General information

Wellbore name	7224/6-1
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	7224/6-1 (Arenaria)
Well name	7224/6-1
Seismic location	3D Survey:NH0608.inline2657 & x-line 2114
Production licence	394
Drilling operator	StatoilHydro Petroleum AS
Drill permit	1185-L
Drilling facility	POLAR PIONEER
Drilling days	31
Entered date	22.07.2008
Completed date	21.08.2008
Release date	21.08.2010
Publication date	21.08.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE TRIASSIC
1st level with HC, formation	KOBBE FM
Kelly bushing elevation [m]	23.0
Water depth [m]	266.0
Total depth (MD) [m RKB]	2338.0
Final vertical depth (TVD) [m RKB]	2338.0
Maximum inclination [°]	1.6
Bottom hole temperature [°C]	73
Oldest penetrated age	MIDDLE TRIASSIC
Oldest penetrated formation	KOBBE FM
Geodetic datum	ED50
NS degrees	72° 37' 29.09'' N
EW degrees	24° 54' 43.41'' E
NS UTM [m]	8060051.26

EW UTM [m]	430414.45
UTM zone	35
NPDID wellbore	5835

Wellbore history

General

The 7224/6-1 Arenaria well was drilled on the Bjarmeland Platform, south of the Swaen Graben, north-east of the Loppa High and west of the Nordkapp Basin in the Barents Sea. The objective of the well was to prove hydrocarbons in prospects of Jurassic age (Stø, Nordmela and Tubåen formations) and in prospects of Triassic age (Snadd formation of

Carnian age). In addition, secondary targets of Triassic age in canalized fluvial sandstones were mapped at many levels within the Fruholmen, Snadd and Kobbe Formations.

Operations and results

First a 9 7/8" pilot hole, 7224/6-U-1, was drilled to 706 m, the surface casing setting depth, to check for shallow gas and give information about drilling the Kolmule formation as surface hole. No shallow gas was observed, and no significant drilling problems were experienced. Wildcat well 7224/6-1 was spudded with the semi-submersible installation Polar Pioneer on 22 July 2008 and drilled to TD at 2338 m in the Triassic Kobbe Formation. The well was drilled with seawater and hi-vis pills down to 706 m, and with Glydril mud from 706 m to TD.

The Arenaria well penetrated a short Quaternary section and then approximately 500 m with Cretaceous rocks before entering rocks of Jurassic and Triassic age. Prospective intervals were identified within shallow marine Jurassic sand (Tubåen Formation), alluvial and shallow marine units of Norian and Early Carnian age (Fruholmen and Snadd Formation) and within, or in association with, a prograding shelf edge system of Anisian age (Kobbe Formation). Low saturation gas was found in the Tubåen Formation. Gas was discovered in 4 levels in the Kobbe Formation (2015 m, 2080 m, 2113 m and 2252 m). Due to tight formation it was only possible to take a gas sample in the Kobbe Formation at 2080 m. Weak oil shows were recorded in the Tubåen Formation at 1020 to 1022 m (spotty yellow cut fluorescence), 1023 (spotty weak yellow residual fluorescence), and at 1034 to 1042 (intermittent weak yellow cut fluorescence).

One core was cut from 1007 to 1043.2 m in the Tubåen Formation. MDT fluid samples were taken at 2078.9 m in the Kobbe formation. Pressure drawdown was very high during sampling and the samples were probably not very representative.

