

### General information

Wellbore name	6506/12-12 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	<a href="#">link to press release</a>
Factmaps in new window	<a href="#">link to map</a>
Main area	NORWEGIAN SEA
Field	<a href="#">ÅSGARD</a>
Discovery	<a href="#">6506/12-12 S (Smørbukk Nordøst)</a>
Well name	6506/12-12
Seismic location	inline 4240 & crossline 2687- NH0609
Production licence	<a href="#">094</a>
Drilling operator	StatoilHydro Petroleum AS
Drill permit	1256-L
Drilling facility	<a href="#">TRANSOCEAN LEADER</a>
Drilling days	67
Entered date	01.06.2009
Completed date	06.08.2009
Release date	06.08.2011
Publication date	06.08.2011
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	LATE CRETACEOUS
1st level with HC, formation	LANGE FM
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	FANGST GP
3rd level with HC, age	EARLY JURASSIC
3rd level with HC, formation	BÅT GP
Kelly bushing elevation [m]	23.5
Water depth [m]	301.0
Total depth (MD) [m RKB]	5508.0
Final vertical depth (TVD) [m RKB]	4904.0
Maximum inclination [°]	49.45
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	ÅRE FM
Geodetic datum	ED50

NS degrees	65° 13' 1.19" N
EW degrees	6° 54' 29.77" E
NS UTM [m]	7234441.75
EW UTM [m]	402170.96
UTM zone	32
NPDID wellbore	6144

## Wellbore history

### General

Well 6506/12-12 S was drilled on the northern part of the Smørbukk structure on the Halten Terrace in the Norwegian Sea. The primary objective was to prove hydrocarbon saturation in the main target reservoir zones in a down flank position in the Smørbukk NE KG segment. Secondary objectives were to obtain pressure and stratigraphic control for placing a sidetrack (6506/12-12 A) for coring and field development (producer well); and to acquire data on the Cretaceous Grizzly prospect.

### Operations and results

A 9 7/8" pilot hole, 6506/12-U-15, was drilled to 854 m prior to the main hole.

Well 6506/12-12 S was spudded with the semi-submersible installation Transocean Leader on 1 June 2009 and drilled to TD at 5508 m, 12 m into the Early Jurassic Åre Formation. No shallow gas was observed by the ROV or on the MWD logs while drilling the 9 7/8" shallow gas pilot hole or the 26" holes. A kick was taken in the top of the Garn Formation, just below the 9 5/8" casing shoe. The well was drilled with Seawater and bentonite down to 1061 m, with Performadril water based mud from 1061 m to 2244 m, and with XP-07 oil based mud from 2244 m to TD.

The 6506/12-12 S well penetrated rocks of Quaternary, Tertiary, Cretaceous and Jurassic age. The well penetrated the secondary targets in the Cretaceous Lysing and Lange Formations (Grizzly prospect) at 3534 m and 4088 m, respectively. Indications of hydrocarbons were observed in the core and cuttings in the Intra Lange Sandstone, but the reservoir quality did not look too promising. The top of the Garn Formation was encountered at 4769.50 m, which is 19 m deeper than prognosis. The main reservoir target, the Lower Ror sandstone unit was encountered at 5176 m, which is 7 m shallower than prognosis. The well indicated hydrocarbons in the Garn, Ile, Tofte, Lower Ror sandstone unit and the Upper/Middle Tilje Formation, but water in the Tilje 3 and Tilje 1 reservoir zones.

A core was cut in the Lange Formation sandstone unit from 4132 - 4168 m. Pressure points were recorded with the LWD stethoscope tool, but due to pressure depletion from the Åsgard production and/or few good pressure points no fluid contacts could be established in any of the reservoir zones. No wire line fluid samples were taken.

Well bore 6506/12-12 S was permanently plugged back to the 9 5/8" casing at 4754 m and prepared for sidetracking on 6 August 2009. It has been re-classified as a wildcat.

### Testing

No drill stem test was performed.

### Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1060.00	5508.00

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	4132.0	4167.0	[m ]

Total core sample length [m]	35.0
Cores available for sampling?	YES

### Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
325	<a href="#">NORDLAND GP</a>
325	<a href="#">NAUST FM</a>
1519	<a href="#">KAI FM</a>
2002	<a href="#">HORDALAND GP</a>
2002	<a href="#">BRYGGE FM</a>
2367	<a href="#">TARE FM</a>
2454	<a href="#">TANG FM</a>
2541	<a href="#">SHETLAND GP</a>
2541	<a href="#">SPRINGAR FM</a>
2804	<a href="#">NISE FM</a>
3077	<a href="#">KVITNOS FM</a>
3534	<a href="#">CROMER KNOLL GP</a>
3534	<a href="#">LYSING FM</a>
3580	<a href="#">LANGE FM</a>
4088	<a href="#">NO FORMAL NAME</a>
4172	<a href="#">LANGE FM</a>
4393	<a href="#">LYR FM</a>
4408	<a href="#">VIKING GP</a>
4408	<a href="#">SPEKK FM</a>
4457	<a href="#">MELKE FM</a>

4769	<a href="#">FANGST GP</a>
4769	<a href="#">GARN FM</a>
4828	<a href="#">NOT FM</a>
4868	<a href="#">ILE FM</a>
4991	<a href="#">BÅT GP</a>
4991	<a href="#">ROR FM</a>
5082	<a href="#">TOFTE FM</a>
5167	<a href="#">ROR FM</a>
5218	<a href="#">TILJE FM</a>
5496	<a href="#">ÅRE FM</a>

## Logs

Log type	Log top depth [m]	Log bottom depth [m]
GR DSI	4774	5495
MWD - ARC8	2244	4774
MWD - ARC9	380	2240
MWD - ECO	4774	4778
MWD - ECO STETH	4787	5497
MWD - TELESCOPE	129	192
PEX150 MSIP PPC AIT	2243	4758

## 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	385.0	36	385.0	0.00	LOT
SURF.COND.	20	1050.0	26	1061.0	1.58	LOT
INTERM.	13 3/8	2243.0	17 1/2	2244.0	1.78	LOT
LINER	9 5/8	4774.0	12 1/4	4774.0	1.40	LOT
OPEN HOLE		5508.0	8 1/2	5508.0	0.00	LOT

## Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
339	1.04	28.0		Spud Mud	
378	1.30	15.0		Spud Mud	

392	1.30	15.0		Ultradrill	
1000	1.04	11.0		Spud Mud	
1058	1.25	33.0		Performadril	
1476	1.37	36.0		Performadril	
2205	1.45	37.0		Performadril	
2252	1.45	38.0		Performadril	
2795	1.73	38.0		XP-07 - #14	
4132	1.73	36.0		XP-07 - #14	
4613	1.73	34.0		XP-07 - #14	
4785	1.22	20.0		XP-07 - #14	
4785	1.78	32.0		XP-07 - #14	
4785	1.75	29.0		XP-07 - #14	
4785	1.73	31.0		XP-07 - #14	
4802	1.35	18.0		XP-07 - #14	
4854	1.65	27.0		XP-07 - #14	
5310	1.39	23.0		XP-07 - #14	
5490	1.36	19.0		XP-07 - #14	
5508	1.35	19.0		XP-07 - #14	

### Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
<a href="#">6144_Foundation_pressure_(Formasjonstrykk)</a>	pdf	0.29

