



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Landmark Resources, Inc.		Company Landmark Resources, Inc.	
Well	Godfrey-Wessel Unit #1-32	Well	Godfrey-Wessel Unit #1-32
Field	Godfrey	Field	Godfrey
County	Sheridan	County	Sheridan
State	Kansas	State	Kansas
Location: API #: 15-179-21488-00-00		Other Services	
1875 FNL & 269 FWL		CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	2780
Log Measured From	Kelly Bushing	K.B.	2785
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2780
SEC 32	TWP 6S	RGE 28W	
Date 8/27/2022			
Run Number	One		
Depth Driller	4540		
Depth Logger	4539		
Bottom Logged Interval	4538		
Top Log Interval	300		
Casing Driller	8.625 @ 306		
Casing Logger	305		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	4400		
Density / Viscosity	9.3	54	
pH / Fluid Loss	10.0	8.0	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.40 @ 80		
Rmf @ Meas. Temp	0.30 @ 80		
Rmc @ Meas. Temp	0.54 @ 80		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.26 @ 121		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	121		
Equipment Number	24		
Location	Hays		
Recorded By	D. Schmidt		
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.

Hoxie,
North to Rd 110, 2 West, 1 1/3 South,
East into

Log Measured From: Kelly Bushing 5 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: Terry McLeod
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\landmark_wessel unit 1-32.db
Dataset field/well/stkml/pass3.11/_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 35	degF 80	Off	ft 4539

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



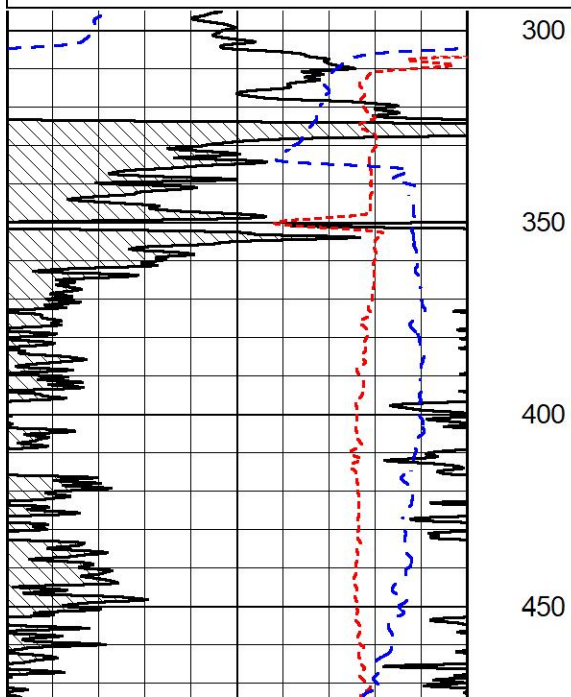
2" SCALE RESISTIVITY

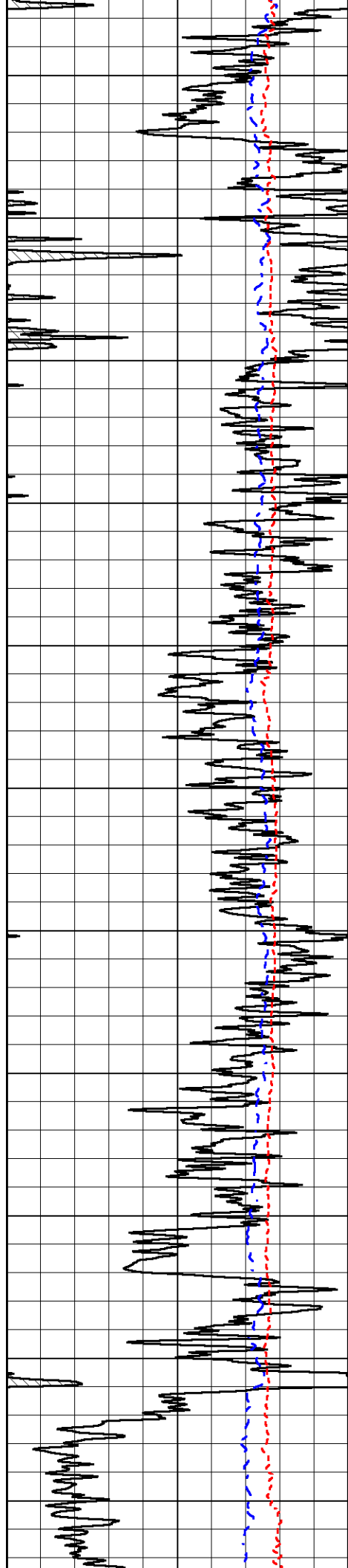
MAIN PASS

Database File landmark_wessel unit 1-32.db
Dataset Pathname stkml/pass3.3
Presentation Format _dil
Dataset Creation Sat Aug 27 14:16:16 2022
Charted by Depth in Feet scaled 1:600

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





500

550

600

650

700

750

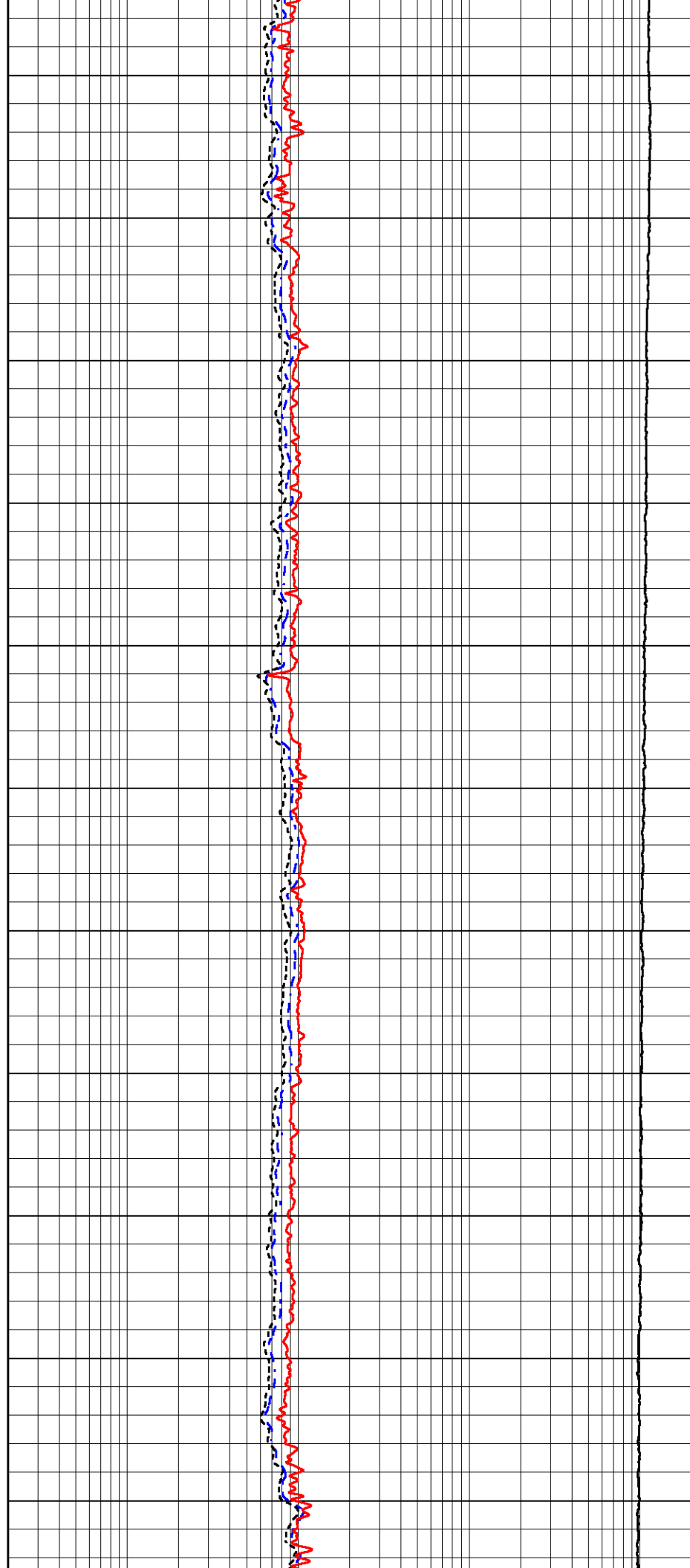
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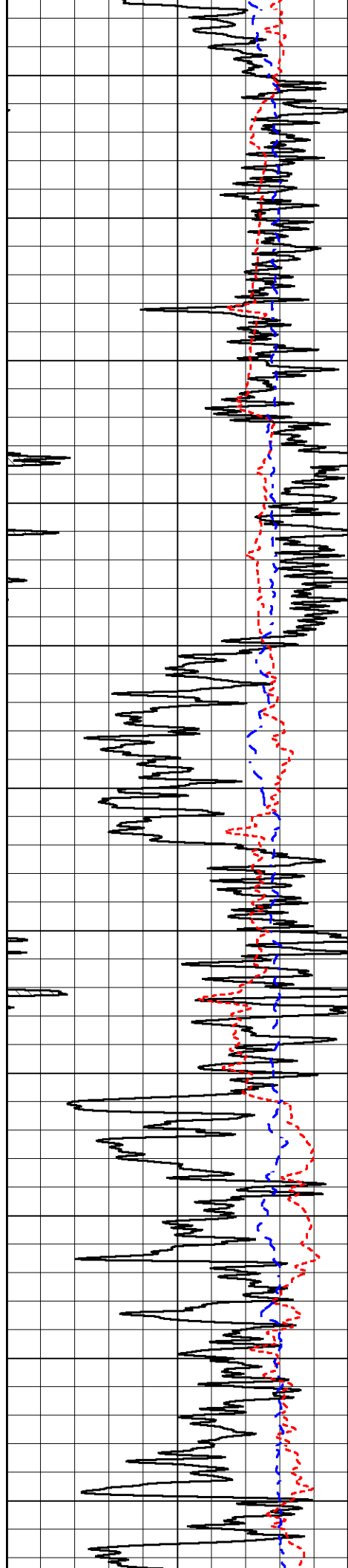
850

