

**General information**

Wellbore name	1/6-7
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	1/6-7
Seismic location	CNI/88-4A & SP. 620
Production licence	144
Drilling operator	Conoco Norway Inc.
Drill permit	724-L
Drilling facility	WEST VANGUARD
Drilling days	119
Entered date	16.03.1992
Completed date	12.07.1992
Release date	12.07.1994
Publication date	15.06.2011
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	22.0
Water depth [m]	68.0
Total depth (MD) [m RKB]	4995.0
Final vertical depth (TVD) [m RKB]	4925.0
Maximum inclination [°]	31.4
Bottom hole temperature [°C]	182
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HAUGESUND FM
Geodetic datum	ED50
NS degrees	56° 33' 20.01" N
EW degrees	2° 54' 11.18" E
NS UTM [m]	6268058.24
EW UTM [m]	494043.59
UTM zone	31
NPDID wellbore	1928



Wellbore history

General

Well 1/6-7 is located in the Feda Graben of the North Sea, approximately mid-way between the Albuskjell and Tommeliten Gamma fields. It was drilled on the flank of a salt diapir. The primary objective of the well was to test the hydrocarbon potential of Late Jurassic sandstones. Two secondary objectives were identified; to test for hydrocarbons in the Cretaceous Chalk and to test for the development and the hydrocarbon potential of Paleocene sands.

Operations and results

Wildcat well 1/6-7 was spudded with the semi-submersible installation West Vanguard on 16 March 1992 and drilled to TD at 4995 m (5001 m logger's depth / 4925 m TVD). A 9 7/8" pilot hole was drilled from 170 to 1007m prior to the 26" section to check for possible shallow gas at 311, 351, and 397 m. No shallow gas was seen. MWD check-shots inside the 20" casing (azimuth unreliable) proved that the well had sidetracked in the 26" hole. In the 12 1/4" hole a steerable assembly was run in hole to correct the course. This twisted off, leaving a fish at 3740 m. The well was plugged back to 3550 m and the well was sidetracked from 3650 m. After the sidetrack the azimuth stayed fairly constant in a northwest direction. The inclination, though, increased. In the 12 1/4" hole from 3515 m to 4329 m the angle built from 3.73deg to 13.52deg. The angle kept building in the 8 1/2" hole until a maximum MWD survey of 31.40deg at 4701m. At this depth the bit was pulled out of the hole for an intermediate logging run and to change the BHA to an angle dropping assembly. This assembly dropped the inclination to 24.7deg by TD. At 4878 m, in the top of Sandstone Unit II, a salt water kick was taken. The well was drilled with seawater with viscous pre-hydrated bentonite sweeps down to 1007 m, with inhibitive polymer mud system utilizing WBS-200 wellbore stabilizer to from 1007 m to 1400 m, with PHPA inhibitive polymer mud from 1400 m to 3273 m, and with high temperature polymer system mud from 3273 m to TD.

Weak to fair shows in the claystone and limestone were seen in several intervals from 2680 to 2950 m (Hordaland Group), and free tarry oil in the mud was observed from 2912 - 2945 m (claystone with stringers of limestone and dolomite). The tarry oil was described as dark brown to black, with a resinous lustre, orange to yellow direct fluorescence, moderate to fast streaming yellowish cut and had a dark brown residue. The Chalk objective was drilled outside of structural closure and top Ekofisk Formation was penetrated at 3278 m (3275 m TVD). Moderate shows were described here in a zone from 3288 to 3293 m with weaker shows continuing down into core #1, and on cuttings further down to 3420 m. The electrical logs indicate an average porosity of 17.5% in this zone. BCU (top Mandal Formation) was penetrated at 4402.5 m (4388.6 m TVD). Two sandstone units of Oxfordian age, Sandstone Unit II (4750 - 4788 m / 4706.4 - 4739.7 m TVD) and Unit I (4879 - 4977 m / 4820 - 4907.5 m TVD) were penetrated. Average porosities of the Units were 16.1 and 21.5 % respectively. Shows in Sandstone Unit II (4750-4788m, Core #2 and #3) were described as very weak to no direct fluorescence, slow even bluish white crush cut, and faint creamy residue fluorescence. Shows in Sandstone Unit I (4879 - 4977 m) appeared with no fluorescence, no cut, minor traces of slow even bluish white crush cut and traces of creamy residue fluorescence. The cuttings in this unit had a good gas odour.

Three cores were cut with 100, 94.7, and 98.5% recovery, respectively. The first core was cut in the upper part of the Ekofisk Formation (3295 m - 3313.9, m) and the next two in the Haugesund Formation (4754 - 4773 m and 4773 - 4800.57 m respectively) in Sandstone Unit II and into the underlying shale. In order to match the gamma ray log cores #1, #2, and #3 has to be shifted + 1.2 m, +6.5 m, and +5.5 m, respectively. A total of 10 FMT pressure tests and one fluid sample were taken in Sandstone Unit I. Calculated pressure gradient in this sandstone is 0.52 psi/ft (0.12 Bar/m). The fluid



sample, at 4884 m, contained water and mud filtrate only.

