



DUAL INDUCTION LOG

Company GORE OIL COMPANY
 Well LYND #7
 Field ZEMAN NORTH
 County TREGO
 State KANSAS

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 Well LYND #7
 Field ZEMAN NORTH
 County TREGO State KANSAS

Location: API #: 15-195-23082-00-00
 2310 FSL & 1320 FEL
 SEC 28 TWP 11S RGE 21W
 Permanent Datum GROUND LEVEL Elevation 2320'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 CNL/CDL
 MEL
 Elevation
 K.B. 2328'
 D.F. N/A
 G.L. 2320'

Date	4/1/2019
Run Number	ONE
Depth Driller	4125'
Depth Logger	4122'
Bottom Logged Interval	4121'
Top Log Interval	300'
Casing Driller	8.625" @ 312'
Casing Logger	312'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	5200
Density / Viscosity	9.1 43
pH / Fluid Loss	10.0 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.75 @ 76
Rmt @ Meas. Temp	0.56 @ 76
Rmc @ Meas. Temp	1.01 @ 76
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.49 @ 116
Operating Rig Time	3 HOURS
Max Rec. Temp. F	116
Equipment Number	P-24
Location	HAYS
Recorded By	IAN MABB
Witnessed By	CHUCK SCHMULTZ

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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.

I-70 & RIGA RD, NORTH TO F RD, 1/2 MILE NORTH AND WEST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: IAN MABB	Primary Witness: CHUCK SCHMULTZ
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\gore_lynd_7.db
Dataset field/well/stackmel/pass5.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	116	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	5	3	186	56	Off	4122

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (96-916)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
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

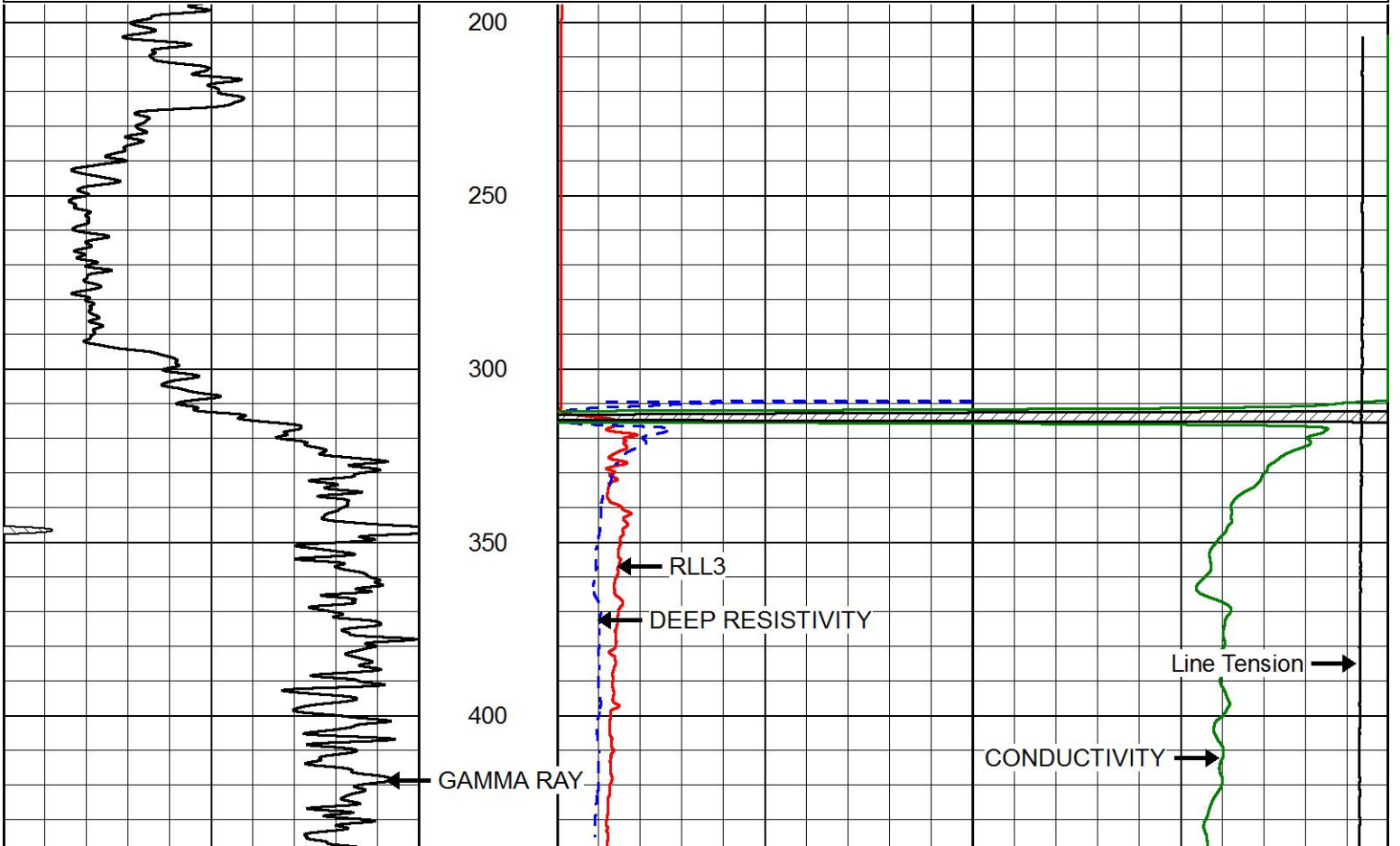
Dataset: gore_lynd_7.db: field/well/stackmel/pass5.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

