

**General information**

Wellbore name	6302/6-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Discovery	6302/6-1 (Tulipan)
Well name	6302/6-1
Seismic location	ST0105-inline 3775 & crossline 4826
Production licence	251
Drilling operator	Statoil ASA (old)
Drill permit	1093-L
Drilling facility	EIRIK RAUDE
Drilling days	103
Entered date	24.06.2005
Completed date	04.10.2005
Release date	04.10.2007
Publication date	21.12.2007
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	DANIAN
1st level with HC, formation	NO FORMAL NAME
Kelly bushing elevation [m]	25.0
Water depth [m]	1261.0
Total depth (MD) [m RKB]	4234.0
Final vertical depth (TVD) [m RKB]	4234.0
Maximum inclination [°]	2.7
Bottom hole temperature [°C]	112
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	SPRINGAR FM
Geodetic datum	ED50
NS degrees	63° 31' 38.43" N
EW degrees	2° 45' 51.56" E
NS UTM [m]	7044540.65
EW UTM [m]	488277.59



UTM zone	31
NPDID wellbore	5086

Wellbore history

General

Block 6302/6 is situated in deep water in the western part of the Møre Basin in the Norwegian Sea with well 6302/6-1 located ca 100 km west of the Ormen Lange Field. At the well location the Quaternary North Sea Fan (Naust Formation) is very thick. No other wells have penetrated such thicknesses of North Sea Fan sediments. The primary objective of the well was to prove hydrocarbons in sandstone of Danian age (Paleocene) in the Rogaland Group. Total depth of the well was estimated to be 4375 m, in the Late Cretaceous Springar Formation.

Operations and results

Well 6302/6-U-1 was spudded semi-submersible installation Eirik Raude on 1 June 2005 and was drilled without significant problems to a total depth of 2122 m. At this depth a water flow was observed in the lower part of the North Sea Fan. After pumping kill mud in several steps, the well was proven stable. The 20" casing was set and cemented with shoe at 2116 m. Water flow was still observed. The well was then abandoned due to the ongoing water flow.

Well 6302/6-1 was then spudded with Eirik Raude 62.5 m southwest of 6302/6-U-1 on 24 June 2006 and in a water depth of 1260.5 m MSL. No shallow gas was observed by the ROV at the wellhead. It was drilled to a total depth of 4234 m (loggers depth) in the Late Cretaceous Springar Formation. The well was drilled with seawater and hi-vis pills down to 1965 m and with Glydril Deepwater mud from 1965 m to TD.

The well penetrated rocks of Quaternary, Tertiary and Cretaceous age. An interbedded sandstone reservoir section with a total thickness of approximately 100 m was penetrated at 3901 m in the lower section of the Rogaland Group, slightly shallower than prognosed. A large data acquisition programme was performed. A minor gas discovery was proven in the upper part of the reservoir section. Unexpectedly, several thick limestone beds were found in the transition zone between the Palaeocene and the Late Maastrichtian. These beds were between 5 and 20 m thick and with a gross thickness of 35 - 40 m.

Three cores were cut in the interval 3903 - 3941.5 m in Danian age sandstone of the Rogaland Group. A total of 15.7 m was recovered from the three cores. MDT fluid samples were taken at 3903 m (gas), 3920.8 m (water), 3937 m (water), and 3952.2 m (gas).

The well was permanently abandoned on 4 October 2005 as a gas discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1975.00	4230.00

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	3903.0	3910.7	[m]
2	3911.6	3916.3	[m]
3	3936.0	3939.1	[m]

Total core sample length [m]	15.5
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
4050.5	[m]	C	OD
4050.5	[m]	SWC	OD
4087.5	[m]	C	OD
4087.5	[m]	SWC	OD
4097.0	[m]	SWC	OD
4097.0	[m]	C	OD
4121.0	[m]	C	OD
4121.0	[m]	SWC	OD
4131.0	[m]	SWC	OD
4131.0	[m]	C	OD
4209.5	[m]	C	OD
4209.5	[m]	SWC	OD

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
1286	NORDLAND GP
1286	NAUST FM
2463	KAI FM
2582	HORDALAND GP



2582	BRYGGE FM
3223	ROGALAND GP
3223	TARE FM
3395	TANG FM
3901	NO FORMAL NAME
4080	SHETLAND GP
4080	SPRINGAR FM

Composite logs

Document name	Document format	Document size [MB]
5086	pdf	0.56

Geochemical information

Document name	Document format	Document size [MB]
5086_01_6302_6_1_gch_transfer_1	txt	0.00
5086_02_6302_6_1_gch_results_1	txt	0.18
5086_1	pdf	0.51
5086_2	pdf	3.21

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CSI	1305	3015
CSI	2000	4225
FMI MSIP	3600	4230
MDT	3902	4139
MDT	3920	3968
MDT	3937	3937
MSCT	3124	3826
MSCT	3901	4218
MSCT	3939	4218
MWD - MPR DCP	1366	4230
PEX DSI HRLA	2319	3018
PEX DSI HRLA	3035	3844





PEX HRLA CMR HNGS	3200	4230
VSP	1315	4237

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	1363.0	36	1363.0	0.00	LOT
SURF.COND.	20	1960.0	26	1960.0	1.29	LOT
INTERM.	16	2380.0	17 1/2	2380.0	1.60	LOT
INTERM.	13 3/8	3035.0	17 1/2	3035.0	1.49	LOT
INTERM.	9 5/8	3840.0	12 1/4	3840.0	1.72	LOT
OPEN HOLE		4230.0	8 1/2	4230.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1332	1.05			BENTONITE/SW 1	
1367	1.05			SW / BENTONITE 1	
1849	1.05			SW / POLYMER 2	
1968	1.18	16.0		GLYDRIL DW 36	
2102	1.23	16.0		GLYDRIL DW 36	
2390	1.24	14.0		GLYDRIL DW 37	
3046	1.37	19.0		GLYDRIL DW 37	
3060	1.39	19.0		GLYDRIL DW 37	
3845	1.39	22.0		GLYDRIL DW 37	
3902	1.37	20.0		GLYDRIL DW 37	
3918	1.56	30.0		GLYDRIL DW 36	
3941	1.56	30.0		GLYDRIL DW 36	
3996	1.56	27.0		GLYDRIL DW 36	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
4134.00	[m]
3910.58	[m]
3906.95	[m]

**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]
5086_Formation_pressure_(Formasjonstrykk)	PDF	0.29

