



### Wellbore History

#### GENERAL

Exploration wells 6507/6-1 and 6507/6-2 were drilled by Saga in the period 1986 to 1991. Both were plugged and abandoned as dry with shows. The Amoco operated exploration well 6507/5-1 well was completed in 1998 and was suspended as an oil and gas discovery in the Jurassic and Cretaceous. The discovery was named Skarv while the Cretaceous part of it has informally been named Gråsel. In 1999, well 6507/5-2 was drilled by BP Amoco to appraise Skarv. The well was plugged and abandoned as a gas well. The Snadd structure was explored by the 6507/5-3 well in June 2000 and plugged and abandoned as a gas discovery.

Well 6507/5-4 was drilled on the southern C-segment of the Skarv structure. The main reservoir target was sandstone in the Early - Middle Jurassic Garn, Ile and Tilje Formations. In the discovery case the objective was to gather the data required to allow confident oil reserves estimates. High-risk secondary targets were the Cretaceous Lysing and Lange Formations.

#### OPERATIONS AND RESULTS

Wildcat well 6507/5-4 was spudded with the semi-submersible installation Stena Dee on 10 February 2001 and drilled to TD at 3812 m (3820 m loggers depth) in the Early Jurassic sediments of the Åre Formation. The well was drilled with seawater and hi-vis sweeps down to 522 m, with KCl/glycol mud from 522 m to 1468 m, and with KCl mud from 1468 m to TD.

Well 6507/5-4 successfully completed a logging program across Cretaceous secondary targets in the 12.25" hole, and a logging and coring programme of the primary Jurassic targets in 8.5" hole. Oil shows of variable strength were recorded from 3060 in the Lange Formation and down to TD. Oil and condensate were discovered in poor quality Early Cretaceous sands. The thin Lysing Formation was tight without shows. Oil and gas were discovered from 3513 m, top of the primary Garn reservoir target, while Ile and Tilje were water-wet. A gas/oil contact was indicated at 3542 m based on logs and cores, but no OWC was seen.

Four conventional cores were cut in the Garn, Not, Ile, Ror, and Tilje Formations in the interval 3512 m to 3724 m. The core-log shift was ca + 7 m for all four cores. MDT fluid samples were taken in the Lange Formation as well as in the Fangst Group. Organic geochemical analyses of these indicated a similar source rock, but with a somewhat higher maturity in the Lange Formation petroleum.

The well bore was plugged back to 1450 m on 15 April 2001 as an oil/gas appraisal of the Skarv Discovery. Since no OWC had been found a sidetrack, 6507/5-4 A, was decided to appraise the Garn down-dip oil leg.

#### TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 6507/5-4