



DUAL INDUCTION LOG

MIDWEST WIRELINE

CompanyLandmark Resources, Inc.		Company Landmark Resources, Inc.	
Well	Rose-Wessler Unit #1-34	Well	Rose-Wessler Unit #1-34
Field	Pence South	Field	Pence South
County	Scott	County	Scott
State	Kansas	State	Kansas
Location: API #: 15-171-21289-00-00		Other Services	
NE NE NE SW 2318 FSL & 2365 FWL SEC 34 TWP 16S RGE 34W		CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	3124
Log Measured From	Kelly Bushing	K.B.	3132
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	3124
Date	6/29/2022		
Run Number	One		
Depth Driller	4870		
Depth Logger	4869		
Bottom Logged Interval	4868		
Top Log Interval	250		
Casing Driller	8.625 @ 294		
Casing Logger	306		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	6500		
Density / Viscosity	9.4 66		
pH / Fluid Loss	10.0 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.7 @ 76		
Rmt @ Meas. Temp	0.53 @ 76		
Rmc @ Meas. Temp	0.95 @ 76		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.43 @ 124		
Operating Rig Time	4.5 Hours		
Max Rec. Temp. F	124		
Equipment Number	P-108		
Location	HAYS		
Recorded By	T. Martin		
Witnessed By	Terry McLeod		

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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.

Log Measured From: Kelly Bushing

Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: T. Martin
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Terry McLeod
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\landmark_rose-wessler unit #1-34.db
Dataset field/well/StkMI/pass3.13/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	124	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	860	95		4869

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



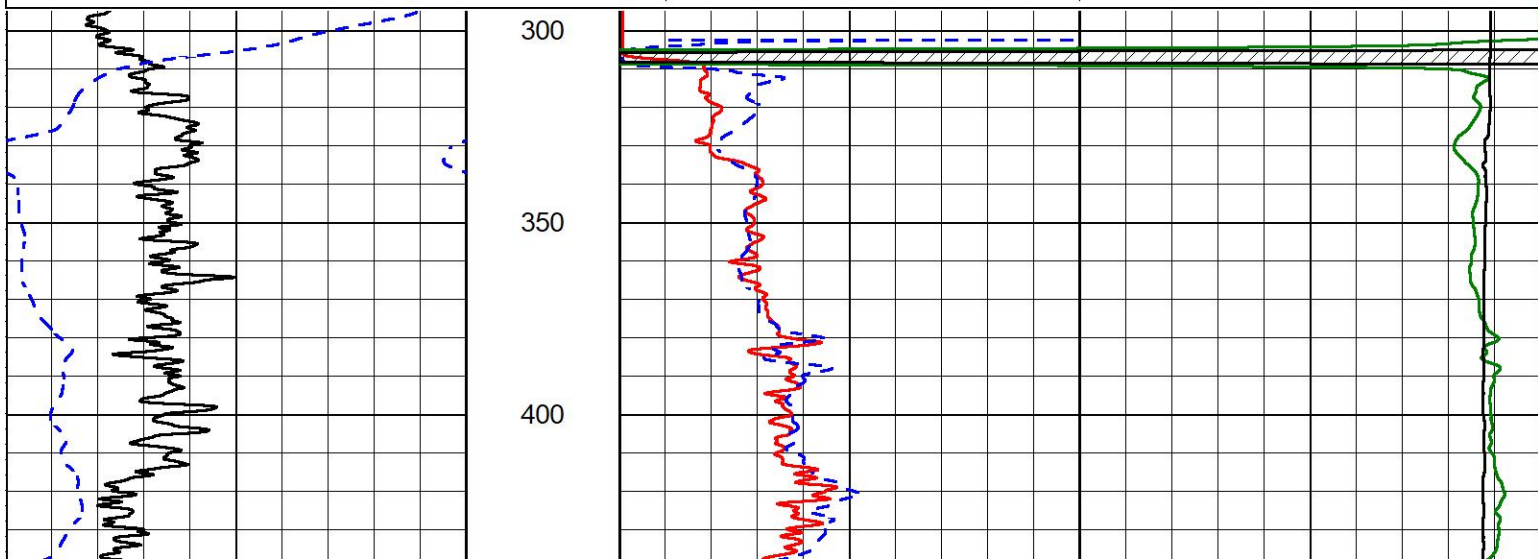
MIDWEST WIRELINE

2" SCALE RESISTIVITY

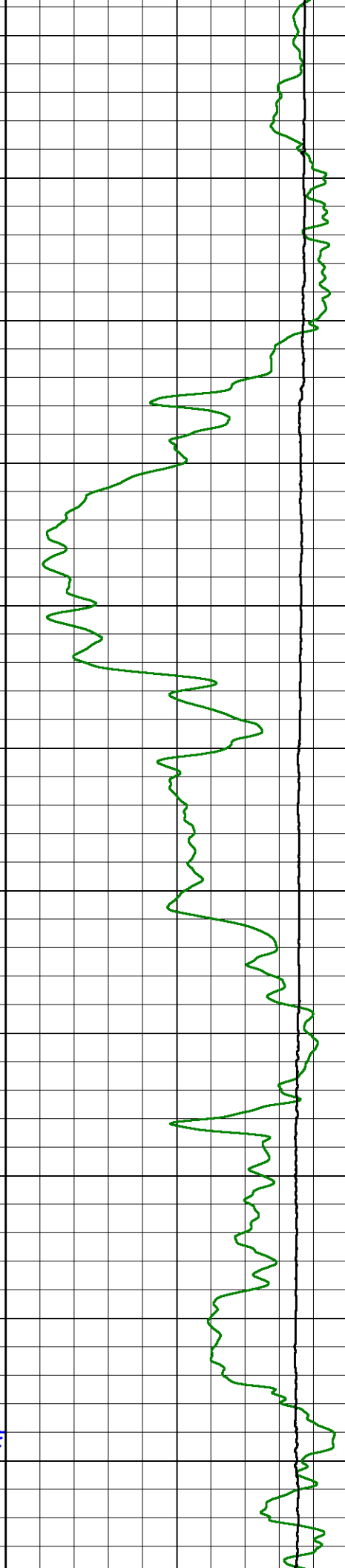
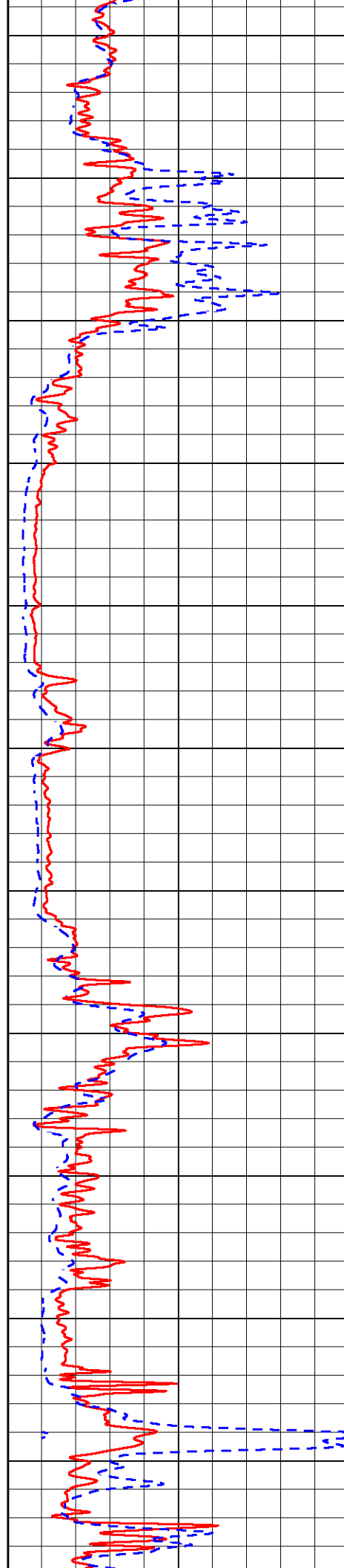
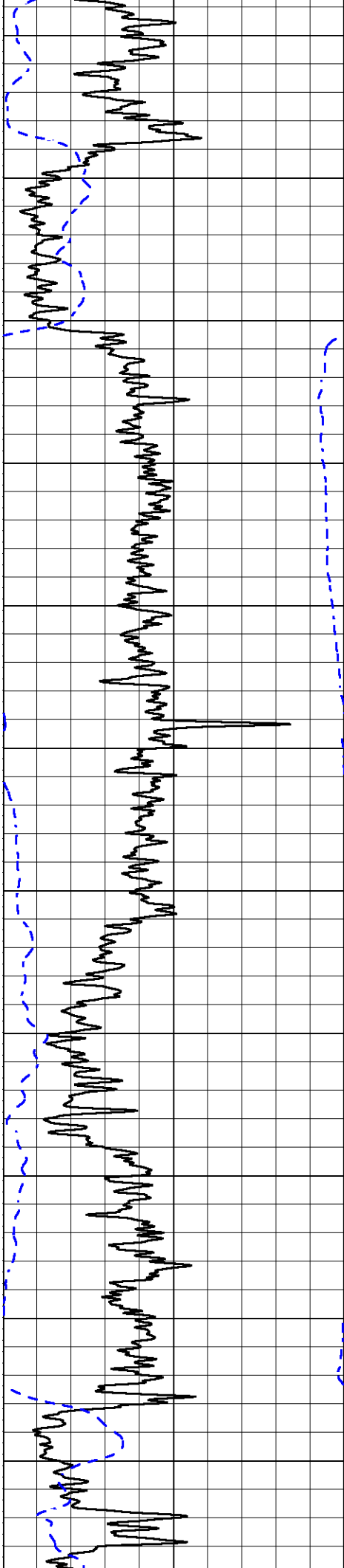
MAIN PASS

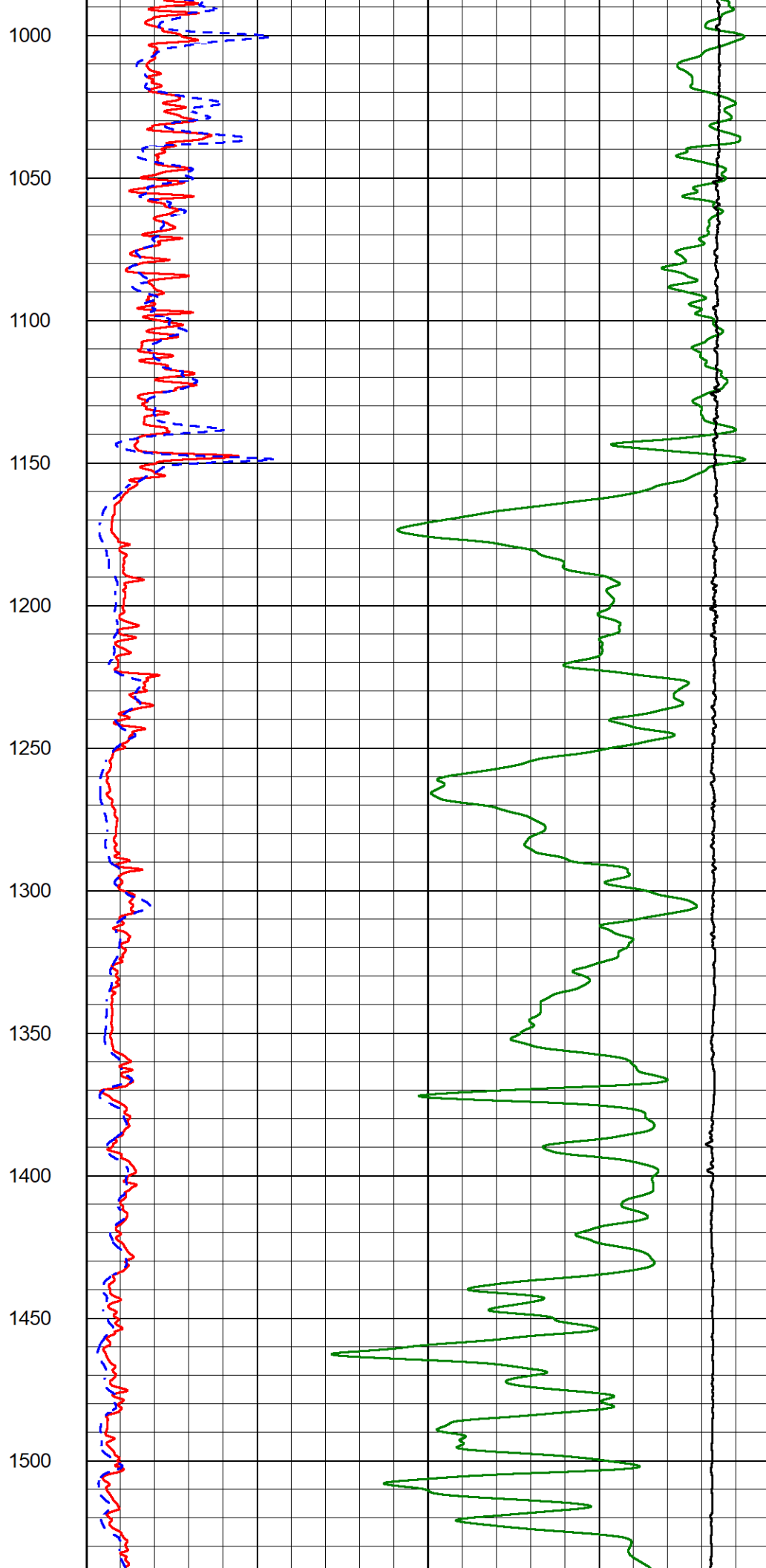
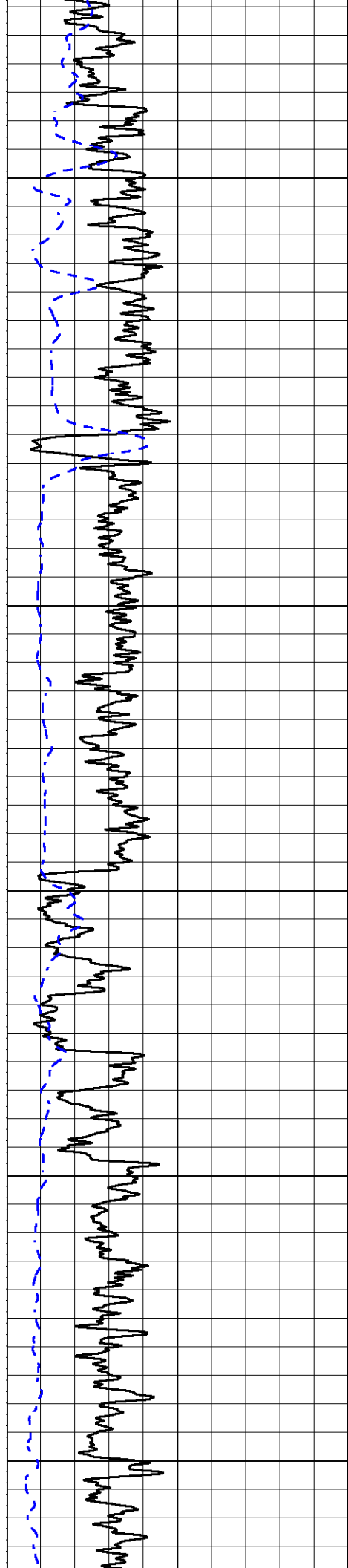
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Presentation Format _dil2in
Dataset Creation Wed Jun 29 18:10:49 2022
Charted by Depth in Feet scaled 1:600

