

DUAL INDUCTION LOG

MIDWEST WIRELINE

Company American Warrior, Inc.		Company American Warrior, Inc.	
Well	Hubin #3-10	Well	Hubin #3-10
Field	Lippoldt West	Field	Lippoldt West
County	Hodgeman	County	Hodgeman
State	Kansas	State	Kansas
Location: API #: 15-083-22010-00-00		Other Services	
1333 FSL & 1692 FWL		CNL/CDL MEL	
Permanent Datum	Ground Level	Elevation	2337
Log Measured From	Kelly Bushing	K.B.	2350
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2337
Date	7/2/2022		
Run Number	One		
Depth Driller	4725		
Depth Logger	4652		
Bottom Logged Interval	4651		
Top Log Interval	300		
Casing Driller	8.625 @ 311		
Casing Logger	311		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3000		
Density / Viscosity	9.3 54		
pH / Fluid Loss	9.5 8.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.45 @ 72		
Rmt @ Meas. Temp	0.34 @ 72		
Rmc @ Meas. Temp	0.61 @ 72		
Source of Rmt / Rmc	Charts		
Rm @ BHT	0.26 @ 123		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	123		
Equipment Number	24		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Kevin Timson		

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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.

Jetmore,
East to 219 Rd, South to K Rd, 2 East,
North into

Log Measured From: Kelly Bushing

13 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: Kevin Timson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\american warrior_hubin 3-10.db
Dataset field/well/stkml/pass3.2/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	125	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	85	70		4652

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

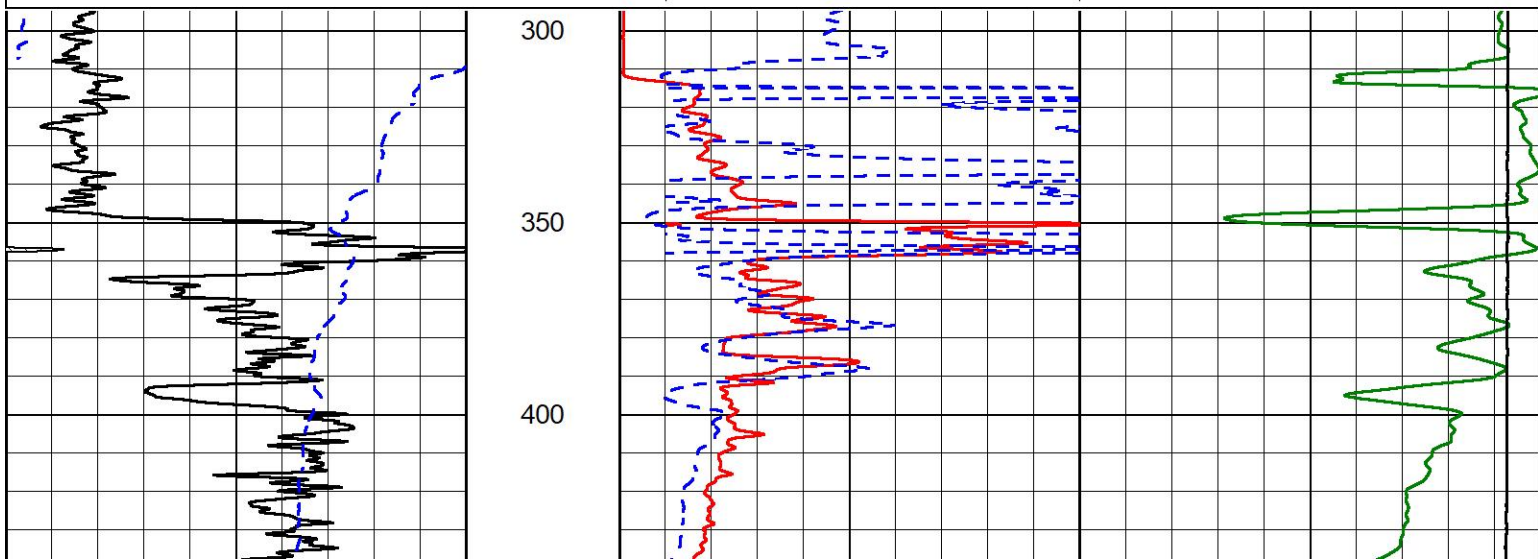


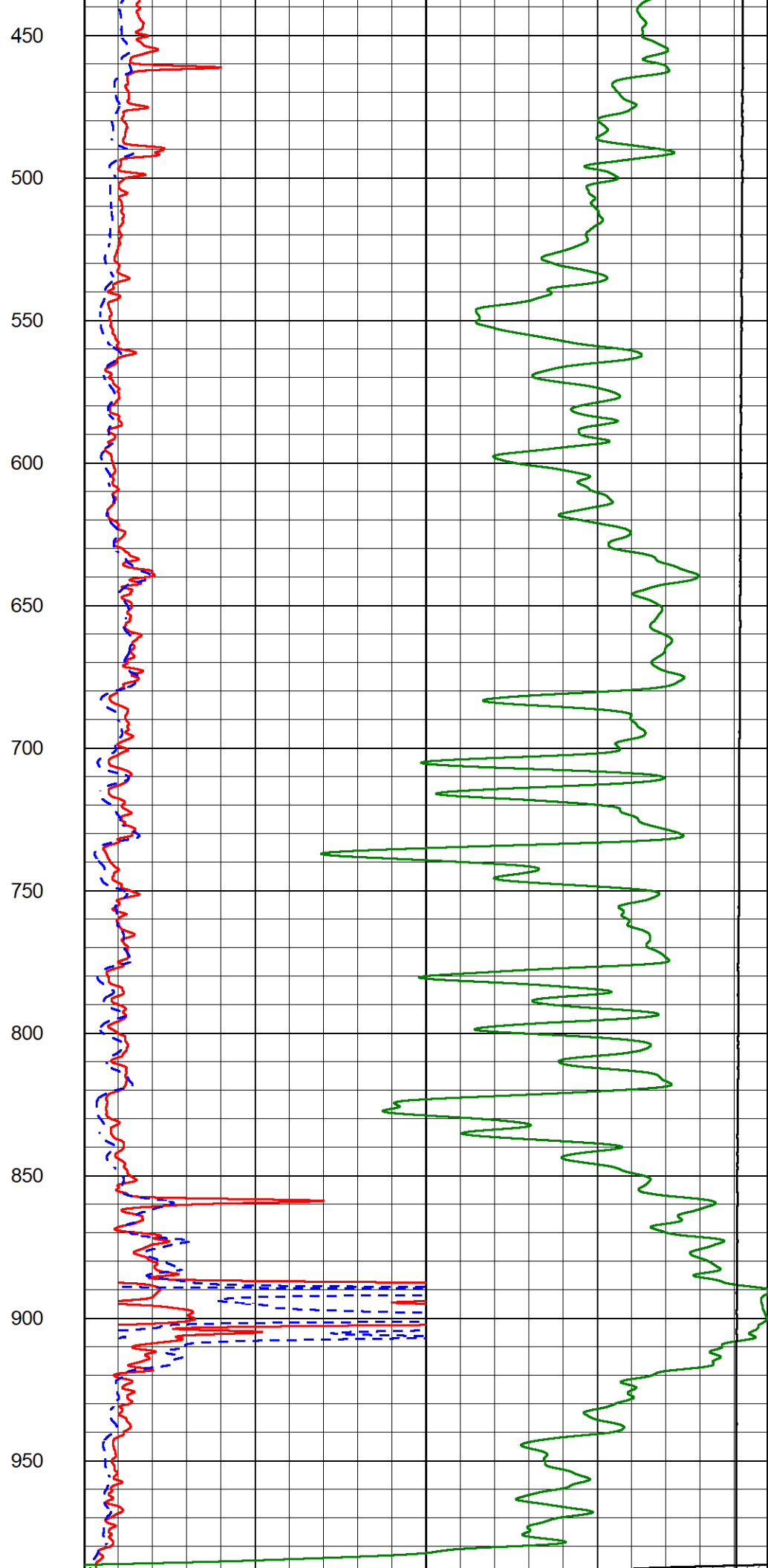
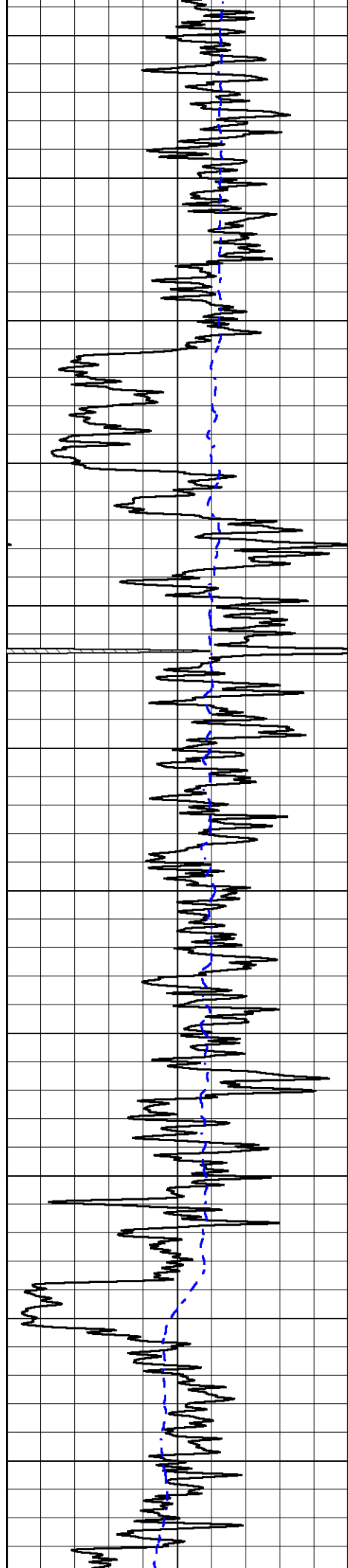
2" SCALE RESISTIVITY

