



# DUAL INDUCTION LOG

Company VAL ENERGY, INC.  
 Well GMK KRISS UNIT #1-18  
 Field UNKNOWN  
 County THOMAS  
 State KANSAS

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 Well GMK KRISS UNIT #1-18  
 Field UNKNOWN  
 County THOMAS State KANSAS

Location: API #: 15-193-20990-00-00  
 2618' FNL & 1660' FEL  
 SEC 8 TWP 8S RGE 35W  
 Permanent Datum GROUND LEVEL Elevation 3329'  
 Log Measured From KELLY BUSHING  
 Drilling Measured From KELLY BUSHING  
 Other Services  
 CNL/CDL  
 MEL/BHCS  
 Elevation  
 K.B. 3334'  
 D.F. N/A  
 G.L. 3329'

Date	3/27/2017
Run Number	ONE
Depth Driller	4900'
Depth Logger	4900'
Bottom Logged Interval	4899'
Top Log Interval	250'
Casing Driller	8.625" @ 260'
Casing Logger	260'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	6000
Density / Viscosity	9.3 57
pH / Fluid Loss	11.0 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.40 @ 54
Rmt @ Meas. Temp	0.30 @ 54
Rmc @ Meas. Temp	0.54 @ 54
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.17 @ 125
Operating Rig Time	5 HOURS
Max Rec. Temp. F	125
Equipment Number	91
Location	COLBY
Recorded By	D. SCHMIDT
Witnessed By	TIM PRIEST

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, 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.

LEVANT,  
 WEST ON OLD 24 TO 9 RD, 1/2 NORTH,  
 WEST INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES  
[www.pioneerenergy.com](http://www.pioneerenergy.com) 785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: TIM PRIEST
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	287	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	40	0	5.5	0	4900	125	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (90-1031)	8.50	4.00	250.00
RLL3F RLL3	15.80 15.80		DIL-M&W (PSI 13)	18.50	3.50	220.00
CILD	8.00					

CILM 4.70

SP 0.20

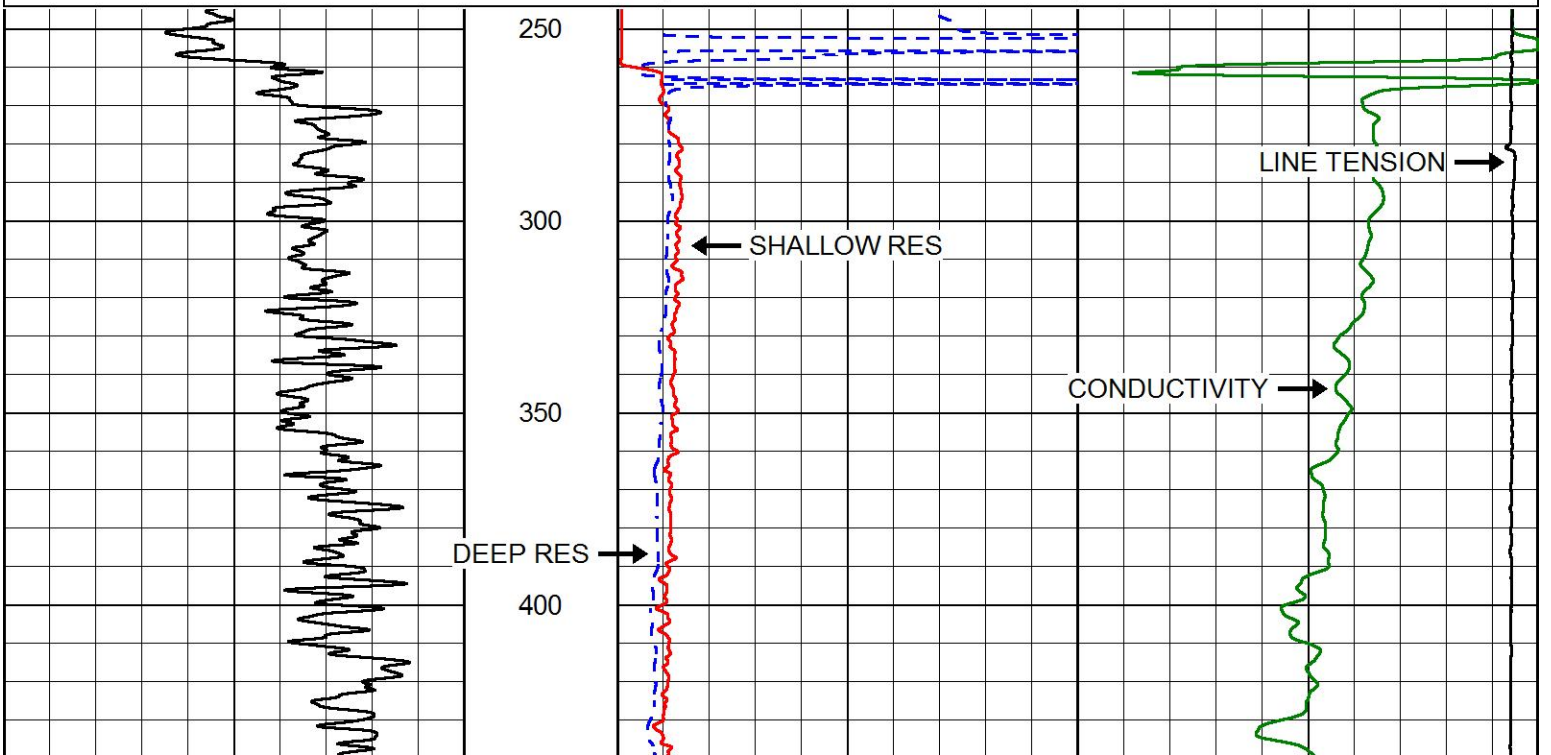
Dataset: val\_gmk kriss\_1-18.db: field/well/STACK/pass3.6  
 Total length: 35.50 ft  
 Total weight: 620.00 lb  
 O.D.: 4.00 in

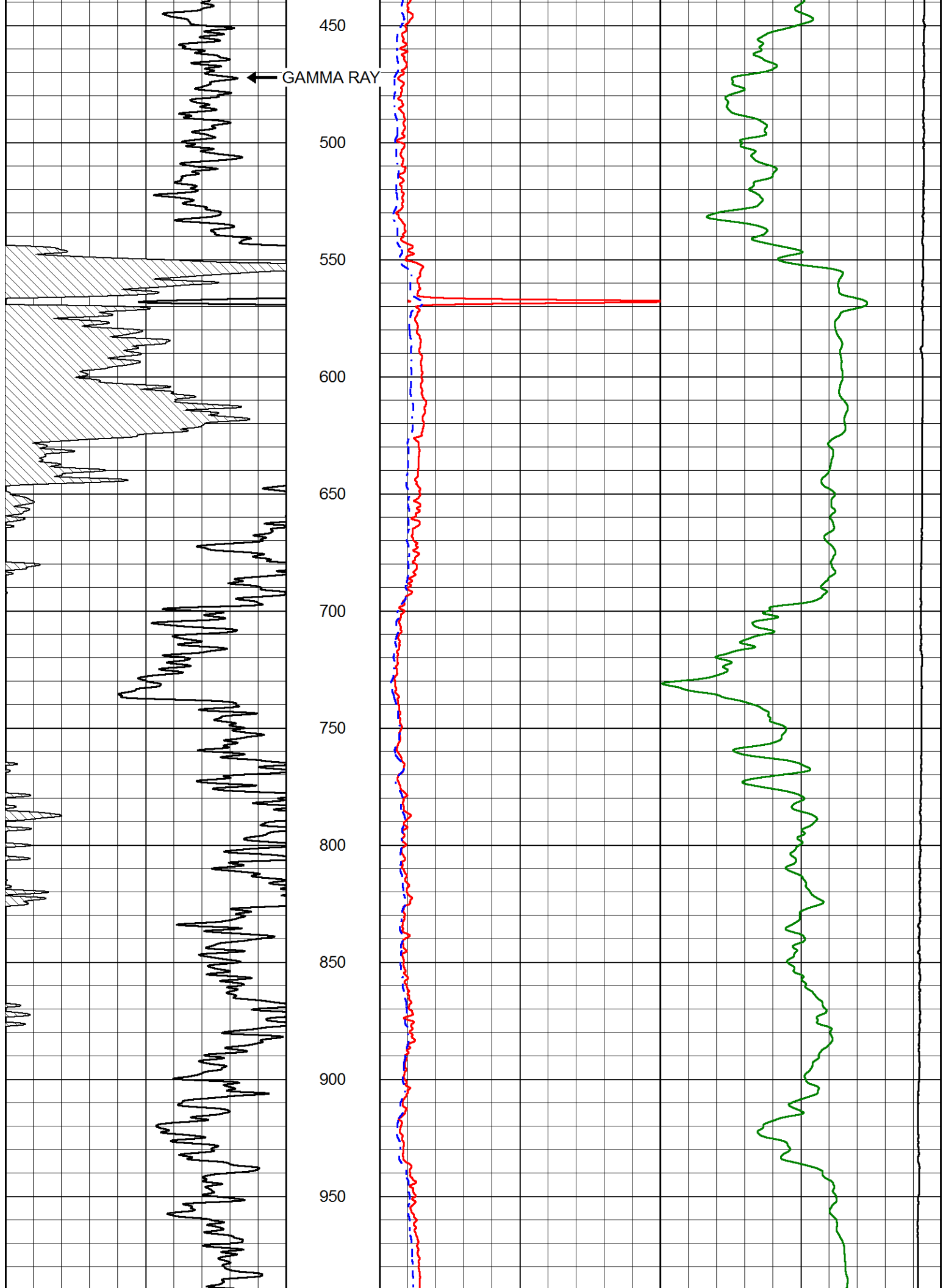


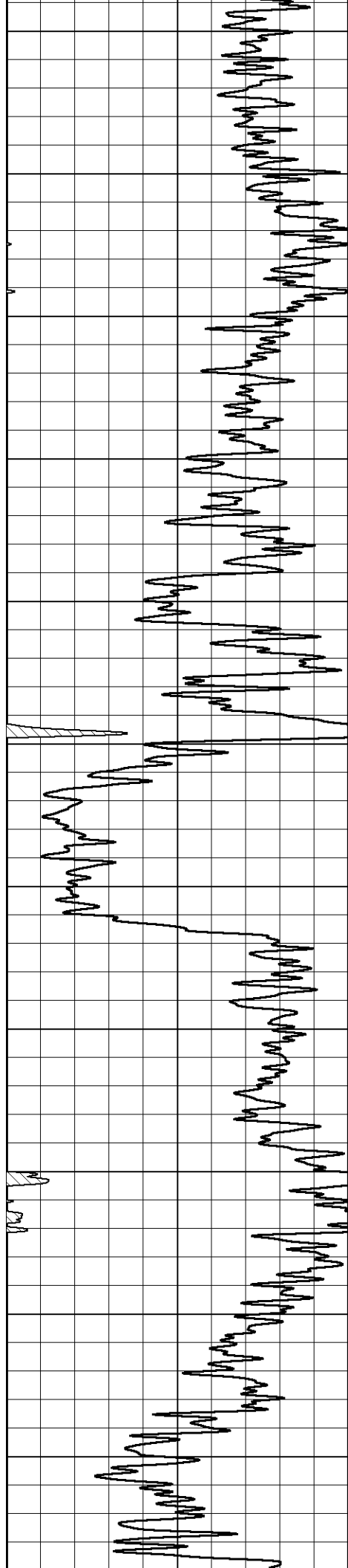
# MAIN PASS

Database File val\_gmk kriss\_1-18.db  
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 Presentation Format dil2in  
 Dataset Creation Mon Mar 27 11:21:43 2017  
 Charted by Depth in Feet scaled 1:600

