

**General information**

Wellbore name	33/9-18
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	33/9-18
Seismic location	CTM 94-3D: INLINE 1127 & CROSSLINE 492
Production licence	037
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	799-L
Drilling facility	DEEPSEA BERGEN
Drilling days	35
Entered date	16.11.1994
Completed date	20.12.1994
Release date	20.12.1996
Publication date	01.07.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	145.0
Total depth (MD) [m RKB]	3253.0
Bottom hole temperature [°C]	124
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	DRAUPNE FM
Geodetic datum	ED50
NS degrees	61° 15' 40.78" N
EW degrees	1° 56' 7.73" E
NS UTM [m]	6792522.53
EW UTM [m]	442897.08
UTM zone	31
NPDID wellbore	2454

**Wellbore history****General**

Well 33/9-18 was drilled to a structure situated east of the Statfjord Field and south-west of the Tordis Field. The main objective of the vertical well 33/9-18 was to explore the hydrocarbon potential of possible sandstones and to test the current geological model. The secondary objective was to explore the hydrocarbon potential of a lead in the Heather Formation.

Operations and results

Exploration well 33/9-18 was spudded on 16 November 1994 with the semi-submersible installation Deepsea Bergen and drilled to TD at 3253 m in the Late Jurassic Draupne Formation. The 36" and 26" hole sections were swept with high viscosity bentonite pills. The 17 1/2" and the 12 1/4" hole sections were drilled with KCl/PAC POLYMER and KCl mud system to prevent bit balling. No shallow gas was recorded.

The well 33/9-18 had tight spots from 325 m to TD. Experienced differential sticking at 1230 m, 1650 m, 1680 m and tight hole from 1652 m to 3140 m. Bit balling occurred in 26" and 12 1/4" section. High viscosity bentonite pills were pumped to improve the flow pattern in an attempt to minimize balling problems.

From 2450 m and down to base Cretaceous at 2849 m the pore pressure increases and reaches approximately 1.54 g/cc which is the maximum pore pressure in the well. The rest of the well has been interpreted as being drilled into the Viking Group, which here contain large slump/slide blocks of Statfjord Formation, Dunlin Group and Brent Group. Within those blocks, the pore pressure seem to be somewhat higher than original pressures in the Statfjord Field. FMT pressures gives pressures in the range of 1.47 g/cc at 3006 m and 1,5 g/cc at 3019 m. No fluid samples were collected in the well.

Two cores were cut in Draupne Formation (core no. 1 was cut in the interval 2967-2978 m and core no. 2 was cut in interval 3045-3054 m) and 1 core in Heather Formation (in the interval 3233-3242 m). No hydrocarbon shows were observed. No fluid samples were collected.

The well was permanently plugged as a dry well on 20 December 1994.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
770.00	3253.00

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	2967.0	2975.7	[m]



2	3045.0	3054.0	[m]
3	3233.0	3239.0	[m]

Total core sample length [m]	23.7
Cores available for sampling?	YES

Core photos

2967-2972m



2972-2975m



3045-3050m



3040-3054m



3233-3238m



3238-3239m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
770.0	[m]	DC	UOS
790.0	[m]	DC	UOS
800.0	[m]	DC	UOS
840.0	[m]	DC	UOS
860.0	[m]	DC	UOS
880.0	[m]	DC	UOS
900.0	[m]	DC	UOS
920.0	[m]	DC	UOS
940.0	[m]	DC	UOS
960.0	[m]	DC	UOS
980.0	[m]	DC	UOS
1000.0	[m]	DC	UOS
1020.0	[m]	DC	UOS
1040.0	[m]	DC	UOS



