



MIDWEST WIRELINE

DUAL INDUCTION LOG

Company **ARP Operating, LLC**
 Well **Dechant #1**
 Field **Wildcat**
 County **Ness** State **Kansas**

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 Field **Wildcat**
 County **Ness**
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Location: **1800' FNL & 1220' FWL**
 API #: **15-135-26095-00-00**
 Other Services: **CNL/CDL MEL**

Date	2/3/2021
Run Number	One
Depth Driller	4425'
Depth Logger	4423'
Bottom Logged Interval	4422'
Top Log Interval	300'
Casing Driller	8.625" @ 335'
Casing Logger	338'
Bit Size	7.875"
Type Fluid in Hole	Chemical
Salinity, ppm CL	6000
Density / Viscosity	9.3 51
pH / Fluid Loss	10.5 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.55 @ 65
Rmt @ Meas. Temp	.41 @ 65
Rmc @ Meas. Temp	.74 @ 65
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.30 @ 120
Operating Rig Time	2 Hours
Max Rec. Temp. F	120 Deg/F
Equipment Number	P-24
Location	HAYS
Recorded By	J. Henrickson
Witnessed By	Sean Deenihan

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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.

Bazine Kansas
 South to 60 Rd, 1 West, South 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	This Log Record Was Witnessed By
Engineer: J. Henrickson	Primary Witness: Sean Deenihan
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\arp_dechant_1.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	120	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	360	55	Off	4423

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
LSD	28.43		CDL-M&W (817-947)	8.50	4.00	250.00
DCAL	28.42					
SSD	27.93					
ML-PSIML (PSI-01)			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83		MI	19.83	19.83	
MI	19.83					
MN	19.83					
RLL3F	15.80	RLL3	15.80			
RLL3	15.80					

CILD	8.00	
CILM	4.70	
SP	0.20	

DIL-PSI HIGH TEMP (952-828)

18.50

3.50

220.00

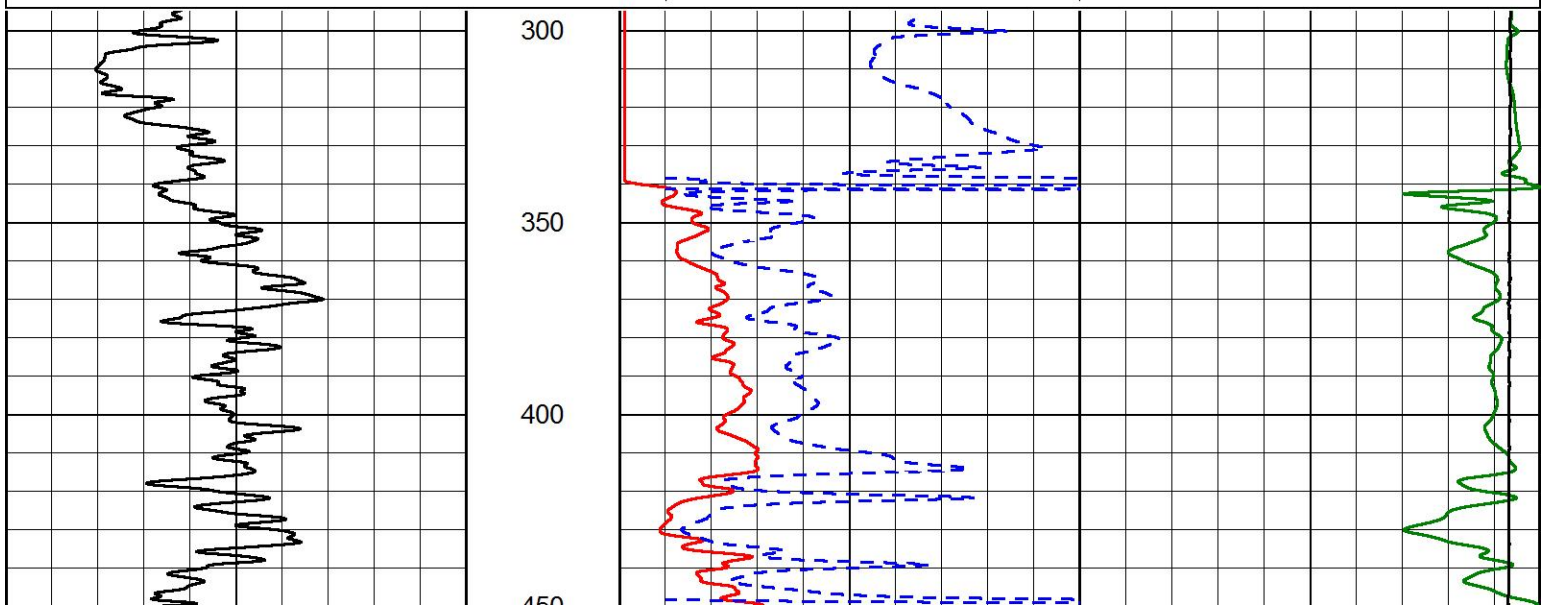
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 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

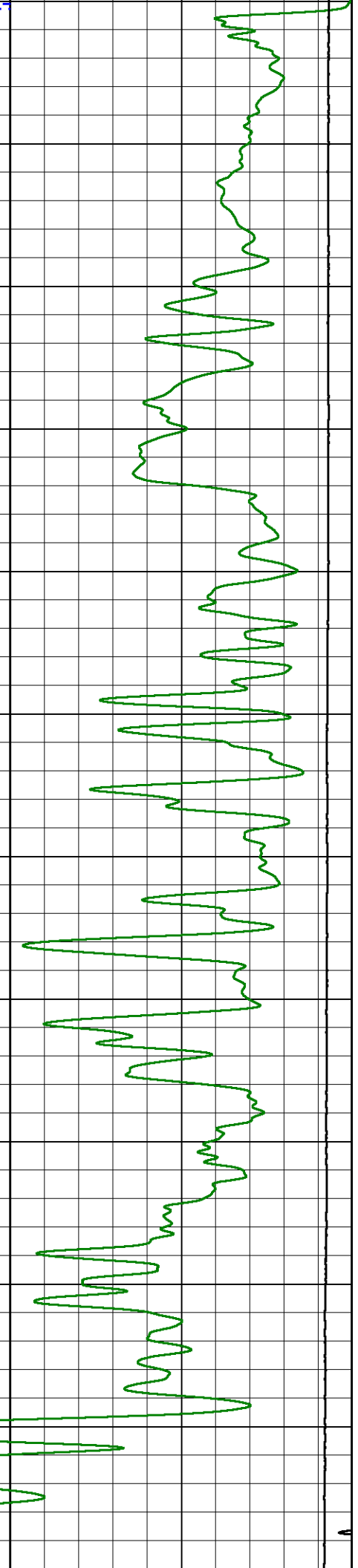
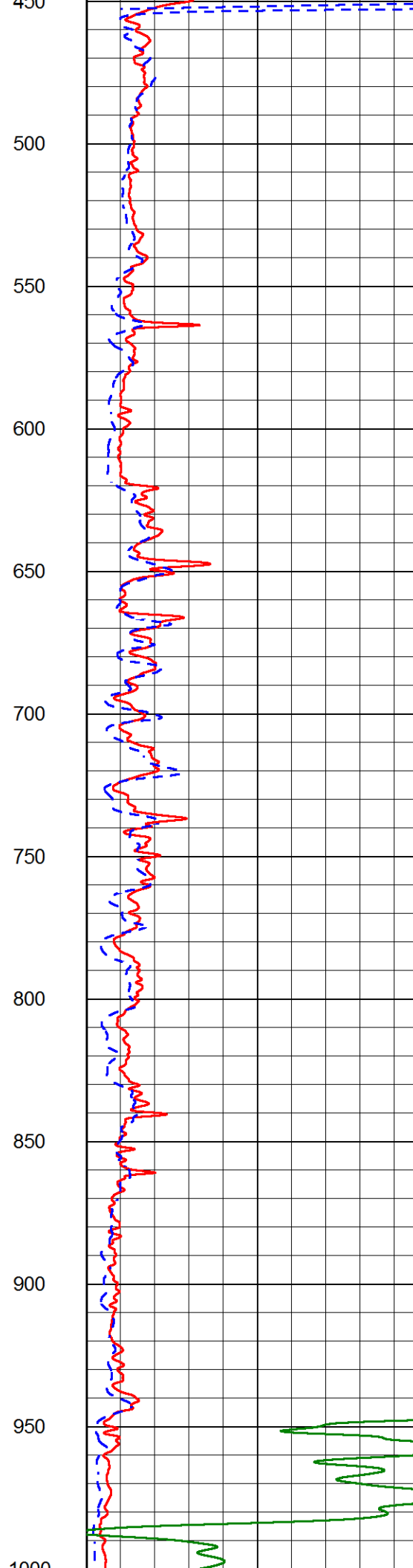
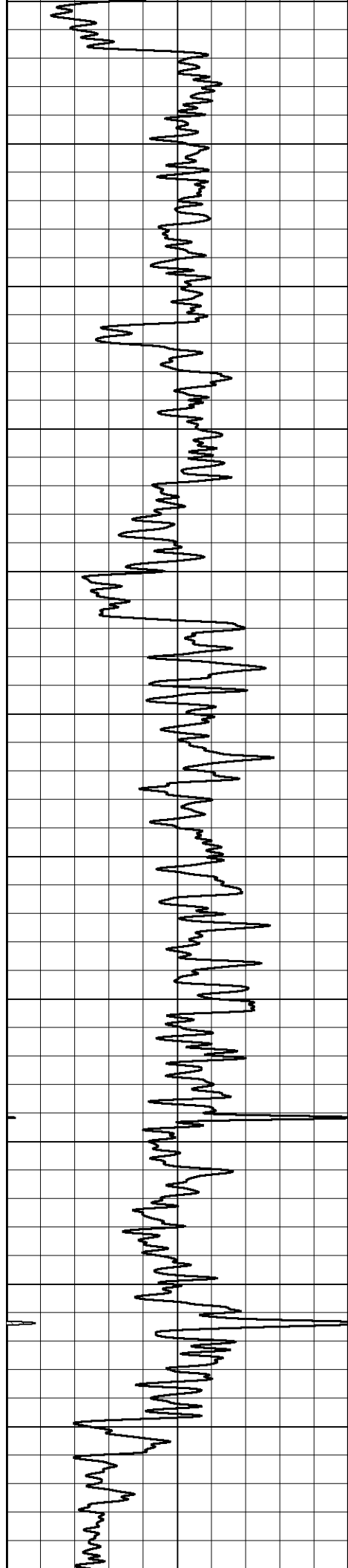


