



DUAL INDUCTION LOG

Company INDIAN OIL COMPANY, INC.
 Well BANKS NORTH #3
 Field AMBER CREEK
 County BARBER State KANSAS

Location: API #: 15-007-24440-0000
 1512' FNL & 2180' FEL
 NE - NW - SW - SE
 Permanent Datum GROUND LEVEL Elevation 1673
 Log Measured From KELLY BUSHING 12' A.G.L.
 Drilling Measured From KELLY BUSHING
 SEC 36 TWP 30S RGE 12W
 Other Services
 CDL/CNL/PE
 MEL/SON/FF
 Elevation
 K.B. 1681
 D.F. 1679
 G.L. 1673

Date	9/13/22
Run Number	ONE
Depth Driller	4810
Depth Logger	4808
Bottom Logged Interval	4806
Top Log Interval	00
Casing Driller	8 5/8"@305'
Casing Logger	305
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/44
pH / Fluid Loss	10.5/9.6
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.750@82F
Rmf @ Meas. Temp	.563@82F
Rmc @ Meas. Temp	.900@82F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.500@123F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	12:15 P.M.
Maximum Recorded Temperature	123F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	AARON YOUNG
	ANTHONY FARRAR

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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.

15-007-24440-0000 Comments

THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 SAWYER, KS., S. ON HWY 281 TO "RESORT RD."(99 SPRINGS SIGN), 1 1/2 W., TO GREEN GATES,
 S. INTO, FOLLOW LEASE RD.

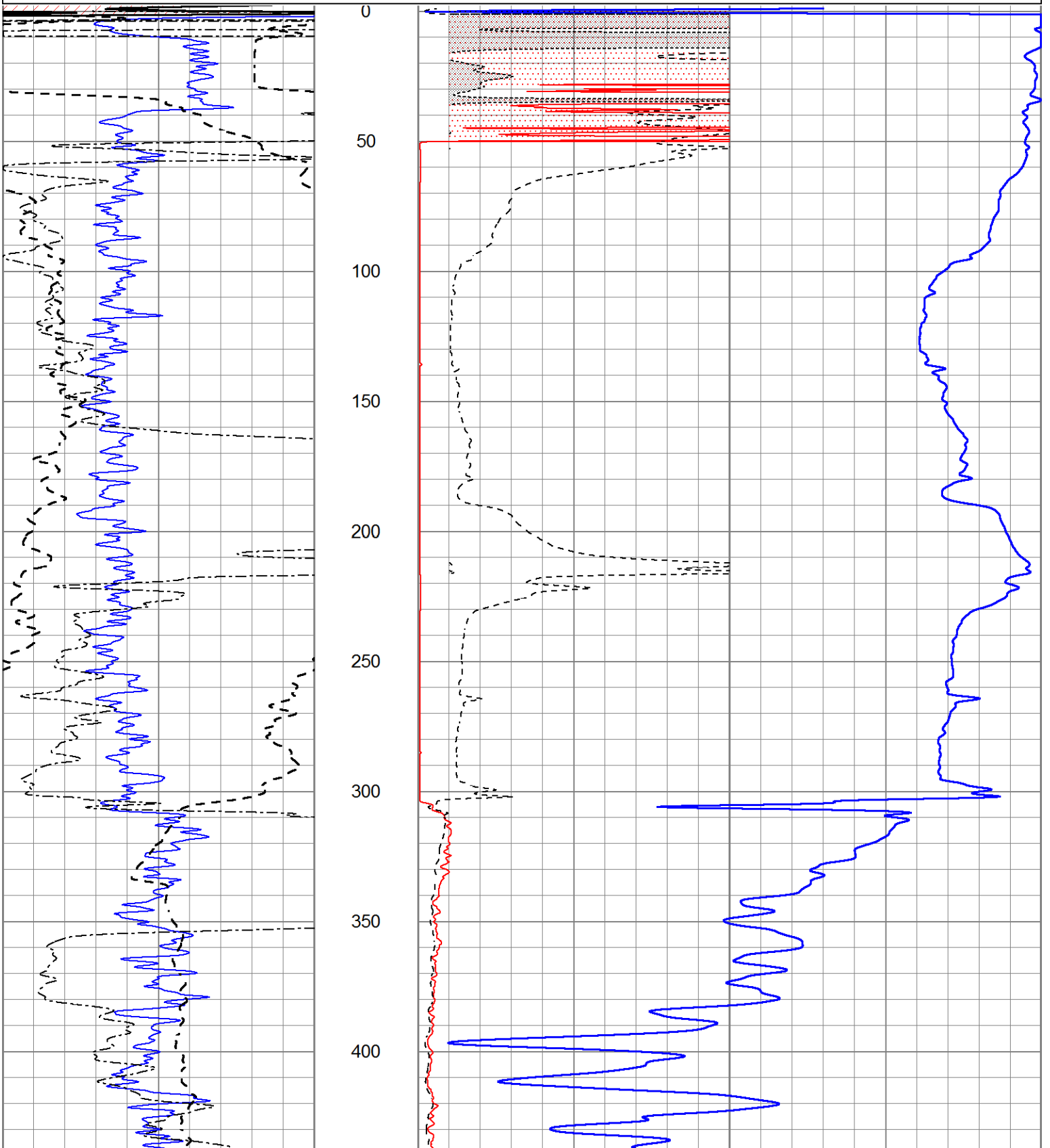


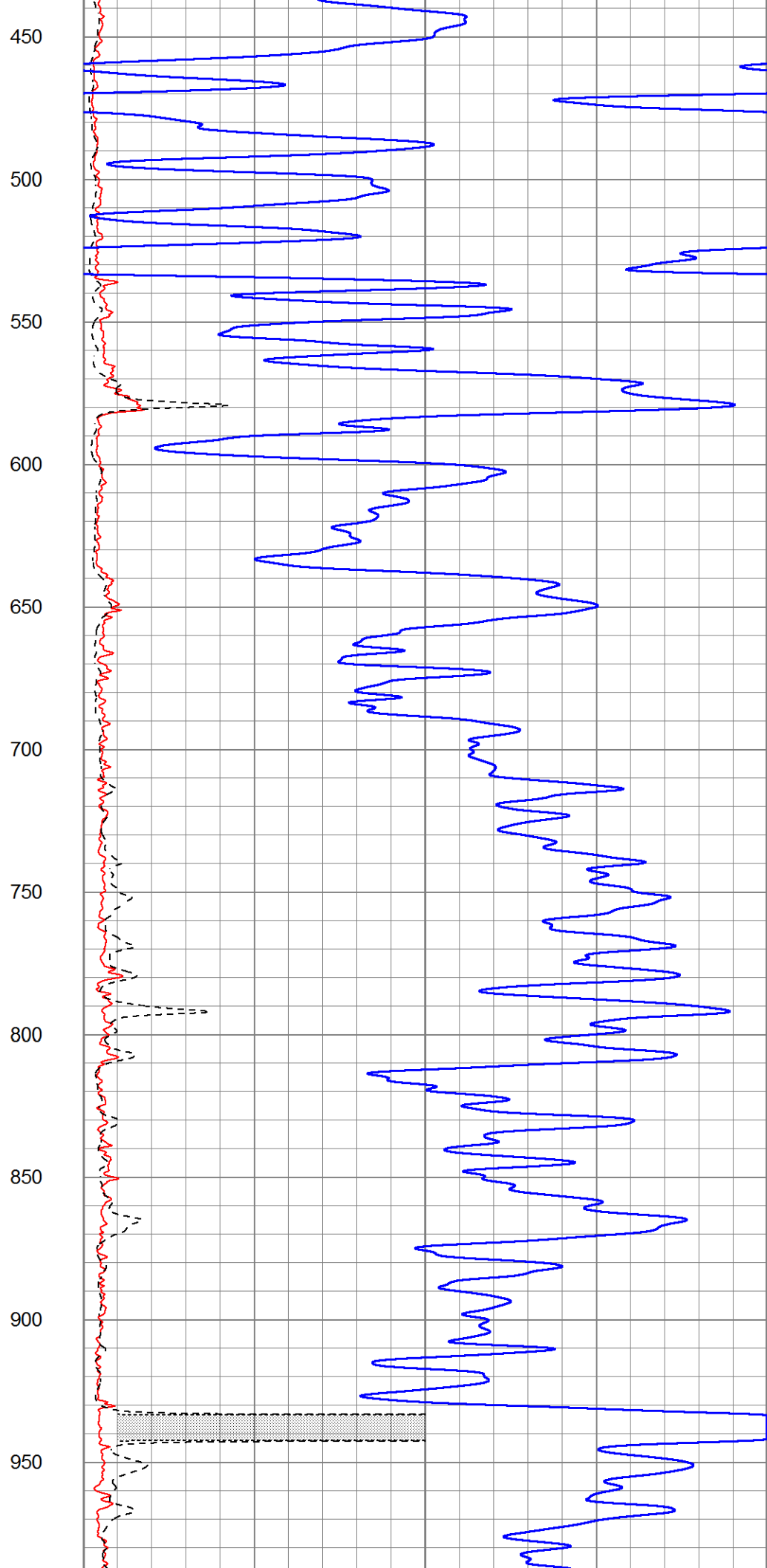
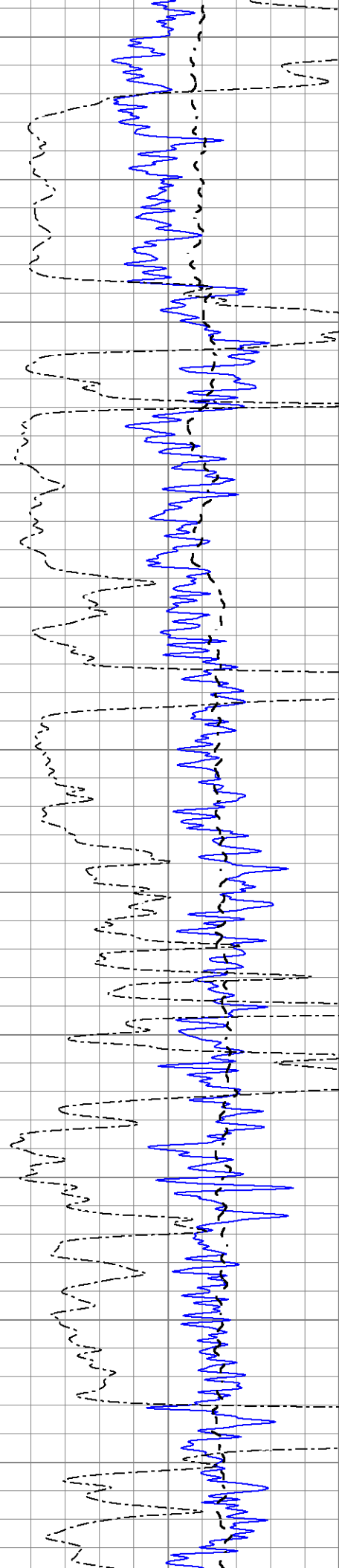
MAIN SECTION

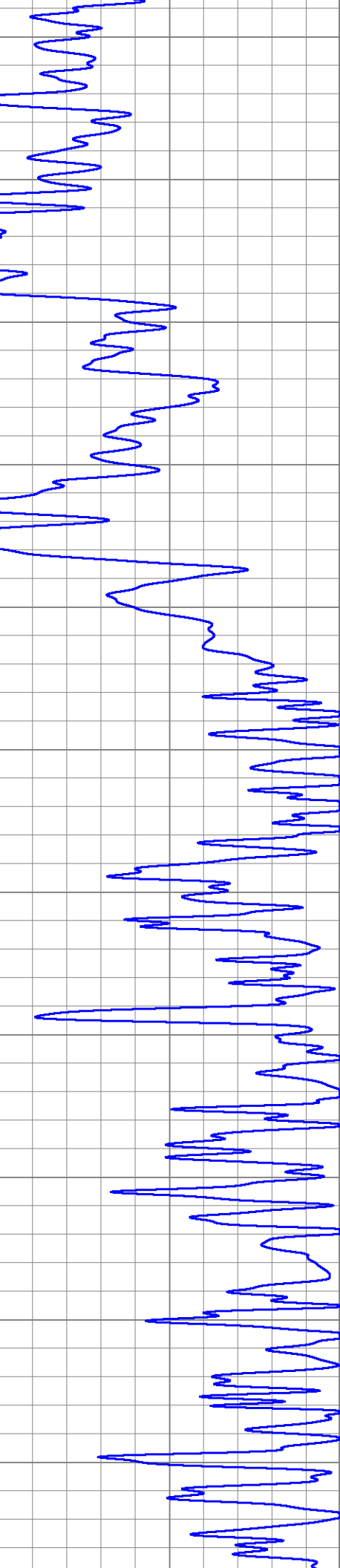
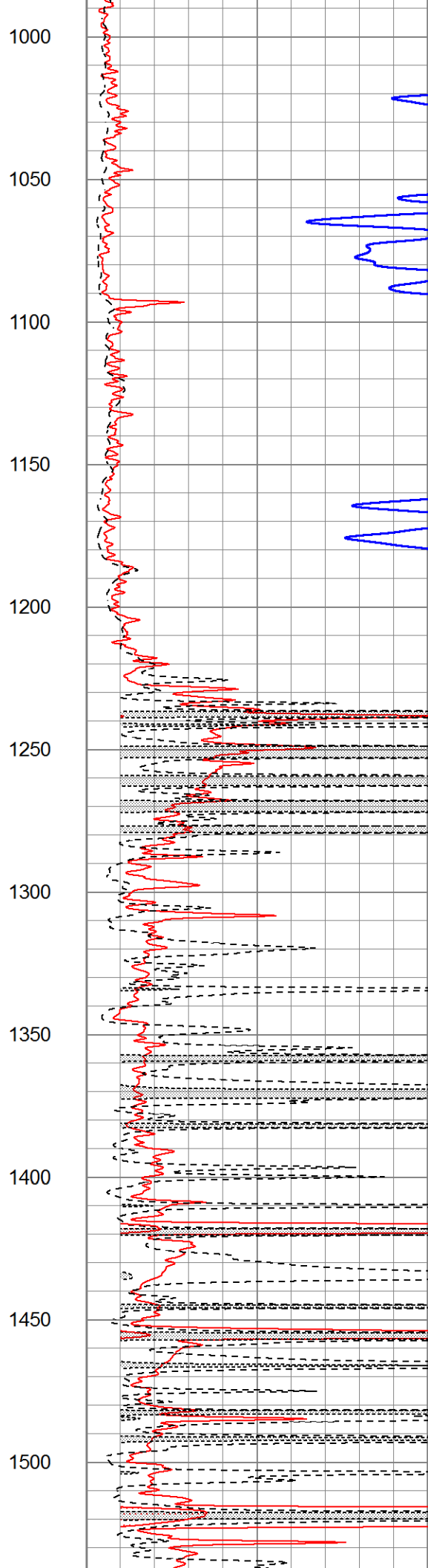
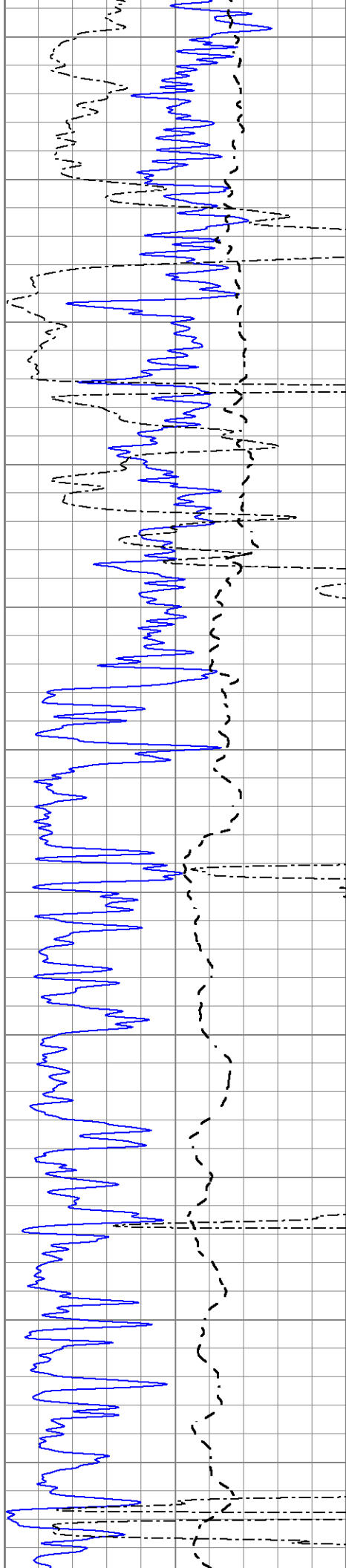
Database File 6925pe.db
 Dataset Pathname pass3.1M
 Presentation Format _dil2
 Dataset Creation Tue Sep 13 14:10:15 2022
 Charted by Depth in Feet scaled 1:600

