

MSI to Support Hywind Scotland Pilot Park Development



Metocean Services International (MSI, Australia) has recently deployed a current profile mooring in 107m water depth approximately 25km off the coast of Peterhead, Scotland, to support Statoil's Hywind Scotland Pilot Park development. The measurement programme is expected to last for 1 year and the mooring will be serviced initially in March 2014 to provide preliminary data for engineering design.

Although current profile measurements are relatively straightforward in this water depth, the challenge on this project was to design a system to enable recovery of the anchor weights, this in order to comply with environmental legislation. MSI's project management team therefore designed a mooring configuration that uses Sonardyne acoustic releases to recover the main instrumentation mooring (comprising TRDI ADCP and Nortek

Aquadopp current meter for data validation), with the subsequent recovery of the anchor components using a separate acoustic release and rope canister system.

The mooring was deployed in early November 2013 from the vessel *C-Salvor* (image) and MSI ensured rigorous HSE planning and communication with the vessel crew and Statoil HSE representative to minimise any risks.

Due to better wind conditions and reduced conflict potential when applying for acreage, the wind industry is currently moving offshore. Hywind is a floating wind turbine, consisting of a turbine placed on top of a ballasted steel cylinder which is fastened to the seabed by three mooring lines. It was developed by Statoil by combining technology from the wind industry with technologies from the oil and gas industry and drawing upon Statoil's longstanding offshore experience. This led to them installing the world's first full scale floating wind turbine off the island of Karmøy, north of Stavanger. After two years of testing, Statoil reported that the concept was verified, performance was beyond expectations and believe that with few operational challenges, excellent production output, and well-functioning technical systems, the Hywind concept could revolutionise the future of offshore wind by taking it into deeper water. The Hywind Scotland Pilot Park development is the next phase in Statoil's development of this system.

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