



Generell informasjon

Brønnbane navn	15/6-11 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	GINA KROG
Funn	15/5-1 Gina Krog
Brønn navn	15/6-11
Seismisk lokalisering	3D LINE st0730z09 INLINE 1460 & TRACE 1480
Utvinningstillatelse	303
Boreoperatør	Statoil Petroleum AS
Boretillatelse	1336-L
Boreinnretning	OCEAN VANGUARD
Boredager	78
Borestart	26.12.2010
Boreslutt	13.03.2011
Frigitt dato	13.03.2013
Publiseringsdato	13.03.2013
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	HUGIN FM
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	116.0
Totalt målt dybde (MD) [m RKB]	4305.0
Totalt vertikalt dybde (TVD) [m RKB]	3853.0
Maks inklinasjon [°]	42
Temperatur ved bunn av brønnbanen [°C]	121
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP



Geodetisk datum	ED50
NS grader	58° 34' 8.62" N
ØV grader	1° 42' 10.61" E
NS UTM [m]	6492945.84
ØV UTM [m]	424551.53
UTM sone	31
NPDID for brønnbanen	6526

Brønnhistorie

General

Well 15/6-11 A was drilled to appraise the 15/5-1 Dagny Discovery in the South-eastern end of the Viking Graben. The north-eastern extension of this structure, the Ermintrude Segment, was tested in 2007 by well 15/6-9 S and side tracks 15/6-9 A&B, which proved oil and gas in a down-to situation in the Hugin Formation, and in communication with the Dagny Discovery. Well 15/6-11-A was drilled on the western part of the Ermintrude structure, on the saddle point between the main Dagny segment and the Ermintrude Segment. The main objective was thus to delimit and test the extension of the hydrocarbon-bearing sands in Hugin Formation of the Dagny Discovery. If hydrocarbons were confirmed a drill stem test would be conducted.

Operations and results

Appraisal well 15/6-11 A was sidetracked from the primary well 15/6-11 S on 26 December 2010. Kick-off point was 1981 m. The well was drilled with the semi-submersible installation Ocean Vanguard to TD at 4305 m (3853 m TVD) in the Early Jurassic Statfjord Formation. No significant problems were encountered in the operations. The sidetrack well was drilled with XP-07 14A oil based mud from kick-off to TD.

The target reservoir sandstones of the Hugin Formation were encountered at 4121 m (3708.5 m TVD), 12.5 m deeper than prognosis. The Hugin Formation was found to be heterolithic siltstone/sandstone at the top but grading to better sand quality with depth. Good sandstones with high gas values and hydrocarbon shows were encountered 4138 m. Both the core and the logs showed presence of hydrocarbons in the Hugin Formation with OWC at 4167 m (3745 m TVD). There were shows indications also in sands in the Sleipner Formation and in the Statfjord Formation towards TD of the well.

A core was cut from 4148 m to 4179 m. The core shift relative to the logs was found to be close to + 2.3 m for the whole core. MDT wire line fluid samples were taken at 4148 m (oil and gas), and at 2597.7 m (water).

The well was permanently abandoned on 13 March 2011 as a gas/condensate appraisal well.

Testing

A drill stem test was conducted from perforations at 4137.8 m to 4158.5 m in the gas/condensate bearing zone of the Hugin Formation. The test produced 120 Sm³ oil and 220000 Sm³ gas /day through a 32/64" choke. The GOR was 1830 Sm³/Sm³. The bottom hole temperature at reference depth was 118 deg C.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1990.00	4305.20

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	4148.0	4181.0	[m]

Total kjerneprøve lengde [m]	33.0
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
3965.0	[m]	DC	
3970.0	[m]	DC	
3975.0	[m]	DC	
3980.0	[m]	DC	
3985.0	[m]	DC	
3990.0	[m]	DC	
3995.0	[m]	DC	
4000.0	[m]	DC	
4006.0	[m]	DC	
4012.0	[m]	DC	
4018.0	[m]	DC	
4024.0	[m]	DC	
4030.0	[m]	DC	
4036.0	[m]	DC	
4042.0	[m]	DC	
4048.0	[m]	DC	
4054.0	[m]	DC	
4060.0	[m]	DC	
4066.0	[m]	DC	
4072.0	[m]	DC	



