



Wellbore History

GENERAL

Well bores 31/2-17 S, -A, and -B were drilled on the north-western periphery of the Troll West gas and oil discovery. The objective was to obtain the thickness of the oil zone and reservoir properties in the "Intermediate Area". Well bores 31/2-17 S and 31/2-17 A are located on each side of a fault subdividing the Intermediate Area into two main compartments. Well 31/2-17 S is located on the eastern side of the fault. The side track 31/2-17 A was turned 180 degrees and landed on the western side of the fault. Well 31/2-17 B was side-tracked from well 31/2-17 A and drilled horizontally to a position about 5 m above the oil water contact.

OPERATIONS AND RESULTS

All three well bores were drilled with the semi-submersible installation Transocean 8 from the same wellhead location. Operations commenced with spud of 31/2-17 S on 28 December 1991 and ended with temporary abandonment of 31/2-17 B on 14 February 1992.

Well 31/2-17 S was drilled to TD at 2220 m in the Middle Jurassic Fensfjord Formation. No significant technical problem occurred in the well bore. The well bore was drilled with sea water and hi-vis pills down to 921 m and with KCl/brine/PHPA mud from 921 m to TD. One and a half m of Draupne Formation was penetrated at 1870 m. The Sognefjord Formation reservoir was encountered with gas at 1871.5 m. The Gas-Oil-Contact was penetrated at 1972 m (1544.2 m TVD MSL) and the Oil-Water-Contact was penetrated at 2011 m (1565.8 m TVD MSL), both contacts in the Heather Formation. Six cores were taken. Core one and two and the upper part of core three were cut in the Sognefjord Formation. The rest of the cores were cut in the Heather B Formation. No fluid sample was taken.

Well 31/2-17 A was kicked off from 31/2-17 S at 909 m and drilled to TD at 1924 m in the Middle Jurassic Fensfjord Formation. No significant technical problem occurred. The well bore was drilled with KCl/brine/PHPA mud from kick-off to 1012 m and with oil based mud from 1012 m to TD. Seven m of Draupne Formation was penetrated at 1681.5 m. The Sognefjord Formation reservoir was encountered with gas at 1688.5 m. The Gas-Oil-Contact was penetrated at 1725.4 m (1543.0 m TVD MSL) in the Sognefjord Formation. The Oil-Water-Contact was penetrated at 1746.5 m (1558.1 m TVD MSL) also in the Sognefjord Formation. Five cores were taken. Core one, two, three and the upper part of core four were cut in the Sognefjord Formation. Core no five was cut in the Heater Formation. No fluid sample was taken.

Well 31/2-17 B was kicked off from 31/2-17 A at 1645 m. The well angle was built up to approximately 90 degrees and was drilled to TD at 1838 m after 147 m nearly horizontal drilling in the Sognefjord Formation gas zone. The junk bonnet from the 9 5/8" liner running was accidentally left in the hole and 2 days were spent fishing for it, otherwise no significant technical problem occurred in this hole. The well bore was drilled with oil-based mud from kick-off to TD. Five m of Draupne Formation was penetrated at 1686 m. The Sognefjord Formation reservoir was encountered with gas at 1691 m. As expected no GOC was encountered, but the GOC is assumed to be the same as in well bore 31/2-17 A. One horizontal core (2.8 m) was taken at TD. Only MWD logs were run. No fluid sample was taken.

31/2-17 S and 31/2-17A were permanently abandoned, while well 31/2-17 B was temporary plugged and suspended for later re-entry. The wells were classified as oil and gas appraisals.

TESTING

No drill stem test was performed in the well bores.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 31/2-17 A