Endurance Hydraulic Screen®

POSITIVE COMPLIANCE WITH STRONG WELLOBRE SUPPORT DELIVERING INSTALLATION EFFICIENCY, FLEXIBILITY AND RELIABILITY

OVERVIEW
An openhole wellbore is often the architecture of choice for completing a sandstone reservoir as it can provide low skin values to help achieve maximum flow performance of the reservoir. It is also typically associated with deviated and horizontal trajectories tapping into narrow hydrocarbon-bearing formations to achieve maximum contact within the pay zones.

Endurance Hydraulic Screen® delivers a new level of sand control completion with reservoir compliance and positive wellbore support while providing unprecedented installation simplicity, flexibility and life of well reliability.

HYDRAULIC SCREEN TECHNOLOGY
Endurance Hydraulic Screen removes the annular gap between the screen and open hole, providing a positive compliant sand control solution. Hydraulic activation pressure radially extends the screens to conform to the borehole geometry in a fast, safe and reliable manner. This unique and proven technology brings major operational efficiencies using a single-trip installation process, standard tubular basepipe and rapid screen activation against the wellbore. It also significantly reduces operational challenges and risks typically associated with traditional methods, such as mechanically expanded screens and gravel-packing operations.

LIFE OF THE WELL PERFORMANCE
Activated with surface-applied pressure, hydraulic screens are set simultaneously in a single trip, providing positive wellbore support for the life of the well. Maintaining active wellbore contact helps reduce deformation of the near-wellbore and associated stress regime, preventing the mobilization of problematic sands, preventing screen plugging, and removing erosion concerns to provide long-term performance and reliability.

FEATURES
» Positive compliant sand control
» Effective wellbore support
» Solid basepipe geometry
» EquiFlow® ICDs/AICDs compatible
» SmartWell® system capable
» Zonal isolation and multi-zone capability
» Hydraulic collapse values exceeding 5,000 psi (as per ISO-17824)
» Proven track history
» Compatible with standard completion equipment and service tools

BENEFITS
» Single-trip installation with record time savings (no expansion trip, no need for washpipe)
» Rapid, safe and reliable activation method for wellbore compliance
» Positive wellbore support for the life of the well
» Inner strength to support much higher geo-mechanical loads than conventional expandable screen
» Reservoir management with full inflow control capability
» Remove complexity in hostile and logistically challenging environments
The inner strength of the system is derived from the solid basepipe platform. Qualification testing has proven that the Endurance Hydraulic Screen can provide mechanical collapse strength beyond API basepipe ratings with the hydraulic collapse values exceeding 5,000 psi as per ISO-17824. This helps dramatically increase the capability of supporting high depletion and geo-mechanical loading scenarios during the life of the well.

INCREASED RESERVOIR PERFORMANCE

With the simplicity of the Endurance Hydraulic Screen architecture, other technologies can be combined to increase, enhance and add longevity to reservoir performance. Compartmentalization of the open hole can easily be accommodated in order to provide zonal isolation and/or reservoir management for both producer and injector wells. EquiFlow® ICDs/AICDs can be easily integrated to increase hydrocarbon production through the deferral/reduction of unwanted fluid production, while real-time control can be accommodated with SmartWell® system technology incorporated within the solid basepipe of Endurance Hydraulic Screen. All of these solutions can also be deployed through multilaterals for enhanced reservoir contact, including FlexRite® multilateral junctions.

Case History in North Sea

» OTC-27016-MS
» Continued reservoir depletion where openhole gravel packing is challenging
» One hour to set the lower completion and activate the screens
» Full compliancy achieved
» Lower completion with reservoir isolation barrier installed, functioned closed and tested in one trip
» Completion time reduced by more than 35% compared to traditional methods
» Simple and effective inflow control with ICDs and openhole zonal isolation
» Productivity comparable with gravel-packed screens

Specifications

<table>
<thead>
<tr>
<th>Current Size (in.)</th>
<th>Basepipe</th>
<th>Screen OD (in.)</th>
<th>Openhole Size (in.)</th>
<th>Maximum Activation Range (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 5/8</td>
<td>Solid</td>
<td>7.750</td>
<td>8.500</td>
<td>10.000</td>
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<tr>
<td>4</td>
<td>Solid</td>
<td>5.250</td>
<td>6.000</td>
<td>6.700</td>
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Other sizes can be available on request

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