

**General information**

Wellbore name	30/10-1
Type	EXPLORATION
Purpose	APPRAISAL
Status	JUNKED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	FRIGG
Discovery	25/1-1 Frigg
Well name	30/10-1
Seismic location	LINE 572-1 SP.2010
Production licence	030
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	84-L
Drilling facility	SAIPEM II
Drilling days	75
Entered date	05.05.1973
Completed date	18.07.1973
Release date	18.07.1975
Publication date	30.09.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	EOCENE
1st level with HC, formation	FRIGG FM
Kelly bushing elevation [m]	14.0
Water depth [m]	105.2
Total depth (MD) [m RKB]	2917.0
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	HARDRÅDE FM
Geodetic datum	ED50
NS degrees	60° 0' 20.37" N
EW degrees	2° 4' 7.17" E
NS UTM [m]	6652562.51
EW UTM [m]	448059.34
UTM zone	31
NPDID wellbore	391



Wellbore history

General

Well 30/10-1 is located on the Northern apex of the Frigg field. The well was drilled as a wildcat, primarily to evaluate the Lower Eocene sand ("Frigg Field Clastic Tongue") in the area. Secondly, the well should evaluate the Paleocene sands and the Late Cretaceous limestone. The plan was to set the 9 5/8 inch casing in the top of a high-pressure zone (Cretaceous Shale) prior to moving the rig Saipem Due to another location. The hole should then be re-entered with another rig and drill deeper to evaluate a deep-seated structural closure.

Operations and results

Well 30/10-1 was spudded with the vessel Saipem Due on 5 May 1973 and drilled to TD at 2917 m in Late Cretaceous (Maastrichtian) shale. Initial drilling from the sea floor to 1067 m was with seawater and gel. Below 1067 m a fresh water Spersene XP 20 (lignosulphonate) mud system was used.

The thickness of the pay section of the Frigg Clastic Tongue (Primary objective) was disappointing in that it was very thin. A green shale unit replaced the expected pay section. Formation interval test and logs indicate that approximately 4 m of the Frigg Clastic sand contained gas and approximately 6 m could possibly be oil bearing. No other good hydrocarbon shows were encountered below the Frigg Clastic Tongue. In the Rogaland Group almost 200 m of sand were present, however, the sand was void of hydrocarbons, with the exception of some scattered fluorescence in the upper portion. Five cores were cut in the Frigg sand in the interval 1974 m to 2010 m. No sidewall cores were taken. Four Formation Interval Tests (FITs) were taken in the Frigg sand. FIT No. 1 at 1960.5 m recovered, 29 cubic feet of gas, 5 litres water and 0.5 litres mud. FIT No. 2 at 1989.5 m recovered 10 litres water. FIT No. 3 at 1974.5 m recovered 7 litres liquid (mud and water) and 100 cc oil. FIT No. 4 at 1966 m recovered 6.5 cubic feet gas, 2.25 litres oil, 300 cc mud, and 4.75 litres of water. Oil gravity was 29.7 deg API.

Due to a pressure zone encountered between 2905 m and 2917 m and subsequent loss of circulation the well was junked. The well was abandoned as an oil and gas appraisal well.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
167.64	2916.94

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	6482.0	6490.0	[ft]
2	6490.0	6521.0	[ft]
3	6534.0	6545.0	[ft]
4	6545.0	6563.0	[ft]
5	6578.0	6593.0	[ft]

Total core sample length [m]	25.3
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3010.0	[ft]	DC	
3100.0	[ft]	DC	
3190.0	[ft]	DC	
3310.0	[ft]	DC	
3400.0	[ft]	DC	
3490.0	[ft]	DC	
3600.0	[ft]	DC	
3690.0	[ft]	DC	
3810.0	[ft]	DC	
3900.0	[ft]	DC	
3990.0	[ft]	DC	
4110.0	[ft]	DC	
4200.0	[ft]	DC	
4290.0	[ft]	DC	
4410.0	[ft]	DC	
4500.0	[ft]	DC	
4620.0	[ft]	DC	
4710.0	[ft]	DC	
4800.0	[ft]	DC	
4890.0	[ft]	DC	
5010.0	[ft]	DC	
5100.0	[ft]	DC	
5190.0	[ft]	DC	
5280.0	[ft]	DC	
5370.0	[ft]	DC	
5460.0	[ft]	DC	



