SPE/IADC INTERNATIONAL DRILLING CONFERENCE AND EXHIBITION

5-7 March 2019  |  World Forum, The Hague

www.spe.org/en/events/drilling-conference/home/

Conference Programme
PUSH YOUR LIMITS

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With a push-the-bit design, the Magnus RSS enables you to excel in everyday and extreme environments. Rugged elements deliver lasting reliability, precise directional steering keeps you on plan and high-performance drilling reduces well-construction costs.

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Dear Colleague,

On behalf of the Advisory and Programme Committees, I am delighted to welcome you to the 2019 SPE/IADC International Drilling Conference and Exhibition in the Hague.

The SPE/IADC International Drilling Conference and Exhibition is one of the key annual industry events. It is renowned for excellent technical content and is a great opportunity to make and maintain business connections.

This year’s programme will include technical sessions covering drill bits, downhole tools, cementing, automation, well control, geomechanics, well placement, drilling dynamics & mechanics, MPD, fluid & waste management, innovative technologies, threaded connections, challenging projects and tubular design. E-posters will be presented throughout the conference and we also welcome back our Diversity and Inclusion session, which will discuss some important topics around how we close the gender gap in oil and gas.

The panel session on day two of the conference will focus on new forms of collaboration that drive innovation and performance improvement. In the last few years, new forms of co-operation and contracting have started to emerge in the industry. These initiatives typically centre around key objectives such as, shared goals and incentives, working as part of a team, integrated project organisation, implementation of digital solutions, standardisation and simplification of processes.

I look forward to meeting you over the next few days.

Pierre Kriesels
General Manager, Wells R&D
Shell Global Solutions International

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Disciplines

**DRILLING:** Covers topics from well planning and wellbore design through drilling equipment, systems and operations to casing and cementing

**COMPLETIONS:** Includes completion design and installation, intelligent wells, sand control, hydraulic fracturing, acidising and stimulation, and well integrity
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Day 1 Coffee Break Sponsor

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SPE President/IADC Chairman

2019 SPE President

Sami Alnuaim
Saudi Aramco

Sami Alnuaim has been with Saudi Aramco for 30 years, where he has worked in reservoir engineering, production engineering, research and development, and at the upstream computer center. He currently serves as manager of Petroleum Engineering Application Services, where he has full responsibility for providing technical information technology support to all upstream operations, including exploration, drilling, production, reservoir engineering, and facility design.

Sami has a long history of service to SPE and is currently a member of the SPE Middle East Board of Directors. He has won several local, regional, and international awards, including the SPE Regional Service Award for the Middle East in 2010 and the SPE Distinguished Service Award and SPE Distinguished Member in 2011.

Sami obtained BS and MS degrees from KFUPM, and a PhD degree from the University of Texas at Austin, all in petroleum engineering. He completed the Wharton Executive Management program at the University of Pennsylvania and the Advanced Asian Business and Culture Program from the Center for Global Business Studies at Pennsylvania State University.

2019 IADC Chairman

Kevin A. Neveu
Precision Drilling Corporation

Kevin A. Neveu is President and Chief Executive Officer and a Director of Precision Drilling Corporation. He has held these positions since joining the company in 2007. Kevin has 35 years of experience in the oilfield services sector holding technical, marketing, management and senior leadership positions over his career. Previously, Kevin was President of the Rig Solutions Group of National Oilwell Varco in Houston and held senior management positions with it and its predecessor companies in London, Moscow, Houston, Edmonton and Calgary.

Kevin currently serves as a Director of Finning International and is a former board member of Bonanza Creek Energy and Rig Net. He is also a member of the Advisory Board for The Heart and Stroke Foundation of Alberta, and an Advisor for the University of Calgary's School of Public Policy. Kevin is a past director and past member of the Executive Committee for the International Association of Drilling Contractors.

Kevin holds a Bachelor of Science degree and is a graduate of the Faculty of Engineering at the University of Alberta and is a registered Professional Engineer in the province of Alberta. He has also completed the Harvard Advanced Management Programme in Boston, Massachusetts.
Committees

Chair
Pierre Kriesels, Shell Global Solutions International

Advisory Committee
Arindam Bhattacharya, Schlumberger
Mel Clare, Hurricane Energy
Kimberley McHugh, Chevron
David Reid, National Oilwell Varco

David Roodenburg, Huisman Equipment B.V.
Lina Serpa, BP
Oonagh Werngren, Independent

Programme Committee
Pradeepkumar Ashok, University of Texas at Austin
Marc Bird, Baker Hughes, a GE company
Martijn Bogaerts, Schlumberger
Igor Brucher, Transocean
Dennis Cisneros, Varei International
Crispin Chatar, Schlumberger
John Clegg, Weatherford
Blaine Dow, Schlumberger
William Duffy, Equinor
Michael Dykalski, BOS Solutions
Alfred Eustes, Colorado School of Mines
Danielle Fuselier, Baker Hughes, a GE company
Lisa Grant, Bureau of Safety and Environmental Enforcement (BSEE)

Martyn Greensmith, MIG Consulting
Mohammed Hattab, Saudi Arabian Oil Company
Hai Hunt, ConocoPhilips
Ashley Johnson, Schlumberger
Sarah Kern, Helmerich & Payne IDC
Marta Lafuente, National Oilwell Varco
Liam Lines, National Oilwell Varco
Arne Lyngholm, Equinor
Robin Macmillan, National Oilwell Varco
Okwuletz Oredolapo, Baker Hughes, a GE company
Gregory Payette, ExxonMobil
Isabel Poletzky, Haliburton
Thomas Redlinger, Bureau Veritas

Matthew Rhodes, BP Upstream – Global Wells Organisation
Rolv Rommetveit, eDrilling Solutions
Nishanth Samuel, Marathon
Otto Santos, Louisiana State University
Hermann Spoerk, Saudi Aramco
Junichi Sugita, Sanvean Technologies
Diego Tellez, Occidental Oil & Gas Corporation
John Thorogood, Drilling Global Consultant LLP
Khaydar Valiullin, WellsX Inc.
Ryan Weedon, National Oilwell Varco
Goof Zijderveld, GustoMSC BV

About the Society of Petroleum Engineers
The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose more than 156,000 members in 154 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing publications, events, training courses, and online resources at www.spe.org.

About the International Association of Drilling Contractors
The International Association of Drilling Contractors (IADC) is dedicated to enhancing the interests of oil and gas and geothermal drilling contractors worldwide. IADC’s contract drilling members own most of the world’s land and offshore drilling units and drill the vast majority of the wells that produce the planet’s oil and gas. IADC’s membership also includes oil and gas producers, and manufacturers and suppliers of oilfield equipment and services. Founded in 1940, IADC strives to secure responsible standards, practices, legislation and regulations that provide for safe, efficient and environmentally sound global drilling operations.

For more information, visit the IADC website at www.iadc.org.
Revolutionary ACD provides consistent seal performance

Plan efficiently and enhance the safety and performance of deepwater MPD with our next generation Active Control Device (ACD). Its revolutionary pressure-sealing system provides constant wellbore sealing without bearings or rotating components. As the sealing sleeve wears, pressure is actively applied to maintain a consistent seal, saving both time and money. Purpose-built and performance proven, the ACD boosts wellbore sealing—so you can advance with confidence.

afglobalcorp.com/drilling
## Schedule of Events (As of February 2019)

### Monday, 4 March

<table>
<thead>
<tr>
<th>Time</th>
<th>Location/Event</th>
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<tbody>
<tr>
<td>1300–1700</td>
<td>DSATS</td>
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<tr>
<td>1700–1900</td>
<td>DSATS Networking Reception</td>
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### Tuesday, 5 March

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<tr>
<th>Time</th>
<th>Location/Session</th>
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<tr>
<td>0900–0950</td>
<td>Opening Session</td>
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<tr>
<td>0950–1015</td>
<td>Keynote Session</td>
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<tr>
<td>1015–1030</td>
<td>Coffee Break, Knowledge Sharing e-Poster Sessions</td>
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<tr>
<td>1030–1230</td>
<td>Technical Session 1: Fluids and Waste Management</td>
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<tr>
<td>1230–1345</td>
<td>Lunch</td>
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<tr>
<td>1515–1545</td>
<td>Coffee Break, Knowledge Sharing e-Poster Sessions</td>
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<tr>
<td>1715–1830</td>
<td>Welcome Reception</td>
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### Sessions

- Opening/Plenary Session
- Panel Session
- Case Study Session
- Special Session
## Schedule of Events

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<th>Thursday, 7 March</th>
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General Information

**Badge Collection**
All attendees are required to wear their name badge at all times. Use of a badge by a person not named on the badge is grounds for confiscation. If you lose your conference badge, please return to registration to obtain a replacement.

**Registration Times**
Onsite registration will be available at the registration desk in the World Forum. The desk will remain open throughout the conference for general queries.
Registration will be open at the following times:
- Tuesday 5 March 08:00 – 18:30
- Wednesday 6 March 08:00 – 17:15
- Thursday 7 March 08:00 – 13:00
Please be prepared to show photo ID to collect your badge and students will need to show a current, full-time student card.

**Exhibition Opening Times**
The Exhibition is open to registrants at the following times:
- Tuesday 5 March 08:00 – 18:30
- Wednesday 6 March 08:30 – 17:15
- Thursday 7 March 08:30 – 15:30

**Speaker / Author Check In**
Authors must check in at the authors’ room located in Africa (ground floor) before reporting to their session rooms. Your PowerPoint presentation files will be uploaded to the network in the author room and will be available in the assigned room where you will present. Please meet with your session chairs 15 minutes before the start of the session in the assigned room. We appreciate your assistance in meeting these deadlines to ensure a successful session.

**Internet Access**
Internet access is complimentary throughout the conference venue; this will be for general browsing only. To access the free Wi-Fi service, connect to the forum2019 wireless network. You will be prompted to enter the following password: forum2019. Your device will be automatically connected to complimentary Wi-Fi.

**Proceedings**
Registered attendees (except students and exhibitors) are entitled to access the technical papers from the SPE/IADC Drilling Conference. Digital Proceedings are delivered through the OnePetro website. From the first day of the conference you will be able to visit www.onepetro.org and enter your access token to download the proceedings. Registration and log-in to OnePetro will be required to redeem your token and can only be used for a single OnePetro account. After redeeming your token you will have continued access to all technical papers for this conference in OnePetro on any compatible device when logged on to your account. Your unique 12digit access code and detailed instructions will be provided in a download card.
You may collect your conference proceedings from the SPE and IADC stands.

**Luncheons**
Networking luncheons are included in select registration categories only. Lunch will be served in the Exhibition Hall at the following times:
- Tuesday, 5 March 12:30 – 13:45
- Wednesday, 6 March 12:30 – 13:45
- Thursday, 7 March 12:30 – 13:30

**Coffee Breaks**
Coffee breaks will take place in the Exhibition Hall at the following times:
- Tuesday, 5 March 10:15 – 10:30, 15:15 – 15:45
- Wednesday, 6 March 10:30 – 11:00, 15:15 – 15:45
- Thursday, 7 March 10:30 – 11:00, 15:00 – 15:30

**Welcome Reception**
The welcome reception will take place on Tuesday 5 March from 1715 – 1830. The Reception will provide ample opportunity to network with delegates, authors, sponsors, exhibitors, and industry contacts.

**Knowledge Sharing e-Poster Sessions**
A knowledge sharing e-Poster is a short PowerPoint presentation presented to attendees via a laptop and a plasma screen. E-poster sessions will take place in the Amazon Foyer during coffee breaks on Tuesday, Wednesday and Thursday.
Audio Visual Copyright
All SPE sessions are protected by EU copyright laws. Photography and audio-visual recording of any kind are strictly prohibited in the sessions and throughout the exhibition area.

Sustainability Statement
The SPE is committed to ensuring that the environmental impact of our exhibitions 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 – core values which are also driving our members.

Event Cancellation
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.
Opening Session and Keynote Address

This session will include welcome speeches from the SPE/IADC Conference Chair, Pierre Kriesels, Shell; 2019 SPE President, Sami Alnuaim, Saudi Aramco and the 2019 IADC Chairman, Kevin Neveu, Precision Drilling Corporation. There will be a special message from the 2020 IADC/SPE Conference Chair, David Reid, National Oilwell Varco followed by a Keynote Address from Paul Goodfellow, Executive Vice President Wells, Shell.

Paul Goodfellow
Executive Vice President Wells
Shell

Paul joined Shell in Holland in 1991, following a period in the mining industry in South Africa and Finland. He holds a B.Eng in Mining Engineering and a Ph.D. in Rock Mechanics and initially worked in a variety of Wells related roles throughout Shell before taking on broader leadership roles.

In 2000, Paul was assigned to Shell Exploration & Production Company as the Operations Manager for Deepwater Drilling and Completions and in August of 2003 he took up the role of Wells Manager for the Americas Region. He was named Venture Manager for North America Onshore in July 2008, and in September 2009 he moved into the role of Vice President Development, Onshore for Upstream Americas.

In January 2013, Paul was appointed Vice President Unconventionals for Upstream Americas and moved into the role of Vice President and Upstream Director for the UK and Ireland in February 2015. Paul took up his current role as the Executive Vice President Wells in April 2017 and is now based in United States of America.

Paul is a Chartered Engineer and a member of the Institute of Mining and Metallurgy and SPE. He was appointed member of the board of directors for Shell Midstream Partners on October 2014.
SPE Drilling Engineering Award

The SPE Drilling Engineering award was established in 1984 and recognises outstanding achievement or contributions to the advancement of petroleum engineering in the area of drilling engineering technology. Candidates are nominated by their professional colleagues and selected by committees appointed by the SPE Board of Directors. The SPE Drilling Engineering Award winner is recognised at the annual SPE/IADC International Drilling Conference and Exhibition and the SPE Annual Technical Conference and Exhibition (ATCE).

