

Hi-Flow Filtration

Challenge

The primary challenge for a filtration system is efficiently processing the specific size and quantity of particles found in the contaminated fluid. These particles are never of uniform size and distribution, and a range of removal methods may be required on a single job. Filtration is a critical step if we want a well to produce at full potential and remain on line for a long period. Although filtering can be expensive and time-consuming, net production can be increased enough to pay the difference.

The purpose of filtering any fluid is to prevent the downhole contamination of the formation. Contamination reduces production and shortens the productive life of the well. Contamination can occur during perforating, fracturing, acidizing, workover, waterflooding, and gravel packing as well. Any time fluid is put into the well bore with a solid content, no matter how slight, there is a chance of damaging the well.

Overview

Halliburton Baroid's Hi-Flow DE Filtration Units are designed to accelerate filtration operations and reduce costly deepwater rig time. The unit achieves flow rates of 30-37 bpm – double the rate available with standard filtration units. All DE Filtration units are custom-built to process all clear solutions (such as brines or seawater), used for well completion or work over operations. These stackable filtering units are uniquely designed. They can be used alone or when more than one wellsite filter is required, they can be manifolded on a single feed and discharge line. This feature is especially attractive for offshore operations where limited platform space is available.

During the last decade, studies showed that many wells were producing below their calculated potential. Researchers proved that formation damage limited production. Experience shows that filtration prevents much of this formation damage. In some cases overall production can be increased by as much as 10 times in gas wells, and 3 times in oil wells by using qualified filtration services.

The main concerns in the area of filtration of completion/workover fluids are the:

- Size range of the particles
- Quantity of particles

Conclusion

Filtration has evolved from old surface filtering systems with low flow volumes to highly sophisticated systems. Regardless of which system is used, a case for filtering fluids can be made for every completed well, every workover, and every secondary recovery project.

Baroid understands the importance of health, safety, and environmental factors. All of our units can be stacked to address deck space restraints; and stacked units are equipped with a safety handrail system. In addition, can help provide a solution that meets or exceeds environmental regulations no matter where you drill. Many HSE risks have been reduced or eliminated. Hoses are manifolded to a collection area and organized to minimize trip-and-fall hazards. The hoses utilize a Figure 100 Hammer Union with fitted hose halters (whip checks) for additional safety.



Benefits and Features

Baroid's DE Filtration unit offers an efficient solution to customer challenges and bring added value to drilling operations:

High Flow Rate (Up to 38 bbl/min)	⇒	Reduce Rig Circulating Time
Stackable Unit	⇒	Compact Footprint
Bulk DE System	⇒	Reduce Dusting HSE Hazard
Digital Flow Meter	⇒	Maintain Optimal Filtration Rate
Deep Containment Pan	⇒	Minimize Wash Cycle Time
Central Hard Pipe Manifold	⇒	Reduce Trip Hazard
Organized hose collection	⇒	Reduced Trips and Falls Risk
Figure 100 Hammer Unions	⇒	Higher Pressure Reliability
Whip Check Restraints	⇒	Reduced HSE Risk
Back-up Hydraulic System	⇒	Increased Reliability

Applications

Baroid's DE Filtration units can serve the following uses:

- The mechanical removing of solids in Completion and Workover fluids
- A high volume and high rate filtration system that fits all deepwater applications

Additionally, this unit offers a customizable design layout suitable for side by side or end to end configurations.



Side by side rig-up
(30' x 30')



End to end rig-up
(15' x 45')

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