



SUPERIOR
Hays,
Kansas

**DUAL
INDUCTION
LOG**

Company WOOLSEY OPERATING COMPANY, LLC.
Well LUTHI GU #5
Field KOCHIA POOL
County BARBER
State KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.
Well LUTHI GU #5
Field KOCHIA POOL
County BARBER State KANSAS

Location: API # : 15-007-23873-0000
1015' FSL & 1420' FEL
NE - NE - SW - SE
Permanent Datum GROUND LEVEL Elevation 1441
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
SEC 36 TWP 33S RGE 11W
Elevation
K.B. 1454
D.F. 1452
G.L. 1441

Date	6/2/12
Run Number	ONE
Depth Driller	5092
Depth Logger	5097
Bottom Logged Interval	5095
Top Log Interval	00
Casing Driller	10 3/4" @ 217'
Casing Logger	214
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/45
pH / Fluid Loss	10.0/9.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.70 @ 89F
Rmf @ Meas. Temp	.52 @ 89F
Rmc @ Meas. Temp	.84 @ 89F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.49 @ 125F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	125F
Equipment Number	680
Location	HAYS, KS.
Recorded By	JASON CAPPELLUCCI
Witnessed By	SCOTT ALBERG

<<< 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
MEDICINE LODGE, KS. - 9 S. TO GERLANE RD. - 8 E. TO CEDAR HILLS RD.
1/4 N. - W. INTO



SUPERIOR
Hays,
Kansas

MAIN SECTION

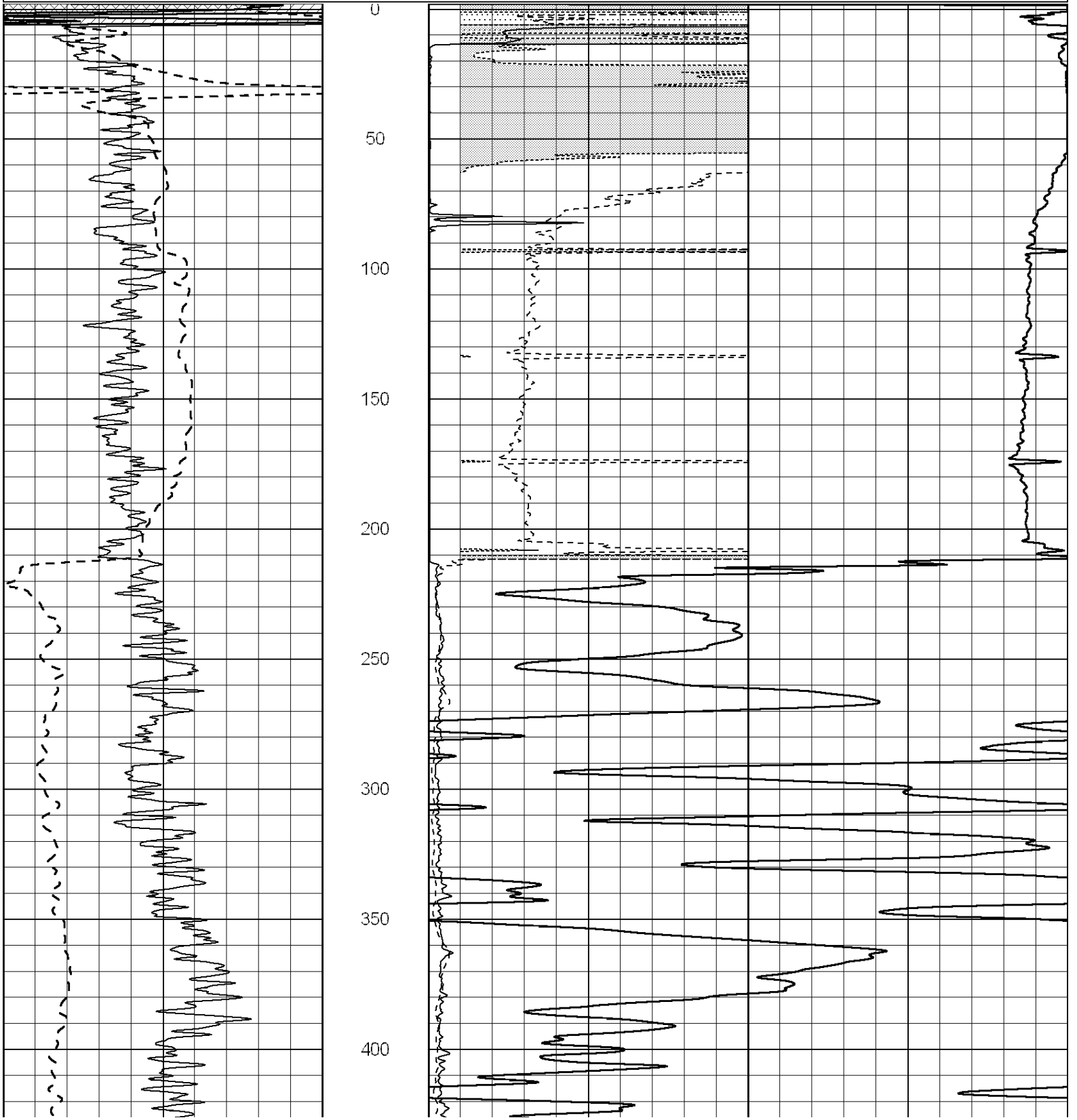
Database File: 009212pe.db
 Dataset Pathname: pass3.2
 Presentation Format: _dil2
 Dataset Creation: Sat Jun 02 20:10:36 2012 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:600

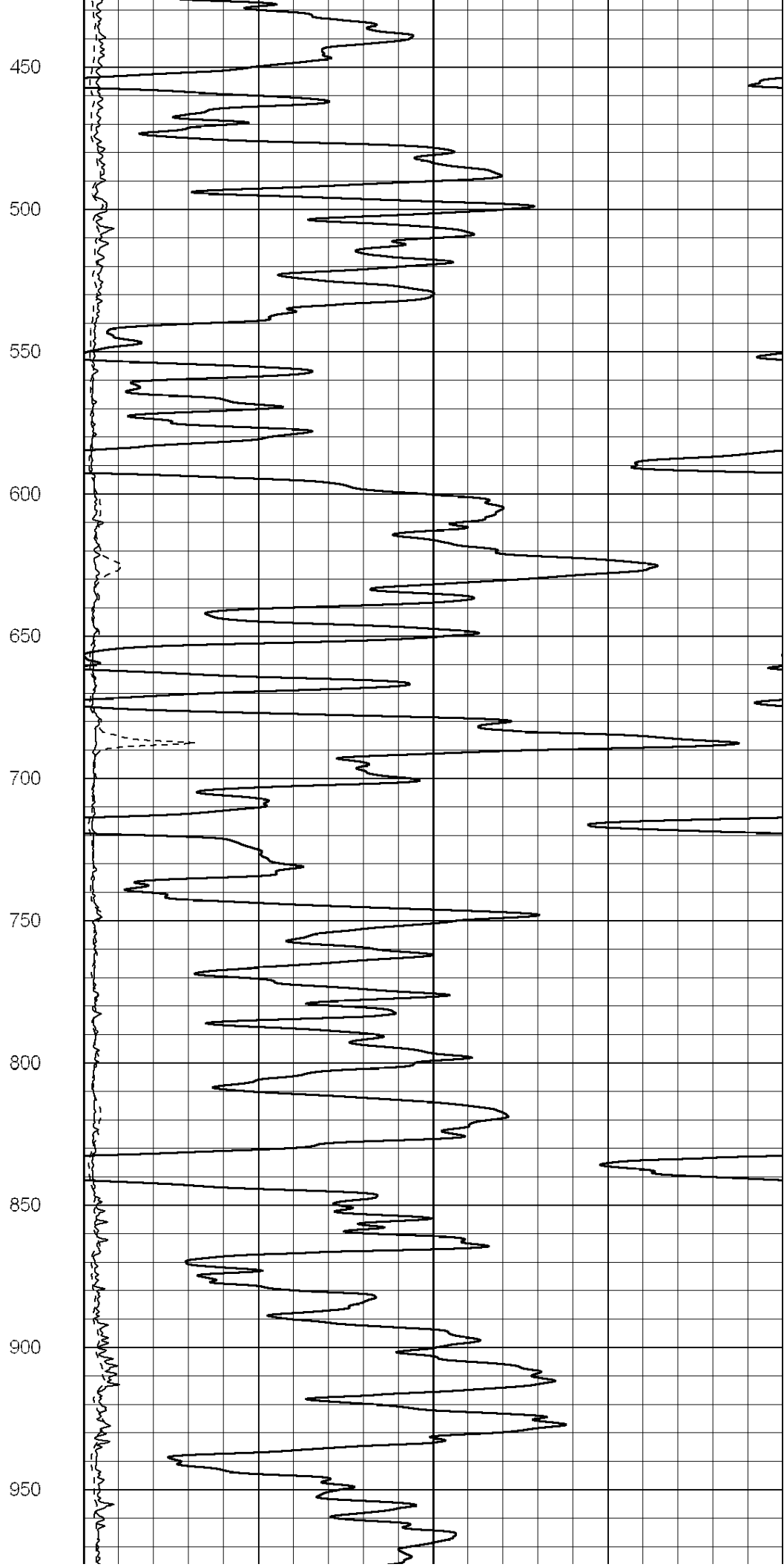
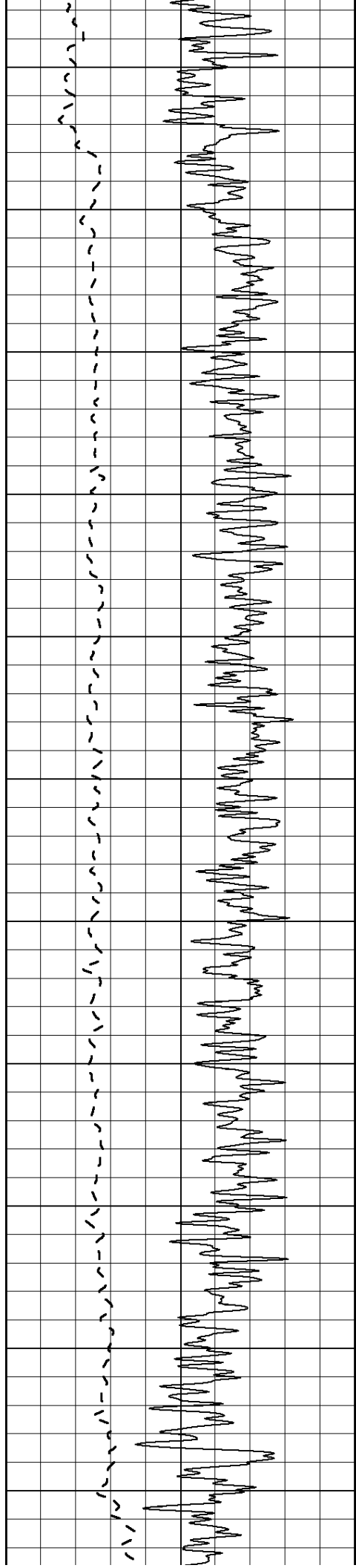
0 Gamma Ray (GAPI) 150
 -100 SP (mV) 100

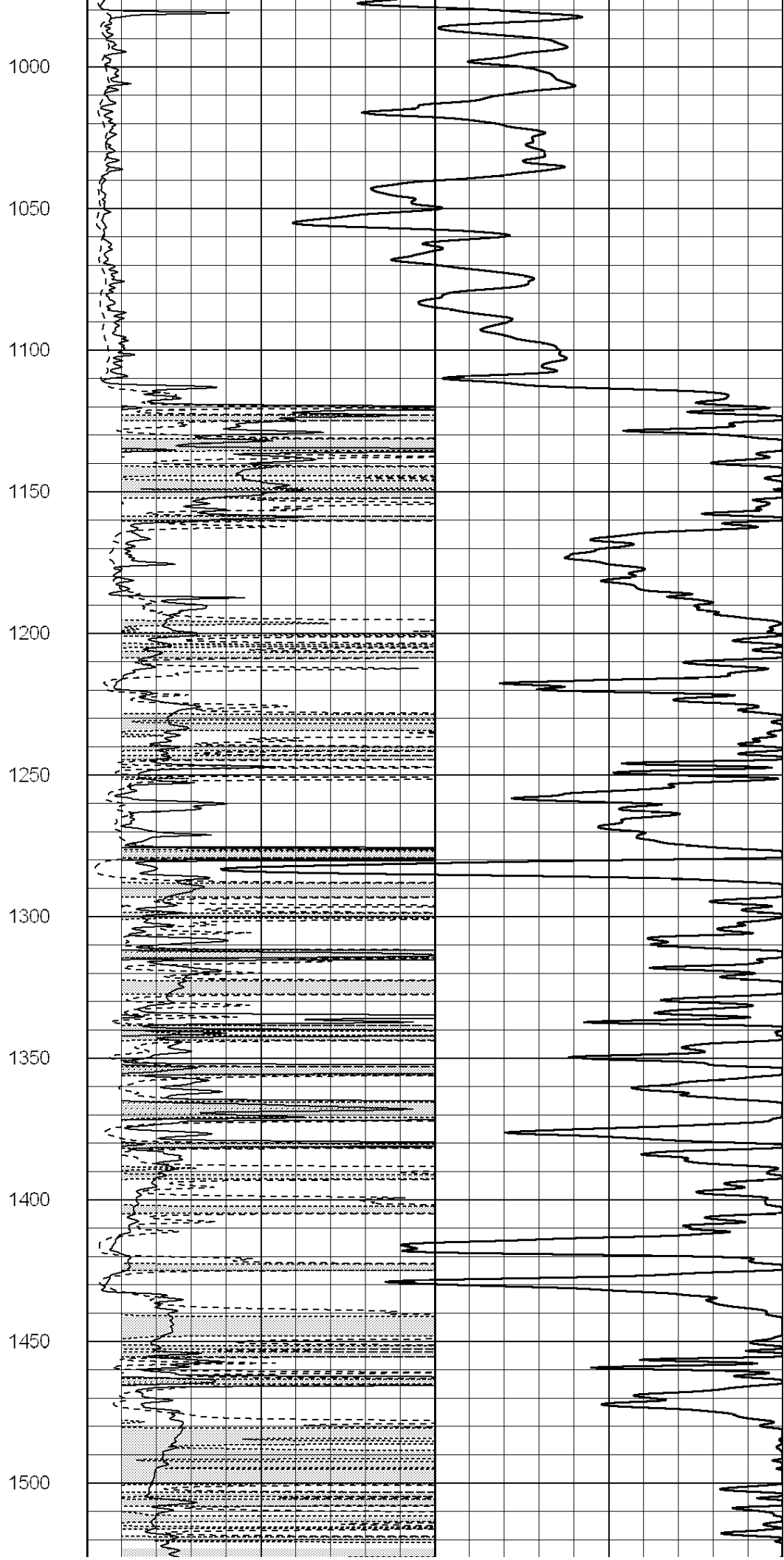
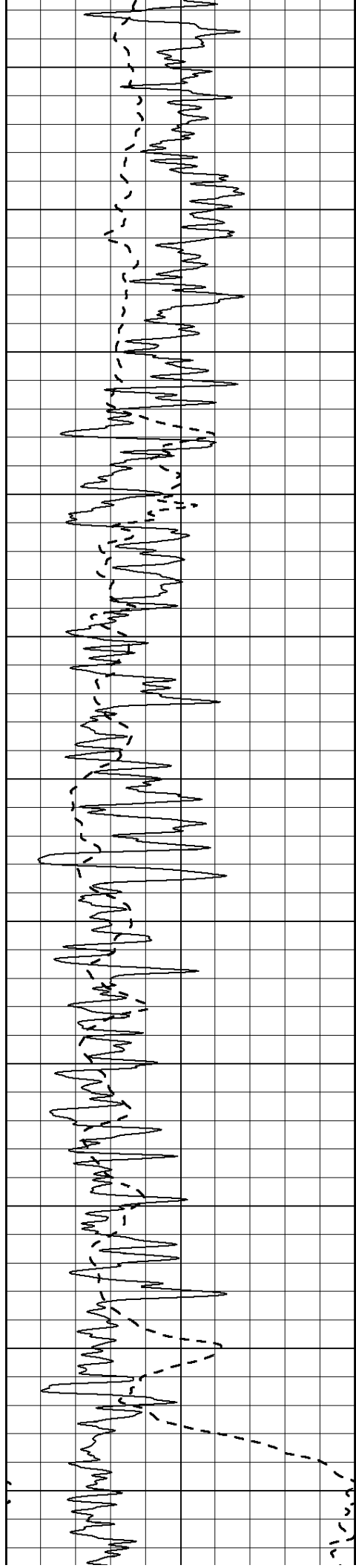
0 RLL3 (Ohm-m) 50
 0 Deep Induction (Ohm-m) 50

