

**General information**

Wellbore name	7120/6-2 S
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	<a href="#">link to press release</a>
Factmaps in new window	<a href="#">link to map</a>
Main area	BARENTS SEA
Field	<a href="#">SNØHVIT</a>
Discovery	<a href="#">7121/4-1 Snøhvit</a>
Well name	7120/6-2
Seismic location	HR line ST0691-05006-SP 1254 line ST0691-SP 1258
Production licence	<a href="#">097</a>
Drilling operator	Statoil ASA (old)
Drill permit	936-L
Drilling facility	<a href="#">POLAR PIONEER</a>
Drilling days	39
Entered date	14.06.2007
Completed date	22.07.2007
Release date	22.07.2009
Publication date	22.07.2009
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
Kelly bushing elevation [m]	23.0
Water depth [m]	321.0
Total depth (MD) [m RKB]	3242.0
Final vertical depth (TVD) [m RKB]	3035.0
Maximum inclination [°]	32
Bottom hole temperature [°C]	111
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	71° 36' 0.6" N
EW degrees	20° 49' 41.7" E



NS UTM [m]	7944559.34
EW UTM [m]	493948.96
UTM zone	34
NPDID wellbore	3558

## Wellbore history

### General

Well 7120/6-2 S is an appraisal well on the Snøhvit Field in the Hammerfest Basin in the Barents Sea. The primary objective for the well was to prove that there are 36 MSm<sup>3</sup> oil in place in the best reservoir zones where the oil is producible, in the Stø 2 and Stø 1 Formations. The well was also to confirm that the oil-water contact is located in the clean quartz sandstone at Stø 2 level in the Stø Formation. In addition, the assumed good quality and the thickening of the reservoir that was expected in the western part of the Snøhvit Field would be proven. A secondary objective for this well was to prove larger gas volumes in the western part of the Snøhvit Field than was calculated earlier.

### Operations and results

Well 7120/6-2 S was spudded with the semi-submersible installation Polar Pioneer on 14 June 2007 and drilled to TD at 3242 m (3035 m TVD) in the Late Triassic Snadd formation. It was designed as an S-well in order to avoid shallow gas in the area and maintain stratigraphic/seismic control while drilling. The well started to build inclination from 470 m and reached maximum inclination of 32 deg in the interval ca 1600 to 2000 m in the 12 1/4" section. The hole packed of several times in the 17 1/2" section. This caused no significant delay in the drilling progress, but no logs were run in this section, from 932 - 1259 m. Formation tops in this section are based on the prognosis. No shallow gas was expected, and no shallow gas was observed. The well was drilled with sea water and bentonite down to 1259 m and with FORMPRO mud from 1259 m to TD.

The observed stratigraphy was well within the uncertainties given in the prognosis, with the exception of the Hekkingen Formation which was 16.5 m shallower than anticipated. Generally the difference from prognosis to result was within +/- 6.5 m and there were no trends in the discrepancies. The Stø Formation (target reservoir) was encountered at 2564 m (2371 m TVD RKB). The gas-oil contact was found at 2626 m (2429.6 m TVD RKB) and the oil-water contact at 2637 m (2440.3 m TVD RKB), both contacts at Stø 2 level. However, the oil rim was thinner than expected, only 10.7 m thick in this area. The in-place oil volume in the western part of the Snøhvit Field called Main Oil Province was reduced from 36 MSm<sup>3</sup> to 26 MSm<sup>3</sup>. These oil reserves were proven to be too small to be of economic interest. Weak shows were recorded on the cores below OWC and down to the base of the Stø Formation at 2678 m. No hydrocarbons were identified in the Snadd Formation and no shows were reported above the Stø Formation reservoir.

Two cores were cut from 2566.5 to 2683.0 m in the Stø Formation and 5 m into to Nordmela Formation. MDT gas, water and oil samples were collected at 13 depths in the Stø Formation. A water sample was also collected in the Tubåen Formation at 2802 m.

The well was suspended on 22 July 2007 as a possible future injector for formation water or CO<sub>2</sub>. It is classified as an oil and gas appraisal well.

### Testing

No drill stem test was performed.

