



Wellbore History

GENERAL

Well 2/5-11 was drilled primarily to explore the Sørime prospect located in the southwestern part of PL 067, which is north of the existing Tor field. The prospect was a stratigraphic chalk play thought to be separate from the hydrocarbon-bearing formation in the nearby well 2/5-7. The main purpose for drilling the well 2/5-11 was to test the hydrocarbon potential within the Maastrichtian Tor formation. A secondary target was to test the hydrocarbon potential in the Ekofisk Formation Tjatse prospect.

OPERATIONS AND RESULTS

The 2/5-11 well was spudded on 6 September 1997. "Transocean Nordic", a Jack-Up Rig, was used to drill and abandon the well. Operations took 20 days longer than planned. Main reasons for the extended time were 2 days of unplanned coring and 9 days waiting on weather. The well was drilled to a total depth of 3550 m in the Tor formation in the chalk. High viscosity bentonite mud was used to 780 m. From 780 m to TD the well was drilled water based with various combinations of KCl, polymer, PAC, and glycol. The expected reservoir was encountered at 3362 m, 2 m deeper than prognosed. A FMT fluid sample containing mainly mud filtrate, some gas and small amounts of floating scummy oil was taken at 3444.3 m. An extensive logging program was employed to evaluate the Chalk sequence. After logging was completed, the logging information indicated that hydrocarbons were present and down hole testing was performed. Testing the well in two zones showed that, although hydrocarbons were present, there was a high content of water. Four cores were cut, one in the Ekofisk Formation (3312 m - 3330 m), one across the Ekofisk - Tor boundary (3330 m - 3366 m), and two in the Tor Formation (3393 m - 3419 m and 3418 m - 3465 m). The well was permanently plugged and abandoned as an oil discovery.

TESTING

Two tests were performed in the well. Test 1 in interval 3363 - 3381 m in the Tor Formation produced a total of 3.8 Sm3 of 38.7 API gravity oil with a Bottom Sediments and Water percentage (BSW) close to 94%. Test 2 in interval 3289 - 3329 m in the Ekofisk Formation involved an acid job to improve recovery. Before the acid job the test produced a total of 12.8 Sm3 of 38.7& API gravity oil with a BSW of 45%. After the acid job the test produced a total of 92 Sm3 oil of 37.1 API gravity with a BSW close to 90%.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 2/5-11