



Generell informasjon

Brønnbane navn	16/1-21 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	IVAR AASEN
Funn	16/1-9 Ivar Aasen
Brønn navn	16/1-21
Seismisk lokalisering	inline2500&crossline2957
Utvinningstillatelse	001 B
Boreoperatør	Det norske oljeselskap ASA
Boretillatelse	1534-L
Boreinnretning	MAERSK INTERCEPTOR
Boredager	49
Borestart	03.03.2015
Boreslutt	20.04.2015
Frigitt dato	20.04.2017
Publiseringsdato	20.04.2017
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE TRIASSIC
1. nivå med hydrokarboner, formasjon.	SKAGERRAK FM
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	SLEIPNER FM
Avstand, boredekk - midlere havflate [m]	55.0
Vanndybde ved midlere havflate [m]	114.0
Totalt målt dybde (MD) [m RKB]	3313.0
Totalt vertikalt dybde (TVD) [m RKB]	2517.0
Maks inklinasjon [°]	64.3
Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	SKAGERRAK FM



Geodetisk datum	ED50
NS grader	58° 55' 41.83" N
ØV grader	2° 13' 22.97" E
NS UTM [m]	6532476.90
ØV UTM [m]	455267.90
UTM sone	31
NPDID for brønnbanen	7530

Brønnhistorie



General

Well 16/1-21 A is a geological sidetrack to well 16/1-21 S. It was drilled to appraise the 16/1-9 Ivar Aasen discovery on the Gungne Terrace in the North Sea. The objective was to obtain key depth and reservoir information for field development in the eastern part of the Ivar Aasen Discovery. The targets were reservoirs in the Hugin/Sleipner and Skagerrak Formations.

Operations and results

Wildcat well 16/1-21 A was kicked off on 3 March 2015, from the main well 16/1-21 S with an open hole kick off below the 13 3/8" casing shoe at 1317 m. The well was drilled with the jack-up installation Mærsk Innovator to TD at 3313 m (2517 m TVD) in the Triassic Hegre Group. Due to severe losses when drilling the 12 1/4" section at 2951 m a cement plug was set and the 9 5/8" liner was run with shoe depth at 2796 m. The well was drilled with Versatec oil based mud from kick-off to TD.

The well penetrated a 6.3 m net sand in the Sleipner Formation above the Skagerrak formation. The reservoir quality in the sand is very good with an average porosity in the net sand of 24 percent. The sand contains gas-condensate and oil. A gas oil contact is interpreted to be at 3192.0 m (2408.0 m TVD).

The underlying Skagerrak reservoir is oil filled and the net sand interval above the Alluvial Fan is 20.3 meters. The average porosity in the net intervals is 23 percent in Skagerrak 2 and 21 percent in Skagerrak 1. The formation pressures in 16/1-21 A indicated a contact at 3273.9 m (2481.6 m TVD) in Skagerrak Alluvial Fan. However, the pressures in this very calcite cemented part of Skagerrak Formation is about 0.6 bar higher than in the oil-filled Skagerrak above, and the actual contact is not resolved. The deepest oil sample is from 3221.1 m.

Oil shows were recorded on cores from 3183 m, in the Sleipner Formation. Shows were visible throughout the cored sections with a weakening trend towards the lowermost part of core 3 in the Skagerrak Formation. No shows are described below base of core 3 at 3234 m.

Three cores were cut from 3174 m in the Heather Formation, through the Sleipner Formation and down to 3235.8 m in the Triassic Skagerrak Formation. The core recovery varied from 92.7% to 99.0 %. The core to log shift is reported to vary between +2.0 m to +3.0 m in different sections of the cores. MDT fluid samples were taken at 3191.03 m (gas-condensate), 3193.44 m (oil), 3195.53 m (oil), 3208.93 m (oil), and 3221.1 m (oil).

The well was permanently abandoned on 20 April 2015 as a dry well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1300.00	3312.00

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



Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3174.0	3200.8	[m]
2	3201.0	3218.6	[m]
3	3218.8	3224.6	[m]

Total kjerneprøve lengde [m]	50.1
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
168	NORDLAND GP
168	UNDIFFERENTIATED
802	UTSIRA FM
848	NO FORMAL NAME
959	HORDALAND GP
959	SKADE FM
1264	NO FORMAL NAME
1811	GRID FM
2094	NO FORMAL NAME
2576	ROGALAND GP
2576	BALDER FM
2634	SELE FM
2736	LISTA FM
2826	HEIMDAL FM
2828	LISTA FM
2890	VÅLE FM
2919	SHETLAND GP
2919	TOR FM
2926	CROMER KNOLL GP
2926	ÅSGARD FM
2972	VIKING GP
2972	DRAUPNE FM
3155	HEATHER FM
3187	VESTLAND GP



3187	SLEIPNER FM
3194	HEGRE GP
3194	SKAGERRAK FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
LWD - DI	168	373
LWD - GR RES DEN NEU SON DI PWD	168	1304
LWD - GR RES DI PWD	1317	2951
LWD - GR RES DI PWD NEU DEN	3133	3313
MDT HC	3024	3024
MDT HC	3119	3221
MDT PPC	2820	2820
MRX XPT GR	3070	3300
PPC SS EMM GR UT	3311	1656
PPC SS GR EMM	1100	2798
VSI	1081	3154
ZAIT NMH IS AH NEXT PEX HNGS	2965	3302

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	223.1	36	223.1	0.00	
SURF.COND.	20	368.0	26	373.0	1.48	LOT
PILOT HOLE		376.0	9 7/8	376.0	0.00	
INTERM.	13 3/8	1299.0	17 1/2	1304.0	1.67	LOT
LINER	9 5/8	2796.0	12 1/4	2951.0	1.60	FIT
LINER	7	3015.0		0.0	0.00	
OPEN HOLE		3315.0	8 1/2	3315.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
1440	1.51	34.0		Versatec OBM	
1850	1.51	33.0		Versatec OBM	



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 16.5.2024 - 19:07

2550	1.51	33.0		Versatec OBM	
2950	1.29	22.0		Versatec OBM	
2950	1.51	37.0		Versatec OBM	
3009	1.29	23.0		Versatec OBM	
3219	1.34	23.0		Versatec OBM	
3313	0.99			Sea water	
3313	1.34	30.0		Versatec OBM	