

**General information**

Wellbore name	3/5-2
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	3/5-2
Seismic location	Sp145 line 77-10
Production licence	022
Drilling operator	Norwegian Gulf Exploration Company AS
Drill permit	199-L
Drilling facility	ODIN DRILL
Drilling days	53
Entered date	29.06.1978
Completed date	20.08.1978
Release date	20.08.1980
Publication date	24.09.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	67.0
Total depth (MD) [m RKB]	3825.0
Final vertical depth (TVD) [m RKB]	3824.0
Bottom hole temperature [°C]	110
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SMITH BANK FM
Geodetic datum	ED50
NS degrees	56° 32' 34.46" N
EW degrees	4° 23' 11.1" E
NS UTM [m]	6267506.24
EW UTM [m]	585252.66
UTM zone	31
NPDID wellbore	291



Wellbore history

General

Exploration well 3/5-2 is located in the eastern part of the Søgne Basin. The main objective was to test the hydrocarbon potential of northeasterly dipping Jurassic sands, which appeared to be truncated up dip by erosion at a Late Kimmerian unconformity. The exact age of the beds above and below the unconformity could not be predicted with certainty with the seismic evidence available. There was no capable closure at any post unconformity horizon higher than that mapped as Late Kimmerian unconformity just above a possible Jurassic Sand.

Well 3/5-2 is Reference well for the Middle to Late Jurassic Haugesund Formation

Operations and results

Wildcat well 3/5-2 was spudded with the semi-submersible installation Odin Drill on 29 June 1978 and drilled to TD at 3826 m in the Triassic Skagerrak Formation. The well was drilled without significant problems. After drilling 164 m of 36" hole the pipe was stuck, but after spotting two 60 Bbl LCM pills followed by an 85 Bbl pill of Pipe Lax the string pulled free without significant lost time. Drilling went on through the 26" section to 462 m using viscous gel mud. From 426 m to TD the well was drilled using a Drispac/Spersene mud system, adding Resinex from ca 3080 m.

Reservoir potential was encountered in the Late Cretaceous Chalk (Maastrichtian 2708.5 m to 2726.5 m) and in Late Jurassic (3174 m to 3185 m) and Triassic (3575 m to 3823.5 m) sandstones. Geochemical analyses proved oil prone shale, marginally mature ($\%Ro = 0.6 \pm 0.7$), in the Late Jurassic Kimmeridge Clay with TOC measured up to 2.1 %. Also the Middle Jurassic Haldager Formation contained shales with potential for gas and possibly some oil. Vitrinite reflectance in one sample from this Formation was $\%Ro = 0.85$. Small quantities of C1 to C4 were recorded in the Late Jurassic Kimmeridge Clay Formation (3143 m to 3163 m) and in even smaller amounts in shales at the top of the Middle Jurassic (3331 m to 3359 m). A slight, streaming crush cut fluorescence was obtained from the shales of the Kimmeridge Clay Formation. A slight to good light yellow fluorescence was also recorded in samples of the Middle Jurassic at 3359 m and at 3368 m. There were no other indications of hydrocarbons in the mud or cuttings. Subsequent log analysis confirmed that hydrocarbons were not present in any significant quantities. No conventional cores were taken, but 72 sidewall cores were recovered from the Jurassic and Triassic. No fluid samples were taken. The well was permanently abandoned as a dry hole on 20 August 1978.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
167.64	3825.24

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

Sample depth	Depth unit	Sample type	Laboratory
1300.0	[m]	DC	STAT
1330.0	[m]	DC	STAT
1360.0	[m]	DC	STAT
1390.0	[m]	DC	STAT
1420.0	[m]	DC	STAT
1450.0	[m]	DC	STAT
1480.0	[m]	DC	STAT
1510.0	[m]	DC	STAT
1540.0	[m]	DC	STAT
1560.0	[m]	DC	STAT
1590.0	[m]	DC	STAT
1620.0	[m]	DC	STAT
1650.0	[m]	DC	STAT
1710.0	[m]	DC	STAT
1740.0	[m]	DC	STAT
1770.0	[m]	DC	STAT
1800.0	[m]	DC	STAT
1830.0	[m]	DC	STAT
1860.0	[m]	DC	STAT
1920.0	[m]	DC	STAT
1950.0	[m]	DC	STAT
1980.0	[m]	DC	STAT
2010.0	[m]	DC	STAT
2040.0	[m]	DC	STAT
2070.0	[m]	DC	STAT
2100.0	[m]	DC	STAT
2130.0	[m]	DC	STAT
2160.0	[m]	DC	STAT
2190.0	[m]	DC	STAT
2220.0	[m]	DC	STAT
2250.0	[m]	DC	STAT
2280.0	[m]	DC	STAT
2310.0	[m]	DC	STAT
2340.0	[m]	DC	STAT
2370.0	[m]	DC	STAT
2400.0	[m]	DC	STAT
2450.0	[m]	DC	STAT
2460.0	[m]	DC	STAT



