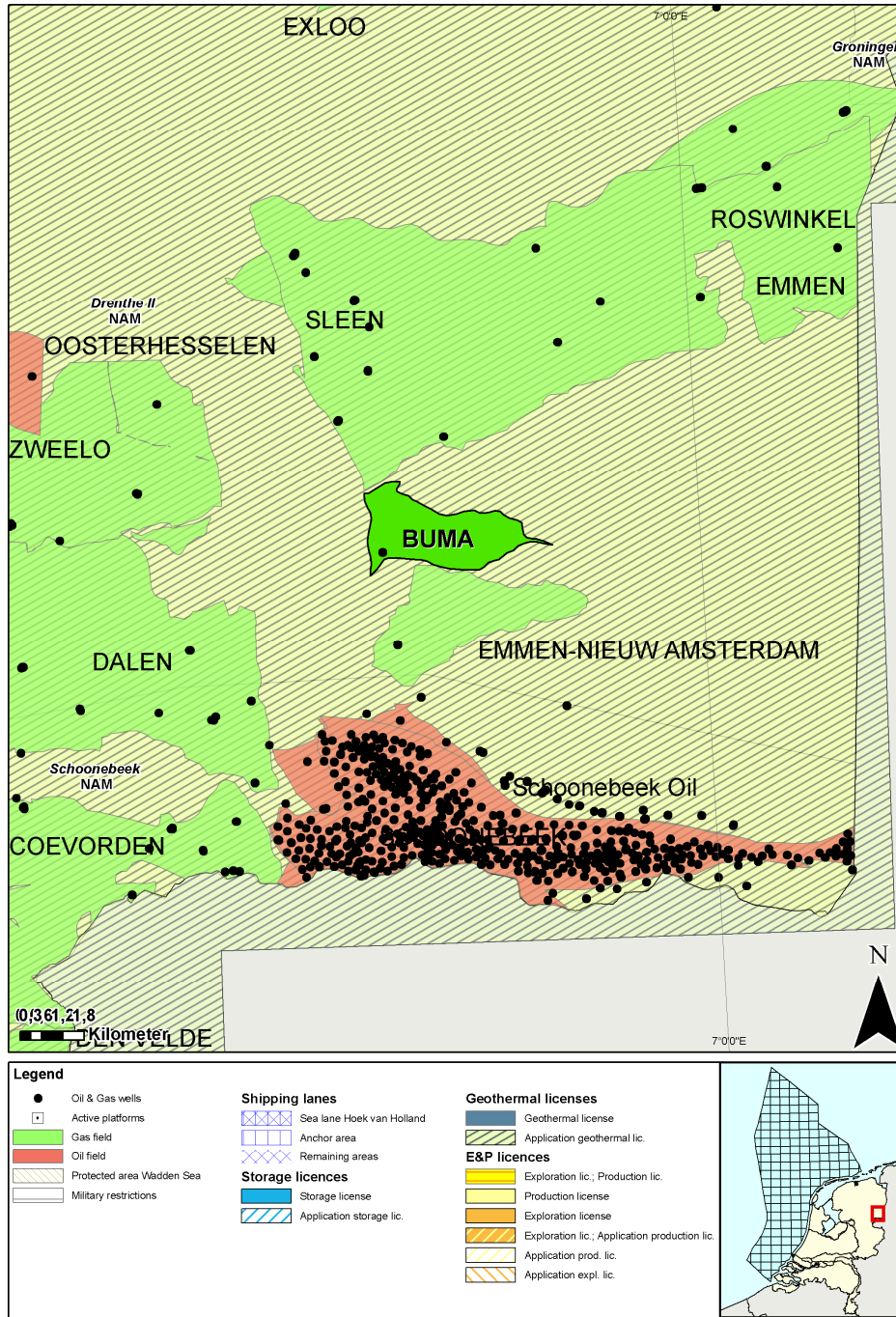




Fact sheet Buma

Stranded fields - Q4 2009



Location map of the Buma gas field

General information

The Buma gas field was discovered in 1997 by NAM by well BUMA-01. The field contains gas in the Zechstein 2 Carbonate Member and is situated in the Drenthe II concession (NAM).

The carbonate has a thickness of circa 200 metres in well BUMA-01-s1. The carbonate is characterized by a great variation in thickness and composition within the area. More information on the thickness pattern, 3D seismic and facies information is available in Van der Sanden (1996) and Geluk (2000).

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).

Sequence of events

Date	Event
04-11-1968	Production license Drenthe granted (NAM)
20-11-1981	Production license area expanded with ca 7,4 km ² (NAM)
25-12-1996	Spud date BUMA-01
10-03-1997	Sidetrack from 3140.0 m ah
29-05-1997	TD reached 4857.0 m ah
18-07-2007	Split up Production license Drenthe; Drenthe II to NAM

Plug data

Depth m ah	Porosity %	Hor. Permeability mD	Density g/cm ³
4342.3	0.7		2.849
4342.6	1.2	1.87	2.839
4342.9	0.5	0.08	2.848
4343.2	0.4		2.839
4344	0.4		2.839
4345.1	0.7		2.836
4345.4	0.6		2.844
4345.7	1		2.832
4346.2	0.4		2.84
4430.2	1.7	0.83	2.851
4430.5	2.2	2.05	2.873
4431.3	1.5	6.73	2.853
4431.6	1.1	0.65	2.856

Reservoir data

Geological unit	Top m ah	Base m ah	Net m ah
RGD & NOGEP A (1993) Zechstein 2 Carbonate	4324.0 m ah	4665 m ah	341

Volumes

Reservoir	GIIP 10 ⁹ m ³	Reserves 10 ⁹ m ³		
	Expected	Proven	Expected	Possible
Zechstein 2 Carbonate (ZEZ2C)	1 - 2			

Well status

Status	Date
BUMA-01: Closed-in	
BUMA-01: Plugged and abandoned	22/04/2007

Infrastructure

The field is located a few kilometers north of the producing field of Emmen-Nieuw Amsterdam. The nearest production facility is also located near this field.

Public References

- Geluk M.C. 2000, Late Permian (Zechstein) carbonate-facies maps, the Netherlands, *Geologie en Mijnbouw*: 79 (1) 17-27
- 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
- Van Wijhe, 1981; The Zechstein 2 Carbonate exploration in the eastern Netherlands, *Proc. Intern. Symp. On the Central European Basin, Warszawa 1978*, p. 574-586.

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

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