



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company **AMERICAN WARRIOR, INC.**
Well **YOUNG NO. 1-12**
Field **WILDCAT**
County **GREELEY**
State **KANSAS**

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Field **WILDCAT**
County **GREELEY** State **KANSAS**

Location: API #: 15-071-20887-00-00

Other Services

SEC 12 TWP 16S RGE 42W
2299' FSL & 335' FWL

CNL/CDL
MEL

Permanent Datum **GROUND LEVEL** Elevation **3790'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 3801'
D.F. N/A
G.L. 3790'

Date **9/25/2018**

Run Number	ONE		
Depth Driller	5200'		
Depth Logger	5197'		
Bottom Logged Interval	5196'		
Top Log Interval	400'		
Casing Driller	8.625" @ 436'		
Casing Logger	436'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	3800		
Density / Viscosity	9.3 55		
pH / Fluid Loss	11.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.68 @ 71		
Rmt @ Meas. Temp	.51 @ 71		
Rmc @ Meas. Temp	.92 @ 71		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.38 @ 128		
Operating Rig Time	2 HOURS		
Max Rec. Temp. F	128 DEGF		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	LUKE THOMPSON		

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

**SHARON SPRINGS KANSAS
WEST TO ROAD 9, SOUTH TO COUNTY LINE
3/4 WEST, 1 1/2 SOUTH, EAST INTO**

Log Measured From: KELLY BUSHING 11 Ft. Above Permanent Datum

**THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858**

Your Pioneer Energy Services Crew

Engineer: J. HENRICKSON
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: LUKE THOMPSON
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\american_warrior_young_1_12.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
0	0	0	0	0	0	0	0
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	0	0	Off	0



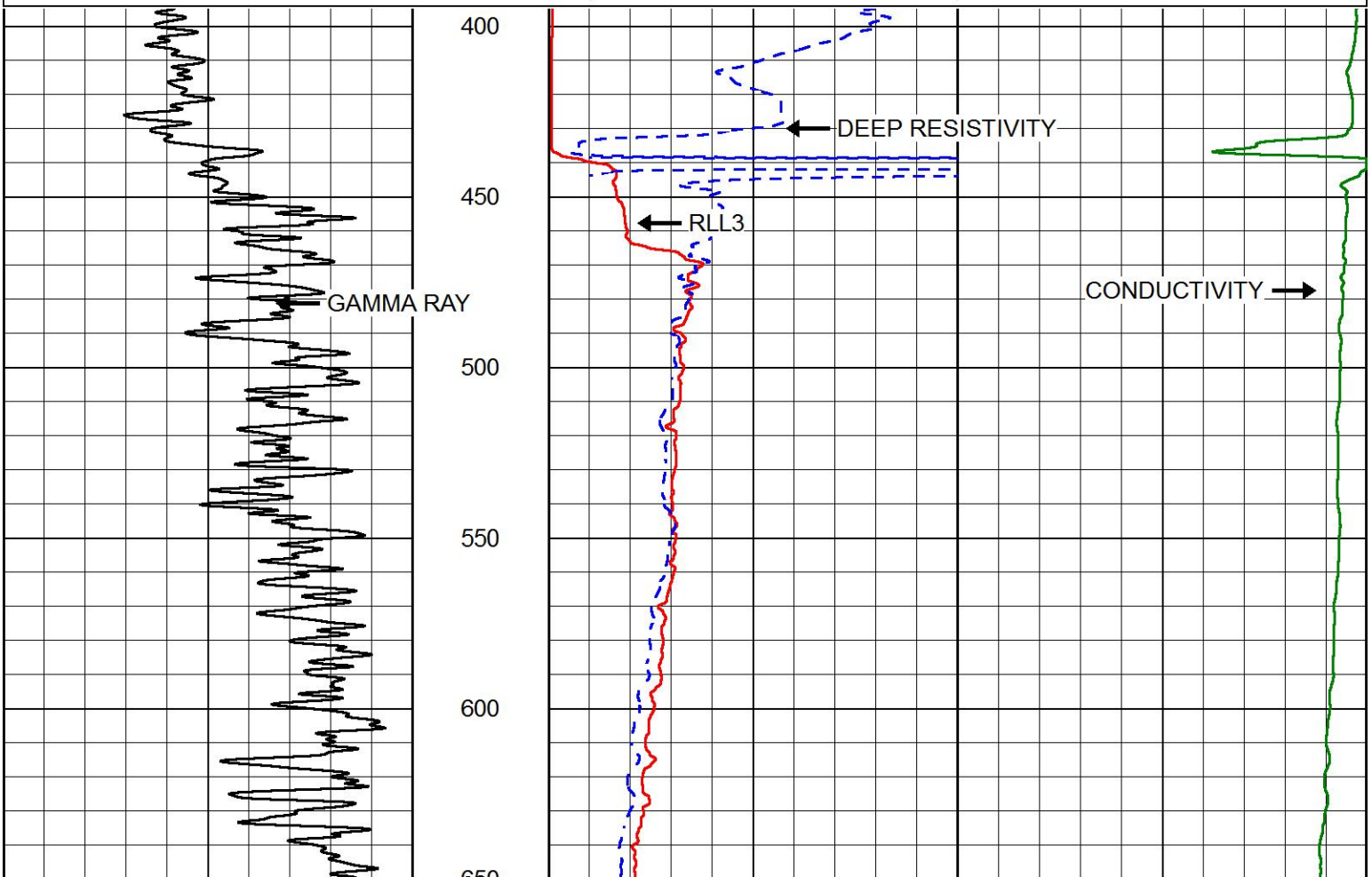
MAIN PASS

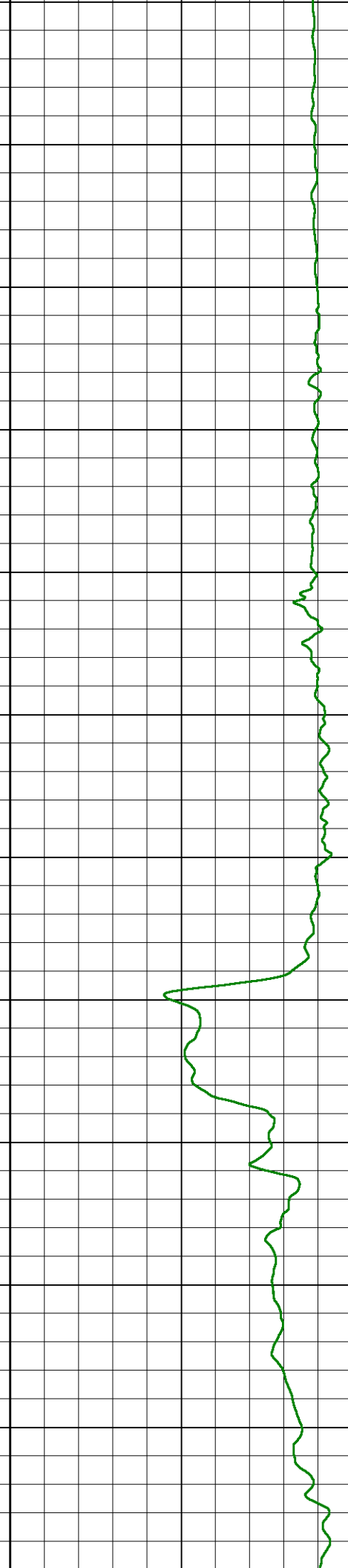
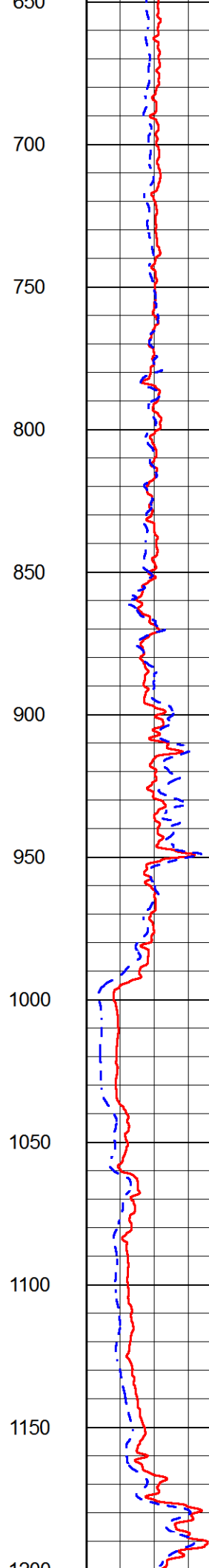
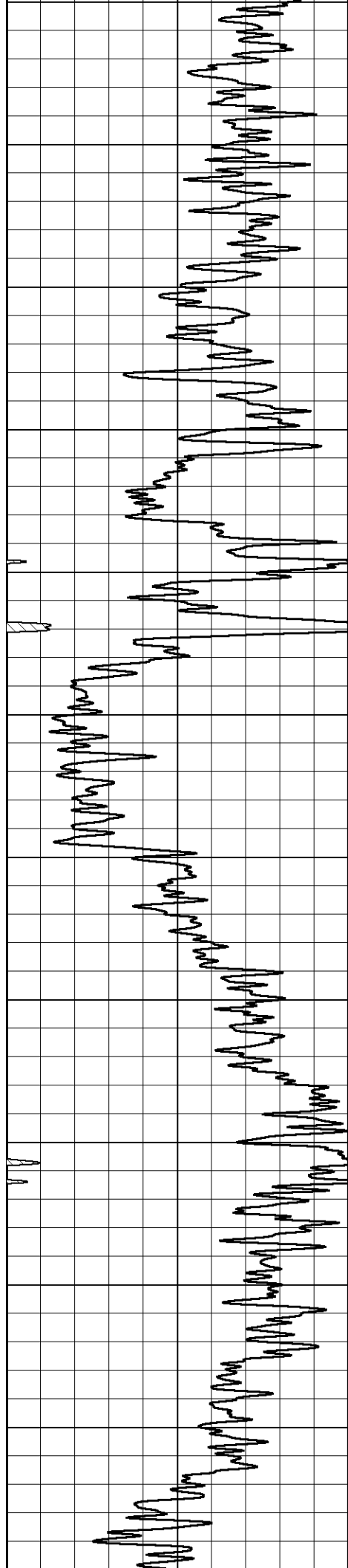
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Dataset Pathname stackml/pass4.1
Presentation Format dil2in
Dataset Creation Tue Sep 25 14:02:45 2018
Charted by Depth in Feet scaled 1:600

