

**General information**

Wellbore name	7220/7-2 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Discovery	7220/7-2 S (Skavl)
Well name	7220/7-2
Seismic location	3D survey WG08STR10-BIN:inline 1516 & xline 3082
Production licence	532
Drilling operator	Statoil Petroleum AS
Drill permit	1473-L
Drilling facility	WEST HERCULES
Drilling days	75
Entered date	02.10.2013
Completed date	16.12.2013
Release date	16.12.2015
Publication date	16.12.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	LATE TRIASSIC
1st level with HC, formation	FRUHOLMEN FM
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	TUBÅEN FM
Kelly bushing elevation [m]	31.0
Water depth [m]	349.0
Total depth (MD) [m RKB]	1855.0
Final vertical depth (TVD) [m RKB]	1730.0
Maximum inclination [°]	32
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	72° 26' 55.11" N
EW degrees	20° 18' 26.27" E



NS UTM [m]	8047082.14
EW UTM [m]	678437.08
UTM zone	33
NPDID wellbore	7252

Wellbore history

General

Well 7220/7-2 S was drilled to test the Skavl structure, a shallow rotated, down-faulted terrace within the Bjørnøyrenna Fault Complex in the Barents Sea. The prospect is located 5 km to the south of the 7220/8-1 Skrugard Discovery well. The primary objective was to explore and prove commercial quantities of hydrocarbons in the primary target (Fruholmen Formation) and the secondary target (Tubåen Formation). In order to reach both the targets, the well had to be drilled deviated through the reservoir section.

Operations and results

Pilot well 7220/7-U-2 was drilled to 462 m to check for shallow gas due to a shallow gas class 1 warning. No shallow gas was observed. Wildcat well 7220/7-2 S was spudded with the semi-submersible installation West Hercules on 2 October 2015 and drilled to TD at 1855 m (1761 m TVD) m in the Triassic Snadd Formation. The well was drilled deviated from 580 m to TD, and with a sail angle of about 30 °from ca 1000 m to TD. The well was drilled with spud mud down to 758 m and with low sulphate KCl/polymer/glycol mud from 758 m to TD.

The well penetrated Quaternary, Tertiary and Cretaceous claystones, as well as late Jurassic claystones. The Tubåen reservoir sandstones came in at 1119 m. In Tubåen Formation both oil and gas were proven, whereas only oil was proven in the Fruholmen Formation, Krabbe Member. Based on log data, a gas oil contact (GOC) is estimated to 1150 m (1120.5 m TVD), and based on log- and pressure data the free water level (FWL) is estimated to 1177 m (1143 m TVD) in the Tubåen Formation. In the Fruholmen Formation the deepest FWL is estimated to 1358 m (1299 m TVD), based on pressure data. Pressure data show two, possibly three separate oil gradients in the Fruholmen Formation.

Six cores were cut in the reservoir formations. A total of 95.2 m core was recovered in three cores in the interval 1130 to 1226 m in the Tubåen Formation, and 112.21 m core was recovered in three cores in the interval 1305.5 to 1369.5 m in the Fruholmen Formation. MDT fluid samples were taken at 1117.96 m (gas), 1132.45 m (oil), 1145.19 m (water), 1172.79 m (oil), 1250.16 m (oil), and 1368.1 m (water).

The well was permanently abandoned on 16 December 2013 as an oil and gas discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
760.00	1854.00



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	1130.0	1169.6	[m]
2	1170.0	1177.8	[m]
3	1177.8	1224.9	[m]
4	1305.5	1329.5	[m]
5	1334.5	1368.6	[m]
6	1369.5	1423.6	[m]

