



Generell informasjon

Brønnbane navn	6506/11-10
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	BERLING
Funn	6506/11-10 Berling
Brønn navn	6506/11-10
Seismisk lokalisering	OMV 13 M01; Inline 2676. Xline 2851
Utvinningstillatelse	644 B
Boreoperatør	OMV (Norge) AS
Boretillatelse	1679-L
Boreinnretning	DEEPSEA BERGEN
Boredager	140
Borestart	28.11.2017
Boreslutt	17.04.2018
Frigitt dato	17.04.2020
Publiseringsdato	17.04.2020
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	EARLY CRETACEOUS
1. nivå med hydrokarboner, formasjon.	LANGE FM
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	GARN FM
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	342.0
Totalt målt dybde (MD) [m RKB]	4536.0
Totalt vertikalt dybde (TVD) [m RKB]	4536.0
Maks inklinasjon [°]	2
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	ROR FM



Geodetisk datum	ED50
NS grader	65° 13' 50.54" N
ØV grader	6° 25' 47.44" E
NS UTM [m]	7236795.23
ØV UTM [m]	379866.36
UTM sone	32
NPDID for brønnbanen	8317

Brønnhistorie

General

Well 6506/11-10 was drilled to test the Hades and Iris prospects on the western margin of the Halten Terrace on the eastern flank of the Sklinna Ridge in the Norwegian Sea. The primary objective (Hades) was to test the hydrocarbon potential in Early Cretaceous intra-Lange Formation sandstones (Breiflabb Sandstone Member in the NORLEX stratigraphy). Secondary objective (Iris) was to test the hydrocarbon potential in the Middle Jurassic Garn Formation.

Operations and results

Wildcat well 6506/11-10 was spudded with the semi-submersible installation Deepsea Bergen on 28 November 2017. A 36" section was drilled first, followed by a 9 7/8" pilot hole to 1407 m to check for shallow gas. Then the 26" section was drilled before the BOP and riser was installed with 20" casing at 1409 m. Final TD was set at 4536 m in the Early Jurassic Ror Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1428 m, with Glydril mud from 1428 m to 2652 m, and with Rheguard oil-based mud from 2652 m to TD.

The primary objective intra-Lange Formation sandstone was penetrated from 3933 to 3976 m. It consists of interlayered sandstones and claystones with an 8 m massive sandstone on top and was found gas-filled from top to a gas-down-to contact at 3968 m. Relatively high resistivities and sampling of water with oil at 3998.3 m indicate some hydrocarbon saturation also below 3968 m. The secondary objective Garn Formation was encountered at 4223 m and was gas-bearing down to a gas-water contact at 4318 m. This reservoir can be divided in two units: an upper fine-grained micaceous and cemented unit and a coarser grained, highly porous and permeable unit below 4292 m. This unit have permeabilities reaching 24 Darcy. Oil shows in the well were weak and questionable due to masking by the oil-based mud.

Three cores were cut in the well. Core 1 was cut from 3942 to 3970 m in the intra-Lange sandstone with 92.2% recovery. Core 2 was cut from 4231 to 4246 m in the Garn Formation with 65.4% recovery. Core 3 was cut from 4313 to 4341 m in the Garn Formation with 65.2% recovery. MDT fluid samples were taken at 3940 m (gas), 3944 (gas), 3998.3 m (water with oil), 4051.2 m (water), 4295.7 m (gas), 4305.4 (gas), and at 4380.3 m (water with oil)

The well was permanently abandoned on 17 April 2018 as a gas/condensate discovery.

Testing

No drill stem test was performed.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1435.00	4537.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3942.0	3967.8	[m]
2	4231.0	4240.8	[m]
3	4313.0	4331.3	[m]

Total kjerneprøve lengde [m]	53.9
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
365	NORDLAND GP
563	NAUST FM
1503	KAI FM
1931	HORDALAND GP
1931	BRYGGE FM
2066	ROGALAND GP
2066	TARE FM
2092	TANG FM
2196	SHETLAND GP
2196	SPRINGAR FM
2398	NISE FM
2527	KVITNOS FM
3201	CROMER KNOLL GP
3201	LYSING FM
3275	LANGE FM
3933	NO FORMAL NAME
3976	LANGE FM



4201	LYR FM
4223	VIKING GP
4223	SPEKK FM
4225	FANGST GP
4225	GARN FM
4439	NOT FM
4473	ILE FM
4517	BÅT GP
4517	ROR FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ECS LDS CMR GR	4165	4530
LWD - ABG GT EWR SOL PWD DIR	3817	4230
LWD - DGR EWR P4PWD	365	431
LWD - DGR EWR P4PWD DIR	433	1428
LWD - DGR EWR P4XBAT PWD DIR	433	1427
LWD - DGR EWR P4XBAT PWD DIR	1428	2652
LWD - DGR SOL EWR P4 ALD CTN PWD	4230	4536
LWD - GPDGR EWR SOL ALD CTN XBAT	2652	3817
MDT GR	3810	4051
MDT GR	4163	4380
MSCT GR	4224	4380
PPC APS CMR GR	3810	4165
PPC MSIP PPC NGIT GR	3810	4165
QAIT APS PPC MSIP GR	4165	4538
QAIT HLDS ECS GR	3810	4165
USIT CBL GR	3739	4154
USIT CBL GR	3806	2646
VSP GR	4217	4308
XLROCK GR	3993	4063

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	431.0	36	431.0	0.00	
SURF.COND.	20	1409.0	26	1428.0	0.00	
PILOT HOLE		1427.0	9 7/8	1427.0	1.71	LOT
INTERM.	13 3/8	2647.0	17 1/2	2652.0	2.01	LOT
INTERM.	9 7/8	3810.0	12 1/4	3817.0	2.15	FIT
LINER	7	4163.0	8 1/2	4165.0	2.17	FIT
OPEN HOLE		4536.0	6	4536.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
409	1.49	17.0		Kill mud	
990	1.30	15.0		RheGuard	
1050	1.59	17.0		Kill mud	
1076	1.62	15.0		RheGuard	
1076	1.30	15.0		RheGuard	
1301	1.59	27.0		Kill mud	
1428	1.02	7.0		Kill mud	
1428	1.29	7.0		Kill mud	
1428	1.29	20.0		Spud mud	
1480	1.46	20.0		Glydril	
2062	1.62	24.0		Glydril	
2652	1.62	24.0		Glydril	
2652	1.67	34.0		Rheguard	
2660	1.71	33.0		Rheguard	
3072	1.83	47.0		RheGuard	
3314	1.72	46.0		Rheguard	
3465	1.77	53.0		Rheguard	
3636	1.80	58.0		Rheguard	
3817	1.80	43.0		RheGuard	
3817	1.82	60.0		Rheguard	
3842	1.78	35.0		RheGuard	
3907	1.80	40.0		RheGuard	
3958	1.80	44.0		RheGuard	
3958	1.82	49.0		RheGuard	
4077	1.83	44.0		RheGuard	



4110	1.84	45.0		RheGuard	
4140	1.96	68.0		RheGuard	
4140	1.91	58.0		RheGuard	
4162	1.86	46.0		RheGuard	
4162	1.96	59.0		RheGuard	
4165	1.91	55.0		RheGuard	
4170	1.96	55.0		RheGuard	
4422	1.96	50.0		RheGuard	
4422	1.97	51.0		RheGuard	
4530	1.96	53.0		RheGuard	
4536	1.83	46.0		RheGuard	
4536	1.98	53.0		RheGuard	