

DUAL INDUCTION LOG

Company L.D. DRILLING, INC.

Well #1-28 SPEER

Field STORMONT

County LANE State KANSAS

Location: API #: 15-101-22653-0000

1794' FSL & 477' FEL

NW - SE - NE - SE

SEC 28 TWP 19S RGE 28W

GROUND LEVEL Elevation 2781

Log Measured From KELLY BUSHING 5' A.G.L.

Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL
MEL

Elevation

K.B. 2786

D.F. 2784

G.L. 2781

Date 7/19/21

Run Number ONE

Depth Driller 4785

Depth Logger 4787

Bottom Logged Interval 4785

Top Log Interval 00

Casing Driller 8 5/8" @ 236'

Casing Logger 236

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD

Density / Viscosity 9.4/49

pH / Fluid Loss 10.0/8.0

Source of Sample FLOWLINE

Rm @ Meas. Temp .750 @ 99F

Rmf @ Meas. Temp .563 @ 99F

Rmc @ Meas. Temp .900 @ 99F

Source of Rmf / Rmc MEASUREMENT

Rm @ BHT .604 @ 123F

Time Circulation Stopped 2.5 HOURS

Time Logger on Bottom 10:15 A.M.

Maximum Recorded Temperature 123F

Equipment Number 922339

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By KIM SHOEMAKER

<<< 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.

15-101-22653-0000

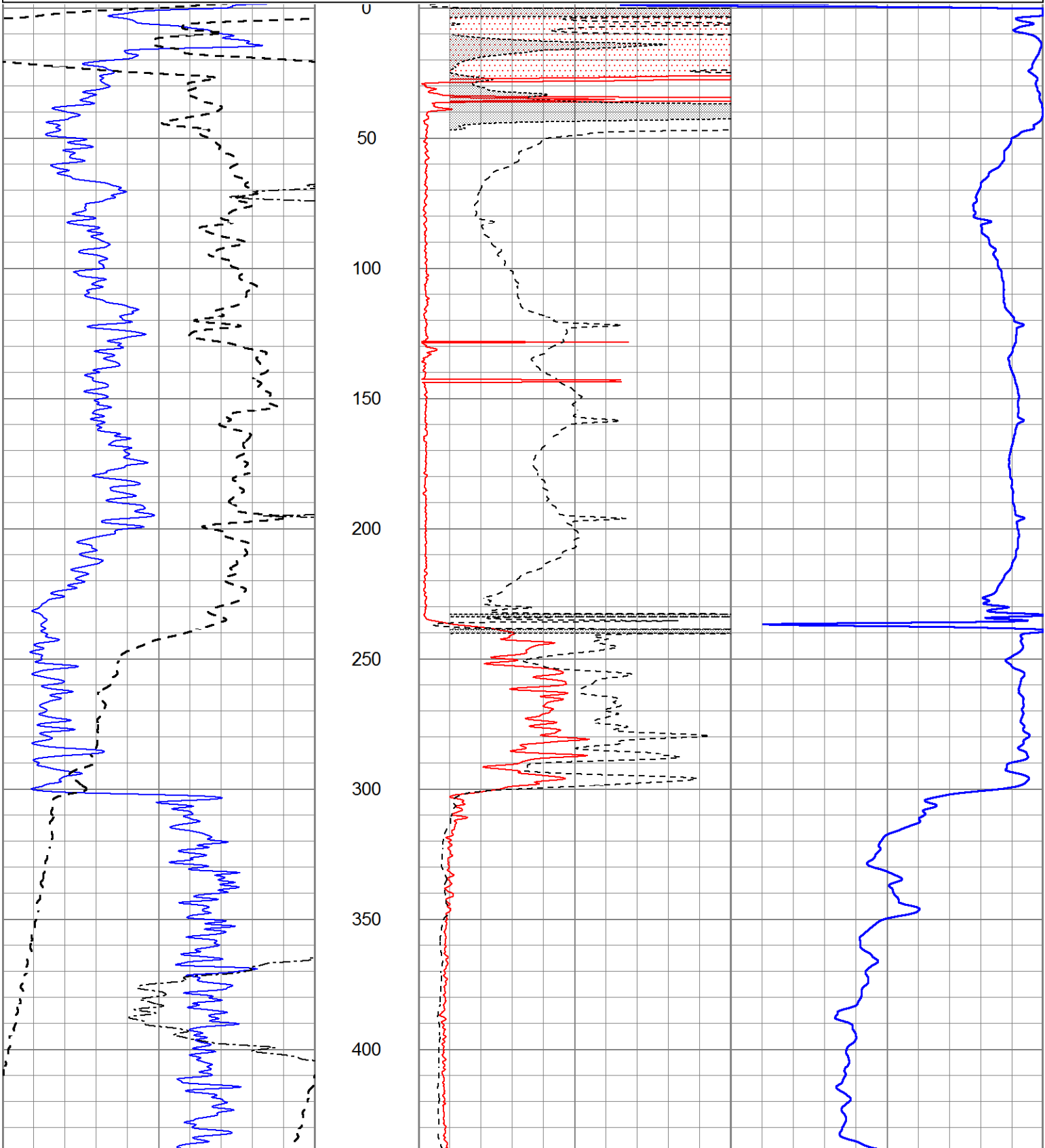
Comments

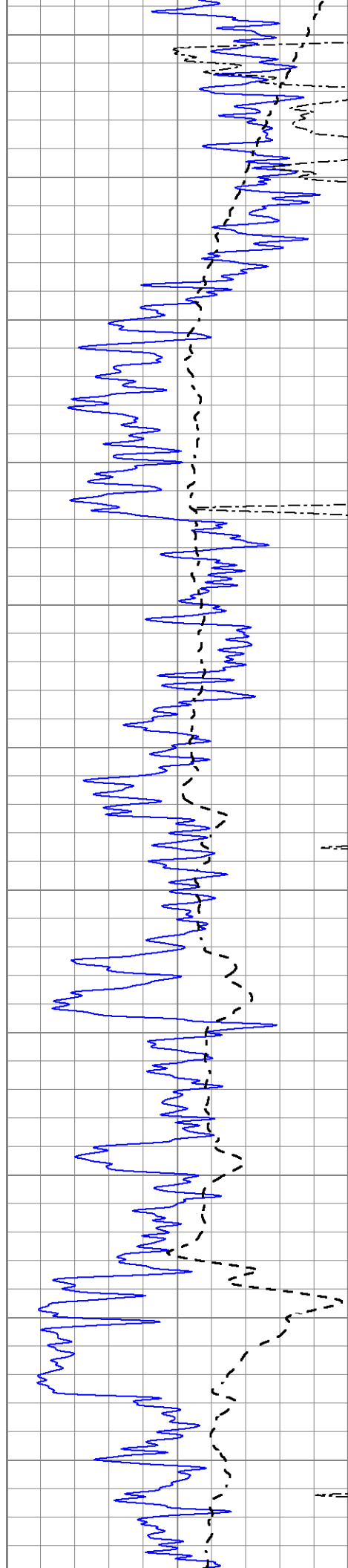
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
DIGHTON, KS, 6S. ON HWY 23 TO "RD. 90", 3E. TO "NEWTON RD.", 1 1/2 S., W. INTO



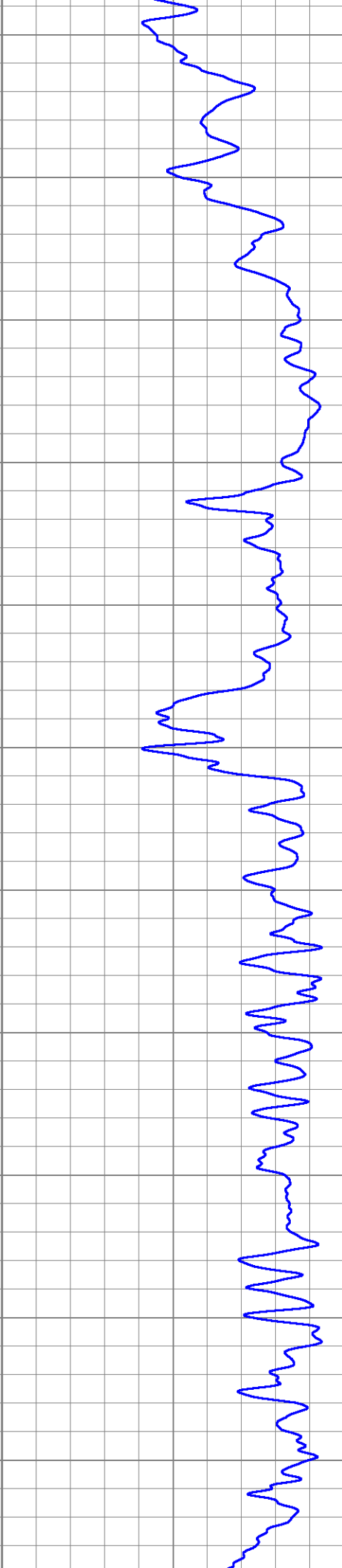
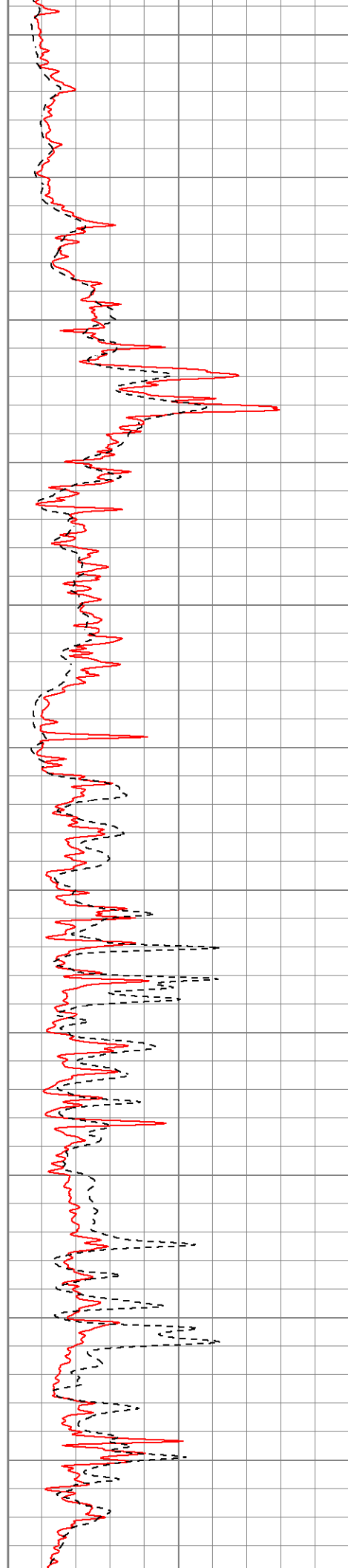
MAIN SECTION