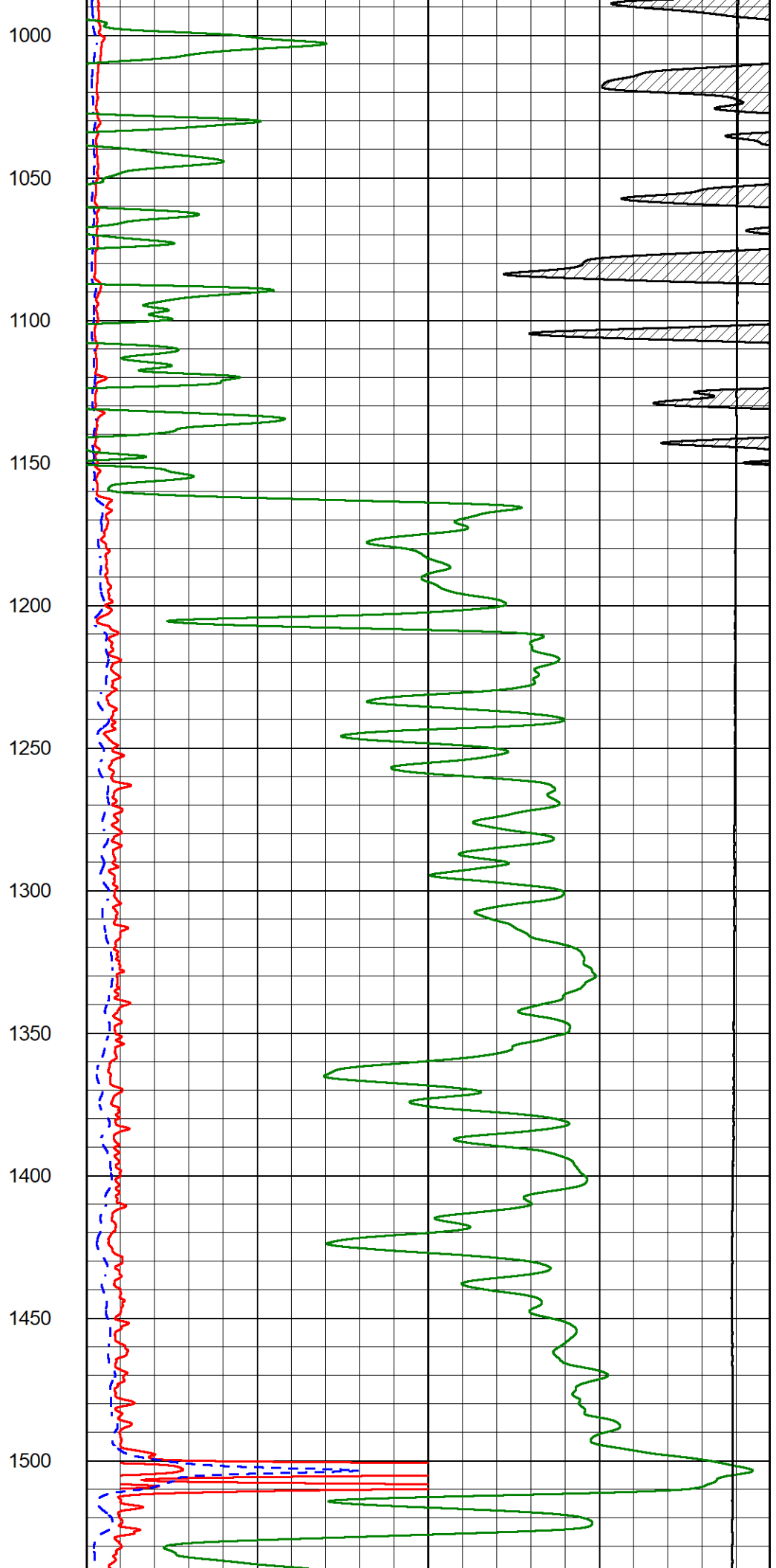
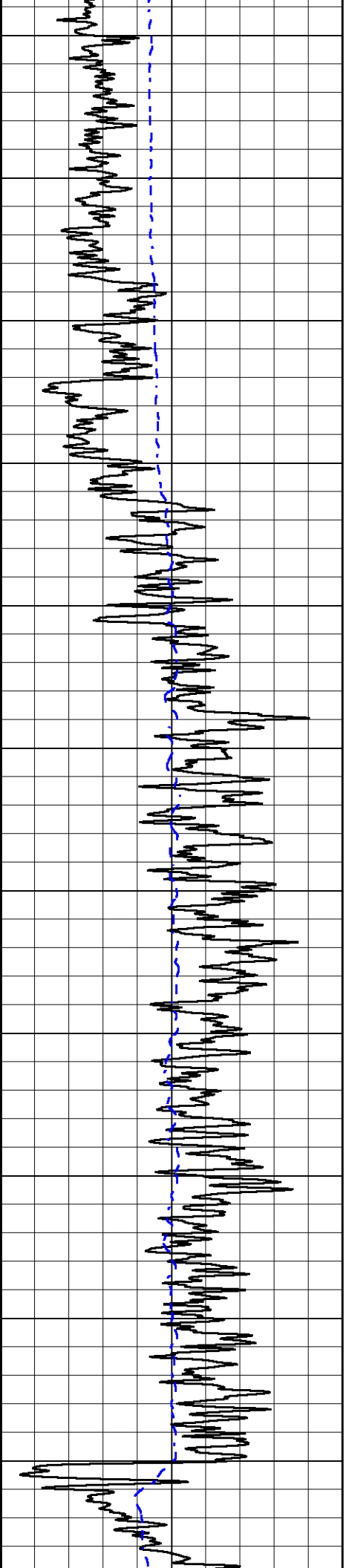
MAIN PASS

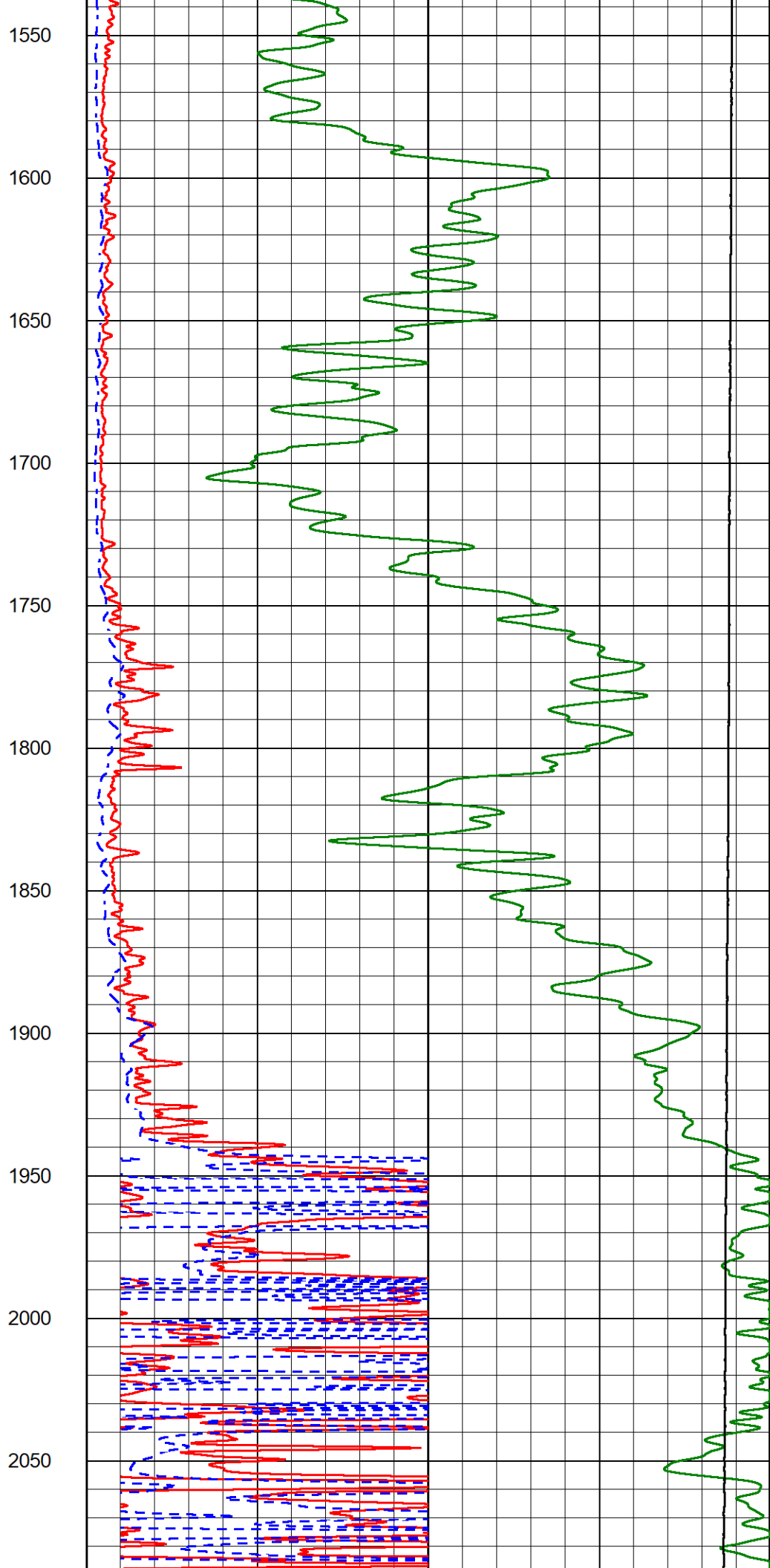
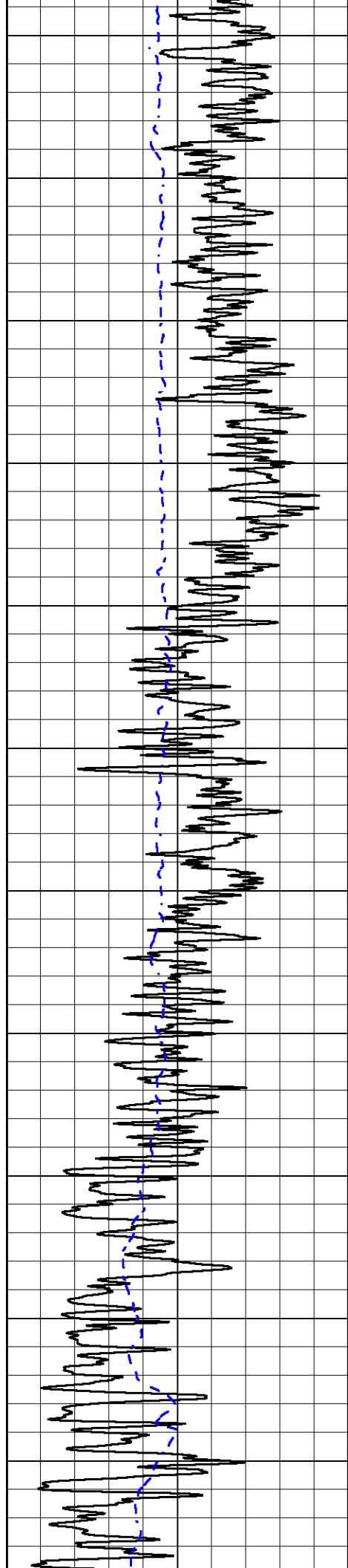
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Presentation Format _dil2in
Dataset Creation Sat Jul 02 10:10:29 2022
Charted by Depth in Feet scaled 1:600

