

**General information**

Wellbore name	36/1-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	36/1-1
Seismic location	LINE ANO 74-18 SP.191
Production licence	042
Drilling operator	Amoco Norway Oil Company
Drill permit	128-L
Drilling facility	DYVI ALPHA
Drilling days	37
Entered date	09.05.1975
Completed date	14.06.1975
Release date	14.06.1977
Publication date	11.02.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	26.0
Water depth [m]	165.0
Total depth (MD) [m RKB]	1596.0
Bottom hole temperature [°C]	38
Oldest penetrated age	PRE-DEVONIAN
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	61° 56' 40.36" N
EW degrees	4° 15' 43.86" E
NS UTM [m]	6868811.12
EW UTM [m]	566230.22
UTM zone	31
NPDID wellbore	435

Wellbore history

**General**

Block 36/1 was the most northern and shoreward block to be released by the Norwegian Government at the time well 36/1-1 was drilled. The eastern boundary of the Block 36/1 is only 20 km from near-shore islands and, at the closest point, approximately 26 km from the mainland. Wildcat well 36/1-1 is located northeast of the Agat Discovery, on the eastern side of the Norwegian Trench. The main objective and target was Middle Jurassic sands.

Operations and results

Exploratory Well 36/1-1 was spudded with the semi-submersible installation Dyvi Alpha on 9 May 1975 and drilled to a total depth of 1596 meters in metamorphic gneiss. The well was drilled without any serious drilling problems. The mud used was a water based salt-water gel /Milben mud down to 515 m, adding lignosulphonate and CMC from 515 m to TD.

Sands were encountered in the Early Cretaceous interval from 1219 m to 1359 m. The target Middle Jurassic sandstones were encountered at 1463 m and extended down to top basement at 1568 m. Coal seams were found between 1500 m to 1548 m. No hydrocarbon bearing formations were encountered in the well. Minor quantities of hydrocarbon were recorded in the Cretaceous and Middle Jurassic sections but there were no major shows. It was assumed that the structure on which 36/1-1 was drilled is not an effective trap. Possibly the shales overlying the Middle Jurassic sandstones are too poorly compacted to constitute effective seals. Also, the major easterly bounding fault may bring sands of the Cretaceous against the Middle Jurassic, thus destroying the effectiveness of the trap. One 6.1 m (80 % recovery) conventional core was cut at TD. No fluid sampling was attempted on wire line.

The well was permanently abandoned as dry on 14 June 1975.

Testing

Two drill stem tests were conducted in the Middle Jurassic: DST 1 from 1549.6 m to 1556 m and DST 2 from 1489.6 m to 1496.6 m. No fluid reached the surface in either test. Gas samples were taken from the test string above the water cushion, which was displaced some distance upwards by inflowing mud filtrate and formation fluids. Analyses of these showed maximum 190 ppm methane in the samples from DST 1 and maximum 130 ppm methane with traces of C2+ in DST 2.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
240.79	1463.00

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	5210.0	5230.0	[ft]



Total core sample length [m]	6.1
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
970.0	[ft]	DC	OD
1000.0	[ft]	DC	OD
2100.0	[ft]	DC	RRI
2170.0	[ft]	DC	RRI
2230.0	[ft]	DC	RRI
2310.0	[ft]	DC	RRI
2380.0	[ft]	DC	RRI
2440.0	[ft]	DC	RRI
2520.0	[ft]	DC	RRI
2570.0	[ft]	DC	RRI
3100.0	[ft]	DC	RRI
3190.0	[ft]	DC	RRI
3310.0	[ft]	DC	RRI
3410.0	[ft]	DC	RRI
3500.0	[ft]	DC	RRI
3500.0	[ft]	DC	OD
3560.0	[ft]	DC	OD
3600.0	[ft]	DC	RRI
3660.0	[ft]	DC	OD
3700.0	[ft]	DC	RRI
3720.0	[ft]	DC	OD
3750.0	[ft]	DC	OD
3800.0	[ft]	DC	RRI
3900.0	[ft]	DC	RRI
3930.0	[ft]	DC	PETROSTR
3960.0	[ft]	DC	PETROS
3990.0	[ft]	DC	PETROS
4000.0	[ft]	DC	RRI
4020.0	[ft]	DC	PETROS
4050.0	[ft]	DC	PETROS
4080.0	[ft]	DC	PETROS
4100.0	[ft]	DC	RRI
4110.0	[ft]	DC	PETROS



