



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Cobalt Energy, LLC		Company Cobalt Energy, LLC	
Well McDaniel Trust #1-18		Well McDaniel Trust #1-18	
Field N/A		Field N/A	
County Logan		County Logan	
State Kansas		State Kansas	
Location: API #: 15-109-21608-00-00		Other Services	
SEC 18 TWP 15S RGE 33W		CNL/CDL MEL	
Permanent Datum	Ground Level	Elevation	2871'
Log Measured From	Kelly Bushing	K.B.	2882'
Drilling Measured From	Kelly Bushing	D.F.	N/A
		G.L.	2871'
Date	12/23/2020		
Run Number	One		
Depth Driller	4600'		
Depth Logger	4603'		
Bottom Logged Interval	4602'		
Top Log Interval	300'		
Casing Driller	8.625" @ 351'		
Casing Logger	349'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	5000		
Density / Viscosity	9.2 65		
pH / Fluid Loss	10.5 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.30 @ 40		
Rmt @ Meas. Temp	0.23 @ 40		
Rmc @ Meas. Temp	0.41 @ 40		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.10 @ 122		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	122		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Larry Nicholson		

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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,
South to Gold Rd, 4 1/2 West, 2 South, 4 West,
South and East into

Log Measured From: Kelly Bushing

11 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Larry Nicholson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\cobalt_mcdanieltrust 1-18.db
Dataset field/well/stkml/pass4.4/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 100	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 420	degF 0	Off	ft 0

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

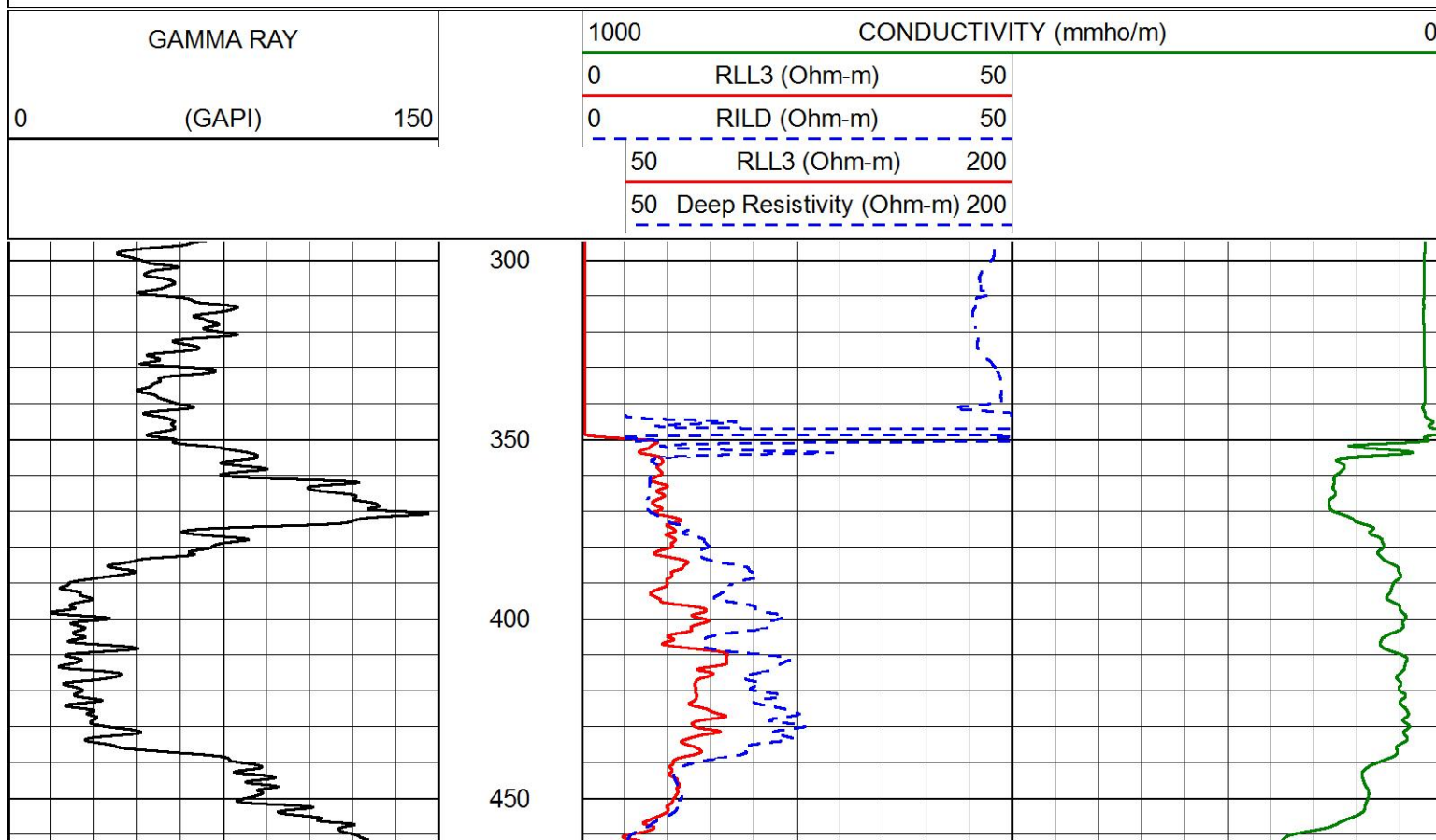
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

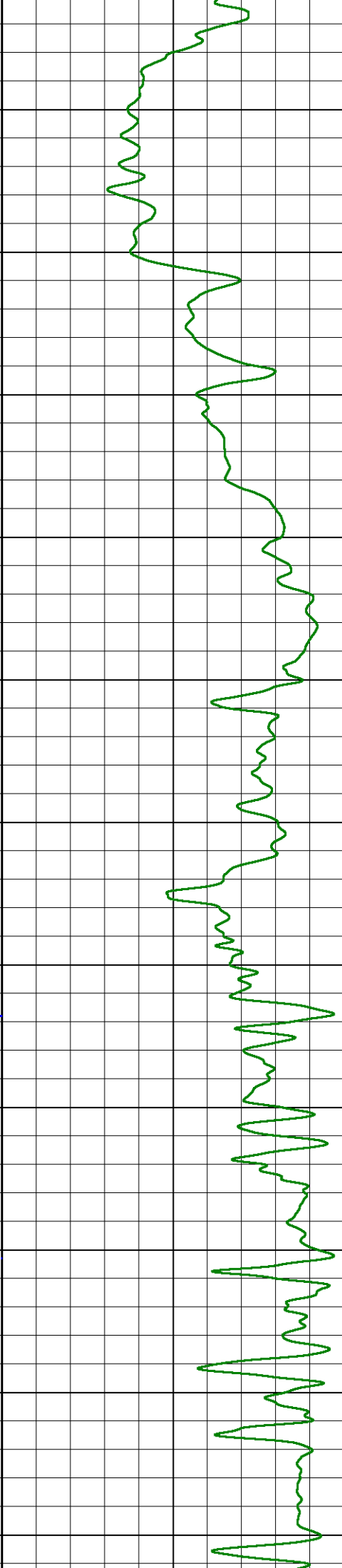
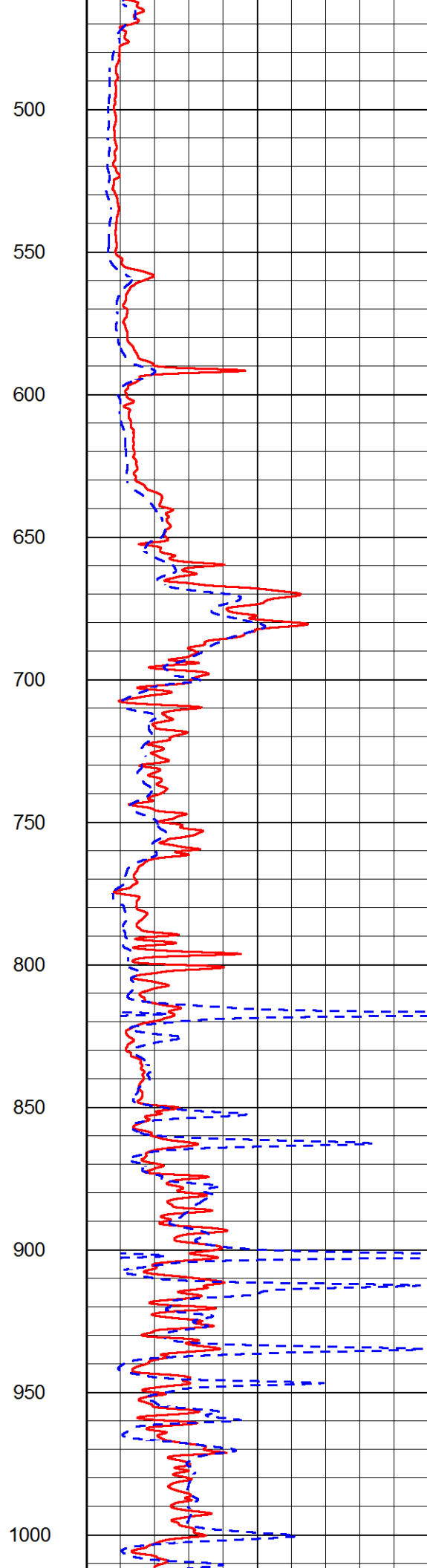
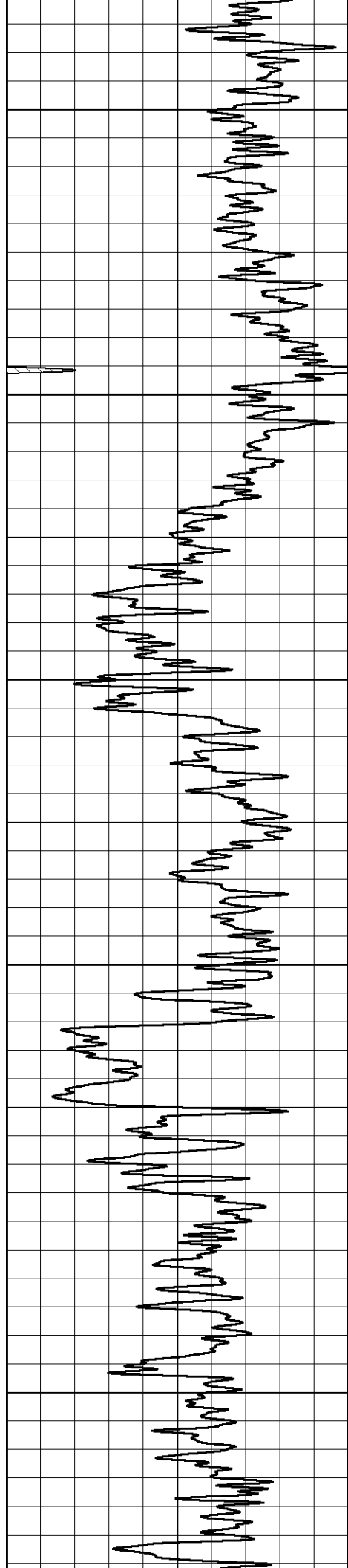


