

## Fugro Introduces New Acoustic Subsea Pipeline Inspection Technology

Fugro's latest generation of Remotely Operated Towed Vehicle (ROTV) enables it to continue to provide its clients with the highest definition and most efficient acoustic subsea pipeline inspection service in the North Sea. This leads to high-value integrity assurance and maximum uptime.

Acquired during sea trials these high definition images show impressive texture and high clarity of seabed sediment features, structures and pipeline assets. The image on the left depicts an exposed pipeline with seabed sediment ripples. The image on the right shows a platform structure, with gravel dumping. Surrounding items of debris are clearly distinguishable.

Fugro Survey Limited has successfully completed full sea trials of two brand new purpose built Focus-2 ROTV systems for pipeline inspection and seabed mapping operations. The units were officially commissioned and deployed on commercial operations in May, following acceptance tests overseen by Fugro's ROTV survey specialists and manufacturers, MacArtney.

The Focus-2 systems have embarked upon a heavy pipeline inspection campaign for 2006 and 2007.

These systems were built to Fugro specifications and present the survey sensors at the optimum position in the perfect environment to obtain the most resolute data for pipeline and subsea asset condition monitoring. The new design of the Focus-2 housing means that the system benefits from being stronger, lighter and more suited to infield operations.

Both vehicles have been fitted with EdgeTech 4200-FS side scan sonar systems, which operate at 300 and 600 kHz, to provide highly resolute data with much improved signal-to-noise ratios. The Focus-2 uses state-of-the-art fiber optic telemetry for vehicle and sensor communication, which further improves data quality and produces a more precise image of the pipeline.

The Focus-2 systems were delivered to Fugro's multi-purpose DP survey vessel, Fugro Mercator, in May.

On completion of alongside wet testing and calibrations, Fugro Mercator successfully undertook sea trials on both Focus-2 ROTV vehicles. During four comprehensive days, Sea Acceptance Tests were completed and both vehicles were signed off ready for service.

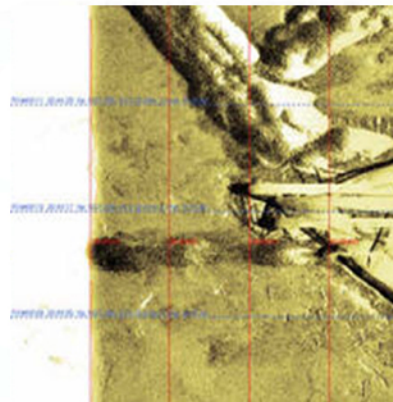
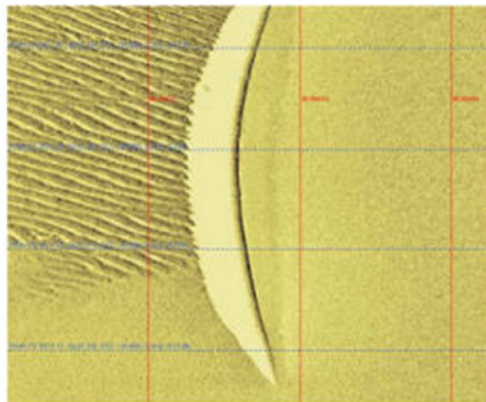
The first commercial pipeline inspection project was quickly completed. Both client and contractor were impressed with productivity and data quality from the new systems. Fugro Mercator also carries an observation class ROV alongside the two Focus-2 ROTV systems, allowing for immediate visual inspection of targets identified during the acoustic inspection. Onboard interpretation of pipeline inspection data is then undertaken to produce a whole dataset that is robust, integrated and interpreted in the context of the environment within which the data were obtained. The chain of custody of data is short and strong.

With lower maintenance overheads and fully redundant hardware, productivity with the new vehicles is expected to improve. In the early stages of their new commercial life, the signs are very positive.

Later in the year, the Focus-2 systems will be tasked with acquiring data to support a deepwater route survey programme, providing data that are highly resolute with con-

trolled positional accuracy far greater than that which can be provided by a conventionally towed fish.

Fugro Survey Limited offers a wealth of ROTV survey, data processing and reporting experience, presenting clients with a cost-effective and high-speed survey tool to acoustically inspect pipeline assets on a periodic basis. We have successfully completed over 70,000 kilometers of ROTV operations in the last ten years, surveying most North Sea pipelines since 1992.



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