



Generell informasjon

Brønnbane navn	2/5-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	TOR
Funn	2/5-1 Tor
Brønn navn	2/5-1
Seismisk lokalisering	
Utvinningstillatelse	006
Boreoperatør	Amoco Norway Oil Company
Boretillatelse	41-L
Boreinnretning	ORION
Boredager	114
Borestart	01.08.1970
Boreslutt	22.11.1970
Frigitt dato	22.11.1972
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
Avstand, boredekk - midlere havflate [m]	27.0
Vanndybde ved midlere havflate [m]	68.0
Totalt målt dybde (MD) [m RKB]	3972.0
Maks inklinasjon [°]	22
Temperatur ved bunn av brønnbanen [°C]	125
Eldste penetrerte alder	LATE JURASSIC
Eldste penetrerte formasjon	FARSUND FM
Geodetisk datum	ED50



NS grader	56° 38' 19.95" N
ØV grader	3° 20' 7.94" E
NS UTM [m]	6277378.57
ØV UTM [m]	520581.27
UTM sone	31
NPDID for brønnbanen	178

Brønnhistorie

General

Wildcat well 2/5-1 is located ca 10 km northeast of the Ekofisk Field. It was drilled on an essentially northwest - southeast striking anticlinal seismic structure extending into the adjacent block 2/4.

The well is Reference Well for the Ekofisk Formation.

Operations and results

Well 2/5-1 was spudded with the jack-up installation Orion on 1 August 1970 and drilled to TD at 3972 m in Late Jurassic shales. At 2997 m cones of the bit was lost in the hole and five days were spent fishing for them. The well was planned vertical, and was essentially vertical with maximum deviation 1.5 deg down to 3238 m. From there deviation increased to 7.1 deg at 3639 m, 12.5 deg at 3821 m, 19.2 deg at 3932 m, and 21.9 deg at 3967 m. The well was drilled with seawater and bentonite down to 381 m and with a Drill aid/XP-20 mud with 3- 6 % diesel from 381 m to TD.

The Danian limestone (Ekofisk Formation) was encountered at 3041. Then a Late Cretaceous succession was penetrated with chalks of the Tor and Hod Formations at 3132 m and 3475 m, respectively, followed by the Blodøks Formation shales at 3551 m and the Hydra Formation chalk at 3594 m. Commercial quantities of hydrocarbons were encountered and tested in the Ekofisk and Tor Formations. The well also penetrated 133 m of Late Jurassic source rock quality shales. Organic geochemical analyses of these shales showed TOC in the range 2 - 4 % and thermal maturity corresponding to late oil window (%Ro around 0.8), in well position.

Twenty-three conventional cores were cut in the chalk. Ten were cut in the Ekofisk Formation (75.2 m recovered), and thirteen in the Tor Formation (171.6 m recovered). No wire line fluid samples were taken.

The well was permanently abandoned on 22 November 1970 as an oil discovery.

Testing

One open-hole DST and eight DSTs through liner perforation were performed. The open-hole DST (DST 1) tested the interval 3042 - 3101 m in the Ekofisk Formation. It flowed at maximum 209 Sm³ oil /day. The GOR was 190 and the oil gravity was 41.5 deg API.

The tests through perforations and after acid stimulation (DST 2 to DST 8) revealed flow rates from individual zones up to 731 Sm³ oil /day. This highest flow was obtained in DST 7 through a 24/64" choke from the interval 3154 - 3191 m in the Tor Formation. The gas/oil ratio and oil gravity in this test were 251 Sm³/Sm³ and 41.9 deg API, respectively.

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Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
141.43	3971.54

Borekaks tilgjengelig for prøvetaking?	NO
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Borekjerper i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	9995.0	10018.0	[ft]
2	10021.0	10034.5	[ft]
3	10036.0	10043.0	[ft]
4	10043.0	10069.0	[ft]
5	10069.0	10101.0	[ft]
6	10101.0	10141.0	[ft]
7	10141.0	10175.0	[ft]
8	10175.0	10204.0	[ft]
9	10204.0	10251.0	[ft]
10	10251.0	10253.0	[ft]
11	10291.0	10314.5	[ft]
12	10314.5	10337.0	[ft]
13	10337.0	10372.7	[ft]
14	10387.0	10415.0	[ft]
15	10425.0	10439.0	[ft]
16	10439.0	10450.0	[ft]
17	10450.0	10479.0	[ft]
18	10479.0	10505.0	[ft]
19	10505.0	10559.0	[ft]
20	10559.0	10616.0	[ft]
21	10616.0	10699.0	[ft]
22	10699.0	10774.6	[ft]
23	10789.0	10878.0	[ft]