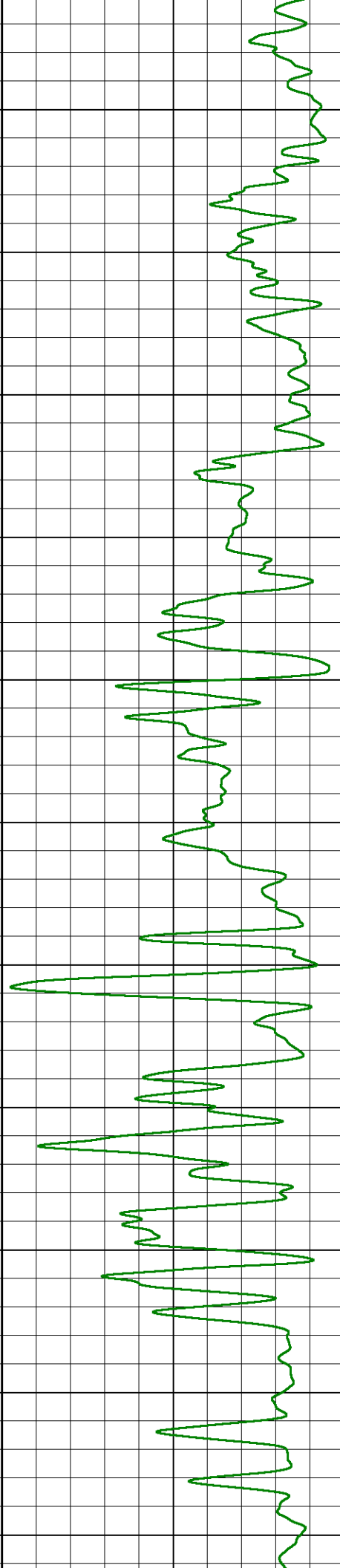
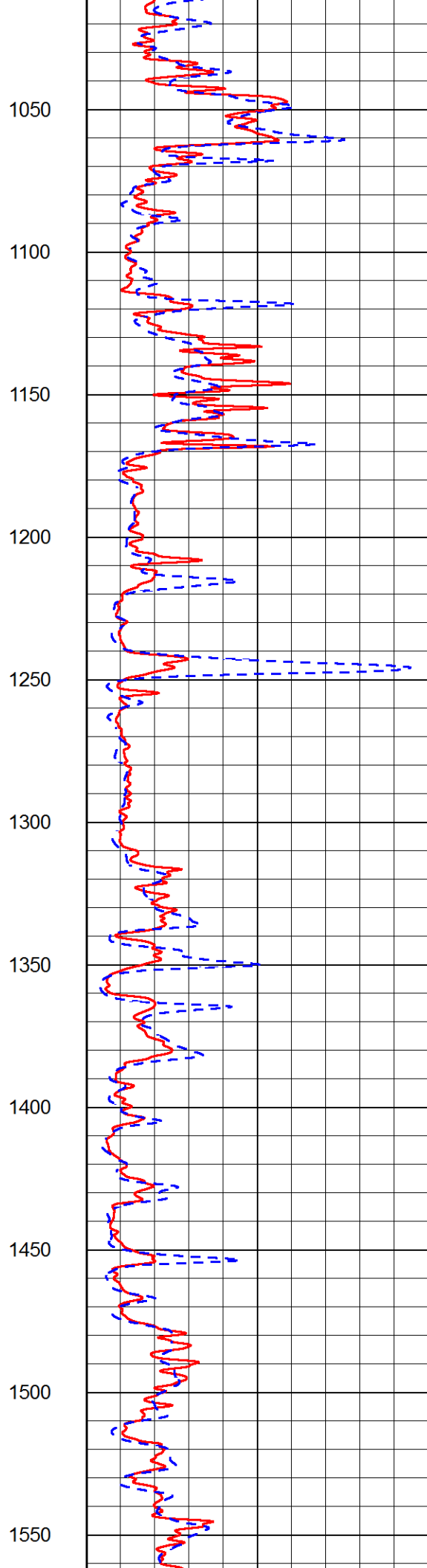
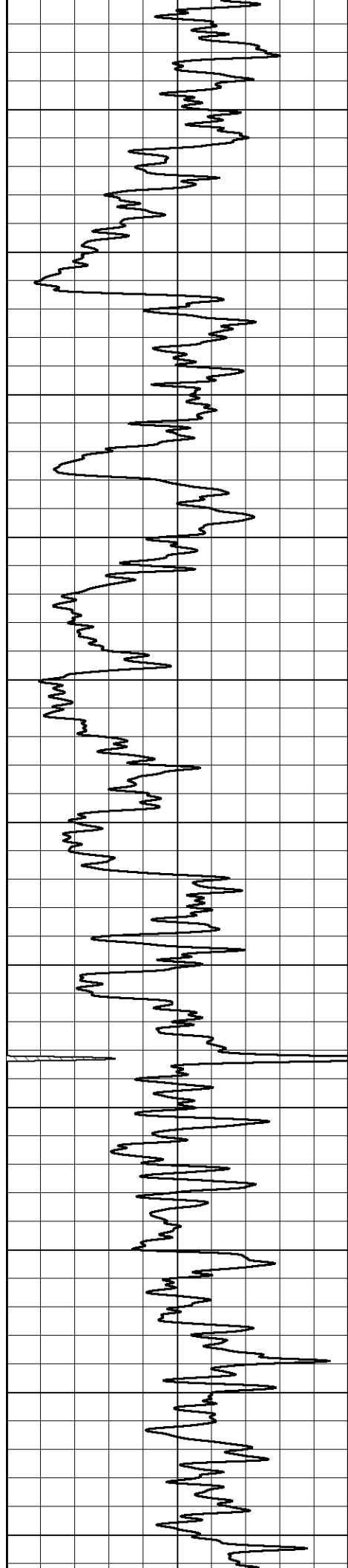
MIDWEST WIRELINE

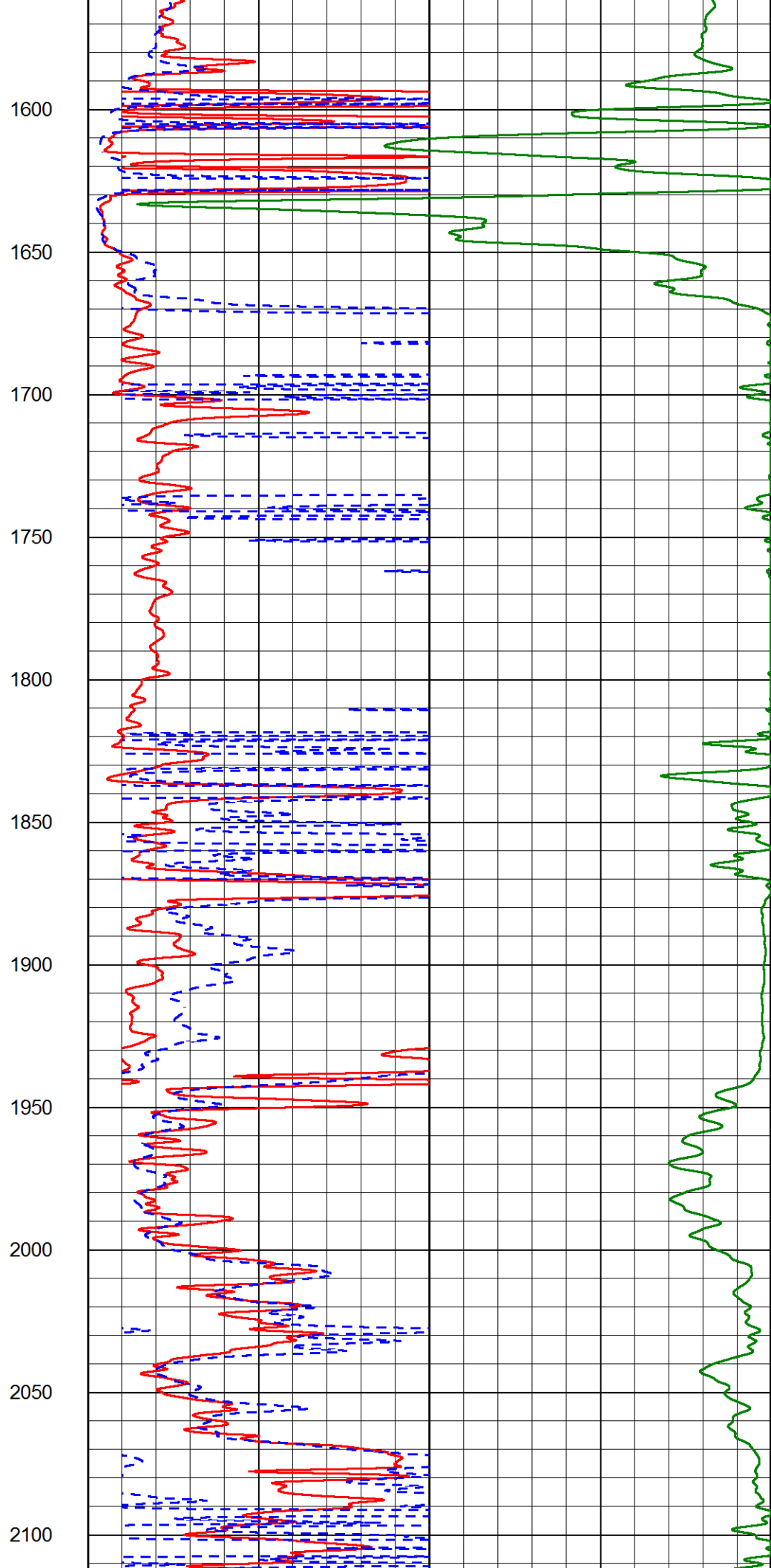
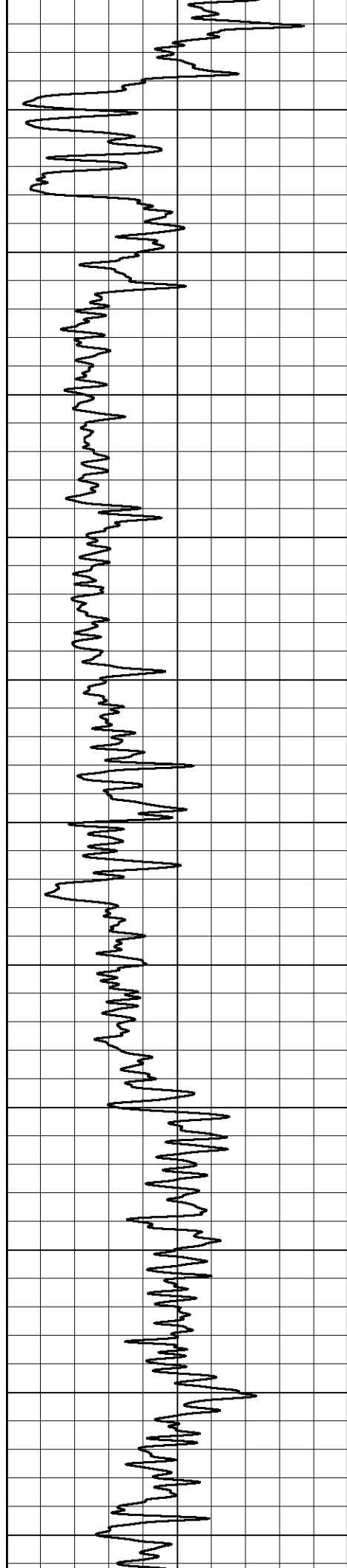
MAIN PASS