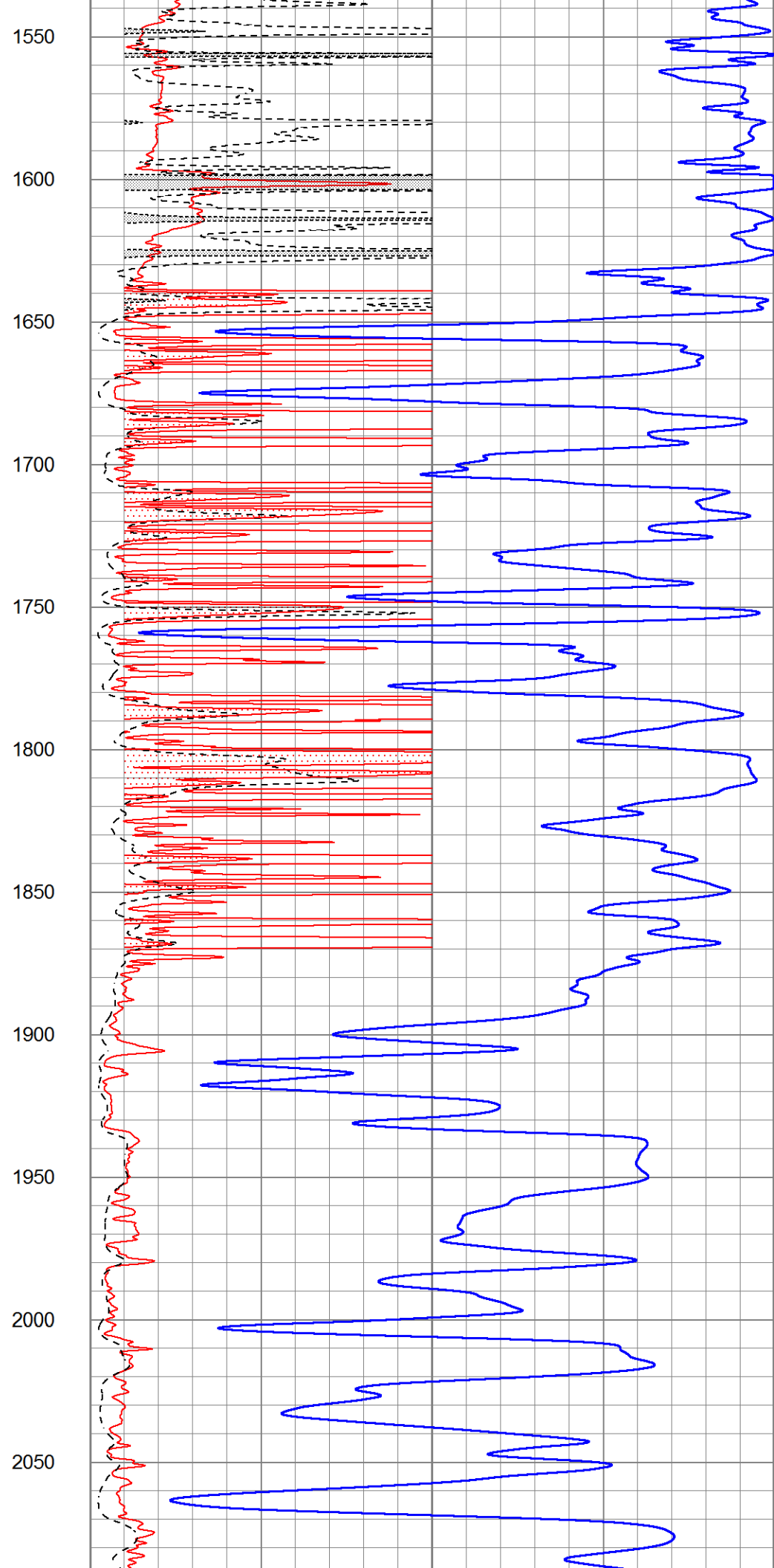
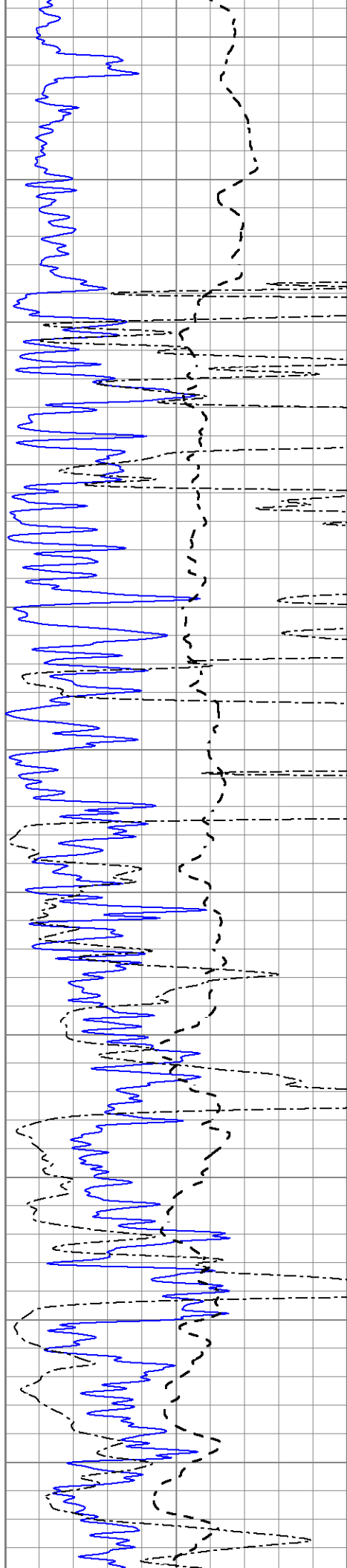
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

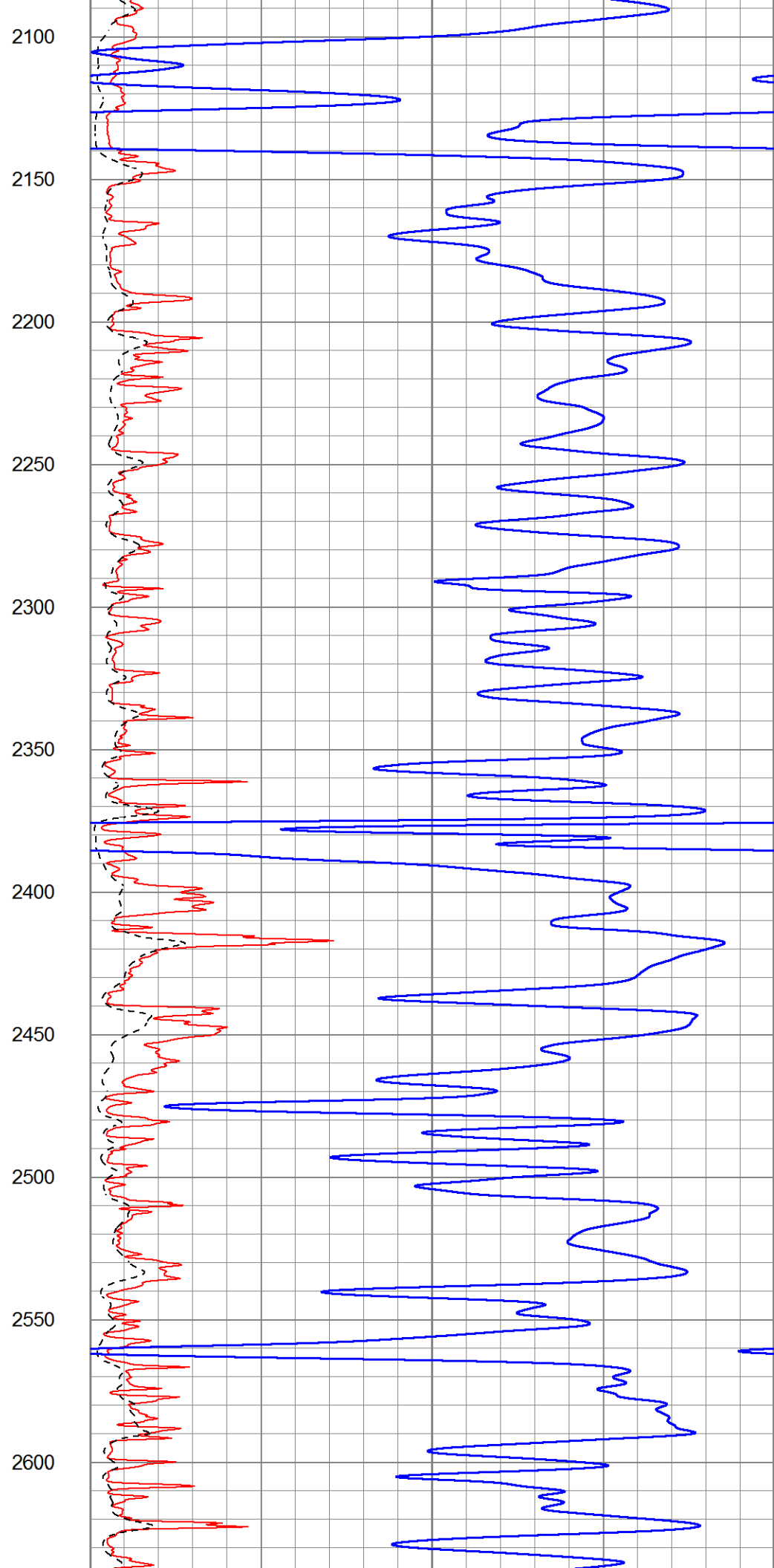
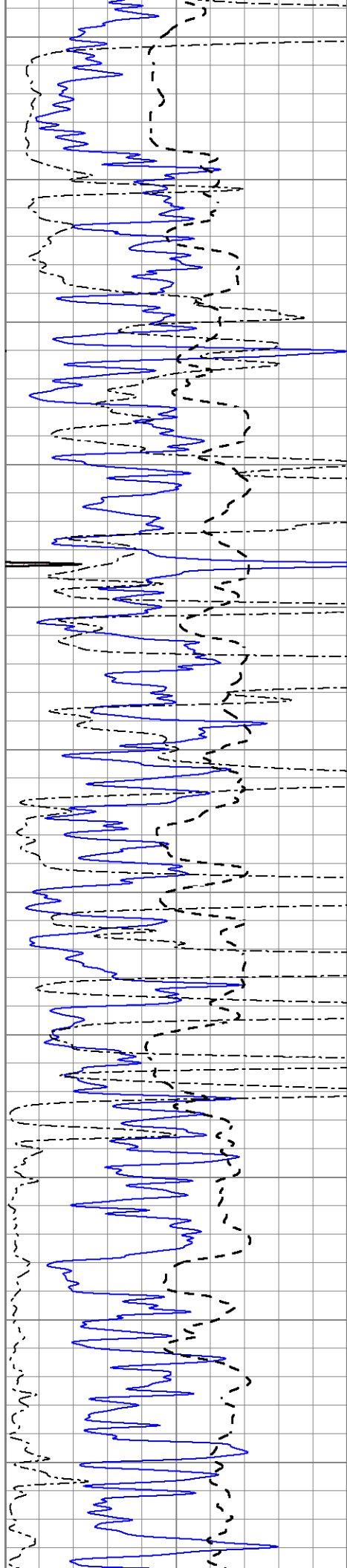
1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

