



MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Elk Energy Holdings, LLC Well Albers Trust #1-36 Field Albers County Thomas State Kansas		Company Elk Energy Holdings, LLC Well Albers Trust #1-36 Field Albers County Thomas State Kansas	
Location: API #: 15-193-21084-00-00 SEC 36 TWP 9S RGE 32W SW SW SE NE 2626' FNL & 1193' FEL		Other Services CNL/CDL MEL	
Permanent Datum Log Measured From Drilling Measured From	Ground Level Kelly Bushing Kelly Bushing	Elevation 3051' 3056' 3051'	K.B. D.F. G.L.
Date	4/6/2021		
Run Number	One		
Depth Driller	4700'		
Depth Logger	4698'		
Bottom Logged Interval	4697'		
Top Log Interval	00'		
Casing Driller	8.625" @ 348'		
Casing Logger	348'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	1000		
Density / Viscosity	9.2 55		
pH / Fluid Loss	8.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.85 @ 68		
Rmt @ Meas. Temp	0.64 @ 68		
Rmc @ Meas. Temp	1.15 @ 68		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.47 @ 123		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	123 Deg F		
Equipment Number	P-24		
Location	HAYS		
Recorded By	T. Martin		
Witnessed By	Ryan Davis		

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

Oakley, 183 N & I-70, 2 N to TH G, 2 E, 1/4 N, W into

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew		This Log Record Was Witnessed By	
Engineer: T. Martin		Primary Witness: Ryan Davis	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\elk_albers trust #1-36.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 123	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m 0	mmho/m 0	mV 350	degF 70	Off	ft 4698

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

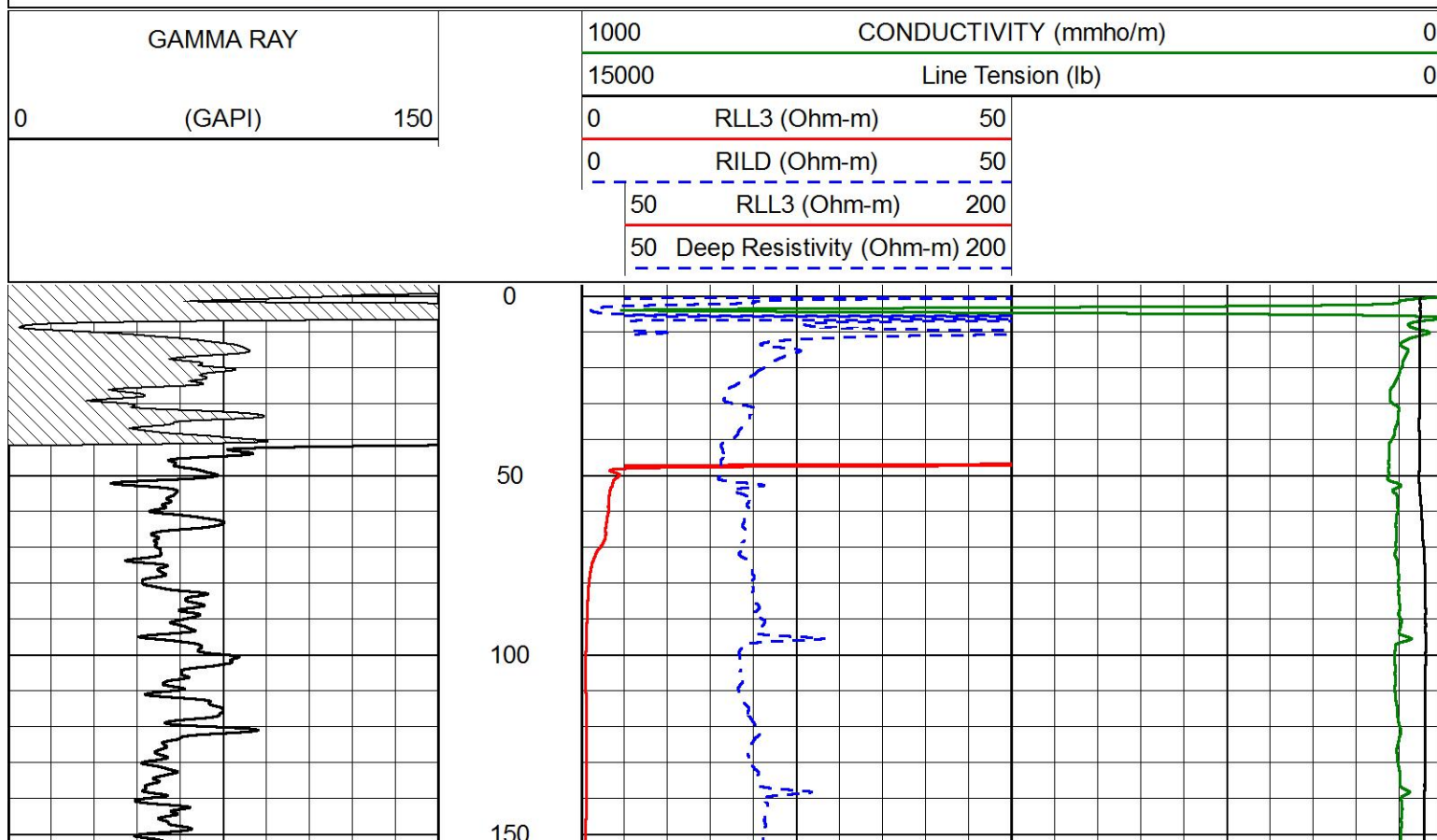
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

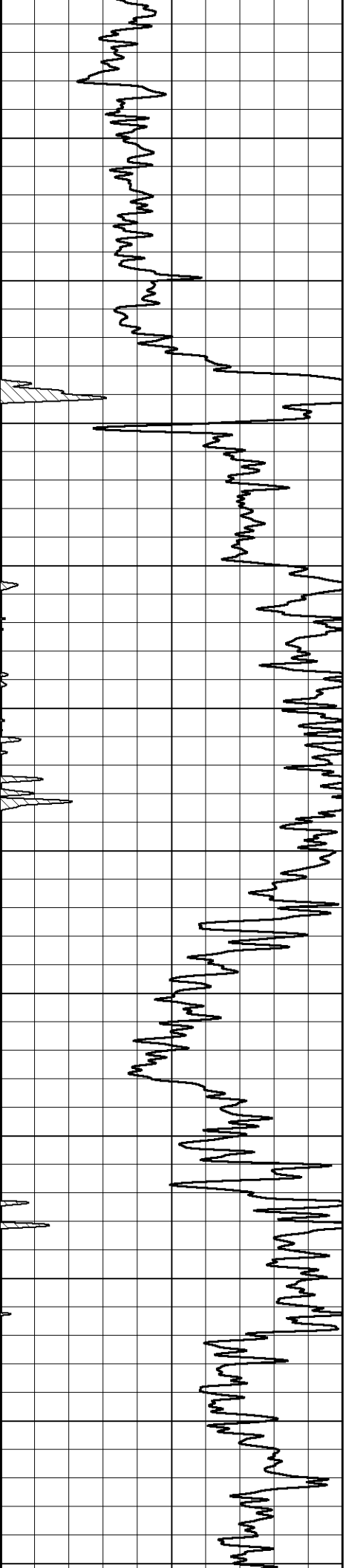


2" SCALE RESISTIVITY

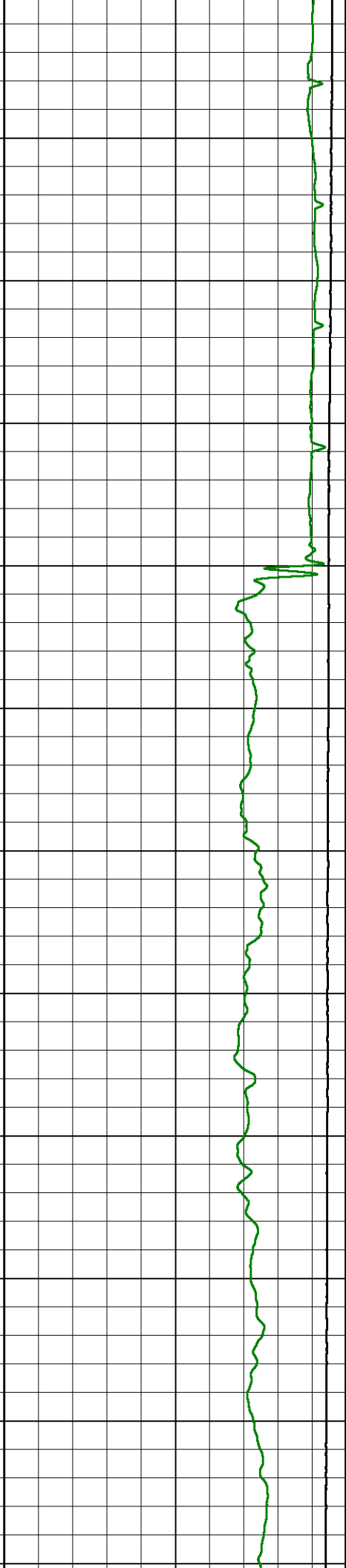
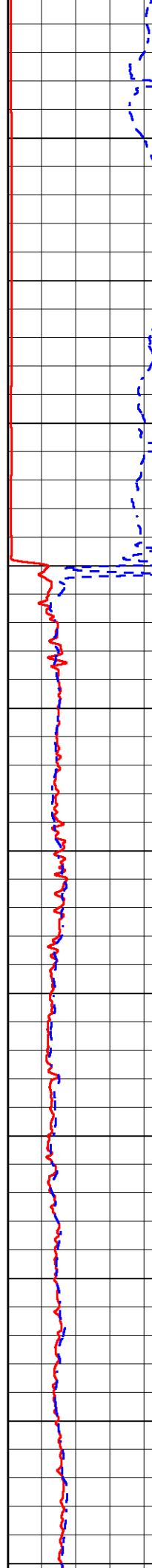
MAIN PASS

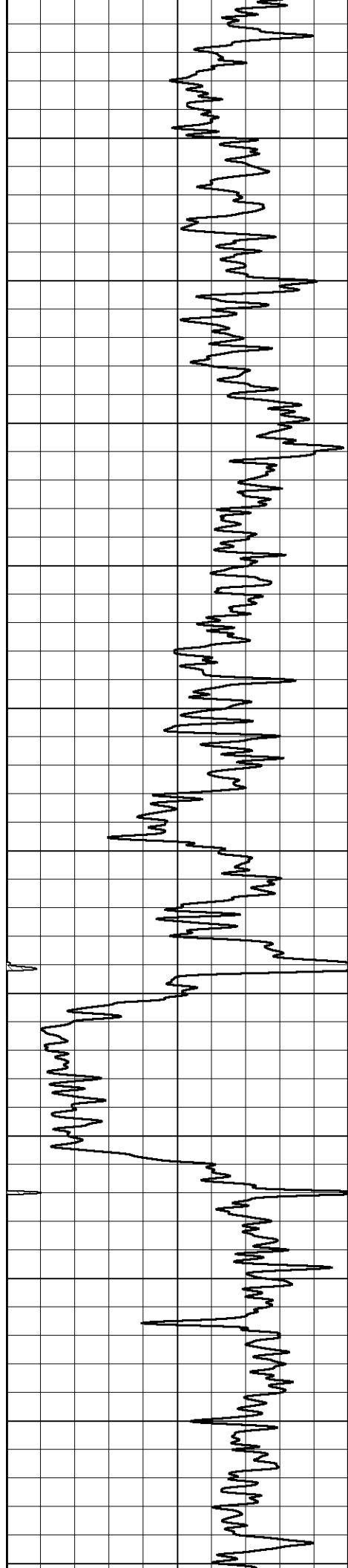
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Dataset Pathname StkMI/pass3.2
Presentation Format _dil2in
Dataset Creation Tue Apr 06 12:54:55 2021
Charted by Depth in Feet scaled 1:600



