



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Castle Resources, Inc.		Company Castle Resources, Inc.	
Well	Hund #2	Well	Hund #2
Field	Newberry	Field	Newberry
County	Wabaunsee	County	Wabaunsee
State	Kansas	State	Kansas
Location: API #: 15-197-20321-00-00		Other Services	
1720 FSL & 900 FEL		CNL/CDL MEL	
Permanent Datum	Ground Level	Elevation	1113
Log Measured From	Kelly Bushing	K.B.	1118
Drilling Measured From	Kelly Bushing	D.F.	1113
		G.L.	1113
SEC 2 TWP 11S RGE 11E			
Date	4/6/2023		
Run Number	One		
Depth Driller	3100		
Depth Logger	3104		
Bottom Logged Interval	3103		
Top Log Interval	300		
Casing Driller	8.625 @ 300		
Casing Logger	308		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4000		
Density / Viscosity	9.6 45		
pH / Fluid Loss	9.2 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	2.60 @ 70		
Rmt @ Meas. Temp	1.95 @ 70		
Rmc @ Meas. Temp	3.51 @ 70		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	1.70 @ 107		
Operating Rig Time	2 Hours		
Max Rec. Temp. F	107		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Jerry Green		

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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.

Paxico,
5 North to Homestead, 1 East, 1/4 North,
West and North to location

Log Measured From: Kelly Bushing

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: Jerry Green
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33			GR-M&W (103)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48			CNT-M&W (210)	5.00	3.50	100.00
LSD DCAL SSD	28.18			CDL-M&W (303-03)	8.50	4.00	250.00
	28.17			ML-PSI STKBL ML (402)	7.58	4.00	65.00
	27.68						
MCAL MI MN	19.58						
	19.58						
	19.58						
RLL3F RLL3	15.50			DIL-M&W (505 HT)	18.25	3.50	220.00
	15.50						
CILD	8.33						
CILM	4.50						
SP	0.20						
Dataset: castle_hund 2.db: field/well/stkml/pass5.1							
Total length: 42.33 ft							
Total weight: 685.00 lb							
O.D.: 4.00 in							

Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle_hund 2.db
Dataset field/well/stkml/pass5.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 107	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m -3.6	mmho/m 7.6	mV 231	degF 60	Off	ft 3100

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

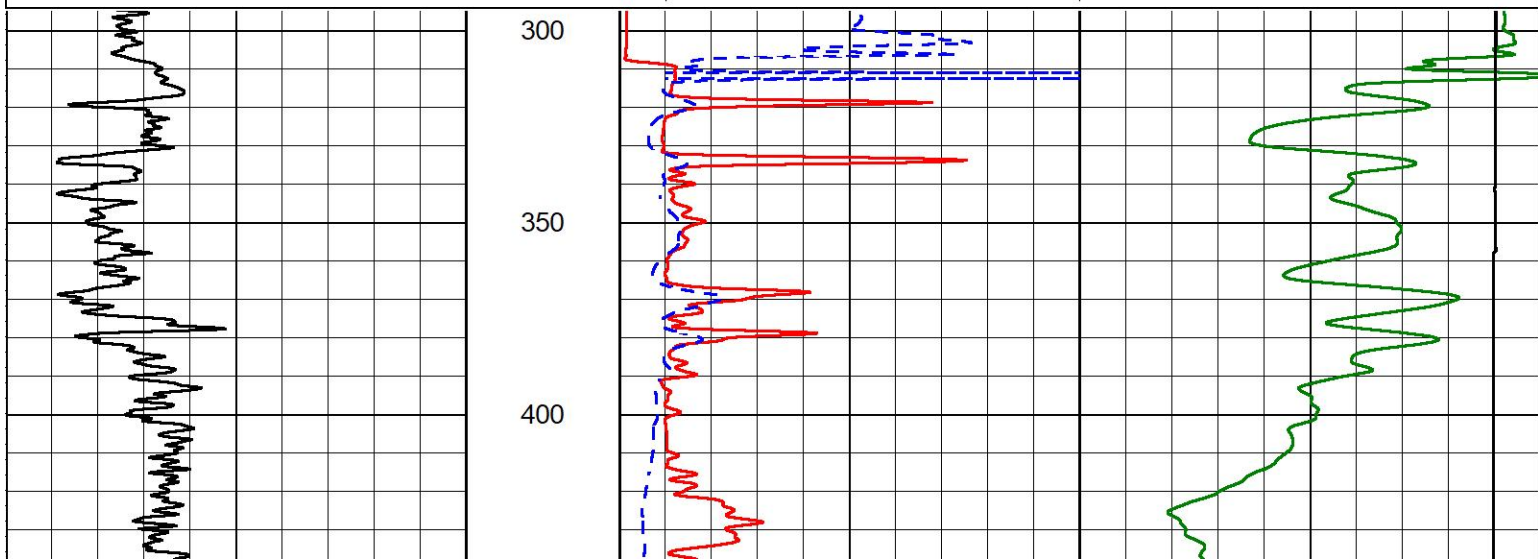


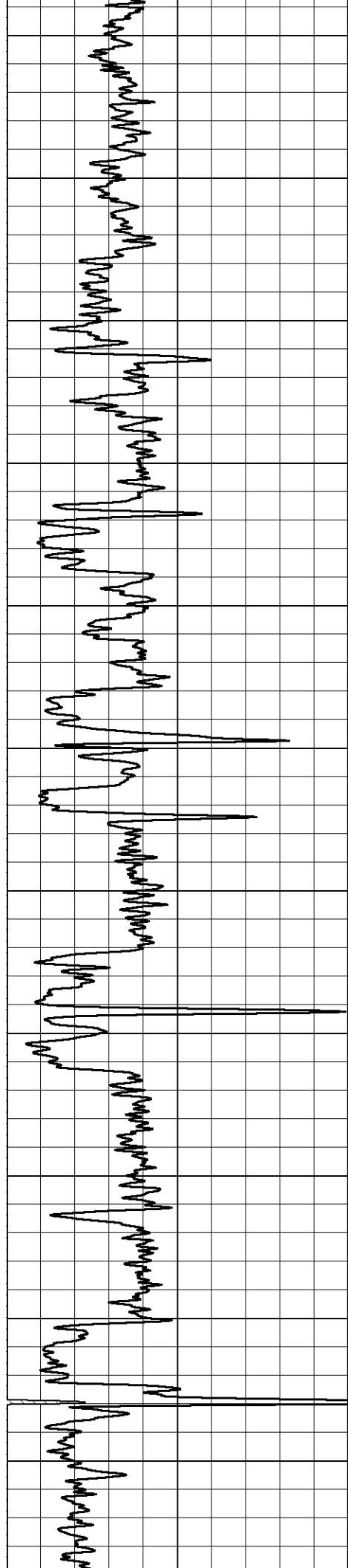
2" SCALE RESISTIVITY

MAIN PASS

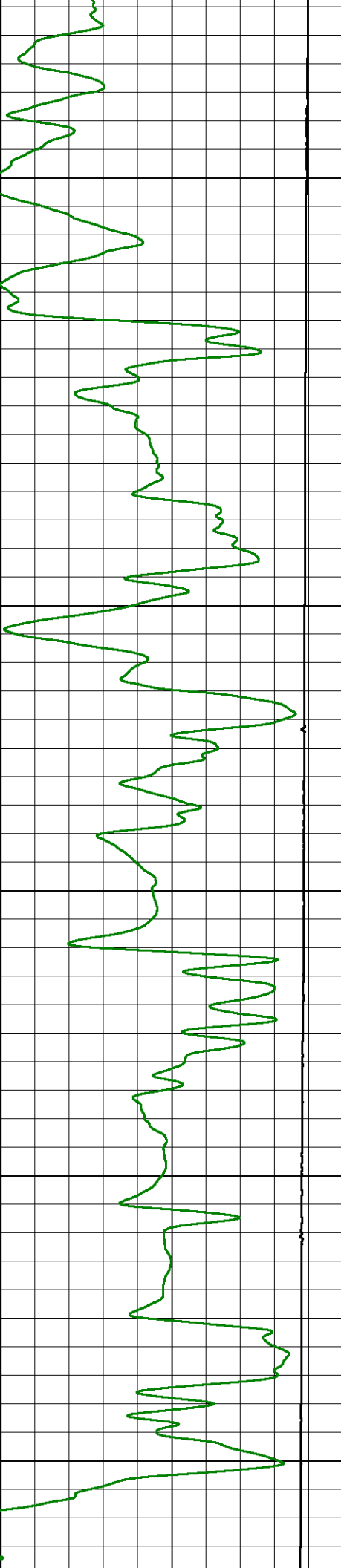
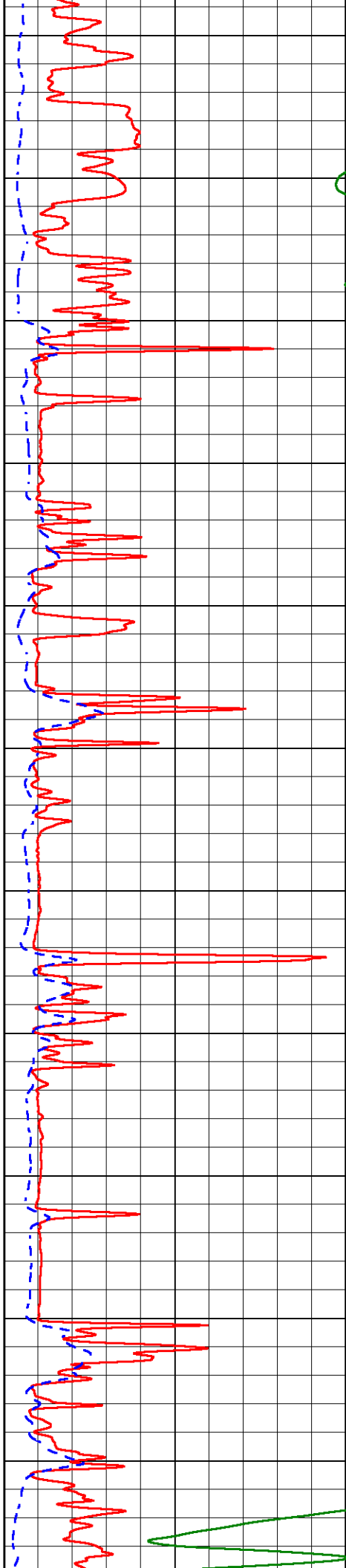
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Dataset Pathname stkml/pass5.3
Presentation Format _dil2in
Dataset Creation Thu Apr 06 18:59:28 2023
Charted by Depth in Feet scaled 1:600

