MultiNode All-Electric Intelligent Well System

Combat water and gas breakthrough to improve ultimate recovery
Water and gas breakthrough can dramatically reduce ultimate recovery

Solutions can be costly and complex
Passive inflow control devices (ICDs) can help balance production along the lateral in horizontal wells. But, over time, fluid properties and reservoir conditions change, while a passive ICD completion remains static, rendering a once-optimized configuration less effective as the well matures. Passive ICDs also have limited effectiveness after breakthrough occurs and water cut becomes high in specific intervals along the wellbore. In the worst scenarios, breakthrough at the heel of the lateral turns the well into a water or gas producer, leaving hydrocarbons unrecovered in the reservoir.

Hydraulic intelligent well systems offer adaptable production control, but they require multiple lines per sleeve, greatly limiting the number of zones you can control in a single production string. The cost and complexity of these systems often make them impractical for managing water and gas breakthrough in horizontal wells.

Sliding sleeves can be used to combat breakthrough, as well. However, they require costly intervention to actuate, and their control is limited because they are either opened or closed, with no choking capability.
The MultiNode™ all-electric intelligent well system is a remote-controlled, electric system that lets you monitor and precisely control an extended number of production zones—without intervention—all at a lower cost compared to other solutions.

The MultiNode system:
- Balances production along the lateral, controlling water or gas breakthrough and increasing ultimate oil recovery
- Enables real-time remote monitoring and control for proactive production optimization
- Helps you adjust to changing wellbore conditions by choking or closing high-water- and high-gas-producing zones
- Lowers costs and increases reach and reliability by controlling multiple zones with a single electric line

The MultiNode system consists of electrically actuated active flow control device (AFCD) downhole valves connected to a surface control unit (SCU) by a single tubing-encased conductor (TEC) cable. Multiple AFCD valves can be installed in cased and openhole wellbores to segment and control production performance. Each AFCD includes six customizable choke settings, including open and closed positions, for controlling flow in each zone. The MultiNode surface unit provides precision control of downhole AFCD valves. The SCU features an intuitive interface that allows operators to actuate the connected AFCD valves in real time with a simple click. A flexible SCADA interface can be used to remotely monitor and control the MultiNode system from virtually anywhere.

Contact your Baker Hughes representative today to learn how the MultiNode all-electric intelligent well system can help you achieve remote, selective flow control in an extended number of zones without intervention, all at a lower total cost when compared to other available solutions.

Combat water and gas breakthrough.
Enhance ultimate recovery.
Minimize costs.