General information

Wellbore name	6610/2-1 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6610/2-1
Seismic location	SP 212 & INLINE 803-ST 9293
Production licence	177
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	858-L
Drilling facility	BYFORD DOLPHIN
Drilling days	33
Entered date	27.08.1996
Completed date	28.09.1996
Release date	28.09.1998
Publication date	30.06.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	406.0
Total depth (MD) [m RKB]	2673.0
Final vertical depth (TVD) [m RKB]	2558.0
Maximum inclination [°]	26.9
Bottom hole temperature [°C]	92
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	RED BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	66° 48' 48.73'' N
EW degrees	10° 30' 26.7'' E
NS UTM [m]	7411584.43
EW UTM [m]	566228.21
UTM zone	32
NPDID wellbore	2874

Wellbore history

General

Wildcat well 6610/2-1S is located in the Nordland III area off shore Northern Norway. The main objective was to test the hydrocarbon potential in Middle and Early Jurassic Sandstones of the Fangst and Båt Groups.

Operations and results

Wildcat well 6610/2-1S was spudded with the semi-submersible installation Byford Dolphin on 27 August 1996 and drilled to TD at 2673 m in the Triassic Red Beds. The hole was drilled vertical down to 938 m and deviated from that point to TD, with deviation mostly around 24 - 26 deg. No significant problems were encountered in the operations. The well was drilled with spud mud down to 946 m and with ANCO 2000 mud from 946 m to TD.

A Lysing Formation sandstone was penetrated from 2050 m to 2067 m. At 2067 m a large hiatus from the Early Jurassic Pliensbachian to the Late Cretaceous Coniacian was encountered. The Tilje Formation was mostly silt and mudstone, while the Åre Formation contained up to 50 m thick sandstone units. All potential reservoir sections in the well were found water wet. The top sand in the Lysing Formation had shows. These were recorded conventionally on cuttings and a core on the rig and confirmed by later geochemical analyses on shore. The geochemical analyses also detected shows in the Tare, Tilje, and Åre Formations. The analyses also detected use of an oil-based additive in the mud below 2063 m. This was not reported in the mud programme. This additive, together with the polyethylene glycols of the ANCO 2000 mud system, hampered interpretations of the geochemical data, particularly in sections with low levels of organic matter. However, it was established that the well is immature all through to TD, and that the best source rock intervals in this well were the coals (and coaly shales) in the Jurassic Åre Formation. The potential of Åre is for gas generation. The Tertiary Brygge and Tang Formations also had a fair source potential for gas.

One core was cut in the Lysing Formation, and two in the Åre Formation. No Fluid samples were taken.

The well was permanently abandoned on 28 September 1996 as a dry hole 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]
950.00	2673.00

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	2051.0	2079.9	[m]
2	2328.0	2329.8	[m]
3	2330.0	2358.4	[m]

Total core sample length [m]	59.2
Cores available for sampling?	YES

Core photos


2051-2056m


2056-2061m


2061-2066m


2066-2071m


2071-2076m


2076-2079m


2328-2329m


2330-2335m


2335-2340m


2340-2345m


2345-2350m


2350-2355m


2355-2358m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
950.0	[m]	DC	RRI
950.0	[m]	DC	OD
960.0	[m]	DC	RRI
960.0	[m]	DC	OD
970.0	[m]	DC	OD

980.0	[m]	DC	OD
980.0	[m]	DC	RRI
990.0	[m]	DC	RRI
990.0	[m]	DC	OD
1000.0	[m]	DC	OD
1010.0	[m]	DC	OD
1010.0	[m]	DC	RRI
1020.0	[m]	DC	RRI
1020.0	[m]	DC	OD
1030.0	[m]	DC	OD
1040.0	[m]	DC	OD
1040.0	[m]	DC	RRI
1050.0	[m]	DC	RRI
1050.0	[m]	DC	OD
1070.0	[m]	DC	RRI
1080.0	[m]	DC	RRI
1100.0	[m]	DC	RRI
1110.0	[m]	DC	RRI
1120.0	[m]	SWC	WESTLAB
1130.0	[m]	DC	RRI
1150.0	[m]	DC	RRI
1160.0	[m]	DC	RRI
1165.0	[m]	SWC	WESTLAB
1180.0	[m]	DC	RRI
1190.0	[m]	DC	RRI
1200.0	[m]	DC	RRI
1210.0	[m]	DC	RRI
1215.0	[m]	SWC	WESTLAB
1220.0	[m]	DC	RRI
1240.0	[m]	DC	RRI
1240.0	[m]	SWC	WESTLAB
1250.0	[m]	DC	RRI
1265.0	[m]	SWC	WESTLAB
1270.0	[m]	DC	RRI
1280.0	[m]	DC	RRI
1300.0	[m]	DC	RRI
1310.0	[m]	DC	RRI
1315.0	[m]	SWC	WESTLAB
1330.0	[m]	DC	RRI
1340.0	[m]	DC	RRI

