

# CETCO

ENERGY SERVICES

A Minerals Technologies Company

## SUCCESS STORY

Well Fluid Management  
Water Treatment & Filtration  
Solids Management Systems & Technologies



# CLEAR SOLUTIONS for complex fluids

Well cleanup package defends multi billion dollar investment from solids production and emulsified rag layer fluid



### CHALLENGE

- Production of emulsified solids and completion fluid at start-up presented a challenge to the client



### SOLUTION

- Engineer a production rated flow path that allows the removal of the undesirables constituents from the fluid stream



### RESULTS

- CETCO Energy Services (CETCO), enabled clean, uninhibited production of the single train 125kbd production train

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# Well Cleanup Package defends multi billion dollar investment from solids production and emulsified rag layer fluid

## CHALLENGE

During the planning cycle, start-up and commissioning of a floating production storage and offloading (FPSO), operating offshore Guyana, a challenge was uncovered by the operator's start-up team. That challenge was the increased risk for sand, solids, and emulsified completion fluid production to the FPSO. The risk this challenge presented was intensified by the fact that the facility production was a singular train setup for 125kbd. Redundancy in the system was not available if solids and emulsion began blocking flow-paths or vessels. While the FPSO had slops and bad oil tankage, the only flow path to these vessels was through the production system.

## CETCO SOLUTION

CETCO collaborated with the operator to develop a temporary production flow path to divert the bulk of the solids and emulsified fluids out of the permanent production stream at the earliest available junction. CETCO engineered and designed a package using available rental units as well as building new vessels. The Desanding Package utilized cyclonic desanding, integral accumulation, sand bagging tanks, an HP separator, and filter separators. This solution offered bulk solids separation and backup by absolute filters. The package was engineered by CETCO to fit in the available footprint and deck loading of the Destiny FPSO clear deck area. CETCO also engineered the system to be API 14c compliant and all electric equipment integrated into the system was IECEX certified. CETCO operated the system for 7 months. During the operation CETCO captured a significant amount of solids and completion fluid which would have been harmful to the permanent process equipment.

## RESULTS

CETCO designed and delivered this de-sanding package in time for the operator to bring their wells to production on schedule and provided protection to the FPSO production system. The detailed advanced planning for rig-up and scheduling assessments allowed the entire package to be installed within the limited window available. The limited install window was due to space and POB availability constraints. The package was able to remove over 2 tons of solids and 600 bbls of completion fluid from the 125kbd production train. This was a huge cost savings to the client as a shut in would have been necessary to clean out vessels had this sludge settled in their tanks and valves.

