

Paradigm Flow Flexi-Coil System

Delivering Outstanding Riser Blockage Removal Services

Overview

An Operator in West Africa had a 490m long sand blockage in a 6" production riser back to an FPSO. The client was planning a conventional cleaning campaign using a drilling rig and standard coil tubing, but with estimated intervention costs reaching over \$30 million other options were required.

Challenge

The only rig up area available was on the port side of the vessel, with the riser on the starboard side, and no equipment could be rigged up above the riser due to lack of space at this entry point.

Previous experience dictated that the riser would have to be removed and hung underneath a nearby drilling rig to allow conventional intervention. An operation which would have taken many weeks of drilling rig time and required a shutdown in production due to drilling rig proximity to the flare.

Solution

Paradigm's Flexi-Coil is an extremely mobile system which allowed the equipment to be rigged up without crane support and a flexible lubricator run to the tie-in point.

Result

- Over 8m³ of sand was removed from the riser
- Once the riser was cleaned over 5000bbls/day flow was demonstrated
- Client was able to return to production six months earlier than originally planned

Value to client

- The client saved approx. \$25 million using Paradigm technology



The Flexi-Coil system has been designed with neutrally buoyant flexible pipe, patented cleaning heads and a patented mobile design to allow challenging interventions to be performed.

Main Features / Benefits

- Extremely mobile equipment
- Flexible neutrally buoyant pipe can pass 1000° corners
- Extreme reach 1000° of corners then 10km reach
- Removal of full and partial flow restrictions – in paraffin, hydrate, asphaltene. Sand and scale
- Back to base metal cleaning for inline inspection on risers
- Riser-base gas lift for hydrate remediation and artificial lift
- Flowline decommissioning and plugging



Image of some of the sand that was removed from the riser.