The well was permanently abandoned on 12 July 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]
1010.00	4993.00

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	3295.0	3313.8	[m]
2	4754.0	4772.0	[m]
3	4773.0	4800.6	[m]

Total core sample length [m]	64.4
Cores available for sampling?	YES

Core photos



3295-3299m



3299-3303m



3303-3307m



3307-3311m



3311-3313m



4754-4759m



4759-4764m



4764-4769m



4769-4772m



4773-4778m



4778-4783m



4783-4788m



4788-4793m



4793-4798m



4798-4800m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3142.0	[m]	DC	RRI
3151.0	[m]	DC	RRI
3160.0	[m]	DC	RRI
3169.0	[m]	DC	RRI
3181.0	[m]	DC	RRI
3190.0	[m]	DC	RRI
3196.0	[m]	DC	RRI
3199.0	[m]	DC	RRI
3211.0	[m]	DC	RRI
3220.0	[m]	DC	RRI
3232.0	[m]	DC	RRI
3241.0	[m]	DC	RRI
3250.0	[m]	DC	RRI
3262.0	[m]	DC	RRI
3272.0	[m]	DC	RRI
3277.0	[m]	DC	RRI
3280.0	[m]	DC	RRI
4402.0	[m]	DC	PETROSTR
4411.0	[m]	DC	PETROS
4420.0	[m]	DC	PETROS
4429.0	[m]	DC	PETROS
4438.0	[m]	DC	PETROS
4447.0	[m]	DC	PETROS
4456.0	[m]	DC	PETROS
4465.0	[m]	DC	PETROS
4474.0	[m]	DC	PETROS
4483.0	[m]	DC	PETROS
4492.0	[m]	DC	PETROS
4501.0	[m]	DC	PETROS



4510.0 [m]	DC	PETROS
4519.0 [m]	DC	PETROS
4528.0 [m]	DC	PETROS
4537.0 [m]	DC	PETROS
4549.0 [m]	DC	PETROS
4555.0 [m]	DC	PETROS
4564.0 [m]	DC	PETROS
4573.0 [m]	DC	PETROS
4582.0 [m]	DC	PETROS
4591.0 [m]	DC	PETROS
4600.0 [m]	DC	PETROS
4609.0 [m]	DC	PETROS
4621.0 [m]	DC	PETROS
4627.0 [m]	DC	PETROS
4636.0 [m]	DC	PETROS
4645.0 [m]	DC	PETROS
4654.0 [m]	DC	PETROS
4663.0 [m]	DC	PETROS
4672.0 [m]	DC	PETROS
4681.0 [m]	DC	PETROS
4690.0 [m]	DC	PETROS
4699.0 [m]	DC	PETROS
4708.0 [m]	DC	PETROS
4717.0 [m]	DC	PETROS
4726.0 [m]	DC	PETROS
4735.0 [m]	DC	PETROS
4744.0 [m]	DC	PETROS
4756.5 [m]	C	PETROS
4762.4 [m]	C	PETROS
4769.0 [m]	C	PETROS
4773.7 [m]	C	PETROS
4777.2 [m]	C	PETROS
4781.2 [m]	C	PETROS
4783.8 [m]	C	PETROS
4789.6 [m]	C	PETROS
4795.9 [m]	C	PETROS
4798.7 [m]	C	PETROS
4807.0 [m]	DC	PETROS
4816.0 [m]	DC	PETROS
4825.0 [m]	DC	PETROS



4834.0 [m]	DC	PETROS
4846.0 [m]	DC	PETROS
4855.0 [m]	DC	PETROS
4864.0 [m]	DC	PETROS
4873.0 [m]	DC	PETROS
4882.0 [m]	DC	PETROS
4891.0 [m]	DC	PETROS
4903.0 [m]	DC	PETROS
4909.0 [m]	DC	PETROS
4918.0 [m]	DC	PETROS
4927.0 [m]	DC	PETROS
4936.0 [m]	DC	PETROS
4942.0 [m]	DC	PETROS
4954.0 [m]	DC	PETROS
4963.0 [m]	DC	PETROS
4978.0 [m]	DC	PETROS
4987.0 [m]	DC	PETROS
4990.0 [m]	DC	PETROS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
92	NORDLAND GP
1792	HORDALAND GP
3069	ROGALAND GP
3069	BALDER FM
3080	SELE FM
3086	LISTA FM
3168	VIDAR FM
3237	LISTA FM
3249	VÅLE FM
3278	SHETLAND GP
3278	EKOFISK FM
3389	TOR FM
3665	HOD FM
4146	BLODØKS FM
4162	HIDRA FM
4291	CROMER KNOLL GP
4291	RØDBY FM



