

**General information**

Wellbore name	30/6-21
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/6-1 Oseberg
Well name	30/6-21
Seismic location	NH 82 - 321 COLUMN 379
Production licence	053
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	537-L
Drilling facility	VILDKAT EXPLORER
Drilling days	47
Entered date	22.02.1987
Completed date	09.04.1987
Release date	09.04.1989
Publication date	04.10.2013
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.0
Water depth [m]	112.0
Total depth (MD) [m RKB]	3100.0
Final vertical depth (TVD) [m RKB]	3098.0
Maximum inclination [°]	5.6
Bottom hole temperature [°C]	120
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	60° 38' 34.88" N
EW degrees	2° 43' 47.6" E
NS UTM [m]	6723215.56
EW UTM [m]	485226.44



UTM zone	31
NPDID wellbore	1037

Wellbore history

General

Well 30/6-21 was drilled on the Alpha North structure in the Oseberg fault block. Well 30/6-7 proved oil in the Ness Formation in 1982. The main purpose of well 30/6-21 was to test the hydrocarbon content in the Oseberg Formations. The well was located in a position where it could be utilized as a subsea oil producer/PTS well.

Operations and results

Appraisal well 30/6-21 was spudded with the semi-submersible rig Vildkat Explorer on 22 February 1987 and drilled to TD at 3100 m in Early Jurassic rocks of the Statfjord Group. Drilling proceeded without significant problems except for some tight hole problems in the upper Oseberg Formation. The well was drilled with sea water and hi-vis pills down to 664 m and with Enviromul oil based mud from 664 m to TD.

Top Brent Group, Ness Formation was penetrated at 2575 m and proved to be oil filled down to top Dunlin at 2670.5 m. This was a down-to oil contact. The RFT data showed a fluid density of .66 g/cc. The Ness Formation proved not to be a reservoir rock due to lack of sand, while the Oseberg Formation had a net/gross ratio close to 1.0. The Cook- and Statfjord formations were both water filled.

Four cores were cut from 2563 m at base Shetland to 2669 m at top Dunlin with close to 100% recovery. RFT fluid samples were taken at 2590 m, 2619 m, and 2660 m.

The well was suspended on 9 April 1987 as an oil appraisal well.

Testing

One Drill Stem Test was performed in the interval 2645 to 2657 m in the Oseberg Formation. It produced 342 Sm³ oil and 50885 Sm³ gas /day through a 9.5 mm choke. The GOR was 149 Sm³/Sm³, the oil density was 0.847, and the gas gravity was 0.724 (air = 1). The test temperature was 106.1 deg C.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
660.00	3100.00

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	2563.0	2580.3	[m]
2	2581.0	2596.7	[m]
3	2597.0	2651.9	[m]
4	2652.0	2668.7	[m]

Total core sample length [m]	104.6
Cores available for sampling?	YES

Core photos



2568-2573m



2573-2578m



2578-2580m



2581-2586m



2586-2591m



2591-2596m



2598-2599m



2597-2602m



2602-2607m



2607-2612m



2612-2617m



2617-2622m



2622-2627m



2627-2632m



2627-2632m



2632-2637m



2637-2642m



2642-2647m



2647-2651m



2652-2657m



2657-2662m



2662-2667m



2667-2668m

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	2645.50	2657.50			YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
137	NORDLAND GP
706	UTSIRA FM
895	HORDALAND GP
1993	ROGALAND GP
1993	BALDER FM
2075	SELE FM
2154	LISTA FM
2265	VÅLE FM
2279	SHETLAND GP
2575	BRENT GP
2575	NESS FM
2615	OSEBERG FM
2670	DUNLIN GP
2670	DRAKE FM
2854	COOK FM
2922	AMUNDSEN FM
3052	STATFJORD GP

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





Document name	Document format	Document size [MB]
1037_01_WDSS_General_Information	pdf	0.38
1037_02_WDSS_completion_log	pdf	0.29