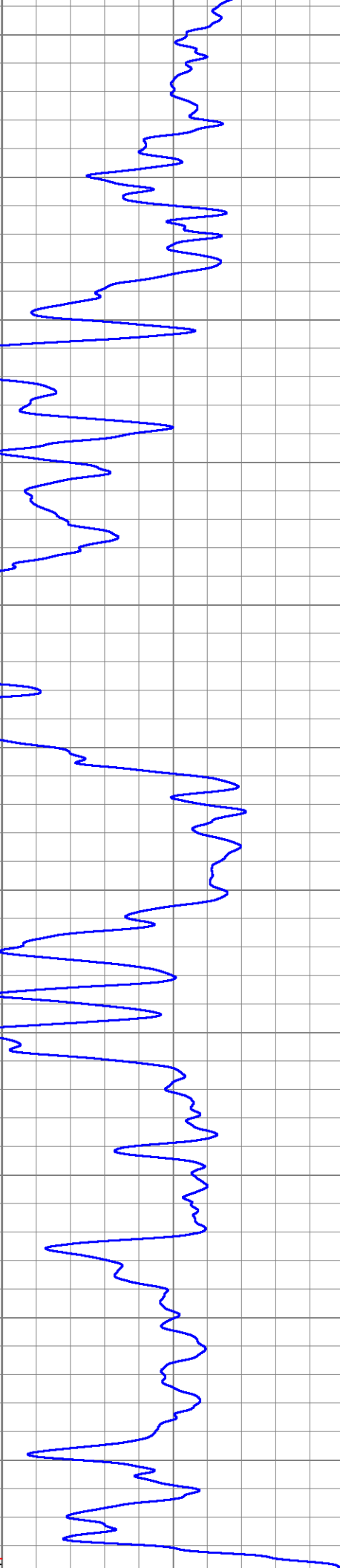
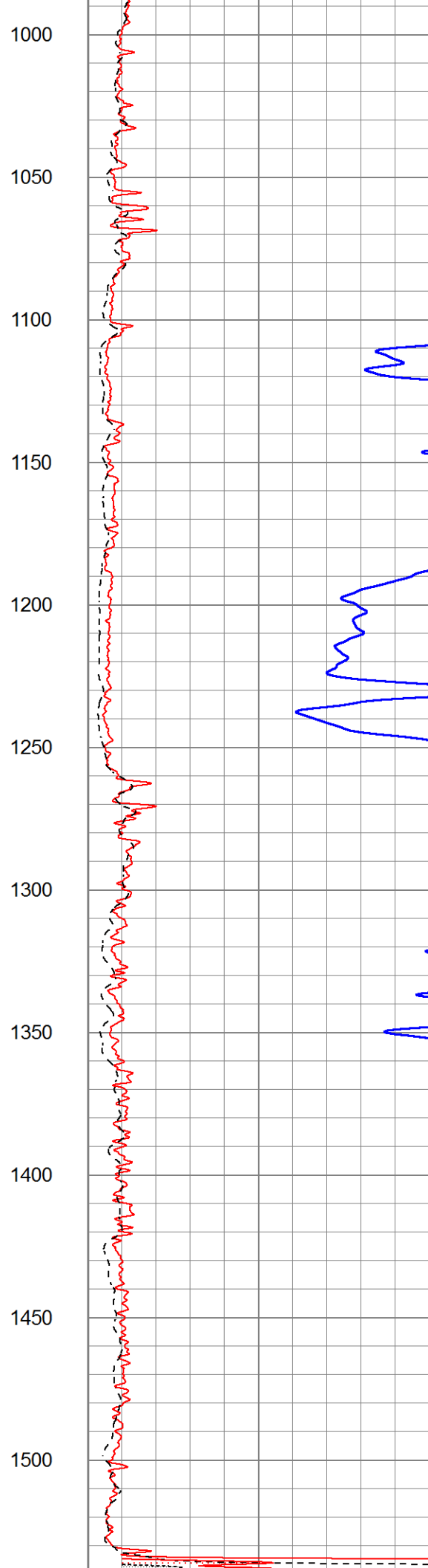
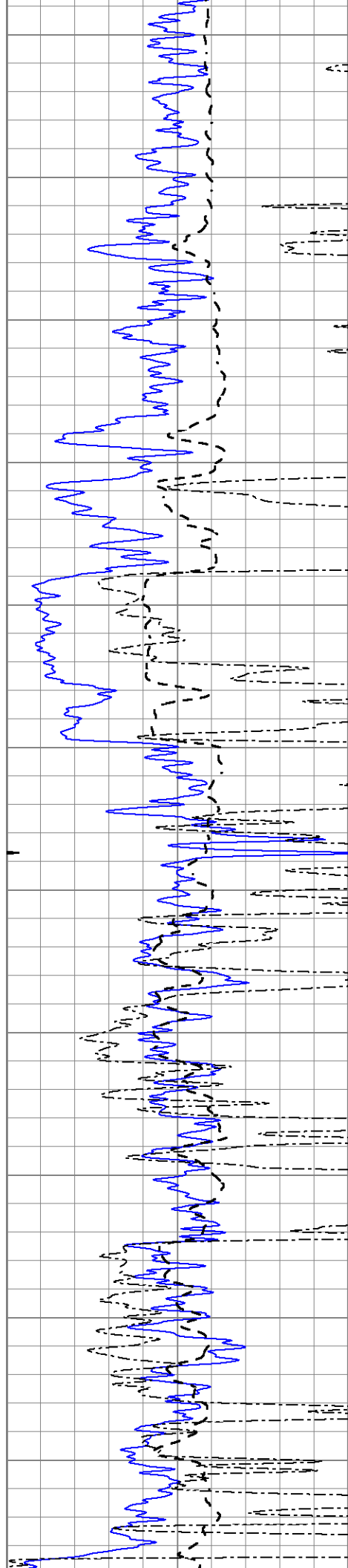
0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

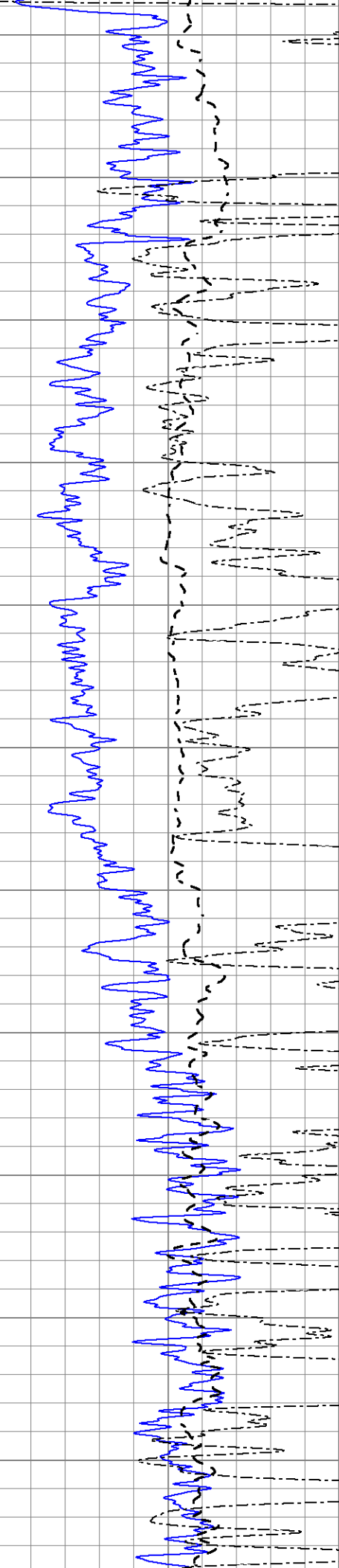




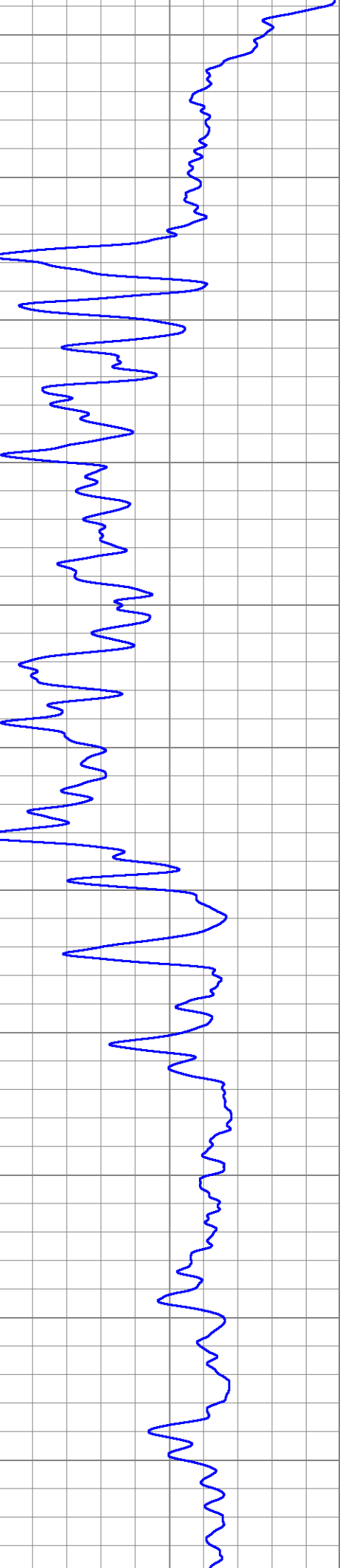
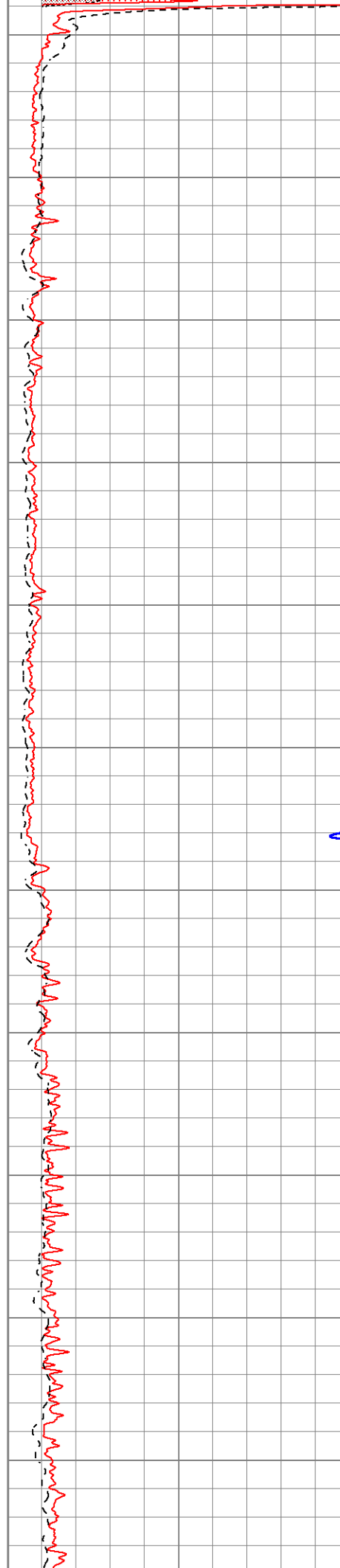
450
500
550
600
650
700
750
800
850
900
950

