

**General information**

Wellbore name	6408/4-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6408/4-1
Seismic location	ST 8621 - 417 SP 1660
Production licence	133
Drilling operator	Conoco Norway Inc.
Drill permit	586-L
Drilling facility	VINNI
Drilling days	31
Entered date	18.09.1988
Completed date	18.10.1988
Release date	18.10.1990
Publication date	30.06.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	27.0
Water depth [m]	209.0
Total depth (MD) [m RKB]	2725.0
Final vertical depth (TVD) [m RKB]	2725.0
Maximum inclination [°]	2.5
Bottom hole temperature [°C]	94
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	GREY BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	64° 40' 0.22" N
EW degrees	8° 15' 27.05" E
NS UTM [m]	7171699.06
EW UTM [m]	464550.03
UTM zone	32
NPDID wellbore	1246



Wellbore history

General

Block 6408/4 is situated on the eastern side of the Trøndelag Platform off shore mid Norway. The drilled prospect is a large, gently dipping structure that is bounded by a southeast dipping fault with dip closure in all other directions.

The objectives were to test for the development of the Late Jurassic Rogn sands and their hydrocarbon potential, and to test for hydrocarbons in the Middle Jurassic Fangst sands. Both Late Jurassic shales and the Lower Jurassic Åre coal unit were considered to be immature on the block. Long distance migration of oil was a critical aspect of the prospect and as such constituted a major risk.

Operations and results

Wildcat well 6408/4-1 was spudded with the semi-submersible installation Vinni on 18 September 1988 and drilled to TD at 2725 m in the Triassic Grey Beds. There were certain problems with hole stability down to 830 m. The drill string twisted off at 370 m and had to be fished up. During logging the tool did not get past 622 m, and due to this there is a lack of conventional log between 622 - 830 m. Otherwise operations went without significant problems. The well was drilled with seawater and hi-vis pills down to 830 m and with KCl/polymer mud from 830 m to TD. No shallow gas was encountered.

The prognosed sand in the Rogn Formation was not developed. A change from high gamma response shale to lower gamma response at 1734 m in the Spekk Formation was noted. The reservoir sections in the Middle and Early Jurassic Fangst Group were encountered at 1825 m to 2015 m with 140 m net sand with 30.5% average porosity (log evaluation). The Båt group and the Triassic also had sands; the most massive of these was the Tilje Formation with 130 m net reservoir with 25.6% average porosity. All reservoir sections were water bearing and there were no shows or stain recorded while drilling. One core was cut between 1745 m to 1746.4 m in the Spekk Formation. A second core was attempted without success. No RFT was run in the well and no fluid sampling attempted.

The well was permanently abandoned on 18 October 1988 as a dry hole.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
840.00	2725.00

Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate



Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	1745.0	1746.4	[m]

Total core sample length [m]	1.4
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1340.0	[m]	DC	STRAT
1370.0	[m]	DC	STRAT
1400.0	[m]	DC	STRAT
1430.0	[m]	DC	STRAT
1460.0	[m]	DC	STRAT
1480.0	[m]	DC	STRAT
1490.0	[m]	DC	STRAT
1500.0	[m]	DC	STRAT
1512.0	[m]	DC	STRAT
1526.0	[m]	DC	STRAT
1530.0	[m]	DC	STRAT
1542.0	[m]	DC	STRAT
1554.0	[m]	DC	STRAT
1560.0	[m]	DC	STRAT
1572.0	[m]	DC	STRAT
1584.0	[m]	DC	STRAT
1590.0	[m]	DC	STRAT
1602.0	[m]	DC	STRAT
1614.0	[m]	DC	STRAT
1620.0	[m]	DC	STRAT
1632.0	[m]	DC	STRAT
1644.0	[m]	DC	STRAT
1650.0	[m]	DC	STRAT
1662.0	[m]	DC	STRAT
1668.0	[m]	DC	STRAT
1674.0	[m]	DC	STRAT
1679.0	[m]	SWC	STRAT
1683.0	[m]	DC	STRAT
1693.0	[m]	DC	STRAT
1698.0	[m]	DC	STRAT



