Generell informasjon

Brønnbane navn	6407/2-6 S
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	HALTEN ØST
Funn	6407/2-6 S (Flyndretind)
Brønn navn	6407/2-6
Seismisk lokalisering	3D survey: ST04M8-inline 2255 & trace 3821
Utvinningstillatelse	473
Boreoperatør	Statoil Petroleum AS
Boretillatelse	1304-L
Boreinnretning	OCEAN VANGUARD
Boredager	41
Borestart	03.04.2010
Boreslutt	13.05.2010
Frigitt dato	13.05.2012
Publiseringsdato	13.05.2012
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	EARLY JURASSIC
1. nivå med hydrokarboner, formasjon.	TOFTE FM
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	TILJE FM
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	252.0
Totalt målt dybde (MD) [m RKB]	3230.0
Totalt vertikalt dybde (TVD) [m RKB]	3188.0
Maks inklinasjon [°]	19
Temperatur ved bunn av brønnbanen [°C]	118

Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	ÅRE FM
Geodetisk datum	ED50
NS grader	64° 46' 17.2'' N
ØV grader	7° 36' 19'' E
NS UTM [m]	7183892.38
ØV UTM [m]	433668.92
UTM sone	32
NPDID for brønnbanen	6351

Brønnhistorie

General

Well 6407/2-6 S was drilled ca 4 km northwest of the Mikkel field and ca 8 km south of the 6407/2-5 S Nona discovery in the Norwegian Sea. The objective was to prove and encounter an economic volume of hydrocarbons in the Early Jurassic Tilje Formation. A secondary objective was to prove hydrocarbons in the Early Jurassic Ror Formation.

Operations and results

Wildcat well 6407/2-6 S was spudded with the semi-submersible installation Ocean Vanguard on 3 April 2010 and drilled to TD at 3230 m (3188 m TVD) in the Early Jurassic Åre Formation. During drilling of the 17 1/2" hole, a distinct drilling break was observed at 1086 m. GR logs from this zone indicated clean sandstone and the resistivity log indicated water. It was concluded that the sandstone was water wet with some dissolved gas. No significant problems were encountered in the operations. The well was drilled with seawater and hi-vis pills down to 609 m, with KCl/Glycol mud from 609 m to 1313 m, and with XP-07 oil based mud from 1313 m to TD.

The Tofte Formation was encountered at 2916.9 m (2887.6 TVD). Weak oil shows and high gas readings indicated gas in the Tofte Formation, but this was not verified logs and pressure data in the potential reservoir sands. The Tilje Formation was penetrated at 2993.2 m (2960 m TVD), which was 37 m shallower than prognosed. A 72 m TVD gas column and a 15 m TVD oil column were proven in the Tilje Formation. No oil shows were reported above Tofte Formation or below Tilje Formation.

Two cores were cut in the intervals 2997 - 3051.5 m and 3070 - 3125 m, both in the Tilje Formation. Fluid samples were taken with the MDT single probe equipment. Gas was sampled at 2940 m in the Ror Formation and at 2994.06 m in the Tilje Formation, oil was sampled at 3068.9 m and 3078.3 m, while water was sampled at 3096.6 m in the Tilje formation. The Tilje oil sample at 3078.3 m analysed offshore contained only 1% mud contamination, while the sample at 3068.9 m had a mud contamination of 12 %.

The well was permanently abandoned on 13 May 2010 as an oil and gas discovery.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1320.00	3228.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2997.0	3051.3	[m]
2	3070.0	3125.2	[m]