Total core sample length [m]	206.7
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
760.0	[m]	DC	ROBERTSO
770.0	[m]	DC	ROBERT
780.0	[m]	DC	ROBERT
790.0	[m]	DC	ROBERT
800.0	[m]	DC	ROBERT
810.0	[m]	DC	ROBERT
820.0	[m]	DC	ROBERT
830.0	[m]	DC	ROBERT
840.0	[m]	DC	ROBERT
850.0	[m]	DC	ROBERT
860.0	[m]	DC	ROBERT
870.0	[m]	DC	ROBERT
880.0	[m]	DC	ROBERT
890.0	[m]	DC	ROBERT
900.0	[m]	DC	ROBERT
910.0	[m]	DC	ROBERT
920.0	[m]	DC	ROBERT
930.0	[m]	DC	ROBERT
940.0	[m]	DC	ROBERT
950.0	[m]	DC	ROBERT



960.0 [m]	DC	ROBERT
970.0 [m]	DC	ROBERT
980.0 [m]	DC	ROBERT
990.0 [m]	DC	ROBERT
1000.0 [m]	DC	ROBERT
1010.0 [m]	DC	ROBERT
1020.0 [m]	DC	ROBERT
1030.0 [m]	DC	ROBERT
1040.0 [m]	DC	ROBERT
1050.0 [m]	DC	ROBERT
1060.0 [m]	DC	ROBERT
1070.0 [m]	DC	ROBERT
1080.0 [m]	DC	ROBERT
1089.0 [m]	DC	ROBERT
1098.0 [m]	DC	ROBERT
1107.0 [m]	DC	ROBERT
1116.0 [m]	DC	ROBERT
1119.0 [m]	DC	ROBERT
1125.0 [m]	DC	ROBERT
1132.8 [m]	C	ROBERT
1136.9 [m]	C	ROBERT
1141.5 [m]	C	ROBERT
1145.3 [m]	C	ROBERT
1150.6 [m]	C	ROBERT
1155.8 [m]	C	ROBERT
1161.9 [m]	C	ROBERT
1168.3 [m]	C	ROBERT
1171.8 [m]	C	ROBERT
1177.5 [m]	C	ROBERT
1180.5 [m]	C	ROBERT
1190.8 [m]	C	ROBERT
1194.7 [m]	C	ROBERT
1215.6 [m]	C	ROBERT
1220.5 [m]	C	ROBERT
1224.8 [m]	C	ROBERT
1227.0 [m]	DC	ROBERT
1236.0 [m]	DC	ROBERT
1245.0 [m]	DC	ROBERT
1254.0 [m]	DC	ROBERT
1263.0 [m]	DC	ROBERT



1281.0	[m]	DC	ROBERT
1290.0	[m]	DC	ROBERT
1305.0	[m]	DC	ROBERT
1321.6	[m]	DC	ROBERT
1326.5	[m]	C	ROBERT
1334.8	[m]	C	ROBERT
1338.9	[m]	C	ROBERT
1345.4	[m]	C	ROBERT
1349.8	[m]	C	ROBERT
1354.8	[m]	C	ROBERT
1359.7	[m]	C	ROBERT
1365.6	[m]	C	ROBERT
1369.9	[m]	C	ROBERT
1374.8	[m]	C	ROBERT
1379.8	[m]	C	ROBERT
1384.7	[m]	C	ROBERT
1389.7	[m]	C	ROBERT
1394.6	[m]	C	ROBERT
1399.5	[m]	C	ROBERT
1405.9	[m]	C	ROBERT
1411.7	[m]	C	ROBERT
1417.5	[m]	C	ROBERT
1420.4	[m]	C	ROBERT
1422.9	[m]	C	ROBERT
1423.3	[m]	C	ROBERT
1425.0	[m]	DC	ROBERT
1434.0	[m]	DC	ROBERT
1443.0	[m]	DC	ROBERT
1452.0	[m]	DC	ROBERT
1461.0	[m]	DC	ROBERT
1470.0	[m]	DC	ROBERT
1479.0	[m]	DC	ROBERT
1488.0	[m]	DC	ROBERT
1497.0	[m]	DC	ROBERT
1506.0	[m]	DC	ROBERT
1515.0	[m]	DC	ROBERT
1524.0	[m]	DC	ROBERT
1533.0	[m]	DC	ROBERT
1542.0	[m]	DC	ROBERT
1551.0	[m]	DC	ROBERT



