



MIDWEST WIRELINE

# DUAL INDUCTION LOG

Company: Darrah Oil Company, LLC  
 Well: Fanshier #1-4  
 Field: Shaeffer-Rothgarn  
 County: Stafford  
 State: Kansas

Company: Darrah Oil Company, LLC  
 Well: Fanshier #1-4  
 Field: Shaeffer-Rothgarn  
 County: Stafford  
 State: Kansas

Location: 1019 FSL & 2241 FWL  
 SEC 4 TWP 21S RGE 13W  
 API #: 15-185-24120-00-00  
 Elevation: 1888  
 Other Services: CNL/CDL MEL/BHCS  
 K.B. 1901  
 D.F. G.L. 1888

Date	10/10/2022
Run Number	One
Depth Driller	3700
Depth Logger	3701
Bottom Logged Interval	3700
Top Log Interval	200
Casing Driller	8:625 @ 225
Casing Logger	223
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	5000
Density / Viscosity	9.4 54
pH / Fluid Loss	10.0 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.25 @ 86
Rmt @ Meas. Temp	0.19 @ 86
Rmc @ Meas. Temp	0.34 @ 86
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.19 @ 113
Operating Rig Time	4 Hours
Max Rec. Temp. F	113
Equipment Number	P-108
Location	HAYS
Recorded By	D. Schmidt
Witnessed By	Jim Musgrove

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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.

Great Bend,  
 South to county line, 1 South, 1/2 West

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: D. Schmidt	Operator:	Primary Witness: Jim Musgrove	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Operator	Offset (ft)	Substrate	Description	Length (ft)	O.D. (in)	Weight (lb)
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.33		GR-M&W (103)	3.00	3.50	50.00
CNLSC CNSSC	37.23 36.48		CNT-M&W (210)	5.00	3.50	100.00
LSD DCAL SSD	28.18 28.17 27.68		CDL-M&W (303-03)	8.50	4.00	250.00
MCAL MI MN	19.58 19.58 19.58		ML-PSI STKBL ML (401)	7.58	4.00	65.00
RLL3F RLL3	15.50 15.50					
CILD	8.33		DIL-M&W (504 HT)	18.25	3.50	220.00
CILM	4.50					
SP	0.20					

Dataset: darrah)\_fانشier 1-4.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\darrah)\_fanshier 1-4.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	113	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	557	80	Off	3701

## 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

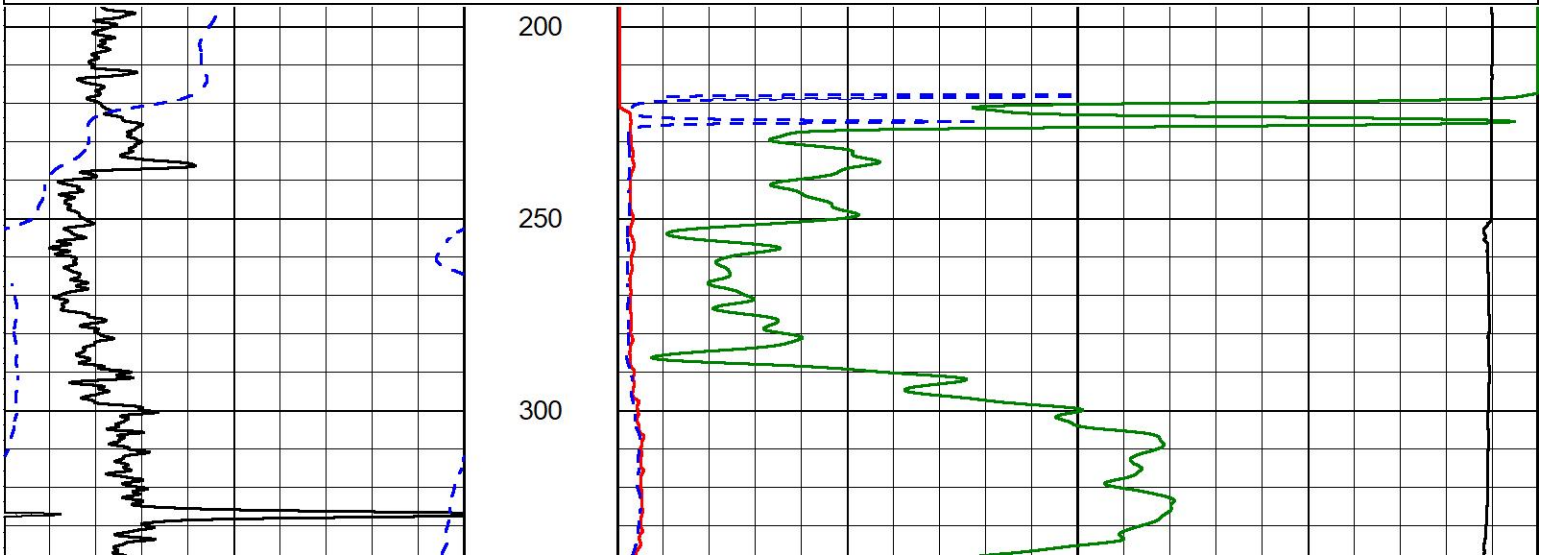


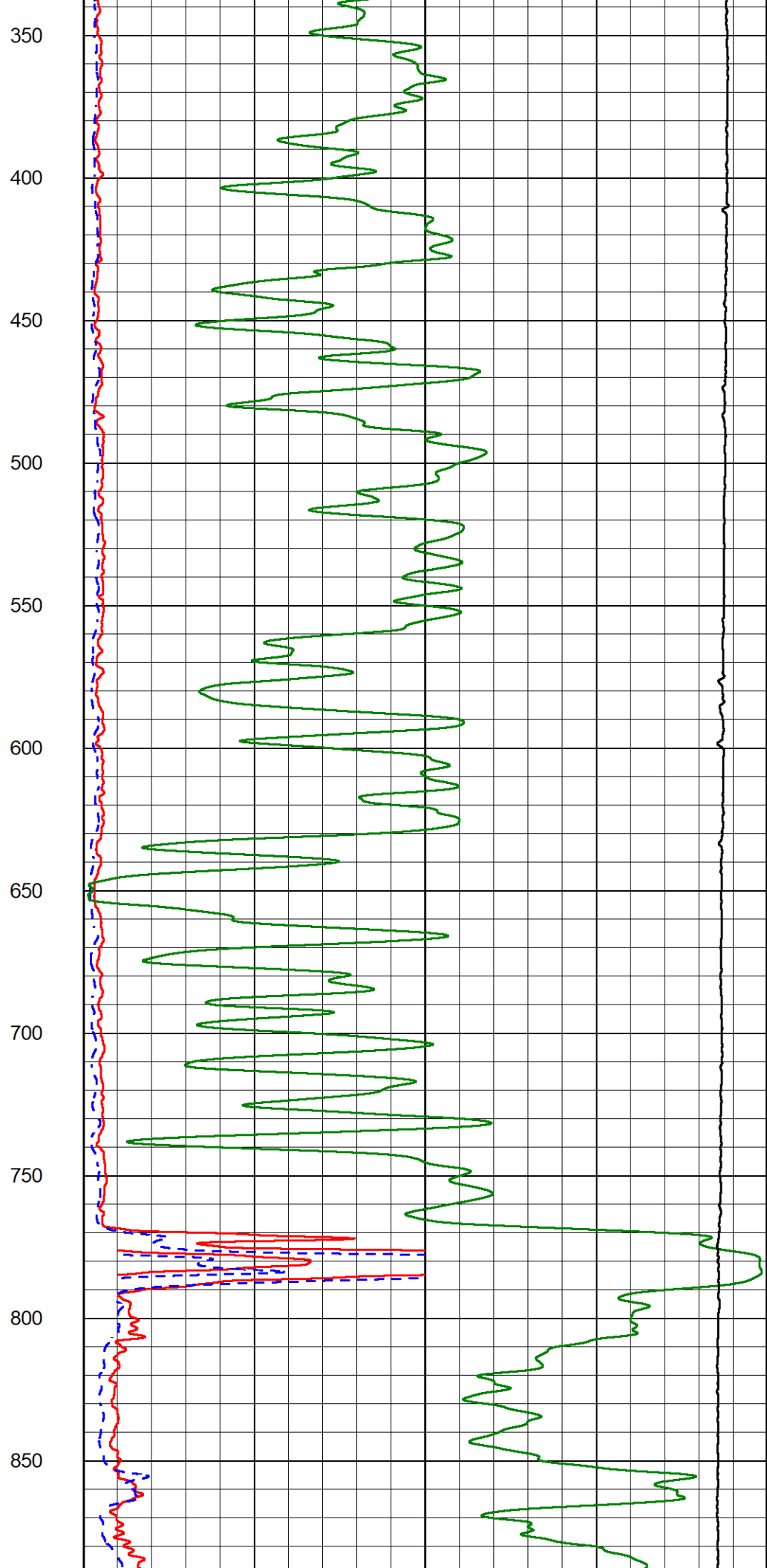
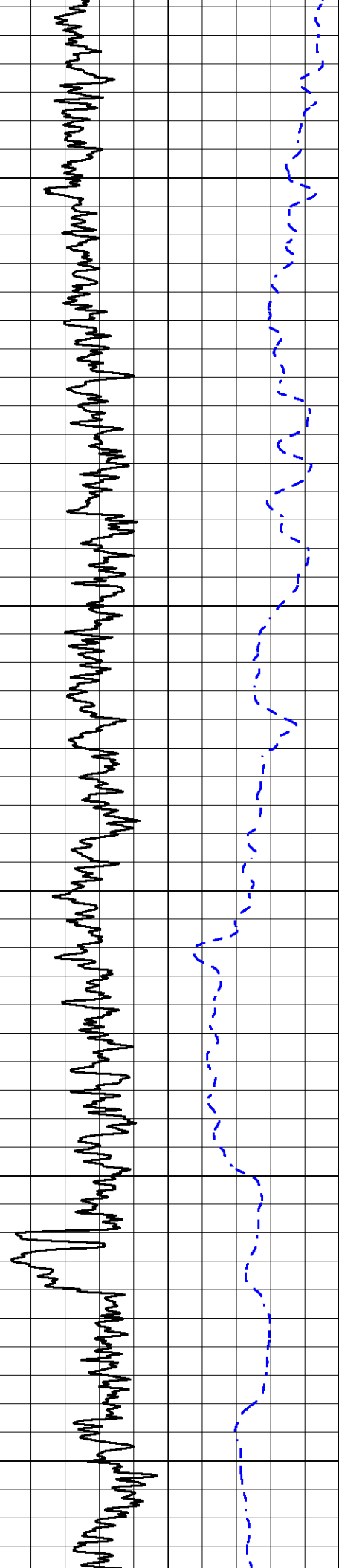
## 2" SCALE RESISTIVITY