2018 Award Recipient, Dan Scott

Danny Eugene Scott of Montgomery, Texas, has started to consultant after retiring in 2017 from Baker Hughes. He served in a variety of engineering and management roles including Chief Metallurgist, Manager of Materials Engineering, Manager of Manufacturing Research and Manager of Diamond Research. Dan has primarily been involved in developing innovative solutions for drilling oil and gas wells during 47 years at Hughes Tool Company and Baker Hughes Inc. During his career he produced over 150 U. S. Patents, 65 publications, authored chapters for text books and received a wide range of recognition for his accomplishments including Fellow from ASM International in 1999, Silver Patent Award from ASME in 2006, Distinguished Member of SPE in 2012, and Exemplary Service from IADC in 2017. At Baker Hughes he earned six chairman’s awards for innovation, commercial success, and best research and received the Baker Hughes Chairman’s Lifetime Technology Achievement Award in 2009. His inventions earned him the prestigious Inventor of the Year Award from the State Bar of Texas in 2017 and the 2017 Innovative Thinker Award from World Oil. This past May he was honored as a Distinguished Professional at the Missouri University of Science & Technology Commencement for his lifetime achievements in the petroleum industry. Dan earned a bachelor’s of science in Metallurgical Engineering from Missouri S&T in 1970.

Dan has been very active in the Society of Petroleum Engineers serving on over 40 conference and programme committees including 26 SPE/IADC Drilling Conference Programme Committees and was the co-chairman of the SPE-ATCE in 2018. He has also been an associate editor of Drilling and Completions and has been a student paper contest judge. At MS&T he has served on the Advisory Board to Metallurgical Engineering in the past and served 8 years on the Industrial Advisory Board for the Petroleum and Geology Departments. He was inducted into the Academy of Mines and Metallurgy in 2013 and has been a frequent speaker on campus including the MS&T Energy Symposiums.
IADC/SPE International Drilling Conference and Exhibition

3–5 March 2020 | Galveston Island Convention Center
Galveston, Texas

Present a Paper at Next Year’s Conference

Call for Papers Deadline: 4 June 2019
Visit go.spe.org/Drilling for detailed instructions.
Plenary Session: New Forms of Collaboration to Drive Innovation and Performance Improvement

Panellists: Simon Corrigan, Senior Product Manager, Baker Hughes, a GE company, Angela Durkin, COO/SVP, Maersk Oil, Kevin Krausert, President & CEO, Beaver Drilling, David Reid, CMO, National Oilwell Varco, David Roodenburg, Manager Tender and Projects, Huisman Equipment B.V.

Moderator: Professor Iain Stewart, University of Plymouth

Going into the energy transition, the oil and gas industry is challenged on its efficiency, societal acceptance, and a legacy of aging infrastructure. Regarding efficiency, alternative sources of energy are showing significant reductions in cost per unit energy; year on year, that will be hard to match. Societal acceptance is crucial for our ability to operate and to be regarded as a ‘force for good’.

Decommissioning and restoration involve the challenge of bringing our sites back to their original state, which involves substantial cost and environmental concerns.

For each of the factors mentioned above, innovation and new ways of working play a key role in meeting the challenges. Finding ways to increase the pace of development and implementation is crucial. For most of the work on wells, there are many parties involved. This helps innovation because of the different perspectives and technical backgrounds. However, coordination of efforts can be a challenge.

In the last few years, new forms of cooperation and contracting have started to emerge in the industry. These initiatives typically centre around things including: shared goals and incentives, working as a team, integrated project organisation, implementation of digital solutions, and standardisation and simplification of processes.

Several examples of these new forms of collaboration will be shared during this panel session. The discussion will be around how this type of working may benefit the industry and what further implementation steps may look like.

Panellists

Simon Corrigan
Senior Product Manager
Baker Hughes, a GE Company

Simon is the Product Manager for VXT Systems within Subsea Production Systems at BHGE. With over 15 years’ experience in new technology development & medium to large scale EPC project execution, Simon is actively leading the development of the AptaraTM LWCT in close collaboration with an international operator for it to be used on future field developments, providing both a CAPEX reduction and TOTEX life of field innovative solutions.

Angela Durkin
COO/SVP
Maersk Drilling

Angela Durkin started her career in Baker Hughes in 1996 as a MWD Operator. She held various international positions in Drilling, Operations, Sales and support functions such as Business Development Manager, Country Manager for Denmark, Vice President for Operations and Technical Support. Her latest role was as Corporate Vice President for Health, Safety and Environment at Baker Hughes.

Angela joined Maersk Drilling in May 2015 as Senior Vice President and Chief Operating Officer, being in charge of all global rig operations including drillships, semi-submersibles and jack-up rigs located in various parts of the world.

Angela holds a Master degree in electronics from the Technical University in Braunschweig, Germany.
Kevin Krausert  
President & CEO  
Beaver Drilling

Kevin is the President & CEO of Beaver Drilling, one of Canada’s largest privately-owned drilling contractors. Kevin has pioneered and championed the marketing and construction of some of the first fully computerised drilling rigs in Canada, launched one of the first autonomous drilling projects in 2017, and led the first long-reach horizontal drilling project in the Canadian arctic in 2011. Kevin is the founder of The Avatar Program – an industry wide collaboration between E&P’s, tech companies and the University of Calgary bringing new technology and AI into the drilling industry. Kevin is also the Drilling Executive Chair of the Canadian Association of Oilwell Drilling Contractors (CAODC). He completed his MBA at the University of Calgary in the Global Energy Executive MBA and holds a Bachelor of Science from McGill University in Neurosciences.

David Reid  
CMO  
National Oilwell Varco

David is the Chief Marketing Officer for NOV, where he develops the global market and strategic engine. David joined Varco International in 1992 and has lived in Scotland, California, and Houston covering roles in service, operations, design, business and product development, leadership, and management. He serves on the NOV and Schlumberger IntelliServ Joint Venture Board and in IADC and SPE leadership positions. David has influenced modern rig and equipment design and the pioneering of drilling automation and oilfield digitisation. Outside of oil and gas, David is a board member for Redeemed, a recovery program for adult women who are survivors of sex trafficking. He has also pioneered a Houston-based organisation of pro-bono, crowdsourced marketing professionals who give their skills and talents to help focused, efficient, high investment recovery groups, like Redeemed, develop and convey their story.

David Roodenburg  
Manager Tender and Projects  
Huisman Equipment B.V.

David Roodenburg is responsible for the tender and product development department at Huisman Equipment. Prior to this role, he held various positions within Huisman including Business Development Manager, Head of System Engineering and Managing Director of Huisman Brazil. David studied at both McGill in Montreal and TU Delft and holds a masters degree in micro and nano engineering. During his studies, he worked his summers on drilling and production rigs in positions ranging from the worm rank, to rough neck to assistant company man.
At Exebenus, we know digitalization. Combining software and services, we digitalize the information exchange between office and rig. Our Exebenus Pulse solution creates digitalized detailed instructions that can be merged with real-time data, allowing you to continuously enhance the quality and safety of your drilling and completions operations. With the digital advantage from Exebenus, each well project advances the next.
Special Events

This year’s conference will host a dedicated luncheon programme on the second day of the Drilling Conference. In this relaxed setting Young Professionals will have the chance to discuss burning industry career topics and hear from our Keynote Speaker, Kelly Richardson, Wells Engineering Team Leader, North Sea, BP talk about her experiences as well as have the opportunity to ask her questions.

Wednesday, 6 March 2019 | 1230-1345

Young Professionals’ Luncheon

Kelly Richardson
BP
Kelly Richardson is a BP Wells Engineering Team Leader in the North Sea where she is accountable for planning safe, compliant and reliable well activities.

With more than 12 years of industry experience Kelly has held a variety of engineering and leadership roles within BP’s Global Wells Organisation, both onshore and offshore, and around the globe in locations such as Angola, Canada and Norway. During this time Kelly has continued to demonstrate strong leadership and technical delivery managing projects in exploration, interventions and well abandonment.

Kelly is passionate about embedding new technology and agile ways of working and has piloted several initiatives helping to transform the way BP operates. She continues to be a strong role model, driving her team’s technical and leadership development.

Kelly is a graduate of Durham and Heriot-Watt Universities, holding a Bachelor of Science in Physics and a Master of Science in Petroleum Engineering.

Schedule

12:30 – 12:35 Welcome & Introduction

12:35 – 13:05 Keynote Address: Kelly Richardson, Wells Engineering Team Leader, North Sea, BP

13:05 Lunch (Served)

13:10 – 13:40 Table Discussions

13:40 – 13:45 Closing Remarks and Networking Opportunity

*An SPE Young Professional is an E&P professional under 36 years old
Special Events

Wednesday, 6 March 2019 | 1700-2000

Onyx Meeting Room

Diversity & Inclusion Session: Closing the Gender Gap in Oil and Gas

Sponsored by

The IADC and SPE are committed to delivering a balanced agenda around Diversity and Inclusion, to support member companies as they strive to address the gap in the Oil & Gas Sector. In 2019 the SPE/IADC International Drilling Conference and Exhibition in The Hague will host a session that allows delegates to explore the challenges facing the industry and hear first-hand, how it can be addressed. This initiative aims to build on the efforts already being undertaken at individual company levels to attract, develop and retain female staff – especially in technical and senior management roles, and to remove barriers that may currently hinder or discourage women from rising through the ranks into leadership roles.

The aim is to address the factors contributing to the gender gap and to advantage all companies, their owners and shareholders through the incremental performance and value that parity will generate. This is good for our people, good for our stakeholders, and good for our business.

Whilst in 2017 the session focused on subjects arising from DAVOS 2016 namely Leadership, Aspiration, goal setting, STEM, recruitment and retention, corporate culture and work life balance, the panel now feel it is time to move the conversation forward with some hard-hitting topics that affect the lives of many. Make sure you join us for this special session in The Hague.

Agenda

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<th>Time</th>
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<tr>
<td>17:00</td>
<td>Drinks, Canapes and Networking</td>
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<tr>
<td>17:30</td>
<td>Session 1 – Keynote Speakers</td>
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<tr>
<td>18:20</td>
<td>Session 2 – Break-out Booths</td>
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<tr>
<td>19:45</td>
<td>Wrap Up and Close</td>
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Session Chair

Oonagh Werngren, MBE

Oonagh is the driving force behind the Diversity and Inclusion session, which takes place at the SPE/IADC International Drilling Conference in The Hague. As the first ever female Wells Manager for BP, over 15 years ago, Oonagh developed a keen interest in career opportunities and mentors a broad spectrum from graduates to industry leaders. She is the co-author, along with Katy Heidenreich, of “The Oil Industry’s Best Kept Secret”.

Oonagh is the former President of the Petroleum Exploration Society of Great Britain and Non-Executive Director of ITF, CDA and The Girls’ Network. In the course of her 36-year career, she has held senior leadership positions around the globe for Oil and Gas UK, GDF SUEZ and BP, working previously for ARCO British Ltd and Tricentrol Oil Corporation. Oonagh was awarded an MBE in the 2011 Queen’s Birthday Honours List, for services to the oil and gas industry.
Keynote Speakers

David Reid  
**National Oilwell Varco**  
David is the Chief Marketing Officer for NOV, where he develops the global market and strategic engine. David joined Varco International in 1992 and has lived in Scotland, California, and Houston covering roles in service, operations, design, business and product development, leadership, and management. He serves on the NOV and Schlumberger IntelliServ Joint Venture Board and in IADC and SPE leadership positions. David has influenced modern rig and equipment design and the pioneering of drilling automation and oilfield digitisation. Outside of oil and gas, David is a board member for Redeemed, a recovery program for adult women who are survivors of sex trafficking. He has also pioneered a Houston-based organisation of pro-bono, crowdsourced marketing professionals who offer their skills and talents to help focused, efficient, high investment recovery groups, like Redeemed, develop and convey their story.

Kim McHugh  
**Chevron**  
Kim McHugh is the Vice President of Drilling and Completions for Chevron Services Company based in Houston, Texas. She assumed the position in May 2018. Kim is responsible for Global Drilling and Completions which includes HES, Assurance, OC, and planning of drilling operations globally. Prior to her current role, she was the General Manager of Drilling and Completions in Houston. Kim is a second-generation driller growing up in the industry in locations all over the US and internationally. Her career has spanned operations in the Gulf of Mexico, Gulf of Thailand, and onshore US. Kim has worked for Chevron, BP, Unocal, and ARCO in operator roles and as a consultant. She has held various roles in managing both field operations, engineering and global performance. Kim is a graduate of Texas A&M University receiving her BS and MS in petroleum engineering. She lives in Katy, Texas with her husband, Dennis, who also works for Chevron. Kim serves on the board for Dress for Success and the IADC WellSharp Advisory Panel.

Katy Heidenreich  
**Oil & Gas UK**  
Katy Heidenreich is Upstream Operations Optimisation Manager at Oil & Gas UK and is responsible for promoting operational excellence and driving initiatives that align with the Maximising Economic Recovery (MER UK) Strategy and increase the competitiveness of the UK Continental Shelf (UKCS).

Katy has spent most of her career in the oil and gas industry working in technical and senior management roles in the UK, Norway and Azerbaijan. Katy joined Oil & Gas UK, the upstream industry’s trade association, after 15 years with Schlumberger Oilfield services. Katy also recently became a published author, releasing a book focusing on the impact women have had on the oil and gas sector, which aims to inspire and encourage the next generation of talented young women to join the industry.

