

**General information**

Wellbore name	30/6-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/6-1 Oseberg
Well name	30/6-1
Seismic location	703 127 SP 390
Production licence	053
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	216-L
Drilling facility	DEEPSEA SAGA
Drilling days	96
Entered date	18.06.1979
Completed date	22.09.1979
Release date	22.09.1981
Publication date	21.05.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.0
Water depth [m]	106.0
Total depth (MD) [m RKB]	3175.0
Bottom hole temperature [°C]	91
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	LUNDE FM
Geodetic datum	ED50
NS degrees	60° 33' 15.1" N
EW degrees	2° 46' 38.36" E
NS UTM [m]	6713312.00
EW UTM [m]	487787.27
UTM zone	31
NPDID wellbore	380



Wellbore history

General

Well 30/6-1 was drilled on the Oseberg Fault block in the North Sea. The primary objective was to penetrate sandstones of Middle Jurassic age and to evaluate their possible content of hydrocarbons. Secondary objectives were sandstones of Lower Jurassic and Paleocene age. The well is Reference well for the Statfjord Group.

Operations and results

Wildcat well 30/6-1 was spudded with the semi-submersible installation Deepsea Saga on 18 June 1979 and drilled to TD at 3175 m in the Triassic Lunde Formation. Problems with setting the 9 5/8" casing at 2443 m caused an 8 days delay in the drilling phase. Also gumbo problems were encountered in the interval 1000 – 1600 m and 4 days rig time as lost due to this. Otherwise operation proceeded without significant problems. The well was drilled with spud mud down to 895 m and with a lignosulphonate/bentonite mud from 895 m to 2456 m and with chromium-lignosulphonate/bentonite mud from 2456 m to TD. Diesel was added at 1720 m to reduce problems with sloughing shales. A 6% to trace levels of oil was recorded in the mud from this depth to TD.

The Cretaceous Jorsalfare Formation had 6.75 m of net pay gas in thin sandstones with average porosity of 29% and water saturation of 39.3%. The Brent Group was encountered at 2285 m and was gas/condensate filled in 38.75 m of net pay sandstones with average porosity of 22.5% and water saturation of 29.2%. The hydrocarbon/water contact was not encountered in the well. The Dunlin Group was water bearing with 45 m of net sand with an average porosity of 24.6%. The Statfjord Group was water bearing with 235 m of net sand with an average porosity of 21.4%. Weak shows were described on conventional and sidewall cores in sandstones from below the hydrocarbon bearing Brent Group down to 2547 m in the Cook Formation.

Six cores were cut. Cores 1 to 5 were cut from 2333.5 m to 2381.2 m in the lower Etive and upper Drake formations. Recovery was generally good, from 89.2 to 100%, but only 52.9 % recovery was obtained in core 5. Core 6 was cut from 2722 to 2733 m in the Nansen Formation with 88.2% recovery. The RFT tool was run for pressure points, but no fluid sampling was done.

The well was permanently abandoned on 22 September as a gas/condensate discovery.

Testing

Two drill stem tests were conducted in the Brent Group.

DST1 tested the interval 2320 to 2330 m in the Etive Formation. It produced 153 Sm³ oil and 487000 Sm³ gas /day through a 32/64" choke. The GOR was 3063 Sm³/Sm³, the oil gravity was 58.9 °API, and the gas gravity was 0.657 (air = 1). The maximum DST temperature was 91.7 °C.

DST1 tested the interval 2301 to 2305 m in the Ness Formation. It produced 166 Sm³ oil and 659800 Sm³ gas /day. Due to a technical problem the effective choke size is unknown. The GOR was 4150 Sm³/Sm³, the oil gravity was 53.5 °API, and the gas gravity was 0.663 (air = 1). The maximum DST temperature was 91.1 °C.



Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
220.00	3175.00

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	2333.0	2338.8	[m]
2	2339.5	2345.2	[m]
3	2345.5	2356.4	[m]
4	2356.7	2365.6	[m]
5	2365.6	2373.9	[m]
6	2722.0	2731.7	[m]

Total core sample length [m]	49.3
Cores available for sampling?	YES

Core photos



2333-2335m



2335-2338m



2338-2339m



2339-2342m



2342-2344m



2344-2345m



2345-2348m



2348-2350m



2350-2353m



2353-2356m



2356-2358m



2358-2360m



2360-2362m



2362-2365m



2365-2368m



2356-2359m 2359-2362m 2362-2364m 2364-2365m 2365-2368m



2368-2371m



2371-2373m



2373-2374m



2722-2724m



2724-2727m



2727-2730m



2730-2731m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2262.0	[m]	DC	IKU

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	DST1	2320.00	2330.00		09.09.1979 - 21:00	YES
DST	DST2	2301.00	2305.00	CONDE NSATE	15.09.1980 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
131	NORDLAND GP
660	UTSIRA FM
865	HORDALAND GP
883	SKADE FM
1062	UNDIFFERENTIATED



1435	SKADE FM
1471	UNDIFFERENTIATED
1949	ROGALAND GP
1949	BALDER FM
2021	SELE FM
2053	LISTA FM
2136	VÅLE FM
2194	SHETLAND GP
2194	JORSALFARE FM
2252	VIKING GP
2252	HEATHER FM
2285	BRENT GP
2285	NESS FM
2320	ETIVE FM
2345	DUNLIN GP
2345	DRAKE FM
2537	COOK FM
2589	AMUNDSEN FM
2712	STATFJORD GP
2712	NANSEN FM
2786	EIRIKSSON FM
2959	RAUDE FM
3003	HEGRE GP
3003	LUNDE FM

Geochemical information

Document name	Document format	Document size [MB]
380_GCH_1	pdf	0.83
380_GCH_2	pdf	0.43
380_GCH_3	pdf	1.47
380_GCH_4	pdf	0.51

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

Document name	Document format	Document size [MB]
380_01_WDSS_General_Information	pdf	0.11





380_02_WDSS_completion_log	pdf	0.20
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Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
380_30_6_1_COMPLETION_LOG	pdf	1.29
380_30_6_1_COMPLETION_REPORT	pdf	26.41

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2320	2330	0.0
2.0	2301	2305	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				90
2.0				90

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	152	487000	0.730	0.657	3066
2.0	166	660000	0.765	0.663	4150

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CALI	787	1721
CBL GR	121	2411
CBL GR	1500	2345
CBL GR	1620	1913
CCL GR	100	150
CCL GR	2220	2250
CCL GR	2250	2350
DLL MSFL GR	2275	2380
FDC CNL GR CAL	2150	3166





FDC GR CAL	1721	2150
HDT	1918	3158
ISF SON GR SP	188	3167
VELOCITY	608	3170

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	189.5	36	189.5	0.00	LOT
SURF.COND.	20	887.0	26	895.0	1.34	LOT
LINER	16	1724.0	19 1/2	1724.0	1.71	LOT
INTERM.	13 3/8	1922.0	17 1/2	1934.0	1.92	LOT
INTERM.	9 5/8	2443.0	12 1/4	2456.0	1.95	LOT
OPEN HOLE		3175.0	8 1/2	3175.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
189	1.04			waterbased	
895	1.08	48.0		waterbased	
1490	1.14			waterbased	
1723	1.25	62.0		waterbased	
2178	1.51	52.0		waterbased	
2392	1.35	58.0		waterbased	
2456	1.42	57.0		waterbased	
2800	1.51	54.0		waterbased	
3021	1.30			waterbased	

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]
380 Formation pressure (Formasjonstrykk)	pdf	0.22