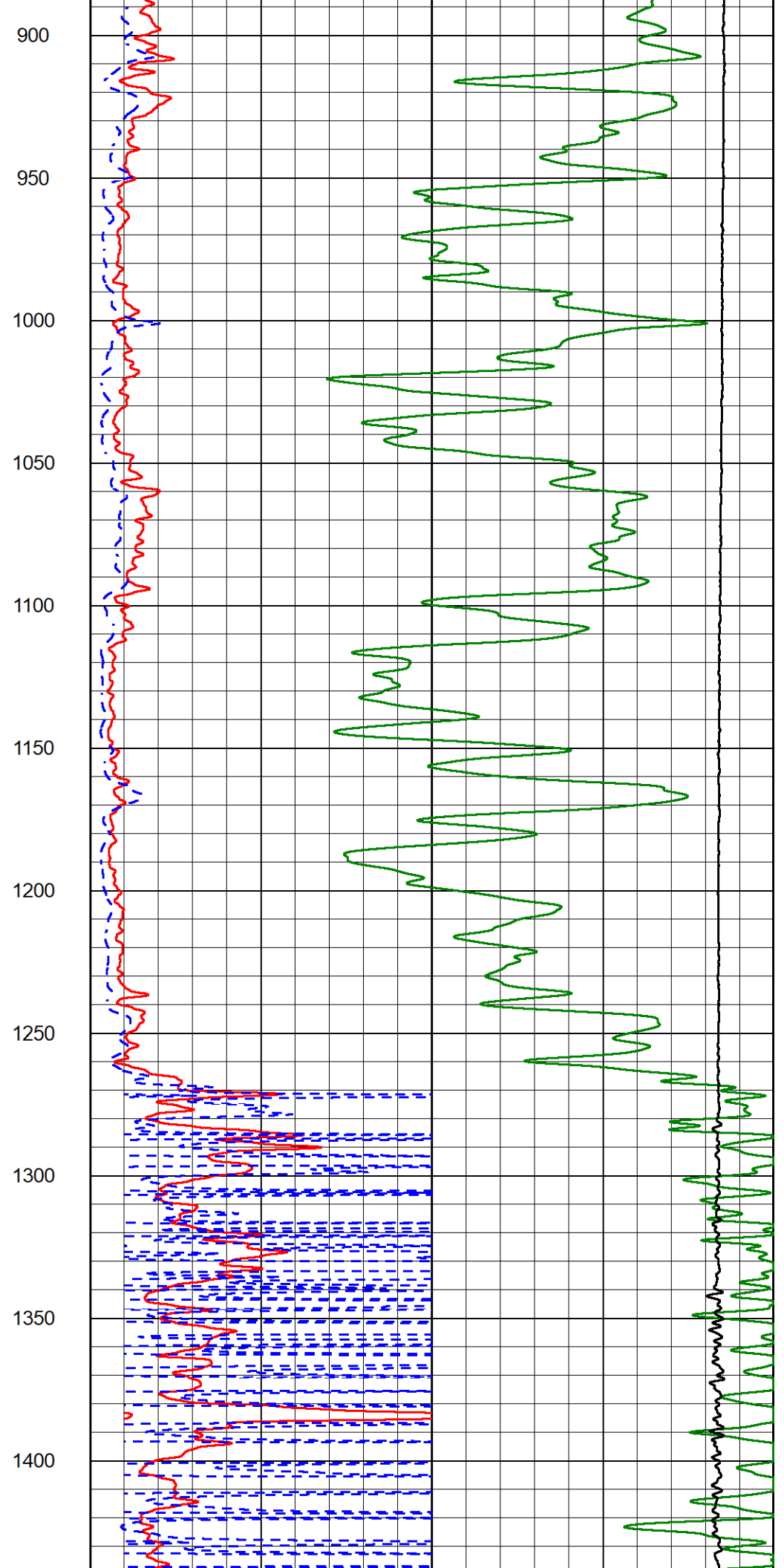
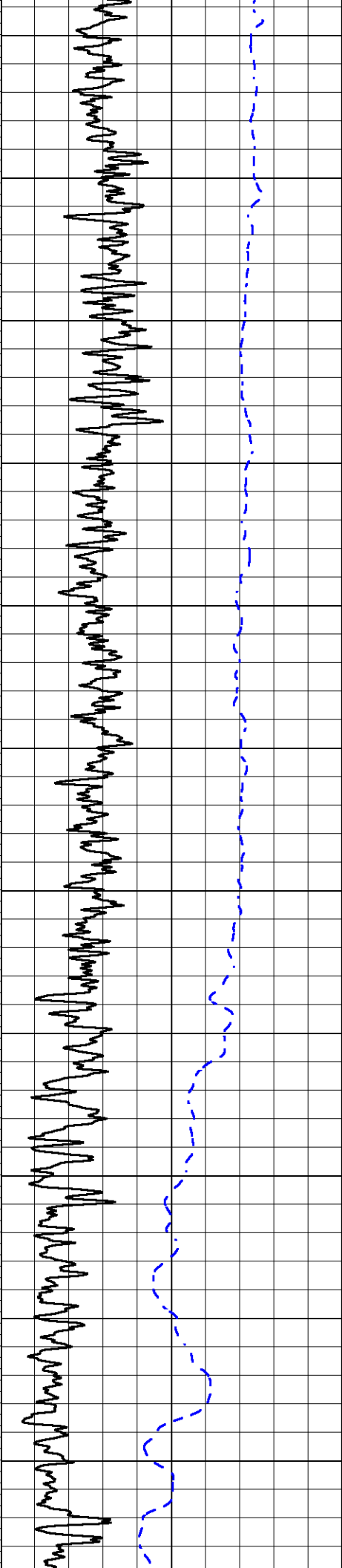
### MAIN PASS

