General information

Wellbore name	7/7-3
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	BRYNHILD
Discovery	7/7-2 Brynhild
Well name	7/7-3
Seismic location	AHN 8707-211. SP. 402
Production licence	148
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	759-L
Drilling facility	DEEPSEA BERGEN
Drilling days	76
Entered date	20.04.1993
Completed date	04.07.1993
Release date	04.07.1995
Publication date	19.10.2006
Purpose - planned	APPRAISAL
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	82.0
Total depth (MD) [m RKB]	3584.0
Final vertical depth (TVD) [m RKB]	3582.0
Maximum inclination [°]	5.5
Bottom hole temperature [°C]	144
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	57° 27' 41.61'' N
EW degrees	2° 16' 20.96'' E
NS UTM [m]	6369143.60
EW UTM [m]	456352.15
UTM zone	31
NPDID wellbore	2113

Wellbore history

Well 7/7-3 is located ca 5 km east of the UK border on the Jæren High in the North Sea. It was drilled to appraise the Late Jurassic discovery in well 7/7-2 and was designed to test seismic interpretations, reservoir thickness and properties, pressure regime, and volume of recoverable oil. The well was planned as a future injector, but since the reservoir only indicated traces of hydrocarbons it was permanently plugged.

Operations and results

Well 7/7-3 was spudded with the semi-submersible installation Deepsea Bergen on 20 April 1993 and drilled to TD at 3584 m in the Late Permian Zechstein Group. The well took 17 days more than planned to drill, mainly due to a 8,5 days downtime related to BOP repair and loss of circulation at end of 12 1/4" section. The well was drilled with seawater and hi-vis pills down to 918 m, and with ANCO 2000 mud from 918 m to 2677 m. From 2677 m to 3354 m the mud was gradually displaced to an ANCOTHERM/Bentonite system. The ANCOTHERM/Bentonite system was used from 3354 m to TD.

The 7/7-3 well penetrated the Ula Formation at 3490.5 m. The siltstone and the uppermost 2 metres of the sandstone showed only weak shows and the following logging and evaluation confirmed that the sandstone did not contain any moveable hydrocarbons.

Three cores were cut from 3486 m to 3516 m, from base Farsund Formation, through the Ula Formation and into the Triassic Group. Two segregated FMT fluid samples were taken at the same depth, 3497.3 m. All fluid chambers proved to contain mud filtrate and water and did not contain any hydrocarbons.

The well was permanently abandoned on 4 July 1993 as dry with shows.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
930.00	3584.00

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	3486.0	3489.3	[m]
2	3489.3	3490.0	[m]

3	3491.0	3516.0	[m]

Total core sample length [m]	29.0
Cores available for sampling?	YES

Core photos


3486-3489m


3489-3490m


3491-3496m


3496-3501m


3501-3506m


3506-3511m


3511-3516m


3516-3516m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1500.0	[m]	DC	MILL
1520.0	[m]	DC	MILL
1540.0	[m]	DC	MILL
1560.0	[m]	DC	MILL
1580.0	[m]	DC	MILL
1600.0	[m]	DC	MILL
1620.0	[m]	DC	MILL
1640.0	[m]	DC	MILL
1660.0	[m]	DC	MILL
1680.0	[m]	DC	MILL
1700.0	[m]	DC	MILL
1720.0	[m]	DC	MILL
1740.0	[m]	DC	MILL
1760.0	[m]	DC	MILL
1780.0	[m]	DC	MILL

1800.0	[m]	DC	MILL
1820.0	[m]	DC	MILL
1840.0	[m]	DC	MILL
1860.0	[m]	DC	MILL
1880.0	[m]	DC	MILL
1900.0	[m]	DC	MILL
1920.0	[m]	DC	MILL
1940.0	[m]	DC	MILL
1960.0	[m]	DC	MILL
1980.0	[m]	DC	MILL
2000.0	[m]	DC	MILL
2020.0	[m]	DC	MILL
2040.0	[m]	DC	MILL
2055.0	[m]	DC	MILL
2070.0	[m]	DC	MILL
2090.0	[m]	DC	MILL
2110.0	[m]	DC	MILL
2140.0	[m]	DC	MILL
2150.0	[m]	DC	MILL
2170.0	[m]	DC	MILL
2190.0	[m]	DC	MILL
2205.0	[m]	DC	MILL
2220.0	[m]	DC	MILL
2235.0	[m]	DC	MILL
2250.0	[m]	DC	MILL
2268.0	[m]	SWC	STATO
2280.0	[m]	SWC	STATO
2295.0	[m]	DC	MILL
2310.0	[m]	DC	MILL
2325.0	[m]	DC	MILL
2340.0	[m]	DC	MILL
2355.0	[m]	DC	MILL
2370.0	[m]	DC	MILL
2385.0	[m]	DC	MILL
2400.0	[m]	DC	MILL
2415.0	[m]	DC	MILL
2430.0	[m]	DC	MILL
2445.0	[m]	DC	MILL
2460.0	[m]	DC	MILL
2475.0	[m]	DC	MILL

