

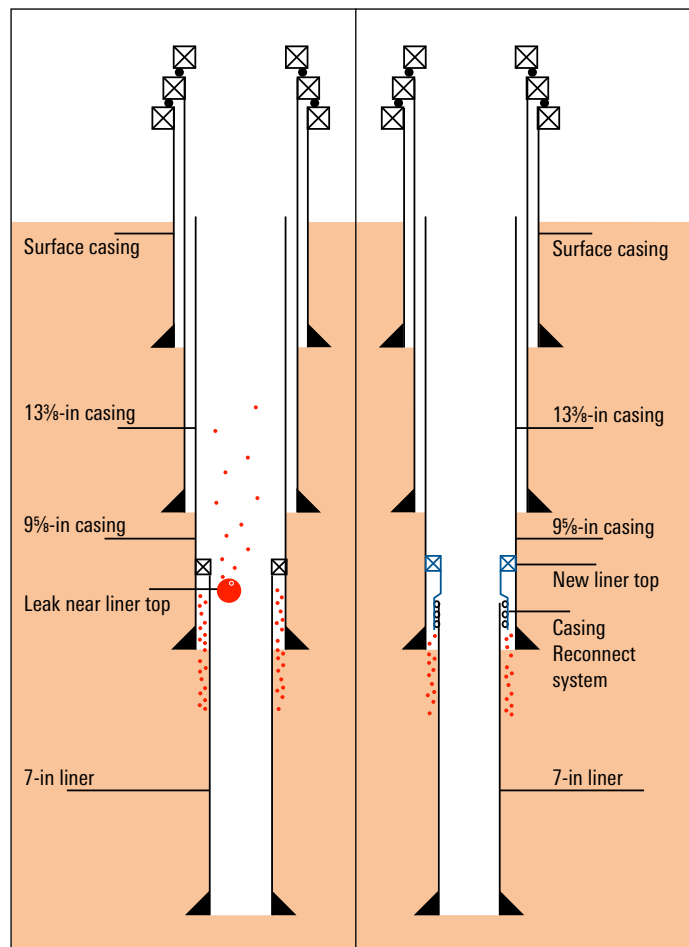
North Sea Operator Prevents Sidetrack by Replacing Leaking Liner Hanger

Casing Reconnect system creates a metal-to-metal seal to the cemented liner without reducing the liner ID, saving days of rig time

Metal-to-metal, gas-tight sealing technology enables an operator to repair a leaking cemented liner without loss of ID and without a sidetrack.

The operator's concerns

The operator completed an offshore injector well with a 7-in liner. After cementing the liner and setting the third-party liner hanger and packer, a leak to the formation was found near the hanger and packer.



A North Sea operator was unable to proceed with the completion after discovering a leak at the top of the cemented liner (left). To avoid a time-consuming and technically challenging sidetrack, the operator used a Casing Reconnect system to create a metal-to-metal seal between the cemented liner and a new liner hanger.

What the operator tried first

The contingency plan called for running a scab liner and packer, but it did not repair the leak. Barring a better solution, the only option would have been to perform a sidetrack—a costly and extremely challenging operation.

What Schlumberger recommended

Removing the leaking liner hanger and packer and replacing them with a [Casing Reconnect*](#) metal-to-metal, gas-tight casing repair system and a new liner hanger system would eliminate the leak and restore casing integrity with the full liner ID.

What the operator achieved

The operator recovered the scab liner and original liner hanger system, cut off the liner one full joint inside of the 9 5/8-in shoe, and dressed the top of the liner stump to remove metal swarf and debris. A new liner hanger and packer were run into the well with the Casing Reconnect system at the bottom and positioned over the dressed liner stump.

Next, the morphing tool was run into the top of the liner at the depth of the Casing Reconnect system, and pressure applied at surface and multiplied through the tool to expand the liner into the Casing Reconnect system. This created a metal-to-metal, gas-tight connection with no reduction in liner ID.

After the tool was pulled out of the well, the connection was tested to 195 bar, which met operator requirements—and enabled completing the well and bringing it online.

Casing Reconnect system gave us back the slot without an expensive and time-consuming sidetrack.

Lead drilling engineer