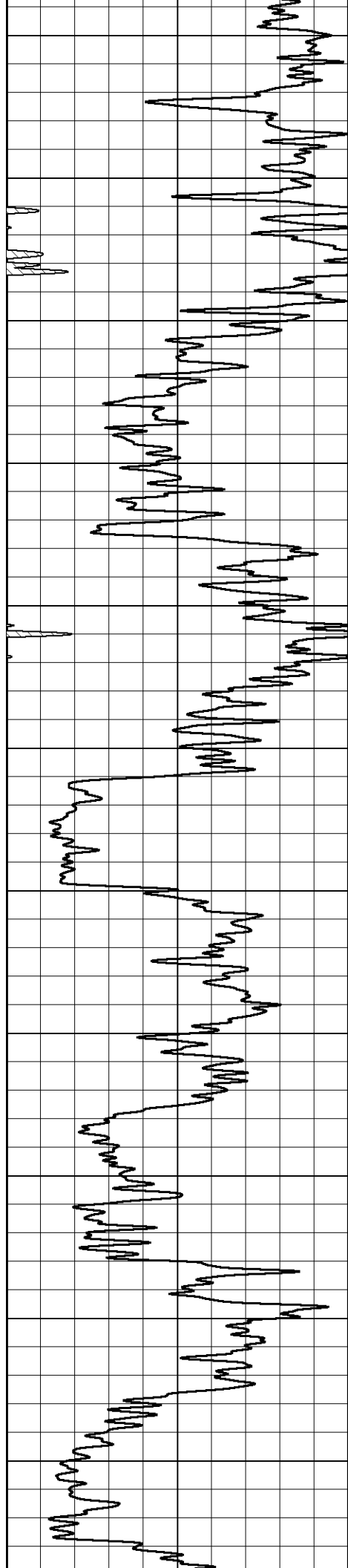


MAIN PASS

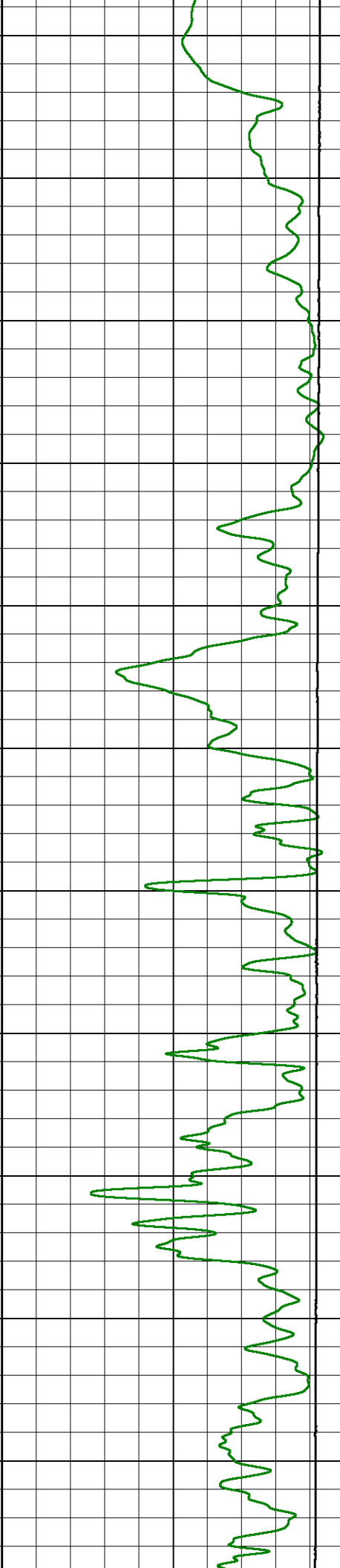
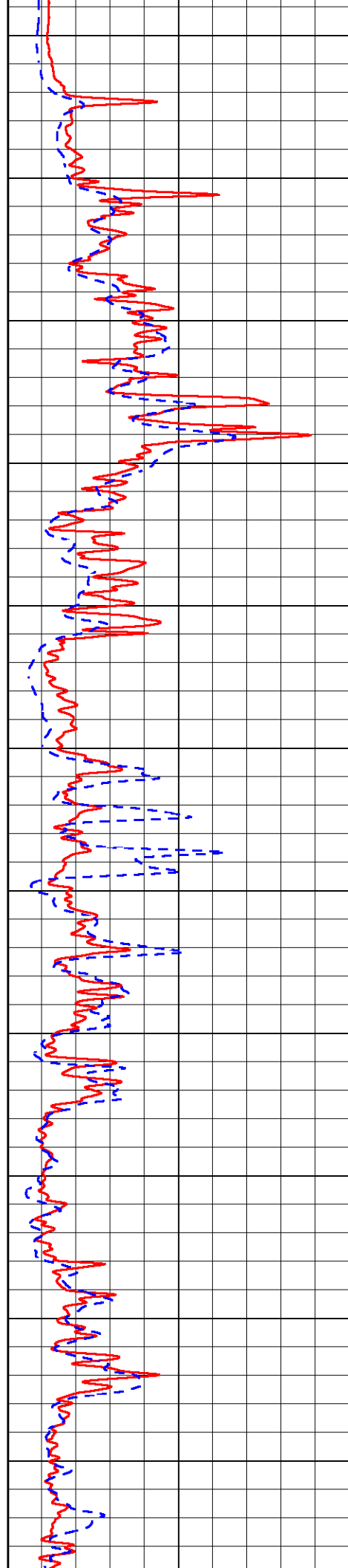
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 Dataset Pathname: stackmel/pass6.1
 Presentation Format: _dil2in
 Dataset Creation: Mon Apr 01 14:13:58 2019
 Charted by: Depth in Feet scaled 1:600

