

Well no : 7321/08-01

Operator : HYDRO

Coordinates : 73 20 11.99 N
21 24 57.27 E

UTM coord. : 8149270 N
705001 E

Licence no : 141

Permit no : 552

Rig : POLAR PIONEER

Rig type : SEMI-SUB.

Contractor : POLAR FRONTIER DRILLING A/S

Bottom hole temperature : deg.C

Elev. KB : 23 M

Spud. date : 87.06.23

Water depth : 468 M

Compl. date : 87.09.03

Total depth : 3482 M

Spud. class : WILDCAT

Form. at TD : PERMIAN

Compl. class : P&A. DRY HOLE

Prod. form :

Seisloca : NH 8506-425 SP. 988XSBB 86 2076 SP. 723

LICENSEES

15.000000 BP PETROLEUM DEV. OF NORWAY A.S
 20.000000 NORSK HYDRO PRODUKSJON A.S
 5.000000 SAGA PETROLEUM A.S.
 50.000000 DEN NORSKE STATS OLJESELSKAP A.S
 10.000000 TENNECO OIL NORWAY 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	578.0	36	806.0	.
SURF.COND.	20	796.0	26	818.0	1.55
INTERM.	13 3/8	2513.0	17 1/2	2532.0	.

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1443.5 - 1465.5	22.0	100.0	
2	1465.5 - 1493.7	27.9	98.9	
3	1493.7 - 1516.6	22.9	100.0	
4	1516.6 - 1544.7	28.0	99.6	
5	2670.8 - 2678.8	7.2	90.0	
6	2839.0 - 2847.0	7.9	98.8	
7	3430.0 - 3431.4	1.4	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weigth g/cm3	Viscosity	Mud type
806.000	1.03	0.0	WATER BASED
818.000	1.30	23.0	WATER BASED
818.000	1.03	23.0	WATER BASED
818.000	1.16	23.0	WATER BASED
882.000	1.17	21.0	WATER BASED

1098.000	1.25	22.0	WATER BASED
1217.000	1.26	22.0	WATER BASED
1352.000	1.25	25.0	WATER BASED
1438.000	1.26	25.0	WATER BASED
2316.000	1.25	25.0	WATER BASED
2355.000	1.20	16.0	WATER BASED
2447.000	1.25	24.0	WATER BASED
2650.000	1.26	19.0	WATER BASED
2676.000	1.27	18.0	WATER BASED
3450.000	1.26	19.0	WATER BASED
3482.000	1.20	16.0	WATER BASED

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	825-3457	610
Wet Samples	825-3482	720

SHALLOW GAS

Interval below KB	REMARKS

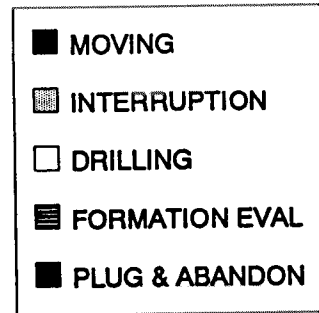
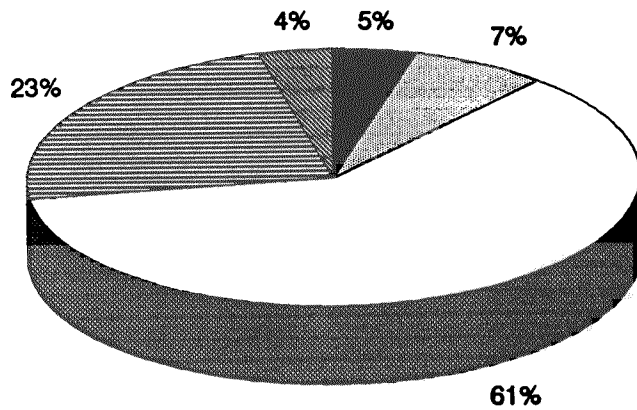
AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIS LSS MSFL GR	600.000 - 798.000	X	X	
DIS LSS MSFL	1300.000 - 1669.000	X	X	
DIS LSS MSFL	794.000 - 2532.000	X	X	
DIS LSS MSFL	2510.000 - 3482.000	X	X	
LDL CNL	588.000 - 778.000	X	X	
LDL CNL	1345.000 - 1671.000	X	X	
LDL CNL	794.000 - 2524.000	X	X	
LDL CNL	2510.000 - 3469.000	X	X	
DLL	794.000 - 2530.000	X	X	
DLL	2510.000 - 3475.000	X	X	
SHDT	794.000 - 2533.000	X		
SHDT	2510.000 - 3475.000	X		
CDM AP/SHDT-PAD	794.000 - 2533.000	X		X
CDM AP/SHDT-PAD	2510.000 - 3480.000	X		X
CDM AP/SHDT-SIDE	1430.000 - 1555.000		1:50	
RFT HP GAUGE	1447.000 - 1640.000	X		
RFT HP GAUGE	852.000 - 2496.000	X		
RFT HP GAUGE	2604.000 - 3122.000	X		
RFT STRAIN GAUGE	1447.000 - 1640.000	X		
RFT STRAIN GAUGE	852.000 - 2496.000	X		
RFT STRAIN GAUGE	2604.000 - 3122.000	X		
NGS	794.000 - 2510.000	X		
NGS	1345.000 - 1662.000	X		
NGS	2510.000 - 3460.000	X		