5550.0 [ft]	DC	
5640.0 [ft]	DC	
5730.0 [ft]	DC	
5820.0 [ft]	DC	
5910.0 [ft]	DC	
6030.0 [ft]	DC	
6120.0 [ft]	DC	
6210.0 [ft]	DC	
6330.0 [ft]	DC	
6360.0 [ft]	DC	
6390.0 [ft]	DC	
6420.0 [ft]	DC	
6486.0 [ft]	C	
6489.0 [ft]	C	
6493.0 [ft]	C	
6498.0 [ft]	C	
6501.0 [ft]	C	
6508.0 [ft]	C	
6545.0 [ft]	C	
6548.0 [ft]	C	
6550.0 [ft]	DC	
6555.0 [ft]	DC	
6600.0 [ft]	DC	
6691.0 [ft]	DC	
6780.0 [ft]	DC	
6870.0 [ft]	DC	
6900.0 [ft]	DC	
6930.0 [ft]	DC	
6960.0 [ft]	DC	
7070.0 [ft]	DC	
7160.0 [ft]	DC	
7225.0 [ft]	DC	
7270.0 [ft]	DC	
7280.0 [ft]	DC	
7290.0 [ft]	DC	
7300.0 [ft]	DC	
7310.0 [ft]	DC	
7320.0 [ft]	DC	
7330.0 [ft]	DC	
7340.0 [ft]	DC	



7350.0 [ft]	DC	
7360.0 [ft]	DC	
7370.0 [ft]	DC	
7470.0 [ft]	DC	
7570.0 [ft]	DC	
7670.0 [ft]	DC	
7770.0 [ft]	DC	
7870.0 [ft]	DC	
7970.0 [ft]	DC	
7990.0 [ft]	DC	
8010.0 [ft]	DC	
8030.0 [ft]	DC	
8050.0 [ft]	DC	
8070.0 [ft]	DC	
8170.0 [ft]	DC	
8270.0 [ft]	DC	
8370.0 [ft]	DC	
8470.0 [ft]	DC	
8570.0 [ft]	DC	
8620.0 [ft]	DC	
8670.0 [ft]	DC	
8680.0 [ft]	DC	
8720.0 [ft]	DC	
8770.0 [ft]	DC	
8870.0 [ft]	DC	
8970.0 [ft]	DC	
9070.0 [ft]	DC	
9170.0 [ft]	DC	
9270.0 [ft]	DC	
9370.0 [ft]	DC	
9470.0 [ft]	DC	
9570.0 [ft]	DC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
129	NORDLAND GP
453	UTSIRA FM
660	HORDALAND GP



660	SKADE FM
842	NO FORMAL NAME
1960	FRIGG FM
2076	ROGALAND GP
2076	BALDER FM
2115	INTRA BALDER FM SS
2160	BALDER FM
2170	SELE FM
2202	HERMOD FM
2289	SELE FM
2340	HERMOD FM
2374	SELE FM
2460	LISTA FM
2621	VÅLE FM
2640	SHETLAND GP
2640	EKOFISK FM
2679	JORSALFARE FM
2834	KYRRE FM

Composite logs

Document name	Document format	Document size [MB]
391	pdf	0.21

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

Document name	Document format	Document size [MB]
391_01_WDSS_General_Information	pdf	0.31

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

Document name	Document format	Document size [MB]
391_1_Completion_Report_&_Completion_log	pdf	6.46





Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC S GRC	117	1088
BHC S GRC	1064	2036
CAL	1063	1570
DIL	1064	2038
GR NEU	1063	2905
IEL	363	1088
TEMP	1524	2659

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	156.0	36	160.0	0.00	LOT
SURF.COND.	20	362.0	26	365.0	0.00	LOT
INTERM.	13 3/8	1063.0	17 1/2	1065.0	1.43	LOT
OPEN HOLE		2917.0	12 1/4	2917.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1096	1.17			water/spers	
1976	1.17			water/spers	
2356	1.18			water/spers	
2565	1.19			water/spers	
2916	1.49			water/spers	

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]
391 Formation pressure (Formasjonstrykk)	pdf	0.21

