

**General information**

Wellbore name	30/6-19
Type	EXPLORATION
Purpose	WILDCAT
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG ØST
Discovery	30/6-19 (Beta Sadel)
Well name	30/6-19
Seismic location	ST 8006 - 145 SP. 215
Production licence	053
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	511-L
Drilling facility	POLAR PIONEER
Drilling days	74
Entered date	09.04.1986
Completed date	21.06.1986
Release date	21.06.1988
Publication date	29.03.2014
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	23.0
Water depth [m]	159.0
Total depth (MD) [m RKB]	3301.0
Final vertical depth (TVD) [m RKB]	3299.0
Maximum inclination [°]	4.8
Bottom hole temperature [°C]	137
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	EIRIKSSON FM
Geodetic datum	ED50
NS degrees	60° 42' 58.03" N
EW degrees	2° 54' 54.18" E
NS UTM [m]	6731330.07
EW UTM [m]	495364.23



UTM zone	31
NPDID wellbore	489

Wellbore history

**General**

Well 30/6-19 was drilled on the Beta Saddle prospect between the Veslefrikk field and the 30/6-5 Oseberg East (Beta South) discovery. The objectives of the well were to prove hydrocarbons in the Brent Group, the Cook Formation, and the Statfjord Group. Planned TD was ca 3400 m or ca 100 m into the Statfjord Formation.

Operations and results

Well 30/6-19 was spudded with the semi-submersible installation Polar Pioneer on 9 April 1986 and drilled to TD at 3301 m in the Early Jurassic Statfjord Group, Eirikson Formation. Drilling proceeded without significant problems down to 1589 m where the string got stuck and the well was sidetracked at 1179 m. At 3117 m the string got stuck and a cement plug was set at 2847 m. The well was sidetracked again at 2822 m and drilled to TD.

The Brent Group (2857 - 2989 m) contained oil down to the OWC at 2956.5 m (Free water level from RFT). Net pay in the oil zone is 58.1 m with an average porosity of 18.8% and an average water saturation of 48.3%. No additional hydrocarbon reservoirs were encountered by the well and only occasional weak shows were seen on sandstone stringers in the Drake Formation and single grains in the Statfjord Group. RFT pressures showed the Cook Formation to be overpressured and the Statfjord Group to be underpressured relative to the Brent Group. This assumes same water density as in the Brent Group water zone.

Four conventional cores were cut in the Brent reservoir from 2858 - 2970 m. Core depths are ca 1.5 m shallower than logger's depth. RFT pressure recordings were performed throughout the Brent Group and in the Cook and Statfjord Formations. Segregated RFT samples were taken in the final sidetrack in the Ness Formation (2869 m; water and a little oil), the Etive Formation (2909 m; oil), and in the Oseberg Formation (2954.8 m water and a little oil).

The well was suspended 21 June 1986 for further testing at a later time. It is classified as an oil and gas discovery.

Testing

Three drill stem tests were performed.

DST 1 tested the interval 2945-2954.0 in the Lower Oseberg Formation. It produced 564 Sm³ oil and 26000 Sm³ gas through a 40/64" choke. GOR was 46 Sm³/Sm³. Oil density was 0.864 g/cm³ and associated gas was 0.85 (air = 1) with 5% CO₂ and 3.5 ppm H₂S. Bottom hole temperature in the test was 124 deg C.

DST 2 tested the interval 2907 - 2932.3 m in the Upper Oseberg, Rannoch and Etive Formations. It produced 797 Sm³ oil and 34000 Sm³ gas through a 36/64" choke. GOR was 43 Sm³/Sm³. Oil density was 0.833 g/cm³ and associated gas was 0.78 (air = 1) with 5% CO₂ and 4 ppm H₂S. Bottom hole temperature in the test was 122 deg C.