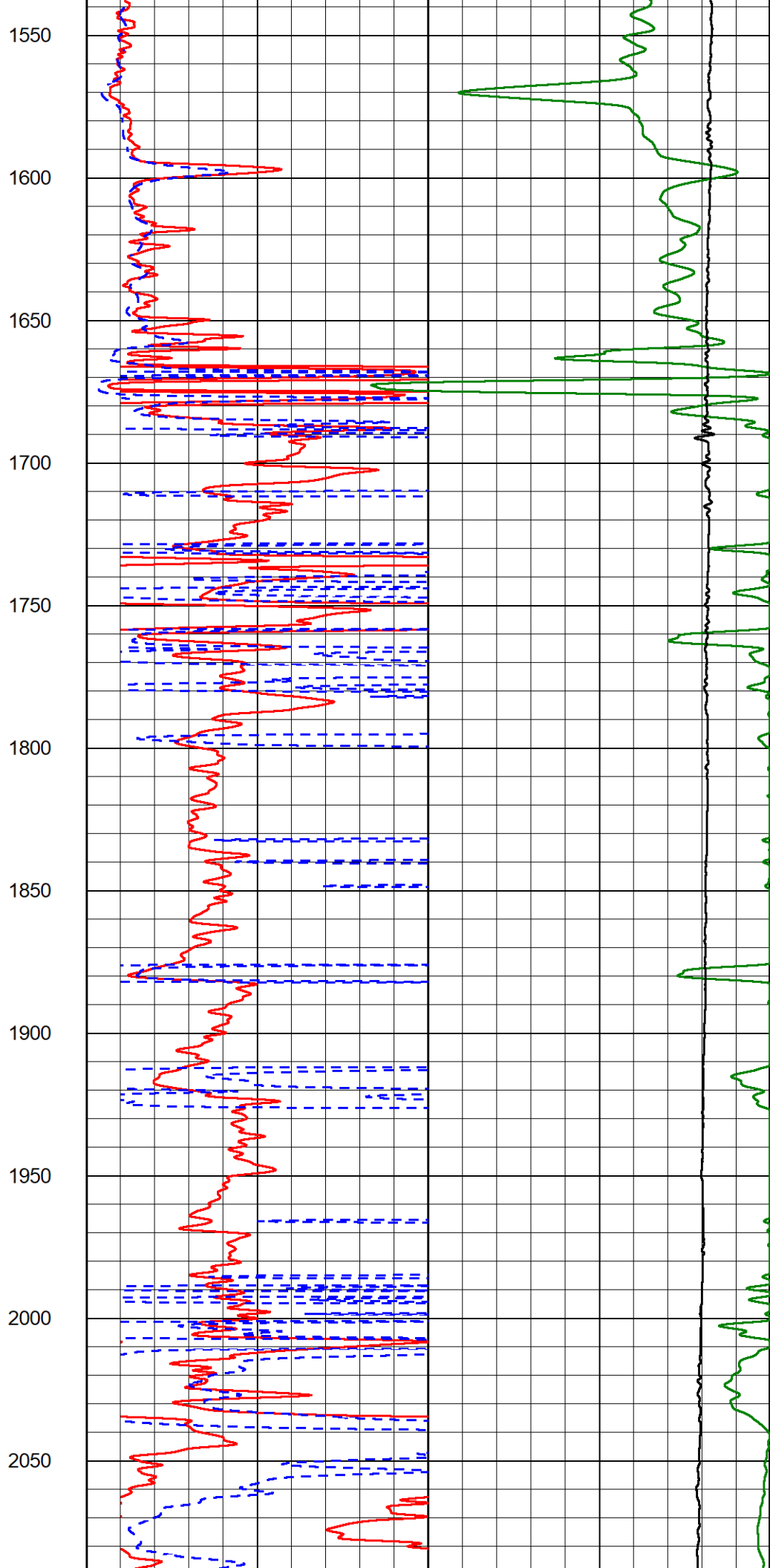
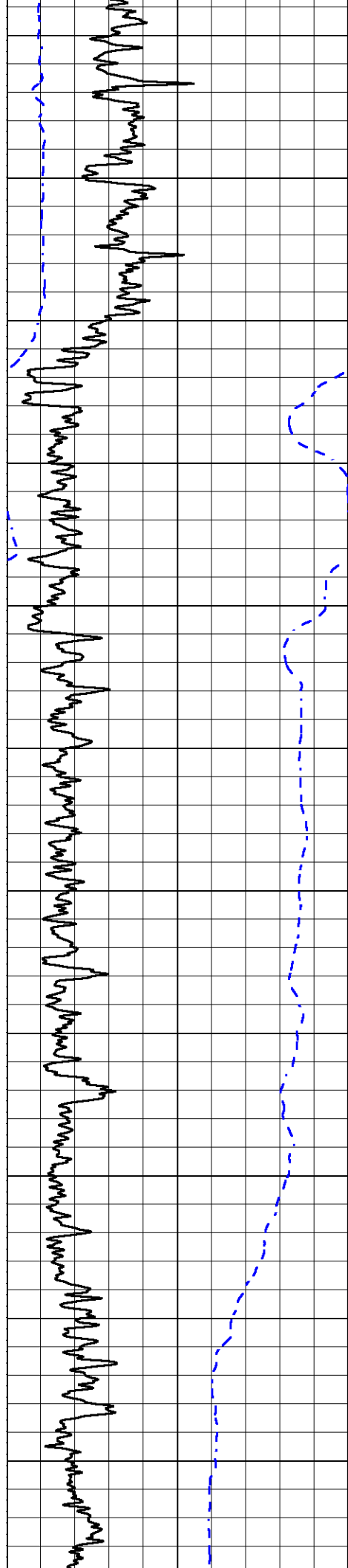
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-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

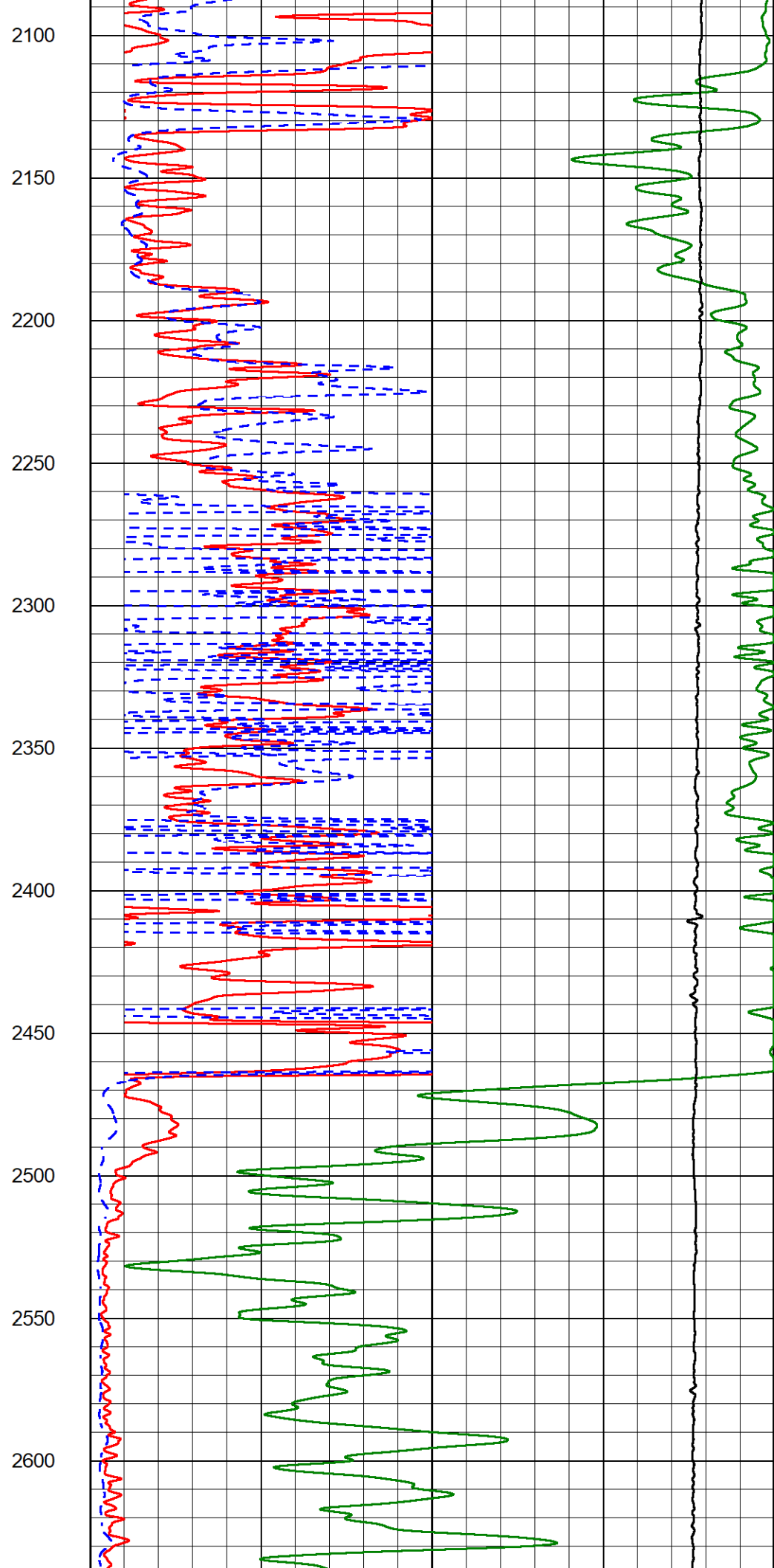
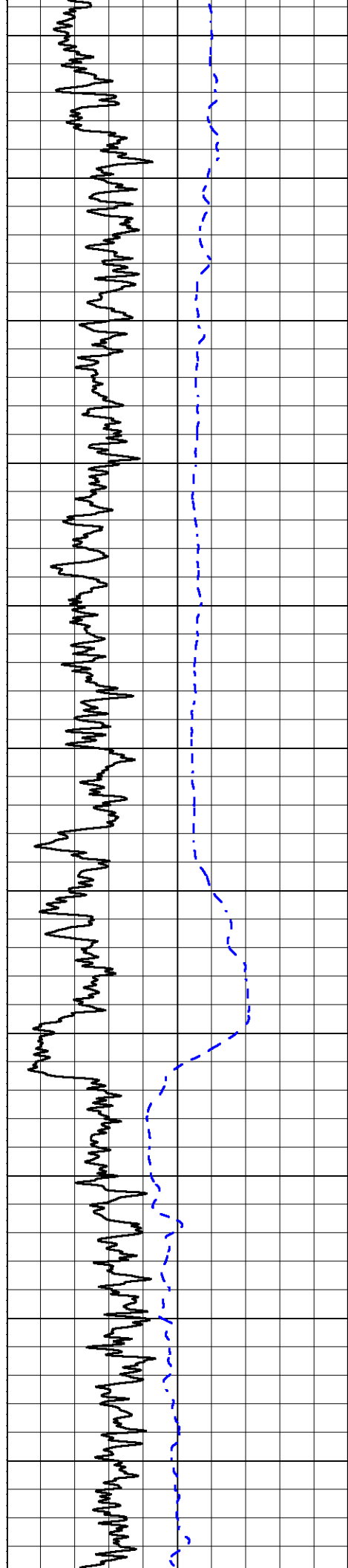


