



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company CASTELLI EXPLORATION, INC.
Well DUNN #2-24
Field SHIMER
County COMANCHE
State KANSAS

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Well DUNN #2-24
Field SHIMER
County COMANCHE State KANSAS

Location: API #: 15-033-21784-00-00

470' FSL & 660' FEL

SEC 24 TWP 33S RGE 17W

CNL/CDL

Permanent Datum GROUND LEVEL Elevation 1814'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1825'
D.F. N/A
G.L. 1814'

Date 10/23/2018

Run Number ONE

Depth Driller 5186'

Depth Logger 5185'

Bottom Logged Interval 5184'

Top Log Interval 200'

Casing Driller 13.375" @ 225'

Casing Logger 229'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 8000

Density / Viscosity 9.3 47

pH / Fluid Loss 11.0 10.4

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.45 @ 75

Rmt @ Meas. Temp 0.34 @ 75

Rmc @ Meas. Temp 0.61 @ 75

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.26 @ 128

Operating Rig Time 3 HOURS

Max Rec. Temp. F 128

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By RICK POPP

<<< Fold Here >>>

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.

COLDWATER,
EAST ON HWY 160 TO RD 23, SOUTH TO Q RD, 1 1/2 EAST,
NORTH AND EAST TO LOCATION

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

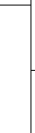
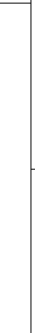
THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: RICK POPP
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73			CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (817-947)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80						
CILD	8.00			DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00
CILM	4.70						
SP	0.20						
Dataset: castelli_dunn 2-24.db: field/well/STKML/pass7.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in							

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



Database File

castelli_dunn 2-24.db

Dataset Pathname

STKML/pass7.1

Presentation Format

dil2in

Dataset Creation

Tue Oct 23 12:46:36 2018

Charted by

Depth in Feet scaled 1:600

MAIN PASS

GAMMA RAY

0 (GAPI) 150

1000 CONDUCTIVITY (mmho/m) 0

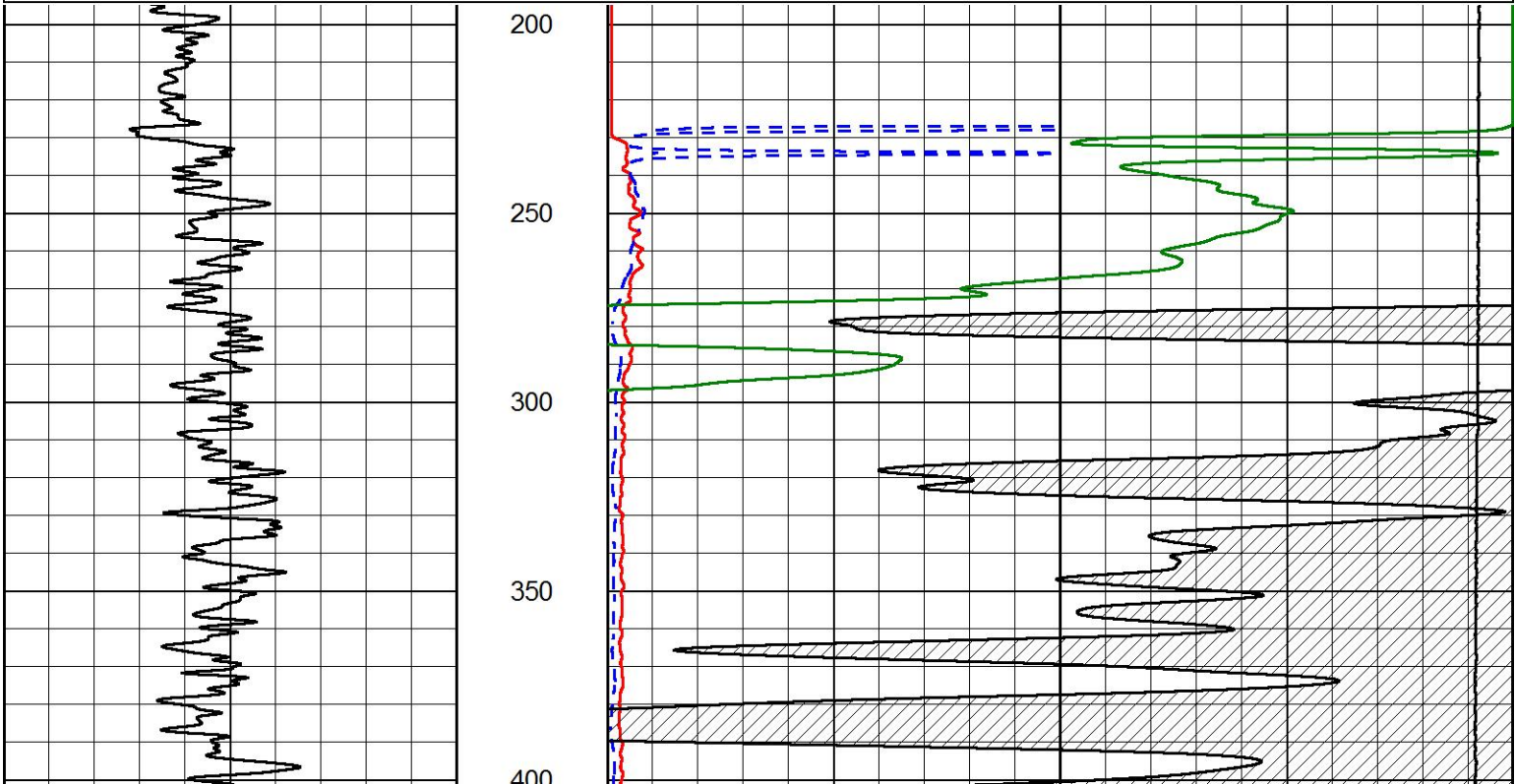
15000 Line Tension (lb) 0

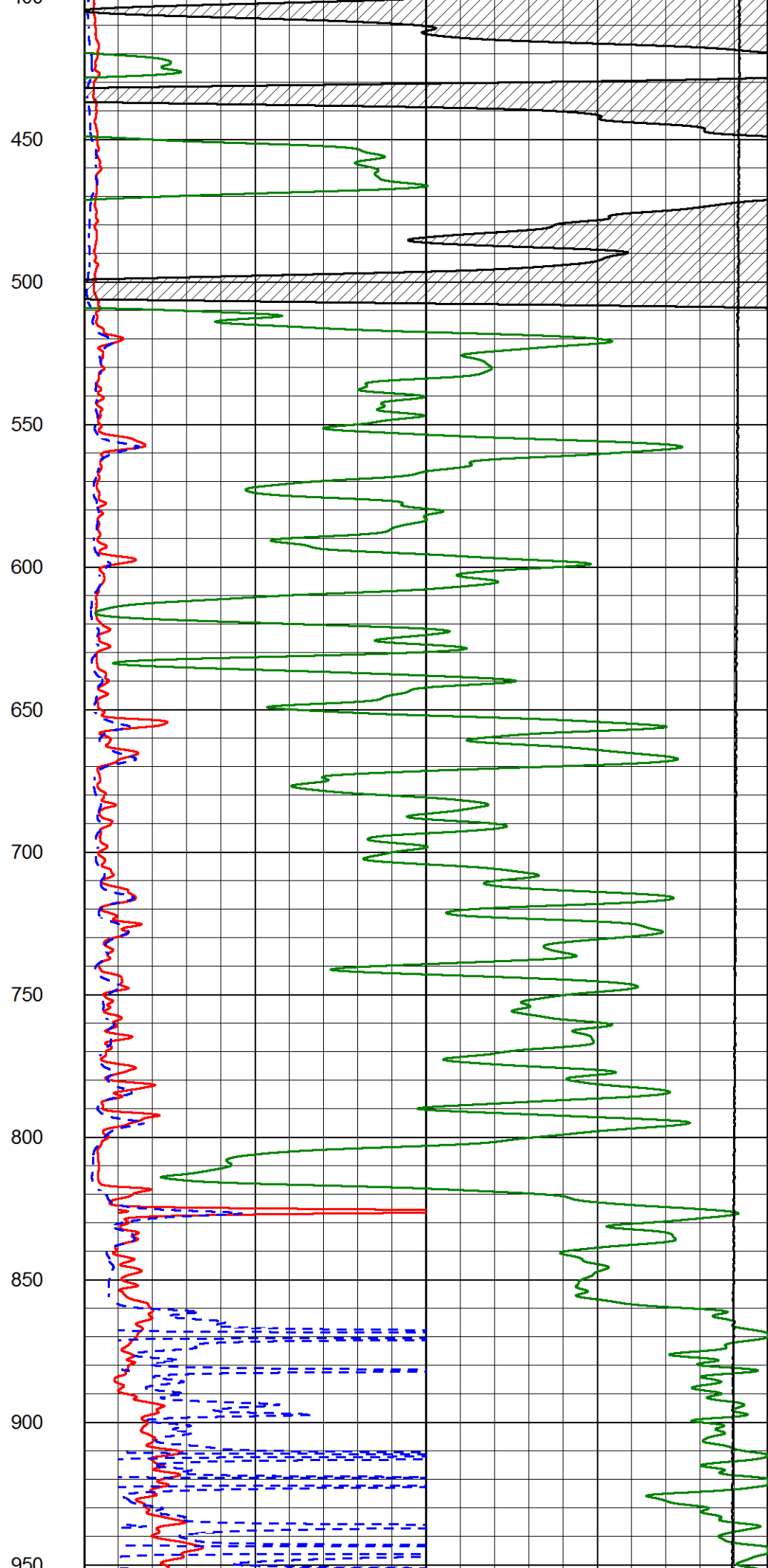
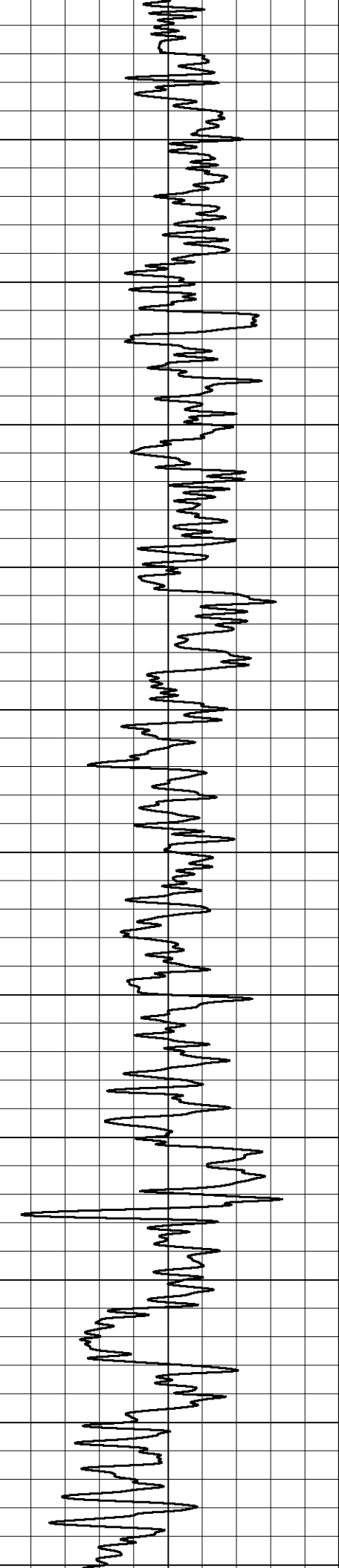
0 RLL3 (Ohm-m) 50

