

**General information**

Wellbore name	7120/9-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	BARENTS SEA
Field	SNØHVIT
Discovery	7120/9-1 (Albatross)
Well name	7120/9-1
Seismic location	513 - 353 SP 1815
Production licence	078
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	338-L
Drilling facility	TREASURE SCOUT
Drilling days	64
Entered date	25.07.1982
Completed date	26.09.1982
Release date	26.09.1984
Publication date	11.02.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	EARLY JURASSIC
1st level with HC, formation	KAPP TOSCANA GP
Kelly bushing elevation [m]	23.0
Water depth [m]	320.0
Total depth (MD) [m RKB]	2300.0
Final vertical depth (TVD) [m RKB]	2300.0
Maximum inclination [°]	3.2
Bottom hole temperature [°C]	73
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	71° 29' 26.57" N
EW degrees	20° 56' 49.47" E
NS UTM [m]	7932342.99
EW UTM [m]	498124.67



UTM zone	34
NPDID wellbore	82

Wellbore history

**General**

Well 7120/9-1 was drilled in the Hammerfest Basin. The primary objective of the well was to test sandstone reservoirs of Early to Middle Jurassic age at a location very close to the highest position of the prospective structure.

The well was to be drilled into sediments of Triassic age to a prognosed depth of 2180 m +100/-130.

Operations and results

Exploration well 7120/9-1 was spudded with the semi-submersible installation Treasure Scout on 25 July 1982 and drilled to TD at 2300 m in the Triassic Snadd Formation. The 36" section was drilled with a 17 1/2" bit followed by a 36" hole opener. Low penetration rates were encountered due to the over-compacted nature of the clay formation together with the presence of numerous erratic glacial boulders. The hole had to be reamed 3 times before the 30" casing was set. After that drilling proceeded without major problems. The 36" section was drilled with mud left from the previous well (7117/9-1). The 26" section down to 760 m was drilled with seawater and prehydrated bentonite. From 760 m to 1651 m the well was drilled with gypsum/"Milpolymer 302" mud, and from 1651 m to TD the well was drilled with "Milpolymer 302".

The main reservoir was found hydrocarbon bearing from 1840.5 m (Top Stø Formation) down to the gas/water contact at 1904 m, eight meter into the Nordmela Formation. This interval consists of fine to medium, occasionally coarse sandstones with a few thin claystone stringers. RFT pressure recordings and sampling were performed over the interval. This gave a clear gas gradient of 0.084 psi/ft down to 1904 m with an underlying water gradient of 0.48 psi/ft. Weak to good shows were reported in sandstones in the interval from 1904 m in the lower part of the Early Jurassic and into the Triassic at TD. The water saturation in this interval ranged from 50-100% and based on log interpretation the hydrocarbons were assumed non-moveable.

The pore pressure recordings and estimates in the well showed a normal pressure gradient down to ca. 1000 m, below which a slight pressure build up was estimated reaching a maximum recorded pressure of 1.14 r.d. at 1840.5 m. No further over pressured zones were noted. Seven cores were taken in the 12 1/4" section. Two segregated RFT samples were taken at 1842.5 m and 1900.5 m, both recovered dry gas.

The well was permanently abandoned as gas discovery on 26 September 1982.

Testing

Two production tests were conducted. DST no. 1 (1935-1939 m) was opened for initial flow on a 15.9 mm. choke but did not flow. The well was perforated again and flowed for 10 minutes during DST no. 2. After a one-hour build up period, the well was again opened for flow without result. The well was re-perforated in DST no. 2A (1858-1864 m and 1869-1874 m) and flowed initially for 10 minutes. After a one-hour build up period, the well was flowed. During the main flow period an ice plug formed in the tubing. Three sets of separator samples were taken during this flow period. DST no 2A produced 291700 Sm³/day of gas with a gravity of 0.72 (air=1) and 10.9 Sm³/day of 53.5° API condensate through a 52/64" choke. The GOR was ca. 27000 Sm³/Sm³ and the CO₂ content was 6.5%.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
410.00	2300.00

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	1843.0	1860.5	[m]
2	1861.0	1879.2	[m]
3	1879.6	1894.5	[m]
4	1894.5	1912.2	[m]
5	1912.2	1929.0	[m]
6	1929.7	1947.4	[m]
7	1950.1	1965.7	[m]

Total core sample length [m]	118.3
Cores available for sampling?	YES

Core photos



1843-1847m



1847-1851m



1851-1855m



1855-1859m



1859-1864m



1864-1868m



1868-1872m



1872-1877m



1877-1881m



1881-1885m





1885-1889m

1889-1893m

1893-1897m

1897-1902m

1902-1906m



1906-1910m



1910-1913m



1913-1917m



1917-1921m



1921-1926m



1926-1930m



1930-1934m



1934-1939m



1939-1943m



1943-1947m



1947-1951m



1951-1956m



1956-1960m



1960-1963m



1963-1965m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
772.0	[m]	SWC	IKU
798.0	[m]	SWC	IKU
846.0	[m]	SWC	IKU
868.0	[m]	SWC	IKU
894.0	[m]	SWC	IKU
921.0	[m]	SWC	IKU
940.5	[m]	SWC	IKU
947.0	[m]	SWC	IKU
947.9	[m]	SWC	IKU
953.0	[m]	SWC	IKU
955.0	[m]	DC	
957.5	[m]	SWC	IKU
965.0	[m]	DC	
971.0	[m]	SWC	IKU