2490.0	[m]	DC	MILL
2505.0	[m]	DC	MILL
2520.0	[m]	DC	MILL
2535.0	[m]	DC	MILL
2550.0	[m]	DC	MILL
2565.0	[m]	DC	MILL
2580.0	[m]	DC	MILL
2591.0	[m]	SWC	STATO
2601.0	[m]	SWC	STATO
2615.0	[m]	DC	MILL
2630.0	[m]	DC	MILL
2646.0	[m]	SWC	STATO
2660.0	[m]	DC	MILL
2675.0	[m]	DC	MILL
2690.0	[m]	DC	MILL
2705.0	[m]	DC	MILL
2720.0	[m]	DC	MILL
2735.0	[m]	DC	MILL
2750.0	[m]	DC	MILL
2765.0	[m]	DC	MILL
2780.0	[m]	DC	MILL
2795.0	[m]	DC	MILL
2800.0	[m]	DC	MILL
2805.0	[m]	DC	MILL
2810.0	[m]	DC	MILL
3286.0	[m]	SWC	STATO
3301.0	[m]	SWC	STATO
3335.0	[m]	SWC	STATO
3350.0	[m]	DC	MILL
3370.0	[m]	DC	MILL
3385.0	[m]	DC	MILL
3400.0	[m]	DC	MILL
3412.0	[m]	DC	MILL
3413.0	[m]	SWC	STATO
3424.0	[m]	DC	MILL
3433.0	[m]	DC	MILL
3442.0	[m]	DC	MILL
3456.5	[m]	SWC	STATO
3459.0	[m]	SWC	STATO
3466.0	[m]	SWC	STATO

3471.0	[m]	SWC	STATO
3479.5	[m]	SWC	STATO
3481.5	[m]	SWC	STATO
3486.1	[m]	C	STATO
3486.2	[m]	C	STATO
3486.3	[m]	C	STATO
3488.0	[m]	SWC	STATO
3489.5	[m]	C	STATO
3495.6	[m]	C	STATO
3498.1	[m]	C	STATO
3553.0	[m]	DC	MILL
3571.0	[m]	DC	MILL
3584.0	[m]	DC	MILL

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
106	NORDLAND GP
1222	HORDALAND GP
2589	ROGALAND GP
2589	BALDER FM
2628	SELE FM
2758	LISTA FM
2796	ANDREW FM
2808	VÅLE FM
2821	SHETLAND GP
2821	EKOFISK FM
2949	TOR FM
3081	HOD FM
3264	CROMER KNOLL GP
3264	RØDBY FM
3274	SOLA FM
3281	TUXEN FM
3291	ÅSGARD FM
3413	TYNE GP
3413	MANDAL FM
3440	FARSUND FM
3491	VESTLAND GP
3491	ULA FM

3507	NO GROUP DEFINED
3507	SMITH BANK FM
3567	ZECHSTEIN GP

Composite logs

Document name	Document format	Document size [MB]
2113	pdf	0.46

Geochemical information

Document name	Document format	Document size [MB]
2113_1	pdf	2.19

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

Document name	Document format	Document size [MB]
2113_7_7_3_COMPLETION_REPORT_AND_LOG	pdf	10.55

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ACL GR	2661	3351
CBL VDL GR	2100	2661
CBL VDL GR	2575	3340
COREGUN	2268	2667
COREGUN	3225	3335
COREGUN	3354	3540
DIFL ACL MLL GR CAL	3340	3587
DIFL ACL ZDL CNL GR CAL	2661	3351
DIFL ACL ZDL GR CAL	903	2677
DIPS GR	3340	3578
FMT CHT GR	3496	3505