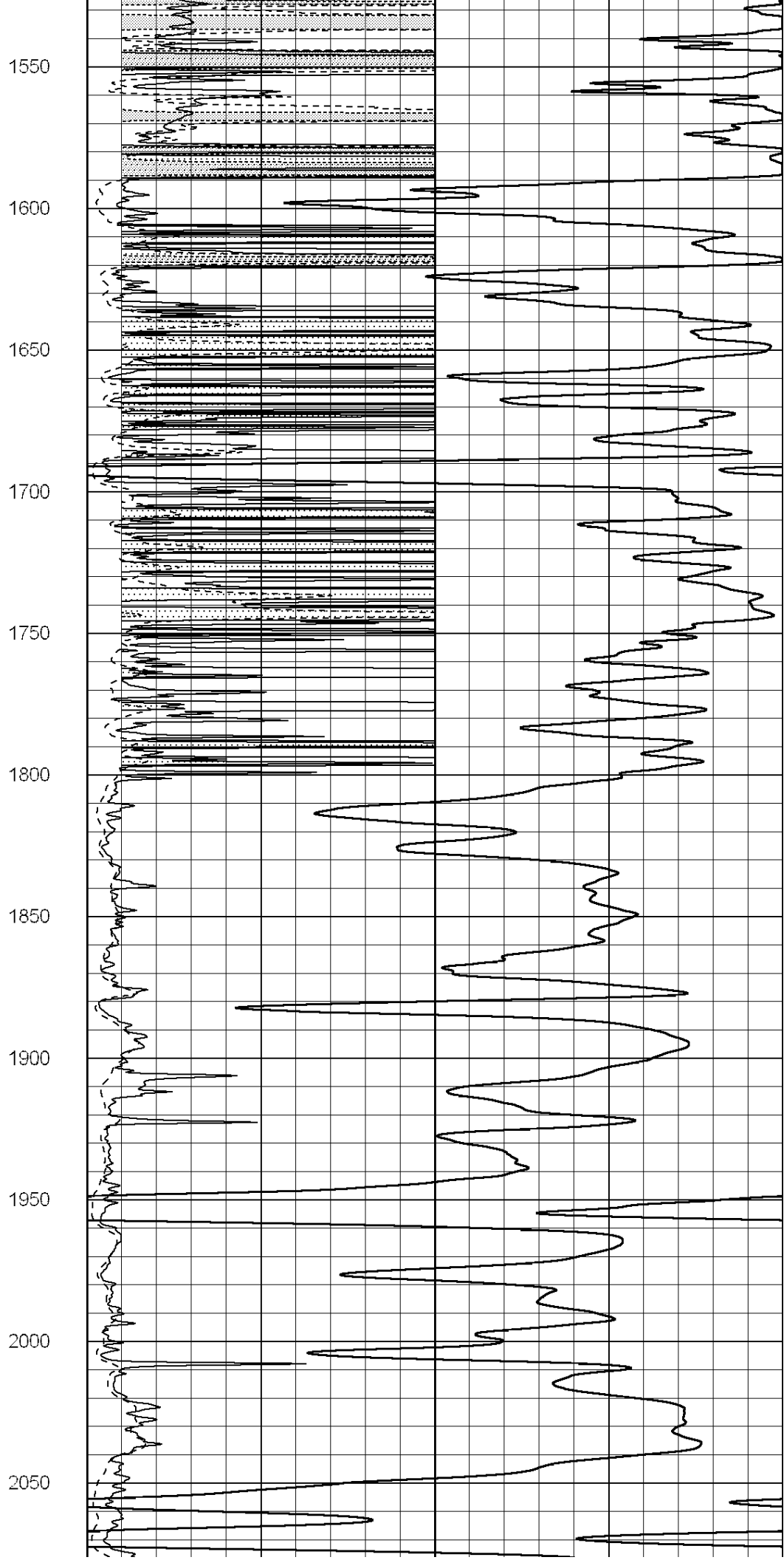
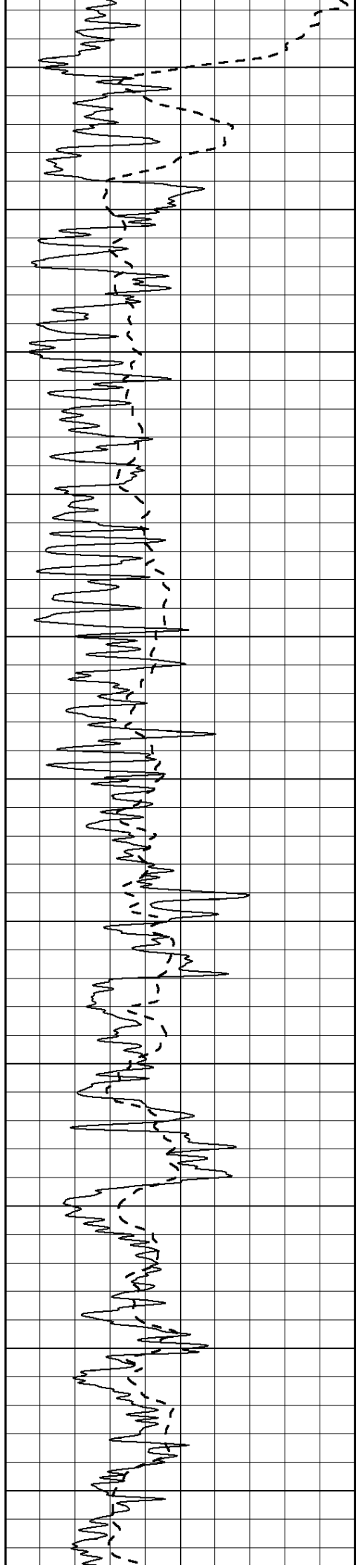
1000 CILD (mmho/m) 0

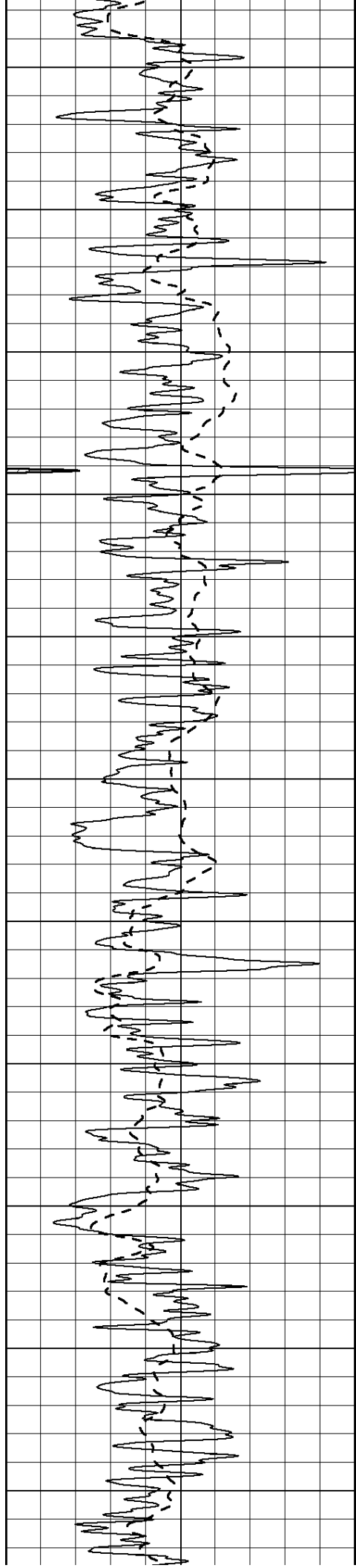
50 RILD X10 (Ohm-m) 500
 50 RLL3 X10 (Ohm-m) 500











2100

2150

2200

2250

2300

2350

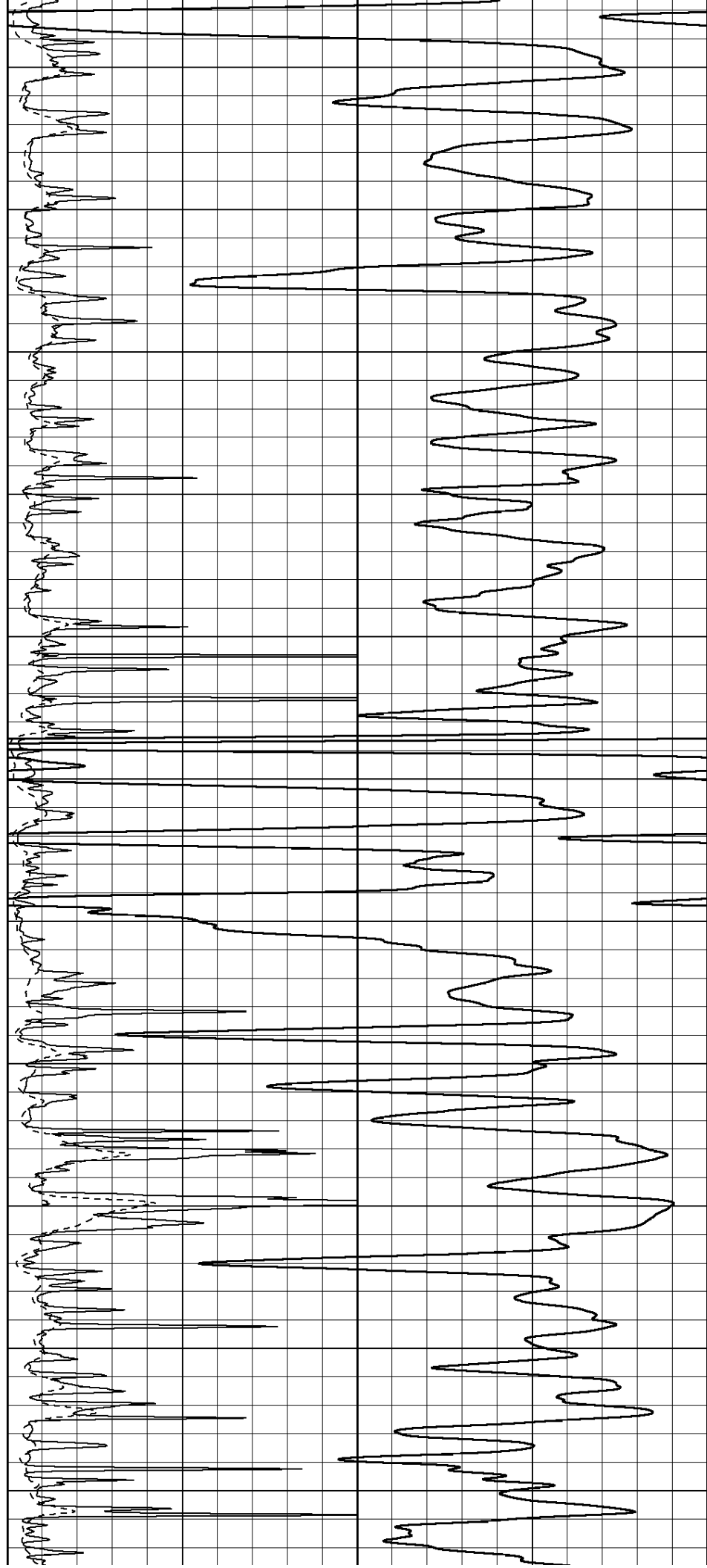
2400

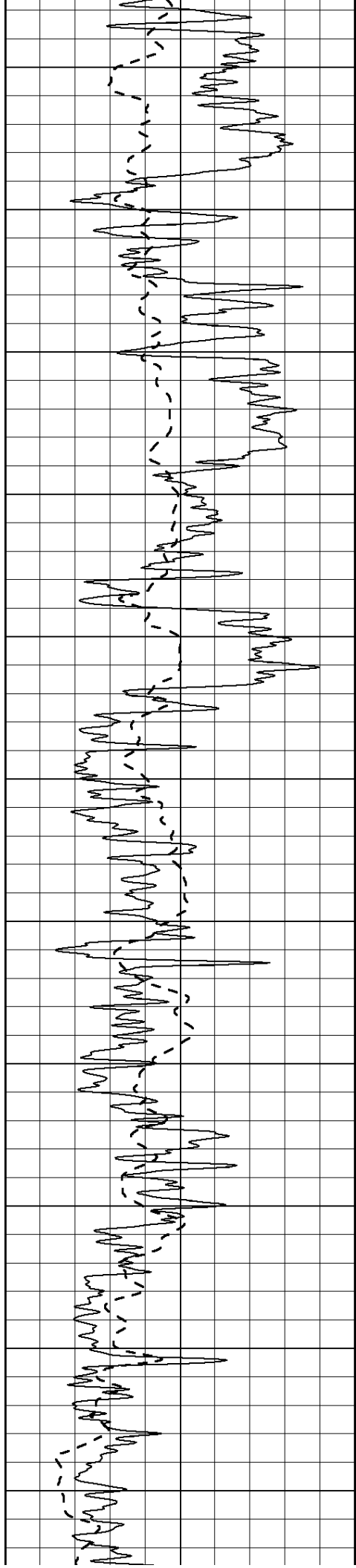
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

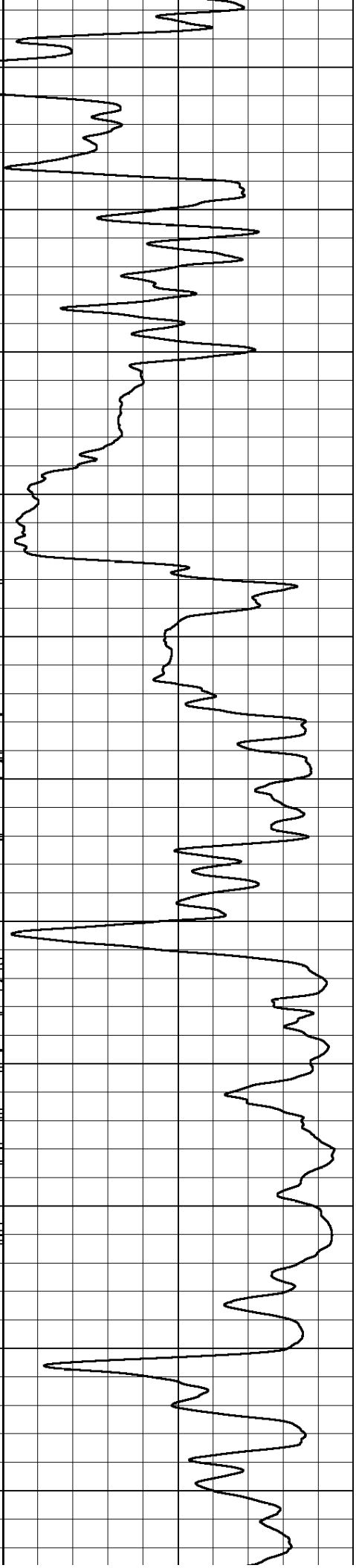
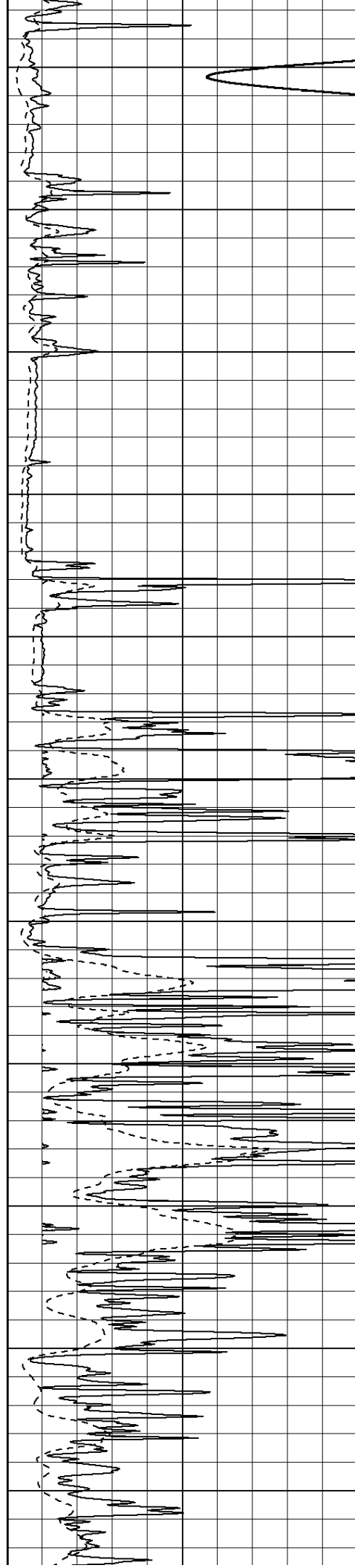
2950

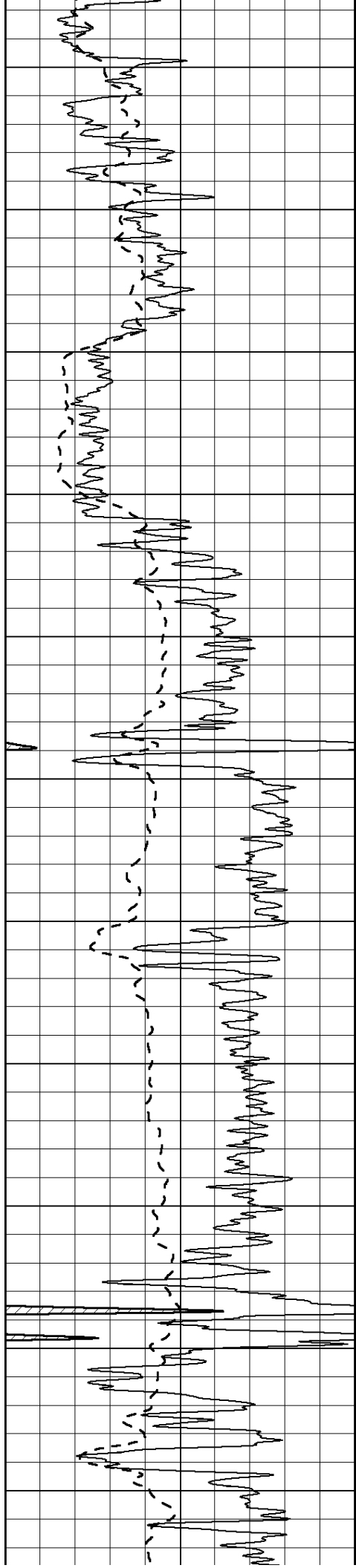
3000

3050

3100

3150





3200

3250

3300

3350

3400

3450

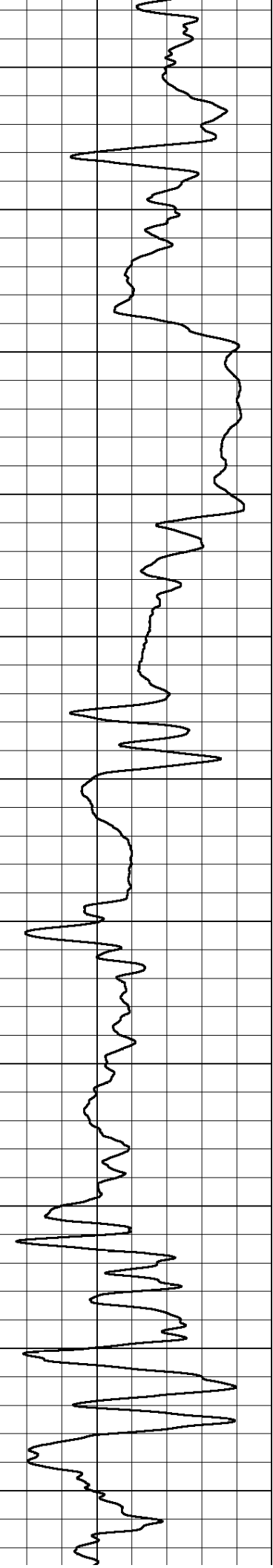
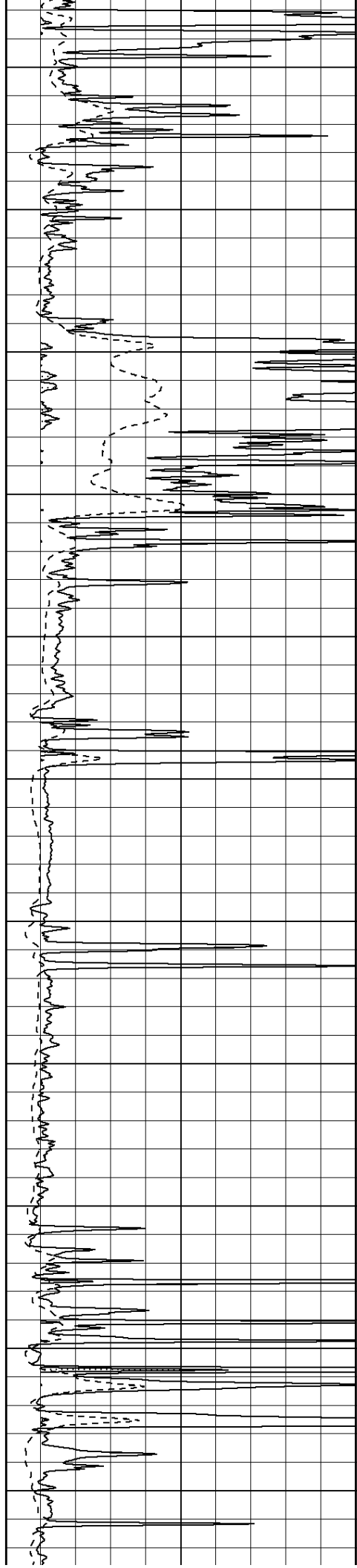
3500

