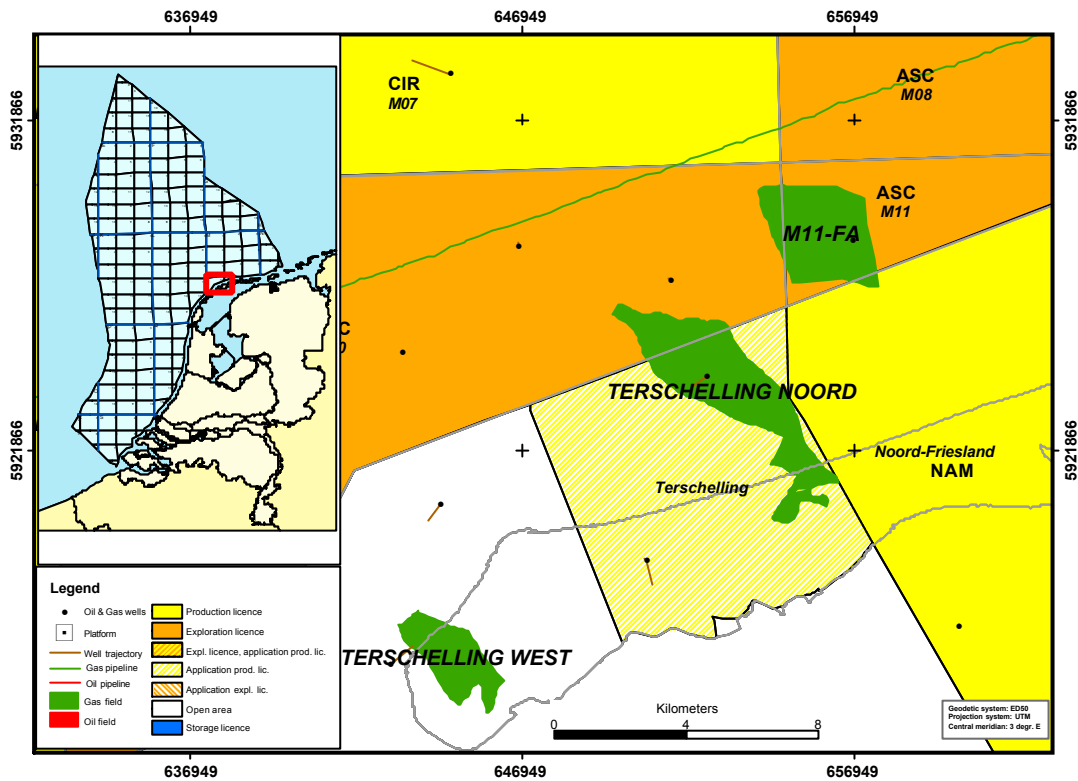


## Fact sheet Terschelling-Noord field



*Location map of the Terschelling-Noord field*

### **General information**

The Terschelling-Noord (TEN) gas field was discovered in 1993 with exploration well TEN-02. It is situated both on- and offshore, in an area stretching northwest from the Terschelling Island into Block M10. The gas is trapped in the reservoir sandstones of the Upper Slochteren Member of the Upper Rotliegend Group. The field has not been developed and currently lies in an exploration license for which a production license is applied for in 1995.

The TEN-field consists of an elongated, NW-SE oriented horst block. This horst block is bounded by faults on three sides. The SE boundary of the field is defined by a dip closure. The field has reasonable reservoir quality but suffers from poor gas quality. The surface area of the field approximates 12.5 km<sup>2</sup>. The field comprises one sandstone reservoir interval: the Upper Slochteren Member (ROSLU).

Data presented in this fact sheet are taken from the various reports from the files of TNO-NITG. It is noted that NAM conducted four 3D seismic surveys in the area of the

Terschelling-Noord field and in the adjoining offshore area. These surveys are (or will be) in the public domain on short notice (November 2006).

