

Case study: Permian Basin, United States

# Integrated production solution doubled production, cut monthly electric costs in half in Permian wells

An operator in the Permian Basin was experiencing the challenges of rapidly declining production from a set of three unconventional wells on gas lift. Their operational costs had become unsustainable.

Baker Hughes worked with the operator to propose a suite of technologies to improve performance and production of the three wells, while also reducing lifting costs.

The wells were converted from gas lift to Centrilift™ Performance Series 400P60 and P60ER high flowrate electrical submersible pump (ESP) systems. Centrilift systems have been designed to improve uptime and lower the cost of operations – even in the most challenging conditions.

The wells were also placed on the ProductionLink™ integrated production optimization platform. ProductionLink uses smart edge technology to analyze data and optimize production continuously and remotely.

As a result, oil production in the three wells increased by 835 BOPD, a 56 percent increase.

Baker Hughes also performed a field trial of the Magnefficient™ permanent magnet motor (PMM) with its new PMM safety module on one of three ESPs to test the efficiency side-by-side with traditional induction ESP motors. The PMM safety module is the industry’s first engineered PMM safety solution, and prevents the ESP pump from spinning the PMM, eliminating voltage generation at surface for safer, simpler operations.

The Magnefficient PMM with the PMM safety module performed flawlessly. The motor also consumed far less electricity, saving the operator approximately \$4,000 USD per month in electric costs alone.

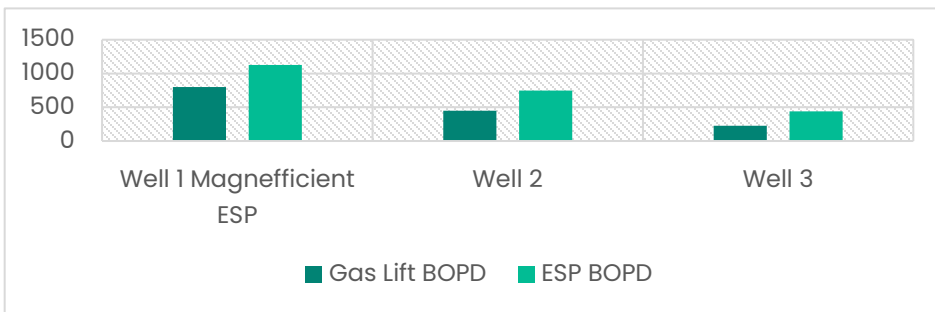
## Challenges

- Rapid decline of production in deep unconventional wells
- High operating costs had become unsustainable
- Declining production due to insufficient lift gas lift systems

## Results

- Increased oil production by 56%
- Analyzed data and optimized production continuously and remotely
- Cut monthly electric costs in half

Integrated Production Solution	
Monthly/Yearly Savings	
<b>835 BOPD production increase over three wells</b>	\$50,000/day USD increase
<b>CENefficient PMM</b>	\$4,000/month USD savings
<b>Projected year one total savings</b>	\$19,700,000 USD



The operator’s three wells experienced a 56 percent increase in production after conversion from gas lift to Baker Hughes Centrilift ESPs. The Magnefficient ESP with the new PMM safety module experienced the highest production increase.