

Well no : 7321/07-01

Operator : MOBIL

Coordinates : 73 25 55.57 N
21 04 31.75 EUTM coord. : 8158731 N
693078 E

Licence no : 140

Permit no : 582

Rig : ROSS RIG

Rig type : SEMI-SUB.

Contractor : ROSS DRILLING CO. A/S

Bottom hole temperature : 99 deg.C

Elev. KB : 23 M

Spud. date : 88.06.26

Water depth : 475 M

Compl. date : 88.10.22

Total depth : 3550 M

Spud. class : WILDCAT

Form. at TD : E.TRIASSIC

Compl. class : P&A. DRY HOLE

Prod. form :

Seisloca : D-16-84 SP 3410

LICENSEES

 15.000000 NORSKE CONOCO A/S
 35.000000 MOBIL DEVELOPMENT NORWAY A.S.
 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/cm3
CONDUCTOR	30	609.0	36	626.0	.
SURF.COND.	20	970.0	26	982.0	1.31
INTERM.	13 3/8	1425.0	17 1/2	1435.0	1.50

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1907.0 - 1909.9	2.9	100.0	
2	2003.0 - 2004.0	1.0	100.0	
3	2004.0 - 2007.5	3.5	100.0	
4	2386.0 - 2394.7	8.7	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm3	Viscosity	Mud type
571.000	1.03	0.0	WATER BASED
1069.000	1.07	10.0	WATER BASED
1083.000	1.09	14.0	WATER BASED
1214.000	1.08	11.0	WATER BASED
1246.000	1.09	11.0	WATER BASED
1508.000	1.08	11.0	WATER BASED
1533.000	1.07	10.0	WATER BASED
1533.000	1.04	7.0	WATER BASED
1537.000	1.06	8.0	WATER BASED
1570.000	1.07	8.0	WATER BASED

1586.000	1.04	6.0	WATER BASED
1586.000	1.03	5.0	WATER BASED
1606.000	1.04	5.0	WATER BASED
1606.000	1.03	3.0	WATER BASED
1644.000	1.04	4.0	WATER BASED
1664.000	1.02	0.0	WATER BASED
1684.000	1.04	4.0	WATER BASED
1684.000	1.03	5.0	WATER BASED
1704.000	1.02	0.0	WATER BASED
1810.000	1.04	6.0	WATER BASED
1855.000	1.07	8.0	WATER BASED
1885.000	1.06	6.0	WATER BASED
1885.000	1.07	7.0	WATER BASED
2063.000	1.14	10.0	WATER BASED
2063.000	1.13	10.0	WATER BASED
2684.000	1.14	9.0	WATER BASED
2730.000	1.13	10.0	WATER BASED
2750.000	1.14	9.0	WATER BASED
3457.000	1.13	10.0	WATER BASED
3527.000	1.14	11.0	WATER BASED
3550.000	1.16	12.0	WATER BASED

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	990-3550	450
Wet Samples	990-3550	390

SHALLOW GAS

Interval below KB	REMARKS

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIL BHC GR	606.000 - 866.000	X	X	
DIL BHC CAL MSFL GR	750.000 - 1435.000	X	X	
DIL GR	1425.000 - 2450.000	X	X	
DIL BHC GR	1425.000 - 3550.000	X	X	
LDL CNL GR CALI	1281.000 - 2442.000	X	X	
LDL CNL GR CALI	1850.000 - 3552.000	X	X	
MWD	1462.000 - 1907.000	X	X	
RFT HP GR	1999.000 - 2389.000			
RFT HP GR	2216.000 - 3481.000			
FMS GR	1425.000 - 2159.000	X		
LSS VDL GR	750.000 - 1435.000	X		
CBL VDL GR	948.000 - 1425.000	X		
VDL GR CAL	969.000 - 1435.000	X	X	

SHDT GR	1900.000 - 3352.000	X	
CDM AP	1999.000 - 2159.000	X	X
CDM AP	1429.000 - 2010.000	X	X
CDM AP/SHDT	1950.000 - 3352.000	X	X
MUD	626.000 - 3550.000		X
VELOCITY LOG	609.000 - 3550.000	1:1000	X
(V.S.P, Zero Offset V.S.P., 10cm/s			1 stk)
(Composite Display, 5cm/s, 10cm/s			8 stk)
(Summed Data, 50 cm/s			1 stk)
(Acoustic Log Calibration, 10 cm/s			1 stk)

MAIN OPERATIONS FOR WELL: 732107 01

Main operation: DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	3840	64,0	4,34
BOP/WELLHEAD EQ	2220	37,0	2,51
CASING	11160	186,0	12,60
CIRC/COND	2820	47,0	3,18
DRILL	42285	704,8	47,76
HOLE OPEN	6630	110,5	7,49
OTHER	1680	28,0	1,90
PRESS DETECTION	210	3,5	0,24
REAM	660	11,0	0,75
SURVEY	1440	24,0	1,63
TRIP	13890	231,5	15,69
WAIT	1710	28,5	1,93
Total	88545	1475,8	100,00

