



Generell informasjon





Brønnbane navn	35/3-6
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	35/3-6
Seismisk lokalisering	GP3D93 inline 3825 & crossline 1820
Utvinningstillatelse	270
Boreoperatør	RWE Dea Norge AS
Boretillatelse	1029-L
Boreinnretning	DEEPSEA BERGEN
Boredager	56
Borestart	06.02.2002
Boreslutt	02.04.2002
Frigitt dato	02.04.2004
Publiseringsdato	18.05.2004
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	225.0
Totalt målt dybde (MD) [m RKB]	3366.0
Totalt vertikalt dybde (TVD) [m RKB]	3366.0
Maks inklinasjon [°]	4.2
Temperatur ved bunn av brønnbanen [°C]	96
Eldste penetrerte alder	LATE JURASSIC
Eldste penetrerte formasjon	HEATHER FM
Geodetisk datum	ED50
NS grader	61° 53' 36.86" N
ØV grader	3° 59' 15.79" E
NS UTM [m]	6862883.49
ØV UTM [m]	551915.62
UTM sone	31
NPDID for brønnbanen	4492



Brønnhistorie

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



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1310.00	3366.00

Borekaks tilgjengelig for prøvetaking?	YES
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Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
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

Spleisede logger





Dokument navn	Dokument format	Dokument størrelse [KB]
4492	pdf	0.32

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4492_35_3_6_COMPLETION_LOG	.pdf	3.29
4492_35_3_6_COMPLETION_REPORT	.pdf	2.17

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [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

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
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

Boreslam





Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Fløtegrense [Pa]	Type slam	Dato, måling
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	