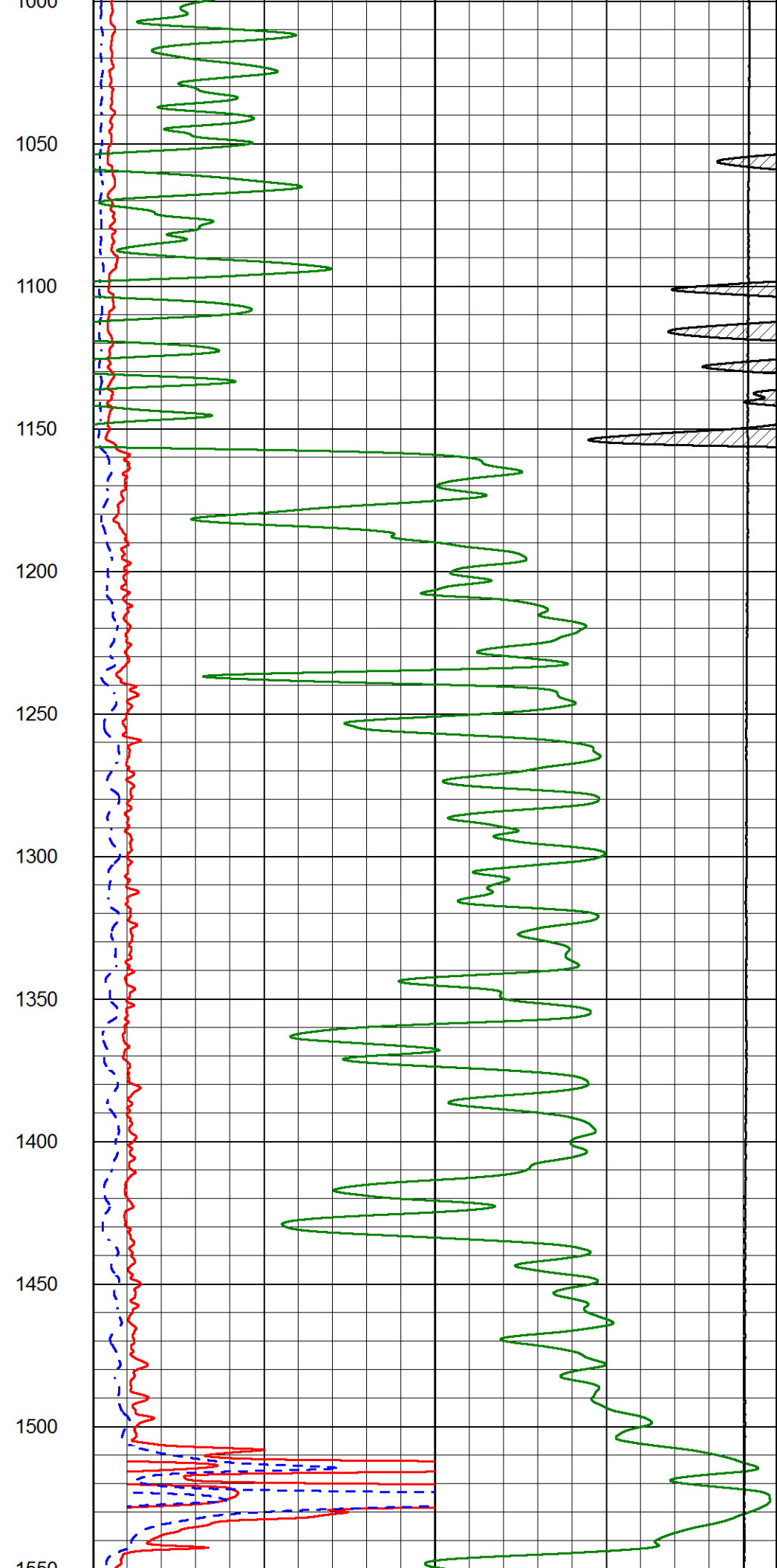
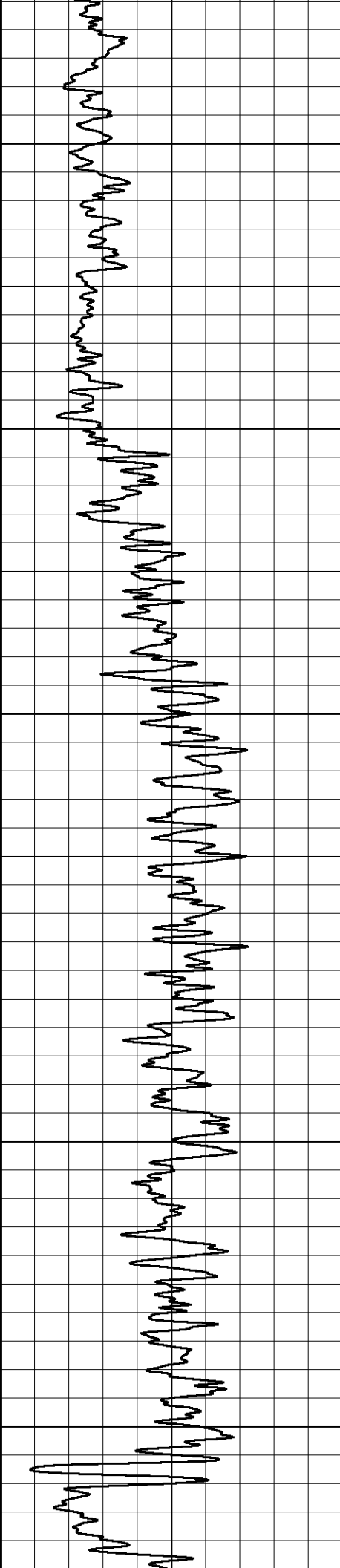
Main Pass

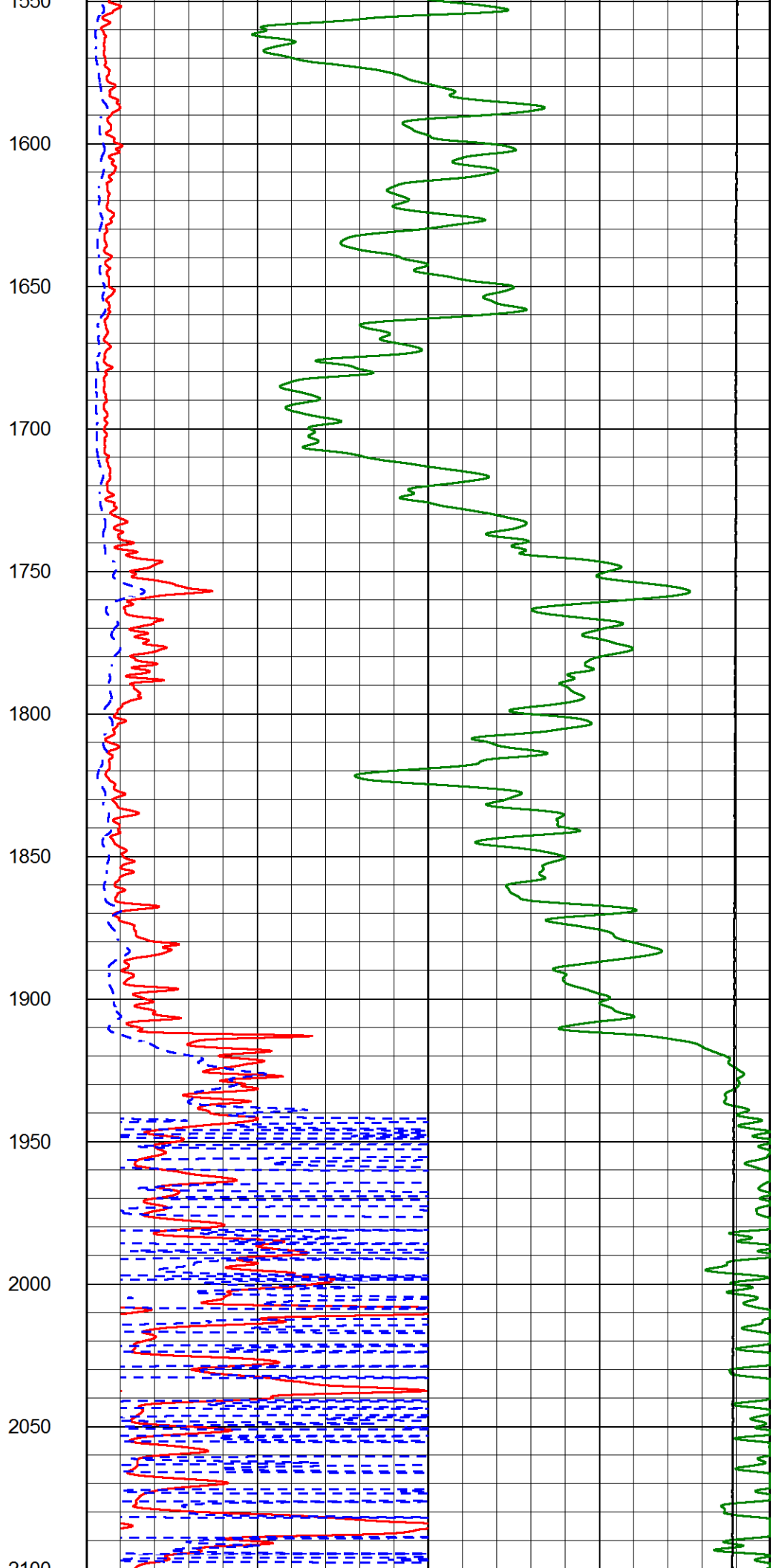
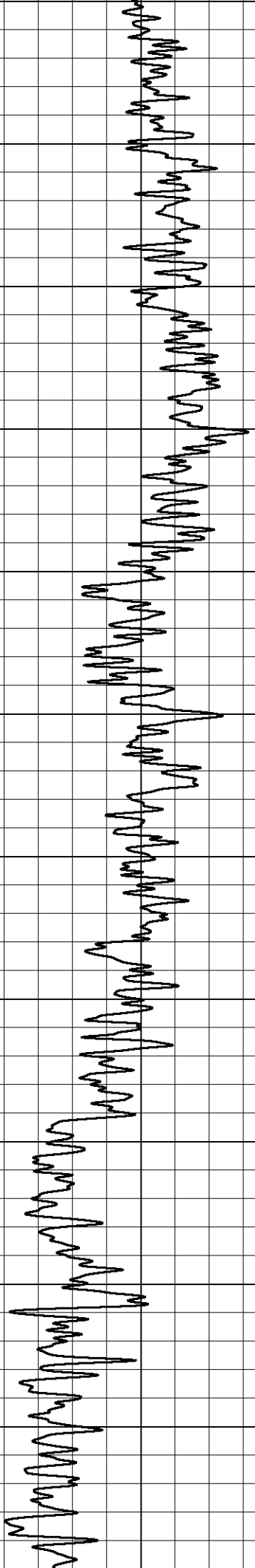
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 Charted by: Depth in Feet scaled 1:600

