IADC DEC Q4 2026 Tech Forum,
"The Best of 2026: Firsts, Feats and Facts"

Tuesday, 10 November, 11.30am-4.30pm
*Venue: **Corva**, 1334 Brittmoore Rd Ste 150, Houston, TX 77043*

The oil and gas industry has long been a driving force of technological innovation, tackling some of the most complex and demanding drilling challenges found anywhere in the world. For decades, engineers and technical specialists have developed groundbreaking tools, techniques, and workflows that have enabled the industry to overcome critical obstacles and continuously improve performance.

Innovation remains at the heart of our industry. As we strive to drill safer, faster and more productive wells, new technologies and operational practices continue to push the boundaries of what is possible. The year 2026 is no exception, and we invite you to share the achievements that have redefined performance, set new benchmarks and delivered industry firsts.

The forum will focus on the challenges the industry overcame, the technologies and practices deployed, the records broken and the results achieved. We'll highlight the lessons learned and the insights gained so that you can benefit from others' experience. Join us in celebrating the best of 2026: the firsts, the feats and the facts that are shaping the future of drilling.

Special thanks to our event host Corva!

Agenda

11.30-12.30 Networking lunch (sponsored by Corva)

12.30-12.45 Welcome – Matt Isbell, DEC Chairman; facility and safety briefing – Corva; introduction to event – Kenza Ait and Andrew Barry, DEC Board members

12.45-1.10 **"How Small Steps Make a Large Difference,"** Robert van Kuilenburg and David Bond, Noble
View Presentation

A rekindled model of a Drilling Contractor closely working together with suppliers has resulted in many relatively small improvements, with significant positive impact on either efficiency of operations or safety. Noble will present an overview of those improvements that combined have made a large impact on our operations. The Noble Guyana operations will be used to showcase many of the improvements, also highlighting the additional challenges posed by ultra efficient operations. Part of the presentation aims to be very interactive, focusing on finding solutions for selected problems together with the audience.

1.10-1.35 **"A Year of Firsts for Remote, Automated Drilling,"** William Fox, Corva
View Video Recording View Presentation

2026 has been a year of huge momentum for remote controlled drilling. Corva's Predictive Drilling is among the leaders in this space, and this talk will cover some notable firsts and

lessons learned:
1. First use with four new Drilling Contractors
2. First use for an extended reach offshore lateral in Advisory Mode
3. First U-Turn well
4. First use of programmable stand-by-stand recipes

For each case, we'll present the challenge, the results and the lessons learned.

1.35-2.00 **"Beyond the Record: Reliability at the Edge of Onshore Extended Reach Drilling,"** Guy Feasey, Neo-Oiltools View Video Recording View Presentation

In 2026, Appalachian drilling continued to redefine the limits of onshore unconventional development. Recent applications involving neotork have contributed to record-setting Appalachian wells, including the longest onshore well and longest lateral drilled in the continental United States, as well as record-setting 24- and 48-hour drilling distances.

These achievements reflect advances across the entire drilling and completions system, but increasingly extreme drilling intervals create another challenge: staying in the hole. Axial and lateral vibration, low-frequency stick-slip and HFTO can reduce drilling efficiency, damage downhole equipment and force premature trips, eroding the capital efficiency that ultra-long lateral development is designed to deliver.

This presentation will examine recent Appalachian achievements involving different operators and RSS platforms where neotork has been a common element, and explore how depth-of-cut management and drilling-system stability can contribute to sustained performance and reliability over increasingly extreme drilling intervals.

The next frontier may not simply be drilling farther or faster—but staying in the hole long enough to do both.

2.00-2.25 **"4th vs 2nd Gen DSC in Vaca Muerta,"** Hector Handal, NOV

Operators in Argentina's Vaca Muerta formation face strong pressure to reduce drilling costs while maintaining efficiency and reliability. Historically, 2nd double-shoulder connections (DSCs) were standard for 4-1/2-in. S135 drill pipe, but inspection records revealed high repair rates and recurring operational issues. This case history evaluates the performance of a 4th generation DSC compared with the earlier second-generation design, focusing on inspection integrity, operational efficiency, logistics, and total cost of ownership (TCO).

The evaluation integrated three datasets: (1) manufacturer performance specifications for both connections; (2) inspection results for more than 1,200 joints under DS-1 Category 4 standards; and (3) field data from approximately 1,043 make-ups on a 25,000-ft drillstring. Comparative analysis covered torque capacity, elevator ratings, inspection outcomes, repair frequency, connection times, and logistics costs.

The 4th generation DSC outperformed the earlier design across all categories. Repair rates decreased from ~24% to ~8.5%, while workshop recuts dropped from ~2.6% to ~0.24%. Average connection time was reduced by ~7 seconds per make-up, saving ~2 hours per well and enabling ~266 barrels of early production per well. Over 12 wells, this equated to ~3,200 incremental barrels annually. Logistics costs also declined, with 105 fewer joints required.

