

**General information**

Wellbore name	7223/5-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Discovery	7223/5-1
Well name	7223/5-1
Seismic location	3D Survey : SG9804:inline 8505 & xline 6895
Production licence	228
Drilling operator	StatoilHydro Petroleum AS
Drill permit	1209-L
Drilling facility	POLAR PIONEER
Drilling days	41
Entered date	05.12.2008
Completed date	14.01.2009
Release date	03.01.2011
Publication date	03.01.2011
Purpose - planned	APPRAISAL
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	TRIASSIC
1st level with HC, formation	SNADD FM
2nd level with HC, age	MIDDLE TRIASSIC
2nd level with HC, formation	KOBBE FM
Kelly bushing elevation [m]	23.0
Water depth [m]	340.0
Total depth (MD) [m RKB]	2549.0
Final vertical depth (TVD) [m RKB]	2548.6
Maximum inclination [°]	2.5
Oldest penetrated age	EARLY TRIASSIC
Oldest penetrated formation	KLAPPMYSS FM
Geodetic datum	ED50
NS degrees	72° 32' 6.18" N
EW degrees	23° 20' 7.74" E



NS UTM [m]	8052579.21
EW UTM [m]	377307.19
UTM zone	35
NPDID wellbore	5960

Wellbore history

General

Well 7223/5-1 was drilled on the Bjarmeland Platform, south of the Swaen Graben, east of the Loppa High in the Barents Sea. The primary objective was to prove oil or gas in a new segment of Ladinian channel complex in the Obesum prospect. The location was chosen in order to test several plays and seismic amplitude anomalies in the Triassic Snadd and Kobbe Formations, and to avoid shallow gas anomalies.

Operations and results

A 9 7/8" pilot hole was drilled to 607 m to check for shallow gas. Some sands were penetrated, but no signs of shallow gas were seen. Well 7223/5-1 was spudded with the semi-submersible installation Polar Pioneer on 4 December 2008 and drilled to TD at 2549 m in the Early Triassic Klappmyss Formation. A leakage on the BOP control system was discovered while drilling the 12 1/4" section. The BOP and riser was pulled and repaired; this took 75 hrs. Otherwise no significant technical problem occurred. The well was drilled with seawater/CaCl₂/Polymer mud down to 602 m and with Glydril WBM from 602 m to TD.

The Snadd Formation was encountered at 585 m and was 1271 m thick. The underlying Kobbe Formation was encountered at 1856 m and was 595 m thick. Hydrocarbons (gas) were observed in Snadd Formation in fluvial sandstones of Ladinian age and in the Kobbe Formation in sandstones of Anisian age. A lower Snadd Formation reservoir penetrated at 1575 m had 60 m gross sandstone with 17 m net gas bearing reservoir, but gas saturation was probably very low. Several sandstone intervals in the Kobbe Formation contained gas but the reservoirs were of very poor quality. Oil shows in the form of fluorescence were recorded at several levels in the Kobbe Formation.

Two cores were cut in the intervals 1579-1595 m in the Snadd formation and 1933-1946 m in the Kobbe formation. MSCT (Mechanical Sidewall Coring Tool) cores were also sampled during TD logging. In the Snadd Formation water and gas were sampled. A water sample was collected at 1584.6 m with dual packer after pumping of 242 litre of fluid. The sample had high contamination level of 14 %. At 1578.4 m gas samples were collected both with large diameter probe and dual packer. The drawdown with the probe was 40 - 45 bar, while with the dual packer a drawdown of approximately 0.9 Bar was observed. The water sample at 1590.3 m was collected with the single probe. The formation had poor reservoir properties and just a few litres were pumped. The sample contained mainly mud filtrate with a small fraction of formation water. In the Kobbe Formation gas samples were collected 1919.9 m. Due to poor reservoir properties the samples were collected with the dual packer. During the sampling a drawdown of approximately 18 Bar was observed.

The well was permanently abandoned on 5 December 2008 as a gas discovery.

Testing

No drill stem test was performed.



Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
610.00	2550.00

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	1579.0	1593.2	[m]
2	1933.0	1945.8	[m]

Total core sample length [m]	27.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
610.0	[m]	DC	FUGRO
620.0	[m]	DC	FUGRO
640.0	[m]	DC	FUGRO
650.0	[m]	DC	FUGRO
670.0	[m]	DC	FUGRO
680.0	[m]	DC	FUGRO
700.0	[m]	DC	FUGRO
710.0	[m]	DC	FUGRO
730.0	[m]	DC	FUGRO
740.0	[m]	DC	FUGRO
760.0	[m]	DC	FUGRO
770.0	[m]	DC	FUGRO
790.0	[m]	DC	FUGRO
800.0	[m]	DC	FUGRO
820.0	[m]	DC	FUGRO
830.0	[m]	DC	FUGRO
850.0	[m]	DC	FUGRO
860.0	[m]	DC	FUGRO
880.0	[m]	DC	FUGRO
910.0	[m]	DC	FUGRO



920.0 [m]	DC	FUGRO
940.0 [m]	DC	FUGRO
950.0 [m]	DC	FUGRO
970.0 [m]	DC	FUGRO
980.0 [m]	DC	FUGRO
1000.0 [m]	DC	FUGRO
1010.0 [m]	DC	FUGRO
1030.0 [m]	DC	FUGRO
1040.0 [m]	DC	FUGRO
1060.0 [m]	DC	FUGRO
1070.0 [m]	DC	FUGRO
1090.0 [m]	DC	FUGRO
1100.0 [m]	DC	FUGRO
1128.0 [m]	DC	FUGRO
1137.0 [m]	DC	FUGRO
1152.0 [m]	DC	FUGRO
1161.0 [m]	DC	FUGRO
1173.0 [m]	DC	FUGRO
1206.0 [m]	DC	FUGRO
1227.0 [m]	DC	FUGRO
1236.0 [m]	DC	FUGRO
1251.0 [m]	DC	FUGRO
1272.0 [m]	DC	FUGRO
1296.0 [m]	DC	FUGRO
1311.0 [m]	DC	FUGRO
1329.0 [m]	DC	FUGRO
1353.0 [m]	DC	FUGRO
1374.0 [m]	DC	FUGRO
1383.0 [m]	DC	FUGRO
1401.0 [m]	DC	FUGRO
1419.0 [m]	DC	FUGRO
1428.0 [m]	DC	FUGRO
1443.0 [m]	DC	FUGRO
1458.0 [m]	DC	FUGRO
1467.0 [m]	DC	FUGRO
1485.0 [m]	DC	FUGRO
1503.0 [m]	DC	FUGRO
1518.0 [m]	DC	FUGRO
1536.0 [m]	DC	FUGRO
1579.9 [m]	C	FUGRO



1587.7	[m]	C	FUGRO
1588.8	[m]	C	FUGRO
1592.3	[m]	C	FUGRO
1602.0	[m]	DC	FUGRO
1611.0	[m]	DC	FUGRO
1620.0	[m]	DC	FUGRO
1629.0	[m]	DC	FUGRO
1638.0	[m]	DC	FUGRO
1647.0	[m]	DC	FUGRO
1656.0	[m]	DC	FUGRO
1665.0	[m]	DC	FUGRO
1674.0	[m]	DC	FUGRO
1683.0	[m]	DC	FUGRO
1692.0	[m]	DC	FUGRO
1701.0	[m]	DC	FUGRO
1710.0	[m]	DC	FUGRO
1719.0	[m]	DC	FUGRO
1728.0	[m]	DC	FUGRO
1737.0	[m]	DC	FUGRO
1746.0	[m]	DC	FUGRO
1755.0	[m]	DC	FUGRO
1764.0	[m]	DC	FUGRO
1773.0	[m]	DC	FUGRO
1782.0	[m]	DC	FUGRO
1791.0	[m]	DC	FUGRO
1800.0	[m]	DC	FUGRO
1809.0	[m]	DC	FUGRO
1818.0	[m]	DC	FUGRO
1827.0	[m]	DC	FUGRO
1836.0	[m]	DC	FUGRO
1848.0	[m]	DC	FUGRO
1857.0	[m]	DC	FUGRO
1866.0	[m]	DC	FUGRO
1875.0	[m]	DC	FUGRO
1884.0	[m]	DC	FUGRO
1893.0	[m]	DC	FUGRO
1902.0	[m]	DC	FUGRO
1911.0	[m]	DC	FUGRO
1920.0	[m]	DC	FUGRO
1933.4	[m]	C	FUGRO



