

**General information**

Wellbore name	7321/9-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	BARENTS SEA
Well name	7321/9-1
Seismic location	SBB - 86 - 1198 SP 265
Production licence	141
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	594-L
Drilling facility	ROSS RIG (2)
Drilling days	35
Entered date	25.10.1988
Completed date	28.11.1988
Release date	28.11.1990
Publication date	06.01.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	23.5
Water depth [m]	459.0
Total depth (MD) [m RKB]	1800.0
Final vertical depth (TVD) [m RKB]	1799.0
Maximum inclination [°]	3.8
Bottom hole temperature [°C]	44
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SNADD FM
Geodetic datum	ED50
NS degrees	73° 16' 7.34" N
EW degrees	21° 41' 0.68" E
NS UTM [m]	8138267.66
EW UTM [m]	329361.05
UTM zone	35
NPDID wellbore	1339



Wellbore history

General

Well 7321/9-1 was drilled on a rotated fault block on the southern margin of the Fingerdjuet Sub-basin in the Bjørnøya East area. The main objective was to test the hydrocarbon potential of the structure, with Late Triassic to Middle Jurassic sandstones as primary target horizon with Early Cretaceous and Triassic (Snadd Formation) sandstones as secondary targets. The wildcat well should also gather as much geological information as possible regarding reservoir, source and cap rock intervals. The well was positioned so that it should avoid faults that could disturb the seismic tie and at the same time would leave a minimum of untested potential up-dip from the well location.

Operations and results

Wildcat well 7321/9-1 was spudded with the semi-submersible rig Ross Rig 25 October 1988 and drilled to TD at 1800 m in the Late Triassic Snadd Formation. Drilling proceeded to TD without any significant problems, but on the way out of the hole the string got stuck at 1501 m. After several unsuccessful attempts, the string was shot off at 1377 m. As a result of this, and because LWD logs were run only to 1507 m (Baroid "Recorded Lithology Logging" -tool, RLL), the hole below 1507 m was not logged. There were also mechanical problems during plugging. In total as much as 40% of the rig time was thus classified as down time. The well was drilled with seawater and hi-vis sweeps down to 680 m and with KCl / polymer mud from 680 m to TD. There was no shallow gas in the hole.

The secondary target, a prognosed sandstone above the Barremian unconformity, was not developed. Instead of a reservoir sandstone a new possible source rock with high organic content was encountered in the Barremian interval from 961 m to 986 m. The primary target reservoir interval (Stø, Nordmela and Fruholmen Formations) was penetrated at 1378.8 m. Approx. 116 m of reservoir rock was found with 35.8 m net sand. The reservoirs were water bearing with only weak indications of hydrocarbons. The prognosed Triassic target in the Snadd Formation did not contain hydrocarbon shows nor significant gas. On this basis it was interpreted as water bearing.

Shows were recorded on cuttings from claystones in several intervals from 920 m down to 1500 m. Shows were also recorded in sandstones in the cores in the interval 1373 m to 1398 m and on cuttings from the interval 1730 m to 1750 m.

Two cores were cut in the interval 1365 - 1398.2 m, through lower part of the Hekkingen Formation, throughout the Fuglen Formation and most of the Stø Formation. Nineteen attempts of RFT pressure testing were done with only one good measurement at 1359 m. The formation pressure here was measured to be 0.83 SG. No fluid samples were taken. From approximately 1000 m to 670 m the quality of the MSFL and sonic logs was bad due to severe washout of the hole.

The well was permanently abandoned on 28 November 1988 as dry with minor shows in the Cretaceous and Jurassic.

Testing

No drill stem test was performed

**Cuttings at the Norwegian Offshore Directorate**

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
690.00	1800.00

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	1365.0	1384.1	[m]
2	1385.2	1398.2	[m]

Total core sample length [m]	32.1
Cores available for sampling?	YES

Core photos

1365-1370m



1370-1375m



1375-1380m



1380-1384m



1385-1390m



1390-1395m



1395-1398m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
547.0	[m]	SWC	HYDRO
552.0	[m]	SWC	HYDRO
557.0	[m]	SWC	HYDRO
560.0	[m]	SWC	HYDRO



