



Generell informasjon

Brønnbane navn	6610/7-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Brønn navn	6610/7-2
Seismisk lokalisering	ST 8216 - 115 SP 541
Utvinningstillatelse	084
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	385-L
Boreinnretning	WEST VANGUARD
Boredager	200
Borestart	28.08.1983
Boreslutt	14.03.1984
Frigitt dato	14.03.1986
Publiseringsdato	15.06.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	235.0
Totalt målt dybde (MD) [m RKB]	4215.0
Totalt vertikalt dybde (TVD) [m RKB]	4213.0
Maks inklinasjon [°]	5.2
Temperatur ved bunn av brønnbanen [°C]	112
Eldste penetrerte alder	EARLY TRIASSIC
Eldste penetrerte formasjon	GREY BEDS (INFORMAL)
Geodetisk datum	ED50
NS grader	66° 27' 49.61" N
ØV grader	10° 10' 10.92" E
NS UTM [m]	7372281.53
ØV UTM [m]	552123.02
UTM sone	32
NPDID for brønnbanen	26

**Brønnhistorie****General**

Wildcat well 6610/7-2 is located on the Trøndelag Platform outside Mid Norway. The primary objective of the well was to test the hydrocarbon potential of Early Jurassic and Late Triassic sandstones. Secondary objectives were to gather information about the stratigraphy and hydrocarbon potential down to approximately 4200 m.

Operations and results

Wildcat well 6610/7-2 was spudded with the semi-submersible installation West Vanguard on 28 August 1983 and drilled to TD at 4215 m in the Triassic Grey Beds. Drilling operations were problematic and took 119 days more than programmed. Excessive reaming of tight spots had to be done during drilling of the 22" hole section. In all the four first hole sections a pilot hole was drilled before underreaming. Nineteen kg junk was recovered from the hole after drilling out of the 13 3/8" casing shoe. Several problems with stuck pipe occurred below 3000 m. At 3526 m the pipe was stuck and was backed off at 3315 m. A cement plug was set from 3292 to 3148 m and the hole was sidetracked from 3212 m. Severe problems with tight hole, was experienced down to 3361 m. The well was drilled with seawater and spud mud down to 701 m, with gypsum/lignosulphonate mud from 701 m to 2160 m. Due to expected salt beds below 2500 m the well was drilled with oil based mud from 2160 m to TD. The oil base used was a Norol product, "hvitolje", a low-aromatic mineral oil C13 - C20 distillate.

The well encountered several sandstone bodies, the first interpreted as the Egga Informal Unit in Paleocene. Earliest Cretaceous - Late Jurassic were not present in the well. At 1487 m the Early Jurassic Båt Group was encountered with massive and porous sandstone sequence. The Triassic interval 3473 - 4218 m also had some clean sandstone, especially in the upper part. Electrical logs and RFT pressure tests, however, proved all potential reservoirs to be water bearing. Organic geochemical analyses showed that the units with the best source rock properties in this well are the shales and coals of the Early Jurassic Tilje and Åre Formations, which can be classified as rich type II/III source rocks with potential for gas and oil. However, shales in the upper 100 m of the Triassic Grey Beds also have fair to rich contents of organic matter classified as type III kerogen with some potential for gas. The well is immature down to approximately 2300 m, reaches peak oil generation maturity (0.8% Ro) at around 2900 m, while base oil window is considered at around TD in the well. Hence, the Early Jurassic coals and shales are immature in the well position. Free hydrocarbons thought to be due to migration are detected only in a siltstone sample from 1504 m in the Tilje Formation.

Two cores were cut, one in the Early Jurassic sequence and one in the Grey beds close to TD. No fluid sample was taken. The sample available at the NPD is a sample of the base oil used in the drilling mud.

The well was permanently abandoned on 14 March 1984 as a dry hole.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
320.00	4212.00
Borekaks tilgjengelig for prøvetaking?	YES

Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1498.0	1507.0	[m]
2	4180.0	4195.0	[m]

Total kjerneprøve lengde [m]	24.0
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



1498-1503m



1503-1507m



4180-4186m



4186-4192m



4192-4195m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
712.0	[m]	SWC	IKU
712.0	[m]	SWC	OD
760.0	[m]	SWC	OD
806.0	[m]	SWC	OD
806.0	[m]	SWC	IKU
888.0	[m]	SWC	OD
888.0	[m]	SWC	IKU
938.0	[m]	SWC	IKU
938.0	[m]	SWC	OD
986.0	[m]	SWC	OD
986.0	[m]	SWC	IKU