1060.0	[m]	DC	UOS
1080.0	[m]	DC	UOS
1100.0	[m]	DC	UOS
1120.0	[m]	DC	UOS
1140.0	[m]	DC	UOS
1160.0	[m]	DC	UOS
1180.0	[m]	DC	UOS
1220.0	[m]	DC	UOS
1250.0	[m]	DC	UOS
1260.0	[m]	DC	UOS
1280.0	[m]	DC	UOS
1300.0	[m]	DC	UOS
1320.0	[m]	DC	UOS
1340.0	[m]	DC	UOS
1360.0	[m]	DC	UOS
1380.0	[m]	DC	UOS
1400.0	[m]	DC	UOS
1420.0	[m]	DC	UOS
1440.0	[m]	DC	UOS
1460.0	[m]	DC	UOS
1480.0	[m]	DC	UOS
1500.0	[m]	DC	UOS
1520.0	[m]	DC	UOS
1540.0	[m]	DC	UOS
1560.0	[m]	DC	UOS
1580.0	[m]	DC	UOS
1600.0	[m]	DC	UOS
1620.0	[m]	DC	UOS
1640.0	[m]	DC	UOS
1660.0	[m]	DC	UOS
1680.0	[m]	DC	UOS
1700.0	[m]	DC	UOS
1720.0	[m]	DC	UOS
1730.0	[m]	DC	UOS
1738.0	[m]	DC	UOS
1747.0	[m]	DC	UOS
1762.0	[m]	DC	UOS
1771.0	[m]	DC	UOS
1780.0	[m]	DC	UOS
1795.0	[m]	DC	UOS



1807.0	[m]	DC	UOS
1813.0	[m]	DC	UOS
1822.0	[m]	DC	UOS
1837.0	[m]	DC	UOS
1846.0	[m]	DC	UOS
1855.0	[m]	DC	UOS
1867.0	[m]	DC	UOS
1879.0	[m]	DC	UOS
1888.0	[m]	DC	UOS
1900.0	[m]	DC	UOS
1906.0	[m]	DC	UOS
1918.0	[m]	DC	UOS
1927.0	[m]	DC	UOS
1933.0	[m]	DC	UOS
1939.0	[m]	DC	UOS
1950.0	[m]	DC	UOS
2140.0	[m]	DC	STATO
2160.0	[m]	DC	STATO
2180.0	[m]	DC	STATO
2200.0	[m]	DC	STATO
2220.0	[m]	DC	STATO
2240.0	[m]	DC	STATO
2260.0	[m]	DC	STATO
2280.0	[m]	DC	STATO
2300.0	[m]	DC	STATO
2320.0	[m]	DC	STATO
2340.0	[m]	DC	STATO
2360.0	[m]	DC	STATO
2380.0	[m]	DC	STATO
2400.0	[m]	DC	STATO
2420.0	[m]	DC	UOS
2440.0	[m]	DC	UOS
2460.0	[m]	DC	STATO
2480.0	[m]	DC	STATO
2500.0	[m]	DC	STATO
2520.0	[m]	DC	STATO
2540.0	[m]	DC	STATO
2560.0	[m]	DC	STATO
2580.0	[m]	DC	STATO
2600.0	[m]	DC	STATO



2620.0 [m]	DC	STATO
2640.0 [m]	DC	STATO
2660.0 [m]	DC	STATO
2680.0 [m]	DC	STATO
2700.0 [m]	DC	STATO
2720.0 [m]	DC	STATO
2740.0 [m]	DC	STATO
2760.0 [m]	DC	STATO
2780.0 [m]	DC	STATO
2781.0 [m]	SWC	STATO
2800.0 [m]	DC	STATO
2812.0 [m]	SWC	STATO
2821.0 [m]	DC	RRI
2832.0 [m]	SWC	STATO
2839.0 [m]	DC	STATO
2848.0 [m]	DC	STATO
2849.0 [m]	SWC	STATO
2851.0 [m]	DC	STATO
2852.0 [m]	SWC	STATO
2854.0 [m]	DC	STATO
2860.0 [m]	DC	STATO
2860.0 [m]	SWC	STATO
2863.0 [m]	DC	STATO
2869.0 [m]	DC	STATO
2872.0 [m]	SWC	STATO
2875.0 [m]	DC	STATO
2878.0 [m]	DC	STATO
2881.0 [m]	DC	STATO
2883.0 [m]	SWC	STATO
2887.0 [m]	DC	STATO
2893.0 [m]	DC	STATO
2900.0 [m]	SWC	STATO
2902.0 [m]	DC	STATO
2914.0 [m]	DC	STATO
2920.0 [m]	SWC	STATO
2923.0 [m]	DC	STATO
2925.0 [m]	DC	STATO
2926.0 [m]	SWC	STATO
2929.0 [m]	DC	STATO
2933.0 [m]	SWC	STATO



