Generell informasjon

Brønnbane navn	30/10-3
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	ODIN
Funn	30/10-2 Odin
Brønn navn	30/10-3
Seismisk lokalisering	LINE CS 73-27 SP.2390
Utvinningstillatelse	030
Boreoperatør	Esso Exploration and Production Norway A/S
Boretillatelse	112-L
Boreinnretning	DRILLMASTER
Boredager	24
Borestart	08.08.1974
Boreslutt	31.08.1974
Frigitt dato	31.08.1976
Publiseringsdato	30.09.2004
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	EOCENE
1. nivå med hydrokarboner, formasjon.	FRIGG FM
Avstand, boredekk - midlere havflate [m]	24.0
Vanndybde ved midlere havflate [m]	106.0
Totalt målt dybde (MD) [m RKB]	2255.0
Totalt vertikalt dybde (TVD) [m RKB]	2255.0
Temperatur ved bunn av brønnbanen [°C]	53
Eldste penetrerte alder	PALEOCENE
Eldste penetrerte formasjon	HERMOD FM
Geodetisk datum	ED50
NS grader	60° 3' 12.27'' N

ØV grader	2° 10' 2.06'' E
NS UTM [m]	6657806.99
ØV UTM [m]	453623.90
UTM sone	31
NPDID for brønnbanen	393

Brønnhistorie

General

Well 30/10-3 was drilled on the Odin Discovery just north of the Frigg area. The main objective was to evaluate the Early Eocene sand ("Frigg Field Clastic Tongue") and appraise the 30/10-2 Odin gas Discovery.

Operations and results

Appraisal well 30/10-3 well was spudded with the semi-submersible installation Drillmaster on 8 August 1974 and drilled to TD at 2255 m in sands of the Paleocene Hermod Formation. Some anchor problems were experienced due to the sandy sea floor; otherwise no drilling problems were encountered during the operations. The mud used was a seawater, lignosulphonate system.

Cuttings from 177 m to 704 m (Pliocene-Miocene undifferentiated) consisted of sand and shells (coquina). From 704 m to 1213 m (Oligocene) the section consisted of sand, coquina and traces of lignite between 780 m and 1213 m. From 1213 m to 1594 m the section is grey shale with stringers of thin micritic limestone. From 1594 m to 1823 m the section is predominantly grey shale with minor traces of micritic limestone. From 1824 m to 2030 m a green shale unit is present. At 2030 m (Top Frigg Clastic Tongue) the lithology changed to sand and continued to a depth of 2073 m. From 2073 m to 2182 m the section consisted of red brown shales and sands. From 2182 m to TD (Paleocene) the section is predominantly sand with some thin grey shales.

The Paleocene sand was void of hydrocarbon shows. The Frigg Clastic Tongue was 43 m thick. Logs and cores indicated approximately 24 m of this interval contained oil and gas down to an oil-water contact at 2054 m. Net pay was 18 m of which 14 m was good clean gas sand and 4 m oil sand.

Six cores were cut from 2010 m in the "Green shale unit" down to 2064 m, 34 m into the Frigg sand. Eight Formation Interval Test (FIT) fluid samples were recovered from four different depths in the Frigg sand. A sample from 2068.1 m 9.75 l water and 0.5 l mud; a sample from 2052.8 m contained 0.6 cf gas and 1.25 l oil; a sample from 2049.2 m contained 1 cf gas and 0.4 l oil; and a sample from 2040.6 m contained 32.5 cf of gas. The well was permanently abandoned on 31 August 1974 as an oil and gas appraisal well.

Testing

No drill stem test was performed

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
182.88	2254.61

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	6594.0	6624.0	[ft]
2	6620.0	6655.0	[ft]
3	6653.0	6683.0	[ft]
4	6682.0	6712.0	[ft]
5	6712.0	6745.0	[ft]
6	6742.0	6772.0	[ft]

Total kjerneprøve lengde [m]	57.3
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2080.0	[ft]	DC	
2200.0	[ft]	DC	
2320.0	[ft]	DC	
2370.0	[ft]	DC	GEOCHEM
2410.0	[ft]	DC	
2530.0	[ft]	DC	
2650.0	[ft]	DC	
2770.0	[ft]	DC	
2890.0	[ft]	DC	
3010.0	[ft]	DC	
3130.0	[ft]	DC	
3250.0	[ft]	DC	
3370.0	[ft]	DC	
3490.0	[ft]	DC	
3500.0	[ft]	SWC	
3550.0	[ft]	DC	
3670.0	[ft]	DC	
3760.0	[ft]	DC	GEOCHEM
3790.0	[ft]	DC	