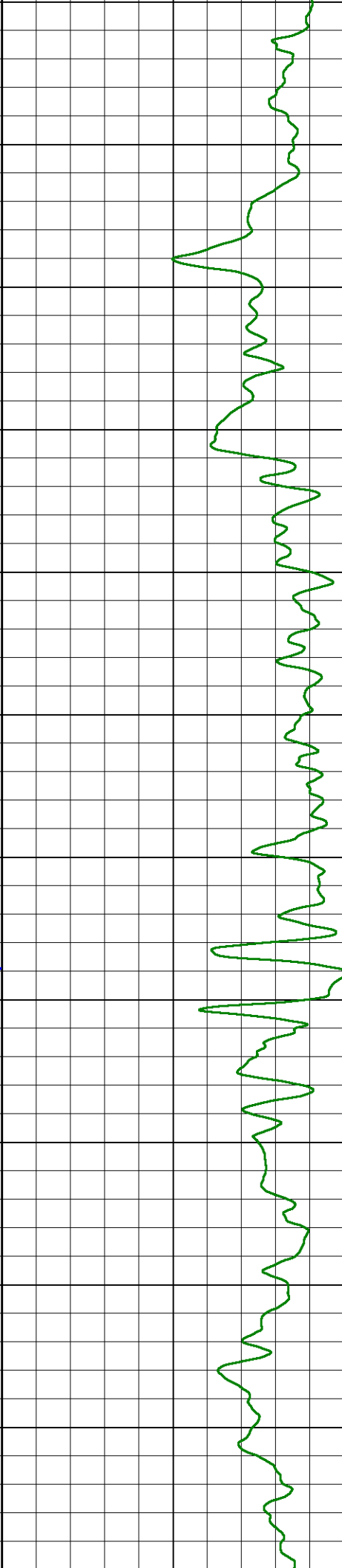
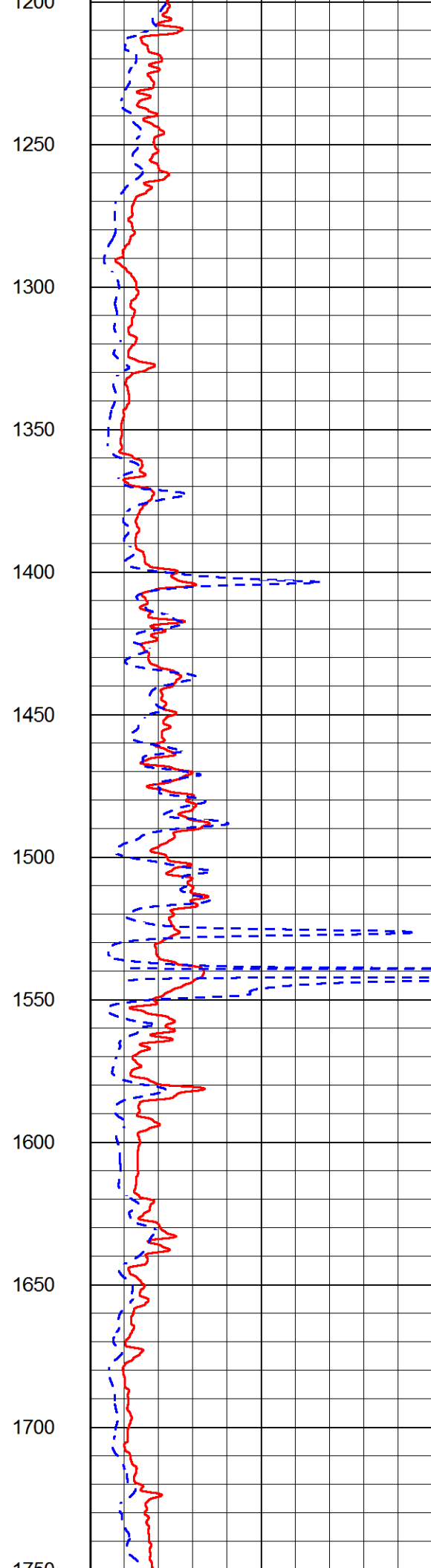
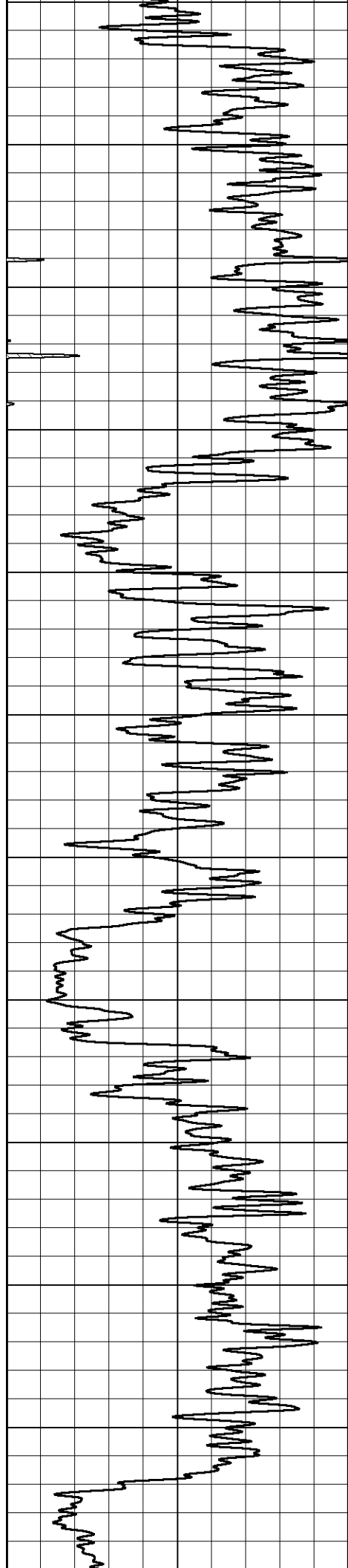
0 GAMMA RAY (GAPI) 150

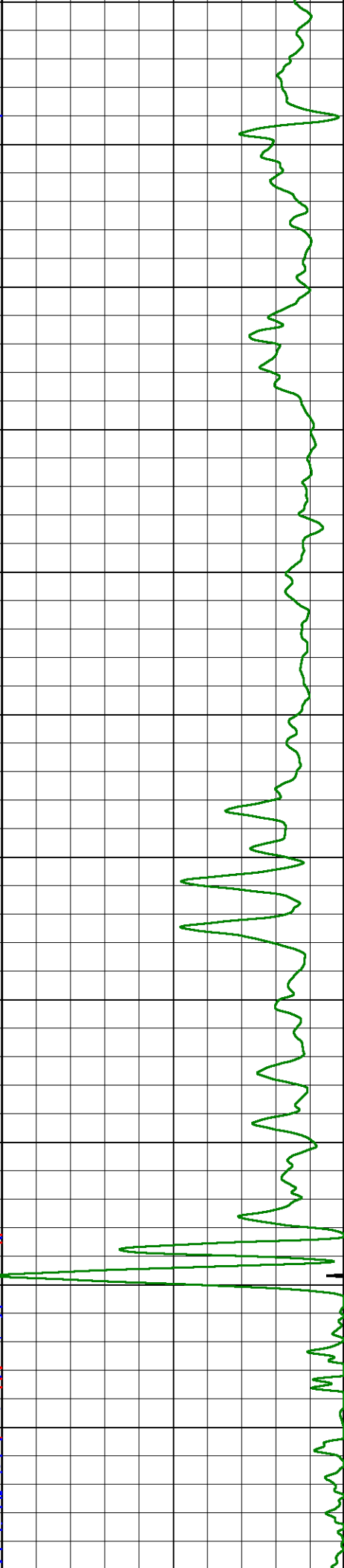
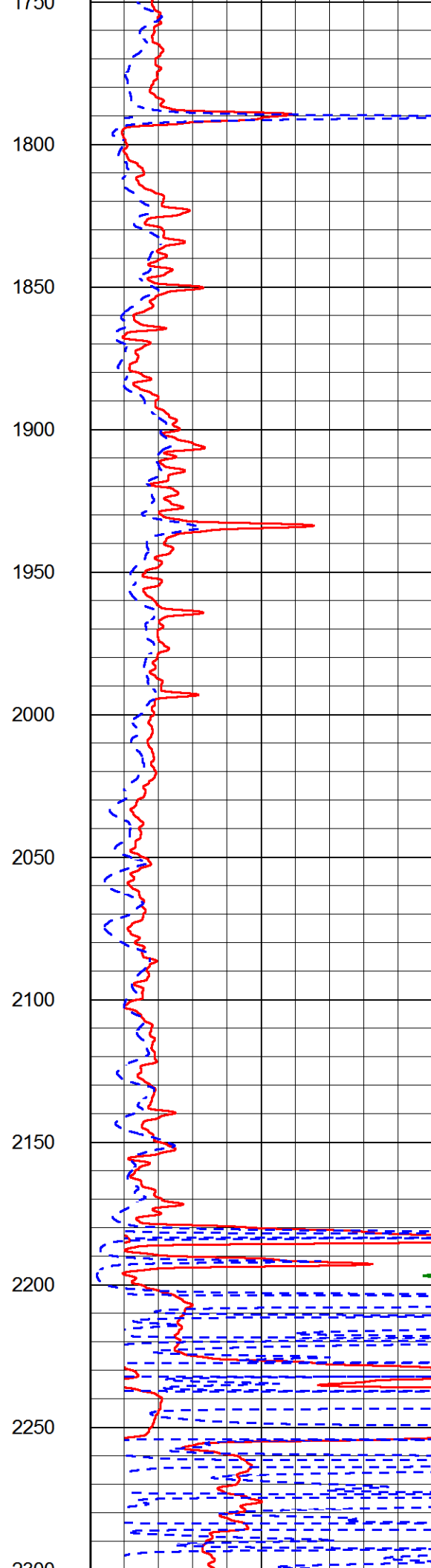
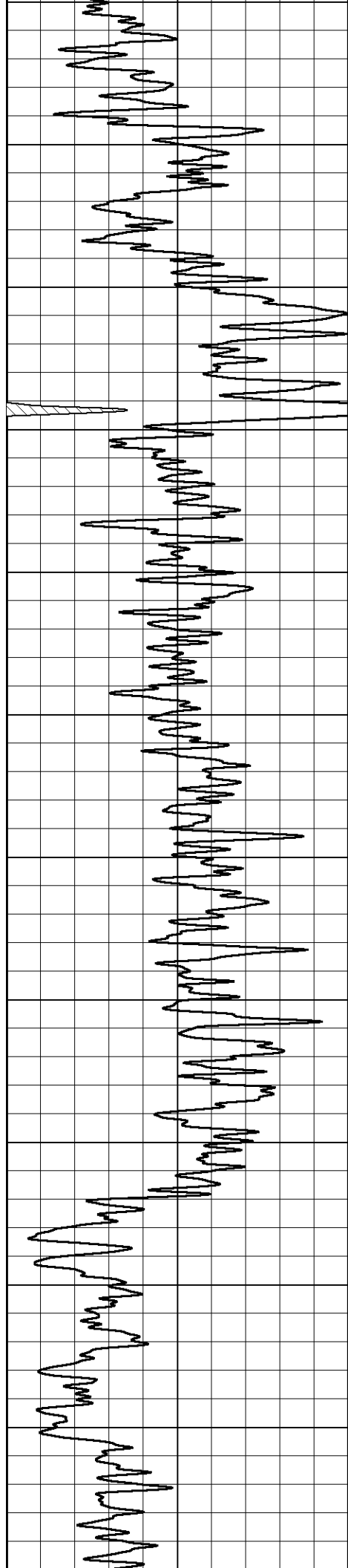
2000 CILD (mmho/m) 0

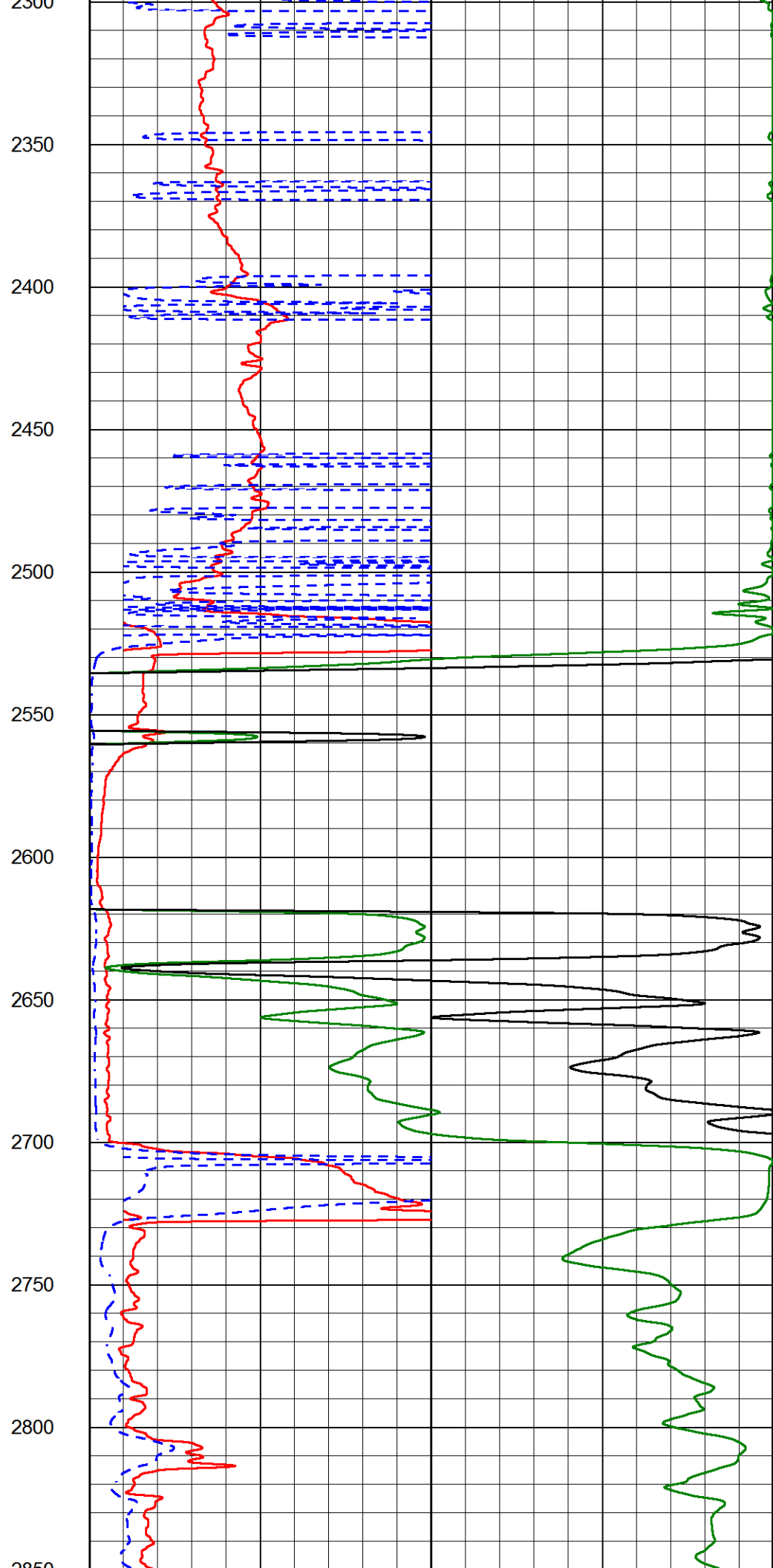
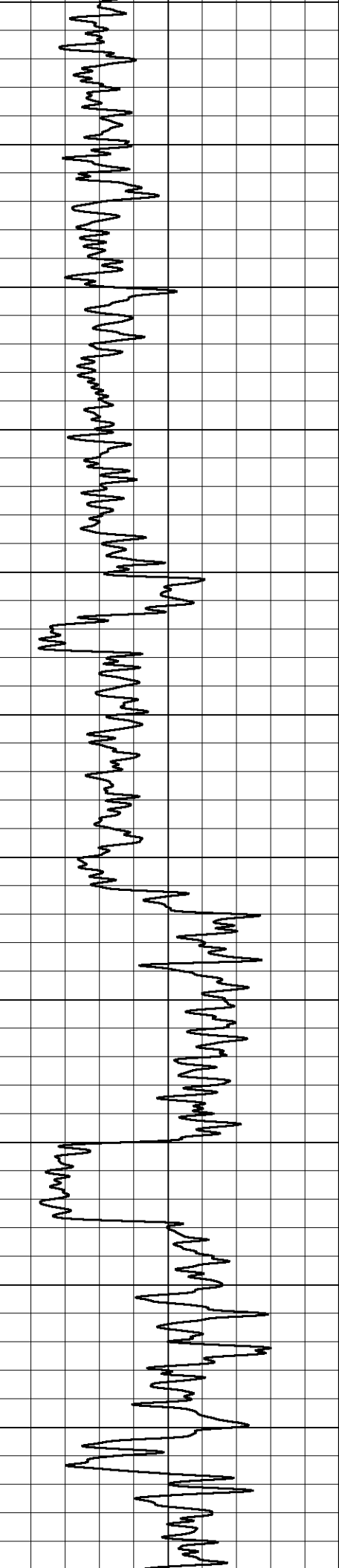
0	RLL3 (Ohm-m)	50
0	DEEP RESISTIVITY (Ohm-m)	50
50	RLL3 (Ohm-m)	500
50	RILD (Ohm-m)	500