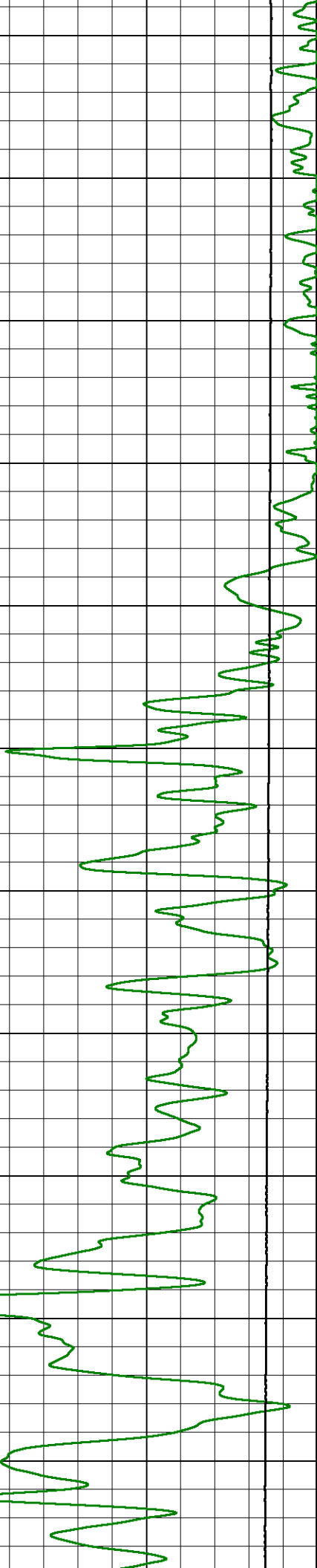
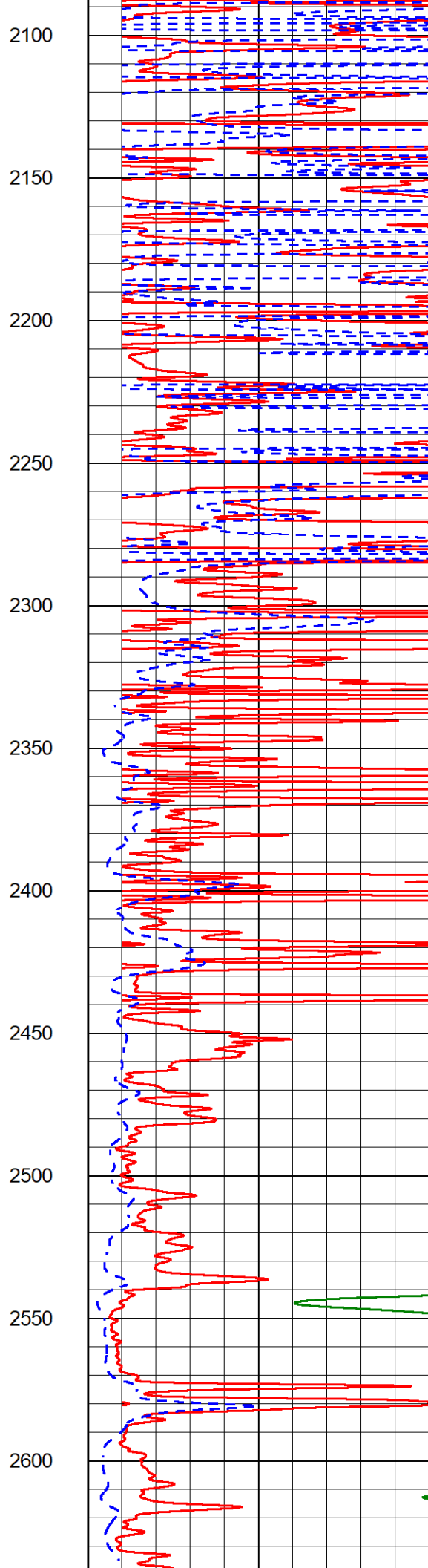
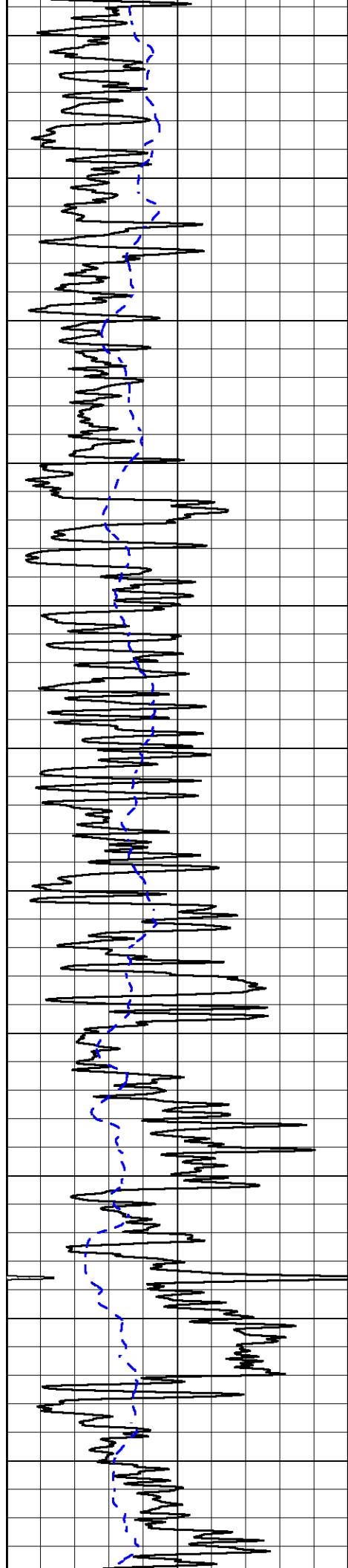
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

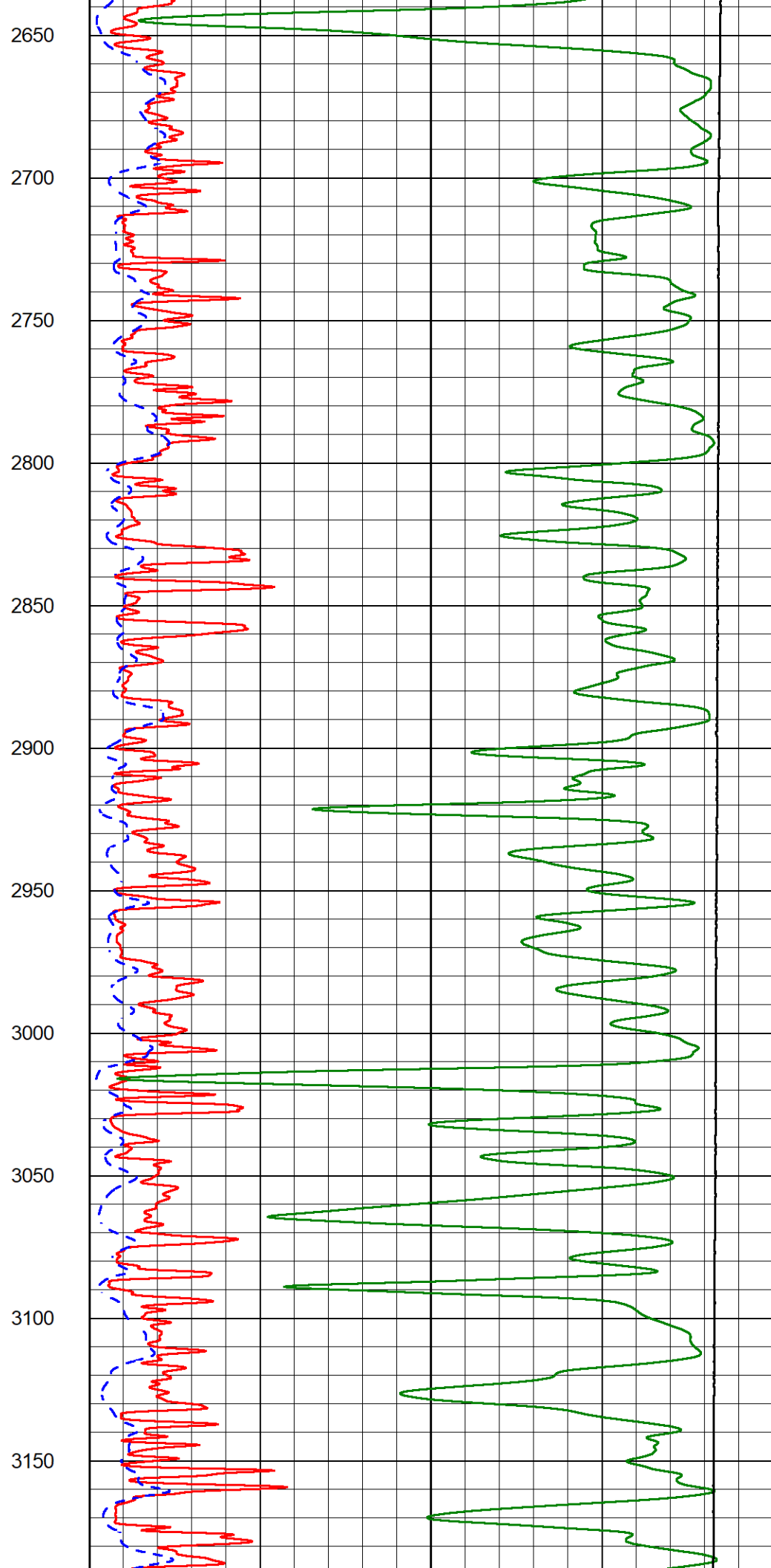
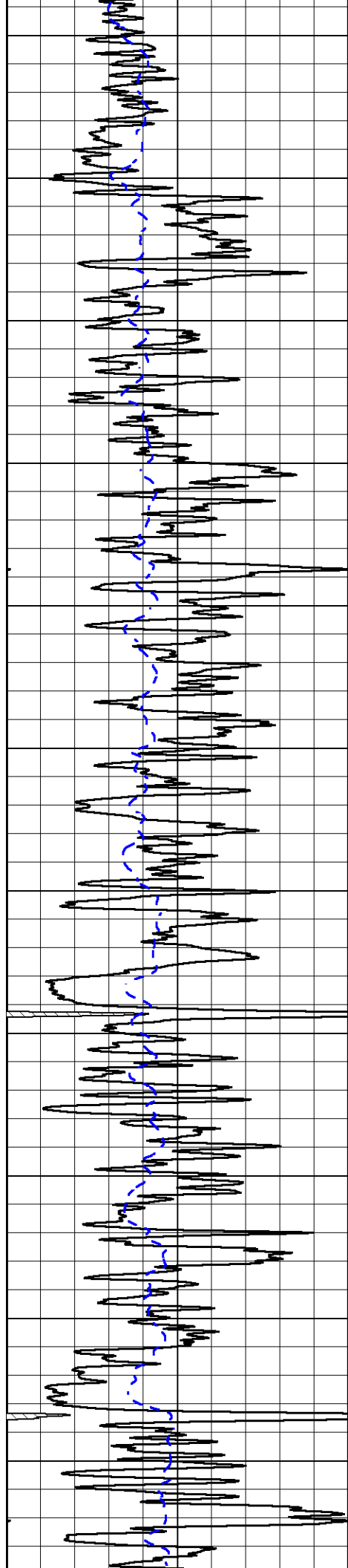


