General information

Wellbore name	7324/8-1
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	7324/8-1 (Wisting)
Well name	7324/8-1
Seismic location	inline 2800 & crossline 4116
Production licence	537
Drilling operator	OMV (Norge) AS
Drill permit	1462-L
Drilling facility	LEIV EIRIKSSON
Drilling days	39
Entered date	10.08.2013
Completed date	17.09.2013
Release date	17.09.2015
Publication date	17.09.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
Kelly bushing elevation [m]	25.0
Water depth [m]	398.0
Total depth (MD) [m RKB]	930.0
Final vertical depth (TVD) [m RKB]	930.0
Maximum inclination [°]	1.6
Bottom hole temperature [°C]	29
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	73° 27' 6.18'' N
EW degrees	24° 24' 15.42'' E
NS UTM [m]	8152888.62
EW UTM [m]	417497.27

UTM zone	35
NPDID wellbore	7221

Wellbore history

General

Well 7324/8-1 was drilled on the Wisting Central prospect in the Barents Sea between the Hoop fault complex to the east and the Maud Basin to the west. The primary objective was to evaluate the Jurassic Realgrunnen Subgroup for hydrocarbons.

Operations and results

Wildcat well 7324/8-1 was spudded with the semi-submersible installation Leiv Eiriksson on 10 August 2013 and drilled to TD at 930m in the late Triassic(Carnian age) Snadd Formation. A 9 7/8" pilot hole was drilled down to 641 m to check for shallow gas. No significant problem was encountered during drilling and logging, but after permanent plugging cutting of the casing proved problematic and caused some down time. The well was drilled with bentonite spud mud down to 492 m and with Glydril mud from 492 m to TD.

The top of the reservoir, Stø Formation was entered at 662 m, only 237 m below the seafloor and contained oil. The well is located down-flanks on the structure; hence, the upper part may have a gas-cap. Due to increased claystone content and decreased porosity/permeability at the end of the coring, the oil/water contact was not clearly defined. However, log data and pressure data suggests that the Stø and Fruholmen formations are in communication and share a common OWC at 708.3 m. Oil shows were described in a Fruholmen sandstone at 728 m and in Snadd sandstones at 775 m, 784 m and 808 m. No shows were described below this depth or above top Stø Formation.

Three consecutive cores were cut in the Realgrunnen Subgroup from 662 m to 710.35 m. The total core recovery for all three cores was 47.05 m (97.3%). The core-log depth shifts were found to be +0.75 m, +1.36 m, and +0.6 m for core number 1, 2, and 3, respectively. MDT oil samples were taken at 664.54 m and 678.07 m. The reservoir temperature based on data from the MDT sampling runs was 16.35 and 17.22 °C in the Stø Formation at 664.54 m and 678.07 m, respectively. The reservoir pressure was about 68.9 bar (664.54 m) and 69.97 bar (678.07 m). The gas-oil ratio determined by PVT analysis was 50 Sm3/Sm3 and the oil gravity is 0.835g/cm3. Gas chromatographic analyses of the oil sample at 664.54 m show depletion of n-alkanes compared to iso-alkanes, suggesting slight biodegradation has occurred in the reservoir. MDT water samples were taken at 782.3 m.

The well was permanently abandoned on 17 September 2013 as an oil discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
494.00	929.00

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	662.0	667.4	[m]
2	668.0	679.3	[m]
3	680.0	710.4	[m]

Total core sample length [m]	47.1
Cores available for sampling?	YES

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
MDT		664.00	0.00	OIL		NO
MDT		678.00	0.00	OIL		NO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
424	NORDLAND GP
424	UNDIFFERENTIATED
500	ADVENTDALEN GP
500	KOLMULE FM
563	KOLJE FM
580	KNURR FM
590	HEKKINGEN FM
621	FUGLEN FM
662	KAPP TOSCANA GP
662	STØ FM
679	NORDMELA FM
730	FRUHOLMEN FM
772	SNADD FM

Geochemical information

Document name	Document format	Document size [MB]
7221_7324_8_1_GCH_1	txt	0.02
7221_7324_8_1_GCH_10	txt	0.02
7221_7324_8_1_GCH_11	txt	0.04
7221_7324_8_1_GCH_12	txt	0.04
7221_7324_8_1_GCH_13	txt	0.05
7221_7324_8_1_GCH_14	txt	0.05
7221_7324_8_1_GCH_15	txt	0.02
7221_7324_8_1_GCH_16	txt	0.01
7221_7324_8_1_GCH_2	txt	0.02
7221_7324_8_1_GCH_3	txt	0.01
7221_7324_8_1_GCH_4	txt	0.02
7221_7324_8_1_GCH_5	txt	0.01
7221_7324_8_1_GCH_6	txt	0.02
7221_7324_8_1_GCH_7	txt	0.02
7221_7324_8_1_GCH_8	txt	0.01
7221_7324_8_1_GCH_9	txt	0.01

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI PPC MSIP PPC EDTC	636	912
HRLA PEX GR	636	918
IBC MSIP GR CCL	425	636
ILEF CMR EDTC	642	921
LWD - ARC VIS8	489	625
LWD - SON VIS NEOS	488	636
LWD - VIS RES	635	923
MDT GR	664	867
MDT GR	664	782
ZAIT IS PPC GR	636	928
ZOVSP	35	920

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	488.0	36	488.0	0.00	
SURF.COND.	9 5/8	636.0	12 1/4	636.0	1.48	FIT
OPEN HOLE		930.0	8 1/2	930.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
450	1.02			Sea Water	
580	1.20	13.0		Glydril	
633	1.14	19.0		KCl/Glycol	
800	1.16	12.0		Glydril	
930	1.20	13.0		Glydril	