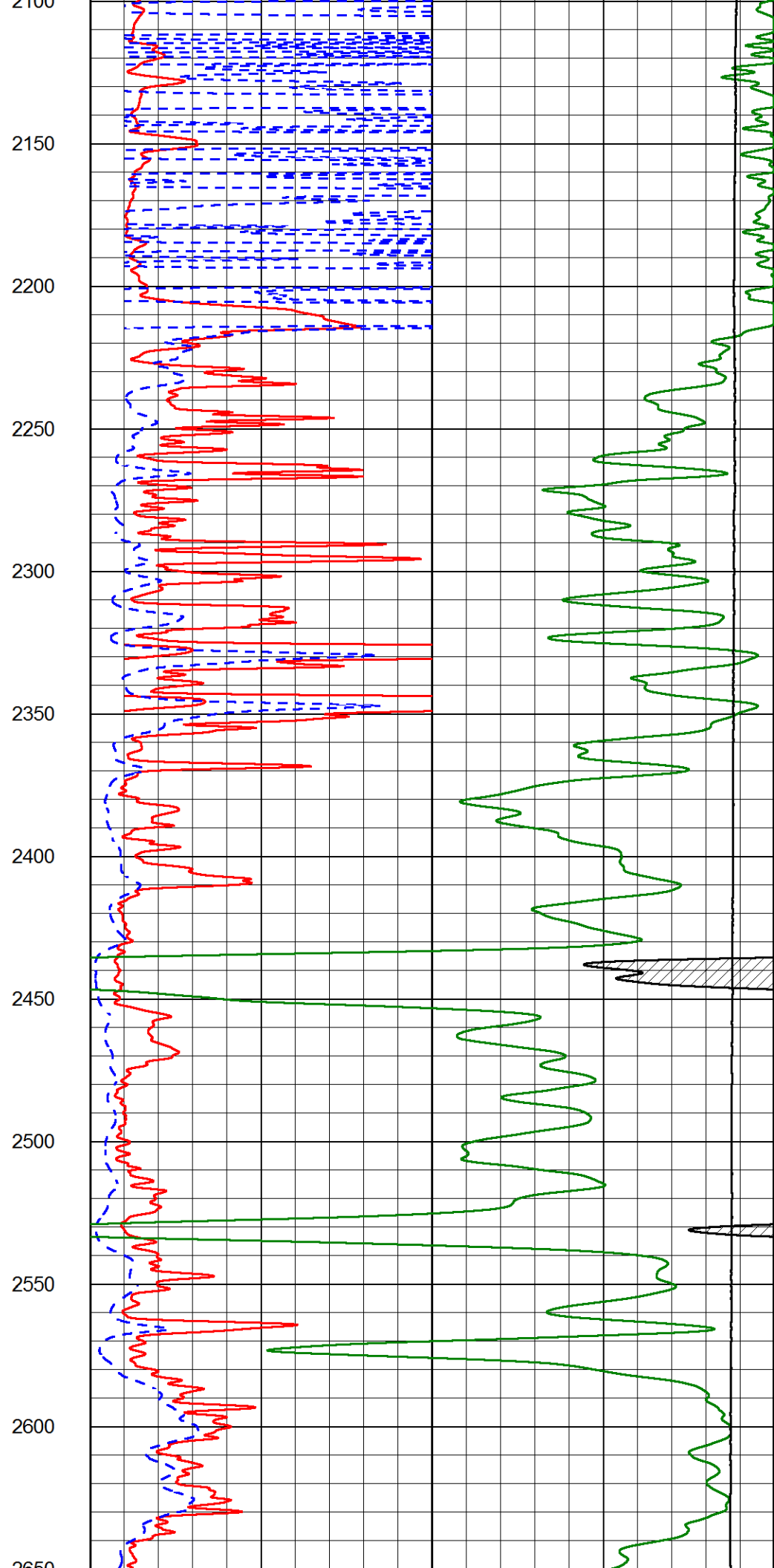
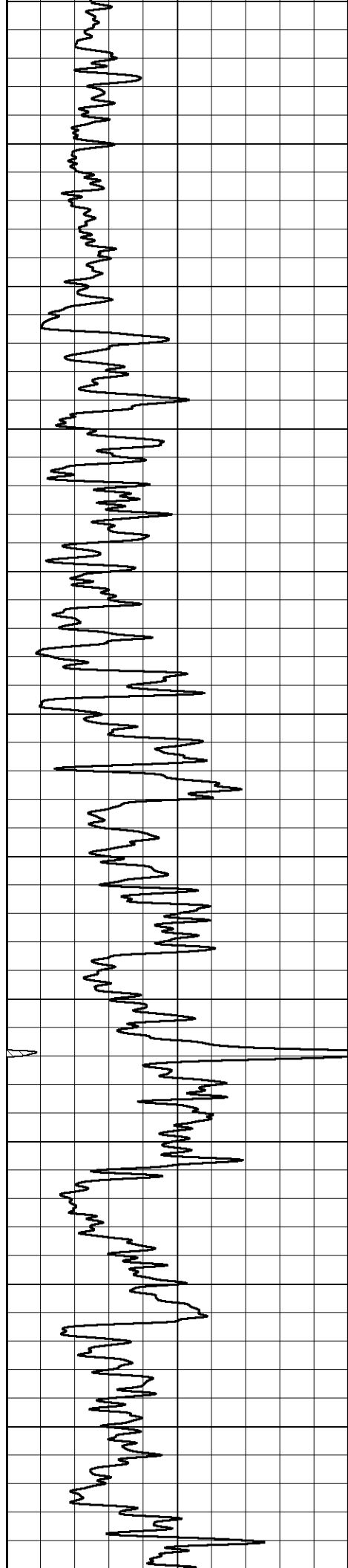
GAMMA RAY (GAPI)	1000	CONDUCTIVITY (mmho/m)	0
	15000	Line Tension (lb)	0
	0	RLL3 (Ohm-m)	50
	0	RILD (Ohm-m)	50
	50	RLL3 (Ohm-m)	200
	50	Deep Resistivity (Ohm-m)	200

