



**SUPERIOR**  
Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

# COMPENSATED DENSITY NEUTRON LOG

Company XTO Energy Inc.  
Well Golden Eagle 20-13  
Field Purgatoire River  
County Las Animas State Colorado

Location: API # : 05 071 09185 00

1127' FSL & 1222' FWL

SEC 20 TWP 33S RGE 67W

Permanent Datum	Ground Level	Elevation	7304'
Log Measured From	Ground Level		
Drilling Measured From	Ground Level		

Elevation

K.B. -----  
D.F. -----  
G.L. 7304'

Date 02-22-07

Run Number One

Depth Driller 2065'

Depth Logger 2061'

Bottom Logged Interval 2037'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 760'

Casing Logger 782'

Bit Size 7 7/8"

Type Fluid in Hole Water

Density / Viscosity ///

pH / Fluid Loss ///

Source of Sample ///

Rm @ Meas. Temp ///

Rmf @ Meas. Temp ///

Rmc @ Meas. Temp ///

Source of Rmf / Rmc ///

Rm @ BHT ///

Time Circulation Stopped 12:00 a.m.

Time Logger on Bottom 2:30 p.m.

Maximum Recorded Temperature 116

Equipment Number T701

Location Trinidad

Recorded By L. Smith

Witnessed By Mr. Don Johnson

>>> Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

## Comments

Compensated Density Neutron Porosity Presented On Sandstone Matrix.  
ABHV Calculated For 5 1/2" Casing  
4mi. past Weston, First right after Bosque entrance.



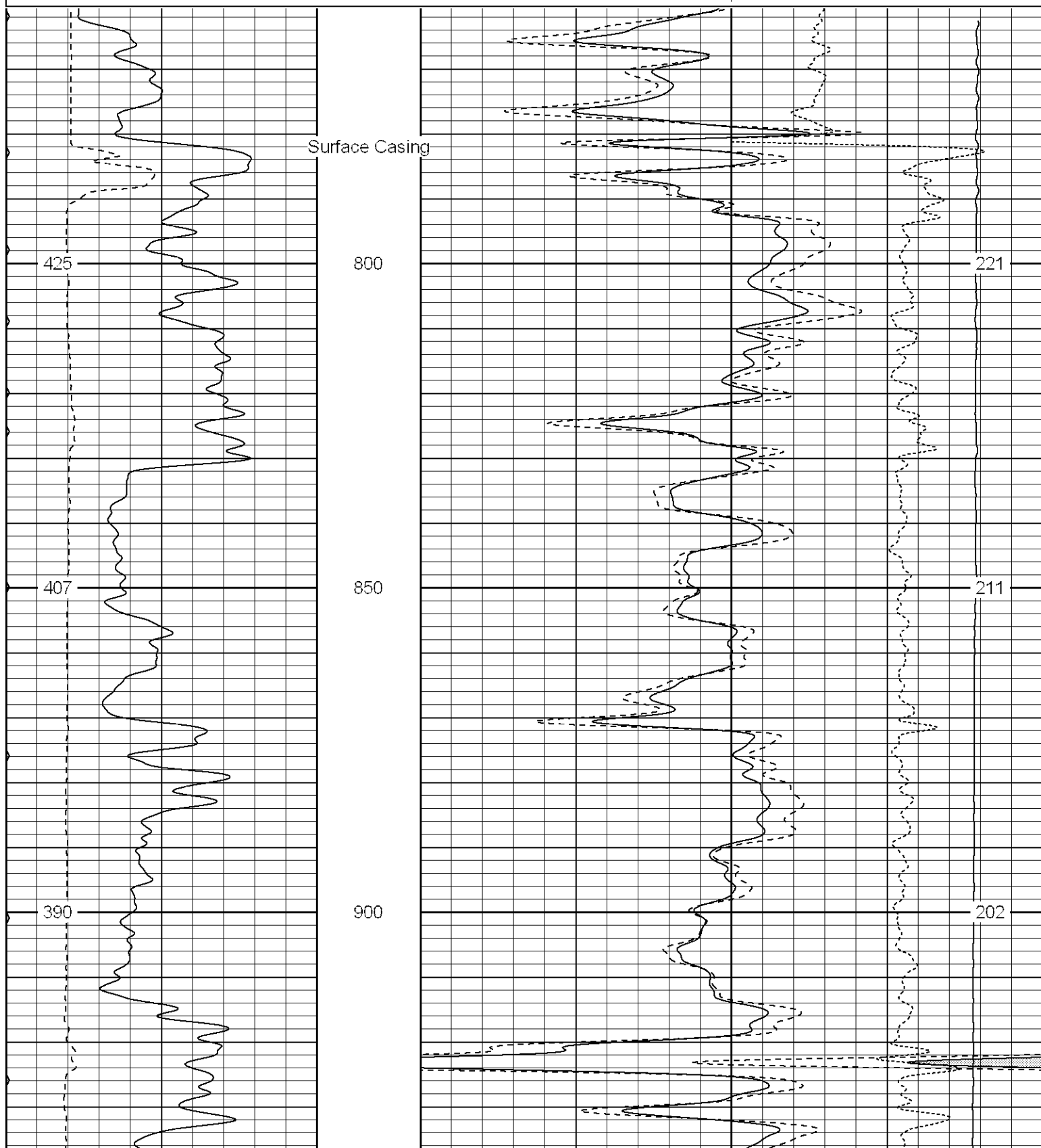
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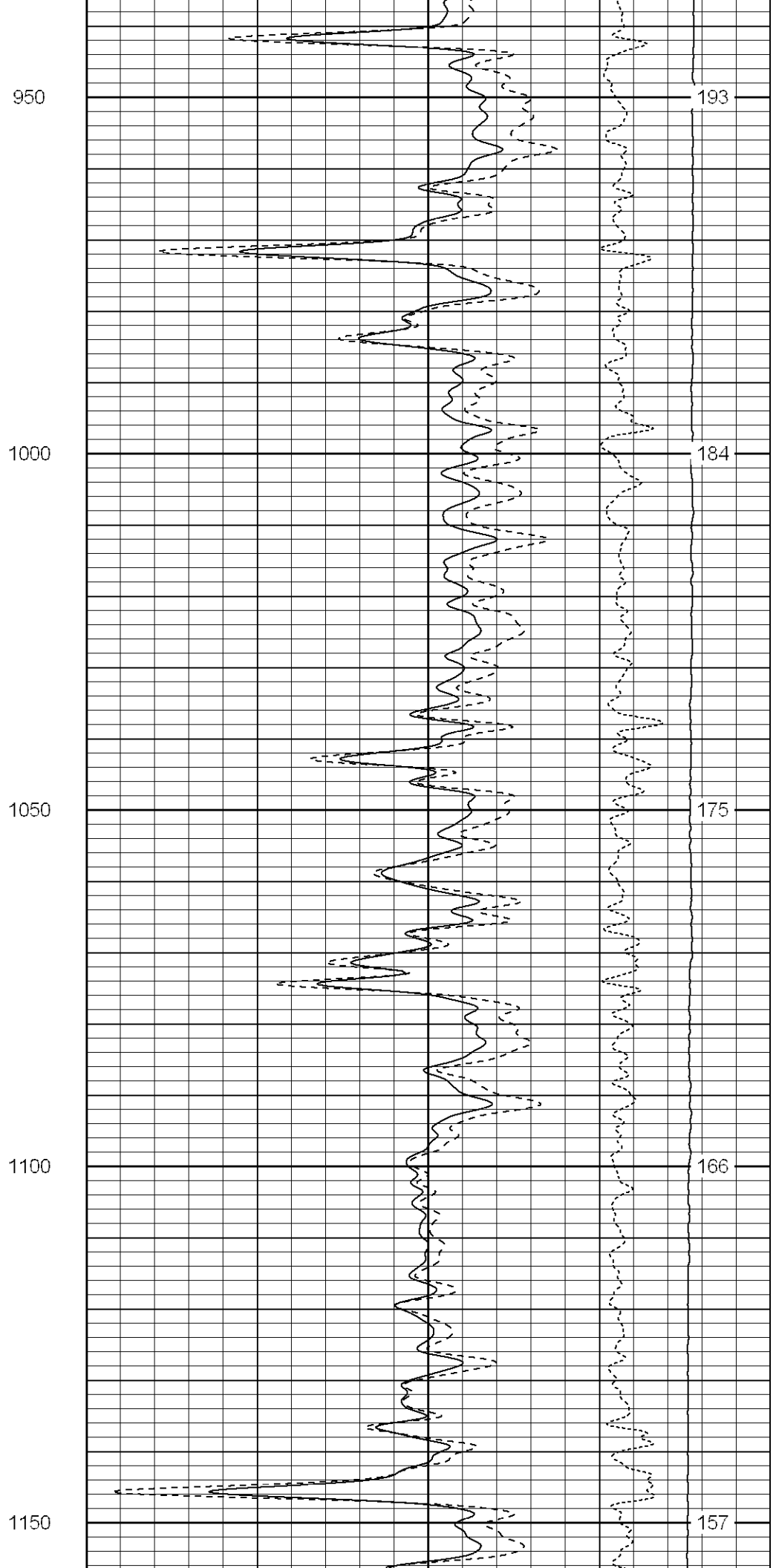
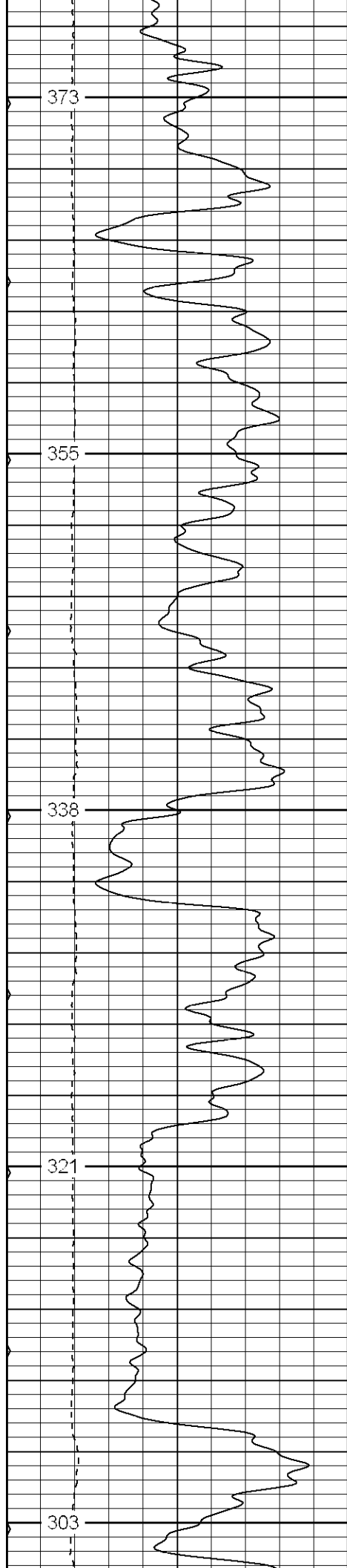
# Main Pass

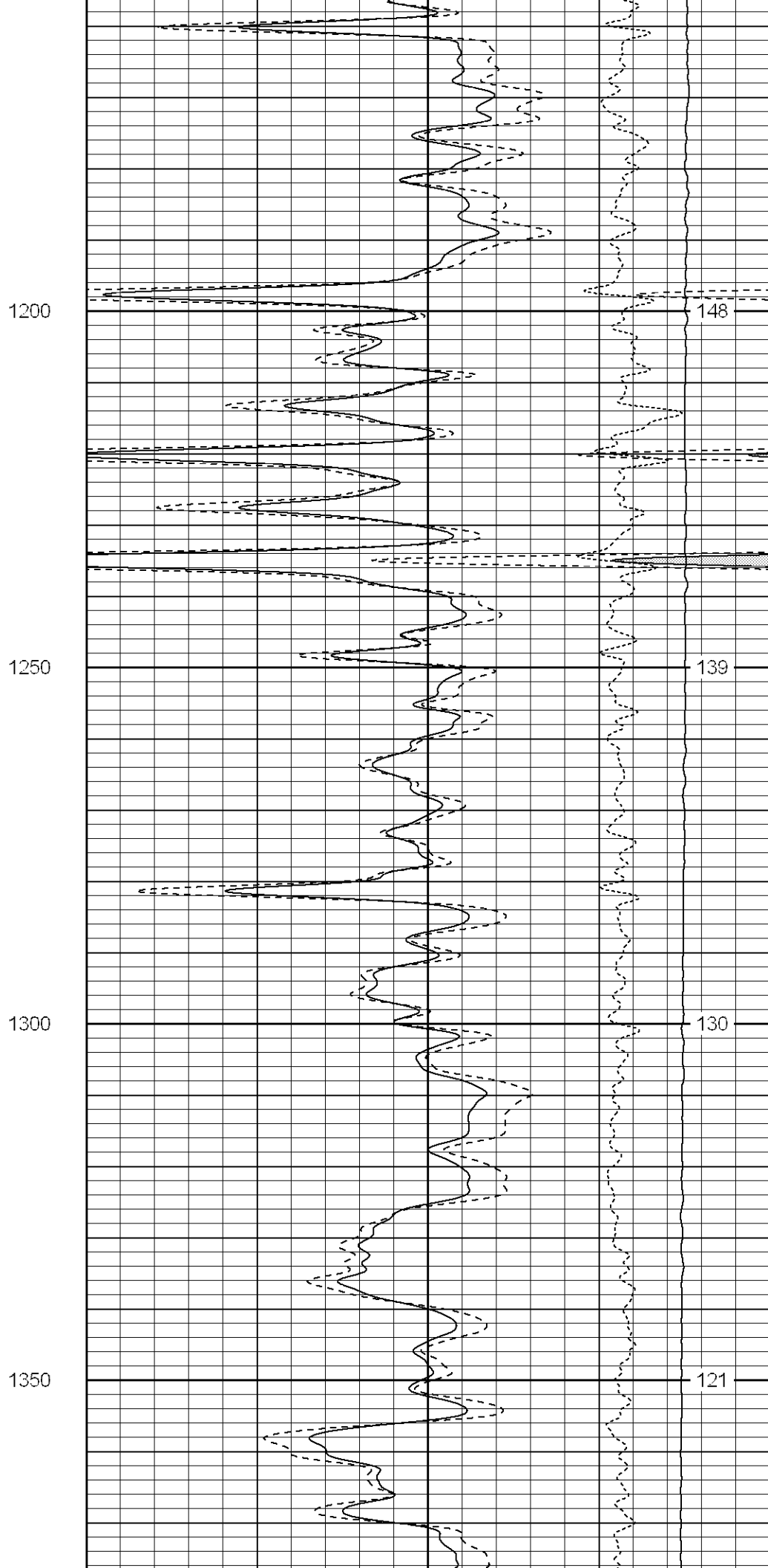
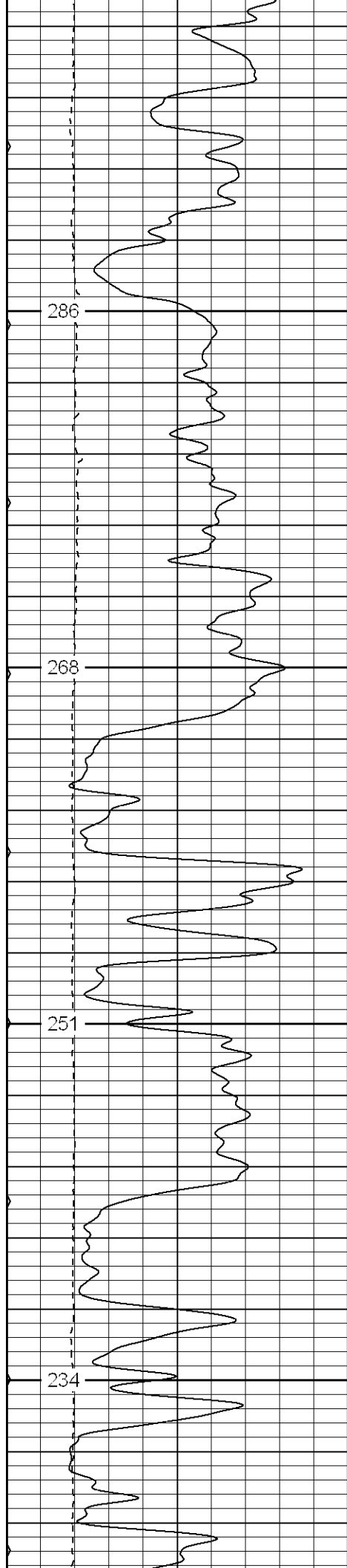
Database File: xtoge2013.db  
 Dataset Pathname: pass2.1  
 Presentation Format: cdl  
 Dataset Creation: Thu Feb 22 03:56:39 2007 by Calc Open-Cased 061129  
 Charted by: Depth in Feet scaled 1:240

