

**General information**

Wellbore name	3/7-5
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	3/7-5
Seismic location	SH8901-104 KRYSSN. 87-233
Production licence	147
Drilling operator	A/S Norske Shell
Drill permit	708-L
Drilling facility	DYVI STENA
Drilling days	64
Entered date	06.12.1991
Completed date	07.02.1992
Release date	07.02.1994
Publication date	09.03.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	67.0
Total depth (MD) [m RKB]	3666.0
Maximum inclination [°]	20.9
Bottom hole temperature [°C]	126
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	56° 28' 47" N
EW degrees	4° 18' 17.6" E
NS UTM [m]	6260375.71
EW UTM [m]	580373.35
UTM zone	31
NPDID wellbore	1759



Wellbore history

General

Well 3/7-5 was drilled on the Lemen structure, a fault bounded, salt induced trap located in the centre of the Søgne Basin in the North Sea. The Primary objective of the well was to test sandstones of the Sandnes and Bryne Formations. Secondary objectives were to evaluate the prospectivity of other possible reservoir levels (Late Cretaceous Chalk and Paleocene sandstones) within structural closure and thereby evaluate the charge potential of the local Søgne Basin hydrocarbon kitchen.

Operations and results

Wildcat well 3/7-5 was spudded with the semi-submersible installation Dyvi Stena on 6 December 1991 and drilled to TD at 3666 m (3637.8 m TVD) in the Late Permian Zechstein Group. The well was drilled efficiently, but some problems with deviation and logging was encountered. The hole was practically vertical down to TD in the 12 1/4" section at 3085. The 8 1/2" section was however drilled with close to 20 deg deviation all through to TD, leading to ca 27 m difference between measured and true vertical depth at final TD. Due to hole problems no wire line logs were run between 2198 m and 3085 m in the 12 1/4" section. The 8 1/2" section was eventually logged to 3575 m, 90 m above final TD, but only after several logging attempts and a check trip. The well was drilled with spud mud and viscous pills down to 610 m, and with seawater/gypsum/polymer mud from 610 m to TD.

Above the objective Sandnes / Bryne formations there were no evidence of producible hydrocarbons, although it should be stated that this could not be completely confirmed by logs because a significant section could not be logged with wire line logs. Top Sandnes Formation was encountered at 3379 m and top Bryne Formation at 3436 m. FMT pressure plot indicated a water gradient throughout the Sandnes / Bryne reservoir. Petrophysical evaluation gave no indications of hydrocarbons in the cleaner parts of the reservoir but, there was some indication of (residual) oil of low saturation in the shalier sections.

No shows were reported in the samples above 3244 m in the Haugesund Formation, where a pale yellow solvent fluorescence was seen in silty claystones and sandstone stringers. The core cut in the Sandnes Formation sandstone was reported to contain some dead oil with a weak crush cut fluorescence. No direct fluorescence was seen in the core. Brownish-yellow cut fluorescence was reported on sidewall cores in Middle Jurassic siltstones and sandstones.

A core was taken from 3383 m to 3393 m in the top part of the Sandnes Formation. A segregated formation fluid sample was taken at a depth of 3390.5 m.

The well was permanently abandoned on 7 February 1992 as a dry well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
620.00	3666.00

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

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3383.0	3392.1	[m]

Total core sample length [m]	9.1
Cores available for sampling?	YES

Core photos

3383-3388m



3388-3392m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3300.0	[m]	DC	APT
3312.0	[m]	DC	APT
3321.0	[m]	DC	APT
3330.0	[m]	DC	APT
3336.0	[m]	DC	APT
3342.0	[m]	DC	APT
3348.0	[m]	DC	APT
3354.0	[m]	DC	APT
3360.0	[m]	DC	APT
3366.0	[m]	DC	APT
3372.0	[m]	DC	APT
3378.0	[m]	DC	APT
3382.2	[m]	C	APT
3383.8	[m]	C	APT
3384.0	[m]	DC	APT
3384.8	[m]	C	APT



3385.9	[m]	C	APT
3386.3	[m]	C	APT
3386.7	[m]	C	APT
3387.5	[m]	C	APT
3388.4	[m]	C	APT
3390.0	[m]	DC	APT
3392.2	[m]	C	APT
3393.0	[m]	DC	APT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
91	NORDLAND GP
1258	HORDALAND GP
2654	ROGALAND GP
2654	BALDER FM
2668	SELE FM
2679	LISTA FM
2711	SHETLAND GP
2711	EKOFISK FM
2800	TOR FM
2912	HOD FM
3044	CROMER KNOLL GP
3044	RØDBY FM
3048	SOLA FM
3050	TUXEN FM
3058	ÅSGARD FM
3085	TYNE GP
3085	HAUGESUND FM
3379	VESTLAND GP
3379	SANDNES FM
3436	BRYNE FM
3609	ZECHSTEIN GP

Geochemical information

Document name	Document format	Document size [MB]
1759_1	pdf	0.64





1759_2	pdf	1.66
1759_3	pdf	5.59

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
1759_01_WDSS_General_Information	pdf	0.45
1759_02_WDSS_completion_log	pdf	0.21

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

Document name	Document format	Document size [MB]
1759_3_7_5_COMPLETION_REPORT_AND_LOG	pdf	47.07

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AC	1821	3071
AC SIG	1821	3071
CBL	523	1716
DIFL AC SP GR CAL	550	1685
DIFL AC SP GR CAL	3075	3575
DIFL BHC AC GR	1625	2195
DIP GR	3074	3550
DLL MLL CAL GR	3045	3530
FMT GR	3382	3445
SP	3074	3542
SWS GR	634	1664
SWS GR	1737	2012
SWS GR	3086	3442
SWS GR	3092	3613
VSP	1000	3555
ZDL CN GR CAL	550	1685
ZDL CN GR CAL	3074	3543



**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	153.0	36	155.0	0.00	LOT
INTERM.	20	601.0	26	615.0	1.49	LOT
INTERM.	13 3/8	1716.0	17 1/2	1730.0	1.84	LOT
INTERM.	9 5/8	3075.0	12 1/4	3090.0	1.96	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
610	1.03			WATER BASED	
682	1.25	68.0		WATER BASED	
914	1.30	54.0		WATER BASED	
1186	1.30	51.0		WATER BASED	
1546	1.30	59.0		WATER BASED	
1725	1.30	58.0		WATER BASED	
2737	1.43	56.0		WATER BASED	
2781	1.48	61.0		WATER BASED	
3040	1.51	62.0		WATER BASED	
3085	1.56	70.0		WATER BASED	
3085	1.56	67.0		WATER BASED	
3199	1.50	65.0		WATER BASED	
3271	1.50	58.0		WATER BASED	
3337	1.55	58.0		WATER BASED	
3337	1.50	63.0		WATER BASED	
3508	1.57	61.0		WATER BASED	
3666	1.60	52.0		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]
1759 Formation pressure (Formasjonstrykk)	pdf	0.22