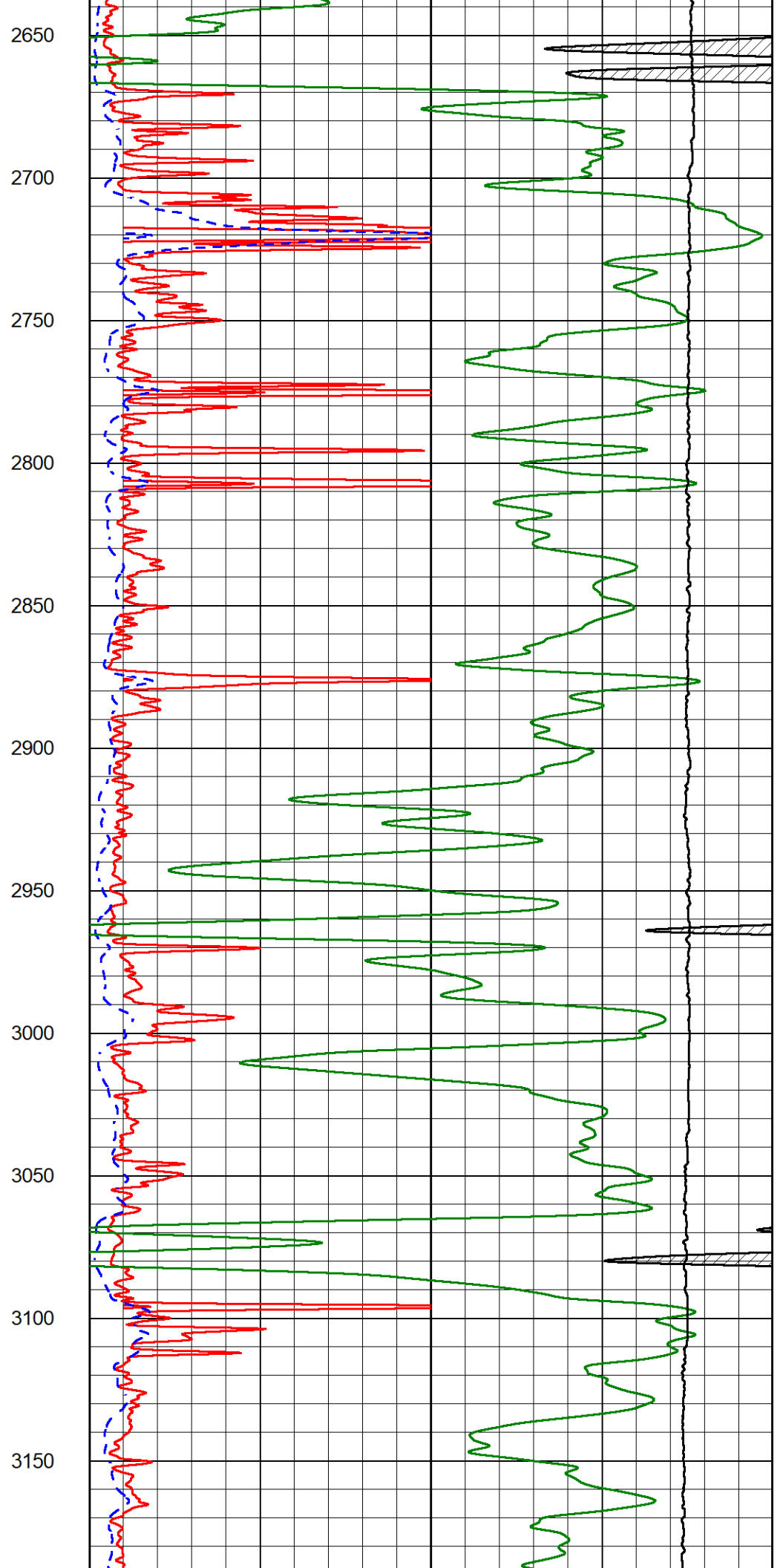
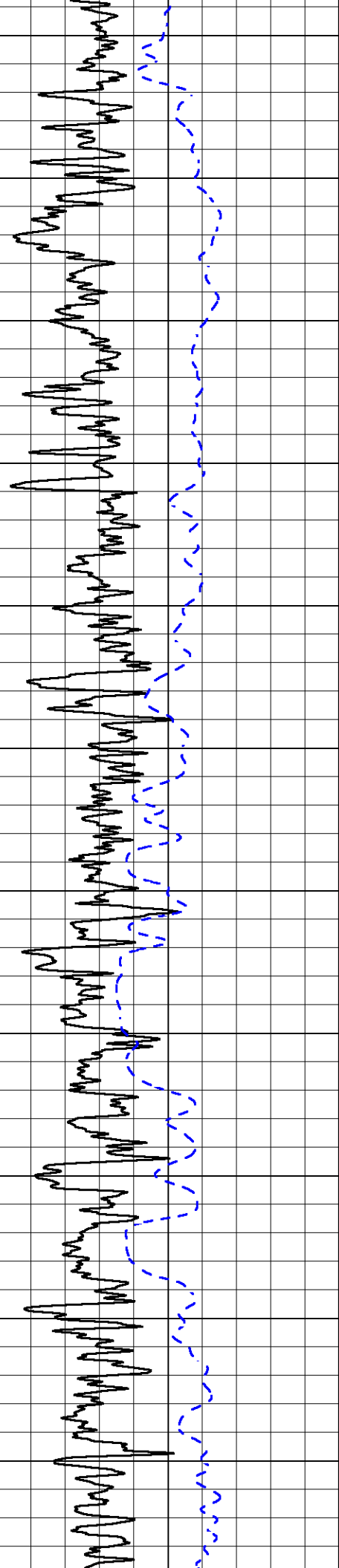
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500
550
600
650
700
750
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850
900
950

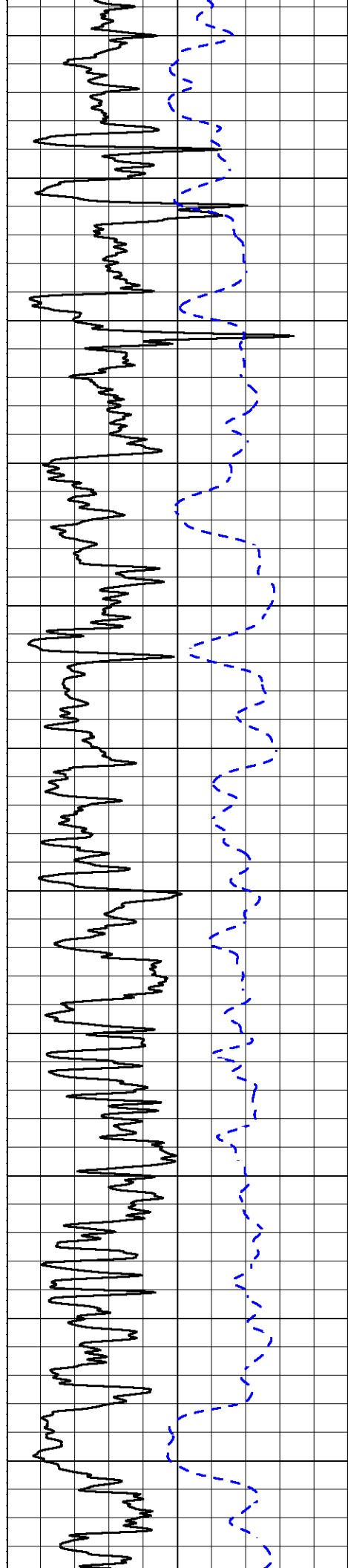












3200

3250

3300

3350

3400

3450

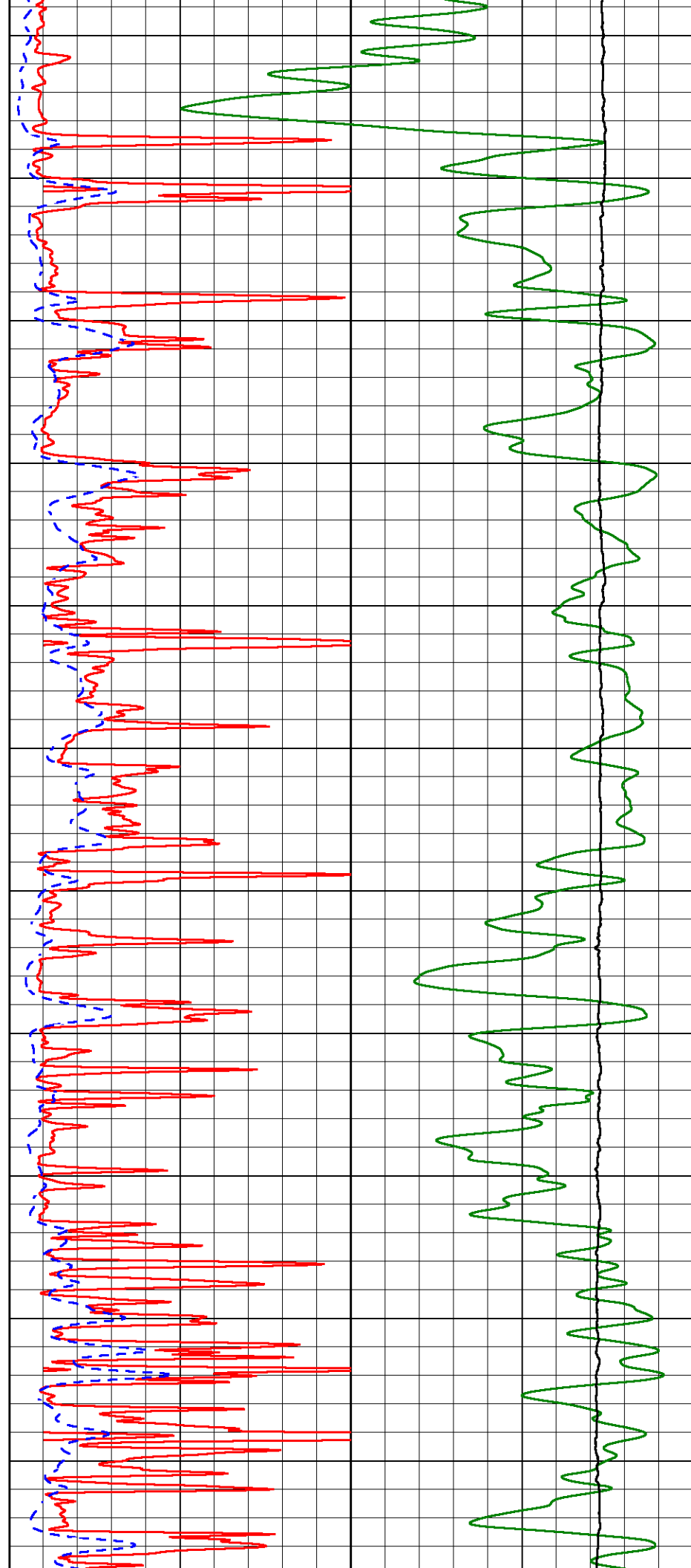
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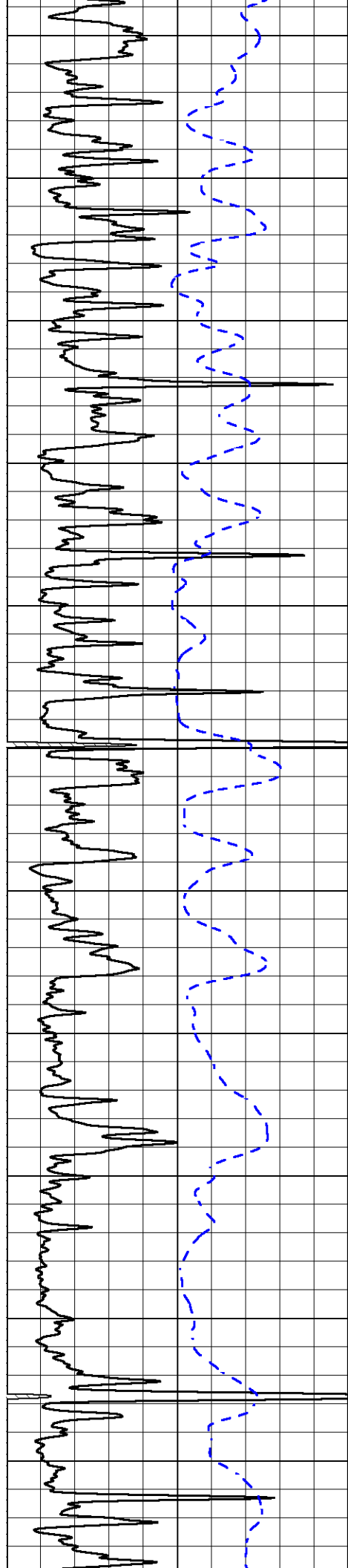
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3750

