

Maximizing ROE on water injection well

SITUATION

An operator approached Baker Hughes for a solution to optimize water injection to increase oil recovery.

OPERATOR CHALLENGES

- Unable to measure and control the water flow from injector wells into production zones
- Aging wells with well integrity concerns
- Battling a belief that intelligent completions in a mature field would not provide compelling ROI

SOLUTION

Expertise

Baker Hughes collaborated with the customer incorporating the knowledge of local personnel and global experts. A cross-functional team including engineering, operations, and the product line aligned on a plan that would optimize water injection to maximize sweep efficiency and recovery.

Design

An electric intelligent completion was designed with permanent fiber optic monitoring to measure injection into the four zones, estimate the impact of a change in choke position, and remotely

control the choke operation. Real-time data capture, analysis, and remote well actuation reduced operational costs. The team incorporated technology from our broad portfolio and several innovations including the [MultiNode™ all-electric intelligent well system](#) and [SureVIEW™ distributed acoustic sensing system](#).

Execution

This project was perfectly executed using our Manage the Job Cycle model of standardized, streamlined processes. We also relied on our global asset footprint and logistics to deliver solutions to the well site on time.

RESULTS

62%
increase in oil production

30%
OPEX savings/year

80%
reduction in carbon footprint

7%
increase in recovery factor

Eliminated
well interventions

1st
four-zone, intelligent injection completion system in the world

100%
reliability in valve actuation and well integrity

ASSET LIFECYCLE