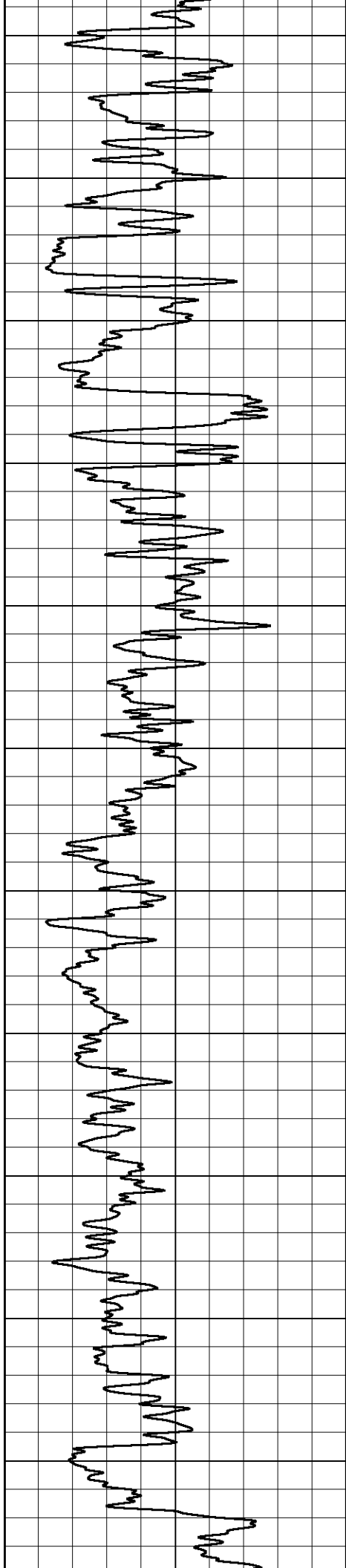
GAMMA RAY (GAPI)	0	150	1000	CONDUCTIVITY (mmho/m)	0	
			15000	Line Tension (lb)	0	
			0	RLL3 (Ohm-m)	50	
			0	DEEP RESISTIVITY (Ohm-m)	50	
			50	RLL3 (Ohm-m)	500	
			50	Deep Resistivity (Ohm-m)	500	



