



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company		ATLAS OPERATING, LLC.	
Well		B & A SMITH #5-8	
Field		SPIVEY-GRABS-BASIL	
County		HARBER	
State		KANSAS	
Location:		API # : 15-077-21730-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		1700' FNL & 1650' FEL	
Drilling Measured From		S/2 - NE - SW - NE	
SEC 8		TWP 31S	
RGE 8W		Elevation	
K.B. 1655		CDL/CNL	
D.F. 1653		MEL	
G.L. 1645			
Date	1/24/10		
Run Number	ONE		
Depth Driller	4547		
Depth Logger	4549		
Bottom Logged Interval	4547		
Top Log Interval	0		
Casing Driller	8 5/8" @ 237'		
Casing Logger	230'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.3/46		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	0.95 @ 81F		
Rmf @ Meas. Temp	0.71 @ 81F		
Rmc @ Meas. Temp	1.14 @ 81F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	0.64 @ 121F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	121F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
Witnessed By	PAT DEENIHAN		

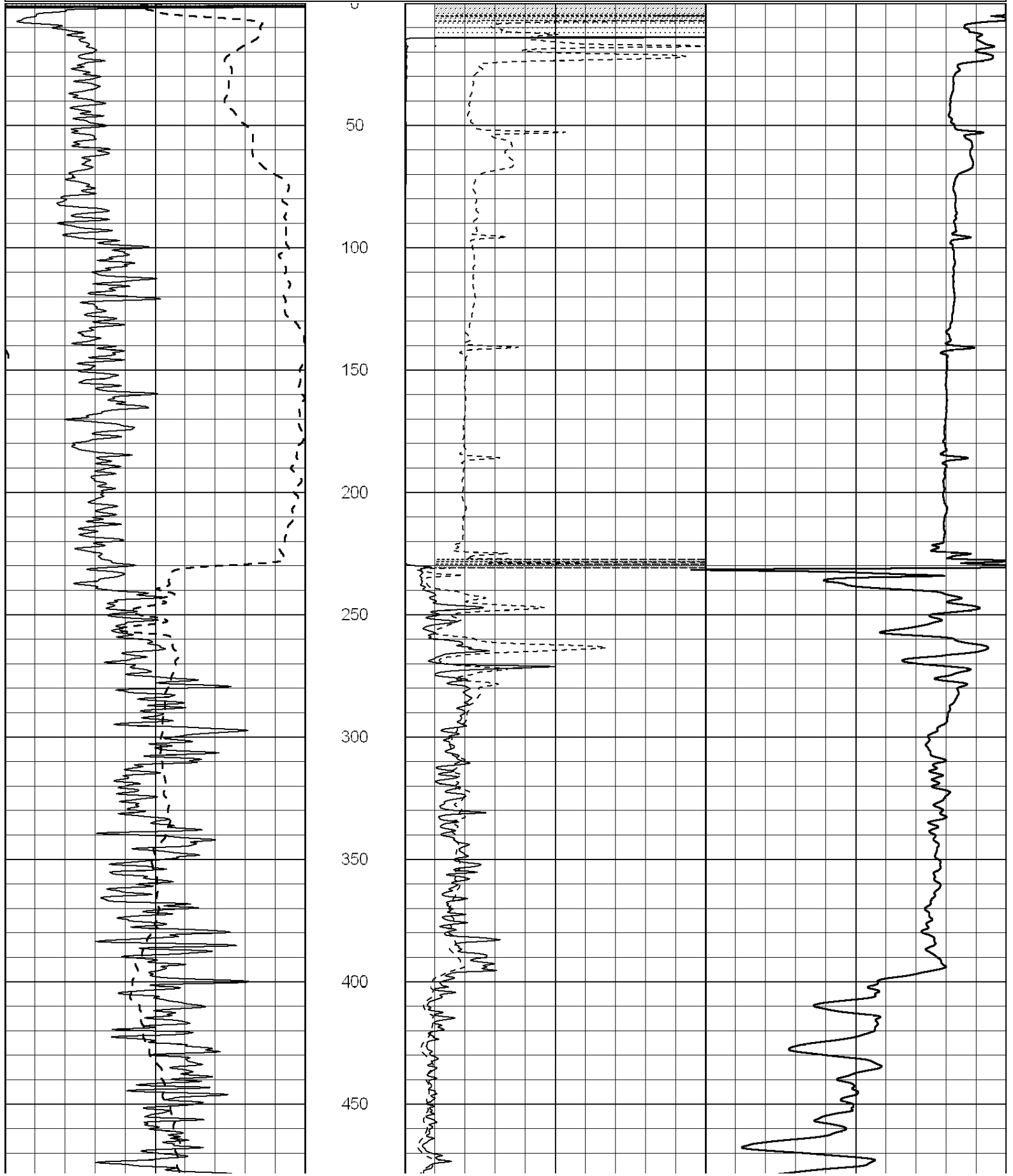
<<< Fold Here >>>

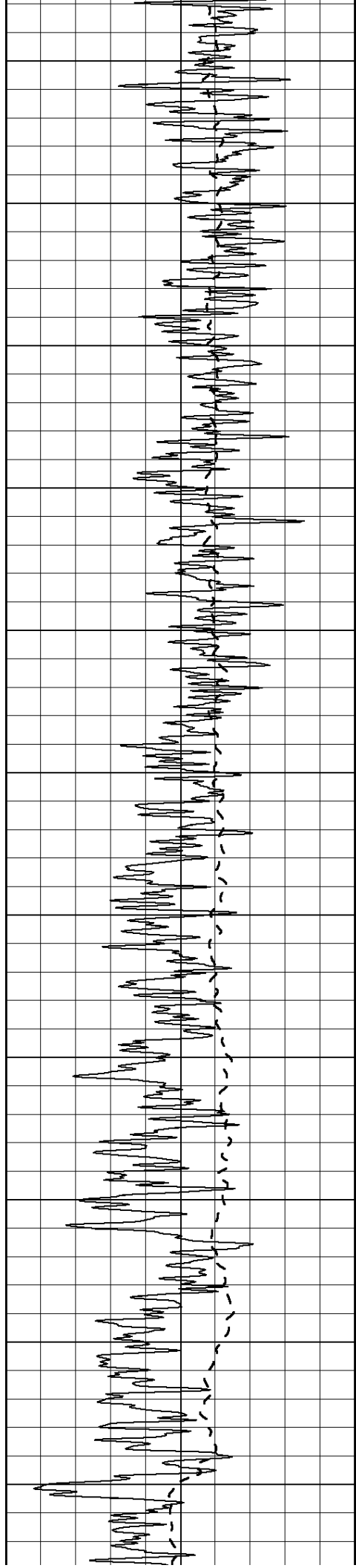
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
ZENDA, KS - 4 MILES EAST TO SW 50 - SOUTH TO SPIVEY GAS PLANT
SOUTH 1/4 TO NW 150 - 1/2 MILE EAST - SOUTH INTO

Charted by: _____ Depth in feet scaled 1:600					
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
-----			-----		
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





500

550

600

650

700

750

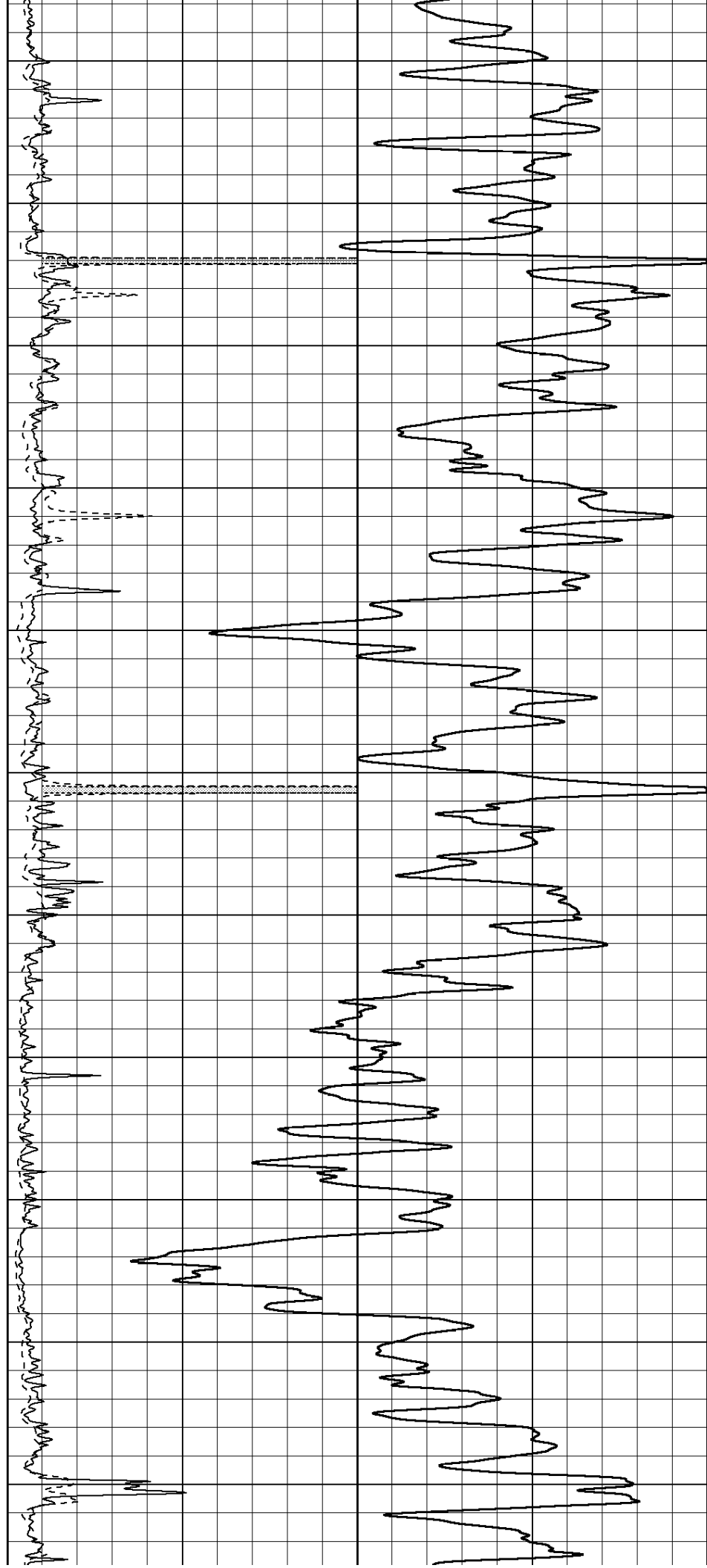
800

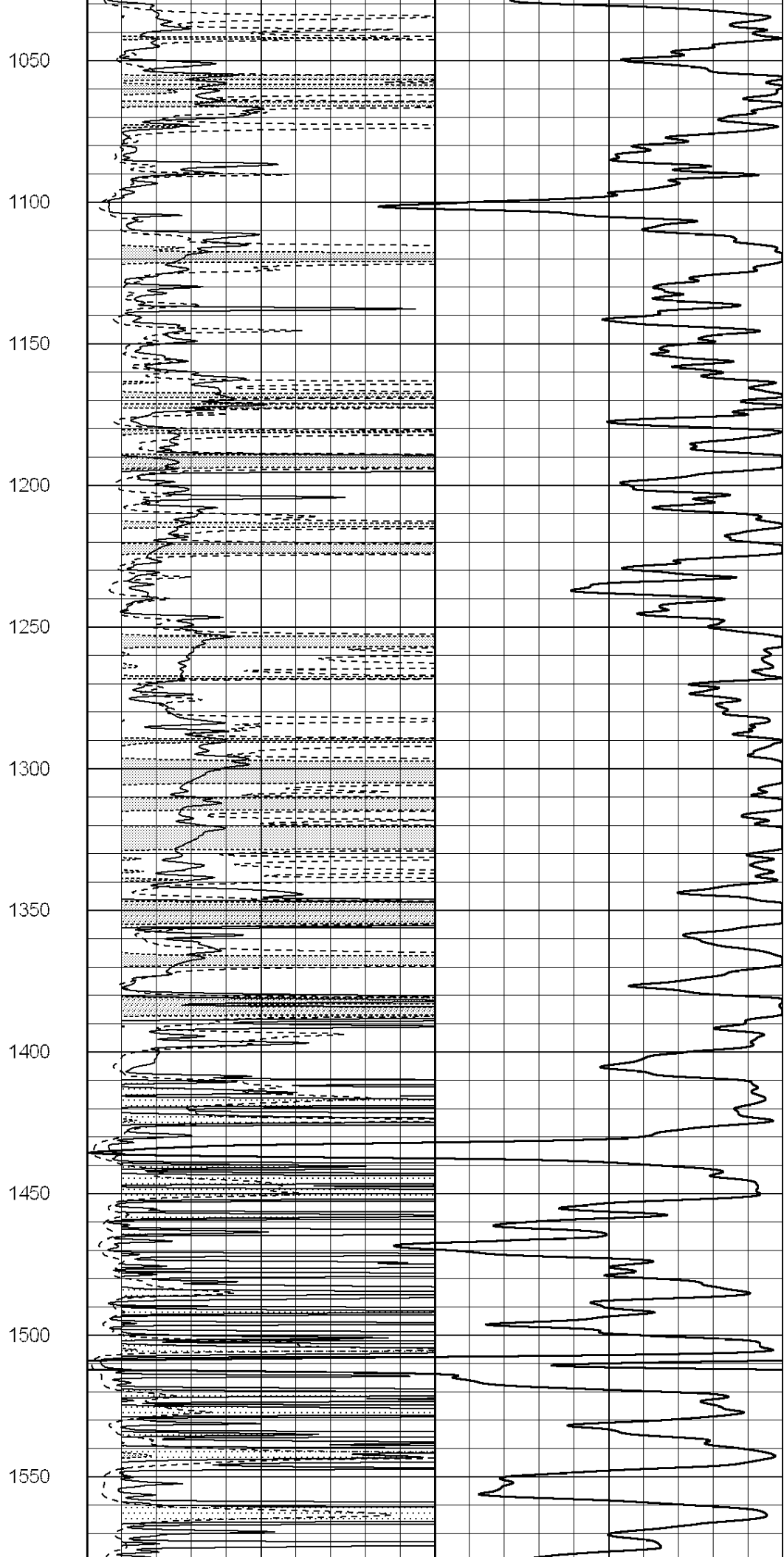
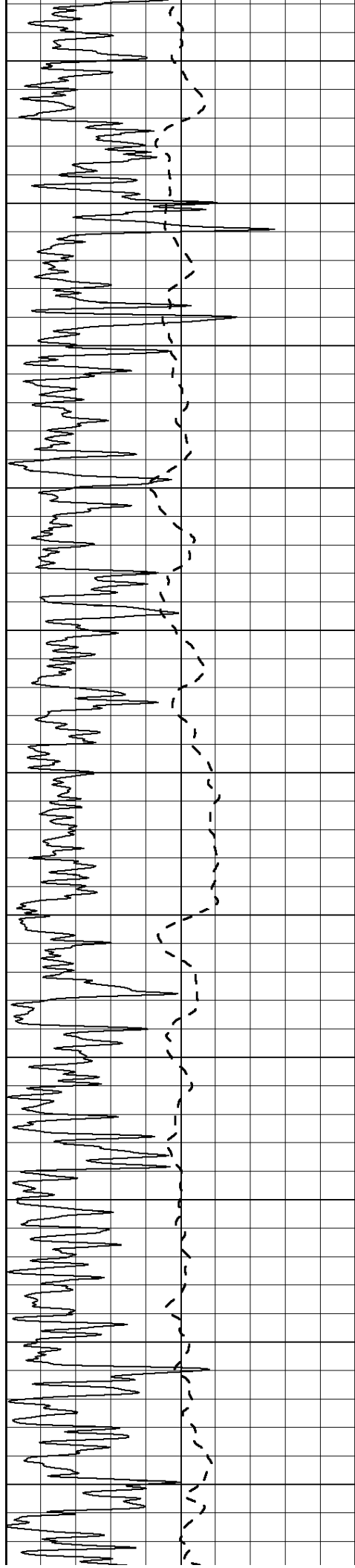
850

