



Generell informasjon

Brønnbane navn	15/12-8
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	15/12-8
Brønn navn	15/12-8
Seismisk lokalisering	ST 8802- ROW 547 & COLUMN 580.
Utvinningstillatelse	038
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	684-L
Boreinnretning	DEEPSEA BERGEN
Boredager	40
Borestart	05.06.1991
Boreslutt	14.07.1991
Frigitt dato	14.07.1993
Publiseringsdato	17.10.2007
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	VESTLAND GP
2. nivå med hydrokarboner, alder	TRIASSIC
2. nivå med hydrokarboner, formasjon	SKAGERRAK FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	87.0
Totalt målt dybde (MD) [m RKB]	3054.0
Totalt vertikalt dybde (TVD) [m RKB]	3052.0
Maks inklinasjon [°]	6.4
Temperatur ved bunn av brønnbanen [°C]	120
Eldste penetrerte alder	TRIASSIC
Eldste penetrerte formasjon	SKAGERRAK FM



Geodetisk datum	ED50
NS grader	58° 3' 1.85" N
ØV grader	1° 58' 3.41" E
NS UTM [m]	6434946.27
ØV UTM [m]	439060.86
UTM sone	31
NPDID for brønnbanen	1778

Brønnhistorie

General

Wildcat well 15/12-8 was drilled ca 3.5 km east of the 15/12-4 well, which made the Varg oil discovery in Jurassic and Triassic sandstones. The main objective of the well was to test the potential for hydrocarbons in sandstones of Oxfordian and Triassic age. Seismic anomalies at 437, 467, 479 and 803 m indicated possibility for shallow gas. Planned TD for the well was 3260 m.

Operations and results

Well 15/12-8 was spudded with the semi-submersible installation Deepsea Bergen on 5 June 1991 and drilled to TD at 3054 m in the Triassic Skagerrak Formation. No significant problems occurred during operations. The well was drilled with seawater / hi-vis pills / CMC down to 615 m, with KCl/polymer mud from 615 m to 2855 m, and with Ancotemp/bentonite mud from 2855 m to TD. No shallow gas was encountered.

Jurassic Vestland Group sandstone was encountered hydrocarbon-bearing at 2838 m. The hydrocarbon column extended 23 m into Triassic sandstone of the Skagerrak Formation. The gas/water contact was estimated to 2877 m, confirmed by FMT pressure gradients and wire line logs. The well was tested, and since no core was cut through the reservoir, the well was sidetracked at 2623 m with TD at 2940 m. The sidetrack was drilled with Ancotemp/bentonite mud. Three conventional cores were cut in the interval 2841 - 2902 m. The sidetrack was formally named 15/12-8 A.

The FMT tool was run in well 15/12-8 and 15/12-8A. One segregated sample was taken at 2863 m in 15/12-8 (gas, condensate and mud filtrate) and another in the water zone at 2888 m in well 15/12-8 A (recovered mud only due to seal failure).

Well 15/12-8 was permanently abandoned on 14 July 1991 as a gas/condensate discovery. The 15/12-8 A sidetrack was permanently abandoned on 29 July as a gas/condensate appraisal well.

Testing

One DST test was performed in 15/12-8 in the interval 2838 - 2869 m. The well produced gas-condensate with a dew point of 230 bar at the measured reservoir temperature, which was 123 deg C. The rates were 550 000 Sm³ gas and 420 Sm³ condensate /day through a 15.9 mm choke. The condensate/gas ratio was 1308 Sm³/Sm³, the condensate gravity was 61 deg API, and the gas gravity was 0.817 (air = 1).

Borekaks i Sokkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
620.00	3054.00