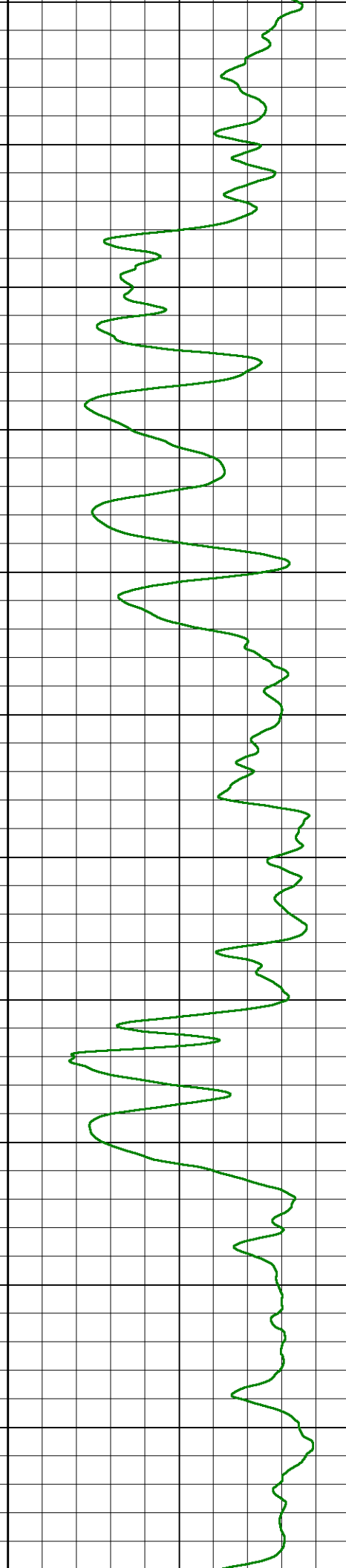
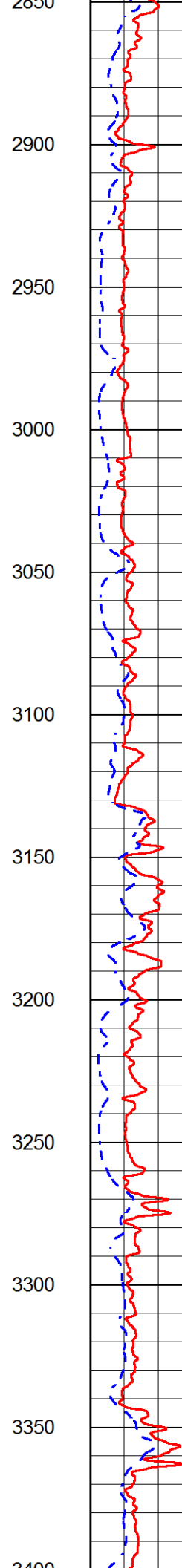
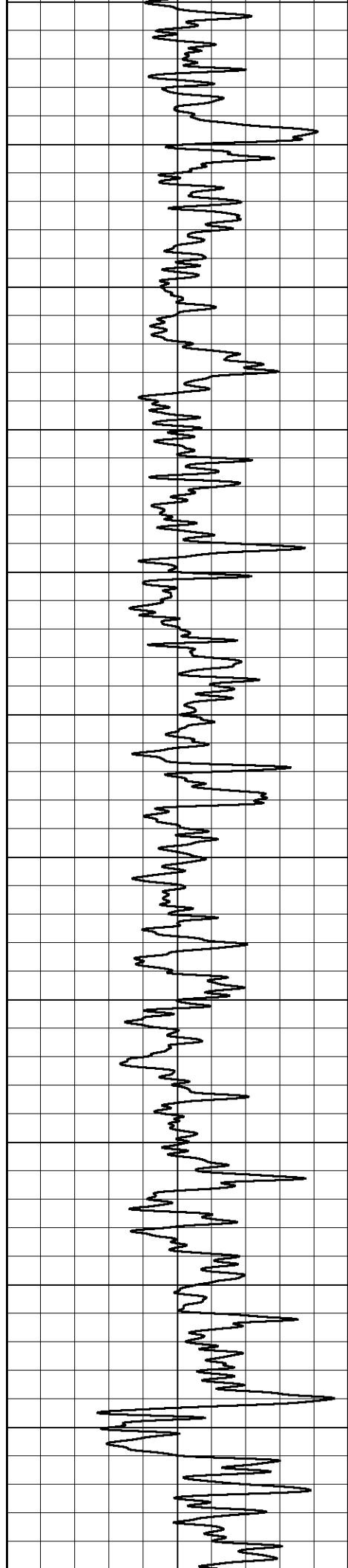


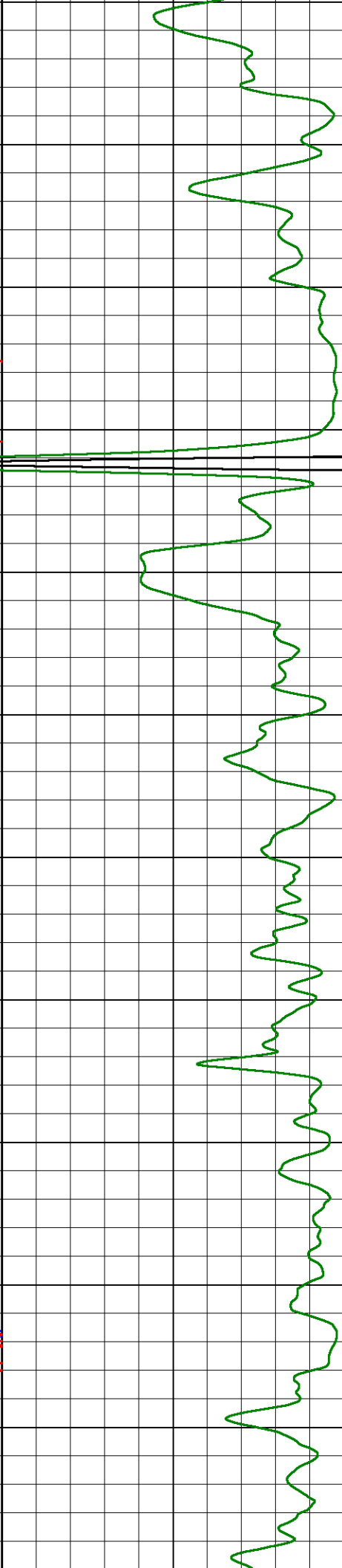
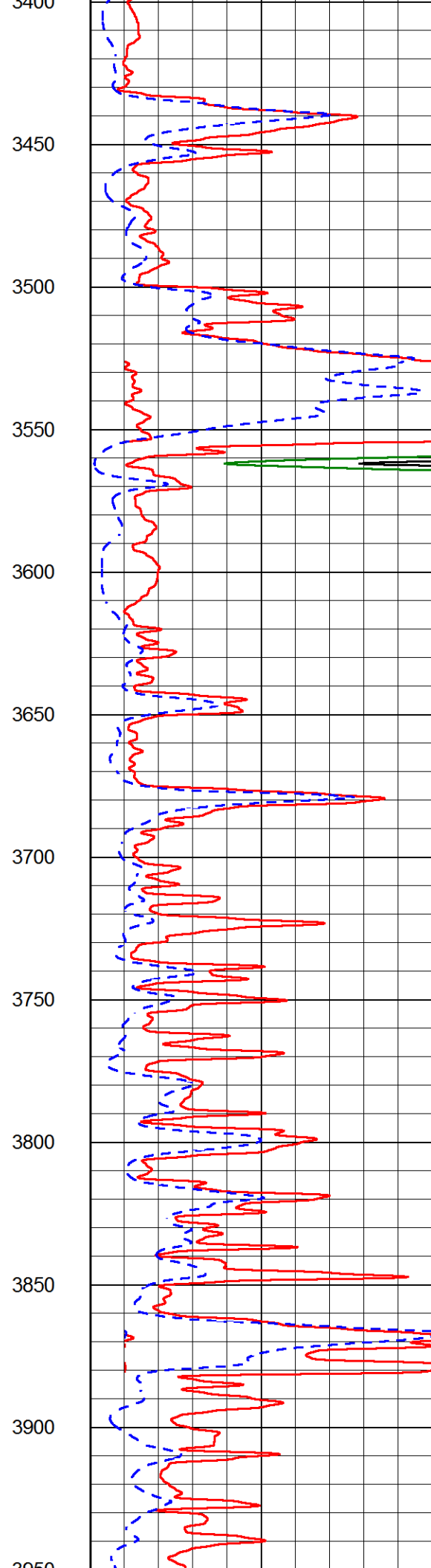
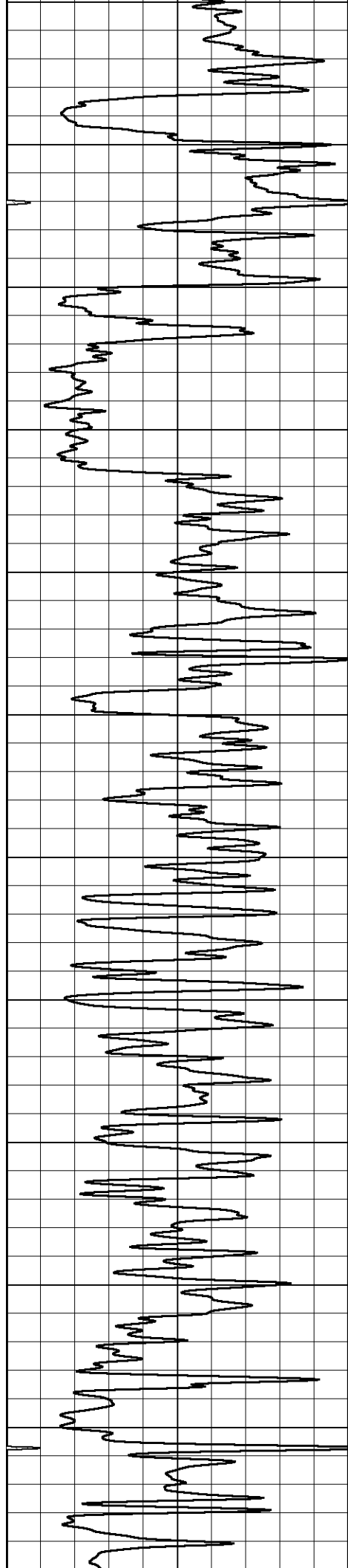