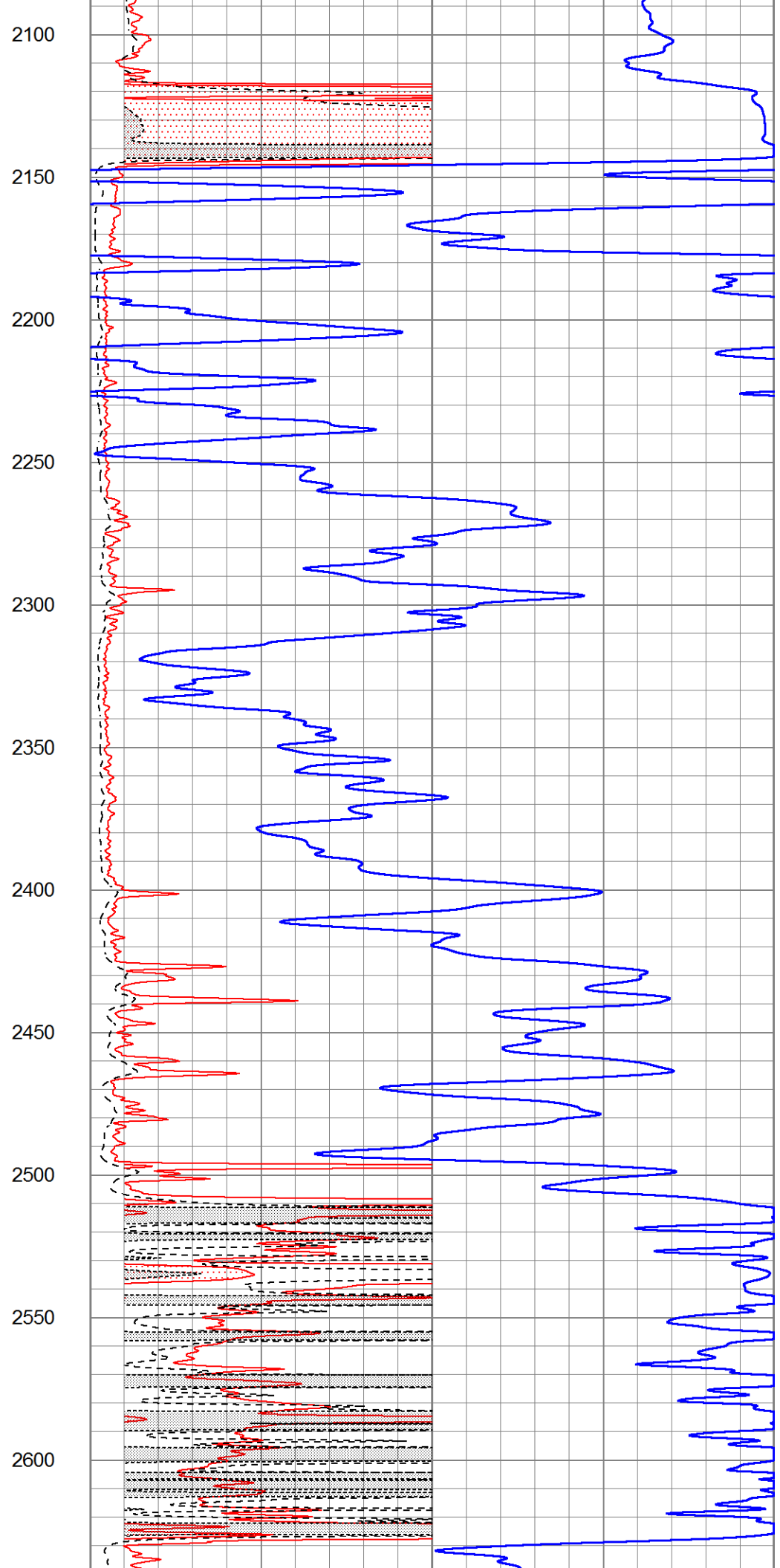
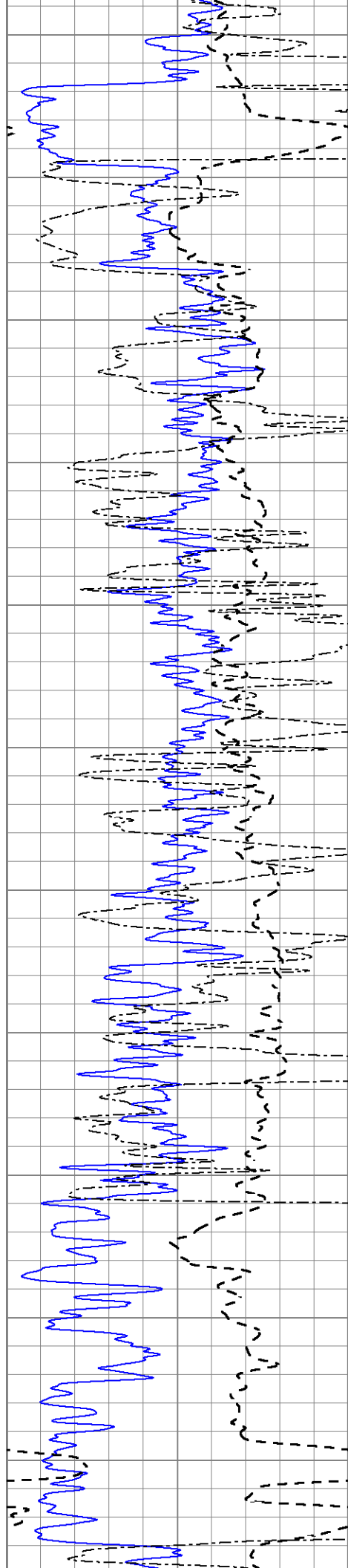


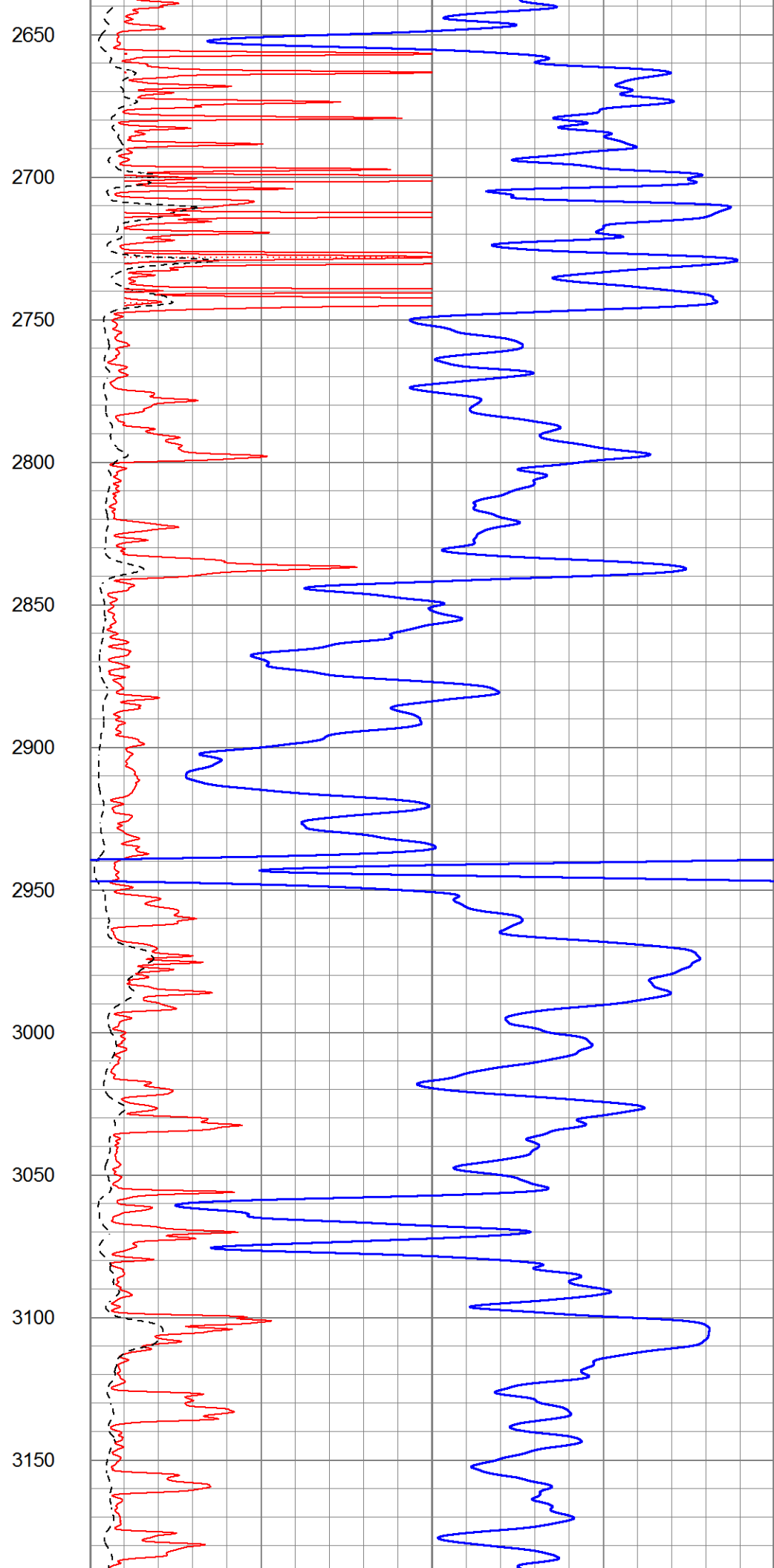
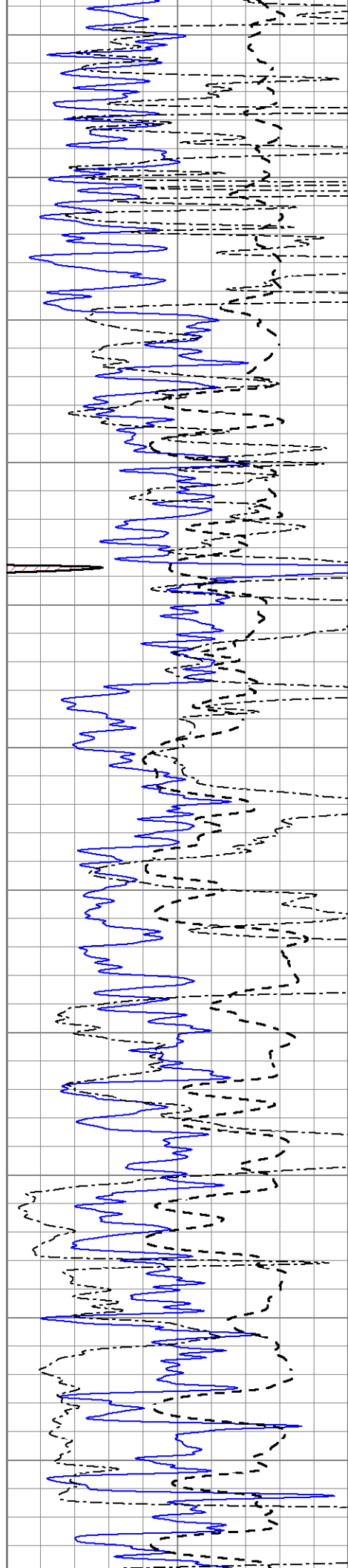