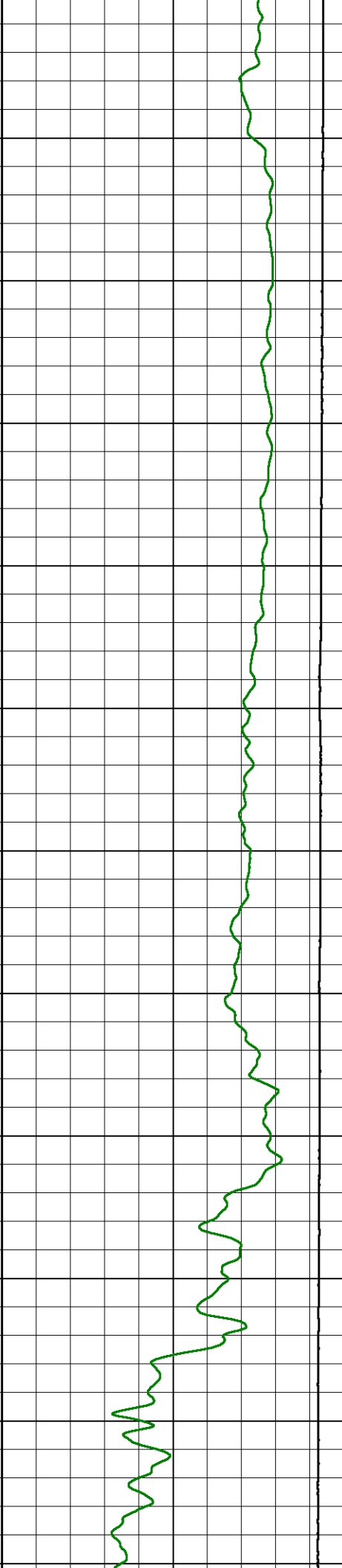
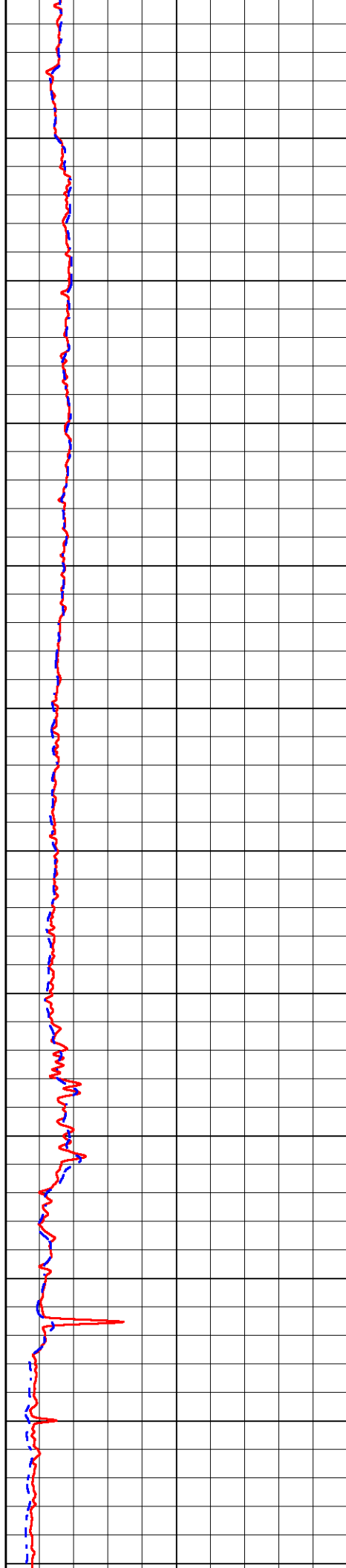


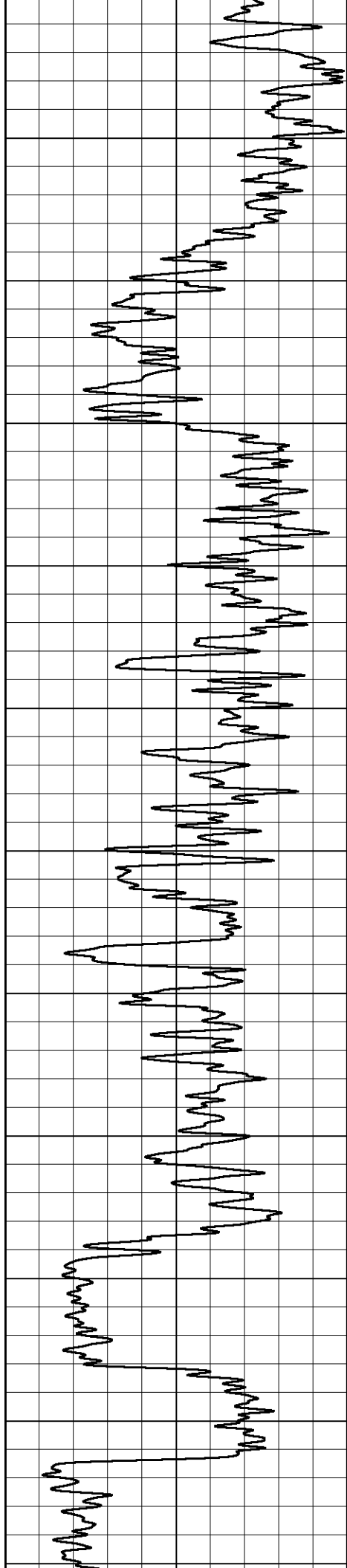
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600
650
700



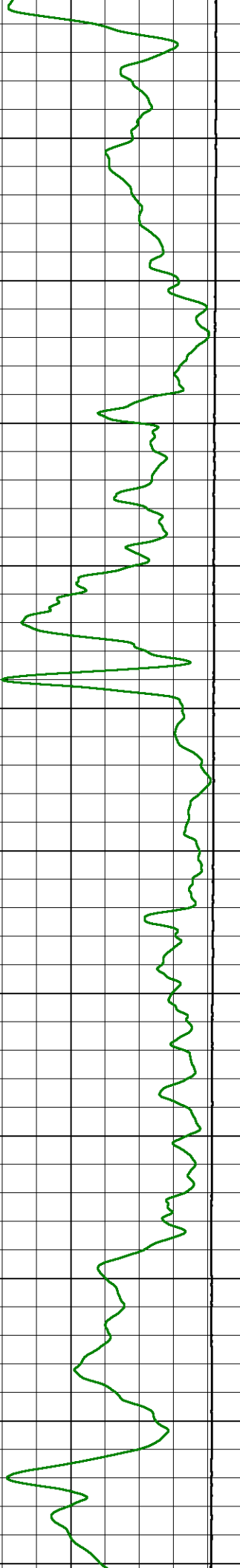
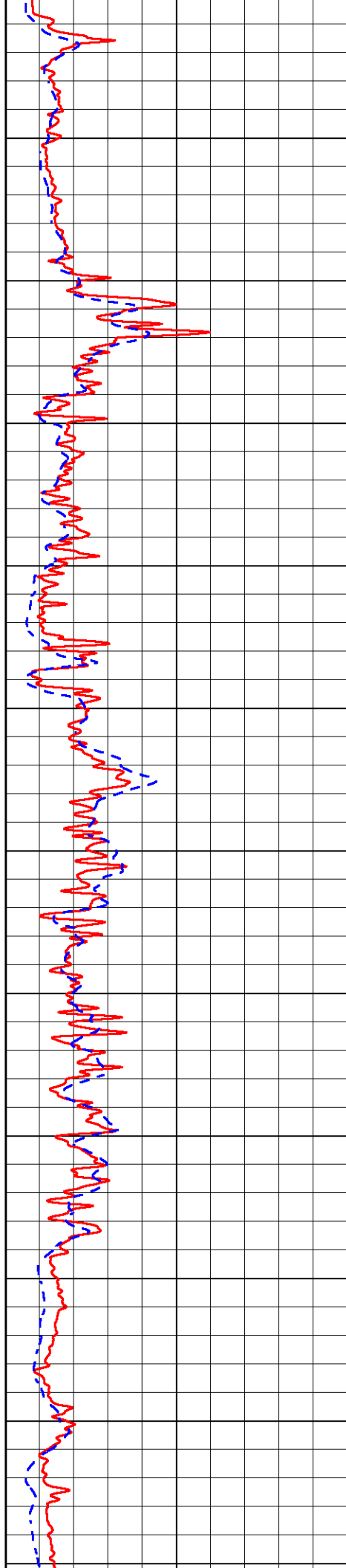


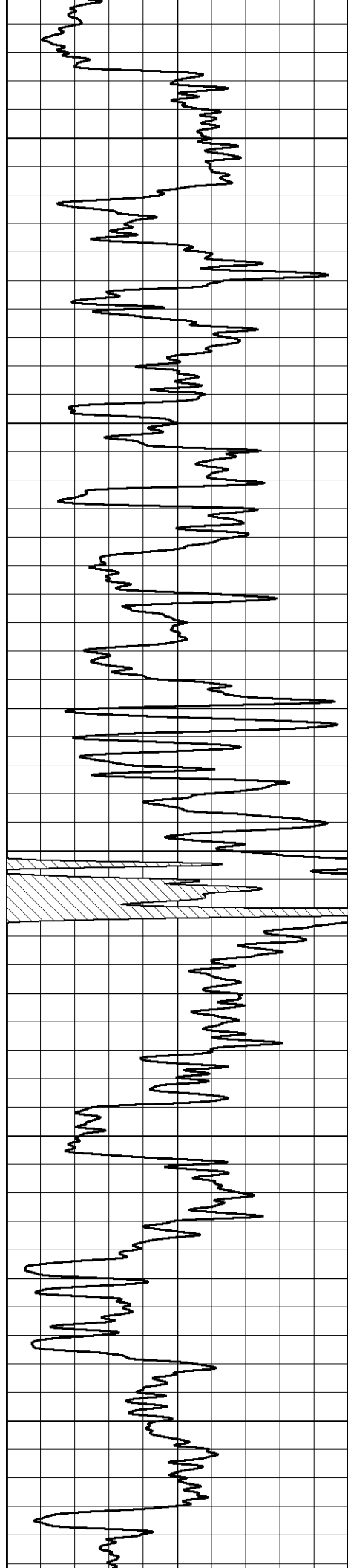
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950
1000
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1100
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1200
1250



