

**General information**

Wellbore name	7220/2-1
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	7220/2-1 (Isfjell)
Well name	7220/2-1
Seismic location	WG0901:inline1591 & xline 9391
Production licence	714
Drilling operator	Statoil Petroleum AS
Drill permit	1543-L
Drilling facility	TRANSOCEAN SPITSBERGEN
Drilling days	14
Entered date	26.09.2014
Completed date	10.10.2014
Release date	10.10.2016
Publication date	12.10.2016
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	NORDMELA FM
Kelly bushing elevation [m]	40.0
Water depth [m]	429.0
Total depth (MD) [m RKB]	1594.0
Final vertical depth (TVD) [m RKB]	1590.0
Maximum inclination [°]	9.6
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	72° 48' 43.85" N
EW degrees	20° 33' 26.97" E
NS UTM [m]	8088240.43



EW UTM [m]	683076.25
UTM zone	33
NPDID wellbore	7558

Wellbore history

General

Well 7220/2-1 was drilled to test the Isfjell prospect in the Bjørnøyrenna Fault Complex between the Bjørnøya Basin and the Loppa High in the western Barents Sea. The main purpose of the well was to test the hydrocarbon potential and phase in the Stø, Nordmela and Tubåen formations of Early - Middle Jurassic age. The Snadd Formation was a secondary target.

Operations and results

Wildcat well 7220/2-1 was spudded with the semi-submersible installation Transocean Spitsbergen on 26 August 2014. After drilling the 36" section down to 501 m the well was set on hold while drilling a separate 9 7/8" pilot hole (7220/2-U-2) from seabed to 678 m to look for shallow gas. No shallow gas was seen. After this, on 28 August, the rig was moved to drill the 7125/4-3 Ensis well. On 22 September, the rig returned to location and drilling of the main well commenced to TD at 1594 m in the Late Triassic Snadd Formation. No significant problem was encountered in the operations. The well was drilled with seawater down to 678 m and with KCl/Polymer/Glycol from 678 m to TD.

The well penetrated Quaternary and Tertiary claystones as well as Jurassic and Triassic sandstones, claystones and siltstones. Top Stø Formation was penetrated at 828 m. Gas was present in Stø and Nordmela formations with a possible GOC at 912 m and a thin (2 m) oil leg. The oil was indicated from resistivity, hydrocarbon core scanner and core extracts. Below the oil, there were good shows down to 922 m. Organic geochemical analyses proved the gas to be thermogenic in origin with no sign of biodegradation. No hydrocarbon indications were observed in the Snadd Formation.

Three cores were cut. Core 1 was cut from 800 to 827 m in the overburden Kolmule shale for rock mechanical purposes. Cores 2 and 3 were cut from 834 to 936.5 m in the reservoir section. MDT gas samples were taken at 886.6 m, while water samples were taken at 983 m.

The well was permanently abandoned on 10 October 2014 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]
680.00	1594.00

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	800.0	826.6	[m]
2	834.0	889.1	[m]
3	889.1	933.5	[m]

Total core sample length [m]	126.1
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
680.0	[m]	DC	ROBERTSO
690.0	[m]	DC	ROBERT
700.0	[m]	DC	ROBERT
710.0	[m]	DC	ROBERT
720.0	[m]	DC	ROBERT
730.0	[m]	DC	ROBERT
740.0	[m]	DC	ROBERT
750.0	[m]	DC	ROBERT
760.0	[m]	DC	ROBERT
770.0	[m]	DC	ROBERT
779.0	[m]	DC	ROBERT
782.0	[m]	DC	ROBERT
788.0	[m]	DC	ROBERT
794.0	[m]	DC	ROBERT
800.2	[m]	C	ROBERT
804.5	[m]	C	ROBERT
808.4	[m]	C	ROBERT
811.6	[m]	C	ROBERT
814.6	[m]	C	ROBERT
821.3	[m]	C	ROBERT
823.5	[m]	C	ROBERT
824.3	[m]	C	ROBERT
825.5	[m]	C	ROBERT
826.3	[m]	C	ROBERT
834.4	[m]	C	ROBERT
838.9	[m]	C	ROBERT



