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4C OBC for Imaging the Pre-Messinian Offshore Nile Delta, Egypt

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SUMMARY

RWE Dea began exploring in 2006 using two seismic crews to span a very difficult transition area. A conventional land operation using a dynamite source was used in the agricultural areas of the Nile Delta while a 2C-OBC crew was utilized shoot all areas offshore and up to the beach. To ensure a seamless image these crews used a master/slave configuration to maintain consistent offsets and azimuths throughout the transition area.

More recently a 4C-OBC was acquired directly west of the original survey and this was designed to merge directly with the previously acquired data. Unlike the first survey the 4C operation needed to be capable of operations in water depths up to 250m while maintaining sufficient positioning accuracy as to not degrade the image quality. The acquisition environment was also significantly more difficult than the initial OBC as the survey area spanned the shipping lanes for Alexandria Port and numerous platforms and fishing vessels operated in the area.

The decision to proceed with a wide-azimuth OBC in favour of streamer operations was driven by the desire to optimize the image quality and provide a comparison product to existing streamer and MAZ-streamer surveys.

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Processing of the 4C-data is ongoing and initial results are encouraging.