1560.0	[m]	DC	ROBERT
1569.0	[m]	DC	ROBERT
1578.0	[m]	DC	ROBERT
1587.0	[m]	DC	ROBERT
1596.0	[m]	DC	ROBERT
1605.0	[m]	DC	ROBERT
1614.0	[m]	DC	ROBERT
1623.0	[m]	DC	ROBERT
1632.0	[m]	DC	ROBERT
1641.0	[m]	DC	ROBERT
1650.0	[m]	DC	ROBERT
1659.0	[m]	DC	ROBERT
1668.0	[m]	DC	ROBERT
1677.0	[m]	DC	ROBERT
1686.0	[m]	DC	ROBERT
1695.0	[m]	DC	ROBERT
1704.0	[m]	DC	ROBERT
1713.0	[m]	DC	ROBERT
1722.0	[m]	DC	ROBERT
1731.0	[m]	DC	ROBERT
1740.0	[m]	DC	ROBERT
1749.0	[m]	DC	ROBERT
1758.0	[m]	DC	ROBERT
1767.0	[m]	DC	ROBERT
1776.0	[m]	DC	ROBERT
1785.0	[m]	DC	ROBERT
1794.0	[m]	DC	ROBERT
1803.0	[m]	DC	ROBERT
1812.0	[m]	DC	ROBERT
1821.0	[m]	DC	ROBERT
1830.0	[m]	DC	ROBERT
1839.0	[m]	DC	ROBERT
1848.0	[m]	DC	ROBERT
1854.0	[m]	DC	ROBERT

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
MDT		1165.00	0.00	OIL	07.03.2014 - 00:00	YES
MDT		1302.32	0.00	OIL	19.03.2014 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
380	NORDLAND GP
380	NAUST FM
455	SOTBAKKEN GP
455	TORSK FM
980	ADVENTDALEN GP
980	KOLMULE FM
1119	KAPP TOSCANA GP
1119	TUBÅEN FM
1190	FRUHOLMEN FM
1190	KRABBE MBR
1422	REKE MBR
1665	AKKAR MBR
1769	SNADD FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD-PD ARC TELE	436	755
MWD-PD X6 GVR ARC TELE	1083	1129
MWD-PD XC ARC TELE	755	1083
MWD-TELE DIR	380	436

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	36	430.2	42	436.0	0.00	
PILOT HOLE		462.0	9 7/8	462.0	0.00	



INTERM.	13 3/8	746.8	17 1/2	755.0	1.25	FIT
LINER	9 5/8	1081.5	12 1/4	1083.0	1.96	LOT
OPEN HOLE		1885.0	8 1/2	1885.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
755	1.12	15.0		KCl/Polymer/Glycol	
770	1.12	14.0		KCl/Polymer/Glycol	
834	1.26	38.0		Low Sulphate/KCl/Poly mer/Glycol	
858	1.12	26.0		KCl/Polymer/Glycol	
934	1.25	29.0		Low Sulphate/KCl/Poly mer/Glycol	
942	1.12	29.0		KCl/Polymer/Glycol	
986	1.25	37.0		Low Sulphate/KCl/Poly mer/Glycol	
1030	1.12	27.0		KCl/Polymer/Glycol	
1083	1.21	22.0		Low Sulphate/KCl/Poly mer/Glycol	
1120	1.21	22.0		Low Sulphate/KCl/Poly mer/Glycol	
1305	1.21	30.0		Low Sulphate/KCl/Poly mer/Glycol	
1370	1.25	27.0		Low Sulphate/KCl/Poly mer/Glycol	
1714	1.25	27.0		Low Sulphate/KCl/Poly mer/Glycol	
1778	1.21	28.0		Low Sulphate/KCl/Poly mer/Glycol	
1855	1.25	29.0		Low Sulphate/KCl/Poly mer/Glycol	
1855	1.20	33.0		Low Sulphate/KCl/Poly mer/Glycol	



1855	1.25	27.0		Low Sulphate/KCl/Poly mer/Glycol	
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