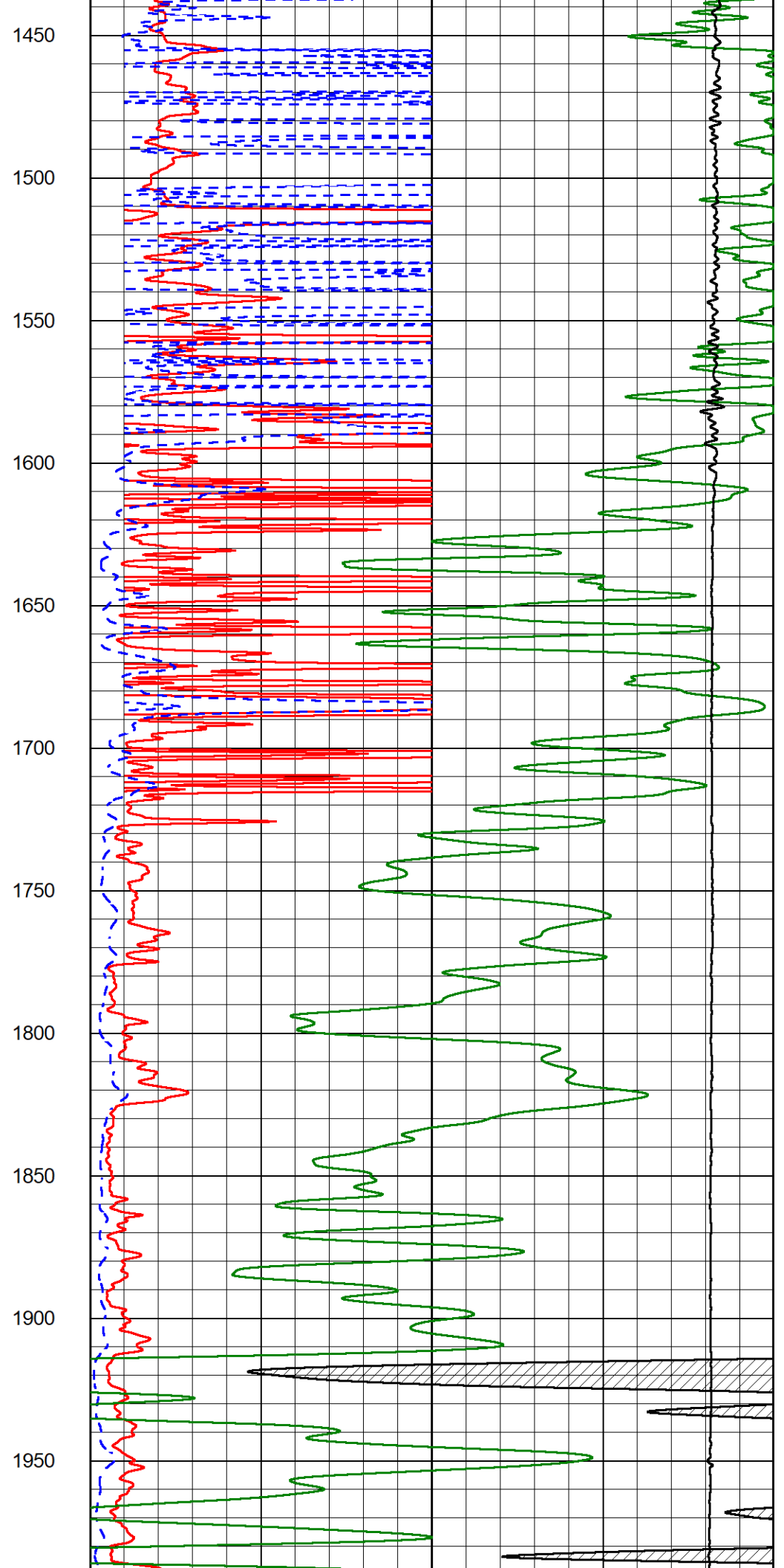
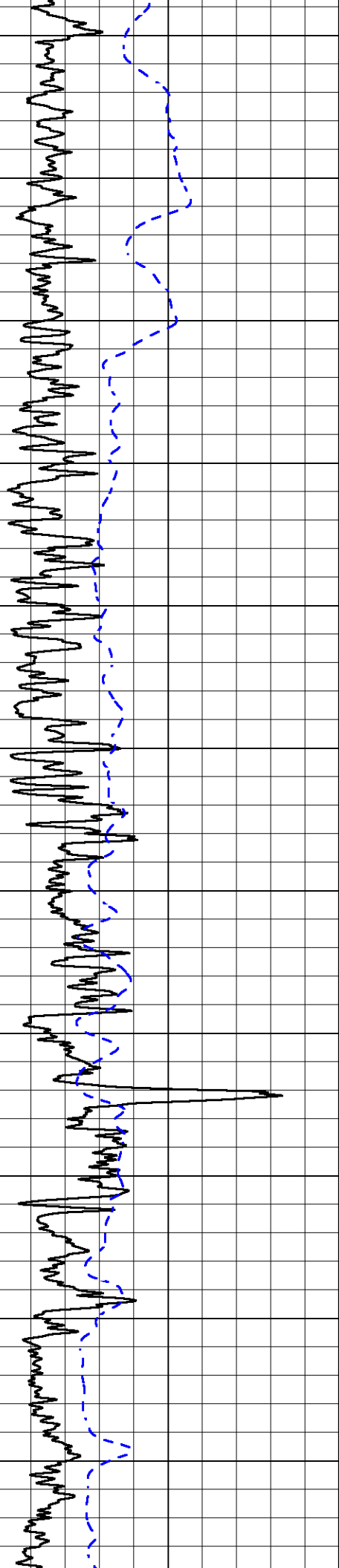
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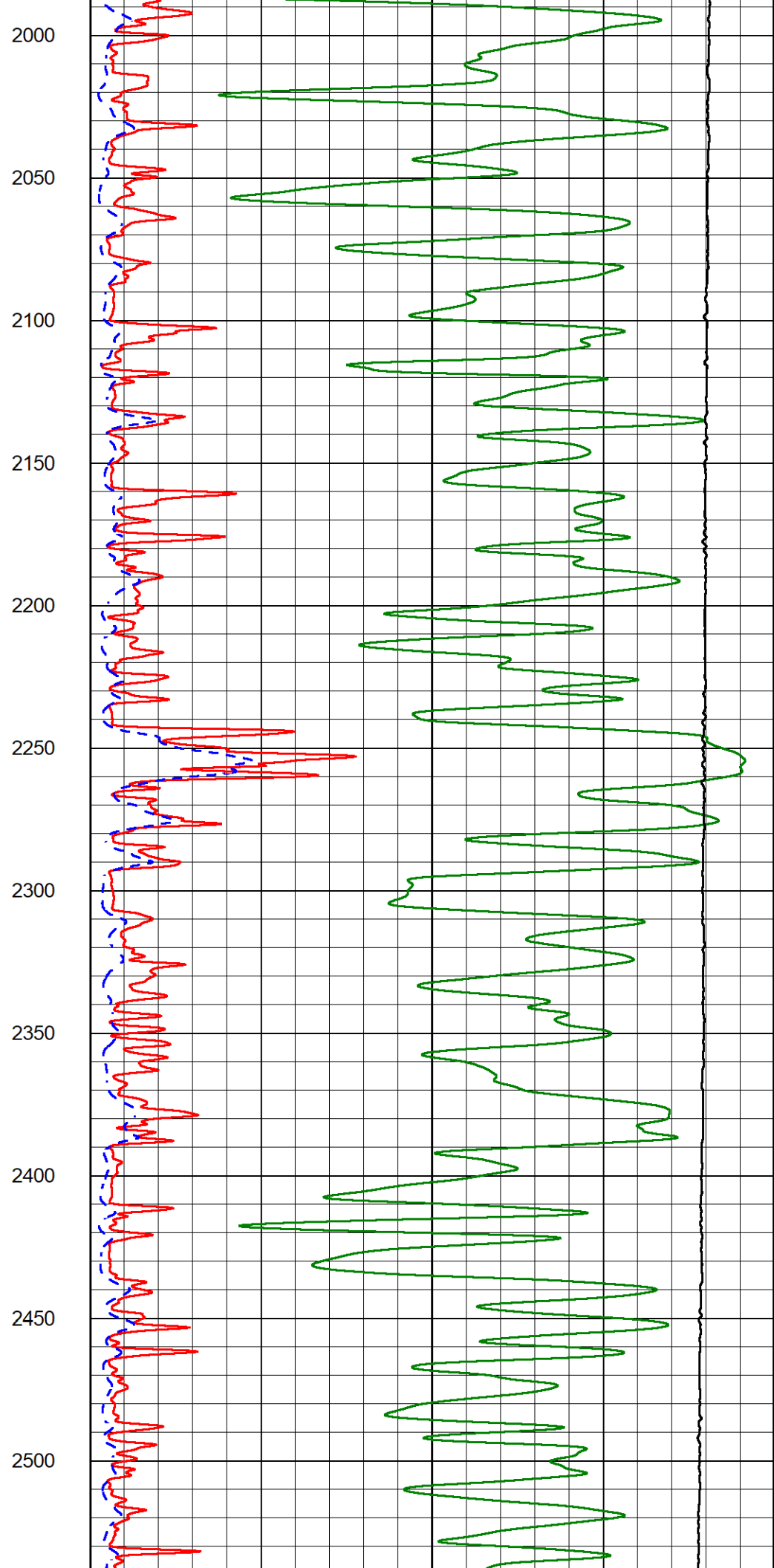
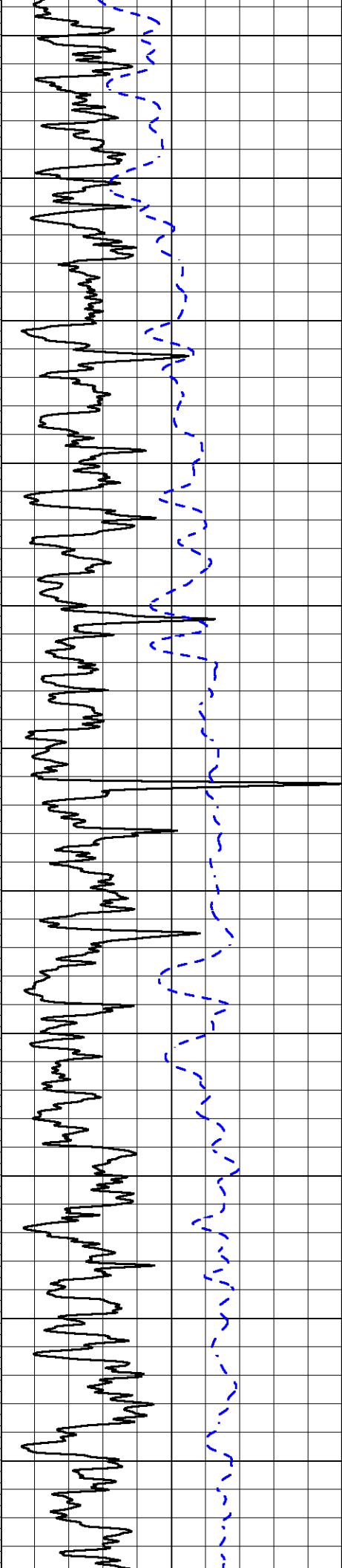
0	Gamma Ray (GAPI)	300	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

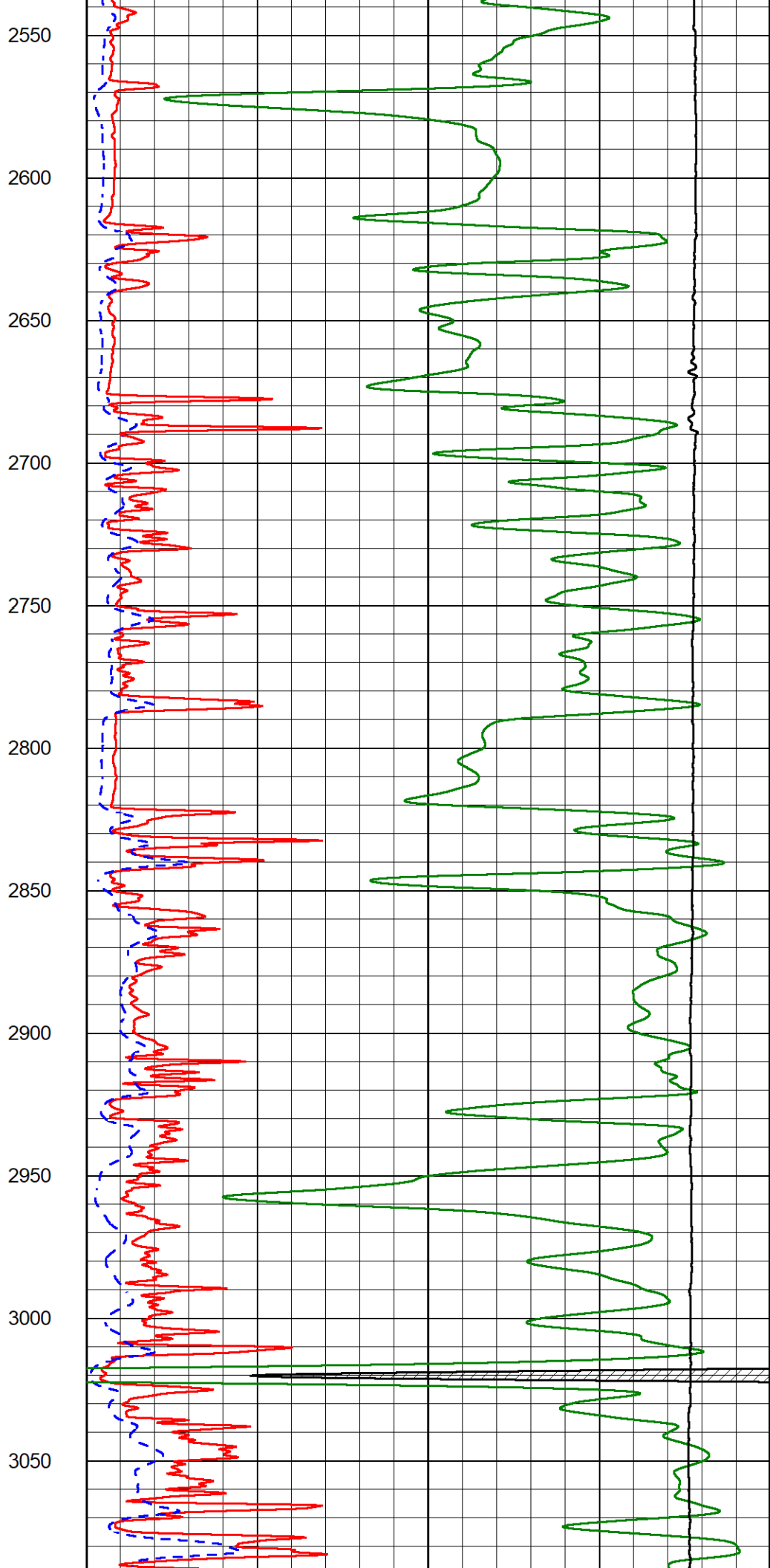
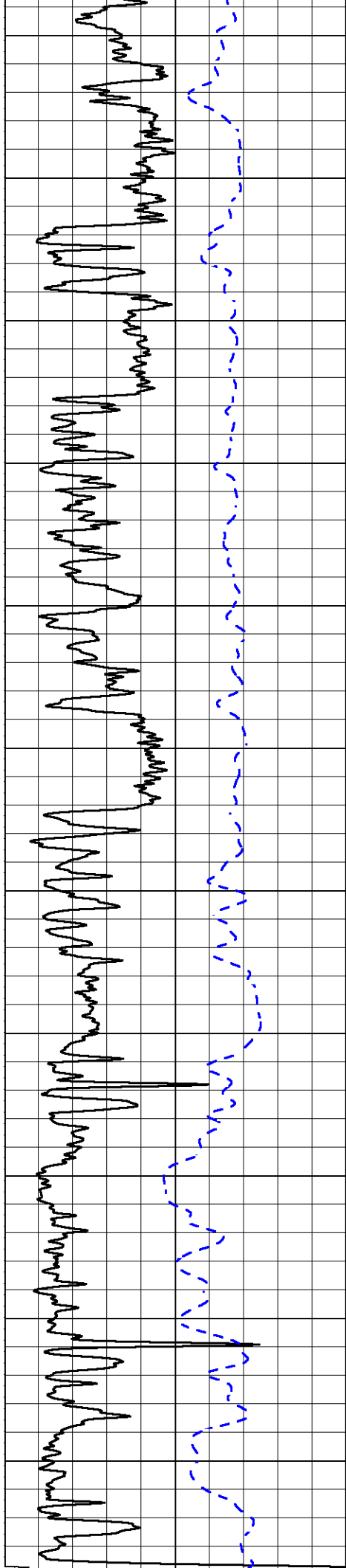


