

**General information**

Wellbore name	6305/8-1
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	ORMEN LANGE
Discovery	6305/5-1 Ormen lange
Well name	6305/8-1
Seismic location	inline 2288-crossline 4182 NH 9602
Production licence	250
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	978-L
Drilling facility	SCARABEO 5
Drilling days	58
Entered date	13.07.2000
Completed date	08.09.2000
Plugged and abandon date	08.09.2000
Release date	08.09.2002
Publication date	18.12.2002
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	PALEOCENE
1st level with HC, formation	EGGA FM (INFORMAL)
Kelly bushing elevation [m]	25.0
Water depth [m]	837.0
Total depth (MD) [m RKB]	3175.0
Final vertical depth (TVD) [m RKB]	3174.8
Maximum inclination [°]	1.7
Bottom hole temperature [°C]	90
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	NISE FM
Geodetic datum	ED50
NS degrees	63° 28' 34.84" N
EW degrees	5° 24' 14.59" E
NS UTM [m]	7041085.11



EW UTM [m]	619767.97
UTM zone	31
NPDID wellbore	4109

Wellbore history

General

Well 6305/8-1 was a joint appraisal well on the Ormen Lange discovery between licences 208, 209 and 250. It was committed to test the reservoir potential of the Tertiary sequence in licence 250. The main target was a sand ("Egga Member") in the Tang Formation. The exploration objectives of the well were to appraise the 6305/5-1 Ormen Lange gas discovery, to test the hydrocarbon potential, type of hydrocarbons and seal in a secondary target Miocene Channel feature, and to improve biostratigraphic control in the area. In addition, the well was designed to provide a variety of information required for development planning of the Ormen Lange discovery.

Operations and results

Appraisal well was spudded with the semi-submersible installation Scarabeo 5 on 13 July 2000 and drilled to a total depth of 3175 m in the Late Cretaceous (Campanian & Late Santonian) Nise Formation. No problems were experienced drilling through the ooze sequence. The well was drilled with bentonite spud mud down to 942 m. A water based mud type based on NaCl brine with glycol additives was used from 942 m to TD. No potential reservoir sandstone was encountered in the Miocene channel sequence, penetrated at 1653 m. The Egga reservoir sandstone was penetrated approximately 20 m higher than prognosed at 2898 m. A gas column of approximately 20 m was penetrated in the well. Below the gas was a thin 2-5 m oil leg, which was not prognosed. The oil was confirmed by MDT sampling, and geochemical analyses indicated that the oil is sourced from a comparatively immature source rock. The gas/oil/water contact was found at 2921.5 m. The upper part of the Egga Member, from 2900 m to 2935 m, was a loose sand interbedded with thin claystone beds. The lower part of the Egga reservoir unit consisted of a more massive sand sequence down to approx. 2950 m. The Jorsalfare Formation consists of interbedded sands and mudstones. Good quality water, oil and gas samples were collected in the reservoir. The entire reservoir in the well was cored: Five cores were cut through the Våle (Egga Member) and Jorsalfare Formation sandstones from 2895 m to 2989 m. Core recovery was excellent (92 %- 100 %). Several MDT samples containing oil and gas were recovered from sampling points at 2923.5 m, 2922 m, 2919.6 m, 2914 m and 2908.2 m. MDT water samples were recovered from sampling points 2980.5 m, 2945 m and 2942.6 m. The well was plugged and abandoned as an oil and gas appraisal well on 8 September 2000.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1560.00	3175.00

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

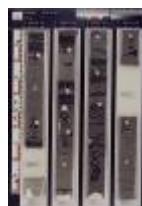
Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2895.0	2914.5	[m]
2	2915.5	2943.3	[m]
3	2943.3	2958.9	[m]
4	2959.1	2980.3	[m]
5	2981.0	2987.7	[m]