4140.0 [ft]	DC	PETROS
4170.0 [ft]	DC	PETROS
4200.0 [ft]	DC	PETROS
4200.0 [ft]	DC	RRI
4230.0 [ft]	DC	PETROS
4260.0 [ft]	DC	PETROS
4290.0 [ft]	DC	PETROS
4300.0 [ft]	DC	RRI
4320.0 [ft]	DC	PETROS
4350.0 [ft]	DC	PETROS
4380.0 [ft]	DC	PETROS
4400.0 [ft]	DC	RRI
4410.0 [ft]	DC	PETROS
4450.0 [ft]	DC	PETROS
4470.0 [ft]	DC	PETROS
4500.0 [ft]	DC	PETROS
4530.0 [ft]	DC	PETROS
4560.0 [ft]	DC	PETROS
4590.0 [ft]	DC	PETROS
4620.0 [ft]	DC	PETROS
4650.0 [ft]	DC	PETROS
4680.0 [ft]	DC	PETROS
4710.0 [ft]	DC	PETROS
4740.0 [ft]	DC	PETROS
4770.0 [ft]	DC	PETROS
4800.0 [ft]	DC	PETROS
4810.0 [ft]	DC	PETROS
4840.0 [ft]	DC	PETROS
4850.0 [ft]	DC	PETROS
4860.0 [ft]	DC	PETROS
4870.0 [ft]	DC	PETROS
4880.0 [ft]	DC	PETROS
4890.0 [ft]	DC	PETROS
4900.0 [ft]	DC	PETROS
4910.0 [ft]	DC	PETROS
4920.0 [ft]	DC	PETROS
4930.0 [ft]	DC	PETROS
4940.0 [ft]	DC	PETROS
4950.0 [ft]	DC	PETROS
4960.0 [ft]	DC	PETROS



4970.0	[ft]	DC	PETROS
4980.0	[ft]	DC	PETROS
4990.0	[ft]	DC	PETROS
5000.0	[ft]	DC	PETROS
5010.0	[ft]	DC	PETROS
5020.0	[ft]	DC	PETROS
5030.0	[ft]	DC	PETROS
5040.0	[ft]	DC	PETROS
5050.0	[ft]	DC	PETROS
5060.0	[ft]	DC	PETROS
5070.0	[ft]	DC	PETROS
5080.0	[ft]	DC	PETROS
5090.0	[ft]	DC	PETROS
5100.0	[ft]	DC	PETROS
5110.0	[ft]	DC	PETROS
5120.0	[ft]	DC	PETROS
5130.0	[ft]	DC	PETROS
5140.0	[ft]	DC	PETROS
5150.0	[ft]	DC	PETROS
5160.0	[ft]	DC	PETROS
5170.0	[ft]	DC	PETROS
5180.0	[ft]	DC	PETROS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
191	NORDLAND GP
586	HORDALAND GP
650	ROGALAND GP
650	BALDER FM
671	LISTA FM
762	NO FORMAL NAME
795	LISTA FM
839	SHETLAND GP
839	JORSALFARE FM
888	KYRRE FM
1175	RØDBY FM
1218	CROMER KNOLL GP
1218	AGAT FM



1358	VIKING GP
1358	HEATHER FM
1463	INTRA HEATHER FM SS
1568	BASEMENT

Composite logs

Document name	Document format	Document size [MB]
435	pdf	0.22

Geochemical information

Document name	Document format	Document size [MB]
435_1	pdf	0.88

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

Document name	Document format	Document size [MB]
435_01_WDSS_General_Information	pdf	0.26

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

Document name	Document format	Document size [MB]
435_01_Completion_Report	pdf	24.49
435_02_Completion_log	pdf	1.93

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	1550	1556	0.0
2.0	1489	1496	0.0





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					
2.0					

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL	1219	1569
CNL FDC GR	512	1472
CNL FDC GR	1466	1593
CONT. DIP	512	1472
CONT.DIP	1466	1593
IES	288	513
IES	512	1472
IES	1466	1593
MLL ML	1466	1593
SONIC GR	288	513
SONIC GR	512	1472
SONIC GR	1466	1593
VELOCITY	300	1550

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	286.0	36	290.0	0.00	LOT
SURF.COND.	20	511.0	26	513.0	0.00	LOT
INTERM.	13 3/8	1465.0	17 1/2	1470.0	1.68	LOT
INTERM.	9 5/8	1596.0	12 1/4	1596.0	0.00	LOT

Drilling mud



Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
286	1.07	49.0	15.0	spud mud	
515	1.08	41.0	12.0	water based	
751	1.10	45.0	9.0	water based	
1466	1.11	41.0	8.0	water based	
1595	1.23	42.0	9.0	water based	