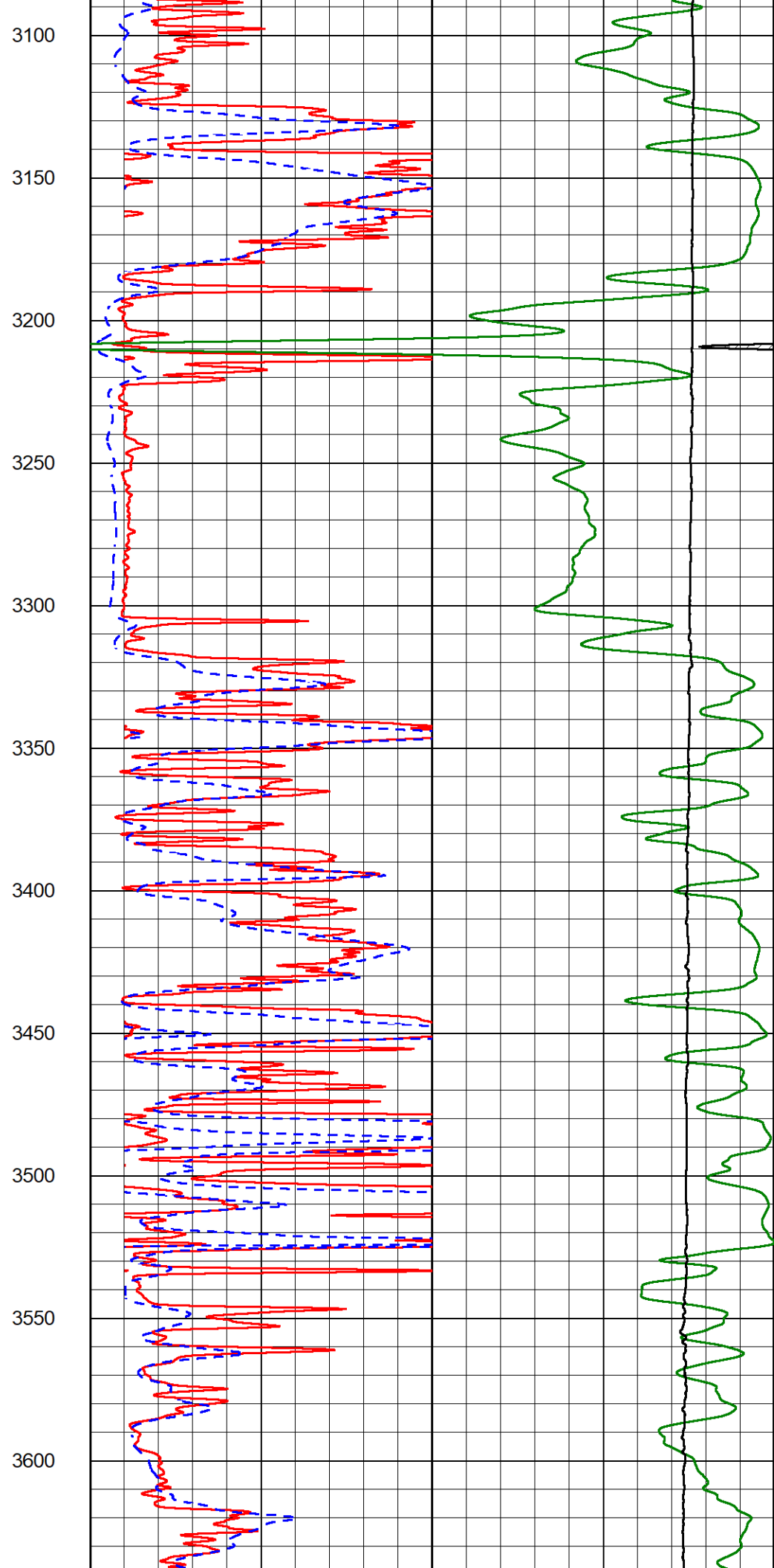
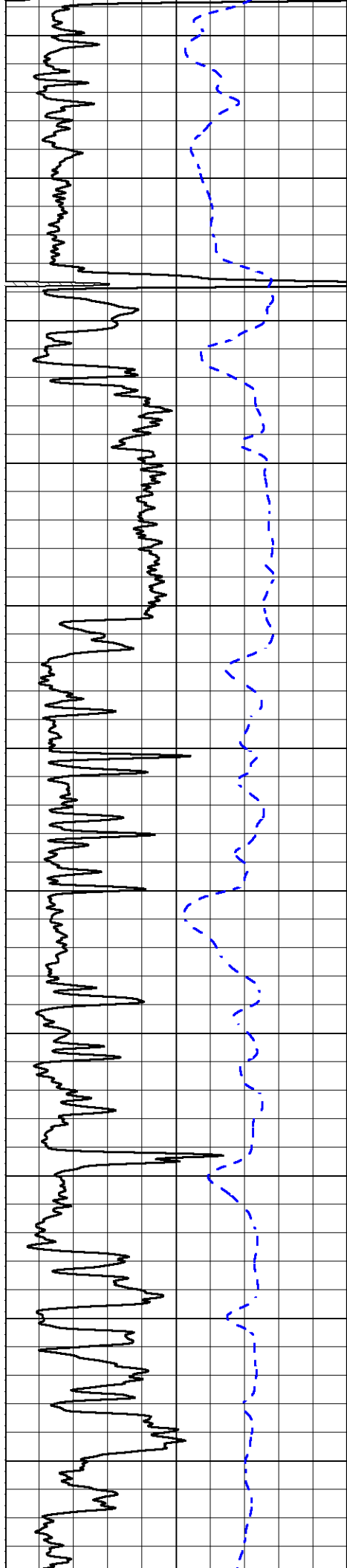


