General information

Wellbore name	7222/11-1
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	7222/11-1 (Caurus)
Well name	7222/11-1
Seismic location	SG 9803-inline7381 & croddline 5747
Production licence	228
Drilling operator	StatoilHydro Petroleum AS
Drill permit	1192-L
Drilling facility	POLAR PIONEER
Drilling days	73
Entered date	24.08.2008
Completed date	04.11.2008
Plugged date	04.11.2008
Plugged and abondon date	26.03.2012
Release date	04.11.2010
Publication date	04.11.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE 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]	356.0
Total depth (MD) [m RKB]	2658.0
Final vertical depth (TVD) [m RKB]	2625.0
Maximum inclination [°]	1.3
Oldest penetrated age	MIDDLE TRIASSIC
Oldest penetrated formation	KOBBE FM
Geodetic datum	ED50
NS degrees	72° 4' 20.7'' N

EW degrees	22° 28' 27.52'' E
NS UTM [m]	8003069.57
EW UTM [m]	344636.90
UTM zone	35
NPDID wellbore	5916

Wellbore history

General

The 7222/11-1 Caurus well was drilled on the Bjarmeland Platform in the Barents Sea. The objective of the well was to prove hydrocarbons in the Caurus prospect in prognosed reservoir intervals in Snadd Formation of Carnian age and in Kobbe formation of Anisian age.

Operations and results

A pilot hole, 7222/11-U-1, was drilled 13 m south-west of the main well location. No shallow gas was found in the pilot hole.

Wildcat well 7222/11-1 was spudded with the semi-submersible installation Polar Pioneer on 24 August 2008 and drilled to TD at 2658 m (2625 m TVD) in the Middle Triassic Kobbe Formation. The 8 1/2" hole was drilled to 2082 m where the well started to lose mud to the formation due to drilling induced fractures, which were observed on the FMI logs. The well was plugged back, and a technical sidetrack T2 with reduced mud weight was drilled from 1252 m to TD. A second technical sidetrack T3, was drilled to core the Kobbe Formation. The well was drilled with seawater and hi-vis pills down to 606 m and with Glydril WBM from 606 m to TD.

The Caurus well penetrated a Quaternary section of 72 m and a Jurassic section of 185 m before drilling into rocks of Triassic age, Snadd Formation, at 636 m. The well proved gas in two levels in the Snadd Formation; in two thin sandstones of Early Norian age at top Snadd level, and in sandstones of Late Carnian age at 771 m with a gas/water contact at 785 m. Good oil shows were seen under the contact from 788 to 798 m. The gas bearing Snadd Formation sandstones had very good reservoir properties. In the Kobbe Formation oil and gas was found at two levels; oil in channelized sandstones of Anisian age at 2112 to 2115 m with weak oil shows from 2115 to 2142 m, and gas and oil in marine sandstones of Anisian age at 2210 to 2238 m with a gas/oil contact at 2233.2 m (2177.5 m TVD MSL). The oil and gas bearing Kobbe Formation sandstones had poor permability. Weak oil shows were seen from 2541 to 2559 m.

Three cores (core 1-3) were cut in the intervals 778 to 807 m and 1287 to 1299.5 m in the main wellbore, and two in 7222/11-1 T3 in the interval 2209.5 to 2243.8 m (core 4-5). In the shallow Snadd reservoir gas samples were collected at 643.8 m and at 771.5 m. A water sample was collected at 789 m. All the Snadd samples were of excellent quality. In the Kobbe sand section two oil samples were collected at 2113.7 m, but due to poor reservoir conditions the oil samples had to be sampled with very high drawdown and well below the dew point. The sampling was performed at 2232 m and 2234 m, with the lowest possible flowing pressure, but the samples collected were not representative for the formation fluid. During sampling of oil free gas coned in from the gas zone above and during gas sampling oil coned in from the oil zone below.