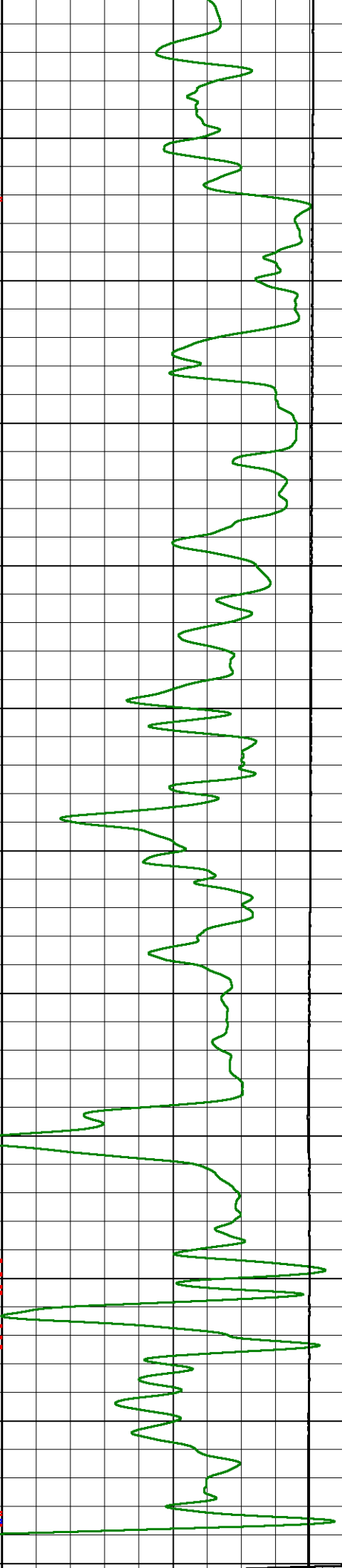
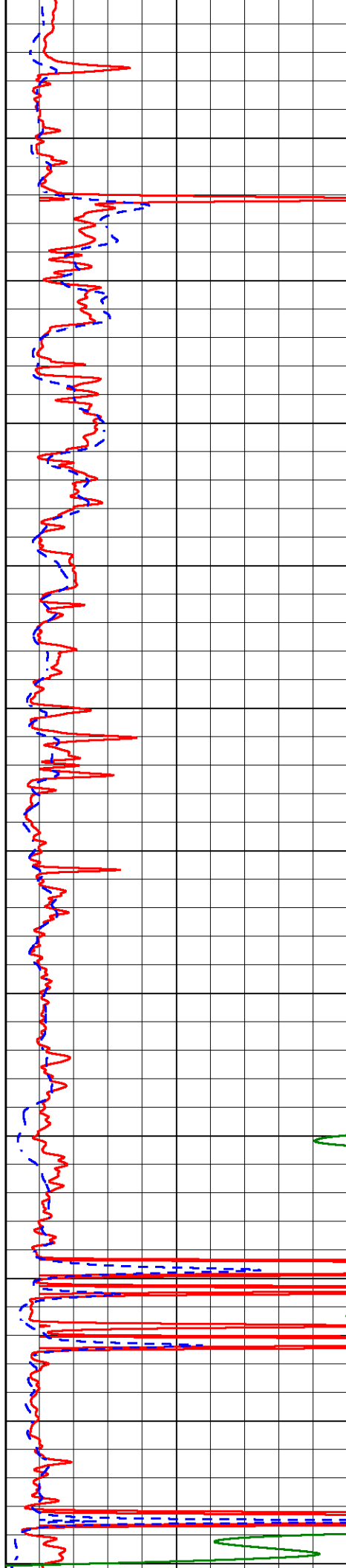


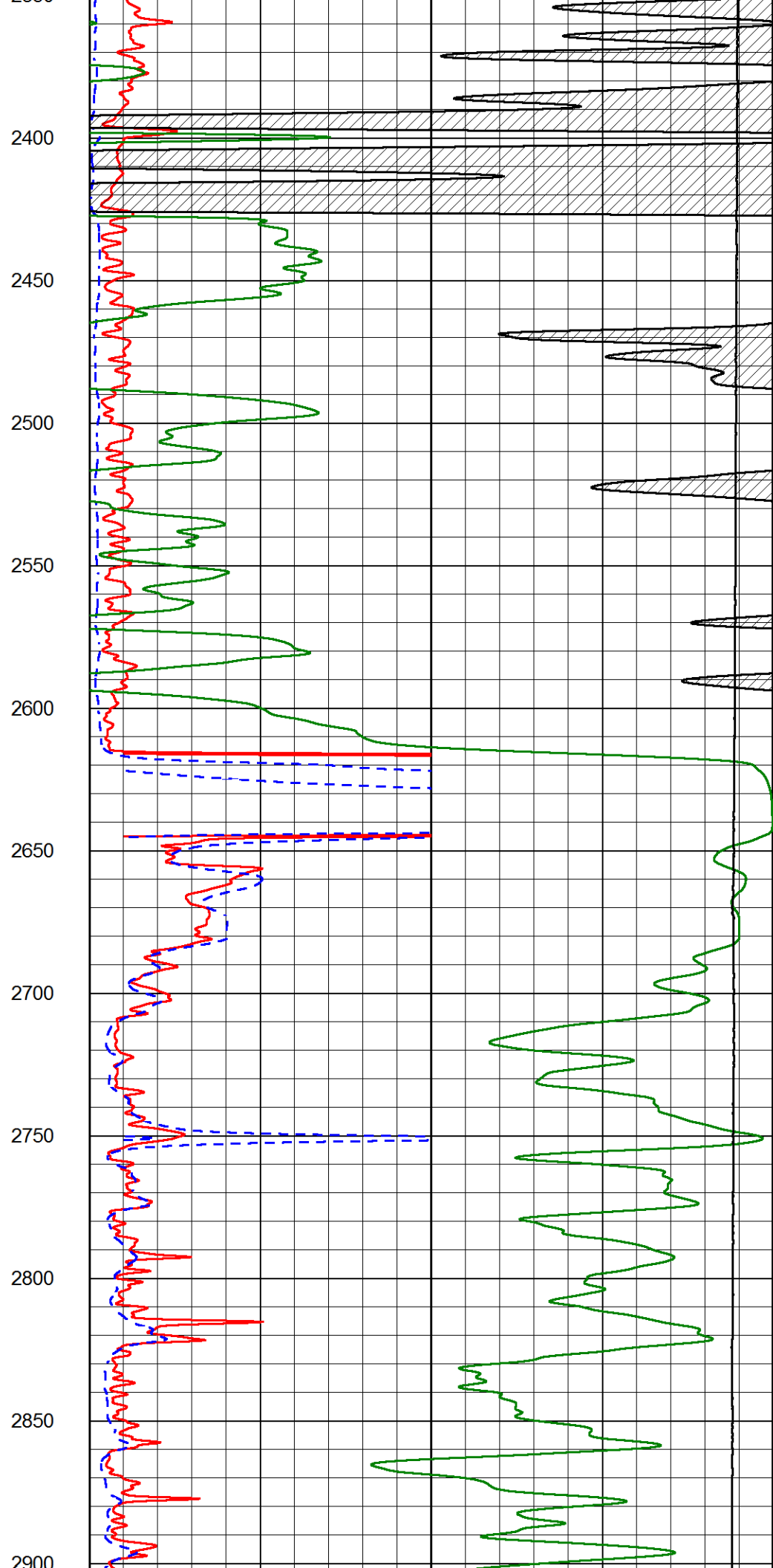
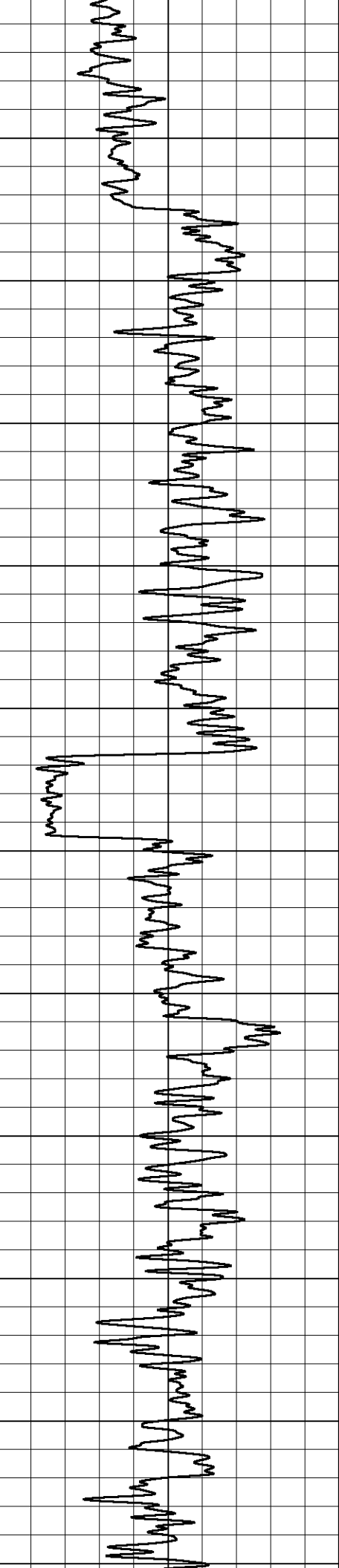
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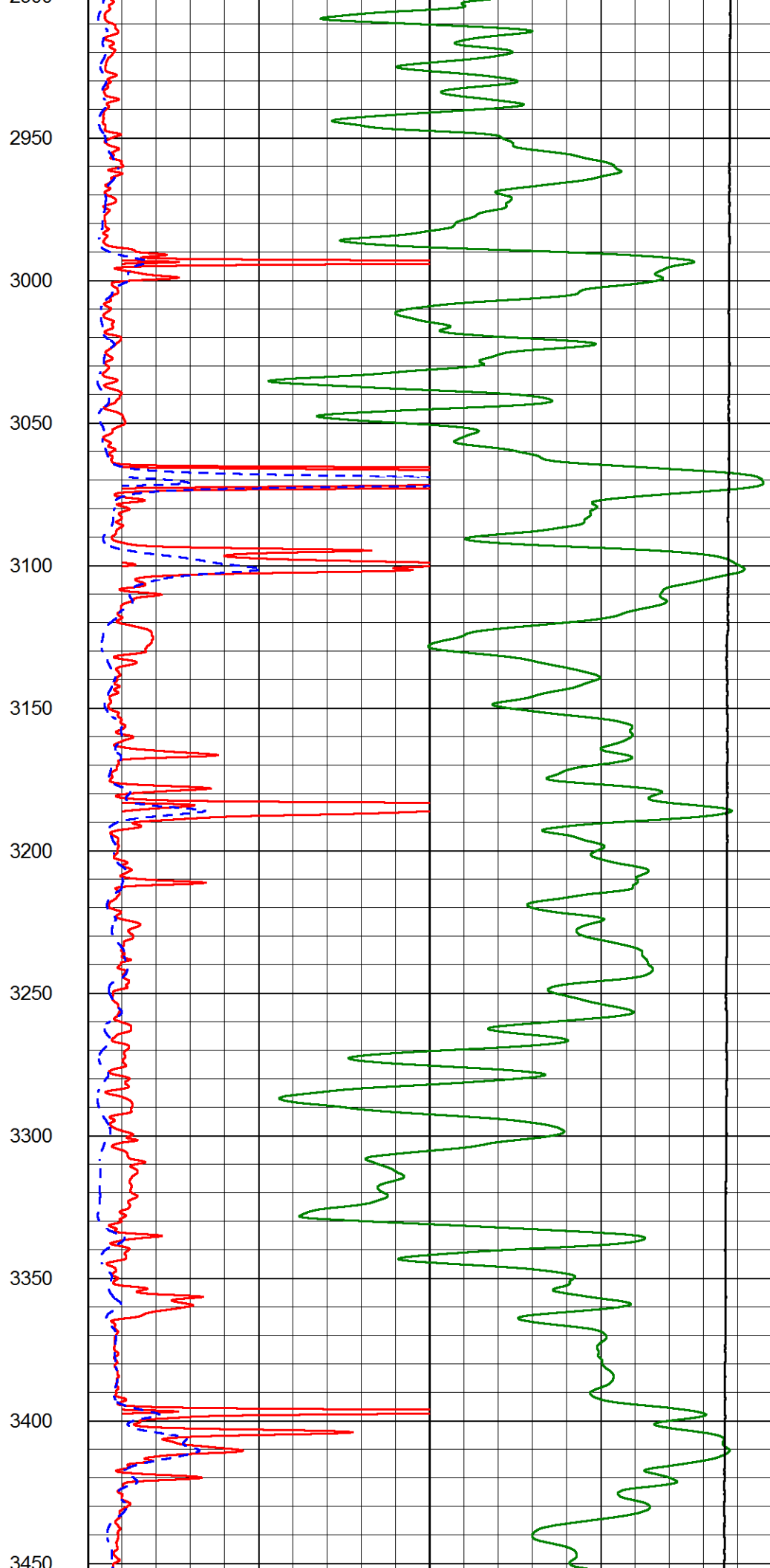
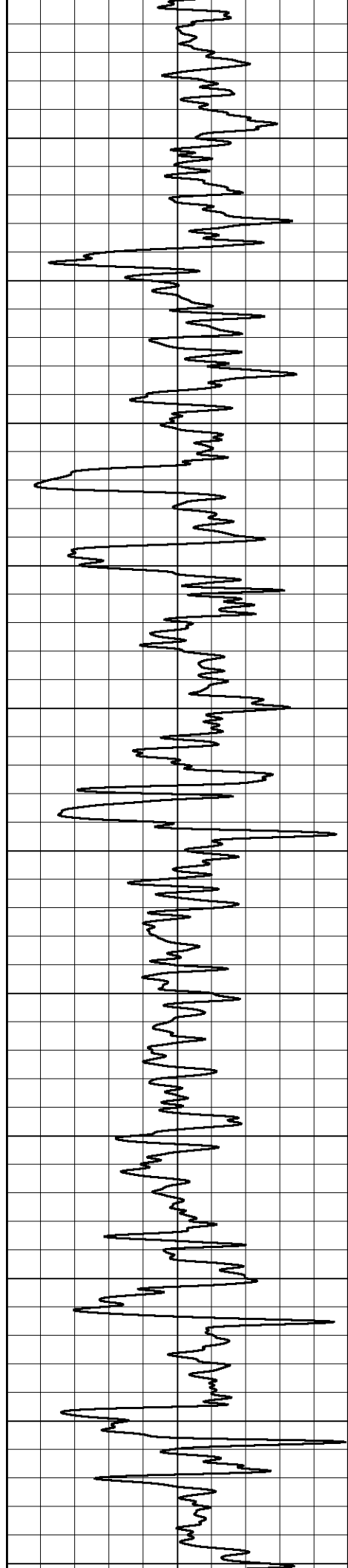