2.25-2.45 **Coffee Break**

2.45-3.10 **"Results from the First US Rig with Industrial Robotics,"** Todd Fox, H&P and Bentec
View Presentation

H&P's FlexRobotics program reached a defining milestone in 2026, demonstrating that industrial-grade robotics can deliver reliable, repeatable automation on the drilling rig floor. This session presents the program's key firsts—our first fully robotic connection, first hands-free tripping sequence, and first multi-pad deployment—showing how robotic workflows have transitioned from controlled trials to field-proven capability.

FlexRobotics was engineered to remove personnel from red-zone exposure, automate high-risk repetitive tasks, and improve consistency across connection and tripping operations. Field data from thousands of robotic cycles highlights gains in execution quality, reduced variability, and measurable improvements in operational efficiency. The presentation will outline performance trends, reliability metrics, and lessons learned from real-world deployment, including system hardening, human-machine interaction, and integration with H&P's digital ecosystem.

Looking ahead, FlexRobotics is positioned to expand task automation, deepen predictive maintenance, and broaden hands-free workflows across future rig designs. The results achieved in 2026 establish a foundation for scalable drilling automation and mark a pivotal step toward a safer, more consistent, robotics-enabled rig floor.

3.10-3.35 **"Predictive Generator Management for Drilling Operations: A Deep Reinforcement Learning Framework,"** Michael Zhang, Patterson-UTI View Presentation

Optimizing generator management on drilling rigs reduces fuel use, emissions, and maintenance costs, but dynamic load profiles make it difficult. Rules-based advisory systems have improved efficiency, yet opportunities remain to reduce generator usage, avoid disruptions, and improve recommendation quality.

We present a reinforcement learning (RL) agent for generator management, trained on data from 104 land rigs through thousands of simulated load scenarios. Using recent power demand, load variability, and operational phase, the agent learned to minimize generators online while mitigating the risk of power limit events. Agents were validated on independent data, then field tested within the existing advisory system with safeguards including reserve power margins and shutdown delays.

Compared with average fleet performance, the agent reduced average generators online by

over 25%. Compared with the previous rules-based system, it achieved an additional 6% reduction in generators online, 58% fewer generator cycling events, and 87% fewer recommendations risking power limit events. Following rigorous fleet-wide testing, it is now the contractor's default generator management system.

To our knowledge, this is the first reported field deployment of direct reinforcement learning control on land drilling rigs, offering a practical roadmap for responsibly integrating RL into existing workflows, with autonomous control as a future step.

3.35-4.00 **"Transitioning from Managed Pressure Drilling to Managed Pressure Wells: A Holistic Well Construction Philosophy in the Mexico Region,"** Carlos Cervantes, Weatherford
View Presentation

Managed Pressure Drilling (MPD) is commonly perceived as a drilling-only technique. Field experience in Mexico between 2019 and 2025 shows that pressure management delivers greater value when applied as an integrated well construction philosophy, referred to as Managed Pressure Wells (MPW), using pressure proactively as a design, optimization and control tool from pre-drilling to completion.

In multiple onshore and offshore wells, MPD equipment and principles were applied beyond drilling: dynamic and static pore pressure tests (DPPT/SPPT), formation integrity tests (DFIT/DLOT), controlled mud displacement, swab and surge mitigation during trips, managed pressure cementing (MPC), reverse-circulation casing cementing, coring in narrow windows, cement plug placement without free fall, and resin plug milling.

Pressure testing and controlled displacement across crossflow intervals allowed precise characterization of the pressure window and elimination of casing sections. In HPHT wells in the Gulf of Mexico, DPPT/SPPT and DFIT/DLOT saved up to 25 days and USD 1.8 million. MPC ensured integrity and reduced mud losses in shallow and deepwater wells, reverse MPC minimized reaming time, and resin milling avoided total losses.

MPW delivers value beyond risk mitigation, improving well integrity, efficiency and safety, and transforming MPD systems from specialized drilling tools into comprehensive enablers of well construction.

4.00-4.25 **"Redefining Emergency Disconnect Performance: Development of a Rapid EDS,"** Curt Kling, NOV View Video Recording View Presentation

Emergency disconnect sequence (EDS) performance is critical to protecting well integrity and subsea equipment. During a drive-off or drift-off event, the rig continues moving while the EDS is executed, increasing riser angle and wellhead loading. Conventional shear EDS sequences may require approximately 45 seconds, while more complex sequences can take longer. In shallow water, where allowable watch circles are reduced, EDS timing can become a limiting factor for deepwater DP rigs.

This paper presents the development of a Rapid EDS designed to significantly reduce the time required to secure the well and disconnect the lower marine riser package. Development

focused on evaluating the complete emergency disconnect process and identifying opportunities to reduce overall sequence time while maintaining the required well-control and disconnect functions.

The resulting system can reduce disconnect time to as little as 8 seconds, significantly increasing the available response margin before equipment operating limits are reached. This capability can expand the operating envelope of deepwater DP drilling units in shallow-water applications while reducing the risk of equipment damage during drive-off or drift-off events.

The paper will discuss the operational challenge, development approach, performance improvement, retrofit considerations, and lessons learned from treating EDS response time as an engineering parameter that can be actively optimized.

4.25 Adjournment