

We enabled safe operations
of a two well intervention program
onboard a floating spar

Project: Direct Line Compensator in the Gulf of Mexico

Background

From December 28, 2015 through February 5, 2016, a customer's spar was located in the Gulf of Mexico. The operator's main objective was to successfully clean up paraffin and scale in two wells, requiring compensation and intervention equipment rigged up from well-to-well that would account for high and low tide cycle variations, enabling safe working operations.

To ensure their objective was safely met, the solution would need to be able to increase, decrease and maintain preset level of drill string weight by controlling the Direct Line Compensator (DLC) pressure. The operator also needed beams and clamps to support the coiled tubing reel and help with deck weight distribution and a swing arm crane for slickline and e-line operations.



We were able to provide a solution that minimized weight and provided redundant safety measures in the event of a failure.

Solution

Devin, a part of Intervention and Stimulation Equipment Business Unit, was selected to provide the needed products and services to the customer for this project. Our team was able to safely install the DLC equipment package within the rig up window. Also provided was our N₂ compensation skid, as part of the DLC package which accounted for all tidal movements and inclement weather by maintaining a constant hook height during vessel movement.

By thoroughly analyzing this project, we were able to provide a solution that minimized the weight of added intervention equipment and completion string in the existing completion, providing redundant safety measures in the event of an N₂ failure and during normal well intervention operations. A winch and swing arm crane were also provided.

Our team safely transferred the DLC/CTLF package and other well intervention equipment while skidding the spar 55' to the next well location in the field.

Devin products and services provided included:

- Direct Line Compensator (DLC)
- 350 ton coiled tubing lift frame (CTLF)
- Bails
- Elevator
- Coiled tubing Mini-track and adapter for injector head
- Swing arm crane
- CTLF stabilizer
- Beams and clamps
- Engineering drawings
- Qualified compensation specialists and technicians

Results

- Reduced conventional equipment rig up time by providing procedures and engineering drawings for equipment space-outs
- Transferred CTLF intervention equipment from well A-6 to well A-7, reducing rig up/rig down time by 36 hours, saving the operator 1 ½ days rig cost.
- Beams provided coil tubing reel weight distribution on pipe deck, and our custom clamps locked all equipment loads to the deck.
- Safely flowed back well A-7 and helped bring A-10 well online to production facility
- DLC provided primary means of compensation support for entire spar on both well operations.
- Successfully compensated the spar for a total 40 days latched to sea bottom