

**General information**

Wellbore name	7125/4-1
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	7125/4-1 (Nucula)
Well name	7125/4-1
Seismic location	MC3D-MFZ-inline 1460 & xline 3876
Production licence	393
Drilling operator	Norsk Hydro Petroleum AS
Drill permit	1128-L
Drilling facility	POLAR PIONEER
Drilling days	50
Entered date	17.01.2007
Completed date	07.03.2007
Release date	07.03.2009
Publication date	09.03.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	EARLY JURASSIC
1st level with HC, formation	NORDMELA FM
2nd level with HC, age	LATE TRIASSIC
2nd level with HC, formation	FRUHOLMEN FM
3rd level with HC, age	MIDDLE TRIASSIC
3rd level with HC, formation	KOBBE FM
Kelly bushing elevation [m]	23.0
Water depth [m]	293.0
Total depth (MD) [m RKB]	1615.0
Final vertical depth (TVD) [m RKB]	1615.0
Maximum inclination [°]	1.3
Bottom hole temperature [°C]	48
Oldest penetrated age	EARLY TRIASSIC
Oldest penetrated formation	KLAPPMYSS FM
Geodetic datum	ED50



NS degrees	71° 33' 0.8" N
EW degrees	25° 14' 22.32" E
NS UTM [m]	7939886.06
EW UTM [m]	437821.20
UTM zone	35
NPDID wellbore	5450

Wellbore history



Wellbore history

General

Wildcat well 7125/4-1 was drilled on the Måsøy Fault Complex in the Barents Sea. The primary objective was to prove commercial hydrocarbon resources within the Nucula prospect, a 4-way structural closure dependent on sealing faults. The structure comprises the Middle Jurassic - Late Triassic Realgrunnen Group, the Late - Middle Triassic Snadd Formation and the Middle Triassic Kobbe Formation reservoirs.

Operations and results

Well 7125/4-1 was spudded with the semi-submersible installation Polar Pioneer on 17 January 2007 and drilled to TD at 1615 m in the Early Triassic Klappmyss Formation. The well was drilled without significant technical problems. It was drilled with sodium chloride brine down to 465 m and with potassium formate mud from 465 m to TD. No shallow gas was observed.

The Kapp Toscana Group, penetrated at 872 m, proved movable gas and oil in the Nordmela and Fruholmen Formations with a GOC at 894 m and an ODT at 939 m. Gas and oil samples were recovered at 951.8 m and 967 m respectively, suggest a separate reservoir at this level, but tight formation makes it difficult to evaluate, and these samples may represent a continuation of the reservoir above. The reservoir had a considerably poorer net/gross than expected. The underlying Snadd Formation was encountered at 1002 m. It was water bearing in the upper part where some sandstone intervals with very good reservoir quality were penetrated. Traces of oil and gas were described in the lower part of Snadd. The Kobbe Formation was encountered at 1206 m. It had a few good reservoir sandstones, especially in the upper part, and some residual oil was proven in this zone. Towards the lower part of the formation at 1428 m, some 60 m of gas was proven down to a probable thin oil zone at 1484 m. The lowest part of the Kobbe Formation proved water gradient. The Klappmyss Formation, penetrated outside of the structural closure, contained interbedded claystones and sandstones without shows of hydrocarbons.

Two cores were cut in the Fruholmen Formation comprising mudstones, sandstones and siltstones. MDT gas samples were recovered at 883.4 m, 951.8 m and 1477.3 m. MDT oil samples were recovered at 914.5 m, 938.1 m, 967.0 m, 898.2 m and 1487.8 m. MDT water samples were collected at 986.5 and 1508.9 m.

