

**General information**

Wellbore name	6507/3-9 S
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	ÆRFUGL NORD
Discovery	6507/3-9 S Ærfugl Nord
Well name	6507/3-9
Seismic location	EN 0804 IL 4175 & XL 3525
Production licence	212 E
Drilling operator	BP Norge AS
Drill permit	1396-L
Drilling facility	POLAR PIONEER
Drilling days	45
Entered date	01.06.2012
Completed date	15.07.2012
Release date	15.07.2014
Publication date	09.12.2014
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	LATE CRETACEOUS
1st level with HC, formation	LYSING FM
Kelly bushing elevation [m]	23.0
Water depth [m]	365.0
Total depth (MD) [m RKB]	2964.0
Final vertical depth (TVD) [m RKB]	2946.0
Maximum inclination [°]	13.2
Oldest penetrated age	EARLY CRETACEOUS
Oldest penetrated formation	LANGE FM
Geodetic datum	ED50
NS degrees	65° 56' 44.38" N
EW degrees	7° 41' 32.91" E
NS UTM [m]	7314658.11
EW UTM [m]	440530.09



UTM zone	32
NPDID wellbore	6951

Wellbore history

General

Well 6507/3-9 S was drilled on the Dønna Terrace in the Norwegian Sea, north of the Snadd Discovery and east of the Marulk field. Both Snadd and Marulk are gas discoveries in the Lysing Formation. The main objective in 6507/3-9 S was to prove gas in Late Cretaceous reservoir rocks (the Lysing formation) in the Snadd Outer prospect.

Operations and results

Wildcat well 6507/3-9 S was spudded with the semi-submersible installation Polar Pioneer on 1 June 2012 and drilled to TD at 2964 m (2946 m TVD) in the Early Cretaceous Lange Formation. A 9 7/8" pilot hole was drilled as a precautionary measure for shallow gas and/or water flow hazards. No shallow gas or water flow was observed. The well was drilled with spud mud and hi-vis sweeps down to 1216 m and with Carbo Sea oil based mud from 1216 m to TD.

Top of main target, Lysing Formation was encountered at 2849.3 m (2831.3 m TVD). The well proved gas in the Lysing formation with reservoir rocks and reservoir quality as expected. From high quality RCI pressure points and the CPI log, the gas/water contact was set at 2863.5 m (2845.5 m TVD). A high gas saturation was seen also in the Lysing sand below the contact. High mud gas readings were recorded in the upper part of the Kai Formation, but otherwise no shows reported other than in the Lysing Formation.

Two cores were cut in the interval 2850 to 2895 m in the Lysing and underlying Lange formations. RCI gas samples were taken at 2859.7 m and 2862 m. A water sample was taken at 2880.6 m.

The well was permanently abandoned on 15 July 2012 as a gas discovery.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1220.00	2964.30

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	2850.0	2866.1	[m]
2	2868.0	2895.6	[m]

Total core sample length [m]	43.7
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
388	NORDLAND GP
388	NAUST FM
1354	KAI FM
1766	HORDALAND GP
1766	BRYGGE FM
1894	ROGALAND GP
1894	TARE FM
1939	TANG FM
2005	SHETLAND GP
2005	NISE FM
2849	CROMER KNOLL GP
2849	LYSING FM
2884	LANGE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
EARTH IMAGER DIP	2820	2916
MWD - DIR	388	1216
MWD - GR RES DIR	388	1223
MWD - GR RES DIR CAL DEN NEU AC	1216	2964
RCI	2798	2928
VSP	1160	2945

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	472.0	42	477.0	0.00	
SURF.COND.	18 3/4	1209.0	24	1216.0	1.68	LOT
PILOT HOLE		1223.0	9 7/8	1223.0	0.00	
INTERM.	9 5/8	2056.0	12 1/4	2063.0	1.87	LOT
OPEN HOLE		2964.0	8 1/2	2964.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
388	1.05			Water	
477	1.05			Water	
1138	1.05			Water	
1216	1.30			Water	
1233	1.50			Synthetic	
2063	1.55			Oil	
2850	1.52			Oil	
2964	1.53			Oil	

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]
6951 Formation pressure (Formasjonstrykk)	pdf	0.27

