

Well no : 25/01-10

Operator : ELF

Coordinates : 59 57 08.58 N  
02 05 48.11 EUTM coord. : 6646607 N  
449542 E

Licence no : 24

Permit no : 570

Rig : VINNI

Rig type : SEMI-SUB.

Contractor : SDS DRILLING

Bottom hole temperature : 144 deg.C

Elev. KB : 27 M

Spud. date : 88.04.19

Water depth : 99 M

Compl. date : 88.09.14

Total depth : 4739 M

Spud. class : WILDCAT

Form. at TD : M.JURASSIC

Compl. class : P&amp;A. DRY HOLE

Prod. form :

Seisloca : EL 8501 X 376 SP. 380

## LICENSEES

41.420000 ELF AQUITAINE NORGE A/S  
 32.870000 NORSK HYDRO PRODUKSJON A.S  
 5.000000 DEN NORSKE STATS OLJESELSKAP A.S  
 20.710000 TOTAL NORGE 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	188.0	36	188.0	.
SURF.COND.	20	910.0	26	923.0	1.17
INTERM.	13 3/8	2825.0	17 1/2	2839.0	1.72
INTERM.	9 5/8	4043.0	12 1/4	4058.0	2.15
LINER	7	4451.0	8 1/2	4471.0	2.25

## CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	4473.0 - 4481.0	0.5	6.3	

## MUD PROPERTIES

Depth below KB meter	Mud weight g/cm3	Viscosity	Mud type
985.000	1.08	25.0	WATER BASED
1588.000	1.14	27.0	WATER BASED
1635.000	1.16	21.0	WATER BASED
1780.000	1.17	181.0	WATER BASED
2062.000	1.20	46.0	WATER BASED
2622.000	1.21	39.0	WATER BASED

2671.000	1.22	36.0	WATER BASED
2833.000	1.21	33.0	WATER BASED
2844.000	1.22	24.0	WATER BASED
2951.000	1.25	26.0	WATER BASED
3384.000	1.27	27.0	WATER BASED
3474.000	1.32	26.0	WATER BASED
3555.000	1.35	29.0	WATER BASED
3635.000	1.42	33.0	WATER BASED
3706.000	1.58	34.0	WATER BASED
3846.000	1.65	37.0	WATER BASED
3953.000	1.68	38.0	WATER BASED
4058.000	1.74	40.0	WATER BASED
4159.000	1.80	42.0	WATER BASED
4470.000	2.05	51.0	WATER BASED
4739.000	2.15	46.0	WATER BASED

## DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
-----		
Cutting		
Wet Samples	935-4740	760
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## SHALLOW GAS

Interval below KB	REMARKS
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## AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
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DIFL BHC AC GR	909.000 - 2832.000	X	X	
DIFL BHC AC GR	2828.000 - 4058.000	X	X	
DIFL AC GR SP	4045.000 - 4445.000	X	X	
DIFL AC GR SP	4457.000 - 4579.600	X	X	
DIFL BHC AC GR	4377.000 - 4745.000	X	X	
CDL CNL GR	909.000 - 2831.000	X	X	
CDL CNL GR	2828.000 - 4059.000	X	X	
CDL CNL GR	4457.000 - 4745.000	X	X	
MWD	196.000 - 4433.000	X	X	
CDM AP	3200.000 - 4058.000	X	X	
CDM AP	4457.000 - 4720.000	X	X	
SPECTRALOG	4457.000 - 4745.000	X	X	
AC CBL VDL GR	1450.000 - 2828.000	X		
AC CBL VDL GR	2740.000 - 4457.000	X		
FMT	3620.000 - 3700.000	X		
FMT	4503.000 - 4685.000	X		

MUD	187.000 - 4745.000		X
VELOCITY	909.000 - 4745.000	1:1000	X
(Two way travel time, 10 cm/s, 20 cm/s			2 stk)
(Synthetic Seismogram, Marine, 10 cm/s, 20 cm/s			10 stk)
(V.S.P, 10cm/s, 20cm/s			5 stk)
(Airgun well velocity survey and calibr.log,			1 stk)

## MAIN OPERATIONS FOR WELL: 002501 10

### Main operation: DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	2370	39,5	1,74
BOP/WELLHEAD EQ	4140	69,0	3,04
CASING	18450	307,5	13,55
CIRC/COND	10950	182,5	8,04
DRILL	52500	875,0	38,55
HOLE OPEN	1440	24,0	1,06
OTHER	5730	95,5	4,21
PRESS DETECTION	3660	61,0	2,69
REAM	9900	165,0	7,27
SURVEY	450	7,5	0,33
TRIP	26460	441,0	19,43
WAIT	120	2,0	0,09
Total	136170	2269,5	100,00

