General information

Wellbore name	30/7-3
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	30/7-3
Seismic location	
Production licence	040
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	163-L
Drilling facility	POLYGLOMAR DRILLER
Drilling days	81
Entered date	06.08.1976
Completed date	25.10.1976
Release date	25.10.1978
Publication date	24.09.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	24.0
Water depth [m]	99.5
Total depth (MD) [m RKB]	4044.0
Final vertical depth (TVD) [m RKB]	4043.0
Maximum inclination [°]	2.75
Bottom hole temperature [°C]	119
Oldest penetrated age	EARLY CRETACEOUS
Oldest penetrated formation	RØDBY FM
Geodetic datum	ED50
NS degrees	60° 17' 9.24'' N
EW degrees	2° 14' 54.44'' E
NS UTM [m]	6683645.52
EW UTM [m]	458441.33
UTM zone	31
NPDID wellbore	386

Wellbore history

General

Well 30/7-3 was drilled in the Fensal sub-basin south-southeast of the Hild Discovery and north of the Odin Discovery.

The main objective of the well was to test a mapped seismic anomaly below the "Ml" marker, prognosed to be a possible porous carbonate development at Cenomanian level. The location of the well gave a test of the anomaly on the western edge, according to the seismic mapping. Secondary objectives were possible Early Cretaceous sand/limestone pinch-outs and Late Jurassic sands.

Operations and results

The well 30/7-3 was spudded with the semi-submersible installation Polyglomar Driller on 6 August 1976 and drilled to TD at 4044 m in the Early Cretaceous (Albian - Aptian) Cromer Knoll Group. When drilling the 12" hole at 3001 m, a leak was discovered in the wellhead. A groove was cut in the sealing area between the wellhead and the collet connector. A wellhead extension was run in the damaged wellhead with four o-rings as seal towards the original wellhead. The drilling was continued and 9 5/8"casing was set at 3782 m. While drilling 8-3/8" hole at 4044 m circulation was lost. When the mud weight was reduced in an attempt to re-establish circulation the well started to flow. A barite plug was set at bottom, and this finally stabilized the well. The well was drilled with freshwater gel to 700 m and with lignosulphonate mud from 700 m to TD.

A comparison of the results from the seismic velocity survey and the seismic interpretations identify the interval between 3795 m and 3918 m as the target seismic anomaly. In this interval a sequence of limestone, marlstone and shale was found. The limestone is composed of mainly calcite with recognisable coccoliths. In the lower part minor terrigenous components of quartz sand and silt, and mica flakes were encountered. In places the limestone became very argillaceous grading to marlstone and shale. No visible porosity or any hydrocarbon shows were seen in this sequence.

Minor amounts of C1 and occasional C2 were reported from about 1500 m. From about 1900 m gas concentrations of about 1% C1, with C2 and C3 coming in towards 2070 m, were seen. In Paleocene sandstone stringers (2093 m to 2407 m) a weak to good, white to yellow fluorescence with a slow to fast streaming, pale white to yellow fluorescent cut was seen, but no visible oil stain was noted on the samples. At approximately 2840 m a thin limestone gave a fair yellow fluorescence and a medium fast streaming white to yellow to fluorescent cut. The samples had no oil stain. In the limestones at approximately 3750 m fair shows were reported. No oil stain was seen, but the samples gave a pale yellow fluorescence and a slow streaming milky yellow fluorescent cut. From 4020 m a substantial increase in the background gas was seen and a peak of 15 % C1, C2 and C3 was recorded at 4029 m. Since no porous or permeable interval was described the recorded gas in this sequence was interpreted as shale gas bleeding from a highly over-pressured shale interval. The shows at 2093 m to 2407 m and at 3750 m were confirmed by post-well geochemical analyses.

The seismic velocity survey indicated the total depth of the well to be very close to the Early Cretaceous pinch-out.

Electrical logs were run prior to final abandonment. One conventional core was cut in the Albian ? Aptian interval from 3918.8 m to 3936.8 m (34.5 % recovery). Due to high pressure the well was permanently abandoned on 25 October 1976, before the expected TD was reached. The well is classified as dry with weak shows.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
161.00	4040.00

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	3918.5	3924.9	[m]

Total core sample length [m]	6.4
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2555.0	[m]	DC	OD
2573.0	[m]	DC	OD
2590.0	[m]	DC	OD
2608.0	[m]	DC	OD
2625.0	[m]	DC	OD
2643.0	[m]	DC	OD
2663.0	[m]	DC	OD
2683.0	[m]	DC	OD
2700.0	[m]	DC	OD
2720.0	[m]	DC	OD
2740.0	[m]	DC	OD
2760.0	[m]	DC	OD
2780.0	[m]	DC	OD
2800.0	[m]	DC	OD
2820.0	[m]	DC	OD
2840.0	[m]	DC	OD
2860.0	[m]	DC	OD
2880.0	[m]	DC	OD
2900.0	[m]	DC	OD
2920.0	[m]	DC	OD

