



General information

Wellbore name	6607/12-4
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Discovery	6607/12-4 (Alve Nordøst)
Well name	6607/12-4
Seismic location	ABP17M01. XL-4687 IL-10461
Production licence	127 C
Drilling operator	Aker BP ASA
Drill permit	1825-L
Drilling facility	DEEPSEA NORDKAPP
Drilling days	32
Entered date	12.09.2020
Completed date	13.10.2020
Plugged date	13.10.2020
Release date	13.10.2022
Publication date	13.10.2022
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	JURASSIC
1st level with HC, formation	TOFTE FM
2nd level with HC, age	JURASSIC
2nd level with HC, formation	FANGST GP
3rd level with HC, age	LATE CRETACEOUS
3rd level with HC, formation	LANGE FM
Kelly bushing elevation [m]	32.7
Water depth [m]	362.0
Total depth (MD) [m RKB]	4160.0
Final vertical depth (TVD) [m RKB]	4156.3
Maximum inclination [°]	8.8
Bottom hole temperature [°C]	149
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	ÅRE FM



Geodetic datum	ED50
NS degrees	66° 3' 39.79" N
EW degrees	7° 59' 5.89" E
NS UTM [m]	7327273.01
EW UTM [m]	454040.67
UTM zone	32
NPDID wellbore	9077

Wellbore history

General

Well 6607/12-4 was drilled to test the Alve North-East prospect on the Revfallet Fault Complex in the Norwegian Sea in AREA. The primary objective was to prove the reservoir and hydrocarbon potential of the Jurassic Garn, Ile, Tofte, Tilje and Åre formations of the Båt and Fangst Groups.

Operations and results

A pilot well 6607/12-U-1 was drilled down to 1347 m during 10 to 12 September 2020 to check for shallow gas. No gas was recorded.

Wildcat well 6607/12-4 was spudded with the semi-submersible installation Deepsea Nordkapp on 12 September 2020 and drilled to TD at 4160 m in the Early Jurassic Åre Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1340 m, with Innover oil-based mud from 1340

m to 2800 m, and with BaraECD oil-based mud from 2800 m to TD.

The well penetrated three Intra-Lange Formation sand units between 3066 m and 3100 m. These sands contained oil, with the best reservoir properties in the middle sand from 3084 to 3092 m. The primary target Fangst Group with Garn, Not and Ile formations was penetrated from 3697.5 to 3769 m and contained gas in sands with poor reservoir quality. Gas-down-to' was recorded in Garn and Not and a potential gas-water contact was encountered at 3780.7 m in the Tofte Formation. The Åre Formation was encountered at 3863 m with interbedded sands, siltstone, mudstones, and numerous coal beds. Åre was water wet. Throughout the well no shows above background OBM were observed on cuttings during drilling.

No cores were cut in well bore 6607/12-4. Schlumberger ORA fluid samples were taken at 3071.1 m (oil), 3071.15 m (oil), 3086.5 m (water), and 3709.6 m (Gas). Water samples were taken with the MDT tool at 3871.8 m and 4076.1 m.

The well was plugged back for side tracking and permanently abandoned on 13 October 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]
1350.00	4160.00

Cuttings available for sampling?	YES
----------------------------------	-----

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
395	NORDLAND GP
395	NAUST FM
1343	KAI FM
1615	HORDALAND GP
1615	BRYGGE FM
1875	ROGALAND GP
1875	TARE FM
1936	TANG FM
1983	SHETLAND GP
1983	SPRINGAR FM
2114	NISE FM
2493	KVITNOS FM
2873	CROMER KNOLL GP
2873	LYSING FM
2880	LANGE FM
3318	LYR FM
3387	VIKING GP
3387	SPEKK FM
3416	MELKE FM
3698	FANGST GP
3698	GARN FM
3714	NOT FM
3741	ILE FM
3787	BÅT GP
3787	TOFTE FM
3809	ROR FM
3811	TILJE FM
3863	ÅRE FM
4062	UNDIFFERENTIATED
4077	UNDIFFERENTIATED
4077	ÅRE FM



Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - ABG PCDC GR RES DEN NEU PW	2800	4160
LWD - ABG PCDC GR RES SON PWD	1341	2800
LWD - PCDC	395	451
LWD - PCDC PWD	451	1341
MDT CFRAC NGI	3634	3674
MDT PC	3709	4076
ORA	3024	3071
ORA	3071	3705
UBI PPC MSIP NGI GR	2880	4150
ZAIT GPIT NEXT PEX ADT HNGS	2793	4162

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	450.7	36	449.2	0.00	
INTERM.	20	1335.6	26	1340.0	1.63	FIT
INTERM.	13 5/8	2793.4	17 1/2	2800.0	1.92	LOT
OPEN HOLE		4160.0	8 1/2	4160.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
445	1.50		22.0	Water	
1341	1.03		1.0	Water	
1341	1.30		11.0	Water	
1468	1.45		10.5	Oil	
2800	1.56		4.3	Oil	
2820	1.52		8.6	Oil	
4160	1.52		10.5	Oil	