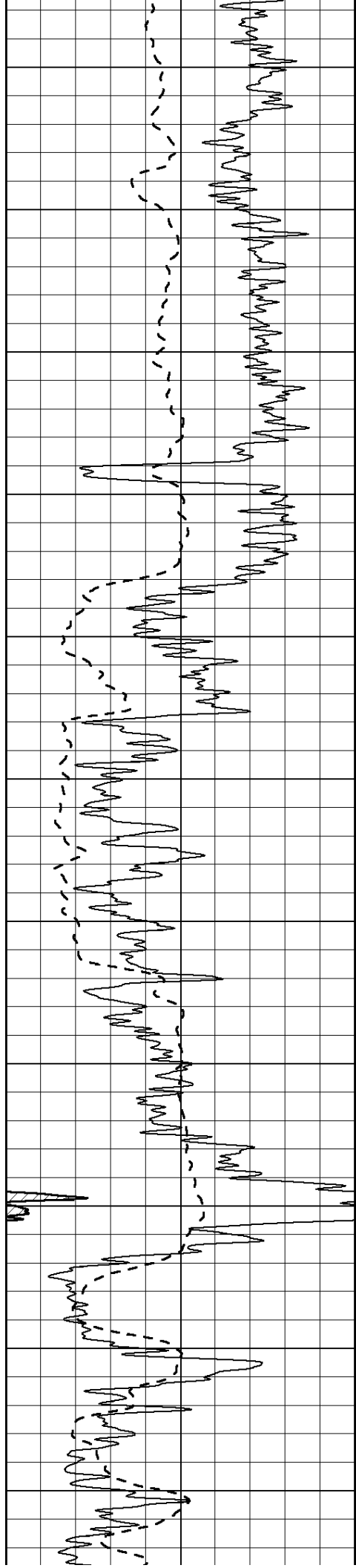
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

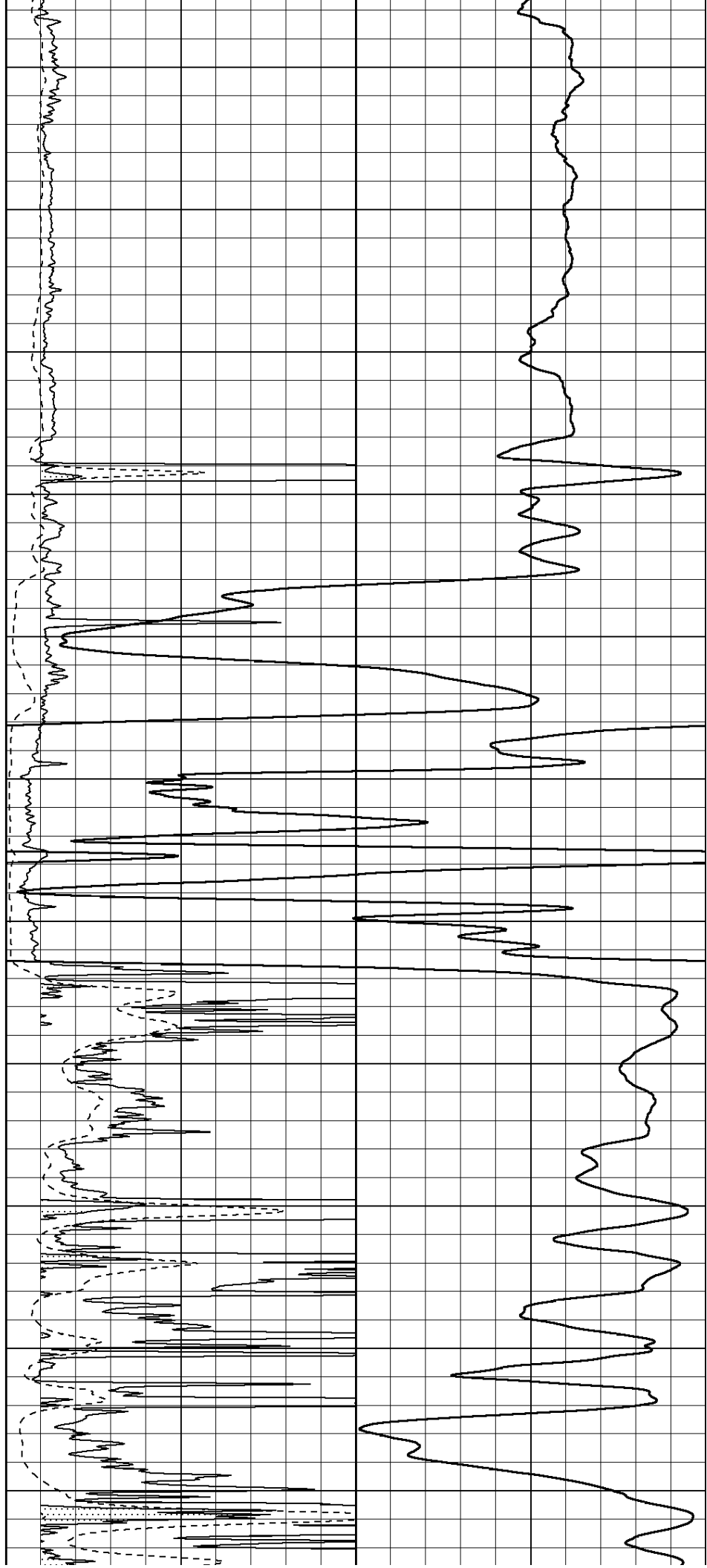
4050

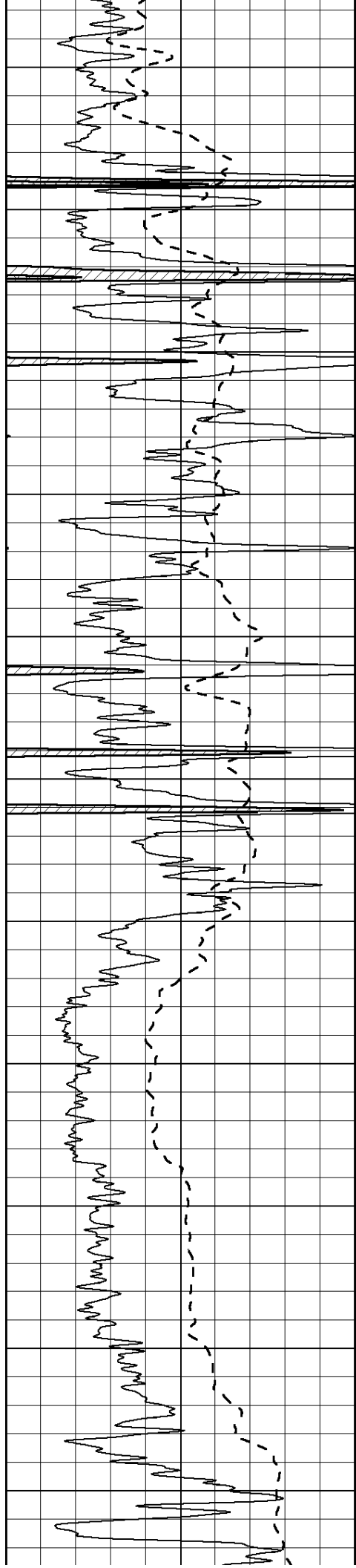
4100

4150

4200

4250





4300

4350

4400

4450

4500

4550

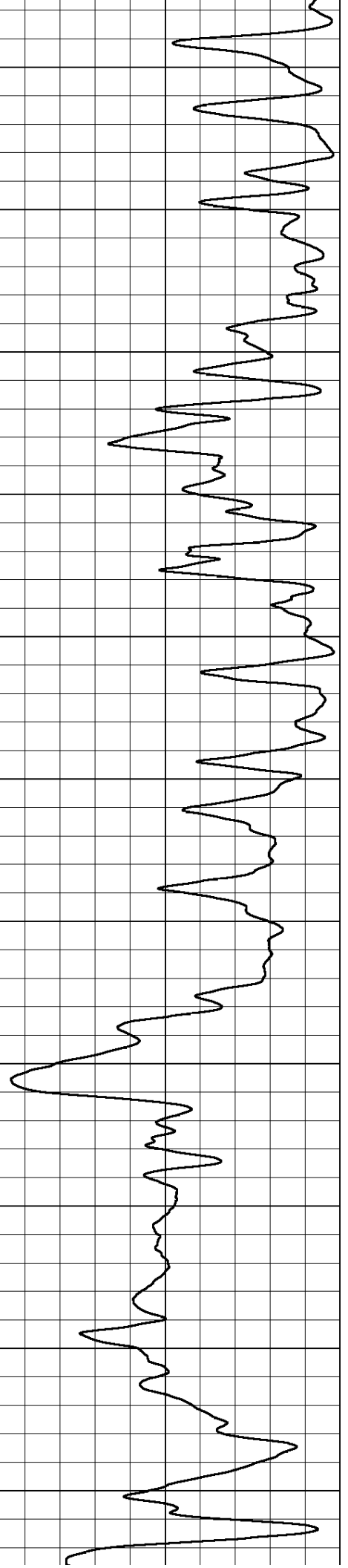
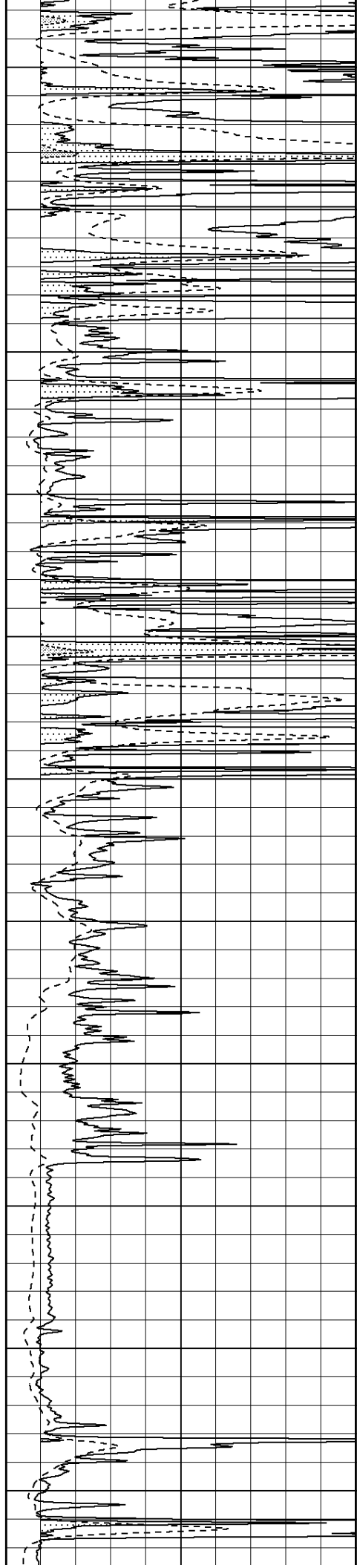
4600

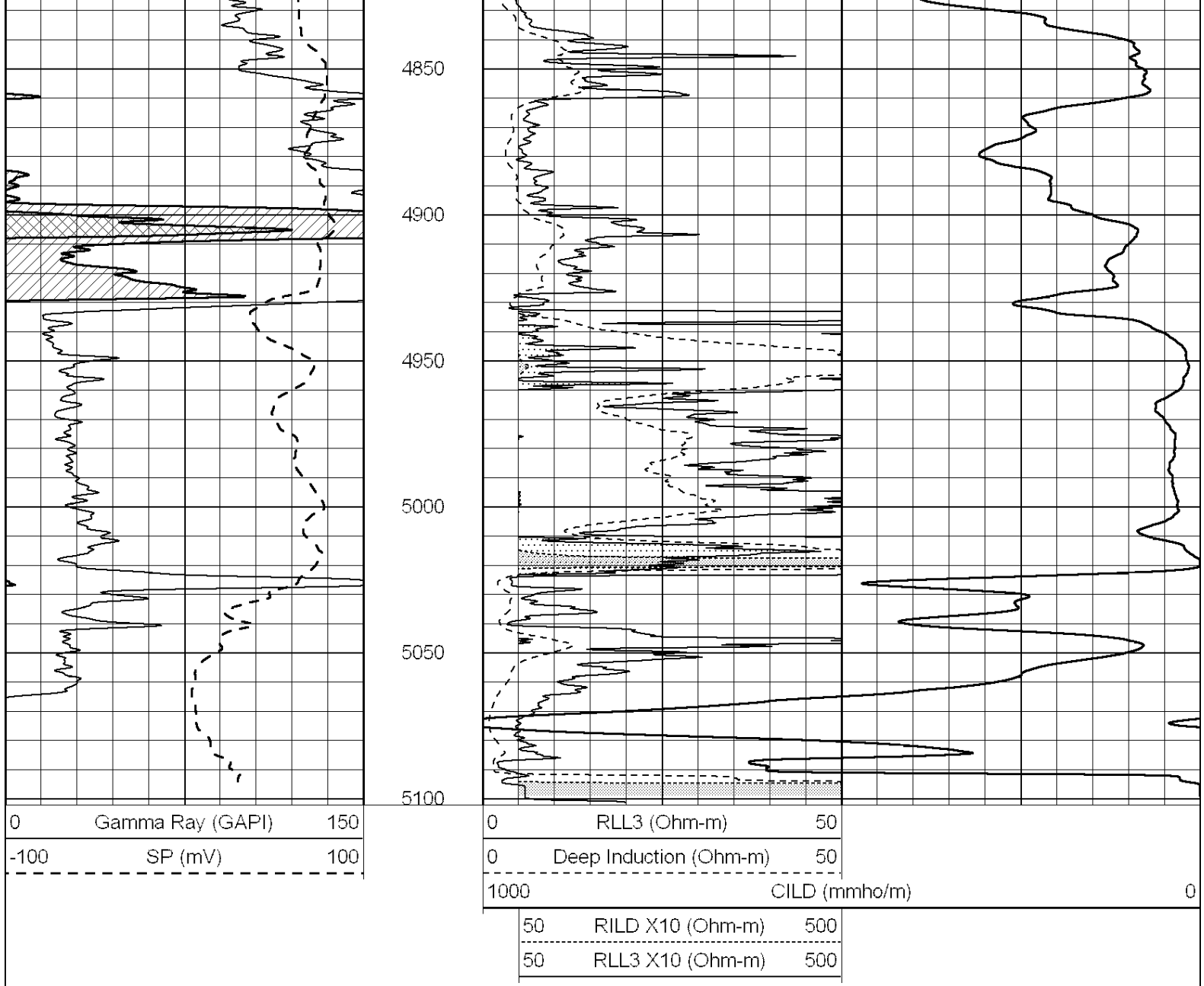
4650

4700

4750

4800





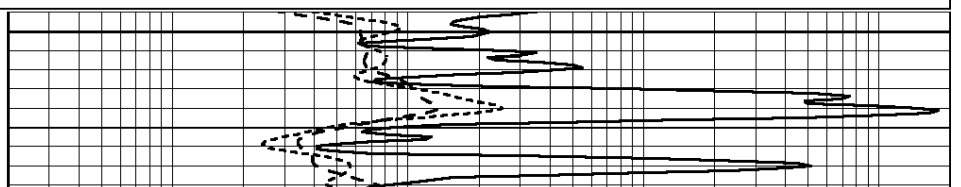
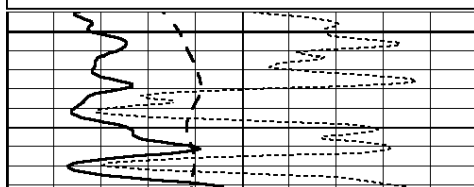
SUPERIOR
Hays,
Kansas