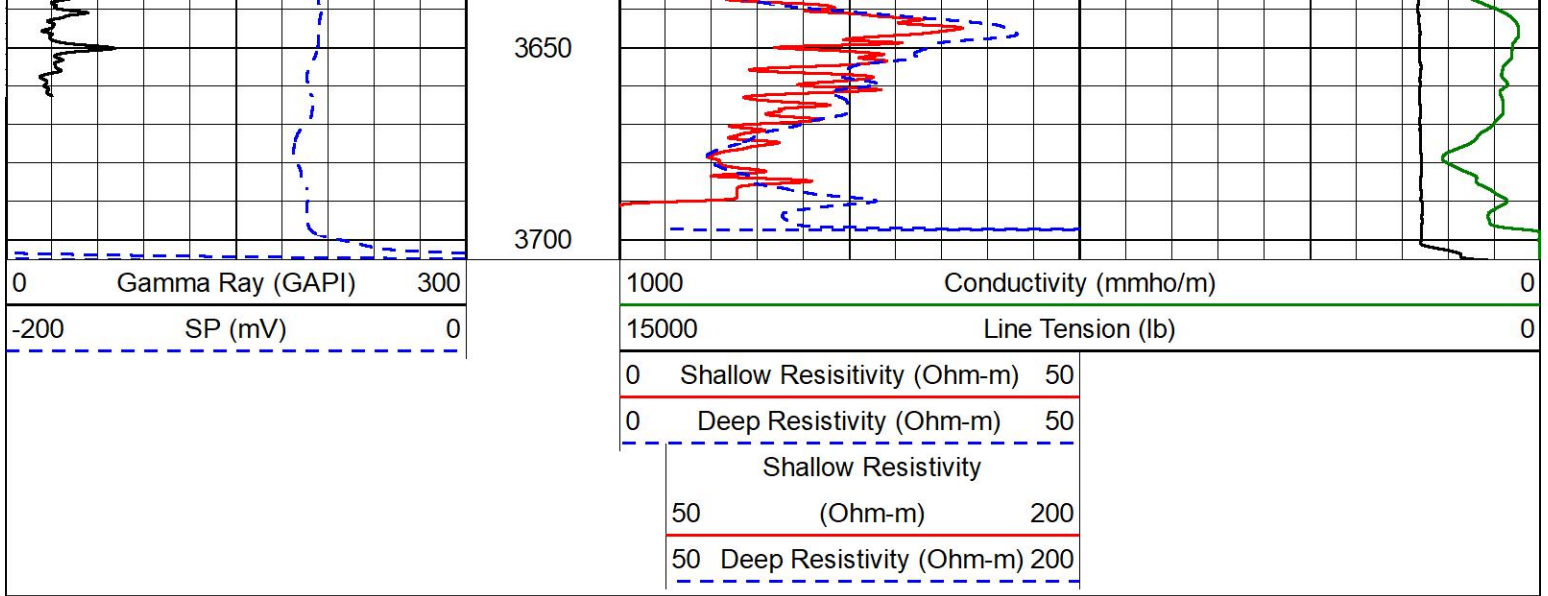










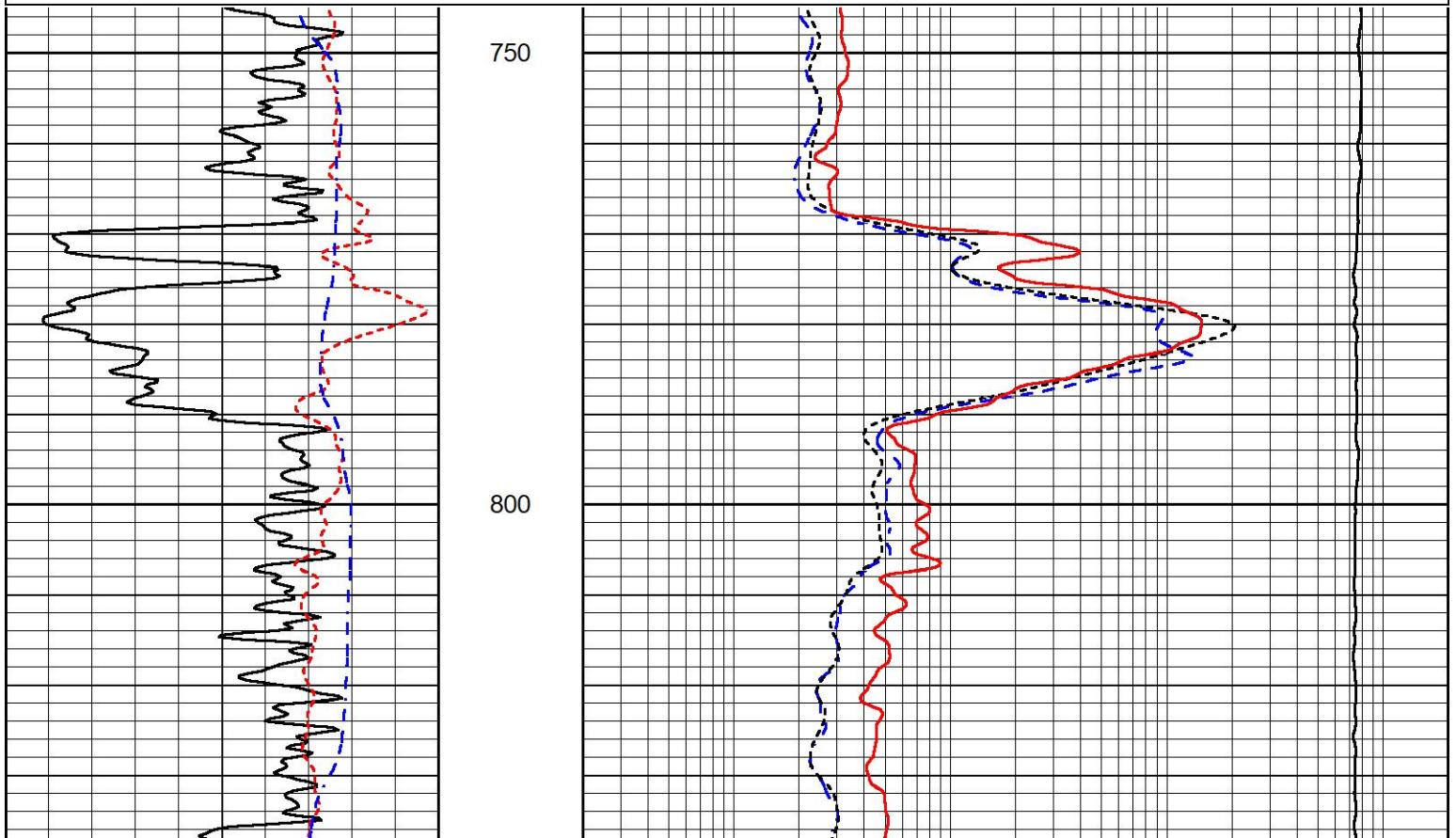
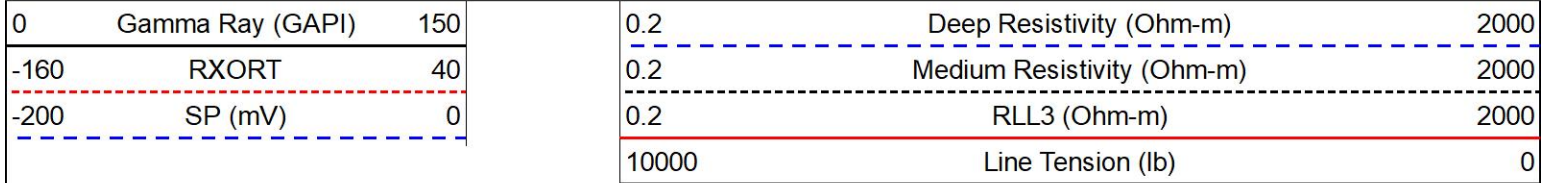


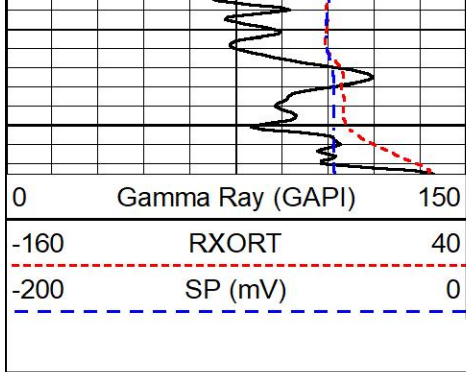
MIDWEST WIRELINE

# ANHYDRITE SECTION

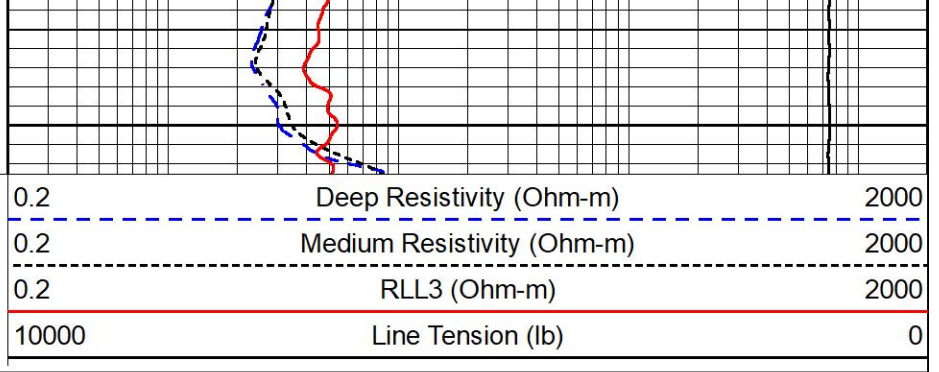
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 Charted by Depth in Feet scaled 1:240





850

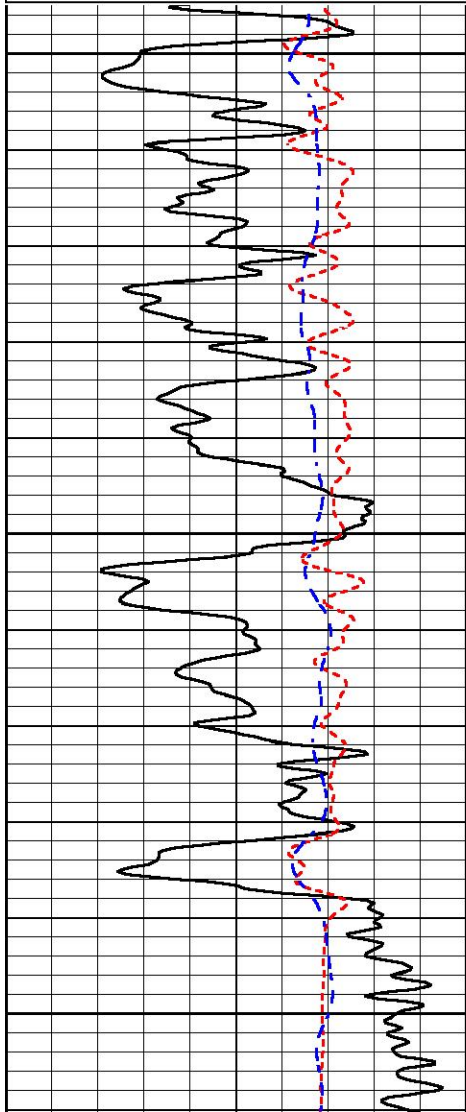
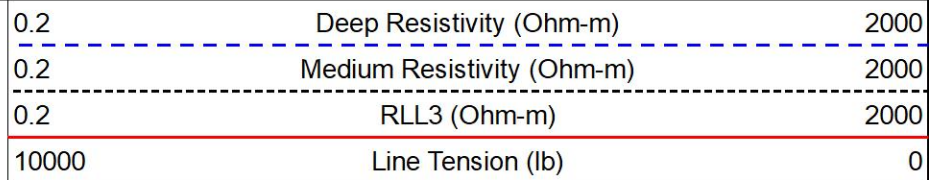
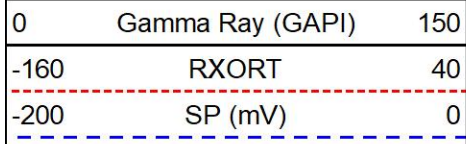


MIDWEST WIRELINE

## DETAIL SECTION

### MAIN PASS

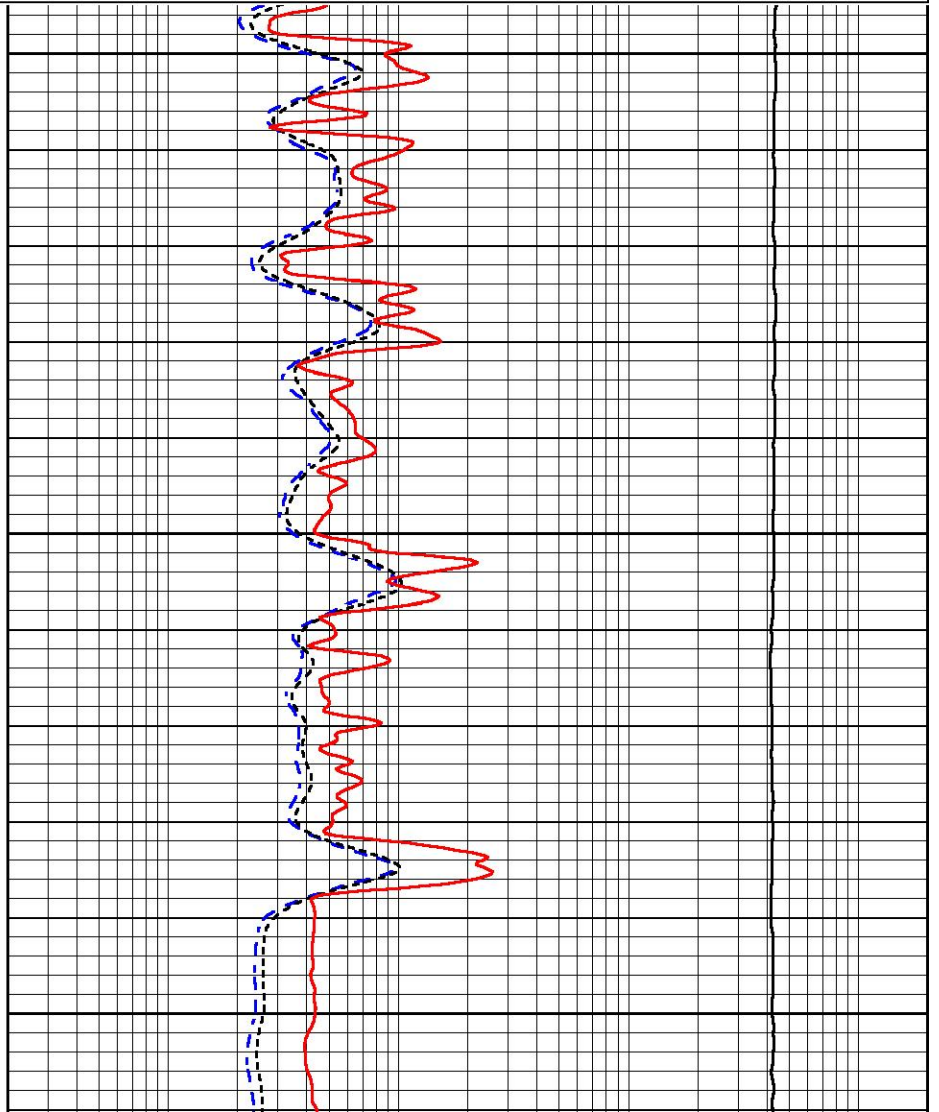
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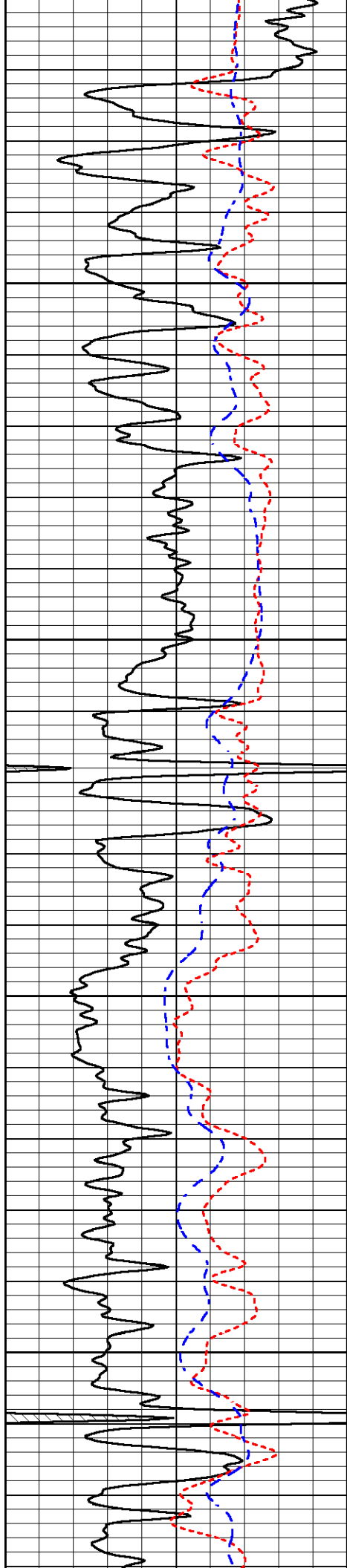