1936.5 [m]	C	FUGRO
1940.3 [m]	C	FUGRO
1942.5 [m]	C	FUGRO
1945.4 [m]	C	FUGRO
1953.0 [m]	DC	FUGRO
1962.0 [m]	DC	FUGRO
1971.0 [m]	DC	FUGRO
1980.0 [m]	DC	FUGRO
1989.0 [m]	DC	FUGRO
1998.0 [m]	DC	FUGRO
2007.0 [m]	DC	FUGRO
2013.0 [m]	DC	FUGRO
2022.0 [m]	DC	FUGRO
2031.0 [m]	DC	FUGRO
2040.0 [m]	DC	FUGRO
2049.0 [m]	DC	FUGRO
2058.0 [m]	DC	FUGRO
2067.0 [m]	DC	FUGRO
2073.0 [m]	DC	FUGRO
2082.0 [m]	DC	FUGRO
2091.0 [m]	DC	FUGRO
2100.0 [m]	DC	FUGRO
2112.0 [m]	DC	FUGRO
2121.0 [m]	DC	FUGRO
2130.0 [m]	DC	FUGRO
2142.0 [m]	DC	FUGRO
2148.0 [m]	DC	FUGRO
2160.0 [m]	DC	FUGRO
2166.0 [m]	DC	FUGRO
2178.0 [m]	DC	FUGRO
2184.0 [m]	DC	FUGRO
2196.0 [m]	DC	FUGRO
2202.0 [m]	DC	FUGRO
2214.0 [m]	DC	FUGRO
2220.0 [m]	DC	FUGRO
2232.0 [m]	DC	FUGRO
2238.0 [m]	DC	FUGRO
2250.0 [m]	DC	FUGRO
2256.0 [m]	DC	FUGRO
2268.0 [m]	DC	FUGRO



2274.0	[m]	DC	FUGRO
2292.0	[m]	DC	FUGRO
2298.0	[m]	DC	FUGRO
2310.0	[m]	DC	FUGRO
2316.0	[m]	DC	FUGRO
2316.0	[m]	DC	FUGRO
2328.0	[m]	DC	FUGRO
2334.0	[m]	DC	FUGRO
2352.0	[m]	DC	FUGRO
2364.0	[m]	DC	FUGRO
2370.0	[m]	DC	FUGRO
2382.0	[m]	DC	FUGRO
2388.0	[m]	DC	FUGRO
2400.0	[m]	DC	FUGRO
2406.0	[m]	DC	FUGRO
2418.0	[m]	DC	FUGRO
2424.0	[m]	DC	FUGRO
2436.0	[m]	DC	FUGRO
2442.0	[m]	DC	FUGRO
2454.0	[m]	DC	FUGRO
2460.0	[m]	DC	FUGRO
2472.0	[m]	DC	FUGRO
2478.0	[m]	DC	FUGRO
2490.0	[m]	DC	FUGRO
2496.0	[m]	DC	FUGRO
2508.0	[m]	DC	FUGRO
2514.0	[m]	DC	FUGRO
2526.0	[m]	DC	FUGRO
2532.0	[m]	DC	FUGRO
2544.0	[m]	DC	FUGRO
2550.0	[m]	DC	FUGRO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
363	NORDLAND GP
467	ADVENTDALEN GP
467	KOLMULE FM
501	KAPP TOSCANA GP



501	STØ FM
508	NORDMELA FM
524	TUBÅEN FM
540	FRUHOLMEN FM
585	SNADD FM
1856	SASSENDALEN GP
1856	KOBBE FM
2451	KLAPPMYSS FM

Composite logs

Document name	Document format	Document size [MB]
5960	pdf	0.45

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI HNGS HRLA	1106	2549
MDT PRESSURE	1176	1634
MDT SAMPLE	1919	1919
MSCT	1106	2549
MWD LWD - ARCVRES6 GVR6 TELESCOP	1110	2549
MWD LWD - ARCVRES9 POWERPULSE	417	1110
MWD LWD - POWERPULSE	363	417
PEX DSI	577	1169
PEX ECS CMR MSIP	1106	2549
VSP	366	2544

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	412.0	36	417.0	0.00	LOT
SURF.COND.	13 3/8	587.0	17 1/2	602.0	2.76	LOT
INTERM.	9 5/8	1109.0	12 1/4	1110.0	2.87	LOT
OPEN HOLE		2549.0	8 1/2	2549.0	0.00	LOT



**Drilling mud**

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1110	1.30	23.0		Glydril	
1220	1.30	18.0		Glydril	
1929	1.30	17.0		Glydril	
2549	1.30	16.0		Glydril	
2549	1.30	16.0		Glydril	
2549	1.29	18.0		Glydril	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
1586.75	[m]
1579.10	[m]
1591.25	[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]
5960_Formalion_pressure_(Formasjonstrykk)	pdf	0.28