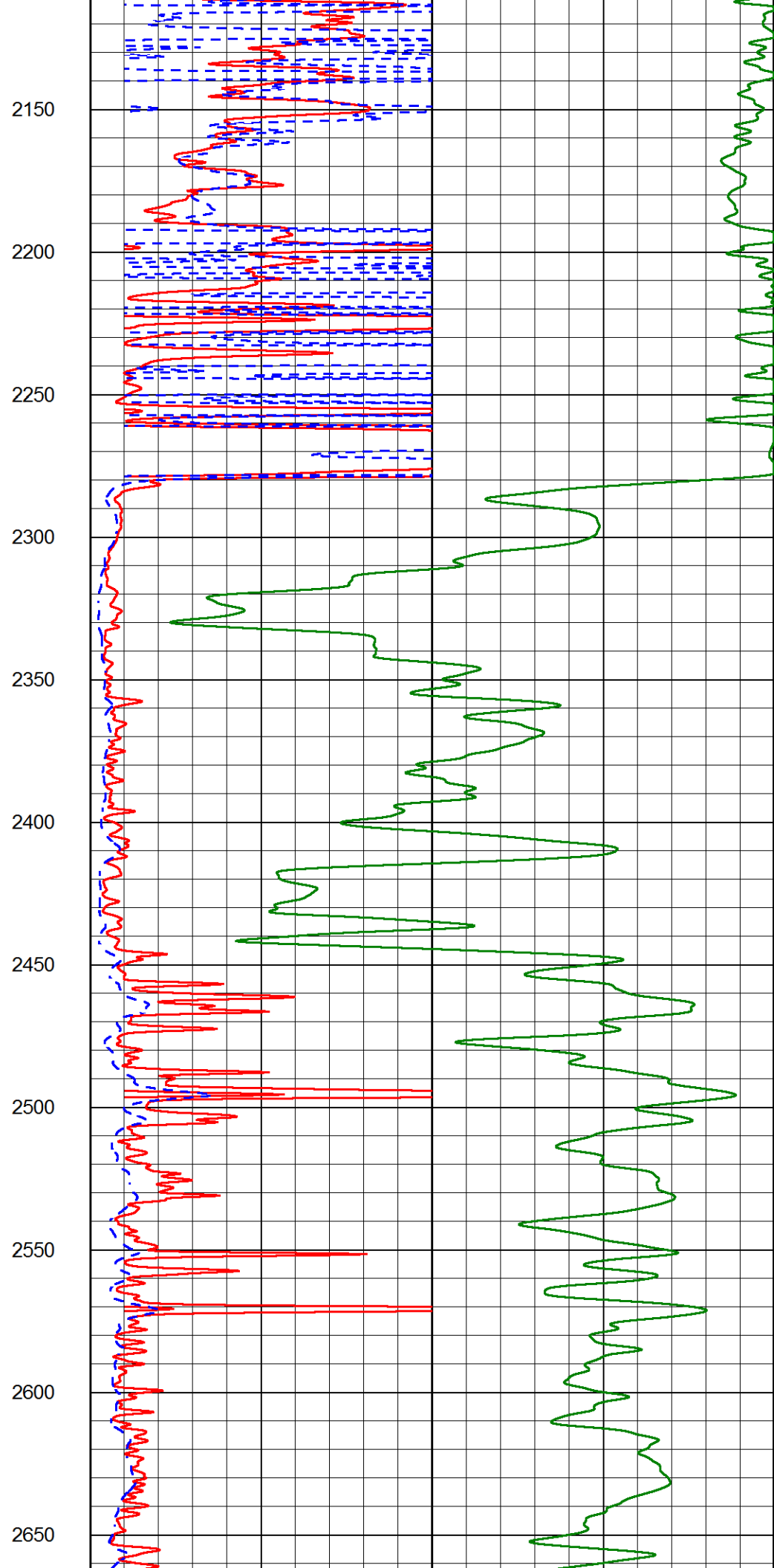
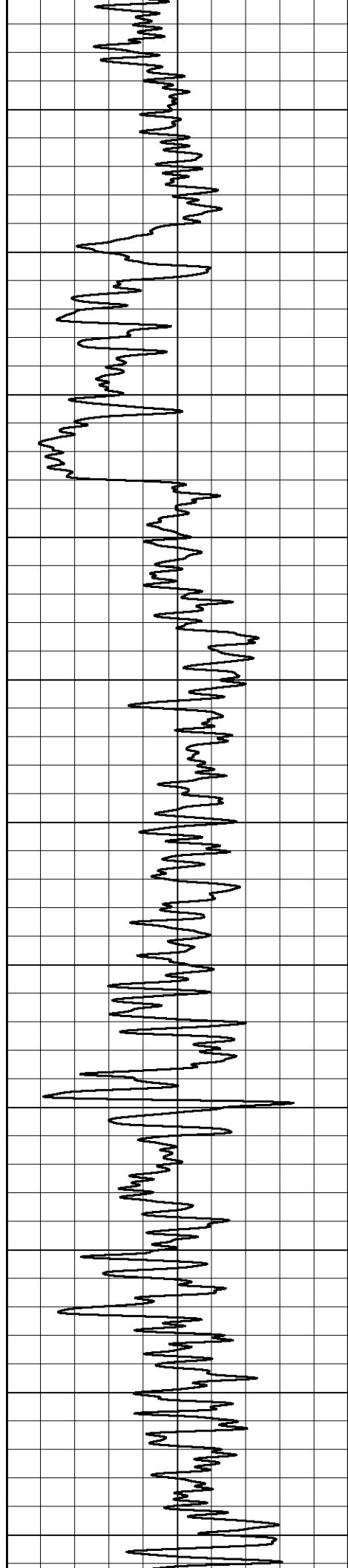
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Presentation Format _dil2in
Dataset Creation Wed Dec 23 09:39:38 2020
Charted by Depth in Feet scaled 1:600

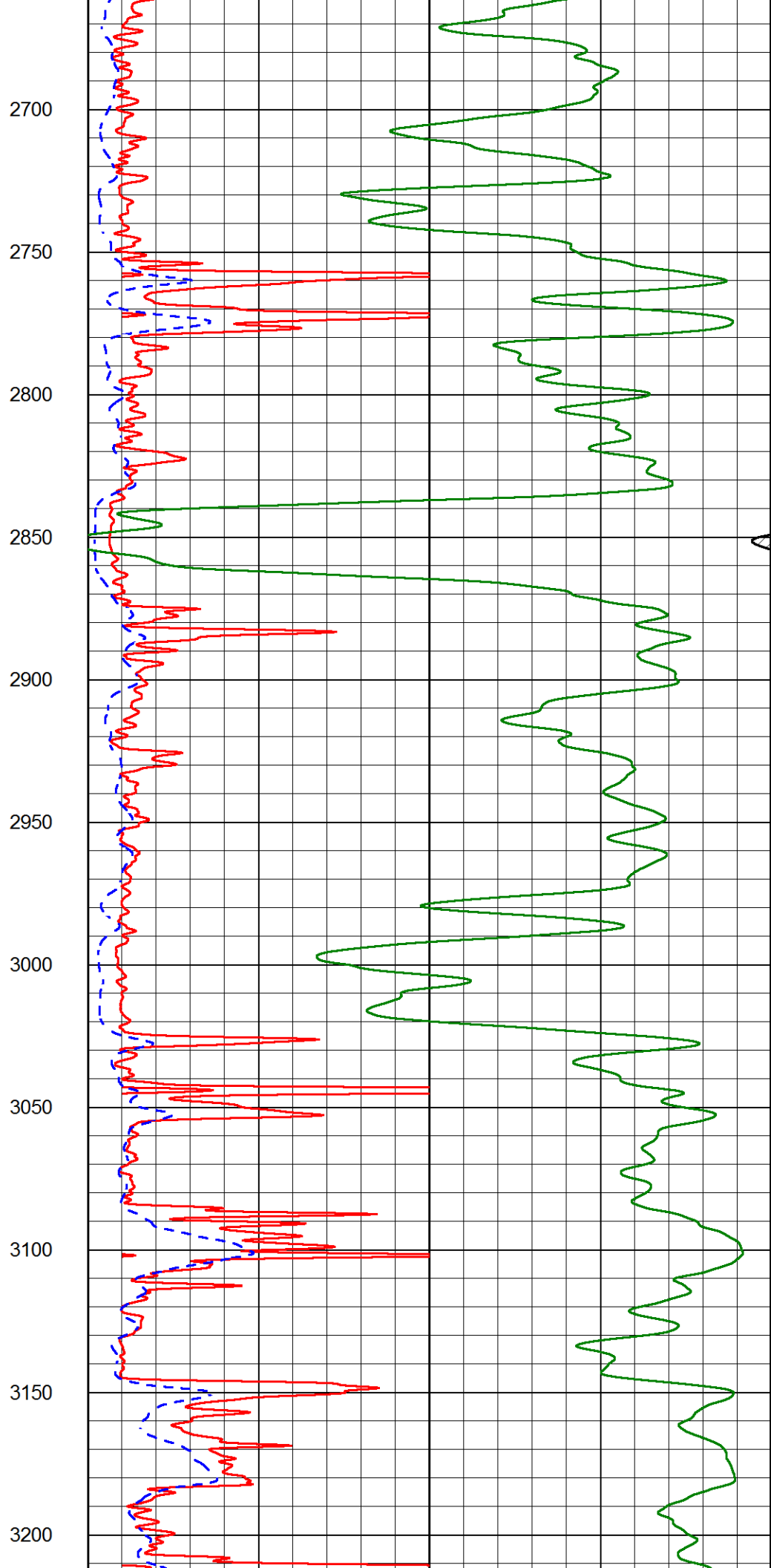
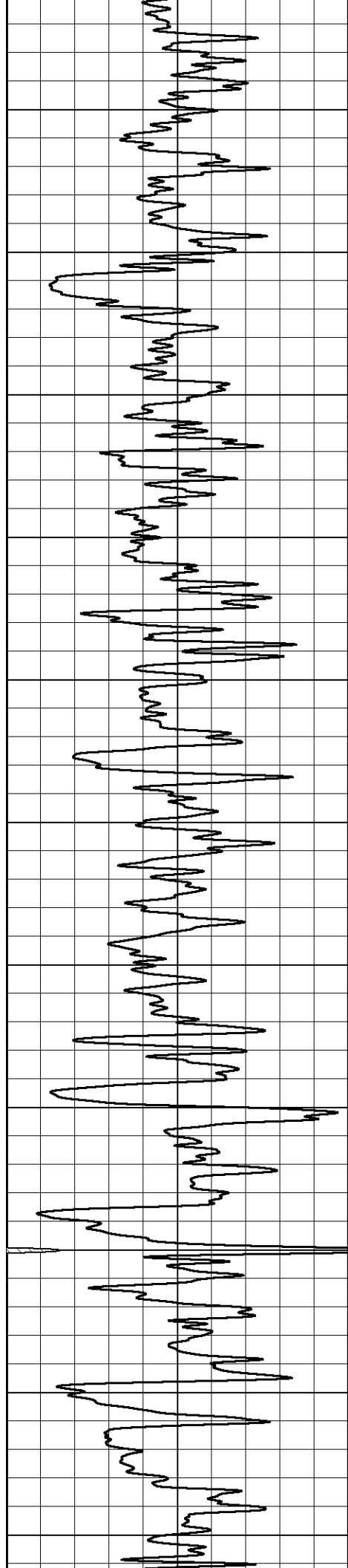


