



MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Lachenmayr Oil, LLC					
Well	Tanner #2				
Field	Kipp North				
County	Stafford				
State	Kansas				
Location: API #: 15-185-24124-00-00					
1815 FNL & 1980 FWL					
SEC 23 TWP 25S RGE 14W	CNL/CDL MEL				
Permanent Datum	Ground Level	Elevation	1971	Elevation	Other Services
Log Measured From	Kelly Bushing			K.B.	1984
Drilling Measured From	Kelly Bushing			D.F.	1971
				G.L.	1971
Date	12/2/2022				
Run Number	One				
Depth Driller	4350				
Depth Logger	4350				
Bottom Logged Interval	4349				
Top Log Interval	400				
Casing Driller	8,625 @ 414				
Casing Logger	412				
Bit Size	7.875				
Type Fluid in Hole	Chemical				
Salinity, ppm CL	8000				
Density / Viscosity	9.3	48			
pH / Fluid Loss	10.0	9.0			
Source of Sample	FLOWLINE				
Rm @ Meas. Temp	0.30 @ 76				
Rmt @ Meas. Temp	0.23 @ 76				
Rmc @ Meas. Temp	0.41 @ 76				
Source of Rmt / Rmc	CHARTS				
Rm @ BHT	0.19 @ 120				
Operating Rig Time	3 Hours				
Max Rec. Temp. F	120				
Equipment Number	P-108				
Location	HAYS				
Recorded By	D. Schmidt				
Witnessed By	Keaton Jones				

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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,
South to 70 Rd, 5 West, 1/2 North,
East 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: Keaton Jones
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lachenmayr_tanner 2.db
Dataset field/well/stkml/pass3.5/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	121	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	370	50		4350

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



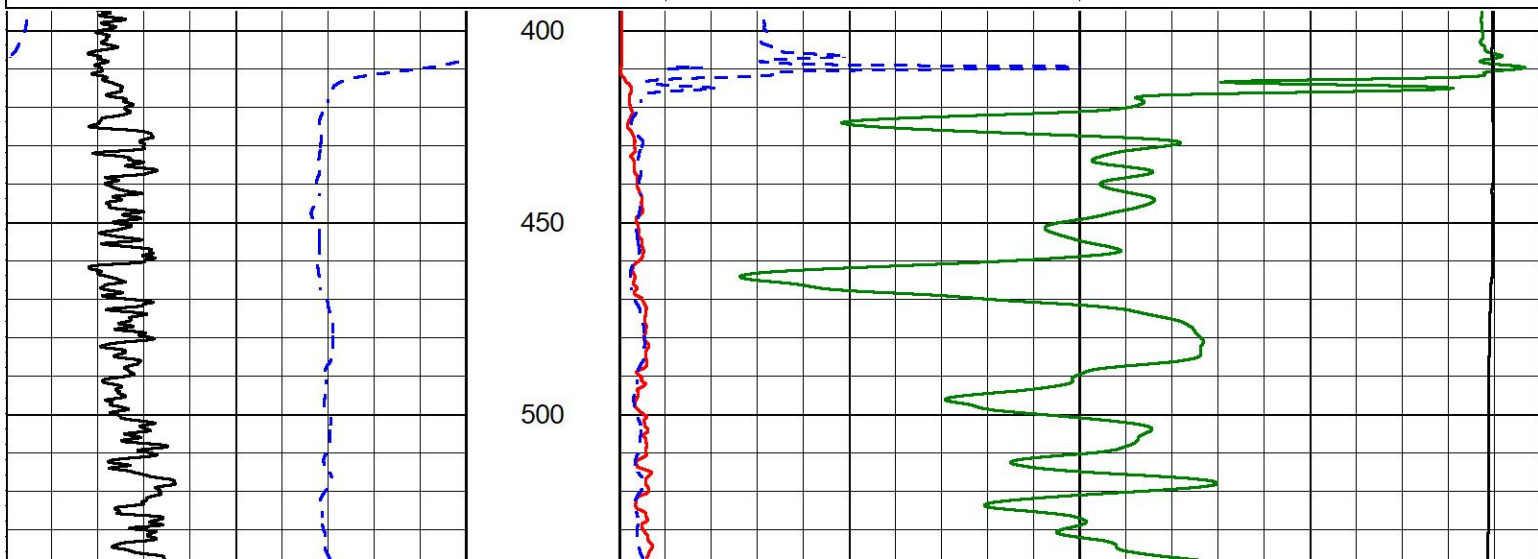
2" SCALE RESISTIVITY

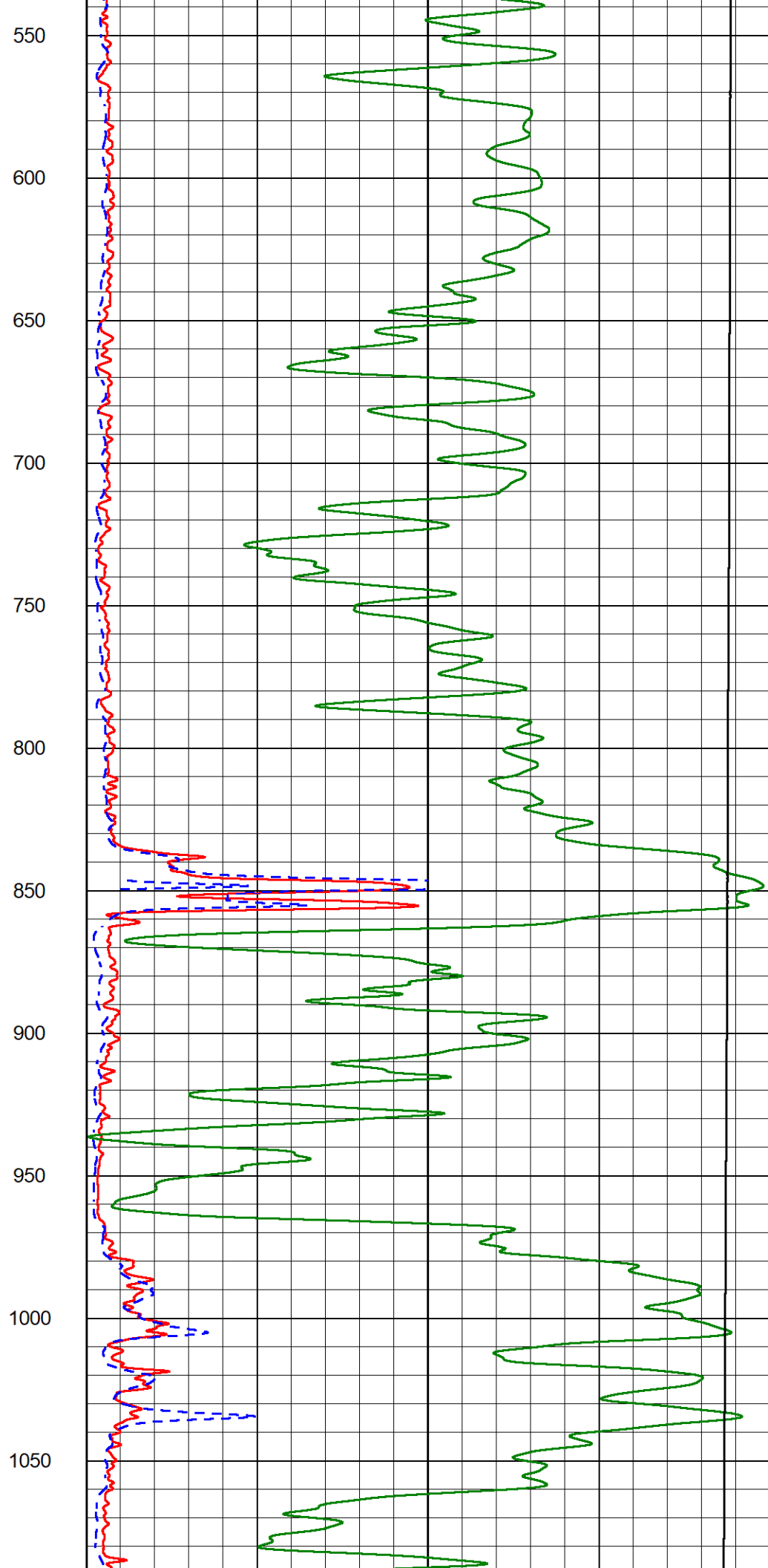
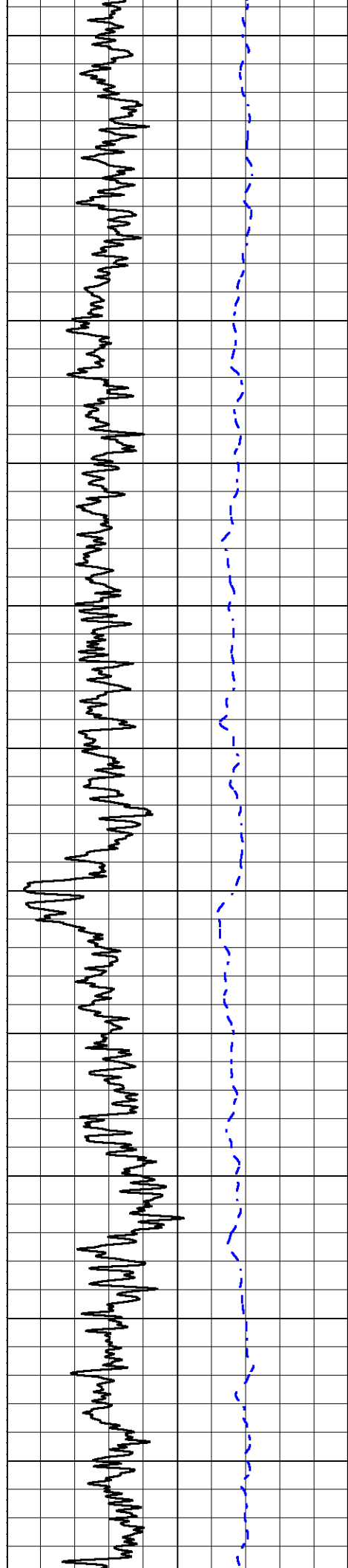
MAIN PASS

