

**General information**

Wellbore name	16/1-5 A
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	16/1-5
Seismic location	INLINR 470 + RANDOMLINE + X-LINE 1349
Production licence	167
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	945-L
Drilling facility	BYFORD DOLPHIN
Drilling days	16
Entered date	21.11.1998
Completed date	06.12.1998
Release date	06.12.2000
Publication date	15.11.2001
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	105.0
Total depth (MD) [m RKB]	2150.0
Final vertical depth (TVD) [m RKB]	2029.8
Maximum inclination [°]	39
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	INTRA HEATHER FM SS
Geodetic datum	ED50
NS degrees	58° 47' 53.52" N
EW degrees	2° 9' 12.14" E
NS UTM [m]	6518040.86
EW UTM [m]	451073.37
UTM zone	31
NPDID wellbore	3626

**Wellbore history****General**

The objectives of well 16/1-5 were to prove hydrocarbon reserves in the Upper Jurassic (Oxfordian - Ryazanian) shallow marine sandstone as well as in the Middle Jurassic shallow to marginal marine sandstone. The well was also planned to provide a good stratigraphic tie to the Paleocene interval and test the possibility for Paleocene sands. A high amplitude at around 2070 ms TWT was also meant to be clarified with this well. The objective of the 16/1-5A sidetrack was to prove hydrocarbon reserves in an Upper Jurassic shallow marine sandstone, up-dip from the hydrocarbon shows that were recorded in well 16/1-5.

Operations and results

The main well, 16/1-5, was spudded and drilled with a water based mud to a total depth of 2460 m RKB. Both the Upper Jurassic sandstone, the Heather Formation "Sandstone Unit", and the Middle Jurassic Hugin Formation were encountered. Both sandstone sequences were water bearing, but oil shows were recorded in the upper 3 meters of the Heather Formation. A good stratigraphic tie to the Paleocene interval was established by the well, but no Paleocene sands were encountered. The high amplitude, observed on the seismic data at approximately 2070 ms TWT, most probably stems from the acoustic impedance contrast between the Heather sandstone - siltstone boundary and/or the Heather - Hugin boundary. No Permian sediments were encountered, with a stratigraphic succession going directly from Jurassic sediments into the Basement. Well 16/1-5 was terminated 194.5 m TVD into the Basement. Three cores were cut in the interval 2023 to 2066 m RKB in the Heather Formation. An FMT sample from 2024.5 m contained formation water and filtrate. The well was classified as dry.

The sidetrack, 16/1-5 A, was kicked off at 1440 m RKB and a 8 1/2" hole section was drilled to a total depth of 2150 m with no casing strings run. Oil based mud was used from kick off to TD. The well encountered the Heather Formation "Sandstone Unit" close to prognosis. Moderate hydrocarbon shows were recorded in the thin, Cretaceous limestone sequence above the Heather Formation as well as in the upper 8 meters of the Heather Formation sandstone. The sidetrack was terminated 24 m TVD into the Heather Formation where a core was cut from 2123 m RKB to TD. No wire line logs were run and the well was permanently plugged and abandoned.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1450.00	2133.00

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	2123.0	2150.0	[m]



Total core sample length [m]	27.0
Cores available for sampling?	YES

Core photos

2123-2128m



2128-2133m



2133-2138m



2138-2143m



2143-2148m



2148-2150m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
130	NORDLAND GP
745	UTSIRA FM
921	HORDALAND GP
1002	SKADE FM
1230	NO FORMAL NAME
1652	GRID FM
1798	NO FORMAL NAME
1973	ROGALAND GP
1973	BALDER FM
2002	SELE FM
2008	LISTA FM
2094	VÅLE FM
2101	SHETLAND GP
2101	HOD FM
2120	VIKING GP



2120 [INTRA HEATHER FM SS](#)

Composite logs

Document name	Document format	Document size [MB]
3626	pdf	0.07

Geochemical information

Document name	Document format	Document size [MB]
3626_1	pdf	1.72

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

Document name	Document format	Document size [MB]
3626_16_1_5_A_COMPLETION_LOG	.pdf	2.56
3626_16_1_5_A_COMPLETION_REPORT	.pdf	26.60

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MPR MDP GR	1427	1674
MPR MDP GR	1674	2123
MPR MDP GR	2123	2150

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	191.0	36	191.0	0.00	LOT
SURF.COND.	13 3/8	1410.0	17 1/2	1417.0	1.81	LOT
OPEN HOLE		2150.0	8 1/2	2150.0	0.00	LOT



**Drilling mud**

Depth MD [m]	Mud weight [g/cm ³]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1440	1.50			oil based m	
2150	2.50			oil based m	