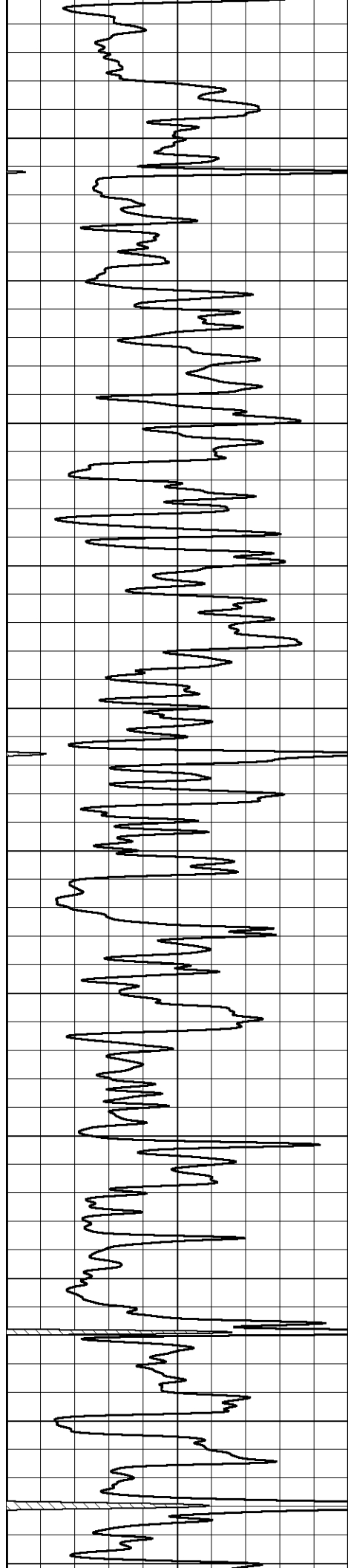


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2350

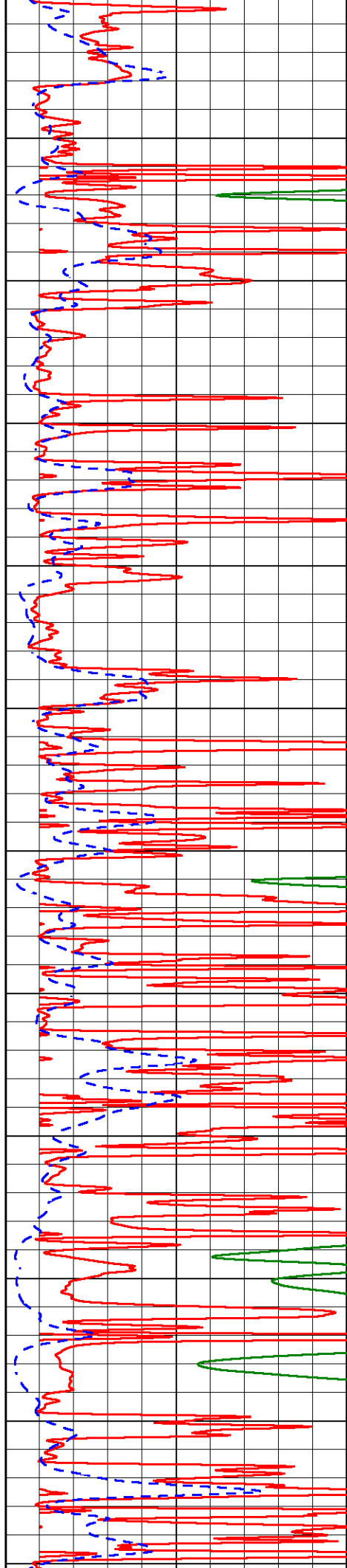


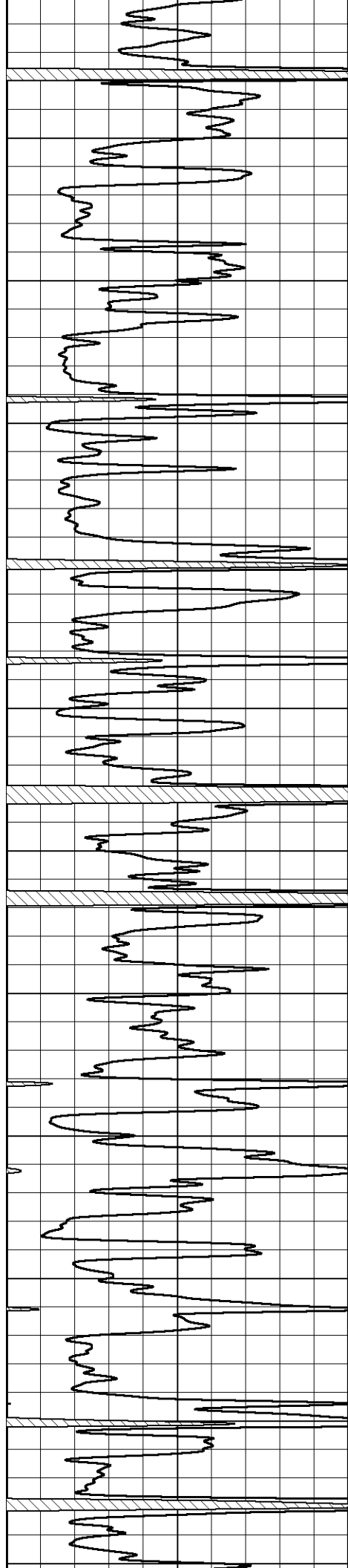




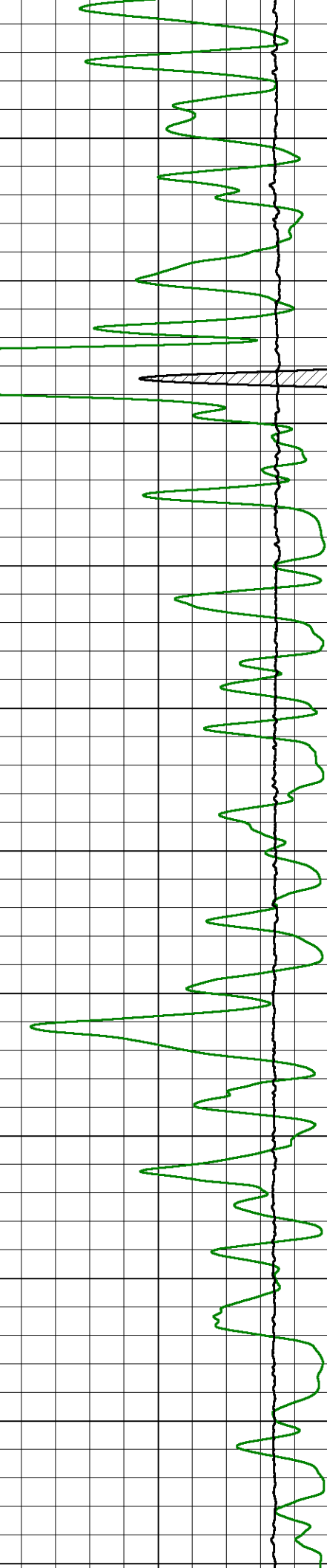
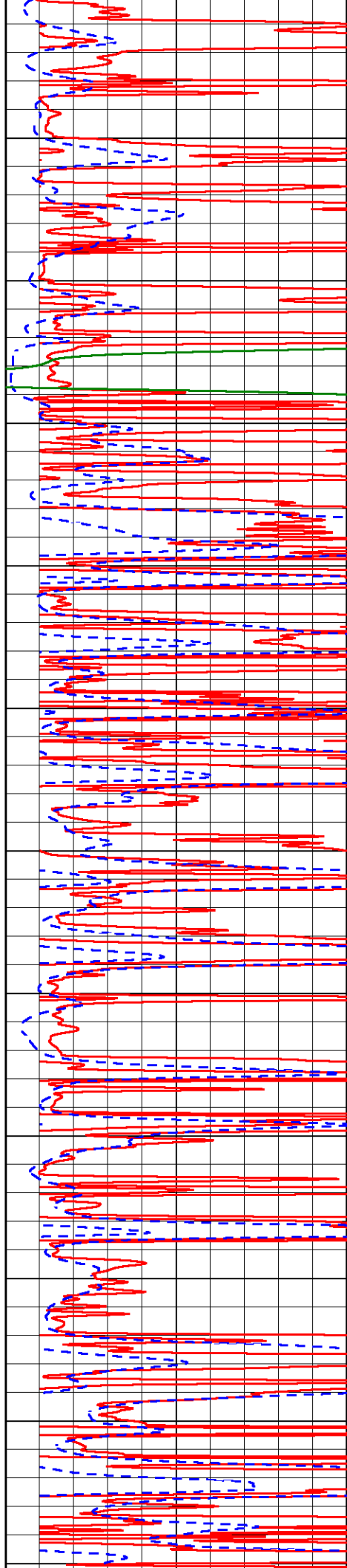


