General information

Wellbore name	30/3-2 R
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	VESLEFRIKK
Discovery	30/3-2 Veslefrikk
Well name	30/3-2
Seismic location	702 154 SP. 233
Production licence	052
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	256-L2
Drilling facility	DEEPSEA SAGA
Drilling days	168
Entered date	02.09.1980
Completed date	16.02.1981
Plugged and abondon date	16.02.1981
Release date	16.02.1983
Publication date	17.10.2007
Purpose - planned	WILDCAT
Reentry	YES
Reentry activity	DRILLING/PLUGGING
Content	OIL/GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.0
Water depth [m]	186.0
Total depth (MD) [m RKB]	3567.0
Final vertical depth (TVD) [m RKB]	3566.0
Maximum inclination [°]	2.75
Bottom hole temperature [°C]	125
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	HEGRE GP
Geodetic datum	ED50
NS degrees	60° 47' 49.23'' N
EW degrees	2° 55' 18.06'' E

NS UTM [m]	6740339.45
EW UTM [m]	495736.96
UTM zone	31
NPDID wellbore	508

Wellbore history

General

Well 30/3-2 R is a re-entry of well 30/3-2, which was suspended at 955 m in Miocene sediments due to a strike. It is located ca 7 km north of the Oseberg Field in the Northern North Sea. The primary objective of the well was to test sandstones belonging to the Brent and Dunlin group. Secondary objective was sandstones in the Statfjord formation.

Operations and results

Wildcat well 30/3-2 was re-entered with the semi-submersible installation Deepsea Bergen on 2 September 1980 and drilled to TD at 3567 m in the Triassic Lunde Formation. The re-entry well track was drilled first with gel/lignosulphonate in 12 1/4" pilot hole from 955 m to 2350. Severe problems were experienced when opening up the pilot hole to 17 1/2". The mud system was changed, and a gypsum system was chosen. This change made it possible to complete the 17 1/2" section, but several days were lost due to hole problems and problems with the draw-works control circuits. The rest of the well was drilled with a gypsum/lignosulphonate mud and proceeded according to the program.

The Brent group was encountered at 2825 m and consisted of the Ness Formation down to 2878 m and the Etive Formation from 2878 m to top Dunlin Group at 2949.5 m. The Statfjord Formation was encountered at 3228 m. The Brent Group contained two separate hydrocarbon-bearing reservoirs with one oil/water contact at 2839 m in the Ness formation, and another at 2932 m in the Oseberg Formation. RFT data also indicated a light hydrocarbon gradient (0.433 g/cc) in a 7 m thick Intra Dunlin (Cook) sand at 3071 m. The character of the fluorescence seen on this sand indicated gas. Frequent but discontinuous oil shows on limestone and claystone were observed beginning at 1930 m and down through Paleocene, Cretaceous and Late Jurassic to top reservoir in the Brent Group. Below OWC shows on sandstones were observed down to 3339 m.

A total of 148 m core was recovered in 12 cores in the interval 2828 m to 3306.5 m in the Brent and Dunlin Groups and the Nansen Member of the Statfjord Formatoion. Three RFT segregated samples were taken in the Brent Group at 2833.5 m (mud filtrate and traces of oil and gas), 2872 m (mud filtrate, oil and some gas), and 2897.5 m (mud filtrate, 37 deg API oil and some gas). A fourth RFT segregated sample was taken in the upper Statfjord Formation, Nansen Member, at 3229.5 m (mud filtrate and gas). An FIT fluid sample was taken in the Dunlin Group at 3078 m (only mud filtrate and sand).

The well was permanently abandoned on 16 February 1981 as an oil and gas discovery.

Testing

Three drill stem tests were attempted in the Brent Group reservoir, two of which were successful.

DST 1 tested the interval 2916 - 2923 m in the Oseberg Formation. It produced 324 Sm3 oil and 26335 Sm3 gas /day through a 12.7 mm choke. The GOR was 81 Sm3/Sm3, the oil gravity was 38.8 deg API, and the gas gravity was 0.714 (air = 1). The DST temperature was 125.6 deg C.

DST 2 tested the interval 2870 - 2874 m in the Ness Formation. It produced 370 Sm3 oil and 30865 Sm3 gas /day through a 12.7 mm choke. The GOR was 85.9 Sm3/Sm3, the oil gravity was 39.8 deg API, and the gas gravity was 0.710 (air = 1). The DST temperature was 122.2 deg C.

DST 3 at 2832 - 2837 m in the Ness Formation failed for technical reasons.