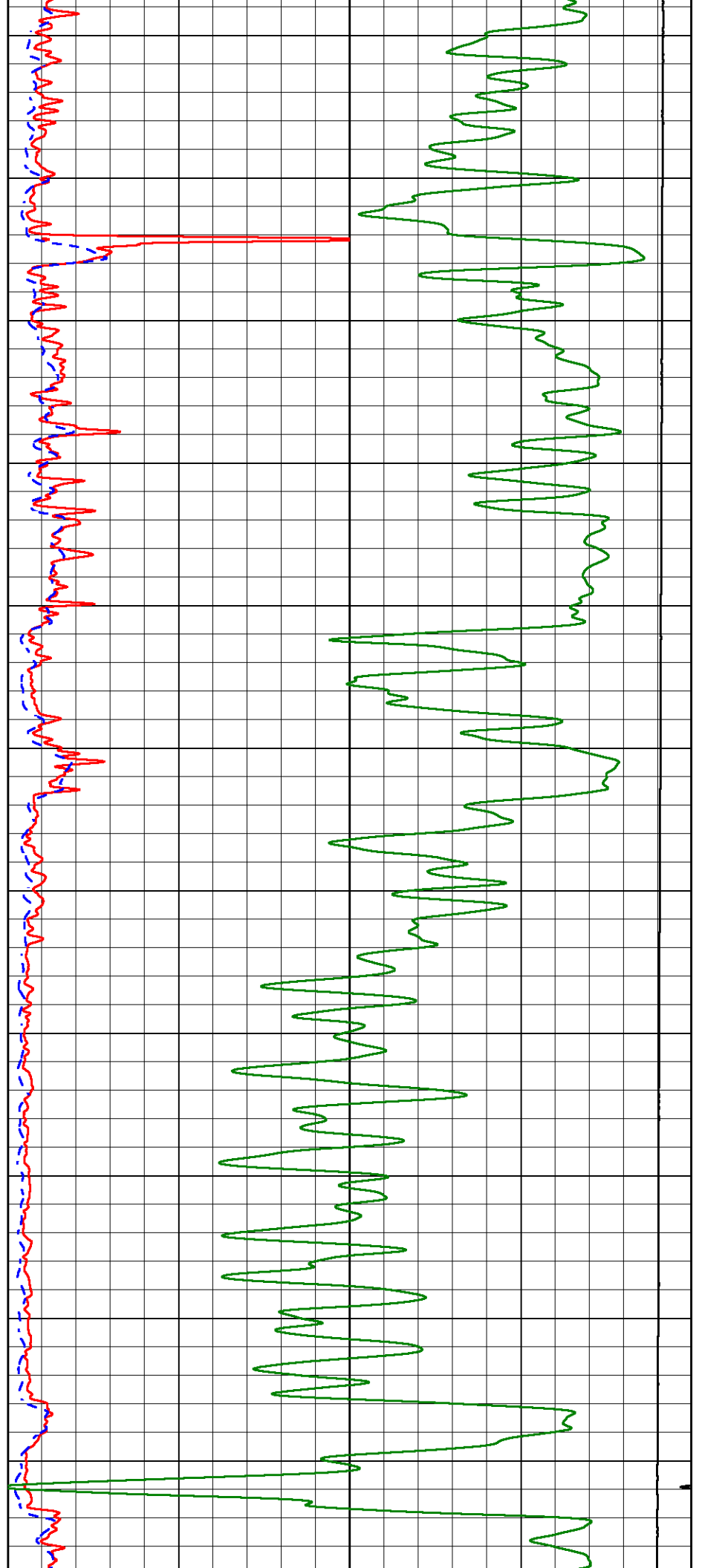


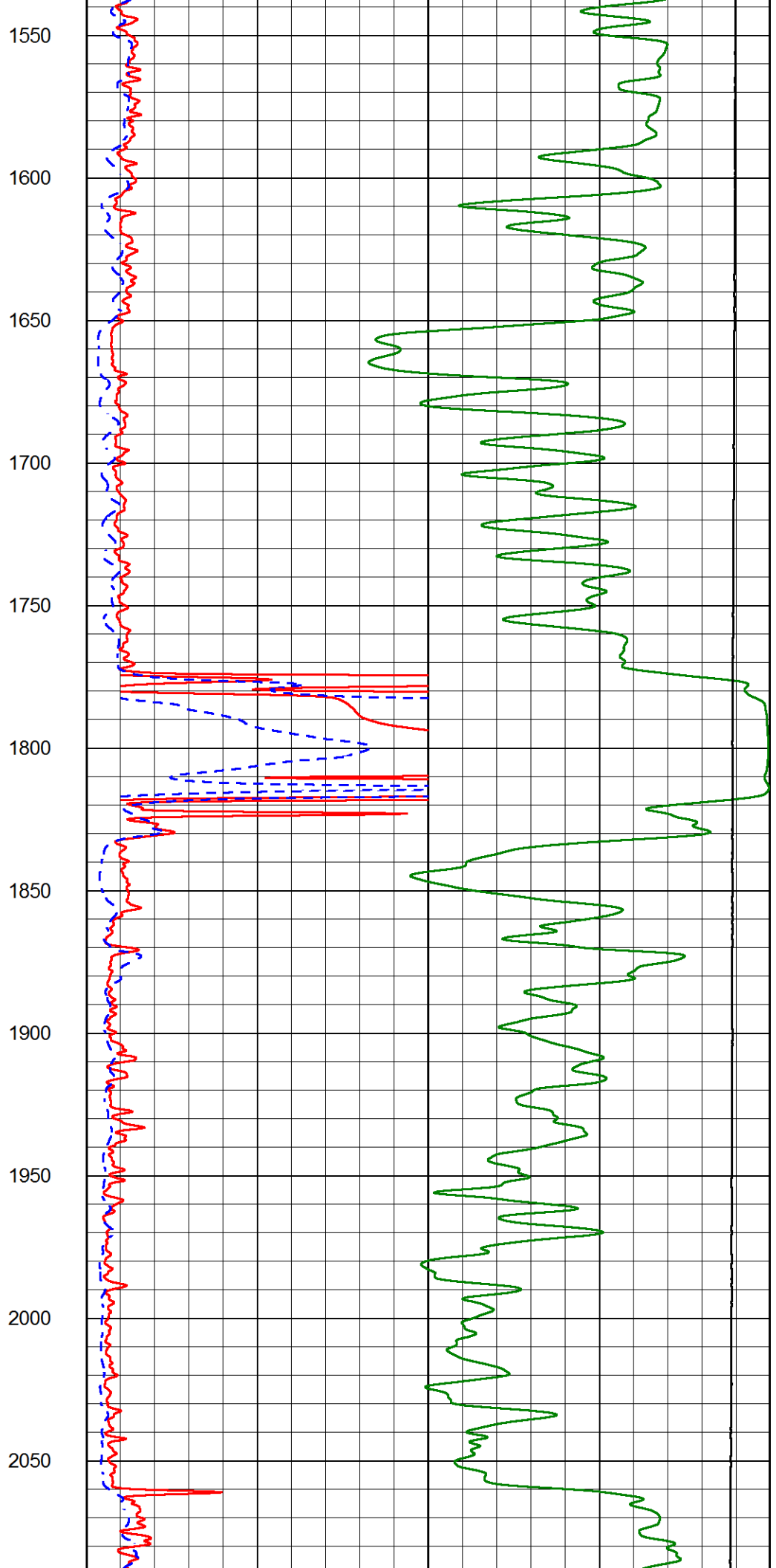
