

**General information**

Wellbore name	34/10-35
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	VALEMON
Discovery	34/10-23 Valemon
Well name	34/10-35
Seismic location	ST 8720-REKKE 507 & KOLONNE 1181
Production licence	050
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	715-L
Drilling facility	ROSS RIG (2)
Drilling days	148
Entered date	05.02.1992
Completed date	01.07.1992
Release date	01.07.1994
Publication date	15.03.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS/CONDENSATE
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	NESS FM
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	COOK FM
Kelly bushing elevation [m]	24.0
Water depth [m]	135.0
Total depth (MD) [m RKB]	4310.0
Final vertical depth (TVD) [m RKB]	4304.0
Maximum inclination [°]	6.7
Bottom hole temperature [°C]	156
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	61° 4' 16.17" N
EW degrees	2° 19' 16.77" E



NS UTM [m]	6771063.85
EW UTM [m]	463374.05
UTM zone	31
NPDID wellbore	1874

Wellbore history

**General**

Well 34/10-35 was drilled on the Tjalve Terrace south-east of the Gullfaks South field in the Northern North Sea. The objective was to test the hydrocarbon potential in the Brent Group between the Gullfaks South field and the 34/10-23 Valemon Discovery.

Operations and results

Well 34/10-23 was spudded with the semi-submersible installation Ross Rig on 5 February 1992 and drilled to TD at 4310 m in the Early Jurassic Statfjord Formation. No significant problems were encountered in the operations. The well was drilled water based with sea water and hi-vis pills down to 1083 m, gypsum/polymer mud from 1091 m to 3783 m, and with Thermopol mud from 3783 m to TD.

The well penetrated Tertiary, Cretaceous and Jurassic rocks. The Middle Jurassic Brent Group was encountered at 3912.5 m, unconformable below the Heather Formation. The Brent Group consisted of Ness Formation only. The underlying Dunlin Group came in with the Drake Formation at 3941.5 m, and the Cook Formation at 3964.5 m. Gas and condensate was proven in the Ness Formation and in the Cook formation down to top Burton Formation at 4048 m. Pressure data clearly indicated no pressure communication between the Ness and Cook Formation reservoirs. No gas-water contacts were established in the well. Oil shows in traces of sandstones (direct and cut fluorescence) were recorded over the interval 2030 m to 2100 m in the Lista and Våle formations and in the interval 2241 m to 2261 m in the Shetland Group. Cut fluorescence was recorded also in shales from the Draupne and Heather formation.

A total of 133.5 m core was cored in 13 cores. Cores 1 to 11 were cut from 3939 m to 4078 m with variable recovery from 33 to 100%. Cores 12 and 13 were cut from 4250 to 4287 m with overall recovery of 98.9%. Visual correlation of cores and well logs indicated a core shift relative to logs of - 8 to - 9.5 m for most cores. Segregated wire line fluid samples were taken at 3921 m (mud filtrate and gas) and at 3987 m (mud filtrate, gas and condensate).

The well was permanently abandoned on 1 July 1992 as a gas/condensate appraisal well.

Testing

Three drill stem tests were conducted in the well.

DST 1 tested the interval 4015 to 4025 m in the lower part of the Cook Formation. It was concluded that the fluid produced came from the same formation interval as during DST 2.

DST 2 tested the interval 3984 to 3995 m, the interval with the best reservoir quality in the Cook Formation. It produced 990000 Sm³ gas/day through a 36/64" choke. The gas/oil ratio was 4500 Sm³/Sm³, the oil gravity was 0.795 g/cm³ and the gas gravity was 0.667 (air = 1). The down hole temperature recorded in the test was 150 deg C.

DST3 tested the interval 3920 to 3929 m in the Ness Formation. It produced 340000 Sm³ gas/day through a 40/64" choke. The gas/oil ratio was 3000 Sm³/Sm³, the oil gravity was 0.794 g/cm³, and the gas gravity was 0.684 (air = 1). The down hole temperature recorded in the test was 142 deg C.



Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1100.00	4310.00

Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3931.0	3938.0	[m]
2	3939.0	3944.0	[m]
4	3949.5	3955.5	[m]
5	3968.0	3970.8	[m]
6	3984.0	3994.0	[m]
7	3994.0	4013.0	[m]
8	4013.0	4017.5	[m]
9	4018.0	4046.0	[m]
10	4046.0	4056.6	[m]
11	4057.5	4063.6	[m]
12	4250.0	4275.6	[m]
13	4276.0	4286.9	[m]

Total core sample length [m]	135.5
Cores available for sampling?	YES

Core photos



3931-3936m



3936-3938m



3939-3944m



3944-3944m



3944-3948m



3949-3954m



3954-3955m



3968-3970m



3984-3989m



3989-3994m



3994-3999m



3999-4004m



4004-4009m



4009-4013m



4013-4017m



4018-4023m



4023-4028m



4028-4033m



4033-4038m



4038-4043m



4043-4045m



4046-4051m



4051-4056m



4056-4056m



4057-4062m



4062-4063m



4250-4255m



4255-4260m



4260-4265m



4265-4270m



4270-4275m



4275-4275m



4276-4281m



4281-4286m



4286-4287m

**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
1120.0	[m]	DC	GEOST
1130.0	[m]	DC	GEOST
1150.0	[m]	DC	GEOST
1230.0	[m]	DC	GEOST
1250.0	[m]	DC	GEOST
1270.0	[m]	DC	GEOST
1290.0	[m]	DC	GEOST
1330.0	[m]	DC	GEOST
1340.0	[m]	DC	GEOST
1360.0	[m]	DC	GEOST
1382.5	[m]	SWC	STATO
1389.5	[m]	SWC	STATO
1411.0	[m]	SWC	STATO
1428.1	[m]	SWC	STATO
1440.0	[m]	DC	GEOST
1450.0	[m]	DC	GEOST
1480.0	[m]	SWC	STATO
1506.5	[m]	SWC	STATO
1512.6	[m]	SWC	STATO
1537.5	[m]	SWC	STATO
1550.0	[m]	DC	GEOST
1560.0	[m]	DC	GEOST
1575.8	[m]	SWC	STATO
1610.0	[m]	DC	GEOST
1620.0	[m]	DC	GEOST
1630.0	[m]	DC	GEOST
1680.0	[m]	DC	GEOST
1695.4	[m]	SWC	STATO
1710.0	[m]	SWC	STATO
1729.5	[m]	SWC	STATO
1740.0	[m]	DC	GEOST
1757.5	[m]	SWC	STATO
1770.0	[m]	DC	GEOST
1787.5	[m]	SWC	STATO
1803.0	[m]	SWC	STATO
1820.0	[m]	DC	GEOST



1840.0 [m]	DC	GEOST
1850.0 [m]	DC	GEOST
1878.8 [m]	SWC	STATO
1884.5 [m]	SWC	STATO
1910.0 [m]	DC	GEOST
1922.5 [m]	SWC	STATO
1937.6 [m]	SWC	STATO
1980.0 [m]	DC	GEOST
2010.0 [m]	DC	GEOST
2030.0 [m]	DC	GEOST
2046.4 [m]	SWC	STATO
2065.9 [m]	SWC	STATO
2079.4 [m]	SWC	STATO
2093.5 [m]	SWC	STATO
2104.0 [m]	SWC	STATO
2114.3 [m]	SWC	STATO
2120.0 [m]	DC	GEOST
2140.0 [m]	DC	GEOST
2170.0 [m]	DC	GEOST
2200.0 [m]	DC	GEOST
2230.0 [m]	DC	GEOST
2260.0 [m]	DC	GEOST
2290.0 [m]	DC	GEOST
2320.0 [m]	DC	GEOST
2350.0 [m]	DC	GEOST
2380.0 [m]	DC	GEOST
2410.0 [m]	DC	GEOST
2440.0 [m]	DC	GEOST
2470.0 [m]	DC	GEOST
2500.0 [m]	DC	GEOST
2530.0 [m]	DC	GEOST
2560.0 [m]	DC	GEOST
2590.0 [m]	DC	GEOST
2620.0 [m]	DC	GEOST
2650.0 [m]	DC	GEOST
2680.0 [m]	DC	GEOST
2710.0 [m]	DC	GEOST
2740.0 [m]	DC	GEOST
2770.0 [m]	DC	GEOST
2800.0 [m]	DC	GEOST



