General information

Wellbore name	33/9-10
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	33/9-10
Seismic location	
Production licence	037
Drilling operator	Mobil Exploration Norway INC
Drill permit	193-L
Drilling facility	FERNSTAR
Drilling days	66
Entered date	08.04.1978
Completed date	12.06.1978
Release date	12.06.1980
Publication date	01.07.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	26.0
Water depth [m]	162.0
Total depth (MD) [m RKB]	3715.0
Final vertical depth (TVD) [m RKB]	3693.0
Maximum inclination [°]	21.15
Bottom hole temperature [°C]	112
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	61° 28' 0.21'' N
EW degrees	1° 46' 29.63'' E
NS UTM [m]	6815550.94
EW UTM [m]	434713.13
UTM zone	31
NPDID wellbore	415

Wellbore history

General

Wildcat well 33/9-10 is located on the Tampen Spur North of the Murchinson Field. The Middle Jurassic Brent sand was the primary objective with the Early Jurassic Statfjord sand as a secondary objective. Planned TD was 3695 m, interpreted to be 30 m into the Statfjord Formation.

Operations and results

Wildcat well 33/9-10 was spudded with the semi-submersible installation Fernstar on 7 April 1978 and drilled to TD at 3715 m in the Early Jurassic Statfjord Formation. The well was drilled with Spud down to 516 m, with seawater/FCL polymer mud from 516 to 1820 m, with lignosulphonate/fresh water from1820 to 3491 m, and with Qbroxin/CC-16/fresh water from 3491 m to TD. Spots of diesel and protectomagic (water or diesel-dispersed asphalt) was added to the mud, beginning at 1820 m. From 1820 m, oil in the mud was reported at contents varying between 3% and 20%.

The electric log pick of the top of the Early Cretaceous Cromer Knoll Group was taken at 3113 m, giving an Early Cretaceous thickness of 146.8 m. The Early Cretaceous consisted of 20.3 m of Barremian limestone at the base with red marl interbedded with the overlying claystone section.

Top Late Jurassic Viking Group was picked at 3259.8 m, 15.7 m high to prognosis. The thickness was 88.2 m of which the upper 69.2 m was the Draupne Formation and the lower 19 m was the Heather Formation. The lithology of the Viking Group was grey to dark grey, silty claystone.

The primary objective Brent Group was penetrated at 3348 m, 37.5 m high to prognosis. The sandstone was argillaceous, medium grained, and had fair to poor porosity. Of the expected 140 m of Brent Group, only 67.5 m was found. Of this 37 m was net sand. The Brent Group was water bearing. No shows were seen in the ditch samples. One core was cut from 3358 m to 3376 m. Very poor shows were observed in the core, but electric logs and Schlumberger Coriband analysis indicated the Brent Formation to be water wet. The shows in the core most likely came from flushing of the core with diesel and protectomagic mud. No residual oil was measured in the core plugs.

Top Dunlin Group was found at 3415.5 m, 110 m high to prognosis. It was 84.5 m thick versus the prognosed 140 m.

The secondary objective Statfjord Formation came in at 3500 m, 165.5 m high to prognosis. The Statfjord sands were tight with calcareous cement. Electric logs and lack of shows proved the formation to be water wet. Drilling went on in order to reach and identify the seismic reflector originally mapped as the Near Top Statfjord event. Twenty meters net of very calcareous sandstone stringers between 3635 m and TD appeared to account for this reflector. The well was permanently abandoned as a dry well on 12 June 1978.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
280.00	3713.00

Cuttings available for sampling?	NO

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3358.0	3376.0	[m]

Total core sample length [m]	18.0
Cores available for sampling?	YES

Core photos


3358-3360m


3360-3363m


3363-3366m


3366-3369m


3368-3371m


3371-3374m


3374-3376m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
188	NORDLAND GP
975	UTSIRA FM
1085	HORDALAND GP
1666	ROGALAND GP
1666	BALDER FM

1780	LISTA FM
1895	SHETLAND GP
3113	CROMER KNOLL GP
3260	VIKING GP
3260	DRAUPNE FM
3329	HEATHER FM
3348	BRENT GP
3416	DUNLIN GP
3416	DRAKE FM
3500	STATFJORD GP

Composite logs

Document name	Document format	Document size [MB]
415	pdf	0.51

Geochemical information

Document name	Document format	Document size [MB]
415_1	pdf	1.68

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

Document name	Document format	Document size [MB]
415_01_WDSS_General_Information	pdf	0.20
415_03_WDSS_lithlog	pdf	0.07

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

Document name	Document format	Document size [MB]
415_1_Completion_Report_and_Completion_log	pdf	3.02

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DLL MSFL	3230	3700
FDC CNL	1858	3700
HDT	1858	3700
ISF SONIC	246	3700
VSP	300	3690

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	262.0	36	265.0	0.00	LOT
SURF.COND.	20	499.0	24	516.0	0.00	LOT
INTERM.	13 3/8	1321.0	17 1/2	1330.0	0.00	LOT
INTERM.	9 5/8	1860.0	12 1/4	1870.0	0.00	LOT
OPEN HOLE		3715.0	8 1/2	3715.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
193	1.31			water based	
254	1.32			water based	
440	1.43			water based	
1800	1.49			water based	
2122	1.34			water based	
2866	1.36			water based	
3375	1.55			water based	
3715	1.52			water based	