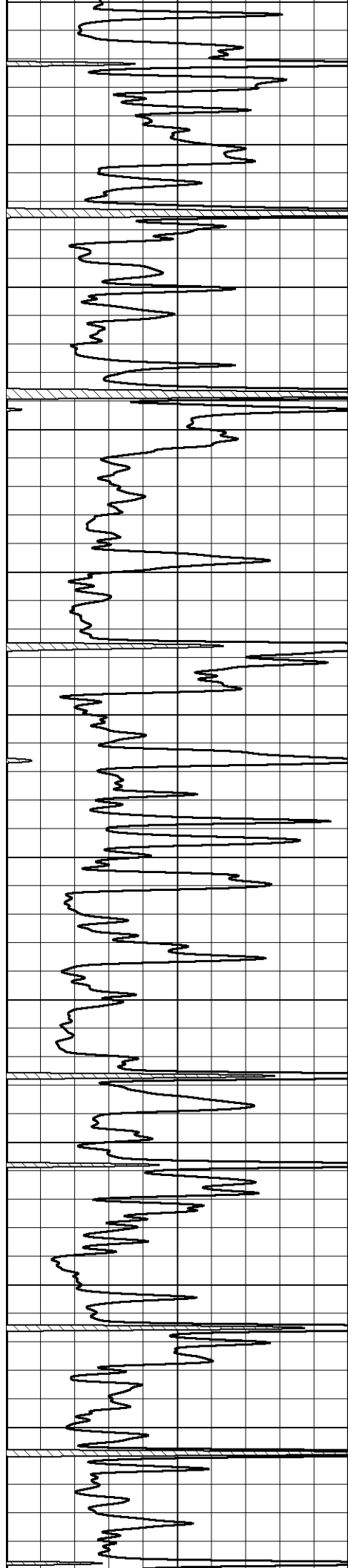




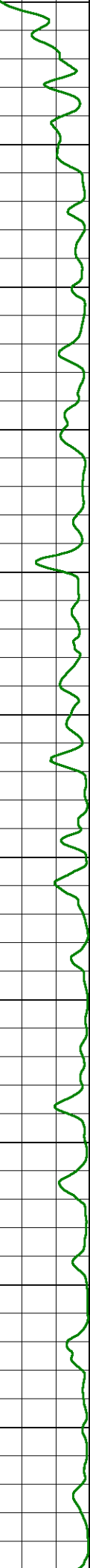
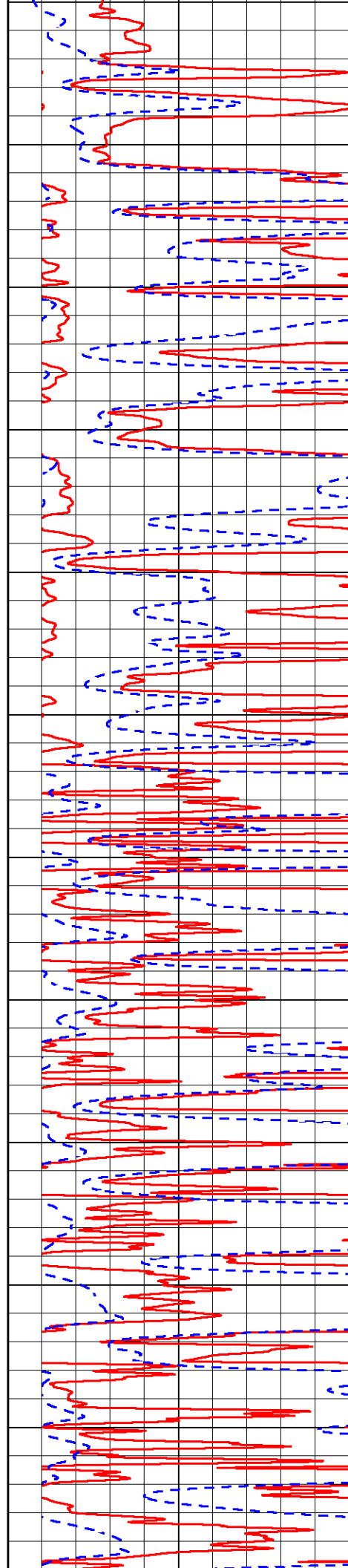