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**Cuttings at the Norwegian Offshore Directorate**

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1260.00	3242.00

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	2566.5	2598.2	[m ]
2	2599.5	2681.9	[m ]

Total core sample length [m]	114.1
Cores available for sampling?	YES

**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
1260.0	[m]	DC	APT
1280.0	[m]	DC	APT
1300.0	[m]	DC	APT
1320.0	[m]	DC	APT
1340.0	[m]	DC	APT
1360.0	[m]	DC	APT
1380.0	[m]	DC	APT
1400.0	[m]	DC	APT
1550.0	[m]	DC	APT
1570.0	[m]	DC	APT
1590.0	[m]	DC	APT
1610.0	[m]	DC	APT
1630.0	[m]	DC	APT
1650.0	[m]	DC	APT
1670.0	[m]	DC	APT
1680.0	[m]	DC	APT
1700.0	[m]	DC	APT
1720.0	[m]	DC	APT
1740.0	[m]	DC	APT



1760.0 [m]	DC	APT
1780.0 [m]	DC	APT
1800.0 [m]	DC	APT
1820.0 [m]	DC	APT
1840.0 [m]	DC	APT
1860.0 [m]	DC	APT
1880.0 [m]	DC	APT
1900.0 [m]	DC	APT
1920.0 [m]	DC	APT
1940.0 [m]	DC	APT
1960.0 [m]	DC	APT
1980.0 [m]	DC	APT
2000.0 [m]	DC	APT
2020.0 [m]	DC	APT
2040.0 [m]	DC	APT
2060.0 [m]	DC	APT
2080.0 [m]	DC	APT
2100.0 [m]	DC	APT
2120.0 [m]	DC	APT
2140.0 [m]	DC	APT
2160.0 [m]	DC	APT
2180.0 [m]	DC	APT
2200.0 [m]	DC	APT
2210.0 [m]	DC	APT
2220.0 [m]	DC	APT
2230.0 [m]	DC	APT
2240.0 [m]	DC	APT
2250.0 [m]	DC	APT
2260.0 [m]	DC	APT
2270.0 [m]	DC	APT
2280.0 [m]	DC	APT
2290.0 [m]	DC	APT
2300.0 [m]	DC	APT
2310.0 [m]	DC	APT
2320.0 [m]	DC	APT
2330.0 [m]	DC	APT
2340.0 [m]	DC	APT
2350.0 [m]	DC	APT
2360.0 [m]	DC	APT
2370.0 [m]	DC	APT



2380.0	[m]	DC	APT
2390.0	[m]	DC	APT
2400.0	[m]	DC	APT
2406.0	[m]	DC	APT
2412.0	[m]	DC	APT
2418.0	[m]	DC	APT
2424.0	[m]	DC	APT
2430.0	[m]	DC	APT
2436.0	[m]	DC	APT
2442.0	[m]	DC	APT
2448.0	[m]	DC	APT
2454.0	[m]	DC	APT
2460.0	[m]	DC	APT
2466.0	[m]	DC	APT
2472.0	[m]	DC	APT
2478.0	[m]	DC	APT
2484.0	[m]	DC	APT
2490.0	[m]	DC	APT
2496.0	[m]	DC	APT
2502.0	[m]	DC	APT
2508.0	[m]	DC	APT
2514.0	[m]	DC	APT
2526.0	[m]	DC	APT
2532.0	[m]	DC	APT
2538.0	[m]	DC	APT
2544.0	[m]	DC	APT
2550.0	[m]	DC	APT
2556.0	[m]	DC	APT
2562.0	[m]	DC	APT
2565.0	[m]	DC	APT
2572.7	[m]	C	APT
2576.1	[m]	C	APT
2578.7	[m]	C	APT
2583.5	[m]	C	APT
2585.5	[m]	C	APT
2595.4	[m]	C	APT
2596.4	[m]	C	APT
2601.4	[m]	C	APT
2607.9	[m]	C	APT
2637.6	[m]	C	APT



2639.2	[m]	C	APT
2654.5	[m]	C	APT
2658.0	[m]	C	APT
2660.3	[m]	C	APT
2663.8	[m]	C	APT
2667.2	[m]	C	APT
2671.9	[m]	C	APT
2674.7	[m]	C	APT
2675.3	[m]	C	APT
2676.8	[m]	C	APT
2676.9	[m]	C	APT
2677.3	[m]	C	APT
2677.6	[m]	C	APT
2678.2	[m]	C	APT
2680.4	[m]	C	APT
2680.9	[m]	C	APT
2681.5	[m]	C	APT
2685.0	[m]	DC	APT
2694.0	[m]	DC	APT
2703.0	[m]	DC	APT
2712.0	[m]	DC	APT
2721.0	[m]	DC	APT
2730.0	[m]	DC	APT
2739.0	[m]	DC	APT
2748.0	[m]	DC	APT
2757.0	[m]	DC	APT
2766.0	[m]	DC	APT
2775.0	[m]	DC	APT
2784.0	[m]	DC	APT
2793.0	[m]	DC	APT
2802.0	[m]	DC	APT
2811.0	[m]	DC	APT
2820.0	[m]	DC	APT
2829.0	[m]	DC	APT
2841.0	[m]	DC	APT
2850.0	[m]	DC	APT
2859.0	[m]	DC	APT
2868.0	[m]	DC	APT
2877.0	[m]	DC	APT
2886.0	[m]	DC	APT



