General information

Wellbore name	31/7-1 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	31/7-1 (Brasse)
Well name	31/7-1
Seismic location	Inline 2414. Xline 2615 (LN1 M03)
Production licence	740
Drilling operator	Faroe Petroleum Norge AS
Drill permit	1632-L
Drilling facility	TRANSOCEAN ARCTIC
Drilling days	24
Entered date	23.06.2016
Completed date	14.07.2016
Release date	14.07.2018
Publication date	14.07.2018
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	SOGNEFJORD FM
Kelly bushing elevation [m]	24.0
Water depth [m]	119.0
Total depth (MD) [m RKB]	2530.0
Final vertical depth (TVD) [m RKB]	2293.0
Maximum inclination [°]	37.5
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	FENSFJORD FM
Geodetic datum	ED50
NS degrees	60° 25' 31.55'' N
EW degrees	3° 1' 28.23'' E
NS UTM [m]	6698949.76
EW UTM [m]	501349.50
UTM zone	31
NPDID wellbore	8008

Wellbore history

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General

Well 31/7-1 A is a geological sidetrack to 31/7-1 on the northern part of the Bjørgvin Arch between the Brage and Oseberg Sør fields in the North Sea. The 31/7-1 Brasse mainbore found oil and gas in the Late Jurassic Sognefjord Formation. The Brasse sidetrack was drilled in the southeast direction from 31/7-1, across a minor fault. The purpose was to reduce the uncertainty for the hydrocarbon contacts as well as to investigate the continuity and facies development of the reservoir.

Operations and results

Appraisal well 31/7-1 A was kicked off at 913 m in the main bore on 22 June 2016. It was drilled with the semi-submersible installation Transocean Arctic to TD at 2530 m in the Middle Jurassic Fensfjord Formation. No significant problem was encountered in the operations. The well was drilled with KCl/polymer/GEM mud from kick-off to TD

The well encountered the Sognefjord Formation at 2370.5 m (2166.5 m TVD) at the prognosed depth, just below the Draupne shales. The Fensfjord Formation was encountered at the prognosed depth of 2477 m (2254.5 m TVD).

The Sognefjord Formation sandstones / siltstones were gas and oil bearing with a gross vertical hydrocarbon column of 5.5 m gas and 24.4 m oil. The Sognefjord Formation had 88 m gross vertical reservoir, with 41.2 m net reservoir and 12.3 m net vertical pay zone. The Fensfjord Formation was water bearing. The GOC was interpreted at 2380 (2172 m TVD) and the OWC at 2409.7 m (2196.4 m TVD), confirming the contacts from the mainbore. The only oil shows reported from the well were on the cores from the hydrocarbon-bearing part of the Sognefjord Formation.

Two cores were cut from 2362 to 2425 m with 100% recovery. MDT fluid samples were taken at 2399.5 m (oil) and 2409.8 m (water).

The well was permanently abandoned on 14 July 2016 as an oil and gas appraisal well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
940.00	2530.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2362.0	2398.0	[m]
2	2398.0	2425.6	[m]

Total core sample length [m]	63.6
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
143	NORDLAND GP
679	UTSIRA FM
837	HORDALAND GP
837	NO FORMAL NAME
1964	ROGALAND GP
1964	BALDER FM
2052	SELE FM
2108	LISTA FM
2268	VÅLE FM
2275	SHETLAND GP
2275	HARDRÅDE FM
2355	VIKING GP
2355	DRAUPNE FM
2371	SOGNEFJORD FM
2478	FENSFJORD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - ECD GR RES DIR DEN CAL NEU	2325	2530
LWD - NBI RES ECD GR DIR	913	2317

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	209.0	36	209.0	0.00	
SURF.COND.	13 3/8	902.0	17 1/2	908.0	1.70	LOT
PILOT HOLE		908.0	9 7/8	908.0	0.00	
INTERM.	9 5/8	2309.0	12 1/4	2317.0	1.59	LOT
OPEN HOLE		2530.0	8 1/2	2530.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
250	1.02			Sea water	
372	1.03	9.0		Sweeps	
439	1.15	40.0		KCL/Polymer/Glycol	
442	1.49	36.0		Kill/DIsplacment Mud	
504	1.03	13.0		Sweeps	
504	1.49	34.0		Kill/DIsplacment Mud	
587	1.15	40.0		KCL/Polymer/Glycol	
587	1.49	34.0		Kill/DIsplacment Mud	
850	1.41	13.0		KCL / Polymer / GEM	
1025	1.49	27.0		KCL / Polymer / GEM	
2091	1.44	28.0		KCL / Polymer / GEM	
2154	1.51	32.0		KCL / Polymer / GEM	
2208	1.41	28.0		KCL /Polymer / GEM	
2241	1.44	22.0		KCL / Polymer / GEM	
2317	1.26	15.0		KCL / Polymer / GEM	
2317	1.44	26.0		KCL / Polymer / GEM	
2327	1.24	15.0		KCL / Polymer / GEM	
2530	1.24	21.0		KCL / Polymer / GEM	