



Generell informasjon

Brønnbane navn	34/10-16
Type	EXPLORATION
Formål	APPRAISAL
Status	SUSPENDED
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	GULLFAKS SØR
Funn	34/10-2 Gullfaks Sør
Brønn navn	34/10-16
Seismisk lokalisering	8008 - 111 SP 240
Utvinningstillatelse	050
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	357-L
Boreinnretning	NORDRAUG
Boredager	119
Borestart	14.12.1982
Boreslutt	11.04.1983
Frigitt dato	11.04.1985
Publiseringsdato	03.10.2011
Opprinnelig formål	APPRAISAL
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]	138.0
Totalt målt dybde (MD) [m RKB]	4042.0
Totalt vertikalt dybde (TVD) [m RKB]	4027.0
Maks inklinasjon [°]	15
Temperatur ved bunn av brønnbanen [°C]	126
Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	LUNDE FM
Geodetisk datum	ED50
NS grader	61° 5' 35.62" N



ØV grader	2° 10' 46.66" E
NS UTM [m]	6773609.61
ØV UTM [m]	455758.16
UTM sone	31
NPDID for brønnbanen	59

Brønnhistorie

General

Well 34/10-16 was drilled on the Gullfaks Sør structure, 8 km south of the Gullfaks Field. The purpose of this well was to investigate a fault block, en echelon to the first fault block tested by well 34/10-2, for possible extension of hydrocarbon accumulation. The principal drilling objective was sandstones of the Brent Group. Secondary objectives were the Cook and Statfjord sands, of which the Statfjord sand proved the presence of oil in well 34/10-2.

Operations and results

Appraisal well 34/10-16 was spudded with the semi-submersible installation Nordraug on 14 December 1982 and drilled to TD at 4042 m (4027 m TVD) in the Late Triassic Lunde Formation. Excessive time were lost due to waiting on weather, hole problems, logging problems and other technical problems. These problems consumed a total of 1080 hours or 45 days downtime. The well was drilled with spud mud down to 225 m, with gel/seawater from 225 m to 617 m, and with lignosulphonate CMC/gel mud from 617 m to TD.

The Brent Group came in at 3171 m and contained both oil and gas with the gas/oil contact at ca 3350 m and the oil/water contact at ca 3422 m, according to the logs. The gas net pay was estimated to 84 m with average porosity 18.2% and average water saturation 22.5%. The oil net pay was estimated to 29.5 m with average porosity 16.5% and average water saturation 38.9%. No hydrocarbons were encountered in the Cook and Statfjord Formations. No oil shows were recorded outside of the Brent Group.

A total of 23 cores were cut, 22 of these covering nearly all of the Brent Group and the last one covering a sandstone in the upper Statfjord Formation. The RFT tool was run for fluid samples. Segregated RFT samples were recovered from 3356 m (oil) and 3345 m (condensate). No pressure points were acquired due to bad hole conditions.

The well was temporary plugged 11 April 1983 and later re entered for drill stem testing. It is classified as an oil appraisal well

Testing

No drill stem test was performed

Borekaks i Sökkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
230.00	4039.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3170.0	3175.4	[m]
2	3177.0	3195.0	[m]
3	3195.0	3211.8	[m]
4	3219.0	3228.5	[m]
5	3229.0	3247.0	[m]
6	3247.0	3260.5	[m]
7	3261.0	3279.0	[m]
8	3280.0	3297.0	[m]
9	3298.0	3308.0	[m]
10	3311.0	3322.0	[m]
11	3323.0	3341.4	[m]
12	3341.4	3348.4	[m]
13	3348.1	3356.0	[m]
14	3359.0	3363.0	[m]
15	3363.0	3369.0	[m]
16	3369.0	3378.0	[m]
17	3378.0	3387.0	[m]
18	3387.0	3395.8	[m]
19	3396.0	3413.4	[m]
20	3414.0	3430.5	[m]
21	3431.0	3447.9	[m]
22	3450.0	3465.8	[m]
23	3811.0	3829.4	[m]

Total kjerneprøve lengde [m]	292.0
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder





3170-3175m



3177-3184m



3184-3191m



3191-3195m



3195-3202m



3202-3209m



3209-3211m



3213-3220m



3220-3227m



3227-3228m



3229-3236m



3236-3243m



3243-3246m



3247-3254m



3254-3260m



3261-3267m



3268-3275m



3275-3279m



3280-3287m



3287-3294m



3294-3297m



3298-3305m



3305-3308m



3311-3318m



3318-3322m



3323-3330m



3330-3337m



3341-3348m



3348-3355m



3355-3356m





3359-3363m 3363-3369m 3369-3376m 3376-3378m 3378-3385m



3385-3387m



3387-3394m



3394-3395m



3396-3403m



3403-3410m



3410-3413m



3414-3421m



3421-3428m



3428-3430m



3431-3438m



3438-3445m



3445-3447m



3450-3457m



3457-3464m



3464-3465m



3811-3818m



3818-3825m



3825-3829m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
3015.0	[m]	DC	GEOCH
3036.0	[m]	DC	GEOCH
3048.0	[m]	DC	GEOCH
3063.0	[m]	DC	GEOCH
3072.0	[m]	DC	GEOCH
3084.0	[m]	DC	GEOCH
3093.0	[m]	DC	GEOCH



