

Well no : 7224/07-01

Operator : STATOIL

Coordinates : 72 17 06.34 N
24 18 2.98 EUTM coord. : 8023008 N
408353 E

Licence no : 137

Permit no : 575

Rig : ROSS RIG

Rig type : SEMI-SUB.

Contractor : ROSS DRILLING CO. A/S

Bottom hole temperature : 101 deg.C

Elev. KB : 23 M

Spud. date : 88.04.13

Water depth : 268 M

Compl. date : 88.06.19

Total depth : 3067 M

Spud. class : WILDCAT

Form. at TD : TRIASSIC

Compl. class : P&A. SHOWS

Prod. form :

Seisloca : ST 8611 - 332 SP. 2480

LICENSEES

10.000000 BP PETROLEUM DEV. OF NORWAY A.S
 15.000000 ESSO NORGE A.S
 10.000000 NORSK HYDRO PRODUKSJON A.S
 5.000000 SAGA PETROLEUM A.S.
 10.000000 A/S NORSKE SHELL
 50.000000 DEN NORSKE STATS OLJESELSKAP A.S

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm ³
CONDUCTOR	30	354.0	36	531.0	.
SURF.COND.	20	651.0	26	664.0	1.69
INTERM.	13 3/8	1919.0	17 1/2	1945.0	1.61
INTERM.	9 5/8	2644.0	12 1/4	2704.0	1.84

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	898.0 - 907.5	9.2	96.8	
2	907.5 - 926.0	18.0	97.3	
3	926.0 - 932.5	4.9	75.4	
4	1725.0 - 1734.0	7.5	83.3	
5	1734.0 - 1740.0	6.0	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weighth g/cm ³	Viscosity	Mud type
660.000	1.03	2000.0	WATER BASED
705.000	1.33	5000.0	WATER BASED
1646.000	1.25	1300.0	WATER BASED
1979.000	1.30	3000.0	WATER BASED
2337.000	1.21	2300.0	WATER BASED

2380.000	1.32	2500.0	WATER BASED
2441.000	1.35	2900.0	WATER BASED
2471.000	1.36	2400.0	WATER BASED
2498.000	1.62	1900.0	WATER BASED
2540.000	1.40	2800.0	WATER BASED
2551.000	1.62	2000.0	WATER BASED
2621.000	1.50	3200.0	WATER BASED
2762.000	1.58	2300.0	WATER BASED
2794.000	1.63	2200.0	WATER BASED
3067.000	1.62	2200.0	WATER BASED

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	665-3067	600
Wet Samples	665-3067	420

SHALLOW GAS

Interval REMARKS
below KB

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIL LSS MSFL GR	355.000 - 3068.000		X	
DIL BHC GR	355.000 - 660.000	X		
DIL LSS MSFL GR	652.000 - 964.000	X		
DIL LSS MSFL GR	950.000 - 1935.000	X		
DIL LSS MSFL GR	1920.000 - 2659.000	X		
DIL LSS MSFL GR	2646.000 - 3068.000	X		
LDL CNL NGS GR	354.000 - 3070.000			X
LDL GR	354.000 - 663.000	X		
LDL CNL NGS	652.000 - 961.000	X		
LDL CNL NGS	950.000 - 1936.000	X		
LDL CNL NGS MERGE	1920.000 - 2660.000	X		
LDL CNL NGS	1920.000 - 2597.000	X		
LDL CNL NGS	2646.000 - 3070.000	X		
MWD	305.000 - 3054.700			X
SHDT GR	652.000 - 1932.000	X		
SHDT GR	1920.000 - 2660.000	X		
SHDT GR	2646.000 - 3068.000	X		
NGS	652.000 - 961.000	X	X	
NGS	950.000 - 1936.000	X	X	
NGS MERGE	1920.000 - 2660.000	X	X	
NGS	1920.000 - 2597.000	X	X	
NGS PLAYBACK	2646.000 - 3070.000	X	X	
RFT HP GR	902.000 - 945.000			
RFT HP	1679.000 - 1936.000			

RFT HP GR	1984.000 - 2661.000		
RFT HP	2702.000 - 2864.000	X	
PRESS. EVALUATION	292.000 - 3067.000	1:1000	
CBL VD GR	292.000 - 1920.000	X	X
CBL VDL GR	292.000 - 2646.000		X
MUD	292.000 - 3067.000		X
VELOCITY LOG	662.000 - 3070.000	1:1000	X
(Synthetic Seismogram, 10 cm/s			3 stk)
(V.S.P., Zero Offset V.S.P., 10cm/s			5 stk)
(Summed data, 30 cm/s			2 stk)
(Acoustic Log Calibration, 10 cm/s			1 stk)

BHT:101 C

TD:3067 M

MAIN OPERATIONS FOR WELL: 722407 01

Main operation: DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	960	16,0	1,45
BOP/WELLHEAD EQ	2640	44,0	4,00
CASING	8190	136,5	12,40
CIRC/COND	2610	43,5	3,95
DRILL	34950	582,5	52,91
HOLE OPEN	2730	45,5	4,13
OTHER	150	2,5	0,23
PRESS DETECTION	390	6,5	0,59
REAM	900	15,0	1,36
SURVEY	240	4,0	0,36
TRIP	12300	205,0	18,62
Total	66060	1101,0	100,00

