



General information

Wellbore name	25/10-4
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	BALDER
Discovery	25/11-1 Balder
Well name	25/10-4
Seismic location	BALMG 188 SP: 125.
Production licence	028
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	270-L
Drilling facility	GLOMAR BISCAY II
Drilling days	42
Entered date	08.12.1980
Completed date	18.01.1981
Release date	18.01.1983
Publication date	26.05.2009
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	EOCENE
1st level with HC, formation	INTRA BALDER FM SS
2nd level with HC, age	PALEOCENE
2nd level with HC, formation	HEIMDAL FM
Kelly bushing elevation [m]	25.0
Water depth [m]	126.0
Total depth (MD) [m RKB]	2349.0
Final vertical depth (TVD) [m RKB]	2348.0
Maximum inclination [°]	4
Bottom hole temperature [°C]	60
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	59° 11' 25.53" N



EW degrees	2° 19' 49.62" E
NS UTM [m]	6561599.92
EW UTM [m]	461743.92
UTM zone	31
NPDID wellbore	217

Wellbore history

General

This well was drilled in two phases, a primary well bore 25/10-4, and a re-entry well bore 25/10-4 R. The well was drilled in the western part of the Balder Field in the North Sea. The primary objective was to establish the presence of a thick accumulation of Paleocene oil sand, and evaluate sand-shale distribution and reservoir quality. The top of the reservoir was anticipated to be at 1698 m subsea. As a secondary high-risk objective, the well was to be drilled to 2700 m to test for the presence of hydrocarbons in the Permian. This test was necessary as any hydrocarbons present could critically affect the design and location of a possible production platform.

Operations and results

Appraisal well 25/10-4 was spudded with the semi-submersible installation Glomar Biscay II on 8 December 1980 and drilled to TD at 2348 m in the Late Permian Zechstein Group where the well was suspended due at 18 January 1981 due to a pressing need for the rig to drill other Balder Field delineation wells, combined with unexpected delays in the 25/10-4 well progress as a result of lost circulation. The re-entry commenced on 29 May 1981 and deepened the well to 2550 m in a massive unconsolidated sand of Permian/ Carboniferous age. The top hole down to 30" casing depth at 214 m was drilled with seawater. Below 214 m the well, including the re-entry well, was drilled with seawater/gels/lignosulphonate.

The main oil sand of Paleocene age was encountered between 1759.5 m and 1784.0 m. The net oil sand was 22 m thick. The Triassic section had several thin and oil-bearing sandstones not detected before in the area. A wire line FIT in one of these sands proved live oil. In total these sandstones made up 21 m net sand but the accumulation was considered insignificant. Cuttings from 2130 m (Early Jurassic) through Permian Zechstein and the upper part of the Permian/Carboniferous unconsolidated sandstone contained traces/shows of hydrocarbons.

No cores were cut. A wire line FIT at 2226 m in a thin Triassic sandstone recovered 7500 cm³ oil with some mud.

The well was permanently abandoned on 13 June 1981 as an oil appraisal well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
220.00	2350.00



Cuttings available for sampling?	NO
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Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1150.0	[m]	DC	
1180.0	[m]	DC	
1210.0	[m]	DC	
1240.0	[m]	DC	
1270.0	[m]	DC	
1300.0	[m]	DC	
1330.0	[m]	DC	
1360.0	[m]	DC	
1390.0	[m]	DC	
1420.0	[m]	DC	
1450.0	[m]	DC	
1480.0	[m]	DC	
1510.0	[m]	DC	
1540.0	[m]	DC	
1570.0	[m]	DC	
1600.0	[m]	DC	
1620.0	[m]	DC	
1620.0	[m]	DC	RRI
1630.0	[m]	DC	RRI
1640.0	[m]	DC	RRI
1640.0	[m]	DC	
1650.0	[m]	DC	
1650.0	[m]	DC	RRI
1660.0	[m]	DC	RRI
1660.0	[m]	DC	
1670.0	[m]	DC	RRI
1675.0	[m]	DC	RRI
1678.0	[m]	DC	
1684.0	[m]	DC	RRI
1687.0	[m]	DC	
1696.0	[m]	DC	
1696.0	[m]	DC	RRI
1702.0	[m]	DC	
1705.0	[m]	DC	
1705.0	[m]	DC	RRI