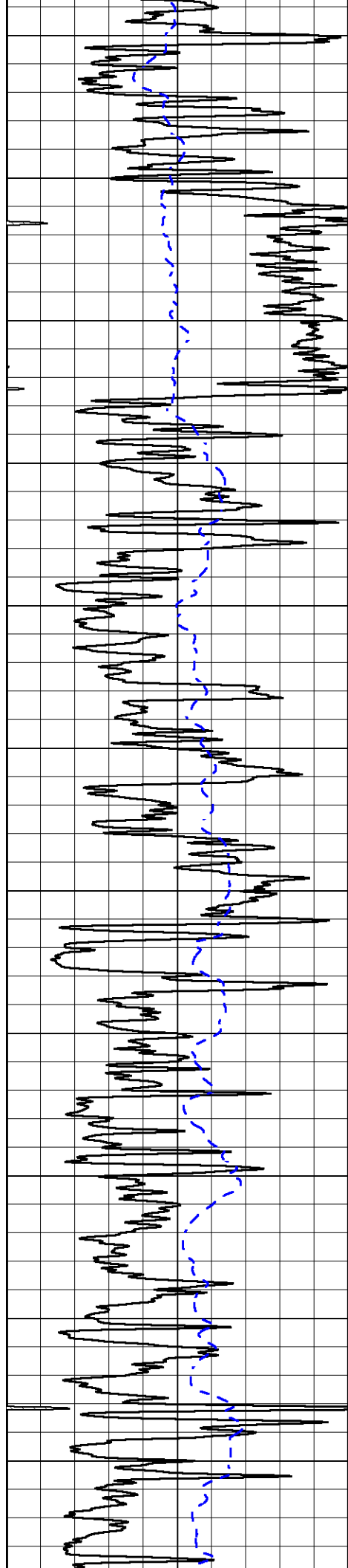












3200

3250

3300

3350

3400

3450

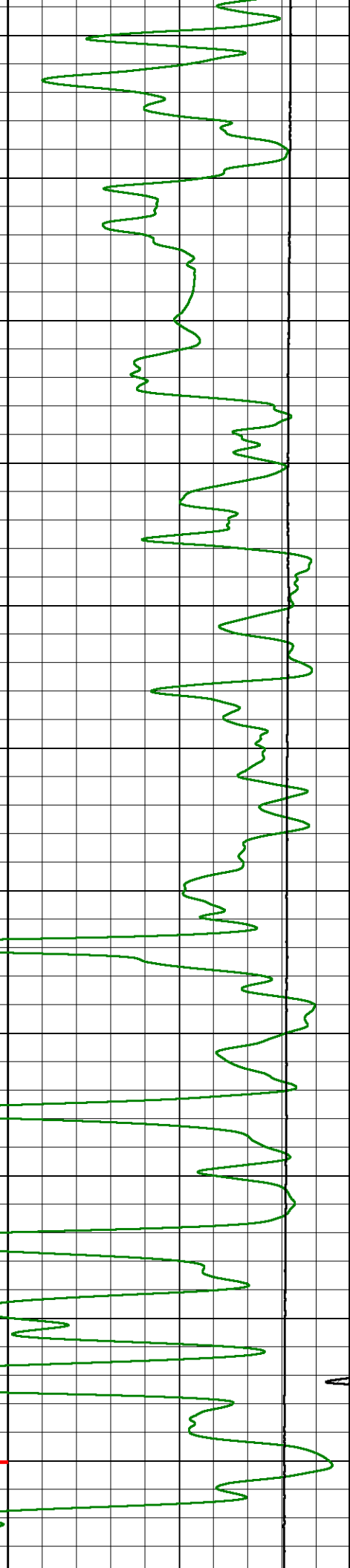
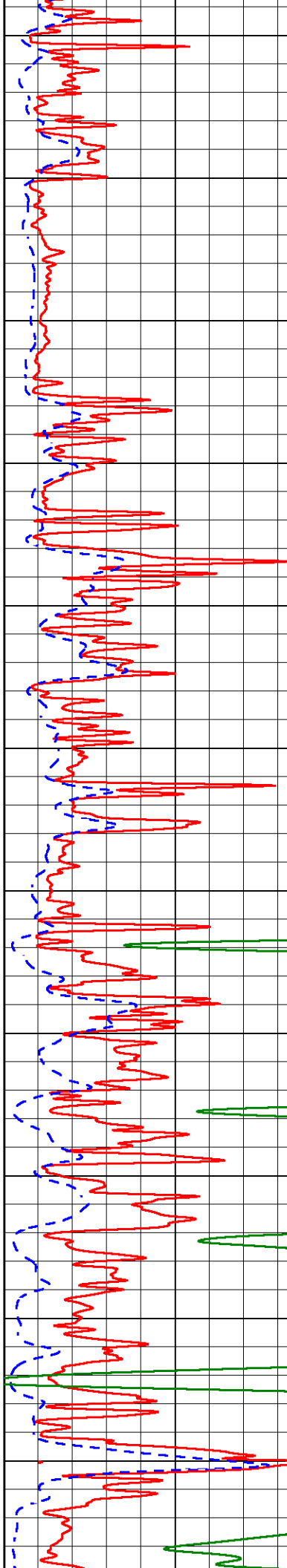
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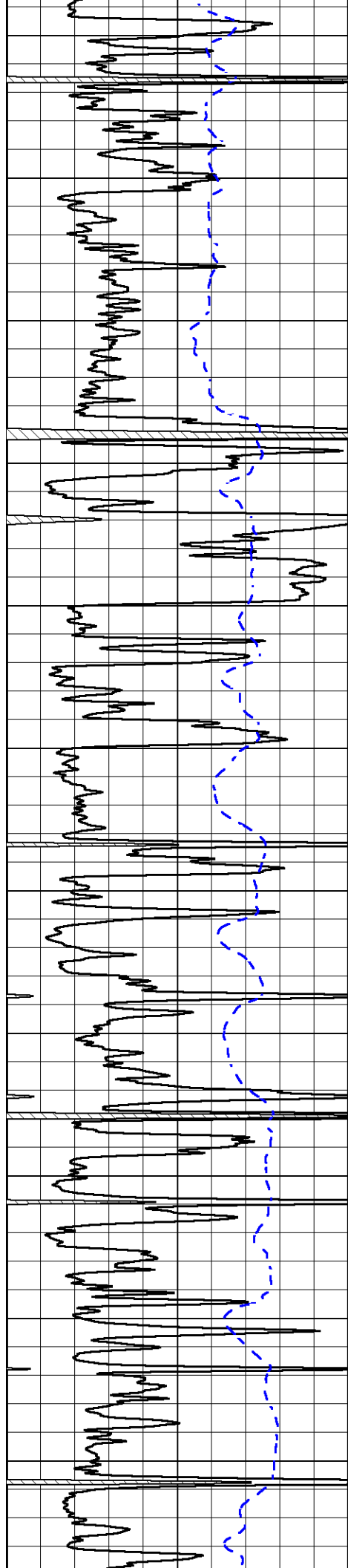
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3600