2940.0	[m]	DC	OD
2960.0	[m]	DC	OD
2980.0	[m]	DC	OD
3000.0	[m]	DC	OD
3017.0	[m]	DC	OD
3037.0	[m]	DC	OD
3057.0	[m]	DC	OD
3077.0	[m]	DC	OD
3097.0	[m]	DC	OD
3120.0	[m]	DC	OD
3140.0	[m]	DC	OD
3160.0	[m]	DC	OD
3180.0	[m]	DC	OD
3203.0	[m]	DC	OD
3220.0	[m]	DC	OD
3240.0	[m]	DC	OD
3260.0	[m]	DC	OD
3280.0	[m]	DC	OD
3300.0	[m]	DC	OD
3320.0	[m]	DC	OD
3340.0	[m]	DC	OD
3360.0	[m]	DC	OD
3380.0	[m]	DC	OD
3400.0	[m]	DC	OD
3420.0	[m]	DC	OD
3440.0	[m]	DC	OD
3460.0	[m]	DC	OD
3480.0	[m]	DC	OD
3497.0	[m]	DC	OD
3517.0	[m]	DC	OD
3537.0	[m]	DC	OD
3557.0	[m]	DC	OD
3577.0	[m]	DC	OD
3597.0	[m]	DC	OD
3617.0	[m]	DC	OD
3637.0	[m]	DC	OD
3657.0	[m]	DC	OD
3677.0	[m]	DC	OD
3697.0	[m]	DC	OD
3717.0	[m]	DC	OD

3737.0	[m]	DC	OD
3757.0	[m]	DC	OD
3777.0	[m]	DC	OD
3797.0	[m]	DC	OD
3817.0	[m]	DC	OD
3837.0	[m]	DC	OD
3857.0	[m]	DC	OD
3877.0	[m]	DC	OD
3897.0	[m]	DC	OD

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
124	NORDLAND GP
446	UTSIRA FM
779	HORDALAND GP
779	SKADE FM
1122	NO FORMAL NAME
1994	GRID FM
2018	NO FORMAL NAME
2062	GRID FM
2099	NO FORMAL NAME
2114	ROGALAND GP
2114	BALDER FM
2143	INTRA BALDER FM SS
2175	BALDER FM
2180	SELE FM
2187	HERMOD FM
2280	SELE FM
2386	LISTA FM
2447	VÅLE FM
2539	SHETLAND GP
2539	EKOFISK FM
2542	JORSALFARE FM
2822	KYRRE FM
3475	TRYGGVASON FM
3633	BLODØKS FM
3665	SVARTE FM
3838	CROMER KNOLL GP

3838	RØDBY FM

Composite logs

Document name	Document format	Document size [MB]
386	pdf	0.43

Geochemical information

Document name	Document format	Document size [MB]
386_1_Source_rock_evaluation_of_well_30_7_3	pdf	5.61
386_2_Geochemical_evaluation_of_the_30_7_3_well	pdf	5.08
386_3_Optical_Studies_of_Organic_matter	pdf	0.75
386_4	pdf	0.42
386_5_Geochemical_Evaluation	pdf	5.08

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

Document name	Document format	Document size [MB]
386_01_WDSS_General_Information	pdf	0.28

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

Document name	Document format	Document size [MB]
386_10_Lithology_of_the_Interval_3600-4040m	pdf	3.10
386_11_Lithology_of_the_Interval_3600-4040m	pdf	3.20
386_12_Mud_Program	pdf	4.37
386_13_Report_on_a_Well_Site_Biostratigraphical_Invest	pdf	1.25
386_14_Biostratigraphical_report_on_the_Mesozoic_serie	pdf	2.55
386_15_Source_Rock_Evaluation	pdf	5.61

386_17_Sample_Description_Book_Field_Report	pdf	9.14
386_18_Biostratigraphy_of_the_Interval_1820-4040m	pdf	3.96
386_19_Petrophysical_Study,_Final_Report	pdf	1.45
386_1_Completion_Report	pdf	9.44
386_2_Directional_Surveys_deviations_multishots	pdf	12.94
386_4_Geological_Progress_Report	pdf	0.95
386_5_Core_Report	pdf	0.47
386_6_Litholog	pdf	4.83
386_7_Well_Summary	pdf	2.05
386_8_Mud_Log	pdf	9.23
386_9_Biostratigraphy	pdf	9.66

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC GR	120	700
ISF BHC GR	684	2654
ISF BHC GR	2534	3584
ISF BHC GR	3525	3786
ISF BHC GR	3779	3945
SWC	2666	3785
SWC	2700	3765

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	159.0	36	173.0	0.00	LOT
SURF.COND.	20	694.0	26	700.0	0.00	LOT
INTERM.	13 3/8	2642.0	17 1/2	2652.0	0.00	LOT
INTERM.	9 5/8	3782.0	12 1/4	3789.0	2.31	LOT
OPEN HOLE		4044.0	8 3/8	4044.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
161	1.14	125.0		spud mud	
700	1.08	150.0	11.0	seawater	
1914	1.12	35.0	15.0	seawater	
2176	1.14	38.0	21.0	seawater	
2652	1.20	39.0	15.0	seawater	
3000	1.50	85.0	35.0	seawater	
3538	1.75	60.0	19.0	seawater	
3880	1.82	70.0	22.0	seawater	
4044	2.11	52.0	17.0	seawater	