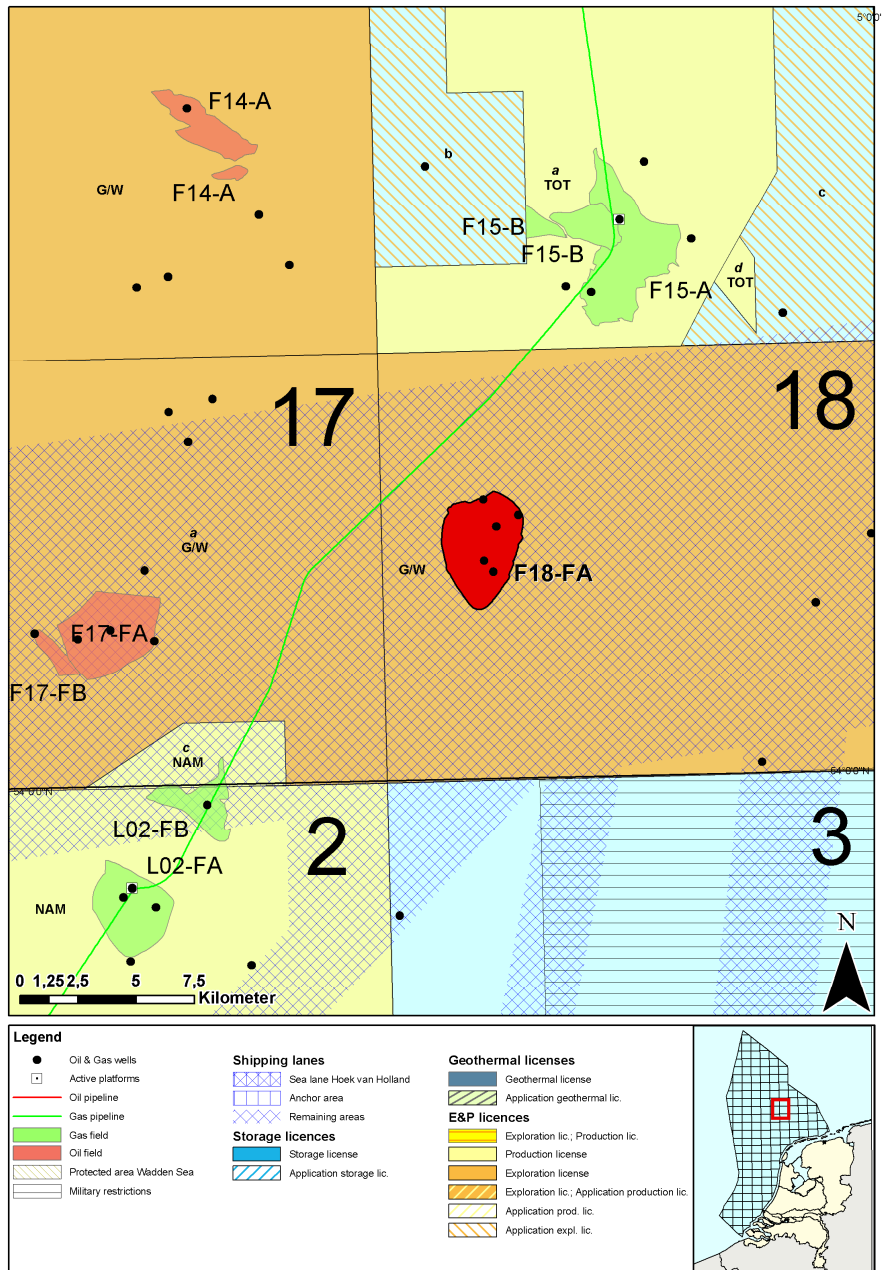




Fact sheet F18-FA field

Stranded fields - Q4 2009



Location map of the F18-FA field

General Information

The F18-FA oil field was discovered in 1970 with exploration well F18-01. Appraisal wells F18-02, F18-04 through F18-07, F18-09 and F18-10 were drilled in the period 1971-1991. The oil is contained in the clastic reservoirs of the Central Graben Subgroup (SLC) of Late Jurassic age. The field has not been developed and currently lies in the exploration license of Grove. The structure is a turtle-back feature, situated between two Zechstein salt walls in the east and west. The accumulation is a heavily faulted anticlinal structure comprising thin and discontinuous oil bearing sands.

The Central Graben Subgroup features a complex sedimentology as shown by the variable thickness of net and pay sand found in the various wells. The Central Graben Subgroup is conformably overlain by the Kimmeridge Clay Formation that provides a regional seal for the Central Graben Subgroup.

