

Well Testing  
Well Intervention and Flowback Applications  
Custom Designed Well Test Packages

# CLEAR SOLUTIONS for complex fluids

## Deepwater Facility Well Test Intervention Flowback Package - Production Drilling Quarters Integration



### CHALLENGE

- Customer had ~2,100 ft2 of available deck space for CETCO to provide versatility and the production interface for multiple flow paths (7). Required flare relief, gas blowby and venting while sourcing alternative heat/cooling media from Deepwater Facility



### SOLUTION

- Fabricated custom equipment and piping to enable maximum throughput based off PSH set points and PSV relief capacity



### RESULTS

- Prevented production shut-ins, optimized fluid recovery rate during production logging, and approval form BSEE for FSS Permit Variance Request

## SUCCESS STORY

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## CHALLENGE

The Customer approached CETCO to safely and effectively recover well intervention fluids during acid stims/flowbacks, production logging, perforation debris recovery and sand consolidation. The requirements were to minimize impact to the reservoir and Deepwater Facility infrastructure, integrate with production tie point, while adhering to a compact package design with a limited deck-space available (~2,100 ft<sup>2</sup>). The equipment was to be MR0-175 NACE Certified/Rated and adhering to 30 CFR subpart H submittal to BSEE. CETCO also needed to provide versatility for multiple production interface flow paths (7).

## CETCO SOLUTION

CETCO designed a multi-functional API RP 14C and NACE Certified Deepwater Intervention Flowback Package to recover well intervention fluids while maximizing fluid rates (~18,000 BPD), fluid recovery and offloading rates. CETCO utilized existing permanent piping to minimize hammer union connections and maximize the limited deck space available, while also using the existing produced water for heating/cooling media. The compact package included heat exchanger, HP & LP separator, vertical storage tanks, and electric/pneumatic transfer pumps, with P.E. Stamped Safety Flow Diagram and System Relief Study.

## RESULTS

The Deepwater Well Test Intervention Flowback Package increased the reservoir Productivity Index, prevented production shut-ins, and optimized the fluid recovery rate during Production Logging with an approved BSEE FSS Permit Variance Request.

The equipment was designed to receive fluid from 7 different flow paths utilizing the Deepwater Facility existing permanent piping:

<b>Flow Path A</b>	Surface Flow Tree to Well Test Intervention Flowback Package
<b>Flow Path A Bypass</b>	Surface Flow Tree to atmospheric 300 bbl tanks
<b>Flow Path B</b>	Surface Flow Tree to Deepwater Facility High Pressure Test Separator
<b>Flow Path C</b>	Aquas fluid from Deepwater Facility High Pressure Test Separator to Well Test Intervention Flowback Package
<b>Flow Path D</b>	Surface Flow Tree and Aquas fluid to Well Test Intervention Flowback Package
<b>Flow Path E</b>	Deepwater Facility Recovered Oil Tanks to atmospheric 300 bbl tanks or overboard to an OSV
<b>Flow Path F</b>	Surface Flow Tree bleed off to atmospheric 300 bbl tanks <ul style="list-style-type: none"><li>• Prevented production shut-ins</li><li>• Optimized fluid recover rate during Production Logging</li><li>• Approved BSEE FSS Permit Variance Request</li></ul>