Total core sample length [m]	90.7
Cores available for sampling?	YES

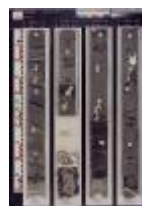
Core photos



2895-2899m



2899-2903m



2903-2907m



2907-2911m



2911-2914m



2915-2919m



2929-2923m



2923-2927m



2927-2931m



2931-2935m



2935-2939m



2939-2943m



2943-2944m



2943-2947m



2981-2985m



2947-2951m



2951-2955m



2955-2959m



2959-2963m



2963-2967m



2967-2971m



2971-2975m



2975-2979m



2979-2980m



2985-2988m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1562.5	[m]	SWC	RRI
1585.0	[m]	DC	RRI
1595.0	[m]	DC	RRI
1605.0	[m]	SWC	RRI
1633.0	[m]	SWC	RRI
1655.0	[m]	SWC	RRI
1665.0	[m]	SWC	RRI
1712.0	[m]	SWC	RRI
1735.0	[m]	DC	RRI
1750.0	[m]	DC	RRI
1782.5	[m]	SWC	RRI
1800.0	[m]	SWC	RRI
1820.0	[m]	SWC	RRI
1850.0	[m]	DC	RRI
1870.0	[m]	DC	RRI
1890.0	[m]	DC	RRI
1910.0	[m]	DC	RRI
1930.0	[m]	DC	RRI
1950.0	[m]	DC	RRI
1970.0	[m]	DC	RRI
1990.0	[m]	DC	RRI
2010.0	[m]	DC	RRI
2030.0	[m]	DC	RRI



2050.0	[m]	DC	RRI
2070.0	[m]	DC	RRI
2090.0	[m]	DC	RRI
2110.0	[m]	DC	RRI
2130.0	[m]	DC	RRI
2150.0	[m]	DC	RRI
2170.0	[m]	DC	RRI
2190.0	[m]	DC	RRI
2210.0	[m]	DC	RRI
2230.0	[m]	DC	RRI
2250.0	[m]	DC	RRI
2270.0	[m]	DC	RRI
2290.0	[m]	DC	RRI
2310.0	[m]	DC	RRI
2330.0	[m]	DC	RRI
2350.0	[m]	DC	RRI
2370.0	[m]	DC	RRI
2390.0	[m]	DC	RRI
2420.0	[m]	DC	RRI
2440.0	[m]	DC	RRI
2460.0	[m]	DC	RRI
2480.0	[m]	DC	RRI
2520.0	[m]	DC	RRI
2540.0	[m]	DC	RRI
2560.0	[m]	DC	RRI
2580.0	[m]	DC	RRI
2600.0	[m]	DC	RRI
2620.0	[m]	DC	RRI
2640.0	[m]	DC	RRI
2660.0	[m]	DC	RRI
2680.0	[m]	DC	RRI
2700.0	[m]	DC	RRI
2720.0	[m]	DC	RRI
2740.0	[m]	DC	RRI
2760.0	[m]	DC	RRI
2780.0	[m]	DC	RRI
2800.0	[m]	DC	RRI
2820.0	[m]	DC	RRI
2840.0	[m]	DC	RRI
2850.0	[m]	DC	RRI



2857.0 [m]	DC	RRI
2860.0 [m]	SWC	RRI
2862.0 [m]	DC	RRI
2871.0 [m]	DC	RRI
2877.0 [m]	DC	RRI
2880.0 [m]	DC	RRI
2883.0 [m]	DC	RRI
2886.0 [m]	DC	RRI
2889.0 [m]	DC	RRI
2895.0 [m]	DC	RRI
2895.1 [m]	C	RRI
2895.9 [m]	C	RRI
2896.8 [m]	C	RRI
2897.6 [m]	C	RRI
2899.1 [m]	C	RRI
2900.1 [m]	C	RRI
2901.2 [m]	C	RRI
2903.2 [m]	C	RRI
2903.9 [m]	C	RRI
2905.6 [m]	C	RRI
2908.7 [m]	C	RRI
2909.1 [m]	C	RRI
2910.9 [m]	C	RRI
2911.5 [m]	C	RRI
2912.5 [m]	C	RRI
2915.8 [m]	C	RRI
2916.9 [m]	C	RRI
2918.7 [m]	C	RRI
2920.4 [m]	C	RRI
2920.7 [m]	C	RRI
2921.8 [m]	C	RRI
2924.4 [m]	C	RRI
2930.9 [m]	C	RRI
2935.7 [m]	C	RRI
2949.7 [m]	C	RRI
2950.0 [m]	C	RRI
2951.2 [m]	C	RRI
2952.5 [m]	C	RRI
2955.4 [m]	C	RRI
2956.5 [m]	C	RRI



