Generell informasjon

Brønnbane navn	7228/7-1 S
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	BARENTS SEA
Brønn navn	7228/7-1
Seismisk lokalisering	3D ST 9403- INLINE 1378 & CROSSLINE 1557
Utvinningstillatelse	202
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	989-L
Boreinnretning	TRANSOCEAN ARCTIC
Boredager	35
Borestart	05.12.2000
Boreslutt	08.01.2001
Plugget dato	08.01.2001
Frigitt dato	08.01.2003
Publiseringsdato	11.02.2003
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	24.0
Vanndybde ved midlere havflate [m]	288.0
Totalt målt dybde (MD) [m RKB]	2087.0
Totalt vertikalt dybde (TVD) [m RKB]	1987.0
Maks inklinasjon [°]	30.1
Temperatur ved bunn av brønnbanen [°C]	60
Eldste penetrerte alder	EARLY PERMIAN
Eldste penetrerte formasjon	UNDEFINED GP
Geodetisk datum	ED50
NS grader	72° 15' 28.9'' N
ØV grader	28° 8' 59.7'' E
NS UTM [m]	8018306.53
ØV UTM [m]	539111.27
UTM sone	35
NPDID for brønnbanen	3015

Brønnhistorie

General

Well 7228/7-1S is situated in the Nordkapp basin. The Nordkapp basin is the most pronounced structural element east of Loppa High, with a basinal-axis oriented NE-SW. From top Cretaceous and down to TD of the well the sediments are steeply dipping due to salt diapirism, with the salt diapir located SE of the surface location. The main objective of well 7228/7-1S was to test the hydrocarbon potential of the Upper Triassic Snadd Formation sandstones. Secondary objectives were to test the hydrocarbon potential in Early to Middle Jurassic sandstones, the Stø, Nordmela and Tubåen Formations, and the Middle Triassic Kobbe Formation sandstones. The well path is deviated and designed to penetrate below the salt diapir.

Operations and results

Wildcat well was spudded on 5 December 2000 with the semi-submersible installation "Transocean Arctic" and drilled to a TD of 2087 m in Early Permian sediments. No shallow gas was expected, but since this was a new area a 9 7/8" pilot hole was drilled. No shallow gas was observed by the ROV. Tracks 7228/7-1 S and 7228/7-1 S T2 were both finished in the Hekkingen Formation due to hole problems in the 17 1/2" section. The 7228/7-1 S track was drilled with sea water and hi-vis bentonite pills down to 372 m, with sea water / hi-vis pills / polymer-treated bentonite mud from 372 m to 507 m, with NaCl / Polymer from 507 m to 709 m, and with sea water from 709 m to 1362 m. The 7228/7-1 S T2 track was kicked of 7228/7-1 S at 1332 m and drilled to 1348 m with a NaCl / sea water / polymer / glycol system. Track 7228/7-1 S T3 was kicked of from below the 20" casing shoe in 7228/7-1 S and drilled with "Glydril" mud (KCl / Polymer / glycol) from 530 m to TD. The observed formation tops were encountered shallower than prognosed, outside the uncertainty range. The deviation from prognosed depths increased with depth, from 79.0 m for the Cretaceous Knurr Formation to 229.5 m for the Triassic Snadd Formation. The Fuglen Formation was encountered below the Hekkingen Formation. It was so thin (12.5 m) that it was below the seismic resolution. Several good reservoir zones were penetrated in the Jurassic section, the Stø Formation, the Nordmela Formation and the Tubåen Formation. At 1712 m the well drilled unexpectedly into a Permian block rather than the target Snadd Formation sandstone. One core was cut in the Stø and Nordmela Formations. No MDT sampling was performed in the well. The Jurassic reservoirs were water wet. This was verified from cuttings and MWD logs. A weak hydrocarbon odour was recorded from the core in the Stø Formation, but only dead, tarry oil was seen, and laboratory studies of the core verified a water-wet formation. Total gas readings increased gradually from approximately 0.1% below the 20" casing shoe to nearly 1 % in the interval between 850 to 950 m. Further down to 1310 m the gas level gradually dropped to approximately 0.2%. From there on gas level increased to between 1-2 %. From a few metres above top Hekkingen Formation and down to TD of the 17 1/2" section, significant amounts of heavier components (C2 - C5) were recorded by the gas chromatograph. Also in the interval between 810 to 1010 m minor amounts of gas heavier than C2 were recorded. No cut fluorescence was seen in the Hekkingen claystones (with Isopropanol as cutting agent). In the 8 1/2" section, including the primary target Snadd Formation, no good visual shows were seen and gas readings were generally low. When "hot shot" dating confirmed the unexpected Permian sediments, the well was plugged back to the 13 3/8" shoe and permanently abandoned as a dry well on 8 January 2001.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1120.00	1347.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1367.0	1394.9	[m]

Total kjerneprøve lengde [m]	27.9
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder


1367-1372m


1372-1377m


1377-1382m


1382-1387m


1387-1392m


1392-1395m

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
311	NORDLAND GP
334	ADVENTDALEN GP
334	KOLMULE FM

1300	KNURR FM
1314	HEKKINGEN FM
1348	FUGLEN FM
1362	KAPP TOSCANA GP
1362	STØ FM
1378	NORDMELA FM
1397	TUBÅEN FM
1480	FRUHOLMEN FM
1598	SNADD FM
1712	UNDEFINED GP

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
3015	pdf	0.14

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
3015_1	pdf	1.83
3015_2	pdf	1.82
3015_3	pdf	2.53
3015_4	pdf	6.02

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
3015_7228_7_1_S_COMPLETION_REPORT	.PDF	58.84

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
MWD AUTOTRACK+MAP	1367	2087
MWD-MPR	372	1367

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	372.0	36	375.0	0.00	LOT
INTERM.	20	502.0	26	510.0	1.62	LOT
INTERM.	13 3/8	1323.0	17 1/2	1325.0	1.73	LOT
OPEN HOLE		2087.0	8 1/2	2087.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
372	1.03	14.0		SEAWATER/PAC	
505	1.20	16.0		SEAWATER/PAC	
507	1.20	16.0		SEAWATER/PAC	
586	1.20	20.0		BRINE	
893	1.39	15.0		GLYDRILL	
1041	1.39	25.0		GLYDRILL	
1158	1.39	24.0		GLYDRILL	
1163	1.40	24.0		GLYDRILL	
1278	1.30	13.0		BRINE	
1280	1.35	22.0		BRINE	
1333	1.45	25.0		GLYDRILL	
1348	1.37	25.0		BRINE	
1348	1.35	21.0		BRINE	
1367	1.35	19.0		GLYDRILL	
1424	1.35	19.0		GLYDRILL	
1618	1.35	19.0		GLYDRILL	
1822	1.35	19.0		GLYDRILL	
2055	1.35	21.0		GLYDRILL	
2087	1.35	21.0		GLYDRILL	