MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Thomas Garner, Inc.
Well Tiger Unit #1
Field
County Stafford State Kansas

Location: API # : 15-185-24116-00-00
NE NW NW NE
86 FNL & 2010 FWL
SEC 17 TWP 24S RGE 13W

Other Services
CNL/CDL
MEL/BHCS

Elevation
K.B. 1935
D.F.
G.L. 1922

Permanent Datum Ground Level Elevation 1922
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Date	8/19/2022		
Run Number	One		
Depth Driller	4117		
Depth Logger	4116		
Bottom Logged Interval	4115		
Top Log Interval	350		
Casing Driller	8.625 @ 396		
Casing Logger	395		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	5500		
Density / Viscosity	9.3 / 69		
pH / Fluid Loss	10.5 / 8.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.75 @ 74		
Rmf @ Meas. Temp	0.56 @ 74		
Rmc @ Meas. Temp	1.01 @ 74		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.47 @ 117		
Operating Rig Time	4.5 Hours		
Max Rec. Temp. F	117		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Keath Reavis	Tom Garner	

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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.

St. John, KS, S to NW 110th,
1.5 W, S 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	This Log Record Was Witnessed By
Engineer: T. Martin	Primary Witness: Keath Reavis
Operator:	Secondary Witness: Tom Garner
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (106)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (207-MW)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (307-01)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (402)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (502 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: garner_tiger unit #1.db: field/well/StkMl/pass3.1
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\garner_tiger unit #1.db
Dataset field/well/StkMl/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	117	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	140	80	Off	4116

Variable Description

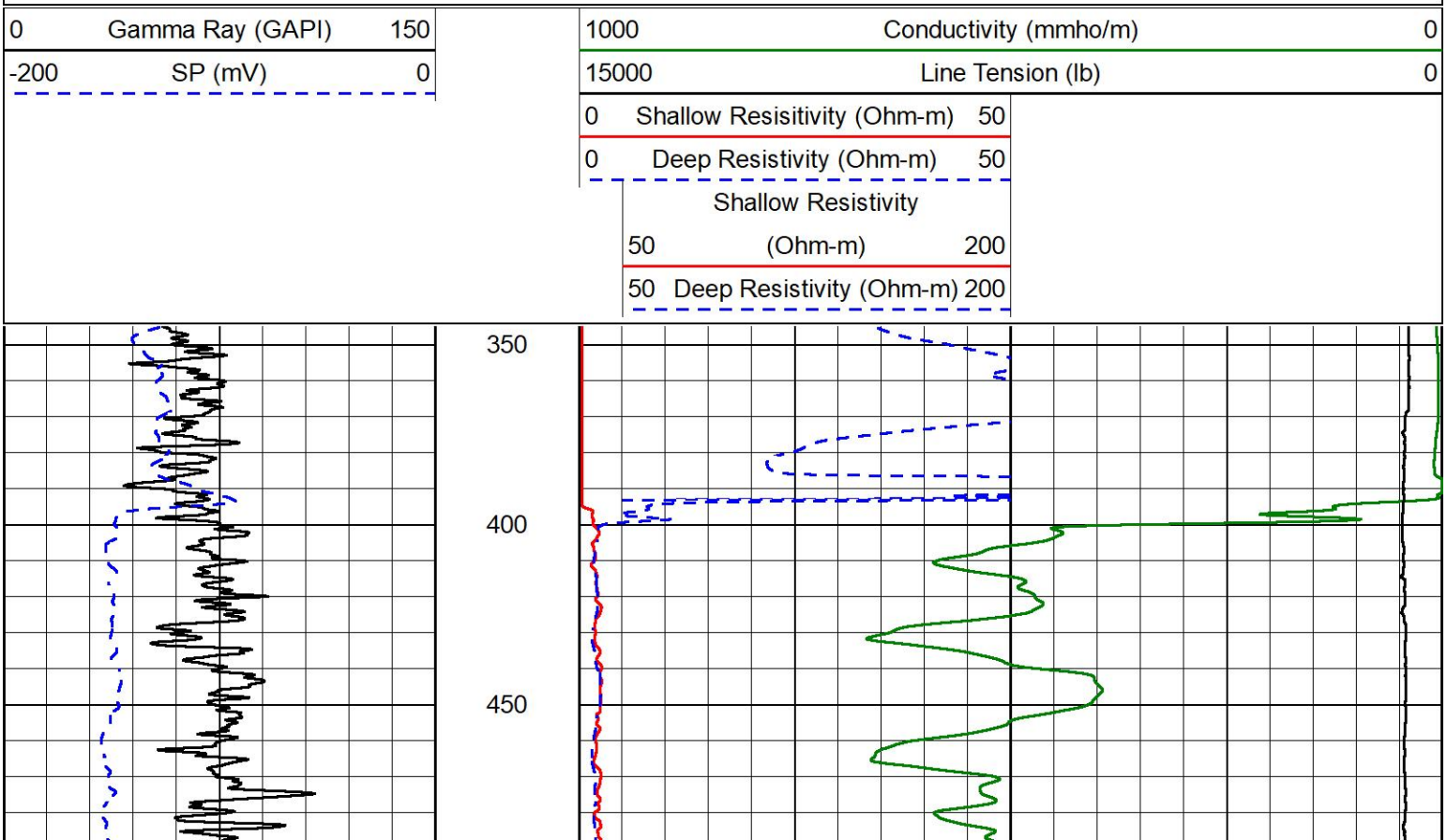
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

