Generell informasjon

Brønnbane navn	2/5-3
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	2/5-3 (Sørøst Tor)
Brønn navn	2/5-3
Seismisk lokalisering	
Utvinningstillatelse	006
Boreoperatør	Amoco Norway Oil Company
Boretillatelse	67-L
Boreinnretning	ZAPATA EXPLORER
Boredager	75
Borestart	02.04.1972
Boreslutt	15.06.1972
Frigitt dato	15.06.1974
Publiseringsdato	02.04.2007
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	PALEOCENE
1. nivå med hydrokarboner, formasjon.	EKOFISK FM
2. nivå med hydrokarboner, alder	LATE CRETACEOUS
2. nivå med hydrokarboner, formasjon	TOR FM
3. nivå med hydrokarboner, alder	LATE CRETACEOUS
3. nivå med hydrokarboner, formasjon	HOD FM
Avstand, boredekk - midlere havflate [m]	34.0
Vanndybde ved midlere havflate [m]	67.0
Totalt målt dybde (MD) [m RKB]	3731.0
Temperatur ved bunn av brønnbanen [°C]	122
Eldste penetrerte alder	LATE PERMIAN
Eldste penetrerte formasjon	ZECHSTEIN GP

Geodetisk datum	ED50
NS grader	56° 35' 50.8'' N
ØV grader	3° 26' 58.8'' E
NS UTM [m]	6272806.93
ØV UTM [m]	527611.80
UTM sone	31
NPDID for brønnbanen	258

Brønnhistorie

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.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
142.95	3730.75

Borekaks tilgjengelig for prøvetaking?	YES

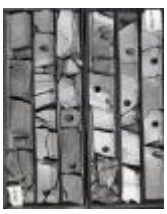
Borekjerner i Sokkeldirektoratet

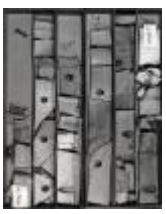
Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	9998.0	10011.0	[ft]
2	10012.0	10023.0	[ft]
3	10025.0	10064.6	[ft]
4	10068.0	10125.0	[ft]
5	10125.0	10145.0	[ft]
6	10145.0	10208.6	[ft]
7	10208.6	10243.0	[ft]
8	10243.0	10265.0	[ft]
9	10265.0	10301.0	[ft]
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 kjerneprøve lengde [m]	156.9
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder

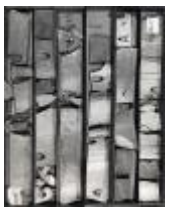

10015-10032ft

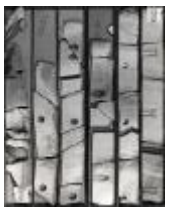

10015-10032ft

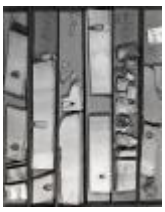

10032-10049ft


10049-10064ft


10064-10081ft


10081-10097ft

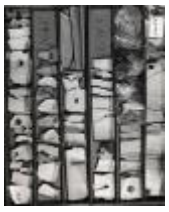

10097-10112ft


10112-10127ft


10127-10142ft


10142-10145ft


10145-10161ft


10161-10208ft


10208-10226ft


10226-10246ft


10246-10260ft


10260-10279ft


10279-10297ft


10297-10314ft


10314-10330ft

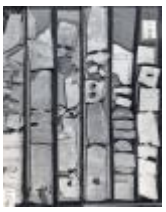

10330-10350ft


10350-10364ft


10364-10379ft


10379-10395ft

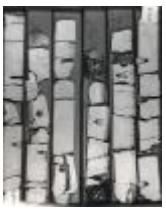

10395-10412ft


10412-10427ft


10427-10443ft


10443-10458ft


10458-10483ft


10483-10510ft


10510-10527ft


10527-10542ft


10542-10549ft

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
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

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
258_01_WDSS_General_Information	pdf	0.41

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil størrelse [mm]
1.0	3386	3395	0.0
2.0	3121	3191	15.9
3.0	3053	3065	12.5

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				
3.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0					
2.0	682	340400	0.844		464
3.0	682	141330	0.830		179

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [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

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
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