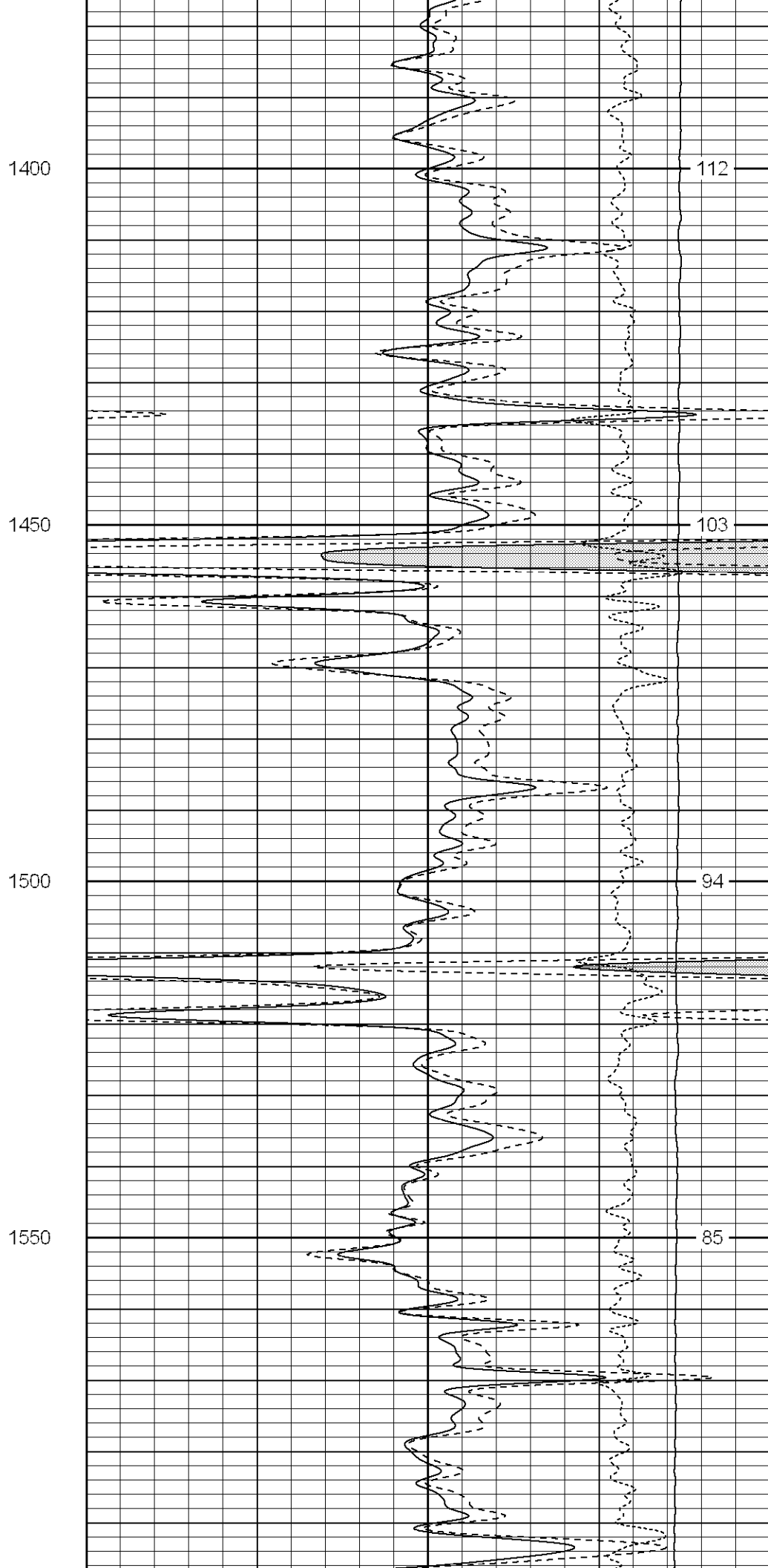
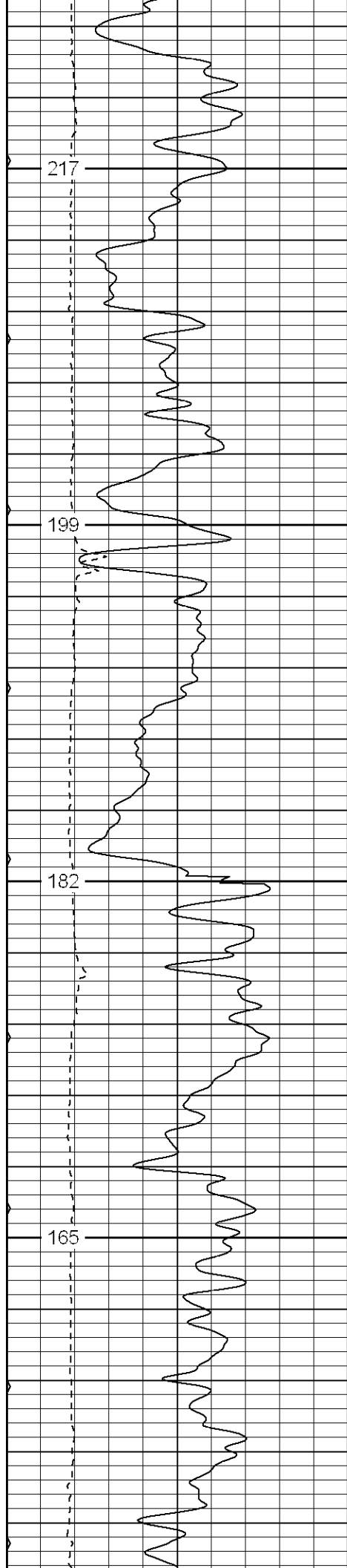
0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

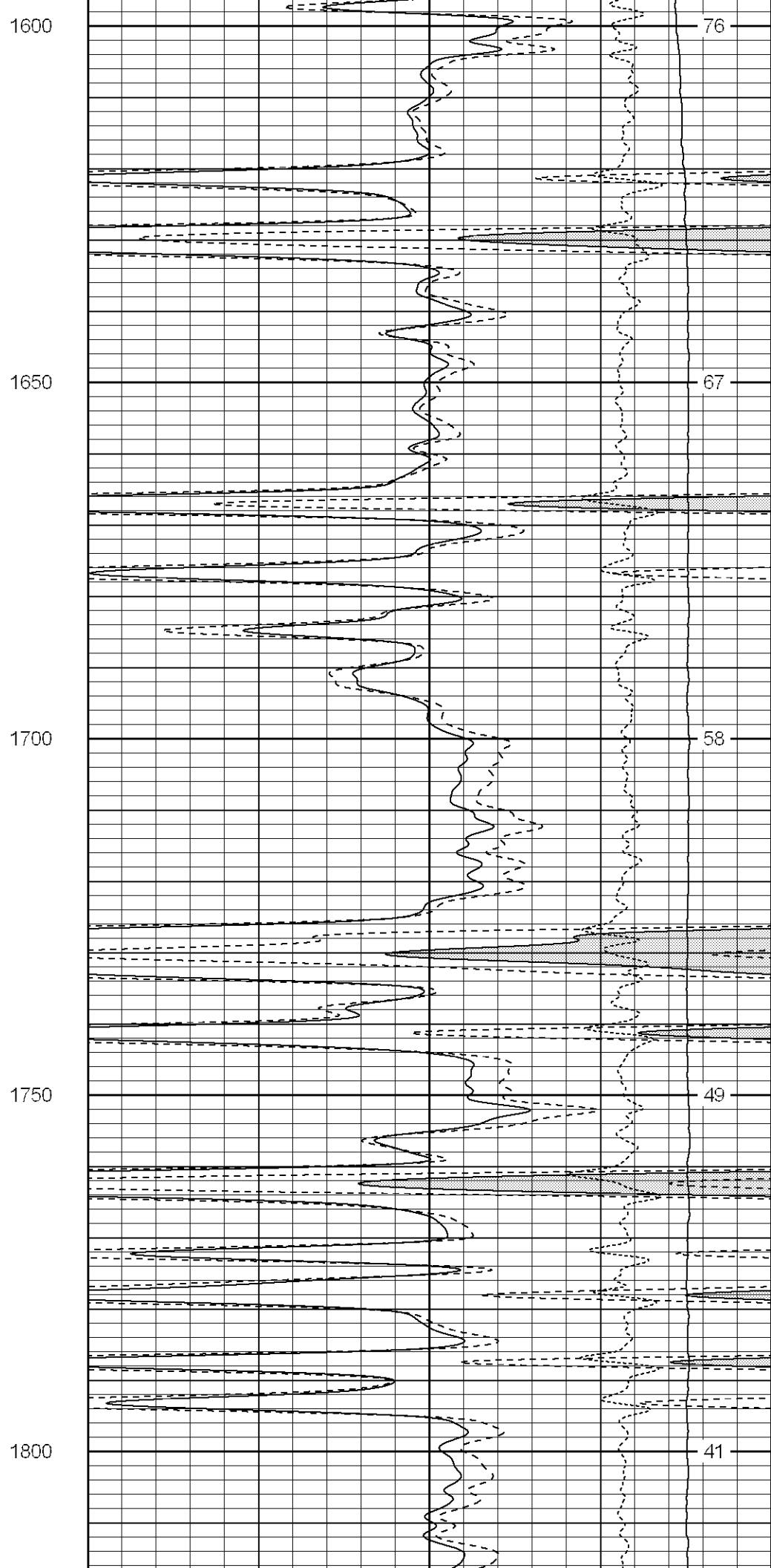
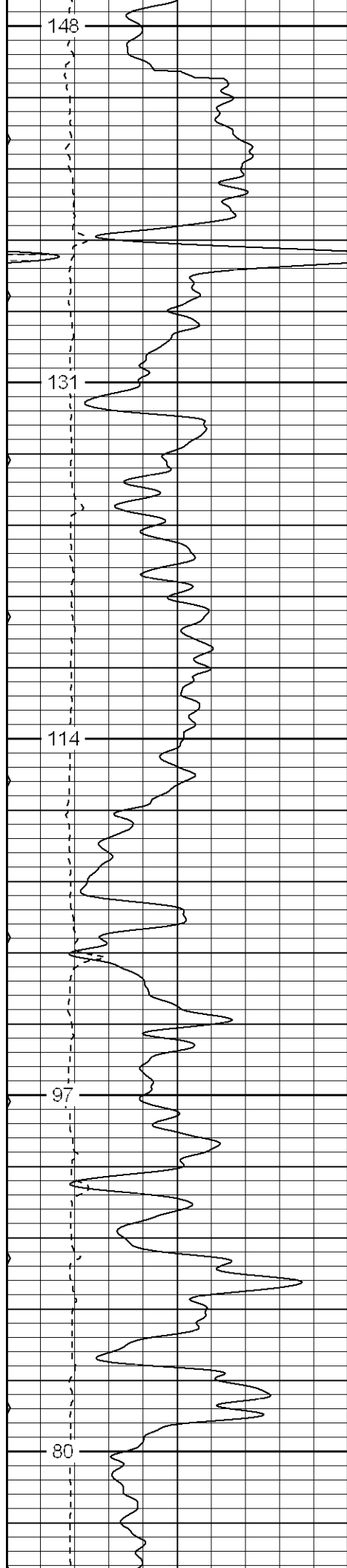
2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0

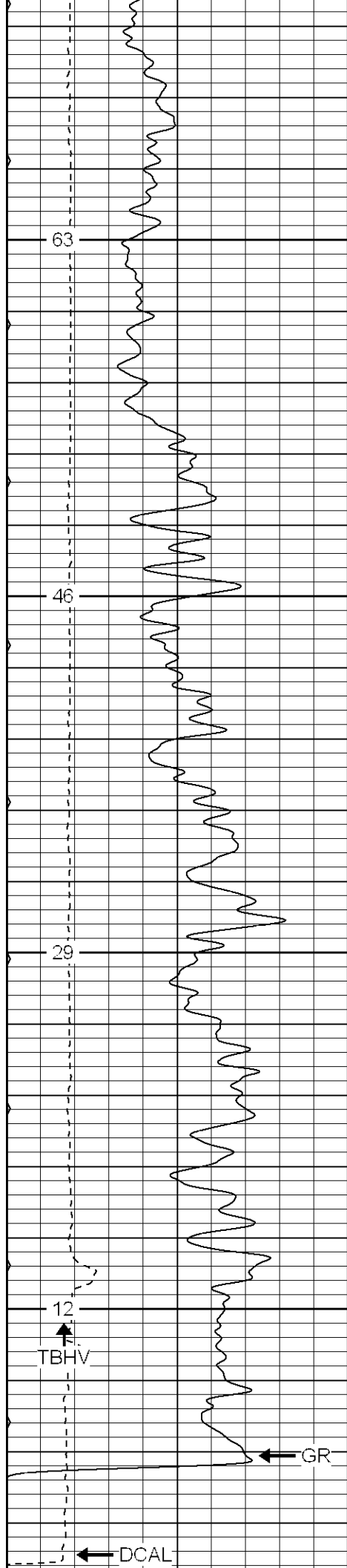










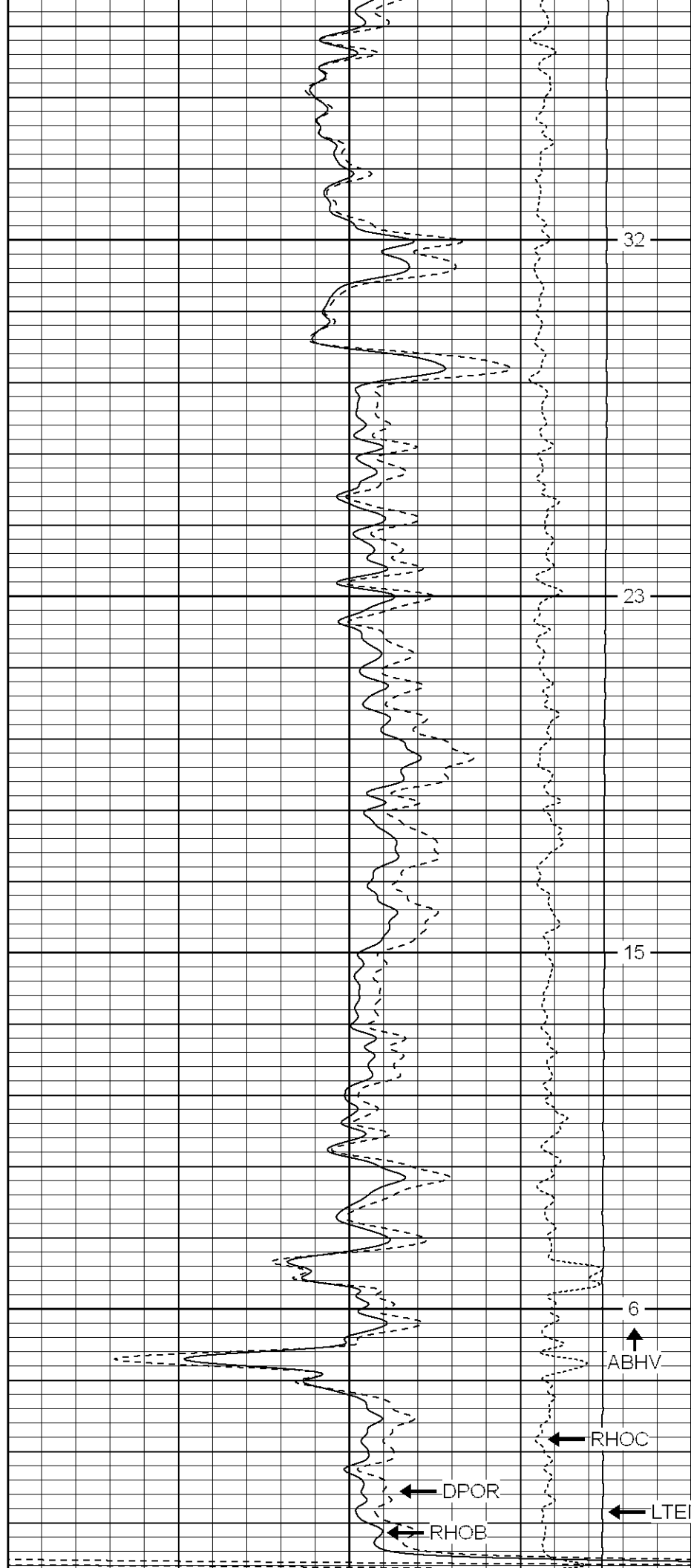


1850

1900

1950

2000

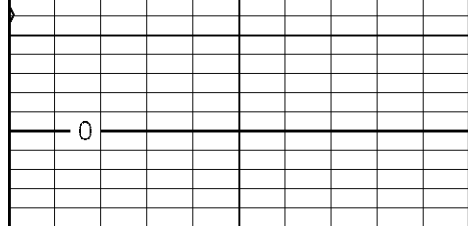


32

23

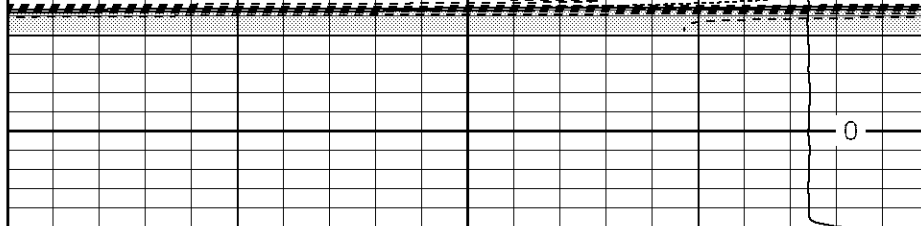
15

6



0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

2050



2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10

-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0



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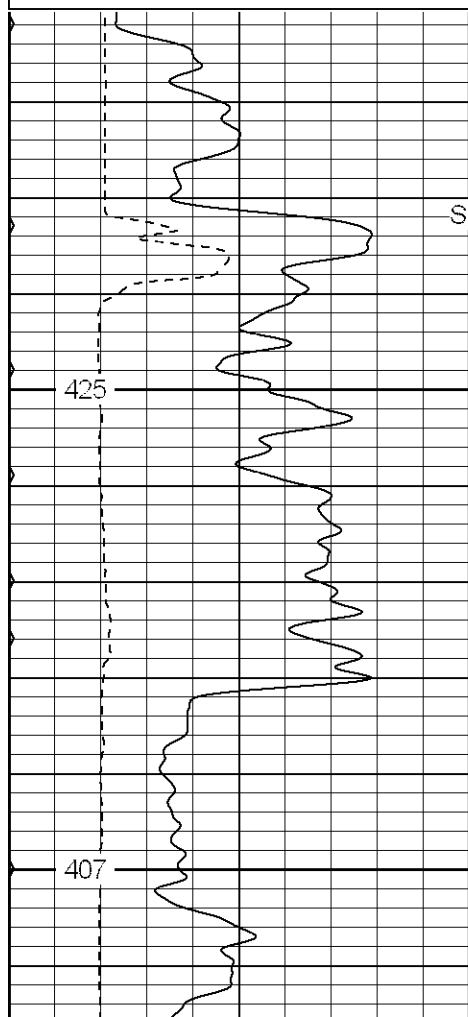
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# Main Pass