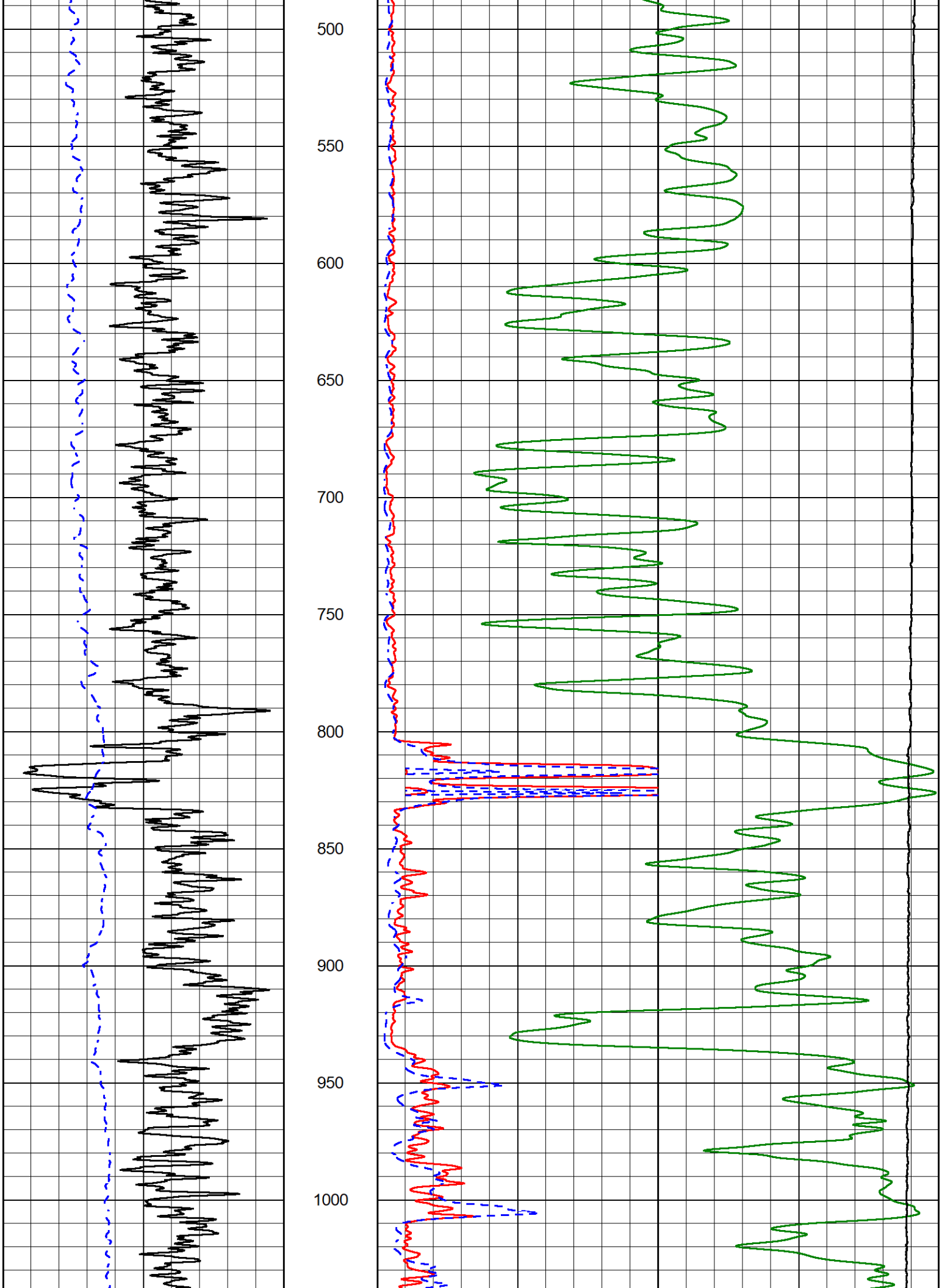
MIDWEST WIRELINE

2" SCALE RESISTIVITY

MAIN PASS

Database File	garner_tiger unit #1.db
Dataset Pathname	StkMl/pass3.2
Presentation Format	_dil2in
Dataset Creation	Fri Aug 19 20:16:37 2022
Charted by	Depth in Feet scaled 1:600

