



# DUAL INDUCTION LOG

**Company** FUNK PETROLEUM, LLC  
**Well** 3KO #1-5  
**Field** WILDCAT  
**County** THOMAS **State** KANSAS

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**Location:** API #: 15-193-21069-00-00  
 1783' FNL & 335' FEL  
 SEC 5 TWP 7S RGE 34W  
 Permanent Datum GROUND LEVEL Elevation 3203'  
 Log Measured From KELLY BUSHING  
 Drilling Measured From KELLY BUSHING  
 Other Services: CNL/CDL MEL/BHCS  
 Elevation: K.B. 3208', D.F. N/A, G.L. 3203'

Date	1/8/2020
Run Number	ONE
Depth Driller	4780'
Depth Logger	4782'
Bottom Logged Interval	4781'
Top Log Interval	300'
Casing Driller	8.625" @ 348'
Casing Logger	347'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	6200
Density / Viscosity	9.5 69
pH / Fluid Loss	11.0 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.45 @ 74
Rmt @ Meas. Temp	.34 @ 74
Rmc @ Meas. Temp	.61 @ 74
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.27 @ 124
Operating Rig Time	4 HOURS
Max Rec. Temp. F	124 DEGF
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	TOM FUNK

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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.  
 COLBY KANSAS  
 WEST ON HWY 24 TO 15 ROAD, 5 3/4 NORTH, WEST INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES  
[www.pioneerenergy.com](http://www.pioneerenergy.com) 785-625-3858

<b>Your Pioneer Energy Services Crew</b> Engineer: J. HENRICKSON Operator: K. PFANNENSTIEL Operator: Operator:	<b>This Log Record Was Witnessed By</b> Primary Witness: TOM FUNK Secondary Witness: Secondary Witness: Secondary Witness:
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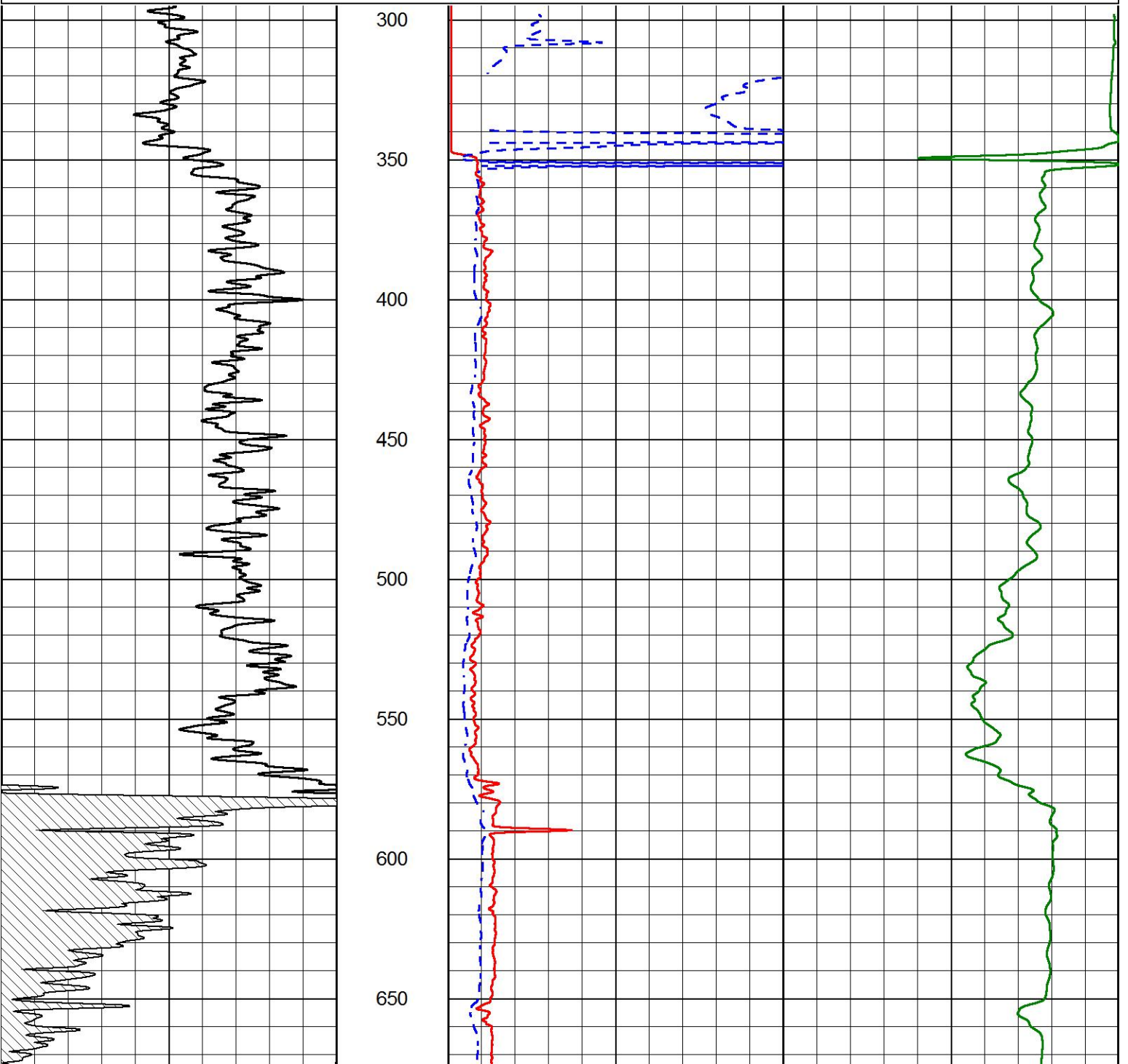
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	44.50		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	41.40 40.65		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (934-229)	8.50	4.00	250.00
MCAL MI MN	20.87 20.87 20.87		ML-PSI UDM ML (UDM-01) Stackable Microlog Tools	11.50	4.00	215.00
RLL3 RLL3F	15.80 15.79		DIL-M&W (55-222)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

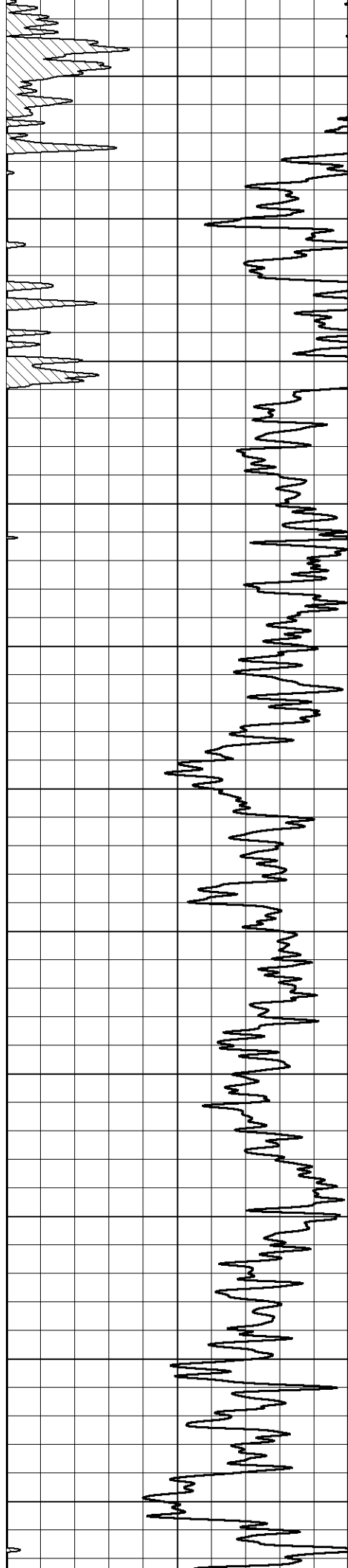
Dataset: funk\_3ko\_1\_5.db: field/well/stackml/pass3.1  
 Total length: 47.00 ft  
 Total weight: 835.00 lb  
 O.D.: 4.00 in

# MAIN PASS

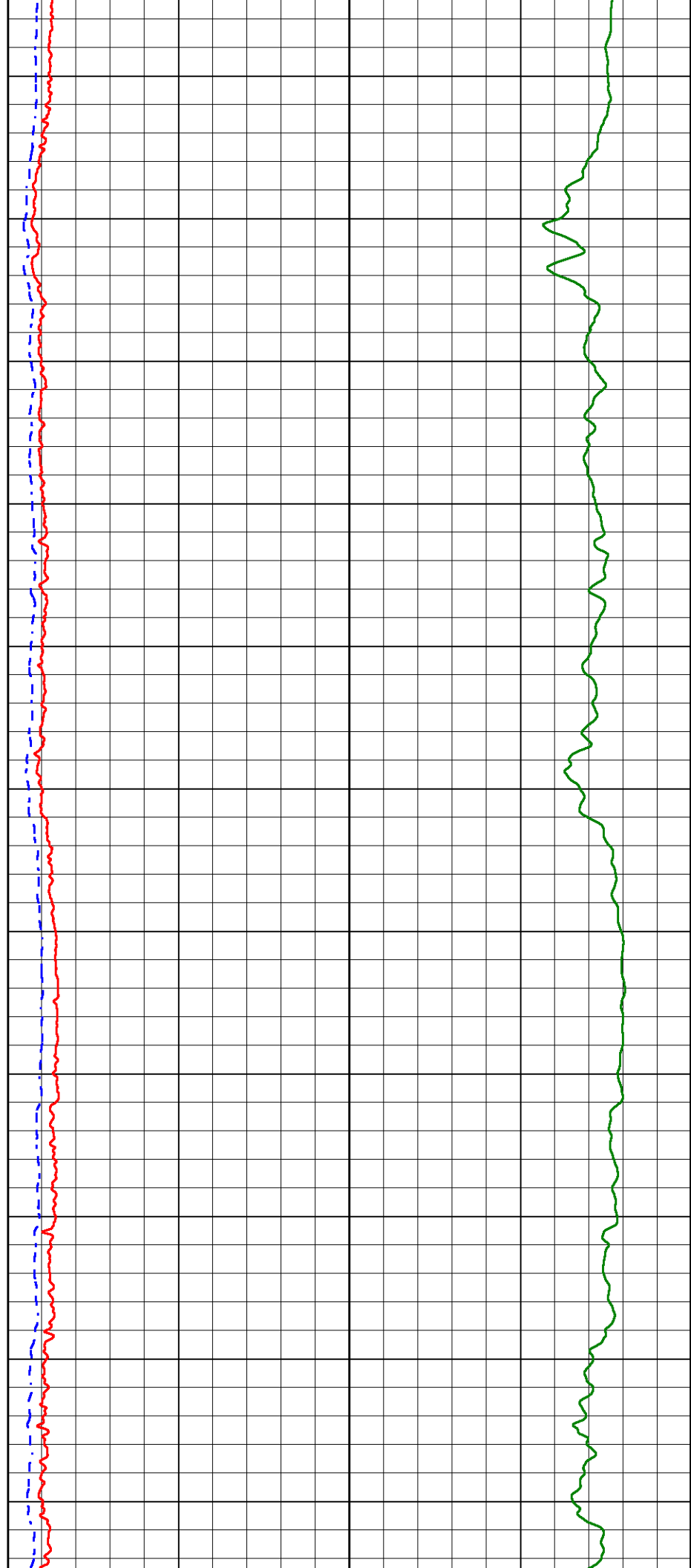
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 Dataset Creation Wed Jan 08 15:52:45 2020  
 Charted by Depth in Feet scaled 1:600