900

950

1000





1050

1100

1150

1200

1250

1300

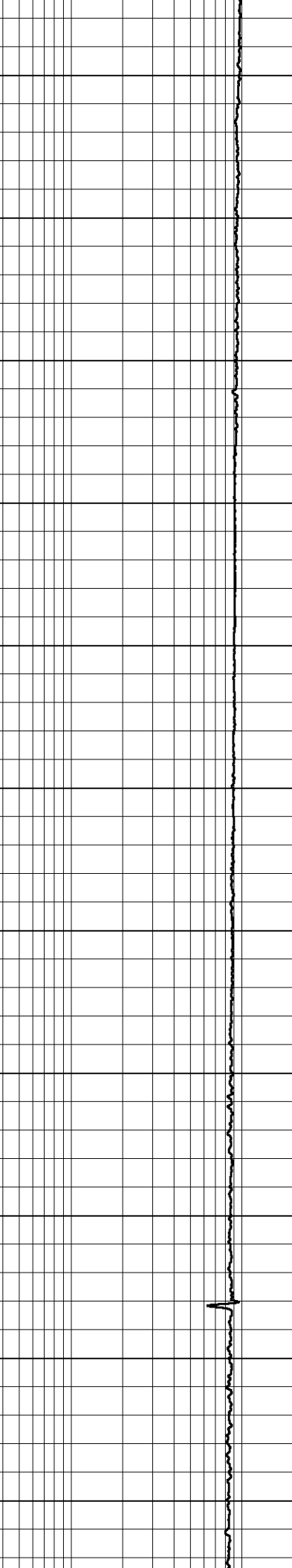
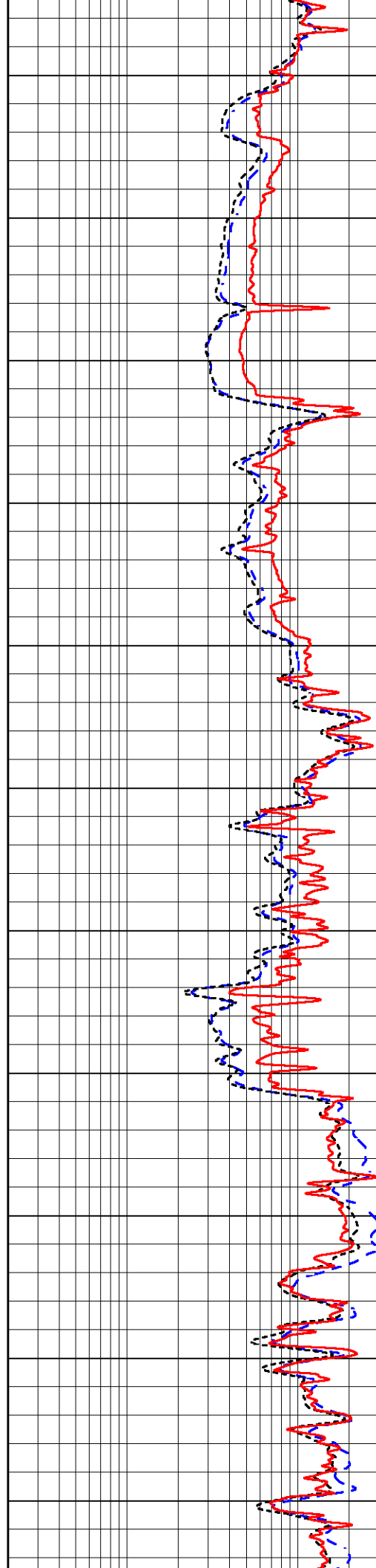
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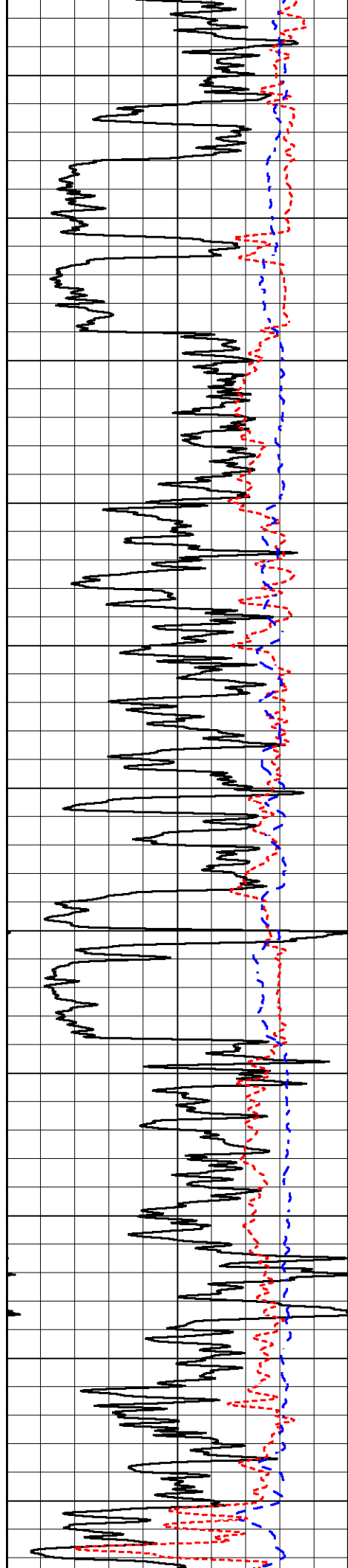
1400

1450

1500

1550





1600

1650

1700

1750

1800

1850

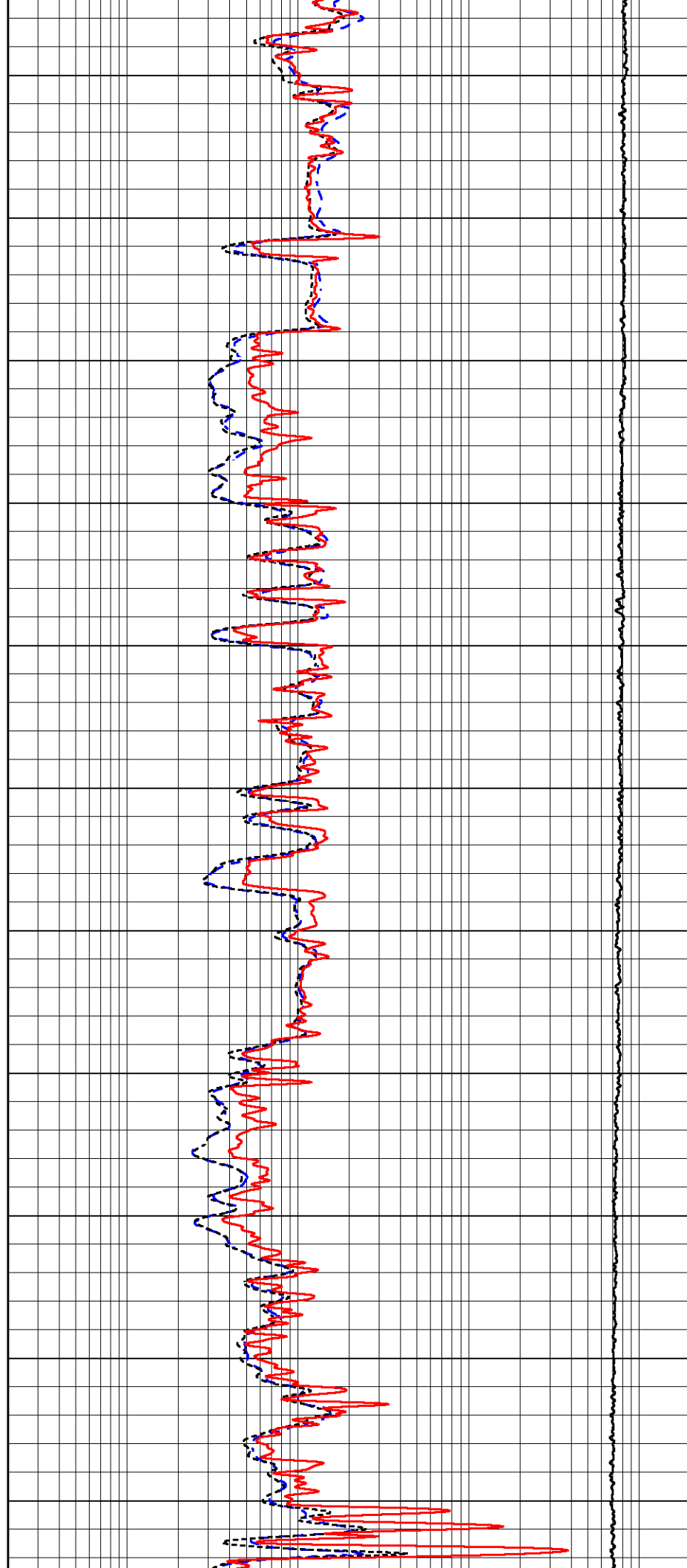
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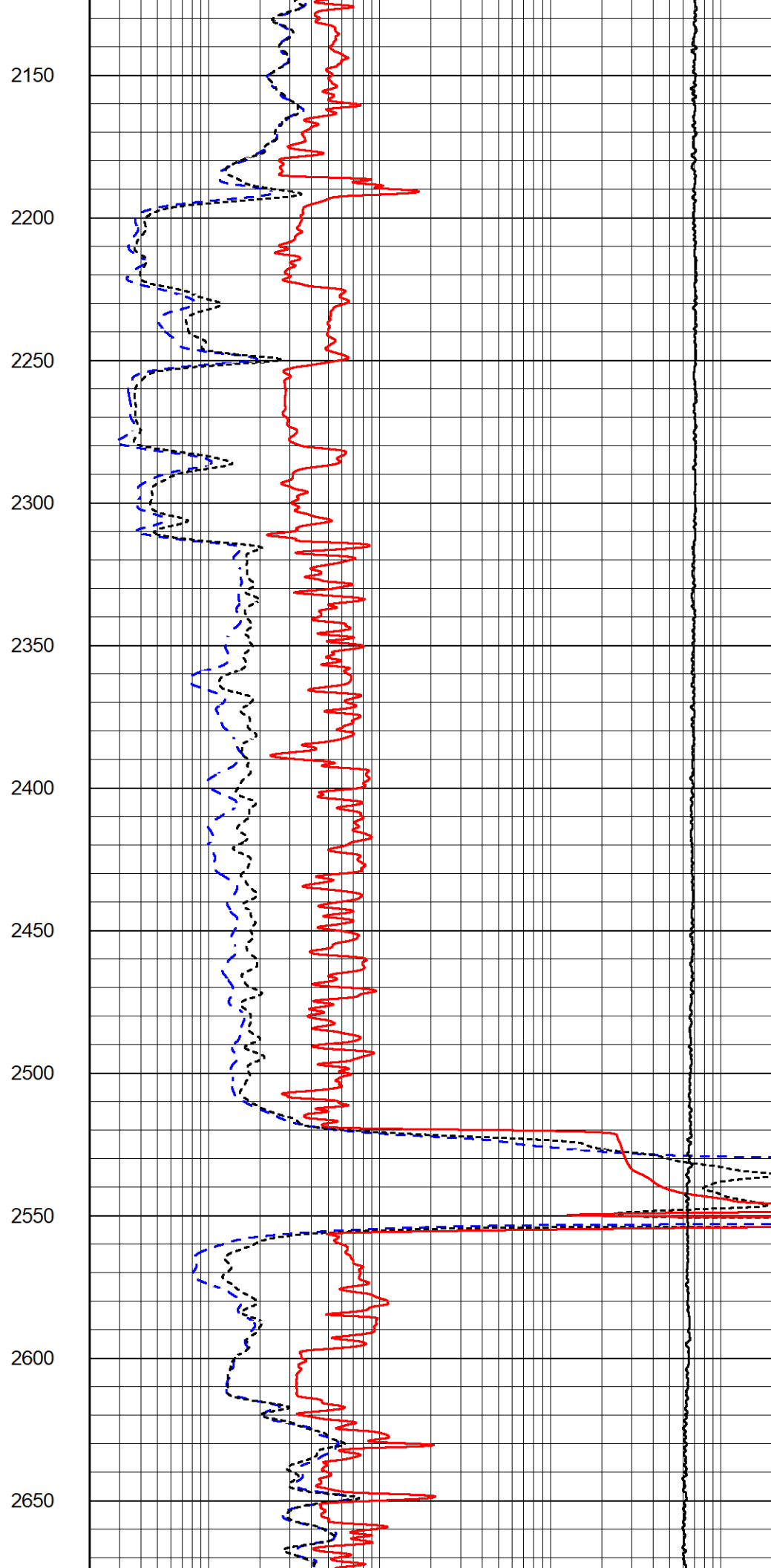
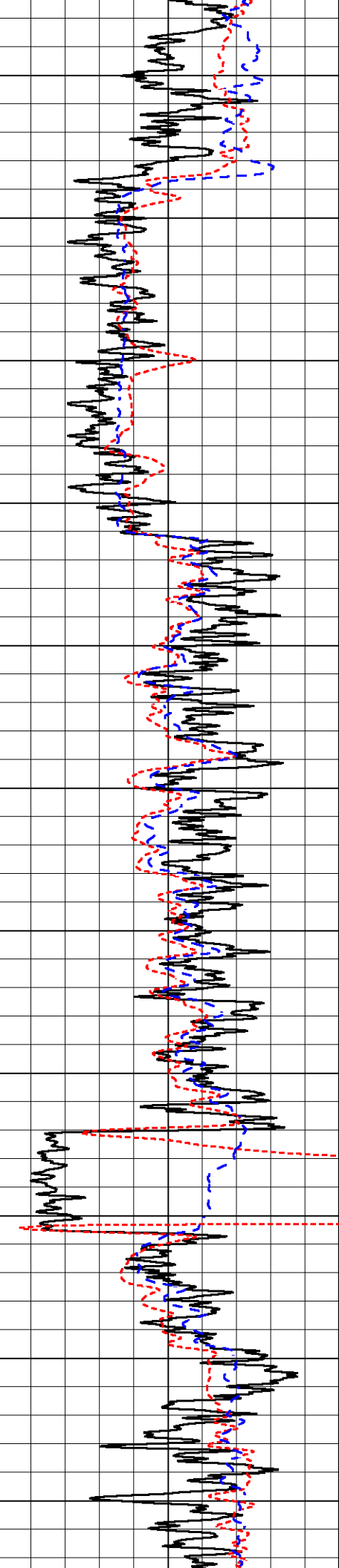
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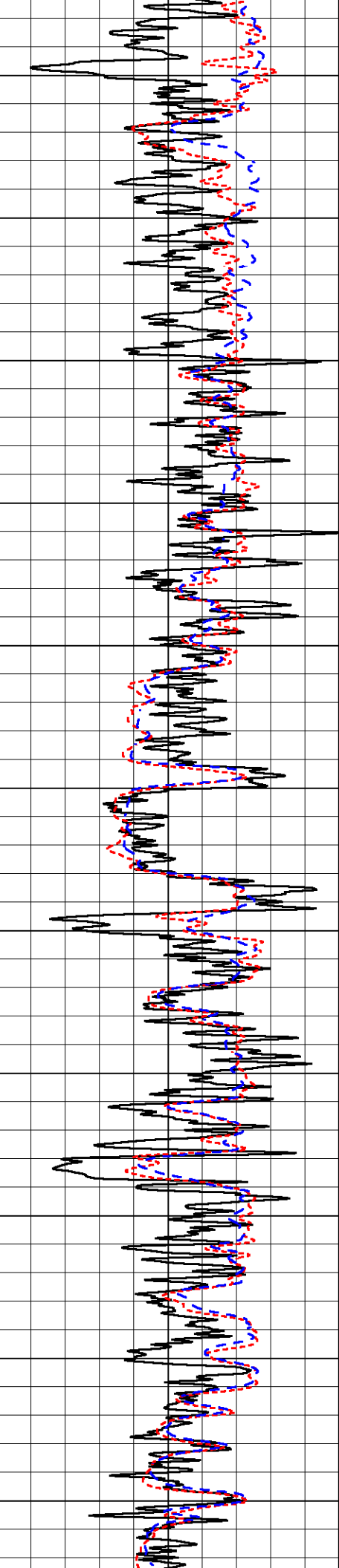
2000