Database File: xtoge2013.db  
Dataset Pathname: pass2.1  
Presentation Format: odnl  
Dataset Creation: Thu Feb 22 03:56:39 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

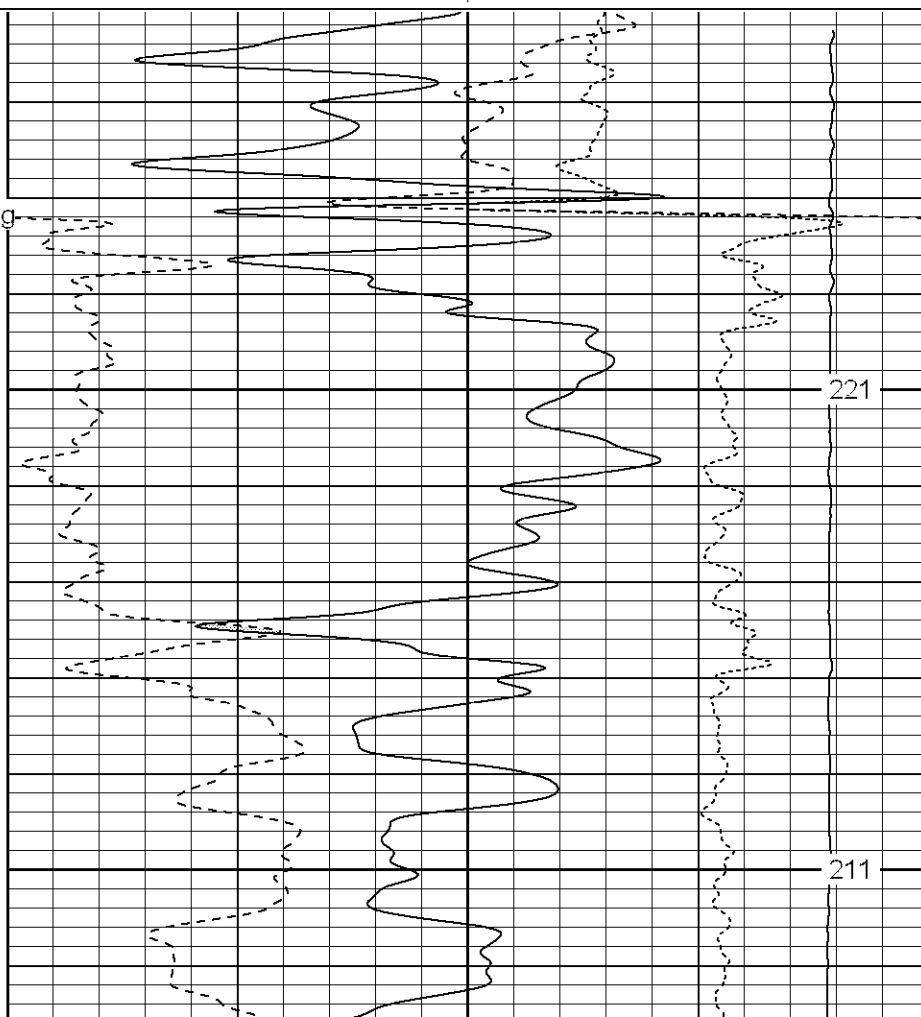
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0



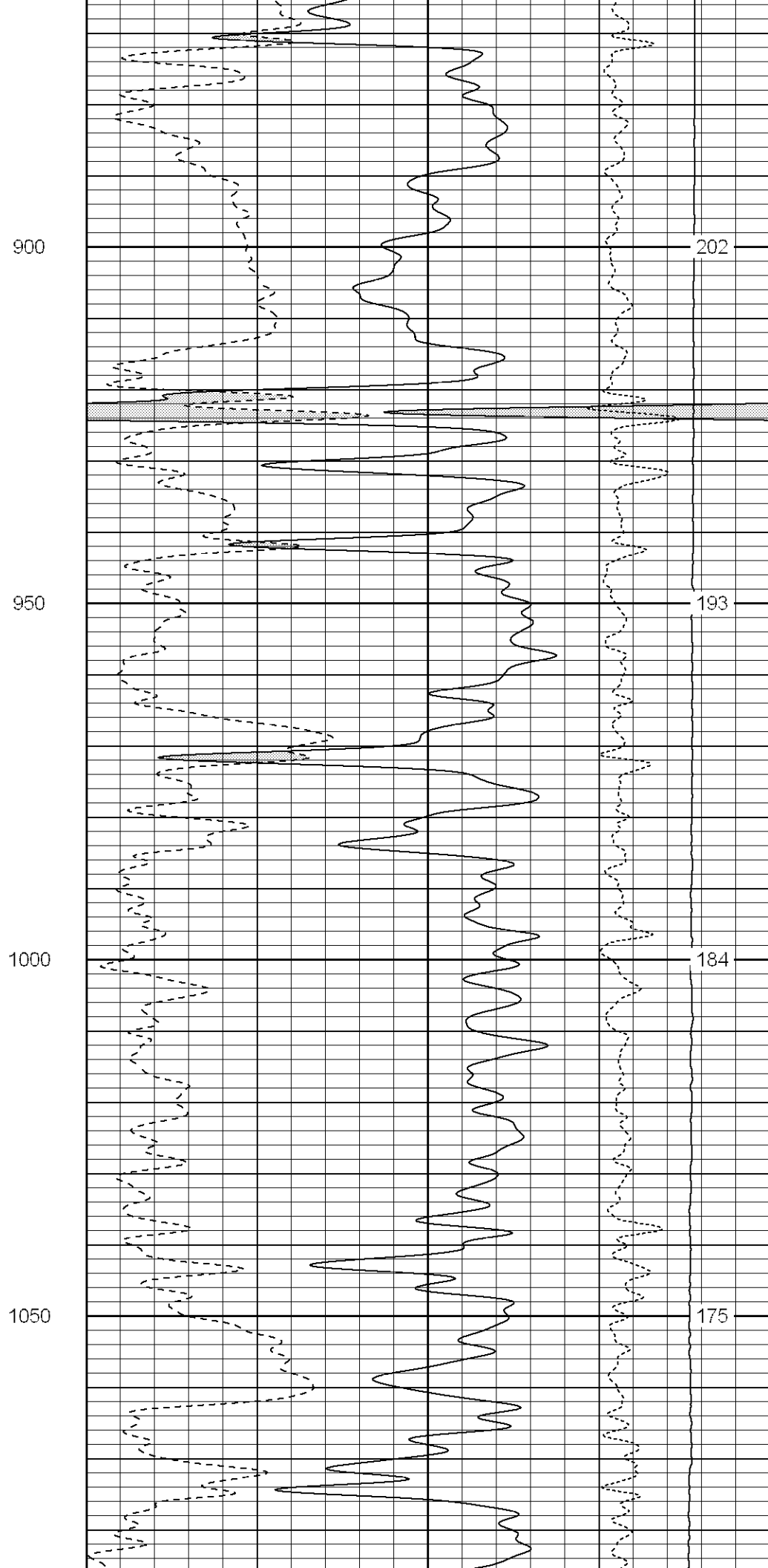
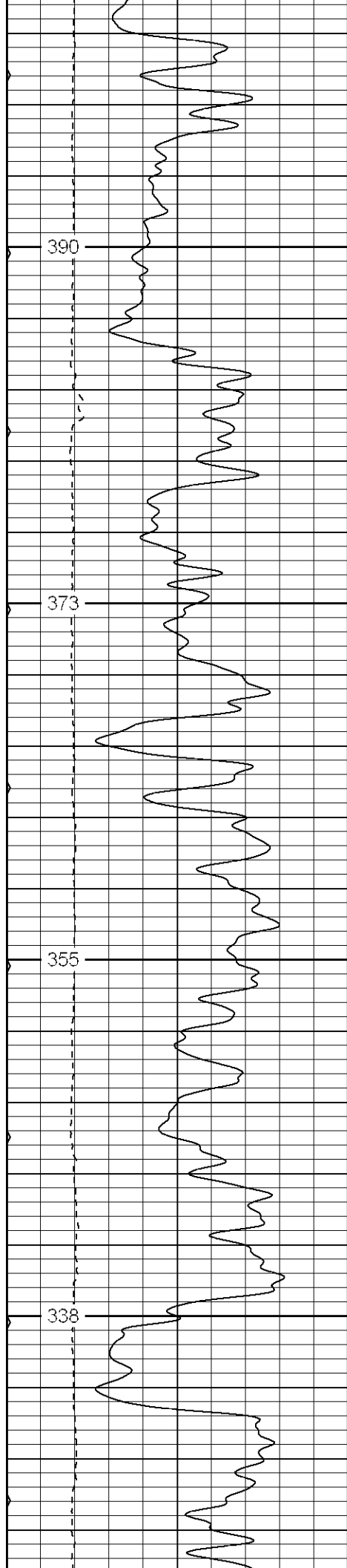
Surface Casing

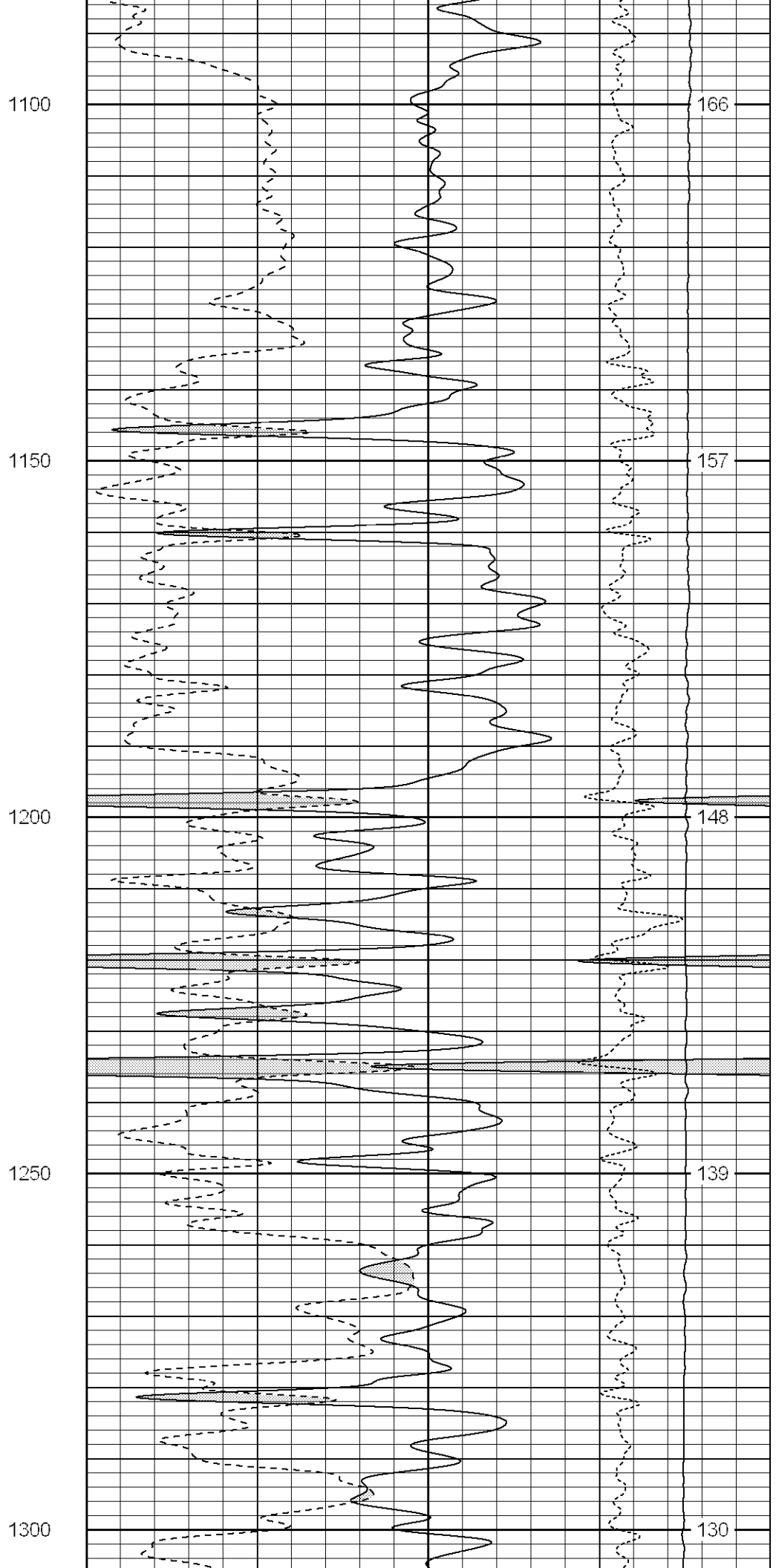
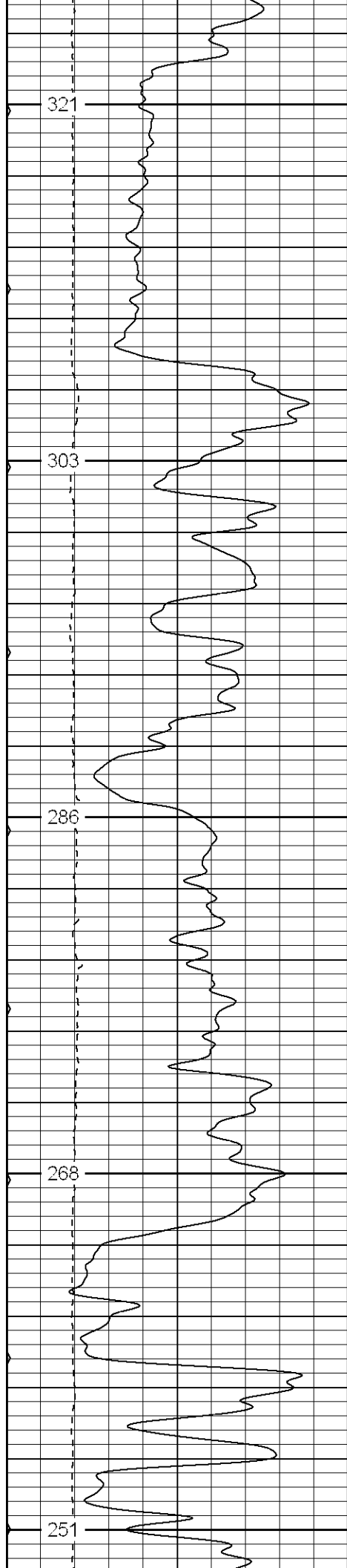
800

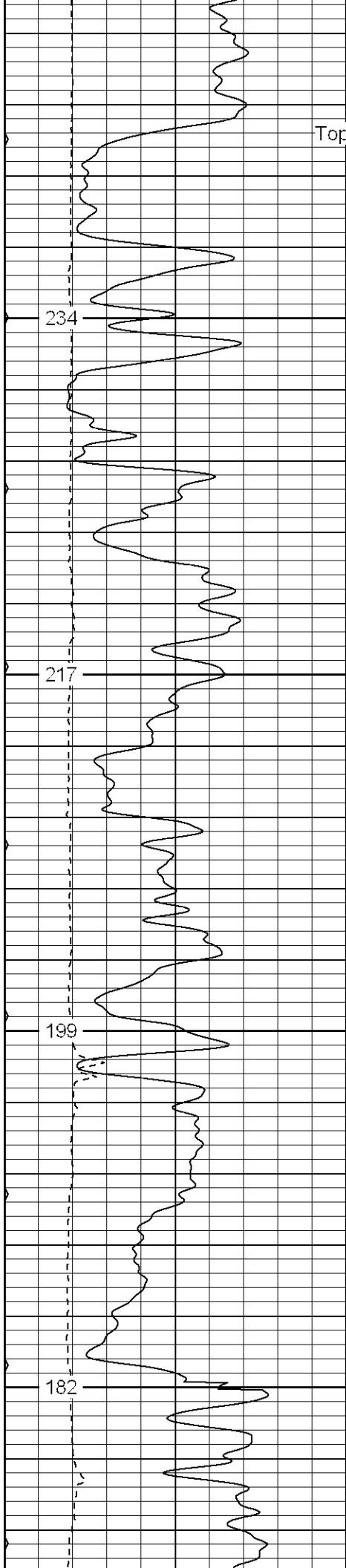
850











Top Of Raton Comgl.

