

# North of Scotland KTP Centre

## Case Study

[www.ktp-link.co.uk](http://www.ktp-link.co.uk)

# ZENITH OILFIELD TECHNOLOGY

The aim of this partnership was to develop a sensing system, based on time domain reflectometry, which would show the composition of fluids within a production oil well.

## Challenge

It is virtually impossible to log a well while a pump is running in the well bore. The KTP provided a real time 2-dimensional fluid imaging array allowing the well bore flowing regime to be measured below pumps, presenting a true empirical measurement of fluid behaviour and not an implied or modelled output. The system provided the oil sector and, potentially the water, geological and marine industries, with an innovative technique that addresses a clear market need.

## Results

A test rig was designed and built to enable the company to carry out those tasks. A cable form that meets the sensing needs, and is capable of withstanding the severe environment downhole, was also developed.

## Benefits

The KTP has enhanced the company's knowledge of how the sensor will work and the methods used to test future sensors. Knowledge transfer to staff members is ensured since the company hired the KTP associate after the project ended.



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Zenith Oilfield Technology is a design and manufacturing company, who specialise in oil field pump monitoring and completion equipment



*"The KTP enabled the company to carry out research into an area where it did not have the internal resource to do so."*

**Mark Connoly,**  
Senior Engineer