563.0 [m]	SWC	HYDRO
566.0 [m]	SWC	HYDRO
590.0 [m]	SWC	HYDRO
608.0 [m]	SWC	HYDRO
632.0 [m]	SWC	HYDRO
650.0 [m]	SWC	HYDRO
674.0 [m]	SWC	HYDRO
690.0 [m]	SWC	HYDRO
710.0 [m]	SWC	HYDRO
730.0 [m]	DC	GEAR
752.0 [m]	SWC	HYDRO
770.0 [m]	DC	GEAR
800.0 [m]	SWC	HYDRO
830.0 [m]	DC	GEAR
850.0 [m]	SWC	HYDRO
860.0 [m]	SWC	HYDRO
870.0 [m]	SWC	HYDRO
880.0 [m]	DC	GEAR
890.0 [m]	SWC	HYDRO
900.0 [m]	SWC	HYDRO
900.0 [m]	DC	GEAR
920.0 [m]	DC	GEAR
925.0 [m]	SWC	HYDRO
940.0 [m]	DC	GEAR
950.0 [m]	SWC	HYDRO
955.0 [m]	SWC	HYDRO
960.0 [m]	SWC	HYDRO
960.0 [m]	DC	GEAR
962.5 [m]	SWC	HYDRO
965.0 [m]	SWC	HYDRO
967.0 [m]	SWC	HYDRO
970.0 [m]	SWC	HYDRO
974.0 [m]	SWC	HYDRO
975.5 [m]	SWC	HYDRO
977.0 [m]	SWC	HYDRO
979.0 [m]	SWC	HYDRO
980.0 [m]	DC	GEARHART
982.0 [m]	SWC	HYDRO
984.0 [m]	SWC	HYDRO
985.0 [m]	SWC	HYDRO



987.0 [m]	SWC	HYDRO
990.0 [m]	SWC	HYDRO
995.0 [m]	SWC	HYDRO
1000.0 [m]	DC	GEARHART
1000.0 [m]	SWC	HYDRO
1020.0 [m]	DC	GEARHART
1040.0 [m]	DC	GEARHA
1050.0 [m]	SWC	HYDRO
1060.0 [m]	DC	GEARHART
1080.0 [m]	DC	GEARHA
1100.0 [m]	DC	GEARHA
1120.0 [m]	DC	GEARHA
1140.0 [m]	DC	GEARHA
1150.0 [m]	SWC	HYDRO
1160.0 [m]	DC	GEARHART
1180.0 [m]	DC	GEARHA
1200.0 [m]	DC	GEARHA
1200.0 [m]	SWC	HYDRO
1220.0 [m]	DC	GEARHART
1240.0 [m]	DC	GEARHA
1250.0 [m]	SWC	HYDRO
1260.0 [m]	DC	GEARHART
1280.0 [m]	DC	GEARHA
1290.0 [m]	SWC	HYDRO
1300.0 [m]	SWC	HYDRO
1300.0 [m]	DC	GEARHART
1302.5 [m]	SWC	HYDRO
1307.0 [m]	SWC	HYDRO
1308.0 [m]	SWC	HYDRO
1311.0 [m]	SWC	HYDRO
1312.0 [m]	DC	GEARHART
1313.0 [m]	SWC	HYDRO
1315.0 [m]	SWC	HYDRO
1316.0 [m]	SWC	HYDRO
1320.0 [m]	SWC	HYDRO
1320.0 [m]	DC	GEARHART
1322.0 [m]	SWC	HYDRO
1325.0 [m]	DC	GEARHART
1325.0 [m]	SWC	HYDRO
1328.0 [m]	SWC	HYDRO



1330.0 [m]	SWC	HYDRO
1335.0 [m]	DC	GEARHART
1336.0 [m]	SWC	HYDRO
1339.0 [m]	SWC	HYDRO
1344.0 [m]	SWC	HYDRO
1345.0 [m]	DC	GEARHART
1347.5 [m]	SWC	HYDRO
1350.0 [m]	SWC	HYDRO
1355.0 [m]	DC	GEARHART
1355.0 [m]	SWC	HYDRO
1360.0 [m]	SWC	HYDRO
1362.0 [m]	SWC	HYDRO
1365.0 [m]	DC	GEARHART
1367.9 [m]	C	OD
1375.0 [m]	DC	GEARHART
1377.5 [m]	C	OD
1378.8 [m]	C	ICHRON
1379.6 [m]	C	OD
1381.6 [m]	C	OD
1382.5 [m]	C	ICHRON
1385.0 [m]	DC	GEARHART
1390.8 [m]	C	OD
1391.7 [m]	C	ICHRON
1395.0 [m]	DC	GEARHART
1395.7 [m]	C	OD
1398.0 [m]	C	OD
1405.0 [m]	DC	GEARHART
1415.0 [m]	DC	GEARHA
1425.0 [m]	DC	GEARHA
1435.0 [m]	DC	GEARHA
1445.0 [m]	DC	GEARHA
1455.0 [m]	DC	GEARHA
1465.0 [m]	DC	GEARHA
1475.0 [m]	DC	GEARHA
1485.0 [m]	DC	GEARHA
1495.0 [m]	DC	GEARHA
1505.0 [m]	DC	GEARHA
1515.0 [m]	DC	GEARHA
1525.0 [m]	DC	GEARHA
1535.0 [m]	DC	GEARHA



