

**General information**

Wellbore name	7120/10-2
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	<a href="#">link</a>
Main area	BARENTS SEA
Well name	7120/10-2
Seismic location	E 841 - 09 SP. 295
Drilled in production licence	<a href="#">098</a>
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	643-L
Drilling facility	<a href="#">BYFORD DOLPHIN</a>
Drilling days	48
Entered date	20.07.1990
Completed date	05.09.1990
Release date	05.09.1992
Publication date	11.02.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	186.0
Total depth (MD) [m RKB]	2500.0
Final vertical depth (TVD) [m RKB]	2497.0
Maximum inclination [°]	7.5
Bottom hole temperature [°C]	63
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HEKKINGEN FM
Geodetic datum	ED50
NS degrees	71° 5' 34.8" N
EW degrees	20° 14' 28.31" E
NS UTM [m]	7888153.58
EW UTM [m]	472556.90
UTM zone	34
NPDID wellbore	1561

## Wellbore history

### General

Block 7120/10 is situated on the southwest margin of the Hammerfest Basin with the Tromsø Basin to the west, and the Troms-Finnmark Platform to the south. Well 7120/10-2 was designed to drill Valanginian submarine fan sandstones, where the hydrocarbon trap is formed by up dip sand pinch out to the south and west combined with structural dip to the northeast. The reservoir was prognosed to be penetrated at 2080 m sub sea. The source kitchen for the prospect was expected to be the Hekkingen Formation of Late Jurassic, which is good to rich source rocks and contains oil prone kerogen. Surface to 214 m subsea could contain boulders and thus cause drilling problems.

### Operations and results

Wildcat well 7120/10-2 was spudded with the semi-submersible installation Byford Dolphin on 20 July 1990 and drilled to TD at 2500 m in the Late Jurassic Hekkingen Formation. Three incidents delayed the drilling for a total of 13.5 days: 1) A boulder bed in the 36" section made it necessary to make a trip to change the BHA. The old hole could not be located on this wiper trip so the string was pulled to re-spud; 2) A wellhead connector leak needed to be diagnosed and repaired; 3) Logs hung up at ledges formed when the shale/ claystone was washed out while resistant limestone were not. As a consequence of the latter no wire line logs were obtained over the interval 2106 m to 1935 m. This interval comprises predominantly shale but does include two sandstone beds (2052 m to 2059 m and 2036 m to 2038 m). The well was drilled with seawater down to 523 m and with lignosulphonate/seawater/gel from 523 m to TD.

The well penetrated the primary objective, Valanginian sandstones, at 2125 m within the Knurr Formation. These reservoir quality rocks comprised of sandstones with minor interbedded siltstones and shales for a thickness of 178 m down to the contact with the Late Jurassic Hekkingen Shale at 2303 m. These reservoir sands all proved water wet. The well penetrated 197 m of Late Jurassic source rock of variable richness. No truly "hot" shale was penetrated, although the Hekkingen Formation did contain organic rich material and showed a significant gas increase with moderately bright cut and crush cut fluorescence throughout. One core was cut in the interval from 2127 to 2136 m. The core was cut close to the top of the sand-prone section. No fluid sample was taken.

The well was permanently abandoned as a dry hole on 5 September 1990.

### Testing

No drill stem test was performed

## Cuttings at the NPD

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
540.00	2500.00

Cuttings available for sampling?	YES
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**Cores at the NPD**

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2127.0	2135.6	[m ]

Total core sample length [m]	8.6
Cores available for sampling?	YES

**Core photos**



2127-2132m



2127-2132m



2132-2136m



2132-2135m

**Palynological slides at the NPD**

Sample depth	Depth unit	Sample type	Laboratory
647.0	[m]	SWC	ESSO
708.0	[m]	SWC	ESSO
728.0	[m]	SWC	ESSO
754.0	[m]	SWC	ESSO
758.0	[m]	SWC	ESSO
797.0	[m]	SWC	ESSO
824.0	[m]	SWC	ESSO
854.0	[m]	SWC	ESSO
864.0	[m]	SWC	ESSO
891.0	[m]	SWC	ESSO
918.0	[m]	SWC	ESSO
941.0	[m]	SWC	ESSO
1000.0	[m]	SWC	ESSO
1047.0	[m]	SWC	ESSO
1088.0	[m]	SWC	ESSO
1126.0	[m]	SWC	ESSO
1175.0	[m]	SWC	ESSO

1191.0 [m]	SWC	ESSO
1217.0 [m]	SWC	ESSO
1268.0 [m]	SWC	ESSO
1286.0 [m]	SWC	ESSO
2128.5 [m]	C	ESSO
2130.6 [m]	C	ESSO
2132.1 [m]	C	ESSO
2134.0 [m]	C	ESSO
2135.0 [m]	C	ESSO
2135.4 [m]	C	ESSO