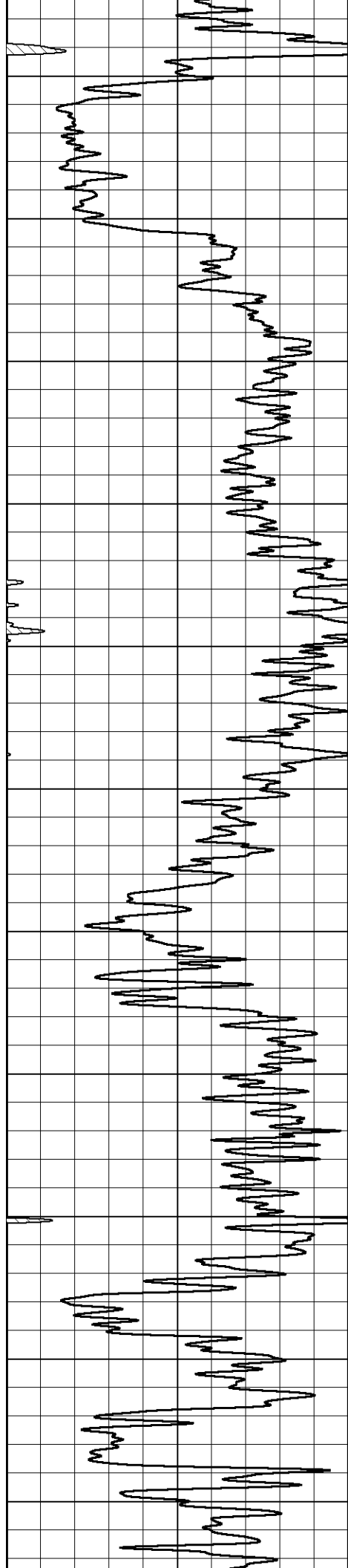
0	GAMMA RAY (GAPI)	150	2000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50	50	DEEP RESISTIVITY (Ohm-m)	50
50	RLL3 (Ohm-m)	200	50	RLL3 (Ohm-m)	200
50	RILD (Ohm-m)	200	50	RILD (Ohm-m)	200



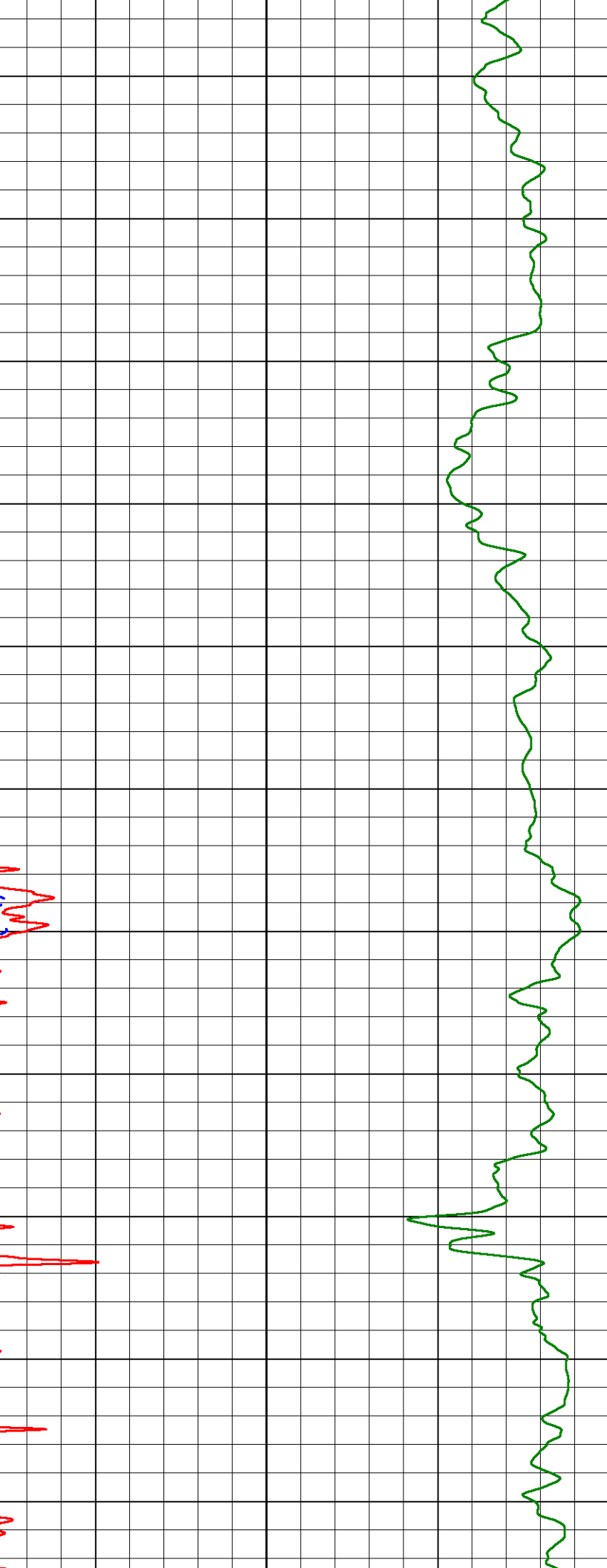
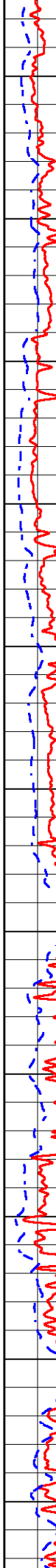


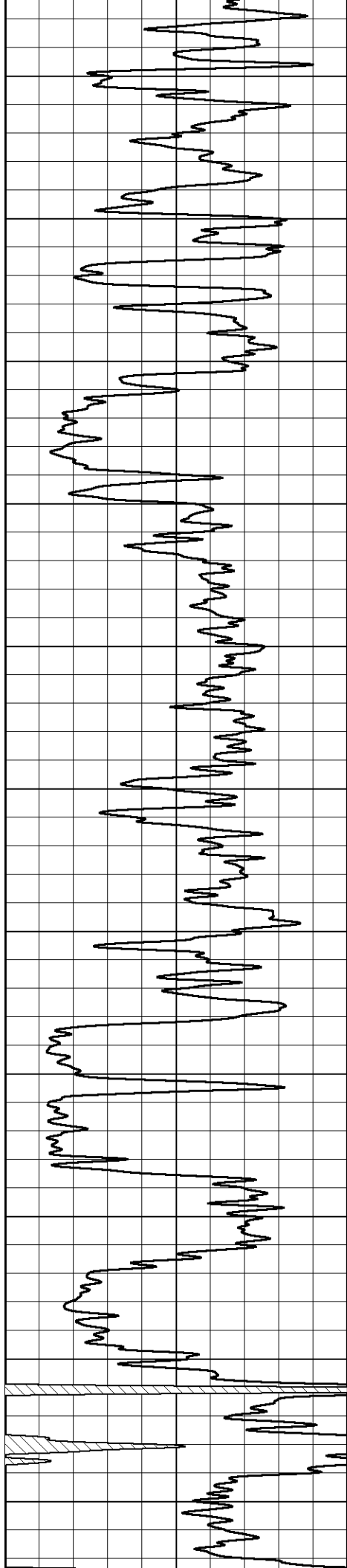
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850  
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950  
1000  
1050  
1100  
1150  
1200





1250  
1300  
1350  
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1500  
1550  
1600  
1650  
1700  
1750





1800

1850

1900

1950

2000

2050

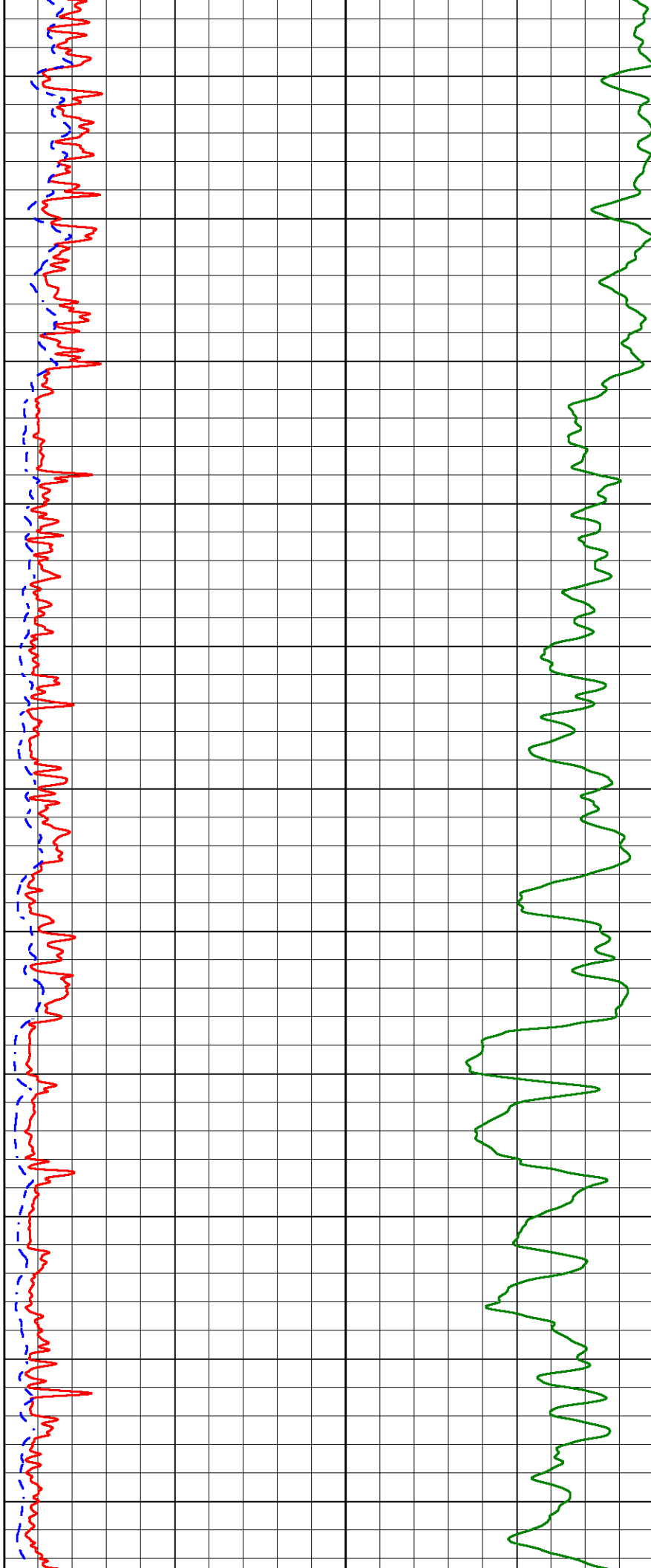
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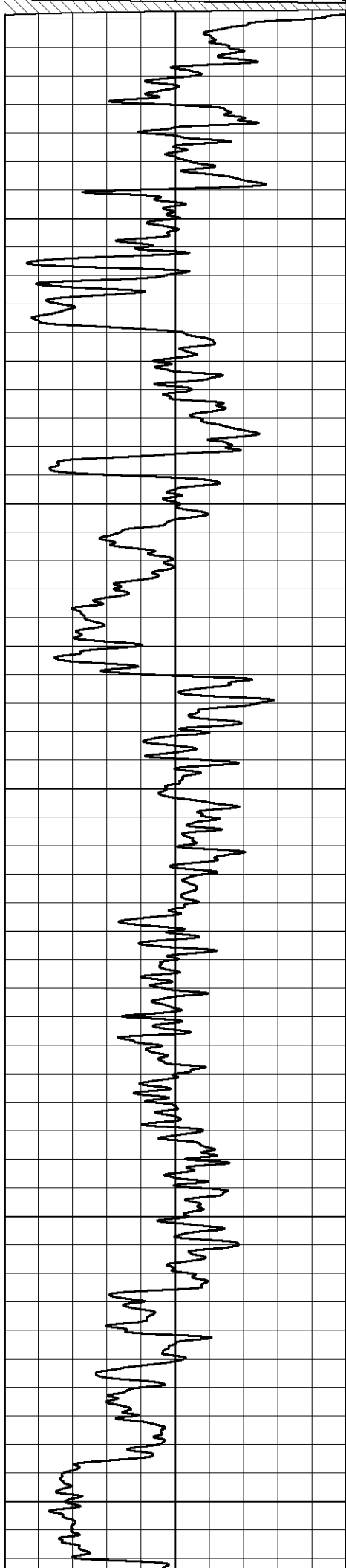
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2200