985.0 [m]	DC	
989.9 [m]	SWC	IKU
995.1 [m]	SWC	IKU
1003.5 [m]	SWC	IKU
1010.0 [m]	SWC	IKU
1015.0 [m]	DC	
1019.0 [m]	SWC	IKU
1033.0 [m]	SWC	IKU
1035.0 [m]	DC	
1048.0 [m]	SWC	IKU
1057.0 [m]	SWC	IKU
1065.0 [m]	DC	
1066.0 [m]	SWC	IKU
1089.0 [m]	SWC	IKU
1110.0 [m]	DC	
1117.0 [m]	SWC	IKU
1135.0 [m]	DC	
1144.0 [m]	SWC	IKU
1165.0 [m]	DC	
1193.0 [m]	SWC	IKU
1195.0 [m]	DC	
1215.0 [m]	DC	
1219.0 [m]	SWC	IKU
1240.0 [m]	SWC	IKU
1240.0 [m]	DC	
1266.0 [m]	SWC	IKU
1280.0 [m]	DC	
1288.5 [m]	SWC	IKU
1310.0 [m]	DC	
1314.0 [m]	SWC	IKU
1345.0 [m]	DC	
1347.0 [m]	SWC	IKU
1357.0 [m]	SWC	IKU
1370.0 [m]	SWC	IKU
1370.0 [m]	DC	
1392.0 [m]	SWC	IKU
1395.0 [m]	DC	
1407.0 [m]	SWC	IKU
1430.0 [m]	DC	
1435.0 [m]	SWC	IKU



1460.0 [m]	DC	
1464.0 [m]	SWC	IKU
1491.0 [m]	SWC	IKU
1495.0 [m]	DC	
1516.5 [m]	SWC	IKU
1525.0 [m]	DC	
1540.0 [m]	DC	
1550.0 [m]	DC	
1560.0 [m]	DC	
1563.0 [m]	SWC	IKU
1575.0 [m]	DC	
1580.0 [m]	DC	
1585.0 [m]	SWC	IKU
1592.0 [m]	SWC	IKU
1597.5 [m]	SWC	IKU
1605.0 [m]	DC	
1616.0 [m]	SWC	IKU
1640.0 [m]	DC	
1640.0 [m]	DC	
1641.0 [m]	SWC	IKU
1650.0 [m]	SWC	IKU
1673.0 [m]	DC	
1681.5 [m]	SWC	IKU
1690.0 [m]	SWC	IKU
1695.0 [m]	DC	
1697.0 [m]	SWC	IKU
1707.5 [m]	SWC	IKU
1712.0 [m]	SWC	IKU
1722.5 [m]	SWC	IKU
1733.0 [m]	DC	
1735.0 [m]	SWC	IKU
1750.0 [m]	DC	
1751.5 [m]	SWC	IKU
1754.0 [m]	SWC	IKU
1758.0 [m]	SWC	IKU
1761.0 [m]	SWC	IKU
1765.0 [m]	SWC	IKU
1772.0 [m]	SWC	IKU
1773.0 [m]	DC	
1780.0 [m]	SWC	IKU



1783.0 [m]	DC	
1788.0 [m]	DC	
1792.0 [m]	SWC	IKU
1808.0 [m]	DC	
1813.0 [m]	DC	
1814.5 [m]	SWC	IKU
1817.0 [m]	SWC	IKU
1818.0 [m]	DC	
1820.0 [m]	DC	
1824.0 [m]	SWC	IKU
1825.0 [m]	DC	
1828.0 [m]	SWC	IKU
1830.0 [m]	DC	
1832.5 [m]	SWC	IKU
1837.0 [m]	SWC	IKU
1840.0 [m]	DC	
1843.0 [m]	DC	
1843.8 [m]	C	IKU
1847.6 [m]	C	IKU
1856.4 [m]	C	IKU
1860.4 [m]	C	IKU
1862.7 [m]	C	IKU
1864.2 [m]	C	IKU
1866.7 [m]	C	IKU
1866.9 [m]	C	IKU
1867.5 [m]	C	IKU
1868.0 [m]	DC	
1870.0 [m]	DC	
1870.9 [m]	C	IKU
1875.0 [m]	DC	
1876.9 [m]	C	IKU
1884.7 [m]	C	IKU
1885.0 [m]	DC	
1886.8 [m]	C	IKU
1888.8 [m]	C	IKU
1894.9 [m]	C	IKU
1895.0 [m]	DC	
1897.4 [m]	C	IKU
1898.0 [m]	DC	
1901.4 [m]	C	IKU



