

**General information**

Wellbore name	7435/12-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	BARENTS SEA
Discovery	7435/12-1 (Korpfjell)
Well name	7435/12-1
Seismic location	ST14005T15: Inline 7833. X-Line 7829
Production licence	859
Drilling operator	Statoil Petroleum AS
Drill permit	1667-L
Drilling facility	SONGA ENABLER
Drilling days	24
Entered date	09.08.2017
Completed date	01.09.2017
Release date	01.09.2019
Publication date	01.09.2019
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	STØ FM
2nd level with HC, age	MIDDLE TRIASSIC
2nd level with HC, formation	KOBBE FM
Kelly bushing elevation [m]	32.0
Water depth [m]	253.0
Total depth (MD) [m RKB]	1540.0
Final vertical depth (TVD) [m RKB]	1539.0
Maximum inclination [°]	3.1
Bottom hole temperature [°C]	54
Oldest penetrated age	MIDDLE TRIASSIC
Oldest penetrated formation	KOBBE FM
Geodetic datum	ED50
NS degrees	74° 4' 18.21" N
EW degrees	35° 48' 31.06" E



NS UTM [m]	8222886.96
EW UTM [m]	402277.88
UTM zone	37
NPDID wellbore	8228

Wellbore history

**General**

Well 7435/12-1 was drilled to test the Korpjell prospect on the Haapet Dome far east on the Bjarmeland Platform in the Barents Sea. The primary objective was to test the hydrocarbon potential, phase and source in the Realgrunnen Subgroup (Stø-Tubåen-Fruholmen formations). Secondary objective was to test the hydrocarbon potential in the Triassic Snadd and Kobbe formations.

Operations and results

The Korpjell pilot well 7435/12-U-1 was spudded on 7 August 2017 and drilled as a vertical 9 7/8" hole. TD was set at 547 m in the Hekkingen Formation. The pilot hole confirmed the geological prognosis and proved no shallow hydrocarbons above the setting depth of the 10 3/4" surface casing in the main well.

Wildcat well 7435/12-1 was spudded with the semi-submersible installation Songa Enabler on 9 August 2017 and drilled to TD at 1540 m in the Middle Triassic Kobbe Formation. Operations proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 306 m and with KCL Polymer/Gem water-based mud from 306 m to TD.

The Hekkingen Formation was drilled without riser and no samples were available for analysis. However, high gamma ray readings indicate source rock with elevated organic content. Coal samples from the Nordmela and Snadd formations show very high TOC concentrations >50 wt% and together with elevated HI of 230 – 340 mg HC/g TOC, they have potential for gas and possibly some oil.

Sandstones in the primary target, in the Realgrunnen Subgroup, was encountered at 576.5 m. The reservoir proved to be hydrocarbon bearing, with a 34 m gas column in sandstones of good to moderate reservoir quality in the Stø and Nordmela formations. The gas-water contact is at 612 m. The deeper secondary targets in the Triassic Snadd and Kobbe formations were encountered at 779.5 m and 1168, respectively. Dry gas was found in thin sandstones in the Kobbe Formation with the highest mud gas readings from top Kobbe down to 1226 m. The reservoir quality in Kobbe was poor with only 2.4 m net reservoir.

Evaluation of diagenetic minerals and vitrinite reflectance indicate erosion and uplift in the area in the range 1.2 to 2.2 km. The well was almost devoid of oil shows. Only very weak shows were described in one spot sample from 584.5 m in the uppermost Nordmela Formation and from ditch cuttings in the interval 1293 – 1317 m MD in the Kobbe Formation.

One core was cut from 583.7 to 628.8 m in the Nordmela Formation with 99.3% recovery. MDT fluid samples were taken in the Nordmela Formation at 588.8 m (gas), 611.0 m (gas), and 616.5 m (water). MDT sampling was attempted also in the Snadd and Kobbe formations, but no sample was acquired.

