



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company BLUE GOOSE DRILLING CO., INC.
Well HINEMAN FARMS #1
Field WILDCAT
County LANE
State KANSAS

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County LANE State KANSAS

Location: API #: 15-101-22609-00-00

Other Services

NE NE NW
330' FNL & 2310' FWL
SEC 16 TWP 18S RGE 27W

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 2691'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2701'
D.F. N/A
G.L. 2691'

Date 8/25/2018

Run Number ONE

Depth Driller 4660'

Depth Logger 4662'

Bottom Logged Interval 4661'

Top Log Interval 250'

Casing Driller 8.625" @ 261'

Casing Logger 259'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 3100

Density / Viscosity 9.2 74

pH / Fluid Loss 10.0 8.0

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.70 @ 67

Rmt @ Meas. Temp 0.53 @ 67

Rmc @ Meas. Temp 0.95 @ 67

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.38 @ 123

Operating Rig Time 4 HOURS

Max Rec. Temp. F 123

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By KEN WALLACE

<<< 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.

DIGHTON,
6 EAST TO TURKEY RED RD, 1 NORTH TO TB,
WEST INTO

Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

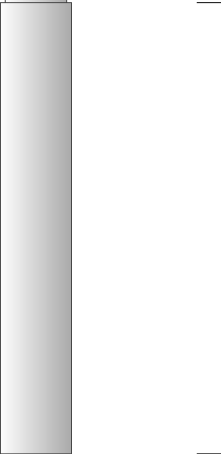
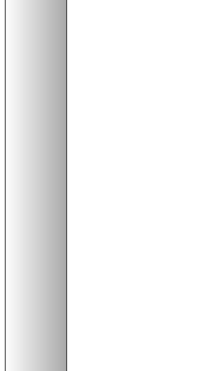
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: KEN WALLACE
Secondary Witness:
Secondary Witness:
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	337	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	4660	123	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 (797-152)	8.50	4.00	250.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-PSI HIGH TEMP (967 (HT))	18.50	3.50	220.00

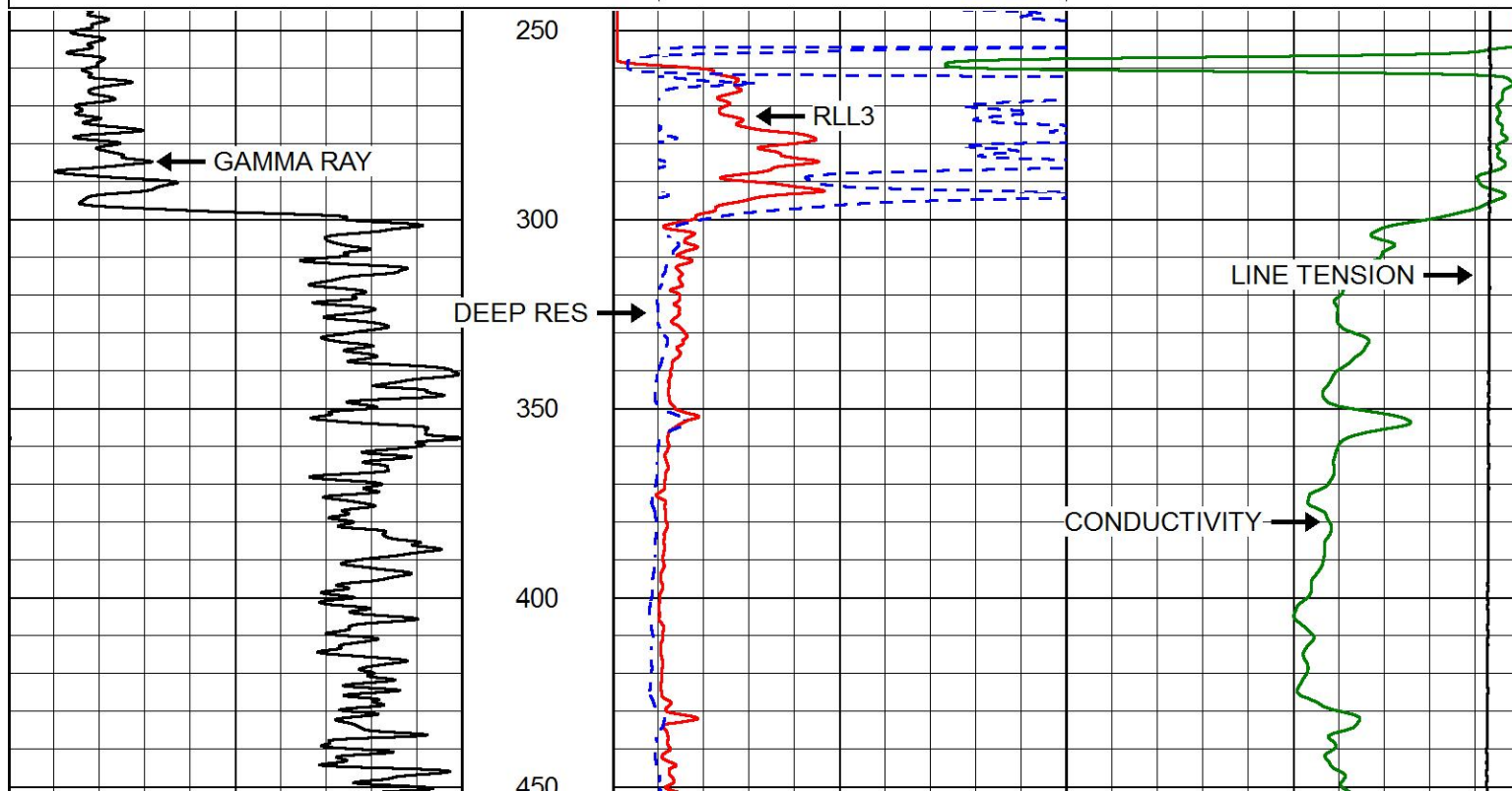
CILM	4.70								
SP	0.20								
Dataset: bluegoose_hineman farms 1.db: field/well/STACK/pass3.3 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									

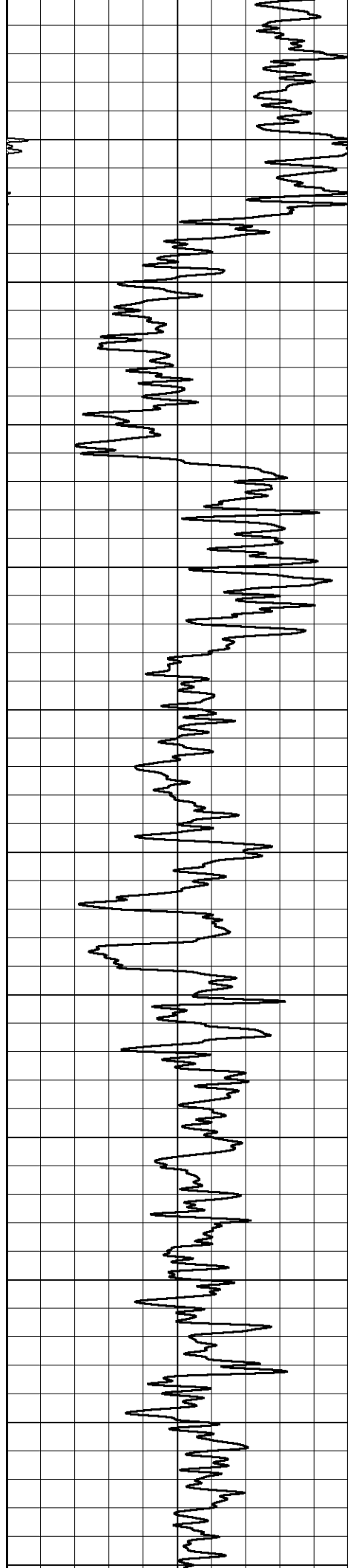


MAIN PASS

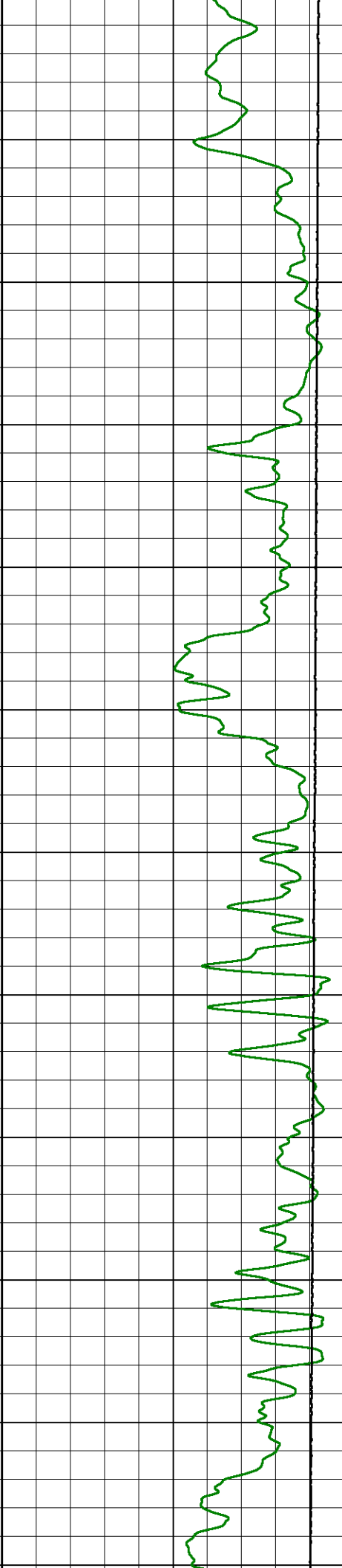
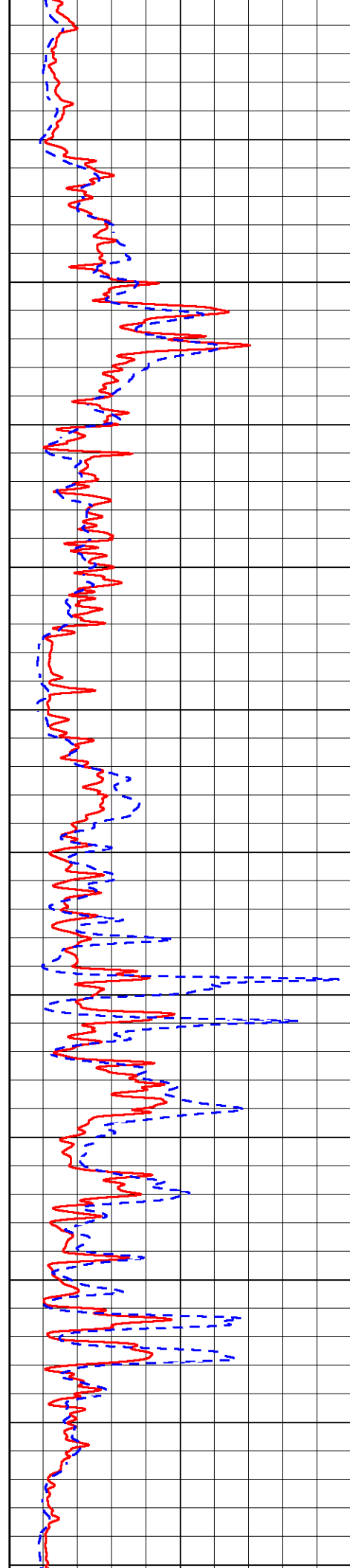
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Presentation Format	dil2in
Dataset Creation	Sat Aug 25 01:54:11 2018
Charted by	Depth in Feet scaled 1:600

