



General information





Wellbore name	25/8-8 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	JOTUN
Discovery	25/8-8 S Jotun
Well name	25/8-8
Seismic location	ES 9403- INLINE 2672 & CDP 2131
Production licence	027 P
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	823-L
Drilling facility	VILDKAT EXPLORER
Drilling days	34
Entered date	22.08.1995
Completed date	24.09.1995
Release date	24.09.1997
Publication date	29.08.2003
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
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]	126.5
Total depth (MD) [m RKB]	2592.0
Final vertical depth (TVD) [m RKB]	2343.7
Maximum inclination [°]	35.5
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	DRAUPNE FM
Geodetic datum	ED50
NS degrees	59° 25' 51.87" N
EW degrees	2° 24' 18.73" E
NS UTM [m]	6588357.70
EW UTM [m]	466254.24
UTM zone	31
NPDID wellbore	2646



Wellbore history

General

Well 25/8-8 S was drilled to test the Paleocene Heimdal Formation sandstones (Tau Prospect) located southeast of the Jotun Field and north east of the Balder Field on the east margin of the South Viking Graben. The well was planned with flexibility to be sidetracked into two other reservoir segments from the same 13 3/8" casing. The well proved oil in the target and two sidetracks were drilled. Well 25/8-8 A was the first sidetrack and the objective was to appraise the discovery in the primary well and to evaluate the sand quality in the eastern segment of the Tau Structure. Well 25/8-8 B was the second sidetrack and the objective was to appraise and evaluate resource potential in the western segment of the 25/8-8 S Discovery and to confirm oil-water and possibly gas-oil contacts.

Operations and results

Exploration well 25/8-8 S was spudded with the semi-submersible installation "Vildkat Explorer" on 22 August 1995 and drilled deviated to TD at 2592 m (2343.7 m TVD SS) in the Late Jurassic Draupne Formation. The well was drilled to 1058 m with seawater and high viscosity gel pills. From 1058 m to TD the well was drilled using an oil-based mud, "Safemul". MWD-GR-Res was used during drilling. MWD-resistivity failed at 872 m and the hole was drilled to 1058 m without resistivity log. No shallow gas was observed. The 13 3/8" casing was set at 1046.5 m.

When the second run with the MDT was done, the MDT cable became stuck. The cable broke at the casing shoe, leaving the tool and about 1000 m of cable in the hole. A fishing job was performed to get the tool and cable out. The fishing job was successful and the rest of the logging program was completed.

The target Heimdal Formation was penetrated at 2236 m and was found hydrocarbon bearing. A GOC is indicated within the interval 2244.9-2252.0 m (2057.0-2063.0 m TVD SS) based on ELAN log analysis, pressure analysis and geochemical analyses. Available well data indicate an OWC at 2283.5 m (2089.3 m TVD SS) with oil saturation up to 5 m TVD deeper. Three 27-metre cores were cut in the Lista and Heimdal Formations in the interval 2228 m to 2309 m. Fluid samples were taken in the first MDT run at 2244.2 m (gas) and 2260.0 m (oil). After testing the well was plugged back to the 13 3/8" casing and the casing pulled to get ready for the first sidetrack, 25/8-8 A.

Sidetrack 25/8-8 A was kicked off from below the 13 3/8" casing shoe at 1080 m on 26 September 1995 and drilled to a TD of 2601.3 m (2158.1 m TVD SS) in the Early Paleocene Ty Formation. The wellbore was drilled with "Safemul" oil based mud from kick off to TD. Based on MDT pressures and extensive MDT sampling 25/8-8 A confirmed oil and gas in the Heimdal Formation with a GOC estimated at 2057.8 m TVD SS and an OWC estimated at 2094.5 m TVD SS. It also proved the amount of sand and reservoir quality decrease eastwards from the original 25/8-8 S well location. Borehole 25/8-8 A was not drill stem tested. Four conventional cores were cut in the Lista and Heimdal Formations in the interval 2414 m to 2522 m. MDT fluid samples were recovered from the Heimdal Formation at depths 2430 m (gas), 2445.6 m (gas), 2453 m (oil), and 2457.8 m (oil). Post-well organic geochemical analyses indicated some "diesel" contamination in the oil samples. After logging sidetrack 25/8-8A was plugged and abandoned as an oil and gas appraisal well.