DST 3 tested the interval 2876-2884 m in the Ness Formation. It produced 668 Sm³ oil and 25000 Sm³ gas through a 52/64" choke. GOR was 50 Sm³/Sm³. Oil density was 0.831 g/cm³ and associated gas was 0.86 (air = 1) with 4.5% CO₂ and 5 ppm H₂S. Bottom hole temperature in the test was 123 deg C.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
620.00	3300.00

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	2858.0	2886.0	[m]
2	2886.0	2913.7	[m]
3	2914.0	2942.0	[m]
4	2942.0	2954.0	[m]

Total core sample length [m]	95.7
Cores available for sampling?	YES

Core photos



2858-2862m



2862-2866m



2866-2870m



2870-2874m



2874-2878m



2878-2882m



2882-2886m



2886-2890m



2890-2894m



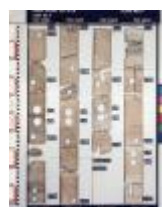
2894-2898m



2898-2902m



2902-2906m



2906-2910m



2910-2913m



2914-2918m



2918-2922m



2922-2926m



2926-2930m



2930-2934m



2934-2938m



2938-2942m



2942-2946m



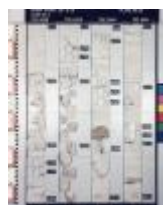
2946-2950m



2950-2954m



2954-2958m



2958-2962m



2962-2966m



2966-2970m

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	2945.00	2954.00	OIL	06.06.1986 - 00:00	YES
DST	DST2	2907.00	2932.30	OIL	11.06.1986 - 00:00	YES
DST	DST3	2876.00	2784.00		15.06.1986 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
183	NORDLAND GP
722	UTSIRA FM
891	HORDALAND GP
1941	ROGALAND GP



1941	BALDER FM
2032	SELE FM
2065	LISTA FM
2217	VÅLE FM
2247	SHETLAND GP
2549	CROMER KNOLL GP
2572	VIKING GP
2572	DRAUPNE FM
2677	HEATHER FM
2857	BRENT GP
2857	TARBERT FM
2866	NESS FM
2905	ETIVE FM
2915	RANNOCH FM
2920	OSEBERG FM
2989	DUNLIN GP
2989	DRAKE FM
3103	COOK FM
3159	BURTON FM
3198	AMUNDSEN FM
3255	STATFJORD GP
3255	NANSEN FM
3275	EIRIKSSON FM

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

Document name	Document format	Document size [MB]
489_01_WDSS_General_Information	pdf	0.33
489_02_WDSS_completion_log	pdf	0.28

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

Document name	Document format	Document size [MB]
489_30_6_19_COMPLETION_REPORT_AND_LOG	pdf	15.95



**Drill stem tests (DST)**

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2945	2954	15.9
2.0	2907	2932	14.3
3.0	2876	2884	20.6

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

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	564	26000	0.861	0.850	46
2.0	797	34000	0.833	0.780	52
3.0	668	25000	0.831	0.860	50

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL CET	335	1493
CBL VDL CET	1327	3004
CST	2215	2795
CST	2242	2751
CST	2812	3299
DIL LSS GR SP	550	3302
DLL MSFL LSS GR	2790	3065
LDL CNL NGT CAL GR	602	3302
RFT	2858	2926
RFT	2858	3283
SHDT	1493	3302

