



Wellbore History

GENERAL

In September of 1998 BP Norge became operator of the PL 019C licence. The 2/1-12 well was the first well in the licence. The main prospect was the Upper Jurassic Ula Formation. The prospect was prognosed as a four-way dip closure, sealed by Upper Jurassic mudstones. Secondary targets were provided by the Vale Formation sandstones (Tertiary) and by limestones of the Tor Formation (Cretaceous). Well control was provided by the Saga operated wells 2/2-2 (1982) and 2/2-5 (1992) and by the BP well 2/1-5 (1982).

OPERATIONS AND RESULTS

Wildcat well 2/1-12 was spudded with the semi-submersible installation "Maersk Jutlander" on 8 January 1999 and reached a Total Depth of 3550.0 m on the 31st January 1999 in sediments of the Middle Jurassic Bryne Formation. A 12 1/4" pilot hole was drilled to 950 m and logged with the CDR tool and was then opened to 17 1/2". No indications of shallow gas were observed on logs.

At 2808 m, the well was shut in due to a 300 bbl water influx. Shut-in drill pipe pressure was 225 psi and Shut-in casing pressure 345psi. The influx was circulated out with 1.60 sg mud. Analysis of the Dx C Exponent and sonic logs shows that the pore pressure was risen to 1.53 sg in the mudstone sequence overlying the Lista Formation at 2704 m. Drilling continued until a flow check was performed at a negative drill break and the well was found to be flowing.

At 3133 m a crack was noticed in the shaft of the top drive. The bit was pulled into the 9 5/8" casing and repairs were undertaken. These repairs required the well to be static for 42 hrs. After the repairs were completed, circulation was established and after 30 minutes of circulation gas increased to 41.2% and dark brown oil was observed over the shakers and in the header box. No shows were seen in the cuttings or in the electrical logs. Geochemical analysis of a sample of the oil showed it to be similar to the Gyda oil. The well was drilled entirely water based with sea water and bentonite hi-vis pills through 36" and 17 1/2" sections down to 950 m, sodium silicate (Barasilc) mud from 950 m to 2930 m, and with KCl polymer mud from 2930 m to TD.

The Ula Formation was encountered at 3250.7 m, 16.5 m higher than prognosed. The sand was of good quality, but no hydrocarbon shows were observed and LWD resistivity logs indicated the reservoir was water-wet.

MDT pressure measurements and sidewall cores were obtained in 8" hole. A detailed pressure survey of the Ula Formation was carried out using the MDT tool and showed the reservoir pressure lay on a water gradient. No conventional cores were taken. No fluid samples were collected. The well was plugged and abandoned as a dry hole on 11 February 1999.

TESTING

No drill stem test was performed

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/1-12