The second sidetrack, 25/8-8 B, was kicked off from 1080 m on 11 October 1995 and drilled to a total depth of 2510 m (2152 m TVD SS) in the Paleocene Lista Formation. The well was drilled with oil-based mud from kick off to TD.

Pressures and extensive MDT sampling confirmed the oil and water gradients and



defined the OWC in the Heimdal Formation. The oil water contact was found at 2428.9 m (2094.7 m TVD SS). The well was not drill stem tested. Three cores were cut in the Lista and Heimdal Formations from 2375 m to 2441 m. After logging sidetrack 25/8-8 B was plugged back and abandoned as an oil and gas appraisal well.

The primary wellbore 25/8-8 S was permanently abandoned on October 24, 1995 as an oil and gas discovery, named the 25/8-8 S Jotun Discovery.

Testing

Well 25/8-8 S was drill stem tested. The main interval 2258 m - 2267 m produced a little sand (1%) at 795 Sm³/day and was chocked back to 628 Sm³/day for the main flow. GOR was 70 Sm³/Sm³. After the main flow, a lower interval 2275-2279 m was perforated with tubing conveyed gun and the two intervals were flowed co-mingled at 1065 Sm³/day with traces of sand. GOR was 70 Sm³/Sm³.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1070.00	2590.00

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	2228.0	2252.8	[m]
2	2255.0	2282.0	[m]
3	2282.0	2309.0	[m]

Total core sample length [m]	78.7
Cores available for sampling?	YES

Core photos



2228-2233m



2233-2238m



2238-2243m



2243-2248m



2248-2252m



2255-2260m



2260-2265m



2265-2270m



2270-2275m



2275-2280m



2280-2282m



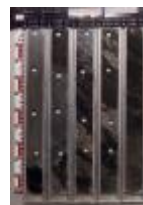
2282-2287m



2287-2292m



2292-2297m



2297-2302m



2302-2307m



2307-2309m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1110.0	[m]	DC	STRAT
1130.0	[m]	DC	STRAT
1150.0	[m]	DC	STRAT
1175.0	[m]	SWC	STRAT
1190.0	[m]	DC	STRAT
1240.0	[m]	DC	STRAT
1260.0	[m]	DC	STRAT
1280.0	[m]	DC	STRAT
1335.0	[m]	SWC	STRAT
1362.0	[m]	SWC	STRAT
1400.0	[m]	SWC	STRAT
1440.0	[m]	DC	STRAT
1480.0	[m]	SWC	STRAT
1510.0	[m]	DC	STRAT
1540.0	[m]	DC	STRAT
1580.0	[m]	DC	STRAT



1610.0	[m]	DC	STRAT
1625.0	[m]	SWC	STRAT
1650.0	[m]	DC	STRAT
1680.0	[m]	DC	STRAT
1730.0	[m]	DC	STRAT
1760.0	[m]	DC	STRAT
1779.0	[m]	SWC	STRAT
1820.0	[m]	DC	STRAT
1853.0	[m]	SWC	STRAT
1880.0	[m]	DC	STRAT
1920.0	[m]	DC	STRAT
1950.0	[m]	DC	STRAT
1968.0	[m]	SWC	STRAT
1990.0	[m]	DC	STRAT
2026.0	[m]	SWC	STRAT
2057.0	[m]	SWC	STRAT
2062.0	[m]	SWC	STRAT
2080.0	[m]	SWC	STRAT
2080.0	[m]	SWC	STRAT
2095.0	[m]	SWC	STRAT
2108.0	[m]	SWC	STRAT
2120.0	[m]	DC	STRAT
2130.0	[m]	DC	STRAT
2139.0	[m]	SWC	STRAT
2140.0	[m]	DC	STRAT
2150.0	[m]	DC	STRAT
2155.0	[m]	SWC	STRAT
2160.0	[m]	DC	STRAT
2163.0	[m]	SWC	STRAT
2172.0	[m]	SWC	STRAT
2173.0	[m]	SWC	STRAT
2177.0	[m]	SWC	STRAT
2191.0	[m]	SWC	STRAT
2205.0	[m]	DC	STRAT
2209.0	[m]	SWC	STRAT
2215.0	[m]	DC	STRAT
2217.0	[m]	SWC	STRAT
2220.0	[m]	DC	STRAT
2230.0	[m]	DC	STRAT
2234.0	[m]	C	STRAT