This year our break-out booths will feature the following topics:

- Pay Gap Implications in Culture and Employee Engagement – Baker Hughes, a GE Company
- Which Way is Up? – BP
- Building Relationships/ Bringing Men into the Conversation – Chevron
- Strengthen Performance Through Diversity and Inclusion – Equinor
- Bringing Yourself to the Party – National Oilwell Varco
- Achieving a D&I Step Change for Oil and Gas: The UK Perspective – Oil and Gas UK
- Evaluating the Talent Pool/ Mentoring and Coaching of Women for the C Suite – Schlumberger
- Power and #MeToo in the Oil and Gas Industry – Serenity in Leadership
# Technical Programme

## Tuesday, 5 March 2019

**Mississippi**

### Session Chairpersons:
- Michael Dykalski, BOS Solutions
- Lisa Grant, (BSEE) Bureau of Safety and Environmental Enforcement

This session will highlight a novel approach to drilling fluid data capture, analysis and prediction applied to enhance drilling performance and optimise waste management.

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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<tbody>
<tr>
<td>1030</td>
<td>194063</td>
<td><strong>Optimised Cuttings and Slops Management Help Save 250 Days on Six-Well North Sea Program</strong></td>
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<td>M. Toft, D. Farr, K. Strøm, Halliburton</td>
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<td>1100</td>
<td>194125</td>
<td><strong>Application of Real-Time Fluids Data to Reduce Uncertainty in Casing-to-Casing Time</strong></td>
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<td>D.E. Jamison, R. Williams, A. Porter, Halliburton</td>
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<td>1130</td>
<td>194131</td>
<td><strong>Effect of Solid Particle Concentration on Drilling Fluid Rheological Behavior and its Impact</strong></td>
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<td>on Pressure Losses</td>
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<td>E. Cayeux, A. Leulseged, NORCE</td>
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<tr>
<td>1200</td>
<td>194132</td>
<td><strong>A Data Driven Approach to Predict Frictional Pressure Losses in Polymer-Based Fluids</strong></td>
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<td>S. Gul, M.D. Johnson, A. Karimi Vajargah, Z. Ma, B.B. Hoxha, E. van Oort, The University of Texas at Austin</td>
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<th>Paper #</th>
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<tr>
<td>194102</td>
<td><strong>Dump, Condition, Dilute: Utilising High Voltage Technology to Extract Solids from Drilling Fluid</strong></td>
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<td>K. Chandler, M. Dykalski, J. Wolfe, BOS Solutions; S. Frisky, Ground Effects; W.J. Duffy, Equinor</td>
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<tr>
<td>194137</td>
<td><strong>Exceptional Flat Rheology Using a Synthetic Organic-inorganic Hybrid in Oil-based Muds Under High Pressure and High Temperature</strong></td>
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<tr>
<td></td>
<td>H.A. Patel, A.K. Santra, C.J. Thaemlitz, Aramco Services Company</td>
</tr>
</tbody>
</table>
## Technical Programme

### O2T Challenging Projects

**Amazon**

**Session Chairpersons:** Danielle Fuselier, *Baker Hughes, a GE company;* Thomas Redlinger, *Bureau Veritas*

This session explores approaches, technology and case studies for the industry’s most challenging applications. The session will review learnings from operators and service companies as they approached challenging programs. Real world case studies will review the impact of machine learning algorithms, equipment design, and well safety.

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<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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<tr>
<td>1030</td>
<td>194172</td>
<td><strong>Study of Formation Bonding in the Wells of the Varg Field Based on Ultrasonic and Sonic Wireline Log Data</strong>&lt;br&gt;L. Noble, Schlumberger; H. Vindheim, Repsol; A. Govil, G.A. Obando, Schlumberger; J. Haga, Repsol; A. Shams, Heriot Watt University</td>
</tr>
<tr>
<td>1100</td>
<td>194156</td>
<td><strong>Managing Shallow Water Flow During Tophole Drilling Operations in the Southern North Sea – A Case Study</strong>&lt;br&gt;A.O. Solarin, Maersk Drilling</td>
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<tr>
<td>1130</td>
<td>194070</td>
<td><strong>Customised High-Rate Cuttings Reinjection System: Effective Design Maintains Continuous Zero Discharge Operations on Sakhalin Island</strong>&lt;br&gt;R. Mahrous, V. Tsoy, R. Ellis, Halliburton</td>
</tr>
<tr>
<td>1200</td>
<td>194157</td>
<td><strong>Well Safety and Performance Gains from MPD in Unconventional High Overpressure Reservoirs in Argentina</strong>&lt;br&gt;A.C. Vieira Martins Lage, E. Gurgel do Amaral Arduino, S. de Andrade Loureiro, G. Siqueira Vanni, H. Pereira da Silva Filho, Petrobras</td>
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</table>
## Technical Programme

### 03T Threaded Connections for Tubulars

**Yangtze**

**Session Chairpersons:** Hai Hunt, ConocoPhillips; Marta Lafuente, National Oilwell Varco

The choice of the right threaded connections during the well design can be a critical element to ensure maximum productivity and maintain well integrity during operations. This session will discuss a series of technologies, analytical evaluation methods and field cases for threaded connections that can be used to evaluate the suitability of a threaded connection for a specific application.

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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| 1030  | 194147  | **Design And Comparison of Two Drill String Solutions that Break Barriers in Extended Reach Drilling**  
A.H. Awad, F. Carrois, M. Lafuente, A. Matveyev, NOV |
| 1100  | 194180  | **An Analytical Model for Double-Shouldered Connection Strengths**  
G. Pettit, Bureau Veritas |
| 1130  | 194059  | **API Connection Leak Equation Extended with Dependence on Axial Force and Backup Pressure**  
M.A. Goodman, eWellbore, LLC; R.F. Mitchell, Well Complete, LLC; I.A. Kali, Altus Well Experts Inc. |
| 1200  | 194146  | **On the Sealability of Metal-to-metal Seals with Application to Premium Casing Connections**  
D. Ernens, Shell Global Solutions International BV, University of Twente; F. Peréz-Ráfols, Luleå University of Technology; D. Van Hoecke, OCAS NV; R.F. Roijmans, E.J. van Riet, Shell Global Solutions International BV; J. Vande Voorde, OCAS NV; A. Almqvist, Luleå University of Technology; M.B. de Rooij, University of Twente; S.M. Roggeband, W. van Haafken, Shell Global Solutions International BV; M. Vanderschueren, P. Thibaux, OCAS NV; H.R. Pasaribu, Shell Global Solutions International BV |

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<th>Paper #</th>
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| 194176  | **Numerical Modeling and Experimental Validation of Advanced Rotary Shouldered Threaded Connections**  
F. Song, M.H. Du, K. Li, Schlumberger |
04T Advances in Drill Bit and Downhole Tool Technology and Applications
Mississippi

Session Chairpersons: Marc Bird, Baker Hughes, a GE company; Ryan Weeden, National Oilwell Varco

This session presents progress in drill bit and downhole tooling technology. Topics cover advances in formation specific cutting technology, simulation of rock-cutter interactions, and bit features eliciting an engineered drilling response and associated case studies. A bit-reamer matching Deepwater case study and open hole caliper monitoring method are included.

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<th>Time</th>
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<tr>
<td>1345</td>
<td>194128</td>
<td>Self-Adjusting PDC Bits Reduce Drilling Dysfunction, Increase Drilling Efficiency in Gulf of Mexico Wells</td>
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<td>W. Rodrigue Jr, R. Callais, A.R. Chowdhury, Baker Hughes, a GE company</td>
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<td>1415</td>
<td>194148</td>
<td>Rock Customised Shaped Cutters Improve Rock Cutting Efficiency</td>
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<td>R. Rahmani, NOV</td>
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<td>1445</td>
<td>194150</td>
<td>Industry’s First PDC Bit Gauge Design for Improved Tracking in North American Horizontal Wells</td>
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<td>R.W. Spencer, B.D. Pierce, R.E. Grimes, Baker Hughes, a GE company</td>
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<td>1545</td>
<td>194134</td>
<td>Modelling the 3D Bit-Rock Interaction Helps Designing Better PDC Bits</td>
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<td>G. Pelfrene, Varel International Energy Services; O. Stab, Mines ParisTech, PSL University, Centre de</td>
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<td>géosciences; D.M. Tilleman, T. Gallifet, B. Cuillier, J. Carlos, Varel International Energy Services</td>
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<td>1615</td>
<td>194060</td>
<td>Pilot Bit and Reamer Matching: Realtime Downhole Data Differentiates Hybrid Drill Bit's Suitability</td>
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<td>with Concentric Reamer in Deepwater, Gulf of Mexico Application</td>
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<td>A. Roy Chowdhury, R. Serrano, W. Rodrigue, Baker Hughes, a GE Company</td>
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<td>1645</td>
<td>194161</td>
<td>Monitoring of Under-reamer Function Status to Confirm In-Gauge Hole, Technology Validated by Open</td>
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<td>Hole Caliper: Case Study</td>
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<td>T.W. Huggett, C.C. Hunter, National Oilwell Varco; M. Alahmad, O. Eatough, Total</td>
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<tr>
<td>194160</td>
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<td>Increased ROP by 18% in Norway and in Other Applications Through Optimising Cutter Geometry from</td>
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<td>Laboratory Tests, Numerical Models and Field Tests</td>
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<td>K.T. Izbinski, J.L. Cardoe, J.A. Bomidi, Baker Hughes, a GE company</td>
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<td>194081</td>
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<td>Jar Placement Efficiency on Optimising Drilling and Cost</td>
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<td>191869</td>
<td></td>
<td>Middle East Success Story with World’s First Adaptive Drill Bit and Premium Rotary Steerable</td>
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<td>Technology</td>
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<td>D. Rasheed Al Enezi, S.M. Gholoum, Kuwait Oil Company; R. Al-Enezi, A.M. Altashah, KOC; A. Redha,</td>
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<td>Kuwait Oil Company; M.G. Omar, A. Abdelhamid, Baker Hughes; W. Agawani, Baker Hughes Solutions;</td>
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<td>M.R. Pandya, Baker Hughes, a GE company; F.G. Valbuena, Baker Hughes</td>
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The ongoing quest for improvement of drilling performance relies more than ever on increasingly sophisticated modelling and machine learning. In turn these rely on the acquisition of large amounts of data, either before operations begin in order to create or improve models of the application, or in real time to refine and calibrate those models. This session explores a number of exciting and innovative techniques in measurement and transmission of data in support of modelling and machine learning.

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<th>Time</th>
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<tr>
<td>1345</td>
<td>194105</td>
<td><strong>Prediction of Penetration Rate Ahead of the Bit Through Real-Time Updated Machine Learning Models</strong>&lt;br&gt;Y. Li, University of Southern California; R. Samuel, Halliburton</td>
</tr>
<tr>
<td>1445</td>
<td>194136</td>
<td><strong>Building a Rig State Classifier Using Supervised Machine Learning to Support Invisible Lost Time Analysis</strong>&lt;br&gt;C.J. Coley, BP</td>
</tr>
<tr>
<td>1545</td>
<td>194084</td>
<td><strong>Deep Learning Model for Classifying Cutting Volume at Shale Shakers in Real-Time Via Video Streaming</strong>&lt;br&gt;X. Du, Y. Jin, X. Wu, University of Houston; Y. Liu, X. Wu, O.K. Awan, J. Roth, K. See, N. Tognini, Shell International Exploration and Production; J. Chen, Z. Han, University of Houston</td>
</tr>
<tr>
<td>1615</td>
<td>194164</td>
<td><strong>Managing Drilling Losses in the Permian using Airborne Gravity Full Tensor Gradiometry</strong>&lt;br&gt;A.D. Sallee, H.P. Dick, V. Sudhakar, Schlumberger; A. Morgan, S. Payton, Bell Geospace; D. Paddock, Schlumberger</td>
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<tr>
<td>1645</td>
<td>194095</td>
<td><strong>Smart Wired Pipe: Drilling Field Trials</strong>&lt;br&gt;J.D. Macpherson, I. Rodgers, K. Schoenborn, R. Mieting, F. Lopez, Baker Hughes, a GE Company</td>
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<tr>
<td>Alternate</td>
<td>194080</td>
<td><strong>Relocate Monitoring Tasks Ashore with Advanced Data Streaming and Data Assurance</strong>&lt;br&gt;P.E. Neri, R. Philo, Energistics Consortium Inc.</td>
</tr>
</tbody>
</table>
Long-term zonal isolation and well integrity are paramount goals for the oil & gas industry. To foster the conversation around these industry goals this session will highlight non-routine cement placement techniques, breaking paradigms regarding centralisation technology, new technology for cement evaluation and monitoring of cement integrity, and innovative additives used in cement slurries.

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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</table>
| 1345  | 194135  | A Novel Mechanical Tool for Annular Cement Verification  
J.A. De Andrade, S. Fagerås, S. Sangesland, Norwegian University of Science and Technology (NTNU) |
| 1415  | 194094  | Myth-Busting Performance Properties of Nonmetallic Rigid Centralisers  
M.R. Rodrigue, L. Kendziora, D.B. Farley, Weatherford International Ltd. |
| 1445  | 194118  | Novel Aromatic Polyamides and its Application in Enhancing the Integrity of Oil Well Cement Sheath  
E.Q. Contreras, D. Rasner, R.F. Martinez, C.J. Thaemlitz, Aramco Services Company: Aramco Research Center |
| 1545  | 194186  | Offline Cementing Technique  
| 1615  | 194159  | Concurrent Real-time Distributed Fiber Optic Sensing of Casing Deformation and Cement Integrity Loss  
Q. Wu, S.D. Nair, E. van Oort, The University of Texas At Austin; A. Guzik, K. Kishida, Neubrex Co., Ltd |
| 1645  | 194075  | Barrier Verification During Plug and Abandonment Using Spectral Noise Logging Technology; Reference Cells Yard Test  
D.J. Gardiner, NORCE Norwegian Research Centre AS; M. Volkov, R. Greiss, TGT Oil & Gas Services |
| Alternate |         | Computation of Surge Pressure Wave Propagation During Cementation Process  
W. Assaad, Shell Global Solutions International B. V.; D. Di Crescenzo, D.J. Murphy, J.E. Boyd, Shell Exploration & Production Company |
|       | 194173  | A Novel Microbially Induced Self-healing Cement/concrete for Underwater Concrete Offshore Structures  
C. Noshi, J.J. Schubert, Texas A&M University |
07T Drilling Automation I
Mississippi

Session Chairpersons: Alfred Eustes, Colorado School of Mines; Olawale Oredolapo, Baker Hughes, a GE company

The automation of various drilling operations is gaining more speed as more complex and challenging wells are drilled. In this session, the automation of directional drilling is presented as well as a presentation of the results of the fourth Worldwide Drillbots Competition.

