



Generell informasjon

Brønnbane navn	30/2-2
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	HULDRA
Funn	30/2-1 Huldra
Brønn navn	30/2-2
Seismisk lokalisering	L 8330 - 134 SP. 430
Utvinningstillatelse	051
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	447-L
Boreinnretning	DYVI DELTA
Boredager	137
Borestart	19.12.1984
Boreslutt	04.05.1985
Frigitt dato	04.05.1987
Publiseringsdato	18.02.2015
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	29.0
Vanndybde ved midlere havflate [m]	123.0
Totalt målt dybde (MD) [m RKB]	4172.0
Totalt vertikalt dybde (TVD) [m RKB]	4169.0
Maks inklinasjon [°]	7.8
Temperatur ved bunn av brønnbanen [°C]	152
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	DRAKE FM
Geodetisk datum	ED50
NS grader	60° 49' 53.89" N



ØV grader	2° 39' 51.65" E
NS UTM [m]	6744240.64
ØV UTM [m]	481749.07
UTM sone	31
NPDID for brønnbanen	457

Brønnhistorie

**General**

Well 30/2-2 was drilled on the Mokkukalven Fault Complex north of the Oseberg Field in the North Sea. The objective was to test possible hydrocarbon accumulations in the Huldra Field, on a structural high that is separated from Huldra discovery well 30/2-1 with significant faults. Well 30/2-1 encountered a 119 m gas column in the Brent Group with a down-to contact at 3793 m. The actual gas/water or oil/water contact could not be established. The main target for 30/2-2 was the Brent Group, believed to be some 70 m deeper than the gas column in 30/2-1.

Operations and results

Appraisal well 30/2-2 was spudded with the semi-submersible installation Dyvi Delta on 19 December 1984 and drilled to TD at 4172 m in the Early Jurassic Drake Formation. When doing the reservoir logging, a radioactive part of the logging tool was left in the hole. This accident caused a sidetrack from 3894 m KB to TD. The sidetrack ran parallel to the original hole at a distance of approximately 20 m. The intention was to drill 50 m into the Statfjord Formation, but the well was finished in the Drake Formation due to hole conditions. The well was drilled with spud mud down to 214 m, with gel/seawater from 214 m to 1023 m, with gypsum/CMC mud from 1023 m to 3802 m, and with gel/lignosulphonate from 3802 m to TD.

Gas bearing Brent sandstone was encountered at 3935 m, with the gas-water contact somewhere in the interval 3975 - 4080 m. No distinct contact was possible to recognize from logs or shows, but later geochemical analyses of the corers indicated a contact at ca 3984 m. Fluorescence indicating shows was first recorded on claystone/limestone cuttings in the interval 2204 m to 2267 m in the Lista Formation. Intermittent golden cut was observed on cuttings samples in the interval 2489 m to 2585 m in the Shetland Group. Otherwise, oil/condensate shows were recorded on sandstones from the Brent Group through the hydrocarbon-bearing reservoir. Below the contact, weak shows believed to relate to in-situ kerogen in coals and shales were recorded down to TD.

A total of 157 m conventional core was recovered in eighteen cores in the interval from 3908 m in the lower Heather Formation, through all of Brent Group and down to 4139.1 m in the uppermost Drake Formation. All cores were cut in the original hole, before side-tracking. Log runs 1 to 5 were also run in the original hole, while run 6 and 7 were run in the sidetrack. No wire line fluid samples were taken.

The well was permanently abandoned on 4 May 1985 as a gas appraisal well.

Testing

Three drill stem tests were conducted in the Brent Group.

DST 1B tested the interval 4071 - 4076 m in the Etive Formation. The test flowed water at only five m³/day through a 19.05 mm choke during a 7.07 hours flow period. The maximum temperature reading was 150 °C. DST 1A failed due to technical problems.

DST 2B tested the intervals 4011-4013 m, 4017-4025 m, and 4035 - 4042 m in the Ness Formation. The test flowed water at only eight m³/day through a 19.05 mm choke during a 13.5 hours flow period. The maximum temperature reading was 148 °C. DST 2A failed due to technical problems.