2050

2100







2700

2750

2800

2850

2900

2950

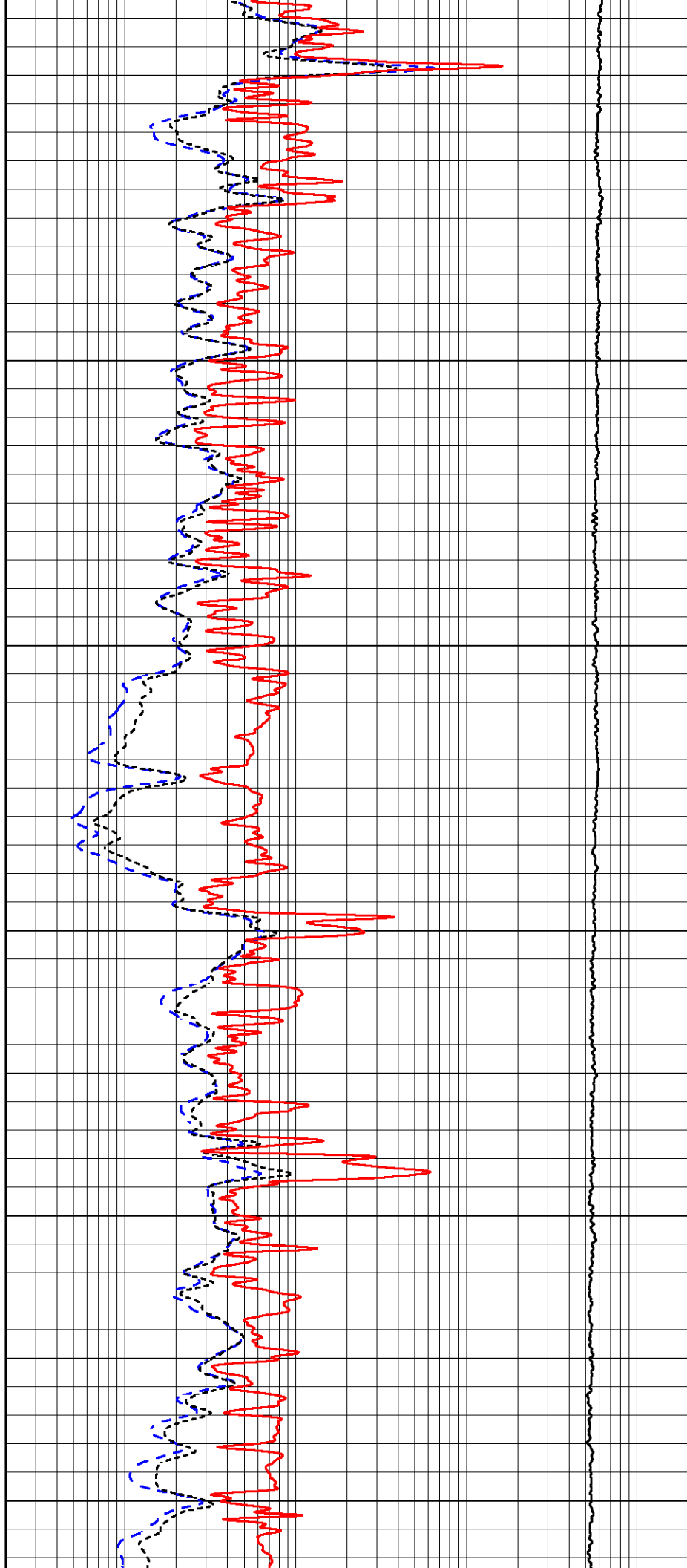
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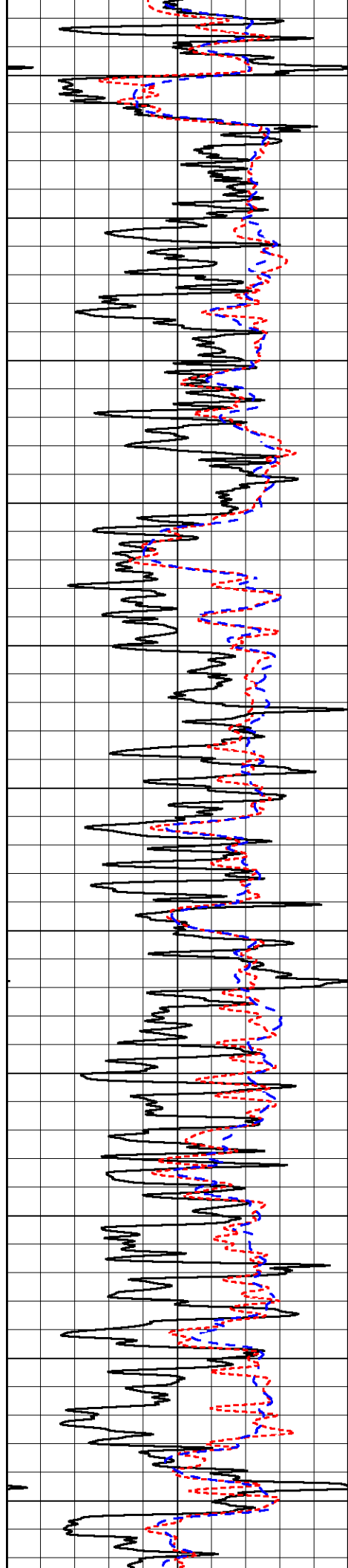
3050

3100

3150

3200





3250

3300

3350

3400

3450

3500

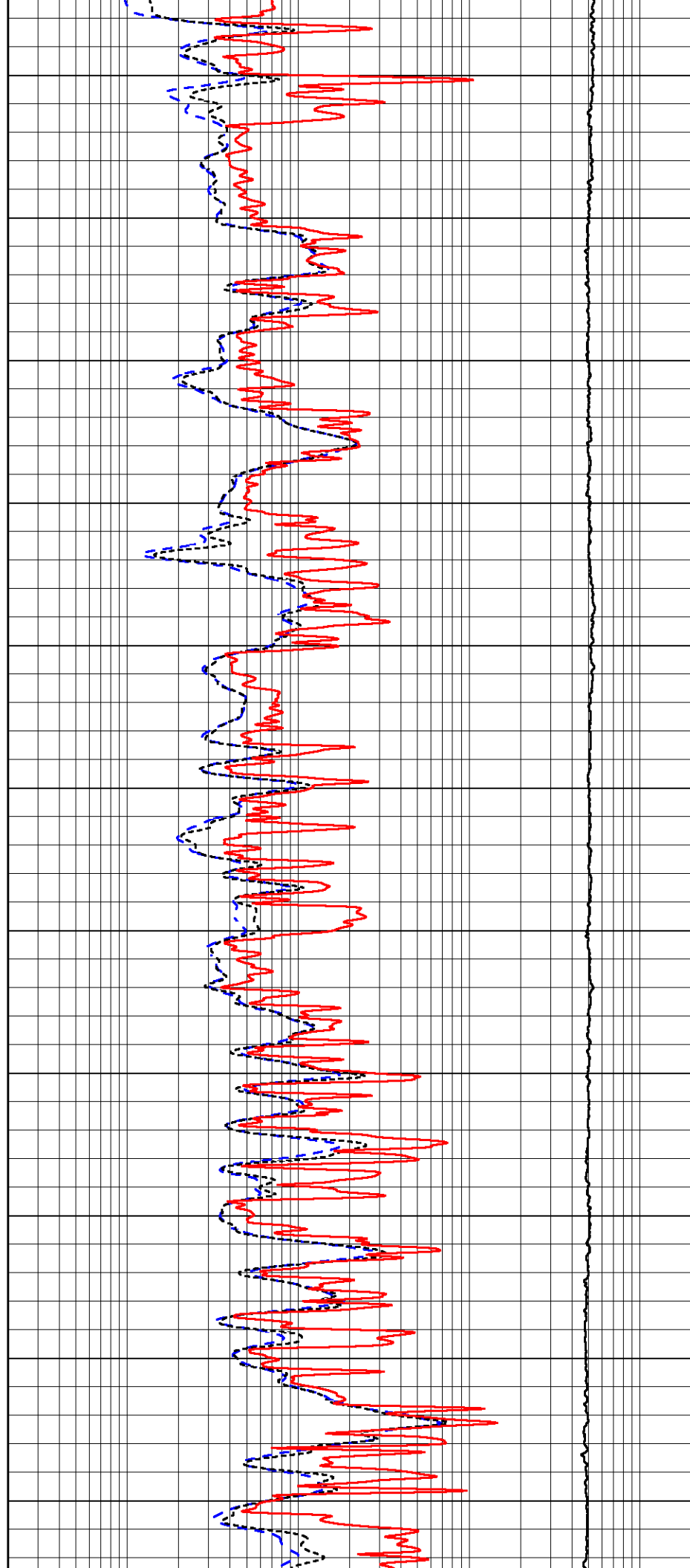
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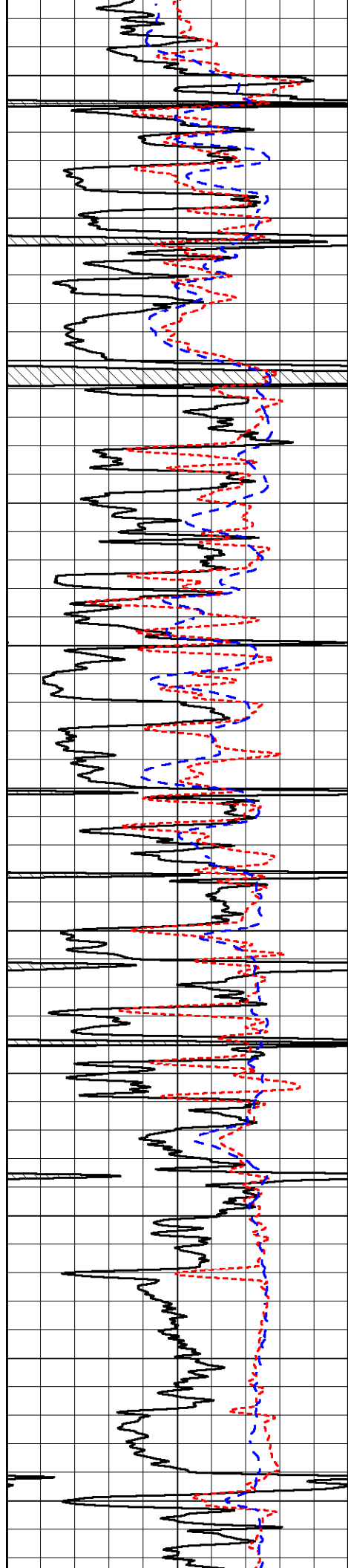
3600

