



Halliburton CleanWell® Solutions

**ADVANCE YOUR CLEANOUT SOLUTION,
ENHANCE YOUR PRODUCTION**

HALLIBURTON



CleanWell® Solutions

MAXIMIZE EFFICIENCY & ASSET VALUE

Our integrated, engineered wellbore cleanout solution effectively cleans your well, preparing it for completion and achieving customer-specified requirements while minimizing rig time and waste fluids.

OPTIMIZED DESIGN & SOLUTION

Halliburton CleanWell® Solutions addresses the entire operation. We gather and analyze well and installation data to help create a custom solution comprising spacers and pills, along with a surface filtration system. Our mechanical cleanup tool configuration is selected based on each well's unique design. In conjunction with the customized pill and spacer design, this configuration provides operators with a tailored solution to maximize debris recovery.

By incorporating our proven and systematic processes, we deliver an optimum solution to maximize the efficiency of your cleanup operation – along with your completion – to help you reduce operating costs and minimize non-productive time.

WORLD-CLASS PERFORMANCE

By collaborating with customers every step of the way, we are able to continuously refine our software modeling systems to identify risks and mitigate potential unscheduled events. Being one step ahead means quick response times on the rig, along with increased production and reduced costs.

It doesn't stop there, though. Through our post-job modeling software, we provide a well report that details all of the key fluids, operations, and equipment data. Recognizing the achievements of each task and identifying lessons learned help us ensure that we are meeting and exceeding the key performance indicators for each project.

WHAT SETS US APART

Not only do CleanWell® tools allow for a single trip, but our latest generation also boasts the largest inner diameter, resulting in optimized hydraulics and debris removal. When coupled with our customized chemistry, the result is an industry-leading cleanout solution. At surface, Halliburton provides custom-built filtration units capable of achieving twice the flow rate of standard systems.

If an issue is ever identified, our problem resolution process helps ensure that the root cause is identified and presented to the customer as soon as possible. Together, we will plan and respond until a solution has been identified and implemented.

An Integrated Approach that Cuts Costs and Risks

Did you know that up to 30% of the non-productive time (NPT) during the well completion phase is directly related to debris left in the wellbore after drilling? Wellbore debris presents a major risk to the well and completion operations, making it imperative to have a robust solution for wellbore cleanup before completing the well. Debris can be a major contributor to incidents, including:

- » Reservoir damage, which can inhibit production and injection rates
- » Failed equipment runs, which can cause delays and NPT
- » Contaminated fluids, which can contribute to lost time and environmental incidents

Halliburton CleanWell® Solutions comprises the latest generation of filtration services, wellbore cleanup fluids, mechanical wellbore cleaning tools, and optimized software modeling to protect production, prolong the life of the well, and help maximize productivity.

**Reduces
NPT
UP TO
30%**



Why Halliburton?

Halliburton CleanWell Solutions effectively cleans your well in preparation for completion. We help customers achieve high standards of wellbore cleanliness while minimizing rig time and waste fluid.

- » Engineering expertise and software
- » Single-trip tool systems
- » Customized suite of BaraKlean® cleanup pills
- » Equipment with flow rates of 30–37 bpm – double the rate available with standard units
- » Integrated design and operations that help provide increased efficiency
- » Customized solutions for well and installation requirements

We help enable a smooth transition from drilling to completion operations by quickly and efficiently executing displacement programs that are designed on sound principles, equipment, tools, and chemical cleaners with proven performance and operation.

Proven Technologies Delivering Results

INTEGRATED WELLBORE CLEANUP SOLUTION HELPS ELIMINATE NON-PRODUCTIVE TIME

CHALLENGES

A major operator in the Middle East was looking for an all-encompassing wellbore cleanup solution for a trial well experiencing static losses in the openhole lateral section. A proven combination of wellbore cleaning tools, chemicals, and filtration services was required so that the operator would not experience additional operational costs and completion delays. Challenges included:

- » Providing a comprehensive solution
- » Maximizing debris recovery
- » Preparing the well for completion without delay

SOLUTION

Halliburton subject matter experts (SMEs) in both wellbore fluids and mechanical cleaning tools developed a customized solution to maximize efficiencies and protect the operator's production targets. This solution included:

- » Mag Tech® magnet and Vali Tech® filter to recover unwanted debris that can damage the wellbore
- » Tailored BaraKlean® chemical pills for casing cleaning
- » Completion Fluid Graphics (CFG™) modeling to optimize fluid hydraulics
- » Twin vessel cartridge units filtered down to 2µm ABS

RESULTS

- » Successfully executed wellbore cleanup, enabling operator to avoid non-productive time and spills
- » Recovered 47 pounds of debris
- » Filtered 8,000 bbl of brine at an average of 10 bpm
- » Achieved less than 0.1 percent total suspended solids and 35 NTU
- » Delivered well on time and on budget



**zero
NPT**

**47 lbs
of debris
recovered**

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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