



Generell informasjon

Brønnbane navn	34/7-21 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	TORDIS
Funn	34/7-21 Borg
Brønn navn	34/7-21
Seismisk lokalisering	SG 8431 R 211 C 1241
Utvinningstillatelse	089
Boreoperatør	Saga Petroleum ASA
Boretillatelse	752-L
Boreinnretning	TREASURE SAGA
Boredager	60
Borestart	15.12.1992
Boreslutt	12.02.1993
Frigitt dato	12.02.1995
Publiseringsdato	28.02.2008
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA DRAUPNE FM SS
2. nivå med hydrokarboner, alder	LATE JURASSIC
2. nivå med hydrokarboner, formasjon	INTRA HEATHER FM SS
Avstand, boredekk - midlere havflate [m]	26.0
Vanndybde ved midlere havflate [m]	192.0
Totalt målt dybde (MD) [m RKB]	3360.0
Totalt vertikalt dybde (TVD) [m RKB]	2874.0
Maks inklinasjon [°]	59
Temperatur ved bunn av brønnbanen [°C]	102
Eldste penetrerte alder	MIDDLE JURASSIC



Eldste penetrerte formasjon	TARBERT FM
Geodetisk datum	ED50
NS grader	61° 17' 36.84" N
ØV grader	2° 4' 21.14" E
NS UTM [m]	6796001.43
ØV UTM [m]	450299.76
UTM sone	31
NPDID for brønnbanen	2068

Brønnhistorie

**General**

Exploration well 34/7-21 A is a sidetrack to well 34/7-21 which found oil in three different sands in the Late Jurassic - Early Cretaceous succession. No OWC was found. The primary purpose of the sidetrack was to test the extension of these discoveries and to prove possible OWC(s). A secondary objective was to test the presence of sandstones, and possible hydrocarbons, within the Late Cretaceous in which a thin sandstone interval was proved oil-bearing in well 34/7-21.

Operations and results

Well 34/7-21A was kicked off from 1798 m in the vertical well on 16 December 1992. The well was deviated and penetrated the top reservoir 585 m west of the vertical well. It was drilled with the semi-submersible installation Treasure Saga to TD at 3360 m (2874 m TVD), 37 metres TVD into the Brent Group. Initial problems with steering the drill string resulted in a kick-off in the wrong direction. The well was turned around and lined up to the correct azimuth. The drill string got mechanically stuck three times in the interval 2465 m to 2571 m, but came free within short time. The string also got stuck at 2998 m when running in the hole after waiting on weather. The hole apparently deteriorated with time. The TD caliper log showed severe washouts of the hole, up to a maximum of 22". Waiting on weather for about 17 days was seen to be a major cause of the severe washouts. The washouts and hence increased amounts of cuttings, possibly explain the problems with the hole packing off and the string becoming stuck. Due to the hole angle and the bad hole condition logging operations were troublesome and time consuming, with many of the logs being run on drill pipe. The sidetrack was drilled with a KCl mud all through. The KCl levels were high and in addition glycol was introduced to inhibit the formation, but without the wanted effect as proved by the severe washout.

The Base Cretaceous Unconformity was penetrated at 2870 m. A 3 m thick sandstone interval just below the Base Cretaceous Unconformity, an Intra-Draupne Sand, 25 m thick TVD, was interpreted from logs to contain movable hydrocarbons. Good oil shows were observed in the more silty/shaly laminated part of the unit below. This sandstone was found in pressure communication with the upper Intra-Draupne Sand tested in well 34/7-21. Deeper down in the Draupne Formation at 2960 m a second Intra-Draupne Sand thin sandstone interval was found hydrocarbon-bearing. Hydrocarbons were in addition proved in a 2 m thick sandstone interval at the top of the Heather Formation. The three hydrocarbon intervals were separated and not in pressure communication. No OWC could be established from the pressure measurements, but both formation water and oil were sampled in the main reservoir sand (2870.0-2875.0 m, 2575.0-2578.0 m TVD), indicating proximity to an OWC. In addition to live oil in the Late Jurassic shows were reported in siltstone/sandstone laminae intermittently in the interval 2335 - 2811, as well as in siltstone/sandstone laminae in the Heather Formation below the oil bearing sands. The Brent Formation proved to be water-bearing.

