



General information

Wellbore name	6305/5-3 S
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	ORMEN LANGE
Discovery	6305/5-1 Ormen lange
Well name	6305/5-3
Seismic location	inline 4627 & crossline5121
Production licence	209
Drilling operator	A/S Norske Shell
Drill permit	1246-L
Drilling facility	LEIV EIRIKSSON
Drilling days	70
Entered date	19.08.2009
Completed date	27.10.2009
Plugged date	27.10.2009
Plugged and abandon date	28.07.2012
Release date	27.10.2011
Publication date	27.10.2011
Purpose - planned	APPRAISAL
Reentry	NO
Content	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]	832.0
Total depth (MD) [m RKB]	2954.0
Final vertical depth (TVD) [m RKB]	2837.0
Maximum inclination [°]	24.9
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	SPRINGAR FM
Geodetic datum	ED50
NS degrees	63° 34' 53.76" N
EW degrees	5° 25' 7.38" E



NS UTM [m]	7052835.00
EW UTM [m]	620055.01
UTM zone	31
NPDID wellbore	6118

Wellbore history

General

Well 6305/5-3 S was drilled on the north-eastern flank of the Ormen Lange Field in the Norwegian Sea. The well had three objectives: to appraise the Egga Reservoir Unit and Springar Formation for fluid content and reservoir quality; to investigate the extent of pressure communication between the C-Template area and the A- and B -Template

area within the Egga Reservoir Unit; and to test possible hydrocarbon potential in the overlying Tare Formation

Operations and results

Appraisal well 6305/5-3 S was spudded with the semi-submersible installation Leiv Eirikson on 19 August 2009 and drilled to TD at 2954 m (2837 m TVD) in the Late Cretaceous Springar Formation. Due to junk in the hole when drilling out of the 20" a technical sidetrack was made (6305/5-3 ST2); otherwise operations went forth without significant problems. The well was drilled with seawater and hi-vis pills down to 1651 m and with Glydril mud from 1651 m to TD.

Top of the Egga Reservoir Unit was encountered at 2797 m (2693.9 m TVD) and was 31 m TVD thick. This was 27 m deeper and 6 m thinner than prognosed. Pressure testing and down hole fluid analysis established the GWC to within 1.9 m. The Gas-Down-To (GDT) was determined at 2678.7 m TVD MSL and the Water-Up-To (WUT) at 2680.6 m TVD MSL. This is about 176 m shallower than the DHI in segment 3. The net/gross came in on the lower end of the prognosis, while the porosity was close to the prognosed. The pressure of the Egga gas-leg was some 3 bar lower than the virgin Ormen Lange gas pressure at this depth, indicating depletion and hence connectivity to the producers of the A and B templates. The Springar and Tare Formation reservoir properties proved to be very poor and no hydrocarbon saturations could be determined.

Sidewall cores were taken, but no conventional coring was done. MDT fluid samples were obtained at 2805 m (gas zone), 2812.4 m (water zone) and 2837 m (water zone). Sampling showed that the water-bearing interval had gas below the GWC.

The well was suspended on 27 October 2009 as a gas appraisal.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1610.00	2954.00

Cuttings available for sampling?	YES
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
857	NORDLAND GP
857	NAUST FM
1660	KAI FM
1732	HORDALAND GP
1732	BRYGGE FM
2350	ROGALAND GP
2350	TARE FM
2498	TANG FM
2797	EGGA FM (INFORMAL)
2842	SHETLAND GP
2842	SPRINGAR FM

Composite logs

Document name	Document format	Document size [MB]
6118 6305 5 3 S	pdf	0.35

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI PPCMSIP ACTS ECRD	2145	2894
GR PPC MSIP PPC	1545	1623
ILE CMR HRLA ECRD	2185	2924
MDT GR	2805	2882
MSCT GR ECRD	2545	2830
MSCT GR ECRD	2782	2881
MWD LWD - DI	857	941
MWD LWD - DI GR RES PWD	941	2954
PEX ECS XPT ACTS ECRD	2177	2929





VSP GR	1600	2914
XPT ACTS ECRD	2569	2880

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	961.0	36	965.0	0.00	LOT
SURF.COND.	20	1651.0	26	1656.0	1.39	LOT
INTERM.	13 3/8	2200.0	17 1/2	2206.0	1.50	LOT
OPEN HOLE		2954.0	12 1/4	2954.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1646	1.26			Glydril DW	
2206	1.33			Glydril DW	
2608	1.35			Glydril DW	
2956	1.35			21/10/2009 20:00 Glydril DW	
2956	1.37			23/10/2009 20:00 Glydril DW	
2956	1.35			Glydril DW	

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]
6118 Formation pressure (Formasjonstrykk)	PDF	0.28

