



Generell informasjon

Brønnbane navn	7120/1-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	BARENTS SEA
Funn	7120/1-2
Brønn navn	7120/1-2
Seismisk lokalisering	86 - 107 / 7147 - 82 A
Utvinningstillatelse	108
Boreoperatør	A/S Norske Shell
Boretillatelse	599-L
Boreinnretning	ROSS RIG (2)
Boredager	87
Borestart	01.01.1989
Boreslutt	28.03.1989
Frigitt dato	28.03.1991
Publiseringsdato	18.05.2004
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	EARLY CRETACEOUS
1. nivå med hydrokarboner, formasjon.	KNURR FM
2. nivå med hydrokarboner, alder	LATE JURASSIC
2. nivå med hydrokarboner, formasjon	HEKKINGEN FM
Avstand, boredekk - midlere havflate [m]	23.5
Vanndybde ved midlere havflate [m]	304.5
Totalt målt dybde (MD) [m RKB]	2630.0
Totalt vertikalt dybde (TVD) [m RKB]	2613.0
Maks inklinasjon [°]	17.8
Temperatur ved bunn av brønnbanen [°C]	77
Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	FRUHOLMEN FM



Geodetisk datum	ED50
NS grader	71° 47' 29.04" N
ØV grader	20° 16' 42.98" E
NS UTM [m]	7966032.04
ØV UTM [m]	474839.56
UTM sone	34
NPDID for brønnbanen	1366

Brønnhistorie

General

Block 7120/1 is situated on the southern margin of the Loppa High and is bisected by the east-west trending Southern Loppa High boundary fault, which separates the Loppa High from the Hammerfest Basin to the south. The main objective of well 7120/1-2 was two seismostratigraphically defined wedges (of inferred Aptian age) in a large fault-bound closure against the Loppa High. Additional objectives were provided by a lower wedge of inferred Hauterivian age and Early Jurassic/Late Triassic elastics truncated beneath the Base Cretaceous unconformity, both down dip from the structural culmination.

Operations and results

The well spudded with the semi-submersible installation Ross Rig on 1 January 1989 and drilled to a total depth of 2630 m in Late Triassic sediments of the Fruholmen Formation. No shallow gas was encountered at any depth. The rig had to be moved three times due to problems with boulders that increased the hole inclination too much. Rough weather conditions, with waves exceeding 16 m, delayed drilling with several days. The well was drilled with seawater and spud mud down to 617 m and with KCl /Polymer mud from 617 m to TD.

Well 7120/1-2 penetrated two seismically defined "wedges" which contained three distinct clastic packages. The uppermost wedge (Wedge I from 1585 m to 1826 m) was dated as Early to Middle Albian in age, whilst the lower hydrocarbon-bearing wedge contains two units of latest Ryazanian / Early Valanginian (Wedge IIa from 1878 m to 1984 m) and Early Volgian age (Wedge IIb from 1984 m to 2138 m) respectively. These units had not previously been penetrated on the Barents Shelf.

Oil shows (direct fluorescence) was recorded on cuttings and cores in several intervals below 1931 m. Based on DST, logs, cores and RFT pressure measurements it was concluded that an oil column in excess of 90 m was encountered in Wedge IIa. Hydrocarbon saturations were considered reliable and although averaging only 50 %, could be as high as 65 % in both the upper and lower reservoir intervals (corresponding to Production Tests 3A and 3B respectively). Reservoir properties in the hydrocarbon-bearing interval were in general very poor and the intercalation of thin sand-shale beds made it impossible to pick an oil-water contact with any confidence. All other interpreted hydrocarbons, with the exception of an isolated sand in the Hekkingen Formation, were considered to be immovable. A segregated RFT sample was recovered from 1888.5 m (within the Production Test 3A interval in the Lower Cretaceous reservoirs of Wedge IIa). Both sample chambers were opened on the rig and found to contain oil, water and gas. A total of 0.0012 m³ of 31 deg API (0.871 g/cm³) oil was recovered along with 0.074 m³ of gas. A second RFT sample was recovered from 2153.5 m (a two to five meter thick isolated sand in the Upper Jurassic Hekkingen Formation). The lower sampling chamber from this interval was opened on the rig; it contained 0.0023 m³ of 41°API (0.820 g/cm³) oil and 0.3706 m³ of gas. Attempts to recover RFT samples and pressures from the