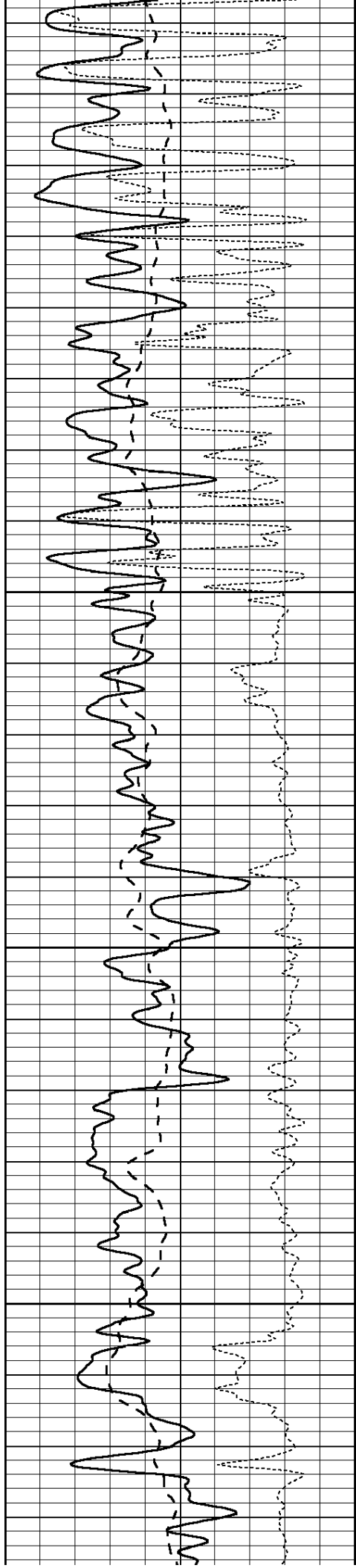
MAIN SECTION

Database File: 009212pe.db
 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Sat Jun 02 19:24:28 2012 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



