

General information

Wellbore name	15/2-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	15/2-1
Seismic location	753 228 SP 321
Production licence	048
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	310-L
Drilling facility	NORTRYM
Drilling days	91
Entered date	26.11.1981
Completed date	24.02.1982
Release date	24.02.1984
Publication date	01.08.2010
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	109.0
Total depth (MD) [m RKB]	4600.0
Maximum inclination [°]	8.3
Bottom hole temperature [°C]	132
Oldest penetrated age	LATE PERMIAN
Oldest penetrated formation	ZECHSTEIN GP
Geodetic datum	ED50
NS degrees	58° 45' 19.3" N
EW degrees	1° 35' 40.58" E
NS UTM [m]	6513814.19
EW UTM [m]	418684.57
UTM zone	31
NPDID wellbore	308

Wellbore history

General

Well 15/2-1 was drilled in the Vilje sub-basin in the Viking Graben in the North Sea, ca 1.5 km from the UK border. The objective of the well 15/2-1 was to test the Upper Jurassic, Middle Jurassic, and Triassic sandstone reservoirs northwest of and down dip of the salt diapir encountered in the well 15/5-3. The well was planned to be drilled ca 200 m into the Triassic with a total depth of ca 4525 m.

Operations and results

Wildcat well 15/2-1 was spudded with the semi-submersible installation Nortrym on 26 September 1981 and drilled to TD at 4600 m in the Late Permian Zechstein Group. No significant problems were encountered in the operations. The well was drilled with seawater and hi-vis pills down to 665 m and with Shaletrol polymer mud system from 665 m to 2750 m. At 2750 m the mud was converted to a dispersed mud system by adding lignosulphonate and this was used for the remaining well bore down to TD. There was 0 - 3% oil in the mud below 1168 m.

The well penetrated a number of sandstone Formations in the Tertiary (Skade, Grid, Intra Balder sandstone, Heimdal, and Ty Formations). All these were entirely water wet. The Hugin Formation (4356 - 4493 m) consisted of massive very fine grained sandstones with beds of coal on top. The Sleipner Formation (4493 - 4554.5 m) had a 10 m thick coal layer on top underlain by siltstones grading occasionally to very fine sandstones, interbeds of sandstones, and stringers of coal. The well did not penetrate any Early Jurassic or Triassic rocks, but encountered evaporites of Permian age at 4554.5 m, unconformably underlying the Sleipner Formation.

Good hydrocarbon shows were reported from both the Hugin and Sleipner Formations. However, wire line log evaluation and core analysis showed very poor reservoir parameters and no moveable hydrocarbons. Fluorescence and cut were observed also on limestone and shale cuttings in the Tor Formation at 2800 - 2835 and in the Early Cretaceous at 3815 - 3922 m

Three cores were cut from 4365 to 4405 m in the Hugin Formation. The RFT tool was run in the Hugin Formation. The formation proved to be tight and no wire line fluid samples were taken.

The well was permanently abandoned on 24 February 1982 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]
200.00	4600.00
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	4368.0	4369.8	[m]
2	4369.8	4390.0	[m]

Total core sample length [m]	22.0
Cores available for sampling?	YES

Core photos


4365-4368m



4368-4371m



4375-4378m



4379-4384m



4384-4389m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2060.0	[m]	DC	RRI
2070.0	[m]	DC	RRI
2090.0	[m]	DC	RRI
2110.0	[m]	DC	RRI
2130.0	[m]	DC	RRI
2140.0	[m]	DC	RRI
2150.0	[m]	DC	RRI
2170.0	[m]	DC	RRI
2180.0	[m]	DC	RRI
2210.0	[m]	DC	RRI
2230.0	[m]	DC	RRI
2260.0	[m]	DC	RRI
2590.0	[m]	DC	RRI
2610.0	[m]	DC	RRI
2630.0	[m]	DC	RRI
2640.0	[m]	DC	RRI
2650.0	[m]	DC	RRI
3650.0	[m]	SWC	RRI
3660.5	[m]	SWC	RRI

