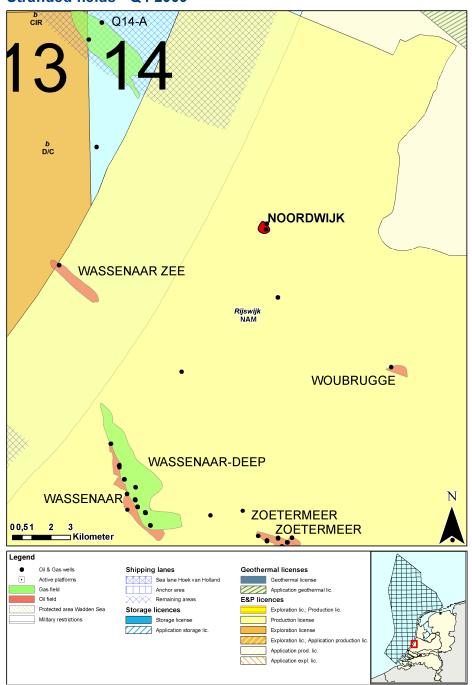




Fact sheet Noordwijk

Stranded fields - Q4 2009



Location map of the Noordwijk oil field

General information

The Noordwijk oil field was discovered in 1956 by NAM by well Noordwijk-01. The field contains oil in the Rijnland Group (KN). The Noordwijk oil field is situated within the Rijswijk concession. The Noordwijk structure is situated on the NW margin of the West Netherlands Basin. The structure of the field is a NW-SE striking anticline. A steeply dipping reverse fault forms the boundary of the structure to the NE.

The Noordwijk-01 well shows an oil layer below a gas cap at Rijswijk Member level. Below are two sand layers containing oil and oil in gas layers below of the Nieuwerkerk Formation. The oil layer has also been penetrated in well Noordwijk-02.

Regional information on the sedimentology and the structural configuration of the area is available in map sheet VII-VIII Noordwijk-Rotterdam, Amsterdam-Gorinchem.

Sequence of events

sequence of crems		
Date	Event	
03-01-1955	Production license Rijswijk granted (NAM)	
20-03-1957	Production license area expanded with ca 1900 km ² (NAM)	
28-10-1955	Spud date Noordwijk-01 (NAM)	
02-01-1956	TD reached 1077,8 m ah	
07-06-1979	Production license area expanded with ca 25 km ² (NAM)	
30-09-1983	Spud date Noordwijk-02 (NAM)	
18-10-1993 to 28-11-1983	RFT's 1104 - 1824,5 m ah	
18/25-10-1983	RFT sample (KNNCR & DF)	
09-12-1983	TD reached 2940 m ah	

Plug data

Tug ada					
Depth m	Porosity %	Hor. Permeability mD	Density g/cm3		
898.2	11		2.7		
968.4	10	1	2.7		
1017	11	10	2.68		
1051.2	12	1	2.68		
1052.3	18	6	2.67		
1057.6	13	2	2.67		
1058.7	12	2	2.67		
1060.1	13	7	2.67		
1063.5	13	1.5	2.68		
1065	10	3	2.66		

Reservoir data

Geological unit RGD & NOGEPA (1993)	Net m ah	Porosity %
Rijswijk Member (KNNSR)	5 - 10	20 - 30

Hydrocarbon specifications

j · · · ·· · · · · · · · · · · · ·				
Reservoir	GHV MJ/m ³	Viscosity	Gravity API	Specific density
Rijnland Group (KN)	39,211	36	26,6	0,895

¹Value of the associated gas

Volumes

Reservoir	STOIIP 10 ⁶ m ³	Reserves 10 ⁶ m ³		
		Proven	Expected	Possible
Rijnland Group (KN)	0,5 - 1			

Productivity

Stratigraphy	Test depth	Borehole pressure
Straugraphy	m ah	Bar
KNNCR	1104	107,2
KNNCR	1131	108,6
DF	1140	109,4
DF	1162,9	111,7
DF	1187	113,3
DF	1427	137,3
KNNCR	1739	169,8
DF	1785	174,6
DF	1824,5	178,7

More RFT information is available on the well log (NWK-02)

Well status

NWK-01: Plugged and abandoned NWK-02: Plugged and abandoned

Public References

TNO-NITG 2002. Geological Atlas of the Deep subsurface of the Netherlands. Map sheet VII: Noordwijk-Rotterdam, Map sheet VIII: Amsterdam Gorinchem. Utrecht.
RGD & NOGEPA 1993, Stratigraphic nomenclature of the Netherlands, Mededelingen Rijks Geologische Dienst, Nr. 50

NAM 1956: Composite well log, <u>NWK-01</u>. On open file NAM 1983: Composite well log, <u>NWK-02</u>. On open file

For more information stranded Oil&Gas fields in the Netherlands:

http://www.nlog.nl/nl/reserves/reserves/stranded.html

For released Well data and Seismic data contact DINOloket:

http://www.dinoloket.nl

For geological maps of the deep subsurface of the Netherlands:

http://www.nlog.nl/nl/pubs/maps/geologic maps/NCP1.html

Liability

Facts and figures supplied on this fact sheet have been compiled carefully. Great care has been taken to ensure correct coverage of all information. TNO and the Ministry of Economic Affairs do not accept any liability for any direct or indirect damage of any kind ensuing from the use of information published on this sheet.