General information

Wellbore name	7121/5-2
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	BARENTS SEA
Field	SNØHVIT
Discovery	7121/5-2 (Snøhvit Beta)
Well name	7121/5-2
Seismic location	ST 8310 - 385 SP. 760
Production licence	110
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	516-L
Drilling facility	ROSS ISLE
Drilling days	42
Entered date	26.05.1986
Completed date	06.07.1986
Release date	06.07.1988
Publication date	05.01.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
Kelly bushing elevation [m]	22.0
Water depth [m]	328.0
Total depth (MD) [m RKB]	2543.0
Final vertical depth (TVD) [m RKB]	2540.0
Maximum inclination [°]	4.3
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	FRUHOLMEN FM
Geodetic datum	ED50
NS degrees	71° 40' 20.79'' N
EW degrees	21° 39' 24.42'' E
NS UTM [m]	7952737.91
EW UTM [m]	523051.48
UTM zone	34
NPDID wellbore	907

Wellbore history

General

Well 7121/5-2 is located ca 10 km northeast of the Snøhvit Field. The purpose of the well was to test the hydrocarbon accumulation on the Beta-structure in sandstones of the Early to Middle Jurassic Stø-formation.

Operations and results

The well was spudded with the semi-submersible installation Ross Isle on 26 May 1986 and drilled to TD at 2543 m in Late Triassic sediments (Rhaetian age). The well was drilled with seawater and hi-vis pills down to 850 m, with gypsum/polymer mud from 850 m to 1977 m, and with gypsum/polymer/NaCl mud from 1977 m to TD.

Hydrocarbon bearing Middle Jurassic sandstones in the Stø Formation were encountered at 2323 m. The gas-bearing zone extends from 2323 m to 2346 m. The gas zone is sealed from the underlying oil zone by a 6 m thick dense shale layer, which prevents the exact location of a gas/oil contact. The oil-bearing zone extends from 2352 m 2358.5 m. The oil water contact at 2358.5 m was picked both from logs and core data. Three cores were cut in the Stø formation (2324 m to 2400 m). A total of 9 FMT runs were performed; two to obtain pressure points and 7 to obtain segregated samples. The first run resulted in 32 pre test pressure points out of 38 attempts, in the interval 2323.5 m to 2369.0 m. Eighteen points were taken in the gas zone, 6 in the tight zone, 4 in the oil zone and 4 were in the water zone. The second run resulted in 9 pre test pressure points of nine attempts in the interval 2358 m to 2361 m. Seven attempts to obtain segregated samples resulted in 5 good samples, two at 2355 m, one at 2326 m, and two at 2353.5 m.

The well was permanently abandoned on 6 June 1986 as an oil and gas discovery.

Testing

Due to the presence of hydrogen sulphide in the well, no tests were performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
460.00	2539.00

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	2324.0	2342.8	[m]
2	2343.0	2371.0	[m]
3	2371.0	2399.0	[m]

Total core sample length [m]	74.8
Cores available for sampling?	YES

Core photos


2324-2330m


2330-2336m


2336-2342m


2341-2342m


2343-2349m


2349-2355m


2355-2361m


2361-2367m


2367-2371m


2371-2377m


2377-2383m


2383-2389m


2389-2395m


2395-2399m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1504.0	[m]	DC	GEARHA
1516.0	[m]	DC	GEARHA
1534.0	[m]	DC	GEARHA
1540.0	[m]	DC	GEARHA
1552.0	[m]	DC	GEARHA
1564.0	[m]	DC	GEARHA
1576.0	[m]	DC	GEARHA
1588.0	[m]	DC	GEARHA
1600.0	[m]	DC	GEARHA
1612.0	[m]	DC	GEARHA