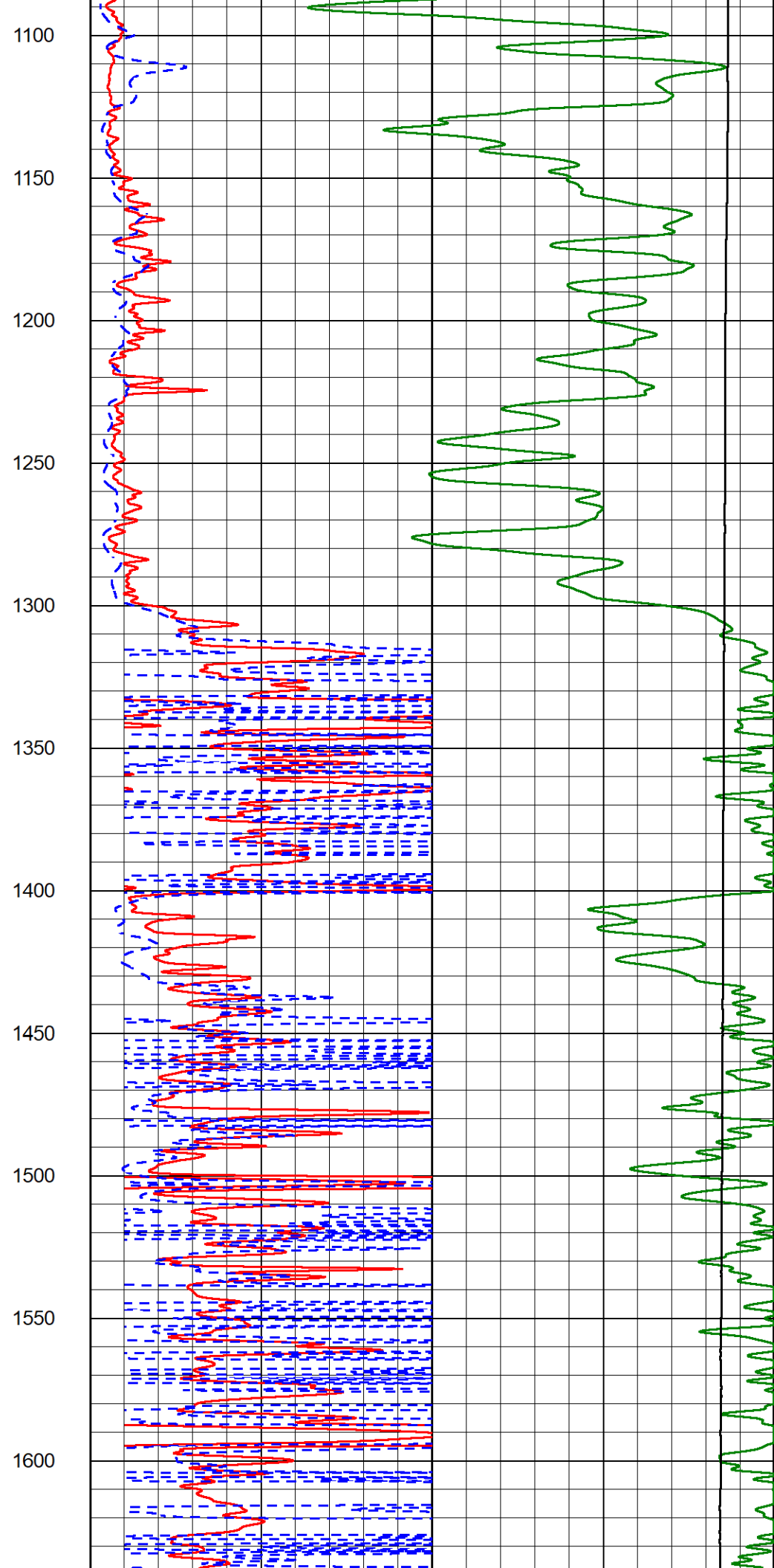
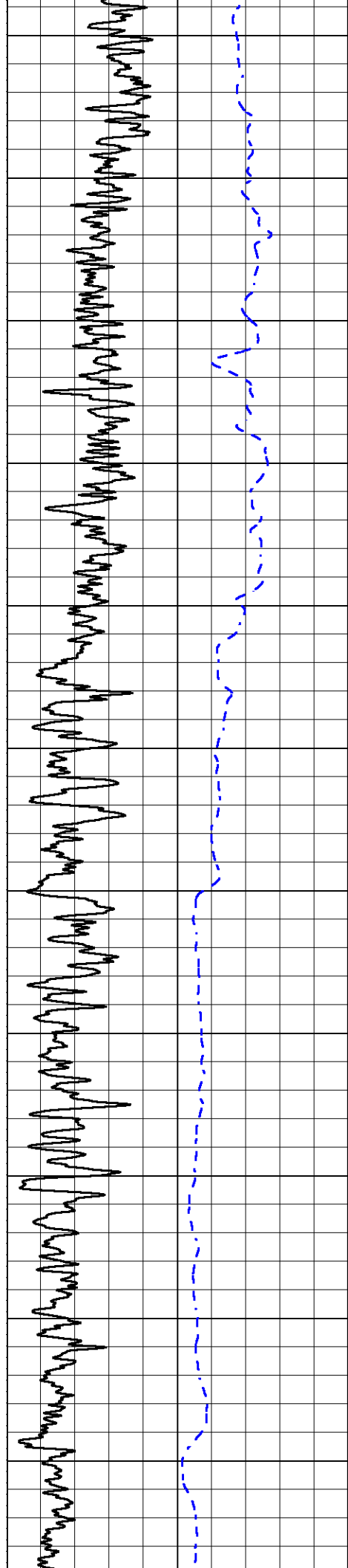
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Presentation Format _dil2in
Dataset Creation Fri Dec 02 18:23:03 2022
Charted by Depth in Feet scaled 1:600

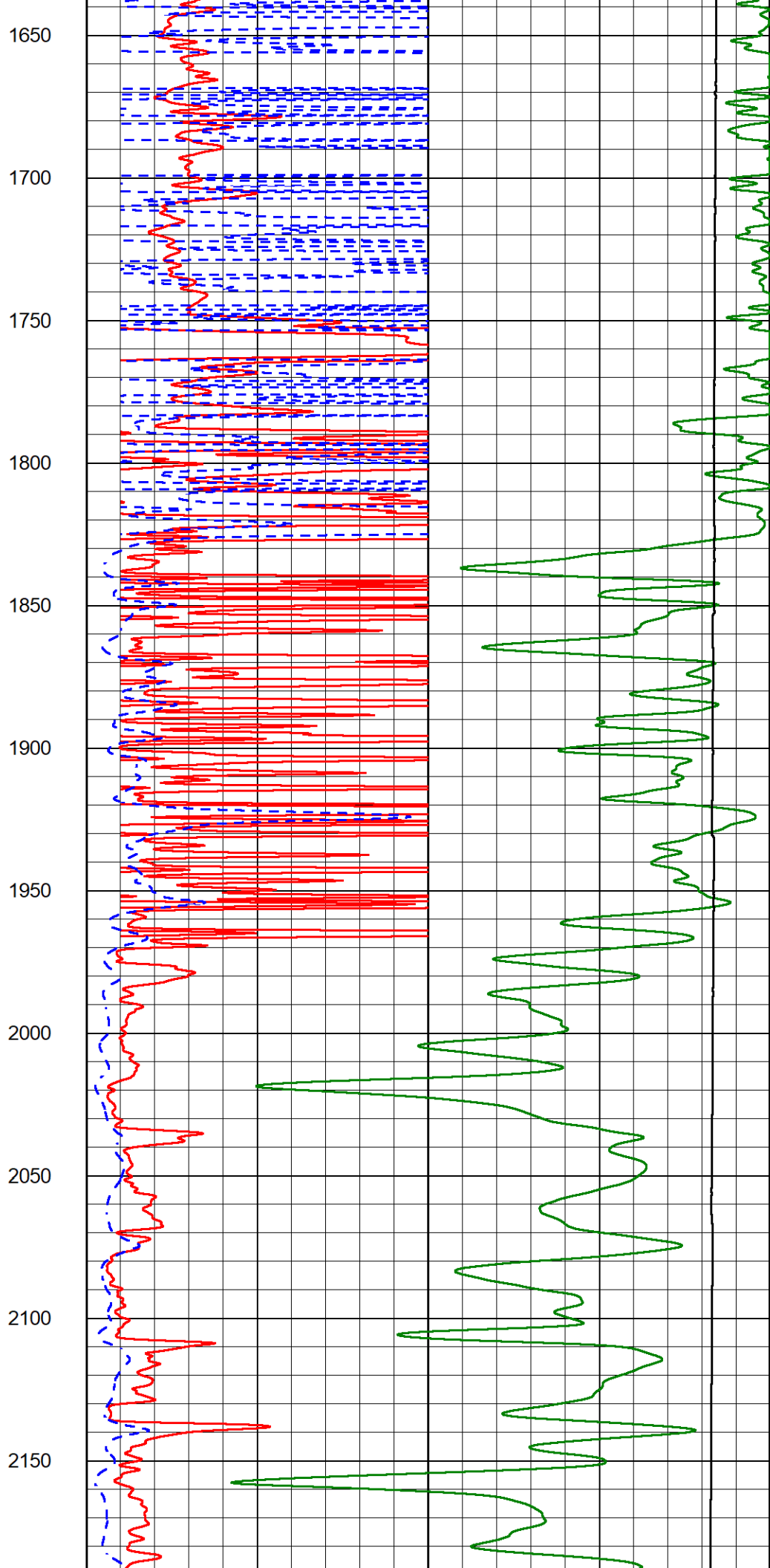
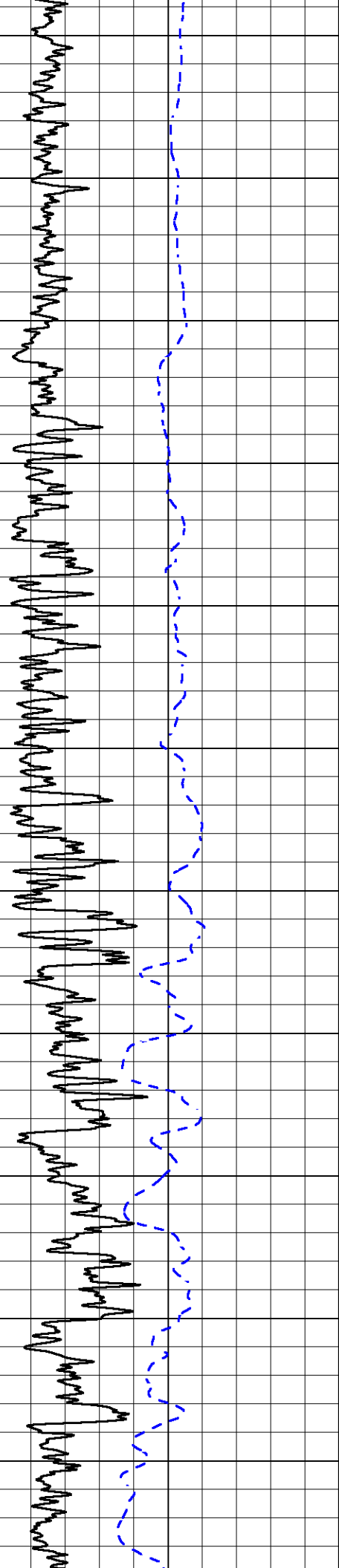
0	Gamma Ray (GAPI)	300
-200	SP (mV)	0