### Main operation: FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC SAMPLES	150	2,5	1,29
CIRC/COND	1590	26,5	13,66
CORE	210	3,5	1,80
LOG	3900	65,0	33,51
RFT/FIT	390	6,5	3,35
TRIP	5400	90,0	46,39
Total	11640	194,0	100,00

### Main operation: INTERRUPTION

Sub operations	Minutes	Hrs	% of total
FISH	4590	76,5	10,97
LOST CIRC	2550	42,5	6,09
MAINTAIN/REP	18060	301,0	43,15
OTHER	930	15,5	2,22
WAIT	1170	19,5	2,80
WELL CONTROL	14550	242,5	34,77
Total	41850	697,5	100,00

### Main operation: MOVING

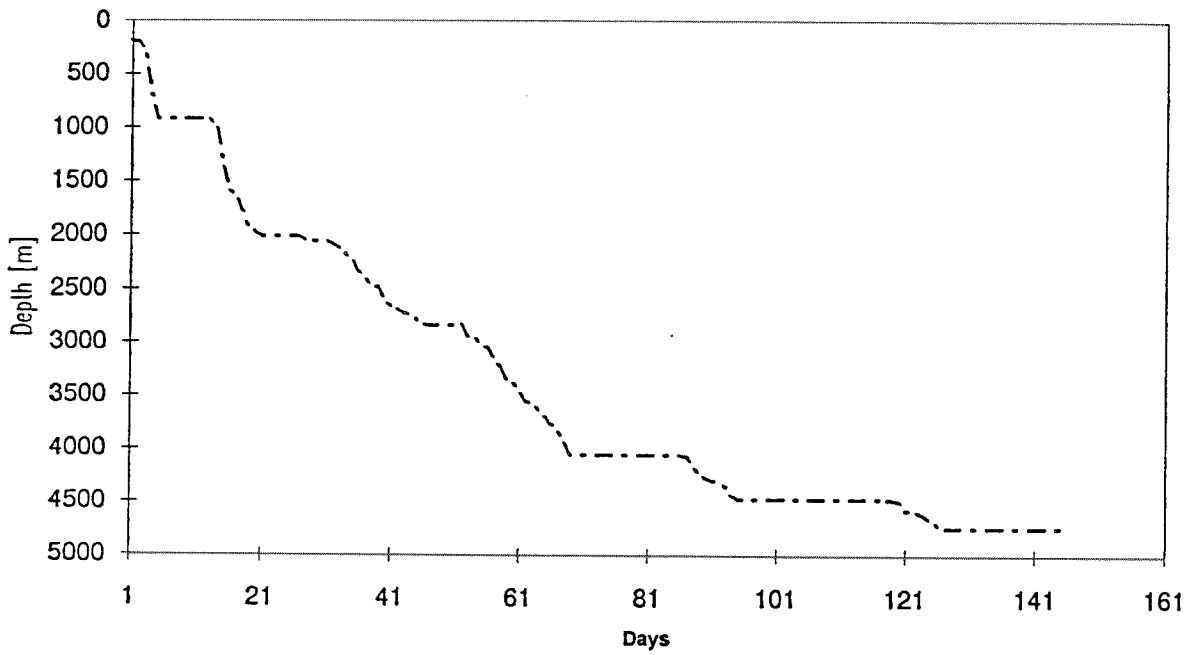
Sub operations	Minutes	Hrs	% of total
ANCHOR	900	15,0	38,46
TRANSIT	1440	24,0	61,54
Total	2340	39,0	100,00

