General information

Wellbore name	7222/1-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Well name	7222/1-1
Seismic location	3D st 1002t10 psdm. Crossline 2440. Inline 1851
Production licence	226
Drilling operator	Eni Norge AS
Drill permit	1629-L
Drilling facility	SCARABEO 8
Drilling days	50
Entered date	14.06.2016
Completed date	02.08.2016
Release date	01.01.2018
Publication date	20.02.2018
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	34.0
Water depth [m]	424.0
Total depth (MD) [m RKB]	2400.0
Final vertical depth (TVD) [m RKB]	2400.0
Maximum inclination [°]	1.5
Oldest penetrated age	PERMIAN
Oldest penetrated formation	RØYE FM
Geodetic datum	ED50
NS degrees	72° 56' 45.94'' N
EW degrees	22° 19' 26.18'' E
NS UTM [m]	8100659.43
EW UTM [m]	347066.29
UTM zone	35
NPDID wellbore	7987

Wellbore history

Wellbore history

General

Well 7222/1-1 was drilled to test the Aurelia prospect on the northern part of the Loppa High in the Barents Sea. The objective was to prove hydrocarbons in the Triassic Snadd and Kobbe formations, and to test the prospectivity of the Early Permian Ørn Formation.

Operations and results

Wildcat well 7222/1-1 was spudded with the semi-submersible installation Scarabeo 8 on 14 June 2016. During coring at 1479.5 m, the string stalled and mud losses at 45 m3/hr occurred, resulting in a very short core and time spent on curing the mud losses. TD was set at 2400 m in the Late Permian Røye Formation, which was earlier than planned, due to slow drilling and several bit trips in massive chert. The well was drilled with seawater and hi-vis sweeps down to 737 m and with EMS-400 oil based mud from 737 m to TD.

The Carnian age reservoir in the Snadd Formation was penetrated at 1015m, and found to be water bearing. The sequence had a gross thickness of 115 m, and a net sand of 44.3 m, giving a net to gross value of 38.6%. Porosity of 22% was calculated for this reservoir zone, with dry gas shows observed. The Ladinian age Snadd reservoir was penetrated at 1181 m, and found to be water bearing. The reservoir zone had a gross thickness of 24.6 m, net sand of 15.5 m giving a net-to-gross value of 63.1%. Porosity of 18% was calculated, and as with the Snadd reservoir, dry gas shows were observed. Top Kobbe Formation reservoir was penetrated at 1464 m. The reservoir sandstone had a thickness of 33 m, and was found to be tight and water bearing. Calculated porosity was 12.5%, with very low permeability, as confirmed from the recovered core. The Steinkobbe Formation, an important Triassic age source rock for oil and gas in the Barents Sea, was penetrated in this well, from 1693 to 1969 m. The Late Permian Røye Formation was found to consist of tight, water-bearing carbonates.

Weak oil shows and wet gas were described on sandstone cuttings from the interval 1478 to 1522 m in the upper part of the Kobbe Formation.

One short core was cut from 1478 to 1479.53 m in the upper part of the Kobbe Formation. No fluid sample was taken.

The well was permanently abandoned on 2 August 2016 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
740.00	2399.00

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	1478.0	1479.5	[m]

Total core sample length [m]	1.5
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
458	NORDLAND GP
539	KAPP TOSCANA GP
539	SNADD FM
1464	SASSENDALEN GP
1464	KOBBE FM
1693	STEINKOBBE FM
1969	KLAPPMYSS FM
2075	HAVERT FM
2195	TEMPELFJORDEN GP
2195	RØYE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
HNGS XPT NGI	1107	1550
MWD - DIR	458	514
MWD - DIR GR RES	514	737
MWD - DIR GR RES SON	737	1015
MWD - DUMB IRON	1479	1542
MWD - DUMB IRON	1556	1556
MWD - GR RES CAL DEN NEU	2125	2125
MWD - GR RES DEN NEU SON	2338	2400
MWD - GR RES DEN NEU SON STETH	2125	2338

MWD - GR RES DIR SON	1015	1479
MWD - GR RES DIR SON ECD	1479	1556
MWD - GR RES DIR SON ECD LWD	1677	2125
MWD - GR RES SON STETH PRES	1556	1556
MWD - IRON DUMB	1556	1677
USIT CBL PPC GR LEH ECRD	434	2123
VSP GR LEH ECRD	515	2390
XPT GR LEH ECRD	2249	2320

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	36	505.6	42	511.0	0.00	
SURF.COND.	20	732.2	24	738.0	0.00	
		740.0		740.0	1.39	LOT
PILOT HOLE		740.0	8 1/2	740.0	0.00	
INTERM.	13 3/8	1007.8	16	1015.0	0.00	
		1018.0		1018.0	1.88	LOT
LINER	9 5/8	2124.0	12 1/4	2125.0	0.00	
		2128.0		2128.0	1.24	FIT
OPEN HOLE		2400.0	8 1/2	2400.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
458	1.03	1.0		--	
741	1.14	13.0		OB	
907	1.10	12.0		OB	
1015	1.20	16.0		OB	
1388	1.30	21.0		OB	
1542	1.22	13.0		OB	
1615	1.14	14.0		OB	
2095	1.10	14.0		OB	
2104	1.14	15.0		OB	
2277	1.10	14.0		OB	
2400	1.10	12.0		OB	