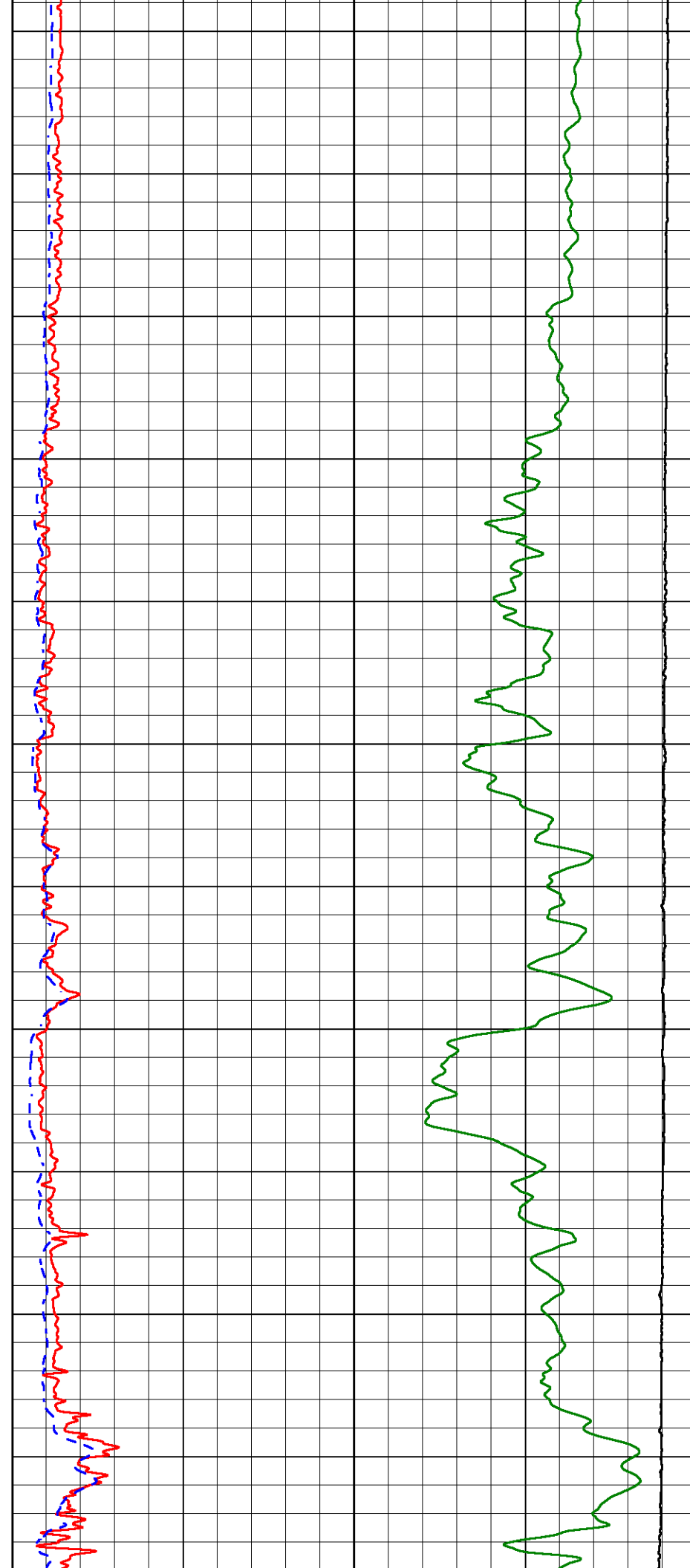
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			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

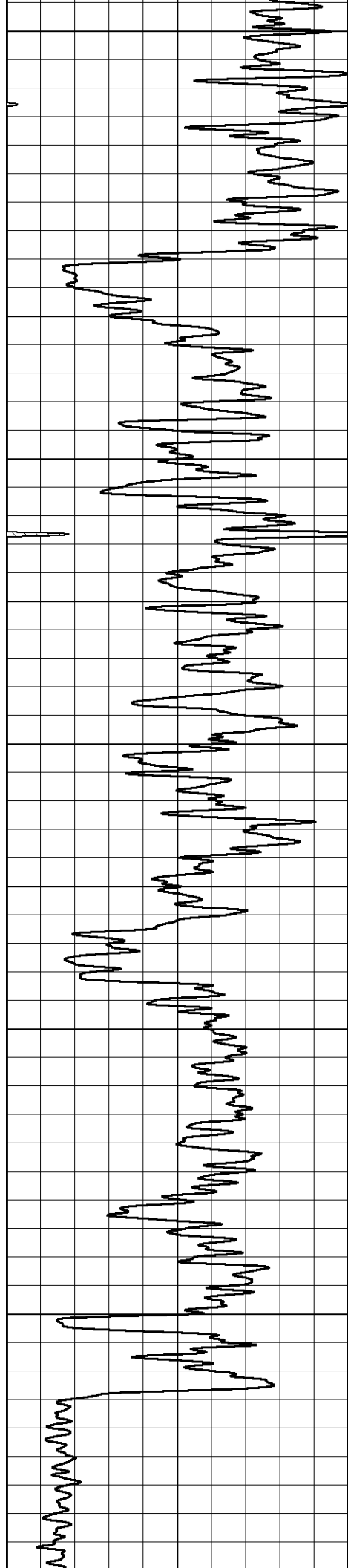




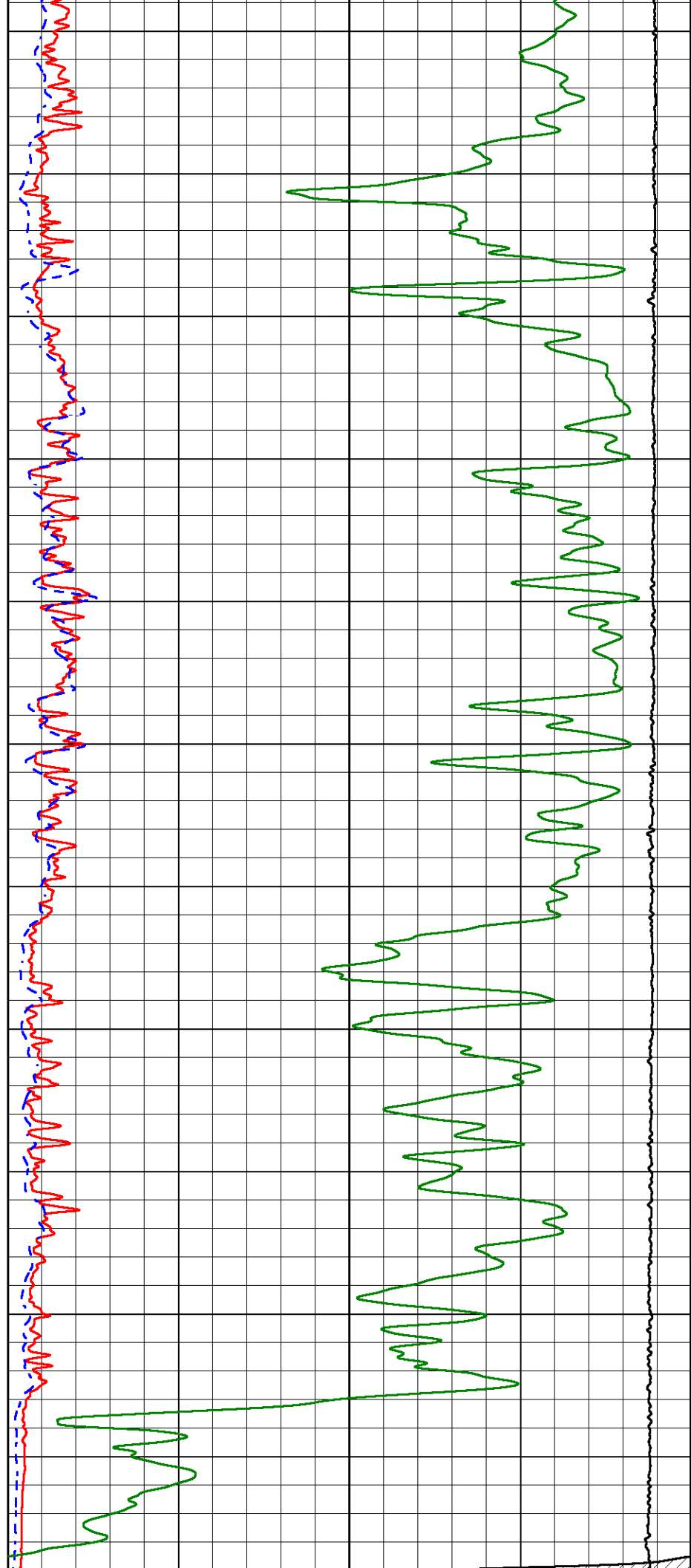


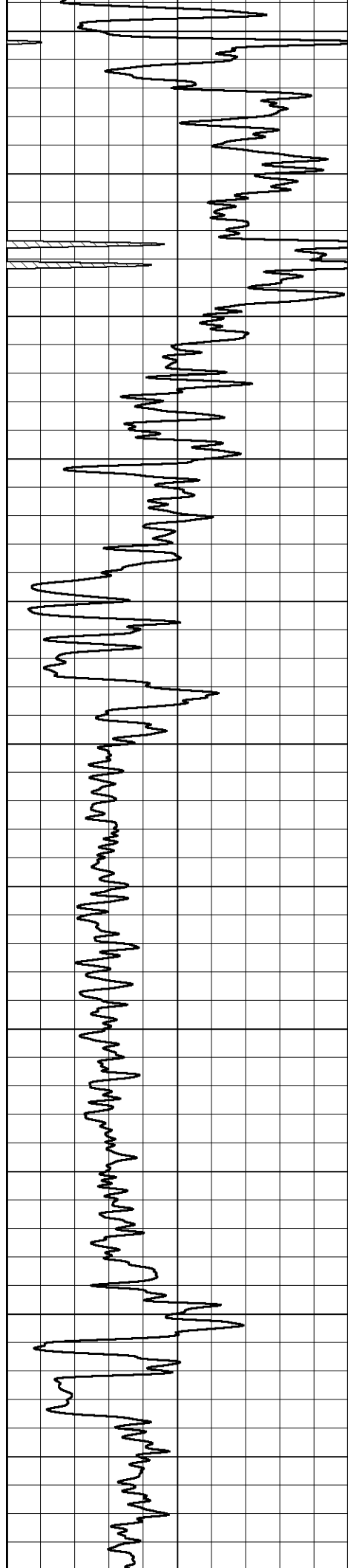
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1150  
1200  
1250  
1300  
1350  
1400  
1450  
1500



