

**General information**

Wellbore name	24/9-12 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	BØYLA
Discovery	24/9-12 S (Frosk)
Well name	24/9-12
Seismic location	DN15M01 IL 17793 DN15M01 XL 9475
Production licence	340
Drilling operator	Aker BP ASA
Drill permit	1681-L
Drilling facility	TRANSOCEAN ARCTIC
Drilling days	42
Entered date	29.12.2017
Completed date	08.02.2018
Plugged date	08.02.2018
Release date	08.02.2020
Publication date	08.02.2020
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	EOCENE
1st level with HC, formation	HORDALAND GP
Kelly bushing elevation [m]	24.0
Water depth [m]	120.0
Total depth (MD) [m RKB]	2336.0
Final vertical depth (TVD) [m RKB]	2326.0
Maximum inclination [°]	19.6
Bottom hole temperature [°C]	70
Oldest penetrated age	EOCENE
Oldest penetrated formation	HEIMDAL FM
Geodetic datum	ED50
NS degrees	59° 20' 58.95" N
EW degrees	1° 49' 48.47" E



NS UTM [m]	6579730.07
EW UTM [m]	433469.98
UTM zone	31
NPDID wellbore	8331

Wellbore history

General

Well 24/9-12 S was drilled to test two prospects in the Vana Sub-basin in the North Sea. The primary objective was to test the hydrocarbon potential in Early Eocene injectite sands, the Frosk prospect. The secondary objective was to test the hydrocarbon potential in sandstones in the Paleocene Hermod Formation, the Marihøne B prospect.

Operations and results

Wildcat well 24/9-12 S was spudded with the semi-submersible installation Transocean Arctic on 29 December 2017. The well consist of two wellbores. The first wellbore was drilled to 2285 m (2275 m TVD) and proved oil in the primary target m. A technical side-track, 24/9-12 S T2, was then kicked off at 1777 m for coring and wire line logging. This wellbore was drilled to final TD at 2336 m (2326 m TVD) m in the Paleocene Heimdal Formation. Operations proceeded without significant problems. The well was drilled with Glydrill water-based mud down to 1360 m, m and with EMS 4600 oil-based mud from 1360 m to TD in both wellbores.

Top of the Frosk injectite complex was encountered at 1861.1 m (1851.4 m TVD), with top of main sands at 1884.9 m (1875 m TVD). The sand was oil filled with a biodegraded oil down to the oil-water contact at 1896 m (1885.7 m TVD). The same contact was seen in both wellbores. Top Hermod Formation sandstone was encountered at 2094 m (20184 m TVD) in both well bores. The Hermod Formation was water-wet with no shows. In the oil-bearing injectite sands there were oil shows on the cores, otherwise there were no oil shows above OBM in the wellbores.

Three cores were cut with 100% recovery in the interval 1856 to 1931.5 m in the technical side-track. The cores captured the entire injectite sand complex. MDT fluid samples were taken at 1863.2 m (oil), 1864.9 m (oil), 1866.1 m (oil), 1888.1 m (oil), 1892.4 m (oil), 1894.8 m (oil with formation water), 1894.81 m (oil), 1907 m (water with traces of oil), 1915 m (water), 2105.02 m (water), 2120.99 m (water), and 2237.99 m (water).

The well was permanently abandoned on 8 February 2018 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]
170.00	2283.00

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	1856.0	1882.5	[m]
2	1882.5	1911.5	[m]
3	1911.5	1931.4	[m]

Total core sample length [m]	75.4
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
144	NORDLAND GP
144	UNDIFFERENTIATED
274	UTSIRA FM
875	HORDALAND GP
875	UNDIFFERENTIATED
1120	GRID FM
1316	UNDIFFERENTIATED
1925	ROGALAND GP
1925	UNDIFFERENTIATED
1977	BALDER FM
2061	SELE FM
2094	HERMOD FM
2150	UNDIFFERENTIATED
2176	LISTA FM
2234	HEIMDAL FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD LWD - DIR GR RES DEN NEU SON	1360	1779
MWD LWD - DIR GR RES SON	154	1360
MWD LWD - DIR PWD GR RES DEN NEU	1779	2285



MWD LWD - SON PRESSURE	1779	2285
T2 - MDT S XLD	1760	1894
T2 - MDT XLD QS	1760	2121
T2 - MWD LWD - DIR GR RES	1777	2335
T2 - MWD LWD - DIR GR RES DEN NE	1380	1777
T2 - MWD LWD - DIR GR RES S	154	1338
T2 - ZAIT NGI MSIP PEX HNGS IM	1760	2336

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	154.5	36	154.5	0.00	
INTERM.	13 3/8	1344.0	17 1/2	1360.0	0.00	
INTERM.	10 3/4	1766.0	12 1/4	1779.0	1.58	FIT
OPEN HOLE		2336.0	8 1/2	2336.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
281	1.21	17.0		Glydril	
784	1.19	18.0		Glydril	
1360	1.25	17.0		EMS 4600	
1360	1.29	17.0		Glydril	
1766	1.25	18.0		EMS 4600	
1766	1.28	19.0		EMS 4600	
1855	1.25	18.0		EMS 4600	
2285	1.27	16.0		EMS 4600	
2336	1.39	22.0		EMS 4600	
2336	1.25	19.0		EMS 4600	