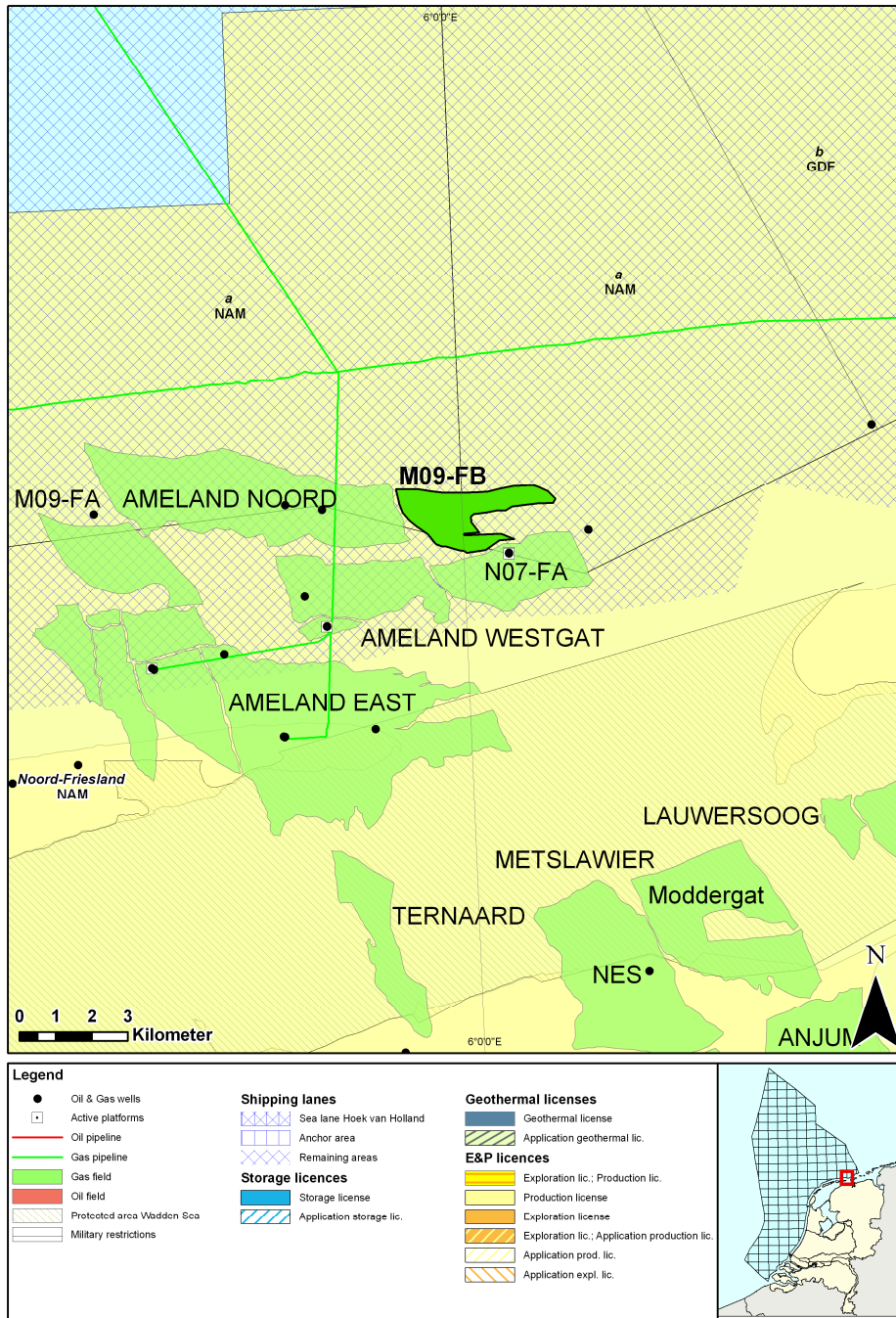




# Fact sheet M09-FB

## Stranded fields - Q4 2009



### **General information**

The M09-FB gas field was discovered in 1998 by NAM by well N07-FA-103. The field contains gas in the Upper Slochteren member (ROSLU) and the Limburg Group (DC). The gas in the Slochteren Sandstone is trapped in a fault-dip closed structure. The field is tested at several reservoir levels in the Slochteren Formation. Complete results of RFT's are available on the composite well log.

