

**General information**

Wellbore name	2/6-6 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	2/6-6
Seismic location	MOL17300 01030 X MOL17300 03019
Production licence	860
Drilling operator	MOL Norge AS
Drill permit	1725-L
Drilling facility	ROWAN VIKING
Drilling days	67
Entered date	13.11.2018
Completed date	18.01.2019
Plugged and abandon date	18.01.2019
Release date	18.01.2021
Publication date	18.01.2021
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	53.0
Water depth [m]	69.0
Total depth (MD) [m RKB]	3843.0
Final vertical depth (TVD) [m RKB]	3625.0
Oldest penetrated age	PERMIAN
Oldest penetrated formation	ROTLIEGEND GP
Geodetic datum	ED50
NS degrees	56° 30' 40.73" N
EW degrees	3° 54' 49.22" E
NS UTM [m]	6263503.05
EW UTM [m]	556230.95
UTM zone	31
NPDID wellbore	8560



Wellbore history

General

Well 2/6-6 S was drilled to test the Oppdal and Driva prospects the east side of the Mandal High in the North Sea. The primary objectives were to test the oil potential in the Paleocene Oppdal submarine sandstone reservoir (Borr Member), and in the Permian aeolian reservoir (Auk Formation) in the Rotliegend Driva prospect.

Operations and results

A 9 7/8" pilot hole was drilled to 1012 m due to a slight shallow gas warning between 391 m and 494 m. No obvious shallow gas was encountered here, nor below 500 m.

Wildcat well 2/6-6 S was spudded with the jack-up installation Rowan Viking on 13 November 2018 and drilled to TD at 3843 m (3628 m TVD) m in the Permian Rotliegend Group. Severe losses were experienced while drilling at 3670 m. The well was drilled with seawater and sweeps down to 1014 m m and with EMS-4600 oil-based mud from 1014 m to TD.

The Paleocene Borr Member target (Intra-Våle Formation sandstone) was penetrated from 2908 to 2949 m (2864 to 2898 m TVD). It consisted of sandstone with a layer of claystone close to the top. Three LWD stethoscope pressure points showed a water gradient below the claystone and lack of pressure communication across the claystone. The Borr Member was water bearing. The cored section had weak shows in the form of cut fluorescence and a weak residue, but no direct fluorescence.

Three meters of the Kupferschiefer Formation source rock was penetrated from 3677 to 3680 m. Geochemical samples from this unit showed TOC up to 5.8% and a Hydrogen Index of 350 mg HC/g TOC. Vitrinite reflectance and Tmax indicated pre-oil to earliest oil window maturity at this depth.

The Permian Auk Formation target (Rotliegend Gp) was penetrated from 3680 to 3808 m (3495 to 3600 m TVD). It was expected as a Sandstone succession, however the cuttings proved to be composed of siltstone with local limestone stringers. Auk had weak shows on sidewall cores from 3788 to 3802 m, described with no direct fluorescence, cut fluorescence and a weak residue.

One conventional core was taken in the target Borr sandstone member from 2910 to 2940 m with 100% recovery. No fluid sample was taken.

The well was permanently abandoned on 18 January 2019 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]
190.00	3843.00

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	2910.0	2940.0	[m]

Total core sample length [m]	30.0
Cores available for sampling?	YES

Comments	B-cutt på plass SS-13-A.
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
122	NORDLAND GP
122	UNDIFFERENTIATED
1536	HORDALAND GP
1536	NO FORMAL NAME
2354	NO FORMAL NAME
2797	ROGALAND GP
2797	BALDER FM
2815	SELE FM
2841	LISTA FM
2889	VÅLE FM
2908	NO FORMAL NAME
2949	SHETLAND GP
2949	EKOFISK FM
3042	TOR FM
3350	HOD FM
3521	HEGRE GP
3521	SKAGERRAK FM
3545	SMITH BANK FM
3599	ZECHSTEIN GP
3678	KUPFERSCHIEFER FM
3680	ROTLIEGEND GP
3680	NO FORMAL NAME

**Logs**

Log type	Log top depth [m]	Log bottom depth [m]
AIT TLD HGNS GR	3651	3838
DU OBMI PPC SC GR	3651	3755
LWD - DI	122	184
LWD - GR ECD DEN RES NEU DI PR S	2809	3663
LWD - GR RES DI	122	184
LWD - GR RES DI	184	958
LWD - GR RES DI NEU DEN SON	2002	2843
LWD - GR RES DI SON	184	1004
LWD - GR RES DI SON	1009	2005
LWD - GR RES ECD PRES DI	3651	3841
MSCT	3675	3833
VSI4	161	3575

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	181.0	36	184.0	0.00	
SURF.COND.	20	1009.0	26	1014.0	1.96	FIT
INTERM.	13 3/8	2002.6	17 1/2	2008.0	1.82	FIT
INTERM.		2008.0		0.0	0.00	
INTERM.	9 5/8	2837.6	12 1/4	2846.0	1.90	FIT
LINER	7	3651.0	8 1/2	3670.0	1.67	FIT
OPEN HOLE		3843.0	6	3843.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
125	1.03			Water	
184	1.20			Water	
184	1.39			Water	
409	1.20			Water	
748	1.03			Water	



936	1.12			Water	
1014	1.45			Oil	
1014	1.20			Water	
1880	1.45			Oil	
2463	1.64			Oil	
2463	1.45			Oil	
2741	1.64			Oil	
3551	1.45			Oil	
3670	1.47			Oil	
3670	1.64			Oil	
3843	1.45			Oil	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2910.62	[m]
2912.62	[m]
2914.33	[m]
2915.28	[m]
2915.50	[m]
2916.30	[m]
2917.30	[m]
2918.16	[m]
2919.30	[m]
2919.75	[m]
2920.65	[m]
2921.25	[m]
2922.02	[m]
2923.65	[m]
2924.50	[m]
2925.45	[m]
2926.25	[m]
2927.50	[m]
2928.60	[m]
2929.95	[m]
2930.50	[m]
2931.45	[m]
2932.50	[m]
2933.50	[m]
2934.45	[m]



2935.50	[m]
2936.50	[m]
2937.50	[m]
2938.67	[m]
2937.70	[m]
3677.00	[m]
3678.00	[m]
3788.00	[m]
3796.00	[m]
3802.00	[m]
3807.00	[m]
3809.00	[m]
3817.00	[m]
3825.10	[m]
3833.00	[m]