

Well no : 25/02-10S Operator : ELF

Coordinates : 59 53 11.80 N UTM coord. : 6639043 N  
 02 30 8.33 E 472144 E

Licence no : 112 Permit no : 494

Rig : HENRY GOODRICH Rig type : SEMI-SUB.

Contractor : SONAT OFFSHORE A/S

Bottom hole temperature : deg.C Elev. KB : 21 M

Spud. date : 85.12.02 Water depth : 120 M

Compl. date : 86.03.19 Total depth : 2967 M

Spud. class : WILDCAT Form. at TD : TERTIARY

Compl. class : SUSP. Prod. form :

Seisloca : EL 8504 - 330 SP. 304

### LICENSEES

21.800000 ELF AQUITAINE NORGE A/S  
 17.300000 NORSK HYDRO PRODUKSJON A.S  
 50.000000 DEN NORSKE STATS OLJESELSKAP A.S  
 10.900000 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/cm <sup>3</sup>
CONDUCTOR	30	202.0	36	202.0	.
INTERM.	20	616.0	26	626.0	.
INTERM.	13 3/8	1032.0	17 1/2	1045.0	.
INTERM.	9 5/8	2115.0	12 1/4	2129.0	.
LINER	7	2380.0	8 1/2	.0	.

### CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2237.0 - 2240.7	3.7	100.0	
2	2241.0 - 2245.0	4.0	100.0	
3	2246.0 - 2246.9	0.9	100.0	
4	2247.5 - 2251.5	4.0	97.9	
5	2251.5 - 2255.5	4.0	100.0	
6	2255.5 - 2256.5	1.0	100.0	
7	2257.0 - 2261.0	4.0	100.0	
8	2261.0 - 2265.0	4.0	100.0	
9	2265.0 - 2269.2	4.2	100.0	
10	2582.0 - 2586.0	4.0	100.0	
11	2586.0 - 2590.0	4.0	100.0	
12	2590.0 - 2594.0	4.0	100.0	
13	2594.0 - 2597.0	5.0	100.0	
14	2888.0 - 2892.9	4.9	100.0	

## MUD PROPERTIES

Depth below KB meter	Mud weight g/cm <sup>3</sup>	Viscosity	Mud type
202.000	1.07	35.0	WATER BASED
220.000	1.05	15.0	WATER BASED
428.000	1.08	15.0	WATER BASED
456.000	1.07	10.0	WATER BASED
626.000	1.15	20.0	WATER BASED
626.000	1.04	0.0	WATER BASED
626.000	1.07	20.0	WATER BASED
626.000	1.08	28.0	WATER BASED
626.000	1.07	20.0	WATER BASED
626.000	1.08	20.0	WATER BASED
626.000	1.15	20.0	WATER BASED
631.000	1.06	20.0	WATER BASED
817.000	1.08	29.0	WATER BASED
956.000	1.09	15.0	WATER BASED
1045.000	1.07	22.0	WATER BASED
1045.000	1.06	20.0	WATER BASED
1045.000	1.07	16.0	WATER BASED
1045.000	1.06	17.0	WATER BASED
1049.000	1.12	160.0	WATER BASED
1100.000	1.13	29.0	WATER BASED
1100.000	1.12	29.0	WATER BASED
1348.000	1.14	34.0	WATER BASED
1459.000	1.15	30.0	WATER BASED
1546.000	1.16	36.0	WATER BASED
1717.000	1.17	34.0	WATER BASED
1791.000	1.18	30.0	WATER BASED
1866.000	1.17	32.0	WATER BASED
1866.000	1.18	35.0	WATER BASED
2015.000	1.20	38.0	WATER BASED
2129.000	1.24	40.0	WATER BASED
2129.000	1.26	40.0	WATER BASED
2133.000	1.07	28.0	WATER BASED
2245.500	1.09	25.0	WATER BASED
2247.500	1.10	25.0	WATER BASED
2257.000	1.12	26.0	WATER BASED
2371.000	1.11	26.0	WATER BASED
2600.000	1.12	32.0	WATER BASED
2748.000	1.11	29.0	WATER BASED
2856.000	1.12	28.0	WATER BASED
2925.000	1.13	29.0	WATER BASED
2955.000	1.11	28.0	WATER BASED

## DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
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Cutting		
Wet Samples	210-2967	430
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## SHALLOW GAS

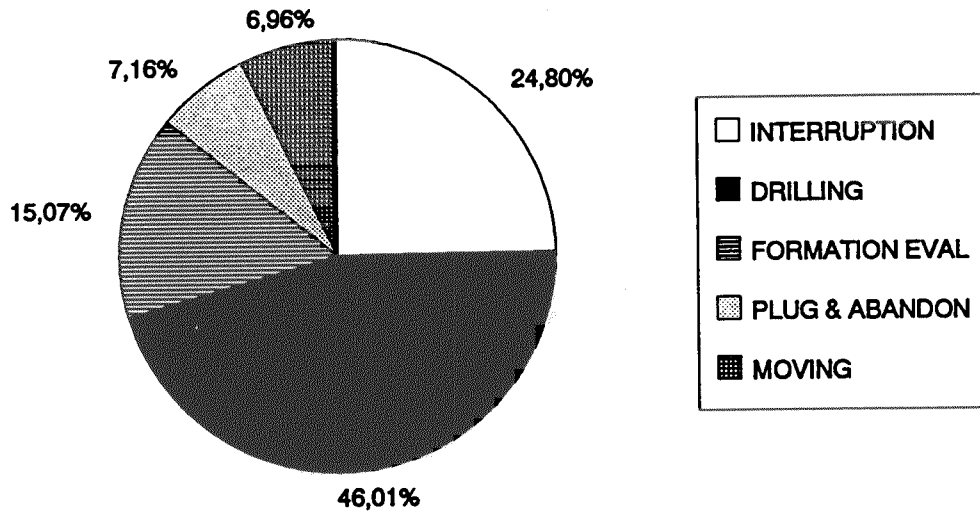
Interval below KB	REMARKS
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## AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIS LSS GR	202.000 - 625.000	X	X	
DIS LSS GR	617.000 - 1044.000	X	X	
DIS LSS GR	1034.000 - 2122.000	X	X	
DIS LSS GR MSFL	2117.000 - 2269.000	X	X	
DIS LSS GR	2117.000 - 2961.500	X	X	
LDL GR	202.000 - 539.000	X		
LDL GR	617.000 - 1045.000	X		
LDL CNL NGL	1034.000 - 1666.000	X		
LDL CNL NGL	1620.000 - 2019.000	X		
LDL CNL GR	2117.000 - 2368.000			
LDL CNL NGL	2117.000 - 2962.000	X		
DLL MSFL GR	1034.000 - 1400.000	X		
DLL MSFL GR	2185.000 - 2425.000	X		
BHC GR	1034.000 - 1300.000	X		
SHDT	2117.000 - 2962.000	X		
CDM AP/SHDT LOC	2126.000 - 2960.000		1:40	
CDM AP/SHDT CSB	2126.000 - 2960.000		1:40	
RFT GR STRAIN GAUGE	1049.000 - 1262.000			
RFT GR	2230.000 - 2949.000			
RFT (STRAIN GAUGE)	2230.000 - 2949.000			
NGL	1034.000 - 1656.000	X	X	
NGL	1620.000 - 2006.000	X	X	
NGL	2117.000 - 2962.200	X	X	
CBL VDL	140.000 - 1033.000	X	X	
CBL VDL GR	425.000 - 2106.000	X	X	
CBL VDL GR	1975.000 - 2326.000	X	X	
MUD	141.000 - 2967.000			X
VELOCITY	360.000 - 4000.000			1:1000X
(Airgun well velocity survey				1 stk.)
(Display of well velocity survey records				11 stk.)
(Two-way travel time, 5-10-40 cm/s				3 stk.)
(Synthetic seismogram, marine, 10-40 cm/s				10 stk.)
(VSP. 10 cm/s				28 stk.)
(VSP. 40 cm/s				8 stk.)
(VSP. Norm./Rev.Pol, 10 cm/s				3 stk.)
(VSP. Static rig source, 10-40 cm/s				27 stk.)
(VSP. Static long offset source, 20 cm/s				3 stk.)

