

**General information**

Wellbore name	6506/9-3
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	ÅSGARD
Discovery	6506/9-3 (Smørbukk Nord)
Well name	6506/9-3
Seismic location	ST9905R04:inline 4190/xline1673.Depth target 4231 mTVD
Production licence	479
Drilling operator	Statoil Petroleum AS
Drill permit	1455-L
Drilling facility	TRANSOCEAN LEADER
Drilling days	73
Entered date	16.06.2013
Completed date	27.08.2013
Release date	27.08.2015
Publication date	27.08.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS/CONDENSATE
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	GARN FM
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	ILE FM
Kelly bushing elevation [m]	23.5
Water depth [m]	302.0
Total depth (MD) [m RKB]	4692.0
Final vertical depth (TVD) [m RKB]	4691.0
Maximum inclination [°]	5
Bottom hole temperature [°C]	170
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	ÅRE FM
Geodetic datum	ED50



NS degrees	65° 15' 5.03" N
EW degrees	6° 54' 15.61" E
NS UTM [m]	7238280.29
EW UTM [m]	402114.39
UTM zone	32
NPDID wellbore	7207

Wellbore history

General

Well 6506/9-3, was drilled on the Smørbukk Nord prospect on the Halten Terrace in the Norwegian Sea. The primary objective was to prove petroleum in the Middle - Early Jurassic Garn, Ile and Tofte formations. The secondary objective was to prove petroleum in the Early Jurassic Ror, Tilje and Åre formations. A third objective was to test for possible hydrocarbon bearing sands in Early Cretaceous intra-Lange Formation sandstones.

Operations and results

Wildcat well 6506/9-3 was spudded with the semi-submersible installation Transocean Leader on 16 June 2013 and drilled to TD at 4692 m in the Early Jurassic Åre Formation. There were no gas warnings at the location and no shallow gas was seen. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis sweeps down to 1171 m and with XP-07 oil based mud from 1171 m to TD.

Thin, partially calcite cemented sand stringers with fair gas saturation were penetrated in the Lange Formation between 3723 m and 3885 m. The well encountered a gas/condensate column of 47 metres in the Garn and upper Not formations with a down-to contact at 4284 m. The reservoir characteristics are good in the Garn and upper Not formations, while they are somewhat poorer than expected in the Ile formation. The Ile Formation proved gas condensate in the MDT sample at 4305.7 and oil in the sample at 4346 m. Geochemical analysis of the cores indicate a gas-oil contact at 4346 m and an oil down to at 4348 m. The deeper Tofte and Tilje formations contain some gas in a tight reservoir; the Åre Formation is water-wet.

A total of 132.6 m core was recovered in two cores from the interval 4241 m to 4385 m in the Garn, Not and Ile formations. The core to log depth shift was +4.5 m for core 1 and +4.0 m for core 2. MDT fluid samples were taken at 4250.9 m (gas condensate), 4305.7 m (gas condensate), and at 4346 m (water and oil). All samples were highly contaminated with mud filtrate.

The well was permanently abandoned on 27 August 2013 as a gas/condensate discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1180.00	4692.00

Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	4241.0	4292.8	[m]
2	4304.0	4384.8	[m]

Total core sample length [m]	132.6
Cores available for sampling?	YES

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
MDT		4250.90	0.00	CONDE NSATE	16.08.2013 - 00:00	YES
MDT		0.00	4305.70	CONDE NSATE	16.08.2013 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
326	NORDLAND GP
326	NAUST FM
1426	KAI FM
1806	HORDALAND GP
1806	BRYGGE FM
2108	ROGALAND GP
2108	TARE FM
2190	TANG FM
2250	SHETLAND GP
2250	SPRINGAR FM
2471	NISE FM
2692	KVITNOS FM



3153	CROMER KNOLL GP
3153	LYSING FM
3230	LANGE FM
4000	LYR FM
4025	VIKING GP
4025	SPEKK FM
4032	MELKE FM
4237	FANGST GP
4237	GARN FM
4273	NOT FM
4302	ILE FM
4386	BÅT GP
4386	ROR FM
4431	TOFTE FM
4492	TILJE FM
4656	ÅRE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT MSIP LDS APS GR	3700	4696
CMR ECS HNGS	4153	4690
MDT	4238	4373
MDT	4250	4628
MDT	4333	4333
MDT MINIDST VIT	4346	4346
MWD - ARC TELE	391	1171
MWD - GVR ECO TELE	4151	4692
MWD - PDX5 ARC SAD TELE	1171	4151
SBT GR CCL	1774	4075
VSP	311	4412

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
CONDUCTOR	30	388.5	36	391.0	0.00	
SURF.COND.	20	1163.0	26	1171.0	1.68	FIT
INTERM.	14	2194.3	17 1/2	2201.0	1.83	FIT



INTERM.	9 5/8	4150.0	12 1/4	4151.0	1.98	FIT
OPEN HOLE		4692.0	8 1/2	4692.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
485	1.40	13.0		XP-07 - Yellow	
600	1.60	39.0		XP-07 - Yellow	
602	1.41	10.0		XP-07 - Yellow	
1596	1.45	32.0		XP-07 - Yellow	
1857	1.82	49.0		OBM-Low ECD-HTHP	
2201	1.60	38.0		XP-07 - Yellow	
2310	1.72	29.0		XP-07 - Yellow	
2950	1.82	47.0		OBM-Low ECD-HTHP	
3925	1.82	45.0		OBM-Low ECD-HTHP	
3995	1.72	33.0		XP-07 - Yellow	
4151	1.72	34.0		XP-07 - Yellow	
4297	1.82	35.0		OBM-Low ECD-HTHP	
4692	1.82	38.0		OBM-Low ECD-HTHP	