

# First-ever VR90s\* operation completed

Clear answers from VR90s Advanced Diagnostic Service enables client to proceed with intervention plan.

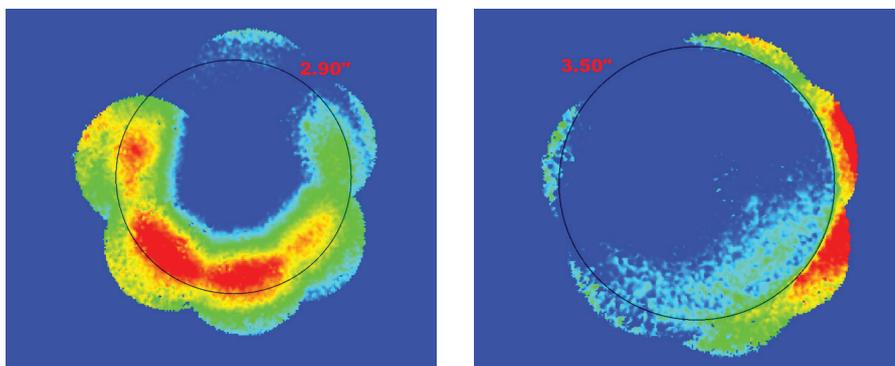
## THE CHALLENGE

An offshore gas well owned by a major Dutch operator had been offline for several years because of a stuck fish. The well temperature was 116 deg C, and the fluid was opaque. Around the suspected depth of the fish the well ID narrowed due to a nipple. In order to choose the correct intervention plan it was necessary to determine if the fish was above or below the nipple profile. Previous attempts to determine the fish depth had been unsuccessful, so the client requested running the VR90s Advanced Diagnostic Service. The objective was to determine if the position of the fish was in the crossover or above, and to provide measurements of the fish top if it was above the nipple profile.

## OUR SOLUTION

The VR90s tool was run in hole until it tagged an obstruction, which upon imaging, was revealed to be the nipple. The X-ray image acquired (below left) shows the 2.9 in nipple ID, highlighted by the circle annotation. The red and orange region indicates debris on the low side of the well.

The VR90s tool's built-in positioning module was then used to move the VR90s tool 5.5 cm above the nipple. A new X-ray image was acquired (below right), revealing a round profile with a 3.5 in ID. The red and orange region indicate debris on the low side of the well, and the upper portion of the ID appears to be free of fluid, indicating that the ID is not completely filled with debris.



## OVERVIEW

**CLIENT:**

- Major Dutch Operator

**CHALLENGE:**

- Determine if stuck fish was above or below nipple profile

**SOLUTION:**

- Used VR90s Advanced Diagnostic Service to determine position of fish, and provide measurements of fish top
- Results demonstrated stuck fish was below the nipple and could not be retrieved using straightforward methods

**BENEFITS:**

- Clear images obtained despite opaque fluids in well, and fish location ascertained
- VR90s diagnosis provided client with better foundation for decision-making and de-risked their intervention plan

CASE STUDY

Client: Major Dutch operator

The results demonstrated that the stuck fish was located below the nipple, and while there was sand-like debris in the low side of the well, it did not completely obstruct the nipple profile. It was apparent that the stuck fish could not be retrieved through straightforward fishing methods.

CLIENT BENEFIT

By running the VR90s service, the client was finally able to obtain images despite the conditions within their well, and ascertain the location of the fish. The VR90s diagnosis provided the client with a better foundation for decision-making, subsequently de-risking their future intervention plan.



**ACCURATE. MEASURABLE. RECOGNIZABLE.**

Well intervention decisions are not easy to make. The Visuray® VR90s\* 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.

