General information

Wellbore name	25/8-5 S
Type	EXPLORATION
Purpose	WILDCAT
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	JOTUN
Discovery	25/8-5 S Jotun
Well name	25/8-5
Seismic location	ESD-511 SP 162.93 / ESD-107 SP 198.56
Production licence	027 P
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	793-L
Drilling facility	DYVI STENA
Drilling days	63
Entered date	21.07.1994
Completed date	22.09.1994
Release date	22.09.1996
Publication date	29.08.2003
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	PALEOCENE
1st level with HC, formation	HEIMDAL FM
Kelly bushing elevation [m]	25.0
Water depth [m]	126.0
Total depth (MD) [m RKB]	3395.0
Final vertical depth (TVD) [m RKB]	2912.7
Maximum inclination [°]	56.6
Bottom hole temperature [°C]	92
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SMITH BANK FM
Geodetic datum	ED50
NS degrees	59° 27' 27.1'' N
EW degrees	2° 21' 52.15'' E
NS UTM [m]	6591324.83

EW UTM [m]	463972.36
UTM zone	31
NPDID wellbore	2390

Wellbore history

General

The main objective of Well 25/8-5 S was to test the presence of hydrocarbons in both the lower Jurassic Statfjord Formation and in the Paleocene Heimdal Formation in the Elli Prospect. The well was to be drilled as a directional well in order to penetrate the two objectives.

Operations and results

Exploration well 25/8-5 S was spudded with the semi-submersible installation "Dyvi Stena" on 21 July 1994 and was drilled as a deviated well to a total depth of 3395 m (3040.7 m TVD RKB / 2887.7 m TVD SS), 57 m into late Triassic (Rhaetian) sediments of the Smith Bank Formation. The well was drilled vertical down to 1204 m before starting to build angle. It was drilled with seawater and hi-vis pills down to 1215 m and with KCl / polymer / PAC / Glycol from 1215 m to TD.

Top Heimdal Formation was penetrated at 2112.6 m (2050 m TVD SS) at an inclination of 33 degrees and an azimuth of 171 degrees and was found to contain oil. The oil-water contact was estimated at 2158 m (2087 m TVD SS). The well found sands of the Vestland Group at 2836 m (2570 m TVD SS) water-wet and the second objective, Statfjord Formation at 3040 m (2687.3 m TVD SS) water-wet. The inclination at top Statfjord was 53.6 degrees and azimuth 163.5 degrees. Top Triassic was correlated to be at 3338 (2855.3 m TVD SS). The inclination was 55.2 degrees and azimuth 163.3 degrees at TD. The well was logged with LWD from 270 m to TD. The LWD included GR-Dual Resistivity and Compensated Density/Neutron. Wire line logs were run from 1170 m - 2291 m. Due to difficult hole conditions, it was not possible to run wire line logs below 2423 m. One core was cut in the Heimdal Formation from 2136 m to 2150 m and one core was cut in the Statfjord Formation from 3052 m to 3061 m. A FMT fluid sample was taken at 2133.6 (2067 m TVD SS) m in the Heimdal Formation. The well was suspended on 22 September as an oil discovery (Jotun). It was re-entered (25/8-5 S R) on 27 July 1997 for plugging and permanent abandonment. Permanent abandonment was completed on 3 August 1997.

Testing

The well was successfully tested in the Heimdal Formation, 2118 - 2149 m and flowed 1073 Sm3/day of 37° API oil through a 128/64 inch choke. The GOR was 38 Sm3/Sm3. No sand or water was produced.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1180.00	3395.00

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	2136.4	2150.6	[m]
2	3052.0	3061.2	[m]

Total core sample length [m]	23.4
Cores available for sampling?	YES

Core photos


2135-2140m


2140-2144m


2144-2148m


2148-2150m


3052-3057m


3057-3061m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1250.0	[m]	DC	STRAT
1800.0	[m]	DC	STRAT
1840.0	[m]	DC	STRAT
1880.0	[m]	DC	STRAT
1900.0	[m]	DC	STRAT
1921.0	[m]	DC	STRAT
1942.0	[m]	DC	STRAT
1954.0	[m]	DC	STRAT
1963.0	[m]	DC	STRAT

