General information

Wellbore name	16/7-5
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	16/7-5
Seismic location	ST 8122 - 552 SP. 615.5
Production licence	072
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	423-L
Drilling facility	ZAPATA UGLAND
Drilling days	33
Entered date	02.07.1984
Completed date	03.08.1984
Release date	03.08.1986
Publication date	15.08.2008
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	26.8
Water depth [m]	80.0
Total depth (MD) [m RKB]	2900.0
Bottom hole temperature [°C]	95
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SMITH BANK FM
Geodetic datum	ED50
NS degrees	58° 21' 6.3'' N
EW degrees	2° 4' 56.16'' E
NS UTM [m]	6468386.64
EW UTM [m]	446284.86
UTM zone	31
NPDID wellbore	134

Wellbore history

Well 16/7-5 is located ca 10 km east of the Sleipner Øst field in the North Sea. The primary objective was to test potential gas bearing Jurassic/Triassic sandstones.

Operations and results

Wildcat well 16/7-5 was spudded with the semi-submersible installation Zapata Ugland on 2 July 1984 and drilled to TD at 2900 m in the Triassic Smith Bank Formation. Due to turning of the permanent guide base the 30" casing had to be re-landed. No other major problems occurred during drilling. The well was drilled with gel/sea water down to 170 m, and with seawater/lignosulphonate gel from 470 m to TD.

The ?Jurassic/Triassic (Skagerrak Formation) was encountered at 2594, underlying an interpreted one-meter layer of Draupne shale. A 306 m gross / 120.5 m net (22% average porosity) sequence of sands was penetrated. No significant hydrocarbon shows were encountered while drilling the well. Electric log analysis also confirmed that the Jurassic/Triassic Sandstone (primary objective) was water bearing. RFT pressure measurements and samples suggested the possible presence of minor amount of gas in the upper part (2594 m to 2642.6 m) where the pressure gradient was lower than the water gradient (below 2662.5 m). However, the pressure readings were scattered in this interval and very much subject to interpretation.

One core was cut from 2590 to 2603 m (2596 - 2612.5 m logger's depth) in the top of the target sands in the Skagerrak Formation. Three successful RFT fluid samples were taken. The first sample, at 2691 m, recovered "2800 cc. of light brown fluid, mainly mud filtrate and mud, no gas, no fluorescence". The second, at 2806.5 m, recovered "8600 cc. of clear medium brown fluid, mainly mud filtrate with a few cc's of gas. The fluid had no odour or taste but it had a very pale bluish white fluorescence". The third, at 2603 m, recovered "8700 cc. of none clear (turbid) fluid + few cc's of gas. The fluid had no odour or taste, but a pale bluish white fluorescence".

The well was permanently abandoned on 3 August 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]
170.00	2897.00

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	2590.0	2603.1	[m]

Total core sample length [m]	13.1

Cores available for sampling?	YES

Core photos


2590-2596m


2596-2602m


2602-2603m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
470.0	[m]	DC	
500.0	[m]	DC	
530.0	[m]	DC	
560.0	[m]	DC	
590.0	[m]	DC	
620.0	[m]	DC	
650.0	[m]	DC	
680.0	[m]	DC	
710.0	[m]	DC	
740.0	[m]	DC	
770.0	[m]	DC	
800.0	[m]	DC	
830.0	[m]	DC	
860.0	[m]	DC	
890.0	[m]	DC	
920.0	[m]	DC	
940.0	[m]	DC	
950.0	[m]	DC	
970.0	[m]	DC	
980.0	[m]	DC	
1010.0	[m]	DC	
1040.0	[m]	DC	
1070.0	[m]	DC	
1100.0	[m]	DC	

1100.0	[m]	DC	
1130.0	[m]	DC	
1140.0	[m]	DC	
1160.0	[m]	DC	
1190.0	[m]	DC	
1220.0	[m]	DC	
1250.0	[m]	DC	
1280.0	[m]	DC	
1310.0	[m]	DC	
1340.0	[m]	DC	
1370.0	[m]	DC	
1400.0	[m]	DC	
1430.0	[m]	DC	
1460.0	[m]	DC	
1490.0	[m]	DC	
1520.0	[m]	DC	
1550.0	[m]	DC	
1580.0	[m]	DC	
1610.0	[m]	DC	
1640.0	[m]	DC	
1670.0	[m]	DC	
1690.5	[m]	SWC	
1700.0	[m]	DC	
1712.5	[m]	SWC	
1730.0	[m]	DC	
1760.0	[m]	DC	
1790.0	[m]	DC	
1800.0	[m]	SWC	
1820.0	[m]	DC	
1840.0	[m]	DC	
1850.0	[m]	DC	
1870.0	[m]	DC	
1880.0	[m]	DC	
1910.0	[m]	DC	
1917.0	[m]	SWC	
1940.0	[m]	DC	
1970.0	[m]	DC	
2006.0	[m]	DC	
2036.0	[m]	SWC	
2048.0	[m]	SWC	

