
PRESS RELEASE

Clear Solutions International Ltd assist LMR Drilling UK Ltd in two record HDD crossings of the Solent:

- believed to be a new world record in the field of horizontal directional drilling
- all drilling and pullback forces lower than predicted value models
- *Ultrabore*® & *Pure-Bore*® drilling fluid system approved for use by the Environment Agency
- drilling fluid formulation and control integral to the project success

7 April 2011. British company Clear Solutions International Limited have supplied the drilling fluid and drilling fluid engineers for the recent successful installation of two 324mm diameter steel gas pipelines between the UK Mainland and the Isle of Wight.

At 3926 meters (12,880 ft) and 3930 meters (12,894 ft) respectively, these are believed to be the two longest pipelines installed by HDD in the world, each crossing used two 508mm boreholes connected by intersection techniques at a depth of 63m below the seafloor. Both 508mm pilot holes - crossing #1: 2217m (7,274 ft) from Gurnard on the Isle of Wight and 1709m (5,607 ft) from Lepe on the mainland; crossing #2: 2156m (7,073 ft) from Gurnard and 1773m (5,817 ft) from Lepe - involved drilling through variable and highly reactive clays from the Headon & Totland Formations, together with the highly permeable and unconsolidated Becton Sand Formation.

Clear Solutions worked closely with the Principal Contractor LMR during a trial drill in 2008 to test the viability of the crossing. The Environment Agency approved Clear Solutions environmentally friendly, water-based drilling fluid system; comprising of *Ultrabore*® a high performance bentonite drilling fluid to which *Pure-Bore*® was added to modify the fluid properties thus enabling the drilling fluid to stabilise the challenging geological conditions and to clean the borehole, and this - together with the expertise of the Clear Solutions drilling fluid engineers - contributed to ensuring the outstanding success of both crossings.

Clear Solutions identified a series of critical drilling fluid properties which were achieved with the Company's own proprietary products. The result was a highly inhibitive fluid providing exceptional hole cleaning, stability, effective clay inhibition and a slick gauge borehole. The results were outstanding, with drilling for crossing #1 commencing on 25 October 2010 and pullback completed 50 days later and for crossing #2 commencing on 26 January 2011 and pullback completed just 45 days later with just 37 tonnes of pull back force on 11 March 2011. *Ends*

Notes:

Clear Solutions International Limited is an independent drilling fluid specialist, employing a team of geotechnical specialists and drilling fluid engineers across Europe. The company has developed a range of revolutionary water-based drilling fluids, including Pure-Bore®, and continues to lead the field with its products. The company has worked extensively on high performance drilling and underground construction projects, and prides itself on providing an environmentally friendly world-class service.

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