The well was permanently abandoned on 4 November 2008 as an oil and 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]
609.00	2082.00

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	778.0	798.8	[m]
2	798.5	807.1	[m]
3	1287.0	1299.5	[m]
4	2209.5	2227.7	[m]
5	2227.7	2243.5	[m]

Total core sample length [m]	75.8
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
609.0	[m]	DC	FUGRO
627.0	[m]	DC	FUGRO
663.0	[m]	DC	FUGRO
681.0	[m]	DC	FUGRO
699.0	[m]	DC	FUGRO
702.0	[m]	DC	FUGRO
720.0	[m]	DC	FUGRO
732.0	[m]	DC	FUGRO
750.0	[m]	DC	FUGRO
768.0	[m]	DC	FUGRO
779.6	[m]	C	FUGRO
782.7	[m]	C	FUGRO
785.3	[m]	C	FUGRO
788.5	[m]	C	FUGRO
794.6	[m]	C	FUGRO
797.5	[m]	C	FUGRO
800.7	[m]	C	FUGRO
801.1	[m]	C	FUGRO

803.9	[m]	C	FUGRO
805.6	[m]	C	FUGRO
807.1	[m]	C	FUGRO
816.0	[m]	DC	FUGRO
846.0	[m]	DC	FUGRO
876.0	[m]	DC	FUGRO
912.0	[m]	DC	FUGRO
957.0	[m]	DC	FUGRO
990.0	[m]	DC	FUGRO
1008.0	[m]	DC	FUGRO
1050.0	[m]	DC	FUGRO
1065.0	[m]	DC	FUGRO
1074.0	[m]	DC	FUGRO
1101.0	[m]	DC	FUGRO
1122.0	[m]	DC	FUGRO
1131.0	[m]	DC	FUGRO
1149.0	[m]	DC	FUGRO
1200.0	[m]	DC	FUGRO
1291.7	[m]	C	FUGRO
1295.1	[m]	C	FUGRO
1297.7	[m]	C	FUGRO
1299.3	[m]	C	FUGRO
1320.0	[m]	DC	FUGRO
1341.0	[m]	DC	FUGRO
1356.0	[m]	DC	FUGRO
1377.0	[m]	DC	FUGRO
1386.0	[m]	DC	FUGRO
1401.0	[m]	DC	FUGRO
1419.0	[m]	DC	FUGRO
1434.0	[m]	DC	FUGRO
1443.0	[m]	DC	FUGRO
1470.0	[m]	DC	FUGRO
1488.0	[m]	DC	FUGRO
1503.0	[m]	DC	FUGRO
1512.0	[m]	DC	FUGRO
1530.0	[m]	DC	FUGRO
1548.0	[m]	DC	FUGRO
1557.0	[m]	DC	FUGRO
1575.0	[m]	DC	FUGRO
1590.0	[m]	DC	FUGRO

1599.0	[m]	DC	FUGRO
1614.0	[m]	DC	FUGRO
1659.0	[m]	DC	FUGRO
1665.0	[m]	DC	FUGRO
1680.0	[m]	DC	FUGRO
1704.0	[m]	DC	FUGRO
1722.0	[m]	DC	FUGRO
1731.0	[m]	DC	FUGRO
1746.0	[m]	DC	FUGRO
1755.0	[m]	DC	FUGRO
1773.0	[m]	DC	FUGRO
1791.0	[m]	DC	FUGRO
1812.0	[m]	DC	FUGRO
1845.0	[m]	DC	FUGRO
1863.0	[m]	DC	FUGRO
1872.0	[m]	DC	FUGRO
1893.0	[m]	DC	FUGRO
1914.0	[m]	DC	FUGRO
1920.0	[m]	DC	FUGRO
1947.0	[m]	DC	FUGRO
1968.0	[m]	DC	FUGRO
1989.0	[m]	DC	FUGRO
2007.0	[m]	DC	FUGRO
2040.0	[m]	DC	FUGRO
2067.0	[m]	DC	FUGRO
2091.0	[m]	DC	FUGRO
2100.0	[m]	DC	FUGRO
2109.0	[m]	DC	FUGRO
2118.0	[m]	DC	FUGRO
2127.0	[m]	DC	FUGRO
2136.0	[m]	DC	FUGRO
2145.0	[m]	DC	FUGRO
2154.0	[m]	DC	FUGRO
2163.0	[m]	DC	FUGRO
2172.0	[m]	DC	FUGRO
2181.0	[m]	DC	FUGRO
2190.0	[m]	DC	FUGRO
2199.0	[m]	DC	FUGRO
2208.0	[m]	DC	FUGRO
2210.3	[m]	C	FUGRO

