



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company American Warrior, Inc.		Company American Warrior, Inc.	
Well	Sinclair #1-16	Well	Sinclair #1-16
Field	Lippoldt East	Field	Lippoldt East
County	Hodgeman	County	Hodgeman
State	Kansas	State	Kansas
Location: API #: 15-083-22013-00-00		Other Services	
Permanent Datum NW SW SE NW Log Measured From 221 FNL & 1401 FWL Drilling Measured From SEC 16 TWP 23S RGE 22W		CNL/CDL MEL/BHCS	
Ground Level Elevation 2257		Elevation	
Kelly Bushing		K.B. 2270	
Kelly Bushing		D.F. 2257	
G.L. 2257			
Date	7/24/2022		
Run Number	One		
Depth Driller	4528		
Depth Logger	4536		
Bottom Logged Interval	4535		
Top Log Interval	300		
Casing Driller	8.625 @ 313		
Casing Logger	316		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	11800		
Density / Viscosity	9.3 52		
pH / Fluid Loss	9.0 11.6		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.7 @ 72		
Rmt @ Meas. Temp	0.53 @ 72		
Rmc @ Meas. Temp	0.95 @ 72		
Source of Rmt / Rmc	Charts		
Rm @ BHT	0.42 @ 121		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	121		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
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.

Hanston, S on Rd 228 to L Rd,
1 W to 227, 1.2 S, W into at red gate

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: T. Martin
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\amwar_sinclair #1-16.db
Dataset field/well/Stack/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 121	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 100	degF 80	Off	ft 4536

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

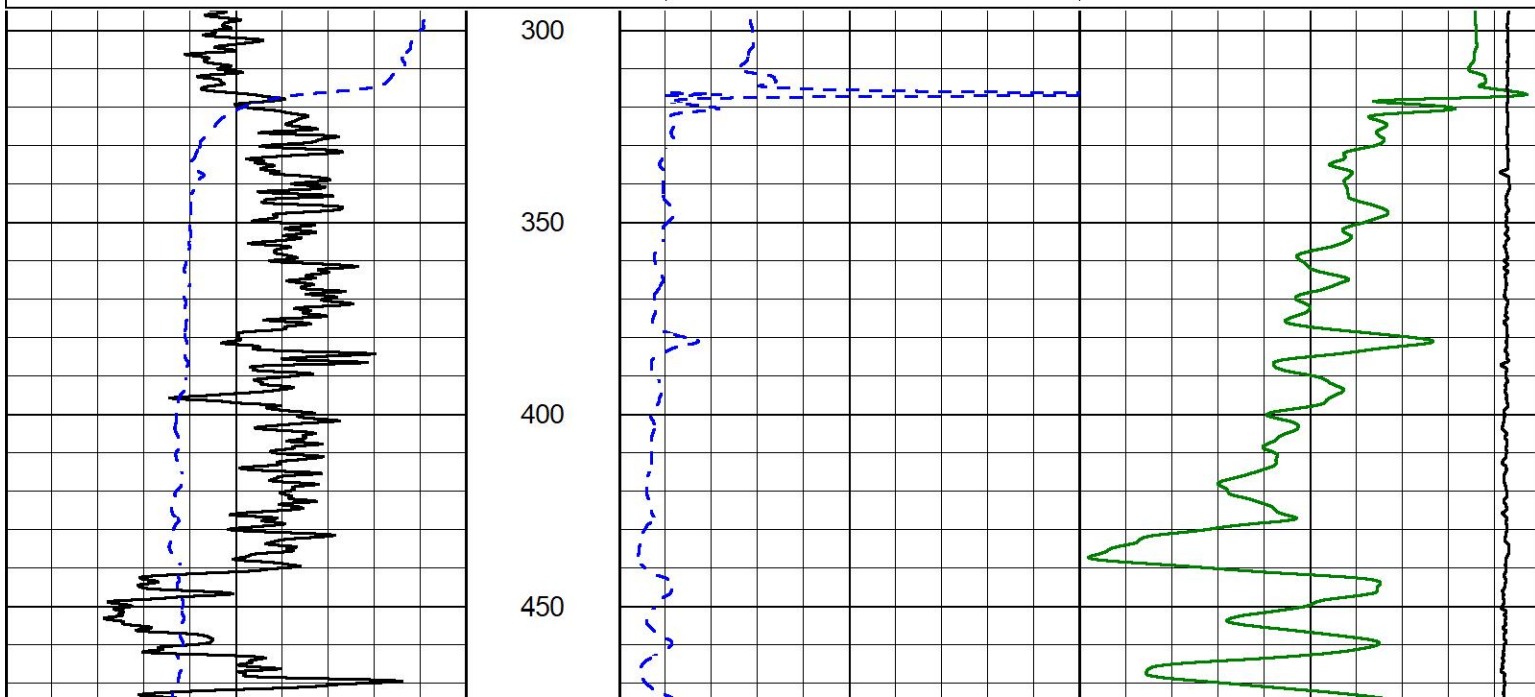


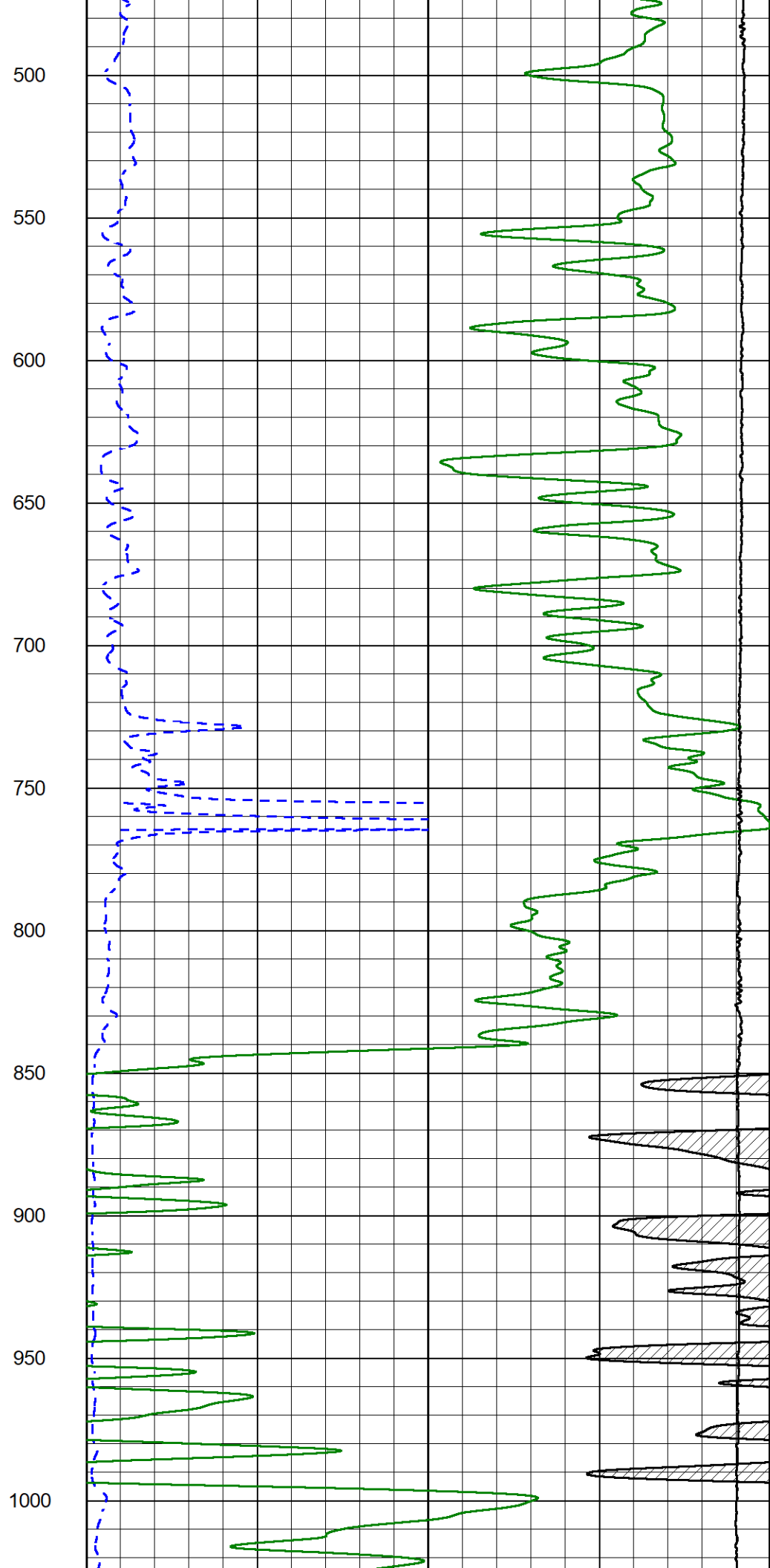
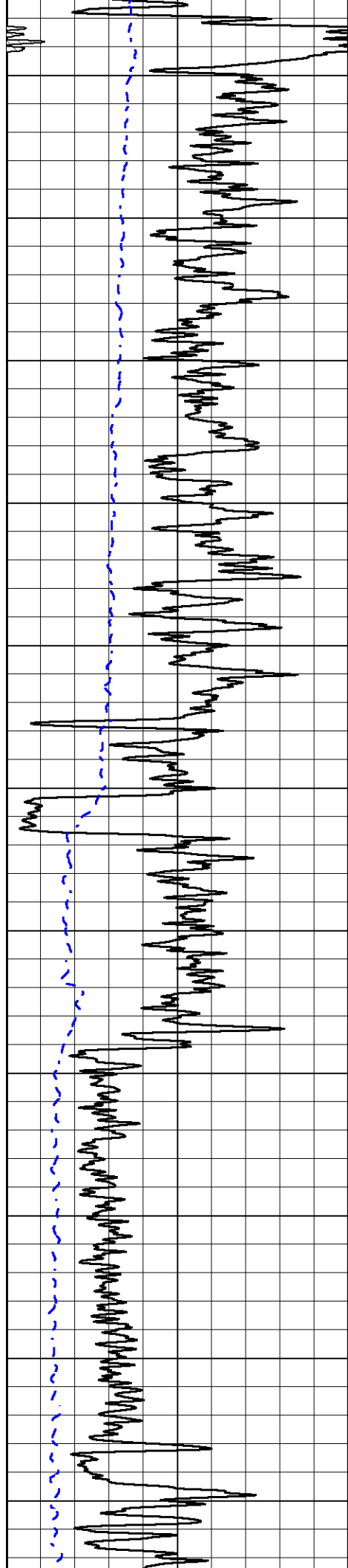
2" SCALE RESISTIVITY