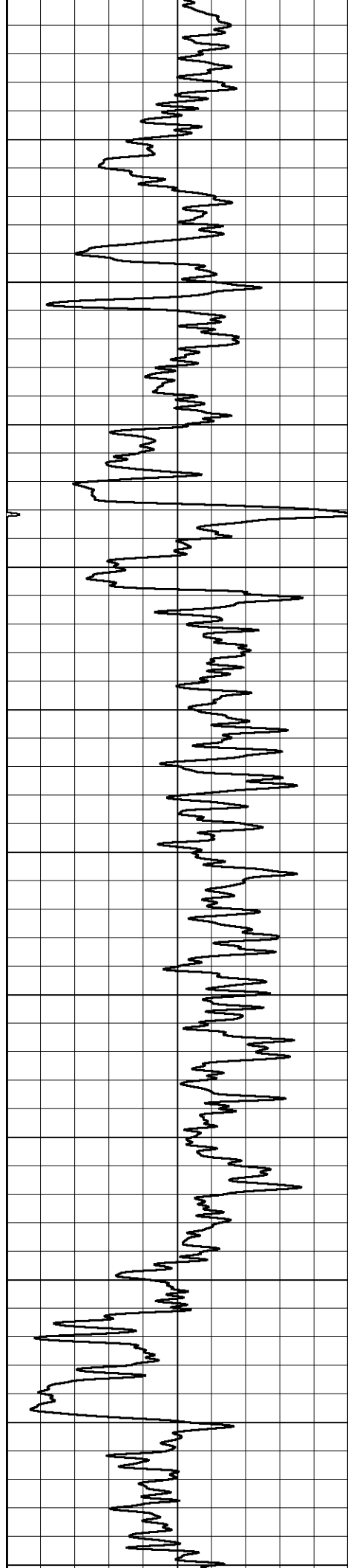
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	15000	Line Tension (lb)	0
	0	RLL3 (Ohm-m)	50
	0	DEEP RESISTIVITY (Ohm-m)	50
	50	RLL3 (Ohm-m)	500
	50	Deep Resistivity (Ohm-m)	500



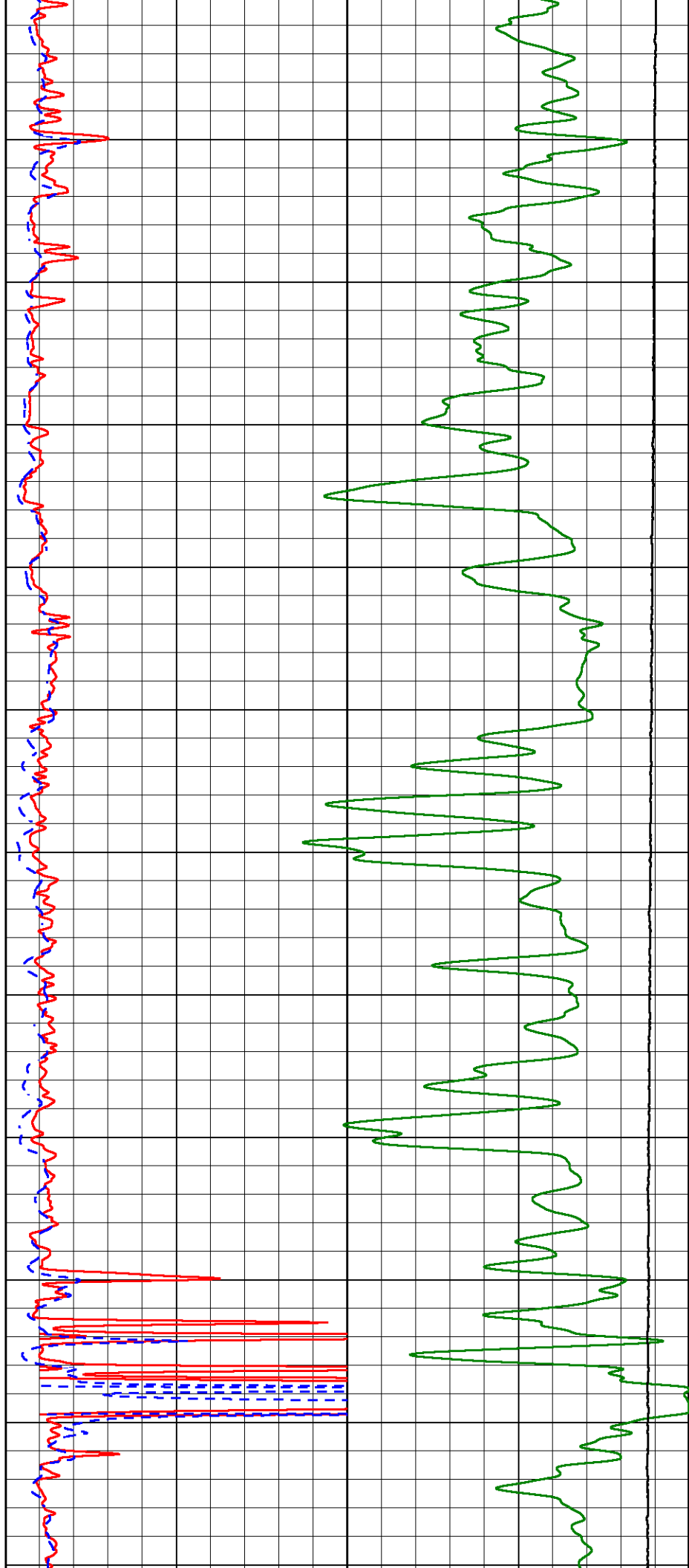


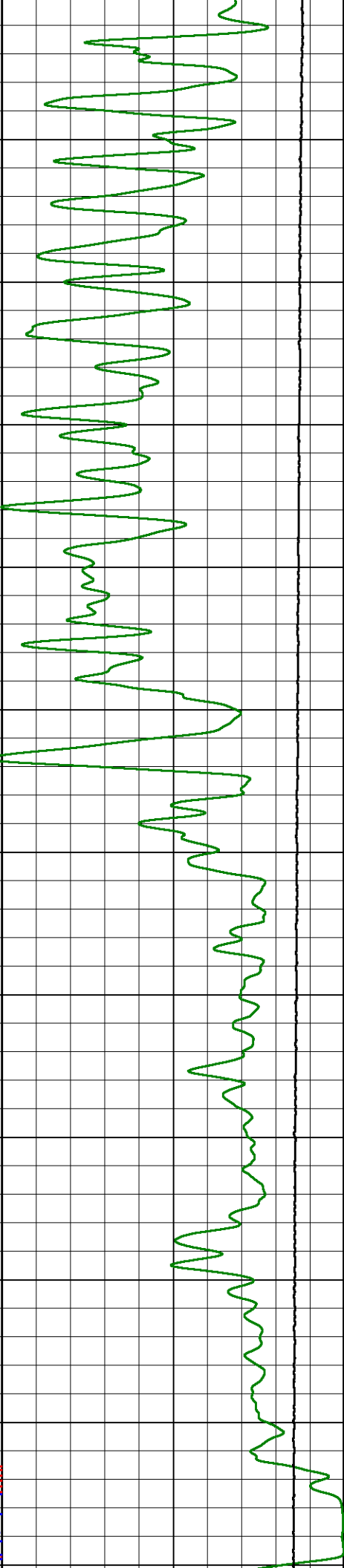
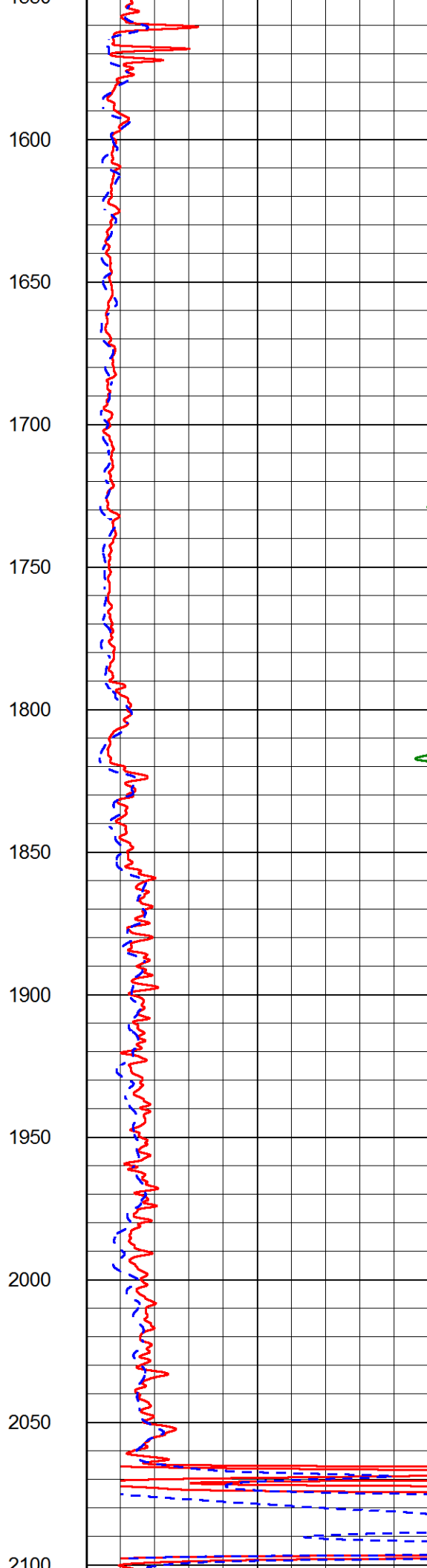
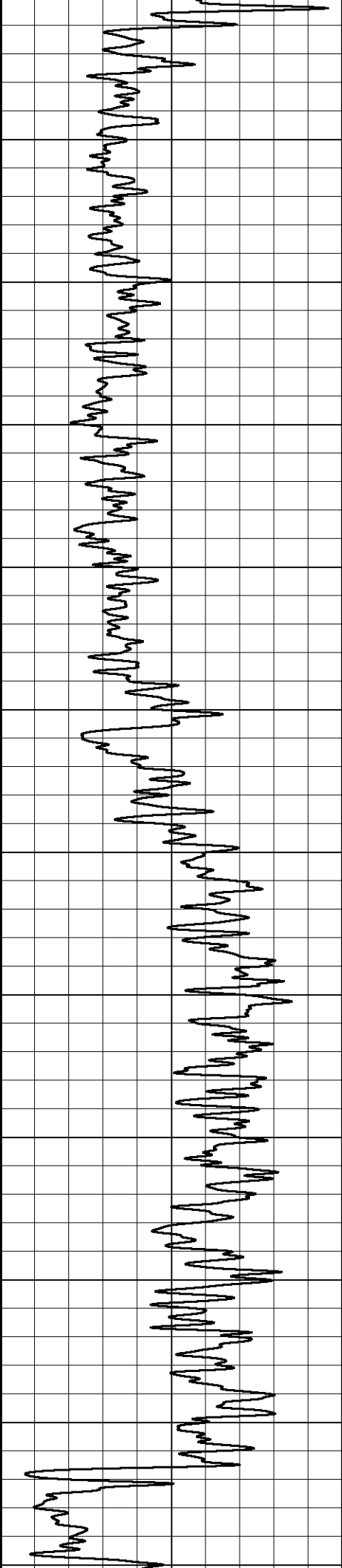
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500
550
600
650
700
750
800
850
900
950
1000