CBL VDL GR	795.000 - 2495.000	X
DRILL. DATA PRESS.	491.000 - 2495.000	1:5000
MUD	810.000 - 3482.000	X
VELOCITY LOG L.T.S.	590.000 - 3424.000	1:1000X
(Velocity, airgun survey & calibr. log data		1 stk.)
(Synthetic seismogram, marine, 10 cm/s		5 stk.)
(VSP, normal/reverse polarity, 10 cm/s		4 stk.)
(VSP, display of polarity		1 stk.)
(Two-way travel time, 10cm/s		1 stk.)

DAILY DRILLING REPORT SYSTEM

MAIN OPERATIONS FOR WELL: 7321/08-01



Main operation	Minutes	Hrs	% of total
MOVING	4980	83,0	4,55
INTERRUPTION	7800	130,0	7,13
DRILLING	66990	1116,5	61,21
FORMATION EVAL	25620	427,0	23,41
PLUG & ABANDON	4050	67,5	3,70
Total	109440	1824,0	100,00

SUB OPERATIONS FOR WELL: 7321/08-01

MAIN OPERATION: MOVING

Sub operation	Minutes	Hrs	% of total
TRANSIT	3960	66,0	79,52
ANCHOR	1020	17,0	20,48
<i>Total</i>	4980	83,0	100,00

MAIN OPERATION: INTERRUPTION

Sub operation	Minutes	Hrs	% of total
FISH	3360	56,0	43,08
MAINTAIN/REP	3810	63,5	48,85
OTHER	390	6,5	5,00
LOST CIRC	240	4,0	3,08
<i>Total</i>	7800	130,0	100,00

MAIN OPERATION: DRILLING

Sub operation	Minutes	Hrs	% of total
TRIP	12630	210,5	18,85
DRILL	39360	656,0	58,76
CASING	5010	83,5	7,48
CIRC/COND	360	6,0	0,54
REAM	1680	28,0	2,51
HOLE OPEN	1920	32,0	2,87
BOP/WELLHEAD EQ	3180	53,0	4,75
BOP ACTIVITIES	2850	47,5	4,25
<i>Total</i>	66990	1116,5	100,00