2250

2300





2350

2400

2450

2500

2550

2600

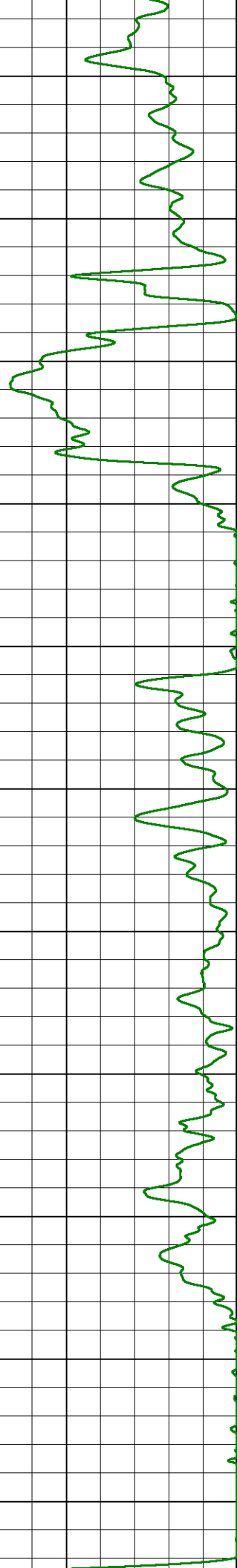
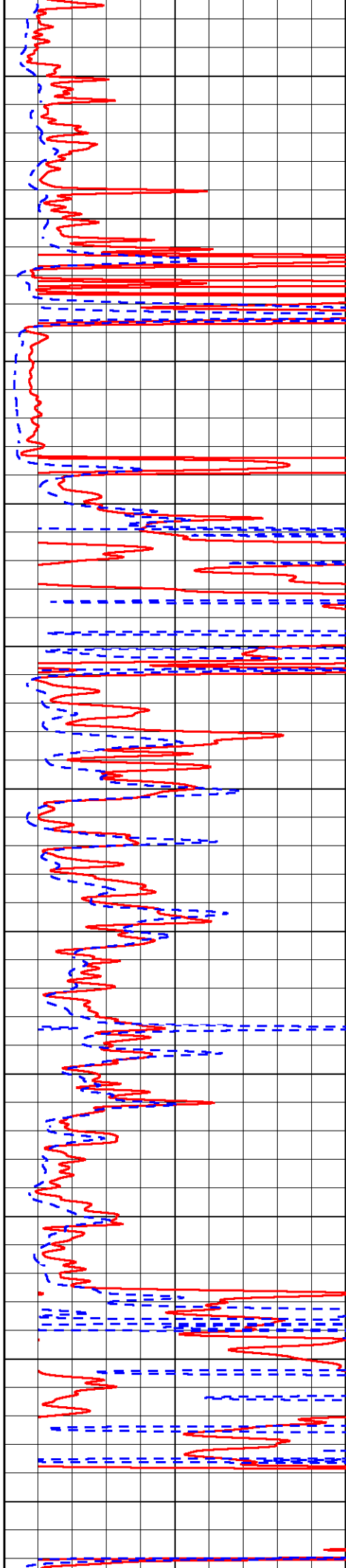
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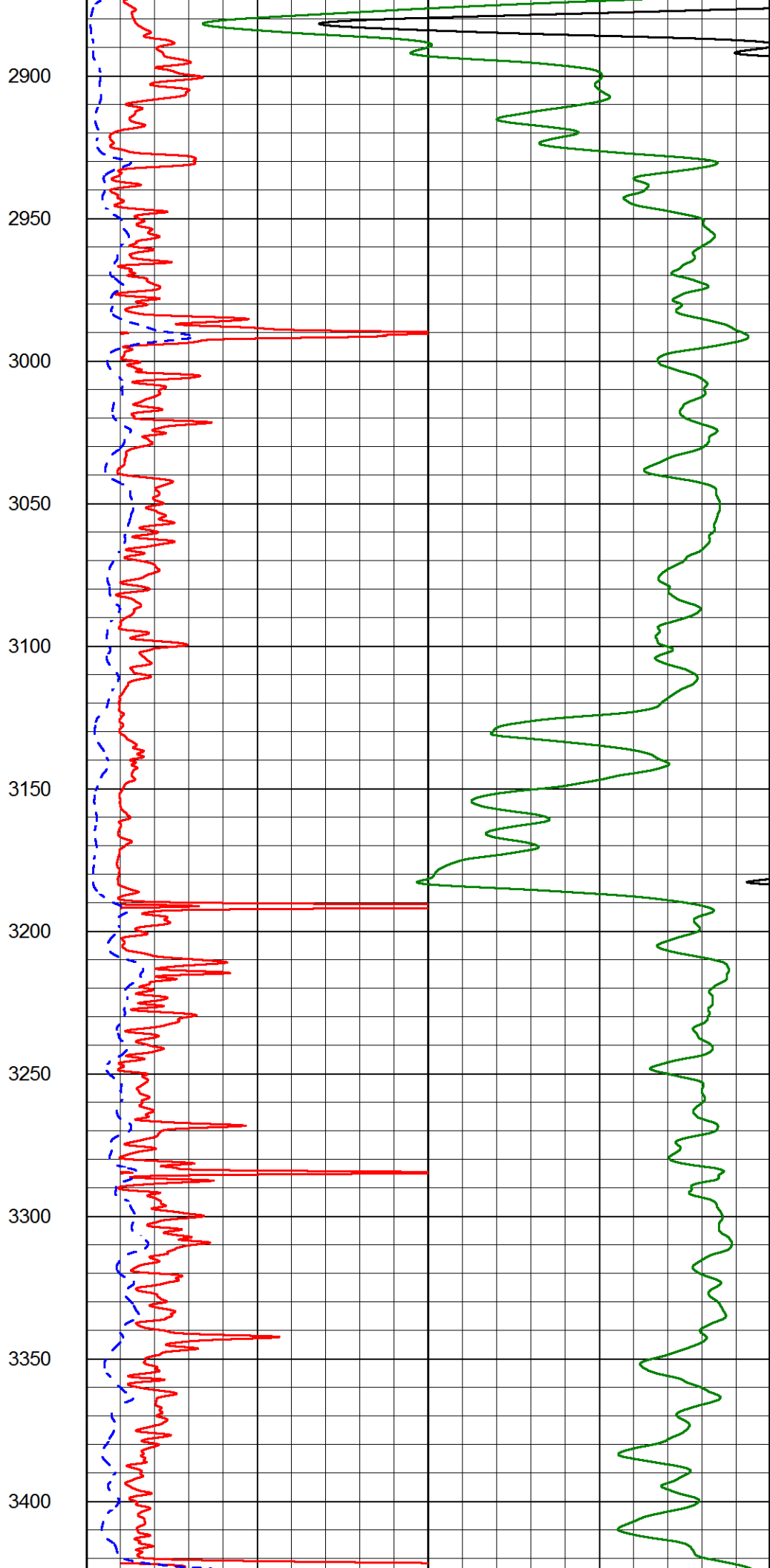
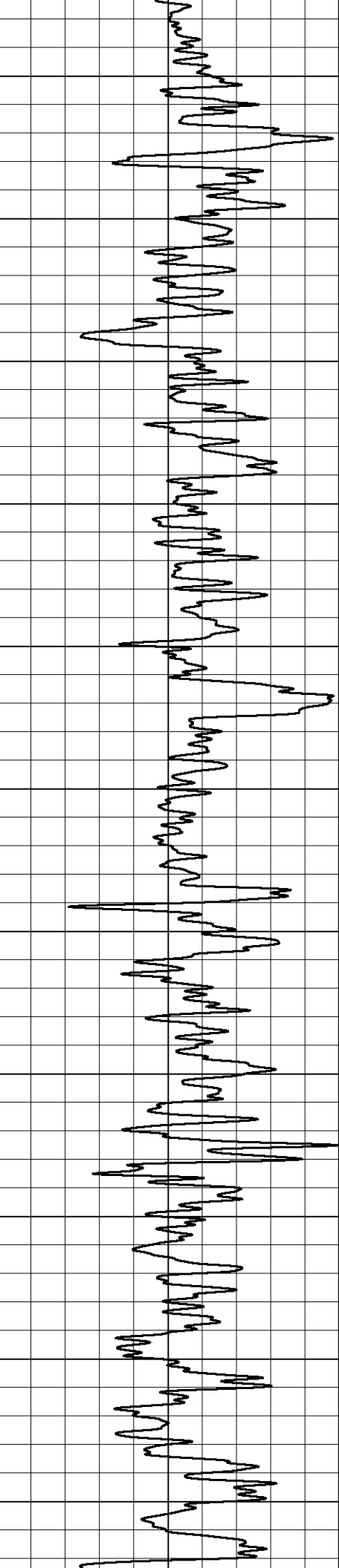
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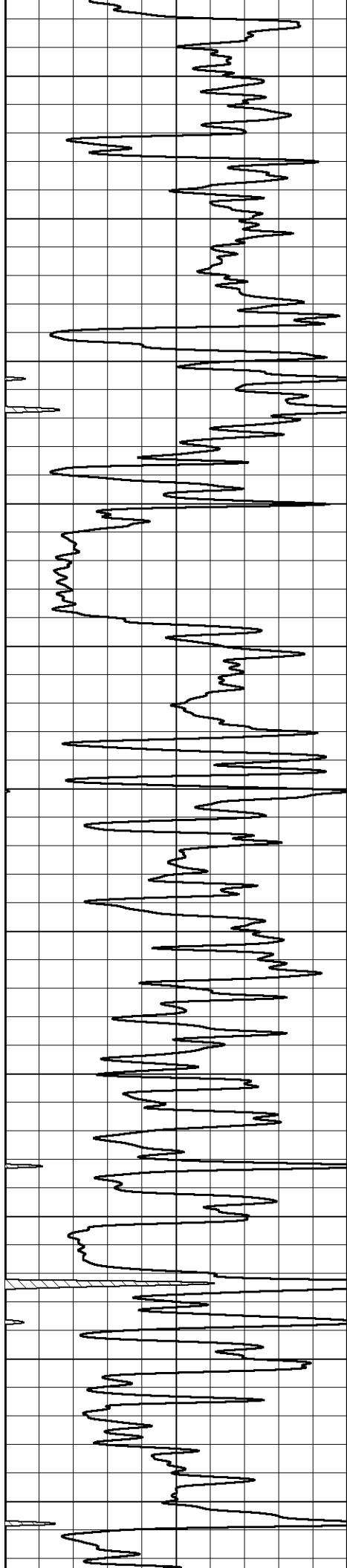