3650

3700





3750

3800

3850

3900

3950

4000

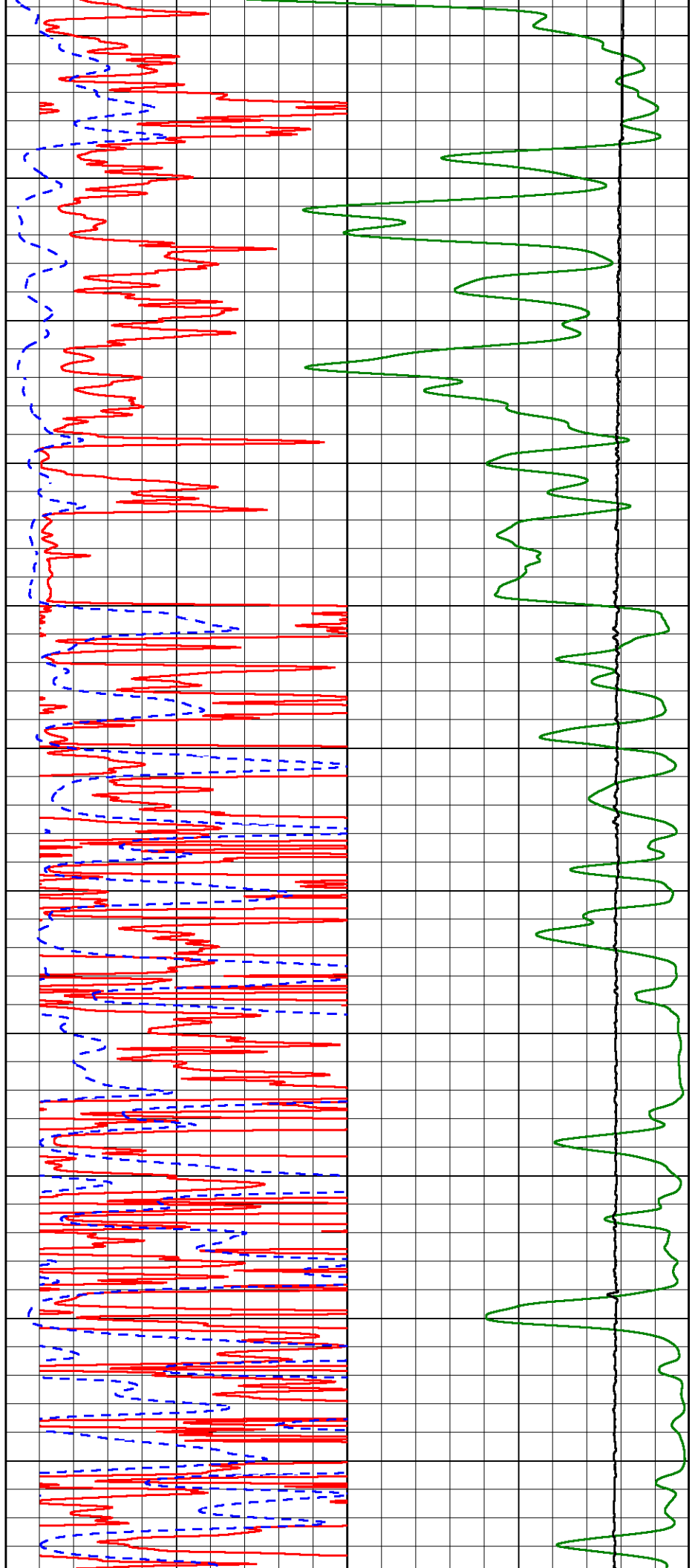
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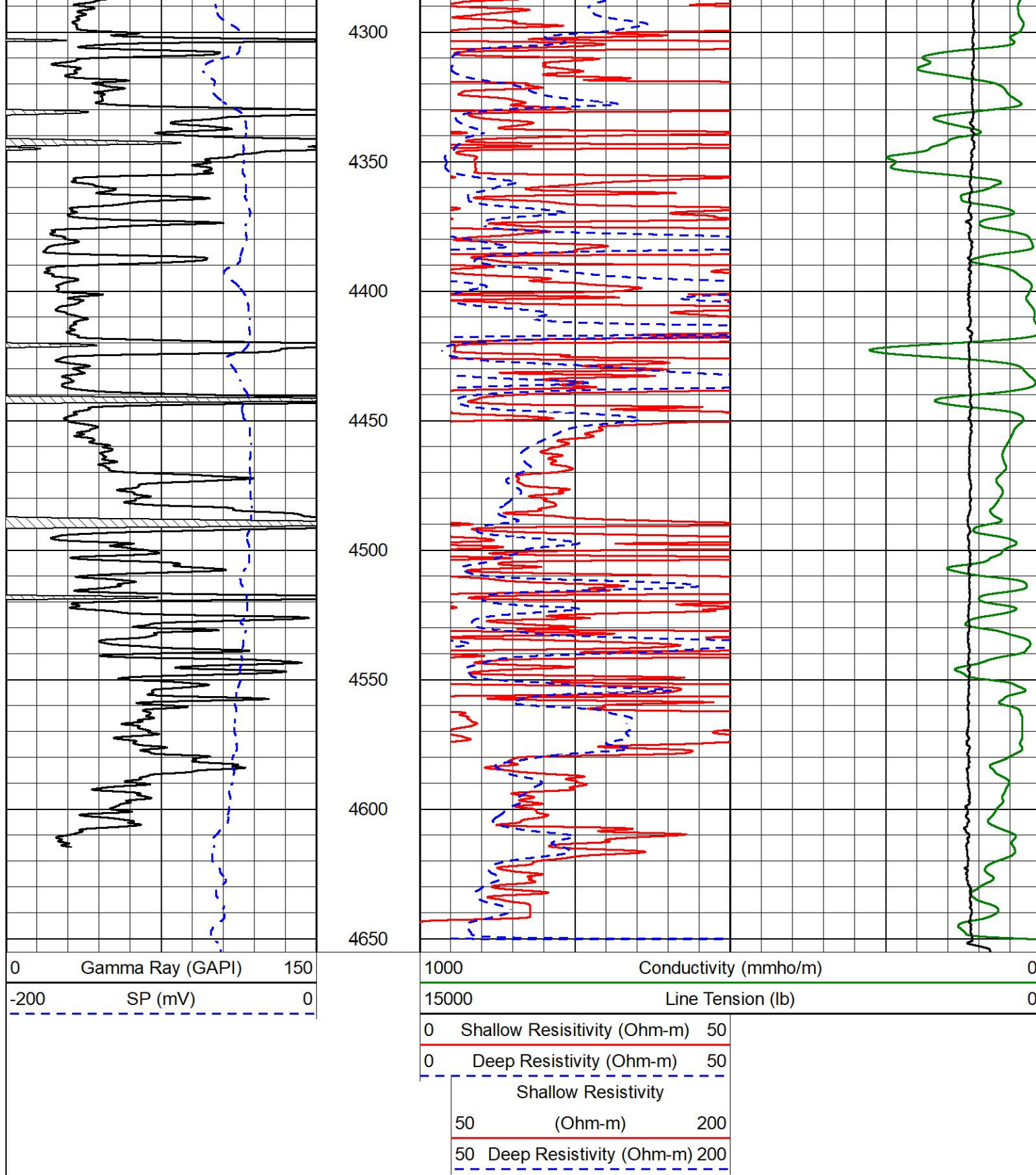
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4150

4200

4250

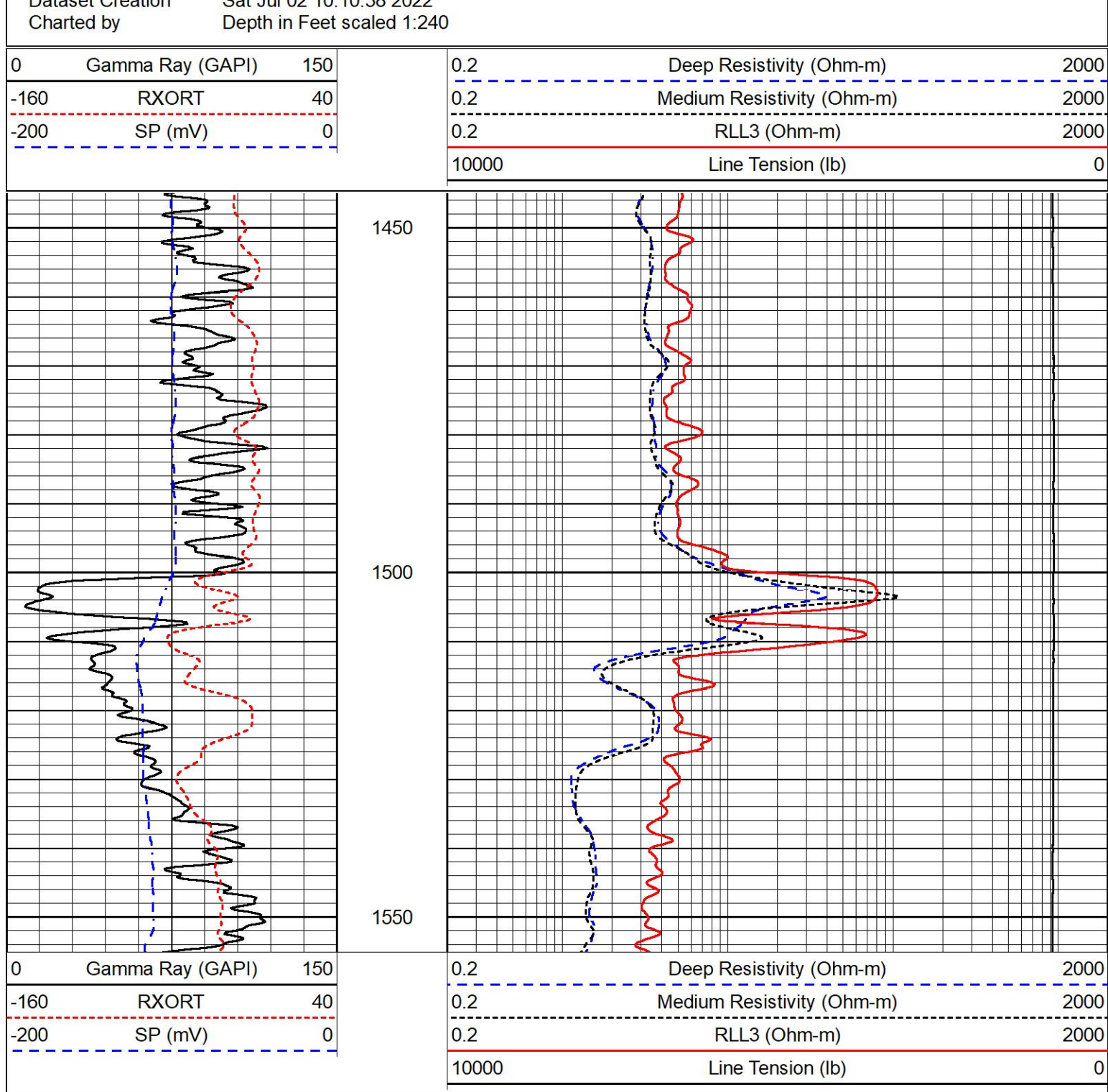




ANHYDRITE SECTION

MAIN PASS

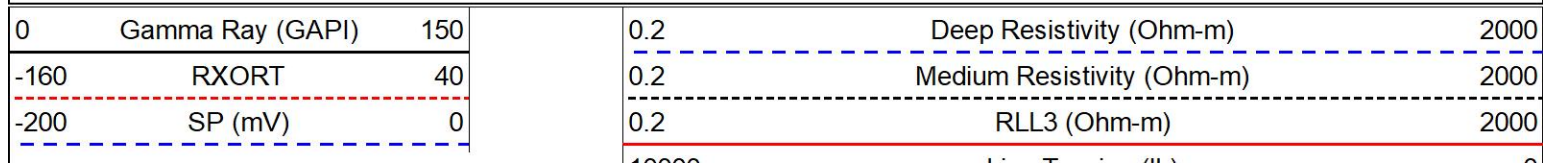
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 Dataset Creation Sat Jul 02 10:10:38 2022