The well was permanently abandoned on 21 August 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]
710.00	2338.00

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	1007.0	1041.0	[m]

Total core sample length [m]	34.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
710.0	[m]	DC	FUGRO
730.0	[m]	DC	FUGRO
750.0	[m]	DC	FUGRO
770.0	[m]	DC	FUGRO
790.0	[m]	DC	FUGRO
807.0	[m]	DC	FUGRO
825.0	[m]	DC	FUGRO
855.0	[m]	DC	FUGRO
873.0	[m]	DC	FUGRO
897.0	[m]	DC	FUGRO
906.0	[m]	DC	FUGRO
915.0	[m]	DC	FUGRO
924.0	[m]	DC	FUGRO
933.0	[m]	DC	FUGRO
942.0	[m]	DC	FUGRO
951.0	[m]	DC	FUGRO
960.0	[m]	DC	FUGRO
966.0	[m]	DC	FUGRO
969.0	[m]	DC	FUGRO
978.0	[m]	DC	FUGRO
987.0	[m]	DC	FUGRO
1005.0	[m]	DC	FUGRO

1018.8	[m]	CC	FUGRO
1019.2	[m]	CC	FUGRO
1020.8	[m]	CC	FUGRO
1022.3	[m]	CC	FUGRO
1023.5	[m]	CC	FUGRO
1033.0	[m]	CC	FUGRO
1034.4	[m]	CC	FUGRO
1036.9	[m]	CC	FUGRO
1038.9	[m]	CC	FUGRO
1039.6	[m]	CC	FUGRO
1053.0	[m]	DC	FUGRO
1062.0	[m]	DC	FUGRO
1071.0	[m]	DC	FUGRO
1080.0	[m]	DC	FUGRO
1089.0	[m]	DC	FUGRO
1098.0	[m]	DC	FUGRO
1107.0	[m]	DC	FUGRO
1116.0	[m]	DC	FUGRO
1125.0	[m]	DC	FUGRO
1134.0	[m]	DC	FUGRO
1143.0	[m]	DC	FUGRO
1158.0	[m]	DC	FUGRO
1164.0	[m]	DC	FUGRO
1176.0	[m]	DC	FUGRO
1188.0	[m]	DC	FUGRO
1200.0	[m]	DC	FUGRO
1206.0	[m]	DC	FUGRO
1218.0	[m]	DC	FUGRO
1230.0	[m]	DC	FUGRO
1290.0	[m]	DC	FUGRO
1302.0	[m]	DC	FUGRO
1314.0	[m]	DC	FUGRO
1350.0	[m]	DC	FUGRO
1362.0	[m]	DC	FUGRO
1380.0	[m]	DC	FUGRO
1392.0	[m]	DC	FUGRO
1404.0	[m]	DC	FUGRO
1416.0	[m]	DC	FUGRO
1428.0	[m]	DC	FUGRO
1440.0	[m]	DC	FUGRO

1452.0	[m]	DC	FUGRO
1464.0	[m]	DC	FUGRO
1476.0	[m]	DC	FUGRO
1488.0	[m]	DC	FUGRO
1500.0	[m]	DC	FUGRO
1509.0	[m]	DC	FUGRO
1518.0	[m]	DC	FUGRO
1527.0	[m]	DC	FUGRO
1536.0	[m]	DC	FUGRO
1545.0	[m]	DC	FUGRO
1554.0	[m]	DC	FUGRO
1563.0	[m]	DC	FUGRO
1572.0	[m]	DC	FUGRO
1581.0	[m]	DC	FUGRO
1590.0	[m]	DC	FUGRO
1599.0	[m]	DC	FUGRO
1608.0	[m]	DC	FUGRO
1617.0	[m]	DC	FUGRO
1626.0	[m]	DC	FUGRO
1635.0	[m]	DC	FUGRO
1644.0	[m]	DC	FUGRO
1653.0	[m]	DC	FUGRO
1662.0	[m]	DC	FUGRO
1671.0	[m]	DC	FUGRO
1680.0	[m]	DC	FUGRO
1689.0	[m]	DC	FUGRO
1698.0	[m]	DC	FUGRO
1707.0	[m]	DC	FUGRO
1716.0	[m]	DC	FUGRO
1725.0	[m]	DC	FUGRO
1734.0	[m]	DC	FUGRO
1752.0	[m]	DC	FUGRO
1761.0	[m]	DC	FUGRO
1770.0	[m]	DC	FUGRO
1779.0	[m]	DC	FUGRO
1788.0	[m]	DC	FUGRO
1797.0	[m]	DC	FUGRO
1806.0	[m]	DC	FUGRO
1815.0	[m]	DC	FUGRO
1824.0	[m]	DC	FUGRO