2830.0	[m]	DC	GEOST
2860.0	[m]	DC	GEOST
2890.0	[m]	DC	GEOST
2920.0	[m]	DC	GEOST
2950.0	[m]	DC	GEOST
2980.0	[m]	DC	GEOST
3010.0	[m]	DC	GEOST
3040.0	[m]	DC	GEOST
3070.0	[m]	DC	GEOST
3100.0	[m]	DC	GEOST
3130.0	[m]	DC	GEOST
3160.0	[m]	DC	GEOST
3190.0	[m]	DC	GEOST
3220.0	[m]	DC	GEOST
3250.0	[m]	DC	GEOST
3280.0	[m]	DC	GEOST
3310.0	[m]	DC	GEOST
3340.0	[m]	DC	GEOST
3370.0	[m]	DC	GEOST
3400.0	[m]	DC	GEOST
3430.0	[m]	DC	GEOST
3460.0	[m]	DC	GEOST
3490.0	[m]	DC	GEOST
3520.0	[m]	DC	GEOST
3550.0	[m]	DC	GEOST
3580.0	[m]	DC	GEOST
3610.0	[m]	DC	GEOST
3620.0	[m]	DC	GEOST
3630.0	[m]	DC	GEOST
3640.0	[m]	DC	GEOST
3650.0	[m]	DC	GEOST
3660.0	[m]	DC	GEOST
3670.0	[m]	DC	GEOST
3680.0	[m]	DC	GEOST
3690.0	[m]	DC	GEOST
3700.0	[m]	DC	GEOST
3710.0	[m]	DC	GEOST
3720.0	[m]	DC	GEOST
3730.0	[m]	DC	GEOST
3740.0	[m]	DC	GEOST



3750.0 [m]	DC	GEOST
3760.0 [m]	DC	GEOST
3770.0 [m]	DC	GEOST
3780.0 [m]	DC	GEOST
3786.0 [m]	DC	GEOST
3792.9 [m]	SWC	STATO
3798.0 [m]	SWC	STATO
3807.0 [m]	SWC	STATO
3813.5 [m]	SWC	STATO
3822.5 [m]	SWC	STATO
3832.5 [m]	SWC	STATO
3843.0 [m]	DC	GEOST
3852.5 [m]	SWC	STATO
3866.0 [m]	SWC	STATO
3873.6 [m]	SWC	STATO
3882.5 [m]	SWC	STATO
3894.5 [m]	SWC	STATO
3903.0 [m]	DC	GEOST
3912.0 [m]	DC	GEOST
3921.0 [m]	DC	GEOST
3931.0 [m]	C	GEOST
3937.5 [m]	C	STATO
3937.9 [m]	C	GEOST
3942.7 [m]	C	GEOST
3950.3 [m]	C	GEOST
3953.3 [m]	C	GEOST
3954.5 [m]	C	STATO
3969.8 [m]	C	GEOST
3987.9 [m]	C	GEOST
3992.8 [m]	C	STATO
3993.2 [m]	C	GEOST
3999.5 [m]	C	GEOST
4004.2 [m]	C	GEOST
4009.7 [m]	C	GEOST
4016.4 [m]	C	GEOST
4021.7 [m]	C	GEOST
4028.6 [m]	C	GEOST
4034.2 [m]	C	GEOST
4040.8 [m]	C	GEOST
4053.4 [m]	C	GEOST



4060.4 [m]	C	GEOST
4062.0 [m]	C	STATO
4062.2 [m]	C	GEOST
4063.6 [m]	C	GEOST
4065.0 [m]	C	STATO
4086.0 [m]	DC	GEOST
4095.0 [m]	DC	GEOST
4104.0 [m]	DC	GEOST
4113.0 [m]	DC	GEOST
4122.0 [m]	SWC	STATO
4131.0 [m]	DC	GEOST
4140.0 [m]	DC	GEOST
4149.0 [m]	DC	GEOST
4158.0 [m]	DC	GEOST
4167.0 [m]	DC	GEOST
4176.0 [m]	DC	GEOST
4185.0 [m]	DC	GEOST
4194.0 [m]	DC	GEOST
4203.0 [m]	DC	GEOST
4212.0 [m]	DC	GEOST
4221.0 [m]	DC	GEOST
4230.0 [m]	DC	GEOST
4239.0 [m]	DC	GEOST
4252.5 [m]	C	GEOST
4262.0 [m]	C	GEOST
4278.9 [m]	C	GEOST
4284.7 [m]	C	GEOST
4296.0 [m]	DC	GEOST
4310.0 [m]	DC	GEOST

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST	TEST1	4015.00	4025.00		01.06.1992 - 20:00	YES
DST	TEST2	3995.00	3984.00		09.06.1992 - 11:00	YES
DST	TEST3	3929.00	3920.00		15.06.1992 - 09:30	YES

