General information

Wellbore name	6405/12-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6405/12-1
Seismic location	LN 12001: inline 1316 & crossline 2767
Production licence	584
Drilling operator	Lundin Norway AS
Drill permit	1539-L
Drilling facility	BREDFORD DOLPHIN
Drilling days	79
Entered date	30.10.2014
Completed date	16.01.2015
Release date	12.04.2016
Publication date	12.04.2016
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	420.0
Total depth (MD) [m RKB]	3330.0
Final vertical depth (TVD) [m RKB]	3330.0
Maximum inclination [°]	1.1
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	NISE FM
Geodetic datum	ED50
NS degrees	64° 11' 42.16'' N
EW degrees	5° 52' 12.7'' E
NS UTM [m]	7122068.79
EW UTM [m]	639378.92
UTM zone	31
NPDID wellbore	7551

Wellbore history

General

Well 6405/12-1 was drilled to test the Lindarormen prospect approximately 80 km northeast of the Ormen Lange field in the Norwegian Sea. The primary and secondary exploration targets were to prove petroleum in Paleocene and late Cretaceous reservoir rocks (Tang Formation and Shetland group, respectively).

Operations and results

Wildcat well 6405/12-1 was spudded with the semi-submersible installation Bredford Dolphin on 30 October 2014 and drilled to TD at 3330 m in the Late Cretaceous Nise Formation. A 9 7/8" pilot hole was drilled from seabed to 906 m. Two possible shallow gas zones were identified due to GR/Res anomaly at 809 - 812 m and 893 - 895 m. The well kicked at 3230 m when a gain of 200 litres was observed. The kick was killed with 1.75 sg mud. 27.8% of the rig time was spent waiting on weather (WOW). The well was drilled with seawater and hi-vis sweeps down to 903 m and with Aquadril mud from 903 m to TD.

The well was dry. No reservoir quality was found in the Paleocene succession. The main target; the Lower Tang Formation, was represented by a unit of claystones with minor limestone stringers and lack of reservoir is considered the main cause of failure for the prospect. In addition, the Egga Sandstone was not developed; the well encountered an 18 m thick unit of claystones and limestone stingers at 3210 - 3228 m. No Springar Formation was found; the well drilled straight into Nise Formation at 3228 m RKB.

No cores were cut. No wireline operations were conducted and no fluid samples were taken.

The well was permanently abandoned on 16 January 2015 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]
910.00	3330.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
445	NORDLAND GP
445	NAUST FM

1496	KAI FM
2322	HORDALAND GP
2322	BRYGGE FM
3047	ROGALAND GP
3047	TARE FM
3156	TANG FM
3228	SHETLAND GP
3228	NISE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD LWD - GR DIR CAL DEN NEU SON	2192	2953
MWD LWD - GR PWD RES DIR DEN NEU	3212	3327
MWD LWD - GR RES DIR DEN CAL NEU	2960	3227
MWD LWD - GR RES DIR SON	895	2216
MWD LWD - GR RES SON PWD DIR	448	903

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	509.5	36	510.5	0.00	
SURF.COND.	20	895.7	26	903.0	1.29	LOT
PILOT HOLE		906.0	9 7/8	906.0	0.00	
INTERM.	13 3/8	2207.7	17 1/2	2216.0	1.65	LOT
PROD.	9 5/8	2960.0	12 1/4	2970.0	1.81	LOT
LINER	7	3228.0	8 1/2	3230.0	1.97	LOT
OPEN HOLE		3330.0	6	3330.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
810	1.03	108.0		Water Based	
903	1.15	16.0		Water Based	

1439	1.17	22.0		Water Based	
2000	1.23	20.0		Water Based	
2216	1.24	17.0		Water Based	
2236	1.30	15.0		Water Based	
2656	1.51	28.0		Water Based	
2740	1.24	11.0		Water Based	
2795	1.84	27.0		Water Based	
2970	1.59	25.0		Water Based	
3230	1.75	34.0		Water Based	
3330	1.84	27.0		Water Based	