

**General information**

Wellbore name	2/5-3
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	2/5-3 (Sørøst Tor)
Well name	2/5-3
Seismic location	
Production licence	006
Drilling operator	Amoco Norway Oil Company
Drill permit	67-L
Drilling facility	ZAPATA EXPLORER
Drilling days	75
Entered date	02.04.1972
Completed date	15.06.1972
Release date	15.06.1974
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
3rd level with HC, age	LATE CRETACEOUS
3rd level with HC, formation	HOD FM
Kelly bushing elevation [m]	34.0
Water depth [m]	67.0
Total depth (MD) [m RKB]	3731.0
Bottom hole temperature [°C]	122
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	56° 35' 50.8" N
EW degrees	3° 26' 58.8" E
NS UTM [m]	6272806.93



EW UTM [m]	527611.80
UTM zone	31
NPDID wellbore	258

Wellbore history

General

Well 2/5-3 was drilled ca 8 km southeast of the Tor Field. The primary target was top Danian chalk. Secondary targets were top Paleocene and base chalk at 3551 m (11650 ft). Planned total depth was 3597 m (11800 ft).

Operations and results

Well was spudded with the jack-up installation Zapata Explorer on 2 April 1972 and drilled to TD at 3731 m in the Late Permian Zechstein Group.

Top Paleocene was encountered at 2929 m, top Ekofisk Formation at 3037 m, top Tor Formation at 3121 m, and top Hod Formation at 3481 m. First show was reported in a limestone stringer at 2259 m. Occasional oils shows, in limestone stringers, were reported in the interval 2604 to 2877 m. The top 3 m of the Paleocene (Balder Formation) was silty and had good oil shows. Oil was found by drill stem testing in the Ekofisk and Tor Formations. Shows continued down to 3261 m in the Tor Formation.

Fifteen conventional cores were cut in the Ekofisk and Tor Formations, recovering a total length of 123.3 m core.

The well was suspended on 15 June 1972 as an oil discovery.

Testing

Three zones were drill stem tested. The following results are after acidization:

DST 1 tested the interval 3386 - 3395 m in the lower part of the Tor Formation and flowed 21 m³ water /day.

DST 2 tested the interval 3120 - 3191 m in the upper part of the Tor Formation. Average flow parameters at maximum choke, 40/64", was 682 Sm³ oil and 340400 Sm³ gas /day. The oil gravity was 36 deg API and the GOR was 463 Sm³/Sm³. The GOR on smaller choke sizes was significantly lower, down to 233 Sm³/Sm³ on a 16/64 "choke.

DST 3 tested the interval 3053 - 3065 m in the Ekofisk Formation and flowed on average 682 Sm³ oil and 141330 Sm³ gas /day on a 32/64" choke. The water production during this flow decreased from 57 to 17.5 m³ /day and the GOR decreased from 213 to 179 Sm³/Sm³. The oil gravity was 38.2 deg API.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
142.95	3730.75

Cuttings available for sampling?	YES
----------------------------------	-----

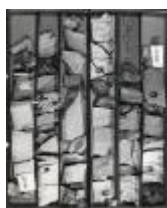


Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	9998.0	10011.0	[ft]
2	10012.0	10023.0	[ft]
3	10025.0	10064.6	[ft]
4	10068.0	10125.0	[ft]
5	10125.0	10145.0	[ft]
6	10145.0	10208.6	[ft]
7	10208.6	10243.0	[ft]
8	10243.0	10265.0	[ft]
9	10265.0	10301.0	[ft]
10	10301.0	10339.0	[ft]
11	10342.0	10402.0	[ft]
12	10402.0	10430.0	[ft]
13	10435.0	10461.0	[ft]
14	10472.0	10494.0	[ft]
15	10505.0	10549.0	[ft]

Total core sample length [m]	156.9
Cores available for sampling?	YES

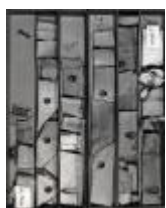
Core photos



10015-10032ft



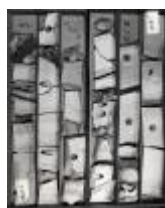
10015-10032ft



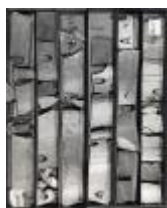
10032-10049ft



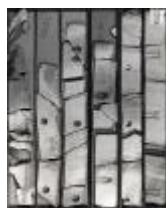
10049-10064ft



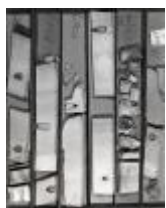
10064-10081ft



10081-10097ft



10097-10112ft



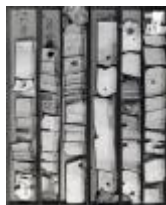
10112-10127ft



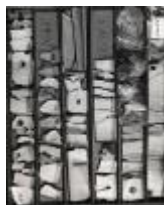
10127-10142ft



10142-10145ft



10145-10161ft



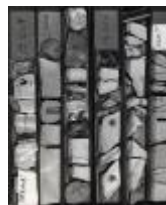
10161-10208ft



10208-10226ft



10226-10246ft



10246-10260ft



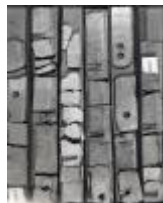
10260-10279ft



10279-10297ft



10297-10314ft



10314-10330ft



10330-10350ft



10350-10364ft



10364-10379ft



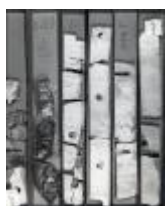
10379-10395ft



10395-10412ft



10412-10427ft



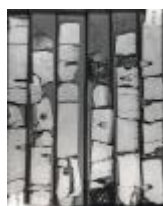
10427-10443ft



10443-10458ft



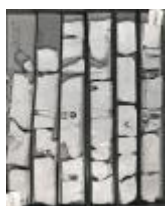
10458-10483ft



10483-10510ft



10510-10527ft



10527-10542ft



10542-10549ft

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
101	NORDLAND GP
1660	HORDALAND GP



2929	ROGALAND GP
2929	BALDER FM
2943	SELE FM
2958	LISTA FM
3026	VÅLE FM
3037	SHETLAND GP
3037	EKOFISK FM
3121	TOR FM
3481	HOD FM
3616	CROMER KNOLL GP
3716	ZECHSTEIN GP

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

Document name	Document format	Document size [MB]
258_01_WDSS_General_Information	pdf	0.41

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3386	3395	0.0
2.0	3121	3191	15.9
3.0	3053	3065	12.5

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					
2.0	682	340400	0.844		464
3.0	682	141330	0.830		179



**Logs**

Log type	Log top depth [m]	Log bottom depth [m]
ADM AP	1593	3731
BHC	366	1597
BHC-C	1588	3733
CBL	1402	3731
CDM FP	1593	3731
CDM PP	1593	3731
DL	3032	3697
FDC	3032	3731
GR-N	2957	2526
IES	375	3737
ML MLL	3032	3505
SNP	3032	3731
TS	67	3005
VELOCITY	67	3732

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	143.0	36	143.0	0.00	LOT
INTERM.	20	375.0	26	392.0	0.00	LOT
INTERM.	13 3/8	1588.0	17 1/2	1588.0	0.00	LOT
INTERM.	9 5/8	3031.0	12 1/4	3044.0	0.00	LOT
LINER	7	3717.0	8 1/2	3731.0	0.00	LOT