



Generell informasjon

Brønnbane navn	6507/3-5 S
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	ALVE
Funn	6507/3-5 S
Brønn navn	6507/3-5
Seismisk lokalisering	ST03M03:inline 4486 & crossline 3280
Utvinningstillatelse	159 B
Boreoperatør	StatoilHydro ASA
Boretillatelse	1113-L
Boreinnretning	OCEAN VANGUARD
Boredager	71
Borestart	28.02.2008
Boreslutt	08.05.2008
Frigitt dato	08.05.2010
Publiseringsdato	08.05.2010
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	ILE FM
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	BÅT GP
Avstand, boredekk - midlere havflate [m]	22.0
Vanndybde ved midlere havflate [m]	368.0
Totalt målt dybde (MD) [m RKB]	4265.0
Totalt vertikalt dybde (TVD) [m RKB]	3834.0
Maks inklinasjon [°]	37
Temperatur ved bunn av brønnbanen [°C]	142



Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	ÅRE FM
Geodetisk datum	ED50
NS grader	65° 58' 6.5" N
ØV grader	7° 48' 35.4" E
NS UTM [m]	7317094.19
ØV UTM [m]	445915.57
UTM sone	32
NPDID for brønnbanen	5307

Brønnhistorie

**General**

Well 6507/3-5 S was drilled on the Alve Field on the Nordland High of the Norwegian Sea. It was drilled both as a producer for earlier proven reserves in the Garn and Not Formations of the Middle Jurassic Fangst Group and as an exploration well. In the exploration part of well 6507/3-5 S the objective was to delimit the volume of hydrocarbons in the Early Jurassic sandstones of the Lower Fangst/Båt Group, Ile and Tilje Formation, underlying the Garn and Not Formations, and to map the productive properties of this reservoir.

Operations and results

Well 6507/3-5 S was spudded with the semi-submersible installation Ocean Vanguard on 28 February 2008 and drilled to TD at 4265 m in the Early Jurassic Åre Formation. After the 36" top hole a 9 7/8" pilot hole was drilled from 456 m to 1226 m to check for shallow gas. No shallow gas was seen. The following 26" section was slide drilled from 548 m in an attempt to make a kick-off, but in fact kick-off from the pilot hole was not achieved until a depth of ca 850 m. The angle built up to ca 36 deg at ca 1400 m. Inclination was kept within 35 to 37 deg down to ca 3200 m, and then dropped back towards the vertical at TD. The well was drilled with sea water and bentonite pills down to 1243 m, with Aquadrill (KCl, Glycol) mud from 1243 m to 2480 m, and with Carbosea oil based mud from 2480 m to TD.

From 3154 to 3319 m frequent thin sand zones were encountered within the Kvitnos and Lange Formations. These sands had a net thickness of ca 10 m. Most of them had clear HC-indication from the MWD resistivity reading as well as a good gas response in the mud returns. Wire line logging was not done in this part of the well due to unstable hole conditions. The Garn/Not gas was proven as expected, with a slightly shallower gas-water contact than pre-well (3633m MSL vs. earlier 3646 m). The well discovered gas in Early and Middle Jurassic sandstones in the Ile -, Ror - and Tilje Formations, and a thin oil-leg in Tilje Fm. Log data from the well indicated a most likely gas oil contact in the Tilje Formation at 3708 m TVD MSL, and an oil water contact (OWC) in the Tilje Formation sandstones at 3755 m TVD MSL.

Shows (fluorescence) were observed on cores from the reservoir in Garn, Not and Tilje Formations, but after comparison with the base oil they were found questionable.