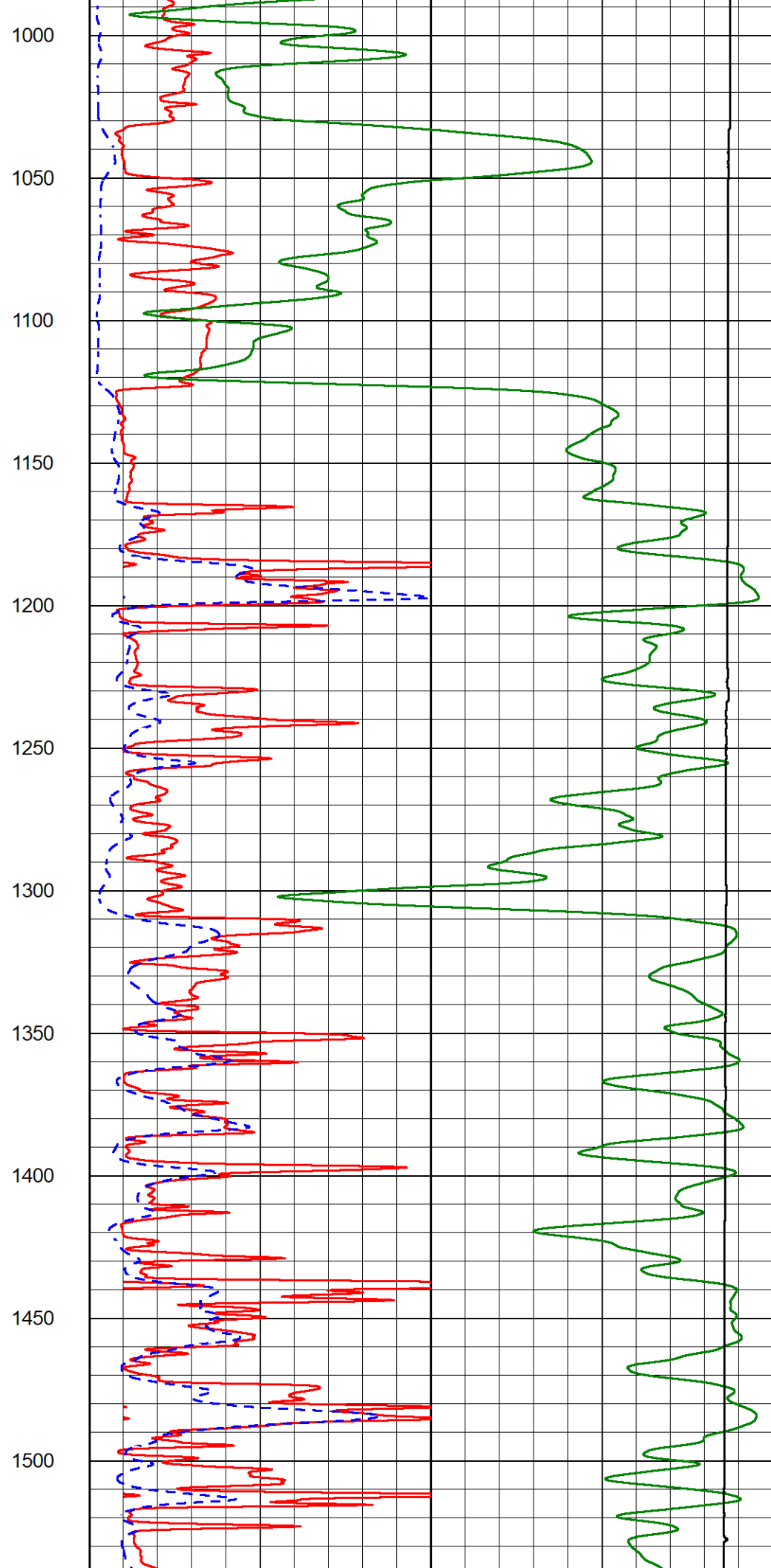
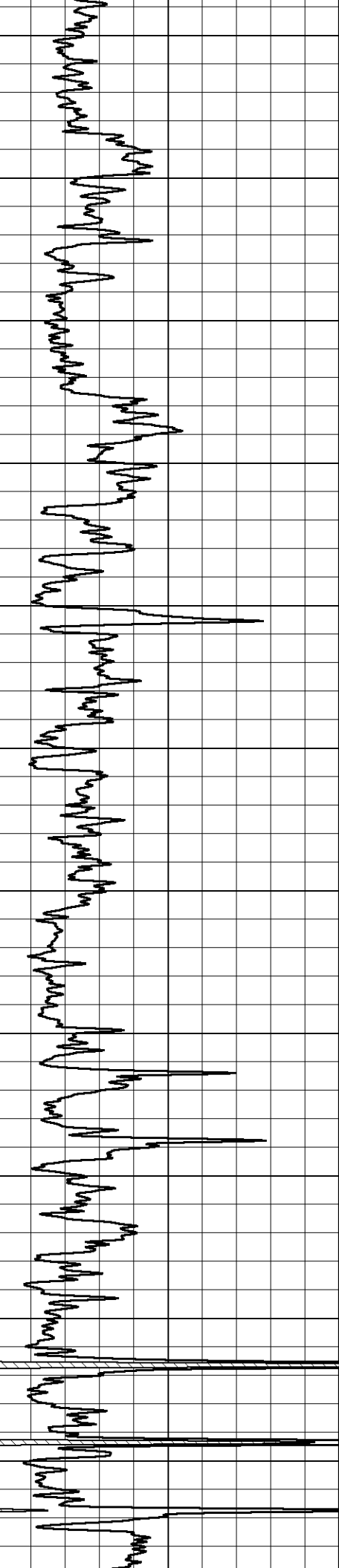
0	Gamma Ray (GAPI)	300	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