Borekaks tilgjengelig for prøvetaking?	YES
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Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1210.0	[m]	DC	GEOCH
1250.0	[m]	DC	GEOCH
1270.0	[m]	DC	GEOCH
1280.0	[m]	DC	GEOCH
1300.0	[m]	DC	GEOCH
1310.0	[m]	DC	GEOCH
1330.0	[m]	DC	GEOCH
1340.0	[m]	DC	GEOCH
1360.0	[m]	DC	GEOCH
1370.0	[m]	DC	GEOCH
1390.0	[m]	DC	GEOCH
1400.0	[m]	DC	GEOCH
1420.0	[m]	DC	GEOCH
1430.0	[m]	DC	GEOCH
1450.0	[m]	DC	GEOCH
1460.0	[m]	DC	GEOCH
1480.0	[m]	DC	GEOCH
1490.0	[m]	DC	GEOCH
1510.0	[m]	DC	GEOCH
1520.0	[m]	DC	GEOCH
1540.0	[m]	DC	GEOCH
1550.0	[m]	DC	GEOCH
1570.0	[m]	DC	GEOCH
1580.0	[m]	DC	GEOCH
1600.0	[m]	DC	GEOCH
1610.0	[m]	DC	GEOCH
1630.0	[m]	DC	GEOCH
1640.0	[m]	DC	GEOCH
1660.0	[m]	DC	GEOCH
1670.0	[m]	DC	GEOCH
1690.0	[m]	DC	GEOCH
1700.0	[m]	DC	GEOCH



1720.0	[m]	DC	GEOCH
1730.0	[m]	DC	GEOCH
1750.0	[m]	DC	GEOCH
1760.0	[m]	DC	GEOCH
1780.0	[m]	DC	GEOCH
1790.0	[m]	DC	GEOCH
1810.0	[m]	DC	GEOCH
1822.8	[m]	SWC	STATO
1840.0	[m]	DC	GEOCH
1850.0	[m]	DC	GEOCH
1868.8	[m]	SWC	STATO
1880.0	[m]	DC	GEOCH
1900.0	[m]	DC	GEOCH
1910.0	[m]	DC	GEOCH
1930.0	[m]	DC	GEOCH
1939.8	[m]	SWC	STATO
1960.0	[m]	DC	GEOCH
1970.0	[m]	DC	GEOCH
1986.8	[m]	SWC	STATO
2000.0	[m]	DC	GEOCH
2020.0	[m]	DC	GEOCH
2030.0	[m]	DC	GEOCH
2050.0	[m]	DC	GEOCH
2067.3	[m]	SWC	STATO
2080.0	[m]	DC	GEOCH
2090.0	[m]	DC	GEOCH
2109.8	[m]	SWC	STATO
2120.0	[m]	DC	GEOCH
2130.0	[m]	DC	GEOCH
2150.0	[m]	DC	GEOCH
2160.0	[m]	DC	GEOCH
2177.3	[m]	SWC	STATO
2190.0	[m]	DC	GEOCH
2203.0	[m]	DC	GEOCH
2215.0	[m]	DC	GEOCH
2230.0	[m]	DC	GEOCH
2246.3	[m]	SWC	STATO
2251.0	[m]	DC	GEOCH
2258.8	[m]	SWC	STATO
2272.8	[m]	SWC	STATO



2286.8	[m]	SWC	STATO
2310.8	[m]	SWC	STATO
2318.8	[m]	SWC	STATO
2335.0	[m]	DC	GEOCH
2350.0	[m]	DC	GEOCH
2365.0	[m]	DC	GEOCH
2380.0	[m]	DC	GEOCH
2410.0	[m]	DC	GEOCH
2419.8	[m]	SWC	STATO
2440.0	[m]	DC	GEOCH
2831.8	[m]	SWC	STATO
2834.8	[m]	SWC	STATO
2836.8	[m]	SWC	STATO
2837.0	[m]	DC	GEOCH
2841.0	[m]	C	STATO
2843.0	[m]	C	STATO
2844.7	[m]	C	STATO
2846.5	[m]	C	STATO
2847.4	[m]	C	STATO
2848.7	[m]	C	STATO
2850.4	[m]	C	STATO
2852.8	[m]	C	STATO
2885.0	[m]	DC	GEOCH
2900.0	[m]	DC	GEOCH
2912.0	[m]	DC	GEOCH
2960.0	[m]	DC	GEOCH
2990.0	[m]	DC	GEOCH
3020.0	[m]	DC	GEOCH
3054.0	[m]	DC	GEOCH

Oljeprøver i Søkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST1	2838.00	2869.00		09.07.1991 - 04:35	YES



Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
110	NORDLAND GP
1082	UTSIRA FM
1207	HORDALAND GP
2251	ROGALAND GP
2251	BALDER FM
2268	SELE FM
2333	LISTA FM
2441	VÅLE FM
2464	SHETLAND GP
2464	EKOFISK FM
2496	TOR FM
2626	HOD FM
2738	BLODØKS FM
2770	CROMER KNOLL GP
2770	RØDBY FM
2797	SOLA FM
2829	VIKING GP
2829	DRAUPNE FM
2838	VESTLAND GP
2854	NO GROUP DEFINED
2854	SKAGERRAK FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1778_1	pdf	0.57
1778_2	pdf	1.26

