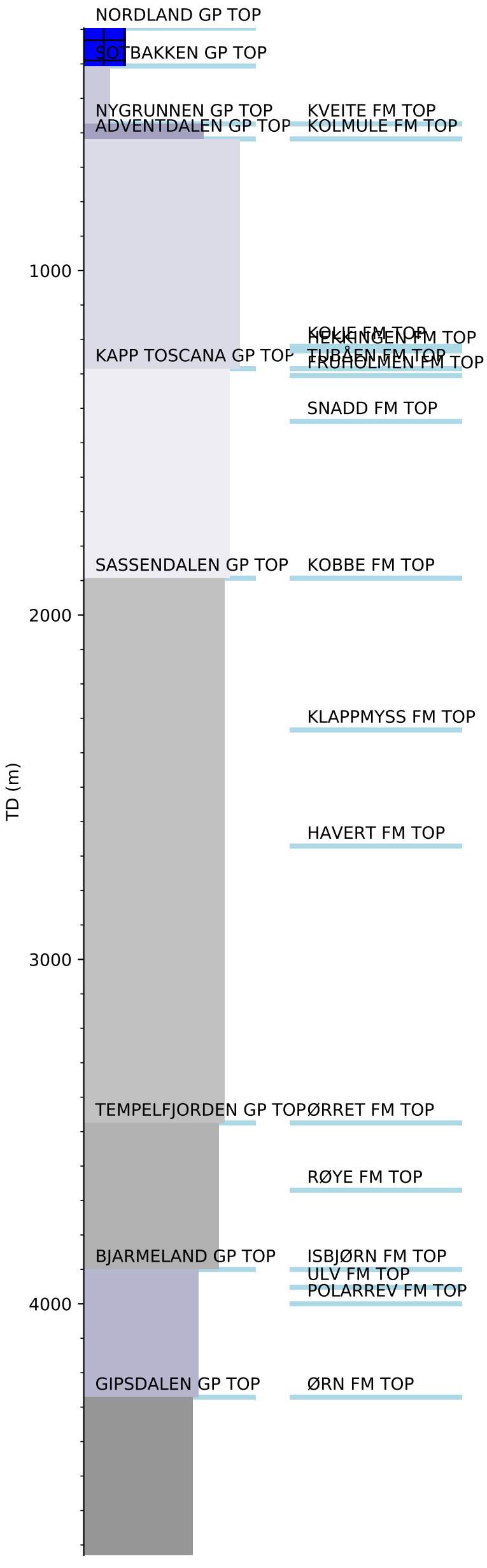
## Groups

## Formation Tops




## Wellbore History

GENERAL

Well 7124/3-1 is located east of the Hammerfest Basin on the Nyslepp Fault Complex. Two levels were identified where tests for hydrocarbons should be performed. The primary target was reservoir rocks of Middle Jurassic age, and a secondary target was Late Carboniferous rocks. In addition the source rock potential of the Triassic rocks should be investigated, as well as the whole stratigraphy from seabed to the prognosed TD at 4500 M.

The well Type Well for the Ørret Formation and Reference Well for the Bjarmeland Group.

OPERATIONS AND RESULTS

Wildcat well 7124/3-1 was spudded with the semi-submersible installation Ross Rig on 29 may 1987 and drilled to TD at 4730 m in rocks of Carboniferous age. Below 633 m the gas values increased rapidly with average values of 0.5 to 5-6% with a maximum of .10.93%. Due to the weak formation at the 30" casing shoe it was not possible to raise the mud weight above 1.03 g/cc. It was decided to stop drilling at 765 m and set the 20" casing because of this. The high gas values were not due to increased gas content of the formation, but rather a function of the low mud weight. Otherwise drilling proceeded without significant problems. The well was drilled with spud mud down to 361 m, with gel mud from 361 m to 765 m, with gypsum / polymer mud from 765 m to 3256 m, and with gel mud from 3256 m to TD.

The well penetrated the Early Jurassic Tubåen Formation at 1284.5 m. The interval 1284.5 m to 1297.5 m contained gas, with a one-metre thick oil leg below. The fluid contacts are based on RFT pressure measurements. The average log porosity of the gas zone is 22.8%, and the water saturation is 9 %. In the oil leg the average porosity is 26.2%, and the average water saturation is 53%. The N/G ratio is 1.0 in both zones. Oil shows in sandstones were recorded on cores from the oil leg down to1304 m. Below this depth several gas charged sandstone horizons yielded notable gas peaks: 2.67% at 1892 m, 1.56% at 2238 m, and 1.33% at 2282 m. These gas peaks yielded a full complement C1 - iC4. Weak oil shows were also recorded in these sands. The deepest recorded shows were at 2346 m. The Carboniferous was encountered at 3900 m. Sandstone was found interbedded with limestone in the interval 4480 m to 4598 m, but no clear lithological boundary was identified as the lower target.

A total of five cores were cut in the Tubåen and Fruholmen Formations from 1288 m to 1407.5 m. The total core recovery was 97%. A total of 5 Repeat Formation Tester (RFT) segregated samples were recovered; gas samples at 1288 m, 1295.5 m, and 1297 m, an oil sample at 1298 m, and a water sample at 1300 m.

The well was permanently abandoned on 20 October 1987 as a minor gas and oil discovery

TESTING

No drill stem test was performed

# LITHOSTRATIGRAPHY & HISTORY FOR WELL: 7124/3-1