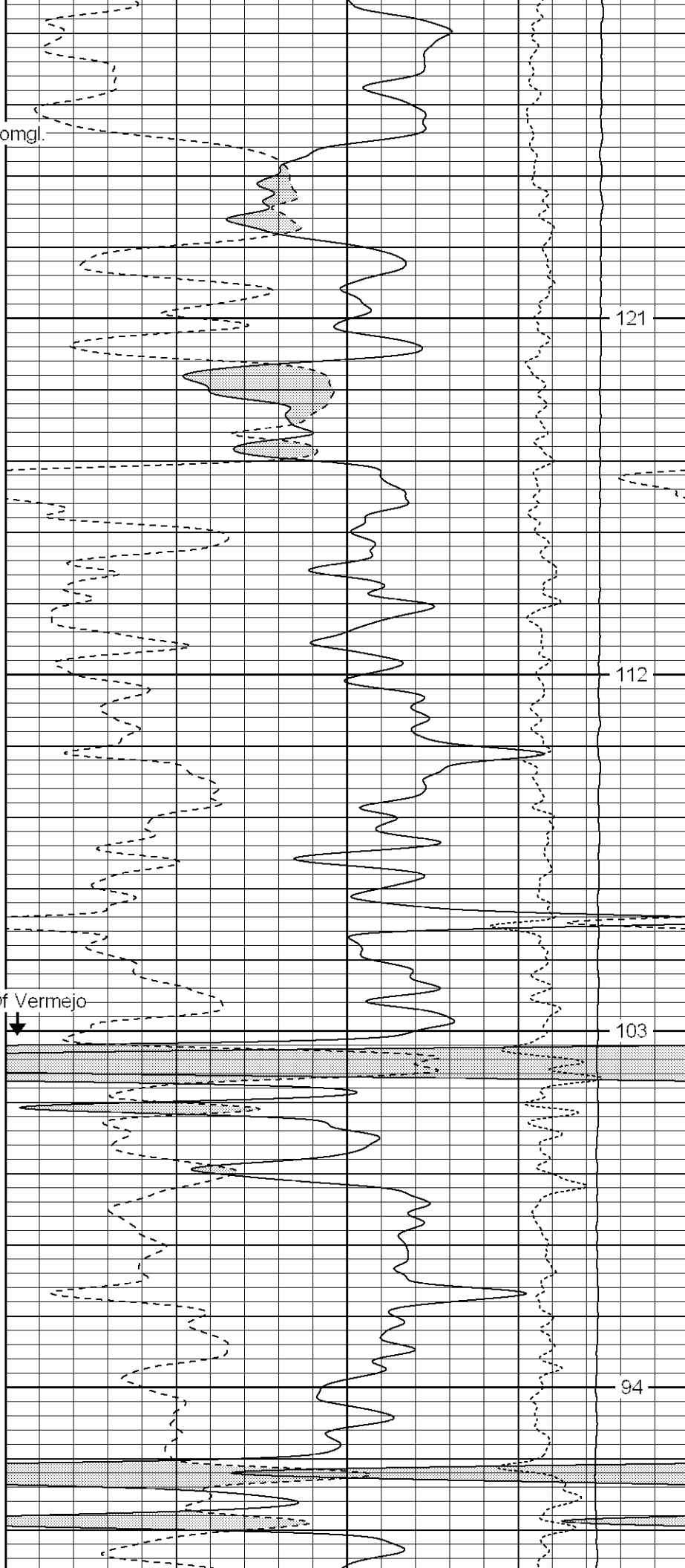
1350

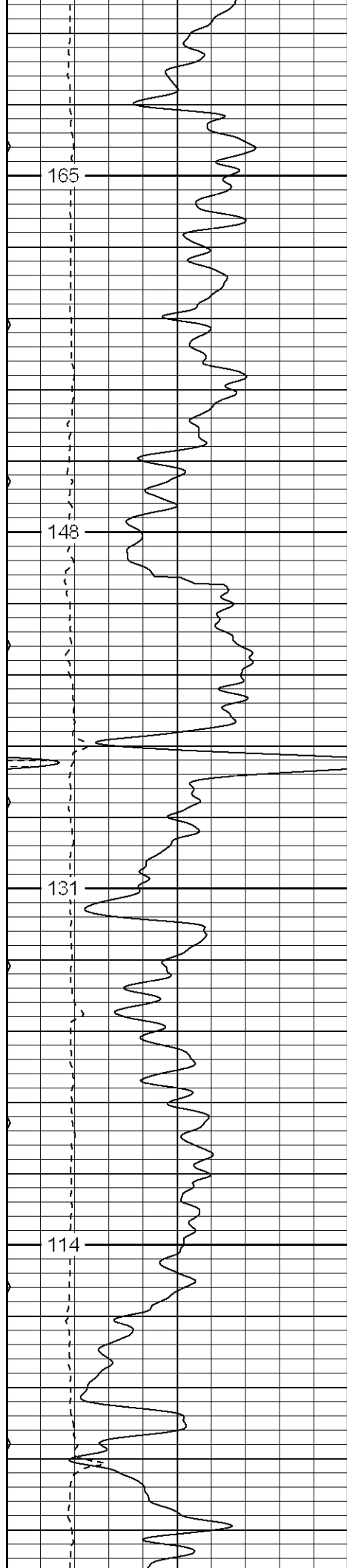
1400

1450

1500

Top Of Vermejo





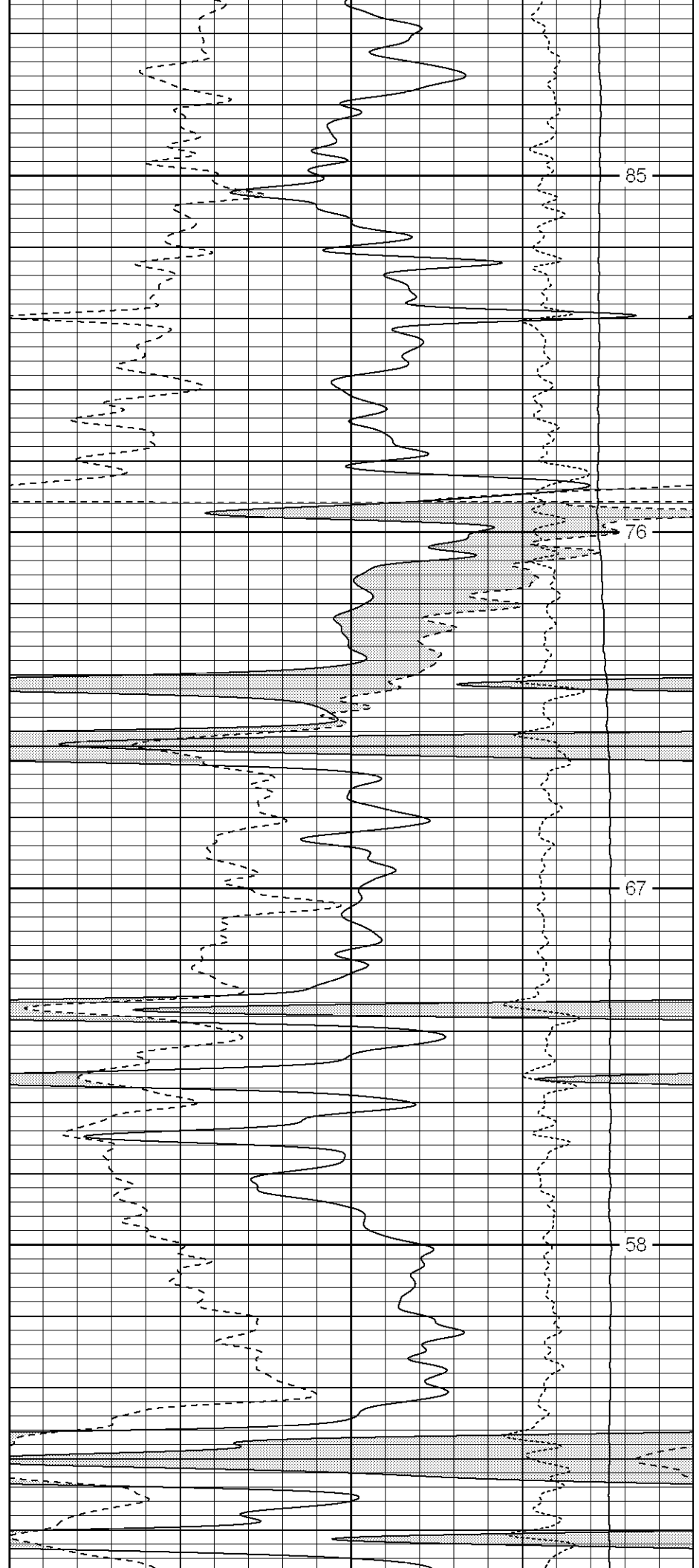
1550

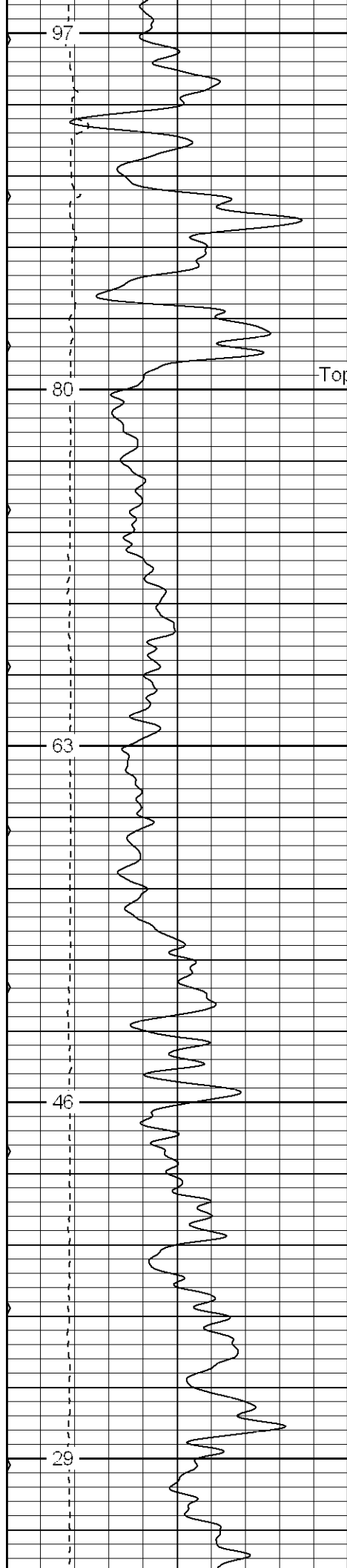
Air  
1600

1650

1700

Foam





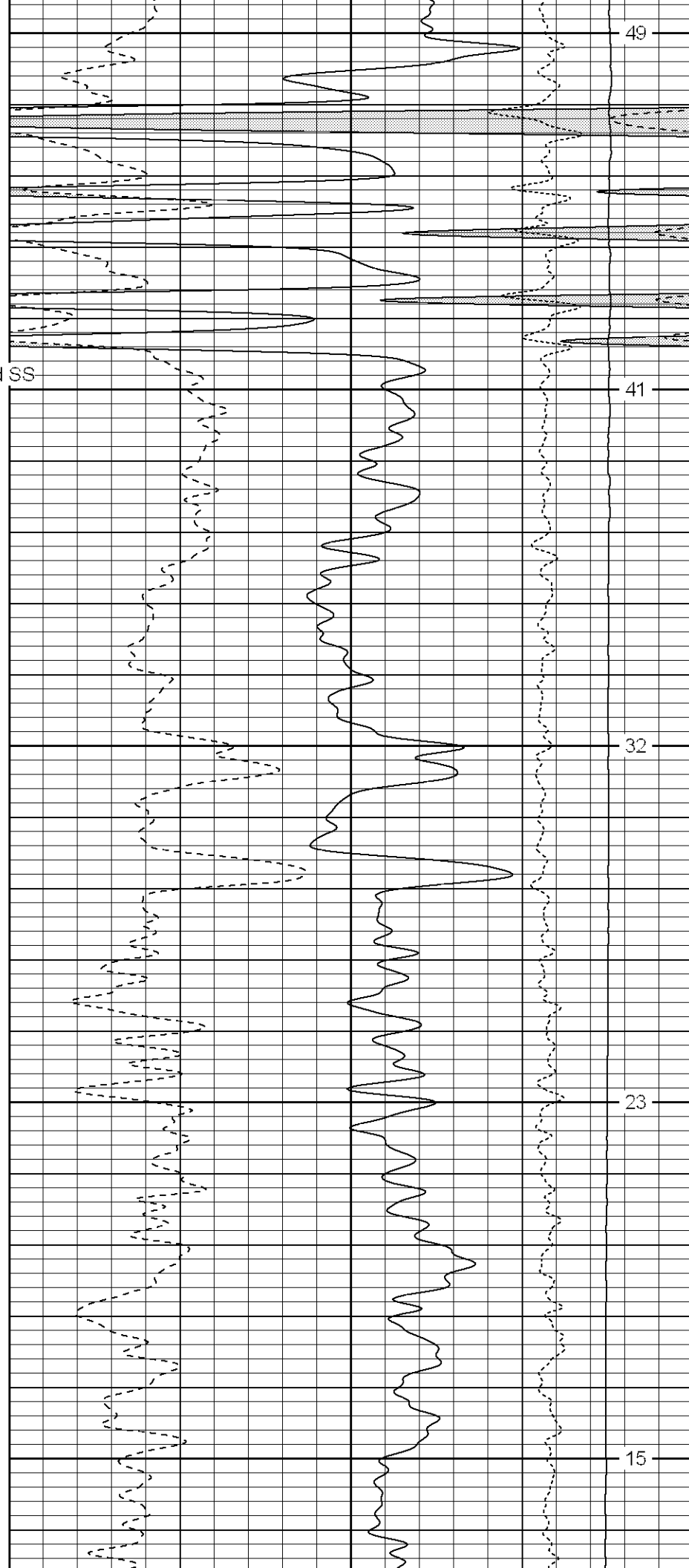
1750

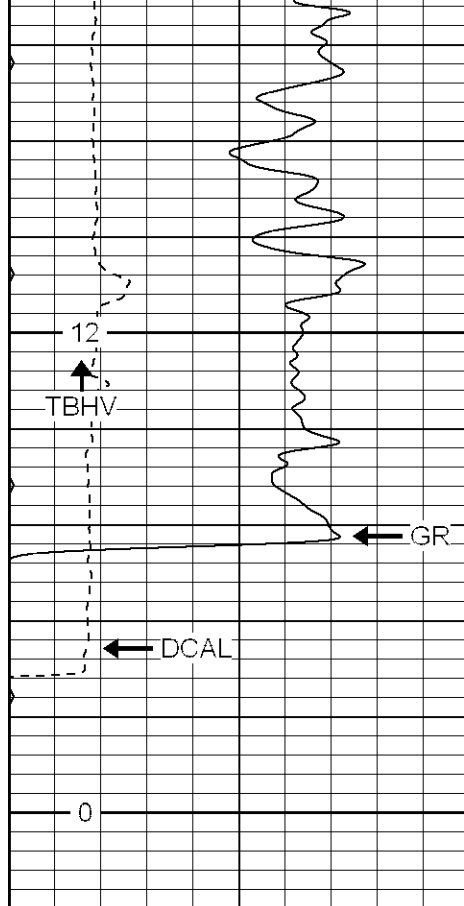
Top Of Trinidad SS  
1800

1850

1900

1950

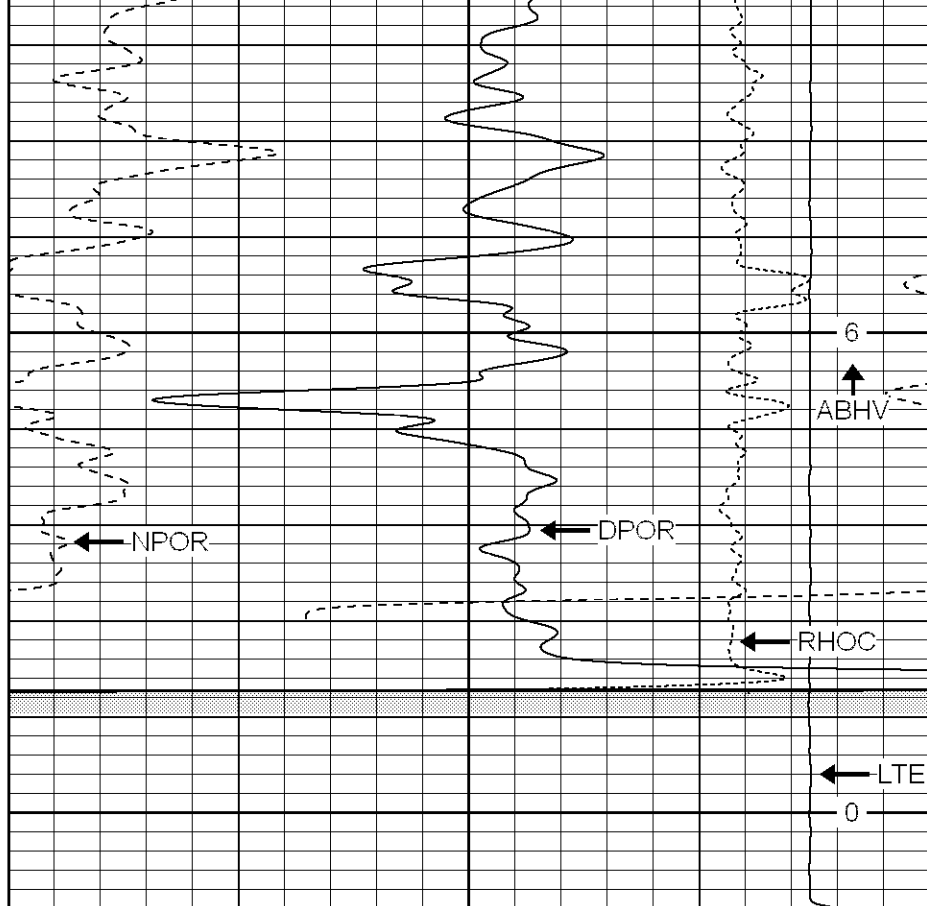




0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

2000

2050



30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0



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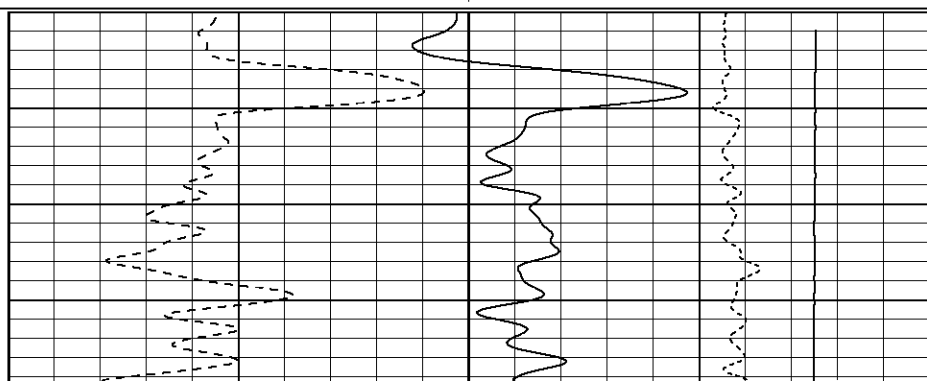
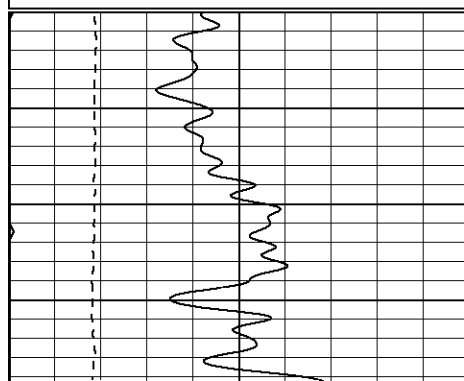
