



General information

Wellbore name	31/4-12
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	31/4-12
Seismic location	NH9204:inline 1800 & crossline 1200
Production licence	055
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	1090-L
Drilling facility	DEEPSEA TRYM
Drilling days	37
Entered date	06.02.2005
Completed date	14.03.2005
Release date	14.03.2007
Publication date	28.02.2008
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	210.0
Total depth (MD) [m RKB]	2226.0
Final vertical depth (TVD) [m RKB]	2226.0
Maximum inclination [°]	3.7
Bottom hole temperature [°C]	92
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	FENSFJORD FM
Geodetic datum	ED50
NS degrees	60° 35' 45.4" N
EW degrees	3° 9' 51.96" E
NS UTM [m]	6717952.80
EW UTM [m]	509006.70
UTM zone	31
NPDID wellbore	5051



Wellbore history

General

Wildcat well 31/4-12 is located just east of the Brage Field on the Bjørgvin Arch in the Northern North Sea. The main objective of the well was to prove hydrocarbon volume of economic interest in the Sognefjord formation of the Viking Group within the Idun Prospect in block 31/4. The secondary objective was to investigate the stratigraphic distribution and the reservoir potential of the Fensfjord formation.

Operations and results

Well 31/4-12 was spudded with the semi-submersible installation Deepsea Trym on 6 February 2005 and drilled to TD at 2226 m in late Middle Jurassic sediments of the Fensfjord Formation. The well had 26% downtime due mainly to rough weather and problems with the BOP. Otherwise no significant problems were encountered in the operations. The well was drilled with bentonite mud down to 1184 m and with "Aqua-drill" glycol mud from 1184 m to TD.

Both Draupne Formation sands and Sognefjord Formation sand were penetrated. A total of 20 m of the main reservoir Sognefjord Formation sand was penetrated in the well. Approximately 17 m of this interval was reservoir sand with excellent quality (close to the P10 values simulated in H-risk). The Draupne sands were dated to Kimmeridgian age, while the Sognefjord sand was of Oxfordian age. The lower Fensfjord Formation reservoir sand, penetrated close to TD of the well, was of Late Callovian - Early Oxfordian age. All sands were water bearing, and no shows were observed. The MDT pressure tests showed that the Draupne / Sognefjord reservoir was depleted by approximately 10 bar indicating a common aquifer with a producing reservoir, most likely the Brage Nord Sognefjord reservoir.

The wire line logging programme was reduced as no commercial discovery was made. No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 14 March 2005 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]
1190.00	2226.00

Cuttings available for sampling?	YES
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Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
235	NORDLAND GP
767	UTSIRA FM
895	HORDALAND GP
1719	ROGALAND GP
1719	BALDER FM
1775	SELE FM
1821	LISTA FM
1904	VÅLE FM
1977	SHETLAND GP
1977	JORSALFARE FM
1995	CROMER KNOLL GP
1995	RØDBY FM
2025	ÅSGARD FM
2043	VIKING GP
2043	DRAUPNE FM
2089	SOGNEFJORD FM
2125	HEATHER FM
2172	FENSFJORD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSI	1778	2221
MDT GR	2081	2215
MWD LWD - DIR	235	308
MWD LWD - DIR GR RES	308	2226
PEX HRLA ECS DSI	2057	2228
VSI GR	1378	2150
VSP	1378	2209

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	308.0	36	308.0	0.00	LOT
SURF.COND.	13 3/8	1178.0	17 1/2	1184.0	1.81	LOT
INTERM.	9 5/8	2056.0	12 1/4	2062.0	1.77	LOT



OPEN HOLE		2226.0	8 1/2	2226.0	0.00	LOT
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Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
310	1.50			WATER BASED	
500	1.54	20.0		WATER BASED	
1184	1.39	19.0		WATER BASED	
1670	1.50	20.0		WATER BASED	
2052	1.20	16.0		WATER BASED	
2226	1.16	16.0		WATER BASED	

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
5051 Formation pressure (Formasjonstrykk)	pdf	0.19

