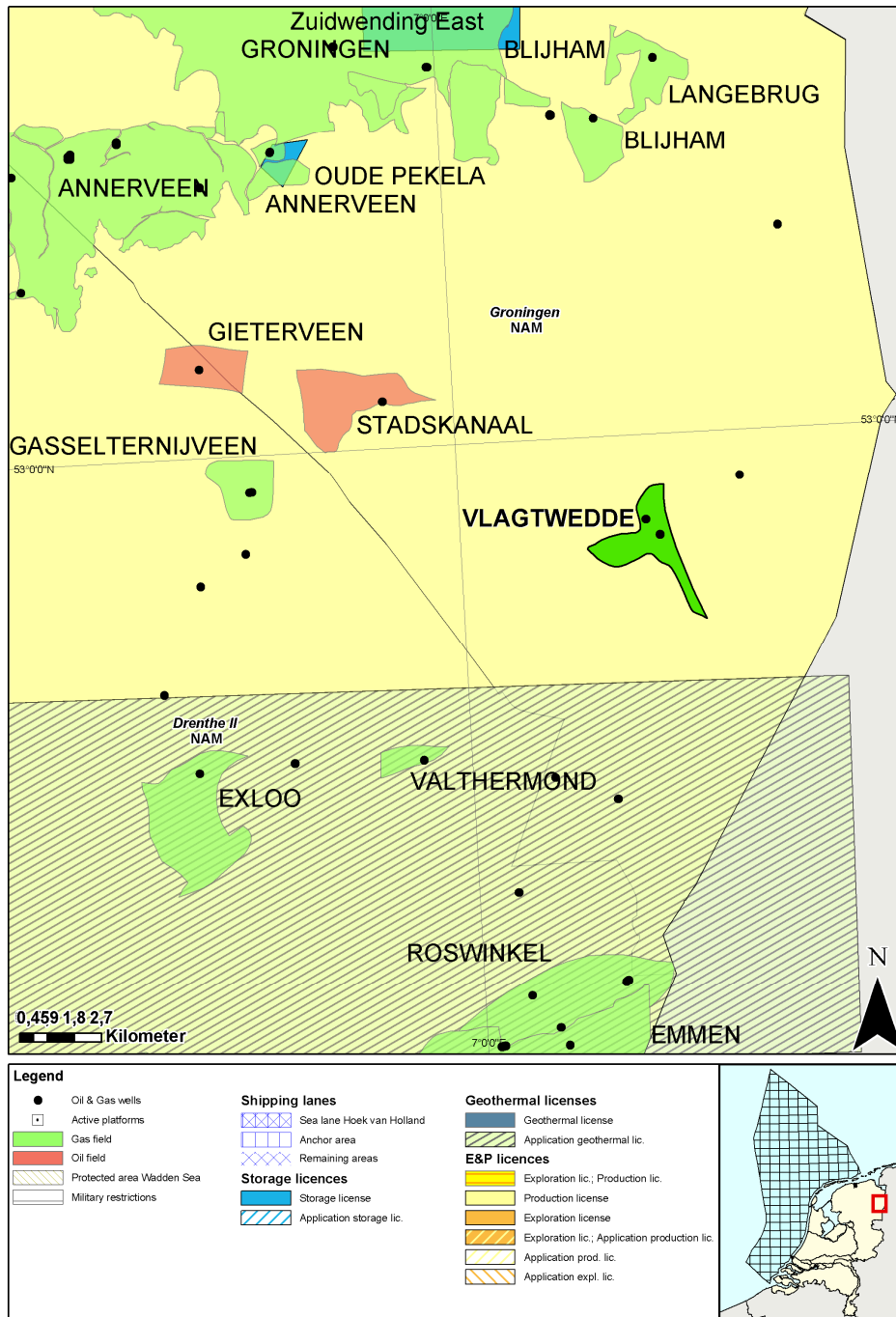




## Fact sheet Vlagtwedde

### Stranded fields - Q4 2009



### General information

The Vlagtwedde gas field was discovered in 1977 by NAM by well Vlagtwedde-02 (VLW-02). It has also been penetrated in Vlagtwedde-03-sidetrack5 (VLW-03-S5). The field contains gas in the Z2 Carbonate member (ZEZ2C). The Vlagtwedde-03-sidetrack5 well shows sour gas in Zechstein 2 Carbonate Member. Due to the high percentage of H<sub>2</sub>S in the gas is production of the gas field currently not economic. The structure of the gas field is bounded by a fault in the east and is dip-closed to the other sides. The gas field is located 6 km of the Dutch border within the Groningen concession of the NAM. Vlagtwedde is situated in the Lower Saxony Basin.

