



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company **K-BAR OIL**
Well **KREHBIEL #2**
Field **RICK**
County **BARTON** State **KANSAS**

Location: API #: 15-009-26290-00-00

Other Services

SEC 13 TWP 19S RGE 11W
660' FNL & 330' FWL

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 1779'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1789'
D.F. N/A
G.L. 1779'

Date 6/16/2020

Run Number	ONE		
Depth Driller	3450'		
Depth Logger	3450'		
Bottom Logged Interval	3449'		
Top Log Interval	250'		
Casing Driller	8.625" @ 282'		
Casing Logger	281'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4000		
Density / Viscosity	9.0 58		
pH / Fluid Loss	10.0 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 80		
Rmt @ Meas. Temp	0.45 @ 80		
Rmc @ Meas. Temp	0.81 @ 80		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.43 @ 111		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	111		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	HERB DEINES		

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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.

CLAFLIN,
EAST TO COUNTY LINE, 8 SOUTH,
EAST INTO

Log Measured From: KELLY BUSHING 10 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: HERB DEINES
Secondary Witness:
Secondary Witness:
Secondary Witness:

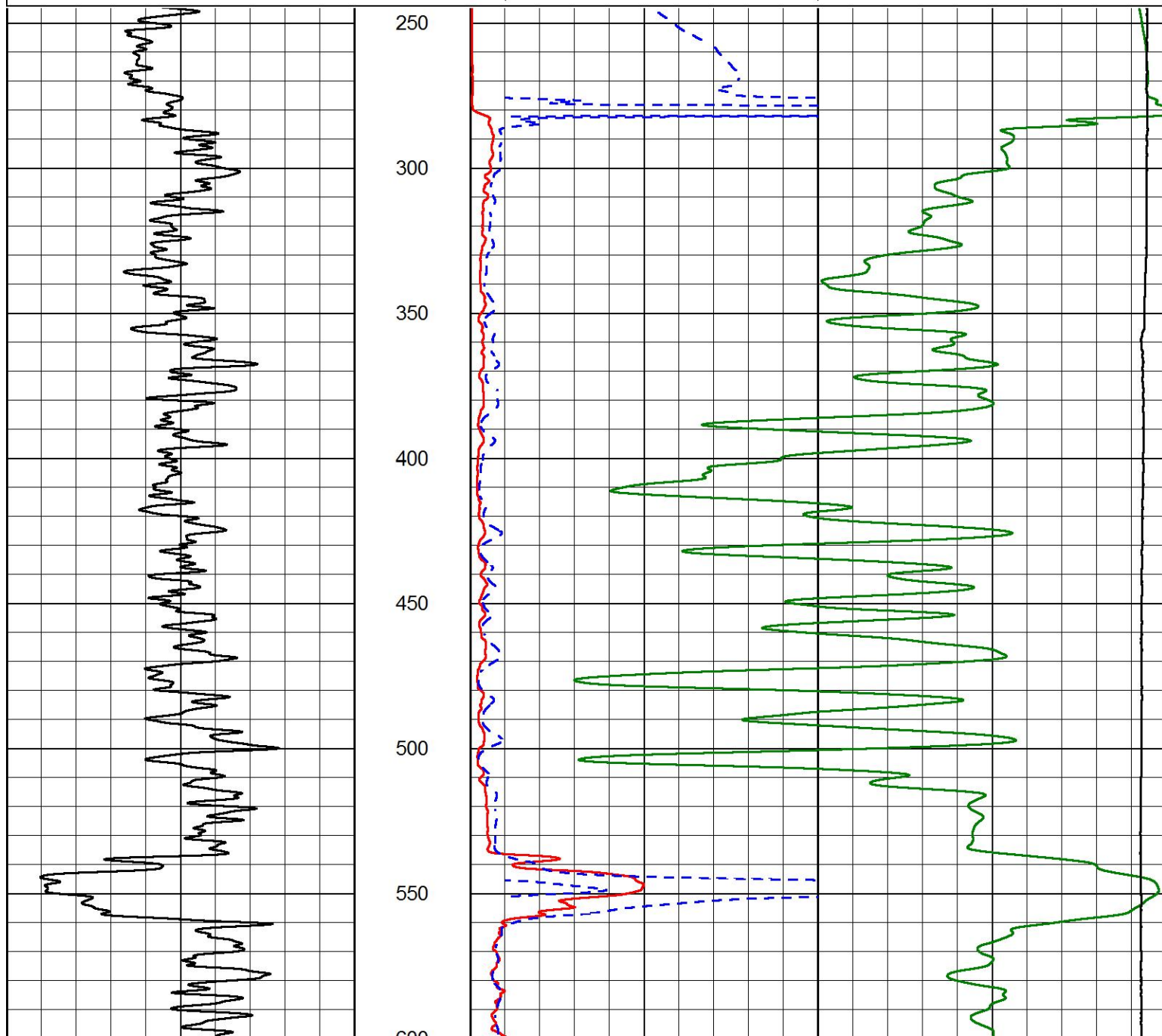
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (817-947)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro 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 (952-828)	18.50	3.50	220.00
CILM	4.70					
SP	0.20					

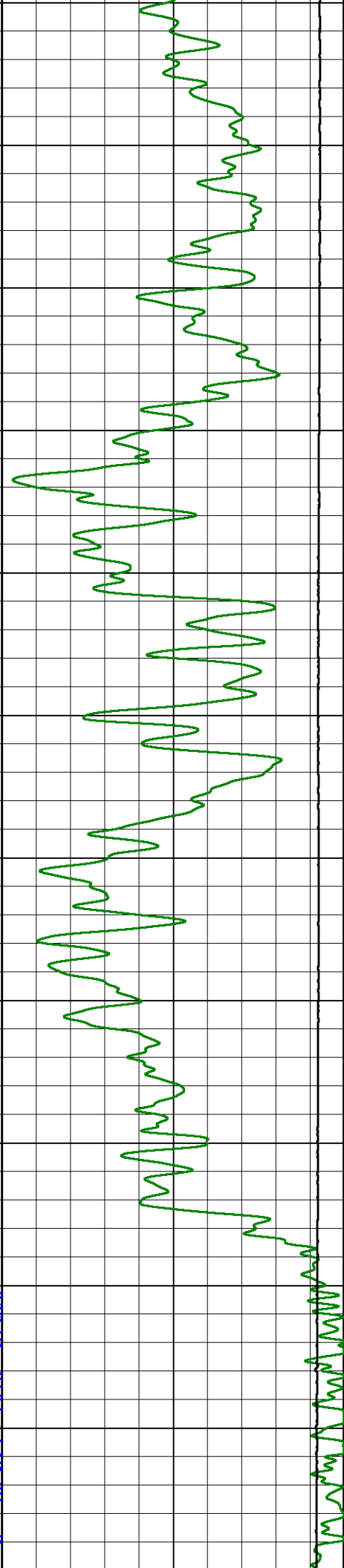
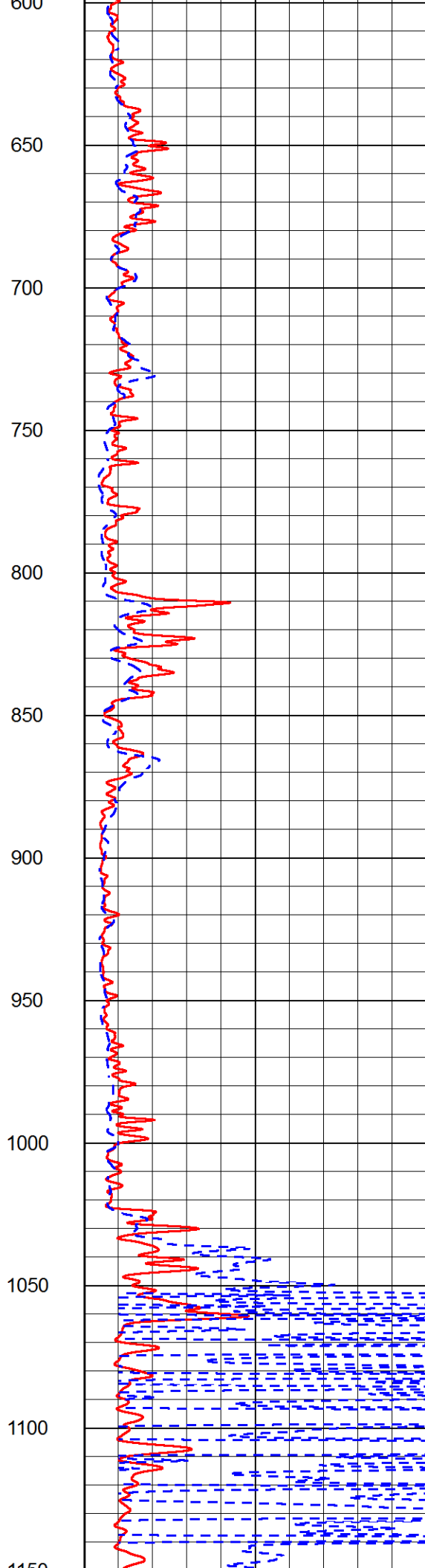
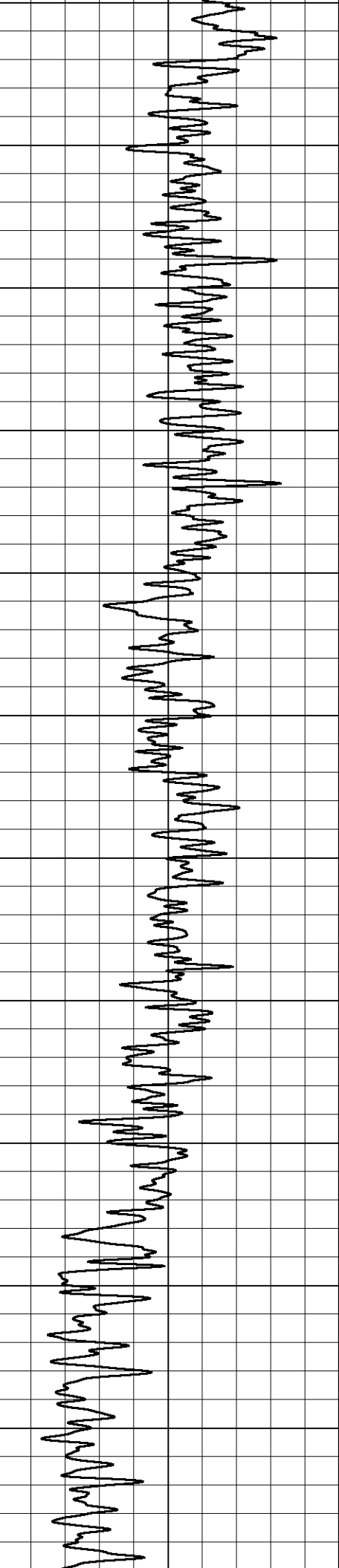


