



Generell informasjon

Brønnbane navn	34/4-10 R
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	34/4-10 (Beta Brent)
Brønn navn	34/4-10
Seismisk lokalisering	MN 9601 INLINE 1220- CROSSLINE 2054
Utvinningstillatelse	057
Boreoperatør	Saga Petroleum ASA
Boretillatelse	968-L2
Boreinnretning	TRANSOCEAN ARCTIC
Boredager	37
Borestart	13.03.2000
Boreslutt	18.04.2000
Plugget og forlatt dato	18.04.2000
Frigitt dato	18.04.2002
Publiseringsdato	29.05.2002
Opprinnelig formål	WILDCAT
Gjenåpnet	YES
Årsak til gjenåpning	DRILLING/PLUGGING
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	24.0
Vanndybde ved midlere havflate [m]	357.0
Totalt målt dybde (MD) [m RKB]	4246.0
Totalt vertikalt dybde (TVD) [m RKB]	4244.0
Maks inklinasjon [°]	4.6
Temperatur ved bunn av brønnbanen [°C]	139
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP
Geodetisk datum	ED50



NS grader	61° 37' 33.27" N
ØV grader	2° 4' 30.41" E
NS UTM [m]	6833018.73
ØV UTM [m]	450962.75
UTM sone	31
NPDID for brønnbanen	4051

Brønnhistorie

General

The purpose of the well 34/4-10 was to test the hydrocarbon potential of the Delta prospect located NW of the Snorre Field in block 34/4. The Delta prospect is a NE-SW oriented structural trap at the rim of the Marulk Basin. The main objective was to test the lithology and the presence of hydrocarbons in possible sandstone units within the Heather Formation. The well had as secondary target the Brent Group. Planned TD for the well was 50 m into the Statfjord Formation.

Operations and results

The well was spudded with the semi-submersible rig "Transocean Arctic" 12 February 2000 and reached a total depth of 4246 m in Statfjord Formation 7 April 2000.

After 13 3/8" casing at 2380 m the well was temporarily plugged and abandoned due to onshore rig-repair at Ågotnes.

After 13 days the well was re-entered as 34/4-10 R. The well was drilled water based to 2385 m and oil based from 2385 m to TD.

In the Upper Jurassic sequences no sandstones were found and therefore no core was taken. The Heather Formation was therefore thinner than prognosed. However, a 103 m thick oil bearing, Aalenian to lower Bajocian, Brent sequence was proven. It is an oil down to situation with 10 m net pay. MDT sampling was carried out in the oil column at 3966.5 m. Six sample bottles were filled, 5 SPMC bottles (450 cc) and 1 MRSC 1 gallon sample chamber. About 50 litres of formation fluid was pumped out before sampling was commenced resulting in a draw down during sampling of about 165 bar. PVT analysis indicated a moderately light oil (GOR 135 sm³/sm³, 0.850g/cc - 0.69 g/cc at reservoir conditions) with about 30% sample contamination by mud filtrate.

One 30 m core was taken in the best sandstone interval from 3953.0 - 3980.4 m. The core shows a classical prograding sequence from lower shore face to upper shore face, with a sequence boundary/ ravinement surface near the top. Above this a sandy transgressive interval is interpreted. At the top of the Brent sequence an unconformity is interpreted at 3937 m. Both the formation pressure and the temperature were high. The Statfjord Formation was water bearing. The well was permanently plugged and abandoned as an oil discovery 18 April 2000.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1320.00	4245.00



Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3953.0	3980.4	[m]

Total kjerneprøve lengde [m]	27.4
Kjerner tilgjengelig for prøvetaking?	YES

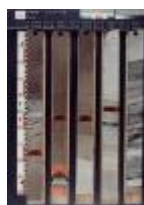
Kjernebilder



3953-3958m



3958-3963m



3963-3968m



3968-3973m



3973-3978m



3978-3980m

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
MDT		0.00	0.00			YES
MDT		3966.50	0.00	OIL	09.04.2000 - 20:09	YES



Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
381	NORDLAND GP
1241	UTSIRA FM
1249	HORDALAND GP
1741	ROGALAND GP
1741	BALDER FM
1780	LISTA FM
1910	SHETLAND GP
1910	JORSALFARE FM
2195	KYRRE FM
3323	TRYGGVASON FM
3773	CROMER KNOLL GP
3773	RØDBY FM
3782	MIME FM
3790	VIKING GP
3790	DRAUPNE FM
3885	HEATHER FM
3937	BRENT GP
3937	UNDIFFERENTIATED
4040	DUNLIN GP
4040	DRAKE FM
4066	COOK FM
4186	STATFJORD GP

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
4051	pdf	0.43

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4051_34_4_10_R_COMPLETION_REPORT	.pdf	63.12





Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT DSI VSP GR	3460	4236
AIT IPLT LDS APS CMR	3665	4235
MCST GR	3726	4240
MDT	3939	3951
MDT GR W/SAMPLE	3767	4240
MWD CDR ISONIC	2364	3672
MWD V675R ADN	3949	4242
MWD V675R ISONIC	3664	3902
MWD V675R ISONIC ADN	3821	3949
VSP GR	2400	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
INTERM.	9 5/8	3674.0	12 1/4	3674.0	2.04	LOT
OPEN HOLE		4246.0	8 1/2	4246.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
2380	1.54	27.0		WATER BASED	
2695	1.50	28.0		OIL BASED	
3474	1.55	30.0		OIL BASED	
3505	1.56	30.0		OIL BASED	
3650	1.56	29.0		OIL BASED	
3674	1.61	28.0		OIL BASED	
3710	1.61	35.0		OIL BASED	
3775	1.62	38.0		OIL BASED	
3905	1.62	36.0		OIL BASED	
3921	1.62	37.0		OIL BASED	
3953	1.76	38.0		OIL BASED	
3981	1.80	41.0		OIL BASED	
4074	1.83	40.0		OIL BASED	
4246	1.83	44.0		OIL BASED	



4246	1.83	44.0		OIL BASED	
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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]
4051 Formation pressure (Formasjonstrykk)	pdf	0.21