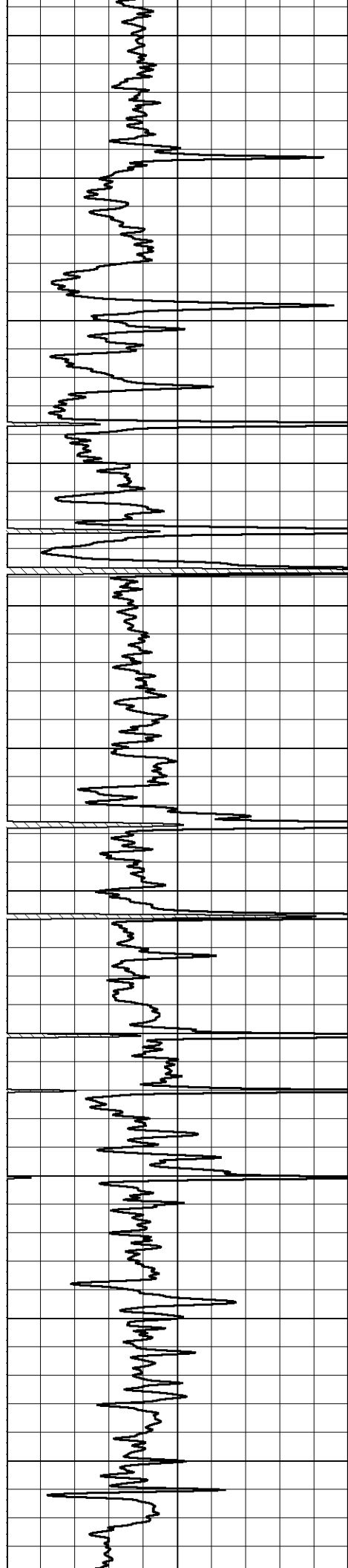




450
500
550
600
650
700
750
800
850
900
950







1550

1600

1650

1700

1750

1800

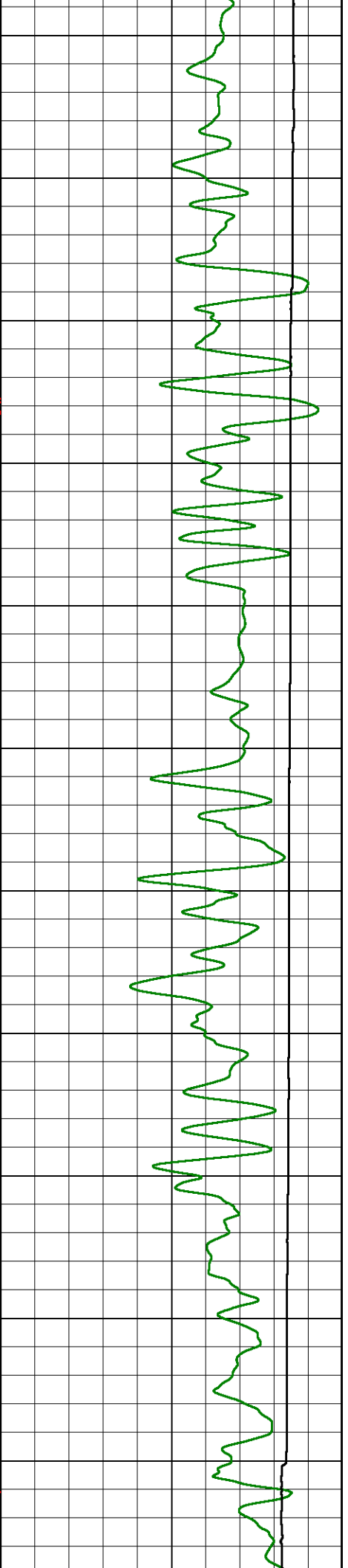
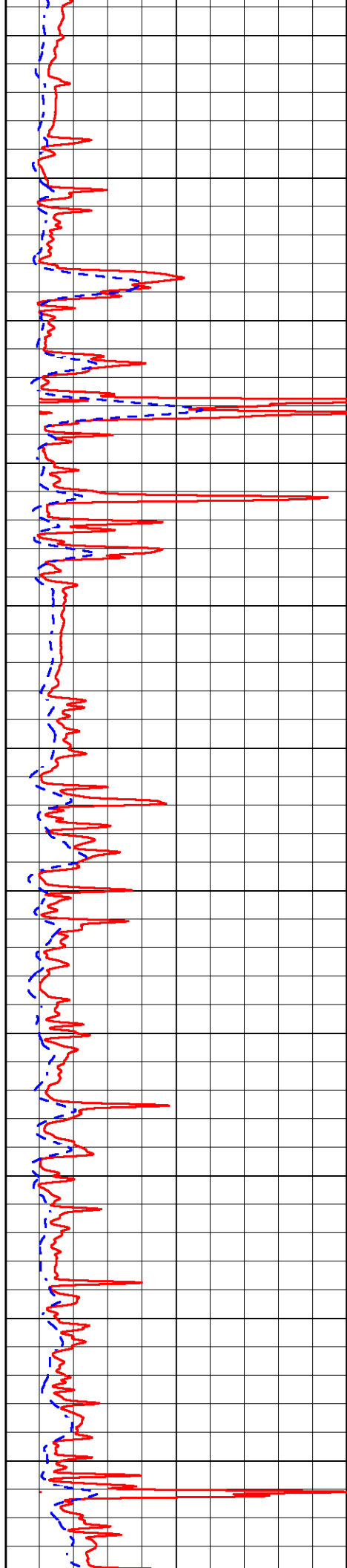
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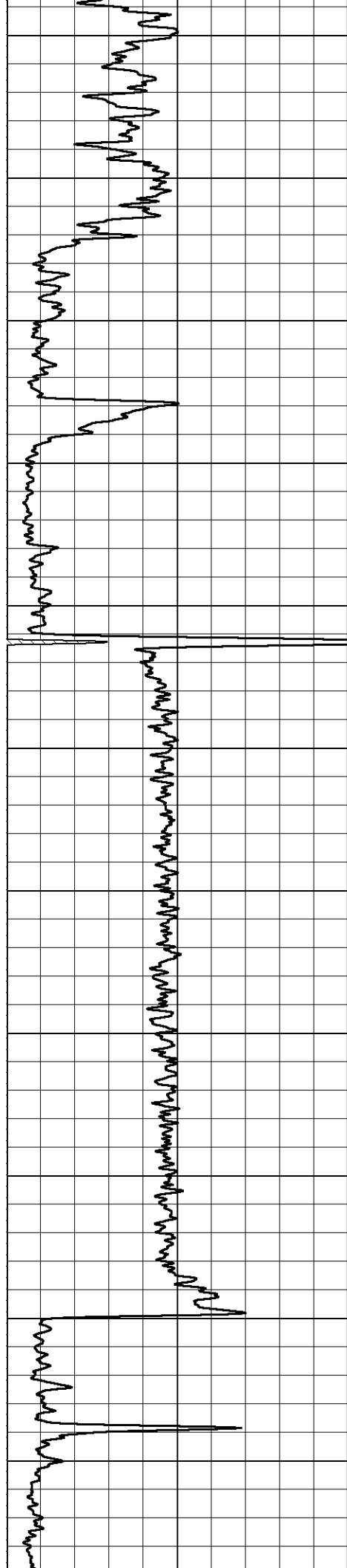
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

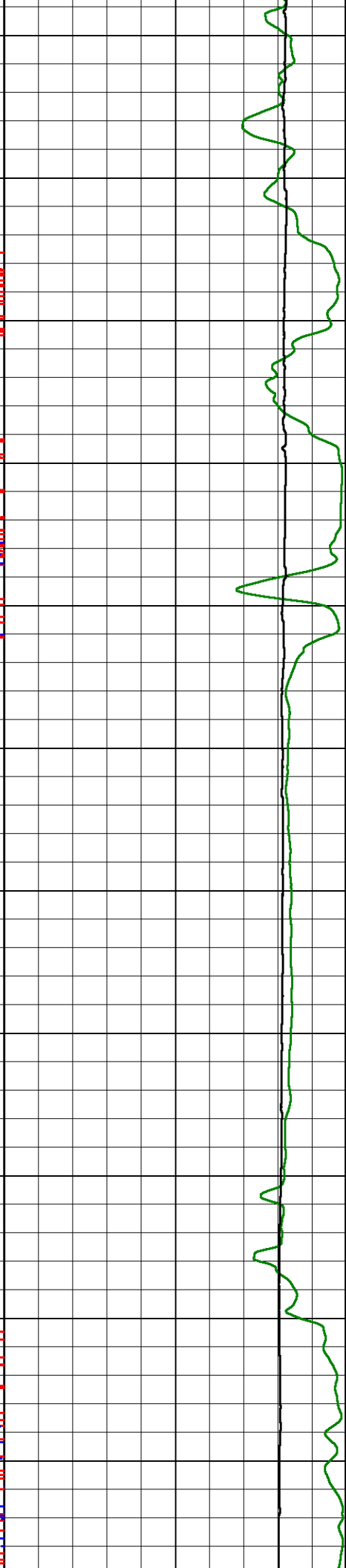
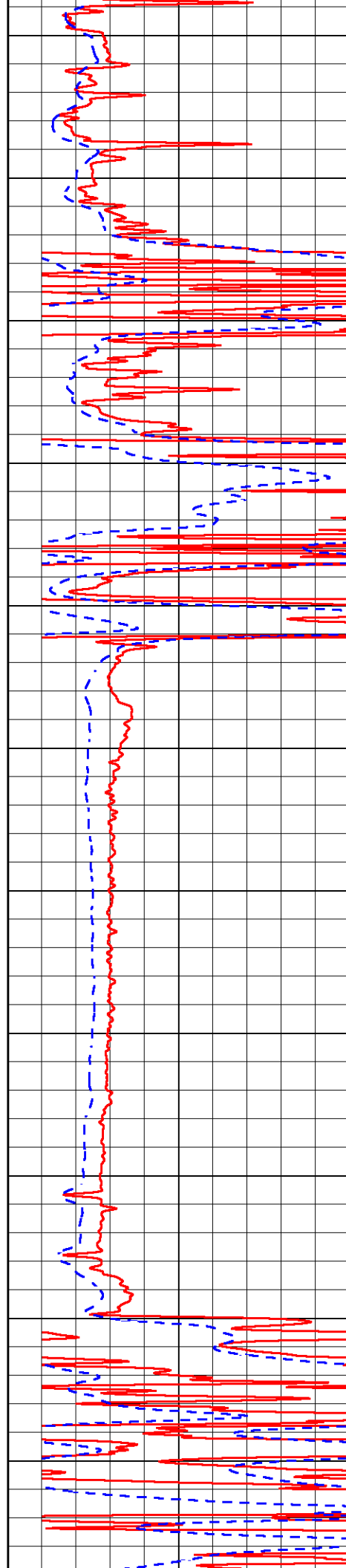
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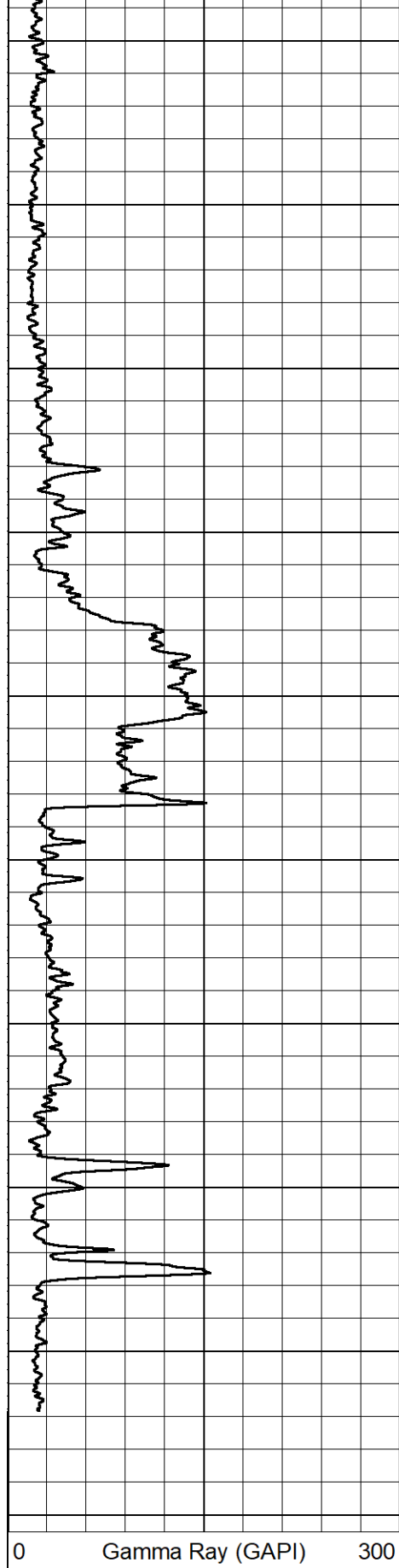
2450