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1778_01_WDSS_General_Information	pdf	0.48
1778_02_WDSS_completion_log	pdf	0.19





Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1778 15 12 8 COMPLETION LOG	pdf	2.80
1778 15 12 8 COMPLETION REPORT	pdf	22.14

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2838	2869	15.9

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningsstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				123

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	420	550000		0.817	1308

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ACBL VDL GR	115	2828
ACL GR ZDL	1793	2839
CDL CN GR	2621	2933
CDL GR	170	484
DIFL AC MLL GR	2621	2933
DIFL ACL GR	170	3048
DIPLOG GR	2828	3046
FMT GR	2838	3009
MLL ZDL CN GR	2828	3048
MWD - GR RES DIR	170	3054
VELOCITY	485	3045
ZDL GR	601	1815





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	170.5	36	172.0	0.00	LOT
INTERM.	20	601.0	26	603.0	1.74	LOT
INTERM.	13 3/8	1798.0	17 1/2	1800.0	1.84	LOT
INTERM.	9 5/8	2837.0	12 1/4	2840.0	2.01	LOT
LINER	7	3051.0	8 1/2	3051.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Fløtegrense [Pa]	Type slam	Dato, måling
171	1.03			WATER BASED	06.06.1991
278	1.03			WATER BASED	10.06.1991
601	1.35	20.0	11.0	WATER BASED	17.06.1991
601	1.35	25.0	12.5	WATER BASED	17.06.1991
601	1.35	19.0	3.0	WATER BASED	17.06.1991
615	1.03			WATER BASED	10.06.1991
615	0.00			WATER BASED	10.06.1991
1036	1.20	15.0	4.0	WATER BASED	14.06.1991
1460	1.30	17.0	4.0	WATER BASED	14.06.1991
1460	1.30	20.0	6.5	WATER BASED	14.06.1991
1789	1.51	22.0	3.5	WATER BASED	20.06.1991
1789	1.53	26.0	3.5	WATER BASED	20.06.1991
1798	1.51	22.0	3.5	WATER BASED	18.06.1991
1815	1.35	20.0	11.0	WATER BASED	17.06.1991
1815	1.35	20.0	6.5	WATER BASED	14.06.1991
1815	1.35	25.0	12.5	WATER BASED	17.06.1991
1818	1.40	19.0	3.0	WATER BASED	17.06.1991
2240	1.53	25.0	4.5	WATER BASED	21.06.1991
2240	1.53	30.0	5.0	WATER BASED	25.06.1991
2240	1.51	22.0	3.5	WATER BASED	18.06.1991
2240	1.51	22.0	3.5	WATER BASED	20.06.1991
2240	1.53	26.0	3.5	WATER BASED	20.06.1991
2240	1.53	30.0	4.5	WATER BASED	25.06.1991
2240	1.53	31.0	4.5	WATER BASED	25.06.1991
2240	1.53	28.0	5.0	WATER BASED	25.06.1991



2240	1.53	29.0	4.5	WATER BASED	26.06.1991
2240	1.53	29.0	6.0	WATER BASED	27.06.1991
2482	1.51	22.0	3.5	WATER BASED	20.06.1991
2495	1.53	26.0	3.5	WATER BASED	20.06.1991
2599	1.53	25.0	4.5	WATER BASED	21.06.1991
2725	1.53	30.0	5.0	WATER BASED	25.06.1991
2812	1.53	30.0	4.5	WATER BASED	25.06.1991
2830	1.53	31.0	4.5	WATER BASED	25.06.1991
2850	1.27	18.0	3.5	WATER BASED	01.07.1991
2850	1.27	18.0	3.5	WATER BASED	03.07.1991
2850	1.27	18.0	4.0	WATER BASED	03.07.1991
2855	1.53	29.0	6.0	WATER BASED	27.06.1991
2855	1.53	29.0	4.5	WATER BASED	26.06.1991
2855	1.53	28.0	5.0	WATER BASED	25.06.1991
2907	1.27	21.0	7.0	WATER BASED	01.07.1991
3054	1.27	18.0	3.5	WATER BASED	01.07.1991

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]
1778 Formation pressure (Formasjonstrykk)	pdf	0.22

