



Generell informasjon

Brønnbane navn	6201/11-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Funn	6201/11-1
Brønn navn	6201/11-1
Seismisk lokalisering	MS 85 - 407 SP. 812
Utvinningstillatelse	130
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	556-L
Boreinnretning	DEEPSEA BERGEN
Boredager	86
Borestart	13.08.1987
Boreslutt	06.11.1987
Frigitt dato	06.11.1989
Publiseringsdato	18.05.2004
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	LATE TRIASSIC
1. nivå med hydrokarboner, formasjon.	LUNDE FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	381.0
Totalt målt dybde (MD) [m RKB]	3850.0
Totalt vertikalt dybde (TVD) [m RKB]	3846.0
Maks inklinasjon [°]	7.6
Eldste penetrerte alder	EARLY TRIASSIC
Eldste penetrerte formasjon	TEIST FM (INFORMAL)
Geodetisk datum	ED50
NS grader	62° 1' 52.73" N
ØV grader	1° 30' 50.37" E
NS UTM [m]	6878724.50
ØV UTM [m]	422247.77



UTM sone	31
NPDID for brønnbanen	1134

Brønnhistorie

General

Well 6201/11-1 was drilled on the Albert structure as the first well on the Norwegian side of the Nordfjord Horst. The best well for correlation is expected to be UK well 211/2-1 which was terminated in rocks of possibly Rhaetian age and was dry. The primary objective for the well was to test the hydrocarbon potential in Triassic sandstones in the A prospect. A secondary objective was to test the structural closure in the Lista/Sele Formation and to acquire geological information related to remaining prospects in the block.

Operations and results

Wildcat well 6201/11-1 was spudded with the Semi-submersible installation Deepsea Bergen on 13 August 1987 and drilled to TD at 3850 m in the Early Triassic Teist Formation. A 12 1/4" pilot hole was drilled with returns to seabed from 30" casing shoe to 930 m. The well started flowing water. It was plugged back and cement was dressed to 650 m. Opened to 26" hole and sat 20" casing already at 641 m. Possible source of water flow was between 650 m to 719 m, but most likely a stronger source was below 719 m. The 17 1/2" hole was drilled to 1808 m where the well kicked due to rapid pore pressure increase near section TD. The well was plugged back and 13 3/8" casing set at 1735 m. At 3384 m there was a problem with hole stability and drilling was stopped. It was decided to set 7" liner. The well was drilled with seawater and bentonite down to 479 m, with gypsum/PAC polymer mud from 479 m to 2701 m, and with gel/lignosulfonate mud from 3384 m to TD.

Oil shows appeared in limestones already in the Hordaland Group at 1325 m down to 1725 m. From 1725 m in the Hordaland Group to 1970 m in the Balder Formation oil shows was recorded on claystones. Below 2000 m oil shows were recorded in sandstones. Top reservoir came in as prognosed at 2678 m and was hydrocarbon bearing. There were good oil shows on cores down to 2881 m, and the logs show possible oil saturation down to the same depth. It was difficult to evaluate the logs due to a cemented reservoir. The porosity and permeability are low, and it was hard to take RFT-measurements. Two RFT segregated samples were taken, one sample at 2716 m and one at 3187 m. Nine cores were cut in the Lunde Formation, five in the interval 2701 m to 2785 m, and four from 2822 m to 2917.5 m. The well was permanently abandoned as an oil discovery on 6 November 1987.

Testing

Three drill stem tests were performed in the Lunde Formation. DST 1 was performed in the intervals 2818 m to 2832 m and 2839 m to 2852 m; DST 2 from 2746.5 m to 2771 m and DST 3 from 2713 m to 2717 m. DST 1 and 2 did not produce to the surface. DST 3 produced ca. 91 Sm³ oil and 72600 Sm³ gas per day through a 10.3 mm choke during the main flow. Oil density was 0.835 g/cm³ and gas gravity was 0.630 (air = 1). Due to a tightly cemented reservoir, the proven resources in this hole are relatively small.