interval 2506 m to 2543 m failed due to tight Formation. Four conventional cores were cut. In addition, a 10 cm core was recovered from the junk basket tool run to retrieve lost bullets prior to drilling ahead at the 7" liner depth. Core 1 was cut from 1815 m to 1825 m in Wedge I, core 2 was cut from 1957 m to 1969 m in Wedge IIa, core 3 (from junk basket: black fissile claystone with strong smell of H₂S) was retrieved from 2147 m in the Hekkingen Formation, core 4 was cut from 2581 m to 2583 m, and the fifth core was cut from 2583 m to 2585.5 m. Cores 4 and 5 were cut in the Fruholmen Formation, and both jammed of.

The well was permanently abandoned on 28 March 1989 as an oil discovery

Testing

Two hydrocarbon production tests were planned for well 7120/1-2. The planned test intervals were 2506 m to 2543 m (Production Test #1 in the Fruholmen Formation) and 1879 m to 1896 m / 1944 m to 1971 m (Production Test 2A / Test 2B in Wedge IIa). During Production Test 2, the tubing conveyed perforating guns parted from the bottom hole assembly and perforated the water-bearing sands below the proposed test interval. This incident led to a repeat of the test over the interval 1879 m to 1971 m as Production Test 3. Test 1 gave no flow, but bottom hole samples and bottoms up contained minute traces of oil. Test 2 produced water, while the final, oil zone test in Wedge IIa (Test 3A and Test 3B) proved moveable oil. However the oil came very slowly with alternating gas and slugs of emulsified oil, and only after displacement of the original diesel cushion with Nitrogen.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
630.00	2630.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1815.0	1825.0	[m]
2	1957.0	1968.0	[m]
3	2581.0	2582.0	[m]
4	2582.0	2585.5	[m]

Total kjerneprøve lengde [m]	25.5
Kjerner tilgjengelig for prøvetaking?	YES

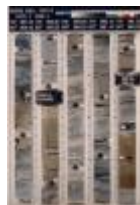
Kjernebilder



1815-1820m



1820-1825m



1957-1962m



1962-1967m



1967-1968m



2581-2585m



2581-2585m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
413.3	[m]	SWC	
469.3	[m]	SWC	
531.3	[m]	SWC	
595.3	[m]	SWC	
643.0	[m]	SWC	
680.0	[m]	SWC	
800.0	[m]	SWC	
870.0	[m]	SWC	
980.0	[m]	SWC	
1020.0	[m]	SWC	
1065.0	[m]	SWC	
1145.0	[m]	SWC	
1160.0	[m]	SWC	
1420.0	[m]	SWC	
1460.0	[m]	SWC	
1500.0	[m]	SWC	
1558.0	[m]	DC	
1559.5	[m]	SWC	RRI
1563.5	[m]	SWC	RRI
1566.1	[m]	SWC	
1576.0	[m]	DC	
1584.9	[m]	SWC	RRI
1589.5	[m]	SWC	



1593.5 [m]	SWC	RRI
1594.0 [m]	DC	
1601.1 [m]	SWC	
1621.0 [m]	DC	
1625.1 [m]	SWC	
1643.0 [m]	DC	
1651.1 [m]	SWC	
1658.0 [m]	SWC	RRI
1677.0 [m]	SWC	
1682.0 [m]	DC	
1688.0 [m]	DC	RRI
1703.0 [m]	DC	RRI
1718.0 [m]	DC	RRI
1724.0 [m]	DC	
1748.0 [m]	DC	RRI
1754.0 [m]	DC	
1778.0 [m]	DC	RRI
1784.1 [m]	SWC	
1799.0 [m]	DC	
1808.0 [m]	DC	RRI
1808.0 [m]	SWC	
1811.0 [m]	DC	
1816.4 [m]	C	
1817.0 [m]	C	RRI
1817.4 [m]	C	
1817.5 [m]	C	RRI
1818.4 [m]	C	
1819.3 [m]	C	FUGRO
1819.4 [m]	C	RRI
1820.0 [m]	C	RRI
1820.1 [m]	C	RRI
1820.1 [m]	C	
1820.4 [m]	C	
1822.4 [m]	C	
1822.6 [m]	C	
1822.6 [m]	C	FUGRO
1830.5 [m]	SWC	RRI
1835.0 [m]	DC	
1838.0 [m]	SWC	RRI
1838.0 [m]	SWC	