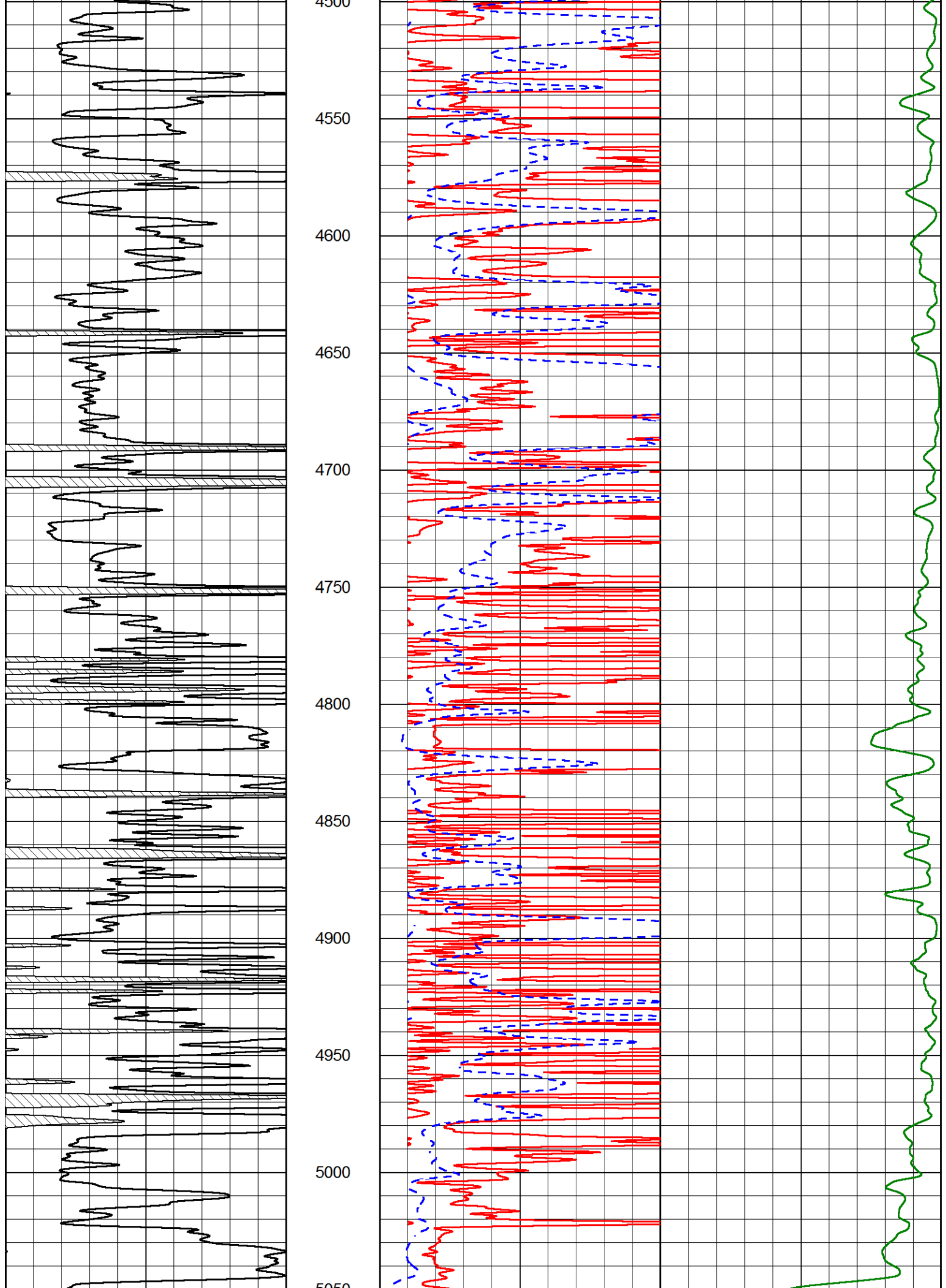


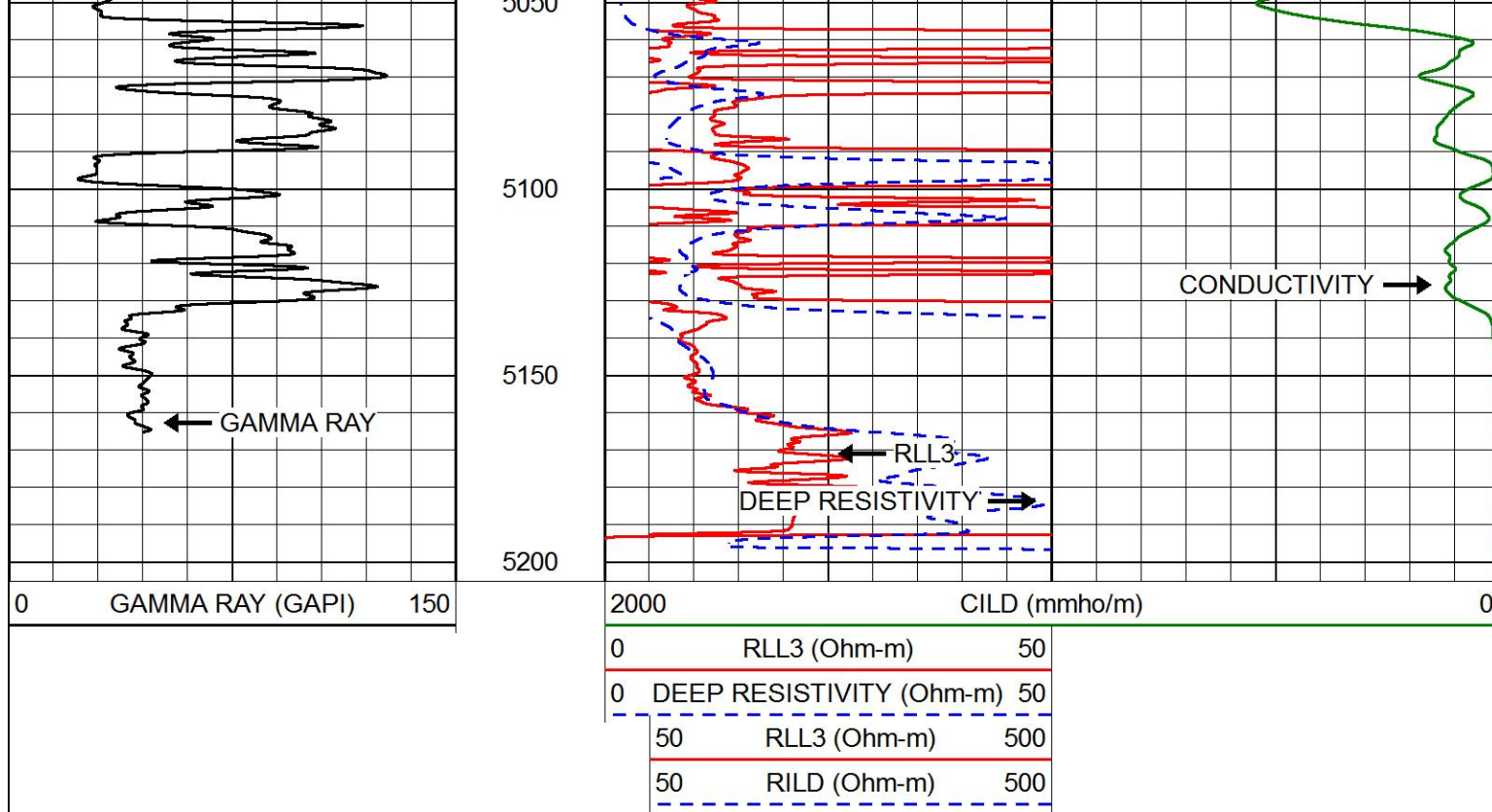




3950
4000
4050
4100
4150
4200
4250
4300
4350
4400
4450
4500



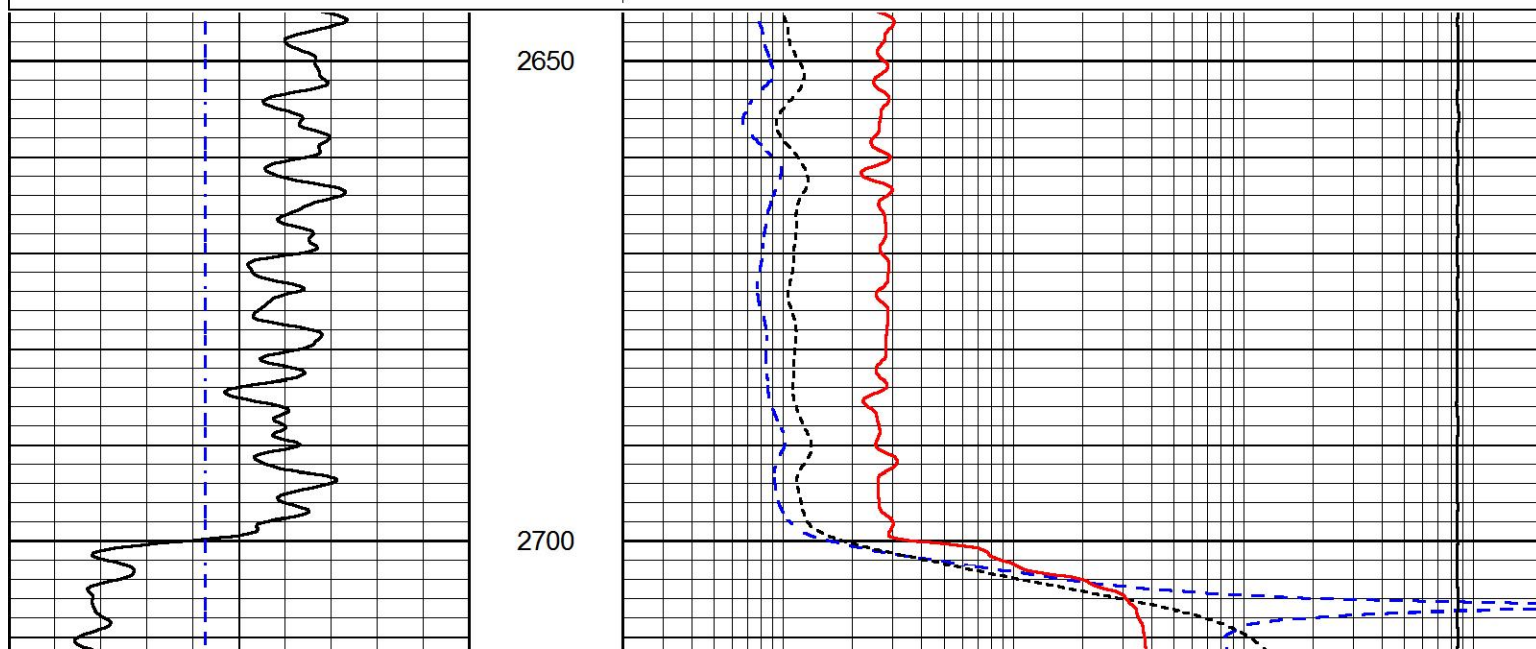


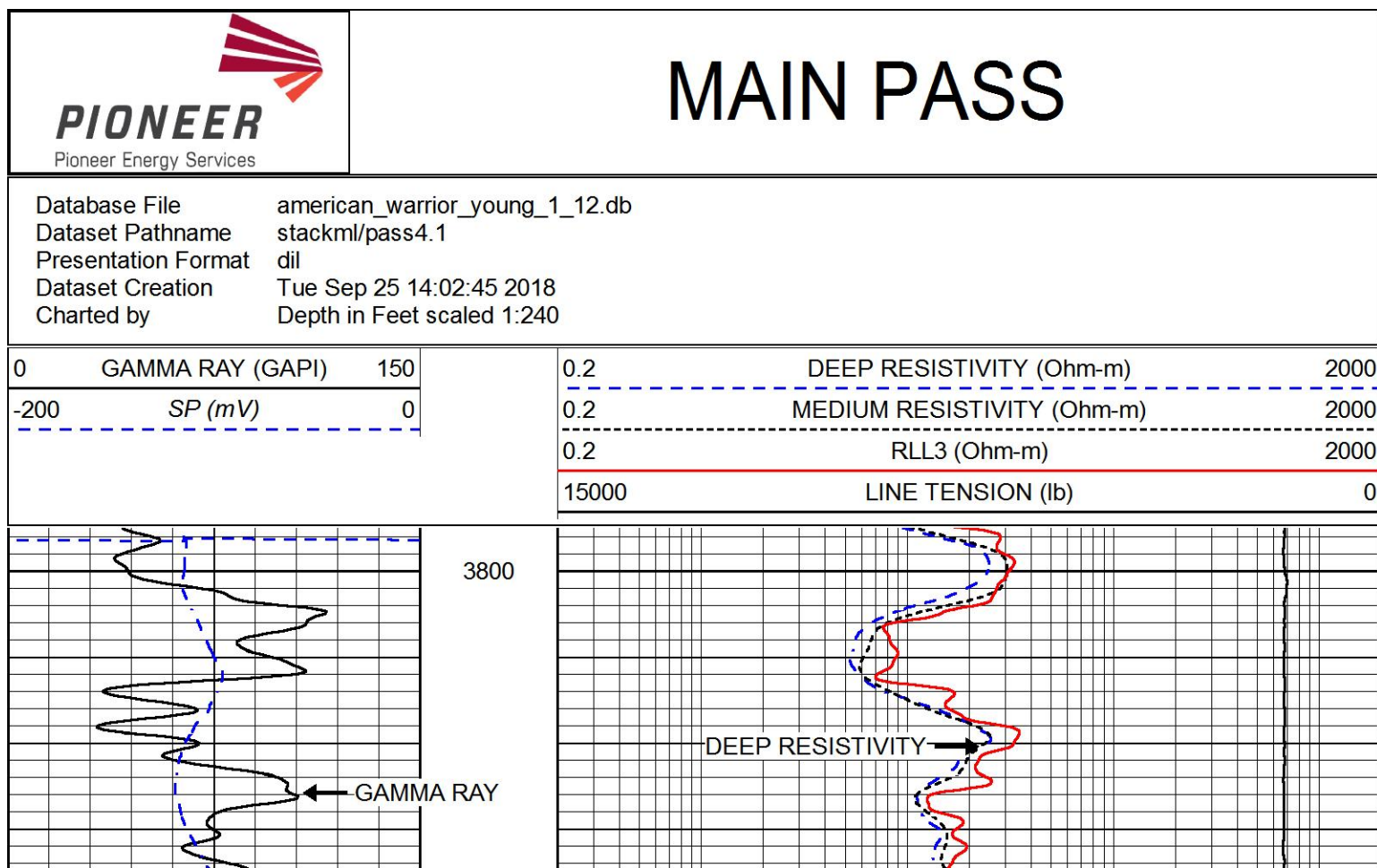
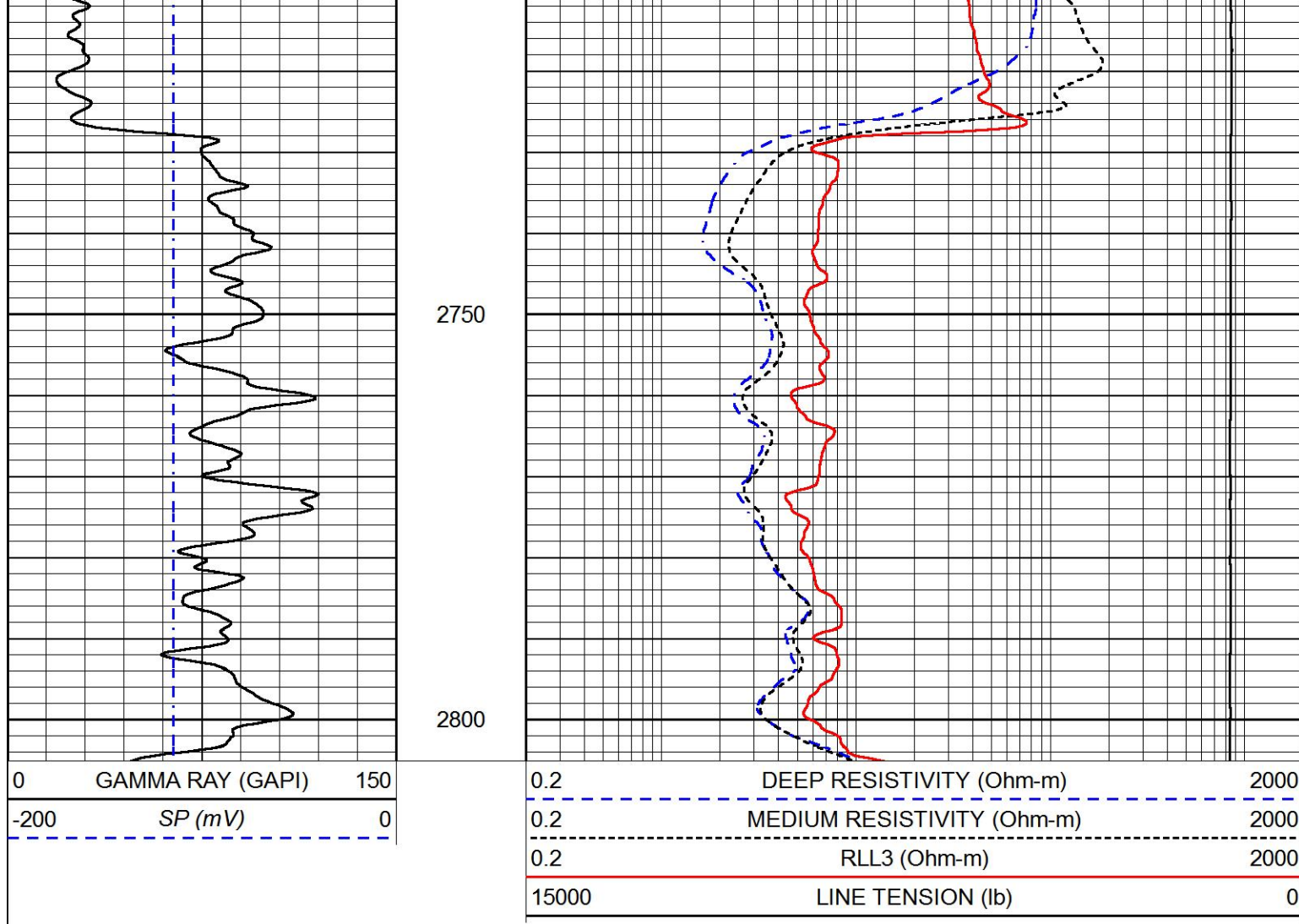


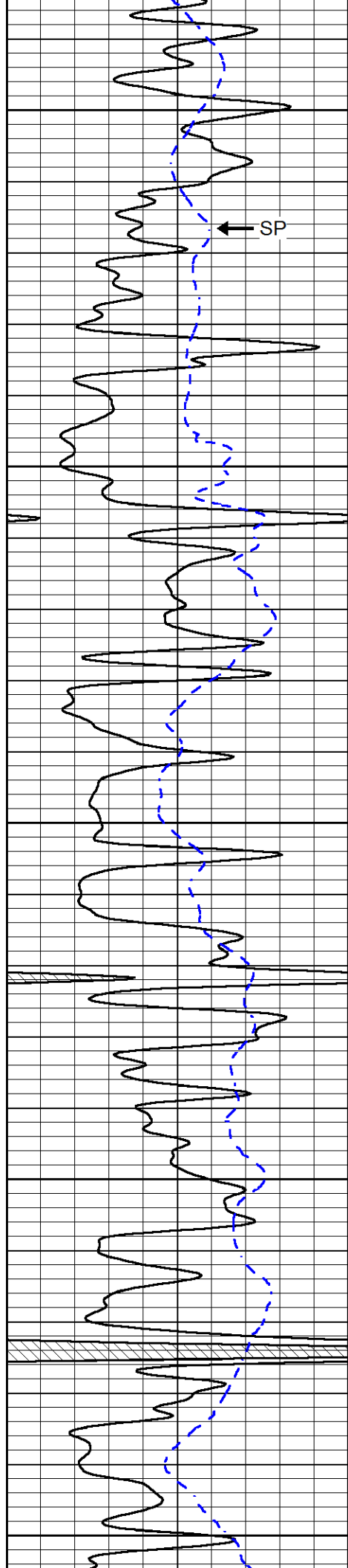
MAIN PASS

Database File american_warrior_young_1_12.db
 Dataset Pathname stackml/pass4.1
 Presentation Format dil
 Dataset Creation Tue Sep 25 14:02:45 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0