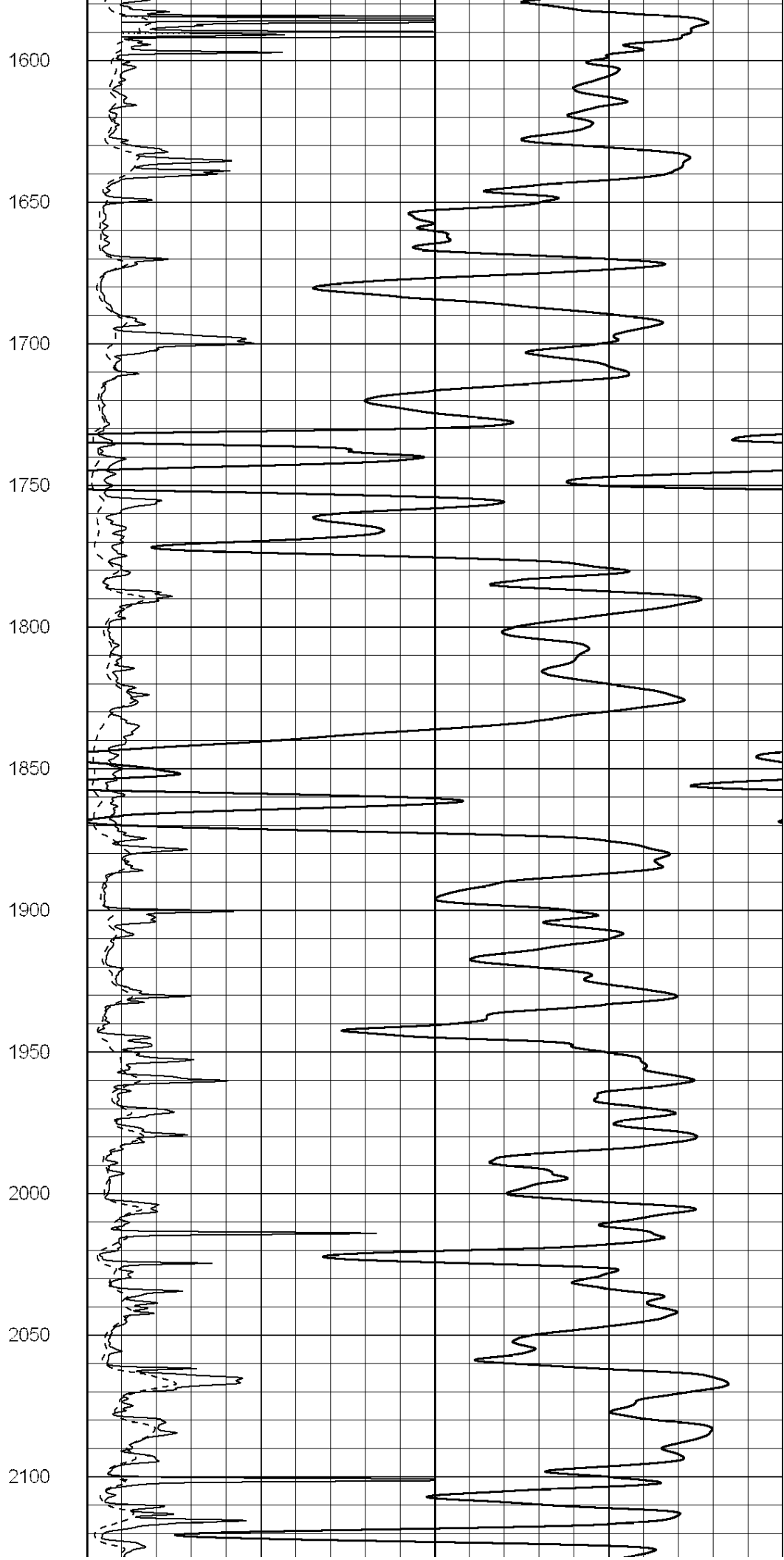
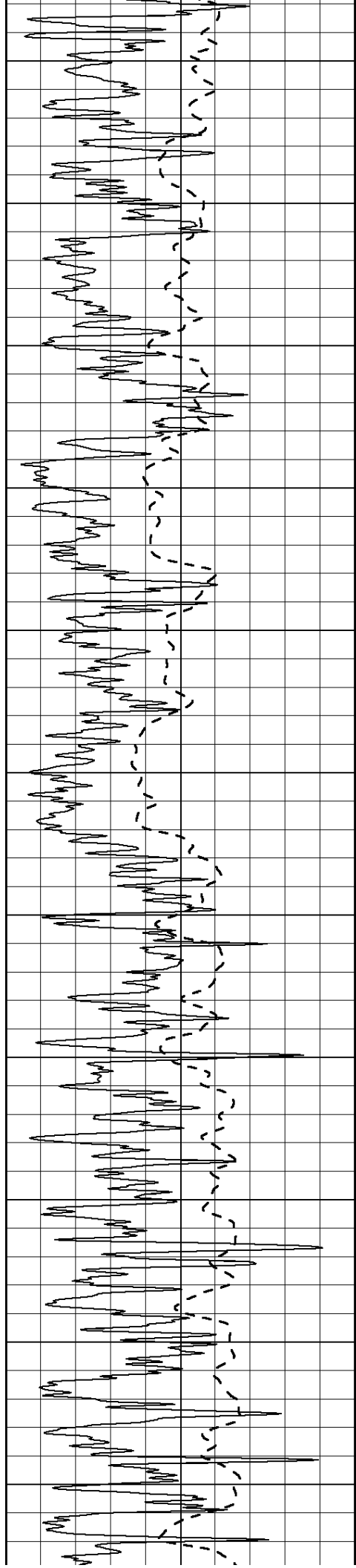
900