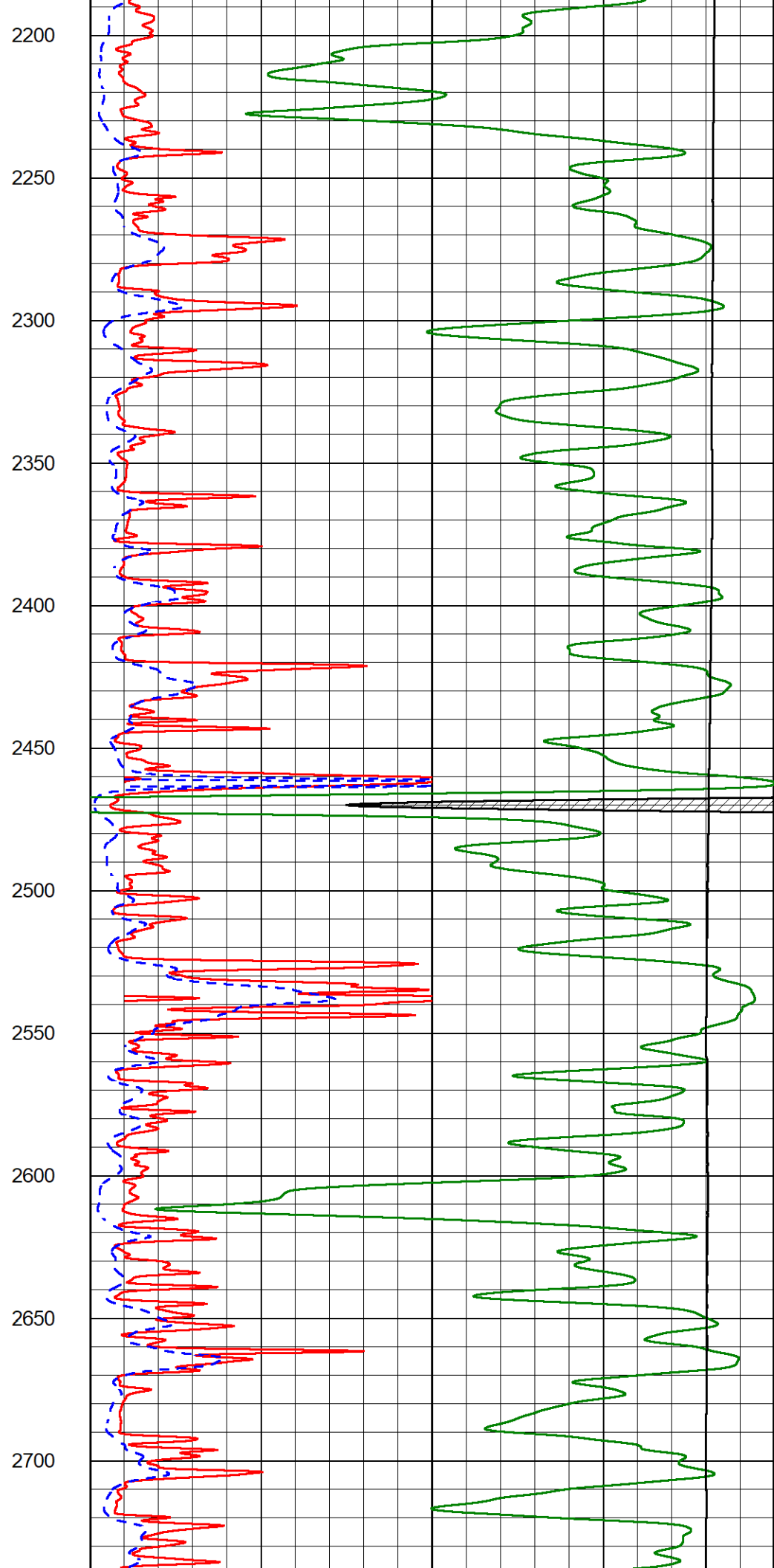
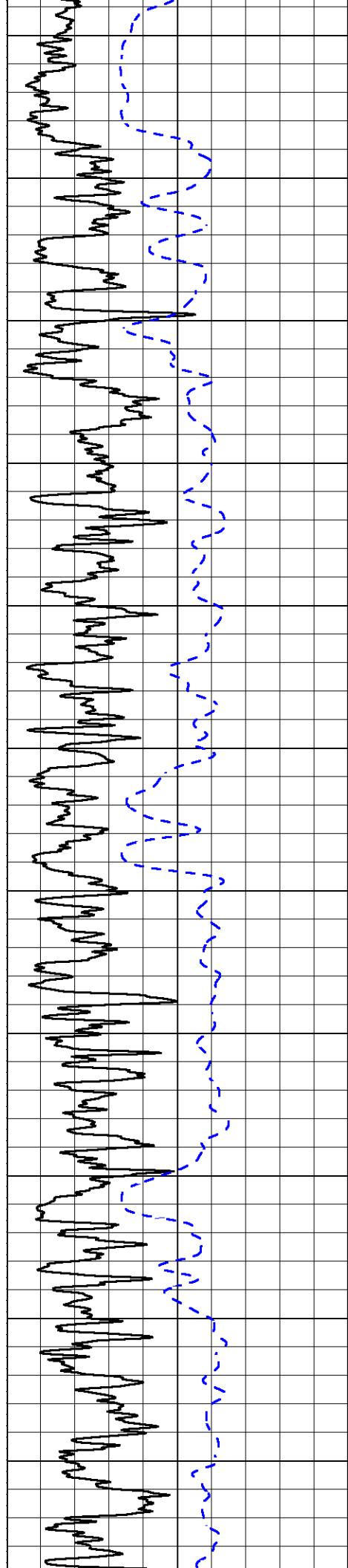
1000	Conductivity (mmho/m)	0
15000	Line Tension (lb)	0
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
50	Shallow Resistivity (Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200