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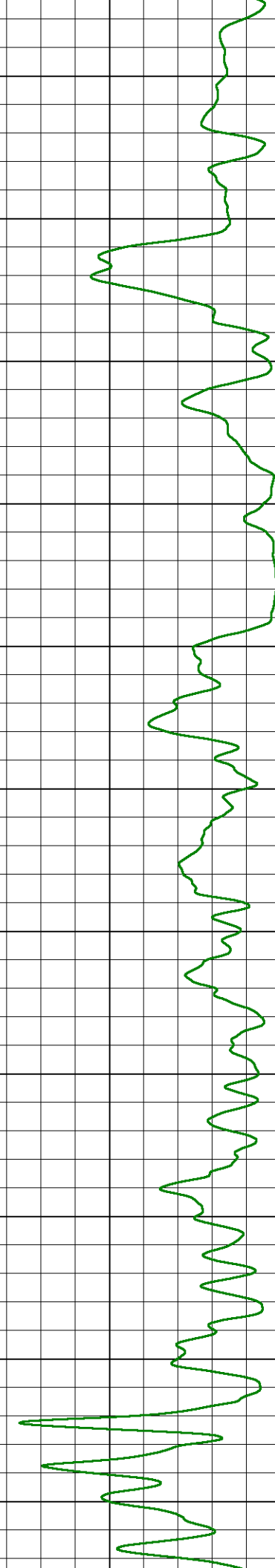
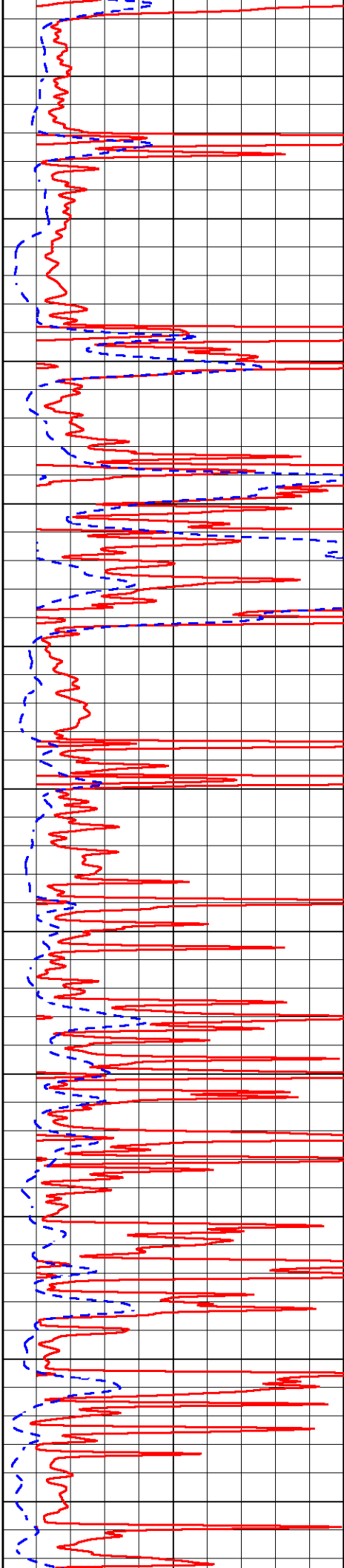
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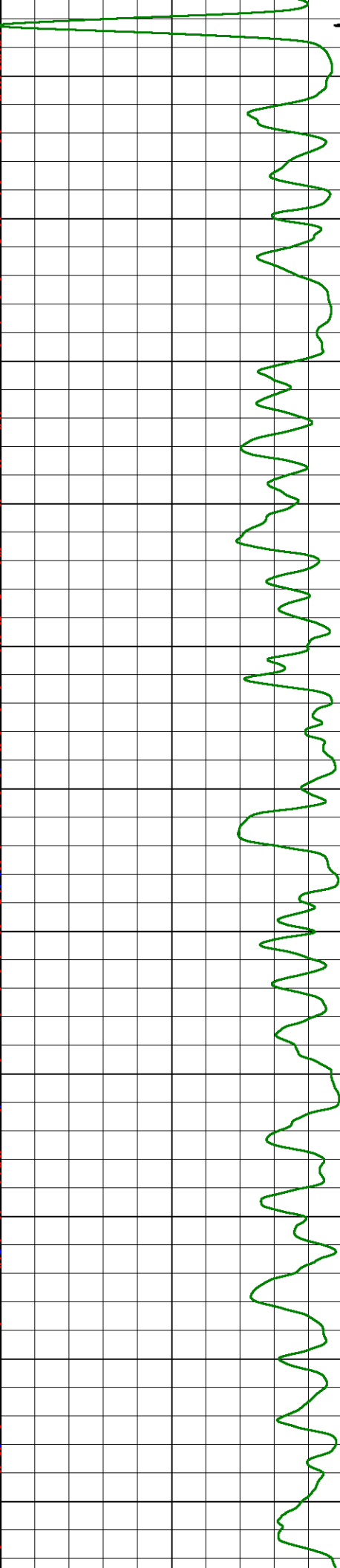
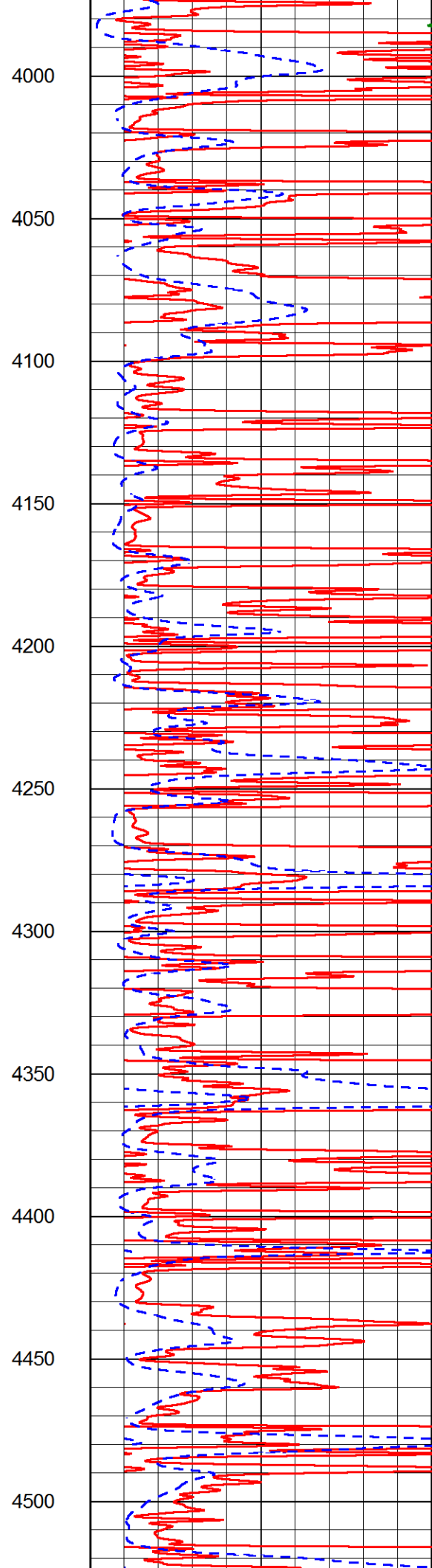
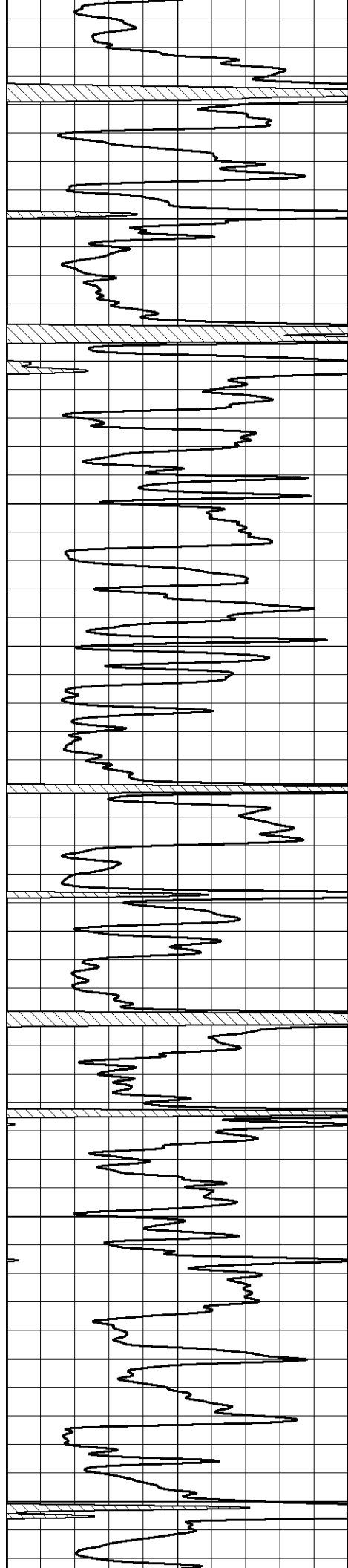


