General information

Wellbore name	3/7-7
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	3/7-7
Seismic location	Seismic survey GD04M01-inline 1570 & x-line 1410
Production licence	289
Drilling operator	DONG E&P Norge AS
Drill permit	1198-L
Drilling facility	MÆRSK GUARDIAN
Drilling days	55
Entered date	03.09.2008
Completed date	27.10.2008
Release date	27.10.2010
Publication date	27.10.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	42.0
Water depth [m]	65.0
Total depth (MD) [m RKB]	3930.0
Final vertical depth (TVD) [m RKB]	3930.0
Maximum inclination [°]	3.2
Bottom hole temperature [°C]	127
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HAUGESUND FM
Geodetic datum	ED50
NS degrees	56° 24' 10.58'' N
EW degrees	4° 18' 3.14'' E
NS UTM [m]	6251825.14
EW UTM [m]	580287.68
UTM zone	31
NPDID wellbore	5932

Wellbore history

General

Well 3/7-7 was drilled on the Marsvin prospect in the southern Søgne Basin, close to the Danish border in the southern North Sea. The objective of the well was to explore the hydrocarbon potential in Kimmeridgian-Volgian age ("Intra Farsund") sandstones.

Operations and results

Wildcat well 2/7-7 was spudded with the jack-up installation Mærsk Guardian on 3 September 2008 and drilled to TD at 3930 m, 73 m into the Late Jurassic Haugesund Formation. The well was drilled very efficiently, except for very low penetration rate when drilling in hard marls in the Ekofisk/Tor Formations. The well was drilled with Seawater/spud mud down to 655 m, with KCl polymer mud from 655 to 1308 m, and with CARBO-SEA oil based mud from 1308 m to TD.

The Marsvin 3/7-7 well penetrated four Kimmeridgian age sandstones in the interval 3457 to 3813 m: two J63 sandstones and two J62 sandstones interbedded in Farsund Formation shales. From petrophysical analyses the four sandstones comprised a total of 143 m gross and 106 m net reservoir with porosities in the range 17.5 to 22.4% and an average permeability of 108 mD. All reservoirs were water wet.

Very weak shows, just above that of OBM, were seen in the upper J62 sandstone (3770 to 3813 m), otherwise no oil shows were reported from the well, or they were masked by the base oil in the mud. Similar observation was made in post-well geochemical analyses of samples from the well; all migrated hydrocarbons and even the total organic carbon in cuttings and side wall cores samples were overprinted by the oil base, only the core samples from the lower J62 sandstone clearly showed migrated hydrocarbons.

One core was cut in the lowermost J62 sandstone from 3776.0 m - 3830.5 m, a total of 54.5 m, with a recovery of 99%. RCI wire line water samples were taken at 3748.5 m and at 3799.8 m.

The well was permanently abandoned on 27 October 2008 as a well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
220.00	3930.00

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	3776.0	3830.1	[m]

Total core sample length [m]	54.1
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
670.0	[m]	DC	DONG
1320.0	[m]	DC	DONG
1390.0	[m]	DC	DONG
1400.0	[m]	DC	DONG
1410.0	[m]	DC	DONG
1420.0	[m]	DC	DONG
2060.0	[m]	DC	DONG
2080.0	[m]	DC	DONG
2120.0	[m]	DC	DONG
2140.0	[m]	DC	DONG
2850.0	[m]	DC	DONG
2860.0	[m]	DC	DONG
2870.0	[m]	DC	DONG
2880.0	[m]	DC	DONG
2890.0	[m]	DC	DONG
2900.0	[m]	DC	DONG
2910.0	[m]	DC	DONG
2920.0	[m]	DC	DONG
2930.0	[m]	DC	DONG
2940.0	[m]	DC	DONG
3391.0	[m]	DC	DONG
3409.0	[m]	DC	DONG
3418.0	[m]	DC	DONG
3421.0	[m]	DC	DONG
3424.0	[m]	DC	DONG
3427.0	[m]	DC	DONG

3433.0	[m]	DC	DONG
3439.0	[m]	DC	DONG
3442.0	[m]	DC	DONG
3454.0	[m]	DC	DONG
3457.0	[m]	DC	DONG
3472.0	[m]	DC	DONG
3478.0	[m]	DC	DONG
3502.0	[m]	DC	DONG
3508.0	[m]	DC	DONG
3556.0	[m]	DC	DONG
3568.0	[m]	DC	DONG
3598.0	[m]	DC	DONG
3601.0	[m]	DC	DONG
3646.0	[m]	DC	DONG
3652.0	[m]	DC	DONG
3700.0	[m]	DC	DONG
3703.0	[m]	DC	DONG
3730.0	[m]	DC	DONG
3736.0	[m]	DC	DONG
3757.0	[m]	DC	DONG
3766.0	[m]	DC	DONG
3779.0	[m]	C	DONG
3783.0	[m]	C	DONG
3797.0	[m]	C	DONG
3803.0	[m]	C	DONG
3814.0	[m]	C	DONG
3822.0	[m]	C	DONG
3829.0	[m]	C	DONG
3835.0	[m]	DC	DONG
3847.0	[m]	DC	DONG
3862.0	[m]	DC	DONG
3871.0	[m]	DC	DONG
3883.0	[m]	DC	DONG
3895.0	[m]	DC	DONG
3904.0	[m]	DC	DONG
3913.0	[m]	DC	DONG
3922.0	[m]	DC	DONG
3930.0	[m]	DC	DONG

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
107	NORDLAND GP
1275	HORDALAND GP
2101	VADE FM
2860	ROGALAND GP
2860	BALDER FM
2877	SELE FM
2895	LISTA FM
2917	VÅLE FM
2941	SHETLAND GP
2941	EKOFISK FM
3054	TOR FM
3292	HOD FM
3386	CROMER KNOLL GP
3386	SOLA FM
3390	TUXEN FM
3422	ÅSGARD FM
3435	TYNE GP
3435	FARSUND FM
3857	HAUGESUND FM

Composite logs

Document name	Document format	Document size [MB]
5932	pdf	0.48

Geochemical information

Document name	Document format	Document size [MB]
5932_01_3_7_7_gch_transfer_1	txt	0.00
5932_02_3_7_7_gch_results_1	txt	0.23

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSL	200	3431
DSL HDIL XMAC ZDL CN	3428	3929
LWD - GR EWR PWD D&I	216	1308
LWD - GR EWR PWD D&I	2965	3930
LWD - PDGR GR EWR PW D D&1	1308	2965
RCI SV GR	3460	3800
SWC GR	3440	3920
VSP GWV GR	2115	3915
ZDL XMAC	3182	3431

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	206.0	36	216.0	0.00	LOT
SURF.COND.	18 5/8	646.0	24	655.0	1.40	LOT
INTERM.	13 3/8	1304.0	17 1/2	1308.0	1.40	LOT
INTERM.	9 5/8	3429.0	12 1/4	3434.0	1.56	LOT
OPEN HOLE		3930.0	8 1/2	3930.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
655	1.30	16.0		Polymer	
955	1.39	20.0		Polymer	
1308	1.39	24.0		Polymer	
1465	1.56	42.0		Oil (regular)	
3097	1.56	21.0		Oil (regular)	
3122	1.56	32.0		Oil (regular)	
3278	1.62	40.0		Oil (regular)	
3434	1.57	33.0		Oil (regular)	
3596	1.60	33.0		Oil (regular)	
3930	1.61	37.0		Oil (regular)	