Generell informasjon

Brønnbane navn	30/11-5
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	MUNIN
Funn	30/11-5 (Steinbit)
Brønn navn	30/11-5
Seismisk lokalisering	SH 9004-839 & CROSSLINE 719
Utvinningstillatelse	035
Boreoperatør	A/S Norske Shell
Boretillatelse	868-L
Boreinnretning	MÆRSK JUTLANDER
Boredager	36
Borestart	05.12.1996
Boreslutt	09.01.1997
Frigitt dato	09.01.1999
Publiseringsdato	15.02.2006
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	105.0
Totalt målt dybde (MD) [m RKB]	3726.0
Totalt vertikalt dybde (TVD) [m RKB]	3725.0
Maks inklinasjon [°]	8.3
Temperatur ved bunn av brønnbanen [°C]	114
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	DRAKE FM
Geodetisk datum	ED50
NS grader	60° 8' 50.39'' N

ØV grader	2° 33' 59.57'' E
NS UTM [m]	6668054.43
ØV UTM [m]	475929.50
UTM sone	31
NPDID for brønnbanen	2986

Brønnhistorie

General

Well 30/11-5 is located in the Viking Graben in the North Sea, between the Oseberg Field area and the Frigg Field area. The objective of the well was to test the presence of hydrocarbons in Middle Jurassic Brent Group sandstones in the "Steinbit" prospect, a fault-dependent structure in Block 30/11.

Operations and results

Wildcat well 30/11-5 was spudded with the semi-submersible installation Maersk Jutlander on 5 December 1996 and drilled to TD at 3726 m in the Early Jurassic Drake Formation. A boulder bed in the top hole from 160 m to 180 m caused some difficulties with entering the 30" surface conductor casing. The GST (geosteering motor with resistivity at the bit) failed in the 8 1/2" section, and was substituted with a MWD/CDR configured in rotary mode to bring the resistivity sensor as close to the bit as possible. The well was drilled with seawater and bentonite hi-vis pills down to 1430 m, and with sodium silicate (Barasilc) mud from 1430 m to 3098 m. From 3098 m to TD the Barasilc mud was gradually replaced with KCl/polymer mud. The Barasilc mud consists of soluble silicates and KCl/polymer based fluid.

The well found the Middle Jurassic Tarbert and Ness Formations within prognosis ranges, with good porosities. A total of 19.2 m net oil pay distributed in several thin intervals was encountered in the well, overlying water-bearing sandstones. Two OWC's were placed at 3366 m and at 3432 m. Evaluation of the RFT data from well 30/11-5 shows different reservoir pressures between the wells 30/11-5 and the wells 30/11-3 and -4 to the south and 30/9-16 to the north. The pore pressures are also different between the various Tarbert reservoirs within 30/11-5, although the data remain in a hydrostatic pressure regime.

Oil shows on cuttings were described as follows: 3249 - 3310 m, on siltstone, limestone, and coal: weak blue white fluorescence with a slow white cut. Some mineral fluorescence in the limestone streaks; 3417 - 3438 m on clean, fine to medium sandstone: traces of blue white direct fluorescence, no cut and no residual fluorescence.

The criterion for coring was based on real-time resistivity reading from the GST, and when this tool did not work and other real-time criteria (poor shows, low gas readings) were not met, the planned 18 m core in Tarbert and Ness was omitted. The RFT tool acquired 13 good pressure points to evaluate pressure gradients. No fluid samples were taken.

The well was permanently abandoned on 9 January 1997 as a minor oil discovery.

Testing

No drill stem test was performed in the well.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1440.00	3726.00

Borekaks tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1710.0	[m]	DC	RRI
1740.0	[m]	DC	RRI
1760.0	[m]	DC	RRI
1780.0	[m]	DC	RRI
1800.0	[m]	DC	RRI
1820.0	[m]	DC	RRI
1840.0	[m]	DC	RRI
1870.0	[m]	DC	RRI
1890.0	[m]	DC	RRI
1910.0	[m]	DC	RRI
1930.0	[m]	DC	RRI
1950.0	[m]	DC	RRI
1970.0	[m]	DC	RRI
1990.0	[m]	DC	RRI
2010.0	[m]	DC	RRI
2030.0	[m]	DC	RRI
2050.0	[m]	DC	RRI
2070.0	[m]	DC	RRI
2090.0	[m]	DC	RRI
2110.0	[m]	DC	RRI
2130.0	[m]	DC	RRI
2150.0	[m]	DC	RRI
2170.0	[m]	DC	RRI
2190.0	[m]	DC	RRI
2210.0	[m]	DC	RRI
2230.0	[m]	DC	RRI
2250.0	[m]	DC	RRI
2270.0	[m]	DC	RRI
2290.0	[m]	DC	RRI
2310.0	[m]	DC	RRI