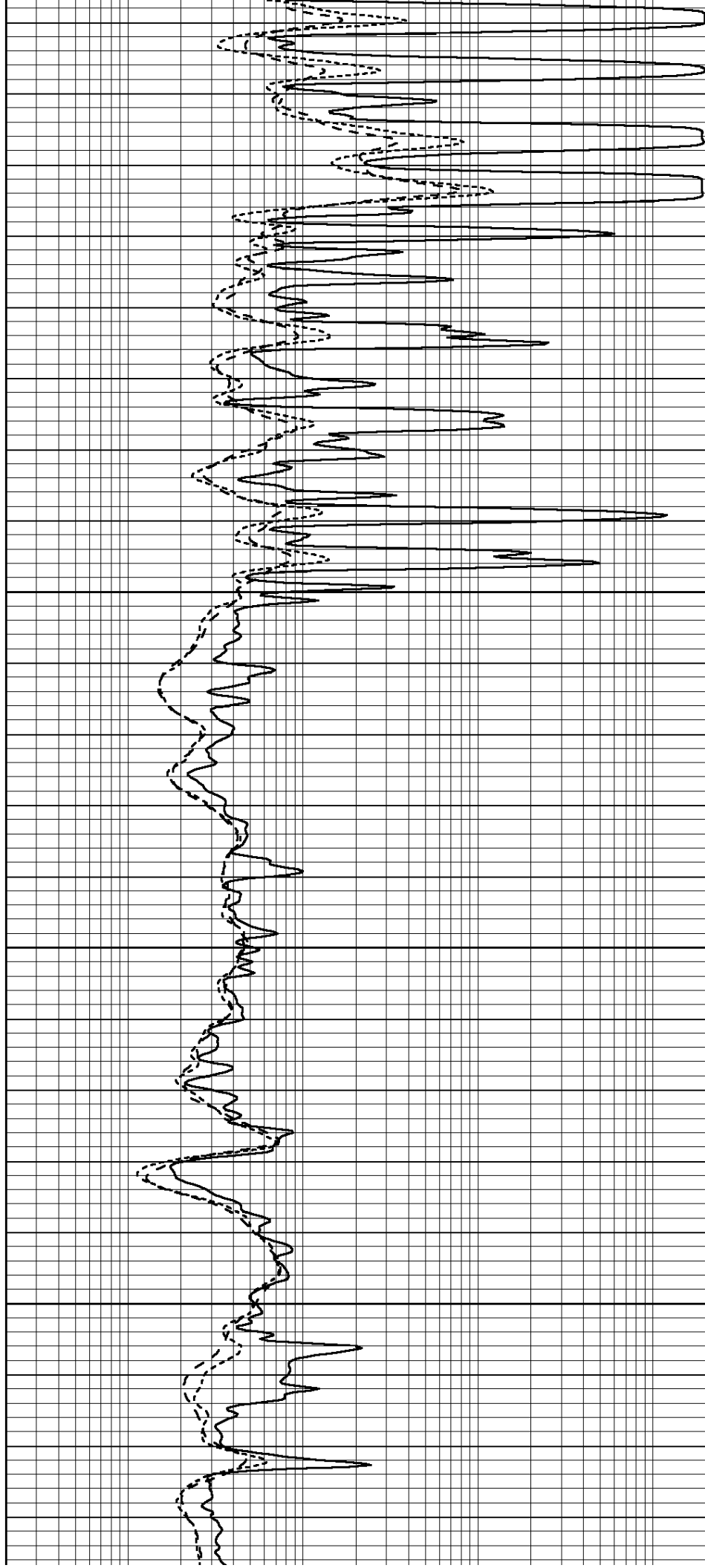


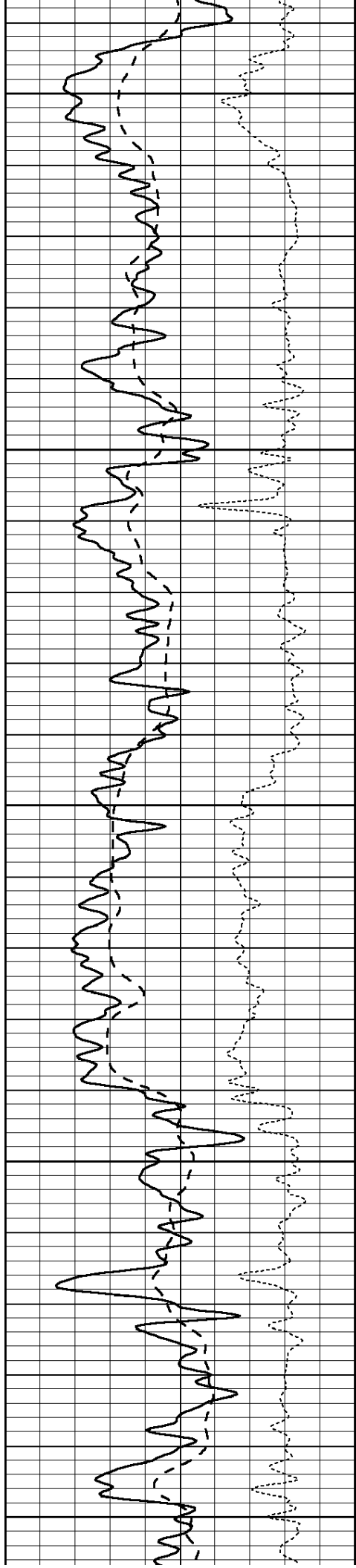
1750

1800

1850

1900





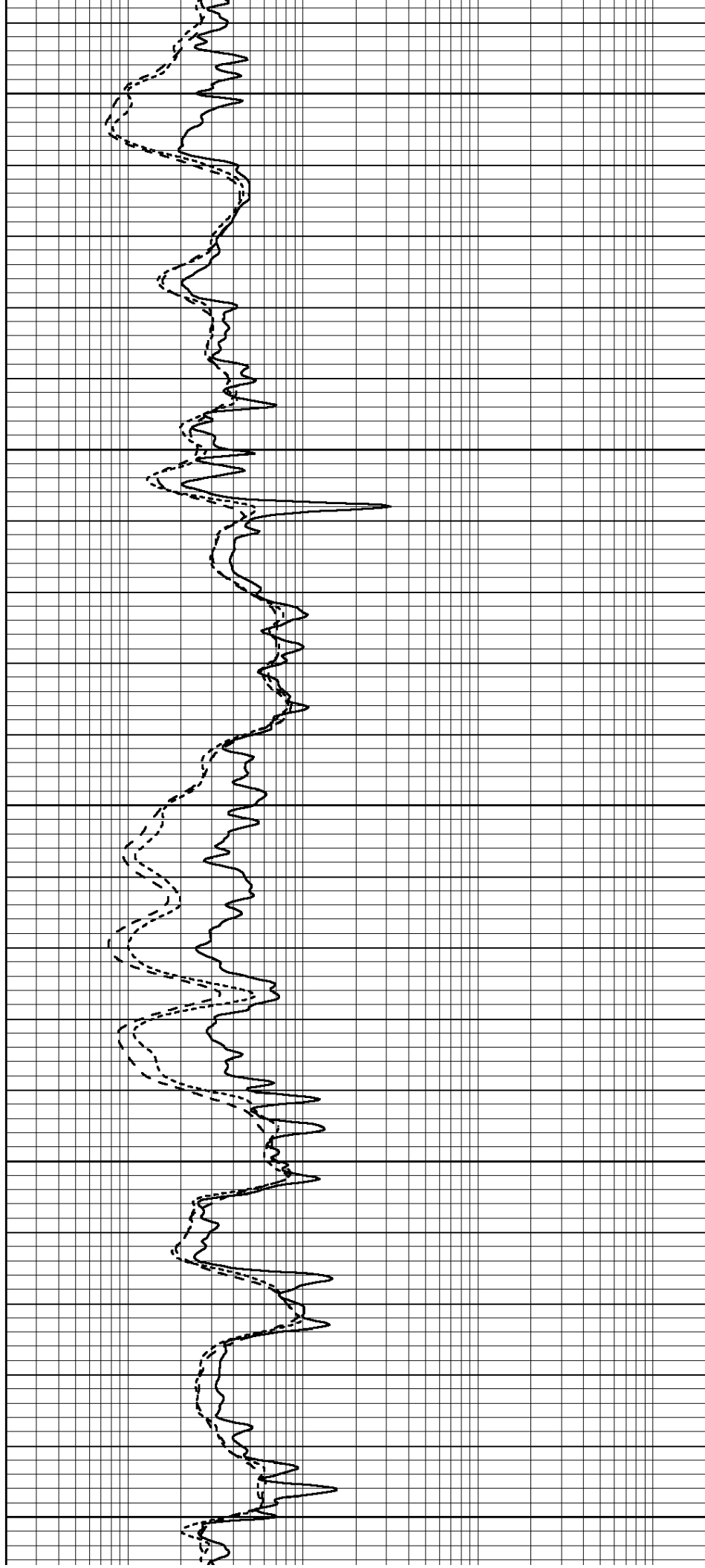
1950

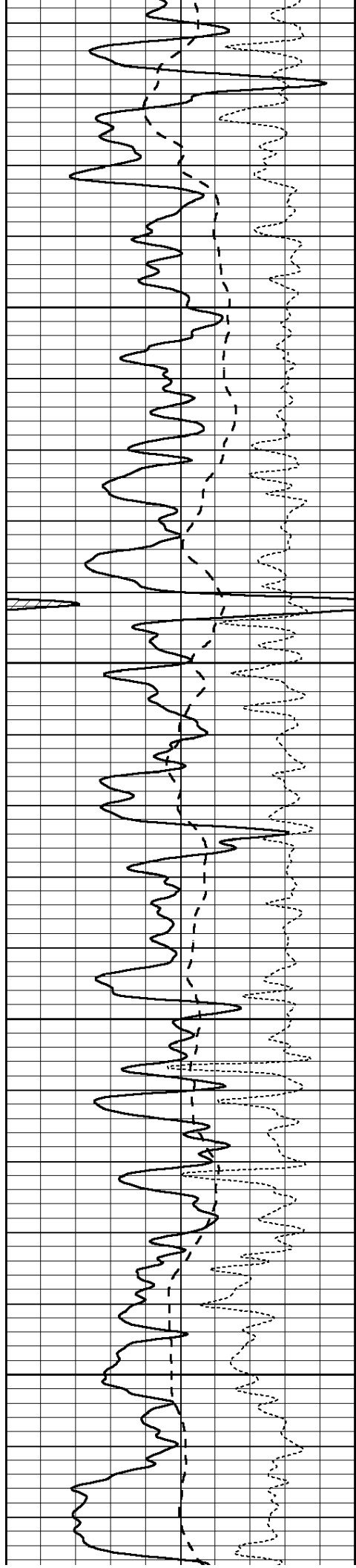
2000

2050

2100

2150



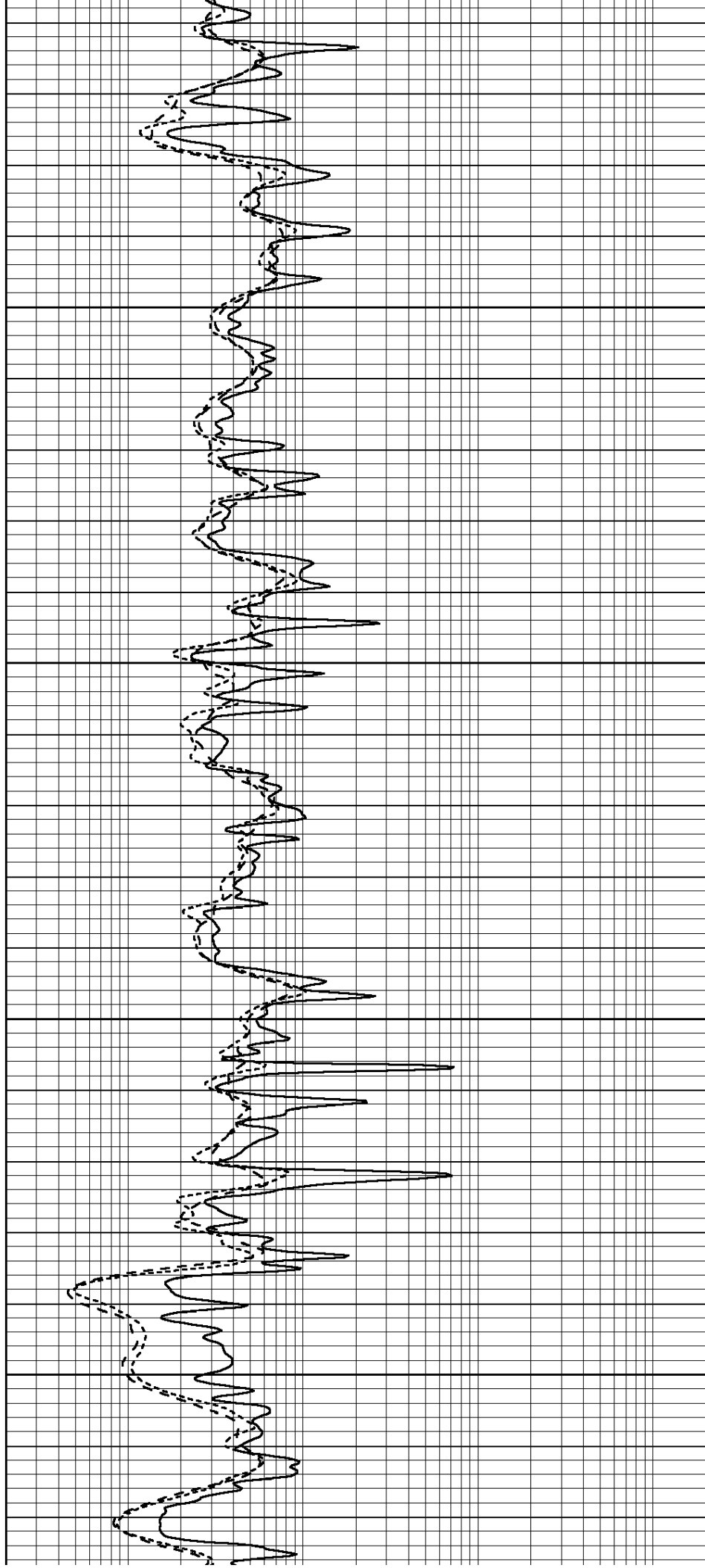


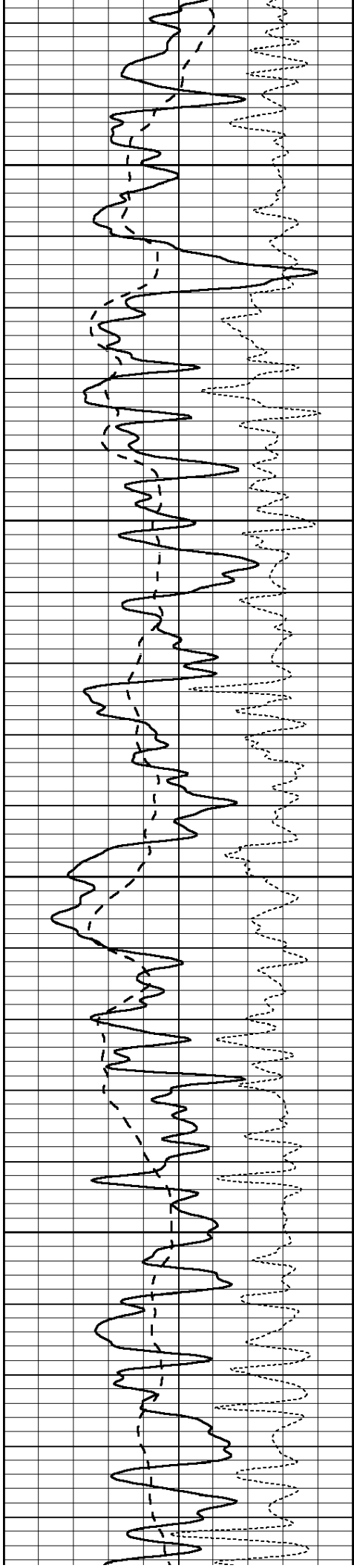
2200

2250

2300

2350



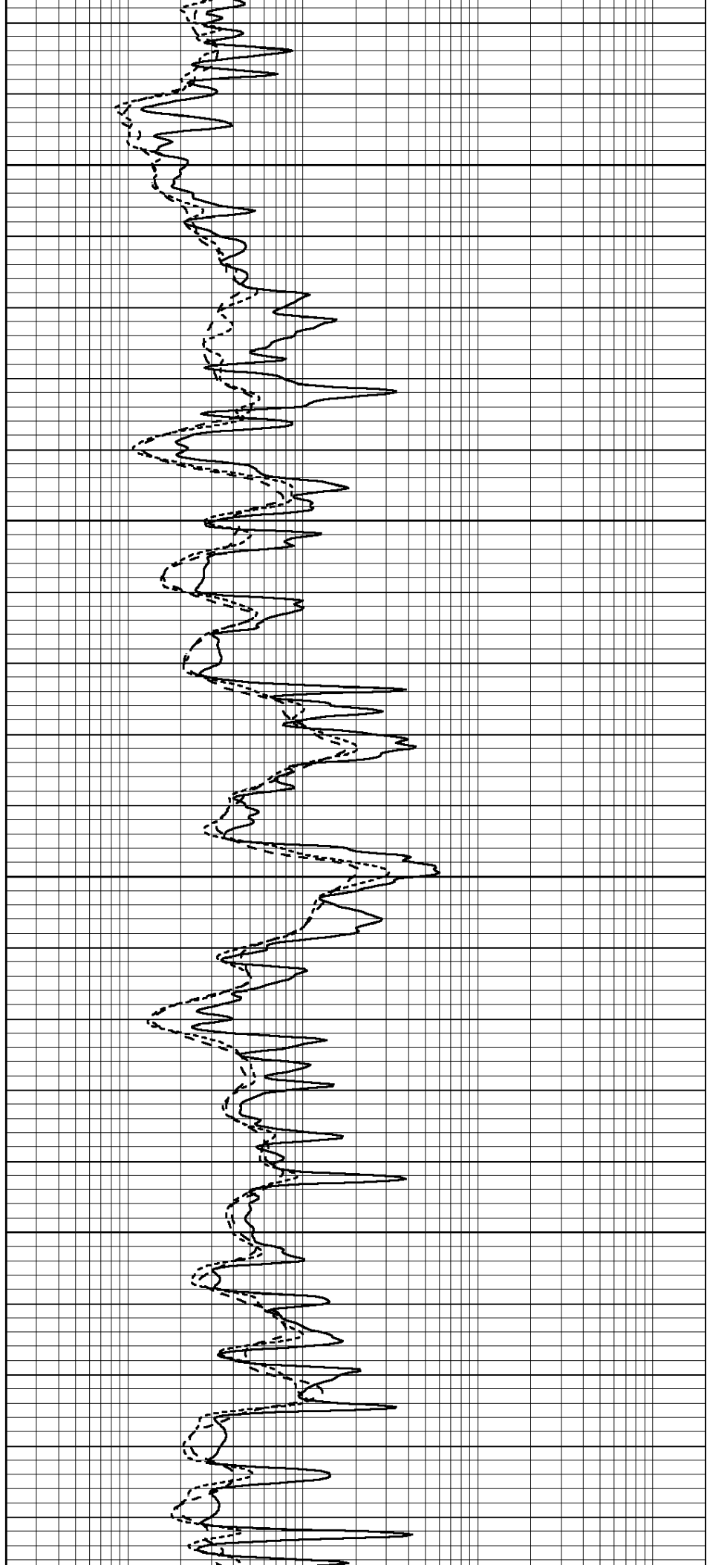


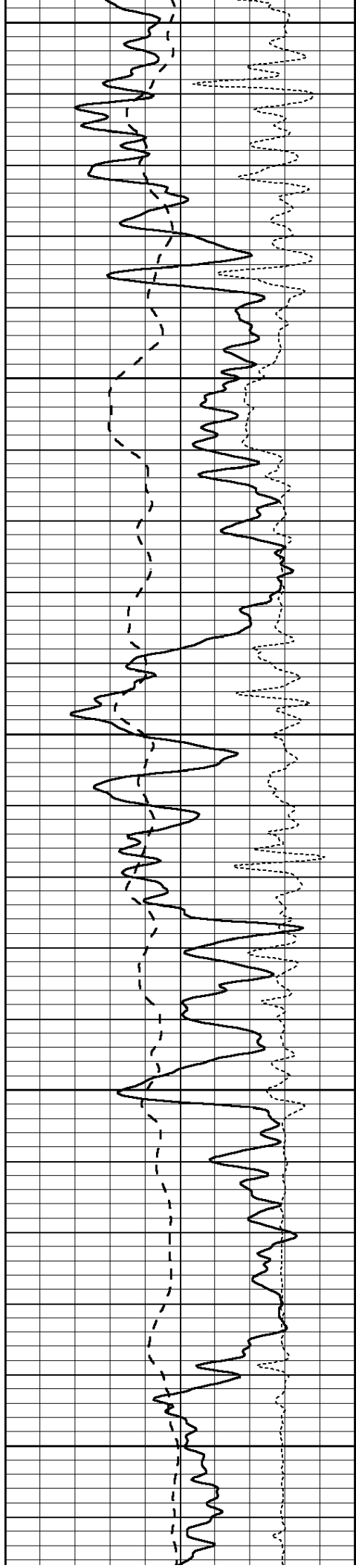
2400

2450

2500

2550





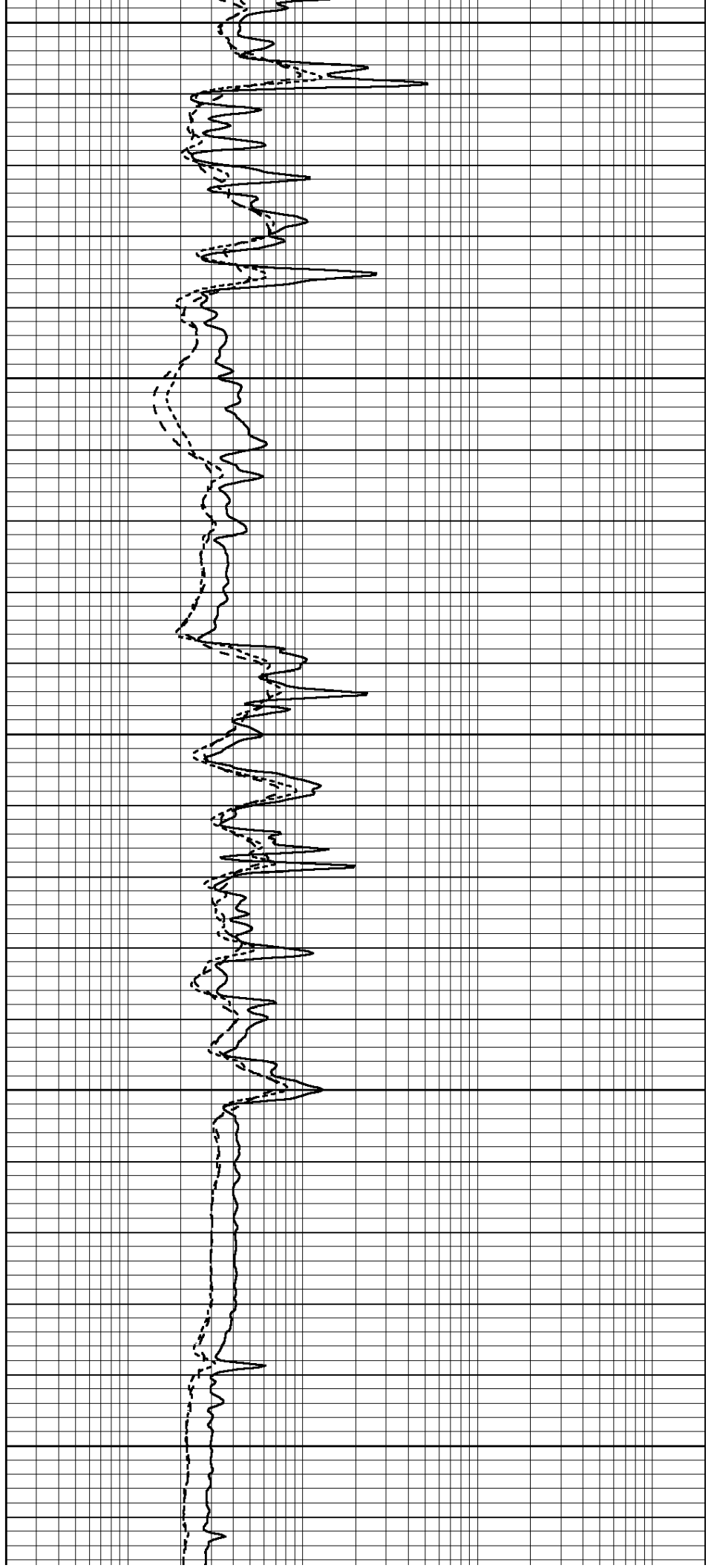
2600

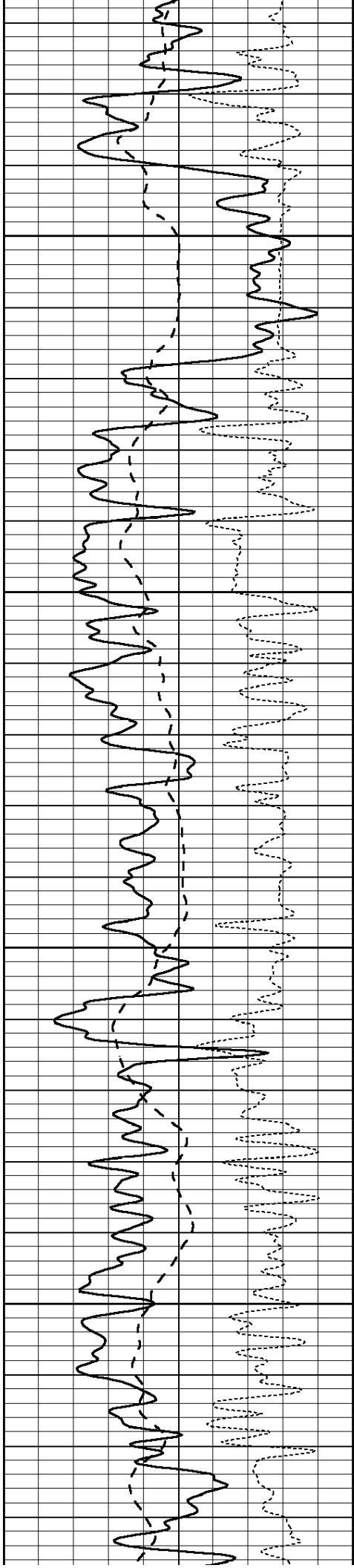
2650

2700

2750

2800



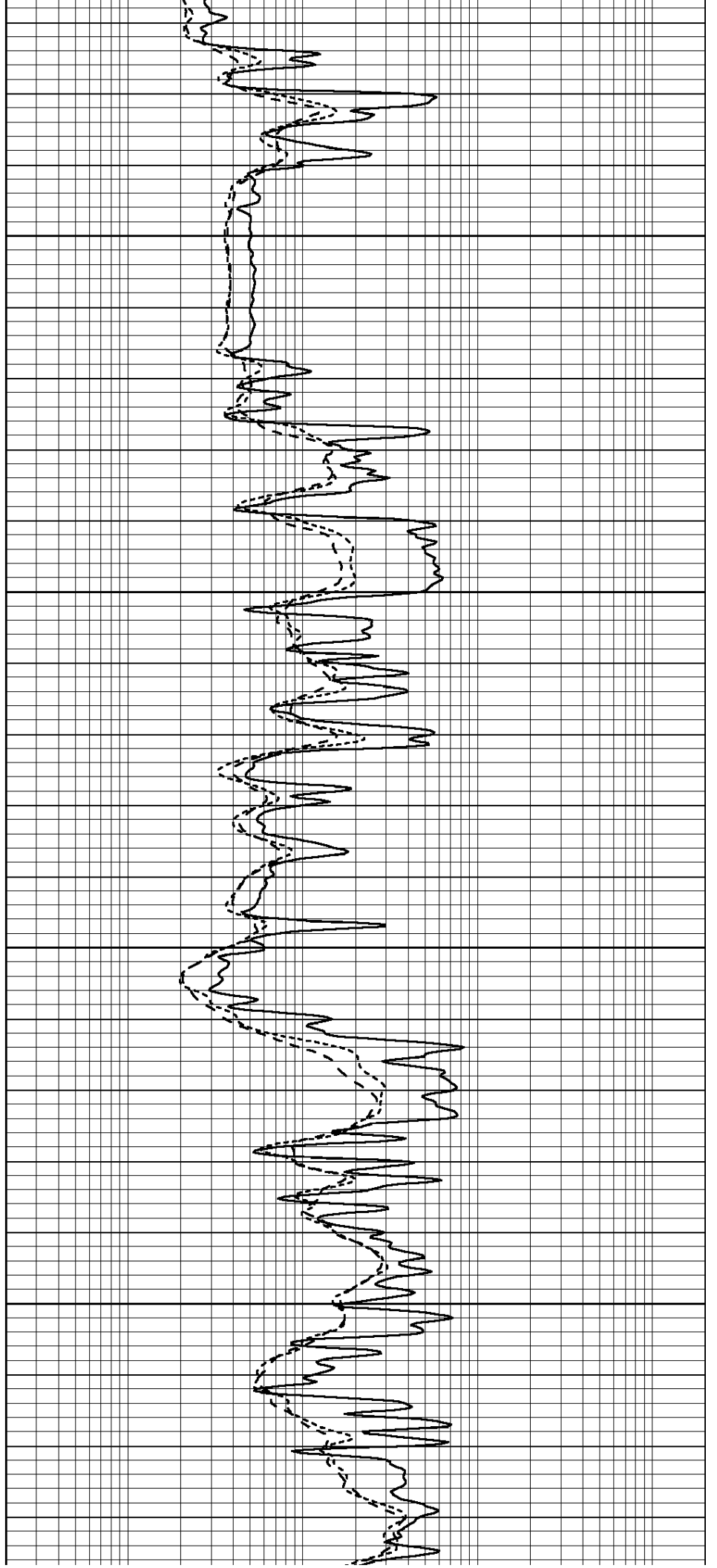


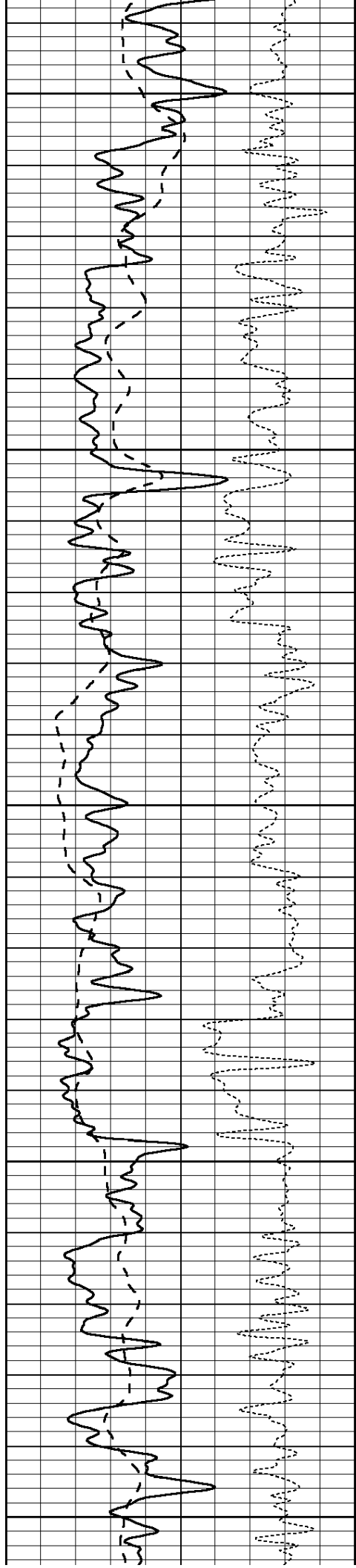
2850

2900

2950

3000





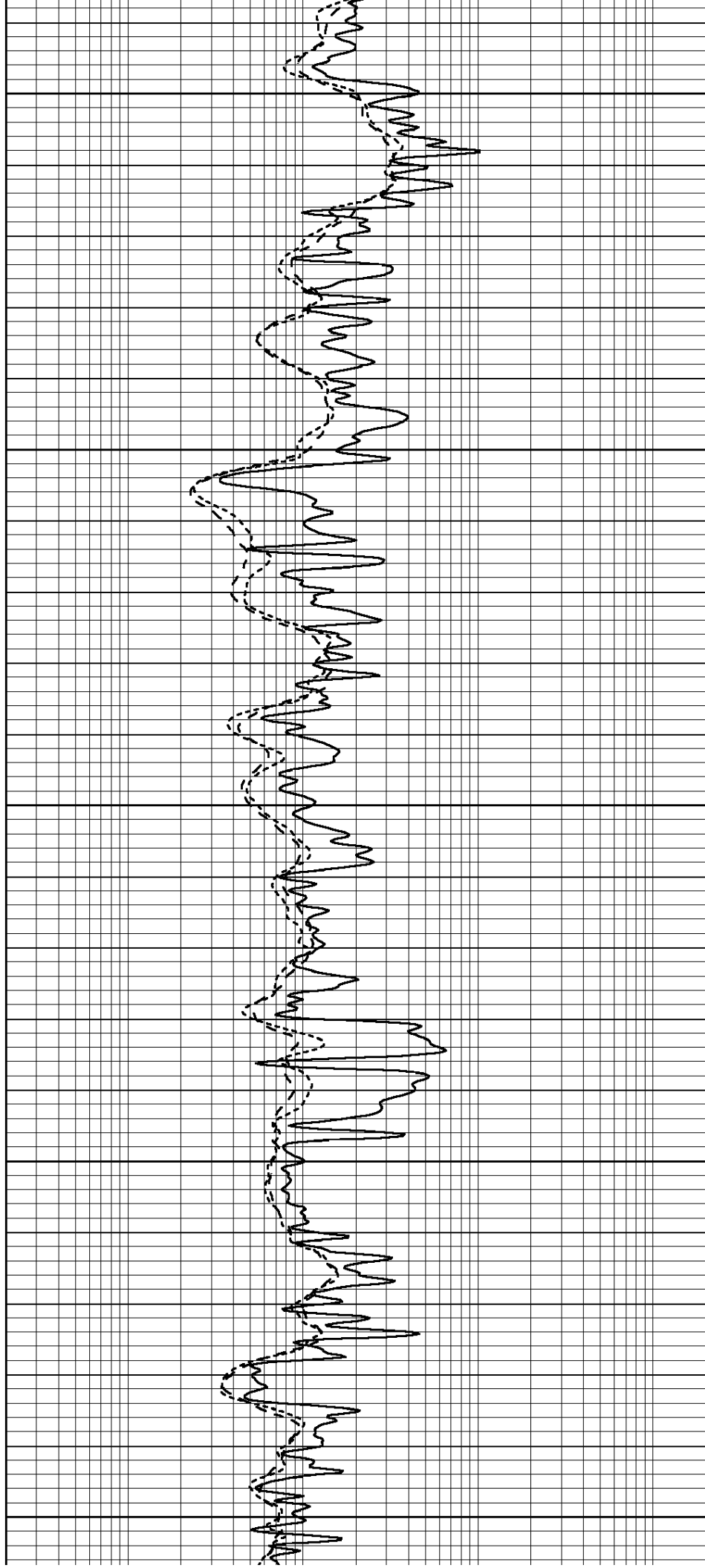
3050

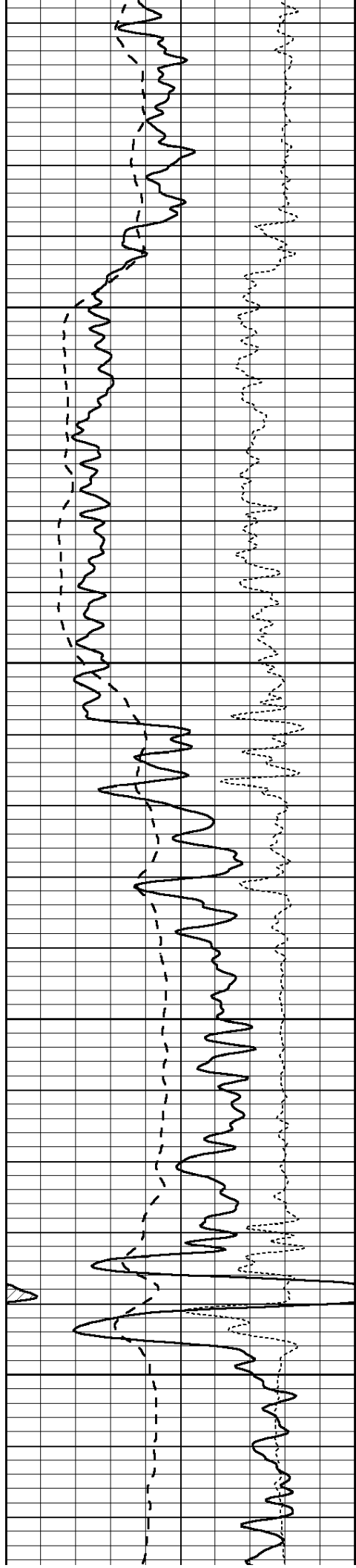
3100

3150

3200

3250



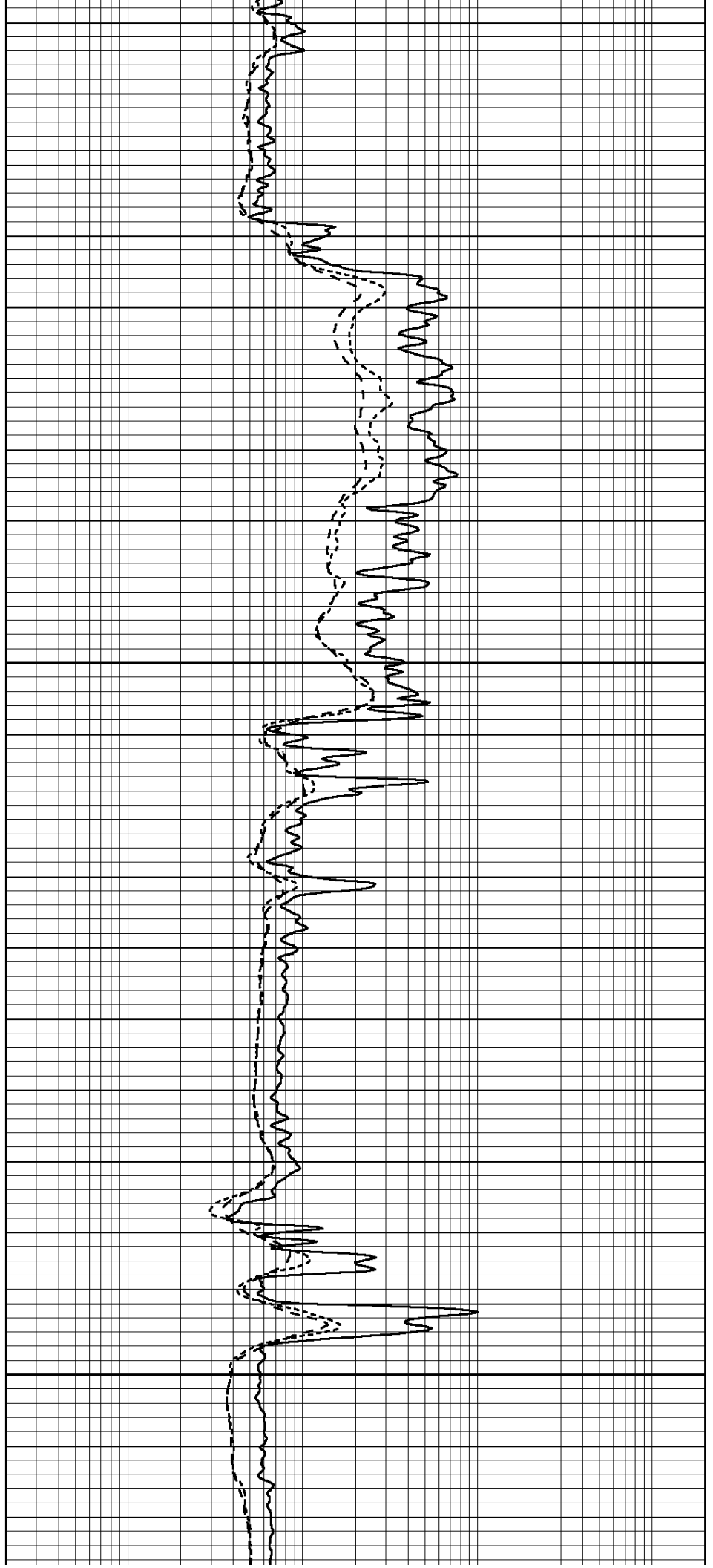


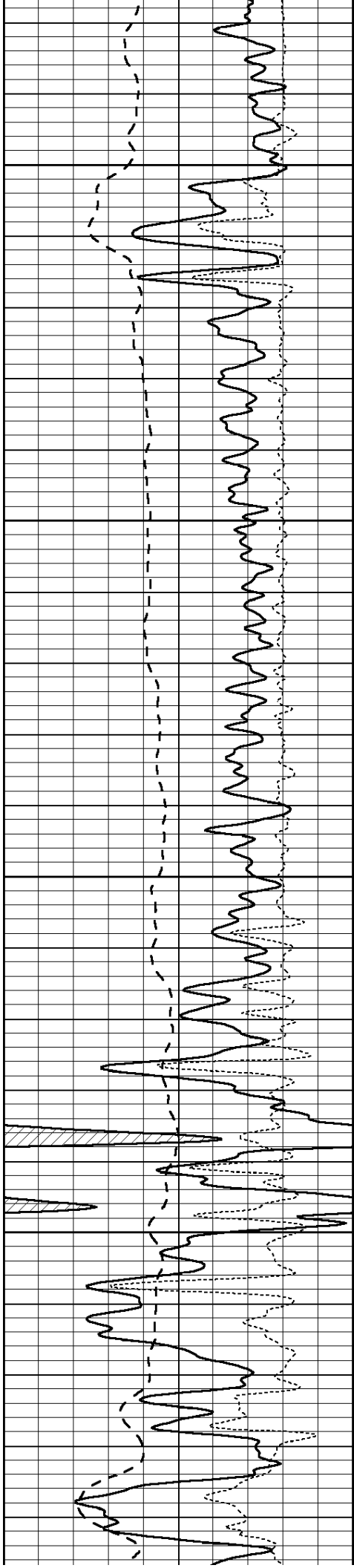
3300