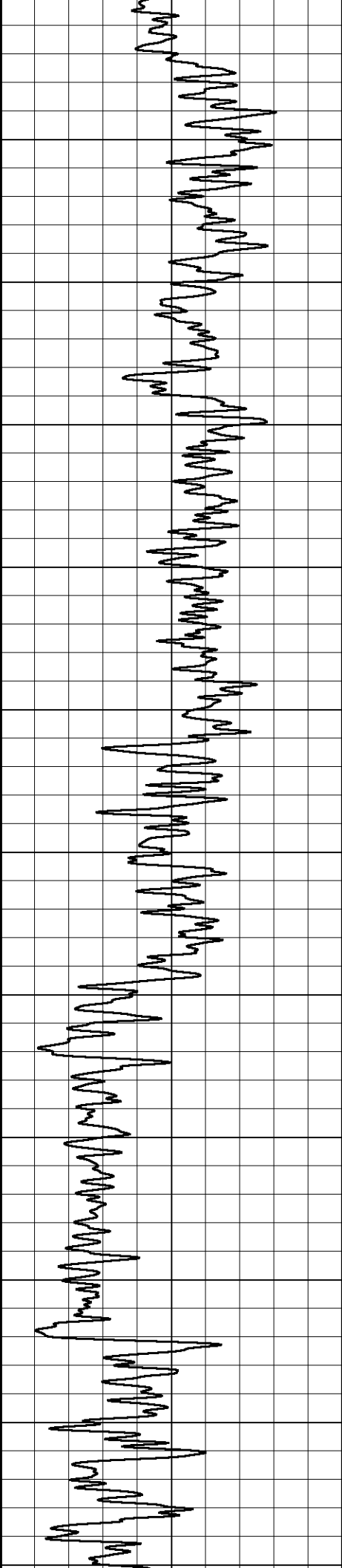




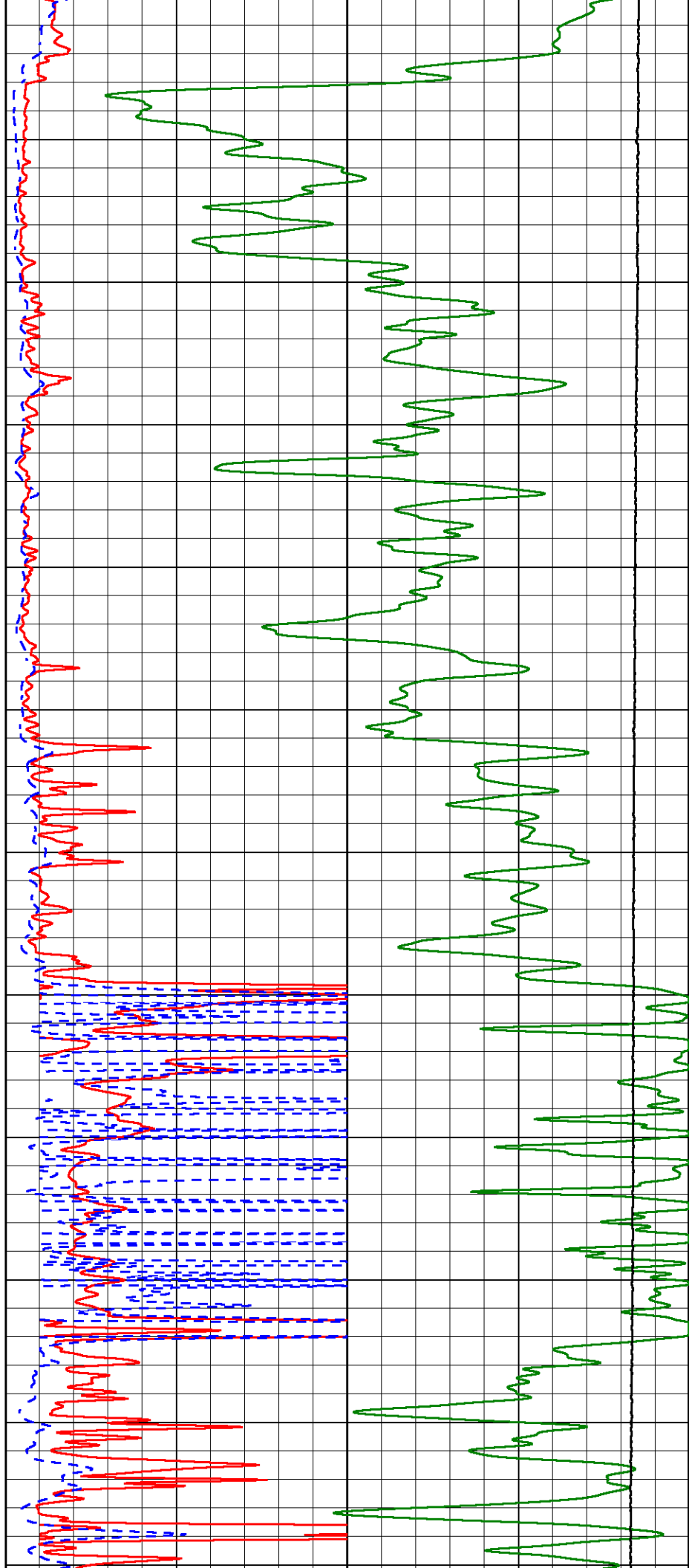
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550

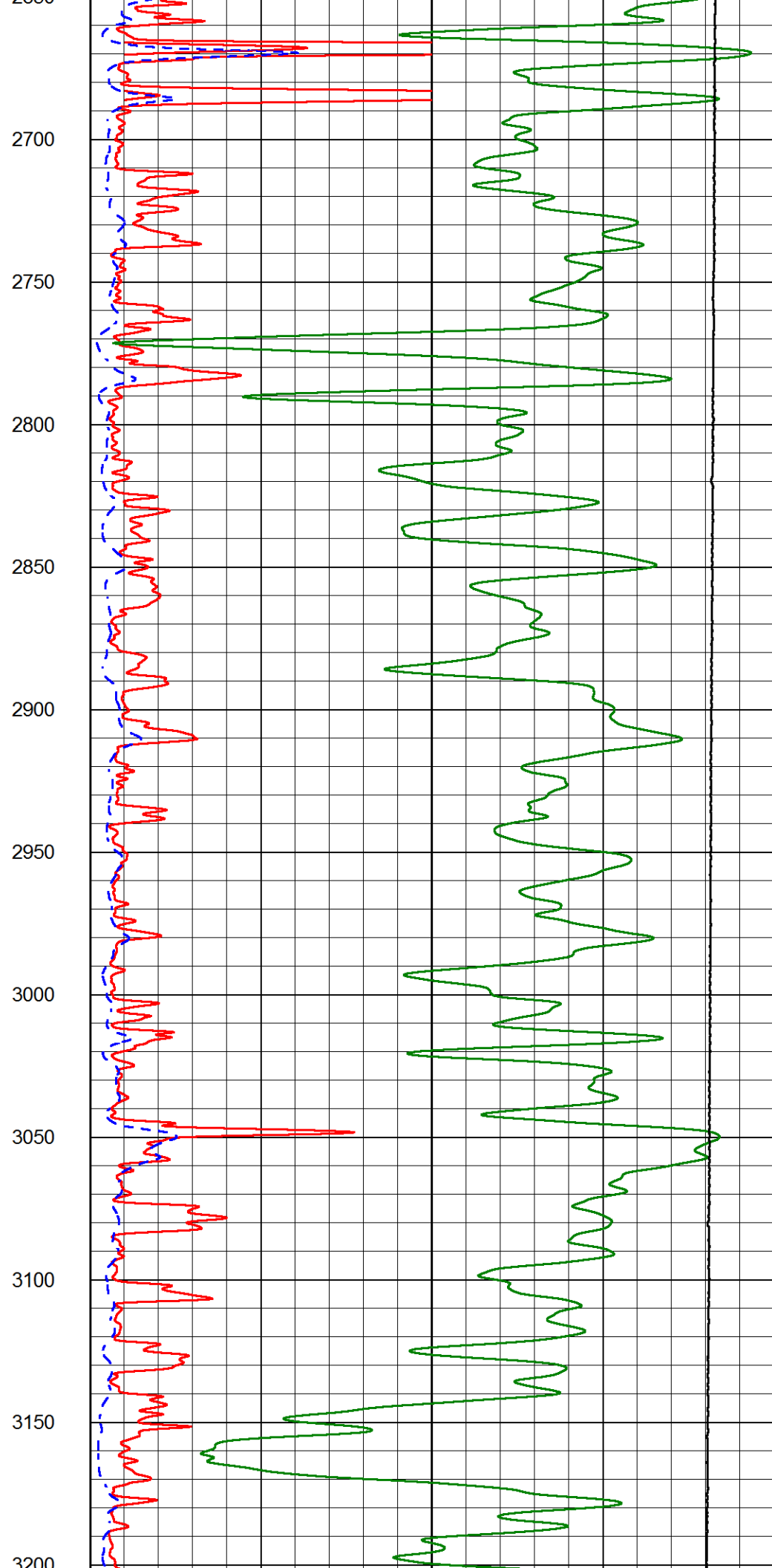
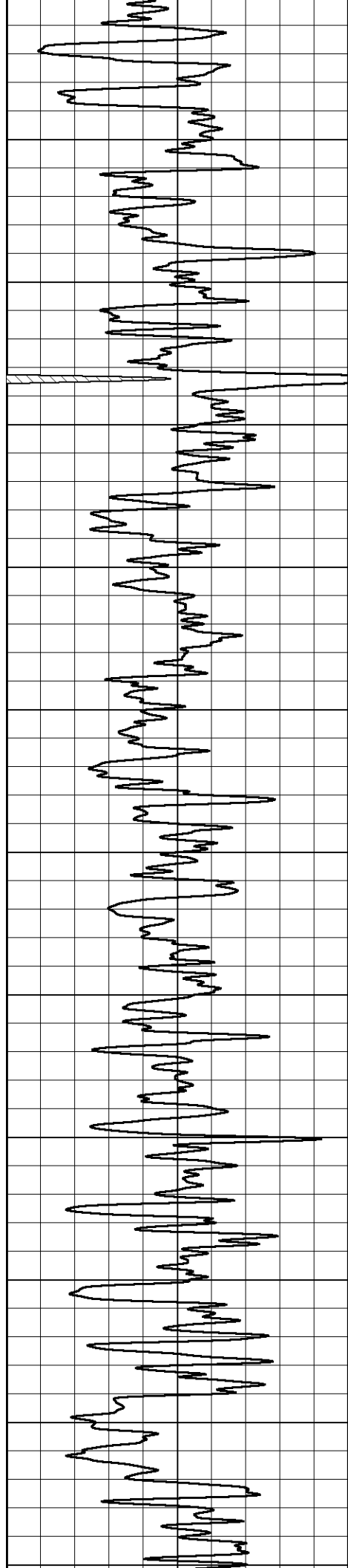