Main operation: FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC SAMPLES	750	12,5	4,21
CIRC/COND	990	16,5	5,56
CORE	2610	43,5	14,65
LOG	9090	151,5	51,01
RFT/FIT	1470	24,5	8,25
TRIP	2910	48,5	16,33
Total	17820	297,0	100,00

Main operation: INTERRUPTION

Sub operations	Minutes	Hrs	% of total
LOST CIRC	1140	19,0	25,50
MAINTAIN/REP	1590	26,5	35,57
OTHER	360	6,0	8,05
WAIT	420	7,0	9,40
WELL CONTROL	960	16,0	21,48
Total	4470	74,5	100,00

Main operation: MOVING

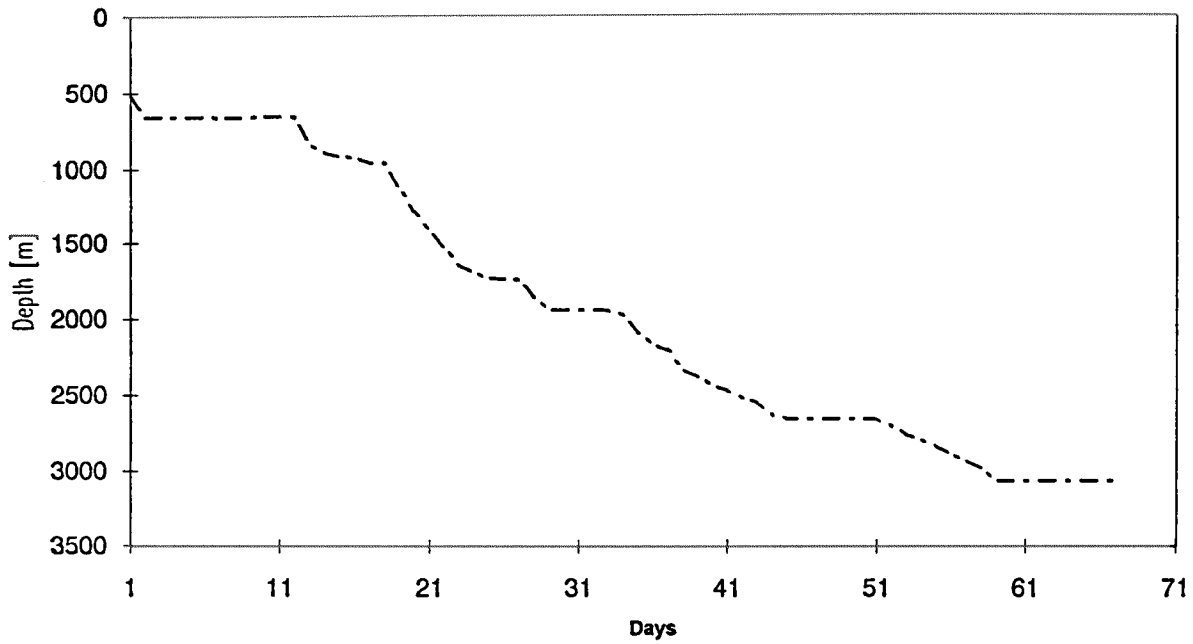
Sub operations	Minutes	Hrs	% of total
ANCHOR	1170	19,5	36,79
TRANSIT	2010	33,5	63,21
Total	3180	53,0	100,00

