General information

Wellbore name	30/8-3
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	30/8-3
Well name	30/8-3
Seismic location	NH 9304- INLINE 2100 & CROSSLINE 2372
Production licence	190
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	914-L
Drilling facility	WEST VANGUARD
Drilling days	54
Entered date	13.11.1997
Completed date	05.01.1998
Release date	05.01.2000
Publication date	01.08.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS/CONDENSATE
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	NESS FM
Kelly bushing elevation [m]	22.0
Water depth [m]	92.5
Total depth (MD) [m RKB]	3720.0
Final vertical depth (TVD) [m RKB]	3718.0
Maximum inclination [°]	7.4
Bottom hole temperature [°C]	135
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	ED50
NS degrees	60° 26' 40.54'' N
EW degrees	2° 38' 58.02'' E
NS UTM [m]	6701135.31
EW UTM [m]	480709.17
UTM zone	31
NPDID wellbore	3246

Wellbore history

General

Well 30/8-3 was drilled just west of the Oseberg Sør Field in the North Sea. The primary objective of the well was the deltaic sands of the Tarbert Formation in the Brent Group. Draupne Formation wedge sand was a secondary objective. Furthermore, the well was placed in a position that should penetrate across the "A-East 1/A-East 3 fault zone in order to get cores and pressure data to evaluate fault seal capacity.

Operations and results

Wildcat well 30/8-3 was spudded with the semi-submersible installation West Vanguard on 13 November 1997 and drilled to TD at 3720 m in the Early Jurassic Drake Formation. Due to shallow gas warnings a 9 7/8" pilot hole was drilled from 214 to 440 m. No gas was observed, and the hole opened up to 17 1/2". The non-productive rig time was 35% of the total for this well. WOW caused 4 days down time. Down hole motor and bit was lost in the 121/4" section. Fishing took ca 10 hours. Unstable hole conditions with mud losses and gains were experienced in the interval 3263 to 3284 m. The hole was sealed off by squeezing cement into the formation and this cured the problem. There were also problems with the TD logging due to tight/sticky hole, lost MDT tool, and erratic signals from the tool causing ca 2.5 days fishing and repairs. The well was drilled with spud mud down to 1588 m, and with KCl/Polymer mud from 1588 m to 3720 m.

There were no indications of reservoir deposits in the Viking Group section. The Tarbert 2 reservoir was penetrated at 3333.0 m, one meter deeper than prognosed. A total of 64.5 m net reservoir was calculated between 3333 m and 3419 m, giving a net to gross ratio of 0.75, somewhat higher than expected. The Tarbert 2 reservoir was dry, with very weak shows of hydrocarbons. A Petroleum Geochemistry study concluded that there were no indications of migrated hydrocarbons within the Tarbert 2 reservoir section. The reservoir properties were moderately good. The average porosity was 17.3 %, slightly higher than prognosed. The majority of the permeability measurements were between 1 mD and 100 mD. The Ness Formation channels, 18 m net, contained gas/condensates. No fluid contacts could be established.

Well 30/8-3 showed about 20 bar overpressure in Tarbert 2, indicating a main pressure barrier between the A-Main and the A-East structures.

Two cores were cut from 3342 to 3435 m in the Tarbert 2 reservoir section. A third core was cut from 3531 to 3559 m to cover a prognosed fault. From FMS data it was later observed that the fault cut the well in a deeper position, between 3645 m and 3659 m. Two MDT fluid samples were collected from 3601.7 m and 3635.3 m.

The well was permanently abandoned on 5 January 1998 as a gas/condensate discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1600.00	3720.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3342.0	3378.9	[m]
2	3379.0	3435.0	[m]
3	3531.0	3559.2	[m]

Total core sample length [m]	121.0
Cores available for sampling?	YES

Core photos


3342-3347m


3347-3352m


3352-3357m


3357-3362m


3362-3367m


3367-3372m


3372-3377m


3377-3378m


3379-3384m


3384-3389m


3389-3394m


3394-3399m


3399-3404m


3404-3409m


3409-3414m


3414-3419m


3419-3424m


3424-3429m


3429-3434m


3434-3435m


3531-3536m


3536-3541m


3541-3546m


3546-3551m


3551-3556m


3556-3559m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
115	NORDLAND GP
609	UTSIRA FM
885	NO FORMAL NAME
915	HORDALAND GP
915	SKADE FM
974	NO FORMAL NAME
1077	NO FORMAL NAME
1142	NO FORMAL NAME
1538	GRID FM
1558	NO FORMAL NAME
2111	ROGALAND GP
2111	BALDER FM
2180	SELE FM
2239	LISTA FM
2389	VÅLE FM

2431	SHETLAND GP
2431	HARDRÅDE FM
2454	JORSALFARE FM
2649	KYRRE FM
3044	TRYGGVASON FM
3141	SVARTE FM
3189	CROMER KNOLL GP
3189	MIME FM
3192	VIKING GP
3192	DRAUPNE FM
3197	HEATHER FM
3252	BRENT GP
3252	TARBERT FM
3473	NESS FM
3659	UNDIFFERENTIATED
3663	DUNLIN GP
3663	DRAKE FM

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
3246_30_8_3_COMPLETION_REPORT	pdf	6.17

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CST GR	3134	3250
CST GR	3294	3712
FMS NGT ACTS	3249	3712
GR DSI ACTS	3007	3714
HALS TLD HGNS ACTS	3719	3249
MDT GR AMS	3335	3340
MDT GR AMS	3338	3635
MDT GR AMS	3495	3510
MDT GR AMS	3545	3660
VELOCITY	3000	3750

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	212.0	36	214.0	0.00	LOT
PILOT HOLE		440.0	9 7/8	440.0	0.00	LOT
SURF.COND.	13 3/8	1581.0	17 1/2	1588.0	0.00	LOT
INTERM.	9 5/8	3249.0	12 1/4	3260.0	0.00	LOT
OPEN HOLE		3720.0	8 1/2	3720.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
139	1.05			water based	
214	1.05			water based	
350	1.05			water based	
440	1.05			water based	
740	1.05			water based	
1588	1.20			water based	
2123	1.45	34.0		water based	
2240	1.45	35.0		water based	
2500	1.43	32.0		water based	
3045	1.45	37.0		water based	
3179	1.45	36.0		water based	
3260	1.46	34.0		water based	
3284	1.62	36.0		water based	
3308	1.62	39.0		water based	
3342	1.62	37.0		water based	
3531	1.32	23.0		water based	
3720	1.37	23.0		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]
3246_Formation_pressure_(Formasjonstrykk)	pdf	0.24