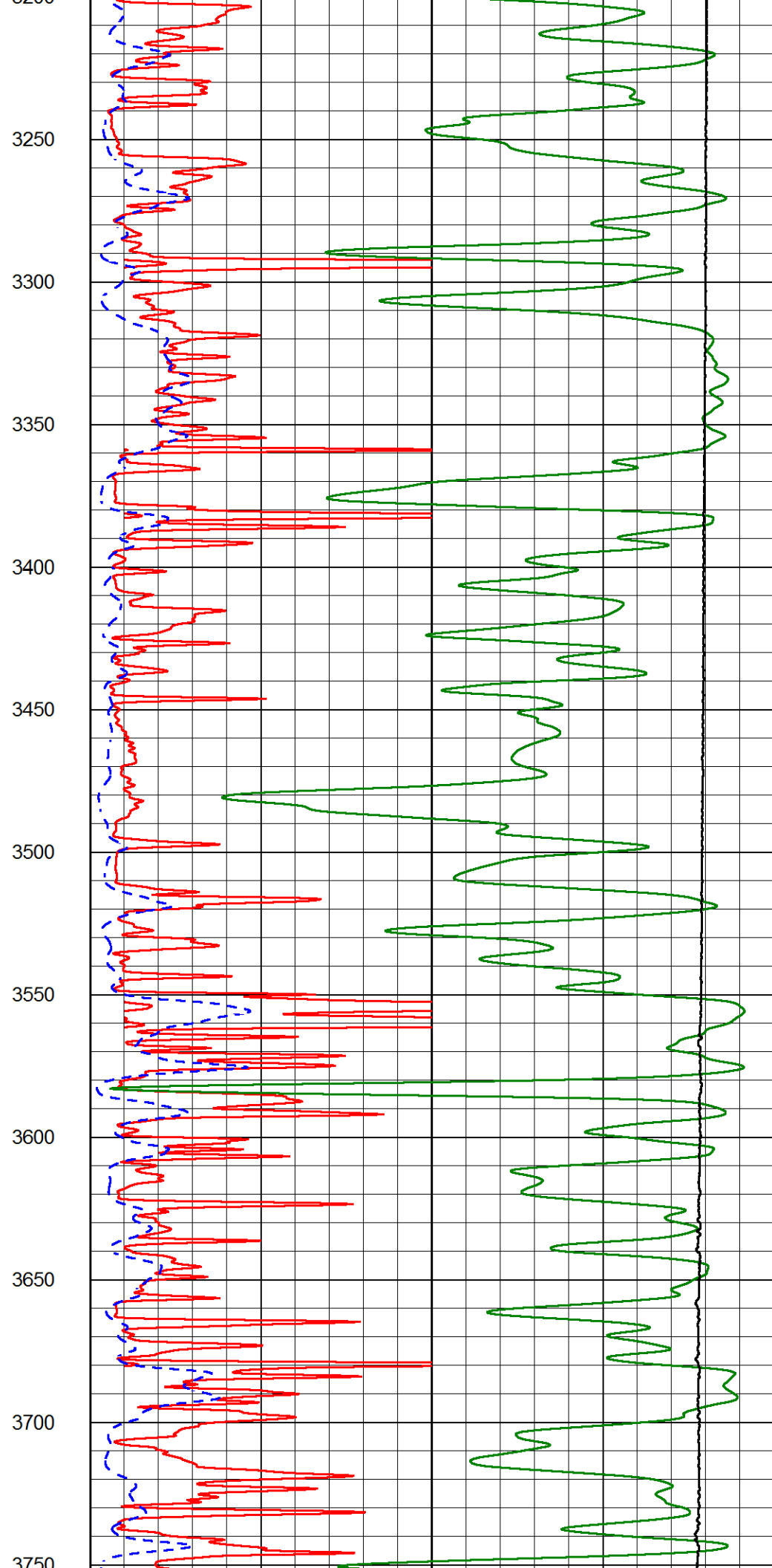
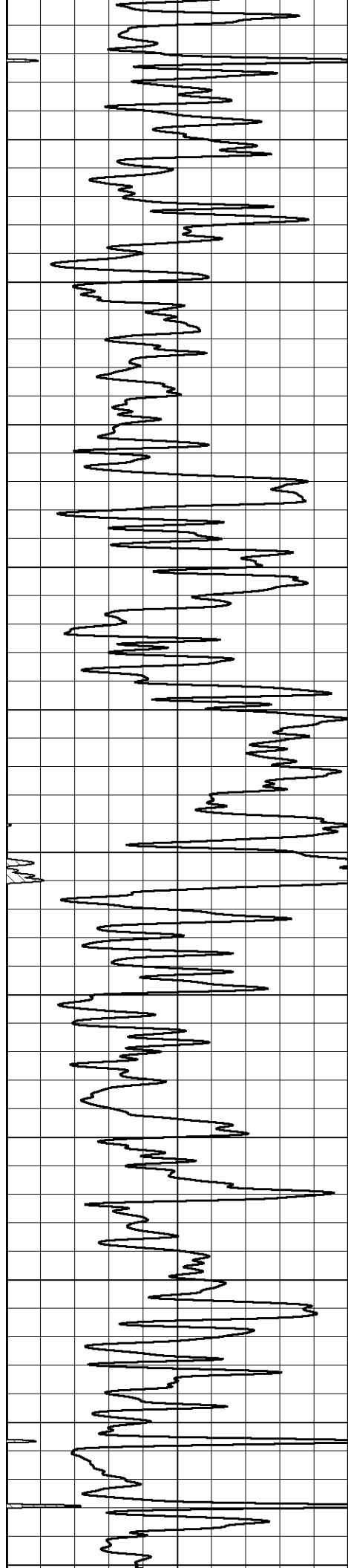


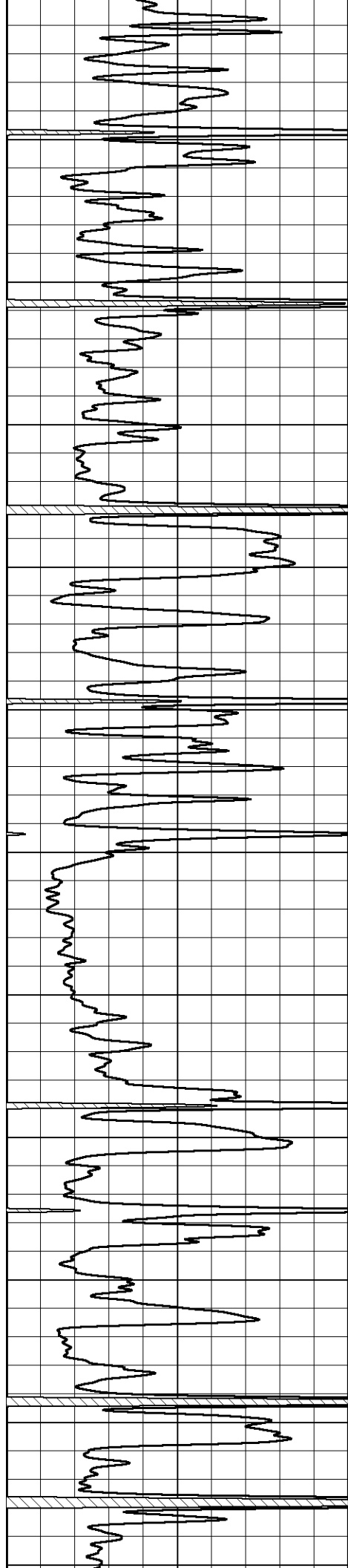


2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650

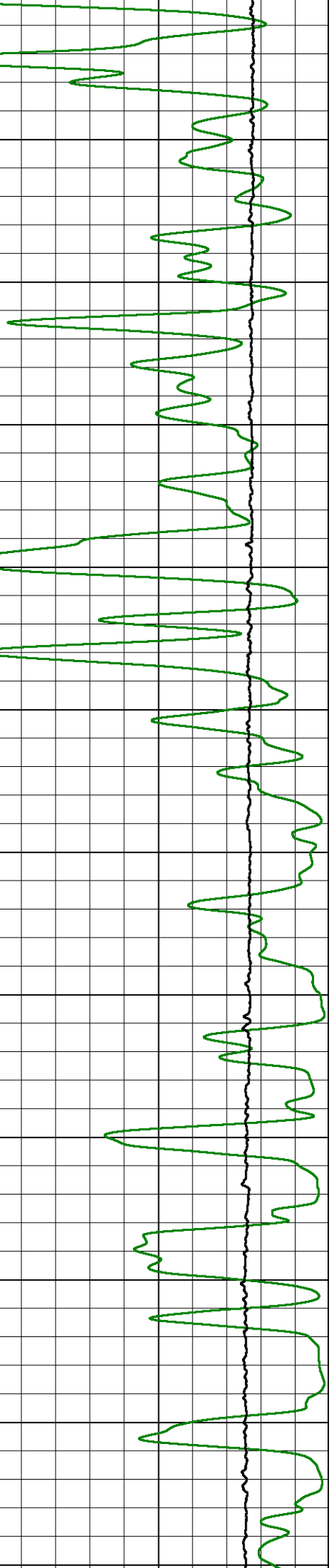
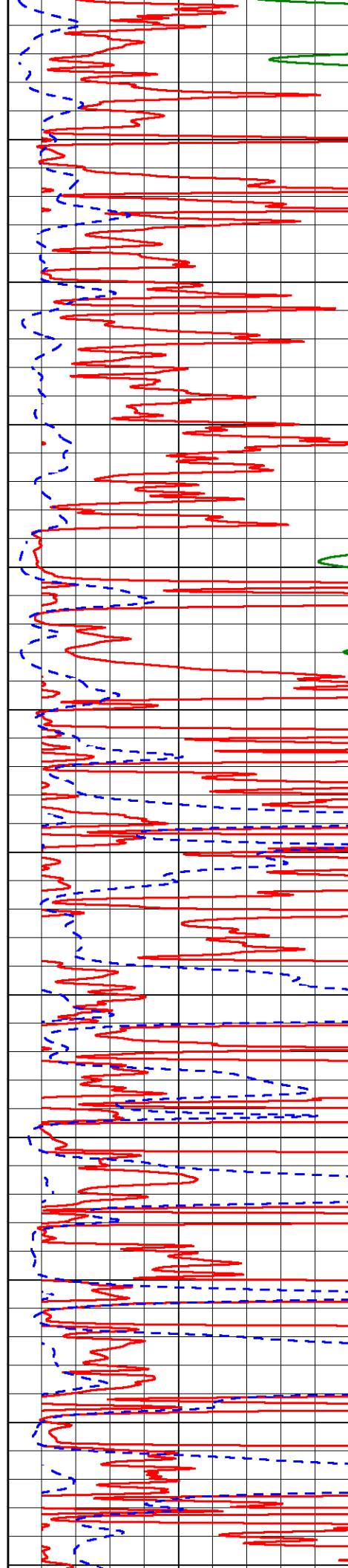


