

**General information**

Wellbore name	7120/5-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	BARENTS SEA
Well name	7120/5-1
Seismic location	TN 6583-346 SP. 495
Production licence	110
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	461-L
Drilling facility	WEST VANGUARD
Drilling days	51
Entered date	17.04.1985
Completed date	06.06.1985
Release date	06.06.1987
Publication date	18.05.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	22.0
Water depth [m]	296.0
Total depth (MD) [m RKB]	2700.0
Final vertical depth (TVD) [m RKB]	2699.0
Maximum inclination [°]	4.4
Bottom hole temperature [°C]	66
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	FRUHOLMEN FM
Geodetic datum	ED50
NS degrees	71° 34' 51.86" N
EW degrees	20° 26' 12.26" E
NS UTM [m]	7942513.53
EW UTM [m]	480135.74
UTM zone	34
NPDID wellbore	471



Wellbore history

General

Wildcat well 7120/5-1 was drilled west of the Snøhvit Field on a separate structure, the Alpha structure in the Hammerfest Basin. The main objective of the well was to test possible hydrocarbon accumulations in the Alpha structure of Middle to Lower Jurassic age. A secondary objective was to drill into rocks of upper Triassic age at a prognosed depth of 3047 m.

Operations and results

Well 7120/5-1 was spudded by Smedvigs semi-submersible rig West Vanguard 17 April 1985, and completed 6 June 1985. The well was drilled with spud mud down to 885 m and with gypsum/polymer mud from 885 m to TD. Seventy-four meter below the 20" casing shoe, after the well had penetrated a fault at 954 m, high background gas with heavy components was encountered. The high background gas persisted throughout this section down to the 13 3/8" casing point at 1975 m. Drilling went on without any serious problems.

The lithology in the Tertiary and Cretaceous comprises clay with scattered Lime-, Dolomite- and Siltstone layers. The Jurassic Stø Formation was encountered at 2285 m represented by clayey sands, while the clean part of that formation came in at 2341 m. Nordmela Formation was found at 2427 m, and top of Triassic rocks, Fruholmen Formation, came in at 2648 m. Both Stø- and Nordmela Formations were water bearing, but with good oil shows. Geochemical analyses of extracts from this interval showed a waxy oil. In a sandy zone between 2405 m to 2420 m high resistivity values were encountered, but RFT tests and pressure measurements gave negative results. Good source potentials were found in mudstones below ca 1900 m. Shales from 1900 m to 2230 m had TOC in the range 1 % - 3.5 %. A 20 m thick, very organic rich shale with 6 - 19 % TOC was encountered from 2251 m to 2271 m in the Hekkingen Formation. Below this level to TD, frequent claystone interbeds had TOC in the range 0.5 % - 5.5 % in cuttings (up to 13.42 % in a swc from 2351.2 m). The highest hydrogen index was seen in the rich Hekkingen shale (200 - 250 mg/g), which correspond to potential for gas with some oil. Six cores were cut in the interval 2286- 2425.5 m, all in the Stø Formation. Close to all of the Stø Formation was cored. A segregated RFT sample was taken at 2346 m. It recovered water with some gas.

The well was permanently abandoned on 6 June 1985 as 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]
380.00	2696.00

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	2286.0	2312.8	[m]
2	2313.0	2323.1	[m]
3	2323.0	2351.0	[m]
4	2351.0	2377.4	[m]
5	2378.0	2398.0	[m]
6	2398.0	2424.7	[m]

Total core sample length [m]	137.9
Cores available for sampling?	YES

Core photos

2286-2290m



2291-2295m



2296-2300m



2301-2305m



2306-2310m



2311-2312m



2313-2317m



2318-2322m



2323-2323m



2296-2300m



2328-2332m



2333-2337m



2338-2342m



2343-2347m



2348-2350m





2351-2355m

2356-2360m

2361-2365m

2366-2370m

2371-2375m



2376-2377m

2378-1282m

2383-2387m

2388-2392m

2393-2397m



2398-2402m

2403-2407m

2408-2412m

2413-2417m

2418-2422m



2423-2424m

2323-2327m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
500.0	[m]	DC	GERH
510.0	[m]	DC	GERH
520.0	[m]	DC	GERH
530.0	[m]	DC	GERH
540.0	[m]	DC	GERH
550.0	[m]	DC	GERH
560.0	[m]	DC	GERH
570.0	[m]	DC	GERH
580.0	[m]	DC	GERH
590.0	[m]	DC	GERH
600.0	[m]	DC	GERH
610.0	[m]	DC	GERH
620.0	[m]	DC	GERH
630.0	[m]	DC	GERH