2500

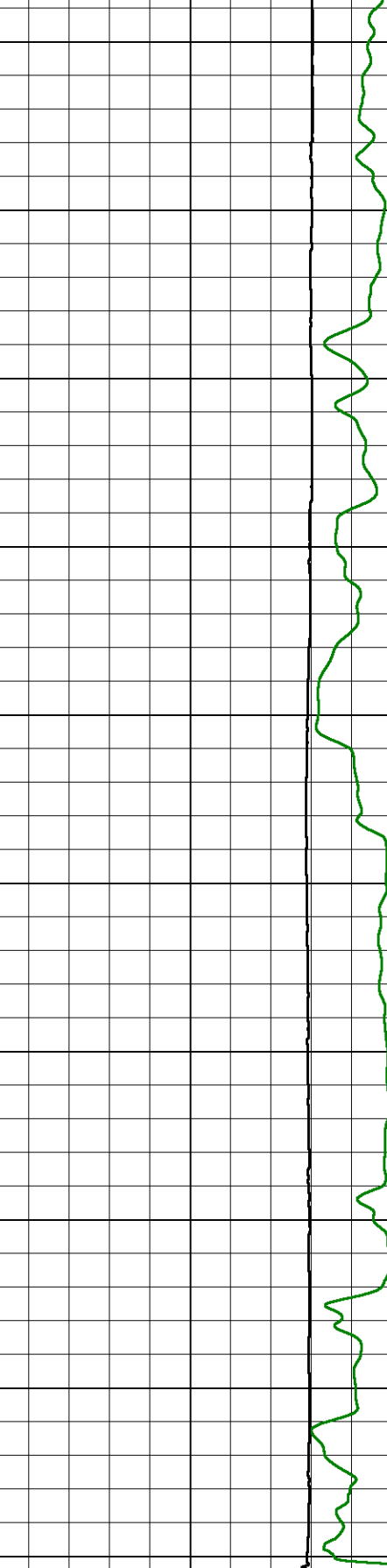
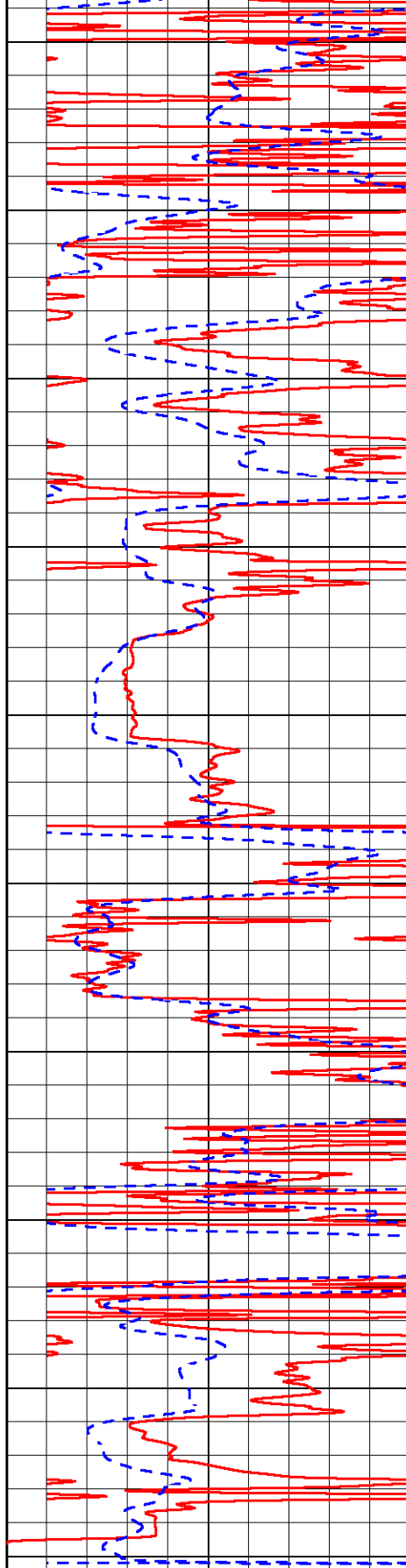
2550

2600





2650
2700
2750
2800
2850
2900
2950
3000
3050
3100



0 Gamma Ray (GAPI) 300

1000 Conductivity (mmho/m) 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



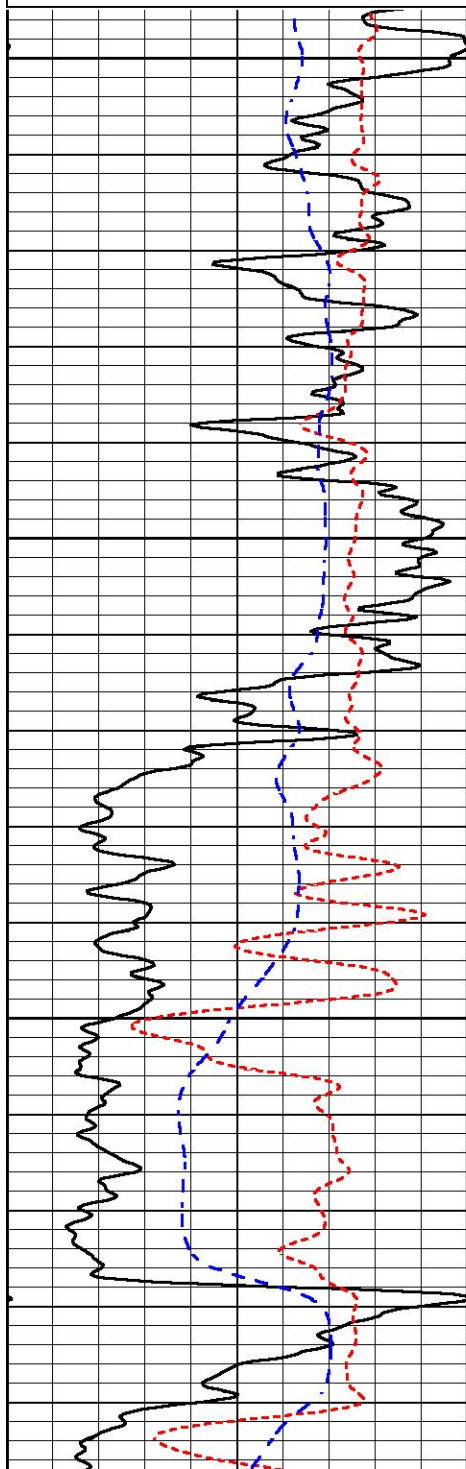
DETAIL SECTION

MAIN PASS

Database File castle_hund 2.db
Dataset Pathname stkml/pass5.1
Presentation Format _dil
Dataset Creation Thu Apr 06 18:55:40 2023
Charted by Depth in Feet scaled 1:240

