

**General information**

Wellbore name	6608/10-17 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	VERDANDE
Discovery	6608/10-17 S Verdande
Well name	6608/10-17
Seismic location	ST11M01 inline 6070 xline 5106
Production licence	128
Drilling operator	Statoil Petroleum AS
Drill permit	1643-L
Drilling facility	DEEPSEA BERGEN
Drilling days	59
Entered date	04.12.2016
Completed date	31.01.2017
Plugged and abandon date	31.01.2017
Release date	31.01.2019
Publication date	22.03.2019
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	CRETACEOUS
1st level with HC, formation	LANGE FM
2nd level with HC, age	CRETACEOUS
2nd level with HC, formation	LANGE FM
Kelly bushing elevation [m]	23.0
Water depth [m]	374.0
Total depth (MD) [m RKB]	3323.0
Final vertical depth (TVD) [m RKB]	3294.0
Maximum inclination [°]	14.7
Oldest penetrated age	EARLY CRETACEOUS
Oldest penetrated formation	SPEKK FM
Geodetic datum	ED50
NS degrees	66° 4' 16.19" N



EW degrees	8° 3' 36.03" E
NS UTM [m]	7328347.00
EW UTM [m]	457455.02
UTM zone	32
NPDID wellbore	8065

Wellbore history

General

Well 6608/10-17 S was drilled to test the Cape Vulture prospects on the Revfallet Fault Complex, northwest of the Norne Field in the Norwegian Sea. The objective was to test the hydrocarbon potential in two turbiditic sandstones within the Early Cretaceous Lange Formation, called Cape Vulture Main and Cape Vulture Upper, respectively.

Operations and results

Wildcat well 6608/10-17 S was spudded with the semi-submersible installation Deepsea Bergen on 4 December 2016 and drilled to TD at 3323 m (3294 m TVD) in Early Cretaceous (Berriasian) shales belonging to the Spekk Formation. While drilling the 8 ½" section and during plug P&A, 31.5 days (53% of total operations) was spent waiting on weather. Otherwise operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1362 m and with XP-07 oil-based mud from 1362 m to TD.

The top of the Lange Formation was encountered at 2796 m (2767 m TVD), top Cape Vulture Upper at 2947 m (2918 m TVD), and top Cape Vulture Main at 2987 m (2959 m TVD). Both reservoirs contained hydrocarbons. In Cape Vulture Upper, there was an 8 m oil column, of which 5 m were in sandstone with moderate to good reservoir properties. In Cape Vulture Main, the well encountered a total oil column of about 5 m with an overlying gas column of about 13 m, of which 3 and 10 m, respectively, were in sandstone with moderate to good reservoir properties.

Fluorescence and cut were recorded on core chips from Cape Vulture main level, otherwise no conventional oil shows were reported from the well. However, Hydrocarbon Core Scanning identified very good shows to live oil in a thin sand at 3012 m below Cape Vulture Main. The resistivity log also indicates hydrocarbons in this sand as well as several thin sands from 2784 in the Lysing Formation and down to 3084 m in the Lange Formation.

One core was cut with 100% recovery from 2956 to 3037 m, covering the Cape Vulture Main in the Lange Formation. MDT fluid samples were taken at 2952.7 m (oil), 2992.2 m (gas/condensate), and 3002.7 m (oil).

The well was permanently abandoned on 31 January as 2017 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]
1370.00	3322.00

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	2956.0	3037.2	[m]

Total core sample length [m]	81.2
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
398	NORDLAND GP
398	NAUST FM
1367	KAI FM
1625	HORDALAND GP
1625	BRYGGE FM
1881	ROGALAND GP
1881	TARE FM
1953	TANG FM
1981	SHETLAND GP
1981	SPRINGAR FM
2186	NISE FM
2659	KVITNOS FM
2779	CROMER KNOLL GP
2779	LYSING FM
2796	LANGE FM
3205	LYR FM
3311	VIKING GP
3311	SPEKK FM

Logs



Log type	Log top depth [m]	Log bottom depth [m]
AIT MSIP PEX HNGS XPT	2550	3325
AIT NGI MDT PA	2762	3100
CMR ECS PEX AIT	2940	3037
MDT PA	3000	3005
MWD - GR	374	436
MWD - GR RES	436	3323
MWD - GR RES SON	1359	2643
VSI4	332	3325
XL ROCK	2790	2953

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	434.1	36	436.0	0.00	
INTERM.	13 3/8	1348.6	17 1/2	1359.0	1.58	FIT
INTERM.	9 5/8	2636.0	12 1/4	2643.0	1.77	FIT
OPEN HOLE		3323.0	8 1/2	3323.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
650	1.51	21.0		XP-07	
1359	1.54	20.0		XP-07	
1409	1.51	21.0		XP-07	
2392	1.62	28.0		XP-07	
2470	1.51	26.0		XP-07	
2652	1.55	34.0		XP-07	
2955	1.57	33.0		XP-07	
3030	1.62	28.0		XP-07	
3037	1.62	26.0		XP-07	
3037	1.57	28.0		XP-07	
3091	1.62	28.0		XP-07	
3262	1.61	28.0		XP-07	
3322	1.62	31.0		XP-07	

