

**General information**

Wellbore name	25/2-10 S
Type	EXPLORATION
Purpose	WILDCAT
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	HUGIN
Discovery	25/2-10 S Hugin
Well name	25/2-10
Seismic location	EL 8504 - 330 SP. 304
Production licence	112
Drilling operator	Elf Petroleum Norge AS
Drill permit	494-L
Drilling facility	HENRY GOODRICH
Drilling days	108
Entered date	02.12.1985
Completed date	19.03.1986
Release date	19.03.1988
Publication date	17.12.2003
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
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]	21.0
Water depth [m]	120.0
Total depth (MD) [m RKB]	2967.0
Final vertical depth (TVD) [m RKB]	2643.0
Bottom hole temperature [°C]	75
Oldest penetrated age	PALEOCENE
Oldest penetrated formation	EKOFISK FM
Geodetic datum	ED50
NS degrees	59° 53' 11.8" N
EW degrees	2° 30' 8.33" E
NS UTM [m]	6639043.07



EW UTM [m]	472144.07
UTM zone	31
NPDID wellbore	855

Wellbore history

**General**

Well 25/2-10 S was designed to drill the Gamma Structure, one of the Frigg satellites, east of the East Frigg Beta Structure. The primary objective of the well was to test whether the gamma structure is an eastward extension of the East Frigg Beta structure. The main target was the Lower Eocene Frigg Formation; secondary targets were the Balder and Ekofisk Formations. In addition a possible gas accumulation was expected in a thin sand body of late Oligocene age.

Shallow gas indications at 256 m MSL, and a disturbed zone on the seismic from seabed to the Frigg Formation demanded a deviated well in order to reach the Frigg Formation at its highest structural position.

Operations and results

Wildcat well 25/2-10 S was spudded 2 December 1985 by Sonat Offshore A/S semi-submersible rig Henry Goodrich. The well terminated in Limestone of the Early Paleocene Ekofisk Formation at a depth of 2967 m (2643 m TVD RKB).

Due to shallow gas indication on the chosen locality, the well was spudded 1100 m north and 200 m east of the TD position. Drilling proceeded without significant problems down to 1049 m here mud was lost.

An Oligocene sand, now re-dated to be of Lower Miocene age, was confirmed in the interval 1115 m to 1148.5 m (1006.5 m to 1031 m TVD RKB) with gas from top sand at 1115 m down to a GOW at 1136.5 m (1006.5 m to 1022.5 m TVD RKB). From 1095 m to 1150 m (992 m to 1030 m TVD RKB) strong yellowish green to yellow ocher direct fluorescence and milky yellow cut were observed on cuttings and SWC. Pressure measurements suggest an oil gradient of ca 0.72 g/cc below the gas with a tentative OWC at 1162 m (1041.5 m TVD RKB). Top Frigg Formation came in at 2230 m (1943 m TVD RKB) with minor amounts of oil and gas. The GOC in the Frigg reservoir was found at 2243.6 m (1956 m TVD RKB) and the OWC at 2259.6 m (1971 m TVD RKB). Brown oil staining was reported on the cores from 2243.5 m to 2257 m. In the Frigg Formation, direct fluorescence shows were reported from 2230 m to 2280 m. No fluorescence was observed below 2280 m. The average reservoir temperatures were estimated to 30.6deg C in the Lower Miocene reservoir and 58.0deg C in the Frigg reservoir.

Five cores were cut in the interval 2236 m to 2275 m. Two cores were cut down to 2311 m, and altogether 9 cores were cut in this well. Wire line RFT samples were taken in Lower Miocene at 1129 m (gas) and in the Frigg Formation at 2234.6 m (gas and mud filtrate), and at 2252.5 m (oil and mud filtrate). Testing of the two hydrocarbon bearing zones was not carried out as the NPD consent for use of the rig was withdrawn. During abandonment operation the BOP was lost 8 m above wellhead and caused severe damage such that the well was lost. The well was suspended 19 March 1986 as an oil and gas discovery.

The well was re-entered (25/2-10 SR) with the semi-submersible installation Nortrym on 16 September 1987. The only operations performed in the re-entry were plugging and permanent abandonment. The well was completed 22 September 1987 as an oil and gas discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
210.00	2967.00

Cuttings available for sampling?	YES
----------------------------------	-----

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2237.0	2245.0	[m]
3	2246.0	2246.9	[m]
4	2247.6	2256.8	[m]
5	2257.0	2269.2	[m]
8	2582.0	2597.0	[m]
9	2888.0	2892.0	[m]

Total core sample length [m]	49.3
Cores available for sampling?	YES

Core photos



2237-2241m



2242-2244m



2246-2247m



2247-2252m



2252-2257m



2257-2260m



2261-2264m



2265-2269m



2582-2586m



2587-2592m



2592-2596m



2888-2892m

**Oil samples at the Norwegian Offshore Directorate**

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
RFT	RFT-5	2252.00	0.00		14.02.1986 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
141	NORDLAND GP
475	UTSIRA FM
520	NO FORMAL NAME
630	HORDALAND GP
630	SKADE FM
1088	NO FORMAL NAME
1115	NO FORMAL NAME
1148	NO FORMAL NAME
1245	NO FORMAL NAME
1264	NO FORMAL NAME
1732	GRID FM
1740	NO FORMAL NAME
2230	FRIGG FM
2501	ROGALAND GP
2501	BALDER FM
2579	INTRA BALDER FM SS
2648	BALDER FM
2661	INTRA BALDER FM SS
2695	SELE FM
2739	LISTA FM
2811	TY FM
2912	VÅLE FM
2939	SHETLAND GP
2939	EKOFISK FM



