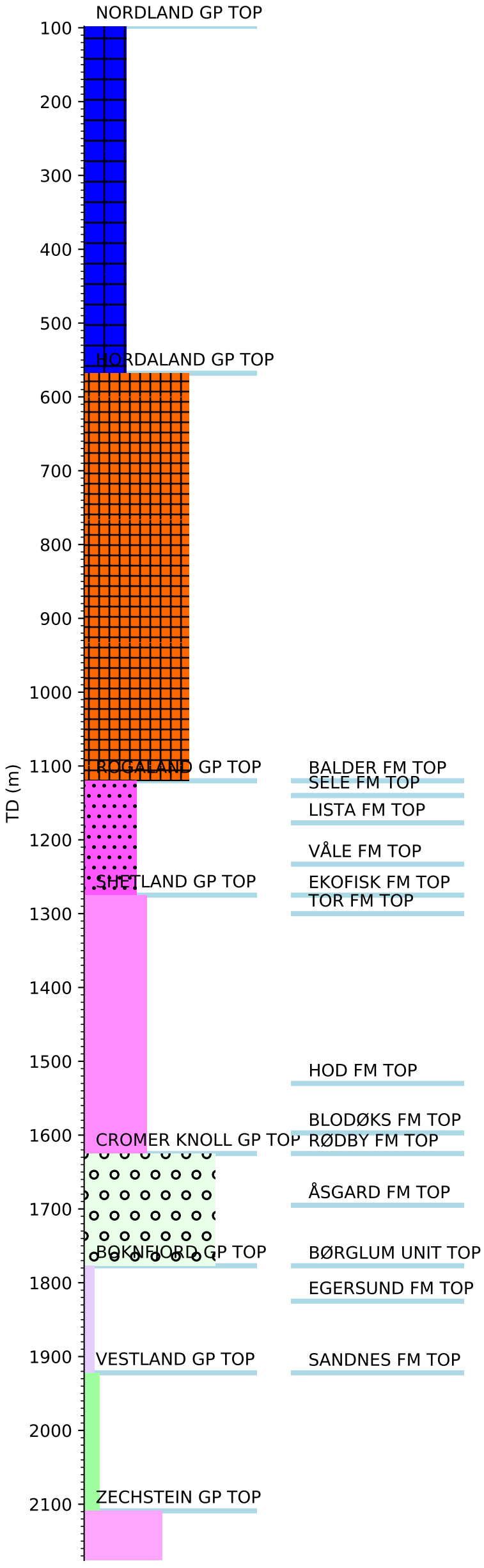
Groups

Formation Tops



Wellbore History

GENERAL

The 9/8-1 well is located in the central western part of the Norwegian-Danish Basin in the North Sea. The objective was to test the hydrocarbon potential of the sedimentary section present on the crest of a closed seismic structure interpreted to be a salt pillow. Prospective reservoir sands were anticipated towards the base of the Tertiary, in the Early Cretaceous and in the Early Triassic.

OPERATIONS AND RESULTS

Wildcat well 9/8-1 was spudded with the jack-up installation Endeavour on 23 May 1968 and drilled to TD at 2176 m in the Late Permian Zechstein Group. It was the first well drilled in Norwegian waters with a jack-up platform. After the 36" conductor was set at 137 m, the hole was drilled with a 17 1/2" bit to 411 m. While reaming the hole to 26", cavings and fill of shell fragments and gravel caused problems from about 300 m, necessitating the 20" casing to be set high at 360 m. The only additional drilling problem of note was a twist off while drilling at 1546 m. The fish was recovered in a few hours without difficulty. From here, operations were successfully carried out to TD. Initial drilling from the sea floor to 1350 feet was with seawater and gel without casing. Returns were to the sea floor. Below 1350 to TD at 7138 feet, a Spersene, XP-20, Salinex mud with up to 10 % diesel oil was used.

The interpreted salt pillow structure was found to be a piercement which breached the Triassic with the result that the

Triassic Bunter sand section was not present in this well. Top Permian Zechstein evaporites at 2109 m were immediately overlain by the Middle Jurassic Dogger formation. The Dogger contained some porous sandstones (Sandnes Formation) but these had only weak shows in the uppermost few feet and the logs indicated high water saturation. Both the Lower Cretaceous and the entire Tertiary section consisted mainly of clays. No sands were developed at the base of either the Lower Cretaceous or the Tertiary Eocene. Immature shales with good to excellent source rock properties were penetrated in the Late Jurassic. Two conventional cores were cut, from 1926 m to 1933.3 m in the Sandnes Formation and 2114.1 m to 2130.6 m in the Zechstein Group. Fluid sampling with the FIT tool at 2061.1 m, 2061.7 m, 1991.9 m, and at 1926.3 m. The two first of these were seal failures and recovered traces of sand together with mud, the third recovered only mud in a tight formation, the fourth successfully recovered formation water and some mud. No hydrocarbons were reported in any of the samples.

The well was permanently abandoned on 29 June 1968 as a dry hole with shows.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 9/8-1