

Towards a World Record

Innovative drilling technology now makes it possible to drill into satellite fields that are located several kilometres away from the original field.

In the North Sea, Statoil is currently drilling an "extended reach well" – up to 85° from the vertical – from the Gullfaks field into the comparatively small field Gulltopp some nine km to the west. The purpose is to tap a satellite that has reserves of approximately 25 million barrels of oil. If successful, this well will save development costs and at the same time make it possible to produce several satellite fields that have previously been considered uneconomic.

However, this is by no means an ordinary production well. Statoil is now testing the limits of the drilling technology and will with this well set a new world record. With a total length of more than 10,000m (planned vertical depth is 2,450m), it will be the longest "extended reach well" ever drilled from a fixed production platform.

More important, however, this well will enable Statoil to tap a reservoir much more cost efficient than by drilling a well from a separate drilling rig with sub-sea completion and a pipeline tied back to Gullfaks A.

The Gullfaks A platform is located in the northern North Sea and is producing approximately 80,000 bopd from Middle Jurassic sandstones.



Photo: Halldan Carstens

The drilling of wells from Gullfaks A is utilizing modern technology that is highly automatic involving a minimum of personnel. All drilling parameters are shown on monitors watched by the drilling supervisor and his crew.



Photo: Halldan Carstens

The geological descriptions of the borehole cuttings are carried out by a service company that is manning the "mud logging unit". The two geologists are also monitoring drilling parameters and all recordings that relate to the drilling mud, including oil and gas shows.



Photo: Halldan Carstens

Communication between the drilling engineers on the platform and the onshore drilling office is facilitated by fiberoptic cables enabling the two parties to discuss all matters related to the drilling in "real time". In addition to being cost efficient, it also leads to safer operations.