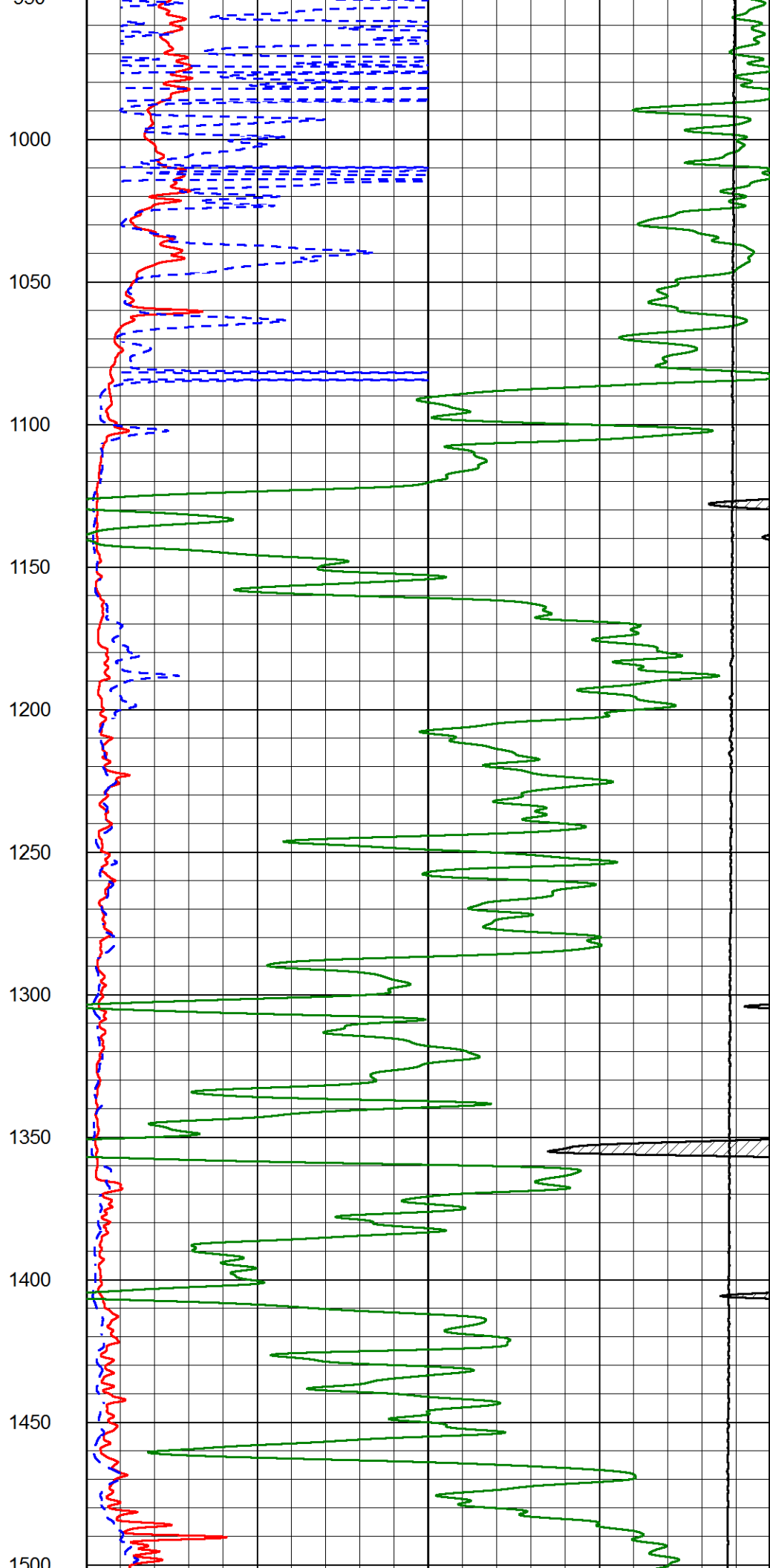
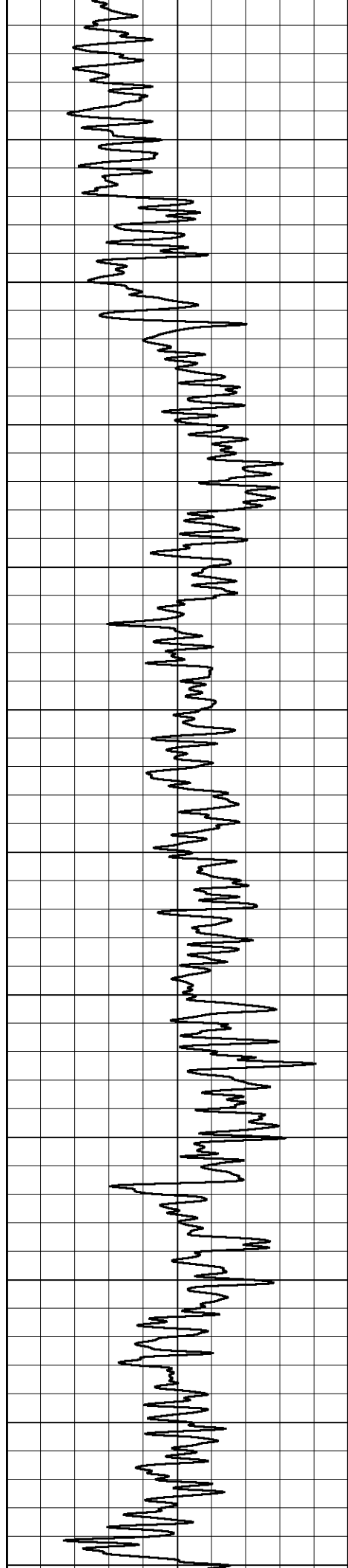
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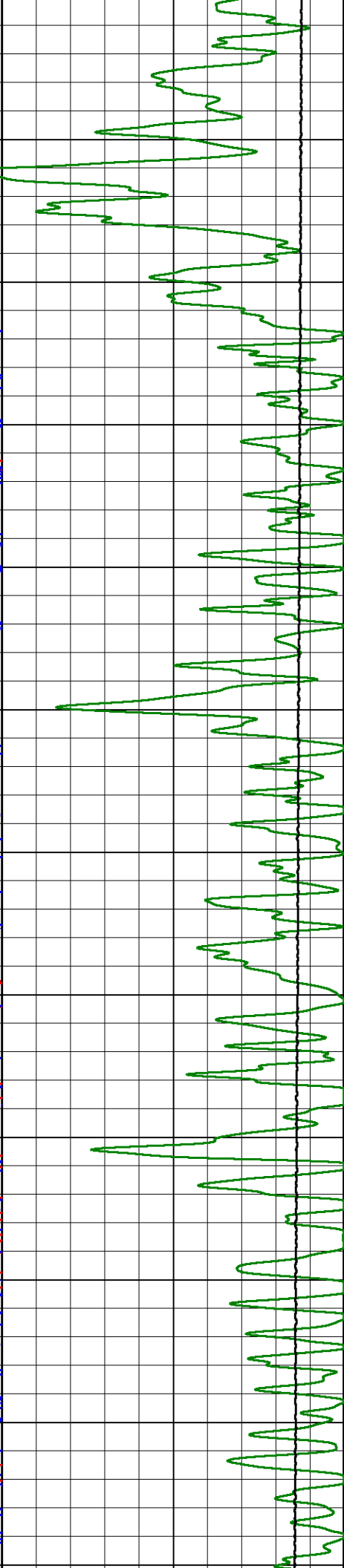
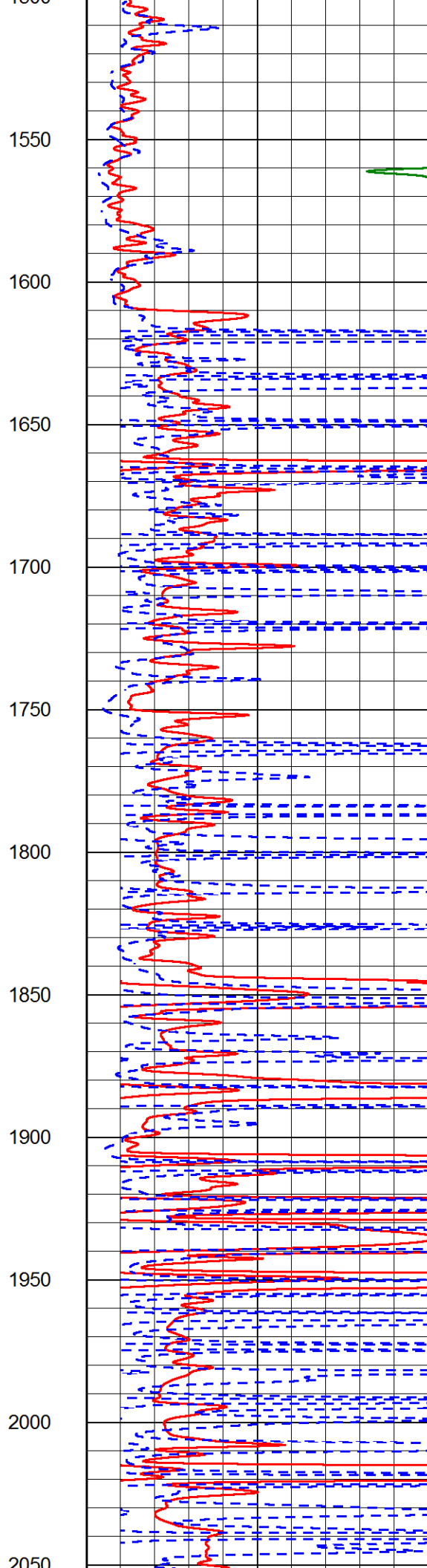
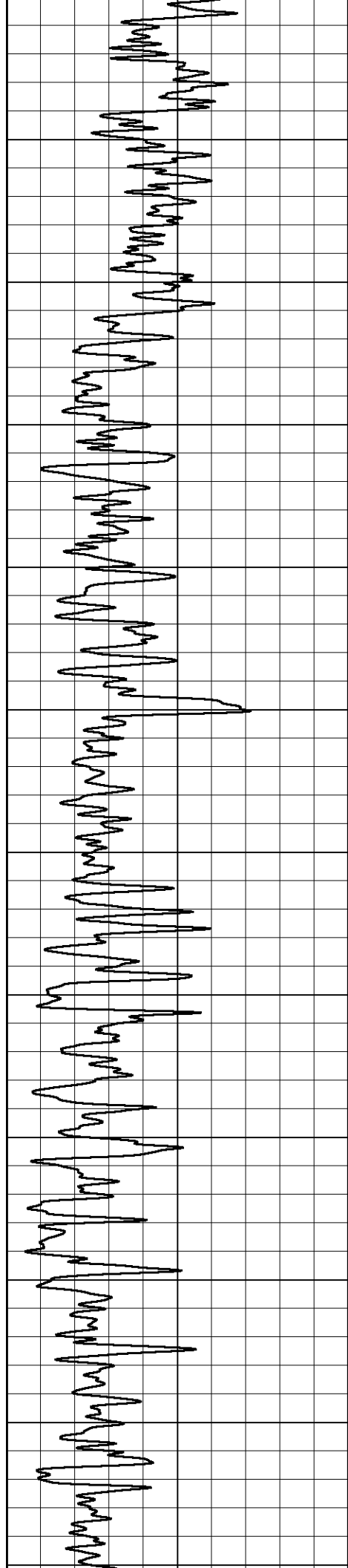
