



Generell informasjon

Brønnbane navn	6608/10-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	NORNE
Funn	6608/10-2 Norne
Brønn navn	6608/10-2
Seismisk lokalisering	NRGS 85 -NRGS84 - 451& SP. 780
Utvinningstillatelse	128
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	701-L
Boreinnretning	ROSS RIG (2)
Boredager	94
Borestart	28.10.1991
Boreslutt	29.01.1992
Frigitt dato	29.01.1994
Publiseringsdato	21.12.2007
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	FANGST GP
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	BÅT GP
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	374.0
Totalt målt dybde (MD) [m RKB]	3678.0
Totalt vertikalt dybde (TVD) [m RKB]	3677.0
Maks inklinasjon [°]	4
Temperatur ved bunn av brønnbanen [°C]	133
Eldste penetrerte alder	LATE TRIASSIC



Eldste penetrerte formasjon	ÅRE FM
Geodetisk datum	ED50
NS grader	66° 0' 49.35" N
ØV grader	8° 4' 26.48" E
NS UTM [m]	7321933.62
ØV UTM [m]	457994.68
UTM sone	32
NPDID for brønnbanen	1782

Brønnhistorie

**General**

Well 6608/10-2 is located on the Dønna Terrace offshore Mid Norway. The primary objective of the well was to test the hydrocarbon potential in the Middle Jurassic Fangst Group sandstones. Possible sandy equivalent to the Rogn Formation in the Viking Group was a secondary objective. The well was planned with TD at 3225 m with a commitment to drill into rocks of Triassic age.

Operations and results

Wildcat well 6608/10-2 was spudded with the semi-submersible installation Ross Rig on 28 October 1991 and drilled to TD at 3678 m in Late Triassic rocks of the Åre Formation. Some problems with tight hole were experienced between 1800 and 2300 m in the 12 1/4" section. Due to presence of hydrocarbons and the commitment to drill to Triassic the well was extended both in time and depth compared to programme. Technical operations went smoothly with little down-time. The well was drilled with seawater and hi-vis pills down to 874 m, with gypsum/PAC mud from 874 m to 2576 m, and with Ancotemp/bentonite mud from 2576 m to TD.

Shows were observed in limestone in the interval 2160 ? 2271 m in the Cretaceous Nise and Lyr Formations. Oil and gas were encountered in the Båt and Fangst Groups (Lower- Middle Jurassic). From FMT data and electric logs the gas-oil contact was interpreted at 2605 m, and the oil-water contact at 2713.5 m. The Rogn Formation equivalent was not present in the well.

A total of 141.5 m core was recovered in six cores from the interval 2590 ? 2741 m in the Fangst and Båt Groups. Two FMT wire line samples were collected; a gas sample at 2583.2 m and an oil sample at 2650.5 m.

The well was permanently abandoned on 29 January 1992 as an oil and gas discovery.

Testing

Four intervals were perforated and tested.

DST 1 tested the interval 2715 ? 2720 m in the in the lower Tofte Formation. The test produced 310 Sm³ water /day through a 2" choke. Maximum bottom hole temperature recorded in the test was 100 deg C.

DST 2 tested the interval 2673 ? 2695 m in the in the upper Tofte Formation. The test produced up to 1165 Sm³ oil and 108667 Sm³ gas /day through a 1.5" choke. The GOR in this flow was 93 Sm³/Sm³, the oil density was 0.856 g/cm³, the gas gravity was 0.65 (air =1), and the gas contained 1.8 % CO₂ and 4 ppm H₂S. Maximum bottom hole temperature recorded in the test was 98.4 deg C.

DST 3A tested the interval 2605 ? 2610 m in the in the lower Garn Formation. The production rate was measured to 33 Sm³ condensate and 582600 Sm³ gas/day through a 19.05 mm choke. The GOR was 17654 Sm³/Sm³. Maximum bottom hole temperature recorded in the test was 91.4 deg C.