1903.3 [m]	C	IKU
1912.0 [m]	C	IKU
1915.5 [m]	C	IKU
1917.4 [m]	C	IKU
1919.6 [m]	C	IKU
1921.2 [m]	C	IKU
1923.0 [m]	C	IKU
1923.8 [m]	C	IKU
1924.7 [m]	C	IKU
1925.7 [m]	C	IKU
1926.4 [m]	C	IKU
1928.1 [m]	C	IKU
1928.8 [m]	C	IKU
1930.6 [m]	C	IKU
1936.7 [m]	C	IKU
1937.0 [m]	SWC	IKU
1937.4 [m]	C	IKU
1938.1 [m]	C	IKU
1939.7 [m]	C	IKU
1941.9 [m]	C	IKU
1949.9 [m]	C	IKU
1950.2 [m]	C	IKU
1952.2 [m]	C	IKU
1955.6 [m]	C	IKU
1956.7 [m]	C	IKU
1957.9 [m]	C	IKU
1958.4 [m]	C	IKU
1959.3 [m]	C	IKU
1960.6 [m]	C	IKU
1962.8 [m]	C	IKU
1965.0 [m]	C	IKU
2000.0 [m]	DC	
2010.0 [m]	DC	
2012.0 [m]	SWC	IKU
2028.0 [m]	DC	
2040.0 [m]	DC	
2048.5 [m]	SWC	IKU
2060.0 [m]	DC	
2063.0 [m]	SWC	IKU
2075.0 [m]	DC	



2079.0	[m]	SWC	IKU
2083.0	[m]	DC	
2088.0	[m]	DC	
2100.0	[m]	DC	
2110.0	[m]	SWC	IKU
2118.0	[m]	SWC	IKU
2128.0	[m]	SWC	IKU
2130.0	[m]	DC	
2136.0	[m]	SWC	IKU
2141.0	[m]	SWC	IKU
2147.0	[m]	SWC	IKU
2155.0	[m]	SWC	IKU
2155.0	[m]	DC	
2162.0	[m]	SWC	IKU
2170.0	[m]	SWC	IKU
2190.0	[m]	DC	
2192.0	[m]	SWC	IKU
2220.0	[m]	DC	
2221.0	[m]	SWC	IKU
2247.0	[m]	DC	
2276.0	[m]	SWC	IKU
2285.0	[m]	SWC	IKU
2285.0	[m]	DC	
2289.0	[m]	DC	
2289.0	[m]	SWC	IKU
2295.0	[m]	SWC	IKU
2297.0	[m]	DC	

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST	DST2A	1869.00	1874.00		17.09.1982 - 00:00	YES

Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
343	NORDLAND GP
590	SOTBAKKEN GP
590	TORSK FM
965	NYGRUNNEN GP
965	KVEITE FM
984	ADVENTDALEN GP
984	KOLMULE FM
1607	KOLJE FM
1761	KNURR FM
1813	HEKKINGEN FM
1840	KAPP TOSCANA GP
1840	STØ FM
1896	NORDMELA FM
1986	TUBÅEN FM
2077	FRUHOLMEN FM
2173	SNADD FM

Composite logs

Document name	Document format	Document size [MB]
82	pdf	0.42

Geochemical information

Document name	Document format	Document size [MB]
82_1	pdf	2.23
82_2	pdf	3.97
82_3	pdf	3.14

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

Document name	Document format	Document size [MB]
82_01_WDSS_General_Information	pdf	0.17
82_02_WDSS_completion_log	pdf	0.17





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

Document name	Document format	Document size [MB]
82_01_Completion_Report	pdf	9.12
82_02_Completion_log	pdf	2.81

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	1935	1936	0.0
2.0	1858	1864	20.6

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					
2.0	11	291000	0.764	0.720	26697

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL	440	1646
CDT	1675	1837
CST	772	1089
CST	1117	1650
CST	1937	2295
DLL MSFL GR CAL SP	1650	1966
HDT	744	2295
ISF LSS GR SP	404	1653
ISF LSS GR SP	1800	2297
ISF LSS GR SP MSFL CAL	1651	1965





LDT CNL GR CAL	390	1966
LDT CNL NGT GR CAL	1935	2297
NGT	1650	2297
RFT	1840	1943
RFT	1900	1900
RFT	1900	2226
RFT	1900	1901
RFT	1935	2270
VELOCITY	558	2300

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	404.0	36	405.0	0.00	LOT
SURF.COND.	20	744.0	26	760.0	1.67	LOT
INTERM.	13 3/8	1651.0	17 1/2	1665.0	1.80	LOT
INTERM.	9 5/8	2300.0	12 1/4	2300.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
766	1.06			seawater	
1216	1.15	32.0	9.0	seawater	
1665	1.20	50.0	10.5	seawater	
1821	1.21	41.0	8.0	seawater	
2059	1.22	46.0	10.0	seawater	
2285	1.25	50.0	11.5	seawater	

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]
82 Formation pressure (Formasjonstrykk)	pdf	0.27

