



Generell informasjon





Brønnbane navn	6604/5-2 S
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Funn	6604/5-1 (Balderbrå)
Brønn navn	6604/5-2
Seismisk lokalisering	
Utvinningstillatelse	894
Boreoperatør	Wintershall Dea Norge AS
Boretillatelse	1806-L
Boreinnretning	SCARABEO 8
Boredager	36
Borestart	22.01.2020
Boreslutt	26.02.2020
Plugget og forlatt dato	26.02.2020
Frigitt dato	26.02.2022
Publiseringsdato	08.08.2022
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	34.0
Vanndybde ved midlere havflate [m]	1207.0
Totalt målt dybde (MD) [m RKB]	4155.0
Totalt vertikalt dybde (TVD) [m RKB]	3850.0
Eldste penetrerte alder	LATE CRETACEOUS
Eldste penetrerte formasjon	SPRINGAR FM
Geodetisk datum	ED50
NS grader	66° 36' 33.48" N
ØV grader	4° 35' 34.3" E
NS UTM [m]	7388915.94
ØV UTM [m]	570562.95
UTM sone	31
NPDID for brønnbanen	8988



Brønnhistorie

General

Well 6604/5-2 S was drilled to appraise the 6604/5-1 Balderbrå discovery in the Vøring Basin of the Norwegian Sea. The primary objective was to verify continuation of reservoir and presence of hydrocarbons in the Late Cretaceous Springar Formation.

Operations and results

Appraisal well 6604/5-2 S was spudded with the semi-submersible installation Scarabeo 8 on 22 January 2020 and drilled to TD at 4155 m (3849.7 m TVD m in the Late Cretaceous Springar Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 2328 m and with Innovert NS oil-based mud from 2328 m to TD.

Three separate Springar sandstone units were penetrated: Sandstone 1 from 3645.4 to 3652.4 m (3386.9 to 3391.3 m TVD), Sandstone 2 from 3777.5 to 3853.4 m (3508.2 to 3577.2 m TVD), and Sandstone 3 from 3935.1 to 4082 m (3651.3 to 3784 m TVD). The reservoirs have reasonably good porosity but generally low permeability due to elevated detrital clay content. A fair amount of cementation is seen similar as in the Balderbrå discovery well. However, cementation also has affected the cleanest and coarsest sandstone units resulting in the absence of better reservoir quality zones. A total amount of 35 XPT pressure points was attempted out of which only 5 were considered valid. The five valid points aligned with the regional, near-hydrostatic, water gradient seen in the Gullstjerne exploration well 6604/6-1. A water density of 0.968 g/cc was estimated. There were no oil shows above the oil-based mud in the well.

Two cores were cut. Core 1 was cut from 3770 to 3842 m in the Springar 2 sand with 101.35 % recovery. The core-log depth shift for this core is 6 m. Core 2 was cut from 3934 to 4006 m in the Springar 3 sand with 101.56 % recovery. The core-log depth shift for this core is 3.6 m. MDT fluid samples were taken at 3647,7 m, 3782 m, 3827,5 m, and 3947 m. All samples contained formation water and OBM filtrate with gas traces. The temperatures recorded during the samplings were 112.8 °C, 116.28 °C, 119.16 °C, and 123.16 °C, respectively. These temperatures extrapolate to a temperature of 133 °C at well TD.

The well was permanently abandoned on 26 February 2020 as a dry appraisal well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
2340.00	4155.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet



Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3770.0	3843.0	[m]
2	3934.0	4007.1	[m]

Total kjerneprøve lengde [m]	146.1
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
1241	NORDLAND GP
1504	KAI FM
1784	HORDALAND GP
1784	BRYGGE FM
1913	NO FORMAL NAME
2498	ROGALAND GP
2498	TARE FM
2594	TANG FM
3558	SHETLAND GP
3558	SPRINGAR FM
3645	UNDIFFERENTIATED
3652	UNDIFFERENTIATED
3778	UNDIFFERENTIATED
3853	UNDIFFERENTIATED
3935	UNDIFFERENTIATED
4082	UNDIFFERENTIATED

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
LWD - DIR	1240	1324
LWD - DIR GR RES	1324	2328
LWD - DIR GR RES DEN NEU	3570	4155
LWD - DIR GR RES DEN NEU SON	2328	3570
PQ PO SATPO IFA MS	3647	3947
ZAIT SS XPT PEX HNGS	2915	4162



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	1322.0	36	1324.0	0.00	
SURF.COND.	13 3/8	2323.0	17 1/2	2328.0	1.35	LOT
INTERM.	9 5/8	3311.0	12 1/4	3317.0	1.55	LOT
OPEN HOLE		3850.0	8 1/2	3850.0	0.00	