



General information





Wellbore name	24/9-14 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
Discovery	24/9-14 S (Froskelår)
Well name	24/9-14
Seismic location	DN15M01 Inline: 17826. Crossline: 9732
Production licence	869
Drilling operator	Aker BP ASA
Drill permit	1737-L
Drilling facility	SCARABEO 8
Drilling days	35
Entered date	19.01.2019
Completed date	22.02.2019
Plugged date	22.02.2019
Release date	22.02.2021
Publication date	30.04.2021
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	EOCENE
1st level with HC, formation	HORDALAND GP
Kelly bushing elevation [m]	34.0
Water depth [m]	119.5
Total depth (MD) [m RKB]	2286.0
Final vertical depth (TVD) [m RKB]	2131.0
Oldest penetrated age	PALEOCENE
Oldest penetrated formation	SELE FM
Geodetic datum	ED50
NS degrees	59° 21' 51.91" N
EW degrees	1° 46' 52.29" E
NS UTM [m]	6581418.06
EW UTM [m]	430717.03
UTM zone	31
NPDID wellbore	8621



Wellbore history

General

Well 24/9-14 S was drilled on the Froskelår injectite sands in the Vana Sub-basin in the North Sea. The structure was first drilled by 24/9-3 in 1981 and oil was discovered in the Frigg Formation. These Frigg sands were later re-defined as injectites. The objective of wildcat well 24/9-14 S was to appraise petroleum and reservoir potential in these sands (Eocene Intra Hordaland group sandstones).

Operations and results

Appraisal well 24/9-14 S was spudded with the semi-submersible installation Scarabeo 8 on 19 January 2019 and drilled to TD at 2286 m in the Paleocene Sele Formation.

Operations proceeded without significant problems. Oil and gas were discovered, and a coring and data acquisition side-track 24/9-14 ST2 was drilled after reaching TD in the main well. The side-track was drilled from kick-off at 1812 m (1657 m TVD) to its TD at 2145 m (1955 m TVD). The well was drilled with Seawater and sweeps down to 218 m, with KCl/Polymer/GEM mud from 218 to 1558 m, and with Innover oil-based mud from 1558 m to TD. The side-track was drilled with Innover oil-based mud from kick-off to its TD.

With reference to the main bore: top of the injectite complex was encountered at 1887 m (1732 m TVD) with a main injectite sand in the lower half from 1936 to 1953 m (1781 to 1798 m TVD). There was gas with a gas-oil contact at ca 1763 m TVD and oil with a down-to contact at the base of the main injectite at 1798 m TVD. From pressure data the OWC is placed at 1838 m TVD. Further, pressure data indicate the same oil and water gradients in 24/9-14 S as in the 24/9-3 discovery well, only ca 2.5 bar depleted. This is consistent with production-depletion from the near-by Bøyla Field. Due to OBM-masking of shows on cuttings oil shows are described only in the hydrocarbon-bearing and cored sandstones in the side-track.

Three cores were cut in the interval 1882 to 1964 m in the side-track. The recoveries were 21.1 m, 27.9 m, and 24 m for cores 1,2 and 3 respectively. MDT fluid samples were taken in the side-track at 1890.9 m (gas), 1917.2 m (gas), 1929.4 m (oil), 1935.7 m (oil), 1946.4 m (oil), and 1957.4 m (oil)

The well was permanently abandoned on 22 February 2019 as an oil and gas appraisal well.

Testing

Before P&A a Pressure and Temperature Gauge was installed in the technical side-track (24/9-14 ST2), to collect and transmit data via Electro Magnetic (EM) signal until approximately end of 2023.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
270.00	3132.00

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	1882.0	1903.1	[m]
2	1909.0	1935.9	[m]
3	1937.0	1961.0	[m]

Total core sample length [m]	72.0
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
154	NORDLAND GP
154	UNDIFFERENTIATED
333	UTSIRA FM
727	SKADE FM
1012	HORDALAND GP
1012	UNDIFFERENTIATED
1028	GRID FM
1441	UNDIFFERENTIATED
1887	NO FORMAL NAME
1955	UNDIFFERENTIATED
2061	ROGALAND GP
2061	BALDER FM
2165	NO FORMAL NAME
2250	SELE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - DIR	152	218
LWD - DIR GR RES SON	218	1558
LWD - DIR PWD GR RES SON DEN NEU	1558	1789
LWD - DIR PWD GR RES SON DEN NEU	1789	2286
LWD - NRM FP	1789	2286



T2 LWD - DIR GR RES PWD	1783	1882
T2 LWD - RES PWD	1964	2145

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	216.4	36	218.6	0.00	
INTERM.	13 3/8	1549.0	17 1/2	1558.0	1.59	FIT
INTERM.	9 5/8	1783.0	12 1/4	1789.0	1.49	FIT
OPEN HOLE		2145.0	8 1/2	2145.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
219	1.50			Water	
415	1.20			Water	
1558	1.27			Oil	
1558	1.03			Water	
1558	1.37			Water	
1631	1.30	0.2		Oil	
1789	1.30			Oil	
1793	1.27			Oil	
1874	1.30			Oil	
1881	1.27			Oil	
1921	1.10			Brine	
1936	1.27			Oil	
2145	1.30			Oil	
2286	1.30			Oil	