



Wellbore History

GENERAL

Well 17/10-1 is situated in the Norwegian- Danish Basin near the western margin of the Sele High, which is a shallow basement feature. The structure on which the well was drilled is a very gentle anticline in an area with prominent salt walls. The objective of the 17/10-1 well was to test the Mesozoic section.

OPERATIONS AND RESULTS

Well 17/10-1 was spudded with the semi-submersible installation Sedneth I and drilled to TD at 3590 m in the Triassic Smith Bank Formation. The hole was drilled with a 18 1/2" bit to 160 m, but during enlarging with a 36" hole opener the temporary guide base sank 2.5 m into the seabed and tilted, due to heavy washing out. This made it impossible to enter the hole and the rig was moved 30 m NNE of its original position where a new hole was spudded. An 18 1/2" hole was drilled to 430 m. Seawater was used as drilling fluid and the returns were to the sea floor. Thereafter the mud system was converted to a Spersene/XP-20 seawater mud. At 3367 m the mud was converted to a salt saturated system since this was below the prognosed depth for top Zechstein salt.

The chief reservoir zone of interest was the massive Jurassic/Triassic sandstone (Gassum and Skagerrak Formations) from 2682 m to 3405 m. This section had porosities mainly between 20 % and 25 % and was entirely water bearing. There is a major unconformity on top of these sands to the overlying Late Jurassic shales. The claystone section from about 2651 m to 2682 m (Tau and Egersund Formations) had an exceptionally high gamma ray with readings up to 300 API units. Resistivities varied between 2 and 7 ohm/m compared with 1 - 1.5 ohm/m for the overlying shales. Cuttings from this section were very carbonaceous and were bleeding gas when first examined. Chromatograph readings were up to 700 ppm C1 with small quantities of C2, C3, and C4. Above and below this section the C1 reading was about 300 ppm. Nearly 700 m of Lower Cretaceous shales were deposited in the area, and they are overlain by about 350 m of limestones. From the early Tertiary on wards clastic deposition prevailed, and fine grained sediments were deposited in a subsiding basin. Organic geochemical analyses showed oil-window maturity from a depth of ca 3000 m to TD.

The well was permanently abandoned on 24 March 1969 as dry hole.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 17/10-1