

**General information**

Wellbore name	11/5-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	11/5-1
Seismic location	NH0504 crossline 2620 & inline 1490
Production licence	317
Drilling operator	Norsk Hydro Petroleum AS
Drill permit	1149-L
Drilling facility	POLAR PIONEER
Drilling days	37
Entered date	07.08.2007
Completed date	12.09.2007
Release date	12.09.2009
Publication date	12.09.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	176.0
Total depth (MD) [m RKB]	1950.0
Final vertical depth (TVD) [m RKB]	1935.0
Maximum inclination [°]	17.3
Bottom hole temperature [°C]	64
Oldest penetrated age	SILURIAN
Oldest penetrated formation	BASEMENT
Geodetic datum	ED50
NS degrees	57° 36' 46.81" N
EW degrees	6° 36' 25.77" E
NS UTM [m]	6388291.50
EW UTM [m]	357048.96
UTM zone	32
NPDID wellbore	5596



Wellbore history

General

Well 11/5-1 was drilled to test the Loshavn prospect, a 3-way dip closure situated on the southern flank of the Farsund Basin. The primary objectives were to test the hydrocarbon potential in shallow marine sandstones of the Late to Middle Jurassic Sandnes and Bryne Formations. Secondary objectives were to test the source rock potential of the Late Jurassic Tau Formation; and to test the reservoir and hydrocarbon potential of the Permian Rotliegendes sandstones. The TD criterion was to drill 600 m below Top Rotliegendes.

Operations and results

Wildcat well 11/5-1 was spudded with the semi-submersible installation Polar Pioneer on 7 August 2007 and drilled to TD at 1950 m into Silurian basement. The well was spudded twice, with the second spud ca 30 m north-west of the original spud position. The well was drilled without much technical problems, but a significant deviation from vertical started below 1375 m. The deviation persisted down to TD, with maximum deviation of 17.3 deg at 1837 m, resulting in a TVD at TD that was 15 m short compared to measured TD. The well was drilled with sea water down to 415 m and with Formate polymer mud from 415 m to TD.

The Late Jurassic Sandnes formation was drilled from 1276 m to 1322m. No Middle Jurassic (Bryne Formation) was present at the well location and the Permian Rotliegendes Sands were drilled from 1321 m to 1920 m. From 1920 m to TD biostratigraphic analyses indicate rocks of Silurian age. The Sandnes Formation was found to be an overall heterolithic transgressive unit of 45 m at the well location. It consisted of a lower shaly part with lower porosity, and an upper more sandy and porous. The upper part was slightly thicker than the lower. The Rotliegendes Group is a more than 500 m thick unit, very heterolithic, mainly composed of interbedded claystones, sandstones, conglomerates and siltstones with traces of limestones. Porosities were very low and wire line pressure tests proved them to be tight. An additional sandstone interval was drilled at the base of Cromer Knoll Group, from 1073 m to 1088 m, the ?Sauda Sandstone Unit?. All reservoir sections were water bearing. No shows were recorded in the well.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 12 September 2007 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
420.00	1950.00

Cuttings available for sampling?	YES
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**Palynological slides at the Norwegian Offshore Directorate**

Sample depth	Depth unit	Sample type	Laboratory
430.0	[m]	DC	P-PARLOU
450.0	[m]	DC	P-PARL
470.0	[m]	DC	P-PARL
490.0	[m]	DC	P-PARL
510.0	[m]	DC	P-PARL
530.0	[m]	DC	P-PARL
550.0	[m]	DC	P-PARL
570.0	[m]	DC	P-PARL
590.0	[m]	DC	P-PARL
610.0	[m]	DC	P-PARL
630.0	[m]	DC	P-PARL
650.0	[m]	DC	P-PARL
670.0	[m]	DC	P-PARL
690.0	[m]	DC	P-PARL
710.0	[m]	DC	P-PARL
730.0	[m]	DC	P-PARL
750.0	[m]	DC	P-PARL
770.0	[m]	DC	P-PARL
790.0	[m]	DC	P-PARL
810.0	[m]	DC	P-PARL
830.0	[m]	DC	P-PARL
850.0	[m]	DC	P-PARL
870.0	[m]	DC	P-PARL
890.0	[m]	DC	P-PARL
910.0	[m]	DC	P-PARL
930.0	[m]	DC	P-PARL
950.0	[m]	DC	P-PARL
970.0	[m]	DC	P-PARL
990.0	[m]	DC	P-PARL
1010.0	[m]	DC	P-PARL
1030.0	[m]	DC	P-PARL
1050.0	[m]	DC	P-PARL
1070.0	[m]	DC	P-PARL
1083.0	[m]	SWC	P-PARL
1089.0	[m]	DC	P-PARL
1092.0	[m]	DC	P-PARL
1095.0	[m]	DC	P-PARL