1624.0	[m]	DC	GEARHA
1636.0	[m]	DC	GEARHA
1648.0	[m]	DC	GEARHA
1660.0	[m]	DC	GEARHA
1672.0	[m]	DC	GEARHA
1684.0	[m]	DC	GEARHA
1696.0	[m]	DC	GEARHA
1708.0	[m]	DC	GEARHA
1720.0	[m]	DC	GEARHA
1735.0	[m]	DC	GEARHA
1744.0	[m]	DC	GEARHA
1756.0	[m]	DC	GEARHA
1768.0	[m]	DC	GEARHA
1780.0	[m]	DC	GEARHA
1792.0	[m]	DC	GEARHA
1804.0	[m]	DC	GEARHA
1816.0	[m]	DC	GEARHA
1828.0	[m]	DC	GEARHA
1840.0	[m]	DC	GEARHA
1852.0	[m]	DC	GEARHA
1864.0	[m]	DC	GEARHA
1876.0	[m]	DC	GEARHA
1888.0	[m]	DC	GEARHA
1900.0	[m]	DC	GEARHA
1912.0	[m]	DC	GEARHA
1924.0	[m]	DC	GEARHA
1927.5	[m]	SWC	GEARHA
1936.0	[m]	DC	GEARHA
1951.0	[m]	DC	GEARHA
1963.0	[m]	DC	GEARHA
1972.0	[m]	DC	GEARHA
1982.0	[m]	SWC	STATOIL
1984.0	[m]	DC	GEARHA
1996.0	[m]	DC	GEARHA
2008.0	[m]	DC	GEARHA
2020.0	[m]	DC	GEARHA
2032.0	[m]	DC	GEARHA
2044.0	[m]	DC	GEARHA
2054.0	[m]	SWC	STATOIL
2056.0	[m]	DC	GEARHA

2062.0	[m]	SWC	GEARHA
2062.0	[m]	SWC	STATOIL
2068.0	[m]	DC	GEARHA
2080.0	[m]	DC	GEARHA
2080.0	[m]	SWC	STATOIL
2092.0	[m]	DC	GEARHA
2104.0	[m]	DC	GEARHA
2116.0	[m]	DC	GEARHA
2121.0	[m]	SWC	STATOIL
2128.0	[m]	DC	GEARHA
2140.0	[m]	DC	GEARHA
2152.0	[m]	DC	GEARHA
2164.0	[m]	DC	GEARHA
2168.0	[m]	SWC	GEARHA
2168.0	[m]	SWC	STATOIL
2175.0	[m]	SWC	GEARHA
2176.0	[m]	DC	GEARHA
2178.0	[m]	SWC	GEARHA
2178.0	[m]	DC	STATOIL
2184.0	[m]	SWC	GEARHA
2187.0	[m]	SWC	GEARHA
2187.0	[m]	SWC	STATOIL
2188.0	[m]	DC	GEARHA
2195.0	[m]	SWC	GEARHA
2200.0	[m]	DC	GEARHA
2207.0	[m]	SWC	GEARHA
2207.0	[m]	SWC	STATOIL
2212.0	[m]	DC	GEARHA
2220.5	[m]	SWC	STATOIL
2224.0	[m]	DC	GEARHA
2236.0	[m]	DC	GEARHA
2248.0	[m]	DC	GEARHA
2249.0	[m]	SWC	GEARHA
2260.0	[m]	DC	GEARHA
2264.5	[m]	SWC	GEARHA
2272.0	[m]	DC	GEARHA
2284.0	[m]	DC	GEARHA
2286.0	[m]	SWC	GEARHA
2296.0	[m]	DC	GEARHA
2303.0	[m]	SWC	GEARHA

2308.0	[m]	DC	GEARHA
2312.5	[m]	SWC	GEARHA
2320.0	[m]	DC	GEARHA
2321.0	[m]	SWC	GEARHA
2324.5	[m]	C	GEARHA
2328.6	[m]	C	GEARHA
2332.0	[m]	DC	GEARHA
2339.9	[m]	C	GEARHA
2344.0	[m]	DC	GEARHA
2344.0	[m]	DC	GEARHA
2344.8	[m]	C	GEARHA
2350.4	[m]	C	GEARHA
2356.0	[m]	DC	GEARHA
2363.0	[m]	C	GEARHA
2368.0	[m]	DC	GEARHA
2375.1	[m]	C	GEARHA
2380.0	[m]	DC	GEARHA
2382.7	[m]	C	GEARHA
2397.0	[m]	C	GEARHA
2398.7	[m]	C	GEARHA
2404.0	[m]	DC	GEARHA
2416.0	[m]	DC	GEARHA
2425.0	[m]	DC	GEARHA
2432.0	[m]	SWC	GEARHA
2440.0	[m]	DC	GEARHA
2446.0	[m]	DC	GEARHA
2449.0	[m]	SWC	GEARHA
2452.0	[m]	DC	GEARHA
2460.0	[m]	SWC	GEARHA
2461.0	[m]	DC	GEARHA
2475.0	[m]	DC	GEARHA
2480.0	[m]	DC	GEARHA
2488.0	[m]	DC	GEARHA
2500.0	[m]	DC	GEARHA
2503.5	[m]	SWC	GEARHA
2512.0	[m]	DC	GEARHA
2519.0	[m]	SWC	GEARHA
2524.0	[m]	DC	GEARHA
2528.0	[m]	DC	GEARHA
2534.0	[m]	SWC	GEARHA