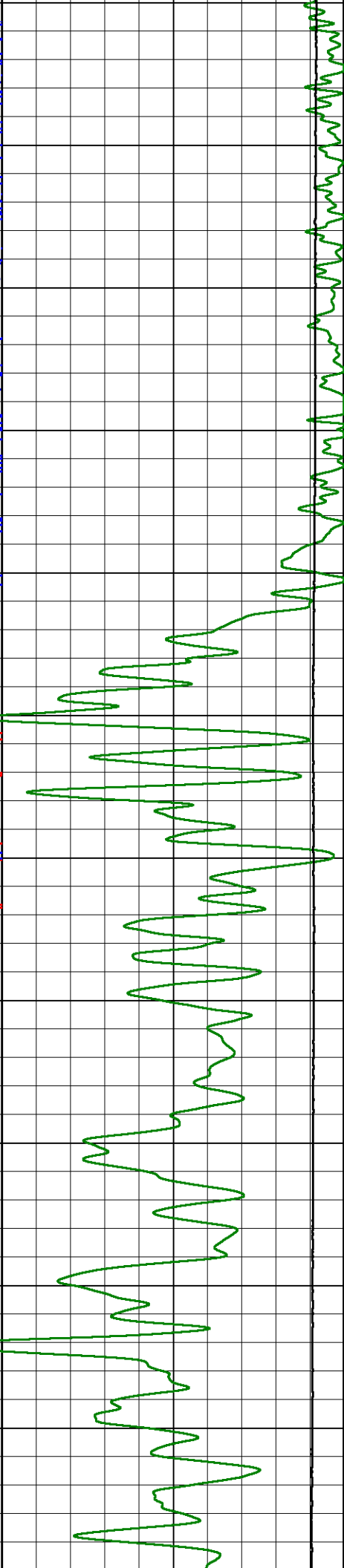
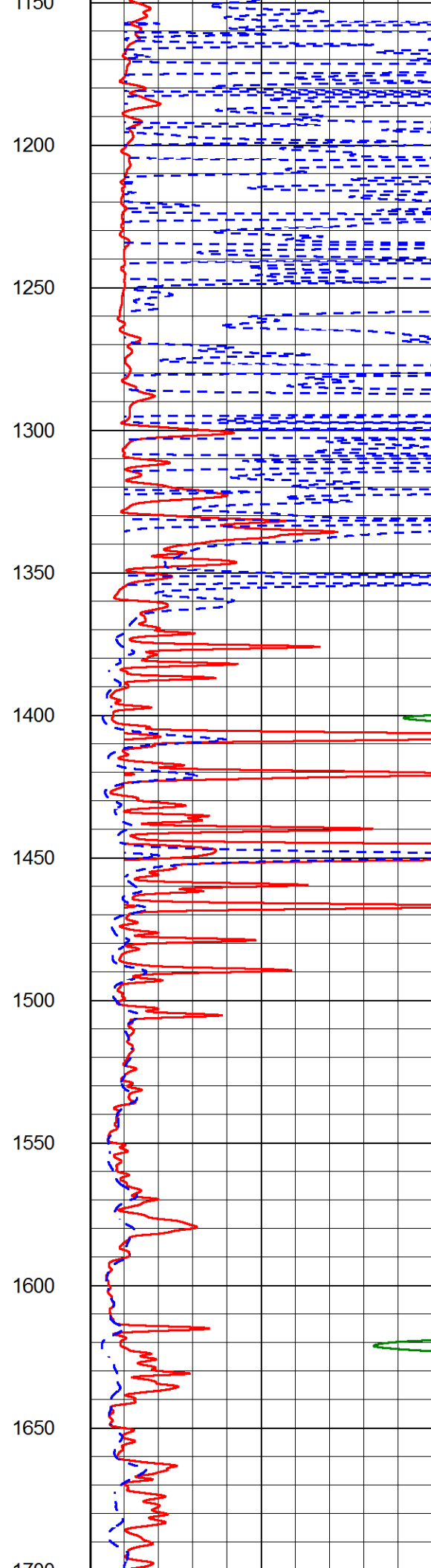
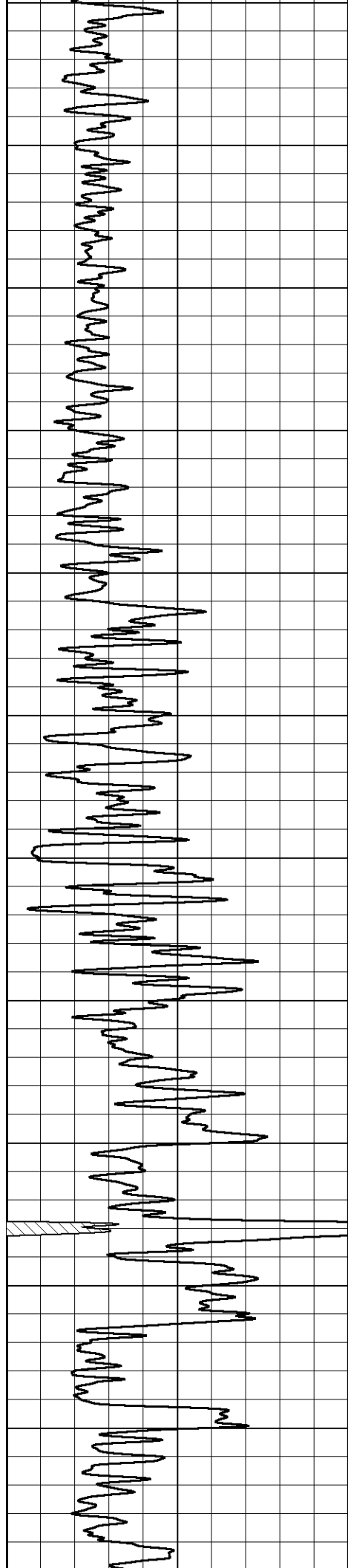
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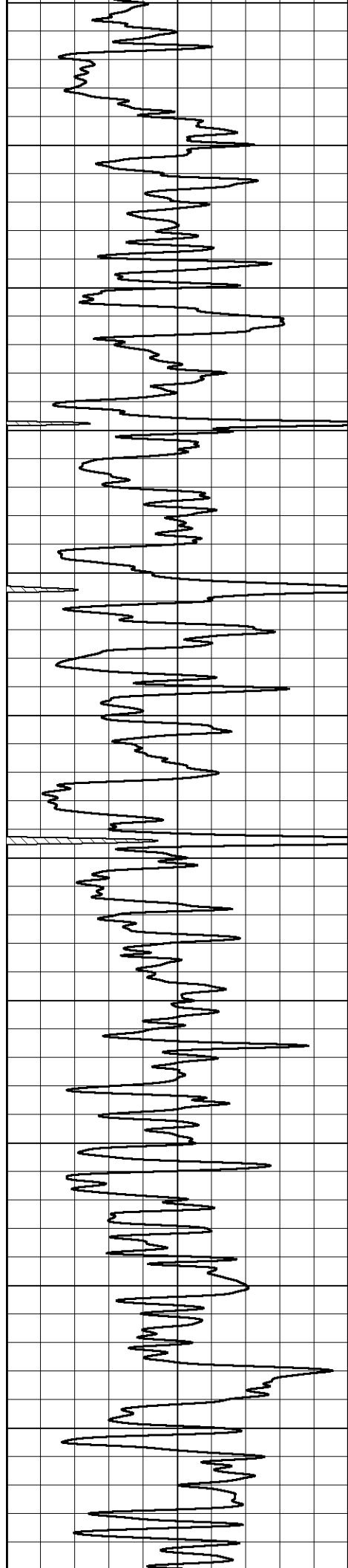
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Dataset Pathname STKML/pass4.1
Presentation Format _dil2in
Dataset Creation Tue Jun 16 02:38:47 2020
Charted by Depth in Feet scaled 1:600

GAMMA RAY			1000	CONDUCTIVITY (mmho/m)		0
			15000	Line Tension (lb)		0
0	(GAPI)	150	0	RLL3 (Ohm-m)	50	
			0	RILD (Ohm-m)	50	
			50	RLL3 (Ohm-m)	200	
			50	Deep Resistivity (Ohm-m)	200	

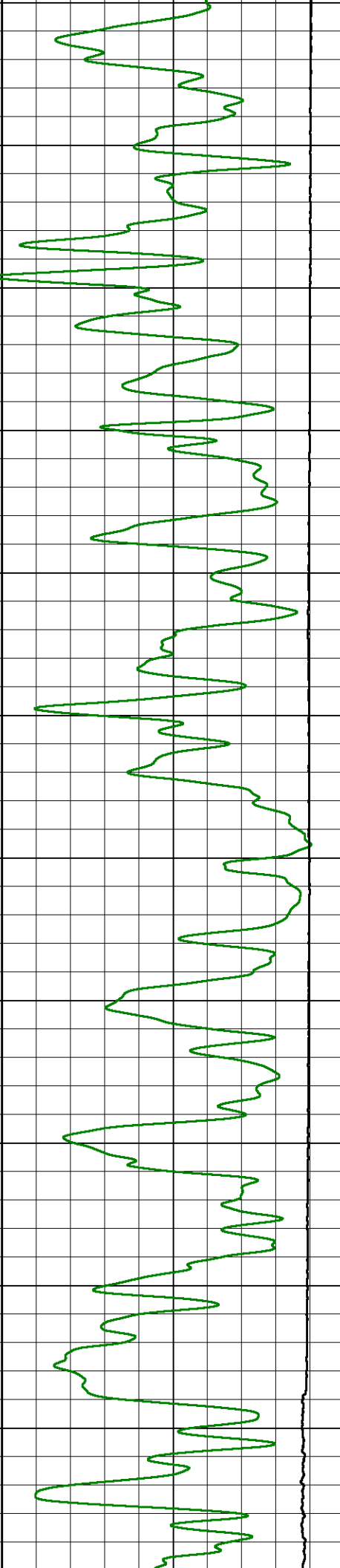
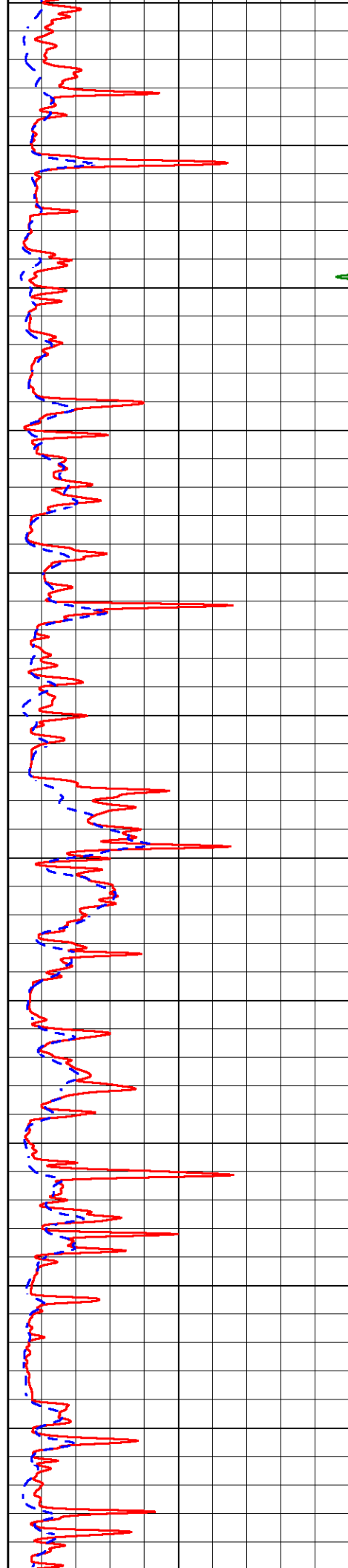


