

**General information**

Wellbore name	34/5-2 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	34/5-2
Seismic location	Inline: 5328. Xline 33056
Production licence	373 S
Drilling operator	A/S Norske Shell
Drill permit	1698-L
Drilling facility	SCARABEO 8
Drilling days	35
Entered date	31.05.2018
Completed date	04.07.2018
Plugged and abandon date	04.07.2018
Release date	04.01.2019
Publication date	02.05.2019
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	33.7
Water depth [m]	387.0
Total depth (MD) [m RKB]	3711.0
Final vertical depth (TVD) [m RKB]	3706.0
Maximum inclination [°]	6.47
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	AMUNDSEN FM
Geodetic datum	ED50
NS degrees	61° 43' 31.18" N
EW degrees	2° 39' 17.51" E
NS UTM [m]	6843794.24
EW UTM [m]	481759.32
UTM zone	31
NPDID wellbore	8448



Wellbore history

General

Well 34/5-2 S was drilled to test the Tyttebær prospect on Tampen Spur, 8 km south-west of the Knarr discovery in the northern North Sea. The primary objective was to test the hydrocarbon potential in the Early Jurassic Cook Formation.

Operations and results

Wildcat well 34/5-2 S was spudded with the semi-submersible installation Scarabeo 8 on 31 May 2018 and drilled to TD at 3711 m in the Early Jurassic Amundsen Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis sweeps down to 1070 m, with KCl/GEM/polymer mud from 1070 m to 2133 m, and with Enviromul oil-based mud from 2133 m to TD.

The Cook Formation was penetrated from 3588 to 3674 m and consisted of fine to very fine-grained sandstone and siltstone. About 50 metres of Cook was reservoir sandstone with generally poor to moderate reservoir quality. Shows (fluorescence and cut) were observed in the Cook Formation, but post-well geochemical analyses indicated the fluorescence to come from the oil-based mud used in the well. The overlying Drake Formation is indicated by kerogen analysis to have source rock quality. Vitrinite reflectance in Drake is around 0.8%Ro, i.e. oil-window maturity.

No cores were cut. No fluid sample was taken.

The well was permanently abandoned on 4 July 2018 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1080.00	3711.00

Cuttings available for sampling?	YES
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Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3496.0	[m]	DC	PETROSTR
3499.0	[m]	DC	PETROS
3502.0	[m]	DC	PETROS
3505.0	[m]	DC	PETROS
3508.0	[m]	DC	PETROS
3511.0	[m]	DC	PETROS



3514.0 [m]	DC	PETROS
3517.0 [m]	DC	PETROS
3520.0 [m]	DC	PETROS
3523.0 [m]	DC	PETROS
3526.0 [m]	DC	PETROS
3529.0 [m]	DC	PETROS
3532.0 [m]	DC	PETROS
3535.0 [m]	DC	PETROS
3538.0 [m]	DC	PETROS
3541.0 [m]	DC	PETROS
3544.0 [m]	DC	PETROS
3547.0 [m]	DC	PETROS
3550.0 [m]	DC	PETROS
3553.0 [m]	DC	PETROS
3556.0 [m]	DC	PETROS
3559.0 [m]	DC	PETROS
3562.0 [m]	DC	PETROS
3565.0 [m]	DC	PETROS
3568.0 [m]	DC	PETROS
3571.0 [m]	DC	PETROS
3574.0 [m]	DC	PETROS
3577.0 [m]	DC	PETROS
3580.0 [m]	DC	PETROS
3583.0 [m]	DC	PETROS
3586.0 [m]	DC	PETROS
3589.0 [m]	DC	PETROS
3592.0 [m]	DC	PETROS
3595.0 [m]	DC	PETROS
3598.0 [m]	DC	PETROS
3601.0 [m]	DC	PETROS
3604.0 [m]	DC	PETROS
3607.0 [m]	DC	PETROS
3610.0 [m]	DC	PETROS
3613.0 [m]	DC	PETROS
3616.0 [m]	DC	PETROS
3619.0 [m]	DC	PETROS
3622.0 [m]	DC	PETROS
3625.0 [m]	DC	PETROS
3628.0 [m]	DC	PETROS
3634.0 [m]	DC	PETROS



3637.0 [m]	DC	PETROS
3640.0 [m]	DC	PETROS
3643.0 [m]	DC	PETROS
3646.0 [m]	DC	PETROS
3649.0 [m]	DC	PETROS
3652.0 [m]	DC	PETROS
3655.0 [m]	DC	PETROS
3658.0 [m]	DC	PETROS
3661.0 [m]	DC	PETROS
3664.0 [m]	DC	PETROS
3667.0 [m]	DC	PETROS
3670.0 [m]	DC	PETROS
3673.0 [m]	DC	PETROS
3676.0 [m]	DC	PETROS
3679.0 [m]	DC	PETROS
3682.0 [m]	DC	PETROS
3685.0 [m]	DC	PETROS
3688.0 [m]	DC	PETROS
3691.0 [m]	DC	PETROS
3694.0 [m]	DC	PETROS
3697.0 [m]	DC	PETROS
3700.0 [m]	DC	PETROS
3703.0 [m]	DC	PETROS
3706.0 [m]	DC	PETROS
3709.0 [m]	DC	PETROS
3711.0 [m]	DC	PETROS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
421	NORDLAND GP
1308	UTSIRA FM
1425	HORDALAND GP
1906	ROGALAND GP
1906	BALDER FM
1940	SELE FM
1954	LISTA FM
2049	SHETLAND GP
2049	JORSALFARE FM



2307	KYRRE FM
3285	TRYGGVASON FM
3472	CROMER KNOLL GP
3472	MIME FM
3481	BRENT GP
3481	RANNOCH FM
3499	DUNLIN GP
3499	DRAKE FM
3588	COOK FM
3674	AMUNDSEN FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD - DIR FTPWD GR RES SON DEN N	3493	3711
MWD - DIR HO	0	498
MWD - DIR PWD	498	1070
MWD - DIR PWD GR RES SON	1070	2133
MWD - DIR PWD GR RES SON GP	2133	3493

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	36	498.0	42	498.0	0.00	
SURF.COND.	20	1063.7	26	1070.0	1.56	LOT
INTERM.	13 5/8	2121.8	17 1/2	2133.0	1.81	LOT
INTERM.	9 7/8	3491.0	12 1/4	3493.0	2.03	LOT
OPEN HOLE		3711.0	8 1/2	3711.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
447	1.03			Seawater	
460	1.50			Fresh Water Bentonite	
470	1.50			Kill Mud	



480	1.04			Fresh Water Bentonite	
1070	1.03			Seawater	
1070	1.50			Kill mud	
1070	1.04			Sweeps	
1073	1.37			KCl/Polymer/GEM WBM	
2007	1.41			KCl/Polymer/GEM	
2133	1.41			KCl/Polymer/GEM	
2133	1.46			Oil Based	
2400	1.50			Oil Based	
3101	1.50			Oil Based	
3195	1.03			Seawater	
3200	1.03			Seawater	
3200	1.00			Oil Based	
3426	1.55			Oil Based	
3452	1.81			Oil Based	
3493	1.55			Oil Based	
3515	1.81			Oil Based	
3711	1.81			Oil Based	