

Gulf of Mexico

Riser Vali Tech® filter adds value during deepwater wellbore cleanout operations

Operator recovers 673 lb of debris in single trip

CHALLENGE

- Wellhead restrictions create limitations for riser tools in the deepwater market

SOLUTION

- Deploy the Riser Vali Tech® filter to fit through restrictions near the surface while retaining the capability for contact with the riser ID

RESULT

- Operator recovered 673 lb of debris in single, short displacement run using Riser Vali Tech® filter

Overview

To address challenges with the increased number of wellhead restrictions in deepwater wells and difficulties with hydraulic debris removal in the riser, CleanWell® Technology developed the Riser Vali Tech® filter. It is equipped with a flexible fluid interrupter sleeve (FIS) designed to fit through restrictions near the surface while retaining the capability for contact with the riser internal diameter (ID). With the high operational costs associated with deepwater rigs, the addition of the Riser Vali Tech filter allows the use of riser tools in short trips to verify displacement and debris recovery and limit the amount of string that must be tripped.

Challenge

Many deepwater wells present restrictions in the form of managed pressure drilling (MPD) units and rotating control devices (RCDs) in the wellhead, which can hinder effective wellbore cleanout. Tools must have a hard OD that is smaller than this restriction; however, using standard casing tools alone can lengthen trip times to verify well cleanliness and debris recovery.



As demonstrated, the Riser Vali Tech® filter provides unmatched performance for downhole debris recovery in deepwater applications.

Solution

The Riser Vali Tech filter provides the most benefit during riser cleanouts with high cross-sectional areas and low annular velocities. The flexible FIS design allows the Riser Vali Tech filter to pass through restrictions and then reengage with the riser ID to divert flow through the collection chamber during filter mode. This enables short displacement runs and allows the riser string to be pulled to verify displacement and debris recovery without pulling the casing tools.

CASE STUDY

Result

During these short displacement trips, the wellbore cleanout string is pulled out of hole (POOH) until the riser cleaning tools reach the surface. At this point, the remaining capacity of the Riser Vali Tech® filter is noted and debris is collected. If the capacity of the Riser Vali Tech filter is deemed below the threshold for a clean well, jetting tools are added to the string along with the riser tools and tripped back in hole for final cleanout and displacement.

During such displacement trips, the Riser Vali Tech filter has collected as much as 673 lb of debris, while final displacements runs have resulted in much more reasonable totals, which highlights the true value this tool provides.



Debris recovery with Riser Vali Tech® filter

Displacement debris report

RUN	TOOL NAME	TOOL SIZE (IN.)	RECOVERY (LB)	PRE-FILTER TUBE MEASUREMENT (IN.)	POST-FILTER TUBE MEASUREMENT (IN.)	VALITECH® PRECENTAGE FULL	DEBRIS DESCRIPTION
Short Trip Disp Run 1	Riser Vali Tech	18.250	673	93.12	31.12	65	Barite
	Riser Mag Tech	16.000	86	n/a	n/a	n/a	Metal Fines
Weight Recovered			759.00				
Final Disp Run 2	Riser Vali Tech	18.250	44	93.12	n/a	n/a	CaBr and Sand
	Riser Mag Tech	16.00	90	n/a	n/a	n/a	Metal Fines
	Power Mag	10.750	130	n/a	n/a	n/a	Metal Fines
	Vali Tech	10.750	0	93.5	93.5	0	Empty
	Power Mag	9.875	98	n/a	n/a	n/a	Metal Fines
	Vali Tech	9.875	0	93.5	93.5	0	Empty
Weight Recovered			362.00				
Total Weight Recovered			1121.00				

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