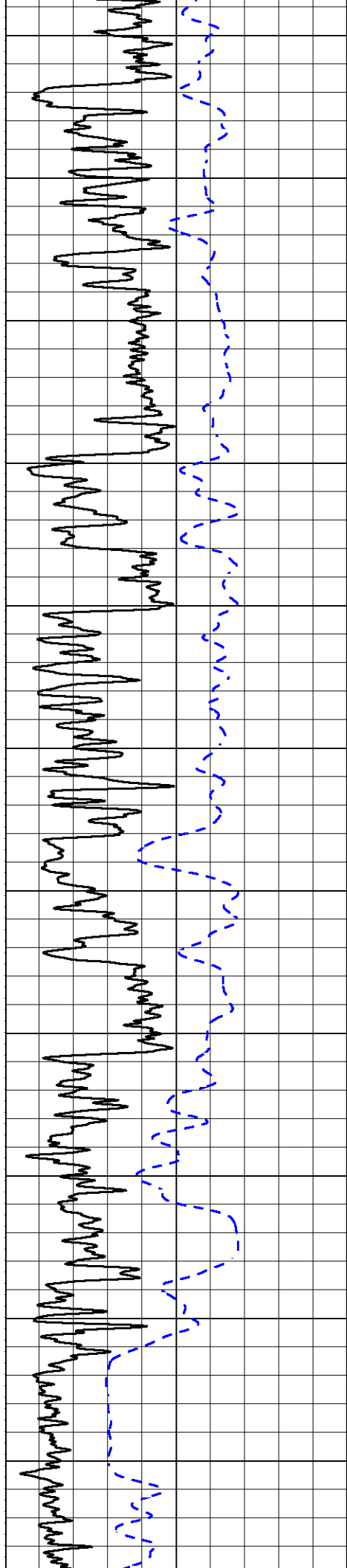




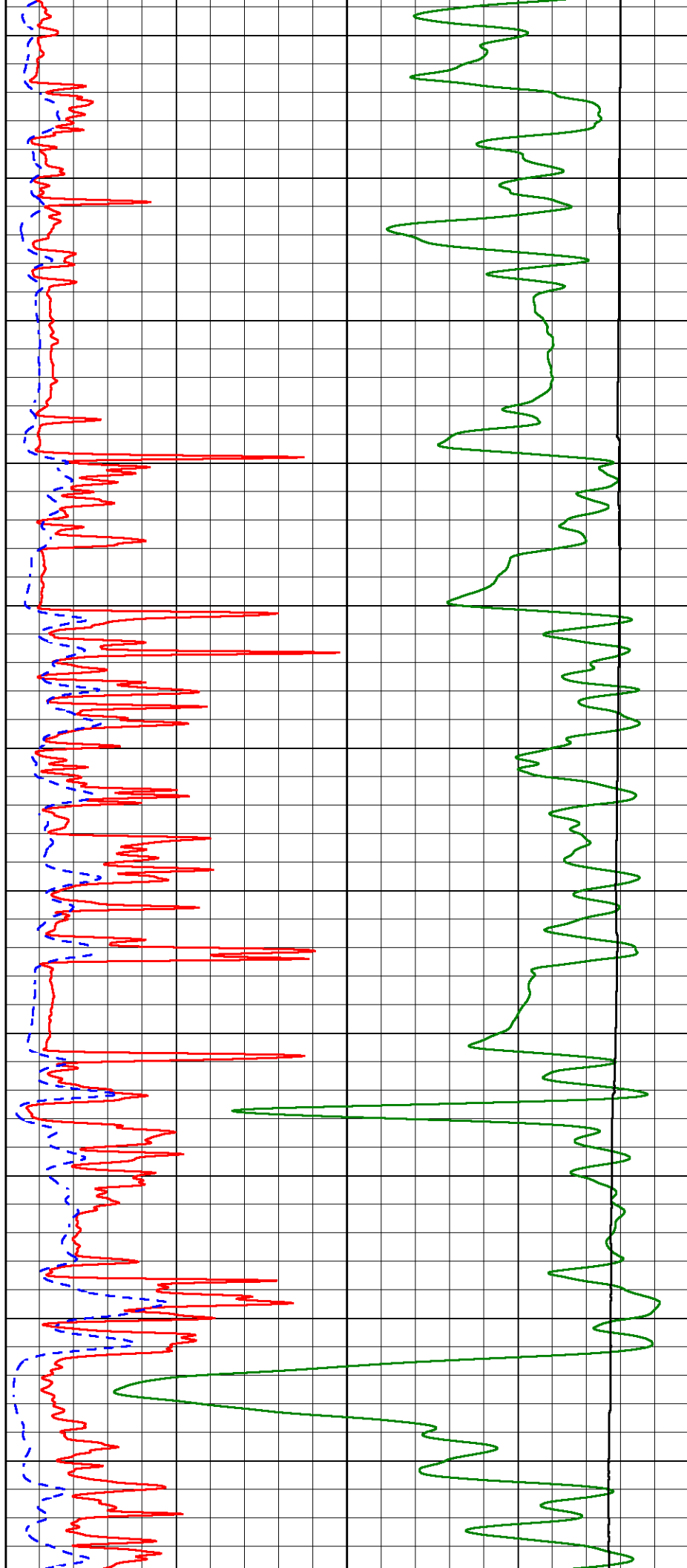


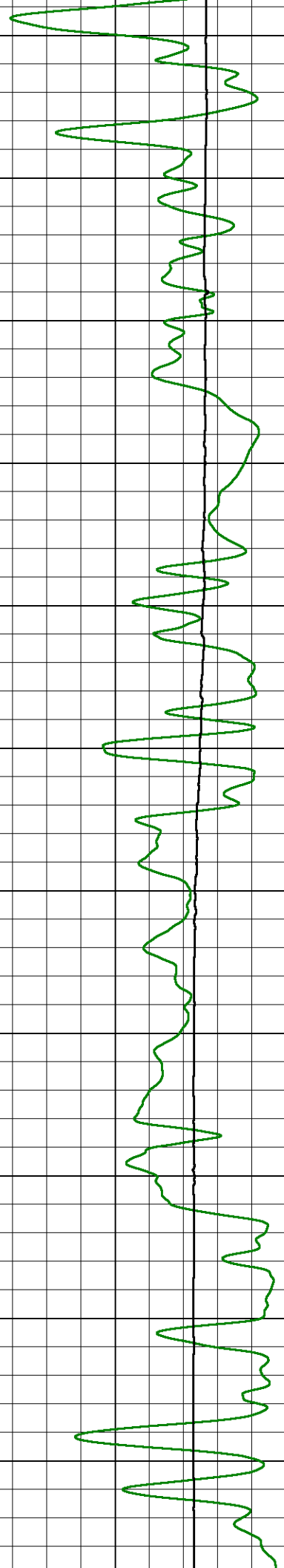
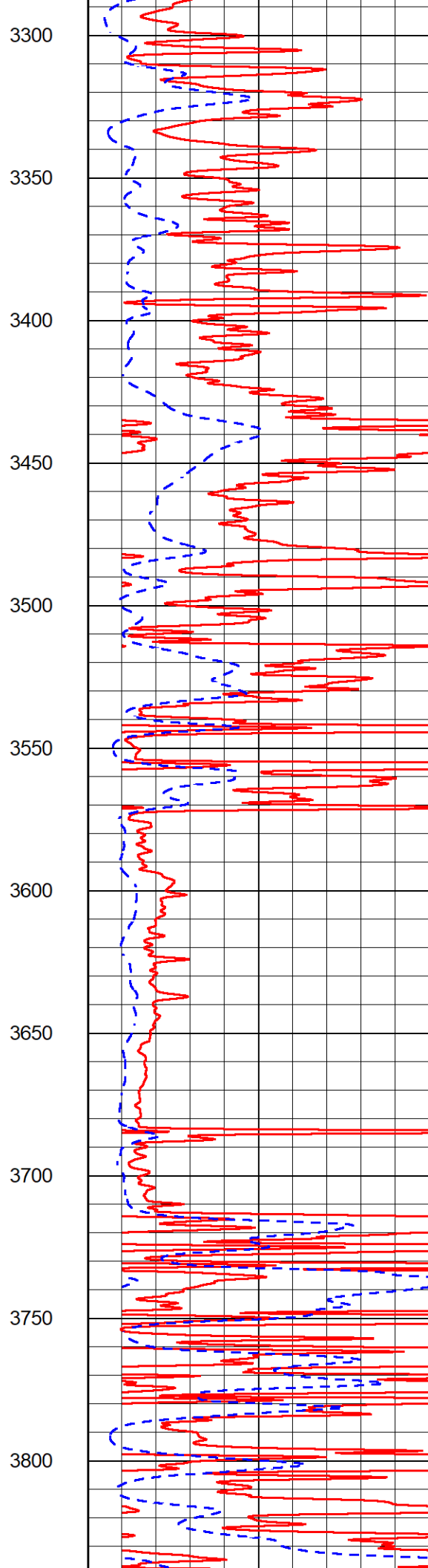
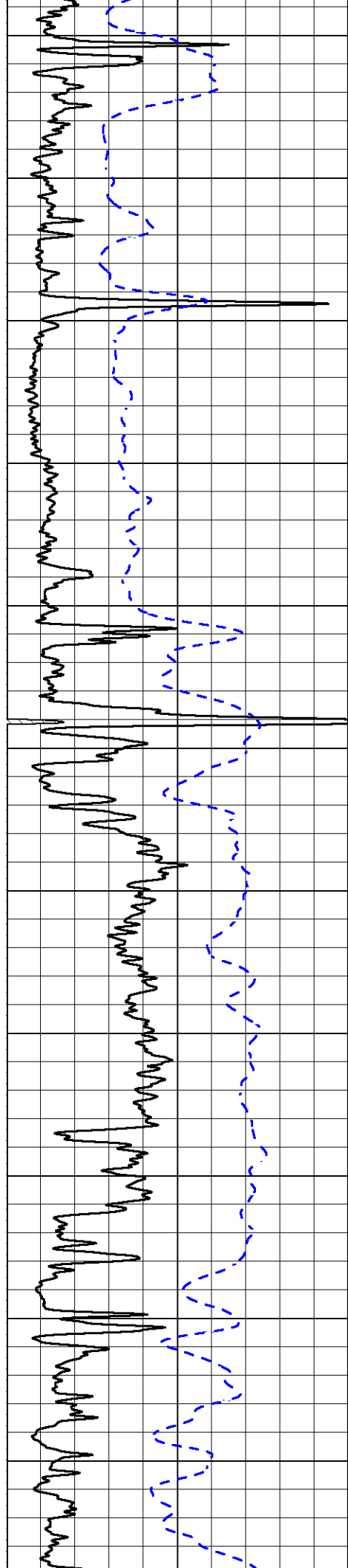


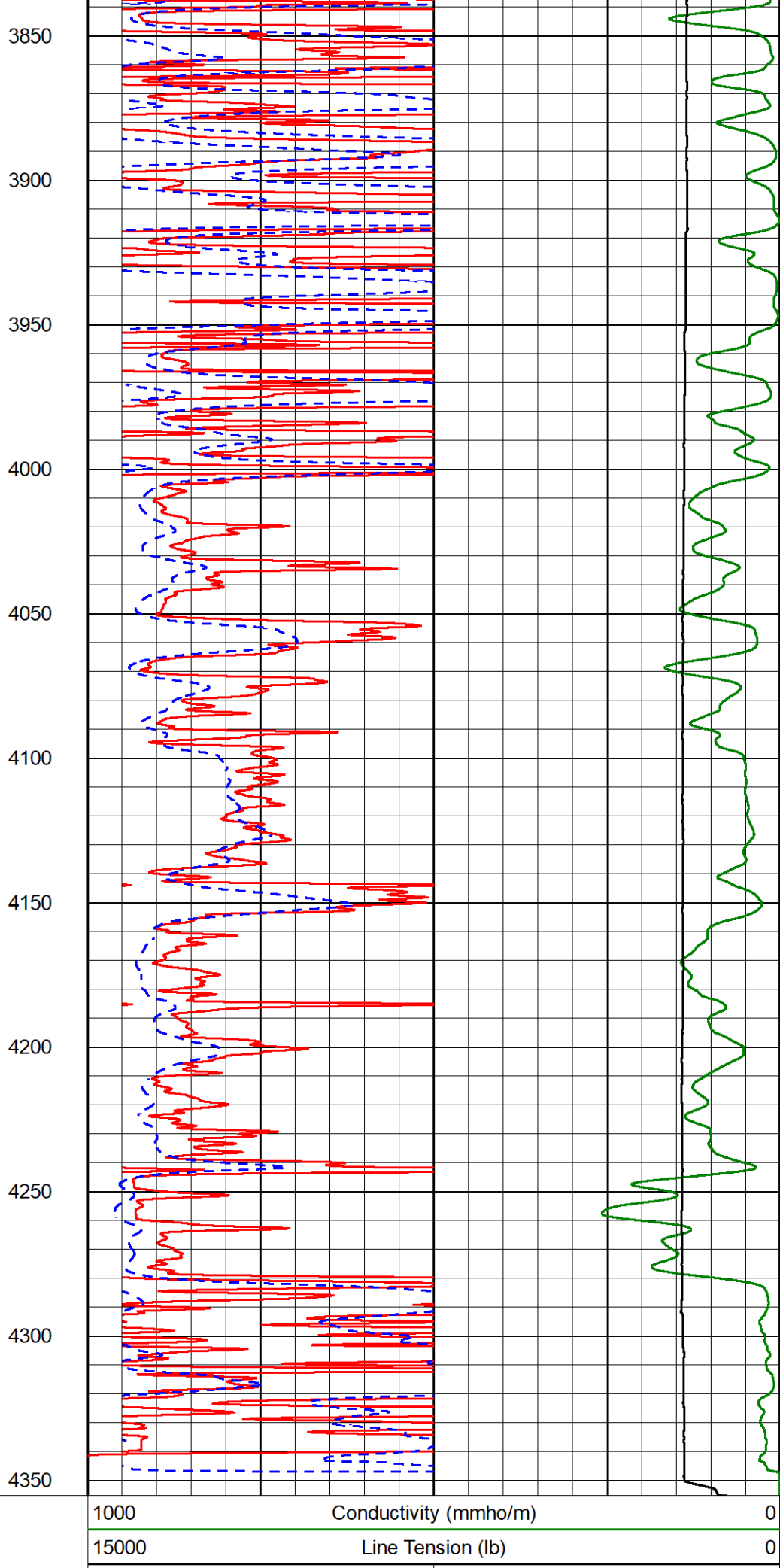
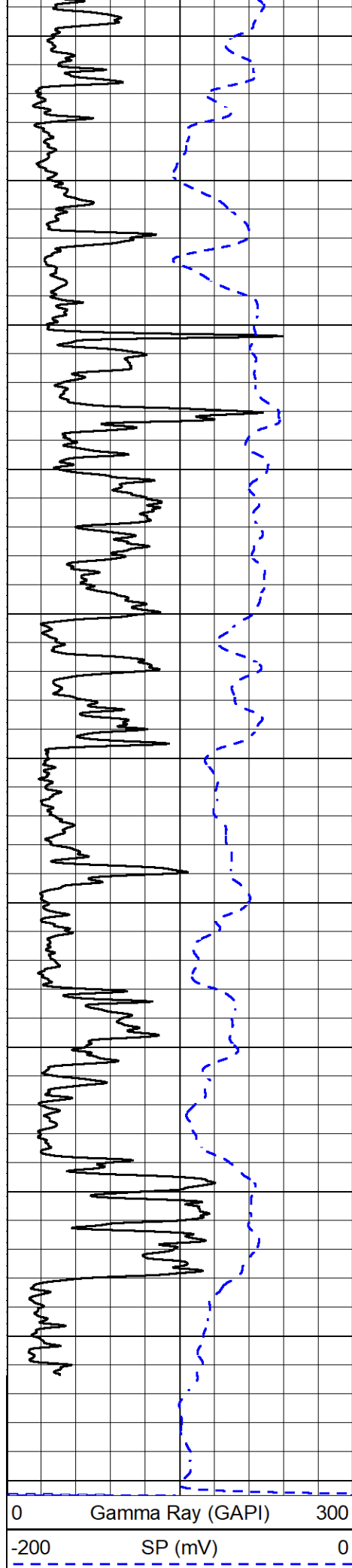




