



Generell informasjon

Brønnbane navn	34/7-31
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	34/7-31
Brønn navn	34/7-31
Seismisk lokalisering	SG 9701& inline 1800/6456
Utvinningstillatelse	089
Boreoperatør	Norsk Hydro Produksjon AS
Boretillatelse	994-L
Boreinnretning	SCARABEO 6
Boredager	35
Borestart	10.03.2001
Boreslutt	13.04.2001
Frigitt dato	13.04.2003
Publiseringsdato	19.10.2006
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA DRAUPNE FM SS
Avstand, boredekk - midlere havflate [m]	26.0
Vanndybde ved midlere havflate [m]	207.0
Totalt målt dybde (MD) [m RKB]	2650.0
Totalt vertikalt dybde (TVD) [m RKB]	2650.0
Maks inklinasjon [°]	2.4
Temperatur ved bunn av brønnbanen [°C]	97
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	TARBERT FM
Geodetisk datum	ED50
NS grader	61° 18' 37.68" N



ØV grader	2° 3' 59.81" E
NS UTM [m]	6797888.38
ØV UTM [m]	450009.18
UTM sone	31
NPDID for brønnbanen	4214

Brønnhistorie

**General**

Well 34/7-31 was drilled in the Borg structure, which is situated on the western side of the Vigdis and Tordis Fields. The primary objective was to appraise the 34/7-23 Discovery in Intra-Draupne Formation Sandstone in this structure. Proven reserves, if sufficient, would most probably be produced through the Vigdis Field installations. Secondary objectives were Paleocene sand (Sele/Lista Formations) in a down-flank position from well 34/7-18 where these sands were oil-filled, and Early Cretaceous sands, found oil filled in well 34/7-21. The well was to be drilled 50 m into the Brent Group, which was expected to be water bearing at well location. In case of encountering an oil-filled Intra-Draupne sand thicker than 10 m TVD in the well, a sidetrack should be drilled, kicked off below the 13 3/8" casing to further appraise the Borg structure.

Operations and results

Well 34/7-31 was spudded with the semi-submersible installation Scarabeo 6 on 10 March 2001 and drilled to TD at 2650 m in the Middle Jurassic Tarbert Formation. A 9 7/8" pilot hole was drilled from seabed 233 m to 1150 m. Logs (MWD) presented from seabed 233 m to 1150 m were recorded in the 9-7/8" pilot hole. The 9 7/8" pilot hole was then opened to 36" and 30" casing run to 306 m. The 26" hole (using 26" hole opener) deviated from the original 9 7/8" pilot hole below 306 m and the two holes were ca 27 m apart at 1150 m. Well 34/7-31 was drilled with returns to Seabed down to 1150 m. Sampling started at 1170 m. The well was drilled with seawater and hi-vis pills down to 1150 m, and with Glydril KCl/polymer mud from 1150 m to TD. No gas related problems were experienced in the well. However, the MWD logs show possible gas levels at 280 m - 282 m, 372 m - 374,5 m and 558 m - 561 m.

The Intra-Draupne Formation Sandstone was encountered at 2470 with ca 35 meters net oil-bearing reservoir. Then, fourteen m of Draupne Formation shale was penetrated before entering the Heather formation. For the secondary objectives, both were water-filled and only Brent had significant sand (Tarbert Formation). Pressure points were taken with the MDT-tool in order to obtain formation pressures and fluid gradients from all reservoirs encountered in well 34/7-31. Especially the degree of depletion in the Intra-Draupne Sandstone was regarded as crucial information. The measured Intra-Draupne reservoir pressure was the same as the shut-in pressure in the Main Borg field. The gradient and reservoir fluid density was well defined, 0.69 g/cc or 0.067 bars/meter, and the reservoir pressure was measured to 307.04 bar at 2494.7 m. There was an ODT situation; hence the OWC is still not defined. Six high quality MDT oil samples were recovered from the Draupne Formation at 2496 m. Four of these were 250 cc single-phase samples. Two conventional cores were cut from 2472 m to 2506m in the Intra-Draupne Formation Sandstone.

The well bore was plugged back to the 13 3/8" casing and permanently abandoned on 13 April 2001 as an oil Appraisal well.

Testing

No drill stem test was performed

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1170.00	2650.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2472.0	2499.3	[m]
2	2499.3	2505.7	[m]

Total kjerneprøve lengde [m]	33.7
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
233	NORDLAND GP
1057	UTSIRA FM
1062	HORDALAND GP
1268	NO FORMAL NAME
1301	NO FORMAL NAME
1470	NO FORMAL NAME
1482	NO FORMAL NAME
1700	ROGALAND GP
1700	BALDER FM
1738	LISTA FM
1891	SHETLAND GP
1891	JORSALFARE FM
2160	KYRRE FM
2458	CROMER KNOLL GP
2458	RØDBY FM
2460	MIME FM
2470	VIKING GP
2470	INTRA DRAUPNE FM SS
2506	DRAUPNE FM
2520	HEATHER FM
2602	BRENT GP
2602	TARBERT FM



Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4214 34 7 31 COMPLETION LOG	.PDF	7.64
4214 34 7 31 COMPLETION REPORT	.PDF	24.56

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
MDT	1842	2618
MSCT	1840	2641
MWD - GR RES DIR	233	2650
PEX DSI VSP	1700	2627
VSP	1690	2620

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	306.0	36	306.0	0.00	LOT
SURF.COND.	20	1144.0	26	1144.0	1.83	LOT
INTERM.	13 3/8	1779.0	17 1/2	1785.0	1.82	LOT
OPEN HOLE		2650.0	8 1/2	2650.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
233	1.05			WATER BASED	
306	1.05			WATER BASED	
688	1.05			WATER BASED	
905	1.05			WATER BASED	
1150	0.00			WATER BASED	
1785	1.48	18.0		WATER BASED	
2092	1.60	26.0		WATER BASED	
2505	1.62	27.0		WATER BASED	
2650	1.62	26.0		WATER BASED	





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

Dokument navn	Dokument format	Dokument størrelse [KB]
4214 Formation pressure (Formasjonstrykk)	pdf	0.22