1844.0 [m]	DC	
1853.0 [m]	DC	
1856.5 [m]	SWC	RRI
1862.0 [m]	DC	
1863.1 [m]	SWC	
1863.1 [m]	SWC	RRI
1868.0 [m]	SWC	RRI
1871.0 [m]	DC	
1880.0 [m]	DC	
1883.5 [m]	SWC	
1883.5 [m]	DC	RRI
1889.0 [m]	DC	
1898.0 [m]	SWC	RRI
1901.0 [m]	DC	
1904.0 [m]	DC	RRI
1905.1 [m]	SWC	
1910.0 [m]	DC	
1913.0 [m]	DC	RRI
1919.0 [m]	DC	
1922.0 [m]	DC	RRI
1928.0 [m]	DC	RRI
1928.5 [m]	SWC	
1931.0 [m]	DC	
1937.0 [m]	DC	RRI
1940.0 [m]	DC	
1943.0 [m]	DC	RRI
1946.0 [m]	DC	RRI
1949.0 [m]	DC	
1953.6 [m]	SWC	
1955.0 [m]	DC	
1957.0 [m]	C	
1957.0 [m]	C	RRI
1957.7 [m]	C	FUGRO
1958.3 [m]	C	
1959.2 [m]	C	RRI
1959.2 [m]	C	ICHRON
1959.2 [m]	C	FUGRO
1959.4 [m]	C	ICHRON
1960.0 [m]	C	ICHRON
1960.1 [m]	C	ICHRON



1960.9 [m]	C	RRI
1960.9 [m]	C	ICHRON
1961.2 [m]	C	ICHRON
1961.5 [m]	C	ICHRON
1962.4 [m]	C	ICHRON
1963.0 [m]	C	ICHRON
1963.5 [m]	C	ICHRON
1963.9 [m]	C	ICHRON
1964.1 [m]	C	RRI
1964.2 [m]	C	ICHRON
1964.5 [m]	C	
1964.6 [m]	DC	
1964.9 [m]	C	ICHRON
1965.2 [m]	C	RRI
1965.2 [m]	C	
1965.5 [m]	C	ICHRON
1965.9 [m]	C	ICHRON
1966.0 [m]	C	FUGRO
1966.1 [m]	C	ICHRON
1966.4 [m]	C	ICHRON
1966.5 [m]	C	
1966.8 [m]	C	FUGRO
1966.8 [m]	C	ICHRON
1967.3 [m]	C	ICHRON
1967.3 [m]	C	
1967.5 [m]	C	
1967.8 [m]	C	RRI
1967.8 [m]	C	ICHRON
1971.5 [m]	SWC	RRI
1971.5 [m]	SWC	
1973.0 [m]	DC	
1975.2 [m]	SWC	
1977.5 [m]	SWC	
1980.0 [m]	SWC	RRI
1980.0 [m]	SWC	
1981.5 [m]	SWC	RRI
1981.5 [m]	SWC	
1982.0 [m]	DC	
1988.0 [m]	DC	RRI
1991.0 [m]	DC	



1992.3	[m]	SWC	
2000.0	[m]	DC	RRI
2000.0	[m]	DC	
2009.0	[m]	DC	
2009.0	[m]	DC	RRI
2016.6	[m]	SWC	
2018.0	[m]	DC	RRI
2018.0	[m]	DC	
2030.0	[m]	DC	
2030.0	[m]	DC	RRI
2042.0	[m]	DC	
2048.0	[m]	DC	RRI
2051.0	[m]	DC	
2060.0	[m]	DC	
2063.0	[m]	SWC	
2067.1	[m]	SWC	RRI
2067.1	[m]	SWC	
2069.0	[m]	DC	
2078.0	[m]	DC	RRI
2081.0	[m]	DC	
2090.0	[m]	DC	
2097.1	[m]	SWC	
2099.0	[m]	DC	
2108.0	[m]	DC	RRI
2110.1	[m]	SWC	
2111.0	[m]	DC	RRI
2111.0	[m]	DC	
2114.0	[m]	DC	RRI
2120.0	[m]	DC	
2129.0	[m]	DC	
2130.5	[m]	SWC	
2132.0	[m]	DC	RRI
2135.0	[m]	DC	RRI
2136.4	[m]	SWC	
2138.0	[m]	DC	RRI
2141.0	[m]	DC	RRI
2141.0	[m]	DC	
2147.0	[m]	DC	
2147.0	[m]	DC	RRI
2150.0	[m]	C	STATOIL



