General information

Wellbore name	30/11-8 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	MUNIN
Discovery	30/11-8 S Munin
Well name	30/11-8
Seismic location	MC3D-NVG05-inline 1610 & xline 3112
Production licence	035
Drilling operator	Statoil Petroleum AS
Drill permit	1339-L
Drilling facility	OCEAN VANGUARD
Drilling days	62
Entered date	20.03.2011
Completed date	20.05.2011
Release date	20.05.2013
Publication date	20.05.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS/CONDENSATE
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	TARBERT FM
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	NESS FM
Kelly bushing elevation [m]	22.0
Water depth [m]	107.5
Total depth (MD) [m RKB]	4043.0
Final vertical depth (TVD) [m RKB]	3844.0
Maximum inclination [°]	46.9
Bottom hole temperature [°C]	133
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	ED50
NS degrees	60° 13' 3.03'' N

EW degrees	2° 29' 22.2'' E
NS UTM [m]	6675900.93
EW UTM [m]	471711.39
UTM zone	31
NPDID wellbore	6540

Wellbore history

General

Well 30/11-8 S was drilled on the Krafla prospect in the Fensal Sub-basin between the Frigg and Oseberg fields in the North Sea. The Krafla prospect is a horst structure with multiple reservoir levels. The main objective of the well was to prove a commercial hydrocarbon accumulation in the Upper and Middle Tarbert Formation with potential also for finding hydrocarbon accumulations in the deeper Etive and Ness Formations. A secondary well objective was to test a lead within the Paleocene Sele Formation (Hermod Sandstone). A geological sidetrack to the Krafla West structure would be considered if hydrocarbons and producible reservoir in the Brent Group were proven in the main well.

Operations and results

Well 30/11-8 S was spudded with the semi-submersible installation Ocean Vanguard on 20 March 2011 and drilled to TD at 4043 m (3844 m TVD) in the Early Jurassic Drake Formation. No significant problem was encountered in the operations. No shallow gas was detected. The well was drilled with seawater and hi-vis pills down to 813 m, with Performadrill WBM from 813 m to 2214 m, and with XP-07 OBM from 2214 m to TD.

The Viking Group, Heather Formation came in at 3473 m (3285 m TVD). The upper part of Heather had water filled sandstones with oil shows. The Brent Group was encountered at 3528.9 m (3339.0 m TVD) which was 17 m TVD deeper than prognosed. The Upper and Middle Tarbert Formation reservoirs proved to be oil filled, but no OWC was encountered. The Ness Formation came in at 3732 m (3538 m TVD) and proved to be both condensate and water filled, but no contact was found. The Etive Formation was water filled without shows. Also the lead in the Sele Formation (Hermod Sandstone) proved to be water filled.

Two cores were cut in the intervals 3481 to 3508 m (Heather Formation) and 3611 to 3666 m (Tarbert Formation). MDT fluid samples were taken at 3478 m (water), 3614.5 m (oil), 3555 m (oil), 3663.4 m (oil), 3748.2 m (condensate), and 3827.7 m (water). The oil samples had a contamination of 14 to 17 %, while the condensate sample was 30 % contaminated. All samples were taken with the MDT single probe.

The well bore was plugged back for sidetracking on 20 May 2011 as an oil and condensate discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
810.00	4041.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3481.0	3508.8	[m]
2	3611.0	3666.4	[m]

Total core sample length [m]	83.1
Cores available for sampling?	YES

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		3555.00	0.00	OIL		YES
DST		0.00	3614.50	OIL		YES
DST		0.00	3614.50	OIL		YES
DST		0.00	3748.20	OIL		YES
DST		0.00	3748.22	OIL		YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
130	NORDLAND GP
515	UTSIRA FM
767	HORDALAND GP

2178	ROGALAND GP
2178	BALDER FM
2236	SELE FM
2333	LISTA FM
2498	VÅLE FM
2567	SHETLAND GP
2567	HARDRÅDE FM
2943	KYRRE FM
3378	TRYGGVASON FM
3433	SVARTE FM
3474	VIKING GP
3474	HEATHER FM
3529	BRENT GP
3529	TARBERT FM
3733	NESS FM
3976	ETIVE FM
3993	RANNOCH FM
3998	DUNLIN GP
3998	DRAKE FM

Geochemical information

Document name	Document format	Document size [MB]
6540_01_30_11_8S_gch_transfer_1	txt	0.00
6540_02_30_11_8S_gch_results_1	txt	0.05

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR	3450	3920
DUAL OBMI	3301	4035
LWD - ARCVRES9 TELE	193	2208
LWD - GVR6 ARCVRES6 PP	3302	4043
LWD - GVR8 ARCVRES8 VSON8 VADN8	2208	3302
LWD - POWERPULSE	129	193
MDT MINI-DST	3476	3657
MDT PP	3477	3982

MDT SA	3555	3614
MDT SA	3663	3827
MSIP CBL	2141	3301
MSIP CBL	3301	4035
PEX AIT HNGS	3301	4048
VSP	795	4000

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	189.0	36	198.0	0.00	LOT
SURF.COND.	20	802.5	26	813.0	1.46	LOT
INTERM.	14	2202.7	17 1/2	2214.0	1.45	LOT
INTERM.	9 5/8	3301.0	12 1/4	3308.0	1.85	LOT
OPEN HOLE		4043.0	8 1/2	4043.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
173	1.35	24.0		Spud Mud	
173	1.60	40.0		Kill Fluid-SW/Bentonite	
194	1.60	41.0		Kill Fluid-SW/Bentonite	
194	1.35	23.0		Spud Mud	
229	1.60	42.0		Kill Fluid-SW/Bentonite	
390	1.35	24.0		Spud Mud	
803	1.35	21.0		Performadril	
1016	1.35	29.0		Performadril	
1214	1.35	24.0		Performadril	
1541	1.35	25.0		Performadril	
2134	1.45	27.0		XP-07 - #14	
2158	1.35	31.0		Performadril	
2208	1.33	17.0		XP-07 - #14	
2211	1.34	16.0		XP-07 - #14	
2803	1.34	20.0		XP-07 - #14	
3302	1.55	28.0		XP-07 - #14	

3302	1.37	25.0		XP-07 - #14	
3508	1.55	27.0		XP-07 - #14	
3597	1.57	41.0		XP-07 - #14	
3666	1.55	30.0		XP-07 - #14	
4043	1.56	30.0		XP-07 - #14	
4043	1.55	29.0		XP-07 - #14	