2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250







0	Deep Resistivity (Ohm-m)	50
	Shallow Resistivity	
50	(Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200



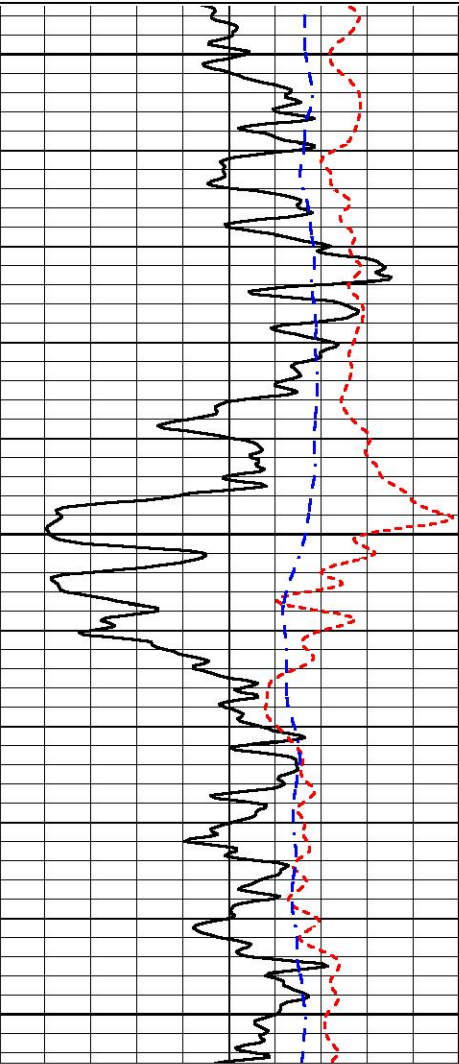
ANHYDRITE SECTION

MAIN PASS

Database File lachenmayr_tanner 2.db
Dataset Pathname stkml/pass3.4
Presentation Format _dil
Dataset Creation Fri Dec 02 18:23:23 2022
Charted by Depth in Feet scaled 1:240

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

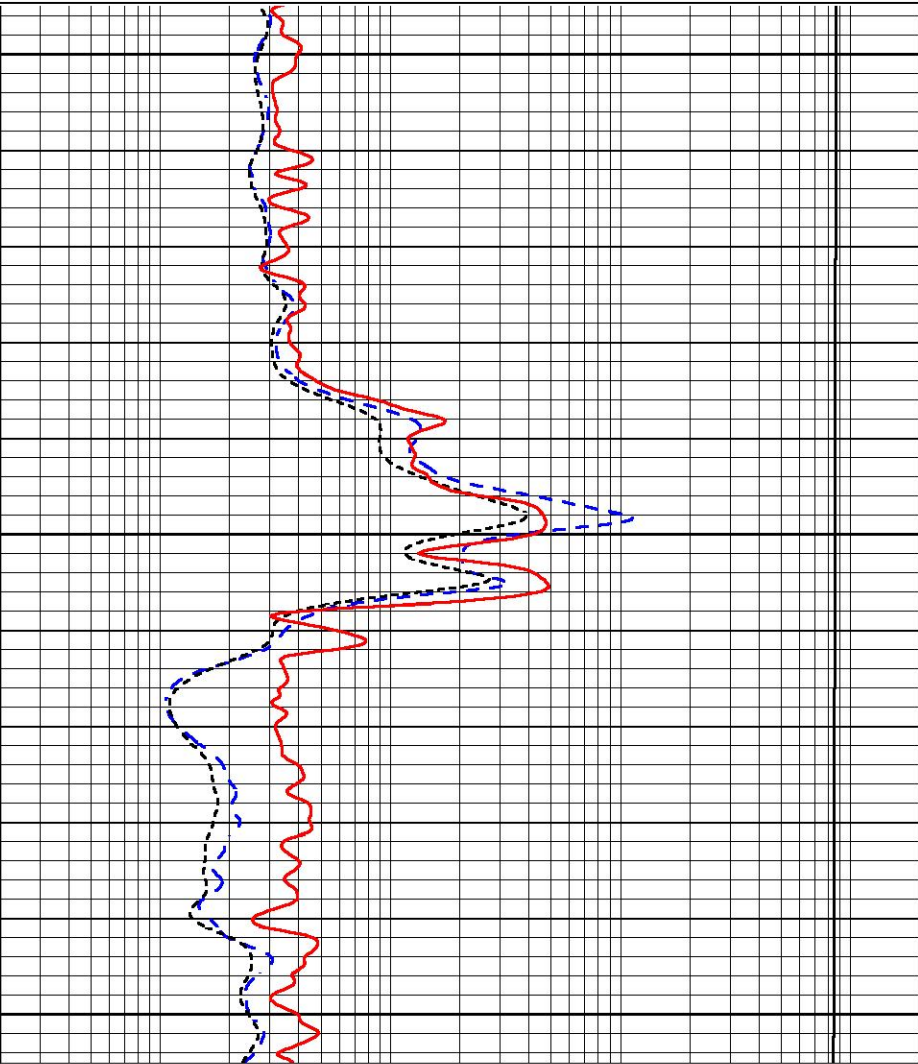
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



800

850

900



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



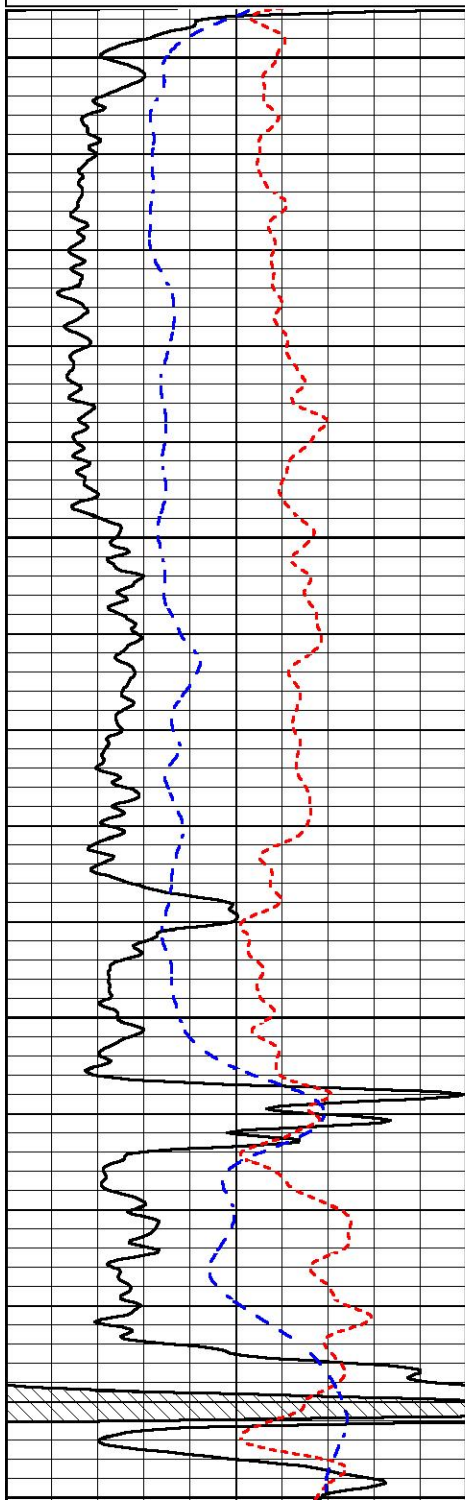
DETAIL SECTION

MAIN PASS

Database File lachenmayr_tanner 2.db
Dataset Pathname stkml/pass3.1
Presentation Format _dil
Dataset Creation Fri Dec 02 18:22:46 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