1703.0	[m]	SWC	STRAT
1704.0	[m]	DC	STRAT
1713.0	[m]	DC	STRAT
1720.0	[m]	DC	STRAT
1722.0	[m]	DC	STRAT
1734.0	[m]	DC	STRAT
1745.0	[m]	SWC	STRAT
1756.0	[m]	SWC	STRAT
1763.0	[m]	SWC	STRAT
1775.0	[m]	SWC	STRAT
1782.0	[m]	DC	STRAT
1792.0	[m]	SWC	STRAT
1795.0	[m]	SWC	STRAT
1800.0	[m]	SWC	STRAT
1812.0	[m]	SWC	STRAT
1822.0	[m]	SWC	STRAT
1825.0	[m]	SWC	STRAT
1839.0	[m]	DC	STRAT
1854.0	[m]	DC	STRAT
1863.0	[m]	DC	STRAT
1872.0	[m]	DC	STRAT
1878.0	[m]	SWC	STRAT
1882.0	[m]	SWC	STRAT
1888.0	[m]	SWC	STRAT
1896.0	[m]	DC	STRAT
1909.0	[m]	SWC	STRAT
1917.0	[m]	DC	STRAT
1924.0	[m]	SWC	STRAT
1932.0	[m]	SWC	STRAT
1944.0	[m]	DC	STRAT
1953.0	[m]	SWC	STRAT
1960.0	[m]	SWC	STRAT
1970.0	[m]	SWC	STRAT
1980.0	[m]	DC	STRAT
1989.0	[m]	DC	STRAT
1998.0	[m]	DC	STRAT
2007.0	[m]	DC	STRAT
2016.0	[m]	DC	STRAT
2025.0	[m]	DC	STRAT
2034.0	[m]	DC	STRAT



2042.0	[m]	SWC	STRAT
2052.0	[m]	DC	STRAT
2056.0	[m]	SWC	STRAT
2070.0	[m]	DC	STRAT
2075.0	[m]	SWC	STRAT
2088.0	[m]	DC	STRAT
2097.0	[m]	DC	STRAT
2106.0	[m]	DC	STRAT
2115.0	[m]	DC	STRAT
2127.0	[m]	DC	STRAT
2136.0	[m]	SWC	STRAT
2145.0	[m]	DC	STRAT
2157.0	[m]	SWC	STRAT
2163.0	[m]	DC	STRAT
2172.0	[m]	DC	STRAT
2181.0	[m]	DC	STRAT
2190.0	[m]	DC	STRAT
2199.0	[m]	DC	STRAT
2208.0	[m]	DC	STRAT
2217.0	[m]	DC	STRAT
2226.0	[m]	DC	STRAT
2235.0	[m]	DC	STRAT
2244.0	[m]	DC	STRAT
2253.0	[m]	SWC	STRAT
2262.0	[m]	DC	STRAT
2271.0	[m]	DC	STRAT
2280.0	[m]	DC	STRAT
2289.0	[m]	DC	STRAT
2298.0	[m]	DC	STRAT
2307.0	[m]	DC	STRAT
2312.0	[m]	SWC	STRAT
2316.0	[m]	DC	STRAT
2325.0	[m]	SWC	STRAT
2328.0	[m]	DC	STRAT
2334.0	[m]	DC	STRAT
2346.0	[m]	DC	STRAT
2357.0	[m]	SWC	STRAT
2373.0	[m]	DC	STRAT
2378.0	[m]	SWC	STRAT
2388.0	[m]	DC	STRAT



