



Generell informasjon

Brønnbane navn	7/11-5
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	MIME
Funn	7/11-5 Mime
Brønn navn	7/11-5
Seismisk lokalisering	603 221 SP 320
Utvinningstillatelse	070
Boreoperatør	Norsk Hydro Produksjon AS
Boretillatelse	316-L
Boreinnretning	TREASURE SEEKER
Boredager	122
Borestart	09.02.1982
Boreslutt	10.06.1982
Frigitt dato	10.06.1984
Publiseringsdato	19.10.2006
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	ULA FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	80.0
Totalt målt dybde (MD) [m RKB]	4478.0
Totalt vertikalt dybde (TVD) [m RKB]	4478.0
Maks inklinasjon [°]	4.75
Temperatur ved bunn av brønnbanen [°C]	169
Eldste penetrerte alder	TRIASSIC
Eldste penetrerte formasjon	SMITH BANK FM
Geodetisk datum	ED50
NS grader	57° 8' 6.39" N



ØV grader	2° 29' 53.53" E
NS UTM [m]	6332679.58
ØV UTM [m]	469626.10
UTM sone	31
NPDID for brønnbanen	42

Brønnhistorie

General

Block 7/11 was awarded in 1965 to the Phillips Group. The first commercial discovery (Cod) was found in this block in 1968. Both Norsk Hydro wells (7/11-5 and 7/11-6) were drilled in the relinquished area awarded to them in Licence 070. The main objective of well 7/11-5 was the Late Jurassic sandstones. The secondary objective was the Triassic sands.

Operations and results

Well 7/11-5 was spudded with the semi-submersible installation Treasure Seeker on 9 February 1982 and drilled to TD at 4478 m in the Triassic Smith Bank Formation. The drilling went forth without incident except for gumbo problems in the top of the 17 1/2" section and minor problems with tight hole in the 8 3/8" section. The well was drilled with sea water and hi-vis pills down to 615 m and with KCl/Drispac mud from 615 m to 2115 m. From 2115 m to TD the well was drilled with KCl/Drispac mud, converted to a fully dispersed gel-lignosulphonate mud in the limestone section.

The well encountered hydrocarbon bearing sandstones in the Late Jurassic Ula Formation with a gross sand interval of 86 m between 4155 and 4241 m. An oil water contact has been estimated to be at 4201 m (from logs). RFT pressure measurements and sampling were performed over the sandstone interval. Below 4202 m, however, no formation pressures were obtained due to seal problems caused by bad hole. Thus a contact based on formation pressure data could not be obtained. The Ula Formation rests unconformably on the Triassic at 4241 m. In the Triassic, thin stringers of sandstones were encountered with a total net sand of 2.25 m and an average porosity of 18%. These sandstones were 100% water saturated. Oil shows were recorded from 3694 m in the Late Cretaceous and down to 4217 m in the Ula Formation. Below 4217 m shows were weak and scattered, and no shows were reported from the Triassic.

Five cores were taken in the Ula Formation from 4159 m to 4231 m. Cores 1 - 4 bled hydrocarbons at the surface. Two RFT segregated samples taken at 4193 m and 4188 m recovered only mud filtrate.

The well was permanently abandoned on 10 June 1982 as an oil discovery.

Testing

Two drill stem tests were performed. DST 1 was taken over the interval 4185 - 4197 m and flowed 470 Sm³/day of 39.2 deg API gravity oil and 118080 Sm³/day of gas. The GOR was measured to 251 Sm³/Sm³ and the gas gravity was 0.876 (air = 1). The second DST over the interval 4165 - 4174 m was abandoned due to the very low permeability and no hydrocarbons were produced to surface. However, calculated flow rates from the flow/unloading of the water cushion indicated 280 STB/day (after 4 hrs 18 minutes) and the oil was found to be of the same type as for DST 1. The maximum temperature during DST 2 was 161 deg C, which was assumed too low. No temperature is available from DST 1. The choke size for both tests was 36/64".