3650

3700

3750





3800

3850

3900

3950

4000

4050

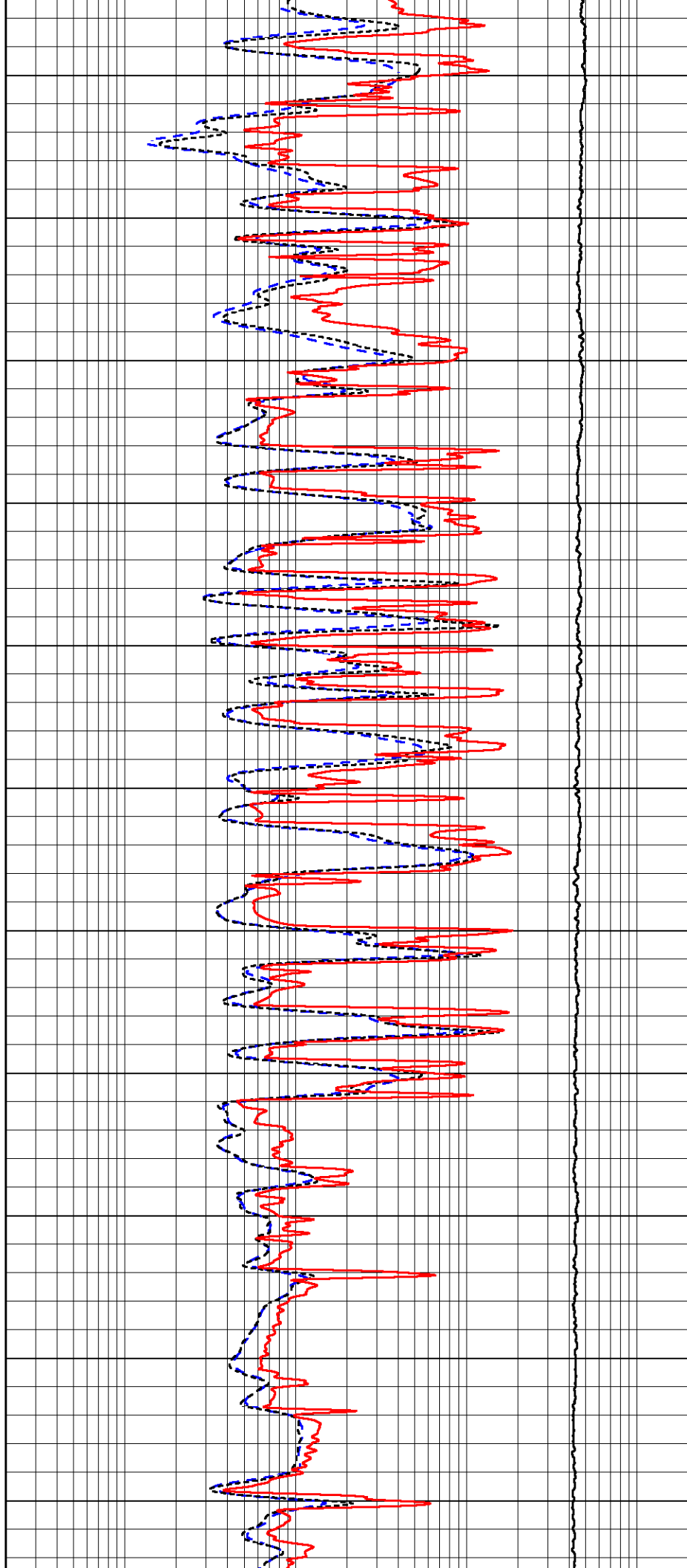
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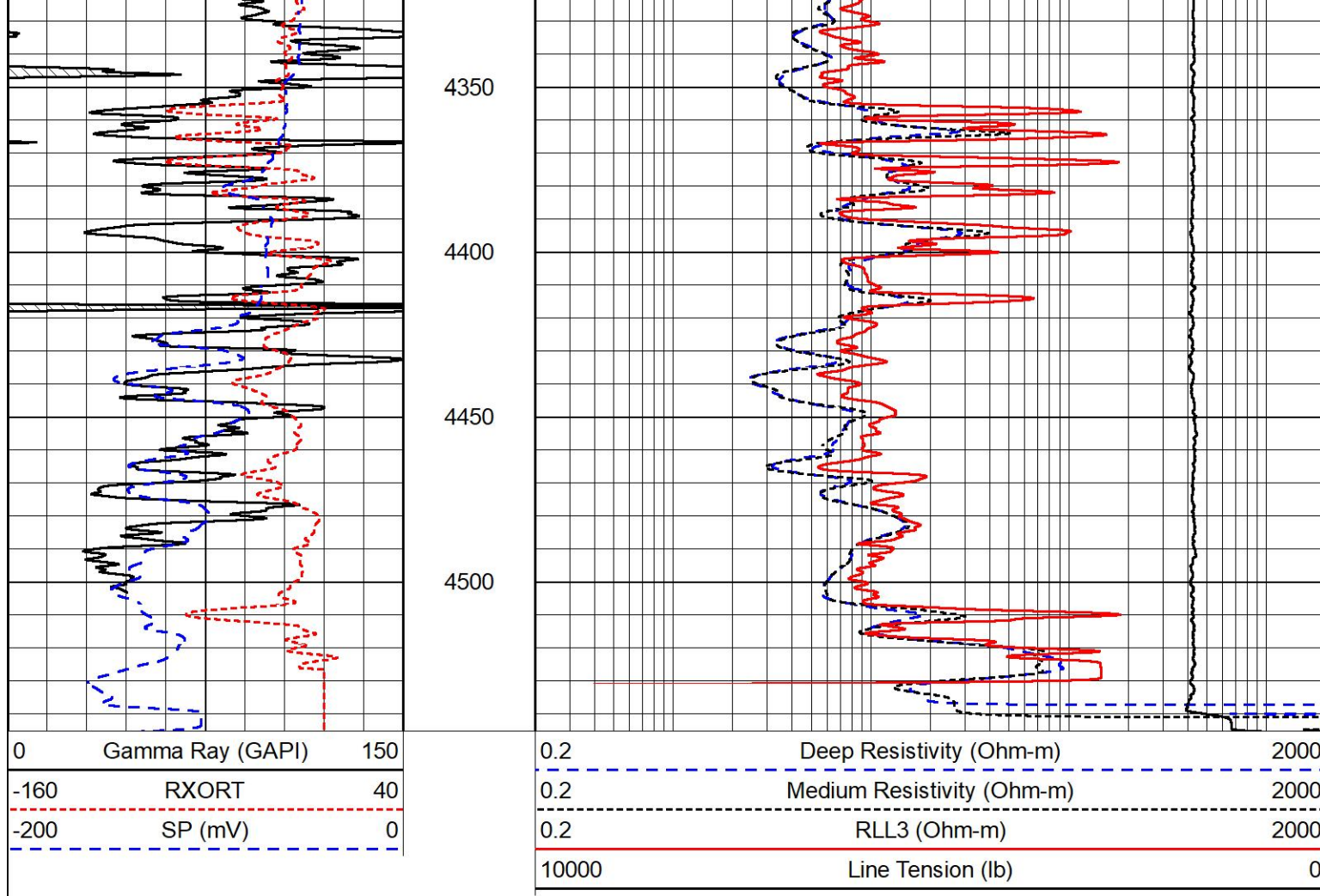
4150

4200

4250

4300

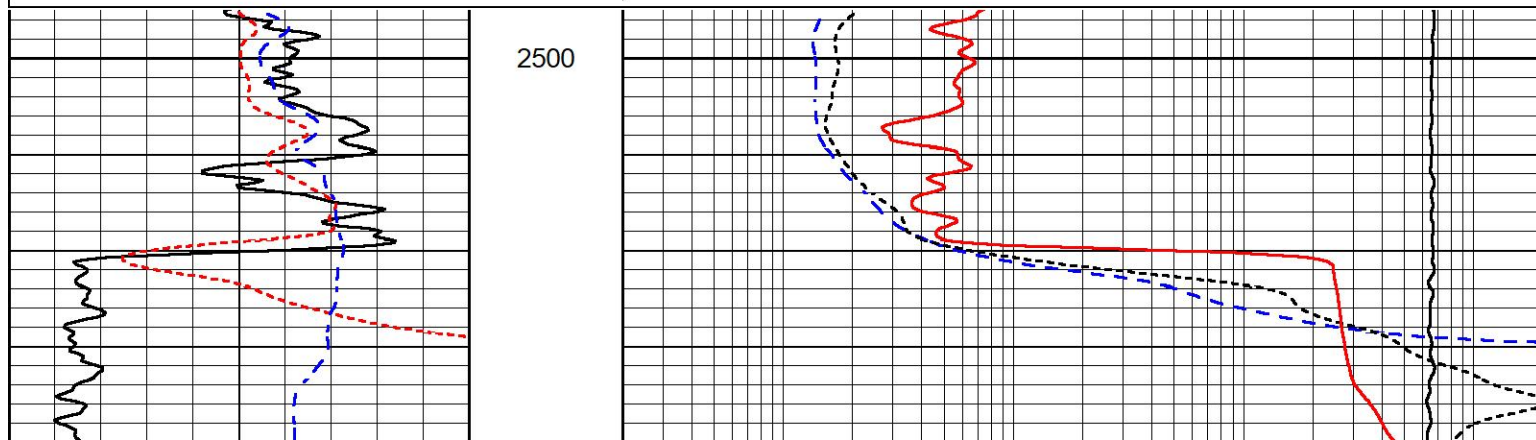
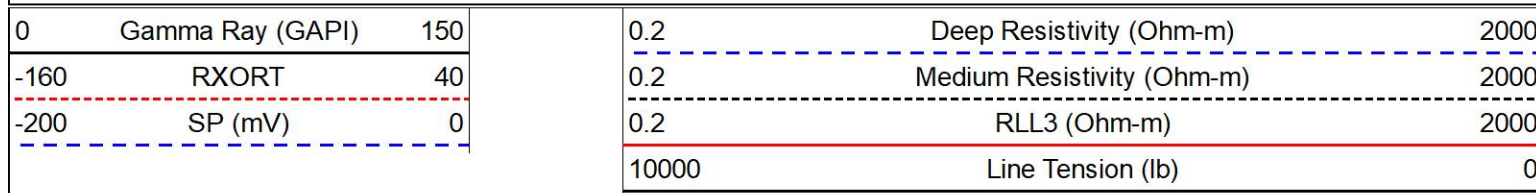