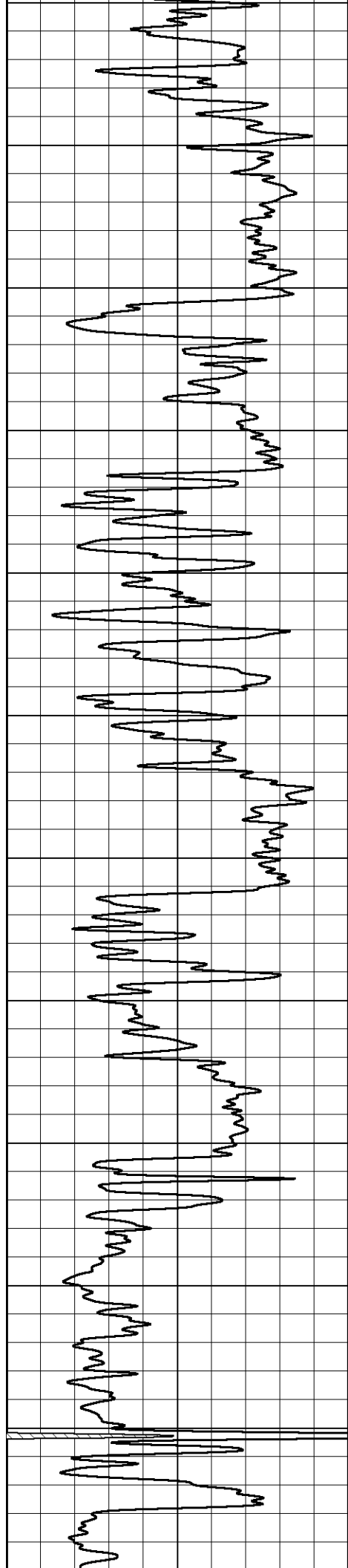




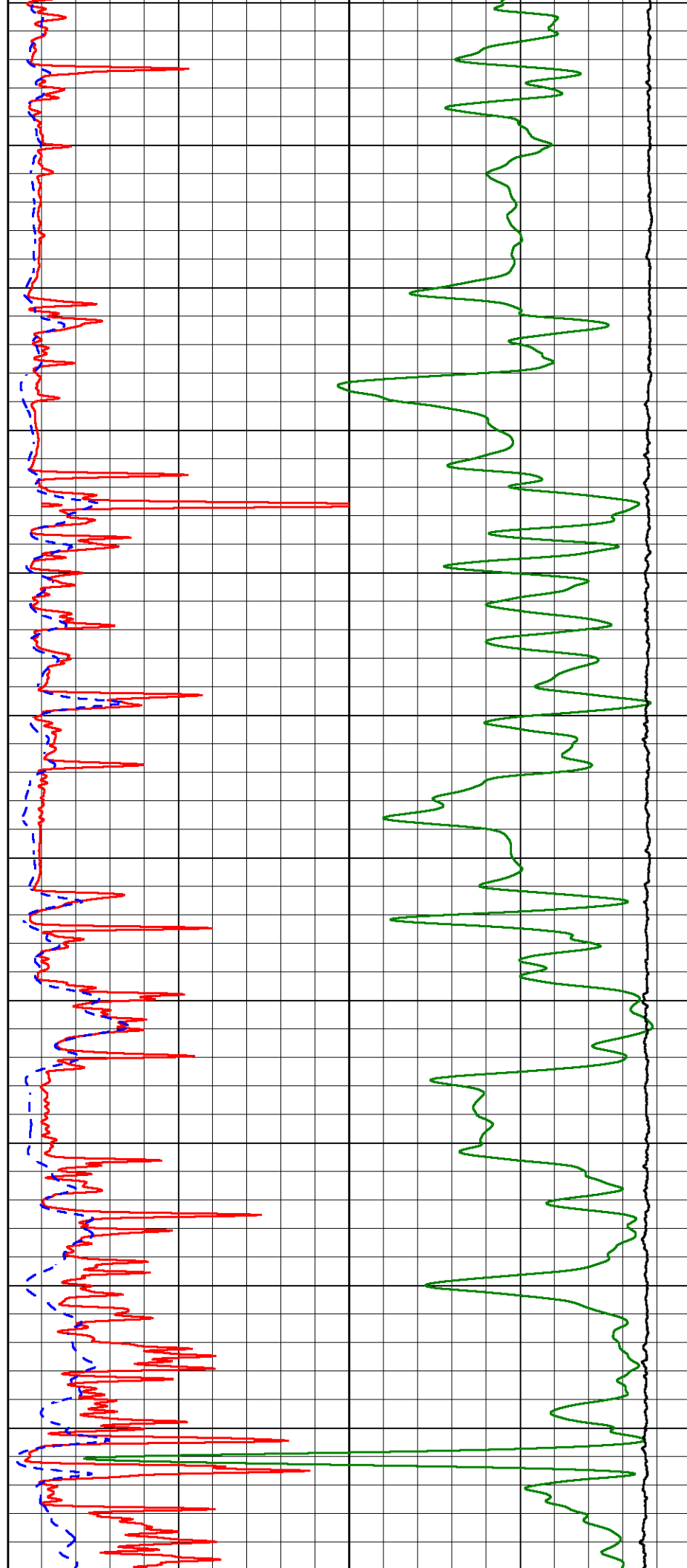


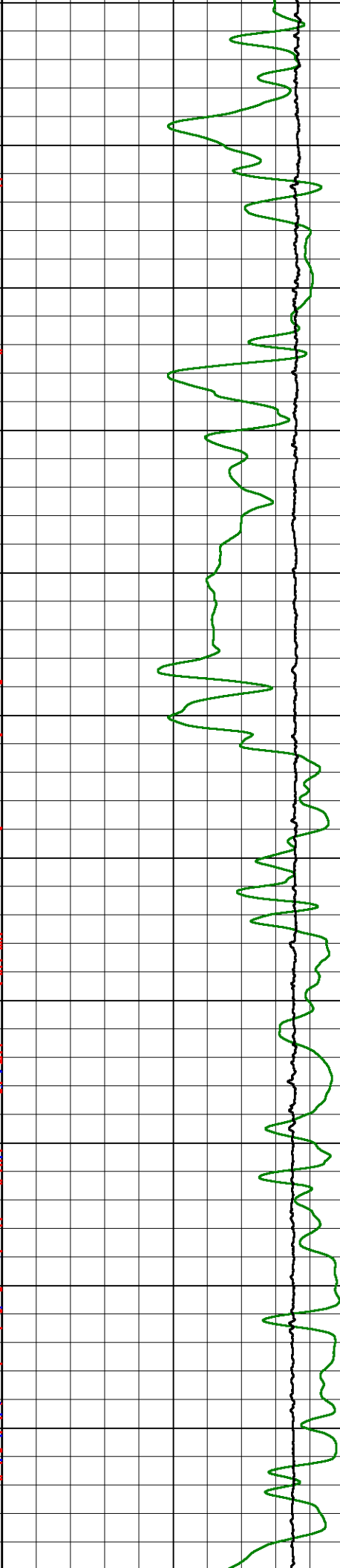
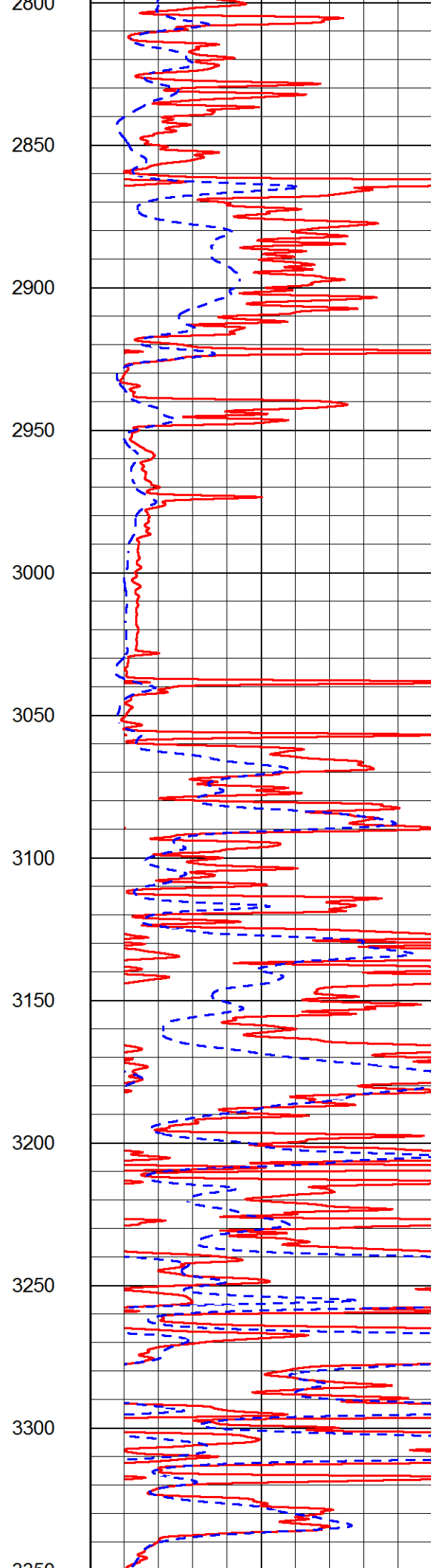
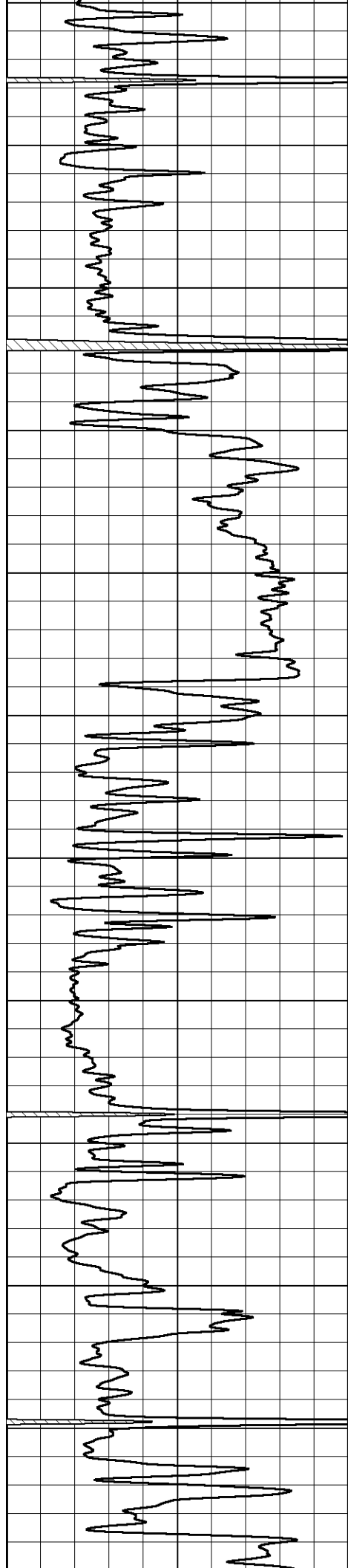
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250

