General information

Wellbore name	25/8-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	BALDER
Discovery	25/8-1 (Ringhorne Forseti)
Well name	25/8-1
Seismic location	LINE CS 40.sp 5650
Production licence	027
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	36-L
Drilling facility	GLOMAR GRAND ISLE
Drilling days	68
Entered date	28.04.1970
Completed date	04.07.1970
Release date	04.07.1972
Publication date	01.08.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	PALEOCENE
1st level with HC, formation	HERMOD FM
Kelly bushing elevation [m]	9.0
Water depth [m]	129.0
Total depth (MD) [m RKB]	2606.0
Bottom hole temperature [°C]	71
Oldest penetrated age	EARLY PERMIAN
Oldest penetrated formation	ROTLIEGEND GP
Geodetic datum	ED50
NS degrees	59° 15' 2'' N
EW degrees	2° 29' 35.41'' E
NS UTM [m]	6568213.91
EW UTM [m]	471091.98
UTM zone	31
NPDID wellbore	173

Wellbore history

General

Well 25/8-1 was drilled on the Utsira High in the North Sea. The main purpose was to test an Eocene structural closure, up dip from oil-bearing Eocene sands in Well 25/11-1.

Operations and results

Wildcat well 25/8-1 was spudded with the vessel Glomar Grand Isle on 28 April 1970. Drilling operations were normal down to 2606 m, which became TD in the well, 289 m into the Early Permian Undefined Group. While drilling at this depth the drilling pipe parted. After recovering the upper portion of the drill pipe the top of the portion left in the hole was found to be at 2559. Attempts to recover the fish failed and after logging and taking sidewall cores in the uncased hole the well was prepared for testing. Initial drilling from the sea floor to 378 m was with sea water and gell. Below 378 m to 1311 m, the mud system consisted of sea water, spersene XP-20 salinex. From 1311 m to TD fresh water, spersene XP-20 mud was used.

The well penetrated several Tertiary sands above the Paleocene (Utsira and Skade Formations). These sands were water wet, but some methane was recorded in the upper part of the Utsira Formation.Two Paleoocene sands (Hermod Formation at 1754.4 - 1758.1 m and 1759.0 - 1763.0 m) were found. The sands were separated by a thin 1 m shale section. Upon testing, the sands were found to be capable of producing approximately 429 Sm3 of 21.7 deg API gravity, low sulphur (0.77 to 0.80%) oil per day. All other sands or reservoirs penetrated by the well, including the Heimdal Formation at 1777 to 1812 m, were water wet without shows.

Seven cores were cut in the well. Core no 1 was cut from 1676.4 to 1684.9 m in the Balder Formation, cores no 2 to 5 were cut in the interval 1724.3 to 1790.7 m in the Balder/Sele/Hermod/Sele/Lista/Heimdal Formations, core no 6 was cut at 1828.8 to 1847.1 m in the Lista/Våle Formations, and core no 7 was cut at 2359.2 to 2377.4 m in the Undefined Group. FIT wire line fluid samples were taken at 1756.6 m (5.5 gallons oil), 1760.5 m (5 gallons oil), and at 1783.1 m (5 gallons water). The oil gravity was 21.7 and 21.8 deg API with 0.77% and 0.80%, respectively.

The well was permanently abandoned on 4 July 1970 as an oil discovery.

Testing

A production test performed in the interval 1755.0 to 1762.4 m in the Hermod Formation sand. The well was tested in four successive flow periods of increasing drawdown pressures. The final flow period lasted about 19 hours; during this period the average rate was about 429 Sm3/day through a 64/64" choke. The GOR was 23.2 Sm3/Sm3 (130 ft3/barrel), oil gravity was 21 deg API. Only trace quantities of basal sediments and water were produced during the test. No sand was detected in the produced fluid sampled at the surface; however, a small quantity of fine-grain sand was removed from the bottom-hole fluid samplers.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
2407.92	2603.00

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	5500.0	5528.0	[ft]
2	5657.0	5715.0	[ft]
3	5713.0	5770.0	[ft]
4	5770.0	5815.0	[ft]
5	5815.0	5875.0	[ft]
6	6000.0	6060.0	[ft]
7	7740.0	7794.0	[ft]