2400.0	[m]	DC	STRAT
2412.0	[m]	DC	STRAT
2424.0	[m]	DC	STRAT
2436.0	[m]	DC	STRAT
2448.0	[m]	DC	STRAT
2457.0	[m]	SWC	STRAT
2460.0	[m]	DC	STRAT
2472.0	[m]	DC	STRAT
2484.0	[m]	DC	STRAT
2496.0	[m]	DC	STRAT
2502.0	[m]	DC	STRAT
2517.0	[m]	DC	STRAT
2528.0	[m]	SWC	STRAT
2541.0	[m]	DC	STRAT
2553.0	[m]	DC	STRAT
2565.0	[m]	DC	STRAT
2577.0	[m]	DC	STRAT
2589.0	[m]	DC	STRAT
2602.0	[m]	SWC	STRAT
2613.0	[m]	DC	STRAT
2625.0	[m]	DC	STRAT
2638.0	[m]	SWC	STRAT
2656.0	[m]	DC	STRAT
2667.0	[m]	DC	STRAT
2679.0	[m]	DC	STRAT
2691.0	[m]	DC	STRAT
2703.0	[m]	DC	STRAT
2715.0	[m]	DC	STRAT
2725.0	[m]	DC	STRAT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
236	NORDLAND GP
774	HORDALAND GP
774	BRYGGE FM
1313	ROGALAND GP
1313	TARE FM
1374	TANG FM



1619	SHETLAND GP
1619	SPRINGAR FM
1636	CROMER KNOLL GP
1636	LANGE FM
1666	LYR FM
1702	VIKING GP
1702	SPEKK FM
1797	MELKE FM
1825	FANGST GP
1825	GARN FM
1945	NOT FM
1968	ILE FM
2015	BÅT GP
2015	ROR FM
2157	TILJE FM
2323	ÅRE FM
2603	GREY BEDS (INFORMAL)

Composite logs

Document name	Document format	Document size [MB]
1246	pdf	0.31

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

Document name	Document format	Document size [MB]
1246 01 WDSS General Information	pdf	0.41
1246 02 WDSS completion log	pdf	0.20

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

Document name	Document format	Document size [MB]
1246 6408 4 1 COMPLETION REPORT AND LOG	pdf	9.87





Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL	240	1673
DIFL LSAC GR SP	575	1674
DIFL LSAC GR SP	1673	2720
DIFL LSAC GR SP CAL	236	616
DIPLOG	1673	2721
MWD RGD	236	2725
SWC	1679	2638
VELOCITY	236	2720
VSP	1000	2708
ZDEN CN GR CAL	820	1675
ZDEN CN GR SPL CAL	1673	2713

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	340.0	36	346.0	0.00	LOT
SURF.COND.	20	820.0	26	830.0	1.53	LOT
INTERM.	13 3/8	1673.0	17 1/2	1692.0	1.75	LOT
OPEN HOLE		2725.0	12 1/4	2725.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
260	1.02			WATER BASED	19.09.1988
346	1.06			WATER BASED	20.09.1988
346	1.06			WATER BASED	21.09.1988
415	1.06			WATER BASED	22.09.1988
830	1.06			WATER BASED	23.09.1988
830	1.06			WATER BASED	26.09.1988
830	1.20			WATER BASED	26.09.1988
830	1.20			WATER BASED	26.09.1988
830	0.00			WATER BASED	27.09.1988
830	0.00			WATER BASED	28.09.1988



859	1.22			WATER BASED	29.09.1988
1433	1.36			WATER BASED	30.09.1988
1692	1.39	25.0	15.0	WATER BASED	03.10.1988
1692	1.40	25.0	15.0	WATER BASED	04.10.1988
1692	1.42	26.0	17.0	WATER BASED	05.10.1988
1692	1.38	25.0	15.0	WATER BASED	06.10.1988
1711	1.21	15.0	9.0	WATER BASED	07.10.1988
1746	1.20	16.0	12.5	WATER BASED	10.10.1988
1938	1.22	14.0	11.0	WATER BASED	10.10.1988
2328	1.23	17.0	13.5	WATER BASED	10.10.1988
2471	1.21	15.0	11.5	WATER BASED	11.10.1988
2725	1.25	17.0	13.0	WATER BASED	13.10.1988
2725	1.25	17.0	13.5	WATER BASED	14.10.1988
2725	1.21	15.0	11.0	WATER BASED	12.10.1988
2725	1.25	17.0	13.5	WATER BASED	17.10.1988