

**General information**

Wellbore name	7220/11-3 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Discovery	7220/11-1 (Alta)
Well name	7220/11-3
Seismic location	LN12M01 inline 29006 xline 24350
Production licence	609
Drilling operator	Lundin Norway AS
Drill permit	1598-L
Drilling facility	ISLAND INNOVATOR
Drilling days	27
Entered date	02.09.2015
Completed date	29.09.2015
Release date	29.09.2017
Publication date	29.09.2017
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	LATE TRIASSIC
1st level with HC, formation	KLAPPMYSS FM
2nd level with HC, age	EARLY TRIASSIC
2nd level with HC, formation	NO FORMAL NAME
Kelly bushing elevation [m]	30.0
Water depth [m]	397.0
Total depth (MD) [m RKB]	2135.0
Final vertical depth (TVD) [m RKB]	1992.0
Maximum inclination [°]	41.3
Oldest penetrated age	PERMIAN
Oldest penetrated formation	ØRN FM
Geodetic datum	ED50
NS degrees	72° 1' 12.62" N
EW degrees	20° 31' 41.23" E
NS UTM [m]	8000137.25



EW UTM [m]	690231.43
UTM zone	33
NPDID wellbore	7786

Wellbore history

General

Well 7220/11-3 A is a geological sidetrack to well 7220/11-3, which confirmed oil and gas in Triassic conglomerates and Permian carbonates in a central position on the Alta discovery. The Alta structure lie on the southern Loppa High in the Barents Sea. Well 7220/11-3 did not penetrated to the oil-water contact. The primary objective of the sidetrack was to prove the presence and thickness of the Early Triassic conglomerates ca 400 m to the east of the main wellbore and to confirm hydrocarbon columns and fluid contacts similar to those established in the 7220/11-1 discovery well.

Operations and results

Appraisal well 7220/11-3 A was kicked off from 1105 m in the 7220/11-3 main bore on 2 September 2015. It was drilled with the semi-submersible installation Island Innovator to 1240 m where it was aborted due to steering problems. The wellbore was plugged back and successfully sidetracked. It was drilled with no significant further issues to a total depth of 2135 m (1991.8 m TVD) in Permian carbonates of the Ørn Formation. The well was drilled with AquaDrill mud from kick-off to TD.

The geological sidetrack proved a total hydrocarbon column height of 74 m comprising 30 m of gas over 44 m of oil. The column extended from 2013 m (1880 m TVD) in the upper Klappmyss Formation down to a free-water level estimated to be at 2094 m (1954 m TVD) in Early Triassic conglomerates. The gas-oil contact was established at 2046 m (1910 m TVD). The pressures and gradients were found to be comparable with those established in the 7220/11-3 main well and in the 7220/11-1 discovery well. Numerous oil shows were described in siltstones and sandstones below 1100 m in the Snadd and Kobbe formations. Shows were described also below the hydrocarbon-bearing reservoir all through down to TD.

Two cores were cut from 2015.0 to 2094.5 m with 100% recovery. MDT fluid samples were taken at 2121.2 m (water), 2064 m (oil), and 2013.4 m (gas).

Due to concerns of possible severe losses occurring while the reservoir was exposed, drilling was terminated prior to penetrating the lowermost Ørn Formation carbonates, which were believed to pose the highest risk of losses. The wellbore was suspended on 29 September 2015 after installing a 7" liner. Further drilling and testing would be done in a later re-entry. The well is classified as an oil and gas appraisal well.

Testing

No drill stem test was performed.

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Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1110.00	1240.00



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	2015.0	2070.4	[m]
2	2070.3	2094.5	[m]

Total core sample length [m]	79.6
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
427	NORDLAND GP
427	UNDIFFERENTIATED
492	SOTBAKKEN GP
492	TORSK FM
575	ADVENTDALEN GP
575	KOLMULE FM
601	KAPP TOSCANA GP
601	SNADD FM
1982	SASSENDALEN GP
1982	KOBBE FM
2013	KLAPPMYSS FM
2064	UNDEFINED GP
2120	GIPSDALEN GP
2120	UNDIFFERENTIATED
2129	ØRN FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD - ATK GR RES PWD DIR AC	1077	1141
MWD - RES GR PWD DIR AC	1141	1240

**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	493.6	36	494.0	0.00	
SURF.COND.	20	590.1	26	598.0	1.41	LOT
PILOT HOLE		598.0	9 7/8	598.0	0.00	
INTERM.	13 3/8	1077.0	17 1/2	1085.0	1.40	LOT
INTERM.	9 5/8	1904.7	12 1/4	1913.0	1.45	LOT
LINER	7	2133.5	8 1/2	2135.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1124	1.20	12.0		Water Based	
1209	1.20	16.0		Water Based	
1301	1.20	14.0		Water Based	
1519	1.20	14.0		Water Based	
1702	1.21	15.0		Water Based	
1913	1.15	8.0		Water Based	
1913	1.21	14.0		Water Based	
2025	1.16	11.0		Water Based	
2135	1.13	1.0		Water Based	
2135	1.14	11.0		Water Based	