

General information

Wellbore name	7324/6-1
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	7324/6-1 (Sputnik)
Well name	7324/6-1
Seismic location	HCF Inline: 4609 Xline: 14315
Production licence	855
Drilling operator	Equinor Energy AS
Drill permit	1761-L
Drilling facility	WEST HERCULES
Drilling days	24
Entered date	18.06.2019
Completed date	31.07.2019
Plugged and abandon date	31.07.2019
Release date	04.12.2020
Publication date	30.04.2021
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	LATE TRIASSIC
1st level with HC, formation	SNADD FM
Kelly bushing elevation [m]	31.0
Water depth [m]	449.0
Total depth (MD) [m RKB]	1600.0
Final vertical depth (TVD) [m RKB]	1600.0
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	73° 39' 7.06" N
EW degrees	24° 58' 35.17" E
NS UTM [m]	8174514.28
EW UTM [m]	436432.08
UTM zone	35
NPDID wellbore	8741

Wellbore history

General

Well 7324/6-1 was drilled to test the Sputnik prospect in the Hoop Fault Complex on the Bjarmeland Platform in the Barents Sea. The prospect had several prospective targets found hydrocarbon-bearing in neighbouring wells. The primary objective was to test the hydrocarbon potential and phase in the Late Carnian interval in the Snadd Formation of Middle to Late Triassic age, called Carn03. Secondary objectives of the well were to clarify whether there was an oil leg present below the depth of the gas-water contact encountered in Well 7325/4-1 (Stø Formation), as well as testing two secondary targets in the Early to Middle Carnian interval of the Snadd formation (Carn02 & Carn01).

Operations and results

The well was entered with the semi-submersible drilling rig West Hercules on 18 June 2019 and drilled vertically to TD at 1600 m (1599.5 m TVD) in the Late Triassic Snadd Formation. The well was drilled down to 746 m with sea water and hi-vis sweeps and from 746 m to TD with Exploradrill oil-based mud.

The Stø Formation was penetrated at 792 m and was found to be water bearing with good oil shows. The formation consists of a homogenous sandstone body. The top of Snadd Formation was encountered at 854 m and is continuously interbedded with claystone, siltstone, and sandstone intervals of varying thickness from submeter to more than ten meters in vertical scale. Carbonaceous material, especially in the sandstone was locally observed. The main targeted Carn03 was penetrated at 1061.5 m and consists of sandstone, interbedded with several thinner claystone beds. Fifty-eight meters of water bearing reservoir sandstone with oil shows was encountered with poor reservoir quality in Carn03. The secondary target, Carn02, was penetrated at 1368 m and consists of sandstone with two-meter scale limestone stringer close to top. A total oil column of 17 m was with an oil-water contact at 1385 m was encountered in the Carn02 reservoir of poor to moderate quality. The secondary target, Carn01, was penetrated at 1508 m and consists of two thick sandstone intervals at top and base, split by a siltstone and claystone interval in the middle. The Carn01 was found to be water bearing with a gross thickness of 41 m. The reservoir can be divided into two zones of predominantly sandstone. A 27 m core was cut in the Stø Formation, and a 63 m core was cut in Carn03 with good coverage and recovery. A 54 m core was cut in Carn02 with moderate reservoir coverage. No core was cut in the Carn01 interval. MDT fluid samples were taken at 1103.5 m (water), 1088 m (water), and 1378 m (oil and formation water)

The well was permanently plugged and abandoned on 31 July 2019 as an oil discovery well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
749.00	1600.00

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	795.0	821.6	[m]
2	1070.0	1132.4	[m]
3	1381.0	1435.0	[m]

Total core sample length [m]	143.0
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
749.0	[m]	DC	CGG
755.0	[m]	DC	CGG
761.0	[m]	DC	CGG
767.0	[m]	DC	CGG
773.0	[m]	DC	CGG
779.0	[m]	DC	CGG
785.0	[m]	DC	CGG
791.0	[m]	DC	CGG
795.0	[m]	DC	CGG
795.6	[m]	C	CGG
798.9	[m]	C	CGG
810.3	[m]	C	CGG
811.5	[m]	C	CGG
814.6	[m]	C	CGG
817.7	[m]	C	CGG
820.5	[m]	C	CGG
821.3	[m]	C	CGG
824.0	[m]	DC	CGG
830.0	[m]	DC	CGG

836.0 [m]	DC	CGG
842.0 [m]	DC	CGG
847.0 [m]	DC	CGG
857.0 [m]	DC	CGG
867.0 [m]	DC	CGG
877.0 [m]	DC	CGG
887.0 [m]	DC	CGG
897.0 [m]	DC	CGG
907.0 [m]	DC	CGG
917.0 [m]	DC	CGG
927.0 [m]	DC	CGG
937.0 [m]	DC	CGG
957.0 [m]	DC	CGG
967.0 [m]	DC	CGG
976.0 [m]	DC	CGG
985.0 [m]	DC	CGG
994.0 [m]	DC	CGG
1003.0 [m]	DC	CGG
1012.0 [m]	DC	CGG
1039.0 [m]	DC	CGG
1048.0 [m]	DC	CGG
1066.0 [m]	DC	CGG
1073.4 [m]	C	CGG
1076.4 [m]	C	CGG
1078.9 [m]	C	CGG
1080.6 [m]	C	CGG
1083.5 [m]	C	CGG
1084.5 [m]	C	CGG
1087.9 [m]	C	CGG
1095.3 [m]	C	CGG
1103.3 [m]	C	CGG
1108.8 [m]	C	CGG
1111.3 [m]	C	CGG
1123.7 [m]	C	CGG
1132.5 [m]	C	CGG
1138.0 [m]	DC	CGG
1144.0 [m]	DC	CGG
1150.0 [m]	DC	CGG
1159.0 [m]	DC	CGG
1168.0 [m]	DC	CGG