Total kjerneprøve lengde [m]	109.5
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1330.0	[m]	DC	GEOSTRAT
1350.0	[m]	DC	GEOSTR
1370.0	[m]	DC	GEOSTR
1390.0	[m]	DC	GEOSTR
1410.0	[m]	DC	GEOSTR
1430.0	[m]	DC	GEOSTR
1450.0	[m]	DC	GEOSTR
1470.0	[m]	DC	GEOSTR
1490.0	[m]	DC	GEOSTR
1510.0	[m]	DC	GEOSTR
1530.0	[m]	DC	GEOSTR
1550.0	[m]	DC	GEOSTR
1570.0	[m]	DC	GEOSTR
1590.0	[m]	DC	GEOSTR
1610.0	[m]	DC	GEOSTR
1630.0	[m]	DC	GEOSTR
1650.0	[m]	DC	GEOSTR
1670.0	[m]	DC	GEOSTR
1690.0	[m]	DC	GEOSTR
1720.0	[m]	DC	GEOSTR
1730.0	[m]	DC	GEOSTR
1750.0	[m]	DC	GEOSTR
1770.0	[m]	DC	GEOSTR
1790.0	[m]	DC	GEOSTR
1810.0	[m]	DC	GEOSTR
1830.0	[m]	DC	GEOSTR
1850.0	[m]	DC	GEOSTR
1870.0	[m]	DC	GEOSTR

1890.0	[m]	DC	GEOSTR
1910.0	[m]	DC	GEOSTR
1930.0	[m]	DC	GEOSTR
1950.0	[m]	DC	GEOSTR
1970.0	[m]	DC	GEOSTR
1990.0	[m]	DC	GEOSTR
2010.0	[m]	DC	GEOSTR
2020.0	[m]	DC	GEOSTR
2070.0	[m]	DC	GEOSTR
2090.0	[m]	DC	GEOSTR
2110.0	[m]	DC	GEOSTR
2130.0	[m]	DC	GEOSTR
2150.0	[m]	DC	GEOSTR
2170.0	[m]	DC	GEOSTR
2190.0	[m]	DC	GEOSTR
2210.0	[m]	DC	GEOSTR
2220.0	[m]	DC	GEOSTR
2240.0	[m]	DC	GEOSTR
2260.0	[m]	DC	GEOSTR
2280.0	[m]	DC	GEOSTR
2300.0	[m]	DC	GEOSTR
2320.0	[m]	DC	GEOSTR
2340.0	[m]	DC	GEOSTR
2360.0	[m]	DC	GEOSTR
2380.0	[m]	DC	GEOSTR
2400.0	[m]	DC	GEOSTR
2420.0	[m]	DC	GEOSTR
2440.0	[m]	DC	GEOSTR
2460.0	[m]	DC	GEOSTR
2480.0	[m]	DC	GEOSTR
2500.0	[m]	DC	GEOSTR
2520.0	[m]	DC	GEOSTR
2540.0	[m]	DC	GEOSTR
2560.0	[m]	DC	GEOSTR
2580.0	[m]	DC	GEOSTR
2600.0	[m]	DC	GEOSTR
2620.0	[m]	DC	GEOSTR
2640.0	[m]	DC	GEOSTR
2652.0	[m]	DC	GEOSTR
2660.0	[m]	DC	GEOSTR

2680.0	[m]	DC	GEOSTR
2700.0	[m]	DC	GEOSTR
2720.0	[m]	DC	GEOSTR
2740.0	[m]	DC	GEOSTR
2760.0	[m]	DC	GEOSTR
2766.0	[m]	DC	GEOSTR
2772.0	[m]	DC	GEOSTR
2778.0	[m]	DC	GEOSTR
2784.0	[m]	DC	GEOSTR
2790.0	[m]	DC	GEOSTR
2796.0	[m]	DC	GEOSTR
2802.0	[m]	DC	GEOSTR
2808.0	[m]	DC	GEOSTR
2814.0	[m]	DC	GEOSTR
2820.0	[m]	DC	GEOSTR
2826.0	[m]	DC	GEOSTR
2832.0	[m]	DC	GEOSTR
2838.0	[m]	DC	GEOSTR
2844.0	[m]	DC	GEOSTR
2850.0	[m]	DC	GEOSTR
2856.0	[m]	DC	GEOSTR
2862.0	[m]	DC	GEOSTR
2862.0	[m]	DC	GEOSTR
2868.0	[m]	DC	GEOSTR
2874.0	[m]	DC	GEOSTR
2880.0	[m]	DC	GEOSTR
2886.0	[m]	DC	GEOSTR
2898.0	[m]	DC	GEOSTR
2904.0	[m]	DC	GEOSTR
2910.0	[m]	DC	GEOSTR
2916.0	[m]	DC	GEOSTR
2922.0	[m]	DC	GEOSTR
2928.0	[m]	DC	GEOSTR
2934.0	[m]	DC	GEOSTR
2940.0	[m]	DC	GEOSTR
2946.0	[m]	DC	GEOSTR
2958.0	[m]	DC	GEOSTR
2964.0	[m]	DC	GEOSTR
2970.0	[m]	DC	GEOSTR
2976.0	[m]	DC	GEOSTR