2895.0	[m]	DC	APT
2904.0	[m]	DC	APT
2913.0	[m]	DC	APT
2922.0	[m]	DC	APT
2931.0	[m]	DC	APT
2940.0	[m]	DC	APT
2949.0	[m]	DC	APT
2958.0	[m]	DC	APT
2967.0	[m]	DC	APT
2976.0	[m]	DC	APT
2985.0	[m]	DC	APT
2994.0	[m]	DC	APT
3003.0	[m]	DC	APT
3012.0	[m]	DC	APT
3021.0	[m]	DC	APT
3030.0	[m]	DC	APT
3036.0	[m]	DC	APT
3045.0	[m]	DC	APT
3054.0	[m]	DC	APT
3063.0	[m]	DC	APT
3072.0	[m]	DC	APT
3081.0	[m]	DC	APT
3090.0	[m]	DC	APT
3102.0	[m]	DC	APT
3108.0	[m]	DC	APT
3114.0	[m]	DC	APT
3120.0	[m]	DC	APT
3126.0	[m]	DC	APT
3132.0	[m]	DC	APT
3138.0	[m]	DC	APT
3144.0	[m]	DC	APT
3150.0	[m]	DC	APT
3156.0	[m]	DC	APT
3162.0	[m]	DC	APT
3168.0	[m]	DC	APT
3174.0	[m]	DC	APT
3180.0	[m]	DC	APT
3186.0	[m]	DC	APT
3192.0	[m]	DC	APT
3198.0	[m]	DC	APT



3204.0	[m]	DC	APT
3213.0	[m]	DC	APT
3222.0	[m]	DC	APT
3231.0	[m]	DC	APT
3240.0	[m]	DC	APT
3242.0	[m]	DC	APT

**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	0	2630.00	0.00	OIL		YES
MDT		2632.00	0.00	OIL	11.07.2007 - 03:05	YES

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
344	<a href="#">NORDLAND GP</a>
459	<a href="#">SOTBAKKEN GP</a>
459	<a href="#">TORSK FM</a>
1137	<a href="#">NYGRUNNEN GP</a>
1137	<a href="#">KVITING FM</a>
1176	<a href="#">ADVENTDALEN GP</a>
1176	<a href="#">KOLMULE FM</a>
1954	<a href="#">KOLJE FM</a>
2351	<a href="#">KNURR FM</a>
2470	<a href="#">HEKKINGEN FM</a>
2550	<a href="#">FUGLEN FM</a>
2564	<a href="#">KAPP TOSCANA GP</a>
2564	<a href="#">STØ FM</a>
2678	<a href="#">NORDMELA FM</a>
2762	<a href="#">TUBÅEN FM</a>
2886	<a href="#">FRUHOLMEN FM</a>
3145	<a href="#">SNADD FM</a>

**Composite logs**







Document name	Document format	Document size [MB]
<a href="#">3558</a>	pdf	0.30

### Geochemical information

Document name	Document format	Document size [MB]
<a href="#">3558_1</a>	pdf	0.23

### Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI MSIP PPC XPT ACTS ECRD	1730	3242
MDT	2615	2632
MDT	2627	2623
MDT	2630	2630
MDT	2631	2631
MDT	2676	2802
MWD - DI	344	411
MWD - GR RES ECD ESD DI	411	3242
PEX HRLA HNGS CMR	3242	2664
WAVSP	344	3200

### 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	407.0	36	411.0	0.00	LOT
INTERM.	13 3/8	1218.0	17 1/2	1259.0	1.46	LOT
INTERM.	9 5/8	2564.0	12 1/4	2566.0	1.59	LOT
LINER	7	3241.0	8 1/2	3242.0	0.00	LOT

### Drilling mud





Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
411	1.03			SW / BENTONITE 1	
500	1.03			SW / BENTONITE 1	
1034	1.03			SW / BENTONITE 1	
1259	1.03			SW / BENTONITE 1	
2490	1.33	21.0		FORM PRO	
2566	1.27	14.0		FORM PRO	
2567	1.22	14.0		POTASSIUM FORMATE	
2568	1.27	8.0		FORM PRO	

### 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]
<a href="#">3558 Formation pressure (Formasjonstrykk)</a>	pdf	0.28