# DAILY DRILLING REPORT SYSTEM

Main operations for well: 25/02-10 S



Total: 2904.00 hours

<i>Main operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
INTERRUPTION	43220	720,33	24,80
DRILLING	80170	1336,17	46,01
FORMATION EVAL	26250	437,50	15,07
PLUG & ABANDON	12480	208,00	7,16
MOVING	12120	202,00	6,96

MAIN OPERATIONS FOR WELL: 25/02-10 S

MAIN OPERATION: INTERRUPTION

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
OTHER	6240	104,00	14,44
MAINTAIN/REP	20570	342,83	47,59
LOST CIRC	2520	42,00	5,83
WAIT	12480	208,00	28,88
FISH	1410	23,50	3,26
Total	43220	720,33	100,00

MAIN OPERATION: DRILLING

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
TRIP	18730	312,17	23,36
DRILL	19200	320,00	23,95
CIRC/COND	2910	48,50	3,63
CASING	20280	338,00	25,30
REAM	1650	27,50	2,06
SURVEY	4380	73,00	5,46
HOLE OPEN	2850	47,50	3,55
UNDERREAM	1320	22,00	1,65
PRESS DETECTION	150	2,50	0,19
BOP/WELLHEAD EQ	2670	44,50	3,33
BOP ACTIVITIES	5550	92,50	6,92
OTHER	480	8,00	0,60
Total	80170	1336,17	100,00

MAIN OPERATION: FORMATION EVAL

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
LOG	8280	138,00	31,54
CIRC SAMPLES	1410	23,50	5,37
TRIP	10380	173,00	39,54
CIRC/COND	1860	31,00	7,09
RFT/FIT	3270	54,50	12,46
CORE	690	11,50	2,63
OTHER	360	6,00	1,37
Total	26250	437,50	100,00