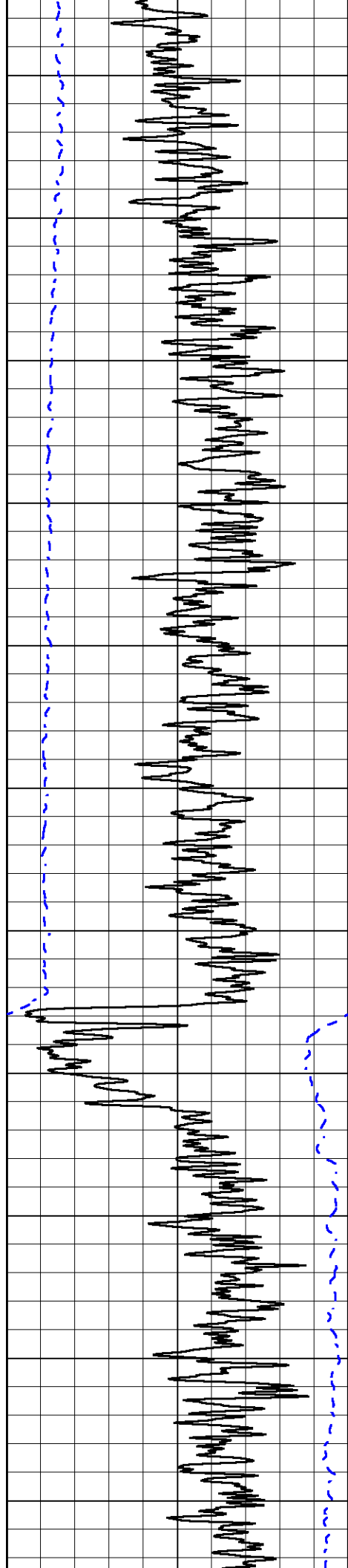
MAIN PASS

Database File amwar_sinclair #1-16.db
Dataset Pathname Stack/pass3.2
Presentation Format _dil2in
Dataset Creation Sun Jul 24 10:18:31 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	Deep Resistivity (Ohm-m)	50
			50	Deep Resistivity (Ohm-m)	200







1050

1100

1150

1200

1250

1300

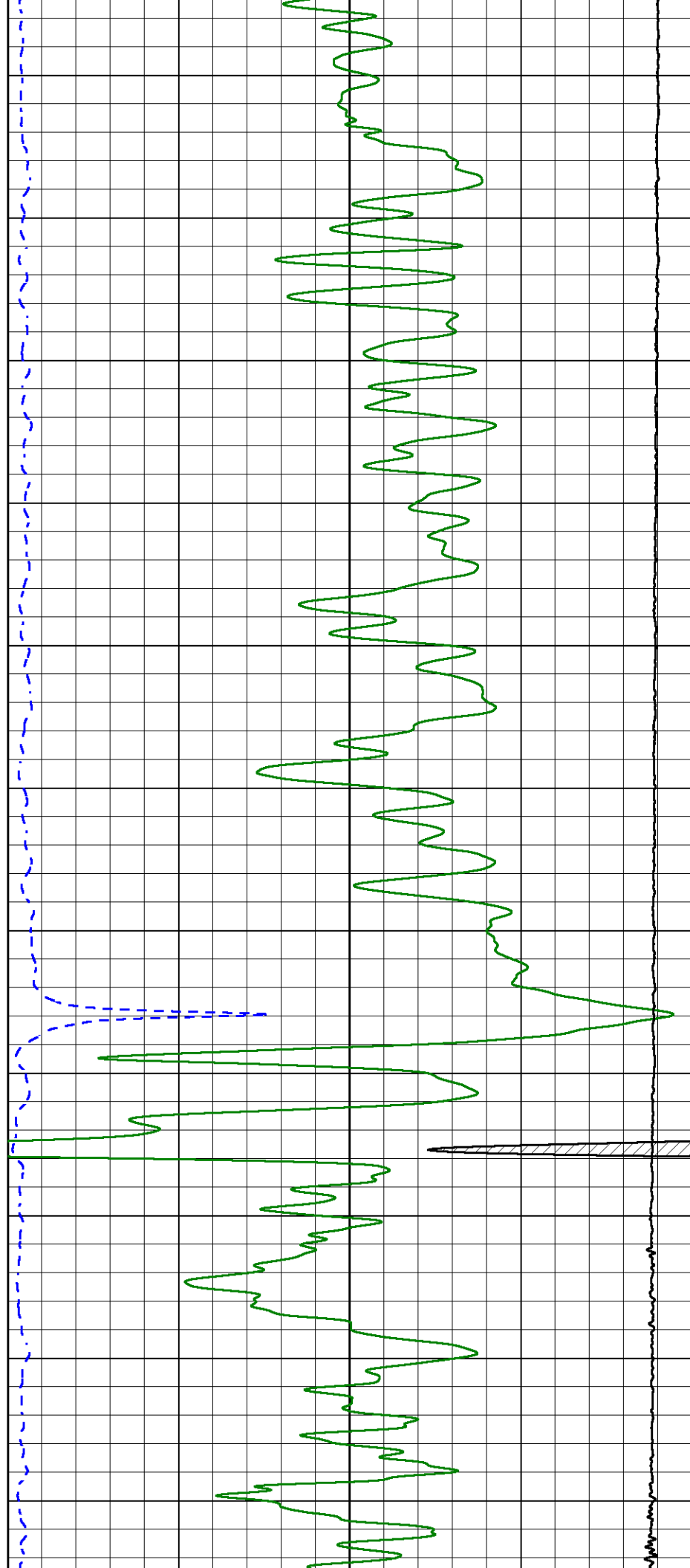
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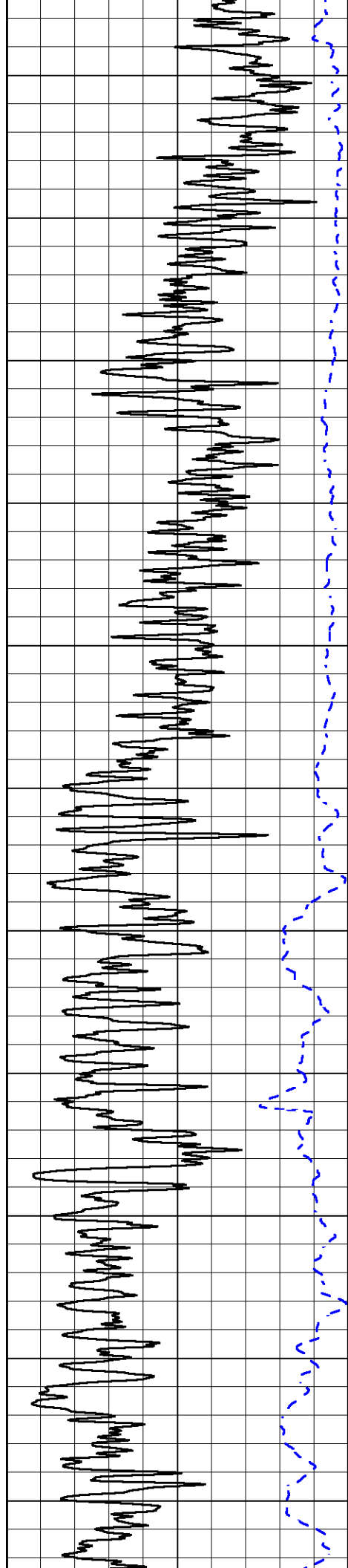
1400

