General information

Wellbore name	6306/5-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Discovery	6306/5-1
Well name	6306/5-1
Seismic location	innline 1036 & crossline 1414/CN6306
Production licence	197
Drilling operator	Amerada Hess Norge AS
Drill permit	892-L
Drilling facility	DEEPSEA TRYM
Drilling days	33
Entered date	08.06.1997
Completed date	10.07.1997
Release date	10.07.1999
Publication date	13.12.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	PALEOCENE
1st level with HC, formation	EGGA FM (INFORMAL)
Kelly bushing elevation [m]	25.0
Water depth [m]	227.5
Total depth (MD) [m RKB]	2050.0
Final vertical depth (TVD) [m RKB]	2044.0
Maximum inclination [°]	9.4
Bottom hole temperature [°C]	74
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	KVITNOS FM
Geodetic datum	ED50
NS degrees	63° 41' 56.42'' N
EW degrees	6° 33' 35.29'' E
NS UTM [m]	7065951.07
EW UTM [m]	379378.45
UTM zone	32
NPDID wellbore	3060

Wellbore history

Wildcat well 6306/5-1 was drilled ca 190 km West of the town Trondheim, on the Klakk Fault Complex, which forms the border between the FrØya High and the MØre Basin. The two main objectives were to test the hydrocarbon potential of two Palaeocene prospects: the Eirikson prospect and the Nansen prospect. When drilled these prospects were prognosed as the Heimdal Formation sandstone and a new informal "Skalmen Formation sandstone", respectively. Only the Skalmen Formation was confirmed by the well. Later this formation has been encountered in other wells in the area as the (informal) Egga Formation.

Operations and results

Wildcat well 6306/5-1 was spudded with the semi-submersible installation Deepsea Trym on 8 June 1997. Operations went without significant problems down to the 8 1/2" section. This section was drilled from 1300 m to 1751 m, top of the Egga reservoir. This was found to be significantly over pressured and a large gain was taken. The well was shut-in and steps were taken to kill the well. The operation was complicated by the discovery that the pipe was stuck. The string was finally cut at 1477 m, and a cement plug was set to be used as kick-off plug for a sidetrack around the fish. The sidetrack was kicked off at 1365 m and drilled to TD at 2050 m in the Late Cretaceous Kvitnos Formation without further problems. The well was drilled with bentonite and seawater down to 1001 m and with ANCO 2000 mud from 1001 m to TD.

No shallow gas or boulder beds were encountered in the uppermost well section. The well penetrated mainly clays and claystones in the Nordland, Hordaland and Rogaland groups with minor sands developed and limestone stringers present. The prognosed Heimdal Formation sands were not present. Top Egga sand was reached at 1751 m and was 12 m thick. The lithology of the Egga sand was mainly a clean sandstone divided in two by a calcareous clay stone. Top of the Egga reservoir was re-penetrated in the sidetrack at 1750 m, consisting of an upper clean sand, a shaly unit, and a thin lower sandstone bed that continued down to top Shetland Group at 1762 m. The Shetland Group consisted mainly of claystone and siltstone with minor dolomites. There were no oil shows recorded in this well. Post well organic geochemical analysis indicated mainly biogenic gas down to approximately 1650 m. Below this depth the gas was a mixture of migrated thermogenic and shallow generated biogenic/diagenetic gas. Hydrogen Index (HI) suggested fair gas and oil prone shales present in both the lower Hordaland Group and lower Tang Formation. All Formations penetrated were however immature in well position. One conventional core was cut in the Early Palaeocene Egga reservoir sand from 1757 m to 1775 m. Only 5.1 m (28.3%) was recovered. Two segregated MDT samples were taken in the Egga sand at 1755.8 m (1728.1 m TVDSS). The contents were water, mud filtrate and gas.

The well was permanently abandoned on as a minor gas discovery.

Testing

No drill stem test was performed in the well.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
520.00	2049.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	1757.0	1762.0	[m]

Total core sample length [m]	5.0
Cores available for sampling?	YES

Core photos

1757-1762m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
990.0	[m]	DC	RRI
1002.0	[m]	DC	RRI
1020.0	[m]	DC	RRI
1029.0	[m]	DC	RRI
1035.0	[m]	DC	RRI
1059.0	[m]	DC	RRI
1080.0	[m]	DC	RRI
1104.0	[m]	DC	RRI
1113.0	[m]	DC	RRI
1122.0	[m]	DC	RRI
1131.0	[m]	DC	RRI
1140.0	[m]	DC	RRI
1164.0	[m]	DC	RRI
1176.0	[m]	DC	RRI
1185.0	[m]	DC	RRI

1194.0	[m]	DC	RRI
1206.0	[m]	DC	RRI
1215.0	[m]	DC	RRI
1227.0	[m]	DC	RRI
1236.0	[m]	DC	RRI
1248.0	[m]	DC	RRI
1254.0	[m]	DC	RRI
1263.0	[m]	DC	RRI
1269.0	[m]	DC	RRI
1278.0	[m]	DC	RRI
1287.0	[m]	DC	RRI
1296.0	[m]	DC	RRI
1302.0	[m]	DC	RRI
1353.0	[m]	DC	RRI
1371.0	[m]	DC	RRI
1383.0	[m]	DC	RRI
1407.0	[m]	DC	RRI
1467.0	[m]	DC	RRI
1536.0	[m]	DC	RRI
1548.0	[m]	DC	RRI
1560.0	[m]	DC	RRI
1575.0	[m]	DC	RRI
1590.0	[m]	DC	RRI
1605.0	[m]	DC	RRI
1620.0	[m]	DC	RRI
1635.0	[m]	DC	RRI
1650.0	[m]	DC	RRI
1665.0	[m]	DC	RRI
1680.0	[m]	DC	RRI
1695.0	[m]	DC	RRI
1725.0	[m]	DC	RRI
1740.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
253	NORDLAND GP
253	NAUST FM
1041	KAI FM

1125	HORDALAND GP
1125	BRYGGE FM
1409	ROGALAND GP
1409	TARE FM
1487	TANG FM
1750	EGGA FM (INFORMAL)
1762	SHETLAND GP
1762	NISE FM
1811	KVITNOS FM

Composite logs

Document name	Document format	Document size [MB]
3060	pdf	0.33

Geochemical information

Document name	Document format	Document size [MB]
3060_1	pdf	1.39

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

Document name	Document format	Document size [MB]
3060_6306_5_1_COMPLETION_REPORT	pdf	73.41

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT IPL CMR GR AMS	1200	1392
AIT IPL GR AMS	1200	2050
AIT MFSL LSS GR AMS	507	1066
AIT MFSL LSS GR AMS	980	1300
CST GR	1295	2050
FMI DSI GPIT GR AMS	1200	2050

LDT CNL GR AMS	507	1300
MDT GR	1750	1760
MWD LWD - D.RAW	252	512
MWD LWD - DPR TF5A	512	2050
VSP	680	2050

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	324.0	36	324.0	0.00	LOT
SURF.COND.	13 3/8	480.0	17 1/2	507.0	1.50	LOT
INTERM.	9 5/8	1296.0	12 1/4	1300.0	2.01	LOT
OPEN HOLE		2050.0	8 1/2	2050.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
143	1.62	39.0		ANCO 2000	
272	0.00			SPUD MUD	
1100	1.66	31.0		ANCO 2000	
1170	1.66	28.0		ANCO 2000	
1300	1.22	19.0		ANCO 2000	
1505	1.59	30.0		ANCO 2000	
1581	1.20	16.0		ANCO 2000	
2050	1.66	34.0		ANCO 2000	