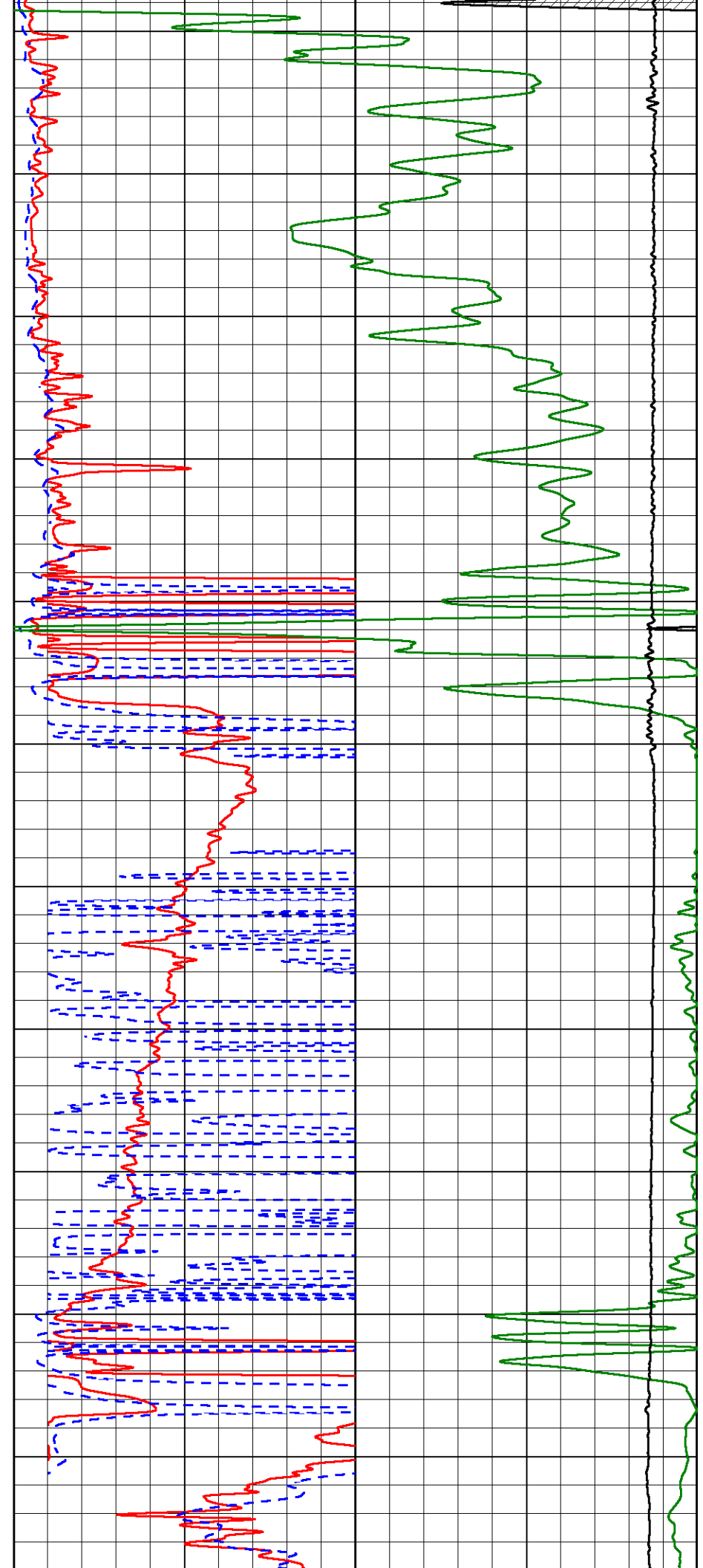


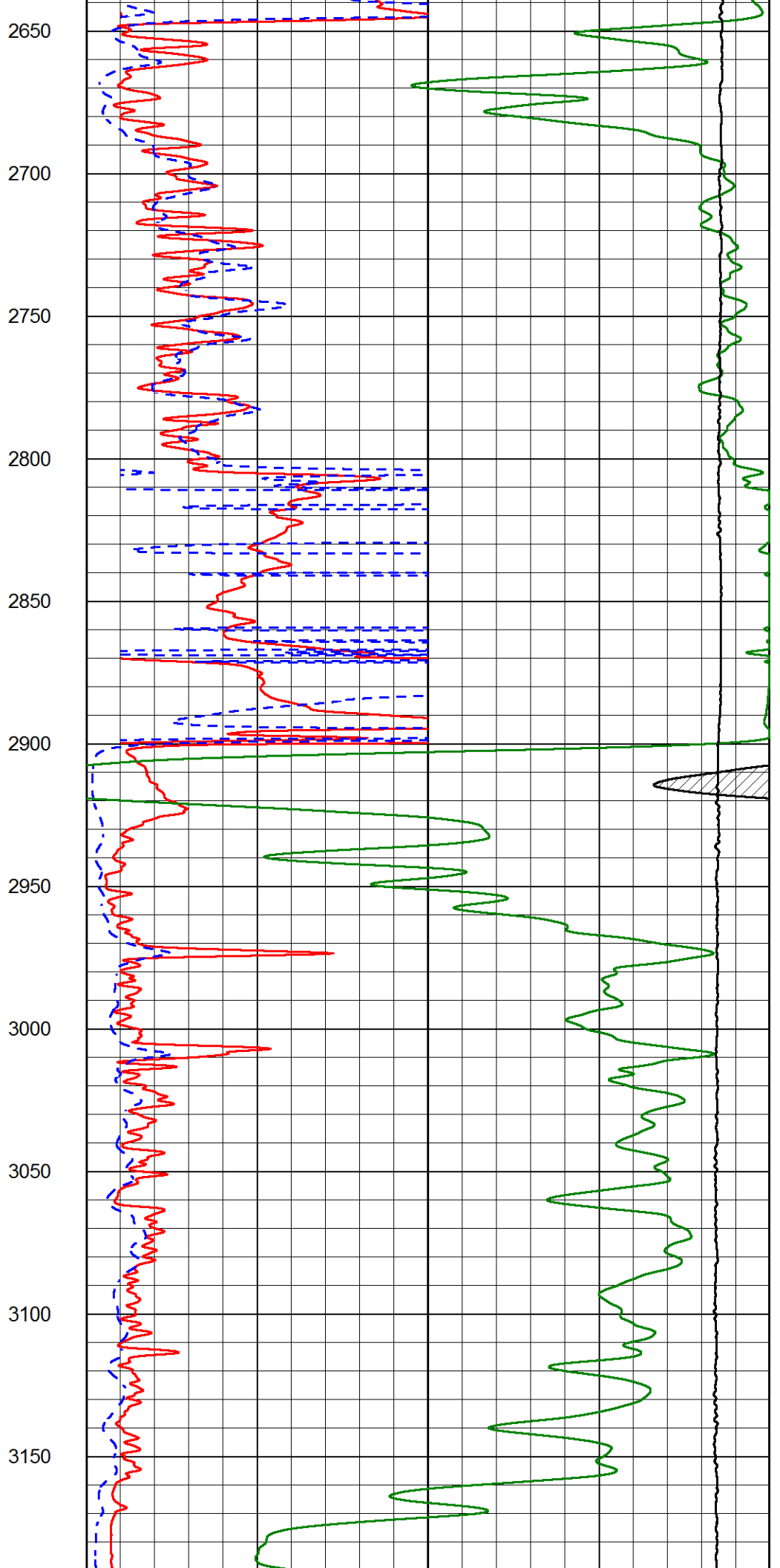
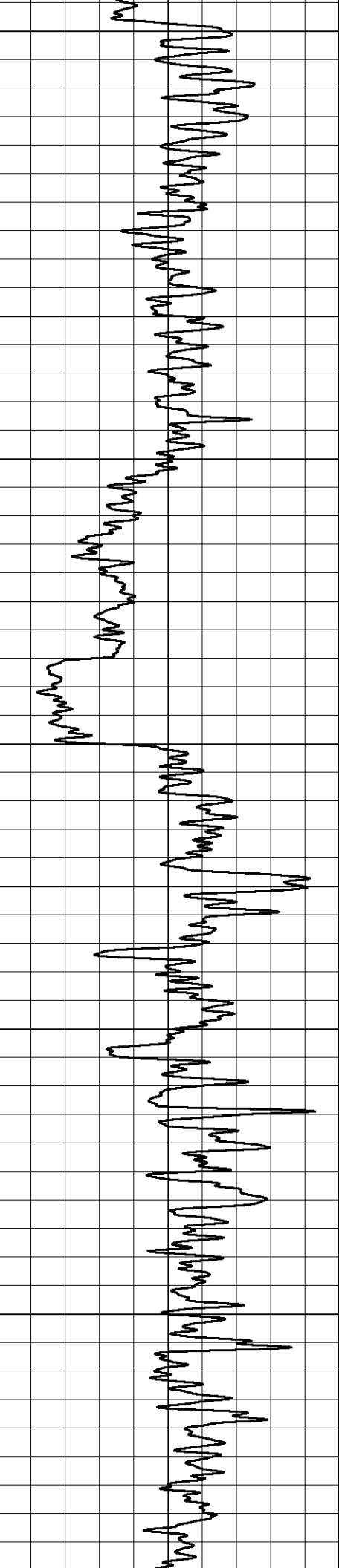
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1700  
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1850  
1900  
1950  
2000  
2050

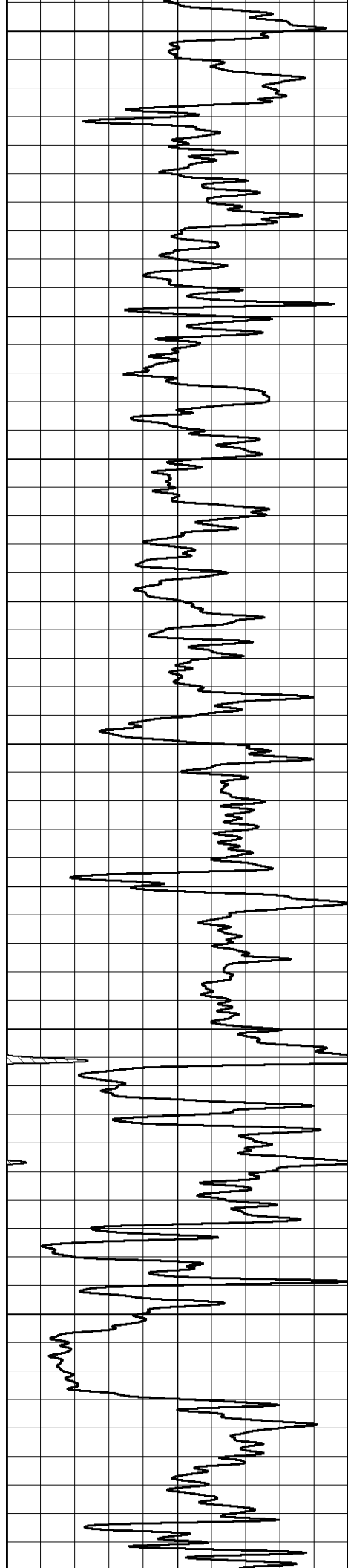




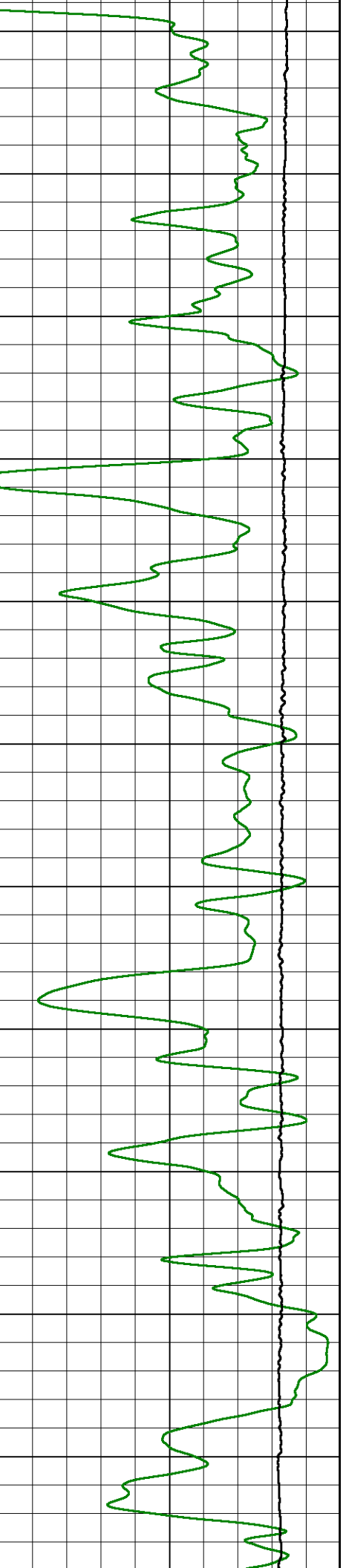
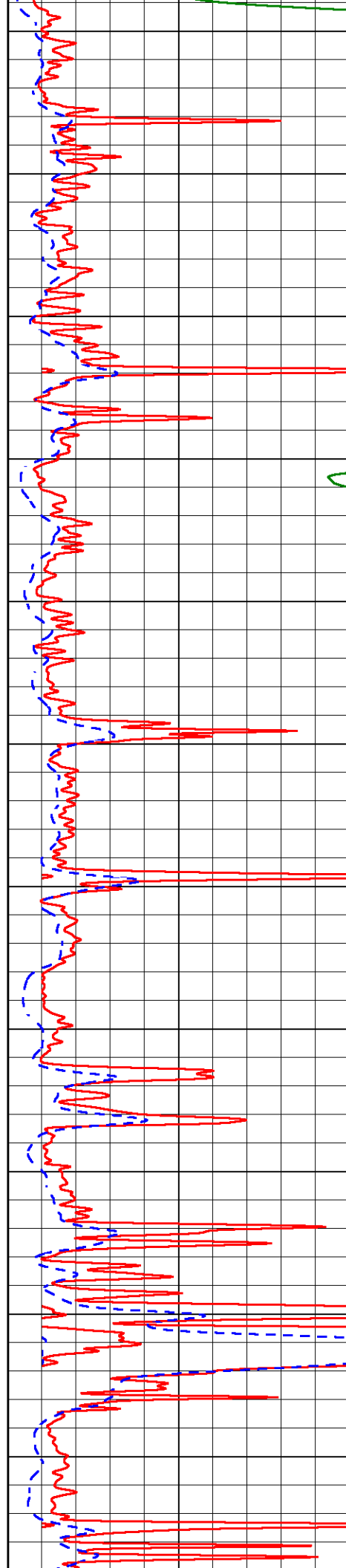
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2400  
2450  
2500  
2550  
2600