DST 3 tested the intervals 3935 - 3949 m, 3955 – 3959 m, and 3967-3974 m in the Tarbert Formation. It produced 227600 Sm³ gas and 105 Sm³ condensate /day through a 19.05 mm choke. The GOR was 2170 Sm³/Sm³. The maximum temperature reading was 137 °C.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
220.00	4172.00

Borekaks tilgjengelig for prøvetaking?	NO
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3908.0	3912.5	[m]
2	3939.0	3957.3	[m]
3	3957.3	3965.8	[m]
4	3966.0	3979.8	[m]
5	3979.8	3987.6	[m]
6	3987.8	3989.6	[m]
7	3989.6	3993.5	[m]
8	3993.5	3997.5	[m]
9	4014.0	4025.6	[m]
10	4026.0	4027.9	[m]
11	4029.0	4031.6	[m]
12	4031.8	4047.7	[m]
13	4047.7	4048.9	[m]
14	4048.9	4052.5	[m]
15	4076.0	4093.8	[m]
16	4094.0	4112.3	[m]
17	4112.3	4130.3	[m]
18	4130.5	4135.5	[m]

Total kjerneprøve lengde [m]	158.4
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder





3908-3912m

3939-3944m

3944-3950m

3950-3956m

3956-3957m



3957-3963m

3963-3965m

3966-3972m

3972-3978m

3978-3979m



3979-3985m

3985-3987m

3987-3989m

3989-3993m

3993-3997m



4014-4020m

4020-4025m

4026-4027m

4029-4031m

4031-4037m



4037-4043m

4043-4047m

4047-4048m

4048-4052m

4076-4082m



4082-4088m

4088-4093m

4094-4100m

4100-4106m

4106-4112m





4112-4112m 4112-4118m 4118-4124m 4124-4130m 4130-4130m



4130-4135m

Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2000.0	[m]	C	GEOST
2018.0	[m]	C	GEOST
2030.0	[m]	C	GEOST
2048.0	[m]	C	GEOST
2060.0	[m]	C	GEOST
2078.0	[m]	C	GEOST
2090.0	[m]	C	GEOST
2108.0	[m]	C	GEOST
2120.0	[m]	C	GEOST
2138.0	[m]	C	GEOST
2150.0	[m]	C	GEOST
2168.0	[m]	C	GEOST
2180.0	[m]	C	GEOST
2198.0	[m]	C	GEOST
2210.0	[m]	C	GEOST
2228.0	[m]	C	GEOST
2240.0	[m]	C	GEOST
2264.0	[m]	C	GEOST
2270.0	[m]	C	GEOST
2288.0	[m]	C	GEOST
2300.0	[m]	C	GEOST
2318.0	[m]	C	GEOST
2330.0	[m]	C	GEOST
2348.0	[m]	C	GEOST
2360.0	[m]	C	GEOST
2378.0	[m]	C	GEOST
2390.0	[m]	C	GEOST



2408.0 [m]	C	GEOST
2420.0 [m]	C	GEOST
2438.0 [m]	C	GEOST
2450.0 [m]	C	GEOST
2468.0 [m]	C	GEOST
2480.0 [m]	C	GEOST
2496.0 [m]	C	GEOST
2518.0 [m]	C	GEOST
2528.0 [m]	C	GEOST
2542.0 [m]	C	GEOST
2558.0 [m]	C	GOEST
2570.0 [m]	C	GEOST
2585.0 [m]	C	GEOST
2600.0 [m]	C	GEOST
2618.0 [m]	C	GEOST
2630.0 [m]	C	GEOST
2648.0 [m]	C	GEOST
2660.0 [m]	C	GEOST
2678.0 [m]	C	GEOST
2690.0 [m]	C	GEOST
2708.0 [m]	C	GEOST
2720.0 [m]	DC	GEOST
2738.0 [m]	C	GEOST
2750.0 [m]	C	GEOST
2753.0 [m]	C	GEOST
2768.0 [m]	C	GEOST
2780.0 [m]	C	GEOST
2798.0 [m]	C	GEOST
2810.0 [m]	C	GEOST
2828.0 [m]	C	GEOST
2840.0 [m]	C	GEOST
2858.0 [m]	C	GEOST
2870.0 [m]	C	GEOST
2888.0 [m]	C	GEOST
2900.0 [m]	C	GEOST
2918.0 [m]	C	GEOST
2930.0 [m]	C	GEOST
2948.0 [m]	C	GEOST
2960.0 [m]	DC	GEOST
2978.0 [m]	C	GEOST