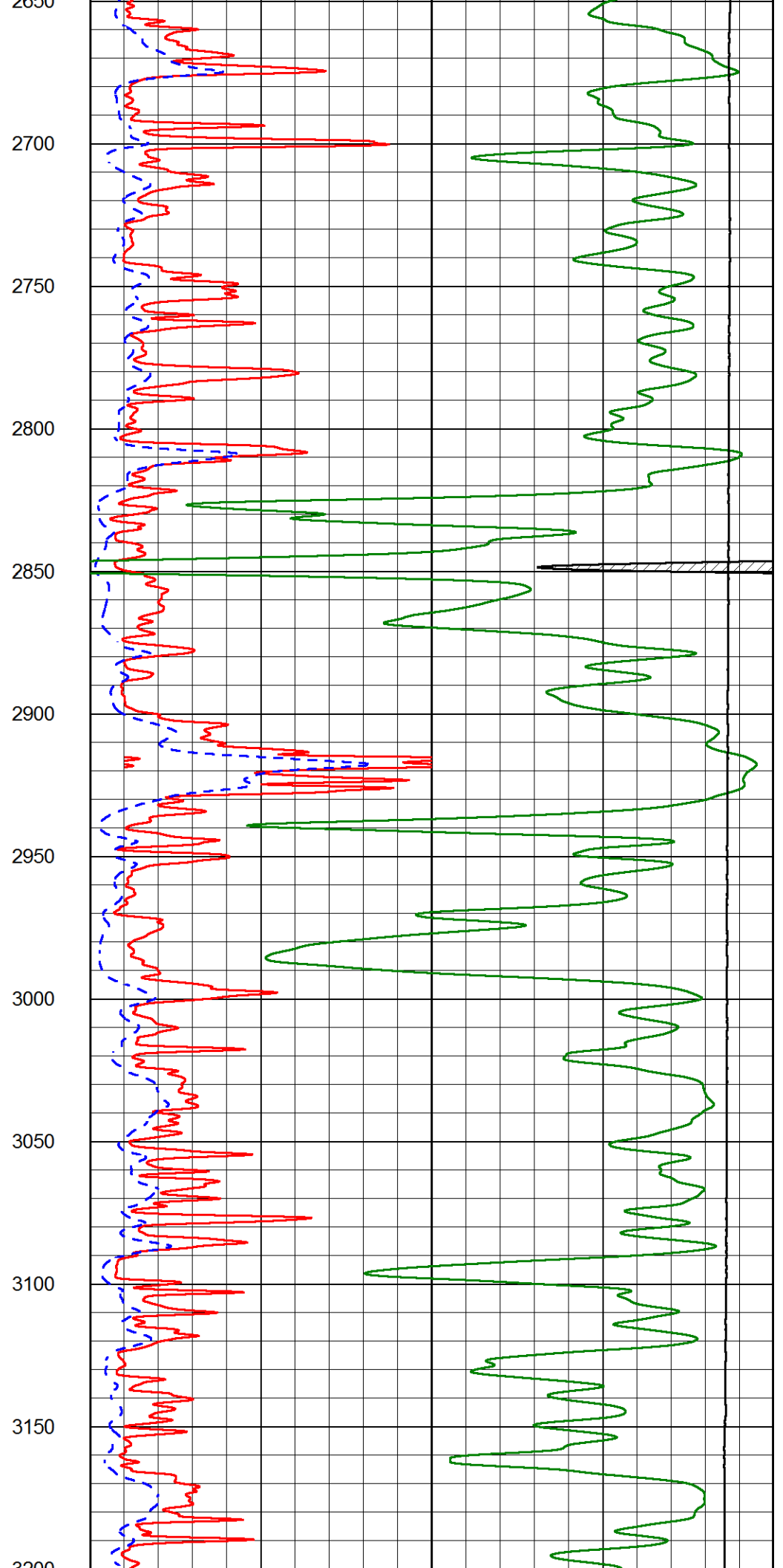
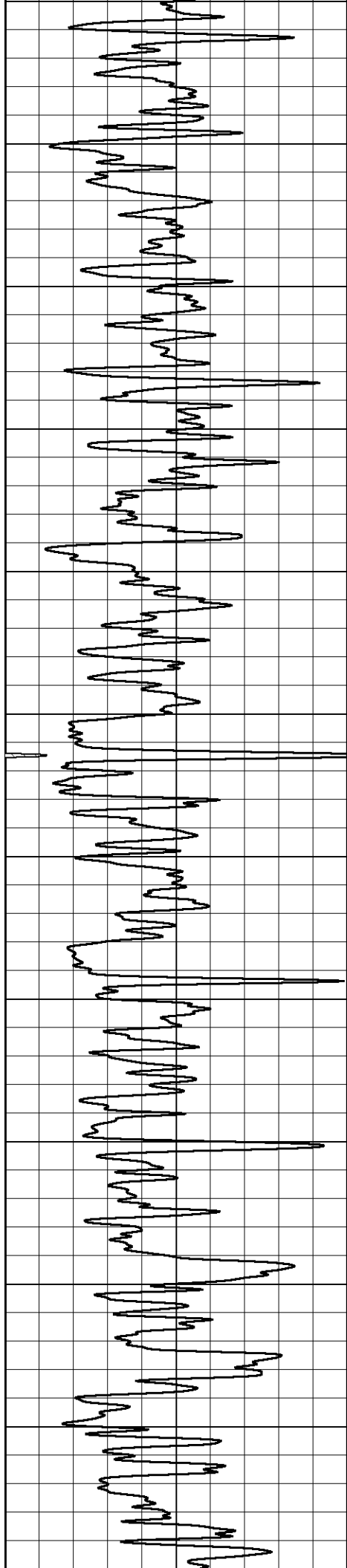