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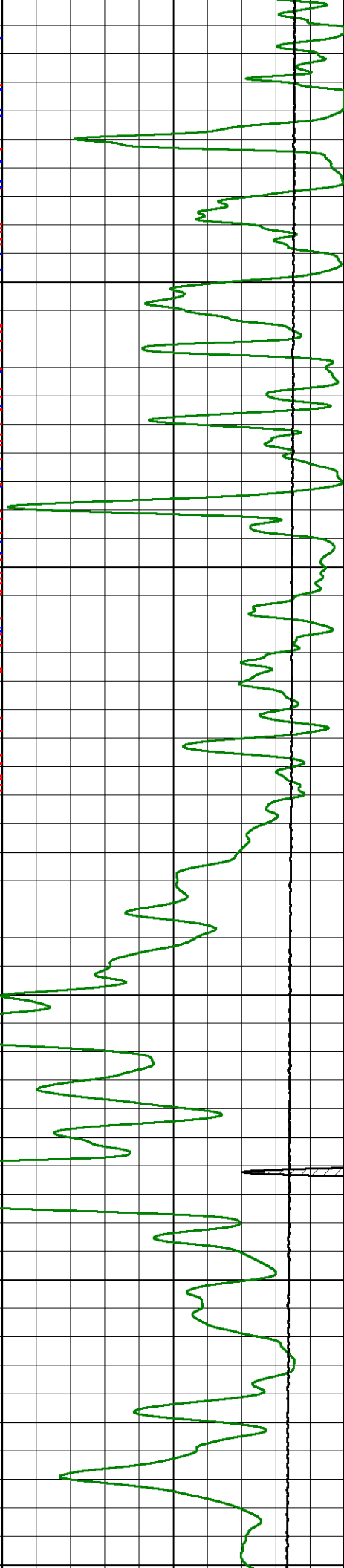
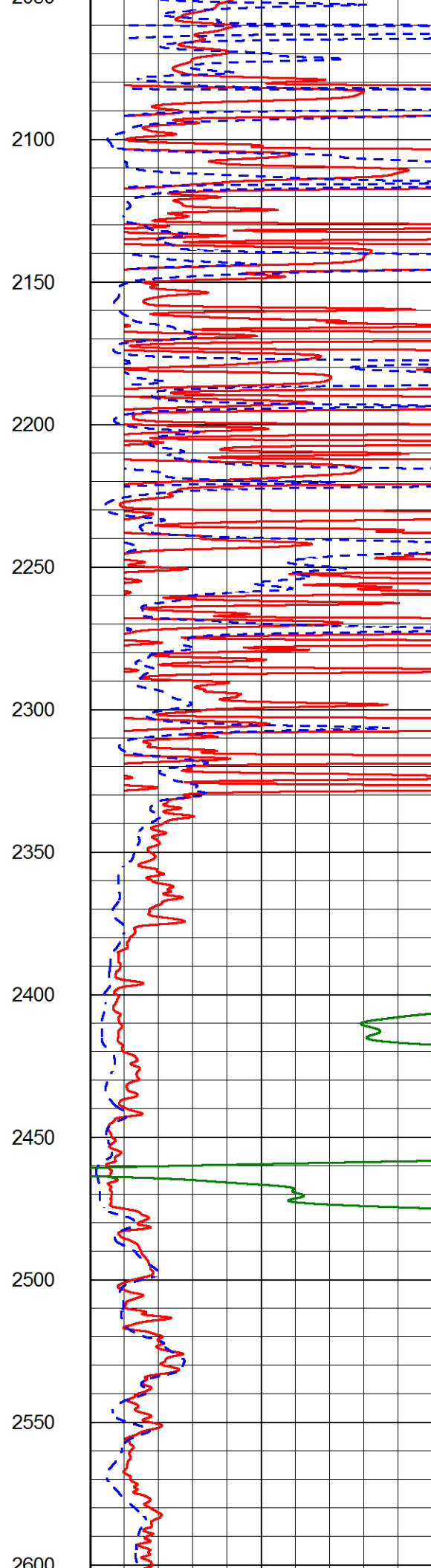
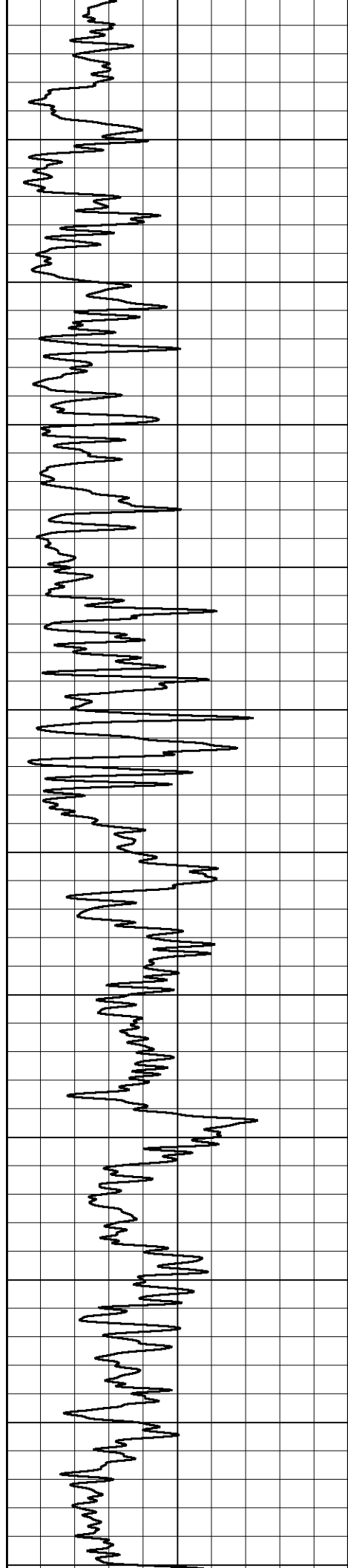
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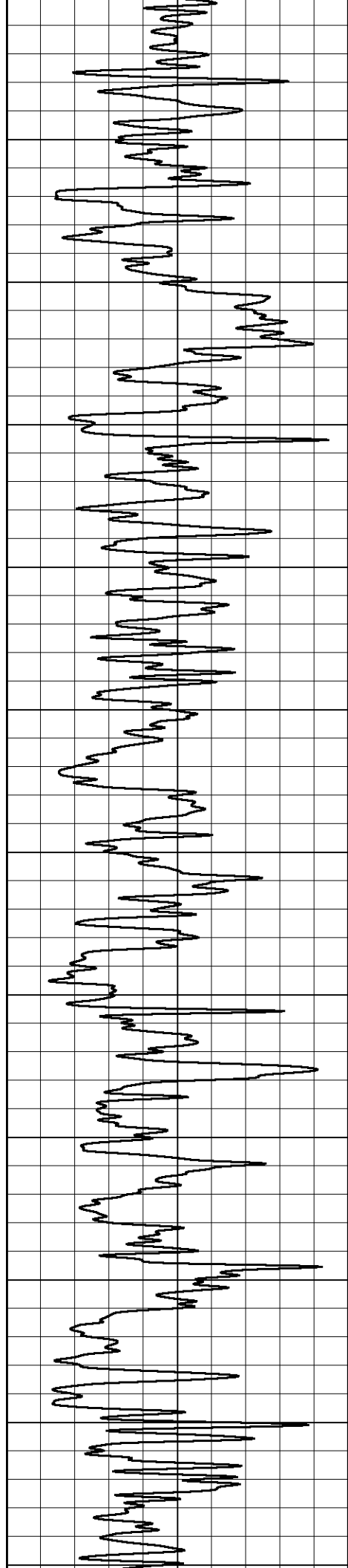




