



Generell informasjon

Brønnbane navn	30/9-6
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	OSEBERG SØR
Funn	30/9-6 Oseberg Sør
Brønn navn	30/9-6
Seismisk lokalisering	NH 8502 320 KOL1080
Utvinningstillatelse	104
Boreoperatør	Norsk Hydro Produksjon AS
Boretillatelse	539-L
Boreinnretning	POLAR PIONEER
Boredager	44
Borestart	08.03.1987
Boreslutt	21.04.1987
Frigitt dato	21.04.1989
Publiseringsdato	08.01.2015
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	TARBERT FM
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	NESS FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	103.0
Totalt målt dybde (MD) [m RKB]	3034.0
Totalt vertikalt dybde (TVD) [m RKB]	3033.0
Maks inklinasjon [°]	2.8
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP
Geodetisk datum	ED50



NS grader	60° 23' 3.77" N
ØV grader	2° 49' 55.59" E
NS UTM [m]	6694389.17
ØV UTM [m]	490743.78
UTM sone	31
NPDID for brønnbanen	1027

Brønnhistorie



General

Well 30/9-6 was drilled on the C-prospect on the southeast flank of the Oseberg Fault block. The structure is a rotated fault block with overall easterly dips towards the Horda Platform fault. The prospect is further bounded by faults to the west and to the northwest. The primary objective was to prove hydrocarbons in the Brent Group and verify possible pressure communication between the C-structure and the Oseberg Field Alpha structure to the North.

Operations and results

Wildcat well 30/9-6 was spudded with the semi-submersible installation Polar Pioneer on 8 March 1987 and drilled to TD at 3034 m in the Early Jurassic Statfjord Group. Drilling proceeded without significant problems. The well was drilled with spud mud down to 970 m and with KCl/polymer mud from 970 m to TD.

The Brent Group was encountered at 2591 m and had oil in three differently pressured sand bodies, one in the Tarbert Formation and two in the Ness Formation. The lowest seen oil was at 2645 m in the Ness Formation. Four different pressure regimes were found in the Brent group. The Tarbert Formation has 6 m gross with 4.5 m net pay. The average porosity is 19% and the average water saturation is 44%. The Ness Formation has 49 m gross (hydrocarbon-bearing interval) with 13.3 m net pay (combining the two oil bearing sand bodies). The average porosity is 23% and the average water saturation is 39%.

Weak shows were described in limestones in the interval 2318 m to 2358 m in the top of the Shetland Group. Otherwise, no oil shows were described outside of the oil-bearing Brent reservoirs.

Five conventional cores were cut in the Brent Group from 2593.5 - 2686 m. RFT fluid samples were taken at 2619 m in both runs 2A and 2B. Run 2B was performed in order to verify the previous run.

The well was permanently abandoned on 21 April as an oil discovery.

Testing

Two drill stem tests were performed.

DST 1 tested the interval 2637.9 m to 2645.5 m in the lowermost oil bearing section in the Ness Formation. This test produced 185 Sm³ oil and 17175 Sm³ gas /day through a 20/64" choke. The GOR was 92.8 Sm³/Sm³, the oil density was 0.855 G/cm³, and the gas gravity was 0.698 (air = 1) with 1% CO₂ and no detectable H₂S. The bottom hole temperature was 100 °C.

DST2 tested the interval 2591.5 m to 2596.5 m in the Tarbert Formation. This test produced 166 Sm³ oil and 16980 Sm³ gas /day through a 20/64" choke. The GOR was 102 Sm³/Sm³, the oil density was 0.856 g/cm³, and the gas gravity was 0.698 with 1% CO₂ and no detectable H₂S. The bottom hole temperature was 100 °C.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
970.00	3032.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2593.5	2603.3	[m]
2	2608.0	2623.5	[m]
3	2628.0	2636.0	[m]
4	2649.0	2665.2	[m]
5	2671.0	2676.8	[m]

Total kjerneprøve lengde [m]	55.2
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2593-2597m



2597-2601m



2601-2603m



2604-2608m



2608-2612m



2612-2616m



2616-2620m



2620-2623m



2624-2628m



2628-2632m



2632-2636m



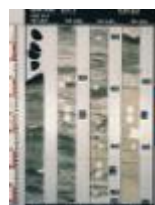
2645-2649m



2649-2653m



2653-2657m



2657-2661m



2661-2665m



2665-2670m



2670-2674m



2674-2676m

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	DST1	2637.90	2645.50	OIL	08.04.1987 - 00:00	YES
DST	DST2	2591.50	2596.50	OIL	12.04.1987 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
126	NORDLAND GP
690	UTSIRA FM
828	HORDALAND GP
2020	ROGALAND GP
2020	BALDER FM
2080	SELE FM
2138	LISTA FM
2302	MAUREEN FM
2317	SHETLAND GP
2547	VIKING GP
2547	HEATHER FM
2591	BRENT GP
2591	TARBERT FM
2597	NESS FM
2693	RANNOCH FM
2699	NO FORMAL NAME
2723	DUNLIN GP
2723	DRAKE FM
2835	COOK FM



