



Generell informasjon

Brønnbane navn	30/7-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	MARTIN LINGE
Funn	30/7-2
Brønn navn	30/7-2
Seismisk lokalisering	LINE 550114 SP.570
Utvinningstillatelse	040
Boreoperatør	Norsk Hydro Produksjon AS
Boretillatelse	137-L
Boreinnretning	POLYGLOMAR DRILLER
Boredager	96
Borestart	06.08.1975
Boreslutt	09.11.1975
Frigitt dato	09.11.1977
Publiseringsdato	30.04.2010
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	EOCENE
1. nivå med hydrokarboner, formasjon.	FRIGG FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	111.0
Totalt målt dybde (MD) [m RKB]	2591.0
Totalt vertikalt dybde (TVD) [m RKB]	2591.0
Maks inklinasjon [°]	5
Temperatur ved bunn av brønnbanen [°C]	69
Eldste penetrerte alder	LATE CRETACEOUS
Eldste penetrerte formasjon	JORSALFARE FM
Geodetisk datum	ED50
NS grader	60° 29' 26.06" N



ØV grader	2° 1' 40.85" E
NS UTM [m]	6706599.29
ØV UTM [m]	446588.17
UTM sone	31
NPDID for brønnbanen	385

Brønnhistorie

**General**

Well 30/7-2 was drilled from a location 150 ft (46 m) east of well 30/7-1, which was junked for technical reasons. The well is located in the eastern part of the East Shetland Basin in the North Sea. The well location is due west of the Oseberg Field and ca 3.5 km from the UK Border. The primary objective was to investigate structural closure at Eocene and Paleocene with possible sand development.

Operations and results

Well was spudded with the semi-submersible installation on 6 August 1975. While drilling the 36" hole at 167 m, the drill string stuck. After several unsuccessful attempts to free the pipe, a string shot was run and the hole was plugged. The well was re-spudded on 9 August 9 after having moved the rig 200 ft (61 m) south-southeast. From 28 August up to 10 September operations were more or less suspended at a depth between 991 and 1001 m due to technical problems with the BOP. The well was drilled with gel/seawater mud down to 485 m, with seawater/gel and Drispac from 485 m to 1001 m, and with seawater/gel/Drispac and Lignosulfonate (Unical) from 1001 m to TD.

Two minor shows were reported from Late Eocene. The first, at 1226 m, is a sandstone with patchy yellow to whitish fair to weak fluorescence with a medium to slow cut. There was no visible oil stain on the sample. The second, in a thin sandstone stringer, at 1525 m, gave a dull gold fluorescence with a slow streaming cut. At approximately 1700 a thin sandstone gave a gold fluorescence and a white, milky, streaming cut. The samples had a slight oil stain.

The well penetrated the Frigg Formation from 1748 to 1909m. It was hydrocarbon bearing with a gas/oil contact at 1762.8 m and an oil/water contact at 1783 m according to the CPI log. The oil in the reservoir seems to be biodegraded with virtually no light components (98% C10+), while the gas is extremely dry (99.6% CH4). Below the OWC at 1783m some sandstone stringers with oil were present with the thickest zone at 1807.5 - 1810.5 m. Cored sandstones from 1975 m to 1989 m in the Hermod Formation had good oil shows. In the sandstone/limestone stringers from 2140 m to 2200 m, 2340 m to 2395 m and 2505 to 2530 m, weak to fair shows were encountered. From 2500 m to TD at 2591 m a substantial increase in the background gas was recorded.

Six cores were cut from 1753 m to 1821.7 m and two more cores were cut from 1970 m to 1989.2 m. Five FIT tests were attempted, of which FIT 1 was a misrun. FIT 2 at 2010 m recovered mud, mud filtrate and possibly some gas. The formation was apparently too tight for proper flow to occur. FIT 3 at 1978 m recovered mud and mud filtrate. FIT 4 at 1808.5 m recovered 2 litres of 21.4 deg API oil and 2.3 litres mixed sand, oil, and water. FIT 5 at 1753 m recovered gas.

The well was permanently abandoned on 9 November 1975 as an oil and gas discovery.

Testing

Two drill stem tests were performed.

DST 1 at 1796.5 to 1801.4 m produced no formation fluids to the surface, but formation water and sand was recovered from the drill string after the test. No show of oil was detected.