2700

2750

2800



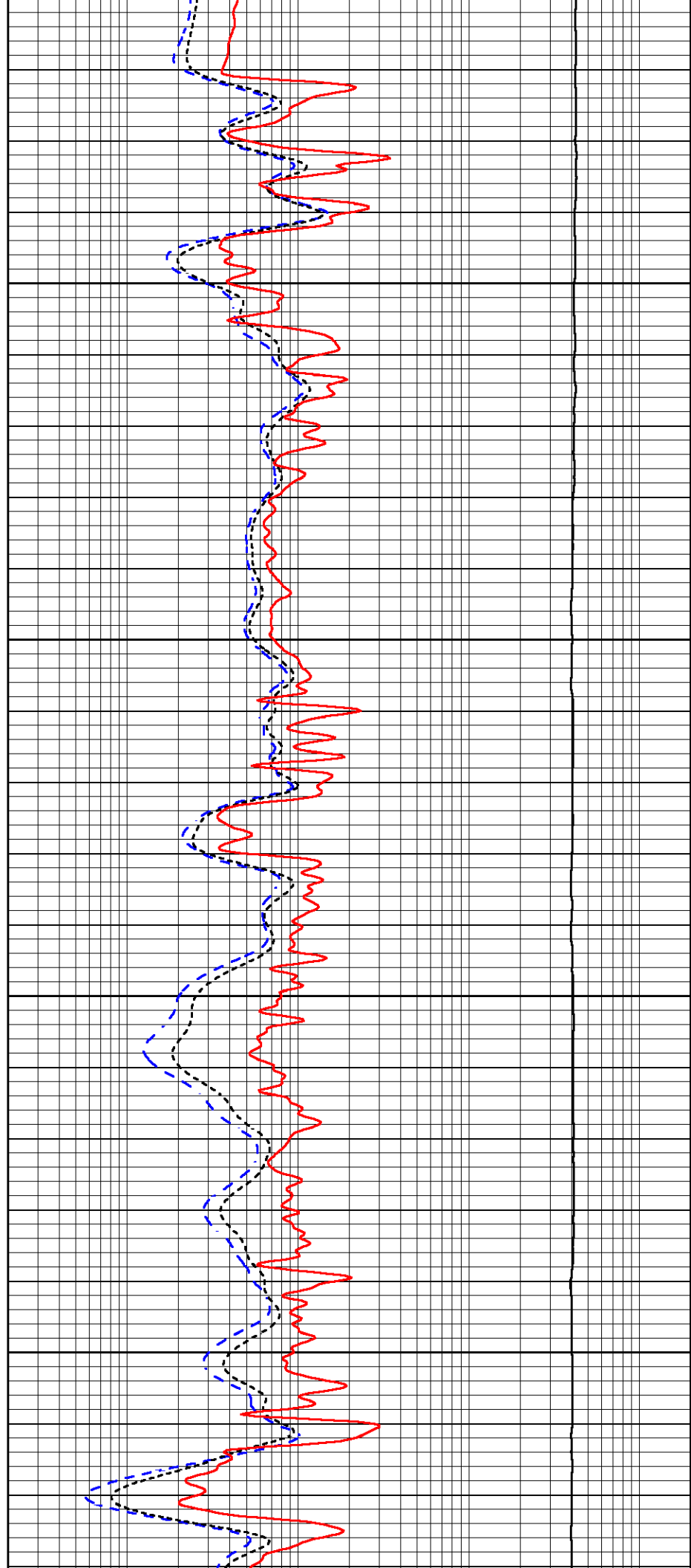


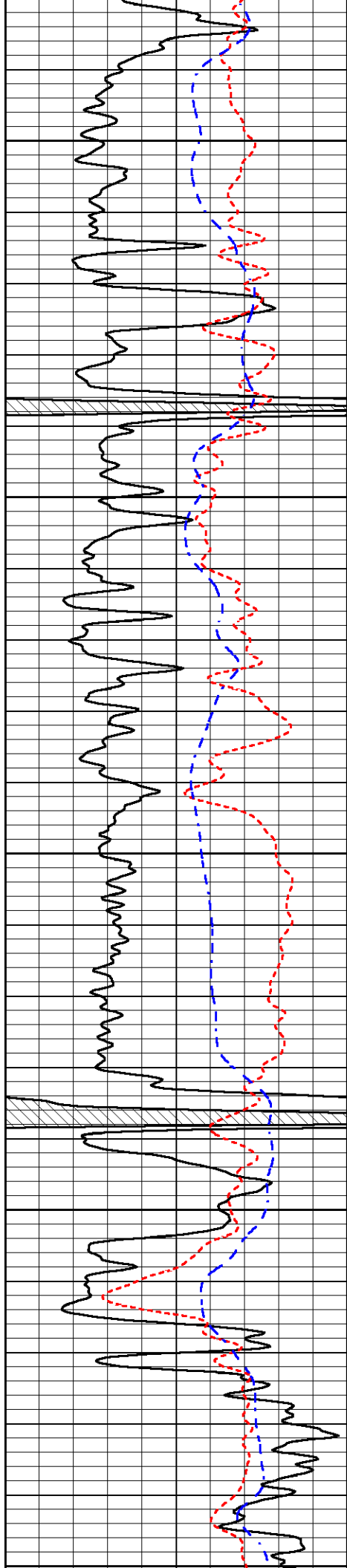
2850

2900

2950

3000





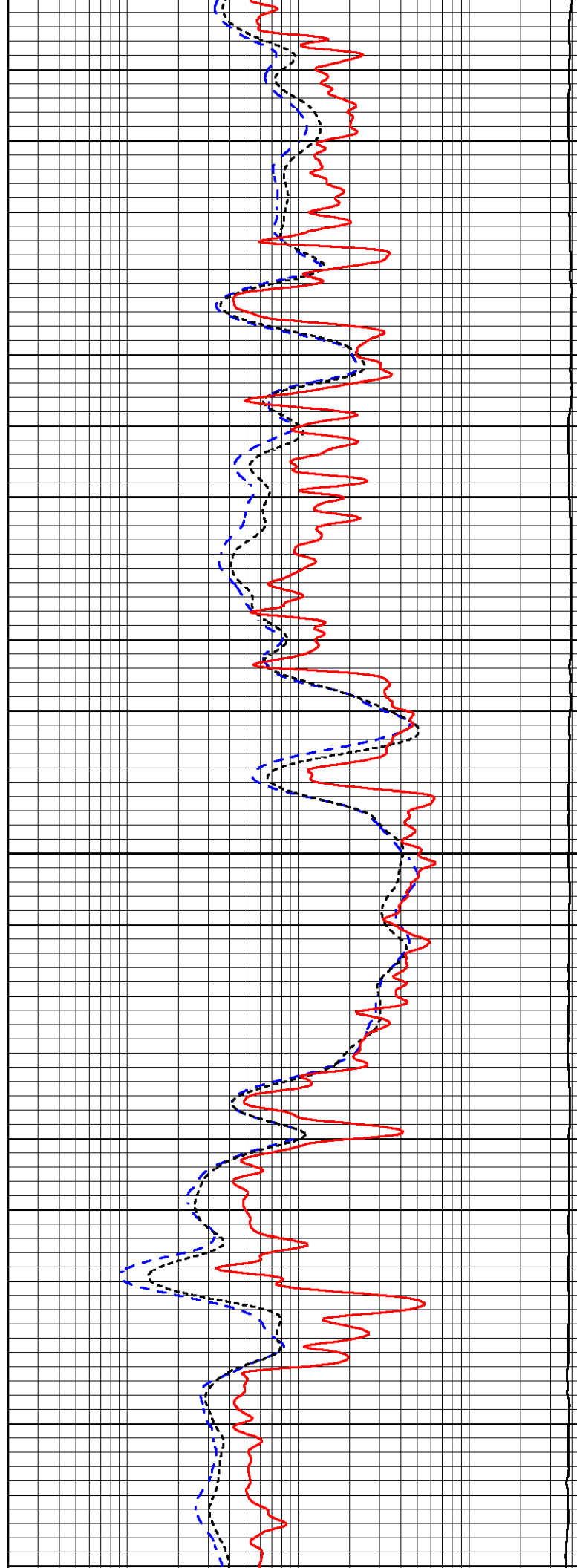
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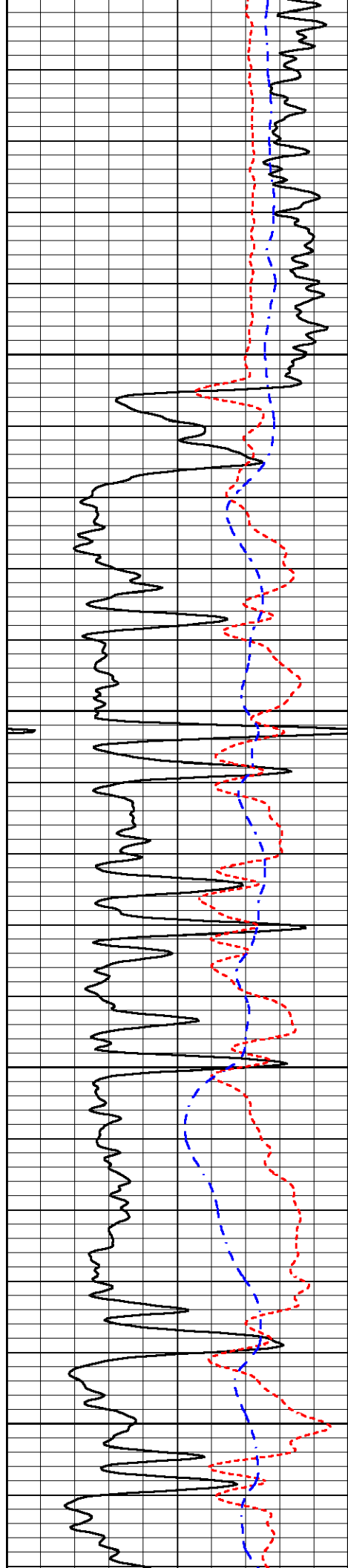
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3150

