General information

Wellbore name	3/4-2 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	3/4-2
Seismic location	dno 0601 R08 xline 1310 & inline 1182
Production licence	356
Drilling operator	Det norske oljeselskap ASA
Drill permit	1364-L
Drilling facility	MÆRSK GUARDIAN
Drilling days	45
Entered date	18.07.2012
Completed date	31.08.2012
Release date	10.08.2013
Publication date	10.08.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	45.5
Water depth [m]	51.0
Total depth (MD) [m RKB]	2961.0
Final vertical depth (TVD) [m RKB]	2864.6
Maximum inclination [°]	28.6
Bottom hole temperature [°C]	104
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	FARSUND FM
Geodetic datum	ED50
NS degrees	56° 38' 47.24'' N
EW degrees	4° 5' 38.18'' E
NS UTM [m]	6278707.02
EW UTM [m]	567085.05
UTM zone	31
NPDID wellbore	6622

Wellbore history

General

Well 3/4-2 S was drilled on the Ulvetanna prospect in the Søgne Basin in the southern North Sea. The prospect was a salt-induced closure at Late Cretaceous level. The objective of exploration well 3/4-2 S Ulvetanna was to test the hydrocarbon potential of the Paleocene Ekofisk Formation and Cretaceous Tor and Hod Formations, in addition to investigate the maturity level of the potential Mandal Formation source rock.

Operations and results

Wildcat well 3/4-2 S was spudded with the jack-up installation Mærsk Guardian on 18 July 2012 and drilled to TD at 2916 m (2864 m TVD) in the Late Jurassic Farsund Formation. The well was drilled deviated in order to penetrate the steeply dipping potential reservoir levels in a best possible angle and direction. The well was drilled with spud mud down to 1262 m and with Performadril WBM from 1262 m to 2962 m.

The Shetland Group Ekofisk Formation was penetrated at 2638 m (2559 m TVD), the primary reservoir level Tor Formation was observed at 2700 m (2614 m TVD), while the potential secondary target Hod Formation was found at 2769 m (2677 m TVD). Both targets were found to be water bearing. Top Mandal Formation was encountered at 2911 m (2815 m TVD). It was 9 m thick with very high gamma ray. Geochemical analyses of sidewall cores indicated a very good oil-prone source rock (TOC = 5 - 7 %wt; Hydrogen Index = 540 to 600 mg HC/g TOC). Tmax and vitrinite reflectance analyses show that the Mandal Formation has not yet entered the oil window in the well location. The well also penetrated a section of the underlying Farsund Formation (base not seen). Side wall cores indicated oil-prone quality here as well, but not as good as in the Mandal Formation.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 31 August 2012 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]
180.00	2961.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
97	NORDLAND GP
1348	HORDALAND GP
2525	ROGALAND GP
2525	BALDER FM
2538	SELE FM
2579	LISTA FM
2600	VÅLE FM
2638	SHETLAND GP
2638	EKOFISK FM
2700	TOR FM
2769	HOD FM
2906	CROMER KNOLL GP
2906	ÅSGARD FM
2911	TYNE GP
2911	MANDAL FM
2920	FARSUND FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD LWD - QBAT PWD DGREWR-	2618	2961
MWD LWD - ABG GR EWR PWD BAT	1259	2618
MWD LWD - ALD CTN ADR AFR	2618	2961
MWD LWD - DIR PWD	193	1262
MWD LWD - QBAT PWD DGR EWR DIR	193	1262
RSCT GR	2911	2956

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	178.0	36	178.0	0.00	LOT
SURF.COND.	13 3/8	1251.0	17 1/2	1262.0	1.87	LOT
PILOT HOLE		1262.0	12 1/4	1262.0	0.00	LOT

INTERM.	9 5/8	2613.0	12 1/4	2618.0	0.00	LOT
OPEN HOLE		2961.0	8 1/2	2961.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
218	1.05	14.0		spud mud	
798	1.05	4.0		spud mud	
1240	1.09	4.0		spud mud	
1260	1.19	14.0		WBM	
1262	1.19	14.0		Displacement mud	
1262	1.09	4.0		spud mud	
1287	1.41	25.0		ENVIROMUL	
1686	1.54	23.0		OBM	
1922	1.61	63.0		Performdril WBM	
2618	1.62	28.0		OBM	
2918	1.61	56.0		Performadril WBM	
2961	1.61	63.0		Performadril WBM	