1450

1500

1550





1600

1650

1700

1750

1800

1850

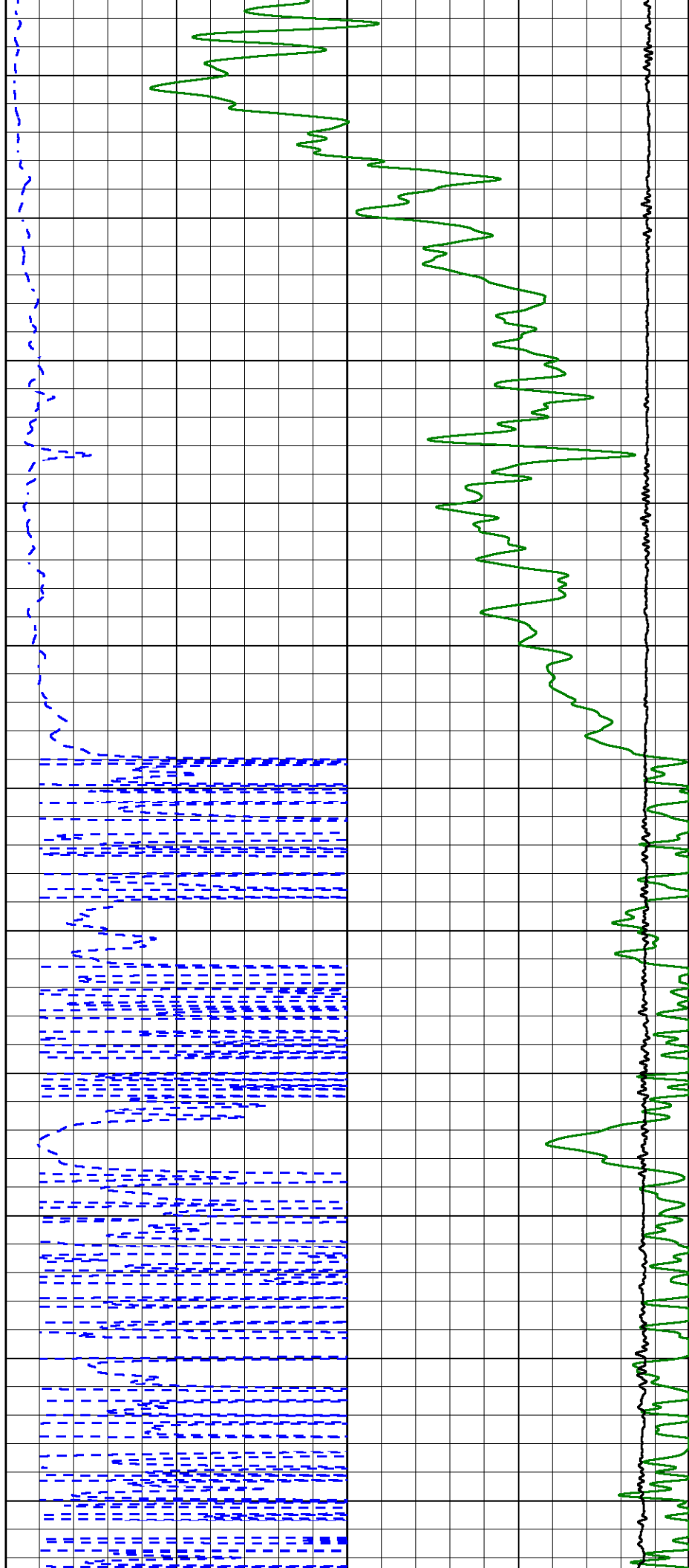
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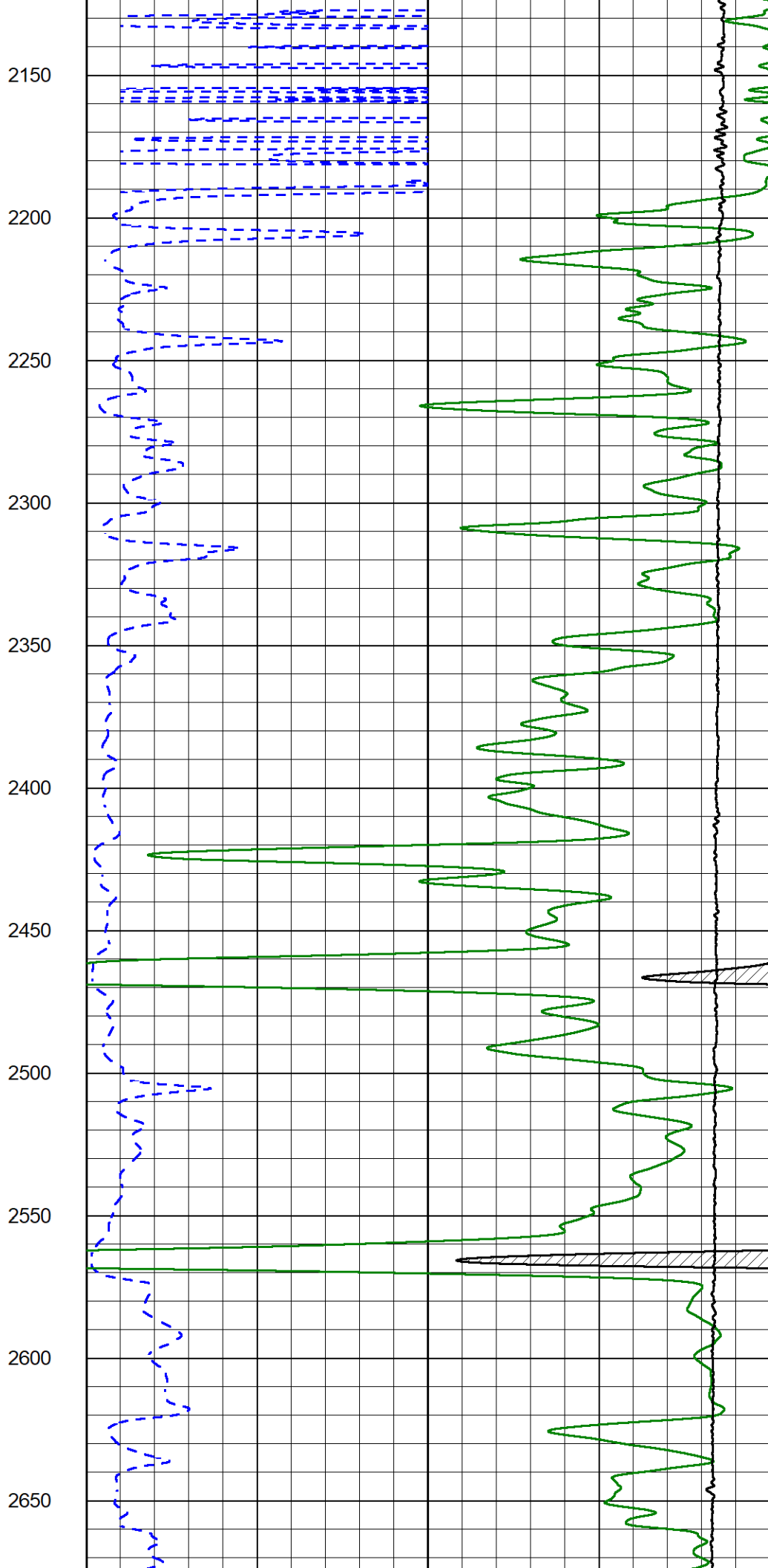
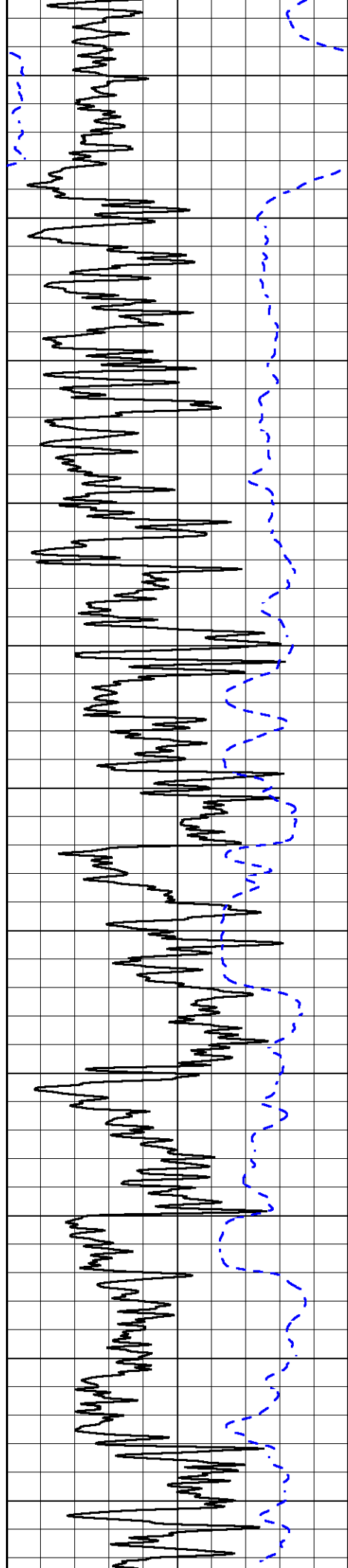
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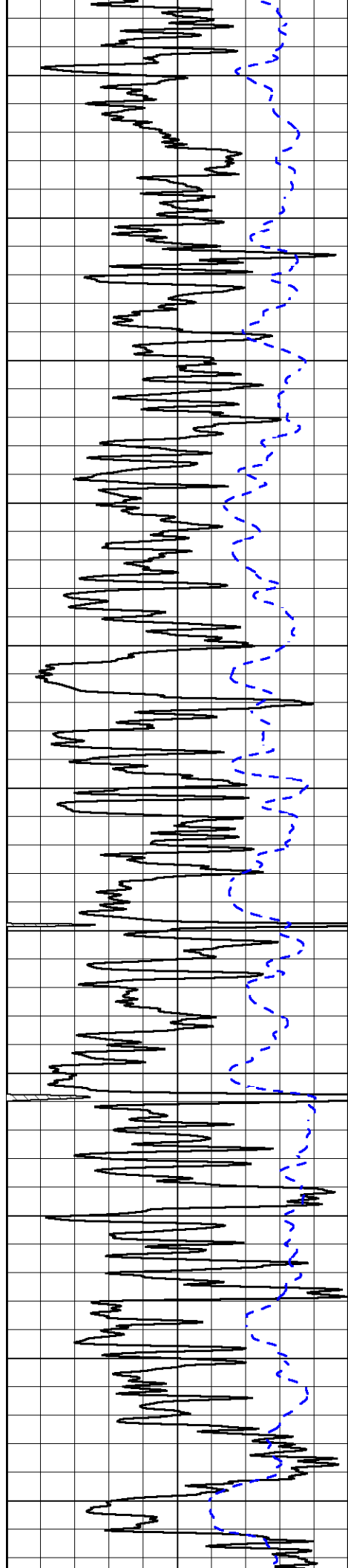
2000

2050

2100







2700

2750

2800

2850

2900

2950

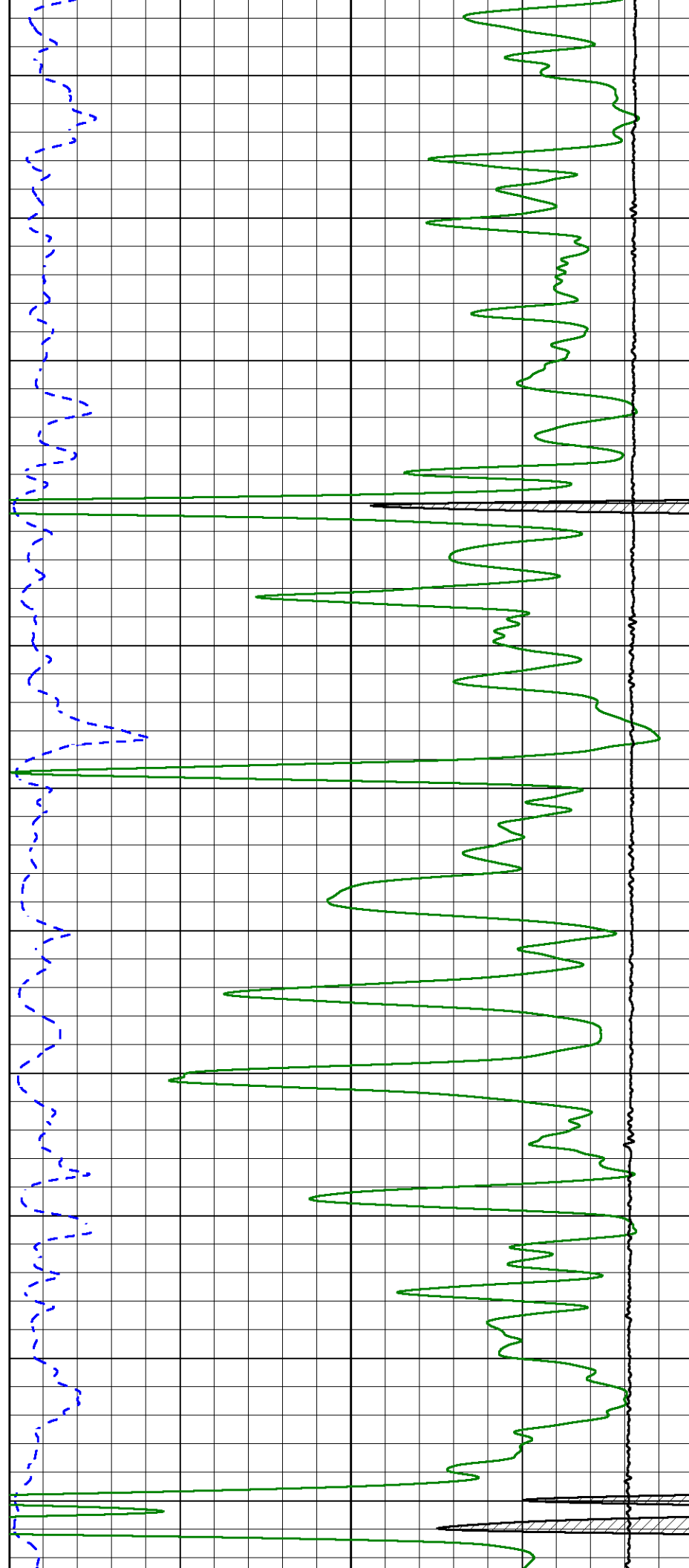
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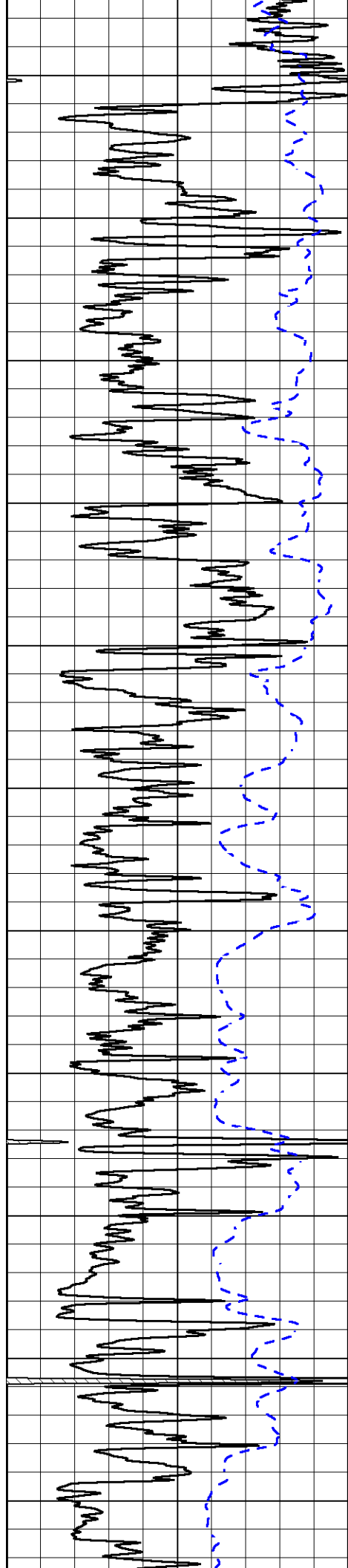
3050

