



Generell informasjon

Brønnbane navn	15/9-12
Type	EXPLORATION
Formål	APPRAISAL
Status	SUSPENDED
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	SLEIPNER VEST
Funn	15/6-3 Sleipner Vest
Brønn navn	15/9-12
Seismisk lokalisering	8010 - 023 SP 270
Utvinningstillatelse	046
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	309-L
Boreinnretning	NORDRAUG
Boredager	98
Borestart	22.11.1981
Boreslutt	27.02.1982
Frigitt dato	27.02.1984
Publiseringsdato	28.03.2014
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]	25.0
Vanndybde ved midlere havflate [m]	110.0
Totalt målt dybde (MD) [m RKB]	3740.0
Totalt vertikalt dybde (TVD) [m RKB]	3739.0
Maks inklinasjon [°]	4.2
Temperatur ved bunn av brønnbanen [°C]	112
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	SLEIPNER FM
Geodetisk datum	ED50
NS grader	58° 27' 23.17" N



ØV grader	1° 43' 4.01" E
NS UTM [m]	6480390.26
ØV UTM [m]	425174.97
UTM sone	31
NPDID for brønnbanen	330

Brønnhistorie

General

Well 15/9-12 was drilled as an appraisal well on the saddle area between the Alpha and Beta structures on the Sleipner Vest field in the North Sea. The main objective was to test the Middle Jurassic sandstones.

Operations and results

After setting anchors on 8 November 1981 the spud was delayed two weeks due to strike by the maritime and drilling crews.

Appraisal well 15/9-12 was spudded with the semi-submersible installation Nordraug on 22 November 1981 and drilled to TD at 3740 m in the Middle Jurassic Sleipner Formation. The 36" hole was drilled to 195 m but due to bad weather the hole was lost and the well was re-spudded on 26 November. Drilling of the 26" and 17 1/2" holes went forth without significant problems other than tight spots in the lower part of the 17 1/2" hole. When setting the 9 the 5/8" casing shoe at 2755 m 64 m³ mud was lost to the formation. The well was drilled with seawater and gel slugs down to 501 m, with gel-lignosulphonate mud from 501 m to 1135 m, with lignosulphonate/gypsum/CMC mud from 1135 m to 2771 m, and with gel-lignosulphonate mud from 2771 to 3740 m.

A 251 m thick Heimdal Formation was penetrated from 2374 m to 2625 m. The Heimdal Formation was water bearing without shows. The primary target reservoir Hugin Formation was penetrated at 3510 m and proved to contain gas-condensate with a gas-water contact at 3654 according to RFT pressure gradients. Weak shows continued on the cores down to 3665 m. The underlying Sleipner Formation was dry without shows.

A total of 168.8 m core was cut from top to base of the Hugin Formation. The depth for cores 1 - 9 should be shifted down ca 7 m to fit with the loggers' depth. Cores 10 - 11 should be shifted 8 and 9 m down, respectively. Seven RFT runs were conducted for pressure points and sampling. Segregated fluid samples were taken at 3653 m, 3592.5 m, 3512 m, and 3647 m.

The well was suspended on 27 February 1982 as a gas-condensate appraisal.

Testing

Testing was planned, but failed due to problems with the test string. For this reason Nordraug was taken to the shipyard and testing would be done in a re-entry.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
220.00	3735.00



Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sakkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3504.5	3522.2	[m]
2	3522.3	3540.2	[m]
3	3540.2	3553.3	[m]
4	3554.0	3572.0	[m]
5	3572.2	3589.8	[m]
6	3590.0	3607.7	[m]
7	3608.0	3625.7	[m]
8	3626.0	3642.7	[m]
9	3644.0	3661.6	[m]
10	3662.0	3664.8	[m]
11	3681.0	3692.4	[m]

Total kjerneprøve lengde [m]	168.1
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



