



Generell informasjon

Brønnbane navn	6406/12-1 S
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Brønn navn	6406/12-1
Seismisk lokalisering	ST9096-513 & SP 1613
Utvinningstillatelse	157
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	662-L
Boreinnretning	ROSS RIG (2)
Boredager	76
Borestart	15.12.1990
Boreslutt	28.02.1991
Frigitt dato	28.02.1993
Publiseringsdato	02.03.2004
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	329.0
Totalt målt dybde (MD) [m RKB]	3965.0
Totalt vertikalt dybde (TVD) [m RKB]	3891.0
Maks inklinasjon [°]	26.8
Temperatur ved bunn av brønnbanen [°C]	147
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	MELKE FM
Geodetisk datum	ED50
NS grader	64° 4' 11.14" N
ØV grader	6° 43' 56.91" E
NS UTM [m]	7106932.34
ØV UTM [m]	389379.24
UTM sone	32
NPDID for brønnbanen	1711

**Brønnhistorie****General**

Well 6406/12-1 S was designed to drill the Kappa Prospect, which is located west of the Vingleia fault complex and northwest of the Frøya High in the southeastern part of block 6406/12. Structurally the block is situated in the southern part of the Halten Terrace. The prospect was one of several prospective sequences in a Late Jurassic fan complex mapped in the area. The prospect was a stratigraphic trap with no structural closure. The primary objective of the well was to test the hydrocarbon potential of Late Jurassic sandstones in the Kappa prospect. Possible other sands in the Cretaceous or Late Jurassic were secondary targets. The well was also designed to test the geophysical and stratigraphic interpretation of the area and improve the geological, palaeontological and geochemical understanding. No shallow gas warnings were given for this well. Large boulders present in the glacial deposits in the area might cause drilling problems in the 36" and 26" hole section. The pore pressure estimates for the Late Jurassic were uncertain as one of the correlation wells (6406/8-1) penetrated highly over-pressured formations and had serious drilling problems. The other correlation well (6407/10-2) did not penetrate any highly over-pressured formation and had no such problems.

Operations and results

Due to shallow gas from site survey the well was moved 350 m away from target and drilled deviated. Wildcat well 6406/12-1 S was spudded with the semi-submersible rig Ross Rig 15 December 1990. A pilot hole was first drilled to 992 m where gas started to flow into the well bore. The well was killed with heavy mud and plugged. The well was re-spudded 2 January 1991. No major problems occurred while drilling the well after re-spudding. The pore pressure was 1.55 g/Cm³ and gas values were generally low and decreasing down hole. It was drilled to a total depth of 3965 m in the Middle Jurassic Melke Formation. The well was drilled with seawater and hi-vis pills down to 965 m and with Gyp/PAC mud from 965 m to TD

No significant sand development was seen in the Cretaceous section. Top reservoir (Rogn Formation) was encountered at 3600 m, which was 45 m lower than prognosed. It consisted of sandstone as prognosed, but proved to be water bearing. Shows were however observed on conventional and sidewall cores from the Rogn Formation. A total of 120 sidewall cores were attempted and 61 were recovered. A total of 3 conventional cores were cut in this well within the intervals 3603 m to 3640 m in the Rogn Formation and 3816 m to 3818 m in the Melke Formation. An RFT fluid sample was taken at 3610 m. It contained water and mud filtrate. The well was permanently abandoned on 1 March 1991 at as a dry well.

Testing

No drill stem test was performed

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
970.00	3964.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sökkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3603.0	3630.3	[m]
2	3630.3	3638.0	[m]
3	3816.0	3817.6	[m]

Total kjerneprøve lengde [m]	36.6
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



3603-3608m



3608-3613m



3613-3618m



3618-3623m



3623-3628m



3628-3630m



3630-3635m



3635-3638m



3636-3638m



3816-3817m



3816-3818m

Palynologiske preparater i Sökkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1460.0	[m]	DC	STRAT



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 29.5.2024 - 21:20

1480.0	[m]	DC	STRAT
1500.0	[m]	DC	STRAT
1510.0	[m]	DC	STRAT
1530.0	[m]	DC	STRAT
1540.0	[m]	DC	STRAT
1560.0	[m]	DC	STRAT
1570.0	[m]	DC	STRAT
1580.0	[m]	DC	STRAT
1600.0	[m]	DC	STRAT
1620.0	[m]	DC	STRAT
1630.0	[m]	DC	STRAT
1650.0	[m]	DC	STRAT
1660.0	[m]	DC	STRAT
1670.0	[m]	DC	STRAT
1690.0	[m]	DC	STRAT
1700.0	[m]	DC	STRAT
1720.0	[m]	DC	STRAT
1740.0	[m]	DC	STRAT
1750.0	[m]	DC	STRAT
1770.0	[m]	DC	STRAT
1790.0	[m]	DC	STRAT
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1890.0	[m]	DC	STRAT
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2050.0	[m]	DC	STRAT



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2500.0	[m]	DC	STRAT
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2530.0	[m]	DC	STRAT
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2590.0	[m]	DC	STRAT
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2640.0	[m]	DC	STRAT
2650.0	[m]	DC	STRAT
2670.0	[m]	SWC	STATO



