



General information





Wellbore name	34/10-33 B
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	GULLFAKS SØR
Discovery	34/10-2 Gullfaks Sør
Well name	34/10-33
Seismic location	ST 8134-156 CP.296 OG 297 (BHPOS.CP.270)
Production licence	050
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	608-L
Drilling facility	DEEPSEA BERGEN
Drilling days	75
Entered date	27.04.1989
Completed date	10.07.1989
Release date	10.07.1991
Publication date	01.01.2012
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	23.0
Water depth [m]	134.0
Total depth (MD) [m RKB]	3942.0
Maximum inclination [°]	93.7
Bottom hole temperature [°C]	102
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	NESS FM
Geodetic datum	ED50
NS degrees	61° 7' 34.44" N
EW degrees	2° 12' 57.1" E
NS UTM [m]	6777262.00
EW UTM [m]	457756.18
UTM zone	31
NPDID wellbore	1407



Wellbore history

General

Well 34/10-33 B is a sidetrack from the vertical appraisal well 34/10-33 on the Gullfaks South structure. It was the first horizontal well ever drilled on the Norwegian continental shelf. The main purpose of the well was to perform a long period test from a horizontal well through the upper part of the Brent Group. The well should provide important production data and the results from the well should be used to calibrate the simulation model for the reservoir and also to update the geological model for this part of the Brent Group.

Operations and results

Appraisal well was sidetracked 27 April 1989 from the vertical at 1840 m, just below the 13 3/8" casing shoe. The well was drilled with the semi-submersible installation Deepsea Bergen to TD at 3942 m in the Late Jurassic Heather Formation. The well bore was drilled with gel/lignosulphonate mud from kick-off to 1864 m and with Interdrill NT oil based mud from 1864 m to TD. The hole was approximately horizontal in the interval 3670 - 3942 m. During setting of the 7" liner for testing of the hydrocarbon zone, the pipe got stuck and broke between the extension pipe and drill string. Fishing was unsuccessful, and the planned test was therefore not possible. Plugging was performed, and Statoil informed NPD and the partners about the alternatives for future operations. After evaluation of FMT data, it was decided to go for a new sidetrack, 34/10-33 C.

The formation tops came in close to the prognosis. The Brent Group, top Tarbert Formation was encountered at 3215 m. Sandstones of the Brent Group contained oil and gas. Due to lateral pressure barriers the Tarbert Formation proved to be water bearing in the horizontal part of the well bore, although good oil shows were described on cores and well site samples up to 3816 m.

Three cores were cut in the intervals 3742 - 3751 m, 3785 - 3790 m, and 3850.5 - 3860 m in the Tarbert Formation. Two runs with the FMT tool on drill string was performed in the horizontal part of the well. In addition, five tests behind the 9 5/8" casing was performed with CHFT (Cased Hole Formation Tester). One segregated fluid sample was taken with FMT at 3892 m (1 litre water and 8 litres oil/filtrate). Two segregated fluid samples were taken with CHFT at 3299.5 m (3.2 Sm³ gas, 0.9 litre fluid) and at 3335.0 m (2.4 Sm³ gas and 1.1 litre fluid).

The well was plugged back and abandoned on 10 July 1989 for the sidetrack 34/10-33 C.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1850.00	3942.00

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	3742.0	3751.0	[m]
2	3785.0	3790.6	[m]
3	3850.0	3859.8	[m]

Total core sample length [m]	24.4
Cores available for sampling?	YES

Core photos



3742-3747m



3747-3751m



3785-3790m



3790-3791m



3850-3855m



3855-3859m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
157	NORDLAND GP
963	UTSIRA FM
974	HORDALAND GP
1029	NO FORMAL NAME



1139	NO FORMAL NAME
1247	NO FORMAL NAME
1513	NO FORMAL NAME
1562	NO FORMAL NAME
1610	NO FORMAL NAME
1821	ROGALAND GP
1821	BALDER FM
1897	LISTA FM
2048	SHETLAND GP
2048	JORSALFARE FM
2340	KYRRE FM
3008	CROMER KNOLL GP
3008	MIME FM
3012	VIKING GP
3012	DRAUPNE FM
3045	HEATHER FM
3215	BRENT GP
3215	TARBERT FM
3353	NESS FM
3679	TARBERT FM
3897	HEATHER FM

Geochemical information

Document name	Document format	Document size [MB]
1407_1	pdf	0.28
1407_2	pdf	0.58

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

Document name	Document format	Document size [MB]
1407_01_WDSS_General_Information	pdf	0.21
1407_02_WDSS_completion_log	pdf	0.17

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





Document name	Document format	Document size [MB]
1407 34 10 33 B Completion log	pdf	1.53
1407 34 10 33 B Completion report I	pdf	36.21
1407 34 10 33 B Completion report II	pdf	32.19

Logs

Log type	Log top depth [m]	Log bottom depth [m]
4 ARM CAL GR	1822	3419
ACBL VDL CCL GR	1800	3475
CDL CN GR	3185	3475
CHFT HP GR	3238	0
CHFT HP GR	3299	0
CHFT HP GR	3335	0
CHFT HP GR	3336	0
CHFT HP GR	3358	0
FMT HP GR	3551	3894
FMT HP GR	3551	3892
GYRO CCL GR	1690	3440
MWD - GR RES NEU POR DEN	1840	3942

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	219.0	36	220.0	0.00	LOT
INTERM.	20	459.0	26	461.0	1.43	LOT
INTERM.	13 3/8	1822.0	17 1/2	1838.0	1.53	LOT
INTERM.	9 5/8	3484.0	12 1/4	3493.0	1.70	LOT
OPEN HOLE		3942.0	8 1/2	3942.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1840	1.44	21.0	9.0	WATER BASED	09.05.1989
1864	1.45	18.0	5.5	OIL BASED	09.05.1989
2100	1.45	24.0	3.0	WATER BASED	03.05.1989





2982	1.58	24.0	6.5	OIL BASED	19.05.1989
3024	1.58	26.0	6.0	OIL BASED	19.05.1989
3088	1.58	22.0	7.0	OIL BASED	19.05.1989
3171	1.58	25.0	7.0	OIL BASED	19.05.1989
3200	1.58	23.0	6.5	OIL BASED	19.05.1989
3241	1.58	22.0	6.5	OIL BASED	19.05.1989
3241	1.58	26.0	7.0	OIL BASED	19.05.1989
3402	1.58	27.0	13.0	OIL BASED	24.05.1989
3415	1.58	27.0	6.5	OIL BASED	24.05.1989
3458	1.58	27.0	7.0	OIL BASED	24.05.1989
3484	1.50	25.0	6.5	OIL BASED	07.06.1989
3485	1.50	24.0	6.0	OIL BASED	08.06.1989
3493	1.58	28.0	7.0	OIL BASED	25.05.1989
3493	1.59	31.0	7.0	OIL BASED	29.05.1989
3493	1.42	20.0	6.0	OIL BASED	02.06.1989
3496	1.42	18.0	8.5	OIL BASED	05.06.1989
3588	1.42	20.0	6.5	OIL BASED	05.06.1989
3625	1.42	25.0	7.0	OIL BASED	05.06.1989
3628	1.53	24.0	9.5	OIL BASED	09.06.1989
3730	1.55	24.0	9.0	OIL BASED	12.06.1989
3860	1.57	20.0	10.0	OIL BASED	19.06.1989
3942	1.60	28.0	10.0	OIL BASED	20.06.1989

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]
1407 Formation pressure (Formasjonstrykk)	pdf	0.22

