

Synchro-Smart™ Rodless PCP Increases Production 90%

MEGMEET Rodless PCP System Increases Production with 96% Lower Energy Cost

BENEFITS

- 90% production Increase
- Low profile aesthetics
- 96% reduction In energy cost

WELL BACKGROUND AND CHALLENGES

- Well producing with rod pump
- 1,512 kWh/day power consumption
- Heavy oil in conventional well
- High well fluid viscosity 12.7 cP

RESULTS WITH SYNCHRO-SMART™ RODLESS PCP

- Daily electricity consumption reduced from 1,512 kWh/day to 53 kWh/day
- Daily output increased from 28 to 53 BOPD
- Achieved 365+ days runtime



Synchro-Smart Rodless PCP systems operating adjacent to yet-to-be-replaced pump jack in Dagang Oil-field, Hebei Province, China

Dagang oilfield is located in Northern China, where in February 2017, Megmeet installed the Synchro-Smart™ Rodless PCP system.

This well was initially installed with a rod pump set at 4,600 feet depth that produced on average 28 BOPD. The operator had concerns about the well profitability due to the low production volume and the energy cost for the rod pump system that consumed 1,512 kWh per day. The viscosity of the well fluid was very high at 12.7 centipoise which is suitable for progressive cavity pumps.

The rod pump had been operating for 245 days, when it was replaced with the Synchro-Smart rodless PCP system. The PCP was able to be set at 4,600 ft depth and produce 53 BOPD. Due to the moderate depth of the well, a 2kW permanent magnet motor was selected which reduced the daily energy usage down to 53kWh/day. The submersible motor driven PCP eliminated the large frictional forces acting on the rod string due to the high fluid viscosity, resulting in higher production efficiency. Additionally, the Synchro-Smart permanent magnet motor’s high efficiency contributed to the power consumption reduction. The well production was nearly doubled while the OPEX was reduced by \$27.6K per year in lower electricity.

The Synchro-Smart system has been in operation over one year bringing increased production and higher profitability.

Production (BOPD)