After wire line logging the well was permanently plugged and abandoned as an oil and gas discovery well on 7 March 2007.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
470.00	1615.00

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	885.0	894.7	[m]
2	895.0	909.1	[m]

Total core sample length [m]	23.8
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
470.0	[m]	DC	FUGRO
490.0	[m]	DC	FUGRO
496.0	[m]	DC	FUGRO
500.0	[m]	DC	FUGRO
510.0	[m]	DC	FUGRO
516.0	[m]	DC	FUGRO
530.0	[m]	DC	FUGRO
540.0	[m]	DC	FUGRO
560.0	[m]	DC	FUGRO
570.0	[m]	DC	FUGRO
580.0	[m]	DC	FUGRO
600.0	[m]	DC	FUGRO
620.0	[m]	DC	FUGRO
640.0	[m]	DC	FUGRO
660.0	[m]	DC	FUGRO
680.0	[m]	DC	FUGRO
690.0	[m]	DC	FUGRO
700.0	[m]	DC	FUGRO
710.0	[m]	DC	FUGRO
720.0	[m]	DC	FUGRO
730.0	[m]	DC	FUGRO
740.0	[m]	DC	FUGRO



750.0 [m]	DC	FUGRO
760.0 [m]	DC	FUGRO
770.0 [m]	DC	FUGRO
780.0 [m]	DC	FUGRO
790.0 [m]	DC	FUGRO
800.0 [m]	DC	FUGRO
810.0 [m]	DC	FUGRO
820.0 [m]	DC	FUGRO
830.0 [m]	DC	FUGRO
845.0 [m]	DC	FUGRO
850.0 [m]	DC	FUGRO
856.0 [m]	DC	FUGRO
862.0 [m]	DC	FUGRO
865.0 [m]	DC	FUGRO
868.0 [m]	DC	FUGRO
871.0 [m]	DC	FUGRO
871.0 [m]	SWC	FUGRO
874.0 [m]	DC	FUGRO
877.0 [m]	DC	ROBERT
879.5 [m]	SWC	FUGRO
880.0 [m]	DC	FUGRO
883.0 [m]	DC	FUGRO
885.0 [m]	DC	FUGRO
887.3 [m]	C	ICHRON
889.0 [m]	C	FUGRO
901.6 [m]	C	ICHRON
905.0 [m]	C	ICHRON
906.3 [m]	C	ICHRON
907.5 [m]	C	ICHRON
913.0 [m]	DC	FUGRO
952.0 [m]	DC	FUGRO
958.0 [m]	DC	FUGRO
964.0 [m]	DC	FUGRO
967.0 [m]	DC	FUGRO
976.0 [m]	DC	FUGRO
985.0 [m]	DC	FUGRO
988.0 [m]	DC	FUGRO
994.0 [m]	DC	FUGRO
1003.0 [m]	DC	FUGRO
1009.0 [m]	DC	FUGRO



1021.0	[m]	DC	FUGRO
1036.0	[m]	DC	FUGRO
1042.0	[m]	DC	FUGRO
1054.0	[m]	DC	FUGRO
1060.0	[m]	DC	FUGRO
1066.0	[m]	DC	FUGRO
1084.0	[m]	DC	FUGRO
1090.0	[m]	DC	FUGRO
1096.0	[m]	DC	FUGRO
1105.0	[m]	DC	FUGRO
1123.0	[m]	DC	FUGRO
1126.0	[m]	DC	FUGRO
1138.0	[m]	DC	FUGRO
1150.0	[m]	DC	FUGRO
1168.0	[m]	DC	FUGRO
1186.0	[m]	DC	FUGRO
1192.0	[m]	DC	FUGRO
1198.0	[m]	DC	FUGRO
1203.0	[m]	SWC	FUGRO
1204.0	[m]	DC	FUGRO
1205.0	[m]	SWC	FUGRO
1213.0	[m]	DC	FUGRO
1218.0	[m]	SWC	FUGRO
1219.0	[m]	DC	FUGRO
1228.0	[m]	DC	FUGRO
1237.0	[m]	SWC	FUGRO
1245.0	[m]	SWC	FUGRO
1249.0	[m]	DC	FUGRO
1252.0	[m]	DC	FUGRO
1258.0	[m]	DC	FUGRO
1285.0	[m]	DC	FUGRO
1297.0	[m]	DC	FUGRO
1303.0	[m]	DC	FUGRO
1306.0	[m]	DC	FUGRO
1310.0	[m]	DC	FUGRO
1328.0	[m]	DC	FUGRO
1333.0	[m]	DC	FUGRO
1339.0	[m]	DC	FUGRO
1339.0	[m]	SWC	FUGRO
1342.0	[m]	DC	FUGRO



