

Wellbore History

GENERAL

Well 25/2-14 was drilled to appraise the Jurassic C prospect on the Frøy Field in the central Viking Graben. The northern part of the Frøy Field appears as a triangle delineated by 3 faults slightly tilted to the WNW, where the eastern limit is the main fault bordering the Frøy structure with a 300 m down-throw, and the northern border is another major fault. It is the western fault trending NNW-SSE, that separates the northern C compartment from the rest of the field, and well 25/2-14 is located in a down flank position. The location was chosen so as not to come too close to the eastern border fault, to leave a limited up dip if any, and to get a full Vestland sequence with the assumed oil water contact within the upper part of the section.

The main objective of the well was to explore the Middle Jurassic sandstones, which are the main reservoir in the Frøy Field. The Lower Jurassic Statfjord sandstones was a secondary target, depending on the results at Vestland level.

Boulders had been observed at 38 and 40 below seabed within 70 metres off location, and a strong reflector at 300 m indicated shallow gas. A hydrostatic regime was expected in throughout the reservoir except for Statfjord, which could be slightly over pressured.

OPERATIONS AND RESULTS

Appraisal well 25/2-14 was spudded with the semi-submersible rig West Vanguard 25 January 1991 and drilled to TD at 3623 m in the Early Jurassic Statfjord Formation. Minor problems were encountered while drilling 8 1/2" pilot hole down to 473 m. Top Vestland Group (Hugin Formation) was as found at the forecasted depth at 3135 m. Top Statfjord Formation was found at 3520.5 m (expected depth was 3537 m). Both reservoirs were found water-wet. There was a general lack of shows throughout the well, the only show was recorded on a 1 m section of core no 4 around 3157 m. Geochemical analyses confirmed a dry well all through. FMT pressure data indicated a separate pressure regime from the Frøy Field. Fifty sidewall cores were attempted and 48 were recovered. Four cores were cut, two in Hordaland shales from 2010 m to 2015 m, and two from the base of the Heather Formation and into the top of the Vestland Group from 3130 m to 3168 m. The well was permanently abandoned on 30 March 1991 as a dry well.

TESTING

No drill stem test was performed