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

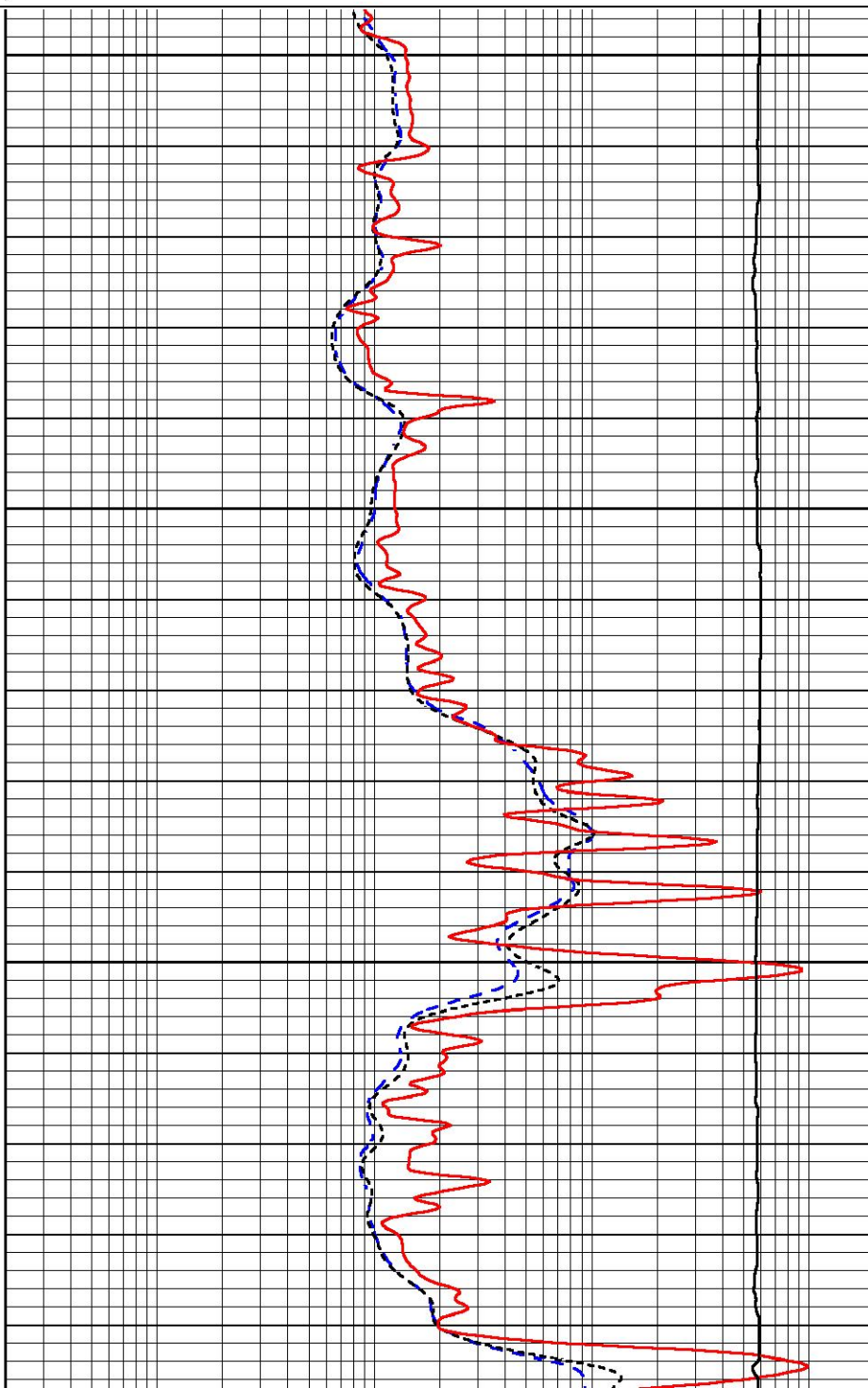
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

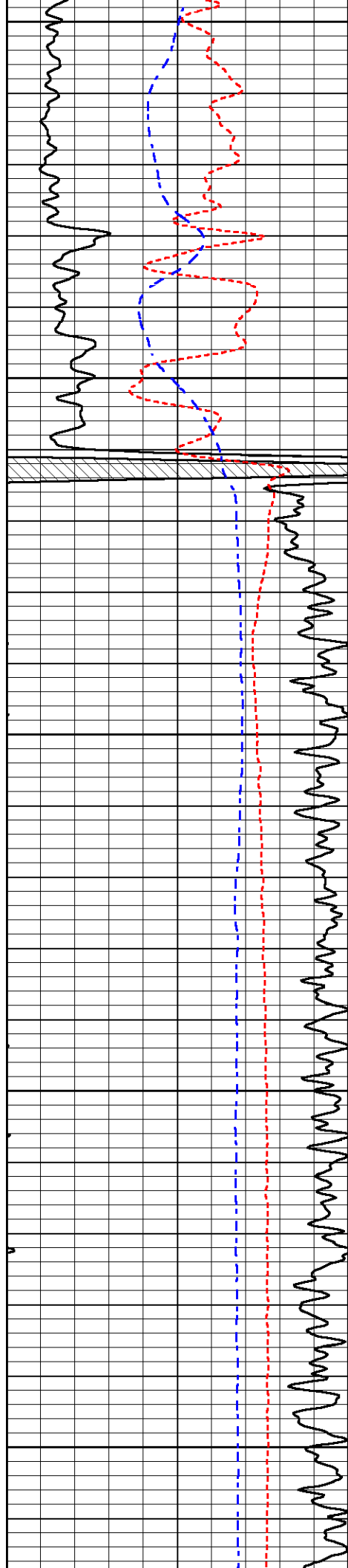


2100

2150

2200





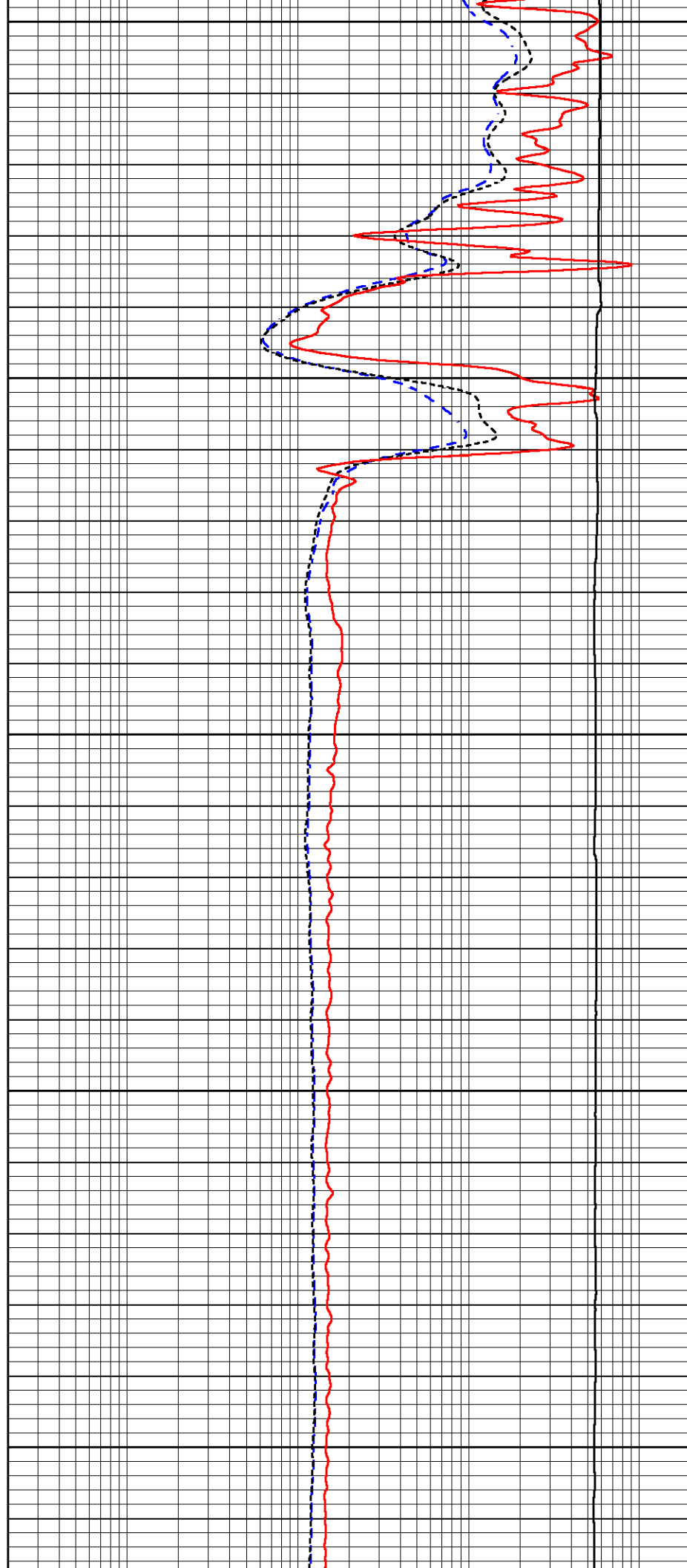
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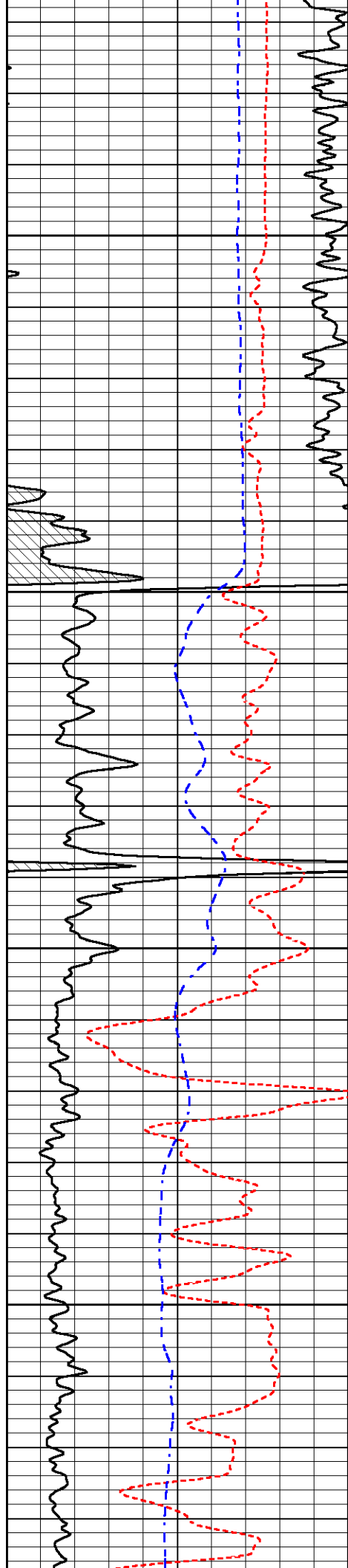
2300

