

General information

Wellbore name	7324/3-1
Туре	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Discovery	7324/3-1 (Intrepid Eagle)
Well name	7324/3-1
Seismic location	HFC11. In-line 3384. X-line 16459
Production licence	615
Drilling operator	Equinor Energy AS
Drill permit	1728-L
Drilling facility	WEST HERCULES
Drilling days	38
Entered date	15.10.2018
Completed date	21.11.2018
Plugged and abondon date	21.11.2018
Release date	01.07.2020
Publication date	01.07.2020
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	LATE TRIASSIC
1st level with HC, formation	SNADD FM
2nd level with HC, age	MIDDLE TRIASSIC
2nd level with HC, formation	SNADD FM
3rd level with HC, age	MIDDLE JURASSIC
3rd level with HC, formation	STØ FM
Kelly bushing elevation [m]	31.0
Water depth [m]	452.0
Total depth (MD) [m RKB]	1709.0
Final vertical depth (TVD) [m RKB]	1709.0
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	73° 57' 27.39'' N



EW degrees	24° 41' 4.86'' E
NS UTM [m]	8208923.97
EW UTM [m]	428594.05
UTM zone	35
NPDID wellbore	8568

Wellbore history

General

Well 7324/3-1 was drilled to test the Intrepid Eagle structure on the Bjarmeland Platform, about 13 km west of the 7325/1-1 Atlantis discovery in the Barents Sea. The objective was to test the hydrocarbon potential and phase in channelized sandstones at two levels within the Snadd Formation. The Primary target was the Carnian age Intrepid Eagle Main channel. The secondary target was the deeper-seated Atlantis channel, also of Triassic age, and in which a gas down-to situation was found in well 7325/1-1 (Atlantis).

Operations and results

Wildcat well 7324/3-1 was spudded with the semi-submersible installation West Hercules on 15 October 2018 and drilled to 1709 m in the Late Triassic Snadd Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 839 m and with KCl/polymer/GEM mud from 839 m to TD.

A Stø Formation sand package was penetrated from 877 to 909 m and proved to be water bearing as expected. The primary target Intrepid Eagle Main channel sand of Carnian age was encountered at 1493 m. It was gas bearing with gas-water contact was at 1518.4 m. The secondary target Atlantis channel was encountered at 1642 m. It was gas-bearing down to a gas-water contact at 1666 m. The Atlantis channel is dated to the Middle Triassic (Ladinian). The reservoir quality in primary and secondary targets is moderate. The porosity is generally good (22% in average in Intrepid-Eagle Main, 17% in average in Atlantis). However, the permeability is limited (around 100 mD in the best parts of Intrepid-Eagle Main, 30-40 mD in the best parts of Atlantis).

Oil shows in the form of fluorescence and cut were recorded almost throughout the well below ca 855 m in the Fuglen Formation. The shows were however rated poor and inconclusive, and much of the fluorescence could be from minerals. The strongest show outside of the gas-bearing intervals was at 1530 m in the Intrepid Eagle Main sandstone where also a weak petroleum odour and stain was recorded.

A 60.68 m conventional core was cut in the Carn02 member with 99.5% recovery. A second 51.35m conventional core was cut in the Atlantis discovery level (secondary target) with 100% recovery. MDT fluid samples were taken at 1505.2 m (gas), 1512.2 m (gas), 1532.8 m (water), 1645.2 m (gas), and 1675.1 m (water).

The well was permanently abandoned on 21 November 2018 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]
843.00	1656.00

Cuttings available for sampling? YE

YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	
1	1507.0	1567.7	[m]
2	1658.0	1709.4	[m]

Total core sample length [m]	112.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
843.0	[m]	DC	CGG
849.0	[m]	DC	CGG
855.0	[m]	DC	CGG
861.0	[m]	DC	CGG
867.0	[m]	DC	CGG
873.0	[m]	DC	CGG
879.0	[m]	DC	CGG
885.0	[m]	DC	CGG
891.0	[m]	DC	CGG
894.0	[m]	DC	CGG
898.5	[m]	С	CGG
903.0	[m]	DC	CGG
909.0	[m]	DC	CGG
915.0	[m]	DC	CGG
921.0	[m]	DC	CGG
927.0	[m]	DC	CGG
933.0	[m]	DC	CGG
939.0	[m]	DC	CGG
945.0	[m]	DC	CGG
995.0	[m]	DC	CGG
1010.0	1010.0 [m]		CGG
1025.0	[m]	DC	CGG