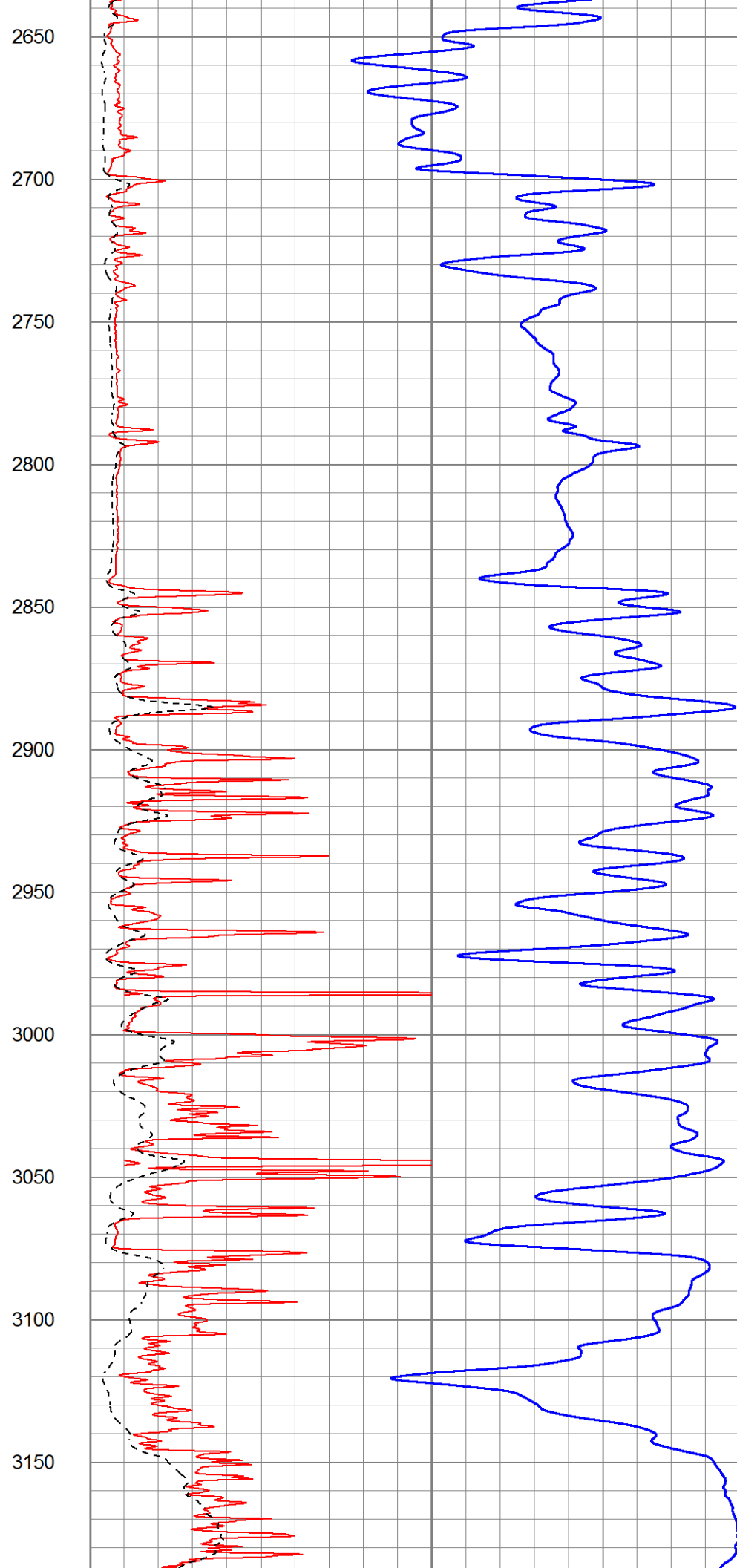
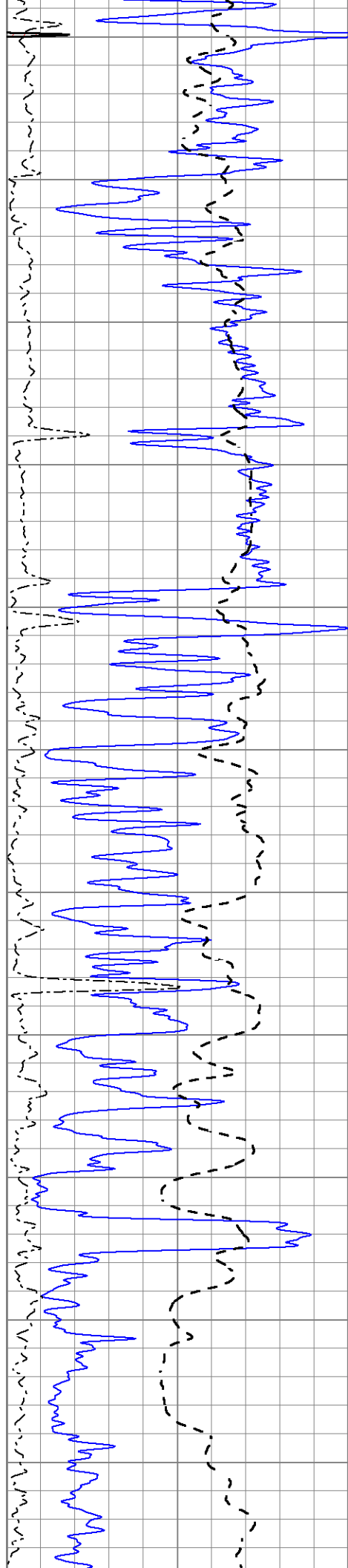


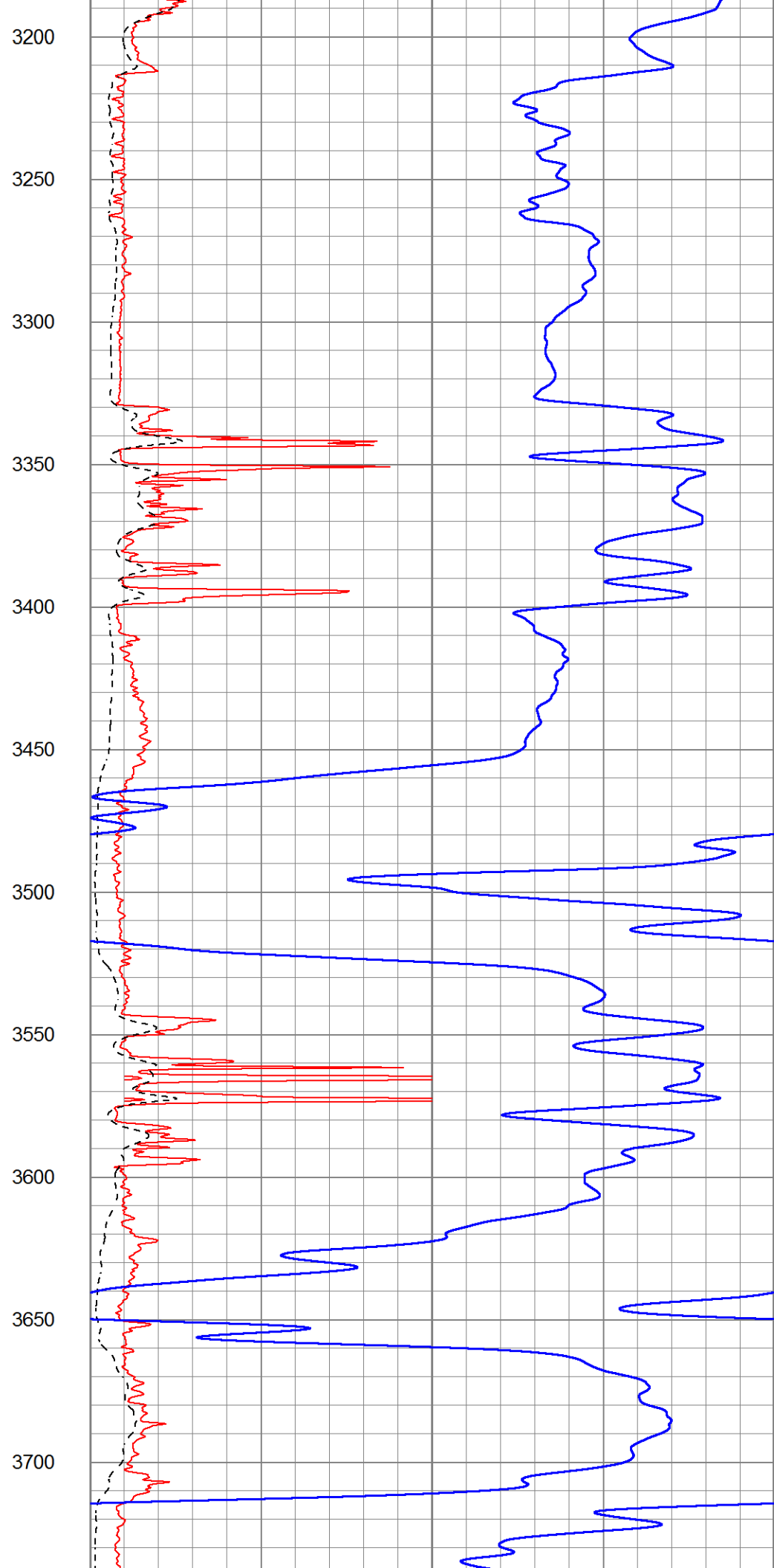
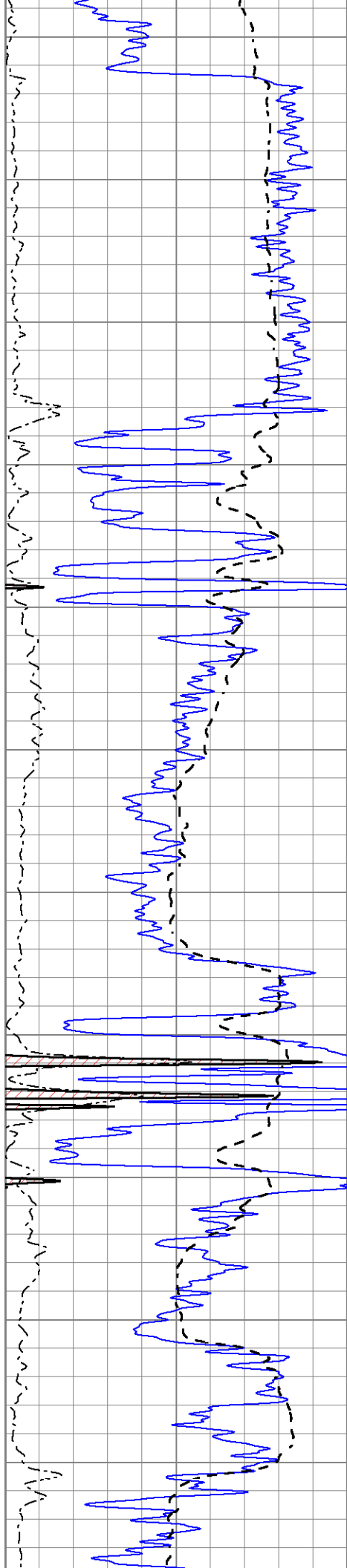


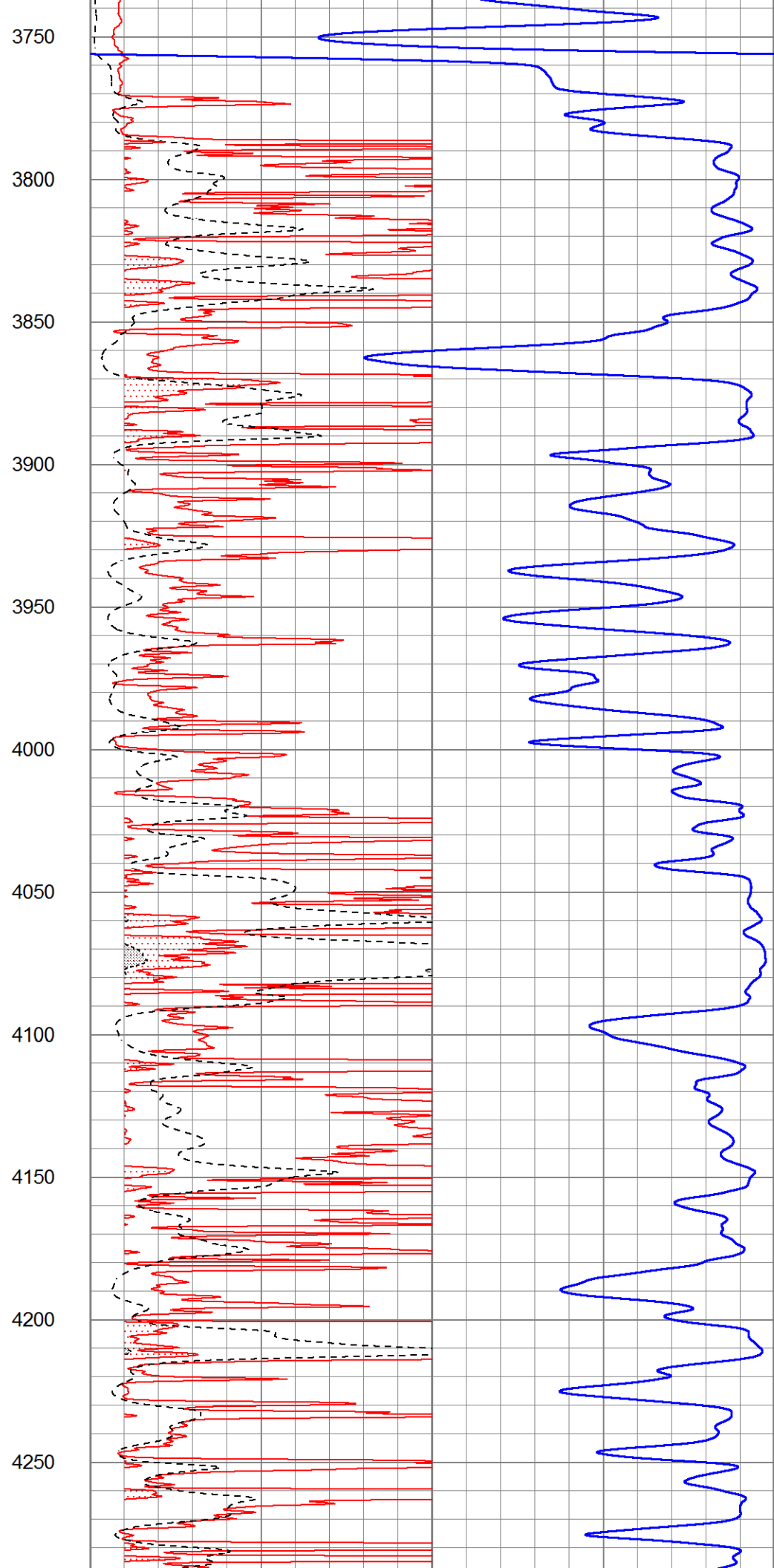
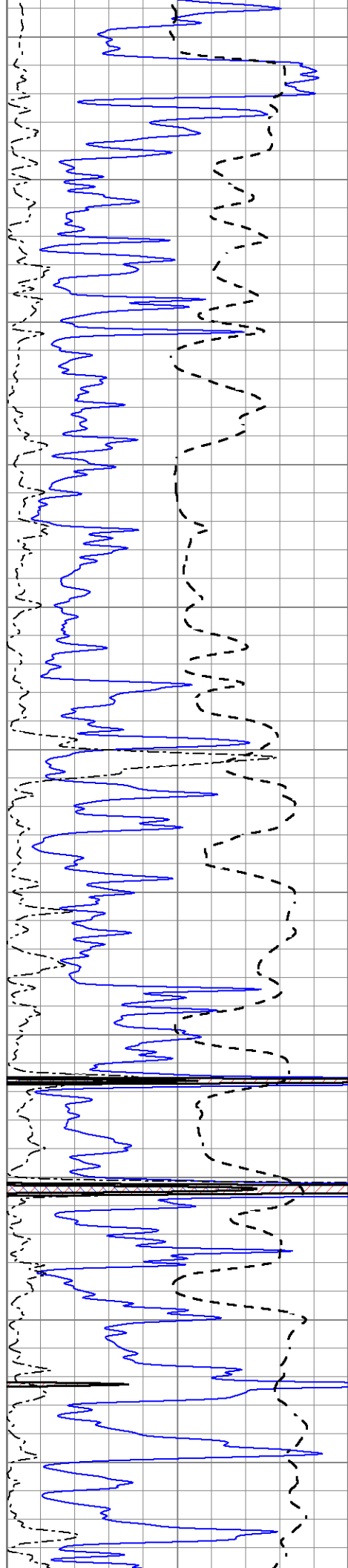