2350

2400

2450



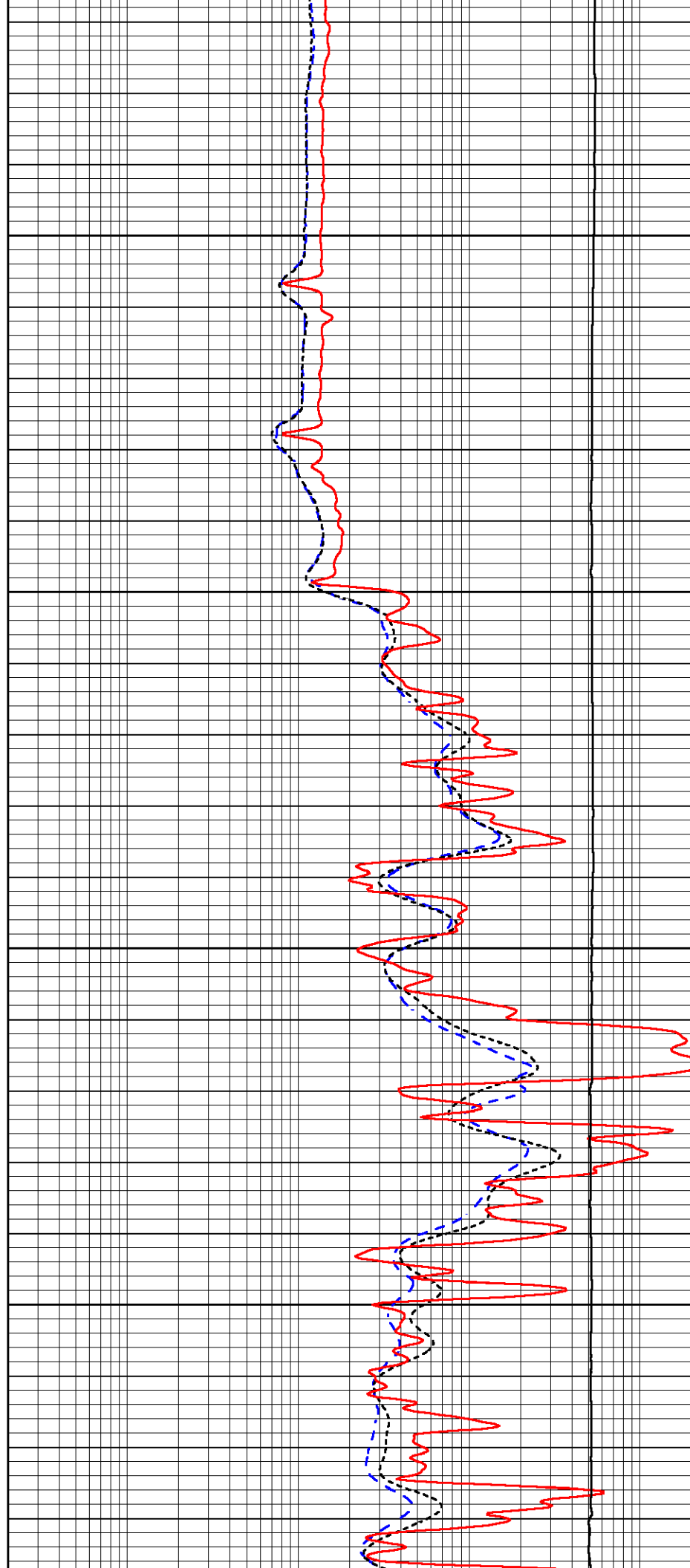


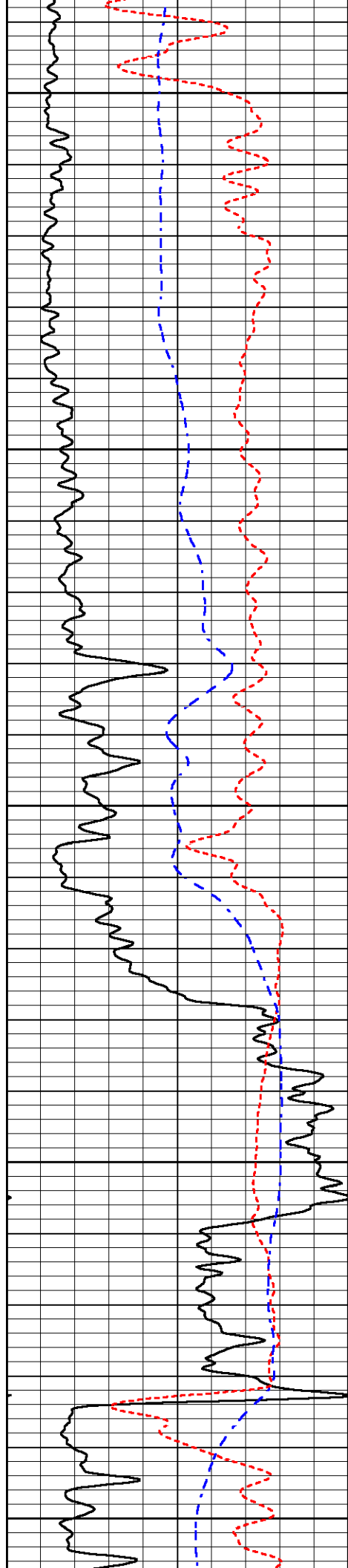
2500

2550

2600

2650





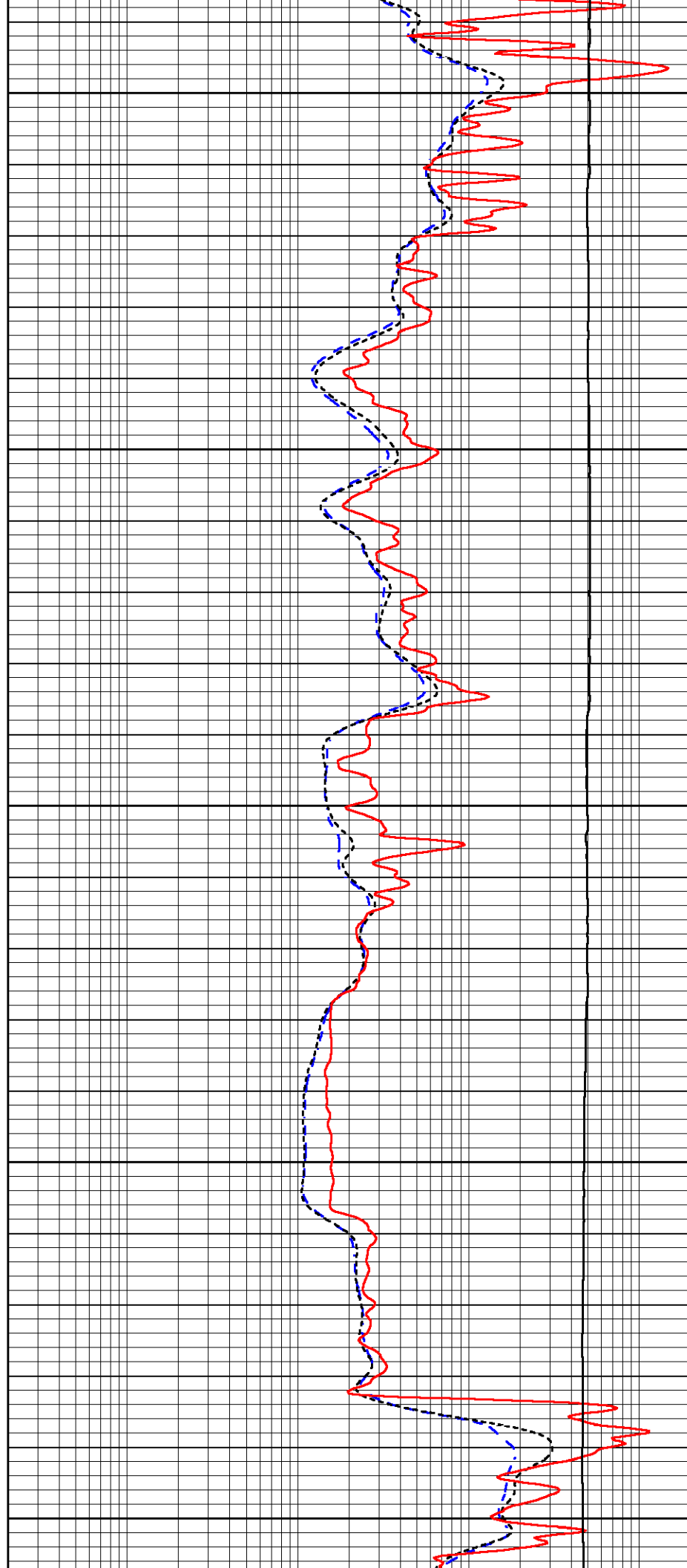
2700

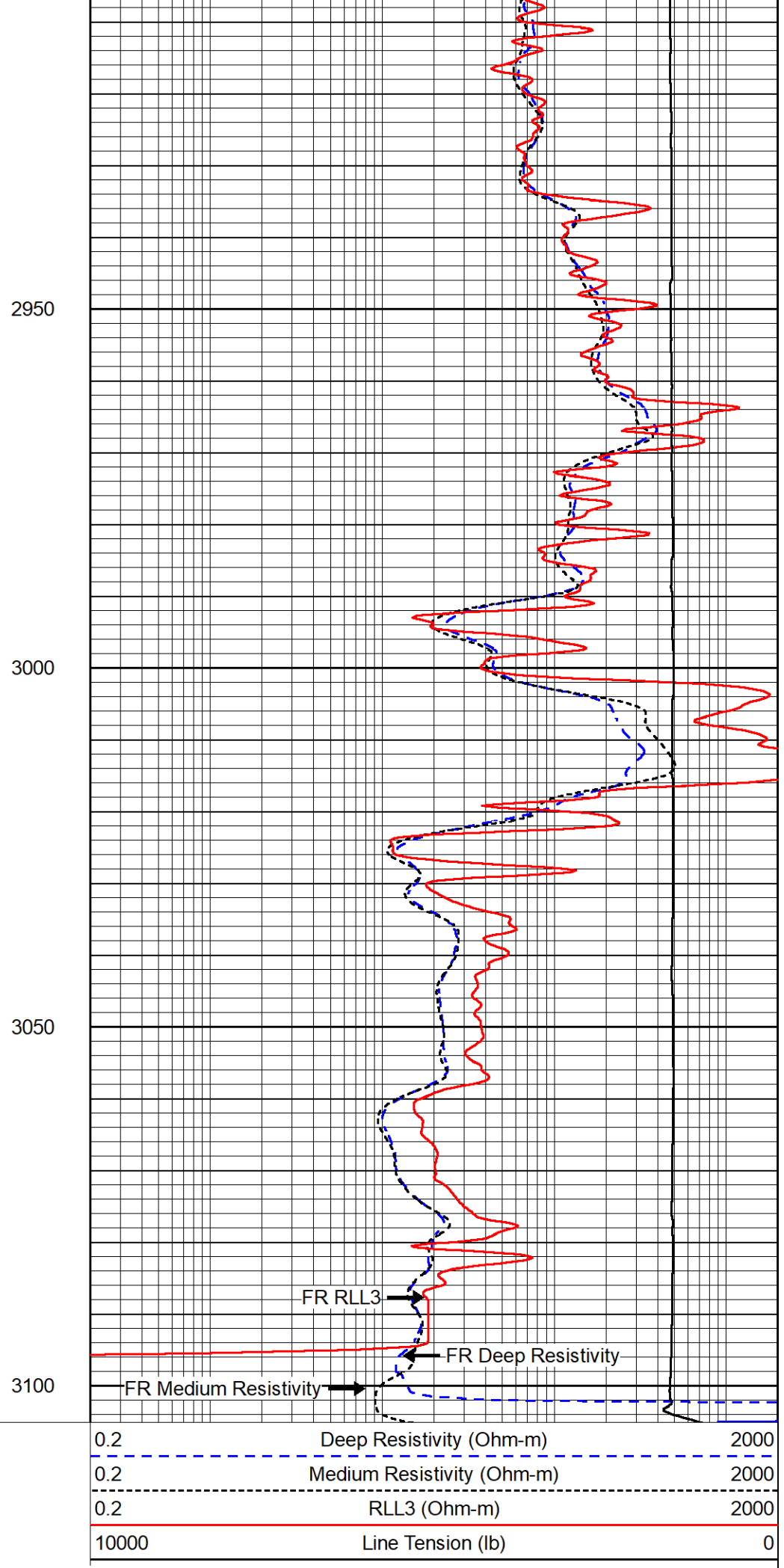
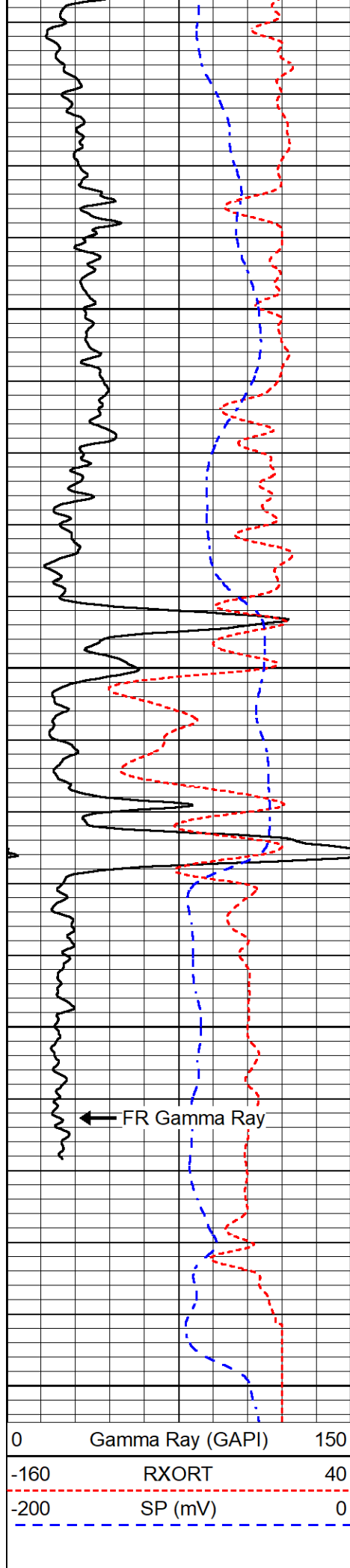
2750