### Lithostratigraphy

Top depth [m]	Lithostrat. unit
211	<a href="#">NORDLAND GP</a>
468	<a href="#">SOTBAKKEN GP</a>
468	<a href="#">TORSK FM</a>
647	<a href="#">NYGRUNNEN GP</a>
647	<a href="#">KVITING FM</a>
703	<a href="#">ADVENTDALEN GP</a>
703	<a href="#">KOLMULE FM</a>
1442	<a href="#">KOLJE FM</a>
1922	<a href="#">KNURR FM</a>
2303	<a href="#">HEKKINGEN FM</a>

### Composite logs

Document name	Document format	Document size [KB]
<a href="#">1561</a>	pdf	0.34

### Documents - older NPD WDSS reports and other related documents

Document name	Document format	Document size [KB]
<a href="#">1561_01_WDSS_General_Information</a>	pdf	0.19
<a href="#">1561_02_WDSS_completion_log</a>	pdf	0.16
<a href="#">1561_01_WDSS_General_Information</a>	pdf	0.19
<a href="#">1561_02_WDSS_completion_log</a>	pdf	0.16

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

Document name	Document format	Document size [KB]
<a href="#">1561_7120_10_2_COMPLETION_LOG</a>	pdf	1.25
<a href="#">1561_7120_10_2_COMPLETION_REPORT</a>	pdf	41.58

**Logs**

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL GR	685	1321
DIL GR CAL SP FGT CNL	2106	2493
DIL GR LSS SP CAL	521	1313
DIL GR LSS SP CAL	1312	1878
DIL GR LSS SP CAL	1837	1935
LDL CNL GR CAL	1312	1878
LDL CNL GR CAL	1837	1935
MWD	249	2500
SWC	551	1286
VELOCITY	375	1930

**Casing and leak-off tests**

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT mud eqv. [g/cm <sup>3</sup> ]	Formation test type
CONDUCTOR	30	248.0	36	250.0	0.00	LOT
INTERM.	13 3/8	523.0	17 1/2	533.0	1.86	LOT
INTERM.	9 5/8	1311.0	12 1/4	1321.0	1.85	LOT
OPEN HOLE		2500.0	8 1/2	2500.0	0.00	LOT

**Drilling mud**

Depth MD [m]	Mud weight [g/cm <sup>3</sup> ]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
224	1.03	1.0		WATER BASED	23.07.1990
249	1.03	1.0		WATER BASED	25.07.1990
249	1.03	1.0		WATER BASED	23.07.1990
249	1.03	1.0		WATER BASED	24.07.1990
249	1.00			WATER BASED	23.07.1990

536	1.03	1.0		WATER BASED	26.07.1990
536	1.07	13.0	3.4	WATER BASED	30.07.1990
536	1.03			WATER BASED	30.07.1990
536	1.07	7.0	5.3	WATER BASED	30.07.1990
685	1.08	5.0	5.7	WATER BASED	31.07.1990
1014	1.13	8.0	6.7	WATER BASED	01.08.1990
1190	1.25	15.0	0.5	WATER BASED	03.09.1990
1300	1.25	15.0	1.9	WATER BASED	03.09.1990
1321	1.15	7.0	8.1	WATER BASED	03.08.1990
1321	1.21	12.0	6.7	WATER BASED	09.08.1990
1321	1.21	12.0	6.7	WATER BASED	13.08.1990
1321	1.21	12.0	6.7	WATER BASED	14.08.1990
1321	1.15	7.0	8.1	WATER BASED	02.08.1990
1321	1.15	10.0	9.1	WATER BASED	06.08.1990
1321	1.16	7.0	8.1	WATER BASED	06.08.1990
1321	1.16	9.0	7.7	WATER BASED	06.08.1990
1321	1.21	12.0	6.7	WATER BASED	10.08.1990
1321	1.21	12.0	6.7	WATER BASED	13.08.1990
1454	1.17	10.0	7.7	WATER BASED	15.08.1990
1670	1.18	11.0	9.6	WATER BASED	15.08.1990
1865	1.16	10.0	7.7	WATER BASED	16.08.1990
1886	1.18	10.0	6.7	WATER BASED	17.08.1990
2076	1.23	14.0	7.7	WATER BASED	21.08.1990
2086	1.23	12.0	8.6	WATER BASED	21.08.1990
2127	1.23	12.0	7.7	WATER BASED	21.08.1990
2136	1.23	11.0	7.2	WATER BASED	21.08.1990
2195	1.23	15.0	7.2	WATER BASED	22.08.1990
2500	1.20	12.0	7.2	WATER BASED	27.08.1990
2500	1.26	17.0	8.1	WATER BASED	27.08.1990
2500	1.26	15.0	6.7	WATER BASED	27.08.1990
2500	1.26	13.0	6.7	WATER BASED	28.08.1990
2500	1.26	15.0	6.7	WATER BASED	29.08.1990
2500	1.26	11.0	5.3	WATER BASED	30.08.1990
2500	1.27	12.0	4.8	WATER BASED	31.08.1990
2500	1.26	14.0	4.8	WATER BASED	03.09.1990