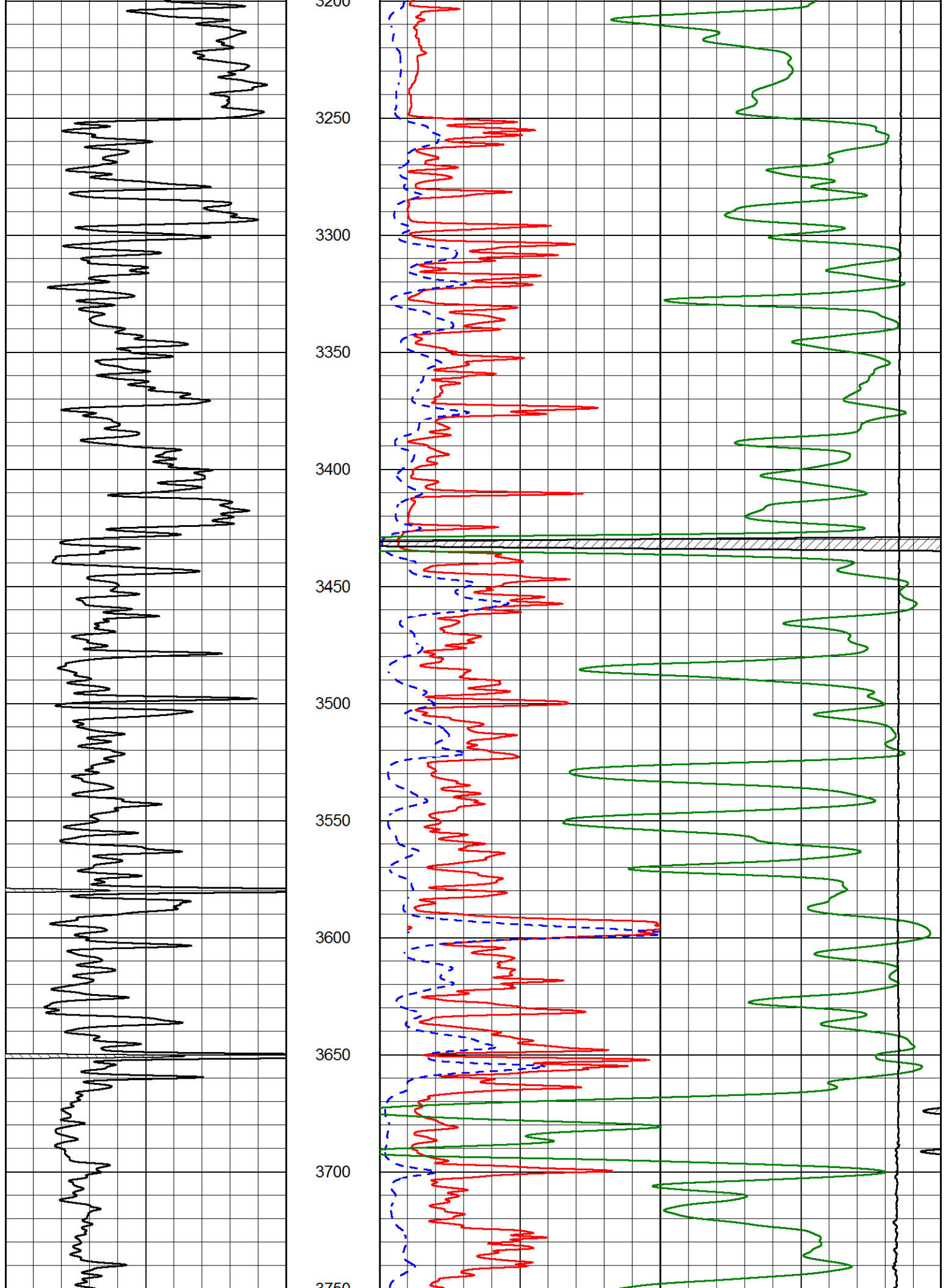


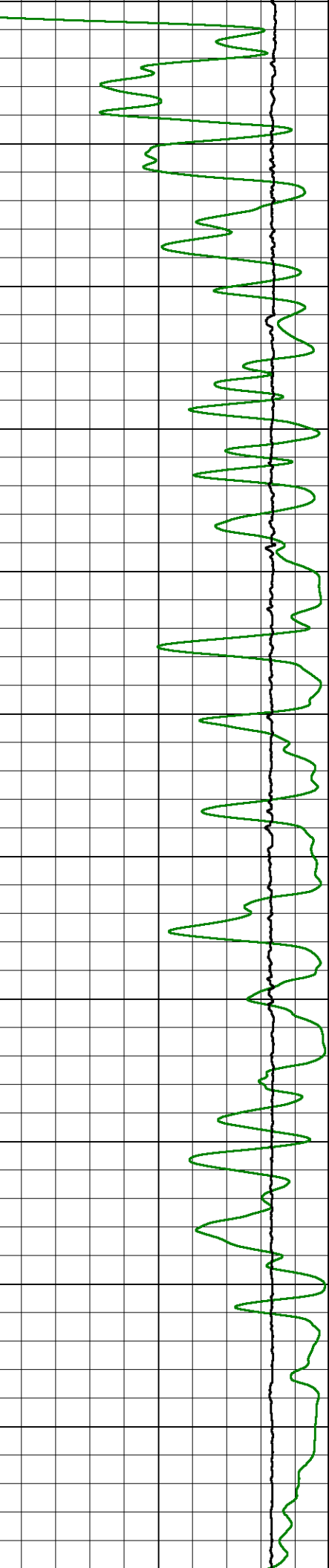
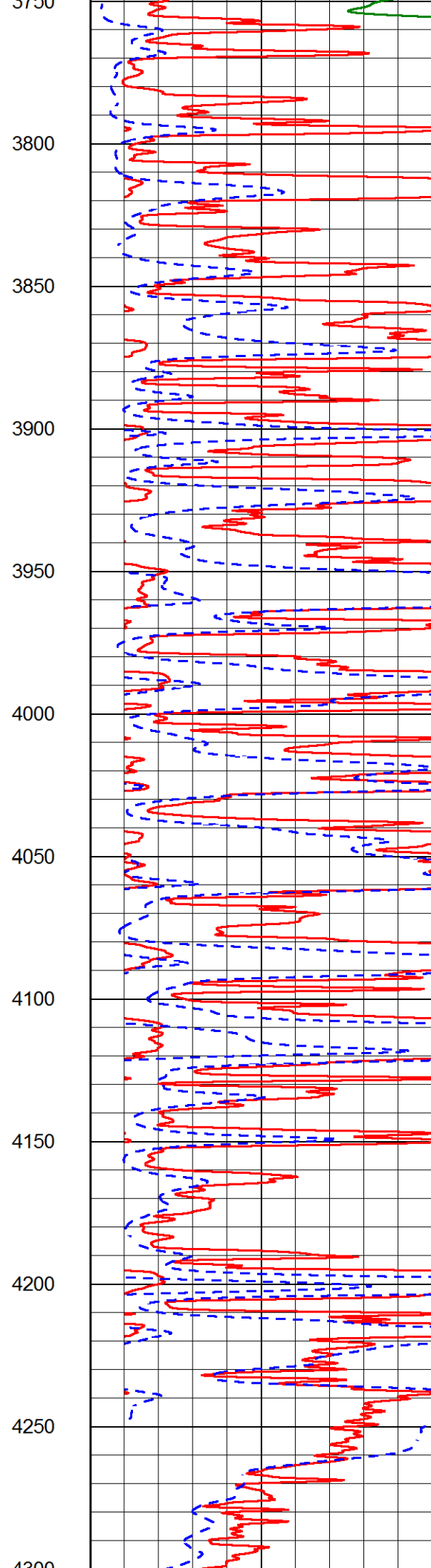
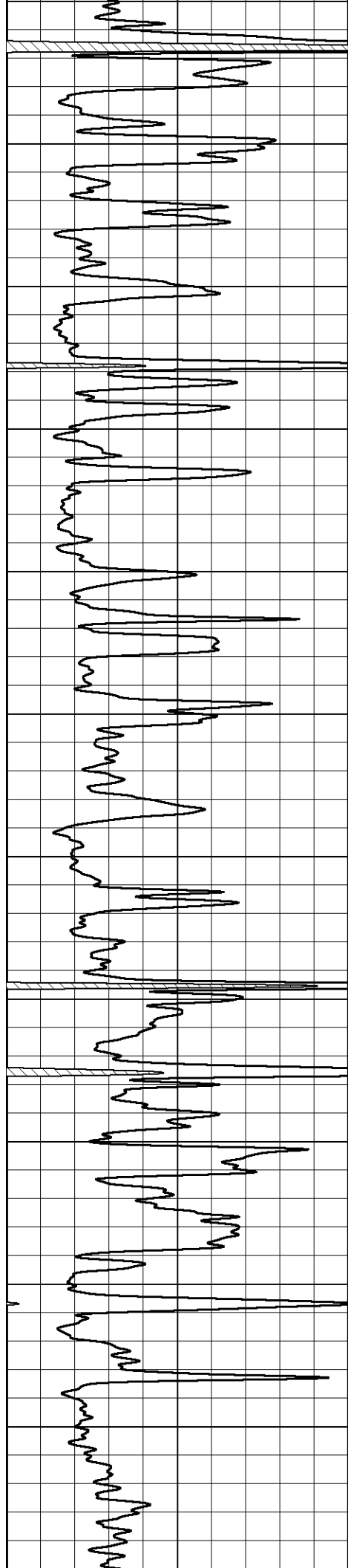


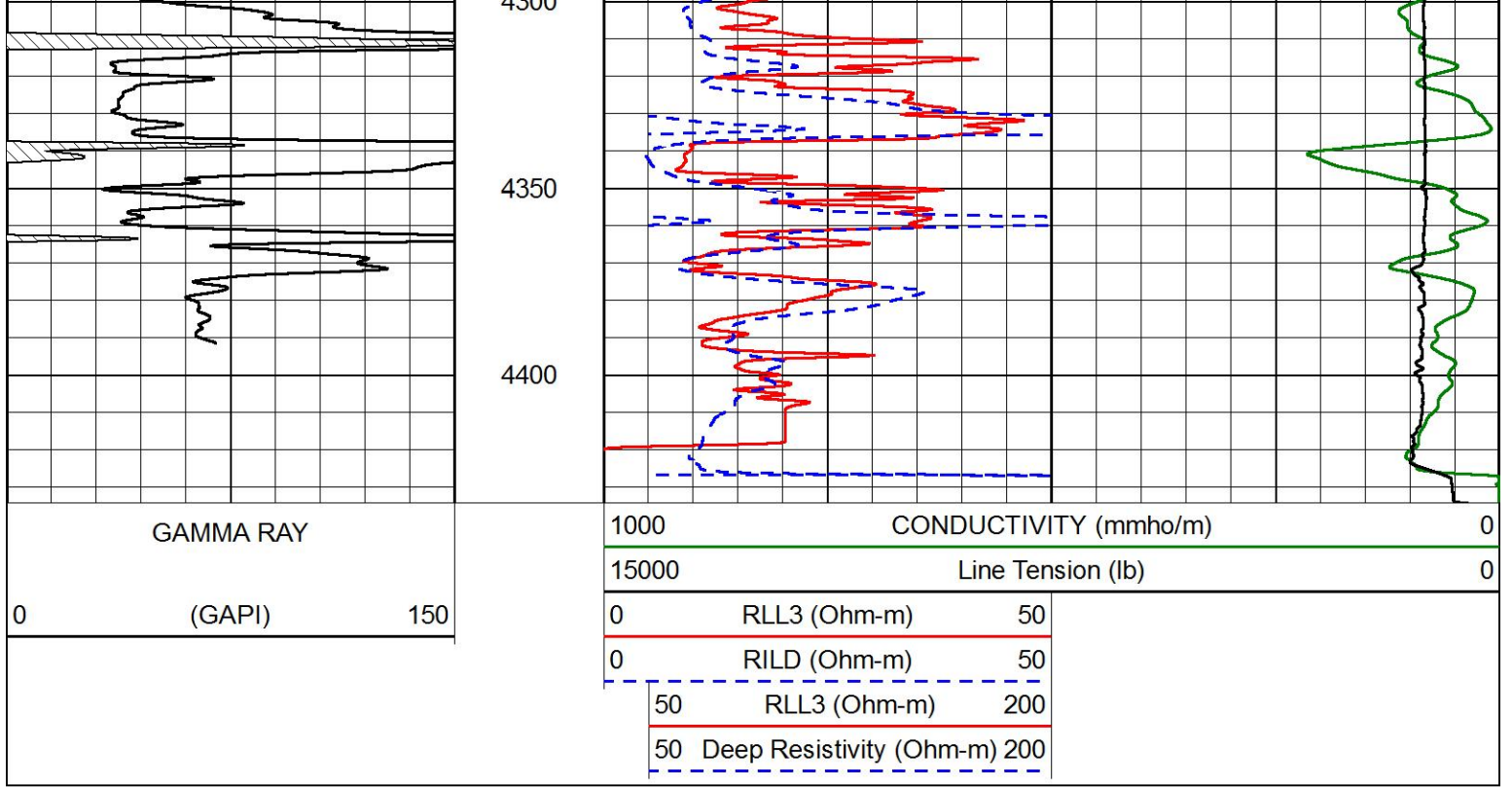










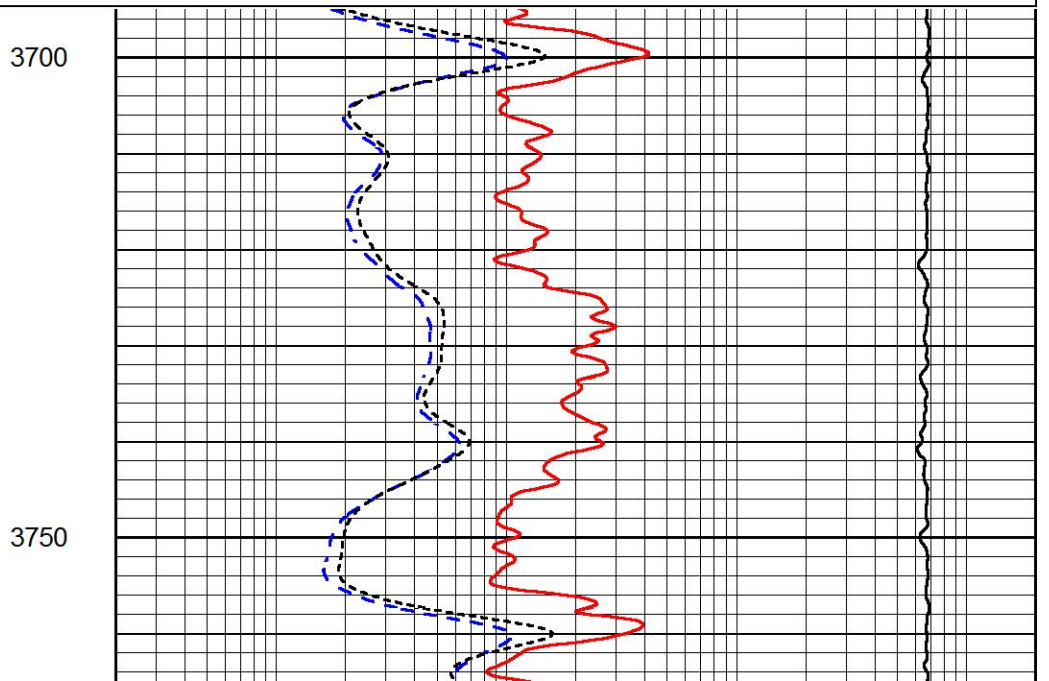
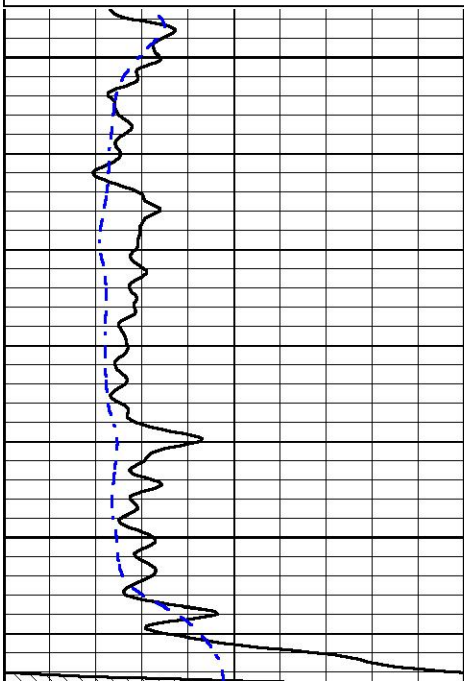


