

**General information**

Wellbore name	35/11-24 S
Type	EXPLORATION
Purpose	WILDCAT
Status	PLUGGED
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	35/11-24 S (Swisher)
Well name	35/11-24
Seismic location	3D survey CGG18M01. Inline: 7451. X-line: 27437
Production licence	248 C
Drilling operator	Equinor Energy AS
Drill permit	1823-L
Drilling facility	WEST HERCULES
Drilling days	29
Entered date	13.07.2020
Completed date	09.08.2020
Plugged date	09.08.2020
Release date	09.08.2022
Publication date	09.08.2022
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
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 HEATHER FM SS
Kelly bushing elevation [m]	31.0
Water depth [m]	356.0
Total depth (MD) [m RKB]	3200.0
Final vertical depth (TVD) [m RKB]	3113.1
Maximum inclination [°]	21
Bottom hole temperature [°C]	117
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	HEATHER FM
Geodetic datum	ED50



NS degrees	61° 5' 40.68" N
EW degrees	3° 23' 59.11" E
NS UTM [m]	6773554.73
EW UTM [m]	521557.60
UTM zone	31
NPDID wellbore	9065

Wellbore history

General

Well 35/11-24 S was drilled to test the Swisher prospect located on the Lomre terrace, 6km west of the Fram Vest field in the North Sea. The primary objective was to confirm commercial hydrocarbons in two Intra-Heather Formation sandstones.

Operations and results

An 8 1/2" pilot hole was drilled through cap-x down to 20" shoe setting depth at 742 m to investigate for shallow gas and water. No flow was observed.

Wildcat well 35/11-24 S was spudded with the semi-submersible installation West Hercules on 13 July 2020 and drilled to TD at 3200 m (3113.1 m TVD) m in Middle Jurassic claystone belonging to the Heather Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 742 m, with Glydril mud from 742 to 1680 m, and with Versatec oil-based mud from 1680 m to TD.

The Viking Group is very thick in the well and consist mainly of claystone. The Draupne Formation from 2789 to 3003 m (2725 to 2926 m TVD) consist entirely of claystone, while the Heather Formation from 3003 m to TD is at least 180 m TVD thick and contain the two target sandstone units in the upper part, a Kimmeridgian unit and an Oxfordian unit, and massive claystone below. The upper unit was penetrated from 3012 to 3029 m (2934 to 2950 m) and the lower unit from 3073 to 3097 m (2992 to 3015 m TVD). The upper unit contain gas and the lower unit contain oil. Pressure tests show different pressure regimes in the two units, with the lower unit on a 6.5 bar lower water gradient than the upper. Oil shows were recorded in both units, but nowhere else in the well.

One core was cut from 3029 to 3139 m with 100% recovery, capturing both Intra-Heather sandstone units. The core-log shift is 0.8 m. MDT fluid samples were taken at 3023.1 m (Gas), 3073.8 m (oil), and 3079.7 m (oil).

The well was plugged back for side-tracking and permanently abandoned on 9 August 2020 as an oil and 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]
750.00	3200.50



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	3029.0	3139.0	[m]

Total core sample length [m]	110.0
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
387	NORDLAND GP
387	NO FORMAL NAME
771	UTSIRA FM
871	HORDALAND GP
871	NO FORMAL NAME
1700	ROGALAND GP
1700	BALDER FM
1752	SELE FM
1771	LISTA FM
1938	VÅLE FM
2010	UNDIFFERENTIATED
2064	SHETLAND GP
2064	JORSALFARE FM
2240	KYRRE FM
2661	SVARTE FM
2680	CROMER KNOLL GP
2680	RØDBY FM
2710	SOLA FM
2759	ÅSGARD FM
2789	VIKING GP
2789	DRAUPNE FM
3003	HEATHER FM
3012	INTRA HEATHER FM SS
3029	HEATHER FM



3073	INTRA HEATHER FM SS
3097	HEATHER FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD - GR RES DIR ECD	387	1680
MWD - GR RES DIR ECD	2909	3200
MWD - GR RES DIR ECD DEN NEU SON	1680	2909
NEXT PEX HNGT XPT	2909	3199
XLD LD ST HP IFA MS CMR SC275	2985	3145
XLR	3000	3029
ZAIP MSIP NGI	2750	3199
ZO VSP	708	3193

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
SURF.COND.	20	735.0	26	742.0	1.35	FIT
INTERM.	13 3/8	1674.0	17 1/2	1680.0	1.55	FIT
LINER	9 5/8	2908.0	12 1/4	2909.0	1.65	FIT
OPEN HOLE		3200.0	8 1/2	3200.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
730	1.14	10.0	5.0	Glydril	
1244	1.15	13.0	7.5	Glydril	
1454	1.17	13.0	7.5	Glydril	
1590	1.18	13.0	8.0	Glydril	
1614	1.36	30.0	10.0	Versatec	
1664	1.37	32.0	10.5	Versatec	
2909	1.37	27.0	7.0	Versatec	
2914	1.35	19.0	10.0	Versatec	
3200	1.35	26.0	7.5	Versatec	

