

**General information**

Wellbore name	7120/12-5
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	7120/12-5
Seismic location	ST07M10 inline 3466 & crossline 8781
Production licence	489
Drilling operator	Eni Norge AS
Drill permit	1326-L
Drilling facility	POLAR PIONEER
Drilling days	79
Entered date	17.10.2010
Completed date	03.01.2011
Release date	03.01.2013
Publication date	15.01.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	187.0
Total depth (MD) [m RKB]	3630.0
Final vertical depth (TVD) [m RKB]	3628.0
Maximum inclination [°]	11.89
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	KOBBE FM
Geodetic datum	ED50
NS degrees	71° 11' 57.92" N
EW degrees	20° 54' 54.97" E
NS UTM [m]	7899853.81
EW UTM [m]	496952.15
UTM zone	34
NPDID wellbore	6478



Wellbore history

General

Well 7120/12-5 was drilled on the Lunde prospect next to the 7120/12-3Alke North discovery in the Hammerfest Basin of the Barents Sea. The main targets were the Stø Formation sandstones in the top of the Kapp Toscana Group, Intra Carnian sandstones of the Snadd Formation and Kobbe Formation sandstones. These formations were expected to be gas bearing.

Operations and results

Wildcat well 7120/12-5 was drilled with the semi-submersible installation Polar Pioneer. Drilling started on 3 January 2010 with a 9 7/8" pilot hole 51.5 m from the main well position to check for shallow gas. No shallow gas was observed. The rig was then moved to the planned position, where it was spudded and drilling commenced to 1761 m where the initial 16" hole was abandoned owing to hole instability. A new 16" hole was sidetracked from 533 m and drilling then proceeded without significant problems to final TD at 3630 m in the Middle Triassic Kobbe Formation. The well was drilled with Seawater and hi-vis sweeps down to 510 m, with K-Format mud from 510 m to 1761 m in the primary well bore and to 1591 m in sidetrack, and with KCl/GEM/Polymer mud from 1591 m to TD.

Sandstones of reservoir quality were penetrated in all three targets, but all were found to be water wet. Based on 12 valid XPT-MDT pressure points a water gradient of 0.101 bar/m was established from the Stø Formation at 2150 m to the Snadd Fm (Intra Carnian sand) at 3100 m. The Stø Formation was encountered at 2165 m, 26.5 m higher than originally prognosed. The Stø sandstones were generally very fine to fine, well sorted and poorly cemented with occasional kaolinite matrix. Top Snadd Formation was encountered at 2582 m with the secondary target Intra Carnian sandstones at 3175 to 3197.5 m, 163m deeper than prognosed. These sands were interbedded with thin siltstones and were generally fine to medium grained, well sorted, poorly cemented with moderate inferred porosity. The Kobbe Formation came in at 3572 m, 163 m deeper than prognosed. The Kobbe sandstones were interbedded with claystone and were very fine to occasionally fine, well sorted and commonly well cemented with poor inferred porosity.

Shows were absent from the well apart from background mineral fluorescence. Low gas values were recorded throughout the well with the highest, short lived peak of 10.45% recorded on penetrating the Stø sandstones. After the initial peak gas values rapidly fell back to background levels below 1%.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 3 January 2011 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]
510.00	3630.00

Cuttings available for sampling?	YES
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
210	NORDLAND GP
766	NYGRUNNEN GP
826	ADVENTDALEN GP
826	KOLMULE FM
1399	KOLJE FM
1828	KNURR FM
1963	HEKKINGEN FM
2153	FUGLEN FM
2165	KAPP TOSCANA GP
2165	STØ FM
2230	NORDMELA FM
2365	TUBÅEN FM
2407	FRUHOLMEN FM
2582	SNADD FM
3572	SASSEDALEN GP
3572	KOBBE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
GR DENS NEU SON	1576	3164
MSCT GR	3177	3608
MWD - ARC SON TELE	210	570
MWD - DVRARC	1591	3164
MWD - PDX5 RAB6 TELE	3294	3630
MWD - PP ARC	570	1591
MWD - RAB6 DV6MT TELE	3164	3294
VSP GR	1986	3620



XPT GR	3177	3191
XPT TLD MAIP	3070	3634

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	268.5	36	268.5	0.00	LOT
SURF.COND.	20	503.0	26	510.0	1.79	LOT
PILOT HOLE		510.0	9 7/8	510.0	0.00	LOT
INTERM.	13 3/8	1576.0	16	1591.0	1.66	LOT
INTERM.	9 5/8	3154.0	12 1/4	3164.0	0.00	LOT
OPEN HOLE		3630.0	8 1/2	3630.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
450	1.33	23.0		KF	
935	1.33	22.0		KF	
1106	1.25	16.0		KF	
1390	1.36	20.0		KF	
1591	1.37	20.0		KF	
1596	1.37	19.0		KC	
1761	1.29	21.0		KF	
1800	1.37	21.0		KC	
2930	1.39	1.0		KC	
3294	1.54	30.0		KC	
3360	1.52	23.0		KC	
3630	1.52	22.0		KC	

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]
6478 Formation pressure (Formasjonstrykk)	pdf	0.28

