

**General information**

Wellbore name	25/10-11
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	25/10-11
Well name	25/10-11
Seismic location	LN 1754 MA 09m01
Production licence	505
Drilling operator	Marathon Petroleum Norge AS
Drill permit	1347-L
Drilling facility	TRANSOCEAN WINNER
Drilling days	170
Entered date	22.02.2011
Completed date	10.08.2011
Release date	10.08.2013
Publication date	10.08.2013
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	EARLY JURASSIC
1st level with HC, formation	DUNLIN GP
2nd level with HC, age	EARLY JURASSIC
2nd level with HC, formation	STATFJORD GP
3rd level with HC, age	MIDDLE JURASSIC
3rd level with HC, formation	HUGIN FM
Kelly bushing elevation [m]	26.0
Water depth [m]	120.0
Total depth (MD) [m RKB]	4562.0
Final vertical depth (TVD) [m RKB]	4560.0
Maximum inclination [°]	5.3
Oldest penetrated age	JURASSIC
Oldest penetrated formation	HUGIN FM
Geodetic datum	ED50
NS degrees	59° 12' 48.06" N



EW degrees	2° 7' 42.29" E
NS UTM [m]	6564286.03
EW UTM [m]	450233.92
UTM zone	31
NPDID wellbore	6563

Wellbore history

**General**

Well 25/10-11 was drilled on the Earb Sør prospect in the Vana Sub-basin west of the Balder Field in the North Sea. The main objectives of the well were to test the hydrocarbon potential of the Late Jurassic sands. The prospect was interpreted as an anomalous thickened Late Jurassic section equivalent to the thinner gas bearing coarse clastics of the Draupne and Heather Formations seen in the 25/7-2 well drilled in 1990. Secondary objective was to evaluate the potential in the Middle Jurassic Hugin Formation. The planned TD was 4461 m.

Operations and results

Wildcat well 25/10-11 was spudded with the semi-submersible installation Transocean Winner on 22 February 2011 and drilled to 2574 m. Further progress was not possible due to junk in the hole. Two cement plugs were set from TD to

1981 m and the well was sidetracked. The 25/10-11 T2 sidetrack was kicked off at 2010 m and drilled to final TD 4562 m in the Middle Jurassic Hugin Formation. The well was drilled with seawater and hi-vis sweeps down to 210 m, with seawater and Glydril/KCl mud from 210 m to 1041 m, with Versatec OBM from 1041 m to 3935 m, and with WARP OBM mud from 3935 m to TD.

The well penetrated top Draupne Formation at 3991 m. The Draupne Formation rested unconformable on the Early Jurassic Dunlin Group at 4024 m. From this point and down a very complex and unexpected stratigraphic sequence was encountered. The anomalous thickened section proved to be sediments of Early Jurassic age and comprised of lithologies from the Dunlin Group and Statfjord Formation. Furthermore this thickened section was emplaced above younger lithologies of the Heather and Hugin Formations. Hydrocarbons were confirmed from logs and MDT fluid samples at several levels, but no contacts were established and the reservoir properties in the sands were very poor.

The oil based mud produced a background weak dull yellow direct fluorescence and weak blue white cut fluorescence which masked virtually any mineral oil show in the cuttings samples from this well. Core samples were generally low porosity with very weak shows of the type associated with gas condensate. Such shows were found on all three cores.

Three cores were cut in the sidetrack: core 1 and 2 from 4271 m to 4343 m in the Statfjord Formation, and core 3 from 4522 m to 4540 m in the Hugin Formation. Total recovery was close to 100%. MDT wire line fluid samples were taken at 4032 m (oil) and 4141 m in the Dunlin Group (water), 4272.5 m (wet gas) in the Statfjord Formation, and at 4409.5 m (wet gas) in the Hugin Formation. All hydrocarbon samples were contaminated with mud filtrate. The least contaminated sample was the one from 4032 m (6% contamination).

The well was permanently abandoned on 10 August 2011 as a minor oil and gas discovery.