2051.5	[m]	SWC	
2066.0	[m]	DC	
2069.0	[m]	DC	
2078.0	[m]	DC	GEOLAB
2078.0	[m]	DC	
2087.0	[m]	DC	GEOLAB
2093.0	[m]	SWC	
2093.0	[m]	DC	GEOLAB
2096.0	[m]	DC	
2102.0	[m]	DC	GEOLAB
2111.0	[m]	DC	GEOLAB
2120.0	[m]	DC	GEOLAB
2126.0	[m]	DC	
2129.0	[m]	DC	GEOLAB
2138.0	[m]	DC	GEOLAB
2140.5	[m]	SWC	
2147.0	[m]	DC	GEOLAB
2152.5	[m]	SWC	
2156.0	[m]	DC	
2156.0	[m]	DC	GEOLAB
2160.5	[m]	SWC	
2165.0	[m]	DC	GEOLAB
2174.0	[m]	DC	GEOLAB
2177.0	[m]	DC	
2183.0	[m]	DC	GEOLAB
2184.5	[m]	SWC	
2186.0	[m]	DC	
2192.0	[m]	DC	GEOLAB
2201.0	[m]	DC	GEOLAB
2210.0	[m]	DC	GEOLAB
2216.0	[m]	DC	
2219.0	[m]	DC	GEOLAB
2228.0	[m]	DC	GEOLAB
2228.0	[m]	DC	
2237.0	[m]	DC	GEOLAB
2237.0	[m]	DC	
2246.0	[m]	DC	
2246.0	[m]	DC	GEOLAB
2252.5	[m]	SWC	
2255.0	[m]	DC	GEOLAB

2264.0	[m]	DC	GEOLAB
2273.0	[m]	DC	GEOLAB
2276.0	[m]	DC	
2282.0	[m]	DC	GEOLAB
2286.5	[m]	SWC	
2288.0	[m]	DC	
2291.0	[m]	DC	GEOLAB
2300.0	[m]	DC	GEOLAB
2302.0	[m]	SWC	
2306.0	[m]	DC	
2309.0	[m]	DC	GEOLAB
2318.0	[m]	DC	GEOLAB
2323.5	[m]	SWC	
2327.0	[m]	DC	GEOLAB
2336.0	[m]	DC	GEOLAB
2336.0	[m]	DC	
2348.0	[m]	DC	
2375.0	[m]	SWC	
2381.0	[m]	DC	
2411.0	[m]	DC	
2441.0	[m]	DC	
2471.0	[m]	DC	
2482.0	[m]	SWC	
2501.0	[m]	DC	
2528.0	[m]	DC	
2540.0	[m]	DC	
2551.5	[m]	SWC	
2552.0	[m]	DC	
2582.0	[m]	SWC	
2591.0	[m]	SWC	
2593.0	[m]	SWC	
2593.5	[m]	SWC	
2595.0	[m]	SWC	
2600.0	[m]	DC	
2612.0	[m]	DC	
2620.0	[m]	SWC	
2621.0	[m]	DC	
2623.0	[m]	SWC	
2637.0	[m]	SWC	
2654.0	[m]	SWC	

2660.0	[m]	SWC	
2687.5	[m]	SWC	
2703.5	[m]	SWC	
2708.0	[m]	SWC	
2711.0	[m]	DC	
2725.0	[m]	SWC	
2754.0	[m]	SWC	
2762.5	[m]	SWC	
2771.0	[m]	DC	
2787.0	[m]	SWC	
2825.0	[m]	SWC	
2831.0	[m]	DC	
2838.0	[m]	SWC	
2874.0	[m]	SWC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
107	NORDLAND GP
868	UTSIRA FM
1015	HORDALAND GP
1105	SKADE FM
1170	NO FORMAL NAME
2075	ROGALAND GP
2075	BALDER FM
2141	SELE FM
2216	LISTA FM
2293	VÅLE FM
2310	SHETLAND GP
2310	EKOFISK FM
2328	TOR FM
2467	HOD FM
2536	BLODØKS FM
2568	CROMER KNOLL GP
2568	RØDBY FM
2575	SOLA FM
2583	ÅSGARD FM
2593	VIKING GP
2593	DRAUPNE FM

