



Wellbore History

GENERAL

The Delta discovery, made by well 33/9-6 in 1976, is situated approximately 4.5 km east of the Murchison platform. Well 33/9-6 had good oil shows, but was not tested due to mechanical problems. An oil down-to at 2998 m TV DSS corresponding to the top Mid Ness shale was seen in the well. The well had moderate reservoir quality within the Tarbert/Ness Formations, and excellent reservoir quality within the water-bearing Etive Formation.

Appraisal well 33/9-21 S confirmed the reservoir properties found in 33/9-6 and found OWC within the Etive Formation.

The horizontal sidetrack 33/9-21 A was drilled to further appraise the oil-bearing sands, but discovered that the reservoir dipped downwards so that the Etive Formation came below the OWC.

The objective with well bore 33/9-21 B was to reach the Etive sand at 6513.6 m and drill it horizontally.

The well was drilled from the Murchison Platform on the UK side of the border, where the well name is UK211/19a-M75x.

OPERATIONS AND RESULTS

Appraisal well 33/9-21 B was kicked off on 30 April 2009 at 6222 m (2980 m TVD SS) in well 33/9-21 A. Kick-off point was in the Ness Formation. The well was drilled as a horizontal producer and reached TD at 6882 m (2982 m TVD SS) in the stratigraphically younger Late Jurassic Heather Formation. The well was drilled with Versaclean oil based mud from kick-off to TD.

The Etive could never be identified on the logs or in the samples and a water bearing Ness Formation Sand encountered at 6621.8 m made clear that the OWC was higher than prognosed. The decision was therefore taken to build the inclination to 95deg. At 6784.8 m an oil bearing sand was encountered, which appeared to be the Tarbert Formation. Drilling continued to 6807.7 m where the well entered the Heather Formation Claystone. Shows were reported as "no shows above OBM" throughout the well bore.

No cores were cut and no wire line fluid samples were taken.

The well was completed on 11 June 2009 as an oil appraisal. It was reclassified to development well and on 25 July 2009 it was put on production

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 33/9-21 B