

CASE STUDY

Successful ERD Run and Liner Screen Protection Using Volant Crimped HydroFORM® Centralizers

The Challenge

- Enable a US based Operator to reach target depth during challenging liner running conditions in offshore ERD horizontal wells using surface rotation to break friction between the wire-wrapped screen liner string and well bore during installation.

The Objective

- Deliver a structurally robust centralizer solution capable of withstanding downhole side loads and protecting production liner screen during running operations, for an 8-well campaign on an offshore platform.
- Work with the direct-wire-wrap screen manufacturer to efficiently affix mid- and end-joint centralizers at the right time in its manufacturing workflow.

The Delivery

- Volant's HydroFORM® crimped centralizers were selected as a robust solution that could be readily attached to the screen base pipe as part of the screen manufacturing process and provide superior rotational running performance if downhole obstructions were encountered.
- The centralizers were affixed to the pipe at mid-joint and field-end pin locations to provide sufficient standoff in the hole, keeping the screened section from contacting the borehole wall and reducing overall running friction when the string is rotated. Mid-joint centralizers were flanked by screened sections.
- Centralizer installation was completed using Volant's automated crimping system and was coordinated with the screen manufacturer in the Houston area, leading to a field-ready product that could be shipped to the field location and installed on Operator's drilling and completion schedule. Digital measurements were taken to confirm the effectiveness of each crimp and QA/QC records were provided to the Operator.

The Value

- Volant's crimped centralizer solution enabled the Operator to receive a field-ready screened liner string with built-in centralization that was optimized for ERD running and that could be rotated with confidence.
- Crimped centralizers enabled maximum advantage of applied surface rotation applied by the rig, transferring more torque and axial load to the obstructed region of the well than would have occurred with floating centralizers.
- The financial advantages of reduced NPT and increased confidence in screen protection and running performance far exceeded the incremental costs between commodity floating centralizers and Volant's crimped centralizer solution.



Doing more with less.

Highlights

- 8 wells in Dos Cuadras Offshore Oil Field
- 4.5" Wire-Wrapped Screens in 6-3/4" hole
- ERD wells with horizontal reach to vertical depth ratios ranging from 1:1 to 3.5:1

Technology

- 4.5" X 6" Crimped HydroFORM centralizers
- Automated crimping technology
- TRUE Analysis
- VolantRED
- Consulting Engineering