FMT CHT GR	3497	0
MWD - GR RES DIR	172	3584
VSP	510	3547
ZDL CNL GR	3340	3587

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	164.5	36	165.0	0.00	LOT
INTERM.	20	903.5	26	905.0	2.00	LOT
INTERM.	13 3/8	2661.0	17 1/2	2663.0	1.95	LOT
INTERM.	9 5/8	3339.0	12 1/4	3340.0	2.04	LOT
OPEN HOLE		3584.0	8 1/2	3584.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
170	1.03			DUMMY	22.04.1993
651	1.03			DUMMY	23.04.1993
920	1.03			DUMMY	26.04.1993
920	1.03			DUMMY	26.04.1993
920	1.20	17.0	6.5	DUMMY	26.04.1993
920	1.03			DUMMY	27.04.1993
940	1.50	46.0	8.0	WATER BASED	07.05.1993
1350	1.50	51.0	11.5	WATER BASED	10.05.1993
1665	1.50	51.0	10.5	WATER BASED	10.05.1993
1850	1.60	47.0	9.5	WATER BASED	10.05.1993
1850	1.60	51.0	11.5	WATER BASED	11.05.1993
1982	1.60	47.0	9.5	WATER BASED	10.05.1993
2180	1.60	51.0	11.5	WATER BASED	11.05.1993
2677	1.65	40.0	7.5	WATER BASED	18.05.1993
2677	1.65	37.0	7.0	WATER BASED	18.05.1993
2677	1.65	39.0	7.0	WATER BASED	18.05.1993
2677	1.65	38.0	7.0	WATER BASED	18.05.1993
2677	1.65	40.0	7.0	WATER BASED	19.05.1993
2677	1.60	44.0	9.0	WATER BASED	18.05.1993
2677	1.65	37.0	7.0	WATER BASED	24.05.1993

2694	1.65	36.0	7.5	WATER BASED	24.05.1993
2789	1.65	44.0	7.5	WATER BASED	24.05.1993
2836	1.65	52.0	9.0	WATER BASED	24.05.1993
2894	1.65	46.0	9.0	WATER BASED	24.05.1993
2930	1.65	49.0	8.5	WATER BASED	25.05.1993
3005	1.85	67.0	10.5	WATER BASED	02.06.1993
3029	1.65	47.0	7.0	WATER BASED	27.05.1993
3054	1.85	50.0	7.0	WATER BASED	02.06.1993
3094	1.73	53.0	8.0	WATER BASED	28.05.1993
3116	1.73	54.0	9.0	WATER BASED	28.05.1993
3237	1.79	58.0	10.5	WATER BASED	02.06.1993
3354	1.82	51.0	7.0	WATER BASED	03.06.1993
3354	1.82	41.0	4.5	WATER BASED	03.06.1993
3354	1.82	56.0	7.5	WATER BASED	07.06.1993
3354	1.82	51.0	7.5	WATER BASED	07.06.1993
3354	1.82	41.0	4.0	WATER BASED	07.06.1993
3354	1.82	40.0	4.0	WATER BASED	08.06.1993
3354	1.82	35.0	4.0	WATER BASED	09.06.1993
3354	1.82	41.0	4.0	WATER BASED	14.06.1993
3354	1.82	26.0	3.5	WATER BASED	14.06.1993
3354	1.82	52.0	7.0	DUMMY	15.06.1993
3354	1.82	52.0	6.0	DUMMY	15.06.1993
3355	1.85	59.0	12.0	WATER BASED	02.06.1993
3357	1.82	46.0	7.0	DUMMY	15.06.1993
3377	1.87	47.0	7.5	DUMMY	15.06.1993
3435	1.92	48.0	8.0	DUMMY	16.06.1993
3486	1.92	42.0	7.5	DUMMY	17.06.1993
3489	1.92	36.0	7.5	DUMMY	21.06.1993
3504	1.92	33.0	7.0	DUMMY	22.06.1993
3518	1.92	29.0	6.5	DUMMY	22.06.1993
3584	1.95	29.0	8.5	DUMMY	22.06.1993
3584	1.92	32.0	7.5	DUMMY	22.06.1993

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]
2113_Formation_pressure_(Formasjonstrykk)	pdf	0.22