3100

3150

3200





3250

3300

3350

3400

3450

3500

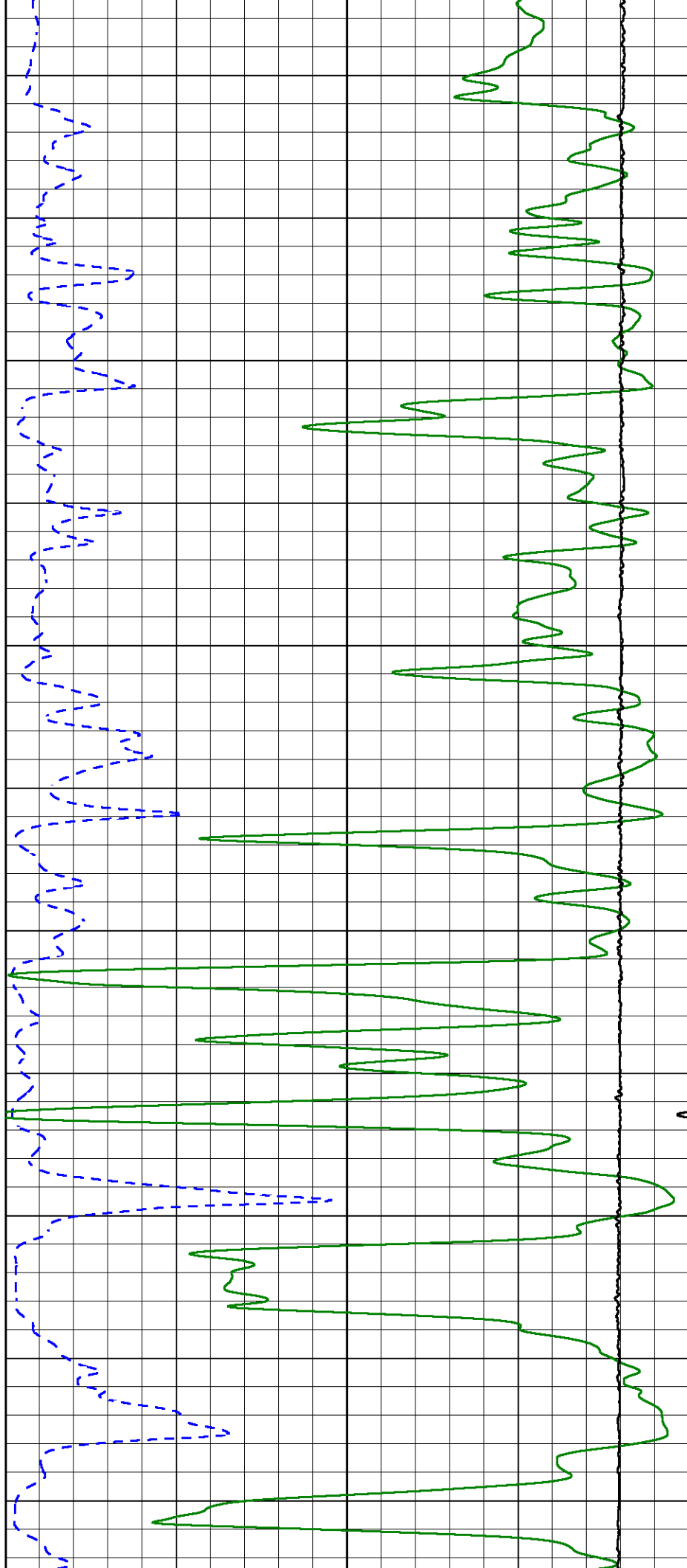
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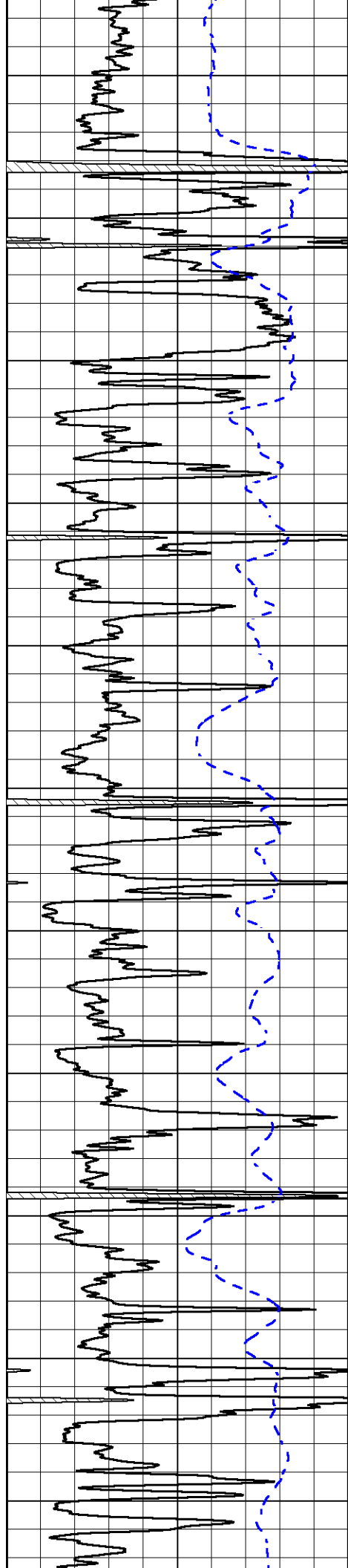
3600

3650

3700

3750





3800

3850

3900

3950

4000

4050

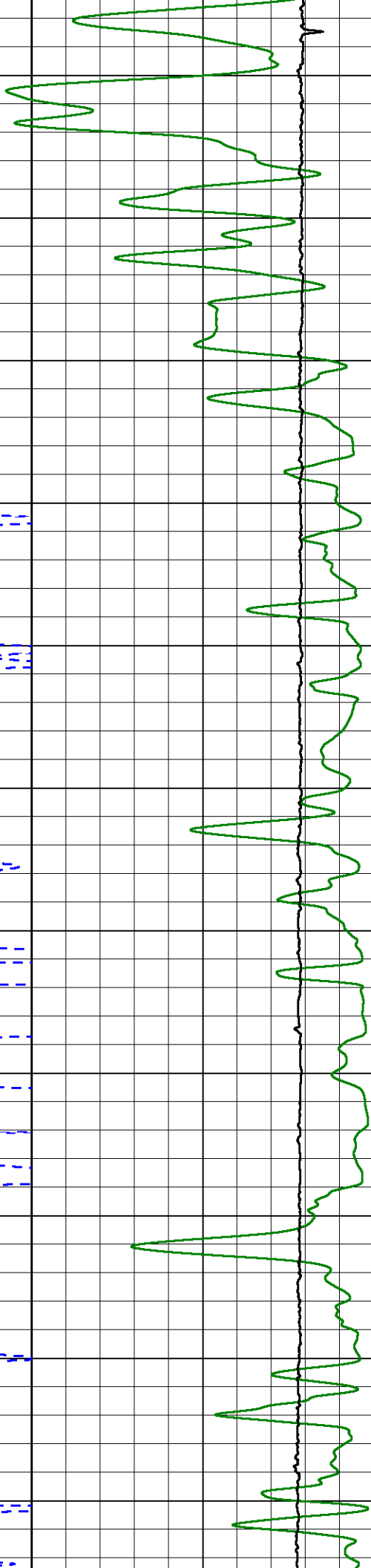
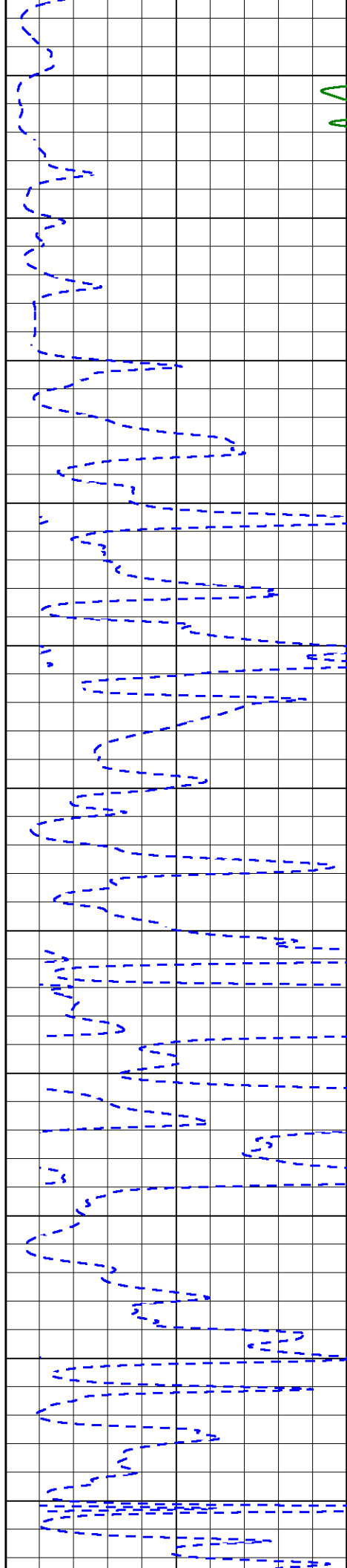
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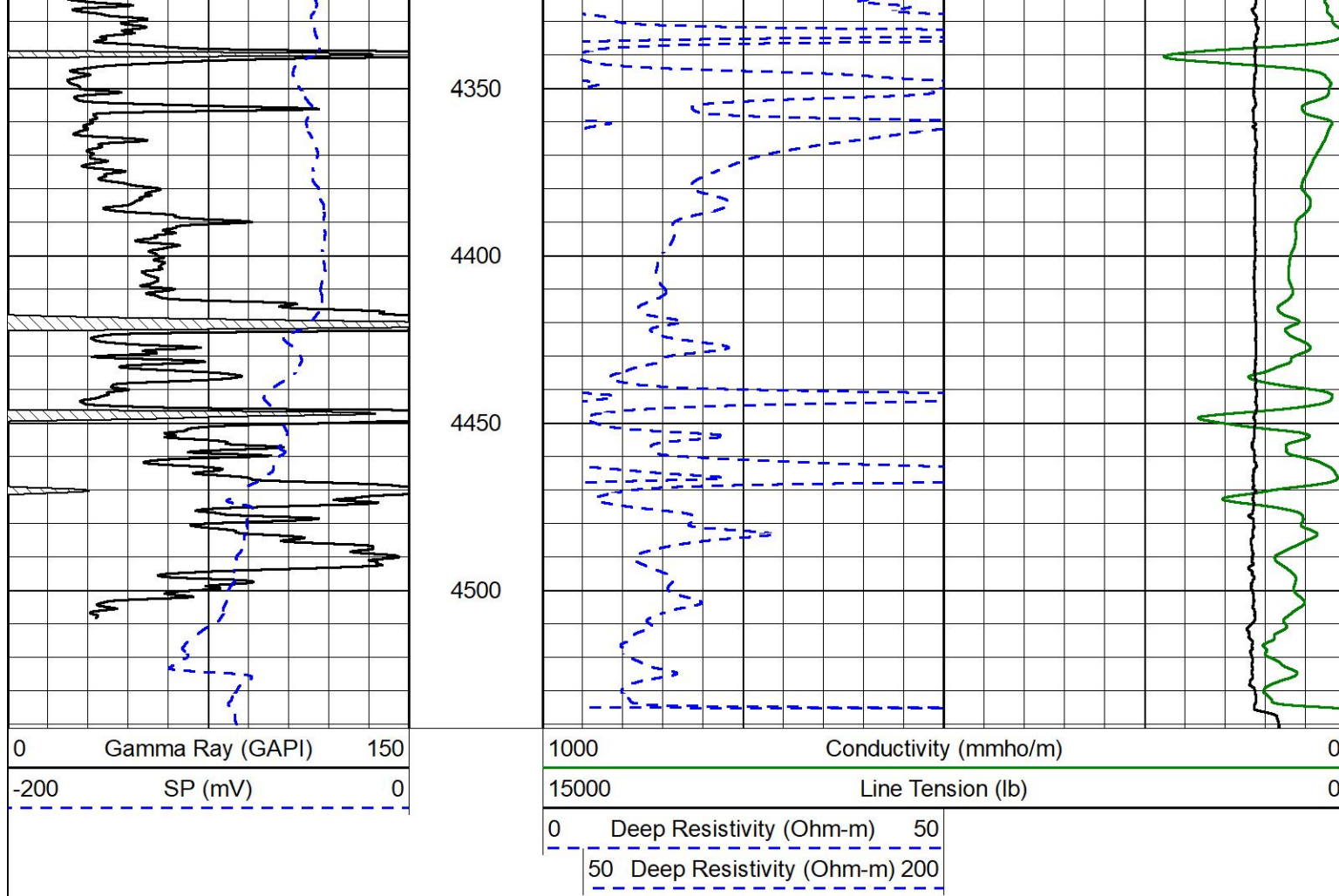
4150