2982.0	[m]	DC	GEOSTR
2988.0	[m]	DC	GEOSTR
2994.0	[m]	DC	GEOSTR
2997.2	[m]	C	GEOSTR
3002.0	[m]	C	GEOSTR
3007.4	[m]	C	GEOSTR
3010.8	[m]	C	GEOSTR
3015.8	[m]	C	GEOSTR
3019.4	[m]	C	GEOSTR
3024.9	[m]	C	GEOSTR
3029.8	[m]	C	GEOSTR
3035.7	[m]	C	GEOSTR
3039.2	[m]	C	GEOSTR
3044.2	[m]	C	GEOSTR
3048.3	[m]	C	GEOSTR
3054.0	[m]	DC	GEOSTR
3060.0	[m]	DC	GEOSTR
3066.0	[m]	DC	GEOSTR
3070.2	[m]	C	GEOSTR
3074.9	[m]	C	GEOSTR
3078.3	[m]	C	GEOSTR
3082.6	[m]	C	GEOSTR
3086.2	[m]	C	GEOSTR
3091.0	[m]	C	GEOSTR
3094.5	[m]	C	GEOSTR
3099.2	[m]	C	GEOSTR
3103.8	[m]	C	GEOSTR
3107.2	[m]	C	GEOSTR
3117.0	[m]	C	GEOSTR
3123.3	[m]	C	GEOSTR

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST		2961.60	0.00			YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
274	NORDLAND GP
274	NAUST FM
1278	KAI FM
1344	HORDALAND GP
1344	BRYGGE FM
2027	ROGALAND GP
2027	TARE FM
2094	TANG FM
2189	SHETLAND GP
2189	SPRINGAR FM
2304	NISE FM
2480	KVITNOS FM
2760	CROMER KNOLL GP
2760	LANGE FM
2863	LYR FM
2909	VIKING GP
2909	SPEKK FM
2917	BÅT GP
2917	TOFTE FM
2942	ROR FM
2993	TILJE FM
3148	ÅRE FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CMR ECS	2850	3227
FTWD	3078	3079
MDT	2940	3097
MDT	2940	3206
MWD - ARCVRES8 TELE	274	811
MWD - ARCVRES9 TELESCOPE	339	1310
MWD - GVR6 ARCVRES6 TELESCOPE	3069	3230
MWD - PD ARCVRES8 TELESCOPE	1310	2926
MWD - TELESCOPE	274	335

PEX AIT	2925	3236
PPC MSIP PPC	1425	3213
VSP	600	3225

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	336.0	36	345.0	0.00	LOT
SURF.COND.	20	605.0	26	609.0	1.30	LOT
PILOT HOLE		811.0	9 7/8	811.0	0.00	LOT
INTERM.	13 3/8	1306.0	17 1/2	1313.0	1.67	LOT
INTERM.	9 5/8	2925.0	12 1/4	2929.0	2.02	LOT
OPEN HOLE		3230.0	8 1/2	3230.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
610	1.10	21.0		Spud Mud	
1056	1.09	15.0		Spud Mud	
1310	1.54	25.0		XP-07 - #14	
1310	1.16	12.0		Spud Mud	
1615	1.54	31.0		XP-07 - #14	
3052	1.22	16.0		XP-07 - #14	
3230	1.24	16.0		XP-07 - #14	
3230	1.22	15.0		XP-07 - #14	

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

Dokument navn	Dokument format	Dokument størrelse [KB]
6351_Formation_pressure_(Formasjonstrykk)	pdf	0.30