FLEXPump series pump increased ESP system run time 98%

An operator in California has a well that encountered sand and scale in low-flow conditions. The operator wanted to reduce operating expenses and increase electrical submersible pumping (ESP) system run life in this challenging environment. The previous nine ESP system installations averaged 220 days run life. The operator approached Baker Hughes, a GE company (BHGE), for an alternative ESP solution.

After limited success with radial-flow pumps, engineers from BHGE decided to install an ESP system with a FLEXPump™ series pump. The 400FLEXPump10 pump provides operational flexibility with thrust balancing technology in lower-flow applications. This pump operates efficiently in flow ranges from 275 to 1,625 barrels per day. This operator’s well had an average flow rate of 375 BFPD.

The ESP system with a 400FLEXPump10 pump operated with increased efficiency and consumed less power than previous installations. The improved efficiency resulted in OPEX savings due to decreased power consumption.

The pump’s stage openings are 25% wider than radial stages for the same flow range. This reduced pump plugging and eliminated ESP system change outs, which provided additional OPEX savings.

The operator was pleased with the ESP system’s success and now has more than 40 systems featuring 400FLEXPump10 pumps in their field.

Challenges
- Operator’s well had history of gas, sand, and scale in the production fluid
- Previous nine ESP system installations failed due to wellbore-related sand and scale issues and low-flow rates

Results
- Workover rig costs were eliminated
- Increased run time 98% over previous average 220-day run time

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