2990.0 [m]	C	GEOST
3008.0 [m]	C	GEOST
3020.0 [m]	C	GEOST
3038.0 [m]	C	GEOST
3068.0 [m]	C	GEOST
3080.0 [m]	C	GEOST
3098.0 [m]	C	GEOST
3110.0 [m]	C	GEOST
3128.0 [m]	C	GEOST
3140.0 [m]	C	GEOST
3158.0 [m]	C	GEOST
3170.0 [m]	C	GEOST
3188.0 [m]	C	GEOST
3200.0 [m]	C	GEOST
3230.0 [m]	C	GEOST
3248.0 [m]	C	GEOST
3260.0 [m]	C	GEOST
3278.0 [m]	C	GEOST
3290.0 [m]	C	GEOST
3308.0 [m]	C	GEOST
3320.0 [m]	C	GEOST
3338.0 [m]	C	GEOST
3350.0 [m]	C	GEOST
3368.0 [m]	C	GEOST
3380.0 [m]	C	GEOST
3398.0 [m]	C	GEOST
3410.0 [m]	C	GEOST
3428.0 [m]	C	GEOST
3440.0 [m]	C	GEOST
3458.0 [m]	C	GEOST
3470.0 [m]	C	GEOST
3488.0 [m]	C	GEOST
3500.0 [m]	C	GEOST
3518.0 [m]	C	GEOST
3530.0 [m]	C	GEOST
3548.0 [m]	C	GEOST
3560.0 [m]	C	GEOST
3578.0 [m]	C	GEOST
3590.0 [m]	C	GEOST
3608.0 [m]	C	GEOST



3620.0 [m]	C	GEOST
3638.0 [m]	C	GEOST
3650.0 [m]	C	GEOST
3668.0 [m]	C	GEOST
3680.0 [m]	C	GEOST
3698.0 [m]	C	GEOST
3710.0 [m]	C	GEOST
3728.0 [m]	C	GEOST
3740.0 [m]	C	GEOST
3758.0 [m]	C	GEOST
3761.0 [m]	C	GEOST
3770.0 [m]	C	GEOST
3788.0 [m]	C	GEOST
3800.0 [m]	C	GEOST
3818.0 [m]	C	GEOST
3830.0 [m]	C	GEOST
3839.0 [m]	C	GEOST
3848.0 [m]	C	GEOST
3860.0 [m]	C	GEOST
3869.0 [m]	C	GEOST
3878.0 [m]	C	GEOST
3890.0 [m]	C	GEOST
3899.0 [m]	C	GEOST
3908.0 [m]	C	GEOST
3920.0 [m]	C	GEOST
3938.0 [m]	C	GEOST
3940.0 [m]	C	GEOST
3944.0 [m]	SWC	GEOST
3950.0 [m]	DC	GEOST
3953.0 [m]	C	GEOST
3956.0 [m]	C	GEOST
3956.0 [m]	DC	GEOST
3964.0 [m]	C	GEOST
3968.0 [m]	DC	GEOST
3970.0 [m]	C	GEOST
3975.0 [m]	C	GEOST
3976.0 [m]	C	GEOST
3977.0 [m]	DC	GEOST
3978.0 [m]	C	GEOST
3980.0 [m]	DC	GEOST