3850

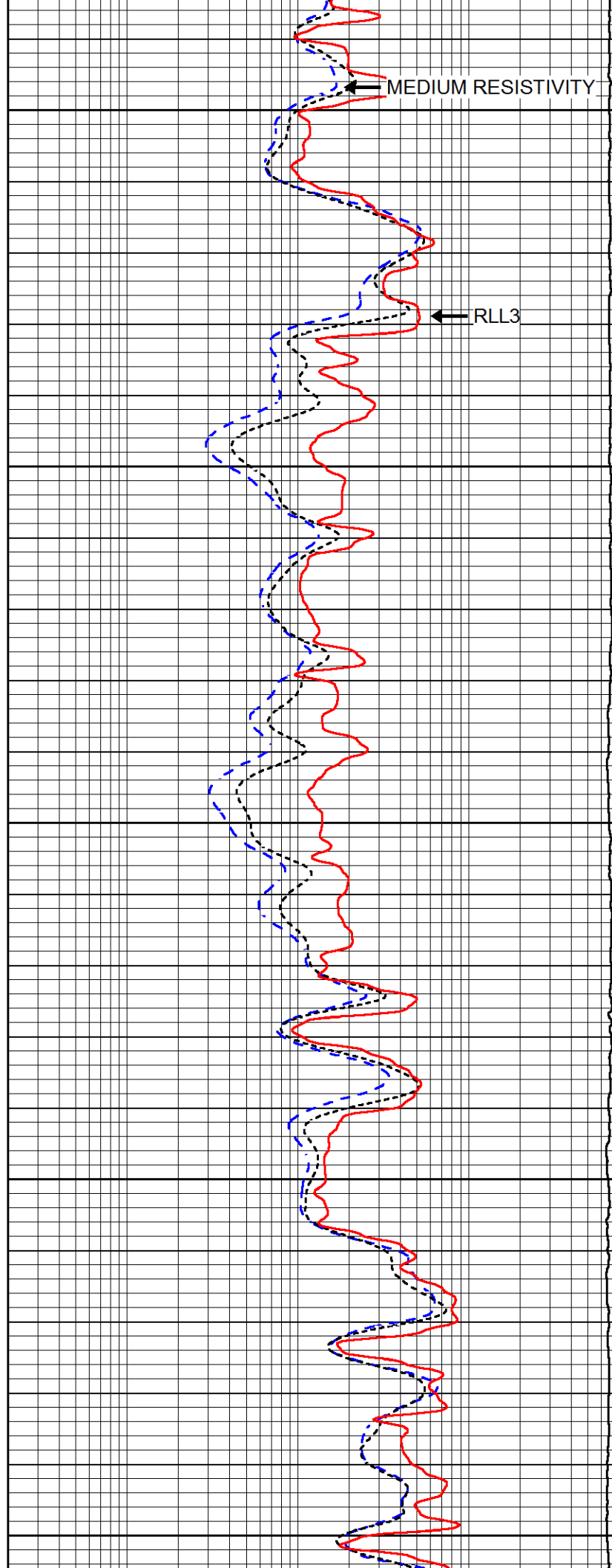
← SP

3900

3950

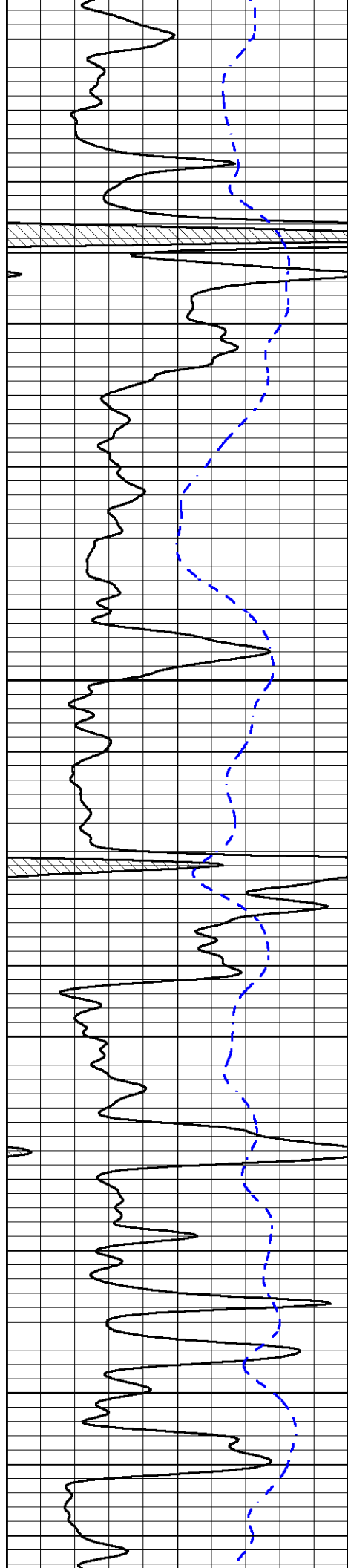
4000

4050



← MEDIUM RESISTIVITY

← RLL3

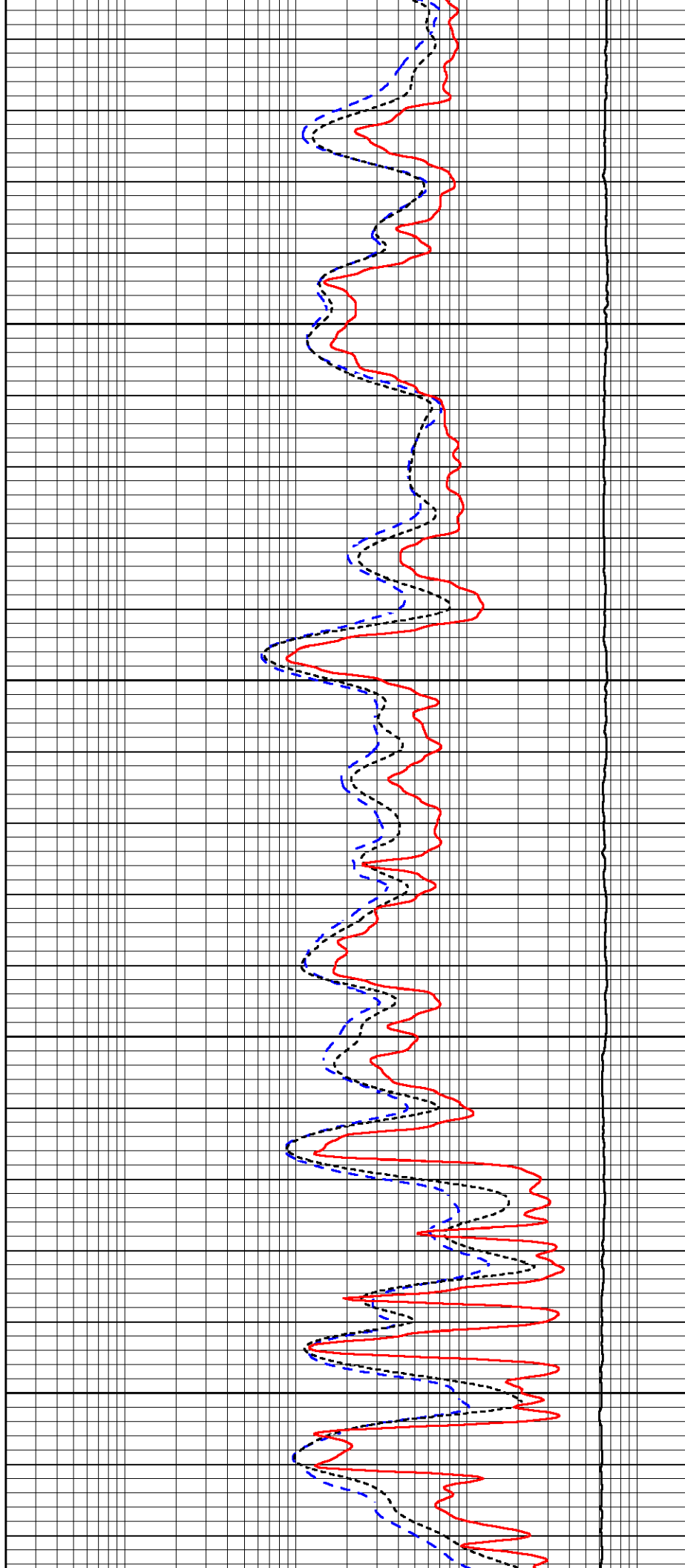


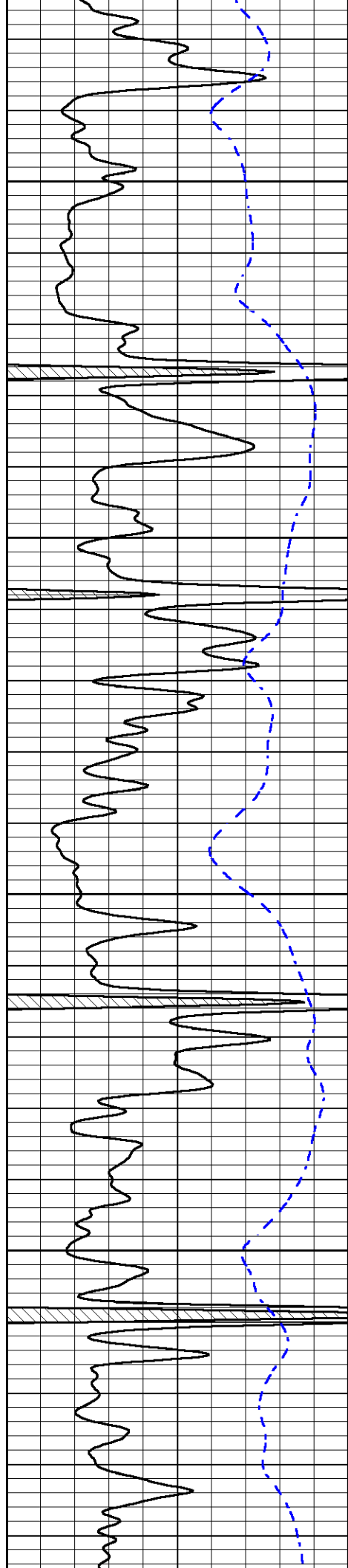
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4150

4200

4250



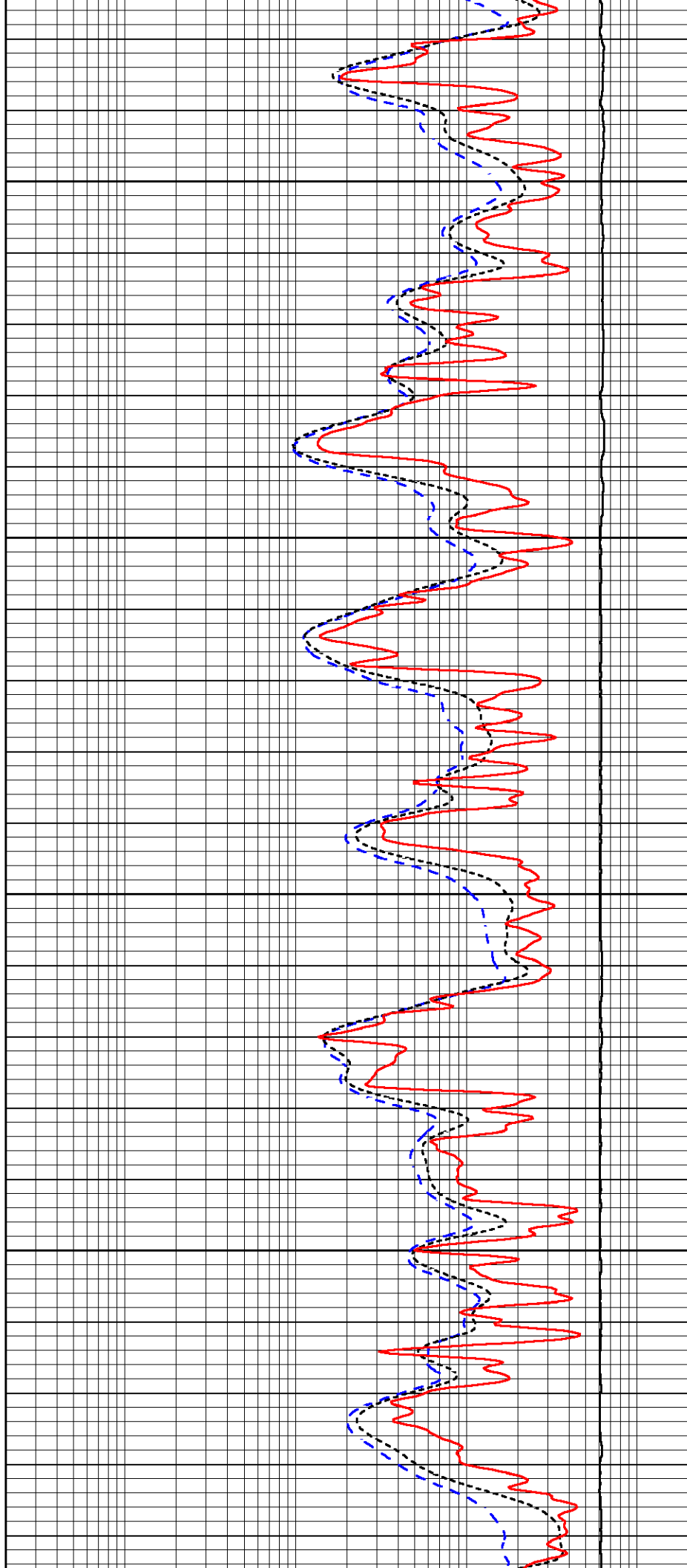


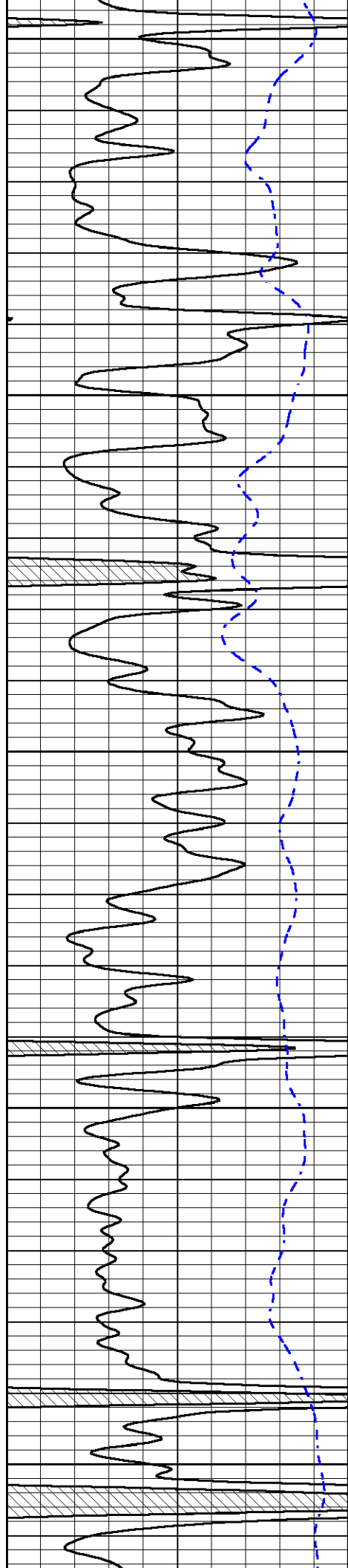
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4400