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
SURF.COND.	20	602.0	26	729.0	1.39	LOT
INTERM.	13 3/8	1495.0	17 1/2	1589.0	1.76	LOT
INTERM.	9 5/8	2790.0	12 1/4	2804.0	1.68	LOT
LINER	7	3273.0	8 1/2	3301.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
267	1.03			WATER BASED	09.04.1986
563	1.05	10.0	8.0	WATER BASED	10.04.1986
614	1.15	9.0	27.0	WATER BASED	13.04.1986
614	1.05	14.0	31.0	WATER BASED	13.04.1986
614	1.05	16.0	41.0	WATER BASED	13.04.1986
614	1.09	15.0	9.0	WATER BASED	14.04.1986
619	1.09	15.0	9.0	WATER BASED	15.04.1986
729	1.09	12.0	9.0	WATER BASED	16.04.1986
1153	1.15	20.0	12.0	WATER BASED	20.04.1986
1202	1.13	20.0	11.0	WATER BASED	21.04.1986
1271	1.11	21.0	15.0	WATER BASED	17.04.1986
1359	1.15	22.0	13.0	WATER BASED	22.04.1986
1539	1.25	27.0	16.0	WATER BASED	23.04.1986
1539	1.25	27.0	16.0	WATER BASED	24.04.1986
1539	1.40	27.0	20.0	WATER BASED	27.04.1986
1589	1.11	20.0	13.0	WATER BASED	20.04.1986
1718	1.40	23.0	15.0	WATER BASED	27.04.1986
2073	1.40	25.0	15.0	WATER BASED	27.04.1986
2230	1.40	21.0	14.0	WATER BASED	29.04.1986
2388	1.40	17.0	8.0	WATER BASED	29.04.1986
2453	1.40	21.0	11.0	WATER BASED	01.05.1986
2496	1.40	17.0	8.0	WATER BASED	01.05.1986
2590	1.40	19.0	10.0	WATER BASED	04.05.1986
2681	1.40	17.0	9.0	WATER BASED	04.05.1986
2800	1.22	15.0	8.0	WATER BASED	20.05.1986
2803	1.40	15.0	9.0	WATER BASED	04.05.1986
2803	1.40	14.0	8.0	WATER BASED	05.05.1986
2804	1.40	18.0	9.0	WATER BASED	06.05.1986



2804	1.40	18.0	8.0	WATER BASED	08.05.1986
2804	1.40	18.0	9.0	WATER BASED	08.05.1986
2840	1.21	10.0	6.0	WATER BASED	11.05.1986
2846	1.25	21.0	8.0	WATER BASED	21.05.1986
2886	1.21	9.0	5.0	WATER BASED	11.05.1986
2900	1.19	14.0	8.0	WATER BASED	15.06.1986
2900	1.19	14.0	8.0	WATER BASED	16.06.1986
2900	1.19	14.0	8.0	WATER-BASED	17.06.1986
2900	1.19	13.0	7.0	WATER-BASED	18.06.1986
2900	1.19	13.0	7.0	WATER-BASED	19.06.1986
2900	1.19	22.0	13.0	WATER-BASED	22.06.1986
2914	1.21	16.0	8.0	WATER BASED	11.05.1986
2939	1.18	12.0	5.0	WATER BASED	10.06.1986
2939	1.18	12.0	5.0	WATER BASED	11.06.1986
2939	1.19	12.0	5.0	WATER BASED	12.06.1986
2939	1.19	18.0	8.0	WATER BASED	09.06.1986
2939	1.19	14.0	8.0	WATER BASED	15.06.1986
2963	1.22	13.0	8.0	WATER BASED	12.05.1986
2976	1.25	23.0	11.0	WATER BASED	25.05.1986
3000	1.25	20.0	8.0	WATER BASED	25.05.1986
3002	1.21	11.0	7.0	WATER BASED	13.05.1986
3038	1.21	14.0	8.0	WATER BASED	14.05.1986
3043	1.19	18.0	8.0	WATER BASED	05.06.1986
3043	1.19	16.0	7.0	WATER BASED	01.06.1986
3043	1.19	14.0	6.0	WATER BASED	02.06.1986
3043	1.19	13.0	6.0	WATER BASED	03.06.1986
3043	1.19	18.0	8.0	WATER BASED	04.06.1986
3043	1.19	18.0	8.0	WATER BASED	08.06.1986
3088	1.22	14.0	9.0	WATER BASED	15.05.1986
3110	1.25	19.0	8.0	WATER BASED	25.05.1986
3117	1.21	20.0	10.0	WATER BASED	19.05.1986
3117	1.22	17.0	9.0	WATER BASED	19.05.1986
3117	1.22	16.0	9.0	WATER BASED	19.05.1986
3117	1.22	14.0	7.0	WATER BASED	19.05.1986
3161	1.25	18.0	8.0	WATER BASED	26.05.1986
3264	1.25	18.0	8.0	WATER BASED	27.05.1986
3301	1.25	20.0	10.0	WATER BASED	28.05.1986
3301	1.25	20.0	10.0	WATER BASED	29.05.1986
3301	1.19	16.0	8.0	WATER BASED	01.06.1986

