



Generell informasjon

Brønnbane navn	9/2-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	9/2-2
Seismisk lokalisering	ST 8626 - 418 SP. 173
Utvinningstillatelse	114
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	558-L
Boreinnretning	ROSS ISLE
Boredager	45
Borestart	08.08.1987
Boreslutt	21.09.1987
Frigitt dato	21.09.1989
Publiseringsdato	25.04.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL SHOWS
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	99.0
Totalt målt dybde (MD) [m RKB]	3550.0
Totalt vertikalt dybde (TVD) [m RKB]	3548.0
Maks inklinasjon [°]	11.1
Temperatur ved bunn av brønnbanen [°C]	104
Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	SKAGERRAK FM
Geodetisk datum	ED50
NS grader	57° 52' 44.35" N
ØV grader	4° 24' 0.69" E
NS UTM [m]	6416242.45
ØV UTM [m]	583043.78
UTM sone	31
NPDID for brønnbanen	1135



Brønnhistorie

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General

Wildcat well 9/2-2 was drilled on a fault-induced dome-formed structural trap (the Alpha structure) in the northwestern part of the block. The primary objective for the well was to test the Jurassic sandstones of the Sandnes- and Bryne Formations in the structure. In addition the well should test the structural and geophysical interpretations, and improve the geological, geochemical and paleontological understanding of the area. The well was programmed and designed as a possible future producer.

Operations and results

Wildcat well 9/2-2 was spudded with the semi-submersible installation Ross Isle 8 august 1987 and drilled to TD at 3550 m in the Triassic Skagerrak Formation. Drilling went on with some minor problems in the interval 2400 - 3000 m. Inclination increased in the 8 1/2" section towards TD and was 11.1° at 3539 m. The well was drilled with seawater and gel down to 363 m, with gypsum/polymer mud from 363 m to 2871 m, and with gel/lignosulphonate mud from 2871 m to TD.

Top Sandnes and Bryne sandstones were reached at 3131 m and 3230 m respectively. From the logs the Middle Jurassic sandstones were interpreted as water bearing. The results of the log interpretation indicated some low hydrocarbon saturations in the lower part of the Sandnes formation and in major parts of the Bryne formation. Some residual hydrocarbons may be present, but the major part of the hydrocarbon saturations, particular in the Bryne formation, is unrealistic due to organic material and coal layers affecting the logs. The first show in the well was recorded at 3114 m and the deepest near TD at 3544 m. The shows were generally seen in shales and coals or in sandstones interbedded with shales and coals. The strongest and most continuous shows were seen in shales from 3114 m to 3234 m (base Egersund Formation - upper Sandnes Formation), and in interbedded sands, shales, and coals in the interval 3417 m to 3498 m (base Bryne Formation and throughout the Fjerritslev Formation). The core from top of the Sandnes reservoir sandstone was devoid of shows and the logs displayed a water-bearing reservoir. Organic geochemical analyses showed excellent source rock potential in the Tau Formation, particularly the upper part which had TOC up to 8 % and hydrogen index up to 570 mg HC/g TOC. Also the lower Bryne Formation had excellent properties with TOC in the range 2.6 to 13 % and hydrogen index in the range 100 to 480 mg HC/g TOC. From vitrinite reflectance and rock-eval Tmax the well is evaluated as mature for oil generation below ca 2900 m and immature above. One run with the FMT tool was made over the interval 3135.8 to 3182.8 m in the Sandnes Fm. The open-hole section below 3182.8 m was not investigated due to malfunction of the FMT tool. No fluid samples were taken. The pressure readings showed a clear water gradient of 1.135 g/cc. This is in good agreement with the water density measured on water samples from the well 9/2-1, DST 1. When comparing FMT data from the wells 9/2-2 and 9/2-1, it is most likely to believe that the Jurassic sandstone in the two wells is in pressure communication. Two cores were cut, one in the Sandnes Formation and one in the Fjerritslev Formation. After having run final electrical logs, it was decided not to test the well.

The well was permanently abandoned on 21 September 1987 as a well with shows.