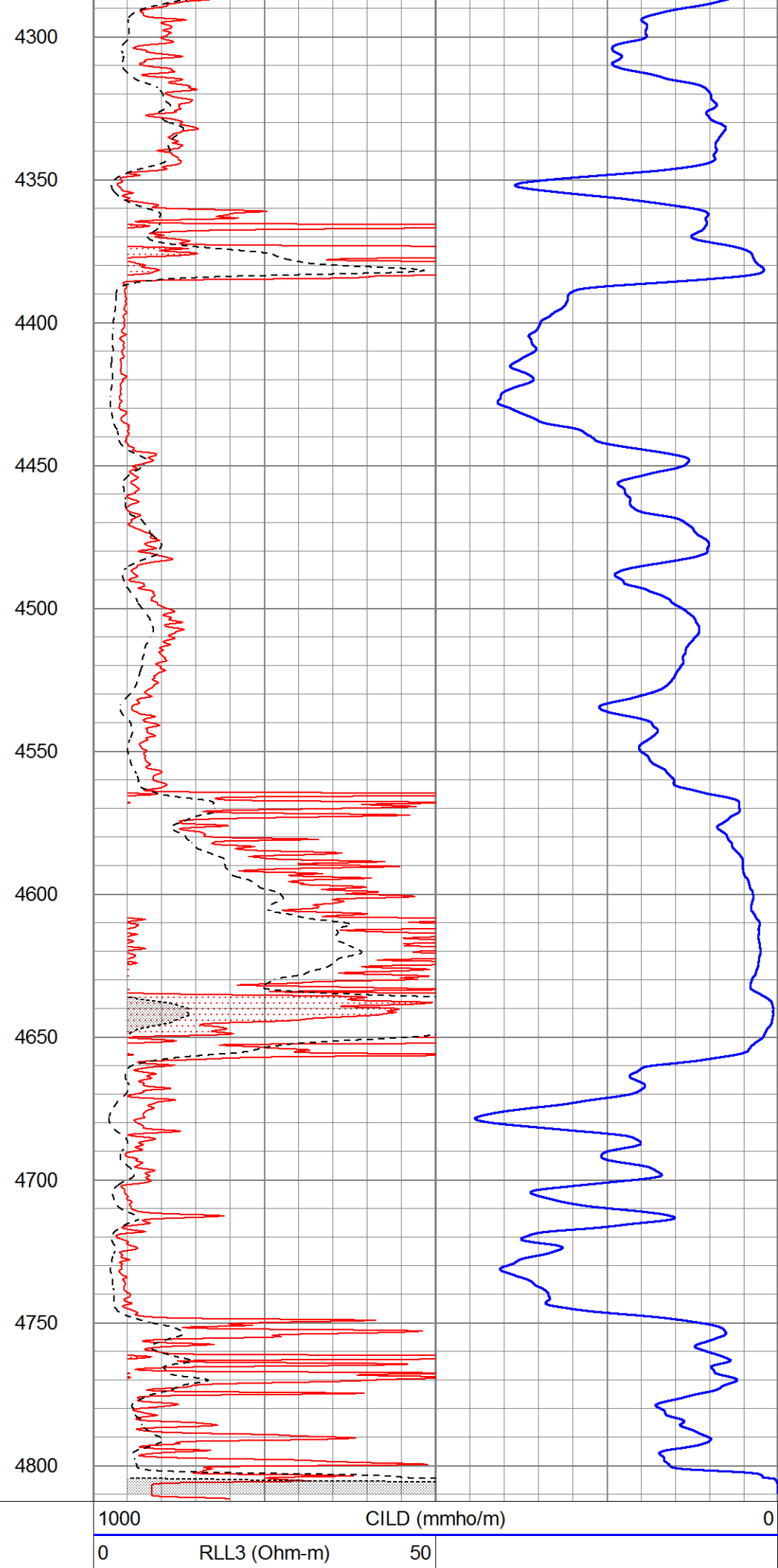
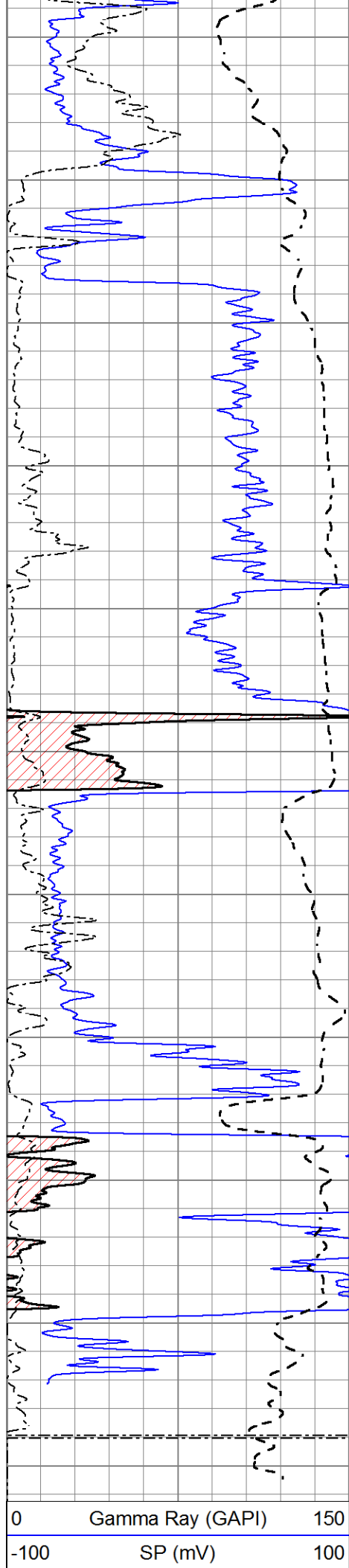












0 RWA (Ohm-m) 1

0 RILD (Ohm-m) 50

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500

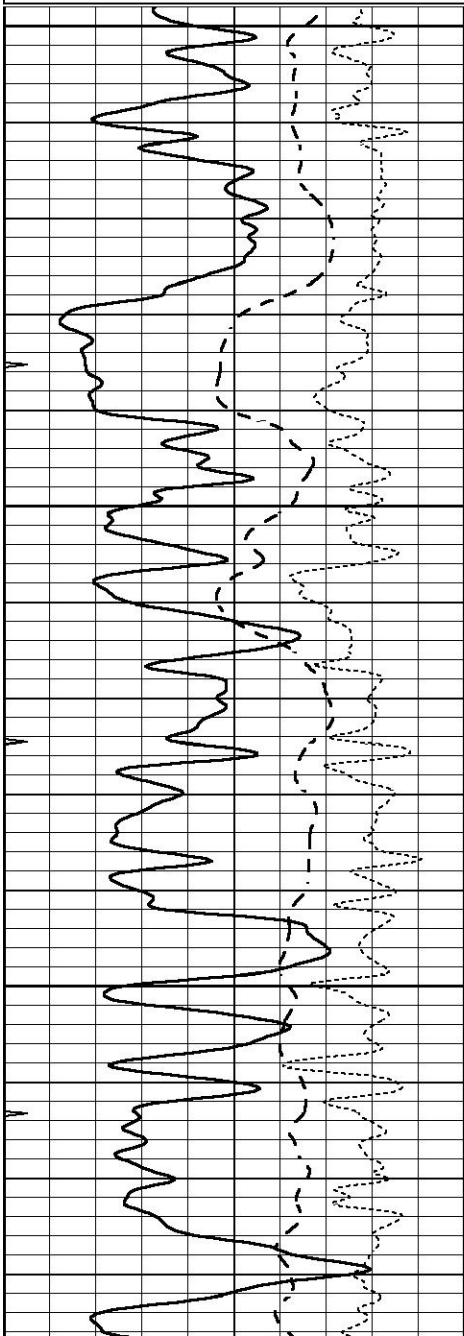


MAIN SECTION

Database File 6925pe.db
 Dataset Pathname pass3.1M
 Presentation Format _dil
 Dataset Creation Tue Sep 13 14:10:15 2022
 Charted by Depth in Feet scaled 1:240

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

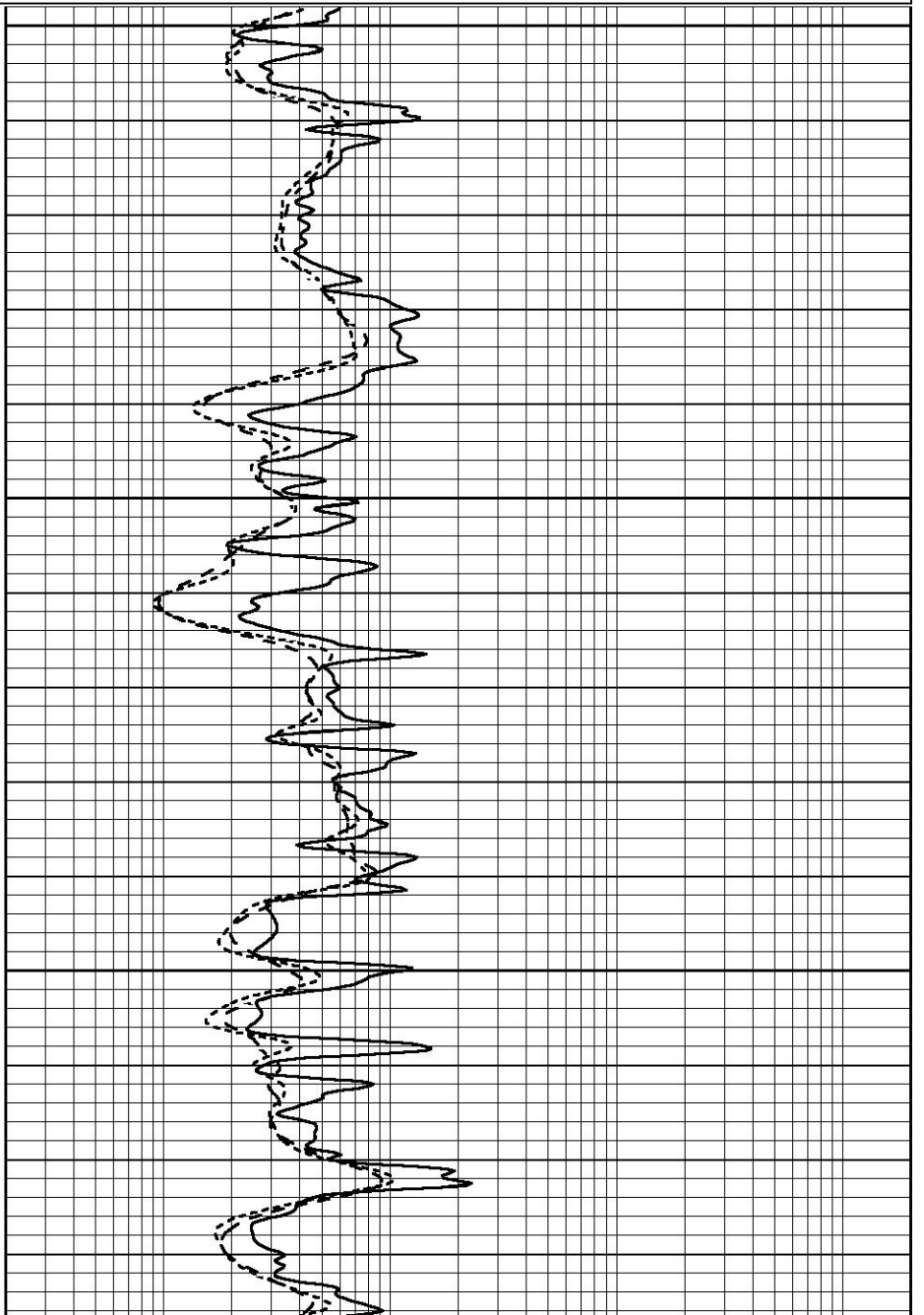
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

