



General information





Wellbore name	2/5-4
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	2/5-4 (Siv)
Well name	2/5-4
Seismic location	
Production licence	006
Drilling operator	Amoco Norway Oil Company
Drill permit	76-L
Drilling facility	ZAPATA EXPLORER
Drilling days	59
Entered date	03.09.1972
Completed date	31.10.1972
Release date	31.10.1974
Publication date	02.04.2007
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]	35.0
Water depth [m]	68.0
Total depth (MD) [m RKB]	3490.0
Bottom hole temperature [°C]	155
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	HOD FM
Geodetic datum	ED50
NS degrees	56° 33' 54.4" N
EW degrees	3° 36' 56.4" E
NS UTM [m]	6269287.02
EW UTM [m]	537837.19
UTM zone	31
NPDID wellbore	259

**Wellbore history****General**

Wildcat well 2/5-4 was drilled ca 21 km southeast of the Tor Field in the southern Norwegian North Sea. The primary targets were Paleocene prognosed at 2914 m (9560 ft), and Danian Carbonate prognosed at 3011 (9880 ft).

Operations and results

Well 2/5-4 was spudded with the jack-up installation Zapata Explorer on 3 November 1972 and drilled to TD at 3490 m in the Late Cretaceous Hod Formation. No significant technical problems were reported from the operations. The well was drilled with seawater and hi-vis mud down to 395 m, with an XC polymer, Shale Trol mud from 395 m to 2743 m, and with Chromium-lignosulphonate (Unical) / seawater mud from 2743 m to TD. From 1 to 6 % diesel addition was used all through.

Top Paleocene (Balder Formation) was encountered at 2928 m, top Danian chalk (Ekofisk Formation) at 3039 m, top Maastrichtian chalk (Tor Formation) at 3131 m, and top Campanian chalk (Hod Formation) at 3420 m.

First show (appearance of C2+ on chromatograph) was in shale at 2883 m. Thin sandstone stringers were penetrated in the Paleocene section, but no shows were recorded in these. Oil shows were recorded in the top of the Danian chalk at 3042 - 3063 m, in the top of the Tor Formation at 3133 - 3167 m, and in the Hod Formation at 3435 - 3459 m. Oil was confirmed by testing in the top of the Tor Formation.

Five short cores were taken with the Schlumberger core slicer. Core no 1 was taken at 3441.5 m in the Hod Formation; cores no 2, 4, and 5 were cut at 3137.9 - 3159.6 m in the Tor Formation, and core no 3 was taken at 3051.7 - 3052.6 m in the Ekofisk Formation. The cores are no longer available from the NPD. No fluid sample was taken on wire line.

The well was permanently abandoned on 31 October as an oil discovery.

Testing

Two drill stem tests were performed. The following results are after acidizing:

DST 1 tested the interval 3137 - 3170 in the top of the Tor Formation and flowed initially 556 Sm³ oil, 30500 Sm³ gas and 484 Sm³ water, declining to 396 Sm³ oil, 20900 Sm³ gas, and 363 Sm³ water /day through a 32/64" choke. The GOR was fairly constant at 53 Sm³/Sm³, while the API decreased slightly from ca 39 to ca 36 deg API through the ca 20 hours flow.

DST 2 tested the interval 3041 - 3081 m in the Ekofisk Formation. It gave no flow.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
399.29	3489.96

Cuttings available for sampling?	YES
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**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
9680.0	[ft]	DC	HRS
9740.0	[ft]	DC	HRS
9800.0	[ft]	DC	HRS
9860.0	[ft]	DC	HRS
9920.0	[ft]	DC	HRS
9980.0	[ft]	DC	HRS
10040.0	[ft]	DC	HRS
10110.0	[ft]	DC	HRS
10160.0	[ft]	DC	HRS
10210.0	[ft]	DC	HRS
10270.0	[ft]	DC	HRS
10290.0	[ft]	DC	HRS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
103	NORDLAND GP
1631	HORDALAND GP
2928	ROGALAND GP
2928	BALDER FM
2938	SELE FM
2946	LISTA FM
2988	VÅLE FM
3039	SHETLAND GP
3039	EKOFISK FM
3131	TOR FM
3420	HOD FM

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

Document name	Document format	Document size [MB]
259_01_WDSS_General_Information	pdf	0.24



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

Document name	Document format	Document size [MB]
259_01_2_5_4_Completion_log	pdf	3.19
259_01_2_5_4_Completion_Report	pdf	4.69

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3137	3170	12.0
2.0	3070	3081	0.0
3.0	3051	3065	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				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	556	30500	0.800		53
2.0					
3.0					

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC-C	1834	3491
CBL	914	3447
CCL	3033	3092
CCL	3133	3176
CDM AP	1834	3494
CDM PP	1834	3494
CNL	1834	3494
DL	3018	3491
FDC	1834	3041





GR-N	367	1834
IES	1834	3494
PML	3018	3494
VELOCITY	1834	3494

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	45.0	36	46.0	0.00	LOT
INTERM.	20	365.0	26	366.0	0.00	LOT
INTERM.	13 3/8	1829.0	17 1/2	1830.0	0.00	LOT
INTERM.	9 5/8	3352.0	12 1/4	3489.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
395	1.13			seawa/hi-vi	
2743	1.61			shale trol	
3352	1.67			lignosul	