The Zechstein 2 Carbonate is characterized by a great variation in thickness and composition within the area. To the south the Zechstein 2 Carbonate reaches a thickness of more than 190m. More information on the thickness pattern, 3D seismic and facies information is available in Van der Sanden (1996) and Geluk (2000). The variation in composition of the Zechstein 2 Carbonate Member causes large lateral variations in porosity in the reservoir.

Regional geological information of the Zechstein 2 Carbonate, the Slochteren Formation and the Tubbergen Formation, including the structural, regional porosity distribution of the Zechstein 2 Carbonate and burial history of the area is available in map sheet VI Veendam-Hoogeveen (TNO-NITG 2000). An additional reference is made to map sheet III: Rotummeroog-Groningen for regional information on the sedimentology and the structural configuration of the area.

### Sequence of events

Date	Event
30-05-1963	NAM production license Groningen
10-05-1977	Spud date Vlagtwedde-02 (NAM)
11-11-1977	TD reached 4457 m ah
16-09/18-11-1977	RFT's 2954,8 - 4434,2 m ah (RBM & DC)
16-09-1977	RFT sample 2954,8 (RBM)
09/21-03-1978	Production test 4369- 4382 m ah (DC)
25-03-1988	Spud date Vlagtwedde-03 (NAM)
30-04/12-09-1988	Sidetrack #1 - Sidetrack #5
24-09-1988	TD reached 4530.0 m ah
28-11-1988	Production test 4418 - 4421 m ah (ZEZ2C)

### Reservoir data

Geological unit RGD & NOGEPa (1993)	Top m ah	Base m ah	Porosity %
Zechstein 2 Carbonate Member (ZEZ2C)	4394 m ah	4473 m ah	10 - 15

### Hydrocarbon specifications

Reservoir	CH <sub>4</sub> %	CO <sub>2</sub> %	N <sub>2</sub> %	H <sub>2</sub> S %	GHV MJ/m <sup>3</sup>
Zechstein 2 Carbonate Member (ZEZ2C)	25	-	30	45	22.12

### Volumes

Reservoir	GIIP 10 <sup>9</sup> m <sup>3</sup>	Reserves 10 <sup>9</sup> m <sup>3</sup>		
		Proven	Expected	Possible
Zechstein 2 Carbonate Member (ZEZ2C)	2 - 4			

### ***Productivity***

Test depth	Q well production at s.c. m <sup>3</sup> /d
Zechstein 2 Carbonate Member (ZEZ2C) 4418 - 4421 m ah	53000

### ***Well status***

Vlagtwedde-02: Plugged and abandoned

Vlagtwedde-03-sidetrack5 (VLW-03-S5): Plugged and abandoned

### ***Infrastructure***

The field is located near the producing fields Blijham (ten kilometers to the north) and Emmen (twelve kilometers to the south). The nearest production facilities are located approximately 16 kilometers to northwest and southwest.

### ***Public References***

Geluk M.C. 2000, Late Permian (Zechstein) carbonate-facies maps, the Netherlands, *Geologie en Mijnbouw*: 79 (1) 17-27

RGD 1995. Geological Atlas of the Deep subsurface of the Netherlands. Map sheet III: Rotummeroog-Groningen, Haarlem.

TNO-NITG 2000. Geological Atlas of the Deep subsurface of the Netherlands. Map sheet VI: Veendam-Hoogeveen. Utrecht.

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

Van der Sanden et al. 1996, Multi-disciplinary exploration strategy in the Northeast Netherlands Zechstein 2 Carbonate play, guided by 3D seismic. In: Rondeel, Batjes & Nieuwenhuijs (eds.) *Geology and gas and oil under the Netherlands*. Kluwer Academic Publishers (Dordrecht): 125-142

NAM 1978: Composite well log, [Vlagtwedde-02](#). *On open file*

NAM 1988: Composite well log, [Vlagtwedde-03-S5](#). *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/NCPI.html](http://www.nlog.nl/nl/pubs/maps/geologic_maps/NCPI.html)

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