4450





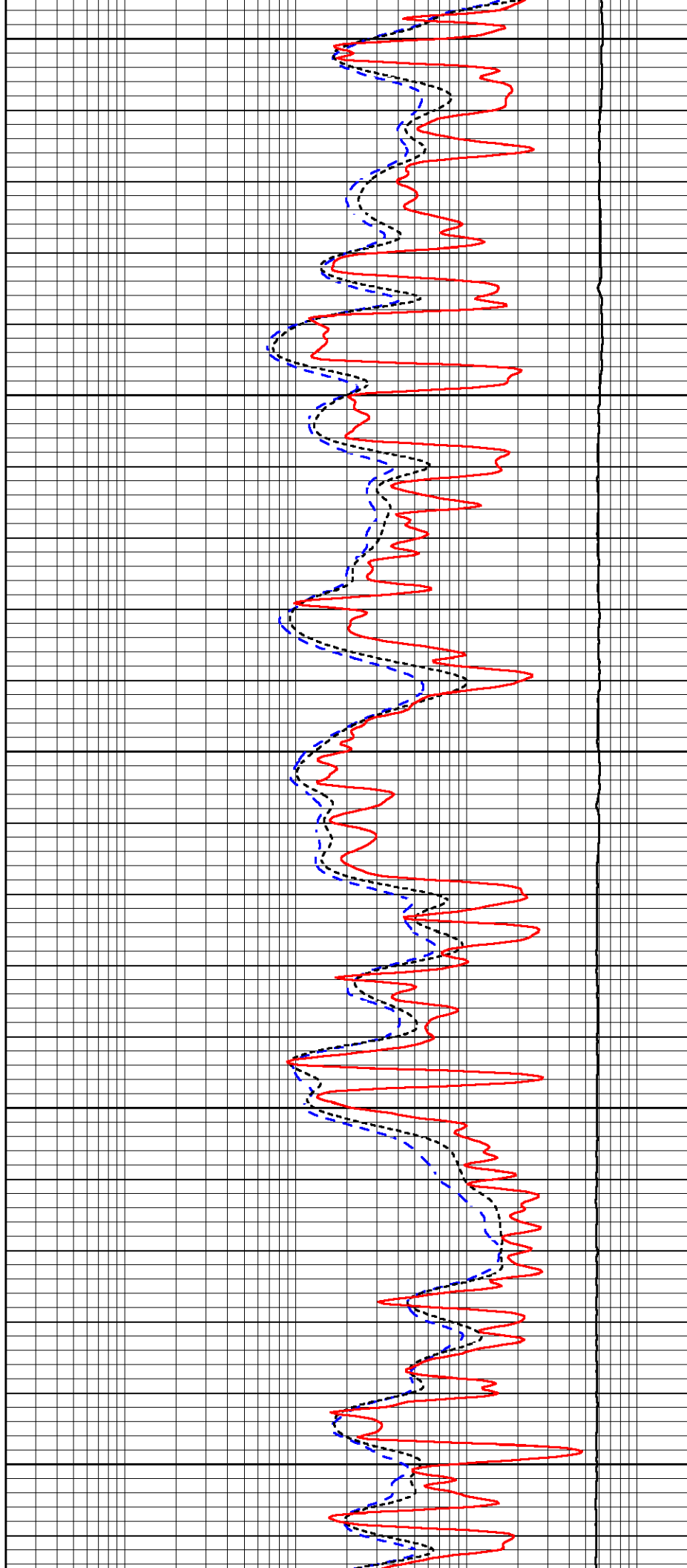
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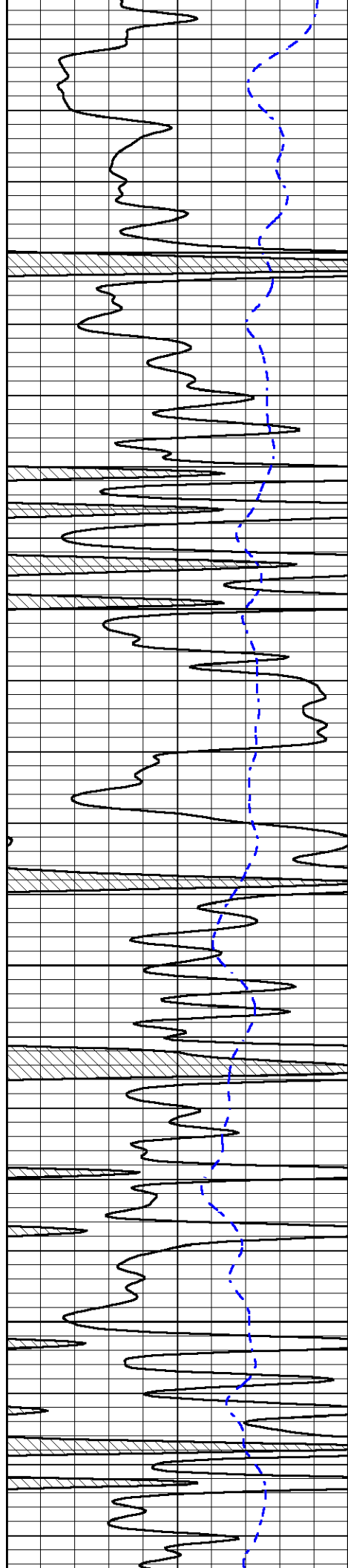
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4600

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4700



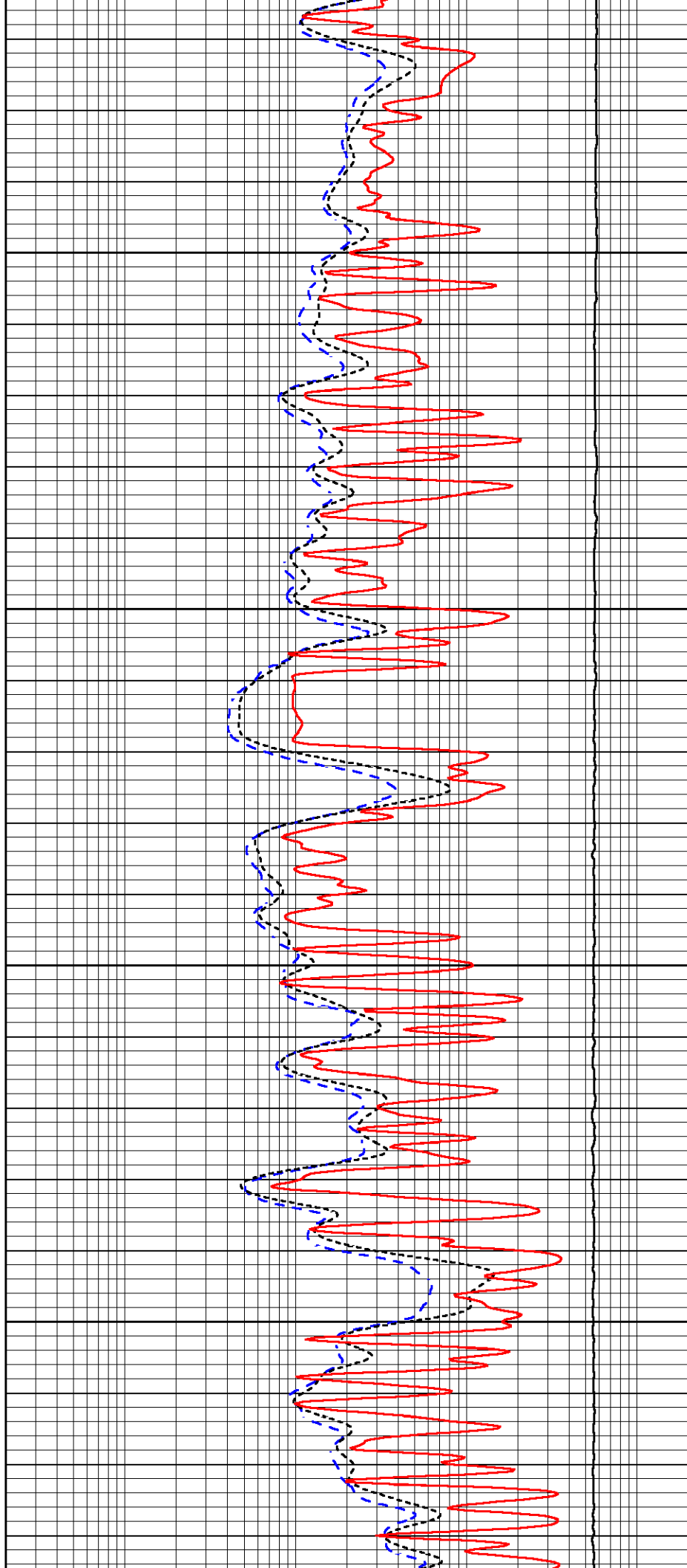


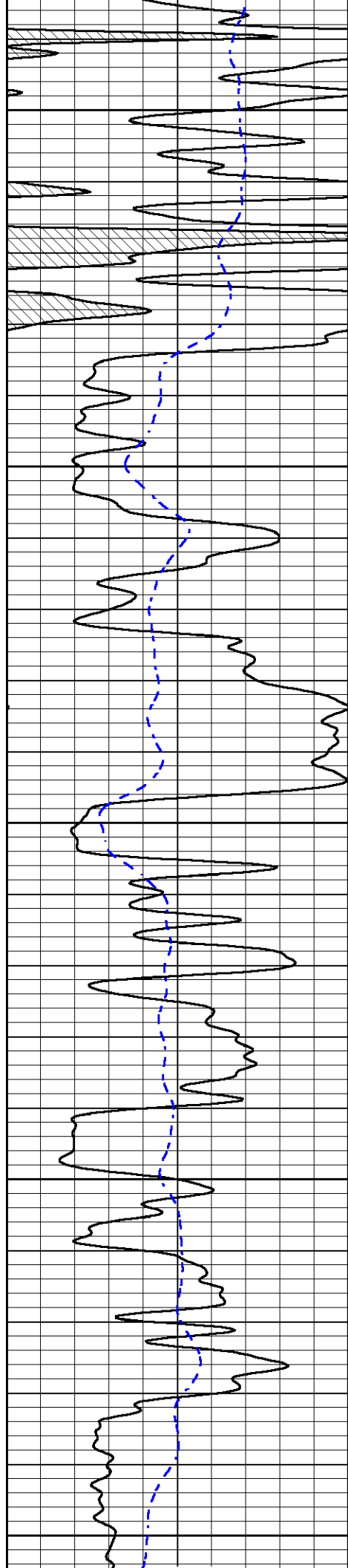
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4800

