



General information

Wellbore name	7220/7-4
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	7220/7-4 (Isflak)
Well name	7220/7-4
Seismic location	3D survey ST13M07. Inline 11629. Xline 8742
Production licence	532
Drilling operator	Equinor Energy AS
Drill permit	1844-L
Drilling facility	TRANSOCEAN ENABLER
Drilling days	36
Entered date	07.02.2021
Completed date	14.03.2021
Plugged and abandon date	14.03.2021
Release date	14.03.2023
Publication date	14.03.2023
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	NORDMELA FM
Kelly bushing elevation [m]	32.0
Water depth [m]	351.0
Total depth (MD) [m RKB]	2112.0
Final vertical depth (TVD) [m RKB]	2111.0
Maximum inclination [°]	3.1
Bottom hole temperature [°C]	73
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	TUBÅEN FM
Geodetic datum	ED50



NS degrees	72° 25' 4.29" N
EW degrees	20° 8' 25.78" E
NS UTM [m]	8043171.73
EW UTM [m]	673135.06
UTM zone	33
NPDID wellbore	9220

Wellbore history

General

Well 7220/7-4 was drilled to test the Isflak prospect in the Bjørnøyrenna Fault Complex approximately 8 kilometres from the Johan Castberg FPSO location in the Barents Sea. The primary objective was to test the Stø and Nordmela formations of Middle to Early Jurassic age.

Operations and results

A 9 7/8" pilot hole was drilled on the well location, from 436 to 950 m to investigate the presence of possible shallow

gas, to reduce the uncertainties, and to gather data to continue drilling the well. No shallow gas or shallow water flow was observed at the well location.

Wildcat well 7220/7-4 was spudded with the semi-submersible installation Transocean Enabler on 7 February 2021 and drilled to TD at 2112 m in the Late Triassic, Tubåen Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1272 m, with KCl/Polymer/GEM from 1272 to 1710, and with BaraHib ECO water-based mud from 1710 m to TD.

Top of the target Stø-Nordmela reservoir was encountered at 1820.3 m. The reservoir was oil-bearing in good quality sandstone with a clear oil-water contact at 1930 m in the Nordmela Formation. Oil shows with stain, visible fluorescence and visible cut with fluorescence was described down to 1985 m. The Tubåen Formation had good reservoir quality sandstone, but was water bearing, as expected.

Three cores were cut in succession in the Stø and Nordmela formations, from 1830 to 1985.9 m. The recovery was 100 %. MDT fluid samples were taken in the Stø and Nordmela formations at 1821 m (oil), 1830.7 m (oil), 1863.4 m (oil), 1923.9 m and 1943 m (water).

The well was permanently abandoned on 14 March 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]
440.00	2112.00



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	1830.0	1877.7	[m]
2	1877.7	1959.1	[m]
3	1959.1	1985.9	[m]

Total core sample length [m]	155.9
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
383	NORDLAND GP
383	NAUST FM
468	SOTBAKKEN GP
468	TORSK FM
1219	ADVENTDALEN GP
1219	KOLMULE FM
1578	KOLJE FM
1707	KNURR FM
1762	FUGLEN FM
1820	KAPP TOSCANA GP
1820	STØ FM
1890	NORDMELA FM
2061	TUBÅEN FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR MDT	1720	2107
IBC CBL	1200	1706
MSIP FMI	1200	2112
MWD LWD - DGR EWR PWD DIR WDP	436	2112
MWD LWD - DWD	382	436



PEX HRLA XPT	1618	2111
VSP	401	2112
XLR	1712	2090
XLR	1829	1829

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	433.9	36	436.0	0.00	
INTERM.	13 3/8	1263.8	17 1/2	1272.0	1.35	FIT
INTERM.	9 5/8	1708.0	12 1/4	1710.0	1.50	FIT
OPEN HOLE		2112.0	8 1/2	2112.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
383	1.30	15.0	11.0	KCl/Polymer/GEM	
600	1.21	12.0	10.5	KCl/Polymer/GEM	
1133	1.30	19.0	9.0	Brine/Polymer mud	
1272	1.21	14.0	9.5	KCl/Polymer/GEM	
1293	1.13	13.0	9.5	BaraHib ECO	
1350	1.24	17.0	9.0	BaraHib ECO	
1435	1.13	14.0	10.5	BaraHib ECO	
1607	1.24	17.0	8.5	BaraHib ECO	
1702	1.14	16.0	14.0	BaraHib ECO	
1710	1.20	16.0	11.0	BaraHib ECO	
1912	1.24	17.0	9.0	BaraHib ECO	
1912	1.22	15.0	10.5	BaraHib ECO	
1958	1.22	20.0	10.0	BaraHib ECO	
1985	1.20	14.0	7.5	BaraHib ECO	
1985	1.22	19.0	11.0	BaraHib ECO	
1985	1.21	20.0	10.5	BaraHib ECO	
2028	1.20	18.0	13.5	BaraHib ECO	
2112	1.20	18.0	13.0	BaraHib ECO	