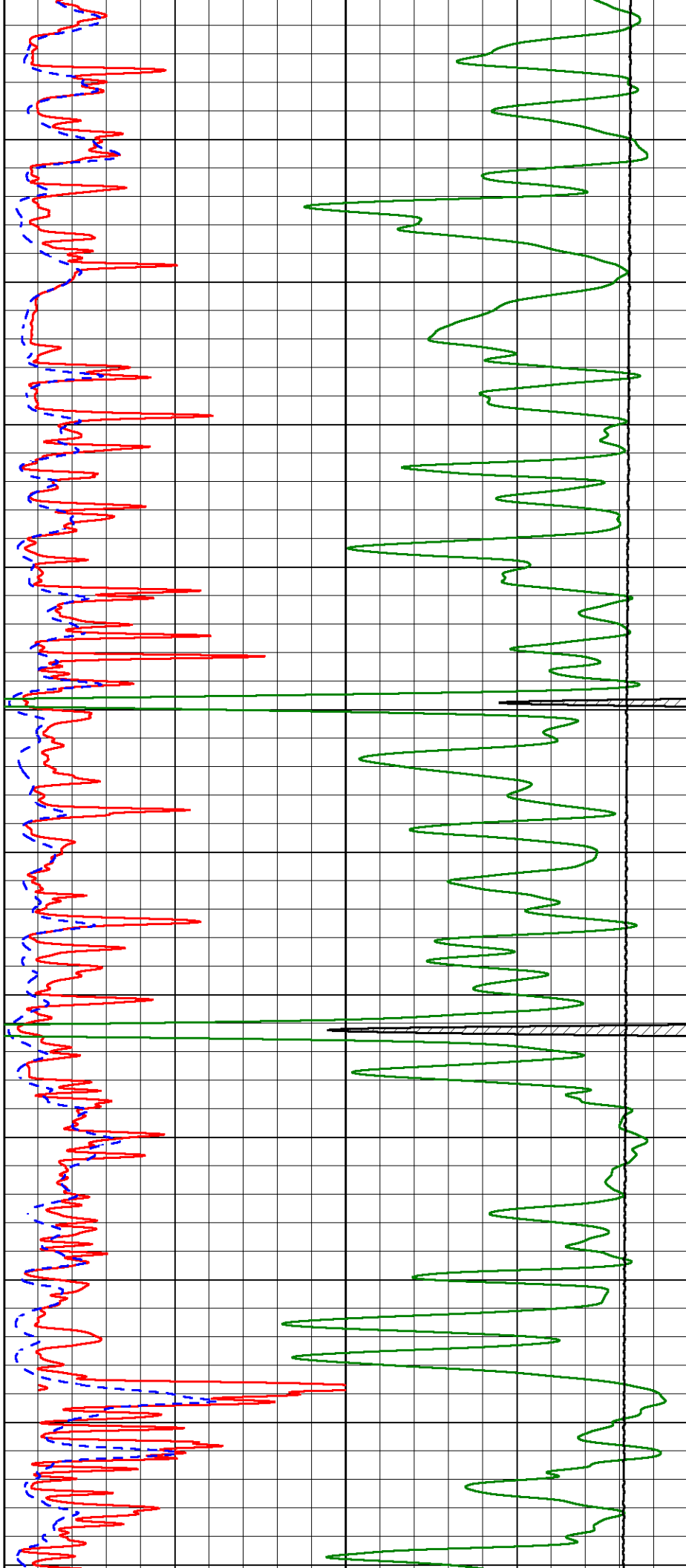


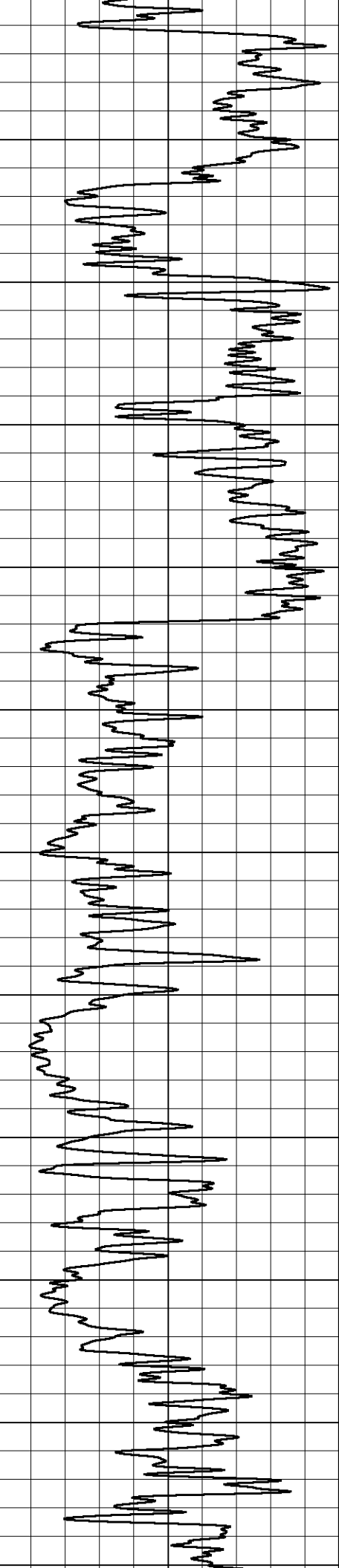




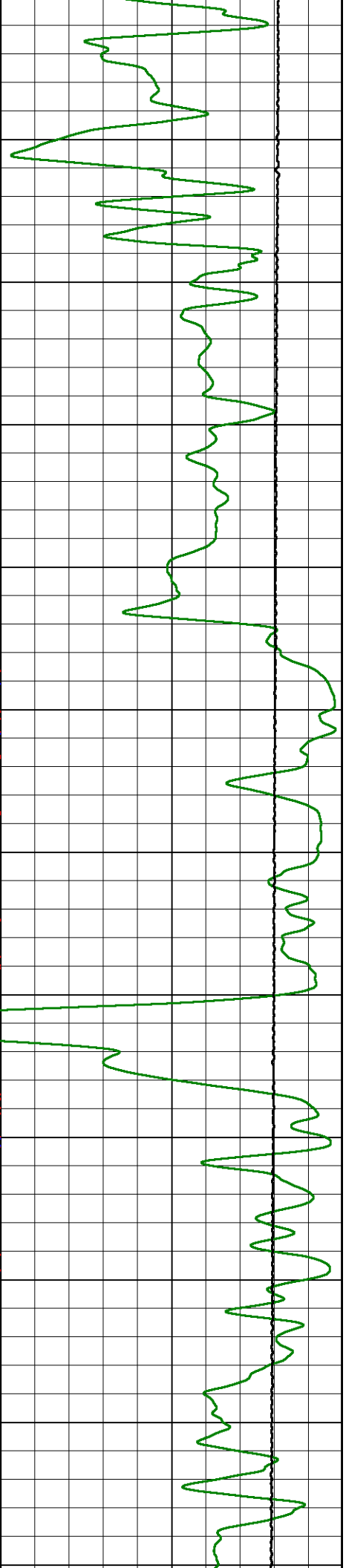
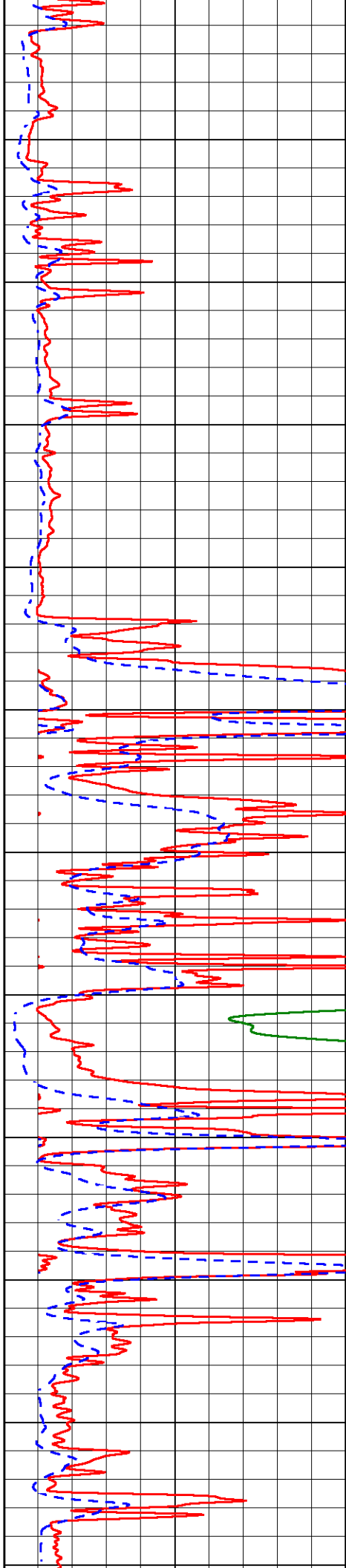