3880.0	[ft]	DC	GEOCHEM
3910.0	[ft]	DC	
4000.0	[ft]	DC	GEOCHEM
4000.0	[ft]	DC	
4120.0	[ft]	DC	GEOCHEM
4120.0	[ft]	DC	
4200.0	[ft]	SWC	
4210.0	[ft]	DC	GEOCHEM
4240.0	[ft]	DC	
4300.0	[ft]	DC	GEOCHEM
4330.0	[ft]	DC	
4390.0	[ft]	DC	GEOCHEM
4420.0	[ft]	DC	
4480.0	[ft]	DC	GEOCHEM
4510.0	[ft]	DC	
4570.0	[ft]	DC	GEOCHEM
4600.0	[ft]	SWC	
4600.0	[ft]	DC	
4660.0	[ft]	DC	GEOCHEM
4690.0	[ft]	DC	
4720.0	[ft]	DC	GEOCHEM
4810.0	[ft]	DC	
4840.0	[ft]	DC	GEOCHEM
4900.0	[ft]	DC	
4960.0	[ft]	DC	GEOCHEM
5020.0	[ft]	DC	
5080.0	[ft]	DC	GEOCHEM
5140.0	[ft]	DC	
5200.0	[ft]	SWC	
5200.0	[ft]	DC	GEOCHEM
5260.0	[ft]	DC	
5320.0	[ft]	DC	GEOCHEM
5380.0	[ft]	DC	
5440.0	[ft]	DC	GEOCHEM
5500.0	[ft]	DC	
5560.0	[ft]	DC	GEOCHEM
5620.0	[ft]	DC	
5650.0	[ft]	DC	GEOCHEM
5710.0	[ft]	DC	
5740.0	[ft]	DC	GEOCHEM

5800.0	[ft]	SWC	
5800.0	[ft]	DC	
5830.0	[ft]	DC	GEOCHEM
5890.0	[ft]	DC	
5920.0	[ft]	DC	GEOCHEM
5980.0	[ft]	DC	
6010.0	[ft]	DC	GEOCHEM
6070.0	[ft]	DC	
6100.0	[ft]	DC	GEOCHEM
6160.0	[ft]	DC	
6190.0	[ft]	DC	GEOCHEM
6250.0	[ft]	DC	
6280.0	[ft]	DC	GEOCHEM
6340.0	[ft]	DC	
6430.0	[ft]	DC	
6460.0	[ft]	DC	GEOCHEM
6520.0	[ft]	DC	
6550.0	[ft]	DC	GEOCHEM
6597.0	[ft]	C	
6600.0	[ft]	C	GEOCHEM
6602.0	[ft]	C	
6602.0	[ft]	C	
6605.0	[ft]	C	
6607.0	[ft]	C	
6610.0	[ft]	C	
6614.0	[ft]	C	
6617.0	[ft]	C	
6620.0	[ft]	C	
6622.0	[ft]	C	
6626.0	[ft]	C	
6630.0	[ft]	C	
6633.0	[ft]	C	
6639.0	[ft]	C	
6643.0	[ft]	C	
6645.0	[ft]	C	
6645.0	[ft]	C	GEOCHEM
6646.0	[ft]	C	
6651.0	[ft]	C	
6654.0	[ft]	C	
6655.0	[ft]	C	

6705.0	[ft]	C	GEOCHEM
6765.0	[ft]	C	GEOCHEM
6770.0	[ft]	DC	
6860.0	[ft]	DC	GEOCHEM
6860.0	[ft]	DC	
6950.0	[ft]	DC	GEOCHEM
6950.0	[ft]	DC	
7040.0	[ft]	DC	GEOCHEM
7040.0	[ft]	DC	
7130.0	[ft]	DC	GEOCHEM
7130.0	[ft]	DC	
7220.0	[ft]	DC	GEOCHEM
7250.0	[ft]	DC	
7310.0	[ft]	DC	GEOCHEM
7310.0	[ft]	DC	
7380.0	[ft]	DC	
7397.0	[ft]	DC	GEOCHEM

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
130	NORDLAND GP
354	UTSIRA FM
1135	HORDALAND GP
2030	FRIGG FM
2073	NO FORMAL NAME
2164	ROGALAND GP
2164	BALDER FM
2182	SELE FM
2188	HERMOD FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
393	pdf	0.19

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
393_1	pdf	0.06
393_2_Hydrocarbon_source_analysis_of_canned_cuttings_from_the_30_10_3_well	pdf	0.96

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
393_01_WDSS_General_Information	pdf	0.26

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
393_1_Completion_Report	pdf	3.88

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
FDC CNT	1937	2237
GR	129	2235
HDT	1524	2238
IES	701	2235
SGR-C	701	2235
VEL	2040	2071

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	166.0	36	170.0	0.00	LOT
SURF.COND.	13 3/8	699.0	17 1/2	700.0	0.00	LOT
OPEN HOLE		2255.0	12 1/4	2255.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
720	1.02			seawater	
1645	1.14			seawater	
2054	1.30			seawater	
2255	1.28			seawater	

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]
393_Formation_pressure_(Formasjonstrykk)	pdf	0.20