Main operation: FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC SAMPLES	660	11,0	5,24
CORE	1440	24,0	11,43
LOG	7260	121,0	57,62
OTHER	270	4,5	2,14
TRIP	2970	49,5	23,57
Total	12600	210,0	100,00

Main operation: INTERRUPTION

Sub operations	Minutes	Hrs	% of total
FISH	2190	36,5	3,26
LOST CIRC	48135	802,3	71,71
MAINTAIN/REP	5610	93,5	8,36
OTHER	6060	101,0	9,03
WAIT	3960	66,0	5,90
WELL CONTROL	1170	19,5	1,74
Total	67125	1118,8	100,00

Main operation: MOVING

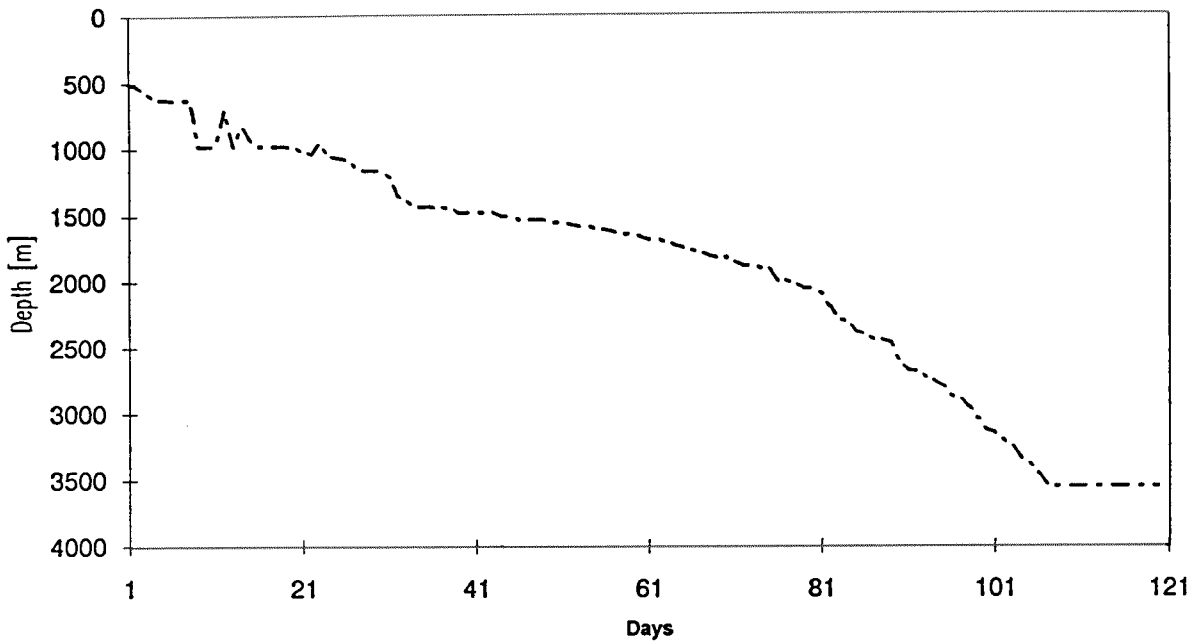
Sub operations	Minutes	Hrs	% of total
ANCHOR	2580	43,0	43,00
POSITION	1320	22,0	22,00
SKID	1440	24,0	24,00
TRANSIT	660	11,0	11,00
Total	6000	100,0	100,00