1040.0	[m]	DC	CGG
1055.0	[m]	DC	CGG
1070.0	[m]	DC	CGG
1085.0	[m]	DC	CGG
1100.0	[m]	DC	CGG
1115.0	[m]	DC	CGG
1130.0	[m]	DC	CGG
1145.0	[m]	DC	CGG
1160.0	[m]	DC	CGG
1175.0	[m]	DC	CGG
1190.0	[m]	DC	CGG
1205.0	[m]	DC	CGG
1220.0	[m]	DC	CGG
1235.0	[m]	DC	CGG
1250.0	[m]	DC	CGG
1265.0	[m]	DC	CGG
1280.0	[m]	DC	CGG
1295.0	[m]	DC	CGG
1310.0	[m]	DC	CGG
1325.0	[m]	DC	CGG
1340.0	[m]	DC	CGG
1355.0	[m]	DC	CGG
1370.0	[m]	DC	CGG
1385.0	[m]	DC	CGG
1400.0	[m]	DC	CGG
1415.0	[m]	DC	CGG
1428.0	[m]	DC	CGG
1434.0	[m]	DC	CGG
1440.0	[m]	DC	CGG
1446.0	[m]	DC	CGG
1452.0	[m]	DC	CGG
1456.0	[m]	DC	CGG
1464.0	[m]	DC	CGG
1470.0	[m]	DC	CGG
1476.0	[m]	DC	CGG
1482.0	[m]	DC	CGG
1488.0	[m]	DC	CGG
1494.0	[m]	DC	CGG
1500.0	[m]	DC	CGG
1506.0	[m]	DC	CGG
		-	



1531.9	[m]	С	CGG
1536.5		C	CGG
1539.8		C	CGG
1544.8		С	CGG
1549.6		С	CGG
1553.9		С	CGG
1557.5		С	CGG
1561.5	[m]	С	CGG
1566.6	[m]	С	CGG
1567.4	[m]	С	CGG
1572.0	[m]	DC	CGG
1578.0	[m]	DC	CGG
1584.0	[m]	DC	CGG
1590.0	[m]	DC	CGG
1596.0	[m]	DC	CGG
1602.0	[m]	DC	CGG
1608.0	[m]	DC	CGG
1614.0	[m]	DC	CGG
1620.0	[m]	DC	CGG
1626.0	[m]	DC	CGG
1632.0	[m]	DC	CGG
1638.0	[m]	DC	CGG
1644.0	[m]	DC	CGG
1650.0	[m]	DC	CGG
1656.0	[m]	DC	CGG
1663.8	[m]	С	CGG
1668.7	[m]	С	CGG
1679.1	[m]	С	CGG
1684.7	[m]	С	CGG
1686.9	[m]	С	CGG
1691.8	[m]	С	CGG
1696.5	[m]	С	CGG
1700.7	[m]	С	CGG
1704.7	[m]	С	CGG
1708.9	[m]	С	CGG
1782.0	[m]	DC	CGG

Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit			
483	NORDLAND GP			
483	NAUST FM			
532	ADVENTDALEN GP			
532	KOLMULE FM			
610	KOLJE FM			
752	KNURR FM			
779	HEKKINGEN FM			
784	FUGLEN FM			
877	KAPP TOSCANA GP			
877	<u>STØ FM</u>			
909	FRUHOLMEN FM			
938	SNADD FM			

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR MDT	1475	1706
FMI MSIP	1383	1705
HRLA PEX ECS	1425	1709
MDT PA	1512	1645
MSIP ECS HRLA PEX	476	1424
MWD LWD - ARC TELE	532	839
MWD LWD - GVR ARC TELE	839	1658
ZO VSP	452	1628

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	533.0	42	535.0	0.00	
INTERM.	13 3/8	833.0	17 1/2	839.0	0.00	
LINER	9 5/8	1224.0	12 1/4	1425.0	0.00	
OPEN HOLE		1709.0	8 1/2	1709.0	0.00	

Drilling mud



Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	· ·	Mud type	Date measured
842	1.14	14.0		KCl/Polymer/GEM	
1324	1.17	11.0		KCl/Polymer/GEM	
1324	1.16	12.0		KCl/Polymer/GEM	
1365	1.14	15.0		KCl/Polymer/GEM	
1451	1.17	12.0		KCl/Polymer/GEM	
1497	1.14	13.0		KCl/Polymer/GEM	
1507	1.16	14.0		KCl/Polymer/GEM	
1708	1.16	12.0		KCl/Polymer/GEM	