

# OIL AND GAS FIELDS IN NORWAY

## INDUSTRIAL HERITAGE PLAN



NORSK OLJEMUSEUM



# NJORD

This oil field lies in 330 metres of water about 20 kilometres west of Draugen in the North Sea. Statoil is the operator.

## Reservoir and recovery strategy

Njord is built up from sandstones in the Jurassic Tilje and Ile formations, with the main reservoir in the former. The field has a complex fault pattern, and communication between the segments is only partial.

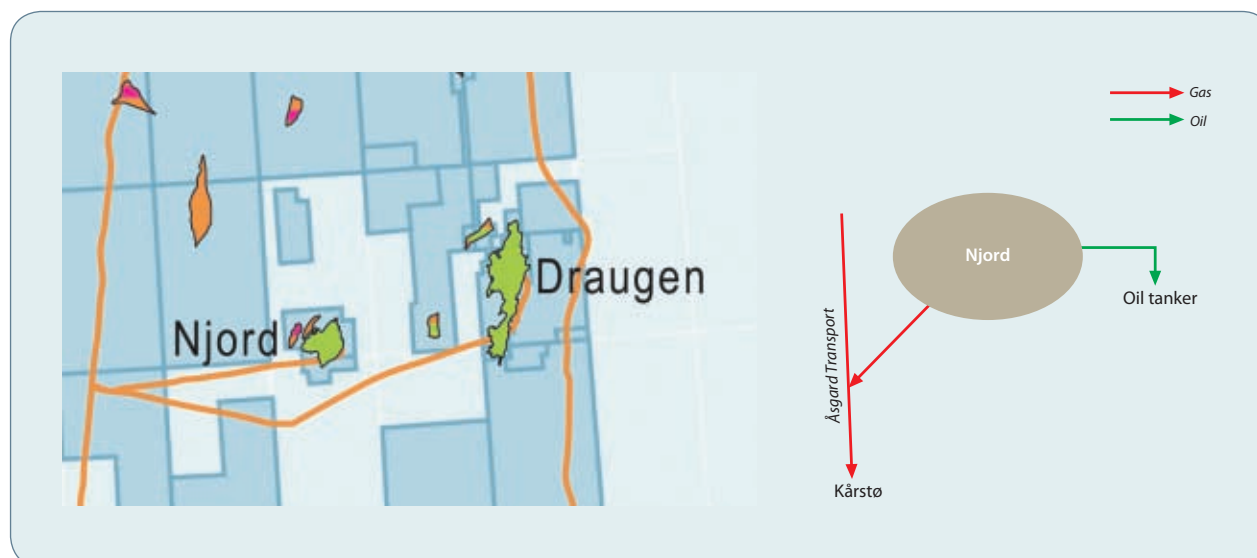
During the first phase of Njord's producing life, oil was produced through 11 production wells and four wells were used to inject the gas into the reservoir as pressure support. Phase two from 2007 is maintaining output with the aid of a number of new production wells as well as by phasing in supplementary reserves found close to the existing infrastructure.

## Transport

Oil is piped to the Njord B storage vessel, moored close to the Njord A platform, for transfer to shuttle



tankers and shipment to market. Gas from Njord is exported through a 40-kilometre pipeline tied into the Åsgard Transport system for onward transport to the Kårstø gas processing plant and markets in continental Europe. Gas exports began in December 2007.





*Njord B. Illustration: APL*

### Development solution

#### Njord A integrated platform

The field has been developed with a steel semi-submersible production, drilling and quarters platform. This is positioned immediately above the subsea-completed wells, which are connected to the floater via flexible risers.

#### Njord B storage ship

Njord B lies 2.5 kilometres from the platform for oil storage and transfer to shuttle tankers. The vessel is remotely operated from Njord A, except during dis-

charging operations and for maintenance. Electricity is also supplied from the platform via a power cable. With a storage capacity of 690 000 barrels, the ship is turret-moored by an eight-point mooring spread. It was built by Kværner Masa Yards at Turku in Finland.



*Njord A in 1998. Photo: Atle Kårstad/Norsk Hydro*

#### Njord

Blocks	6407/7 and 6407/10
Production licences	107 and 132
Awarded	1985 and 1987
Total recoverable reserves	158.5 mil bbl oil 10.7 bn scm gas 1.7 mill tonnes NGL
Remaining at 31 Dec 2008	14.5 mill bbl oil 8.6 bn scm gas 2.1 mill tonnes NGL
Discovery year	1986
Approved for development	12 Jun 1995
On stream	30 Sep 1997
Operator	Statoil
Operations organisation	Kristiansund
Main supply base	Kristiansund

#### Licensees

E.ON Ruhrgas Norge	30.0%
Statoil	20.0%
ExxonMobil E&P Norway AS	20.0%
GDF Suez E&P Norge	20.0%
Petoro	7.5%
VNG Norge AS	2.5%