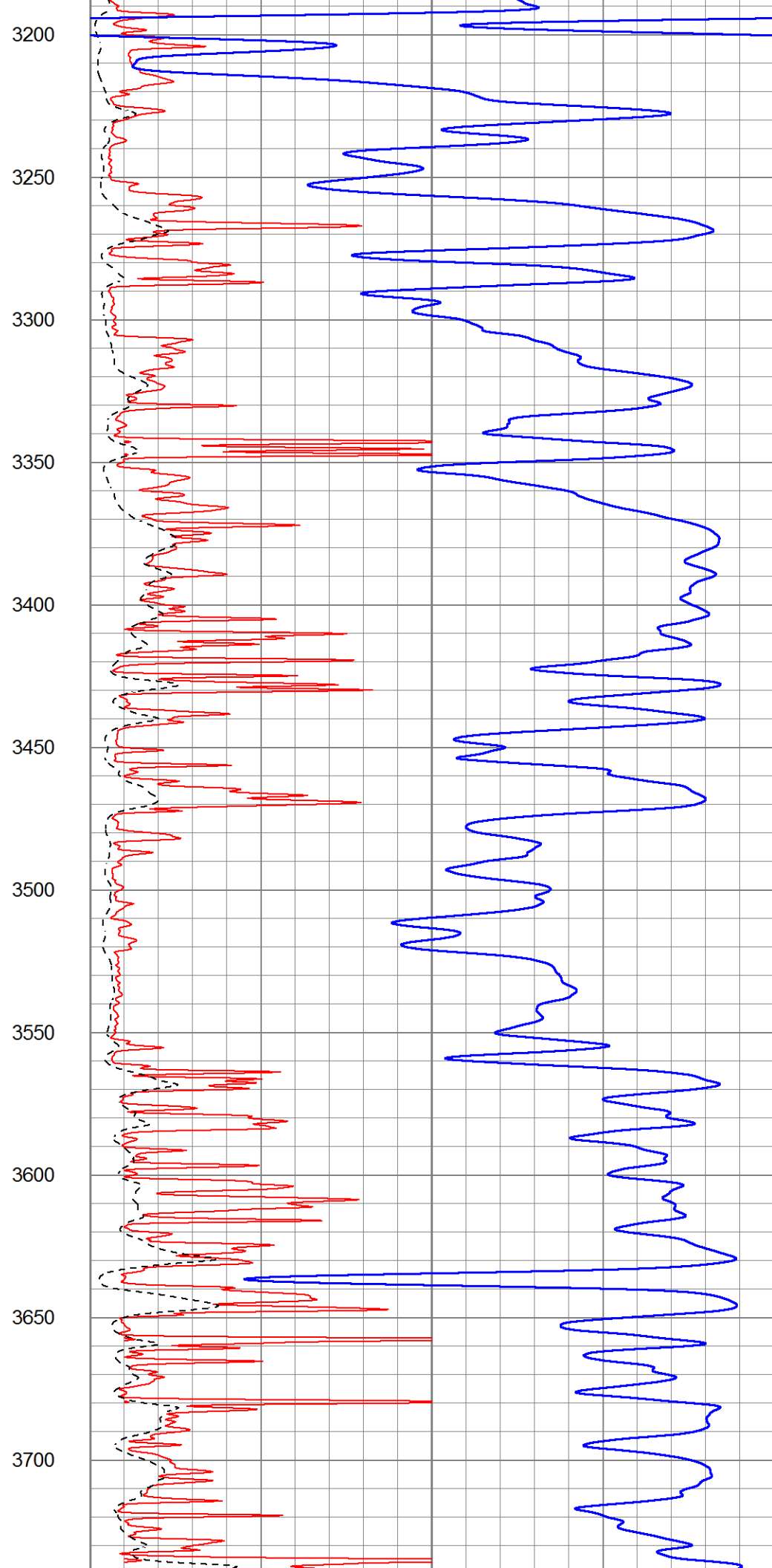
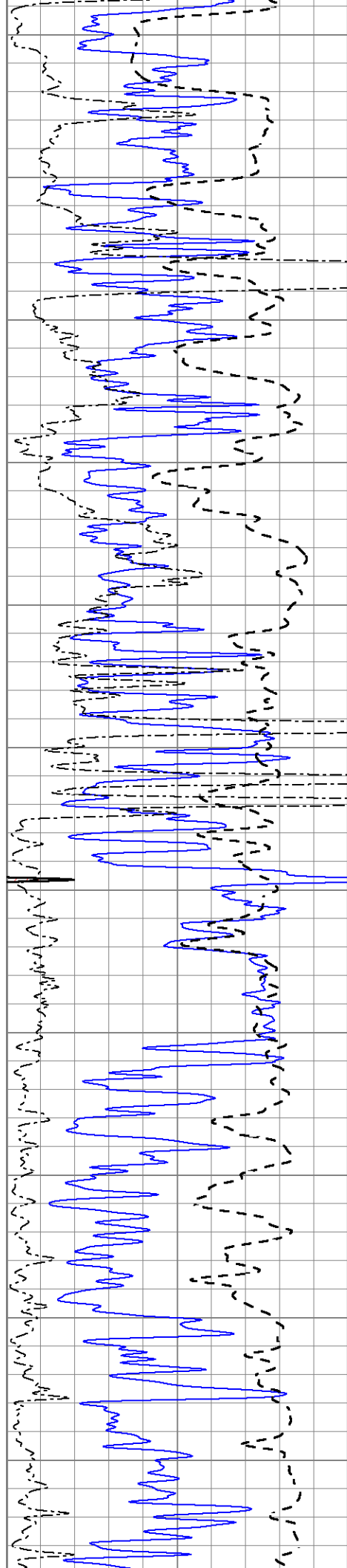


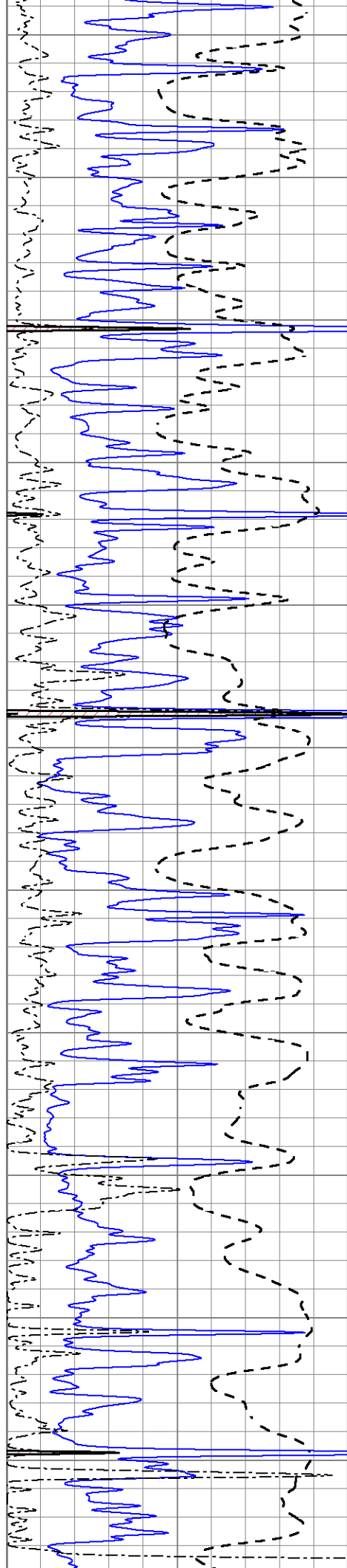
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050