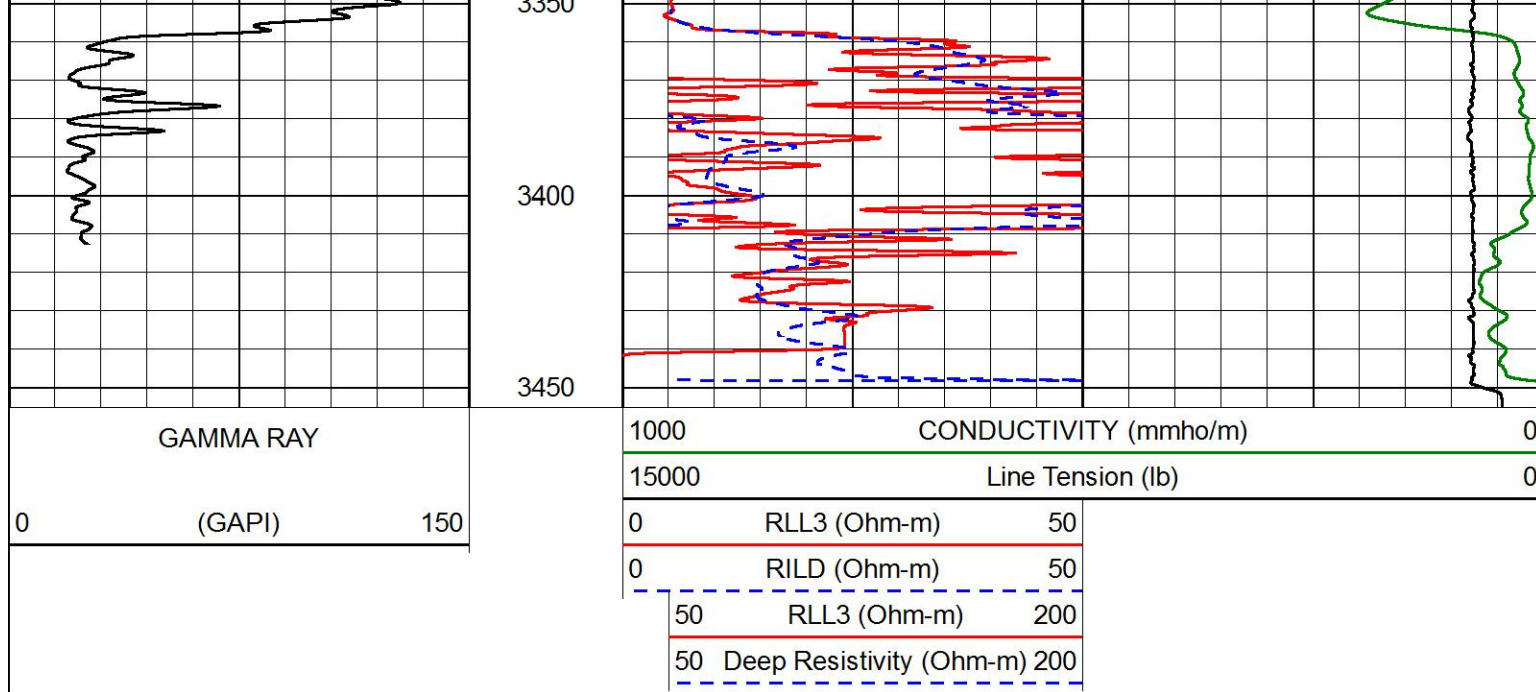




2250
2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800



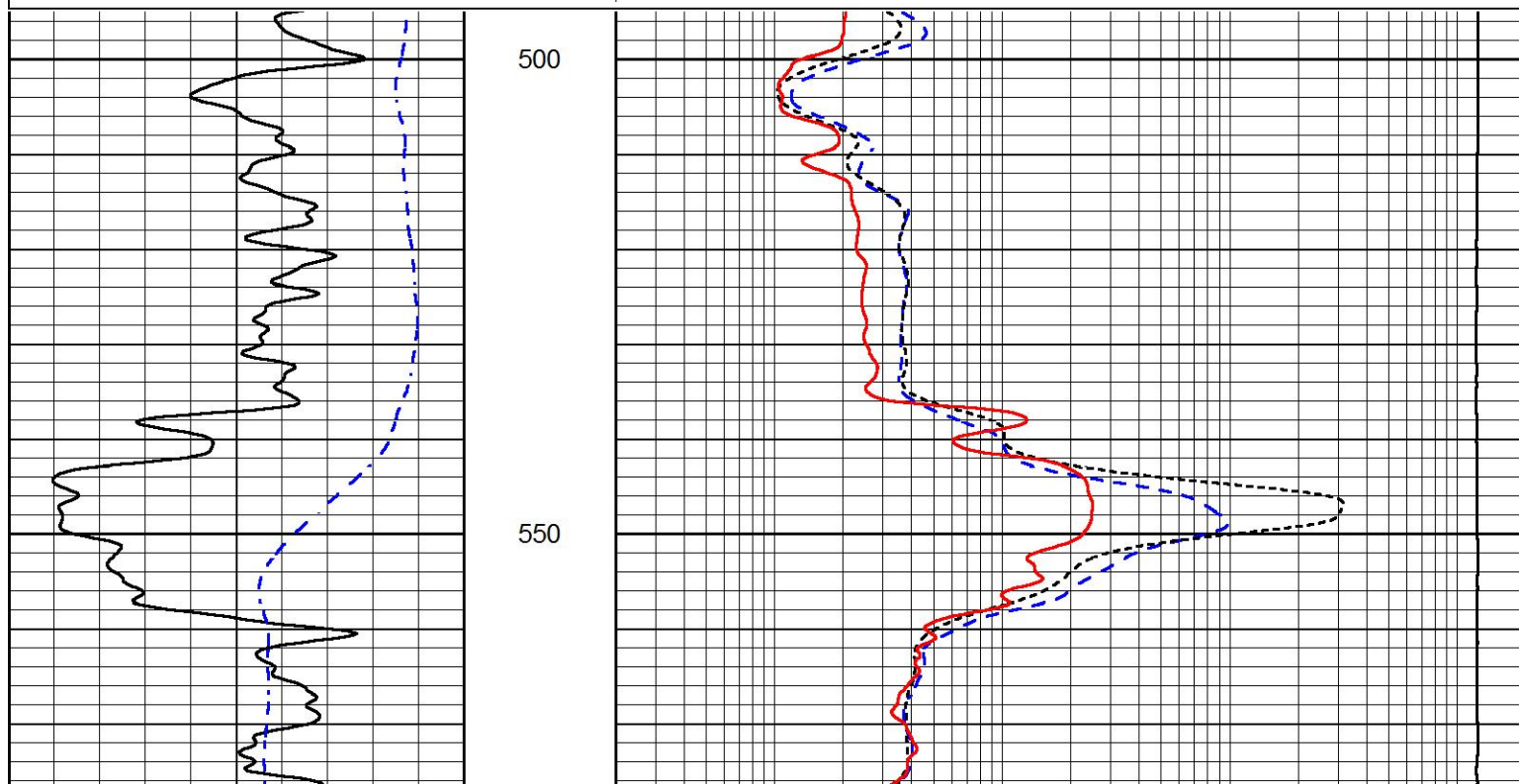


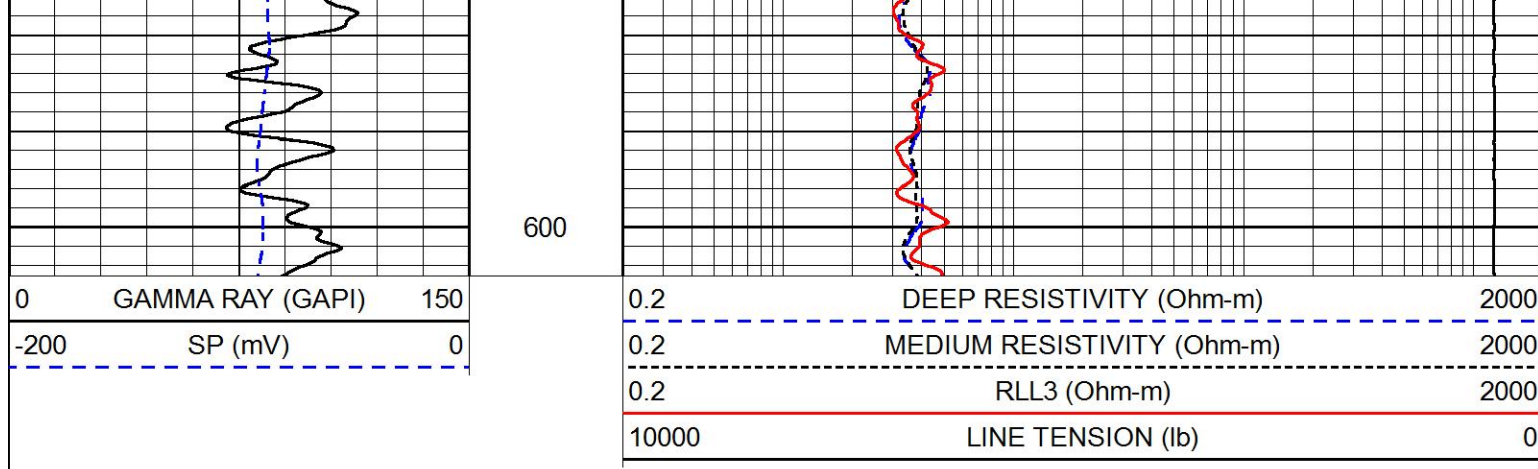


MAIN PASS

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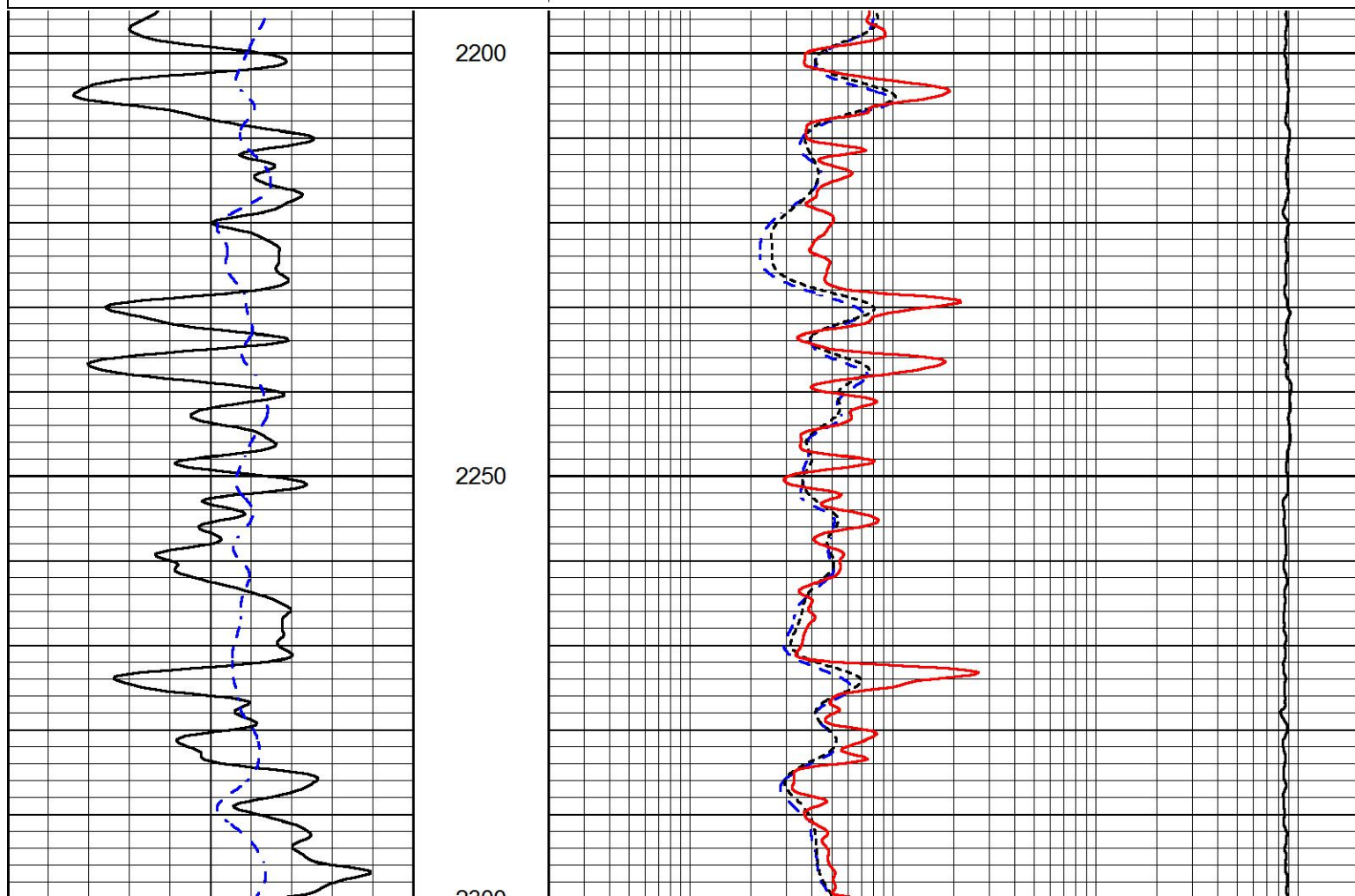
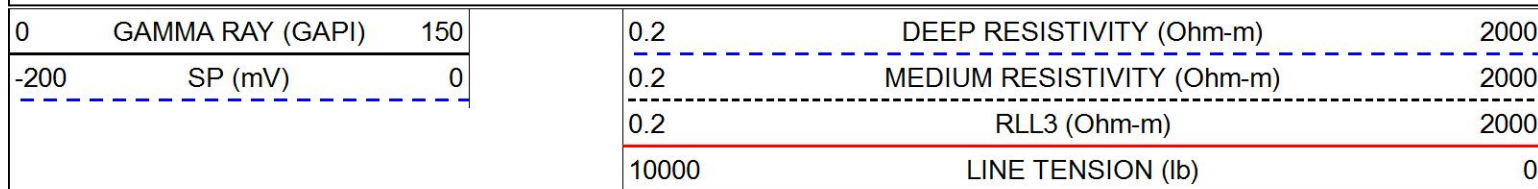