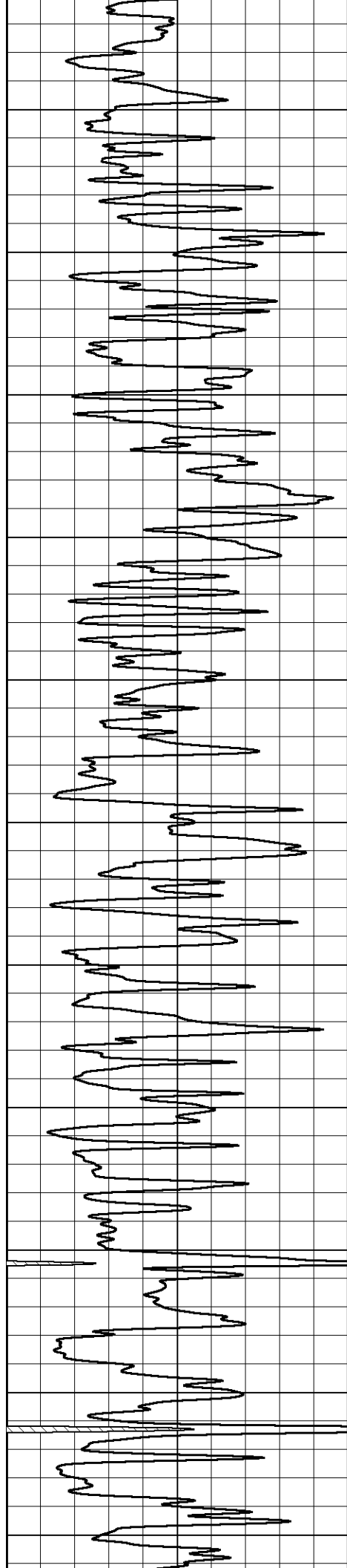












3250

3300

3350

3400

3450

3500

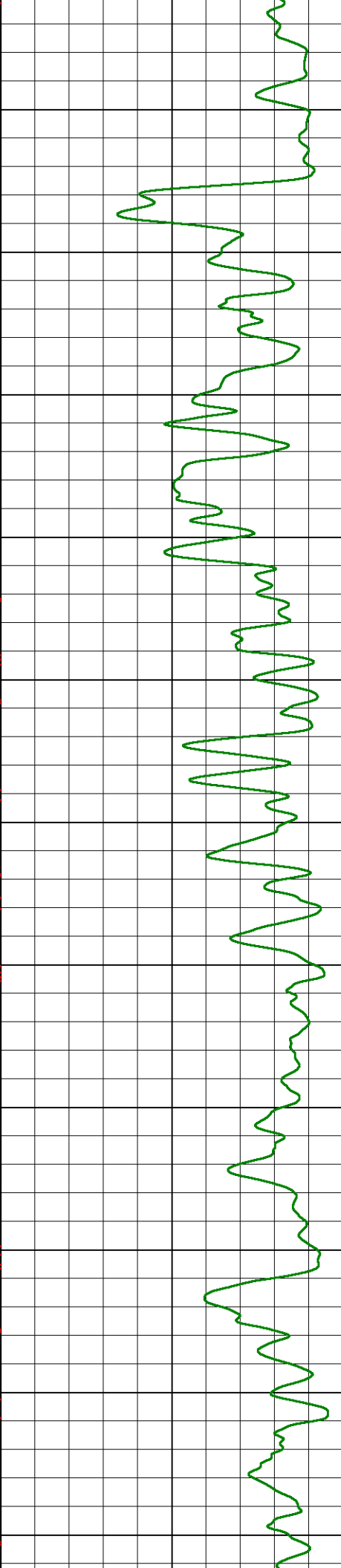
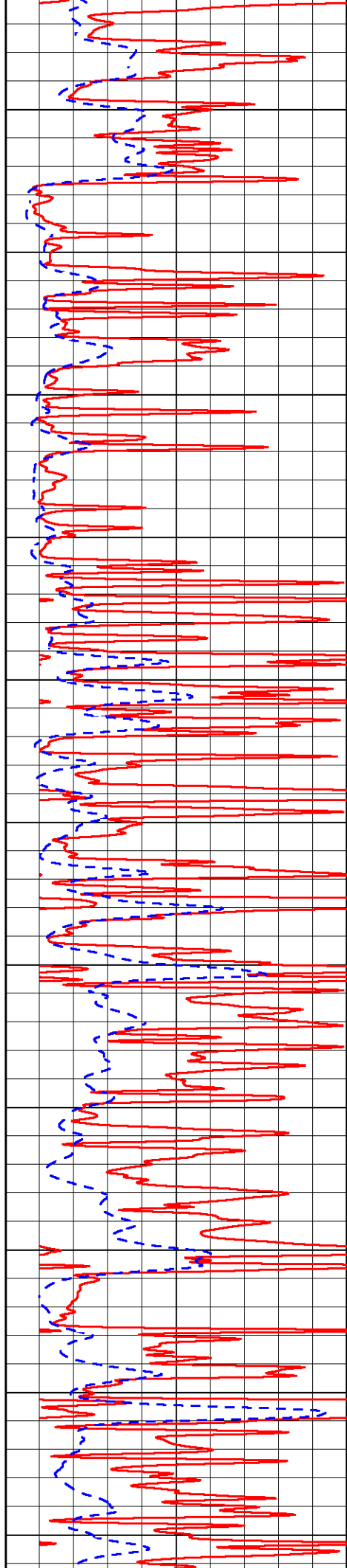
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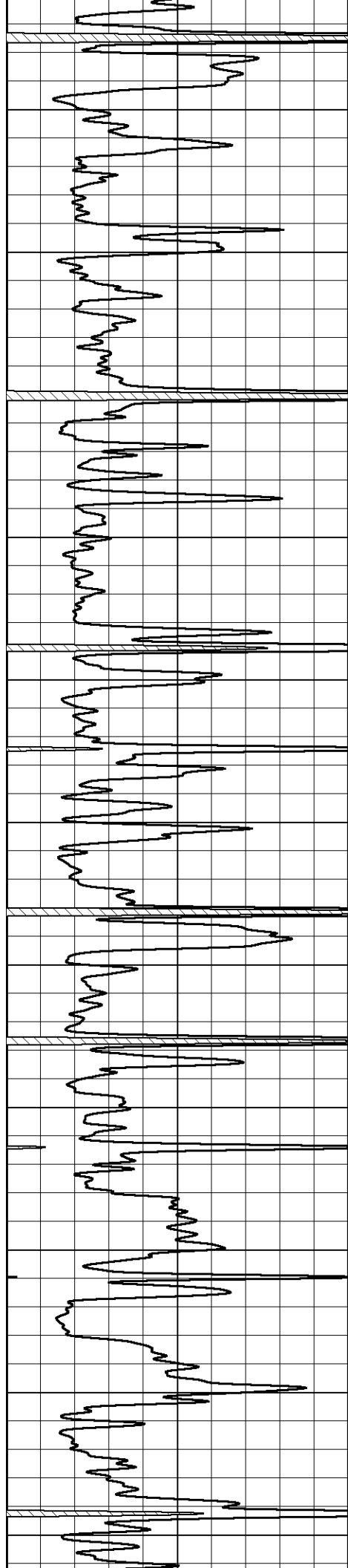
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3650

3700

3750





3800

3850

3900

3950

4000

4050

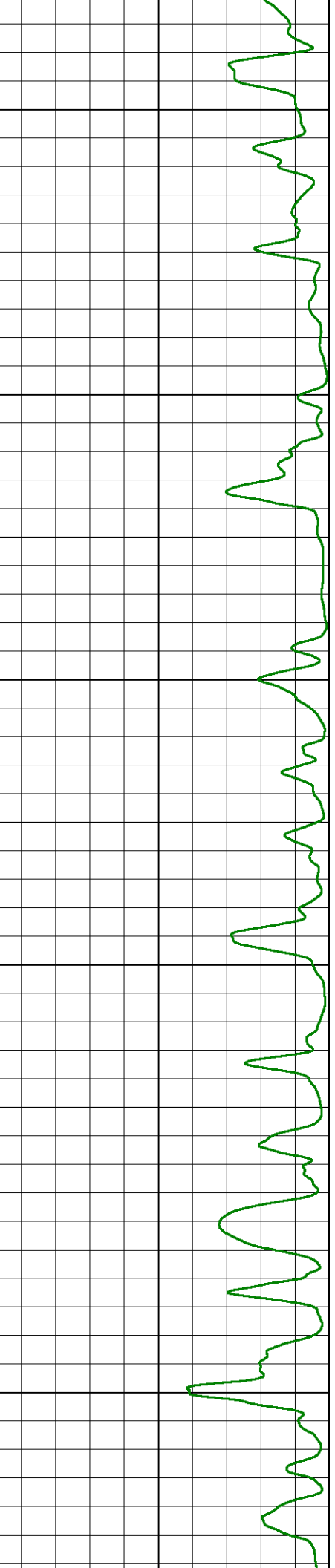
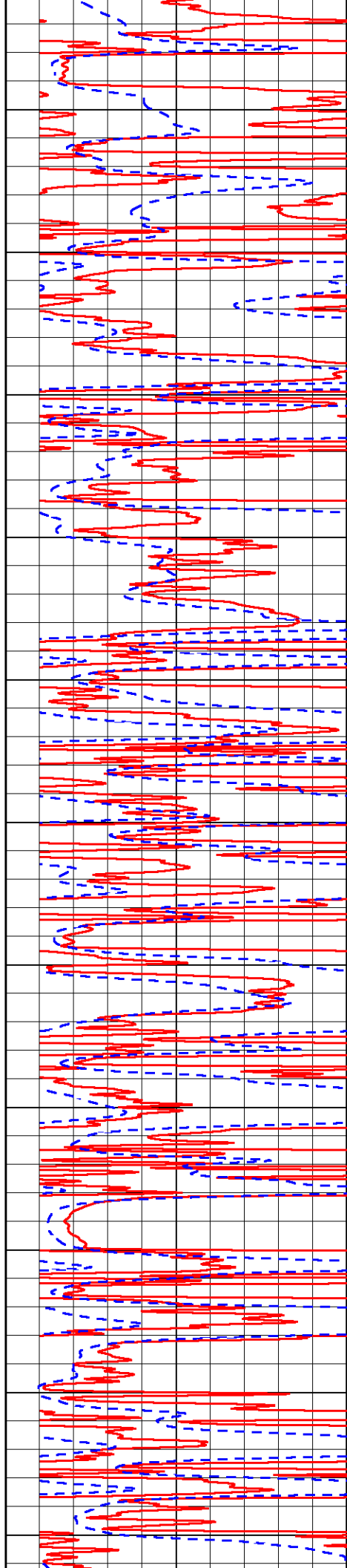
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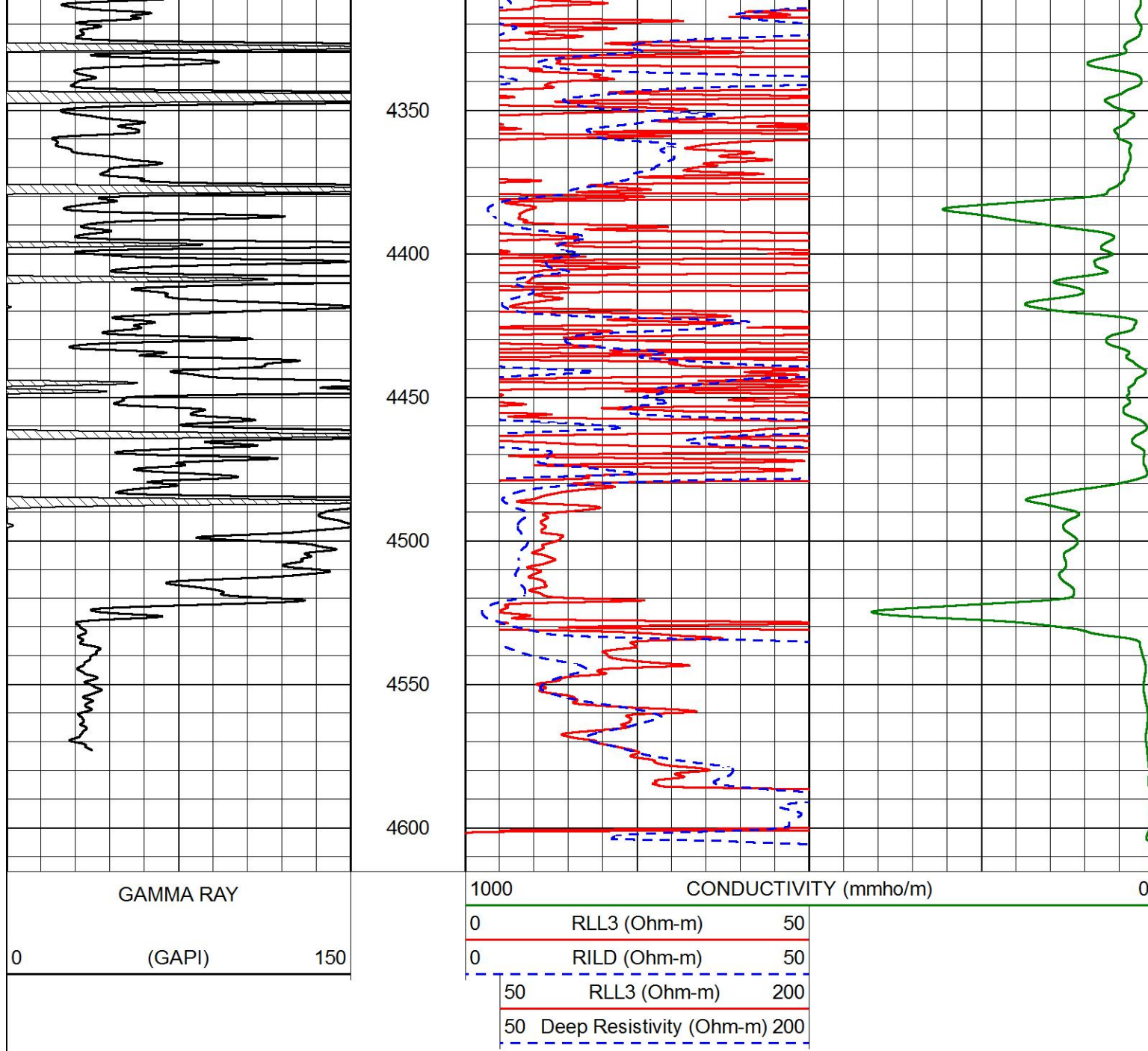
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4200

