

**General information**

Wellbore name	33/9-19 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	SYGNA
Discovery	33/9-19 S Sygna
Well name	33/9-19
Seismic location	E 86 REPR. 93 INLINE 620& CROSSL. 990
Production licence	037
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	848-L
Drilling facility	TRANS. WILDCAT
Drilling days	25
Entered date	29.06.1996
Completed date	23.07.1996
Release date	23.07.1998
Publication date	01.07.2004
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	ETIVE FM
2nd level with HC, age	MIDDLE JURASSIC
2nd level with HC, formation	RANNOCH FM
Kelly bushing elevation [m]	25.0
Water depth [m]	304.0
Total depth (MD) [m RKB]	3197.0
Final vertical depth (TVD) [m RKB]	3061.0
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	STATFJORD GP
Geodetic datum	ED50
NS degrees	61° 28' 33.56" N
EW degrees	1° 59' 50.6" E
NS UTM [m]	6816380.31
EW UTM [m]	446585.05



UTM zone	31
NPDID wellbore	2830

Wellbore history

General

Well 33/9-19 S is situated in the Tampen Spur area. The well targeted the Statfjord Nord Nordøst Segment at the north-eastern extension of the Statfjord North Field structure in blocks 33/9 and 34/7. The objective was to prove the minimum economical recoverable reserves and the most likely oil water contact in the Brent Group.

Operations and results

The 33/9-19 S well was spudded on the 29 of June 1996, using the semi-submersible installation "Transocean Wildcat". The well was drilled in a north-western direction to TD at 3197 m in the Early Jurassic Statfjord Formation. A pilot hole was drilled to 450 m. No shallow gas was recorded. The 36" and 17 1/2" sections were drilled with sea water and swept clean with bentonite mud. The 12 1/4" hole section was drilled with Ancho-2000 mud and the 8 1/2" hole section was drilled with Ancovert Oil based mud.

The target Base Cretaceous/Top Brent was reached at 2689.0 m (2646.8 m TVD RKB), 28 m shallower than prognosed. Sandstone in the Brent Group was oil filled from top down to claystone at 2811 m. Drilling continued towards the planned TD in Dunlin Group with an inclination of 35°. After having reached this TD, it was decided to continue drilling in order to investigate the Statfjord Formation reservoir characteristics and to improve the mapping of the Brent and Dunlin Groups. The inclination stayed at approximately 29.5° to final TD at 3197 m (3061.5 m TVD RKB). Top Statfjord Formation, which was water wet, came in at 3122 m (2996 m TVD RKB), 19 m TVD shallower than prognosed.

One 90 ft core was cut from 2709 to 2727 m (100% recovery). The core jammed off after 18 m during coring of a calcite cemented sandstone interval. The core consisted of 100% HC filled Brent Group sandstone. MDT samples were recovered from depth 2701 m.

The well 33/9-19 S was plugged back for side-tracking on 23 July 1996. It is classified as an oil discovery on

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
780.00	3197.00

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	2709.0	2727.2	[m]

Total core sample length [m]	18.2
Cores available for sampling?	YES

Core photos

2709-2714m



2714-2719m



2719-2714m



2724-2727m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2651.0	[m]	DC	UOS
2660.0	[m]	DC	UOS
2669.0	[m]	DC	UOS
2675.0	[m]	DC	UOS
2684.0	[m]	DC	UOS
2689.0	[m]	SWC	UOS
2691.0	[m]	SWC	UOS
2696.0	[m]	DC	UOS
2697.0	[m]	SWC	UOS
2699.0	[m]	DC	UOS
2719.5	[m]	SWC	UOS
2722.9	[m]	SWC	UOS
2726.5	[m]	SWC	UOS
2736.0	[m]	DC	UOS
2765.0	[m]	DC	UOS
2774.0	[m]	DC	UOS
2792.0	[m]	DC	SWC
2795.0	[m]	DC	UOS



2801.0	[m]	DC	UOS
2810.0	[m]	DC	UOS
2816.0	[m]	SWC	UOS
2822.0	[m]	DC	UOS
2828.0	[m]	DC	UOS
2837.0	[m]	DC	UOS
2849.0	[m]	DC	UOS
2855.0	[m]	DC	UOS
2873.0	[m]	DC	UOS
2885.0	[m]	DC	UOS
2897.0	[m]	DC	UOS
2906.0	[m]	DC	UOS
2915.0	[m]	DC	UOS
2924.0	[m]	DC	UOS
2933.0	[m]	DC	UOS
2942.0	[m]	DC	UOS
2947.0	[m]	DC	UOS
2948.0	[m]	DC	UOS
2957.0	[m]	DC	UOS
2966.0	[m]	DC	UOS
2975.0	[m]	DC	UOS
2984.0	[m]	DC	UOS
2993.0	[m]	DC	UOS
3002.0	[m]	DC	UOS
3011.0	[m]	DC	UOS
3020.0	[m]	DC	UOS
3029.0	[m]	DC	UOS
3038.0	[m]	DC	UOS
3047.0	[m]	DC	UOS
3056.0	[m]	DC	UOS
3065.0	[m]	DC	UOS
3074.0	[m]	DC	UOS
3083.0	[m]	DC	UOS
3092.0	[m]	DC	UOS
3101.0	[m]	DC	UOS
3110.0	[m]	DC	UOS
3119.0	[m]	DC	UOS
3122.0	[m]	DC	UOS
3131.0	[m]	DC	UOS
3132.0	[m]	SWC	UOS



3140.0	[m]	DC	UOS
3152.0	[m]	DC	UOS
3181.0	[m]	DC	UOS
3182.0	[m]	DC	UOS

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
328	NORDLAND GP
960	UTSIRA FM
1131	HORDALAND GP
1681	ROGALAND GP
1681	BALDER FM
1714	LISTA FM
1869	SHETLAND GP
1869	JORSALFARE FM
2237	KYRRE FM
2678	CROMER KNOLL GP
2678	MIME FM
2689	BRENT GP
2689	ETIVE FM
2742	RANNOCH FM
2845	DUNLIN GP
2845	DRAKE FM
2939	COOK FM
2975	BURTON FM
3027	AMUNDSEN FM
3122	STATFJORD GP

Composite logs

Document name	Document format	Document size [MB]
2830	pdf	0.46

Geochemical information





Document name	Document format	Document size [MB]
2830_1	pdf	0.50

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

Document name	Document format	Document size [MB]
2830_33_9_19_S_COMPLETION_REPORT_AND_COMPLETION_LOG	pdf	14.70

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AS GR AMS	1951	3192
DIL GR AMS	1951	3185
LDL CNL GR AMS	1951	3165
MDT GR	2692	2797
MWD - DPR II	329	3197
VSP	832	2635

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	390.0	36	392.0	0.00	LOT
INTERM.	13 3/8	758.0	17 1/2	760.0	1.58	LOT
INTERM.	9 5/8	1951.0	12 1/4	1953.0	1.85	LOT
OPEN HOLE		3197.0	8 1/2	3197.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
450	1.03			DUMMY	
1220	1.22			DUMMY	
1900	1.50			DUMMY	
1956	1.50	24.0		ANCO 2000	
2305	1.62	40.0		ANCO VERT	





2709	1.62	42.0		ANCO VERT	
3197	1.62	39.0		ANCO VERT	

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]
2830 Formation pressure (Formasjonstrykk)	pdf	0.22

