

**General information**

Wellbore name	35/3-6
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	35/3-6
Seismic location	GP3D93 inline 3825 & crossline 1820
Production licence	270
Drilling operator	RWE Dea Norge AS
Drill permit	1029-L
Drilling facility	DEEPSEA BERGEN
Drilling days	56
Entered date	06.02.2002
Completed date	02.04.2002
Release date	02.04.2004
Publication date	18.05.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	225.0
Total depth (MD) [m RKB]	3366.0
Final vertical depth (TVD) [m RKB]	3366.0
Maximum inclination [°]	4.2
Bottom hole temperature [°C]	96
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HEATHER FM
Geodetic datum	ED50
NS degrees	61° 53' 36.86" N
EW degrees	3° 59' 15.79" E
NS UTM [m]	6862883.49
EW UTM [m]	551915.62
UTM zone	31
NPDID wellbore	4492



Wellbore history

General

Block 35/3 is located where the Måløy Terrace continues into the Selje High. The Selje High has a NE/SW trend, whereas the Måløy Terrace is dominated by a N-S fault trend.

The objectives of well 35/3-6 were to test for commercial hydrocarbons and locate any associated hydrocarbon contacts within the Måke Nord prospect, to investigate the Albian Agat Formation, and to obtain and evaluate data required for any potential appraisal drilling.

Operations and results

The exploration well 35/3-6 was spudded on 6 February 2002 with the semi-submersible installation Deepsea Bergen and drilled to a total depth of 3366 m in the late Jurassic Heather Formation. The 36" section was drilled with seawater and swept with high viscosity pills. The 9-7/8" pilot hole was drilled riser-less with seawater and high viscosity pills and displaced to 1.20 sg mud. This hole was then opened to 17 1/2" with seawater and high viscosity pills and displaced to 1.20 sg mud prior to running the 13 3/8" casing. The 12 1/4" section to TD was drilled with KCl/polymer/glycol mud (Glydril). When drilling the 36" section, a boulder bed was experienced from 270m to 275m (22 m to 27 m below seabed). This led to hole inclination going up from 1 to 3.5 degrees. After setting the 13 3/8" casing, the wellhead was inspected with the ROV and a flow was observed from below the guide base, which was partially covered by debris. After an unsuccessful attempt to stop the flow by grouting the 30" conductor and landing the BOP, a combined cement bond log and temperature log were then run. It was concluded that the water-flow originated from the Utsira Formation sands below 587 m. A bridge plug was set, the casing perforated at 568 m and a cement retainer installed. By repeated injection and partially circulation of kill mud through the perforations, the well was stabilized. A combination of a cross-linked polymer pill and low-density cement was placed in the annulus, which effectively stopped the flow.

The observed formation tops from seafloor to the primary target top Agat Formation were in accordance with the prognosis with only minor differences observed. An approximate 90 m of Agat Formation sandstone was anticipated, but only 2.5 m was present in the well location. As a consequence, both the Top Åsgard Formation and the Base Cretaceous Unconformity came in much shallower than prognosed. The 2.5 m thick Agat Formation consisted of carbonate cemented sandstone with traces of hydrocarbons. Otherwise the well encountered no hydrocarbon bearing intervals. No reservoir was found. The majority of the prospect strata are older than the Agat reservoir sandstones of the Agat Formation observed in offset wells. The space available for deposition defined by isopachs was filled with mostly Barremian shales prior to sandstone input in the Albian. This resulted in bypass and erosion rather than deposition in the prospect area during Albian times.

The cutbacks observed from the resistivity could indicate increasing pore pressure. Other parameters like gas does not confirm this but the gas readings were low and as such indicate a huge overbalance. No cores were cut and no fluid samples were collected in well 35/3-6.

The well 35/3-6 was plugged and abandoned as a dry well. The anchors were pulled on 1 of April.

Testing

No drill stem test was performed

**Cuttings at the Norwegian Offshore Directorate**

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1310.00	3366.00

Cuttings available for sampling?	YES
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
248	NORDLAND GP
573	UTSIRA FM
619	HORDALAND GP
619	NO FORMAL NAME
826	NO FORMAL NAME
1053	ROGALAND GP
1053	BALDER FM
1072	SELE FM
1128	HEIMDAL FM
1145	LISTA FM
1337	VÅLE FM
1356	SHETLAND GP
1356	JORSALFARE FM
1429	KYRRE FM
2223	TRYGGVASON FM
2771	BLODØKS FM
2786	SVARTE FM
2955	CROMER KNOLL GP
2955	AGAT FM
2958	RØDBY FM
2982	ÅSGARD FM
3155	VIKING GP
3155	DRAUPNE FM
3335	HEATHER FM

Composite logs





Document name	Document format	Document size [MB]
4492	pdf	0.32

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

Document name	Document format	Document size [MB]
4492_35_3_6_COMPLETION_LOG	.pdf	3.29
4492_35_3_6_COMPLETION_REPORT	.pdf	2.17

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CSAT GR (LEH-QT)	589	3333
CST GR (LEH-QT)	2940	3365
MWD - CDR	309	983
MWD - CDR	309	1300
MWD - CDR	983	1300
MWD - CDR	1300	1986
MWD - CDR	1986	2369
MWD - CDR	2369	2695
MWD - CDR	2695	3366
USIT GR CCL AMS	256	1209
ZOVSP	589	3335

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	309.0	36	310.0	0.00	LOT
INTERM.	13 3/8	1294.0	17 1/2	1300.0	1.45	LOT
INTERM.	9 5/8	2686.0	12 1/4	2690.0	1.50	LOT
OPEN HOLE		3366.0	8 1/2	3366.0	0.00	LOT

Drilling mud





Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
260	1.32	80.0		GLYDRIL	
935	1.03	120.0		SPUD MUD	
1228	1.14	73.0		GLYDRIL	
1265	1.14	63.0		GLYDRIL	
1300	1.20	100.0		SPUD MUD	
1485	1.25	66.0		GLYDRIL	
1545	1.32	67.0		GLYDRIL	
1821	1.29	74.0		GLYDRIL	
1892	1.32	73.0		GLYDRIL	
1985	1.32	95.0		GLYDRIL	
2250	1.32	80.0		GLYDRIL	
2695	1.32	71.0		GLYDRIL	
2699	1.32	85.0		GLYDRIL	
2910	1.32	75.0		GLYDRIL	
3079	1.32	75.0		GLYDRIL	
3366	1.32	72.0		GLYDRIL	