

**General information**

Wellbore name	25/2-11
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	HUGIN
Discovery	25/2-10 S Hugin
Well name	25/2-11
Seismic location	8504 - 328 SP. 10253
Production licence	112
Drilling operator	Elf Petroleum Norge AS
Drill permit	536-L
Drilling facility	NORTRYM
Drilling days	80
Entered date	20.02.1987
Completed date	10.05.1987
Release date	10.05.1989
Publication date	17.12.2003
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	EARLY MIOCENE
1st level with HC, formation	NO FORMAL NAME
2nd level with HC, age	EOCENE
2nd level with HC, formation	FRIGG FM
Kelly bushing elevation [m]	25.0
Water depth [m]	118.0
Total depth (MD) [m RKB]	2075.0
Final vertical depth (TVD) [m RKB]	2071.0
Maximum inclination [°]	7.3
Bottom hole temperature [°C]	58
Oldest penetrated age	EOCENE
Oldest penetrated formation	FRIGG FM
Geodetic datum	ED50
NS degrees	59° 52' 27.86" N
EW degrees	2° 30' 59.58" E



NS UTM [m]	6637677.85
EW UTM [m]	472930.94
UTM zone	31
NPDID wellbore	1036

Wellbore history

General

Well 25/2-11 was the second well to be drilled on the East Frigg Gamma structure in the Viking Graben. Seismic anomalies indicated shallow gas in the area. The well was primarily designed to test the reservoir productivity of the Frigg Formation. Secondly to test for possible gas accumulation in Late Oligocene sands which might represent a continuation of the gas-bearing sands encountered in the 25/2-10 well, which due to technical problems had to be abandoned without logging and testing. TD was prognosed to be 2075 m, the Frigg Formation at 1930 m and the Oligocene sands at 1005 m.

Operations and results

Appraisal well 25/2-11 was spudded 20 February 1987 by Golar-Nor offshore semi-submersible rig Nordtrym and drilled to TD at 2075 m in rocks of Eocene age. Due to the seismic anomalies that indicated shallow gas, the well was spudded 100 m north of the original location.

Hard calcite cemented sands were encountered in Miocene where unconsolidated sands were prognosed. This caused 17 extra days of drilling, under-reaming and sidetracking. Top Oligocene was penetrated 20 m below prognosed depth, and top Frigg formation came 20 m below prognosis. Both targets proved to be hydrocarbon bearing. The main hydrocarbon-bearing reservoir encountered in Oligocene was a sand-lense at 1105.5 - 1111.5 m (1079.8 - 1085.8 MSL). Post-well gas chromatographic analyses of core chip extracts from Oligocene (1051 m and 1107 m) showed extensively biodegraded oil. The Frigg Formation oil/water contact was encountered at 1975 m, and gas/oil contact at 1960 m.

Coring commenced from 1950 m to 1986 m with 50% recovery. Three runs to sample the oil from the Oligocene reservoir interval 1105.5 m to 1111.5 m were made by RFT through casing. No hydrocarbons were recovered. A RFT sample from 1967 m in the Frigg Formation recovered mud filtrate with traces of oil.

The well was plugged and abandoned on 10 may 1987 as a gas and oil appraisal.

Testing

The instability of shales on top of the Frigg formation excluded open hole testing, and a 7" liner had to be set and perforated for testing purposes. Three DSTs were attempted in the interval 1950 m to 1955 m. The two first did not produce but DST3 was successful, producing at maximum 666000 Sm³ gas /day with a 64/64 choke and WHP = 60 bar.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
240.00	2075.00



Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
2	1951.0	1969.0	[m]
3	1969.0	1969.9	[m]
4	1973.0	1975.0	[m]

Total core sample length [m]	20.9
Cores available for sampling?	YES

Core photos

1951-1956m



1956-1961m



1961-1966m



1966-1969m



1973-1975m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
143	NORDLAND GP
476	UTSIRA FM
521	UNDIFFERENTIATED
1025	HORDALAND GP
1046	SKADE FM
1262	NO FORMAL NAME
1353	NO FORMAL NAME
1450	NO FORMAL NAME
1950	FRIGG FM

Composite logs





Document name	Document format	Document size [MB]
1036	pdf	0.31

Geochemical information

Document name	Document format	Document size [MB]
1036_1	pdf	0.46

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
1036_01_WDSS_General_Information	pdf	0.44
1036_02_WDSS_completion_log	pdf	0.15

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
1036_25_2_11_COMPLETION_REPORT_AND_LOG	pdf	4.87

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	1958	1953	25.4

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	15.000	6.000	18.000	61

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0		666000		0.600	





Logs

Log type	Log top depth [m]	Log bottom depth [m]
BGT	229	780
CBL VDL	50	1208
CBL VDL	890	1930
CST	1047	1210
CST	1245	1565
CST	1950	2055
DIL LSS GR	229	800
DIL LSS GR	764	1226
DIL LSS GR	1214	1940
DIL LSS GR	1935	2074
DLL MSFL GR	900	1200
DLL MSFL GR	1935	2071
LDT CNL NGT	764	1226
LDT CNL NGT	1935	2073
LDT GR	1214	1940
MWD	143	1958
RFT	0	0
RFT	1954	2040
SHDT GR	764	1221

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
CONDUCTOR	30	229.0	36	357.0	0.00	LOT
SURF.COND.	20	765.0	26	808.0	1.38	LOT
INTERM.	13 3/8	1214.0	17 1/2	1324.0	1.52	LOT
INTERM.	9 5/8	1936.0	12 1/4	1962.0	1.58	LOT
LINER	7	2075.0	8 1/2	2075.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
621	1.09	27.0	8.8	WATER BASED	27.02.1987



658	1.09	29.0	8.8	WATER BASED	02.03.1987
678	1.10	32.0	10.7	WATER BASED	02.03.1987
746	1.11	29.0	9.8	WATER BASED	02.03.1987
782	1.05	17.0	9.3	WATER BASED	18.03.1987
785	1.11	28.0	9.8	WATER BASED	05.03.1987
800	1.11	27.0	8.8	WATER BASED	05.03.1987
808	1.05	17.0	7.8	WATER BASED	19.03.1987
840	1.05	17.0	6.8	WATER BASED	23.03.1987
917	1.06	19.0	8.8	WATER BASED	23.03.1987
973	1.07	20.0	6.3	WATER BASED	23.03.1987
1055	1.07	22.0	5.8	WATER BASED	24.03.1987
1073	1.06	23.0	4.9	WATER BASED	25.03.1987
1230	1.07	22.0	6.8	WATER BASED	26.03.1987
1324	1.08	22.0	4.9	WATER BASED	03.04.1987
1508	1.10	23.0	2.9	WATER BASED	06.04.1987
1632	1.15	26.0	5.8	WATER BASED	06.04.1987
1900	1.17	36.0	7.8	WATER BASED	06.04.1987
1947	1.18	35.0	6.8	WATER BASED	07.04.1987

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
1036 Formation pressure (Formasjonstrykk)	pdf	0.19