DST 3B tested the interval 2590 - 2603 m in the in the Garn Formation. Maximum rates were recorded to 100 Sm³ condensate and 945000 Sm³ gas /day through a 38.1 mm choke. The GOR was 9450 Sm³/Sm³ in this flow, the condensate density was 0.783 g/cm³, the gas gravity was 0.645 (air = 1), and the gas contained 1.1 % CO₂ and 0.5 ppm H₂S. Maximum bottom hole temperature recorded in the test was 95.5 deg C



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
890.00	3678.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2590.0	2616.7	[m]
2	2617.6	2641.0	[m]
3	2646.0	2673.8	[m]
4	2674.0	2681.8	[m]
5	2686.0	2714.2	[m]
6	2714.2	2741.8	[m]

Total kjerneprøve lengde [m]	141.5
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2590-2595m



2595-2600m



2600-2605m



2605-2610m



2610-2615m



2615-2616m



2617-2622m



2622-2627m



2627-2632m



2632-2637m



2637-2542m



2642-2646m



2646-2651m



2651-2656m



2656-2661m



2661-2666m



2666-2671m



2671-2673m



2674-2679m



2679-2681m



2686-2691m



2691-2696m



2696-2701m



2701-2706m



2706-2711m



2711-2714m



2714-2719m



2719-2724m



2724-2729m



2729-2734m



2734-2739m



2739-2741m

Palynologiske preparater i Sjøkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1420.0	[m]	SWC	STATO
1553.0	[m]	SWC	STATO
1572.0	[m]	DC	RRI
1614.0	[m]	DC	RRI
1632.0	[m]	DC	RRI
1650.0	[m]	DC	RRI
1678.0	[m]	SWC	STATO
1680.0	[m]	DC	RRI



1684.0 [m]	SWC	STATO
1704.0 [m]	DC	RRI
1722.0 [m]	DC	RRI
1740.0 [m]	DC	RRI
1776.0 [m]	DC	RRI
1806.0 [m]	DC	RRI
1824.0 [m]	DC	RRI
1846.0 [m]	DC	RRI
1854.0 [m]	DC	RRI
1857.0 [m]	SWC	STATO
1860.0 [m]	SWC	STATO
1887.0 [m]	SWC	STATO
1898.0 [m]	SWC	STATO
1932.0 [m]	DC	RRI
1947.0 [m]	SWC	STATO
1953.0 [m]	SWC	STATO
1965.0 [m]	SWC	STATO
1985.0 [m]	SWC	STATO
1986.0 [m]	DC	RRI
2051.0 [m]	SWC	STATO
2085.0 [m]	SWC	STATO
2137.0 [m]	SWC	STATO
2200.0 [m]	SWC	STATO
2249.0 [m]	SWC	STATO
2256.0 [m]	SWC	STATO
2331.0 [m]	SWC	STATO
2348.0 [m]	SWC	STATO
2352.0 [m]	DC	STATO
2355.0 [m]	DC	STATO
2358.0 [m]	DC	STATO
2360.0 [m]	SWC	STATO
2368.0 [m]	SWC	STATO
2375.0 [m]	SWC	STATO
2385.0 [m]	SWC	STATO
2444.0 [m]	SWC	STATO
2481.0 [m]	DC	RRI
2490.0 [m]	DC	RRI
2502.0 [m]	DC	RRI
2511.0 [m]	DC	RRI
2523.0 [m]	DC	RRI