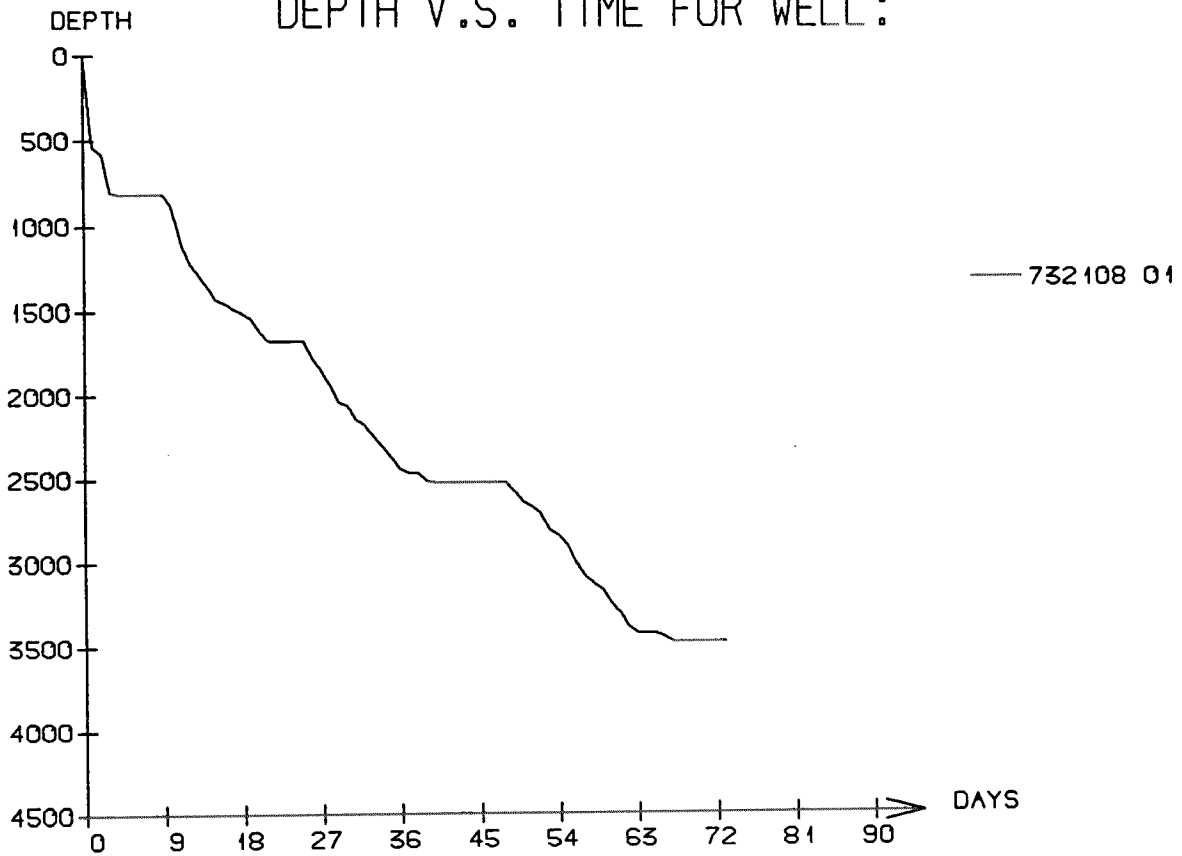
MAIN OPERATION: FORMATION EVAL

Sub operation	Minutes	Hrs	% of total
TRIP	4650	77,5	18,15
LOG	9720	162,0	37,94
CIRC SAMPLES	960	16,0	3,75
CORE	4140	69,0	16,16
CIRC/COND	750	12,5	2,93
OTHER	4170	69,5	16,28
RFT/FIT	1140	19,0	4,45
WAIT	90	1,5	0,35
<i>Total</i>	25620	427,0	100,00

