Generell informasjon

Brønnbane navn	7121/1-1 R
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	BARENTS SEA
Brønn navn	7121/1-1
Seismisk lokalisering	NH 8306 - 211 SP. 1106
Utvinningstillatelse	111
Boreoperatør	Esso Exploration and Production Norway A/S
Boretillatelse	487-L2
Boreinnretning	ZAPATA UGLAND
Boredager	158
Borestart	18.03.1986
Boreslutt	23.08.1986
Plugget og forlatt dato	23.08.1986
Frigitt dato	23.08.1988
Publiseringsdato	11.04.2003
Opprinnelig formål	WILDCAT
Gjenåpnet	YES
Årsak til gjenåpning	DRILLING/PLUGGING
Innhold	SHOWS
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	26.8
Vanndybde ved midlere havflate [m]	369.0
Totalt målt dybde (MD) [m RKB]	5000.0
Totalt vertikalt dybde (TVD) [m RKB]	5000.0
Temperatur ved bunn av brønnbanen [°C]	146
Eldste penetrerte alder	LATE CARBONIFEROUS
Eldste penetrerte formasjon	ØRN FM
Geodetisk datum	ED50
NS grader	71° 56' 25.74'' N
ØV grader	21° 4' 36.52'' E
NS UTM [m]	7982512.86
ØV UTM [m]	502657.85
UTM sone	34
NPDID for brønnbanen	896

Brønnhistorie

General

Well 7121/1-1 was drilled on the Loppa High in the northern part of the Tromsøflaket area, offshore Northern Norway.

The primary objective of the 7121/1-1 exploration well was to test the reservoir and hydrocarbon potential of a possible Early Permian (Artinskian) mounded carbonate facies (biohermal build-ups) identified by seismic. Secondary objectives were Late Permian carbonates and Early Carboniferous to Devonian sandstones, Late Carboniferous - Early Permian carbonates, and Triassic sandstones. Finally, the exploration well was designed to fulfill the license's obligatory work program which committed the licensees to drill one wildcat well to test prospects down to rocks of Devonian age or 5000 m, whichever came first.

Operations and results

Exploration well 7121/1-1 was spudded on 10 October 1985 in 369 m water depth with the semi-submersible installation "Zapata Ugland". Due to NPD winter season regulations drilling was stopped at 916 m. Drilling of well 7121/1-1R commenced on 19 March 1986 and reached total depth of 5000 m in Late Carboniferous sediments of the Ørn Formation. The well was drilled with sea water and gel down to 1978 m, and with Sea water / gel / polymer from 1978 m to TD. Lost Circulation Material was used below 3370 m. Triassic rocks were encountered at 698 m, unconformably underlying 178 meters of Tertiary claystone and siltstone. The Triassic sediments (2295 m thick) consisted predominantly of very fine clastics with minor interbeds of sandstone, stringers of dolomite and limestone and traces of coal.

Fair to poor hydrocarbon shows were encountered in some thin and tight sandstones of Late and Middle Triassic age. The only significant hydrocarbon show was encountered in a 11.5 m thick sandstone bed, between 1932.0 and 1943.5 m, where 18.7 % gas (C1 & C4) was measured by the gas detectors. The Paleozoic section (Permian - Late Carboniferous Ørn Formation) was encountered at 2993 m. The section, +2007 m thick, consists predominantly of carbonates (silicified limestones, limestones, dolomitic limestones, dolomitized limestones and dolomites) with minor interbeds of chert, siltstones and anhydrites.& Silicification, re-crystallization and dolomitization are common and only a few intervals show reasonably fair preservation of original depositional textures.

The prognosed primary objective, Early Permian (Artinskian) mounded carbonate facies (biohermal build-ups), was encountered at 3765-3994 m (thickness 229 m). However, biostratigraphic analysis dates the interval as Late Gzhelian - Early Asselian. Only 12% of the carbonate rocks have porosities above 6.0 % (6.0 - 10.0 %). The porosity types recognized in these thin, widely spaced intervals are intercrystalline - interparticle, moldic and fracture porosities.

No hydrocarbon shows were encountered while drilling the Paleozoic section and the interpretation of the wireline logs confirmed that the section is 100% water bearing.

Wellsite and laboratory geochemical analyses of the sediments drilled indicated that the most significant source rock sequences were Early - Middle Triassic shales between 2200 and 2800 m. Source rocks of Permian age were not found. The well was permanently abandoned as a dry hole 23 August 1986.

Testing

No drill stem test was performed.

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3137.5	3138.5	[m]
2	3385.0	3386.0	[m]
3	3511.0	3513.7	[m]

Total kjerneprøve lengde [m]	4.7
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder


3137-3138m


3385-3386m


3511-3512m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2797.0	[m]	DC	FUGRO

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
396	NORDLAND GP
519	SOTBAKKEN GP
519	TORSK FM
698	KAPP TOSCANA GP
698	FRUHOLMEN FM
792	SNADD FM
2210	SASSENDALEN GP
2210	KOBBE FM
2605	KLAPPMYSS FM

2786	HAVERT FM
2993	TEMPELFJORDEN GP
2993	RØYE FM
3502	BJARMELAND GP
3502	ISBJØRN FM
3586	ULV FM
3625	ISBJØRN FM
3700	POLARREV FM
3990	GIPSDALEN GP
3990	ØRN FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
896	pdf	0.74

