General information

Wellbore name	30/11-7
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	FULLA
Discovery	30/11-7 Fulla
Well name	30/11-7
Seismic location	3D survey NH0609-inline 4240 & xline 2087
Production licence	035 B
Drilling operator	StatoilHydro Petroleum AS
Drill permit	1195-L
Drilling facility	WEST ALPHA
Drilling days	84
Entered date	12.11.2008
Completed date	03.02.2009
Release date	03.02.2011
Publication date	03.02.2011
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS/CONDENSATE
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	NESS FM
Kelly bushing elevation [m]	18.0
Water depth [m]	111.0
Total depth (MD) [m RKB]	4067.0
Final vertical depth (TVD) [m RKB]	4067.0
Maximum inclination [°]	2.5
Bottom hole temperature [°C]	139
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	ED50
NS degrees	60° 0' 21.24'' N
EW degrees	2° 22' 25.62'' E

NS UTM [m]	6652389.10
EW UTM [m]	465075.91
UTM zone	31
NPDID wellbore	5919

Wellbore history

General

Well 30/11-7 was drilled on the eastern flank of the Central Viking Graben, NE of the Frigg Field in the North Sea. The main objectives were to prove gas condensate in the Fulla structure, establish the gas/water contact in the reservoir, and verify Brent Group reservoir quality. Further objectives were to verify reservoir pressure conditions and vertical communication in reservoir. The TD of the well was planned 50 m into the Drake Formation, or to 4068 m TVD RKB.

Operations and results

Wildcat well 30/11-7 was spudded with the semi-submersible installation West Alpha on 12 November 2008 and drilled to TD at 4067 m in the Early Jurassic Drake Formation. No shallow gas was observed by the ROV or on the MWD while drilling the 36" or the 26" holes. Boulders gave slow penetration and heavy vibration between 250 to 300 m. In the 17 1/2" section from 1334 to 3014 m hard rocks, carbonate stringers and cemented sandstone stringers caused slow penetration and numerous bit changes. Intermediate wire line logging was performed at 2910 m while a leak in the top drive DDM was repaired. In the wire line logging at final TD the MDT tool got stuck and was left in the hole. The well was drilled with seawater and spud mud down to 1331 m and with Versatec oil based mud from 1331 m to TD.

The 30/11-7 well penetrated rocks of Quaternary, Tertiary, Cretaceous and Jurassic age. A 12 m thick Draupne Formation shale was encountered at 3722 m overlying a 219 m thick Heather Formation. The main prognosed reservoir sandstones of the Tarbert Formation were not encountered in the well. Top Brent Group, Ness Formation, was encountered at 3953 m. The well proved a lean gas-condensate in sandstones of the Ness Formation. The Gas-Water Contact is estimated to be at 3992 m, based on pressure results. Poor oil shows were observed on Early Cretaceous limestone cuttings from 3450 m to 3657 m. Good oil shows were observed in the middle part of the core from the Ness Formation.

One core was cut at 3983.0 to 3998.1 m in the Ness Formation. Water was sampled from the Etive Formation at 4008 m, and gas was sampled from the Ness Formation at 3985 m, and at 3986 m. The single probe (PS) was used for sampling water and the Quicksilver probe (PQ) were used for sampling gas. A mini DST by MDT dual packer MDT was performed at 3981.2 m in the Ness Formation, but the samples from this test was lost as the tool string got stuck and was left in the hole.

The well was permanently plugged back to the 14" casing, just above the 9 5/8" hanger and abandoned. A sidetrack was planned to be drilled by Transocean Leader.

The well was suspended on 3 February 2009 as a gas/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]
1340.00	4067.00

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	3983.0	3998.0	[m]

Total core sample length [m]	15.0
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
129	NORDLAND GP
421	UTSIRA FM
1029	HORDALAND GP
1091	SKADE FM
1360	NO FORMAL NAME
2119	FRIGG FM
2152	ROGALAND GP
2152	BALDER FM
2204	SELE FM
2208	HERMOD FM
2319	LISTA FM
2544	HEIMDAL FM
2614	VÅLE FM
2626	SHETLAND GP
2626	JORSALFARE FM
2901	KYRRE FM
3425	TRYGGVASON FM
3710	CROMER KNOLL GP
3722	VIKING GP

3722	DRAUPNE FM
3734	HEATHER FM
3953	BRENT GP
3953	NESS FM
4002	ETIVE FM
4017	RANNOCH FM
4027	DUNLIN GP
4027	DRAKE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT MSIP PEX GR	2996	3657
AIT OBMI GR	3656	4065
CMR ECS HNGS GR	3945	4001
DSI GR	1313	2885
MDT GR	3957	4021
MDT GR	3981	3981
MDT GR	3985	3985
MDT GR	3985	3600
MSIP PEX GR	3200	4046
MWD LWD - GR RES DIR PWD	129	3660
MWD LWD - GR RES DIR PWD FPWD	3660	4067
PEX GR	1313	2888
WA-ZO VSP	1420	4045

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	188.0	36	192.0	0.00	LOT
SURF.COND.	20	1316.0	26	1331.0	1.65	LOT
INTERM.	14	2999.0	17 1/2	3014.0	1.92	LOT
INTERM.	9 5/8	3658.0	12 1/4	3660.0	2.01	LOT
OPEN HOLE		4067.0	8 1/2	4067.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1334	1.39	22.0		Versatec	
2881	1.95	63.0		Versatec	
2909	1.48	27.0		Versatec	
3014	1.48	28.0		Versatec	
3014	1.48	28.0		Versatec	
3117	1.76	36.0		Versatec	
3658	1.85	44.0		Versatec	
3661	1.85	46.0		Versatec	
3765	1.92	56.0		Versatec	
3983	1.95	57.0		Versatec	
4024	1.95	56.0		Versatec	
4053	1.95	56.0		Versatec	
4067	1.95	57.0		Versatec	
4067	1.95	56.0		Versatec	