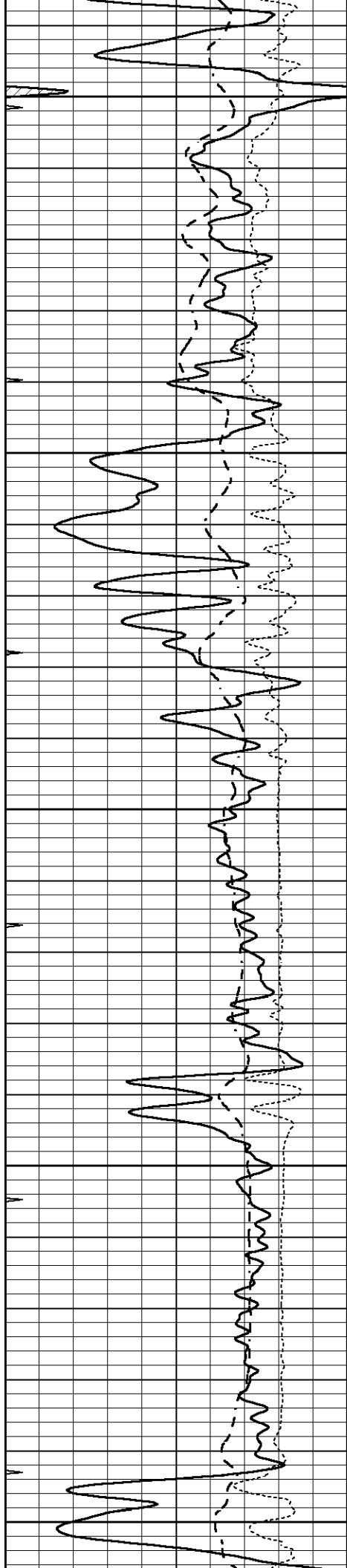


2500

2550

2600





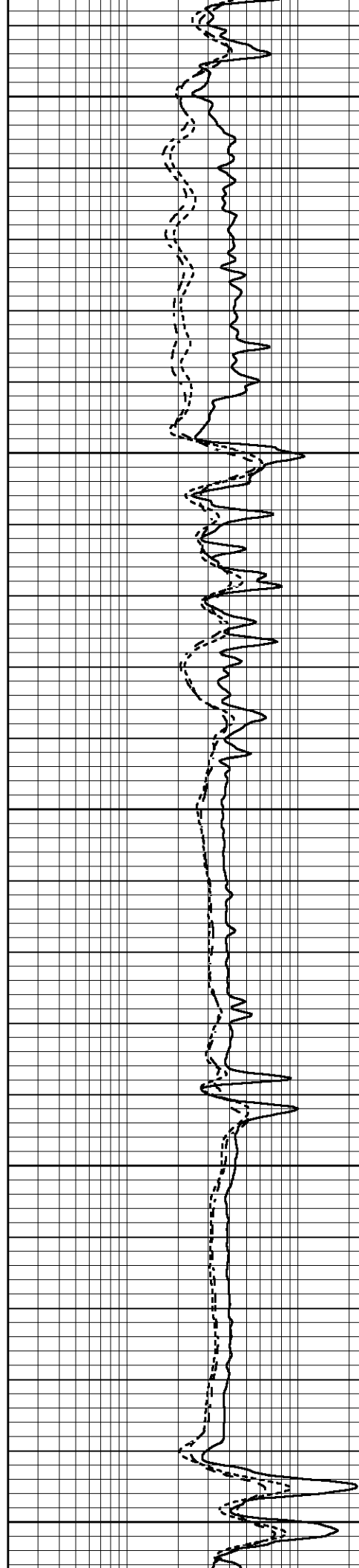
2650

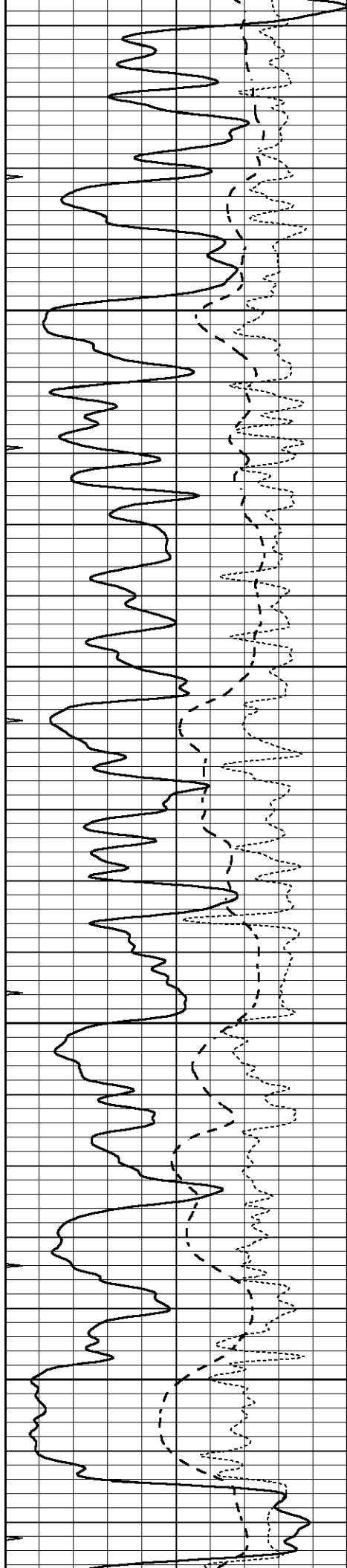
2700

2750

2800

2850



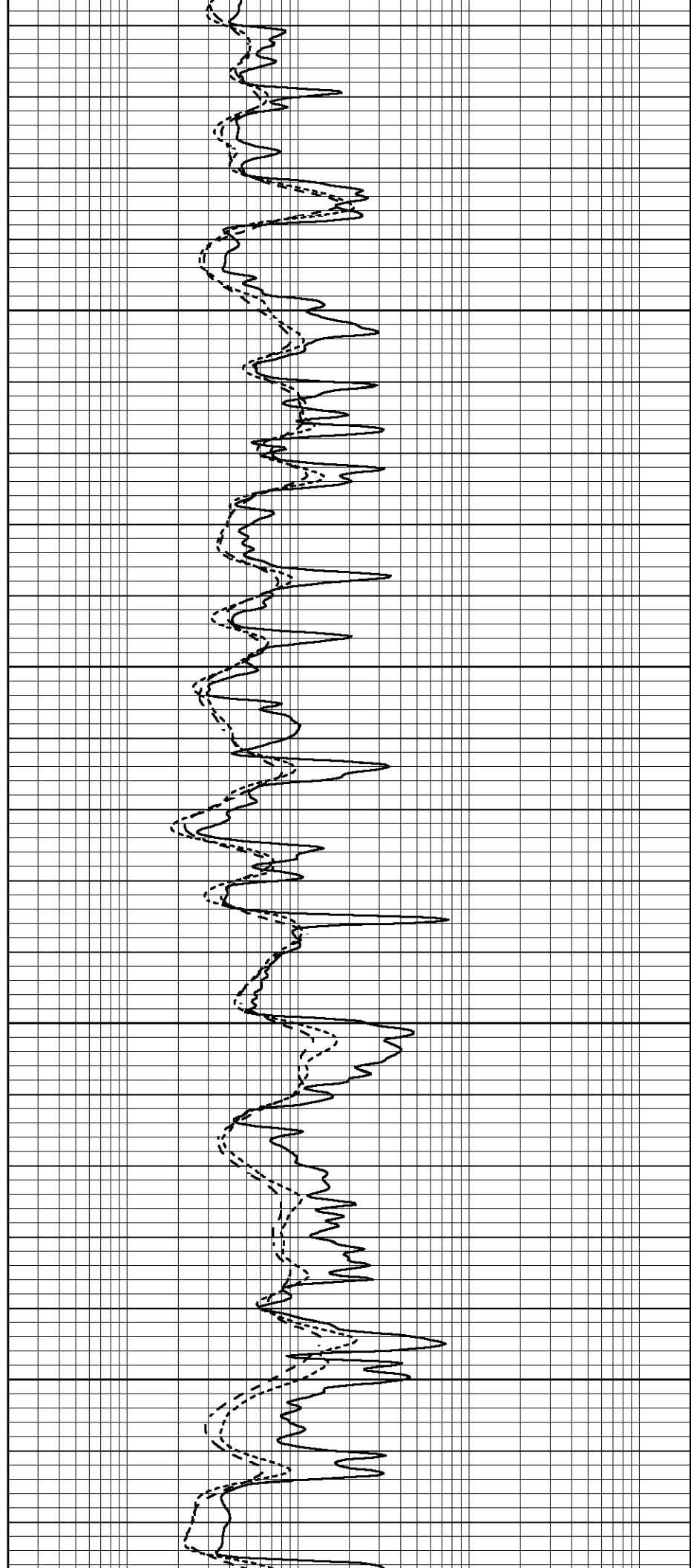


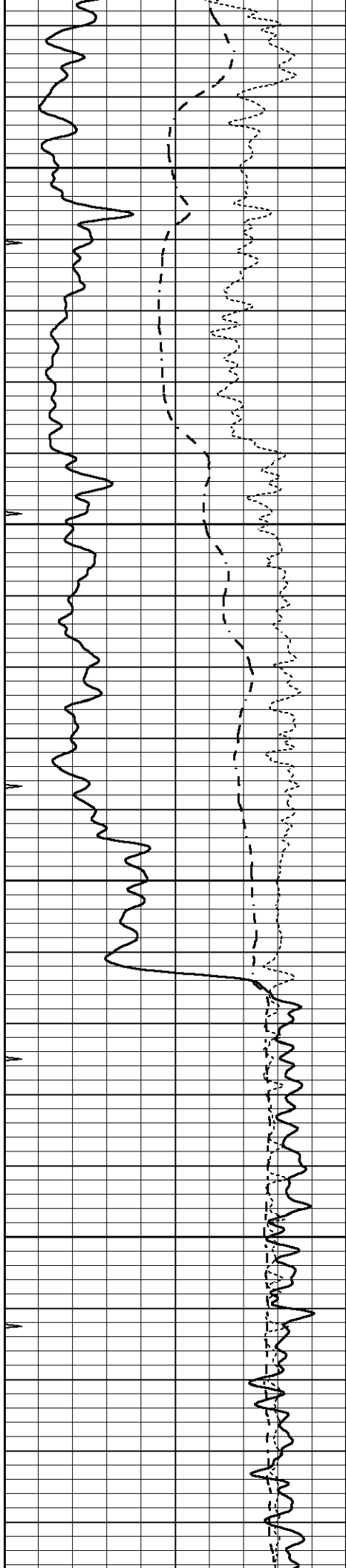
2900

2950

3000

3050



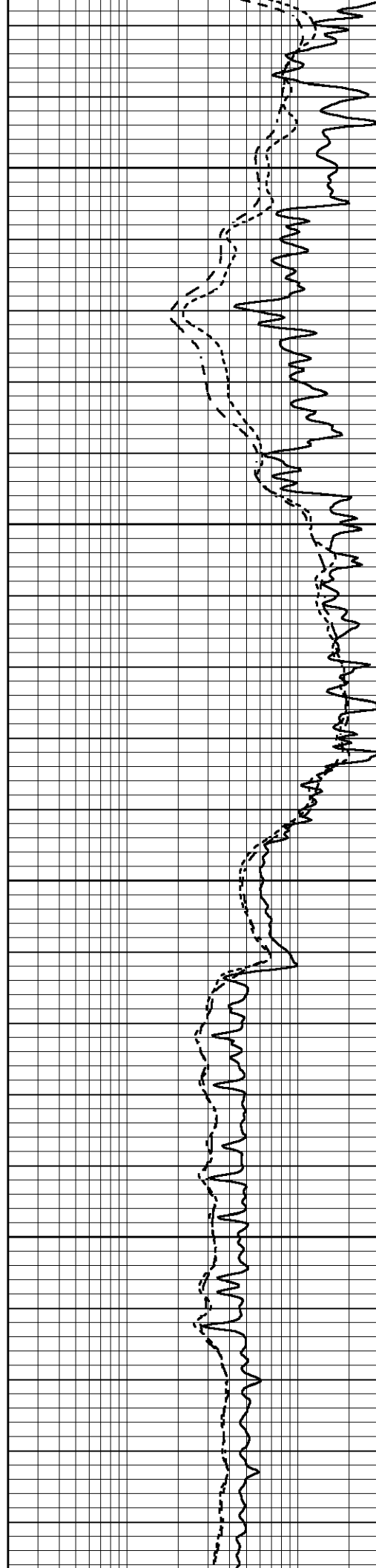


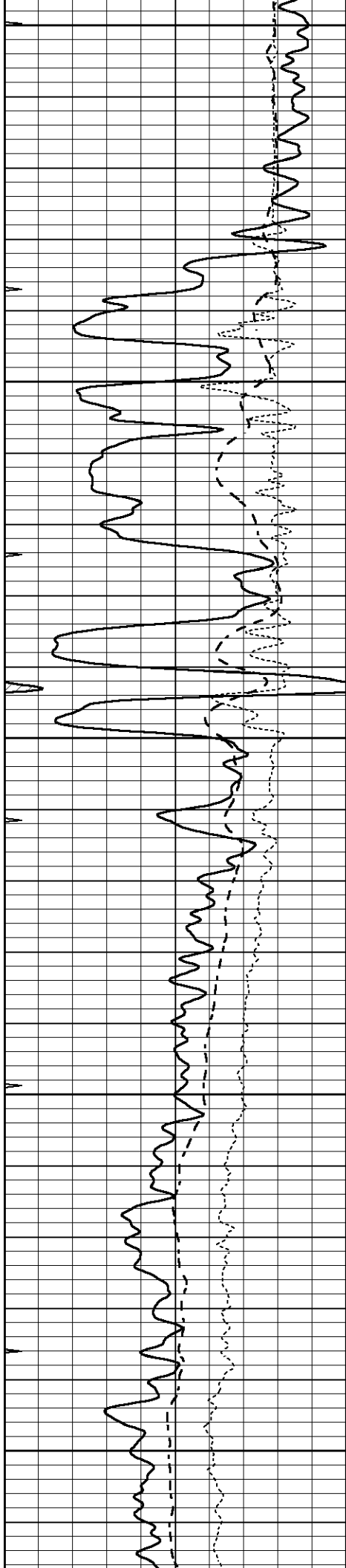
3100

3150