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3900

3950

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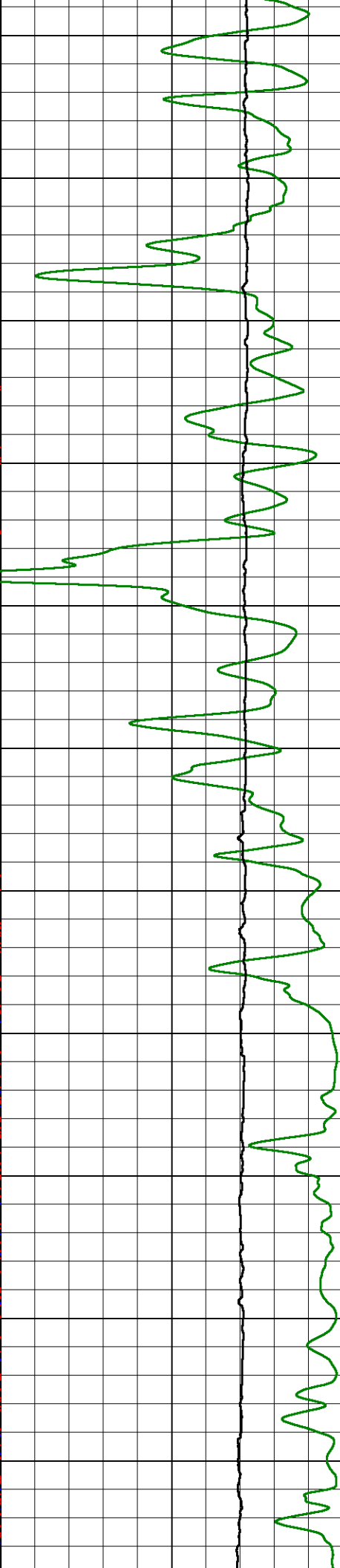
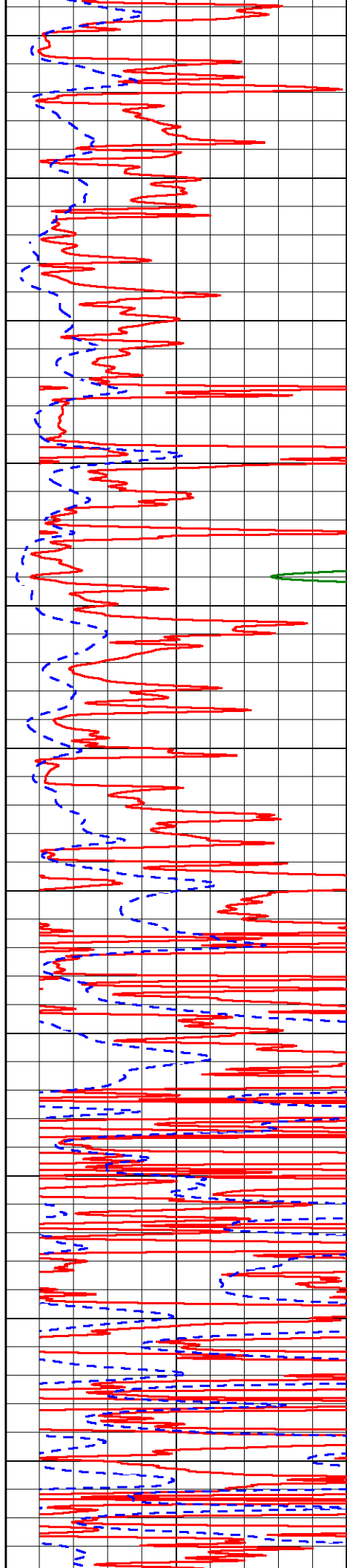
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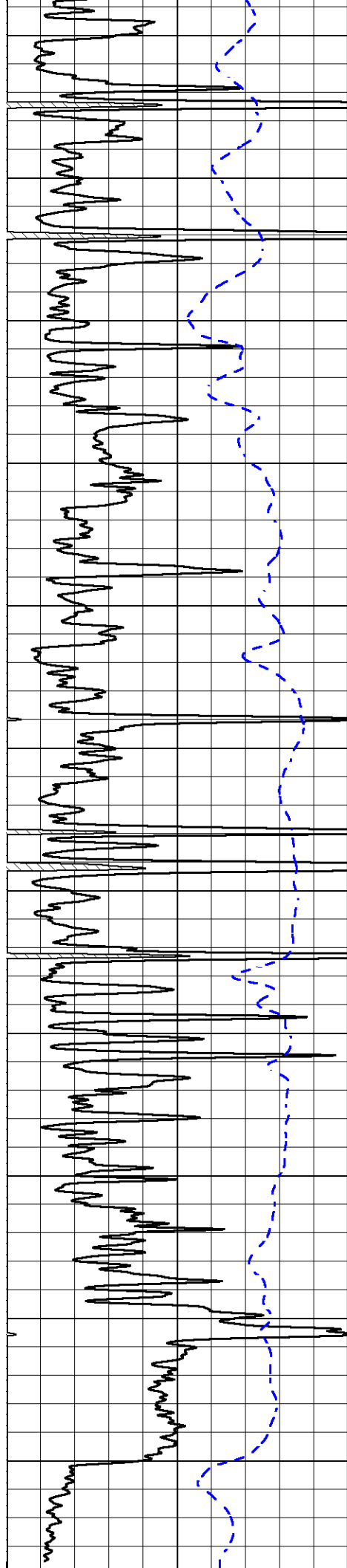
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4150

4200

4250





4300

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4400

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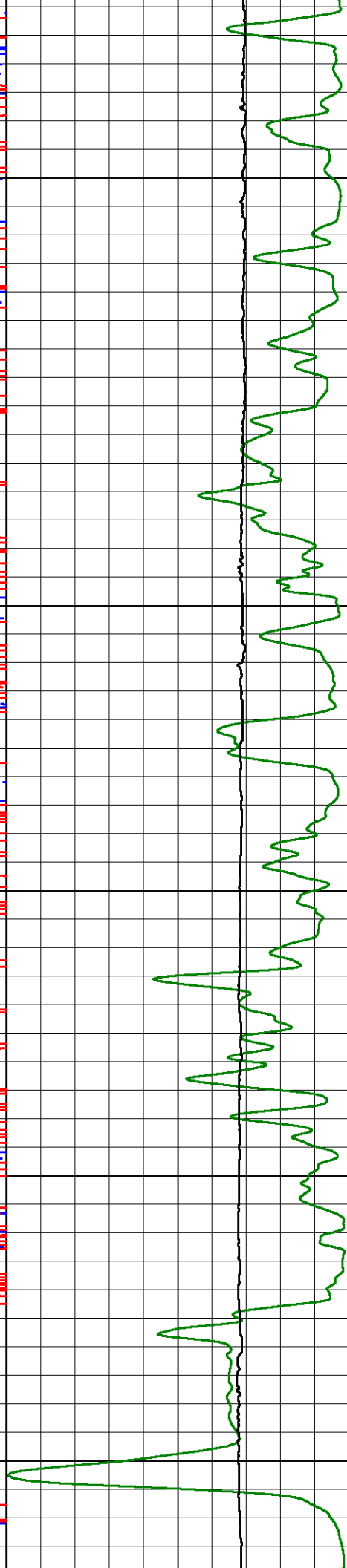
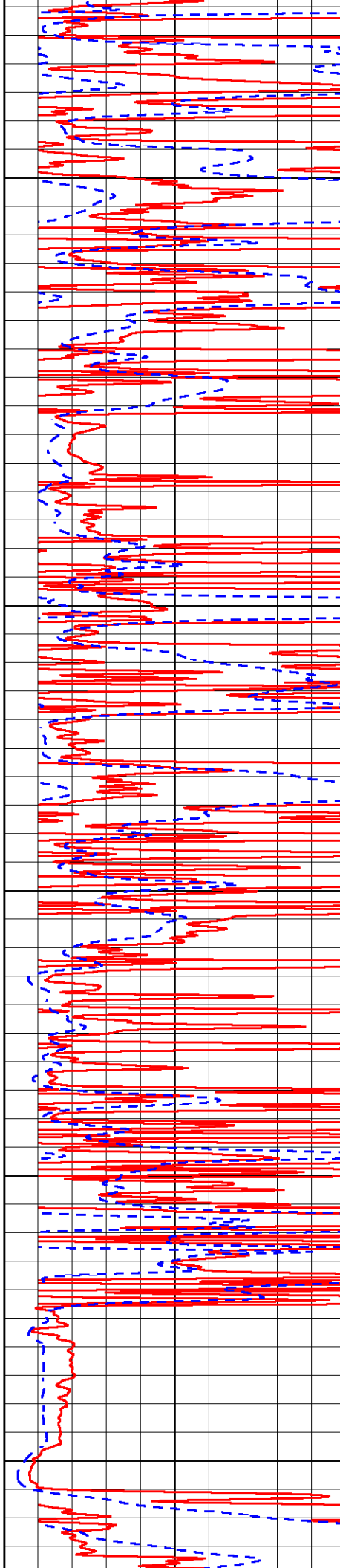
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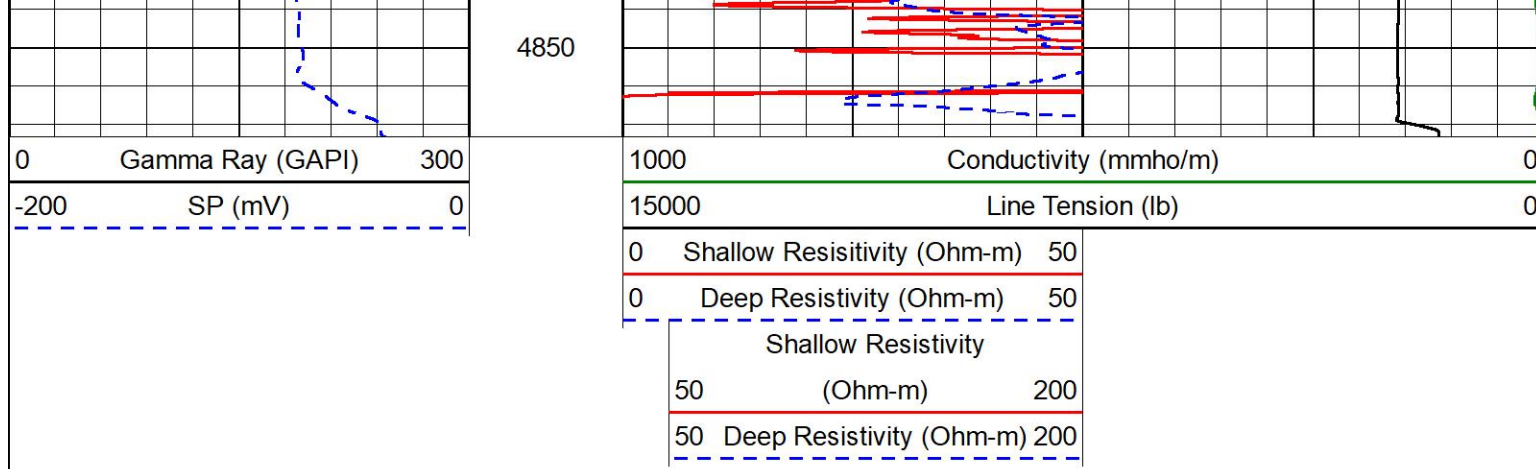
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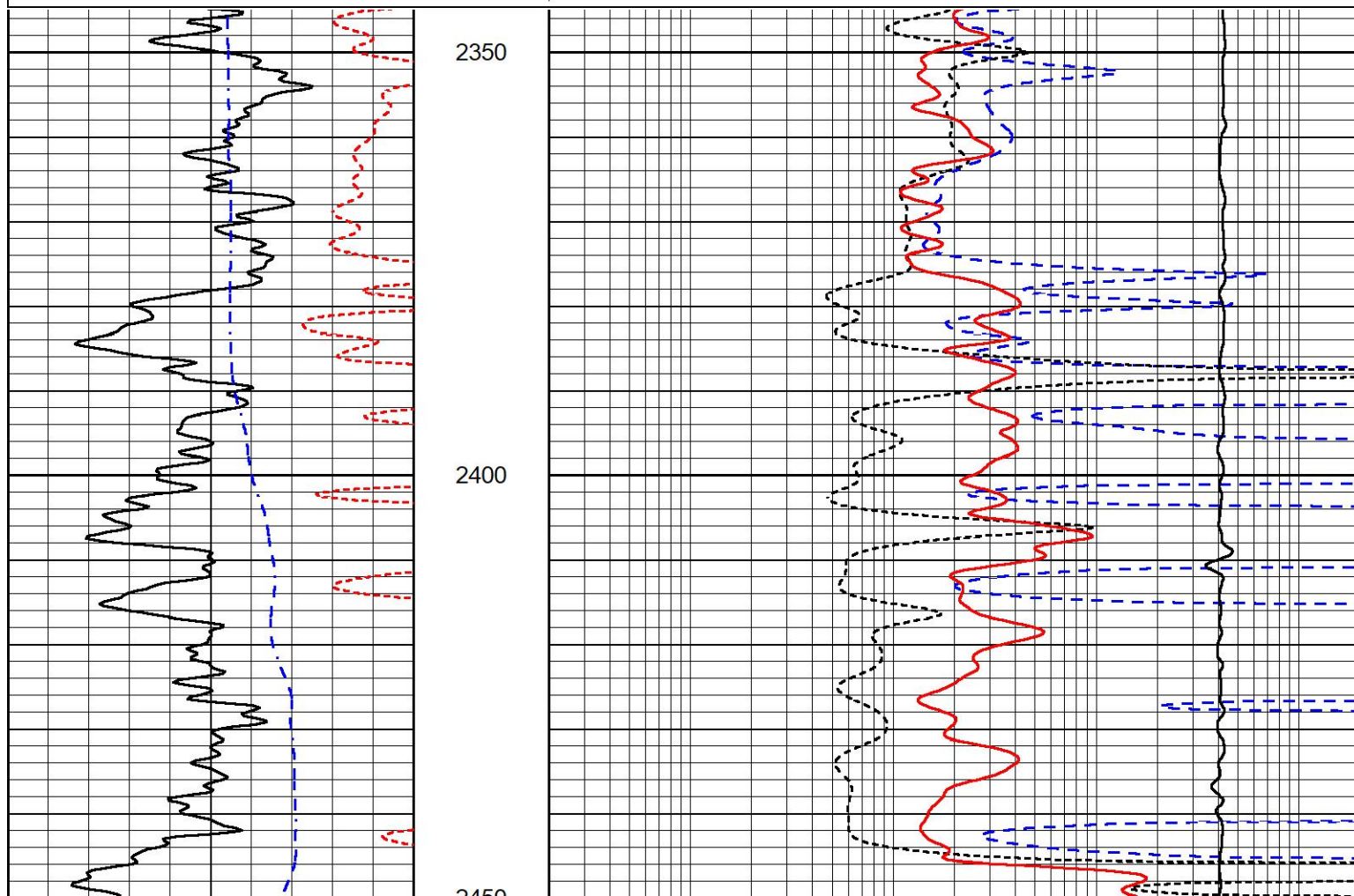
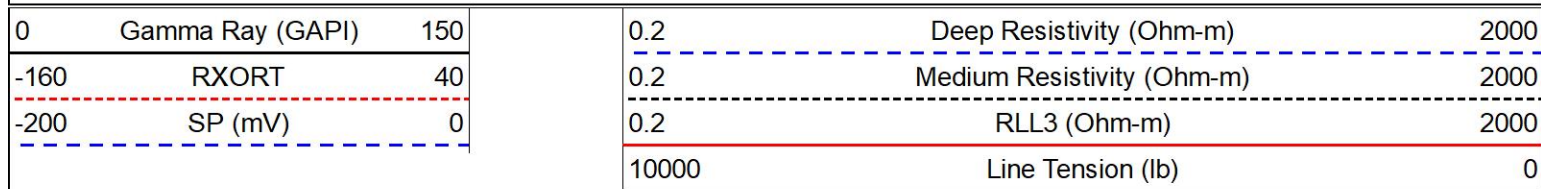


