General information

Wellbore name	16/2-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	16/2-1
Seismic location	C 309 C SP: 19246
Production licence	001
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	3-L
Drilling facility	OCEAN TRAVELER
Drilling days	30
Entered date	11.07.1967
Completed date	09.08.1967
Release date	09.08.1969
Publication date	19.10.2006
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	26.0
Water depth [m]	113.0
Total depth (MD) [m RKB]	1906.0
Final vertical depth (TVD) [m RKB]	1906.0
Maximum inclination [°]	1.5
Bottom hole temperature [°C]	73
Oldest penetrated age	PRE-DEVONIAN
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	58° 53' 35.19'' N
EW degrees	2° 21' 25.77'' E
NS UTM [m]	6528477.90
EW UTM [m]	462951.38
UTM zone	31
NPDID wellbore	144

Wellbore history

General

Well 16/2-1 is located on the very western part of the Utsira High in the central part of the Vestland Arch. The Utsira High is a large, flat, fault bounded basement feature. The objective of this early well in the North Sea was: "To test the hydrocarbon potential of the sedimentary section; investigate the lithology and sequence in this portion of the North Sea basin; and to partially fulfil Esso's drilling obligation to the Norwegian Government incurred on behalf of the Licences."

Operations and results

Wildcat well 16/2-1 was spudded with the semi-submersible installation Ocean Traveler on 11 July 1967 and drilled to TD at 1906 m, 33 m into basement rock. There were no noteworthy drilling problems encountered while drilling. Initial drilling from the sea floor to 381 m was with seawater and gel without casing. Returns were to the sea floor. Below 381 m to total depth of 1906 m, a seawater slurry with gel, CMC, Spersene, XP-20, Caustic Soda, Barite, and 0-10% diesel oil was used.

Oil shows were seen on cores in tight Cretaceous carbonate rocks in the Tor Formation. The shows were strong and continuous from top Tor Formation down to 1776 m, and then became patchy. These rocks were too impermeable to justify further tests in this well. Weak shows were seen also in a thin Oligocene sand from 1256 m to 1263 m and in Eocene mudstones from 1631 m to 1637 m, Balder Formation. Dead oil/tar was observed in fractures in the basement rock.

Five cores were cut from 1739.5 m to 1821.8 m in the Tor Formation chalk and two more cores were cut from 1879.1 m to 1883.7 m in the basement. Four Formation Interval Tests (FIT) were performed at 1748.9 m, 1733.4 m, 1642.6 m, and at 1738.2 m. The tests, one in Early Tertiary shales and three in Late Cretaceous carbonates, did not show any hydrocarbons.

The well was permanently abandoned on 9 August 1967 as a well 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]
381.00	1905.00

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	5705.0	5737.0	[ft]
2	5737.0	5797.0	[ft]
3	5796.0	5856.0	[ft]
4	5857.0	5917.0	[ft]
5	5917.0	5977.0	[ft]
6	6165.0	6170.0	[ft]
7	6175.0	6180.0	[ft]

Total core sample length [m]	86.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1650.0	[ft]	DC	
2550.0	[ft]	DC	
3110.0	[ft]	DC	
3200.0	[ft]	DC	
3290.0	[ft]	DC	
3380.0	[ft]	DC	
3400.0	[ft]	DC	
3410.0	[ft]	DC	
3470.0	[ft]	DC	
3500.0	[ft]	DC	
3560.0	[ft]	DC	
3590.0	[ft]	DC	
3650.0	[ft]	DC	
3710.0	[ft]	DC	
3740.0	[ft]	DC	
3800.0	[ft]	DC	
3830.0	[ft]	DC	
3910.0	[ft]	DC	
3970.0	[ft]	DC	
4000.0	[ft]	DC	
4090.0	[ft]	DC	
4134.0	[ft]	SWC	
4140.0	[ft]	SWC	
4180.0	[ft]	DC	

4210.0	[ft]	DC	
4270.0	[ft]	DC	
4300.0	[ft]	DC	
4360.0	[ft]	DC	
4390.0	[ft]	DC	
4420.0	[ft]	DC	
4426.0	[ft]	SWC	
4460.0	[ft]	DC	
4480.0	[ft]	DC	
4500.0	[ft]	DC	
4553.0	[ft]	DC	
4580.0	[ft]	DC	
4600.0	[ft]	DC	
4660.0	[ft]	DC	
4680.0	[ft]	DC	
4760.0	[ft]	DC	
4780.0	[ft]	DC	
4860.0	[ft]	DC	
4880.0	[ft]	DC	
4943.0	[ft]	SWC	
4960.0	[ft]	DC	
4960.0	[ft]	DC	
4980.0	[ft]	DC	
5022.0	[ft]	SWC	
5022.0	[ft]	DC	
5036.0	[ft]	SWC	
5038.0	[ft]	DC	
5060.0	[ft]	DC	
5080.0	[ft]	DC	
5144.0	[ft]	DC	
5144.0	[ft]	SWC	
5160.0	[ft]	DC	
5180.0	[ft]	DC	
5226.0	[ft]	SWC	
5226.0	[ft]	DC	
5260.0	[ft]	DC	
5280.0	[ft]	DC	
5350.0	[ft]	SWC	
5360.0	[ft]	SWC	
5360.0	[ft]	DC	