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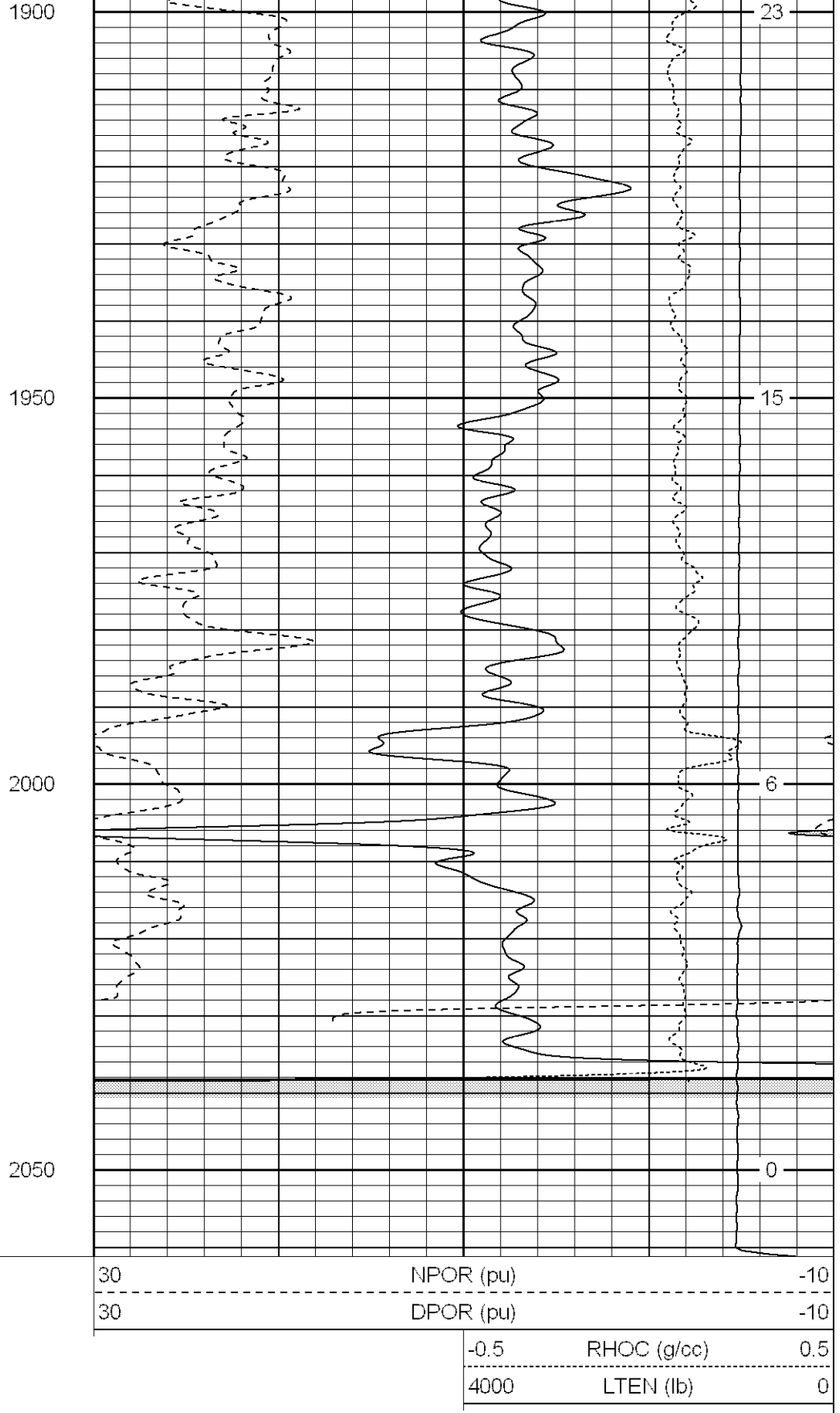
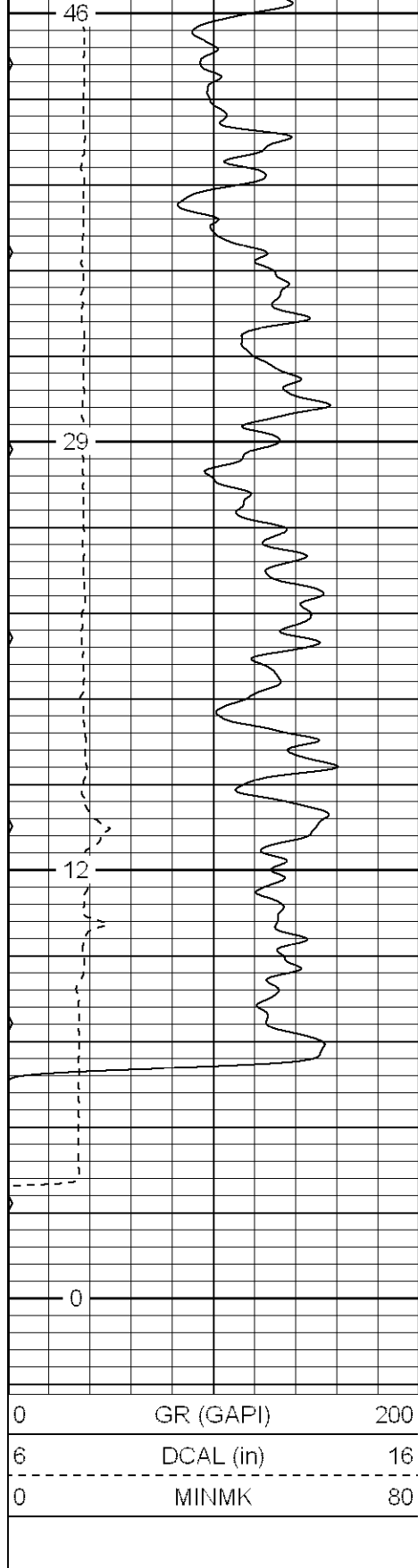
# Repeat Pass

Database File: xtoge2013.db  
Dataset Pathname: pass1.1  
Presentation Format: cdnl  
Dataset Creation: Thu Feb 22 03:41:23 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16
0	MINMK	80

30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0





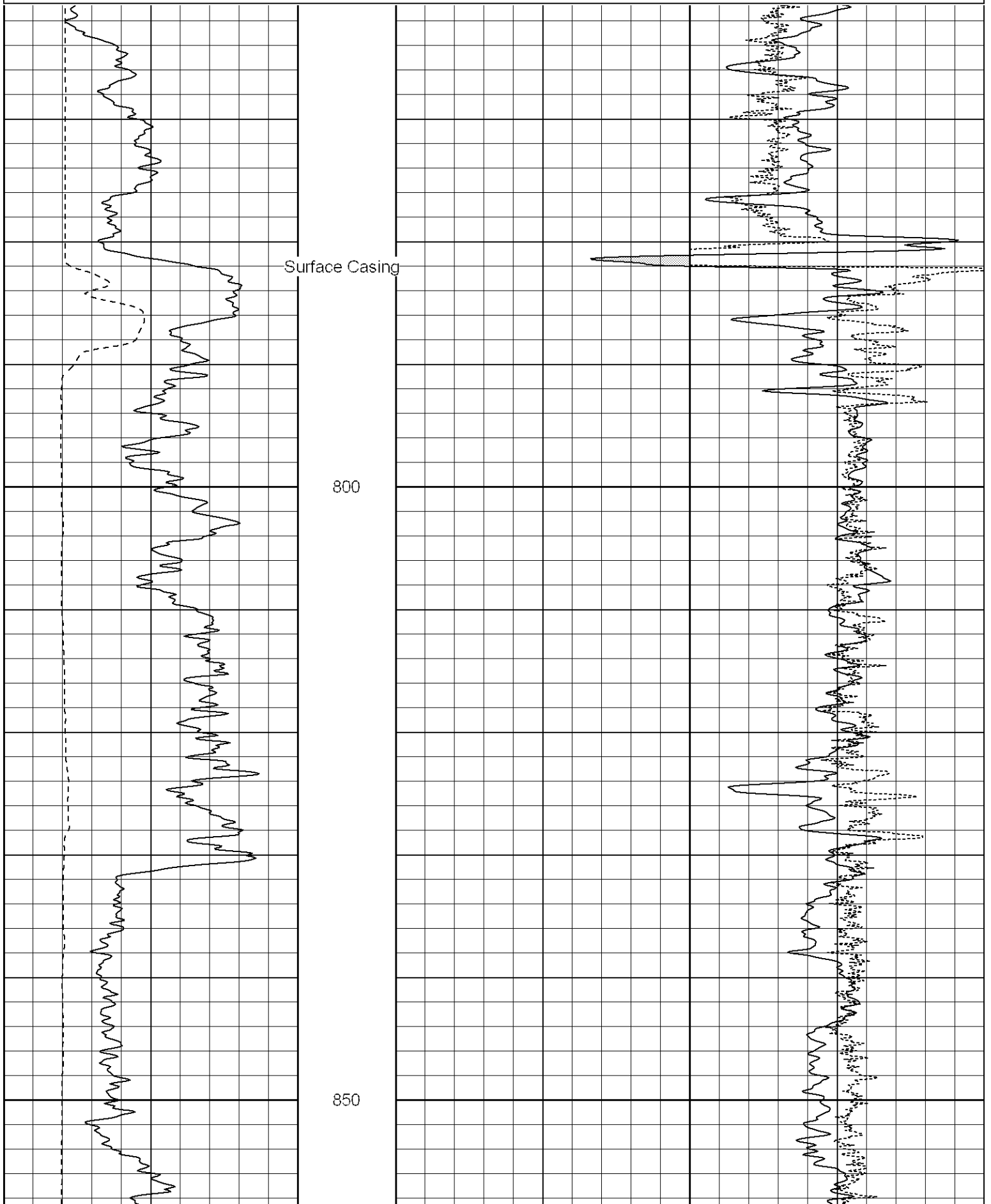
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# High Resolution Pass

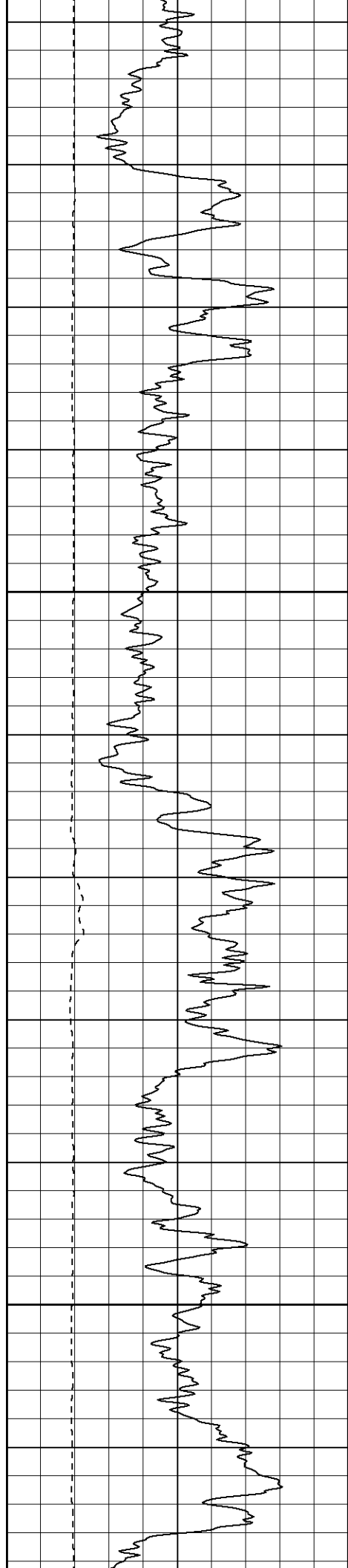
Database File: xtoge2013.db  
 Dataset Pathname: pass2.2  
 Presentation Format: cdlhr