2150.0	[m]	DC	
2150.0	[m]	C	RRI
2150.0	[m]	C	
2156.0	[m]	SWC	
2156.0	[m]	SWC	RRI
2160.0	[m]	SWC	RRI
2165.0	[m]	DC	
2170.0	[m]	SWC	
2170.0	[m]	SWC	RRI
2180.0	[m]	SWC	RRI
2180.0	[m]	SWC	
2189.0	[m]	DC	
2195.0	[m]	SWC	
2198.0	[m]	DC	
2198.0	[m]	DC	RRI
2207.0	[m]	DC	RRI
2210.0	[m]	SWC	
2213.0	[m]	DC	
2219.0	[m]	DC	
2219.0	[m]	DC	RRI
2228.0	[m]	DC	RRI
2234.0	[m]	DC	
2243.0	[m]	DC	RRI
2244.0	[m]	SWC	
2246.0	[m]	DC	
2249.0	[m]	DC	RRI
2249.0	[m]	DC	
2258.0	[m]	DC	RRI
2270.0	[m]	DC	
2285.0	[m]	DC	
2285.0	[m]	DC	RRI
2357.0	[m]	DC	
2368.5	[m]	SWC	
2372.0	[m]	DC	
2384.0	[m]	DC	
2390.0	[m]	SWC	
2415.0	[m]	SWC	
2425.0	[m]	SWC	
2432.0	[m]	DC	
2448.0	[m]	SWC	



2450.0	[m]	DC	
2460.0	[m]	SWC	
2469.0	[m]	SWC	
2474.0	[m]	DC	
2507.0	[m]	DC	
2509.5	[m]	SWC	
2526.5	[m]	SWC	
2531.0	[m]	DC	
2555.0	[m]	DC	
2561.0	[m]	SWC	
2573.0	[m]	DC	
2582.6	[m]	C	
2584.5	[m]	C	
2585.4	[m]	C	
2597.0	[m]	DC	
2612.5	[m]	SWC	
2626.0	[m]	SWC	

Oljeprøver i Søkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST3A	1879.00	1971.00		21.03.1989 - 10:30	YES
DST		1888.00	1896.00		21.03.1989 - 00:00	YES
DST	DST3B	1944.00	1971.00		22.03.1989 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
328	NORDLAND GP
408	SOTBAKKEN GP
408	TORSK FM
1560	NYGRUNNEN GP
1560	KVEITE FM
1585	ADVENTDALEN GP
1585	KOLMULE FM



1586	NO FORMAL NAME
1591	KOLMULE FM
1826	KOLJE FM
1878	KNURR FM
1984	HEKKINGEN FM
1986	NO FORMAL NAME
2138	HEKKINGEN FM
2158	FUGLEN FM
2211	KAPP TOSCANA GP
2211	STØ FM
2365	NORDMELA FM
2452	TUBÅEN FM
2506	FRUHOLMEN FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
1366	pdf	0.47

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1366_1	pdf	3.20

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1366_01 WDSS General Information	pdf	0.26
1366_02 WDSS completion log	pdf	0.15

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)





Dokument navn	Dokument format	Dokument størrelse [KB]
1366_7120_1_2_COMPLETION_REPORT_AND_LOG	pdf	42.89

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil størrelse [mm]
2.0	1879	1971	12.7

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningsstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
2.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
2.0	150			0.673	

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL	1164	1546
CBL VDL	1440	2145
CHKSHT	415	2135
CST	414	604
CST	623	1537
CST	643	1537
CST	1560	2136
CST	1972	2145
CST	2164	2622
CST	2460	2578
DIL BHC	402	616
DIL BHC	610	1550
DIL BHC	1546	2144
DIL BHC	2145	2561
DIL BHC	2477	2628





DIL MSFL	2145	2630
DLL MSFL	1546	2137
LDL CNL AMS	610	1552
LDL CNL CAL	402	615
LDL CNL NGS	1546	2144
LDL CNL NGS	2450	2629
LDL CNL NGT	2144	2564
MWD	342	2140
RFT	2153	2541
RFT	2508	2578
SHDT	2145	2630
SHDT CAL	1545	2141
VSP	700	2584