Total kjerneprøve lengde [m]	244.4
Kjerner tilgjengelig for prøvetaking?	YES



Palynologiske preparater i Sakkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
3551.0	[m]	DC	OD
3560.0	[m]	DC	OD
3569.0	[m]	DC	OD
3578.0	[m]	DC	OD
3587.0	[m]	DC	OD
3597.0	[m]	DC	OD
3606.0	[m]	DC	OD
3615.0	[m]	DC	OD
3624.0	[m]	DC	OD
3633.0	[m]	DC	OD
3642.0	[m]	DC	OD
3652.0	[m]	DC	OD
3664.0	[m]	DC	OD
3673.0	[m]	DC	OD
3682.0	[m]	DC	OD
3691.0	[m]	DC	OD
3703.0	[m]	DC	OD
3712.0	[m]	DC	OD
3722.0	[m]	DC	OD
3731.0	[m]	DC	OD
3740.0	[m]	DC	OD
3749.0	[m]	DC	OD
3758.0	[m]	DC	OD
3767.0	[m]	DC	OD
3776.0	[m]	DC	OD
3786.0	[m]	DC	OD
3798.0	[m]	DC	OD
3807.0	[m]	DC	OD
3816.0	[m]	DC	OD
3825.0	[m]	DC	OD
3834.0	[m]	DC	OD
3844.0	[m]	DC	OD
3853.0	[m]	DC	OD
3862.0	[m]	DC	OD
3871.0	[m]	DC	OD
3880.0	[m]	DC	OD
3889.0	[m]	DC	OD



3898.0	[m]	DC	OD
3908.0	[m]	DC	OD
3917.0	[m]	DC	OD
3926.0	[m]	DC	OD
3935.0	[m]	DC	OD
3944.0	[m]	DC	OD
3953.0	[m]	DC	OD
3962.0	[m]	DC	OD
3972.0	[m]	DC	OD

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
95	NORDLAND GP
1704	HORDALAND GP
2920	ROGALAND GP
2920	BALDER FM
2929	SELE FM
2933	LISTA FM
3034	VÅLE FM
3041	SHETLAND GP
3041	EKOFISK FM
3132	TOR FM
3475	HOD FM
3551	BLODØKS FM
3594	HIDRA FM
3635	CROMER KNOLL GP
3635	RØDBY FM
3839	TYNE GP
3839	FARSUND FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
178_1	pdf	0.27
178_2	pdf	1.79
178_3	pdf	0.76
178_4	pdf	2.20





Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
178_01_WDSS_General_Information	pdf	0.17

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
178_01_2_5_1_Completion_log	pdf	6.92
178_01_2_5_1_Completion_Report	pdf	23.39
178_01_2_5_1_Operator_Final_Well_Report	pdf	6.61
178_02_2_5_1_Cross_Section_Enclosure1	pdf	6.52
178_05_2_5_1_Gas_chrom_log	pdf	5.19

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	3042	3101	0.0
2.0	3274	3277	0.0
4.0	3244	3248	0.0
5.0	3285	3234	0.0
6.0	3225	3234	0.0
7.0	3154	3191	0.0
8.0	3043	3056	0.0

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0			46.000	121
2.0				
4.0				
5.0				
6.0				
7.0	48.000		48.000	





8.0				
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Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	209	223212			190
2.0					
4.0	425	612000			256
5.0	145				
6.0	445				
7.0	159	203838			228
8.0	230	65000			

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
BHC GR	378	3968
CAL	378	1600
CBL	110	3311
DLL	3043	3967
FDC GR	1591	3972
GR	122	378
HDT	1591	3971
IES	278	3971
MLL-C	3043	3362
NL CCL	2988	3311
VELOCITY	378	3968

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	127.0	36	128.0	0.00	LOT
SURF.COND.	20	378.0	26	378.0	0.00	LOT
INTERM.	13 3/8	1591.0	17 1/2	1601.0	0.00	LOT
INTERM.	9 5/8	3045.0	12 1/4	3055.0	0.00	LOT
PROD.	7	3327.0	8 1/2	3973.0	0.00	LOT



Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
141	1.14	40.0		seawater	
2017	1.56			waterbased	
3081	1.71	45.0		waterbased	
3580	1.63	50.0		waterbased	
3811	1.63	44.0		waterbased	

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
10000.00	[ft]
10010.00	[ft]
10018.00	[ft]
10407.00	[ft]