General information

Wellbore name	15/12-20 S
Type	EXPLORATION
Purpose	WILDCAT
Status	RE-CLASS TO DEV
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	VARG
Discovery	15/12-20 S
Well name	15/12-20
Seismic location	NH0201
Production licence	038
Drilling operator	Talisman Energy Norge AS
Drill permit	1184-L
Drilling facility	MÆRSK GIANT
Drilling days	35
Entered date	28.05.2008
Completed date	01.07.2008
Release date	01.07.2010
Publication date	01.08.2010
Purpose - planned	WILDCAT
Reclassified to wellbore	15/12-A-7 A
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	SLEIPNER FM
Kelly bushing elevation [m]	51.5
Water depth [m]	84.0
Total depth (MD) [m RKB]	4192.0
Final vertical depth (TVD) [m RKB]	3141.5
Maximum inclination [°]	56.6
Bottom hole temperature [°C]	123
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 4' 40.53'' N
EW degrees	1° 53' 25.77'' E

NS UTM [m]	6438070.14
EW UTM [m]	434558.93
UTM zone	31
NPDID wellbore	5824

Wellbore history

General

Well 15/12-20 S was drilled from the Varg Field production Platform in the southern Viking Graben in the North Sea. The primary objective of the well was to explore a potential undrained compartment in Triassic sands. A secondary objective was potential Late Jurassic sands that could exist above the Triassic sands.

Operations and results

Wildcat well 15/12-20 S was drilled with the jack-up installation Mærsk Giant, as a sidetrack from development well 15/12-A-7 on the Varg Field. It was kicked off 28 May 2008 from 1306 m, just above the 13 3/8" casing in the 15/12-A-7 development well, and drilled to TD at 4192 m (3142 m TVD) in the Late Triassic Skagerrak Formation. Significant operational problems were not encountered although 21% of the rig time was counted as non-productive. The main contributor to non-productive time was failure to mill the window in the 13 3/8" casing during kick-off. The well was drilled with Carbo-Sea oil based mud from kick-off to TD.

The Oxfordian Sandstone that makes up the reservoir over Varg Field was absent as forecast. A discovery was made in Middle Jurassic Sleipner Formation sandstone. This sand, encountered at 3808 m, was not prognosed. It contained oil down to a lithological contact at ca 3842 m (2878 m TVD SS). The underlying Triassic was encountered at 3874 m and was dry. Good shows on sandstones were reported in cuttings at 3810 and all through to the end of the cores at 3875 m. Formation Gas peaks up to a maximum of 4% were seen in the Sleipner formation. Resistivity was initially high, 15 ? 30 ohm/m from 3812 m (after the coal) and dropped off at 3835m MD to 0.3 - 0.8 ohm/m.

Two cores were taken (26.26 m and 54.85 m) from the Sleipner Formation and ca 25 m into the Triassic. Reservoir pressures were taken using TesTrak and an oil gradient of 0.935 SG was obtained although a water gradient was not established. No wire line fluid samples were taken.

Exploration well 15/12-20 S is classified as an oil discovery. On 1 July 2008 7" liner was run to 4191 m and the well was reclassified to development well 15/12-A-7-A.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1310.00	4192.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3815.0	3841.2	[m]
2	3843.0	3897.9	[m]

Total core sample length [m]	81.1
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
136	NORDLAND GP
1305	HORDALAND GP
2906	ROGALAND GP
2906	BALDER FM
2924	SELE FM
3022	LISTA FM
3176	VÅLE FM
3269	SHETLAND GP
3269	TOR FM
3432	HOD FM
3655	BLODØKS FM
3699	CROMER KNOLL GP
3699	RØDBY FM
3747	ÅSGARD FM
3791	VIKING GP
3791	DRAUPNE FM
3797	HEATHER FM
3808	VESTLAND GP
3808	SLEIPNER FM
3874	NO GROUP DEFINED
3874	SKAGERRAK FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MWD LWD - DIR	1304	1336
MWD LWD - DIR RES GR CCN MT ST T	3898	4192
MWD LWD - DIR RES GR PWD	1336	3815

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
INTERM.	9 5/8	3370.0	12 1/4	3375.0	1.70	LOT
LINER	7	4191.0	8 1/2	4192.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1250	1.46	38.0		oil based	
1290	1.46	32.0		oil based	
1297	1.59	40.0		water based	
1303	1.59	38.0		water based	
1313	1.59	40.0		water based	
1316	1.59	44.0		water based	
1333	1.60	48.0		water based	
1336	1.59	39.0		water based	
1348	1.59	52.0		water based	
1354	1.60	51.0		water based	
1373	1.59	57.0		water based	
1474	1.53	43.0		water based	
1750	1.59	43.0		water based	
3171	1.59	45.0		water based	
3375	1.60	43.0		water based	
3613	1.44	30.0		water based	
3843	1.44	32.0		water based	
3898	1.45	32.0		water based	
4136	1.45	33.0		water based	
4192	1.02			water based	
4192	1.44	31.0		water based	

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]
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