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<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
<th>Authors</th>
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<tbody>
<tr>
<td>0900</td>
<td>194090</td>
<td><strong>Steering Advisory System for Rotary Steerable Systems</strong></td>
<td>U. Zalluhoglu, N. Demirer, J. Marck, H. Gharib, R.P. Darbe, Halliburton</td>
</tr>
<tr>
<td>0930</td>
<td>194096</td>
<td><strong>Slide Drilling Guidance System for Directional Drilling Path Optimisation</strong></td>
<td>C. Pehlivanturk, J.J. D'Angelo, The University of Texas at Austin; D. Cao, Anadarko Petroleum Corporation; D. Chen, P. Ashok, E. van Oort, The University of Texas at Austin</td>
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<tr>
<td>1000</td>
<td>194226</td>
<td><strong>Design and Implementation of a Miniature Autonomous Drilling Rig for Drillbots 2018</strong></td>
<td>M.L. Arno, NTNU; A. Thuve, Equinor; S. Knoop, Altus Intervention; S. Hovda, A. Pavlov, NTNU; F. Florence, Rig Operations LLC</td>
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<tr>
<td></td>
<td>194087</td>
<td><strong>An Active Return Flowline Sensor for Onshore Drilling Rigs</strong></td>
<td>P. Lambie, J.H. Sampaio Jr, Colorado School of Mines</td>
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</table>
## Technical Programme

### 08T Well Control

**Amazon**

**Session Chairpersons:** Rolv Rommetveit, eDrilling Solutions; Otto Santos, Louisiana State University

This session will have papers presenting the latest technologies and applications in well control. A demonstration of an automated pressure control system for assisted well control will first be presented. Two papers on well control modelling will be presented; one utilising an advanced gas influx model for interpretation of an incident in the North Sea, and the other on how well control and temperature modelling helped to facilitate safe and effective delivery of a complex and challenging offshore HPHT well.

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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</table>
| 0900   | 194089   | **Demonstration of Automated Pressure Control System for Assisted Well Control Offshore Norway**  
A. Knudsen, Spirit Energy; Y. Couturier, J. Hardt, M. Boganes, B. Dow, K.E. Nord-Varhaug, Schlumberger |
| 0930   | 194145   | **Well Control Incident in the North Sea as Interpreted with Advanced Gas Influx Modelling**  
| 1000   | 194175   | **Well Control and Temperature Modelling Facilitates the Effective Delivery of Challenging Shallow Water HPHT Exploration Well**  
M.J. Davis, I. Selent, B. Duplessis, Schlumberger; W. Janisch, Genesis 2000 Petroleum Pty Ltd |

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<tr>
<th>Paper #</th>
<th>Presentation</th>
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| 194187   | **The Effect of Pipe Rotation on Dynamic Well Control Casing Pressure Using the Dispersed Bubble Model**  
Z.A. Al Marhoon, University of Oklahoma; B. Akbari, Louisiana State University; H. Al Ramis, Univeristy of Oklahoma |
| 194079   | **Simulated Drilling Testing of an Active Wellbore Sealing System on a Full-Scale Test Rig**  
The Geomechanics session will highlight improved methods to assess fracture radiant that take into account 4D seismic data and a 3D geomechanical model, the deployment of a logging well drilling tool that uses acoustic impedance contrast and ultrasonic amplitude measurements to obtain high-resolution structural, stratigraphic and borehole geometry information and an integrated geomechanical approach to more accurately predict the fracture gradient for wellbores with different trajectories to mitigate risks of losses for challenging wellbores.

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<tr>
<th>Time</th>
<th>Paper #</th>
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| 0900   | 194154   | **Assessing Current Fracture Gradient of a High Pressure, High Temperature (HP/HT) Field as a Key Input for its Development and Abandonment**  
M. Salehabadi, I. Susanto, Shell UK Ltd.; C. Freeman, C. Prin, S. De Gennaro, R. Laird, G. Forsyth, Shell UK Ltd; D. Doornhof, Nederlandse Aardolie Maatschappij B.V. |
| 0930   | 194074   | **Determining Wellbore Stability Parameters Using a New LWD High Resolution Ultrasonic Imaging Tool**  
C.L. Ciuperca, D. Di Tomasso, Weatherford; M. Dawber, PetroAcoustics; J. Tidswell, Angus Energy |
| 1000   | 194139   | **An Integrated Geomechanical Approach to Accurately Predicting the Fracture Gradient for Mitigating Drilling Losses of Challenging Wellbores**  
Z. Fang, N. Zamikhan, R. Tarang, C. On, P. Huver, Brunei Shell Petroleum Co Sdn Bhd |
Technical Programme

Wednesday, 6 March 2019

10T Well Placement
Mississippi

Session Chairpersons: Martyn Greensmith, MIG Consulting; Matthew Rhodes, BP Upstream – Global Wells Organisation

Well Placement encompasses the engineering and services required to spatially place all our well types in the optimal position with respect to current and future value creation. It is paramount that this placement firstly considers HSE with respect to existing wells, geohazards and our understanding of the pore-pressure/fracture gradient regime (well control). With this in mind Well Placement needs to apply a risk based multi-disciplinary approach. This session will cover the optimisation of survey acquisition and advanced quality control of existing systems, and also present the latest thinking with respect to trajectory definition and technology advancement.

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<tr>
<th>Time</th>
<th>Paper #</th>
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<tr>
<td>1345</td>
<td>194057</td>
<td>Eliminating Rig Time from MWD Surveying</td>
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<td>R. Lowdon, M. Breen, M. Mouyiasis, M. Edmunds, K. Bulychenkov, K. Brovko, Schlumberger</td>
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<td>1415</td>
<td>194130</td>
<td>Combined Gyroscopic and Magnetic Surveys Provide Improved Magnetic Survey Data and Enhanced Survey Quality Control</td>
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<td>J.L. Weston, A.G. Ledroz, Gyrodata Inc.</td>
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<td>1445</td>
<td>194127</td>
<td>Intelligent Wellbore Path Estimation Using Multiple Integrated MEMS Sensors</td>
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<td>H. Liu, R. Shor, S. Park, University of Calgary</td>
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<td>1545</td>
<td>194101</td>
<td>Using High-Resolution MWD Survey Data in Mud Removal Simulations for Effective Cementing Program Design</td>
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<td>L.C. Monterrosa, C. Tay, J.M. Salazar, Schlumberger</td>
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<td>1615</td>
<td>194085</td>
<td>Monte Carlo Analysis of Advanced Spline Curves for Wellbore Trajectory Uncertainty Calculations</td>
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<td>K.I. McKenna, A.W. Eustes, Colorado School of Mines; M. AbuGhaban, Saudi Aramco; M.P. Shahri, Apache Corporation</td>
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<td>1645</td>
<td>194179</td>
<td>Validation of Directional Survey Data Against Positional Uncertainty Models</td>
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<td>M. Willerth, S. Maus, Helmerich &amp; Payne Technologies</td>
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<td>194067</td>
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<td>Challenges and Solutions for Accurate Wellbore Placement in the Barents Sea</td>
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<td>194153</td>
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<td>Micro-Sonde Well Logging System; a Novel Method for Along-Well Measurements</td>
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<td>G. Saelevik, H. Skadsem, S. Kragset, D.J. Gardner, E. Randeberg, NORCE Norwegian Research Centre AS; M. Hjelstuen, SINTEF</td>
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## Technical Programme

### 11T Understanding Stick Slip and Torsional Dynamics

**Amazon**

**Session Chairpersons:** Pradeepkumar Ashok, *University of Texas at Austin*; Junichi Sugiura, *Sanvean Technologies*

Stick slip and unwanted torsional dynamics continue to cause damage to drill bits, mud motors, and other downhole tools. Significant nonproductive time can be prevented through proper understanding, early recognition and mitigation of such torsional dynamics and stick slip. This session presents the latest advances in sensor technologies, modelling and control techniques that help us achieve this goal.

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<th>Time</th>
<th>Paper #</th>
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<tr>
<td>1345</td>
<td>194072</td>
<td><strong>High-Frequency at-Bit Measurements Provide New Insights into Torsional Dynamics when Drilling with Steerable Mud Motors in Unconventional Horizontal Wells</strong>&lt;br&gt;J.K. Wilson, T. Whitacre, G. Heisig, Scientific Drilling International, Inc.</td>
</tr>
<tr>
<td>1415</td>
<td>194138</td>
<td><strong>A Drill Bit and Drilling Motor with Embedded High-Frequency (1600Hz) Drilling Dynamics Sensors Provide New Insights into Challenging Downhole Drilling Conditions</strong>&lt;br&gt;J. Sugiura, S. Jones, Sanvean Technologies</td>
</tr>
<tr>
<td>1445</td>
<td>194071</td>
<td><strong>Real-Time System to Calculate the Maximum Load of High-Frequency Torsional Oscillations Independent of Sensor Positioning</strong>&lt;br&gt;A. Hohl, E.M. Palata, P. Arevalo, Baker Hughes, a GE company</td>
</tr>
<tr>
<td>1545</td>
<td>194117</td>
<td><strong>Mitigating and Understanding Stick-Slip in Unconventional Wells</strong>&lt;br&gt;H.N. Dao, S. Menand, K. Mills, Drillscan; M.R. Isbell, Hess Corp.</td>
</tr>
<tr>
<td>1615</td>
<td>194108</td>
<td><strong>Curing Stick-slip: Eureka</strong>&lt;br&gt;S. Dwars, Shell; M. Lien, Equinor; S. Øydna, MHIWirth; T. Baumgartner, Shell</td>
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<tr>
<td>1645</td>
<td>194120</td>
<td><strong>Mitigation Of Multi-frequency Stick/slip</strong>&lt;br&gt;Z. Sun, Q. Gu, Halliburton Energy Services</td>
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<td>194115</td>
<td><strong>Quenching of Self-Excited Vibrations in Multi Degree-of-Freedom Systems: Application to Stick-Slip Mitigation in Drilling</strong>&lt;br&gt;G. Ramakrishnan, Halliburton</td>
</tr>
</tbody>
</table>
Technical Programme

12T Tubular Design and Applications
Yangtze

Session Chairpersons: Marta Lafuente, National Oilwell Varco; Thomas Redlinger, Bureau Veritas

Whether it's in Deepwater, HP/HT, Shale or when re-developing mature fields, choosing the right tubulars for a specific environment can be a challenge. This session will examine tubular design methods that can be used for different applications and loadings and it will describe how these design practices can help assuring well integrity.

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<tr>
<th>Time</th>
<th>Paper #</th>
<th>Presentation</th>
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</table>
| 1345  | 194056   | Slim Well Casing Design for a Deepwater Application using a Fast and Flexible Finite Element Engine  
H. Panayirci, O.L. Houette, S. Brands, M. Paraschiv, Schlumberger; S. French, Energean Oil & Gas |
| 1415  | 194113   | Evaluation of the Elevated Temperature Performance and Degradation Mechanisms of Thread Compounds  
D. Ermens, Shell Global Solutions International BV, University of Twente; D. Westerwaal, R.F. Roijmans,  
E.J. van Riet, Shell Global Solutions International BV; S. Daegling, Shell Global Solutions Germany GmbH;  
A. Wheatley, Shell International Petroleum Company Ltd.; E. Worthington, Shell Global Solutions Germany  
GmbH; H. Kramer, Nederlandse Aardolie Maatschappij BV; W. van Haaften, Shell Global Solutions  
International BV; M.B. de Rooij, University of Twente; H.R. Pasaribu, Shell Global Solutions International BV |
| 1445  | 194062   | Dynamic Stress Analysis of Critical and Cyclic Loads for Production Casing in Horizontal Shale Wells  
R.F. Mitchell, Well Complete LLC; N.R. Zwarich, H.L. Hunt, ConocoPhillips; A.R. McSpadden, R. Trevisan,  
Altus Well Experts Inc.; M.A. Goodman, Altus Well Experts Inc. (Retired) |
| 1545  | 194155   | Frictional Heating of Casing Due to Drill String Rotation – Finite Element and CFD Simulations  
W. Assaad, Shell Global Solutions International B. V.; B. Tarr, Shell International E&P Co.; K. See,  
Shell Exploration & Production Co |
| 1615  | 194076   | Calculating a Tortuosity Index Metric Using Machine Learning Techniques  
C. Noshi, J.J. Schubert, Texas A&M University |
| 1645  | 194121   | The Mechanical Response of Concentric Cemented Casings Exposed to Arbitrary Transverse External  
Geomechanical and Salt Loads  
U.B. Sathuvalli, S. Krishna, P. Suryanarayana, Blade Energy Partners |
13T Managed Pressure Drilling
Mississippi

Session Chairpersons: Blaine Dow, Schlumberger; Isabel Poletzky, Halliburton

This session gives an overview of the latest technology initiatives to improve implementation of MPD, including: simulation models accounting for the transient temperature profile and its effect in wellbore hydraulics; use of a downhole choke, MPD and Continuous Circulation to improve pressure control; Drilling with Liner, MPD and Continuous Circulation application to solve drilling hazards in an overpressure zone; using a digital twin to improve pressure management; MPD system including pressure, flow and solubility pressure controls to provide better performance in situations such as riser unloading; and, MPD solving challenges and optimising the drilling process in the Bakken.