Testing

No drill stem test was performed.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
370.00	3550.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3135.0	3163.4	[m]
2	3414.0	3431.0	[m]

Total kjerneprøve lengde [m]	45.4
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



3135-3140m



3140-3145m



3145-3150m



3150-3155m



3155-3160m



3160-3163m



3414-3419m



3419-3424m



3424-3429m



3429-3431m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
520.0	[m]	DC	GEARH
540.0	[m]	DC	GEARH



560.0	[m]	DC	GEARH
580.0	[m]	DC	GEARH
600.0	[m]	DC	GEARH
620.0	[m]	DC	GEARH
640.0	[m]	DC	GEARH
660.0	[m]	DC	GEARH
700.0	[m]	DC	GEARH
720.0	[m]	DC	GEARH
740.0	[m]	DC	GEARH
756.0	[m]	DC	GEARH
774.0	[m]	DC	GEARH
792.0	[m]	DC	GEARH
807.0	[m]	DC	GEARH
822.0	[m]	DC	GEARH
840.0	[m]	DC	GEARH
855.0	[m]	DC	GEARH
1446.0	[m]	DC	GEARH
1464.0	[m]	DC	GEARH
1482.0	[m]	DC	GEARH
1500.0	[m]	DC	GEARH
1518.0	[m]	DC	GEARH
1536.0	[m]	DC	GEARH
1554.0	[m]	DC	GEARH
1572.0	[m]	DC	GEARH
1590.0	[m]	DC	GEARH
1608.0	[m]	DC	GEARH
1626.0	[m]	DC	GEARH
1644.0	[m]	DC	GEARH
1662.0	[m]	DC	GEARH
1680.0	[m]	DC	GEARH
1698.0	[m]	DC	GEARH
1716.0	[m]	DC	GEARH
1734.0	[m]	DC	GEARH
1752.0	[m]	DC	GEARH
1770.0	[m]	DC	GEARH
1788.0	[m]	DC	GEARH
1806.0	[m]	DC	GEARH
1821.0	[m]	DC	GEARH
1836.0	[m]	DC	GEARH
1851.0	[m]	DC	GEARH



1866.0	[m]	DC	GEARH
1881.0	[m]	DC	GEARH
1896.0	[m]	DC	GEARH
1911.0	[m]	DC	GEARH
1926.0	[m]	DC	GEARH
1941.0	[m]	DC	GEARH
1956.0	[m]	DC	GEARH
1971.0	[m]	DC	GEARH
1986.0	[m]	DC	GEARH
2001.0	[m]	DC	GEARH
2016.0	[m]	DC	GEARH
2031.0	[m]	DC	GEARH
2046.0	[m]	DC	GEARH
2061.0	[m]	DC	GEARH
2076.0	[m]	DC	GEARH
2091.0	[m]	DC	GEARH
2106.0	[m]	DC	GEARH
2121.0	[m]	DC	GEARH
2136.0	[m]	DC	GEARH
2151.0	[m]	DC	GEARH
2166.0	[m]	DC	GEARH
2181.0	[m]	DC	GEARH
2196.0	[m]	DC	GEARH
2211.0	[m]	DC	GEARH
2226.0	[m]	DC	GEARH
2241.0	[m]	DC	GEARH
2256.0	[m]	DC	GEARH
2271.0	[m]	DC	GEARH
2298.0	[m]	DC	GEARH
2313.0	[m]	DC	GEARH
2328.0	[m]	DC	GEARH
2343.0	[m]	DC	GEARH
2358.0	[m]	DC	GEARH
2373.0	[m]	DC	GEARH
2388.0	[m]	DC	GEARH
2403.0	[m]	DC	GEARH
2418.0	[m]	DC	GEARH
2433.0	[m]	DC	GEARH
2448.0	[m]	DC	GEARH
2463.0	[m]	DC	GEARH



