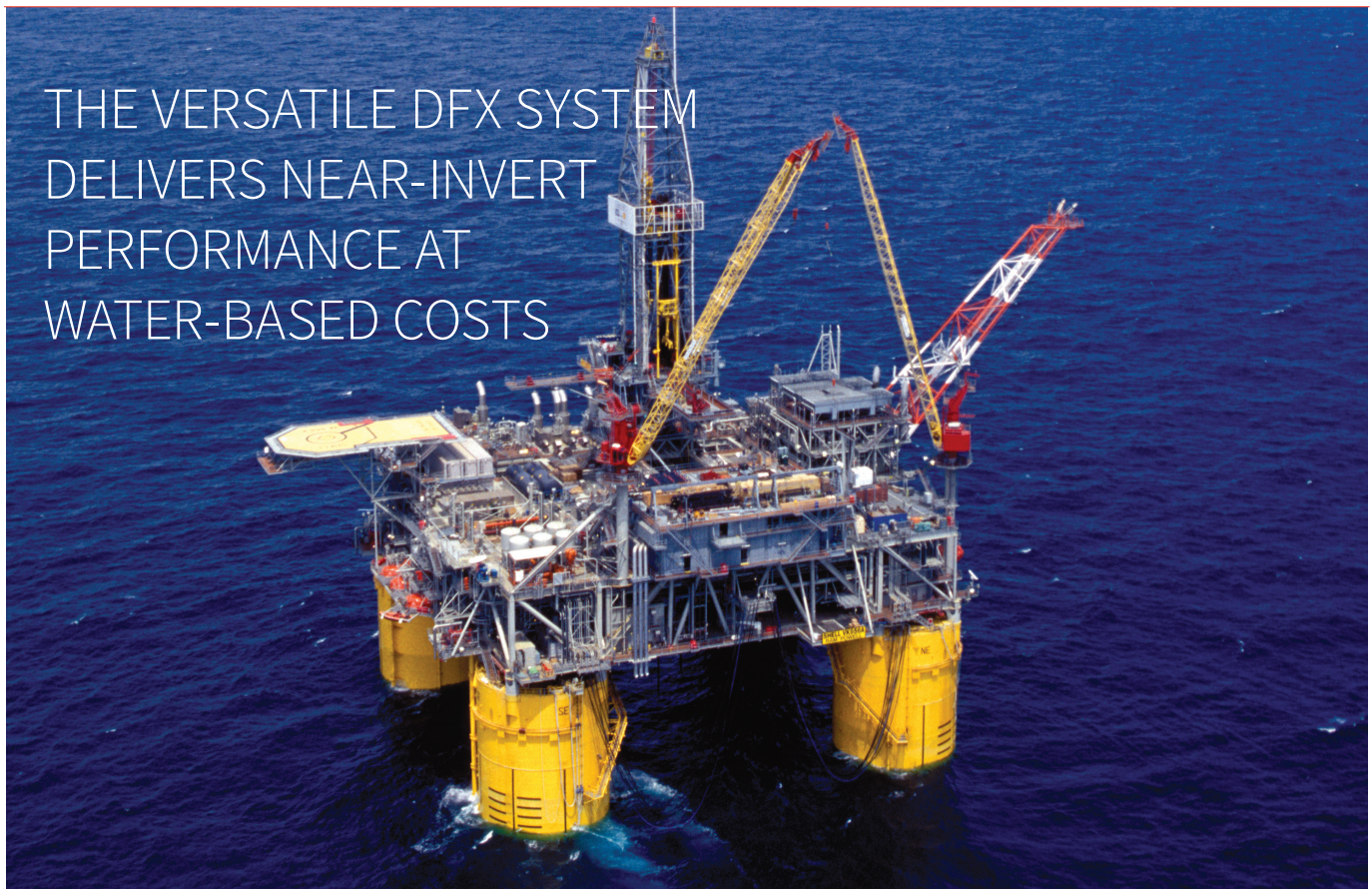


## DFX™ High-Performance Water-based Drilling Fluid System



THE VERSATILE DFX SYSTEM  
DELIVERS NEAR-INVERT  
PERFORMANCE AT  
WATER-BASED COSTS

NOV FluidControl's DFX high-performance water-based drilling fluid system effectively delivers what the industry has long sought: An aqueous-base system that approaches the performance characteristics of a premium invert emulsion drilling fluid without the associated economic, environmental and logistical constraints.

In the most demanding deepwater, shelf and onshore applications, the highly inhibitive and ultra-versatile DFX system consistently provides a stable wellbore and does so with inhibition, lubricity and rates of penetration (ROP) strikingly similar to that of an oil or synthetic-base drilling fluid, and at a fraction of the costs. At the same time, the patented DFX system gives you the environmental and related economic advantages intrinsic to a water-based drilling fluid.

The heart of the DFX water-based drilling fluid is a uniquely engineered, three-component surfactant package easily customized to meet any borehole condition. The novel and environmentally acceptable additives comprising the DFX surfactant package generate the performance measures essential for a true high-performance water-based drilling fluid:

- ROP: Low molecular weight synthetic oil with ROP enhancing surfactant
- Lubricity: Sulfonated tall oil with ester-blend friction reducer
- Inhibition: Anti-accretion agent that is specially blended and tailored for expected downhole conditions

What's more, the DFX system delivers the optimum drilling efficiencies you would expect only from an invert emulsion fluid, but without the associated waste management limitations and costs.

### Applications

- Deepwater and sub-salt wells
- Deep shelf wells
- Unconventional shale and other land wells
- Sensitive ecosystems
- High-angle well paths
- Drilling zones prone to lost circulation
- Cost-intensive environments
- Logistically-challenged areas

### Features

- Uniquely engineered, three-component surfactant package
- Environmentally acceptable additives
- Acid gas tolerant
- Fresh water to saturated salt base fluids
- Easily customized for borehole conditions
- Meets all discharge requirements
- Low coefficient of friction values
- Patented technology
- Wide density, temperature range
- Requires no special handling

### Benefits

- Near-OBM ROP
- Reduces drilling, waste disposal costs
- Enhances environmental profile
- Minimizes NPT
- Remains stable at elevated temperatures
- Superior inhibition
- Promotes wellbore stability
- Easy to formulate, maintain
- Lessens logistical constraints
- Delivers high lubricity to reduce torque and drag
- Ideal for range of applications
- Reduces environmental liability