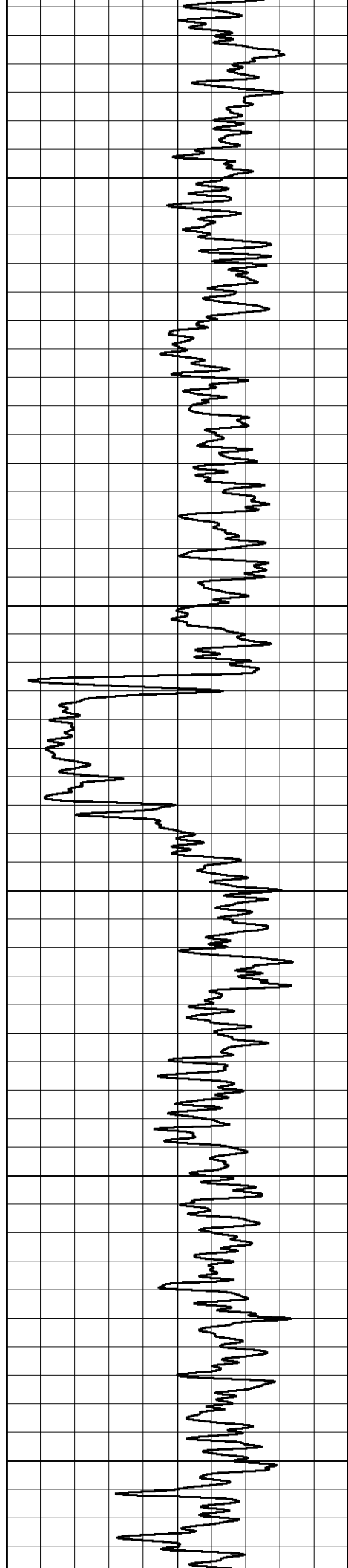
450
500
550
600
650
700
750
800
850
900
950