1984.0	[m]	DC	STRAT
1999.0	[m]	DC	STRAT
2023.0	[m]	DC	STRAT
2041.0	[m]	DC	STRAT
2050.0	[m]	DC	STRAT
2062.0	[m]	DC	STRAT
2089.0	[m]	DC	STRAT
2104.0	[m]	DC	STRAT
2128.0	[m]	SWC	STRAT
2134.0	[m]	DC	STRAT
2144.5	[m]	C	STRAT
2145.2	[m]	C	STRAT
2150.5	[m]	C	STRAT
2158.0	[m]	SWC	STRAT
2161.0	[m]	DC	STRAT
2167.5	[m]	SWC	STRAT
2183.0	[m]	DC	STRAT
2185.0	[m]	DC	STRAT
2224.0	[m]	DC	STRAT
2247.5	[m]	SWC	STRAT
2251.0	[m]	SWC	STRAT
2260.0	[m]	DC	STRAT
2299.0	[m]	DC	STRAT
2305.0	[m]	DC	STRAT
2314.0	[m]	DC	STRAT
2323.0	[m]	DC	STRAT
2350.0	[m]	DC	STRAT
2371.0	[m]	DC	STRAT
2389.0	[m]	DC	STRAT
2392.0	[m]	DC	STRAT
2398.0	[m]	DC	STRAT
2407.0	[m]	DC	STRAT
2428.0	[m]	DC	STRAT
2449.0	[m]	DC	STRAT
2485.0	[m]	DC	STRAT
2527.0	[m]	DC	STRAT
2554.0	[m]	DC	STRAT
2569.0	[m]	DC	STRAT
2602.0	[m]	DC	STRAT
2623.0	[m]	DC	STRAT

2647.0	[m]	DC	STRAT
2653.0	[m]	DC	STRAT
2662.0	[m]	DC	STRAT
2680.0	[m]	DC	STRAT
2701.0	[m]	DC	STRAT
2710.0	[m]	DC	STRAT
2737.0	[m]	DC	STRAT
2755.0	[m]	DC	STRAT
2761.0	[m]	DC	STRAT
2773.0	[m]	DC	STRAT
2785.0	[m]	DC	STRAT
2794.0	[m]	DC	STRAT
2797.0	[m]	DC	STRAT
2803.0	[m]	DC	STRAT
2809.0	[m]	DC	STRAT
2818.0	[m]	DC	STRAT
2824.0	[m]	DC	STRAT
2827.0	[m]	DC	STRAT
2833.0	[m]	DC	STRAT
2836.0	[m]	DC	STRAT
2845.0	[m]	DC	STRAT
2851.0	[m]	DC	STRAT
2860.0	[m]	DC	STRAT
2869.0	[m]	DC	STRAT
2878.0	[m]	DC	STRAT
2896.0	[m]	DC	STRAT
2911.0	[m]	DC	STRAT
2920.0	[m]	DC	STRAT
2926.0	[m]	DC	STRAT
2935.0	[m]	DC	STRAT
2956.0	[m]	DC	STRAT
2980.0	[m]	DC	STRAT
2995.0	[m]	DC	STRAT
3010.0	[m]	DC	STRAT
3028.0	[m]	DC	STRAT
3040.0	[m]	DC	STRAT
3046.0	[m]	DC	STRAT
3052.4	[m]	C	STRAT
3055.4	[m]	C	STRAT
3058.3	[m]	C	STRAT

3059.4	[m]	C	STRAT
3067.0	[m]	DC	STRAT
3115.0	[m]	DC	STRAT
3154.0	[m]	DC	STRAT
3172.0	[m]	DC	STRAT
3181.0	[m]	DC	STRAT
3229.0	[m]	DC	STRAT
3271.0	[m]	DC	STRAT
3286.0	[m]	DC	STRAT
3328.0	[m]	DC	STRAT
3343.0	[m]	DC	STRAT
3349.0	[m]	DC	STRAT
3358.0	[m]	DC	STRAT
3379.0	[m]	DC	STRAT
3395.0	[m]	DC	STRAT

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST	DST1	2149.00	2118.00		15.09.1994 - 07:45	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
151	NORDLAND GP
448	UTSIRA FM
608	NO FORMAL NAME
654	HORDALAND GP
654	SKADE FM
1000	NO FORMAL NAME
1247	GRID FM
1303	NO FORMAL NAME
1950	ROGALAND GP
1950	BALDER FM
2008	SELE FM
2068	LISTA FM

