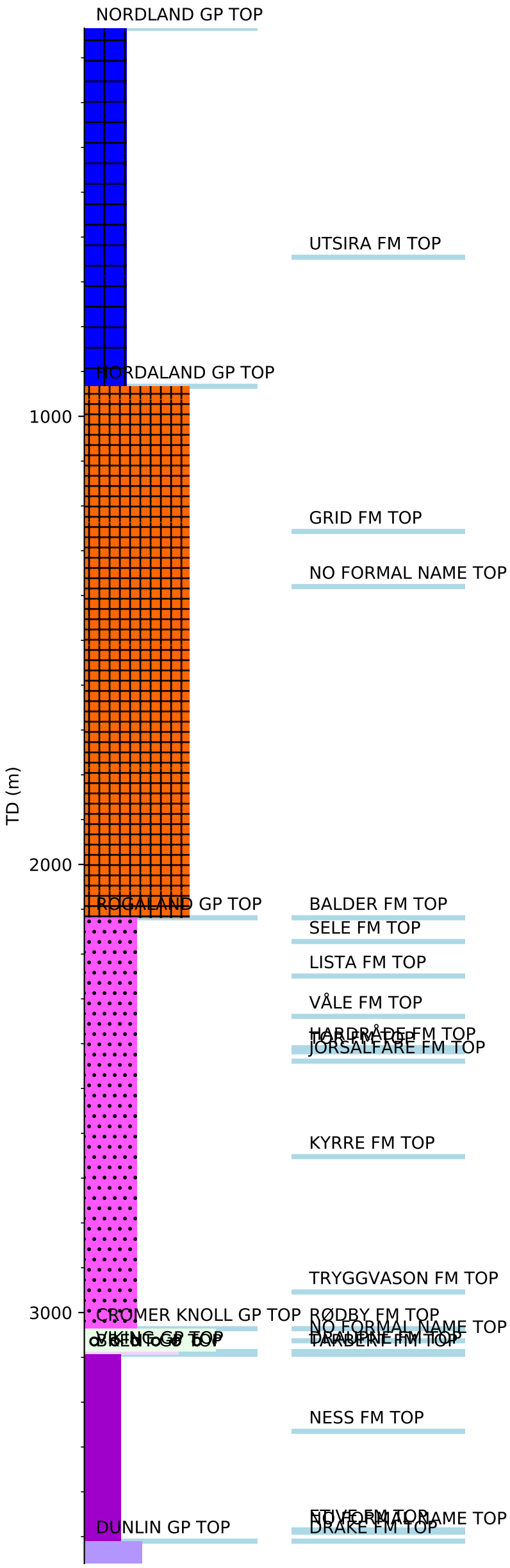

Wellbore History

GENERAL

Well 30/9-19 was the first well to be drilled on the Delta structure west of the Oseberg Field in the North Sea. The primary objective was to prove hydrocarbons in the Middle Jurassic Tarbert Formation. The underlying Middle Jurassic Ness Formation was a secondary target.

OPERATIONS AND RESULTS

Wildcat well 30/9-19 was spudded with the semi-submersible installation West Delta on 9 September 1998 and drilled to TD at 3560 m in the Early Jurassic Drake Formation. A 9 5/8" pilot hole was drilled prior to the 26" section to check for shallow gas. No gas was encountered. No significant problem was encountered in the operations although 25% of the rig time was counted as down time. This was a sum of various minor equipment failures, fishing for MDT tool and WOW. The well was drilled with sea water and hi-vis pills down to 1205 m and with ANCO 2000 mud from 1205 m to TD.

The Tarbert Formation was penetrated from 3092 m to 3264 m. The main Tarbert reservoir was encountered at 3138 m and it contained gas in the upper part down to 3216 m and oil from ca 3231 m down to 3247 m. The gas and the oil columns are separated by a shaley siltstone with a double coal layer. The oil column was over-pressured compared to the gas column.

An allochtonous Ness block (3062.5 - 3087 m) has been interpreted in the Early Cretaceous section, supposed to be a slide associated with degradation of the major fault zone to the east. This block contains a thin gas-filled sand layer at 3072 to 3075 m. Gas was also encountered in a channel sand within the lowermost Ness Formation from 3452 -3456.5 m.

Three cores were cut in the well. Core no 1 (3184 - 3240 m) and core no 2 (3240 -3247 m) were cut in the Tarbert Formation, while core no 3 (3494 - 3522 m) was cut in the Oseberg/Rannoch (OR) formations and into the underlying Dunlin Group. Wire line fluid samples were taken at 3153 m, 3233 m, 3234 m, 3244 m, and 3488.5 m. Pressure points were taken between 3196 and 3215 m.

The well was permanently abandoned on 22 October 1998 as a gas and oil discovery.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/9-19