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

Document name	Document format	Document size [MB]
1037_30_6_21_Completion_log	pdf	2.57
1037_30_6_21_Final_Well_report	pdf	3.49

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2646	2658	9.5

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				106

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	342	51000	0.847	0.724	149

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL CET GR	2393	2770
CBL VDL GR	1275	1701
CBL VDL GR	2135	2543
CST	2672	3094
DIL LSS GR	2600	3105
DIL LSS GR CAL	650	2564
DITE SDT GR	2543	2671
EPT	2545	2930
LDL CNL GR	2234	2673





LDL CNL NGT GR CAL	2540	3106
MWD - GR RES	137	1720
RFT	2578	2660
RFT	2590	0
RFT	2590	2665
RFT	2617	3093
RFT	2619	0
RFT	2660	0
VSP	1230	1720

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	225.0	0.00	LOT
SURF.COND.	20	650.0	26	665.0	0.00	LOT
INTERM.	13 3/8	1704.0	17 1/2	1720.0	1.59	LOT
INTERM.	9 5/8	2543.0	12 1/4	2560.0	1.60	LOT
LINER	7	2856.0	8 1/2	3100.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
130	1.50	35.0	11.0	OIL BASED	16.03.1987
225	1.05			WATER	23.02.1987
225	0.00			WATER	24.02.1987
300	1.00			OIL BASED	08.04.1987
300	1.00			OIL BASED	13.04.1987
453	1.06			WATER	25.02.1987
615	1.17			WATER	26.02.1987
664	1.35			WATER	27.02.1987
664	0.00	34.0	16.0	OIL	02.03.1987
727	1.35	34.0	16.0	OIL	02.03.1987
1115	1.36	35.0	14.0	OIL	02.03.1987
1115	0.00	32.0	13.0	OIL	03.03.1987
1288	1.36	37.0	13.0	OIL	04.03.1987
1351	1.35	34.0	12.0	OIL	05.03.1987
1720	1.36	32.0	12.0	OIL	06.03.1987



1720	0.00	28.0	9.0	OIL	09.03.1987
1723	1.50	34.0	11.0	OIL	10.03.1987
2009	1.49	33.0	11.0	OIL	11.03.1987
2347	1.49	34.0	12.0	OIL	12.03.1987
2560	1.50	35.0	11.0	OIL BASED	13.03.1987
2560	1.35	23.0	8.0	OIL BASED	16.03.1987
2652	1.36	20.0	7.0	OIL BASED	17.03.1987
2669	1.37	21.0	7.0	OIL BASED	18.03.1987
2734	1.36	20.0	6.0	OIL BASED	19.03.1987
2799	1.25	19.0	5.0	OIL BASED	25.03.1987
2799	1.25	19.0	5.0	OIL BASED	26.03.1987
2799	1.25	20.0	5.0	OIL BASED	30.03.1987
2799	1.25	19.0	6.0	OIL BASED	30.03.1987
2799	1.25	23.0	6.0	OIL BASED	01.04.1987
2799	1.25	21.0	6.0	OIL BASED	01.04.1987
2799	1.25	21.0	5.0	OIL BASED	02.04.1987
2799	1.26	22.0	5.0	OIL BASED	03.04.1987
2799	1.25	22.0	6.0	OIL BASED	06.04.1987
2799	1.25	22.0	8.0	OIL BASED	06.04.1987
2799	1.25	23.0	6.0	OIL BASED	07.04.1987
2856	1.37	21.0	6.0	OIL BASED	24.03.1987
2860	1.37	20.0	6.0	OIL BASED	
3025	1.37	20.0	7.0	OIL BASED	20.03.1987
3100	1.37	21.0	7.0	OIL BASED	
5810	1.35	23.0	8.0	OIL BASED	16.03.1987

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]
1037 Formation pressure (Formasjonstrykk)	pdf	0.22