4250

4300





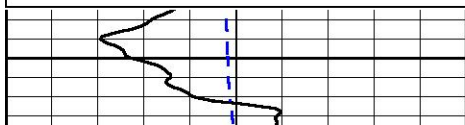
MIDWEST WIRELINE

MAIN PASS

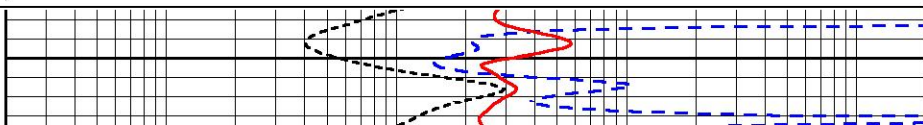
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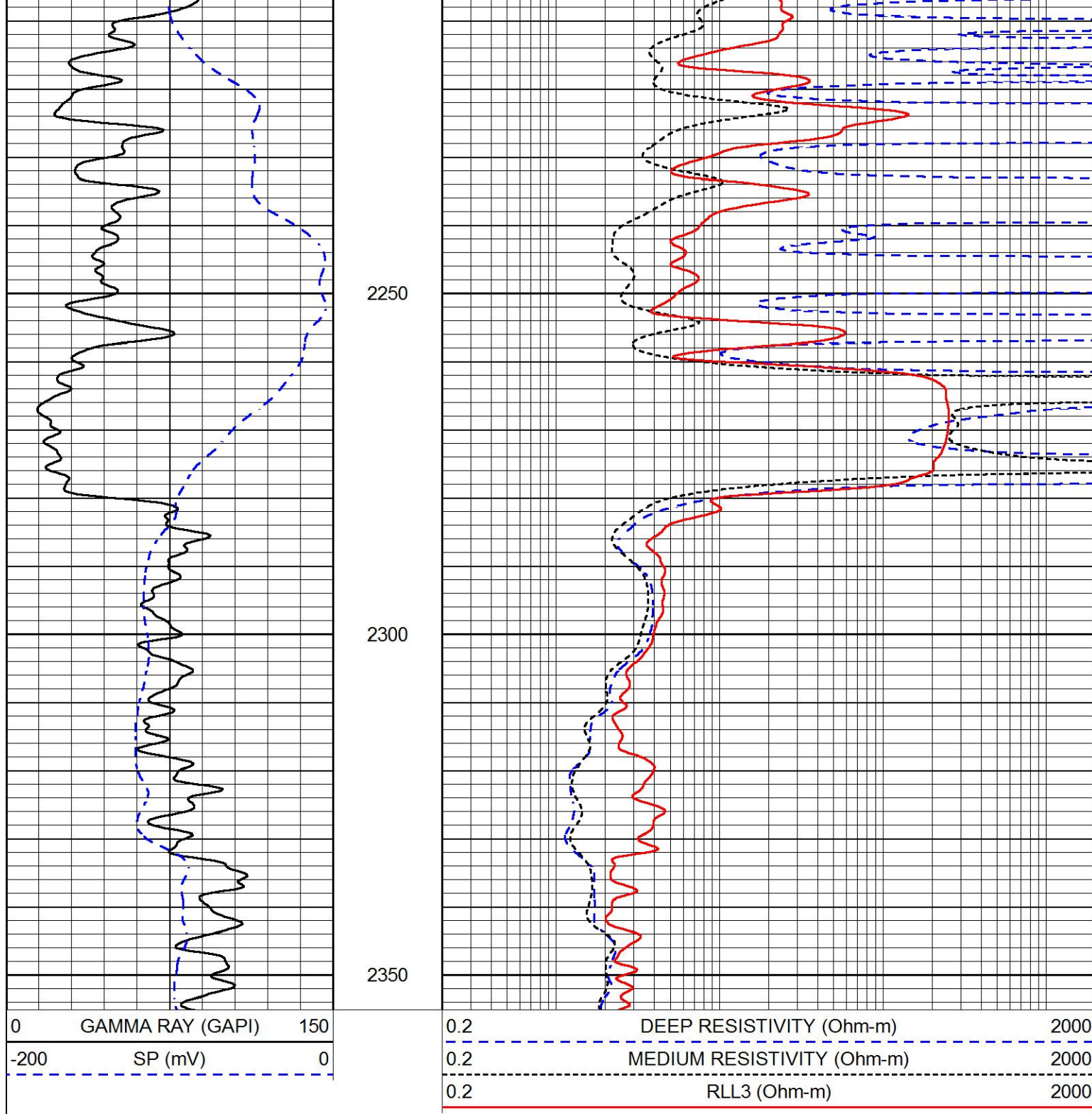
0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

0.2 DEEP RESISTIVITY (Ohm-m) 2000
 0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
 0.2 RLL3 (Ohm-m) 2000



2200





MAIN PASS

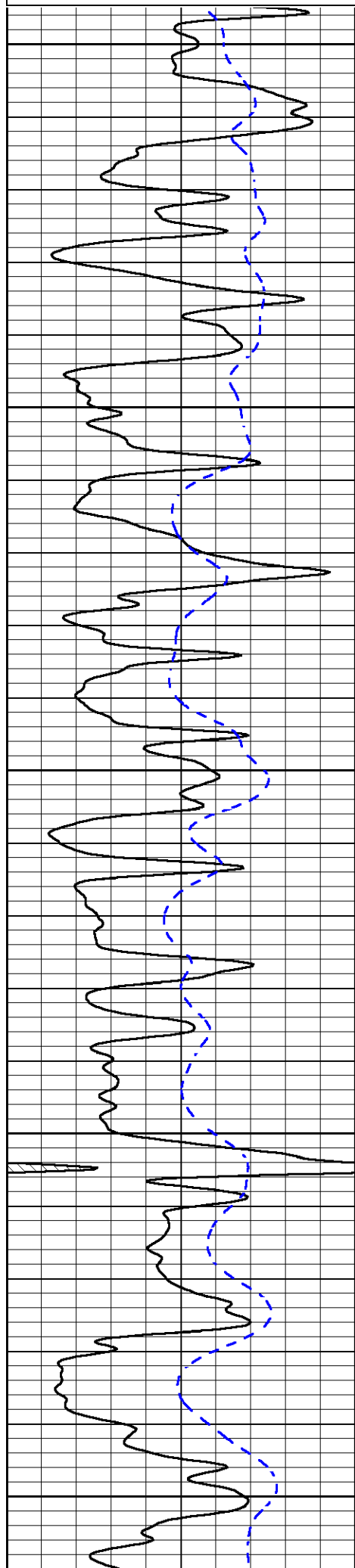
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 Dataset Pathname stkml/pass4.1
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0.2

RLL3 (Ohm-m)

2000



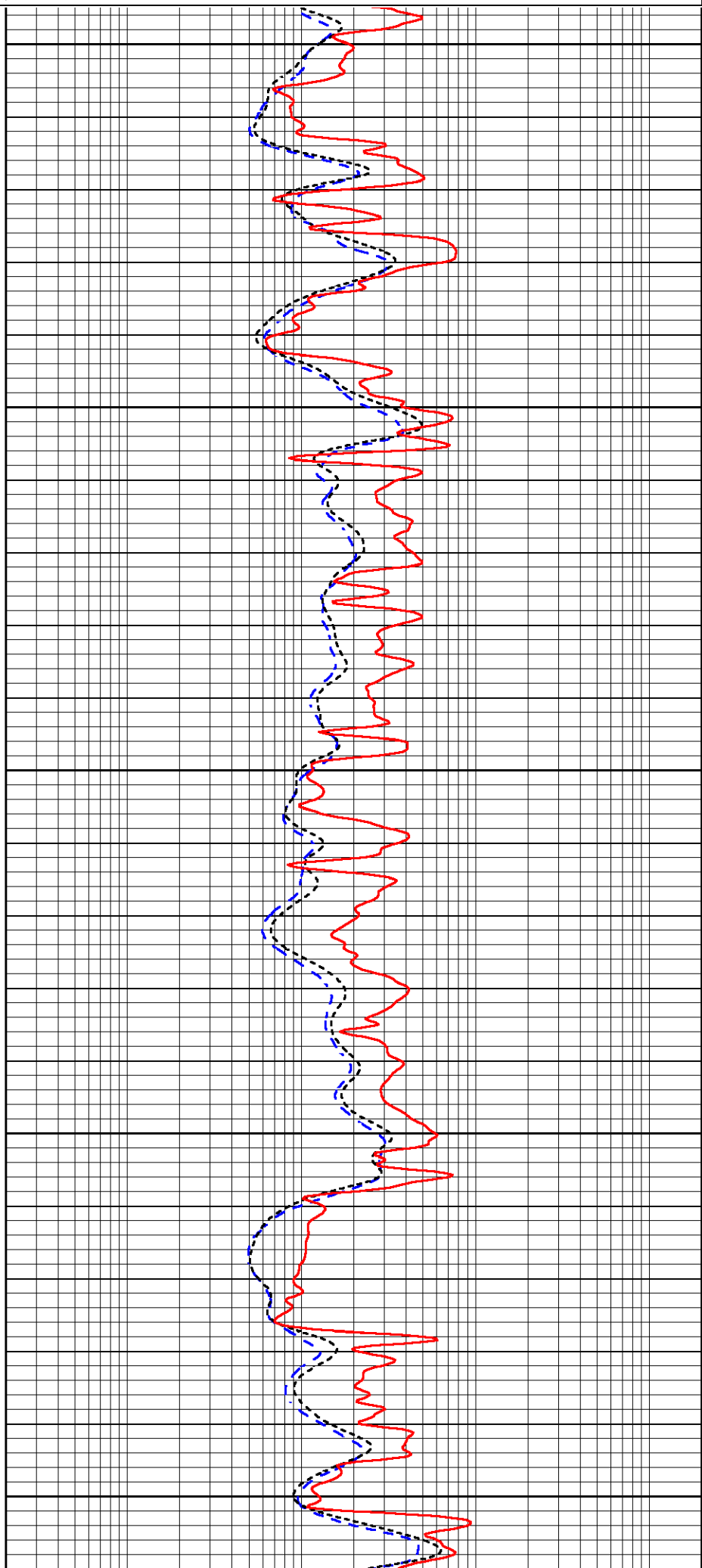
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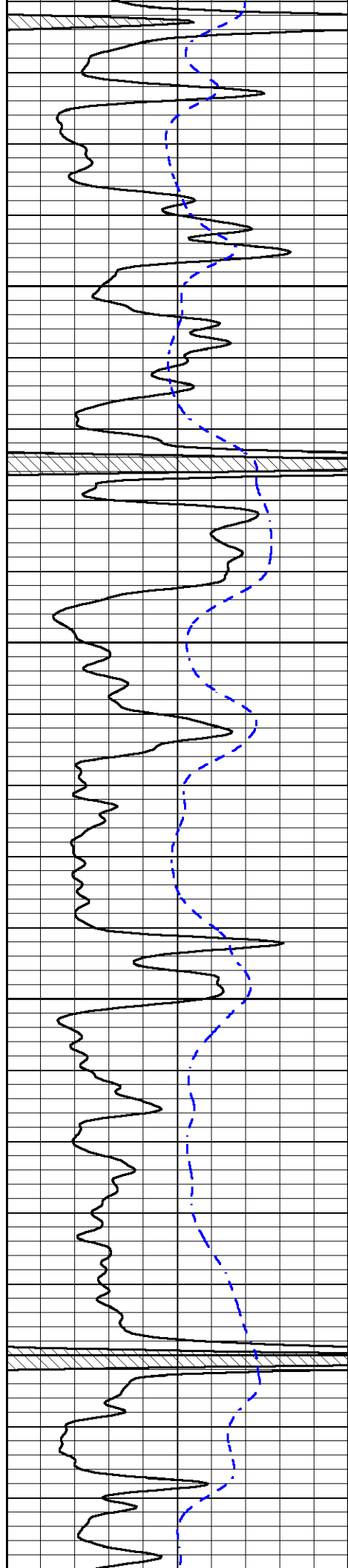
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3600