842.9 [m]	C	ROBERT
847.5 [m]	C	ROBERT
851.9 [m]	C	ROBERT
856.3 [m]	C	ROBERT
861.9 [m]	C	ROBERT
868.0 [m]	C	ROBERT
875.8 [m]	C	ROBERT
877.7 [m]	C	ROBERT
883.5 [m]	C	ROBERT
888.4 [m]	C	ROBERT
890.4 [m]	C	ROBERT
894.6 [m]	C	ROBERT
899.3 [m]	C	ROBERT
901.7 [m]	C	ROBERT
908.5 [m]	C	ROBERT
914.3 [m]	C	ROBERT
919.4 [m]	C	ROBERT
923.8 [m]	C	ROBERT
927.8 [m]	C	ROBERT
932.3 [m]	C	ROBERT
940.0 [m]	DC	ROBERT
945.0 [m]	DC	ROBERT
950.0 [m]	DC	ROBERT
955.0 [m]	DC	ROBERT
960.0 [m]	DC	ROBERT
965.0 [m]	DC	ROBERT
970.0 [m]	DC	ROBERT
975.0 [m]	DC	ROBERT
980.0 [m]	DC	ROBERT
985.0 [m]	DC	ROBERT
990.0 [m]	DC	ROBERT
995.0 [m]	DC	ROBERT
1000.0 [m]	DC	ROBERT
1010.0 [m]	DC	ROBERT
1015.0 [m]	DC	ROBERT
1020.0 [m]	DC	ROBERT
1030.0 [m]	DC	ROBERT
1035.0 [m]	DC	ROBERT
1040.0 [m]	DC	ROBERT
1050.0 [m]	DC	ROBERT



1055.0	[m]	DC	ROBERT
1060.0	[m]	DC	ROBERT
1070.0	[m]	DC	ROBERT
1075.0	[m]	DC	ROBERT
1080.0	[m]	DC	ROBERT
1090.0	[m]	DC	ROBERT
1095.0	[m]	DC	ROBERT
1100.0	[m]	DC	ROBERT
1110.0	[m]	DC	ROBERT
1115.0	[m]	DC	ROBERT
1120.0	[m]	DC	ROBERT
1125.0	[m]	DC	ROBERT
1130.0	[m]	DC	ROBERT
1140.0	[m]	DC	ROBERT
1160.0	[m]	DC	ROBERT
1170.0	[m]	DC	ROBERT
1190.0	[m]	DC	ROBERT
1200.0	[m]	DC	ROBERT
1220.0	[m]	DC	ROBERT
1230.0	[m]	DC	ROBERT
1250.0	[m]	DC	ROBERT
1260.0	[m]	DC	ROBERT
1280.0	[m]	DC	ROBERT
1290.0	[m]	DC	ROBERT
1310.0	[m]	DC	ROBERT
1320.0	[m]	DC	ROBERT
1340.0	[m]	DC	ROBERT
1350.0	[m]	DC	ROBERT
1370.0	[m]	DC	ROBERT
1380.0	[m]	DC	ROBERT
1400.0	[m]	DC	ROBERT
1410.0	[m]	DC	ROBERT
1430.0	[m]	DC	ROBERT
1440.0	[m]	DC	ROBERT
1460.0	[m]	DC	ROBERT
1470.0	[m]	DC	ROBERT
1490.0	[m]	DC	ROBERT
1500.0	[m]	DC	ROBERT
1520.0	[m]	DC	ROBERT
1530.0	[m]	DC	ROBERT



1550.0	[m]	DC	ROBERT
1565.0	[m]	DC	ROBERT
1579.0	[m]	DC	ROBERT
1594.0	[m]	DC	ROBERT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
469	NORDLAND GP
469	UNDIFFERENTIATED
530	SOTBAKKEN GP
530	TORSK FM
655	ADVENTDALEN GP
655	KOLMULE FM
828	KAPP TOSCANA GP
828	STØ FM
873	NORDMELA FM
992	TUBÅEN FM
1113	FRUHOLMEN FM
1538	SNADD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MDT	828	1559
MWD - ARC6 TELE675	678	773
MWD - PERI15	773	1594
MWD- TELE ARCVRES9	510	640
PEX HRLA MSIP	767	1591
VSI4	422	1520

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	517.0	36	520.2	0.00	
INTERM.	13 3/8	670.7	17 1/2	678.5	1.19	FIT
INTERM.	9 5/8	767.2	12 1/4	773.5	1.45	FIT



OPEN HOLE		1594.0	8 1/2	1594.0	0.00	
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Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
529	1.20	52.0		Low Sulphate/KCl/Poly mer/Glycol	
678	1.14	18.0		Low Sulphate/KCl/Poly mer/Glycol	
678	1.14	27.0		KCl/Polymer/GEM	
740	1.14	19.0		KCl/Polymer/Glycol	
800	1.17	19.0		Low Sulphate/KCl/Poly mer/Glycol	
935	1.17	30.0		Low Sulphate/KCl/Poly mer/Glycol	
1202	1.16	49.0		Low Sulphate/KCl/Poly mer/Glycol	
1594	1.16	58.0		Low Sulphate/KCl/Poly mer/Glycol	