Two cores were cut in the well, at 3959 to 4013 m in the Garn and Not Formations and at 4144 to 4180.8 m in the Tilje Formation. MDT wire line fluid samples were taken at 3960.5 m in t (gas) in Garn Formation, 4049.5 m in the Ile Formation (gas/condensate), 4083.3 m in the Tofte Formation (oil), 4119.5 m in Tilje Formation (gas/condensate), 4160.8 m in Tilje Formation (oil), and at 4166.6 m in Tilje Formation (oil). Most of the samples were heavily contaminated with base oil from the mud (32 - 75 %), only the Garn and the deepest Tilje Formation samples had minor contamination (5 - 12%)

The exploration well bore was plugged and permanently abandoned back to 3818 m. The well above 3818 m was suspended. A development well, 6507/3-L-2H, was to be sidetracked from this well in late 2008.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1250.00	4265.00



Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3959.0	4012.4	[m]
2	4144.0	4180.8	[m]

Total kjerneprøve lengde [m]	90.2
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1370.0	[m]	DC	GEOSTRAT
1390.0	[m]	DC	GEOSTR
1410.0	[m]	DC	GEOSTR
1440.0	[m]	DC	GEOSTR
1460.0	[m]	DC	GEOSTR
1490.0	[m]	DC	GEOSTR
1510.0	[m]	DC	GEOSTR
1540.0	[m]	DC	GEOSTR
1560.0	[m]	DC	GEOSTR
1600.0	[m]	DC	GEOSTR
1610.0	[m]	DC	GEOSTR
1630.0	[m]	DC	GEOSTR
1660.0	[m]	DC	GEOSTR
1680.0	[m]	DC	GEOSTR
1710.0	[m]	DC	GEOSTR
1730.0	[m]	DC	GEOSTR
1760.0	[m]	DC	GEOSTR
1780.0	[m]	DC	GEOSTR
1800.0	[m]	DC	GEOSTR
1830.0	[m]	DC	GEOSTR
1860.0	[m]	DC	GEOSTR
1880.0	[m]	DC	GEOSTR
1910.0	[m]	DC	GEOSTR



1930.0	[m]	DC	GEOSTR
1950.0	[m]	DC	GEOSTR
1980.0	[m]	DC	GEOSTR
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2060.0	[m]	DC	GEOSTR
2080.0	[m]	DC	GEOSTR
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2160.0	[m]	DC	GEOSTR
2180.0	[m]	DC	GEOSTR
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2280.0	[m]	DC	GEOSTR
2300.0	[m]	DC	GEOSTR
2330.0	[m]	DC	GEOSTR
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3260.0	[m]	DC	GEOSTR
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3290.0	[m]	DC	GEOSTR
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3310.0	[m]	DC	GEOSTR
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3390.0	[m]	DC	GEOSTR
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3420.0	[m]	DC	GEOSTR
3430.0	[m]	DC	GEOSTR
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3480.0	[m]	DC	GEOSTR
3490.0	[m]	DC	GEOSTR
3500.0	[m]	DC	GEOSTR



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3600.0	[m]	DC	GEOSTR
3610.0	[m]	DC	GEOSTR
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3730.0	[m]	DC	GEOSTR
3740.0	[m]	DC	GEOSTR
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3760.0	[m]	DC	GEOSTR
3770.0	[m]	DC	GEOSTR
3780.0	[m]	DC	GEOSTR
3790.0	[m]	DC	GEOSTR
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3890.0	[m]	DC	GEOSTR
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3988.8	[m]	C	GEOSTR
3990.3	[m]	C	GEOSTR
3993.4	[m]	C	GEOSTR
3996.9	[m]	C	GEOSTR
4000.0	[m]	C	GEOSTR
4002.5	[m]	C	GEOSTR
4005.0	[m]	C	GEOSTR
4009.4	[m]	C	GEOSTR
4012.3	[m]	C	GEOSTR
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4019.0	[m]	SWC	GEOSTR
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4026.5	[m]	SWC	GEOSTR
4029.0	[m]	DC	GEOSTR
4032.0	[m]	DC	GEOSTR
4035.0	[m]	DC	GEOSTR
4038.0	[m]	SWC	GEOSTR
4047.0	[m]	DC	GEOSTR
4050.0	[m]	DC	GEOSTR
4059.0	[m]	DC	GEOSTR
4061.0	[m]	SWC	GEOSTR
4065.0	[m]	DC	GEOSTR