2594	NO GROUP DEFINED
2594	SKAGERRAK FM
2775	SMITH BANK FM

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

Document name	Document format	Document size [MB]
134_01_WDSS_General_Information	pdf	0.19
134_02_WDSS_completion_log	pdf	0.27

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

Document name	Document format	Document size [MB]
134_01_16_7_5_CompletionReport_and_Completionlog	pdf	16.76
134_02_16_7_5_Final_Well_Report	pdf	25.17
134_03_16_7_5_End_of_Well_report_Gearhart_Geodata_Services	pdf	35.39
134_04_16_7_5_Hydrocarbon_Source_Analysis	pdf	4.41
134_05_16_7_5_Paleontological_Study	pdf	11.92
134_06_16_7_5_Routine_Core_Analysis	pdf	0.47

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL GR	334	1264
CST	1366	2337
ISF BHC GR CAL	459	1280
ISF SLS GR CAL	106	470
ISF SLS GR CAL	2335	2903
ISF SLS GR SP CAL	1264	2350
LDT CNL GR CAL	2335	2903
LDT CNT GR CAL	1264	2350
RFT	2375	2897
RFT	2583	2888
RFT	2603	2636

SHDT	1600	2350
SHDT	2335	2903
VSP	300	2900

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
SURF.COND.	20	458.7	26	474.0	1.91	LOT
INTERM.	13 3/8	1264.0	17 1/2	1313.0	1.78	LOT
INTERM.	9 5/8	2335.0	12 1/4	2368.0	2.00	LOT
OPEN HOLE		2900.0	8 1/2	2900.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
420	1.06	5.0	4.8	WATER BASED	02.07.1984
474	1.08	6.0	5.3	WATER BASED	02.07.1984
474	1.15	7.0	7.0	WATER BASED	03.07.1984
474	1.15	8.0	7.2	WATER BASED	05.07.1984
474	1.15	7.0	7.2	WATER BASED	05.07.1984
474	1.15	8.0	8.6	WATER BASED	10.07.1984
474	1.15	7.0	7.0	WATER BASED	03.07.1984
474	1.15	7.0	7.2	WATER BASED	05.07.1984
474	1.15	8.0	8.6	WATER BASED	10.07.1984
474	1.08	6.0	5.3	WATER BASED	02.07.1984
474	1.15	8.0	7.2	WATER BASED	05.07.1984
568	1.07	6.0	8.6	WATER BASED	10.07.1984
900	1.15	7.0	7.5	WATER BASED	10.07.1984
1200	1.14	8.0	10.5	WATER BASED	10.07.1984
1280	1.15	8.0	9.5	WATER BASED	12.07.1984
1280	1.15	13.0	14.4	WATER BASED	10.07.1984
1280	1.15	13.0	14.4	WATER BASED	10.07.1984
1280	1.15	8.0	9.5	WATER BASED	12.07.1984
1302	1.15	9.0	10.1	WATER BASED	12.07.1984
1579	1.10	8.0	8.1	WATER BASED	17.07.1984
1986	1.14	11.0	7.7	WATER BASED	17.07.1984

2310	1.16	12.0	10.5	WATER BASED	17.07.1984
2350	1.27	10.0	11.0	WATER BASED	20.07.1984
2350	1.21	12.0	9.5	WATER BASED	17.07.1984
2350	1.21	12.0	9.5	WATER BASED	19.07.1984
2350	1.27	10.0	11.0	WATER BASED	20.07.1984
2350	1.27	14.0	13.4	WATER BASED	20.07.1984
2350	1.24	16.0	9.5	WATER BASED	23.07.1984
2350	1.21	12.0	9.5	WATER BASED	17.07.1984
2350	1.21	12.0	9.5	WATER BASED	19.07.1984
2350	1.27	14.0	13.4	WATER BASED	20.07.1984
2350	1.24	16.0	9.5	WATER BASED	23.07.1984
2510	1.25	17.0	8.1	WATER BASED	25.07.1984
2580	1.30	18.0	8.6	WATER BASED	25.07.1984
2590	1.33	22.0	9.6	WATER BASED	25.07.1984
2644	1.33	21.0	9.6	WATER BASED	31.07.1984
2886	1.33	19.0	8.1	WATER BASED	31.07.1984
2900	1.33	18.0	8.1	WATER BASED	31.07.1984

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]
134_Formation_pressure_(Formasjonstrykk)	pdf	0.22