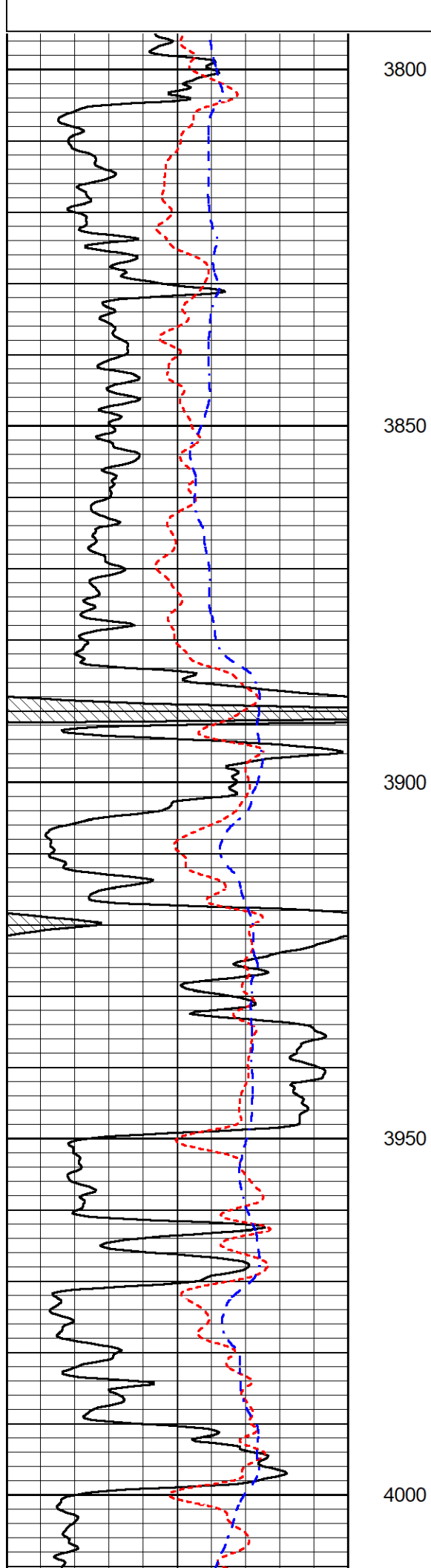
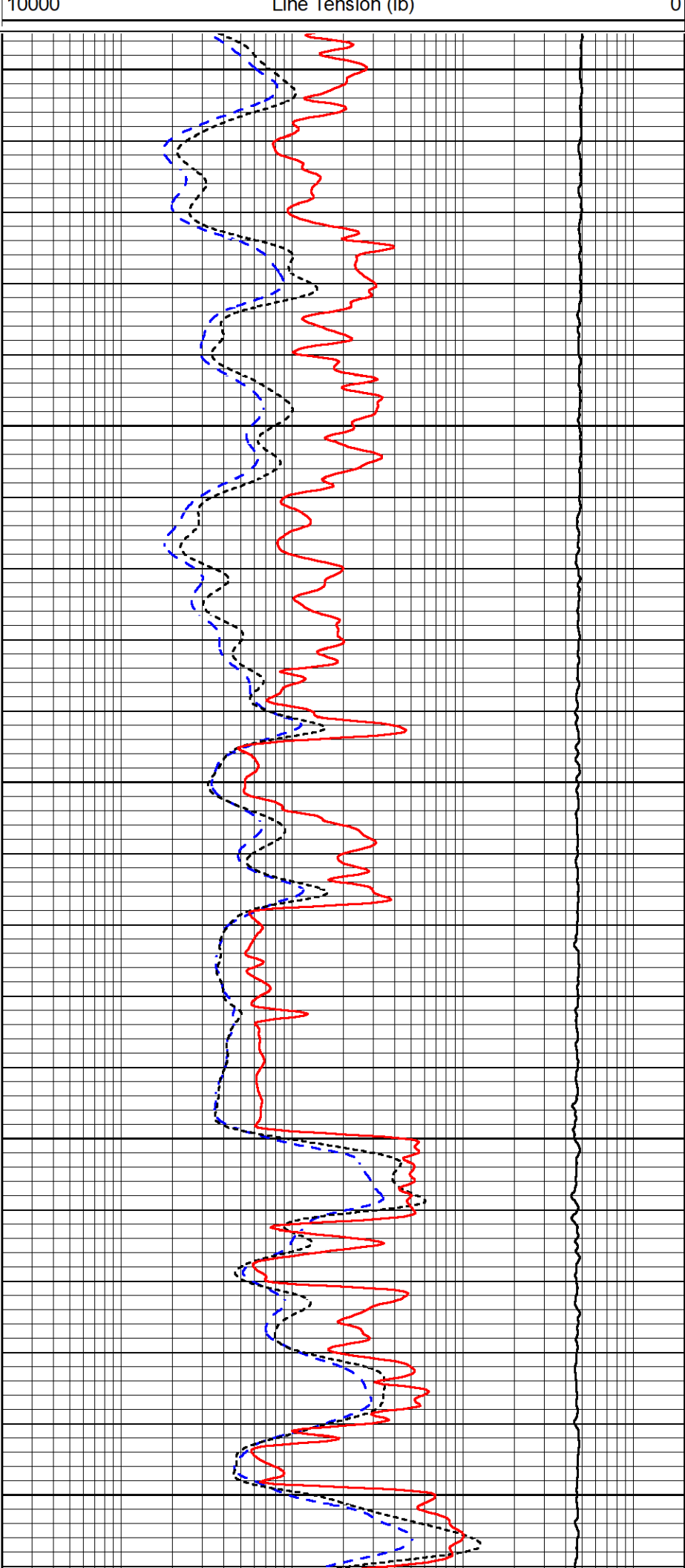


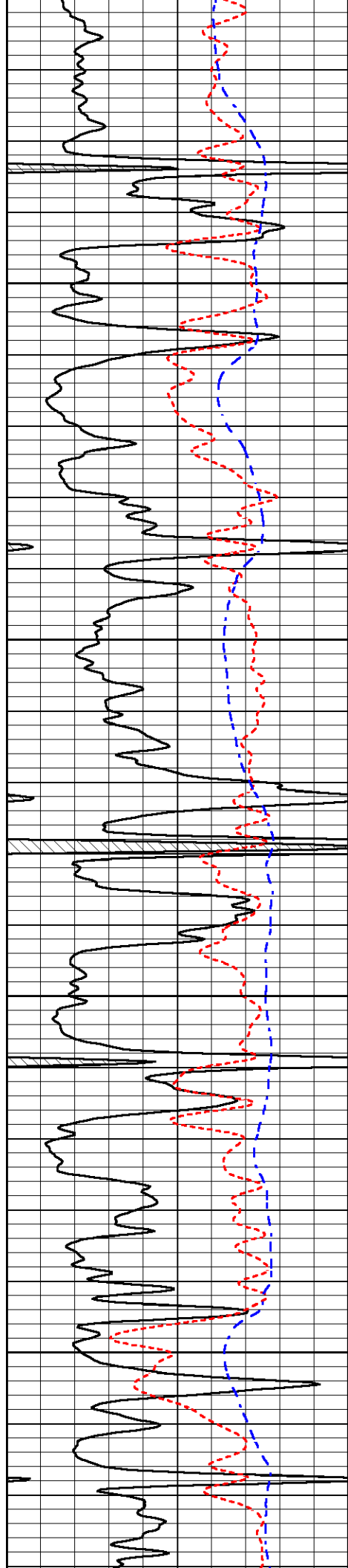
DETAIL SECTION

MAIN PASS

Database File american_warrior_hubin 3-10.db
Dataset Pathname stkml/pass3.1
Presentation Format _dil
Dataset Creation Sat Jul 02 10:10:20 2022
Charted by Depth in Feet scaled 1:240





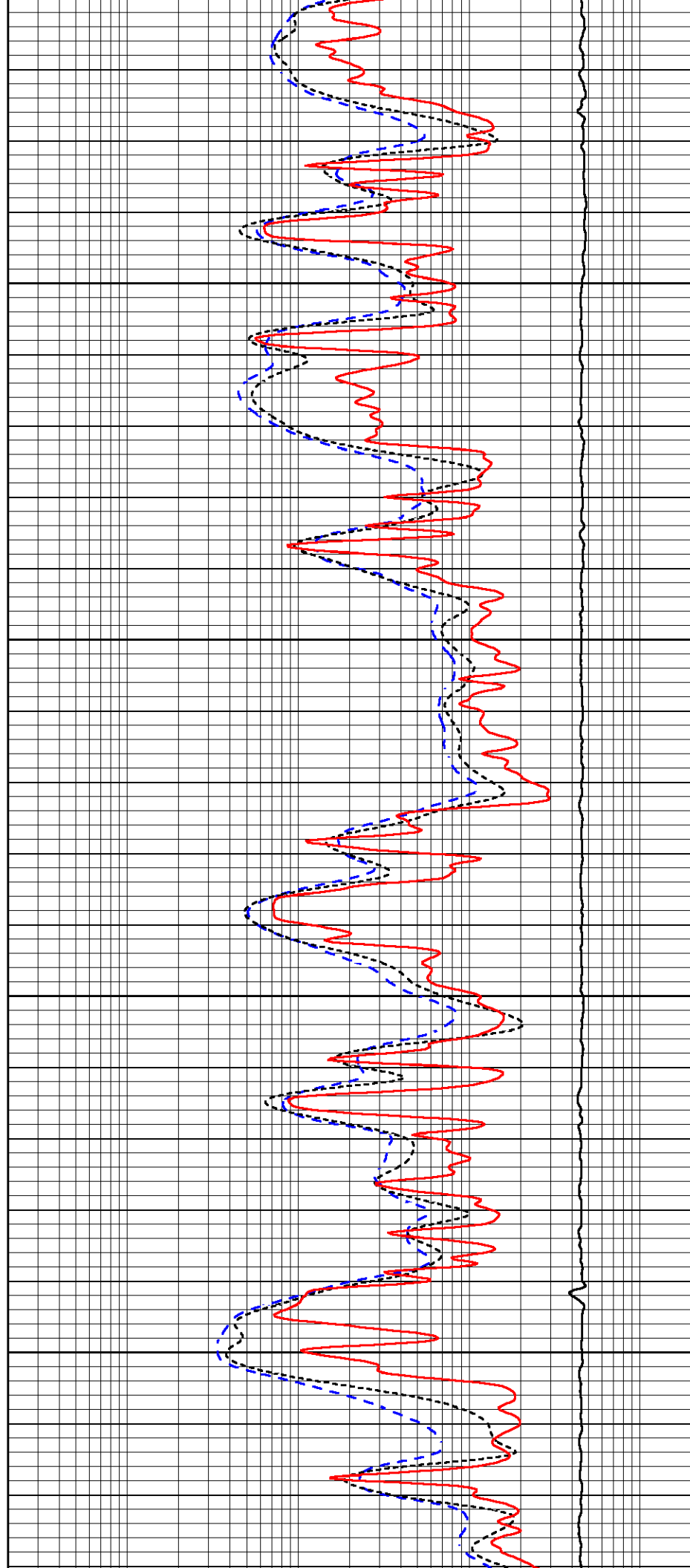


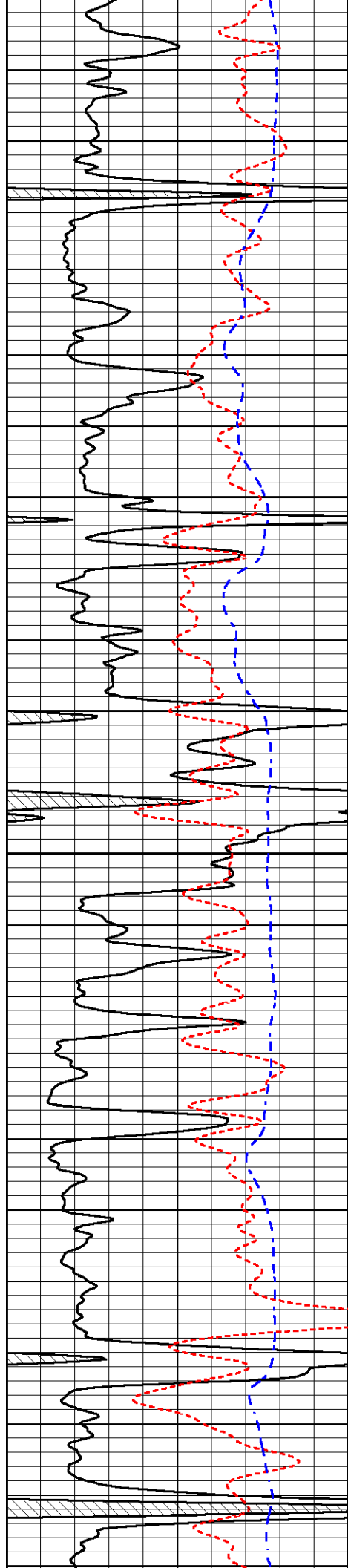
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4100

