General information

Wellbore name	6406/1-3
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Discovery	6406/1-2 (Sklinna)
Well name	6406/1-3
Seismic location	NA01 M2-3D-inline 2484 & crossline 1465
Production licence	256
Drilling operator	Eni Norge AS
Drill permit	1084-L
Drilling facility	OCEAN VANGUARD
Drilling days	68
Entered date	16.10.2004
Completed date	22.12.2004
Release date	22.12.2006
Publication date	28.06.2007
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	22.0
Water depth [m]	361.0
Total depth (MD) [m RKB]	4276.0
Final vertical depth (TVD) [m RKB]	4275.0
Maximum inclination [°]	3.2
Oldest penetrated age	CRETACEOUS
Oldest penetrated formation	LANGE FM
Geodetic datum	ED50
NS degrees	64° 54' 25.97'' N
EW degrees	6° 8' 25.34'' E
NS UTM [m]	7201351.97
EW UTM [m]	364711.00
UTM zone	32
NPDID wellbore	4986

Wellbore history

General

Well 6406/1-3 is located west of the 6406/1-2 and the Kristin gas discoveries off shore Mid Norway. The main purpose was to test the extension of the gas discovery found in Lower Cretaceous Lange Unit 3 sandstones of the Cromer Knoll Group in well 6406/1-2. Secondary purpose was to test the hydrocarbon potential of the Cretaceous Lange Sequence 1 and 2.

Operations and results

Well 6406/1-3 was spudded with the semi-submersible installation Ocean Vanguard on 16 October 2004 and drilled to TD at 4276 m in the Early Cretaceous Lange Formation. Between 2330 and 2396 m the BHA got stuck several times and it was decided to set the 13 3/8" casing shoe at 2312 m (188 m above the planned depth). Due to these problems it was also decided to switch to an oil based mud system. The well was drilled with seawater/PAC and hi-vis pills down to 1309 m, with Performadrill water based mud from 1309 m to 2507 m, and with XP-07 Oil based mud from 2507 m to TD.

No hydrocarbons were encountered in the well. The Lysing Formation sandstones found at 3419 m was water bearing. Shows evaluation on cuttings was difficult due to mineral fluorescence from CaCO3 mud additives and cut fluorescence from the oil based mud. In conclusion no oil shows were observed in the well. Only MWD logs were acquired in the well. No logs or samples were acquired on wire line. No sidewall cores or conventional cores were taken.

At 22:40 on 14 December two of the anchor winches failed. The rig moved rapidly off location, parting the riser and the diverter ball joint and the well had to be abandoned for rig repair. The well was abandoned probably only 30 m above the main target. The well is classified as a dry appraisal without shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1310.00	4274.00

Cuttings available for sampling?	YES

Lithostratigraphy

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

1590	KAI FM
2106	HORDALAND GP
2106	BRYGGE FM
2485	ROGALAND GP
2485	TARE FM
2551	TANG FM
2600	SHETLAND GP
2600	SPRINGAR FM
2683	NISE FM
3419	CROMER KNOLL GP
3419	LYSING FM
3442	LANGE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD - DIR	160	1309
MWD - DIR	383	460
MWD - DIR	2317	2507
MWD - GR RES DIR	4130	4276
MWD - GR RES DIR SON	460	1309
MWD - GR RES DIR SON	1314	2507
MWD - GR RES SON DENS NEU DIR	2512	4130

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	455.0	36	460.0	0.00	LOT
SURF.COND.	20	1297.0	26	1309.0	1.52	LOT
INTERM.	13 3/8	2312.0	17 1/2	2314.0	1.56	LOT
INTERM.	9 7/8	4119.0	12 1/4	4130.0	2.14	LOT
OPEN HOLE		4276.0	8 1/2	4276.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1020	1.03			SEAWATER	
1043	1.20			SEAWATER	
1309	1.20			SALT MUD	
1314	1.30	32.0		WBM (PERFOMADRI	
1760	1.32	34.0		WBM (PERFOMADRI	
2507	1.53	40.0		WBM (PERFOMADRI	
2510	1.60	42.0		WBM (PERFOMADRI	
2797	1.70	30.0		OBM (XP 07)	
3287	1.71	31.0		OBM (XP 07)	
3521	1.80	46.0		OBM (XP 07)	
4130	1.84	44.0		OBM (XP 07)	
4276	1.92	47.0		OBM (XP 07)	