1833.0	[m]	DC	FUGRO
1842.0	[m]	DC	FUGRO
1851.0	[m]	DC	FUGRO
1860.0	[m]	DC	FUGRO
1869.0	[m]	DC	FUGRO
1878.0	[m]	DC	FUGRO
1887.0	[m]	DC	FUGRO
1896.0	[m]	DC	FUGRO
1905.0	[m]	DC	FUGRO
1914.0	[m]	DC	FUGRO
1923.0	[m]	DC	FUGRO
1932.0	[m]	DC	FUGRO
1941.0	[m]	DC	FUGRO
1950.0	[m]	DC	FUGRO
1959.0	[m]	DC	FUGRO
1968.0	[m]	DC	FUGRO
1977.0	[m]	DC	FUGRO
1986.0	[m]	DC	FUGRO
1995.0	[m]	DC	FUGRO
2004.0	[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
2076.0	[m]	DC	FUGRO
2085.0	[m]	DC	FUGRO
2094.0	[m]	DC	FUGRO
2103.0	[m]	DC	FUGRO
2112.0	[m]	DC	FUGRO
2121.0	[m]	DC	FUGRO
2130.0	[m]	DC	FUGRO
2139.0	[m]	DC	FUGRO
2148.0	[m]	DC	FUGRO
2157.0	[m]	DC	FUGRO
2166.0	[m]	DC	FUGRO
2175.0	[m]	DC	FUGRO
2184.0	[m]	DC	FUGRO

2193.0	[m]	DC	FUGRO
2202.0	[m]	DC	FUGRO
2211.0	[m]	DC	FUGRO
2220.0	[m]	DC	FUGRO
2229.0	[m]	DC	FUGRO
2238.0	[m]	DC	FUGRO
2247.0	[m]	DC	FUGRO
2256.0	[m]	DC	FUGRO
2265.0	[m]	DC	FUGRO
2274.0	[m]	DC	FUGRO
2283.0	[m]	DC	FUGRO
2292.0	[m]	DC	FUGRO
2301.0	[m]	DC	FUGRO
2310.0	[m]	DC	FUGRO
2319.0	[m]	DC	FUGRO
2328.0	[m]	DC	FUGRO
2338.0	[m]	DC	FUGRO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
289	NORDLAND GP
419	ADVENTDALEN GP
419	KOLMULE FM
890	KNURR FM
906	HEKKINGEN FM
974	FUGLEN FM
1004	KAPP TOSCANA GP
1004	TUBÅEN FM
1064	FRUHOLMEN FM
1166	SNADD FM
2010	SASSENDALEN GP
2010	KOBBE FM

Composite logs

Document name	Document format	Document size [MB]
5835	pdf	0.43

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MDT	1005	1393
MDT	1865	1521
MDT	2078	0
MDT	2078	2012
MWD - PD GV6 ARCVRES6	1043	2338
MWD - PP	288	706
MWD - PP ARC825 SONVIS	288	706
MWD - PP GVR8 ARCVRES8	604	1007
PEX ECS CMR HNGS MSIP	1505	2338
PEX ECS HNGS MSIP	699	1595
VSP	320	2330

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	338.0	36	343.0	0.00	LOT
SURF.COND.	20	699.0	17 1/2	706.0	1.91	LOT
PILOT HOLE		706.0	9 7/8	706.0	0.00	LOT
LINER	9 5/8	1503.0	12 1/4	1505.0	1.82	LOT
OPEN HOLE		2338.0	8 1/2	2338.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
343	1.03			SW-hi-vi	
706	1.03			SW-hi-vi	
1505	1.28			WMB-gly	
2338	1.30			WMB-gly	