2490.0	[m]	DC	STAT
2520.0	[m]	DC	STAT
2550.0	[m]	DC	STAT
2580.0	[m]	DC	STAT
2610.0	[m]	DC	STAT
2640.0	[m]	DC	STAT
2670.0	[m]	DC	STAT
2700.0	[m]	DC	STAT
2730.0	[m]	DC	STAT
3163.7	[m]	SWC	APT
3169.8	[m]	SWC	APT
3175.9	[m]	SWC	APT
3177.1	[m]	SWC	APT
3177.7	[m]	SWC	APT
3227.9	[m]	SWC	APT
3254.5	[m]	SWC	APT
3270.3	[m]	SWC	APT
3274.0	[m]	SWC	APT
3300.8	[m]	SWC	APT
3317.3	[m]	SWC	APT
3325.2	[m]	SWC	APT
3343.5	[m]	SWC	APT
3344.4	[m]	SWC	APT
3345.6	[m]	SWC	APT
3353.9	[m]	SWC	APT
3355.9	[m]	SWC	APT
3366.7	[m]	SWC	APT
3374.9	[m]	SWC	APT
3377.3	[m]	SWC	APT
3379.8	[m]	SWC	APT
3381.5	[m]	SWC	APT
3388.9	[m]	SWC	APT
3404.4	[m]	SWC	APT
3414.8	[m]	SWC	APT
3414.8	[m]	SWC	APT
3417.3	[m]	SWC	APT
3419.7	[m]	SWC	APT
3422.0	[m]	SWC	APT
3432.8	[m]	SWC	APT
3441.3	[m]	SWC	APT



3451.9 [m]	SWC	APT
3459.6 [m]	SWC	APT
3471.5 [m]	SWC	APT
3530.9 [m]	SWC	APT
3533.1 [m]	SWC	APT
3539.5 [m]	SWC	APT
3556.8 [m]	SWC	APT
3558.9 [m]	SWC	APT
3562.9 [m]	SWC	APT
3571.8 [m]	SWC	APT
3573.6 [m]	SWC	APT
3575.1 [m]	SWC	APT
10450.0 [ft]	DC	APT
10465.0 [ft]	DC	APT
10485.0 [ft]	DC	APT
10500.0 [ft]	DC	APT
10520.0 [ft]	DC	APT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
92	NORDLAND GP
1140	HORDALAND GP
2560	ROGALAND GP
2560	BALDER FM
2579	SELE FM
2602	LISTA FM
2627	SHETLAND GP
2627	EKOFISK FM
2782	HOD FM
3013	HIDRA FM
3062	CROMER KNOLL GP
3062	RØDBY FM
3070	TUXEN FM
3084	ÅSGARD FM
3144	TYNE GP
3144	MANDAL FM
3170	FARSUND FM
3172	ELDFISK FM



3183	HAUGESUND FM
3345	VESTLAND GP
3345	BRYNE FM
3575	NO GROUP DEFINED
3575	GASSUM FM
3604	NO GROUP DEFINED
3604	SMITH BANK FM

Composite logs

Document name	Document format	Document size [MB]
291	pdf	0.51

Geochemical information

Document name	Document format	Document size [MB]
291_1	pdf	0.51
291_2 comparison of chemical reports from 3 5 1 and 3 5 2	pdf	0.45

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

Document name	Document format	Document size [MB]
291_01 WDSS General Information	pdf	0.21
291_03 WDSS lithlog	pdf	0.07

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

Document name	Document format	Document size [MB]
291_1 Completion report operation	pdf	5.81
291_2 Completion report	pdf	29.31
291_3 Proposed drilling program	pdf	54.46
291_4 Stratigraphic tops	pdf	0.57
291_5 Petrographic analysis of four sidewall cores	pdf	0.36





291 6 Biostratigraphy of the interval 580-12550	pdf	9.96
291 7 A brief hand formation evaluation	pdf	1.08
291 8 Formation pressure evaluation report	pdf	1.80

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FDC	1668	3165
FDC CNL	3153	3822
HDT DIP	3153	3823
ISF SONIC	162	475
ISF SONIC	463	1668
ISF SONIC	1668	3164
ISF SONIC	3085	3823
SWC	0	0
TEMP	119	3131
VELOCITY	492	3740

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	162.0	36	163.0	0.00	LOT
SURF.COND.	20	463.0	26	466.0	0.00	LOT
INTERM.	13 3/8	1667.0	17 1/2	1670.0	0.00	LOT
INTERM.	9 5/8	3152.0	12 1/4	3155.0	0.00	LOT
OPEN HOLE		3825.0	8 1/2	3825.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
133	1.05	60.0		seawater	
476	1.08	59.0		seawater	
1679	1.24	54.0		seawater	
2273	1.29	61.0		seawater	
2837	1.31	52.0		seawater	
3108	1.37	56.0		seawater	





3622	1.50	63.0		seawater	
3825	1.54	62.0		seawater	