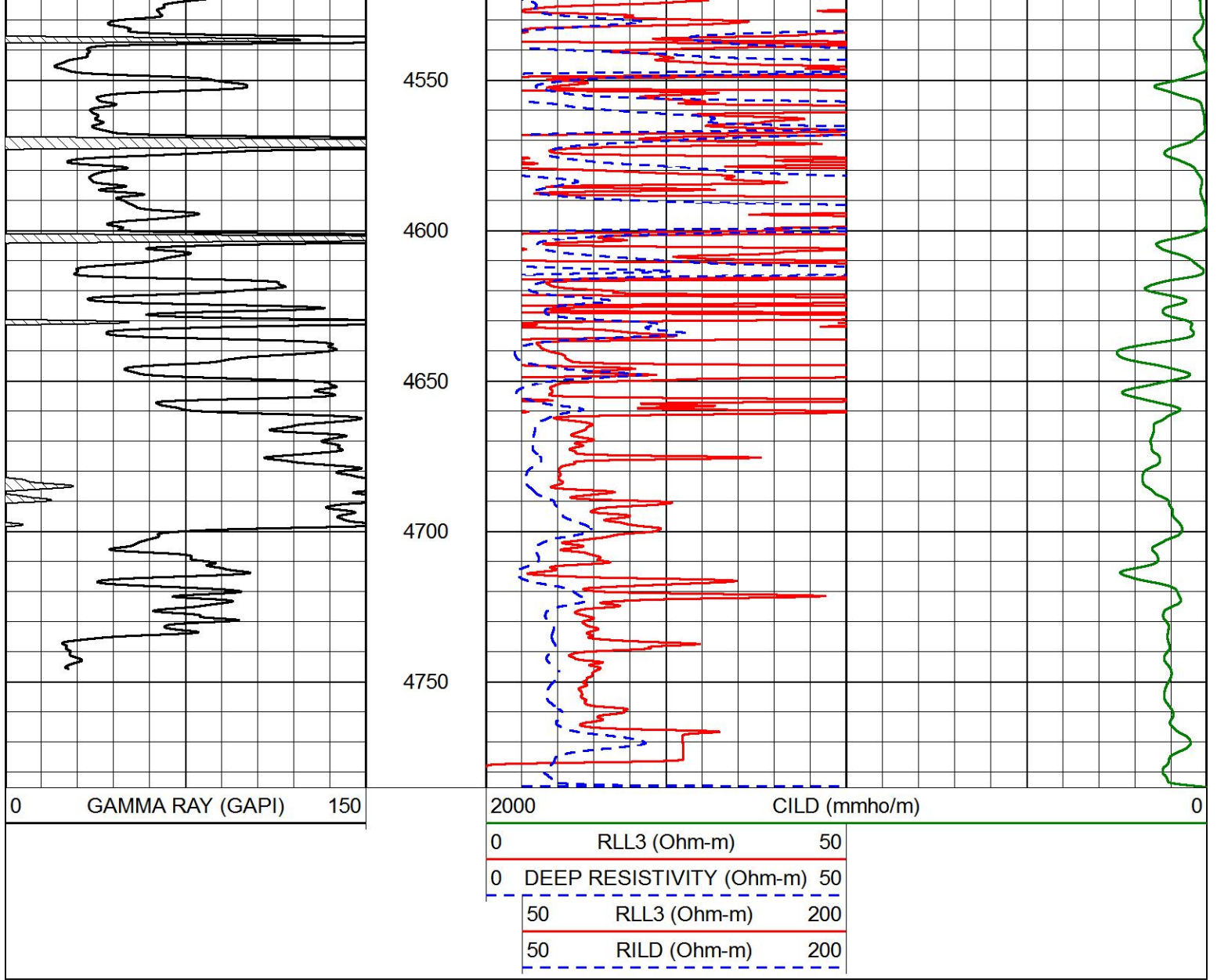




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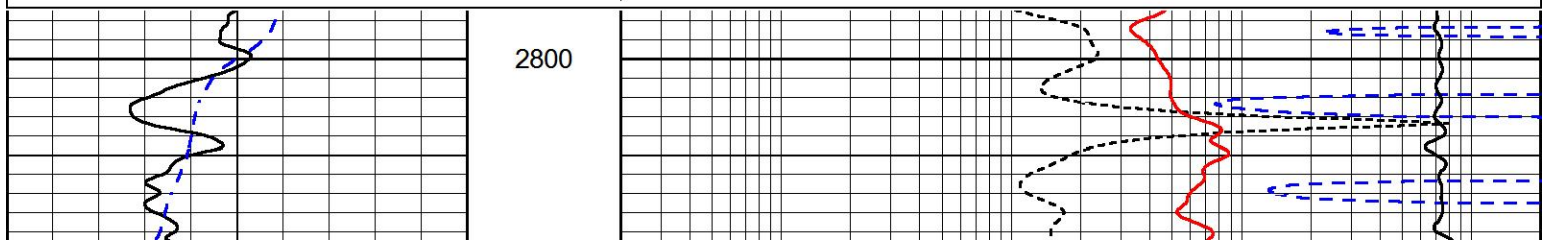
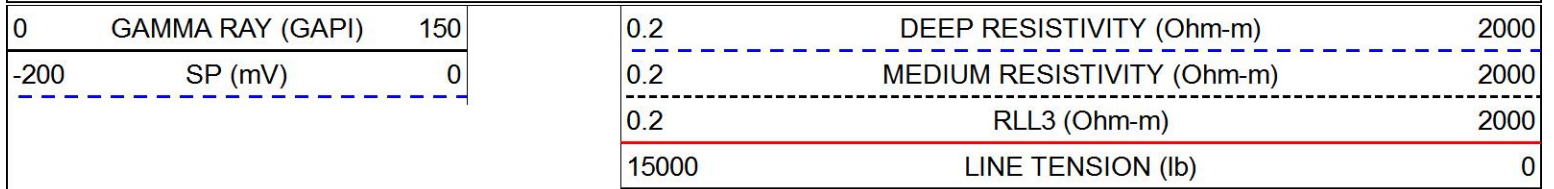


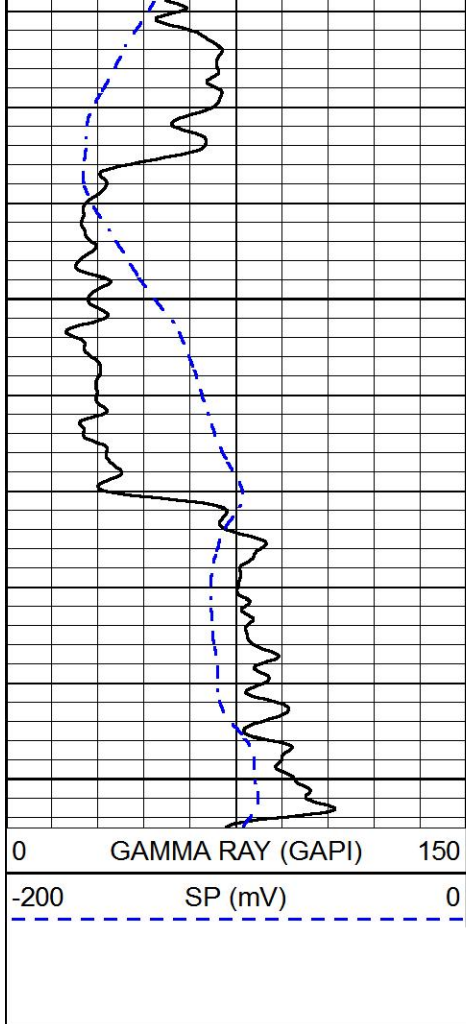




# MAIN PASS

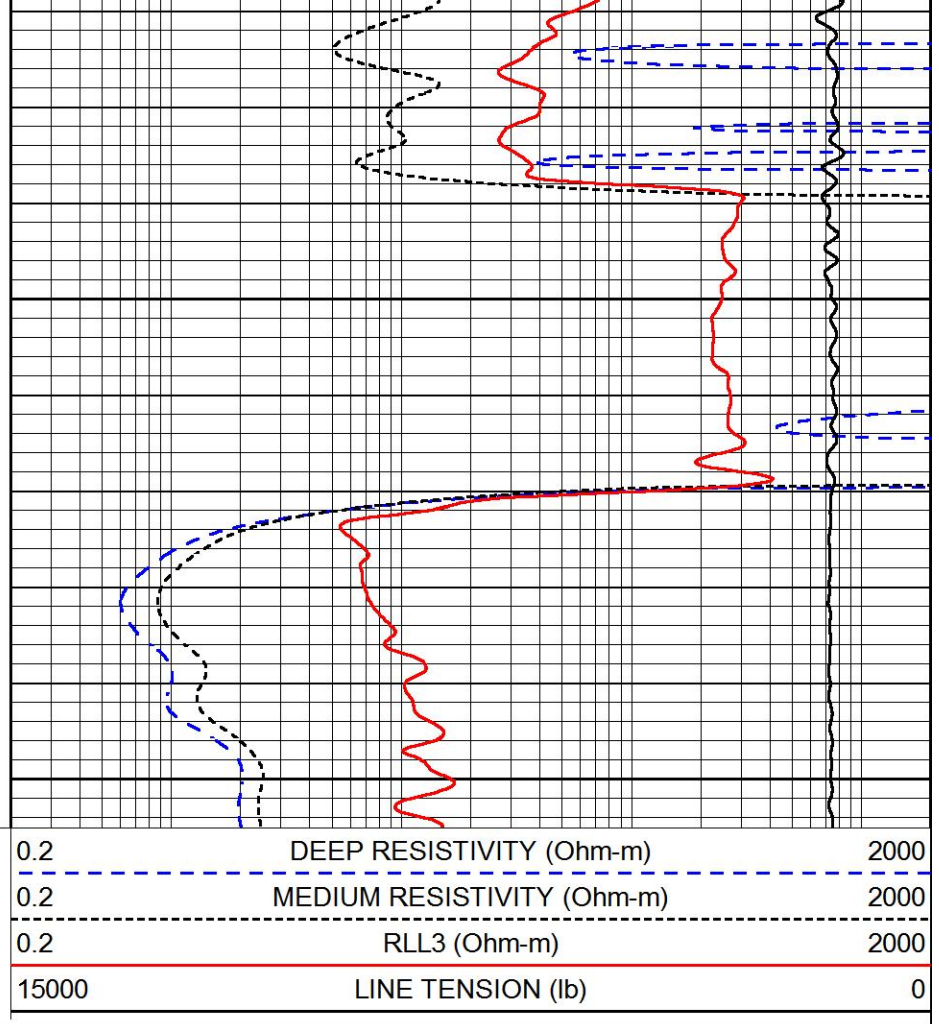
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 Dataset Creation Wed Jan 08 15:52:45 2020  
 Charted by Depth in Feet scaled 1:240





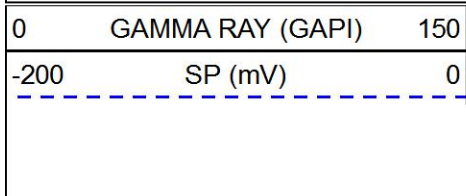
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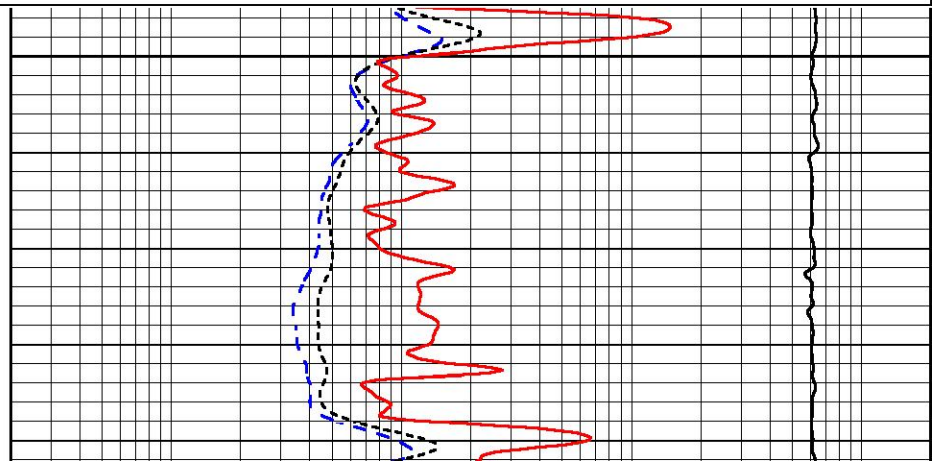
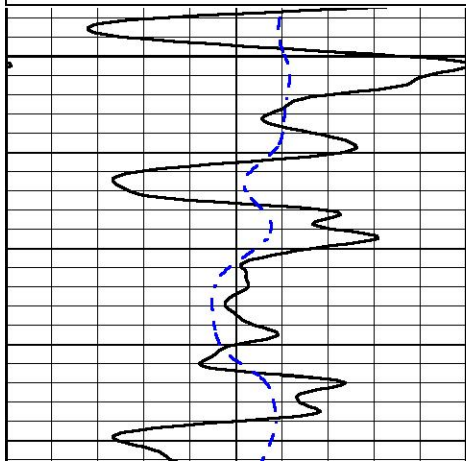
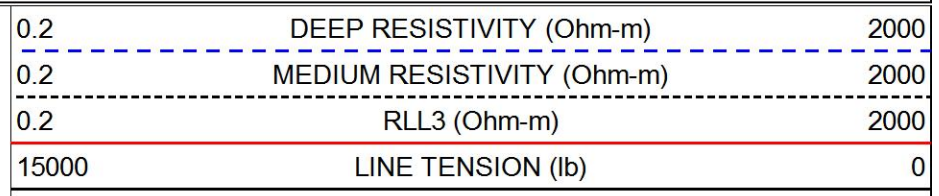