Total core sample length [m]	110.3
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
6360.0	[ft]	DC	RRI
6400.0	[ft]	DC	RRI
6440.0	[ft]	DC	RRI
6480.0	[ft]	DC	RRI
6500.0	[ft]	DC	RRI
6510.0	[ft]	DC	RRI
6520.0	[ft]	DC	RRI
6530.0	[ft]	DC	RRI
6540.0	[ft]	DC	RRI
6550.0	[ft]	DC	RRI
6560.0	[ft]	DC	RRI
6570.0	[ft]	DC	RRI
6600.0	[ft]	DC	RRI
6610.0	[ft]	DC	RRI
6640.0	[ft]	DC	RRI
6650.0	[ft]	DC	RRI

6680.0	[ft]	DC	RRI
6700.0	[ft]	DC	RRI
6720.0	[ft]	DC	RRI
6760.0	[ft]	DC	RRI
6760.0	[ft]	DC	RRI
6800.0	[ft]	DC	RRI
6800.0	[ft]	DC	RRI
6840.0	[ft]	DC	RRI
6880.0	[ft]	DC	RRI
6920.0	[ft]	DC	RRI
6960.0	[ft]	DC	RRI
7000.0	[ft]	DC	RRI
7040.0	[ft]	DC	RRI
7080.0	[ft]	DC	RRI
7120.0	[ft]	DC	RRI
7160.0	[ft]	DC	RRI
7200.0	[ft]	DC	RRI

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST	TEST1	1762.00	1755.00		30.06.1970 - 00:00	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
138	NORDLAND GP
607	UTSIRA FM
716	NO FORMAL NAME
750	HORDALAND GP
750	SKADE FM
970	NO FORMAL NAME
991	SKADE FM
1015	NO FORMAL NAME
1062	SKADE FM
1093	NO FORMAL NAME

1663	NO FORMAL NAME
1665	ROGALAND GP
1665	BALDER FM
1736	SELE FM
1754	HERMOD FM
1763	SELE FM
1767	LISTA FM
1777	HEIMDAL FM
1812	LISTA FM
1841	VÅLE FM
1846	SHETLAND GP
1846	EKOFISK FM
1853	TOR FM
1897	HOD FM
1915	BLODØKS FM
1923	HIDRA FM
1936	CROMER KNOLL GP
1981	VIKING GP
1981	DRAUPNE FM
1987	STATFJORD GP
2158	NO GROUP DEFINED
2317	UNDEFINED GP

Geochemical information

Document name	Document format	Document size [MB]
173_1	pdf	4.96
173_2	pdf	1.40
173_3	pdf	0.64
173_4	pdf	2.44

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

Document name	Document format	Document size [MB]
173_01_WDSS_General_Information	pdf	0.18

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

Document name	Document format	Document size [MB]
173_25_8_1_Completion_log	pdf	1.55
173_25_8_1_Completion_report	pdf	38.47

Documents - Norwegian Offshore Directorate papers

Document name	Document format	Document size [MB]
173_01_NPD_Paper_No.28_Lithology__Balder_area__Well_25_8_1	pdf	18.56
173_02_NPD_Paper_No.28_Interpreted_Lithology_log__Well_25_8_1	pdf	1.40
173_03_NPD_Paper_No.28_Lithologic_Correlation_chart__Well_25_8_1	pdf	0.48
173_04_NPD_Paper_No.28_Log_Correlation_chart_Profile_NE-SW__Well_25_8_1	pdf	0.41

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	1755	1762	25.4

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	429	9965	0.930		23

Logs

Log type	Log top depth [m]	Log bottom depth [m]
BHC SON GR CAL	389	2540
DIP	389	2083
FDC	1328	2540

GR	134	389
IES	389	2548
MLL CAL	389	1915
VELOCITY	135	2600

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	163.0	36	165.0	0.00	LOT
SURF.COND.	20	390.0	26	405.0	0.00	LOT
INTERM.	13 3/8	1330.0	18	1346.0	0.00	LOT
INTERM.	9 5/8	1881.0	12 1/4	1903.0	0.00	LOT
OPEN HOLE		2606.0	8 1/2	2606.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
378	1.05			seawater	
1310	1.07			sw/sper	
2619	1.04			fw/sper	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
1754.00	[m]
1754.00	[m]
1755.00	[m]
1756.00	[m]
1754.00	[m]
5866.00	[ft]
5845.00	[ft]
5862.00	[ft]
5875.00	[ft]
6042.50	[ft]
5776.50	[ft]
5869.00	[ft]
5836.00	[ft]

5773.00	[ft]
5825.50	[ft]
7767.00	[m]
7740.00	[ft]

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]
173_Formation_pressure_(Formasjonstrykk)	pdf	0.21