0	GR (GAPI)	200
6	DCAL (in)	16

1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5

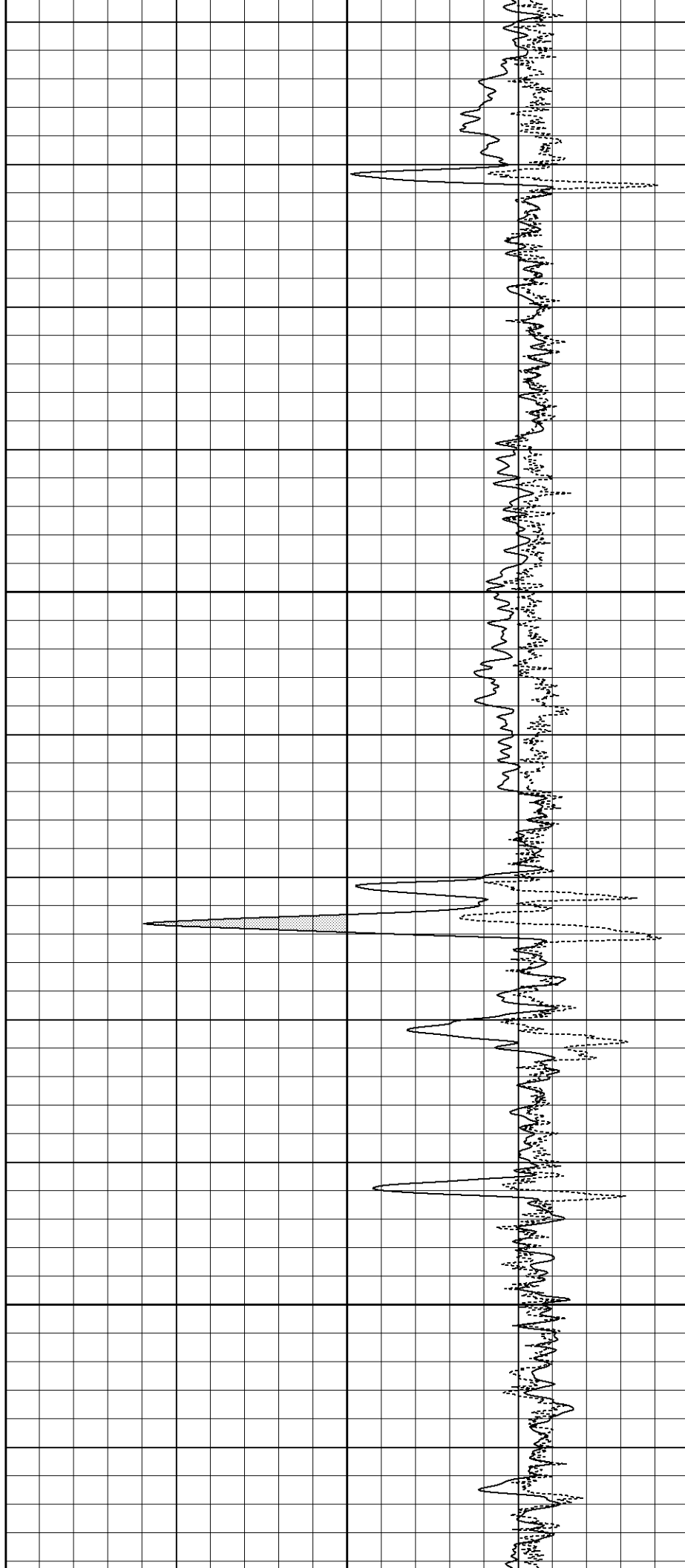


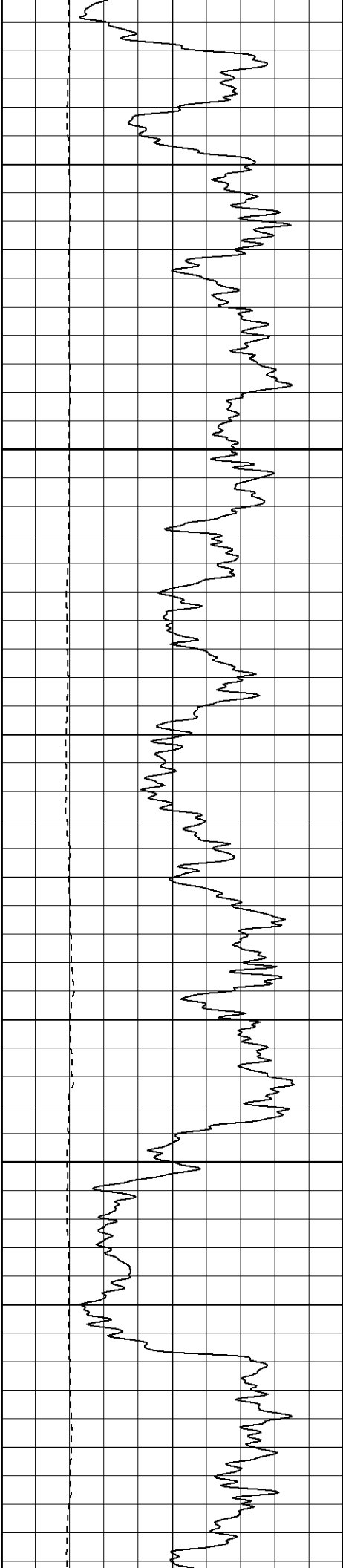




900

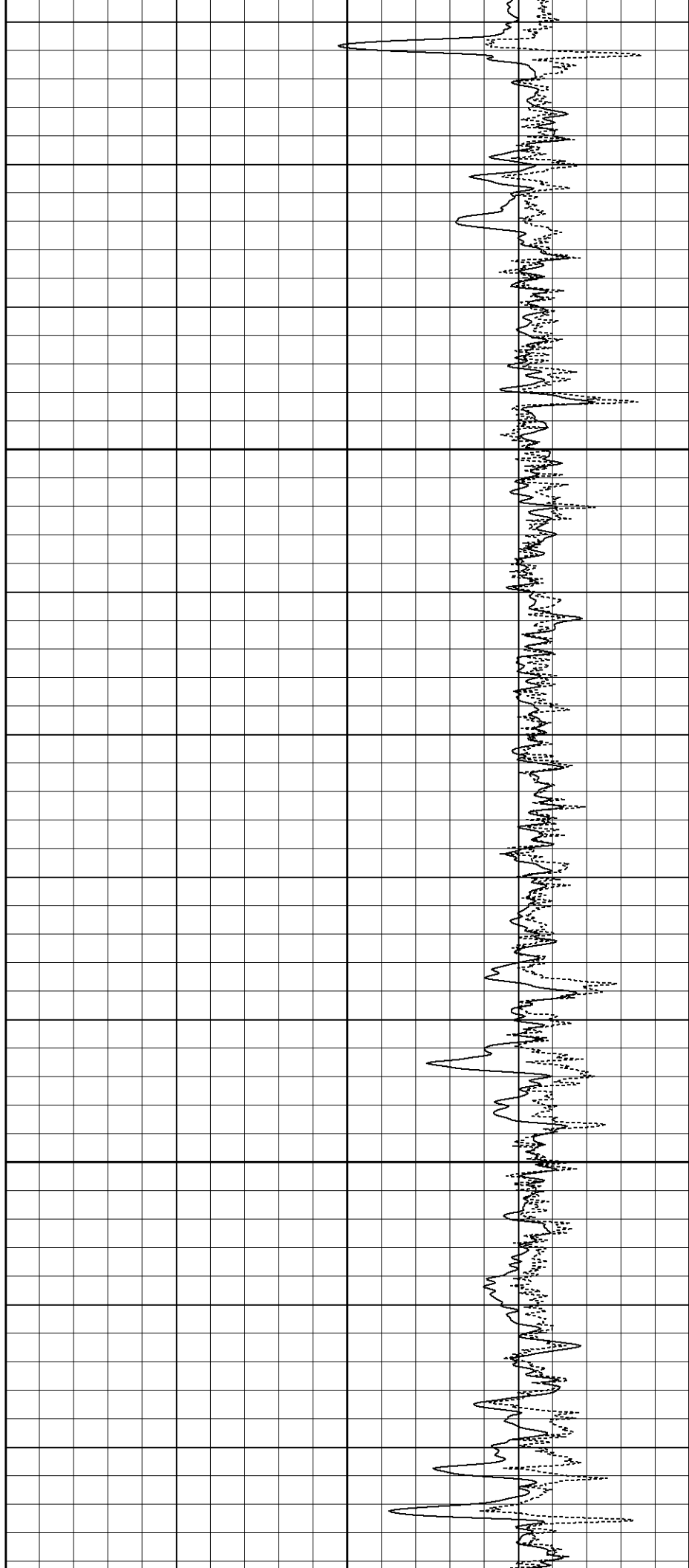
950

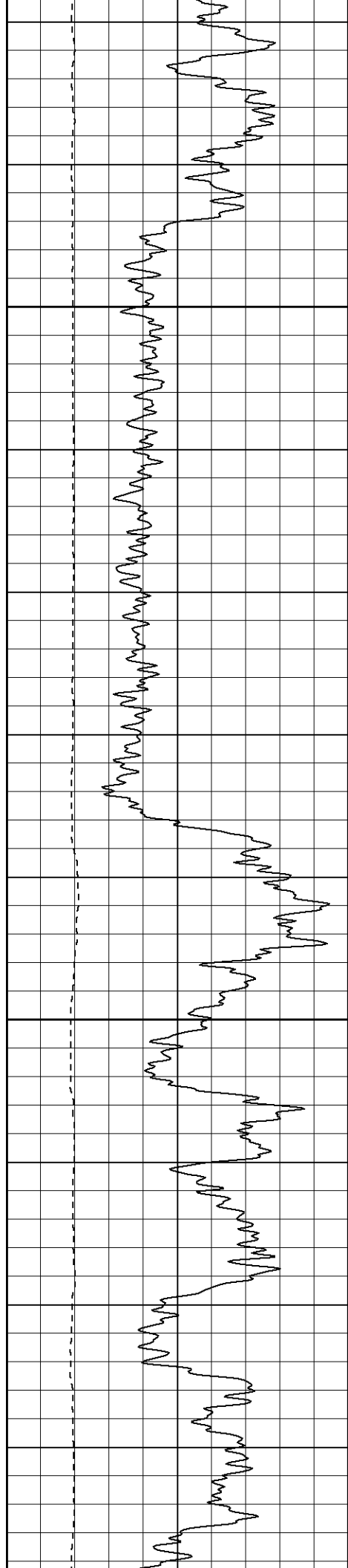




1000

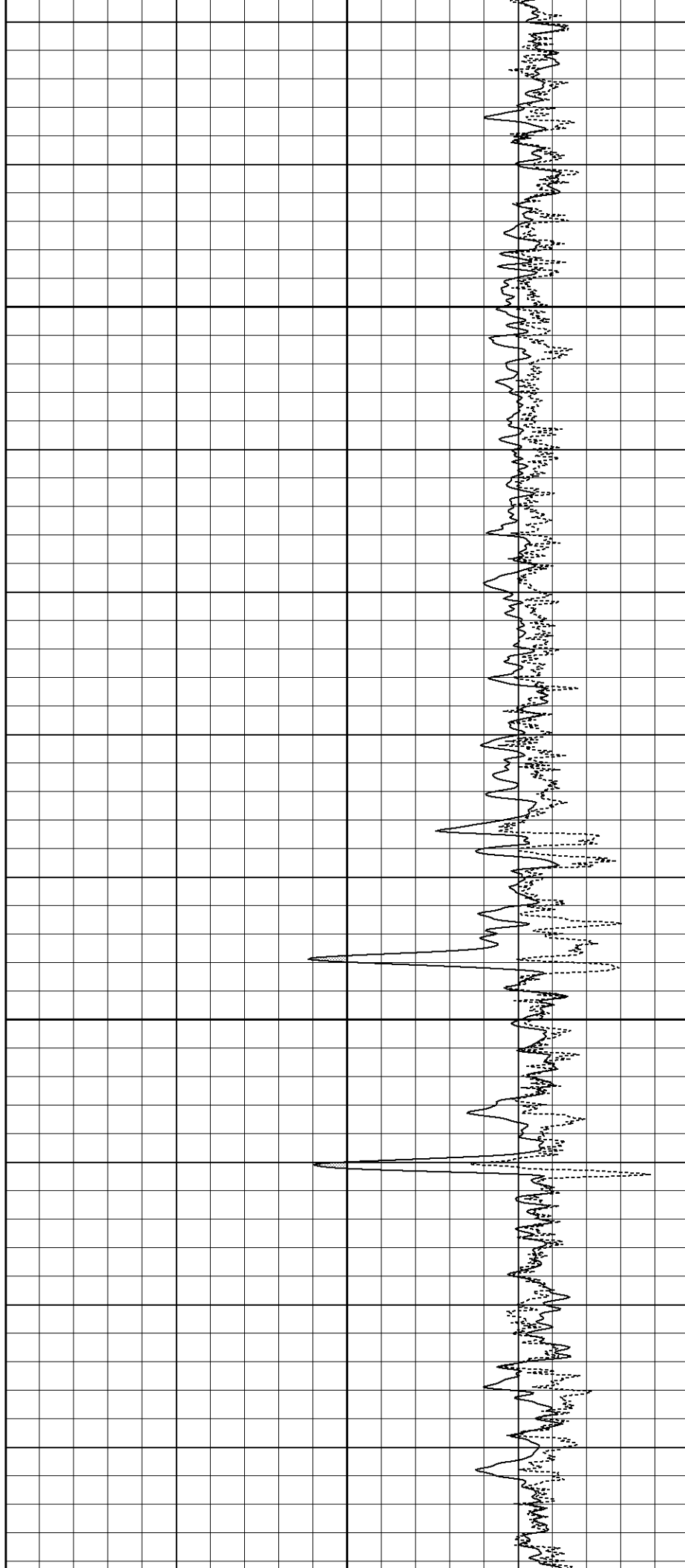
1050

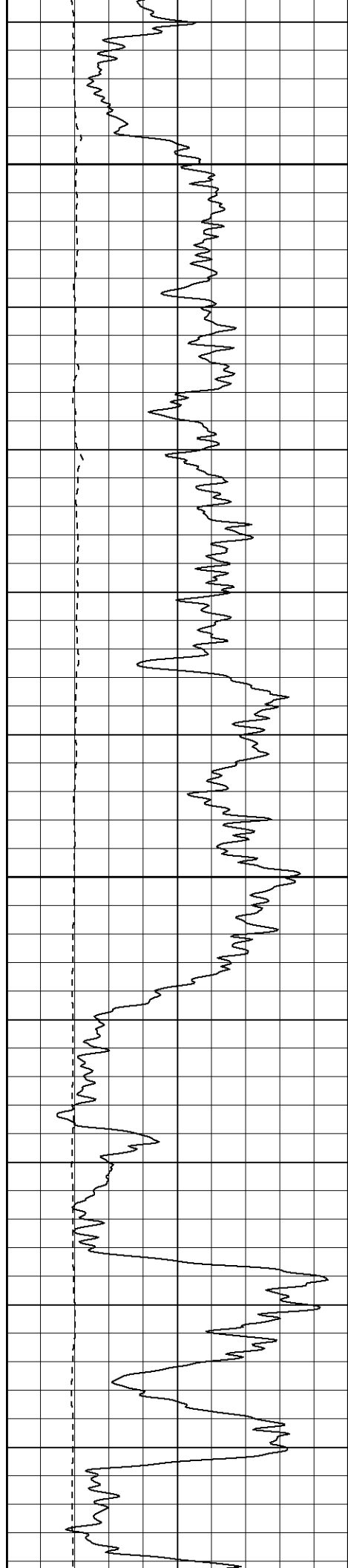




1100

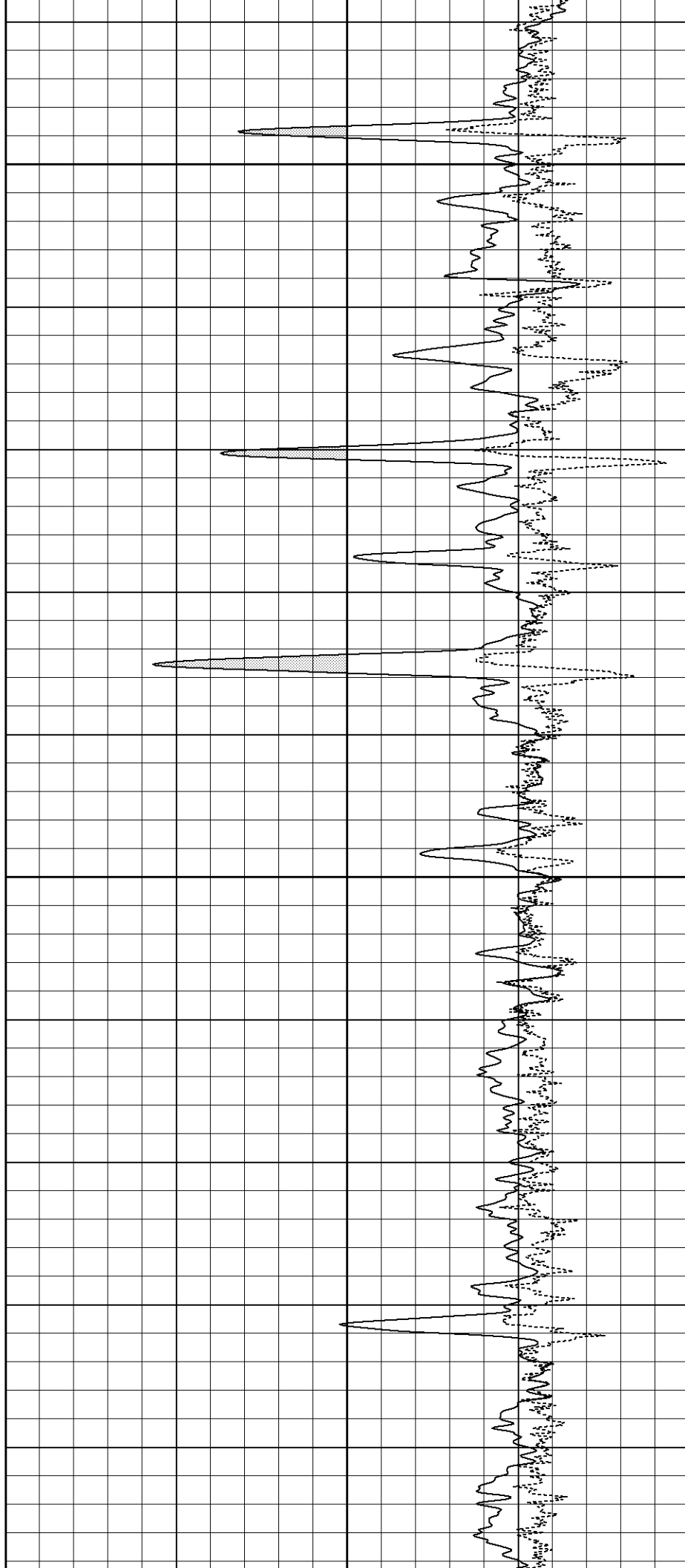
1150

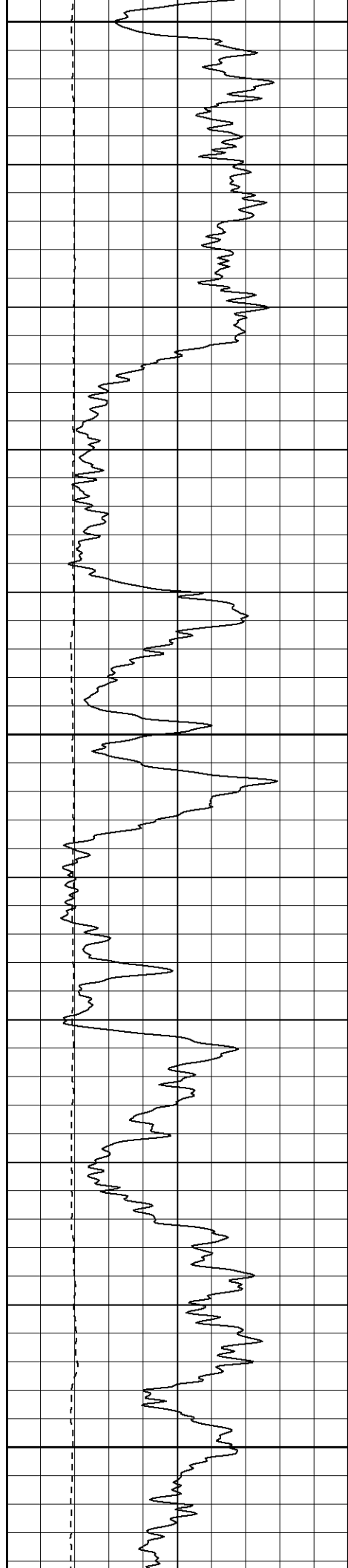




1200

1250

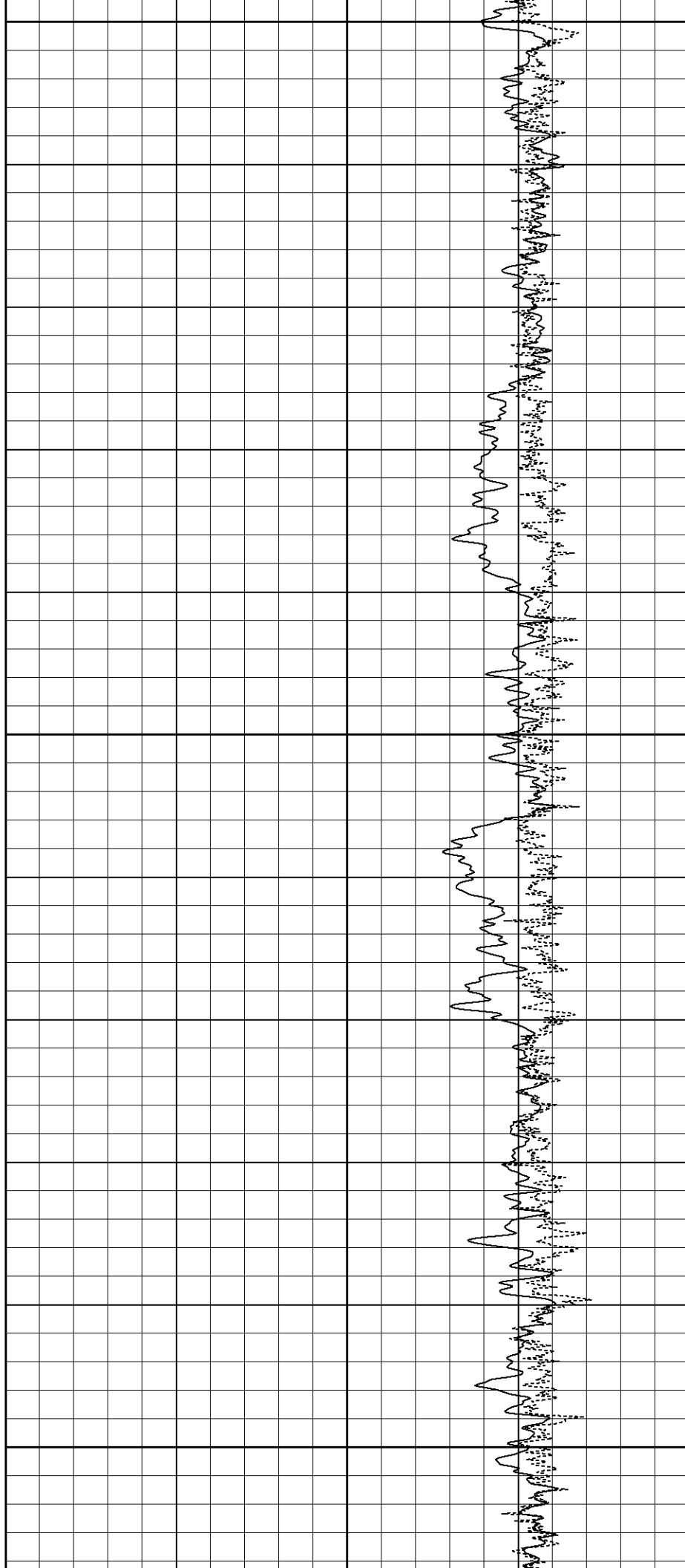


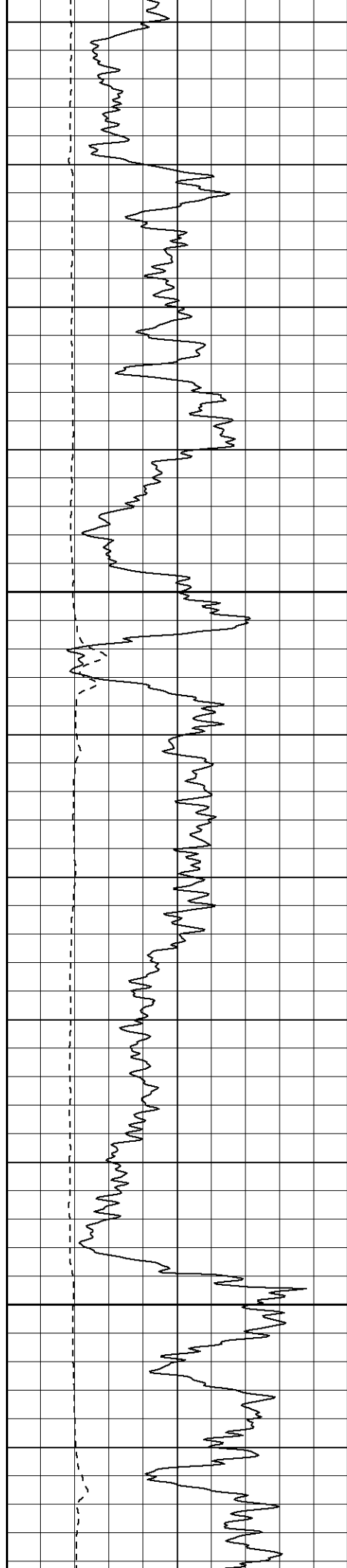


1300

1350

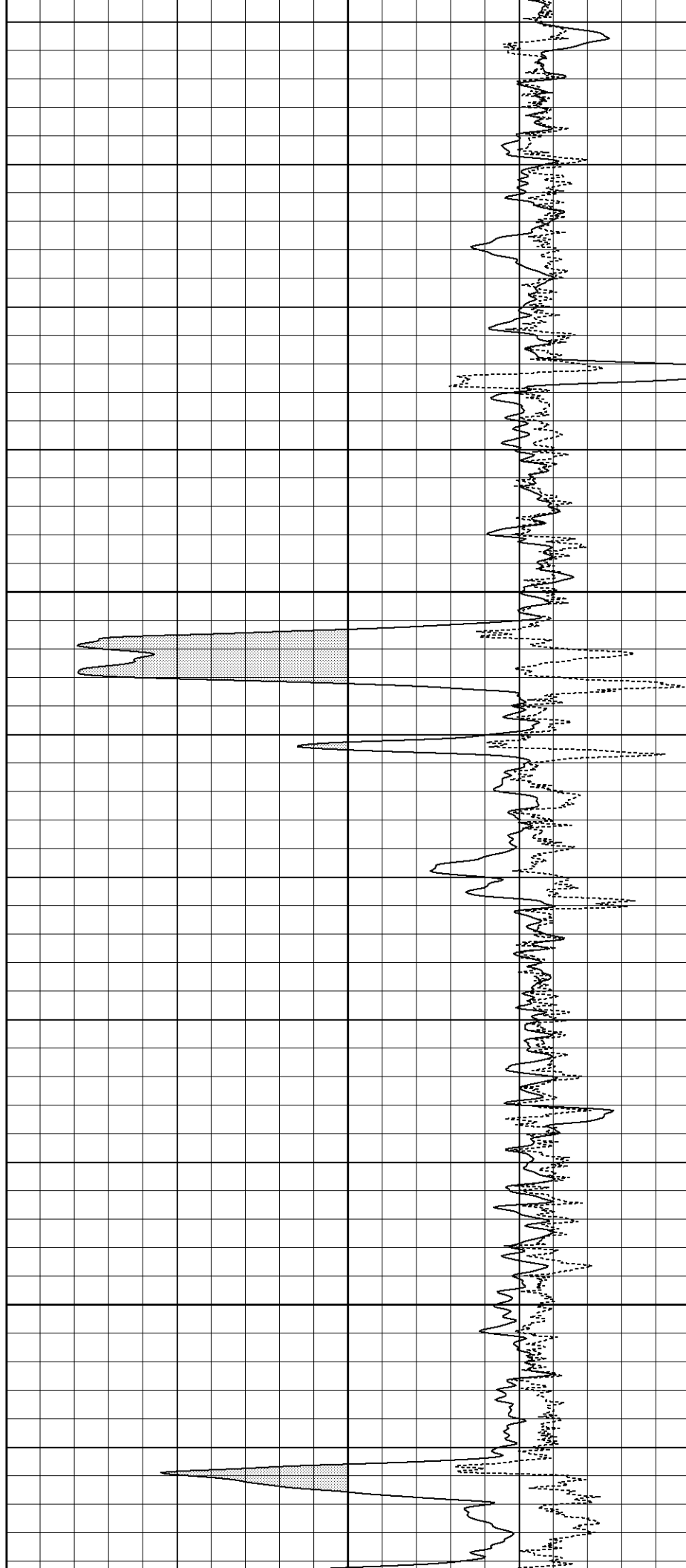
1400

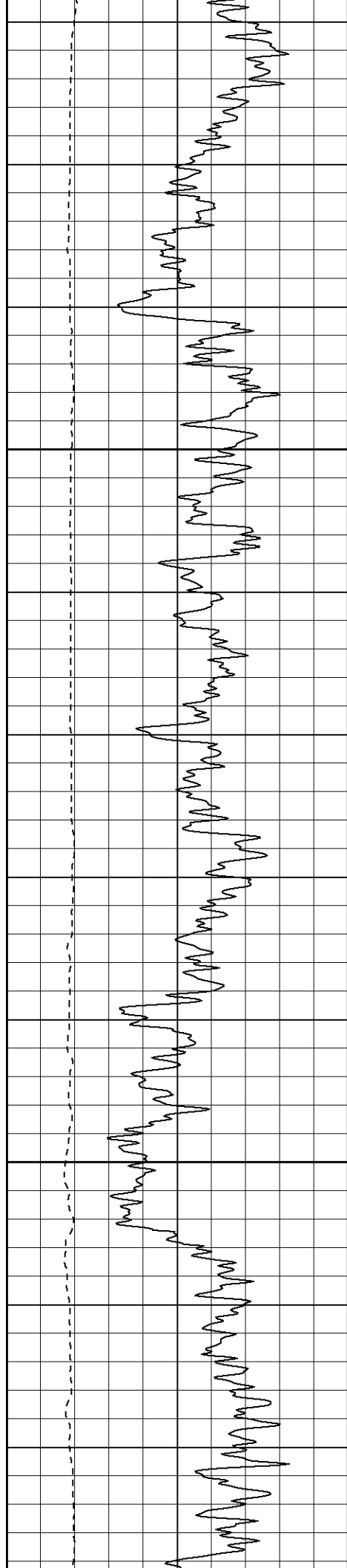




1450

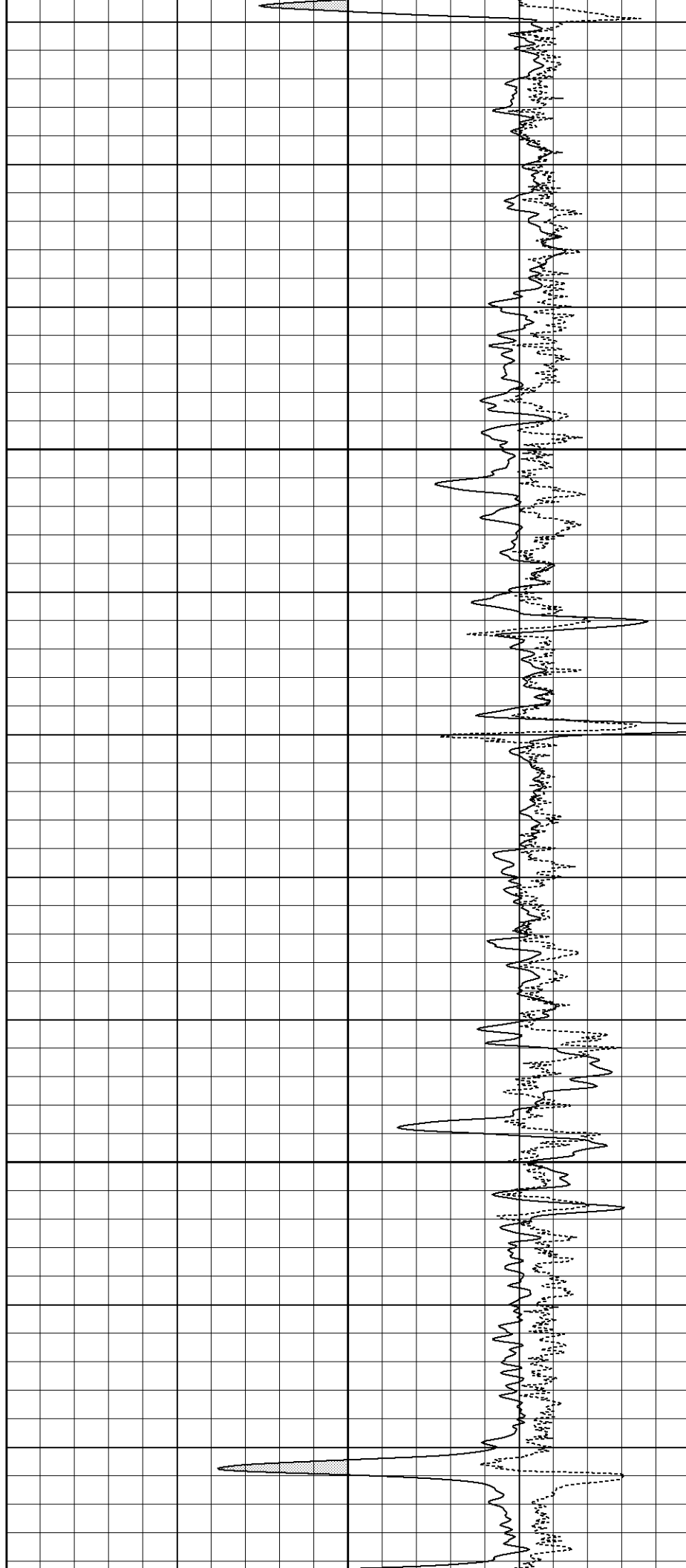
1500

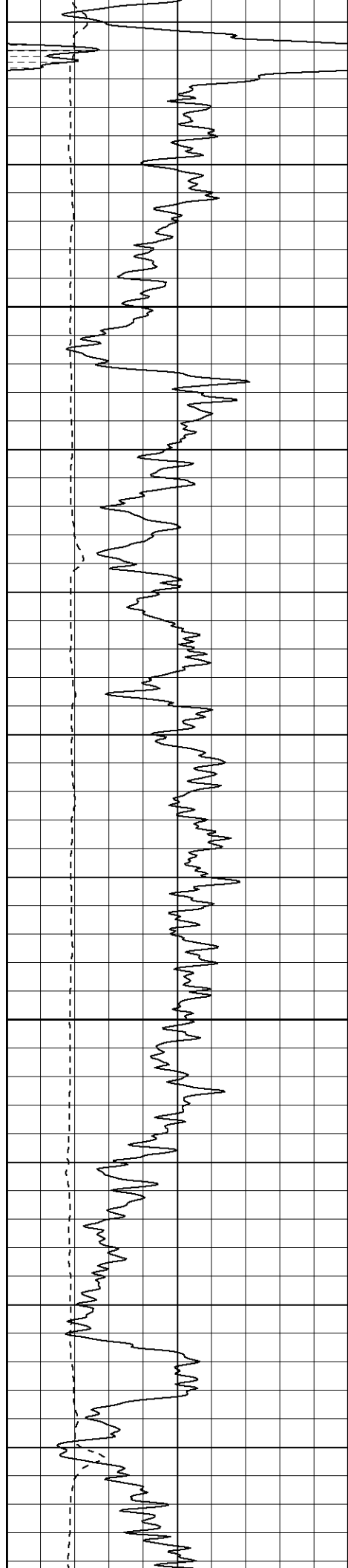




1550

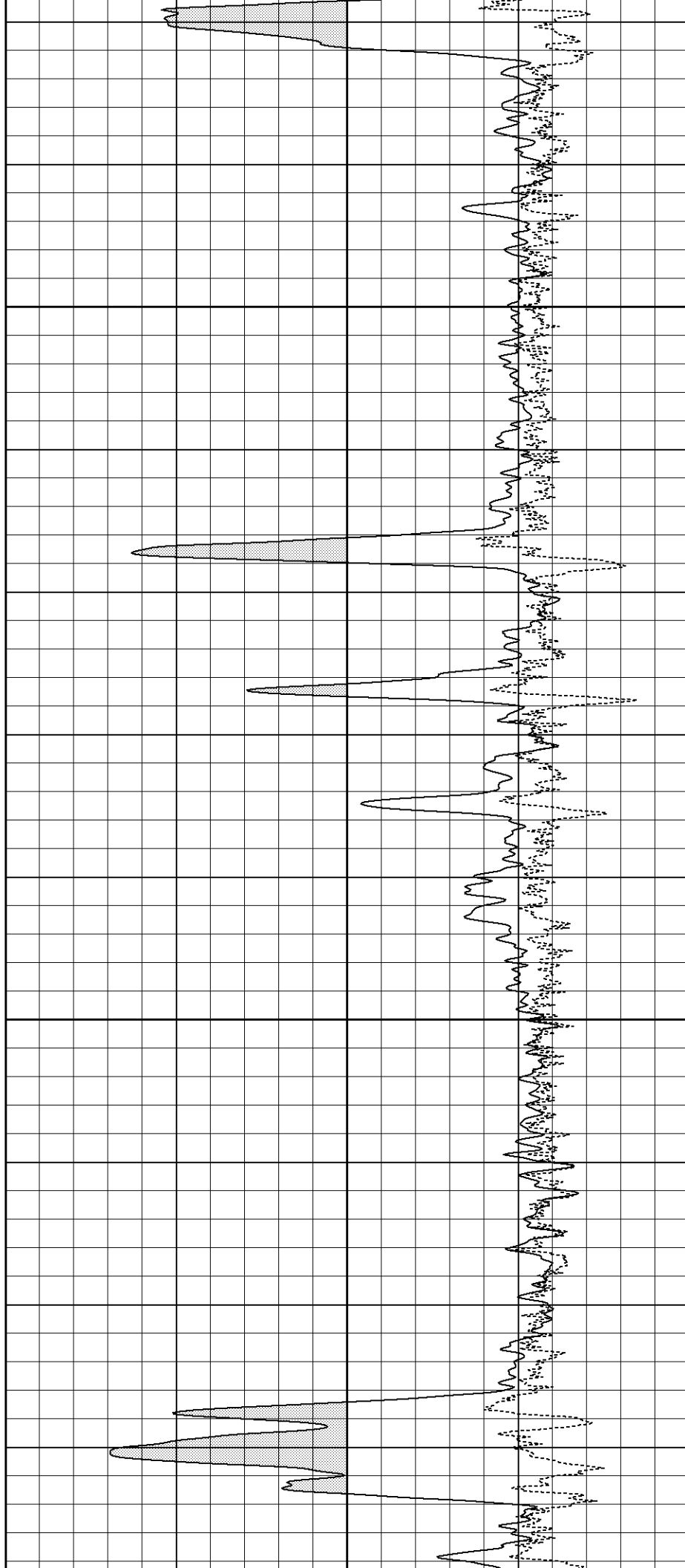
1600



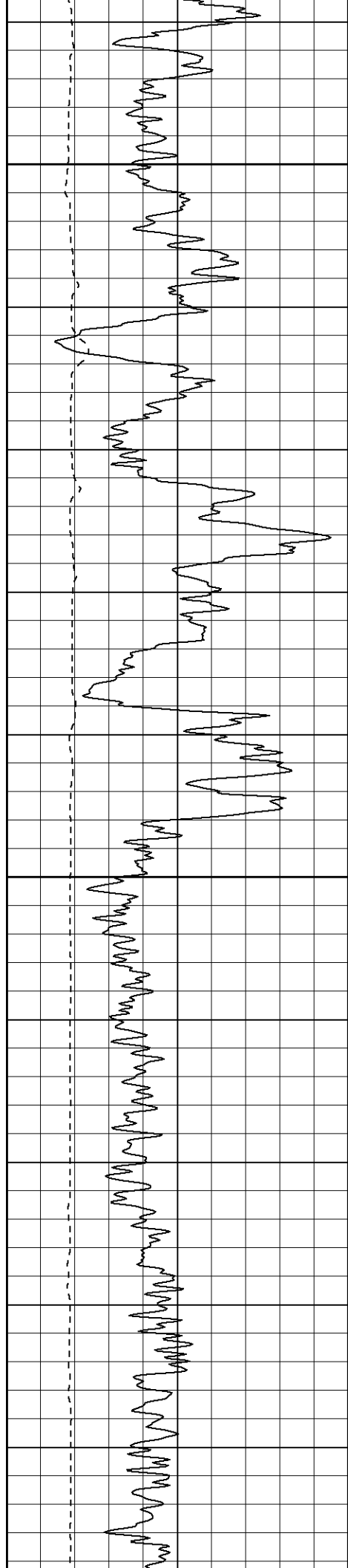


1650

1700

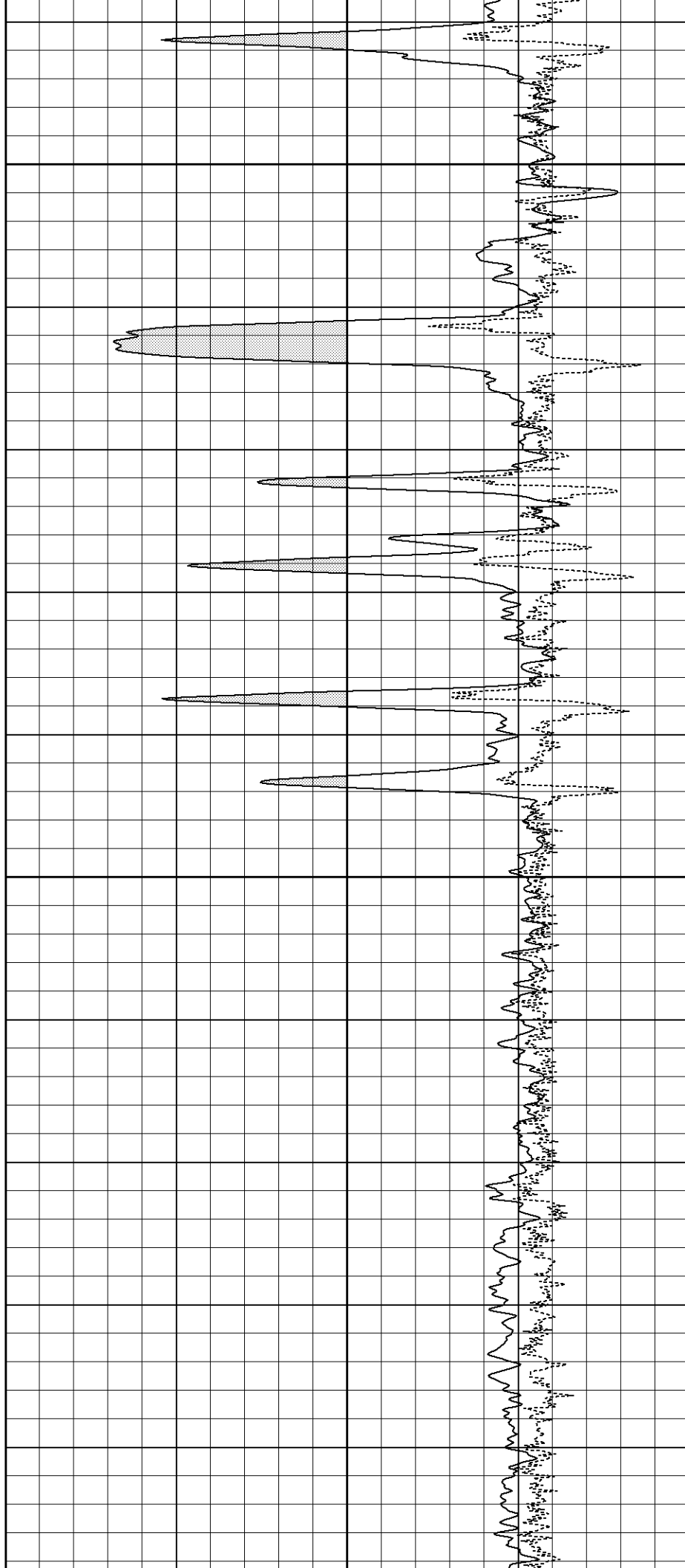






1750

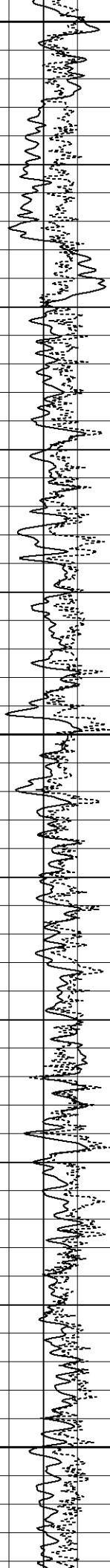
1800

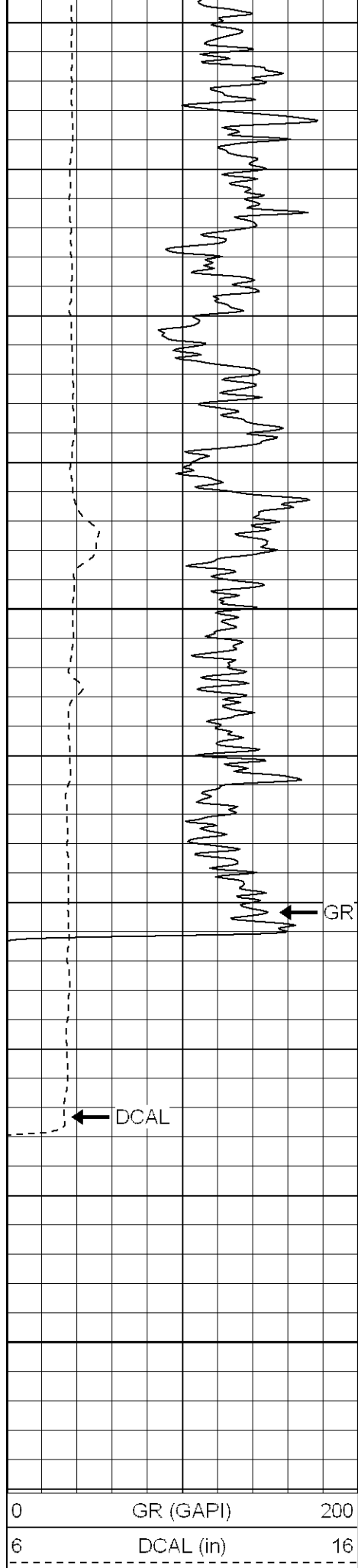


1850

1900

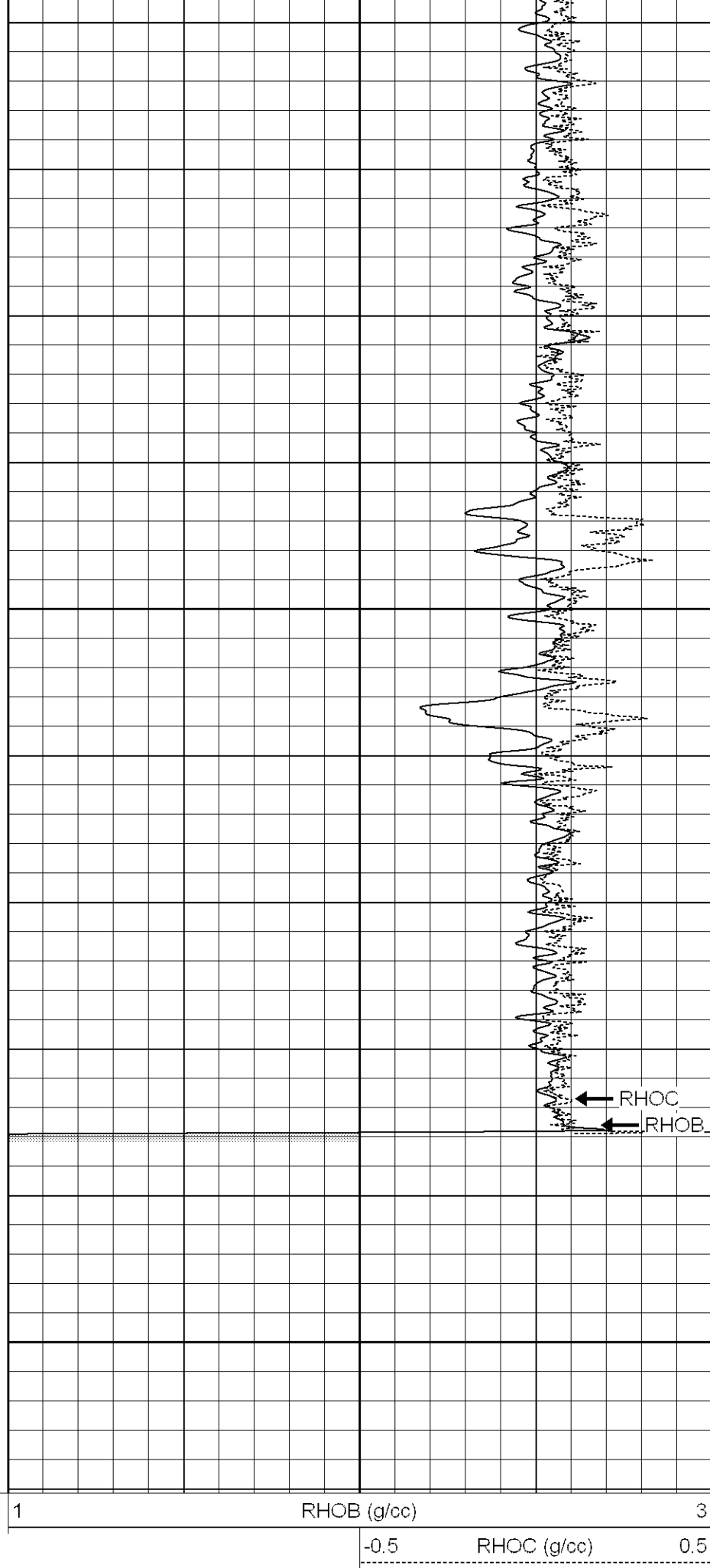
1950





2000

