



Generell informasjon

Brønnbane navn	35/3-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	35/3-1
Seismisk lokalisering	
Utvinningstillatelse	041
Boreoperatør	Saga Petroleum ASA
Boretillatelse	162-L
Boreinnretning	DEEPSEA SAGA
Boredager	100
Borestart	19.07.1976
Boreslutt	26.10.1976
Frigitt dato	26.10.1978
Publiseringsdato	11.02.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	304.0
Totalt målt dybde (MD) [m RKB]	4475.0
Totalt vertikalt dybde (TVD) [m RKB]	4469.6
Maks inklinasjon [°]	12.1
Temperatur ved bunn av brønnbanen [°C]	126
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	DRAKE FM
Geodetisk datum	ED50
NS grader	61° 50' 41.89" N
ØV grader	3° 43' 41.36" E
NS UTM [m]	6857289.00
ØV UTM [m]	538333.83
UTM sone	31
NPDID for brønnbanen	432



Brønnhistorie

The exploratory well, 35/3-1, was drilled on block 35/3 in the northern Norwegian North Sea, approximately 65 km west of Måløy in western Norway. The location is east of the Norwegian Trench. The general objective was to test the total stratigraphical sequence down to pre-Jurassic strata. Within the sequence, sand development was predicted for the Lower Cretaceous and the Early Jurassic, with a possibility for minor sands in Middle-Late Jurassic. The well should penetrate two seismic reflectors believed to represent top Early-pre Jurassic and basement, respectively. Planned TD was at 5250 m.

Operations and results

Wildcat well 35/3-1 was spudded with the semi-submersible installation Deepsea Saga on 19 July 1976. The well was terminated at 4475 m in the Dunlin Group (Middle Jurassic, Bajocian age). This was not the planned TD, but due to high pressure the well was abandoned at this depth for safety reasons. Because of this the two deep seismic reflectors were not tested in this well. The well was drilled with seawater and salt water gel/Milben mud down to 982 m, with gypsum mud from 982 m to 2474 m, and with lignosulphonate mud from 2474 m to TD.

A number of Tertiary sands not normally encountered in this part of the North Sea, were penetrated in this well. In the Early Jurassic, at 3805 m, a 215 m sequence of Agat Formation sandstone was penetrated. At 4145 m a 21 m sequence of Late Jurassic Intra Heather Formation sandstone was penetrated. Shows were encountered and described as follows:

"The first traces of hydrocarbons were encountered in Early Cretaceous sand at 3865 m. The sand gave a poor show of dead oil with no direct fluorescence, but with slow, streaming, cream cut fluorescence. Similar shows were occasionally encountered over the interval 3865 - 3975 m, partly with a fast, streaming, white cut fluorescence. At 3900 m a relatively clean, fine to medium grained silica cemented sand showed light brown stain, traces of pale yellow fluorescence, and fast, streaming, white cut fluorescence. In the Jurassic, two sand beds around 4220 m had a fair gas show of 350,000 ppm C1, 35000 ppm C2, and 13000 ppm C3 as recorded in The Analyst's unit. The sand had no stain and no direct fluorescence, but showed some scattered white cut fluorescence. A dirty sand stringer at 4225 m showed 130000 ppm C1, 23000 ppm C2 and 9500 C3, with associated scattered white cut fluorescence. General background gas in the Jurassic was 1000 ppm total."

Geochemical analyses showed oil maturity below ca 3200 m (%Ro > 0.5). Below ca 4100 m analyses showed abundant light hydrocarbons, indicating condensate/gas generation from Heather shales below this depth. These shales had 1.9% organic carbon on average, representing a massive source rock for condensate and gas. No conventional cores were cut and no fluid sample taken. Fifty-one sidewall cores were recovered from 2975 m to TD.

The well was plugged and abandoned on 26 October as a well with shows.

Testing

No drill stem test was performed.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
520.00	4475.00

Borekaks tilgjengelig for prøvetaking?	YES
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Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2530.0	[m]	DC	RRI
2545.0	[m]	DC	RRI
2560.0	[m]	DC	RRI
2575.0	[m]	DC	RRI
2590.0	[m]	DC	RRI
2605.0	[m]	DC	RRI
2617.0	[m]	DC	RRI
2635.0	[m]	DC	RRI
2650.0	[m]	DC	RRI
2665.0	[m]	DC	RRI
2680.0	[m]	DC	RRI
2695.0	[m]	DC	RRI
2710.0	[m]	DC	RRI
2725.0	[m]	DC	RRI
2740.0	[m]	DC	RRI
2755.0	[m]	DC	RRI
2770.0	[m]	DC	RRI
2785.0	[m]	DC	RRI
2800.0	[m]	DC	RRI
2815.0	[m]	DC	RRI
2830.0	[m]	DC	RRI
2845.0	[m]	DC	RRI
2860.0	[m]	DC	RRI
2875.0	[m]	DC	RRI
2890.0	[m]	DC	RRI
2905.0	[m]	DC	RRI
2920.0	[m]	DC	RRI
2935.0	[m]	DC	RRI
2950.0	[m]	DC	RRI
2965.0	[m]	DC	RRI
2980.0	[m]	DC	RRI