3750

3800

3850

3900

3950

4000

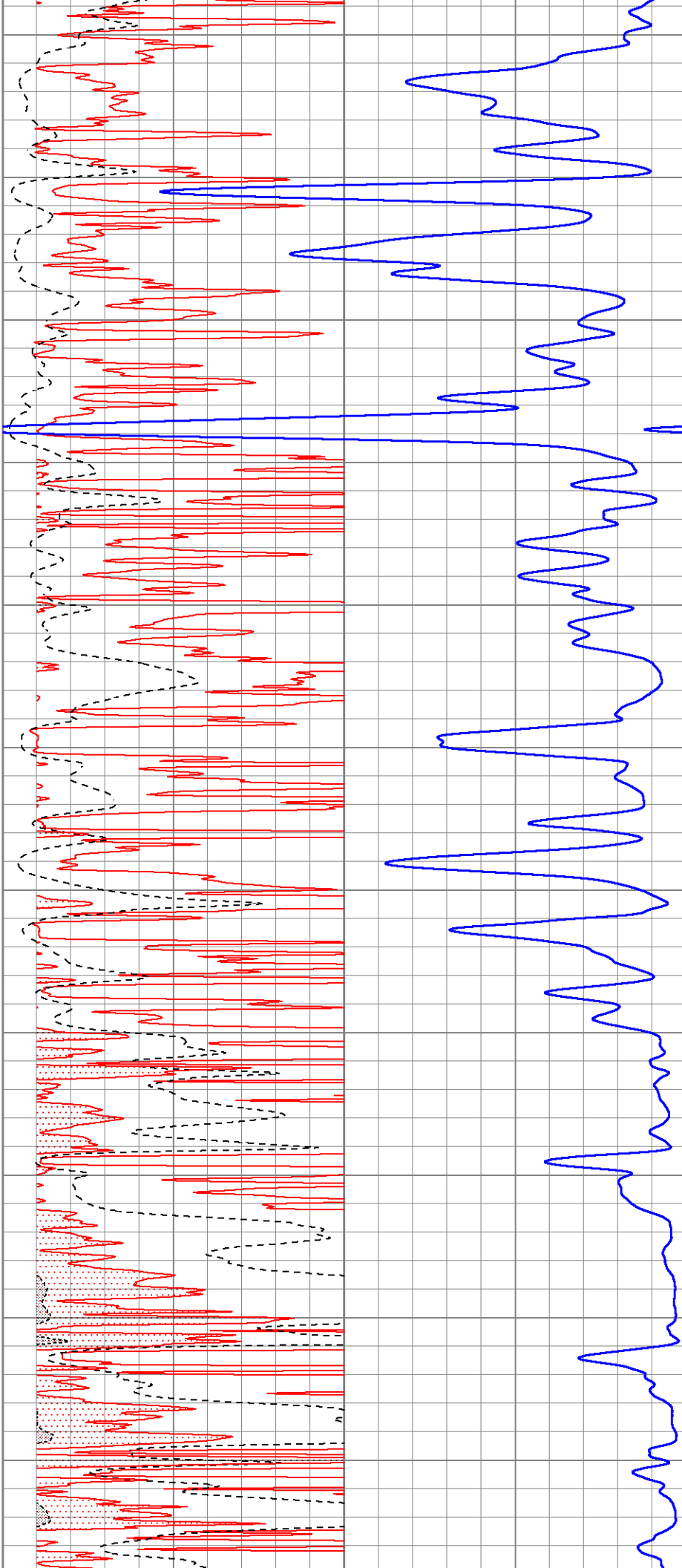
4050

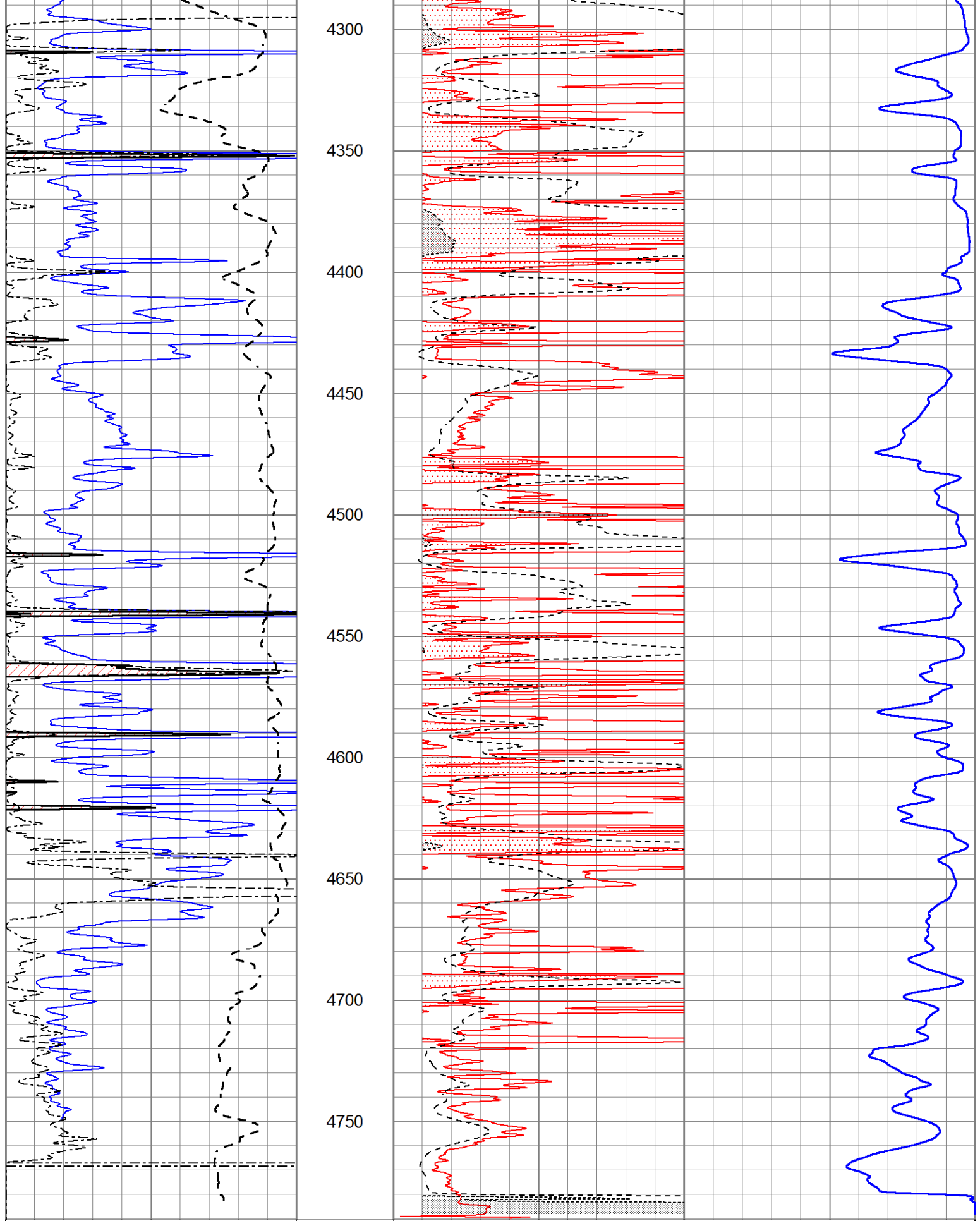
4100

4150

4200

4250





0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500

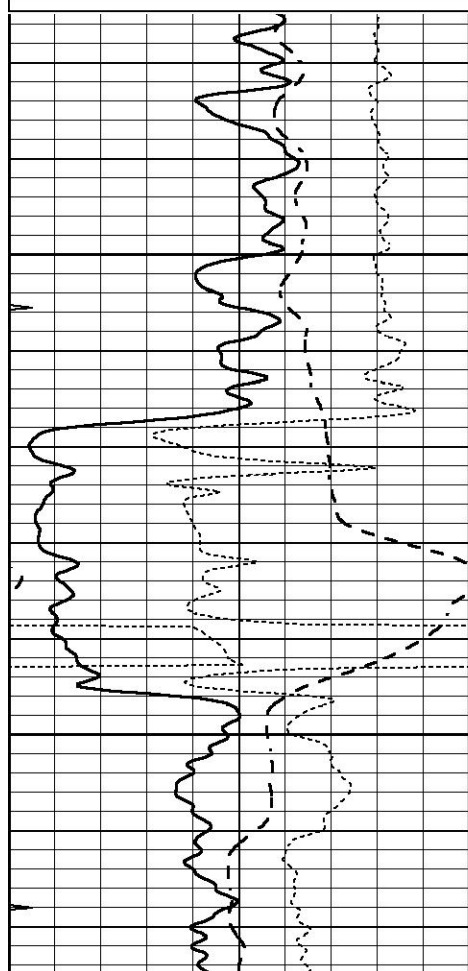


ANHYDRITE

Database File 5588ddn.db
 Dataset Pathname pass3.5A
 Presentation Format _dil
 Dataset Creation Mon Jul 19 11:52:09 2021
 Charted by Depth in Feet scaled 1:240

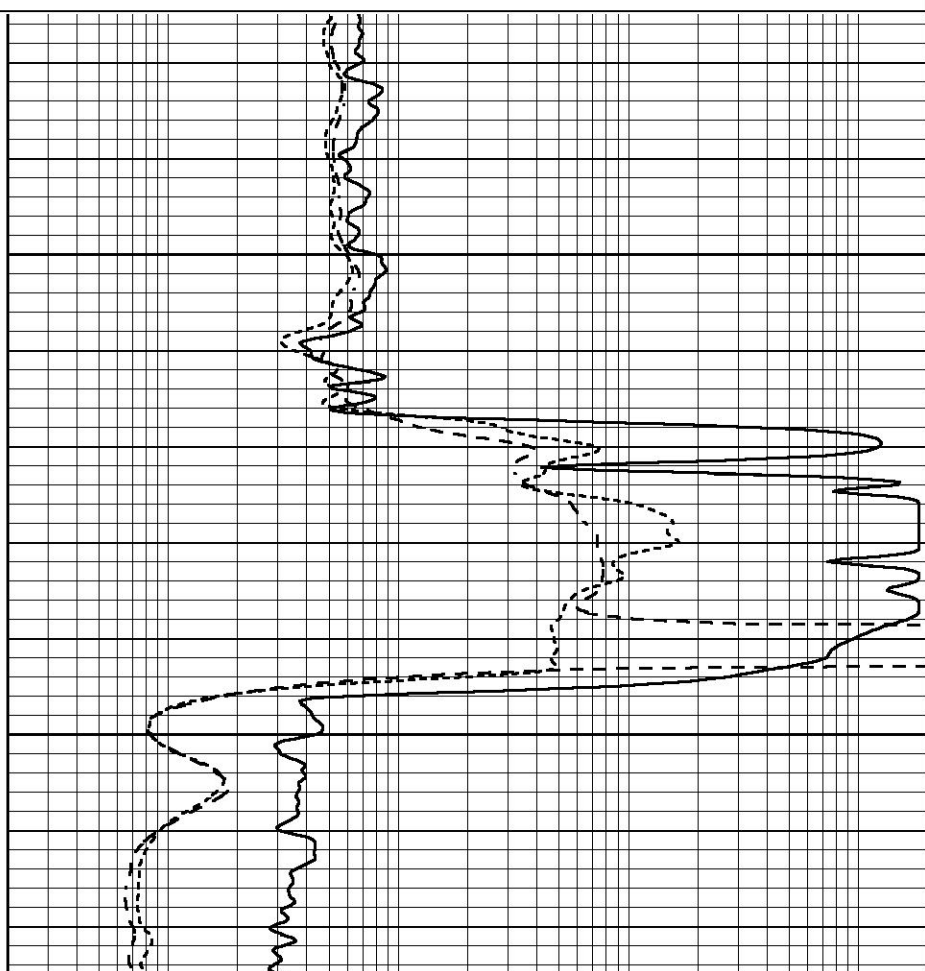
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



2100

2150



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

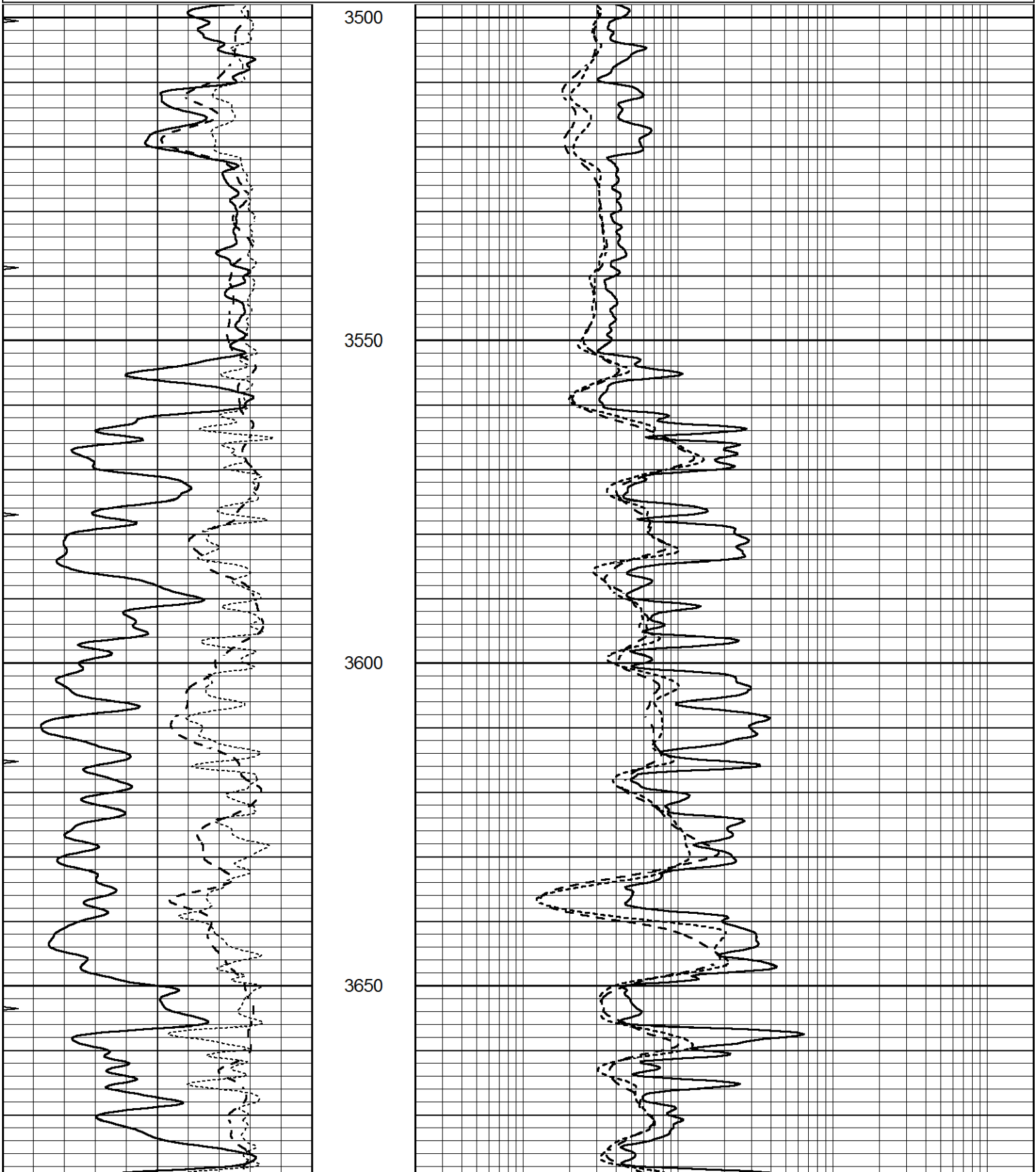
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

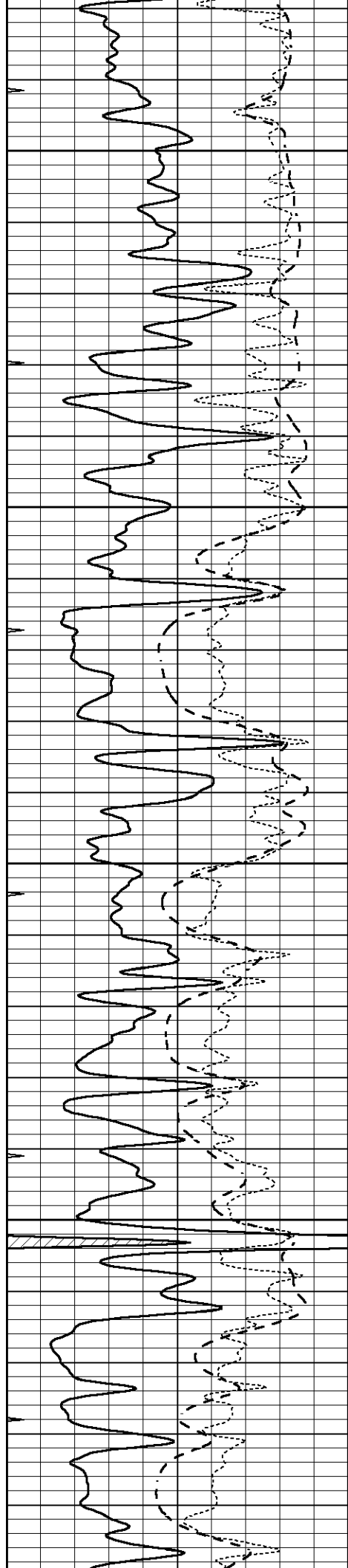


MAIN SECTION

Database File	5588ddn.db
Dataset Pathname	pass3.5M
Presentation Format	_dil
Dataset Creation	Mon Jul 19 11:51:44 2021
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



