

**General information**

Wellbore name	30/6-6
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/6-1 Oseberg
Well name	30/6-6
Seismic location	8006 - 203 SP 280
Production licence	053
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	311-L
Drilling facility	DEEPSEA SAGA
Drilling days	75
Entered date	09.01.1982
Completed date	24.03.1982
Release date	24.03.1984
Publication date	29.03.2014
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	114.0
Total depth (MD) [m RKB]	3225.0
Final vertical depth (TVD) [m RKB]	3224.0
Maximum inclination [°]	2.5
Bottom hole temperature [°C]	125
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	COOK FM
Geodetic datum	ED50
NS degrees	60° 36' 43.43" N
EW degrees	2° 49' 54.11" E
NS UTM [m]	6719748.76
EW UTM [m]	490785.95
UTM zone	31
NPDID wellbore	39



Wellbore history

General

Well 30/6-6 was drilled on the 30/6 Alpha structure (Oseberg fault block) in the North Sea, as the fifth well drilled on this structure. The well was drilled down-dip of 30/6-3 and 30/6-4. The primary objective of this well was to define the oil-water contact for the structure. This would be achieved by penetrating the OWC or by extrapolation of fluid gradients from RFT and DST pressure measurements.

Operations and results

Appraisal well 30/6-6 was spudded with the semi-submersible installation Deepsea Saga on 9 January 1982 and drilled to TD at 3225 m in the Early Jurassic Cook Formation. Drilling operations proceeded without specific problems down to ca 1300 m. At this depth problems related to excessive torque and drag on short trips occurred. The mud weight was then reduced from 1.4 to 1.29 after which drilling again proceeded without problems. The well was drilled with spud mud down to 200 m, with Gel/seawater/spud mud from 200 m to 1793 m, and with gel/lignosulphonate mud from 1793 m to TD.

Top Viking Group was penetrated at 2587 m and consisted of 113 m Draupne Formation shales on top of 120 m Heather Formation. The Brent Group was encountered at 2820 m. It was water bearing. Combined RFT-pressures from 30/6-6 and 30/6-4 gave an oil/water contact at 2720 +/- 20 m, which was later confirmed by the build-up pressures from the DST and the calculated water density under reservoir conditions. No indications of H₂S were seen in this well. No shows are reported from the well.

Three cores were taken in the Ness and Eive formations from 2921 m - 2964 m. RFT water samples were attempted at 2879 m, 2955 m and 2956 m, but were only moderately successful due to poor recovery and contamination with cushion water.

The well was permanently abandoned on 24 March 1982 as a dry well.

Testing

One DST was perforated over 2946 to 2962 m in the water zone in the Eive Formation. The well was production tested and tests on reservoir parameters were carried out, including use of tritium tracers. The well produced 380 m³ water /day through a 64/64" choke. The maximum flowing temperature recorded during the test was 116.5 deg C. Water samples were taken. The production test was followed by an injection test through the same perforations.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
200.00	3224.00

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	2921.0	2933.0	[m]
2	2936.5	2954.0	[m]
3	2963.6	2969.0	[m]

Total core sample length [m]	34.9
Cores available for sampling?	YES

Core photos


2926-2931m



2931-2933m



2935-2941m



2941-2946m



2946-2951m



2951-2954m



2963-2964m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1360.0	[m]	DC	GEOCH
1390.0	[m]	DC	GEOCH
1410.0	[m]	DC	GEOCH
1470.0	[m]	DC	GEOCH
1500.0	[m]	DC	GEOCH
1530.0	[m]	DC	GEOCH
1560.0	[m]	DC	GEOCH
1590.0	[m]	DC	GEOCH
1620.0	[m]	DC	GEOCH
1650.0	[m]	DC	GEOCH
1680.0	[m]	DC	GEOCH