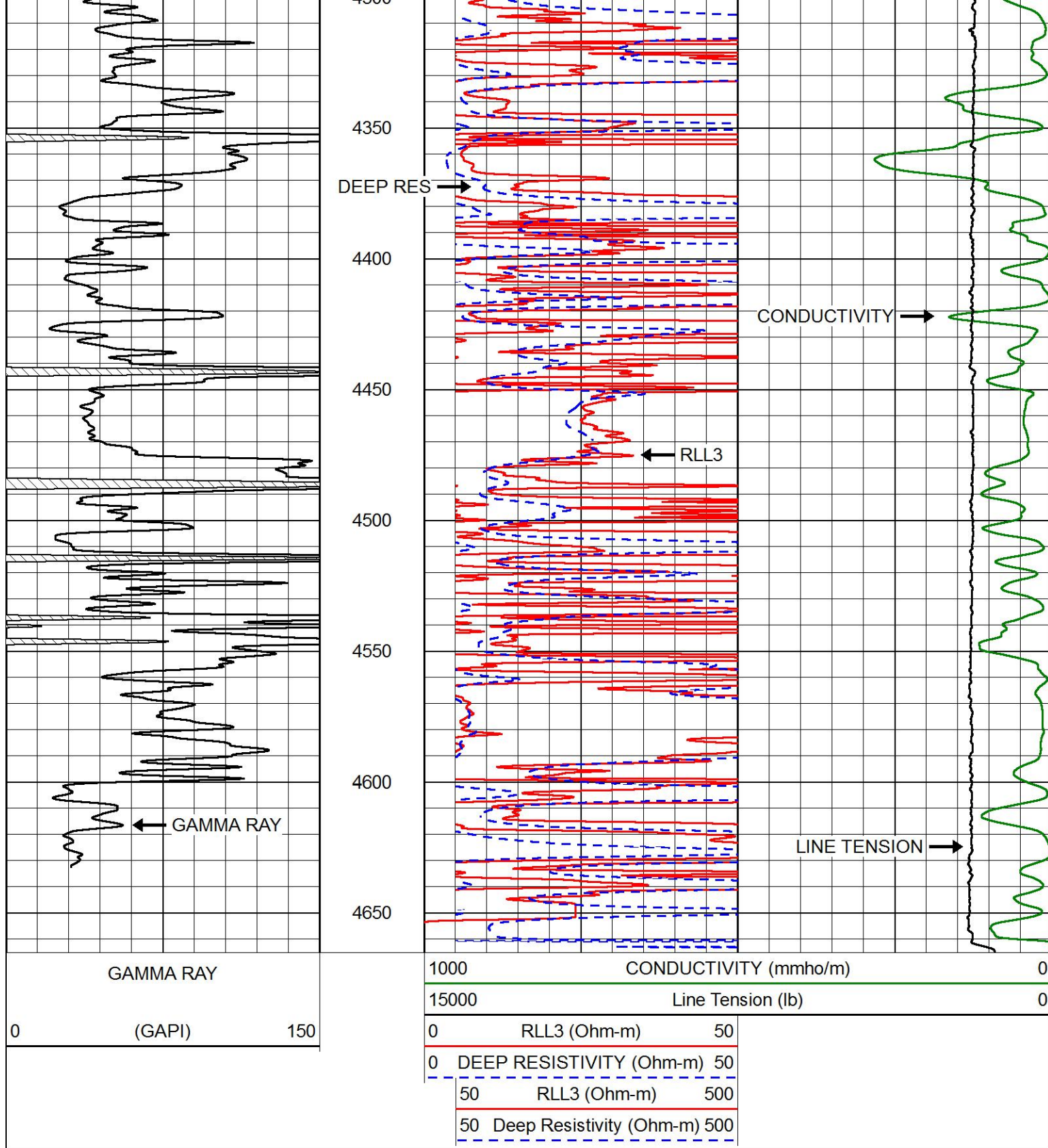






3700
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250
4300

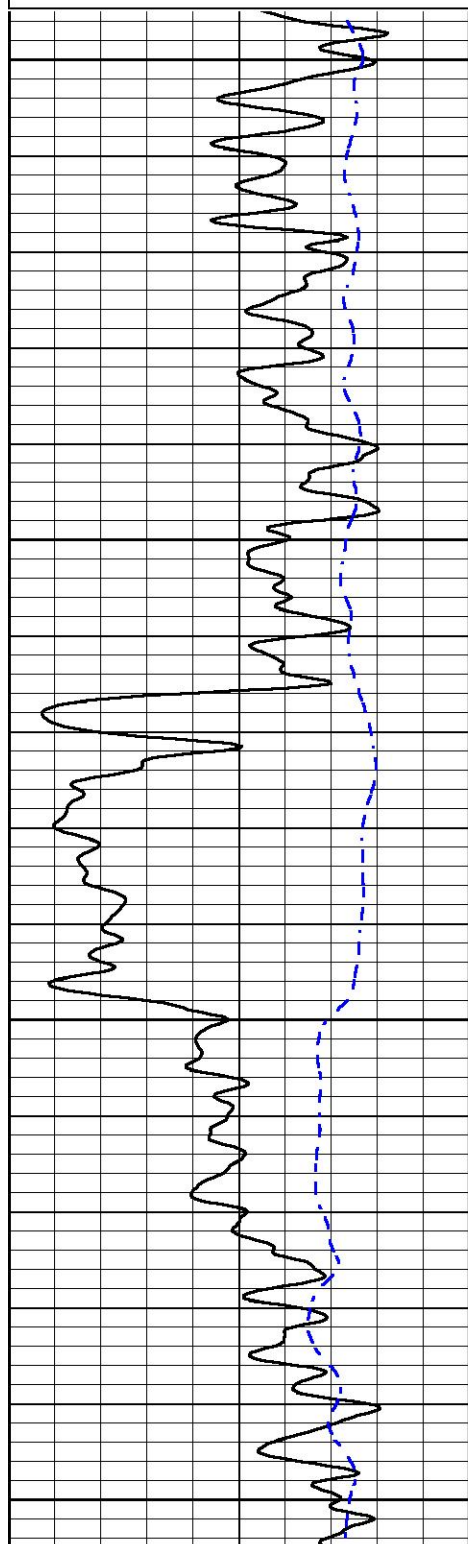




MAIN PASS

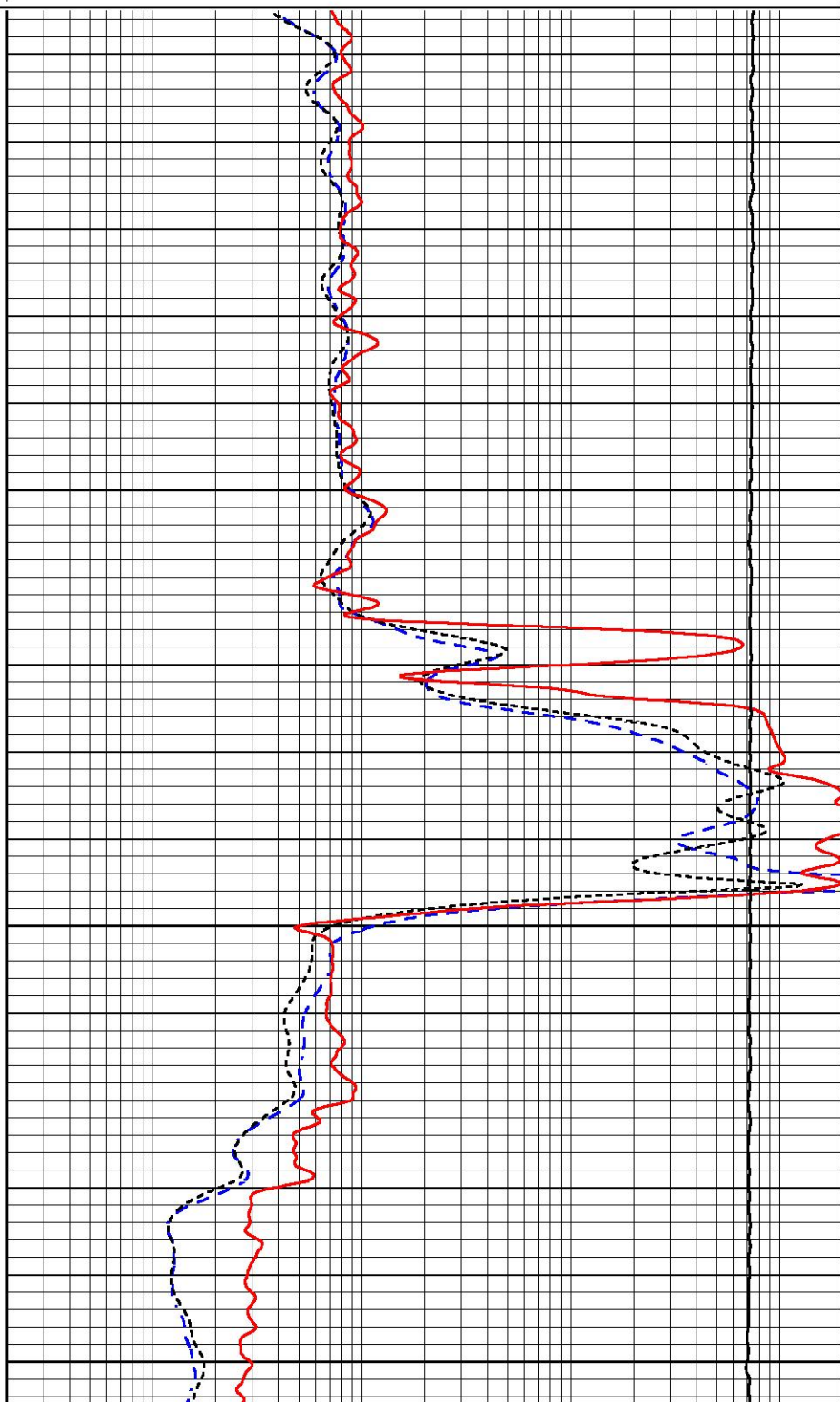
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 Dataset Pathname STACK/pass4.1
 Presentation Format dil
 Dataset Creation Sat Aug 25 01:54:11 2018
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0



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



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

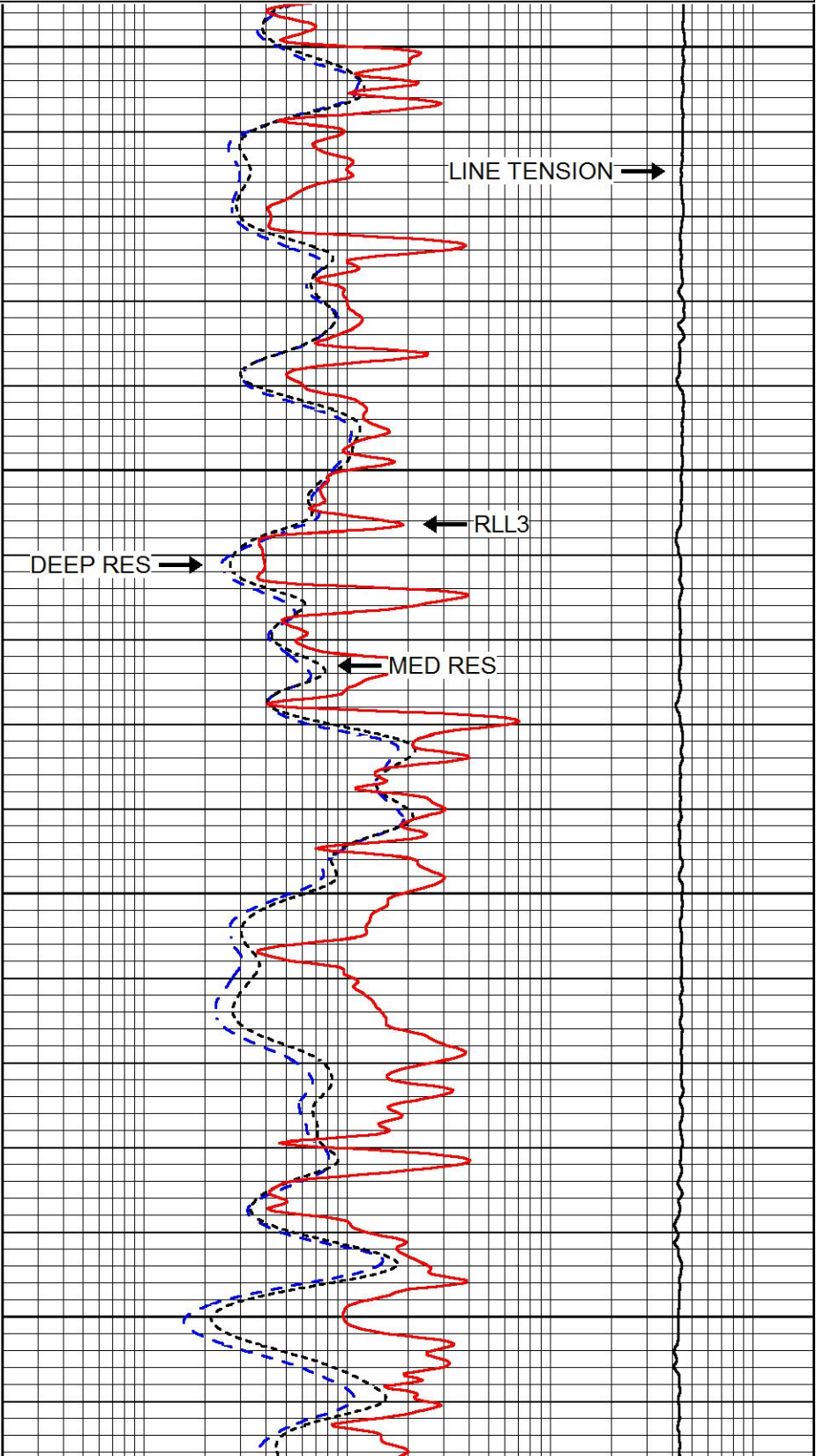
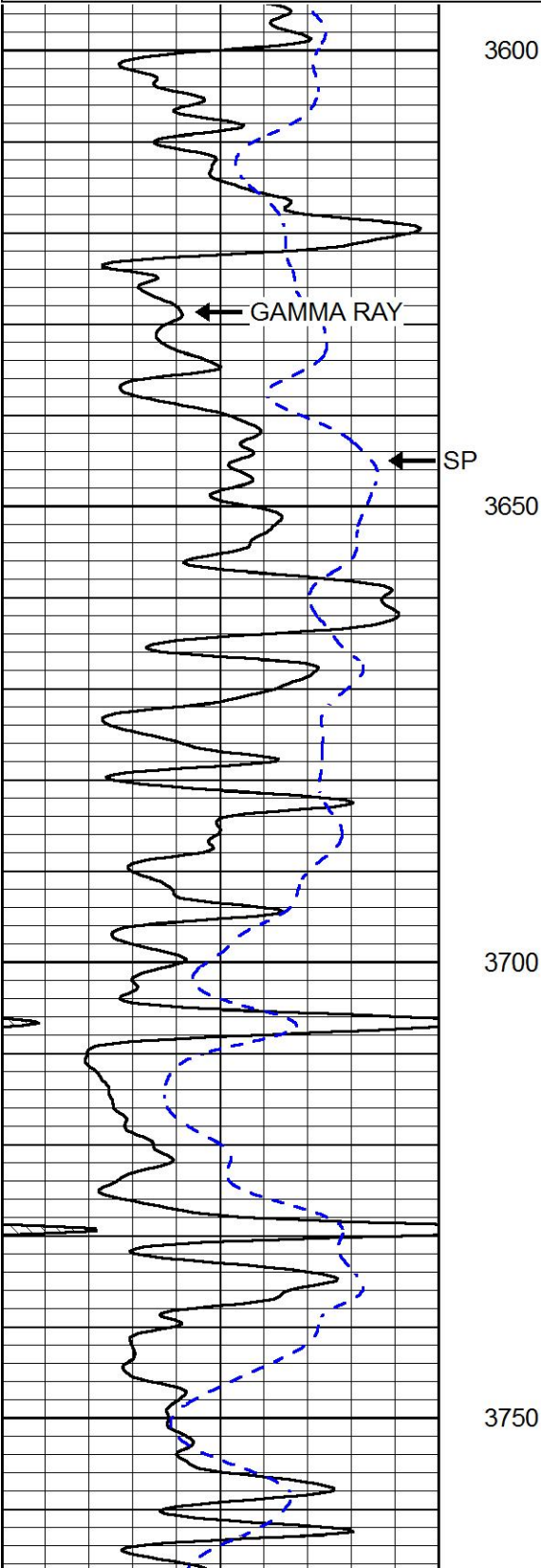


