General information

Wellbore name	15/12-7 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	15/12-7
Seismic location	ST8802 - 775 & SP 534
Production licence	116
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	655-L
Drilling facility	DEEPSEA BERGEN
Drilling days	63
Entered date	06.11.1990
Completed date	07.01.1991
Release date	07.01.1993
Publication date	11.02.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	85.0
Total depth (MD) [m RKB]	3570.0
Final vertical depth (TVD) [m RKB]	3529.0
Maximum inclination [°]	26.6
Bottom hole temperature [°C]	128
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SMITH BANK FM
Geodetic datum	ED50
NS degrees	58° 0' 49.93'' N
EW degrees	1° 58' 35.54'' E
NS UTM [m]	6430858.60
EW UTM [m]	439525.83
UTM zone	31
NPDID wellbore	1680

Wellbore history

General

Well 15/12-7 S was designed to drill in Late Jurassic Oxfordian sandstones on the Theta North prospect in the southeastern part of the PL 116 licence area. The structure is a rotated fault block dipping southeast and bound to the west and north by faults. Based on mapping and inversion studies of the 15/12-5 well and the Beta-east structure it was likely that an Oxfordian sequence was present at the Theta structure. However, it could not be excluded that the Oxfordian reservoir had been eroded from top of the structure. The main objective of well 15/12-7 S was to test the potential for hydrocarbons in the Oxfordian sandstones. A secondary objective was to test possible Triassic sandstones. Seismic anomalies at 441 m and 792 m strongly suggested shallow gas. Because of this the spud location was set outside of the planned location.

Operations and results

Wildcat well 15/12-7 S was spudded with the semi-submersible installation Deepsea Bergen on 6 November 1990 and drilled to TD at 3529 m in the Triassic Smith Bank Formation. Problems were encountered in building and dropping angle in deviated well section (13 3/8" to 9 5/8"). Pipe stuck at 2703 m and 2720m but came free. Stuck again with FMT-tool at 3425m. The tool was left in the hole. The well was drilled with seawater and bentonite pills down to 173 m, with seawater and CMC EHV from 173 m to 620 m, with gypsum/PAC from 620 m to 3027 m, and with gel/polymer/lignosulphonate from 3027 m to TD. No shallow gas was encountered at 441 m, but from MWD gas was encountered at 775 m. Several misruns while logging were experienced.

The Oxfordian reservoir sandstone (Intra Heather Sandstone) came in at 3025 m, 25.5 m shallower than prognosed. No hydrocarbons were encountered. One 27 m conventional core was cut from 3028 m to 3055 m in the reservoir unit with 94.4 % recovery. A total of 100 sidewall cores were attempted of which 93 were recovered. No sidewall cores were attempted in the 17 1/2" section (620 m to 1820 m) due to hole problems. No fluid samples were taken in the well.

The well was permanently abandoned on 7 January 1991 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]
630.00	3570.00

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	3028.0	3053.5	[m]

Total core sample length [m]	25.5
Cores available for sampling?	YES

Core photos


3028-3033m


3033-3038m


3038-3043m


3043-3048m


3048-3053m


3053-3054m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1827.0	[m]	SWC	STATO
1858.0	[m]	SWC	STATO
1915.0	[m]	SWC	STATO
1945.0	[m]	SWC	STATO
1975.0	[m]	SWC	STATO
1995.0	[m]	SWC	STATO
2020.0	[m]	SWC	STATO
2080.0	[m]	SWC	STATO
2251.0	[m]	SWC	STATO
2288.0	[m]	SWC	STATO
2353.0	[m]	SWC	STATO
2364.0	[m]	SWC	STATO
2375.0	[m]	SWC	STATO
2383.0	[m]	SWC	STATO