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
190.00	4478.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerper i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	4159.0	4176.2	[m]
2	4177.1	4185.8	[m]
3	4185.8	4194.8	[m]
4	4195.0	4212.9	[m]
5	4213.0	4230.7	[m]

Total kjerneprøve lengde [m]	70.5
Kjerper tilgjengelig for prøvetaking?	YES

Kjernebilder



4164-4167m



4159-4162m



4168-4171m



4172-4175m



4168-4176m



4178-4181m



4182-4185m



4185-4186m



4186-4189m



4190-4193m



4194-4195m



4196-4199m



4200-4203m



4204-4207m



4208-4211m



4212-4213m



4214-4217m



4218-4221m



4222-4225m



4226-4229m



4230-4231m

Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
3896.0	[m]	SWC	RRI
3912.0	[m]	SWC	RRI
3924.0	[m]	SWC	RRI
3934.0	[m]	SWC	RRI
3939.0	[m]	SWC	RRI
3956.0	[m]	SWC	RRI
3959.0	[m]	SWC	RRI
4159.2	[m]	C	RRI
4159.5	[m]	C	RRI
4163.9	[m]	C	RRI
4171.4	[m]	C	RRI
4172.6	[m]	C	RRI
4173.4	[m]	C	RRI
4174.8	[m]	C	RRI
4175.5	[m]	C	RRI
4176.2	[m]	C	RRI



4178.9 [m]	C	RRI
4180.7 [m]	C	RRI
4184.5 [m]	C	RRI
4185.8 [m]	C	RRI
4188.2 [m]	C	RRI
4192.6 [m]	C	RRI
4212.4 [m]	C	RRI
4221.2 [m]	C	RRI
4223.6 [m]	C	RRI
4228.8 [m]	C	RRI
4423.0 [m]	SWC	RRI
4430.0 [m]	SWC	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
105	NORDLAND GP
1497	HORDALAND GP
3022	ROGALAND GP
3022	BALDER FM
3052	SELE FM
3078	LISTA FM
3104	MAUREEN FM
3231	SHETLAND GP
3231	EKOFISK FM
3310	TOR FM
3683	HOD FM
3860	BLODØKS FM
3865	HIDRA FM
3928	CROMER KNOLL GP
3928	RØDBY FM
4024	TYNE GP
4024	MANDAL FM
4057	FARSUND FM
4155	VESTLAND GP
4155	ULA FM
4241	NO GROUP DEFINED
4241	SMITH BANK FM



Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
42	pdf	0.77

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
42_1	pdf	1.29
42_2	pdf	2.12
42_3	pdf	1.75
42_4	pdf	2.55

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
42_01_WDSS_General_Information	pdf	0.18
42_02_WDSS_completion_log	pdf	0.30

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
42_01_7_11_5_Completion_Report	pdf	11.67
42_02_7_11_5_Completion_log	pdf	3.12

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	4185	4197	14.3
2.0	4165	4174	14.3





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

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	470	118000	0.828	0.876	251
2.0	45				

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL	1980	3948
CST	1085	2090
CST	3171	3959
CST	3959	4437
CST	4154	4437
DLL MSFL GR	4120	4337
HDT	2099	3959
HDT	3948	4440
HRT	1500	2065
ISF LSS GR	178	3959
ISF LSS GR	3947	4475
ISF MSFL LSS GR	3947	4201
LDT CNL GR	2099	4437
LDT GR	603	2115
RFT	4176	4465
RFT	4193	0
RFT	4265	4300
SEISLOOK	200	4474
VSP	200	4474

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	178.0	36	179.0	0.00	LOT
SURF.COND.	20	601.0	26	615.0	1.74	LOT
INTERM.	13 3/8	2100.0	17 1/2	2115.0	1.84	LOT
INTERM.	9 5/8	3944.0	12 1/4	3955.0	2.05	LOT
LINER	7	4444.0	8 3/8	4478.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
310	1.08	3.0	11.0	WATER BASED	06.06.1982
615	1.15	6.0	20.0	WATER BASED	06.06.1982
1375	1.46	19.0	28.0	WATER BASED	06.06.1982
1766	1.57	21.0	13.0	WATER BASED	06.06.1982
1971	1.62	31.0	18.0	WATER BASED	06.06.1982
2115	1.62	26.0	15.0	WATER BASED	06.06.1982
2771	1.65	26.0	15.5	WATER BASED	06.06.1982
3228	1.54	14.0	14.0	WATER BASED	06.06.1982
3510	1.61	15.0	10.0	WATER BASED	06.06.1982
3904	1.61	18.0	12.0	WATER BASED	06.06.1982
4039	1.70	22.0	5.0	WATER BASED	06.06.1982
4334	1.80	17.0	6.0	WATER BASED	06.06.1982
4478	1.81	18.0	8.0	WATER BASED	06.06.1982

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]
42_Formalion_pressure_(Formasjonstrykk)	pdf	0.22