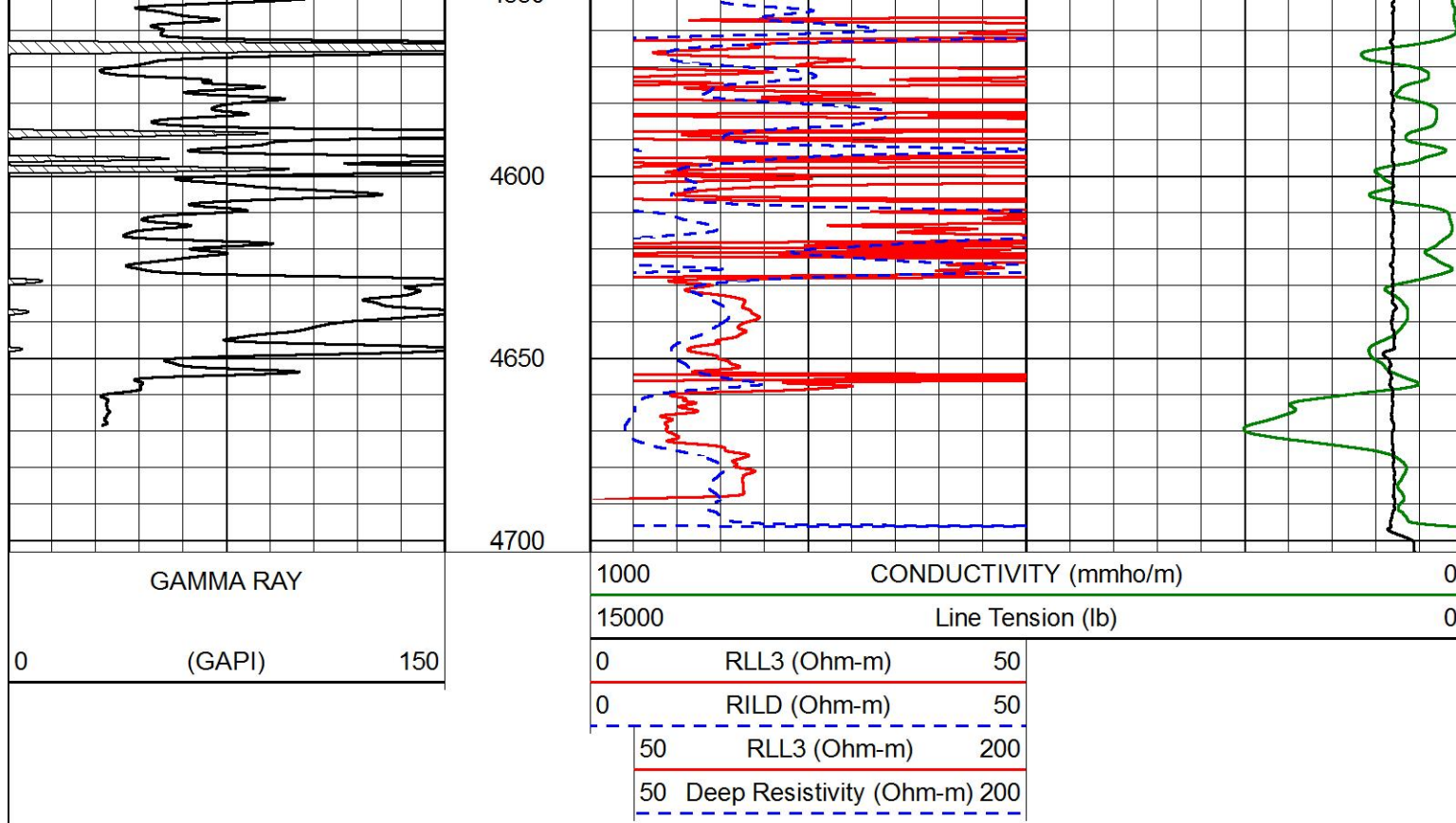
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4350
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4450
4500
4550



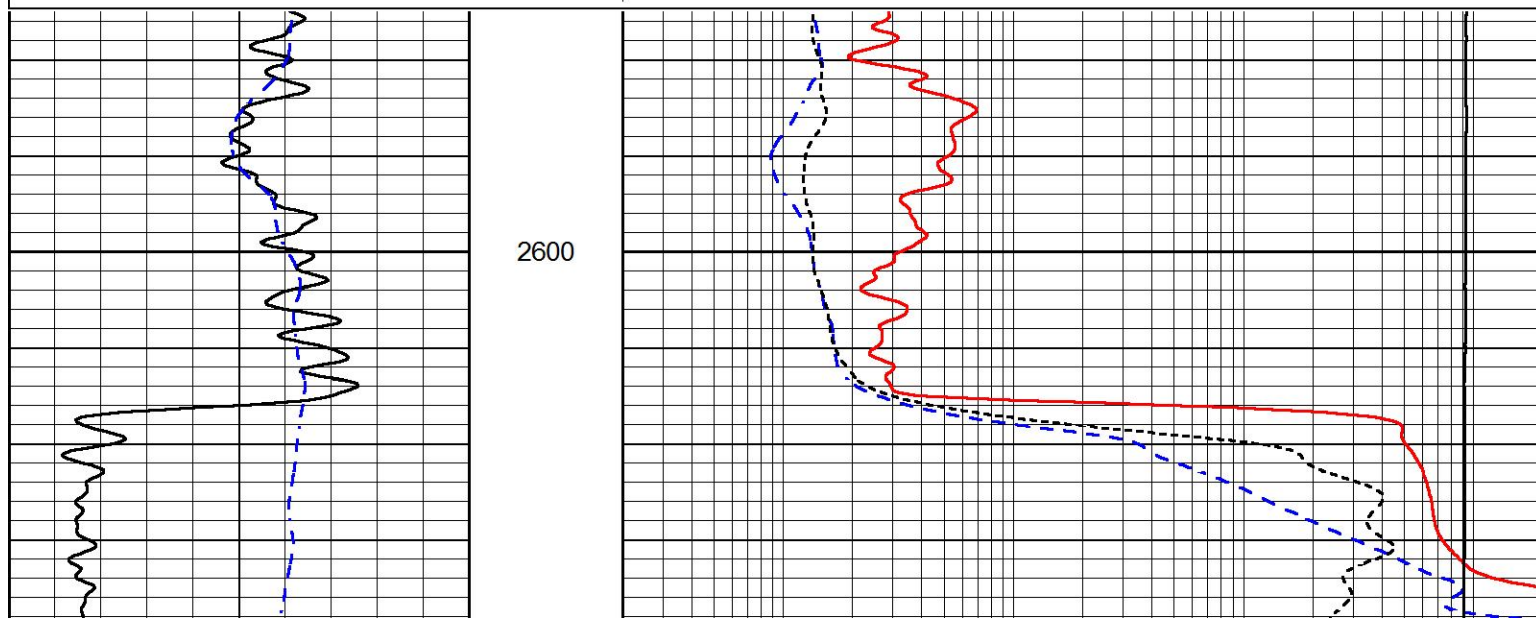


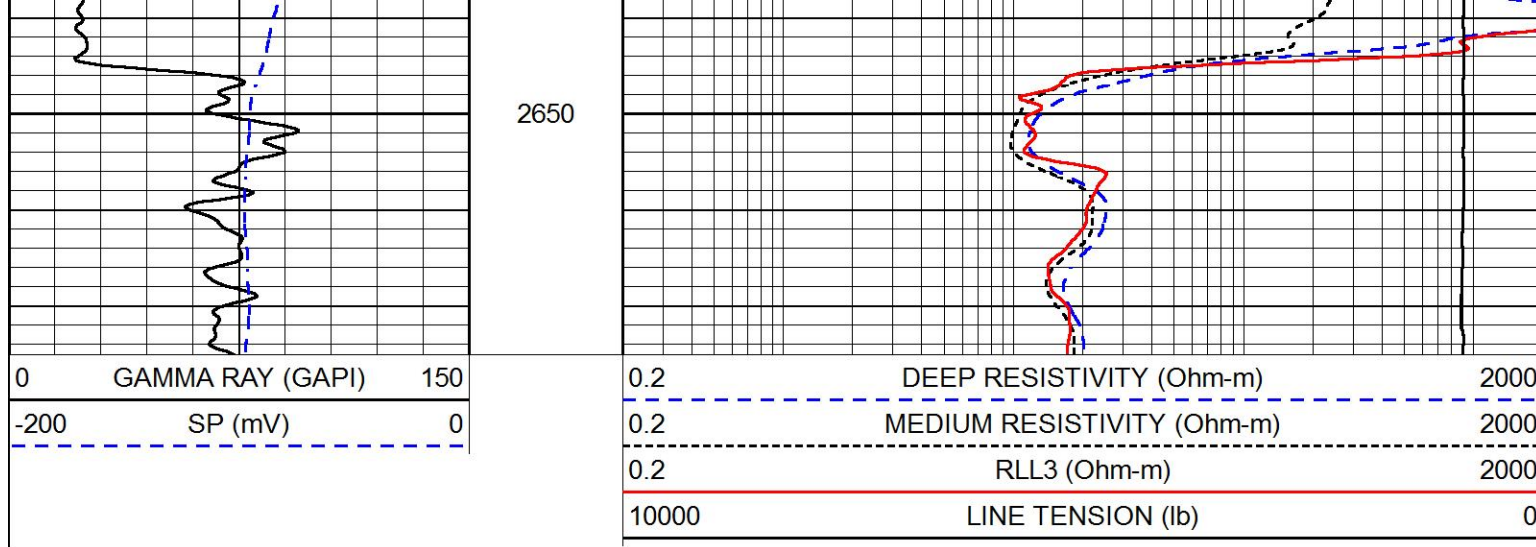
ANHYDRITE SECTION

MAIN PASS

Database File elk_albers trust #1-36.db
 Dataset Pathname StkMI/pass3.4
 Presentation Format _dil
 Dataset Creation Tue Apr 06 12:30:43 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			10000	LINE TENSION (lb)	0

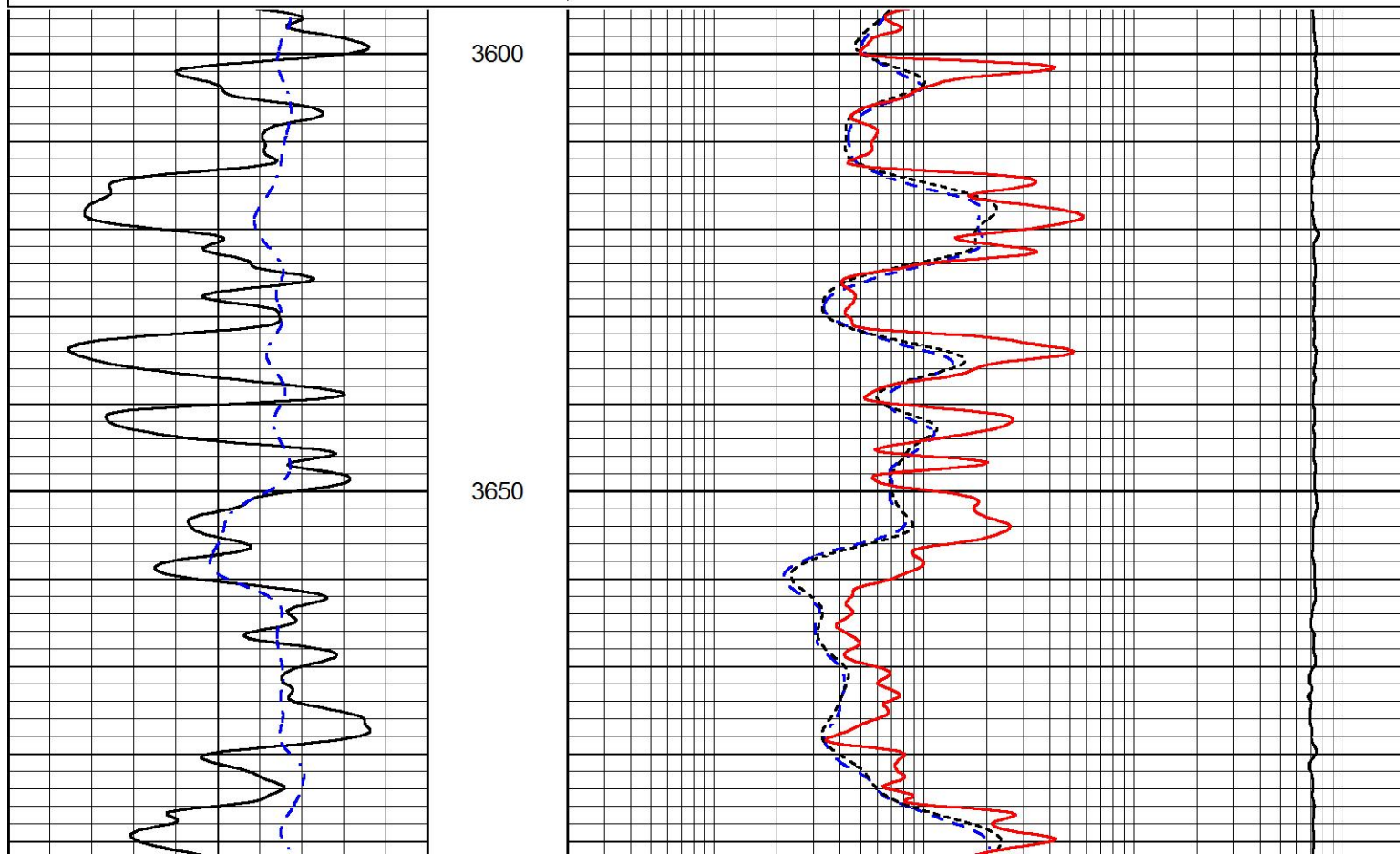
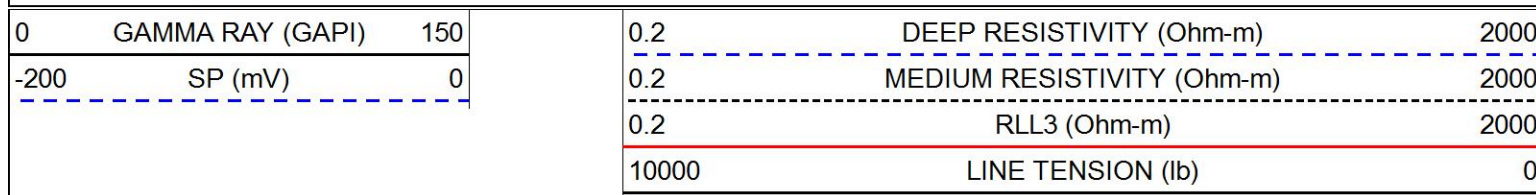