640.0 [m]	DC	GERH
650.0 [m]	DC	GERH
660.0 [m]	DC	GERH
670.0 [m]	DC	GERH
680.0 [m]	DC	GERH
690.0 [m]	DC	GERH
700.0 [m]	DC	GERH
710.0 [m]	DC	GERH
720.0 [m]	DC	GERH
730.0 [m]	DC	GERH
740.0 [m]	DC	GERH
750.0 [m]	DC	GERH
760.0 [m]	DC	GERH
770.0 [m]	DC	GERH
780.0 [m]	DC	GERH
790.0 [m]	DC	GERH
800.0 [m]	DC	GERH
810.0 [m]	DC	GERH
820.0 [m]	DC	GERH
830.0 [m]	DC	GERH
840.0 [m]	DC	GERH
870.0 [m]	DC	GERH
880.0 [m]	DC	GERH
890.0 [m]	DC	GERH
901.0 [m]	SWC	GERH
910.0 [m]	DC	GERH
920.0 [m]	DC	GERH
930.0 [m]	DC	GERH
940.0 [m]	DC	GERH
950.0 [m]	DC	GERH
960.0 [m]	DC	GERH
970.0 [m]	DC	GERH
980.0 [m]	DC	GERH
990.0 [m]	DC	GERH
1000.0 [m]	SWC	GERH
1010.0 [m]	DC	GERH
1020.0 [m]	DC	GERH
1030.0 [m]	DC	GERH
1040.0 [m]	DC	GERH
1050.0 [m]	DC	GERH



1060.0	[m]	DC	GERH
1070.0	[m]	DC	GERH
1080.0	[m]	DC	GERH
1124.0	[m]	DC	GERH
1136.0	[m]	DC	GERH
1148.0	[m]	DC	GERH
1163.0	[m]	DC	GERH
1205.0	[m]	SWC	GERH
1209.0	[m]	SWC	GERH
1234.0	[m]	SWC	GERH
1256.0	[m]	DC	GERH
1270.0	[m]	SWC	GERH
1292.0	[m]	DC	GERH
1304.0	[m]	DC	GERH
1316.0	[m]	DC	GERH
1328.0	[m]	DC	GERH
1340.0	[m]	DC	GERH
1352.0	[m]	DC	GERH
1364.0	[m]	DC	GERH
1376.0	[m]	DC	GERH
1388.0	[m]	DC	GERH
1406.0	[m]	DC	GERH
1412.0	[m]	DC	GERH
1448.0	[m]	DC	GERH
1460.0	[m]	DC	GERH
1472.0	[m]	DC	GERH
1484.0	[m]	DC	GERH
1496.0	[m]	DC	GERH
1508.0	[m]	DC	GERH
1520.0	[m]	DC	GERH
1532.0	[m]	DC	GERH
1544.0	[m]	DC	GERH
1565.0	[m]	SWC	GERH
1580.0	[m]	DC	GERH
1592.0	[m]	DC	GERH
1604.0	[m]	DC	GERH
1616.0	[m]	DC	GERH
1628.0	[m]	DC	GERH
1643.0	[m]	DC	GERH
1663.0	[m]	SWC	GERH



1673.0	[m]	DC	GERH
1688.0	[m]	DC	GERH
1703.0	[m]	DC	GERH
1718.0	[m]	DC	GERH
1737.0	[m]	SWC	GERH
1748.0	[m]	DC	GERH
1763.0	[m]	DC	GERH
1778.0	[m]	DC	GERH
1801.0	[m]	SWC	GERH
1812.0	[m]	SWC	GERH
1823.0	[m]	DC	GERH
1860.0	[m]	SWC	GERH
1883.0	[m]	DC	GERH
1906.0	[m]	SWC	GERH
1928.0	[m]	DC	GERH
1950.0	[m]	SWC	GERH
1973.0	[m]	DC	GERH
1988.0	[m]	DC	GERH
2000.0	[m]	DC	GERH
2018.0	[m]	DC	GERH
2033.0	[m]	DC	GERH
2048.0	[m]	DC	GERH
2063.0	[m]	DC	GERH
2078.0	[m]	DC	GERH
2100.0	[m]	SWC	GERH
2123.0	[m]	DC	GERH
2138.0	[m]	DC	GERH
2150.0	[m]	SWC	GERH
2168.0	[m]	DC	GERH
2183.0	[m]	DC	GERH
2200.0	[m]	SWC	GERH
2210.0	[m]	SWC	GERH
2228.0	[m]	DC	GERH
2242.0	[m]	SWC	GERH
2253.0	[m]	SWC	GERH
2261.5	[m]	SWC	GERH
2267.0	[m]	SWC	GERH
2276.0	[m]	DC	RRI
2284.0	[m]	SWC	GERH
2286.1	[m]	C	RRI



