



General information

Wellbore name	2/1-13 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	2/1-13
Seismic location	inline 8340 & xline 20280
Production licence	299
Drilling operator	Talisman Energy Norge AS
Drill permit	1212-L
Drilling facility	MÆRSK GUARDIAN
Drilling days	121
Entered date	07.11.2008
Completed date	07.03.2009
Release date	03.01.2011
Publication date	03.01.2011
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	41.3
Water depth [m]	69.0
Total depth (MD) [m RKB]	4435.0
Final vertical depth (TVD) [m RKB]	4358.0
Maximum inclination [°]	21.4
Bottom hole temperature [°C]	161
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	56° 47' 9.5" N
EW degrees	3° 2' 29.72" E
NS UTM [m]	6293703.09
EW UTM [m]	502541.05
UTM zone	31
NPDID wellbore	5975



Wellbore history

General

Well 2/1-13 S was drilled on the TR3 prospect located on the south-western margin of the Hydra High, 14 km southwest of Gyda, 8 kilometres southwest of the Gyda South Field and 1.5 kilometres southwest of the closest well 2/1-11. The well was drilled in a more crestal position than 2/1-11. The primary target of the well was fluvial channel sands of the Triassic Skagerrak Formation. Secondary objective was the Bryne reservoir.

Operations and results

Well 2/1-13 S was spudded with the jack-up installation Maersk Guardian on 6 November 2008 and drilled to TD at 4435 m in the Triassic Skagerrak Formation. The 36" top hole was drilled to 214 m, followed by a 12 1/4" pilot hole to 620 m to check for shallow gas. Although some gas was encountered it was not of sufficient quantity or pressure to cause concern. Further drilling proceeded without significant problems down to TD in the 16" section at 2416 m. When running the 13 3/8" casing, it could not pass 2093 m. Due to well bore stability problems and the long rat hole left as a consequence of setting the casing shoe high, the well was sidetracked below the casing shoe. This technical sidetrack, 2/1-13 ST2, was drilled to final TD. The well was drilled with Pre-hydrated Bentonite/CMC/seawater down to 620 m, with Versatec oil based mud from 620 m to 4149 m, and with Warp HTHP oil based mud from 4149 m to TD.

The top of the reservoir was encountered 63 m shallower than prognosed, at 4241 m (4124 m TVD SS) and had 1m of possible pay in sandstones in the interval 4252 to 4276 m. Shows were seen throughout this interval. No OWC was recognised on the logs, but ODT was at 4362 m (4152.0 m TVD SS). The stratigraphy of the reservoir is somewhat uncertain, but it is believed that the upper part down to 4362 m belong to the Bryne Formation, while the underlying sand belong to the Skagerrak Formation. The Skagerrak Formation was dry.

One core was cut in the Bryne Formation from 4274 to 4301 m. The RCI tool was run on wire line to take pressure points, but only the Skagerrak Formation gave valid pressures, proving a water gradient of 1.05 sg. The Bryne Formation proved to be tight. No fluid samples were taken.

The well was permanently abandoned on 7 March 2008 as a dry well with oil and gas shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
250.00	2410.00

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	4274.0	4301.1	[m]

Total core sample length [m]	27.1
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
4183.0	[m]	DC	APT
4195.0	[m]	DC	APT
4204.0	[m]	DC	APT
4213.0	[m]	DC	APT
4222.0	[m]	DC	APT
4231.0	[m]	DC	APT
4240.0	[m]	DC	APT
4249.0	[m]	DC	APT
4258.0	[m]	DC	APT
4274.0	[m]	DC	APT
4435.0	[m]	DC	APT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
110	NORDLAND GP
1875	HORDALAND GP
3092	ROGALAND GP
3092	BALDER FM
3116	SELE FM
3123	LISTA FM
3151	VIDAR FM
3254	LISTA FM
3290	VÅLE FM
3308	SHETLAND GP
3308	EKOFISK FM



3422	TOR FM
3824	HOD FM
4065	HIDRA FM
4115	CROMER KNOLL GP
4115	RØDBY FM
4137	SOLA FM
4149	TUXEN FM
4176	TYNE GP
4176	HAUGESUND FM
4241	VESTLAND GP
4241	BRYNE FM
4362	NO GROUP DEFINED
4362	SKAGERRAK FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD LWD - DIR	214	620
MWD LWD - GR	110	214
MWD LWD - GR RES DIR	214	620
MWD LWD - GR RES DIR PWD DDS	620	2416

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	206.0	30	214.0	0.00	LOT
SURF.COND.	20	618.0	24	620.0	1.67	LOT
INTERM.	13 3/8	2077.0	16	2416.0	1.95	LOT
INTERM.	9 7/8	4142.0	12 1/4	4149.0	2.24	LOT
OPEN HOLE		4435.0	8 1/2	4435.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
41	1.49	15.0		Kill	
214	1.05	3.0		Bentonite / SW	



617	1.19	10.0		PHB/Sea water	
620	1.14	11.0		PHB/Sea water	
1150	1.74	46.0		OB Versatec	
1323	1.49	33.0		Versatec	
2177	1.54	39.0		Versatec	
2416	1.56	32.0		Versatec	
2416	1.56	32.0		Versatec	
2764	1.69	48.0		Versatec OBM	
4000	1.70	48.0		Versatec OBM	
4149	1.72	48.0		Versatec OBM	
4150	2.04	50.0		OB WARP	
4274	2.01	45.0		OB WARP	
4435	2.01	48.0		OB WARP	