2478.0	[m]	DC	GEARH
2493.0	[m]	DC	GEARH
2508.0	[m]	DC	GEARH
2523.0	[m]	DC	GEARH
2538.0	[m]	DC	GEARH
2553.0	[m]	DC	GEARH
2568.0	[m]	DC	GEARH
2583.0	[m]	DC	GEARH
2598.0	[m]	DC	GEARH
2613.0	[m]	DC	GEARH
2628.0	[m]	DC	GEARH
2643.0	[m]	DC	GEARH
2658.0	[m]	DC	GEARH
2673.0	[m]	DC	GEARH
2688.0	[m]	DC	GEARH
2703.0	[m]	DC	GEARH
2718.0	[m]	DC	GEARH
2733.0	[m]	DC	GEARH
2748.0	[m]	DC	GEARH
2766.0	[m]	DC	GEARH
2778.0	[m]	DC	GEARH
2793.0	[m]	DC	GEARH
2808.0	[m]	DC	GEARH
2823.0	[m]	DC	GEARH
2838.0	[m]	DC	GEARH
2853.0	[m]	DC	GEARH
2868.0	[m]	DC	GEARH
2916.0	[m]	DC	GEARH
2931.0	[m]	DC	GEARH
2946.0	[m]	DC	GEARH
2952.0	[m]	DC	GEARH
2961.0	[m]	DC	GEARH
2976.0	[m]	DC	GEARH
2982.0	[m]	SWC	GEARH
2991.0	[m]	DC	GEARH
2995.0	[m]	SWC	GEARH
3006.0	[m]	DC	GEARH
3015.0	[m]	SWC	GEARH
3021.0	[m]	DC	GEARH
3030.0	[m]	SWC	GEARH



3036.0	[m]	DC	GEARH
3051.0	[m]	DC	GEARH
3060.0	[m]	SWC	GEARH
3066.0	[m]	DC	GEARH
3081.0	[m]	DC	GEARH
3090.0	[m]	SWC	GEARH
3096.0	[m]	DC	GEARH
3111.0	[m]	DC	GEARH
3120.0	[m]	SWC	GEARH
3126.0	[m]	DC	GEARH
3130.0	[m]	SWC	GEARH
3137.7	[m]	C	GEARH
3146.9	[m]	C	GEARH
3152.0	[m]	C	GEARH
3154.4	[m]	C	GEARH
3159.3	[m]	C	GEARH
3170.0	[m]	SWC	GEARH
3174.0	[m]	DC	GEARH
3189.0	[m]	DC	GEARH
3204.0	[m]	DC	GEARH
3210.0	[m]	SWC	GEARH
3219.0	[m]	DC	GEARH
3225.0	[m]	SWC	GEARH
3234.0	[m]	DC	GEARH
3249.0	[m]	DC	GEARH
3264.0	[m]	DC	GEARH
3271.0	[m]	SWC	GEARH
3279.0	[m]	DC	GEARH
3294.0	[m]	DC	GEARH
3309.0	[m]	DC	GEARH
3324.0	[m]	DC	GEARH
3339.0	[m]	DC	GEARH
3354.0	[m]	DC	GEARH
3363.0	[m]	SWC	GEARH
3369.0	[m]	DC	GEARH
3384.0	[m]	DC	GEARH
3399.0	[m]	DC	GEARH
3410.0	[m]	SWC	GEARH
3414.0	[m]	DC	GEARH
3419.9	[m]	C	GEARH



3421.5 [m]	DC	GEUS
3426.4 [m]	C	GEARHART
3428.4 [m]	DC	GEUS
3428.7 [m]	DC	GEUS
3430.8 [m]	DC	GEUS
3434.0 [m]	SWC	GEARHART
3441.0 [m]	DC	GEARHA
3456.0 [m]	DC	GEARHA
3471.0 [m]	DC	GEARHA
3486.0 [m]	DC	GEARHA
3495.0 [m]	SWC	GEARHA
3501.0 [m]	DC	GEARHA
3516.0 [m]	DC	GEARHA
3523.0 [m]	SWC	GEARHA
3531.0 [m]	DC	GEARHA
3540.0 [m]	SWC	GEARHA
3546.0 [m]	DC	GEARHA
3550.0 [m]	DC	GEARHA

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
121	NORDLAND GP
406	HORDALAND GP
747	ROGALAND GP
747	BALDER FM
770	SELE FM
778	LISTA FM
795	VÅLE FM
803	SHETLAND GP
803	EKOFISK FM
873	TOR FM
1161	HOD FM
1425	BLODØKS FM
1445	CROMER KNOLL GP
1445	SOLA FM
1511	ÅSGARD FM
2381	BOKNFJORD GP
2381	FLEKKEFJORD FM



2447	SAUDA FM
2957	TAU FM
3062	EGERSUND FM
3123	VESTLAND GP
3123	SANDNES FM
3230	BRYNE FM
3475	NO GROUP DEFINED
3475	FJERRITSLEV FM
3498	NO GROUP DEFINED
3498	SKAGERRAK FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
1135	pdf	0.57

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1135_1	pdf	4.02

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1135_01_WDSS_General_Information	pdf	0.38
1135_02_WDSS_completion_log	pdf	0.28

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1135_9_2_2_COMPLETION_REPORT_AND_LOG	pdf	26.67





Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ACBL VDL GR	350	1092
ACBL VDL GR	2000	2835
CDL GR CAL	334	2814
CNL GR	3050	3517
DIFL ACL GR SP CAL	334	2832
DIFL ACL GR SP CAL MLL	2835	3547
FMT	3135	3138
HR DIP	2856	3521
MWD - GR RES DIR	189	3550
SWC	2957	3540
SWC	2960	3543
TEMP	2000	2825
VELOCITY	840	3535
ZDEN CNL GR CAL	2835	3543

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	182.0	36	182.0	0.00	LOT
SURF.COND.	20	334.0	26	366.0	1.39	LOT
INTERM.	13 3/8	1093.0	17 1/2	1128.0	1.78	LOT
INTERM.	9 5/8	2838.0	12 1/4	2875.0	1.80	LOT
OPEN HOLE		3577.0	8 1/2	3577.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
189	1.05			WATER BASED	24.08.1987
350	1.31	30.0	5.7	WATER BASED	18.09.1987
350	1.05	19.0	5.5	WATER BASED	24.08.1987
696	1.13	17.0	4.8	WATER BASED	24.08.1987
793	1.12	15.0	5.3	WATER BASED	24.08.1987
848	1.13	16.0	4.8	WATER BASED	24.08.1987
876	1.15	20.0	6.2	WATER BASED	24.08.1987



920	1.31	32.0	6.2	WATER BASED	16.09.1987
920	1.31	32.0	7.2	WATER BASED	18.09.1987
1030	1.15	17.0	7.2	WATER BASED	24.08.1987
1104	1.15	17.0	6.7	WATER BASED	24.08.1987
1125	1.15	16.0	4.3	WATER BASED	24.08.1987
1153	1.10	12.0	7.7	WATER BASED	24.08.1987
1246	1.10	15.0	7.2	WATER BASED	24.08.1987
1340	1.10	14.0	6.7	WATER BASED	24.08.1987
1379	1.10	15.0	7.2	WATER BASED	24.08.1987
1409	1.10	16.0	6.7	WATER BASED	24.08.1987
1463	1.10	15.0	6.2	WATER BASED	24.08.1987
1611	1.10	16.0	6.7	WATER BASED	24.08.1987
1695	1.10	22.0	6.7	WATER BASED	24.08.1987
1794	1.10	21.0	5.7	WATER BASED	24.08.1987
1940	1.10	24.0	7.7	WATER BASED	24.08.1987
2160	1.10	17.0	4.8	WATER BASED	24.08.1987
2520	1.15	18.0	5.2	WATER BASED	24.08.1987
2713	1.31	30.0	3.8	WATER BASED	16.09.1987
2738	1.20	19.0	5.3	WATER BASED	24.08.1987
2871	1.23	18.0	4.8	WATER BASED	25.08.1987
2871	1.30	21.0	4.8	WATER BASED	27.08.1987
2871	1.27	23.0	5.7	WATER BASED	31.08.1987
2871	1.27	12.0	2.6	WATER BASED	31.08.1987
2871	1.27	13.0	3.5	WATER BASED	31.08.1987
2871	1.27	13.0	2.9	WATER BASED	31.08.1987
2871	1.30	20.0	4.8	WATER BASED	26.08.1987
2942	1.27	28.0	4.6	WATER BASED	03.09.1987
3037	1.31	28.0	3.8	WATER BASED	03.09.1987
3105	1.31	28.0	4.3	WATER BASED	04.09.1987
3152	1.31	30.0	4.3	WATER BASED	07.09.1987
3235	1.31	27.0	3.8	WATER BASED	07.09.1987
3312	1.31	30.0	3.8	WATER BASED	07.09.1987
3356	1.31	25.0	4.3	WATER BASED	09.09.1987
3414	1.31	26.0	4.3	WATER BASED	09.09.1987
3431	1.31	25.0	3.8	WATER BASED	10.09.1987
3509	1.31	28.0	4.3	WATER BASED	11.09.1987
3550	1.31	29.0	3.3	WATER BASED	14.09.1987





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 brønnspar. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
1135 Formation pressure (Formasjonstrykk)	pdf	0.22