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2790.0	[m]	DC	STRAT
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2960.0	[m]	DC	STRAT
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3490.0	[m]	SWC	STATO
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3596.0	[m]	SWC	STATO
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3615.3	[m]	C	STATO
3625.6	[m]	C	STATO
3629.4	[m]	C	STATO
3632.2	[m]	C	STATO
3634.6	[m]	C	STATO
3636.0	[m]	C	STATO
3636.6	[m]	C	STATO
3637.7	[m]	C	STATO
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3682.0	[m]	SWC	STATO
3687.0	[m]	SWC	STATO
3694.0	[m]	SWC	STATO
3703.0	[m]	SWC	STATO
3714.0	[m]	SWC	STATO
3721.0	[m]	SWC	STATO



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3727.0	[m]	SWC	STATO
3736.0	[m]	SWC	STATO
3736.0	[m]	DC	STRAT
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3751.4	[m]	SWC	STATO
3756.0	[m]	SWC	STATO
3760.0	[m]	SWC	STATO
3766.0	[m]	DC	STRAT
3779.0	[m]	SWC	STATO
3790.0	[m]	C	STATO
3790.0	[m]	DC	STRAT
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3807.0	[m]	DC	STRAT
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3816.0	[m]	C	STATO
3816.5	[m]	C	STATO
3817.0	[m]	C	STATO
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3859.0	[m]	DC	STRAT
3872.0	[m]	SWC	STATO
3875.0	[m]	DC	OD
3878.0	[m]	SWC	STATO
3886.0	[m]	DC	STRAT
3896.6	[m]	SWC	STATO
3907.3	[m]	SWC	STATO
3914.0	[m]	SWC	STATO
3923.0	[m]	SWC	STATO
3925.0	[m]	DC	OD
3930.0	[m]	SWC	STATO
3937.0	[m]	SWC	STATO
3952.0	[m]	DC	STRAT
3965.0	[m]	DC	STATO
3965.0	[m]	DC	OD

Litostratigrafi



Topp Dyb [mMD RKB]	Litostrat. enhet
352	NORDLAND GP
352	NAUST FM
1167	KAI FM
1752	HORDALAND GP
1752	BRYGGE FM
2047	ROGALAND GP
2047	TARE FM
2137	TANG FM
2323	SHETLAND GP
2323	SPRINGAR FM
2854	NISE FM
3095	KVITNOS FM
3478	CROMER KNOLL GP
3478	LANGE FM
3577	LYR FM
3600	VIKING GP
3600	ROGN FM
3625	SPEKK FM
3727	MELKE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
1711	pdf	0.63

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1711_1	pdf	2.44

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1711_01_WDSS_General_Information	pdf	0.53





1711_02_WDSS_completion_log	pdf	0.22
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Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1711_6406_12_1_S_COMPLETION_REPORT_A_ND_LOG	pdf	36.07

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL GR	750	2532
CST	2565	3940
CST	2667	3940
DIL LSS GR CAL	415	963
DIL LSS GR CAL	951	2545
LDL CNL GR	2375	3813
LDL GR	415	963
LDL GR	951	2545
LDL GR	3592	3957
MWD - DPR	415	883
MWD - DPR	423	2547
MWD - RGD	2546	3965
PI LSS GR CAL	3592	3957
PI LSS MSFL GR CAL	2375	3813
RFT GR	3602	3627
RFT GR	3610	3610
VSP-NI	1550	3930
VSP-WAW	1550	415
VSP-WAW	2960	3100

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	415.0	36	417.0	0.00	LOT
INTERM.	20	951.0	26	955.0	1.72	LOT
INTERM.	13 3/8	2532.0	17 1/2	2534.0	1.82	LOT





OPEN HOLE		3965.0	12 1/4	3965.0	0.00	LOT
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Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
492	0.00			WATER BASED	18.12.1990
512	0.00			WATER BASED	18.12.1990
594	1.58	12.0	5.5	WATER BASED	27.02.1991
625	0.00			WATER BASED	18.12.1990
924	1.03			WATER BASED	07.01.1991
965	1.03			WATER BASED	09.01.1991
965	0.00			WATER BASED	09.01.1991
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965	0.00			WATER BASED	11.01.1991
988	0.00	19.0	6.5	WATER BASED	27.12.1990
988	0.00			WATER BASED	28.12.1990
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988	0.00	10.0	10.0	WATER BASED	27.12.1990
988	0.00	13.0	7.0	WATER BASED	28.12.1990
988	0.00	23.0	6.0	WATER BASED	02.01.1991
988	0.00	28.0	7.5	WATER BASED	02.01.1991
988	0.00	28.0	7.5	WATER BASED	02.01.1991
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1579	1.35	23.0	5.0	WATER BASED	17.01.1991
1781	1.45	21.0	6.5	WATER BASED	18.01.1991
1815	1.55	21.0	6.5	WATER BASED	18.01.1991
2015	1.60	33.0	8.5	WATER BASED	21.01.1991
2026	1.60	33.0	8.5	WATER BASED	21.01.1991
2093	1.60	29.0	7.5	WATER BASED	21.01.1991
2156	1.60	29.0	7.5	WATER BASED	21.01.1991
2200	1.60	30.0	10.5	WATER BASED	25.01.1991



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 29.5.2024 - 21:20

2317	1.58	20.0	6.0	WATER BASED	26.02.1991
2330	1.60	34.0	8.0	WATER BASED	21.01.1991
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3965	1.58	24.0	6.5	WATER BASED	26.02.1991

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]
1711_Formalion_pressure_(Formasjonstrykk)	pdf	0.28