4336	SOLA FM
4364	ÅSGARD FM
4402	TYNE GP
4402	MANDAL FM
4448	FARSUND FM
4655	HAUGESUND FM

Composite logs

Document name	Document format	Document size [MB]
1928_1_6_7	pdf	1.11

Geochemical information

Document name	Document format	Document size [MB]
1928_1	pdf	0.26
1928_2	pdf	7.15

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

Document name	Document format	Document size [MB]
1928_01_WDSS_General_Information	pdf	0.62
1928_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]
1928_1_6_7_Completion_Log	pdf	3.11
1928_1_6_7_Completion_Report	pdf	54.72

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CSG CAL	0	4025





DAC GR	1000	3270
DAC GR	3262	4307
DAC GR	4263	4965
DIFL AC GR	4930	5000
DIFL AC GR SP	4350	4965
DIFL AC ZDL CN GR	1005	3273
DIFL ZDL CN SP GR	3262	4358
DIP GR	1600	3274
DIP GR	3262	4360
DIP GR	4350	4969
DIP GR	4650	5001
DLL MLL AC GR	420	1100
DLL MLL AC GR	3262	4361
DLL MLL GR	4350	4968
FMT	4663	4950
GR AC ZDL	90	1001
MWD - DPR RAW	92	4995
SBT	2683	3460
SWC	1355	3265
SWC	3280	4318
SWC	4365	4995
SWC	4465	4988
VSP	1010	4340
VSP	4250	5000
ZDL CN GR	4350	4970
ZDL CN GR	4820	5000

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	165.0	36	167.0	0.00	LOT
INTERM.	20	1000.6	26	1002.0	1.81	LOT
INTERM.	13 3/8	3261.0	17 1/2	3263.0	1.98	LOT
INTERM.	9 7/8	4346.8	12 1/4	4348.0	0.00	LOT

Drilling mud



Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
96	1.04	200.0		WATER BASED	
165	1.04	80.0		WATER BASED	
311	1.04	300.0		WATER BASED	
735	1.04	28.0		WATER BASED	
773	1.04	200.0		WATER BASED	
903	1.71	50.0		WATER BASED	
1003	1.43	95.0		WATER BASED	
1007	1.11	45.0		WATER BASED	
1010	1.25	72.0		WATER BASED	
1280	1.45	81.0		WATER BASED	
1400	1.59	67.0		WATER BASED	
1490	1.63	115.0		WATER BASED	
1680	1.63	84.0		WATER BASED	
1812	1.63	69.0		WATER BASED	
1952	1.63	72.0		WATER BASED	
2100	1.63	65.0		WATER BASED	
2190	1.63	68.0		WATER BASED	
2396	1.63	78.0		WATER BASED	
2414	1.63	75.0		WATER BASED	
2508	1.65	82.0		WATER BASED	
2640	1.66	68.0		WATER BASED	
2802	1.67	84.0		WATER BASED	
2920	1.67	89.0		WATER BASED	
2992	1.68	92.0		WATER BASED	
3079	1.67	83.0		WATER BASED	
3132	1.67	100.0		WATER BASED	
3157	1.71	103.0		WATER BASED	
3224	1.71	80.0		WATER BASED	
3273	1.65	43.0		WATER BASED	
3275	1.61	51.0		WATER BASED	
3335	1.56	46.0		WATER BASED	
3427	1.56	48.0		WATER BASED	
3507	1.56	48.0		WATER BASED	
3550	1.47	67.0		WATER BASED	
3592	1.47	47.0		WATER BASED	
3613	1.47	52.0		WATER BASED	
3625	1.47	49.0		WATER BASED	



3649	1.47	48.0		WATER BASED	
3653	1.46	51.0		WATER BASED	
3655	1.47	55.0		WATER BASED	
3673	1.47	48.0		WATER BASED	
3770	1.47	45.0		WATER BASED	
3827	1.47	46.0		WATER BASED	
3916	1.47	39.0		WATER BASED	
3999	1.53	38.0		WATER BASED	
4059	1.53	44.0		WATER BASED	
4101	1.53	44.0		WATER BASED	
4200	2.12	55.0		WATER BASED	
4223	1.53	37.0		WATER BASED	
4281	1.53	37.0		WATER BASED	
4289	2.12	59.0		WATER BASED	
4331	1.53	37.0		WATER BASED	
4358	1.57	43.0		WATER BASED	
4441	1.92	41.0		WATER BASED	
4526	1.97	42.0		WATER BASED	
4613	1.97	46.0		WATER BASED	
4691	2.00	52.0		WATER BASED	
4710	2.00	50.0		WATER BASED	
4754	2.00	50.0		WATER BASED	
4773	2.00	58.0		WATER BASED	
4801	2.00	58.0		WATER BASED	
4995	2.12	60.0		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]
1928 Formation pressure (Formasjonstrykk)	pdf	0.21