4200

4250

4300





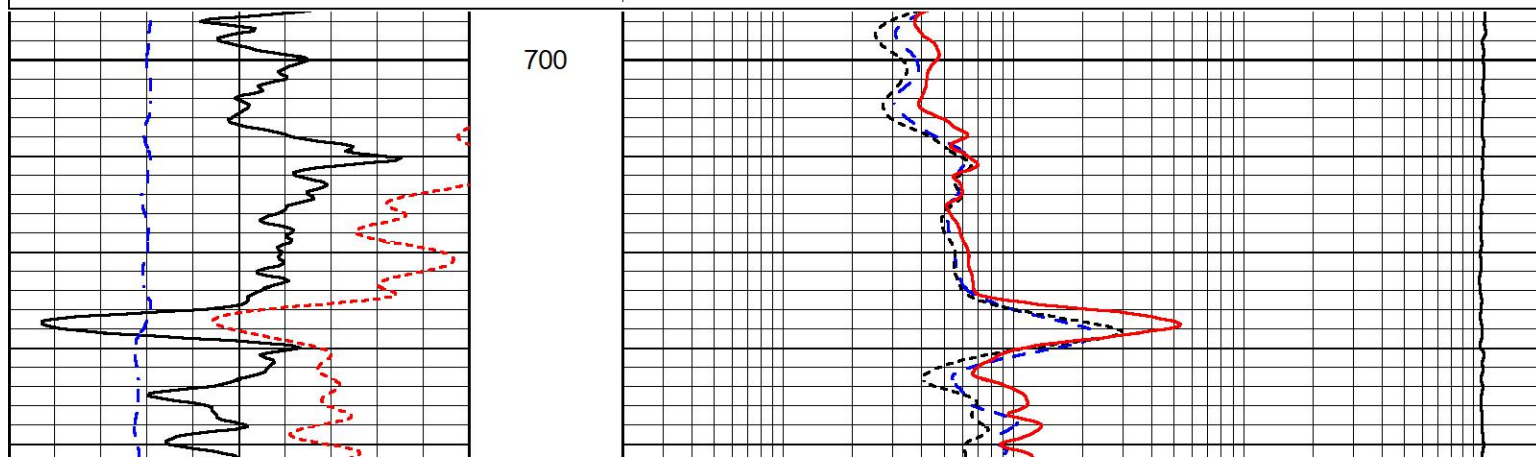
MIDWEST WIRELINE

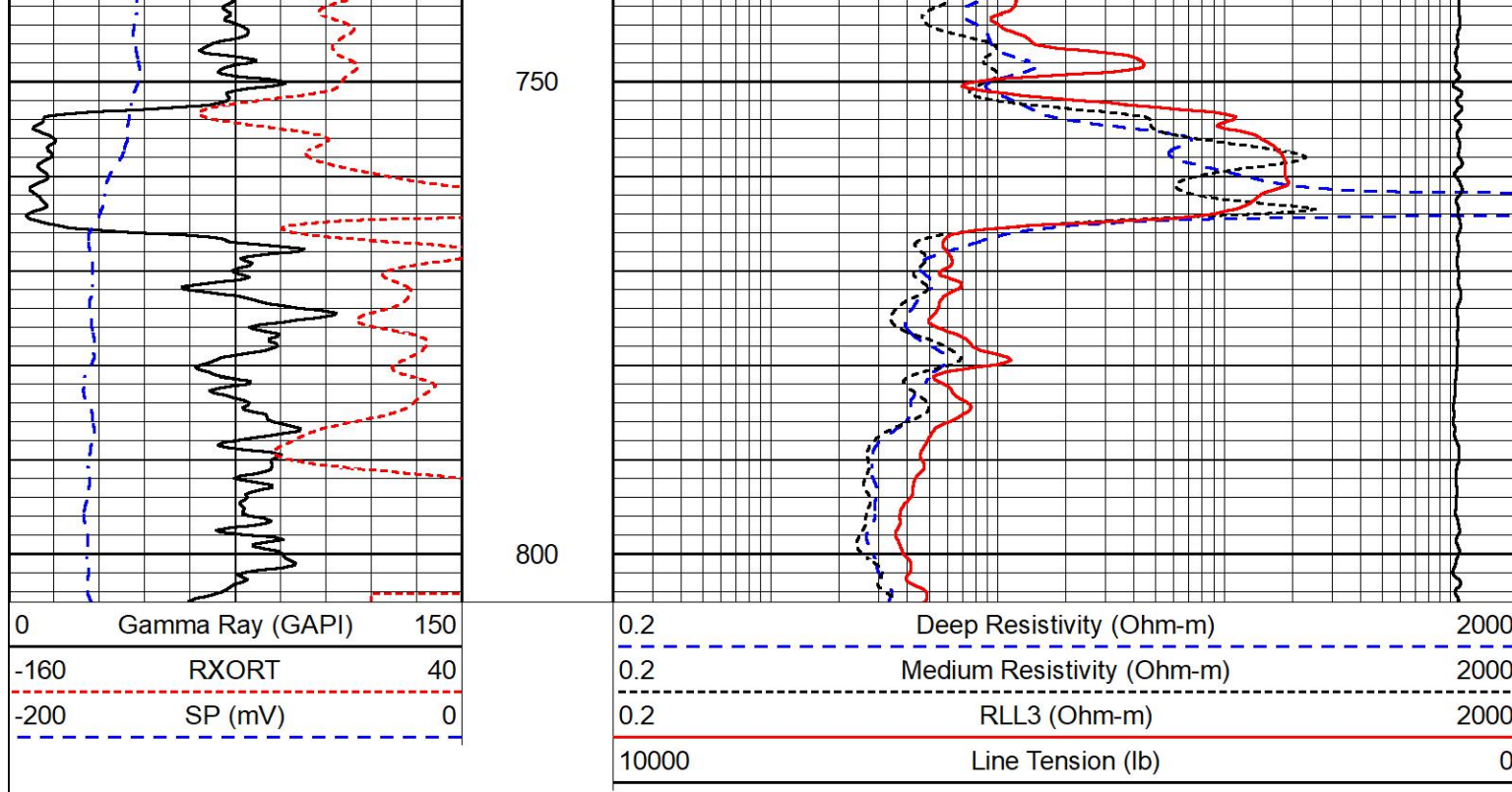
ANHYDRITE SECTION

MAIN PASS

Database File amwar_sinclair #1-16.db
 Dataset Pathname Stack/pass3.4
 Presentation Format _dil
 Dataset Creation Sun Jul 24 10:22:34 2022
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXORT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	RLL3 (Ohm-m)	2000
			10000	Line Tension (lb)	0



