General information

Wellbore name	31/1-1
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	31/1-1
Seismic location	MN9201R05-NH9401R05 inline 3252& MN9201R05-NH9401R05 xline 2874
Production licence	311
Drilling operator	Marathon Petroleum Norge AS
Drill permit	1166-L
Drilling facility	BREDFORD DOLPHIN
Drilling days	45
Entered date	02.01.2008
Completed date	15.02.2008
Release date	15.02.2010
Publication date	15.02.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	341.0
Total depth (MD) [m RKB]	2920.0
Final vertical depth (TVD) [m RKB]	2920.0
Maximum inclination [°]	1.2
Bottom hole temperature [°C]	103
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	60° 49' 8.86'' N
EW degrees	3° 18' 54.13'' E
NS UTM [m]	6742841.84
EW UTM [m]	517136.60
UTM zone	31
NPDID wellbore	5765

Wellbore history

General

Wildcat well 31/1-1 was drilled on the Bjørn prospect ca 10 km due west of the Troll West oil province. The primary target was the fluvial-deltaic Middle Jurassic Brent Group. Secondary targets were the underlying Lower Jurassic Cook and Statfjord Formations. Planned TD was 2977 m, or 100 m into the Early Jurassic Statfjord Formation.

Operations and results

The rig came on cost on the 22nd of December 2007. Prior to spud, 8 days were spent waiting on weather to set anchors. Well 31/1-1 was spudded on 2 January 2008 by the semi-submersible rig Bredford Dolphin. The well was drilled vertically to a TD at 2920m in the Early Jurassic Statfjord Formation. It was drilled with seawater down to 546 m, with KCl/glycol mud from 546 m to 1219 m, and with Performadril mud from 1219 m to TD.

Reservoir quality sands were encountered in the 3 targets zones but all were water bearing. Weak shows were recorded at 2414 to 2449 m in siltstone/sandstone of theTarbert Formation, and at 2514 to 2564 m in sandstone of the Etive Formation.

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

The well was permanently abandoned on 15 February 2008 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]
1220.00	2920.00

Cuttings available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2033.0	[m]	DC	PETROSTR
2036.0	[m]	DC	PETROS
2039.0	[m]	DC	PETROS
2042.0	[m]	DC	PETROS
2045.0	[m]	DC	PETROS
2048.0	[m]	DC	PETROS
2051.0	[m]	DC	PETROS

2054.0	[m]	DC	PETROS
2057.0	[m]	DC	PETROS
2063.0	[m]	DC	PETROS
2066.0	[m]	DC	PETROS
2069.0	[m]	DC	PETROS
2072.0	[m]	DC	PETROS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
366	NORDLAND GP
822	UTSIRA FM
840	HORDALAND GP
1670	ROGALAND GP
1670	BALDER FM
1736	SELE FM
1803	LISTA FM
1993	SHETLAND GP
1993	JORSALFARE FM
2040	CROMER KNOLL GP
2051	VIKING GP
2051	DRAUPNE FM
2055	SOGNEFJORD FM
2068	HEATHER FM
2415	BRENT GP
2415	TARBERT FM
2450	NESS FM
2514	ETIVE FM
2564	RANNOCH FM
2634	DUNLIN GP
2634	DRAKE FM
2691	COOK FM
2767	AMUNDSEN FM
2787	JOHANSEN FM
2882	STATFJORD GP

Logs

Log type	Log top depth [m]	Log bottom depth [m]
GR RES CAL NEU DEN SON	580	2910
MWD - GR RES DIR ECD	433	2920

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	433.0	36 1/4	433.0	0.00	LOT
SURF.COND.	13 3/8	1208.0	17 1/2	1219.0	0.00	LOT
INTERM.	9 5/8	2009.0	12 1/4	2020.0	1.49	LOT
OPEN HOLE		2920.0	8 1/2	2920.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1686	1.25	96.0		water based	
1845	1.25	95.0		water based	
2015	1.25	100.0		water based	
2020	1.30	109.0		water based	
2023	1.25	108.0		water based	
2062	1.25	56.0		water based	
2272	1.25	56.0		water based	
2586	1.25	56.0		water based	