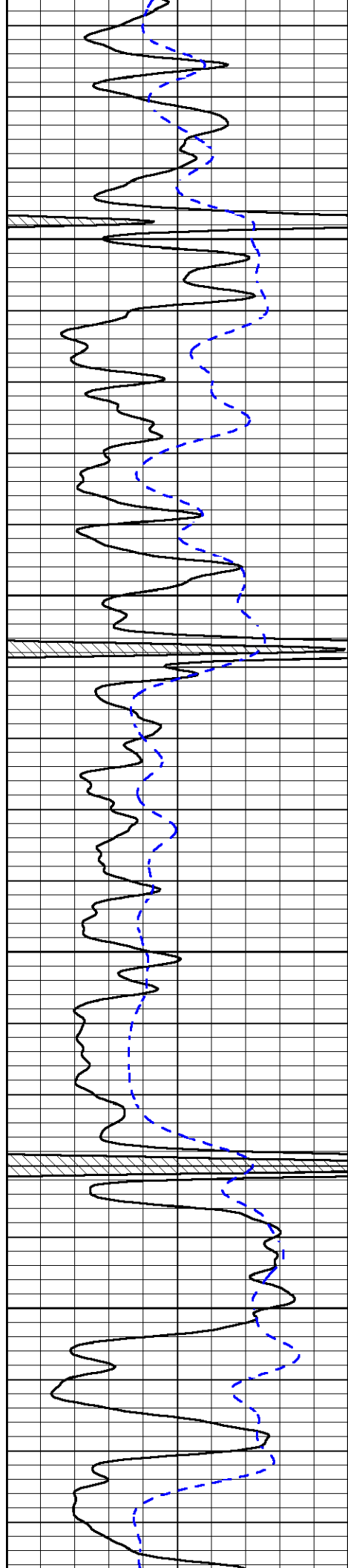
MAIN PASS

Database File bluegoose_hineman farms 1.db
Dataset Pathname STACK/pass3.1
Presentation Format dil
Dataset Creation Sat Aug 25 01:24:44 2018
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



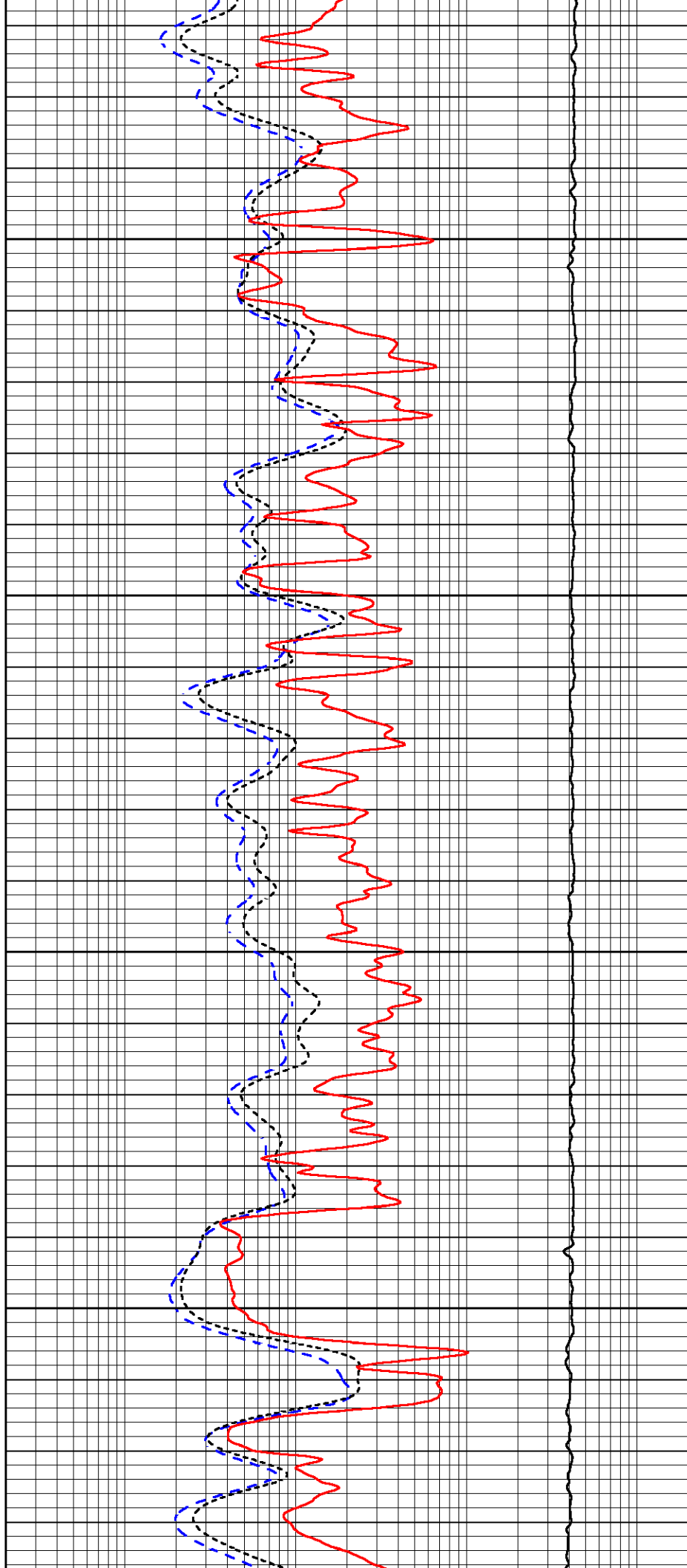


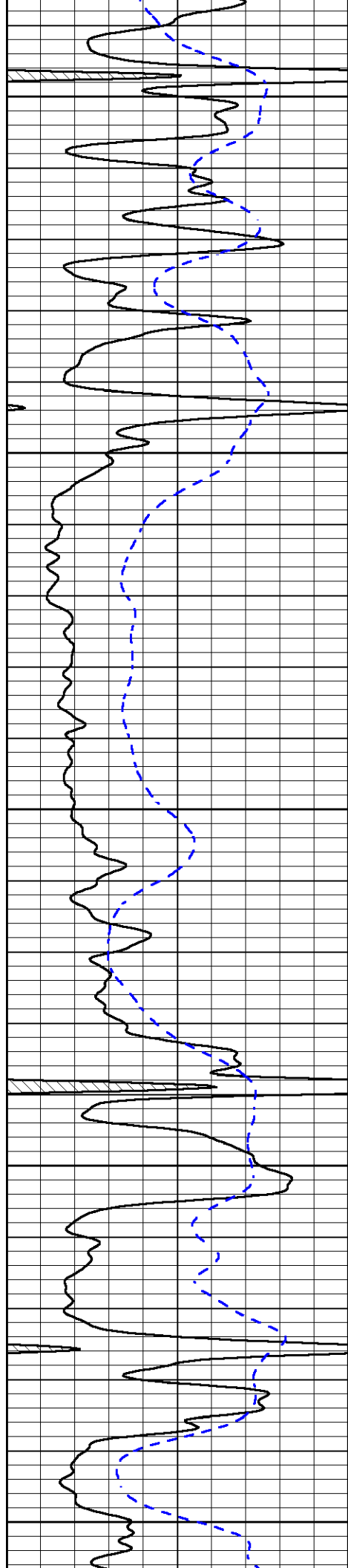
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3850

