

# Rod-Lift Solutions, Maximizer® Pumping Units

## Reduced OPEX 16% and Workover Costs 75% within Failure-Prone, 100-Well ESP Asset

### Objectives

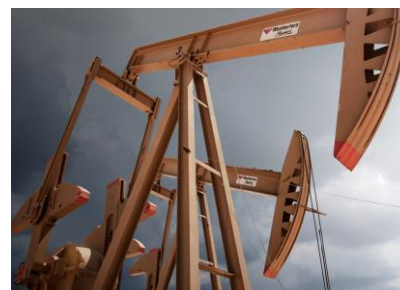
- Mitigate frequent ESP failures and related operating costs for 100 wells in severe-service well environment with high corrosion and slugging. Each was producing between 150 to 300 B/D and struggling with high gas-to-oil ratios (GORs), which lead to ESP motor failures and multiple workovers per year at a cost of \$35K and two weeks of downtime each.

### Our Approach

- A Weatherford artificial-lift solutions team was deployed to the operator's locations for in-depth collaboration and thorough review of their lift-strategy needs. The team revealed misapplications of the ESP technology that were exasperated by the reservoir's gas-production ratios. Weatherford advised switching to high-volume rod-lift to better accommodate the reservoir production potential and high GORs. Recommendations included Maximizer III surface pumping units coupled with KDP™ heavy-load sucker rods and King Cobra® severe-service rod guides. This combination would accommodate the operator's production needs while dramatically reducing failures and downtime. The operator agreed to a 90-day, two-well test-pilot program featuring KPI comparisons.
- The team deployed the rod-lift solutions for the two wells. During the 90-day trial, the rod-lift solution consistently increased production by 11% and eliminated workovers, reducing operations costs by 16 percent.
- Prior to deploying the remaining 98 wells, the asset acquired new ownership. Value statements for the trial program were resubmitted and the new operator agreed to proceed conversion of the asset's remaining wells at minimum of 5 wells per year.

### Value to Customer

- The artificial-lift solutions team reduced ESP failures by advising that the asset's lift systems were not properly matched with the reservoir characteristics. The team recommended a high-flow rod-lift solution—featuring Maximizer surface pumping units, KDP heavy-load sucker rods, and King Cobra severe-service rod guides—increasing production by 11% and reducing operations costs by 16 percent.
- The solution eliminated costly workovers and improved production rates. This proof of value motivated the current operator to apply the rod-lift strategy to the remaining 98 wells in the asset.



Maximizer III surface pumping units paired with KDP heavy-load sucker rods and King Cobra severe-service rod guides replaced ESPs suffering from low-production rates and frequent workovers.

#### LOCATION

Northwest Oklahoma

#### LIFT TYPE

ESP lift

#### WELL TYPE

Very high deviation with side loads

#### WELL DEPTH

5,200 ft (1,585 m)

#### FORMATION

Oklahoma Mississippi Lime

#### PRODUCTS/SERVICES

Artificial Lift Solutions

Maximizer III surface pumping units

KDP heavy-load sucker rods

King Cobra severe-service rod guides