2213.4	[m]	C	FUGRO
2217.0	[m]	DC	FUGRO
2217.5	[m]	C	FUGRO
2219.8	[m]	C	FUGRO
2223.4	[m]	C	FUGRO
2224.9	[m]	C	FUGRO
2226.0	[m]	DC	FUGRO
2227.5	[m]	C	FUGRO
2228.4	[m]	C	FUGRO
2231.3	[m]	C	FUGRO
2233.2	[m]	C	FUGRO
2235.0	[m]	DC	FUGRO
2237.9	[m]	C	FUGRO
2241.1	[m]	C	FUGRO
2243.1	[m]	C	FUGRO
2244.0	[m]	DC	FUGRO
2253.0	[m]	DC	FUGRO
2262.0	[m]	DC	FUGRO
2271.0	[m]	DC	FUGRO
2280.0	[m]	DC	FUGRO
2289.0	[m]	DC	FUGRO
2298.0	[m]	DC	FUGRO
2307.0	[m]	DC	FUGRO
2316.0	[m]	DC	FUGRO
2325.0	[m]	DC	FUGRO
2334.0	[m]	DC	FUGRO
2343.0	[m]	DC	FUGRO
2352.0	[m]	DC	FUGRO
2361.0	[m]	DC	FUGRO
2370.0	[m]	DC	FUGRO
2379.0	[m]	DC	FUGRO
2388.0	[m]	DC	FUGRO
2397.0	[m]	DC	FUGRO
2406.0	[m]	DC	FUGRO
2415.0	[m]	DC	FUGRO
2424.0	[m]	DC	FUGRO
2433.0	[m]	DC	FUGRO
2442.0	[m]	DC	FUGRO
2451.0	[m]	DC	FUGRO
2460.0	[m]	DC	FUGRO

2469.0	[m]	DC	FUGRO
2478.0	[m]	DC	FUGRO
2487.0	[m]	DC	FUGRO
2496.0	[m]	DC	FUGRO
2505.0	[m]	DC	FUGRO
2514.0	[m]	DC	FUGRO
2523.0	[m]	DC	FUGRO
2532.0	[m]	DC	FUGRO
2541.0	[m]	DC	FUGRO
2550.0	[m]	DC	FUGRO
2559.0	[m]	DC	FUGRO
2568.0	[m]	DC	FUGRO
2577.0	[m]	DC	FUGRO
2586.0	[m]	DC	FUGRO
2595.0	[m]	DC	FUGRO
2604.0	[m]	DC	FUGRO
2613.0	[m]	DC	FUGRO
2622.0	[m]	DC	FUGRO
2631.0	[m]	DC	FUGRO
2640.0	[m]	DC	FUGRO
2649.0	[m]	DC	FUGRO
2658.0	[m]	DC	FUGRO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
379	NORDLAND GP
451	KAPP TOSCANA GP
589	FRUHOLMEN FM
636	SNADD FM
2007	SASSENDALEN GP
2007	KOBBE FM

Composite logs

Document name	Document format	Document size [MB]
5916	pdf	0.49

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ARCVRES6 TELESCOPE	1252	2209
CMR PEX HRLA ECS	1169	2658
FMI HNGS HRLA	583	1163
FMI HNGS HRLA	1170	2079
FMI MSIP	1169	2658
MDT	641	1073
MDT	1752	2072
MDT	2113	2236
MDT	2113	2232
MSCT	626	1147
MSCT	1434	2643
MWD LWD - ARCVRES PP SONVIS8	379	606
MWD LWD - ARCVRES6 PP GVR6	1170	2082
MWD LWD - ARVRES8 PP GVR8	606	1170
PEX CMR	1169	2658
PEX CMR MSIP	1170	2079
PEX MSIP CMR ECS	577	1169
VSP	1169	2590

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	427.0	36	427.0	0.00	LOT
SURF.COND.	20	600.0	17 1/2	606.0	2.04	LOT
INTERM.	9 5/8	1169.0	12 1/4	1170.0	2.43	LOT
OPEN HOLE		2244.0	8 1/2	2244.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
606	1.32	19.0		Seawater	
700	1.22	16.0		Glydril	

975	1.32	16.0		Glydril	
1170	1.32	14.0		Glydril	
1234	1.32	17.0		Glydril	
1252	1.21	17.0		Glydril	
1252	1.33	16.0		Glydril	
1300	1.32	20.0		Glydril	
1648	1.22	16.0		Glydril	
2036	1.23	16.0		Glydril	
2134	1.22	14.0		Glydril	
2658	1.22	14.0		Glydril	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
778.74	[m]
783.75	[m]
789.50	[m]
795.02	[m]
799.27	[m]
805.02	[m]
1289.25	[m]
2235.00	[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]
5916_Formation_pressure_(Formasjonstrykk)	pdf	0.28