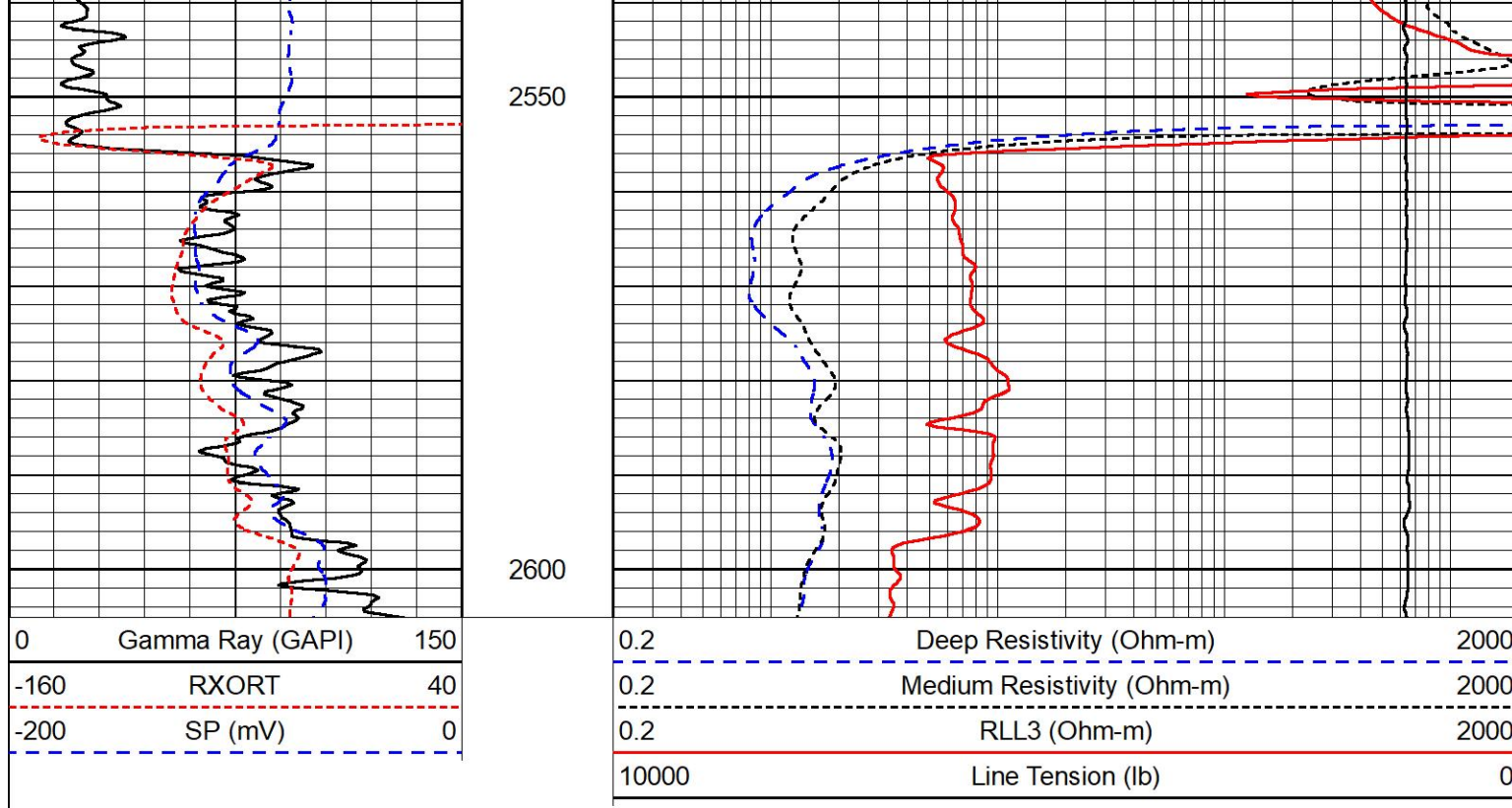


ANHYDRITE SECTION

MAIN PASS

Database File landmark_wessel unit 1-32.db
 Dataset Pathname stkml/pass3.4
 Presentation Format _dil
 Dataset Creation Sat Aug 27 14:16:28 2022
 Charted by Depth in Feet scaled 1:240



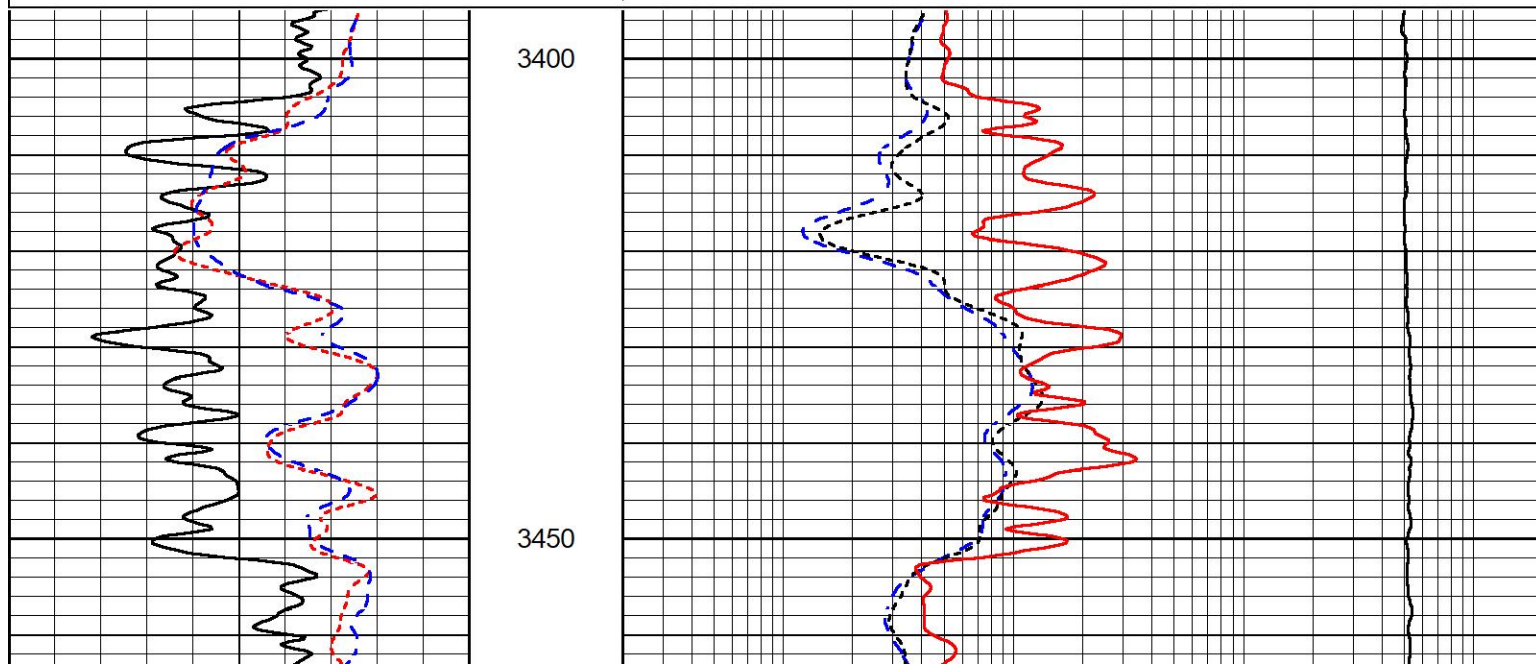
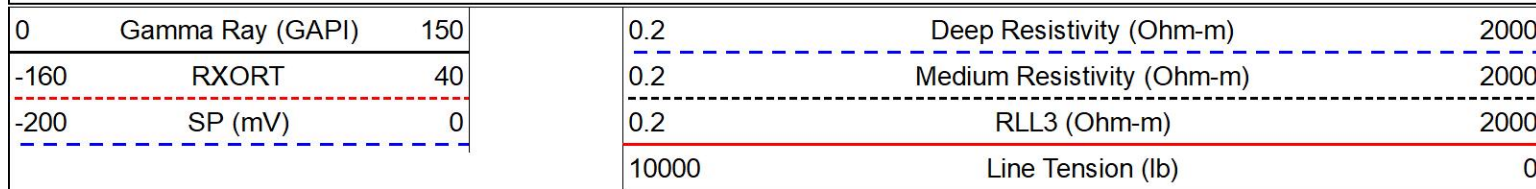


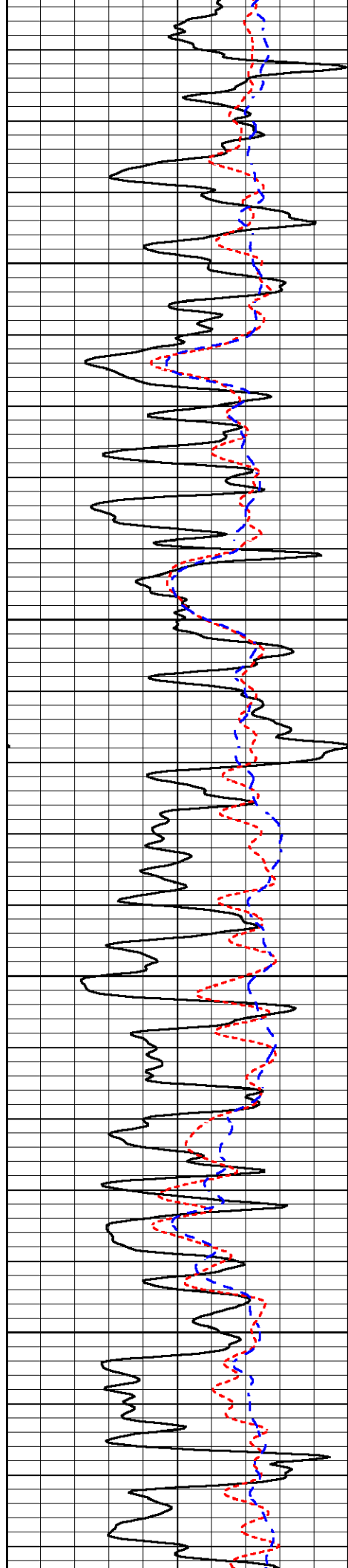
MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

Database File landmark_wessel unit 1-32.db
 Dataset Pathname stkml/pass3.1
 Presentation Format _dil
 Dataset Creation Sat Aug 27 14:11:20 2022
 Charted by Depth in Feet scaled 1:240



