



General information





Wellbore name	2/7-8
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	ELDFISK
Discovery	2/7-8
Well name	2/7-8
Seismic location	LINE PGE 217 M SP: 375
Production licence	018
Drilling operator	Phillips Petroleum Company Norway
Drill permit	85-L
Drilling facility	ZAPATA EXPLORER
Drilling days	66
Entered date	08.06.1973
Completed date	12.08.1973
Release date	12.08.1975
Publication date	26.10.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	PALEOCENE
1st level with HC, formation	EKOFISK FM
2nd level with HC, age	LATE CRETACEOUS
2nd level with HC, formation	TOR FM
Kelly bushing elevation [m]	34.0
Water depth [m]	70.0
Total depth (MD) [m RKB]	3318.0
Bottom hole temperature [°C]	104
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	HOD FM
Geodetic datum	ED50
NS degrees	56° 23' 8.6" N
EW degrees	3° 19' 6.6" E
NS UTM [m]	6249195.05
EW UTM [m]	519666.78
UTM zone	31
NPDID wellbore	267



Wellbore history

General

Well 2/7-8 is located In the Feda Graben of the southern North Sea, some 3 km west of the Eldfisk Field. It was drilled on the East Eldfisk Structure, and the main objective was to test the Danian Limestone. Secondary objective was to test the Late Cretaceous Chalk, which could be hydrocarbon bearing if porosity is present.

Operations and results

Wildcat well 2/7-8 was spudded with the jack-up installation Zapata Explorer on 8 June 1973 and drilled to TD at 3318 m in the Late Cretaceous Hod Formation. The well was drilled with seawater and hi-vis slugs down to 1220 m, and with a lignosulphonate mud (UNI-CAL / Caustic) from 1220 m to TD. According to the mud program the section below 1220 m was drilled with 4% diesel in the mud.

The Danian Limestone, which was expected to be 100 m thick with 38 m of net pay, was found to be much thinner than the other wells on Eldfisk, and was only 9 m thick. It was also less fractured than other wells on Eldfisk, but still yielded commercial quantities of oil and gas, after acidization, over the total interval on the third of three drill stem tests. This test included the top 23 m of the Late Cretaceous (Maastrichtian). The remaining tests below this interval, also in the Maastrichtian, did not produce oil or gas in commercial amounts. The truncated Danian, the lack of fracturing and secondarily porosity, and the fact that the produced oil was heavier than the oils on the main Eldfisk structure to the west, suggested that East Eldfisk structure is not in communication with the main Eldfisk structure.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 12 August 1973 as an oil discovery.

Testing

Four drill stem tests were performed.

DST 1 and 2 tested the interval 3039 - 3051 m in the Maastrichtian Tor Formation. DST 1 gave no production. DST 2, after acidization, produced 1 litre fluid (95% water and 5% oil) per hour.

DST 3 tested the interval 3014 - 3033 m in the Tor Formation. It produced 13.5 Sm³ oil and 2407 Sm³ gas/day. The corresponding GOR is 178 Sm³/Sm³, and the measured oil gravity was 14 deg API.

DST 4 tested the interval 2969 - 3001 m in the Danian Ekofisk Formation and the upper Tor Formation. It produced 539 Sm³ oil and 53802 SM³ gas/day. The corresponding GOR is 100 Sm³/Sm³, and the measured oil gravity was 33 deg API.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1237.49	3318.36



Cuttings available for sampling?	NO
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
104	NORDLAND GP
1850	HORDALAND GP
2874	ROGALAND GP
2874	BALDER FM
2886	SELE FM
2920	LISTA FM
2963	VÅLE FM
2969	SHETLAND GP
2969	EKOFISK FM
2978	TOR FM
3028	HOD FM

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

Document name	Document format	Document size [MB]
267 01 WDSS General Information	pdf	0.25

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

Document name	Document format	Document size [MB]
267 01 2 7 8 Completion Log	pdf	1.35
267 01 2 7 8 Completion report	pdf	5.04

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
267 01 NPD Paper No.30 Geology of the Ekofisk Area Well 2 7 8	pdf	72.88
267 02 NPD Paper No.30 Early Tertiary-Late Jurassic Correlation chart Well 2 7 8	pdf	0.56





Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3039	3051	0.0
2.0	3039	3051	0.0
3.0	3014	3033	0.0
4.0	2969	3001	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				
3.0	40.000	27.000		
4.0	40.000	37.000		

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					
2.0					
3.0	13	2406	0.970		
4.0	539	53789	0.860		

Logs

Log type	Log top depth [m]	Log bottom depth [m]
4ARM DIPLOG	8700	10886
BHC AC GR	230	3995
BHC AC GR	4004	8044
BHC AC GR	8033	10877
CBL	230	585
CBL	300	3940
CBL	5400	7700
CBL	7720	10814
CNL	9300	10886
FDC	9300	10886
IEL	1600	10887



ML	9300	10886
VELOCITY	230	10887

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	154.0	36	155.0	0.00	LOT
SURF.COND.	20	488.0	26	497.0	0.00	LOT
INTERM.	13 3/8	1220.0	17 1/2	1229.0	0.00	LOT
INTERM.	9 5/8	2449.0	12 1/4	2457.0	0.00	LOT
LINER	7	3311.0	8 1/2	3318.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
174	1.10			waterbased	
487	1.07	55.0		waterbased	
548	1.37	50.0		waterbased	
762	1.43	55.0		waterbased	
1066	1.49	55.0		waterbased	
1219	1.37	55.0		waterbased	
2900	1.72	51.0		waterbased	
3318	1.71	51.0		waterbased	