2800

2850

2900







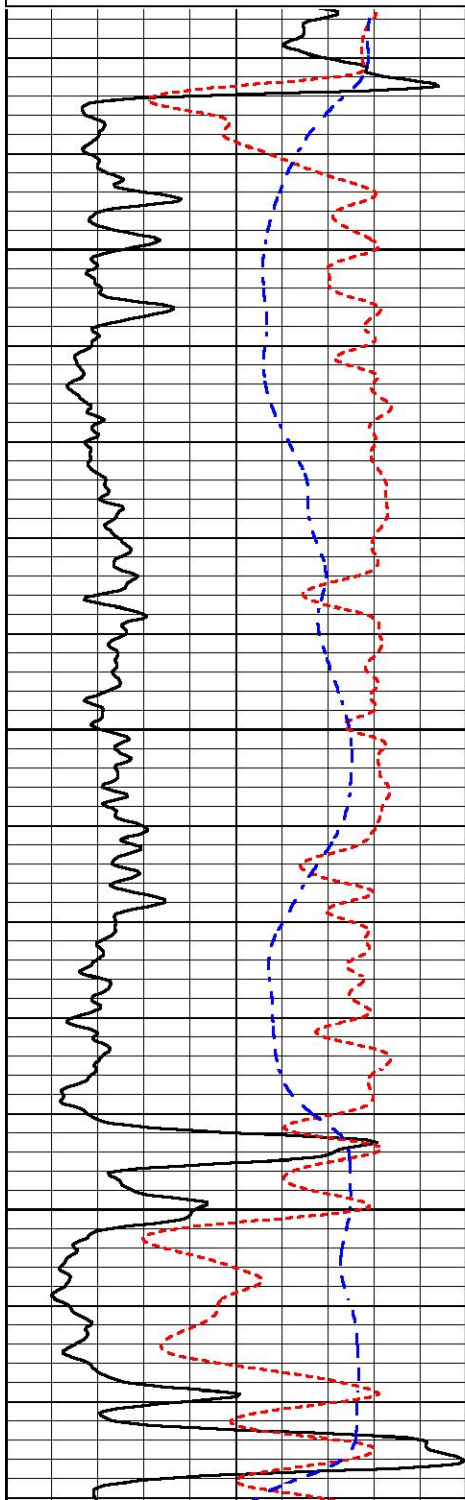
REPEAT SECTION

REPEAT PASS

Database File castle_hund 2.db
Dataset Pathname stkml/pass4.1
Presentation Format _dil
Dataset Creation Thu Apr 06 18:46:08 2023
Charted by Depth in Feet scaled 1:240

