



## Wellbore History

### GENERAL

Well 30/6-19 was drilled on the Beta Saddle prospect between the Veslefrikk field and the 30/6-5 Oseberg East (Beta South) discovery. The objectives of the well were to prove hydrocarbons in the Brent Group, the Cook Formation, and the Statfjord Group. Planned TD was ca 3400 m or ca 100 m into the Statfjord Formation.

### OPERATIONS AND RESULTS

Well 30/6-19 was spudded with the semi-submersible installation Polar Pioneer on 9 April 1986 and drilled to TD at 3301 m in the Early Jurassic Statfjord Group, Eirikson Formation. Drilling proceeded without significant problems down to 1589 m where the string got stuck and the well was sidetracked at 1179 m. At 3117 m the string got stuck and a cement plug was set at 2847 m. The well was sidetracked again at 2822 m and drilled to TD.

The Brent Group (2857 - 2989 m) contained oil down to the OWC at 2956.5 m (Free water level from RFT). Net pay in the oil zone is 58.1 m with an average porosity of 18.8% and an average water saturation of 48.3%. No additional hydrocarbon reservoirs were encountered by the well and only occasional weak shows were seen on sandstone stringers in the Drake Formation and single grains in the Statfjord Group. RFT pressures showed the Cook Formation to be overpressured and the Statfjord Group to be underpressured relative to the Brent Group. This assumes same water density as in the Brent Group water zone.

Four conventional cores were cut in the Brent reservoir from 2858 - 2970 m. Core depths are ca 1.5 m shallower than logger's depth. RFT pressure recordings were performed throughout the Brent Group and in the Cook and Statfjord Formations. Segregated RFT samples were taken in the final sidetrack in the Ness Formation (2869 m; water and a little oil), the Etive Formation (2909 m; oil), and in the Oseberg Formation (2954.8 m water and a little oil).

The well was suspended 21 June 1986 for further testing at a later time. It is classified as an oil and gas discovery.

### TESTING

Three drill stem tests were performed.

DST 1 tested the interval 2945-2954.0 in the Lower Oseberg Formation. It produced 564 Sm<sup>3</sup> oil and 26000 Sm<sup>3</sup> gas through a 40/64" choke. GOR was 46 Sm<sup>3</sup>/Sm<sup>3</sup>. Oil density was 0.864 g/cm<sup>3</sup> and associated gas was 0.85 (air = 1) with 5% CO<sub>2</sub> and 3.5 ppm H<sub>2</sub>S. Bottom hole temperature in the test was 124 deg C.

DST 2 tested the interval 2907 - 2932.3 m in the Upper Oseberg, Rannoch and Etive Formations. It produced 797 Sm<sup>3</sup> oil and 34000 Sm<sup>3</sup> gas through a 36/64" choke. GOR was 43 Sm<sup>3</sup>/Sm<sup>3</sup>. Oil density was 0.833 g/cm<sup>3</sup> and associated gas was 0.78 (air = 1) with 5% CO<sub>2</sub> and 4 ppm H<sub>2</sub>S. Bottom hole temperature in the test was 122 deg C.

DST 3 tested the interval 2876-2884 m in the Ness Formation. It produced 668 Sm<sup>3</sup> oil and 25000 Sm<sup>3</sup> gas through a 52/64" choke. GOR was 50 Sm<sup>3</sup>/Sm<sup>3</sup>. Oil density was 0.831 g/cm<sup>3</sup> and associated gas was 0.86 (air = 1) with 4.5% CO<sub>2</sub> and 5 ppm H<sub>2</sub>S. Bottom hole temperature in the test was 123 deg C.

## LITHOSTRATIGRAPHY & HISTORY FOR WELL: 30/6-19