General information

Wellbore name	2/7-4
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	EDDA
Discovery	2/7-4 Edda
Well name	2/7-4
Seismic location	Line PS 5628 & SP 82
Production licence	018
Drilling operator	Phillips Petroleum Company Norway
Drill permit	71-L
Drilling facility	OCEAN VIKING
Drilling days	73
Entered date	23.06.1972
Completed date	03.09.1972
Release date	03.09.1974
Publication date	18.01.2007
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	PALEOCENE
1st level with HC, formation	EKOFISK FM
2nd level with HC, age	LATE CRETACEOUS
2nd level with HC, formation	TOR FM
Kelly bushing elevation [m]	26.0
Water depth [m]	72.0
Total depth (MD) [m RKB]	3356.0
Maximum inclination [°]	1.6
Bottom hole temperature [°C]	110
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	TOR FM
Geodetic datum	ED50
NS degrees	56° 27' 52.03'' N
EW degrees	3° 6' 12'' E
NS UTM [m]	6257917.77

EW UTM [m]	506367.48
UTM zone	31
NPDID wellbore	263

Wellbore history

General

Well 2/7-4 is located in the southern part of the Norwegian North Sea and ca 10 km south east of the Ekofisk Field. The primary objective was the Danian Chalk, expected to be 90 m thick and possibly completely hydrocarbon bearing.

Secondary objective was Late Cretaceous carbonates, especially in the upper part, which could be oil bearing in communication with the Danian. Planned TD was at 3353 m in the Late Cretaceous. In the event that hydrocarbon shows were still evident at the proposed TD the well would be deepened until potential productive zones were completely penetrated.

Operations and results

Wildcat well 2/7-4 was spudded with the semi-submersible installation Ocean Viking on 23 June 1972 and drilled to TD at 3356 m in the Late Cretaceous Tor Formation. The well was drilled without significant problems.

The "Danian Chalk" (Ekofisk Formation) was encountered at 3096 m, and the Late Cretaceous Tor Formation at 3186 m. Both formations were oil bearing. DST's and logs indicate oil down to 3225 m, while the deepest test at 3291 - 3266 m produced water, some gas, and trace oil. Oil shows were recorded on cores in the interval 3133 m to 3246 m.

Twelve cores were cut from 3116 m to 3264 in the Ekofisk and Tor Formations. No wire line fluid samples taken.

The well was permanently abandoned on 3 September 1972 on as an oil discovery.

Testing

Six DST's were conducted in the Ekofisk and Tor Formations. Maximum production data after acid treatment follows: DST 1 tested the interval 3292 - 3266 m in the Tor Formation and produced 67 m3/day water, 2800 Sm3/day gas, and trace oil. DST 2 tested the interval 3197 - 3234 m in the Tor Formation and produced 1054 Sm3 oil and 273600 Sm3 gas /day on a 44/64" choke. The GOR was 260 Sm3/Sm3 and the oil gravity was 37.7 deg API. DST 3 tested the interval 3149 - 3170 m in the Ekofisk Formation and produced 200 Sm3 oil and 71200 Sm3 gas /day on a 36/64" choke. The GOR was 357 Sm3/Sm3 and the oil gravity was 44.5 deg API. DST 4 from the interval 3127 m to 3145 m in the Ekofisk Formation produced only water cushion: no formation fluid came to surface. DST 5 and DST 6 tested the interval 3106 m to 3114 m in the Upper Ekofisk Formation and produced small quantities of oil and gas to the surface from a nearly tight formation.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
487.68	3352.80

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	10224.0	10258.0	[ft]
2	10258.0	10302.0	[ft]
3	10302.0	10344.0	[ft]
4	10359.0	10379.0	[ft]
5	10380.0	10396.0	[ft]
6	10405.0	10448.0	[ft]
7	10448.0	10474.0	[ft]
8	10477.0	10517.0	[ft]
9	10517.0	10535.0	[ft]
10	10563.0	10580.0	[ft]
11	10605.0	10651.0	[ft]
12	10651.0	10679.0	[ft]

Total core sample length [m]	114.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3174.5	[m]	C	OD
3185.0	[m]	C	OD
3185.6	[m]	C	OD
3188.2	[m]	C	OD
3190.3	[m]	C	OD
3210.2	[m]	C	OD

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST		0.00	0.00			YES
DST		0.00	0.00	OIL		YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
99	NORDLAND GP
1749	HORDALAND GP
2945	ROGALAND GP
2945	BALDER FM
2961	SELE FM
3008	LISTA FM
3077	VÅLE FM
3096	SHETLAND GP
3096	EKOFISK FM
3186	TOR FM

Composite logs

Document name	Document format	Document size [MB]
263	pdf	0.28

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

Document name	Document format	Document size [MB]
263_01_WDSS_General_Information	pdf	0.25

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

Document name	Document format	Document size [MB]
263_01_2_7_4_Completion_Report_and_Completion_log	pdf	18.33

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3266	3292	0.0
2.0	3197	3220	0.0
3.0	3149	3170	0.0
4.0	3127	3145	0.0
5.0	3106	3114	0.0
6.0	3106	3114	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				
3.0				
4.0				
5.0				
6.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					
2.0	1054	27183			
3.0	200	7079			
4.0					
5.0	7	736			
6.0	8	1444			

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC	488	3351
CBL	1033	2429

CBL	2347	3242
CBL	2371	3326
CDM	2429	3355
CDM AP PP	1208	2438
DL	3048	3352
FDC	3061	3355
GR	107	3351
GR NL	3018	3328
IES	488	3356
PML C	3049	3356
VELOCITY	488	3352

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	177.0	36	187.0	0.00	LOT
INTERM.	20	610.0	26	622.0	1.86	LOT
INTERM.	13 3/8	2093.0	17 1/2	2110.0	1.88	LOT
INTERM.	9 5/8	3383.0	12 1/4	3390.0	0.00	LOT
LINER	7	3710.0	8 1/2	3723.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
132	1.07			seawater	
487	1.31			waterbased	
1219	1.49	45.0		waterbased	
2438	1.71	47.0		waterbased	
3353	1.71	48.0		waterbased	