



Wellbore History

GENERAL

The well 6506/12-11 S was planned to be completed as a future producer. The main objectives of the well were to collect data on reservoir quality and fluid distribution, perform a long-term test to evaluate the continuity of the reservoir in the Tilje Formation, carry out an interference test between this well and an adjacent gas injector, 6506/11-5 S, and to investigate the effect of stimulation by fracturing on well productivity.

OPERATIONS AND RESULTS

The deviated appraisal well 6506/12-11 S was spudded on 8 June 1996 with the semi-submersible installation "Transocean Searcher" and drilled to a TD of 5268 m (4842.5 m TVD), approximately 60 m into the Åre Formation. Drilling was interrupted for 11 days by a labour conflict. The well was drilled with seawater and high viscosity pills down to 621 m, Anco 2000 mud with glycol from 621 to 2242 m, and with oil based Anco vert from 2242 m to TD. The well penetrated the top of the Tilje Formation and the Åre Formation, respectively, 18 m and 9.5 m shallower than prognosed. Both the Tilje and the Åre Formations were hydrocarbon bearing. Two tests were performed, one in Åre and one in Tilje. In addition, a minifrac test was performed in the Åre Formation. Six cores (196 m, 187 m recovered) were cut in the Tilje and Åre Formations. Three MDT wireline samples were taken in the well, one from each of the formations Åre, Tilje, and Garn. The samples from the Tilje and Åre Formations contained oil and gas, while the sample from the Garn Formation, contained formation water. A 7" liner was run and cemented on 9 August 1996. After testing, well 6506/12-11 S was suspended on 7 September 1996 as an oil appraisal well. The well was re-entered (6506/12-11 SR) on 11 November 1996 for an extended test. Well 6506/12-11 SR was suspended as an oil appraisal well on 1 February 1997 and re-classed to development well 6506/12-I-4 H.

TESTING

Test 1 in 6506/12-11 S was carried out over the interval 5226 - 5235.5 m in Åre and flowed with a rate of 685 Sm³/day oil and 453000 Sm³/day gas. Test 2 in 6506/12-11 S was carried out over the interval 5197.5 - 5206.5 m in Tilje and flowed with a rate of 470 Sm³/day oil and 173900 Sm³/day gas. The testing in 6506/12-11 SR consisted of a prefrac test in Tilje 1.1 followed by a massiv hydraulic stimulation and clean up with coiled tubing prior to start the extended well test. Most of the produced oil during the well test was recovered by the floating production, storage and testing vessel "Crystal Sea". When offloading Crystal Sea at Mongstad, the oil was burnt off at the installation.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6506/12-11 S