2050



# Calibration Report

Database File: xtoge2013.db  
 Dataset Pathname: pass1  
 Dataset Creation: Thu Feb 22 02:41:24 2007 by Log Open-Cased 061129

## Dual Induction Calibration Report

Serial-Model: 5375-G  
 Surface Cal Performed: Sun Feb 18 13:17:13 2007  
 Downhole Cal Performed: Sun Feb 18 13:17:56 2007

### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.008	0.626	V	0.000	500.000	mmho-m	809.126	-6.267
Medium	0.010	0.748	V	0.000	550.000	mmho-m	745.979	-7.704
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.008	0.626	V	0.000	500.000	mmho-m	809.454	-6.433
Medium	0.011	0.748	V	0.000	550.000	mmho-m	746.838	-8.278

### Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	-0.588	499.807	mmho-m	0.163	499.960	mmho-m	0.999	0.750
Medium	-0.423	549.681	mmho-m	0.565	549.932	mmho-m	0.999	0.987
Shallow	2.508	0.017	V	500.000	2.000	Ohm-m	159.862	-7.400

## Compensated Density Calibration Report

Serial-Model: 902-2.75POH  
 Source / Verifier: /  
 Master Calibration Performed: Fri Feb 09 11:24:21 2007

### Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1015.57	498.52	cps
