Generell informasjon

Brønnbane navn	7220/8-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	BARENTS SEA
Felt	JOHAN CASTBERG
Funn	7220/8-1 Johan Castberg
Brønn navn	7220/8-1
Seismisk lokalisering	3D survey WG08 -inline 1530 & crossline 3470
Utvinningstillatelse	532
Boreoperatør	Statoil Petroleum AS
Boretillatelse	1327-L
Boreinnretning	POLAR PIONEER
Boredager	65
Borestart	27.02.2011
Boreslutt	02.05.2011
Frigitt dato	02.05.2013
Publiseringsdato	02.05.2013
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	STØ FM
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	NORDMELA FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	374.0
Totalt målt dybde (MD) [m RKB]	2222.0
Totalt vertikalt dybde (TVD) [m RKB]	2221.0
Maks inklinasjon [°]	3.2
Eldste penetrerte alder	LATE TRIASSIC

Eldste penetrerte formasjon	SNADD FM
Geodetisk datum	ED50
NS grader	72° 29' 28.92'' N
ØV grader	20° 20' 2.25'' E
NS UTM [m]	8051910.71
ØV UTM [m]	678908.52
UTM sone	33
NPDID for brønnbanen	6484

Brønnhistorie

General

Well 7220/8-1 was drilled just west of the Polheim Sub-platform and Loppa High in the Barents Sea. The main objective was to prove an economical volume of hydrocarbons and to establish hydrocarbon contacts in the Stø and Nordmela formations in the Skrugard Prospect. The targeted Skrugard fault block is one of several rotated fault blocks in the licence and a part of the Bjørnøyrenna Fault Complex.

Operations and results

A shallow 8 1/2" pre-spud well (7220/8-U-1) was drilled and logged to 955 m to check for shallow gas due to seismic anomalies around the well location. No shallow gas was encountered. After that wildcat well 7220/8-1 was spudded with the semi-submersible installation Polar Pioneer on 27 February 2011 and drilled to TD at 2222 m in the Late Triassic Snadd Formation. Drilling operations proceeded without significant problems but upon intermediate MDT logging the cable broke and about 10 days were lost fishing. The well was drilled with spud mud and hi-vis pills down to 850 m and with KCl/Polymer/Glycol from 850 m to TD.

The well penetrated Tertiary and Cretaceous Claystones and Sandstones and upper Jurassic Claystones above the reservoir. In the reservoir the well penetrated Sandstones of Jurassic age, within the Stø, Nordmela and Tubåen Formations, and of Triassic age within the Fruholmen and Snadd Formations. The primary target reservoir was penetrated with top Stø Formation at 1276 m, and top Nordmela Formation at 1354 m. These Formations contained a 37 m thick gas column (GOC at 1312 m) and an 83 m thick oil column (OWC at 1395 m). Results from the well indicate that flat spots seen on the geo-seismic section represent the gas-oil-contact (GOC) and the oil-water-contact (OWC). The Snadd Formation was penetrated at 2122 m TVD, which was 35 m shallower than the prognosis.

Very good hydrocarbon shows were seen when drilling the reservoir in the Stø and Nordmela Formations. No shows were observed below 1400 m in the core chips and cuttings.

A total of five cores were cut in the Stø and Nordmela Formations, in the interval 1292.5 - 1405.5 m (97.8% recovery). Schlumberger MDT single probe was used for all samples. Oil samples were acquired at 1320.6 m, 1336.8 m, and at 1380.5 m in the Stø and Nordmela Formations. Due to the broken cable incident no water or gas samples were acquired.

