

**General information**

Wellbore name	7321/4-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Well name	7321/4-1
Seismic location	
Production licence	721
Drilling operator	DEA Norge AS
Drill permit	1724-L
Drilling facility	ISLAND INNOVATOR
Drilling days	38
Entered date	25.08.2018
Completed date	01.10.2018
Plugged and abandon date	01.10.2018
Release date	01.10.2020
Publication date	01.10.2020
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	30.0
Water depth [m]	497.0
Total depth (MD) [m RKB]	1630.0
Final vertical depth (TVD) [m RKB]	1629.0
Maximum inclination [°]	6.2
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	73° 44' 7.76" N
EW degrees	21° 8' 21.94" E
NS UTM [m]	8191747.15
EW UTM [m]	317048.96
UTM zone	35
NPDID wellbore	8552



Wellbore history

General

Well 7321/4-1 was drilled to test the Gråspett prospect in the western part of the Fingerdjuet Basin in the Barents Sea. The primary objective was to prove petroleum in Late Triassic to Middle Jurassic reservoir rocks (Stø Formation) and the secondary objective was to prove petroleum in Late Triassic reservoir rocks (Snadd formation).

Operations and results

Wildcat well 7321/4-1 was spudded with the semi-submersible installation Island Innovator on 25 August 2018. After drilling a 36" top hole to 593 m a 9 7/8" pilot was drilled to 945 m to check for shallow gas. No shallow gas was observed, but the pilot BHA got stuck and had to be left in hole with top at 755 m. A technical side-track (7321/4-1 T2) was kicked off at 745 m and drilling commenced to final TD at 1629 m in the Late Triassic Snadd Formation without significant problems. The well was drilled with seawater and hi-vis sweeps in the 9 7/8" pilot hole and down to 710 m (kick-off for T2 side-track), and with Glydril mud from 710 m to TD.

Well 7321/4-1 encountered about 15 metres of water wet sandstone with poor reservoir quality in the Stø formation. In the Snadd formation, the well encountered about 32 metres of tight and water wet sandstone. Analysis of the mud gas indicated wet gas in the Stø Formation and dry gas in Snadd. Only traces of oil shows were seen. Weak hydrocarbon odour was recorded in a cuttings sample from the Hekkingen Formation, while very weak oil shows (direct and/or cut fluorescence) were described in sidewall cores at 1341.4 m and 1349.7 m in the Stø Formation, and 1417.2 m in the Fruholmen Formation. Organic geochemical analysis of cuttings from the Hekkingen Formation indicate maturity in the late oil window (%Ro ~ 0.8 - 0.9 and Rock-Eval Tmax ~ 455 – 464°C). The uplift that can be estimated from this is in the range 1500 – 2000 m. TOC in the Hekkingen formation varied from ca 2 – 3 %wt in the upper part (Krill Member) to 4 – 8 %wt in the lower part (Alge Member). Due to deep burial pre-uplift the remaining hydrocarbon potential in the Hekkingen is low (Rock-Eval HI in the range 90 – 140 mg HC/g TOC).

No cores were cut. No fluid sample was taken.

The well was permanently abandoned on 1 October 2018 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]
710.00	1630.00

Cuttings available for sampling?	YES
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Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
529	NORDLAND GP
529	NO FORMAL NAME
534	ADVENTDALEN GP
534	KOLMULE FM
860	KOLJE FM
970	KNURR FM
1120	HEKKINGEN FM
1270	FUGLEN FM
1341	STØ FM
1355	NORDMELA FM
1369	FRUHOLMEN FM
1506	KAPP TOSCANA GP
1506	SNADD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI PPC MSIP	1289	1628
HRLA PEX GR	1289	1628
MSCT GR	1301	1609
MWD LWD - GEOV ECOS NEOS TELES	1295	1630
MWD LWD - PD AV TS SS SV ADNVIS	710	1295
MWD LWD - TELE	529	592
MWD LWD - TELE	639	710
MWD LWD - TELE NEOSC	579	946
VSP GR	1292	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	30	591.0	36	593.0	0.00	
SURF.COND.	20	705.0	26	710.0	1.28	FIT
PILOT HOLE		945.0	9 7/8	945.0	0.00	
INTERM.	9 5/8	1291.0	12 1/4	1295.0	0.00	
		1295.0		1298.0	1.35	FIT



OPEN HOLE		1630.0	8 1/2	1630.0	0.00	
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Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
715	1.13	14.0		KCl mud	
1162	1.17	14.0		Glydril	
1284	1.24	14.0		GLYDRIL	
1295	1.17	15.0		GLYDRIL	
1332	1.24	14.0		GLYDRIL	
1347	1.14	9.0		GLYDRIL	
1347	1.21	12.0		GLYDRIL	
1436	1.14	10.0		GLYDRIL	
1630	1.17	14.0		GLYDRIL	
1630	1.14	10.0		GLYDRIL	