

**General information**

Wellbore name	16/2-19 A
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	16/2-19
Seismic location	3D survey:LN0902STR11 inline 3526 & xline 3631
Production licence	265
Drilling operator	Statoil Petroleum AS
Drill permit	1517-L
Drilling facility	OCEAN VANGUARD
Drilling days	32
Entered date	03.04.2014
Completed date	03.05.2014
Release date	03.05.2016
Publication date	03.05.2016
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
2nd level with HC, age	TRIASSIC
2nd level with HC, formation	SKAGERRAK FM
Kelly bushing elevation [m]	22.0
Water depth [m]	116.0
Total depth (MD) [m RKB]	2347.5
Final vertical depth (TVD) [m RKB]	1979.0
Maximum inclination [°]	42.6
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	58° 54' 12.28" N
EW degrees	2° 29' 37.71" E



NS UTM [m]	6529557.51
EW UTM [m]	470835.44
UTM zone	31
NPDID wellbore	7456

Wellbore history

General

Well 16/2-19 A is a geological sidetrack to the 16/2-19 Geitungen well. The well is drilled on the northern part of the Johan Sverdrup Field on the Utsira High in the North Sea.

The sidetrack 16/2-19 A targeted Intra Draupne Formation Sandstones in an assumed depocentre in a more distal position than the 16/2-12 but in a more proximal position than 16/2-19. The objectives were to investigate the reservoir distribution, facies and quality of the Draupne sandstone, and to find the oil-water contact.

Operations and results

Appraisal well 16/2-19 A was kicked off through 13 3/8" casing at 625.5 m in the primary well on 3 April 2014. It was drilled with the semi-submersible installation Ocean Vanguard to TD at 2347 m (1979 m TVD) in granitic basement rock. No significant problem was encountered in the operations. The well was drilled with XP-07 oil based mud from kick-off to TD.

Draupne Formation claystone was penetrated at 2265 m, while Intra Draupne Formation Sandstone came in at 2271 m. A 13 m gross oil column was encountered in Intra Draupne Formation sandstone and Triassic Skagerrak Formation sandstone, the upper 3 m of which were in sandstone with very good reservoir quality. An oil-down-to situation was encountered. Oil shows described in the reservoir section from 2270 m to 2289 m; otherwise, no shows are reported from the well.

Two cores were cut across the reservoir section. Core 1 was cut from 2256.5 m in the Åsgard Formation, through Draupne formation claystone and Intra Draupne Formation Sandstone to 2283.2 m in the uppermost Hegre Group with 100% recovery. Core 2 was cut from 2283.2 m to 2305.1 m in the Skagerrak Formation with 99% recovery. MDT fluid samples were taken at 2281.04 m (oil with trace OBM contamination) and 2291.74 m (oil with ca 30% OBM contamination).

The well was permanently abandoned on 3 May 2014 as an oil appraisal well. A CATS system was installed for long term monitoring of pressure and temperature.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
630.00	2348.00

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	2256.5	2283.2	[m]
2	2283.2	2304.8	[m]

Total core sample length [m]	48.2
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
650.0	[m]	DC	ROBERTSO
660.0	[m]	DC	ROBERT
670.0	[m]	DC	ROBERT
680.0	[m]	DC	ROBERT
690.0	[m]	DC	ROBERT
700.0	[m]	DC	ROBERT
710.0	[m]	DC	ROBERT
720.0	[m]	DC	ROBERT
730.0	[m]	DC	ROBERT
740.0	[m]	DC	ROBERT
750.0	[m]	DC	ROBERT
760.0	[m]	DC	ROBERT
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
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
1070.0 [m]	DC	ROBERT
1080.0 [m]	DC	ROBERT
1090.0 [m]	DC	ROBERT
1100.0 [m]	DC	ROBERT
1110.0 [m]	DC	ROBERT
1120.0 [m]	DC	ROBERT
1130.0 [m]	DC	ROBERT
1140.0 [m]	DC	ROBERT
1150.0 [m]	DC	ROBERT
1160.0 [m]	DC	ROBERT
1170.0 [m]	DC	ROBERT
1180.0 [m]	DC	ROBERT
1190.0 [m]	DC	ROBERT
1200.0 [m]	DC	ROBERT
1220.0 [m]	DC	ROBERT
1240.0 [m]	DC	ROBERT
1260.0 [m]	DC	ROBERT
1280.0 [m]	DC	ROBERT
1300.0 [m]	DC	ROBERT
1320.0 [m]	DC	ROBERT
1340.0 [m]	DC	ROBERT
1360.0 [m]	DC	ROBERT
1380.0 [m]	DC	ROBERT
1400.0 [m]	DC	ROBERT
1420.0 [m]	DC	ROBERT
1440.0 [m]	DC	ROBERT