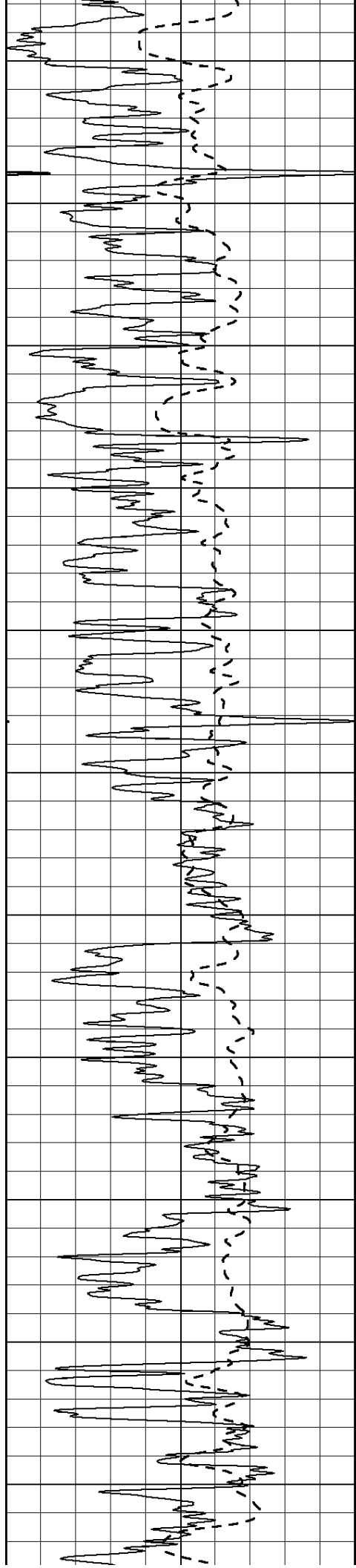
950

1000









2150

2200

2250

2300

2350

2400

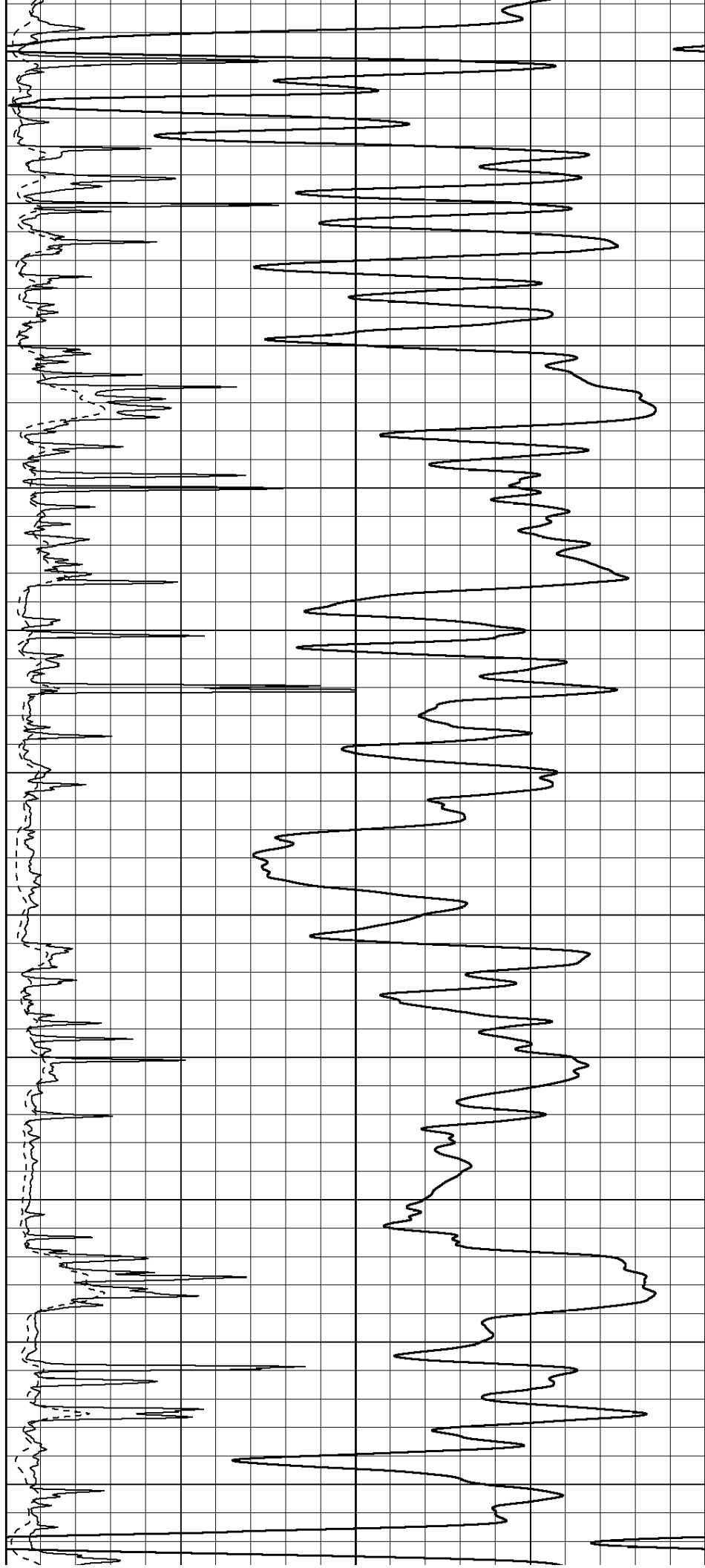
2450

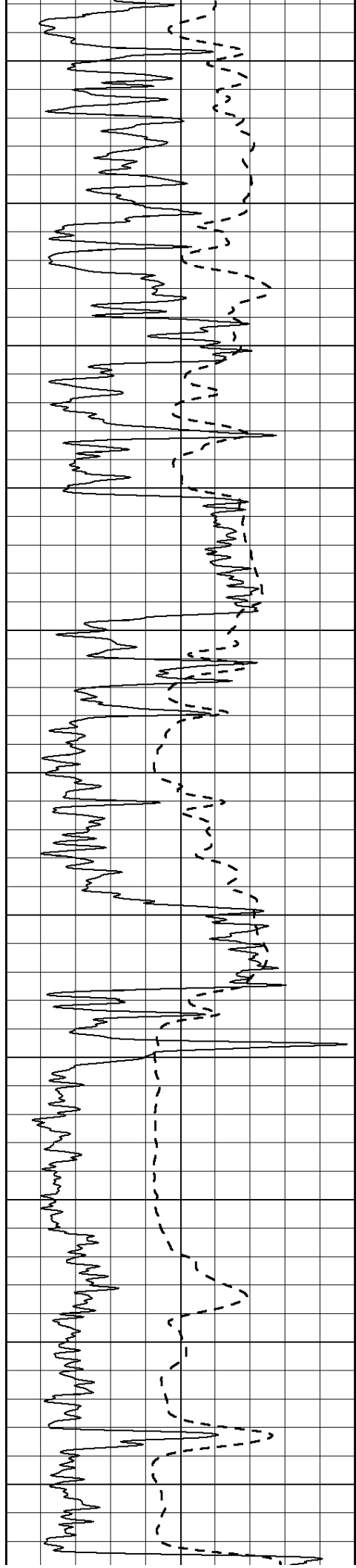
2500

2550

2600

2650





2700

2750

2800

2850

2900

2950

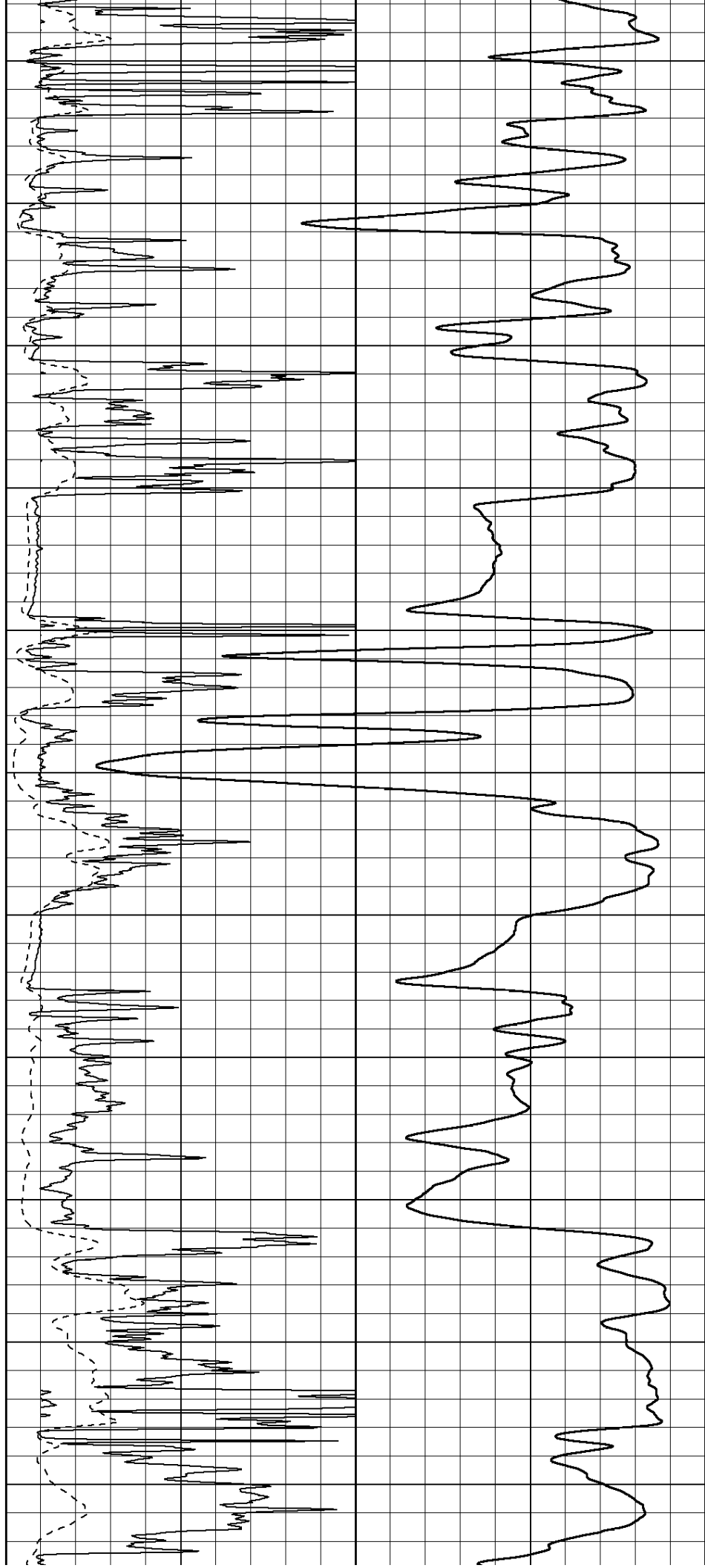
3000

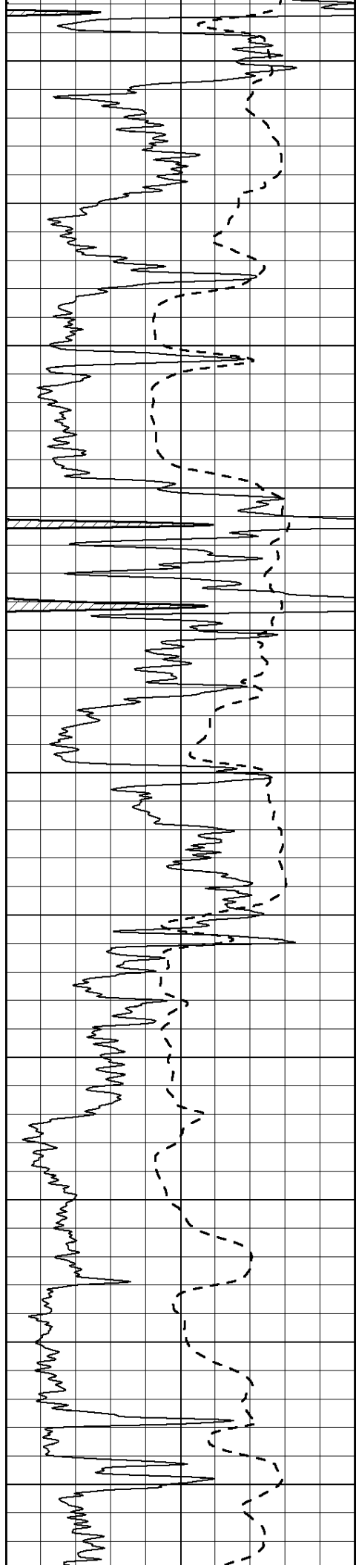
3050

3100

3150

3200





3250

3300

3350

3400

3450

3500

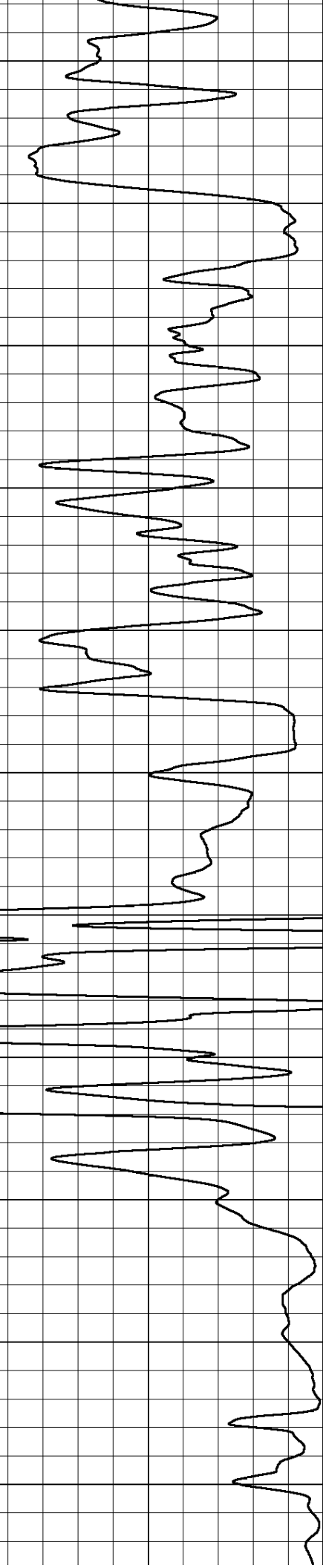
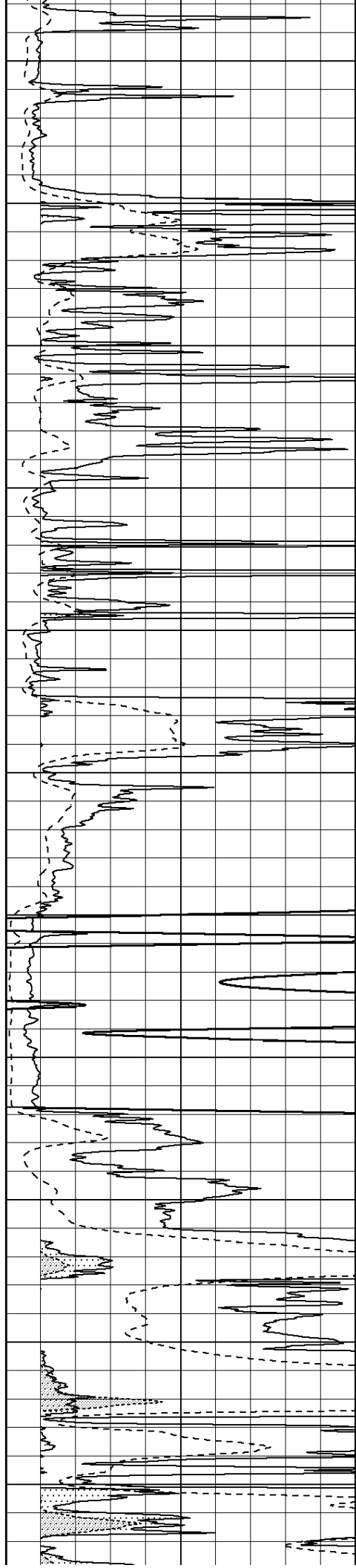
3550

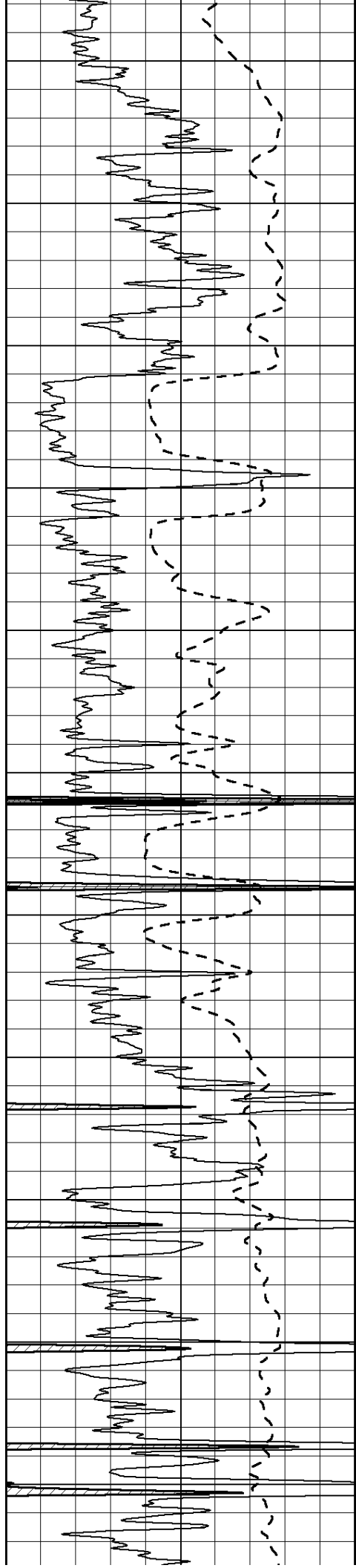
3600

3650

3700

3750





3800

3850

3900

3950

4000

4050

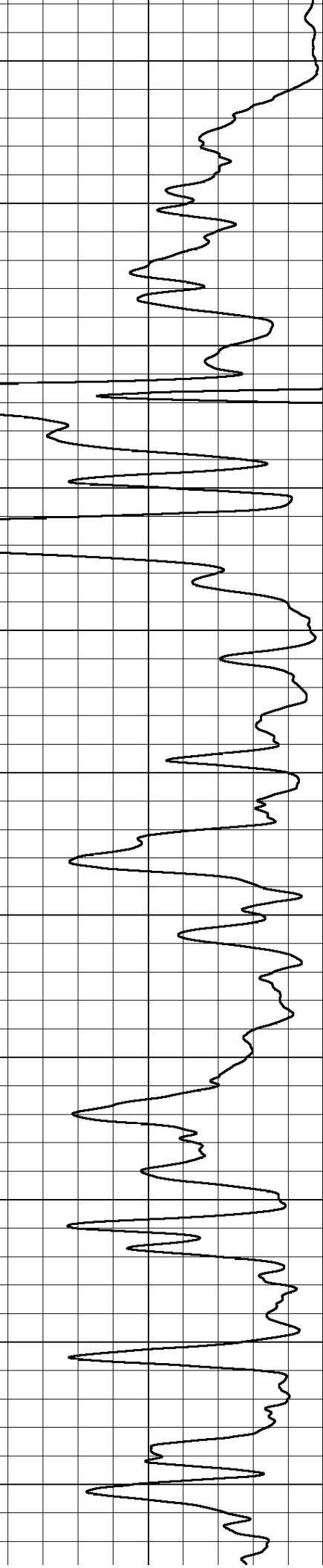
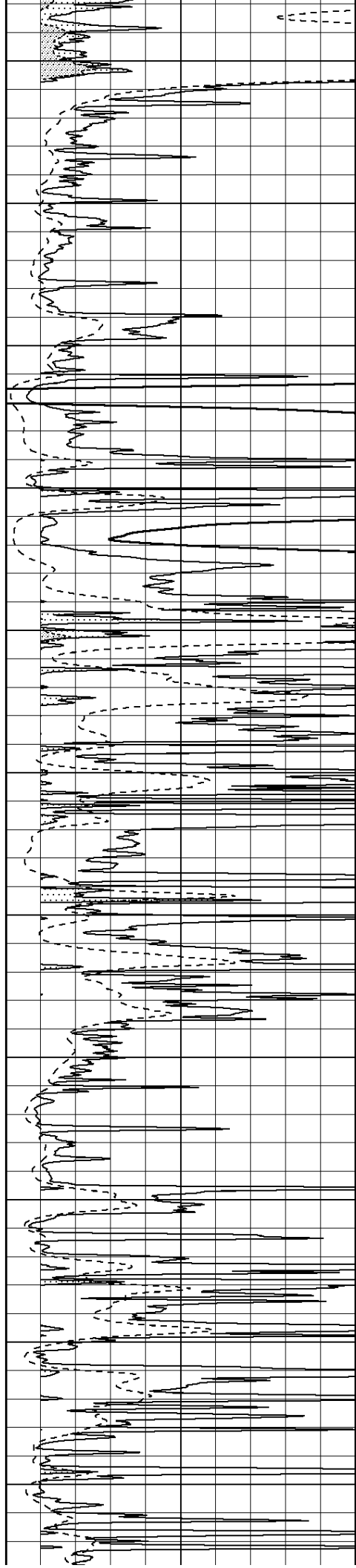
4100

