General information

Wellbore name	2/7-30
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	2/7-30
Seismic location	EGDAR-ROW 341 COLONNE 1554
Production licence	018
Drilling operator	Phillips Petroleum Company Norway
Drill permit	803-L
Drilling facility	MÆRSK GUARDIAN
Drilling days	43
Entered date	27.02.1995
Completed date	10.04.1995
Release date	10.04.1997
Publication date	26.10.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	43.0
Water depth [m]	71.0
Total depth (MD) [m RKB]	3478.0
Final vertical depth (TVD) [m RKB]	3477.0
Maximum inclination [°]	3.6
Bottom hole temperature [°C]	121
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	HOD FM
Geodetic datum	ED50
NS degrees	56° 26' 22.49'' N
EW degrees	3° 16' 25.5'' E
NS UTM [m]	6255178.06
EW UTM [m]	516879.70
UTM zone	31
NPDID wellbore	2394

Wellbore history

General

Well 2/7-30 was drilled on the Edgar prospect in the Feda Graben ca 4 km north-east of the Eldfisk Field in the southern North Sea. The objective was to test a combined structural/stratigraphic play first identified on seismic data as a high-amplitude anomaly within the Late Cretaceous (Maastrichtian) Tor Formation. The primary target for the 2/7-30 well was the upper Tor Formation as defined through seismic inversion modelling of the anomaly. The Paleocene (Danian) Ekofisk Formation was regarded as a secondary target, with two possible productive intervals, an upper zone of reworked Danian chalk and a lower zone dominated by reworked Maastrichtian deposits.

Operations and results

Wildcat well 2/7-30 was spudded with the jack-up installation Maersk Guardian on 27 February 1995 and drilled to TD at 3478 m in the Late Cretaceous Hod Formation. No significant problem was encountered in the operations. Coring in the well was performed with a "Security/DBS coring system" where the inner barrel is oil filled. Apparently the base oil in this system have contaminated some of the organic geochemical data from the cores from the well. The well was drilled with seawater and bentonite/native clay down to 469 m and with a KCl/Pac/Glycol mud from 469 m to TD.

The top Ekofisk Formation was encountered at 3150.1 m wire line depth, which was 17.4 m higher than prognosed. Both the upper and lower allochthonous intervals in Ekofisk Formation proved water wet, despite some fair shows observed during drilling/coring. Porosity up to 25-28% and permeability close to 1 mD was obtained in these intervals. No pressure data or formation fluid samples were collected due to the low permeabilities. Geochemical analysis of residual oil from the core samples concluded that the Egdar oil is similar to the oil in the Eldfisk Bravo structure. The primary target, top Tor Formation, was encountered at 3241.9 m, 12.2 m high to prognosis. A 36.6 m thick section with porosity of 30-35% (average 31 %) and permeabilities of 1-4 mD was penetrated. There was an isolated show of oil at 3248.6 m; otherwise the Tor Formation was devoid of hydrocarbons. The pressure measurements fell on a water gradient and were 200-300 psi (13.6 - 20.4 bar) lower than the initial pressure estimate for Eldfisk Field at comparable depth. It is likely that the upper Tor Formation on Egdar is in pressure communication with the Eldfisk Bravo structure. No porous intervals or shows were encountered in the Hod Formation.

A total of 125.3 m core was cut in 6 cores from 3140.0 m in the lower Vale Formation, through the entire Ekofisk Formation and terminated at 3276.0 m in the base of the porous Tor Formation interval. No wire line fluid samples were taken due to the low permeabilities encountered in the chalk sections.

The well was permanently abandoned on 10 April 1995 as a dry well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
472.00	3477.00

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	10302.0	10363.6	[ft]
2	10363.6	10454.6	[ft]
3	10454.6	10545.0	[ft]
4	10545.0	10602.6	[ft]
5	10602.0	10623.0	[ft]
6	10658.0	10748.3	[ft]

Total core sample length [m]	125.5
Cores available for sampling?	YES

Core photos

10302-10317ft

10317-10332ft

10332-10347ft

10347-10362ft

10362-10363ft

10363-10378ft

10378-10393ft

10393-10408ft

10408-10423ft

10423-10438ft

10438-10453ft

10453-10454ft

10454-10469ft

10469-10484ft

10484-10499ft

10499-10514ft

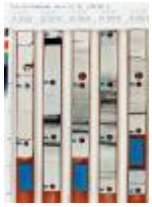
10514-10529ft

10529-10544ft

10544-10545ft

10545-10560ft

10560-10575ft


10575-10590ft

10590-10602ft

10602-10617ft

10617-10623ft

10658-10673ft

10673-10688ft

10688-10703ft

10703-10718ft

10718-10733ft

10733-10748ft

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
10250.0	[ft]	DC	
10270.0	[ft]	DC	
10302.0	[ft]	C	
10605.0	[ft]	C	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
114	NORDLAND GP
1765	HORDALAND GP
3012	ROGALAND GP
3012	BALDER FM
3025	SELE FM
3081	LISTA FM
3130	VÅLE FM
3150	SHETLAND GP
3150	EKOFISK FM
3242	TOR FM
3326	HOD FM

Geochemical information

Document name	Document format	Document size [MB]
2394_1	pdf	0.13
2394_2	pdf	2.20

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

Document name	Document format	Document size [MB]
2394_2_7_30_COMPLETION_REPORT_AND_LOG	pdf	65.25

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT LDL CNL GR AMS	10286	11420
CBL VDL GR CCL	360	5686
CST	10640	11407
DLL MSFL DSI NGT AMS	10286	11356
FMS GR AMS	10286	11430
LDL GPIT DSI ACTS GR	5015	10287
MDT GR AMS	10356	11184
MWD LWD - CDR RES GR DIR	662	10288

VSP	2100	11425

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	209.0	36	210.0	0.00	LOT
SURF.COND.	20	462.0	26	465.0	0.00	LOT
INTERM.	13 3/8	1529.0	17 1/2	1530.0	0.00	LOT
INTERM.	9 5/8	3136.0	12 1/4	3140.0	0.00	LOT
OPEN HOLE		3477.0	8 1/2	3477.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
184	1.20	22.0		WATER BASED	
469	1.20	8.0		WATER BASED	
1462	1.49	35.0		WATER BASED	
1534	1.49	33.0		WATER BASED	
2887	1.74	47.0		WATER BASED	
3079	1.74	15.0		WATER BASED	
3140	1.58	30.0		WATER BASED	
3232	1.56	35.0		WATER BASED	
3478	1.56	37.0		WATER BASED	

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]
2394_Formation_pressure_(Formasjonstrykk)	pdf	0.21