1360.0	[m]	DC	RRI
1365.0	[m]	SWC	WESTLAB
1370.0	[m]	DC	RRI
1390.0	[m]	DC	RRI
1390.0	[m]	SWC	WESTLAB
1395.0	[m]	SWC	WESTLA
1400.0	[m]	DC	RRI
1412.0	[m]	DC	RRI
1430.0	[m]	SWC	WESTLAB
1436.0	[m]	DC	RRI
1445.0	[m]	SWC	WESTLAB
1451.0	[m]	DC	RRI
1460.0	[m]	DC	RRI
1460.0	[m]	SWC	WESTLAB
1469.0	[m]	DC	RRI
1478.0	[m]	DC	RRI
1490.0	[m]	SWC	WESTLAB
1490.0	[m]	DC	RRI
1499.0	[m]	DC	RRI
1508.0	[m]	DC	RRI
1512.0	[m]	SWC	WESTLAB
1517.0	[m]	DC	RRI
1526.0	[m]	DC	RRI
1527.0	[m]	SWC	WESTLAB
1535.0	[m]	DC	RRI
1542.0	[m]	SWC	WESTLAB
1544.0	[m]	DC	RRI
1553.0	[m]	DC	RRI
1557.0	[m]	SWC	WESTLAB
1562.0	[m]	DC	RRI
1571.0	[m]	DC	RRI
1572.0	[m]	SWC	WESTLAB
1580.0	[m]	DC	RRI
1589.0	[m]	DC	RRI
1598.0	[m]	DC	RRI
1607.0	[m]	DC	RRI
1619.0	[m]	DC	RRI
1628.0	[m]	DC	RRI
1643.0	[m]	DC	RRI
1655.0	[m]	SWC	WESTLAB

1661.0	[m]	SWC	WESTLA
1664.0	[m]	DC	RRI
1667.0	[m]	SWC	WESTLAB
1679.0	[m]	DC	RRI
1685.0	[m]	DC	RRI
1686.0	[m]	SWC	WESTLAB
1691.0	[m]	DC	RRI
1694.0	[m]	DC	RRI
1696.0	[m]	SWC	WESTLAB
1705.0	[m]	SWC	WESTLA
1709.0	[m]	DC	RRI
1715.0	[m]	SWC	WESTLAB
1724.0	[m]	DC	RRI
1730.0	[m]	SWC	WESTLAB
1739.0	[m]	DC	RRI
1745.0	[m]	SWC	WESTLAB
1754.0	[m]	DC	RRI
1763.5	[m]	SWC	WESTLAB
1769.0	[m]	DC	RRI
1784.0	[m]	DC	RRI
1795.6	[m]	SWC	WESTLAB
1799.0	[m]	DC	RRI
1812.5	[m]	SWC	WESTLAB
1814.0	[m]	DC	RRI
1829.0	[m]	DC	RRI
1829.0	[m]	SWC	WESTLAB
1846.0	[m]	SWC	WESTLA
1847.0	[m]	DC	RRI
1859.0	[m]	DC	RRI
1865.5	[m]	SWC	WESTLAB
1874.0	[m]	DC	RRI
1880.0	[m]	SWC	WESTLAB
1889.0	[m]	DC	RRI
1904.0	[m]	DC	RRI
1914.0	[m]	SWC	WESTLAB
1919.0	[m]	DC	RRI
1924.0	[m]	SWC	WESTLAB
1934.0	[m]	DC	RRI
1949.0	[m]	DC	RRI
1964.0	[m]	DC	RRI

1979.0	[m]	DC	RRI
1981.0	[m]	SWC	WESTLAB
1988.0	[m]	DC	RRI
1991.8	[m]	SWC	WESTLAB
1997.0	[m]	DC	RRI
2006.0	[m]	DC	RRI
2015.0	[m]	DC	RRI
2024.0	[m]	DC	RRI
2028.0	[m]	SWC	WESTLAB
2033.0	[m]	DC	RRI
2042.0	[m]	DC	RRI
2048.0	[m]	SWC	WESTLAB
2051.2	[m]	DC	RRI
2053.8	[m]	DC	RRI
2055.2	[m]	DC	RRI
2056.7	[m]	C	WESTLAB
2065.1	[m]	C	WESTLA
2071.3	[m]	C	WESTLA
2077.3	[m]	C	WESTLA
2084.0	[m]	DC	RRI
2091.0	[m]	SWC	WESTLAB
2093.0	[m]	DC	RRI
2102.0	[m]	DC	RRI
2105.0	[m]	SWC	WESTLAB
2111.0	[m]	DC	RRI
2120.0	[m]	DC	RRI
2129.0	[m]	DC	RRI
2138.0	[m]	DC	RRI
2143.5	[m]	SWC	WESTLAB
2147.0	[m]	DC	RRI
2156.0	[m]	DC	RRI
2165.0	[m]	DC	RRI
2174.0	[m]	DC	RRI
2186.0	[m]	DC	RRI
2193.0	[m]	SWC	WESTLAB
2195.0	[m]	DC	RRI
2204.0	[m]	DC	RRI
2213.0	[m]	DC	RRI
2222.0	[m]	DC	RRI
2231.0	[m]	DC	RRI