1098.0	[m]	DC	P-PARL
1101.0	[m]	DC	P-PARL
1104.0	[m]	DC	P-PARL
1107.0	[m]	SWC	P-PARL
1110.0	[m]	DC	P-PARL
1113.0	[m]	SWC	P-PARL
1116.0	[m]	DC	P-PARL
1117.5	[m]	SWC	P-PARL
1123.0	[m]	SWC	P-PARL
1125.0	[m]	SWC	P-PARL
1127.5	[m]	SWC	P-PARL
1131.0	[m]	DC	P-PARL
1134.0	[m]	DC	P-PARL
1137.0	[m]	SWC	P-PARL
1140.0	[m]	SWC	P-PARL
1146.0	[m]	DC	P-PARL
1152.0	[m]	DC	P-PARL
1155.0	[m]	DC	P-PARL
1158.0	[m]	DC	P-PARL
1161.0	[m]	DC	P-PARL
1164.0	[m]	DC	P-PARL
1167.0	[m]	DC	P-PARL
1170.0	[m]	DC	P-PARL
1173.0	[m]	DC	P-PARL
1176.0	[m]	DC	P-PARL
1181.0	[m]	SWC	P-PARL
1185.0	[m]	DC	P-PARL
1188.0	[m]	DC	P-PARL
1191.0	[m]	DC	P-PARL
1194.0	[m]	DC	P-PARL
1197.0	[m]	DC	P-PARL
1200.0	[m]	DC	P-PARL
1203.0	[m]	DC	P-PARL
1206.0	[m]	DC	P-PARL
1210.5	[m]	SWC	P-PARL
1212.0	[m]	DC	P-PARL
1215.0	[m]	DC	P-PARL
1219.0	[m]	DC	P-PARL
1221.0	[m]	DC	P-PARL
1224.0	[m]	DC	P-PARL



1228.5	[m]	SWC	P-PARL
1230.0	[m]	DC	P-PARL
1233.0	[m]	DC	P-PARL
1236.0	[m]	DC	P-PARL
1239.0	[m]	DC	P-PARL
1242.0	[m]	DC	P-PARL
1245.0	[m]	DC	P-PARL
1247.5	[m]	SWC	P-PARL
1251.0	[m]	DC	P-PARL
1255.5	[m]	SWC	P-PARL
1257.0	[m]	DC	P-PARL
1260.0	[m]	DC	P-PARL
1262.0	[m]	SWC	P-PARL
1265.5	[m]	SWC	P-PARL
1268.5	[m]	SWC	P-PARL
1272.5	[m]	SWC	P-PARL
1275.0	[m]	DC	P-PARL
1278.0	[m]	DC	P-PARL
1284.0	[m]	DC	P-PARL
1289.0	[m]	SWC	P-PARL
1296.0	[m]	DC	P-PARL
1299.0	[m]	DC	P-PARL
1302.0	[m]	DC	P-PARL
1305.0	[m]	DC	P-PARL
1308.0	[m]	DC	P-PARL
1312.0	[m]	SWC	P-PARL
1314.0	[m]	DC	P-PARL
1317.0	[m]	SWC	P-PARL
1319.0	[m]	SWC	P-PARL
1329.5	[m]	SWC	P-PARL
1332.5	[m]	SWC	P-PARL
1336.0	[m]	SWC	P-PARL
1338.5	[m]	SWC	P-PARL
1354.5	[m]	SWC	P-PARL
1374.0	[m]	DC	P-PARL
1389.0	[m]	DC	P-PARL
1405.5	[m]	SWC	P-PARL
1419.0	[m]	DC	P-PARL
1434.0	[m]	DC	P-PARL
1449.0	[m]	DC	P-PARL



1464.0 [m]	DC	P-PARL
1479.0 [m]	DC	P-PARL
1494.0 [m]	DC	P-PARL
1509.0 [m]	DC	P-PARL
1524.0 [m]	DC	P-PARL
1539.0 [m]	DC	P-PARL
1554.0 [m]	DC	P-PARL
1569.0 [m]	DC	P-PARL
1584.0 [m]	DC	P-PARL
1599.0 [m]	DC	P-PARL
1617.0 [m]	DC	P-PARL
1629.0 [m]	DC	P-PARL
1647.0 [m]	DC	P-PARL
1659.0 [m]	DC	P-PARL
1674.0 [m]	DC	P-PARL
1689.0 [m]	DC	P-PARL
1704.0 [m]	DC	P-PARL
1719.0 [m]	DC	P-PARL
1734.0 [m]	DC	P-PARL
1750.5 [m]	SWC	P-PARL
1764.0 [m]	DC	P-PARL
1779.0 [m]	DC	P-PARL
1801.0 [m]	SWC	P-PARL
1824.0 [m]	DC	P-PARL
1839.0 [m]	DC	P-PARL
1854.0 [m]	DC	P-PARL
1859.0 [m]	SWC	P-PARL
1869.0 [m]	SWC	P-PARL
1869.0 [m]	DC	P-PARL
1884.0 [m]	SWC	P-PARL
1910.5 [m]	SWC	P-PARL
1920.0 [m]	DC	P-PARL
1920.5 [m]	SWC	P-PARL
1950.0 [m]	DC	P-PARL

Lithostratigraphy

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



355	SHETLAND GP
382	CROMER KNOLL GP
420	SOLA FM
717	ÅSGARD FM
1086	BOKNFJORD GP
1086	SAUDA FM
1107	TAU FM
1141	EGERSUND FM
1276	VESTLAND GP
1276	SANDNES FM
1322	ROTLIEGEND GP
1920	BASEMENT

Composite logs

Document name	Document format	Document size [MB]
5596	pdf	0.36

Logs

Log type	Log top depth [m]	Log bottom depth [m]
MDT GR	1077	1862
MSCT GR	1077	1347
MSCT GR	1077	1920
MWD-DIR APWD GR RES SON	199	1179
MWD-DIR APWD GR RES SON RAB GEOV	1179	1950
SP PEX TLD MCFL HGNS ECS DSI	1038	1952
VSP	1880	1940

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	263.0	36	267.0	0.00	LOT
SURF.COND.	20	410.0	26	415.0	1.58	LOT
INTERM.	9 5/8	1063.0	12 1/4	1073.0	2.32	LOT





OPEN HOLE		1950.0	8 1/2	1950.0	0.00	LOT
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Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
263	1.04			WATER BASED	
560	1.20	14.0		WATER BASED	
863	1.24	16.0		WATER BASED	
1073	1.27	16.0		WATER BASED	