2938.0	[m]	DC	STATO
2940.0	[m]	SWC	STATO
2945.0	[m]	SWC	STATO
2947.0	[m]	DC	STATO
2953.0	[m]	DC	STATO
2956.0	[m]	DC	STATO
2959.0	[m]	DC	STATO
2960.0	[m]	SWC	STATO
2964.0	[m]	DC	STATO
2965.0	[m]	DC	STATO
2967.0	[m]	C	STATO
2971.0	[m]	C	STATO
2976.0	[m]	C	STATO
2978.0	[m]	C	STATO
2980.0	[m]	SWC	STATO
2983.0	[m]	DC	STATO
2983.0	[m]	SWC	STATO
2988.0	[m]	SWC	STATO
2992.0	[m]	DC	STATO
2993.0	[m]	SWC	STATO
2995.0	[m]	DC	STATO
2998.0	[m]	DC	STATO
3001.0	[m]	SWC	STATO
3004.0	[m]	SWC	STATO
3007.0	[m]	DC	STATO
3012.0	[m]	SWC	STATO
3015.0	[m]	SWC	STATO
3016.0	[m]	DC	STATO
3025.0	[m]	DC	STATO
3027.0	[m]	SWC	STATO
3030.0	[m]	SWC	STATO
3033.0	[m]	DC	STATO
3034.0	[m]	SWC	STATO
3037.0	[m]	DC	STATO
3044.0	[m]	SWC	STATO
3048.0	[m]	C	STATO
3054.0	[m]	C	STATO
3061.0	[m]	DC	STATO
3067.0	[m]	DC	STATO
3073.0	[m]	DC	STATO



3075.0	[m]	SWC	STATO
3076.0	[m]	DC	STATO
3079.0	[m]	DC	STATO
3081.0	[m]	SWC	STATO
3082.0	[m]	DC	STATO
3091.0	[m]	DC	STATO
3093.0	[m]	SWC	STATO
3100.0	[m]	DC	STATO
3104.0	[m]	SWC	STATO
3106.0	[m]	DC	STATO
3107.0	[m]	DC	STATO
3109.0	[m]	DC	STATO
3118.0	[m]	DC	STATO
3121.0	[m]	DC	STATO
3124.0	[m]	DC	STATO
3126.0	[m]	SWC	STATO
3127.0	[m]	DC	STATO
3133.0	[m]	SWC	STATO
3136.0	[m]	DC	STATO
3145.0	[m]	DC	STATO
3149.0	[m]	SWC	STATO
3154.0	[m]	DC	STATO
3157.0	[m]	DC	STATO
3160.0	[m]	DC	STATO
3163.0	[m]	DC	STATO
3168.0	[m]	SWC	STATO
3172.0	[m]	DC	STATO
3175.0	[m]	DC	STATO
3177.0	[m]	SWC	STATO
3181.0	[m]	DC	STATO
3190.0	[m]	DC	STATO
3199.0	[m]	DC	STATO
3205.0	[m]	DC	STATO
3208.0	[m]	DC	STATO
3217.0	[m]	DC	STATO
3220.0	[m]	DC	STATO
3225.0	[m]	SWC	STATO
3226.0	[m]	DC	STATO
3230.0	[m]	DC	STATO
3233.0	[m]	DC	STATO



3233.0	[m]	C	STATO
3235.0	[m]	C	STATO
3247.0	[m]	DC	STATO
3250.0	[m]	DC	STATO
3253.0	[m]	DC	STATO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
168	NORDLAND GP
995	UTSIRA FM
1028	HORDALAND GP
1729	ROGALAND GP
1729	BALDER FM
1767	LISTA FM
1933	SHETLAND GP
1933	JORSALFARE FM
2195	KYRRE FM
2821	TRYGGVASON FM
2841	CROMER KNOLL GP
2841	MIME FM
2846	VIKING GP
2846	DRAUPNE FM
2946	UNDEFINED GP

