



General information





Wellbore name	35/11-23 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
Field	FRAM
Discovery	35/11-23 (Echino Sør)
Well name	35/11-23
Seismic location	Inline: 2236. Xline: 6293. 3-D survey ST13M03
Production licence	090
Drilling operator	Equinor Energy AS
Drill permit	4918-L
Drilling facility	DEEPSEA ATLANTIC
Drilling days	15
Entered date	07.11.2019
Completed date	21.11.2019
Plugged and abandon date	21.11.2019
Release date	21.11.2021
Publication date	22.12.2021
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	30.0
Water depth [m]	350.0
Total depth (MD) [m RKB]	2883.0
Final vertical depth (TVD) [m RKB]	2659.0
Oldest penetrated age	JURASSIC
Oldest penetrated formation	VIKING GP
Geodetic datum	ED50
NS degrees	61° 1' 14.7" N
EW degrees	3° 27' 49.21" E
NS UTM [m]	6765347.72
EW UTM [m]	525062.70
UTM zone	31
NPDID wellbore	8940



Wellbore history

General

Well 35/11-23 A is a geological side-track to the 35/11-23 Echino discovery on the Lomre Terrace north of the Troll Field in the North Sea. Well 35/11-23 discovered oil and gas in the Late Jurassic Sognefjord Formation and the Middle Jurassic Brent Group. The 35/11-23 A side-track was drilled down flanks to the west of the main bore on the Echino structure and the objective was to establish the OWC within the Sognefjord J56 reservoir.

Operations and results

Appraisal well 35/11-23 A was kicked off from the main bore at 1130 m on 7 November 2019. It was drilled with the semi-submersible installation Deepsea Atlantic to TD at 2883 m in the Middle Jurassic Heather Formation. Operations proceeded without significant problems. The well was drilled with Synteq oil-based mud from kick-off to TD.

The J56 and J52 Sognefjord Formation sands that were found hydrocarbon bearing in the main bore, were penetrated from 2551 to 2605 m (2344 to 2395 m TVD) and from 2634 to 2673 m (2422 to 2460 m TVD), respectively. Both had good reservoir properties and were water bearing. Combined pressure data from the main bore and the side-track proved an OWC in the J56 sand at 2544 m (2337 m TVD). Pressure data also showed 3 bar lower pressure in J56 than in J52. The Krossfjord Formation from 2798 to 2808 m (2578 to 2588 m TVD) had a thin sand with high resistivity and shows described with direct and cut fluorescence. These are the only shows described in the well.

No conventional cores were cut, but sidewall cores were taken. RCX water samples were taken at 2552.2 m .

The well was permanently abandoned on 21 November 2019 as a dry 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]
1140.00	2883.00

Cuttings available for sampling?	YES
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Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2500.0	[m]	DC	PETROSTR
2512.0	[m]	DC	PETROS



2524.0	[m]	DC	PETROS
2536.0	[m]	DC	PETROS
2548.0	[m]	DC	PETROS
2551.0	[m]	DC	PETROS
2554.0	[m]	DC	PETROS
2557.0	[m]	DC	PETROS
2557.0	[m]	DC	PETROS
2563.0	[m]	DC	PETROS
2572.0	[m]	DC	PETROS
2578.0	[m]	DC	PETROS
2584.0	[m]	DC	PETROS
2590.0	[m]	DC	PETROS
2596.0	[m]	DC	PETROS
2602.0	[m]	DC	PETROS
2608.0	[m]	DC	PETROS
2614.0	[m]	DC	PETROS
2620.0	[m]	DC	PETROS
2626.0	[m]	DC	PETROS
2632.0	[m]	DC	PETROS
2638.0	[m]	DC	PETROS
2644.0	[m]	DC	PETROS
2650.0	[m]	DC	PETROS
2656.0	[m]	DC	PETROS
2662.0	[m]	DC	PETROS
2668.0	[m]	DC	PETROS
2674.0	[m]	DC	PETROS
2680.0	[m]	DC	PETROS
2686.0	[m]	DC	PETROS
2692.0	[m]	DC	PETROS
2698.0	[m]	DC	PETROS
2704.0	[m]	DC	PETROS
2710.0	[m]	DC	PETROS
2716.0	[m]	DC	PETROS
2722.0	[m]	DC	PETROS
2728.0	[m]	DC	PETROS
2734.0	[m]	DC	PETROS
2743.0	[m]	DC	PETROS
2752.0	[m]	DC	PETROS
2758.0	[m]	DC	PETROS
2764.0	[m]	DC	PETROS



2770.0 [m]	DC	PETROS
2776.0 [m]	DC	PETROS
2782.0 [m]	DC	PETROS
2788.0 [m]	DC	PETROS
2794.0 [m]	DC	PETROS
2800.0 [m]	DC	PETROS
2803.0 [m]	DC	PETROS
2806.0 [m]	DC	PETROS
2809.0 [m]	DC	PETROS
2812.0 [m]	DC	PETROS
2818.0 [m]	DC	PETROS
2824.0 [m]	DC	PETROS
2830.0 [m]	DC	PETROS
2836.0 [m]	DC	PETROS
2842.0 [m]	DC	PETROS
2848.0 [m]	DC	PETROS
2854.0 [m]	DC	PETROS
2860.0 [m]	DC	PETROS
2866.0 [m]	DC	PETROS
2875.0 [m]	DC	PETROS
2881.0 [m]	DC	PETROS
2883.0 [m]	DC	PETROS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
1573	BALDER FM
1629	ROGALAND GP
1629	BALDER FM
1697	SELE FM
1755	LISTA FM
1926	VÅLE FM
1978	JORSALFARE FM
2155	SHETLAND GP
2155	JORSALFARE FM
2216	DRAUPNE FM
2255	KYRRE FM
2417	VIKING GP
2417	DRAUPNE FM



2499	HEATHER FM
2551	UNDIFFERENTIATED
2605	HEATHER FM
2634	UNDIFFERENTIATED
2673	HEATHER FM
2796	UNDIFFERENTIATED
2808	HEATHER FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - GR RES	1126	2348
LWD - GR RES	2348	2883

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.	13 3/8	1117.0	17 1/2	1117.0	1.51	FIT
LINER	9 5/8	2150.3	12 1/4	2150.3	1.40	FIT
OPEN HOLE		2659.0	8 1/2	2659.0	0.00	