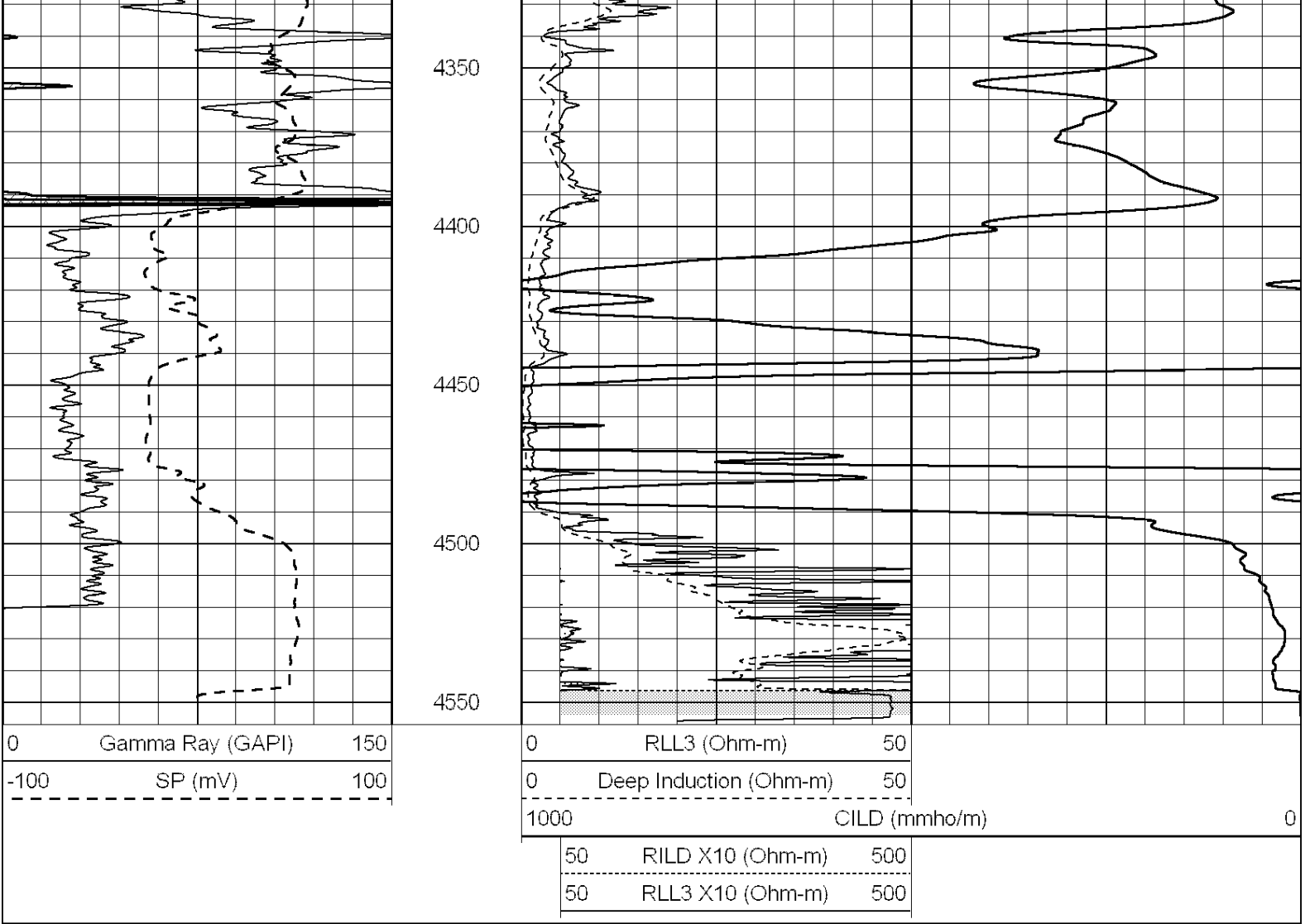
4150

4200

4250

4300

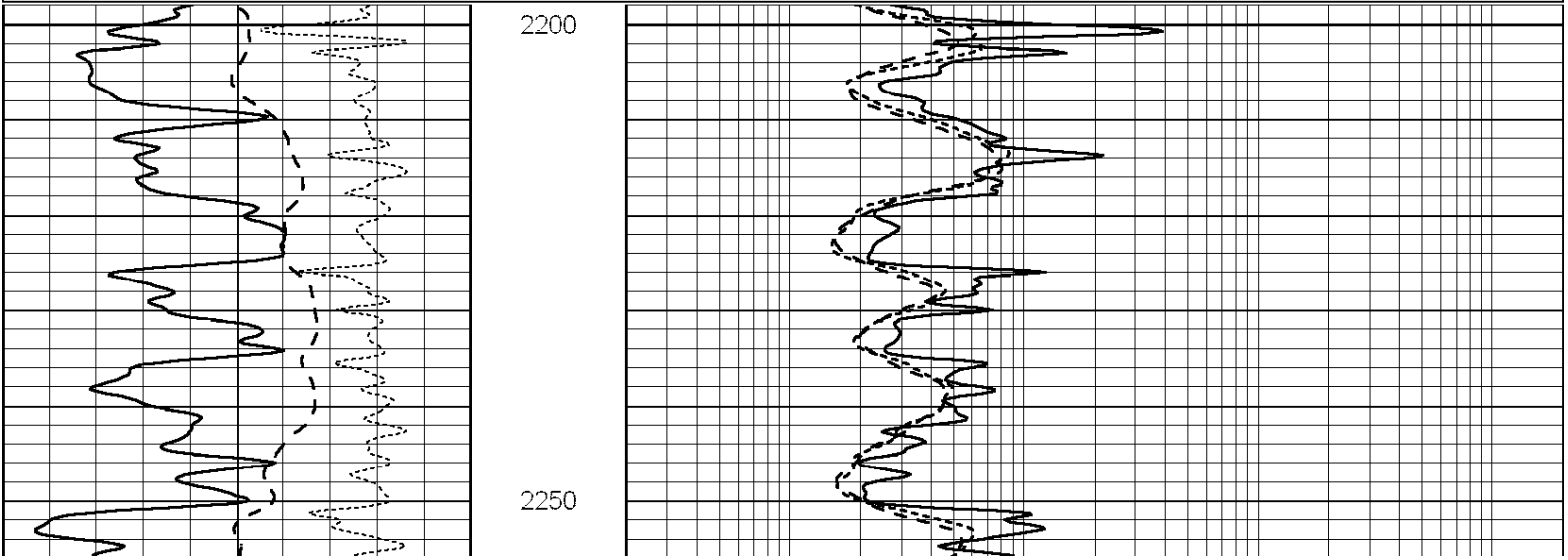


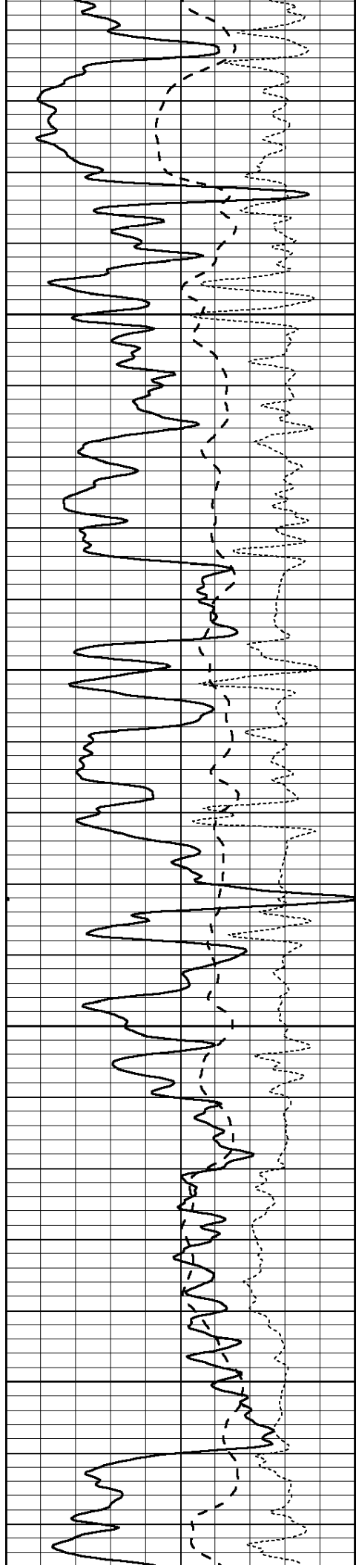


Database File:	006677ddn.db
Dataset Pathname:	pass4.3.3
Presentation Format:	_dil
Dataset Creation:	Mon Jan 24 22:07:26 2011 by Calc Open-Cased 090629
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



