

Wellbore History

GENERAL

Well 2/5-3 was drilled ca 8 km southeast of the Tor Field. The primary target was top Danian chalk. Secondary targets were top Paleocene and base chalk at 3551 m (11650 ft). Planned total depth was 3597 m (11800 ft).

OPERATIONS AND RESULTS

Well was spudded with the jack-up installation Zapata Explorer on 2 April 1972 and drilled to TD at 3731 m in the Late Permian Zechstein Group.

Top Paleocene was encountered at 2929 m, top Ekofisk Formation at 3037 m, top Tor Formation at 3121 m, and top Hod Formation at 3481 m. First show was reported in a limestone stringer at 2259 m. Occasional oils shows, in limestone stringers, were reported in the interval 2604 to 2877 m. The top 3 m of the Paleocene (Balder Formation) was silty and had good oil shows. Oil was found by drill stem testing in the Ekofisk and Tor Formations. Shows continued down to 3261 m in the Tor Formation.

Fifteen conventional cores were cut in the Ekofisk and Tor Formations, recovering a total length of 123.3 m core.

The well was suspended on 15 June 1972 as an oil discovery.

TESTING

Three zones were drill stem tested. The following results are after acidization:

DST 1 tested the interval 3386 - 3395 m in the lower part of the Tor Formation and flowed 21 m3 water /day.

DST 2 tested the interval 3120 - 3191 m in the upper part of the Tor Formation. Average flow parameters at maximum choke, 40/64", was 682 Sm3 oil and 340400 Sm3 gas /day. The oil gravity was 36 deg API and the GOR was 463 Sm3/Sm3. The GOR on smaller choke sizes was significantly lower, down to 233 Sm3/Sm3 on a 16/64 "choke.

DST 3 tested the interval 3053 - 3065 m in the Ekofisk Formation and flowed on average 682 Sm3 oil and 141330 Sm3 gas /day on a 32/64" choke. The water production during this flow decreased from 57 to 17.5 m3 /day and the GOR decreased from 213 to 179 Sm3/Sm3. The oil gravity was 38.2 deg API.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/5-3