2845	BURTON FM
2907	AMUNDSEN FM
2981	STATFJORD GP

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1027_GCH_1	pdf	0.19
1027_GCH_2	pdf	0.24
1027_GCH_3	pdf	1.32
1027_GCH_4	pdf	1.08

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
1027_01_WDSS_General_Information	pdf	0.38
1027_02_WDSS_completion_log	pdf	0.25

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1027_30_9_6_Completion_log	pdf	5.83
1027_30_9_6_Completion_Report	pdf	10.66

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2638	2646	7.9
2.0	2592	2597	7.9

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				





Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	185	17175	0.855	0.698	93
2.0	166	16980	0.856	0.698	102

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL CET	1600	2962
CST	2165	2570
CST	2583	2999
DIL LSS LDT CNL GR SP CAL	950	3028
DLL MSFL NGT	2567	2800
MWD GR SON NEU RES	126	2587
RFT	2591	3002
RFT	2592	2643
RFT	2619	0
RLL GR EWR COND	2565	2655
SHDT	950	3033
VSP	680	2950

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	213.0	36	214.0	0.00	LOT
INTERM.	13 3/8	954.0	17 1/2	970.0	1.71	LOT
INTERM.	9 5/8	2567.0	12 1/4	2587.0	1.81	LOT
LINER	7	3031.0	8 1/2	3034.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
124	0.00			WATER BASED	21.04.1987
131	0.00			WATER BASED	21.04.1987
160	1.03			WATER BASED	09.03.1987



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 14.5.2024 - 08:04

165	0.00			WATER BASED	21.04.1987
214	1.03			WATER BASED	10.03.1987
863	1.03			WATER BASED	11.03.1987
970	1.03			WATER BASED	12.03.1987
970	1.34	27.0	11.0	WATER BASED	13.03.1987
1438	1.34	28.0	12.0	WATER BASED	16.03.1987
1527	1.40	37.0	18.0	WATER BASED	16.03.1987
1888	1.40	31.0	12.0	WATER BASED	16.03.1987
2136	1.40	30.0	12.0	WATER BASED	17.03.1987
2267	1.40	32.0	12.0	WATER BASED	18.03.1987
2350	1.21	25.0	9.0	WATER BASED	21.04.1987
2399	1.40	34.0	13.0	WATER BASED	19.03.1987
2465	1.21	22.0	7.0	WATER BASED	21.04.1987
2472	1.40	32.0	10.0	WATER BASED	20.03.1987
2528	1.40	33.0	9.0	WATER BASED	
2587	1.40	31.0	9.0	WATER BASED	
2587	1.21	17.0	6.0	WATER BASED	24.03.1987
2593	1.21	27.0	10.0	WATER BASED	25.03.1987
2624	1.21	27.0	10.0	WATER BASED	26.03.1987
2634	1.21	26.0	10.0	WATER BASED	13.04.1987
2634	1.21	26.0	9.0	WATER BASED	14.04.1987
2634	1.21	20.0	7.0	WATER BASED	21.04.1987
2651	1.21	26.0	10.0	WATER BASED	30.03.1987
2686	1.21	27.0	10.0	WATER BASED	30.03.1987
2759	1.21	24.0	9.0	WATER BASED	30.03.1987
2858	1.21	24.0	8.0	WATER BASED	30.03.1987
2965	1.21	28.0	11.0	WATER BASED	06.04.1987
2965	1.21	27.0	11.0	WATER BASED	06.04.1987
2965	1.21	27.0	11.0	WATER BASED	07.04.1987
2965	1.21	27.0	11.0	WATER BASED	08.04.1987
2965	1.21	27.0	11.0	WATER BASED	13.04.1987
2965	1.21	25.0	10.0	WATER BASED	13.04.1987
3034	1.21	24.0	10.0	WATER BASED	31.03.1987
3034	1.21	24.0	10.0	WATER BASED	01.04.1987
3034	1.21	24.0	9.0	WATER BASED	02.04.1987
3034	1.21	25.0	9.0	WATER BASED	03.04.1987

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]
1027 Formation pressure (Formasjonstrykk)	pdf	0.23

