General information

Wellbore name	30/6-31 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
Well name	30/6-31
Seismic location	CGG17M01 inline 5911
Production licence	053
Drilling operator	Equinor Energy AS
Drill permit	1804-L
Drilling facility	WEST HERCULES
Drilling days	22
Entered date	04.04.2020
Completed date	25.04.2020
Plugged and abondon date	25.04.2020
Release date	25.04.2022
Publication date	08.08.2022
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	31.0
Water depth [m]	107.0
Total depth (MD) [m RKB]	2852.0
Final vertical depth (TVD) [m RKB]	2830.0
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	NESS FM
Geodetic datum	ED50
NS degrees	60° 33' 12.9'' N
EW degrees	2° 52' 12.27'' E
NS UTM [m]	6713230.30
EW UTM [m]	492874.14
UTM zone	31
NPDID wellbore	8979

Wellbore history

General

Well 30/6-31 S was drilled to test the Helleneset prospect between the Oseberg and Brage fields on the Oseberg Fault block in the North Sea. The primary objective was to test the hydrocarbon potential in Callovian Intra-Heather Formation sandstones.

Operations and results

A shallow gas pilot hole 30/6-U-28 was spudded 18 m south of the main well location on 9 March 2020. Due to weather and other problems, this well was aborted after drilling down to 511 m. A second pilot hole (drilled with 8 ½" BHA) was then drilled from 30/6-31 S well location down to 1120 m. Based on the log interpretation, flow checks, sonar and ROV observations, there were no shallow gas observed from these pilot holes.

Wildcat well 30/6-31 S was spudded with the semi-submersible installation West Hercules on 4 April 2020 and drilled to TD at 2852 m (2830.4 m TVD) in the Middle Jurassic Ness Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1120 m, with Versatec oil-based mud from 1120 m to 2649 m, and with Exploradrill oil-based mud from 2649 m to TD.

High formation gas levels were observed in limestones within Shetland Group in the 12 ¼" section. The limestones are correlated with Shetland limestone in Oseberg Main Field. A gas chimney is observed in the seismic, showing potential leak to overburden and which may charge the Shetland limestone at the well location.

The targeted Jurassic Callovian syn-rift reservoir was poorly developed and appear as thin cemented sands without any indication of hydrocarbons from the logs, gas, or cuttings. A thin Tarbert Formation was drilled, and no hydrocarbon indications were encountered. The pressure measurement acquired in Heather-Callovian, Tarbert and Ness sand concluded a depleted pressure (100 bar depletion in the Ness Formation.).

No cores were cut. No fluid sample was taken.

The well was permanently abandoned on 25 April 2020 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1130.00	2850.00

Cuttings available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1130.0	[m]	DC	APT
1170.0	[m]	DC	APT
1210.0	[m]	DC	APT
1250.0	[m]	DC	APT
1290.0	[m]	DC	APT
1330.0	[m]	DC	APT
1370.0	[m]	DC	APT
1410.0	[m]	DC	APT
1450.0	[m]	DC	APT
1490.0	[m]	DC	APT
1530.0	[m]	DC	APT
1570.0	[m]	DC	APT
1610.0	[m]	DC	APT
1650.0	[m]	DC	APT
1680.0	[m]	DC	APT
2100.0	[m]	DC	APT
2120.0	[m]	DC	APT
2140.0	[m]	DC	APT
2160.0	[m]	DC	APT
2180.0	[m]	DC	APT
2200.0	[m]	DC	APT
2260.0	[m]	DC	APT
2280.0	[m]	DC	APT
2300.0	[m]	DC	APT
2320.0	[m]	DC	APT
2370.0	[m]	DC	APT
2400.0	[m]	DC	APT
2430.0	[m]	DC	APT
2510.0	[m]	DC	APT
2515.0	[m]	DC	APT
2520.0	[m]	DC	APT
2525.0	[m]	DC	APT
2540.0	[m]	DC	APT
2545.0	[m]	DC	APT
2550.0	[m]	DC	APT
2555.0	[m]	DC	APT
2560.0	[m]	DC	APT
2565.0	[m]	DC	APT
2570.0	[m]	DC	APT

2575.0	[m]	DC	APT
2580.0	[m]	DC	APT
2585.0	[m]	DC	APT
2590.0	[m]	DC	APT
2595.0	[m]	DC	APT
2600.0	[m]	DC	APT
2605.0	[m]	DC	APT
2610.0	[m]	DC	APT
2620.0	[m]	DC	APT
2625.0	[m]	DC	APT
2630.0	[m]	DC	APT
2635.0	[m]	DC	APT
2640.0	[m]	DC	APT
2645.0	[m]	DC	APT
2652.0	[m]	DC	APT
2664.0	[m]	DC	APT
2670.0	[m]	DC	APT
2676.0	[m]	DC	APT
2682.0	[m]	DC	APT
2688.0	[m]	DC	APT
2694.0	[m]	DC	APT
2700.0	[m]	DC	APT
2706.0	[m]	DC	APT
2712.0	[m]	DC	APT
2718.0	[m]	DC	APT
2724.0	[m]	DC	APT
2730.0	[m]	DC	APT
2736.0	[m]	DC	APT
2742.0	[m]	DC	APT
2748.0	[m]	DC	APT
2754.0	[m]	DC	APT
2760.0	[m]	DC	APT
2766.0	[m]	DC	APT
2772.0	[m]	DC	APT
2784.0	[m]	DC	APT
2790.0	[m]	DC	APT
2796.0	[m]	DC	APT
2802.0	[m]	DC	APT
2808.0	[m]	DC	APT
2814.0	[m]	DC	APT

2820.0	[m]	DC	APT
2826.0	[m]	DC	APT
2832.0	[m]	DC	APT
2838.0	[m]	DC	APT
2844.0	[m]	DC	APT
2850.0	[m]	DC	APT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
138	NORDLAND GP
685	UTSIRA FM
880	HORDALAND GP
1033	SKADE FM
2069	BALDER FM
2085	ROGALAND GP
2085	BALDER FM
2136	SELE FM
2192	LISTA FM
2305	VÅLE FM
2313	JORSALFARE FM
2334	SHETLAND GP
2334	JORSALFARE FM
2416	RØDBY FM
2425	KYRRE FM
2483	CROMER KNOLL GP
2483	RØDBY FM
2511	ÅSGARD FM
2514	DRAUPNE FM
2536	VIKING GP
2536	DRAUPNE FM
2582	HEATHER FM
2737	UNDIFFERENTIATED
2812	BRENT GP
2812	TARBERT FM
2817	NESS FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD - AV TS	189	1120
MWD - AV TS	2649	2852
MWD - ES SS TS	187	2649
XPT HNGS AIT PEX	2649	2852

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	187.0	42	189.0	0.00	
SURF.COND.	13 3/8	1113.0	17 1/2	1120.0	1.67	LOT
PILOT HOLE		1120.0	8 1/2	1120.0	0.00	
LINER	9 5/8	2649.0	12 1/4	2649.0	1.74	LOT
OPEN HOLE		2852.0	8 1/2	2852.0	0.00	