1460.0 [m]	DC	ROBERT
1480.0 [m]	DC	ROBERT
1500.0 [m]	DC	ROBERT
1520.0 [m]	DC	ROBERT
1540.0 [m]	DC	ROBERT
1560.0 [m]	DC	ROBERT
1580.0 [m]	DC	ROBERT
1600.0 [m]	DC	ROBERT
1620.0 [m]	DC	ROBERT
1640.0 [m]	DC	ROBERT
1680.0 [m]	DC	ROBERT
1700.0 [m]	DC	ROBERT
1720.0 [m]	DC	ROBERT
1740.0 [m]	DC	ROBERT
1760.0 [m]	DC	ROBERT
1780.0 [m]	DC	ROBERT
1800.0 [m]	DC	ROBERT
1820.0 [m]	DC	ROBERT
1840.0 [m]	DC	ROBERT
1880.0 [m]	DC	ROBERT
1900.0 [m]	DC	ROBERT
1920.0 [m]	DC	ROBERT
1940.0 [m]	DC	ROBERT
1960.0 [m]	DC	ROBERT
1980.0 [m]	DC	ROBERT
2000.0 [m]	DC	ROBERT
2020.0 [m]	DC	ROBERT
2060.0 [m]	DC	ROBERT
2080.0 [m]	DC	ROBERT
2100.0 [m]	DC	ROBERT
2120.0 [m]	DC	ROBERT
2126.5 [m]	C	ROBERT
2133.0 [m]	DC	ROBERT
2139.0 [m]	DC	ROBERT
2145.0 [m]	DC	ROBERT
2169.0 [m]	DC	ROBERT
2175.0 [m]	DC	ROBERT
2181.0 [m]	DC	ROBERT
2187.0 [m]	DC	ROBERT
2196.0 [m]	DC	ROBERT



2208.0	[m]	DC	ROBERT
2214.0	[m]	DC	ROBERT
2226.0	[m]	DC	ROBERT
2232.0	[m]	DC	ROBERT
2238.0	[m]	DC	ROBERT
2244.0	[m]	DC	ROBERT
2250.0	[m]	DC	ROBERT
2263.7	[m]	C	ROBERT
2267.5	[m]	C	ROBERT
2269.5	[m]	C	ROBERT
2272.1	[m]	C	ROBERT
2272.9	[m]	C	ROBERT
2274.9	[m]	C	ROBERT
2275.9	[m]	C	ROBERT
2280.6	[m]	C	ROBERT
2283.2	[m]	C	ROBERT
2285.9	[m]	C	ROBERT
2307.0	[m]	DC	ROBERT
2313.0	[m]	DC	ROBERT
2319.0	[m]	DC	ROBERT
2325.0	[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		2291.70	0.00	OIL	18.09.2014 - 00:00	YES
MDT		2281.00	0.00	OIL	18.09.2014 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
138	NORDLAND GP
815	UTSIRA FM
898	HORDALAND GP
1003	SKADE FM
1111	NO FORMAL NAME



1778	ROGALAND GP
1778	BALDER FM
1807	SELE FM
1829	LISTA FM
1936	VÅLE FM
1948	SHETLAND GP
1948	EKOFISK FM
1965	TOR FM
2053	HOD FM
2133	BLODØKS FM
2144	SVARTE FM
2168	CROMER KNOLL GP
2168	RØDBY FM
2247	SOLA FM
2250	ÅSGARD FM
2265	VIKING GP
2265	DRAUPNE FM
2283	HEGRE GP
2283	SKAGERRAK FM
2310	BASEMENT

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT PEX HNGS	2120	2345
DUAL OBMI PPC MSIP PPC	2120	2345
EXPRO CPST	1005	1005
MDT MINIDST	2270	2292
MWD LWD - ARCVIS	202	902
MWD LWD - ARCVRES6 TELE675	2120	2131
MWD LWD - ARCVRES6 TELE675	2262	2347
MWD LWD - PD ARC TELE	625	2126
PERFO	2277	2283
USIT CBL GR	1610	2120
XPT ECS CMR	2120	2345

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
INTERM.	9 5/8	2120.0	12 1/4	2126.0	1.40	FIT
LINER	7	2335.0	8 1/2	2347.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
715	1.23	17.0		XP-07 - Yellow	
1494	1.39	24.0		XP-07 - Yellow	
2126	1.39	23.0		XP-07 - Yellow	
2126	1.41	23.0		XP-07 - Yellow	
2127	1.22	18.0		XP-07 - Yellow	
2305	1.24	18.0		XP-07 - Yellow	
2322	1.21	16.0		XP-07 - Yellow	
2347	1.17	17.0		XP-07 - Yellow	
2348	1.21	17.0		XP-07 - Yellow	