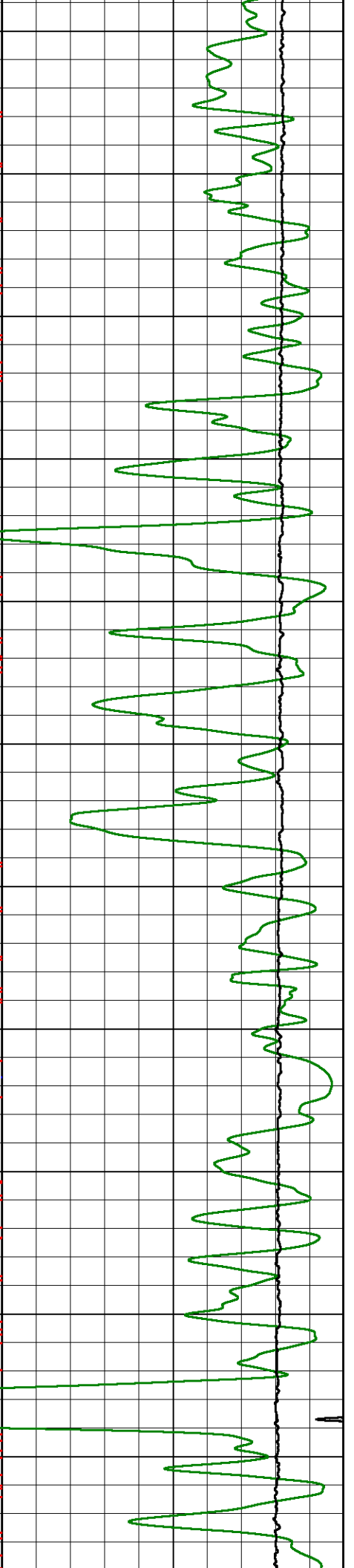
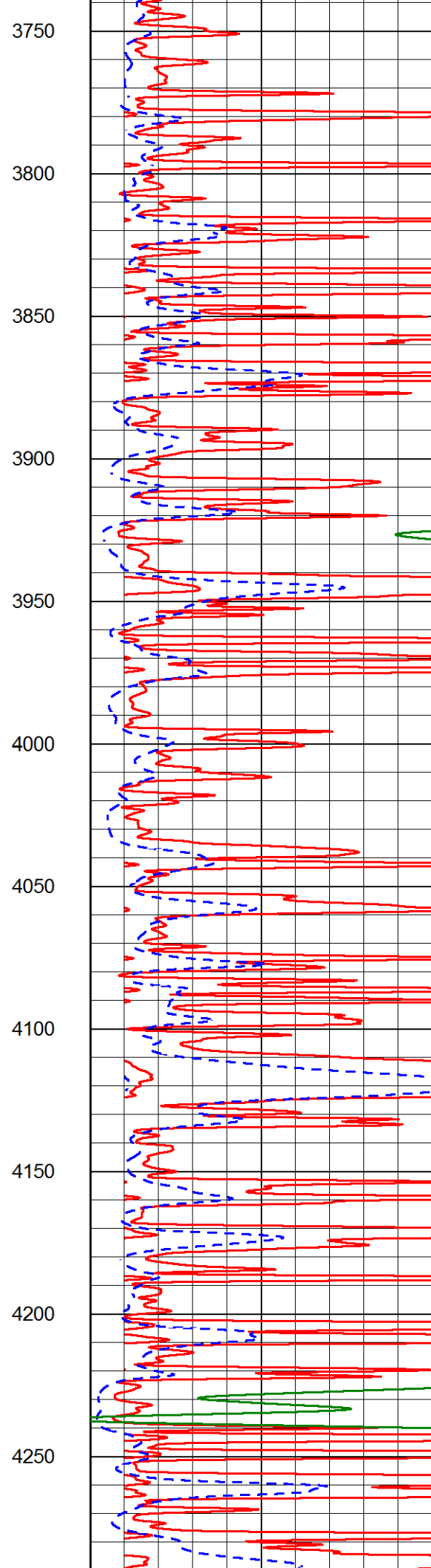
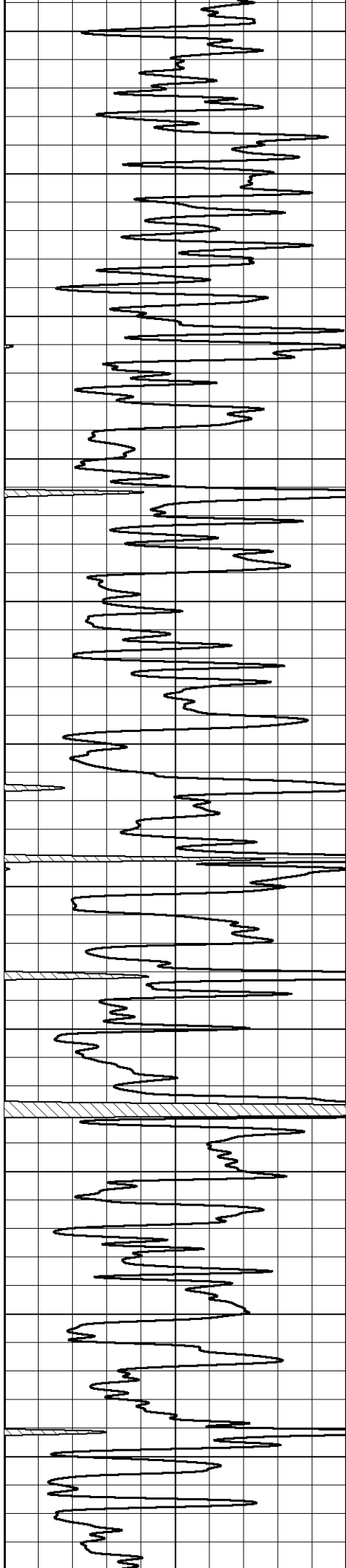


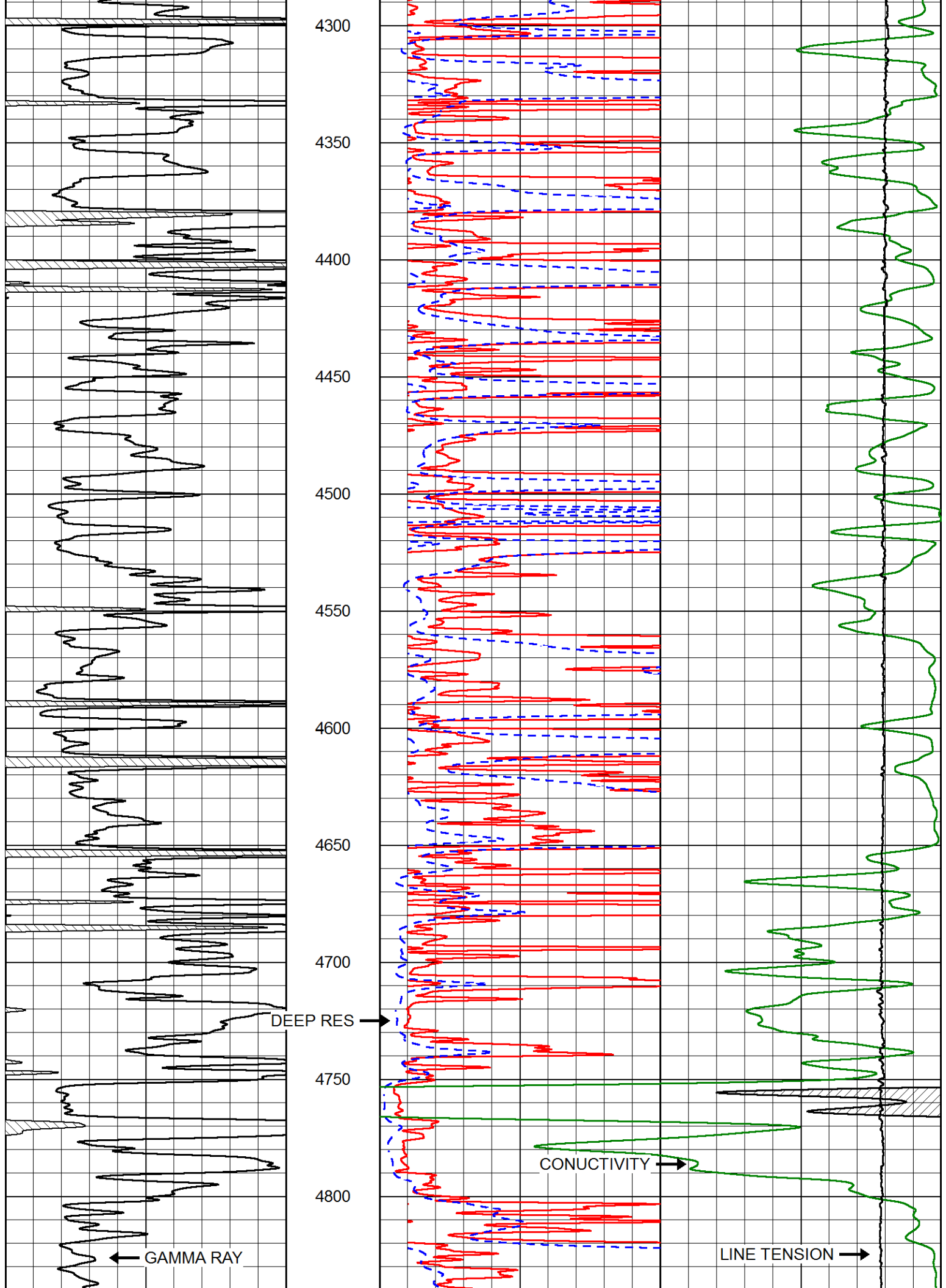


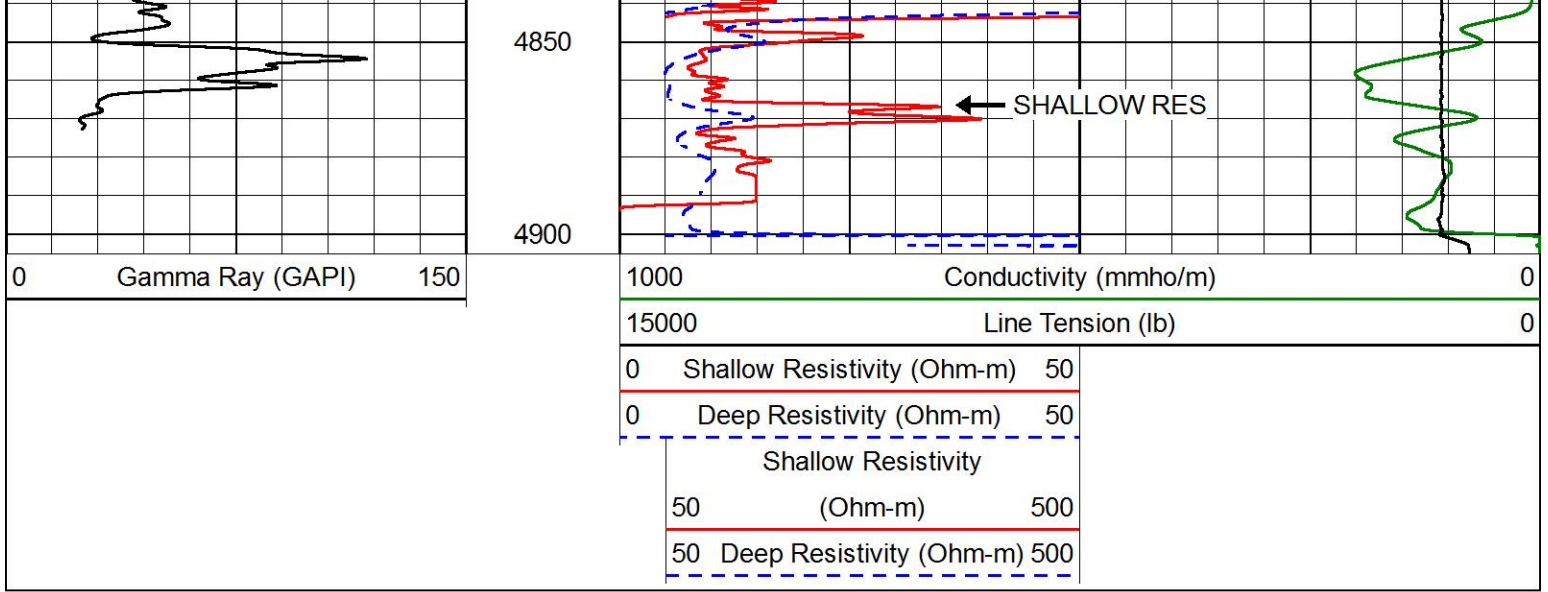


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3250  
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3500  
3550  
3600  
3650  
3700