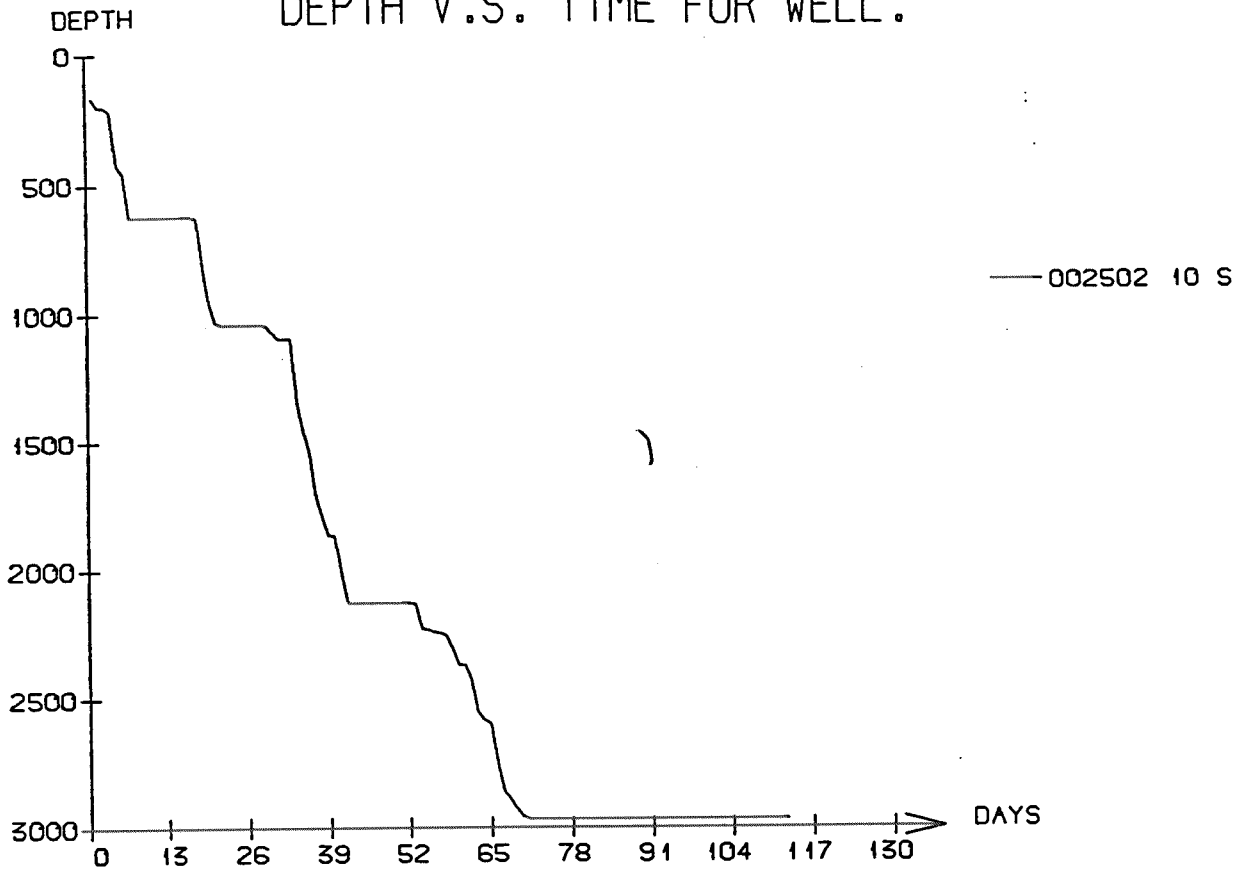
MAIN OPERATION: PLUG & ABANDON

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
TRIP	3750	62,50	30,05
CIRC/COND	960	16,00	7,69
CEMENT PLUG	690	11,50	5,53
MECHANICAL PLUG	360	6,00	2,88
EQUIP RECOVERY	3420	57,00	27,40
PERFORATE	2400	40,00	19,23
CUT	900	15,00	7,21
Total	12480	208,00	100,00