1710.0	[m]	DC	GEOCH
1740.0	[m]	DC	GEOCH
1770.0	[m]	DC	GEOCH
1800.0	[m]	DC	GEOCH
1830.0	[m]	DC	GEOCH
1860.0	[m]	DC	GEOCH
1890.0	[m]	DC	GEOCH
1920.0	[m]	DC	GEOCH
1950.0	[m]	DC	GEOCH
1980.0	[m]	DC	GEOCH
2009.0	[m]	DC	GEOCH
2015.0	[m]	DC	GEOCH
2036.0	[m]	DC	GEOCH
2063.0	[m]	DC	GEOCH
2090.0	[m]	DC	GEOCH
2135.0	[m]	DC	GEOCH
2162.0	[m]	DC	GEOCH
2189.0	[m]	DC	GEOCH
2216.0	[m]	DC	GEOCH
2243.0	[m]	DC	GEOCH
2270.0	[m]	DC	GEOCH
2294.0	[m]	DC	GEOCH
2321.0	[m]	DC	GEOCH
2339.0	[m]	DC	GEOCH
2348.0	[m]	DC	GEOCH
2351.0	[m]	DC	GEOCH
2610.0	[m]	SWC	RRI
2626.0	[m]	SWC	RRI
2630.0	[m]	SWC	RRI
2654.0	[m]	SWC	RRI
2659.0	[m]	SWC	RRI
2689.0	[m]	SWC	RRI
2701.0	[m]	SWC	RRI
2722.0	[m]	SWC	RRI
2740.0	[m]	SWC	RRI
2760.0	[m]	SWC	RRI
2780.0	[m]	SWC	RRI
2792.0	[m]	SWC	RRI
2807.0	[m]	SWC	RRI
2819.0	[m]	SWC	RRI



2824.0	[m]	SWC	RRI
2831.0	[m]	SWC	RRI
2838.0	[m]	SWC	RRI
2861.0	[m]	SWC	RRI
2898.0	[m]	SWC	RRI
2928.5	[m]	SWC	RRI
2967.0	[m]	SWC	RRI
3010.0	[m]	SWC	RRI
3035.0	[m]	SWC	RRI
3151.0	[m]	SWC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
138	NORDLAND GP
703	UTSIRA FM
893	HORDALAND GP
2092	ROGALAND GP
2092	BALDER FM
2188	SELE FM
2289	LISTA FM
2338	SHETLAND GP
2553	CROMER KNOLL GP
2587	VIKING GP
2587	DRAUPNE FM
2700	HEATHER FM
2820	BRENT GP
2820	TARBERT FM
2861	NESS FM
2931	ETIVE FM
2965	DUNLIN GP
2965	DRAKE FM
3152	COOK FM

Geochemical information





Document name	Document format	Document size [MB]
39 1 Hydrocarbon migration in a selected area of the North Sea	pdf	20.54
39 1	pdf	1.31
39 2	pdf	0.25
39 3	pdf	44.44
39 4	pdf	21.44

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

Document name	Document format	Document size [MB]
39 01 WDSS General Information	pdf	0.17
39 02 WDSS completion log	pdf	0.25

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
39 1 Hydrocarbon migration in a selected area of the North Sea	pdf	20.54

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2946	2962	25.4

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

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					

Logs





Log type	Log top depth [m]	Log bottom depth [m]
CBL CCL VDL GR	450	3046
CDM AP	2251	3224
FDC CNL GR CAL	605	3223
HDT	2552	3224
ISF SON MSFL GR	131	3223
RFT HP	2823	3191
VELOCITY	131	3223

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	199.5	36	200.0	0.00	LOT
SURF.COND.	20	605.0	26	620.0	1.48	LOT
INTERM.	13 3/8	1793.0	17 1/2	1815.0	1.68	LOT
INTERM.	9 5/8	2251.0	12 1/4	2565.0	1.74	LOT
LINER	7	3220.0	8 1/2	3220.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
200	1.04	40.0		waterbased	
470	1.08	55.0		waterbased	
955	1.09	53.0		waterbased	
1310	1.39	86.0		waterbased	
1655	1.21	56.0		waterbased	
2190	1.48	54.0		waterbased	
2570	1.25	49.0		waterbased	
2815	1.23	55.0		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]
39 Formation pressure (Formasjonstrykk)	pdf	0.22