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
CONDUCTOR	30	401.0	36	0.0	0.00	LOT
INTERM.	20	607.0	26	622.0	1.37	LOT
INTERM.	9 5/8	1544.0	12 1/2	1564.0	1.27	LOT
LINER	7	2144.0	8 1/2	2151.0	1.34	LOT
LINER	4 1/2	2630.0	5 7/8	2630.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
366	1.04			WATER BASED	04.01.1989
673	1.02	15.0	20.0	WATER BASED	16.01.1989
827	1.20	19.0	24.0	WATER BASED	16.01.1989
880	1.20	19.0	24.0	WATER BASED	16.01.1989
1100	1.02	17.0	20.0	WATER BASED	17.01.1989
1290	1.20	17.0	19.0	WATER BASED	17.01.1989
1500	1.20	20.0	28.0	WATER BASED	19.01.1989
1500	1.20	20.0	28.0	WATER BASED	20.01.1989
1500	1.20	20.0	28.0	WATER BASED	25.01.1989
1500	1.20	22.0	34.0	WATER BASED	19.01.1989
1600	1.20	21.0	28.0	WATER BASED	25.01.1989



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 10.5.2024 - 15:27

1670	1.20	21.0	20.0	WATER BASED	26.01.1989
1740	1.20	26.0	21.0	WATER BASED	26.01.1989
1781	1.20	24.0	21.0	WATER BASED	27.01.1989
1781	1.20	24.0	21.0	WATER BASED	30.01.1989
1830	1.18	20.0	21.0	WATER BASED	30.01.1989
1850	1.20			WATER BASED	20.03.1989
1850	1.20			WATER BASED	22.03.1989
1850	1.20			WATER BASED	28.03.1989
1850	1.20			WATER BASED	16.03.1989
1887	1.20	22.0	23.0	WATER BASED	31.01.1989
1934	1.20	21.0	23.0	WATER BASED	01.02.1989
1950	1.20	22.0	20.0	WATER BASED	03.02.1989
1950	1.20	22.0	20.0	WATER BASED	02.02.1989
1990	1.02			WATER BASED	22.03.1989
2040	1.18	22.0	22.0	WATER BASED	06.02.1989
2050	1.03			WATER BASED	13.03.1989
2050	1.03			WATER BASED	14.03.1989
2050	1.03			WATER BASED	15.03.1989
2101	1.18	22.0	22.0	WATER BASED	06.02.1989
2140	1.18	20.0	23.0	WATER BASED	08.02.1989
2140	1.18	20.0	23.0	WATER BASED	09.02.1989
2140	1.18	20.0	23.0	WATER BASED	13.02.1989
2159	1.20	20.0	21.0	WATER BASED	17.02.1989
2160	1.20	20.0	21.0	WATER BASED	20.02.1989
2258	1.20	21.0	23.0	WATER BASED	20.02.1989
2384	1.20	21.0	23.0	WATER BASED	20.02.1989
2384	1.20	21.0	23.0	WATER BASED	21.02.1989
2456	1.20	21.0	22.0	WATER BASED	22.02.1989
2494	1.20	21.0	22.0	WATER BASED	24.02.1989
2550	1.20	21.0	22.0	WATER BASED	27.02.1989
2564	1.20	21.0	22.0	WATER BASED	28.02.1989
2581	1.20	21.0	22.0	WATER BASED	28.02.1989
2585	1.20	21.0	22.0	WATER BASED	02.03.1989
2585	1.20	21.0	22.0	WATER BASED	28.02.1989
2600	1.03			WATER BASED	10.03.1989
2600	1.03			WATER BASED	07.03.1989
2600	1.03			WATER BASED	09.03.1989
2600	1.03			WATER BASED	13.03.1989
2630	1.03			WATER BASED	07.03.1989
2630	1.20	21.0	20.0	WATER BASED	03.03.1989



2630	1.20	21.0	20.0	WATER BASED	06.03.1989
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Tynnslip i Søkeldirektoratet

Dybde	Enhet
1816.15	[m]
1817.32	[m]
1961.72	[m]
1962.73	[m]
2581.80	[m]
2583.48	[m]

Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
1366_Formalion_pressure_(Formasjonstrykk)	pdf	0.28

