

**General information**

Wellbore name	6403/10-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6403/10-1
Seismic location	xline:NH003-4698 Inline:NH003-3446
Production licence	253
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	1041-L
Drilling facility	SCARABEO 5
Drilling days	68
Entered date	24.10.2002
Completed date	30.12.2002
Release date	30.12.2004
Publication date	11.02.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	1717.0
Total depth (MD) [m RKB]	3400.0
Final vertical depth (TVD) [m RKB]	3397.0
Maximum inclination [°]	6.3
Bottom hole temperature [°C]	80
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	KVITNOS FM
Geodetic datum	ED50
NS degrees	64° 3' 39.22" N
EW degrees	3° 0' 10.88" E
NS UTM [m]	7103975.31
EW UTM [m]	500147.51
UTM zone	31
NPDID wellbore	4602



Wellbore history

General

The exploration well 6403/10-1 was drilled to test the hydrocarbon potential in one of the segments of the PL 253 Solsikke dome structure. The Solsikke structure is situated in the north-western part of the outer Møre Basin, close to the Møre Marginal High, in the Norwegian Sea. The structure is defined as a large Tertiary dome comprising a thickness anomaly of Upper Cretaceous sediments. The primary target was the Nise and Intra Springar sandstones and the secondary target was the Intra Kvitnos sandstones. The well was drilled in a relatively low structural position on the southern part of the dome. The location was chosen to test the hydrocarbon potential above a clear flat event within the Nise Formation and at the same time penetrate the Springar in a position of anticipated good Springar reservoir quality near observed flat events within the Springar. The well should also test the intra Kvitnos Formation, but avoid faults within the formations and shallow gas observations. In addition, the spud location had to take into account the rough sea bottom.

Operations and results

Exploration well 6403/10-1 was spudded with the semi-submersible installation Scarabeo 5 on 24 October 2002 and drilled to TD at 3398 m in the Kvitnos Formation. No serious problems were encountered during drilling. The well was drilled with spud mud down to 2217 m and with a water-based glycol system (GLYDRIL) from 2217 m to TD.

Mudstone and siltstone were encountered in the Cretaceous reservoir section, with high content of siltstone in Nise. Sidewall cores of the siltstone in the Nise Formation showed high porosity but low permeability with no reservoir quality. The well did not prove any hydrocarbons. Organic geochemical analyses indicated immature formations throughout the well based on Rock-Eval Tmax and vitrinite reflectance readings. No significant amounts of C15+ hydrocarbons were detected in these analyses, confirming the on-rig shows analyses. There were however recorded traces of ?supermature? hydrocarbon gasses and gasoline range hydrocarbons (C1 to C9) in the interval 2500 m to 2800 m, indicating a migration pathway at this level. The well was not conventionally cored since the coring criteria were not met. Forty-eight sidewall cores were recovered. No pressure points were recorded on wire line and no fluid samples taken.

The well was permanently abandoned as dry on 30 December 2002.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
2200.00	3400.00

Cuttings available for sampling?	YES
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**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
2217.0	[m]	DC	RRI
2226.0	[m]	DC	RRI
2235.0	[m]	DC	RRI
2244.0	[m]	DC	RRI
2253.0	[m]	DC	RRI
2262.0	[m]	DC	RRI
2271.0	[m]	DC	RRI
2280.0	[m]	DC	RRI
2289.0	[m]	DC	RRI
2298.0	[m]	DC	RRI
2307.0	[m]	DC	RRI
2316.0	[m]	DC	RRI
2325.0	[m]	DC	RRI
2334.0	[m]	DC	RRI
2340.0	[m]	DC	RRI
2349.0	[m]	DC	RRI
2361.0	[m]	DC	RRI
2370.0	[m]	DC	RRI
2379.0	[m]	DC	RRI
2382.0	[m]	DC	RRI
2391.0	[m]	DC	RRI
2400.0	[m]	DC	RRI
2409.0	[m]	DC	RRI
2418.0	[m]	DC	RRI
2427.0	[m]	DC	RRI
2436.0	[m]	DC	RRI
2445.0	[m]	DC	RRI
2454.0	[m]	DC	RRI
2463.0	[m]	DC	RRI
2472.0	[m]	DC	RRI
2481.0	[m]	DC	RRI
2490.0	[m]	DC	RRI
2499.0	[m]	DC	RRI
2508.0	[m]	DC	RRI
2517.0	[m]	DC	RRI
2526.0	[m]	DC	RRI
2535.0	[m]	DC	RRI
2544.0	[m]	DC	RRI



2553.0	[m]	DC	RRI
2562.0	[m]	DC	RRI
2571.0	[m]	DC	RRI
2580.0	[m]	DC	RRI
2592.0	[m]	DC	RRI
2601.0	[m]	DC	RRI
2610.0	[m]	DC	RRI
2619.0	[m]	DC	RRI
2628.0	[m]	DC	RRI
2637.0	[m]	DC	RRI
2646.0	[m]	DC	RRI
2655.0	[m]	DC	RRI
2664.0	[m]	DC	RRI
2673.0	[m]	DC	RRI
2682.0	[m]	DC	RRI
2691.0	[m]	DC	RRI
2700.0	[m]	DC	RRI
2709.0	[m]	DC	RRI
2718.0	[m]	DC	RRI
2727.0	[m]	DC	RRI
2736.0	[m]	DC	RRI
2745.0	[m]	DC	RRI
2754.0	[m]	DC	RRI
2763.0	[m]	DC	RRI
2772.0	[m]	DC	RRI
2781.0	[m]	DC	RRI
2790.0	[m]	DC	RRI
2799.0	[m]	DC	RRI
2808.0	[m]	DC	RRI
2817.0	[m]	DC	RRI
2826.0	[m]	DC	RRI
2835.0	[m]	DC	RRI
2843.0	[m]	DC	RRI
2858.0	[m]	SWC	RRI
2867.0	[m]	SWC	RRI
2871.0	[m]	SWC	RRI
2878.0	[m]	SWC	RRI
2882.0	[m]	SWC	RRI
2884.0	[m]	SWC	RRI
2894.0	[m]	SWC	RRI