2539.0	[m]	DC	GEARHA

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
350	NORDLAND GP
449	SOTBAKKEN GP
449	TORSK FM
934	NYGRUNNEN GP
934	KVITING FM
977	ADVENTDALEN GP
977	KOLMULE FM
1820	KOLJE FM
2079	KNURR FM
2260	HEKKINGEN FM
2305	FUGLEN FM
2323	KAPP TOSCANA GP
2323	STØ FM
2400	NORDMELA FM
2450	TUBÅEN FM
2503	FRUHOLMEN FM

Composite logs

Document name	Document format	Document size [MB]
907	pdf	0.33

Geochemical information

Document name	Document format	Document size [MB]
907_1	pdf	2.43

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

Document name	Document format	Document size [MB]
907_01_WDSS_General_Information	pdf	0.21
907_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]
907_71221_5_2_COMPLETION_REPORT_AND_LOG	pdf	21.23

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC AC CDL VDL GR	344	1898
CDL CNL GR	1897	2544
CDL GR	829	1939
COREGUN	1927	2540
DIFL BHC AC CDL GR SP CAL	829	1958
DIFL BHC AC GR SP CAL	1897	2644
DLL MLL GR	2293	2544
FMT	2323	2369
FMT	2328	2355
HR DIP	1897	2540
MWD - GR RES	499	1035
RLL - GR RES	2300	2550

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	449.0	36	452.0	0.00	LOT
SURF.COND.	20	829.0	26	1035.0	1.53	LOT
INTERM.	13 3/8	1898.4	17 1/2	1977.0	1.48	LOT
OPEN HOLE		2543.0	12 1/4	2543.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
390	1.08			WATER BASED	26.05.1986
453	1.08			WATER BASED	26.05.1986
453	0.00	800.0	11.0	WATERBASED	05.06.1986
524	1.10	600.0	12.7	WATER BASED	05.06.1986
848	1.10	600.0	14.8	WATER BASED	05.06.1986
1035	1.10	600.0	13.5	WATER BASED	05.06.1986
1035	0.00	800.0	29.4	WATERBASED	05.06.1986
1035	1.08	1000.0	28.3	WATER BASED	05.06.1986
1035	1.10	2400.0	7.2	WATER BASED	08.06.1986
1035	1.08	900.0	28.8	WATER BASED	05.06.1986
1169	1.10	2400.0	8.0	WATER BASED	08.06.1986
1415	1.13	2300.0	9.3	WATER BASED	09.06.1986
1580	1.14	2200.0	10.1	WATER BASED	11.06.1986
1754	1.15	2000.0	9.7	WATER BASED	12.06.1986
1874	1.16	2200.0	9.3	WATER BASED	15.06.1986
1977	0.00	2100.0	8.0	WATERBASED	15.06.1986
1977	1.30	2600.0	8.4	WATER BASED	15.06.1986
1977	1.16	2000.0	9.3	WATERBASED	15.06.1986
2060	1.30	2200.0	7.2	WATERBASED	17.06.1986
2135	1.28	1900.0	7.2	WATERBASED	18.06.1986
2217	1.26	1900.0	6.3	WATER BASED	19.06.1986
2293	1.25	1900.0	5.1	WATERBASED	23.06.1986
2324	1.28	2000.0	5.5	WATERBASED	23.06.1986
2363	1.27	1900.0	5.9	WATER BASED	23.06.1986
2399	1.27	1800.0	5.9	WATER BASED	23.06.1986
2431	1.27	1900.0	6.3	WATER BASED	24.06.1986
2470	1.26	2000.0	6.3	WATER BASED	25.06.1986
2484	1.26	2100.0	6.5	WATER BASED	30.06.1986
2507	1.26	2100.0	6.5	WATER BASED	26.06.1986
2507	1.26	2100.0	6.5	WATER BASED	30.06.1986
2543	1.26	2400.0	7.6	WATERBASED	30.06.1986
2543	1.26	2400.0	7.8	WATER BASED	30.06.1986
2543	1.26	2200.0	7.8	WATER BASED	30.06.1986

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]
907_Formation_pressure_(Formasjonstrykk)	pdf	0.28