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<th>Time</th>
<th>Paper #</th>
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<tr>
<td>0900</td>
<td>194083</td>
<td><strong>An Integrated Thermal and Multiphase Flow Model for Estimating Transient Temperature Dynamics During Drilling Operations</strong>&lt;br&gt;A. Fallah, Q. Gu, The University of Texas at Austin; Z. Ma, A. Karimi Vajargah, The University of Texas at Austin, now with Quantum Reservoir Impact; D. Chen, P. Ashok, E. van Oort, The University of Texas at Austin; R. May, Baker Hughes, a GE company</td>
</tr>
<tr>
<td>0930</td>
<td>194143</td>
<td><strong>Verification of Downhole Choke Technology in a Simulator Using Data from a North Sea Well</strong>&lt;br&gt;M. Kvernland, D. Gorski, M. Sant’ Ana, Heavelock AS; J. Godhavn, Equinor ASA; O.M. Aamo, S. Sangesland, NTNU</td>
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<tr>
<td>1000</td>
<td>194124</td>
<td><strong>Combination of Drilling With Liner, Managed Pressure Drilling and Continuous Circulation Methods to Mitigate a High Pressure Interval in the Zechstein Group in the North Sea</strong>&lt;br&gt;M. Ruoff, Oranje Nassau Energie B.V.; D. Costa, Oranje-Nassau Energie B.V.; S.M. Rosenberg, S. Ameen Rostami, D. Krol, H. Salomonsen, M. Tan, Weatherford</td>
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<tr>
<td>1100</td>
<td>194088</td>
<td><strong>Using an Advanced Digital Twin to Improve Downhole Pressure Control</strong>&lt;br&gt;K. Thoresen, A. Kyllingstad, S. Hovland, A. Hetland, NOV</td>
</tr>
<tr>
<td>1130</td>
<td>194163</td>
<td><strong>A Switching Controller for Mitigating Riser Gas Unloading Hazards in Offshore Drilling</strong>&lt;br&gt;Q. Gu, A. Fallah, The University of Texas at Austin; A. Ambrus, The University of Texas at Austin, now with Norwegian Research Centre; Z. Ma, The University of Texas at Austin, now with Quantum Reservoir Impact; D. Chen, P. Ashok, E. van Oort, The University of Texas at Austin</td>
</tr>
<tr>
<td>1200</td>
<td>194114</td>
<td><strong>Revitalising the Bakken With Managed Pressure Drilling</strong>&lt;br&gt;G.E. Parayno, Schlumberger; S. Peacock, Petro-Hunt; B. Connolly, Schlumberger</td>
</tr>
<tr>
<td>Alternate</td>
<td>194177</td>
<td><strong>Understanding Hydraulics and Friction Loss in Extremely Narrow Annuli for Deepwater MPD Operations</strong>&lt;br&gt;H. Patil, K.M. Deshpande, Weatherford; K.P. Smelker, Shell; P. Naphade, Weatherford</td>
</tr>
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</table>
14T Directional Drilling
Amazon

Session Chairpersons: Ashley Johnson, Schlumberger; John Thorogood, Drilling Global Consultant LLP

The papers of this session show there are multiple opportunities to improve our systems, practices and performance ranging from understanding the rotary steerable market dynamics, verifying weight transfer models to using AI techniques for optimising ROP. Physics-based advisory systems enable improved control of steerable motors. By adopting a multi-faceted approach to refining our tools we can extend the reach of our wells and in so doing extend the life of existing infrastructure. Big data analytics allows us to assess the impact of tortuosity on well quality, but as two papers explain, calculation of tortuosity is anything but straightforward.

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<tr>
<td>0900</td>
<td>194169</td>
<td><strong>Field-verified Modeling Compares Weight Transfer Methods in Horizontal Wells</strong>&lt;br&gt;J. Garcia, S.M. Banks, WWT; J. Mccormick, Pegasus Vertex; R. Brosig, Rosehill Resources</td>
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<td>0930</td>
<td>194099</td>
<td><strong>Unplanned Tortuosity Index: Separating Directional Drilling Performance from Planned Well Geometry</strong>&lt;br&gt;J. D’Angelo, P. Ashok, E. van Oort, The University of Texas At Austin; M.P. Shahri, T.S. Thetford, B. Nelson, M. Behounek, M.D. White, Apache Corp.</td>
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<tr>
<td>1000</td>
<td>194167</td>
<td><strong>Tortuosity: The Rest of the Hidden Story</strong>&lt;br&gt;R. Samuel, Y. Zhang, Halliburton</td>
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<tr>
<td>1100</td>
<td>194182</td>
<td><strong>Using Big Data to Study the Impact of Wellbore Tortuosity on Drilling, Completions, and Production Performance</strong>&lt;br&gt;T. Baumgartner, C. Lin, Y. Liu, A. Mendonsa, D. Zimpfer, Shell</td>
</tr>
<tr>
<td>1130</td>
<td>194077</td>
<td><strong>Steering Advisory System for Mud Motors</strong>&lt;br&gt;U. Zalluhoglu, H. Gharib, J. Marck, N. Demirer, R.P. Darbe, Halliburton</td>
</tr>
<tr>
<td>1200</td>
<td>194170</td>
<td><strong>A Paradigm in Rotary Steerable Drilling – Market Demands Drive a New Solution</strong>&lt;br&gt;J.M. Clegg, C. Mejia, S. Farley, Weatherford</td>
</tr>
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</table>
This session covers some of the latest developments observed in the offshore drilling space. From how Big Data solutions are being utilised to reduce well construction time and cost, how simulators improve the delivery of the actual wells being drilled and how the downturn has influenced maintenance to be more effective offshore. It also includes some interesting and innovative BOP centralisation system and rig modifications to adapt to operate two different types of wellheads simultaneously.

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<tr>
<td>0900</td>
<td>194109</td>
<td><strong>Subsea BOP Tethering System as an Alternative for Mitigating Wellhead Fatigue</strong>&lt;br&gt;L. Cantinelli Sevillano, C.K. Morooka, University of Campinas; J.T. Lieng, Deep Sea Anchors; S. Sangesland, Norwegian University of Science and Technology</td>
</tr>
<tr>
<td>1000</td>
<td>194165</td>
<td><strong>Subsea Xmas Tree and Completion Operations on Two Different Subsea Providers with a Single Rig Using One Common IWOCS System</strong>&lt;br&gt;T. Blanckaert, Total EP Congo; C.A. Bottomley, O&amp;G Subsea Products Systems Ltd</td>
</tr>
<tr>
<td>1100</td>
<td>194111</td>
<td><strong>Combining Drilling Big Data and Machine Learning method to Improve the Timeliness of Drilling</strong>&lt;br&gt;Z. Ying, S. Ting, Y. Jin, Y. Qishuai, China University of Petroleum-Beijing; W. Hongshu, L. Zhengli, CNOOC China Limited, Shenzhen Branch; L. Zhong, H. Yi, CNOOC China Limited, Zhanjiang Branch</td>
</tr>
<tr>
<td>1130</td>
<td>194116</td>
<td><strong>The Specialty of Push-the-bit Rotary Steerable Tool Dynamics</strong>&lt;br&gt;Q. Xue, L. Huang, J. Wang, China University of Geosciences-Beijing; L. Li, Chinese Academy of Geological Sciences; B. Lii, China University of Geosciences-Beijing</td>
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#19DC

## Technical Programme

### Thursday, 7 March 2019

#### 16T Drilling Dynamics and Mechanics

#### Mississippi

**Session Chairpersons:** Liam Lines, National Oilwell Varco; Khaydar Valiullin, WellsX, Inc

A showcase on how advanced models and high quality data can be applied to understand and overcome typical oilfield drilling challenges. In this session you will hear from companies including ExxonMobil and Shell speak about how they are breaking down the classical boundaries between proprietary models and data using open source structures and creating a novel real-time drill advisor App store to improve accessibility and collaboration. The session will also cover how wired drill pipe and associated downhole sensors brought about significant performance benefits to the drilling campaign of a major E&P company and how machine learning was used by one of the industry's largest drilling service companies to characterise drillstring vibration allowing for more effective mitigation. The final presentation will show how the torque and drag reduction of axial oscillation tools can be predicted through advancements in modelling techniques.

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<tr>
<td>1330</td>
<td>194082</td>
<td><strong>Creating Open Source Models, Test Cases, and Data for Oilfield Drilling Challenges</strong>&lt;br&gt;P.E. Pastusek, ExxonMobil Development Co.; G.S. Payette, ExxonMobil Upstream Research Co.; R.J. Shor, University of Calgary; E. Caeuex, U.F. Aarsnes, Norce; J. Hedengren, Brigham Young University; S. Menand, DrillScan; J.D. Macpherson, Baker Hughes, a GE company; R.A. Gandikota, MindMesh Inc; M. Behounek, Apache Corp.; R.J. Harmer, Schlumberger; E. Detournay, University of Minnesota; R. Illerhaus, Integrity Directional; Y. Liu, Shell Development Co.</td>
</tr>
<tr>
<td>1400</td>
<td>194093</td>
<td><strong>Performance Impact of Downhole Data from Wired Drill Pipe and Downhole Sensors</strong>&lt;br&gt;M. Giltner, L. Earle, J.B. Willis, D. Tellez, R. Neel, Occidental Petroleum Corporation</td>
</tr>
<tr>
<td>1530</td>
<td>194061</td>
<td><strong>Real-Time Drillstring Vibration Characterisation Using Machine Learning</strong>&lt;br&gt;E. Millan, M. Ringer, R. Boualleg, D. Li, Schlumberger</td>
</tr>
<tr>
<td>1600</td>
<td>194133</td>
<td><strong>Modeling the Effect of Axial Oscillation Tools in Torque and Drag Computations</strong>&lt;br&gt;M. Mahjoub, H.N. Dao, S. Menand, Drillscan</td>
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<td>194098</td>
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**Session Chairpersons:** Sarah Kern, Helmerich & Payne IDC; John Thorogood, Drilling Global Consultant LLP

The papers and posters presented provide insight into issues encountered while integrating automated systems with a real world drilling environment. The topics include scaling and measuring workflow, linking real time systems with drilling management processes, deploying an advisory system across a fleet of rigs, development of algorithms to enable automatic correction of measurement errors, integrating unique offshore issues with automated control systems, identifying and maintaining procedural alignment, and automating the zeroing of bit weight and differential pressure based on rig activity. Authors are from a wide range of backgrounds, including Schlumberger, International Research Institute of Stavanger, Apache, Shell and NOV.

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<th>Time</th>
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<tr>
<td>1330</td>
<td>194129</td>
<td>Automated Drilling Narratives: A Scalable Workflow To Measure The Effectiveness Of Drilling Procedures</td>
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<td>M.K. Hamzah, O. Erge, S. Chambon, Schlumberger Technologies</td>
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<td>1400</td>
<td>194110</td>
<td>Toward Seamless Interoperability Between Real-time Drilling Management and Control Applications</td>
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<td>E. Cayeux, B. Daireaux, N. Saadallah, S. Alyaev, NORCE</td>
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<td>1430</td>
<td>194184</td>
<td>Change Management Challenges Deploying a Rig Based Drilling Advisory System</td>
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<td>M. Behounek, B. Millican, B. Nelson, M.D. Wicks, E. Rintala, M.D. White, T.S. Thetford, Apache Corp.; P. Ashok, D. Ramos, Intelllicess Inc.</td>
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<td>1530</td>
<td>194058</td>
<td>Automated Preprocessing Techniques for High Frequency Downhole Sensor Data</td>
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<td>T. Baumgartner, Shell; P. Ashok, E. van Oort, University of Texas at Austin</td>
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<tr>
<td>1600</td>
<td>194123</td>
<td>Automatic Control of Mud Pumps, Draw-works and Top-drive on a Floater</td>
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<td>B. Daireaux, E.W. Dvergsnes, E. Cayeux, NORCE; R. Bergerud, Sekal; I. Kjosnes, Equinor</td>
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<tr>
<td>194068</td>
<td>Automatic Identification of Procedural Adherence in Well Construction-operations</td>
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<td>S. V, S. Chambon, O. Erge, D. Mansour, M.K. Hamzah, Schlumberger Technologies</td>
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<td>194066</td>
<td>Data Quality at the Rigsite – Automated System to Zero Bit Weight and Differential Pressure</td>
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<td>R.J. Borjas, A. Creegan, A.A. Perdomo, D. Shults, NOV</td>
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18T Well Cementing and Zonal Isolation
Yangtze

Session Chairpersons: Martijn Bogaerts, Schlumberger; Arne Lyngholm, Equinor

As we move to increasingly more complex environments, we face escalating challenges in Cementing and Zonal Isolation. This session addresses innovative cementing solutions and non-cementing alternatives, latest developments on fluid modelling and case studies which all lead to establishing and maintaining proper well integrity.

