

Drill-In Fluids

Reservoir-Friendly Solutions



NEWPARK
FLUIDS SYSTEMS

Maximize Productivity, Minimize Damage

Formation damage begins as soon as reservoir drilling commences. Therefore, reservoir drill-in fluids are critical to minimizing formation damage while maximizing reservoir productivity.

Newpark offers a comprehensive range of high-performance reservoir drill-in fluids ideally suited to the many demands associated with complex open-hole completions. Each Newpark reservoir drill-in fluid is specifically engineered and optimized based on Newpark's thorough understanding of reservoir fluids, formation geology, completion type and other considerations.

Created specifically for reservoir applications, Newpark reservoir drill-in fluids include both water and invert emulsion options, providing ultra-low permeability and easy filter cake removal. Designed to maintain a balance between drilling and subsequent reservoir requirements in both producer and injector applications, these proven fluids are adaptable to a host of challenging project conditions.

A full suite of highly compatible filter cake breaker systems are part of Newpark's total fluids solution strategy. Whether it's a water or invert emulsion filter cake, Newpark can deliver the necessary system to provide uniform and efficient filter cake removal across the entire wellbore.

Newpark RDF Solutions: Meticulously Engineered to Deliver

Reservoir Focused Solutions

The transition from the drilling phase to the completion phase is viewed as a discrete operation requiring specialized expertise as the reservoir is prepared for completion. Newpark is focused on ensuring that the reservoir interval is drilled and completed efficiently while maximizing performance.

Open-hole completions have become more challenging as applications become more complex and chemically sensitive. The restrictive nature of these new completions requires a more precise method of removing filter cakes.

The Newpark family of reservoir drill-in fluids and breaker systems works in unison to provide comprehensive and predictable behavior throughout the completion process.

Newpark's comprehensive suite of reservoir drill-in fluids is made up of high-performance water or invert emulsion systems designed to address specific project conditions. Newpark's range of systems include:

CleanDrill™

A flexible, minimally-damaging monovalent brine-based reservoir drill-in fluid, CleanDrill can be optimized for a specific application capable of delivering high performance in a wide variety of operations.

The system is comprised of a number of products, each of which is acid-soluble, allowing for relatively simple filter cake cleanup through chemical treatment.

CleanDrill™ HD

To overcome the inherent incompatibilities biopolymers have in divalent brines, Newpark offers a unique, multi-functional additive providing both viscosity and filtration control. CleanDrill HD was developed in conjunction with an optimized bridging package. The low-solids formulation provides the necessary fluid-loss control while maintaining an easily removable filter cake.



Port Fourchon I facility is designed to handle simultaneous loading and unloading operations.

The return permeameter utilized for testing of fluid/formation interactions.





Resolution™

A minimally damaging, invert emulsion reservoir drill-in fluid, Resolution RDF is designed to meet the drilling performance of a conventional invert emulsion fluid while mitigating formation damage mechanisms such as oil-wetting, emulsion blocking and solids plugging.

Breaker Systems

As open-hole completions increase globally, breaker systems have become a critical during well completion. The potential for maximizing productivity via uniform filter cake removal is becoming increasingly recognized.

Newpark offers a complete set of highly effective filter cake clean-up solutions for both water-based and invert emulsion drill-in fluid filter cakes based on the in-situ production of organic acid.

Additionally, specific polymer breaking enzymes or micro-emulsifying surfactants are utilized dependent upon the nature of the filter cake to be removed.

Post-test analysis of formation sample.

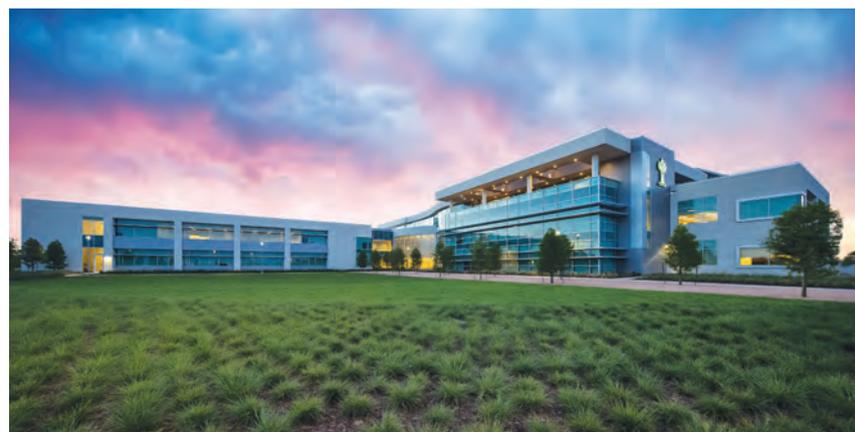


Laboratory Focused

To be able to provide an optimized solution, there must be a laboratory capable of performing the necessary tests. The Newpark Reservoir and Completions Fluids Lab has the following capabilities to support this effort:

- Reservoir drill-in fluid and breaker screening
- M9100 Return Permeameter for reservoir drill-in fluid and breaker testing
- VHX6000 Digital Microscope to determine damage mechanism
- Routine Core Analysis
 - Air Permeability
 - Helium Porosimeter
 - Sample coring
- Access to the Newpark Laboratory Network

Newpark's Technology Center in Katy, TX.





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