Composite logs

Document name	Document format	Document size [MB]
2454	pdf	0.47

Geochemical information

Document name	Document format	Document size [MB]
2454_1	pdf	0.96



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

Document name	Document format	Document size [MB]
2454 33 9 18 COMPLETION REPORT AND LOG	pdf	16.10

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DLL ZDL CNL GR	1949	3242
FMT GR	2947	3235
HEXDIP GR	2776	3251
MAC SL GR	1650	3247
MWD - DPR	234	3253
SWC GR	2690	3225
VSP	470	3250

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	230.0	0.00	LOT
INTERM.	20	753.0	26	755.0	1.49	LOT
INTERM.	13 3/8	1951.0	17 1/2	1953.0	1.96	LOT
OPEN HOLE		3253.0	8 1/2	3253.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
234	1.04			WATER BASED	21.11.1994
423	1.04			WATER BASED	21.11.1994
517	1.04			WATER BASED	21.11.1994
717	1.04			WATER BASED	21.11.1994
764	1.04			WATER BASED	23.11.1994
764	1.04			WATER BASED	24.11.1994
875	1.22	15.0	8.5	WATER BASED	28.11.1994
1636	1.40	34.0	17.5	WATER BASED	28.11.1994





1815	1.43	34.0	17.5	WATER BASED	28.11.1994
1815	1.43	34.0	17.5	WATER BASED	01.12.1994
1900	1.55	32.0	11.5	WATER BASED	21.12.1994
1966	1.43	34.0	17.5	WATER BASED	01.12.1994
1966	1.48	34.0	17.5	WATER BASED	01.12.1994
1966	1.48	34.0	17.5	WATER BASED	02.12.1994
1969	1.48	31.0	11.5	WATER BASED	05.12.1994
2105	1.48	37.0	15.5	WATER BASED	05.12.1994
2289	1.48	41.0	15.5	WATER BASED	07.12.1994
2745	1.55	36.0	15.0	WATER BASED	07.12.1994
2950	1.55	36.0	16.0	WATER BASED	08.12.1994
2967	1.55	39.0	15.5	WATER BASED	09.12.1994
2978	1.55	39.0	15.5	WATER BASED	12.12.1994
2978	1.55	36.0	15.5	WATER BASED	12.12.1994
2978	1.55	36.0	16.5	WATER BASED	12.12.1994
2978	1.55	33.0	14.5	WATER BASED	19.12.1994
2978	1.55	35.0	14.0	WATER BASED	13.12.1994
2978	1.55	33.0	16.0	WATER BASED	15.12.1994
2978	1.55	33.0	17.0	WATER BASED	16.12.1994
2978	1.55	35.0	16.5	WATER BASED	19.12.1994
2978	1.55	33.0	14.5	WATER BASED	19.12.1994
3007	1.55	33.0	13.0	WATER BASED	21.12.1994
3007	1.55	30.0	15.0	WATER BASED	19.12.1994
3014	1.55	36.0	15.5	WATER BASED	12.12.1994
3020	1.55	30.0	15.0	WATER BASED	19.12.1994
3020	1.55	33.0	13.0	WATER BASED	21.12.1994
3054	1.55	36.0	16.5	WATER BASED	12.12.1994
3075	1.55	35.0	14.0	WATER BASED	13.12.1994
3174	1.55	33.0	16.0	WATER BASED	15.12.1994
3233	1.55	33.0	17.0	WATER BASED	16.12.1994
3242	1.55	35.0	16.5	WATER BASED	19.12.1994
3253	1.55	30.0	15.0	WATER BASED	19.12.1994
3253	1.55	33.0	14.5	WATER BASED	19.12.1994
3253	1.55	33.0	14.5	WATER BASED	19.12.1994
3253	1.55	33.0	13.0	WATER BASED	21.12.1994

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2967.40	[m]



2972.03	[m]
2972.80	[m]
2973.48	[m]
3045.65	[m]
3047.70	[m]
3049.50	[m]
3052.45	[m]
3053.21	[m]
3234.57	[m]
3238.02	[m]

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]
2454 Formation pressure (Formasjonstrykk)	pdf	0.22