4150

4200





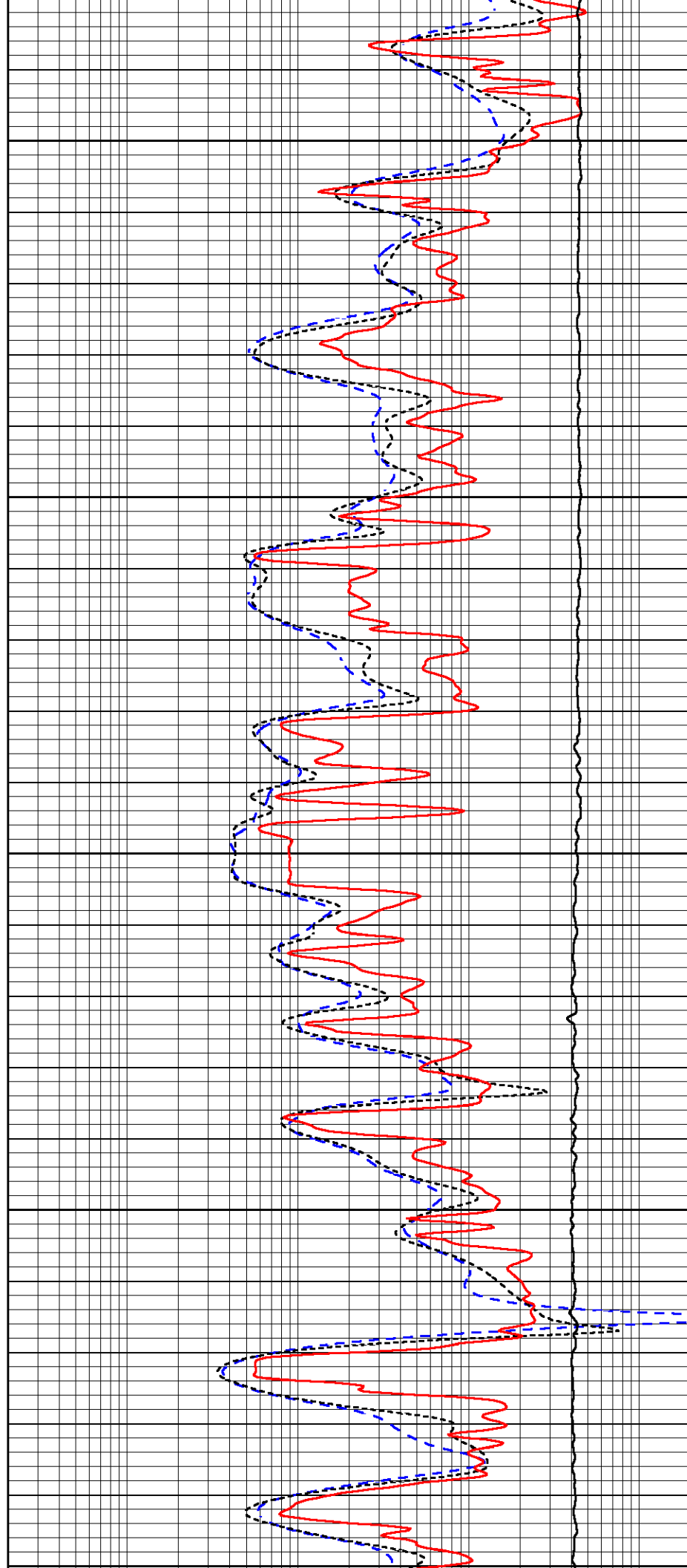
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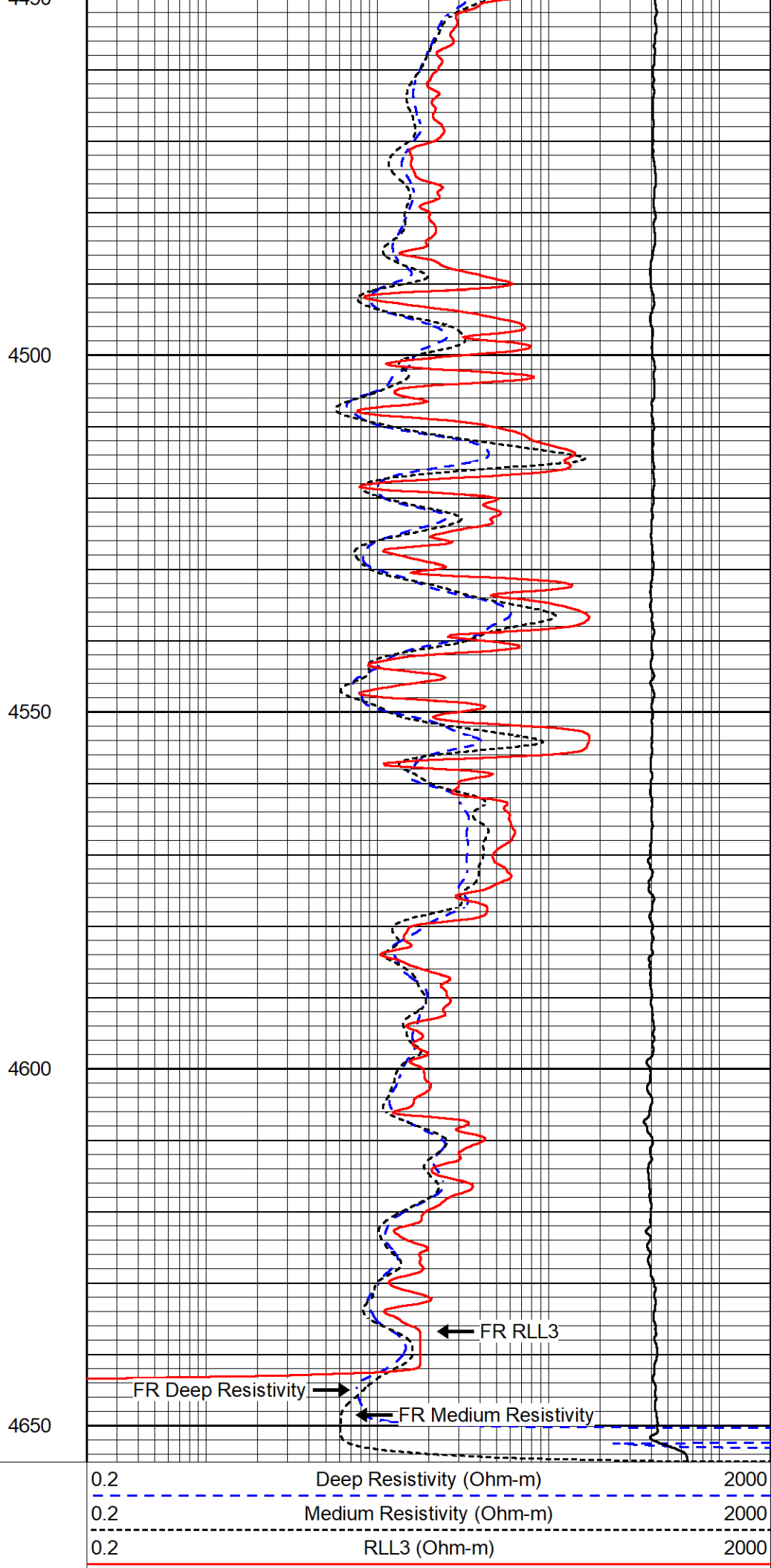
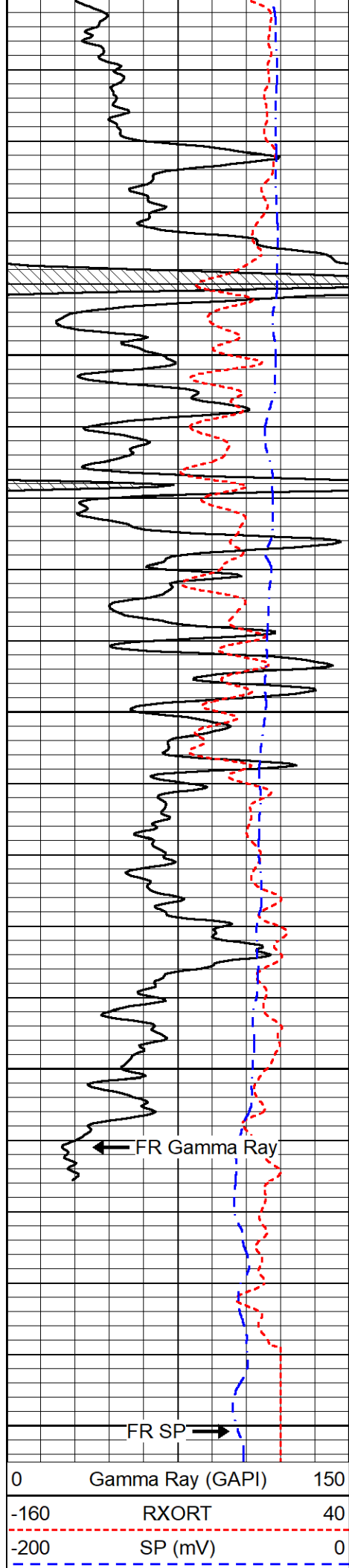
4300