3200

3250





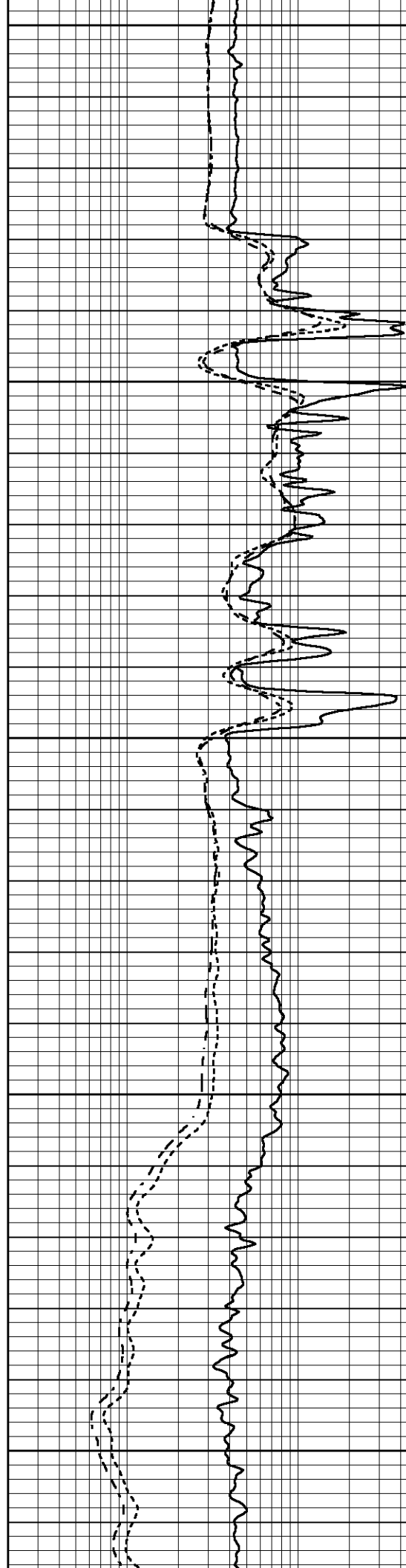
3300

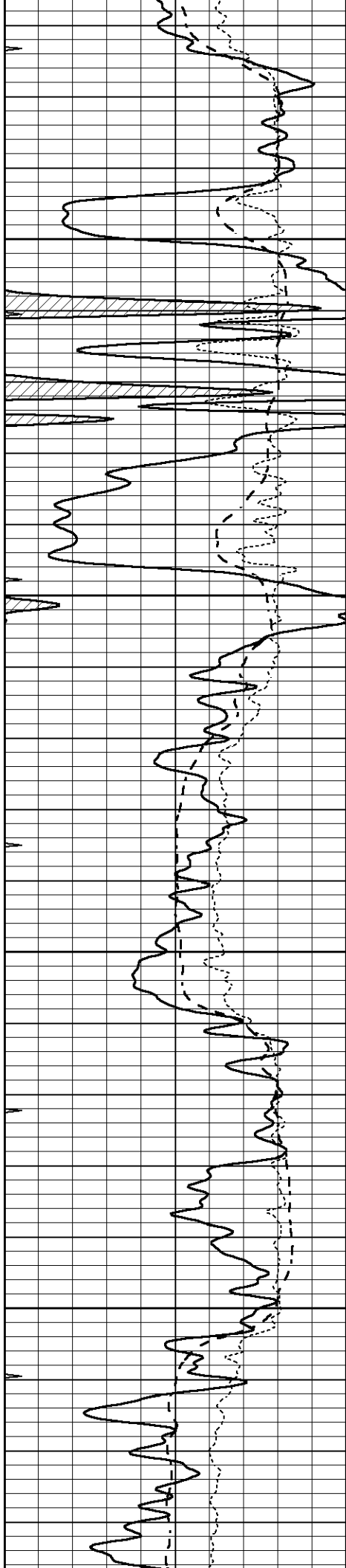
3350

3400

3450

3500



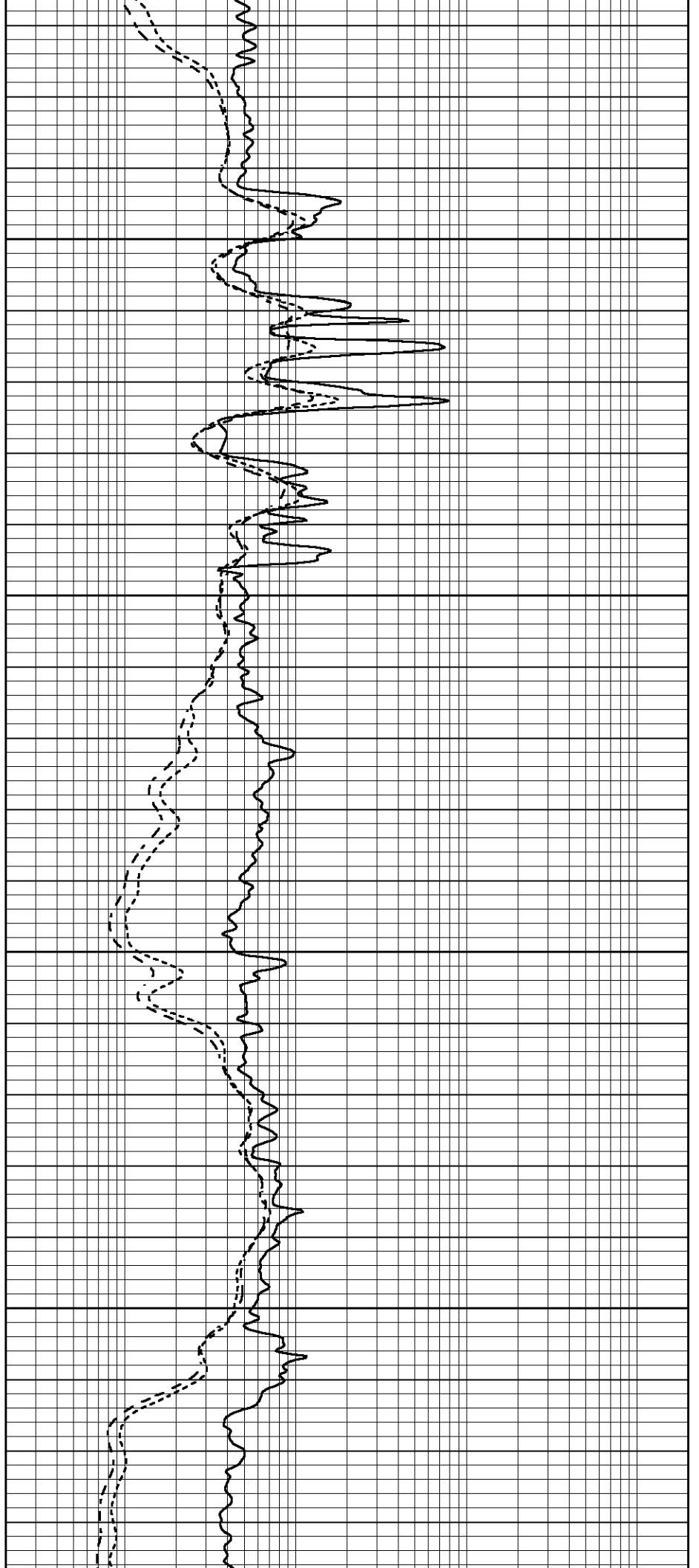


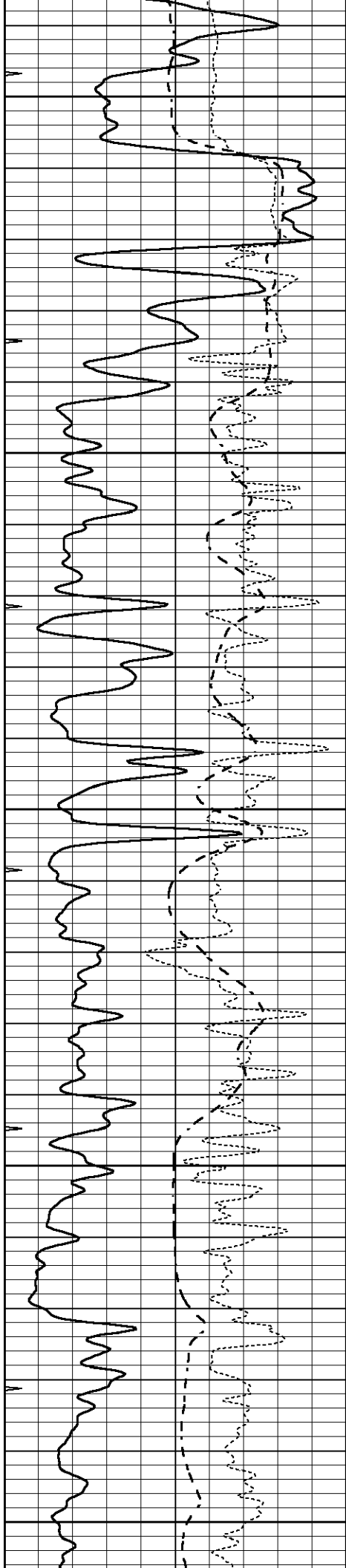
3550

3600

3650

3700





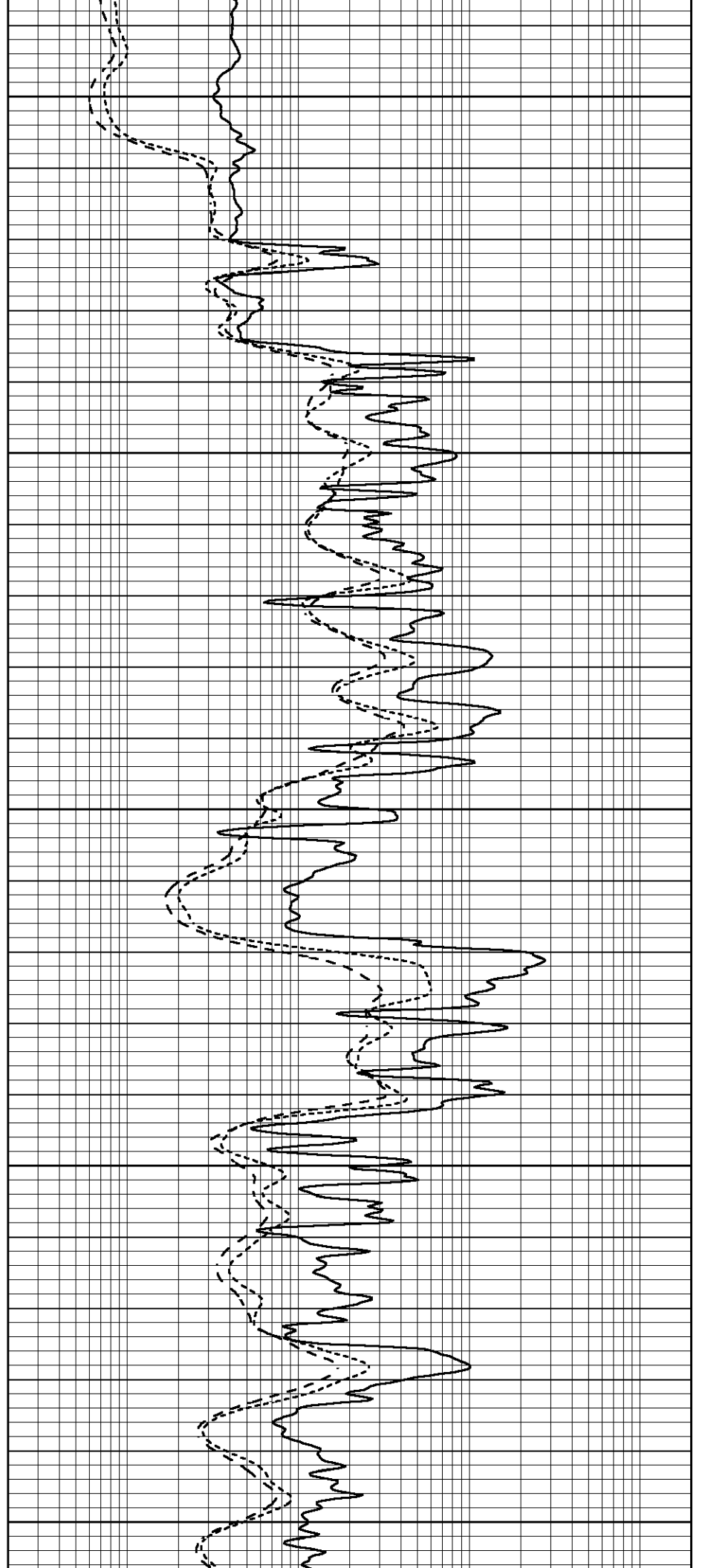
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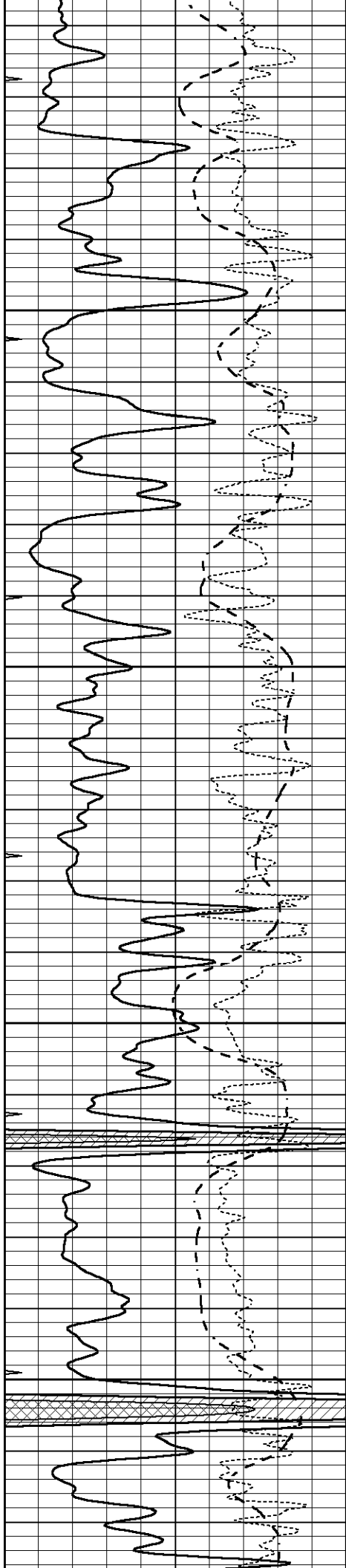
3800

