



Generell informasjon

Brønnbane navn	30/9-2
Type	EXPLORATION
Formål	APPRAISAL
Status	SUSPENDED
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	OSEBERG
Funn	30/6-9
Brønn navn	30/9-2
Seismisk lokalisering	ST 8006 - 117 SP 1505
Utvinningstillatelse	079
Boreoperatør	Norsk Hydro Produksjon AS
Boretillatelse	370-L
Boreinnretning	NORTRYM
Boredager	103
Borestart	01.04.1983
Boreslutt	12.07.1983
Frigitt dato	12.07.1985
Publiseringsdato	28.05.2003
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	105.0
Totalt målt dybde (MD) [m RKB]	2830.0
Totalt vertikalt dybde (TVD) [m RKB]	2830.0
Maks inklinasjon [°]	12
Temperatur ved bunn av brønnbanen [°C]	107
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	DRAKE FM
Geodetisk datum	ED50
NS grader	60° 27' 53" N



ØV grader	2° 49' 13.03" E
NS UTM [m]	6703339.30
ØV UTM [m]	490116.41
UTM sone	31
NPDID for brønnbanen	11

Brønnhistorie

**General**

The wildcat 30/9-2 was planned as the first well on the Gamma structure in block 30/9. Well 30/6-9 had previously penetrated the structure but this well failed to encounter the oil/water contact. The primary objectives of 30/9-2 were to verify the reserve estimate for the main part of the gamma structure and penetrate the oil/water contact in the lower part of the Brent Group. Additional objectives were to obtain core material from the oil zone in the Etive Formation and perform a water injection test in this, obtain information on the quality of the reservoir in the water zone and stratigraphical information on the southern part of the Gamma structure. & The well was temporarily abandoned for about one year and then re-entered for an extended test.

Operations and results

Wildcat well 30/9-2 was spudded with the semi-submersible installation "Nortrym" on 1 April 1983 and drilled to a total depth of 2830 m in the Early Jurassic Dunlin Group. The well was drilled using water-based mud down to the 12 1/4" hole at 1715 m. The 12 1/4" hole was drilled to TD using oil based mud ("ENVIROMUL" and "IL 2832 oil" as oil base). While running the 13 3/8" casing, this got stuck at 1334 m. The casing was worked free using diesel in the mud and the casing was set at 1680 m. After drilling the 12 1/4" hole to 2203 m the drill pipe got stuck with the bit at 2170 m. Several unsuccessful attempts were made to free the pipe. The drill pipe was then backed off and the well was cemented back and sidetracked from 1482.5 m.

The Brent Group sandstones (2578-2767 m) RKB were hydrocarbon bearing down to 2737m where an oil/water contact was encountered within the Etive Formation sandstones (2698-2767m). & No additional hydrocarbon bearing reservoirs were encountered by this well. Poor hydrocarbon shows reported from Upper Cretaceous limestones were considered uninteresting. The Ness Formation (2578-2698 m) consisted of very fine to coarse-grained sandstones with interbedded shales, coals and occasional siltstones. & The Etive Formation consisted of very fine to predominantly medium grained homogeneous sandstones with pebble beds in the upper part. & The sandstones were locally micaceous and carbonaceous and contained stringers with abundant calcareous cement. & Twelve conventional cores were cut continuously from 2591 m near the top of the Ness Formation and down into the top of the Drake Formation shales at 2777 m. FMT pressure recordings and sampling were performed in the well. & Samples of oil and gas were obtained from the FMT samples at 2599.5 m (Ness Formation) and 2728 m (Etive Formation). & Samples of water/filtrate were obtained from the samples at 2639.5 m (Ness Formation) and 2755 m (Etive Formation).

The well was temporarily abandoned as an oil and gas appraisal on 12 July 1983. The well was re-entered as 30/9-2 R on 1 June 1986 for a test production. The re-entry was formally completed on 7 July, and subsequently re-classified to 30/9-T-2 for the test production. &

Testing

Four DST's were performed in the well, two in the Etive Formation (DST1 from 2738 m to 2737 m and DST2 from 2704 m to 2728 m) and two in the Ness Formation (DST3 2685 m to 2693 m and DST4 from 2595 m to 2604 m). The DST performed in the lower part of the Etive Formation was a combined production and injection test, which produced water. The other DST's produced oil and gas.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
230.00	2155.00

Borekaks tilgjengelig for prøvetaking?	YES
--	-----

Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2591.0	2594.0	[m]
2	2594.0	2611.4	[m]
4	2614.0	2632.0	[m]
5	2632.0	2650.4	[m]
6	2650.5	2668.8	[m]
7	2669.0	2687.0	[m]
8	2687.0	2704.3	[m]
9	2705.0	2722.5	[m]
10	2723.0	2738.2	[m]
11	2741.0	2757.0	[m]
12	2759.0	2776.8	[m]