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4245.0	[m]	DC	GEOSTR
4251.0	[m]	DC	GEOSTR
4257.0	[m]	DC	GEOSTR
4263.0	[m]	DC	GEOSTR
4265.0	[m]	DC	GEOSTR

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
390	NORDLAND GP
390	NAUST FM
1415	KAI FM
1772	HORDALAND GP
1772	BRYGGE FM
2046	ROGALAND GP
2046	TARE FM
2098	TANG FM
2137	SHETLAND GP
2137	SPRINGAR FM
2296	NISE FM
3155	KVITNOS FM
3240	CROMER KNOLL GP
3240	LANGE FM
3432	LYR FM
3566	VIKING GP
3566	SPEKK FM
3570	MELKE FM
3960	FANGST GP
3960	GARN FM
3972	NOT FM
4016	ILE FM
4063	BÅT GP
4063	ROR FM
4080	TOFTE FM
4095	ROR FM
4113	TILJE FM
4216	ÅRE FM



Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
5307_01_6507_3_5S_gch_transfer_1	txt	0.00
5307_02_6507_3_5S_gch_results_1	txt	0.17

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
2XPPC IS MSIP RT+ACTS ECRD	2530	4266
ACTS B ECRD VSP-VSI4 GR	883	4255
ACTS ECRD MDT	3960	4213
EDTC B-MDT MRPA	3982	4119
EDTC B-MDT MRPA	4022	4160
GR ECS PEX CMR +ACTS ECRD	3918	4266
GR MSCT	3960	4186
MWD - ARCVRES9	448	2480
MWD - GVR6 ARCVRES6 PP	3935	4265
MWD - PP GVR8 ARCVRES8	2480	3935

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	448.0	36	456.0	0.00	LOT
SURF.COND.	20	1238.0	26	1243.0	1.57	LOT
INTERM.	13 3/8	2066.0	17 1/2	2480.0	1.60	LOT
INTERM.	9 5/8	3917.0	12 1/4	3935.0	1.70	LOT
OPEN HOLE		4265.0	8 1/2	4265.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1055	1.50	40.0		CARBOSEA	
1235	1.52	21.0		Aquadrill	
1246	1.25	16.0		Aquadrill	





1442	1.28	13.0		Aquadrill	
1500	1.52	24.0		Aquadrill	
1515	1.51	26.0		Aquadrill	
1759	1.59	53.0		CARBOSEA	
1907	1.41	18.0		Aquadrill	
1931	1.59	53.0		CARBOSEA	
2000	1.59	64.0		CARBOSEA	
2033	1.59	60.0		CARBOSEA	
2066	1.54	20.0		Aquadrill	
2130	1.59	61.0		CARBOSEA	
2140	1.52	29.0		Aquadrill	
2257	1.52	21.0		Aquadrill	
2449	1.51	27.0		Aquadrill	
2480	1.51	26.0		Aquadrill	
2508	1.54	34.0		CARBOSEA	
2767	1.54	40.0		CARBOSEA	
3000	1.54	42.0		CARBOSEA	
3395	1.55	52.0		CARBOSEA	
3728	1.56	52.0		CARBOSEA	
3935	1.59	64.0		CARBOSEA	
3959	1.50	53.0		CARBOSEA	
4013	1.50	42.0		CARBOSEA	
4145	1.50	42.0		CARBOSEA	
4180	1.50	42.0		CARBOSEA	
4203	1.50	42.0		CARBOSEA	
4265	1.50	44.0		CARBOSEA	
4580	1.50	40.0		CARBOSEA	

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]
5307 Formation pressure (Formasjonstrykk)	PDF	0.28