3504-3509m



3509-3514m



3514-3519m



3519-3522m



3522-3527m



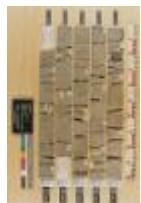
3527-3532m



3532-3537m



3537-3540m



3540-3545m



3545-3550m



3550-3553m



3554-3559m



3559-3564m



3564-3569m



3569-3572m



3572-3577m



3577-3582m



3582-3587m



3587-3589m



3590-3595m



3595-3600m



3600-3605m



3605-3607m



3608-3613m



3613-3618m



3618-3623m



3623-3625m



3626-3631m



3631-3636m



3636-3641m



3641-3642m



3644-3649m



3649-3654m



3654-3659m



3659-3661m



3662-3664m



3681-3686m



3686-3691m



3691-3692m



Palynologiske preparater i Sjøkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2305.0	[m]	SWC	STATOIL
2372.0	[m]	SWC	STATOI
2377.0	[m]	SWC	STATOI
2383.0	[m]	SWC	STATOI
2417.0	[m]	SWC	STATOI
2443.0	[m]	SWC	STATOI
2473.0	[m]	SWC	STATOI
2560.0	[m]	SWC	STATOI
2588.0	[m]	SWC	STATOI
2613.0	[m]	SWC	STATOI
2660.0	[m]	SWC	STATOI
2705.0	[m]	SWC	STATOI
2758.0	[m]	SWC	STATOI
3300.0	[m]	DC	
3330.0	[m]	DC	
3360.0	[m]	DC	
3390.0	[m]	DC	
3420.0	[m]	DC	
3450.0	[m]	DC	
3480.0	[m]	DC	
3505.0	[m]	DC	
3520.1	[m]	C	
3563.9	[m]	C	
3651.8	[m]	C	
3653.5	[m]	C	
3682.9	[m]	C	
3685.9	[m]	C	
3700.0	[m]	DC	
3720.0	[m]	DC	
3735.0	[m]	DC	

Oljeprøver i Sjøkeldirektoratet



Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	TEST1B	3585.00	3595.00		14.04.1982 - 00:00	YES
DST	TEST2	3512.00	3522.00		20.04.1982 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
135	NORDLAND GP
822	UTSIRA FM
1066	HORDALAND GP
1394	SKADE FM
1823	FRIGG FM
2220	ROGALAND GP
2220	BALDER FM
2269	SELE FM
2328	LISTA FM
2374	HEIMDAL FM
2625	MAUREEN FM
2723	SHETLAND GP
2764	TOR FM
2979	HOD FM
3233	BLODØKS FM
3246	HIDRA FM
3295	CROMER KNOLL GP
3295	RØDBY FM
3348	SOLA FM
3360	ÅSGARD FM
3400	VIKING GP
3400	DRAUPNE FM
3498	HEATHER FM
3510	VESTLAND GP
3510	HUGIN FM
3694	SLEIPNER FM

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter





Dokument navn	Dokument format	Dokument størrelse [KB]
330_01_WDSS_General_Information	pdf	0.20
330_02_WDSS_completion_log	pdf	0.05

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
330_15_9_12_COMPLETION_LOG	pdf	2.33
330_15_9_12_COMPLETION_REPORT	pdf	22.87

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	3585	3595	25.4
2.0	3512	3522	25.4

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0	253	762000	0.790	0.770	3011
2.0	234	807000	0.790	0.760	3448

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL GR	130	1115
CBL VDL GR	800	2756
CBL VDL GR	2614	3704
CST	2240	2771
CST	2830	3740





DLL MSFL	3360	3745
FDC CNL GR	1120	3746
FDC GR	501	1133
HDT	2756	3746
ISF SON GR	195	3745
RFT	2380	2705
RFT	3511	3529
RFT	3511	3529
RFT	3512	3541
RFT	3541	3638
RFT	3544	3671
RFT	3604	3737

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	195.0	36	195.0	0.00	LOT
SURF.COND.	20	501.0	26	515.0	1.77	LOT
INTERM.	13 3/8	1120.0	17 1/2	1135.0	1.79	LOT
INTERM.	9 5/8	2755.0	12 1/4	2771.0	1.73	LOT
LINER	7	3740.0	8 1/2	3740.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
195	1.05			waterbased	
815	1.11			waterbased	
1420	1.12			waterbased	
2575	1.18			waterbased	
3025	1.18			waterbased	
3190	1.29			waterbased	
3740	1.50			waterbased	