Borekaks i Søkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
680.00	3850.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2701.0	2712.3	[m]
2	2729.0	2739.3	[m]
3	2740.0	2765.7	[m]
4	2767.5	2777.5	[m]
5	2779.5	2785.0	[m]
6	2822.0	2835.1	[m]
7	2836.0	2846.0	[m]
8	2853.5	2881.3	[m]
9	2881.5	2918.6	[m]

Total kjerneprøve lengde [m]	150.6
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2701-2705m



2706-2710m



2711-2712m



2729-2733m



2734-2738m



2739-2739m



2740-2744m



2745-2749m



2750-2754m



2755-2759m



2760-2764m



2765-2766m



2767-2771m



2772-2778m



2777-2778m



2779-2783m



2784-2785m



2822-2826m



2827-2831m



2832-2835m



2837-2840m



2841-2845m



2853-2857m



2858-2862m



2863-2867m



2868-2872m



2873-2877m



2878-2881m



2881-2885m



2886-2890m



2891-2895m



2896-2900m



2901-2905m



2906-2910m



2911-2915m



2916-2918m



Palynologiske preparater i Sakkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1820.0	[m]	DC	STAT.
1831.0	[m]	SWC	STAT.
1850.0	[m]	DC	STAT.
1860.0	[m]	DC	STAT.
1867.0	[m]	SWC	STAT.
1892.5	[m]	SWC	STAT.
1918.2	[m]	SWC	STAT.
1940.0	[m]	DC	STAT.
1970.0	[m]	DC	STAT.
2010.0	[m]	DC	STAT.
2028.5	[m]	SWC	STAT.
2044.0	[m]	SWC	STAT.
2061.0	[m]	SWC	STAT.
2080.0	[m]	DC	STAT.
2100.0	[m]	DC	STAT.
2130.0	[m]	DC	STAT.
2154.0	[m]	SWC	STAT.
2170.0	[m]	DC	STAT.
2210.0	[m]	DC	STAT.
2230.0	[m]	DC	STAT.
2240.0	[m]	DC	STAT.
2252.0	[m]	SWC	STAT.
2280.0	[m]	DC	STAT.
2300.0	[m]	DC	STAT.
2310.0	[m]	DC	STAT.
2330.0	[m]	DC	STAT.
2340.0	[m]	DC	STAT.
2360.0	[m]	DC	STAT.
2370.0	[m]	DC	STAT.
2390.0	[m]	DC	STAT.
2400.0	[m]	DC	STAT.
2420.0	[m]	DC	STAT.
2430.0	[m]	DC	STAT.
2433.0	[m]	SWC	STAT.
2450.0	[m]	DC	STAT.
2460.0	[m]	DC	STAT.



Faktasider

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2527.0	[m]	SWC	STAT.
2540.0	[m]	DC	STAT.
2550.0	[m]	DC	STAT.
2570.0	[m]	DC	STAT.
2600.0	[m]	DC	STAT.
2616.0	[m]	SWC	STAT.
2630.0	[m]	DC	STAT.
2640.0	[m]	DC	STAT.
2655.0	[m]	SWC	STAT.
2665.0	[m]	SWC	STAT.
2675.0	[m]	SWC	STAT.
2680.0	[m]	DC	STAT.
2690.0	[m]	DC	STAT.
2700.0	[m]	DC	STAT.
2701.9	[m]	C	STAT.
2702.5	[m]	C	STAT.
2705.5	[m]	C	STAT.
2709.6	[m]	C	STAT.
2711.8	[m]	C	STAT.
2712.2	[m]	C	STAT.
2730.5	[m]	C	STAT.
2736.8	[m]	C	STAT.
2739.3	[m]	C	STAT.
2747.0	[m]	C	STAT.
2772.4	[m]	C	STAT.
2793.0	[m]	SWC	STAT.
2800.0	[m]	SWC	STAT.
2812.0	[m]	SWC	STAT.
2950.0	[m]	DC	STAT.
2968.0	[m]	SWC	STAT.
2980.0	[m]	DC	STAT.
3010.0	[m]	DC	STAT.
3040.0	[m]	DC	STAT.
3070.0	[m]	DC	STAT.
3100.0	[m]	DC	STAT.
3130.0	[m]	DC	STAT.
3249.0	[m]	DC	STAT.
3264.0	[m]	DC	STAT.
3279.0	[m]	DC	STAT.
3294.0	[m]	DC	STAT.