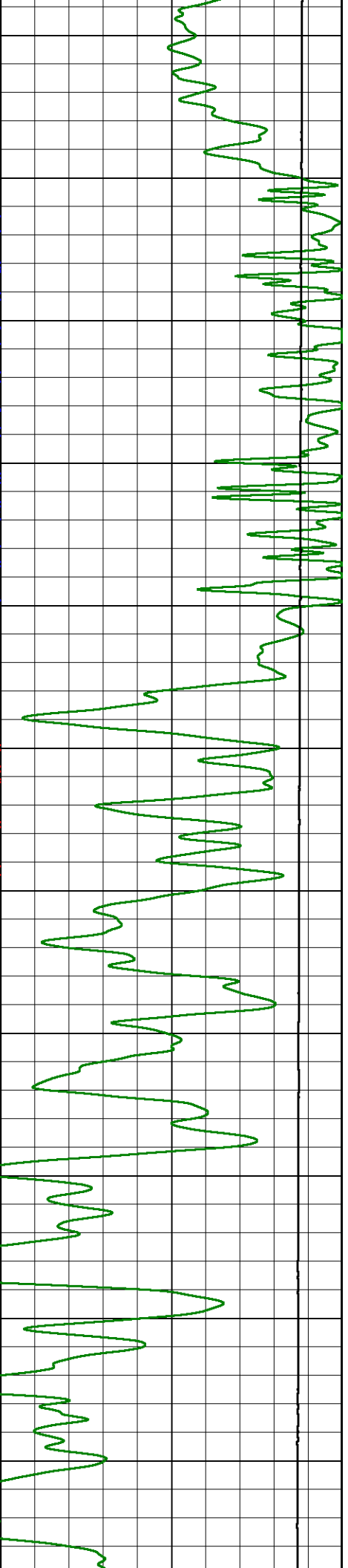
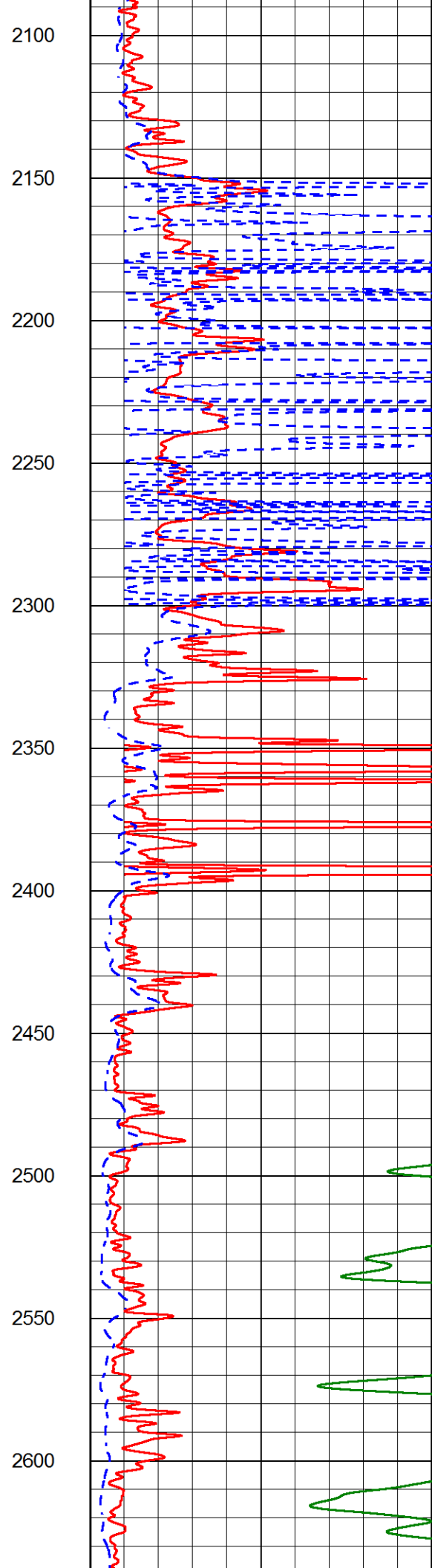
