

**General information**

Wellbore name	7220/10-1
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	7220/10-1 (Salina)
Well name	7220/10-1
Seismic location	Kryssing av XL 2162 og IL 1474 (WG0901-3D)
Production licence	533
Drilling operator	Eni Norge AS
Drill permit	1413-L
Drilling facility	SCARABEO 8
Drilling days	65
Entered date	13.08.2012
Completed date	16.10.2012
Release date	16.10.2014
Publication date	13.01.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	EARLY CRETACEOUS
1st level with HC, formation	KOLMULE FM
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	STØ FM
Kelly bushing elevation [m]	34.0
Water depth [m]	341.0
Total depth (MD) [m RKB]	2405.0
Final vertical depth (TVD) [m RKB]	2405.0
Maximum inclination [°]	0.9
Bottom hole temperature [°C]	79
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	72° 0' 57.34" N



EW degrees	20° 3' 25.01" E
NS UTM [m]	7998239.81
EW UTM [m]	674093.10
UTM zone	33
NPDID wellbore	7015

Wellbore history

General

Well 7220/10-1 was drilled on the Salina Prospect in the south-west end of the Loppa High in the Barents Sea area. The primary exploration target for the well was to prove petroleum in Early Cretaceous to Late Jurassic reservoir rocks (Knurr and Hekkingen formations). The secondary target was to prove petroleum in Middle to Early Jurassic reservoir rocks (Stø, Nordmela, Tubåen and Fruholmen formations).

Operations and results

Wildcat well 7220/10-1 was spudded with the semi-submersible installation Scarabeo 8 on 13 August 2012 and drilled to TD at 2405 m in Late Triassic Snadd Formation. A 9 7/8" pilot hole was drilled from the seabed to 830 m to check for shallow gas. There was no indication of shallow gas. The well was drilled with seawater and hi-vis pills down to 688 m and with EMS-3100 water based mud (seawater) from 688 m to TD.

The well proved the presence of a 134 m reservoir consisting of sandstones and siltstones of Aptian age within the Kolmule Formation. Top of this sandstone was at 1291 m and the upper 36 m was gas bearing and had 20% average porosity and a net/gross of 96%. Extrapolation of MDT pressure gradients placed the gas-water contact at 1327 m. The reservoir quality decreases towards the base of the reservoir. Top Stø Formation was penetrated at 1513.5 m. It consisted of 132 m sandstone with very good reservoir quality. The upper 53 m was gas bearing and had average porosity of 20% and a net/gross of 90%. A clean gas-water contact was found at 1567 m. The gas in both reservoirs had isotopic profiles typical of thermogenic gases. The gas in the Stø Formation had more C2+ components than the gas in the Kolmule Formation.

Sandstone reservoirs were also found in Nordmela, Tubåen, Fruholmen and Snadd Formations with average porosity ranging from 17 to 21%. All reservoir levels below the Stø Formation were water bearing. No oil shows were described in the well.

Two cores were cut from 1299.5 m to 1355 m in the Kolmule reservoir and two were cut from 1518 m to 1587.5 m in the Stø reservoir. MDT gas samples were taken at 1309.99 m in the Kolmule Formation and at 1520.51 and 1560.49 m in the Stø Formation.

The well was permanently abandoned on 16 October 2012 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]
690.00	2405.00



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	1298.5	1323.9	[m]
2	1326.0	1353.7	[m]
3	1518.0	1547.5	[m]
4	1547.5	1576.2	[m]

Total core sample length [m]	111.3
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
382	NORDLAND GP
474	SOTBAKKEN GP
474	TORSK FM
1272	ADVENTDALEN GP
1272	KOLMULE FM
1456	KOLJE FM
1484	HEKKINGEN FM
1499	FUGLEN FM
1513	KAPP TOSCANA GP
1513	STØ FM
1645	NORDMELA FM
1832	TUBÅEN FM
1931	FRUHOLMEN FM
2303	SNADD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI MSIP GR	1177	1451
FMI MSIP GR	1450	2405



GR NBGR RES ECD SON DIR D N	1245	2405
HRLA TLD APS ECS HNGS GR	1151	1451
HRLA TLD APS HNGS CMR GR	1450	2405
MDT	1516	2363
MWD - GR RES ECD DIR	362	668
MWD - GR RES ECD SON DIR	668	1450
PS HY PO IFA MS PC GR	1310	1333
USIT DCBL GR	0	0
VSP	736	2340
XPT CMR GR	1250	1450

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	442.0	42	450.0	0.00	
SURF.COND.	20	682.0	24	688.0	1.45	LOT
PILOT HOLE		830.0	9 7/8	830.0	0.00	
INTERM.	13 3/8	1177.0	16	1186.0	1.34	LOT
LINER	9 5/8	1450.0	12 1/4	1450.0	1.40	LOT
OPEN HOLE		2405.0	8 1/2	2405.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
382	0.00	1.0		waterbased	
1186	0.00	1.1		waterbased	
1344	0.00	1.2		waterbased	
1548	0.00	1.2		waterbased	
2105	0.00	1.2		MI-SWACO EMS-3100	
2405	0.00	1.2		MI-SWACO EMS-3100	

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]
7015 Formation pressure (Formasjonstrykk)	PDF	0.21

