

Well no : 25/ 2-09 Operator : ELF

Coordinates : 59 53 10.16 N UTM coord. : 6639054
 02 22 15.09 E 464786

Licence no : 26 Permit no : 470

Rig : NORTRYM Rig type : SEMI-SUB.

Contractor : GOLAR-NOR OFFSHORE A/S

Bottom hole temperature : 57.8 deg.C Elev. KB : 25 M

Spud. date : 85.06.14 Water depth : 112 M

Compl. date : 85.07.24 Total depth : 2297 M

Spud. class : APPRAISAL Form. at TD : PALEOCENE

Compl. class : SUSPENDED. GAS DISC. Prod. form :

Seisloca : EL 8403 - 410 SP. 270

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 MARINE NORSK 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
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CONDUCTOR	30	197.0	36	202.0	
INTERM.	13 3/8	987.0	17 1/2	1002.0	1.37
INTERM.	9 5/8	888.0	12 1/4	2297.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1939.4 - 1957.2	18.2	98.4	EOCENE
2	1959.5 - 1985.4	26.0	100.0	EOCENE
3	1987.5 - 2013.4	25.0	100.0	EOCENE
4	2015.3 - 2033.4	18.0	100.0	EOCENE
5	2034.0 - 2036.8	2.8	100.0	EOCENE
6	2060.5 - 2074.5	14.0	100.0	EOCENE
7	2074.5 - 2075.5	0.0	0.0	EOCENE
8	2080.0 - 2103.0	23.3	100.0	EOCENE
9	2107.0 - 2117.9	10.9	100.0	EOCENE
10	2143.0 - 2145.0	0.0	00.0	EOCENE
11	2220.0 - 2236.5	16.5	100.0	EOCENE/PALEOCENE
12	2238.5 - 2256.0	17.9	99.0	PALEOCENE

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Plastic viscosity mPa.s	Mud type
198.000	1.06		WATER BASED
202.000	1.05		WATER BASED
602.000	1.06		WATER BASED
908.000	1.10	28.0	WATER BASED
1010.000	1.06	32.0	WATER BASED
1300.000	1.16	38.0	WATER BASED
1525.000	1.19	38.0	WATER BASED
1783.000	1.20	40.0	WATER BASED
1933.000	1.23	34.0	WATER BASED
1946.000	1.24	31.0	WATER BASED
2034.000	1.26	32.0	WATER BASED
2107.000	1.27	41.0	WATER BASED

DRILL STEM TEST

NO DST'S WERE PERFORMED IN THIS WELL

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
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Cutting

Wet Samples	200 - 2292	200
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SHALLOW GAS

Interval below KB	REMARKS
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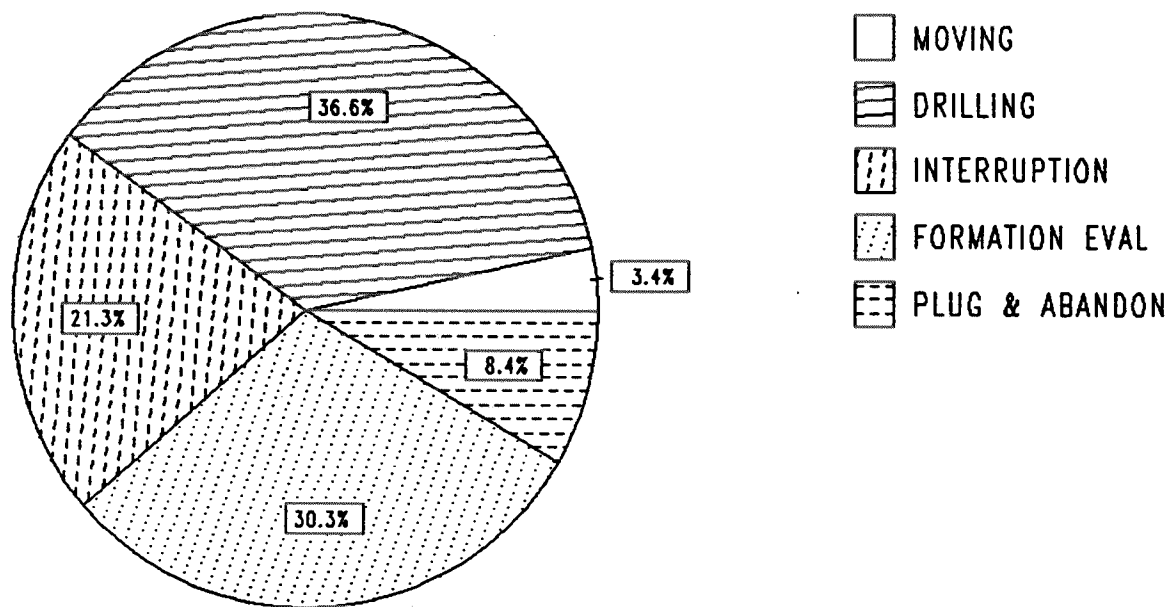
NONE