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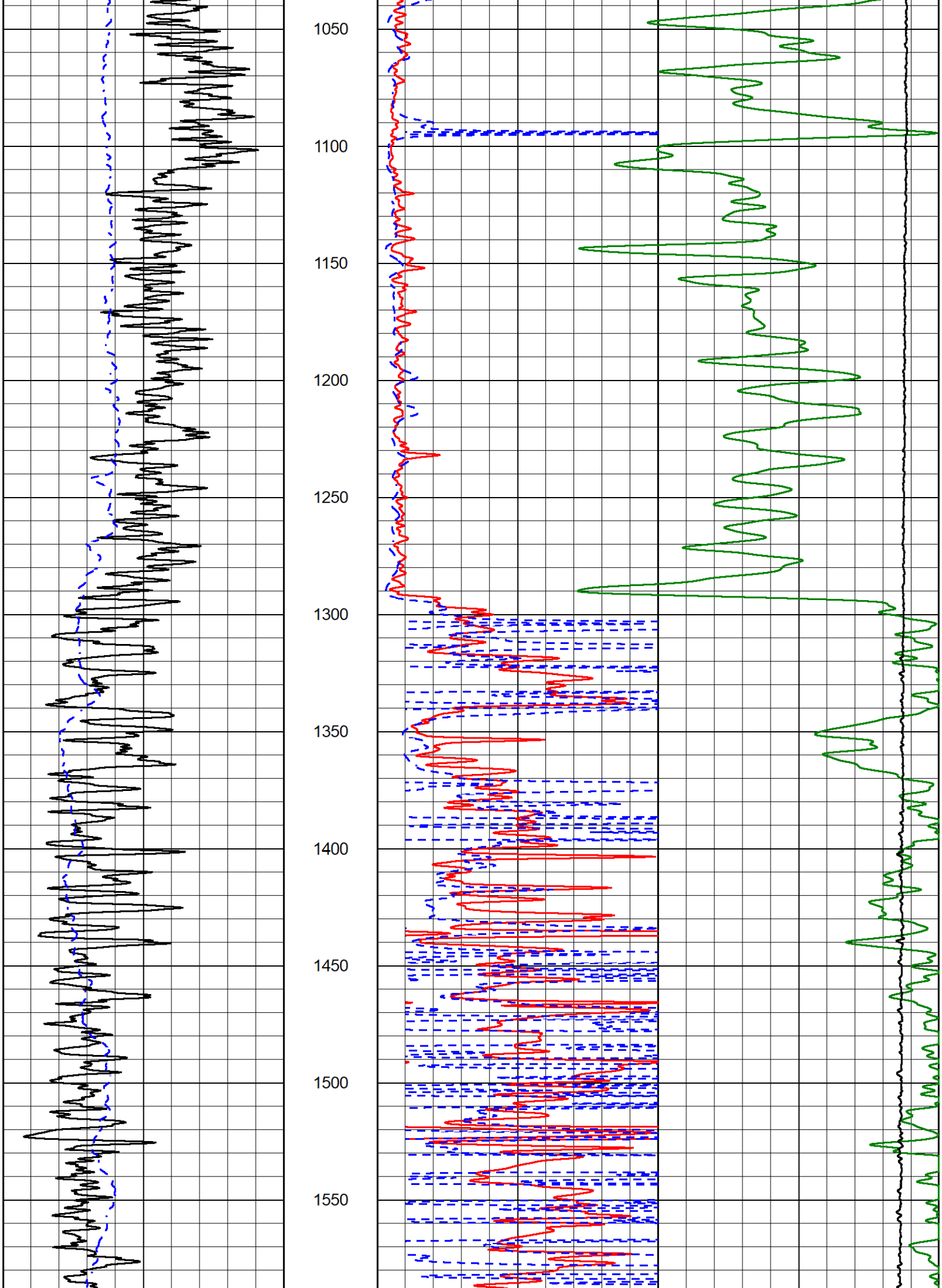
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1450
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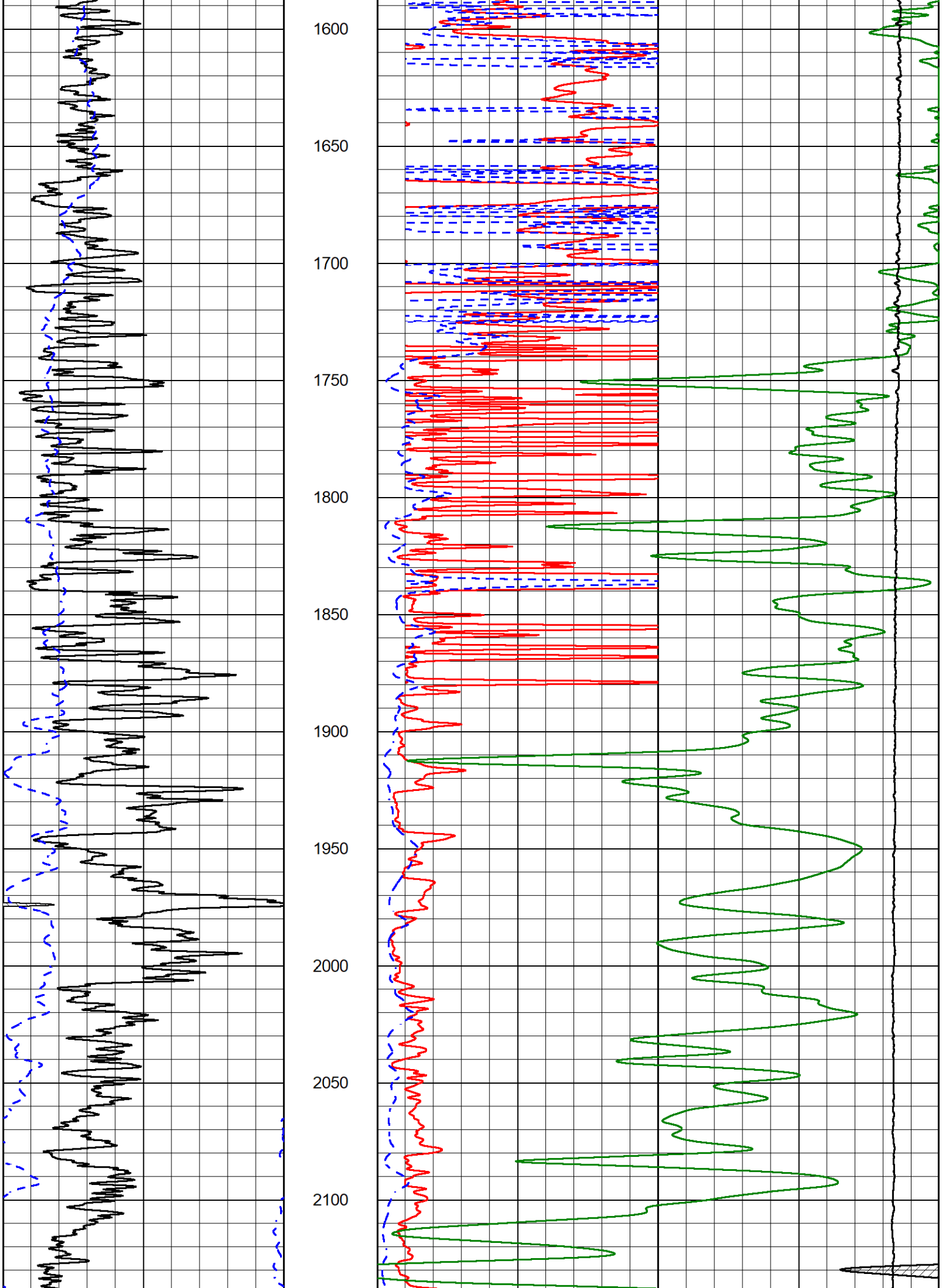
1550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2050