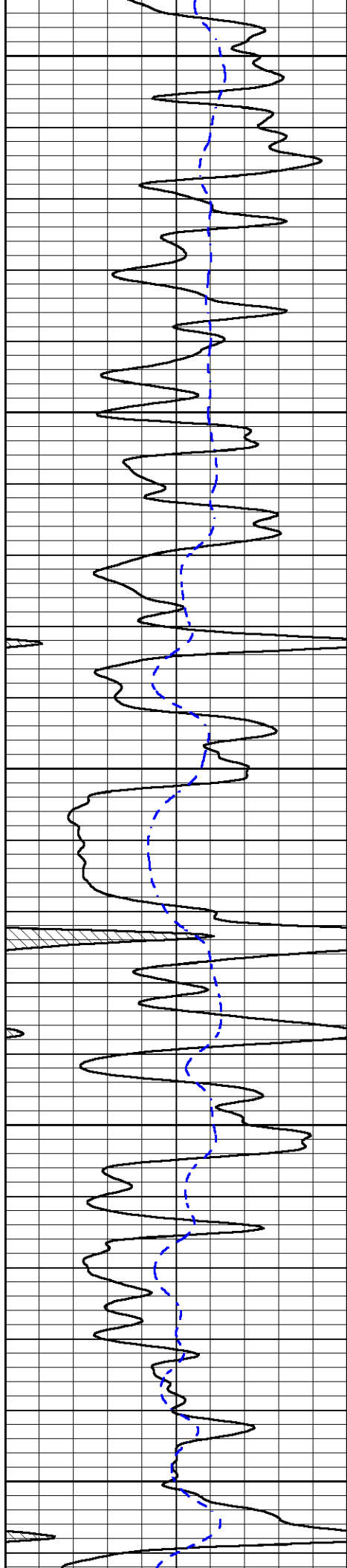
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Dataset Creation Wed Jan 08 15:52:45 2020  
Charted by Depth in Feet scaled 1:240



3700





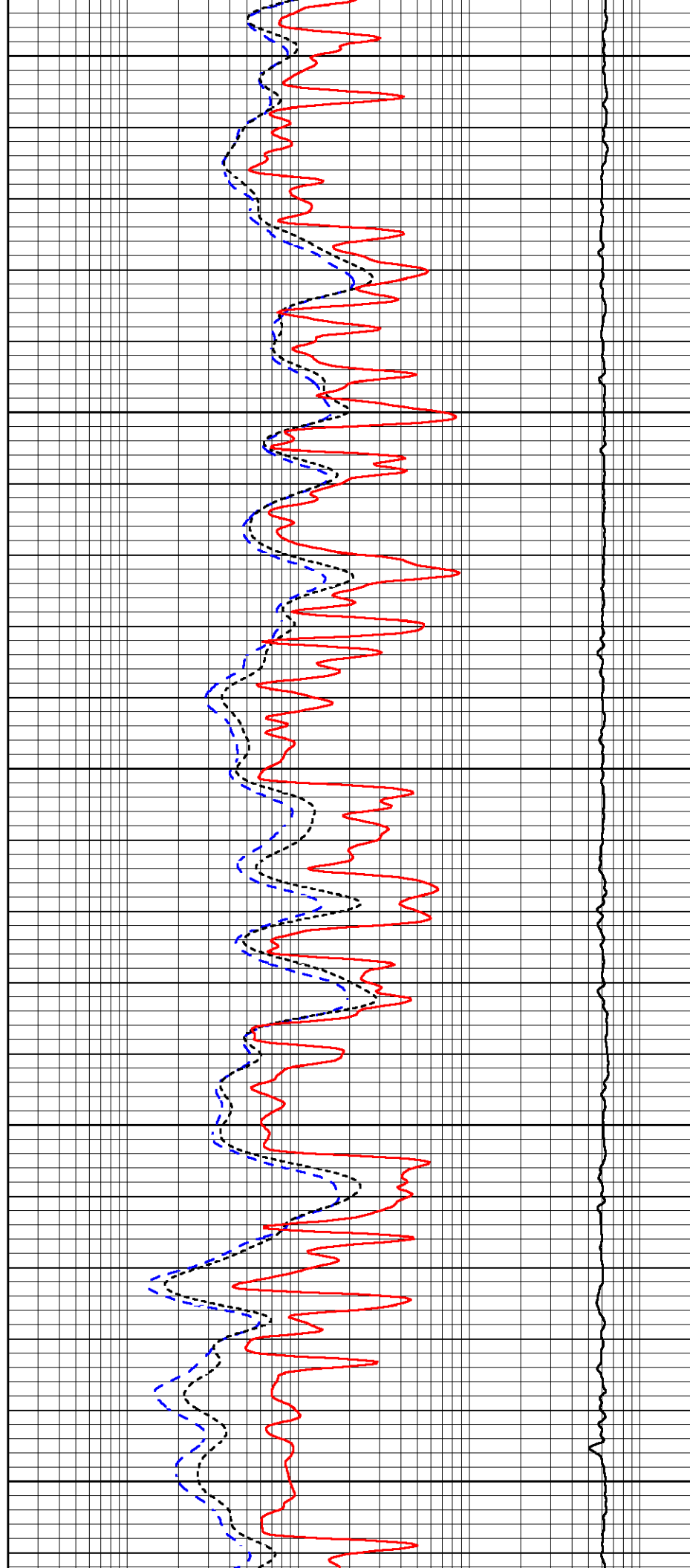
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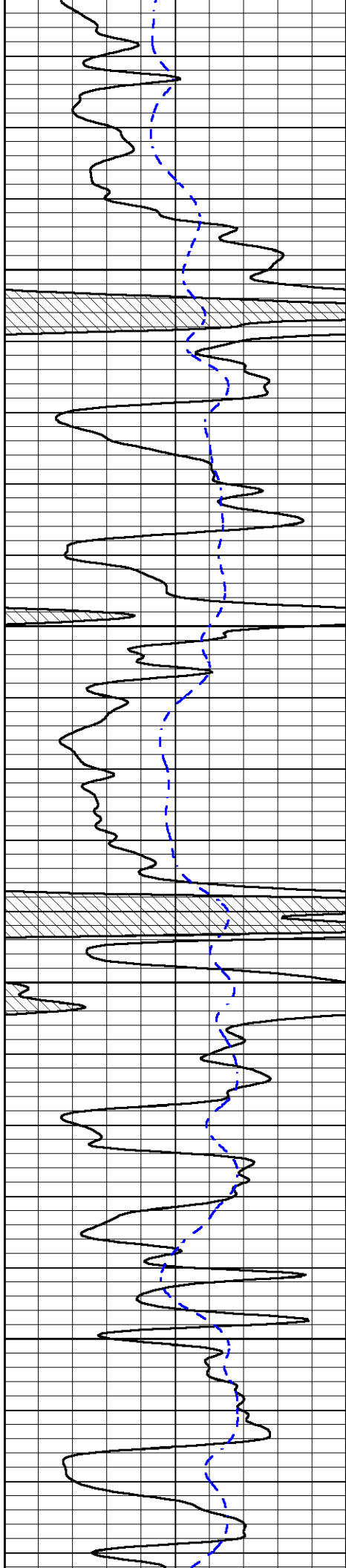
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3950