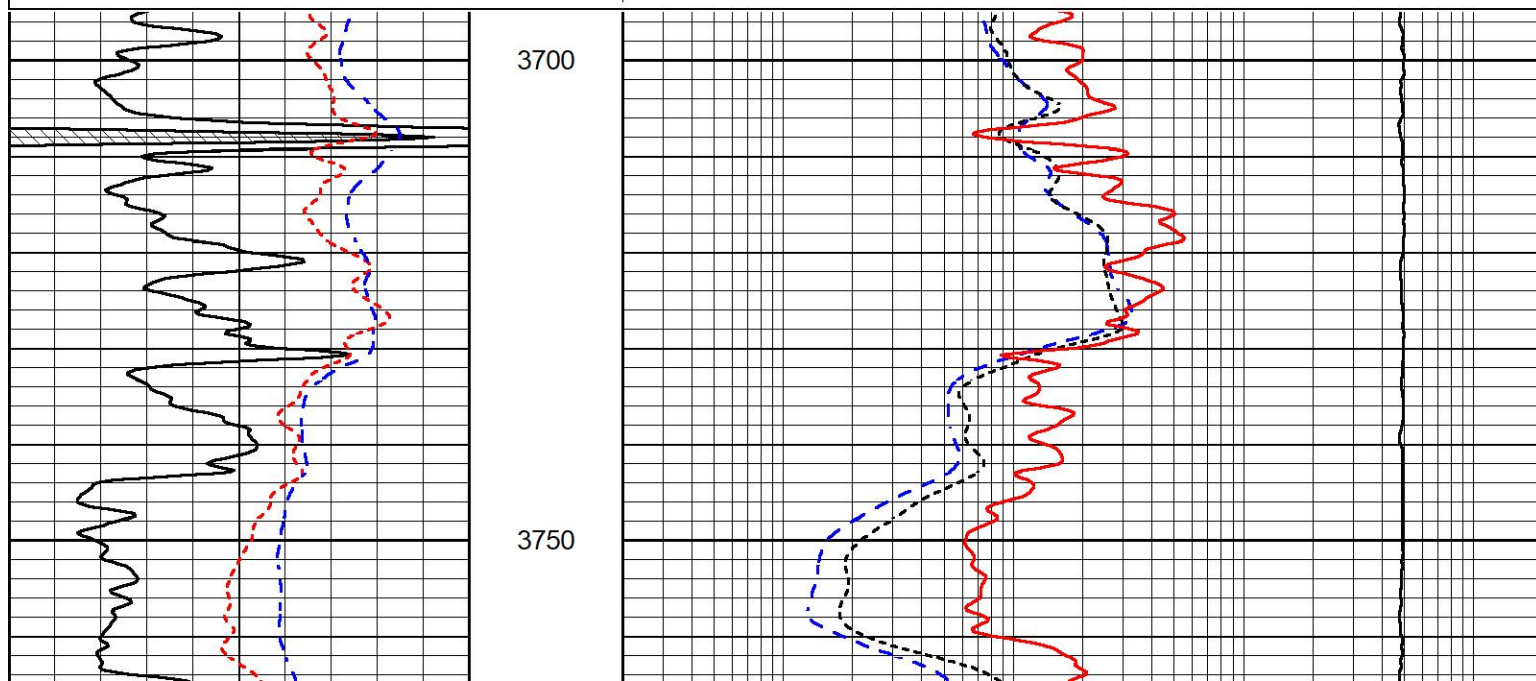
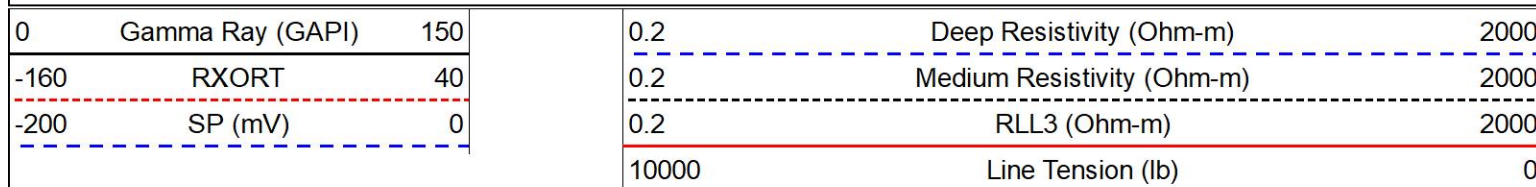


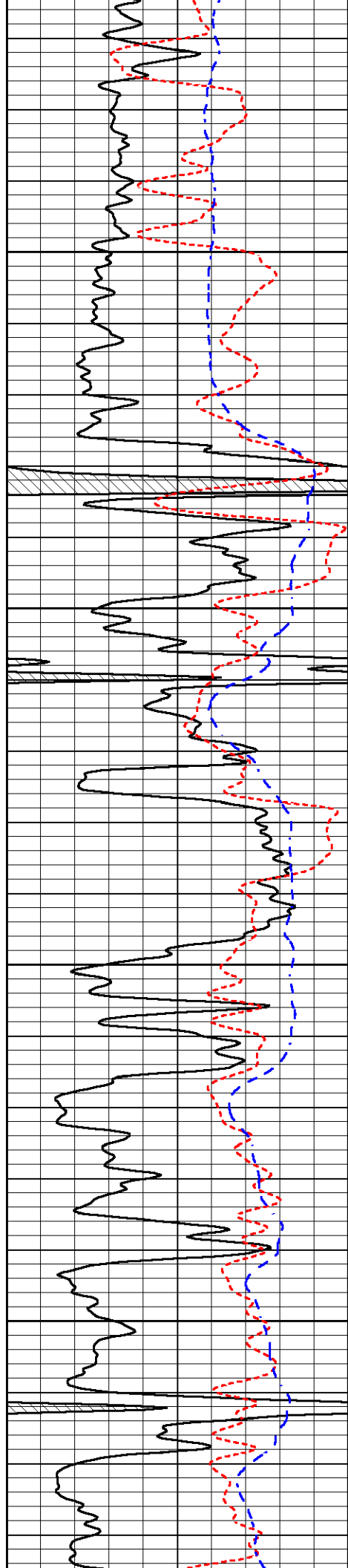
MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

Database File amwar_sinclair #1-16.db
 Dataset Pathname Stack/pass3.1
 Presentation Format _dil
 Dataset Creation Sun Jul 24 10:18:46 2022
 Charted by Depth in Feet scaled 1:240