3669.0	[m]	SWC	RRI
3690.0	[m]	SWC	RRI
3705.0	[m]	SWC	RRI
3720.0	[m]	SWC	RRI
3736.0	[m]	SWC	RRI
3741.0	[m]	SWC	RRI
3750.0	[m]	SWC	RRI
3765.5	[m]	SWC	RRI
3779.0	[m]	SWC	RRI
3781.0	[m]	SWC	RRI
3839.0	[m]	SWC	RRI
3877.0	[m]	SWC	RRI
3880.0	[m]	SWC	RRI
3908.5	[m]	SWC	RRI
3927.0	[m]	SWC	RRI
3937.5	[m]	SWC	RRI
3948.5	[m]	SWC	RRI
3960.0	[m]	SWC	RRI
3974.0	[m]	SWC	RRI
4016.5	[m]	SWC	RRI
4030.5	[m]	SWC	RRI
4055.0	[m]	SWC	RRI
4089.5	[m]	SWC	RRI
4114.5	[m]	SWC	RRI
4131.0	[m]	SWC	RRI
4157.0	[m]	SWC	RRI
4166.0	[m]	SWC	RRI
4180.0	[m]	SWC	RRI
4198.5	[m]	SWC	RRI
4218.0	[m]	SWC	RRI
4234.5	[m]	SWC	RRI
4242.5	[m]	SWC	RRI
4262.0	[m]	SWC	RRI
4280.0	[m]	SWC	RRI
4288.0	[m]	SWC	RRI
4306.0	[m]	SWC	RRI
4311.0	[m]	SWC	RRI
4317.0	[m]	SWC	RRI
4325.0	[m]	SWC	RRI
4336.5	[m]	SWC	RRI

4341.5	[m]	SWC	RRI
4352.0	[m]	SWC	RRI
4354.0	[m]	SWC	RRI
4357.0	[m]	SWC	RRI
4364.5	[m]	SWC	RRI
4365.3	[m]	C	WESTLAB
4365.8	[m]	C	RRI
4368.8	[m]	C	WESTLAB
4370.4	[m]	C	WESTLA
4372.3	[m]	C	WESTLA
4375.3	[m]	C	WESTLA
4375.9	[m]	C	RRI
4378.1	[m]	C	WESTLAB
4381.9	[m]	C	WESTLA
4386.0	[m]	C	WESTLA
4387.7	[m]	C	WESTLA
4388.7	[m]	C	WESTLA
4389.7	[m]	C	RRI
4389.9	[m]	C	WESTLAB
4390.4	[m]	C	RRI
4392.0	[m]	C	RRI
4396.0	[m]	C	RRI
4397.5	[m]	C	RRI
4399.7	[m]	C	RRI
4399.8	[m]	C	WESTLAB
4405.0	[m]	C	RRI
4405.0	[m]	SWC	RRI
4424.0	[m]	SWC	RRI
4446.0	[m]	SWC	RRI
4481.0	[m]	SWC	RRI
4494.5	[m]	SWC	RRI
4535.0	[m]	SWC	RRI
4548.0	[m]	SWC	RRI
4554.0	[m]	SWC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
134	NORDLAND GP

706	UTSIRA FM
842	HORDALAND GP
1150	SKADE FM
1199	NO FORMAL NAME
1428	GRID FM
1824	NO FORMAL NAME
2058	ROGALAND GP
2058	BALDER FM
2103	INTRA BALDER FM SS
2118	BALDER FM
2148	SELE FM
2178	LISTA FM
2236	HEIMDAL FM
2494	LISTA FM
2572	TY FM
2640	VÅLE FM
2655	SHETLAND GP
2655	EKOFISK FM
2731	TOR FM
2920	HOD FM
3506	BLODØKS FM
3551	HIDRA FM
3668	CROMER KNOLL GP
3668	RØDBY FM
3733	SOLA FM
3805	ÅSGARD FM
3878	VIKING GP
3878	DRAUPNE FM
4211	HEATHER FM
4356	VESTLAND GP
4356	HUGIN FM
4393	SLEIPNER FM
4555	ZECHSTEIN GP

Composite logs

Document name	Document format	Document size [MB]
308	pdf	0.88

Geochemical information

Document name	Document format	Document size [MB]
308_1	pdf	0.41
308_2	pdf	2.27

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

Document name	Document format	Document size [MB]
308_01_WDSS_General_Information	pdf	0.16
308_02_WDSS_completion_log	pdf	0.34

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

Document name	Document format	Document size [MB]
308_15_2_1_Completion_log	pdf	3.37
308_15_2_1_Completion_report	pdf	35.90

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL	400	3763
CST	1429	2748
CST	1429	2705
CST	2764	3520
CST	3537	3781
CST	3789	4114
CST	3844	4516
CST	4131	4354
CST	4357	4554
FDC CNL	653	4600
HDT	2736	4565
ISF SONIC	134	4599
RFT	4365	4417

RFT		4416	4419
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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	196.0	36	196.0	0.00	LOT
SURF.COND.	20	653.0	26	655.0	1.72	LOT
INTERM.	13 3/8	2737.0	17 1/2	2750.0	1.71	LOT
INTERM.	9 5/8	3770.0	12 1/4	3786.0	1.99	LOT
OPEN HOLE		4600.0	8 3/8	4600.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
250	1.08	36.0		waterbased	
650	1.11	32.0		waterbased	
1560	1.11	65.0		waterbased	
2180	1.20	65.0		waterbased	
2840	1.23	65.0		waterbased	
3160	1.25	65.0		waterbased	
3840	1.75	67.0		waterbased	
4150	1.89	59.0		waterbased	
4580	1.88	60.0		waterbased	