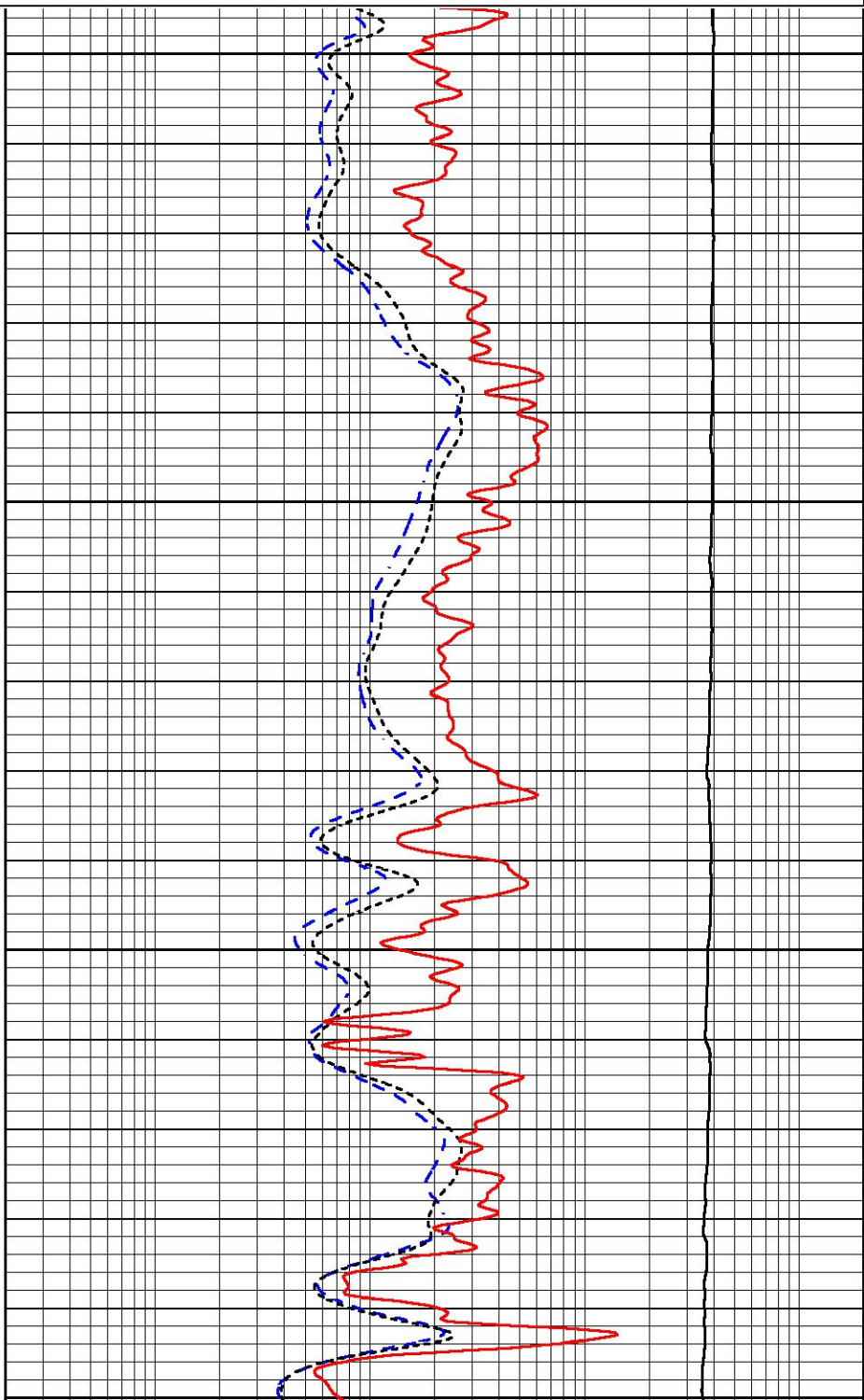


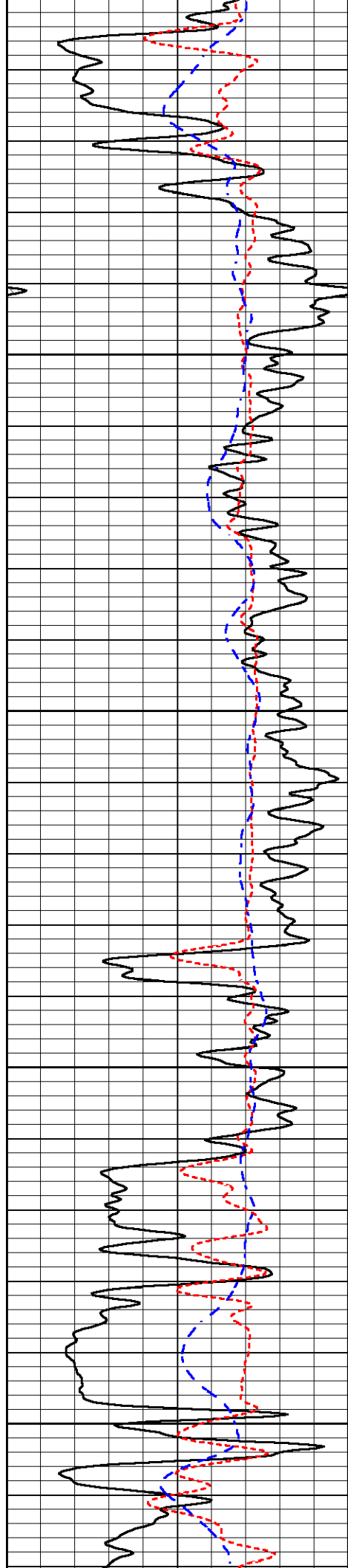
3400

3450

3500

3550





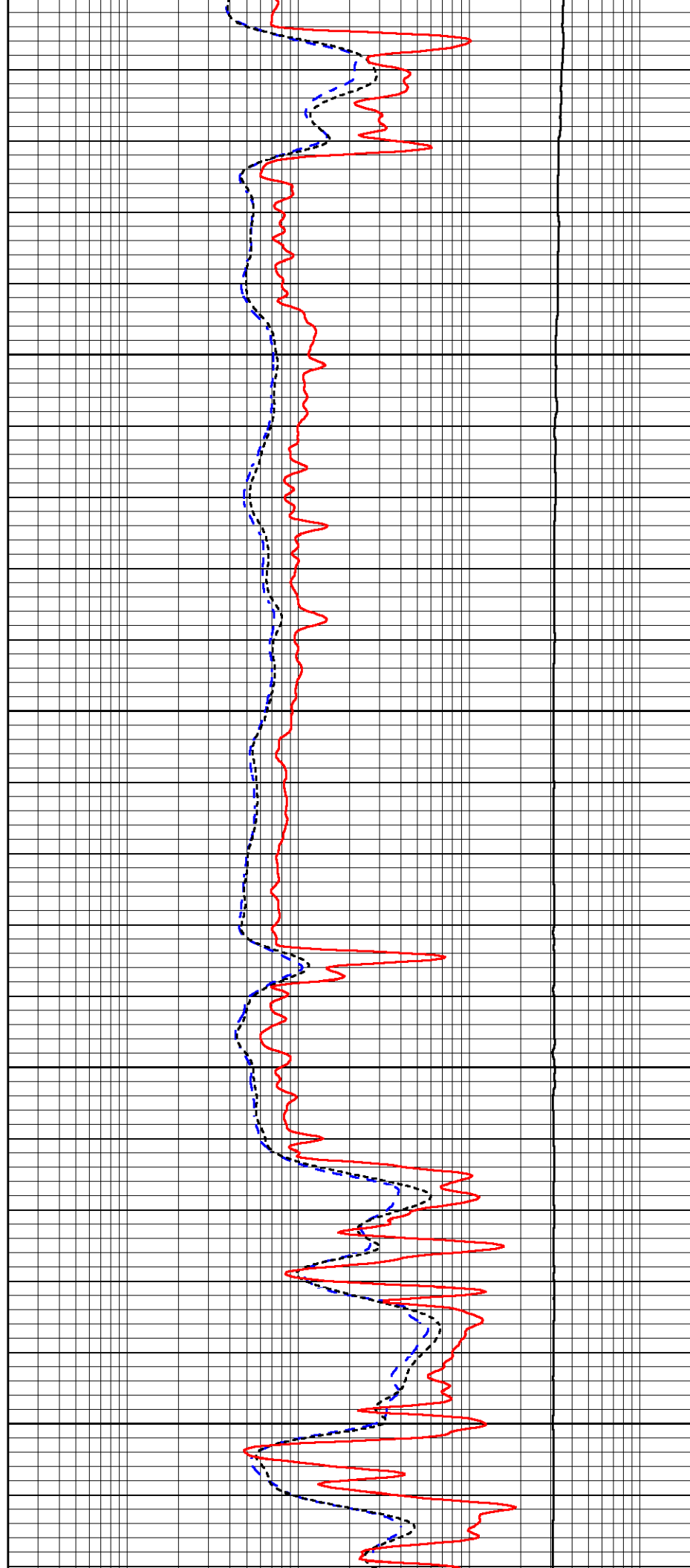
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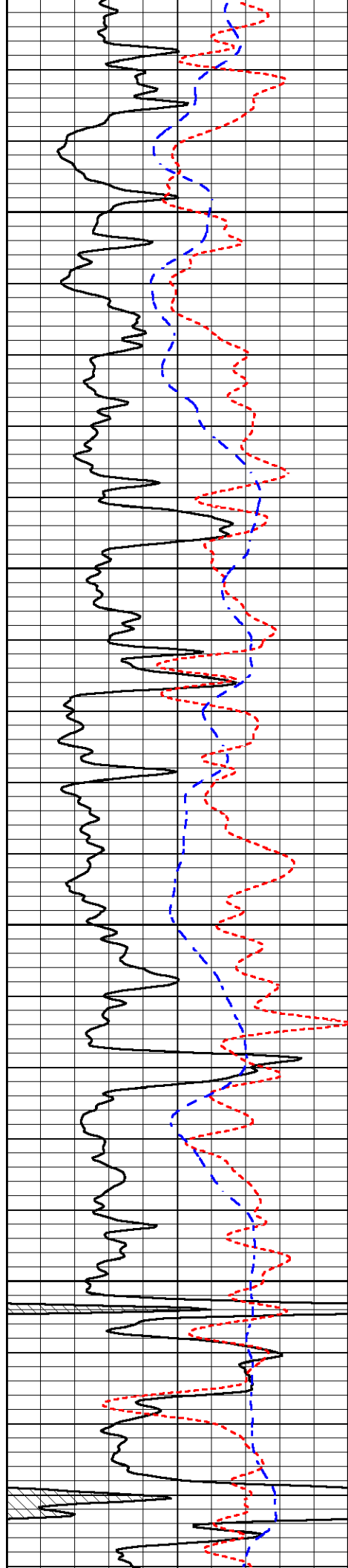
3600

