

**General information**

Wellbore name	33/9-5
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	STATFJORD
Discovery	33/12-1 Statfjord
Well name	33/9-5
Seismic location	LINE MNG-16 SP.778
Production licence	037
Drilling operator	Mobil Exploration Norway INC
Drill permit	142-L
Drilling facility	ROSS RIG (1)
Drilling days	67
Entered date	27.10.1975
Completed date	01.01.1976
Release date	01.01.1978
Publication date	12.04.2016
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.0
Water depth [m]	152.0
Total depth (MD) [m RKB]	3157.0
Bottom hole temperature [°C]	76
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	61° 20' 47.87" N
EW degrees	1° 56' 51.7" E
NS UTM [m]	6802013.31
EW UTM [m]	443705.30
UTM zone	31
NPDID wellbore	410



Wellbore history

General

Well 33/9-5 was drilled on the northern part of the Statfjord structure on Tampen Spur in the northern North Sea. The objective was to appraise the northern extension of the Statfjord Field with the Brent Group as primary target. The Brent Group had previously proved oil bearing in wells 33/9-3 and 33/9-4 on the northern part of the structure. The well was positioned to penetrate the upper Brent reservoir at 2522 m MSL, 62 meters above the known field water level. The Statfjord Group was a secondary objective.

Operations and results

Appraisal well 33/9-5 was spudded with the semi-submersible installation Ross Rig on 27 October 1975 and drilled to TD at 3157 m in Late Triassic sediments of the Statfjord Group.

Top Brent Group (Tarbert Formation) was encountered at 2605 m, 57.8 m low to prognosis. As with other Brent Group oil wells in the Statfjord Field, high total gas readings (70 000 ppm) were encountered when the reservoir was penetrated. Using the field pay cut off value of 65% water saturation, the oil/water contact depth as measured from the CPI log is 2616.4 m (2591.4 MSL), which is 7.3 meters deeper than the main field water level. The resulting gross pay interval is 11.6 meters of which 100% is net pay using CPI field cut off values of 65% water saturation, 40% v-clay or 12% porosity. Average CPI measured porosity in the pay section is 22.1% and water saturation is 37%.

The Statfjord Group was penetrated at 2998 m and was found water wet.

One core was cut from 2611.5 to 2628.35 m with 88.7% recovery. The core to log depth shift was estimated to be -2.3 m. FIT fluid samples were taken at 2624.5 m (failed test), 2617.0 m (water with trace oil), 2611.0 m (water with trace mud), 2609.0 m (water with trace mud), 2607.0 m (35.8 °API oil and water), 2650.0 m (water with trace mud), and 2607.8 m (water only).

The well was permanently abandoned on 1 January 1976 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
260.00	3157.00

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
1	2611.5	2628.0	[m]

Total core sample length [m]	16.5
Cores available for sampling?	YES

Core photos



2611-2614m



2614-2616m



2616-2619m



2619-2621m



2621-2624m



2624-2627m



2627-2628m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2556.0	[m]	DC	UOS
2562.0	[m]	DC	UOS
2568.0	[m]	DC	UOS
2574.0	[m]	DC	UOS
2580.0	[m]	DC	UOS
2586.0	[m]	DC	UOS
2592.0	[m]	DC	UOS
2598.0	[m]	DC	UOS
2604.0	[m]	DC	UOS
2612.0	[m]	DC	UOS
2613.0	[m]	DC	UOS
2615.0	[m]	DC	UOS
2616.0	[m]	DC	UOS
2618.8	[m]	DC	UOS



2619.0 [m]	DC	UOS
2622.0 [m]	DC	UOS
2622.2 [m]	DC	UOS
2624.0 [m]	DC	UOS
2625.0 [m]	DC	UOS
2627.0 [m]	DC	UOS
2628.0 [m]	DC	UOS
2631.0 [m]	DC	UOS
2637.0 [m]	DC	UOS
2643.0 [m]	DC	UOS
2649.0 [m]	DC	UOS
2655.0 [m]	DC	UOS
2661.0 [m]	DC	UOS
2667.0 [m]	DC	UOS
2673.0 [m]	DC	UOS
2679.0 [m]	DC	UOS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
177	NORDLAND GP
895	UTSIRA FM
1008	HORDALAND GP
1674	ROGALAND GP
1674	BALDER FM
1706	SELE FM
1863	SHETLAND GP
2546	CROMER KNOLL GP
2556	VIKING GP
2556	DRAUPNE FM
2558	HEATHER FM
2605	BRENT GP
2605	TARBERT FM
2652	NESS FM
2718	ETIVE FM
2774	DUNLIN GP
2998	STATEFJORD GP

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

Document name	Document format	Document size [MB]
410_01_WDSS_General_Information	pdf	0.27

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

Document name	Document format	Document size [MB]
410_33_9_5_COMPLETION_LOG	pdf	1.27
410_33_9_5_COMPLETION_REPORT	pdf	4.05

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BGT	450	1895
BHC	451	1900
CDM AP	1888	3155
DIR	450	1895
DLL	2449	3157
DLL MSFL	2549	3157
FDC CNL	1888	3157
IES	460	3157
ISF SON	451	3155
MUD	460	3157
VELOCITY	451	3155

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	252.0	36	252.0	0.00	
SURF.COND.	20	456.0	26	460.0	0.00	
INTERM.	13 3/8	1889.0	17 1/2	1903.0	0.00	
INTERM.		3158.0	12 1/4	3158.0	0.00	

Drilling mud





Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
252	1.22			Waterbased	
460	1.10			Waterbased	
1332	1.13			Waterbased	
1555	1.20			Waterbased	
1973	1.56			Waterbased	
2259	1.58			Waterbased	
2608	1.50			Waterbased	
2794	1.62			Waterbased	

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]
410_Formation_pressure_(Formasjonstrykk)	PDF	0.22