The well was permanently abandoned on 2 May 2011 as an oil and gas discovery.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
850.00	2222.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1292.5	1296.5	[m]
2	1297.5	1324.2	[m]
3	1324.5	1351.4	[m]
4	1351.5	1377.9	[m]
5	1378.5	1405.0	[m]

Total kjerneprøve lengde [m]	110.5
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
850.0	[m]	DC	STATOIL
860.0	[unknown]	DC	STATOIL
870.0	[unknown]	DC	STATOIL
880.0	[unknown]	DC	STATOIL
890.0	[unknown]	DC	STATOIL
900.0	[unknown]	DC	STATOIL
910.0	[unknown]	DC	STATOIL
920.0	[unknown]	DC	STATOIL
930.0	[unknown]	DC	STATOIL
940.0	[unknown]	DC	STATOIL
950.0	[unknown]	DC	STATOIL
960.0	[unknown]	DC	STATOIL
970.0	[unknown]	DC	STATOIL
980.0	[unknown]	DC	STATOIL
990.0	[unknown]	DC	STATOIL
1000.0	[unknown]	DC	STATOIL
1010.0	[unknown]	DC	STATOIL
1020.0	[unknown]	DC	STATOIL
1030.0	[unknown]	DC	STATOIL
1040.0	[unknown]	DC	STATOIL
1050.0	[unknown]	DC	STATOIL

1060.0	[unknown]	DC	STATOIL
1080.0	[unknown]	DC	STATOIL
1090.0	[unknown]	DC	STATOIL
1100.0	[unknown]	DC	STATOIL
1110.0	[unknown]	DC	STATOIL
1120.0	[unknown]	DC	STATOIL
1130.0	[unknown]	DC	STATOIL
1140.0	[unknown]	DC	STATOIL
1150.0	[unknown]	DC	STATOIL
1160.0	[unknown]	DC	STATOIL
1170.0	[unknown]	DC	STATOIL
1180.0	[unknown]	DC	STATOIL
1190.0	[unknown]	DC	STATOIL
1200.0	[unknown]	DC	STATOIL
1203.0	[unknown]	DC	STATOIL
1209.0	[unknown]	DC	STATOIL
1215.0	[unknown]	DC	STATOIL
1221.0	[unknown]	DC	STATOIL
1227.0	[unknown]	DC	STATOIL
1233.0	[unknown]	DC	STATOIL
1239.0	[unknown]	DC	STATOIL
1245.0	[unknown]	DC	STATOIL
1252.0	[unknown]	DC	STATOIL
1258.0	[unknown]	DC	STATOIL
1261.0	[unknown]	DC	STATOIL
1270.0	[unknown]	DC	STATOIL
1276.0	[unknown]	DC	STATOIL
1279.0	[unknown]	DC	STATOIL
1285.0	[unknown]	DC	STATOIL
1288.0	[unknown]	DC	STATOIL
1291.0	[unknown]	DC	STATOIL
1291.0	[unknown]	DC	STATOIL
1292.5	[unknown]	C	STATOIL
1296.5	[unknown]	C	STATOIL
1302.0	[unknown]	C	STATOIL
1307.0	[unknown]	C	STATOIL
1313.0	[unknown]	C	STATOIL
1316.0	[unknown]	C	STATOIL
1324.2	[unknown]	C	STATOIL
1330.0	[unknown]	C	STATOIL

1335.8	[unknown]	C	STATOIL
1340.0	[unknown]	C	STATOIL
1343.8	[unknown]	C	STATOIL
1350.0	[unknown]	C	STATOIL
1351.3	[unknown]	C	STATOIL
1354.0	[unknown]	C	STATOIL
1357.0	[unknown]	C	STATOIL
1358.0	[unknown]	C	STATOIL
1364.0	[unknown]	C	STATOIL
1367.0	[unknown]	C	STATOIL
1371.9	[unknown]	C	STATOIL
1377.0	[unknown]	C	STATOIL
1377.9	[unknown]	C	STATOIL
1382.4	[unknown]	C	STATOIL
1387.5	[unknown]	C	STATOIL
1390.0	[unknown]	C	STATOIL
1396.5	[unknown]	C	STATOIL
1400.0	[unknown]	C	STATOIL
1405.5	[unknown]	C	STATOIL
1414.0	[unknown]	C	STATOIL
1420.0	[unknown]	DC	STATOIL
1426.0	[unknown]	DC	STATOIL
1432.0	[unknown]	DC	STATOIL
1438.0	[unknown]	DC	STATOIL
1444.0	[unknown]	DC	STATOIL
1450.0	[unknown]	DC	STATOIL
1456.0	[unknown]	DC	STATOIL
1462.0	[unknown]	DC	STATOIL
1471.0	[unknown]	DC	STATOIL
1480.0	[unknown]	DC	STATOIL
1489.0	[unknown]	DC	STATOIL
1495.0	[unknown]	DC	STATOIL
1504.0	[unknown]	DC	STATOIL
1510.0	[unknown]	DC	STATOIL
1519.0	[unknown]	DC	STATOIL
1525.0	[unknown]	DC	STATOIL
1531.0	[unknown]	DC	STATOIL
1537.0	[unknown]	DC	STATOIL
1543.0	[unknown]	DC	STATOIL
1549.0	[unknown]	DC	STATOIL