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500
ILD SFL SP LSS GR	197 - 1002	X	X
DISFL LSS	988 - 2021	X	X
DISFL LSS	1900 - 2295	X	X
ILD SFL SP LSS	197 - 1002	1:1000	
DISFL LSS	988 - 2021	1:1000	
DISFL LSS	1900 - 2295	1:1000	
LDL AMS	197 - 1001	X	X
LDL CNL	988 - 2021	X	X
LDL CNL NGL	1900 - 2294	X	X
DLL MSFL SP	1900 - 2292	X	X
CDM	1800 - 2296	X	
CDM AP	1800 - 2298	X	
SHDT	1800 - 2296	X	
BGL (CALIPER)	197 - 1002	X	
NGT RATIO	1900 - 2294	X	
TEMPERATURE AMS	197 - 1001		X
TEMPERATURE AMS	988 - 2021		X
TEMPERATURE AMS	1000 - 2277		X
TEMPERATURE AMS	1900 - 2280		X
RFT HP	1938 - 2267	X	
CBL VDL	135 - 887	X	
VELOCITY	197 - 2295	1:1000 X	
(+ Airgun Well Velocity Survey and Calibr. data, 1 stk)			
(+ Synthetic Seismogram, 10 + 40 cm/s, 4 stk)			
(+ Synthetic Seismogram, Marine, 10 cm/s, 1 stk)			
(+ Synthetic Seismogram, Marine, 40 cm/s, 1 stk)			
(+ Two Way Travel Time, 5 cm/s, 1 stk)			
(+ Two Way Travel Time, 10 cm/s, 1 stk)			
(+ Two Way Travel Time, 40 cm/s, 1 stk)			
(+ V.S.P., Display 4m-6mi, 40 cm, 6 stk)			
(+ V.S.P., Display 5m-6mi, 10 cm, 7 stk)			
(+ V.S.P., Static Long Offset Source, 10 cm/s, 9 stk)			
(+ V.S.P., Static Long Offset Source, 40 cm/s, 2 stk)			

DAILY DRILLING REPORT SYSTEM

Main operation : 25/02-09



Total : 984 HRS

Main operation	Minutes	Hours	% of total
MOVING	1980	33.00	3.35
DRILLING	21631	360.52	36.64
INTERRUPTION	12599	209.98	21.34
FORMATION EVAL	17880	298.00	30.28
PLUG & ABANDON	4950	82.50	8.38

MAIN OPERATIONS WELL : 25/02-09

MAIN OPERATION: DRILLING

Sub operations	Min	Hrs	% of total
CASING	3241	54.02	14.98
TRIP	5310	88.50	24.55
DRILL	6990	116.50	32.31
BOP/WELLHEAD EQ	1860	31.00	8.60
CIRC/COND	1050	17.50	4.85
SURVEY	540	9.00	2.50
PRESS DETECTION	240	4.00	1.11
BOP ACTIVITIES	1410	23.50	6.52
REAM	990	16.50	4.58
TOTAL	21631	360.52	

MAIN OPERATION: MOVING

Sub operations	Min	Hrs	% of total
ANCHOR	1950	32.50	98.48
TRANSIT	30	0.50	1.52
TOTAL	1980	33.00	

MAIN OPERATION: FORMATION EVAL

Sub operations	Min	Hrs	% of total
CIRC SAMPLES	660	11.00	3.69
CIRC/COND	1140	19.00	6.38
LOG	4620	77.00	25.84
TRIP	6960	116.00	38.93
CORE	4470	74.50	25.00
OTHER	30	0.50	0.17
TOTAL	17880	298.00	