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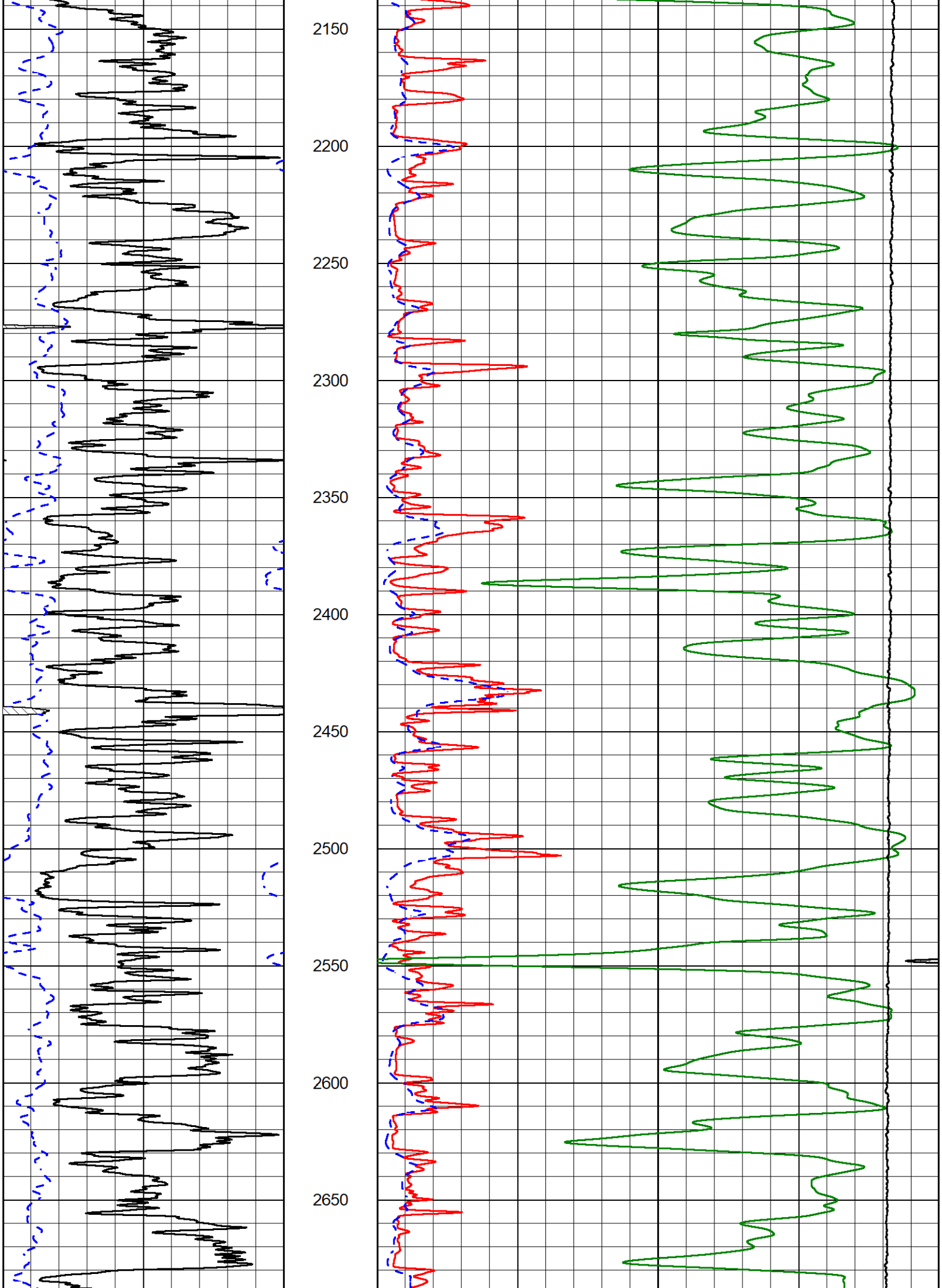
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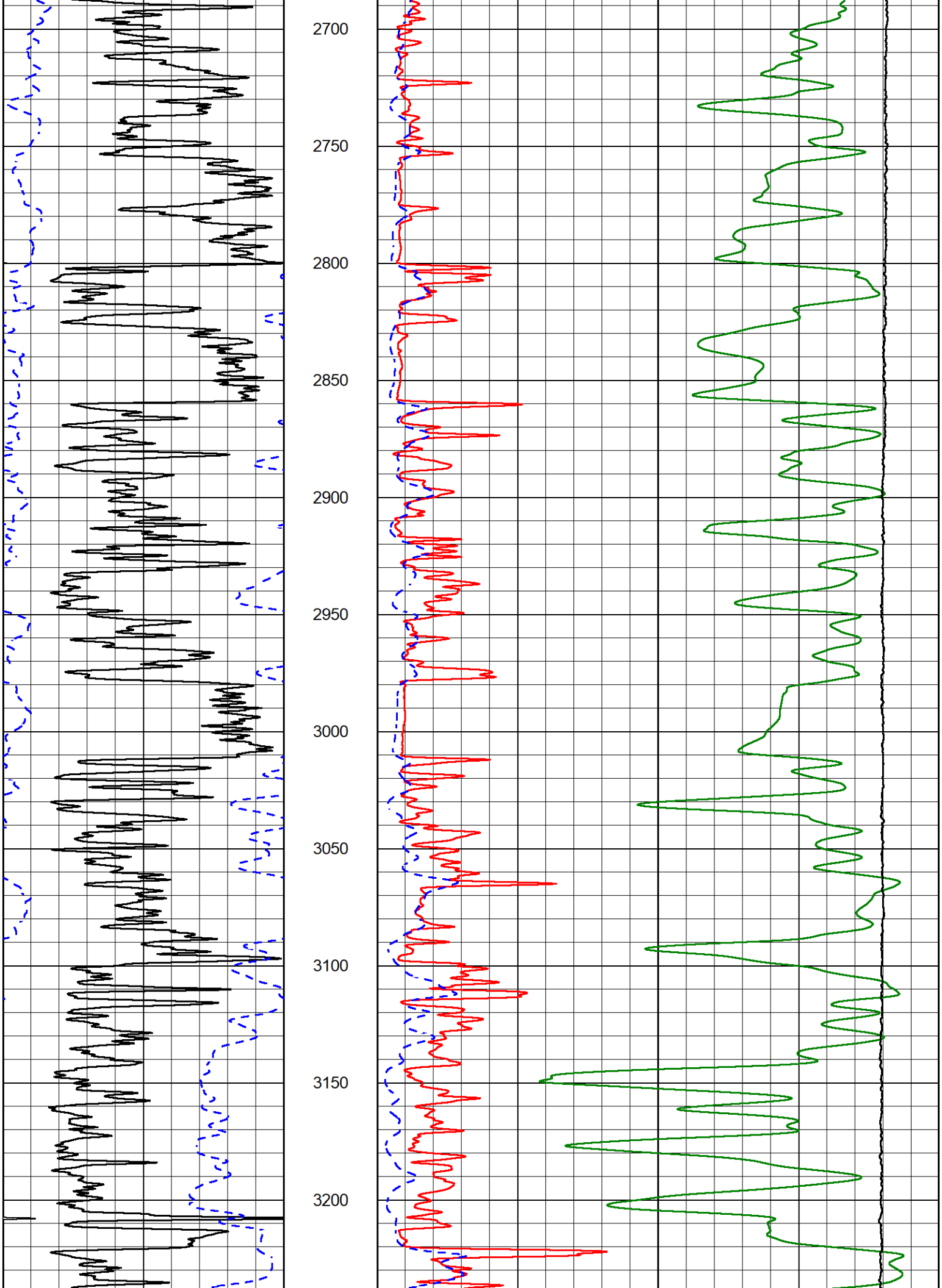
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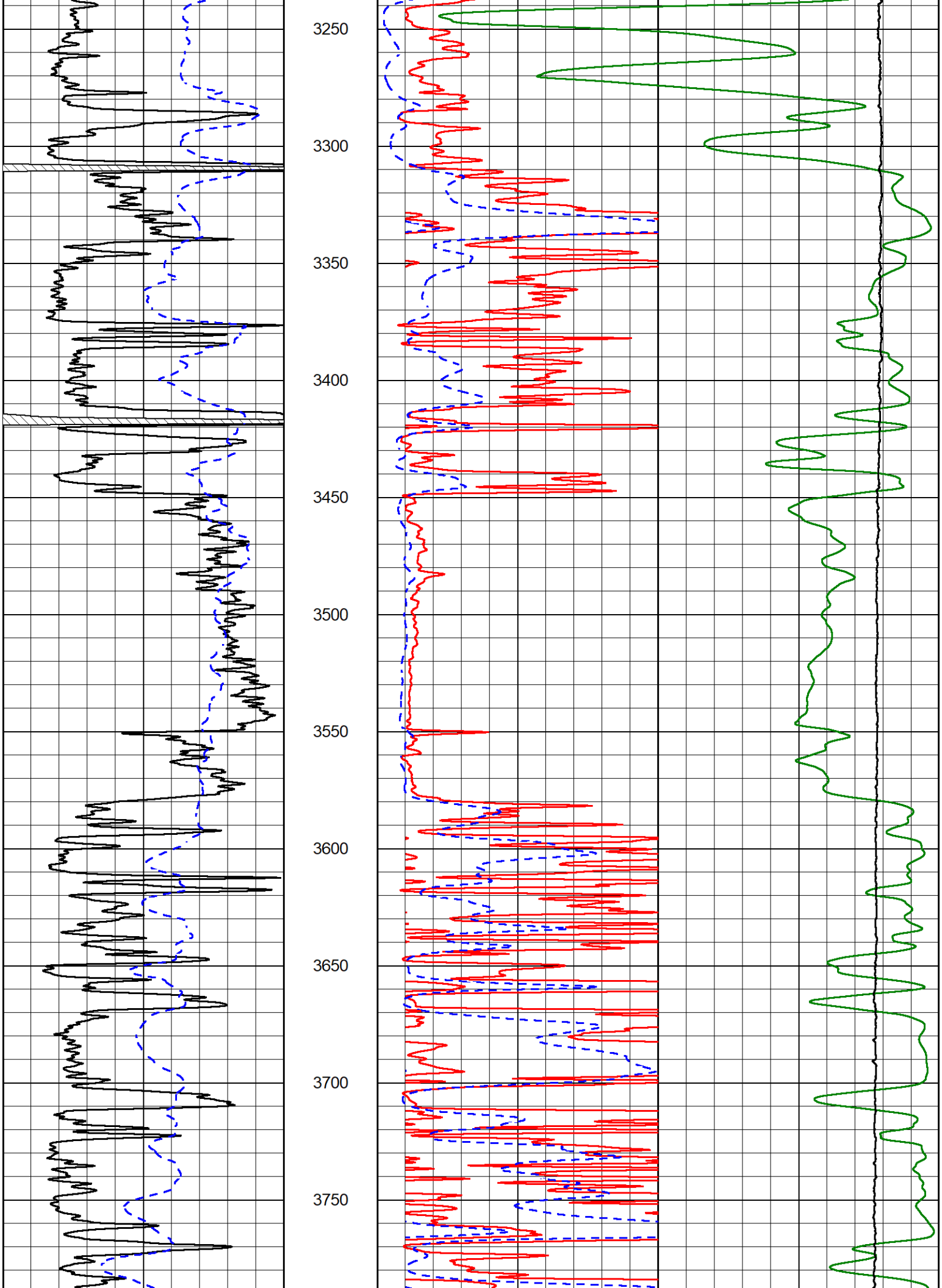
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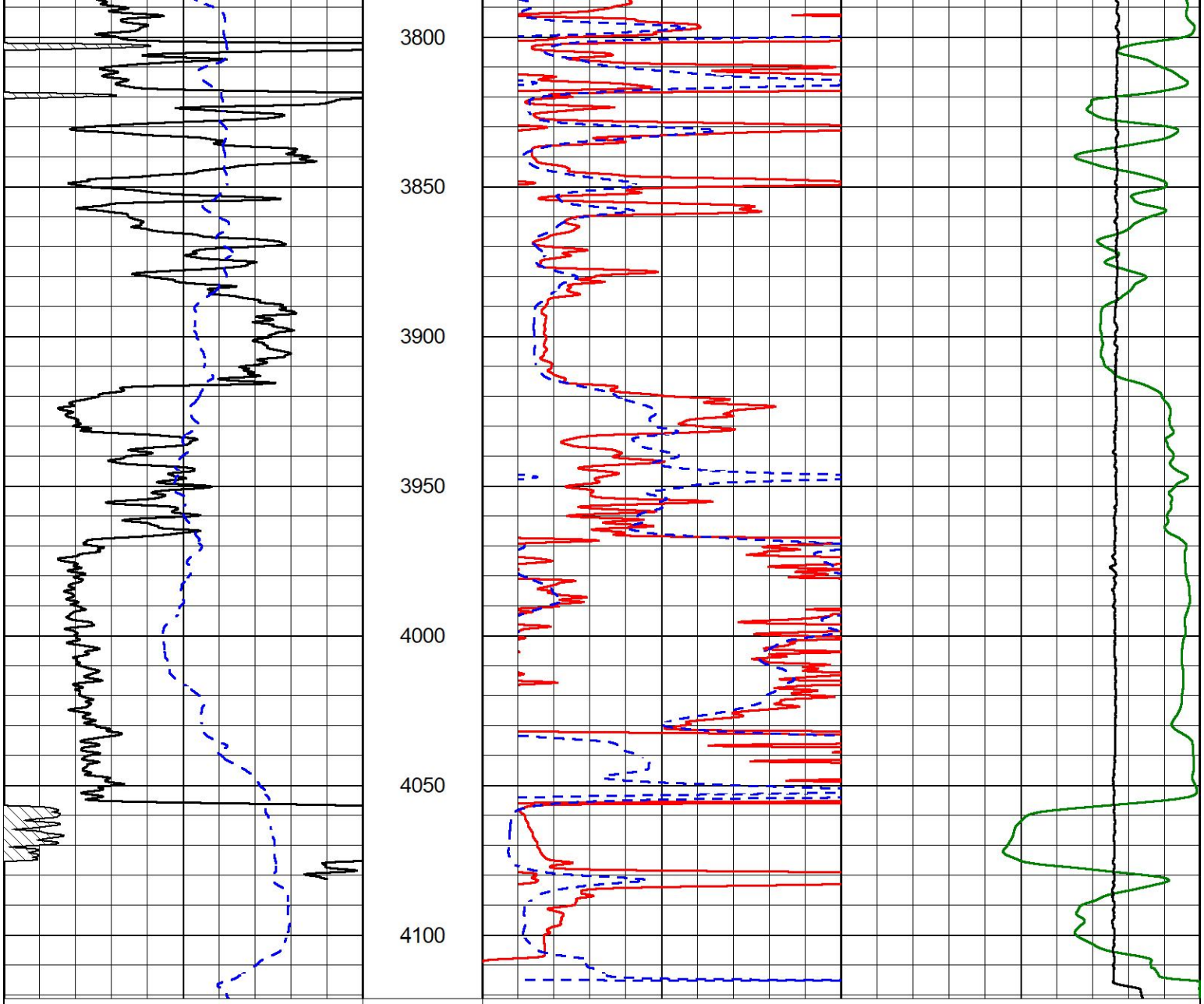
3700
3750