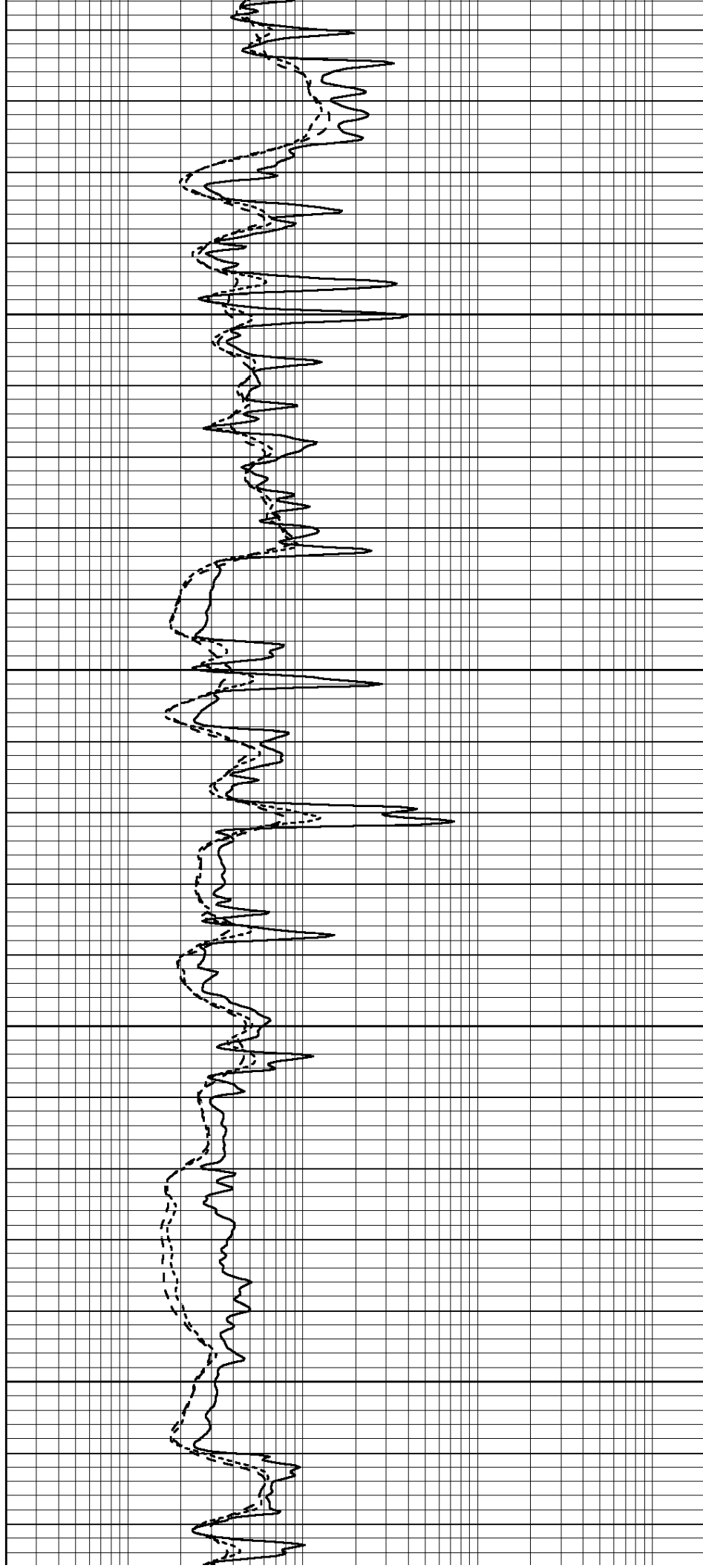


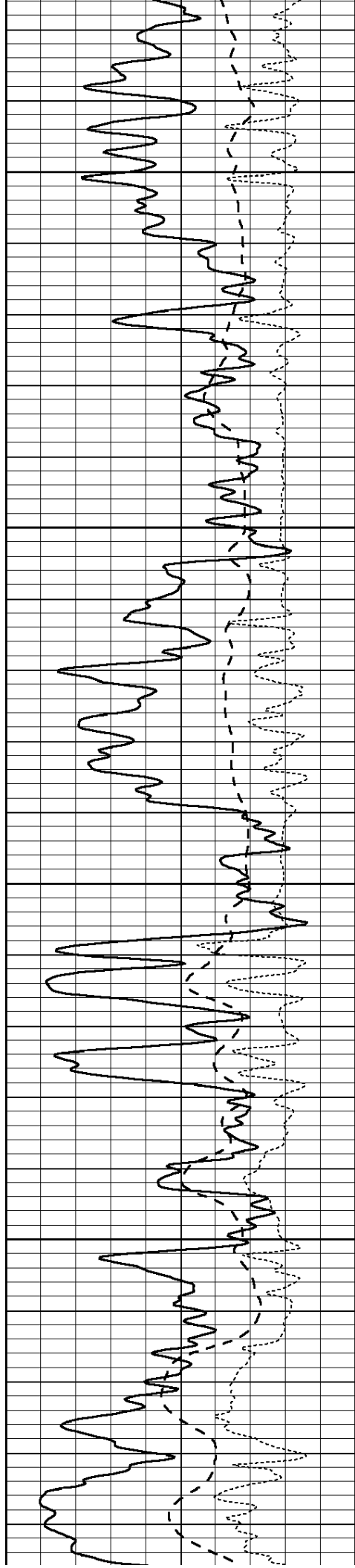
2300

2350

2400

2450



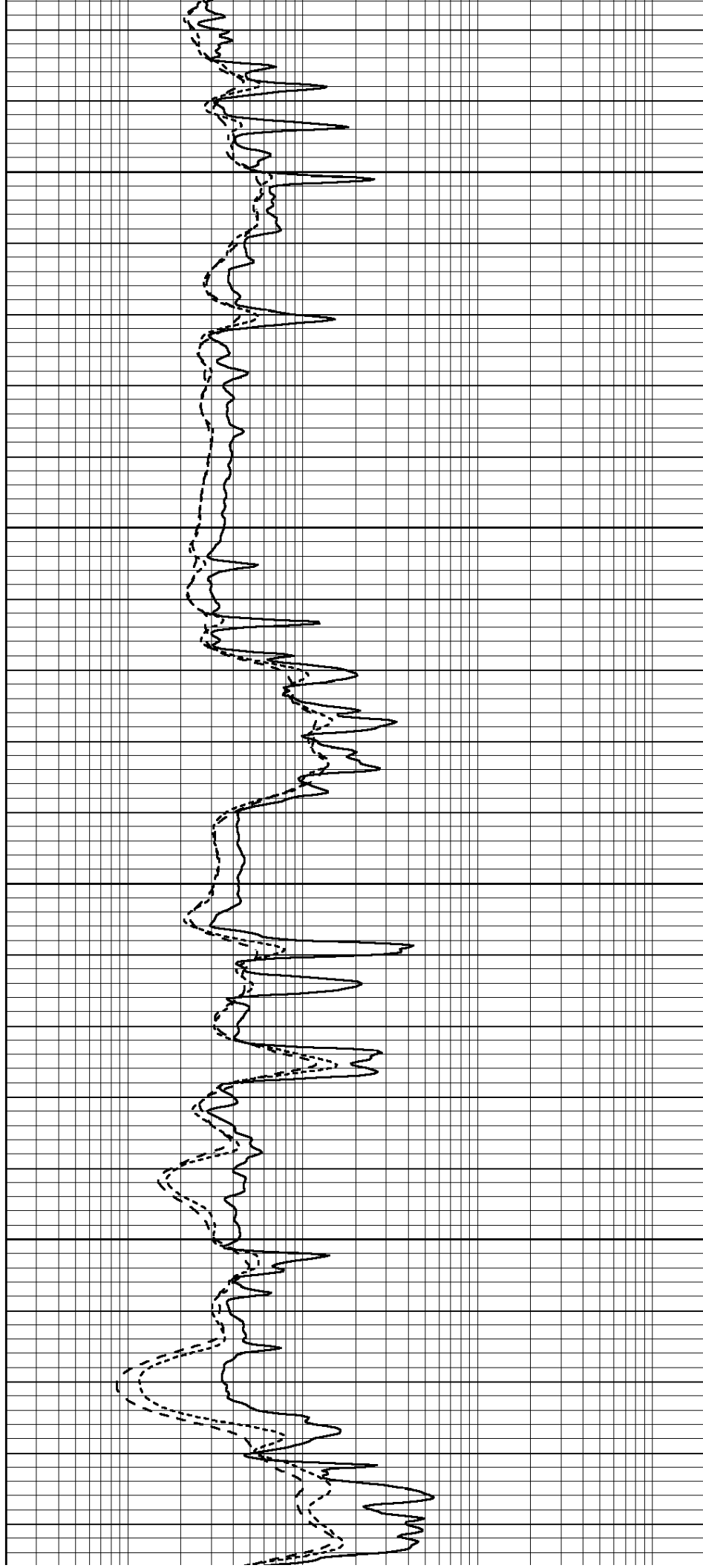


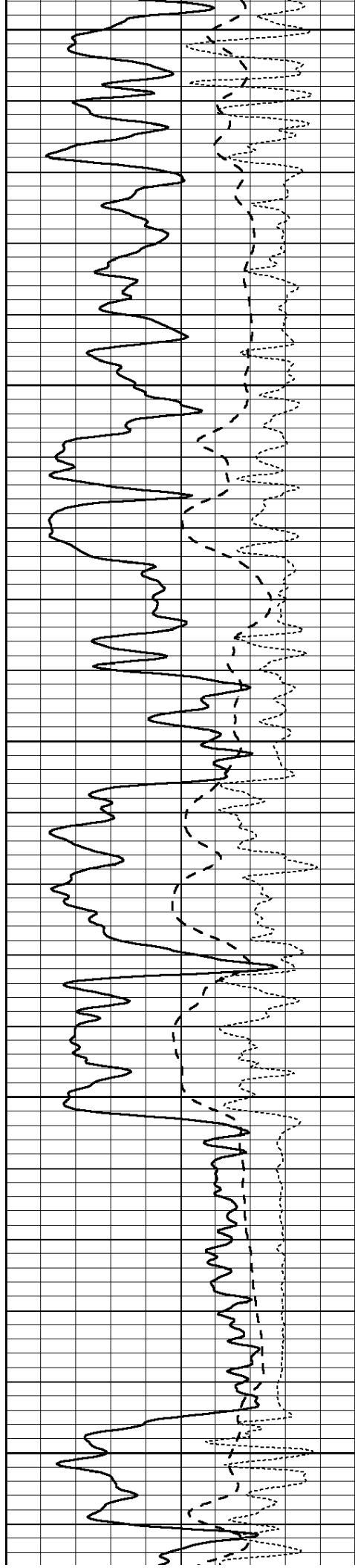
2500

2550

2600

2650





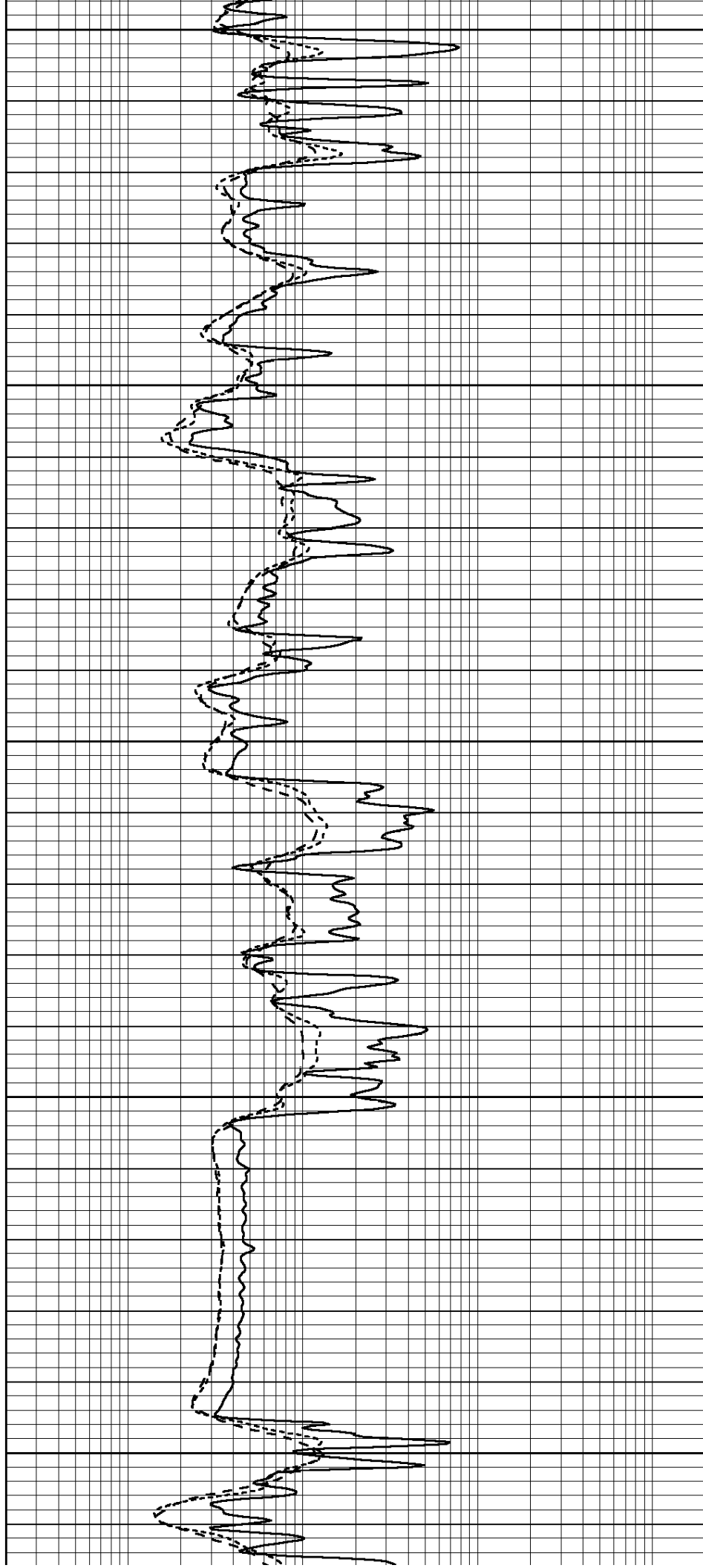
2700

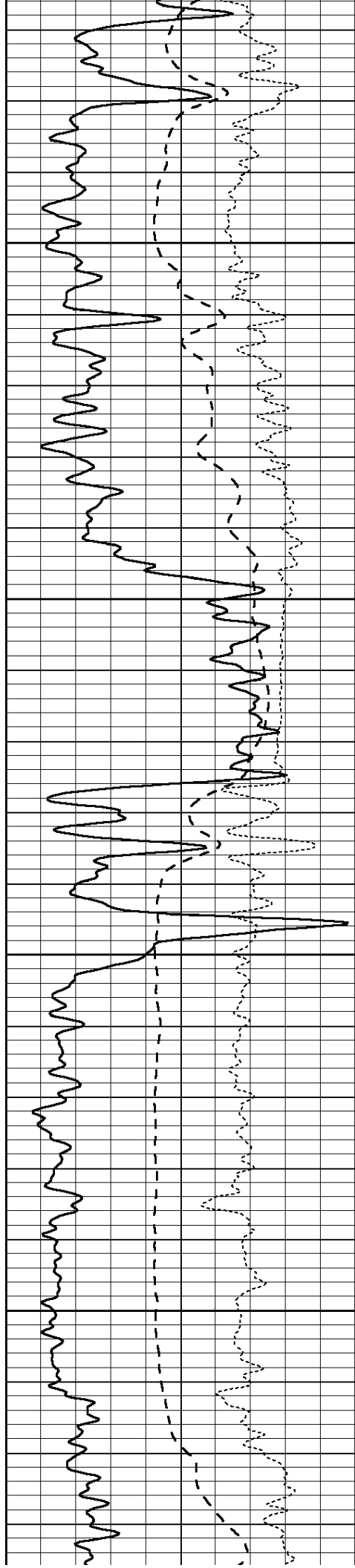
2750

2800

2850

2900



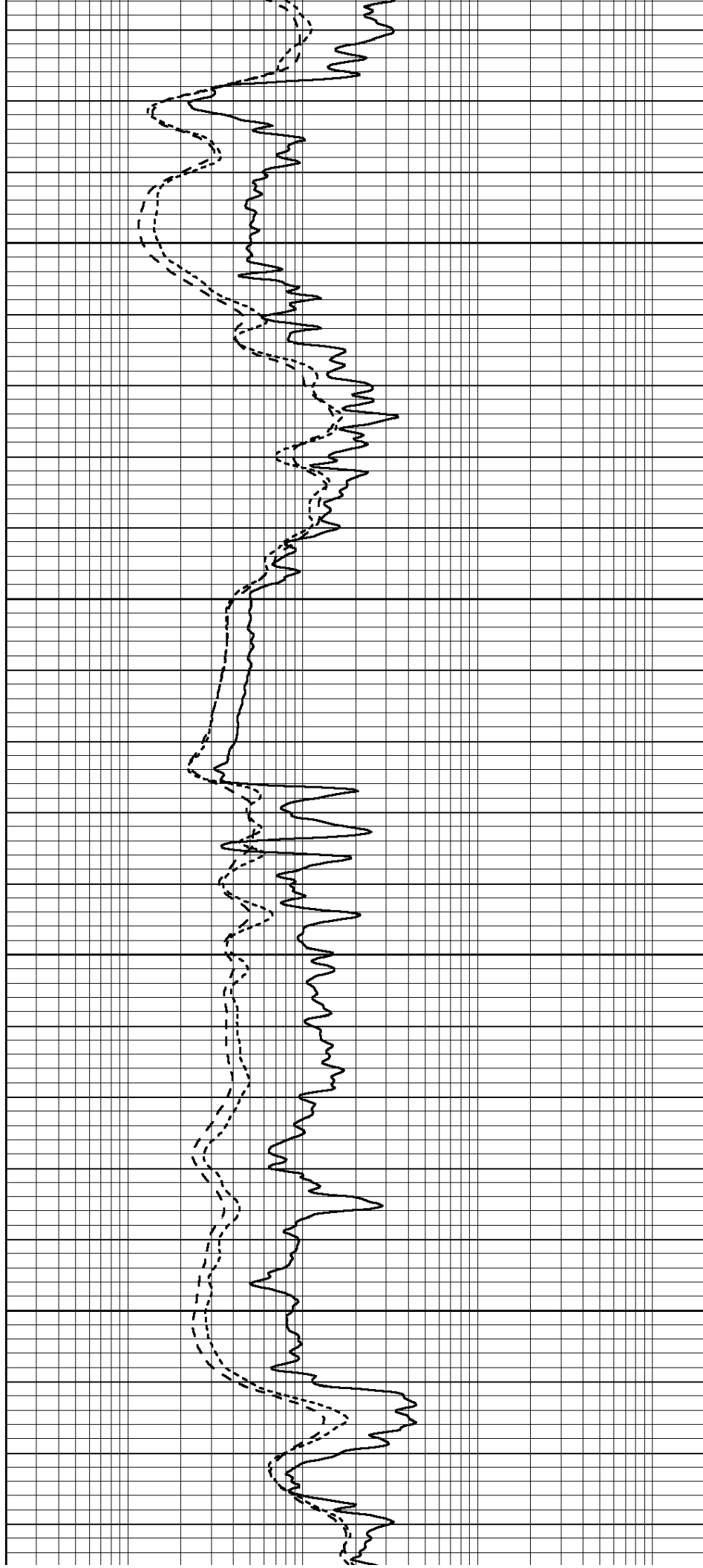


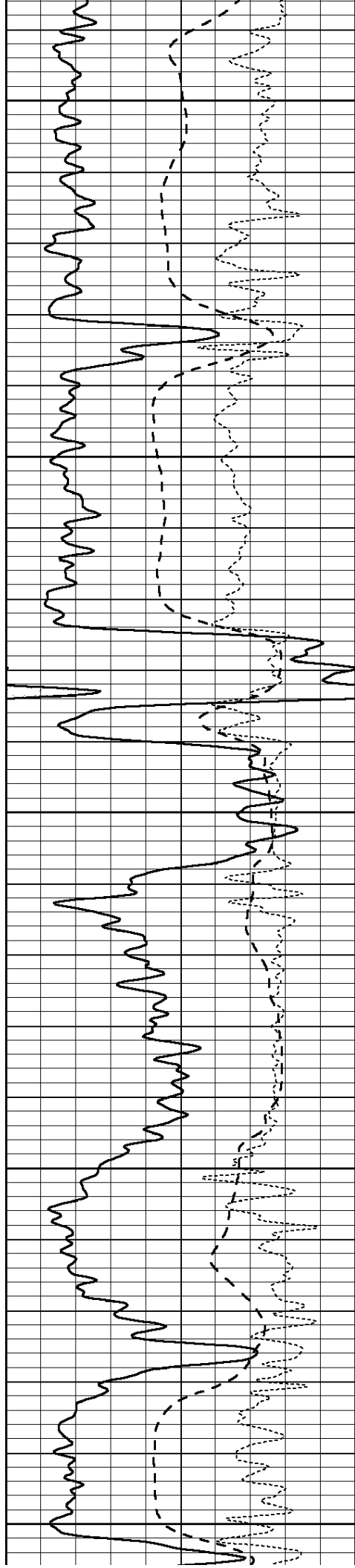
2950

3000

3050

3100





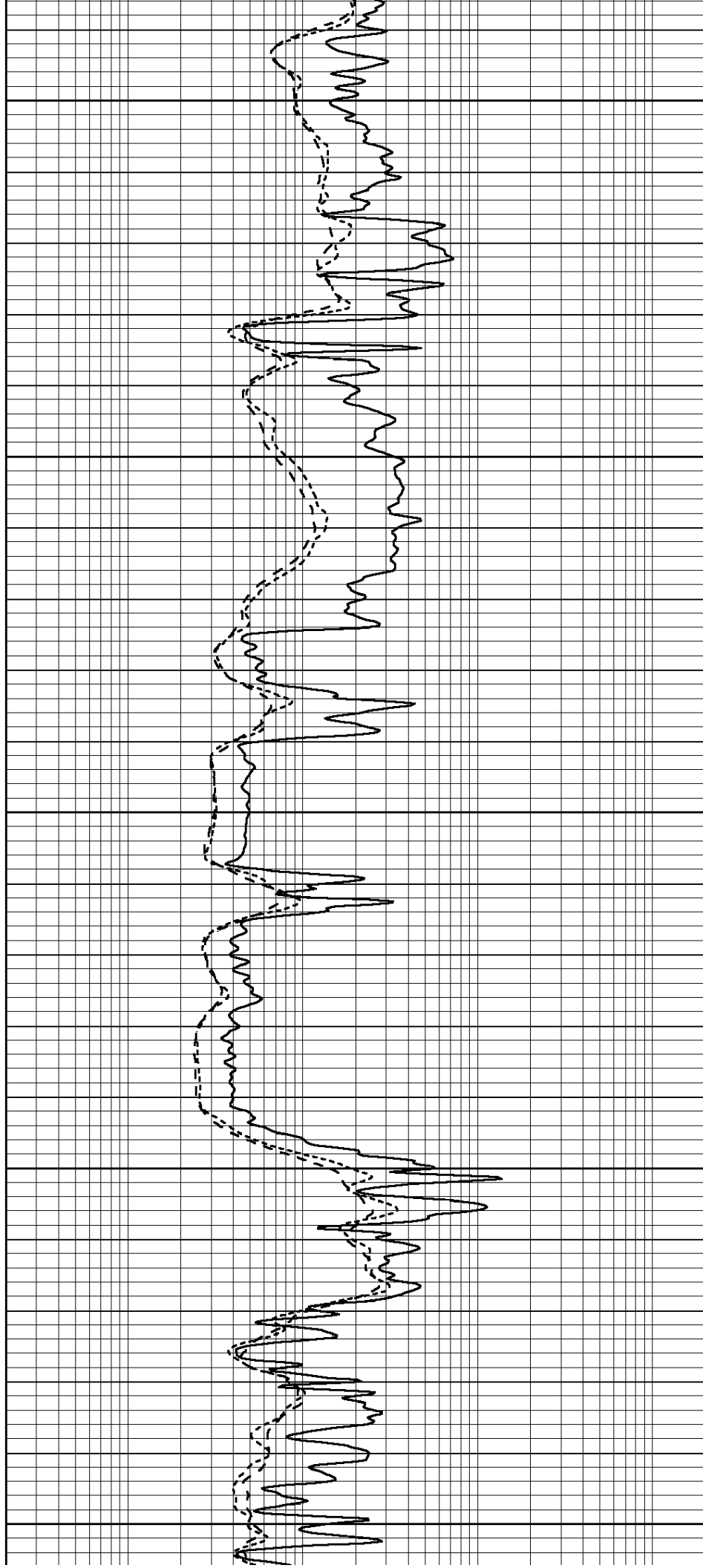
3150

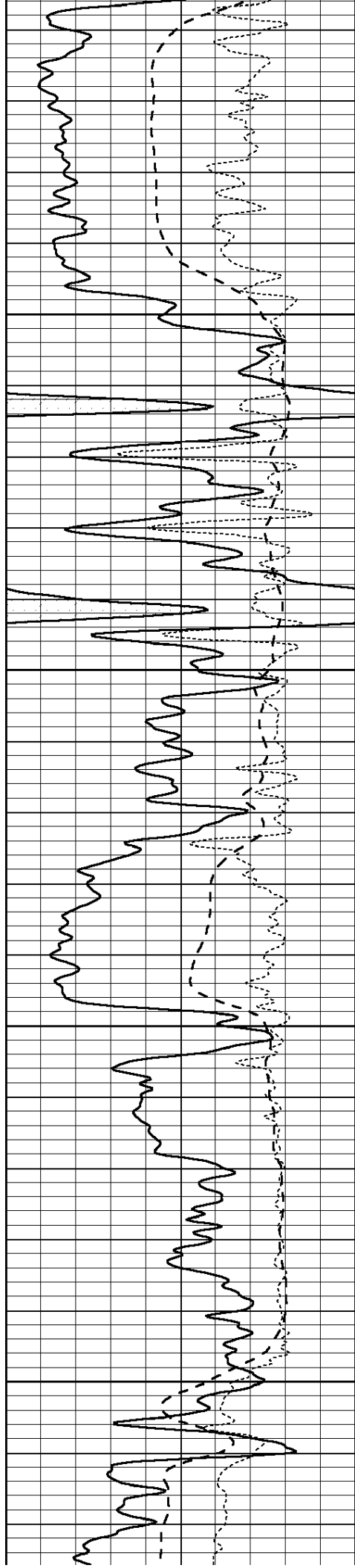
3200

3250

3300

3350



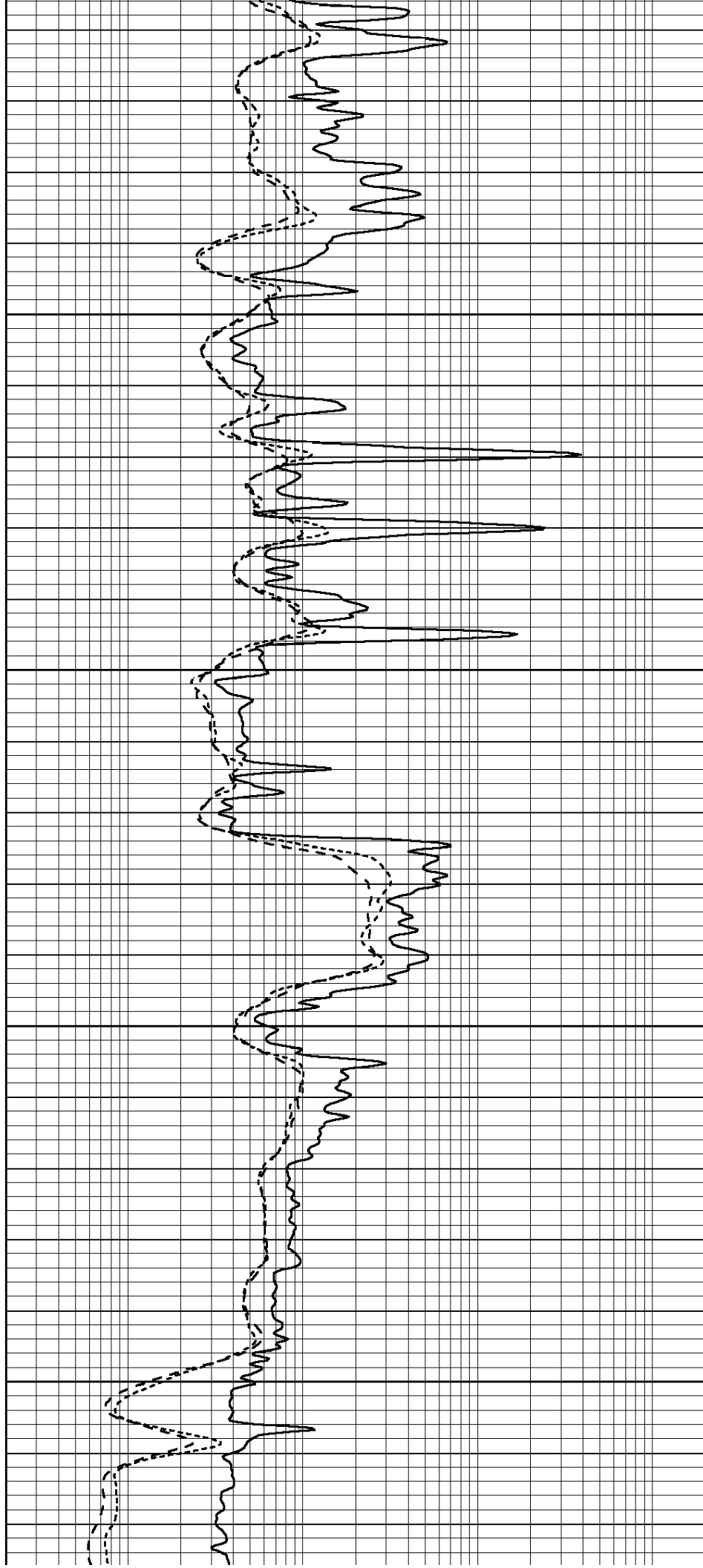


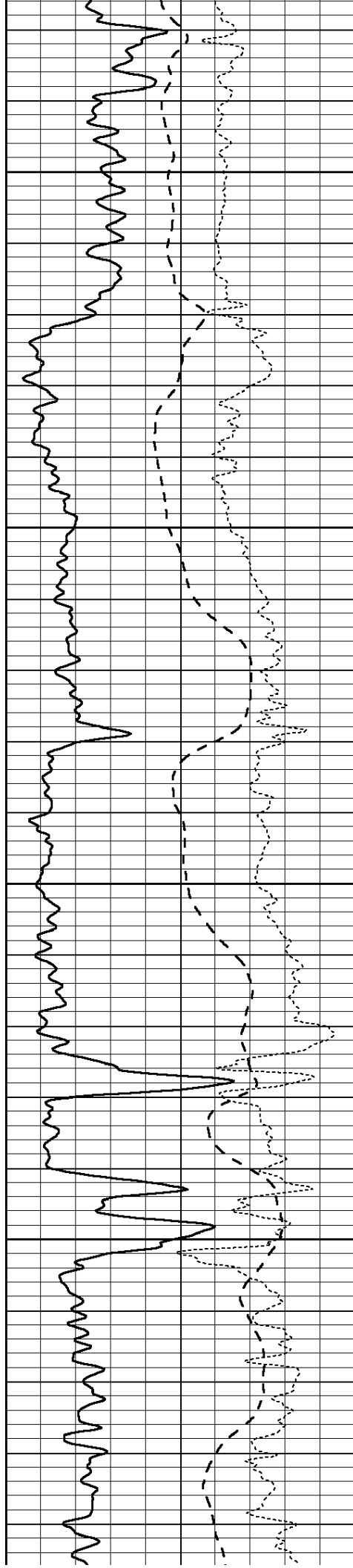
3400

3450

3500

3550



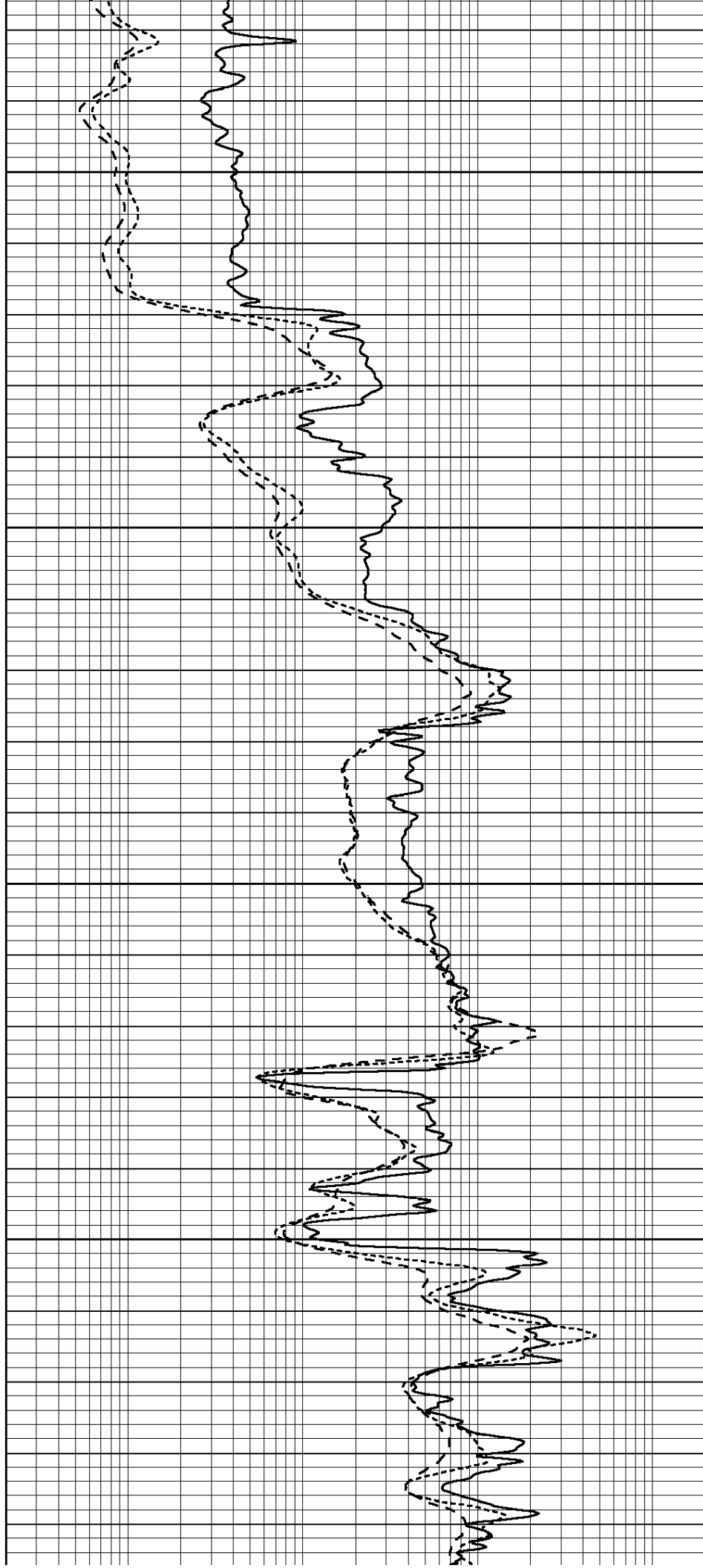


