



Generell informasjon

Brønnbane navn	16/1-23 S
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	EDVARD GRIEG
Funn	16/1-8 Edvard Grieg
Brønn navn	16/1-23
Seismisk lokalisering	LN12M02. inline 2474. crossline 6454
Utvinningstillatelse	338
Boreoperatør	Lundin Norway AS
Boretillatelse	1536-L
Boreinnretning	ROWAN VIKING
Boredager	63
Borestart	24.06.2015
Boreslutt	25.08.2015
Frigitt dato	25.08.2017
Publiseringsdato	25.08.2017
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	TRIASSIC
1. nivå med hydrokarboner, formasjon.	SKAGERRAK FM
Avstand, boredekk - midlere havflate [m]	52.0
Vanndybde ved midlere havflate [m]	108.0
Totalt målt dybde (MD) [m RKB]	2130.0
Totalt vertikalt dybde (TVD) [m RKB]	2095.0
Maks inklinasjon [°]	24
Eldste penetrerte formasjon	BASEMENT
Geodetisk datum	ED50
NS grader	58° 49' 47.06" N
ØV grader	2° 16' 55.78" E
NS UTM [m]	6521465.73



ØV UTM [m]	458553.52
UTM sone	31
NPDID for brønnbanen	7532

Brønnhistorie

General

Well 16/1-23 S was drilled appraise the Edvard Grieg Field on the Utsira High in the North Sea. The primary objective was to investigate the hydrocarbon potential in the South Eastern part of the Field. It was also designed to allow installation of a CaTS pressure gauge for long term monitoring of reservoir pressure.

Operations and results

Wildcat well 16/1-23 S was spudded with the jack-up installation Rowan Viking on 24 June 2015 and drilled to TD at 2130 m in basement rock. The well was drilled S-shaped with up to 24 ° deviation in the interval from 630 m to 1480 m. This was to avoid a fault at the reservoir level. Target location was approximately 43 m west of the spud location. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis sweeps down to 315 m, with KCl/polymer mud from 634 m to 1888 m, and with Aquadril mud from 188 m to TD.

Well 16/1-23 S proved a 66 metres gross oil column in conglomerates and sandstones with medium to good reservoir quality. The top of the reservoir, from 1953 to 1953.5 m, is a marine sandstone unit with a basal conglomeratic transgression lag belonging to the Åsgard Formation, the remaining reservoir is conglomerates and thin sandstone units belonging to the Triassic Skagerrak Formation. A Free Water Level was established from pressure gradients at ca 2020.4 m (1985.5 m TVD). The pressure points further proved an oil gradient with the same density as in the rest of the Edvard Grieg field. Fair to poor oil shows were recorded on cores below the FWL down to 2054 m.

Eight cores were cut. Core 1 was cut from 1681 to 1690 m in Hordaland Group claystone for hole instability studies. Core recovery was 104.1%. Cores 2 to 8 were cut from 1945.5 m in the Åsgard Formation to 2064.4 m in the Skagerrak Formation. Recovery varied from 92.5 to 100%. MDT fluid samples were taken at 1958.2 m (oil), 1990.0 m (oil), 1990.6 m (oil), 2015.21 m (oil), 2024.7 m (water), 2061.4 m (water), 2061.72 m (water), and 2030.85 m (water). Single stage separation of the oil samples gave oil densities in the range 0.857 to 0.886 g/cm³ and GORs in the range 149 to 111 Sm³/Sm³.

The CaTS reservoir pressure monitoring system was installed before the well was permanently abandoned on 25 August 2015 as an oil appraisal well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
320.00	2129.00



Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1681.0	1690.4	[m]
2	1945.5	1954.8	[m]
3	1955.5	1974.2	[m]
4	1975.5	1979.4	[m]
5	1979.5	1992.2	[m]
6	1993.0	2021.5	[m]
7	2012.9	2040.0	[m]
8	2040.0	2064.5	[m]

Total kjerneprøve lengde [m]	134.0
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
160	NORDLAND GP
780	UTSIRA FM
1035	HORDALAND GP
1040	SKADE FM
1621	GRID FM
1750	ROGALAND GP
1750	BALDER FM
1761	SELE FM
1809	LISTA FM
1879	VÅLE FM
1901	SHETLAND GP
1901	EKOFISK FM
1916	TOR FM
1934	HOD FM
1943	CROMER KNOLL GP
1943	SOLA FM
1946	ÅSGARD FM



1953	HEGRE GP
1953	SKAGERRAK FM
2094	BASEMENT

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
DSL CN ZDL XMAC RTEK MLL	200	2129
DSL FLEX MREX	1850	2128
DSL SBT	1500	1992
DSL STAR HD UXPL	1880	2122
DSL SWC	1894	2103
DSL SWC	2065	2080
DSL VSP	200	2128
FST GR	1891	2018
FTWT GR	1955	2067
GR MDT STURN	1957	2061
MWD - ECD DIR	315	633
MWD - ECD GR DIR	160	303
MWD - GR ECD RES DIR	1882	1944
MWD - GR ECD RES DIR AC	315	634
MWD - GR ECD RES DIR DEN CAL NEU	1882	2129
MWD - GR RES ECD DIR CAL NEU NEU	633	1888

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	308.1	36	315.0	0.00	
SURF.COND.	20	626.0	26	633.0	1.60	FIT
PILOT HOLE		634.0	9 7/8	634.0	0.00	
INTERM.	9 5/8	1882.0	12 1/4	1888.0	1.68	LOT
OPEN HOLE		2130.0	8 1/2	2130.0	0.00	

Boreslam



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 10.5.2024 - 10:07

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Fløtegrense [Pa]	Type slam	Dato, måling
160	1.40	16.0		Water Based	
324	1.13	11.0		Water Based	
565	1.39	17.0		Water Based	
633	1.19	11.0		Water Based	
634	1.13	11.0		Water Based	
638	1.21	13.0		Water Based	
1146	1.30	14.0		Water Based	
1619	1.18	27.0		Oil Based	
1642	1.35	19.0		Water Based	
1888	1.40	23.0		Water Based	
1946	1.15	14.0		Water Based	
1993	1.18	16.0		Water Based	
2130	1.16	24.0		Oil Based	
2130	1.15	15.0		Water Based	