General information

Wellbore name	2/1-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	2/1-1
Seismic location	
Production licence	019
Drilling operator	Conoco Norway Inc.
Drill permit	73-L
Drilling facility	OCEAN TIDE
Drilling days	79
Entered date	28.08.1972
Completed date	14.11.1972
Release date	14.11.1974
Publication date	12.03.2011
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	34.0
Water depth [m]	66.0
Total depth (MD) [m RKB]	4178.0
Bottom hole temperature [°C]	126
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	TYNE GP
Geodetic datum	ED50
NS degrees	56° 45' 26.6'' N
EW degrees	3° 12' 18.8'' E
NS UTM [m]	6290539.34
EW UTM [m]	512548.43
UTM zone	31
NPDID wellbore	249

Wellbore history

General

Well 2/1-1 was drilled on the Cod Terrace on the eastern margin of the Central Graben of the North Sea. The objectives were Danian - Late Cretaceous limestones and possible Jurassic sandstone.

Operations and results

Wildcat well 2/1-1 was spudded with the jack-up installation Ocean Tide on 28 August 1972 and drilled to TD at 4178 m in sediments believed to be of Late Jurassic age. The hole was drilled without much problem down to TD in the 8 1/2" section at 3886 m where logs were run and a 7" liner was set with shoe at 3885 m. A 5 7/8" hole was drilled to 4178 (TD) where the well kicked and the pipe got stuck. During killing operations returns were lost and circulation could not be re-established. The kick was most likely caused by a salt water flow from a Late Jurassic sand lense. When trying to back off the drill pipe twisted off, leaving a 340 m fish in the hole. A cement retainer was set and the well was plugged back to 3789 m. Hence, no logs were run below 3886 m.

Oil shows (dull gold fluorescence with slow straw-yellow cut) were observed in the shales at the base of the Middle Palaeocene and at the top of the Danian limestone (3124 - 3178 m), especially at 3161 m where there was a good straw-yellow streaming cut (faster than the upper intervals) accompanied by a minor gas peak. In the lower part of the Maastrichtian limestone gas peaks with 10% C2+ components appeared. Oil shows were recorded in limestone horizons in the Campanian and in the Berriasian. Weak fluorescence was observed also in thin sandstone lenses in the Late Jurassic, above the kick-sand at TD.

A core was cut from 3165.3 to 3179.1 m (10385 to 10430 ft) in the Danian limestone (Ekofisk Formation).

The well was permanently abandoned on 14 November 1972 as a well with shows.

Testing

Perforation intervals in the lower Chalk zone at 3619.8 - 3639.6 m, 3706.3 - 3719.2 m, and 3728.9 - 3742.6 m were tested before and after acidizing. The pre-acid test failed to unload the water cushion and the post acid test flowed gas at rates varying from 11412 to 11326 Sm3/day. A thick emulsion containing traces of condensate was also produced with the gas. Although the test tools and pressure gauges were lost in the hole, it is believed that the test was definitive of the zone tested, that is that the zone is extremely tight and contained gas or gas condensate.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
167.64	4175.76

Cuttings available for sampling?	NO

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	10386.0	10425.0	[ft]

Total core sample length [m]	11.9
Cores available for sampling?	YES

Core photos


10385-10400ft


10400-10415ft


10415-10425ft

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
100	NORDLAND GP
1981	NO FORMAL NAME
2207	HORDALAND GP
2926	ROGALAND GP
2926	BALDER FM
2937	SELE FM
2944	LISTA FM
2981	FORTIES FM
3013	LISTA FM
3039	VIDAR FM
3104	LISTA FM
3128	SHETLAND GP
3128	EKOFISK FM
3246	TOR FM
3600	HOD FM
3742	CROMER KNOLL GP
3742	RØDBY FM
3755	TUXEN FM

3775	ÅSGARD FM
3886	NO DATA

Geochemical information

Document name	Document format	Document size [MB]
249_1	pdf	1.18

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
249_01_WDSS_General_Information	pdf	0.24

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

Document name	Document format	Document size [MB]
249_2_1_1_COMPLETION_LOG	.pdf	2.30
249_2_1_1_COMPLETION_REPORT	.pdf	3.11

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3620	3743	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	16.000			

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0		14100			

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC SON GR	53	3883
CBL	2971	3779
CNL CCL	2971	3779
CPI	3048	3794
DLL	3044	3800
FDC CNL	3026	3800
IES	403	3885
MLL ML	3047	3800
PERF	3596	3764

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	148.0	36	158.0	0.00	LOT
SURF.COND.	20	403.0	26	415.0	0.00	LOT
INTERM.	13 3/8	1154.0	17 1/2	1166.0	0.00	LOT
INTERM.	9 5/8	3044.0	12 1/4	3050.0	0.00	LOT
LINER	7	3885.0	8 1/2	3886.0	0.00	LOT
OPEN HOLE		4178.0	5 7/8	4178.0	0.00	LOT