The well was permanently abandoned on 1 September 2017 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]
550.00	1539.00



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	583.7	628.5	[m]

Total core sample length [m]	44.8
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
545.2	[m]	SWC	CGG
546.3	[m]	SWC	CGG
550.0	[m]	DC	CGG
553.0	[m]	DC	CGG
554.0	[m]	SWC	CGG
556.0	[m]	DC	CGG
562.0	[m]	DC	CGG
563.0	[m]	SWC	CGG
568.0	[m]	DC	CGG
568.0	[m]	SWC	CGG
574.0	[m]	DC	CGG
574.0	[m]	SWC	CGG
577.0	[m]	DC	CGG
579.0	[m]	SWC	CGG
580.0	[m]	DC	CGG
583.0	[m]	DC	CGG
584.2	[m]	C	CGG
585.4	[m]	C	CGG
587.8	[m]	C	CGG
589.3	[m]	C	CGG
592.9	[m]	C	CGG
597.1	[m]	C	CGG
602.3	[m]	C	CGG
607.6	[m]	C	CGG
613.6	[m]	C	CGG



618.8 [m]	C	CGG
623.9 [m]	C	CGG
626.8 [m]	C	CGG
631.0 [m]	DC	CGG
637.0 [m]	DC	CGG
643.0 [m]	DC	CGG
645.0 [m]	SWC	CGG
649.0 [m]	DC	CGG
651.0 [m]	SWC	CGG
655.0 [m]	SWC	CGG
655.0 [m]	DC	CGG
661.0 [m]	DC	CGG
667.0 [m]	DC	CGG
673.0 [m]	DC	CGG
679.0 [m]	DC	CGG
685.0 [m]	DC	CGG
691.0 [m]	DC	CGG
703.0 [m]	DC	CGG
712.0 [m]	DC	CGG
721.0 [m]	DC	CGG
730.0 [m]	DC	CGG
739.0 [m]	DC	CGG
748.0 [m]	DC	CGG
752.9 [m]	SWC	CGG
757.0 [m]	DC	CGG
766.0 [m]	DC	CGG
775.0 [m]	DC	CGG
784.0 [m]	SWC	CGG
784.0 [m]	DC	CGG
793.0 [m]	DC	CGG
802.0 [m]	DC	CGG
813.0 [m]	DC	CGG
822.0 [m]	DC	CGG
831.0 [m]	DC	CGG
840.0 [m]	DC	CGG
849.0 [m]	DC	CGG
858.0 [m]	DC	CGG
867.0 [m]	DC	CGG
876.0 [m]	DC	CGG
885.0 [m]	DC	CGG



894.0 [m]	DC	CGG
903.0 [m]	DC	CGG
912.0 [m]	DC	CGG
921.0 [m]	DC	CGG
930.0 [m]	DC	CGG
939.0 [m]	DC	CGG
948.0 [m]	DC	CGG
957.0 [m]	DC	CGG
966.0 [m]	DC	CGG
975.0 [m]	DC	CGG
984.0 [m]	DC	CGG
993.0 [m]	DC	CGG
1002.0 [m]	DC	CGG
1011.0 [m]	DC	CGG
1020.0 [m]	DC	CGG
1029.0 [m]	DC	CGG
1038.0 [m]	DC	CGG
1046.0 [m]	DC	CGG
1047.0 [m]	DC	CGG
1056.0 [m]	DC	CGG
1065.0 [m]	DC	CGG
1074.0 [m]	DC	CGG
1083.0 [m]	DC	CGG
1092.0 [m]	DC	CGG
1101.0 [m]	DC	CGG
1110.0 [m]	DC	CGG
1119.0 [m]	DC	CGG
1128.0 [m]	DC	CGG
1137.0 [m]	DC	CGG
1146.0 [m]	DC	CGG
1155.0 [m]	DC	CGG
1164.0 [m]	DC	CGG
1173.0 [m]	DC	CGG
1182.0 [m]	DC	CGG
1191.0 [m]	DC	CGG
1200.0 [m]	DC	CGG
1212.0 [m]	DC	CGG
1221.0 [m]	DC	CGG
1236.0 [m]	DC	CGG
1245.0 [m]	DC	CGG