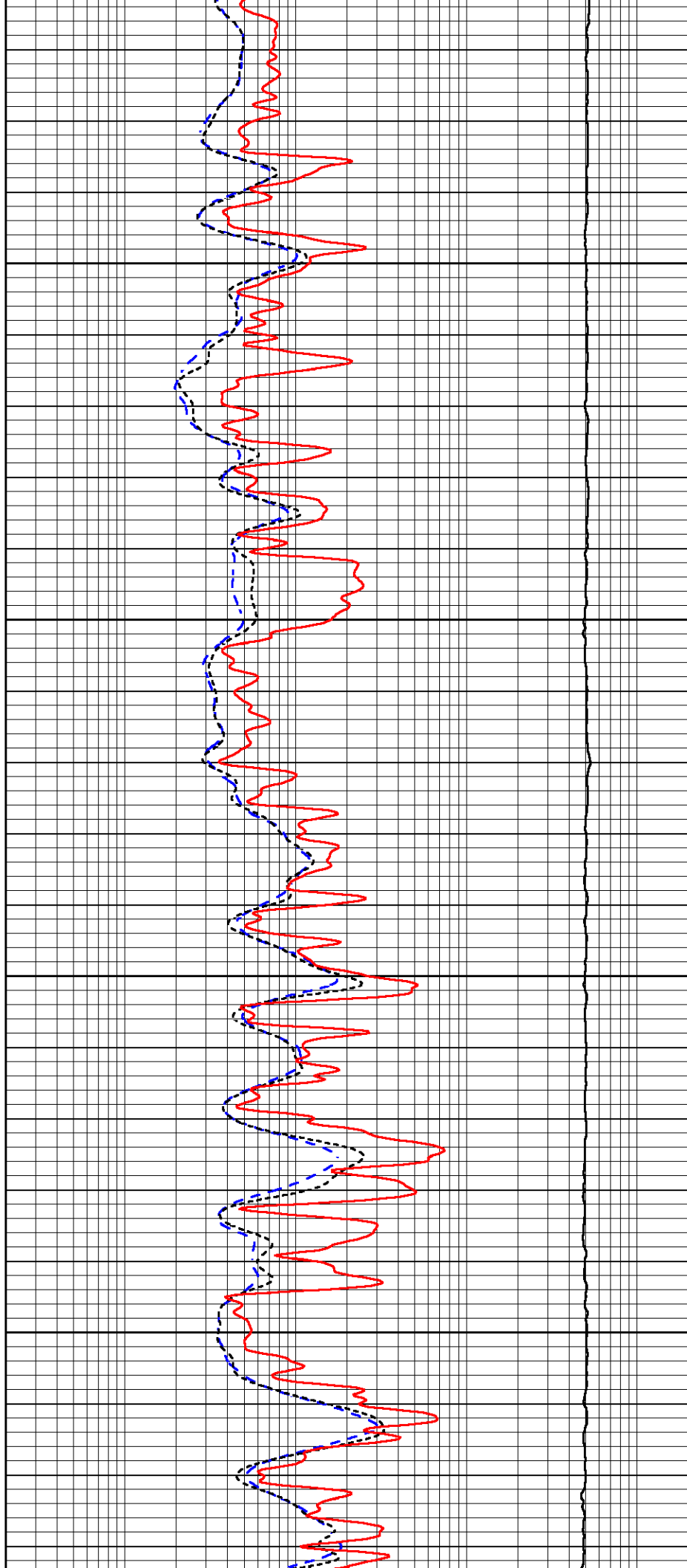


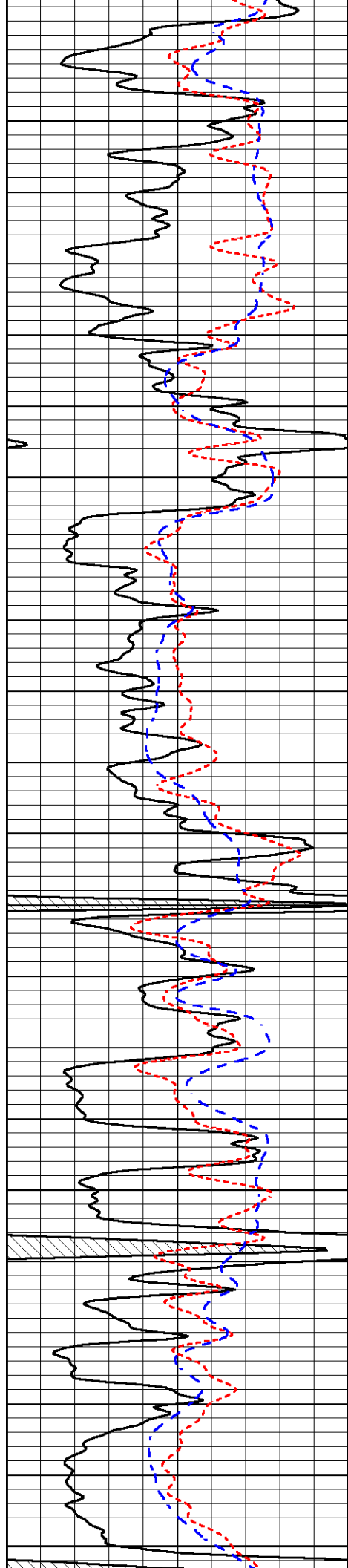
3500

3550

3600

3650





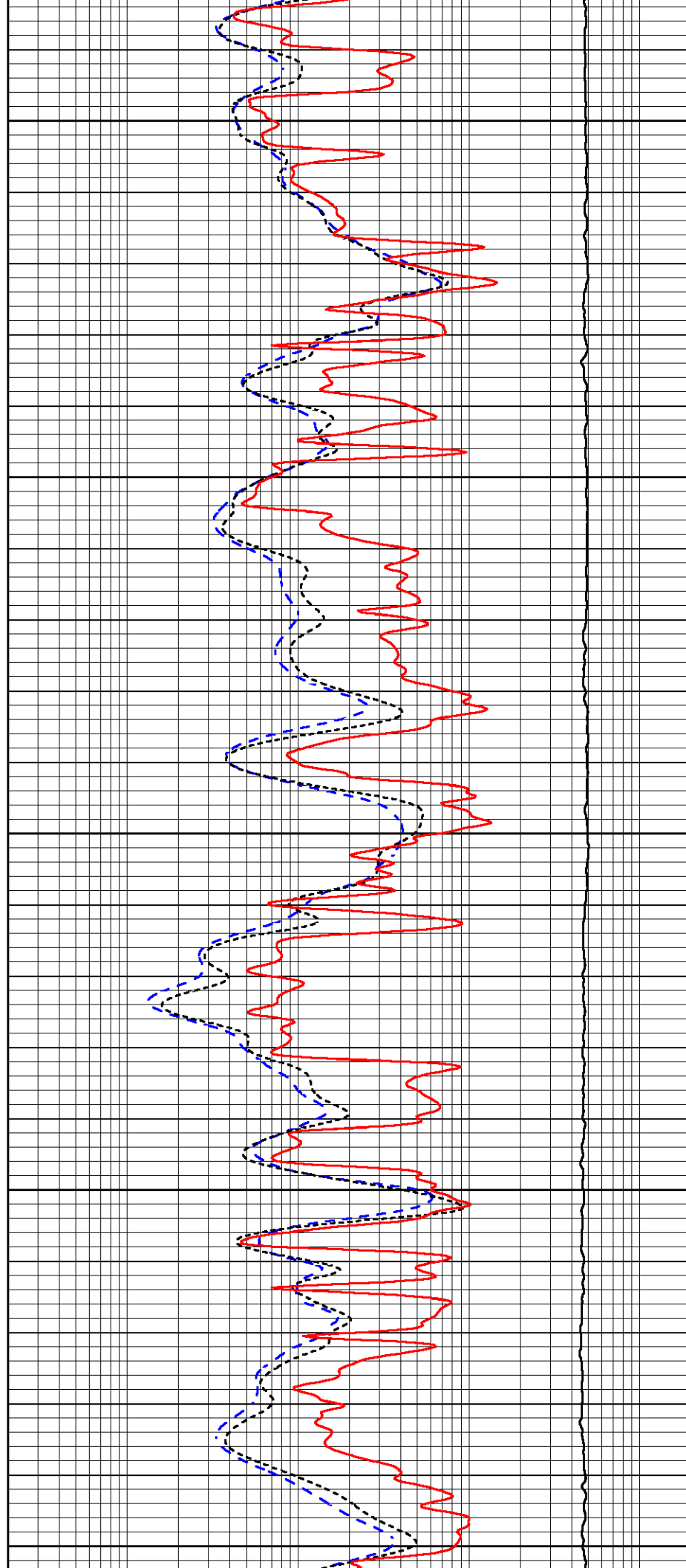
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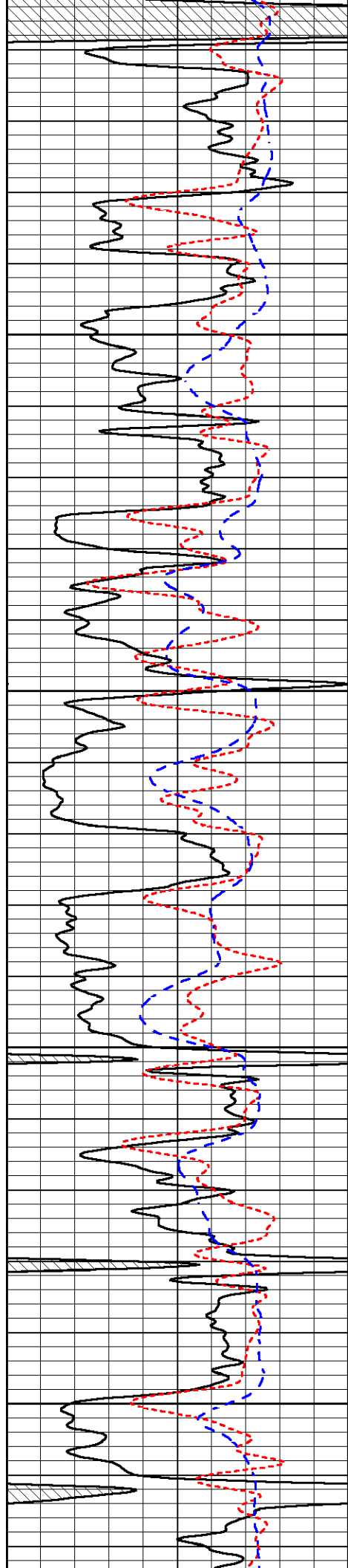
3750

