General information

Wellbore name	7122/2-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	BARENTS SEA
Well name	7122/2-1
Seismic location	NH 9257-417 SP.61
Production licence	179
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	745-L
Drilling facility	POLAR PIONEER
Drilling days	36
Entered date	07.10.1992
Completed date	11.11.1992
Release date	11.11.1994
Publication date	18.05.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	363.0
Total depth (MD) [m RKB]	2120.0
Final vertical depth (TVD) [m RKB]	2120.0
Maximum inclination [°]	5.9
Bottom hole temperature [°C]	72
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	STØ FM
Geodetic datum	ED50
NS degrees	71° 57' 40.28'' N
EW degrees	22° 38' 40.1'' E
NS UTM [m]	7985596.37
EW UTM [m]	556833.38
UTM zone	34
NPDID wellbore	2018

Wellbore history

General

Well 7122/2-1 is located on the northern periphery of the Hammerfest Basin towards the Loppa High. The primary objective of the well was to test the potential of Valanginian and Hauterivian stratigraphic prospect 7122/2, 3-A. Additional objectives were to undertake a coring and sampling programme necessary for evaluation of the hydrocarbon potential of the 7122/2 3-A prospect and the surrounding area; to obtain an improved understanding of the reservoir potential, source rock development and maturity of the area; and to obtain better stratigraphic and velocity control. Planned TD was at least 50 m into the Middle Jurassic Stø Formation, and if hydrocarbons were encountered, to drill on until shows ceased.

Operations and results

Wildcat well 7122/2-1 was spudded with the semi-submersible rig Polar Pioneer on 7 October 1992 and drilled to TD at 2120 m in the Middle Jurassic Stø Formation. The drill string stuck at 669 m in the 24" section and a technical sidetrack was performed. Apart from this drilling operations went on without significant problems. The well was drilled with seawater and hi-vis pills down to 734 m and with KCl/PHPA/polymer mud from 734 m to TD.

The primary target, The Knurr Formation, was encountered from 1831.5m to 1954.5m and was water bearing. It consisted of massive sandstone sequence. Average horizontal permeability from cores was 636.3 mD. The secondary target, the Stø Formation, was also water bearing. Top Stø Formation was penetrated at 2067.5 m.

Organic geochemical analyses showed that the maturity of the penetrated sections in well 7122/2-1 range from immature/early mature in the Lower Cretaceous (800 m / %Ro ca 0.47) to peak mature in the Lower Jurassic (2120 m / %Ro ca 0.75). Both source rock sections, the Middle Barremian to Early Aptian Kolje Formation and the Late Jurassic Hekkingen Formation are mature with respect to oil generation. The remaining hydrocarbon generation potential of the Kolje and the Hekkingen Formations is still very good. Both source rock sections contain Type II kerogen and have potential for oil generation. The upper part of the Kolje Formation, from 1765 m to 1781 m, have the highest hydrogen indexes in the well (typically 300 - 500 mg HC/g TOC and TOC in the range 3 - 12 %) and appear more marine than the Hekkingen Formation (typically 200 - 300 mg HC/g TOC and TOC in the range 2 - 13 %). No significant amount of migrated hydrocarbons was detected by the analyses.

A total of 8 cores were cut in the well covering the intervals 1771 m to 1783 m and 1812 m to 1825m in the Kolje Formation, and the interval 1833-1931.8 m in the Knurr Formation. A total of 21 RFT pressure measurements, including one segregated sample at 1874 m were taken in one run. The sample contained water.

The well was permanently abandoned on 11 November 1992 as a dry hole.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
780.00	2120.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	1771.0	1776.2	[m]
2	1776.2	1778.1	[m]
3	1779.0	1784.1	[m]
4	1812.0	1824.6	[m]
5	1833.0	1860.6	[m]
6	1860.6	1888.3	[m]
7	1888.3	1915.7	[m]
8	1915.7	1931.8	[m]

