

OIL AND GAS FIELDS IN NORWAY

INDUSTRIAL HERITAGE PLAN



NORSK OLJEMUSEUM

HEIDRUN

This oil and gas field lies in about 350 metres of water on the Halten Bank, 175 kilometres off mid-Norway.

Heidrun was proven in 1985 by Conoco. The licence terms allowed Statoil to take over the operatorship for the production phase. That option was exercised when the field came on stream in 1995.

The northern segments of Heidrun are being developed with subsea installations in order to phase in resources from this area.

Reservoir and recovery strategy

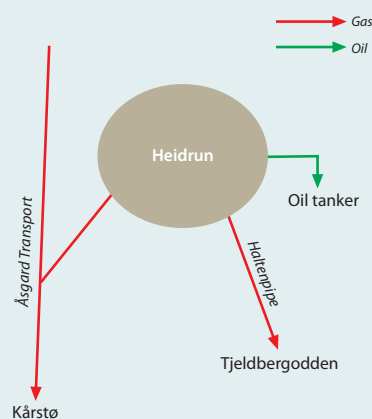
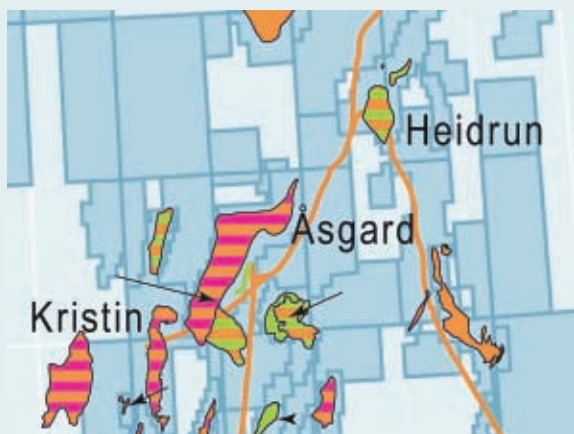
Located at a depth of 2 300 metres, the reservoir is built up from early and middle Jurassic sandstones. The recovery strategy for Heidrun is based on pressure maintenance through water and gas injection.

Transport

Oil from the field is loading into shuttle tankers on the field and shipped to Mongstad near Bergen and to Tetney in the UK. Since Heidrun has no storage facilities, a shuttle tanker must always be in place on



the field ready to take on oil. This storage-free loading system is the first of its kind in the world. Two loading buoys are moored to the seabed. A tanker pulls one of these into its bottom, and loading can continue virtually regardless of the weather.





The Heidrun platform. Photo: Svein Harald Ledaal/Statoil

Part of the gas is carried in the Haltenpipe line to Tjeldbergodden in Norway as feedstock for methanol production, with the rest piped through Åsgard Transport to Kårstø.

Development solution

The Heidrun tension-leg platform (TLP) is the

world's first concrete-hulled floater moored to the seabed by steel tenders. Its four tether foundations are shaped like the base section of a 19-cell Condeep, while the hull has four columns. The platform is connected to a seabed template with 56 well slots.

The northern part of the field is produced through subsea installations.

Heidrun

Blocks 6407/7 and 6407/8
 Production licences 095 and 124
 Awarded 1984 and 1986

Total recoverable reserves 1 170 mill bbl oil
 41.6 bn scm gas
 1.7 mill tonnes NGL
 Remaining at 31 Dec 2008 370 mill bbl oil
 30.1 bn scm gas
 1.2 mill tonnes NGL

Discovery year 1985
 Approved for development 14 May 1991
 On stream 18 Oct 1995
 Operator Statoil
 Operations organisation Stjørdal
 Main supply base Kristiansund

Licensees

Statoil	12.41%
Petoro	58.16%
ConocoPhillips	24.31%
Eni Norge	5.12%



The Heidrun TLP with its steel tethers. Illustration: Statoil

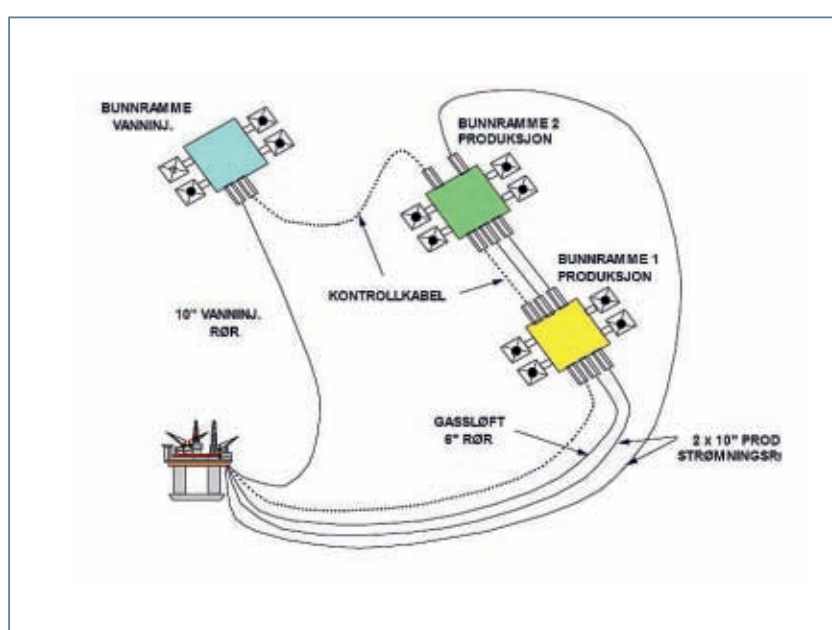


Illustration: Statoil