



Generell informasjon

Brønnbane navn	6604/5-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Funn	6604/5-1 (Balderbrå)
Brønn navn	6604/5-1
Seismisk lokalisering	BG0904R11. Inline 1470. Xline 2752
Utvinningstillatelse	894
Boreoperatør	Wintershall Norge AS
Boretillatelse	1680-L
Boreinnretning	WEST PHOENIX
Boredager	65
Borestart	10.01.2018
Boreslutt	22.03.2018
Frigitt dato	22.03.2020
Publiseringsdato	22.03.2020
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	LATE CRETACEOUS
1. nivå med hydrokarboner, formasjon.	SPRINGAR FM
Avstand, boredekk - midlere havflate [m]	39.0
Vanndybde ved midlere havflate [m]	1219.0
Totalt målt dybde (MD) [m RKB]	3858.0
Totalt vertikalt dybde (TVD) [m RKB]	3858.0
Maks inklinasjon [°]	2
Temperatur ved bunn av brønnbanen [°C]	132
Eldste penetrerte alder	LATE CRETACEOUS
Eldste penetrerte formasjon	SPRINGAR FM
Geodetisk datum	ED50
NS grader	66° 35' 37.43" N



ØV grader	4° 32' 56.55" E
NS UTM [m]	7387131.89
ØV UTM [m]	568665.16
UTM sone	31
NPDID for brønnbanen	8318

Brønnhistorie

General

Well 6604/5-1 was drilled to test the Balderbrå prospect in the Vøring Basin of the Norwegian Sea. The primary objective was to prove reservoir presence and hydrocarbon accumulations in Springar Sandstone intervals. TD was planned to be 150 m below the base of the deepest Springar Sandstone. In case of a discovery a technical side-track was planned to obtain cores from the reservoir.

Operations and results

A pilot hole 6604/5-U-1 was drilled 50 m away from the mainbore location in a 12 1/4" hole in order to identify the correct setting depth for the 20" x 13-3/8" casing below the ooze.

Wildcat well 6604/5-1 was spudded with the semi-submersible installation West Phoenix on 10 January 2018 and drilled to TD at 3858 m in the Late Cretaceous Springar Formation. Gas was discovered, and the well was side-tracked at 3308 m to obtain cores from the hydrocarbon-bearing sandstones. The side-track reached TD at 3760 m in the Late Cretaceous Springar Formation. During P&A in the mainbore a leak in the slip joint between the gator lock and inner barrel was discovered. This led to a 10 days repair period before normal operations were resumed. The well was drilled with seawater and hi-vis pills down to 2375 m and with Innovert oil-based mud from 2382 m to TD. Innovert OBM was used also in the side-track.

Three Springar was encountered at 3259 m. Intra-Springar sands were penetrated with tops in the mainbore at 3336 m, 3453 m, and 3582.5 m. In the side-track the sands were penetrated 1 – 2 m MD deeper. All three sands were gas filled with gas-down to contacts. Pressure measurements showed that the three sandstones have different pressure regimes. Weak, light-coloured shows were described in the two upper Springar sandstones, otherwise no oil shows were recorded in the well.

Two cores were cut in the two lower and thickest Springar sandstones in the side-track. Core one was cut from 3450 to 3504 m with 101% recovery. The core-log depth shift for this core is 2.42 m. Core two was cut from 3579 to 3634 m with 102% recovery. The core-log depth shift for this core is 3.90 m. MDT gas samples were taken at 3339.7 m, 3457.7 m, and 3592.7 m.

The well was permanently abandoned on 22 March 2018 as a gas discovery.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
2390.00	3857.65

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3450.0	3504.7	[m]
2	3579.0	3634.1	[m]

Total kjerneprøve lengde [m]	109.8
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
1258	NORDLAND GP
1258	NAUST FM
1504	KAI FM
1730	HORDALAND GP
1730	BRYGGE FM
2513	ROGALAND GP
2513	TARE FM
2594	TANG FM
3259	SHETLAND GP
3259	SPRINGAR FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
LWD - DIR	1258	1348
LWD - DIR GR RES PWD	1348	2382
LWD - DIR GR RES PWD SON DEN	2382	3220
LWD - DIR GR RES PWD SON DEN POR	3220	3858
MDT GR SATURN	1257	3858



T2-CMR NEXT HNGS	3219	3760
T2-LWD - DIR	1258	1348
T2-LWD - DIR GR RES PWD	1348	2382
T2-LWD - DIR GR RES PWD	3308	3760
T2-LWD - DIR GR RES PWD SO DE PO	3220	3858
T2-LWD - DIR GR RES PWD SON DEN	2382	3220
T2-MDT	3340	3710
T2-QGEO MSIP	3219	3760
T2-ZAIT ADT PEX HNGS	3219	3760
T2-ZVSP	1200	3760

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	1344.0	42	1348.0	0.00	
INTERM.	13 3/8	2376.0	17 1/2	2382.0	1.34	LOT
INTERM.	9 5/8	3219.0	12 1/4	3220.0	1.45	LOT
OPEN HOLE		3858.0	8 1/2	3858.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1348	1.03			Water	
1348	1.30			Water	
1450	1.05			Water	
2100	1.04			Water	
2100	1.04			Oil	
2342	1.05			Water	
2382	1.12			Water	
2382	1.30			Water	
2561	1.14			Oil	
3070	1.25			Oil	
3157	1.15			Oil	
3202	1.25			Oil	
3221	1.25			Oil	
3221	1.15			Oil	



Faktasider

Brønnbane / Leting

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3504	1.25			Oil	
3858	1.25			Oil	