2238.0	[m]	C	STRAT
2245.0	[m]	C	STRAT
2249.0	[m]	C	STRAT
2256.0	[m]	C	STRAT
2260.0	[m]	C	STRAT
2267.0	[m]	C	STRAT
2267.0	[m]	C	RRI
2270.0	[m]	C	RRI
2272.0	[m]	C	STRAT
2272.0	[m]	C	RRI
2273.8	[m]	C	RRI
2275.0	[m]	C	RRI
2277.0	[m]	C	STRAT
2279.0	[m]	C	RRI
2282.5	[m]	C	RRI
2284.0	[m]	C	STRAT
2298.0	[m]	C	STRAT
2308.0	[m]	C	STRAT
2308.0	[m]	C	STRAT
2314.0	[m]	DC	STRAT
2320.0	[m]	DC	STRAT
2323.0	[m]	SWC	STRAT
2324.0	[m]	SWC	STRAT
2331.0	[m]	SWC	STRAT
2346.0	[m]	SWC	STRAT
2353.0	[m]	SWC	STRAT
2365.0	[m]	DC	STRAT
2378.0	[m]	SWC	STRAT
2380.0	[m]	DC	STRAT
2395.0	[m]	DC	STRAT
2403.0	[m]	SWC	STRAT
2418.0	[m]	SWC	STRAT
2437.5	[m]	SWC	STRAT
2442.0	[m]	SWC	STRAT
2452.0	[m]	SWC	STRAT
2470.0	[m]	DC	STRAT
2485.0	[m]	SWC	STRAT
2491.0	[m]	SWC	STRAT
2498.0	[m]	SWC	STRAT
2502.0	[m]	SWC	STRAT



2510.0	[m]	DC	STRAT
2520.0	[m]	DC	STRAT
2530.0	[m]	DC	STRAT
2540.0	[m]	DC	STRAT
2542.0	[m]	SWC	STRAT
2547.0	[m]	SWC	STRAT
2550.5	[m]	SWC	STRAT
2565.0	[m]	DC	STRAT
2580.0	[m]	DC	STRAT
2590.0	[m]	DC	STRAT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
152	NORDLAND GP
474	UTSIRA FM
610	NO FORMAL NAME
668	HORDALAND GP
668	SKADE FM
1025	NO FORMAL NAME
1184	SKADE FM
1237	NO FORMAL NAME
1318	GRID FM
1333	NO FORMAL NAME
2062	ROGALAND GP
2062	BALDER FM
2123	SELE FM
2175	LISTA FM
2236	HEIMDAL FM
2352	LISTA FM
2453	TY FM
2498	VÅLE FM
2518	CROMER KNOLL GP
2533	VIKING GP
2533	INTRA DRAUPNE FM SS
2563	DRAUPNE FM

Geochemical information





Document name	Document format	Document size [MB]
2646_1	pdf	1.95
2646_2	pdf	1.64

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

Document name	Document format	Document size [MB]
2646_25_8_8_S_COMPLETION_REPORT_AND_LOG	pdf	65.30

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2258	2267	50.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	3.600			

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	1067	75900	0.850	0.730	71

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT IPL EPT GR	1046	2584
CBL	1500	2539
CST GR	1175	2555
DSI GR	1046	2285
DSI UBI GR	2125	2587
MDT GR	2237	2260
MDT GR	2238	2238
MDT GR	2238	2463
MWD - GR RES DIR	206	2583





PLT	2256	2300
VSP	480	2505

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	211.0	36	212.0	0.00	LOT
SURF.COND.	13 3/8	1046.0	17 1/2	1046.0	0.00	LOT
LINER	7	2592.0	8 1/2	2592.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
157	1.05			DUMMY	
1058	1.05			DUMMY	
1175	1.43	47.0		OIL BASED	
2115	1.43	44.0		OIL BASED	
2229	1.43	44.0		OIL BASED	
2295	1.45	41.0		OIL BASED	
2460	1.43	41.0		OIL BASED	
2506	1.43	40.0		OIL BASED	
2543	1.08			DUMMY	
2544	1.43	39.0		OIL BASED	
2592	1.08			DUMMY	

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]
2646 Formation pressure (Formasjonstrykk)	pdf	0.19