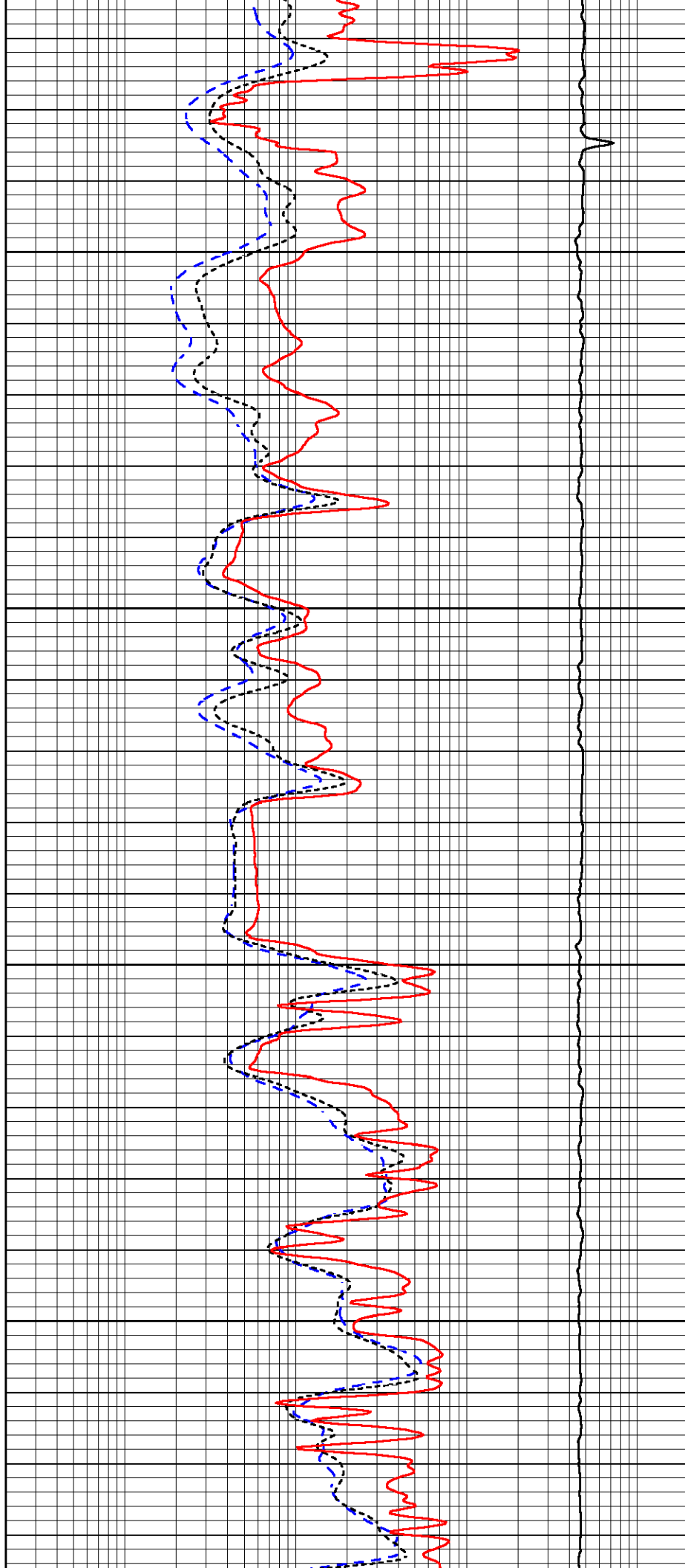


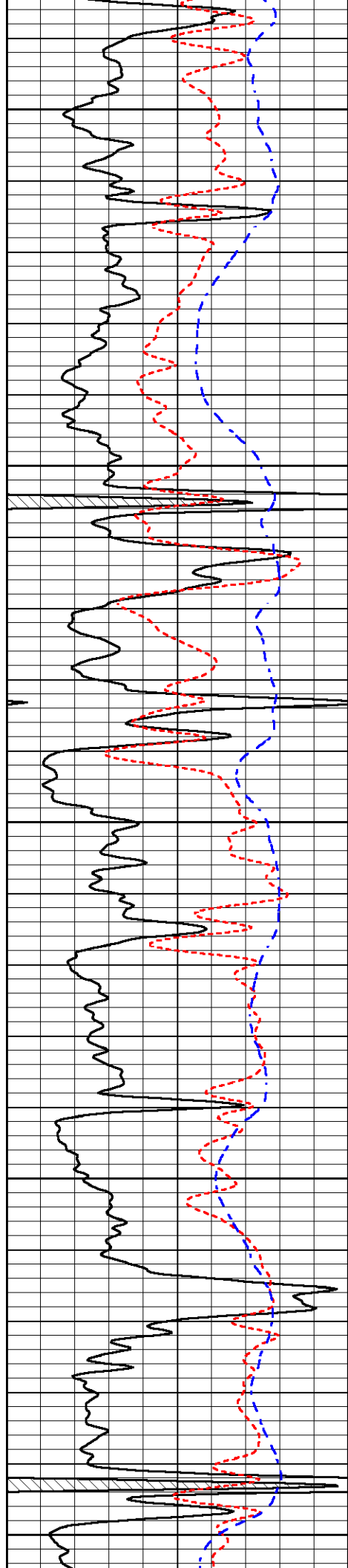
3800

3850

3900

3950





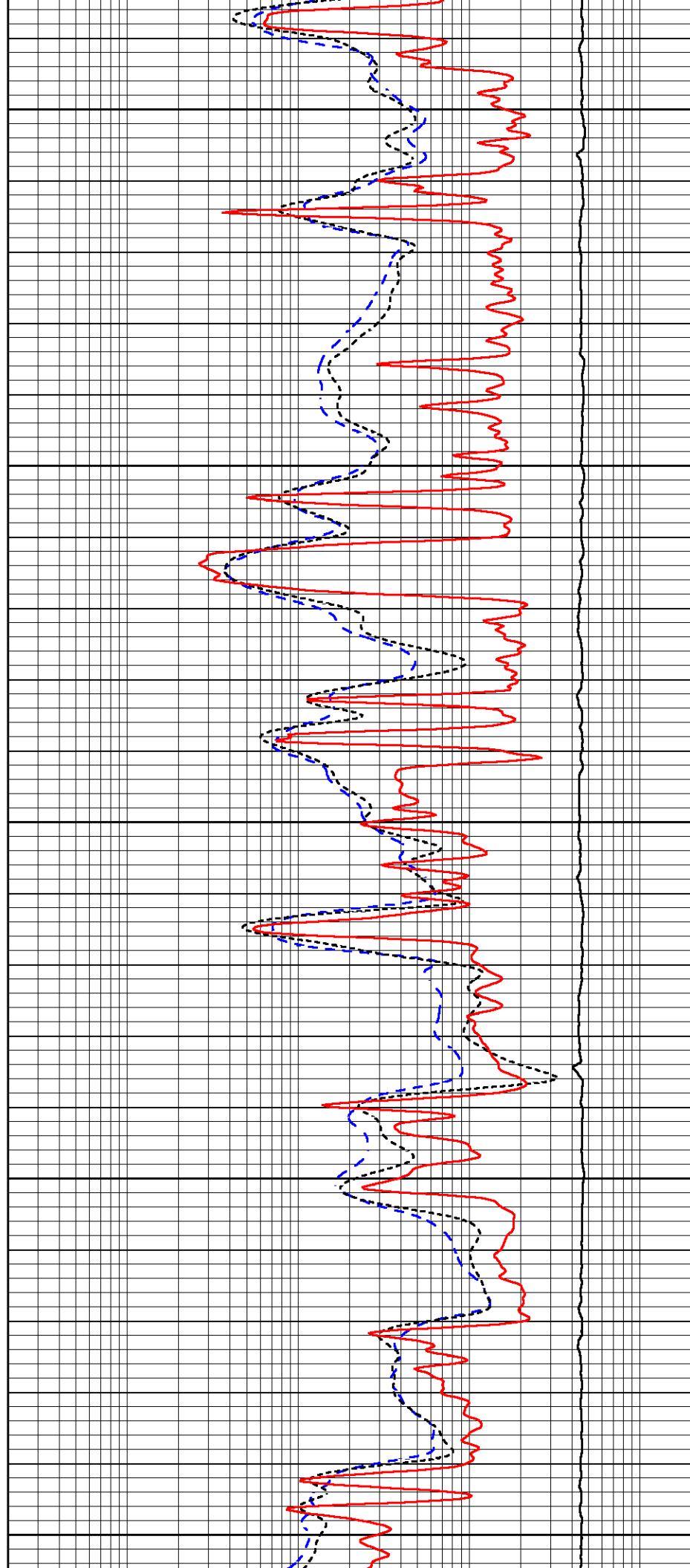
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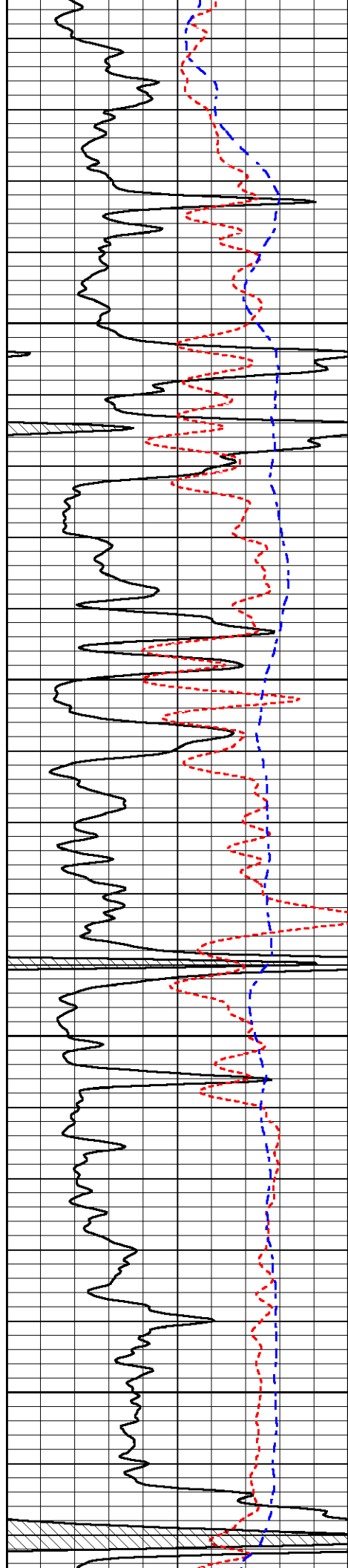
4050

