



Wellbore History

GENERAL

Well 9/2-8 S was drilled from slot 3 of the Yme template. The well was planned as an exploration well, to identify the hydrocarbon potential of the Yme Epsilon East and West structures. The well design was based on flexibility to enable later completion as a production well if commercial reserves of oil were encountered. The Epsilon East and West structures are developed on the east and west sides of a salt diapir. The well was planned to drill down through the sequence on the east flank with the Sandnes Formation being the primary target. As a secondary target the well was planned to extend a further 1600 m into Epsilon West structure. This involved drilling through the base of the salt diapir and then up through the sequence within the western flank. The Epsilon East structure was recognized as a fairly well defined prospect, comprising of an eastward dipping tilted fault block. Complicated tectonism affecting the Epsilon West structure however, meant this could only have the status of a lead. The main uncertainties with respect to probability of discovery were considered as leakage/trap and source/migration.

OPERATIONS AND RESULTS

Wildcat well 9/2-8 S was spudded from the seabed with the jack-up installation "Mærsk Giant" on 24 June 1997. At 5936 m the BHA became stuck while drilling the Sandnes Formation. The well was subsequently sidetracked to 9/2-8S T2 from 5680 m on the 4 October 1997. The T2 sidetrack was only drilled to 6011 m due to the BHA becoming stuck at 6002 m while pulling out of hole. A further sidetrack, 9/2-8S T3, was drilled from 5628.5 m, on 19 October 1997 and reached a TD of 7203 m on 16 December 1997. This sidetrack failed to penetrate the Vestland Group, passing from Zechstein salts of the faulted zone straight into the shales of the Tau Formation. As a result a final sidetrack, 9/2-8S T4, was started from 6144 m on 21 December 1997. This wellbore reached final TD at 7584 m in the Late Jurassic Egersund formation on 18 January 1998 after penetrating the uppermost Sandnes Formation. The Sandnes Formation proved to be dry and tight. Cores were taken in the original 9/2-8S well from 5842 m to 5926 m within the Sandnes reservoir on the Epsilon East structure. Oil shows were noted, but MWD logging indicated that the formation was water wet. A FMT fluid sample was taken in 9/2-8S T4 at 7397 m (Epsilon West structure). The plan was to complete the well with a 5" liner through the reservoir section, but as both structures were water wet, cement-plugs were set in the Epsilon West. The well was completed in the Epsilon East structure on 2 February 1998 as a dry well. It was subsequently re-classified to development well 9/2-A-3 and used as an injection well for gas produced from the Yme field.

TESTING

No drill stem test was performed.

LITHOSTRATIGRAPHY & HISTORY FOR WELL: 9/2-8 S