General information

Wellbore name	7234/6-1
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	7234/6-1 (Stangnestind)
Well name	7234/6-1
Seismic location	ABP17307-03007. SP 1214: 3D: ST14003ABPR17 inline: 2557. xline: 6472
Production licence	858
Drilling operator	Aker BP ASA
Drill permit	1858-L
Drilling facility	DEEPSEA NORDKAPP
Drilling days	49
Entered date	01.06.2021
Completed date	19.07.2021
Plugged and abondon date	19.07.2021
Release date	25.04.2022
Publication date	25.04.2022
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	LATE CARBONIFEROUS
1st level with HC, formation	ØRN FM
Kelly bushing elevation [m]	32.5
Water depth [m]	247.0
Total depth (MD) [m RKB]	4035.0
Final vertical depth (TVD) [m RKB]	4035.0
Maximum inclination [°]	1.6
Bottom hole temperature [°C]	153
Oldest penetrated age	LATE CARBONIFEROUS
Oldest penetrated formation	ØRN FM
Geodetic datum	ED50
NS degrees	72° 38' 54.42'' N
EW degrees	34° 50' 49.39'' E

NS UTM [m]	8066266.55
EW UTM [m]	361850.58
UTM zone	37
NPDID wellbore	9316

Wellbore history

General

Well 7234/6-1 was drilled to test the Stangnestind prospect on the western flank of the Fedynsky High, 12 km from the Russian border. The primary objective was to explore the hydrocarbon potential of the untested play in Late Carboniferous to Early Permian carbonate intervals of the rn Formation, Gipsdalen Group.

Operations and results

An 8 1/2" pilot well, 7234/6-U-1, was spudded on 31 May 2021, 25 m west of the main bore to check for shallow gas, check out unknown shallow lithology in the Lower Cretaceous wedge and to serve as a data acquisition well in the shallow part of the stratigraphy at Stangnestind. The pilot hole was drilled to 672 m. No shallow gas or water flow was detected and a safe setting depth for the 20" casing in the main bore was established.

Wildcat well 7234/6-1 was spudded with the semi-submersible installation Deepsea Nordkapp on 1 June 2021 and drilled to TD at 4035 m (4041 m loggers depth) m in the rn Formation of Late Carboniferous to Early Permian age. Severe losses up to 60 m3/h occurred at TD. The well was stabilized, and logging commenced successfully. The well was drilled with seawater and hi-vis pills down to 630 m, with KCl water-based mud from 630 m to 3618 m, and with BaraECD 2.2 oil-based mud from 3618 m to TD.

The well encountered dolomitised limestone reservoir (intra rn Formation) at 3915 m and detected a 57 m column of dry gas. The gas contained 13 % CO2 and 15.9 % H2S. No wells on the Norwegian continental shelf have previously seen any H2S level close to this. 26 m of the reservoir zone had relatively good reservoir properties (average porosity of 14%). Although the gas-water contact was not seen on logs, an MDT-sample at 4012,6 m proved water below the gas column. The well also encountered several thin, gas-bearing sandstone layers in the Triassic. Approximate drillers depth for these intervals are 1340-1350 m, 1563-1573 m, 1646-1650 m,1735-1750 m, 1955-2072 m (several intervals), 2570-2580 m, 2791-2815 m. These sands have moderate to low gas saturations and moderate reservoir properties. The sands at 1563 to 1573 m had direct dull straw yellow fluorescence and a very slow diffuse milky cut, otherwise no oil shows above the OBM background was observed on cuttings from the well.

No cores were cut. MDT fluid samples were taken at 3973.1 m (gas), 3982.5 m (gas) and 4012.6 m (water).

The well was permanently abandoned on 19 July 2021 as small 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]
633.00	4024.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
280	NORDLAND GP
302	NO FORMAL NAME
633	NO FORMAL NAME
682	ADVENTDALEN GP
682	HEKKINGEN FM
708	FUGLEN FM
730	REALGRUNNEN SUBGP
730	KAPP TOSCANA GP
760	SNADD FM
1202	UNDIFFERENTIATED
1729	SASSENDALEN GP
1729	HAVERT FM
3711	TEMPELFJORDEN GP
3711	ØRRET FM
3758	RØYE FM
3880	BJARMELAND GP
3880	ISBJØRN FM
3908	GIPSDALEN GP
3908	ØRN FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CMR HNGS	972	1600
LWD - GR RES DIR INC APWD	520	746
LWD - INCL	480	520
LWD - NBGR NBRES DIR INC RES APW	746	1600
MDT LFA MRMS PA	985	1585
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
INTERM.	30	332.6	36	336.0	0.00	
INTERM.	20	623.1	26	630.0	2.16	LOT
INTERM.	13 3/8	1900.3	17 1/2	1910.0	1.41	FIT
INTERM.	9 5/8	3604.0	12 1/4	3618.0	1.72	FIT
OPEN HOLE		4035.0	8 1/2	4035.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
285	1.03		23.8	Water	
333	1.30		23.5	Water	
520	1.03		3.0	Water	
623	1.14		18.0	Water	
1140	1.16		14.0	Water	
1910	1.15		22.0	Water	
2099	1.16		7.7	Water	
2846	1.17		13.4	Water	
3443	1.16		11.0	Water	
3574	1.42		9.5	Oil	
3618	1.30		9.5	Oil	
3618	1.16		13.4	Water	
3740	1.42		7.2	Oil	
3740	1.39		7.2	Oil	
3921	1.39		7.2	Oil	
4036	1.41		6.7	Oil	