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<th>Time</th>
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| 1330  | 194183  | Effect of Polypropylene Fiber Reinforcement in Cement Sheaths Exposed to Cyclic Fatigue Loading at Wellbore Conditions  
S.J. Giesler, J.J. Schubert, Texas A&M University |
| 1400  | 194171  | Experimental Studies on Cement Sheath Integrity During Pressure Cycling  
T. Vralstad, R. Skorpa, B. Werner, SINTEF |
| 1430  | 194158  | A Laboratory Study Of The Effect Of Casing Pipe Roughness To Cement Plug Integrity  
A.N. Corina, Norwegian University of Science and Technology; N.V. Opedal, T. Vralstad, SINTEF; S. Sangesland, Norwegian University of Science and Technology |
| 1530  | 194091  | Cementing an Irregular Annulus Geometry: Full-Scale Experiments and 3D Simulations  
H. Skadsem, S. Kragset, J. Sørbø, NORCE Norwegian Research Centre AS/DrillWell |
| 1600  | 194174  | Rigless Solutions to Well Intervention with Bismuth and Thermite  
P.J. Carragher, J. Fulks, G. McWilliam, BiSN Oil Tools |

Alternate

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<tr>
<th>Paper #</th>
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| 194166  | Overcoming Challenges in an HPHT Abandonment in the North Sea  
A. Rublevskiy, J. Reid, G. Joneja, S. Nafikova, J. Salazar, Schlumberger |
| 194092  | Long-term Oil Well Zonal Isolation Control Using Geopolymers: An Analysis of Shrinkage Behavior  
R. Olvera, P. Panchmatia, M. Juenger, The University of Texas at Austin; M. Aldin, Metarock Laboratories; E. van Oort, The University of Texas at Austin |
# Knowledge Sharing e-Poster Sessions (As of February 2019)

## Tuesday, 5 March 2019

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| 1015  | 194102  | Dump, Condition, Dilute: Utilising High Voltage Technology to Extract Solids from Drilling Fluid  
K. Chandler, M. Dykalski, J. Wolfe, BOS Solutions; S. Frisky, Ground Effects; W.J. Duffy, Equinor |
| 1515  | 194160  | Increased ROP by 18% in Norway and in Other Applications Through Optimising Cutter Geometry from Laboratory Tests, Numerical Models and Field Tests  
K.T. Izbinski, J.L. Cardoe, J.A. Bomidi, Baker Hughes, a GE company |
| 1530  | 194080  | Relocate Monitoring Tasks Ashore with Advanced Data Streaming and Data Assurance  
P.E. Neri, R. Philo, Energistics Consortium Inc. |
| **Station 2** | | |
| 1015  | 194137  | Exceptional Flat Rheology Using a Synthetic Organic-inorganic Hybrid in Oil-based Muds Under High Pressure and High Temperature  
H.A. Patel, A.K. Santra, C.J. Thaemlitz, Aramco Services Company |
| **Station 3** | | |
| 1015  | 194176  | Numerical Modeling and Experimental Validation of Advanced Rotary Shouldered Threaded Connections  
F. Song, M.H. Du, K. Li, Schlumberger |
| 1515  | 191869  | Middle East Success Story with World’s First Adaptive Drill Bit and Premium Rotary Steerable Technology  
D. Rasheed Al Enezi, S.M. Gholoum, Kuwait Oil Company; R. Al-Enezi, A.M. Altashah, KOC; A. Redha, Kuwait Oil Company; M.G. Omar, A. Abdelhamid, Baker Hughes; W. Agawani, Baker Hughes Solutions; M.R. Pandya, Baker Hughes, a GE company; F.G. Valbuena, Baker Hughes |
| 1530  | 194151  | Computation of Surge Pressure Wave Propagation During Cementation Process  
W. Assaad, Shell Global Solutions International B. V.; D. Di Crescenzo, D.J. Murphy, J.E. Boyd, Shell Exploration & Production Company |
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# Knowledge Sharing e-Poster Sessions

## Wednesday, 6 March 2019

### Station 1

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<th>Poster ID</th>
<th>Title</th>
<th>Authors/Institutions</th>
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<tbody>
<tr>
<td>1030</td>
<td>194173</td>
<td>A Novel Microbially Induced Self-healing Cement/Concrete for Underwater Concrete Offshore Structures</td>
<td>C. Noshi, J.J. Schubert, Texas A&amp;M University</td>
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### Station 2

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<tr>
<td>1030</td>
<td>194087</td>
<td>An Active Return Flowline Sensor for Onshore Drilling Rigs</td>
<td>P. Lambie, J.H. Sampaio Jr, Colorado School of Mines</td>
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### Station 3

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<tr>
<td>1030</td>
<td>194187</td>
<td>The Effect of Pipe Rotation on Dynamic Well Control Casing Pressure Using the Dispersed Bubble Model</td>
<td>Z.A. Al Marhoon, University of Oklahoma; B. Akbari, Louisiana State University; H. Al Ramis, Univeristy of Oklahoma</td>
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# Knowledge Sharing e-Poster Sessions

**Thursday, 7 March 2019**

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<tr>
<td>194115</td>
<td>Quenching of Self-Excited Vibrations in Multi Degree-of-Freedom Systems: Application to Stick-Slip Mitigation in Drilling</td>
<td>G. Ramakrishnan, Halliburton</td>
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<td>194098</td>
<td>Improving Accuracy of Well Depth and ROP</td>
<td>A. Kyllingstad, K. Thoresen, NOV</td>
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<td>194177</td>
<td>Understanding Hydraulics and Friction Loss in Extremely Narrow Annuli for Deepwater MPD Operations</td>
<td>H. Patil, K.M. Deshpande, Weatherford; K.P. Smelker, Shell; P. Naphade, Weatherford</td>
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<td>194106</td>
<td>Using Simulation to Prevent Non-Productive Time</td>
<td>M. Hutchinson, Leader Drilling International; A. Elliott, M. Carlson, B. Thornton, MSC Software; B. Murray, TerraVici Drilling Solutions</td>
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<td>194166</td>
<td>Overcoming Challenges in an HPHT Abandonment in the North Sea</td>
<td>A. Rublevskyi, J. Reid, G. Joneja, S. Nafikova, J. Salazar, Schlumberger</td>
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<td>Data Quality at the Rigsite - Automated System to Zero Bit Weight and Differential Pressure</td>
<td>R.J. Borjas, A. Creegan, A.A. Perdomo, D. Shults, NOV</td>
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<td>194092</td>
<td>Long-term Oil Well Zonal Isolation Control Using Geopolymers: An Analysis of Shrinkage Behavior</td>
<td>R. Olvera, P. Panchmatia, M. Juenger, The University of Texas at Austin; M. Aldin, Metarock Laboratories; E. van Oort, The University of Texas at Austin</td>
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Exhibitors List (as of February 2019)

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AFGlobal Corporation
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Baker Hughes, a GE company
Bartington Instruments Ltd
Cabot Specialty Fluids
CAN by Neodrill
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**34 Abaco Drilling Technologies**  
**Website:** www.abacodrilling.com  
**Contact:** silvia.cisneros@abacodrilling.com  
**Telephone:** +1 281 869 0688

Abaco Drilling Technologies is a leading technology-driven manufacturer of power sections for worldwide oil and gas drilling and thru-tubing operations. Our modern facilities, precision manufacturing capabilities, quality control, R&D, and engineering proficiency deliver ideal elastomer and power section solutions that increase efficiency, improve safety and maximise downhole performance. Our elite portfolio of elastomer technology increases durability and extends the life cycle of our power sections. We offer a full range of power sections from 1-1/16-in thru 11-1/4-in diameter with state-of-the-art CNC manufacturing, CMM rotor measurement and repair, complete stator reeling, and drilling fluid compatibility testing for mud motors.

**47 Baker Hughes, a GE company**  
**Website:** www.bhge.com  
**Telephone:** +1 713 439 8600

Baker Hughes, a GE company (NYSE: BHGE) is the world’s first and only fullstream provider of integrated oilfield products, services and digital solutions. We deploy minds and machines to enhance customer productivity, safety and environmental stewardship, while minimising costs and risks at every step of the energy value chain. With operations in over 120 countries, we infuse over a century of experience with the spirit of a startup – inventing smarter ways to bring energy to the world.

**77 AFGlobal Corporation**  
**Website:** www.afglobalcorp.com  
**Contact:** cmathers@afglobalcorp.com  
**Telephone:** +1 713 3 393 4200

AFGlobal Corporation is a fully integrated, global oil and gas OEM and technology specialist providing differentiated technology, products, and services. We are the market leader in pressure pumping and managed pressure drilling (MPD), and have a significant global market position in subsea connectors, as well as sealing products for land, offshore and general industrial applications. AFGlobal provides strategic technologies to the upstream market for onshore, offshore and connectors and precision manufacturing requirements. The Company maintains a significant position in oil and gas, power generation and general industrial.

**43 Altus Well Experts, Inc.**  
**Website:** www.altuswellexperts.com  
**Contact:**  
- John A. Howard: jhoward@altuswellexperts.com or Ruggero Trevisan (Europe): rtrevisan@altuswellexperts.com or Simon Glover (Asia Pacific): sglover@altuswellexperts.com  
**Telephone:** +1 713 858 5040 or +44 782 450 8550 or +64 21 174 9900

Former Enertech Engineers provide elite consulting service in the following areas:  
- Tubular design (casing and tubing for critical wells such as HPHT, deepwater, high rate fracs)  
- Engineering and Software Training related to Drilling and Production Engineering, in particular for thermal and tubular analysis  
- On-site and off-site consulting, training, mentoring, competency development, QA, QC, and manuals  
- Development of “Expert Engines for Altus Consulting” for advanced thermal and stress analysis.

**64 Bartington Instruments Ltd**  
**Website:** www.bartington.com  
**Contact:** sales@bartington.com  
**Telephone:** +44 (0)1993 706565

Bartington Instruments, in over 30 years, has gained extensive experience in the development and manufacture of high-precision fluxgate magnetometers, magnetic susceptibility equipment and Helmholtz Coil systems with maximised sensitivity, an absolute minimum of noise, wide bandwidth and low power consumption. We specialise in rugged, portable magnetic field sensors designed to survive high levels of shock and vibration. Our products include high temperature fluxgate probes for integration in oil and mineral exploration including MWD, directional drilling, TDEM and a range of magnetic susceptibility sensors for stratigraphic and petrophysical analysis of cores, in the laboratory or directly in boreholes.

**69 Cabot Specialty Fluids**  
**Website:** www.cabotcorp.com/cesiumformate  
**Contact:** christian.busengdal@cabotcorp.com  
**Telephone:** +47 41568235

Cabot is the global leading supplier of cesium potassium formate fluids and services. For more than 20 years, over 60 fields, these remarkable fluids combined with Cabot’s unmatched expertise have helped operators unlock the productivity potential of their reservoirs. Cesium potassium formate enables a unique single-fluid combination drill-in and completion option. Available over a wide density range from SG 1.50 – 2.30 without use of weighting solids. Delivering a best-in-class high performance drill-in fluid, a superior clean completion environment without compromise on safety or well control.
**CAN by Neodrill**

**Website:** www.neodrill.com  
**Contact:** post@neodrill.com  
**Telephone:** +47 911 13 138

**CAN®** – the smarter well foundation. Neodrill make the construction of exploration and production wells cheaper, safer and more efficient by establishing a smarter well foundation, enabling pre-rig well construction.

**CAN®** (Conductor Anchor Node) technology is a combination of a suction anchor and a guide pipe. The suction anchor pushes the guide pipe into the seabed, providing top support for the conductor. This novel and patented approach of installing a subsea wellhead foundation was developed to facilitate the installation of conductors with light vessels and subsea conductor driving.

Once installed, the CAN ensures that a proper well formation is in place. This removes the risks associated with uncertainties related to e.g.: bending, fatigue, load capacity and cementing quality. CAN® has been proven in 20 installations, in water depths ranging from 100 to 1500 m, to cut well construction time and costs, reduce risks and improve safety.

The unique design of the CAN lends itself to easy integration of protection structures and efficient pre-installation of other subsea infrastructure equipment like flow lines, etc. As a result, CAN technology now acts as an enabler to other subsea technological advances, leading the way towards the next generation of subsea solution.

**CEROBEAR GmbH**

**Website:** www.cerobear.com  
**Contact:** Christian.Klatt@cerobear.com  
**Telephone:** +49 173 5220237

CEROBEAR is a Germany based manufacturer of custom engineered, high performance hybrid and all-ceramic rolling bearing solutions for the oil and gas, petrochemical, fluid machinery, aerospace, race car, and machine tool markets. Our bearings enhance the service life of any rotating system and hence lead to increased productivity and reduced total operating costs.
Exhibitors

40 Derrick Equipment Company
Website: www.Derrick.com
Contact: dtbeard@derrick.com
Telephone: +1 832 540 9768

Since 1977, Derrick® has manufactured innovative technologies for the oil and gas drilling industry. Our separation and screen technology offers unmatched solids removal performance and significant cost-savings. We deliver to our global clients leading-edge solutions and around-the-clock, award-winning service to maximise rig solids control efficiency. Derrick’s equipment symbolises rugged reliability in an industry known for its intensely hazardous environment and ever-changing drilling technologies. To discover how you can reduce your overall operating costs, visit us at www.Derrick.com

80 Drillbotics
Website: www.drillbotics.com
Contact: 2019@Drillbotics.com
Telephone: +1 (512) 656 4919

Drillbotics® is an international competition sponsored by SPE’s Drilling Systems Technical Section (DSATS) to design and build a mini-rig that can drill autonomously. There are two buttons: start and stop. Students must recognise and mitigate hidden drilling dysfunctions. For more information, please visit www.Drillbotics.com

11 Drillform
Website: www.drillform.com
Contact: info@drillform.com
Telephone: +1 403 263 3133

Drillform is a specialty equipment designer and manufacturer delivering leading-edge automated drilling equipment. Headquartered in Calgary, Alberta, Canada, Drillform has additional shop and service facilities in Odessa, Texas and Abu Dhabi, UAE. Drillform has brought to market the innovative Bulldog product line consisting of a series of Automated Floor Wrenches, several unique service and drilling rig catwalks, pipe cleaning systems, power slips, drawworks, and top drives. Drillform offers exceptional repair, recertification, refurbishment and field services. Our production and service management teams possess extensive experience and a commitment to exceeding client needs and product performance expectations.