0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			10000	LINE TENSION (lb)	0

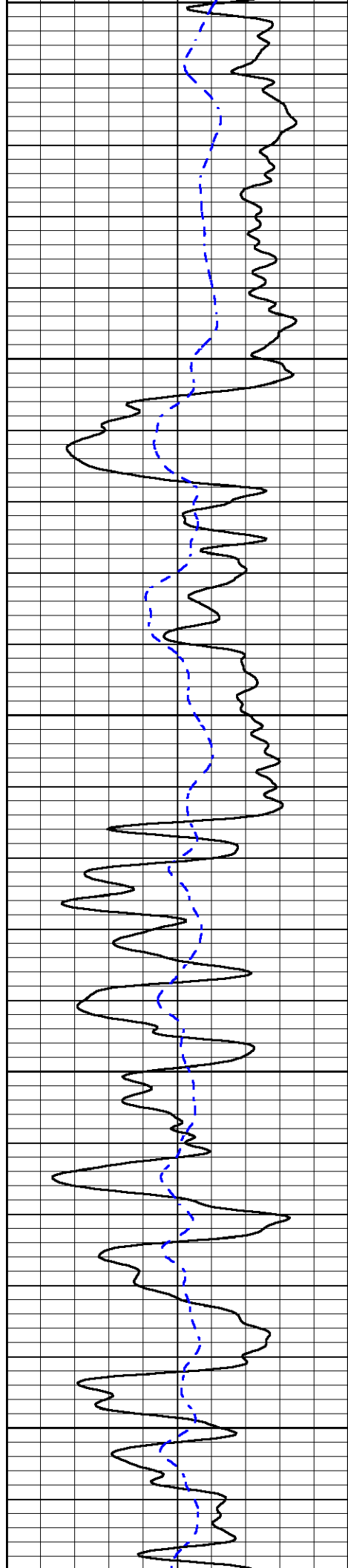




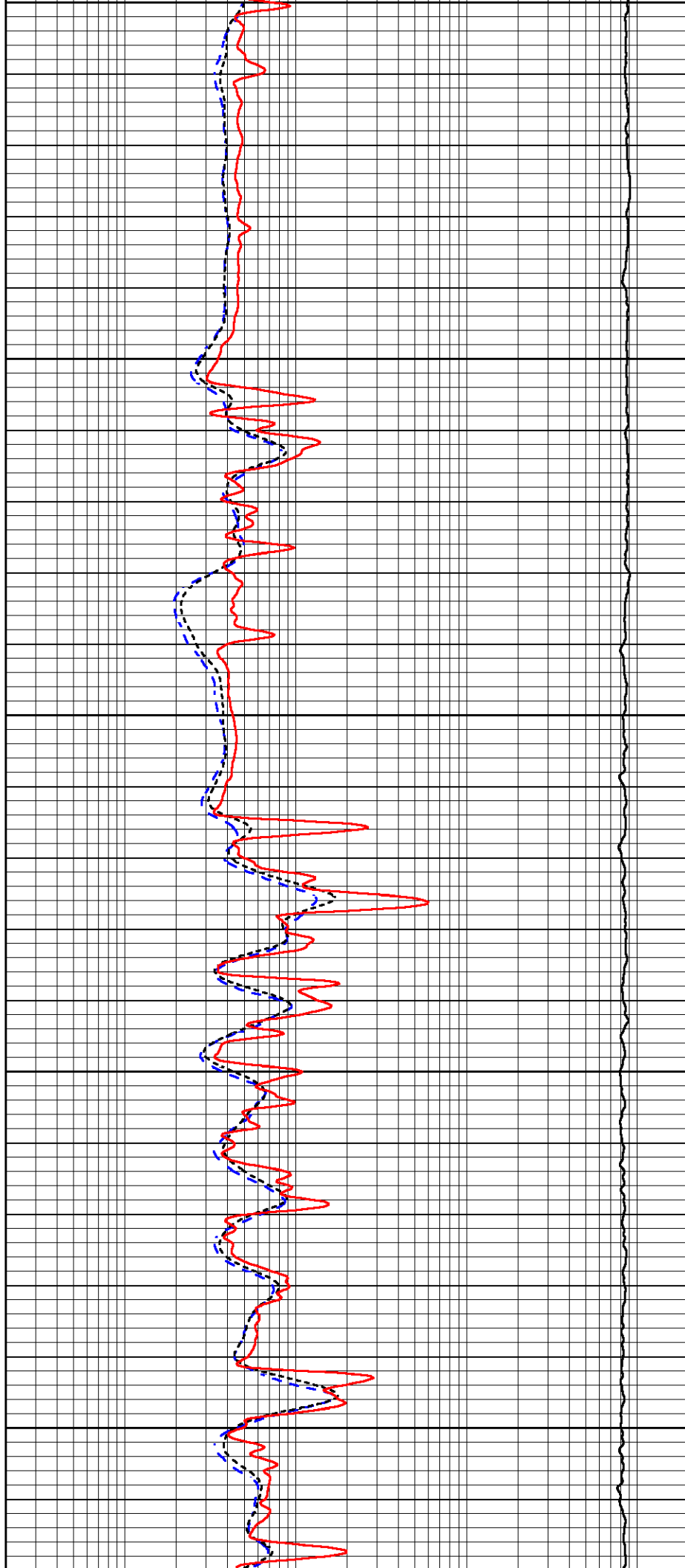
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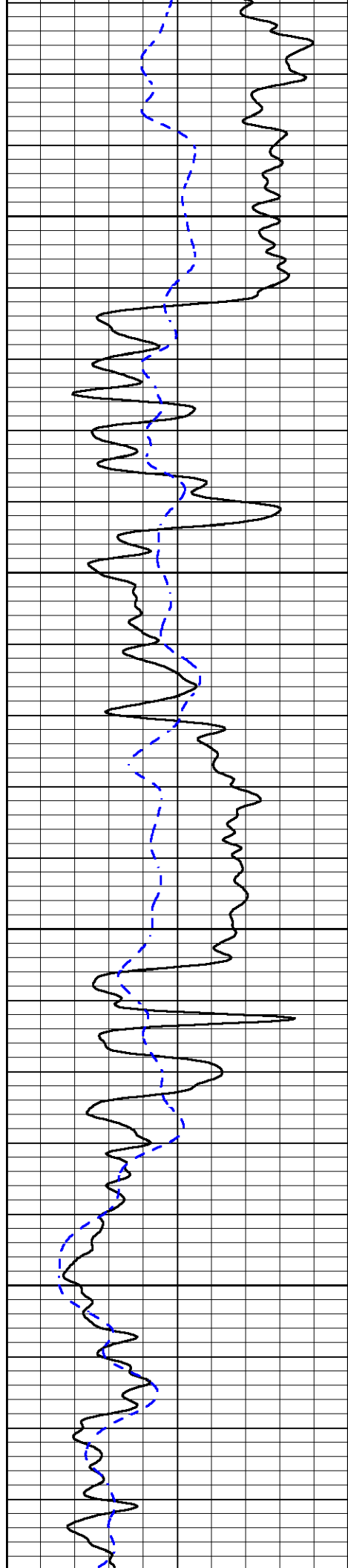
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2300
2350
2400
2450
2500