4350

4400

4450







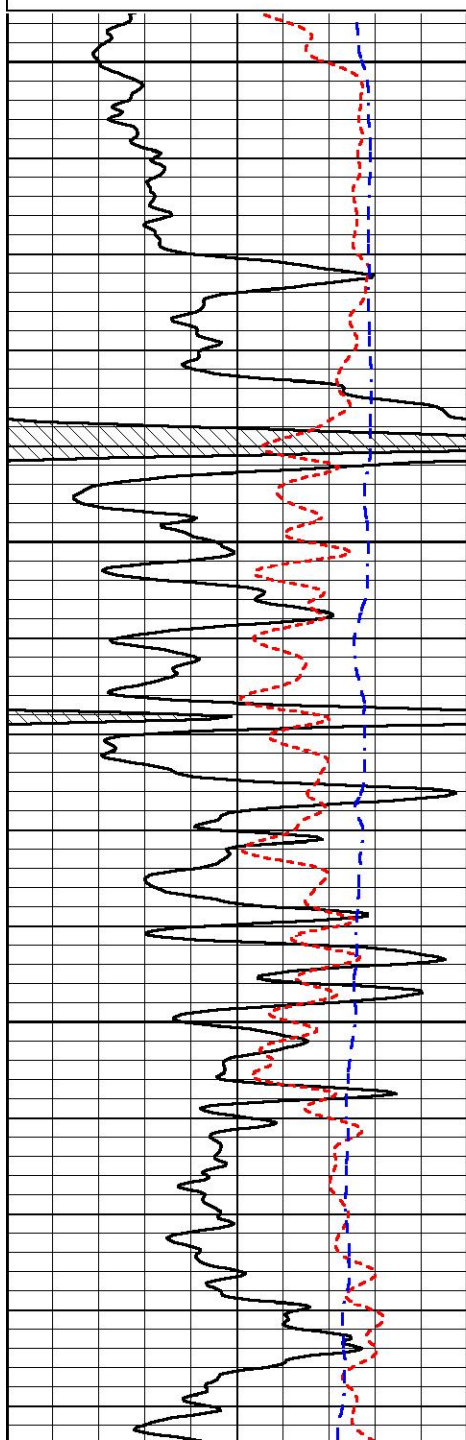
REPEAT SECTION

REPEAT PASS

Database File american_warrior_hubin_3-10.db
Dataset Pathname stkml/pass2.1
Presentation Format _dil
Dataset Creation Sat Jul 02 09:40:31 2022
Charted by Depth in Feet scaled 1:240

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

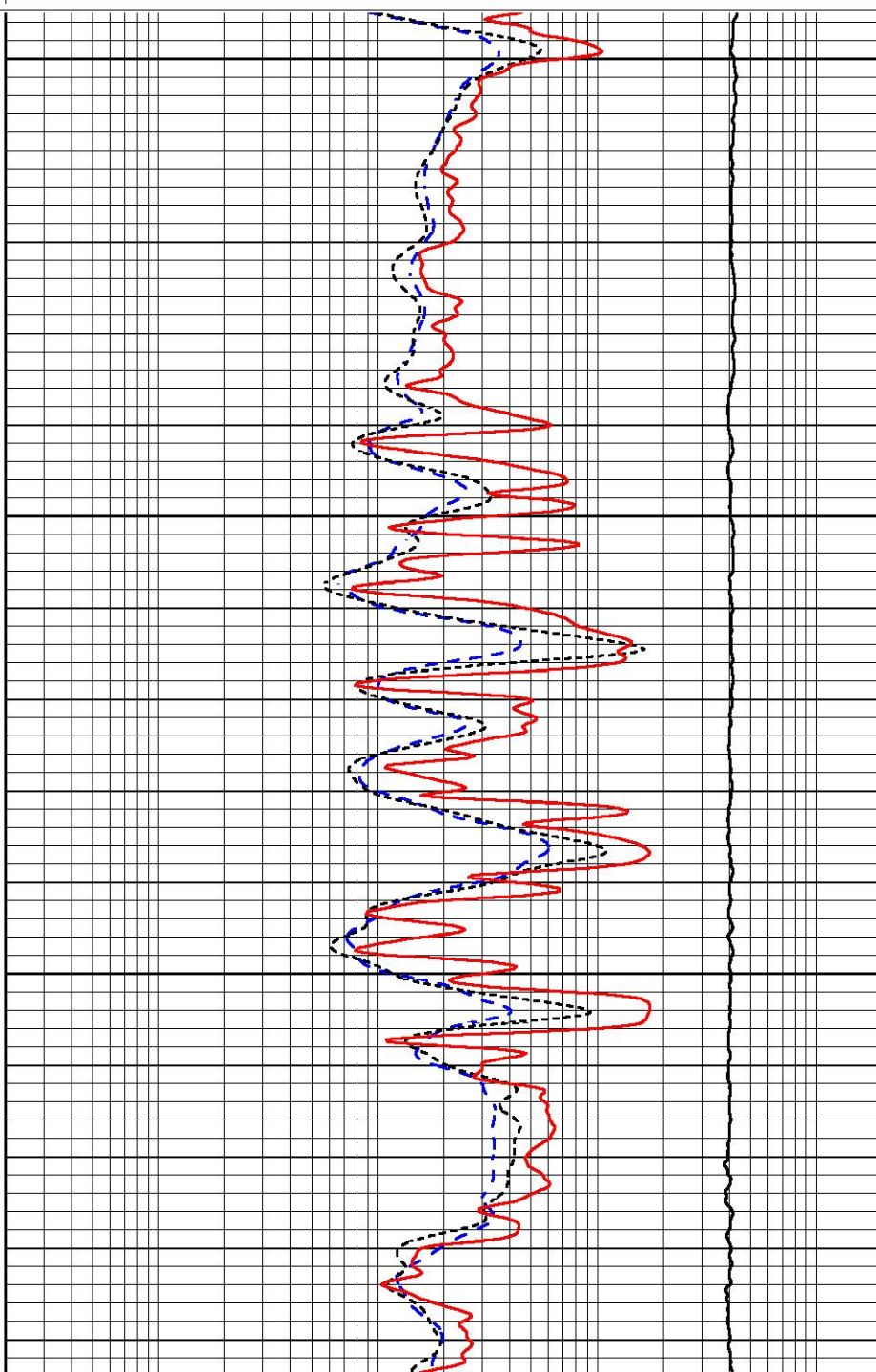
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

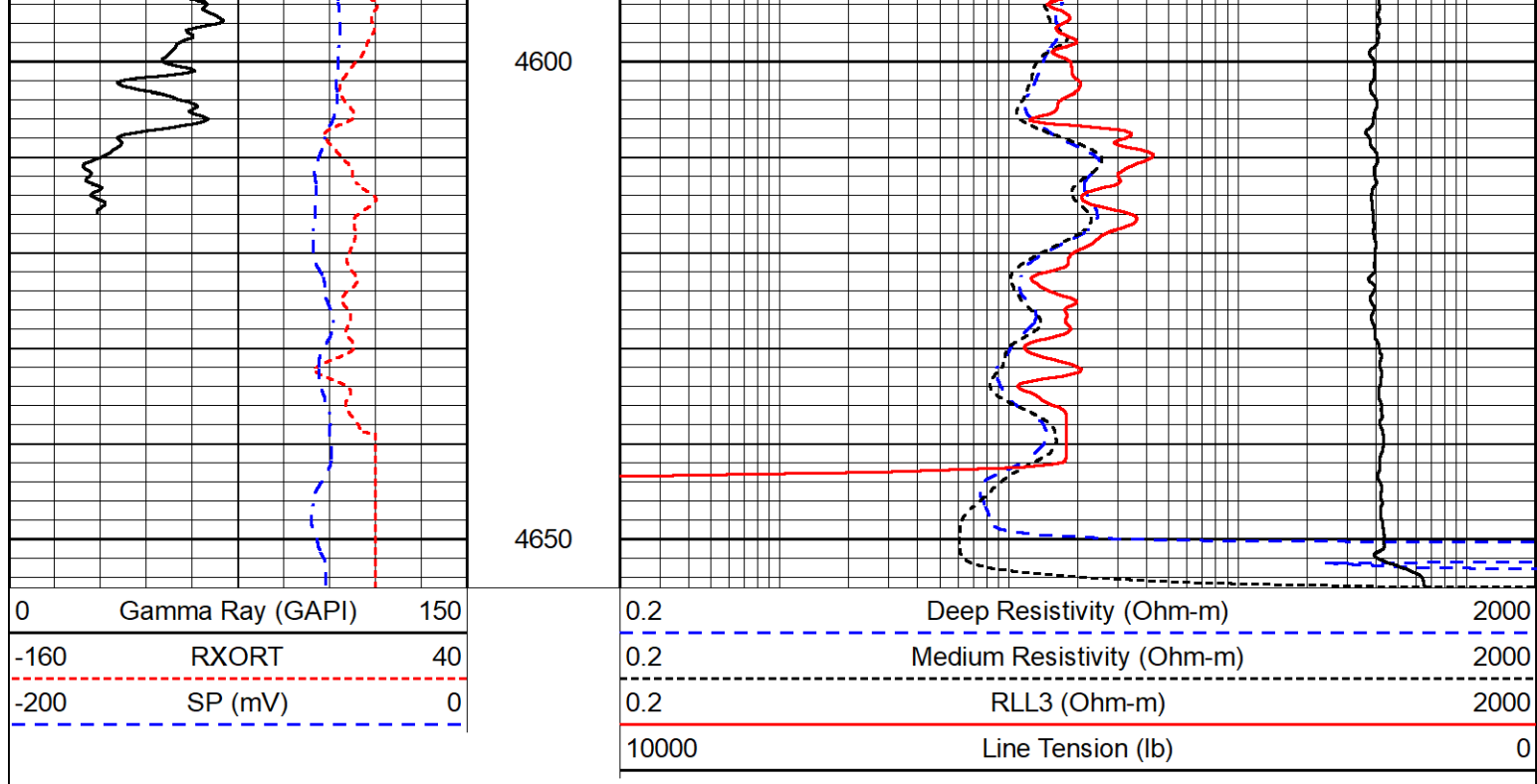


4450

4500

4550





Calibration Report	
Database File	american warrior_hubin 3-10.db
Dataset Pathname	stkml/pass3.2
Dataset Creation	Sat Jul 02 09:46:12 2022

Dual Induction Calibration Report	
Serial-Model:	501 HT-M&W
Surface Cal Performed:	Sat Apr 30 02:12:10 2022

Readings			References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-34.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.350	-11.000

Microlog Calibration Report	
Serial-Model:	401-PSIML
Performed:	Mon Jun 27 17:53:09 2022

Readings			References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	31500.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.4000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-140.1000

Compensated Density Calibration Report	
Serial-Model:	302-02-M&W
Source #:	20762B
Master Calibration Performed:	Wed Jun 22 01:19:51 2022

Master Calibration	
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	Density			Far Detector	Near Detector	
Magnesium	1.755	g/cc		4422.04	6163.44	cps
Aluminum	2.655	g/cc		835.14	3912.91	cps
Spine Angle = 74.75			Density/Spine Ratio = 0.521			
	Size			Reading		
Small Ring	8.00	in		0.53		
Large Ring	16.00	in		0.60		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W

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

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	
3)	Short Space	cps			
	Long Space	cps		pu	

POST-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	pu
3)	Short Space	cps			
	Long Space	cps		pu	pu

Gamma Ray Calibration Report

Serial Number: 101
Tool Model: M&W
Performed: Mon Jan 24 19:14:46 2022

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
Calibrator Reading: 637.0 cps

Sensitivity: 0.5500 GAPI/cps





MIDWEST WIRELINE

Well	Hubin #3-10
Field	Lippoldt West
County	Hodgeman
State	Kansas