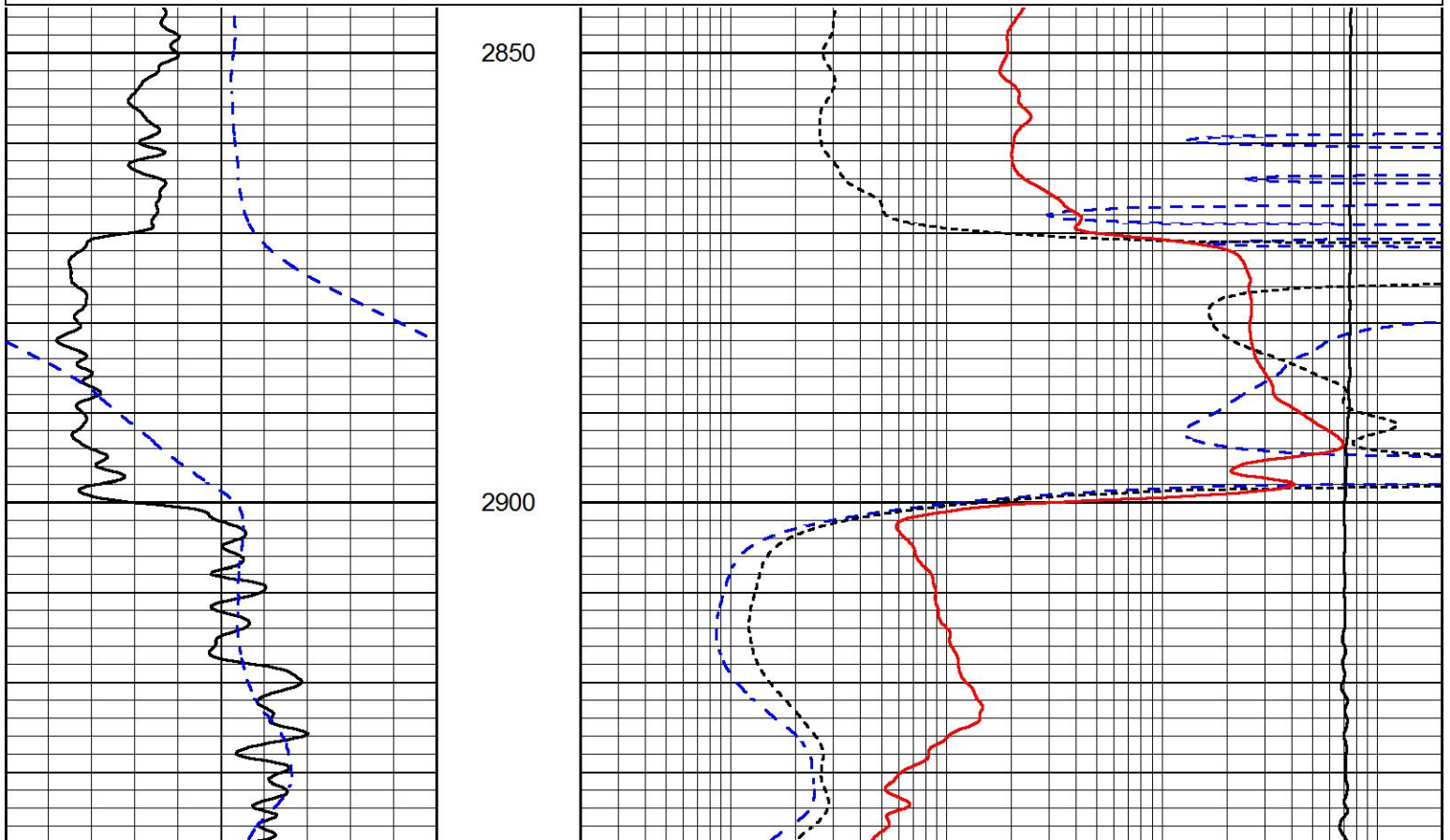
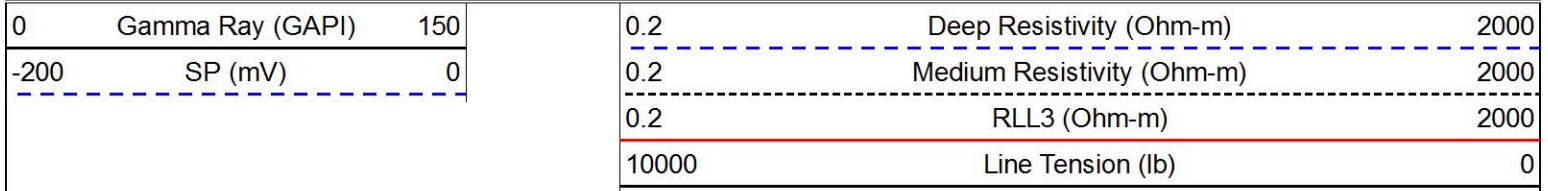


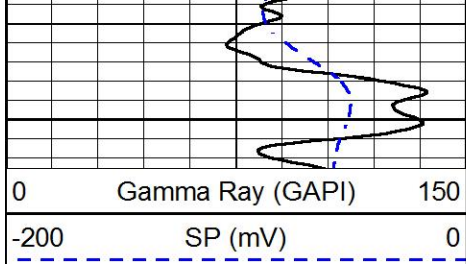




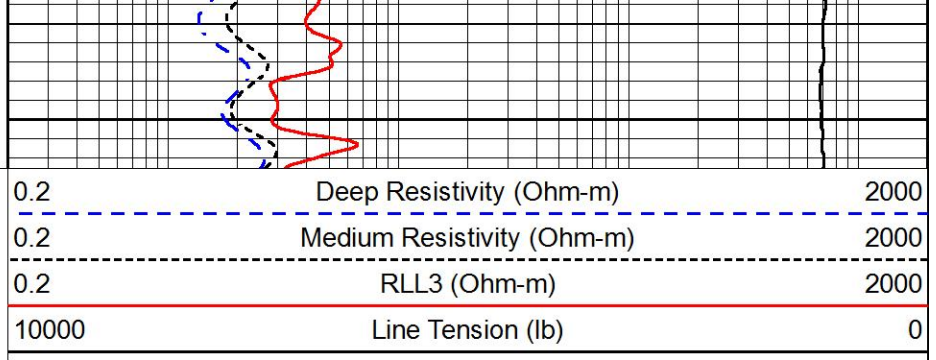
# MAIN PASS

Database File val\_gmk kriss\_1-18.db  
 Dataset Pathname STACK/pass4.1  
 Presentation Format dil  
 Dataset Creation Mon Mar 27 11:21:43 2017  
 Charted by Depth in Feet scaled 1:240





2950



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

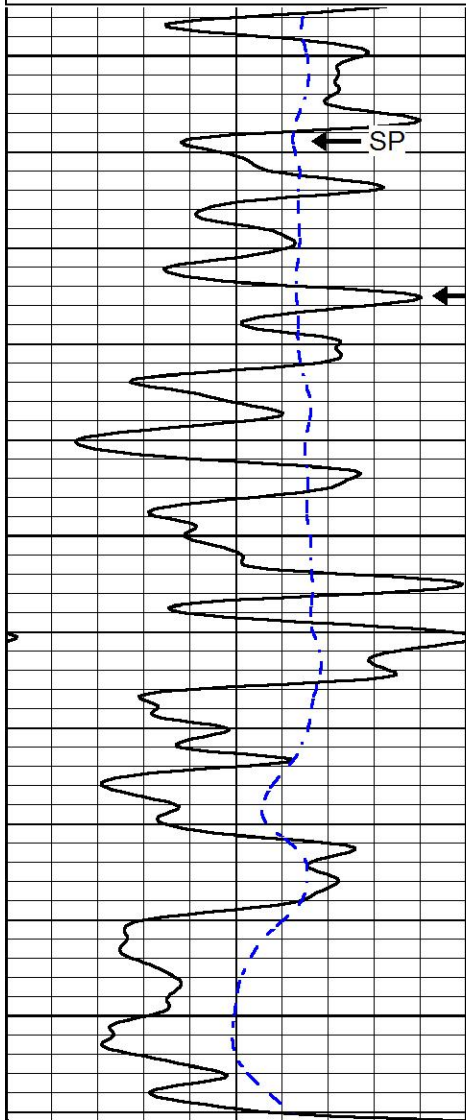


# MAIN PASS

Database File val\_gmk kriss\_1-18.db  
Dataset Pathname STACK/pass3.1  
Presentation Format dil  
Dataset Creation Mon Mar 27 10:47:33 2017  
Charted by Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150  
-200 SP (mV) 0