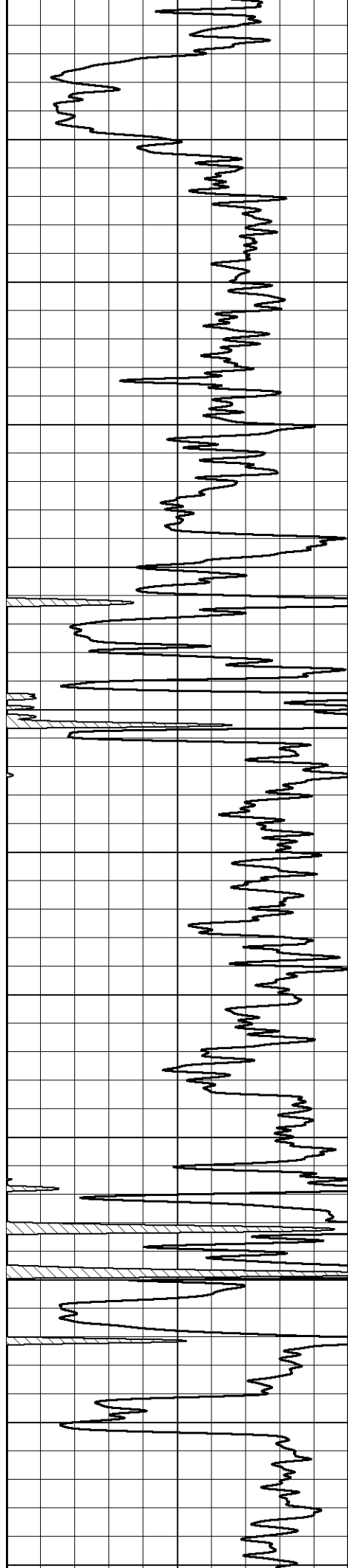
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2800
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2900
2950
3000
3050
3100
3150



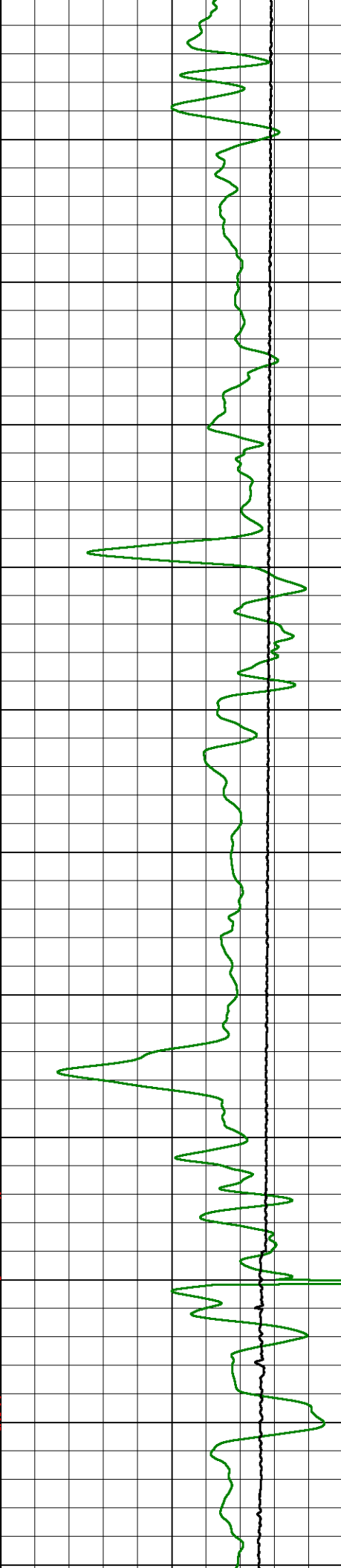
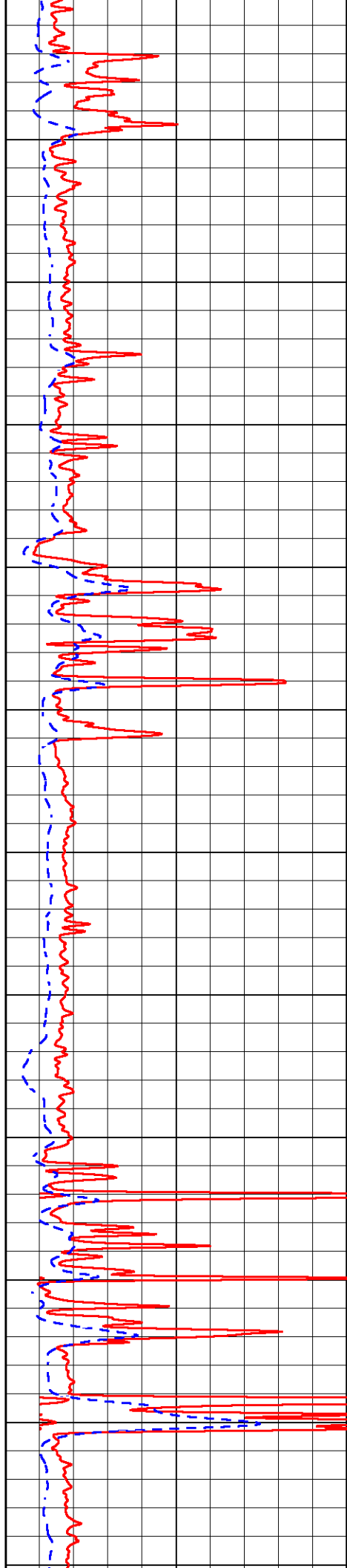


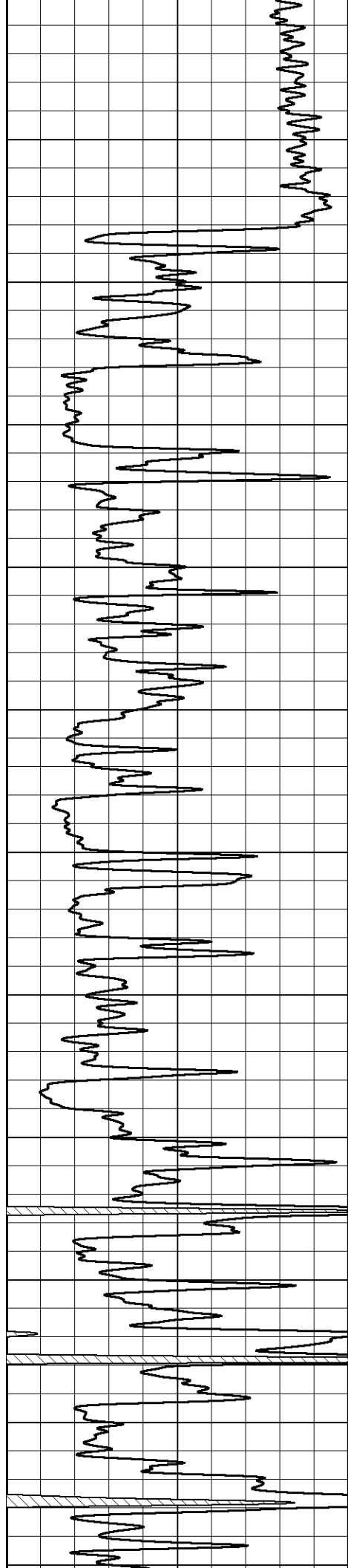
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3650
3700



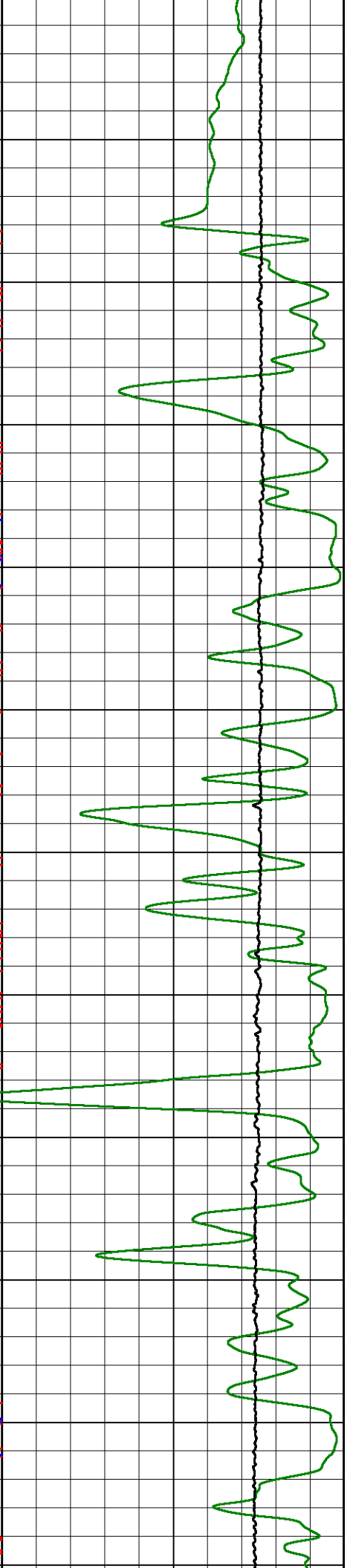
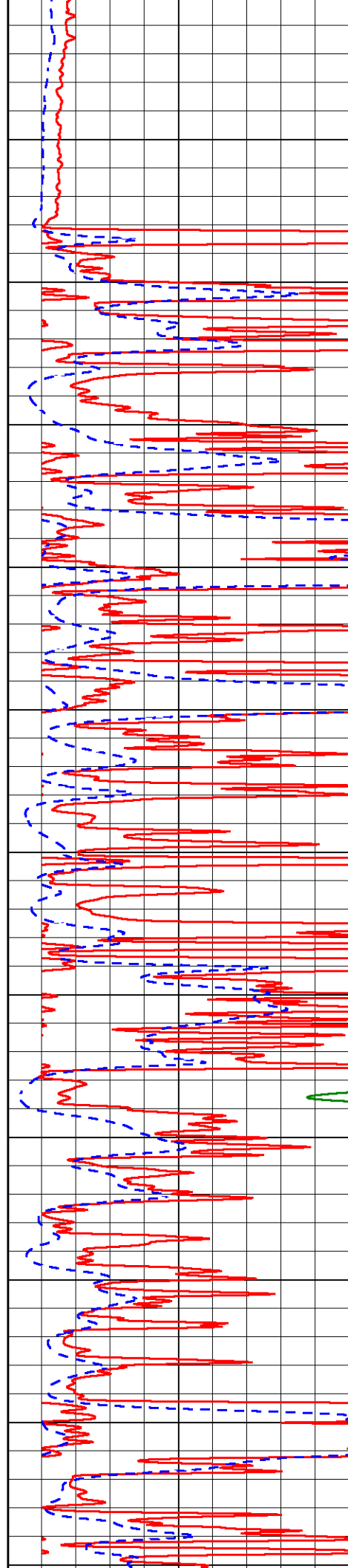