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 18.5.2024 - 16:12

2532.0 [m]	DC	RRI
2550.0 [m]	DC	RRI
2559.0 [m]	DC	RRI
2576.0 [m]	DC	RRI
2615.6 [m]	C	STATOIL
2617.4 [m]	C	STATOIL
2618.8 [m]	C	STATO
2620.7 [m]	C	STATOI
2621.1 [m]	C	STATOI
2627.4 [m]	C	STATOI
2629.9 [m]	C	STATOI
2630.6 [m]	C	STATOI
2633.3 [m]	C	STATOI
2636.4 [m]	C	STATOI
2637.3 [m]	C	STATOI
2638.2 [m]	C	STATOI
2640.4 [m]	C	STATOI
2641.9 [m]	C	STATOI
2645.1 [m]	C	STATOI
2649.5 [m]	C	STATOI
2650.7 [m]	C	STATOI
2652.0 [m]	C	STATOI
2652.6 [m]	C	STATO
2653.4 [m]	C	STATOI
2654.2 [m]	C	STATOI
2657.6 [m]	C	STATOI
2659.8 [m]	C	STATO
2662.5 [m]	C	STATO
2678.3 [m]	C	STATO
2692.5 [m]	C	STATO
2701.5 [m]	C	STATO
2710.8 [m]	C	STATO
2721.5 [m]	C	STATO
2721.9 [m]	C	STATO
2724.5 [m]	C	STATO
2724.7 [m]	C	STATO
2726.0 [m]	C	STATO
2738.3 [m]	C	STATO
2761.0 [m]	SWC	STATO
2773.0 [m]	DC	RRI



2787.0 [m]	SWC	STATO
2794.0 [m]	DC	RRI
2818.0 [m]	DC	RRI
2822.0 [m]	SWC	STATO
2836.0 [m]	DC	RRI
2842.0 [m]	DC	RRI
2866.0 [m]	DC	RRI
2875.0 [m]	SWC	STATO
2884.0 [m]	DC	RRI
2896.0 [m]	DC	RRI
2908.0 [m]	DC	RRI
2918.5 [m]	SWC	STATO
2926.0 [m]	DC	RRI
2938.0 [m]	DC	RRI
2944.0 [m]	DC	RRI
2956.0 [m]	DC	RRI
2962.0 [m]	DC	RRI
2974.0 [m]	DC	RRI
2978.0 [m]	SWC	STATO
2992.0 [m]	DC	RRI
3004.0 [m]	DC	RRI
3016.0 [m]	DC	RRI
3025.0 [m]	SWC	STATO
3034.0 [m]	DC	RRI
3043.0 [m]	DC	RRI
3053.0 [m]	SWC	STATO
3063.0 [m]	DC	RRI
3072.0 [m]	DC	RRI
3080.0 [m]	SWC	STATO
3087.0 [m]	DC	RRI
3100.0 [m]	SWC	STATO
3117.0 [m]	DC	RRI
3125.0 [m]	SWC	STATO
3135.0 [m]	DC	RRI
3144.0 [m]	DC	RRI
3153.0 [m]	DC	RRI
3162.0 [m]	DC	RRI
3171.0 [m]	DC	RRI
3180.0 [m]	DC	RRI
3189.0 [m]	DC	RRI



3198.0 [m]	DC	RRI
3210.0 [m]	SWC	STATO
3219.0 [m]	DC	RRI
3229.5 [m]	SWC	STATO
3240.0 [m]	DC	RRI
3249.0 [m]	DC	RRI
3262.0 [m]	SWC	STATO
3280.0 [m]	SWC	STATO
3290.0 [m]	SWC	STATO
3309.0 [m]	DC	RRI
3318.0 [m]	DC	RRI
3325.0 [m]	SWC	STATO
3335.0 [m]	DC	RRI
3343.0 [m]	SWC	STATO
3354.0 [m]	DC	RRI
3363.0 [m]	DC	RRI
3370.0 [m]	SWC	STATO
3381.0 [m]	DC	RRI
3417.0 [m]	DC	RRI
3426.0 [m]	SWC	STATO
3435.0 [m]	DC	RRI
3453.0 [m]	DC	RRI
3481.5 [m]	SWC	STATO
3518.0 [m]	SWC	STATO
3528.0 [m]	DC	RRI
3537.0 [m]	DC	RRI
3558.0 [m]	DC	RRI
3570.5 [m]	SWC	STATO
3582.0 [m]	DC	RRI
3594.0 [m]	DC	RRI
3600.0 [m]	DC	RRI
3618.0 [m]	DC	RRI
3618.0 [m]	DC	OD
3627.0 [m]	SWC	STATO
3636.0 [m]	DC	RRI
3648.0 [m]	DC	RRI
3652.0 [m]	DC	OD
3653.0 [m]	SWC	STATO
3654.5 [m]	SWC	STATO
3660.9 [m]	SWC	STATO