3980.0 [m]	C	GEOST
3983.0 [m]	C	GEOST
3985.0 [m]	DC	GEOST
3990.0 [m]	DC	GEOST
3994.0 [m]	DC	GEOST
3995.0 [m]	SWC	GEOST
3998.0 [m]	DC	GEOST
4004.0 [m]	SWC	GEOST
4010.0 [m]	DC	GEOST
4014.0 [m]	C	GEOST
4018.0 [m]	C	GEOST
4024.0 [m]	C	GEOST
4027.0 [m]	C	GEOST
4028.0 [m]	DC	GEOST
4029.0 [m]	DC	GEOST
4030.0 [m]	C	GEOST
4036.0 [m]	C	GEOST
4040.0 [m]	DC	GEOST
4040.0 [m]	C	GEOST
4043.0 [m]	C	GEOST
4044.0 [m]	DC	GEOST
4046.0 [m]	DC	GEOST
4047.0 [m]	DC	GEOST
4048.0 [m]	DC	GEOST
4048.0 [m]	C	GEOST
4049.0 [m]	C	GEOST
4051.0 [m]	DC	GEOST
4051.0 [m]	C	GEOST
4052.0 [m]	C	GEOST
4058.0 [m]	DC	GEOST
4061.0 [m]	SWC	GEOST
4070.0 [m]	SWC	GEOST
4070.0 [m]	DC	GEOST
4079.0 [m]	SWC	GEOST
4088.0 [m]	DC	GEOST
4089.0 [m]	C	GEOST
4093.0 [m]	DC	GEOST
4093.0 [m]	C	GEOST
4095.0 [m]	DC	GEOST
4096.0 [m]	DC	GEOST



4097.0 [m]	C	GEOST
4098.0 [m]	C	GEOST
4100.0 [m]	DC	GEOST
4106.0 [m]	SWC	GEOST
4115.0 [m]	SWC	GEOST
4118.0 [m]	SWC	GEOST
4118.0 [m]	DC	GEOST
4126.0 [m]	DC	GEOST
4128.0 [m]	C	GEOST
4130.0 [m]	DC	GEOST
4132.0 [m]	C	GEOST
4134.0 [m]	C	GEOST
4135.0 [m]	DC	GEOST
4148.0 [m]	DC	GEOST
4160.0 [m]	DC	GEOST
4172.0 [m]	DC	GEOST

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST3	3935.00	3974.00		23.04.1985 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
152	NORDLAND GP
783	UTSIRA FM
892	HORDALAND GP
892	NO FORMAL NAME
1967	ROGALAND GP
1967	BALDER FM
2041	SELE FM
2063	LISTA FM
2224	SHETLAND GP
2224	JORSALFARE FM
2533	KYRRE FM



3442	TRYGGVASON FM
3679	BLØDØKS FM
3702	CROMER KNOLL GP
3702	UNDIFFERENTIATED
3776	VIKING GP
3776	DRAUPNE FM
3824	HEATHER FM
3935	BRENT GP
3935	TARBERT FM
3959	NESS FM
4070	ETIVE FM
4075	RANNOCH FM
4098	OSEBERG FM
4135	DUNLIN GP
4135	DRAKE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
457_GCH_1	pdf	0.63
457_GCH_2	pdf	3.83
457_GCH_3	pdf	1.71
457_GCH_4	pdf	2.47
457_GCH_5	pdf	0.41
457_GCH_6	pdf	0.10
457_GCH_7	pdf	0.32
457_GCH_8	pdf	0.46

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
457_01 WDSS General Information	pdf	0.30
457_02 WDSS completion log	pdf	0.30

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)





Dokument navn	Dokument format	Dokument størrelse [KB]
457_30_2_2_Completion_log	pdf	5.09
457_30_2_2_Completion_Report	pdf	29.56

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	4071	4076	19.1
2.0	4011	4042	19.1
3.0	3935	3974	19.1

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					
3.0	105	226000	0.808	0.734	2160

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL	722	2345
CBL	2425	3788
CBL	3600	4127
CDL CNS GR	214	4163
DIL BCS CAL GR	214	4164
DLL MSF GR	1006	2718
FED	2345	2716
NGT	3665	4175
SFT	3937	4100





