

# Synchro-Smart™ Rodless PCP Saves Operator 75% In Energy Usage

## MEGMEET Rodless PCP System Replaces ESP In Dagang Oil Field

### BENEFITS

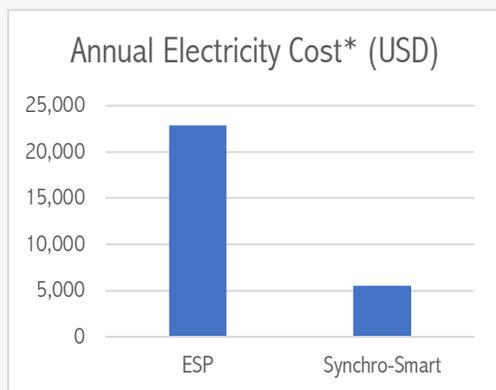
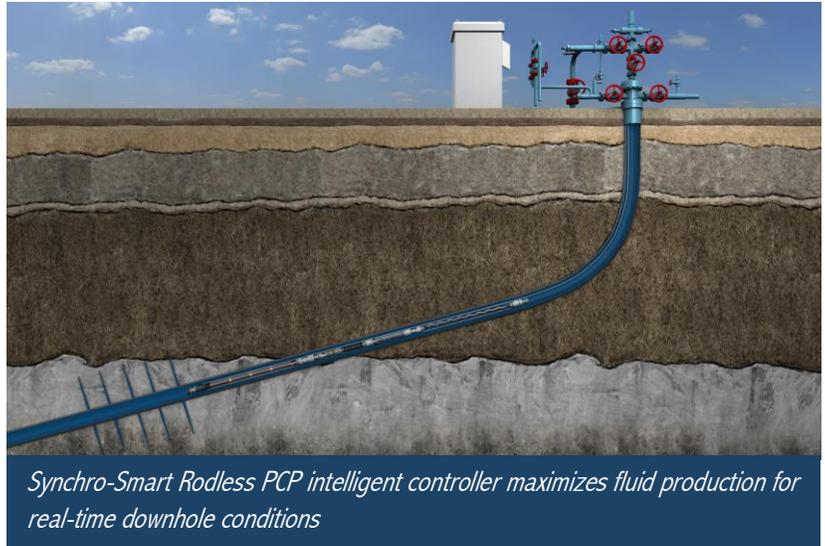
- Reduced OPEX
- Maintain production rate
- Small surface footprint

### WELL BACKGROUND AND CHALLENGES

- Deviated well with 62.5° Inclination
- Producing 158 BOPD with ESP

### RESULTS WITH SYNCHRO-SMART™ RODLESS PCP

- Daily electricity consumption reduced from 1254 kWh per day to 304 kWh per day
- Saved \$17,000 per year electricity cost\*
- Daily output maintained at 160 BOPD
- Achieved 365+ day runtime without maintenance



Dagang field is located in Northern China, where in December 2017, Megmeet installed the Synchro-Smart™ Rodless PCP system to replace an operating ESP.

This well has a 62.5° inclination that was initially installed with an ESP (electric submersible pump) set at 4,750 ft. The well had been operating for 635 days with an average output of 158 BOPD. The output level was below the optimal range for an ESP and alternative artificial lift systems were considered.

The Synchro-Smart system was able to provide a higher efficiency due to the permanent magnet motor technology and the variable speed drive system which optimally controls the pumping system. The 8kW permanent magnet motor was sufficient to maintain the output at 160 BOPD and operate at a sixth of the energy usage. Using only 204kWhr per day, the Synchro-Smart system has saved energy costs by 75%.

The system has been operating for 365 days with no maintenance required. The Synchro-Smart intelligent control system provides the operator with real-time downhole conditions and motor performance data. With remote access from any Internet connected device to the Synchro-Smart system, the pump speed can be set manually, set to maintain constant dynamic fluid level or set to run intermittently for low flow wells. Abnormal operating conditions generate an alert enabling immediate response.

Replacing the ESP with the Synchro-Smart system which is also a similar submersible motor system allowed the site to maintain a small surface footprint, low acoustic noise and eco-friendly operation.

\*assumes electricity cost \$.05 per kWhr