



# BaraXcel™-N HP NAF and BARACARB® LCM Enable Operator to Avoid Sticking Issues in Depleted Sands

## COMBO SOLUTION SAVES DAYS OF RIG TIME, VALUED AT MILLIONS OF DOLLARS

GULF OF MEXICO

### CHALLENGE

An operator needed a solution for a production interval containing depleted sands that were causing differential sticking of the drillstring and casing in an offset well

### SOLUTION

BaraXcel™-N HP NAF system combined with BARACARB® sized LCM background treatment to help seal pore openings and minimize filter cake buildup

### RESULTS

Production zone was drilled and casing was set and cemented with zero issues, saving 7–14 days of rig time compared to the offset

### OVERVIEW

An operator in deepwater Gulf of Mexico needed to drill through depleted sands in the production zone by using a 13.6-lb/gal BaraXcel™-N high-performance (HP) non-aqueous fluid (NAF) system, which would result in a significant overbalance of 7,450 psi.

A previous well had experienced differentially stuck pipe in this interval, resulting in a costly unplanned sidetrack. The goal was to reach the interval total depth and set production casing without sticking the drillstring or the casing.

**REDUCED  
7–14 DAYS  
OF RIG TIME**

### SOLUTION

The Baroid team recommended treating the active BaraXcel-N HP NAF system with BARACARB® 5 and 25 sized ground marble lost circulation material (LCM). The BaraXcel-N system's rheological properties help minimize the risk of lost circulation, and this system had performed well for the operator on numerous preceding wells. A background treatment with BARACARB LCM was formulated with a variable particle size distribution that would match the depleted sand pore openings. BARACARB LCM is acid soluble and can be removed after perforating the pay zone.

Adding BARACARB LCM to the active fluid system further decreased the already low seepage losses seen with BaraXcel-N HP NAF, and helped reduce filtercake buildup across these sands. As a result, there were no issues with sticking of the drillstring, logging tools, or casing. No mud losses were observed during this interval.

Lost Circulation Material	Concentration
BARACARB® 5	10 lb/bbl
BARACARB 25	10 lb/bbl



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### RESULTS

Stuck pipe is a very costly problem that includes charges for fishing, lost downhole tools, and rig time needed to drill a sidetrack. Avoiding issues related to the depleted sands saved at least 7–14 days on this operation, where costs were approximately USD 1 million per day. The operator was also able to minimize the volume of BaraXcel-N HP NAF lost to seepage. The production liner was set and cemented at the planned depth without any remedial work.

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