1555.0	[unknown]	DC	STATOIL
1561.0	[unknown]	DC	STATOIL
1567.0	[unknown]	DC	STATOIL
1573.0	[unknown]	DC	STATOIL
1579.0	[unknown]	DC	STATOIL
1585.0	[unknown]	DC	STATOIL
1591.0	[unknown]	DC	STATOIL
1597.0	[unknown]	DC	STATOIL
1603.0	[unknown]	DC	STATOIL
1609.0	[unknown]	DC	STATOIL
1615.0	[unknown]	DC	STATOIL
1621.0	[unknown]	DC	STATOIL
1630.0	[unknown]	DC	STATOIL
1636.0	[unknown]	DC	STATOIL
1642.0	[unknown]	DC	STATOIL
1642.0	[unknown]	DC	STATOIL
1648.0	[unknown]	DC	STATOIL
1654.0	[unknown]	DC	STATOIL
1660.0	[unknown]	DC	STATOIL
1666.0	[unknown]	DC	STATOIL
1672.0	[unknown]	DC	STATOIL
1678.0	[unknown]	DC	STATOIL
1684.0	[unknown]	DC	STATOIL
1690.0	[unknown]	DC	STATOIL
1699.0	[unknown]	DC	STATOIL
1705.0	[unknown]	DC	STATOIL
1711.0	[unknown]	DC	STATOIL
1720.0	[unknown]	DC	STATOIL
1726.0	[unknown]	DC	STATOIL
1738.0	[unknown]	DC	STATOIL
1744.0	[unknown]	DC	STATOIL
1750.0	[unknown]	DC	STATOIL
1756.0	[unknown]	DC	STATOIL
1768.0	[unknown]	DC	STATOIL
1780.0	[unknown]	DC	STATOIL
1789.0	[unknown]	DC	STATOIL
1798.0	[unknown]	DC	STATOIL
1807.0	[unknown]	DC	STATOIL
1816.0	[unknown]	DC	STATOIL
1828.0	[unknown]	DC	STATOIL

1840.0	[unknown]	DC	STATOIL
1849.0	[unknown]	DC	STATOIL
1858.0	[unknown]	DC	STATOIL
1867.0	[unknown]	DC	STATOIL
1876.0	[unknown]	DC	STATOIL
1888.0	[unknown]	DC	STATOIL
1897.0	[unknown]	DC	STATOIL
1906.0	[unknown]	DC	STATOIL
1915.0	[unknown]	DC	STATOIL
1921.0	[unknown]	DC	STATOIL
1930.0	[unknown]	DC	STATOIL
1939.0	[unknown]	DC	STATOIL
1948.0	[unknown]	DC	STATOIL
1954.0	[unknown]	DC	STATOIL
1963.0	[unknown]	DC	STATOIL
1972.0	[unknown]	DC	STATOIL
1978.0	[unknown]	DC	STATOIL
1990.0	[unknown]	DC	STATOIL
1999.0	[unknown]	DC	STATOIL
2008.0	[unknown]	DC	STATOIL
2017.0	[unknown]	DC	STATOIL
2026.0	[unknown]	DC	STATOIL
2032.0	[unknown]	DC	STATOIL
2041.0	[unknown]	DC	STATOIL
2050.0	[unknown]	DC	STATOIL
2059.0	[unknown]	DC	STATOIL
2065.0	[unknown]	DC	STATOIL
2071.0	[unknown]	DC	STATOIL
2080.0	[unknown]	DC	STATOIL
2086.0	[unknown]	DC	STATOIL
2095.0	[unknown]	DC	STATOIL
2104.0	[unknown]	DC	STATOIL
2116.0	[unknown]	DC	STATOIL
2125.0	[unknown]	DC	STATOIL
2134.0	[unknown]	DC	STATOIL
2146.0	[unknown]	DC	STATOIL
2155.0	[unknown]	DC	STATOIL
2161.0	[unknown]	DC	STATOIL
2170.0	[unknown]	DC	STATOIL
2179.0	[unknown]	DC	STATOIL

