4D seismic projects worldwide to benefit from RIL streamer positioning technology

***Edinburgh, 28th May 2010*:** A further step towards improving the accuracy of 4D seismic using towed streamer acquisition for monitoring oil and gas reservoirs during production is being introduced this summer by Reservoir Imaging Ltd (RIL), the 4D seismic software services consultancy based in Edinburgh, Scotland.

RIL's 4D Specialist's are due to start using the new version of RIL's Osprey suite of 4D technologies around the world for major oil companies which for the first time addresses the impact of waves, current and weather on the movement of towed streamers during a survey so that repeat surveys can effectively follow the so called 'feathering' pattern of previous surveys. Osprey software is expected to produce more economic, better quality data for monitoring reservoir performance at some of the most important oil and gas fields worldwide.

There is no question that 4D seismic is emerging as a significant tool in reservoir management allowing geoscientists and engineers to compare the imaging results of repeat seismic surveys to track the behaviour of hydrocarbons in the reservoir during production. Demand for 4D projects has remained remarkably resilient over the last two years and is expected to grow this year.

A key challenge in a successful 4D is for subsequent 'monitor' surveys to replicate the feathering of streamers from the baseline survey to ensure good repeatability. Up until recently a target feather had to be computed for each line, and then during acquisition the 4D survey contractor had to predict and then match this feather as closely as possible.

In 2008 RIL undertook a major analysis of typical baseline data and determined that focusing on the precise feathering of each line might be unnecessarily restrictive and complicated. Instead the company introduced the concept of a feather tunnel, This allows more flexibility in the line selection process during a survey which translates into acceptable repeatability being achieved more efficiently. Prototype software was created in late 2008 to build 4D tunnels for each line to test the applicability of the technique.

Development of the RIL software coincided with recent industry advances in the ability to steer both sources and streamers which also offer new opportunities to optimise the accuracy of 4D surveys. As a result RIL is bringing in a second generation of tunneling software which enables optimal 4D repeatability by ensuring the streamers are steered down the centre of the tunnels. This meets the repeatability requirement more efficiently and ensures future monitor surveys will also be easier to repeat.

The RIL software is about to be applied this summer on a large number of 4D projects in the UK, Norway, Gulf of Mexico, West Africa and the Far East.

Keith Watt, managing director, RIL, said: 'The development of our next generation 4D tools offers a significant opportunity to both improve the quality of a 4D monitor survey and to acquire it in a more efficient and cost effective manner. We are looking forward to seeing our clients benefit from the new technology in their 4D projects over the next few months.'

***About RIL*:** RIL, headquartered in Edinburgh, Scotland, was formed in 2005 by a team of experienced geoscientists to serve the global market for 4D marine seismic surveys. The company specializes in providing design, planning, and acquisition QC to ensure that each survey in a 3D time-lapse (or 4D) seismic project can be repeated as accurately possible. Only if all the survey parameters are observed can companies track the performance of oil and gas reservoirs by comparing images of the subsurface recorded over time during production. RIL has a growing client list with projects in the North Sea, Gulf of Mexico, West Africa, South East Asia and the Far East.

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