2995.0	[m]	DC	RRI
3010.0	[m]	DC	RRI
3025.0	[m]	DC	RRI
3037.0	[m]	DC	RRI
3055.0	[m]	DC	RRI
3070.0	[m]	DC	RRI
3085.0	[m]	DC	RRI
3100.0	[m]	DC	RRI
3115.0	[m]	DC	RRI
3130.0	[m]	DC	RRI
3145.0	[m]	DC	RRI
3160.0	[m]	DC	RRI
3175.0	[m]	DC	RRI
3190.0	[m]	DC	RRI
3205.0	[m]	DC	RRI
3220.0	[m]	DC	RRI
3235.0	[m]	DC	RRI
3250.0	[m]	DC	RRI
3265.0	[m]	DC	RRI
3280.0	[m]	DC	RRI
3295.0	[m]	DC	RRI
3310.0	[m]	DC	RRI
3325.0	[m]	DC	RRI
3340.0	[m]	DC	RRI
3355.0	[m]	DC	RRI
3370.0	[m]	DC	RRI
3385.0	[m]	DC	RRI
3400.0	[m]	DC	RRI
3415.0	[m]	DC	RRI
3430.0	[m]	DC	RRI
3460.0	[m]	DC	RRI
3475.0	[m]	DC	RRI
3490.0	[m]	DC	RRI
3505.0	[m]	DC	RRI
3520.0	[m]	DC	RRI
3535.0	[m]	DC	RRI
3550.0	[m]	DC	RRI
3565.0	[m]	DC	RRI
3595.0	[m]	DC	RRI
3615.0	[m]	DC	RRI



3630.0	[m]	DC	RRI
3645.0	[m]	DC	RRI
3690.0	[m]	DC	RRI
3720.0	[m]	DC	RRI
3750.0	[m]	DC	RRI
3780.0	[m]	DC	RRI
3810.0	[m]	DC	RRI
3837.0	[m]	DC	RRI
3870.0	[m]	DC	RRI
3900.0	[m]	DC	RRI
3930.0	[m]	DC	RRI
3960.0	[m]	DC	RRI
3990.0	[m]	DC	RRI
4020.0	[m]	DC	RRI
4050.0	[m]	DC	RRI
4080.0	[m]	DC	RRI
4110.0	[m]	DC	RRI
4140.0	[m]	DC	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
330	NORDLAND GP
574	UTSIRA FM
743	HORDALAND GP
743	NO FORMAL NAME
835	NO FORMAL NAME
965	NO FORMAL NAME
1161	NO FORMAL NAME
1204	NO FORMAL NAME
1350	ROGALAND GP
1350	BALDER FM
1358	LISTA FM
1392	NO FORMAL NAME
1422	LISTA FM
1556	NO FORMAL NAME
1580	SHETLAND GP
1580	JORSALFARE FM
1720	KYRRE FM



2962	TRYGGVASON FM
3359	BLODØKS FM
3387	SVARTE FM
3725	CROMER KNOLL GP
3725	RØDBY FM
3805	AGAT FM
4020	ÅSGARD FM
4145	VIKING GP
4145	INTRA HEATHER FM SS
4166	HEATHER FM
4435	DUNLIN GP
4435	DRAKE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
432	pdf	0.56

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
432_1	pdf	1.62

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
432_01_WDSS_General_Information	pdf	0.28

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
432_01_Completion_Report	pdf	12.11
432_02_Completion_log	pdf	3.08





Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
BHC SONIC GR	503	2472
CBL	321	4176
CBL	325	2461
FDC CNL GR	4176	4471
FDC GR	503	4182
HDT	0	0
HDT	2462	4471
IES	503	2474
ISF SONIC GR	2461	4468
MLL ML	4176	4471
VELOCITY	375	4470

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	505.0	36	507.0	0.00	LOT
SURF.COND.	20	969.0	26	970.0	0.00	LOT
INTERM.	13 3/8	2465.0	17 1/2	2466.0	1.77	LOT
INTERM.	9 5/8	4180.0	12 1/4	4182.0	2.04	LOT
OPEN HOLE		4475.0	8 1/2	4475.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
510	0.00			seawater	
819	1.10	68.0	58.0	water based	
2306	1.19	53.0	30.0	water based	
2622	1.31	46.0	18.0	water based	
3139	1.35	48.0	5.0	water based	
4202	1.37	46.0	5.0	water based	
4313	1.80	49.0	4.0	water based	