1177.0 [m]	DC	CGG
1186.0 [m]	DC	CGG
1195.0 [m]	DC	CGG
1204.0 [m]	DC	CGG
1213.0 [m]	DC	CGG
1222.0 [m]	DC	CGG
1231.0 [m]	DC	CGG
1240.0 [m]	DC	CGG
1249.0 [m]	DC	CGG
1258.0 [m]	DC	CGG
1267.0 [m]	DC	CGG
1276.0 [m]	DC	CGG
1285.0 [m]	DC	CGG
1294.0 [m]	DC	CGG
1303.0 [m]	DC	CGG
1312.0 [m]	DC	CGG
1321.0 [m]	DC	CGG
1330.0 [m]	DC	CGG
1339.0 [m]	DC	CGG
1348.0 [m]	DC	CGG
1354.0 [m]	DC	CGG
1360.0 [m]	DC	CGG
1366.0 [m]	DC	CGG
1372.0 [m]	DC	CGG
1378.0 [m]	DC	CGG
1382.7 [m]	C	CGG
1390.3 [m]	C	CGG
1393.2 [m]	C	CGG
1394.9 [m]	C	CGG
1397.8 [m]	C	CGG
1400.9 [m]	C	CGG
1403.8 [m]	C	CGG
1404.8 [m]	C	CGG
1407.6 [m]	C	CGG
1410.7 [m]	C	CGG
1412.6 [m]	C	CGG
1415.6 [m]	C	CGG
1418.9 [m]	C	CGG
1421.7 [m]	C	CGG
1424.7 [m]	C	CGG

1427.5 [m]	C	CGG
1430.7 [m]	C	CGG
1433.9 [m]	C	CGG
1438.0 [m]	DC	CGG
1444.0 [m]	DC	CGG
1450.0 [m]	DC	CGG
1456.0 [m]	DC	CGG
1462.0 [m]	DC	CGG
1468.0 [m]	DC	CGG
1474.0 [m]	DC	CGG
1480.0 [m]	DC	CGG
1486.0 [m]	DC	CGG
1492.0 [m]	DC	CGG
1498.0 [m]	DC	CGG
1504.0 [m]	DC	CGG
1510.0 [m]	DC	CGG
1516.0 [m]	DC	CGG
1522.0 [m]	DC	CGG
1528.0 [m]	DC	CGG
1534.0 [m]	DC	CGG
1540.0 [m]	DC	CGG
1546.0 [m]	DC	CGG
1552.0 [m]	DC	CGG
1558.0 [m]	DC	CGG
1564.0 [m]	DC	CGG
1570.0 [m]	DC	CGG
1576.0 [m]	DC	CGG
1582.0 [m]	DC	CGG
1588.0 [m]	DC	CGG
1594.0 [m]	DC	CGG
1600.0 [m]	DC	CGG

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
481	NORDLAND GP
534	ADVENTDALEN GP
534	KOLMULE FM
675	KOLJE FM

702	KNURR FM
714	HEKKINGEN FM
746	FUGLEN FM
792	KAPP TOSCANA GP
792	STØ FM
811	FRUHOLMEN FM
854	SNADD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR HNGS	972	1600
MDT LFA MRMS PA	985	1585
MWD LWD - GR RES DIR INC APWD	520	1600
MWD LWD - TELE INC	480	520
PEX NEXT SS AIT	450	973
RTS SS NEXT PEX	972	1600
USIT CBL	698	960

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	42	520.0	36	520.0	0.00	
SURF.COND.	13 3/8	741.2	17 1/2	746.0	1.43	FIT
LINER	9 5/8	792.0	12 1/4	973.0	1.54	FIT
OPEN HOLE		1600.0	8 1/2	1600.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
746	1.14	14.0		Exploradrill	
746	1.30	19.0		CMC Spud	
779	1.14	13.0		Exploradrill	
973	1.17	15.0		Exploradrill	
982	1.18	15.0		Exploradrill	
1124	1.20	12.0		Exploradrill	

1134	1.18	14.0		Exploradrill	
1134	1.20	17.5		Exploradrill	
1398	1.18	17.0		Exploradrill	
1435	1.20	16.0		Exploradrill	
1474	1.18	15.5		Exploradrill	
1587	1.18	15.5		Exploradrill	
1601	1.18	16.0		Exploradrill	
1601	1.20	16.0		Exploradrill	