Total core sample length [m]	123.6
Cores available for sampling?	YES

Core photos


1771-1775m


1775-1776m


1776-1778m


1779-1783m


1783-1784m


1812-1816m


1816-1820m


1820-1824m


1824-1825m


1833-1837m


1837-1841m


1841-1845m


1845-1849m


1849-1853m


1853-1857m


1857-1860m


1857-1861m


1860-1864m


1861-1864m


1864-1868m


1868-1872m


1868-1972m


1872-1876m


1876-1880m


1880-1884m


1884-1888m


1888-1888m


1888-1889m


1888-1892m


1889-1892m


1892-1896m


1896-1900m


1900-1904m


1904-1908m


1908-1912m


1912-1915m


1912-1916m


1915-1919m


1916-1919m


1919-1923m


1923-1927m


1927-1931m


1931-1932m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1771.0	[m]	C	FUGRO
1775.0	[m]	C	FUGRO
1776.2	[m]	C	FUGRO
1778.0	[m]	C	FUGRO
1781.0	[m]	C	FUGRO
1784.1	[m]	C	FUGRO
1812.0	[m]	C	FUGRO
1812.3	[m]	C	ICHRON
1813.4	[m]	C	ICHRON
1814.4	[m]	C	ICHRON
1815.6	[m]	C	ICHRON
1816.5	[m]	C	ICHRON
1817.8	[m]	C	FUGRO
1818.0	[m]	C	ICHRON
1818.2	[m]	C	ICHRON
1819.2	[m]	C	ICHRON
1819.8	[m]	C	FUGRO
1820.7	[m]	C	ICHRON
1821.9	[m]	C	ICHRON
1822.5	[m]	C	FUGRO
1822.5	[m]	C	ICHRON
1823.1	[m]	C	ICHRON
1824.0	[m]	C	FUGRO
1824.6	[m]	C	ICHRON
1834.0	[m]	C	FUGRO
1857.7	[m]	C	ICHRON
1863.9	[m]	C	ICHRON
1872.7	[m]	C	ICHRON
1872.8	[m]	C	FUGRO

1873.1	[m]	C	FUGRO
1876.5	[m]	C	FUGRO
1882.0	[m]	C	ICHRON
1885.4	[m]	C	FUGRO
1894.5	[m]	C	ICHRON
1894.5	[m]	C	FUGRO
1913.8	[m]	C	FUGRO
1913.8	[m]	C	ICHRON
1922.6	[m]	C	FUGRO
1922.7	[m]	C	ICHRON
1923.1	[m]	C	FUGRO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
386	NORDLAND GP
418	SOTBAKKEN GP
418	TORSK FM
743	NYGRUNNEN GP
743	KVITING FM
764	ADVENTDALEN GP
764	KOLMULE FM
1764	KOLJE FM
1832	KNURR FM
1955	HEKKINGEN FM
2025	FUGLEN FM
2068	KAPP TOSCANA GP
2068	STØ FM

Composite logs

Document name	Document format	Document size [MB]
2018	pdf	0.36

Geochemical information

Document name	Document format	Document size [MB]
2018_1	pdf	5.39
2018_2	pdf	5.71
2018_3	pdf	6.46
2018_4	pdf	8.63
2018_5	pdf	4.38

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

Document name	Document format	Document size [MB]
2018_01_WDSS_General_Information	pdf	0.64
2018_02_WDSS_completion_log	pdf	0.15

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

Document name	Document format	Document size [MB]
2018_7122_2_1_COMPLETION_REPORT_AND_LOG	pdf	14.57

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CST GR	762	1753
CST GR	1767	2118
CST GR	1941	2100
DIL LSS GR SP AMS	714	1753
DLL MSFL SDL GR SP	1746	2120
FMS4 GR	1746	2120
FMS-4 GR	714	1754
LDL CNL GR CAL	714	1735
LDL CNL GR CAL AMS	1746	2099
MWD - GR RES DIR	386	2120
NGL	714	1726
NGL	1746	2090
RFT HP GR AMS	1768	2106
VDL GR	1349	1746

VSP	1360	2110

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	448.0	36	450.0	0.00	LOT
INTERM.	18 5/8	716.0	26	718.0	1.81	LOT
INTERM.	13 3/8	1750.0	17 1/2	1755.0	1.53	LOT
OPEN HOLE		2120.0	12 1/4	2120.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
418	1.07			WATER BASED	
444	1.20	17.0		WATER BASED	
448	1.20	17.0		WATER BASED	
449	1.08	40.0		WATER BASED	
542	1.07	47.0		WATER BASED	
642	1.07	47.0		WATER BASED	
734	1.20	28.0		WATER BASED	
858	1.07	39.0		WATER BASED	
915	1.07	39.0		WATER BASED	
945	1.10	24.0		WATER BASED	
1092	1.12	22.0		WATER BASED	
1254	1.13	40.0		WATER BASED	
1433	1.20	21.0		WATER BASED	
1568	1.20	19.0		WATER BASED	
1620	1.20	20.0		WATER BASED	
1681	1.20	21.0		WATER BASED	
1765	1.20	21.0		WATER BASED	
1782	1.20	21.0		WATER BASED	
1812	1.20	20.0		WATER BASED	
1873	1.20	22.0		WATER BASED	
1932	1.20	21.0		WATER BASED	
2051	1.20	20.0		WATER BASED	
2120	1.20	20.0		WATER BASED	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
1816.25	[m]
1835.50	[m]
1838.75	[m]
1845.50	[m]
1851.50	[m]
1869.25	[m]
1875.50	[m]
1883.75	[m]
1889.75	[m]
1909.50	[m]
1919.50	[m]
1923.75	[m]
1928.25	[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]
2018_Formation_pressure_(Formasjonstrykk)	pdf	0.25