

JPT[®]

MANAGING RESERVOIRS: **CAN AI DO IT?**



FIELD DEVELOPMENT PROJECTS
NEW-FRONTIER RESERVOIRS II
PETROLEUM DATA ANALYTICS
SAND MANAGEMENT AND SAND CONTROL

FEATURES

Powder River Basin Boom

Relief for Shale

Seismic and Video Games

allowing improved hole cleaning and increased rate of penetration, particularly in large-diameter and long lateral sections. This allows users to adjust to different well-construction requirements, using a similar design approach without incurring costly well displacements and surface-equipment preparations. Biodegradable with nontoxic chemistry, the product allows aquifer protection. These features enable operators to achieve a monobore approach, using the same core fluid from top to bottom with minor fine-tuning throughout the section and shortening overall well-delivery time. From an operational perspective, fluid management is improved through less product load, design simplicity, and leaner inventory management. The technology has been used by several operators in Europe, the Middle East, and North America.

► For more information, visit www.drilling-products.com.

Hybrid Separation System

Halliburton introduced the BaraOmni hybrid separation system, a technology that effectively removes ultrafine low-gravity solids (LGS), resulting in better-performing, longer-lasting fluid systems to help operators significantly reduce costs. As drilling fluids are used, ultrafine LGS accumulate and can affect operational performance negatively. Operators currently use dilution to address this issue, which results in excessive fluid volumes and costs. The hybrid separation system eliminates the need for dilution and improves the operator's ability to recover drilling fluids so they can drill more wells with less fluid volume. Additionally, BaraOmni allows drilling fluids, contaminated solids, and other hydrocarbon waste streams to be treated with a single system. It replaces traditional complex solids control and waste management equipment setups. As a result, the operator can minimize waste transportation, off-site treatment, and storage to reduce environmental exposure and total cost of ownership. In west Texas, the system was successfully operational within 24 hours of mobilization and was used to treat ultrafine-solids-laden, nonaqueous drilling fluid.



Fig. 3—The SkyVIEW wireline truck from Nine Energy Service.

In this application, the technology reduced solids from 24% concentration to a final concentration of 3% LGS. The result was a field-ready, premix fluid that was readily blended into a high-performance drilling fluid.

► For more information, visit www.halliburton.com.

Isotopic Analysis Solution

Gas isotopes are a flexible tool, adding value in any phase of the upstream activity. For many years, natural gas was primarily characterized by its chemical composition. In the early 1980s, the isotopic characterization of gas was extensively introduced, mainly to distinguish between a thermogenic or biogenic origin of the gas. The increasing availability of isotopic gas-composition data has revealed the ability to provide many additional key pieces of information, including gas maturity, gas provenance, migration patterns, caprock efficiency, reservoir continuity, and well integrity. Isotopes have also been used for geosteering in unconventional reservoirs, maintaining the wellbore within the most prolific organic facies. GEOLOG offers a comprehensive range of carbon isotopic analyses at the wellsite by use of a patented analytical solution. The technology uses equipment based on laser spectrometry to bring isotopic analysis to the wellsite, with the capability to provide isotopic analysis of methane, ethane, and propane while drilling. This ability to perform a multicomponent analysis in real time combined with flexible sampling intervals, all backed by laboratory-quality levels of accuracy, provides a significant advantage to the

operator. This service allows the development not only of a high degree of competency in data acquisition but also in the interpretation of the data gathered.

► For more information, visit www.geolog.com.

Wireline Truck

Nine Energy Service introduced the SkyVIEW wireline truck, engineered to enhance safety and reliability to eliminate downtime and further improve successes in wireline operations. The trucks will begin initial operations at Nine's Permian and Northeast locations starting in the third quarter of 2018. With the trucks, Nine strives to improve upon its 99% success rate in wireline operations by offering greater visibility for the operator with windows above and on the sides to increase safety (Fig. 3). An open back also allows 90° visibility, unlike traditional wireline trucks. A reengineered logging unit makes it possible to change out the wireline drum in 20 minutes, allowing for use of different types of cable for varying job requirements. The new truck design lowers downtime by offering greater efficiency and true redundancy, with an extra drum stored on the truck instead of an offsite shop. A separate power pack offers independent hydraulic and generator power that can be used to power the operation in the event of a vehicle failure or when the operator does not want to draw on the truck's power. The power pack provides hydraulic pressure and alternating-current/direct-current power so that downtime is averted. **JPT**

► For more information, visit www.nineenergyservice.com.