

**General information**

Wellbore name	16/1-19 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	IVAR AASEN
Discovery	16/1-9 Ivar Aasen
Well name	16/1-19
Seismic location	Survey LN 12M02 3D inline 2073 & xline 3768
Production licence	457
Drilling operator	Wintershall Norge AS
Drill permit	1458-L
Drilling facility	BORGLAND DOLPHIN
Drilling days	32
Entered date	13.08.2013
Completed date	25.10.2013
Plugged date	23.09.2013
Plugged and abandon date	25.10.2013
Release date	25.10.2015
Publication date	25.10.2015
Purpose - planned	
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	31.0
Water depth [m]	113.0
Total depth (MD) [m RKB]	1995.0
Final vertical depth (TVD) [m RKB]	1984.0
Maximum inclination [°]	10.1
Oldest penetrated age	PRE-DEVONIAN
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	58° 54' 24.39" N
EW degrees	2° 18' 14.14" E
NS UTM [m]	6530030.37



EW UTM [m]	459899.46
UTM zone	31
NPDID wellbore	7255

Wellbore history

General

Well 16/1-19 S was drilled on the Amol prospect about two and a half kilometres east of appraisal wells 16/1-16 and 16/1-16 A at the Ivar Aasen field, and about three kilometres north of the Edvard Grieg field in the central part of the North Sea. The primary objective was to prove petroleum in Early Cretaceous reservoir rocks (the Åsgard formation) in the western part of the Utsira High. The secondary target was to prove petroleum in fractured and/or weathered basement rocks.

Operations and results

Wildcat well 16/1-19 S was spudded with the semi-submersible installation Borgland Dolphin on 13 August 2013 and drilled to TD at 1995 in the Basement rock. A 9 7/8" pilot hole was drilled to 604 m without any indication of shallow gas. Operations were suspended twice to accommodate sidetrack operations on the Asha East prospect. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 604 m, with Carbo-Sea oil based mud from 604 m to 1862 m, and with Aquadril mud from 1862 m to TD.

The Åsgard Formation was encountered at 1878 m and proved to contain only half a metre of tight sandstone/clay stone. The fractured basement was encountered at 1891 m with oil in the fractures. Live oil was sampled from the fractures, but the reservoir quality was poorer than expected.

Three cores were cut in the interval 1865 to 1910 m with 100% recovery. RCI oil samples were taken at 1929.5 m. The samples proved a GOR in the range 106 to 135 Sm³/Sm³, an oil density of ca 0.857 g/cm³, and a gas gravity of ca 0.97 (air = 1).

The well was permanently abandoned on 25 October 2013 as a well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
610.00	1995.00

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	1865.0	1895.2	[m]
2	1895.2	1903.5	[m]
3	1904.0	1910.3	[m]

Total core sample length [m]	44.8
Cores available for sampling?	YES

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		1929.50	0.00	OIL		NO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
144	NORDLAND GP
144	UNDIFFERENTIATED
771	UTSIRA FM
811	HORDALAND GP
811	UNDIFFERENTIATED
901	SKADE FM
1501	GRID FM
1727	ROGALAND GP
1727	BALDER FM
1738	SELE FM
1763	LISTA FM
1845	SHETLAND GP
1845	EKOFISK FM
1878	CROMER KNOLL GP
1878	ÅSGARD FM
1891	BASEMENT

**Logs**

Log type	Log top depth [m]	Log bottom depth [m]
DSL WGI MLL RTE XMAC ZDL CN SL	73	1993
GR FLEX MREX	1851	1993
GR RCX SP	1887	1965
MWD - DIR	144	604
MWD - GR RES PWD SON DIR	215	1862
MWD - GR RES STTRSK DIR CAL DEN	1895	1995
VSP	337	1972

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	211.0	36	216.0	0.00	
SURF.COND.	13 3/8	597.0	17 1/2	604.0	1.45	LOT
INTERM.	9 5/8	1853.0	12 1/4	1862.0	1.70	FIT
OPEN HOLE		1995.0	8 1/2	1995.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
216	1.02			SW/PHB	
338	1.49	20.0		Kill Mud	
500	1.39	26.0		Carbosea	
1600	1.36	28.0		Carbosea	
1885	1.14	14.0		Aquadrill	
1995	1.15	20.0		Aquadrill	