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 20.5.2024 - 00:11

990.0 [m]	DC	DONG
1002.0 [m]	SWC	IKU
1002.0 [m]	SWC	OD
1010.0 [m]	DC	DONG
1030.0 [m]	DC	DONG
1031.5 [m]	SWC	IKU
1047.0 [m]	SWC	IKU
1050.0 [m]	DC	DONG
1070.0 [m]	DC	DONG
1090.0 [m]	DC	DONG
1110.0 [m]	DC	DONG
1129.0 [m]	SWC	IKU
1130.0 [m]	DC	DONG
1150.0 [m]	DC	DONG
1170.0 [m]	DC	DONG
1190.0 [m]	DC	DONG
1206.0 [m]	SWC	IKU
1209.0 [m]	DC	DONG
1230.0 [m]	DC	DONG
1251.0 [m]	DC	DONG
1255.0 [m]	SWC	IKU
1263.0 [m]	DC	DONG
1270.0 [m]	SWC	IKU
1305.0 [m]	SWC	IKU
1344.0 [m]	SWC	IKU
1400.0 [m]	SWC	IKU
1435.0 [m]	SWC	OD
1435.0 [m]	SWC	IKU
1460.0 [m]	SWC	IKU
1470.0 [m]	SWC	IKU
1479.0 [m]	SWC	OD
1482.0 [m]	SWC	OD
1485.0 [m]	SWC	IKU
1521.5 [m]	SWC	IKU
1539.0 [m]	DC	OD
1560.0 [m]	DC	OD
1579.0 [m]	DC	OD
1593.0 [m]	DC	OD
1629.0 [m]	DC	OD
1629.3 [m]	SWC	IKU



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 20.5.2024 - 00:11

1635.3	[m]	SWC	IKU
1654.5	[m]	SWC	IKU
1668.0	[m]	DC	OD
1678.0	[m]	SWC	IKU
1705.0	[m]	SWC	IKU
1707.0	[m]	DC	OD
1723.5	[m]	SWC	IKU
1746.0	[m]	DC	OD
1785.0	[m]	DC	OD
1806.0	[m]	DC	OD
1851.0	[m]	DC	OD
1910.0	[m]	SWC	IKU
1911.0	[m]	DC	OD
1938.0	[m]	DC	OD
1971.0	[m]	DC	OD
1998.0	[m]	DC	OD
2028.0	[m]	DC	OD
2061.0	[m]	DC	OD
2078.0	[m]	SWC	IKU
2091.0	[m]	DC	OD
2122.0	[m]	DC	OD
2151.0	[m]	DC	OD
2159.0	[m]	SWC	IKU
2167.0	[m]	SWC	OD
2171.0	[m]	DC	OD
2175.0	[m]	SWC	OD
2189.0	[m]	SWC	OD
2208.0	[m]	DC	OD
2223.0	[m]	SWC	IKU
2226.0	[m]	DC	OD
2244.0	[m]	DC	OD
2252.0	[m]	SWC	OD
2274.0	[m]	DC	OD
2334.0	[m]	DC	OD
2355.0	[m]	SWC	OD
2364.0	[m]	DC	OD
2377.5	[m]	SWC	OD
2392.0	[m]	SWC	IKU
2394.0	[m]	DC	OD
2430.0	[m]	DC	OD



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 20.5.2024 - 00:11

2440.0	[m]	SWC	IKU
2440.0	[m]	DC	DONG
2446.5	[m]	DC	OD
2454.0	[m]	DC	OD
2484.0	[m]	DC	OD
2497.0	[m]	SWC	OD
2514.0	[m]	DC	OD
2541.5	[m]	SWC	IKU
2544.0	[m]	DC	OD
2574.0	[m]	DC	OD
2589.5	[m]	SWC	IKU
2604.0	[m]	DC	OD
2634.0	[m]	DC	OD
2637.0	[m]	SWC	IKU
2664.0	[m]	DC	OD
2694.0	[m]	DC	OD
2724.0	[m]	DC	OD
2749.5	[m]	SWC	OD
2784.0	[m]	DC	OD
2844.0	[m]	DC	OD
2874.0	[m]	DC	OD
2904.0	[m]	DC	OD
2994.0	[m]	DC	OD
3024.0	[m]	DC	OD
3054.0	[m]	DC	OD
3084.0	[m]	DC	OD
3114.0	[m]	DC	OD
3144.0	[m]	DC	OD
3150.0	[m]	SWC	OD
3174.0	[m]	DC	OD
3201.0	[m]	SWC	OD
3204.0	[m]	DC	OD
3221.0	[m]	SWC	OD
3234.0	[m]	DC	OD
3242.0	[m]	SWC	OD
3261.0	[m]	DC	OD
3264.0	[m]	DC	OD
3284.0	[m]	DC	OD
3294.0	[m]	DC	OD
3324.0	[m]	DC	OD



