

Land Operations, Denmark

Halliburton technology helps identify dual-string casing integrity in a single run

Single-trip logging run avoids expensive workover and minimizes rig time

CHALLENGE

- Identify corrosion and casing integrity in a single run

SOLUTION

- Deploy the Halliburton Monoconductor Electromagnetic Pipe Xaminer® (EPX™ V) tool in combination with the Multifinger Imaging Tool (MIT) to assess the 9%- and 13½-in. casing integrity and casing corrosion

RESULT

- Able to provide assurance that well integrity was sufficient to prevent any requirement for workover or tubing replacements

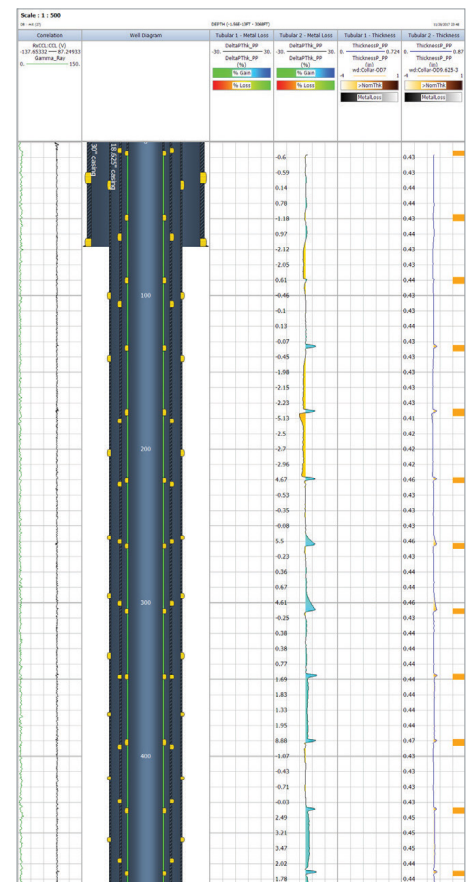
Overview

Halliburton had carried out several casing integrity measurements over the past two years for an underground gas storage company in Denmark. As the main wireline provider, Halliburton had successfully used Xaminer® Electromagnetic Corrosion Tool (XECT) and Multifinger Imaging Tool (MIT) technology to verify casing integrity. This provided acceptable evaluation in 9%-in. casing, but would require two separate runs.

With the introduction of the new Electromagnetic Pipe Xaminer® V (EPX™ V) tool, Halliburton is able to evaluate up to five strings of casing, including in this instance 13½-in. casing. With its combinability with MIT technology, a detailed investigation of the casing was achieved in one run.

Challenge

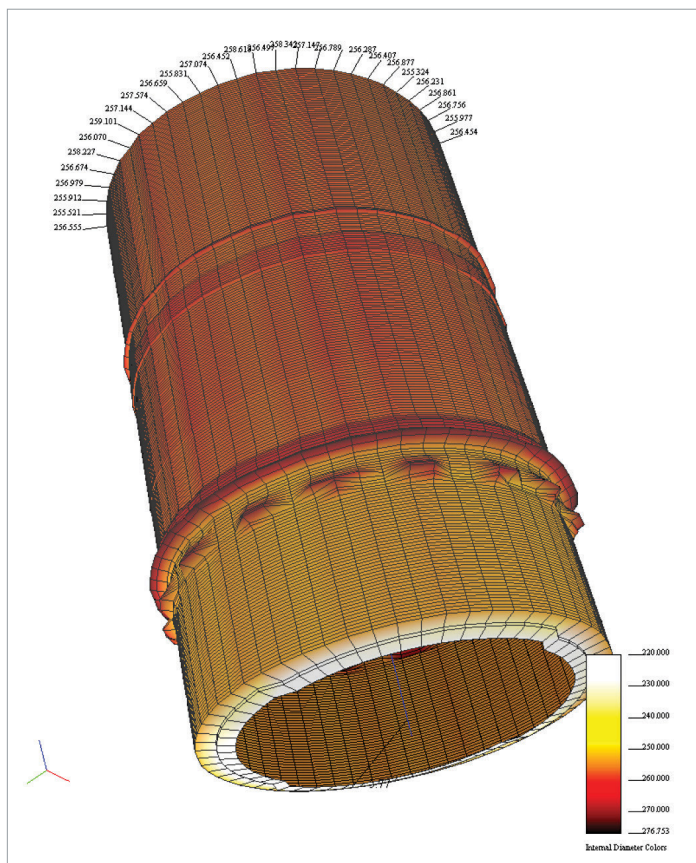
Previously, the customer had been unable to evaluate the casing integrity of a second string (13½ in.) in its gas storage caverns. The ability to complete everything in one day was a critical requirement. With pressure-control equipment rig ups and two to three runs of wireline, casing integrity checks can often take more than one day to be completed.



This EPX™ V log highlights loss in the second string.

Solution

Halliburton proposed the use of the EPX V/MIT tool string to log the internal condition of the 9 $\frac{5}{8}$ -in. casing and provide the overall condition of 9 $\frac{5}{8}$ -in. and 13 $\frac{3}{8}$ -in. casing in one run. This new tool combination would allow single-trip deployment where previous deployments had entailed two trips and were unable to evaluate the 13 $\frac{3}{8}$ -in. casing. Additionally, the tool's slim housing (1 $\frac{1}{4}$ -in. OD) permits through-tubing access, offering an extended range of operation for quantitative analysis of up to five tubulars from 2 $\frac{3}{8}$ to 24 in. OD pipe.



Multifinger Imaging Tool caliper illustration over tubing hanger.

Result

The Halliburton casing integrity tool string (EPX V/MIT tools) was able to successfully identify the casing integrity on two strings in a single run, which included a full joint analysis of the initial 9 $\frac{5}{8}$ -in. casing (MIT) and casing thickness and corrosion evaluation of both the 9 $\frac{5}{8}$ - and 13 $\frac{3}{8}$ -in. casing. This resulted in a time savings of one day and acquired integrity measurements on the outer string casing to prevent a costly workover operation, saving the customer approximately USD 25,000.

The customer was very appreciative that Halliburton could provide previously unavailable data and, with the combination run, reduce its logging time considerably.



The Electromagnetic Pipe Xaminer® V tool has been thoroughly tested in multiple casing scenarios, helping to ensure that the technology is characterized and delivers an accurate metal-loss assessment. The above image corresponds to a four-casing setup, including 5-in. OD, 9 $\frac{5}{8}$ -in. OD, 13 $\frac{3}{8}$ -in. OD, and 16-in. OD casings.

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

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H012849 03/25 © 2025 Halliburton. All Rights Reserved.

halliburton.com

HALLIBURTON