VELOCITY	800	4125
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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	214.5	36	214.5	0.00	LOT
SURF.COND.	20	1008.0	26	1023.0	1.61	LOT
INTERM.	13 3/8	2350.0	17 1/2	2365.0	2.03	LOT
INTERM.	9 5/8	3778.0	12 1/4	3802.0	2.14	LOT
LINER	7	4170.0	8 1/2	4170.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1670	1.11	9.0	7.3	WATERBASED	04.01.1985
1670	1.11	9.0	7.3	WATER BASED	04.01.1985
1870	1.25	9.0	10.0	WATER BASED	07.01.1985
1870	1.25	9.0	10.0	WATERBASED	07.01.1985
1978	1.35	10.0	13.0	WATER BASED	07.01.1985
1978	1.35	10.0	13.0	WATERBASED	07.01.1985
2122	1.45	15.0	15.2	WATER BASED	07.01.1985
2122	1.45	15.0	15.2	WATERBASED	07.01.1985
2258	1.45	16.0	8.3	WATERBASED	07.01.1985
2258	1.45	16.0	8.3	WATER BASED	07.01.1985
2365	1.50	16.0	8.4	WATER BASED	09.01.1985
2365	1.53	17.0	8.9	WATER BASED	09.01.1985
2365	1.55	16.0	7.0	WATER BASED	14.01.1985
2365	1.50	16.0	8.4	WATERBASED	09.01.1985
2365	0.00	17.0	8.9	WATERBASED	09.01.1985
2365	0.00	16.0	7.0	WATERBASED	14.01.1985
2472	1.55	18.0	7.4	WATERBASED	14.01.1985
2472	1.55	18.0	7.4	WATER BASED	14.01.1985
2533	1.60	20.0	7.9	WATER BASED	15.01.1985
2533	1.60	20.0	7.9	WATERBASED	15.01.1985
2556	1.70	21.0	7.4	WATERBASED	15.01.1985
2556	1.70	21.0	7.4	WATER BASED	15.01.1985
2605	1.70	22.0	7.9	WATER BASED	16.01.1985



2605	1.70	22.0	7.9	WATERBASED	16.01.1985
2619	1.73	22.0	7.4	WATER BASED	16.01.1985
2619	1.73	22.0	7.4	WATERBASED	16.01.1985
2704	1.77	22.0	7.0	WATERBASED	17.01.1985
2704	1.77	22.0	7.0	WATER BASED	17.01.1985
2802	1.75	19.0	7.0	WATER BASED	18.01.1985
2802	1.75	19.0	7.0	WATERBASED	18.01.1985
2909	1.78	22.0	8.0	WATERBASED	21.01.1985
2909	1.78	22.0	8.0	WATER BASED	21.01.1985
2980	1.79	22.0	8.0	WATERBASED	28.01.1985
2980	1.79	22.0	8.0	WATER BASED	28.01.1985
3802	1.82	22.0	6.0	WATERBASED	11.02.1985
3802	1.82	22.0	6.0	WATER BASED	11.02.1985
3884	1.91	25.0	8.0	WATER BASED	18.02.1985
3884	1.91	25.0	8.0	WATERBASED	18.02.1985
3938	1.96	35.0	8.0	WATER BASED	01.04.1985
3938	1.96	35.0	8.0	WATERBASED	01.04.1985
3950	1.96	35.0	8.0	WATERBASED	01.04.1985
3950	1.96	35.0	8.0	WATER BASED	01.04.1985
4013	1.94	26.0	8.8	WATERBASED	26.02.1985
4013	1.94	26.0	8.8	WATER BASED	26.02.1985
4019	1.96	35.0	8.0	WATER BASED	01.04.1985
4019	1.96	35.0	8.0	WATERBASED	01.04.1985
4100	1.96	35.0	8.0	WATERBASED	01.04.1985
4100	1.96	35.0	8.0	WATER BASED	01.04.1985
4172	1.96	35.0	8.4	WATER BASED	26.03.1985
4172	1.96	35.0	8.4	WATERBASED	26.03.1985
4174	1.94	26.0	8.8	WATER BASED	06.03.1985
4174	1.94	26.0	8.8	WATERBASED	06.03.1985

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
4134.68	[m]
4132.38	[m]
4124.70	[m]
4106.35	[m]
4106.02	[m]
4098.90	[m]
4093.30	[m]



4089.65	[m]
4086.65	[m]
4082.65	[m]
4078.65	[m]
4040.25	[m]
4020.73	[m]
3984.42	[m]
3973.67	[m]
3968.45	[m]
4116.65	[m]
3963.74	[m]
3957.82	[m]
3955.70	[m]
3951.45	[m]
3944.90	[m]
3939.95	[m]
4022.30	[m]
3945.00	[m]
4102.00	[m]
3974.90	[m]
3949.40	[m]
4042.90	[m]
4079.40	[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]
457 Formation pressure (Formasjonstrykk)	pdf	0.21