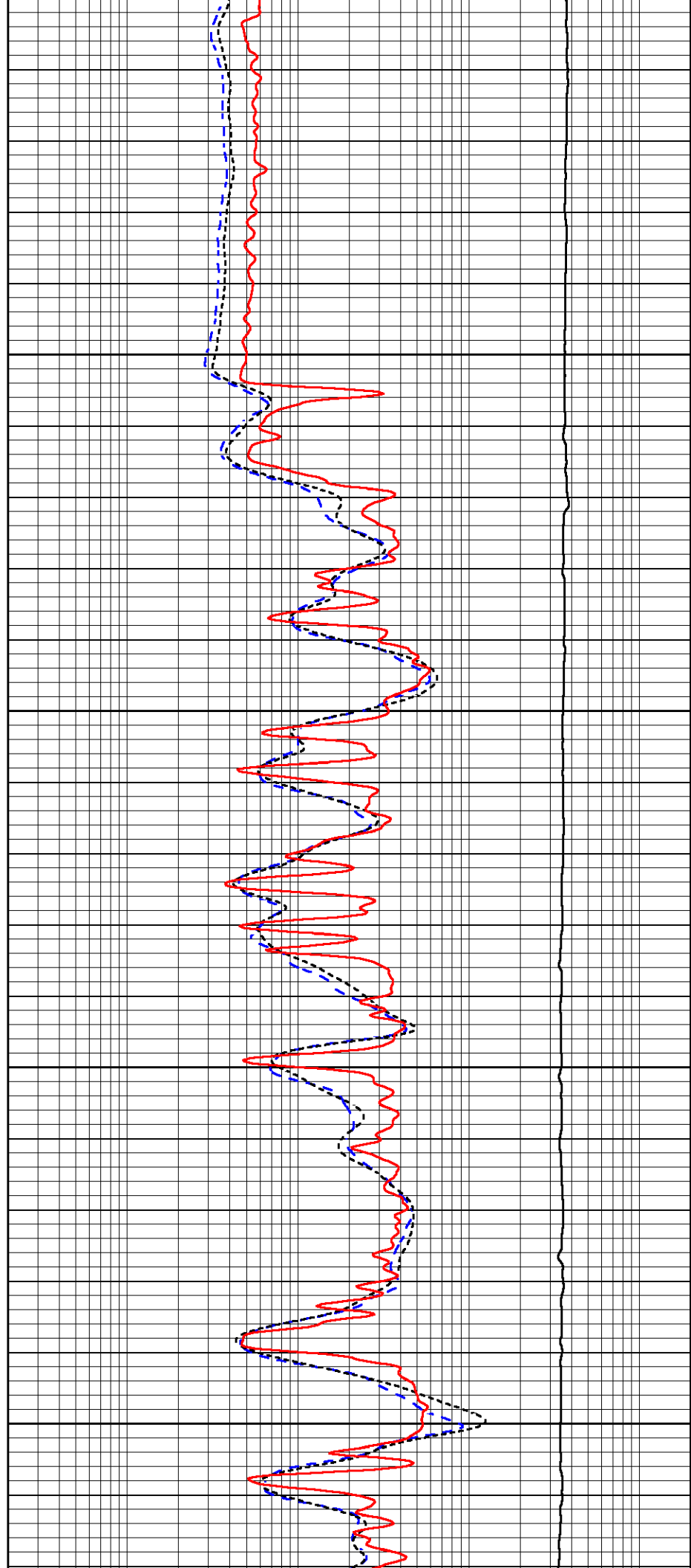
3200

3250

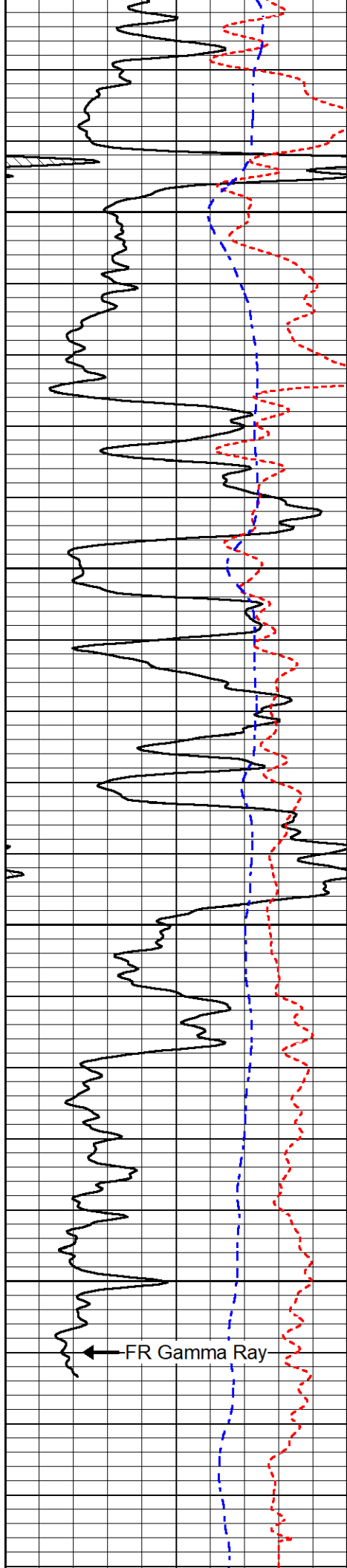




3250  
3300  
3350  
3400  
3450



3250  
3300  
3350  
3400  
3450

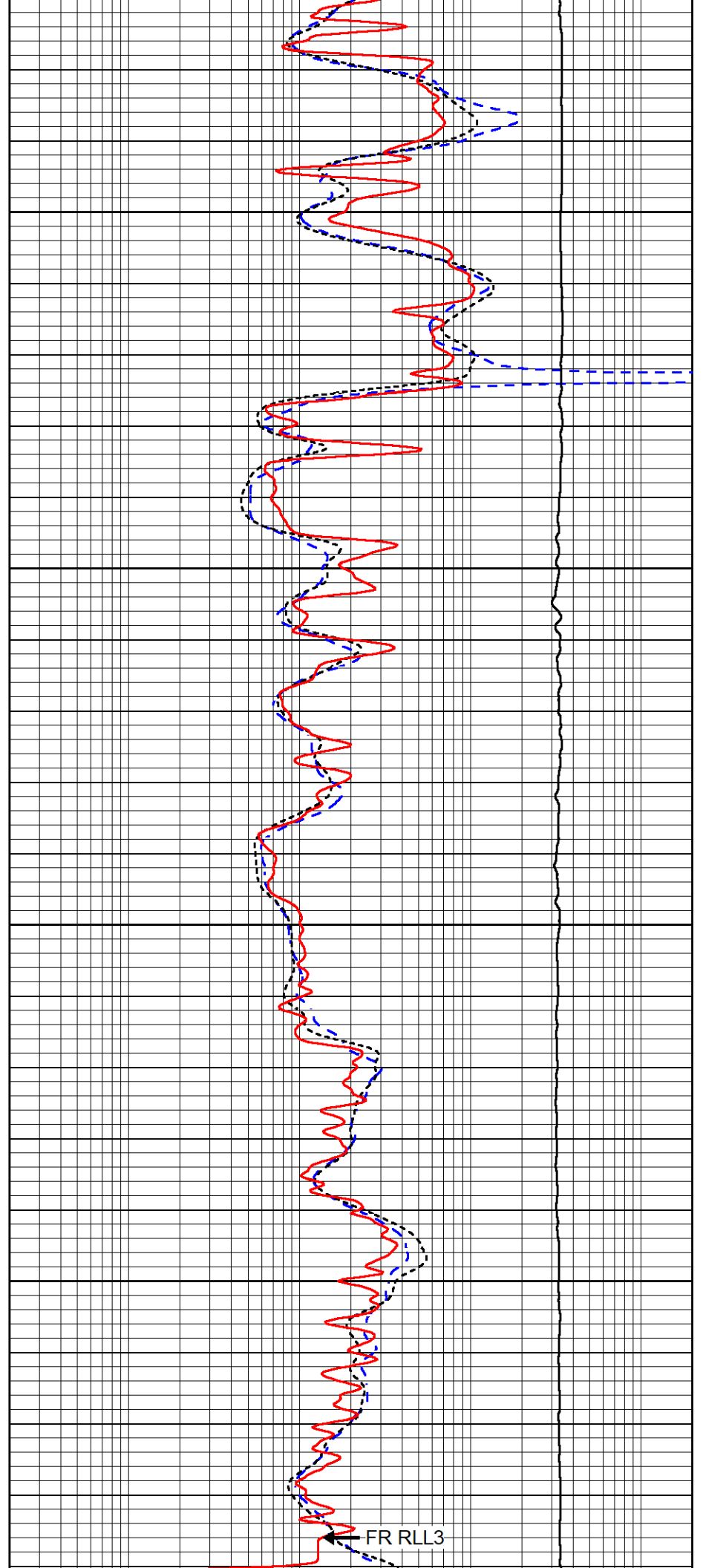


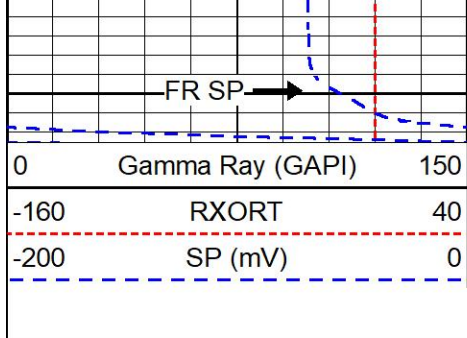
3500

3550

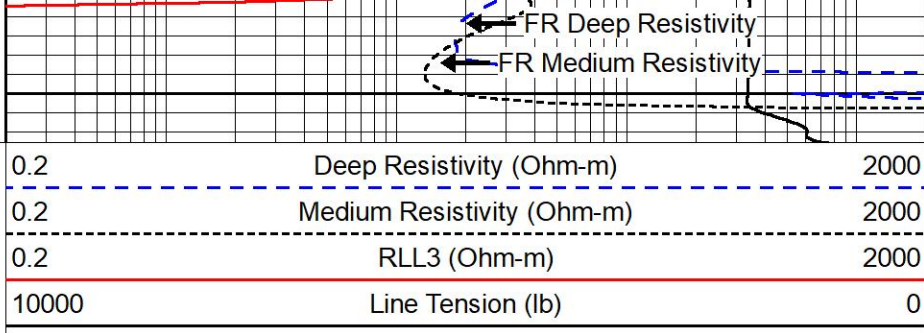
3600

3650





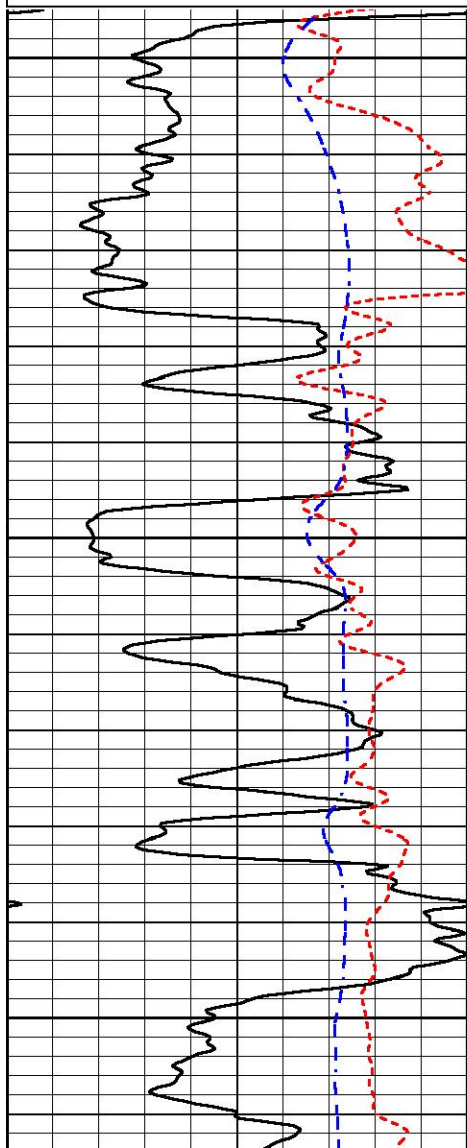
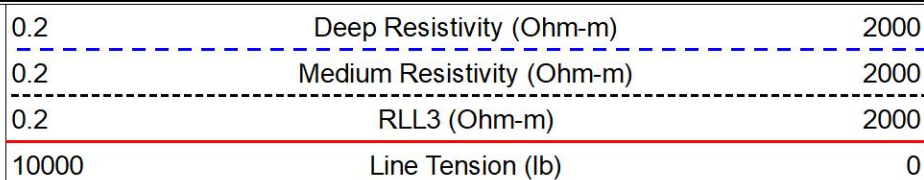
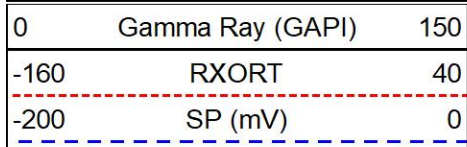
3700



# REPEAT SECTION

## REPEAT PASS

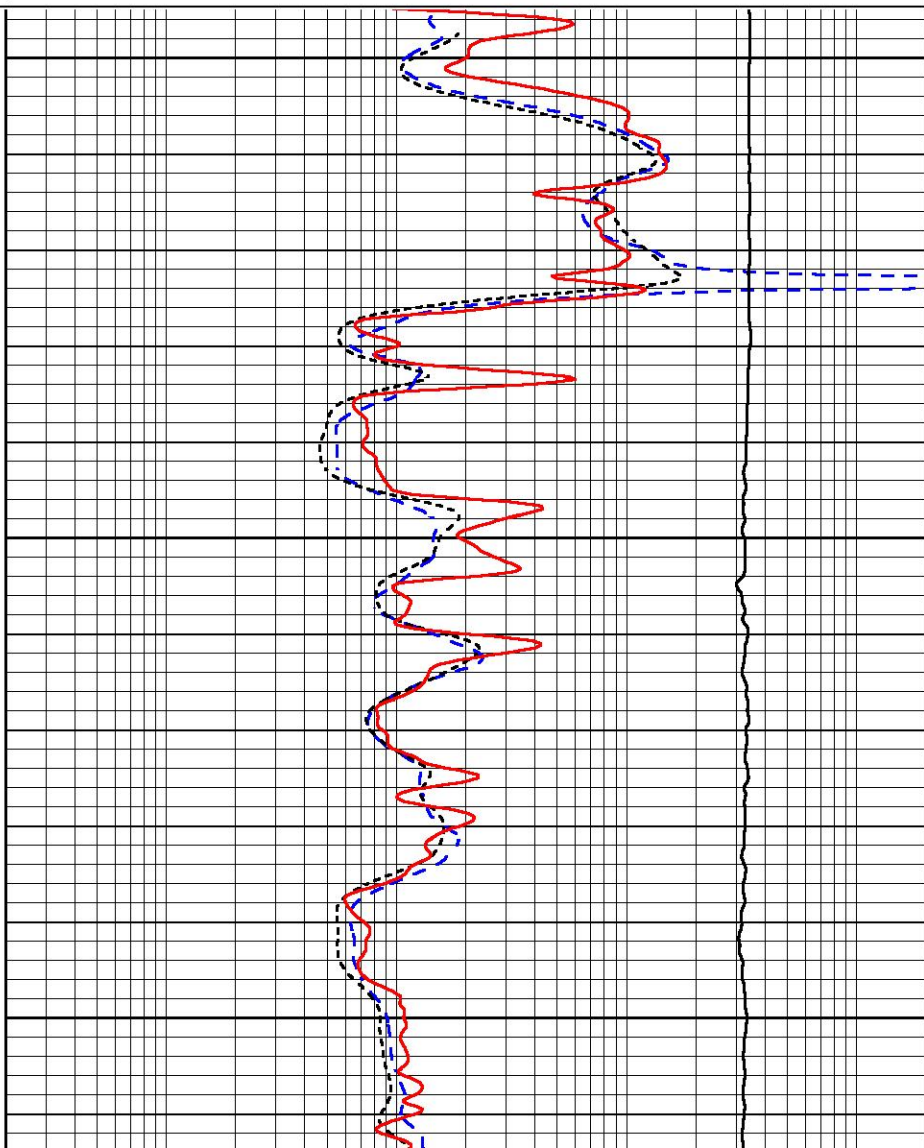
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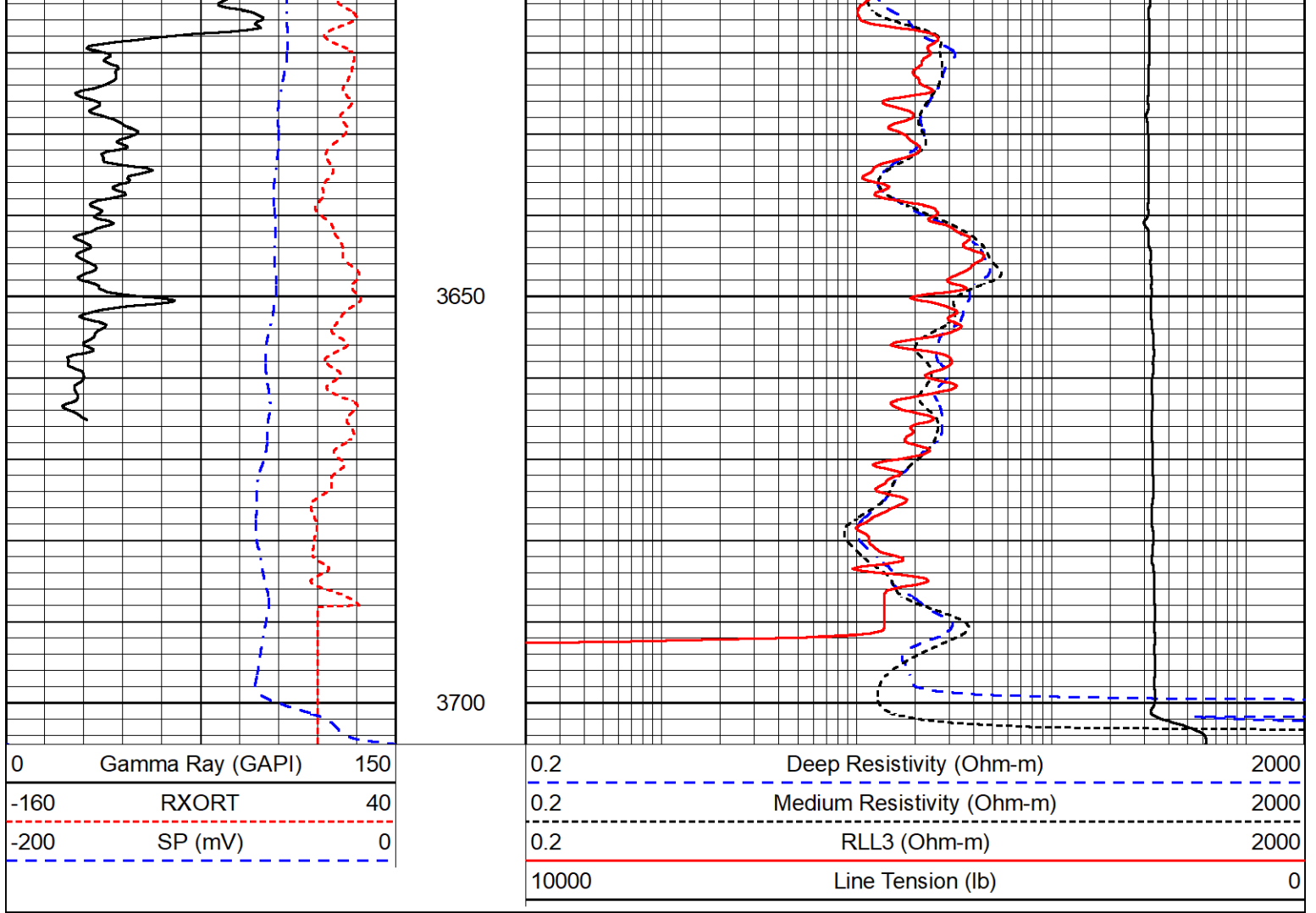


3500

3550

3600





### Calibration Report

Database File darrah)\_fanshier 1-4.db  
 Dataset Pathname stkml/pass3.1  
 Dataset Creation Mon Oct 10 14:36:48 2022

### Dual Induction Calibration Report

Serial-Model: 504 HT-M&W  
 Surface Cal Performed: Mon Aug 1 06:26:43 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.680	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-46.000

### Microlog Calibration Report

Serial-Model: 401-PSI STKBL ML  
 Performed: Mon Oct 10 13:25:02 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal	Ohm-m	m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	24000.0000	-1.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	27000.0000	-1.0000
Caliper	1.0049	1.0846	5.5000	20.0000	in	135.0000	-131.2500

### Compensated Density Calibration Report

Serial-Model: 303-03-M&W  
 Source #: 21170B  
 Master Calibration Performed: Mon Oct 10 13:32:26 2022

#### Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.647	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.502		
	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 Dec 3 09:16:24 2021

#### 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** Darrah Oil Company, LLC  
**Well** Fanshier #1-4  
**Field** Shaeffer-Rothgarn  
**County** Stafford  
**State** Kansas