3900

3950





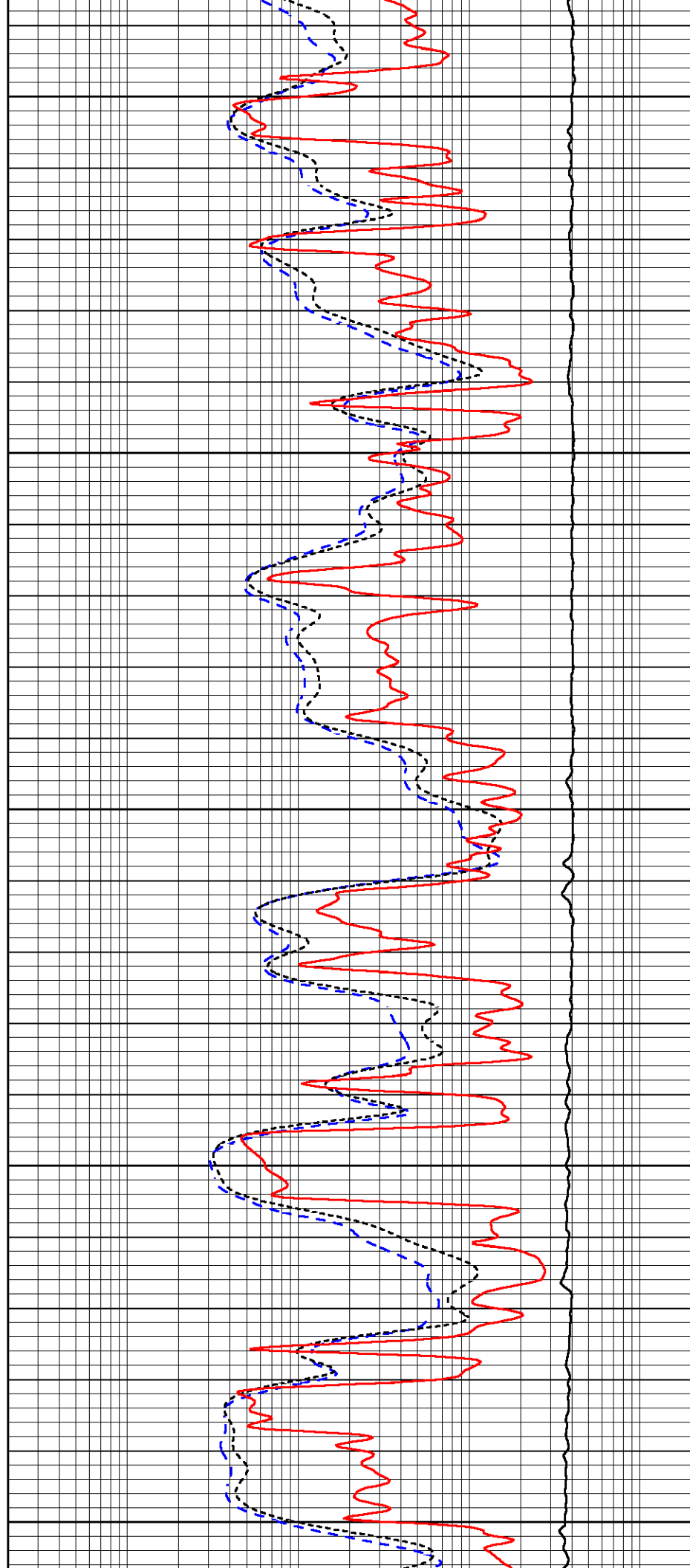
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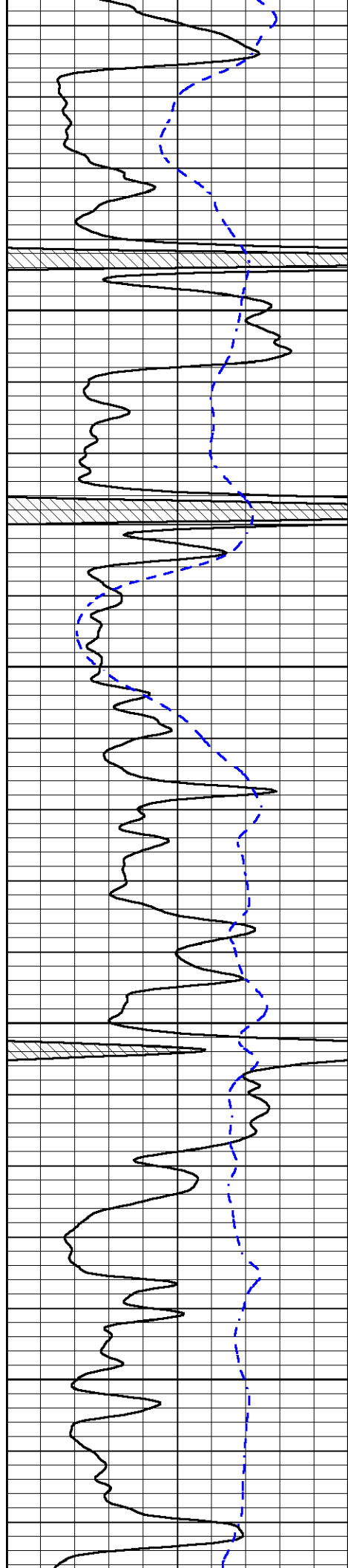
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4100