Main operation: PLUG & ABANDON

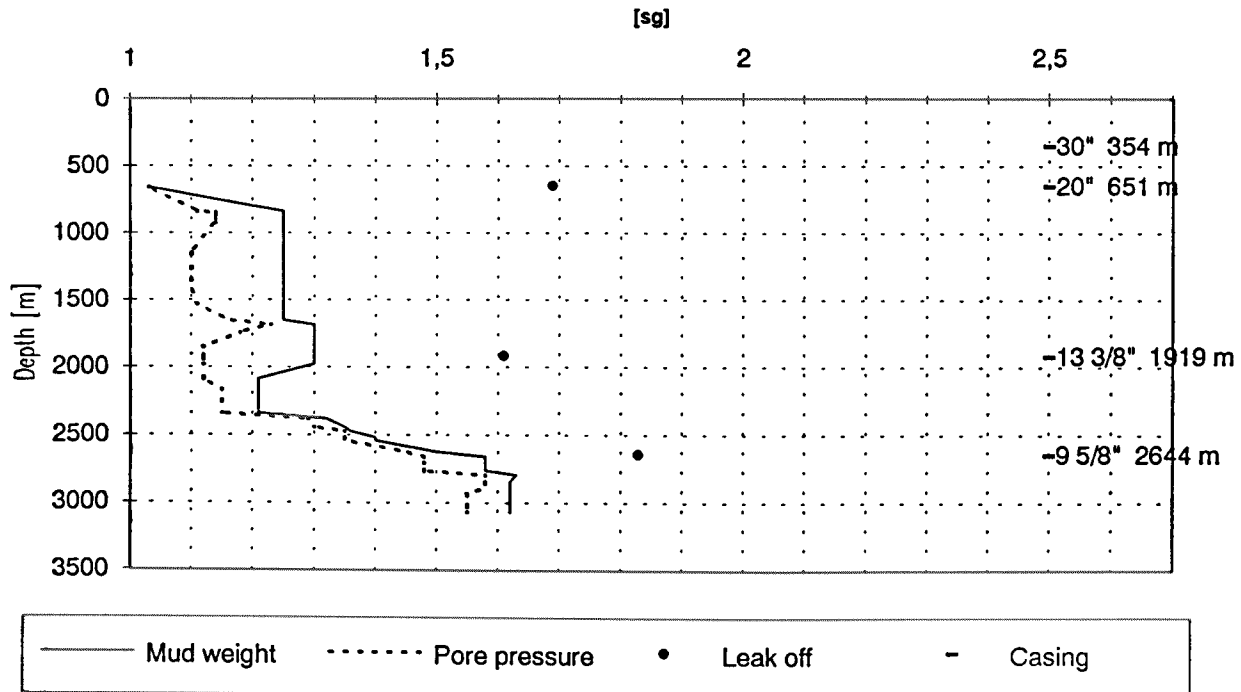
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	390	6,5	4,98
CIRC/COND	900	15,0	11,49
CUT	420	7,0	5,36
EQUIP RECOVERY	1470	24,5	18,77
MECHANICAL PLUG	360	6,0	4,60
PERFORATE	570	9,5	7,28
TRIP	3720	62,0	47,51
Total	7830	130,5	100,00

Total time used 1656 hrs (69 days)

Depth v.s. time plot for well: 722407 01



Composite plot for well: 722407 01



Well History 7224/7-1

GENERAL:

Well 7224/7-1 was drilled in the Key Area II at the Herta Dome structure in the Barents Sea. The hole was drilled on a dome structure. The structure has closure on all pre Oligocene levels.

The well was designed to test sandstone reservoirs of Early Jurassic/Late Triassic and Early Triassic ages and carbonaceous rocks of Permian age. In addition, the well was to test the geophysical and structural interpretation, and improve the geological, geochemical and paleontological understanding of this new area in the Barents Sea.

The well was planned to be drilled to the total depth of 4400 m, into Permian carbonates. However, as the result from the well 7226/11-1 turned out to be negative regarding the Permian rocks, it was decided to reduce the TD to 3200 m.

OPERATIONS:

Wildcat well 7224/7-1 was spudded 13 April 1988 by Ross Drilling A/S semi-submersible rig Ross Rig and completed 19 June 1988 at a depth of 3067 m in Triassic rocks.

There was no shallow gas in the hole. Drilling proceeded without any significant problem down to 2352 m where gas flowed in from the formation. During further drilling the pore pressure increased to 1.48 SG in the formation at 2621 m, and Statoil decided to stop drilling and set casing at 2658 m RKB. 9 5/8" casing was set at 2644 m. Further drilling to T.D. went without significant problems.

Top Middle Jurassic/Early Triassic sandstone came in at 894 m, but contained only weak indications of hydrocarbons. Logs and RFT tests showed that the sandstones were water-bearing. Bottom Anisian sandstone was not developed as much as expected. Bottom Smithian sandstone, prognosed at 2730 m, was not encountered as expected. After expected reservoir level being penetrated without encountering reservoir sand, Statoil requested to stop further drilling. The hole was drilled to 3067 m.

During drilling Statoil reported increasing pressure and relatively high connection gas readings. Repeated attempts of getting RFT pressure points and fluid samples were unsuccessful due to tight formation. RFT-fluid sample of the gas was only performed at 1730 m in the Triassic sequence.

The well was plugged and abandoned with shows.

TESTING:

No DST tests were performed in the well.

GEOLOGICAL TOPS

WELL: 7224/7-1

Depth m (RKB)

<i>Nordland Group</i>	292.0
<i>Sotbakken Group</i>	387.5
<i>Torsk Fm.</i>	387.5
<i>Nordvestbanken Group</i>	402.0
<i>Kolmule Fm.</i>	402.0
<i>Knurr Fm.</i>	760.5
<i>Teistengrunnen Group</i>	791.5
<i>Hekkingen Fm.</i>	791.5
<i>Fuglen Fm.</i>	861.0
<i>Realgrunnen Group</i>	894.0
<i>Stø Fm.</i>	894.0
<i>Nordmela Fm.</i>	919.5
<i>Fruholmen Fm.</i>	931.5
<i>Ingøydjupet Group</i>	975.0
<i>Snadd Fm.</i>	975.0
<i>Kobbe Fm.</i>	1642.0
<i>Klappmyss Fm.</i>	2222.0
<i>Havert Fm.</i>	2608.0
<i>T.D.</i>	3067.0