4850

4900





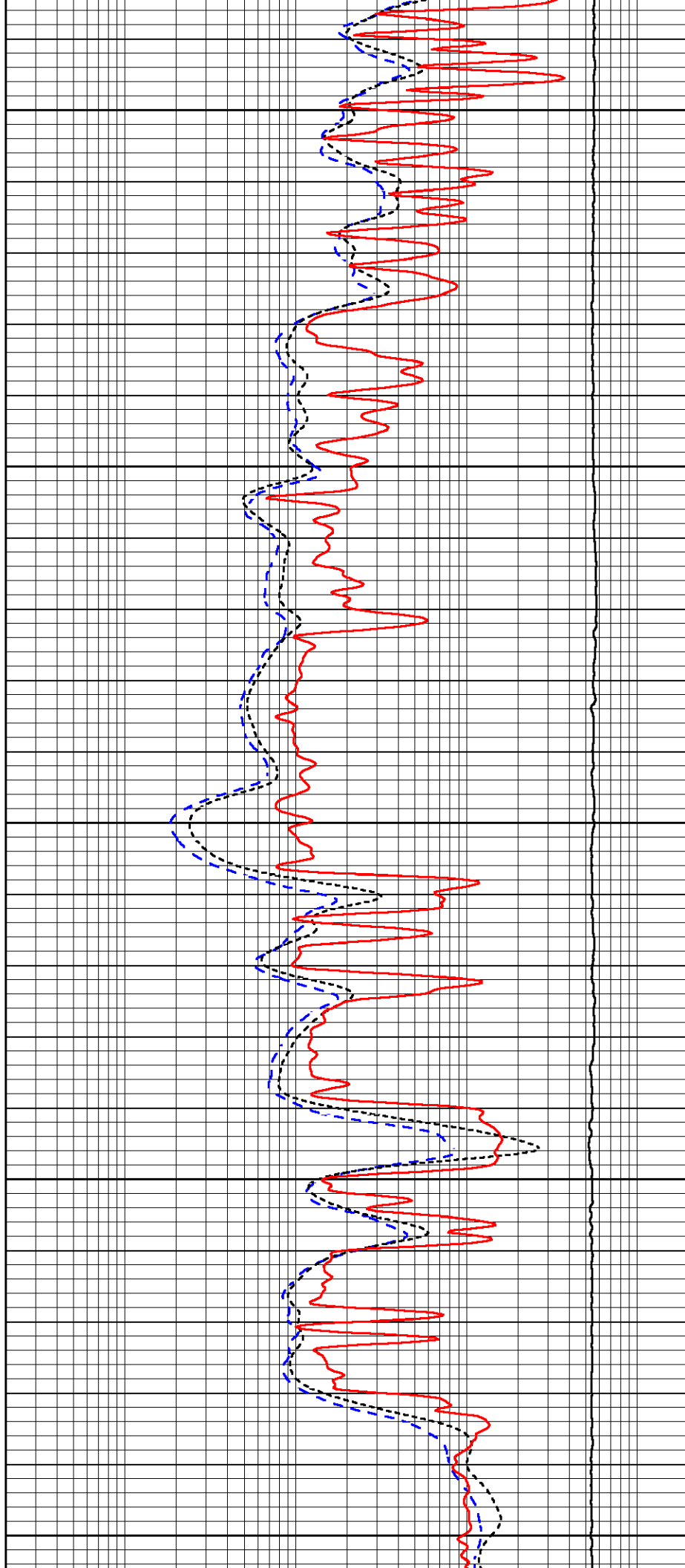
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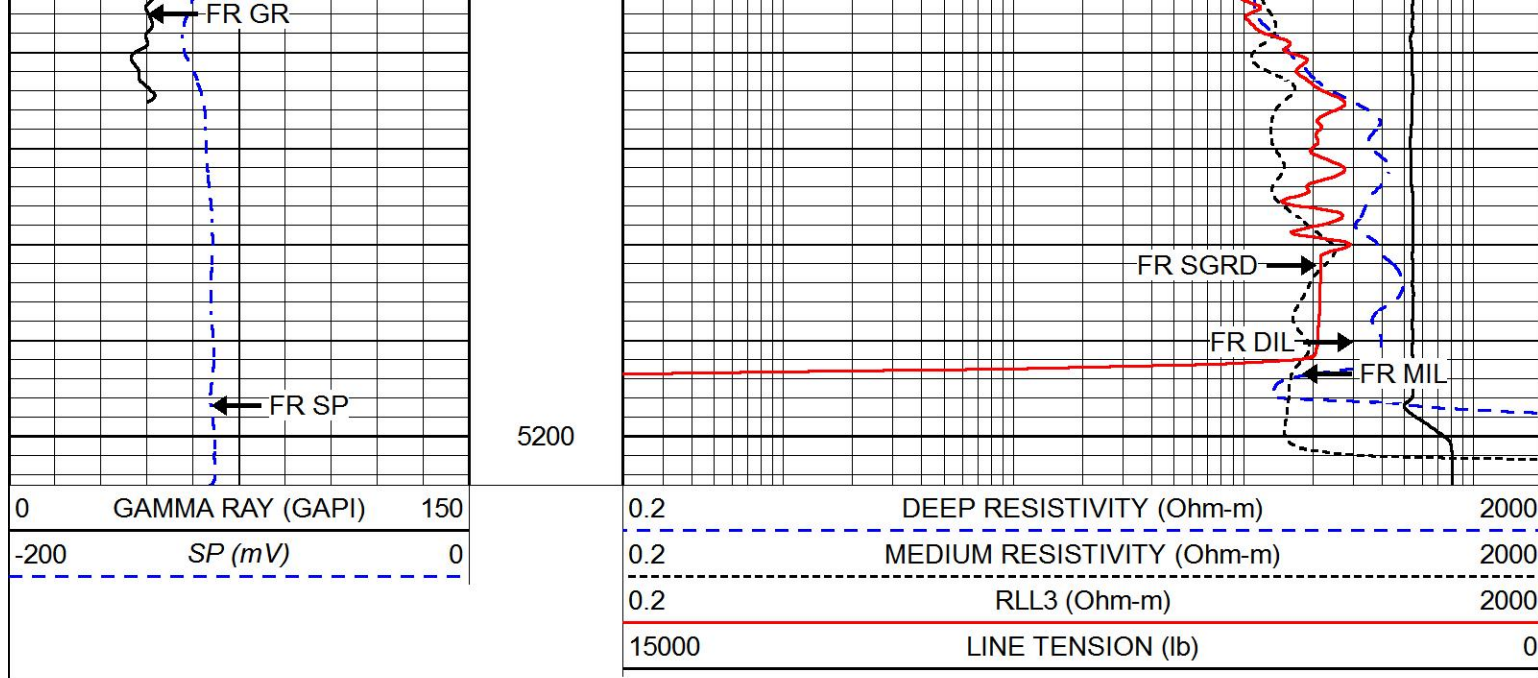
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5050

5100

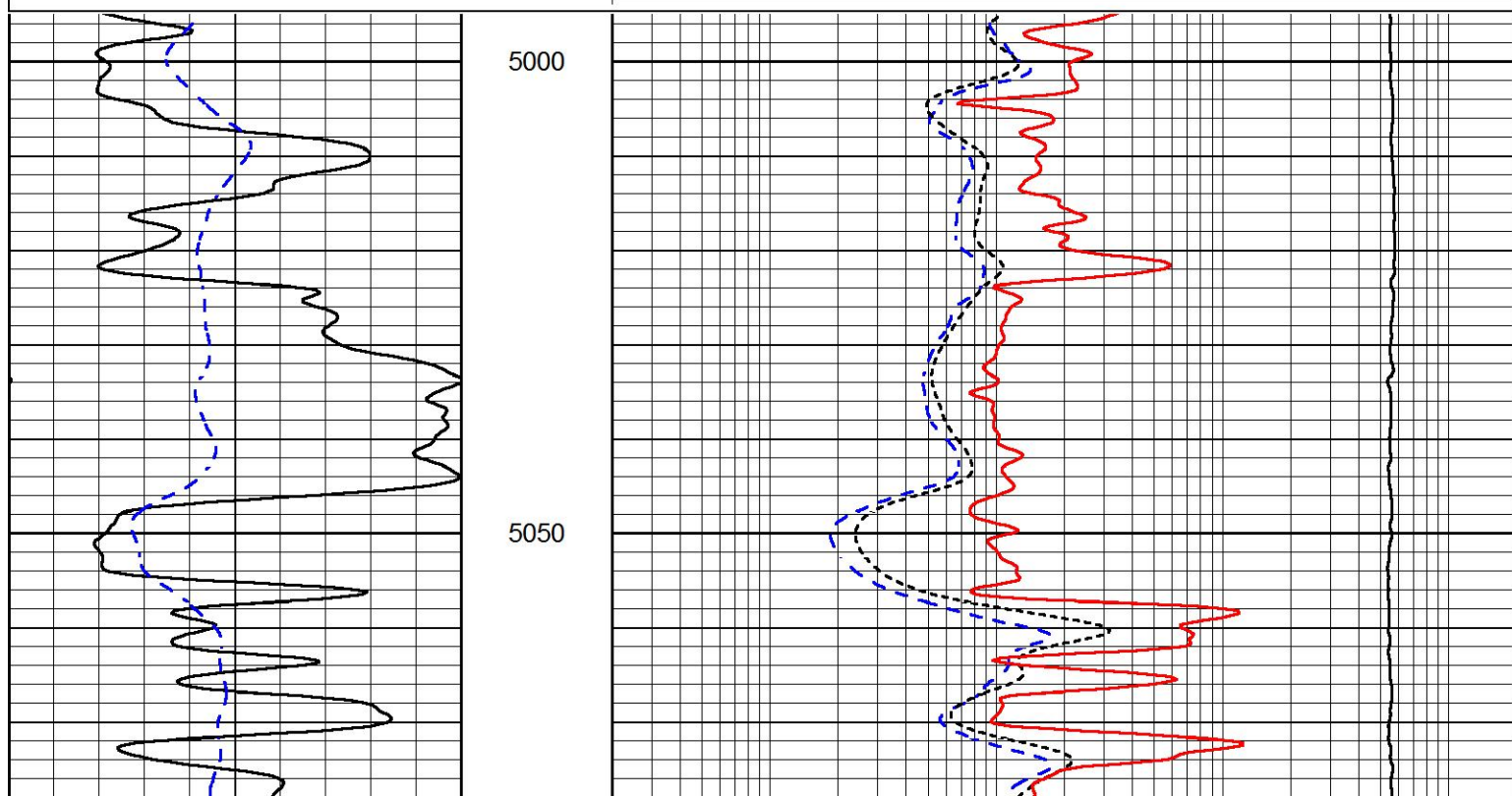
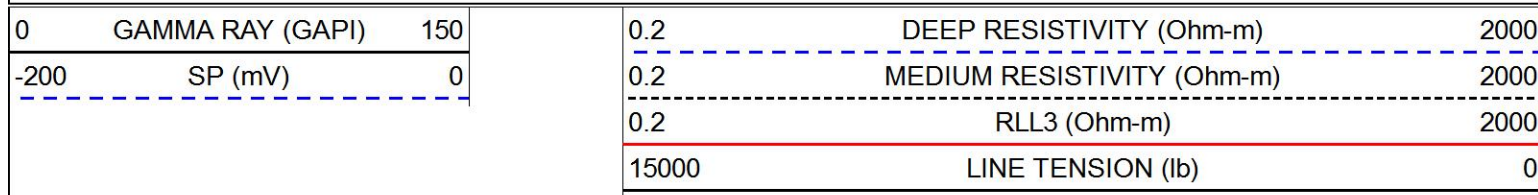
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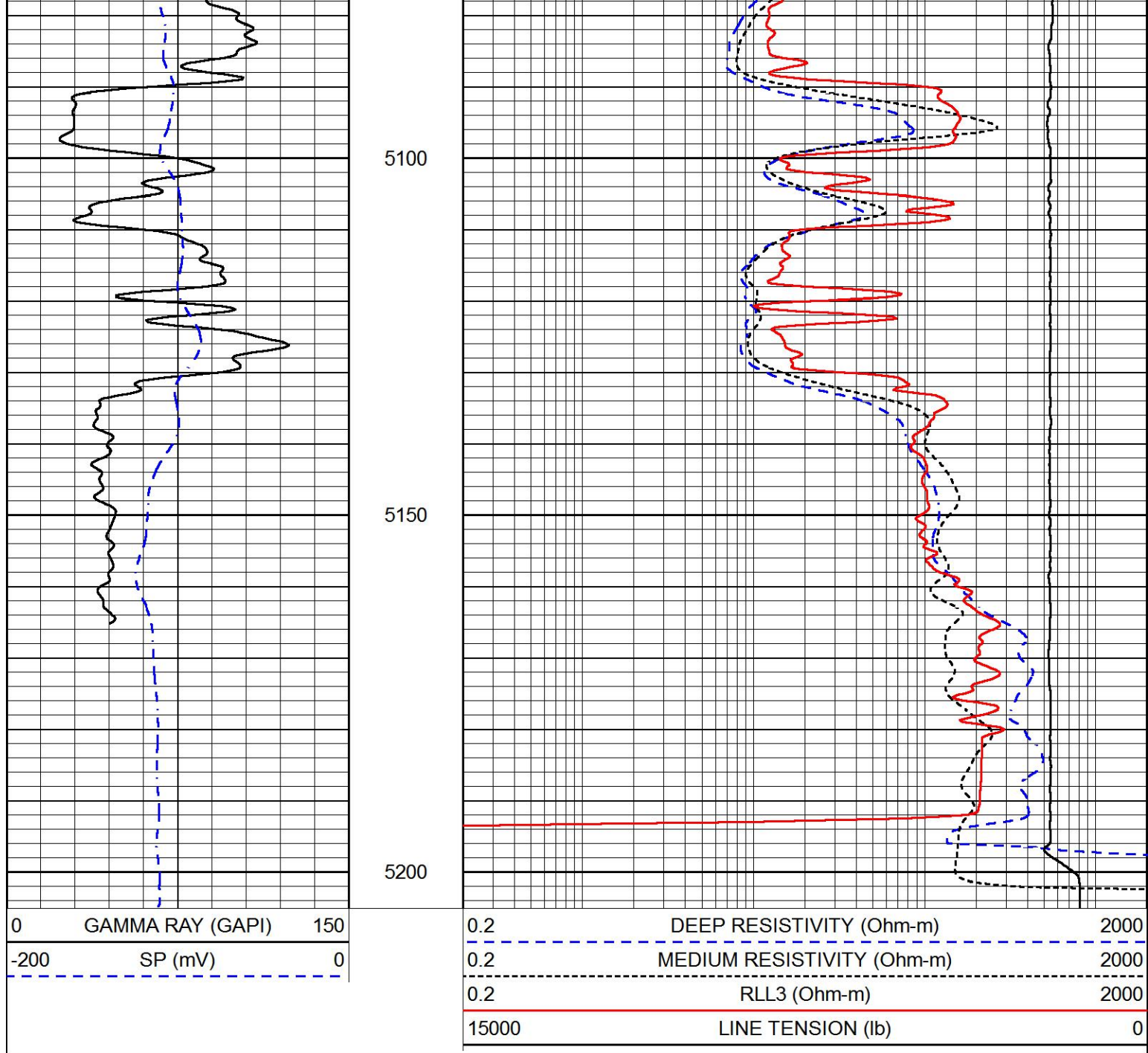




REPEAT SECTION

Database File: american_warrior_young_1_12.db
 Dataset Pathname: stackml/pass2.1
 Presentation Format: dil
 Dataset Creation: Tue Sep 25 14:08:52 2018
 Charted by: Depth in Feet scaled 1:240







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Company	AMERICAN WARRIOR, INC.
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