

**General information**

Wellbore name	2/3-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	2/3-1 (Løven)
Well name	2/3-1
Seismic location	LINE 13.
Production licence	022
Drilling operator	Norske Murphy Oil Company
Drill permit	23-L
Drilling facility	OCEAN TRAVELER
Drilling days	53
Entered date	10.02.1969
Completed date	03.04.1969
Release date	03.04.1971
Publication date	29.06.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	OLIGOCENE
1st level with HC, formation	VADE FM
Kelly bushing elevation [m]	27.0
Water depth [m]	59.0
Total depth (MD) [m RKB]	2934.0
Bottom hole temperature [°C]	90
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	56° 53' 9.46" N
EW degrees	3° 51' 38.08" E
NS UTM [m]	6305162.64
EW UTM [m]	552439.87
UTM zone	31
NPDID wellbore	162



Wellbore history

General

Well 2/3-1 is located approximately in the centre of the block on the Sørvestlandet High. The aim of the well was to test potential reservoirs in the Tertiary, Cretaceous, Jurassic, and Trias.

Operations and results

Wildcat well 2/3-1 was spudded with the semi-submersible installation Ocean Traveler on 10 February 1969 and drilled to TD at 2934 m in the Late Permian Zechstein Group. Bad weather with wind up to 31 m/s caused the rig to drift up to ca 40 feet off location on several occasions, interrupting drilling operations. The well was drilled with seawater and bentonite down to 463 m. A water based mud system was used in the remaining borehole.

The well encountered gas in two zones in Oligocene. From log analyses most of the reservoir interval from 1623 m to 1636 m, except a shale break, had a porosity around 22% with Sw = 30%. Best part of the second zone had a porosity of 23% with an Sw of 23%, (1597 m to 1600 m). No cores were cut in the well and no fluid samples were taken other than during the tests.

The well was permanently abandoned as a gas discovery on 3 April 1969.

Testing

Seven inch casing was run to 1673 m and two flowing drill stem tests were made successfully. The first test was made from perforations at 1624 m to 1636 m and flowed dry gas at rates of 207000 to 304000 Sm³/day on choke sizes varying from 24/64" to 30/64". The second test flowed dry gas at rates of 40000 to 92000/day on choke sizes varying from 12/64" to 30/64" from perforations at 1588 m to 1600 m.

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
4980.0	[ft]	DC	RRI
5020.0	[ft]	DC	RRI
5100.0	[ft]	DC	RRI
5140.0	[ft]	DC	RRI
5180.0	[ft]	DC	RRI
5220.0	[ft]	DC	RRI
5300.0	[ft]	DC	RRI
5340.0	[ft]	DC	RRI
5380.0	[ft]	DC	RRI
5420.0	[ft]	DC	RRI
5500.0	[ft]	DC	RRI
5540.0	[ft]	DC	RRI



5580.0	[ft]	DC	RRI
5620.0	[ft]	DC	RRI
5700.0	[ft]	DC	RRI
5740.0	[ft]	DC	RRI
5780.0	[ft]	DC	RRI
5820.0	[ft]	DC	RRI
5900.0	[ft]	DC	RRI
5940.0	[ft]	DC	RRI
5980.0	[ft]	DC	RRI
6020.0	[ft]	DC	RRI
6100.0	[ft]	DC	RRI
6140.0	[ft]	DC	RRI
6180.0	[ft]	DC	RRI
6220.0	[ft]	DC	RRI
6300.0	[ft]	DC	RRI
6320.0	[ft]	DC	RRI
6380.0	[ft]	DC	RRI
6420.0	[ft]	DC	RRI
6500.0	[ft]	DC	RRI
6540.0	[ft]	DC	RRI
6580.0	[ft]	DC	RRI
6620.0	[ft]	DC	RRI
6700.0	[ft]	DC	RRI
6740.0	[ft]	DC	RRI
6780.0	[ft]	DC	RRI
6840.0	[ft]	DC	RRI
6880.0	[ft]	DC	RRI
6920.0	[ft]	DC	RRI
7000.0	[ft]	DC	RRI
7040.0	[ft]	DC	RRI
7080.0	[ft]	DC	RRI
7120.0	[ft]	DC	RRI
7180.0	[ft]	DC	RRI
7240.0	[ft]	DC	RRI
7280.0	[ft]	DC	RRI
8360.0	[ft]	DC	SNEA
8420.0	[ft]	DC	SNEA
9020.0	[ft]	DC	SNEA
9140.0	[ft]	DC	SNEA
9250.0	[ft]	DC	SNEA



9330.0	[ft]	DC	SNEA
9420.0	[ft]	DC	SNEA
9510.0	[ft]	DC	SNEA
9560.0	[m]	DC	SNEA

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
84	NORDLAND GP
1330	HORDALAND GP
2135	ROGALAND GP
2135	BALDER FM
2153	SELE FM
2175	LISTA FM
2243	SHETLAND GP
2243	TOR FM
2359	CROMER KNOLL GP
2563	VESTLAND GP
2580	NO GROUP DEFINED
2580	SKAGERRAK FM
2832	SMITH BANK FM
2917	ZECHSTEIN GP

Composite logs

Document name	Document format	Document size [MB]
162	pdf	0.31

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

Document name	Document format	Document size [MB]
162_01_WDSS_General_Information	pdf	0.19

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





Document name	Document format	Document size [MB]
162 1 Completion report	pdf	13.07
162 2 Drilling programme murphy	pdf	4.39
162 3 Drilling programme	pdf	0.46
162 4 Permanent abandonment	pdf	2.73
162 5 Report on wellhead demolition operations	pdf	1.08
162 6 Sea floor search survey	pdf	40.06
162 7 Survey report	pdf	2.48

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
162 01 NPD Paper No.17 Lithology Well 2 3 1	pdf	19.10
162 02 NPD Paper No.17 Interpreted Lithology log Well 2 3 1	pdf	46.29

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	1624	1637	11.5
2.0	1588	1601	11.5

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0		283100			
2.0		50000			

Logs





Log type	Log top depth [m]	Log bottom depth [m]
DENS	1579	1653
GR SON CAL	107	2930
IEL	275	2924
LL	275	2395
MLL CAL	1158	2865
SNP	1579	1653

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	123.0	36	124.0	0.00	LOT
INTERM.	20	275.0	26	277.0	0.00	LOT
INTERM.	13 3/8	1298.0	17 1/2	1300.0	0.00	LOT
INTERM.	9 5/8	1674.0	12 1/4	1674.0	0.00	LOT
OPEN HOLE		2934.0	8 1/2	2934.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
123	1.02	200.0		spud mud	
463	1.01	108.0		water based	
701	1.11	40.0		water based	
1173	1.30	50.0		water based	
1310	1.37	49.0		water based	
1323	1.37	63.0		water based	
1646	1.44	62.0		water based	
2172	1.41	98.0		water based	