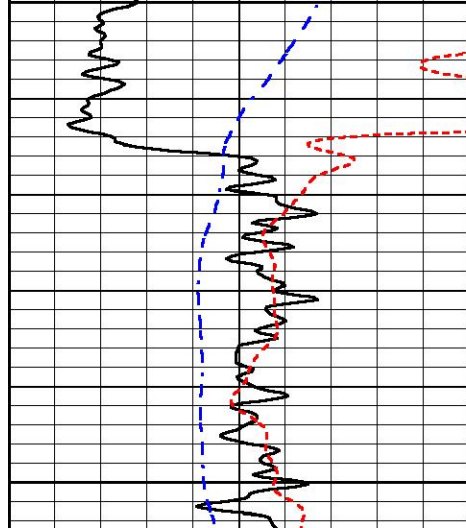
MIDWEST WIRELINE

ANHYDRITE SECTION

MAIN PASS

Database File landmark_rose-wessler unit #1-34.db
 Dataset Pathname StkMI/pass3.40
 Presentation Format _dil
 Dataset Creation Wed Jun 29 17:38:46 2022
 Charted by Depth in Feet scaled 1:240

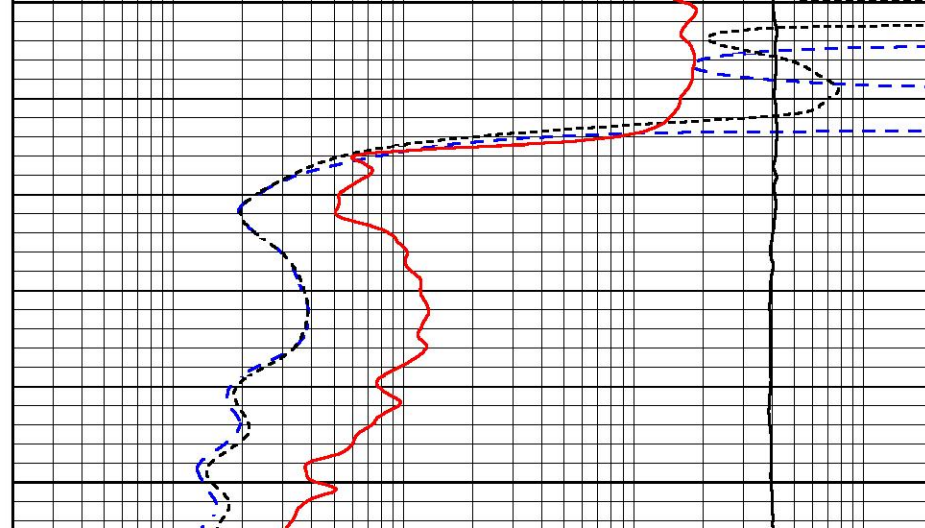




0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

2430

2500



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



MIDWEST WIRELINE

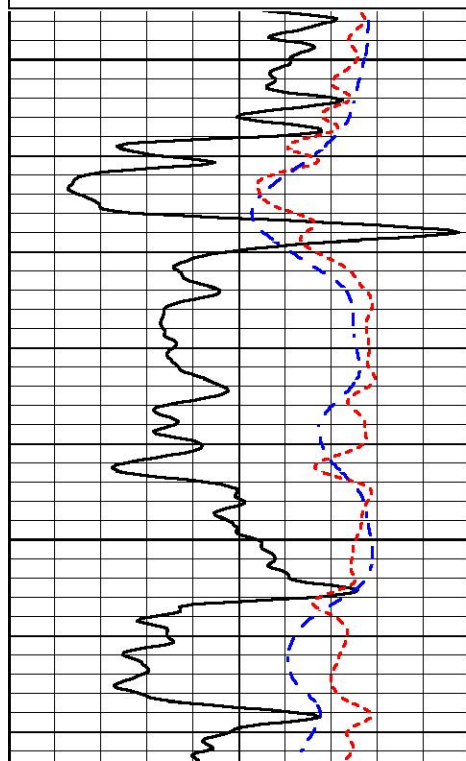
DETAIL SECTION

MAIN PASS

Database File landmark_rose-wessler unit #1-34.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _dil
 Dataset Creation Wed Jun 29 18:13:06 2022
 Charted by Depth in Feet scaled 1:240

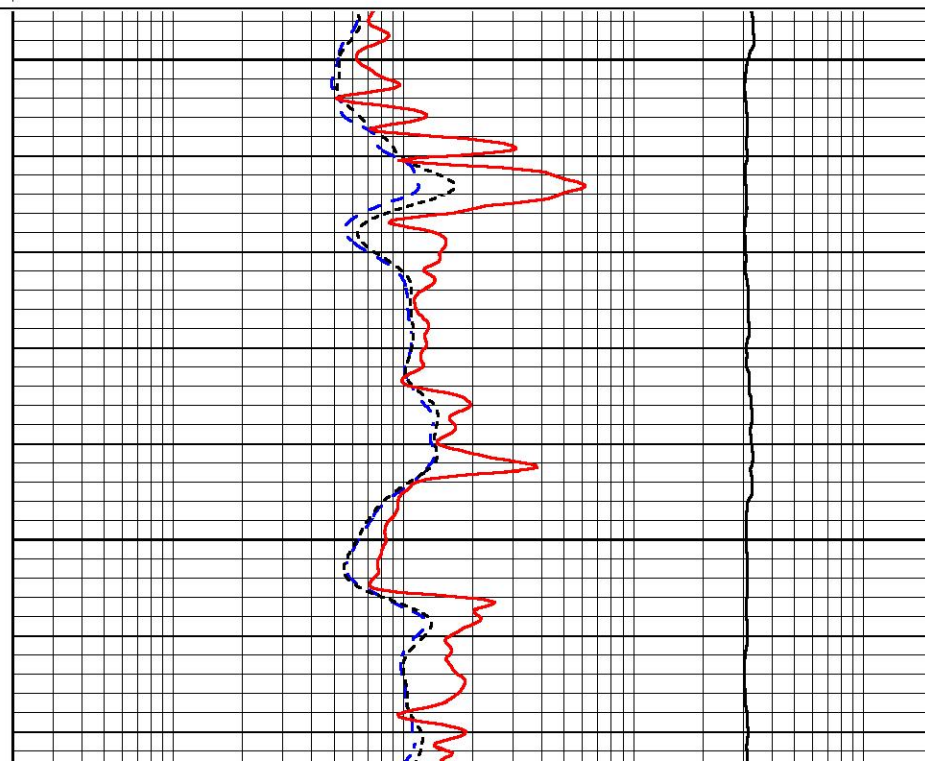
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

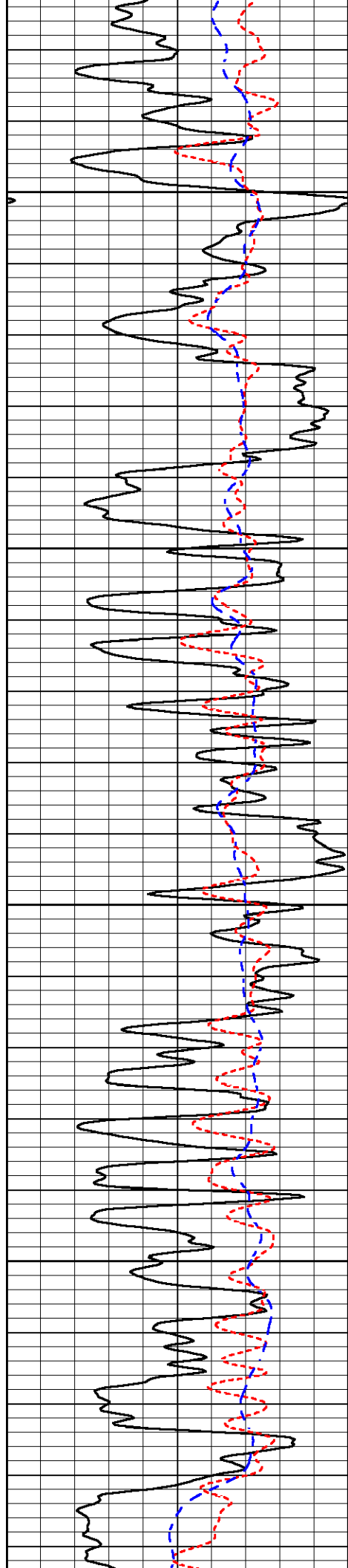
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



3400

3450



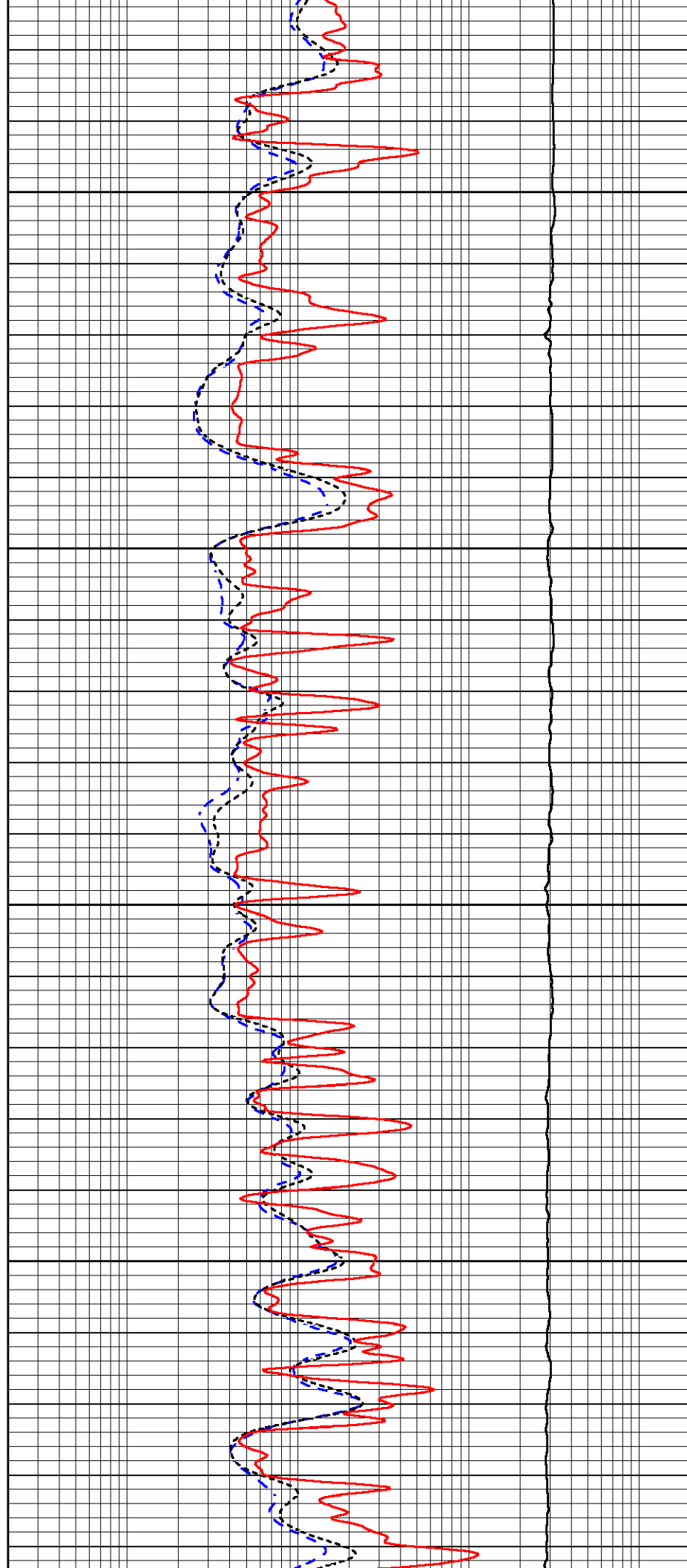


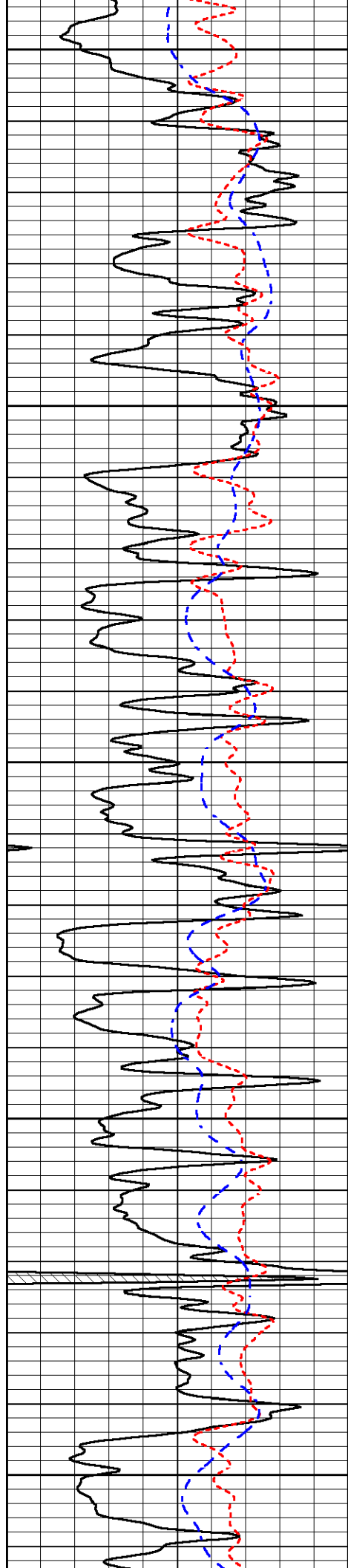
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3650