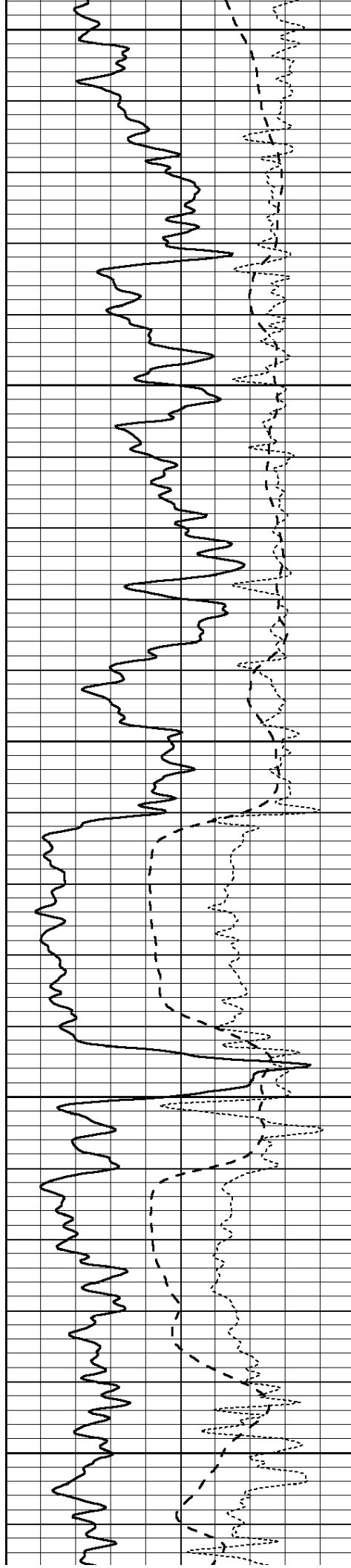
3600

3650

3700

3750





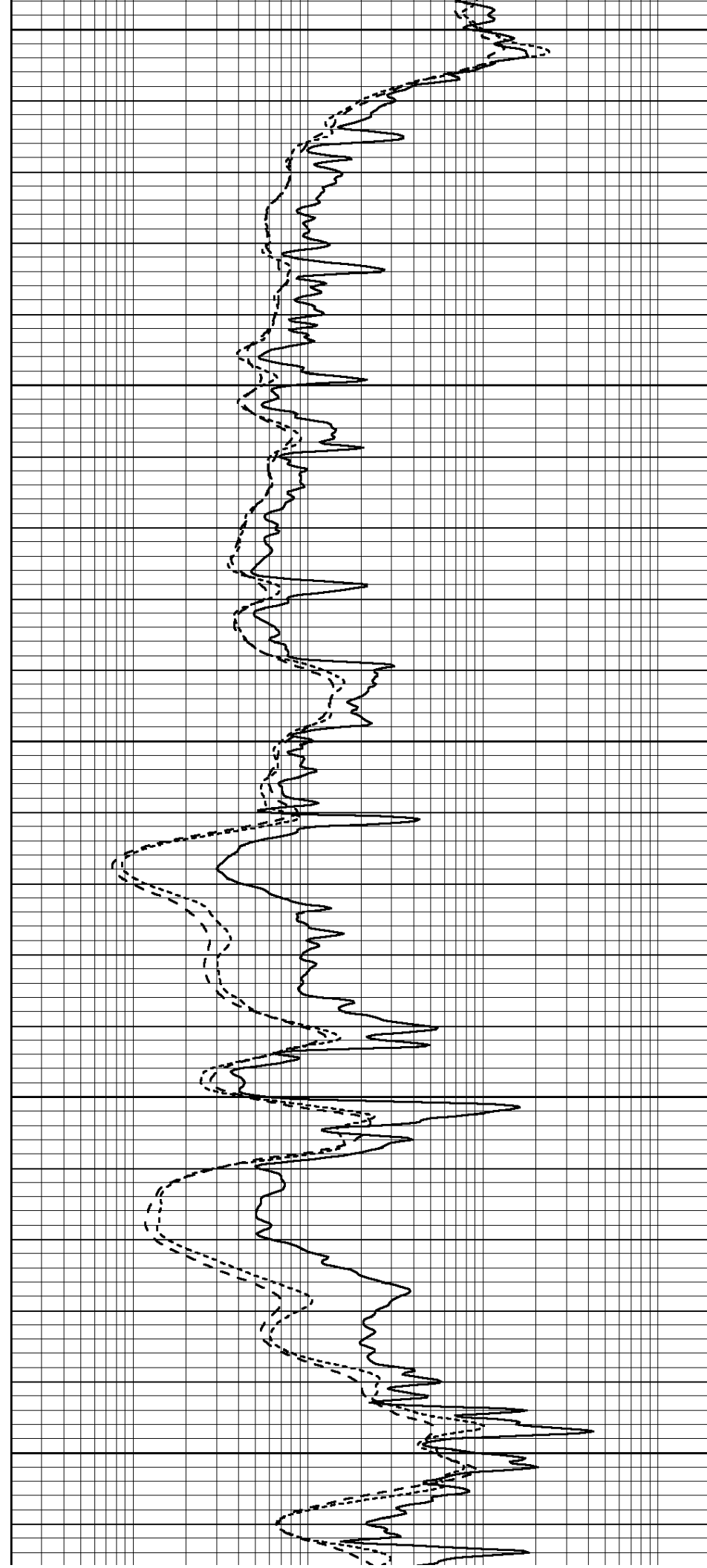
3800

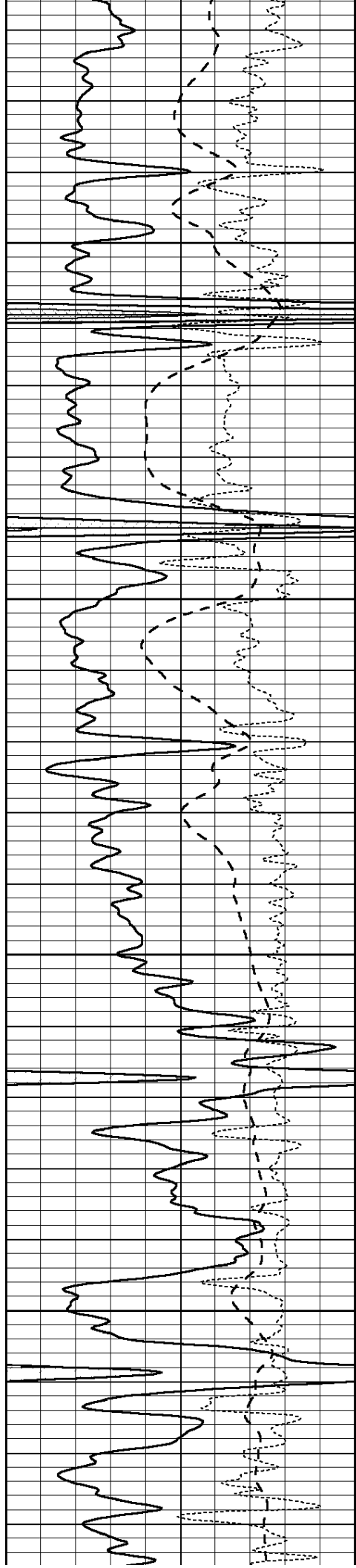
3850

3900

3950

4000



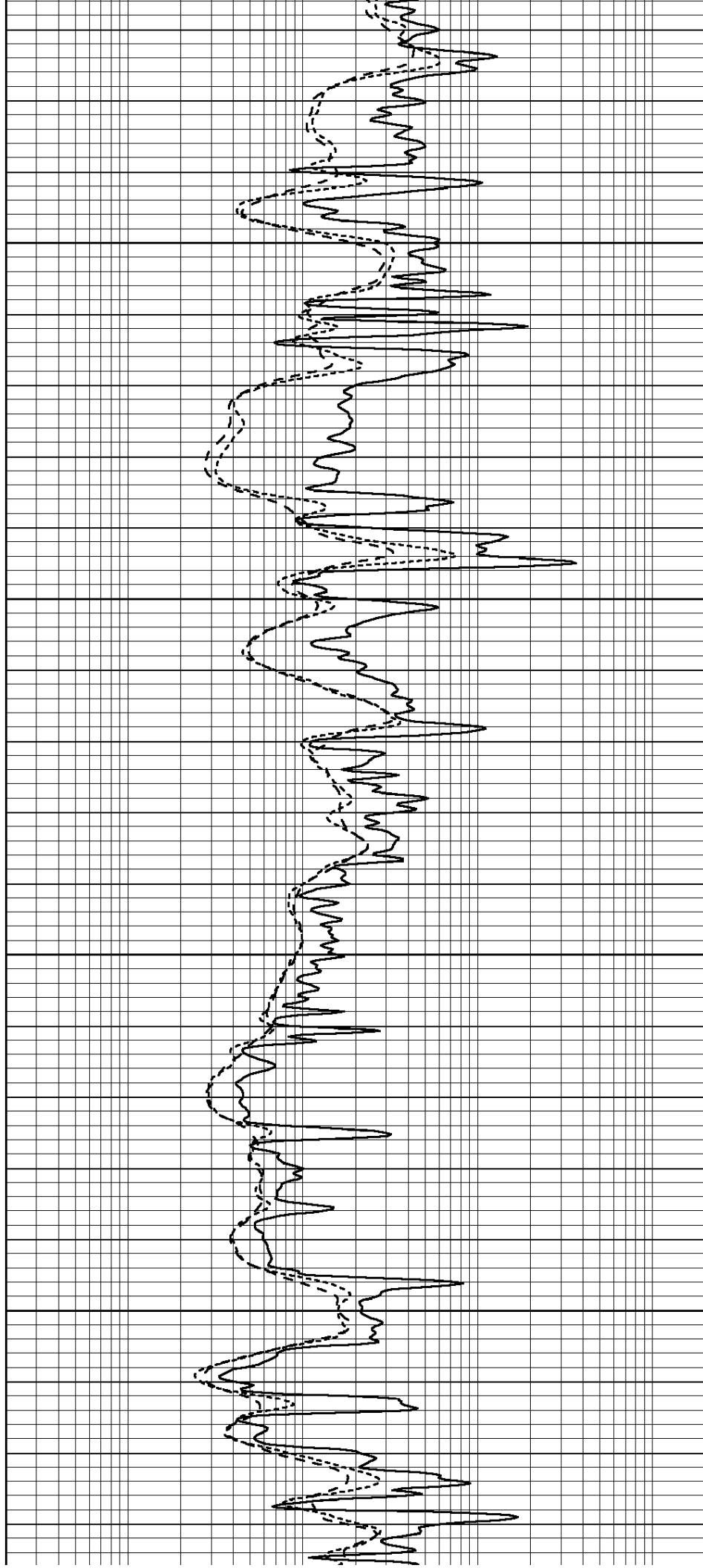


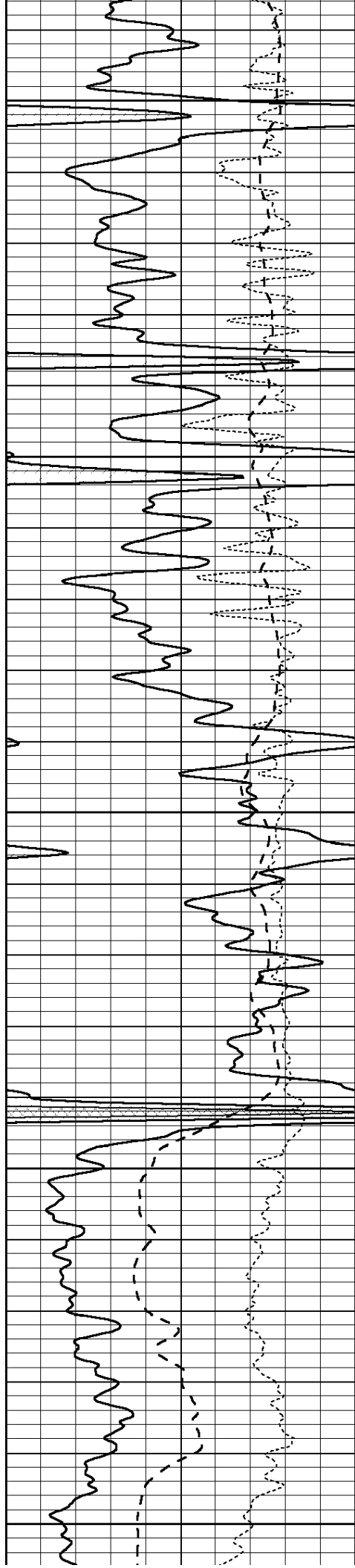
4050

4100

4150

4200





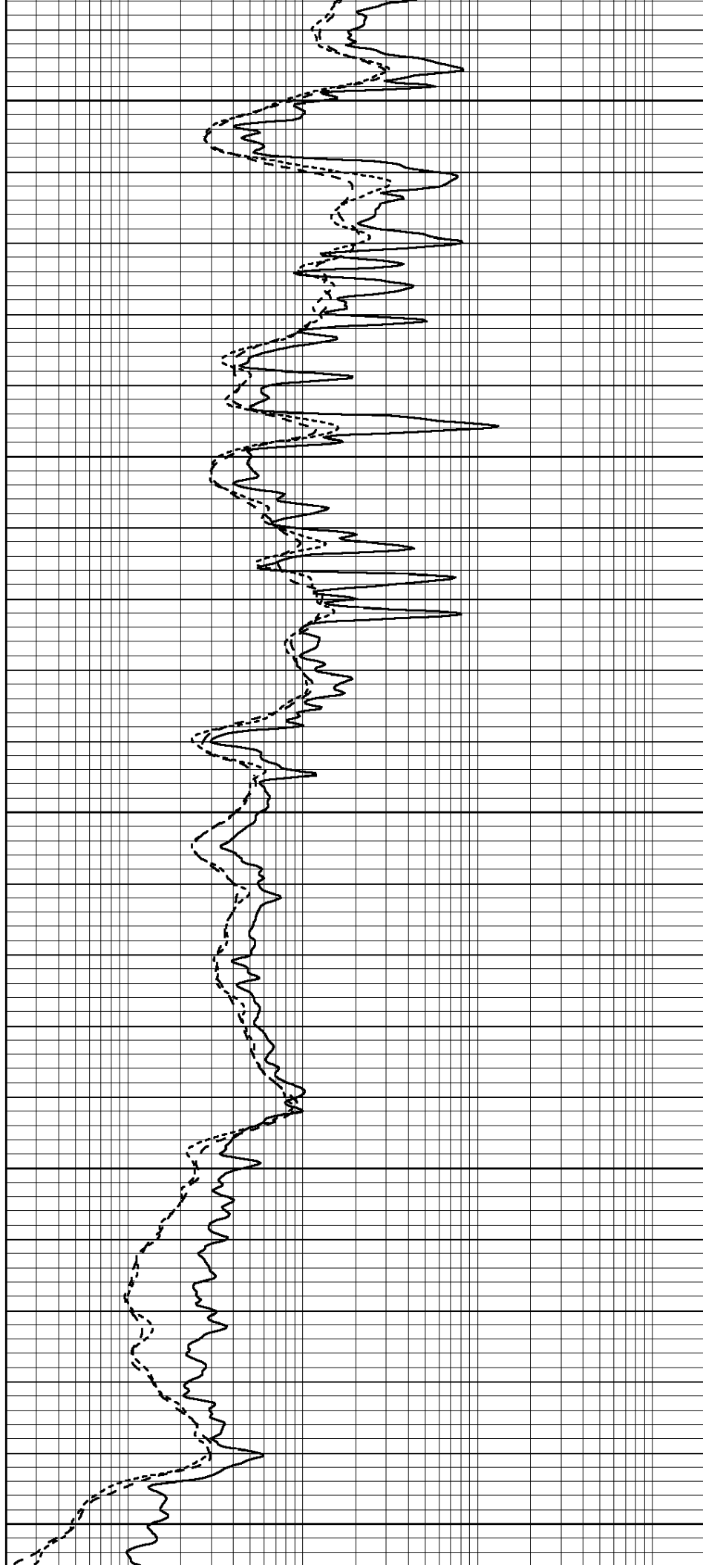
4250

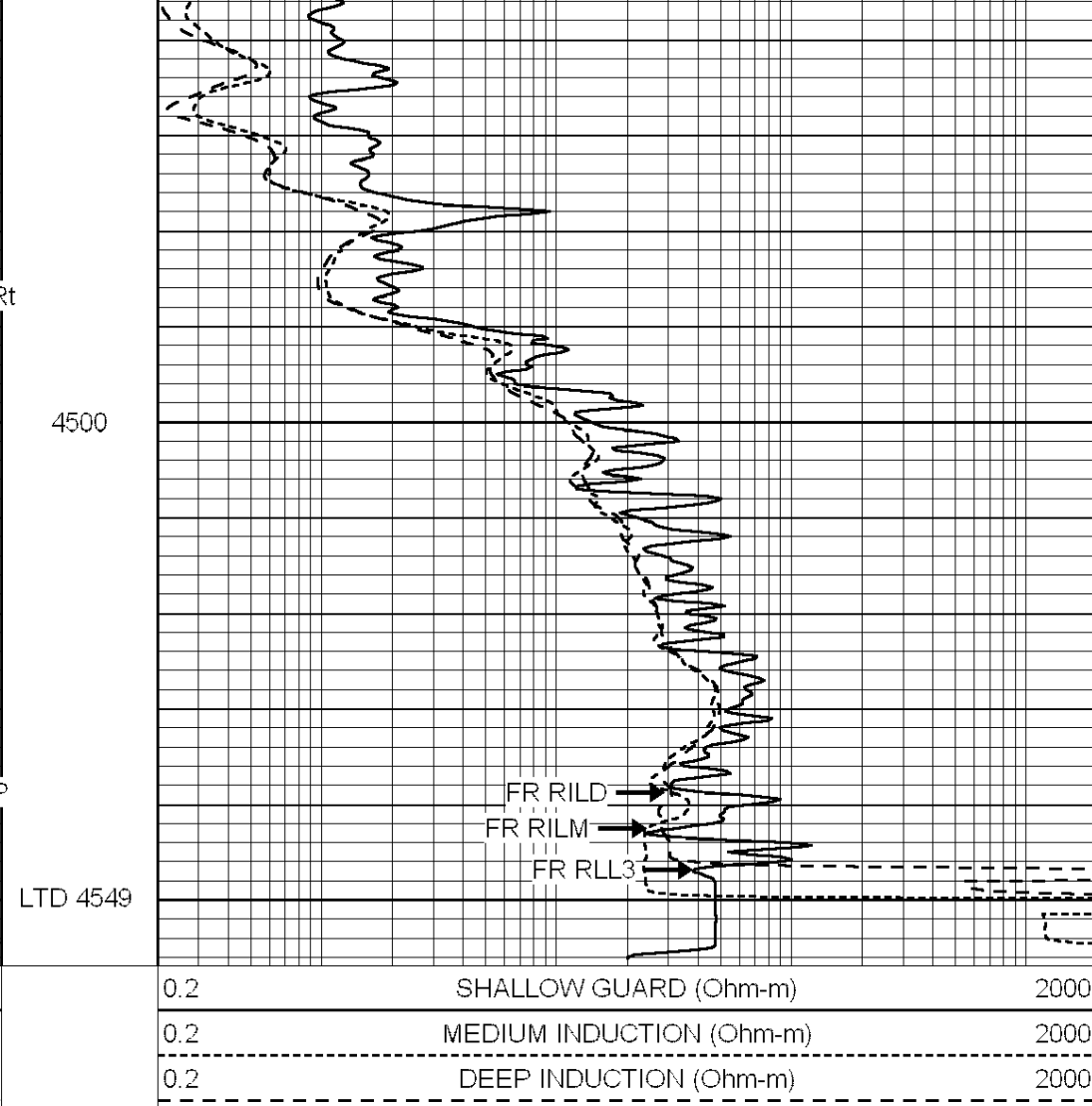
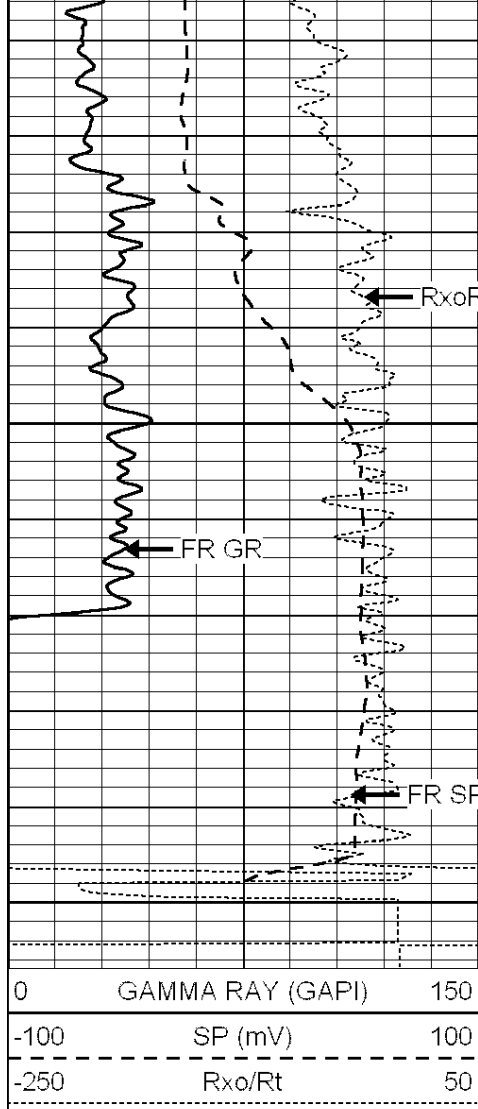
4300

4350

4400

4450

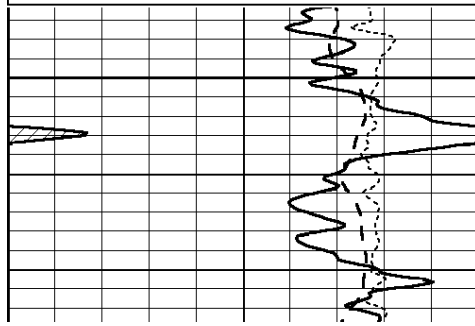
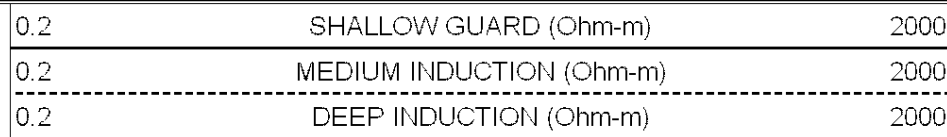
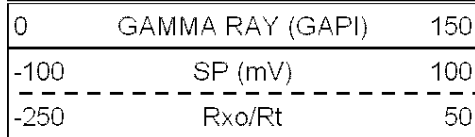




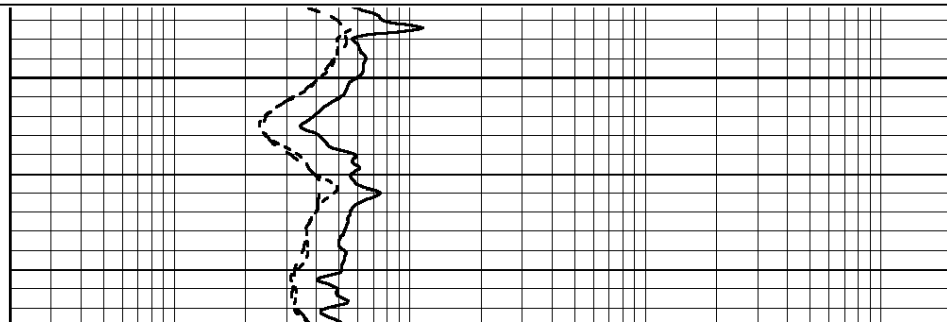
SUPERIOR
Hays,
Kansas

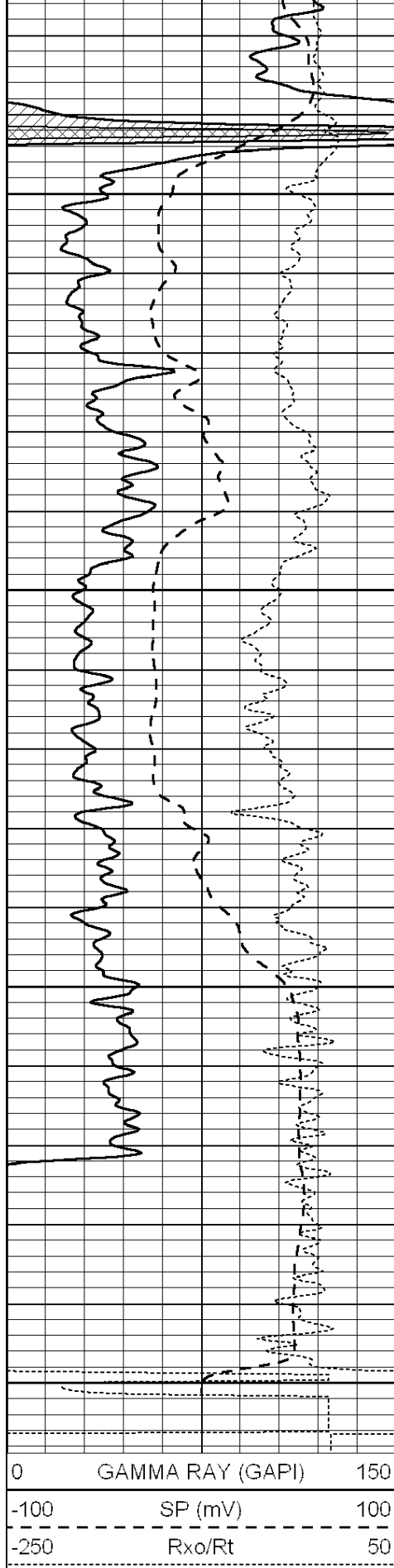
REPEAT SECTION