3800

3850

3900



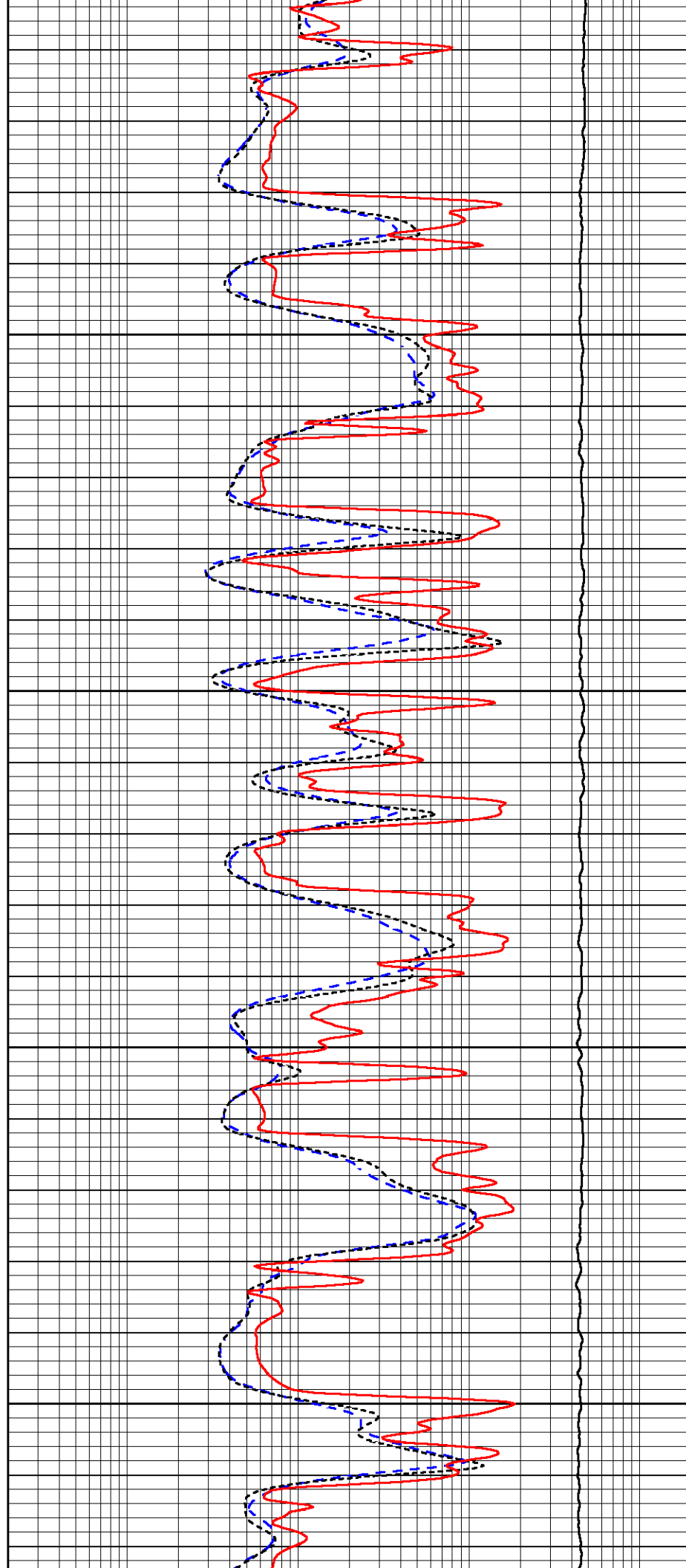


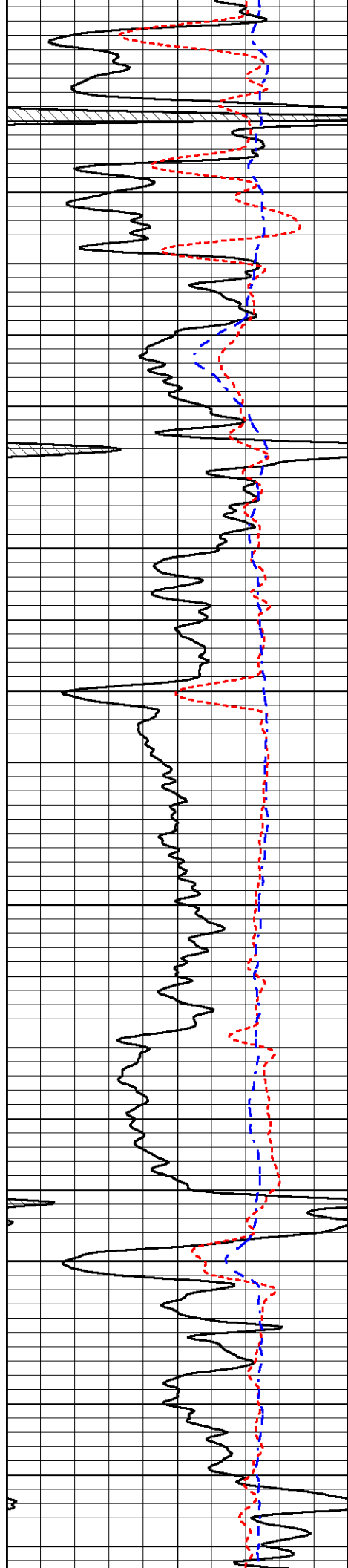
3950

4000

4050

4100



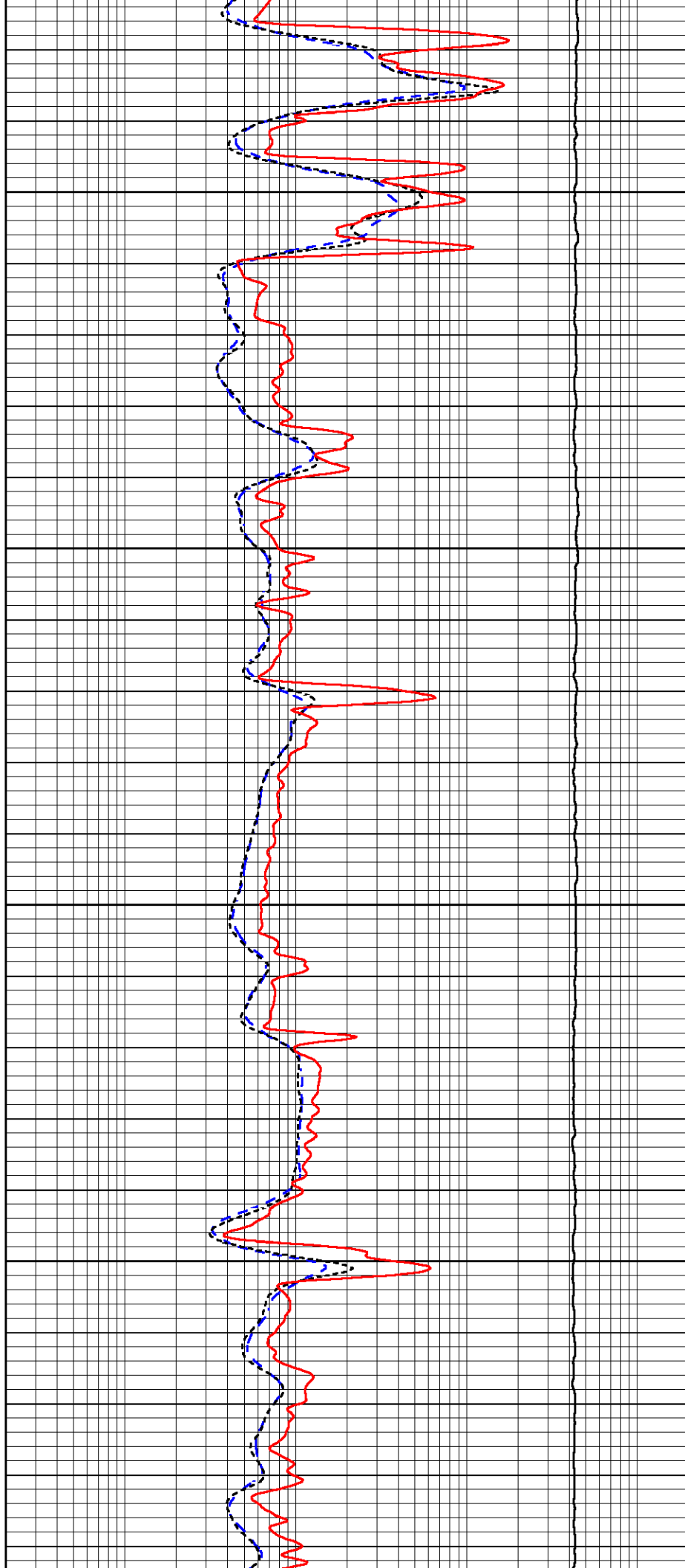


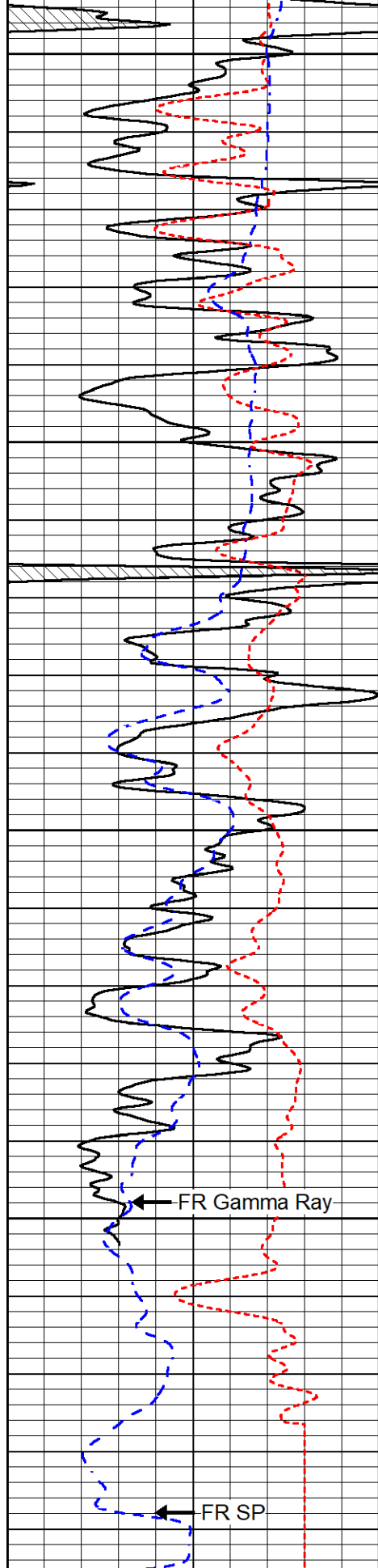
4150

4200

4250

4300





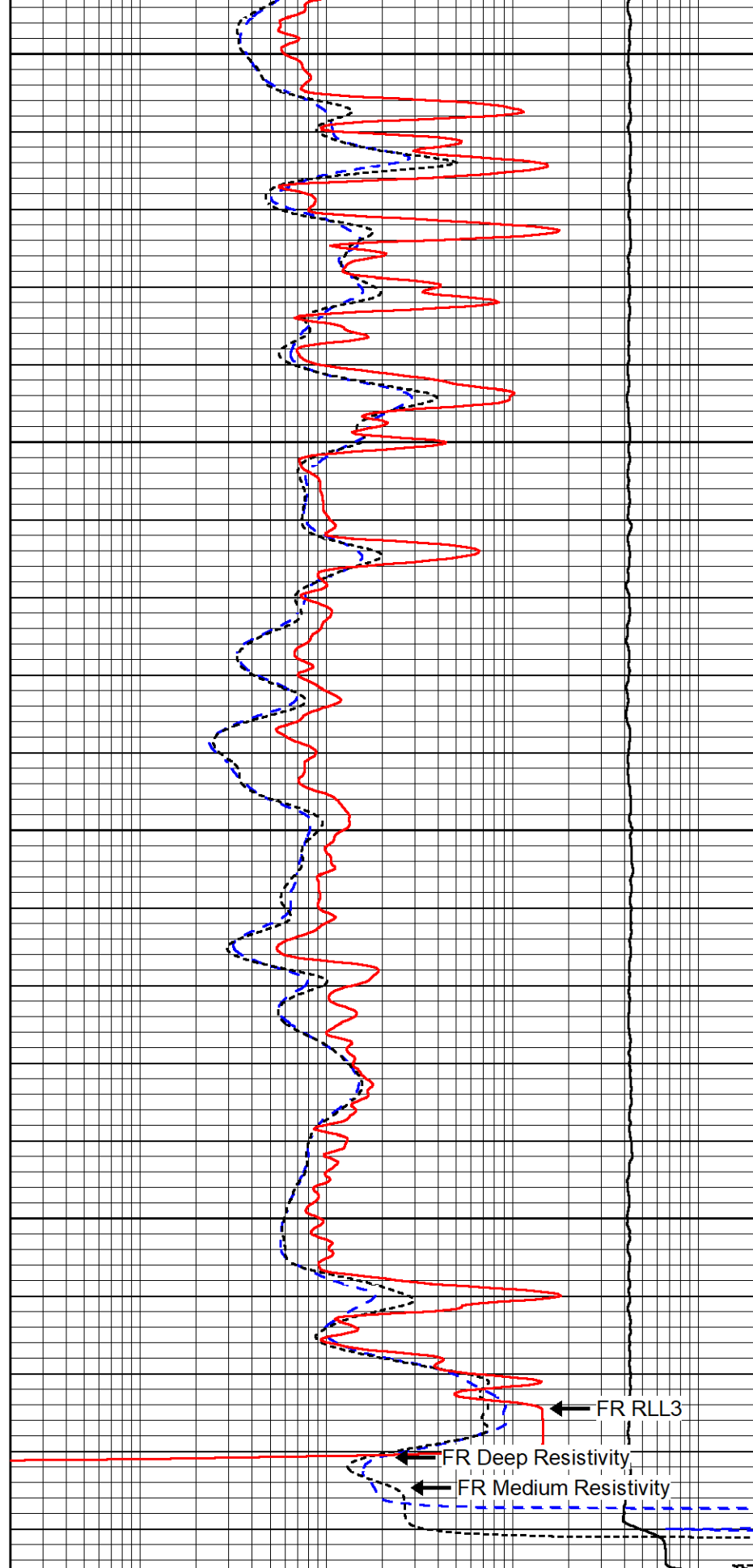
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