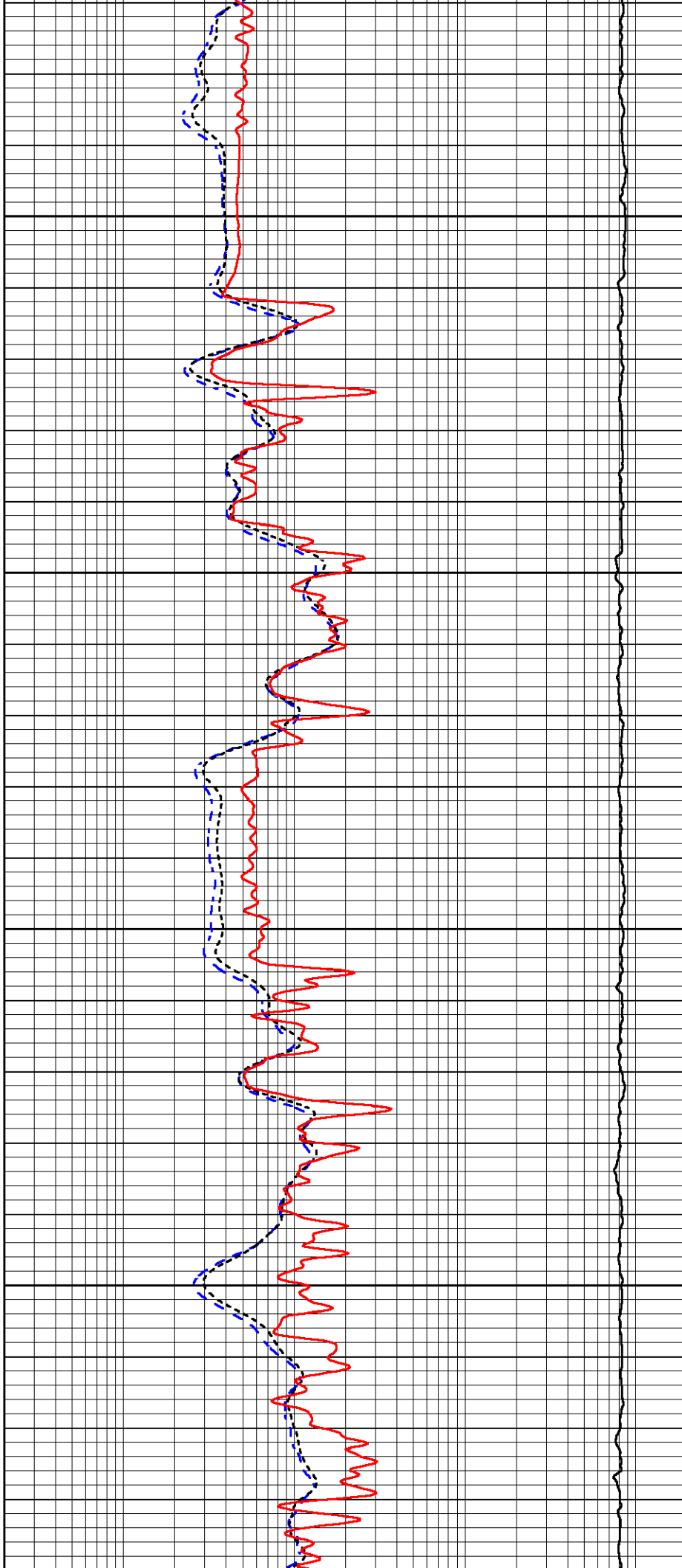


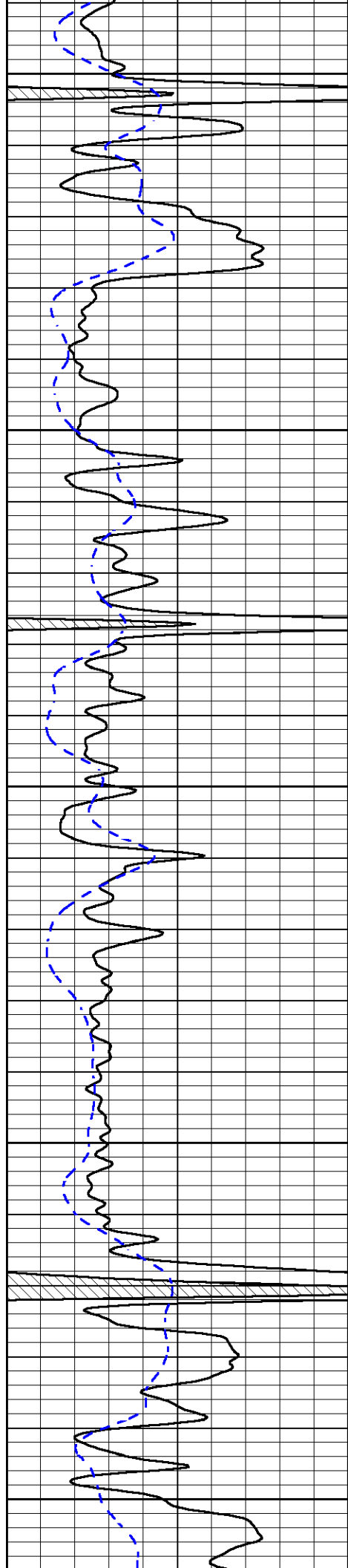
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2600

2650

2700





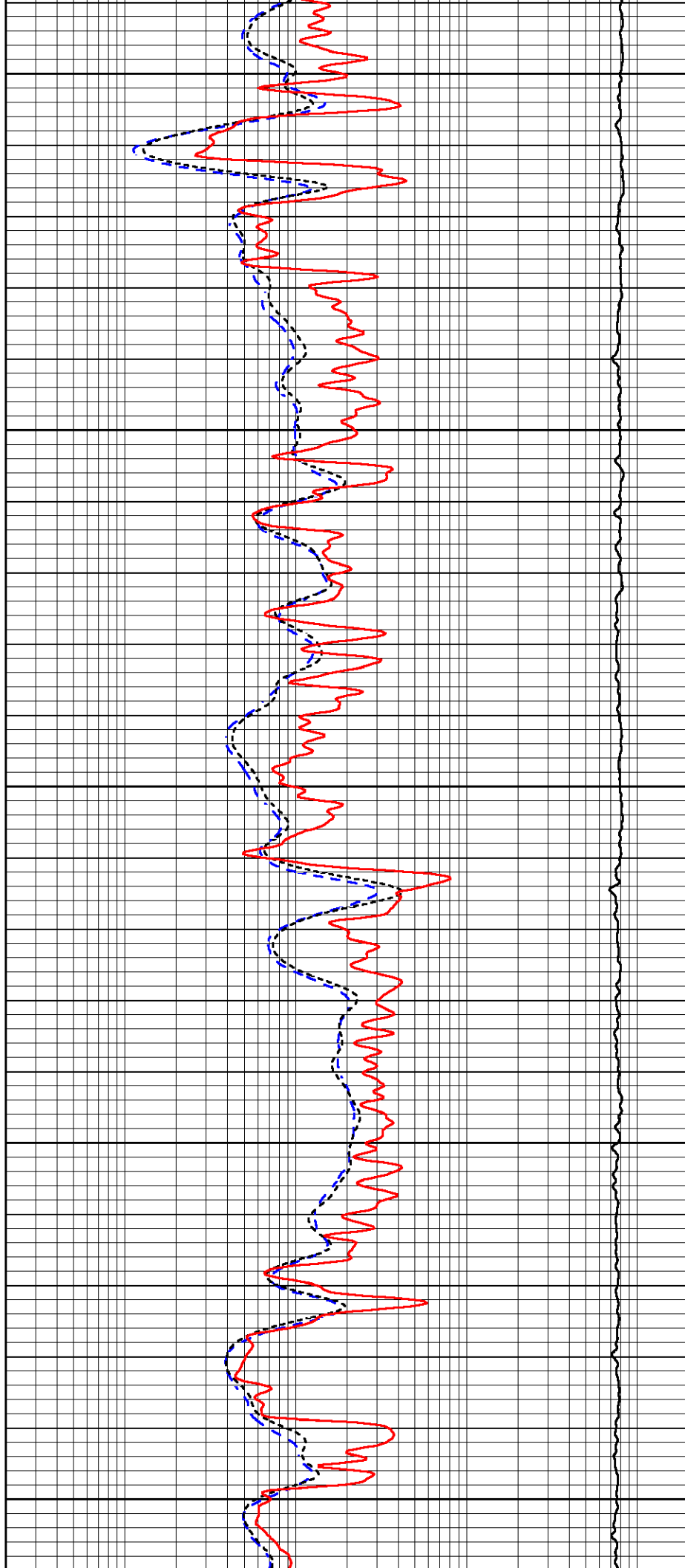
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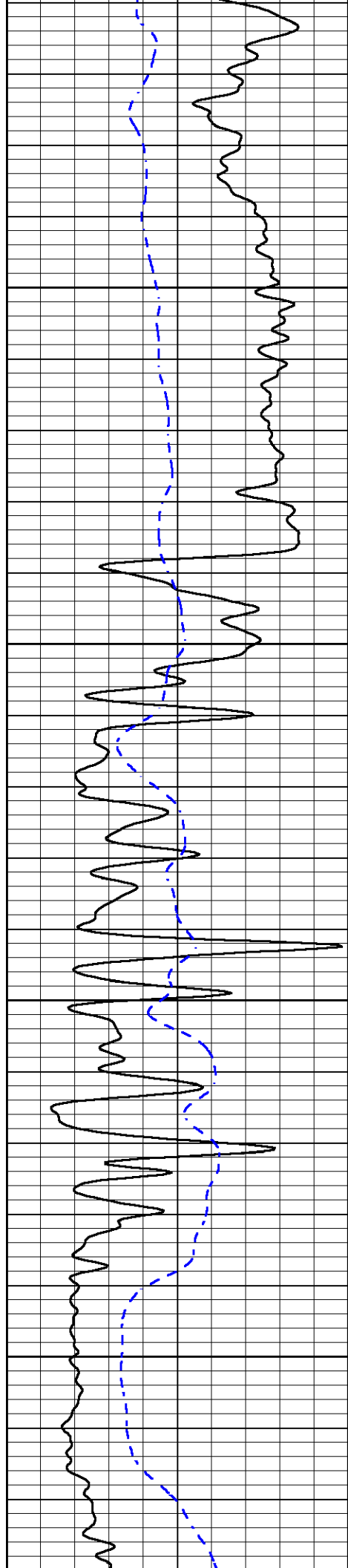
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2850