1254.0	[m]	DC	CGG
1263.0	[m]	DC	CGG
1272.0	[m]	DC	CGG
1281.0	[m]	DC	CGG
1288.6	[m]	SWC	CGG
1290.0	[m]	DC	CGG
1299.0	[m]	DC	CGG
1308.0	[m]	DC	CGG
1317.0	[m]	DC	CGG
1326.0	[m]	DC	CGG
1335.0	[m]	DC	CGG
1344.0	[m]	DC	CGG
1353.0	[m]	DC	CGG
1362.0	[m]	DC	CGG
1371.0	[m]	DC	CGG
1380.0	[m]	DC	CGG
1389.0	[m]	DC	CGG
1398.0	[m]	DC	CGG
1407.0	[m]	DC	CGG
1416.0	[m]	DC	CGG
1425.0	[m]	DC	CGG
1434.0	[m]	DC	CGG
1443.0	[m]	DC	CGG
1452.0	[m]	DC	CGG
1461.0	[m]	DC	CGG
1470.0	[m]	DC	CGG
1479.0	[m]	DC	CGG
1488.0	[m]	DC	CGG
1497.0	[m]	DC	CGG
1506.0	[m]	DC	CGG
1515.0	[m]	DC	CGG
1524.0	[m]	DC	CGG
1533.0	[m]	DC	CGG
1539.0	[m]	DC	CGG
8980.0	[ft]	DC	

Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
285	NORDLAND GP
285	NAUST FM
291	ADVENTDALEN GP
291	UNDIFFERENTIATED
492	KLIPPFISK FM
498	HEKKINGEN FM
539	FUGLEN FM
577	KAPP TOSCANA GP
577	STØ FM
583	NORDMELA FM
657	TUBÅEN FM
682	FRUHOLMEN FM
780	SNADD FM
1168	SASSENDALEN GP
1168	KOBBE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMI MSIP	1536	1536
FMI MSIP GR	290	791
HRLA PEX ECS GR	521	803
IBC CBL GR	280	536
MDT	824	1205
MDT GR	576	578
MDT GR	578	581
MDT GR	579	781
MSCT	810	1398
MSCT	861	1204
MWD - ARC TELE	285	545
MWD - GVR ARC TELE	545	805
MWD - MICROS IMP	805	1540
PEX HRLA ECS	798	1529
USIT CBL GR	288	530
XL ROCK GR	544	794
XL ROCK GR	651	794
ZO VSP	220	1500

**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	27	290.0	30	290.0	0.00	
		536.0		0.0	1.45	FIT
INTERM.	10 3/4	538.4	14 3/4	548.0	0.00	
		787.4		0.0	1.95	LOT
LINER	7 5/8	799.3	9 1/2	808.0	0.00	
OPEN HOLE		1540.0	6 1/2	1540.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
308	1.03	9.0		Spud Mud	
420	1.24	17.0		KCl/Polymer/GEM	
420	1.22	16.0		KCl/Polymer/GEM	
545	1.15	12.0		KCl/Polymer/GEM	
545	1.03	8.0		Spud Mud	
581	1.15	14.0		KCl/Polymer/GEM	
697	1.20	16.0		KCl/Polymer/GEM	
715	1.15	16.0		KCl/Polymer/GEM	
805	1.15	14.0		KCl/Polymer/GEM	
805	1.18	16.0		KCl/Polymer/GEM	
940	1.18	17.0		KCl/Polymer/GEM	
1240	1.20	20.0		KCl/Polymer/GEM	
1255	1.18	19.0		KCl/Polymer/GEM	
1540	1.20	20.0		KCl/Polymer/GEM	