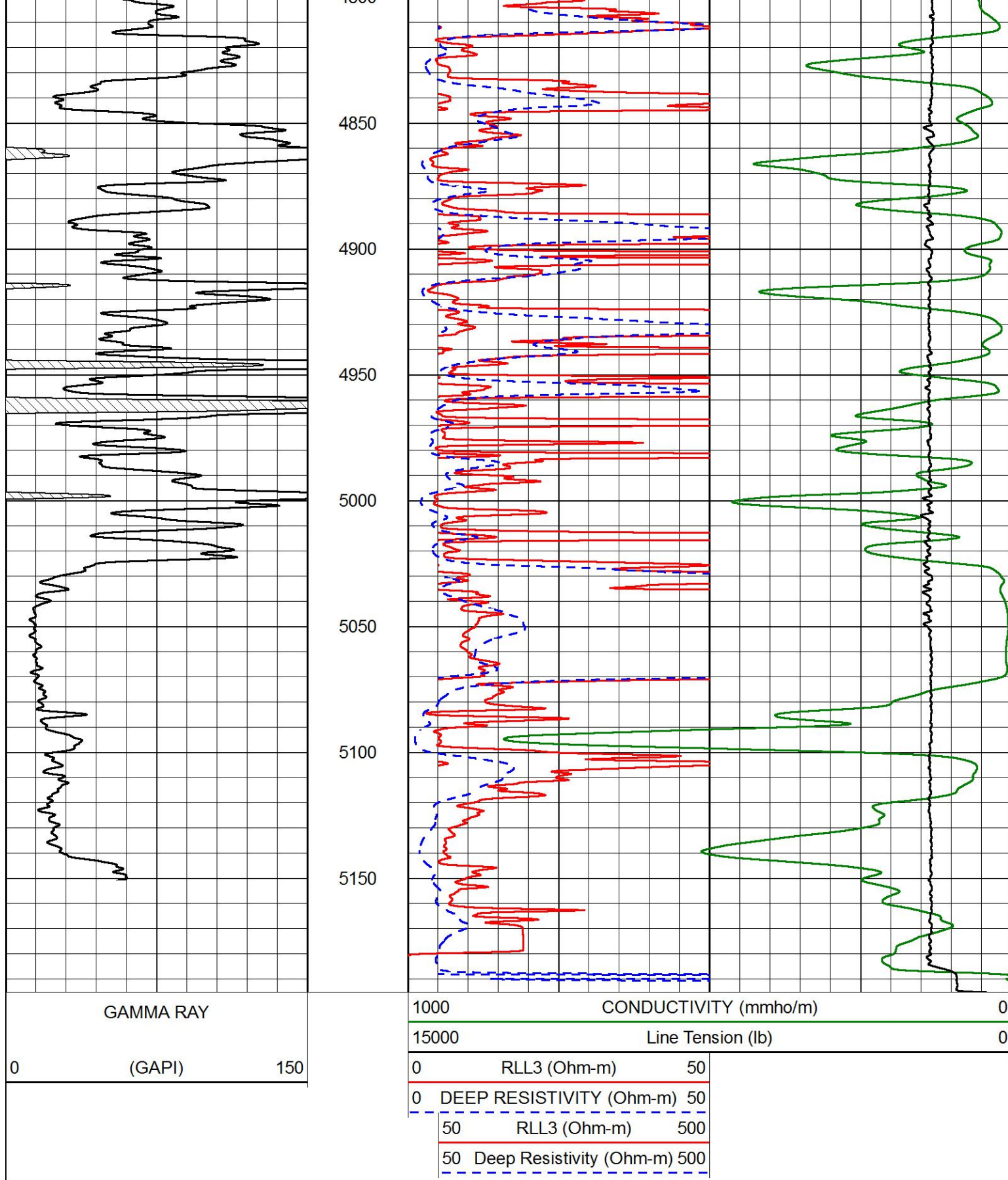
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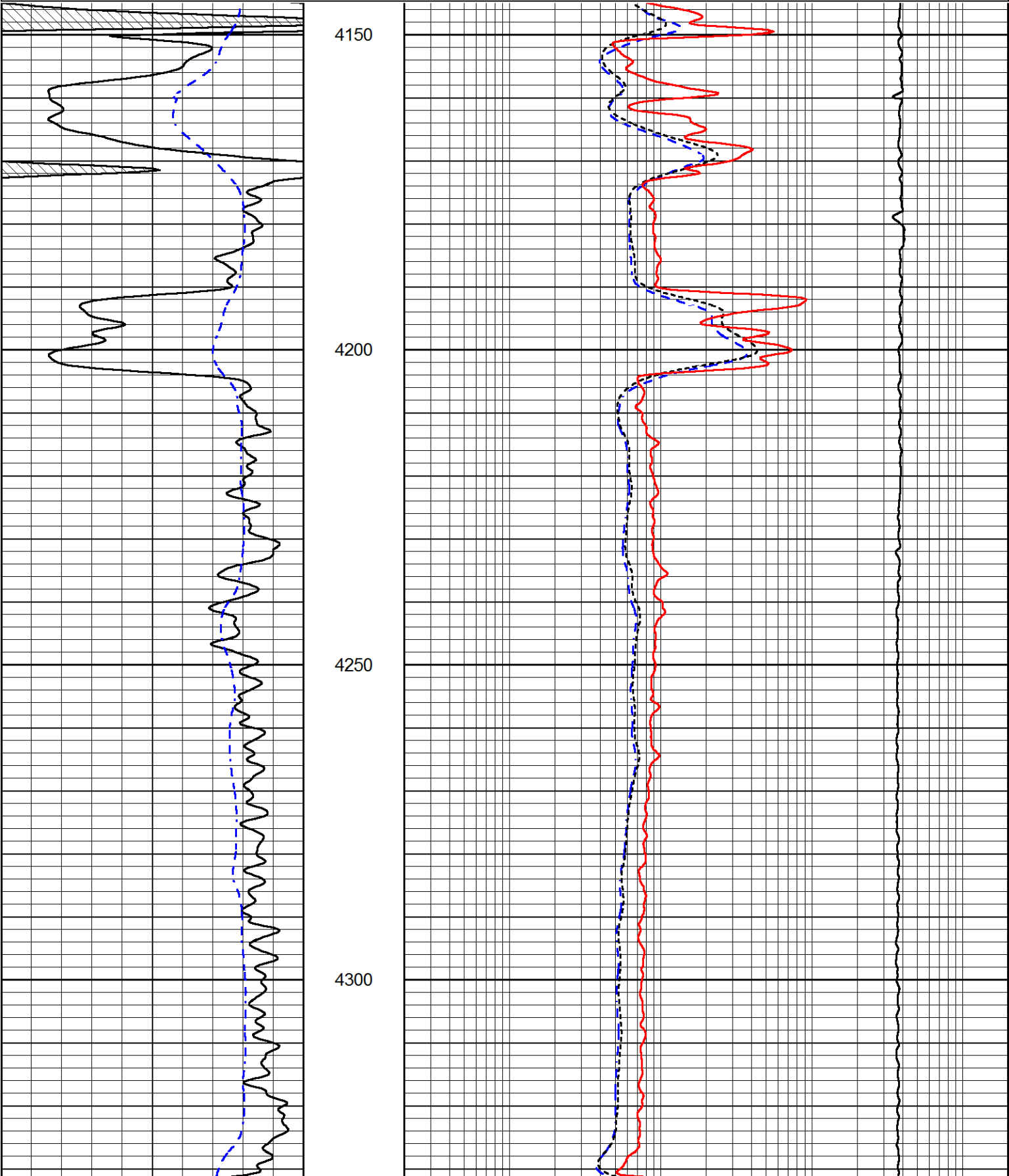
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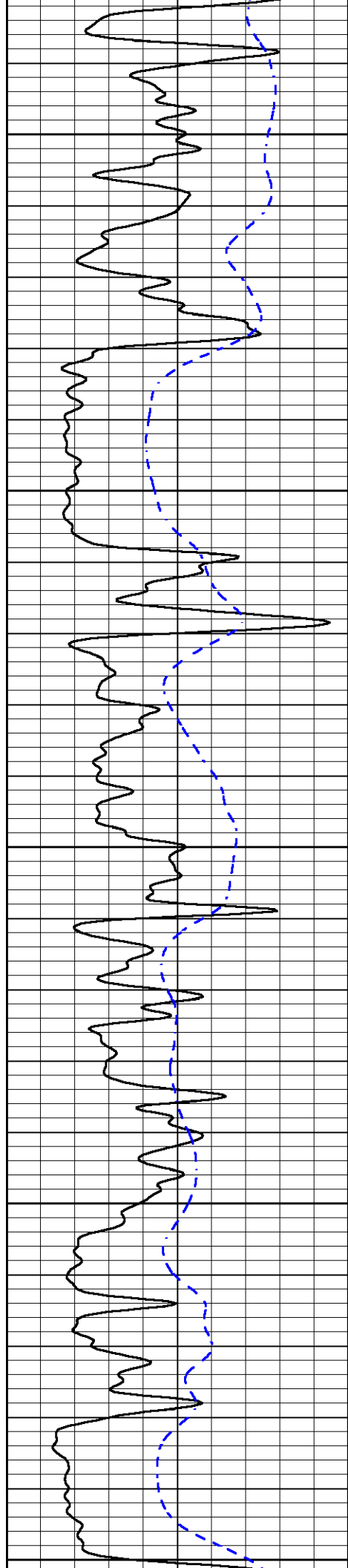