2330.0	[m]	DC	RRI
2350.0	[m]	DC	RRI
2370.0	[m]	DC	RRI
2390.0	[m]	DC	RRI
2410.0	[m]	DC	RRI
2430.0	[m]	DC	RRI
2450.0	[m]	DC	RRI
2470.0	[m]	DC	RRI
2490.0	[m]	DC	RRI
2510.0	[m]	DC	RRI
2530.0	[m]	DC	RRI
2550.0	[m]	DC	RRI
2570.0	[m]	DC	RRI
2590.0	[m]	DC	RRI
2610.0	[m]	DC	RRI
2630.0	[m]	DC	RRI
2650.0	[m]	DC	RRI
2670.0	[m]	DC	RRI
2930.0	[m]	DC	RRI
2950.0	[m]	DC	RRI
2970.0	[m]	DC	RRI
2990.0	[m]	DC	RRI
3010.0	[m]	DC	RRI
3030.0	[m]	DC	RRI
3050.0	[m]	DC	RRI
3070.0	[m]	DC	RRI
3090.0	[m]	DC	RRI
3111.0	[m]	DC	RRI
3132.0	[m]	DC	RRI
3144.0	[m]	DC	RRI
3165.0	[m]	DC	RRI
3186.0	[m]	DC	RRI
3207.0	[m]	DC	RRI
3228.0	[m]	DC	RRI
3249.0	[m]	DC	RRI
3270.0	[m]	DC	RRI
3291.0	[m]	DC	RRI
3312.0	[m]	DC	RRI
3330.0	[m]	DC	RRI
3372.0	[m]	DC	RRI

3390.0	[m]	DC	RRI
3411.0	[m]	DC	RRI
3432.0	[m]	DC	RRI
3453.0	[m]	DC	RRI
3471.0	[m]	DC	RRI
3492.0	[m]	DC	RRI
3513.0	[m]	DC	RRI
3534.0	[m]	DC	RRI
3555.0	[m]	DC	RRI
3576.0	[m]	DC	RRI
3597.0	[m]	DC	RRI
3618.0	[m]	DC	RRI
3639.0	[m]	DC	RRI
3660.0	[m]	DC	RRI
3681.0	[m]	DC	RRI
3702.0	[m]	DC	RRI
3723.0	[m]	DC	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
128	NORDLAND GP
508	UTSIRA FM
705	HORDALAND GP
1750	GRID FM
1757	NO FORMAL NAME
1785	GRID FM
1850	NO FORMAL NAME
2169	ROGALAND GP
2169	BALDER FM
2222	HERMOD FM
2306	SELE FM
2352	LISTA FM
2550	VÅLE FM
2561	SHETLAND GP
2561	HARDRÅDE FM
2835	KYRRE FM
3059	CROMER KNOLL GP
3059	RØDBY FM

3082	VIKING GP
3082	DRAUPNE FM
3115	HEATHER FM
3249	BRENT GP
3249	TARBERT FM
3443	NESS FM
3716	DUNLIN GP
3716	DRAKE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
2986	pdf	0.27

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2986_30_11_5_COMPLETION_DRILLING_REPORT	pdf	7.91
2986_30_11_5_COMPLETION_GEOLOGICAL_REPORT	pdf	39.89
2986_30_11_5_COMPOSITE_LOG	pdf	5.11

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AS LDL CNL GR AMS	1700	2250
LDL AS CNL	0	0
MWD LWD - CDR	2708	3726
MWD LWD - GR	405	920
MWD LWD - GR RES DIR	1750	2708
NGS DLL MSFL CAL	3088	3726
RFT RPQS GR AMS	3088	3726
VSP GR	2158	3720

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	225.0	36	227.0	0.00	LOT
SURF.COND.	14	1419.0	17 1/2	1420.0	0.00	LOT
INTERM.	9 5/8	2085.0	12 1/4	2090.0	0.00	LOT
OPEN HOLE		3726.0	8 1/2	3726.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
190	1.05			SEAWATER	
214	1.05			SEAWATER	
1430	1.05			SEAWATER	
1430	1.05			SEAWATER	
2274	1.41	54.0		BARASILC	
2597	1.39	56.0		BARASILC	
3167	1.32	60.0		BARASILC	
3726	1.35	87.0		BARASILC	

Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
2986_Formation_pressure_(Formasjonstrykk)	pdf	0.22