DST 2 at 1766 to 1776.5 m produced 80 - 140 Sm³ oil and gas/day. Oil gravity was 22.2 deg API and the gas gravity was 0.564 (air = 1). DST 2 also produced a lot of sand that created problems for the test. The content of sand produced with the fluids exceeded 14% by volume at the start of the flow, decreasing to less than 1% after 4 hours.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
200.00	2591.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1753.0	1764.5	[m]
2	1765.2	1780.0	[m]
3	1780.2	1792.4	[m]
4	1792.4	1800.6	[m]
5	1802.5	1816.2	[m]
6	1819.0	1821.7	[m]
7	1970.0	1979.0	[m]
8	1983.7	1989.2	[m]

Total kjerneprøve lengde [m]	77.6
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
134	NORDLAND GP
444	UTSIRA FM
655	NO FORMAL NAME
860	HORDALAND GP
1748	FRIGG FM
1909	ROGALAND GP
1909	BALDER FM
1933	SELE FM
1947	HERMOD FM
2025	SELE FM
2048	HERMOD FM
2088	LISTA FM
2350	VÅLE FM



2371	SHETLAND GP
2371	JORSALFARE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
385	pdf	0.43

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
385_01_WDSS_General_Information	pdf	0.26

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
385_01_30_7_2_Analysis_of_Samples_from_DST	pdf	2.24
385_01_30_7_2_Biostratigraphic_Analysis_of_14_Sidewall_Cores	pdf	2.84
385_01_30_7_2_Biostratigraphy_from_1725-2475m	pdf	3.08
385_01_30_7_2_Completion_log	pdf	1.26
385_01_30_7_2_Completion_Report	pdf	26.75
385_01_30_7_2_Core_1-8_Lithological_Description_Poro-Perm	pdf	3.59
385_01_30_7_2_Core_Report	pdf	1.22
385_01_30_7_2_Core_Show_report	pdf	0.99
385_01_30_7_2_Drilling_Program	pdf	2.36
385_01_30_7_2_Final_Geological_Report	pdf	5.07
385_01_30_7_2_Gas_Analysis	pdf	0.08
385_01_30_7_2_Geological_Prognosis	pdf	1.50
385_01_30_7_2_Grain_Size_distribution_Analysis	pdf	4.07
385_01_30_7_2_Idel_Mud_Log	pdf	12.34
385_01_30_7_2_Mud_Log	pdf	12.87





385_01_30_7_2_Reservoir_Evaluation_Eocene_Discovery	pdf	5.36
385_01_30_7_2_Reservoir_Evaluation_Eocene_Discovery_2	pdf	5.42
385_01_30_7_2_Reservoir_Fluid_Study_PVT_Study	pdf	24.47
385_01_30_7_2_Reservoir_Sampling_Report-Surface_Sample	pdf	0.51
385_01_30_7_2_Well_Summary_Final_Report	pdf	3.30
385_01_30_7_2_Rapport_av_GC_MS_analyse_av_raaoljen	pdf	0.17

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil størrelse [mm]
1.0	1797	1801	0.0
2.0	1765	1777	0.0

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0					
2.0					

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
BHC GR	110	1005
BHC GR	1002	1699
BHC GR	1688	1898
BHC GR	1850	2590
CBL	900	1500
CBL	1660	1830





CNL FDC	482	1700
CNL FDC	1688	1898
CNL FDC	1850	2590
DLL MSFL	1688	1898
DLL MSFL	1850	2073
HDT	1688	2589
IES	1002	1699
IES	1688	1816
IES	1688	1898
IES	1850	2590
TL	1	987

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	198.0	36	199.0	0.00	LOT
SURF.COND.	20	482.0	26	485.0	0.00	LOT
INTERM.	13 3/8	1002.0	17 1/2	1010.0	0.00	LOT
INTERM.	9 5/8	1690.0	12 1/4	1700.0	0.00	LOT
LINER	7	1860.0	8 1/2	2591.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
485	1.06	80.0		waterbased	
1100	1.07	47.0		waterbased	
1753	1.27	59.0		waterbased	
2137	1.24	42.0		waterbased	
2591	1.32	45.0		waterbased	

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]
385 Formation pressure (Formasjonstrykk)	pdf	0.20