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 16.5.2024 - 07:34

4078.0 [m]	DC	
4084.0 [m]	DC	
4090.0 [m]	DC	
4096.0 [m]	DC	
4102.0 [m]	DC	
4105.0 [m]	DC	
4108.0 [m]	DC	
4114.0 [m]	DC	
4117.0 [m]	DC	
4120.0 [m]	DC	
4123.0 [m]	DC	
4126.0 [m]	DC	
4129.0 [m]	DC	
4132.0 [m]	DC	
4135.0 [m]	DC	
4138.0 [m]	DC	
4141.0 [m]	DC	
4144.0 [m]	DC	
4147.0 [m]	DC	
4148.0 [m]	C	
4150.0 [m]	DC	
4151.7 [m]	C	
4153.0 [m]	DC	
4156.0 [m]	DC	
4156.2 [m]	C	
4159.0 [m]	DC	
4159.5 [m]	C	
4162.0 [m]	DC	
4163.1 [m]	C	
4163.9 [m]	C	
4165.0 [m]	DC	
4165.6 [m]	C	
4168.0 [m]	DC	
4171.0 [m]	DC	
4171.7 [m]	C	
4174.0 [m]	DC	
4174.6 [m]	C	
4177.0 [m]	DC	
4178.0 [m]	C	
4179.1 [m]	C	



4180.0	[m]	DC	
4183.0	[m]	DC	
4186.0	[m]	DC	
4189.0	[m]	DC	
4192.0	[m]	DC	
4195.0	[m]	DC	
4198.0	[m]	DC	
4207.0	[m]	DC	
4213.0	[m]	DC	
4219.0	[m]	DC	
4225.0	[m]	DC	
4231.0	[m]	DC	
4237.0	[m]	DC	
4243.0	[m]	DC	
4249.0	[m]	DC	
4255.0	[m]	DC	
4261.0	[m]	DC	
4267.0	[m]	DC	
4273.0	[m]	DC	
4279.0	[m]	DC	
4285.0	[m]	DC	
4291.0	[m]	DC	
4297.0	[m]	DC	
4303.0	[m]	DC	
4305.2	[m]	C	

Oljeprøver i Sökkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST		4158.00	4139.58	OIL	25.02.2011 - 19:40	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
137	NORDLAND GP
786	UTSIRA FM



996	HORDALAND GP
1328	SKADE FM
1748	GRID FM
2109	ROGALAND GP
2109	BALDER FM
2167	SELE FM
2217	LISTA FM
2245	HEIMDAL FM
2757	VÅLE FM
2850	SHETLAND GP
2850	EKOFISK FM
2895	TOR FM
3284	HOD FM
3715	BLODØKS FM
3718	HIDRA FM
3802	CROMER KNOLL GP
3802	RØDBY FM
3914	SOLA FM
3935	ÅSGARD FM
3967	VIKING GP
3967	DRAUPNE FM
4009	HEATHER FM
4121	VESTLAND GP
4121	HUGIN FM
4201	SLEIPNER FM
4286	DUNLIN GP
4286	COOK FM
4291	STATFJORD GP

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	4148	4180	12.7

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0			22.000	118



Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygnde rel. luft	GOR [m3/m3]
1.0	120	220000			

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
MWD LWD - ARCRES8 TELE	4010	4148
MWD LWD - ARCVRES8 TELE	1989	4003
MWD LWD - GVR ARC6 TELE	4010	4305

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
LINER	9 5/8	4002.0	12 1/4	4006.0	2.13	LOT
LINER	7	4304.0	8 1/2	4305.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
420	1.39	28.0		Spud Mud	
1950	1.49	13.0		XP-07 - #14	
2244	1.39	28.0		XP-07 - #14	
2631	1.40	23.0		XP-07 - #14	
2902	1.39	25.0		XP-07 - #14	
3042	1.40	28.0		XP-07 - #14	
3117	1.40	24.0		XP-07 - #14	
3390	1.42	27.0		XP-07 - #14	
3430	1.43	23.0		XP-07 - #14	
3477	1.45	24.0		XP-07 - #14	
3549	1.48	26.0		XP-07 - #14	
4003	1.50	29.0		XP-07 - #14	
4003	1.50	25.0		XP-07 - #14	
4028	1.50	28.0		XP-07 - #14	
4076	1.50	30.0		XP-07 - #14	



4174	1.50	34.0		XP-07 - #14	
4180	1.51	31.0		XP-07 - #14	
4305	1.52	30.0		XP-07 - #14	
4305	1.50	27.0		XP-07 - #14	
4305	1.50	26.0		XP-07 - #14	
4305	1.52	31.0		XP-07 - #14	
4305	1.50	32.0		XP-07 - #14	

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 brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
6526 Formation pressure (Formasjonstrykk)	pdf	0.23