Aluminum	2.590	g/cc	183.60	250.82	cps
Spine Angle = 68.12			Density/Spine Ratio = 0.477		
	Size		Reading		
Small Ring	7.95	in	1.84	V	
Large Ring	17.00	in	4.32	V	

## Neutron Calibration Report

Serial Number: 802  
 Tool Model: 2.75POH  
 Performed: Fri Feb 09 08:32:01 2007

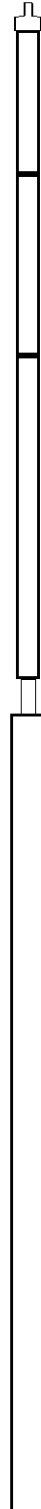
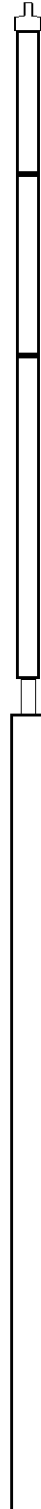
Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps

# Gamma Ray Calibration Report

Serial Number:	804	
Tool Model:	2.75POH	
Performed:	Fri Feb 09 00:46:24 2007	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8100	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	37.84		None	0.75	1.50	5.00
			GR-2.75POH (804) Probe	3.73	2.75	43.00
NEU	32.30		NEU-2.75POH (802) Probe Epithermal	4.75	2.75	58.00
			CDL-2.75POH (902) Probe	8.43	2.75	106.00
LSD DCAL SSD	24.47 24.19 23.95		Probe	0.89	3.50	20.00
CILD SP	10.60 10.60		DIL-G (5375) Gearhart	20.83	4.00	345.00
CILM	6.89					
RLL3	1.70					

Dataset:			xtoge2013.db: field/well/run1/pass1		
Total Length:			39.37 ft		
Total Weight:			577.00 lb		
O.D.			4.00 in		