2907.0	[m]	DC	RRI
2912.0	[m]	SWC	RRI
2925.0	[m]	DC	RRI
2934.0	[m]	DC	RRI
2936.0	[m]	SWC	RRI
2943.0	[m]	DC	RRI
2952.0	[m]	DC	RRI
2959.0	[m]	SWC	RRI
2961.0	[m]	DC	RRI
2970.0	[m]	DC	RRI
2975.0	[m]	SWC	RRI
2979.0	[m]	DC	RRI
2988.0	[m]	DC	RRI
2997.0	[m]	DC	RRI
3006.0	[m]	DC	RRI
3008.0	[m]	SWC	RRI
3015.0	[m]	DC	RRI
3024.0	[m]	DC	RRI
3028.0	[m]	SWC	RRI
3033.0	[m]	DC	RRI
3042.0	[m]	DC	RRI
3051.0	[m]	DC	RRI
3060.0	[m]	DC	RRI
3063.0	[m]	SWC	RRI
3069.0	[m]	DC	RRI
3078.0	[m]	DC	RRI
3087.0	[m]	DC	RRI
3096.0	[m]	DC	RRI
3105.0	[m]	DC	RRI
3114.0	[m]	DC	RRI
3123.0	[m]	DC	RRI
3132.0	[m]	DC	RRI
3141.0	[m]	DC	RRI
3150.0	[m]	DC	RRI
3152.0	[m]	SWC	RRI
3159.0	[m]	DC	RRI
3168.0	[m]	DC	RRI
3177.0	[m]	DC	RRI
3186.0	[m]	DC	RRI
3195.0	[m]	DC	RRI



3204.0	[m]	DC	RRI
3213.0	[m]	DC	RRI
3222.0	[m]	DC	RRI
3231.0	[m]	DC	RRI
3240.0	[m]	DC	RRI
3249.0	[m]	DC	RRI
3258.0	[m]	DC	RRI
3267.0	[m]	DC	RRI
3276.0	[m]	DC	RRI
3285.0	[m]	DC	RRI
3297.0	[m]	DC	RRI
3306.0	[m]	DC	RRI
3315.0	[m]	DC	RRI
3324.0	[m]	DC	RRI
3333.0	[m]	DC	RRI
3342.0	[m]	DC	RRI
3351.0	[m]	DC	RRI
3360.0	[m]	DC/SWC	RRI
3369.0	[m]	DC	RRI
3378.0	[m]	DC	RRI
3380.0	[m]	SWC	RRI
3387.0	[m]	DC	RRI
3393.0	[m]	SWC	RRI
3396.0	[m]	DC	RRI
3400.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
1742	NORDLAND GP
1742	NAUST FM
1904	KAI FM
2015	HORDALAND GP
2015	BRYGGE FM
2250	ROGALAND GP
2250	TARE FM
2334	TANG FM
2496	SHETLAND GP
2496	SPRINGAR FM



2825	NISE FM
3098	KVITNOS FM

Composite logs

Document name	Document format	Document size [MB]
4602	pdf	0.24

Geochemical information

Document name	Document format	Document size [MB]
4602_1	pdf	1.66

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

Document name	Document format	Document size [MB]
4602_6403_10_1_COMPLETION_LOG	.pdf	2.11
4602_6403_10_1_COMPLETION_REPORT	.PDF	5.53

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSI GR	1742	2625
HRLA PEX DSI GR	2848	3393
MSCT GR	2848	3393
MWD LWD - GR GEO VISDN ISON PWD	2843	3400
MWD LWD - GR GEOVIS VISDN PWD DI	2522	2842
MWD LWD - GR RES ARC ISON DIR	2207	2503
MWD LWD - GR RES CDR DIR	1817	2214
MWD LWD - PP	1742	1852
MWD LWD - PP ARC	2522	2838
VSI GR	1680	2640





VSI GR	2521	3390
ZO VSP	421	3390

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	1833.0	36	1852.0	0.00	LOT
INTERM.	20	2207.0	26	2214.0	1.14	LOT
INTERM.	13 3/8	2510.0	17 1/2	2518.0	1.24	LOT
INTERM.	9 5/8	2830.0	12 1/4	2843.0	1.27	LOT
OPEN HOLE		3400.0	8 1/2	3400.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1775	1.23	20.0		WATER BASED	
1852	1.05			WATER BASED	
2035	1.22	20.0		WATER BASED	
2214	1.05			WATER BASED	
2518	1.11	11.0		WATER BASED	
2522	1.12	11.0		WATER BASED	
2670	1.22	21.0		WATER BASED	
2842	1.18	21.0		WATER BASED	
2922	1.20	21.0		WATER BASED	
3305	1.21	21.0		WATER BASED	
3400	1.21	21.0		WATER BASED	