2958.8	[m]	C	RRI
2959.0	[m]	C	RRI
2959.6	[m]	C	RRI
2960.0	[m]	C	RRI
2961.0	[m]	C	RRI
2961.5	[m]	C	RRI
2962.0	[m]	C	RRI
2965.6	[m]	C	RRI
2967.0	[m]	C	RRI
2971.0	[m]	C	RRI
2972.7	[m]	C	RRI
2974.6	[m]	C	RRI
2978.3	[m]	C	RRI
2981.1	[m]	C	RRI
2982.0	[m]	DC	RRI
2983.8	[m]	C	RRI
2985.0	[m]	DC	RRI
2987.4	[m]	C	RRI
2991.0	[m]	DC	RRI
2997.0	[m]	DC	RRI
3000.0	[m]	DC	RRI
3003.0	[m]	DC	RRI
3006.0	[m]	DC	RRI
3009.0	[m]	DC	RRI
3012.0	[m]	DC	RRI
3015.0	[m]	DC	RRI
3051.0	[m]	DC	RRI
3072.0	[m]	DC	RRI
3090.0	[m]	DC	RRI
3111.0	[m]	DC	RRI
3132.0	[m]	DC	RRI
3150.0	[m]	DC	RRI
3165.0	[m]	DC	RRI
3168.0	[m]	DC	RRI
3171.0	[m]	DC	RRI
3175.0	[m]	DC	RRI

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
MDT	MDT-1	2942.00	0.00	WATER	12.08.2000 - 00:00	YES
MDT		2922.00	0.00	OIL	29.08.2000 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
862	NORDLAND GP
862	NAUST FM
1590	KAI FM
1745	HORDALAND GP
1745	BRYGGE FM
2508	ROGALAND GP
2508	TARE FM
2596	TANG FM
2898	EGGA FM (INFORMAL)
2976	SHETLAND GP
2976	SPRINGAR FM
3132	NISE FM

Composite logs

Document name	Document format	Document size [MB]
4109	pdf	0.33

Geochemical information

Document name	Document format	Document size [MB]
4109_1	pdf	1.92
4109_2	pdf	1.86
4109_3	pdf	1.44
4109_4	pdf	1.97
4109_5	pdf	1.90





4109 6	pdf	1.92
4109 7	pdf	1.79
4109 8	pdf	1.81

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

Document name	Document format	Document size [MB]
4109 6305 8 1 COMPLETION LOG	.pdf	2.18
4109 6305 8 1 COMPLETION REPORT	.pdf	1.03

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR ECS HNGS	2880	2926
CMR-200	2900	3022
DSI	1750	3172
FMI HRLA HNGS	2852	3156
MDT	2908	3010
MSCT GR	1562	1820
MSCT GR	2860	3030
MWD - GR RES SON DIR	915	3053
PEX HALS TLD HGNS	2852	3170
PWX DSI	862	1848
VSP	900	1770
VSP	2040	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	941.0	36	942.0	0.00	LOT
INTERM.	20	1544.0	26	1550.0	1.40	LOT
INTERM.	9 5/8	2852.0	12 1/4	2860.0	1.66	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
867	1.30			WATER BASED	
890	1.30			WATER BASED	
942	1.50			WATER BASED	
942	1.30			WATER BASED	
2895	1.30	16.0		WATER BASED	
2943	1.30	16.0		WATER BASED	
2981	1.30	19.0		WATER BASED	
2982	1.30	18.0		WATER BASED	
2989	1.30	18.0		WATER BASED	
3013	1.30	19.0		WATER BASED	
3175	1.30	23.0		WATER BASED	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2927.82	[m]
2985.46	[m]

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]
4109 Formation pressure (Formasjonstrykk)	PDF	0.22