1346.7	[m]	SWC	FUGRO
1358.6	[m]	SWC	FUGRO
1378.0	[m]	DC	FUGRO
1379.1	[m]	SWC	FUGRO
1384.0	[m]	DC	FUGRO
1390.0	[m]	DC	FUGRO
1396.0	[m]	DC	FUGRO
1409.2	[m]	SWC	FUGRO
1414.0	[m]	DC	FUGRO
1421.0	[m]	DC	FUGRO
1429.0	[m]	DC	FUGRO
1435.0	[m]	DC	FUGRO
1441.0	[m]	DC	FUGRO
1448.0	[m]	DC	FUGRO
1459.0	[m]	DC	FUGRO
1465.0	[m]	DC	FUGRO
1488.0	[m]	DC	FUGRO
1501.0	[m]	DC	FUGRO
1505.0	[m]	DC	FUGRO
1513.0	[m]	DC	FUGRO
1522.0	[m]	DC	FUGRO
1525.0	[m]	DC	FUGRO
1534.0	[m]	DC	FUGRO
1540.0	[m]	DC	FUGRO
1548.0	[m]	DC	FUGRO
1550.0	[m]	SWC	FUGRO
1555.0	[m]	DC	FUGRO
1567.0	[m]	DC	FUGRO
1571.0	[m]	DC	FUGRO
1573.0	[m]	DC	FUGRO
1575.2	[m]	SWC	FUGRO
1579.0	[m]	DC	FUGRO
1588.0	[m]	DC	FUGRO
1588.0	[m]	SWC	FUGRO
1593.0	[m]	SWC	FUGRO
1600.0	[m]	DC	FUGRO
1609.0	[m]	DC	FUGRO
1612.0	[m]	DC	FUGRO
1615.0	[m]	DC	FUGRO

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
316	NORDLAND GP
493	SOTBAKKEN GP
493	TORSK FM
499	NYGRUNNEN GP
499	KVITING FM
538	ADVENTDALEN GP
538	KOLMULE FM
699	NO FORMAL NAME
702	KOLMULE FM
733	KOLJE FM
779	KNURR FM
817	HEKKINGEN FM
817	KRILL MBR
864	ALGE MBR
869	FUGLEN FM
872	KAPP TOSCANA GP
872	NORDMELA FM
882	FRUHOLMEN FM
1002	SNADD FM
1206	SASSENDALEN GP
1206	KOBBE FM
1561	KLAPPMYSS FM

Composite logs

Document name	Document format	Document size [MB]
5450	pdf	0.28

Geochemical information

Document name	Document format	Document size [MB]
5450_01_7125_4_1_gch_transfer_1	txt	0.00
5450_02_7125_4_1_gch_results_1	txt	0.33





5450_1	pdf	0.40
5450_2	pdf	2.40

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSI TLD DNL	556	844
FMI APS GR PPC MSIP	838	1253
FMI MSIP PPC	1230	1605
MDT	862	1245
MDT	873	986
MDT PEX ECS HNGS	1134	1604
MDT Q	1405	1524
MSCT	840	1593
MSCT	1253	1253
MSIP PPC IS	1200	1284
MWD - ARC DT RAB APWD DIR	316	1615
SP SMR HRLA PEX ECS HNGS	838	1253
VSP	317	1605

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	376.0	36	376.0	0.00	LOT
SURF.COND.	20	454.0	26	454.0	0.00	LOT
INTERM.	13 3/8	551.0	17 1/2	551.0	1.14	LOT
INTERM.	9 5/8	838.0	12 1/4	838.0	1.51	LOT
OPEN HOLE		1615.0	8 1/2	1615.0	1.85	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
404	1.03			WATER BASED	
474	1.07	14.0		WATER BASED	
556	1.08	11.0		WATER BASED	
705	1.30	19.0		WATER BASED	





844	1.30	19.0		WATER BASED	
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Thin sections at the Norwegian Offshore Directorate

Depth	Unit
885.20	[m]
886.40	[m]
887.20	[m]
894.20	[m]
899.80	[m]
901.05	[m]
904.50	[m]
905.50	[m]

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]
5450_Formation_pressure_(Formasjonstrykk)	pdf	0.23