2289.2 [m]	C	RRI
2292.0 [m]	C	RRI
2295.2 [m]	C	RRI
2297.9 [m]	C	RRI
2299.2 [m]	C	RRI
2301.4 [m]	C	RRI
2303.0 [m]	DC	GERH
2304.6 [m]	C	RRI
2306.8 [m]	C	RRI
2308.8 [m]	C	RRI
2311.4 [m]	C	RRI
2312.0 [m]	DC	GERH
2312.4 [m]	C	RRI
2313.6 [m]	C	RRI
2314.2 [m]	C	RRI
2314.7 [m]	C	RRI
2317.6 [m]	C	RRI
2318.0 [m]	DC	GERH
2320.6 [m]	C	RRI
2322.8 [m]	C	RRI
2323.6 [m]	C	RRI
2325.6 [m]	C	RRI
2328.6 [m]	C	RRI
2331.9 [m]	C	RRI
2333.0 [m]	DC	GERH
2334.9 [m]	C	RRI
2337.8 [m]	C	RRI
2342.0 [m]	DC	GERH
2354.0 [m]	DC	GERH
2363.0 [m]	DC	GERH
2381.0 [m]	DC	GERH
2389.5 [m]	C	RRI
2391.9 [m]	C	RRI
2393.0 [m]	C	ICHRON
2393.0 [m]	DC	GERH
2393.5 [m]	C	RRI
2396.0 [m]	C	RRI
2397.5 [m]	C	RRI
2399.7 [m]	C	RRI
2403.2 [m]	C	ICHRON



2403.6	[m]	C	RRI
2405.9	[m]	C	RRI
2408.0	[m]	DC	GERH
2418.8	[m]	C	RRI
2421.8	[m]	C	RRI
2426.0	[m]	SWC	GERH
2429.0	[m]	SWC	GERH
2435.0	[m]	DC	RRI
2435.0	[m]	DC	RRI
2441.0	[m]	DC	RRI
2441.0	[m]	DC	RRI
2444.0	[m]	DC	GERH
2447.0	[m]	DC	RRI
2447.0	[m]	DC	RRI
2453.0	[m]	DC	RRI
2453.0	[m]	DC	RRI
2456.0	[m]	DC	GERH
2459.0	[m]	DC	RRI
2459.0	[m]	DC	RRI
2465.0	[m]	DC	RRI
2465.0	[m]	DC	RRI
2468.0	[m]	DC	GERH
2477.0	[m]	DC	RRI
2477.0	[m]	DC	RRI
2480.0	[m]	DC	GERH
2483.0	[m]	DC	RRI
2495.0	[m]	DC	RRI
2495.0	[m]	DC	RRI
2501.0	[m]	DC	RRI
2501.0	[m]	DC	RRI
2506.0	[m]	SWC	GERH
2528.0	[m]	DC	GERH
2540.0	[m]	DC	GERH
2552.0	[m]	DC	GERH
2588.0	[m]	DC	GERH
2600.0	[m]	DC	GERH
2654.0	[m]	SWC	GERH
2660.0	[m]	SWC	GERH
2662.0	[m]	SWC	GERH
2666.0	[m]	SWC	GERH



2690.0	[m]	DC	GERH
2699.0	[m]	DC	GERH

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
318	NORDLAND GP
410	SOTBAKKEN GP
410	TORSK FM
1183	NYGRUNNEN GP
1183	KVITING FM
1230	ADVENTDALEN GP
1230	KOLMULE FM
2170	KOLJE FM
2205	KNURR FM
2248	HEKKINGEN FM
2271	FUGLEN FM
2285	KAPP TOSCANA GP
2285	STØ FM
2427	NORDMELA FM
2510	TUBÅEN FM
2648	FRUHOLMEN FM