2900

2950



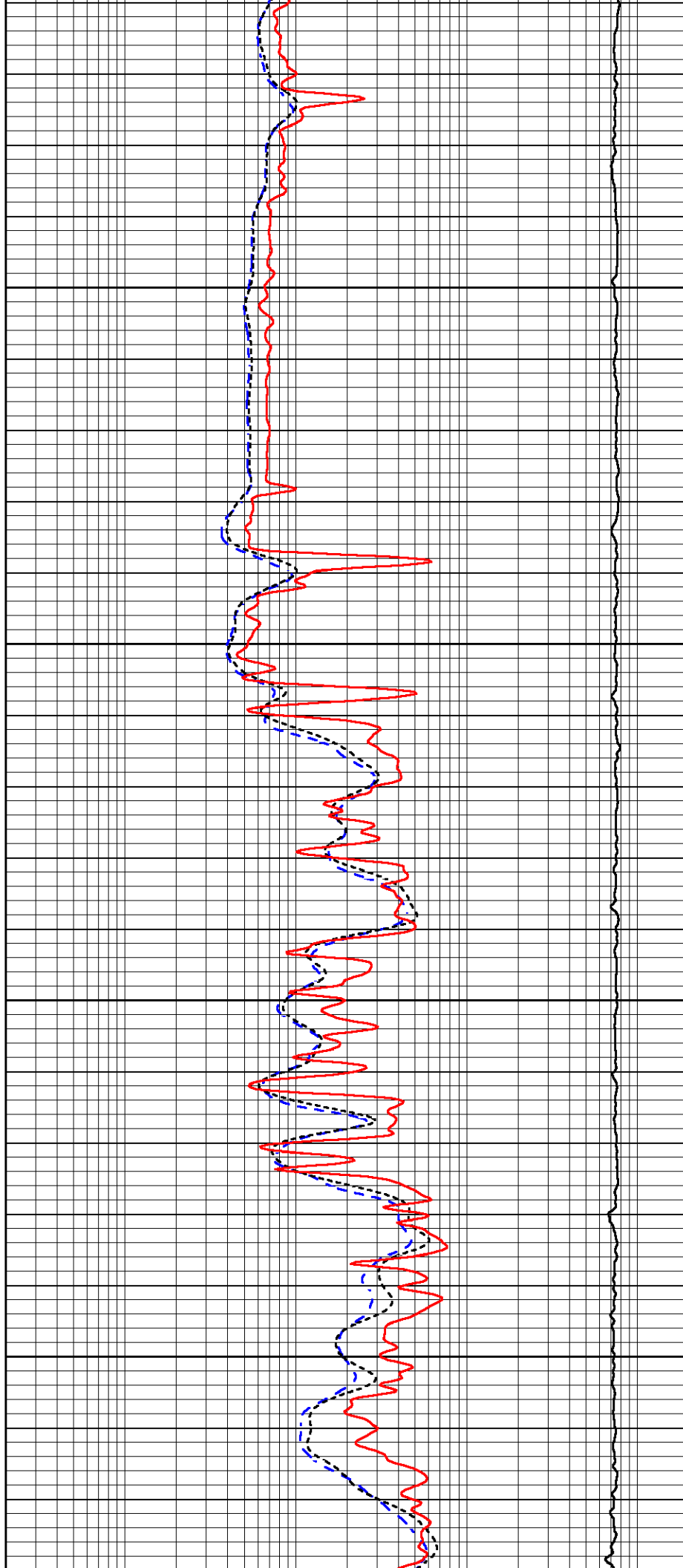


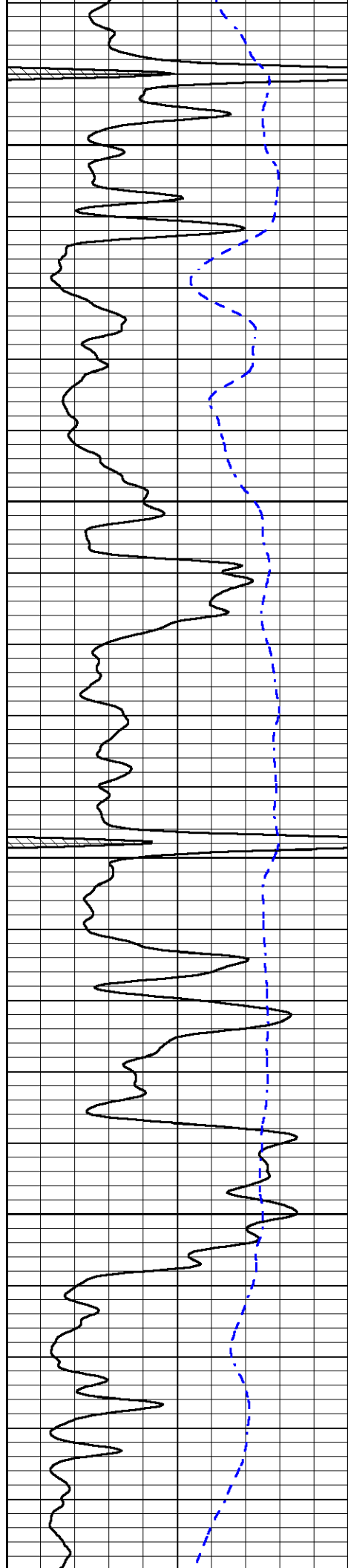
3000

3050

3100

3150





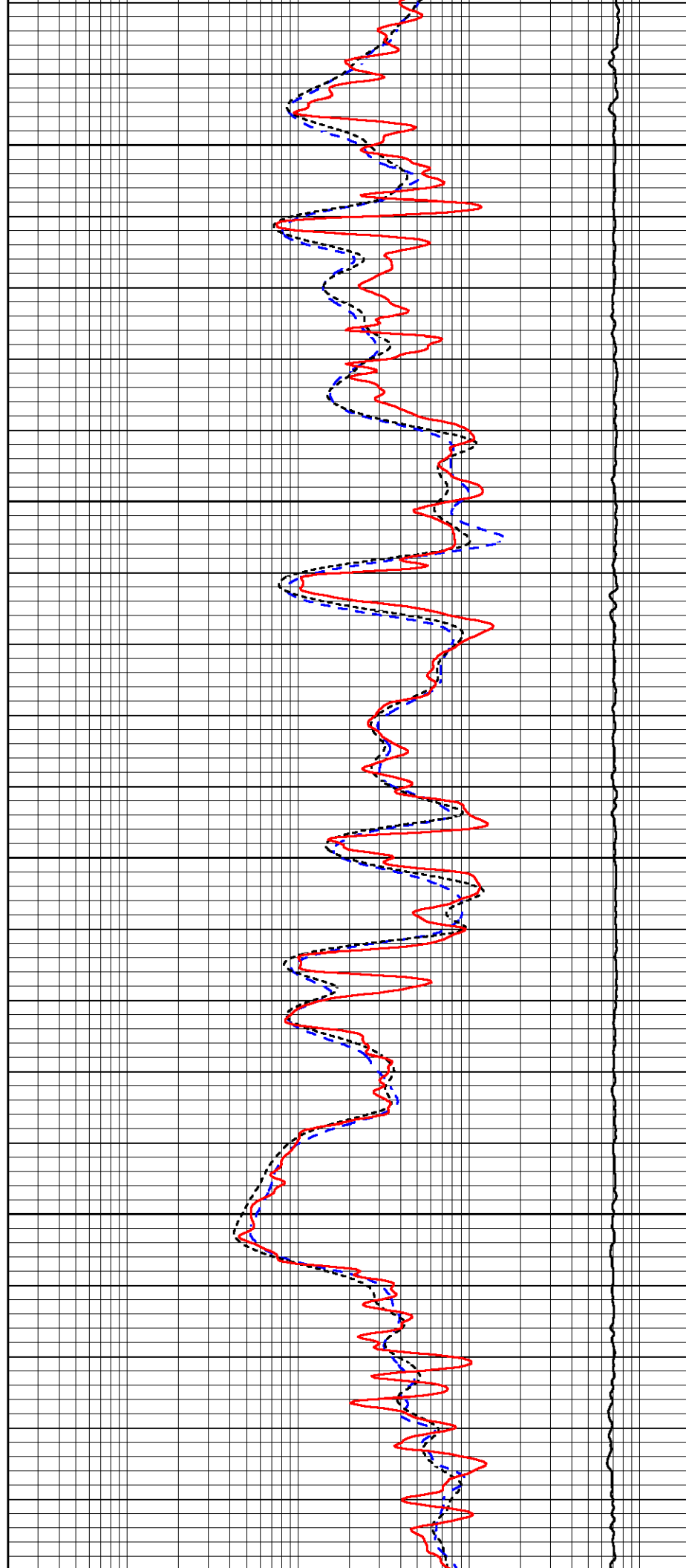
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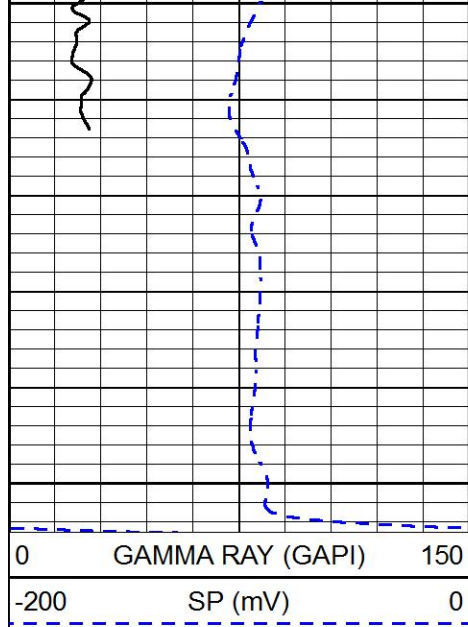
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3300