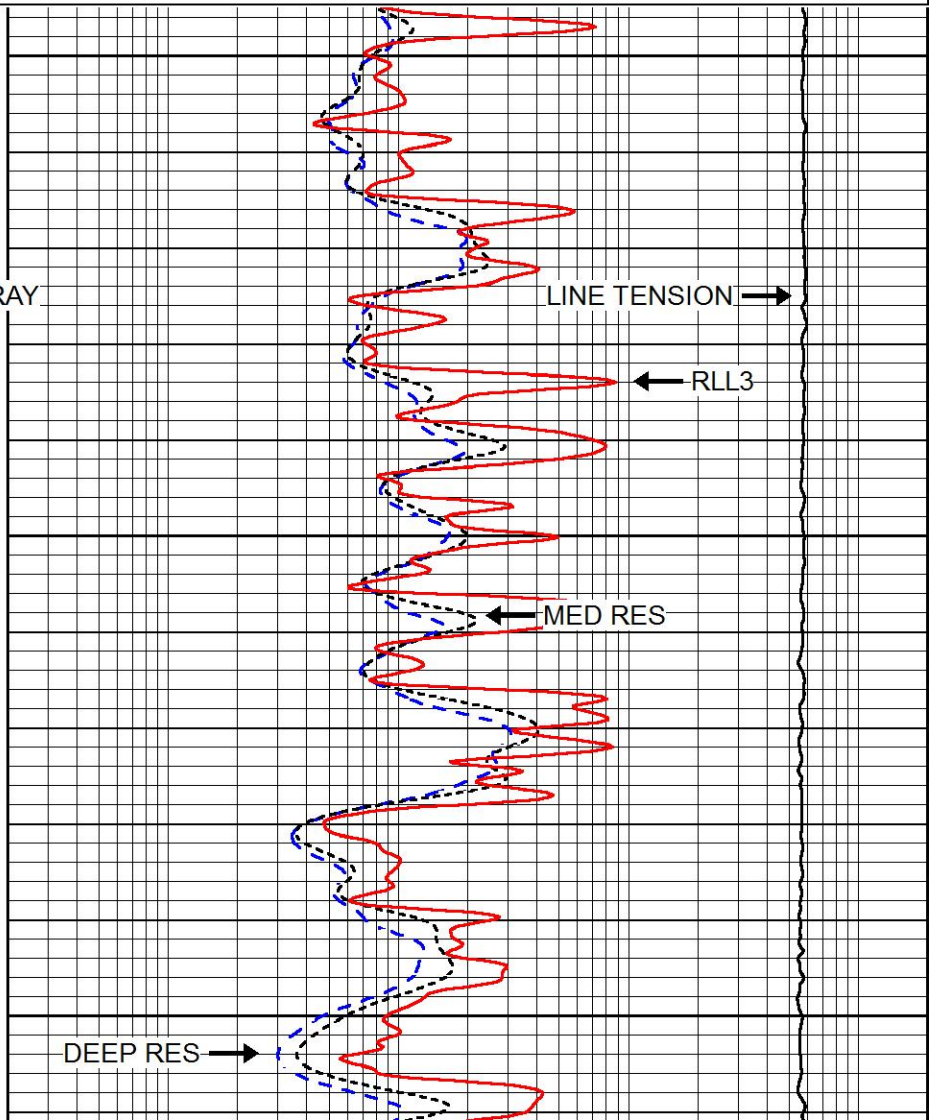
0.2 Deep Resistivity (Ohm-m) 2000  
0.2 Medium Resistivity (Ohm-m) 2000  
0.2 RLL3 (Ohm-m) 2000  
10000 Line Tension (lb) 0



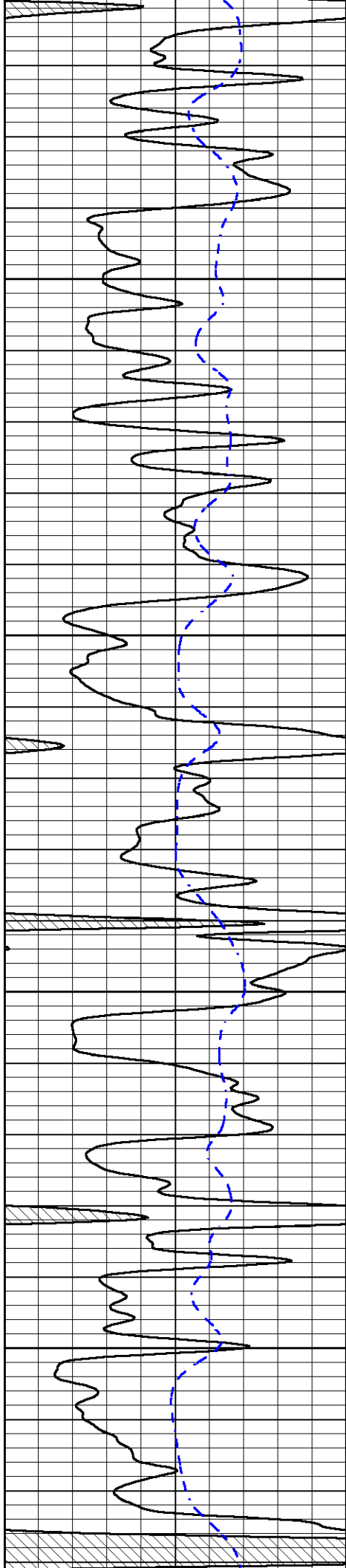
3800

3850

3900



DEEP RES

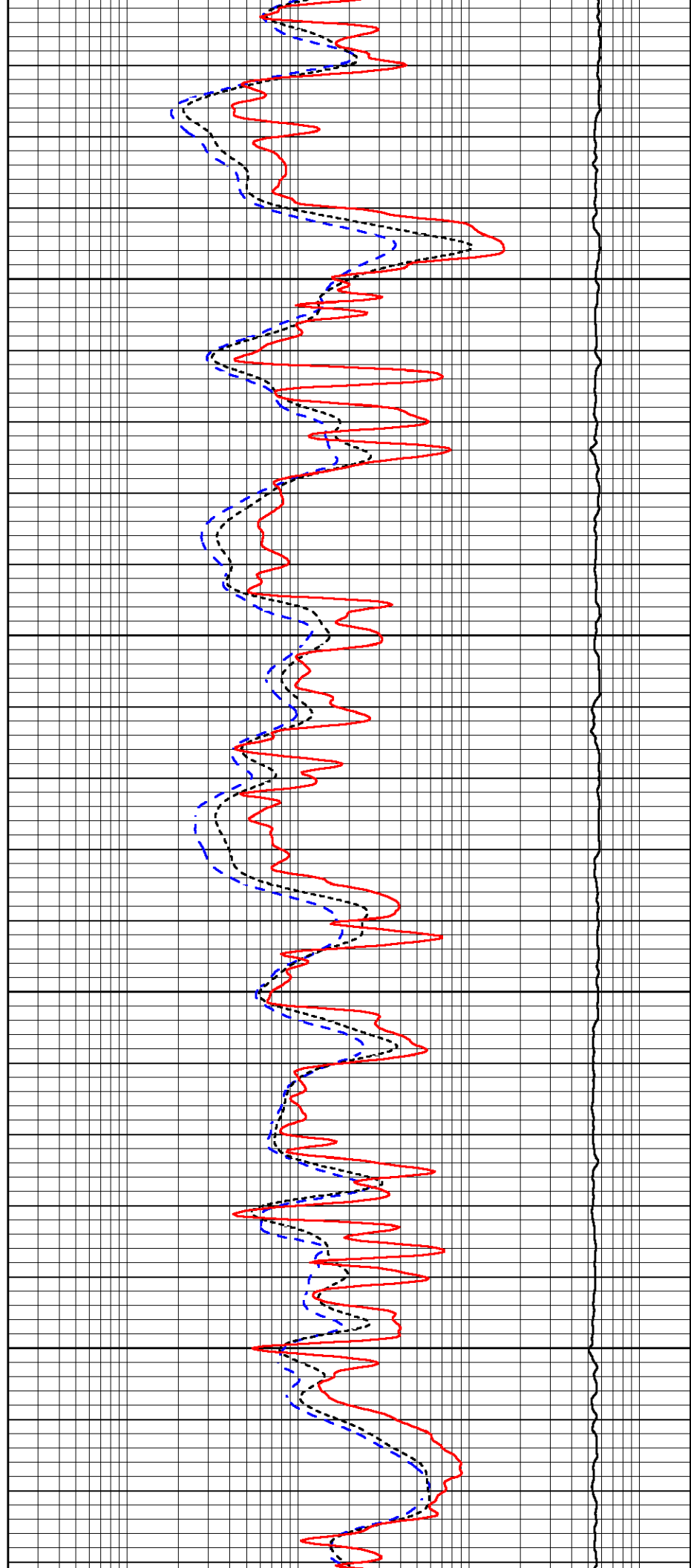


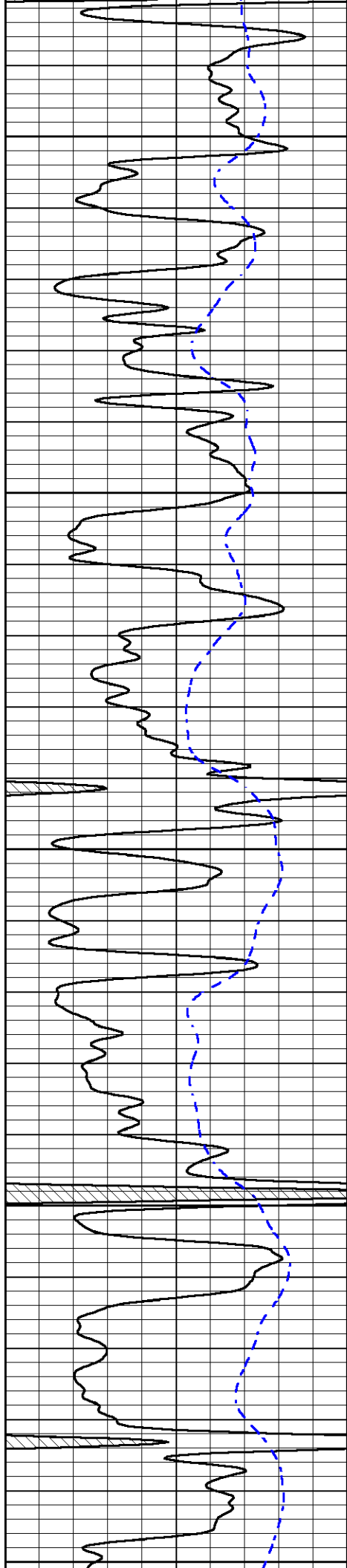
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4000

4050

4100





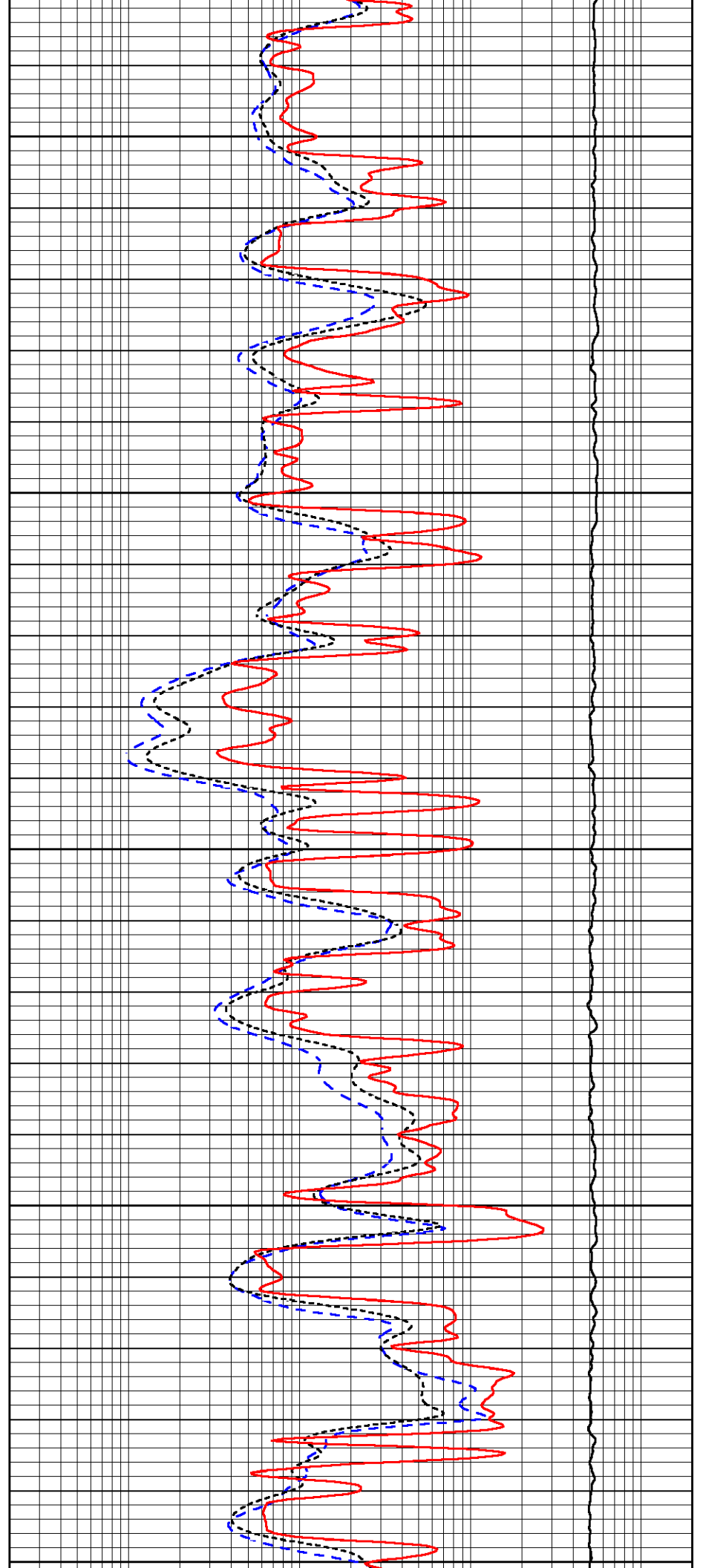
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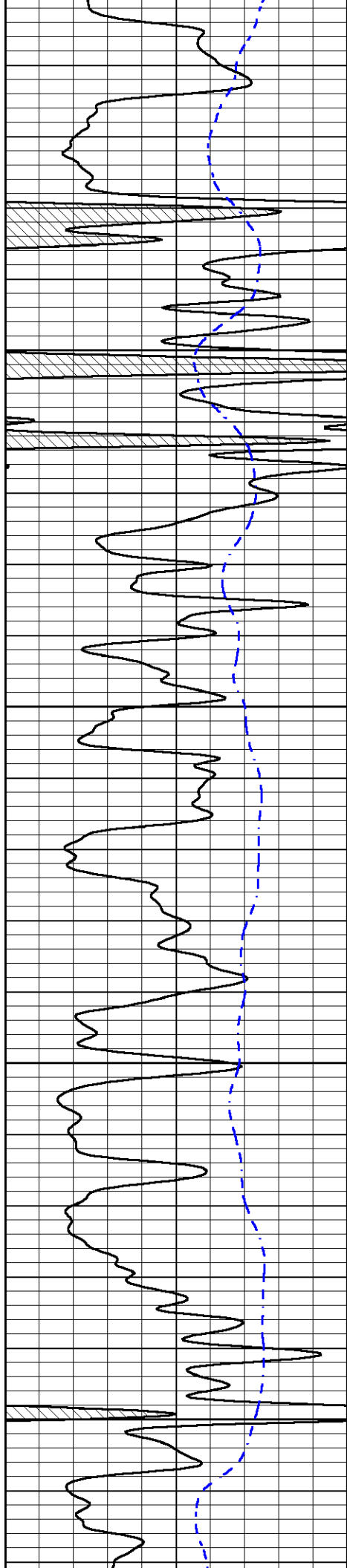
4200