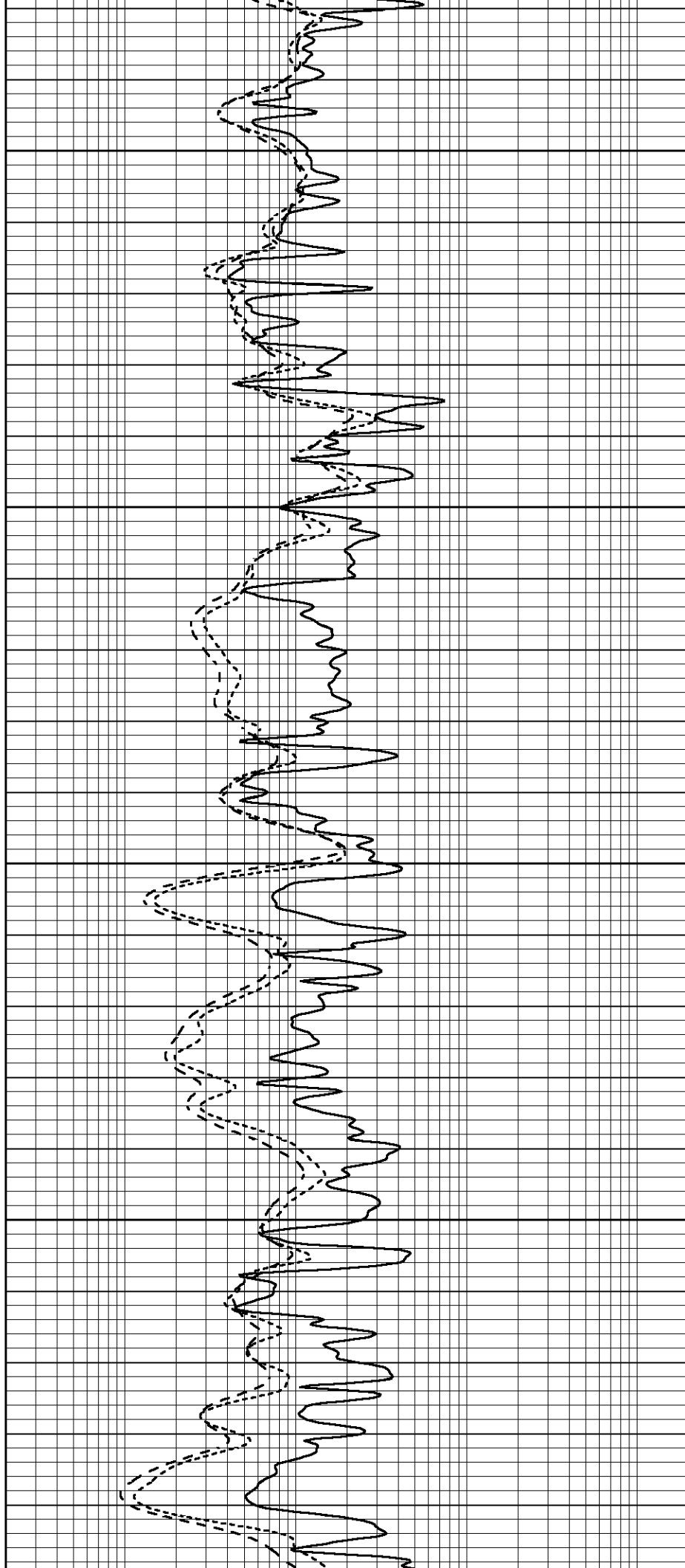


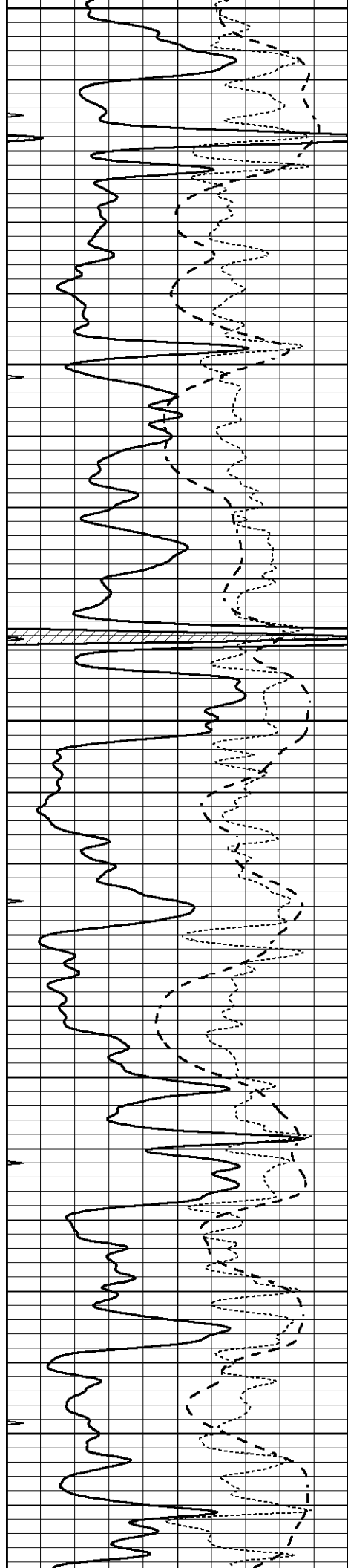
3700

3750

3800

3850





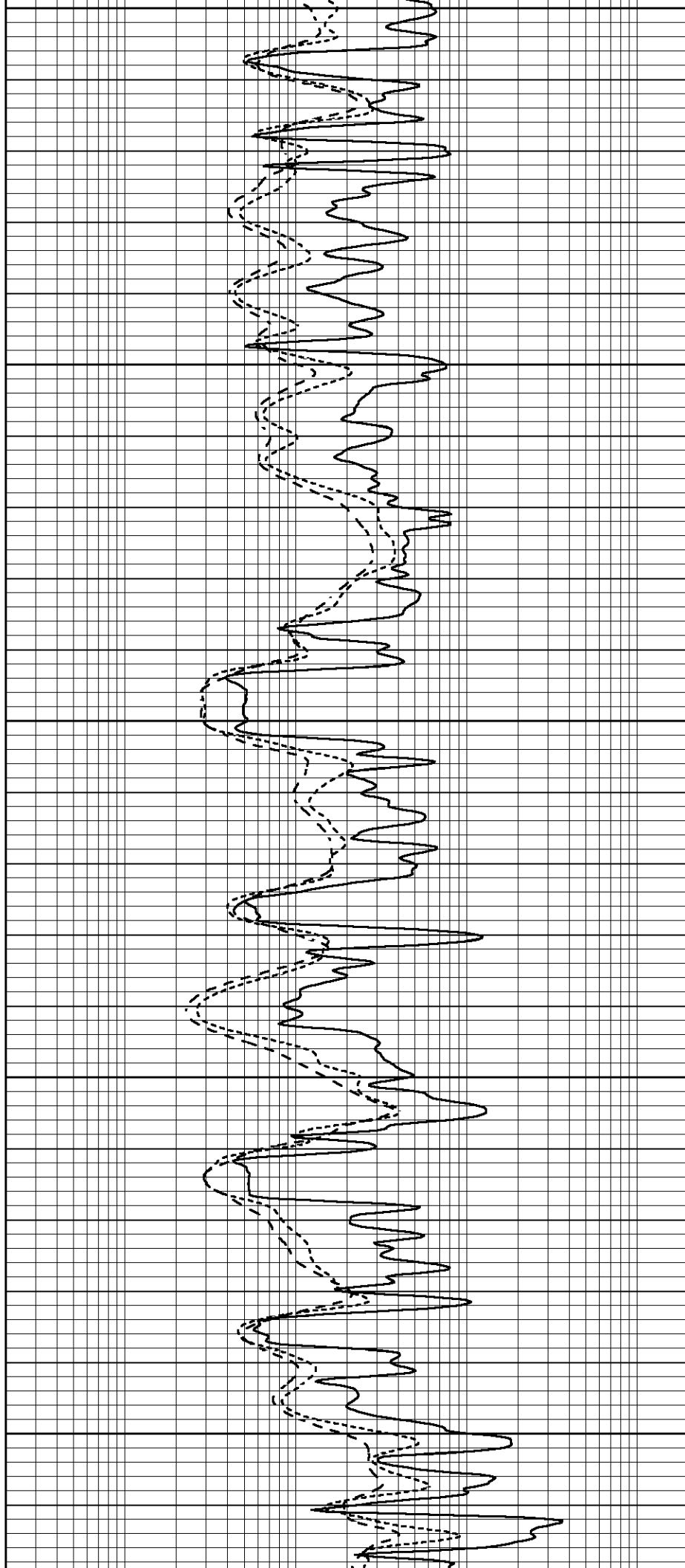
3900

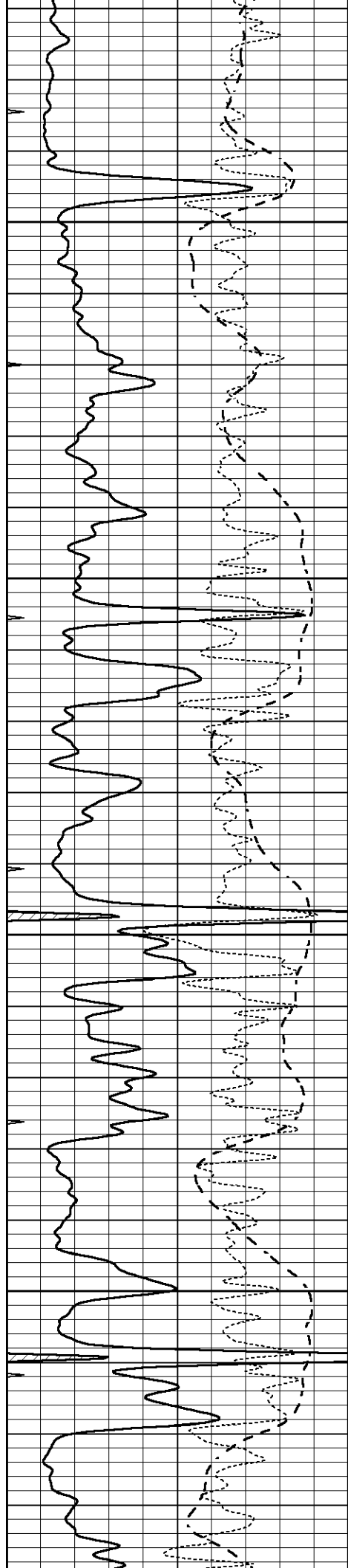
3950

4000

4050

4100



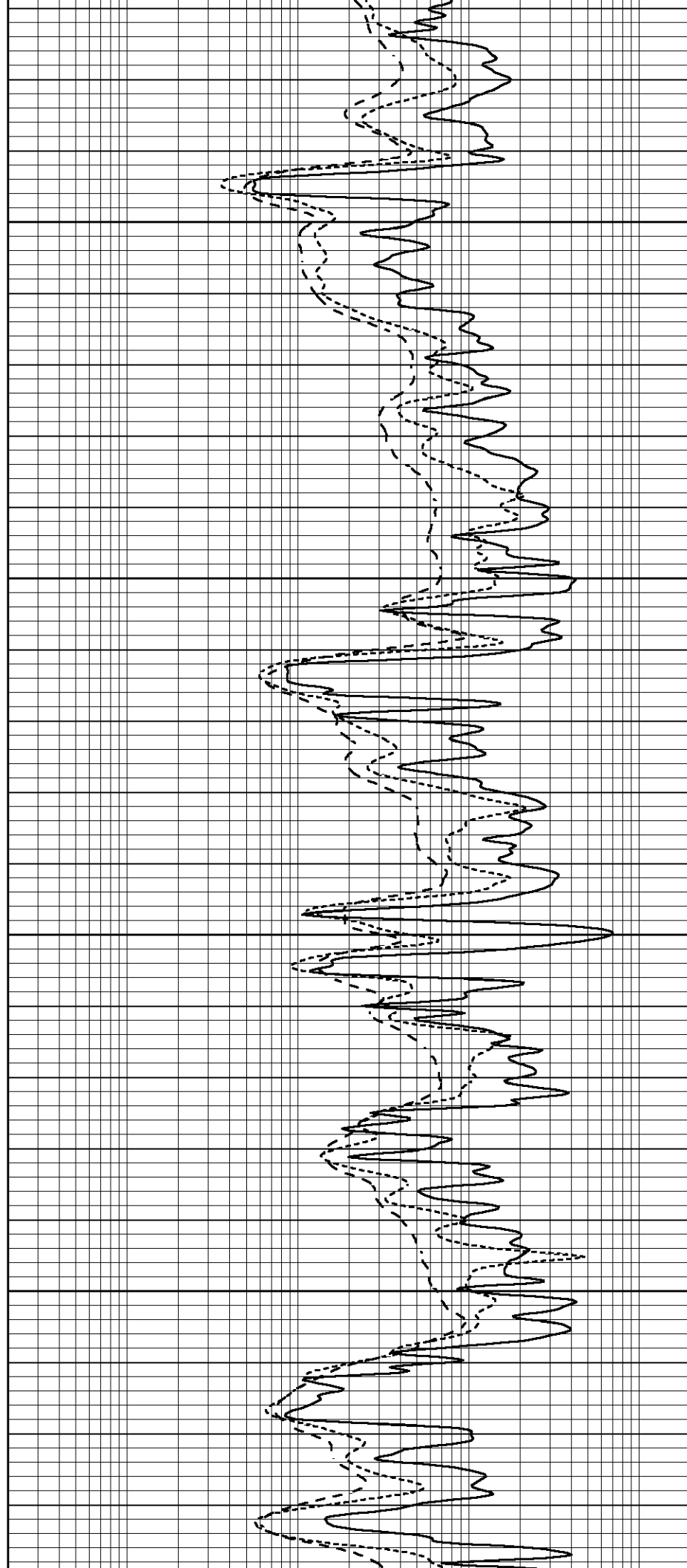


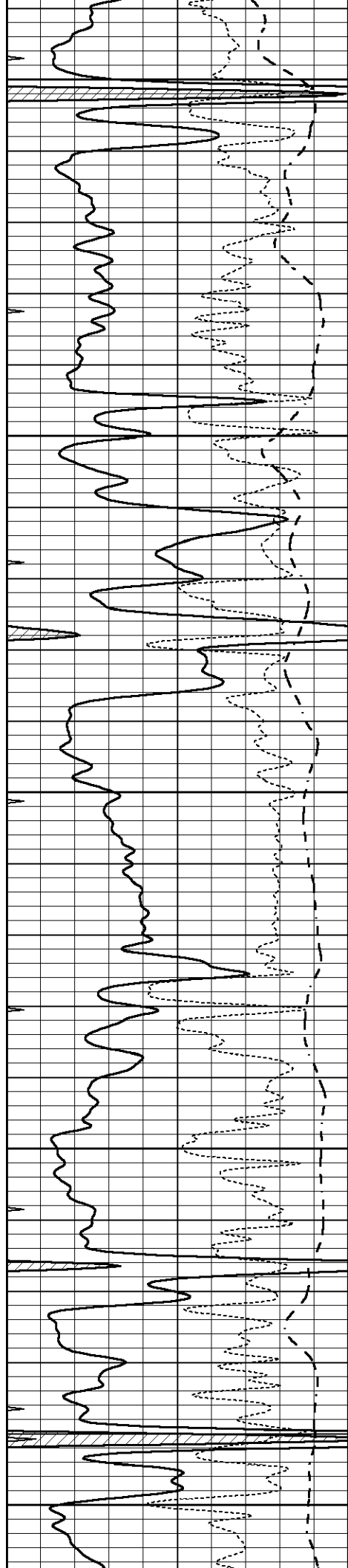
4150

4200

4250

4300





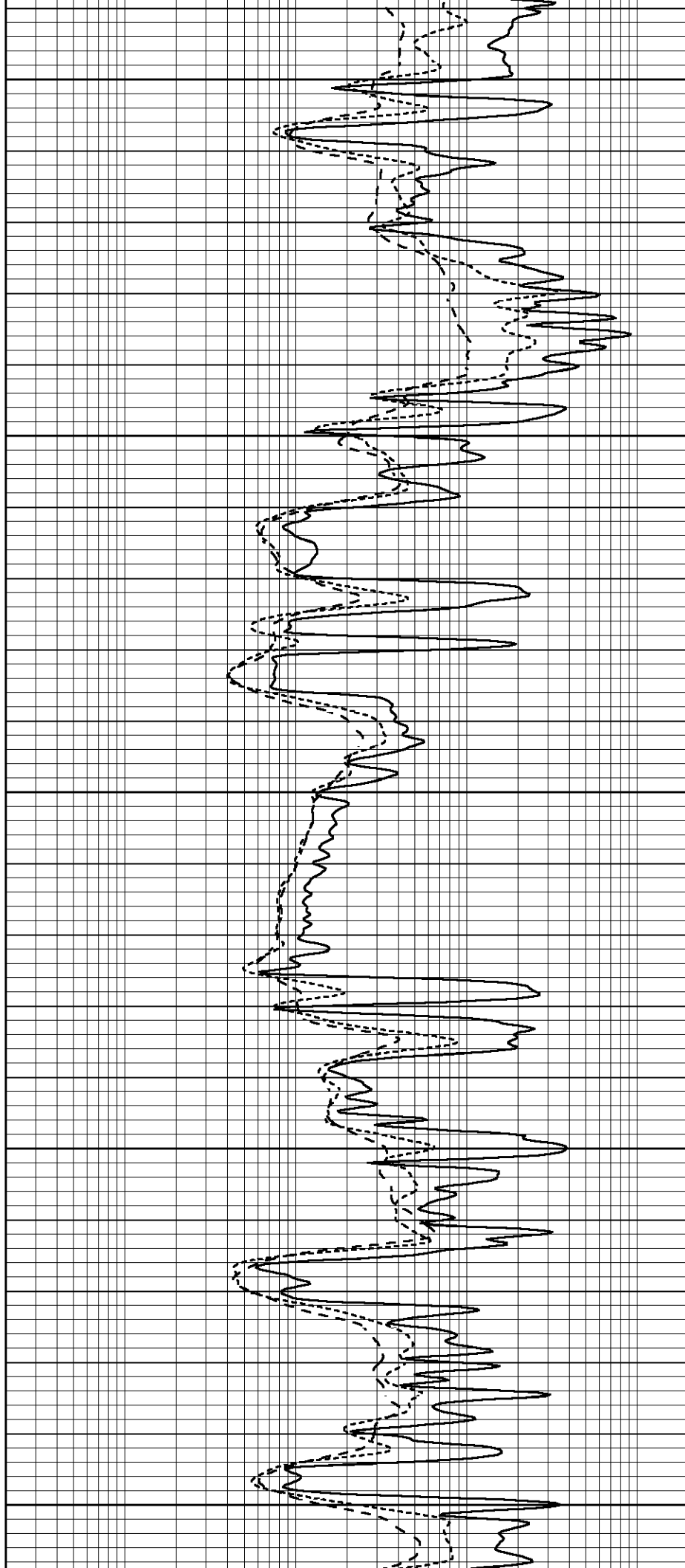
4350

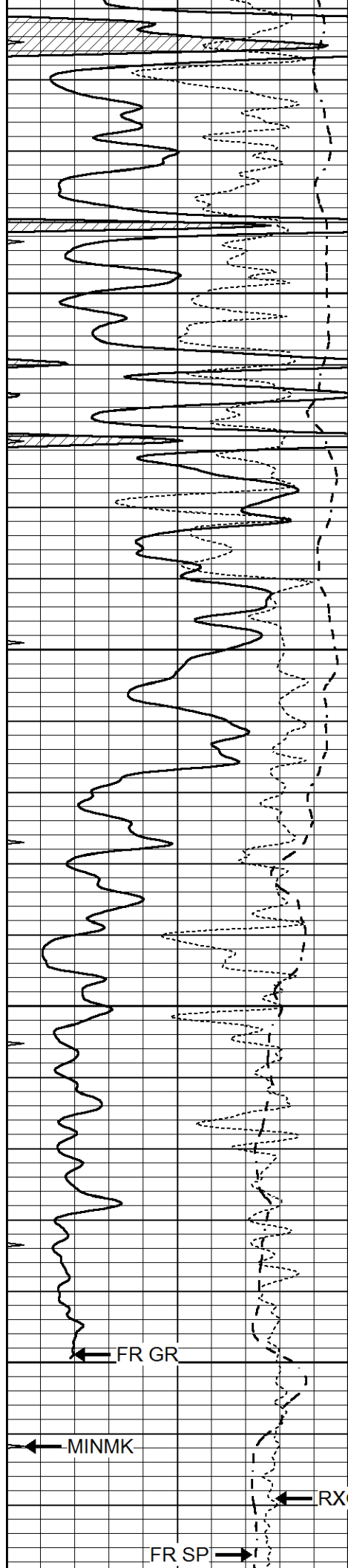
4400

4450