1708.0 [m]	DC	
1711.0 [m]	DC	
1714.0 [m]	DC	
1717.0 [m]	DC	
1720.0 [m]	DC	
1720.0 [m]	DC	RRI
1723.0 [m]	DC	
1726.0 [m]	DC	
1729.0 [m]	DC	
1729.0 [m]	DC	RRI
1732.0 [m]	DC	
1738.0 [m]	DC	
1744.0 [m]	DC	
1744.0 [m]	DC	RRI
1750.0 [m]	DC	RRI
1750.0 [m]	DC	
1759.0 [m]	DC	RRI
1771.0 [m]	DC	
1790.0 [m]	DC	
1810.0 [m]	DC	
1830.0 [m]	DC	
1850.0 [m]	DC	
1870.0 [m]	DC	
1870.0 [m]	DC	RRI
1890.0 [m]	DC	
1900.0 [m]	DC	RRI
1910.0 [m]	DC	
1930.0 [m]	DC	
1950.0 [m]	DC	
1960.0 [m]	DC	
1970.0 [m]	DC	
1980.0 [m]	DC	
1980.0 [m]	DC	RRI
1990.0 [m]	DC	RRI
1990.0 [m]	DC	
2000.0 [m]	DC	
2000.0 [m]	DC	RRI
2010.0 [m]	DC	
2020.0 [m]	DC	
2050.0 [m]	DC	



2070.0 [m]	DC	
2090.0 [m]	DC	
2110.0 [m]	DC	
2130.0 [m]	DC	
2150.0 [m]	DC	
2170.0 [m]	DC	
2190.0 [m]	DC	
2210.0 [m]	DC	
2230.0 [m]	DC	
2250.0 [m]	DC	
2270.0 [m]	DC	
2290.0 [m]	DC	
2310.0 [m]	DC	
2330.0 [m]	DC	
2340.0 [m]	DC	
2346.0 [m]	SWC	
2350.0 [m]	DC	
2355.0 [m]	SWC	
2362.5 [m]	SWC	
2364.5 [m]	SWC	
2380.0 [m]	SWC	
2395.0 [m]	SWC	
2405.0 [m]	SWC	
2418.0 [m]	SWC	
2423.0 [m]	SWC	
2450.0 [m]	SWC	
2483.0 [m]	SWC	
2530.0 [m]	SWC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
151	NORDLAND GP
569	UTSIRA FM
693	NO FORMAL NAME
740	HORDALAND GP
740	SKADE FM
920	NO FORMAL NAME
1058	SKADE FM



1109	NO FORMAL NAME
1203	SKADE FM
1219	NO FORMAL NAME
1418	GRID FM
1487	NO FORMAL NAME
1682	ROGALAND GP
1682	BALDER FM
1720	SELE FM
1747	LISTA FM
1760	HEIMDAL FM
1874	LISTA FM
1950	SHETLAND GP
1961	VIKING GP
1961	DRAUPNE FM
1963	INTRA DRAUPNE FM SS
1982	DRAUPNE FM
1985	HEATHER FM
2003	STATFJORD GP
2154	NO GROUP DEFINED
2314	ZECHSTEIN GP

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

Document name	Document format	Document size [MB]
217_01_WDSS_General_Information	pdf	0.18
217_02_WDSS_completion_log	pdf	0.23

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

Document name	Document format	Document size [MB]
217_00_25_10_4_Completion_Log	pdf	1.60
217_00_25_10_4_Completion_Report	pdf	20.29
217_00_25_10_4_Geological_Completion_Report	pdf	14.19

Logs





Log type	Log top depth [m]	Log bottom depth [m]
DEN NEU	1272	2348
DLL MLL	1600	1949
IEL AC GR SP	150	2343
TEMP	451	1245

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	214.0	36	214.0	0.00	LOT
INTERM.	13 3/8	497.0	17 1/2	512.0	1.68	LOT
INTERM.	9 5/8	1288.5	12 1/4	1305.0	1.71	LOT
LINER	7	2279.0	8 1/2	2349.0	1.63	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
460	1.10	35.0		seawater	
730	1.08	51.0		seawater	
1160	1.07	38.0		waterbased	
1450	1.12	39.0		waterbased	
1750	1.10	44.0		waterbased	
1910	1.15	48.0		waterbased	
2120	1.20	51.0		waterbased	