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

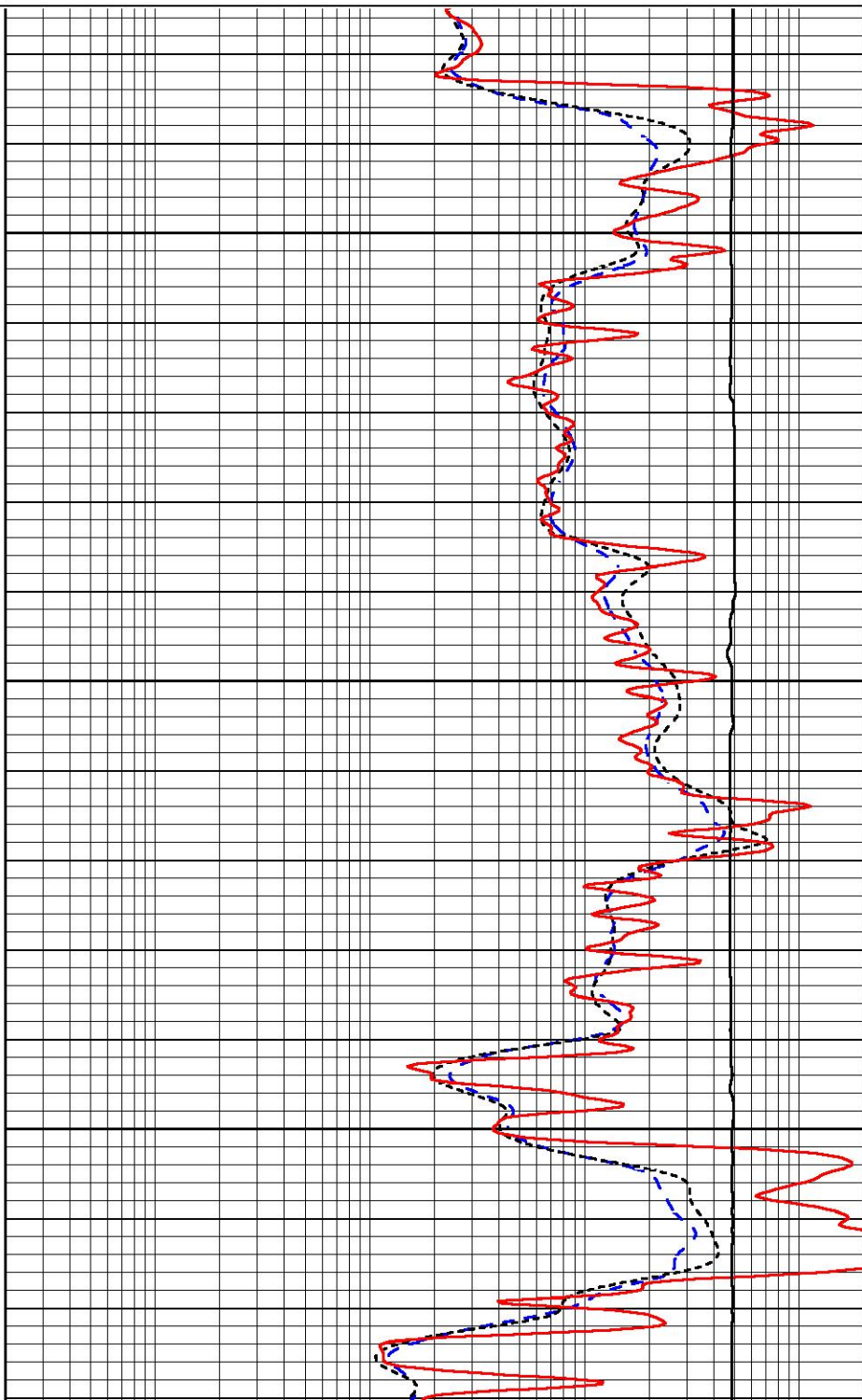
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

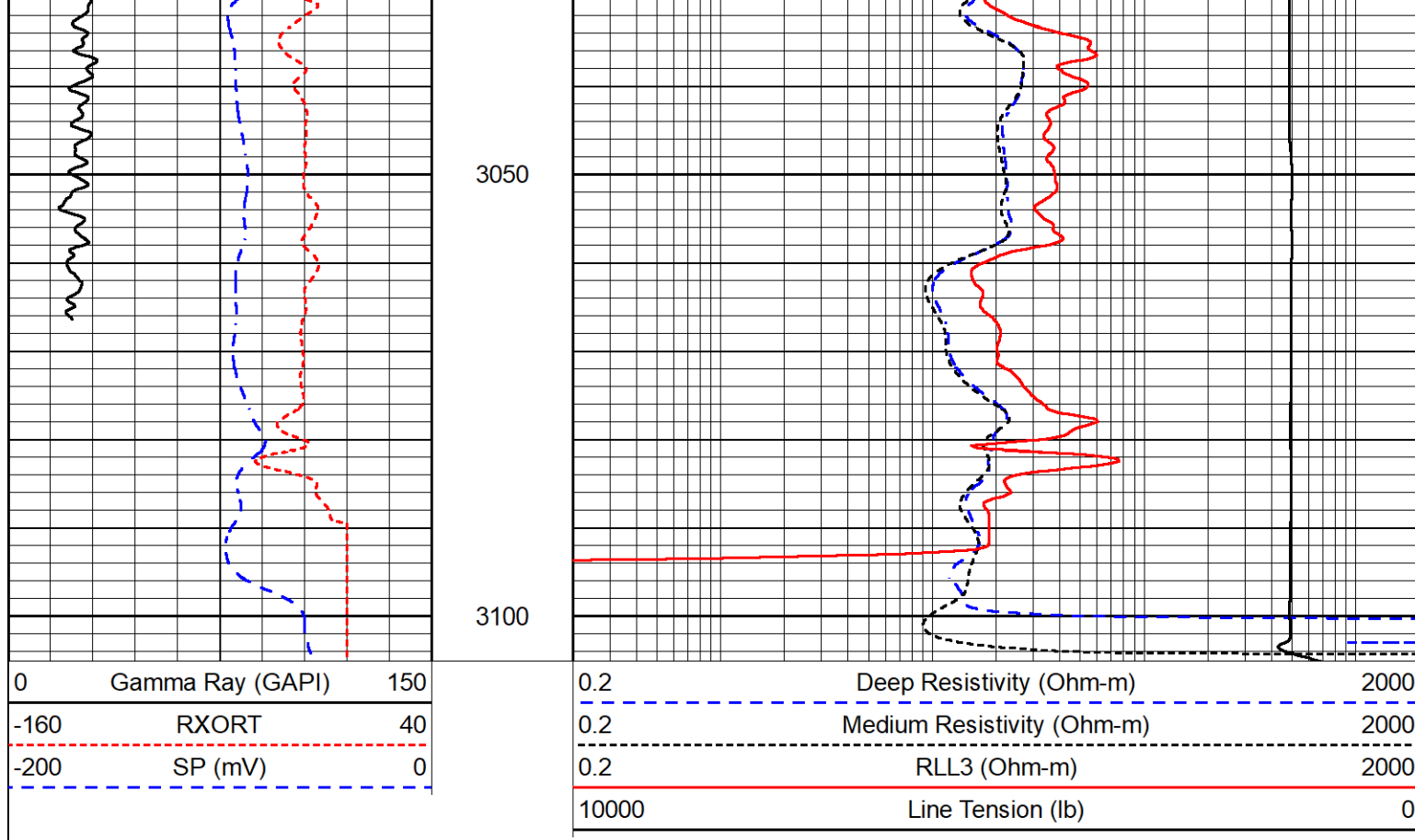


2900

2950

3000





Calibration Report		
Database File	castle_hund 2.db	
Dataset Pathname	stkml/pass5.1	
Dataset Creation	Thu Apr 06 18:55:40 2023	

Dual Induction Calibration Report							
Serial-Model:				505 HT-M&W			
Surface Cal Performed:				Mon Mar 20 13:26:49 2023			
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.475	-43.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.410	-52.000

Microlog Calibration Report							
Serial-Model:				402-PSI STKBL ML			
Performed:				Wed Jan 25 21:26:04 2023			
	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	11000.0000	-1.0000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	11500.0000	-0.5000
Caliper	1.0046	1.1419	5.5000	20.0000	in	50.0000	-44.6250

Compensated Density Calibration Report							
Serial-Model:				303-03-M&W			
Source #:				21170B			
Master Calibration Performed:				Mon Mar 20 13:27:55 2023			

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.665	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.512		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.03		

Compensated Neutron Calibration Report

Serial-Model: 210-M&W
 Source #: N-1238
 Master Calibration Performed: 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: Wed Jan 25 21:25:33 2023

Calibrator Value: 500.0 GAPI

Background Reading: 28.0 cps
 Calibrator Reading: 986.0 cps

Sensitivity: 0.5700 GAPI/cps



Company Castle Resources, Inc.
 Well Hund #2
 Field Newberry
 County Wabaunsee
 State Kansas