3310.0	[m]	DC	STAT.
3324.0	[m]	DC	STAT.
3340.0	[m]	DC	STAT.
3370.0	[m]	DC	STAT.
3384.0	[m]	DC	STAT.
3480.0	[m]	SWC	STAT.
3495.0	[m]	DC	STAT.
3555.0	[m]	DC	STAT.
3585.0	[m]	DC	STAT.
3600.0	[m]	DC	STAT.
3615.0	[m]	DC	STAT.
3630.0	[m]	DC	STAT.
3645.0	[m]	DC	STAT.
3660.0	[m]	DC	STAT.
3675.0	[m]	DC	STAT.
3690.0	[m]	DC	STAT.
3705.0	[m]	DC	STAT.
3720.0	[m]	SWC	STAT.
3750.0	[m]	SWC	STAT.
3750.0	[m]	DC	STAT.
3765.0	[m]	DC	STAT.
3795.0	[m]	DC	STAT.
3840.0	[m]	DC	STAT.

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST3	2712.60	2716.70		30.10.1987 - 12:30	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
404	NORDLAND GP
1261	UTSIRA FM
1292	HORDALAND GP
1776	ROGALAND GP



1776	BALDER FM
1832	LISTA FM
2031	SHETLAND GP
2031	JORSALFARE FM
2170	KYRRE FM
2678	HEGRE GP
2678	LUNDE FM
3532	LOMVI FM
3628	TEIST FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
1134	pdf	0.64

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1134_1	pdf	1.69
1134_2	pdf	0.89

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1134_01_WDSS_General_Information	pdf	0.44
1134_02_WDSS_completion_log	pdf	0.31

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1134_6201_11_1_COMPLETION_REPORT_AND_LOG	pdf	25.20

Borestrengtester (DST)





Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
3.0	2713	2717	10.3

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

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
3.0	91	72000	0.835	0.630	798

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL GR	613	3383
CST GR	1753	2626
CST GR	2655	2968
CST GR	3404	3822
DIL BHC GR	404	3382
DLL MSFL GR	2600	3847
LDL CNL GR	404	2618
LDL CNL GR	3101	3383
LDL CNL GR	3383	3849
LDL CNL SGR	2600	3072
MWD - GR RES DIR	404	2695
MWD - GR RES DIR	2739	2814
MWD - GR RES DIR	2904	3382
RFT GR	2681	2725
RFT GR	2681	3229
RFT GR	2715	2805
SHDT GR	2600	3849
TEMP	404	2300
VSP	500	3380

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	479.0	36	481.0	0.00	LOT
SURF.COND.	20	641.0	26	930.0	1.35	LOT
INTERM.	13 3/8	1735.0	17 1/2	1808.0	1.60	LOT
INTERM.	9 5/8	2599.0	12 1/4	2620.0	1.84	LOT
LINER	7	3383.0	8 1/2	3384.0	2.30	LOT
OPEN HOLE		3850.0	6	3850.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
327	1.06			WATER BASED	18.05.1987
550	1.30	5000.0		WATER BASED	19.08.1987
650	1.30	6200.0		WATER BASED	20.08.1987
650	1.15			WATER BASED	24.08.1987
650	1.05	9999.0		WATER BASED	21.08.1987
650	1.05	100.0		WATER BASED	24.08.1987
675	1.15	7500.0	5.6	WATER BASED	24.08.1987
780	1.15	6100.0	5.1	WATER BASED	25.08.1987
930	1.30	7000.0		WATER BASED	18.08.1987
1426	1.20	6900.0	5.5	WATER BASED	26.08.1987
1698	1.24	7500.0	5.6	WATER BASED	27.08.1987
1750	1.35	7000.0	7.5	WATER BASED	31.08.1987
1750	1.35	7000.0	5.5	WATER BASED	03.09.1987
1753	1.45	6600.0	4.5	WATER BASED	03.09.1987
1794	1.35	6800.0	6.3	WATER BASED	28.08.1987
1808	1.35	2800.0	6.3	WATER BASED	31.08.1987
1808	1.35	2300.3	4.0	WATER BASED	31.08.1987
1808	1.48	6400.0	7.5	WATER BASED	09.09.1987
1808	1.51	2200.0	4.5	WATER BASED	09.09.1987
1808	1.51	4900.0	5.0	WATER BASED	09.09.1987
1836	1.45	7200.0	5.5	WATER BASED	04.09.1987
2166	1.45	3000.0	6.3	WATER BASED	09.09.1987
2439	1.48	2800.0	6.8	WATER BASED	09.09.1987
2620	1.51	5000.0	5.5	WATER BASED	10.09.1987
2620	1.51	5000.0	4.5	WATER BASED	11.09.1987
2620	1.70	6000.0	6.5	WATER BASED	14.09.1987