2390.0	[m]	SWC	STATO
2408.0	[m]	SWC	STATO
2422.0	[m]	SWC	STATO
2437.0	[m]	SWC	STATO
2494.0	[m]	SWC	STATO
2510.0	[m]	SWC	STATO
2527.0	[m]	SWC	STATO
2542.0	[m]	SWC	STATO
2555.0	[m]	SWC	STATO
2571.0	[m]	SWC	STATO
2585.0	[m]	SWC	STATO
2960.0	[m]	SWC	STATO
2975.0	[m]	SWC	STATO
2983.0	[m]	SWC	STATO
2990.0	[m]	SWC	STATO
2998.0	[m]	SWC	STATO
3005.0	[m]	SWC	STATO
3020.0	[m]	SWC	STATO
3028.0	[m]	C	STATO
3028.3	[m]	C	STATO
3028.7	[m]	C	STATO
3029.3	[m]	C	STATO
3032.5	[m]	C	STATO
3033.0	[m]	C	STATO
3035.6	[m]	C	STATO
3037.6	[m]	C	STATO
3039.9	[m]	C	STATO
3040.0	[m]	C	STATO
3049.0	[m]	C	STATO
3049.5	[m]	C	STATO
3066.0	[m]	DC	STATO
3174.0	[m]	DC	STATO
3234.0	[m]	DC	STATO
3258.0	[m]	DC	STATO
3267.0	[m]	DC	STATO
3270.0	[m]	DC	STATO
3483.0	[m]	DC	STATO
3570.0	[m]	DC	STATO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
108	NORDLAND GP
1128	UTSIRA FM
1150	UNDIFFERENTIATED
1284	HORDALAND GP
2358	ROGALAND GP
2358	BALDER FM
2379	SELE FM
2460	LISTA FM
2549	VÅLE FM
2583	SHETLAND GP
2583	EKOFISK FM
2630	TOR FM
2685	HOD FM
2942	CROMER KNOLL GP
2942	SOLA FM
2975	ÅSGARD FM
3008	VIKING GP
3008	DRAUPNE FM
3025	INTRA HEATHER FM SS
3036	NO GROUP DEFINED
3036	SKAGERRAK FM
3477	SMITH BANK FM

Composite logs

Document name	Document format	Document size [MB]
1680	pdf	0.60

Geochemical information

Document name	Document format	Document size [MB]
1680_1	pdf	1.50

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

Document name	Document format	Document size [MB]
1680_01_WDSS_General_Information	pdf	0.51
1680_02_WDSS_completion_log	pdf	0.21

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

Document name	Document format	Document size [MB]
1680_15_12_7_S_COMPLETION_REPORT_AND_LOG	PDF	16.31

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ACBL VDL GR	108	1795
ACBL VDL GR	1460	3010
CDL CNL GR CAL	1797	3026
CDL GR CAL	168	1786
CST GR	1827	3020
CST GR	3025	3502
DIFL AC GR SP	3014	3570
DIFL ACL GR SP	168	3021
FMT GR	3027	3203
FMT GR	3145	3425
HR DIPLOG	3010	3570
HR DIPLOG GR	2350	3025
MWD	179	3570
VELOCITY	500	2350
ZDEN CNL SPL CAL	3010	3569

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	168.0	36	170.0	0.00	LOT
INTERM.	20	604.0	26	606.0	2.08	LOT

INTERM.	13 3/8	1797.0	17 1/2	1800.0	1.85	LOT
INTERM.	9 5/8	3014.0	12 1/4	3016.0	1.65	LOT
OPEN HOLE		3570.0	8 1/2	3570.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1099	1.20	15.0		WATER BASED	
1559	1.20	15.0		WATER BASED	
1693	1.30	15.0		WATER BASED	
1815	1.30	20.0		WATER BASED	
1820	1.35	13.0		WATER BASED	
1959	1.45	18.0		WATER BASED	
2142	1.55	19.0		WATER BASED	
2350	1.60	27.0		WATER BASED	
2451	1.60	25.0		WATER BASED	
2498	1.60	24.0		WATER BASED	
2563	1.60	25.0		WATER BASED	
2625	1.60	21.0		WATER BASED	
2638	1.60	25.0		WATER BASED	
2758	1.60	26.0		WATER BASED	
2767	1.60	26.0		WATER BASED	
2799	1.60	38.0		WATER BASED	
2835	1.60	28.0		WATER BASED	
2861	1.60	27.0		WATER BASED	
2917	1.60	27.0		WATER BASED	
2980	1.60	29.0		WATER BASED	
3020	1.31	44.0		WATER BASED	
3026	1.60	25.0		WATER BASED	
3066	1.30	20.0		WATER BASED	
3570	1.31	44.0		WATER BASED	

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]
1680_Formation_pressure_(Formasjonstrykk)	pdf	0.22