### Main operation: PLUG & ABANDON

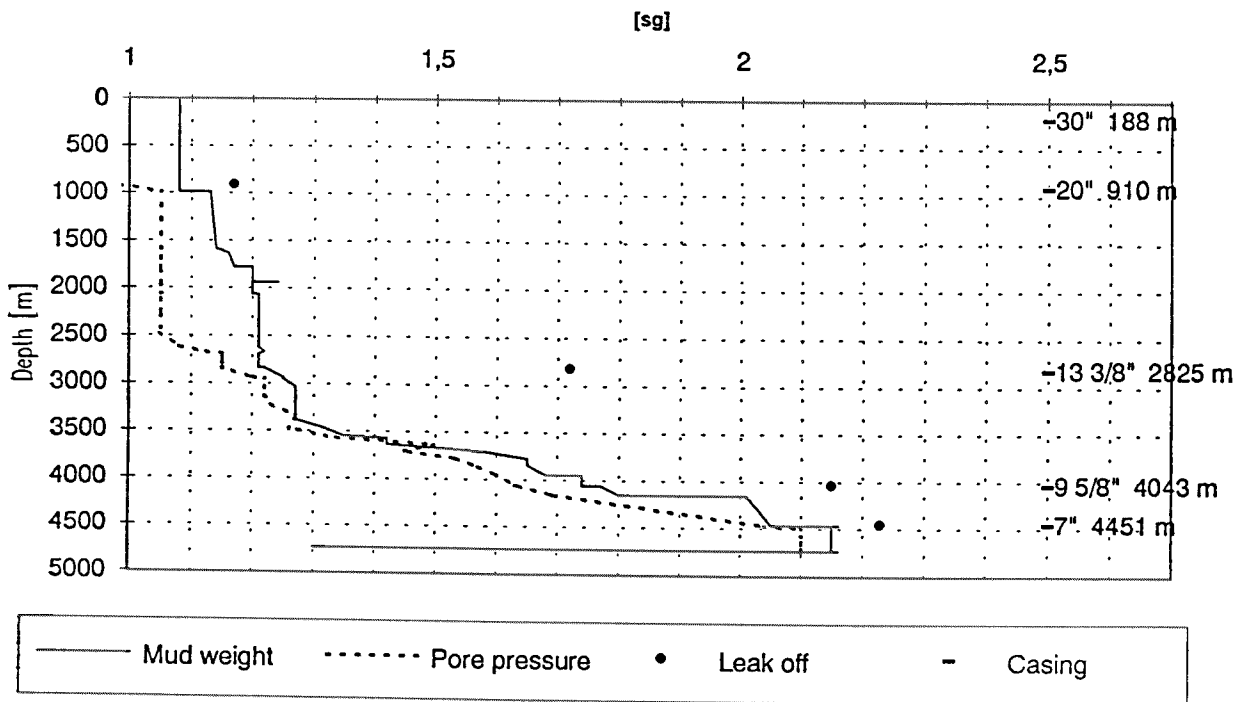
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	2040	34,0	10,37
CIRC/COND	2220	37,0	11,28
CUT	2010	33,5	10,21
EQUIP RECOVERY	2160	36,0	10,98
MECHANICAL PLUG	450	7,5	2,29
OTHER	780	13,0	3,96
PERFORATE	450	7,5	2,29
TRIP	8100	135,0	41,16
WAIT	1470	24,5	7,47
Total	19680	328,0	100,00

Total time used 3528 hrs ( 147 days)

Depth v.s. time plot for well: 002501 10



Composite plot for well: 002501 10



## Well History 25/1-10

### GENERAL:

Well 25/1-10 was drilled in the "Deep Frigg" structure which is a narrow North-South trended Mesozoic fault block situated in the Viking Graben. The structure is limited to the East by a large normal fault, dips steeply (approx. 15°) westwards into the Viking Graben, and is highly overpressured.

The well was designed to test the remaining updip potential of the Brent and Statfjord reservoirs. Secondary objectives were to establish the sweeping status of the Early Eocene Frigg Fm. and to obtain additional petrophysical data from this reservoir.

### OPERATIONS:

Wildcat well 25/1-10 was spudded 19 April 1988 by SDS Drilling semi-submersible rig Vinni and completed 14 September 1988 at a depth of 4739 m in Middle Jurassic rocks. There were no signs of shallow gas. A cement plug had to be set in the Frigg Fm. due to a cave-in where the drill-string got stuck. The plugged interval was 1935 - 1990 m. There is probably 4-5 m of gas at the top. In places there were experienced high background gas in the Cretaceous. This could be in fractures or thin sandstone stringers in the chalk. The hole was drilled with turbine from 2049 m.

There were many problems in the well. The greatest problem was to keep the well stable. The cement job done when setting liner was bad, and the BOP was repaired several times. The drill-string got stuck at 4676 m and 4739 m.

One core was cut in the Brent Group between 4473 - 4483 m. This got stuck on its way up to the surface and only 0.5 m was recovered. At 4739 m the drilling was stopped due to fear of the pressure getting so high that the well would be lost. Elf contacted NPD and requested to plug the well at 4739 m due for safety reasons. NPD approved and it was not drilled into the Statfjord Fm.

FMT measurements showed that the Brent Group was water-bearing. It was hard to tell if the Dunlin Group had been penetrated or not.

The well was plugged and abandoned as dry .

### TESTING:

No DST tests were performed in this well.

# GEOLOGICAL TOPS

WELL: 25/1-10

Depth m (RKB)

<i>Nordland Group</i>	126.0
<i>Hordaland Group</i>	730.0
<i>Frigg Fm.</i>	1926.0
<i>Rogaland Group</i>	2171.0
<i>Balder Fm.</i>	2171.0
<i>Sele Fm.</i>	2291.0
<i>Lista Fm.</i>	2423.0
<i>Maureen Fm.</i>	2593.0
<i>Shetland Group</i>	2667.0
<i>Cromer Knoll Group</i>	4060.0
<i>Viking Group</i>	4259.0
<i>Draupne Fm.</i>	4259.0
<i>Heather Fm.</i>	4312.0
<i>Brent Group</i>	4471.0
<i>T.D.</i>	4739.0