32 Drilling Info
Website: www.drillinginfo.com
Contact: support@drillinginfo.com
Telephone: +1 888 290 7697

Drillinginfo delivers business-critical insights to the energy, power, and commodities markets. Our state-of-the-art SaaS platform offers sophisticated technology, powerful analytics, and industry-leading data. Our solutions deliver value across upstream, midstream and downstream markets, empowering exploration and production (E&P), oilfield services, midstream, utilities, trading and risk, and capital markets companies to be more collaborative, efficient, and competitive. Drillinginfo delivers actionable intelligence over mobile, web, and desktop to analyse and reduce risk, conduct competitive benchmarking, and uncover market insights. Drillinginfo serves over 3,500 companies globally from its Austin, Texas, headquarters and has approximately 650 employees. Recently Drillinginfo acquired PLS Research and Database business and 1Derrick, leaders in deal analysis and evaluation for investors in oil and gas. For more information visit drillinginfo.com.

68 DrillScan
Website: www.drillscan.com
Contact: Régis Studer, Managing Director, régis.studer@drillscan.com
Telephone: +33 5 59 98 75 90

DrillScan is a French independent company which provides advanced and unique engineering solutions to the drilling industry. DrillScan solutions enable operators, drilling contractors and service companies to reduce drilling costs in optimising the drilling process while minimising HSE risks. DrillScan products:
- Drilling engineering software: that covers all aspects of drilling and completion, going from basic to advanced modules
- Drilling engineering services: experienced and skilled engineers providing customised studies
- Training: advanced drilling courses

DrillScan proprietary physical models have been extensively validated in the field, on many case studies. DrillScan also published more than 30 publications that show the unique added-value of its solutions.

Our software platform also enables you to monitor and visualise drilling operations in real-time, to ensure quick decision-making for the engineer or drilling manager.

DrillScan has offices or representation in France, USA, UAE, Netherlands, Norway and Russia.
Exhibitors

**75 Drillstar Industries**

Website: www.drillstar.fr  
Contact: François Damian-Picollet, Sales Manager, sales@drillstar.fr  
Telephone: +33 559 130 105, Mobile: +33 6 77 23 60 35

Manufacturer of downhole equipment for over 35 years, Drillstar Industries provides its customers all around the world with innovative drilling, milling and fishing solutions. Thanks to its innovative Z-Reamer and MUDHammer technologies, Drillstar also proposes advanced underreaming and hard rock drilling services to oil and gas operators throughout the region.

**41 Dril-Quip / TIW Corporation**

Website: www.dril-quip.com  www.tiwoiltools.com  
Contact: michael.lynds@tiwoiltools.com  
Telephone: +1 713 939 7711

Dril-Quip, Inc. is one of the world’s leading manufacturers of offshore drilling and production equipment that is well suited for use in deep water applications. Dril-Quip is recognised for its full range of innovative drilling and production products that can be utilised to provide total solutions for offshore field developments.

TIW, A Dril-Quip Company, provides custom-engineered Liner Hangers, Expandable Liners Systems, Completion Packers, Safety & Kelly Valves and Specialised Service Tools for the global oil and gas industry.

**65 eDrilling**

Website: www.edrilling.no  
Contact: info@edrilling.no  
Telephone: +47 99443848

eDrilling is a world leading provider of drilling and well performance solutions. We work closely with E&P companies, operators, and service companies to help them save cost, improve safety, and increase efficiency of drilling operations by providing integrated and dynamic drilling and well performance solutions needed to better plan, prepare for, control and evaluate drilling operations.

All our products are integral parts of our Life Cycle Drilling Simulation concept; an advanced dynamic drilling models and diagnosis technology merged with 3D visualisation into a “virtual wellbore”. eDrilling offers a comprehensive range of services. Drawing on 20 years of experience from the industry’s best practices, operational experience and deep software expertise we assist you in assessing your drilling, operational, and IT needs, while deploying new technology to maximise the value of your investment. We provide training to fit our customers’ needs using drilling Digital Twin.

Capitalising on decades of experience in the area between operation and software modelling, eDrilling offers an array of tools and resources to keep your software and applications running smoothly.

**23 EC-Profile**

Website: www.ec-profile.com  
Contact: wolters@electrochemicalmachining.com  
Telephone: +31 6 2237 9750

ECM Technologies is specialised in machining metal by means of electrolysis. What has started as a small project almost 10 years ago with a successful demonstration in 2013 and small series production of small sized stators in 2017 has now been set up as a unique venture called EC-Profile.

EC-Profile is set up to produce a wide range of complex profiles in and on tubes for different applications of motors, pumps, ethylene cracking coils, heat exchanger tubes, threading etc. for different kind of industries. This is also including stators with a thin layer of elastomer and the metal to metal stators without elastomer for drilling in extreme environments e.g. extreme chemistry and or high temperature above 200°C.

For any challenging profile feel free to connect.

**72 Enhanced Drilling**

Website: www.enhanced-drilling.com  
Contact: solutions@enhanced-drilling.com  
Telephone: +47 5615 4000

Enhanced Drilling offers a range of solutions that can improve your project. Whether it’s rapid loss/gain detection ability – giving you more time to decide on your options – with our solutions such as the RMR® Riser Mud Recovery system or the EC-Drill® Managed Pressure Drilling system, our technology has safety firmly at the forefront.

The MPC Managed Pressure Cementing system enables the safe isolation of problematic zones, simply yet effectively keeping unforeseen challenges such as gas and shallow water hazards at bay.

**Enhanced Drilling solutions are:**

**EC-Drill®** is a Managed Pressure Drilling (MPD) system based on a Dual Gradient Drilling (DGD) method. It can be used in both shallow and deep water (including depleted wells), either from a jack-up, platform or a floating drilling vessel. Using a Subsea Pump Module (SPM) connected to the drilling riser at a specified water depth, the fluid level inside the drilling riser can be adjusted to change bottom hole pressure.

**RMR®** Riserless Mud Recovery system is a risk-reduction tool that enables the drilling of a better quality, more stable top-hole safely.
Exhibitors

quickly and with less environmental impact. This Dual Gradient Drilling system is an innovative way to return mud and cuttings to the rig before the marine riser is run, without discharge to the seabed. With RMR® there is no ‘Pump & Dump’.

**MPC** Managed Pressure Cementing system provides safe isolation of problematic zones – cost effectively – even in challenging narrow pressure window scenarios. The system provides precise control of the pressure and flow of returning cement. Constant pressure can be achieved at weak zones, preventing losses to the formation. Gas and shallow water hazards are simply yet effectively kept at bay.

**CTS** Cuttings Transportation System is based on proven technology used in the offshore market for more than a decade. It was developed to transport cuttings away from the well area during top-hole drilling on semi-submersible rigs and during clean-up operations on the seabed. This will have a major impact on the viability of drilling operations, especially in environmentally sensitive areas.

**21 Exceed**

**Website:** www.xcd.com  
**Contact:** info@xcd.com  
**Telephone:** +44 (0)1224577940

Exceed specialise in delivering well management and performance improvement solutions for the upstream oil and gas industry. Supporting client projects across the entire well lifecycle, we enhance safety, minimise cost, add value and maximise operational efficiency. With offices in the UK, Canada, Ghana and local representation across seven regions, we have your needs covered.

**WELL MANAGEMENT** With a track record for delivering results in harsh and remote environments, we offer clients a 9-year LTI free track record gained across 30+ countries and 5 continents. We offer tailored solutions supporting all aspects of well operations – from engineering studies to fully-integrated well management campaigns. Exceed cover the full well life cycle with subsurface, petroleum engineering, well engineering, managed pressure drilling design and rig MPD supervisors, well construction, well integrity and well decommissioning services.

Our primary focus is the safe delivery of your well objectives:  
1. Enhancing safety  
2. Assuring integrity  
3. Maximising value  
4. Reducing Costs

**PERFORMANCE IMPROVEMENT** Our field-proven performance solutions have helped clients across the globe achieve outstanding safety results and realise project savings ranging from $15million to $260million. Working side-by-side with your people, our proven methodology enhances safety, increases productive time, and reduces time and costs – on every well.

**14 Exebenus**

**Website:** www.exebenus.com  
**Contact:** annesiw@exebenus.com  
**Telephone:** +47 91763400

Profile: The digital advantage for drilling and completions, Exebenus digitalise the information exchange between office & rig. Our Exebenus Pulse solution crease digitalised detailed instructions that can be merged with real-time data, allowing continuous enhancement of quality and safety in drilling & completions operations. With the digital advantage from Exebenus, each well project advances the next.

**Brands:** Exebenus Puls automatically makes detailed operating procedures, facilitates dynamic interaction between office and rig, validates actions and flags deviations, and captures best practices use.

**Categories:** Computer Systems, Control Systems, Drilling / Completion Services.

**37 Gaia Earth Group**

**Website:** www.gaia-earth.co.uk  
**Contact:** info@gaia-earth.co.uk  
**Telephone:** +44 1343 830617

The Gaia group offers:

- Wireline and LWD on-site and load out quality assurance services.
- Technical consulting for wireline conveyance
- Wireline cable standoff measurements and services
- Open and cased hole petrophysical services.

**33 GeoArray Technologies**

**Website:** www.geoarraytech.com  
**Contact:** media@geolog.com  
**Telephone:** +1 832 434 6169

GeoArray Technologies is an independent geophysical contractor delivering real-time seismic monitoring services to its clients worldwide. The competitiveness of our proprietary FracArray® technology is based on the following key-points: high-density real-time surface acquisition system; seismic moment tensor inversion technique; real-time data processing. Our services include:

**Hydraulic fracturing monitoring**

- FRAC geometry
- Stimulated reservoir volume based on tensor measurement

**Reservoir surveillance**

- Fluid front displacement in EOR/IOR processes (steam, water, gas, polymer/solvent)
- 4D Reservoir drainage pattern surveillance
Exhibitors

• 4D horizontal well profiling

4D well integrity surveillance
• Integrity diagnosis in CSS operations
• Leak detection

Reservoir structural characterisation
• Active faults
• Natural fractures

Underground gas storage monitoring
• Cap-rock integrity
• Geo-containment

GeoArray Technologies offers cost-effective and reliable solutions based on its considerable industry experience and track record.

79 Geolog
Website: www.geolog.com
Contact: media@geolog.com
Telephone: +971 (0)45 586 831

GEOLOG is a global oilfield services company that provides surface logging services to national and international oil companies and integrated service providers, both onshore and offshore. Founded in 1982 in Milan, Italy, the firm remains privately owned and independent and employs c. 1,500 staff across 50+ countries with main corporate offices in Milan, Dubai, Amsterdam and Houston. GEOLOG focuses all its efforts on providing only one service and therefore must excel at this – in both service quality and technology. GEOLOG services are focused on the optimisation of the overall drilling process and reduction in costs of each well in addition to the acquisition of quality data for formation characterisation. Expertise includes Deep to Ultra-Deep Water, HP/HT, Extended Reach Drilling, Unconventional and Geothermal operations.

GEOLOG has pioneered the provision of technological solutions directly at the wellsite that identify hazards, reduce risk and characterise rocks and fluids delivering reservoir and source interpretations in real-time, thereby enabling operators to optimise their downhole measurements and their laboratory sampling (leading to cost reductions and faster decision time). GEOLOG’s growth is to be attributed to, amongst others, its technological leadership in surface logging and strong focus on proprietary R&D in collaboration with oil companies.

13 Global Gravity
Website: www.globalgravity.dk
Contact: kc@globalgravity.dk
Telephone: +45 29 25 20 21

We have extensive experience in base- and rig-operations and are dedicated to improving the safety and efficiency of handling tubulars in the offshore oil- and gas industry.

With our unique field proven TubeLock® TTRS and our dedicated skilled people, we are ready to serve the demanding industry.

Our goals
• Save time • Save space • Save handling
We provide intelligent handling of tubulars

Mission
Global Gravity supply the world’s first Tubular Transport Running System (TTRS). We called it TubeLock®.
TubeLock® provides optimisation of all processes for pipe handling within all types of well interventions and drilling operations around the world. Giving our global customers great cost savings together with the most effective and safe TTRS for all types of pipes and drilling rigs.

Vision
TubeLock® TTRS will mirror what the container has done for the freight industry. We want to change bulk handling of tubulars to a systematic and optimised process, eliminating inefficient and costly processes from the drilling industry. This will improve the revenue for the oil and gas operators and its partners.

Our TubeLock® TTRS will provide intelligent handling of tubulars from pipe manufacturer to run in hole at the rig site in only one handling. We believe that this will be the future for all involved with pipe transport, storage, inspection and drilling.

3 H.P. Well Screen B.V.
Website: www.hpwellscreen.com
Contact: sales@hpwellscreen.com
Telephone: +31 546 577 908

H.P. Well Screen is one of Europe’s largest manufactures and specialist of wedge wire screen filtration products. We offer customised screen solutions for applications in the Oil & Gas, Water, Geothermal, Petrochemical, General Filtration and Architecture. We offer a wide range of well screens, reactor internals, industrial filters and architectural gratings.

More than 25 years of experience
Throughout our more than 25 years history, started as Houston Well Screen, we became an independent organisation, respected by our customers in various markets.
Exhibitors

Creativity, Flexibility, Short delivery times
Our strength not only rests with our product and services, but with the skills of our people, the technical knowledge and our 25 years experience in the field. We are recognised for our excellence in customised solutions, creativity, flexibility and no-nonsense mentality, coupled with short delivery times and competitive prices.