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
159	NORDLAND GP
910	UTSIRA FM
962	HORDALAND GP
1872	ROGALAND GP
1872	BALDER FM
1930	SELE FM
1938	LISTA FM
2080	VÅLE FM
2097	SHETLAND GP
3635	CROMER KNOLL GP
3791	VIKING GP
3791	DRAUPNE FM
3877	HEATHER FM
3913	BRENT GP
3913	NESS FM
3942	DUNLIN GP
3942	DRAKE FM
3965	COOK FM
4048	BURTON FM
4116	AMUNDSEN FM
4239	STATEFJORD GP

Geochemical information

Document name	Document format	Document size [MB]
1874_1	pdf	0.70
1874_2	pdf	28.20
1874_3	pdf	25.26

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
1874_01 WDSS General Information	pdf	0.62





1874 02 WDSS completion log	pdf	0.24
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Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
1874 34 10 35 Completion log	pdf	2.67
1874 34 10 35 Completion report	pdf	36.80
1874 34 10 35 Completion report Appendix	pdf	16.59

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	4015	4025	15.8
2.0	3984	3995	12.7
3.0	3920	3930	15.8

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	190.000			
2.0		390.000		
3.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	130	630000	0.795	0.665	4800
2.0	220	990000	0.795	0.667	4500
3.0	113	340000	0.794	0.684	3000

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL GR	2633	3200
CBL VDL GR	3010	3359
DAC GR	3769	4302
DIFL ACL GR CHT	3769	4302
DIFL ACL ZDL GR CAL	1080	4180





DIP GR	3858	4302
DLL MLL CHT SPL	3886	4056
FMR GR CHR	3987	3987
FMT GR CHT	3871	3932
FMT GR CHT	3920	4288
FMT GR CHT	3921	3921
MWD	227	4310
SBT VDL GR	3651	4056
VSP	753	4230
ZDL CNL GR CAL CHT	3769	4302

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
CONDUCTOR	30	221.0	36	221.0	0.00	LOT
INTERM.	20	1083.0	26	1083.0	1.62	LOT
INTERM.	13 3/8	3200.0	17 1/2	3202.0	2.00	LOT
INTERM.	9 5/8	3777.0	12 1/4	3780.0	2.12	LOT
LINER	7	4123.0	8 1/2	4310.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
903	1.03			WATER BASED	
1083	1.03	17.0		DUMMY	
1090	1.03			WATER BASED	
1091	1.03	19.0		DUMMY	
1535	1.20	20.0		DUMMY	
1995	1.30	24.0		DUMMY	
2536	1.30	24.0		DUMMY	
2629	1.30	31.0		WATER BASED	
2860	1.30	29.0		WATER BASED	
2973	1.30	25.0		WATER BASED	
3020	1.30	28.0		WATER BASED	
3116	1.39	35.0		WATER BASED	
3140	1.39	32.0		WATER BASED	
3186	1.39	34.0		WATER BASED	



3215	1.46	28.0		WATER BASED	
3218	1.39	22.0		WATER BASED	
3285	1.39	23.0		WATER BASED	
3339	1.39	24.0		WATER BASED	
3449	1.39	27.0		WATER BASED	
3496	1.39	24.0		WATER BASED	
3527	1.67	36.0		WATER BASED	
3534	1.67	32.0		WATER BASED	
3547	1.70	28.0		DUMMY	
3547	1.67	32.0		WATER BASED	
3549	1.70	32.0		DUMMY	
3592	1.70	38.0		DUMMY	
3602	1.70	41.0		DUMMY	
3633	1.78	41.0		DUMMY	
3662	1.78	44.0		DUMMY	
3740	1.83	44.0		DUMMY	
3779	1.92	40.0		DUMMY	
3780	1.91	36.0		DUMMY	
3812	2.00	27.0		DUMMY	
3821	2.04	39.0		DUMMY	
3869	2.04	25.0		DUMMY	
3871	2.04	39.0		DUMMY	
3883	2.04	26.0		DUMMY	
3921	2.04	41.0		DUMMY	
3939	2.04	31.0		DUMMY	
3949	2.04	35.0		DUMMY	
4069	2.04	57.0		DUMMY	
4078	2.04	51.0		DUMMY	
4086	2.04	28.0		DUMMY	
4157	2.04	50.0		DUMMY	
4202	2.04	52.0		DUMMY	
4250	2.04	45.0		DUMMY	
4276	2.04	44.0		DUMMY	
4287	2.04	46.0		DUMMY	
4310	2.04	33.0		DUMMY	

Pressure plots





The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
1874 Formation pressure (Formasjonstrykk)	pdf	0.21