MAIN PASS

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





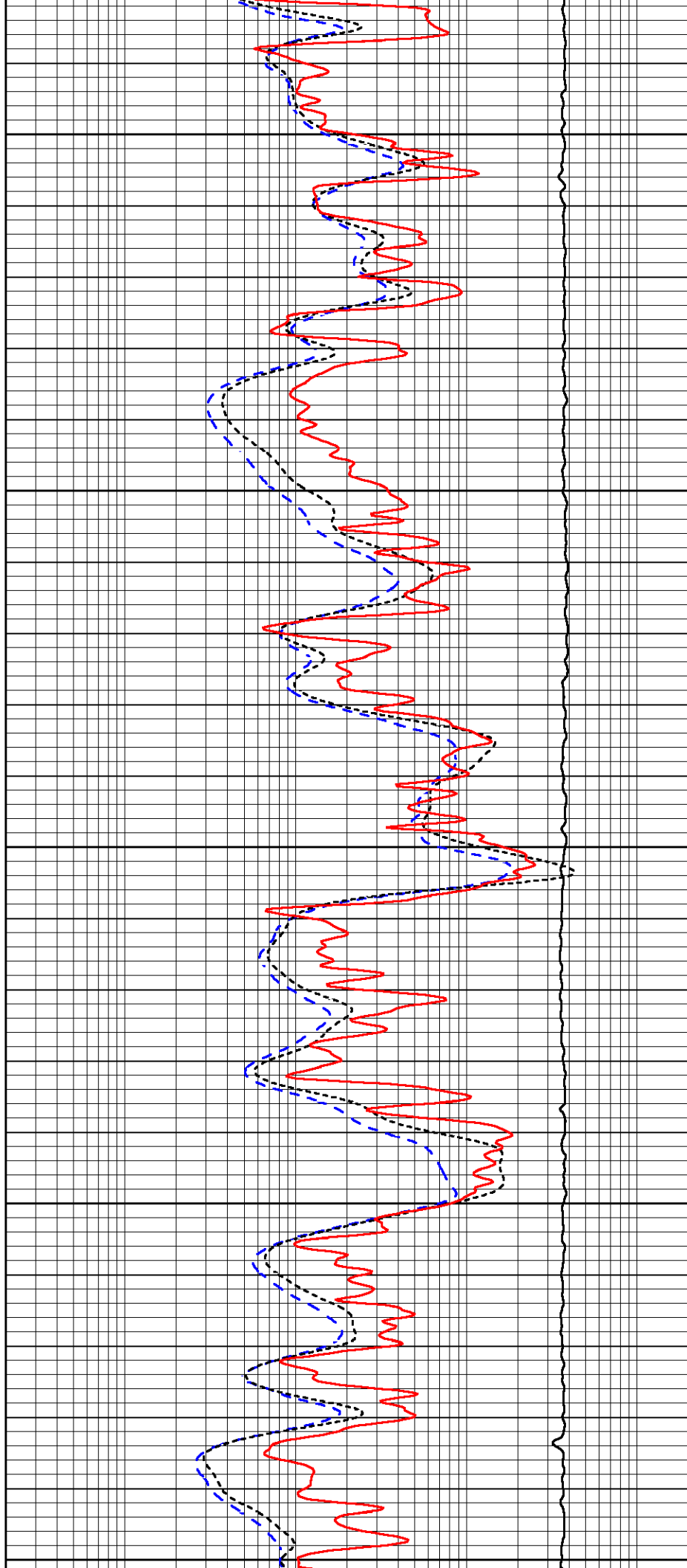
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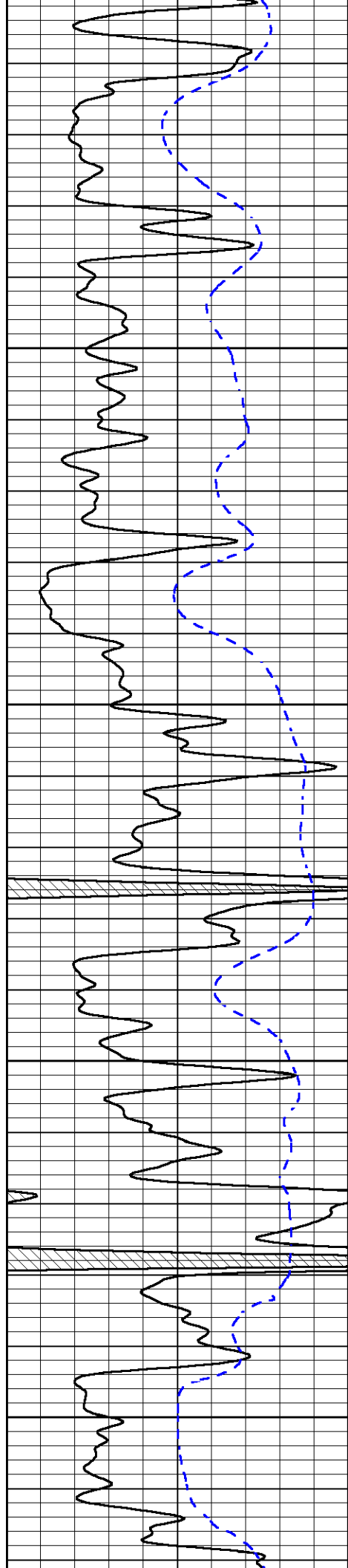
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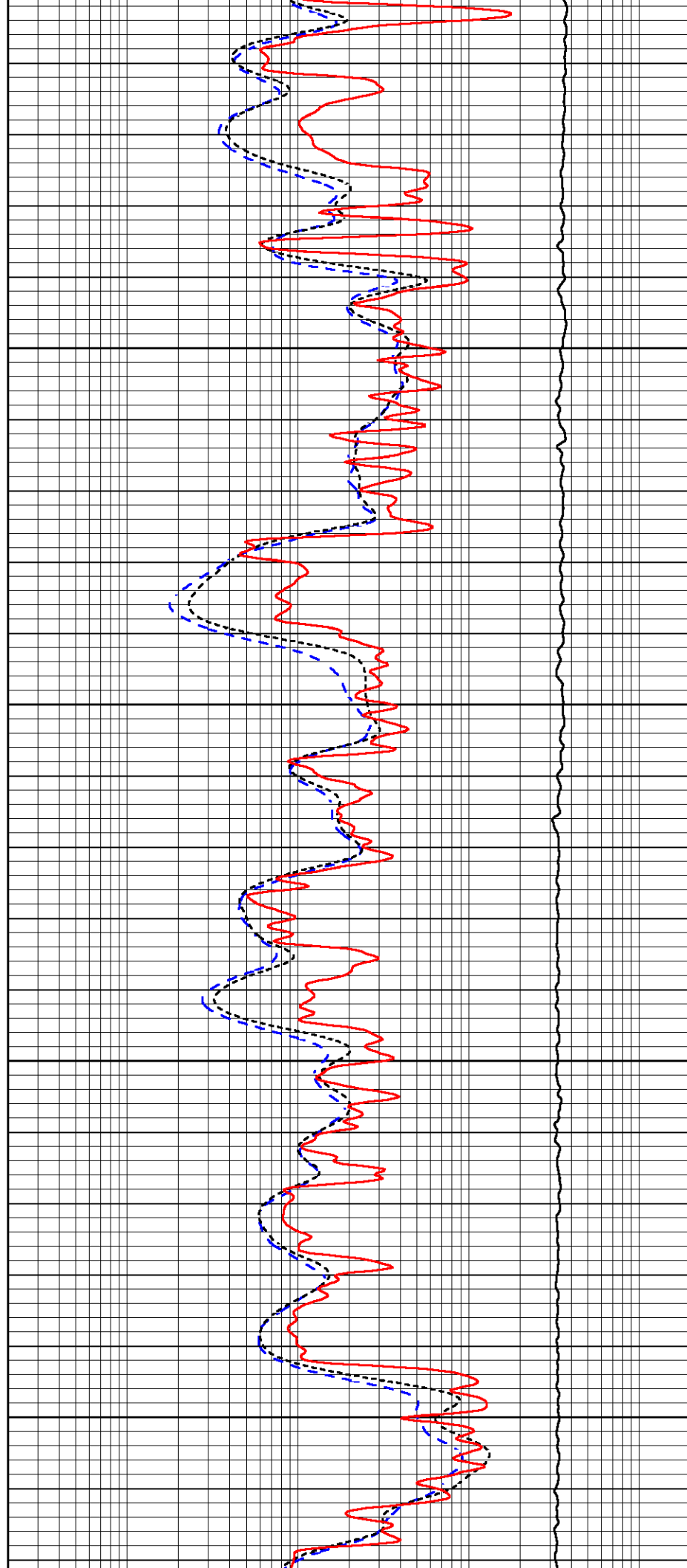