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 20.5.2024 - 00:11

3338.0	[m]	SWC	OD
3354.0	[m]	DC	OD
3376.0	[m]	SWC	OD
3384.0	[m]	DC	OD
3414.0	[m]	DC	OD
3444.0	[m]	DC	OD
3453.5	[m]	SWC	OD
3474.0	[m]	DC	OD
3478.5	[m]	SWC	OD
3534.0	[m]	DC	OD
3564.0	[m]	DC	OD
3587.0	[m]	SWC	OD
3636.0	[m]	DC	OD
3663.0	[m]	DC	OD
3693.0	[m]	DC	OD
3717.0	[m]	DC	OD
3753.0	[m]	DC	OD
3774.0	[m]	DC	OD
3801.0	[m]	DC	OD
3840.0	[m]	DC	OD
3864.0	[m]	DC	OD
3877.0	[m]	SWC	OD
3894.0	[m]	DC	OD
3924.0	[m]	DC	OD
3951.0	[m]	DC	OD
3966.0	[m]	SWC	IKU
3984.0	[m]	DC	OD
4014.0	[m]	DC	OD
4044.0	[m]	DC	OD
4074.0	[m]	DC	OD
4104.0	[m]	DC	OD
4120.5	[m]	SWC	OD
4134.0	[m]	DC	OD
4164.0	[m]	DC	OD
4194.0	[m]	DC	OD

Oljeprøver i Sökkeldirektoratet



Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
MUD		0.00	0.00	BASE OIL		YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
257	NORDLAND GP
257	NAUST FM
993	HORDALAND GP
993	BRYGGE FM
1039	ROGALAND GP
1039	TARE FM
1126	TANG FM
1166	NO FORMAL NAME
1197	TANG FM
1262	SHETLAND GP
1262	SPRINGAR FM
1455	CROMER KNOLL GP
1455	LANGE FM
1487	BÅT GP
1487	TILJE FM
1533	ÅRE FM
1726	GREY BEDS (INFORMAL)

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
26	pdf	0.91

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
26_1	pdf	3.38
26_2	pdf	4.16





Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
26_01_WDSS_General_Information	pdf	0.19
26_02_WDSS_completion_log	pdf	0.37

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
26_01_Completion_Report_and_Composite_log	pdf	57.53
26_02_End_Of_Well_Report_Report	pdf	1.58
26_03_Analysis_samples_from_Shaker_and_mudcleaner	pdf	0.26
26_04_Biostratigraphy_report	pdf	2.15
26_05_End_Of_Well_Report	pdf	92.78
26_06_Geochemical_Evaluation	pdf	7.86
26_07_Hvitolje_basert_boreslam	pdf	47.94
26_08_Palynology	pdf	1.36
26_09_Sedimentundersokelse_etter_proveboring_med_oljebasert_slam	pdf	38.97

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
BGT	701	1464
BGT	701	1464
BGT	1449	2159
BGT	1449	2162
CBL VDL GR	259	1449
CBL VDL GR	908	2143
CBL VDL GR	1755	3470
CNT GR	2140	3290
CST	712	1460
CST	1470	1752
CST	1753	2159
CST	2152	2667





CST	2674	3478
CST	3505	4205
CST	3505	4088
DLL MSFL GR SP	3472	4215
HDT GR	701	1466
HDT GR	3473	4217
ISF SONIC MSFL SP CAL GR	1449	2177
ISF SONIC SFL SP CAL GR	320	713
ISF SONIC SP CAL	701	1465
ISF SONIC SP GR	2177	4216
LDL CNL CAL GR	320	1466
LDL CNL CAL NGS	1449	4217
RFT GR	1490	2125
RFT GR	3514	4199
SHDT GR	1449	2178
TDT GR	2300	3290
VELOCITY	360	4210

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	321.0	36	321.0	0.00	LOT
SURF.COND.	20	701.0	26	715.0	1.53	LOT
INTERM.	16	1450.0	22	1465.0	1.78	LOT
INTERM.	13 3/8	2143.0	17 1/2	2160.0	1.76	LOT
INTERM.	9 5/8	3471.0	12 1/4	3486.0	2.00	LOT
OPEN HOLE		4215.0	8 1/2	4215.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
300	1.07	9.0		WATER BASED	
700	1.10	9.0	18.0	WATER BASED	
730	1.12			WATER BASED	
1110	1.17			WATER BASED	
1135	1.25			WATER BASED	
1175	1.31			WATER BASED	



1225	1.32	17.0	19.0	WATER BASED	
1300	1.43			WATER BASED	
1400	1.43	19.0	19.0	WATER BASED	
1465	1.40	12.0	11.0	WATER BASED	
2260	1.14	18.0	18.0	WATER BASED	
2295	1.19	20.0	15.0	WATER BASED	
2385	1.13	21.0	16.0	WATER BASED	
2530	1.20	22.0	20.0	WATER BASED	
2795	1.21	21.0	19.0	WATER BASED	
2845	1.22	24.0	20.0	WATER BASED	
2870	1.20	30.0	16.0	WATER BASED	
2890	1.19	19.0	17.0	WATER BASED	
2920	1.18	19.0	14.0	WATER BASED	
3000	1.19	22.0	14.0	WATER BASED	
3140	1.20	21.0	10.0	WATER BASED	
3240	1.21	17.0	22.0	WATER BASED	
3355	1.30	23.0	15.0	WATER BASED	
3450	1.35	28.0	17.0	WATER BASED	

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]
26_Formalion_pressure_(Formasjonstrykk)	PDF	0.23

