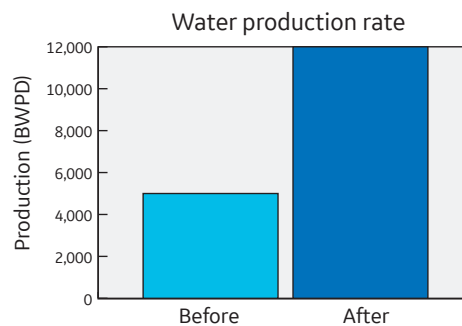


Coordinated ESP and HPump waterflood system doubles water injection and saves \$1.5 million USD in CAPEX

A new waterflood project in Jones County, Mississippi, used an **electrical submersible pumping (ESP) system** from Baker Hughes, a GE company (BHGE), to directly inject water from a source well into an injection well at a rate of 5,000 BWPD. In order to increase field production, the customer needed an additional 7,000 BWPD and was considering drilling a new source well to make up the additional water.

BHGE engineers reviewed the water source well conditions with the customer and determined that a second well would not be required. The ESP on the existing water well was resized to produce 12,000 BWPD while an **HPump™ surface pumping system** was sized and installed to increase the ESP production pressure from 1,000 to 1,400 psi.

This modification gives the system the ability to flood a second injection well located 5,000 ft from the first. By designing the system without the use of a surface tank and incorporating a coordinated control between the ESP and the HPump system, the need for a second source well was eliminated. This saved the operator approximately \$1.5 million USD in drilling costs and \$150,000 USD in annual maintenance costs.



Challenges

- Increased production from 5,000 to 12,000 BWPD
- Doubled production without adding additional wells

Results

- Increased waterflood injection rate 140%, from 5,000 to 12,000 BWPD
- Saved \$1.5 million USD in capital expenditures by eliminating the need for a second water source well
- Saved \$150,000 USD in annual maintenance costs for second water source well