5371.0	[ft]	SWC	
5375.0	[ft]	DC	
5400.0	[ft]	DC	
5460.0	[ft]	DC	
5480.0	[ft]	DC	
5540.0	[ft]	DC	
5560.0	[ft]	DC	
5580.0	[ft]	DC	
5580.0	[ft]	DC	
5600.0	[ft]	DC	
5612.0	[ft]	SWC	
5620.0	[ft]	DC	
5620.0	[ft]	DC	
5660.0	[ft]	DC	
5680.0	[ft]	DC	
5707.0	[ft]	DC	ESSO
5715.0	[ft]	DC	ESSO
5726.5	[ft]	SWC	ESSO
5739.0	[ft]	DC	ESSO
5752.5	[ft]	SWC	ESSO
5763.5	[ft]	SWC	ESSO
5773.0	[ft]	DC	ESSO
5780.0	[ft]	DC	
5789.0	[ft]	DC	ESSO
5801.5	[ft]	SWC	ESSO
5815.0	[ft]	DC	ESSO
5828.5	[ft]	SWC	ESSO
5839.5	[ft]	SWC	ESSO
5852.5	[ft]	SWC	ESSO
5856.0	[ft]	DC	
5863.0	[ft]	DC	ESSO
5871.0	[ft]	SWC	
5875.0	[ft]	DC	ESSO
5887.0	[ft]	DC	ESSO
5902.0	[ft]	DC	ESSO
5916.0	[ft]	DC	ESSO
5929.0	[ft]	DC	ESSO
5940.0	[ft]	DC	ESSO
5951.0	[ft]	DC	ESSO
5965.0	[ft]	DC	ESSO

5977.0	[ft]	DC	ESSO
5980.0	[ft]	DC	
6030.0	[ft]	DC	
6040.0	[ft]	DC	
6060.0	[ft]	DC	
6080.0	[ft]	DC	
6090.0	[ft]	DC	
6110.0	[ft]	DC	
6110.0	[ft]	DC	
6120.0	[ft]	DC	
6130.0	[ft]	DC	
6130.0	[ft]	DC	
6140.0	[ft]	DC	
6180.0	[ft]	DC	
6230.0	[ft]	DC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
139	NORDLAND GP
797	UTSIRA FM
845	NO FORMAL NAME
939	HORDALAND GP
939	SKADE FM
950	SKADE FM
1154	NO FORMAL NAME
1625	ROGALAND GP
1625	BALDER FM
1645	SELE FM
1669	LISTA FM
1732	SHETLAND GP
1732	TOR FM
1838	HOD FM
1850	CROMER KNOLL GP
1850	RØDBY FM
1858	SOLA FM
1873	BASEMENT

Composite logs

Document name	Document format	Document size [MB]
144	pdf	0.27

Geochemical information

Document name	Document format	Document size [MB]
144_1	pdf	1.26

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

Document name	Document format	Document size [MB]
144_01_WDSS_General_Information	pdf	0.18

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

Document name	Document format	Document size [MB]
144_16_2_1_COMPLETION_LOG	pdf	1.25
144_16_2_1_COMPLETION_REPORT	pdf	3.70

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
144_01_NPD_Paper_No.3_Lithology__Well_16_2_1	pdf	11.51
144_02_NPD_Paper_No.3_Interpreted_Lithology_log__Well_16_2_1	pdf	51.08

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC SONIC GR	140	1907

CDM	365	1910
FDC	365	1910
IES	365	1909
LL7	365	1908
MLL	365	1910

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	164.0	36	164.0	0.00	LOT
SURF.COND.	20	186.0	26	186.0	0.00	LOT
INTERM.	13 3/8	363.0	17 1/2	363.0	0.00	LOT
INTERM.	9 5/8	1110.0	12 1/4	1110.0	0.00	LOT
OPEN HOLE		1905.0	8 1/2	1905.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
164	0.00			sea water	
381	0.00			sea water/g	

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]
144_Formation_pressure_(Formasjonstrykk)	pdf	0.19