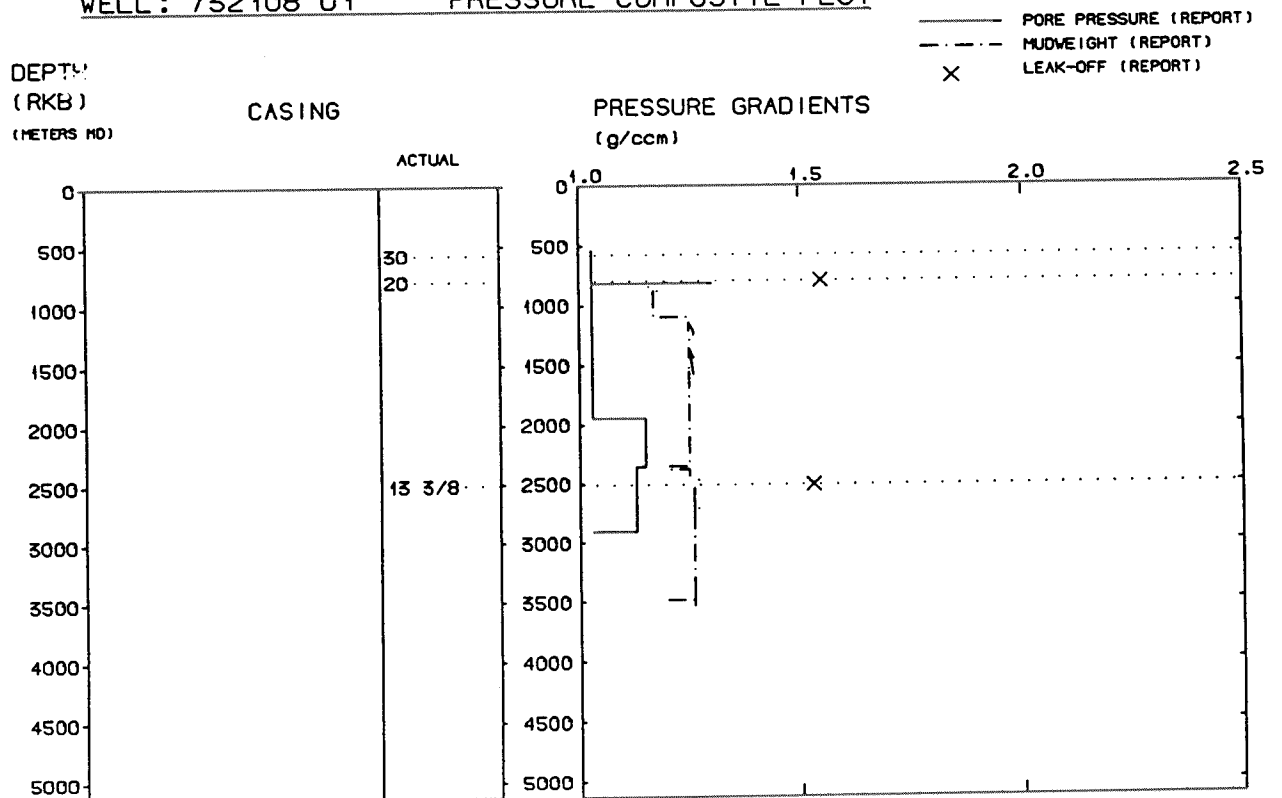
MAIN OPERATION: PLUG & ABANDON

Sub operation	Minutes	Hrs	% of total
TRIP	1740	29,0	42,96
CEMENT PLUG	690	11,5	17,04
MECHANICAL PLUG	240	4,0	5,93
CUT	960	16,0	23,70
EQUIP RECOVERY	330	5,5	8,15
SQUEEZE	60	1,0	1,48
CIRC/COND	30	0,5	0,74
<i>Total</i>	4050	67,5	100,00

DEPTH V.S. TIME FOR WELL:



WELL: 732108 01 PRESSURE COMPOSITE PLOT



Well History 7321/8-1

GENERAL:

Well 7321/8-1 was drilled on the Alpha structure. The main objectives of the well were to :

- Test the reservoir properties and hydrocarbon bearing potential of Middle to Early Jurassic sandstones in a position which would leave the minimum of reserves untested updip.
- Test the reservoir properties and hydrocarbon bearing potential of the Base Late Triassic sandstone sequence.
- Test the Permian reservoir properties and hydrocarbon bearing potential within mapped closure.
- Establish a good seismic tie.
- Test the geological model.
- Gather the maximum amount of geological information on source, seal and reservoir intervals.
- Have the well approved as the first commitment well in the licence.

OPERATIONS:

Wildcat well 7321/8-1 was spudded 23 June 1987 by Polar Frontier Drilling semi-submersible rig Polar Pioneer and completed 3 September 1987 at a depth of 3482 m in Permian rocks. The hole was drilled to 818 m without riser. Anticipated top reservoir was encountered at 1437 m, 201 m higher than expected. The reservoir unit had only traces of oil and gas. Top Permian was encountered at 3398 m, 875 m higher than expected.

7 cores were cut in this well. 4 cores were cut in the interval 1443.5 - 1544.7 m, the other cores in the intervals 2670.8 - 2678.8 m, 2839 - 2847 m and 3430 - 3431.4 m.

The well was plugged and abandoned as a dry hole.

TESTING:

No DST tests were performed in this well.

GEOLOGICAL TOPS

WELL:7321/8-1

Depth m (RKB)

<i>Nordland Group</i>	491.0
<i>Nordvestbanken Group</i>	546.0
<i>Kolmule Fm.</i>	546.0
<i>Kolje Fm.</i>	852.0
<i>Knurr Fm.</i>	1352.0
<i>Teistengrunnen Group</i>	1382.5
<i>Hekkingen Fm.</i>	1382.5
<i>Fuglen Fm.</i>	1427.0
<i>Realgrunnen Group</i>	1437.0
<i>Stø Fm.</i>	1437.0
<i>Nordmela Fm.</i>	1455.0
<i>Fruholmen Fm.</i>	1467.0
<i>Krabbe Mb.</i>	1467.0
<i>Reke Mb.</i>	1495.0
<i>Akkar Mb.</i>	1589.0
<i>Ingøydjupet Group</i>	1626.0
<i>Snadd Fm.</i>	1626.0
<i>Undefined claystone sequence</i>	3335.0
<i>Tempelfjorden Group</i>	3398.0
<i>Miseryfjellet Fm.</i>	3398.0
<i>T.D.</i>	3482.0