



Wellbore History

GENERAL

Well 34/10-8 was drilled on the southern part of the Gullfaks Field. The primary objective was to test sandstones of Middle Jurassic age. Secondary objectives were sandstones in the Early Jurassic.

OPERATIONS AND RESULTS

Appraisal well 34/10-8 was spudded with the semi-submersible installation Deepsea Saga on 8 March and drilled to TD at 2214 m in the Early Jurassic Cook Formation. Some problems with lost circulation was encountered when circulating prior to cementing the 13 3/8" casing. Also the drill string became stuck during plug back operations at 2037 m and 9 days were lost when fishing for it. The well was drilled with Gel/spud mud down to 875 m and with gel/lignosulphonate from 875 m to TD.

The Middle Jurassic Brent Group sandstones came in with Tarbert Formation on top at 1821 m and the Ness Formation at 1853 m. The Tarbert and Ness formations were hydrocarbon-bearing with a 151 m gross pay zone from 1821 to 1972 m. The Early Jurassic sandstones of the Cook Formation were water saturated. Above the reservoir good oil shows were recorded on limestone from 1712 to 1745 m and on limestone/mudstone/siltstone from 1665 to 1705 m. Otherwise traces of oil shows were recorded above the reservoir up to a depth of 1220 m. No shows were recorded below the oil bearing reservoir.

A total of 13 cores were taken from 1823 to 1976 m, with a total recovery of 140 m. The RFT tool was run in the Brent sand and good data was obtained from 1826 to 2006 m. Fifteen out of seventeen tests were successful. In the Ness zone a fluid sample was taken at 1950 m.

The well was permanently abandoned on 25 May 1980 as an oil appraisal well.

TESTING

The well was perforated and tested in the interval 1869 to 1873 m in the Brent Group, Ness Formation. The test produced 498 Sm³ oil and 33900 Sm³ gas /day. The GOR was 68 Sm³/Sm³, the oil gravity was 29.5 deg API, and the gas gravity was 0.622 (air = 1). After the flow test an injection test was performed, indicating a fracture pressure of ca 5500 psig.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/10-8