Main operation: PLUG & ABANDON

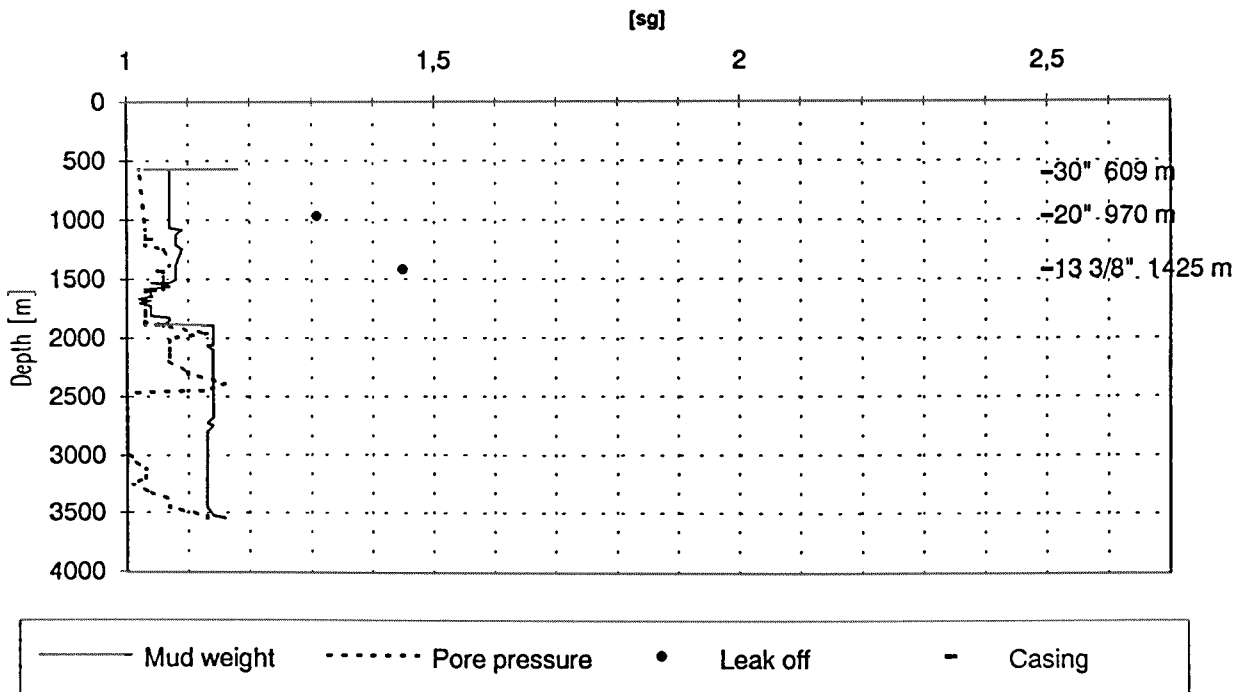
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	2040	34,0	28,45
CIRC/COND	180	3,0	2,51
CUT	2220	37,0	30,96
EQUIP RECOVERY	2490	41,5	34,73
OTHER	240	4,0	3,35
Total	7170	119,5	100,00

Total time used 3024 hrs (126 days)

Depth v.s. time plot for well: 732107 01



Composite plot for well: 732107 01



Well History 7321/7-1

GENERAL:

Well 7321/7-1 was the first well drilled on the license. It was situated in the Strategic Area III of the Barents Sea. The two blocks constituting the license are mainly located on the western edge of the Tunheim Terrace, a down faulted province on the west side of the Loppa Ridge. The primary objective of the well was Juro-Triassic sandstones in a rotated fault block. Potential was expected throughout the Middle Jurassic to Base Carnian interval.

OPERATIONS:

Wildcat well 7321/7-1 was spudded 26 June 1988 by Ross Drilling semi-submersible rig Ross Rig and completed 22 October 1988 at a depth of 3550 m in Early Triassic rocks.

The hole was drilled to 526 m and then abandoned due to building up of the angle. The rig was moved 13 m and the well was respudded 27 June 1988. The hole was drilled to setting depth for 20" casing without returns to the surface. During drilling of 17 1/2" hole section, Problems with loss of drilling mud to the formation.

Loss of mud to believed weak/fractured occurred formation lead to setting of 13 3/8" casing shoe at 1430 m, 770 m higher than expected. The problem with loss of mud continued below 13 3/8" casing shoe and down to 1813 m where the loss was considerably reduced.

During drilling of the Jurassic and Triassic sequences no drilling mud was lost to the formation. Except from two fishing operations no significant drilling problems, were experienced.

There was no shallow gas in the hole. Top reservoir was encountered at 1998.5 m, 97.5 m deeper than prognosed. An Intra Carnian reflector prognosed at 2736 m and was encountered at 2751 m, only 15 m deeper than prognosed. Near bottom a Carnian seismic reflector was encountered at 3448 m.

Four cores were attempted, but due to very low rates of penetration the coring program was severely reduced. The first core was cut in the Early Cretaceous Knurr Fm. A second core was attempted in the Stø Fm. but was aborted due to no penetration. The third core was cut in the Middle Jurassic Stø Fm. and a final core was cut in a sandstone in the Snadd Fm. Very weak shows were observed in the Stø Fm. and in parts of the Snadd Fm.

The results from RFT-tests and logs indicated a zone with good porosity and gas in the interval 2385 - 2390 m. The resulting sandstones were tight and water-bearing.

The well was plugged and abandoned as a dry hole.

TESTING:

No DST tests were performed in the well.

GEOLOGICAL TOPS

WELL:7321/7-1

Depth m (RKB)

<i>Nordland Group</i>	498.5
<i>Nordvestbanken Group</i>	526.0
<i>Kolmule Fm.</i>	526.0
<i>Kolje Fm.</i>	1145.0
<i>Knurr Fm.</i>	1892.0
<i>Teistengrunnen Group</i>	1918.0
<i>Hekkingen Fm.</i>	1918.0
<i>Fuglen Fm.</i>	1965.0
<i>Realgrunnen Group</i>	1998.5
<i>Stø Fm.</i>	1998.5
<i>Nordmela Fm.</i>	2022.0
<i>Fruholmen Fm.</i>	2038.5
<i>Ingøydjupet Group</i>	2206.5
<i>Snadd Fm.</i>	2206.5
<i>T.D.</i>	3550.0