Four cores were cut within the interval 2847-2911 m from the Late Cretaceous Rødby Formation and 6 m into the Draupne Formation. A fifth core was cut in a shaly part of the Draupne Formation in the interval 2943-2954 m. A total of 75 metres were cut, of which 69.5 metres were recovered (93%). A total of 8 runs were made with the FMT of which 4 were regarded as successful. Fluid samples were taken at 3035.5 m / 2670.4 m TVD (oil and gas), 2872.5 m / 2577 m TVD (water), 2874 m / 2577.7 m TVD (gas and filtrate), and at 2873.5 m / 2577.3 m TVD (oil, gas, and filtrate). The well was permanently abandoned on 12 February 1993 as an oil appraisal.

Testing

The sidetrack well 34/7-21 A was not tested.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1820.00	3360.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2847.0	2873.5	[m]
2	2874.0	2885.3	[m]
3	2890.0	2900.8	[m]
4	2901.0	2910.1	[m]
5	2943.0	2953.9	[m]

Total kjerneprøve lengde [m]	68.6
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2847-2851m



2851-2855m



2855-2859m



2859-2863m



2863-2867m



2867-2871m



2871-2873m



2874-2878m



2878-2882m



2882-2885m





2890-2894m 2894-2898m 2898-2900m 2901-2905m 2905-2909m



2909-2920m



2943-2947m



2947-2951m



2951-2953m

Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2868.0	[m]	C	RRI
2871.0	[m]	C	RRI
2872.0	[m]	C	RRI
2874.0	[m]	C	RRI
2876.0	[m]	C	RRI
2878.0	[m]	C	RRI
2879.0	[m]	C	RRI
2880.0	[m]	C	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
218	NORDLAND GP
1025	UTSIRA FM
1040	HORDALAND GP
1200	NO FORMAL NAME
1278	NO FORMAL NAME
1322	NO FORMAL NAME
1403	NO FORMAL NAME
1711	ROGALAND GP
1711	BALDER FM
1754	LISTA FM
1876	NO FORMAL NAME
1890	LISTA FM
1900	SHETLAND GP
1900	JORSALFARE FM
2180	KYRRE FM



2847	CROMER KNOLL GP
2847	RØDBY FM
2851	MIME FM
2870	VIKING GP
2870	INTRA DRAUPNE FM SS
2905	DRAUPNE FM
2960	INTRA DRAUPNE FM SS
2962	DRAUPNE FM
3030	INTRA HEATHER FM SS
3036	HEATHER FM
3306	BRENT GP
3306	TARBERT FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
2068_1	pdf	0.30
2068_2	pdf	8.56

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2068_34_7_21_A_COMPLETION_REPORT_AND_LOG	pdf	12.15

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CDL CN SL	1795	3344
DPIL MAC GR	1795	3353
FMT GR	2844	3035
HEXDIP GR	2830	3060
MWD FLS - GR RES DIR TEMP	1795	3319
VELOCITY	1330	3350