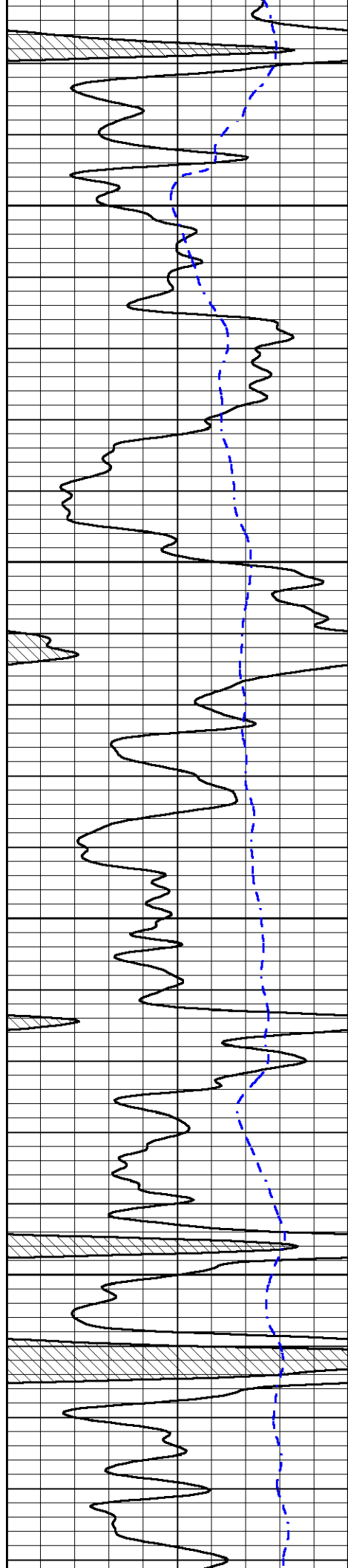
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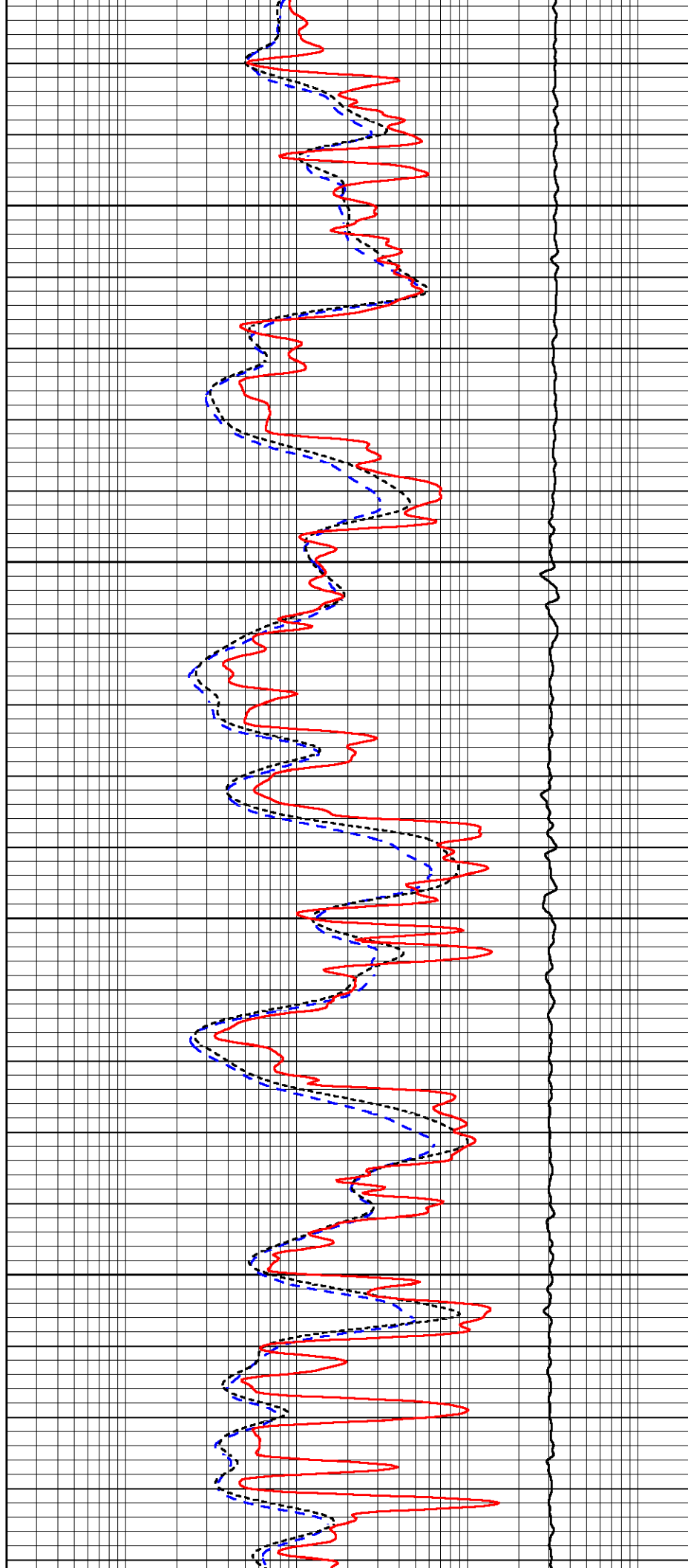


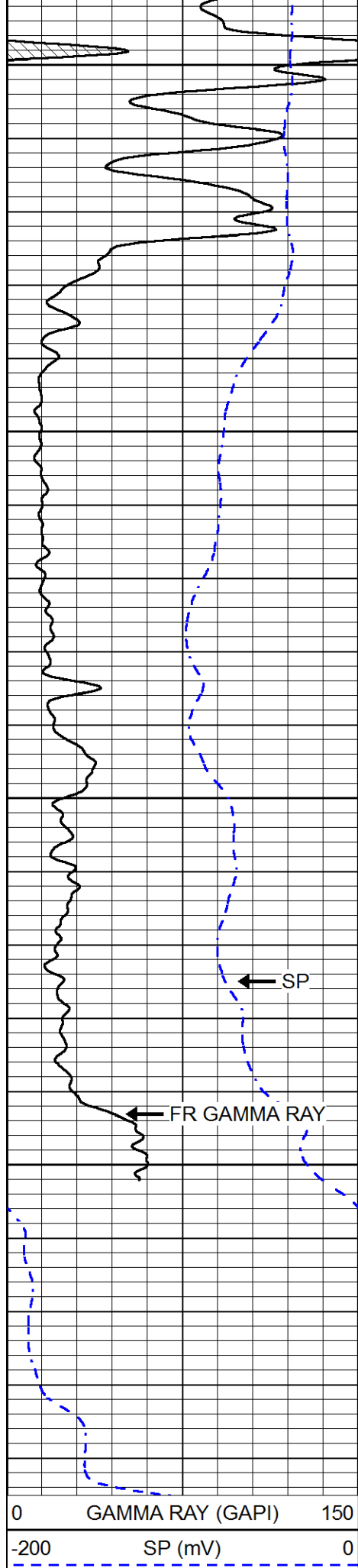
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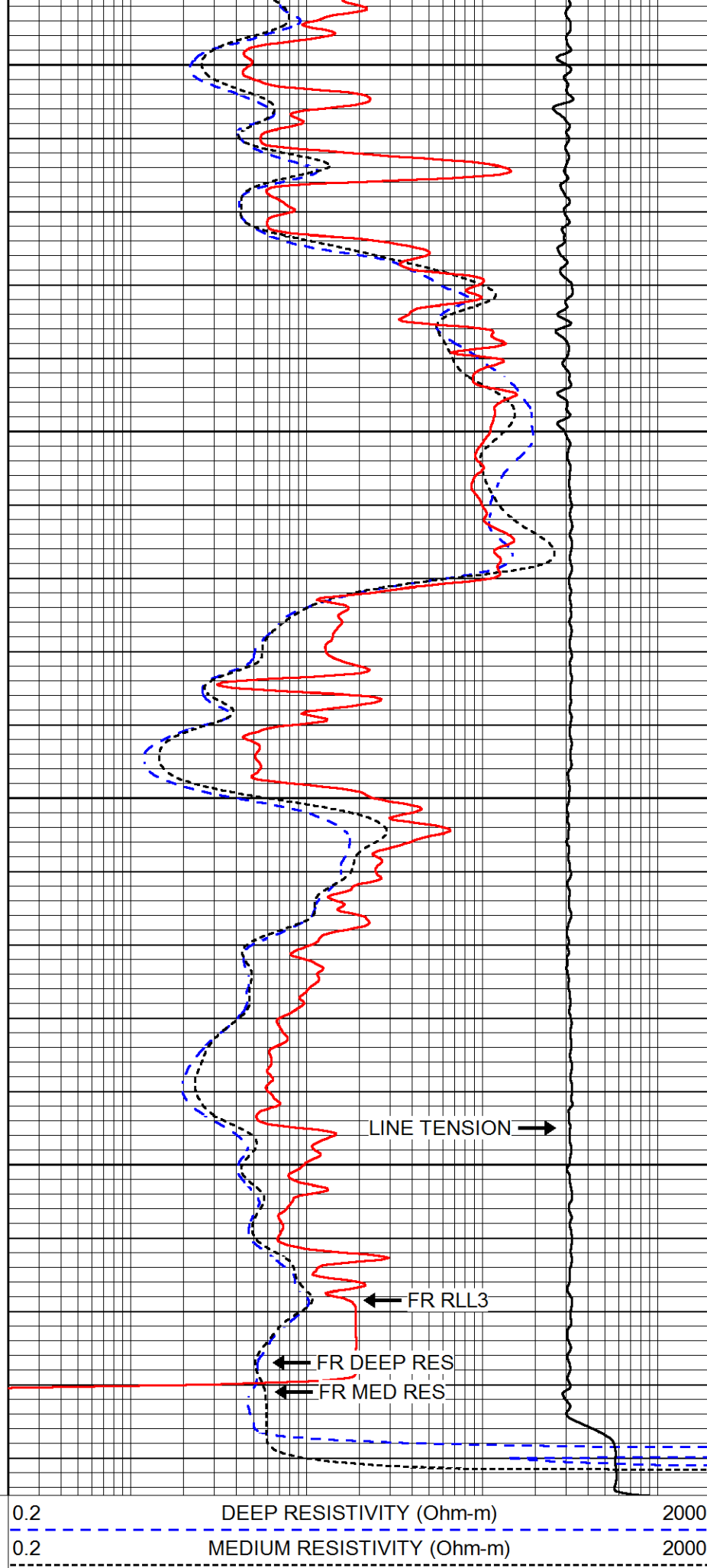


5000

5050

5100

5150



Calibration Report

Database File castelli_dunn 2-24.db
 Dataset Pathname STKML/pass7.1
 Dataset Creation Tue Oct 23 12:46:36 2018

Dual Induction Calibration Report

Serial-Model: 967 (HT)-PSI HIGH TEMP
 Calibration Performed: Sun Oct 07 19:24:22 2018

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-15.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-41.500

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sat Sep 08 05:17:35 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	30000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9500

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Fri Aug 24 11:16:00 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.670	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.526		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	15.00	in	1.15		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: FRI AUG 24 10:30:30 2018

Detector	Readings	Target	Normalization
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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	
Tool Model:	M&W	
Calibration Performed:	Fri Aug 24 11:16:10 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

 PIONEER Pioneer Energy Services	<table><tr><td>Company</td><td>CASTELLI EXPLORATION, INC.</td></tr><tr><td>Well</td><td>DUNN #2-24</td></tr><tr><td>Field</td><td>SHIMER</td></tr><tr><td>County</td><td>COMANCHE</td></tr><tr><td>State</td><td>KANSAS</td></tr></table>	Company	CASTELLI EXPLORATION, INC.	Well	DUNN #2-24	Field	SHIMER	County	COMANCHE	State	KANSAS
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