

Gulf of America

# Operator locates stuck inspection tool with non-intrusive diagnostic service

InnerVue™ PipeSuite diagnostic service saves time and reduces excavation costs

## CHALLENGE

- Locate stuck ILI MFL tool quickly
- Minimize downtime and excavation costs

## SOLUTION

- Deploy InnerVue™ PipeSuite diagnostic service
- Performed eight blockage surveys from both ends for precise positioning
- Confirm location with X-ray imaging

## RESULT

- Pinpointed stuck tool within 50 ft
- Validated position with X-ray imaging
- Avoided multiple digs and reduced labor hours
- Improved safety and operational efficiency

## Overview

During a scheduled inline inspection (ILI) required by the Pipeline and Hazardous Materials Safety Administration (PHMSA), a 4 in. magnetic flux leakage (MFL) tool became stuck inside an active pipeline. Although flow continued, the operator lacked visibility into the tool's exact location. Without precise pinpointing, recovery efforts would require multiple excavations across the suspected pipeline segment, increasing labor hours, equipment mobilization, and safety exposure.

To avoid a series of trial-and-error digs, the operator needed a fast, accurate way to determine the tool's position while keeping the pipeline in service. They turned to Halliburton for a solution that could deliver actionable insight without disrupting operations. Halliburton deployed the InnerVue™ PipeSuite diagnostic service, a non-intrusive technology that profiles pipeline blockages using controlled pressure waves. The service identifies internal restrictions and anomalies without isolating or depressurizing the line, which gives operators a rapid and reliable path to informed decision-making.



A single targeted cutout replaced multiple excavations—saving time, resources, and improving efficiency.

## Challenge

A stuck ILI tool introduces operational uncertainty and creates significant retrieval risk. Traditional location techniques often require repeated excavations to narrow down the obstruction's position. Each dig adds cost, increases downtime, and exposes crews to additional safety hazards.

The operator needed high-confidence location data to justify a single excavation. The method had to function on a live pipeline, avoid intrusive intervention, and deliver accuracy within a narrow distance range to eliminate unnecessary work. Effectively, the challenge centered on reducing excavation scope while maintaining operational continuity and safety.

### Solution

Halliburton mobilized InnerVue™ PipeSuite to diagnose the blockage location with precision. The team conducted eight targeted surveys—four from the launcher end and four from the trap end—to generate high-resolution blockage signatures. By cross-referencing the pressure wave data from both directions, Halliburton converged on a consistent location, significantly shrinking the excavation window.

To further strengthen confidence, X-ray imaging was deployed at the identified point before excavation began. The verification imaging confirmed the position within 50 ft, providing the operator with the assurance needed to execute a targeted cutout.

The approach required minimal surface setup and only one on-site technician, which allowed the operator to maintain normal pipeline operation while capturing the diagnostic data. This streamlined workflow minimized crew exposure, reduced time on location, and enabled the operator to proceed efficiently with tool recovery.

### Result

Armed with precise location data, the operator performed a single, efficient excavation rather than multiple exploratory digs. The validated position from the combined diagnostics eliminated uncertainty, reduced field labor hours, and accelerated the retrieval timeline.

By avoiding unnecessary excavation, the operator reduced operational costs and protected personnel from added risk. The ability to keep the pipeline in service throughout the process helped maintain operational continuity and prevented revenue-impacting downtime.

The InnerVue™ PipeSuite diagnostic service ultimately enabled a confident, cost-effective recovery, which demonstrated how non-intrusive technologies provide operators with rapid clarity during unplanned events.



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