3105.0	[m]	DC	GEOCH
3114.0	[m]	DC	GEOCH
3123.0	[m]	DC	GEOCH
3135.0	[m]	DC	GEOCH
3147.0	[m]	DC	GEOCH
3159.0	[m]	DC	GEOCH
3165.0	[m]	DC	GEOCH
3390.0	[m]	C	RRI
3458.0	[m]	C	RRI

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST1	3397.00	3407.00	OIL	10.09.1983 - 00:00	YES
DST	TEST2	3177.00	3187.00		17.09.1983 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
163	NORDLAND GP
1002	UTSIRA FM
1045	HORDALAND GP
1168	NO FORMAL NAME
1187	NO FORMAL NAME
1223	NO FORMAL NAME
1600	NO FORMAL NAME
1855	ROGALAND GP
1855	BALDER FM
1928	LISTA FM
2062	SHETLAND GP
2062	JORSALFARE FM
2355	KYRRE FM
2978	CROMER KNOLL GP
2978	RØDBY FM
2984	SOLA FM
2990	ÅSGARD FM



3017	VIKING GP
3017	DRAUPNE FM
3030	HEATHER FM
3171	BRENT GP
3171	TARBERT FM
3217	NESS FM
3399	ETIVE FM
3412	RANNOCH FM
3475	DUNLIN GP
3475	DRAKE FM
3556	COOK FM
3602	BURTON FM
3625	AMUNDSEN FM
3798	STATFJORD GP
4010	HEGRE GP
4010	LUNDE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
59_1	pdf	1.66
59_2	pdf	4.59
59_3	pdf	0.19

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
59_01_WDSS_General_Information	pdf	0.21
59_02_WDSS_completion_log	pdf	0.39

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
59_34_10_16_Analysis_of_Core_Samples	pdf	0.25
59_34_10_16_Completion_log	pdf	3.05
59_34_10_16_Completion_Report	PDF	44.91





59 34 10 16 Interpretation Of Drill Stem Test	pdf	0.57
59 34 10 16 Petrophysical Evaluation	pdf	3.43
59 34 10 16 PVT Analysis DST1 Jan84	pdf	0.23
59 34 10 16 PVT analysis DST1	pdf	0.23
59 34 10 16 Reservoir Fluid Study	pdf	0.63
59 34 10 16 Routine Core Analysis	pdf	2.56
59 34 10 16 R Completion Report	pdf	36.40
59 34 10 16 Source Rock Analyses	pdf	3.16
59 34 10 16 Special Core Analysis Study	pdf	4.47
59 34 10 16 Special Core Analysis Study Sep84	pdf	2.47
59 34 10 16 Special Core Analysis Study Vol1	pdf	2.79
59 34 10 16 Special Core Analysis Study Vol2	pdf	7.97
59 34 10 16 Spesial Core Analysis Geco 6 4plugs	pdf	15.00
59 34 10 16 Stratigraphical Paleontological Report	pdf	5.97
59 34 10 16 Vitrinite Reflectance	pdf	0.09
59 34 10 16 Well Testing Report	pdf	1.32
59 34 10 16 Well Testing Report DST1	pdf	2.07
59 34 10 16 Well Testing Report DST2	pdf	2.25

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil størrelse [mm]
1.0	3397	3407	19.0
2.0	3177	3187	20.6

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	955	182000	0.860	0.670	191
2.0	400	1647000	0.790	0.660	4118

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
BGT	2917	3168
CBL VDL GR	899	2917
CBL VDL GR	1684	1910
CBL VDL GR	2758	4010
DLL GR	3157	3223
ISF LSS GR MSFL	163	4043
LDL CNL GR	226	4043
NGS	3150	3500

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	225.0	36	226.0	0.00	LOT
SURF.COND.	20	598.0	26	619.0	1.46	LOT
INTERM.	13 3/8	1904.0	17 1/2	1920.0	1.67	LOT
INTERM.	9 5/8	2915.0	12 1/4	2930.0	1.87	LOT
LINER	7	4035.0	9 1/2	4042.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
225	1.04			waterbased	
425	1.08			waterbased	
720	1.15			waterbased	
1845	1.27			waterbased	
2215	1.21			waterbased	
3100	1.52			waterbased	
4040	1.55			waterbased	