3350

3400

3450



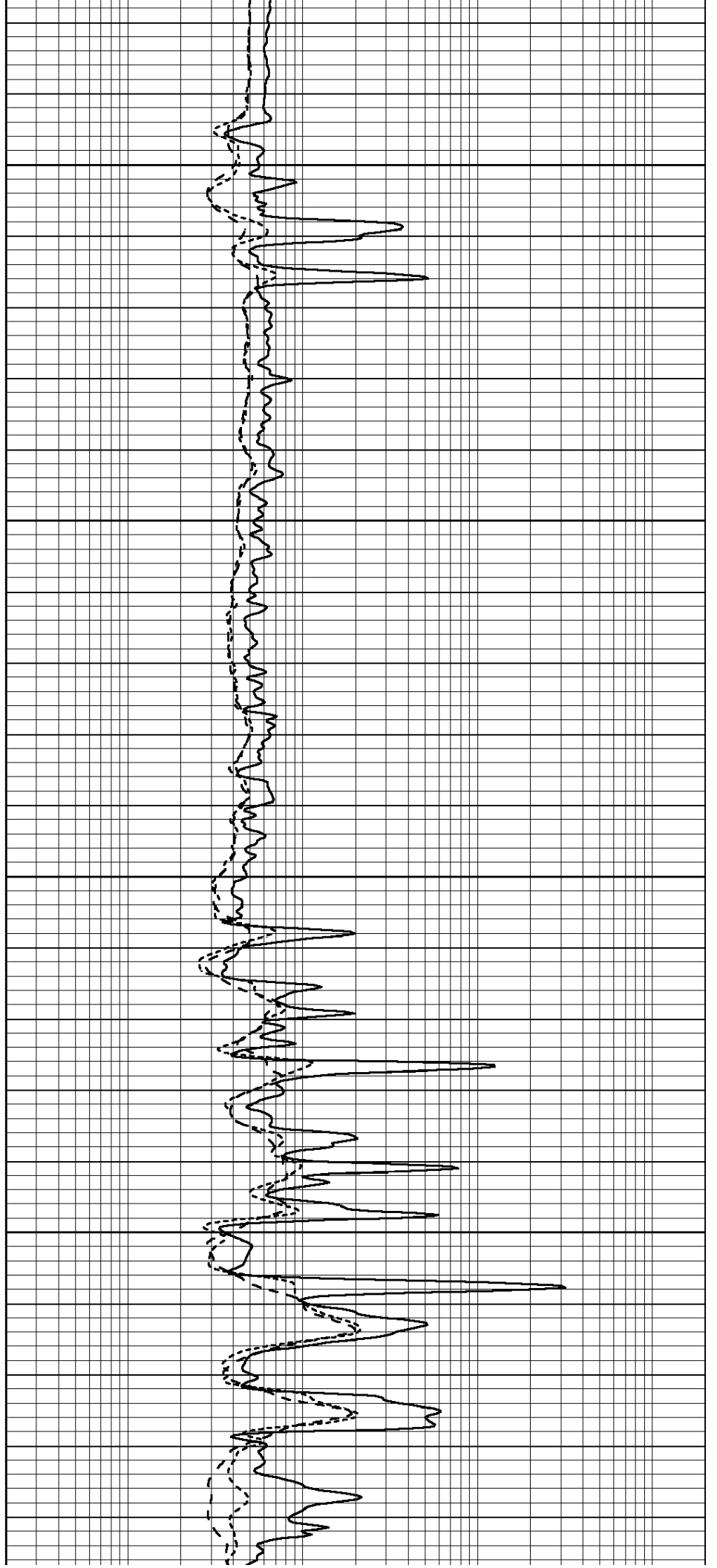


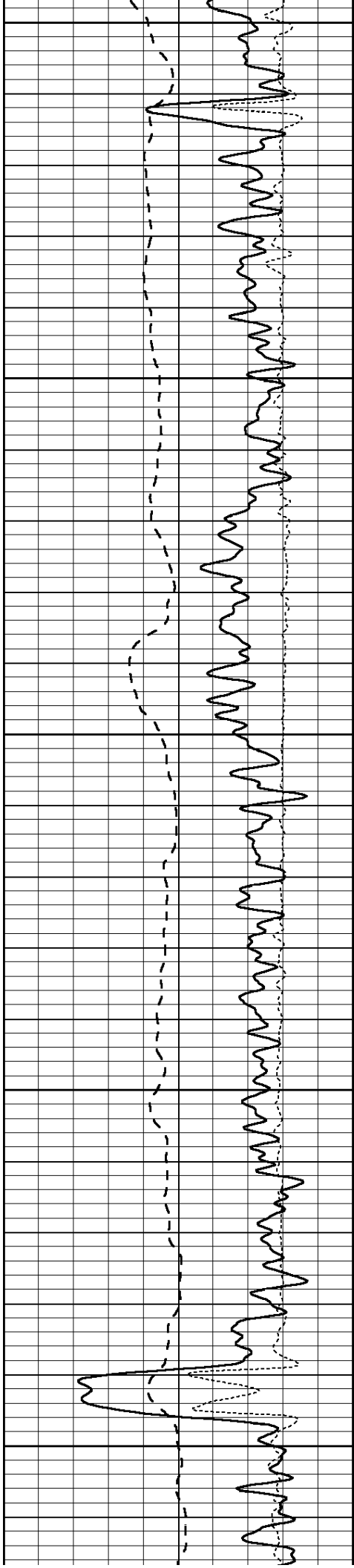
3500

3550

3600

3650





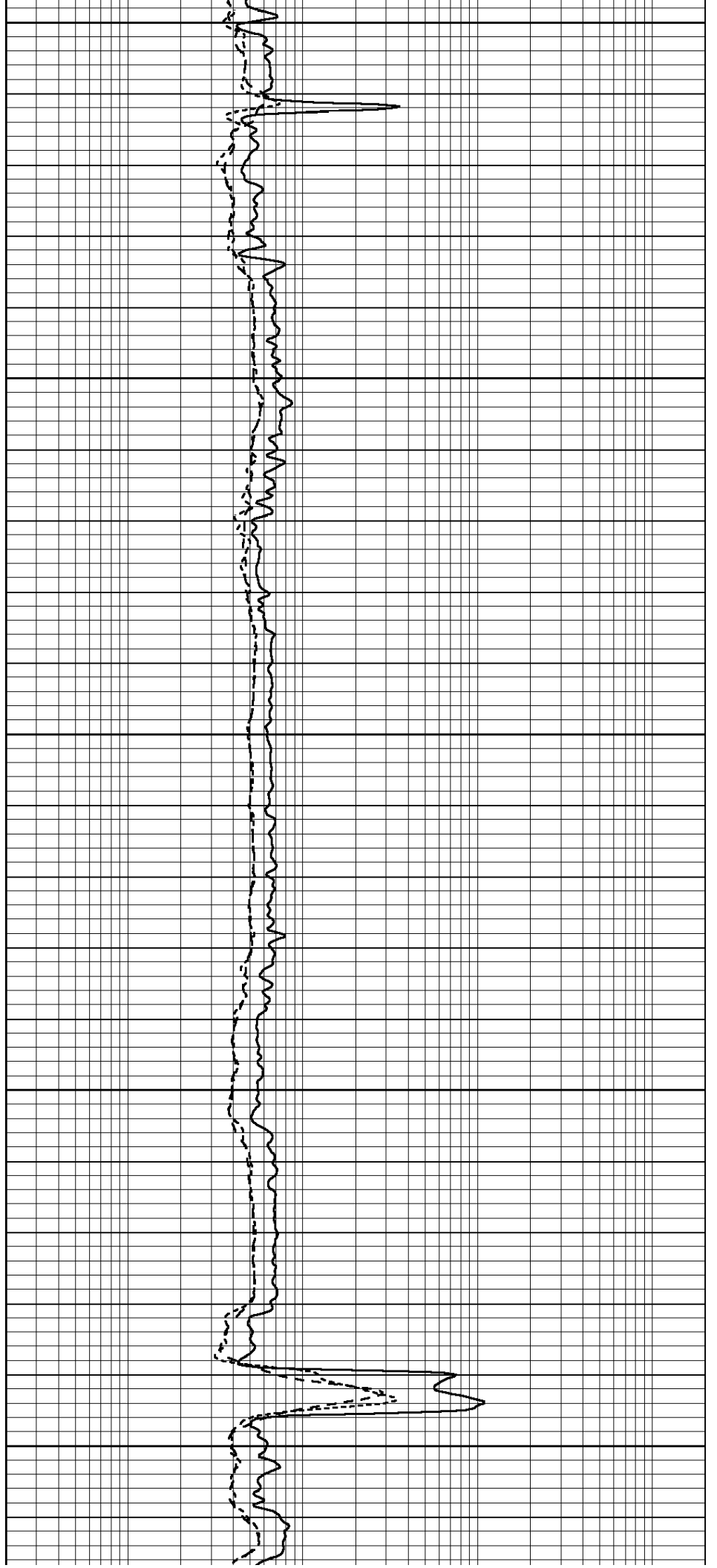
3700

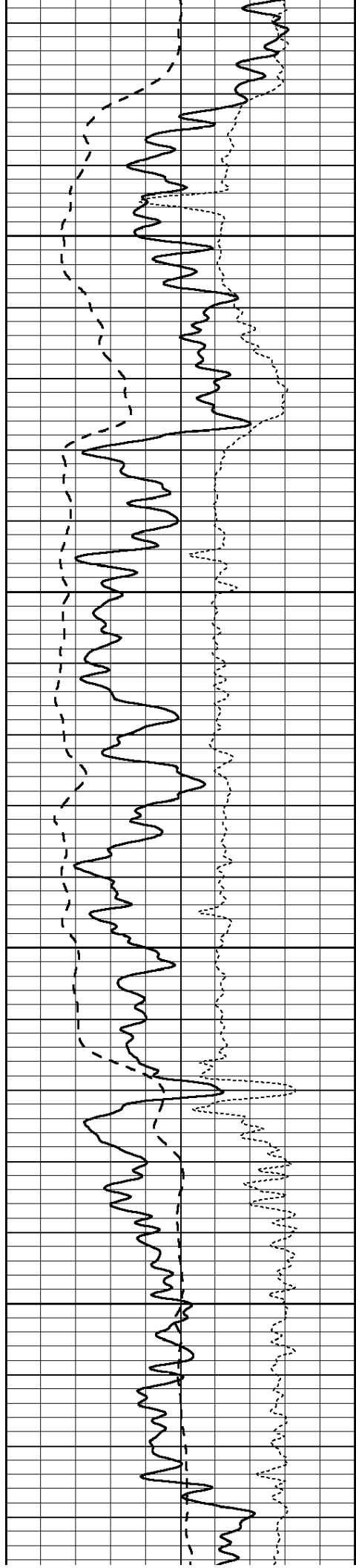
3750

3800

3850

3900



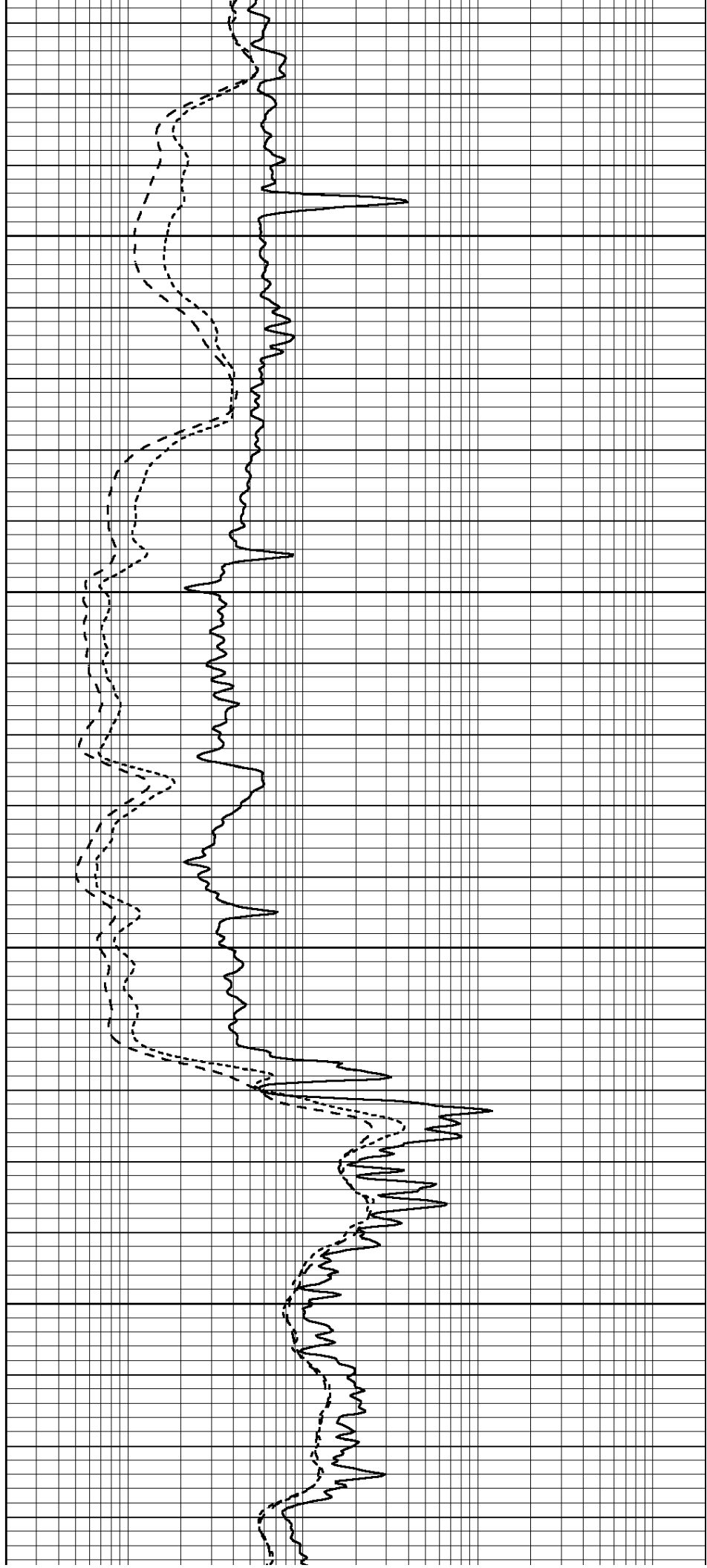


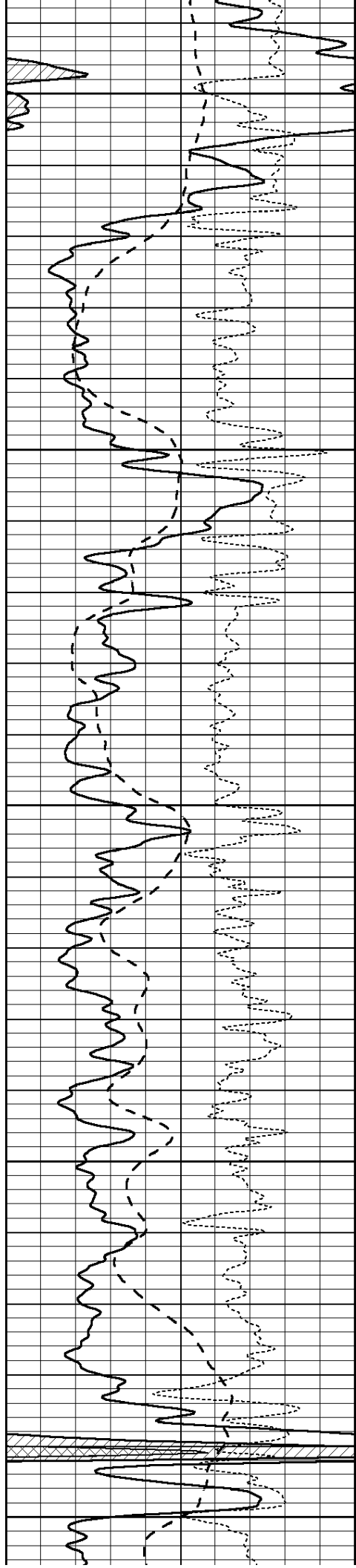
3950

4000

4050

4100





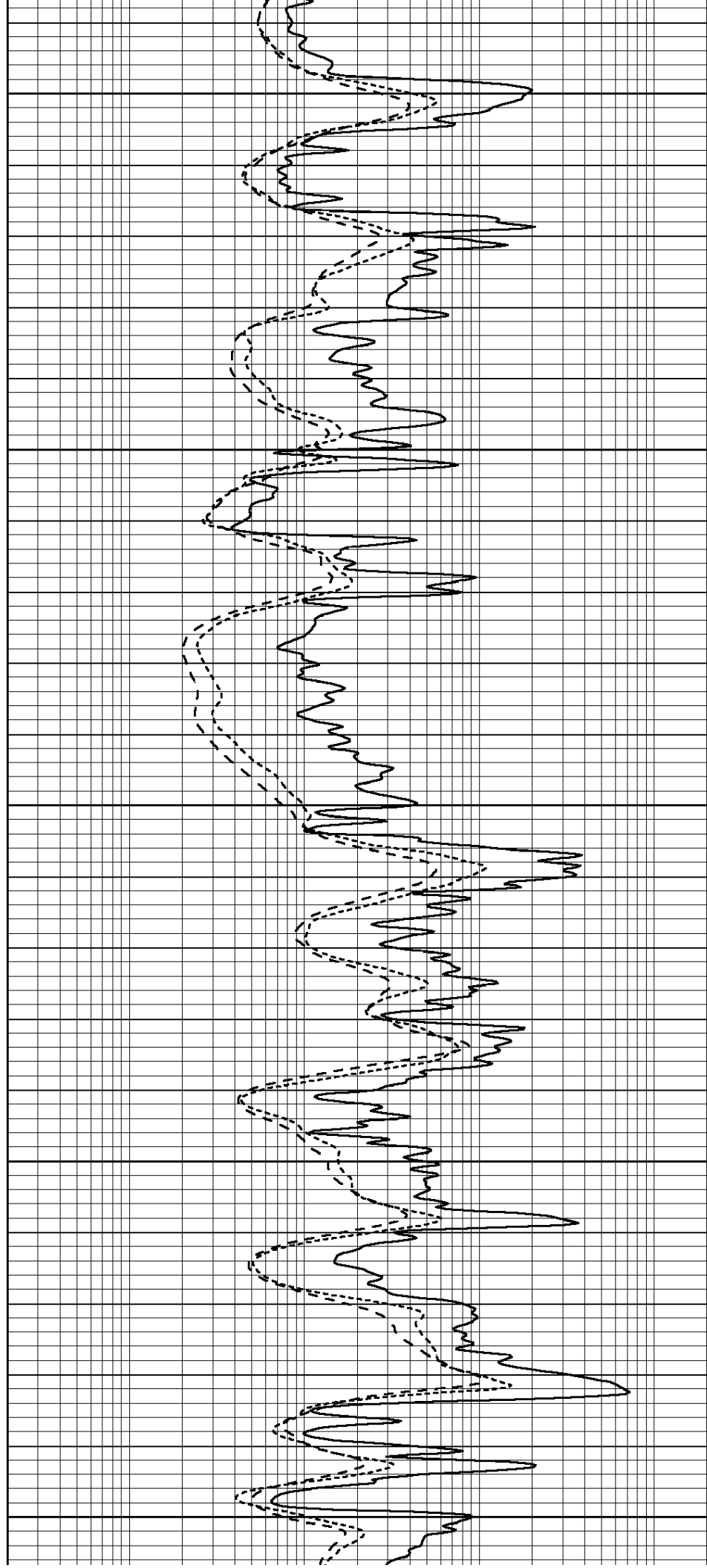
4150

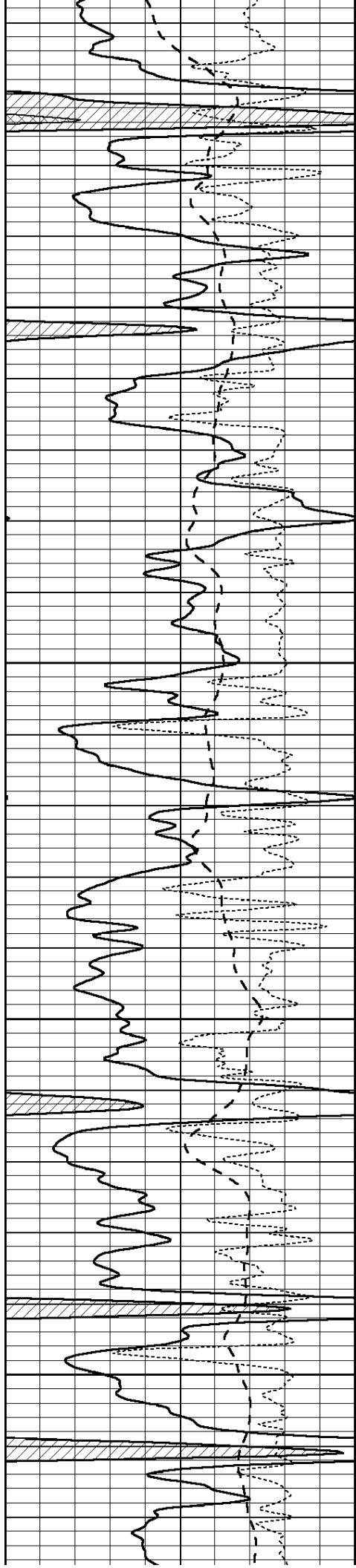
4200

4250

4300

4350



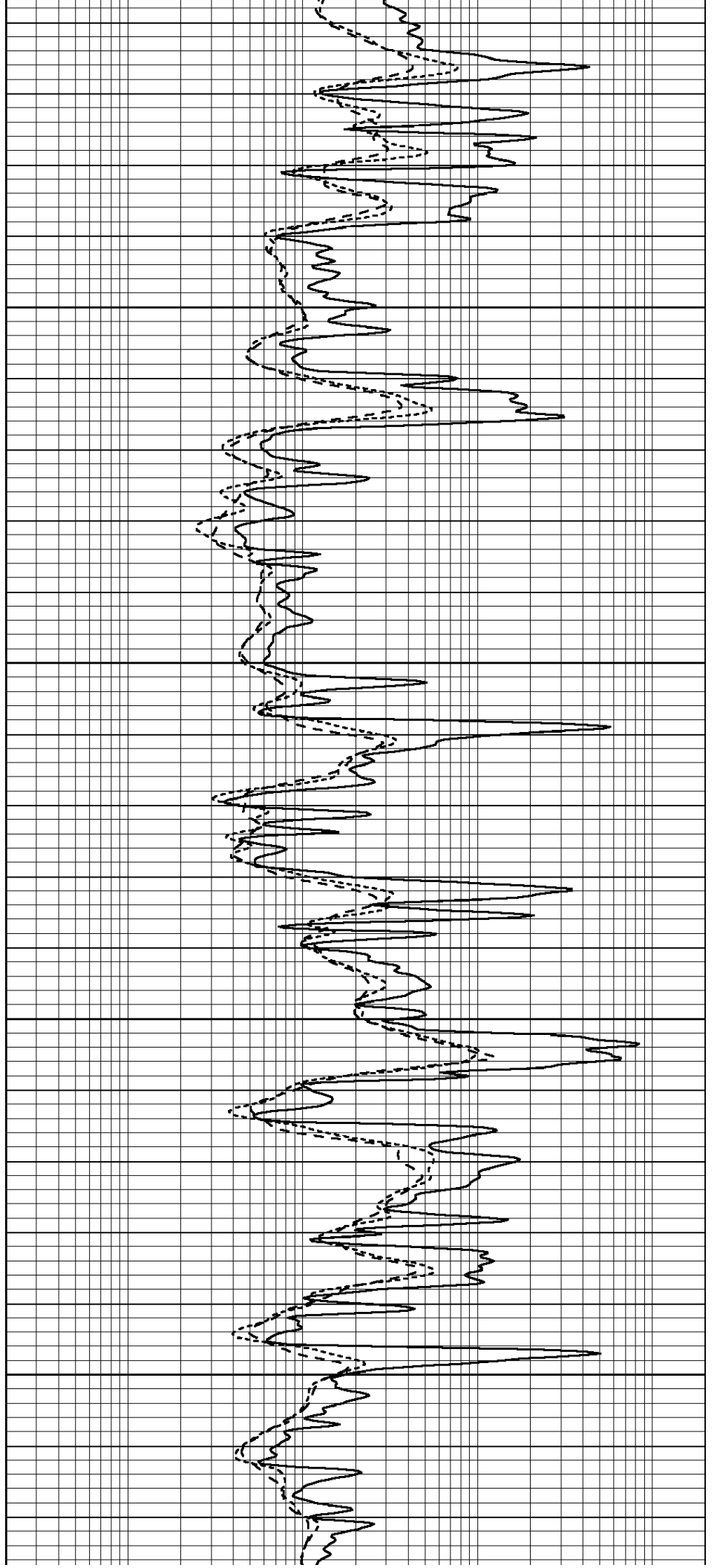


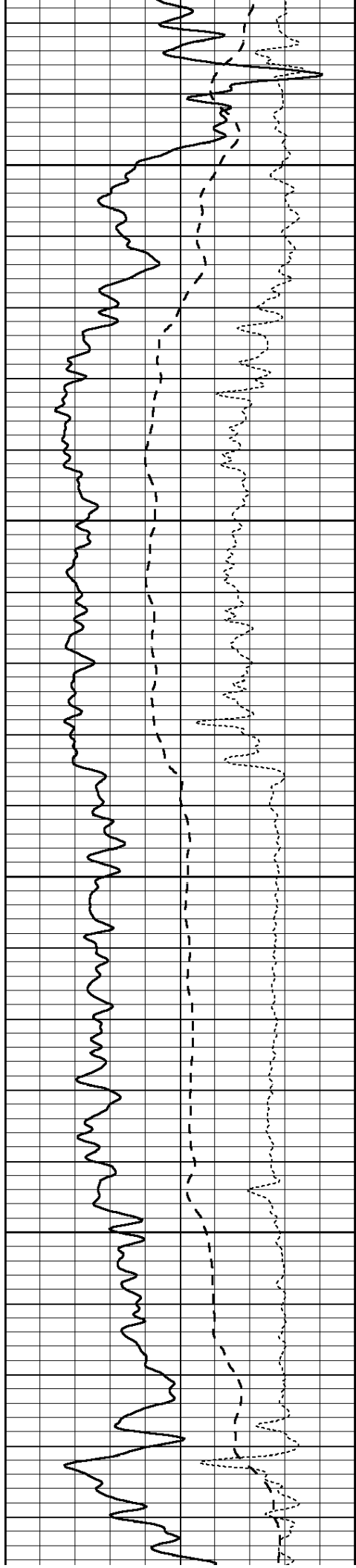
4400

4450

4500

4550



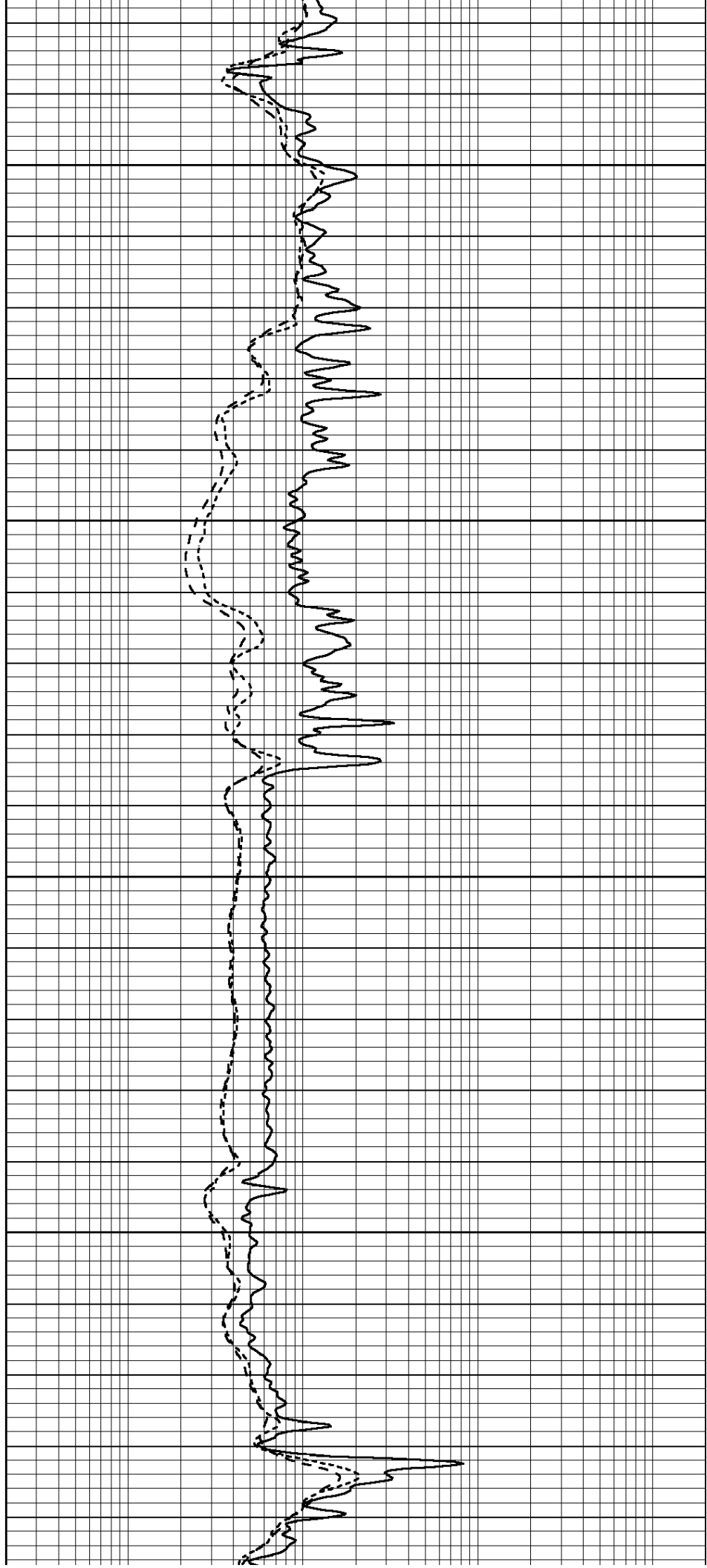


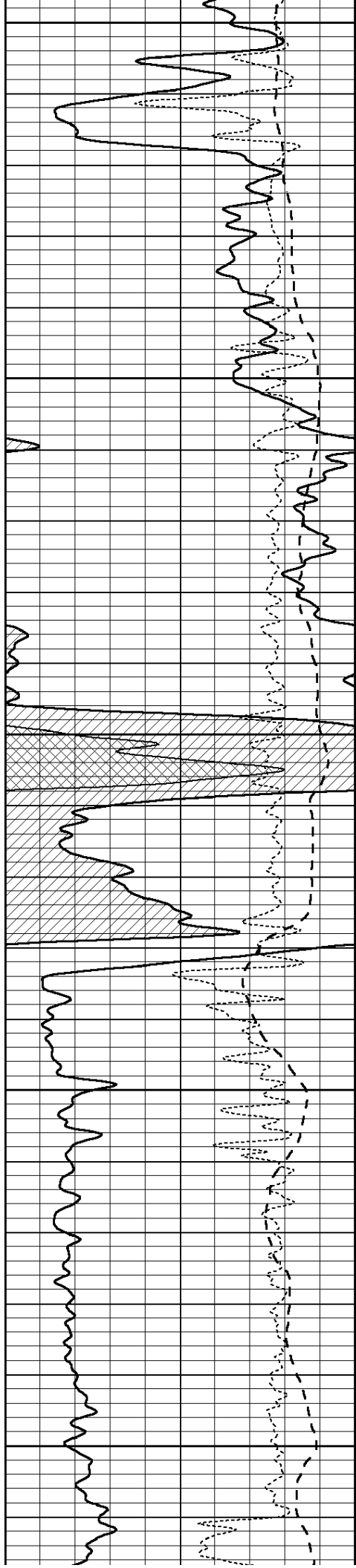
4600

4650

4700

4750





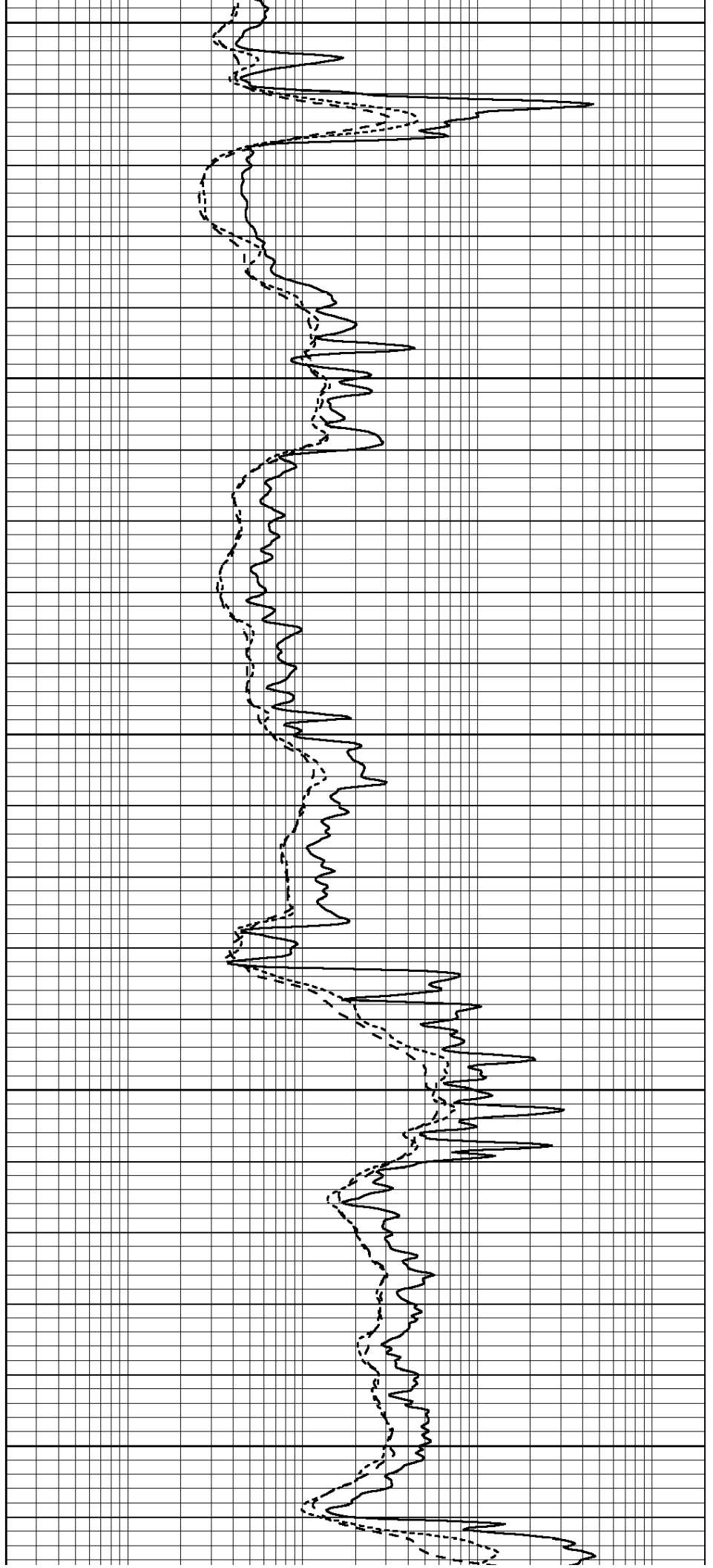
4800

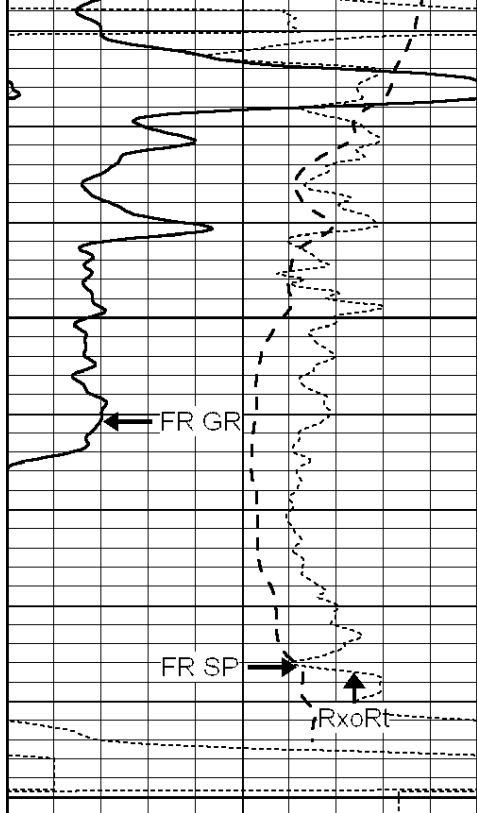
4850

4900

4950

5000

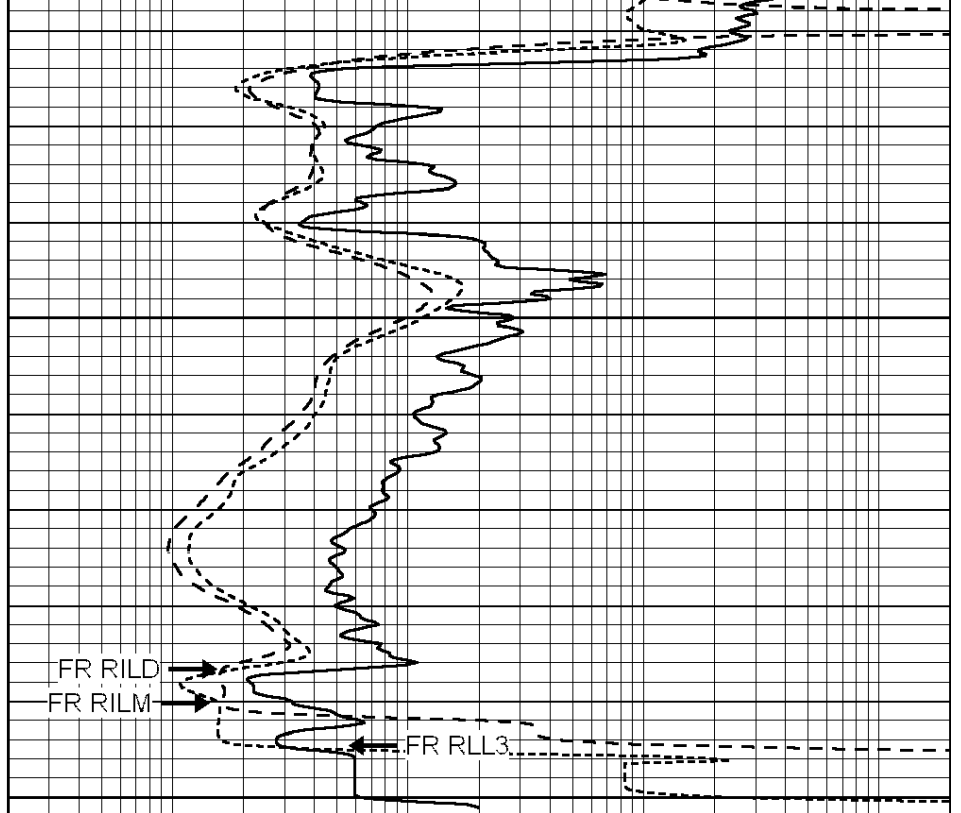




5050

LTD 5097
5100

