

**General information**

Wellbore name	16/1-6 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
Discovery	16/1-6 S (Verdandi)
Well name	16/1-6
Seismic location	SNST3D-inline4379 & crossline5037
Production licence	167
Drilling operator	Statoil ASA (old)
Drill permit	1066-L
Drilling facility	BORGLAND DOLPHIN
Drilling days	14
Entered date	08.06.2003
Completed date	21.06.2003
Release date	21.06.2005
Publication date	21.06.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	31.0
Water depth [m]	112.0
Total depth (MD) [m RKB]	2194.0
Final vertical depth (TVD) [m RKB]	2024.0
Maximum inclination [°]	40.5
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	TOR FM
Geodetic datum	ED50
NS degrees	58° 59' 27.95" N
EW degrees	2° 17' 43.07" E
NS UTM [m]	6539424.89
EW UTM [m]	459501.21
UTM zone	31
NPDID wellbore	4767



Wellbore history

General

Well 16/1-6 A is a sidetrack to the 16/1-6 S discovery on the Utsira High in the North Sea. The objective of well 16/1-6A was to penetrate the Heimdal Formation down flank, where a flat event had been mapped, in order to appraise the extent of the gas discovery and possibly penetrate a hydrocarbon - water contact.

Operations and results

Appraisal well 16/1-6 A was spudded with the semi-submersible installation Borgland Dolphin on 8 June 2003. The well was kicked off at 1215 m in 16/1-6 S and drilled to TD at 2194 m in the Late Cretaceous Tor Formation. It was drilled with oil-based mud (Novatec) from kick-off to TD.

Grid sands were penetrated from 1529.5 m (1480.5 m TVD MSL) to 1757 m (m TVD MSL). The Heimdal Formation came in at 2006.5 m (1850.5 m TVD MSL), which was considerably deeper than expected. The Heimdal Formation was also thinner than expected. Wire line and MWD logs showed relatively high resistivity readings combined with high porosity within the uppermost 2 ? 3 m of the Grid sandstone, but no conclusions regarding the presence of hydrocarbons could be drawn from these weak indications. Weak shows in the Heimdal Formation were considered to be residual only. From logs both the Grid and the Heimdal sandstones were concluded to be water wet. One core was attempted in the Grid Formation, but junk in the hole prevented the core from entering the core barrel, hence no recovery. MWD log data were collected from the whole well track, while the majority of the wire line logging, including MDT and VSP, had to be abandoned due to tight, partly collapsed hole.

The well was permanently abandoned on 21 June 2003 as a dry hole.

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	2190.00

Cuttings available for sampling?	YES
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
143	NORDLAND GP
722	UTSIRA FM
783	NO FORMAL NAME



830	HORDALAND GP
866	SKADE FM
1154	NO FORMAL NAME
1530	GRID FM
1553	NO FORMAL NAME
1629	GRID FM
1638	NO FORMAL NAME
1742	GRID FM
1757	NO FORMAL NAME
1876	ROGALAND GP
1876	BALDER FM
1914	SELE FM
1952	LISTA FM
2007	HEIMDAL FM
2056	LISTA FM
2123	VÅLE FM
2163	SHETLAND GP
2163	EKOFISK FM
2181	TOR FM

Composite logs

Document name	Document format	Document size [MB]
4767	pdf	0.18

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
4767 16 1 6 A COMPLETION LOG	.pdf	0.68
4767 16 1 6 A COMPLETION REPORT	.PDF	10.94

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MDT GR	1750	1750
MWD - AUTOTRACK MPR	1149	2194





PEX AIT DSI	1190	1730
VSP GR	0	0

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	203.0	36	203.0	0.00	LOT
SURF.COND.	20	546.0	26	546.0	1.82	LOT
INTERM.	13 3/8	1197.0	17 1/2	1197.0	1.60	LOT
OPEN HOLE		2194.0	8 1/2	2194.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1480	1.45	20.0		NOVATEC 55	
1698	1.45	17.0		NOVATEC 55	
1867	1.45	20.0		NOVATEC 55	