



## Completion Solutions

# Remotely operated Evo-RED® bridge plugs achieve new run record

Location: Offshore Norway

### Overview

A major operator in Norway was looking for a way to efficiently carry out a plug and abandonment operation on its well. However, the operation proved to be a challenge due to gas buildup in the annular region. The operator recognized that the conventional method of setting a retrievable bridge plug and removing it periodically to circulate the gas out of the well would be too time consuming. The need to mobilize a wireline unit, along with the inherent risks involved, encouraged them to look for a more safe and innovative technology.



Halliburton recommended installation of two Evo-RED® bridge plugs, which open and close remotely without the need for intervention. Thus, a wireline run was not required to physically move a sleeve or remove a plug. Instead, the Evo-RED plugs' built-in electronic sensors and actuators continuously listen to the pressure commands from the surface, doing the work on their own. This enabled the operator to open the eRED® ball valve to periodically circulate out the gas buildup in the annulus. They later closed the two Evo-RED plugs to act as barriers while the christmas tree was disassembled and the drilling blowout preventer (BOP) was installed.

During the operation, the upper eRED valve was opened and closed two times, and the lower eRED valve was opened and closed up to nine times. This set a new record of 18 remote operations, as eRED valves and Evo-RED plugs are typically opened and closed only around four or five times in a single completion operation.

### Benefits

The Halliburton remotely operated Evo-RED plugs ended up eliminating a total of 18 wireline runs, thus saving the operator time and money. The plugs' remote open and close capabilities helped make the operation safe and efficient for the operator and, therefore, these plugs may become a standard technology for them in plug and abandonment operations.

CHALLENGES	SOLUTIONS	RESULTS
<ul style="list-style-type: none"> <li>Alleviating pressure buildup in annulus during plug and abandonment operations</li> </ul>	<ul style="list-style-type: none"> <li>Two Evo-RED® bridge plugs in the tubing, allowing the operator to remotely open and close the valves</li> </ul>	<ul style="list-style-type: none"> <li>Remote operations eliminated up to 18 wireline runs</li> </ul>
<ul style="list-style-type: none"> <li>Relieving gas buildup while also eliminating multiple wireline runs that are time consuming and inherent with HSE risks</li> </ul>	<ul style="list-style-type: none"> <li>eRED® ball valve to circulate out the gas buildup in the annulus region</li> </ul>	<ul style="list-style-type: none"> <li>Effectively circulated and removed gas buildup</li> <li>Saved time and money, and avoided potential HSE risks involved with wireline runs</li> </ul>