Sequence of events

| Date | Event |
|-------------|---|
| 04-03-1968 | Award exploration license F18 to Tenneco |
| 25-03-1970 | Spud date exploration well F18-01 (Tenneco) |
| 06-06-1970 | Completion date well F18-01 |
| 05-01-1971 | Spud date appraisal well F18-02 (Tenneco) |
| 04-02-1971 | Completion date well F18-02 |
| 16-10-1972 | Spud date appraisal well F18-04 (Tenneco) |
| 14-11-1972 | Completion date well F18-04 |
| 1976 | Transfer of F18 operatorship to BP |
| 10-04-1978 | Relinquishment of F18b; transfer of F18a operatorship to AGIP |
| 12-11-1980 | Spud date appraisal well F18-05 (AGIP) |
| 20-01-1981 | Completion date well F18-05 |
| 23-01-1981 | Spud date appraisal well F18-06 (AGIP) |
| 09-02-1981 | Completion date appraisal well F18-06 |
| 09-03-1981 | Spud date appraisal well F18-07 (AGIP) |
| 16-04-1981 | Completion date well F18-07 |
| 10-04-1983 | Expiration of exploration license F18a |
| 05-04-1984 | Exploration license application F18a by NAM |
| 19-02-1985 | Award exploration license F18a to NAM |
| 15-04-1985 | Exploration license F18a effective |
| 29-01-1987 | Spud date appraisal well F18-09 (NAM) |
| 29-05-1987 | Completion date appraisal well F18-09 |
| 17-04-1991 | Spud date appraisal well F18-10 (NAM) |
| 24-07-1991 | Completion date appraisal well F18-10 |
| 15-04-1995 | Expiration of exploration license F18a |
| 11-10-2006 | Exploration license F18 effective (Grove) |
| 20-11-2008 | Exploration license F18 extended with two years |

Reservoir data

| Well | Interval m TVD/MSL | Net sand m | Av. Por. % | Av. So % | PI BOPD/psi | Av. K mD |
|-------------|-------------------------------|-----------------------|-----------------------|---------------------|------------------------|---------------------|
| F18-01 | 2392-2551 | 28 | 18 | | | |
| F18-02 | 2527.5-2534.5 | 7 | 18 | | | |
| F18-04 | - | 3 | 10 | | | |
| F18-05 | 2398.5-2406 | 6.5 | 18 | 42 | 5.7 | 543 |
| F18-06 | 2582-2583.5 | 1.5 | 12 | 40 | | 15 |
| F18-07 | 2404-2504 | 11.0 | | | | |
| F18-09 | 2618-2647 | 3.2 | 13 | 24 | | |
| F18-10 | 2905-3474 | 21.3 | 16 | 60 | | |
| | 2965-3005 | 9.1 | 15 | 52 | | |
| | 3468-3474 | 6.0 | 16 | 60 | | |

Contacts

| | | |
|-----------------------------------|---|----------------------------------|
| Top structure m TVD/MSL | Structural spillpoint m TVD/MSL | OWC m TVD/MSL |
| 2300 | 2600 | 2650 ± 5 from RFT in well F18-06 |

Hydrocarbon specifications

| Well | Spec. gravity g/cm ³ | API |
|--------|------------------------------------|------------|
| F18-01 | 0.868 | 26-35 |
| F18-02 | | 39 |
| F18-04 | | not tested |
| F18-05 | | 34 |
| F18-06 | | not tested |
| F18-07 | | not tested |
| F18-09 | | no flow |
| F18-10 | | not tested |

Volumes - Oil

| | | | | | |
|---|------------------|-----------------|--|------------------|-----------------|
| STOIP 10 ⁶ m ³ st | | | Reserves 10 ⁶ m ³ st | | |
| P90 (1P) | Exp. | P10 (3P) | P90 (1P) | Exp. | P10 (3P) |
| | In the range 4-8 | | | In the range 1-2 | |

Volumes - Associated gas

| | | | | | |
|---|------------------|-----------------|--|--------------------|-----------------|
| GIP 10 ⁹ m ³ st | | | Reserves 10 ⁹ m ³ st | | |
| P90 (1P) | Exp. | P10 (3P) | P90 (1P) | Exp. | P10 (3P) |
| | In the range 1-2 | | | In the range 0-0.5 | |

Productivity

| Well | Reservoir pressure in bar abs | Q well prod. at s.c. in m ³ /d | Drawdown in bar | Q50 calculated m ³ /d at 50 bar drawdown |
|--------------------------|----------------------------------|---|--------------------|---|
| F18-01 2548-2553 m-RT | 326.8 | 37 oil | 326.8 | 177.6 |
| F18-01 2576-2579 m-RT | 326.8 | 93 oil | 326.8 | 176.8 |

Q50 based on available public data from composite log (F18-01)

Well status

F18-01: Plugged and Abandoned
 F18-02: Plugged and Abandoned
 F18-04: Plugged and Abandoned
 F18-05: Plugged and Abandoned
 F18-06: Plugged and Abandoned
 F18-07: Plugged and Abandoned
 F18-09: Plugged and Abandoned
 F18-10: Closed in (Buoy.)

Infrastructure

The nearest platform is: F15-A at 15 km. The nearest gas pipeline (shortest distance rectangular to the pipeline): NOGAT at 5 km.

Public References

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

SodM 1970, Proces-Verbaal nr. 6309 (Official Report of the State Supervision of the Mines on the proven occurrence of gas/oil in a well)

SodM 1971, Proces-Verbaal nr. 4091. (Official Report of the State Supervision of the Mines on the proven occurrence of gas/oil in a well)

Composite log well F18-01-s1, *On open file.*

Composite log well F18-02, *On open file.*

Composite log well F18-04, *On open file.*

Composite log well F18-05, *On open file.*

Composite log well F18-06, *On open file.*

Composite log well F18-07, *On open file.*

Composite log / End-of-Well Report F18-09, *On open file.*

Composite log / End-of-Well Report F18-10, *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

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