MIDWEST WIRELINE

ANHYDRITE SECTION

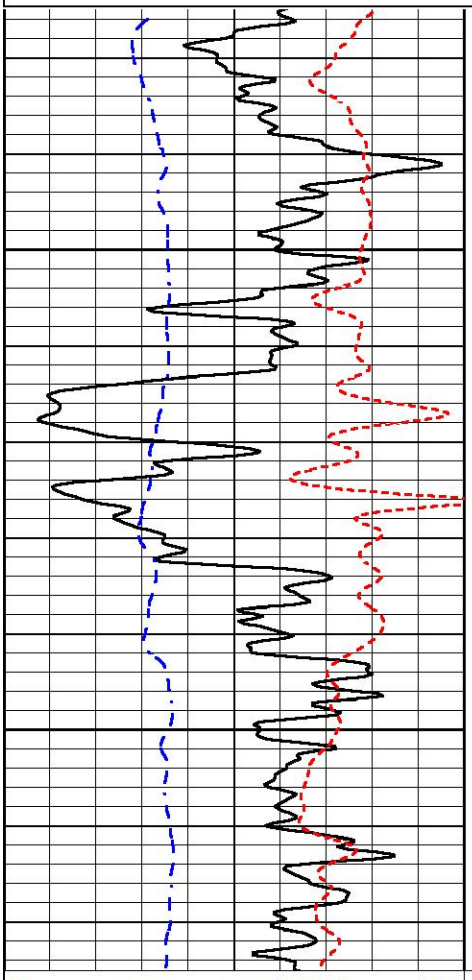
MAIN PASS

Database File	garner_tiger unit #1.db
Dataset Pathname	StkMI/pass3.4
Presentation Format	_dil
Dataset Creation	Fri Aug 19 20:09:43 2022
Charted by	Depth in Feet scaled 1:240



-160	RXORT	40
-200	SP (mV)	0

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



800

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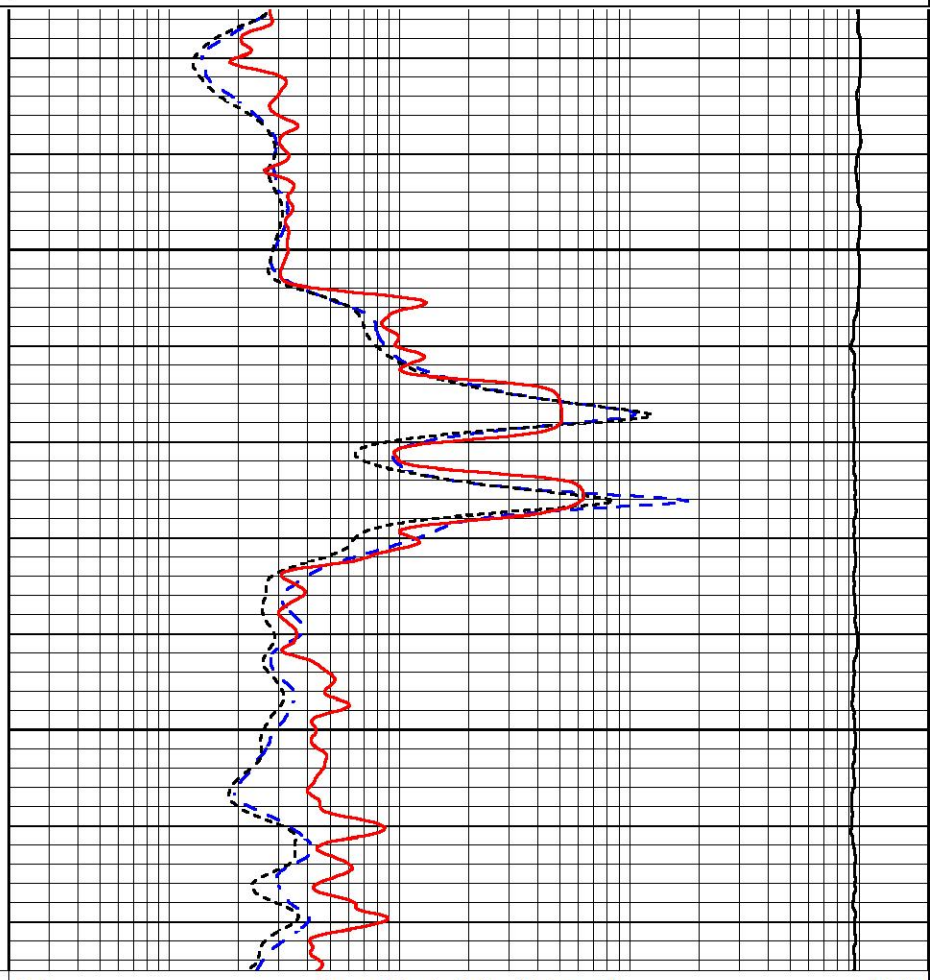


0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

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

MIDWEST WIRELINE

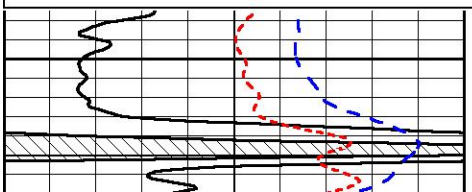
DETAIL SECTION

MAIN PASS

Database File	garner_tiger unit #1.db
Dataset Pathname	StkMI/pass3.1
Presentation Format	_dil
Dataset Creation	Fri Aug 19 20:16:46 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