3350

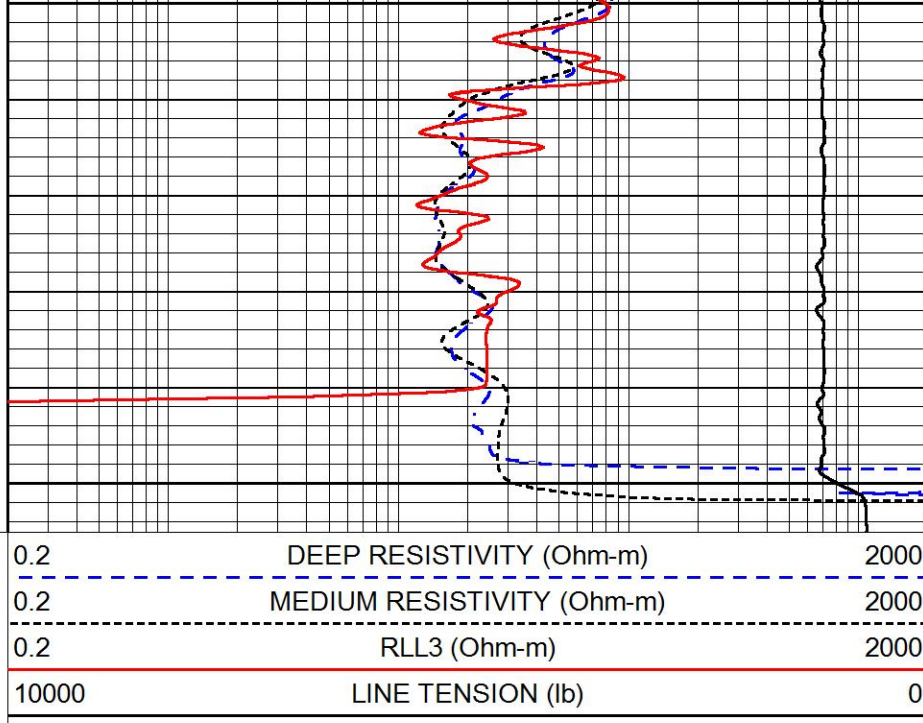
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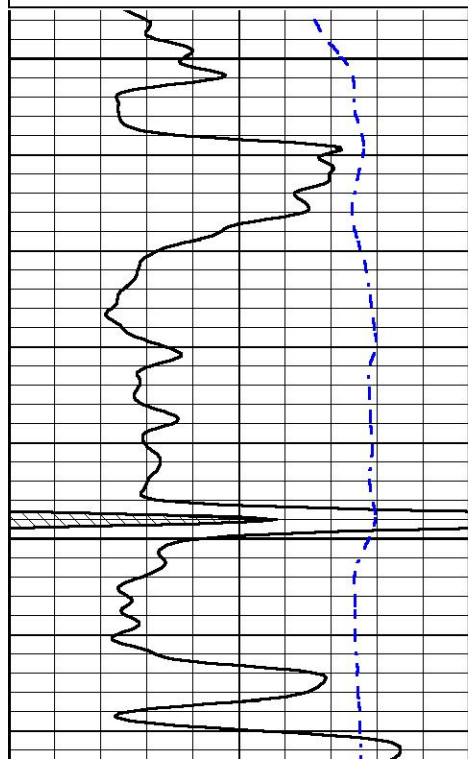
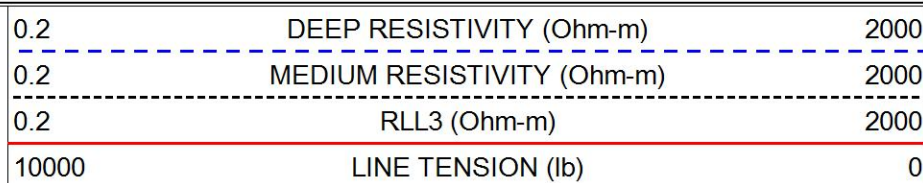
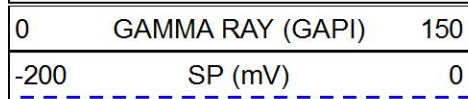
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3450



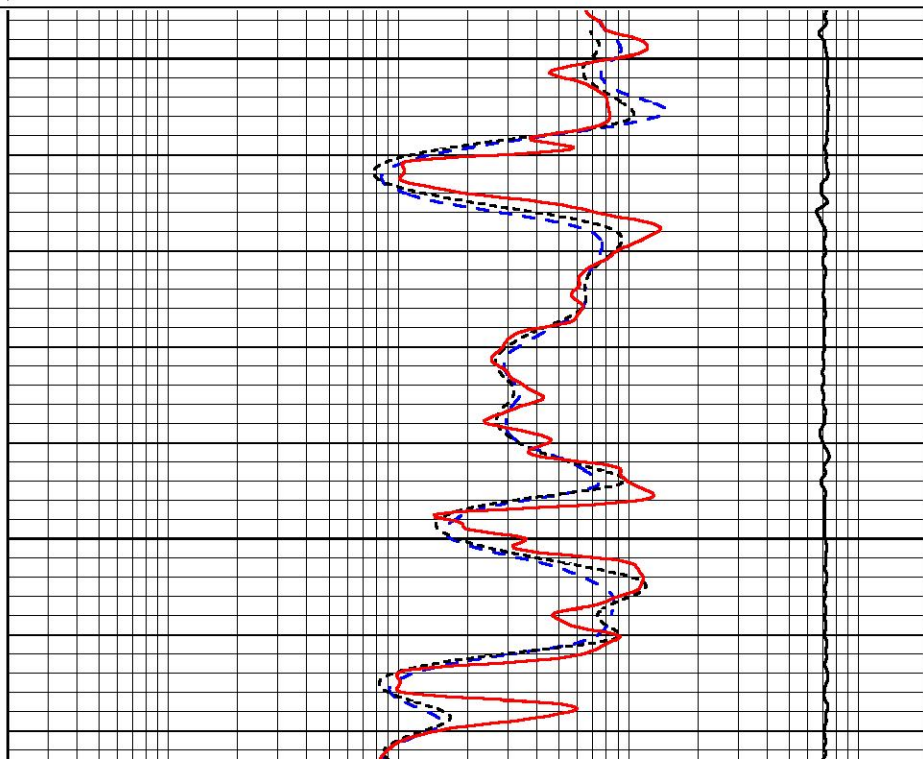
REPEAT SECTION

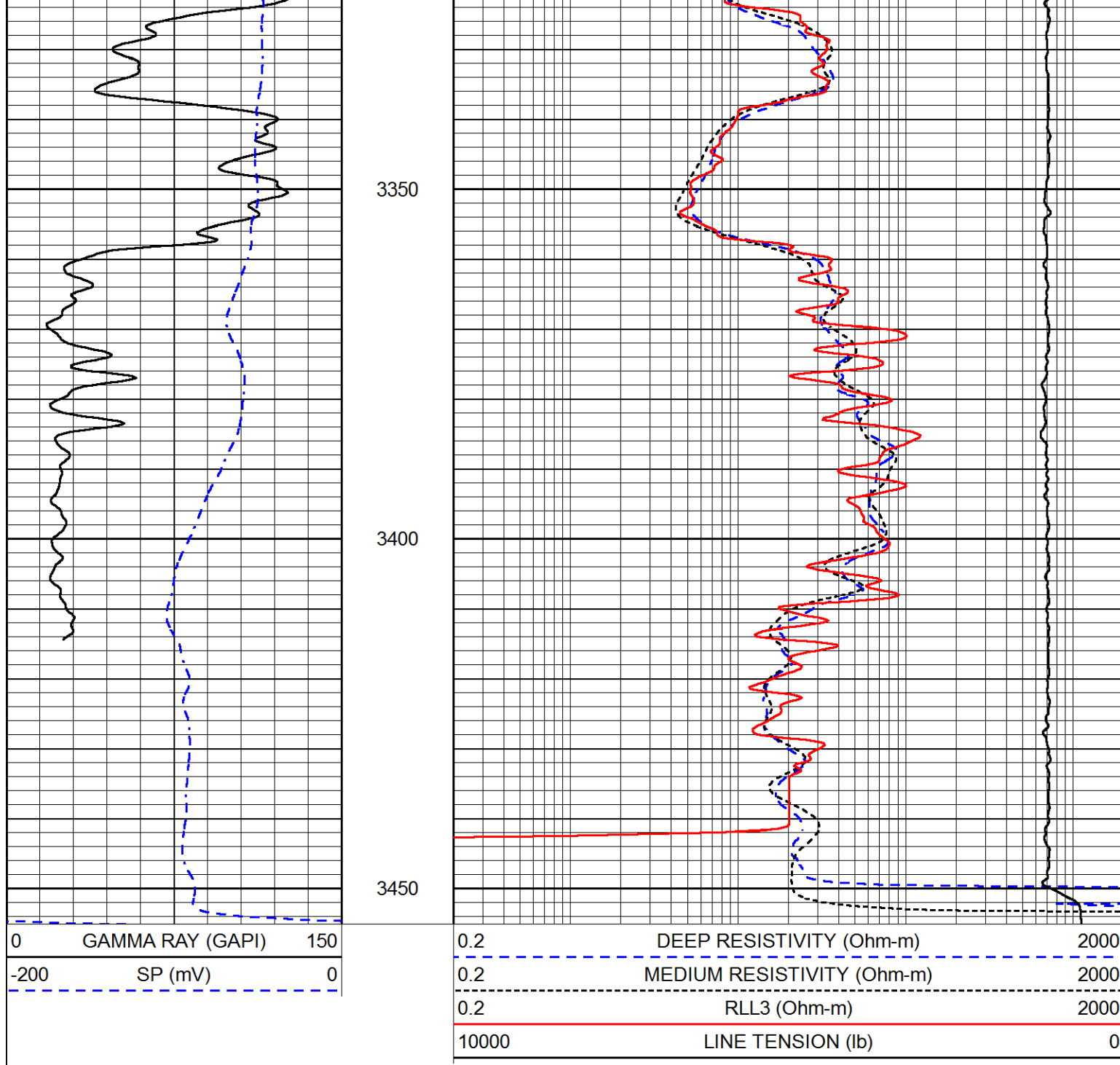
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Presentation Format _dil
Dataset Creation Tue Jun 16 02:19:31 2020
Charted by Depth in Feet scaled 1:240



3250

3300





Calibration Report

Database File k-bar oil_krehbiel 2.db
Dataset Pathname STKML/pass3.1
Dataset Creation Tue Jun 16 02:16:52 2020

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
Calibration Performed: Sun Mar 01 09:43:59 2020

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.390	-28.000
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.260	-24.000

Microlog Calibration Report

Serial-Model:
Performed:PSI-01-PSIML
Tue Jun 16 01:32:04 2020

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	14000.0000	-1.2000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	17000.0000	-1.1000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.4000

Compensated Density Calibration Report

Serial-Model:
Source / Verifier:
Master Calibration Performed:817-947-M&W
16955B / 2ci
Tue Sep 24 21:18:50 2019

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

Gamma Ray Calibration Report

Serial Number: 233-M&W
Tool Model: M&W
Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



Company K-BAR OIL
Well KREHBIEL #2
Field RICK

PIONEER

Pioneer Energy Services

Field

RICK

County

BARTON

State

KANSAS