

# VR90<sup>®</sup> service saves customer from costly remediation

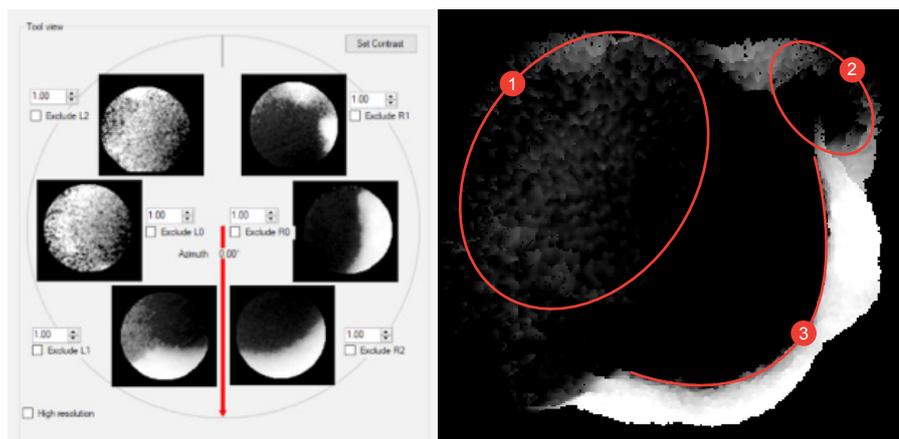
Imaging of damaged casing.

## THE CHALLENGE

While attempting to set a plug during the abandonment of a well, the client encountered an obstruction before reaching the intended depth. They needed a fast way to reliably diagnose the cause of the obstruction and confidently determine a course of action. The client had used Visuray's VR90 downhole X-ray diagnostic service before and was familiar with its efficiency, reliability and cost savings, prompting them to call for an onsite evaluation.

## OUR SOLUTION

Visuray mobilized its team and equipment to the well site within hours of the initial callout. Because X-rays can penetrate any production fluid, there was no need to waste time circulating, cleaning, or conditioning the well and the VR90 downhole X-ray diagnostic tool was immediately run in hole to 1,960 feet.



Raw data captured by the VR90 tool.

1. Damaged casing with debris obstructing well
2. Hole in casing
3. Intact casing 3.12" diameter

## OVERVIEW

### CLIENT:

- Permian Basin operator

### CHALLENGE:

- Obstruction preventing plug placement at required depth and suspending operations

### SOLUTION:

- Ran VR90 downhole X-ray diagnostic service to identify obstruction
- Real-time images revealed the casing to be partially collapsed, with other parts significantly damaged

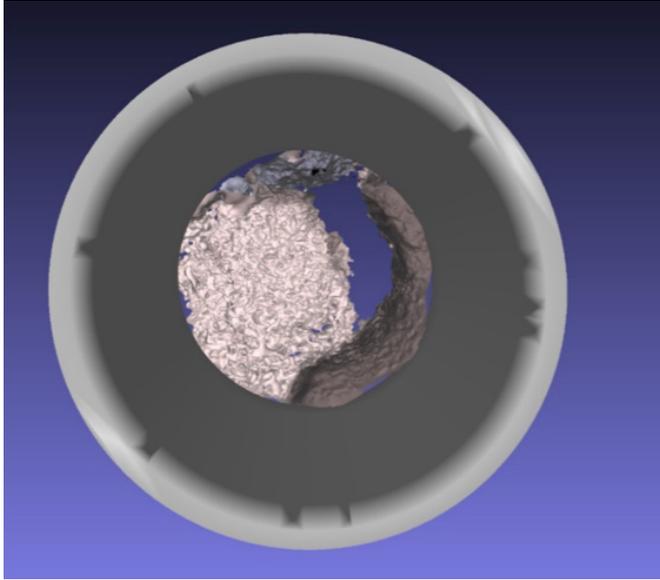
### BENEFITS:

- Fast, reliable diagnosis indicated clear course of action that minimized non-productive time
- Decreased operational risk and cost by eliminating need for milling and providing evidence to plug at shallower depth

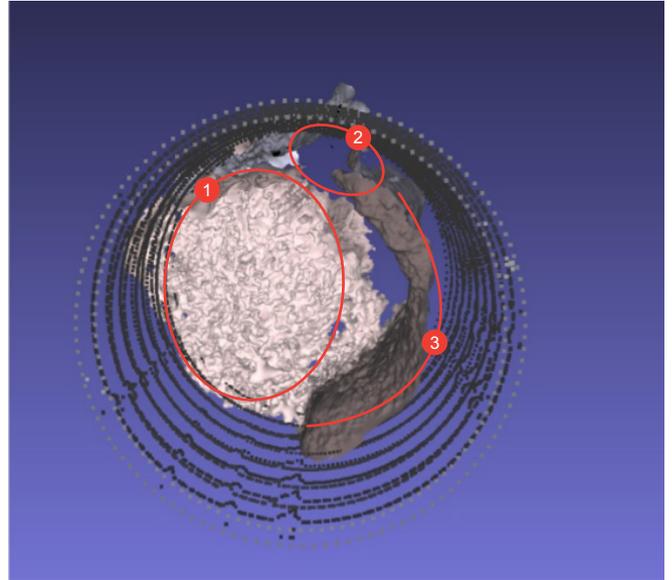
CASE STUDY

Client: Permian Basin operator

Real-time images produced at this depth showed a portion of the casing had collapsed and was obstructing the well. The VR90 tool's images also revealed a hole in the casing, which allowed debris to further obstruct the well. A dimensionally-accurate reconstruction of the damaged casing demonstrated that the diameter of the intact casing was about 3".



Reconstruction of damaged casing.



1. Damaged casing with debris obstructing well  
 2. Hole in casing 3. Intact casing 3.12" diameter

Thus, less than three hours after the VR90 tool was deployed at the wellsite, the cause of the obstruction was determined to be partially collapsed and damaged casing, with the hole in the casing indicating that the integrity of the casing might be compromised. This diagnosis made it clear to the client that the plan to mill through the obstruction would possibly compromise the integrity of the casing further, and a safer course of action would be to simply plug the well above the obstruction.

CLIENT BENEFIT

Visuray provided the client with a fast, reliable diagnosis of their obstruction without any costly or time-consuming preparation of the well. Visuray's VR90 downhole X-ray diagnostic service revealed the nature, dimensions, and state of the obstruction, allowing for a more efficient and cost-effective well intervention.



**ACCURATE. MEASURABLE. RECOGNIZABLE.**

Well intervention decisions are not easy to make. The Visuray® VR90® tool offers a new commercial wireline diagnostic service that uses ground-breaking X-ray technology to give you downhole images in any well production fluid – allowing you to see with certainty and act with confidence.

Visit [visuray.com/case-studies](http://visuray.com/case-studies) for examples.