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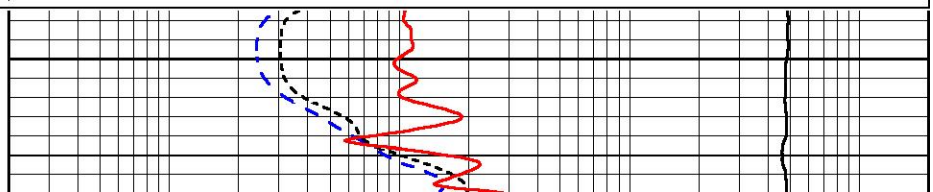

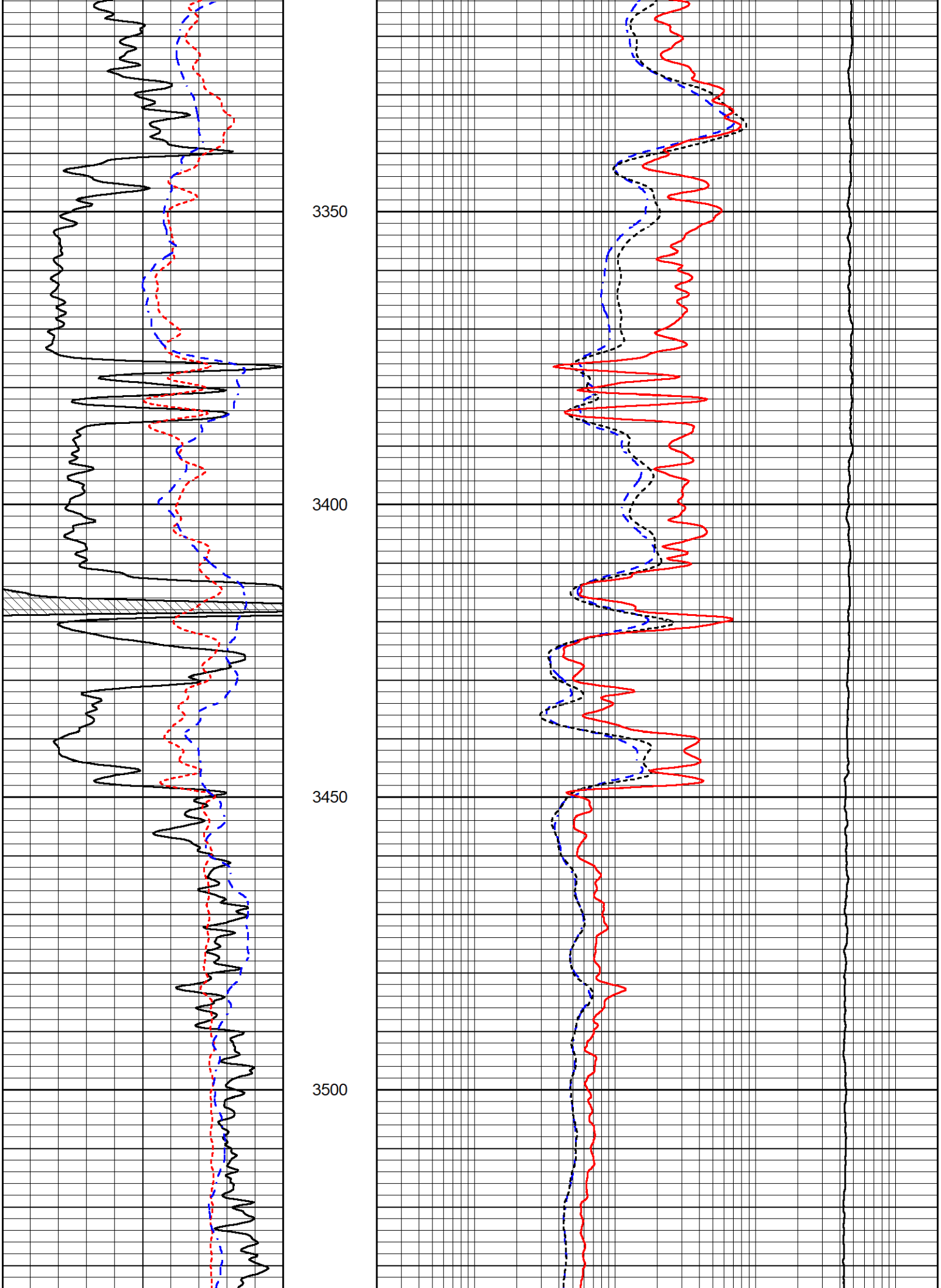
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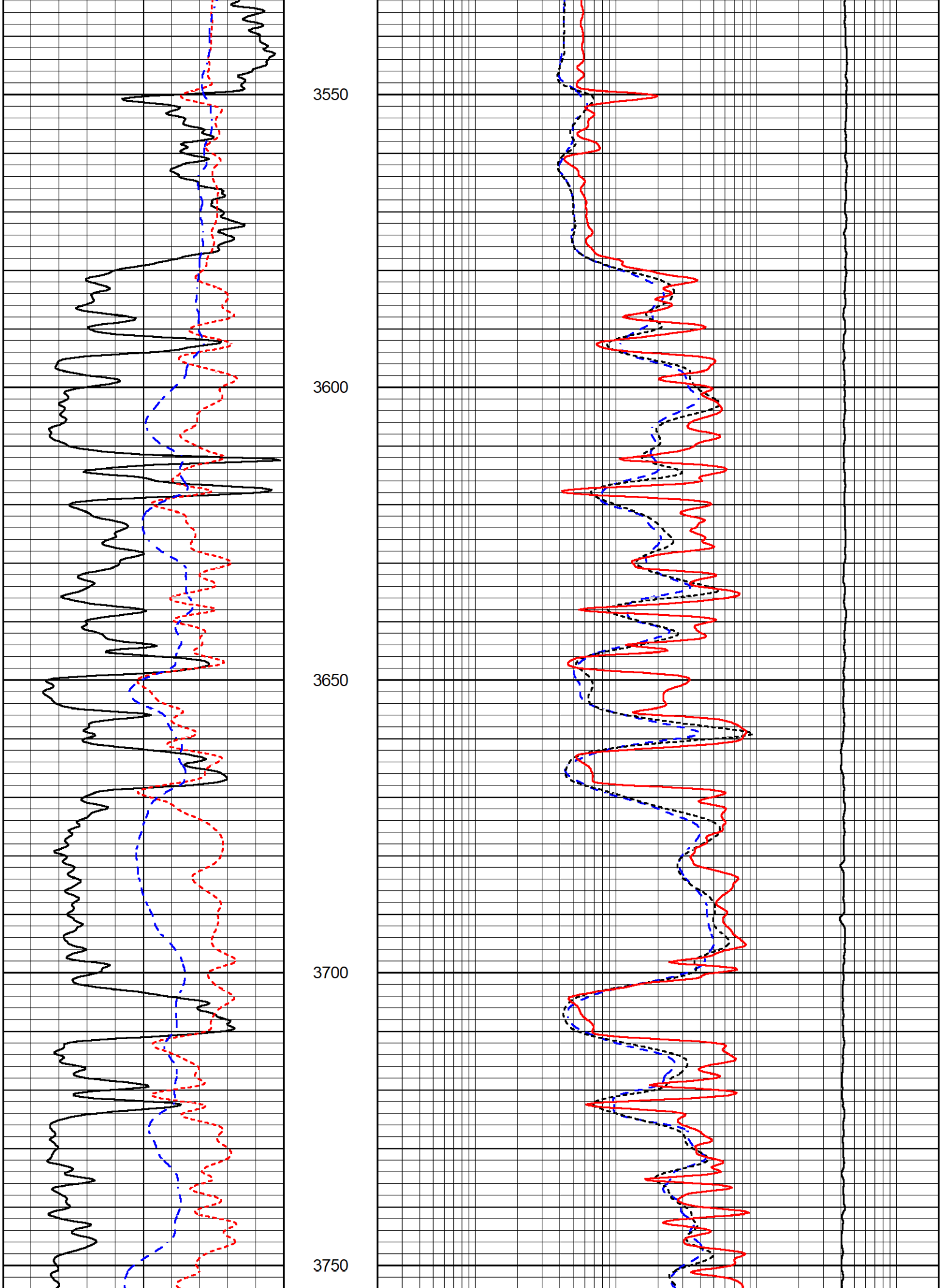
