



Downhole X-Ray
Diagnostic Service

Illuminate the Invisible[®]

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.

ACCURATE • MEASURABLE • RECOGNIZABLE



	WHAT'S IN YOUR WELL	WHAT WE SEE IN 2D	WHAT WE SEE IN 3D
FISH			
WIRE BALL			
WRENCH			

Above These three examples show typical downhole objects encountered during well intervention operations. In all three cases, VR90 images allow you to select the correct fishing tool for successful recovery.

Left With its unique downward focused X-ray source, the VR90 tool is shown imaging the fishing neck of a wireline tool stuck in a well.



HOW DOES IT WORK?

A unique compact X-ray source emits X-rays that survey the volume immediately below the tool. Measurements of the backscattered radiation are then converted into 2D and 3D images using an innovative fluid-based surface reconstruction technique. By using X-rays rather than other conventional methods, the VR90 tool works in any downhole production fluid.

APPLICATIONS

- Inspection of downhole equipment such as valves and mandrels
- Classification and quantification of wellbore restrictions
- Determination of shapes and dimensions of dropped objects
- Identification and characterization of collapsed or split casing
- Providing input for design of customized fishing tools

BENEFITS

- Saves time, reduces cost, and minimizes environmental risk
- Provides immediate information during well interventions
- Works in all production fluids
- Runs on all types of electric wireline, and compatible with downhole tractors and coiled tubing systems
- Can be run centered or eccentric
- Uses electronic X-ray sources, simplifying logistics and increasing safety



MEASUREMENT SPECIFICATIONS

Depth of investigation	100 mm
Depth resolution	< 5 mm
Lateral resolution	< 1 mm
Depth accuracy	5 mm
Lateral accuracy	1 mm

EQUIPMENT SPECIFICATIONS

Pressure	20,000 psi (1380 bar)
Temperature	212 °F (100 °C)*
OD	3 5/8 in (92 mm)
Length	27.5 ft (8.4 m)
Weight	520 lbs (236 kg)

*300 °F (150 °C) tool available in 2016

Contacts



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