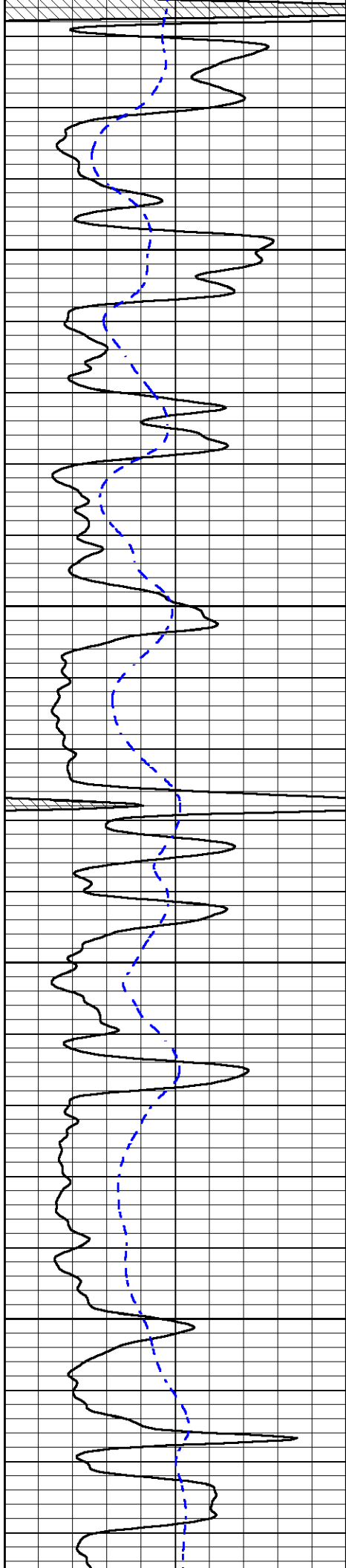
Main Pass

Database File arp_dechant_1.db
 Dataset Pathname stackml/pass3.1
 Presentation Format _dil
 Dataset Creation Wed Feb 03 23:21:57 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-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