Customised screen solutions
Our products are the most cost effective solution for:
- Solid/Liquid separation
- Sizing and screening
- Dewatering
- Media Retention
- Sand Control

All our product are customised for your application to optimise:
- Production continuity
- Low operational costs
- Low maintenance costs
- Max process output
- Long lifetime
- Low installation costs
- Chemical/Thermal resistance

The manufacturing capabilities of our production plant in The Netherlands, together with our partners for screens in Europe, Asia and the USA enables us to respond quickly to any demand for any well.

16  Halliburton
Website: www.halliburton.com
Telephone: +44 (0)1224 777000

Founded in 1919, Halliburton celebrates 100 years of service as one of the world's largest providers of products and services to the energy industry. With 60,000 employees, representing 140 nationalities in more than 80 countries, the company helps its customers maximise value throughout the lifecycle of the reservoir.

76  Houston Digital Instruments
Website: www.hdigauges.com
Contact: info@hdigauges.com
Telephone: +1 713 688 8555

HDI's core focus is safe and reliable pressure monitoring instrumentation. These instruments continuously monitor pressure, temperature, pump stroke counts, and choke positions during exploration and other stimulation operations. With instrumentation on over 90% of the offshore drilling rigs worldwide, as well as a strong presence on land applications, HDI, with respect to well control and specifically low pressure readings, has enhanced the industry's safety, accuracy, and reliability while ensuring less down time.

57  Huisman
Website: www.huismanequipment.com
Contact: sales@huisman-nl.com
Telephone: +31 (0)88 070 22 22

Huisman is a worldwide operating company delivering step changing technical solutions to world's leading companies in the oil and gas, renewables, leisure and civil industries. We are constantly working on new solutions and systems, which we believe add value to the market’s existing technologies. These innovations have been implemented into many of our products, and as we have extensive operational experience with a wide variety of heavy construction equipment, we are able to use the best solutions for new products and projects.

Our product range can be divided into six main categories: Cranes, Pipelay Equipment, Drilling Equipment, Winches, Vessel Designs and Specials. Our projects range from stand-alone components to highly engineered, integrated systems, from concept to installation and lifetime support. A dedicated worldwide operating service team of skilled professionals is on stand-by to provide advice, training and service support before, during and after delivery to Huisman equipment owners and third parties. Huisman operations are divided between the facilities in China, Czech Republic and the Netherlands, and sales and service offices in Brazil, Norway, Singapore and the USA.

36  IADC (International Association of Drilling Contractors)
Website: www.iadc.org
Contact: leesa.teel@iadc.org
Telephone: +1 713 292 1945

The International Association of Drilling Contractors (IADC) is dedicated to enhancing the interests of oil and gas and geothermal drilling contractors worldwide. IADC’s contract drilling members own most of the world’s land and offshore drilling units and drill the vast majority of the wells that produce the planet’s oil and gas. IADC’s membership also includes oil and gas producers, and manufacturers and suppliers of oilfield equipment and services. Founded in 1940, IADC strives to secure responsible standards,
Exhibitors

practices, legislation and regulations that provide safe, efficient and environmentally sound global drilling operations.

IADC holds Accredited Observer status at the International Maritime Organisation and the International Seabed Federation, branches of the United Nations. The Association is a leader in developing standards for industry training, most notably its well control training and assessment programme, WellSharp, and rig-floor orientation programme, RigPass.

IADC is headquartered in Houston, with offices and chapters located in all geographies where members are active worldwide. For more information, visit the IADC website.

59 Impact Fluid Solutions
Website: www.impact-fluids.com
Contact: info@impact-fluids.com
Telephone: +1 713 964 7736

Impact Fluid Solutions is a premier provider of specialty additives to oil and gas operators, fluid companies and oilfield service providers. By combining advanced chemistry with oilfield expertise, we deliver fluid solutions purpose-built to solve complex wellbore challenges—minimising NPT and increasing ultimate recoveries. The Impact team includes petroleum and geological engineers who know what it takes to plan and execute successful drilling, cementing and completion programs. Our ISO-accredited Technology Center serves as both a hub of innovation and a base for providing expert customer support.

12 Kongsberg Digital
Website: www.kongsberg.com
Contact: Kristian.hernes@kdi.kongsberg.com
Telephone: +47 97 171583

Kongsberg Digital is a provider of next-generation software and digital solutions to customers within maritime, oil and gas, and renewables and utilities. The company consists of more than 500 software experts with leading competence within the internet of things, smart data, artificial intelligence, maritime simulation, automation and autonomous operations.

Kongsberg Digital is subsidiary of KONGSBERG (OSE-ticker: KOG), an international, knowledge based group delivering high-technology systems and solutions to clients within the oil and gas industry, subsea, merchant marine, defence and aerospace. KONGSBERG has 7,000 employees located in more than 25 countries.

5 Nabors
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Telephone: +1 281 874 0035

Nabors Industries owns and operates one of the world’s largest land-based drilling rig fleet and is a provider of offshore drilling rigs in the United States and multiple international markets. Nabors also provides directional drilling services, performance tools and innovative technologies for its own rig fleet and those of third parties. Leveraging our advanced drilling automation capabilities, Nabors’ highly skilled workforce continues to set new standards for operational excellence to transform our industry.

25 National Oilwell Varco
Website: www.nov.com
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Telephone: +1 713 375 3700

National Oilwell Varco (NYSE: NOV) is a leading provider of technology, equipment, and services to the global oil and gas industry that supports customers’ full-field drilling, completion, and production needs. Since 1862, NOV has pioneered innovations that improve the cost-effectiveness, efficiency, safety, and environmental impact of oil and gas operations. NOV powers the industry that powers the world.

24 Pegasus Vertex Inc
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Telephone: +1 713 981 5558

Pegasus Vertex, Inc. specialises in drilling software and engineering consulting. Designed for onshore/offshore operations, our mission is to reduce drilling costs while increasing the efficiency at every rig. Experience the difference with PVI.

66 Peloton
Website: www.peloton.com
Contact: sales@peloton.com
Telephone: +1 888 PELOTON (753 6866)

Peloton has been on the leading edge of well lifecycle data management and visualisation for over 25 years. With data managed by our WellView, SiteView, RigView, ProdView and LandView software, Peloton provides fully integrated solutions for land management, operations, drilling, production and construction/reclamation. Today, more than 450 oil and gas clients worldwide rely
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38 Ray Procter Group UK Limited
Website: www.rayproctergroup.com
Contact: fin.procter@rpgroup.im
Telephone: +44 (0)7548 164336

Ray Procter Group. RPG have two areas of expertise:

RPG's Well Engineering Competency Training is used by many medium to small operators around the globe. It has been in existence since 2003 and is recognised by many companies as providing a solid grounding for young engineers. The programme is a mix of self study, face to face training and mentoring finished off by a set of exams that provide solid evidence of competence.

RPG are known around the world as specialists in the design, selection and use of drill strings having been involved in many failure investigations, stuckpipe case studies and equipment design reviews. RPG can assist or lead in any aspect of drill string design, procurement and use.

1 Redback Drilling Tools
Website: www.redbackdrillingtools.com
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Telephone: +44 1224 774000

Redback Drilling Tools manufactures and services the market leading Redback Roller Reamer in Standard, Modular and Wired Non Mag versions. These tools address reaming, torque and vibration issues and aid in the achievement of improved drilling performance. Applications include support of Rotary Steerable systems, reduction of stick-slip vibration, and removal of mini doglegs.

73 Rider International
Website: www.ridercorp.com
Contact: info@ridercorp.com
Telephone: +31 (0) 20 261 8330

We believe that competent people who have access to relevant information, good communication and effective guidance can deliver exceptional performance. Therefore, we created ‘Rider’, a unique and powerful Workforce Performance Platform designed for asset-intensive industries. Rider links critical strategic and operational activities to competence and risk. Rider enables companies to optimise performance, improve business efficiency and demonstrate compliance at any given moment – never miss a critical step.

22 Salunda
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Telephone: +44 (0) 1869 843 120

Salunda specialise in wireless, networked sensor systems for the oil & gas industry with a focus on optimising operational efficiencies & safety. Features include excellent stability at extremes of pressure, temperature and salinity, plus superior lifetime and reliability. Salunda monitoring solutions are non-invasive, contactless and have no moving parts.

45 Schlumberger
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Telephone: +1 281 285 8000

Schlumberger is the world’s leading provider of technology for reservoir characterisation, drilling, production, and processing to the oil and gas industry. Working in more than 85 countries and employing approximately 100,000 people who represent over 140 nationalities, Schlumberger supplies the industry’s most comprehensive range of products and services, from exploration through to production, and integrated pore-to-pipeline solutions that optimise hydrocarbon recovery to deliver reservoir performance.

42 Seed Technologies Corp. Ltd
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Contact: Allen.yu@seed-carbide.com
Telephone: +86 183 7338 0077

Seed Technologies Corp., Ltd. was established in July of 2006. Devoted to R&D and manufacturing of tungsten carbide materials, machined parts and various hard-facing. Seed manufacture solid tungsten carbide parts/carbide attached steel parts/tungsten carbide or other hard materials surface coating steel parts for oil and gas equipment that are used in extreme harsh working conditions including severe abrasion, erosion, acid or alkali corrosion, high temperature, high pressure, great pressure differential and strong impact.

Seed offers innovative solutions to meet the complex and severe mining challenges around the globe. In the aspect of improving product performance and user demand, Seed have acquired the methodology of replacing the traditional techniques with brand-new materials and processing technologies. Seed introduces “supermetal”
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to interpret and redefine her products. Seed have never stopped and will never stop marching the road of exploring new materials and new technologies. If you dare to imagine, we take the challenges and bring you the excellent supermetal products, beyond your imagination. The cemented carbide hardmetal era will become more gorgeous because of Seed Aseeder Corporation was invested by Seed as a Houston based company dedicated for sales and customer support in the North American.

2  Society of Petroleum Engineers

Website: www.spe.org
Contact: formslondon@spe.org
Telephone: +44 20 7299 3300

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose more than 156,000 members in 154 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing publications, events, training courses, and online resources at www.spe.org.

4  TAM International

Website: www.tamintl.com
Contact: john.stewart@tamintl.com
Telephone: +44 7545 786940

TAM International have been providing Inflatable, Swellable and Stage Cementing Solutions to the oil and gas industry for over 50-years. The Drilling Sector remains an important part of our business, whether it be provision of Larger Diameter inflatable Packers for a wide range of Drilling Intervention Operations or assisting Operating companies in improving Well Integrity for the complete Life Cycle of the Well. TAM International is in the strongest position to deliver the optimum Stage Cementing Solutions in a wide range of Casing and Liner Sizes, with VO Qualified Stage Cementing Technology available for Production Casing Sizes inside Open Hole and Casing.
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28 Tomax
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Tomax specialises in downhole regulators and has been in the market for more than 10 years with the Anti Stick-Slip Tool (AST). The control algorithm of the AST serves multiple objectives: It absorbs direct torsional impact, it prevents self-excitation from overloaded cutters, and it balances the wear-flat friction versus optimal cut. With such multiple benefits savings can be had from different and overlapping sources: Footage, ROP and reliability. This mean the AST technology effectively adds value in every kind of well. Come see us to discuss and learn what we can do for improving your drilling cost.

55 Weatherford
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Weatherford is among the largest oil and gas service providers, with a global network of manufacturing, service, research and development, and training facilities in more than 90 countries. Our portfolio includes innovative solutions, technologies, and services for drilling and formation evaluation, well construction, completion and stimulation, and production. Designed to meet the evolving needs of our industry, our comprehensive service capabilities and differentiating technologies enable clients to maximise recovery, achieve or regain well integrity, and optimise production for the life of the well.

71 Wellcem
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Wellcem is an oil service company headquartered in Norway with branches located around the world. We provide tailor-made unconventional sealing solutions based on our core resin, drilling and well competence. Typical applications include lost circulation, compromised wellbore integrity, plug and abandonment, zonal isolation and the remediation of sustained casing pressure.

Wellcem’s vision is to be a leading provider of technology for Plugging, Lost Circulation, Leak Stop, and Zonal isolation in Oil and Gas Wells. Wellcem has developed and patented a polymer based resin that is pumped downhole in a liquid state and with both time and temperature will transition into a hard set solid. Once in its cured state, its mechanical properties greatly exceed those of conventional systems making it ideal for the downhole environment. Viscosity, curing time, and density can all be custom tailored to remediate the customer’s specific criteria’s. Wellcem has executed close to 500 jobs from 2012.

78 WWT International
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Independent service company operating worldwide. Specialist products and services include:

1. WWT Non-Rotating Protectors™: proven casing wear, torque, drag & buckling solution for directional, horizontal, Deepwater, ERD & wells where friction inhibits drilling performance in cased or open hole. Extensive torque/drag & casing wear modeling, field experience & focus on solving each well’s unique challenges are why WWT Protectors are used in complex wells worldwide.


3. WWT Coiled Tubing (CT) Tractors™ help overcome CT lockup in complex, extended-reach wells. The hydraulically driven WWT Tractor enables the deployment of equipment further to reach target depth, to perform various operations.

74 Xait
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Xait is a software development company providing enterprise customers with software for document co-authoring, automation and collaboration.

Our cloud-based software XaitPorter is a complete all-in-one co-authoring solution for teams to collaboratively create, manage and produce documents. Streamline and optimise your document production to maximise your revenue from bids and proposals and other business-critical documents.
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The power of our resources means nothing without the energy of our people. Their focus and expertise make our energy more dependable, more sustainable, and more useful.

We are looking for experienced drilling professionals to join our team.

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