

Case Study

Packers Plus completes a best-in-field well in the Black Sea

INTERNATIONAL, ROMANIA
STACKFRAC HD SYSTEM

Background

The Lebada Vest field is situated approximately 95 km offshore from Constanta, Romania. The zone of interest is 50 to 60% limestone laminated with streaks of permeability ranging from 0.1 to 2 mD and porosity between 15 and 22%. The reservoir is also situated close to an undesirable gas cap. The largest oil and gas producer in southeast Europe had a horizontal well in Lebada Vest which they wanted to multi-stage stimulate without fracturing into the gas cap.



Challenge

Because of the high costs inherent to offshore wells, the main focus for completing these wells is to increase operational efficiency to minimize the time required for stimulation. Previously, the Operator had completed their wells with cemented perforated liners and polymerbased, conventional fracture fluids prepared with fresh water. The latter required that the treatment boat return to port after each stimulation because the fracture fluid had to be batch-mixed into the boat tanks at the dock. This process required an average of three days for each fracture treatment.

Solution

After evaluating all completion options, the Operator chose to run a 3-stage open hole Packers Plus StackFRAC® system to gain the time and cost advantages from the single, continuous stimulation operation. A non-polymer-based fracturing fluid allowed for mixture with seawater instead of freshwater. Additionally, due to the lack of a dedicated treatment boat, a supply boat was modified to hold land-based fracture equipment.

Results

The 3-stage stimulation was executed in one day with eight hours of pump time versus an estimated nine days for a conventional cemented liner “plug and perf” completion. The change in fracturing fluid as well as supply boat modifications negated the need to return to shore after each stage and shaved 12 days off of the operation.

Ultimately, the Operator’s goal was to stimulate a part of the reservoir which had not been exploited by using multi-stage fracturing. The use of Packers Plus proprietary technology enabled this to be an efficient and cost effective process. After treatment, the well became the record producer in the Black Sea and its stabilized production rate was 2.5 times the best offset well in Lebada Vest completed with conventional methods. Because of this success, the Operator has continued to use the Packers Plus StackFRAC system in their Black Sea offshore wells.