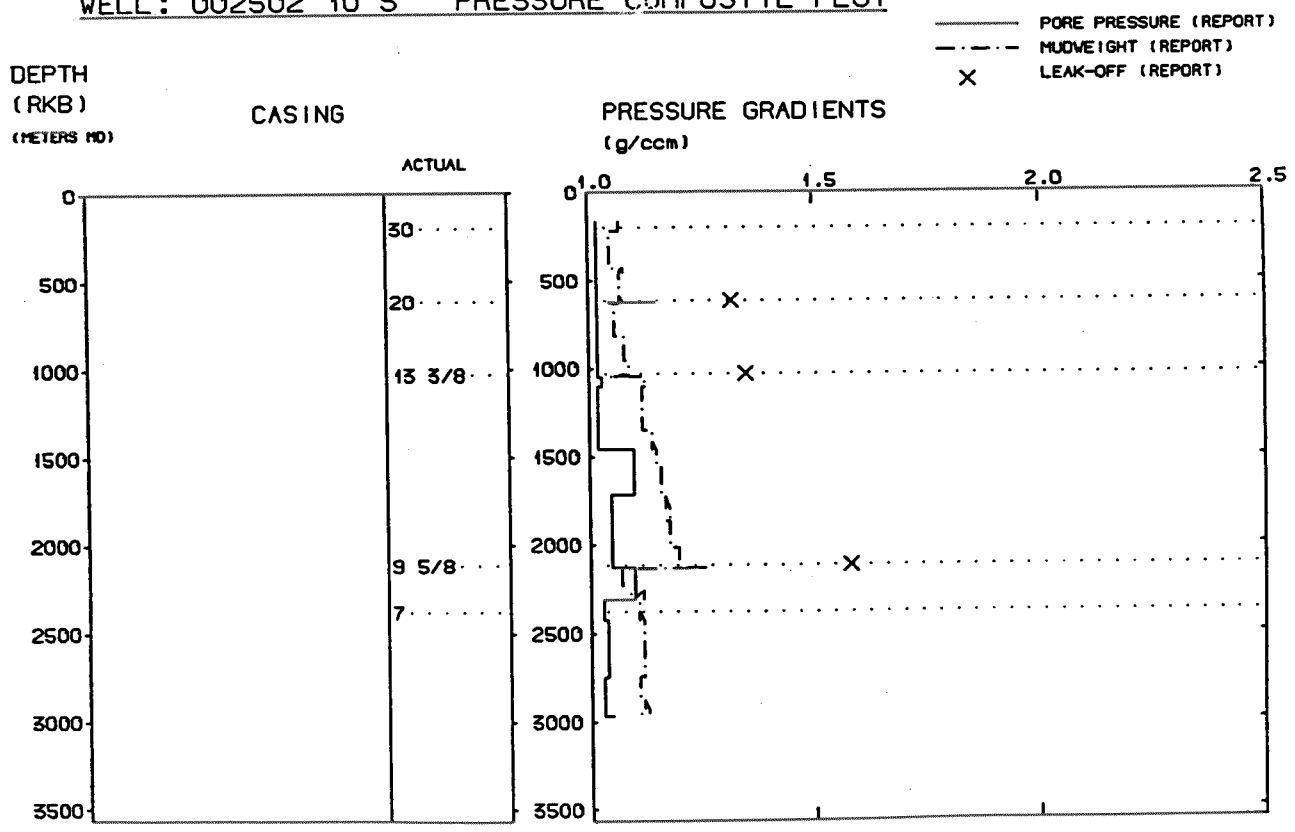
MAIN OPERATION: MOVING

<i>Sub operation</i>	<i>Minutes</i>	<i>Hours</i>	<i>% of total</i>
ANCHOR	5130	85,50	42,33
TRANSIT	6990	116,50	57,67
Total	12120	202,00	100,00

# DEPTH V.S. TIME FOR WELL:



## WELL: 002502 10 S PRESSURE COMPOSITE PLOT



## Well History 25/2-10.

### GENERAL:

Well 25/2-10 was designed to drill the Gamma Structure, one of the Frigg satellites, east of the East Frigg Beta Structure. The primary objective of the well was to test whether the Gamma Structure is an eastward extension of the East Frigg Beta structure. The main objectives for this well is Lower Eocene Frigg Fm, and secondary objects were the Balder- and Maureen Fm. In addition a possible gas accumulation was expected in a thin sand body of U.Oligocene age.

Shallow gas indications at 256 m MSL, and a disturbed zone on the seismic from sea-bed to the Frigg Fm demanded a deviated well in order to reach the Frigg Fm at its highest structural position.

### OPERATIONS:

Appraisal well 25/2-10 was spudded 2 December 1985 by Sonat Offshore A/S semi-submersibel rig Henry Goodrich, and suspended 19 March 1986 due to NPD consent for use of the rig was withdrawn. The well terminated in Lst of Danian age at a depth of 2967 m MD, 2643 m TVD.

Due to shallow gas indication on the choosen locality, the well was spudded 1100 m north and 200 m east of the TD. position. Drilling proceeded without significant problems down to 1049 m MD here mud was lost. Gas was encountered between 1114- 1134 m RKB. Top Frigg came in at 1941 TVD with minor amounts of oil and gas. GWC was encountered at 1134 m MD, and OWC came in at 1147 m MD. Five cores were cut in the interval 2236- 2275 m MD. Two cores were cut down to 2311 m MD, and altogether 14 cores were cut in this well. The BOP was lost 8 m above wellhead and caused severe damadge such that the well was lost.

### TESTING:

No DST-test were perfmed in this well.

# GEOLOGICAL TOPS

WELL: 25/2-10 S

	Depth m (TVD)
<i>Nordland Group</i>	141,0
<i>Utsira Fm</i>	270,0
<i>Hordaland Group</i>	987,0
<i>Grid Fm</i>	1007,5
<i>Unspecified Fm</i>	1115,2
<i>Frigg Fm</i>	1934,0
<i>Rogaland Group</i>	2196,5
<i>Balder Fm</i>	2196,5
<i>Sele Fm</i>	2381,0
<i>Lista Fm</i>	2424,0
<i>Maureen Fm</i>	2493,0
<i>TD.</i>	2643,0