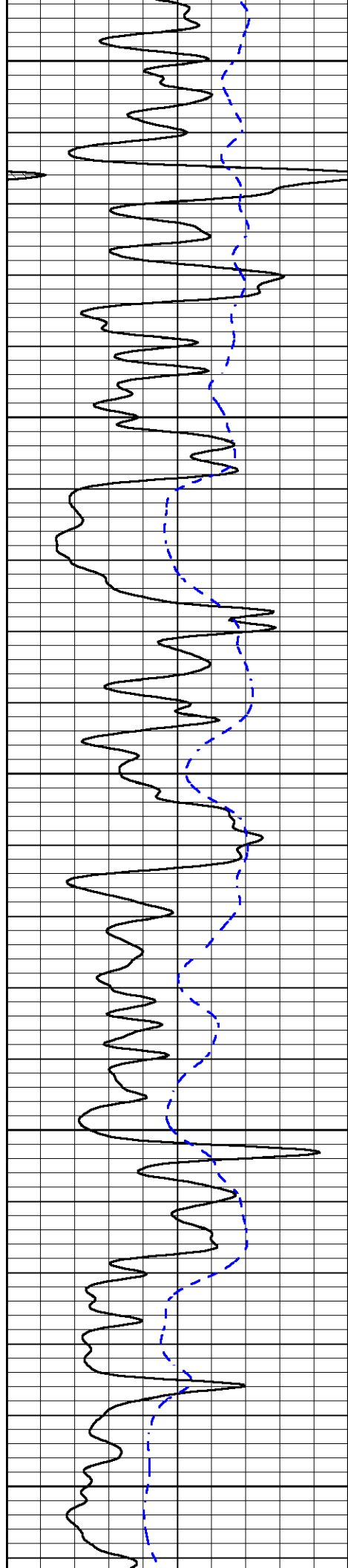


MIDWEST WIRELINE

MAIN PASS

Database File elk_albers trust #1-36.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _dil
 Dataset Creation Tue Apr 06 12:56:34 2021
 Charted by Depth in Feet scaled 1:240





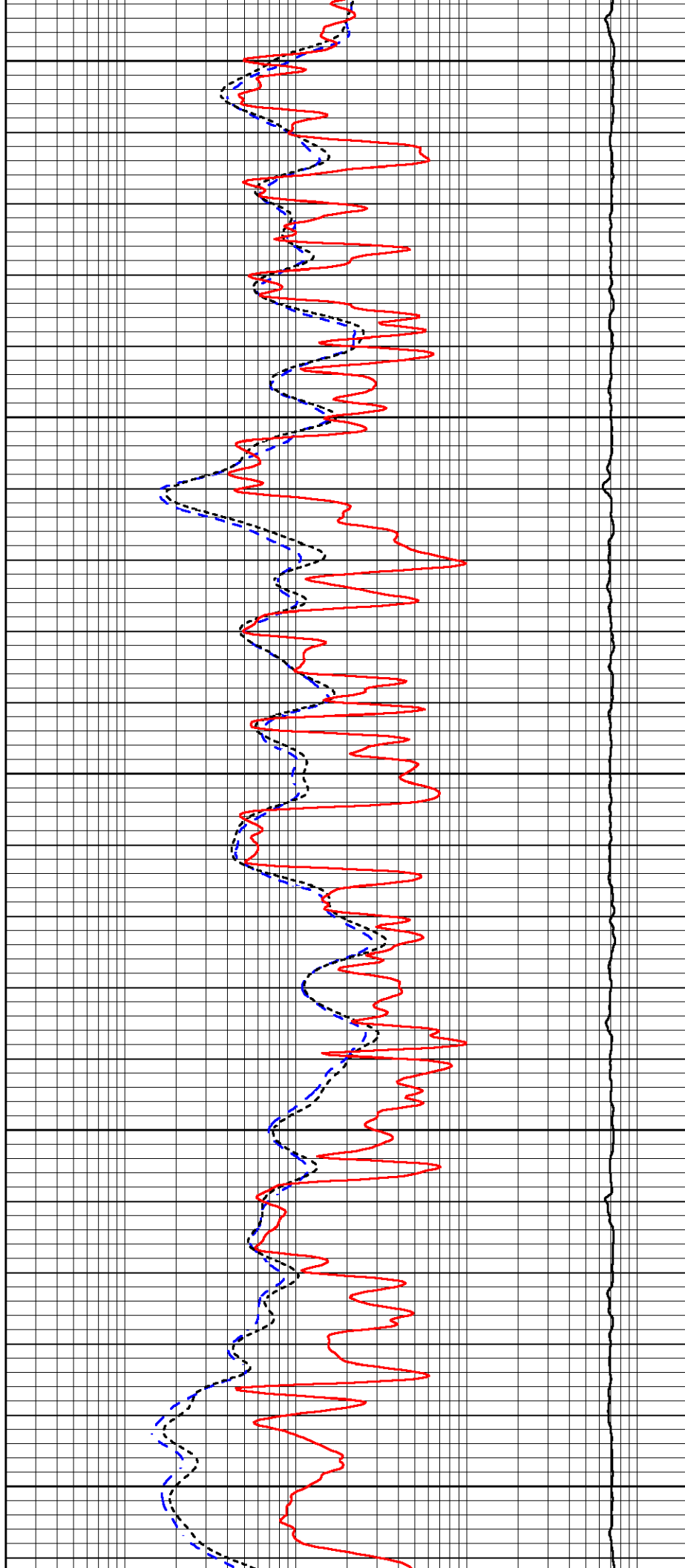
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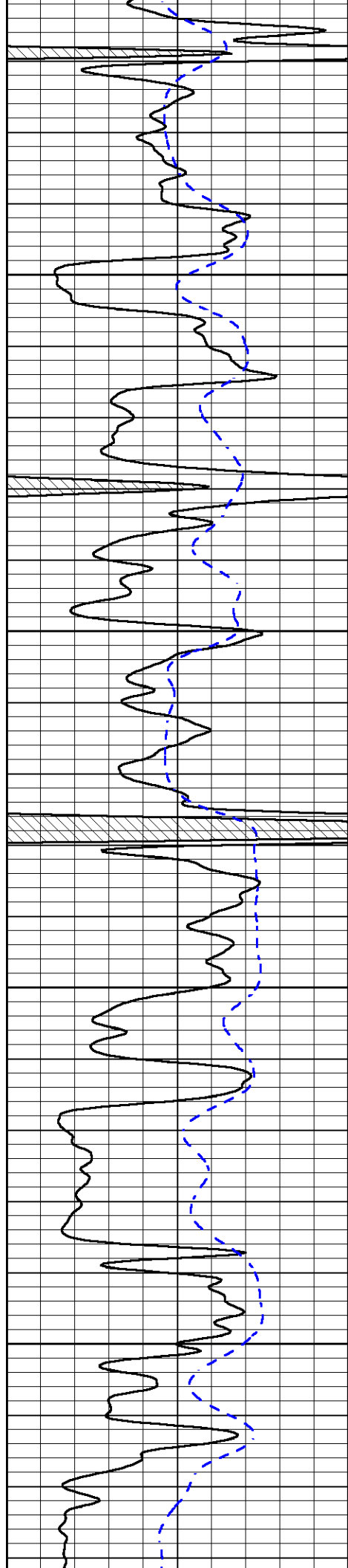
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3850

