

**General information**

Wellbore name	16/1-7
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	IVAR AASEN
Discovery	16/1-7
Well name	16/1-7
Seismic location	FS9402RE98 Survey - inline 2290 & crossline 2020
Production licence	001 B
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	1078-L
Drilling facility	DEEPSEA DELTA
Drilling days	30
Entered date	29.04.2004
Completed date	28.05.2004
Release date	28.05.2006
Publication date	19.10.2006
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	SLEIPNER FM
Kelly bushing elevation [m]	29.0
Water depth [m]	112.2
Total depth (MD) [m RKB]	3186.0
Final vertical depth (TVD) [m RKB]	3185.0
Maximum inclination [°]	2.2
Bottom hole temperature [°C]	122
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 55' 58.63" N



EW degrees	2° 7' 42.36" E
NS UTM [m]	6533063.65
EW UTM [m]	449827.58
UTM zone	31
NPDID wellbore	4928

Wellbore history

General

The primary objective of well 16/1-7 was to test the hydrocarbon potential of the West Cable prospect. The prospect was located on the eastern margin of the South Viking Graben southwest of the Utsira High in the North Sea, approximately 35 km southwest of the Balder Field. The main objective of the well was to test the hydrocarbon potential of the Sleipner Formation coastal plain sandstone reservoir of Callovian and Bathonian age. The hydrocarbon potential of the Late Jurassic Heather and Draupne Formations, and the Tertiary Lista and Våle Formations were considered as secondary objectives. The anticipated hydrocarbon type was light oil. Planned TD was 50 m into Triassic sediments.

Operations and results

Well 16/1-7 was spudded with the semi-submersible installation Deepsea Delta on 29 April 2004 and drilled to TD at 3186 m 103 m into in the Late Triassic Skagerrak Formation. No significant problems were reported from the operations. The well was drilled with seawater + high viscosity polymer sweeps down to 1286 m and with Versavert oil based mud from 1286 m to TD. No shallow gas was observed.

A 73 m thick Heimdal Formation (Meile Member) was encountered at 2327 m. The Formation was water wet with no shows. No sands were developed in the Late Jurassic. The well discovered a 14.0 m (11.0 m net) oil bearing sand between 2955.5 and 2969.4 m (logging depth) in the Sleipner Formation. The RCI tool was used to take pressures and samples. The reservoir was normally pressured. Four 840 cc and two 4 litre samples were taken in the oil zone at 2965 m, 2964.1 m and two 840 cc samples were taken in the water zone at 2977.5 m, 2976.5 m. The interpreted Free Water Level was at 2969.9 m. No conventional coring was performed in the well.

The well was permanently abandoned on 28 May 2004 as an oil Discovery.

Testing

The discovery was tested using RCI straddle packer assembly (also called mini drill stem tests) at 2975 m, 2964.5 m and 2959.5 m (logging depth).

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1290.00	3186.00

Cuttings available for sampling?	YES
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**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
1580.0	[m]	DC	RRI
1620.0	[m]	DC	RRI
1670.0	[m]	DC	RRI
1730.0	[m]	DC	RRI
1770.0	[m]	DC	RRI
1840.0	[m]	DC	RRI
1930.0	[m]	DC	RRI
2120.0	[m]	DC	RRI
2150.0	[m]	DC	RRI
2180.0	[m]	DC	RRI
2210.0	[m]	DC	RRI
2240.0	[m]	DC	RRI
2260.0	[m]	DC	RRI
2270.0	[m]	DC	RRI
2290.0	[m]	DC	RRI
2320.0	[m]	DC	RRI
2330.0	[m]	DC	RRI
2380.0	[m]	DC	RRI
2410.0	[m]	DC	RRI
2420.0	[m]	DC	RRI
2430.0	[m]	DC	RRI
2470.0	[m]	DC	RRI
2510.0	[m]	DC	RRI
2609.0	[m]	SWC	RRI
2756.0	[m]	SWC	RRI
2783.0	[m]	SWC	RRI
2814.0	[m]	SWC	RRI
2839.0	[m]	DC	RRI
2875.0	[m]	SWC	RRI
2905.0	[m]	DC	RRI
2920.0	[m]	DC	RRI
2920.0	[m]	DC	APT
2926.0	[m]	DC	APT
2935.0	[m]	DC	APT
2942.5	[m]	SWC	RRI
2944.0	[m]	DC	APT
2950.0	[m]	DC	APT