4100

4150

4200



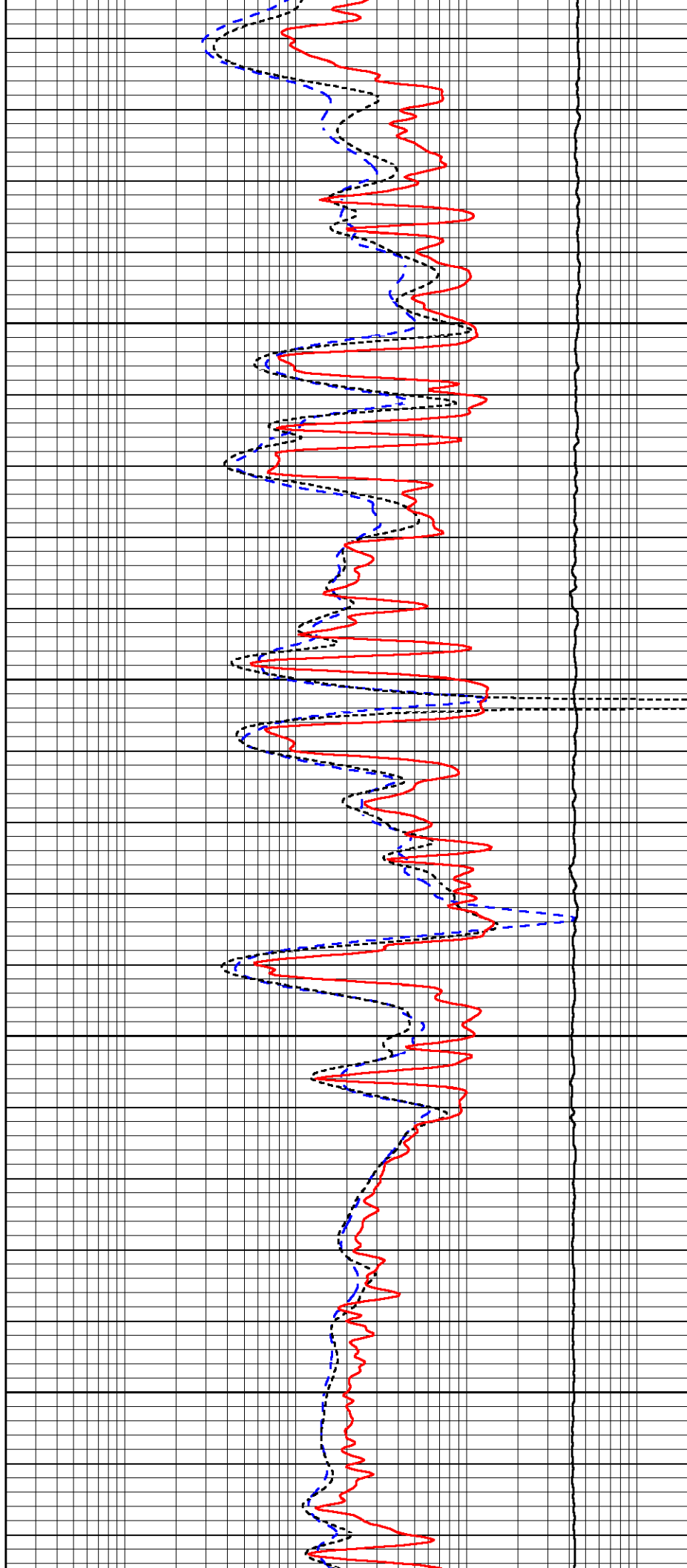


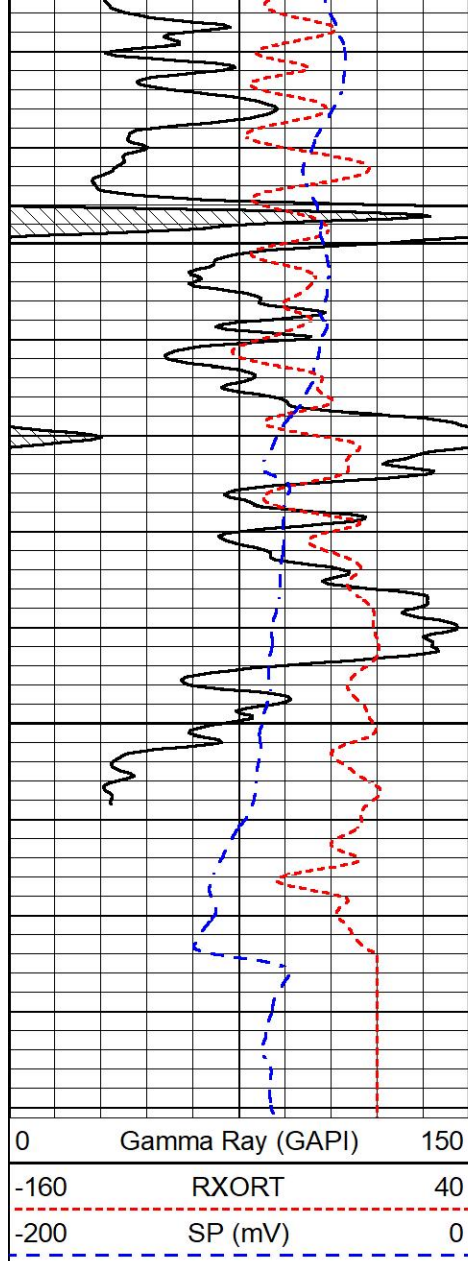
4250

4300

4350

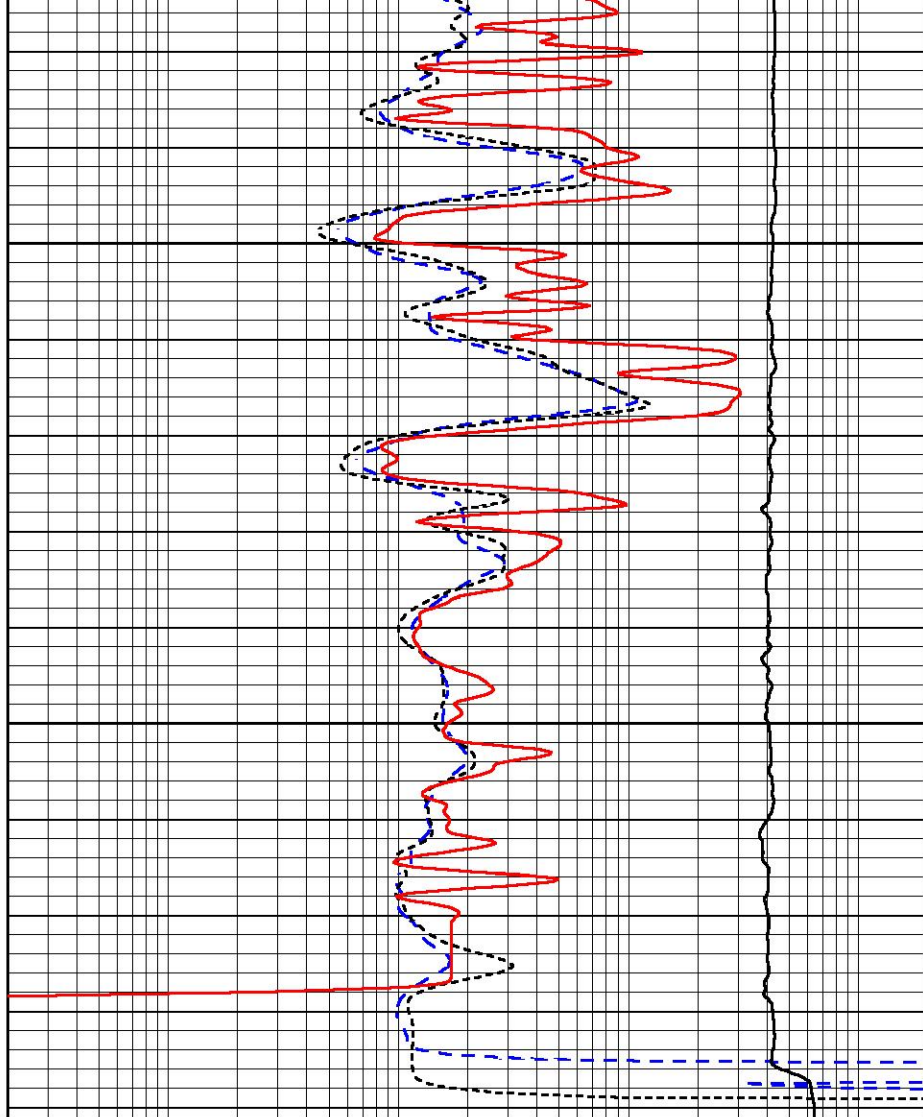
4400





4450

4500

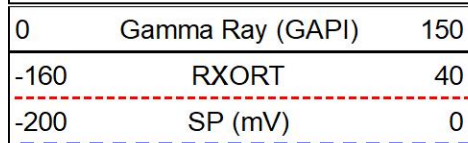


MIDWEST WIRELINE

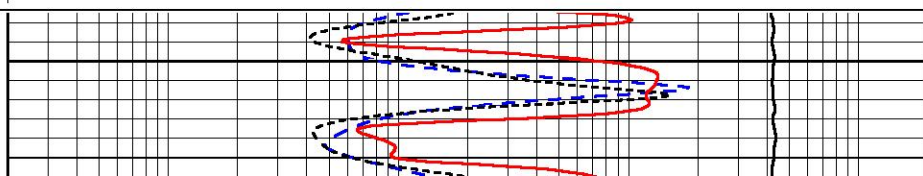
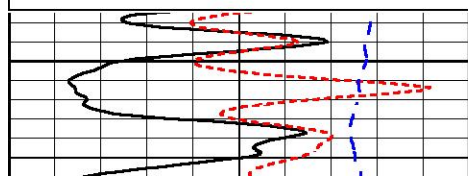
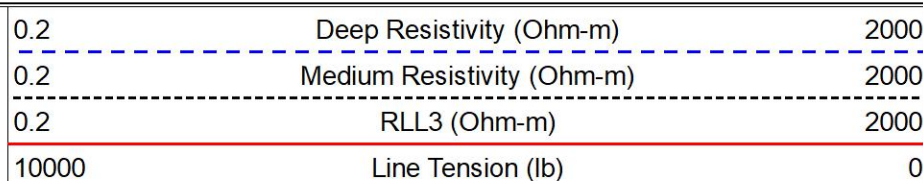
REPEAT SECTION

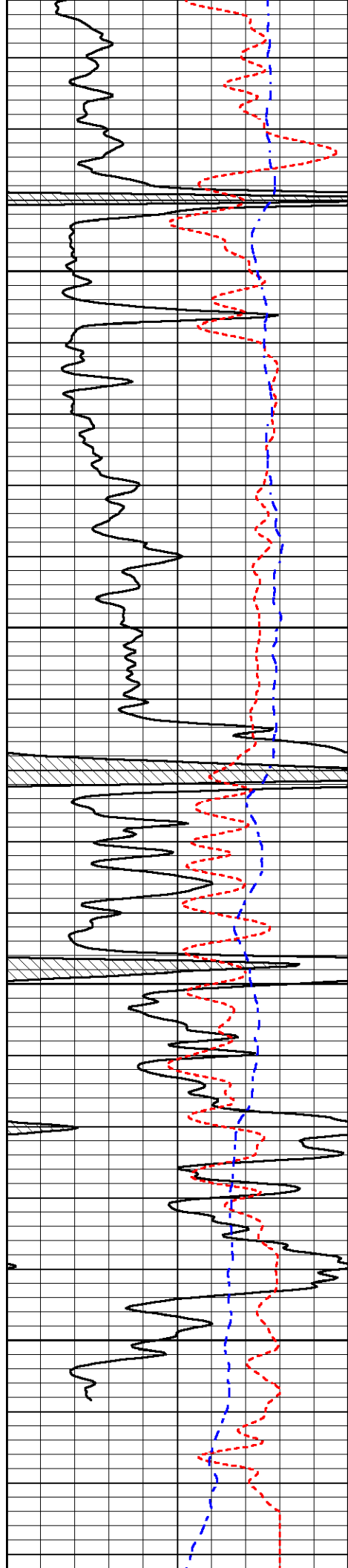
REPEAT PASS

Database File amwar_sinclair #1-16.db
 Dataset Pathname Stack/pass2.1
 Presentation Format _dil
 Dataset Creation Sun Jul 24 09:37:33 2022
 Charted by Depth in Feet scaled 1:240



4300



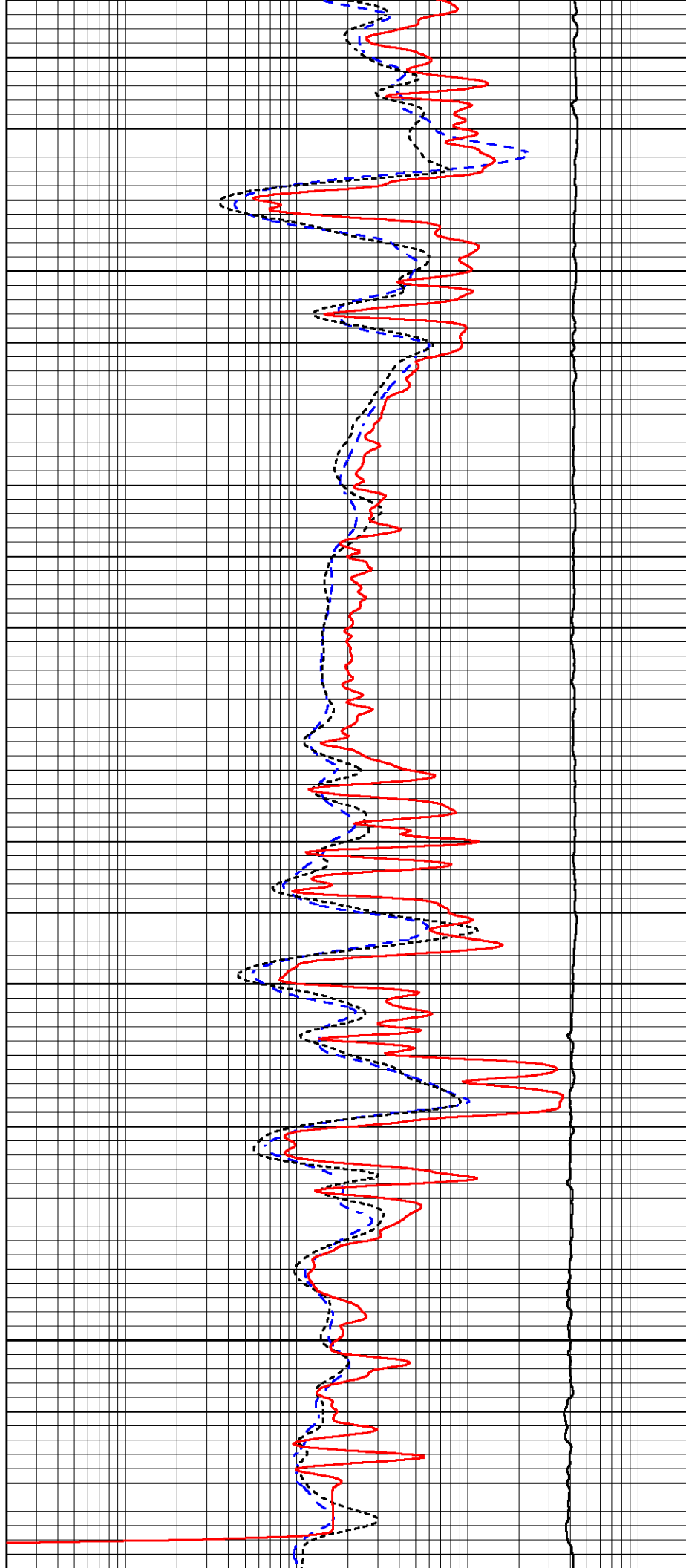


4350

4400

4450

4500



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

Database File		amwar_sinclair #1-16.db	Calibration Report
Dataset Pathname		Stack/pass3.1	
Dataset Creation		Sun Jul 24 10:18:46 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	-28.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.305	-29.500

Compensated Density Calibration Report

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

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4422.04	6163.44	cps
Aluminum	2.665	g/cc	835.14	3912.91	cps
Spine Angle = 74.75			Density/Spine Ratio = 0.527		
	Size		Reading		
Small Ring	8.00	in	0.53		
Large Ring	30.00	in	0.60		

Compensated Neutron Calibration Report	
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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 Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	

POST-SURVEY VERIFICATION

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

Gamma Ray Calibration Report

Serial Number:	106	
Tool Model:	M&W	
Performed:	Fri Dec 3 15:10:46 2021	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.5500	GAPI/cps



Company	American Warrior, Inc.
Well	Sinclair #1-16
Field	Lippoldt East
County	Hodgeman
State	Kansas