4350

4400

4450

4500



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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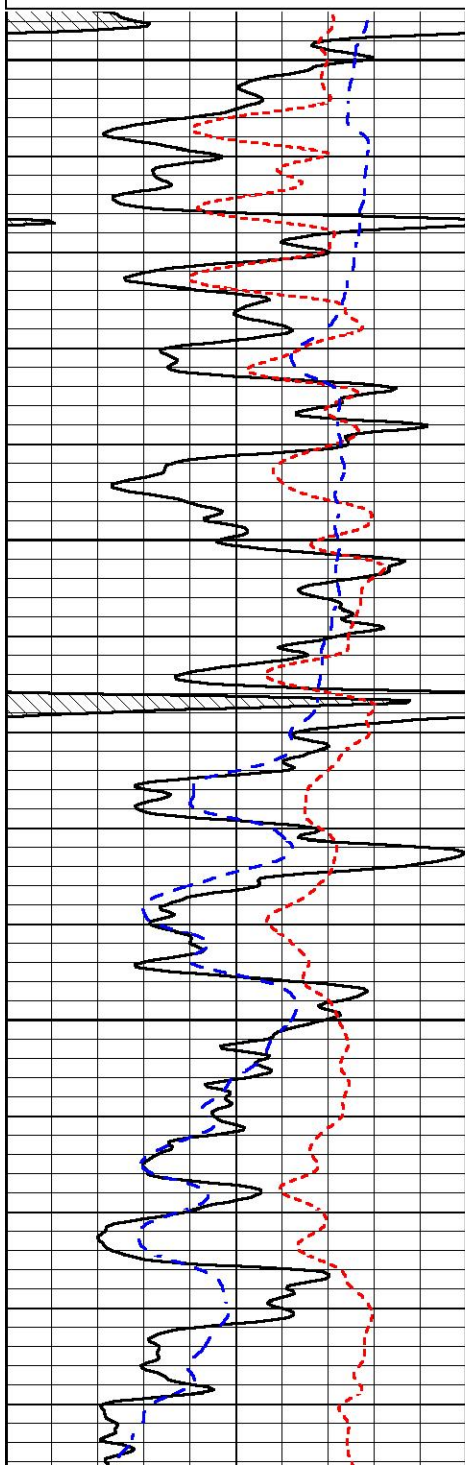
REPEAT SECTION

REPEAT PASS

Database File landmark_wessel unit 1-32.db
Dataset Pathname stkm1/pass2.1
Presentation Format _dil
Dataset Creation Sat Aug 27 13:30:51 2022
Charted by Depth in Feet scaled 1:240

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

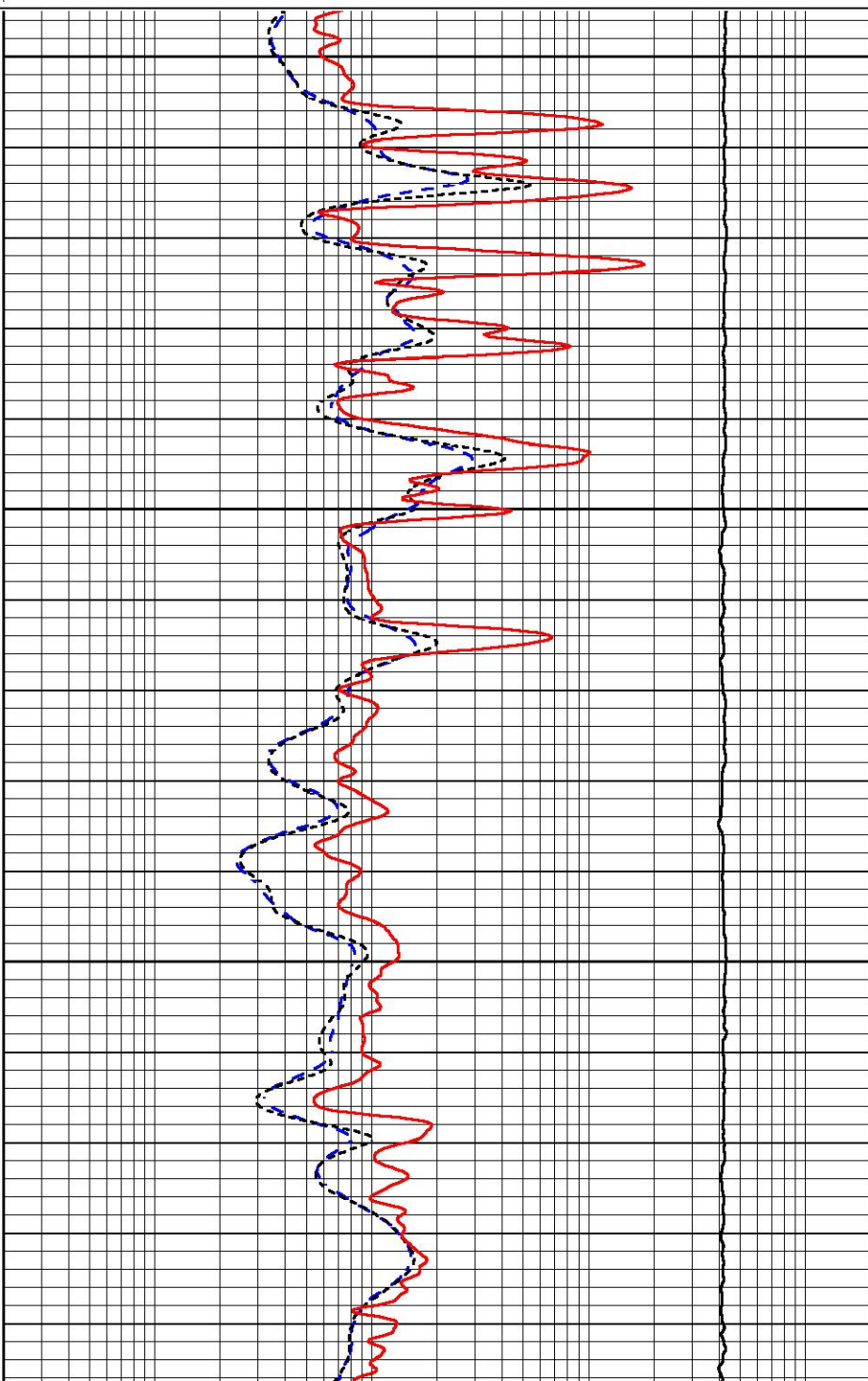
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

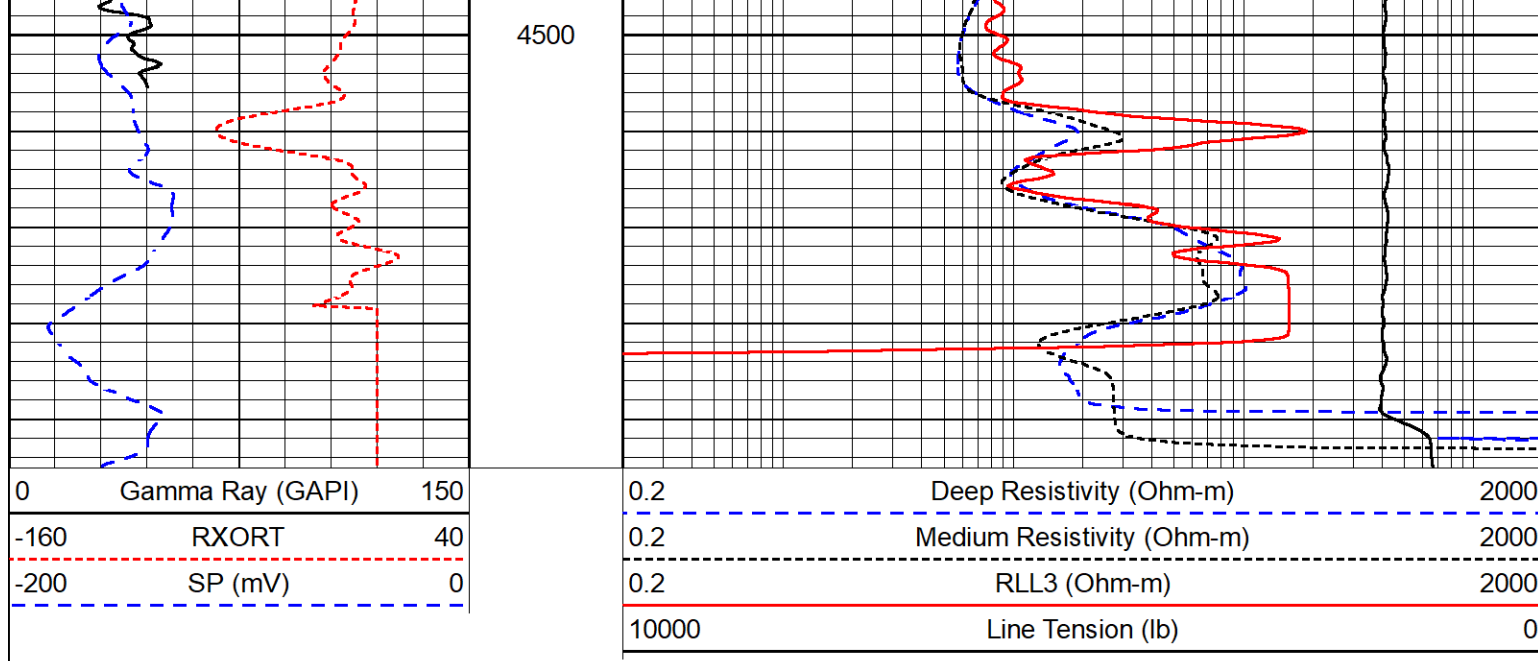


4350

4400

4450





Calibration Report	
Database File	landmark_wessel unit 1-32.db
Dataset Pathname	stkml/pass3.11
Dataset Creation	Sat Aug 27 13:16:03 2022

Dual Induction Calibration Report

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

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.455	-39.000
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.305	-33.000

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	21000.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.8000
Caliper	1.0052	1.0858	5.0000	16.5000	in	65.0000	-59.8500

Compensated Density Calibration Report

Serial-Model:	307-11-M&W
Source #:	20762B
Master Calibration Performed:	Sat Aug 27 10:20:16 2022

Master Calibration			
	Density	Far Detector	Near Detector
Magnesium	1.755 g/cc	3600.52	1768.22 cps

Magnesium	1.755	g/cc	5000.32	4700.22	cps
Aluminum	2.670	g/cc	693.98	3106.20	cps
Spine Angle = 75.41			Density/Spine Ratio = 0.538		
	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	

		Company	Landmark Resources, Inc.
		Well	Godfrey-Wessel Unit #1-32
		Field	Godfrey



County
State

Sheridan
Kansas