3650

3700



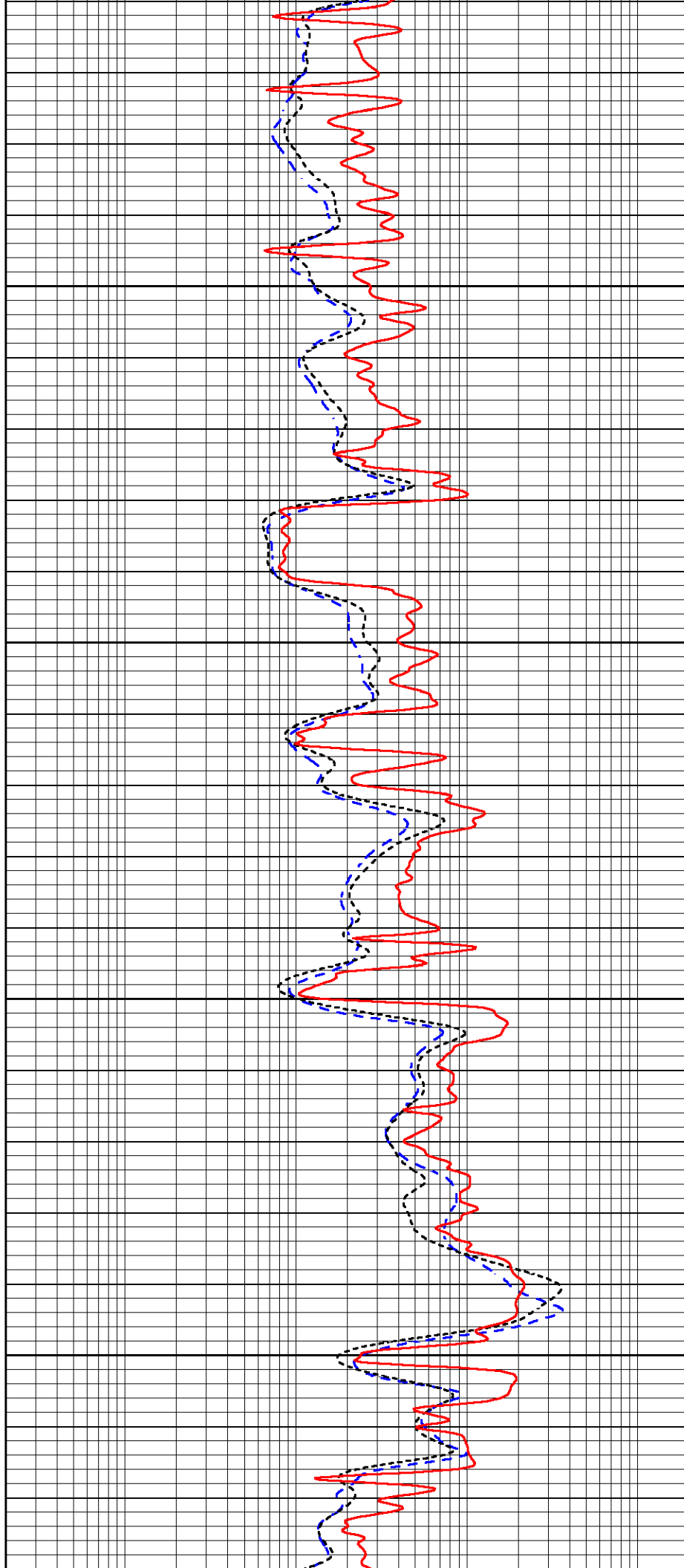


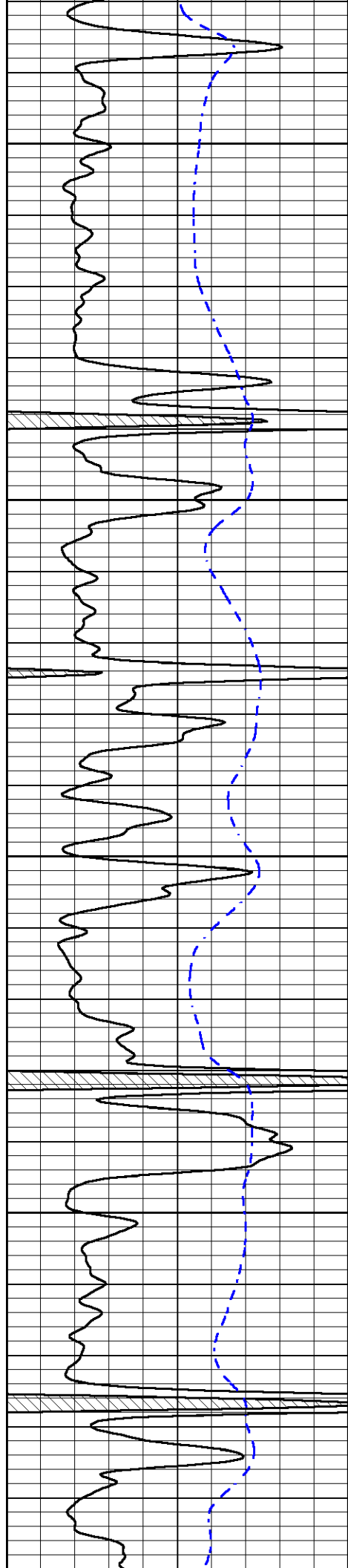
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3800

3850

3900





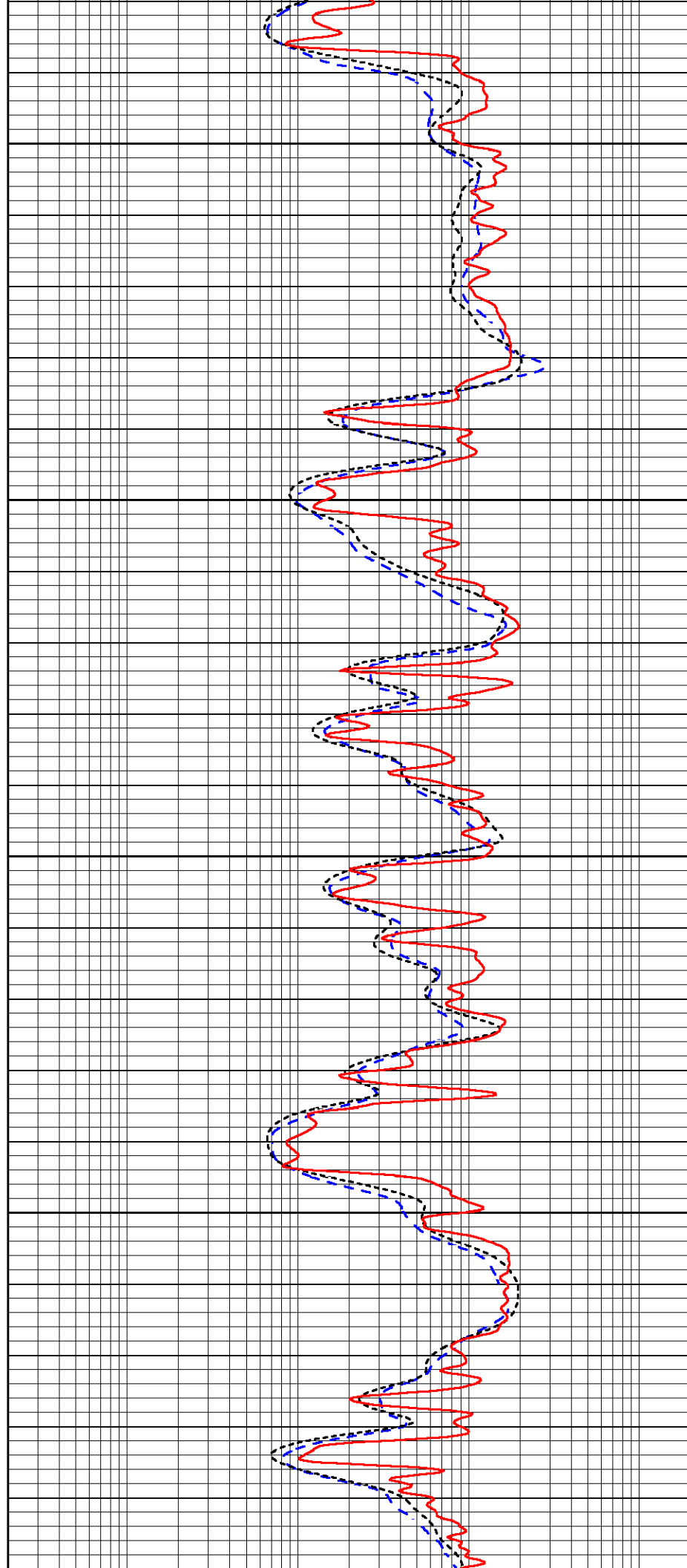
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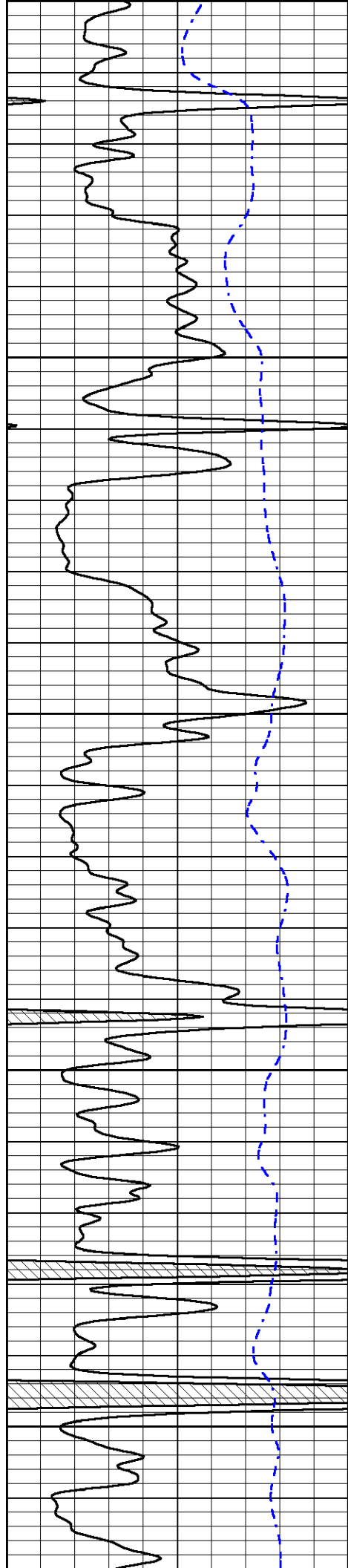
4000

