

**General information**

Wellbore name	7/8-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	7/8-1
Seismic location	LINE 22830 SP. 1114
Production licence	016
Drilling operator	Phillips Petroleum Company Norway
Drill permit	19-L
Drilling facility	OCEAN VIKING
Drilling days	159
Entered date	31.08.1968
Completed date	05.02.1969
Release date	05.02.1971
Publication date	17.10.2007
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	27.0
Water depth [m]	82.0
Total depth (MD) [m RKB]	3334.0
Maximum inclination [°]	7
Bottom hole temperature [°C]	125
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	GASSUM FM
Geodetic datum	ED50
NS degrees	57° 19' 20.6" N
EW degrees	2° 28' 28.8" E
NS UTM [m]	6353538.76
EW UTM [m]	468362.20
UTM zone	31
NPDID wellbore	158

**Wellbore history**

Well 7/8-1 was drilled on an anticlinal structure in the westernmost part of the Norwegian-Danish Basin and marginal to the northern slope of the Central Through. The anticline was interpreted as a salt-induced structure with closure at top Paleocene and top Cretaceous, and these horizons were defined as the main objectives of the well. The well should be drilled into Permian salt with prognosed top at 3261 m (10700 ft).

Operations and results

Wildcat well 7/8-1 was spudded with the semi-submersible installation Ocean Viking on 31 August 1968 and drilled to TD at 3334 m in Triassic sediments of the Gassum Formation. The well did not reach the planned TD in Permian salt.

Drilling went without significant problems down to 1981 m. From this depth on, several drilling problems arose. After the casing had parted at two places the well had to be sidetracked from 1831 m. This hole was then drilled to 3334 m, which is recorded as TD for the well. At this depth the well kicked and the mud density was increased from 12.3 ppg to 12.8 ppg. While circulating, the hole gave up mud and sloughing finally caused the pipe to stick. After having backed off the drill pipe and displaced the hole with 14.0 ppg mud, a high pressure was observed on the drill pipe and the mud system density was increased to 14.3 ppg. Several mud conditioning operations were necessary until the well seemed dead. After recovering 2650 m of drill pipe out of the hole the well was plugged from 2657 m to 2469 m and displaced with 14.7 ppg mud. A second sidetracked hole was then drilled from 2538 m to 3316 m where the final logs were run. The operations were also delayed significantly by severe weather conditions in December and January. The well was drilled with seawater and high viscosity pills down to 1166 m, and with a saturated salt water mud from 1166 m to TD. Below 1920 m the mud contained from 2 - 6 % oil.

Both objective formations were encountered. However, both were thinner than expected and no hydrocarbon bearing sections were encountered. Only very few, spotted shows were reported from the well: Two shows in Late Cretaceous chalk (at 2770 m and 2828.5 m) and in the Triassic Gassum Formation sand at 3283 - 3316 m. The sand had good porosity and flowed water at high rates when tested.

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

The well was permanently abandoned on 5 February 1969 as a dry well.

Testing

Four drill stem tests were made in well 7/8-1, in the sidetracked hole at. The formation tests produced no oil or gas. The deepest test, DST 1 at 3230 - 3316 m in the Bryne and Gassum Formations flowed water at a rate of 5000 BPD (795 Sm³/day). DST 2 was conducted in Danian chalk at 2679 - 2702 m and gave no formation fluid to surface, but 3.6 m³ of water was reversed out. DST 3 (2529 - 2543 m) and DST 4 (2489 - 2507 m) in Late Paleocene gave only small quantities of reversed-out mud-cut water.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1661.16	3328.42

Cuttings available for sampling?	NO
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**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
3194.0	[m]	DC	RRI
3206.0	[m]	DC	RRI
3212.0	[m]	DC	SAGA
3213.0	[m]	DC	RRI
3219.0	[m]	DC	RRI
3231.0	[m]	DC	SAGA
3231.0	[m]	DC	RRI
3237.0	[m]	DC	RRI
3237.0	[m]	DC	STATO
3249.0	[m]	DC	RRI
3249.0	[m]	DC	SAGA
3255.0	[m]	DC	RRI
3261.0	[m]	DC	SAGA
3261.0	[m]	DC	RRI
3274.0	[m]	DC	RRI
3274.0	[m]	DC	SAGA
3280.0	[m]	DC	RRI
3286.0	[m]	DC	RRI
3298.0	[m]	DC	SAGA
3310.0	[m]	DC	SAGA
3322.0	[m]	DC	SAGA
3328.0	[m]	DC	SAGA

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
109	NORDLAND GP
1275	HORDALAND GP
2435	ROGALAND GP
2435	BALDER FM
2464	SELE FM
2529	LISTA FM
2602	MAUREEN FM
2669	SHETLAND GP
2669	EKOFISK FM
2730	TOR FM



2955	HOD FM
3095	HIDRA FM
3135	CROMER KNOLL GP
3201	TYNE GP
3201	MANDAL FM
3219	VESTLAND GP
3219	SANDNES FM
3230	BRYNE FM
3275	NO GROUP DEFINED
3275	GASSUM FM

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

Document name	Document format	Document size [MB]
158_01_WDSS_General_Information	pdf	0.20

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

Document name	Document format	Document size [MB]
158_01_Completion_Report	pdf	4.93
158_02_Completion_Log	pdf	1.47

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
158_01_NPD_Paper_No.18_Lithology_Well_7_8_1	pdf	13.52
158_02_NPD_Paper_No.18_Interpreted_Lithology_log_Well_7_8_1	pdf	50.73

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3231	3317	0.0
2.0	2680	2702	25.4





3.0	2529	2544	25.4
4.0	2489	2508	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0	36.600	24.800		
3.0	37.200	24.100		
4.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					
2.0	23				
3.0	19				
4.0					

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CAL	1061	1822
CBL	2744	3231
CCL	250	1915
CDM	2125	2850
CDS	1220	1524
FDC	2125	2850
GR	107	2125
GRN	2713	3019
IES	2125	3316
LL-7	2125	2850
MLL-C	2125	2849
SGR-C	2125	3313
SNP	2125	2850
VELOCITY	1834	3316

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	125.0	36	125.0	0.00	LOT
SURF.COND.	20	483.0	26	516.0	0.00	LOT
INTERM.	13 3/8	1946.0	17 1/2	1982.0	0.00	LOT
INTERM.	9 5/8	2125.0	12 1/4	2145.0	0.00	LOT
LINER	7	3232.0	8 1/2	3232.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
125	1.02			seawater	
516	1.05			seawater	
1574	1.43	41.0		waterbased	
2688	1.68	57.0		waterbased	
3334	1.76	52.0		waterbased	