4500

4550



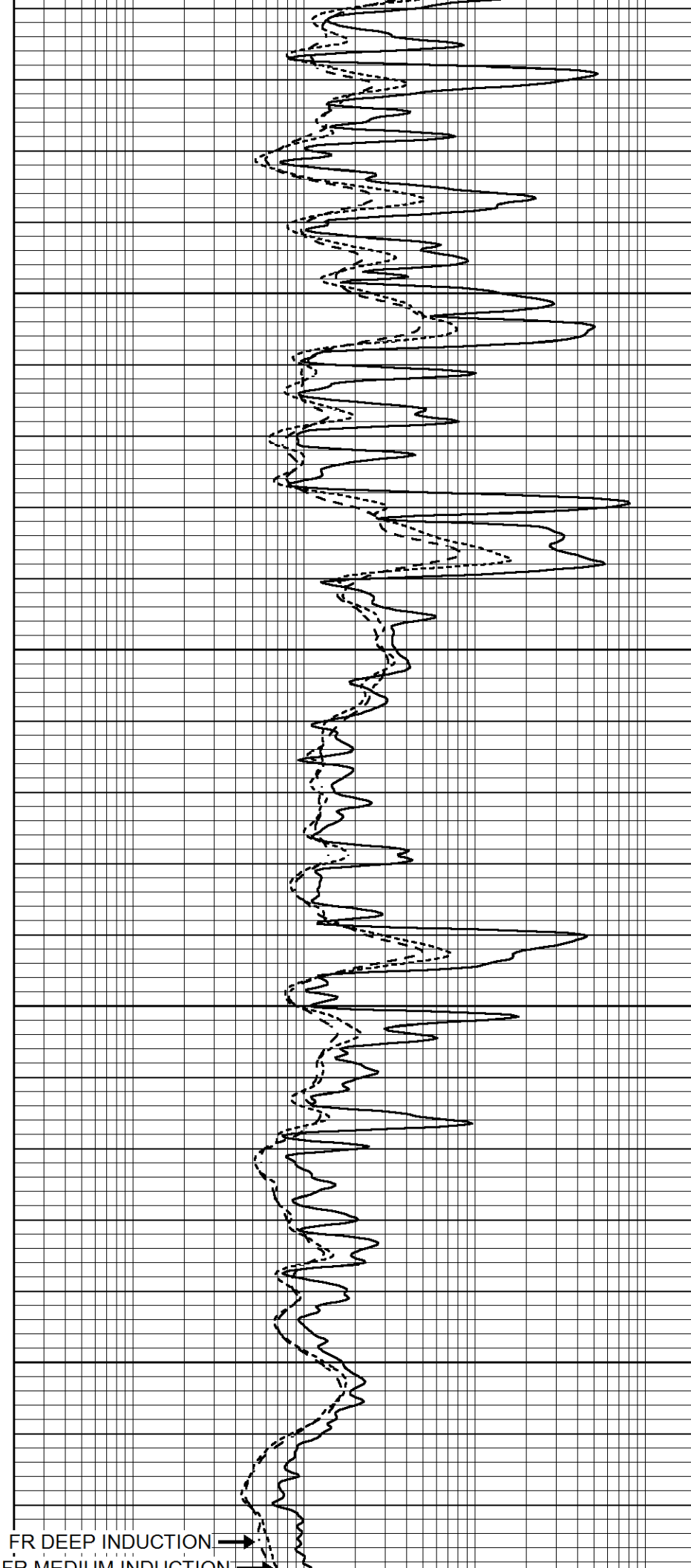


4600

4650

4700

4750



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

LTD 4787

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

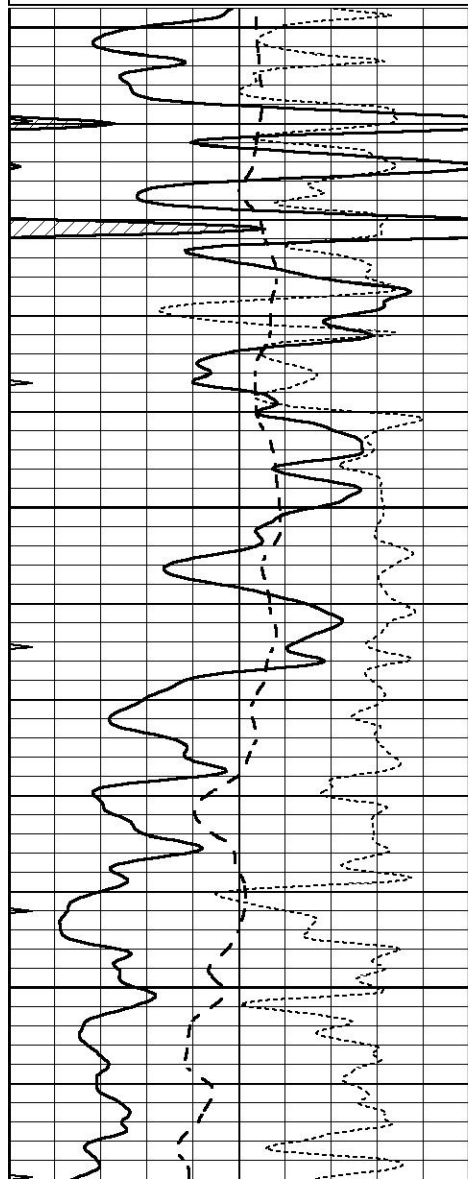


REPEAT SECTION

Database File 5588ddn.db
Dataset Pathname pass2.6R
Presentation Format _dil
Dataset Creation Mon Jul 19 11:44:09 2021
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

