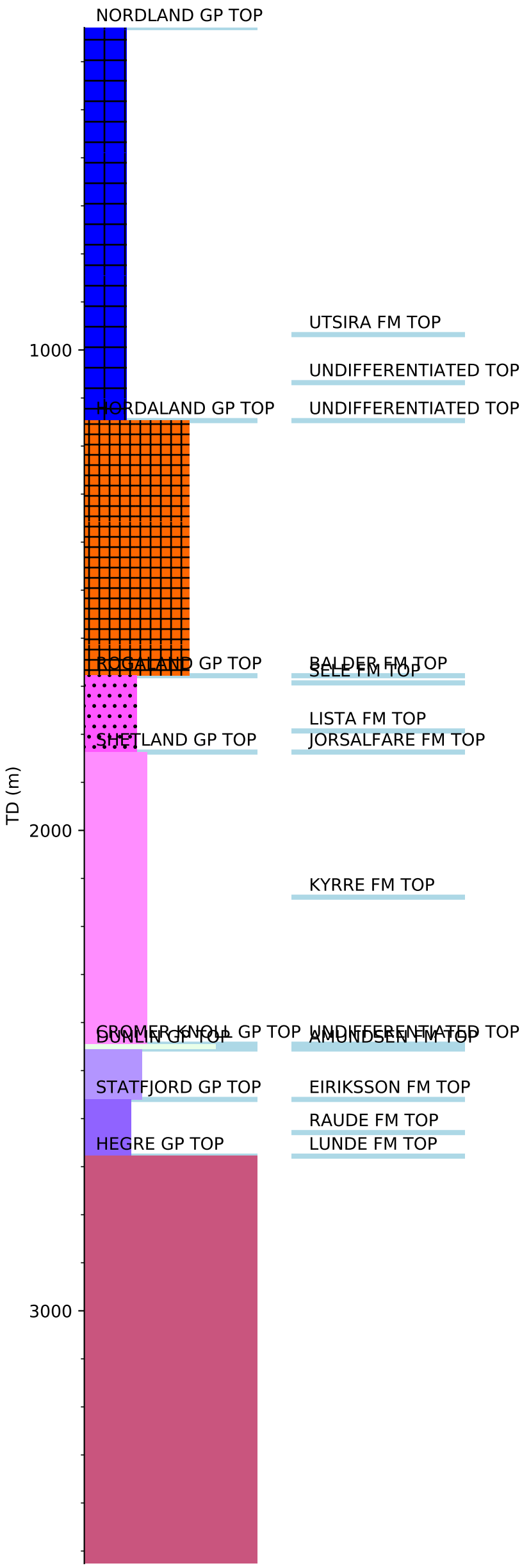
Groups

Formation Tops



Wellbore History

GENERAL

Well 34/7-7 was drilled on the western side of the “Inner Main Fault” near the geographic centre of the Snorre Field. The objectives were to test the reservoir quality of the Statfjord Group and the Oil-Water Contact, expected to be at 2611 m. Further objectives were to test the subdivision and reservoir characteristics of the Triassic Lunde Formation.

OPERATIONS AND RESULTS

Wildcat well 34/7-7 was spudded with the semi-submersible installation Treasure Saga on 17 September 1985 and drilled to TD at 3526 m in the Late Triassic Lunde Formation. A 17 1/2” pilot hole was drilled from 455 m to 995 m to check for shallow gas before opening up to 26”. No shallow gas was seen. Some fishing jobs were required during logging and testing, otherwise operations proceeded without significant problems. The well was drilled with spud mud down to 455 m, with gel mud from 455 m to 995 m, with gypsum/polymer mud from 995 m to 2562 m, and with gel mud from 2562 m to TD.

Well 34/7-7 penetrated top reservoir at 2561.1 m. The OWC was defined at 2615 m in the Statfjord Group. The average log porosity in the oil zone is 26.2%, the net/gross is 0.37, and the average water saturation is 26.2%. Weak oil shows were seen from around 2140 m in sandstone and siltstone from early Campanian in the Shetland Group (top Kyrre Formation) and down to to the top Dunlin Group at 2455 m. Through the Dunlin Group down to the top Statfjord reservoir at 2561 m, the shows became stronger. Below the OWC, a sandstone interval at the bottom of the Statfjord (2640 - 2644 m) had good oil shows. Going into the Upper Lunde, the shows disappear.

Nineteen cores were cut and recovered during drilling of the well. Core 1 to 8 were cut from 2563 to 2669.5 m through the whole Statfjord Group and the first meters of the Upper Lunde Formation. Core 9 to 19 were cut in the interval 2888.2 to 3336.7 m in the Upper Lunde Formation. Total core recovery was 197.25 m (94.1%). The core - log depth shifts for the individual cores varied from -0.6 m to +1.8 m. FMT oil samples were taken at 2613.5 m and 2564.8 m.

The well was permanently abandoned on 16 December as an oil appraisal well.

TESTING

Two Drill Stem Tests (DST) were carried out in the Statfjord Group, Eiriksson Formation.

DST 1 tested the interval 2561.5-2569.5 m at the top of the oil zone. The test produced 1720 Sm3 oil /day through a 14.3 mm choke. At stock tank conditions the GOR was 68 Sm3/Sm3, the oil density was 0.8362 g/cm3, and the gas gravity was 1.059 (air = 1). The bottom hole temperature was 93 °C.

DST 2 tested the interval 2611.7-2614.7 m just above the OWC. The test produced 980 Sm3 oil /day through a 71.8 mm choke. At stock tank conditions the GOR was 62.5 Sm3/Sm3, the oil density was 0.8403 g/cm3, and the gas gravity was 1.081 (air = 1). The bottom hole temperature was 93 °C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 34/7-7