3650

3700

3750



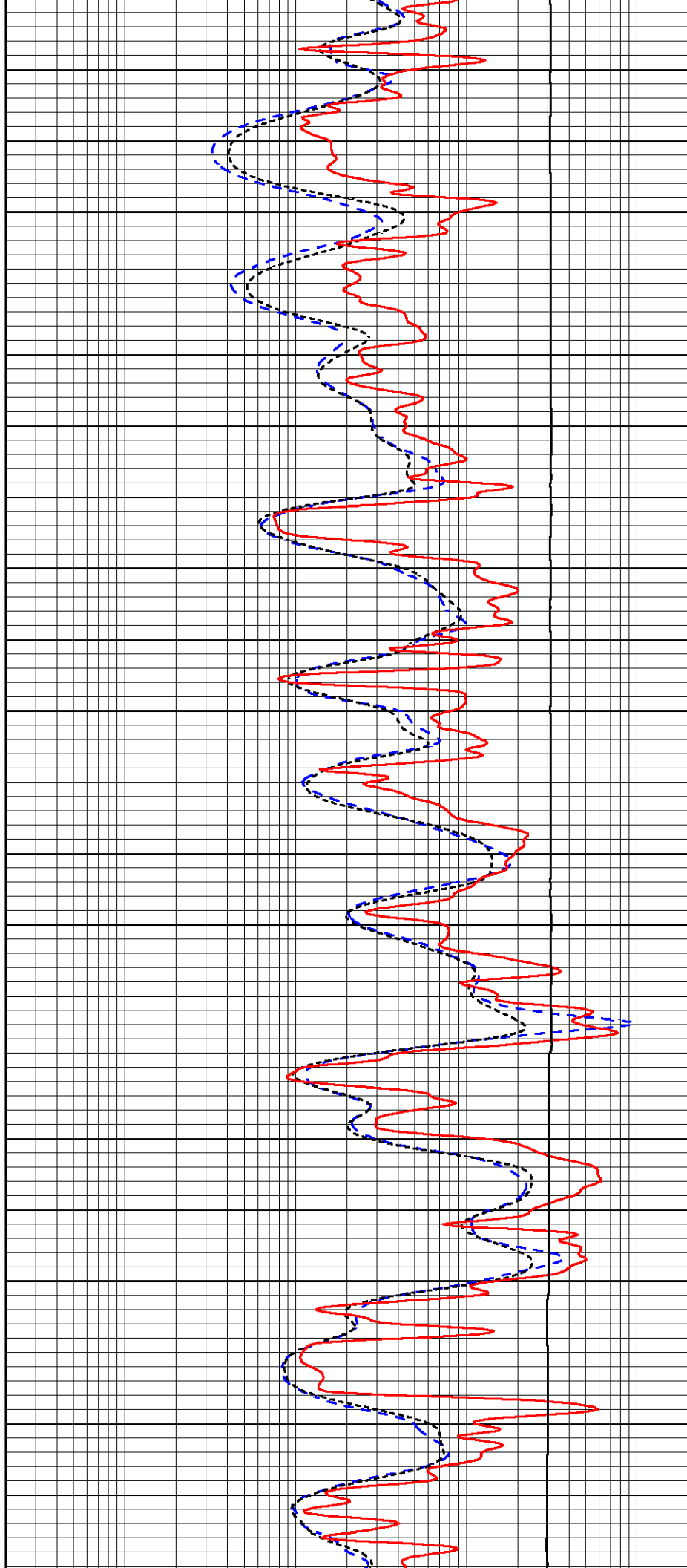


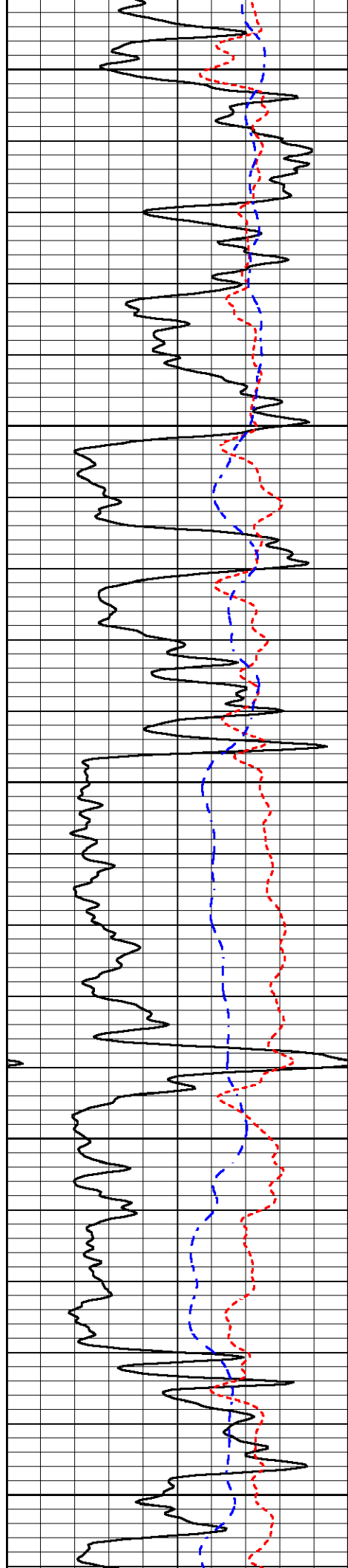
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3850

3900

3950





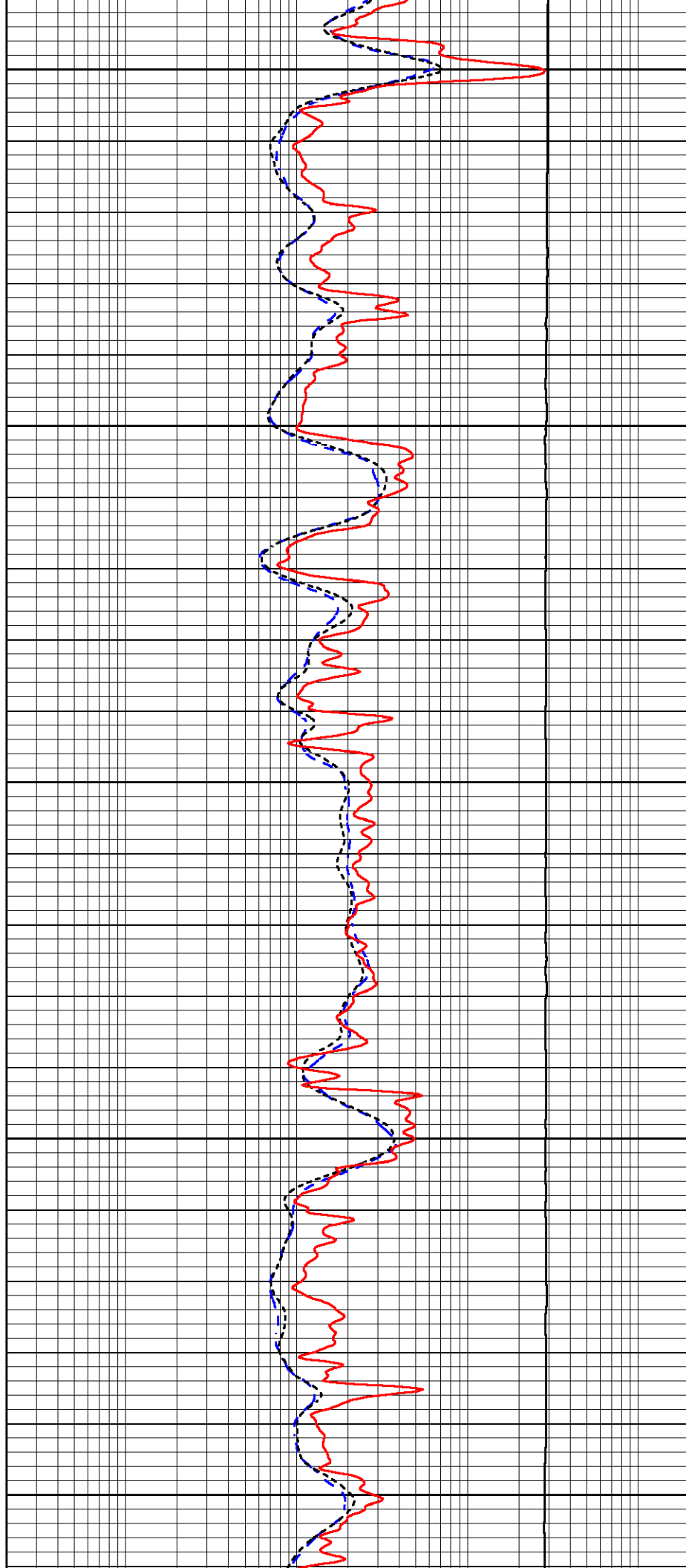
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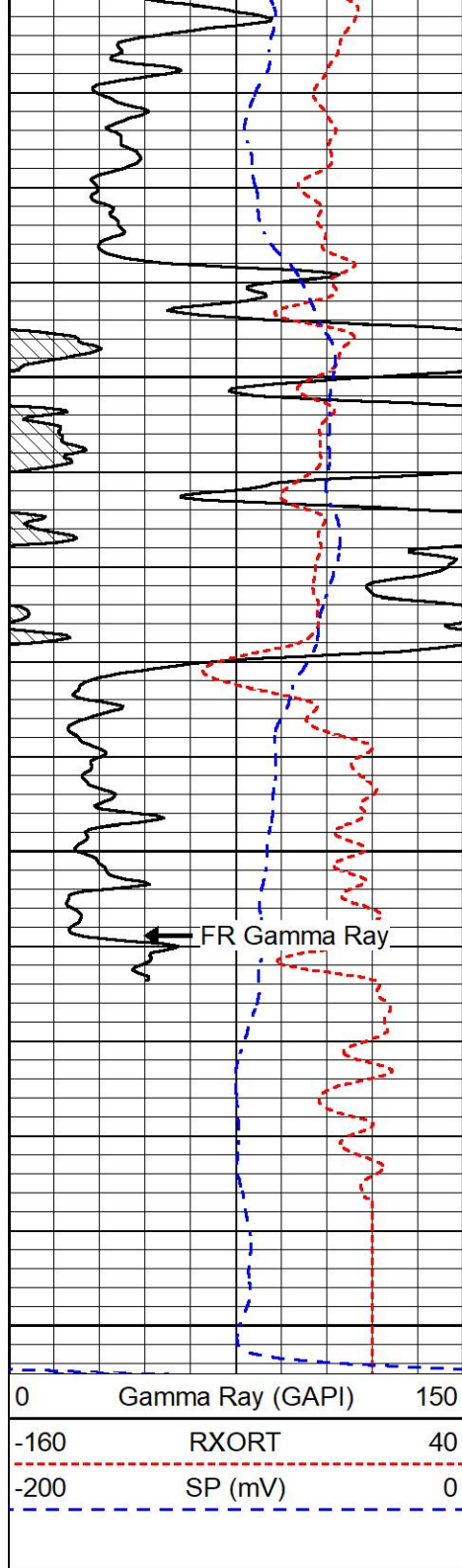
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4100