3900



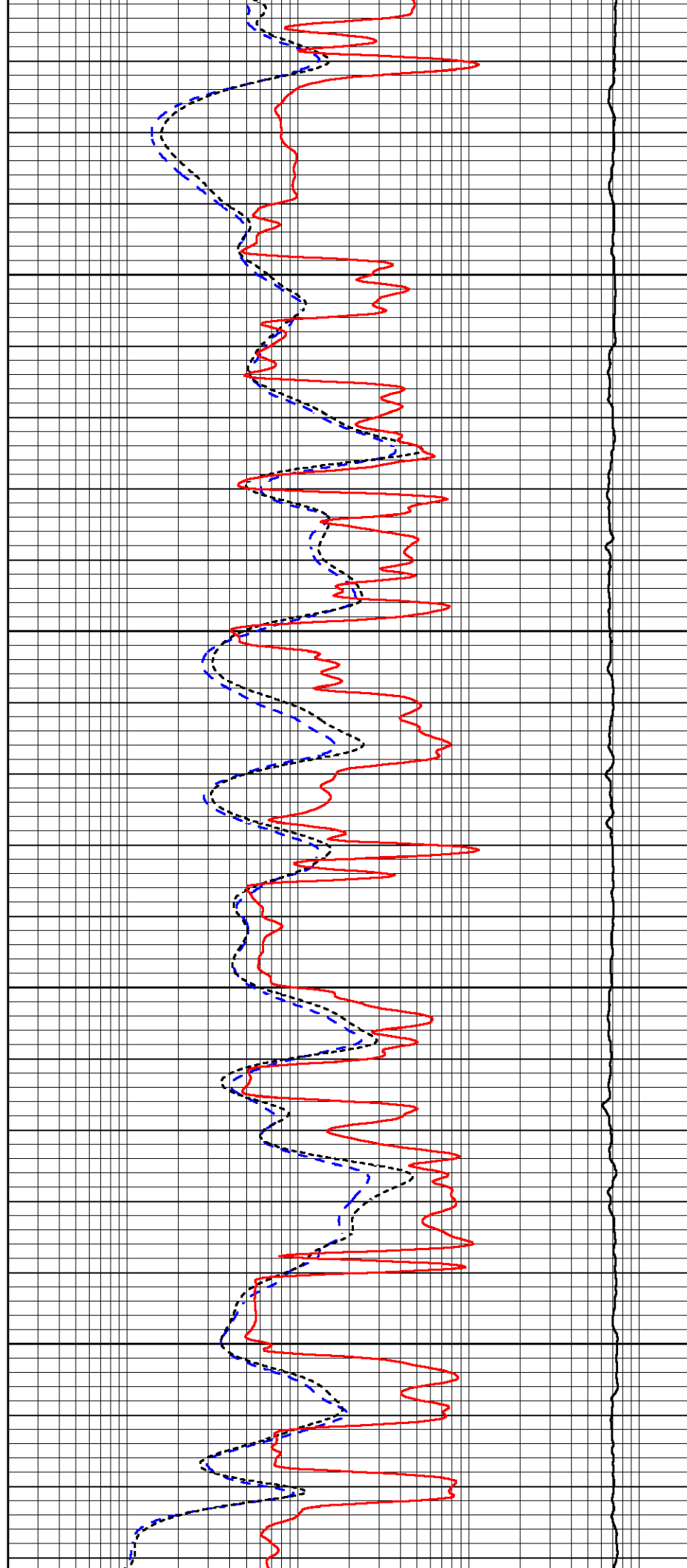


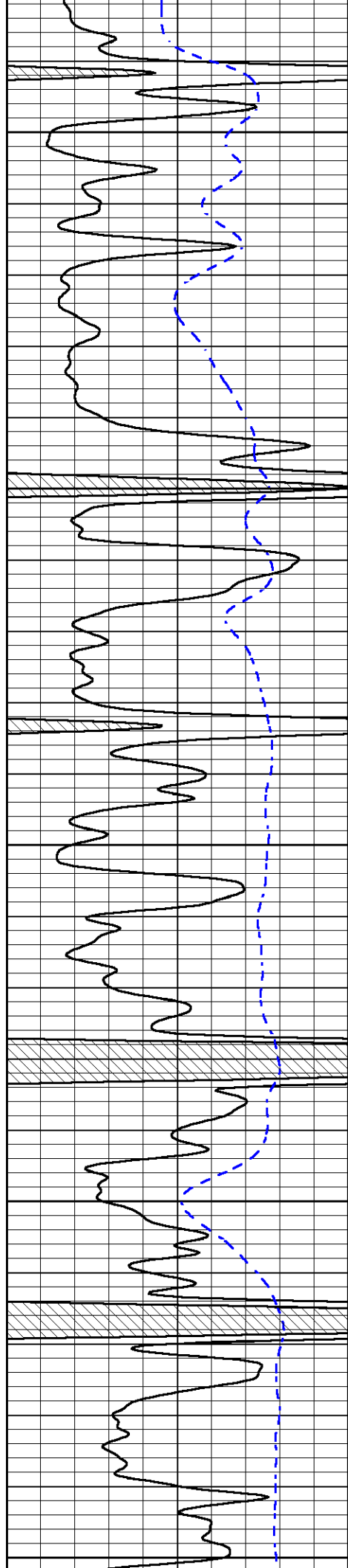
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4000

4050

4100





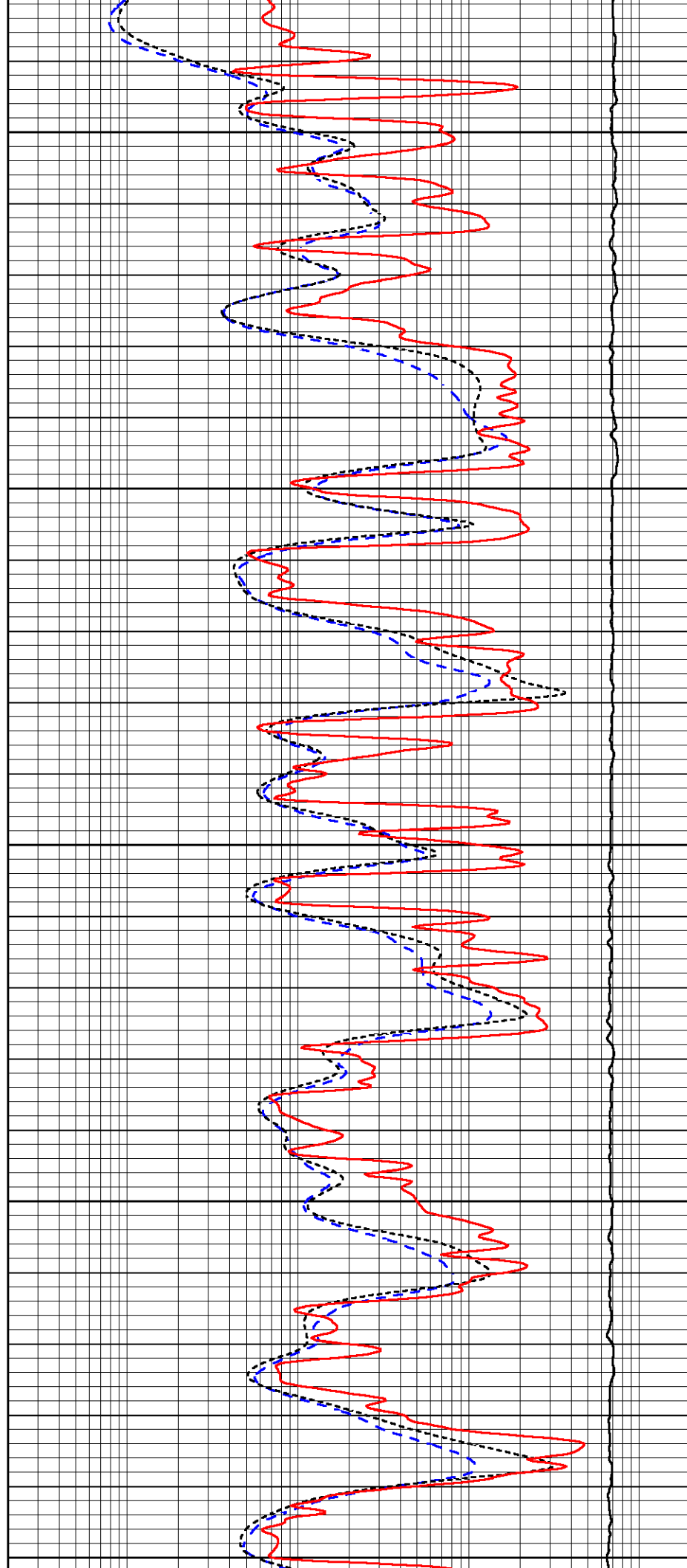
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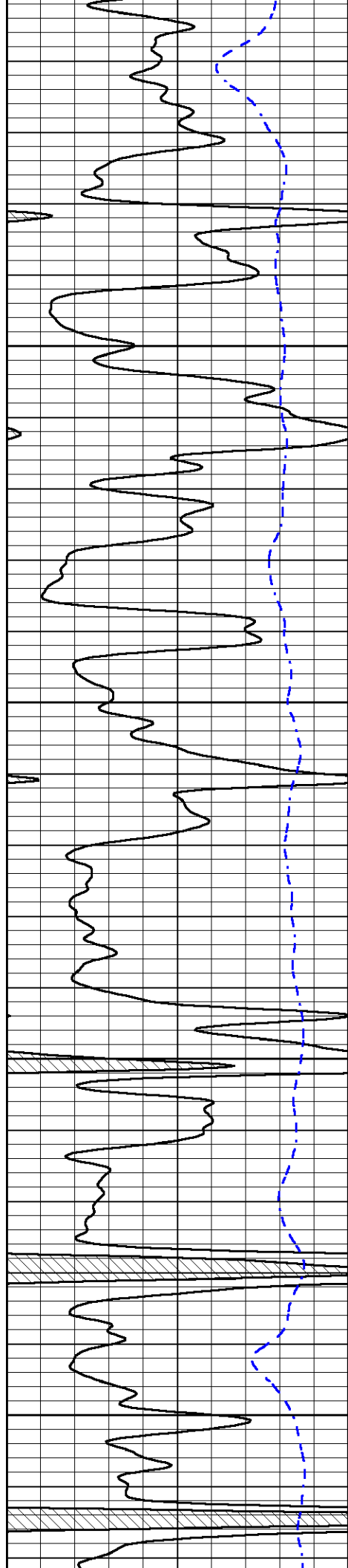
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4250