Total kjerneprøve lengde [m]	176.7
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2591-2594m



2594-2599m



2598-2604m



2604-2609m



2609-2612m



2614-2619m



2619-2624m



2624-2629m



2629-2632m



2632-2637m



2637-2642m



2642-2647m



2647-2651m



2650-2655m



2655-2660m



2660-2665m



2665-2669m



2669-2674m



2674-2679m



2679-2684m



2684-2687m



2687-2692m



2692-2697m



2697-2702m



2702-2705m



2705-2710m



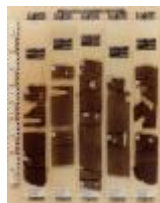
2710-2715m



2715-2720m



2720-2723m



2723-2728m



2728-2733m



2733-2738m



2738-2739m



2741-2746m



2746-2751m



2751-2755m



2756-2757m



2759-2764m



2764-2769m



2769-2774m



2774-2777m

Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2486.0	[m]	SWC	RRI
2499.4	[m]	SWC	RRI
2508.9	[m]	SWC	RRI
2515.9	[m]	SWC	RRI
2524.0	[m]	SWC	RRI
2534.5	[m]	SWC	RRI
2542.0	[m]	SWC	RRI
2566.0	[m]	SWC	RRI
2577.5	[m]	SWC	RRI
2584.0	[m]	SWC	RRI
2591.7	[m]	C	RRI
2593.1	[m]	C	OD
2593.8	[m]	C	OD
2603.5	[m]	C	RRI
2609.8	[m]	C	OD
2610.6	[m]	C	OD
2610.7	[m]	C	RRI
2617.8	[m]	C	RRI
2627.9	[m]	C	RRI
2639.0	[m]	C	RRI
2647.8	[m]	C	RRI
2658.2	[m]	C	RRI
2667.5	[m]	C	RRI
2670.3	[m]	C	OD
2677.1	[m]	C	RRI
2678.7	[m]	C	OD
2684.0	[m]	C	RRI
2695.8	[m]	C	OD



2697.3	[m]	C	RRI
2697.7	[m]	C	OD
2703.3	[m]	C	RRI
2703.4	[m]	C	OD
2710.8	[m]	C	RRI
2720.2	[m]	C	RRI
2732.7	[m]	C	RRI
2742.1	[m]	C	RRI
2744.7	[m]	C	RRI
2748.8	[m]	C	OD
2750.4	[m]	C	RRI
2752.0	[m]	C	RRI
2753.4	[m]	C	OD
2764.4	[m]	C	OD
2770.0	[m]	C	OD
2795.0	[m]	C	RRI
2825.5	[m]	C	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
129	NORDLAND GP
655	UTSIRA FM
715	UNDIFFERENTIATED
867	HORDALAND GP
1114	SKADE FM
1155	NO FORMAL NAME
1167	SKADE FM
1180	NO FORMAL NAME
1233	SKADE FM
1244	NO FORMAL NAME
1269	SKADE FM
1359	NO FORMAL NAME
2014	ROGALAND GP
2014	BALDER FM
2084	SELE FM
2199	LISTA FM
2290	VÅLE FM
2303	SHETLAND GP



2303	HARDRÅDE FM
2420	KYRRE FM
2505	TRYGGVASON FM
2507	CROMER KNOLL GP
2509	VIKING GP
2509	HEATHER FM
2578	BRENT GP
2578	NESS FM
2698	ETIVE FM
2767	DUNLIN GP
2767	DRAKE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
11	pdf	0.43

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
11 1	pdf	1.86
11 2	pdf	1.33

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
11 01 WDSS General Information	pdf	0.21
11 02 WDSS completion log	pdf	0.29

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
11 30 9 2 COMPLETION LOG	pdf	2.75
11 30 9 2 COMPLETION REPORT	pdf	17.72





Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL	1250	1680
CDL CAL GR	900	1689
CDL CNL CAL GR	1479	2828
DIFL LS BHC GR	1482	2830
DIFL LS BHC SP GR	218	900
DIFL LS BHC SP GR	900	1700
FMT	2305	2765
FMT	2639	2690
FMT SAMPLE	2728	2728
FMT SAMPLE	2755	2755
HDT	1900	2826
SPECTRALOG	2550	2790
SWC	2230	2825
TEMP	930	1250
VSP	1268	2830

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	219.0	36	220.0	0.00	LOT
SURF.COND.	20	901.0	26	915.0	1.78	LOT
INTERM.	13 3/8	1680.0	17 1/2	1715.0	1.81	LOT
INTERM.	9 5/8	2830.0	12 1/4	2830.0	0.00	LOT
OPEN HOLE		4083.0	8 1/2	4083.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
2582	1.16	1.0		WATER BASED	
2594	1.16	1.0		WATER BASED	
2710	1.16	1.0		WATER BASED	
2722	1.16	1.0		WATER BASED	
2724	1.16	1.0		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 brønnspar. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

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