Composite logs

Document name	Document format	Document size [MB]
471	pdf	0.53

Geochemical information

Document name	Document format	Document size [MB]
471_1	pdf	2.68

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





Document name	Document format	Document size [MB]
471_01_WDSS_General_Information	pdf	0.28
471_02_WDSS_completion_log	pdf	0.22

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

Document name	Document format	Document size [MB]
471_7120_5_1_COMPLETION_REPORT_AND_LOG	pdf	43.46

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL	340	1975
CST	901	1960
CST	1698	2100
DLL	2274	2694
DLWD	885	2607
ISF SON MSFL GR SP CAL	318	2700
LDT CNL GR	381	1976
LDT CNL GR NGT	1975	2701
RFT HP	2286	2670
RFT HP	2286	2416
RFT SG	2286	2670
RFT SG	2286	2416
SHDT	850	1969
SHDT	1975	2701
VSP	540	2685

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	381.0	36	386.0	0.00	LOT
SURF.COND.	20	850.0	26	865.0	1.55	LOT
INTERM.	13 3/8	1975.0	17 1/2	1988.0	1.47	LOT
OPEN HOLE		2700.0	12 1/4	2700.0	0.00	LOT



**Drilling mud**

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
382	1.06	1000.0	10.6	WATER BASED	18.04.1985
865	1.07	600.0	12.0	WATER BASED	21.04.1985
865	1.25	1100.0	11.0	WATER BASED	25.04.1985
865	1.07			WATER BASED	29.04.1985
865	1.05	800.0	7.2	WATER BASED	29.04.1985
865	1.24	1100.0	10.2	WATER BASED	26.04.1985
865	1.07			WATER BASED	29.04.1985
865	1.05	800.0	7.2	WATER BASED	29.04.1985
865	1.24	1100.0	10.2	WATER BASED	26.04.1985
865	1.25	1100.0	11.0	WATER BASED	25.04.1985
885	1.05	800.0	7.6	WATER BASED	29.04.1985
1082	1.08	1300.0	8.9	WATER BASED	30.04.1985
1299	1.10	1200.0	13.1	WATER BASED	02.05.1985
1440	1.11	1100.0	8.9	WATER BASED	02.05.1985
1637	1.17	1200.0	8.9	WATER BASED	03.05.1985
1666	1.22	1200.0	8.0	WATER BASED	06.05.1985
1788	1.22	1300.0	8.0	WATER BASED	06.05.1985
1843	1.22	1300.0	8.0	WATER BASED	06.05.1985
1918	1.22	5.5	1900.0	WATER BASED	08.05.1985
2089	1.15	1100.0	5.1	WATER BASED	14.05.1985
2250	1.15	1100.0	5.0	WATER BASED	20.05.1985
2286	1.24	1100.0	5.0	WATER BASED	20.05.1985
2330	1.24	1500.0	6.4	WATER BASED	20.05.1985
2368	1.24	1500.0	5.9	WATER BASED	20.05.1985
2378	1.24	1500.0	5.9	WATER BASED	21.05.1985
2411	1.24	1600.0	6.8	WATER BASED	22.05.1985
2425	1.24	1500.0	5.9	WATER BASED	23.05.1985
2456	1.24	1500.0	5.9	WATER BASED	24.05.1985
2545	1.24	1600.0	5.9	WATER BASED	28.05.1985
2581	1.24	1600.0	5.5	WATER BASED	28.05.1985
2613	1.24	1700.0	7.2	WATER BASED	28.05.1985
2681	1.24	1800.0	5.1	WATER BASED	28.05.1985
2700	1.24	1800.0	6.3	WATER BASED	29.05.1985
2700	1.24	1700.0	6.3	WATER BASED	30.05.1985



2700	1.24	1700.0	7.6	WATER BASED	31.05.1985
2700	1.24	1700.0	7.6	WATER BASED	31.05.1985
2700	1.24	1700.0	6.3	WATER BASED	30.05.1985

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2379.35	[m]
2401.65	[m]
2405.65	[m]
2423.65	[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]
471 Formation pressure (Formasjonstrykk)	PDF	0.27