The gas field is situated within three concessions of NAM, the Noord-Friesland (South), N07a (North East) and M09a (North West). The M09-FA field is located 3 km north of the coast of Ameland. The gas field is situated in the Lauwerszee Trough, which lies North off the Friesland Platform.

Regional information on the geology, including sedimentology and the structural configuration, of the area is available in map sheet II Ameland-Leeuwarden.

### **Sequence of events**

Date	Event
21-07-1998	Spud date N07-FA-103
29-08-1998	RFT's 4146.0 – 4371.5 m ahd
29-08-1998	RFT sample 4215.0 m ah (ROSLU Upper Slochteren Member)
04-09-1998	TD reached 4645.00 m ah
<b>M09 and Noord-Friesland</b>	
08-03-1968	NAM exploration license M09
27-02-1969	NAM production license Noord-Friesland
08-03-1978	NAM exploration license M09 relinquished
07-03-1983	NAM production license M09a requested
09-12-1983	NAM exploration license M09a relinquished
15-03-1990	NAM production license M09a
<b>N07a</b>	
09-06-1992	Placid production license N07
23-12-2003	License split up in N07a and N07b
23-12-2003	GDF production license N07a and N07b
23-12-2003	Transfer license N07a to NAM

### **Reservoir data**

Geological unit RGD & NOGEPA (1993)	Top m ah	Base m ah	Net m ah	N/G %	Porosity %
Ameland member ROCLA	4247.5 m ah	4308.0 m ah	3.6	6.0	5 - 10
Upper Slochteren Member ROSLU	4143.7 m ah	4247.5 m ah	65.4	10.6	10 -15

### **Plug data**

Depth m ah	Porosity %	Hor. Permeability mD	Density g/cm <sup>3</sup>
4145.15	10.9	0.14	2.726
4146.55	13.7	0.15	2.709
4149.6	13.9	0.1	2.707
4149.82	13.5	2.12	2.706
4151.75	12.1	0.08	2.718
4161.05	10.4	0.22	2.727
4169.95	6.3	0.02	2.76
4172.09	16.2	1.83	2.693
4174.4	19.2	22.73	2.697

4174.56	15.1	4.23	2.71
4179.88	10	0.03	2.732
4182.9	13.3	0.13	2.722
4183.4	15.5	0.46	2.728

### 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>
Upper Slochteren member (ROSLU)	83.4	1.15	11.2	-	36.71

### Volumes

Reservoir	GIIP 10 <sup>9</sup> m <sup>3</sup>	Reserves 10 <sup>9</sup> m <sup>3</sup>		
		Proven	Expected	Possible
Upper Slochteren Member ROSLU	1-2			

### Productivity

Test depth	Reservoir pressure bar
RFT 4146.0 m-RT (ROSLU)	361.2
RFT 4160.0 m-RT (ROSLU)	387.0
RFT 4183.0 m-RT (ROSLU)	499.5
RFT 4213.0 m-RT (ROSLU)	378.9
RFT 4215.0 m-RT (ROSLU)	553.5
RFT 4371.5 m-RT (ROSLU)	424.4

Test depth	Reservoir pressure in bar abs	CGR m <sup>3</sup> / 10 <sup>6</sup> m <sup>3</sup>	WGR m <sup>3</sup> / 10 <sup>6</sup> m <sup>3</sup>	Q well production at s.c. m <sup>3</sup> /d	Drawdown bar
Upper Slochteren Member (ROSLU) 3980 - 3985 m-RT	545	1	200	20000	50

More productivity data can be found on the composite well log.

### Well status

The status of well N07-FA-103 is plugged and abandoned.

### Infrastructure

The N07-FA-SP monopole platform is situated above the M09-FB gas field. The nearest pipeline is at 3 km.

### Public References

- RGD 1991. Geological Atlas of the Deep subsurface of the Netherlands. Map sheet II: Ameland-Leeuwarden. Haarlem.
- RGD & NOGEPa 1993, Stratigraphic nomenclature of the Netherlands, Mededelingen Rijks Geologische Dienst, Nr. 50

NAM 1998: Composite well log. *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 DINOluket:

<http://www.dinoluket.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)

***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.*