



Generell informasjon

Brønnbane navn	35/9-11 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	35/9-6 S
Brønn navn	35/9-11
Seismisk lokalisering	RD1205-inline 1134 & crossline 0305
Utvinningstillatelse	420
Boreoperatør	RWE Dea Norge AS
Boretillatelse	1522-L
Boreinnretning	LEIV EIRIKSSON
Boredager	36
Borestart	15.04.2014
Boreslutt	21.05.2014
Plugget og forlatt dato	12.07.2015
Frigitt dato	21.05.2016
Publiseringsdato	21.05.2016
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA HEATHER FM SS
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	BRENT GP
3. nivå med hydrokarboner, alder	EARLY JURASSIC
3. nivå med hydrokarboner, formasjon	COOK FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	367.5
Totalt målt dybde (MD) [m RKB]	3860.0
Totalt vertikalt dybde (TVD) [m RKB]	3820.0



Maks inklinasjon [°]	21.8
Temperatur ved bunn av brønnbanen [°C]	129
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP
Geodetisk datum	ED50
NS grader	61° 21' 25.45" N
ØV grader	3° 40' 44.57" E
NS UTM [m]	6802911.35
ØV UTM [m]	536315.22
UTM sone	31
NPDID for brønnbanen	7469

Brønnhistorie



General

Well 35/9-11 A is a sidetrack to well 35/9-11 S. The well bores were drilled on the northern tip of the Ryggsteinen Ridge, west of the Gjøa Field. The two well bores had the same general objective: to appraise the 35/9-6 Titan Discovery. The 35/9-11 S well verified the Titan discovery. This initiated 35/9-11 A to perform data acquisition including coring, pressure measurement and fluid sampling.

Operations and results

Appraisal well 35/9-11 A was kicked off at 3065 m in 35/9-11 S on 15 April 2014. It was drilled with the semi-submersible installation Leiv Eiriksson to TD at 3860 m in the Early Jurassic Statfjord Group. The sidetrack well was drilled parallel to the primary well bore at a distance ca 25 m from the primary well bore. No significant problem was encountered in the operations. The well was drilled with Glydril mud from kick-off to TD.

A 21 m thick sequence of Callovian sandstones was penetrated from 3270 m to 3291. These sandstones were absent in 33/9-11 S, just 25 m away. The rest of the Jurassic reservoir targets were also present in well 35/9-11 A. According to the petrophysical evaluation, hydrocarbons were proven in six different stratigraphic levels (Callovian-, Tarbert-, Etive-, Cook-, Johansen- and Statfjord-Formation).

The data acquisition in 35/9-11 A included MWD/LWD, 11 wireline runs including formation pressure/fluid sampling and 5 coring runs with a total recovery 83.6 m. Three cores were cut in the Tarbert Formation from 3440 to 3454 m; these should be shifted + 3.0 m to match the wire line logs. One core was cut in the Etive/Rannoch formations from 3497 to 3527 m; this core should be shifted +2.9 m to match the logs. One core was cut in in the Cook Formation from 3625 to 3667 m; this core should be shifted + 3.8 m to match the logs. The fluid samples were taken at 3272.5 m (oil with GOR ~250 Sm³/Sm³), 3469.5 m (oil with GOR ~500 Sm³/Sm³), 3495 m (oil with GOR ~600 Sm³/Sm³), 3637.8 m (oil with oil with GOR ~300 Sm³/Sm³), 3692.2 m (water), 3820.48 (mud), and 3822.2 m (water and mud).

The well was permanently abandoned on 21 May 2014 as an oil and gas appraisal well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
3030.00	3857.00

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

Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3440.0	3444.7	[m]
2	3445.5	3449.6	[m]



3	3450.5	3453.5	[m]
4	3497.0	3526.6	[m]
5	3625.0	3666.0	[m]

Total kjerneprøve lengde [m]	82.4
Kjerner tilgjengelig for prøvetaking?	YES

Oljeprøver i Søkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
MDT		3495.00	0.00	WATER	02.05.2014 - 00:00	YES
MDT		3637.80	0.00	OIL	02.05.2014 - 00:00	YES
MDT		3272.50	0.00	OIL	02.05.2014 - 00:00	YES
MDT		3637.80	0.00	OIL	02.05.2014 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
393	NORDLAND GP
563	UTSIRA FM
575	UNDIFFERENTIATED
605	HORDALAND GP
605	SKADE FM
765	NO FORMAL NAME
834	GRID FM
965	UNDIFFERENTIATED
1018	FRIGG FM
1222	UNDIFFERENTIATED
1253	ROGALAND GP
1253	BALDER FM
1299	SELE FM
1340	LISTA FM
1634	TY FM
1704	SHETLAND GP



1704	JORSALFARE FM
1854	KYRRE FM
2800	TRYGGVASON FM
2945	BLODØKS FM
2970	SVARTE FM
2981	CROMER KNOLL GP
2981	RØDBY FM
3065	SOLA FM
3082	TUXEN FM
3098	ÅSGARD FM
3163	VIKING GP
3163	HEATHER FM
3271	NO FORMAL NAME
3292	HEATHER FM
3441	BRENT GP
3441	TARBERT FM
3470	NESS FM
3492	ETIVE FM
3523	RANNOCH FM
3557	DUNLIN GP
3557	DRAKE FM
3624	COOK FM
3701	BURTON FM
3709	AMUNDSEN FM
3753	JOHANSEN FM
3782	AMUNDSEN FM
3801	STATFJORD GP

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CMR XPT	3156	3856
FMI MSIP	2902	3856
HRLA TLD APS MCFL HNGS	2902	3857
MDT	3272	3495
MDT	3637	3822
MDT	3693	3693
MSCT	3272	3449
MWD LWD - DI GR	392	462



MWD LWD - GR RES DI PWD	462	785
MWD LWD - GR RES DI PWD SON	785	1757
MWD LWD - GR RES NEU DEN DI SON	1757	3800
MWD LWD - NBGR GR RES DEN DI PWD	3065	3860
MWL LWD - GR RES NEU DEN SON DI	462	785
MWL LWD - NBGR RES DI PWD SON	785	785
VSP	1537	3854
XLR	2832	3449
XLR	3273	3604
XPT ADT	3248	3863

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
OPEN HOLE		3860.0	8 1/2	3860.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
2631	1.35	17.0		Glydril	
3072	1.34	18.0		Glydril	
3440	1.35	16.0		Glydril	
3570	1.35	15.0		Glydril	
3667	1.35	18.0		Glydril	
3859	1.35	16.0		Glydril	
3859	1.36	17.0		Glydril	