Testing

A drill stem test was carried out from perforations over the gross interval 4179 m to 4413 m. Cumulative liquid production during the entire test was approximately 24 Sm³. Some gas and hydrocarbon liquid was produced at surface but the final surface liquid flow was still mainly brine with some formation water.

**Cuttings at the Norwegian Offshore Directorate**

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1050.00	2550.00

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	4271.0	4298.0	[m]
2	4298.0	4343.0	[m]
3	4522.0	4539.8	[m]

Total core sample length [m]	89.8
Cores available for sampling?	YES

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST		0.00	0.00	WATER		YES
DST		0.00	0.00	OIL		YES
MDT		0.00	4272.50	CONDENSATE		YES
MDT		0.00	4409.50	CONDENSATE		YES
MDT		0.00	4032.00	CONDENSATE		YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
146	NORLAND GP
759	UTSIRA FM
938	HORDALAND GP
1487	GRID FM



2136	ROGALAND GP
2136	BALDER FM
2239	SELE FM
2295	LISTA FM
2313	HEIMDAL FM
2426	TY FM
2737	SHETLAND GP
2737	EKOFISK FM
2779	JORSALFARE FM
2869	KYRRE FM
3124	TRYGGVASON FM
3311	BLODØKS FM
3470	SVARTE FM
3627	CROMER KNOLL GP
3627	RØDBY FM
3897	SOLA FM
3954	ÅSGARD FM
3991	VIKING GP
3991	DRAUPNE FM
4024	DUNLIN GP
4146	STATFJORD GP
4351	VESTLAND GP
4351	HUGIN FM
4435	VIKING GP
4435	HEATHER FM
4501	VESTLAND GP
4501	HUGIN FM

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	4179	4413	8.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				138



Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0		1465			

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT PEX ECS HNGS EDTC	3888	4562
LWD - ABGR ECD RES GR DIR SON	2538	2538
LWD - ABGR RES GR DIR SON	1041	2538
LWD - DEN CAL RES POR SON	3935	4522
LWD - DIR	2350	2538
LWD - ECD RES GR DIR	210	1022
LWD - ECD RES GR DIR SON	2567	2791
LWD - GR DIR ECD RES SON DEN POR	2791	3935
LWD - PD GR ECD RES GR DIR SON	2010	2204
LWD - PD GR ECD RES GR DIR SON	2204	2567
LWD - PD GR ECD RES GR DIR SON	2558	2558
LWD - PWD RES GR DIR	2570	2574
LWD - RES GR ECD DEN CAL RES POR	4540	4562
LWD - RES GR PROBE DIR ECD	3935	4522
MDT	4032	4542
MDT	4272	4543
MSCT	4032	4520
OBMI2 IS PPC MSIP PPC EDTC	146	4562
VSI4 EDTC	842	4550
XPT CMR EDTC	3922	4562

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	207.0	36	210.0	0.00	LOT
SURF.COND.	20	1031.0	26	1041.0	1.55	LOT



INTERM.	13 5/8	2784.0	17 1/2	2791.0	1.75	LOT
INTERM.	9 5/8	3922.0	12 1/4	3935.0	2.05	LOT
OPEN HOLE		4562.0	8 1/2	4562.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
156	1.20	1.0		wvjobreportmudchk.com	
210	1.50	1.0		wvjobreportmudchk.com	
1022	1.39	18.0		wvjobreportmudchk.com	
1022	1.30	15.0		wvjobreportmudchk.com	
1041	1.25			wvjobreportmudchk.com	
2143	1.40	45.0		Versatec OBM	
2539	1.40	41.0		Versatec OBM	
2574	1.41	36.0		Versatec	
3491	1.60	55.0		Versatec OBM	
3935	1.79	41.0		OIL (REGULAR)	
4118	1.81	44.0		OIL (REGULAR)	
4540	1.81	43.0		OIL (REGULAR)	
4562	1.65	62.0		OIL (REGULAR)	