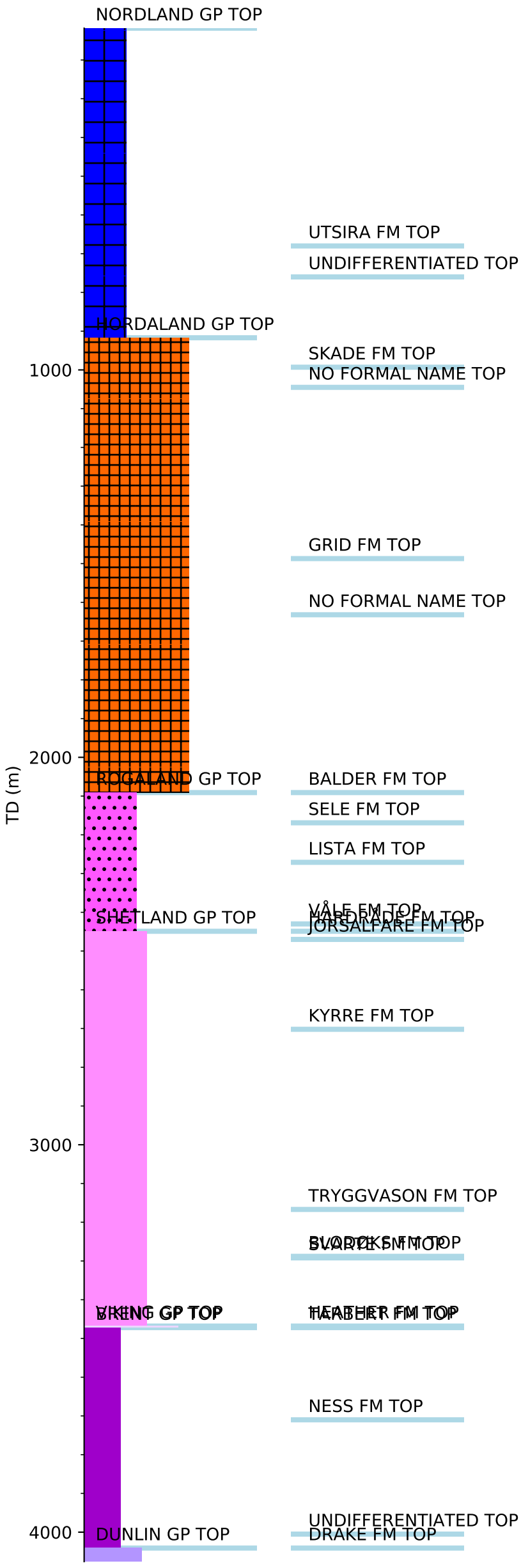

Wellbore History

Well 30/5-2 is located a few km west of the Oseberg Field in the Northern North Sea. It was drilled on the northern and down dip extension of the hydrocarbon accumulation discovered by well 30/8-1 S. The main target was the Brent deltaic sands of the Tarbert Formations. The primary objectives were to prove filling level and hydrocarbon types in a down dip (northern) direction, and to prove pressure communication and continuity with the reservoirs in 30/8-1 S. Planned TD was 50 m into the Dunlin Group.

OPERATIONS AND RESULTS

Appraisal well 30/5-2 was spudded with the semi-submersible installation Treasure Saga on 4 October 1996 and drilled to TD at 4076 m in the Early Jurassic Drake Formation. The total duration of the well was some 20 days behind schedule. The main contribution to this was time spent to cure a shallow gas source, corrective measures in conjunction with a 13 3/8" casing hanger sitting high and a stuck MDT tool. The well was drilled with spud mud and bentonite down to 1558 m, with KCl/polymer mud from 1558 m to TD.

The main reservoir interval consisted of the Tarbert Formation, but the Ness and ORE Formations were also encountered. Gas and oil pay was interpreted below 3528.5 m in the "Tarbert 2" reservoir, approximately 58 m and 10 m respectively. The well interpretation concludes with a GDT (gas down to) situation at 3591.5 m in the Tarbert 2 reservoir and with an OUT (oil up to) at 3602 m. An OWC is indicated at 3614 m with a FWL (free water level) at about 3616.5 m. In the Ness Formation a total of 16 m pay was interpreted in channel sands. The assumed fluid in these sands is gas, but this was not conclusively proven. The ORE (Oseberg - Rannoch - Etive) Formation had 1.4 m pay interpreted, but this may be an optimistic result as it was equally likely that this could represent so-called residual hydrocarbons. The reservoir properties are considered fairly modest with porosities generally below 20 % and with core permeabilities generally in the range 1 to 100 mD. The best properties, based on MDT mobility, were found in the Tarbert 2 gas reservoir and in the water bearing Ness sand at 3720 - 3740 m.

Three cores were cut in the Tarbert Formation from 3531 to 3632.35 m.

The well was permanently abandoned on 21 December 1996 as an oil and gas appraisal well.

TESTING

Three drill stem tests were performed. DST IA tested the water zone in the interval 3623.3 - 3627.8 m. It produced water at a rate of 30 m3 /day. DST IB tested the intervals 3623.3 - 3627.8 m + 3601.3 - 3621.3 m. In the main flow, using a 32/64" choke, it produced 250 m3 water, 135 Sm3 oil, and 63000 Sm3 gas /day. The GOR was 470 Sm3/Sm3, the oil density was 0.88 g/cm3 and the gas gravity was 0.79 - 0.82 (air = 1). The initial reservoir temperature measured in this flow was 131.1 deg C. DST II tested the gas zone in the interval 3529.1 - 3591.1 m. At maximum rates in the main flow, using a 72/64" choke, this test produced 980000 Sm3 gas and 510 Sm3 oil /day. No water was produced. The GOR was 1920 Sm3/Sm3, the oil density was 0.83 g/cm3, and the gas gravity was 0.69 (air = 1). The initial reservoir temperature measured in this flow was 127.4 deg C.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/5-2