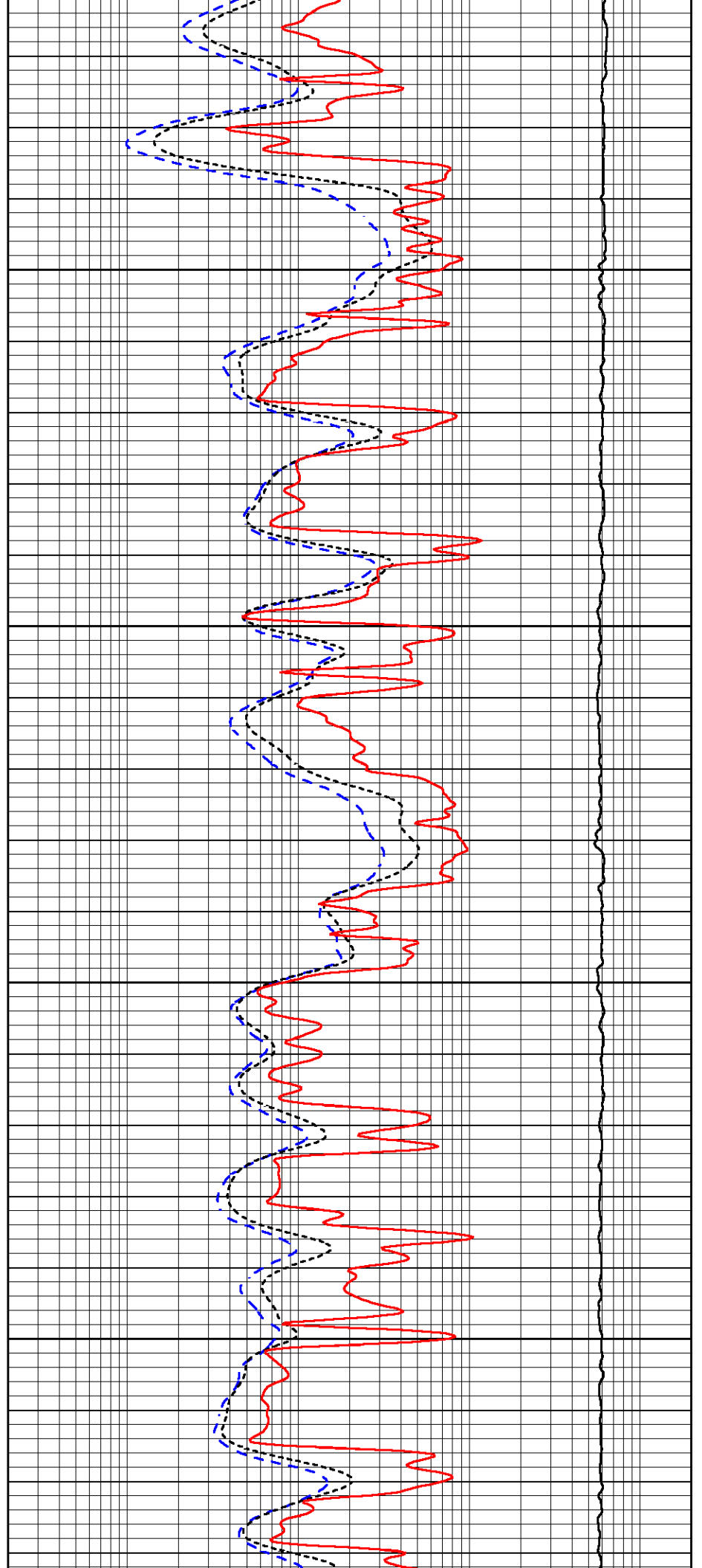


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4050

4100

4150

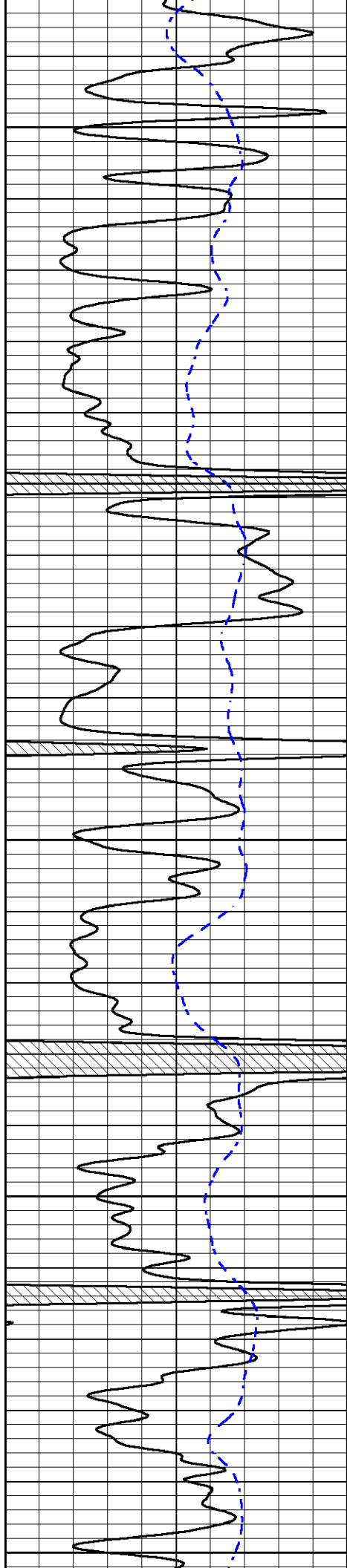


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4050

4100

4150



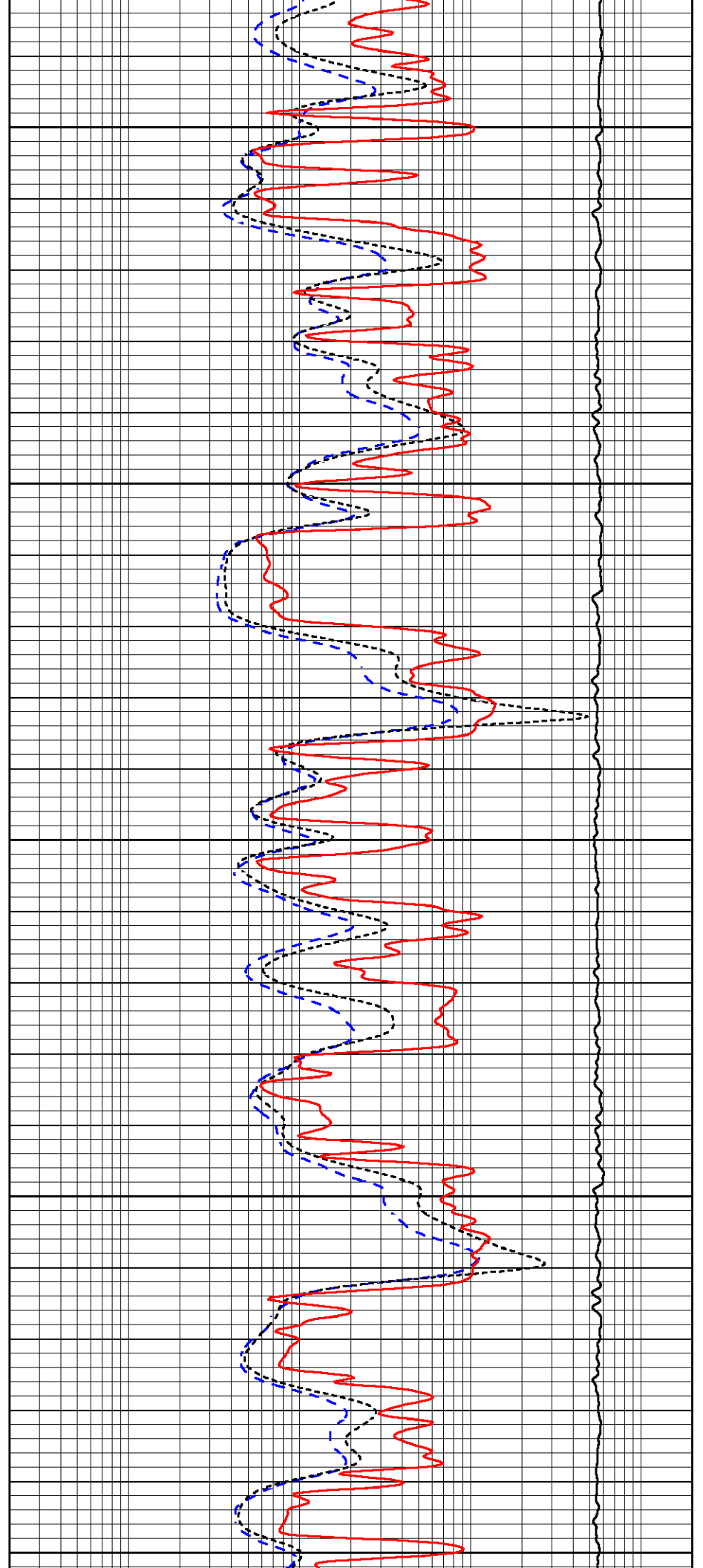
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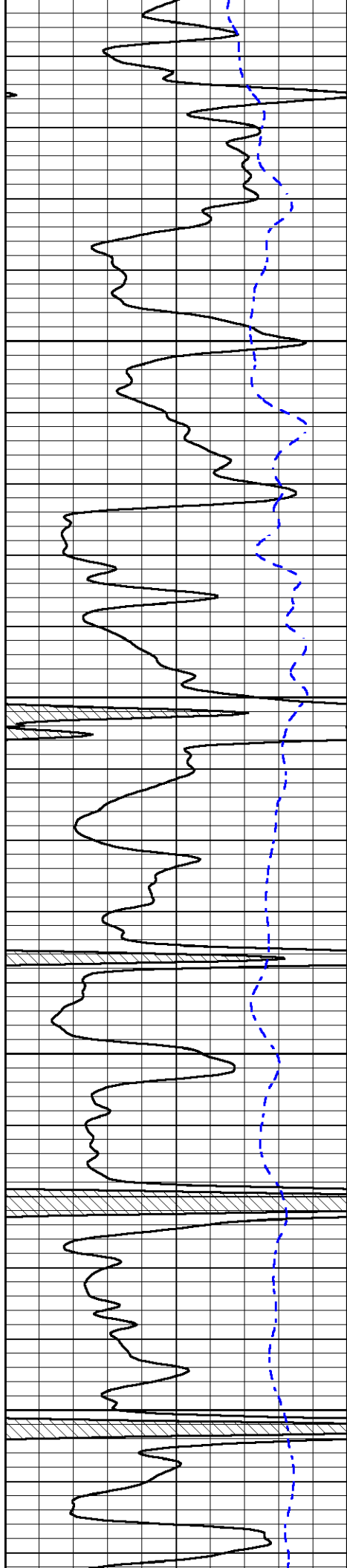
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4400