3661.0	[m]	DC	OD
3669.0	[m]	DC	RRI
3670.0	[m]	DC	OD
3678.0	[m]	DC	RRI

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	DST2	2673.00	2695.00		04.01.1992 - 16:30	YES
DST	DST3A	2603.00	2606.00		10.01.1992 - 09:30	YES
DST	DST3B	2603.00	2606.00		13.01.1992 - 20:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
397	NORDLAND GP
397	NAUST FM
1352	KAI FM
1565	HORDALAND GP
1565	BRYGGE FM
1857	ROGALAND GP
1857	TARE FM
1913	TANG FM
1951	SHETLAND GP
1951	SPRINGAR FM
2151	NISE FM
2253	CROMER KNOLL GP
2253	LYR FM
2347	VIKING GP
2347	SPEKK FM
2365	MELKE FM
2578	FANGST GP
2578	GARN FM
2611	NOT FM
2619	ILE FM



2659	BÅT GP
2659	ROR FM
2668	TOFTE FM
2720	TILJE FM
2819	ÅRE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1782_1	pdf	0.27
1782_2	pdf	0.65
1782_3	pdf	0.10
1782_4	pdf	2.96

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1782_01 WDSS General Information	pdf	0.81
1782_02 WDSS completion log	pdf	0.23

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1782_6608_10_2 COMPLETION REPORT AND LOG	pdf	42.32

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2715	2720	50.8
3.1	2673	2696	72.0
3.2	2605	2610	19.0
3.3	2590	2610	28.0





Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningsstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				100
3.1		30.000		98
3.2				91
3.3				95

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0				0.680	
3.1	1165		0.847	0.660	93
3.2		582600		0.640	
3.3		945000		0.640	

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ACBL GR	1563	2559
ACBL GR	2405	3319
CBL VDL GR	394	1520
DIFL ACL GR	867	3661
DIPLOG GR	1520	2140
DIPLOG GR	2559	3332
DIPLOG GR	3329	3661
DLL MLL SL	2559	2758
FMT HP GR	2579	2800
FMT HP GR	2650	2650
LWD - CDR CDN	2100	2573
MWD	465	3335
VELOCITY	930	3640
ZDL CNL CAL GR	1520	2141
ZDL CNL CAL GR	2559	3644
ZDL GR	867	1525

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	459.0	36	460.0	0.00	LOT
INTERM.	20	867.0	26	870.0	1.41	LOT
INTERM.	13 3/8	1520.0	17 1/2	1522.0	1.86	LOT
INTERM.	9 5/8	2561.0	12 1/4	2564.0	1.95	LOT
LINER	7	3330.0	8 1/2	3678.0	1.82	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
886	1.03	23.0		WATER BASED	
920	1.20	20.0		WATER BASED	
1220	1.20	20.0		WATER BASED	
1540	1.37	29.0		WATER BASED	
1542	1.37	23.0		WATER BASED	
1727	1.50	24.0		WATER BASED	
1828	1.64	28.0		WATER BASED	
1911	1.62	36.0		WATER BASED	
2041	1.62	33.0		WATER BASED	
2561	1.20	15.0		WATER BASED	
2576	1.30	22.0		WATER BASED	
2579	1.20	14.0		WATER BASED	
2590	1.30	23.0		WATER BASED	
2674	1.30	20.0		WATER BASED	
2682	1.30	20.0		WATER BASED	
2741	1.30	22.0		WATER BASED	
3013	1.30	21.0		WATER BASED	
3051	1.30	20.0		WATER BASED	
3073	1.25	21.0		WATER BASED	
3276	1.20	15.0		WATER BASED	
3282	1.20	16.0		WATER BASED	
3330	1.20	15.0		WATER BASED	
3335	1.20	15.0		WATER BASED	
3445	1.20	18.0		WATER BASED	
3617	1.20	15.0		WATER BASED	
3678	1.20	17.0		WATER BASED	



Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspar. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
1782 Formation pressure (Formasjonstrykk)	pdf	0.30