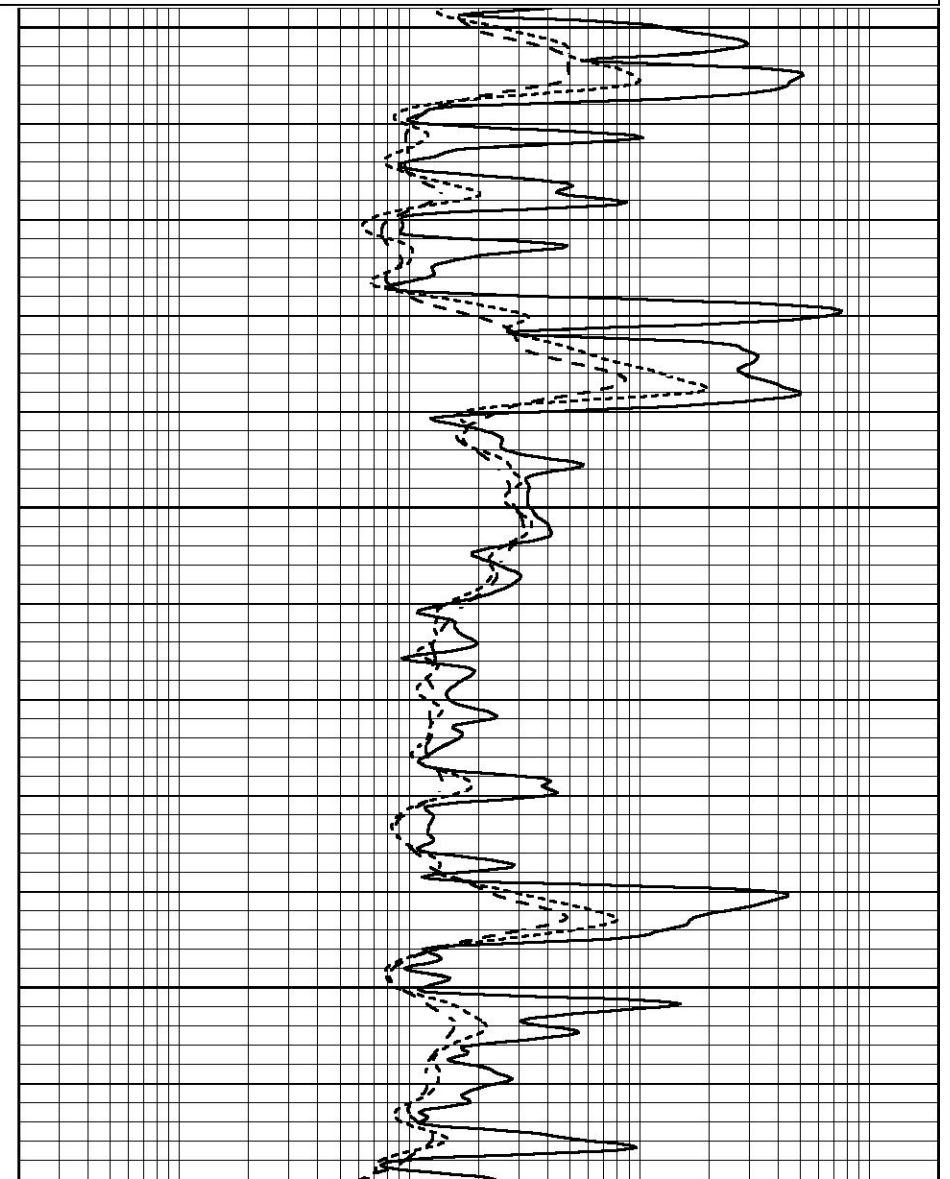
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

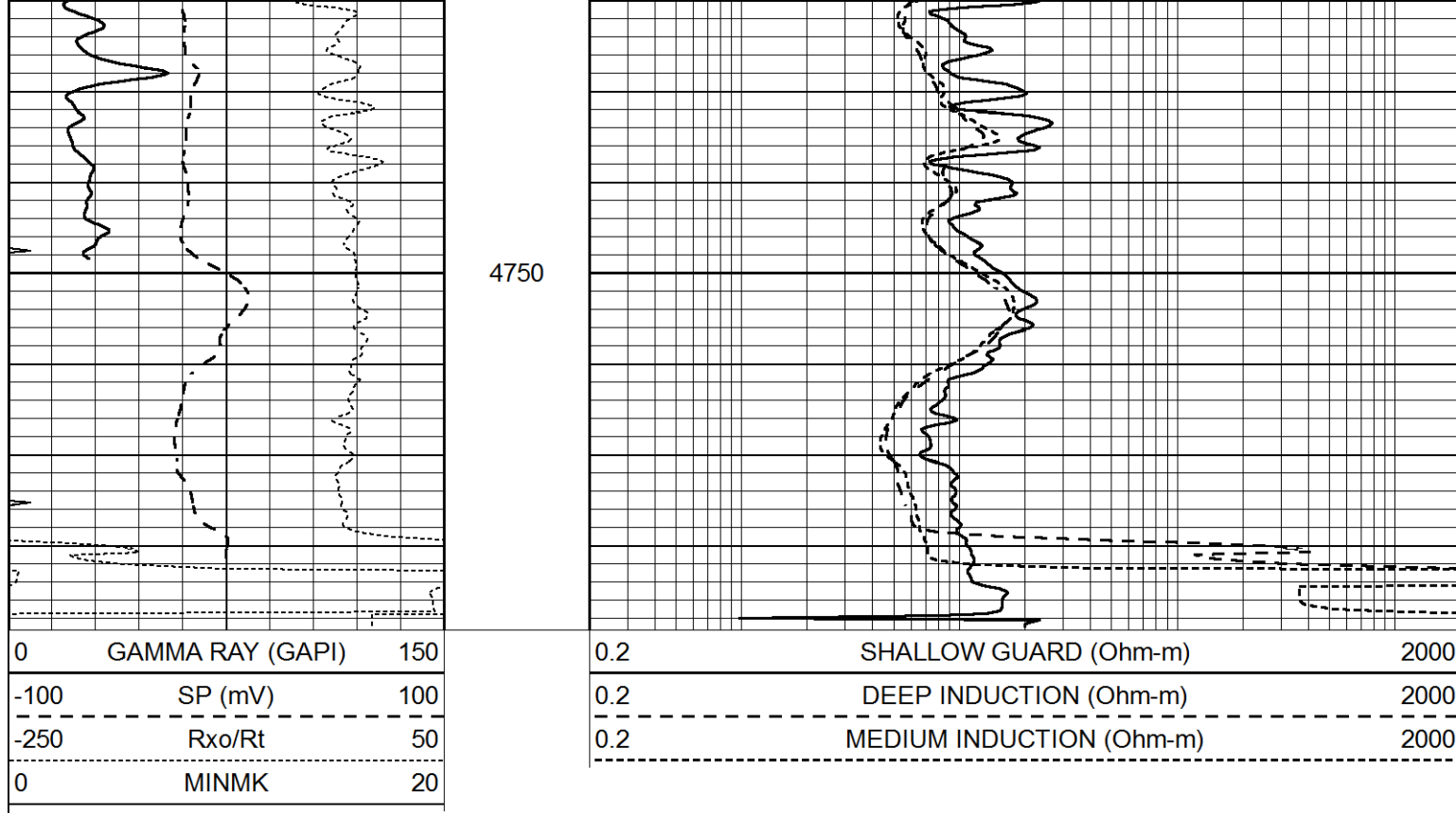


4600

4650

4700





Calibration Report									
Database File	5588ddn.db								
Dataset Pathname	pass3.5M								
Dataset Creation	Mon Jul 19 11:51:44 2021								
Dual Induction Calibration Report									
Serial-Model:					PROBE7-DILG				
Surface Cal Performed:					Mon Jul 12 00:16:57 2021				
Downhole Cal Performed:					Thu Mar 12 11:45:10 2020				
After Survey Verification Performed:					Thu Mar 12 11:45:00 2020				
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	630.000	-6.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	685.000	-56.000	
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		
		0.000	mmho-m		4000.000	mmho-m		

Litho Density Calibration Report

Serial: 004 Model: PRB

Master Calibration			Performed Tue May 18 11:02:48 2021					
	Background	Magnesium		Aluminum		Aluminum+Fe		
Window 1	1187.1	10004.0		3142.5		2810.8		cps
Window 2	1084.9	8556.6		2749.3		2502.4		cps
Window 3	923.1	5129.8		1819.8		1719.3		cps
Window 4	263.5	263.6		259.7		262.8		cps
Long Space	0.0	7471.7		1664.4		1417.5		cps
Short Space	1.5	984.9		645.6		561.2		cps
Rho		1.7100		2.5900		0.0000		g/cc
Pe		2.0000		2.7500		5.7900		
Rib Angle	: 44.3	Rib Slope	: 0.976	Density/Spine Ratio			: 0.564	
Spine Angle	: 74.3	Spine Slope	: 3.555	Spine Intercept			: -15.6	

Before Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0		0.0		cps
Window 2	0.0	0.0		0.0		0.0		cps
Window 3	0.0	0.0		0.0		0.0		cps
Window 4	0.0	0.0		0.0		0.0		cps
Long Space	0.0	0.0		0.0		0.0		cps
Short Space	0.0	0.0		0.0		0.0		cps
Measured Rho		0.0000		0.0000		0.0000		g/cc
Measured Correction		0.0000		0.0000		0.0000		g/cc
Measured Pe				0.0000		0.0000		

After Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0		0.0		cps
Window 2	0.0	0.0		0.0		0.0		cps
Window 3	0.0	0.0		0.0		0.0		cps
Window 4	0.0	0.0		0.0		0.0		cps
Long Space	0.0	0.0		0.0		0.0		cps
Short Space	0.0	0.0		0.0		0.0		cps
Measured Rho		0.0000		0.0000		0.0000		g/cc
Measured Correction		0.0000		0.0000		0.0000		g/cc
Measured Pe				0.0000		0.0000		

--

Compensated Neutron Calibration Report

Serial Number:	070808PMC
Tool Model:	NABORS

PRE-SURVEY VERIFICATION			
Detector	Readings	Measured	Target

Short Space	cps	pu	pu
Long Space	cps		
POST-SURVEY VERIFICATION			
Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu
Gamma Ray Calibration Report			
Serial Number:	070558		
Tool Model:	OPEN_GR		
Performed:	Fri Jul 09 13:16:04 2021		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	