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



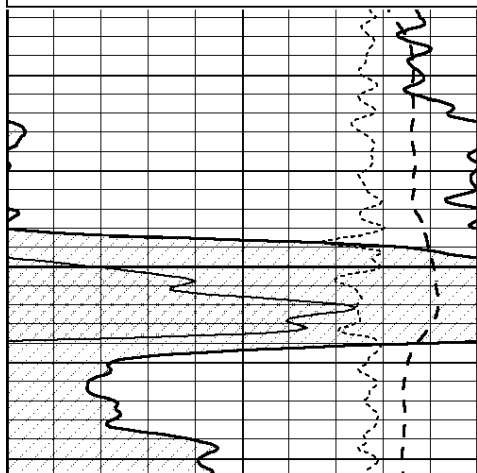
SUPERIOR
Hays,
Kansas

REPEAT SECTION

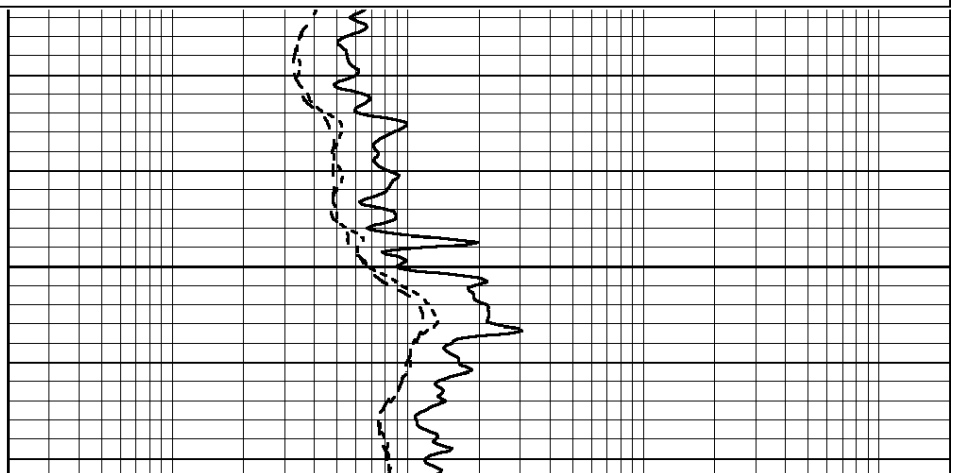
Database File: 009212pe.db
 Dataset Pathname: pass2.1
 Presentation Format: _dil
 Dataset Creation: Sat Jun 02 19:21:27 2012 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

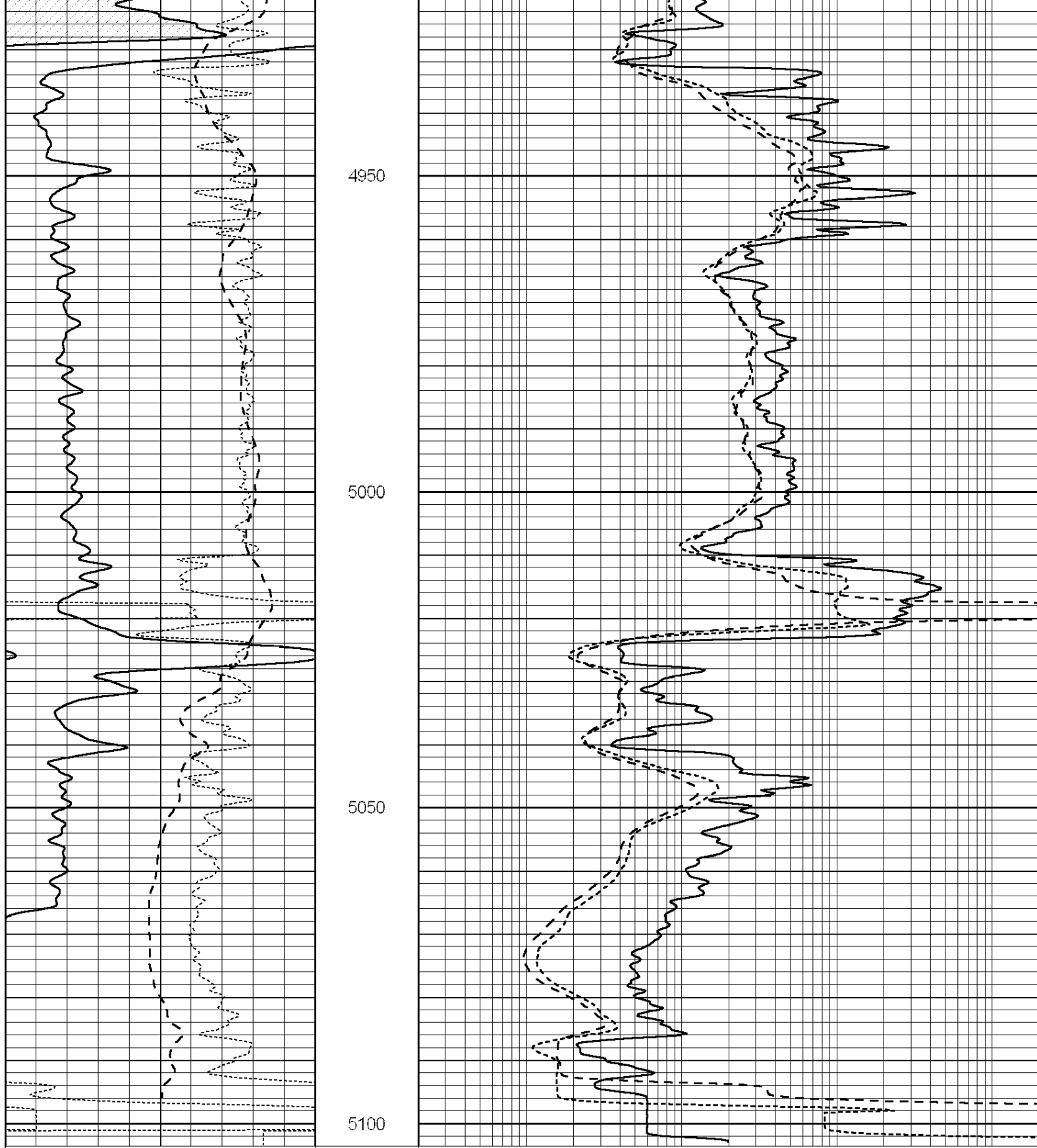
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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



4900





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

Calibration Report

Database File: 009212pe.db
 Dataset Pathname: pass2.1
 Dataset Creation: Sat Jun 02 10:21:27 2012 by Calc Open Office 000620

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Fri Aug 01 06:33:19 2008
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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		

Litho Density Calibration Report

Serial: 001 Model: PRB
Performed Thu Sep 17 09:57:21 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2056.0	9796.8	3673.1	10821.3	cps
Window 2	1920.0	8541.1	3303.5	9307.2	cps
Window 3	1563.1	4735.7	2212.8	5017.5	cps
Window 4	466.0	466.1	465.6	471.5	cps
Long Space	0.0	6621.1	1383.5	7387.2	cps
Short Space	2.5	2361.7	1523.2	2534.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio	: 0.541
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept	: -18.9

Caliper

	Readings	Reference	
Low Ref	3.1	8.4	
High Ref	4.3	14.3	
Gain: 4.6			Offset: -7.7

Compensated Neutron Calibration Report

Serial Number: 6I
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: #8
Tool Model: OPEN
Performed: Mon Jun 13 16:56:43 2011

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 175.0 cps

Sensitivity: 0.8371 GAPI/cps