

**General information**

Wellbore name	16/2-22 S
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	JOHAN SVERDRUP
Discovery	16/2-6 Johan Sverdrup
Well name	16/2-22
Seismic location	IL3105. XL3565 (LN0902STR11)
Production licence	265
Drilling operator	Statoil Petroleum AS
Drill permit	1646-L
Drilling facility	DEEPSEA ATLANTIC
Drilling days	13
Entered date	16.01.2017
Completed date	28.01.2017
Plugged and abandon date	29.01.2017
Release date	28.01.2019
Publication date	04.04.2019
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	INTRA DRAUPNE FM SS
Kelly bushing elevation [m]	30.0
Water depth [m]	116.0
Total depth (MD) [m RKB]	1993.0
Final vertical depth (TVD) [m RKB]	1982.0
Maximum inclination [°]	9.8
Bottom hole temperature [°C]	85
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	58° 55' 33.5" N
EW degrees	2° 24' 33.2" E
NS UTM [m]	6532109.67



EW UTM [m]	465984.21
UTM zone	31
NPDID wellbore	8083

Wellbore history

General

Well 16/2-22 S was drilled to appraise the Northern outline of the Johan Sverdrup Field on the Utsira High in the North Sea. The Johan Sverdrup reservoir range from Late Triassic to Early Cretaceous in age, with Intra Draupne Formation sandstone as the main unit. The primary objective was to test The Intra-Draupne Formation sandstone and investigate pressure communication.

Operations and results

Appraisal well 16/2-22 S was spudded with the semi-submersible installation Deepsea Atlantic on 16 January 2017 and drilled to TD at 1993 m (1982 m TVD) m in granitic basement. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1214 m and with Carbosea oil-based mud from 1214 m to TD.

The Intra Draupne Formation reservoir was penetrated from 1934.5 to 1950 m. The Formation consists of muddy spiculites and is directly overlying basement. It is oil bearing from top to base. No shows were observed in the well outside of the oil-bearing reservoir. Pressure data over the reservoir proved an oil gradient that match the one in surrounding wells. The reservoir pressure is about 0.4 bar lower pressure compared to previously drilled well 16/2-12. This difference is in line with the rate of pressure depletion in the area.

One core was cut from 1937 to 1953 m in the Intra Draupne Formation sandstone and Basement with 100% recovery. Two RCX fluid samples were taken. Oil was sampled at 1943.4 m (1933.4 m TVD) and water at 1950 m (1939.9 m TVD).

The well was permanently abandoned on 28 January 2017 as an oil appraisal.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1220.00	1993.00

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	1937.0	1953.5	[m]

Total core sample length [m]	16.5
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
146	NORDLAND GP
791	UTSIRA FM
919	HORDALAND GP
919	SKADE FM
1090	NO FORMAL NAME
1643	ROGALAND GP
1643	BALDER FM
1657	SELE FM
1691	LISTA FM
1799	VÅLE FM
1808	SHETLAND GP
1808	EKOFISK FM
1818	TOR FM
1855	HOD FM
1891	CROMER KNOLL GP
1891	RØDBY FM
1919	SOLA FM
1923	ÅSGARD FM
1935	VIKING GP
1935	DRAUPNE FM
1950	BASEMENT

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSL MREX CN ZDL HDIL	1208	1993
GR FLEX GXPLORIT UXPL	1208	1993
GR FTEX ORIT XMAC	1208	1993



GR RCX SENT	1816	1950
MWD - GR RES	200	1993

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	195.5	42	200.0	0.00	
INTERM.	13 3/8	1208.3	17 1/2	1214.0	1.42	FIT
OPEN HOLE		1993.0	12 1/4	1993.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
200	1.25	8.0		Bentonite/Polymer mud	
1093	1.25	24.0		CARBOSEA	
1214	1.25	8.0		Bentonite/Polymer mud	
1214	1.25	27.0		CARBOSEA	
1312	1.25	30.0		CARBOSEA	
1833	1.25	25.0		CARBOSEA	
1911	1.25	25.0		CARBOSEA	
1943	1.25	24.0		CARBOSEA	
1993	1.25	24.0		CARBOSEA	