4250

4300

4350



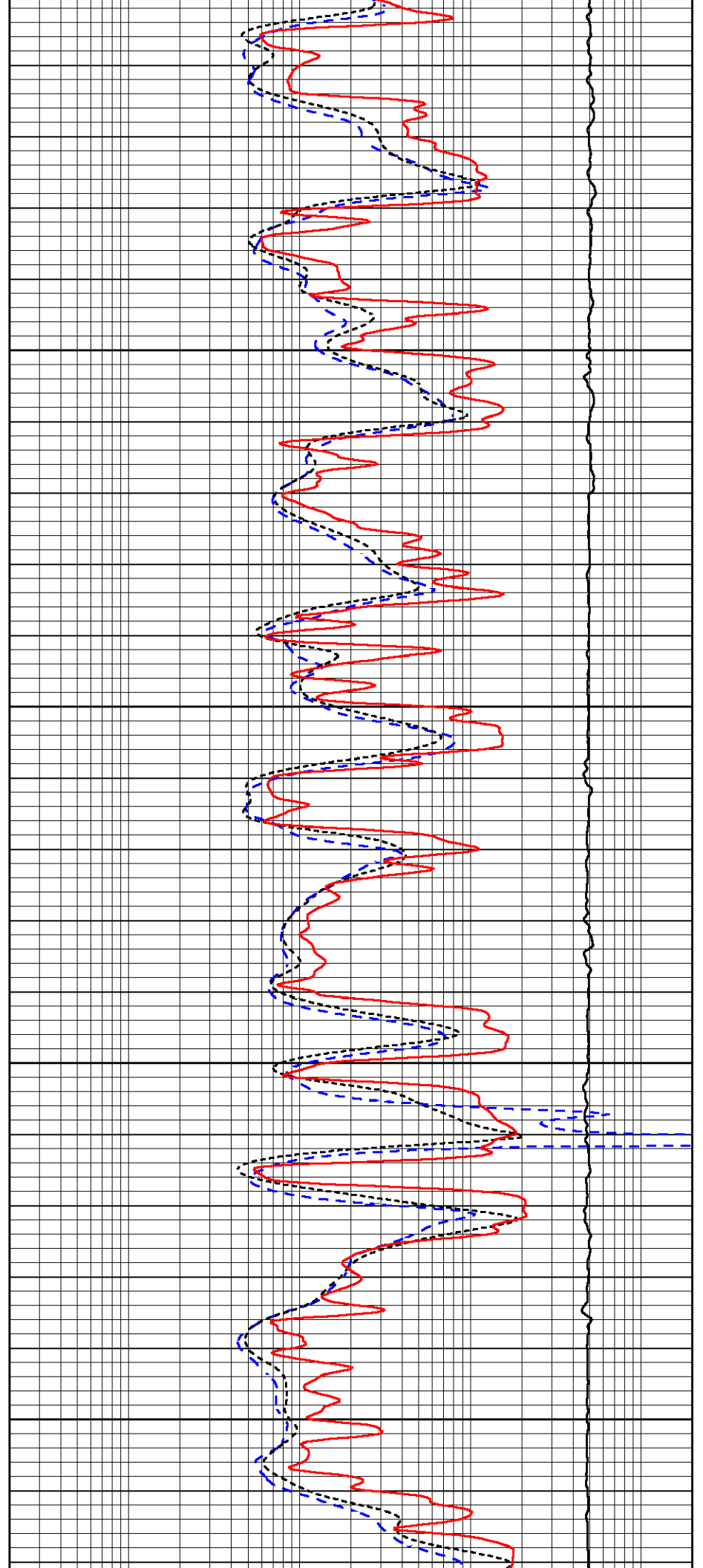


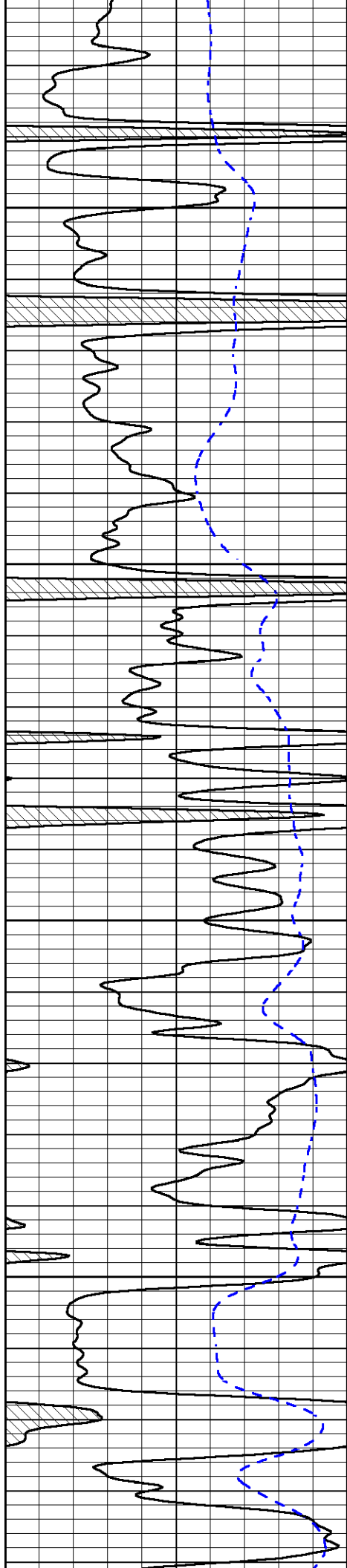
4400

4450

4500

4550



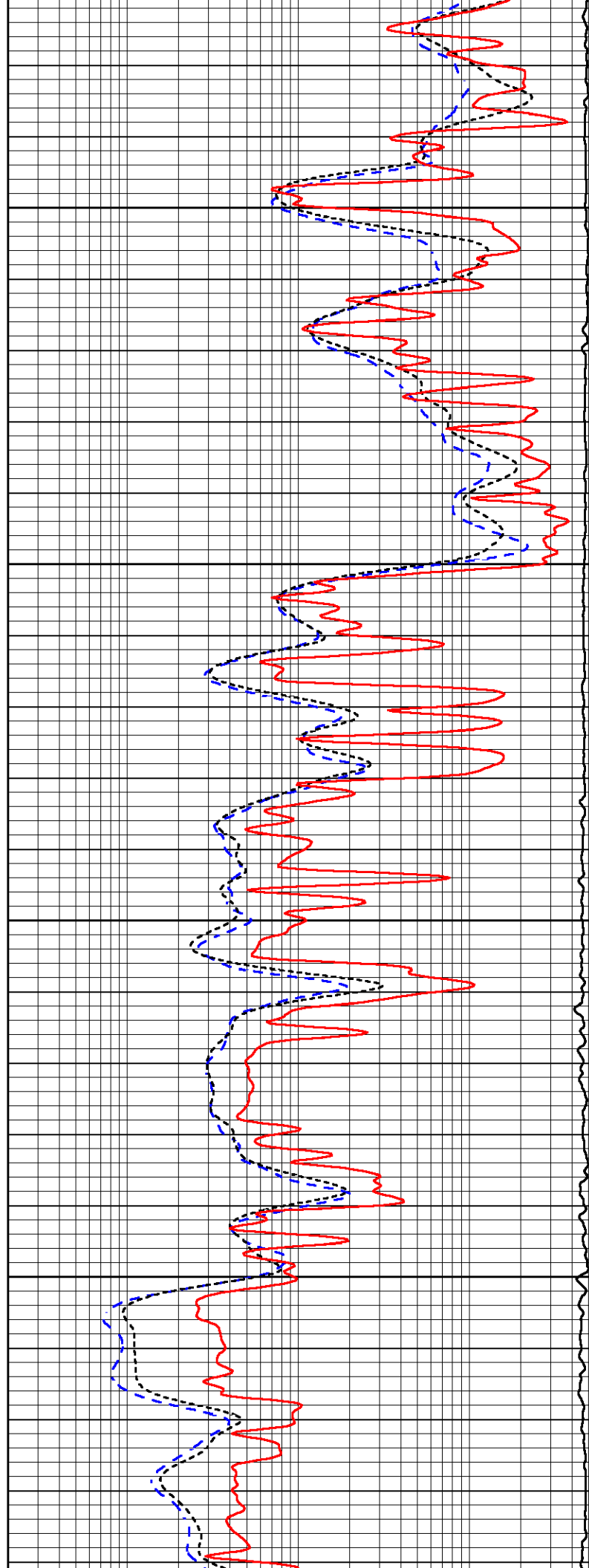


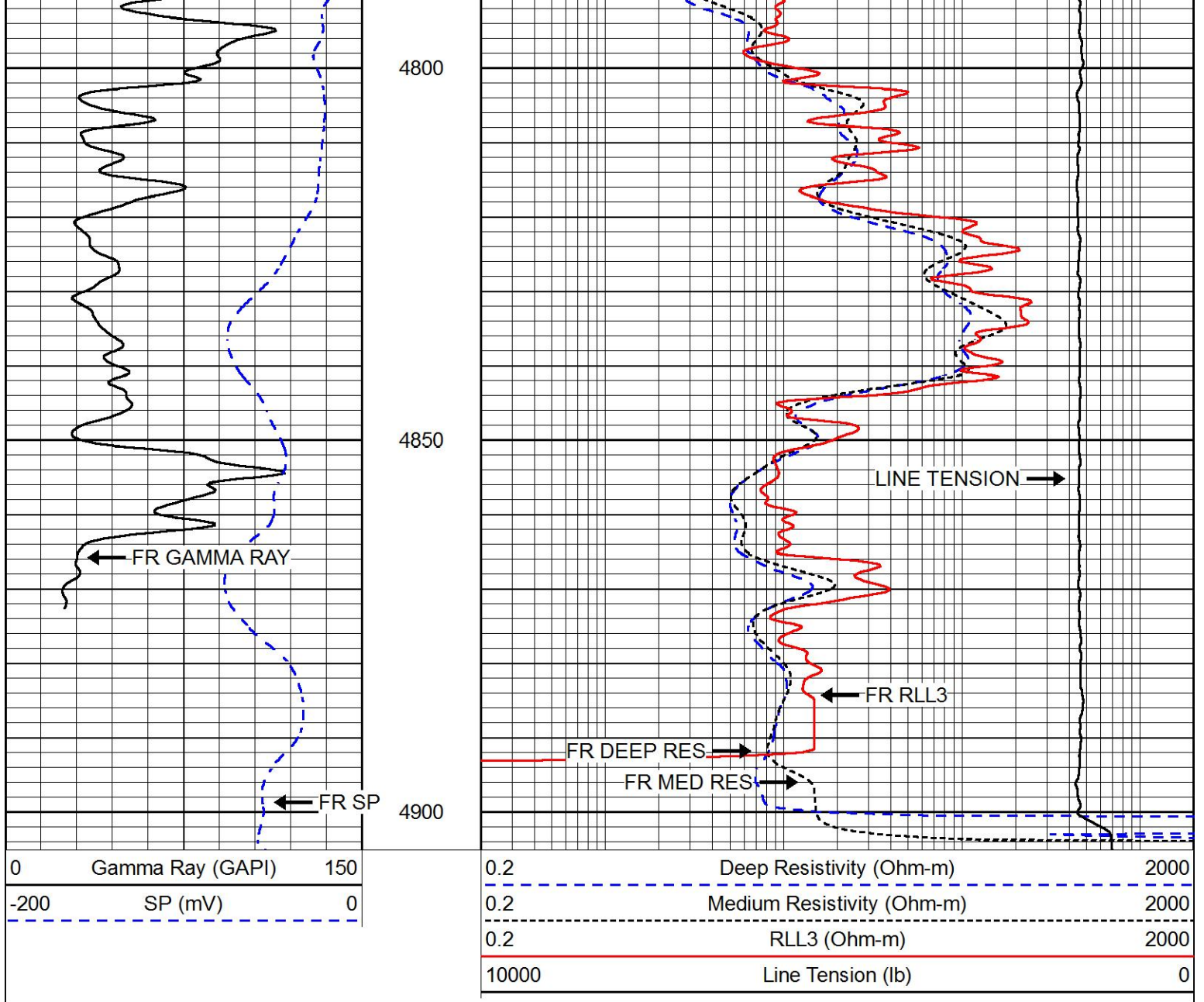
4600

4650

4700

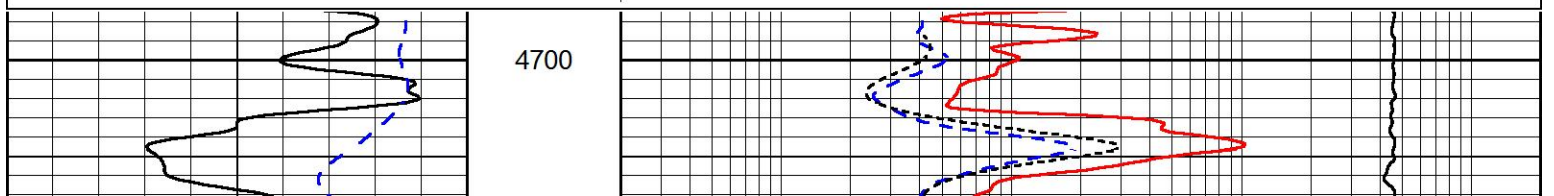
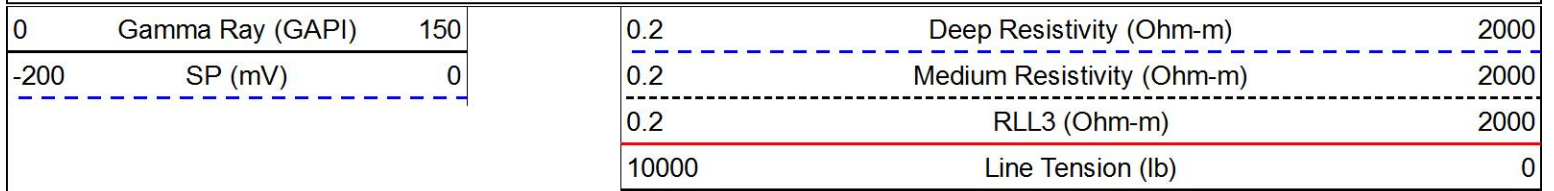
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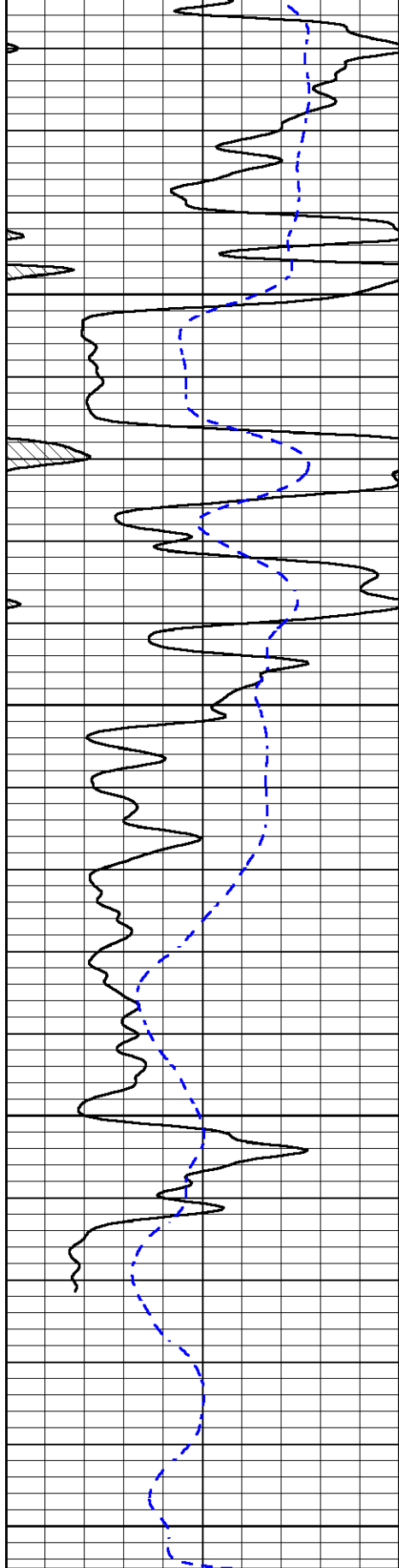




# REPEAT SECTION

Database File val\_gmk kriss\_1-18.db  
 Dataset Pathname STACK/pass2.1  
 Presentation Format dil  
 Dataset Creation Mon Mar 27 10:37:25 2017  
 Charted by Depth in Feet scaled 1:240





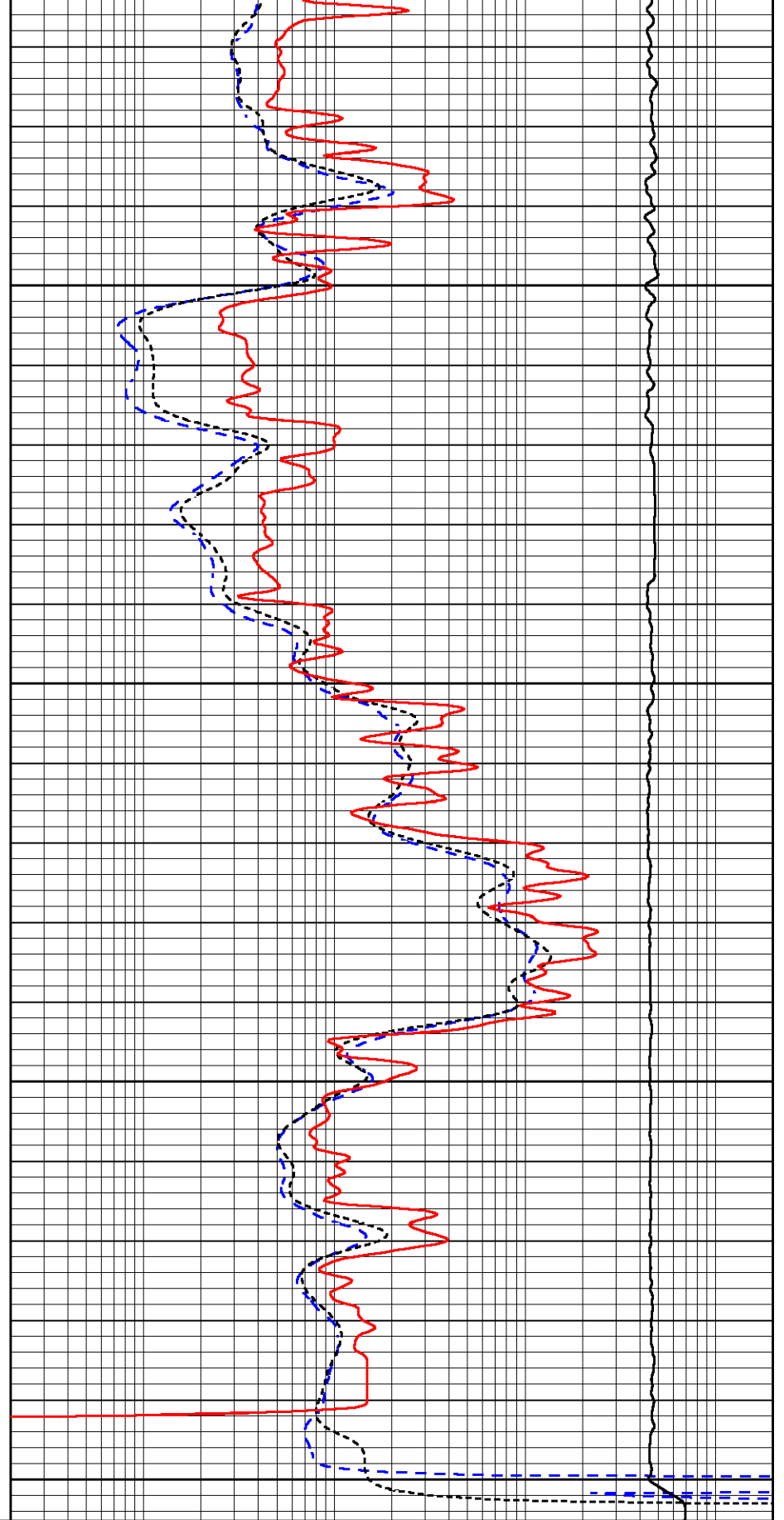
4750

4800

4850

4900

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

Database File val\_gmk kriss\_1-18.db  
 Dataset Pathname STACK/pass3.6  
 Dataset Creation Mon Mar 27 10:35:01 2017

Dual Induction Calibration Report

Serial-Model: PSI 13-M&W  
 Calibration Performed: Mon Mar 27 09:51:30 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.950	-33.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.800	-30.000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W  
 Source / Verifier: 16955B / 2ci  
 Master Calibration Performed: Mon Mar 27 09:51:50 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	5174.18	6425.27	cps
Aluminum	2.665	g/cc	963.17	4037.42	cps
Spine Angle = 74.55			Density/Spine Ratio = 0.522		
	Size		Reading		
Small Ring	6.00	in	1.83		
Large Ring	16.00	in	1.48		

Compensated Neutron Calibration Report

Serial Number: 207-MW  
 Tool Model: M&W  
 Calibration Performed: Thu Mar 2 10:30:30 2017

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: 89  
 Tool Model: M&W  
 Calibration Performed: Thu Mar 02 20:45:00 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



**PIONEER**

Pioneer Energy Services

Company	VAL ENERGY, INC.
Well	GMK KRISS UNIT #1-18
Field	UNKNOWN
County	THOMAS
State	KANSAS