Three offset wells to the TEN-02 well are reference wells for the Rotliegend Lithostratigraphy (Terschelling-01, Hollum-Ameland-02 and Buren-01, Van Adrichem Boogaert & Kouwe, 1993-1997). For general information on the geology of the Terschelling-West field area one is referred to RGD 1991, the Geological atlas of the Netherlands, map sheet Vlieland-Terschelling in which the geological history is explained and for example also petrophysical analyses are reported.

It must be noted that the field lies close to the environmental sensitive Waddenzee area.

### *Sequence of events*

Date	Event
28-11-1985	Award drilling license Vlieland II to NAM
14-01-1987	Modification of drilling license Vlieland II
28-04-1987	Drilling license Vlieland II effective
21-12-1992	Spud date well TEN-02 (NAM)
03-03-1993	Completion date well TEN-02 (NAM)
23-03-1995	Drilling license Vlieland II lapsed
28-04-1995	Application production licence Terschelling by NAM

### *Reservoir data*

Geological unit RGD & NOGEPa (1993)	Depth interval m TVD/MSL	Net thickness m	N/G %	Porosity %	Gas saturation %
Upper Slochteren Member	2572-2707	61	45	9.2-15.9	26.4-60.6
Pay zone down to FWL	2572-2635	33	52	11.7	40.0-48.9

Well TEN-02 was cored across three depth ranges: 2582.6-2603.4 m, 2605.5-2630.2 m and 2630.6-2654.6 m (TVD/MSL). At a large number of levels along these core intervals, both porosity and permeability were measured. Core porosities in the range 9-16 % appear to correspond with a core permeability range of roughly 0.1-3 mD.

### *Contacts*

Reservoir	Top structure m	GDT m	GWC m	FWL m TVD/MSL
Upper Slochteren	Approx. 2525	2636	2657	2635

### *Hydrocarbon specifications*

Reservoir	CH <sub>4</sub> %	CO <sub>2</sub> %	N <sub>2</sub> %	GHV MJ/m <sup>3</sup>
Upper Slochteren	74.7	14.1	6.6	33.73

### *Volume*

Reservoir	GIIP 10 <sup>9</sup> m <sup>3</sup> st			Reserves 10 <sup>9</sup> m <sup>3</sup> st		
	Proven	Expected	Possible	Proven	Expected	Possible
Upper Slochteren	4.6	5.8	7.2	2.6	3.4	4.3

### ***Productivity***

<b>Reservoir</b>	<b>Reservoir pressure bar</b>	<b>Test interval m TVD/MSL</b>	<b>CGR m<sup>3</sup>/10<sup>6</sup>m<sup>3</sup></b>	<b>Q50 well production at s.c. m<sup>3</sup> st/d</b>	<b>skin</b>	<b>K mD</b>
Upper Slochteren	433 at 2575m	2572-2636		16000-31000	± 4	0.13

*Q50 based on available public data from composite log*

### ***Well status***

TEN-02, Plugged back and abandoned

### ***Infrastructure***

The nearest platform is: L09-FF at 26 km. The nearest pipeline (shortest distance rectangular to the pipeline): NGT at 3.4 km

### ***Public references***

RGD 1996, Concessie aanvraag Terschelling, Petrofysica, TNO report. (Advice production license application Terschelling, Petrofysical report.)

RGD 1996, Advies Concessie Terschelling, Rapport 96ADV04. (Advice production license application Terschelling. *Screened version on open file.*)

RGD 1991, Geological Atlas of the deep Subsurface of the Netherlands, Map sheet I, Vlieland-Terschelling.

RGD & NOGPA 1993, Stratigraphic nomenclature of the Netherlands, Mededelingen Rijks Geologische Dienst, Nr. 50

Composite log of well TEN-02. *On open file*

For more information on Oil and Gas data, Stranded fields, Well and Seismic data and Geological maps:

*<http://www.nlog.nl>*

### ***Liability***

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