General information

Wellbore name	33/12-5
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	STATFJORD
Discovery	33/12-1 Statfjord
Well name	33/12-5
Seismic location	LINE MNG-34 SP.145
Production licence	037
Drilling operator	Mobil Exploration Norway INC
Drill permit	140-L
Drilling facility	NORSKALD
Drilling days	136
Entered date	09.10.1975
Completed date	21.02.1976
Release date	21.02.1978
Publication date	02.12.2014
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	143.0
Total depth (MD) [m RKB]	4574.0
Final vertical depth (TVD) [m RKB]	4572.0
Maximum inclination [°]	4
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	LOMVI FM
Geodetic datum	ED50
NS degrees	61° 11' 5.53'' N
EW degrees	1° 51' 53.39'' E
NS UTM [m]	6784070.29
EW UTM [m]	438959.62
UTM zone	31
NPDID wellbore	115

Wellbore history

General

Well 33/12-5 was drilled on the Tampen Spur in the northern North Sea. It was drilled on the southeast, downfaulted flank of the Statfjord structure, but on the upthrown block of the major, east-bounding Statfjord fault. The well was programmed to test in a higher structural position, a Triassic sand, found water bearing in the 33/12-2 well, and to evaluate older, untested section beneath the sand. The Triassic sand in 33/12-2, defined seismically by the "R2" horizon, had been tentatively identified as Early Triassic. Secondary objectives were possible Jurassic reservoirs preserved within this downfaulted area east of the Statfjord Field. The 33/12-4 well was a similar test on the east flank of the Statfjord feature. This well found a thin Jurassic/Upper Triassic? sand with good porosity, which tested saltwater with minor amounts of oil.

The well is type well for the Lomvi and Teist formations.

Operations and results

Appraisal well 33/12-5 was spudded with the semi-submersible installation Norskald on 9 October 1975 and drilled to TD at 4574 m in the Triassic Lomvi Formation. The well was drilled water based with a lignosulphonate mud from 485 m to TD.

The Tertiary and Late Cretaceous sections were similar to other wells in the area, consisting predominantly of claystones and siltstones with minor sands. Along the southeast flank of the Statfjord feature, erosion appears to have removed Jurassic sediments and a portion of the Upper Triassic prior to draping of an indeterminate Jurassic sand, interpreted as reworked Statfjord Formation sand, on the eroded Triassic surface. Only minor shows were encountered in the reworked Jurassic sand, which tested saltwater on DST. These were the only shows reported from the well.

Top Triassic, Hegre Group, was penetrated at 2735 m. The main Triassic objective, previously interpreted as an Early Triassic Bunter Sand (Lomvi Formation) in 33/12-2 and projected to 33/12-5, was encountered at 3741 m. The sand was 115 m thick and 307.5 higher than in the 12-2 well. Reinterpretation of palynology indicates that this sand is of Late Triassic Carnian-Norian age in both wells. The sand was found water wet and exhibited marginal reservoir characteristics with an average log porosity of only 11 percent.

No cores were cut and no wire line fluid samples were taken in this well.

The well was permanently abandoned on 21 February 1976 as a dry well.

Testing

One drill stem test was performed in the reworked sand on top of the Triassic in the interval 2718 m to 2724.1 m. The test produced 443 m3/day of water without any oil. The bottom hole temperature during the test was 97.8 °C.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
147.52	1393.55

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
168	NORDLAND GP
931	UTSIRA FM
945	HORDALAND GP
1701	ROGALAND GP
1701	BALDER FM
1772	SELE FM
1911	SHETLAND GP
2707	CROMER KNOLL GP
2718	UNDEFINED GP
2735	HEGRE GP
2735	LUNDE FM
3747	LOMVI FM
3867	TEIST FM

Geochemical information

Document name	Document format	Document size [MB]
115_GCH_1	pdf	0.70
115_GCH_2	pdf	1.36

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
115_01_WDSS_General_Information	pdf	0.28

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
115_33_12_5_Completion_log	pdf	2.42
115_33_12_5_Completion_Report	pdf	4.05

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2718	2724	0.0

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

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

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC	477	2000
CBL	2600	2795
CDM	1938	4217
CDM AP	2861	4217
FDC CNL	1937	4568
GR	3800	4564
IES	477	2000
ISF SON	230	486
TEMP	1599	2374
VELOCITY	230	4573

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	230.0	36	230.0	0.00	
SURF.COND.	20	477.0	26	485.0	0.00	
INTERM.	13 3/8	1937.0	17 1/2	2003.0	0.00	
INTERM.	9 5/8	2861.0	12 1/4	2873.0	0.00	
OPEN HOLE		4574.0	8 1/2	4574.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
485	1.04			waterbased	
1683	1.07	40.0		waterbased	
2005	1.25	57.0		waterbased	
2040	1.48	47.0		waterbased	
2283	1.60	80.0		waterbased	
2995	1.54	46.0		waterbased	
3245	1.59	55.0		waterbased	