MAIN OPERATION: INTERRUPTION

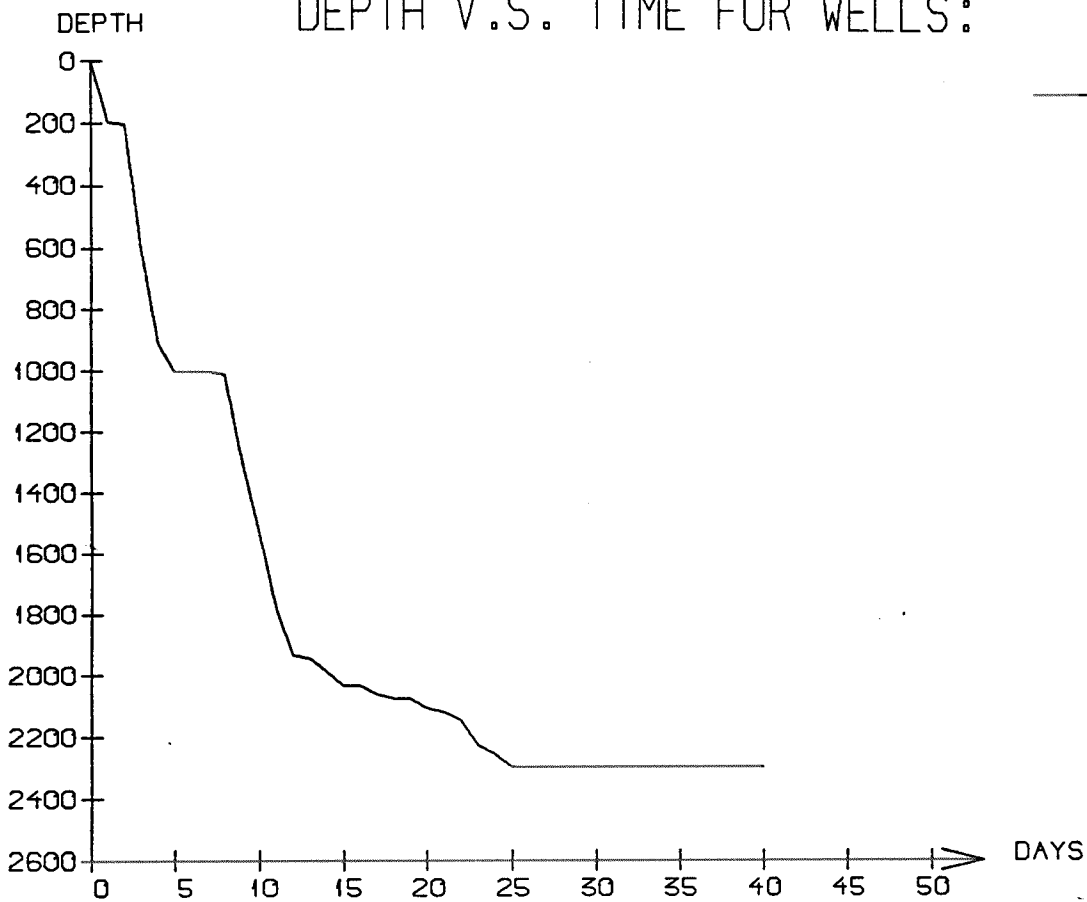
Sub operations	Min	Hrs	% of total
MAINTAIN/REP	10109	168.48	80.24
LOST CIRC	1830	30.50	14.52
OTHER	660	11.00	5.24
TOTAL	12599	209.98	

MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	Hrs	% of total
TRIP	1440	24.00	29.09
CEMENT PLUG	840	14.00	16.97
WAIT	360	6.00	7.27
CIRC/COND	30	0.50	0.61
OTHER	180	3.00	3.64
MECHANICAL PLUG	300	5.00	6.06
EQUIP RECOVERY	1320	22.00	26.67
CUT	480	8.00	9.70
TOTAL	4950	82.50	

DEPTH V.S. TIME FOR WELLS:

— 0025/02- 09



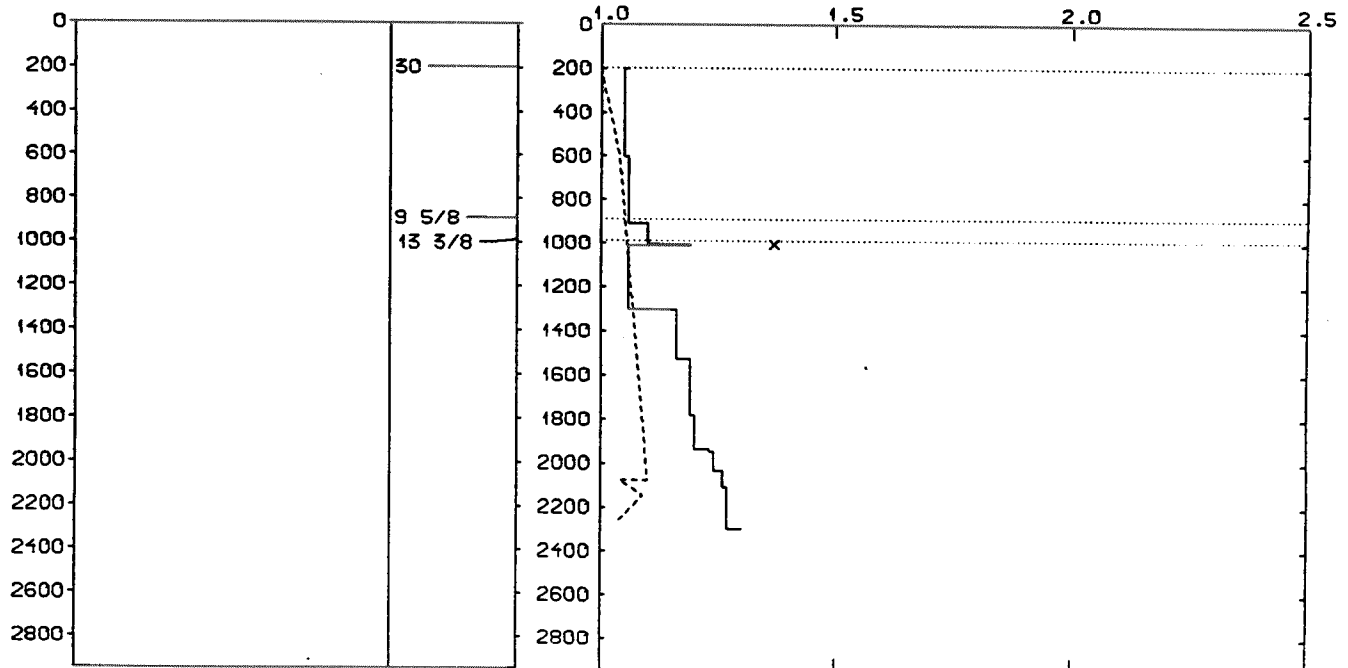
WELL: 002502 09 PRESSURE COMPOSITE PLOT

DEPTH
(RKB)
(METERS)

CASING

PRESSURE GRADIENTS
(g/ccm)

— MUDWEIGHT (REPORT)
- - - PORE PRESSURE (REPORT)
x LEAK-OFF (REPORT)



Well History 25/2-9

General:

Well 25/2-9 was designed to drill an assumed top in the eastern part of the structure, at the Frigg East Beta structure, one of the Frigg Satellites.

The main objects of this well was:

- to reveal petrophysical characteristics in an area where development wells could be located.
- check gas column height and gas in place.
- get static formation pressure in order to estimate communication with the main Frigg field.
- coring the Frigg Upper Shaly and Balder formations for static and dynamic petrophysical measurements.

Prognosed depth of the Frigg Formation was 1922 m RKB, and T.D. 2450 m.

Operations:

Appraisal well 25/2-9 was spudded 14 June 1985 by Golar Nor Offshore A/S semi-submersibel rig Nortrym, and completed 24 July 1985 at a depth of 2297 m in Paleocene rocks.

Top Frigg came in at 1935 m RKB. Gas/oil contact was encountered at 1960 m RKB, and oil/water contact at 1972 m RKB.

A total of 12 cores were cut with a total length of 214.25 m with 86% recovery. The cores consisted mainly of sands, more or less consolidated.

At 2297 m RKB 800 l/min. of mud was lost due to a leakage between 13 3/4"- and 20" casing. 9 5/8" casing was set to 888 m RKB and the well was gradually brought under control. During this operation a part of the underreamer were lost into the hole, and fishing went on for two days.

The well was plugged and suspended as a gas discovery.

Testing:

No DST tests were performed in this well.

GEOLOGICAL TOPS

WELL: 25-2-9

	Depth m (RKB)
<i>Nordland Group</i>	197
<i>Utsira Fm.</i>	777
<i>Hordaland Group</i>	968
<i>Frigg Fm.</i>	1935
<i>Rogaland Group</i>	2223
<i>Balder Fm</i>	2223
<i>Sele Fm</i>	2259
<i>Heimdal Fm.</i>	2283
<i>T.D</i>	2297