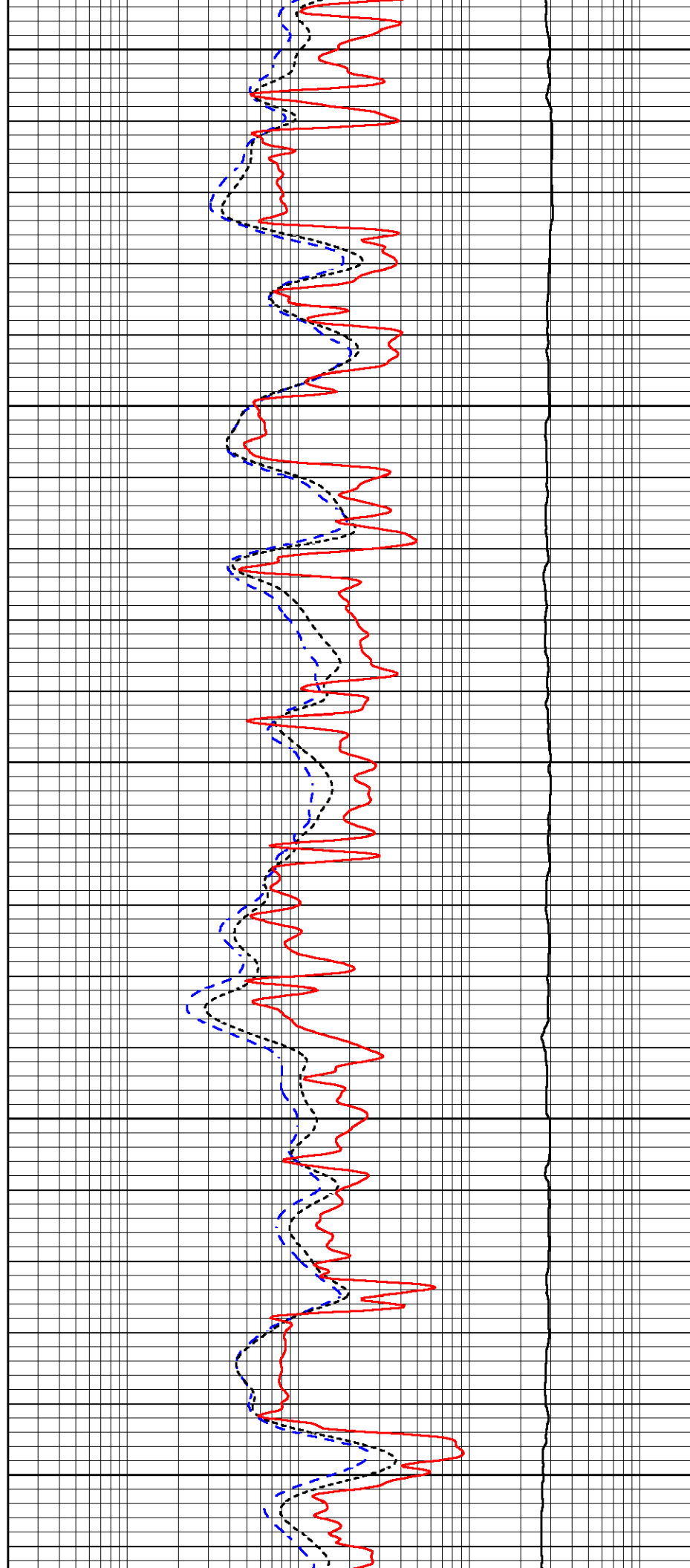
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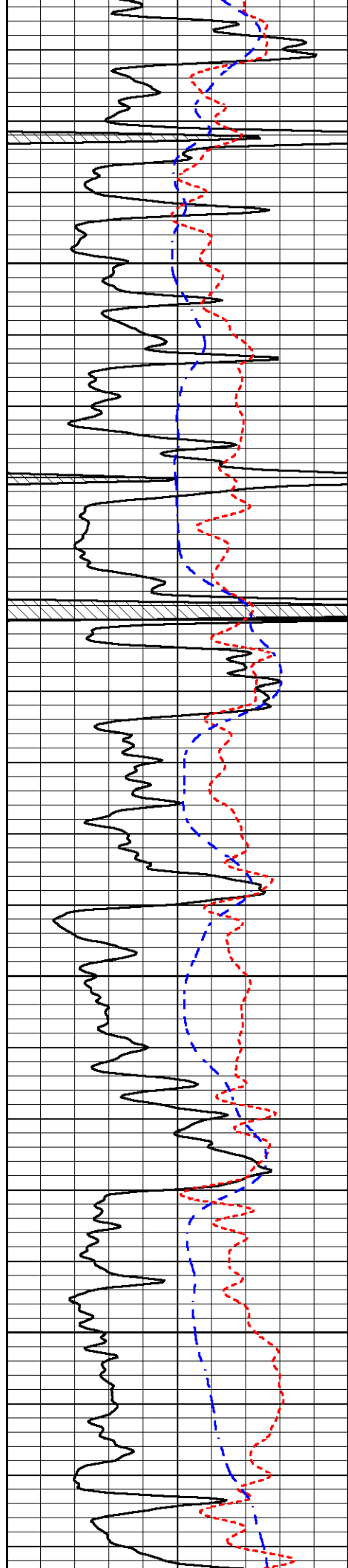
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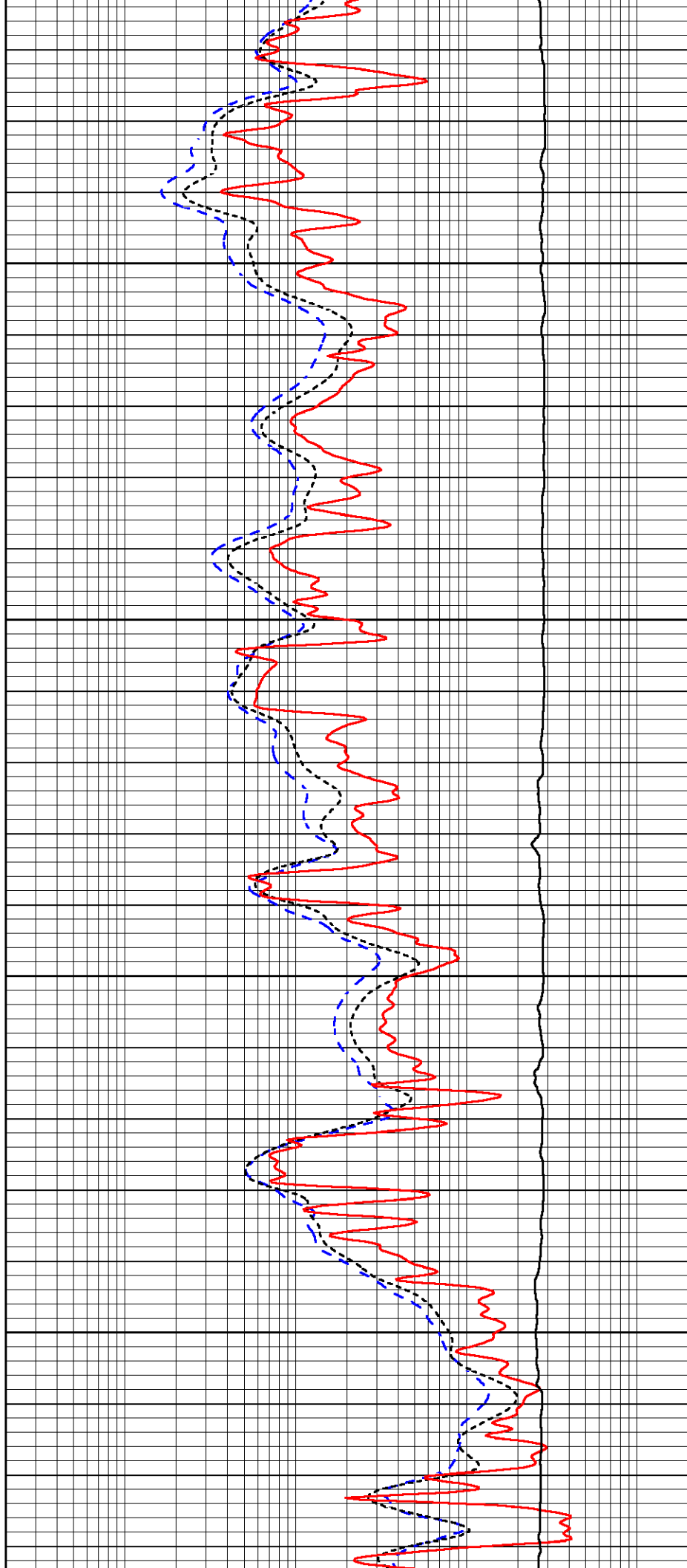


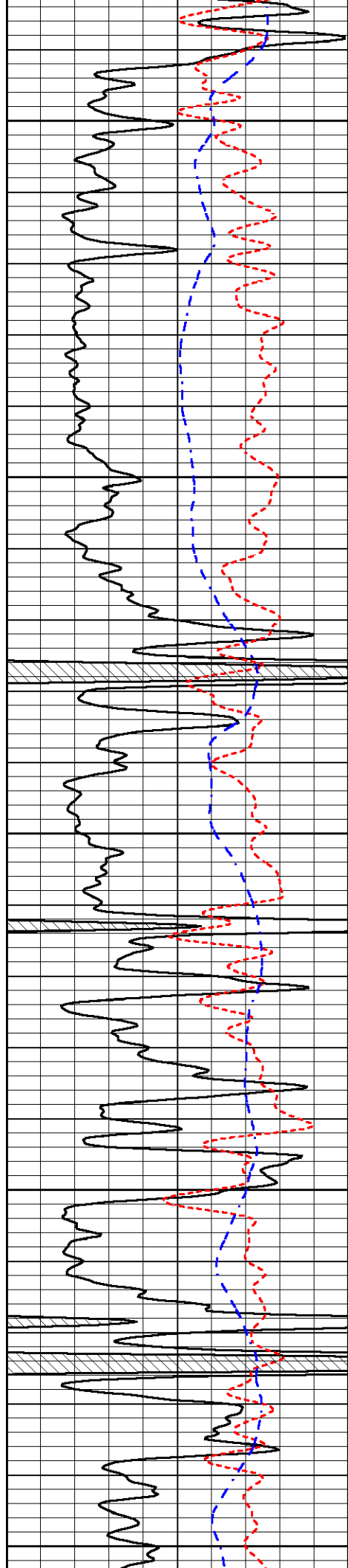
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4000

