

**General information**

Wellbore name	35/10-4 A
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	35/10-4 A (Gnomoria)
Well name	35/10-4
Seismic location	CGG17M01 inline 7119 / xline 27917
Production licence	630
Drilling operator	Equinor Energy AS
Drill permit	1712-L
Drilling facility	DEEPSEA BERGEN
Drilling days	29
Entered date	15.10.2018
Completed date	12.11.2018
Plugged and abandon date	12.11.2018
Release date	12.11.2020
Publication date	12.11.2020
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	INTRA HEATHER FM SS
2nd level with HC, age	LATE JURASSIC
2nd level with HC, formation	INTRA DRAUPNE FM SS
Kelly bushing elevation [m]	23.0
Water depth [m]	363.0
Total depth (MD) [m RKB]	3946.0
Final vertical depth (TVD) [m RKB]	3430.0
Maximum inclination [°]	48.6
Bottom hole temperature [°C]	128
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HEATHER FM
Geodetic datum	ED50
NS degrees	61° 8' 55.44" N



EW degrees	3° 17' 4.98" E
NS UTM [m]	6779548.53
EW UTM [m]	515327.82
UTM zone	31
NPDID wellbore	8500

Wellbore history

General

Well 35/10-4 A is a geological side-track to well 35/10-4 S on the Marflo Spur in the North Sea. It was drilled to test the Gnomoria prospect. The primary objective was to prove hydrocarbon-bearing sandstones of Kimmeridgian and Oxfordian age, in the Draupne and Heather formations. The secondary objective was to test the reservoir potential in the Callovian sequence below the Oxfordian sandstone reservoir.

Operations and results

Wildcat well 35/10-4 A was Kicked off from a milled window at 1661 to 1668 m in well 35/10-4 S on 15 October 2018. It was drilled with the semi-submersible installation Deepsea Bergen to TD at 3946 m in the Late Jurassic Heather Formation. Operations proceeded without significant problems. The well was drilled with XP-07 oil-based mud from kick-off to TD.

Well 35/10-4 A encountered top Intra-Draupne Formation sandstone at 3757 m (3274 m TVD). Top Heather Formation was encountered at 3820 m (3326 m TVD). A total of 126 m (104.1 m TVD) of Heather Formation sandstone and claystone was penetrated in the well. The upper ca 100 m of Heather consist of mainly sandstone. The core and thin

sections show high amounts of quartz cementation throughout the Intra-Draupne sand, with better zones in the Heather Formation. Oil was proven at 3824.2 m in the Heather sandstone by sampling. An oil-water contact is indicated by the logs to be at ca 3841 m, but an oil gradient could not be confirmed due to lack of valid pressure points. Oil shows were described on the cores and cuttings in the interval 3757 to 3864. Water was sampled at 3845.2 m.

The interval 3776.5 to 3825.6 m in the Intra Draupne and Heather sands was cored in four cores. Core recovery was from 95.4 to 100%. MDT fluid samples were taken at 3824.2 m (oil with 14% OBM contamination) and 3845.2 m (water with 85% OBM contamination)

The well was permanently abandoned on 12 November 2018 as a small 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]
1680.00	3946.00



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	3774.0	3787.4	[m]
2	3788.0	3806.3	[m]
3	3806.5	3820.4	[m]
4	3820.4	3823.1	[m]

Total core sample length [m]	48.2
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
386	NORDLAND GP
386	NO FORMAL NAME
855	HORDALAND GP
855	NO FORMAL NAME
1105	SKADE FM
1221	NO FORMAL NAME
1736	ROGALAND GP
1736	BALDER FM
1815	SELE FM
1851	LISTA FM
1980	VÅLE FM
2023	SHETLAND GP
2023	JORSALFARE FM
2090	KYRRE FM
2860	TRYGGVASON FM
3392	BLODØKS FM
3404	SVARTE FM
3456	CROMER KNOLL GP
3456	RØDBY FM
3489	SOLA FM
3493	ÅSGARD FM
3526	VIKING GP



3526	DRAUPNE FM
3757	INTRA DRAUPNE FM SS
3820	HEATHER FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT MSIP QGEO	3200	3950
MDT	3474	3845
MWD LWD - GR RES DI ECD	1674	3476
MWD LWD - GR RES DI ECD PRES	3476	3774
MWD LWD - GR RES DI ECD PRESS	3824	3946
PEX ECS HNGS CMR	3450	3950
VSP FF	1441	3878

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.	9 5/8	3474.0	12 1/4	3476.0	1.68	FIT
OPEN HOLE		3946.0	8 1/2	3946.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
700	1.35	13.0		XP-07	
1678	1.37	17.0		XP-07	
1878	1.36	18.0		XP-07	
2229	1.35	20.0		XP-07	
3185	1.35	17.0		XP-07	
3476	1.55	23.0		XP-07	
3476	1.36	19.0		XP-07	
3774	1.55	21.0		XP-07	
3774	1.54	21.0		XP-07	
3823	1.54	20.0		XP-07	
3823	1.56	21.0		XP-07	
3946	1.55	21.0		XP-07	