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
896_1	pdf	1.93
896_2	pdf	1.96
896_3	pdf	1.97
896_4	pdf	1.70
896_5	pdf	0.79

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
896_01_WDSS_General_Information	pdf	0.23
896_02_WDSS_completion_log	pdf	0.39

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
4ARM-CAL GR	900	2030

4ARM-CAL GR	1979	2800
CBL VDL	395	1979
DIFL ACL CBL CNL CDL SP CAL GR	2781	5002
DIFL ACL CNL CDL SP CAL GR	1979	2805
DIFL ACLCNL CDL SP CAL GR	900	2152
DIFL LSACL CDL SP CAL GR	2781	3368
MWD DLWD	900	3368
SWC	938	2123
SWC	2165	2794
SWC	2795	4995
TEMP	1800	2750
VSP	800	5000

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	518.0	36	526.5	0.00	LOT
SURF.COND.	20	901.0	22	916.0	1.51	LOT
INTERM.	16	1979.5	17 1/2	2154.0	1.55	LOT
INTERM.	11 3/4	2784.0	14 3/4	2804.0	1.46	LOT
OPEN HOLE		5000.0	10 5/8	5000.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
591	1.08	9.0		WATER BASED	
898	1.08	9.0		WATER BASED	
922	1.08	8.0		WATER BASED	
936	1.08	9.0		WATER BASED	
965	1.10	8.0		WATER BASED	
1121	1.13	10.0		WATER BASED	
1131	1.13	13.0		WATER BASED	
1207	1.13	8.0		WATER BASED	
1244	1.14	10.0		WATER BASED	
1260	1.13	10.0		WATER BASED	
1280	1.13	10.0		WATER BASED	
1292	1.14	13.0		WATER BASED	

1337	1.13	9.0		WATER BASED	
1423	1.14	13.0		WATER BASED	
1487	1.15	14.0		WATER BASED	
1515	1.13	9.0		WATER BASED	
1527	1.13	9.0		WATER BASED	
1576	1.13	9.0		WATER BASED	
1618	1.13	10.0		WATER BASED	
1650	1.13	10.0		WATER BASED	
1672	1.13	10.0		WATER BASED	
1700	1.13	14.0		WATER BASED	
1711	1.13	11.0		WATER BASED	
1739	1.13	10.0		WATER BASED	
1760	1.13	12.0		WATER BASED	
1815	1.13	10.0		WATER BASED	
1835	1.13	12.0		WATER BASED	
1884	1.13	8.0		WATER BASED	
1907	1.13	12.0		WATER BASED	
1925	1.13	8.0		WATER BASED	
1933	1.13	10.0		WATER BASED	
1942	1.13	11.0		WATER BASED	
1960	1.13	10.0		WATER BASED	
1993	1.13	10.0		WATER BASED	
1994	1.13	11.0		WATER BASED	
2039	1.13	11.0		WATER BASED	
2056	1.13	11.0		WATER BASED	
2064	1.13	8.0		WATER BASED	
2107	1.14	9.0		WATER BASED	
2113	1.13	13.0		WATER BASED	
2115	1.13	9.0		WATER BASED	
2120	1.13	10.0		WATER BASED	
2152	1.13	8.0		WATER BASED	
2153	1.15	8.0		WATER BASED	
2154	1.13	13.0		WATER BASED	
2175	1.13	8.0		WATER BASED	
2231	1.13	10.0		WATER BASED	
2236	1.13	10.0		WATER BASED	
2350	1.13	15.0		WATER BASED	
2407	1.13	14.0		WATER BASED	
2518	1.13	14.0		WATER BASED	
2555	1.15	12.0		WATER BASED	

2620	1.21	15.0		WATER BASED	
2663	1.26	17.0		WATER BASED	
2702	1.32	19.0		WATER BASED	
2721	1.32	20.0		WATER BASED	
2804	1.32	20.0		WATER BASED	
2817	1.20	14.0		WATER BASED	
2845	1.20	14.0		WATER BASED	
2900	1.20	14.0		WATER BASED	
2967	1.20	10.0		WATER BASED	
2987	1.17	11.0		WATER BASED	
2998	1.20	14.0		WATER BASED	
3056	1.20	13.0		WATER BASED	
3117	1.20	15.0		WATER BASED	
3138	1.17	10.0		WATER BASED	
3138	1.17	11.0		WATER BASED	
3140	1.17	11.0		WATER BASED	
3181	1.17	11.0		WATER BASED	
3205	1.17	11.0		WATER BASED	
3310	1.17	13.0		WATER BASED	
3370	1.06	4.0		WATER BASED	
3386	1.08	11.0		WATER BASED	
3460	1.08	12.0		WATER BASED	
3479	1.08	10.0		WATER BASED	
3513	1.08	12.0		WATER BASED	
3684	1.07	8.0		WATER BASED	
3924	1.07	10.0		WATER BASED	
4116	1.08	11.0		WATER BASED	
4299	1.09	12.0		WATER BASED	
4406	1.09	12.0		WATER BASED	
4469	1.09	11.0		WATER BASED	
4695	1.09	11.0		WATER BASED	
4887	1.09	12.0		WATER BASED	
4988	1.09	12.0		WATER BASED	
5000	1.09	10.0		WATER BASED	