



General information

Wellbore name	6603/5-1 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6603/5-1
Seismic location	inline 3056/3048/3010 & crossline 2242
Production licence	392
Drilling operator	A/S Norske Shell
Drill permit	1302-L
Drilling facility	AKER BARENTS
Drilling days	106
Entered date	06.09.2010
Completed date	20.12.2010
Release date	20.12.2012
Publication date	15.01.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	40.0
Water depth [m]	1452.0
Total depth (MD) [m RKB]	5254.0
Final vertical depth (TVD) [m RKB]	5068.0
Maximum inclination [°]	30.4
Bottom hole temperature [°C]	190
Oldest penetrated age	EARLY CRETACEOUS
Oldest penetrated formation	LANGE FM
Geodetic datum	ED50
NS degrees	66° 34' 33.21" N
EW degrees	3° 32' 46.05" E
NS UTM [m]	7384397.32
EW UTM [m]	524227.52
UTM zone	31
NPDID wellbore	6348



Wellbore history

General

Well 6603/5-1 S was a frontier exploration well which tested a high relief structure called Dalsnuten in the southern part of the Gjallar Ridge in the Norwegian Sea. The primary objective was to prove hydrocarbons in reservoirs beneath the interpreted Jurassic J2 and J5 intervals in the Dalsnuten prospect and establish the hydrocarbon phase. Secondary objective was to evaluate the reservoir potential of potential Late Cretaceous sands.

Operations and results

Wildcat well 6603/5-1 S was spudded with the semi-submersible installation Aker Barents on 6 September 2010 and drilled to TD at 5254 m (5068 m TVD) in the Early Cretaceous (Aptian) Lange Formation. A 9 7/8" pilot hole was drilled from 1587 m to 2320 m to check for shallow gas. No shallow gas was observed. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 2320 m, with Glydril mud from 2320 m to 3162 m, and with Paratherm oil based mud from 3162 m to TD.

The prospective Late Cretaceous Springar and Nise formations were penetrated from 2415 m to 3116 m, but consisted of claystone with only traces of siltstone and sandstone. The target J2 and J5 seismic horizons were penetrated and proved to be in Cenomanian and Aptian sediments, respectively. The Jurassic was not reached. The well was dry all through. There were no oil shows and the gas levels were not above background levels.

No conventional or sidewall cores were cut and no wire line fluid samples were taken. The maximum bottom hole temperature measured in the well was 184 deg C. This temperature was recorded on wire line at 5218 m, 68 hours after last circulation of mud. A second log run gave 182 deg C at 5184 m, 81 hours after circulation. From these two temperatures a true formation temperature of 190 +/- 5 deg C was estimated at TD. With - 1.8 deg C at sea floor this gives an average temperature gradient of 53 deg C/km through the well.

The well was permanently abandoned on 20 December 2010 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
2330.00	5255.00

Cuttings available for sampling?	YES
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**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
1486	NORDLAND GP
1486	NAUST FM
1668	HORDALAND GP
1668	BRYGGE FM
2323	ROGALAND GP
2323	TARE FM
2365	TANG FM
2415	SHETLAND GP
2415	SPRINGAR FM
2813	NISE FM
3116	KVITNOS FM
3245	CROMER KNOLL GP
3245	LYSING FM
3744	LANGE FM

Geochemical information

Document name	Document format	Document size [MB]
6348_GCH_1	pdf	0.50
6348_GCH_2	pdf	1.59
6348_GCH_3	pdf	0.48

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MSIP PPC DSI GPIT HRLT PEX HNCS	2280	3164
MSIP PPC IS LDS APS HNCS GR	3570	5256
MWD - ARC	1585	3162
MWD - ARC SON VIS	1585	2320
MWD - ARC SON VIS SEISM	3162	3570
MWD - GR	1486	1585
MWD - PD ARC STET	3570	5254
VSI GR	1465	3157





VSI GR	3309	5244
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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	1582.0	36	1586.5	0.00	LOT
SURF.COND.	20	2312.0	26	2320.0	1.20	LOT
INTERM.	13 3/8	3156.0	17 1/2	3162.0	1.34	LOT
INTERM.	9 5/8	3568.0	12 1/4	3570.0	1.44	LOT
OPEN HOLE		5254.0	8 1/2	5254.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1502	1.03			Seawater	
1520	1.03			Seawater	
1526	1.03			Seawater	
2320	1.03			Seawater	
2426	1.12			Glydril	
3008	1.13			Glydril	
3162	1.13			Glydril	
3394	1.31			Paratherm	
3570	1.17			Paratherm	
3729	1.26			Paratherm	
4086	1.32			Paratherm	
5232	1.29			Paratherm	