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2682	1.70	5500.0	6.0	WATER BASED	14.09.1987
2688	1.70	90.0	4.5	WATER BASED	28.09.1987
2688	1.70	36.0	4.5	WATER BASED	24.09.1987
2688	1.70	34.0	5.0	WATER BASED	20.10.1987
2688	1.70	38.0	4.0	WATER BASED	02.10.1987
2689	1.07	68.0	4.5	WATER BASED	19.10.1987
2689	1.70	34.0	5.0	WATER BASED	21.10.1987
2689	1.70	31.0	4.5	WATER BASED	22.10.1987
2689	1.70	35.0	6.0	WATER BASED	26.10.1987
2689	1.70	30.0	5.0	WATER BASED	26.10.1987
2689	1.70	30.0	5.0	WATER BASED	27.10.1987
2689	1.70	32.0	5.5	WATER BASED	28.10.1987
2689	1.70	30.0	10.0	WATER BASED	29.10.1987
2689	1.70	29.0	8.0	WATER BASED	30.10.1987
2689	1.70	32.0	5.5	WATER BASED	02.11.1987
2689	1.70	32.0	5.0	WATER BASED	02.11.1987
2689	1.70	28.0	4.0	WATER BASED	02.11.1987
2689	1.70	34.0	5.0	WATER BASED	23.10.1987
2689	1.70	34.0	5.0	WATER BASED	26.10.1987
2689	1.70	67.0	4.5	WATER BASED	28.09.1987
2689	1.70	93.0	5.0	WATER BASED	28.09.1987
2689	1.70	38.0	5.0	WATER BASED	29.09.1987
2689	1.70	38.0	5.0	WATER BASED	30.09.1987
2689	1.70	39.0	5.0	WATER BASED	01.10.1987
2689	1.70	32.0	5.5	WATER BASED	16.09.1987
2689	1.70	34.0	4.5	WATER BASED	18.09.1987
2689	1.70	33.0	4.0	WATER BASED	18.09.1987
2689	1.70	3500.0	3.8	WATER BASED	21.09.1987
2689	1.70	9100.0	4.2	WATER BASED	21.09.1987
2689	1.70	4700.0	7.2	WATER BASED	21.09.1987
2689	1.70	4100.0	4.2	WATER BASED	22.09.1987
2689	1.70	4000.0	3.8	WATER BASED	23.09.1987
2689	1.70	36.0	5.0	WATER BASED	25.09.1987
2737	1.70	24.0	4.0	WATER BASED	14.09.1987
2767	1.70	31.0	3.0	WATER BASED	16.09.1987
3280	1.70	63.0	4.5	WATER BASED	19.10.1987
3384	1.51	2300.0	3.0	WATER BASED	05.10.1987
3384	1.70	4900.0	7.2	WATER BASED	05.10.1987
3387	1.51	55.0	3.0	WATER BASED	05.10.1987
3448	1.51	23.0	4.5	WATER BASED	06.10.1987



3448	1.51	57.0	4.5	WATER BASED	07.10.1987
3454	1.51	24.0	5.5	WATER BASED	08.10.1987
3454	1.51	25.0	4.0	WATER BASED	09.10.1987
3454	1.51	28.0	4.0	WATER BASED	14.10.1987
3454	1.51	28.0	6.0	WATER BASED	16.10.1987

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
2731.00	[m]
2733.70	[m]
2749.40	[m]
2751.10	[m]
2752.80	[m]
2754.70	[m]
2760.60	[m]
2768.70	[m]
2822.80	[m]
2824.70	[m]
2828.70	[m]
2830.70	[m]
2729.60	[m]
2832.60	[m]
2841.80	[m]
2845.60	[m]
2857.90	[m]
2862.50	[m]
2867.50	[m]
2879.90	[m]
2914.70	[m]
2889.90	[m]

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 brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.





Dokument navn	Dokument format	Dokument størrelse [KB]
1134 Formation pressure (Formasjonstrykk)	PDF	0.28

