

Wellbore History

GENERAL

Wildcat well 33/9-10 is located on the Tampen Spur North of the Murchinson Field. The Middle Jurassic Brent sand was the primary objective with the Early Jurassic Statfjord sand as a secondary objective. Planned TD was 3695 m, interpreted to be 30 m into the Statfjord Formation.

OPERATIONS AND RESULTS

Wildcat well 33/9-10 was spudded with the semi-submersible installation Fernstar on 7 April 1978 and drilled to TD at 3715 m in the Early Jurassic Statfjord Formation. The well was drilled with Spud down to 516 m, with seawater/FCL polymer mud from 516 to 1820 m, with lignosulphonate/fresh water from1820 to 3491 m, and with Qbroxin/CC-16/fresh water from 3491 m to TD. Spots of diesel and protectomagic (water or diesel-dispersed asphalt) was added to the mud, beginning at 1820 m. From 1820 m, oil in the mud was reported at contents varying between 3% and 20%.

The electric log pick of the top of the Early Cretaceous Cromer Knoll Group was taken at 3113 m, giving an Early Cretaceous thickness of 146.8 m. The Early Cretaceous consisted of 20.3 m of Barremian limestone at the base with red marl interbedded with the overlying claystone section.

Top Late Jurassic Viking Group was picked at 3259.8 m, 15.7 m high to prognosis. The thickness was 88.2 m of which the upper 69.2 m was the Draupne Formation and the lower 19 m was the Heather Formation. The lithology of the Viking Group was grey to dark grey, silty claystone.

The primary objective Brent Group was penetrated at 3348 m, 37.5 m high to prognosis. The sandstone was argillaceous, medium grained, and had fair to poor porosity. Of the expected 140 m of Brent Group, only 67.5 m was found. Of this 37 m was net sand. The Brent Group was water bearing. No shows were seen in the ditch samples. One core was cut from 3358 m to 3376 m. Very poor shows were observed in the core, but electric logs and Schlumberger Coriband analysis indicated the Brent Formation to be water wet. The shows in the core most likely came from flushing of the core with diesel and protectomagic mud. No residual oil was measured in the core plugs.

Top Dunlin Group was found at 3415.5 m, 110 m high to prognosis. It was 84.5 m thick versus the prognosed 140 m.

The secondary objective Statfjord Formation came in at 3500 m, 165.5 m high to prognosis. The Statfjord sands were tight with calcareous cement. Electric logs and lack of shows proved the formation to be water wet. Drilling went on in order to reach and identify the seismic reflector originally mapped as the Near Top Statfjord event. Twenty meters net of very calcareous sandstone stringers between 3635 m and TD appeared to account for this reflector. The well was permanently abandoned as a dry well on 12 June 1978.

TESTING

No drill stem test was performed.