4050

4100





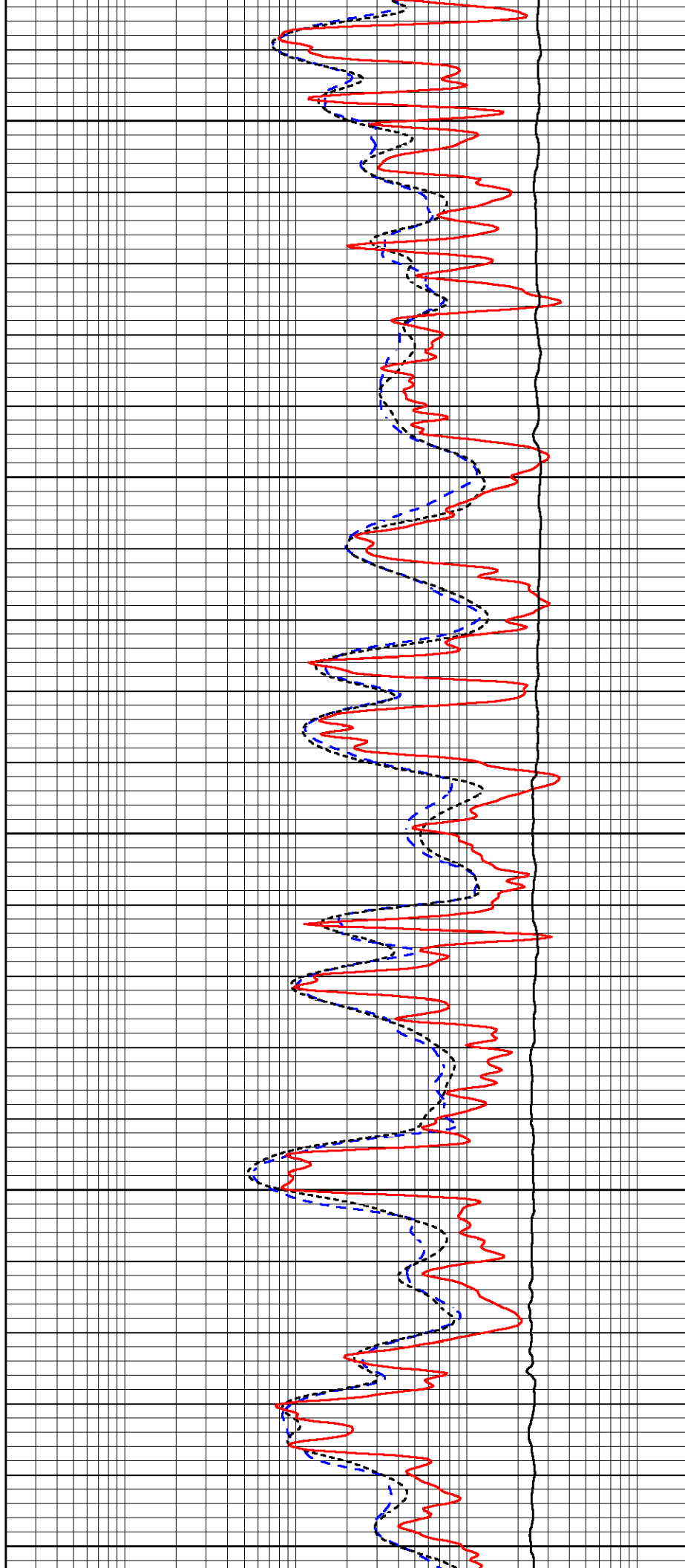
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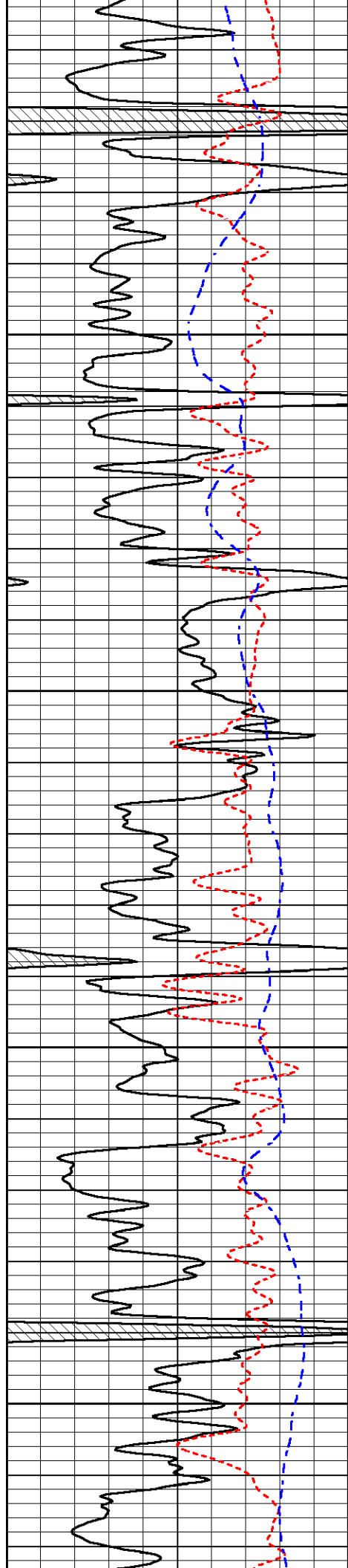
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4250

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4350



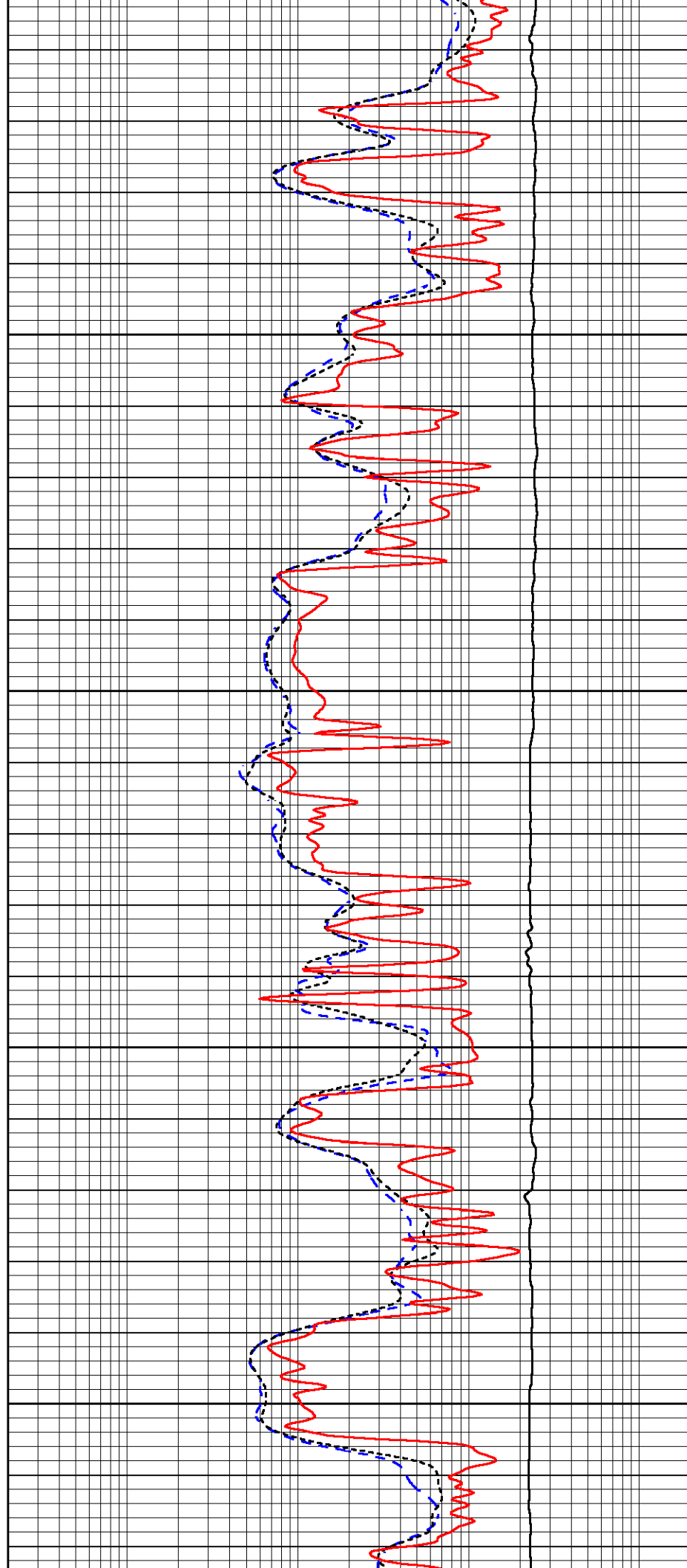


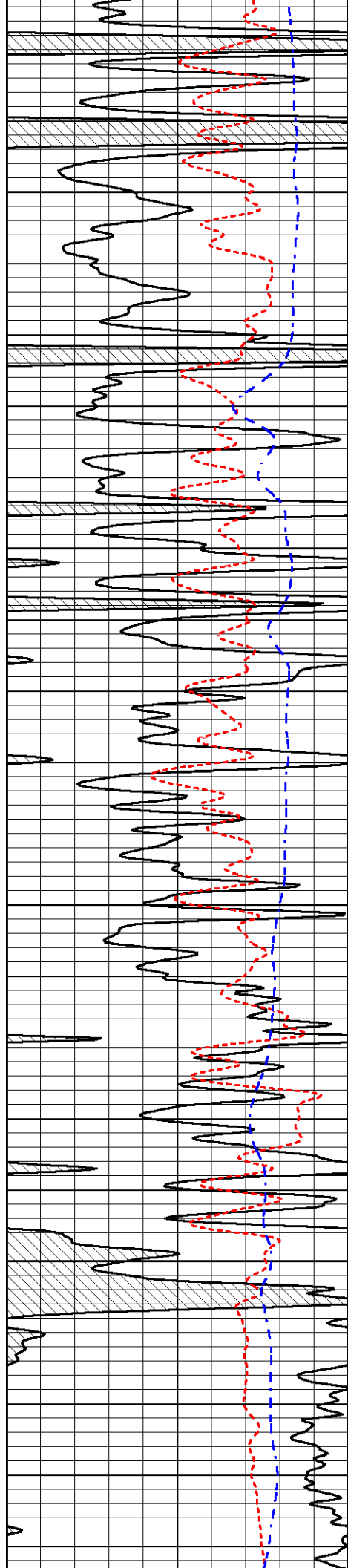
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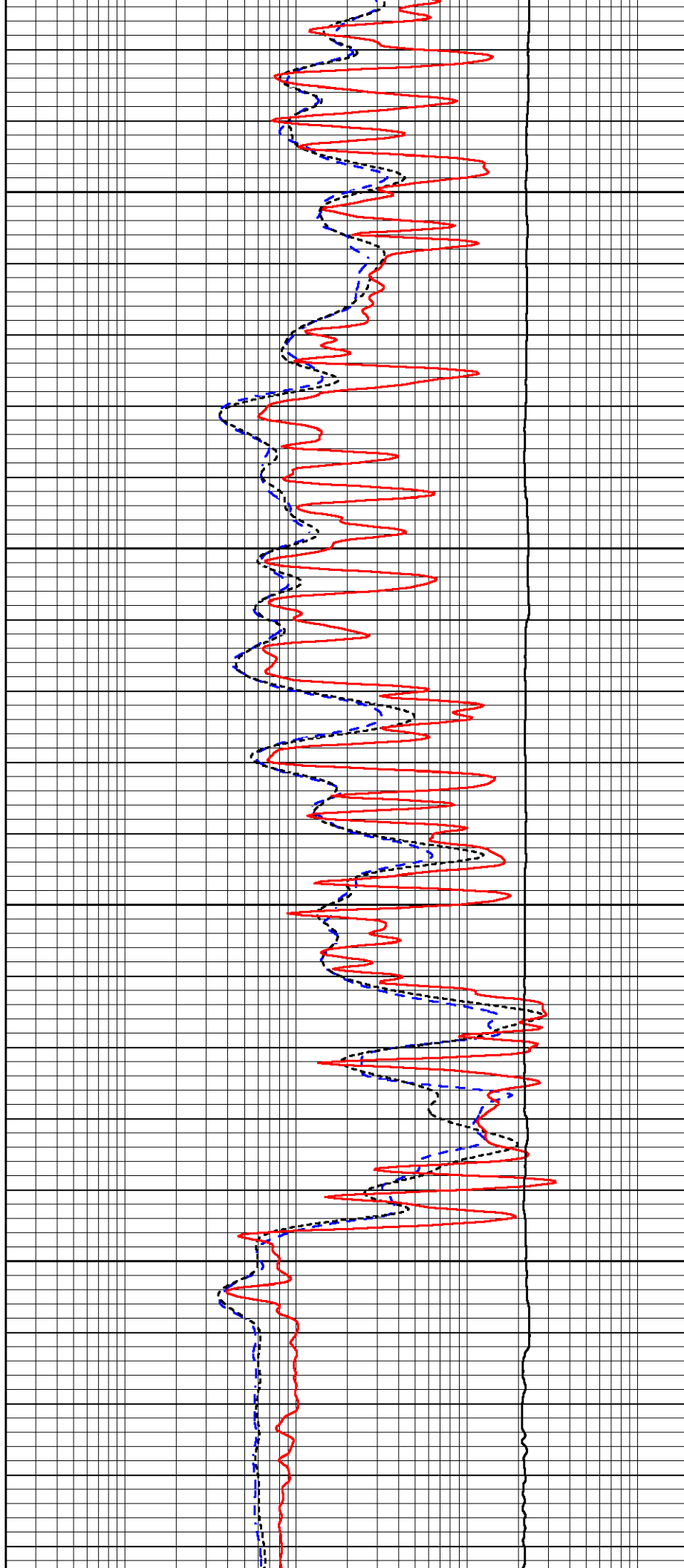