4050

4100

4150





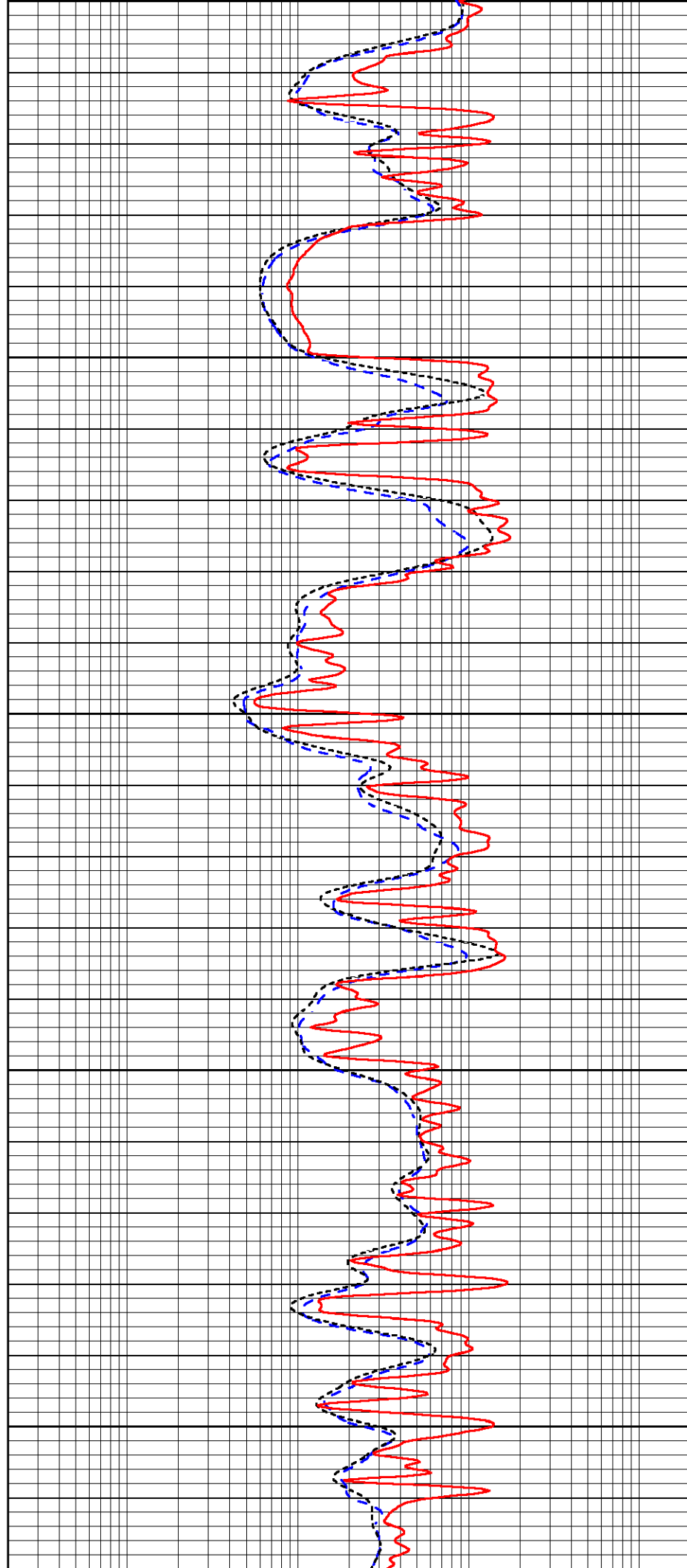
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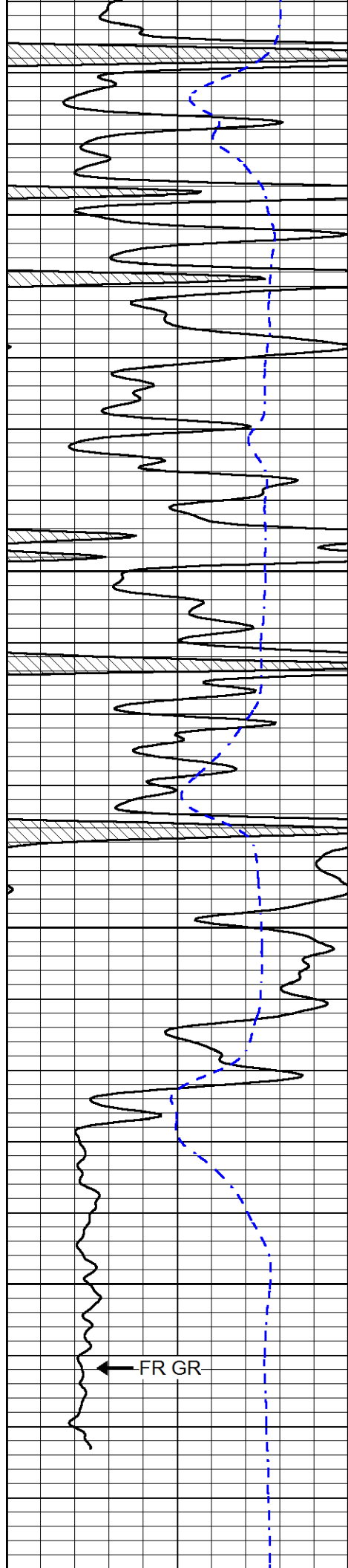
4200

4250

4300

4350





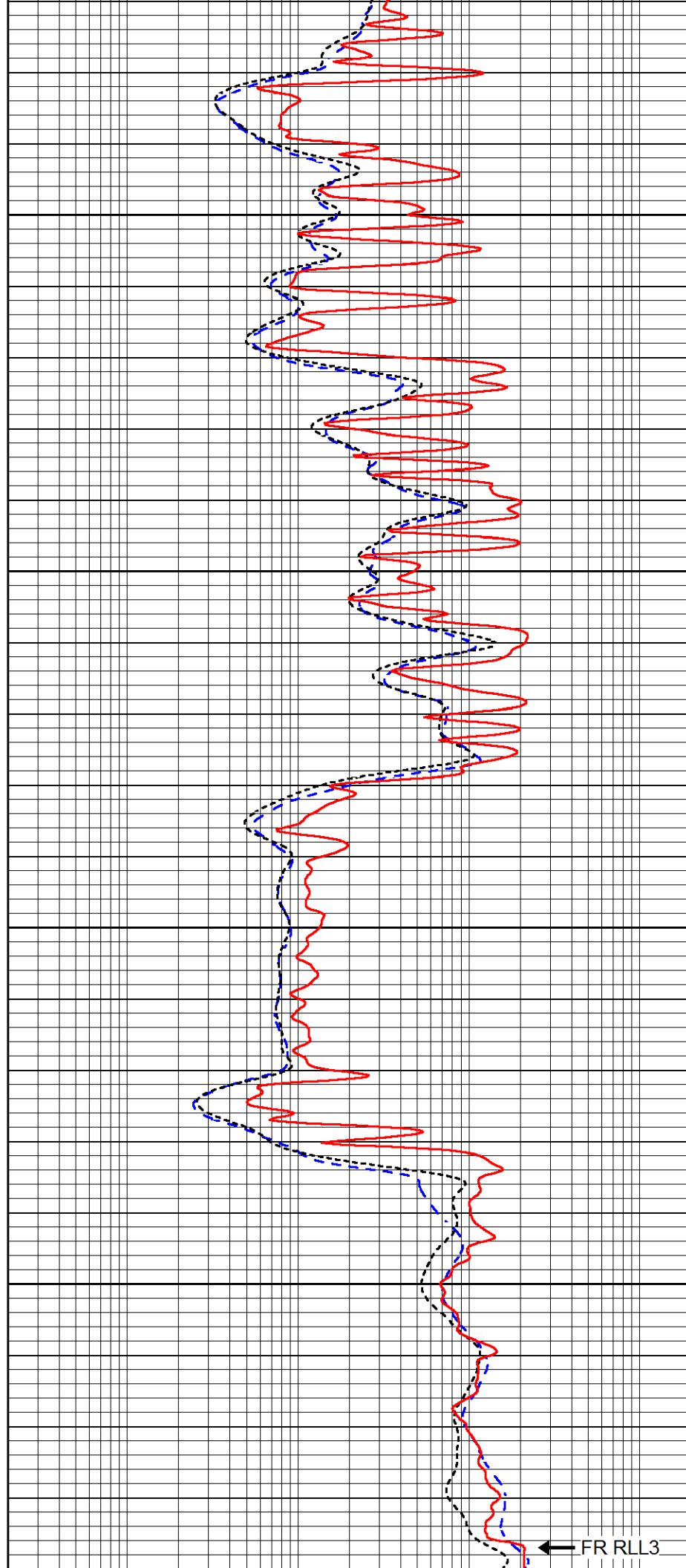
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4450