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2828.0	2833.8	[m]
2	2834.5	2842.0	[m]
3	2860.0	2864.4	[m]
4	2879.0	2893.5	[m]
5	2897.0	2898.4	[m]
6	2898.5	2916.0	[m]
7	2916.0	2934.6	[m]
8	2934.6	2951.2	[m]
9	3073.0	3082.5	[m]
10	3083.7	3102.0	[m]
11	3102.0	3121.4	[m]
12	3295.0	3306.6	[m]

Total core sample length [m]	144.8
Cores available for sampling?	YES

Core photos


2828-2830m


2830-2833m


2833-2834m


2834-2837m


2837-2839m


2839-2842m


2860-2862m


2862-2864m


2879-2882m


2881-2884m

2884-2887m 2887-2889m 2889-2892m 2892-2895m 2895-2896m





2897-2898m 2898-2901m 2901-2903m 2903-2906m 2906-2909m





2909-2912m 2912-2914m 2914-2915m 2916-2918m 2918-2921m





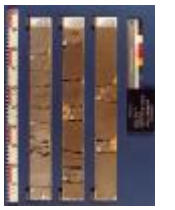
2921-2924m 2924-2926m 2926-2929m 2929-2932m 2932-2934m

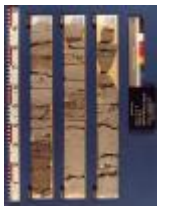




2934-2937m 2937-2940m 2940-2942m 2942-2945m 2945-2948m







2948-2950m 2950-2951m 3073-3075m 3075-3078m 3078-3081m





3081-3082m 3083-3086m 3086-3089m 3089-3091m 3091-3094m





3094-3097m 3097-3099m 3099-3102m 3102-3104m 3104-3107m





3107-3110m 3110-3112m 3112-3115m 3115-3118m 3118-3120m





3120-3121m 3295-3297m 3297-3300m 3300-3303m 3303-3305m

3305-3306m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
340.0	[m]	DC	RRI
640.0	[m]	DC	RRI
1140.0	[m]	DC	RRI
1840.0	[m]	DC	RRI
1940.0	[m]	DC	RRI
2031.0	[m]	DC	RRI
2331.0	[m]	DC	RRI

2655.0	[m]	DC	RRI
2721.0	[m]	DC	RRI
2724.0	[m]	DC	FUGRO
2748.0	[m]	DC	FUGRO
2772.0	[m]	DC	FUGRO
2790.0	[m]	DC	FUGRO
2820.0	[m]	DC	FUGRO
2826.0	[m]	DC	FUGRO
2947.9	[m]	C	RRI
2958.0	[m]	DC	FUGRO
2976.0	[m]	DC	FUGRO
2982.0	[m]	DC	FUGRO
3006.0	[m]	DC	FUGRO
3018.0	[m]	DC	FUGRO
3036.0	[m]	DC	FUGRO
3054.0	[m]	DC	RRI
3054.0	[m]	DC	FUGRO
3114.0	[m]	DC	FUGRO
3132.0	[m]	DC	FUGRO
3168.0	[m]	DC	FUGRO
3204.0	[m]	DC	RRI
3204.0	[m]	DC	FUGRO
3210.0	[m]	DC	FUGRO
3222.0	[m]	DC	FUGRO
3423.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
211	NORDLAND GP
753	UTSIRA FM
894	HORDALAND GP
1954	ROGALAND GP
1954	BALDER FM
2002	SELE FM
2032	LISTA FM
2203	SHETLAND GP
2714	VIKING GP
2714	DRAUPNE FM

2731	HEATHER FM
2825	BRENT GP
2825	NESS FM
2879	ETIVE FM
2882	RANNOCH FM
2891	OSEBERG FM
2950	DUNLIN GP
2950	DRAKE FM
2982	COOK FM
3121	BURTON FM
3228	STATFJORD GP
3228	NANSEN FM
3298	LUNDE FM
3308	EIRIKSSON FM
3394	RAUDE FM

Geochemical information

Document name	Document format	Document size [MB]
508_1	pdf	0.33
508_2	pdf	0.91
508_3	pdf	3.19
508_4	pdf	0.24
508_5	pdf	5.49

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

Document name	Document format	Document size [MB]
508_01_WDSS_General_Information	pdf	0.12
508_02_WDSS_completion_log	pdf	0.27

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2916	2923	12.7
2.0	2870	2874	12.7
3.0	2832	2837	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0	32.000	23.000		
2.0	31.000	23.000		
3.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	325	27000	0.831	0.714	86
2.0	369	32000	0.826	0.710	86
3.0					

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL CCL GR	1675	3569
CBL VDL GR	2639	3051
DLL MSFL GR	2332	3562
FDC CNL GR CAL	940	3567
GEODIP	2800	3125
HDT	2332	3567
ISF SONIC GR SP	259	3567
LDT CNT GR	2332	3059
LDT GR CAL	3051	3567
VELOCITY	1900	2500

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	260.0	36	261.0	0.00	LOT
SURF.COND.	20	940.0	26	955.0	1.72	LOT
INTERM.	13 3/8	2332.0	17 1/2	2355.0	1.89	LOT
INTERM.	9 5/8	3057.0	12 1/4	3060.0	1.80	LOT
LINER	7	3564.0	8 1/2	3567.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
600	1.10	50.0		waterbased	
1250	1.20	50.0		waterbased	
1530	1.30	54.0		waterbased	
2020	1.40	57.0		waterbased	
3050	1.25	56.0		waterbased	
3400	1.25	57.0		waterbased	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2895.00	[m]
3073.70	[m]
3078.00	[m]
3081.80	[m]
3098.00	[m]
3121.00	[m]
3295.45	[m]
3304.70	[m]
3306.10	[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]
508_Formation_pressure_(Formasjonstrykk)	pdf	0.23