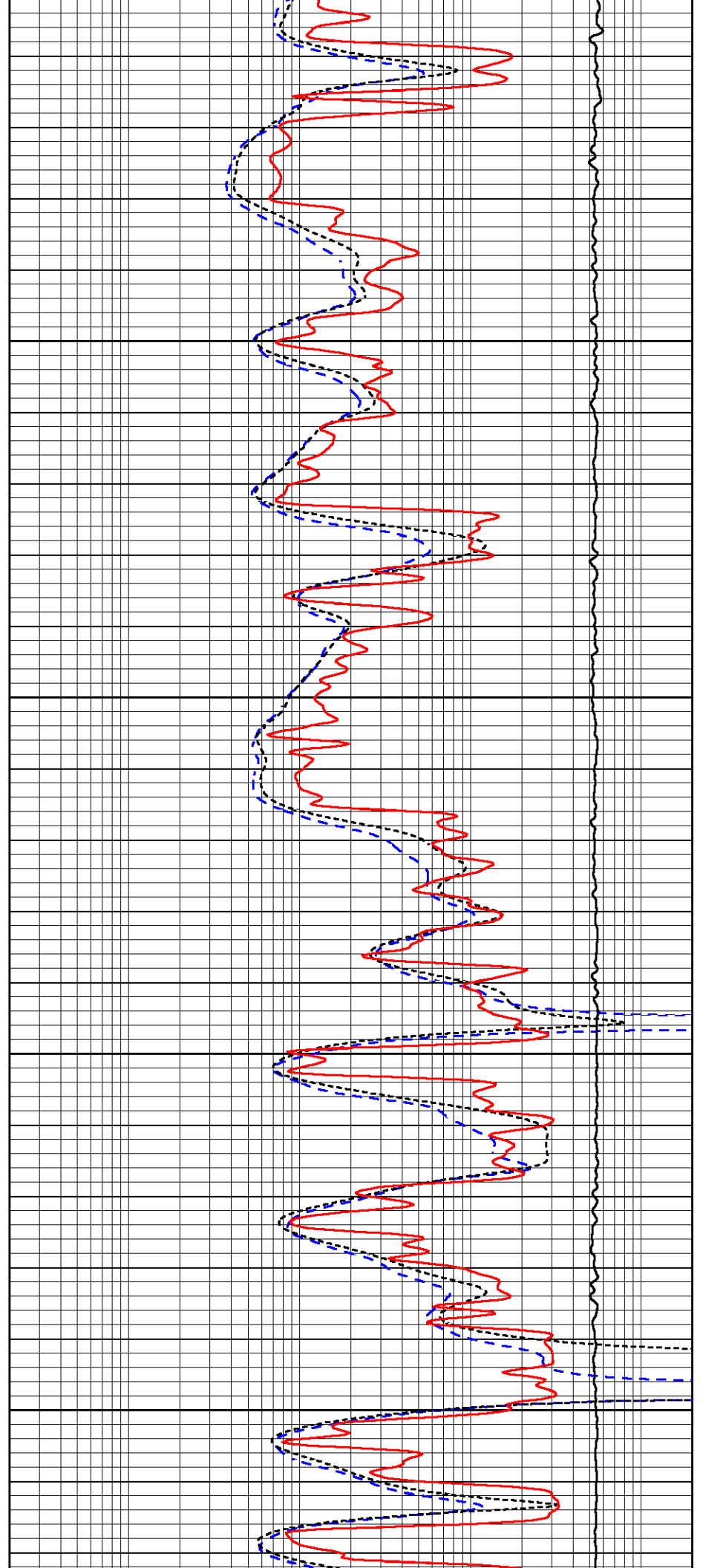


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4500

4550

4600

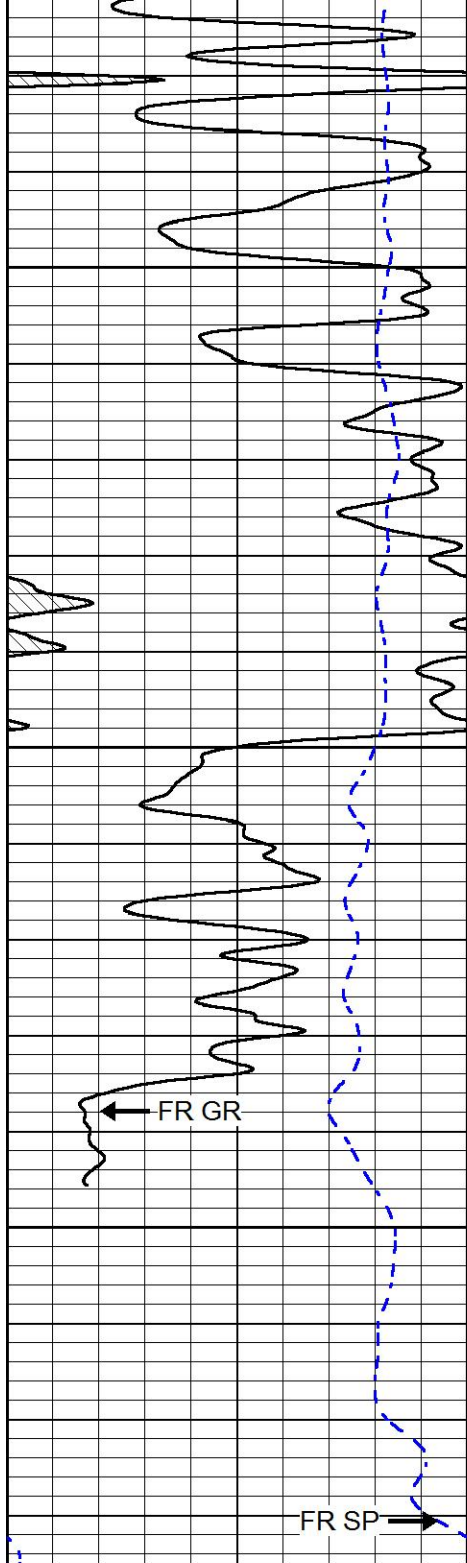


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4500

4550

4600

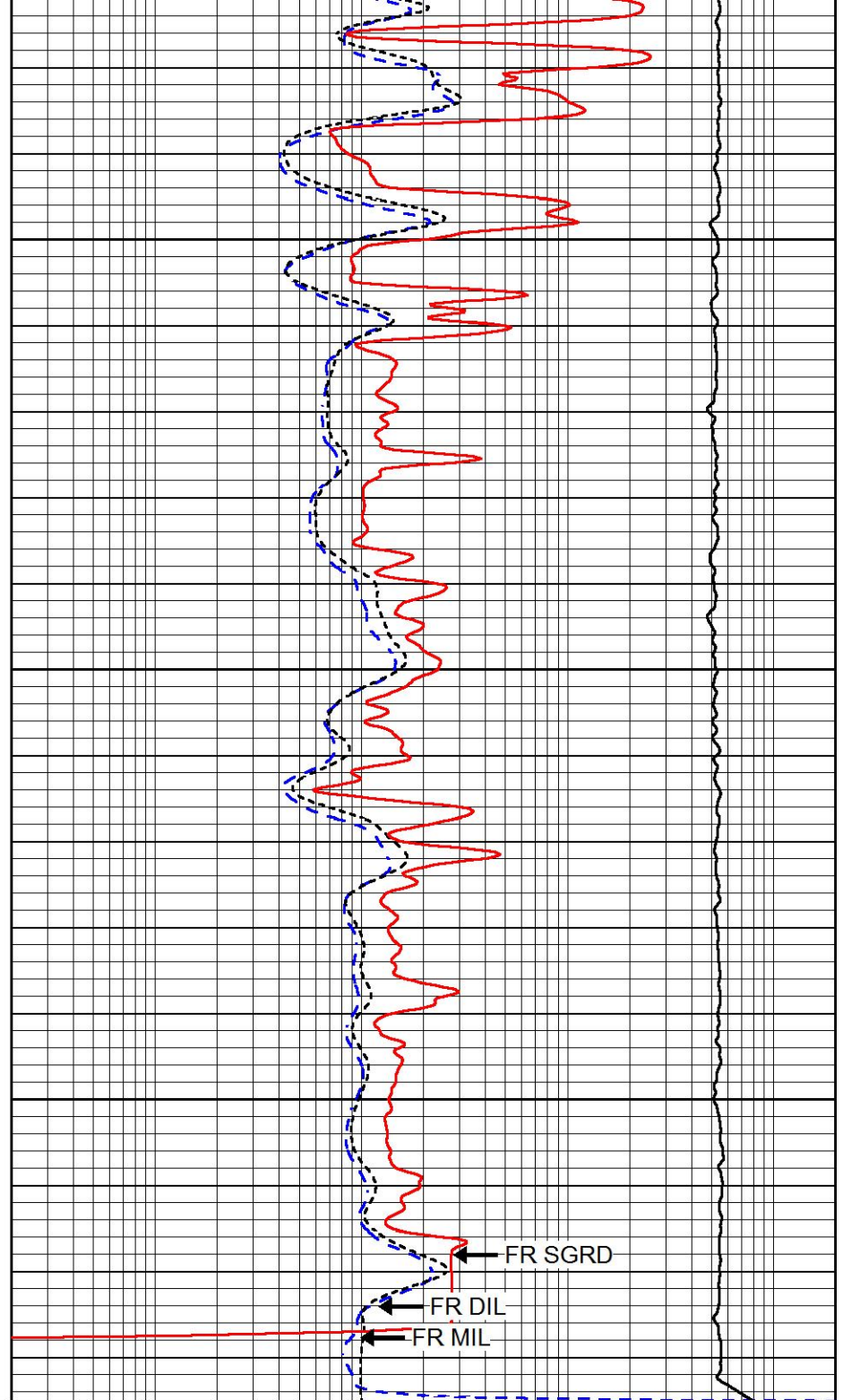


4650

4700

4750

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

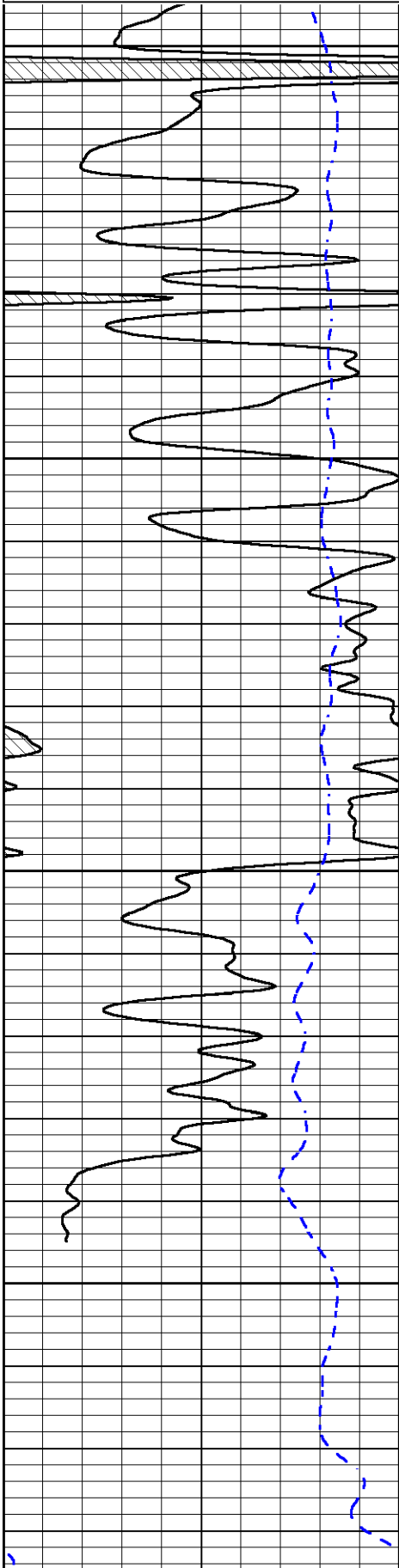


# REPEAT SECTION

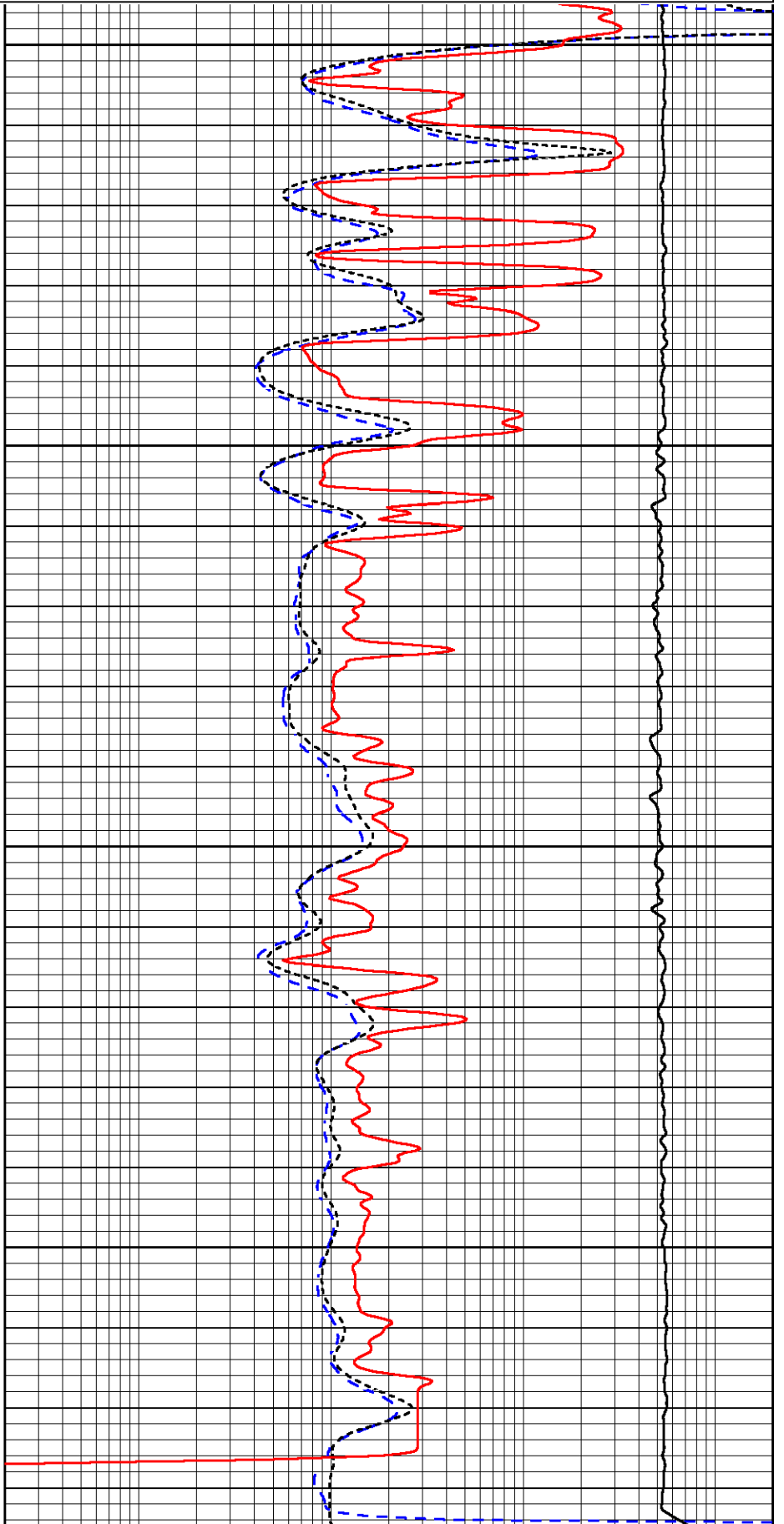
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 Dataset Pathname stackml/pass2.1  
 Presentation Format dil

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



4600  
4650  
4700  
4750





Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025
Long Space	460.00 cps	1000.00 cps	1.9500

Gamma Ray Calibration Report

Serial Number:	89-M&W	
Tool Model:	M&W	
Calibration Performed:	Tue Dec 10 05:11:34 2019	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



**PIONEER**  
Pioneer Energy Services

Company	FUNK PETROLEUM, LLC
Well	3KO #1-5
Field	WILDCAT
County	THOMAS
State	KANSAS