Generell informasjon

Brønnbane navn	35/11-21 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	35/12-2 (Grosbeak)
Brønn navn	35/11-21
Seismisk lokalisering	Inline: 8175. XLine: 28062
Utvinningstillatelse	248 I
Boreoperatør	Wellesley Petroleum AS
Boretillatelse	1721-L
Boreinnretning	TRANSOCEAN ARCTIC
Boredager	42
Borestart	06.09.2018
Boreslutt	17.10.2018
Plugget og forlatt dato	17.10.2018
Frigitt dato	17.10.2020
Publiseringsdato	17.10.2020
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	NESS FM
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	FENSFJORD FM
3. nivå med hydrokarboner, alder	LATE JURASSIC
3. nivå med hydrokarboner, formasjon	SOGNEFJORD FM
Avstand, boredekk - midlere havflate [m]	24.0
Vanndybde ved midlere havflate [m]	360.0
Totalt målt dybde (MD) [m RKB]	2931.0
Totalt vertikalt dybde (TVD) [m RKB]	2638.0

Maks inklinasjon [°]	58.65
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	COOK FM
Geodetisk datum	ED50
NS grader	61° 9' 28.17'' N
ØV grader	3° 38' 56.48'' E
NS UTM [m]	6780701.21
ØV UTM [m]	534929.97
UTM sone	31
NPDID for brønnbanen	8549

Brønnhistorie

General

Well 35/11-21 A was drilled to appraise the 35/12-2 Grosbeak discovery on the Ryggsteinen Ridge in the North Sea. The objective was to prove extension of the Fensfjord Formation discovery, a northern extension of Ness Formation sand, and to establish fluid contacts in Brent Group.

Operations and results

Appraisal well 35/11-21 A was kicked off at 1010 m in primary well 35/11-21 S on 6 September 2018. It was drilled with the semi-submersible installation Transocean Arctic to TD at 2931 m in the Early Jurassic Cook Formation. Operations proceeded without significant problems. The well was drilled with Innovert NS oil-based mud from kick-off to TD.

The Sognefjord Formation was encountered at 2281.0 m (1964.0 m TVD). It contained a 45 m gas column of which 20 m was effective reservoir sandstone with very good reservoir properties. The Fensfjord Formation was encountered at 2389.0 m (2071.8 m TVD). Fensfjord contained an oil column of about 8 m, of which 2 m was effective reservoir in sandstone with moderate to good reservoir properties. Top Brent Group, Ness Formation was encountered at 2724.9 m (2407.6 m TVD). Ness contained a total oil column of 50 m, of which 15 m was effective reservoir sandstone with good reservoir properties. The Brent Group oil-water contact was not found. Weak shows were described in silty sandstones in the Heather Formation above the Sognefjord Formation and above the Fensfjord Formation, otherwise there were no oil shows observed outside of the hydrocarbon-bearing reservoir sections.

Five cores were cut with 100% recovery. Three were cut from 2275 to 2437.32 m in the Viking Group, and two were cut from 2730.5 to 2839.26 m. MDT fluid samples were taken at 2297.01 m (gas), 2317.02 m (gas), 2389.5 m (gas), 2393.94 m (oil), 2415.99 m (water), 2736.00 m (oil), 2763.5 m (oil), 2792.99 m (water), and 2820 m (water).

The well was permanently abandoned on 17 October 2018 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]
1010.00	2931.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2275.0	2327.6	[m]
2	2327.6	2382.6	[m]
3	2382.6	2437.3	[m]
4	2730.5	2784.7	[m]
5	2785.0	2839.3	[m]

Total kjerneprøve lengde [m]	270.8
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
384	NORDLAND GP
384	NO FORMAL NAME
579	UTSIRA FM
720	HORDALAND GP
720	NO FORMAL NAME
1145	NO FORMAL NAME
1399	ROGALAND GP
1399	BALDER FM
1513	SELE FM
1745	LISTA FM
1769	NO FORMAL NAME
1821	LISTA FM
1843	NO FORMAL NAME
1849	LISTA FM
1904	NO FORMAL NAME

1925	LISTA FM
2019	VÅLE FM
2055	SHETLAND GP
2055	JORSALFARE FM
2127	KYRRE FM
2264	VIKING GP
2264	HEATHER FM
2281	SOGNEFJORD FM
2320	HEATHER FM
2389	FENSFJORD FM
2467	HEATHER FM
2519	INTRA HEATHER FM SS
2543	HEATHER FM
2725	BRENT GP
2725	NESS FM
2792	ETIVE FM
2809	RANNOCH FM
2847	OSEBERG FM
2874	DUNLIN GP
2874	DRAKE FM
2897	COOK FM

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	449.5	36	449.5	0.00	
INTERM.	13 3/8	990.0	17 1/2	996.0	1.46	FIT
INTERM.	9 7/8	2128.0	12 1/4	2134.0	1.51	FIT
OPEN HOLE		2931.0	8 1/2	2931.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
958	1.34	18.0		INNOVERT OBM	
1450	1.34	22.0		INNOVERT OBM	
2134	1.34	21.0		INNOVERT OBM	
2202	1.24	16.0		INNOVERT OBM	

2326	1.25	16.0		INNOVERT OBM	
2467	1.24	16.0		INNOVERT OBM	
2681	1.34	23.0		Innovert OBM	
2681	1.24	18.0		Innovert OBM	
2931	1.24	15.0		INNOVERT OBM	