

**General information**

Wellbore name	33/9-6
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	33/9-6 DELTA
Well name	33/9-6
Seismic location	
Production licence	037
Drilling operator	Mobil Exploration Norway INC
Drill permit	158-L
Drilling facility	DYVI ALPHA
Drilling days	70
Entered date	23.06.1976
Completed date	31.08.1976
Release date	31.08.1978
Publication date	20.06.2011
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.5
Water depth [m]	153.0
Total depth (MD) [m RKB]	3354.0
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	61° 25' 12.8" N
EW degrees	1° 48' 43.09" E
NS UTM [m]	6810334.73
EW UTM [m]	436594.24
UTM zone	31
NPDID wellbore	411

**Wellbore history****General**

Well 33/9-6 was drilled ca 3 km east of the UK border on the 9-Delta prospect located on the regional Murchison structural trend, which extends across the northern portion of block 33/9. The well was the first wildcat in the Norwegian sector of the Murchison trend.

The primary objective was the Brent Group sand, which is oil reservoir of the adjacent Murchison Field. The well was drilled near the crest of the structure with a planned total depth of 3300 m, approximately 30 m into the Early Jurassic Statfjord Formation.

Operations and results

Wildcat well 33/9-6 was spudded with the semi-submersible installation Dyvi Alpha on 23 June 1976 and drilled to TD at 3354 m in the Early Jurassic Statfjord Formation.

The Tertiary consisted primarily of clays, siltstones, and minor sands. The tuffaceous red claystone typical of the Paleocene was encountered slightly above the log pick at 1669.5 m. The sandy basal portion of the Paleocene was not well developed in 33/9-6. Oil and gas shows have occurred in this zone in both Statfjord and Murchison Field wells; however, no-shows were observed in 33/9-6. The objective Brent Group was encountered at 2995 m, 7.5 m low to prognosis. The sand was described as clear to white, fine grained and very micaceous. Porosity was poor to fair; and poor to fair oil shows and scattered thin zones of bleeding oil were described down to 3023 m. No shows occurred below 3023 m. Schlumberger Coriband Log analysis and core data indicated 24.5 meters of gross pay and 13.5 meters of net pay, and an oil/water contact of 3019.5 m. Based on this reserves for the horst block alone were estimated at only ca 900000 Sm³ oil due to the poor reservoir quality in the oil column. By assuming the same oil/water contact for the graben area to the east additional reserves of ca 7900000 Sm³ oil was estimated.

Two cores were cut in the Brent Group reservoir from 2997 m to 3033.4 m. Four FIT'S were run at 2998.5 m, 2996.5 m, 2997.5 m, and 2995.5 m in the Brent reservoir to evaluate the shows. The FIT's were unsuccessful in recovering quantitative formation fluid. With the exception of FIT No. 2, which recovered a trace of oil, only mud filtrate, mud, and a trace of gas were recovered. The NaCl content of recovered fluid ranged from 3300 - 5280 ppm which was consistent with the salinity of the drilling mud.

The well was permanently abandoned on 31 August 1976. It is classified as a minor oil discovery.

Testing

A drill stem test was attempted, but terminated without results due to mechanical problems.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
250.00	3354.00

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	2997.0	3015.0	[m]
2	3015.0	3033.4	[m]

Total core sample length [m]	36.4
Cores available for sampling?	YES

Core photos


2997-2999m



2999-3002m



3002-3005m



3005-3007m



3007-3010m



3010-3013m



3013-3015m



3015-3017m



3017-3020m



3020-3023m



3023-2035m



3025-3028m



3028-3031m



3031-3033m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3021.0	[m]	C	LAP
3023.0	[m]	C	LAP
3024.0	[m]	C	LAP
3025.0	[m]	C	LAP
3026.0	[m]	C	LAP



3027.0	[m]	C	LAP
3028.0	[m]	C	LAP
3031.0	[m]	C	LAP

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
179	NORDLAND GP
924	UTSIRA FM
972	NO FORMAL NAME
993	HORDALAND GP
1194	NO FORMAL NAME
1207	NO FORMAL NAME
1230	NO FORMAL NAME
1248	NO FORMAL NAME
1670	ROGALAND GP
1670	BALDER FM
1760	LISTA FM
1890	SHETLAND GP
1890	JORSALFARE FM
2100	KYRRE FM
2871	CROMER KNOLL GP
2871	RØDBY FM
2922	MIME FM
2939	VIKING GP
2939	DRAUPNE FM
2982	HEATHER FM
2995	BRENT GP
2995	TARBERT FM
3030	NESS FM
3086	ETIVE FM
3103	RANNOCH FM
3140	DUNLIN GP
3140	DRAKE FM
3200	COOK FM
3250	BURTON FM
3280	AMUNDSEN FM
3322	STATFJORD GP



Geochemical information

Document name	Document format	Document size [MB]
411 1	pdf	4.14
411 2	pdf	4.45
411 3	pdf	4.60

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

Document name	Document format	Document size [MB]
411 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]
411 33 9 6 Completion Log	pdf	1.98
411 33 9 6 Completion Report	pdf	3.49

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CAL	900	972
CBL	800	2998
CBL	879	970
CDM AP	1771	3353
DLL MSFL	2925	3354
FDC CNL	1741	3354
ISF SONIC	249	3354
SRS	247	3354

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	250.0	36	250.0	0.00	LOT
SURF.COND.	20	481.0	26	495.0	0.00	LOT
INTERM.	13 3/8	1770.0	17 1/2	1782.0	0.00	LOT
INTERM.	9 5/8	3331.0	12 1/4	3354.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1000	1.16			waterbased	
1560	1.16			waterbased	
1782	1.25			waterbased	
2817	1.46			waterbased	
3222	1.61			waterbased	

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
411 Formation pressure (Formasjonstrykk)	PDF	0.22