2188.0	[unknown]	DC	STATOIL
2197.0	[unknown]	DC	STATOIL
2203.0	[unknown]	DC	STATOIL
2212.0	[unknown]	DC	STATOIL
2218.0	[unknown]	DC	STATOIL
2222.0	[unknown]	DC	STATOIL

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
MDT		1380.50	0.00	OIL	13.04.2011 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
397	NORDLAND GP
455	SOTBAKKEN GP
455	TORSK FM
1014	ADVENTDALEN GP
1014	KOLMULE FM
1227	KOLJE FM
1245	KNURR FM
1252	FUGLEN FM
1276	KAPP TOSCANA GP
1276	STØ FM
1354	NORDMELA FM
1511	TUBÅEN FM
1628	FRUHOLMEN FM
2122	SNADD FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
6484_1	pdf	0.14
6484_2	pdf	1.73

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL CAL	397	865
CMR ECS	839	1436
FMI MSIP	1200	1436
MDT	1251	1472
MDT	1278	1300
MDT	1278	1472
MSIP ZAIT CA CBL	1	100
MSIP ZAIT CA CBL	680	1245
MWD - ARCVRES8 TELESCOPE	852	942
MWD - PERI15 TELE VADN6	942	1472
MWD - TELESCOPE	397	852
PEX HNGS GR	1225	1436
PEX HRLA	1250	2122
USIT	675	1255
VSP	500	2122
VSP TOOL STRING	1000	1255
XPT	1424	2151
ZAIT MSIP	1250	2122

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	470.0	36	474.0	0.00	LOT
SURF.COND.	9 5/8	838.0	12 1/4	850.0	1.25	LOT
LINER	7	1251.0	8 1/2	1252.0	0.00	LOT
OPEN HOLE		2222.0	6	2222.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
397	1.60	19.0		Kill Fluid-SW/Bentonite	
397	1.05	15.0		Spud Mud	

471	1.05	14.0		Spud Mud	
472	1.60	19.0		Kill Fluid-SW/Bentonite	
474	1.05	12.0		Spud Mud	
474	1.60	19.0		Kill Fluid-SW/Bentonite	
850	1.05	12.0		Spud Mud	
850	1.20	20.0		KCl/Polymer/Glycol	
850	1.25	21.0		KCl/Polymer/Glycol	
850	1.05	12.0		Spud Mud	
872	1.15	12.0		KCl/Polymer/Glycol	
1035	1.12	13.0		KCl/Polymer/Glycol	
1252	1.12	13.0		KCl/Polymer/Glycol	
1252	1.15	12.0		KCl/Polymer/Glycol	
1379	1.24	15.0		KCl/Polymer/Glycol	
1472	1.21	12.0		KCl/Polymer/Glycol	
1472	1.23	13.0		KCl/Polymer/Glycol	
1472	1.24	12.0		KCl/Polymer/Glycol	
2222	1.21	14.0		KCl/Polymer/Glycol	

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]
6484_Formation_pressure_(Formasjonstrykk)	PDF	0.28