4150

4200



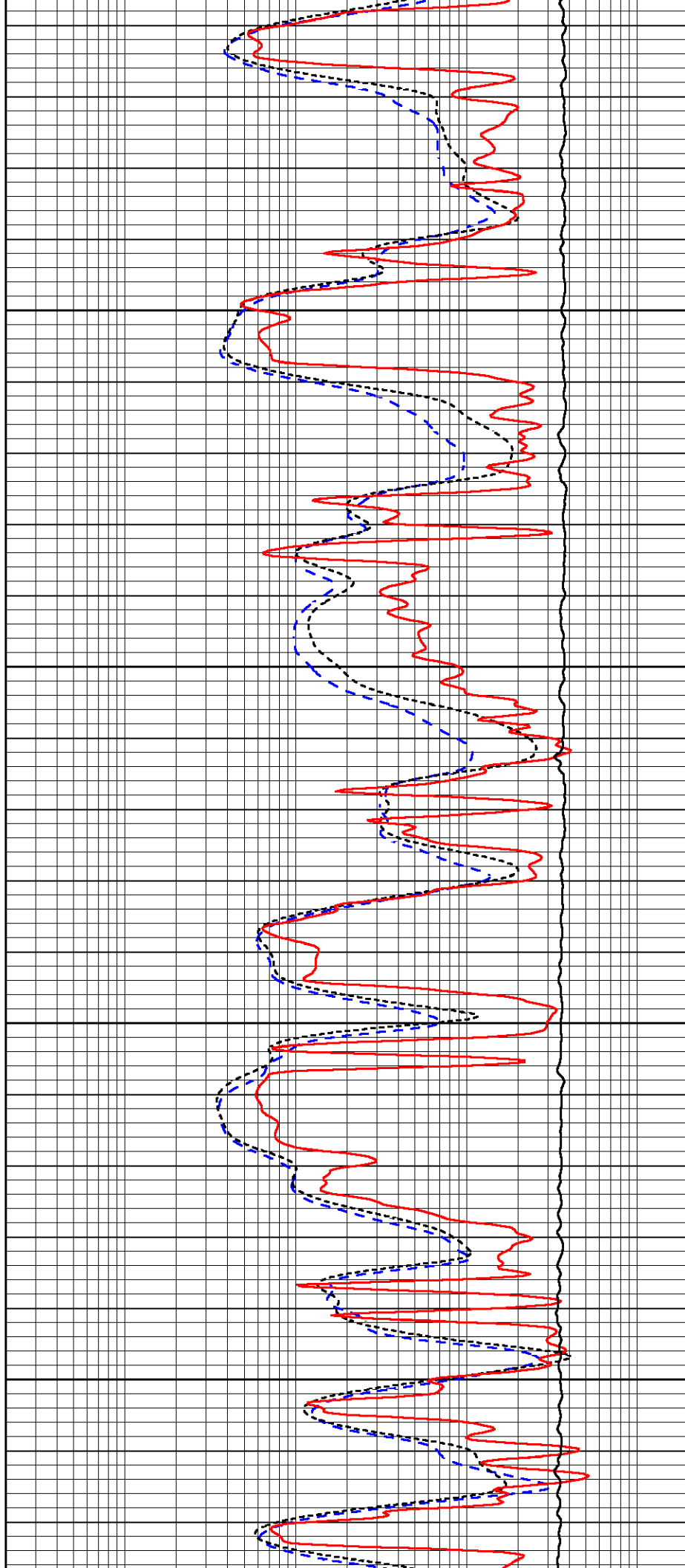


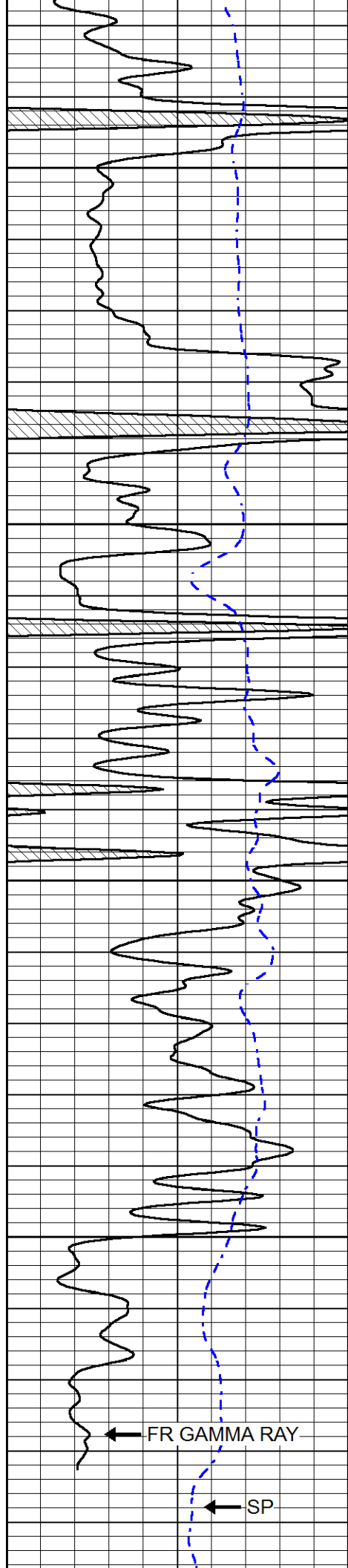
4250

4300

4350

4400





4450

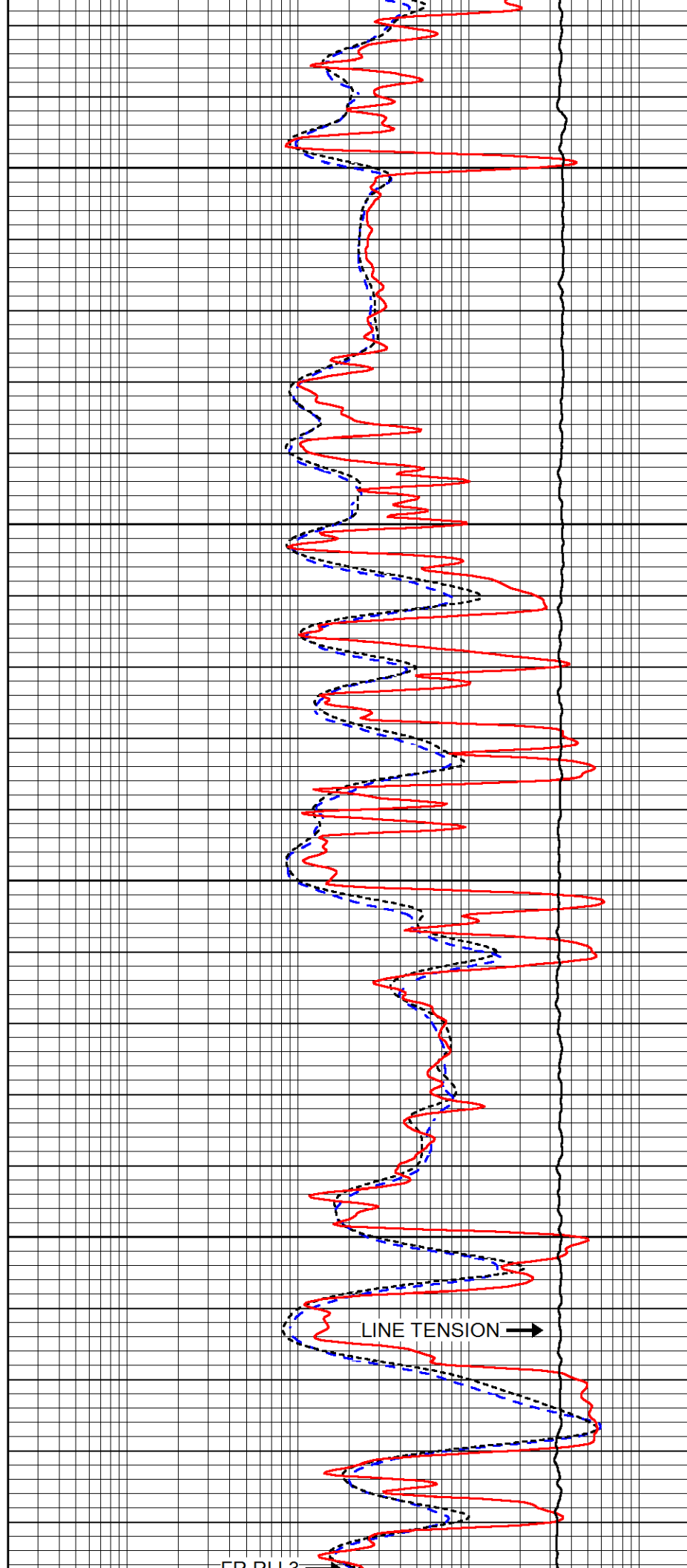
4500

4550

4600

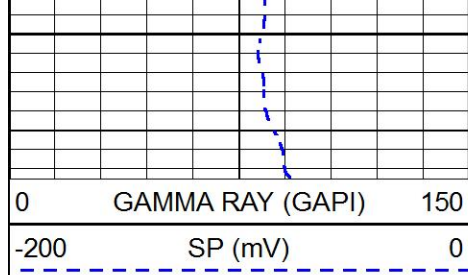
FR GAMMA RAY

SP

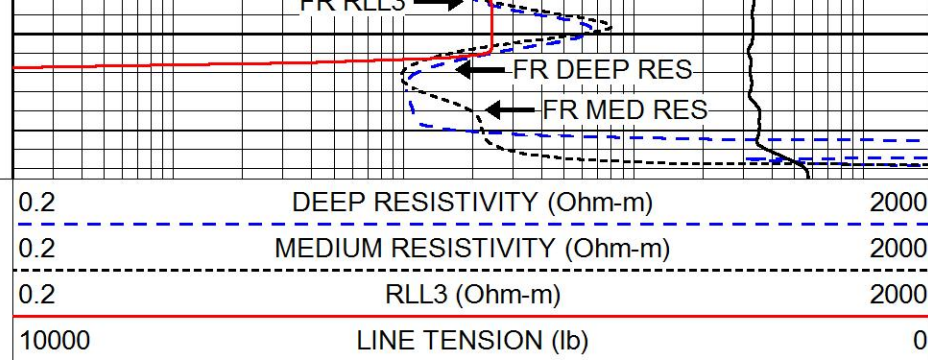


LINE TENSION →

FR PU 2

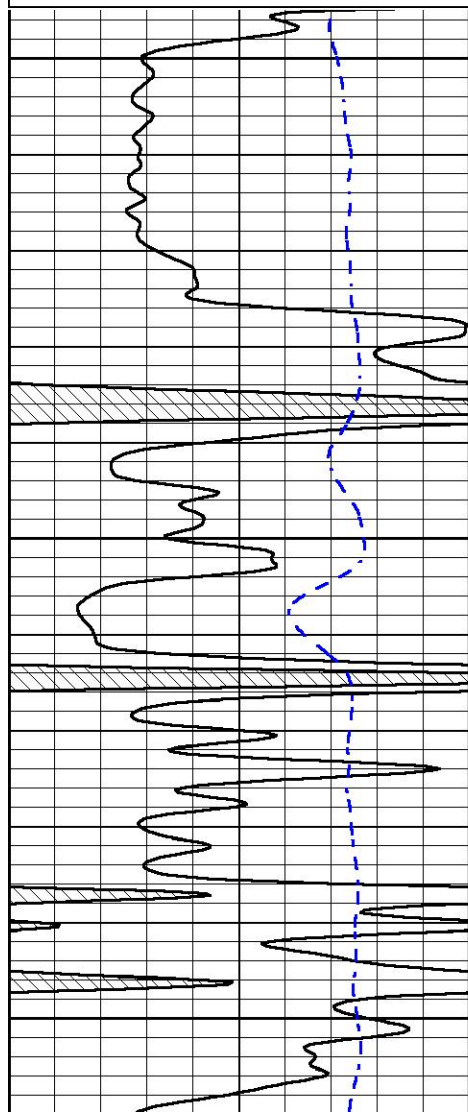
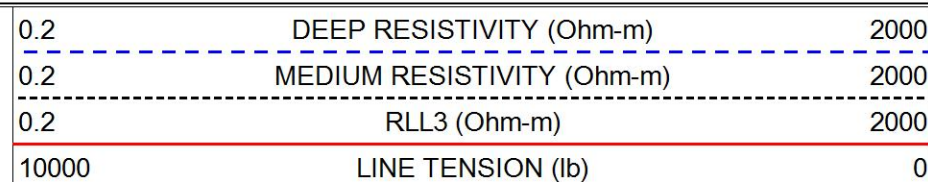
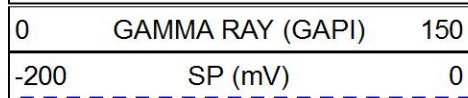


4650



REPEAT SECTION

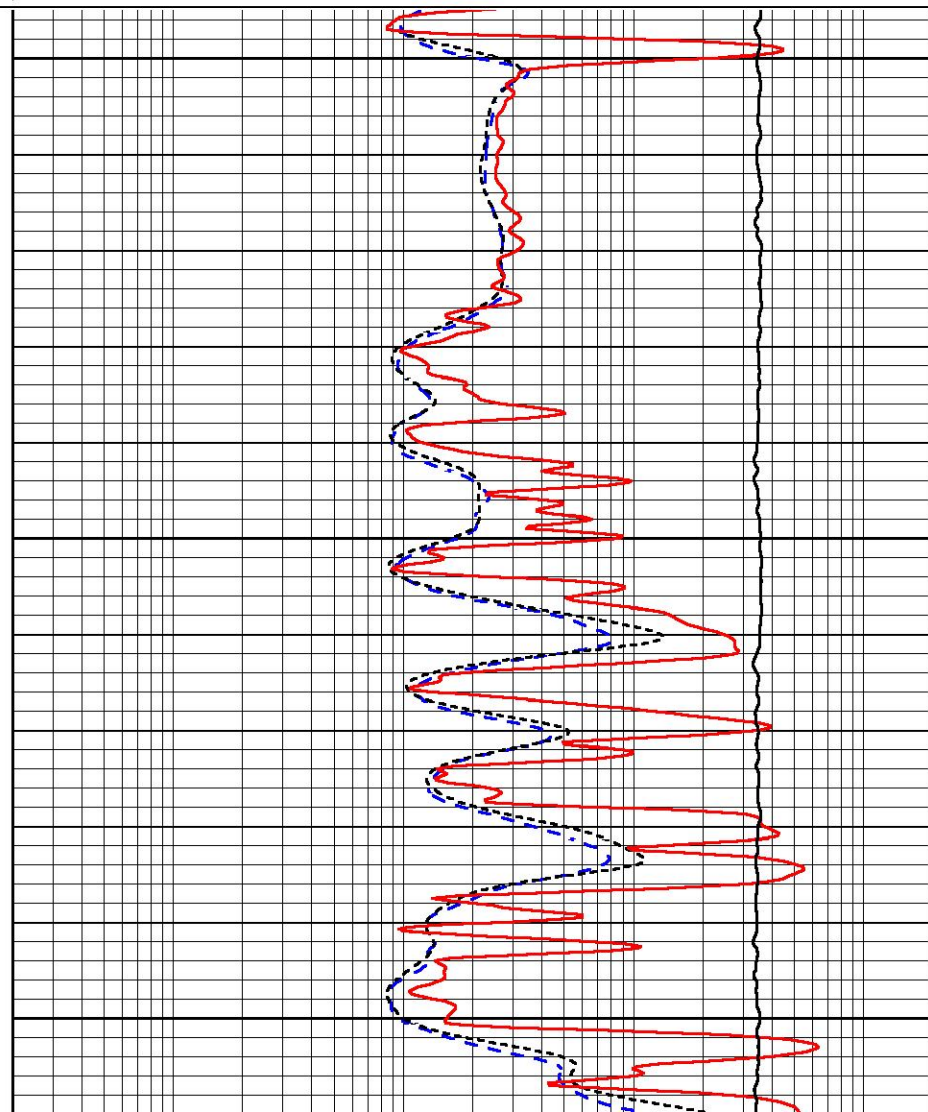
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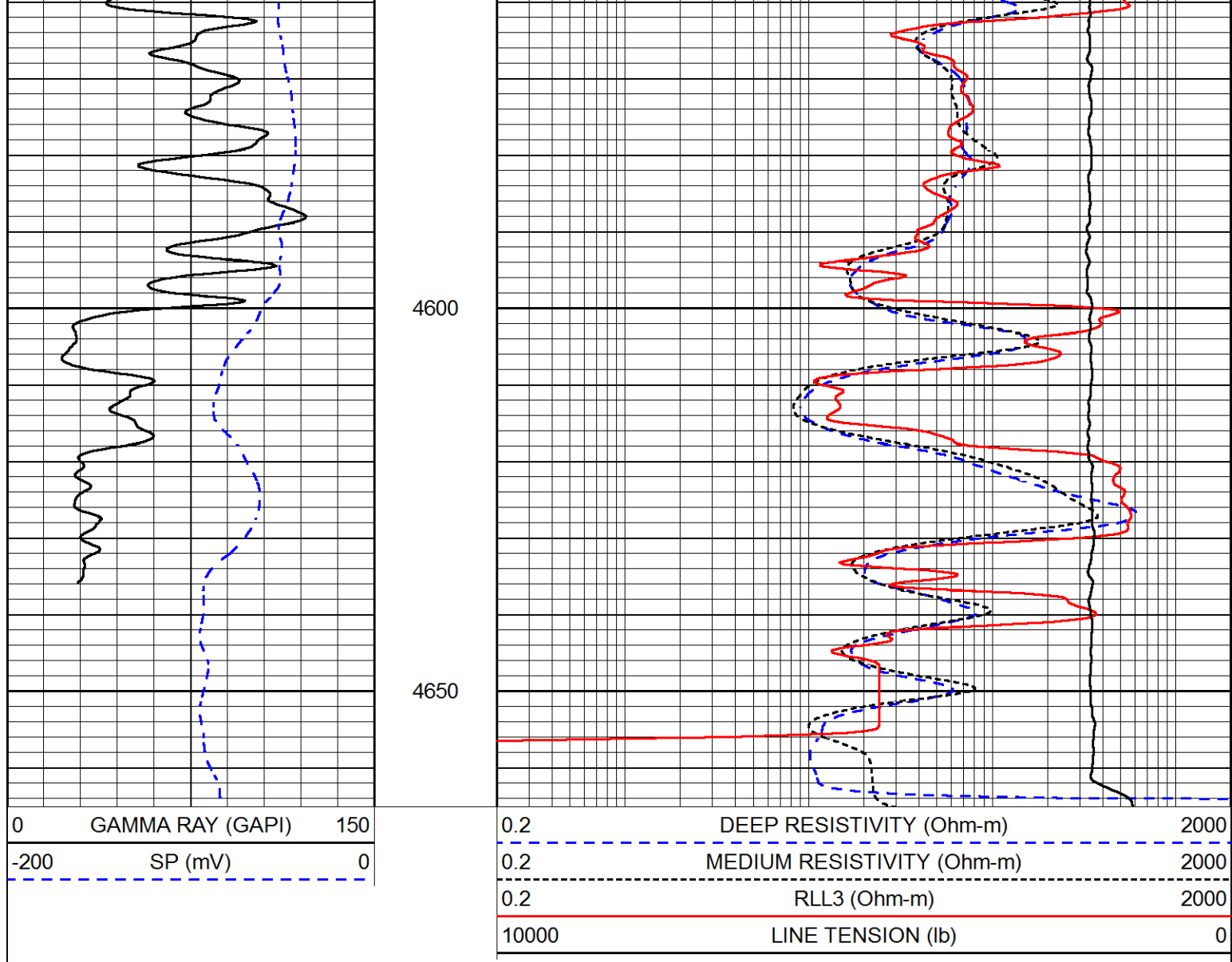


4450

4500

4550





Calibration Report	
Database File	bluegoose_hineman farms 1.db
Dataset Pathname	STACK/pass3.3
Dataset Creation	Sat Aug 25 00:54:25 2018

Dual Induction Calibration Report							
Serial-Model:				967 (HT)-PSI HIGH TEMP			
Calibration Performed:				Fri Aug 24 11:15:17 2018			
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-16.500
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-39.250

Compensated Density Calibration Report	
Serial-Model:	797-152-M&W
Source / Verifier:	16955B / 2ci
Master Calibration Performed:	Tue May 01 13:38:28 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4933.40	5500.86	cps
Aluminum	2.660	g/cc	928.80	3521.29	cps
Spine Angle = 75.04			Density/Spine Ratio = 0.524		
	Size		Reading		
Small Ring	5.00	in	1.09		
Large Ring	15.00	in	1.03		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: FRI AUG 24 10:30:30 2018

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: Fri Aug 24 11:16:10 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



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