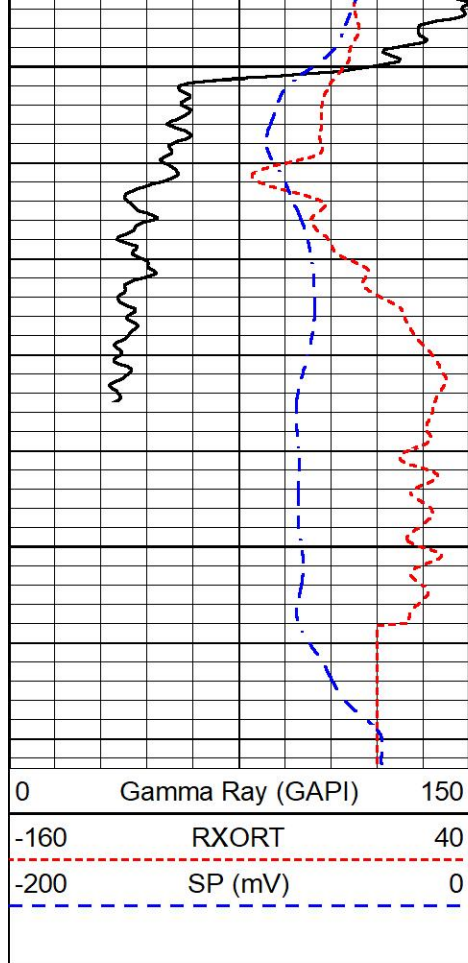
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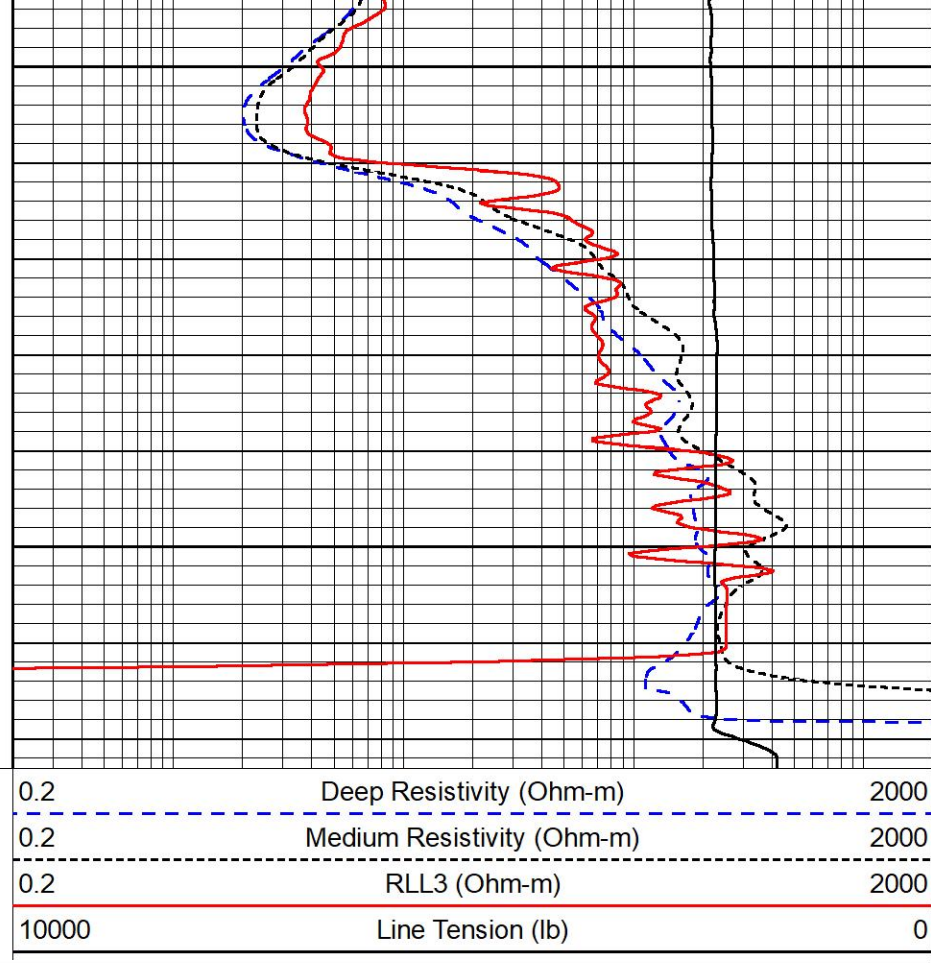
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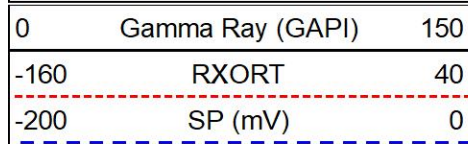


MIDWEST WIRELINE

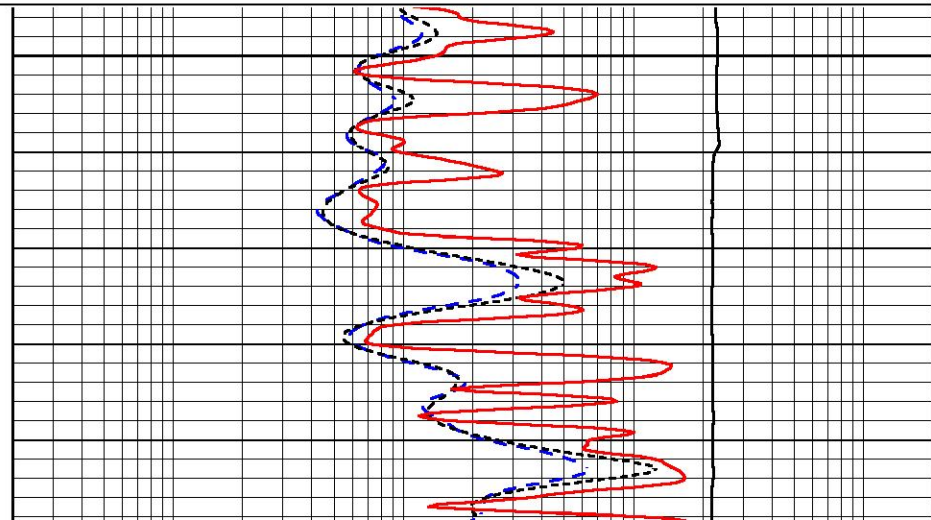
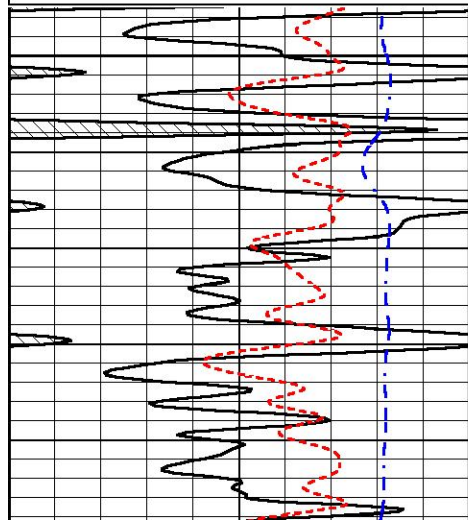
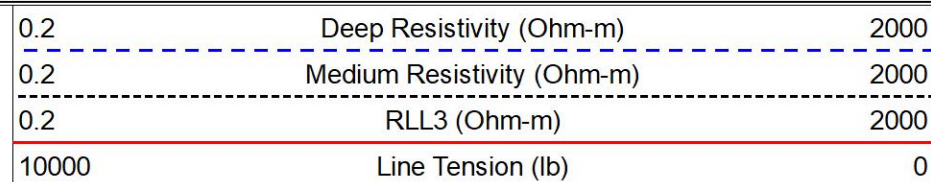
REPEAT SECTION

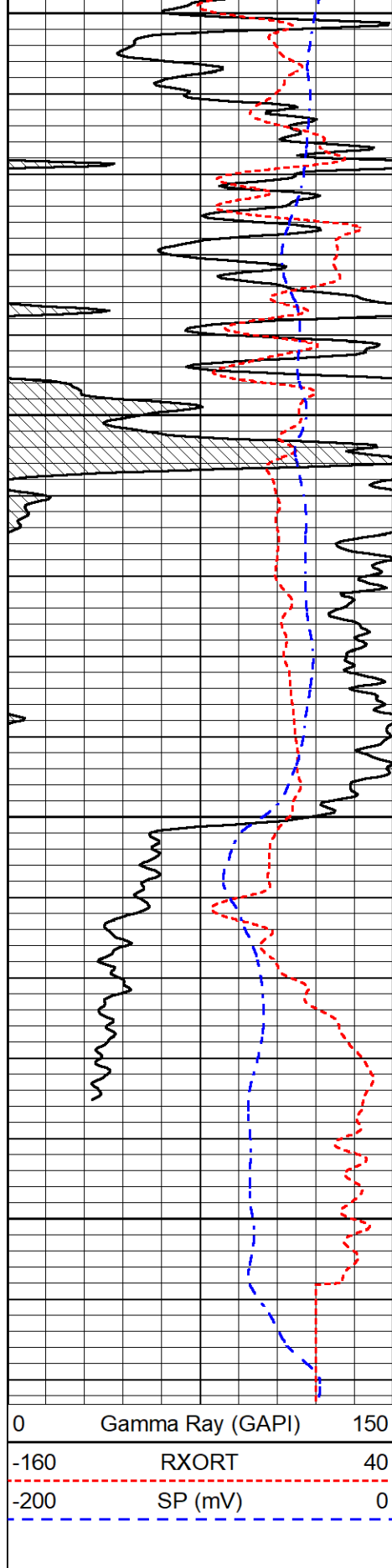
REPEAT PASS

Database File landmark_rose-wessler unit #1-34.db
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 Presentation Format _dil
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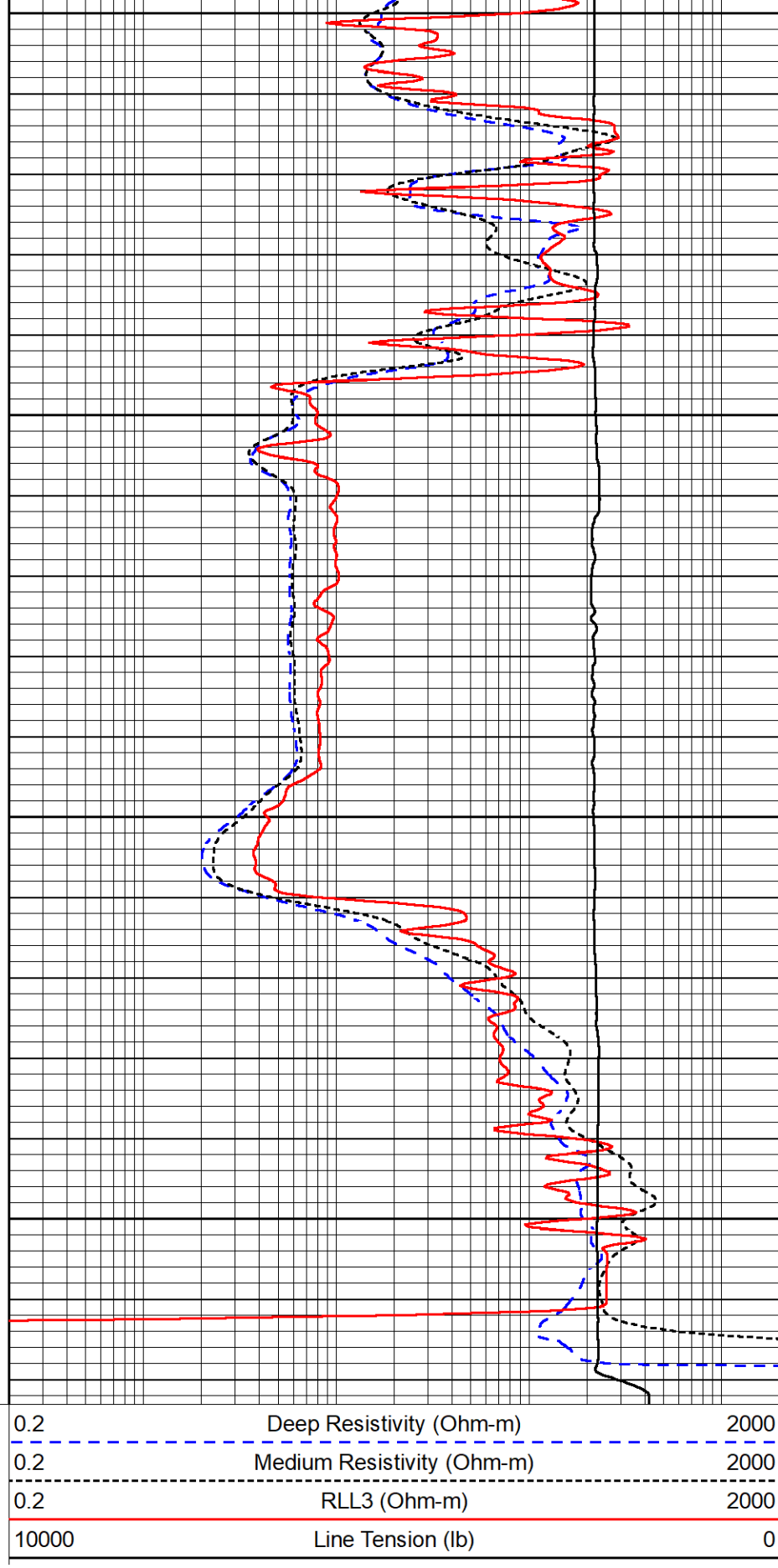


4700

4750

4800

4850



Calibration Report

Database File landmark_rose-wessler unit #1-34.db
 Dataset Pathname StkMI/pass3.13
 Dataset Creation Wed Jun 29 18:18:23 2022

Dual Induction Calibration Report

Serial-Model:
Surface Cal Performed:

504 HT-M&W
Wed Jun 29 12:51:29 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-15.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-50.750

Microlog Calibration Report

Serial-Model:
Performed:

401-PSI STKBL ML
Wed Jun 29 12:51:40 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	24000.0000	-0.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	18700.0000	0.0000
Caliper	1.0049	1.0846	5.5000	20.0000	in	165.0000	-161.8000

Compensated Density Calibration Report

Serial-Model:
Source #:
Master Calibration Performed:

303-03-M&W
21170B
Thu Dec 16 23:28:34 2021

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.670	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.515		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.03		

Compensated Neutron Calibration Report

Serial-Model:
Source #:
Master Calibration Performed:

210-M&W
N-1238
Fri Dec 3 09:16:24 2021

Master 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

Gamma Ray Calibration Report

Serial Number: 103
Tool Model: M&W
Performed: Fri Dec 3 12:13:24 2021

Calibrator Value:	500.0	GAPI
Background Reading:	28.0	cps
Calibrator Reading:	986.0	cps
Sensitivity:	0.5700	GAPI/cps



MIDWEST WIRELINE

Company	Landmark Resources, Inc.
Well	Rose-Wessler Unit #1-34
Field	Pence South
County	Scott
State	Kansas