4300

4350



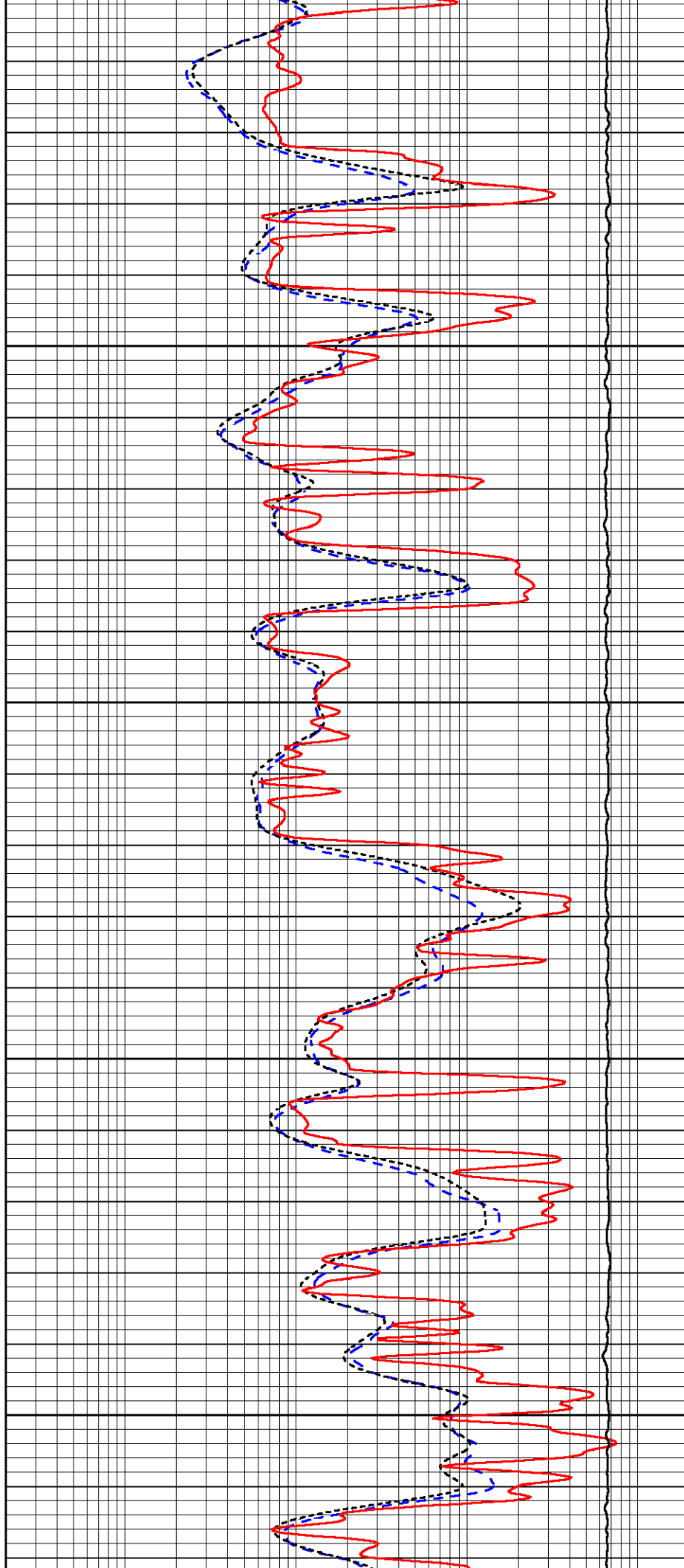


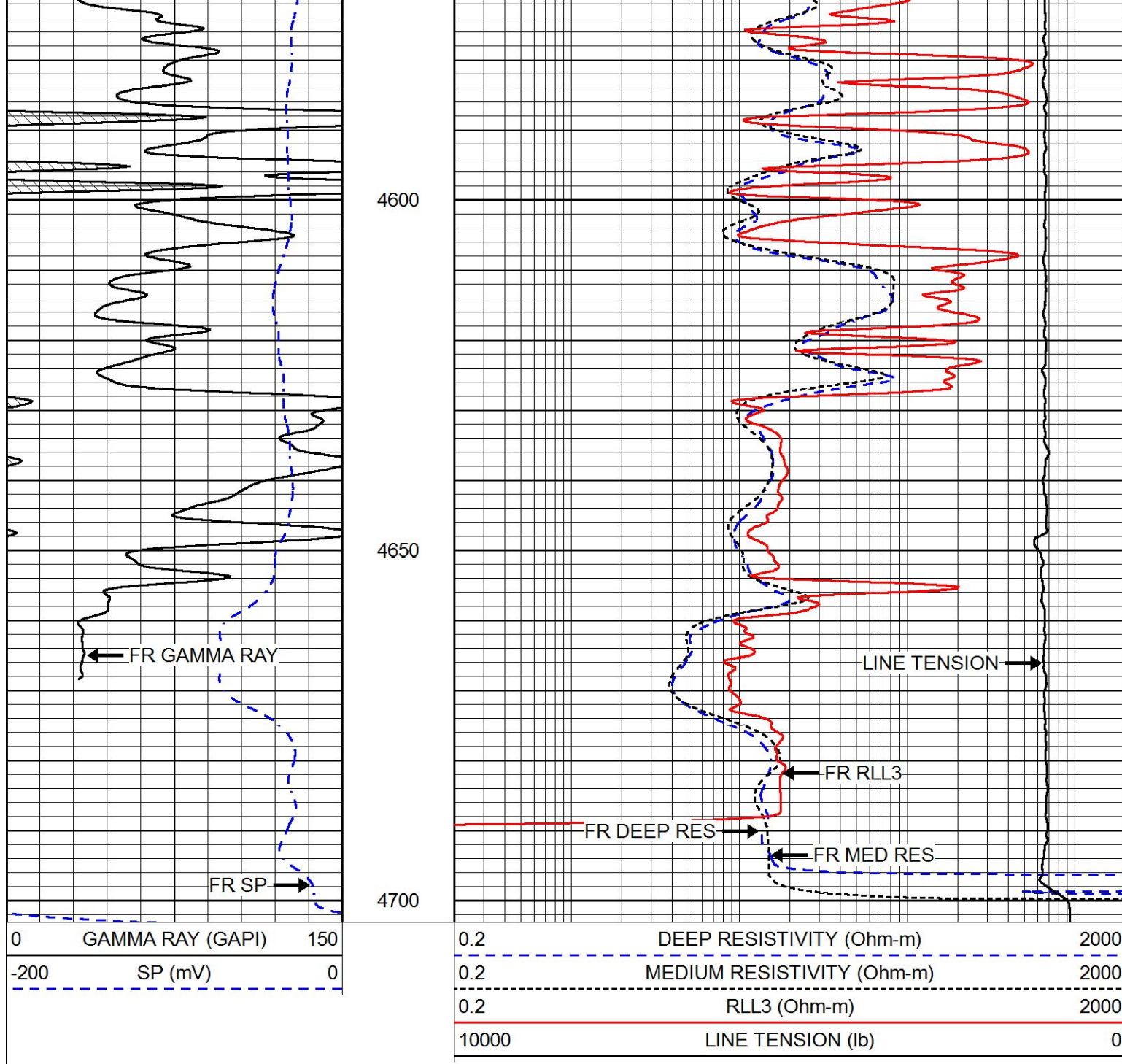
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4500

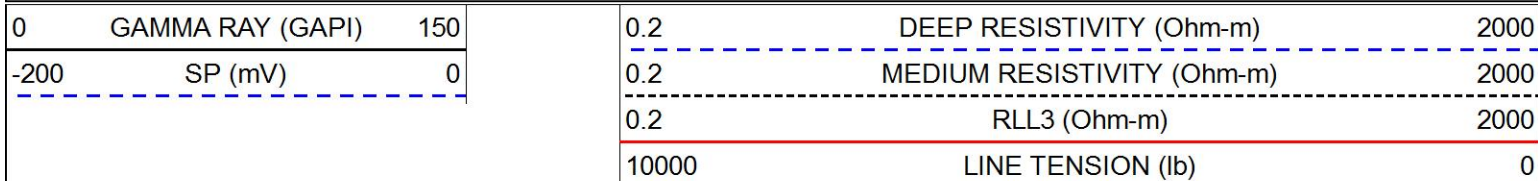
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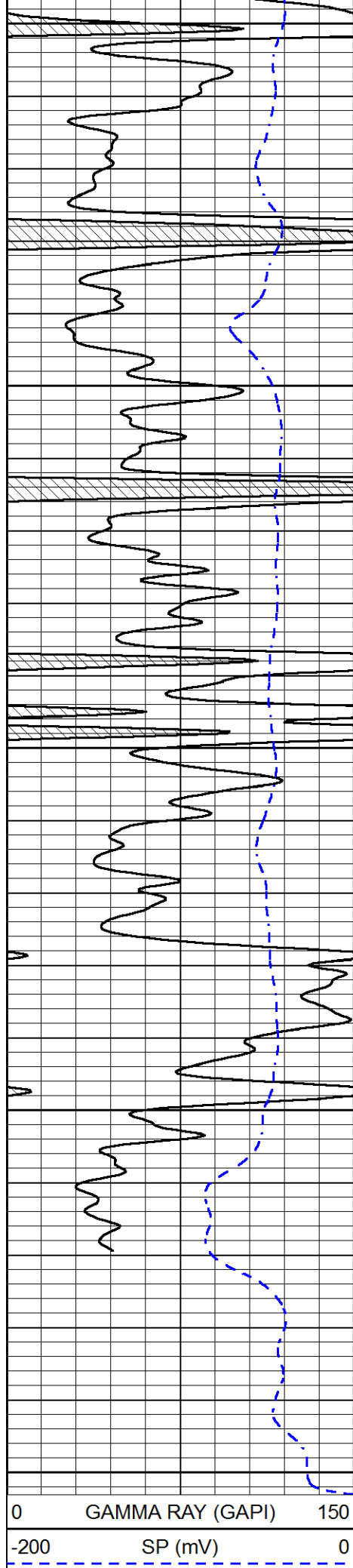




REPEAT SECTION

Database File elk_albers trust #1-36.db
 Dataset Pathname StkMI/pass2.1
 Presentation Format _dil
 Dataset Creation Tue Apr 06 12:28:32 2021
 Charted by Depth in Feet scaled 1:240





4500

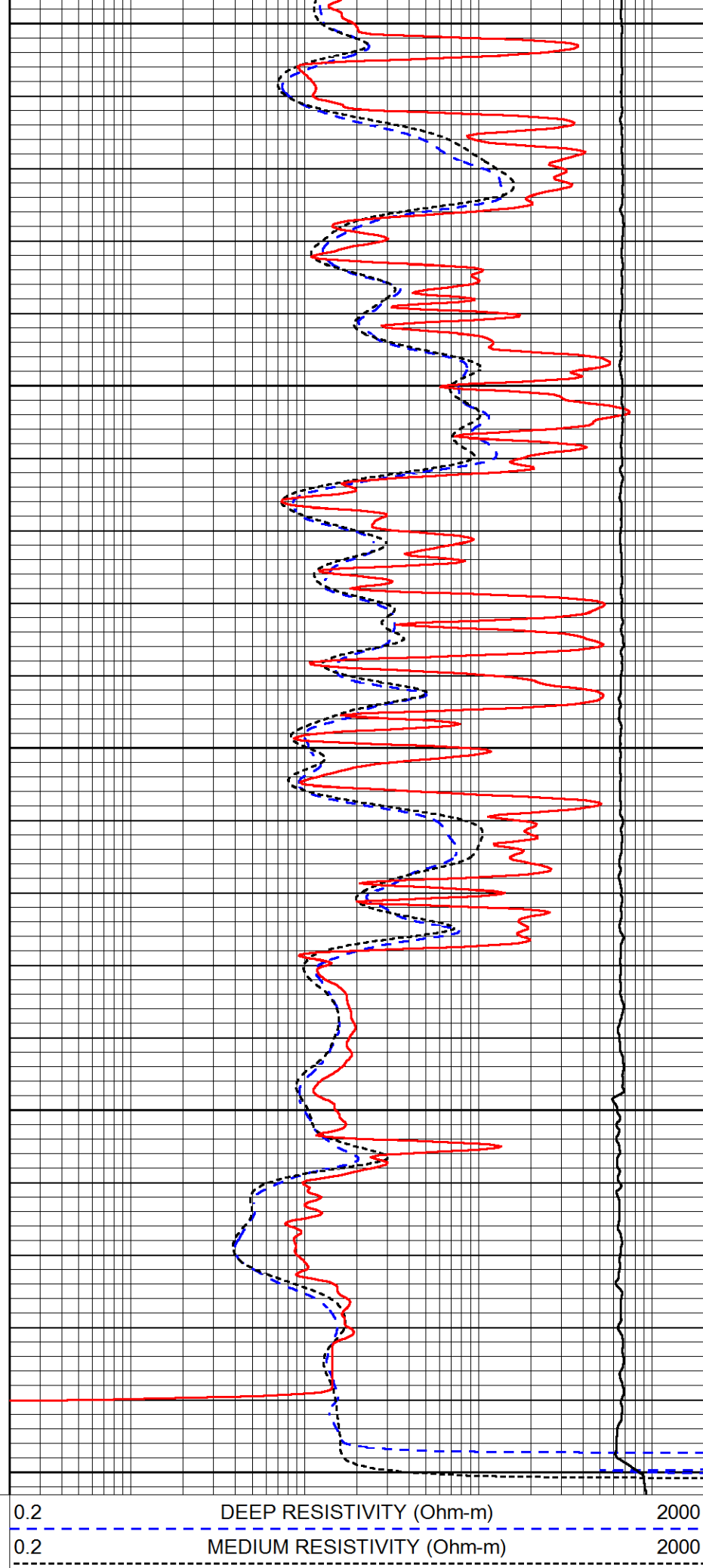
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4600

4650

4700

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

```
Database File      elk_albers trust #1-36.db
Dataset Pathname  StkMI/pass3.1
Dataset Creation   Tue Apr 06 12:56:34 2021
```

Serial-Model: 952-828-PSI HIGH TEMP
Surface Cal Performed:

		Readings		References		Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-34.000
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-34.000

Serial-Model: 817-947-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Thu Apr 1 14:04:39 2021
Before Survey Verification Performed:
After Survey Verification Performed:

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	5708.83	5527.94	cps
Aluminum	2.680	g/cc	1049.66	3515.58	cps
Spine Angle = 75.04			Density/Spine Ratio = 0.528		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	14.50	in	1.23		

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

Serial Number: 207-MW
Tool Model: M&W

CALIBRATION

Detector		Readings		Target		Normalization
	Short Space	6240.00	cps	1000.00	cps	1.6025
	Long Space	460.00	cps	1000.00	cps	1.9500
PRE-SURVEY VERIFICATION						
	Detector	Readings		Measured	Target	
1)	Short Space	cps				
	Long Space	cps		pu	pu	
2)	Short Space	cps				
	Long Space	cps		pu		
3)	Short Space	cps				
	Long Space	cps		pu		
POST-SURVEY VERIFICATION						
	Detector	Readings		Measured	Target	
1)	Short Space	cps				
	Long Space	cps		pu	pu	
2)	Short Space	cps				
	Long Space	cps		pu	pu	
3)	Short Space	cps				
	Long Space	cps		pu	pu	
Gamma Ray Calibration Report						
	Serial Number:	233-M&W				
	Tool Model:	M&W				
	Performed:	Wed Mar 3 05:25:33 2021				
	Calibrator Value:	1.0	GAPI			
	Background Reading:	0.0	cps			
	Calibrator Reading:	1.0	cps			
	Sensitivity:	0.5500	GAPI/cps			

	Company	Elk Energy Holdings, LLC
	Well	Albers Trust #1-36
	Field	Albers
	County	Thomas
	State	Kansas