BARADRIL-N® Acid Soluble Drill-in Fluid System

OVERVIEW

The BARADRIL-N® system is one of the specialized fluid systems within Baroid’s DRIL-N® fluids family. It is specifically formulated and designed for drilling, completion, or workover operations in horizontal and vertical wells. With properly-sized acid soluble bridging material, the clay-free BARADRIL-N system helps provide non-damaging fluid for drilling the sensitive reservoir section. The system is formulated with freshwater or brine, thermally-stable polymers for suspension and filtration control, and sized ground marble (BARACARB®) bridging particles. The BARADRIL-N system is a custom designed, non-damaging drill-in fluid for applications where fluid-loss control and formation damage are of primary concern. The BARADRIL-N system can be formulated with freshwater, seawater, potassium chloride, sodium chloride, sodium bromide solutions, and sodium or potassium or cesium formate.

CHALLENGE

When drilling into the reservoir, a primary concern is formation damage caused by foreign particle invasion and plugging, formation clay dispersion and migration, chemically incompatible fluids, and fluid invasion. Formation damage, if not addressed, can lead to lost circulation, wellbore stability issues, and ultimately, decreased production.

RETURN PERMEABILITY

The filter cake left behind by BARADRIL-N drill-in fluid does not hinder or slow reservoir clean up procedures, and the filter cake is easily removed with N-FLOW™ filter cake breakers.

FEATURES

» Acid soluble and non-damaging to producing formations
» Provides effective fluid-loss control while drilling targeted permeable formations
» Provides excellent lubricating characteristics
» Stable rheology
» Quick cleanup
» Weighted or unweighted, depending on application
» Density range of 8.6 – 14.5 lb/gal (1,031 – 1,738 kg/m³)

BENEFITS

» Helps increase wellbore stability
» Enables high penetration rates
» Easy to prepare and maintain in the field
» Customized per well, based on core samples
» Helps increase production rates
PARTICLE SIZE DISTRIBUTION

The bridging material in the BARADRIL-N system can be customized using Baroid’s DFG™ modeling software for selecting the pore throat size. This custom-sizing capability minimizes particle invasion and fluid loss to the producing formation. The chart on the right displays the particle size distribution of the BARACARB bridging material that can be used in the BARADRIL-N system.

![Particle Size Distribution Chart](chart.png)