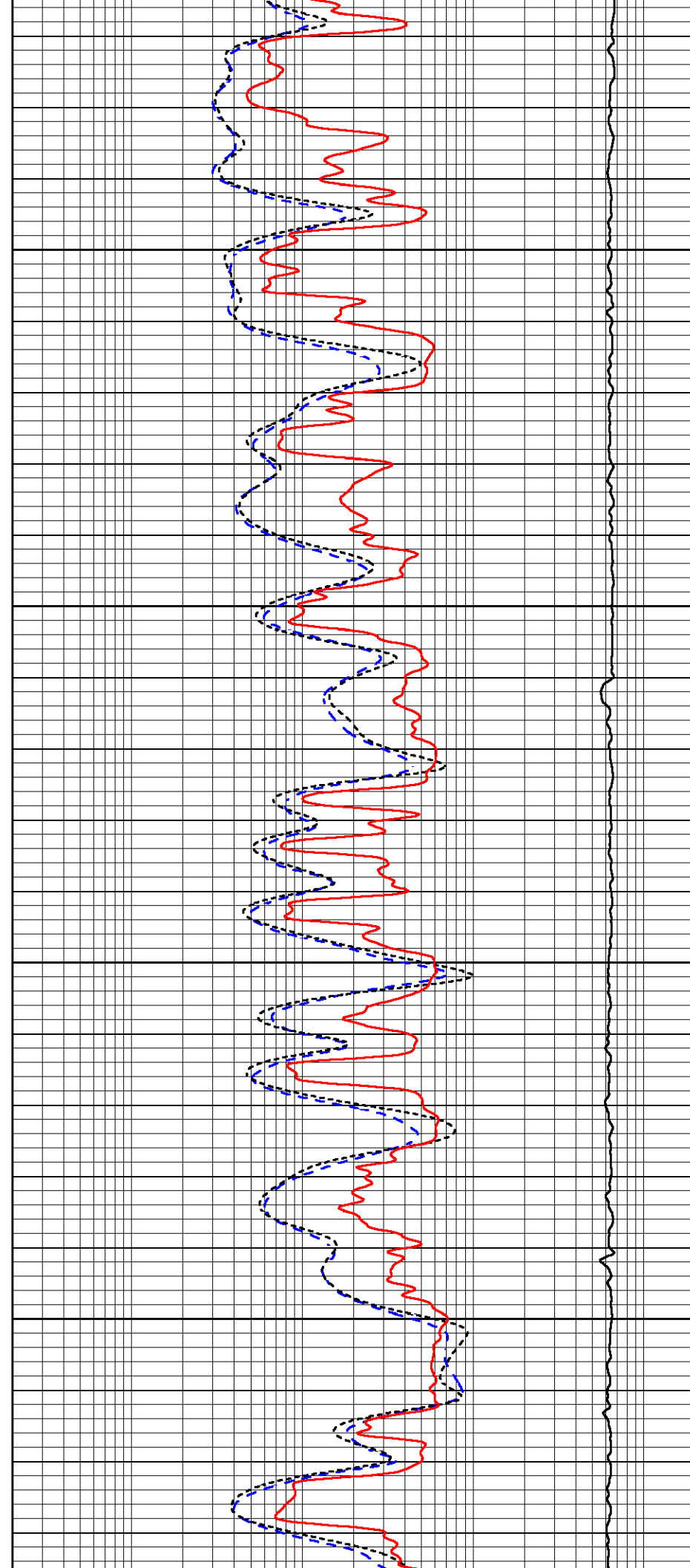


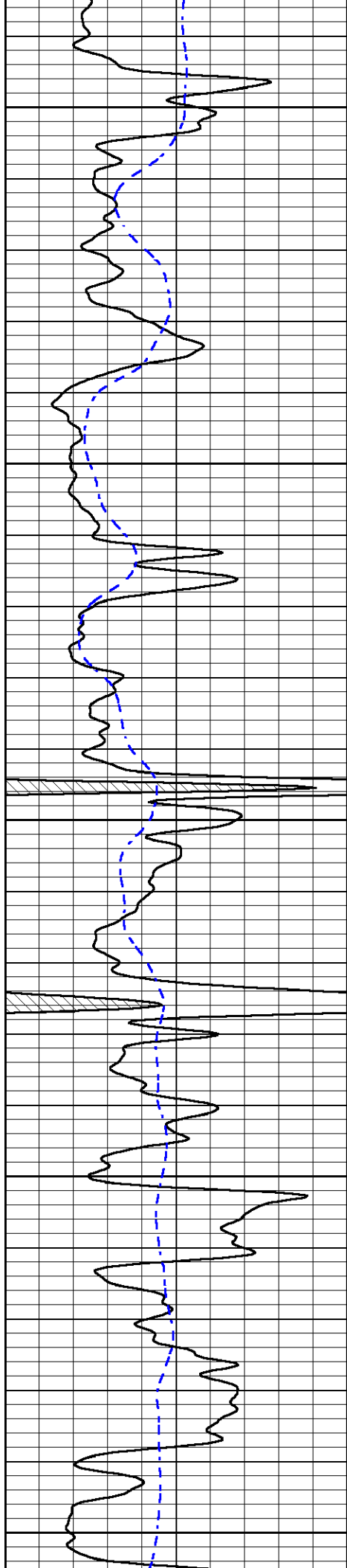
3800

3850

3900

3950





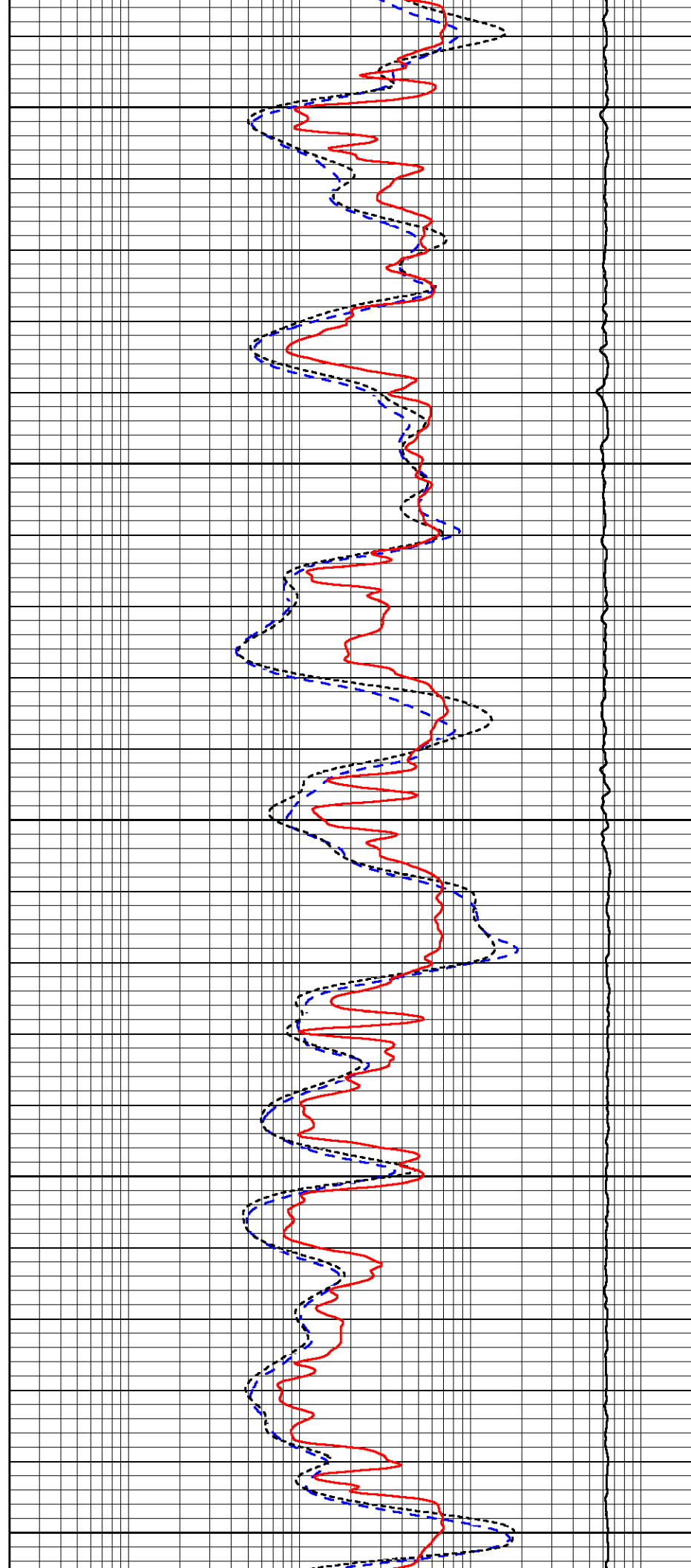
4000

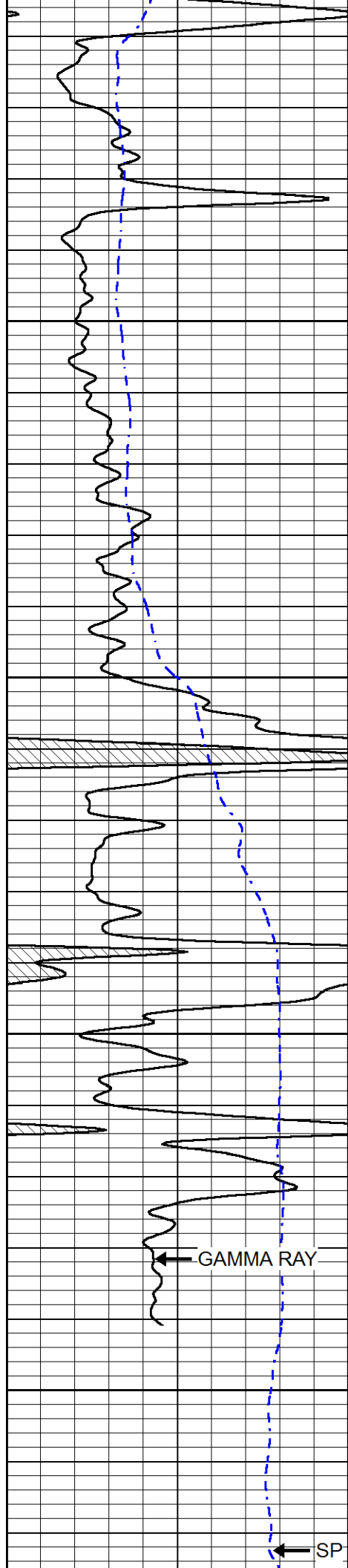
4050

4100

4150

4200





4250

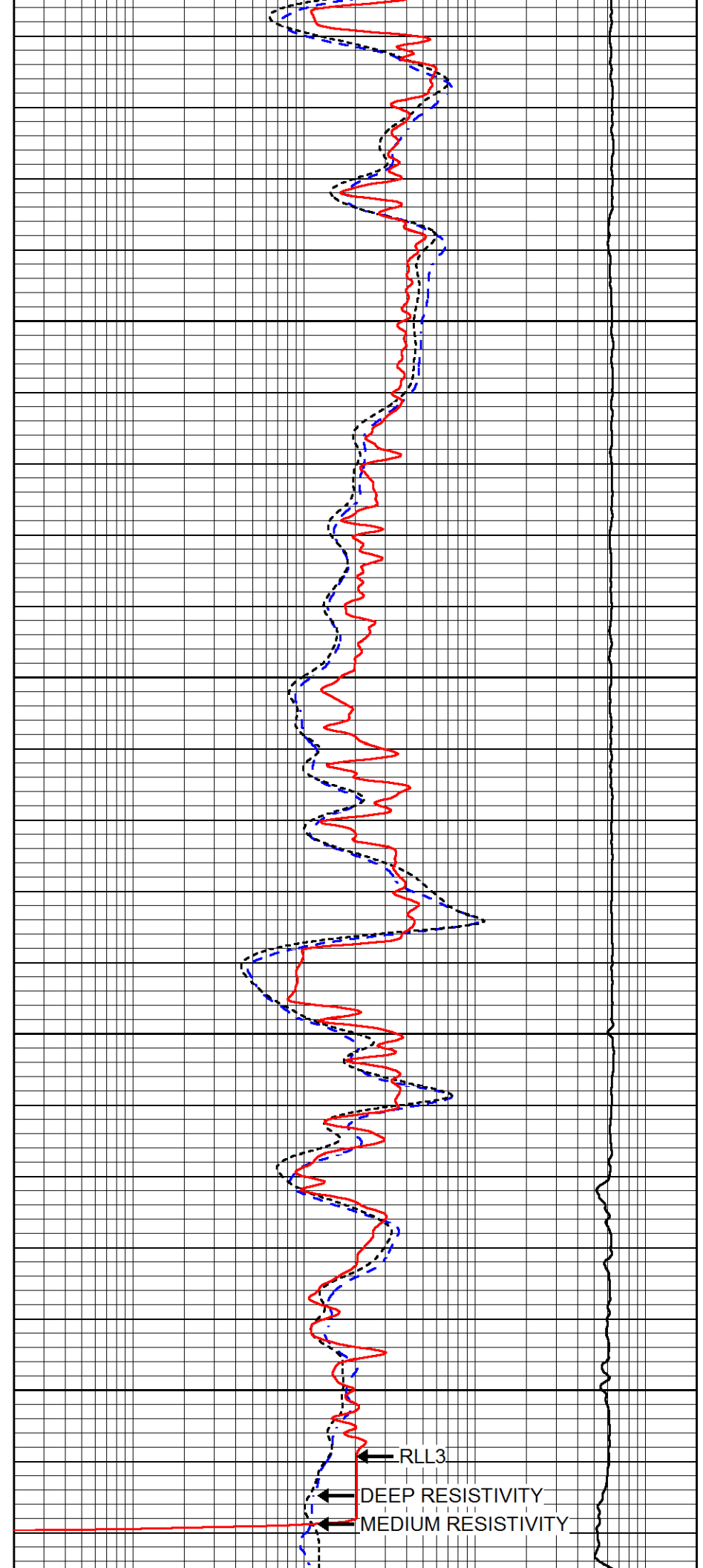
4300

4350

4400

GAMMA RAY

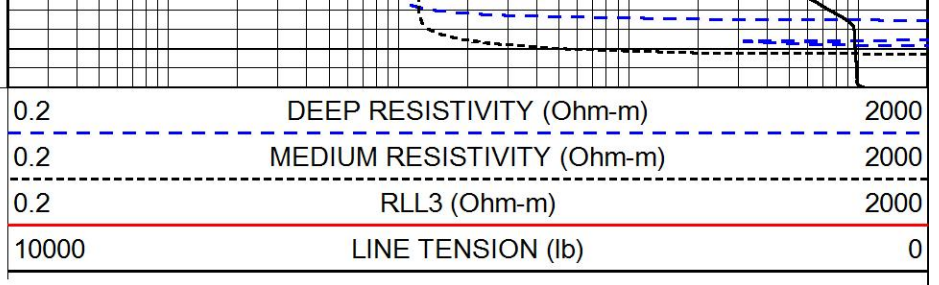
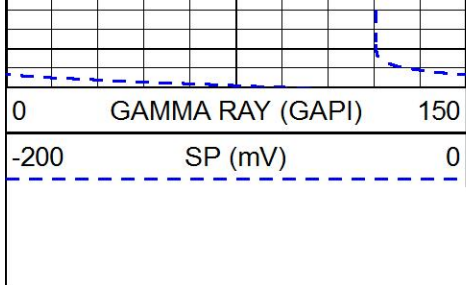
SP