1545.0	[m]	DC	GEARHA
1557.0	[m]	DC	GEARHA
1567.0	[m]	DC	GEARHA
1587.0	[m]	DC	GEARHA
1600.0	[m]	DC	GEARHA
1610.0	[m]	DC	GEARHA
1620.0	[m]	DC	GEARHA
1630.0	[m]	DC	GEARHA
1640.0	[m]	DC	GEARHA
1650.0	[m]	DC	GEARHA
1660.0	[m]	DC	GEARHA
1670.0	[m]	DC	GEARHA
1680.0	[m]	DC	GEARHA
1690.0	[m]	DC	GEARHA
1700.0	[m]	DC	GEARHA
1710.0	[m]	DC	GEARHA
1720.0	[m]	DC	GEARHA
1730.0	[m]	DC	GEARHA
1740.0	[m]	DC	GEARHA
1750.0	[m]	DC	GEARHA
1760.0	[m]	DC	GEARHA
1770.0	[m]	DC	GEARHA
1780.0	[m]	DC	GEARHA
1792.0	[m]	DC	GEARHA
1797.0	[m]	DC	GEARHA

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
483	NORDLAND GP
558	ADVENTDALEN GP
558	KOLMULE FM
892	KOLJE FM
986	KNURR FM
1317	HEKKINGEN FM
1367	FUGLEN FM
1379	KAPP TOSCANA GP
1379	STØ FM
1417	NORDMELA FM



1424	FRUHOLMEN FM
1572	SNADD FM

Composite logs

Document name	Document format	Document size [MB]
1339	pdf	0.18

Geochemical information

Document name	Document format	Document size [MB]
1339_1	pdf	2.39
1339_2	pdf	4.29

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

Document name	Document format	Document size [MB]
1339_01_WDSS_General_Information	pdf	0.21
1339_02_WDSS_completion_log	pdf	0.15

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

Document name	Document format	Document size [MB]
1339_7321_9_1_COMPLETION_REPORT_AND_LOG	pdf	11.59

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CST	547	677
CST	690	1362
DIL LSS SP GR MSFL	540	1371
LDL CNL NGL CAL GR	658	1371
MWD - GR RES DIR	547	1362





MWD - RLL	1351	1506
MWD - RLL EWR	1351	1496
RFT	937	1365
SHDT	663	1366
VSP	483	1365

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	543.0	36	546.0	0.00	LOT
INTERM.	13 3/8	668.0	17 1/2	680.0	1.38	LOT
OPEN HOLE		1800.0	12 1/4	1800.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
500	1.14	15.0	7.0	WATER BASED	29.11.1988
529	1.05			WATER BASED	31.10.1988
546	1.05			WATER BASED	31.10.1988
562	1.05			WATER BASED	31.10.1988
622	1.14	15.0	7.0	WATER BASED	24.11.1988
680	1.05			WATER BASED	01.11.1988
680	1.05			WATER BASED	02.11.1988
680	1.05			WATER BASED	31.10.1988
680	1.08	13.0	6.0	WATER BASED	03.11.1988
1008	1.14	14.0	7.0	WATER BASED	04.11.1988
1213	1.14	16.0	7.0	WATER BASED	07.11.1988
1330	1.14	16.0	7.0	WATER BASED	07.11.1988
1365	1.14	16.0	7.0	WATER BASED	07.11.1988
1387	1.14	17.0	10.0	WATER BASED	10.11.1988
1398	1.14	17.0	9.0	WATER BASED	11.11.1988
1427	1.14	17.0	7.0	WATER BASED	14.11.1988
1550	1.14	16.0	11.0	WATER BASED	15.11.1988
1723	1.14	18.0	8.0	WATER BASED	15.11.1988
1800	1.14	18.0	8.0	WATER BASED	18.11.1988
1800	1.14	18.0	8.0	WATER BASED	15.11.1988
1800	1.14	17.0	8.0	WATER BASED	15.11.1988



1800	1.14	18.0	8.0	WATER BASED	16.11.1988
1800	1.14	16.0	7.0	WATER BASED	21.11.1988
1800	1.11	15.0	7.0	WATER BASED	21.11.1988
1800	1.11	15.0	7.0	WATER BASED	22.11.1988

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
1379.50	[m]
1380.75	[m]
1388.50	[m]
1397.75	[m]

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]
1339 Formation pressure (Formasjonstrykk)	PDF	0.22