2113	HEIMDAL FM
2420	LISTA FM
2529	TY FM
2600	SHETLAND GP
2600	TOR FM
2780	CROMER KNOLL GP
2780	ÅSGARD FM
2795	VIKING GP
2795	DRAUPNE FM
2822	HEATHER FM
2836	VESTLAND GP
2836	HUGIN FM
2878	SLEIPNER FM
2922	DUNLIN GP
2922	AMUNDSEN FM
3040	STATFJORD GP
3338	NO GROUP DEFINED
3338	SMITH BANK FM

Geochemical information

Document name	Document format	Document size [MB]
2390_1	pdf	1.47

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

Document name	Document format	Document size [MB]
2390_25_8_5_S_COMPLETION_REPORT_AND_LOG	pdf	35.79

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2118	2149	50.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0		29.000		82

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	1073	40774	0.850		38

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BRIDGE PLUG	2230	2230
CCL	1900	2233
DAL GR CAL CHT	2135	2423
DAL GR CMT.TOP	1470	2285
DLL MLL TBRT CHT GR	0	1153
FMT	2113	2208
FMT	2117	2201
FMT	2171	2171
HEXDIP	1153	2204
LWD CDN - DEN DEU	2268	3373
LWD CDR - DRES	1170	3387
MWD - GR DIR	274	3395
SWC	2008	2251
VSP - MLR	500	2290
ZDL CN SL MAC CHT	1153	2301
ZDL CN SL MAC CHT	1153	2260

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	272.0	36	272.0	0.00	LOT
SURF.COND.	13 3/8	1153.0	17 1/2	1170.0	0.00	LOT
INTERM.	9 5/8	2291.0	12 1/4	2302.0	0.00	LOT
OPEN HOLE		3395.0	8 1/2	3395.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
180	1.02			DUMMY	
352	1.13			DUMMY	
811	1.13			DUMMY	
1137	1.50	16.0		DUMMY	
1170	1.20	28.0		WATER BASED	
1331	1.23	32.0		WATER BASED	
1755	1.37	48.0		WATER BASED	
2008	1.50	42.0		WATER BASED	
2064	1.50	18.0		DUMMY	
2094	1.50	39.0		WATER BASED	
2108	1.50	16.0		DUMMY	
2136	1.50	38.0		WATER BASED	
2150	1.50	33.0		WATER BASED	
2234	1.50	34.0		WATER BASED	
2261	1.50	34.0		WATER BASED	
2300	1.50	31.0		WATER BASED	
2301	1.50	32.0		WATER BASED	
2335	1.22	19.0		WATER BASED	
2485	1.22	25.0		WATER BASED	
2615	1.23	22.0		WATER BASED	
2700	1.23	30.0		WATER BASED	
2712	1.22	28.0		WATER BASED	
2758	1.21	30.0		WATER BASED	
2879	1.26	31.0		WATER BASED	
3015	1.30	29.0		WATER BASED	
3015	1.26	27.0		WATER BASED	
3061	1.33	25.0		WATER BASED	
3395	1.40	28.0		WATER BASED	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2137.00	[m]
2136.40	[m]
2137.25	[m]

2137.55	[m]
2137.75	[m]
2138.00	[m]
2138.25	[m]
2138.50	[m]
2138.75	[m]
2139.00	[m]
2139.25	[m]
2139.55	[m]
2139.75	[m]
2140.00	[m]
2140.25	[m]
2140.55	[m]
2140.75	[m]
2141.00	[m]
2141.25	[m]
2141.50	[m]
2141.75	[m]
2142.00	[m]
2142.25	[m]
2142.50	[m]
2142.75	[m]
2143.00	[m]
2143.55	[m]
2143.75	[m]
2144.00	[m]
2144.25	[m]
2144.75	[m]
2145.00	[m]
2145.25	[m]
2145.55	[m]
2145.75	[m]
2146.00	[m]
2146.25	[m]
2146.55	[m]
2146.75	[m]
2147.00	[m]
2147.25	[m]
2147.80	[m]
2148.00	[m]

2148.25	[m]
2148.50	[m]
2148.75	[m]
2149.00	[m]
2149.25	[m]
2149.50	[m]
2149.80	[m]
2150.00	[m]
2150.25	[m]
3052.00	[m]
3052.60	[m]
3053.00	[m]
3053.75	[m]
3054.25	[m]
3054.75	[m]
3055.25	[m]
3055.75	[m]
3056.25	[m]
3056.80	[m]
3057.75	[m]
3057.25	[m]
3058.25	[m]
3058.75	[m]
3059.55	[m]
3059.25	[m]
3060.50	[m]
3061.00	[m]

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]
2390_Formation_pressure_(Formasjonstrykk)	pdf	0.19