4150

4200

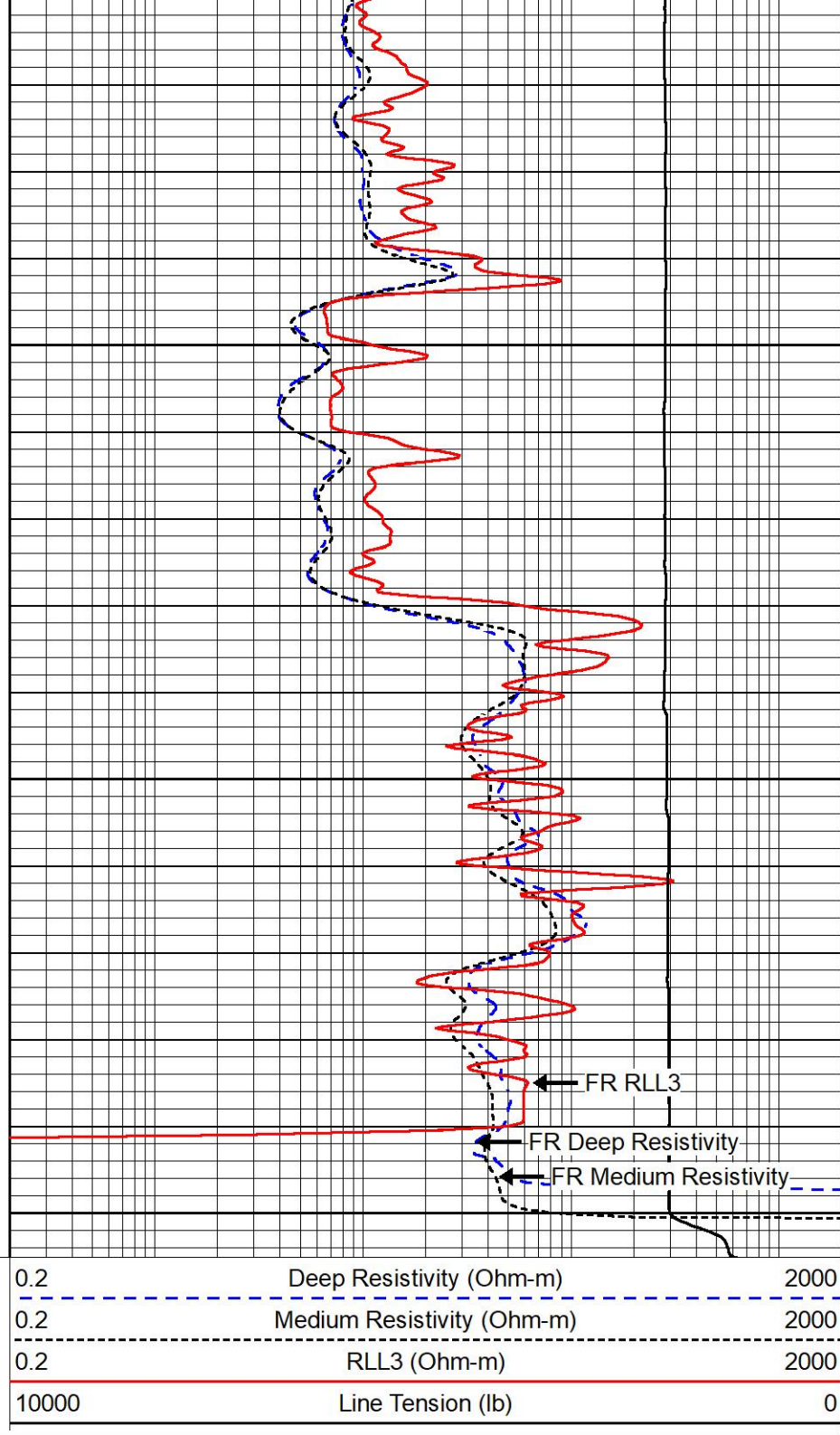




4250

4300

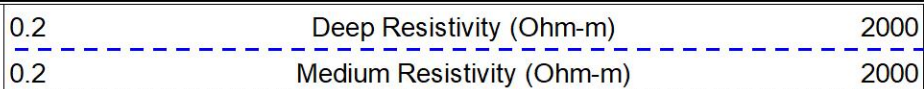
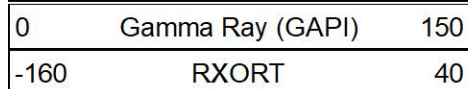
4350



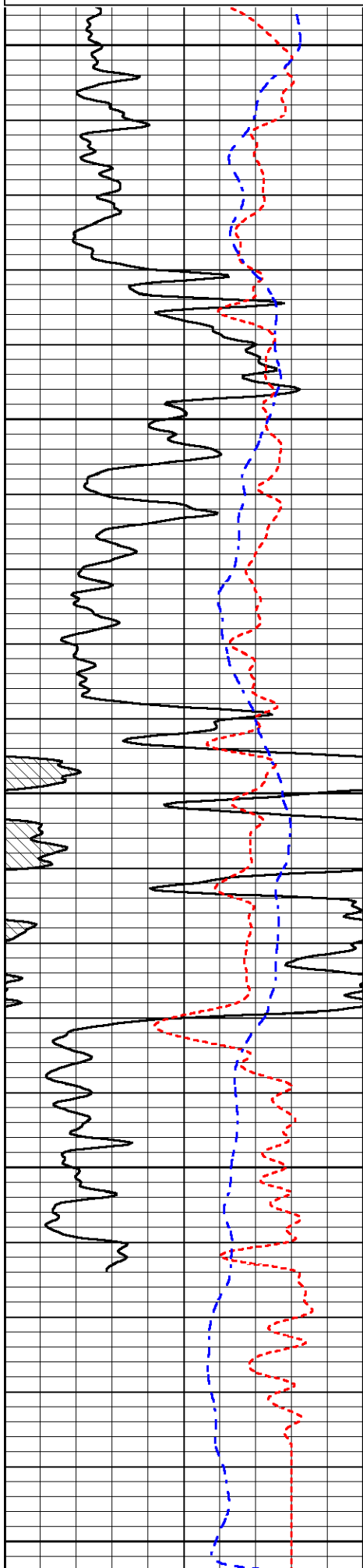
REPEAT SECTION

REPEAT PASS

Database File lachenmayr_tanner 2.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _dil
 Dataset Creation Fri Dec 02 17:51:10 2022
 Charted by Depth in Feet scaled 1:240



-200 SP (mV) 0



4150

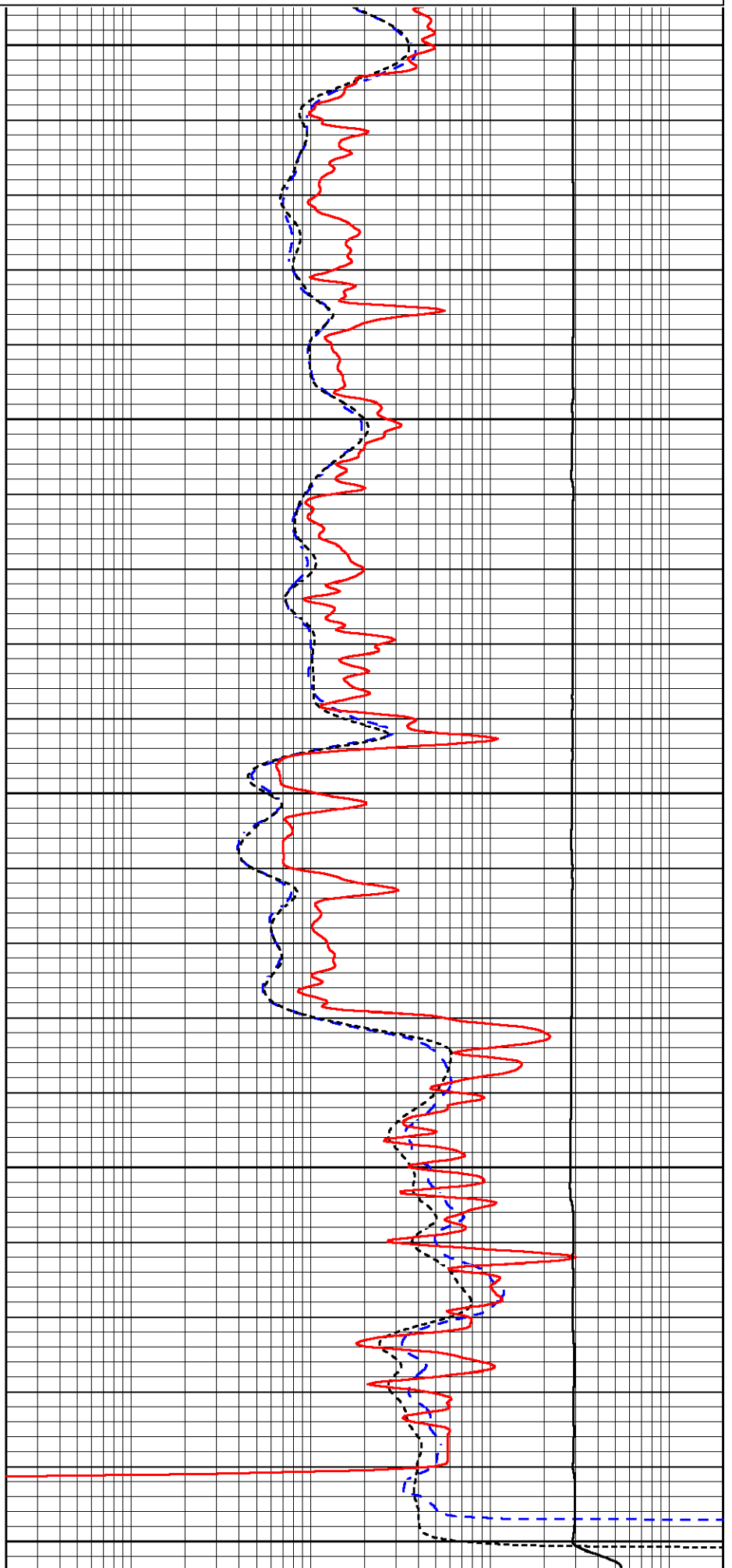
4200

4250

4300

4350

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



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 lachenmayr_tanner 2.db
Dataset Pathname stkml/pass3.5
Dataset Creation Fri Dec 02 17:53:25 2022

Dual Induction Calibration Report

Serial-Model: 505 HT-M&W
Surface Cal Performed: Mon Nov 14 06:05:40 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.480	-53.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.390	-49.500

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
Performed: Fri Nov 25 03:22:18 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	38000.0000	-1.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	42000.0000	-1.0000
Caliper	1.0046	1.1419	5.5000	20.0000	in	105.5890	-102.7500

Compensated Density Calibration Report

Serial-Model: 303-03-M&W
Source #: 21170B
Master Calibration Performed: Mon Oct 17 15:14:24 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.650	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.503		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.04		

Compensated Neutron Calibration Report

Serial-Model: 210-M&W
Source #: N-1238
Master Calibration Performed: Fri Nov 25 03:22:18 2022

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:	Fri Dec 3 12:13:24 2021	
Calibrator Value:	500.0	GAPI
Background Reading:	28.0	cps
Calibrator Reading:	986.0	cps
Sensitivity:	0.5700	GAPI/cps



Company	Lachenmayr Oil, LLC
Well	Tanner #2
Field	Kipp North
County	Stafford
State	Kansas