Composite logs

Document name	Document format	Document size [MB]
855	pdf	0.58

Geochemical information

Document name	Document format	Document size [MB]
855_1	pdf	1.76
855_2	pdf	0.40

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

Document name	Document format	Document size [MB]
855_01_WDSS_General_Information	pdf	0.36
855_02_WDSS_completion_log	pdf	0.23

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

Document name	Document format	Document size [MB]
855_25_2_10_COMPLETION_REPORT_AND_LOG	pdf	5.94

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BGT	945	1428
BHC GR	947	1143
CBL VDL CCL GR	1950	2034
CBL VDL GR	140	1830
CST GR	848	2034
DIL LSS GR	202	2642
DLL MSFL GR	948	2126
LDT CNL	947	2642
LDT GR	202	956





MWD	220	2967
NGT	947	2642
SHDT GR	1837	2640

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	202.0	36	202.0	0.00	LOT
INTERM.	20	616.0	26	626.0	0.00	LOT
INTERM.	13 3/8	1032.0	17 1/2	1045.0	0.00	LOT
INTERM.	9 5/8	2115.0	12 1/4	2129.0	0.00	LOT
LINER	7	2967.0	8 1/2	2967.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
166	1.07	35.0	65.0	WATER BASED	04.12.1985
202	1.07	35.0	65.0	WATER BASED	05.12.1985
220	1.05	15.0	10.0	WATER BASED	10.12.1985
428	1.08	15.0	5.0	WATER BASED	10.12.1985
456	1.07	10.0	20.0	WATER BASED	10.12.1985
626	1.07	20.0	29.0	WATER BASED	10.12.1985
626	1.08	20.0	14.0	WATER BASED	10.12.1985
626	1.15	20.0	14.0	WATER BASED	11.12.1985
626	1.15	20.0	14.0	WATER BASED	12.12.1985
626	1.15	20.0		WATER BASED	16.12.1985
626	1.04			WATER BASED	17.12.1985
626	1.04			WATER BASED	18.12.1985
626	1.07	20.0	13.0	WATER BASED	23.12.1985
626	1.08	28.0	20.0	WATER BASED	10.12.1985
631	1.06	20.0	13.0	WATER BASED	23.12.1985
817	1.08	29.0	17.0	WATER BASED	23.12.1985
956	1.09	15.0	23.0	WATER BASED	23.12.1985
1037	1.07	12.0	25.0	WATER BASED	24.12.1985
1045	1.07	24.0	17.0	WATER BASED	24.12.1985
1045	1.07	22.0	12.0	WATER BASED	24.12.1985
1045	1.06	20.0	20.0	WATER BASED	24.12.1985



1045	1.06	17.0	8.0	WATER BASED	30.12.1985
1045	1.12	22.0	11.0	WATER BASED	30.12.1985
1045	1.07	16.0	15.0	WATER BASED	30.12.1985
1049	1.12	16.0	13.5	WATER BASED	30.12.1985
1049	1.12	16.0	27.0	WATER BASED	30.12.1985
1049	1.12	160.0	270.0	WATER BASED	30.12.1985
1075	1.13	30.0	11.0	WATER BASED	01.01.1986
1100	1.13	29.0	10.0	WATER BASED	02.01.1986
1100	1.12	29.0	10.0	WATER BASED	06.01.1986
1100	1.13	29.0	10.0	WATER BASED	01.01.1986
1348	1.14	34.0	13.0	WATER BASED	06.01.1986
1459	1.15	30.0	9.0	WATER BASED	06.01.1986
1546	1.16	36.0	12.0	WATER BASED	07.01.1986
1717	1.17	34.0	13.0	WATER BASED	03.01.1986
1791	1.18	30.0	10.0	WATER BASED	09.01.1986
1866	1.17	32.0	12.0	WATER BASED	13.01.1986
1866	1.18	35.0	13.0	WATER BASED	13.01.1986
2015	1.20	38.0	16.0	WATER BASED	13.01.1986
2129	1.24	40.0	14.0	WATER BASED	16.01.1986
2129	1.26	40.0	14.0	WATER BASED	17.01.1986
2129	1.24	43.0	14.0	WATER BASED	14.01.1986
2129	1.26	40.0	14.0	WATER BASED	20.01.1986
2129	1.26	40.0	15.0	WATER BASED	20.01.1986
2133	1.07	28.0	5.0	WATER BASED	23.01.1986
2233	1.09	26.0	8.0	WATER BASED	25.01.1986
2236	1.09	26.0	10.0	WATER BASED	25.01.1986
2246	1.09	25.0	5.0	WATER BASED	25.01.1986
2248	1.10	25.0	5.0	WATER BASED	25.01.1986
2257	1.12	26.0	5.0	WATER BASED	25.01.1986
2311	1.11	24.0	5.0	WATER BASED	30.01.1986
2371	1.11	26.0	7.5	WATER BASED	31.01.1986
2371	1.11	26.0	2.5	WATER BASED	03.02.1986
2427	1.12	31.0	6.5	WATER BASED	03.02.1986
2555	1.12	27.0	8.0	WATER BASED	03.02.1986
2582	1.12	28.0	9.0	WATER BASED	01.02.1986
2600	1.12	32.0	10.0	WATER BASED	04.02.1986
2748	1.11	29.0	9.0	WATER BASED	06.02.1986
2856	1.12	28.0	10.7	WATER BASED	11.02.1986
2885	1.12	30.0	8.8	WATER BASED	11.02.1986
2925	1.13	29.0	8.8	WATER BASED	11.02.1986



2955	1.11	28.0	9.8	WATER BASED	11.02.1986
2967	1.11	30.0	9.8	WATER BASED	11.02.1986

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]
855 Formation pressure (Formasjonstrykk)	pdf	0.23

