General information

Wellbore name	7/11-11 S
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	MIME
Discovery	7/11-5 Mime
Well name	7/11-11
Seismic location	ILN 7369-CDP 6109-TRC 37
Production licence	301
Drilling operator	Talisman Energy Norge AS
Drill permit	1133-L
Drilling facility	MÆRSK GIANT
Drilling days	74
Entered date	29.03.2007
Completed date	10.06.2007
Release date	10.06.2009
Publication date	10.06.2009
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL SHOWS
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	ULA FM
Kelly bushing elevation [m]	43.4
Water depth [m]	80.4
Total depth (MD) [m RKB]	4679.0
Final vertical depth (TVD) [m RKB]	4444.0
Maximum inclination [°]	24.3
Bottom hole temperature [°C]	168
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SMITH BANK FM
Geodetic datum	ED50
NS degrees	57° 7' 34.87'' N
EW degrees	2° 28' 58.68'' E
NS UTM [m]	6331711.79

EW UTM [m]	468696.47
UTM zone	31
NPDID wellbore	5474

Wellbore history

General

Appraisal well 7/11-11 S was drilled on the Mime Field, which is situated on the Cod Terrace in the North Sea. A previous well on Mime, 7/11-10 S produced 484000 Sm3 oil equivalents between 1990 and 1993 before being abandoned due to asphaltene precipitation. In the neighbour Mime well 7 /11-5 an oil contact was found at 4176 m TVD MSL, but this was thought to be a down-to contact set by lithology and not a true OWC. The primary objective of 7/11-11 S was to prove a deeper contact within the Ula Formation reservoir zone than the contact found in 7/11-5. The appraisal was drilled on the Mime Main proven segment and, depending on the results, two sidetrack appraisals into either Mime Main or Mime West was planned.

Operations and results

Well 7/11-11 S was spudded with the jack-up installation Mærsk Giant on 29 March 2007 and drilled to TD at 4679 m (4444 m TVD RKB) in the Triassic Smith Bank Formation. The well path was vertical down to ca 1350 m. Angle was built to ca 24 deg at ca 1900 m and was kept within 13 - 25 deg from there to TD. It was drilled with Seawater and bentonite sweeps down to 800 m, with KCL/Polymer mud from 800 m to 1323 m, and with Carbosea invert emulsion oil based mud from 1323 m to TD.

Top Ula Formation was encountered at 4470 m (4200 TVD MSL), 15 m shallow to prognosis. It was however 67 m thicker than expected, but the effective reservoir zone within Ula was encountered as deep as 4256 m TVD MSL due to a thicker non-reservoir top Ula sequence than expected. Station log measurements were undertaken with the CMR tool at 6 depths in the Ula Formation and interpreted via Magnetic Resonance Fluid Characterisation (MRF). The results indicated 2 hydrocarbon phases, a heavy viscous oil and a light oil (probably OBM filtrate). These results were in direct contrast to the core, produced fluids and other log evaluation. Despite efforts to resolve this enigma the CMR MRF results remain in contradiction to the other data. The reservoir was concluded to be water bearing with only some poor shows in the top ca 15 m. The rest of the well had no shows other than high gas readings in the Mandal Formation. A total of 26 pressure measurements were attempted in the Ula Sandstone (24) and Smith Bank (2) between 4501m and 4632 m using a large diameter probe and a dual packer. No stable pressures could be obtained. The maximum temperature recorded (non-corrected) was 167.9 deg C, measured at 4622 m during the final MDT run. The low permeability in the reservoir made further development of the well unviable and it was decided to plug back and abandon without testing or further sidetracks.

Two cores were cut at 4479 to 4587 m in the Ula Formation. Core #1 at 4479 - 4533 m cut 54 m, but recovered 55.76 m due to re-packing of core. The core catcher backed off resulting in the core slipping out of the inner barrel. Thus, the core had to be retrieved from the outer barrel and inserted manually into the inner barrel. An MDT water sample was obtained from 4541 m.

The well was permanently abandoned on 10 June 2007 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]
220.00	4679.00

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	4479.0	4533.5	[m]
2	4533.5	4588.3	[m]

Total core sample length [m]	109.3
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
123	NORDLAND GP
1518	HORDALAND GP
3192	ROGALAND GP
3192	BALDER FM
3204	SELE FM
3225	LISTA FM
3253	MAUREEN FM
3408	SHETLAND GP
3408	EKOFISK FM
3504	TOR FM
3895	HOD FM
4072	HIDRA FM
4145	CROMER KNOLL GP
4145	RØDBY FM
4176	SOLA FM
4222	ÅSGARD FM
4274	TYNE GP
4274	MANDAL FM

4348	FARSUND FM
4470	VESTLAND GP
4470	ULA FM
4618	NO GROUP DEFINED
4618	SMITH BANK FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT DSI EMS	4285	4679
HNGS LDS APS CMR	4285	4679
MDT CMR GR TLC	4285	4679
MDT GR TLC	4502	4632
MWD - DIR	123	214
MWD - GR RES DIR PWD	214	4679
VSP	123	4544

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	201.0	36	214.0	0.00	LOT
SURF.COND.	13 3/8	1312.0	17 1/2	1322.0	1.70	LOT
INTERM.	9 5/8	4285.0	12 1/4	4296.0	1.90	LOT
OPEN HOLE		4679.0	8 1/2	4679.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
123	1.04	120.0		WATER BASED	
210	1.04	120.0		WATER BASED	
915	1.03			WATER BASED	
938	1.18	120.0		WATER BASED	
1013	1.62			OIL BASED	
1323	1.24	56.0		WATER BASED	
1722	1.60			WATER BASED	
1937	1.62			OIL BASED	

3326	1.62			OIL BASED	
3333	1.62			OIL BASED	
3402	1.62			OIL BASED	
3474	1.62			OIL BASED	
3493	1.62			OIL BASED	
4077	1.62			OIL BASED	
4181	1.62			OIL BASED	
4185	1.62			OIL BASED	
4296	1.62			OIL BASED	
4301	1.62			OIL BASED	
4679	1.62			OIL BASED	