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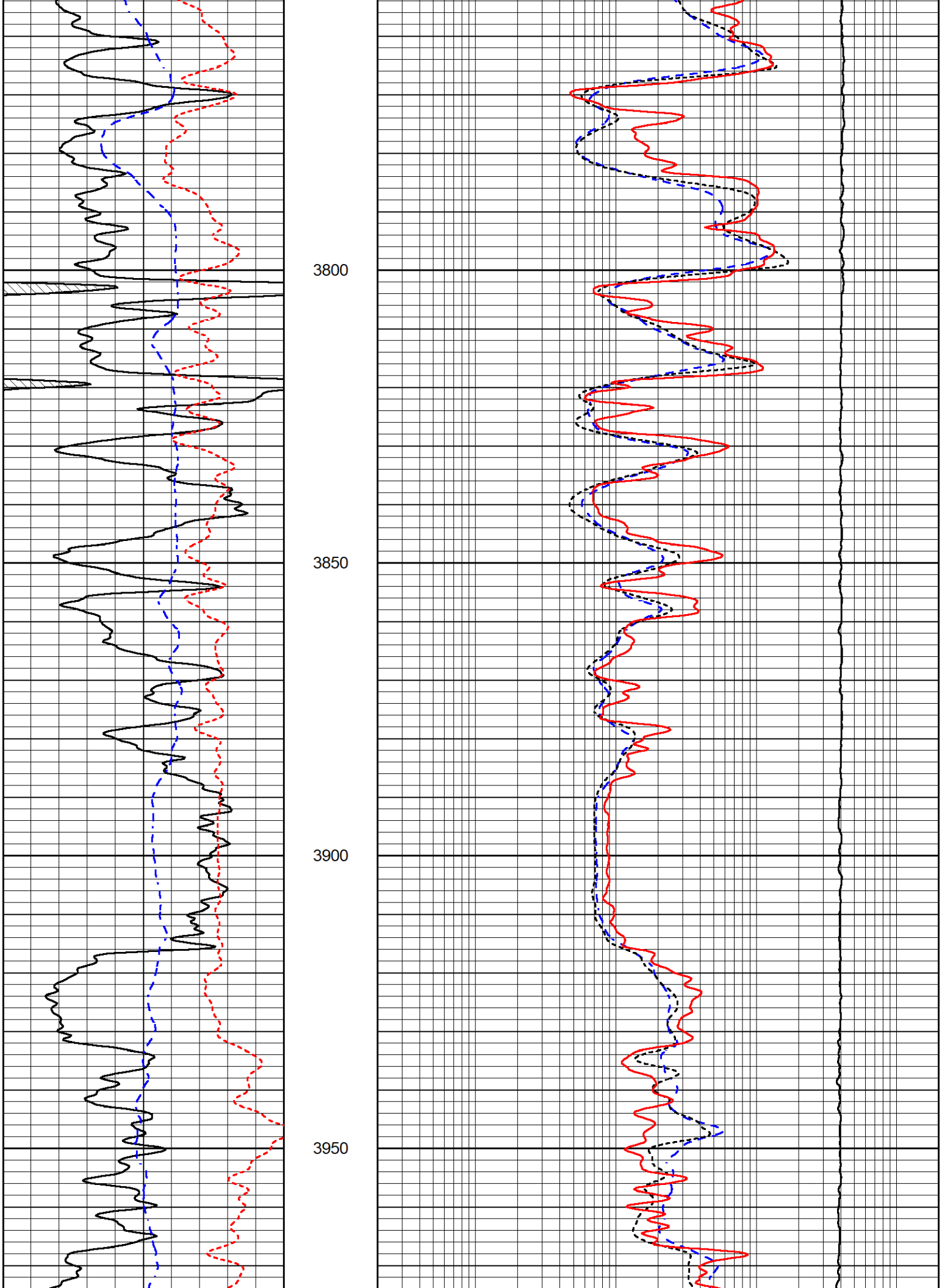
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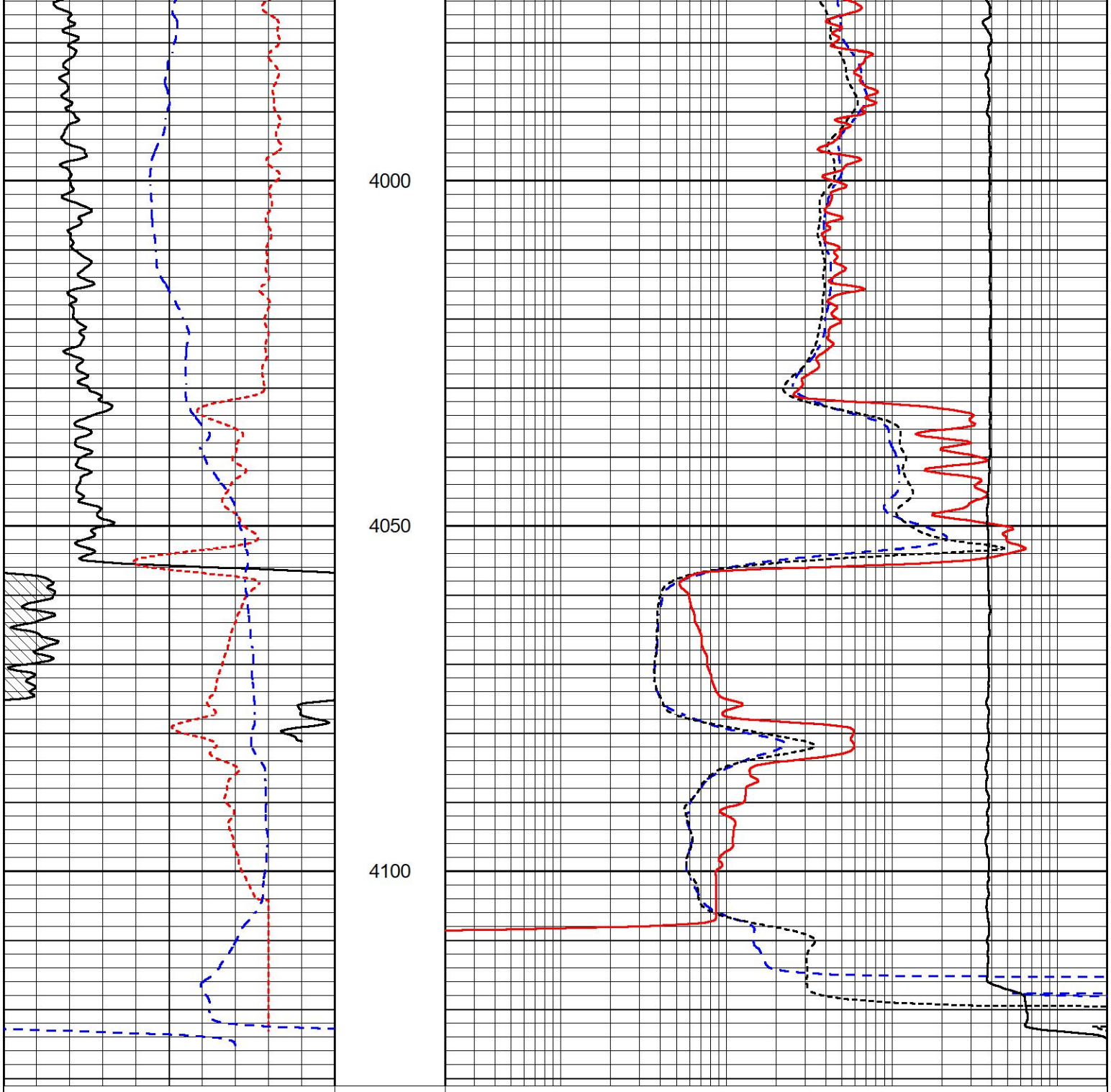
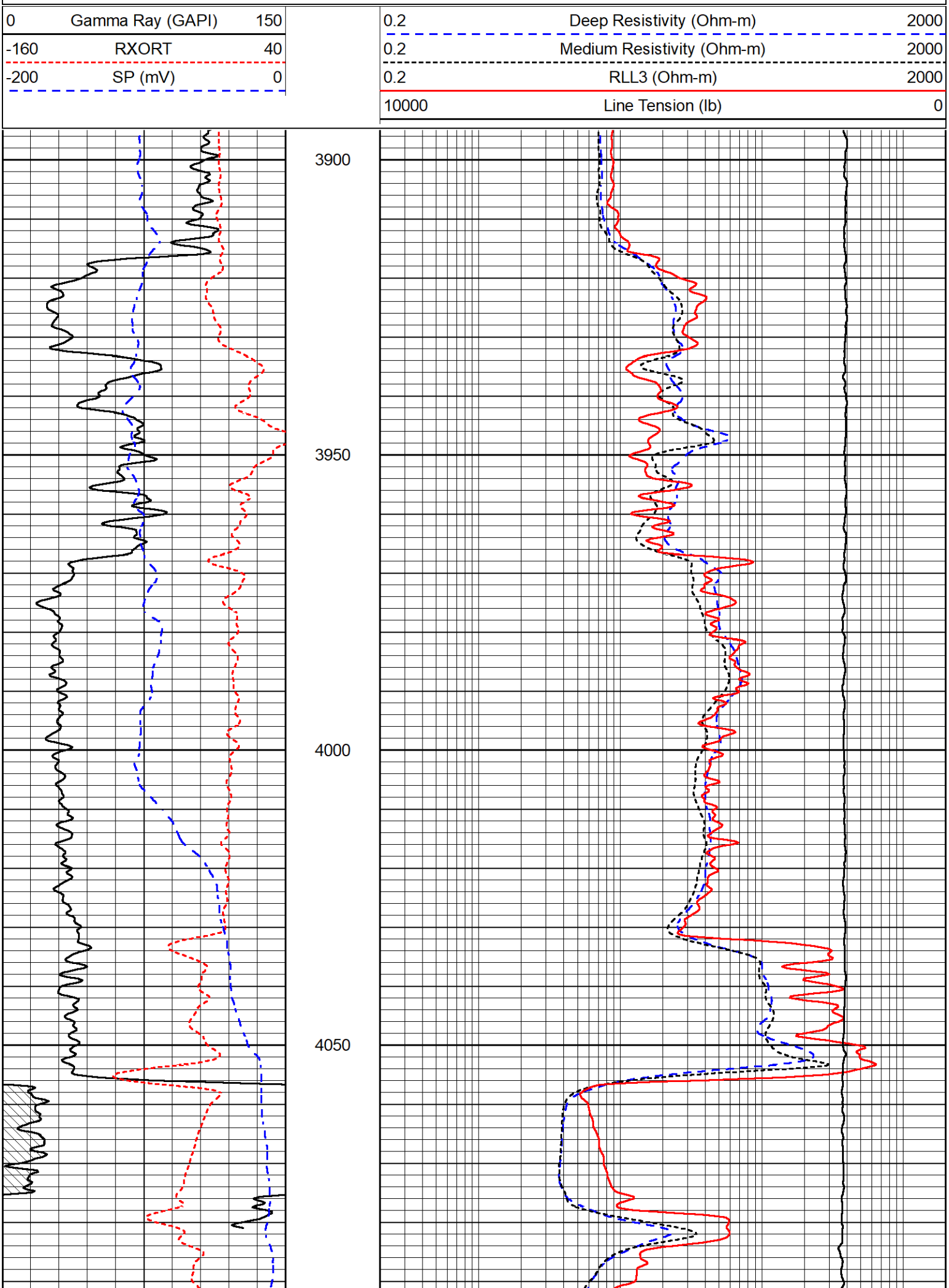


MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

Database File	garner_tiger unit #1.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_dil
Dataset Creation	Fri Aug 19 20:01:07 2022
Charted by	Depth in Feet scaled 1:240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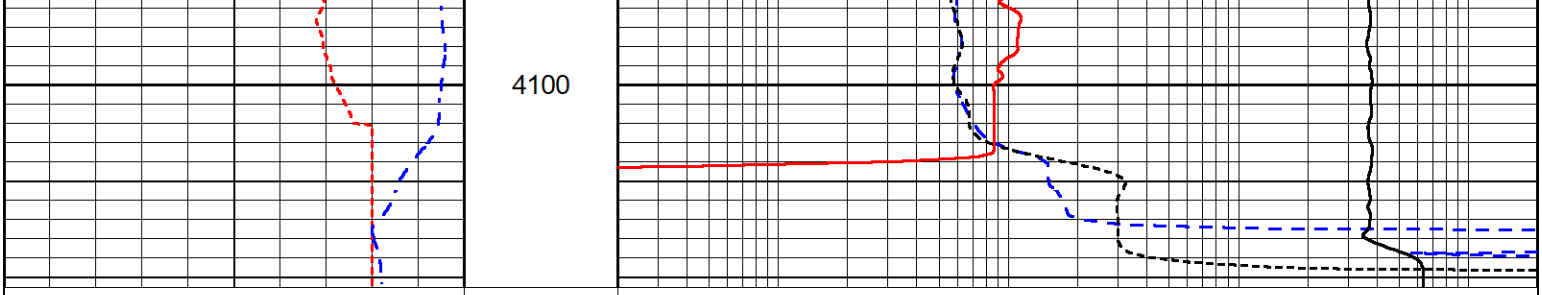
-160 RXORT 40
-200 SP (mV) 0
0.2 Deep Resistivity (Ohm-m) 2000
0.2 Medium Resistivity (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
10000 Line Tension (lb) 0
3900
3950
4000
4050



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

Calibration Report

Database File	garner_tiger unit #1.db
Dataset Pathname	StkMl/pass3.1
Dataset Creation	Fri Aug 19 20:16:46 2022

Dual Induction Calibration Report

Serial-Model:	502 HT-M&W
Surface Cal Performed:	Sun Jul 24 22:38:00 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	255.800	mmho/m	0.454	-32.000
Medium	113.335	1585.690	0.000	255.800	mmho/m	0.350	-7.000

Microlog Calibration Report

Serial-Model:	402-PSIML
Performed:	Sun Jul 17 13:11:21 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	-0.3000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	0.2000
Caliper	1.0052	1.0858	5.0000	16.5000	in	65.0000	-59.7500

Compensated Density Calibration Report

Serial-Model:	307-01-M&W
Source #:	20762B
Master Calibration Performed:	Fri Aug 19 13:18:02 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3617.09	2548.77	cps
Aluminum	2.770	g/cc	687.19	1627.91	cps

Spine Angle = 74.89

Density/Spine Ratio = 0.590

Size	Reading

Small Ring	6.00	in	1.16
Large Ring	18.00	in	1.01

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: 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

MIDWEST WIRELINE

Company Thomas Garner, Inc.
Well Tiger Unit #1
Field
County Stafford
State Kansas