2240.0	[m]	DC	RRI
2249.0	[m]	DC	RRI
2258.0	[m]	DC	RRI
2267.0	[m]	DC	RRI
2274.3	[m]	SWC	WESTLAB
2276.0	[m]	DC	RRI
2285.0	[m]	DC	RRI
2294.0	[m]	DC	RRI
2296.5	[m]	SWC	WESTLAB
2303.0	[m]	DC	RRI
2312.0	[m]	DC	RRI
2323.0	[m]	SWC	WESTLAB
2327.0	[m]	DC	RRI
2328.0	[m]	C	WESTLAB
2333.9	[m]	C	WESTLA
2341.1	[m]	C	WESTLA
2344.9	[m]	C	WESTLA
2349.4	[m]	C	WESTLA
2357.1	[m]	C	WESTLA
2360.0	[m]	DC	RRI
2364.0	[m]	SWC	WESTLAB
2369.0	[m]	DC	RRI
2378.0	[m]	DC	RRI
2387.0	[m]	DC	RRI
2397.0	[m]	DC	RRI
2402.5	[m]	SWC	WESTLAB
2406.0	[m]	DC	RRI
2411.0	[m]	SWC	WESTLAB
2415.0	[m]	DC	RRI
2424.0	[m]	DC	RRI
2442.0	[m]	DC	RRI
2443.0	[m]	SWC	WESTLAB
2451.0	[m]	DC	RRI
2460.0	[m]	DC	RRI
2469.0	[m]	DC	RRI
2478.0	[m]	DC	RRI
2487.0	[m]	DC	RRI
2496.0	[m]	DC	RRI
2505.0	[m]	DC	RRI
2514.0	[m]	DC	RRI

2521.0	[m]	DC	RRI
2523.0	[m]	DC	RRI
2530.0	[m]	SWC	WESTLAB
2532.0	[m]	DC	RRI
2541.0	[m]	DC	RRI
2550.0	[m]	DC	RRI
2552.5	[m]	SWC	WESTLAB
2559.0	[m]	DC	RRI
2568.0	[m]	DC	RRI
2577.0	[m]	DC	RRI
2586.0	[m]	DC	RRI
2596.0	[m]	DC	RRI
2604.0	[m]	DC	RRI
2613.0	[m]	DC	RRI
2622.0	[m]	DC	RRI
2631.0	[m]	DC	RRI
2640.0	[m]	DC	RRI
2649.0	[m]	DC	RRI
2659.0	[m]	SWC	WESTLAB
2661.0	[m]	DC	RRI
2670.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
431	NORDLAND GP
435	HORDALAND GP
435	BRYGGE FM
1365	ROGALAND GP
1365	TARE FM
1494	TANG FM
1699	SHETLAND GP
1699	SPRINGAR FM
1853	NISE FM
1984	KVITNOS FM
2050	CROMER KNOLL GP
2050	LYSING FM
2067	BÅT GP
2067	TILJE FM

2278	ÅRE FM
2541	GREY BEDS (INFORMAL)
2598	RED BEDS (INFORMAL)

Composite logs

Document name	Document format	Document size [MB]
2874	pdf	0.26

Geochemical information

Document name	Document format	Document size [MB]
2874_1	pdf	4.67

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

Document name	Document format	Document size [MB]
2874_6610_2_1_S_COMPLETION_REPORT_AND_COMPLETION_LOG	pdf	44.50

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DPIL MAC ZDL CN GR	938	1625
DPIL MAC ZDL CN GR	1600	1748
DPIL MAC ZDL CNL DSL CHT	1745	2678
HEXDIP GR	1505	1748
HEXDIP GR CHT	1750	2670
MWD DPR	493	944
MWD DPR-2A	944	1751
MWD DPR-RAW	1741	2660
RCI GR	1617	1680
RCI GR CHT	1857	2641
SWC	950	1750

SWC	950	1750
SWC GR	1763	2659
SWC GR	1763	2041
VSP GR	635	1285
VSP GR	1285	1745
VSP GR	1385	2675

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	491.0	36	493.0	0.00	LOT
SURF.COND.	13 3/8	938.0	17 1/2	940.0	1.54	LOT
INTERM.	9 5/8	1740.0	12 1/4	1740.0	1.81	LOT
OPEN HOLE		2673.0	8 1/2	2673.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
493	1.30			DUMMY	
944	1.03	8.0		SEAWATER/BENT.	
1234	1.30	12.0		ANCO 2000	
1350	1.30	12.0		ANCO 2000	
1751	1.30	13.0		ANCO 2000	
1754	1.30	18.0		ANCO 2000	
2026	1.25	11.0		ANCO 2000	
2673	1.30	18.0		ANCO 2000	

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]
2874_Formation_pressure_(Formasjonstrykk)	pdf	0.29