3850

3900

3950



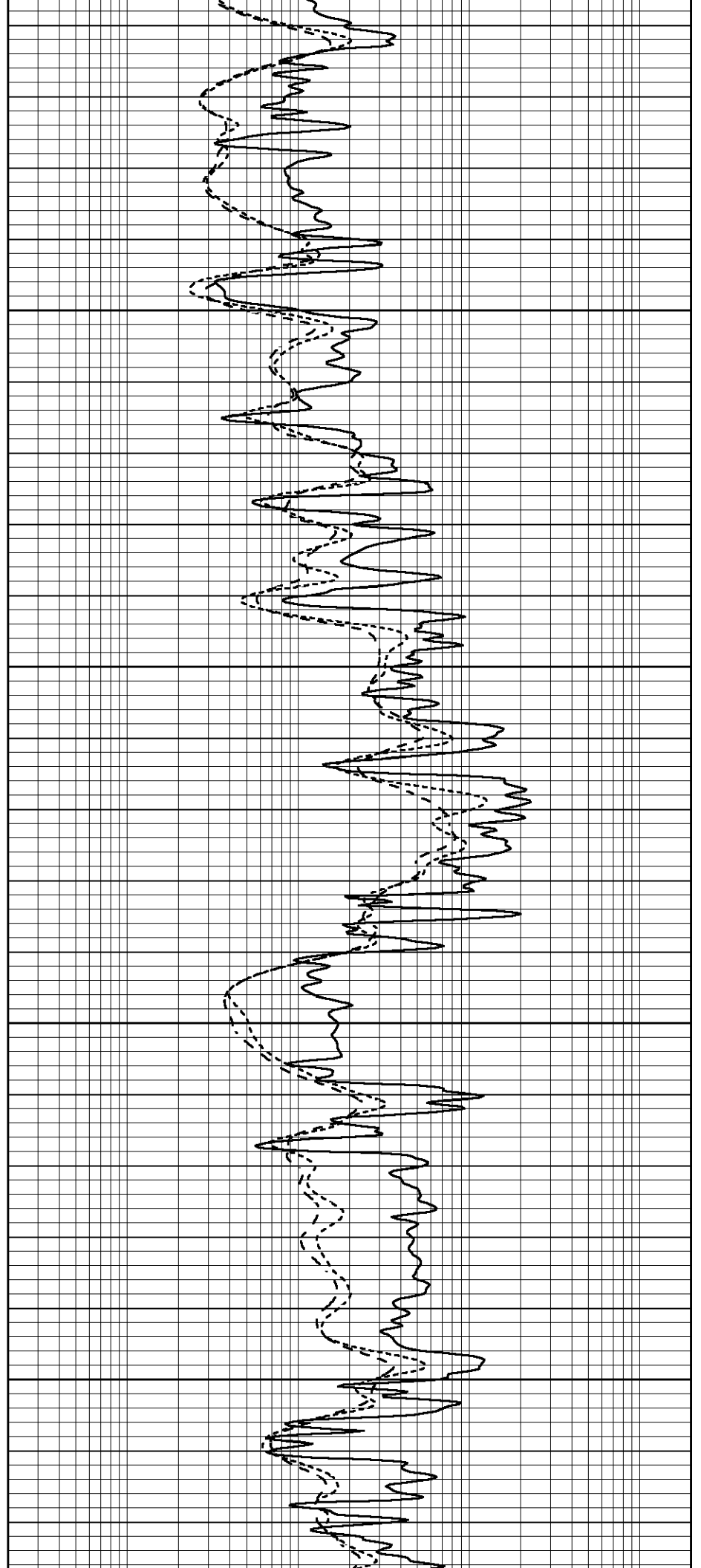


4000

4050

4100

4150



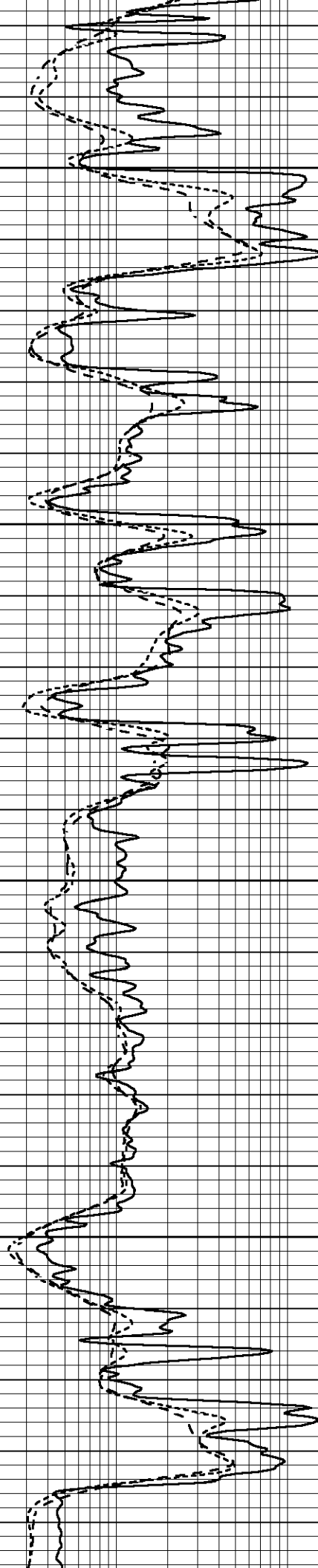


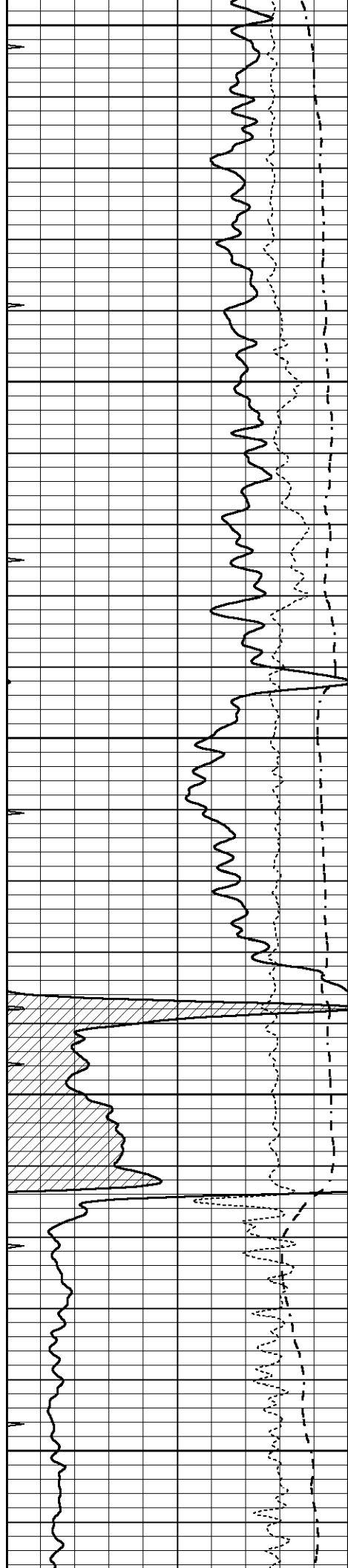
4200

4250

4300

4350





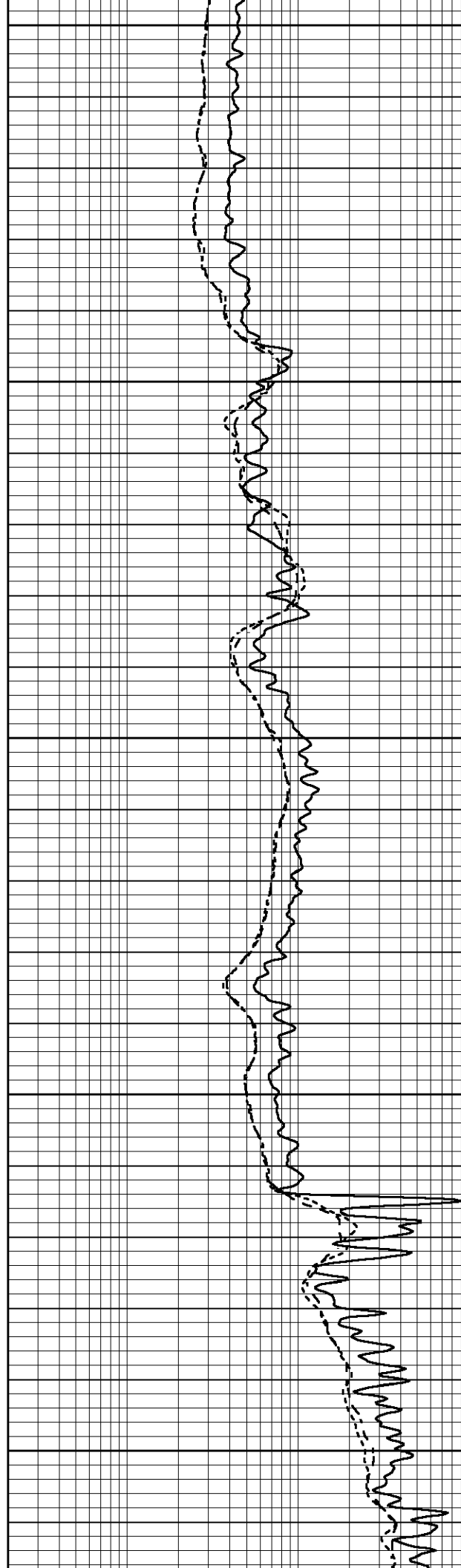
4400

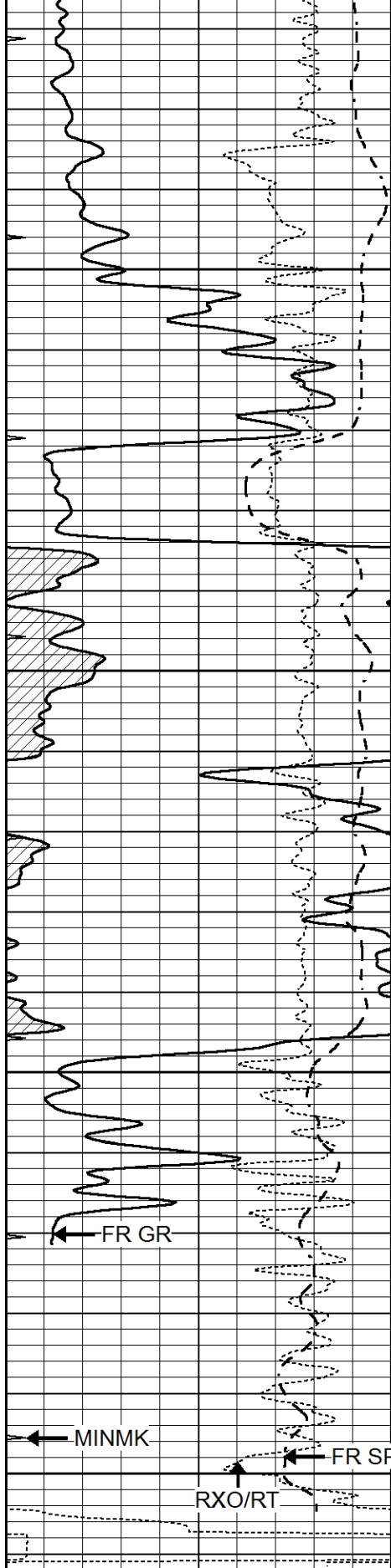
4450

4500

4550

4600





4650

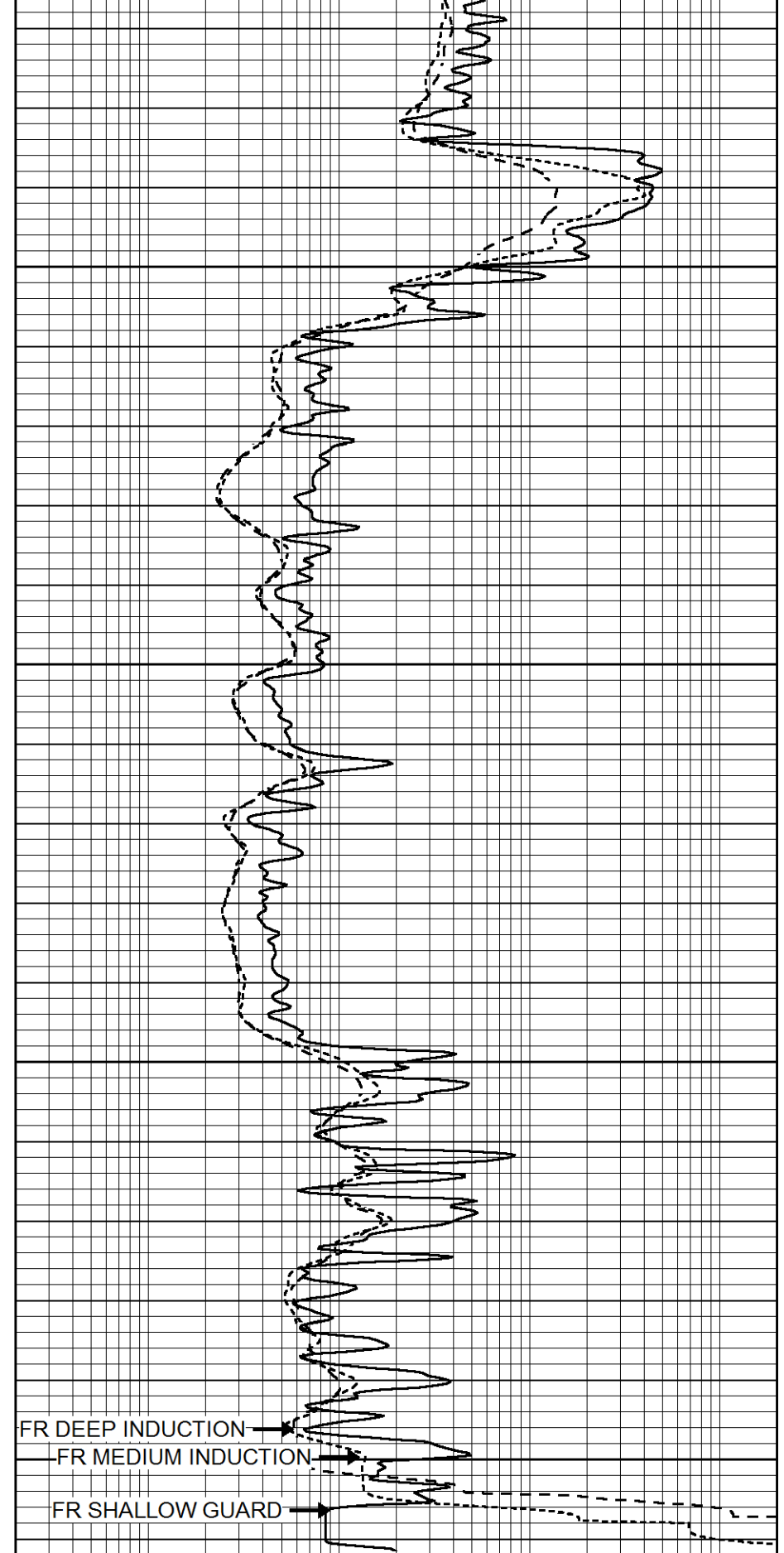
4700

4750

4800

LTD 4808

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



FR DEEP INDUCTION

FR MEDIUM INDUCTION

FR SHALLOW GUARD

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

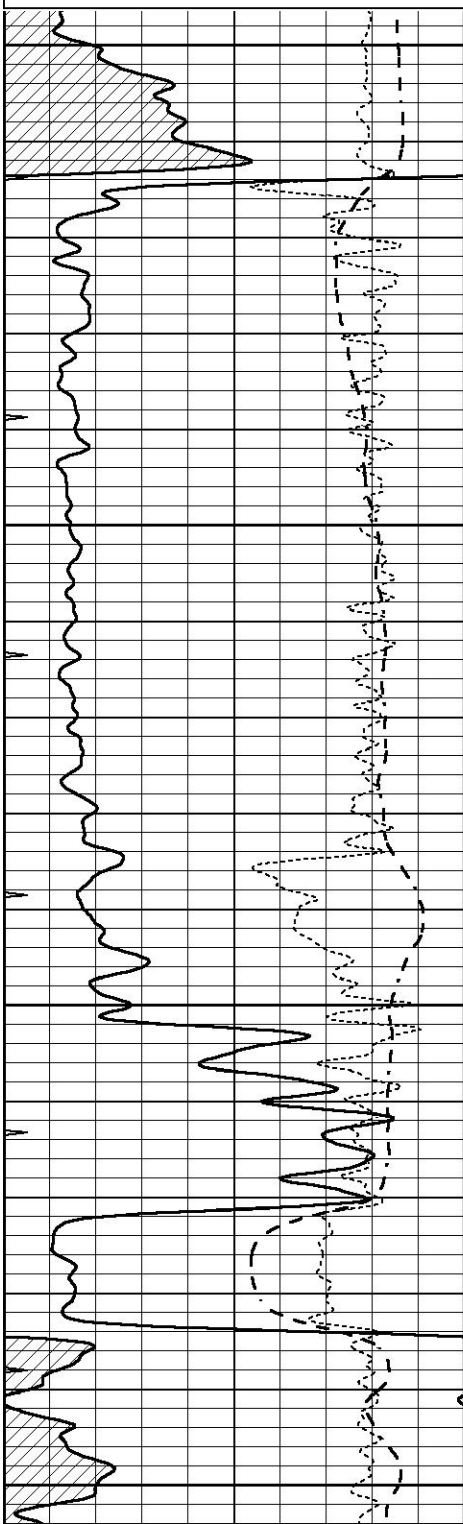


REPEAT SECTION

Database File 6925pe.db
 Dataset Pathname pass2.1R
 Presentation Format _dil
 Dataset Creation Tue Sep 13 14:12:32 2022
 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

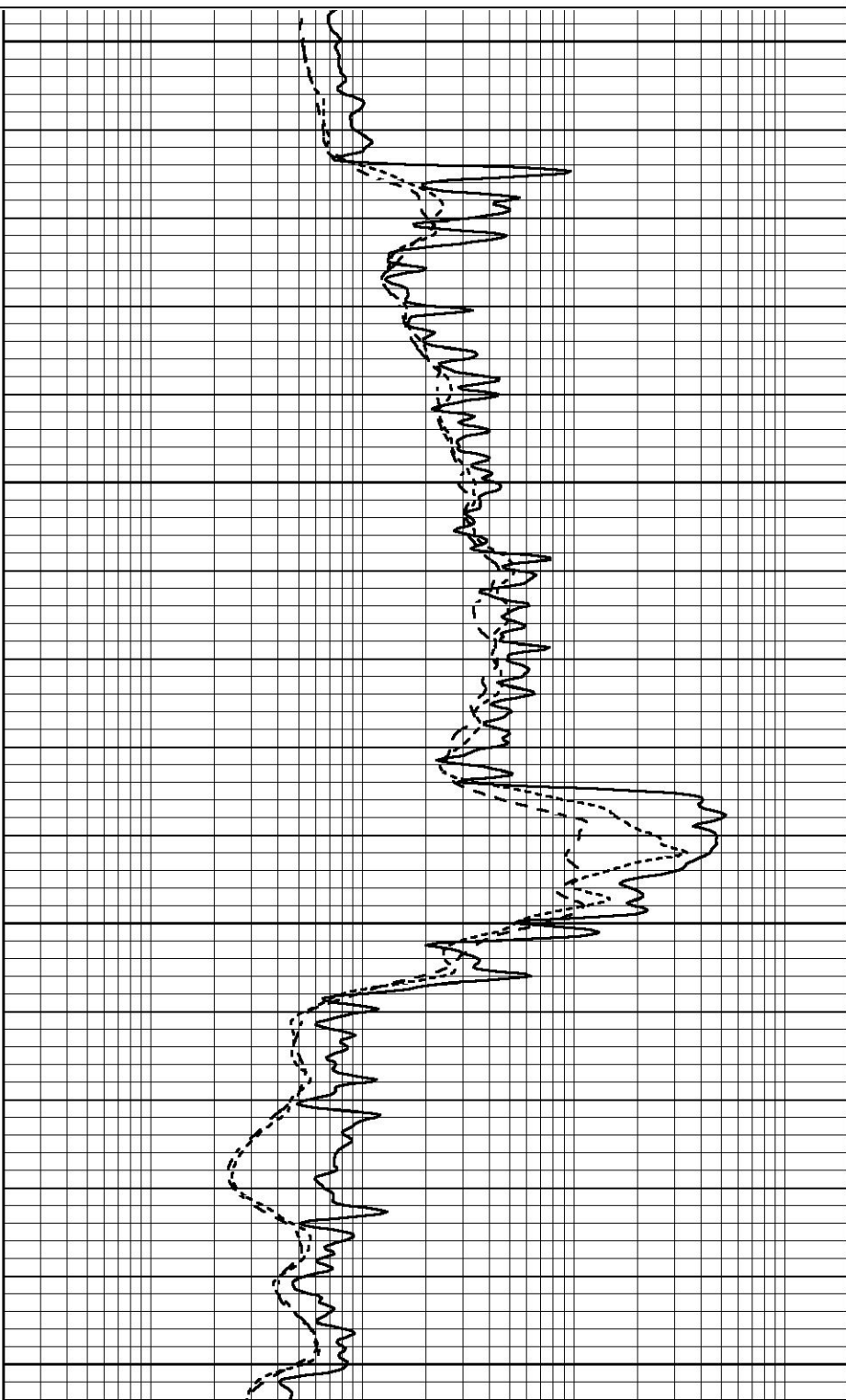


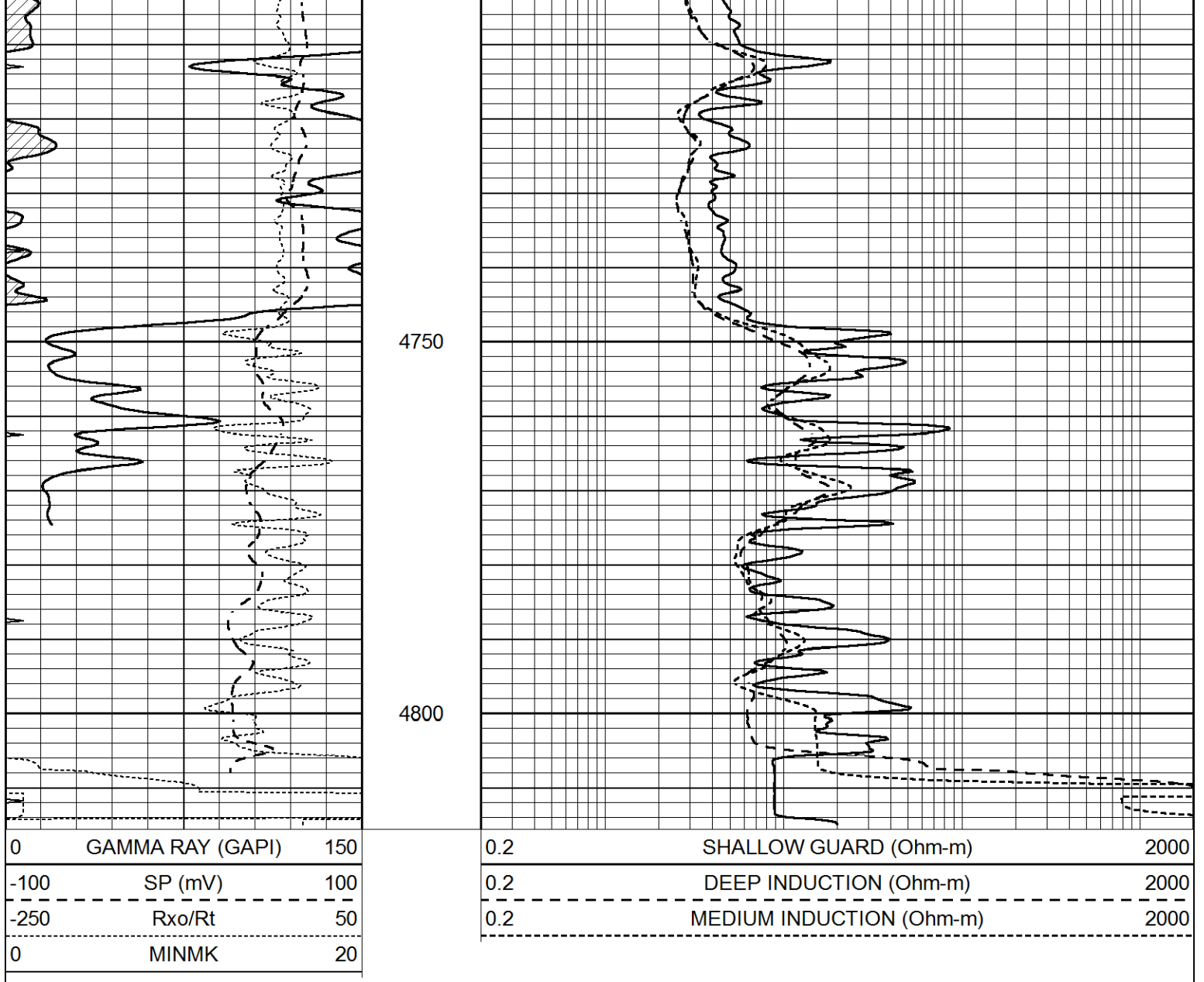
4550

4600

4650

4700





Calibration Report

Database File 6925pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Tue Sep 13 14:10:15 2022

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Tue Sep 13 12:18:42 2022
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	V	Air	Loop	mmho/m	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	640.000	14.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	630.000	4.000

Internal:	Zero			Cal			Results	
	Zero	Cal	V	Zero	Cal	mmho/m	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: 004 Model: PRB

Master Calibration

Performed Tue Aug 02 11:29:35 2022

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1154.2	10019.5	3137.9	2795.6	cps
Window 2	1054.4	8597.6	2733.4	2469.5	cps
Window 3	902.3	5241.4	1832.1	1719.3	cps
Window 4	251.9	261.1	255.8	252.9	cps
Long Space	0.0	7543.2	1679.0	1415.0	cps
Short Space	4.4	2049.3	1321.7	1116.8	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 43.7	Rib Slope	: 0.957	Density/Spine Ratio	: 0.562
Spine Angle	: 73.7	Spine Slope	: 3.426	Spine Intercept	: -17.2

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

	Background	Magnesium	Aluminum	Aluminum+Fe	
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

	Background	Magnesium	Aluminum	Aluminum+Fe	
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		
Long Space	cps	pu	pu

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: Mon Sep 05 14:32:31 2022

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps