DATA SHEET

HALLIBURTON

WELL COMPLETIONS | SAND CONTROL

EquiFlow Density™ autonomous inflow control completion system

Preferentially produce oil and restrict unwanted fluid based on density contrast

FEATURES

- Independent of tubing orientation
- High-flow-rate capacity at low-pressure differentials
- Each device functions independently for precise response to the reservoir

OPTIONAL FEATURES

- Sliding sleeve and washpipe-free feature (pressure activated)
- Cable bypass

BENEFITS

- Differentiates solely on density contrast
- Maximizes ultimate recovery
- Autonomously switches from oil to water and back to oil, as required

Overview

Autonomous inflow control device (AICD) applications in oil producer wells have effectively managed unwanted fluid production and improved oil recovery since their industry deployment. During initial production, AICDs regulate inflow along the wellbore. Upon breakthrough of unwanted fluid, the AICDs autonomously restrict the inflow of this unwanted fluid from effective zones and stimulates oil production from the other well sections. Commercially available AICDs primarily operate by differentiating the viscosity contrast between oil and gas or water. In light-oil reservoirs, however, the viscosity contrast is not significant enough for conventional AICDs.

Halliburton developed the EquiFlow Density™* autonomous inflow control completion system, a novel class of AICDs that balances production flow and restricts unwanted production fluids, even with minimal viscosity difference between the produced fluid.

The innovative EquiFlow Density autonomous inflow control completion system differentiates the density contrast between produced fluids by buoyancy forces that are magnified with artificial gravity. This feature eliminates the need for downhole orientation in the completion. The EquiFlow Density's autonomous inflow control completion system centrifugal selector operates a valve to open or restrict production flow based on the density of downhole fluids.

The EquiFlow Density autonomous inflow control completion system performance has been demonstrated in computational numerical simulations and measured in testing. The flow-loop test performance demonstrated substantial restriction of unwanted fluid based exclusively on density contrast.

EquiFlow Density™ Autonomous Inflow Control Completion System

* Halliburton acknowledges Saudi Aramco as sponsor of this product development.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

halliburton.com