Groups Formation Tops NORDLAND GP TOP **NAUST FM TOP** 300 -400 500 600 700 800 900 1000 1100 TD (m) 1200 KAI FM TOP 1300 RDALAND GP TOP **BRYGGE FM TOP** GP TOP TARE FM TOP 1400 TANG FM TOP SHETLAND GP TOP SPRINGAR FM TOP 1500 **BÅT GP TOP ROR FM TOP** 1600 TILJE FM TOP 1700 ÅRE FM TOP 1800 1900 **GREY BEDS (INFORMAL) TOP** 2000 **RED BEDS (INFORMAL) TOP** 2100

Wellbore History

GENERAL

Wildcat well 6609/10-1 is located on the Trøndelag Platform outside Mid Norway. The objective was to test the entire stratigraphic column between the seabed and into the Late Triassic. The primary target of the well was Jurassic sandstones on the Nordland Ridge, secondary to test possible sand development in the Paleocene.

OPERATIONS AND RESULTS

Wildcat well 6609/10-1 was spudded with the semi-submersible installation Treasure Saga on 2 August 1983 and drilled to TD at 2167 m in the Late Triassic Red Beds. The well was drilled with spud mud down to 413 m, adding some lignosulphonate (Unical) from 413 m to 1265 m, and with a full lignosulphonate mud from 1265 m to TD.

Apart from the glaciomarine sands and silts of Pleistocene age at the top, the well proved mainly clay and clay stone down to the Lower Jurassic Sandstone. In the Tertiary two unconformities were seen; a Late Miocene unconformity at 1312 m and a major unconformity at 1367 m, ranging in age from Early Eocene to Middle Miocene. The Tertiary unconformably overlies the Late Cretaceous, which in the well is of Campanian-Early Maastrichtian age. This section rests unconformably on Middle Jurassic (Late Toarcian-Early Bajocian) claystones at 1605 m. Beneath a Middle/Early Jurassic unconformity at 1642 m the well penetrated Tilje Formation Sandstone (143 m thick), the Are Formation 1733 - 1993 m) and the Triassic Grey and Red Beds. Both the Tilje and Are Formation sandstones had significant shale content. The drilling proved the pressure to be hydrostatic throughout the entire well. The formation pressure is approximately 170 bar at 1700 m. The sand intervals apparently belong to the same pressure regime. All sands proved water bearing. No shows were recorded in any section of the well.

As the Late Jurassic was not present in the well location the only potential source rock found in the well was the Early Jurassic - Late Triassic "Coal Unit" (Åre Formation). The entire well was found immature for any petroleum generation and no migrant hydrocarbons could be detected by organic geochemical analyses.

Two conventional cores were cut, one near the top of the Tilje Formation and one near the top of the Åre Formation. A full suit of logs was run over the sand intervals, but no fluid sample was taken.

The well was permanently abandoned on 29 August 1983 as a dry hole.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6609/10-1