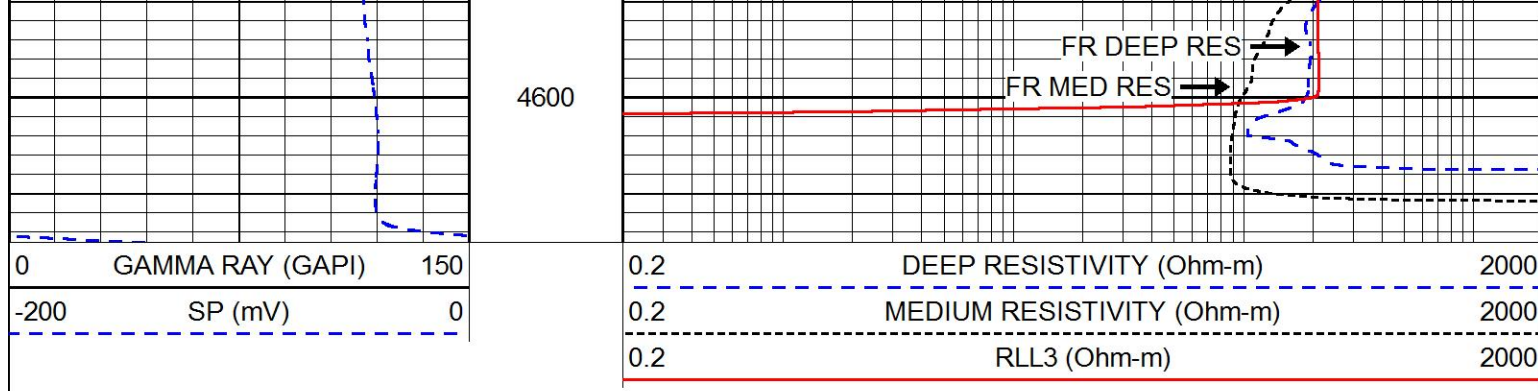
4500

4550

← FR GR



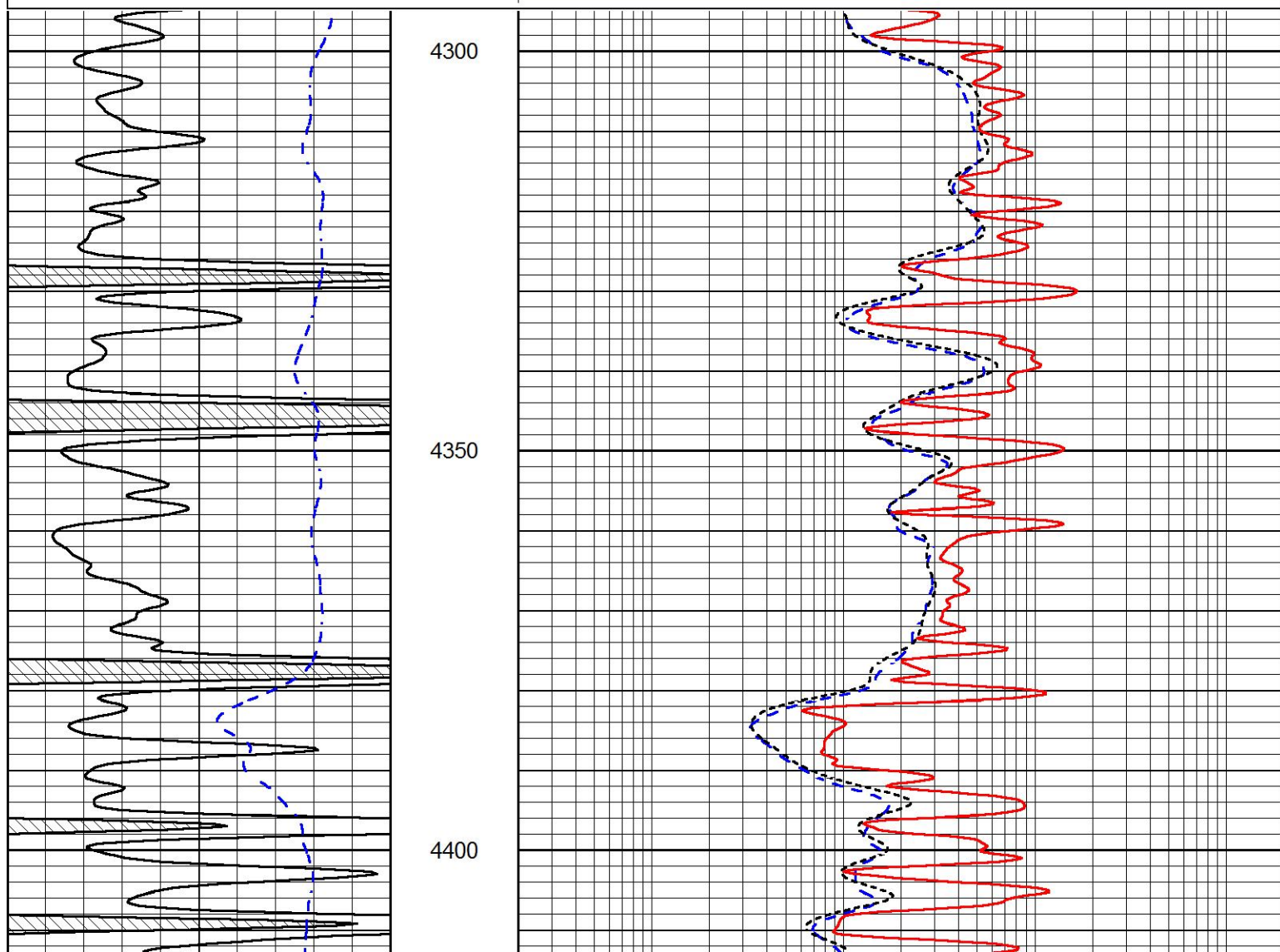
← FR RLL3

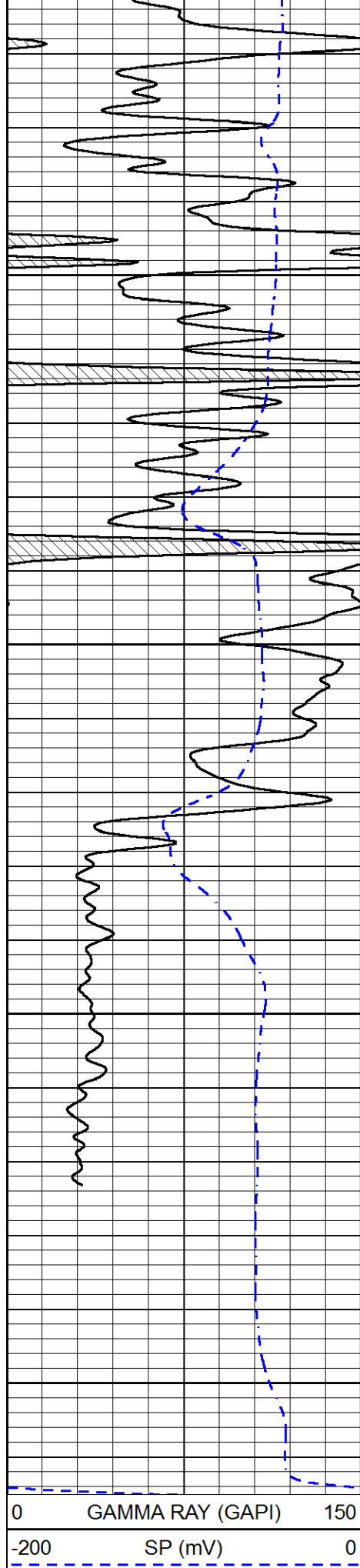


MIDWEST WIRELINE

REPEAT SECTION

Database File cobalt_mcdanieltrust 1-18.db
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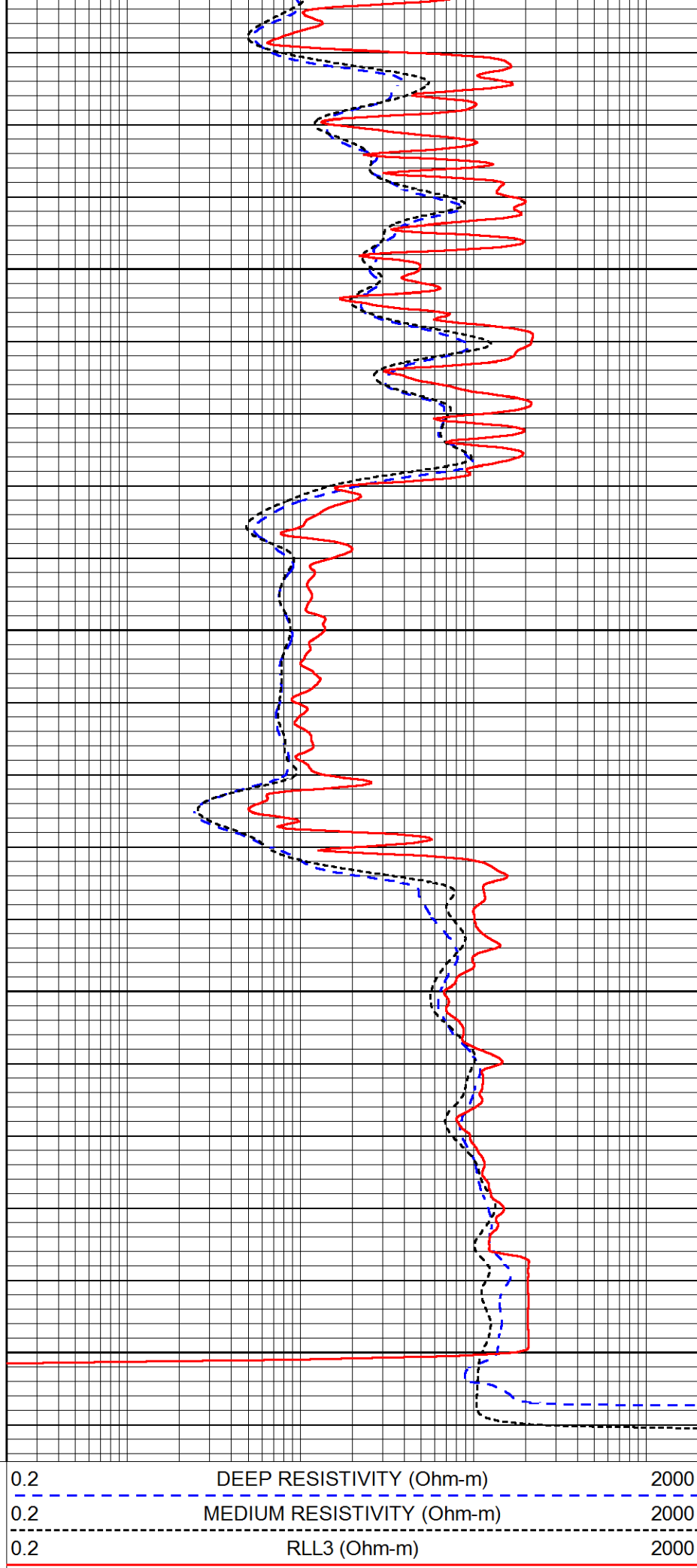


4450

4500

4550

4600



Calibration Report							
Database File	cobalt_mcdanieltrust 1-18.db						
Dataset Pathname	stkml/pass4.4						
Dataset Creation	Wed Dec 23 08:57:30 2020						
Dual Induction Calibration Report							
Serial-Model:				952-828-PSI HIGH TEMP			
Calibration Performed:				Sun Jun 28 08:39:24 2020			
		Readings		References		Results	
Loop:	Air	Loop		Air	Loop	Gain	Offset
Deep	167.000	835.000		0.000	255.000 mmho/m	0.455	-30.000
Medium	0.000	1348.000		142.000	255.000 mmho/m	0.325	-28.000
Microlog Calibration Report							
Serial-Model:				PSI-01-PSIML			
Performed:				Tue Sep 29 10:01:17 2020			
		Readings		References		Results	
	Zero	Cal		Zero	Cal	m	b
Normal	0.0000	1.0000		0.0000	1.0000 Ohm-m	23000.0000	-2.5000
Inverse	0.0000	1.0000		0.0000	1.0000 Ohm-m	21000.0000	-1.3000
Caliper	1.0033	1.0841		5.0000	16.5000 in	142.3500	-138.5500
Compensated Density Calibration Report							
Serial-Model:				817-947-M&W			
Source / Verifier:				16955B / 2ci			
Master Calibration Performed:				Sun Sep 20 22:09:47 2020			
Master Calibration							
		Density		Far Detector		Near Detector	
Magnesium	1.755	g/cc		6127.15	5922.31	cps	
Aluminum	2.680	g/cc		1141.85	3762.09	cps	
Spine Angle = 74.89				Density/Spine Ratio = 0.532			
		Size		Reading			
Small Ring	4.50	in		1.02			
Large Ring	14.50	in		1.23			
Compensated Neutron Calibration Report							
Serial Number:				207-MW			
Tool Model:				M&W			
Calibration Performed:				WED FEB 13 10:30:30 2019			
Detector		Readings		Target		Normalization	
Short Space	6240.00	cps		1000.00	cps	1.6025	
Long Space	460.00	cps		1000.00	cps	1.9500	

Long Spans: 100000 cps 100000 cps 100000 cps 100000

Gamma Ray Calibration Report

Serial Number:	233-M&W	
Tool Model:	M&W	
Calibration Performed:	Sun Sep 20 22:10:24 2020	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5500	GAPI/cps