Database File: 006677ddn.db
 Dataset Pathname: pass3.2
 Presentation Format: _dil
 Dataset Creation: Mon Jan 24 22:23:26 2011 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



4350



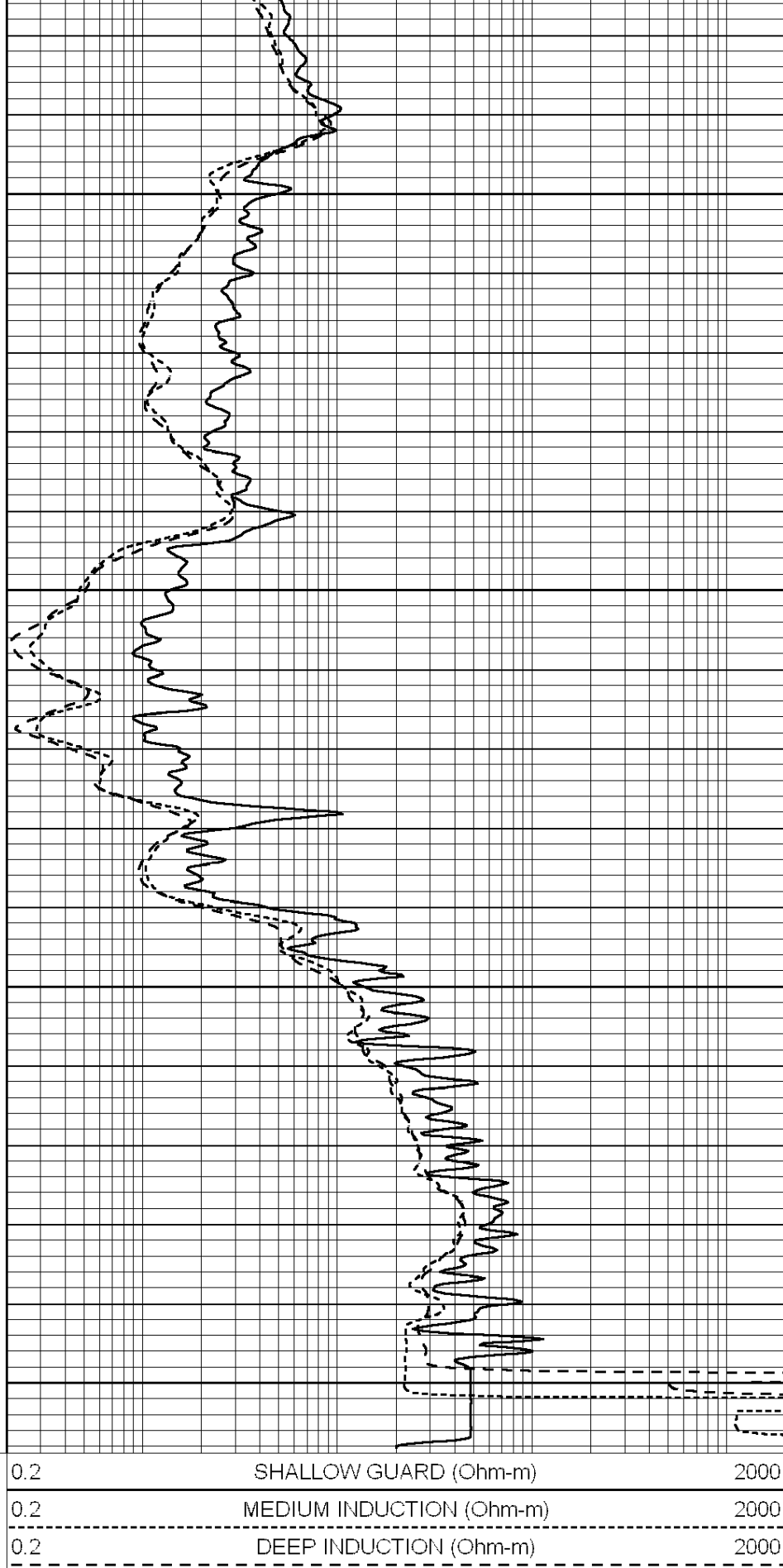


4400

4450

4500

4550



Calibration Report

Database File: 006677ddn.db
Dataset Pathname: pass4.3.4

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Jul 30 06:14:24 2008
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	8.759
Medium	0.039	0.728	V	0.000	464.000	mmho/m	673.322	-26.058
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	mmho-m		

After Survey Verification

Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR4-GEARHART
 Source / Verifier: 143 / 143
 Master Calibration Performed: Tue May 11 10:59:10 2010

Master Calibration

	Density			Far Detector		Near Detector	
Magnesium	1.710	g/cc		1015.91		497.51	cps
Aluminum	2.580	g/cc		227.67		350.20	cps
Spine Angle = 76.79				Density/Spine Ratio = 0.566			
	Size			Reading			
Small Ring	8.00	in		2.50	V		
Large Ring	14.00	in		4.70	V		

Compensated Neutron Calibration Report

Serial Number: 5I
 Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000
Gamma Ray Calibration Report					
Serial Number:	GR6				
Tool Model:	OPEN				
Performed:	Mon Jan 24 18:24:21 2011				
Calibrator Value:	150.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	276.0	cps			
Sensitivity:	0.9635	GAPI/cps			