



# Offshore Integrity Diagnostic Camera

In response to a call for proposals, EV Offshore received support for the development of its offshore diagnostic camera when ITF allocated PIONEER funding to the project and subsequently ITF's members recognised its potential.

**The Requirement:** It is not uncommon for wells to be suspended or abandoned due to unknown circumstances down hole. This can often lead to wasted time, effort and expense. Technology that has the ability to conduct accurate down-hole imaging has the potential to prevent this occurring.

## The Solution:

In 2006, ITF issued a call for proposals for reservoir access and well intervention technology developments. EV Offshore submitted a proposal for the development of a real-time HPHT digital video camera for deployment on a 5/16" mono-conductor electric-line.

The latest EV technology has the capability of deployment in live-well and HP/HT down-hole applications for visual diagnosis during the complete drilling, completion, production and work-over life cycle of a well. The technology will interface with generic electric line or coiled tubing equipment on the rig or platform to provide real-time visual or non-visual images down hole. Imaging technologies used will depend on the presence of turbid fluid in the well bore.

## The Method:

The camera specification offered considerable advances over the current down-hole cameras that are on the market. One of the main differentiators was the inclusion of an acoustic imager to allow the identification of objects in the well bore in limited or zero visibility conditions.

During discussions with potential sponsors this capability was considered to be an important step change in the technology. Subsequently, ITF decided to fund a proof concept demonstration of the acoustic technology through its PIONEER fund. This would be used as the basis for the non visual part of the camera system and the demonstration was intended

to allow potential sponsors to make an informed judgment on whether to fund the JIP or not.

Having conducted a successful demonstration, thanks to investment by ITF, EV Offshore secured funding from four of ITF's member companies.

## Implementation:

After the successful completion of field trials and well testing, EV Offshore Ltd has deployed its existing camera technology for well-intervention projects. Having a history of proven reliability, the visual image information that the technology provides allows critical decisions to be made that has saved operators millions of pounds in reduced rig or non-production time and allowed decisions to be made that have reduced or removed costly downstream contingencies.

## The Outcomes:

In recognition of the potential that EV Offshore's real-time well-intervention and down-hole integrity diagnostic camera has to offer, two of ITF's member companies have moved forward in joint collaboration to assist EV Offshore develop the technology for commercial application.



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