Foringsrør og formasjonsstyrketester





Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 12.5.2024 - 13:10

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
INTERM.	13 3/8	1795.0	17 1/2	1810.0	1.85	LOT
OPEN HOLE		3360.0	12 1/4	3360.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1800	1.55	29.0	12.0	WATER BASED	16.12.1992
1873	1.52	30.0	17.0	WATER BASED	17.12.1992
2155	1.54	36.0	28.0	WATER BASED	21.12.1992
2155	1.54	32.0	22.0	WATER BASED	21.12.1992
2260	1.56	44.0	38.0	WATER BASED	21.12.1992
2309	1.56	42.0	36.0	WATER BASED	21.12.1992
2465	1.60	58.0	44.0	WATER BASED	23.12.1992
2510	1.61	43.0	28.0	WATER BASED	14.12.1992
2510	1.61	43.0	28.0	WATER BASED	14.12.1992
2510	1.61	38.0	24.0	WATER BASED	16.12.1992
2580	1.60	46.0	35.0	WATER BASED	28.12.1992
2580	1.60	48.0	37.0	WATER BASED	28.12.1992
2774	1.60	46.0	30.0	WATER BASED	28.12.1992
2847	1.60	51.0	31.0	WATER BASED	28.12.1992
2864	1.60	44.0	31.0	WATER BASED	28.12.1992
2878	1.60	42.0	30.0	WATER BASED	28.12.1992
2899	1.60	41.0	31.0	WATER BASED	04.01.1993
2899	1.60	41.0	31.0	WATER BASED	04.01.1993
2934	1.60	43.0	29.0	WATER BASED	04.01.1993
2934	1.60	42.0	34.0	WATER BASED	04.01.1993
2973	1.60	43.0	33.0	WATER BASED	04.01.1993
2998	1.60	39.0	28.0	WATER BASED	04.01.1993
3033	1.60	39.0	28.0	WATER BASED	05.01.1993
3033	1.60	39.0	28.0	WATER BASED	07.01.1993
3033	1.60	39.0	28.0	WATER BASED	07.01.1993
3033	1.60	39.0	28.0	WATER BASED	08.01.1993
3033	1.60	39.0	28.0	WATER BASED	12.01.1993
3033	1.60	39.0	28.0	WATER BASED	12.01.1993
3033	1.60	39.0	28.0	WATER BASED	12.01.1993
3033	1.60	39.0	28.0	WATER BASED	14.01.1993



3033	1.60	42.0	28.0	WATER BASED	15.01.1993
3033	1.60	39.0	28.0	WATER BASED	04.01.1993
3033	1.60	39.0	28.0	WATER BASED	12.01.1993
3056	1.60	54.0	40.0	WATER BASED	15.01.1993
3122	1.60	54.0	32.0	WATER BASED	20.01.1993
3122	1.60	42.0	33.0	WATER BASED	20.01.1993
3122	1.60	42.0	33.0	WATER BASED	20.01.1993
3137	1.60	45.0	31.0	WATER BASED	20.01.1993
3228	1.60	49.0	35.0	WATER BASED	22.01.1993
3241	1.63	46.0	34.0	WATER BASED	25.01.1993
3302	1.60	44.0	36.0	WATER BASED	25.01.1993
3360	1.60	39.0	34.0	WATER BASED	26.01.1993
3360	1.60	37.0	23.0	WATER BASED	28.01.1993
3360	1.60	35.0	23.0	WATER BASED	29.01.1993
3360	1.60	35.0	25.0	WATER BASED	01.02.1993
3360	1.60	36.0	26.0	WATER BASED	01.02.1993
3360	1.60	35.0	25.0	WATER BASED	02.02.1993
3360	1.60	35.0	23.0	WATER BASED	03.02.1993
3360	1.60	35.0	26.0	WATER BASED	08.02.1993
3360	1.60	35.0	26.0	WATER BASED	08.02.1993
3360	1.60	35.0	26.0	WATER BASED	08.02.1993
3360	1.60	35.0	28.0	WATER BASED	09.02.1993
3360	1.60	43.0	39.0	WATER BASED	10.02.1993
3360	1.60	43.0	39.0	WATER BASED	11.02.1993
3360	1.60	43.0	39.0	WATER BASED	12.02.1993
3360	1.60	43.0	39.0	WATER BASED	15.02.1993
3360	1.60	43.0	39.0	WATER BASED	15.02.1993
3360	1.60	46.0	36.0	WATER BASED	25.01.1993
3360	1.60	40.0	35.0	WATER BASED	27.01.1993
3360	1.60	33.0	20.0	WATER BASED	01.02.1993
3360	1.60	35.0	23.0	WATER BASED	04.02.1993
3360	1.60	35.0	28.0	WATER BASED	08.02.1993

Tynnslip i Sökkeldirektoratet

Dybde	Enhet
2704.12	[m]
2876.60	[m]
2879.27	[m]
2881.30	[m]



2884.40	[m]
2890.90	[m]
2893.85	[m]
2899.64	[m]
2903.73	[m]
2906.70	[m]

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]
2068 Formation pressure (Formasjonstrykk)	pdf	0.22