RLL3

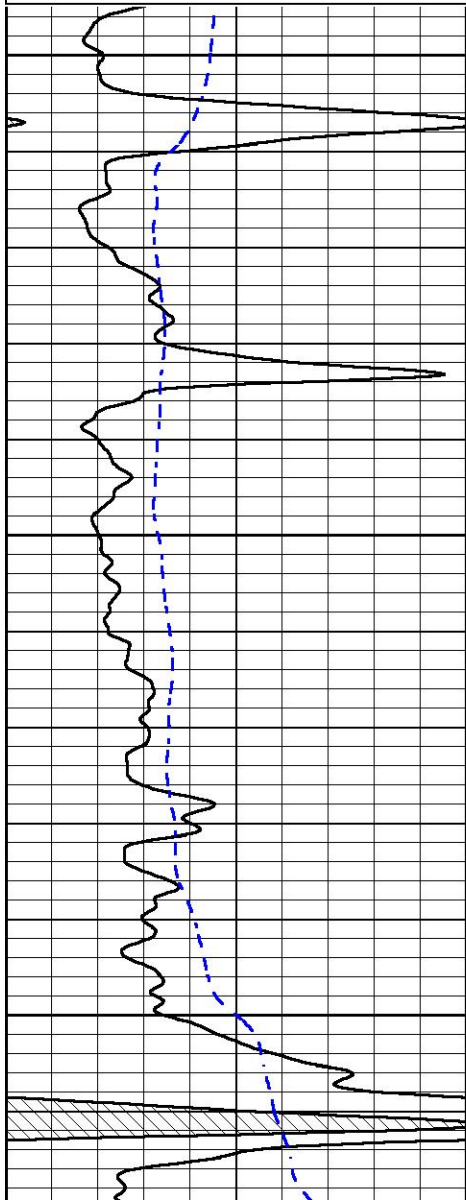
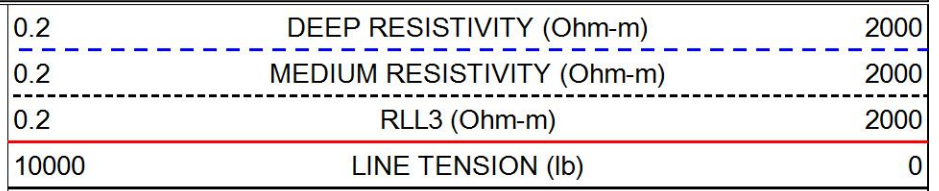
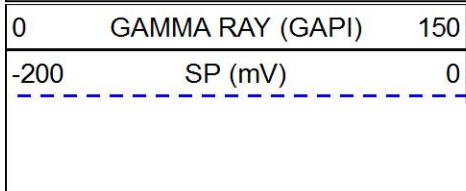
DEEP RESISTIVITY

MEDIUM RESISTIVITY



Repeat Section

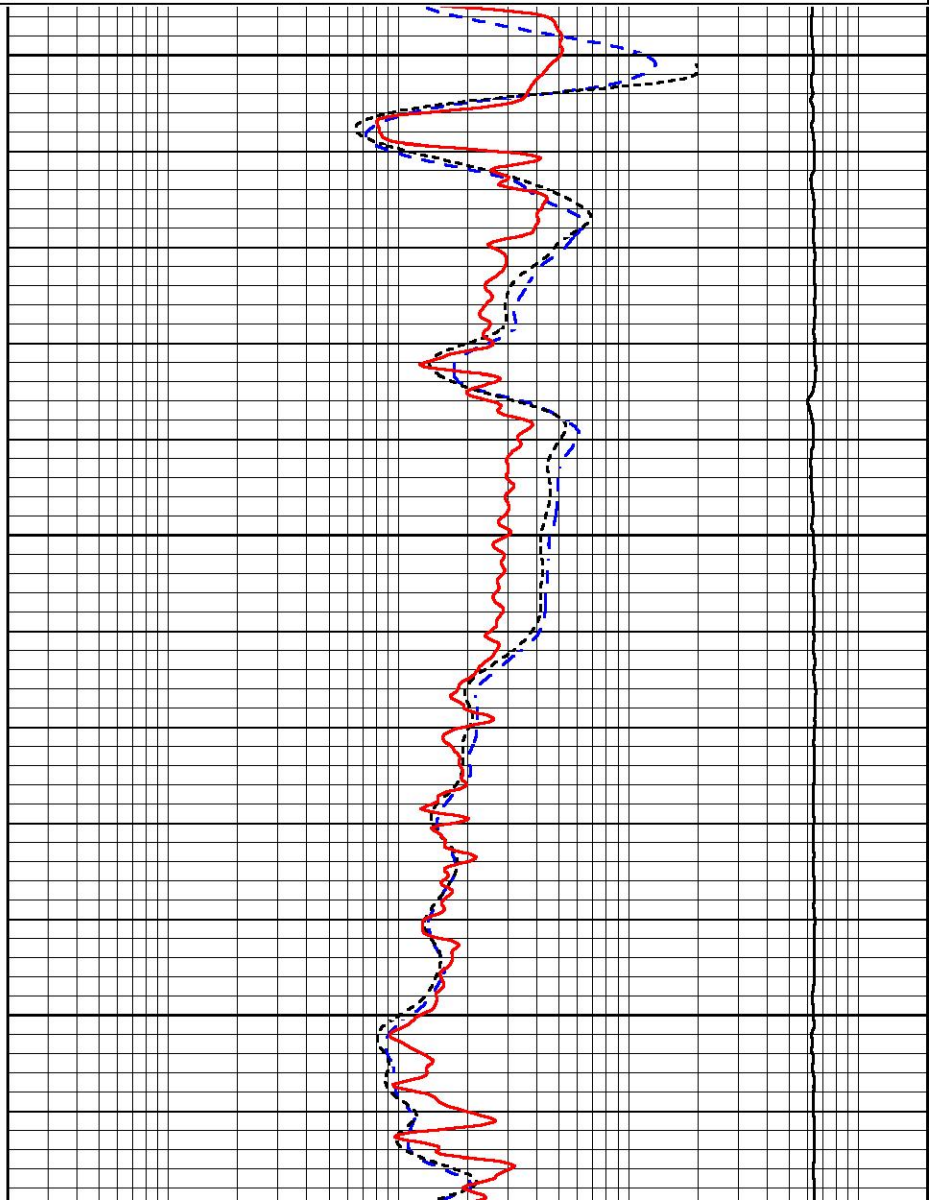
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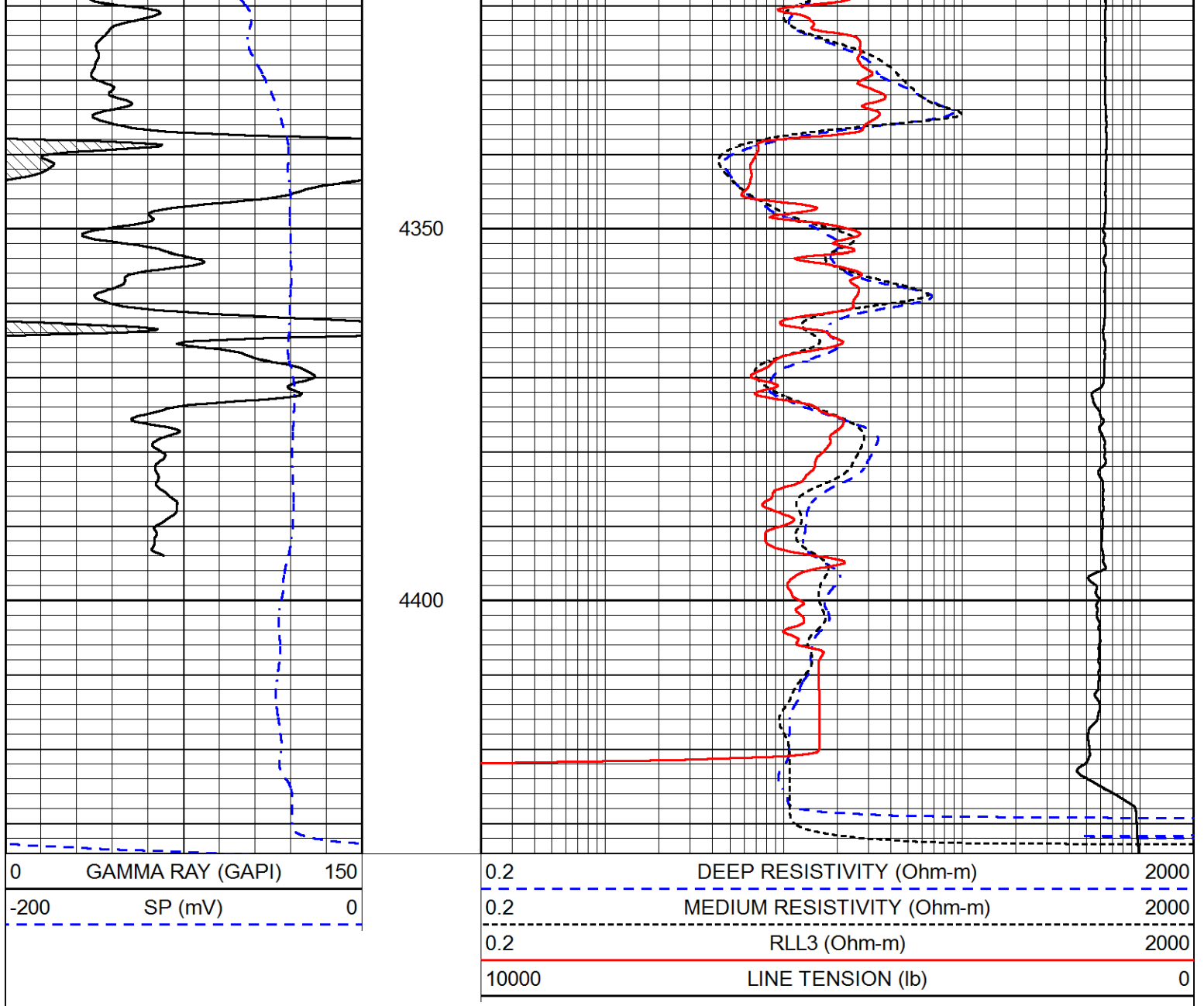


4200

4250

4300





Calibration Report

Database File arp_dechant_1.db
 Dataset Pathname stackml/pass3.1
 Dataset Creation Wed Feb 03 23:21:57 2021

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Sun Jan 17 01:42:03 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-33.500
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sun Jan 17 01:42:11 2021

	Readings		References		Results		
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	15000.0000	-0.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	17000.0000	0.0000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.6000

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Sun Sep 20 22:09:47 2020

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.670	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.526		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	14.50	in	1.23		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W
Tool Model: M&W
Calibration Performed: Sun Sep 20 22:10:24 2020

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



MIDWEST WIRELINE

Company ARP Operating, LLC
Well Dechant #1
Field Wildcat
County Ness
State Kansas