2959.0	[m]	DC	APT
2968.0	[m]	DC	APT
2971.5	[m]	SWC	RRI
2977.0	[m]	DC	APT
2986.0	[m]	DC	RRI
2986.0	[m]	DC	APT
2995.0	[m]	DC	APT
3001.0	[m]	DC	APT
3010.0	[m]	DC	APT
3019.0	[m]	DC	APT
3028.0	[m]	DC	APT
3031.0	[m]	DC	RRI
3037.0	[m]	DC	APT
3046.0	[m]	DC	APT
3052.0	[m]	DC	APT
3055.0	[m]	DC	RRI
3061.0	[m]	DC	APT
3069.0	[m]	SWC	RRI
3070.0	[m]	DC	APT
3079.0	[m]	DC	APT
3085.0	[m]	SWC	RRI
3136.0	[m]	SWC	RRI
3157.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
141	NORDLAND GP
717	UTSIRA FM
847	HORDALAND GP
920	SKADE FM
1157	NO FORMAL NAME
1631	GRID FM
1723	NO FORMAL NAME
1782	GRID FM
1820	NO FORMAL NAME
1862	GRID FM
1922	NO FORMAL NAME
2130	ROGALAND GP



2130	BALDER FM
2197	SELE FM
2263	LISTA FM
2327	HEIMDAL FM
2327	MEILE MBR (INFORMAL)
2400	LISTA FM
2522	SHETLAND GP
2522	EKOFISK FM
2560	TOR FM
2727	CROMER KNOLL GP
2747	VIKING GP
2747	DRAUPNE FM
2918	HEATHER FM
2953	VESTLAND GP
2953	SLEIPNER FM
3083	NO GROUP DEFINED
3083	SKAGERRAK FM

Composite logs

Document name	Document format	Document size [MB]
4928	pdf	0.47

Geochemical information

Document name	Document format	Document size [MB]
4928_1	pdf	0.08
4928_2	pdf	0.53

Logs

Log type	Log top depth [m]	Log bottom depth [m]
GR HDIL CDL CN XMAC	2552	3183
LWD - GR MPR	225	1279
LWD - MPR ORD CCN APX	1286	3186
MREX	2945	3030





RCI PRESSURE	2957	3044
RCI PRESSURE SAMPLE	2964	2977
STRADDLE PACKER	2957	2964
SWC	2574	3165
SWC	2575	3165
VSP	50	3180

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	223.0	36	229.0	0.00	LOT
SURF.COND.	13 3/8	1282.0	17 1/2	1286.0	1.96	LOT
INTERM.	9 5/8	2556.0	12 1/4	2561.0	1.95	LOT
OPEN HOLE		3186.0	8 1/2	3186.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
147	0.00			WBM	
1104	0.00			WBM	
1286	0.00			WBM	
2177	1.32	30.0		NAF	
2472	1.37			NAF	
2508	1.32	30.0		NAF	
2561	0.00			NAF	
3186	1.50	36.0		NAF	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2761.00	[m]
2784.00	[m]
2948.00	[m]
2957.00	[m]
2959.00	[m]
2959.50	[m]
2962.50	[m]



2970.00	[m]
2991.00	[m]
2992.00	[m]
2997.00	[m]
3005.00	[m]
3011.00	[m]
3045.00	[m]
3062.50	[m]
3095.00	[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]
4928 Formation pressure (Formasjonstrykk)	pdf	0.22