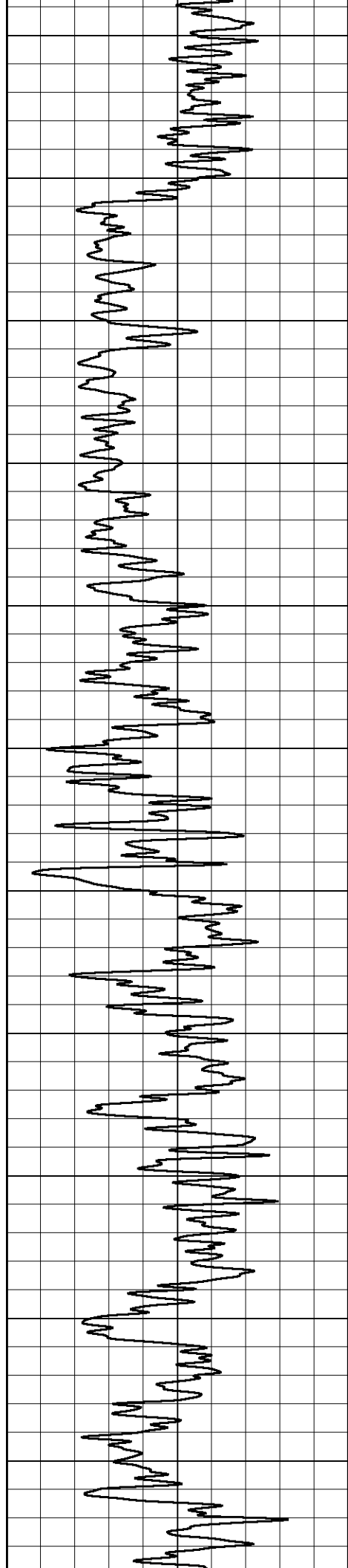


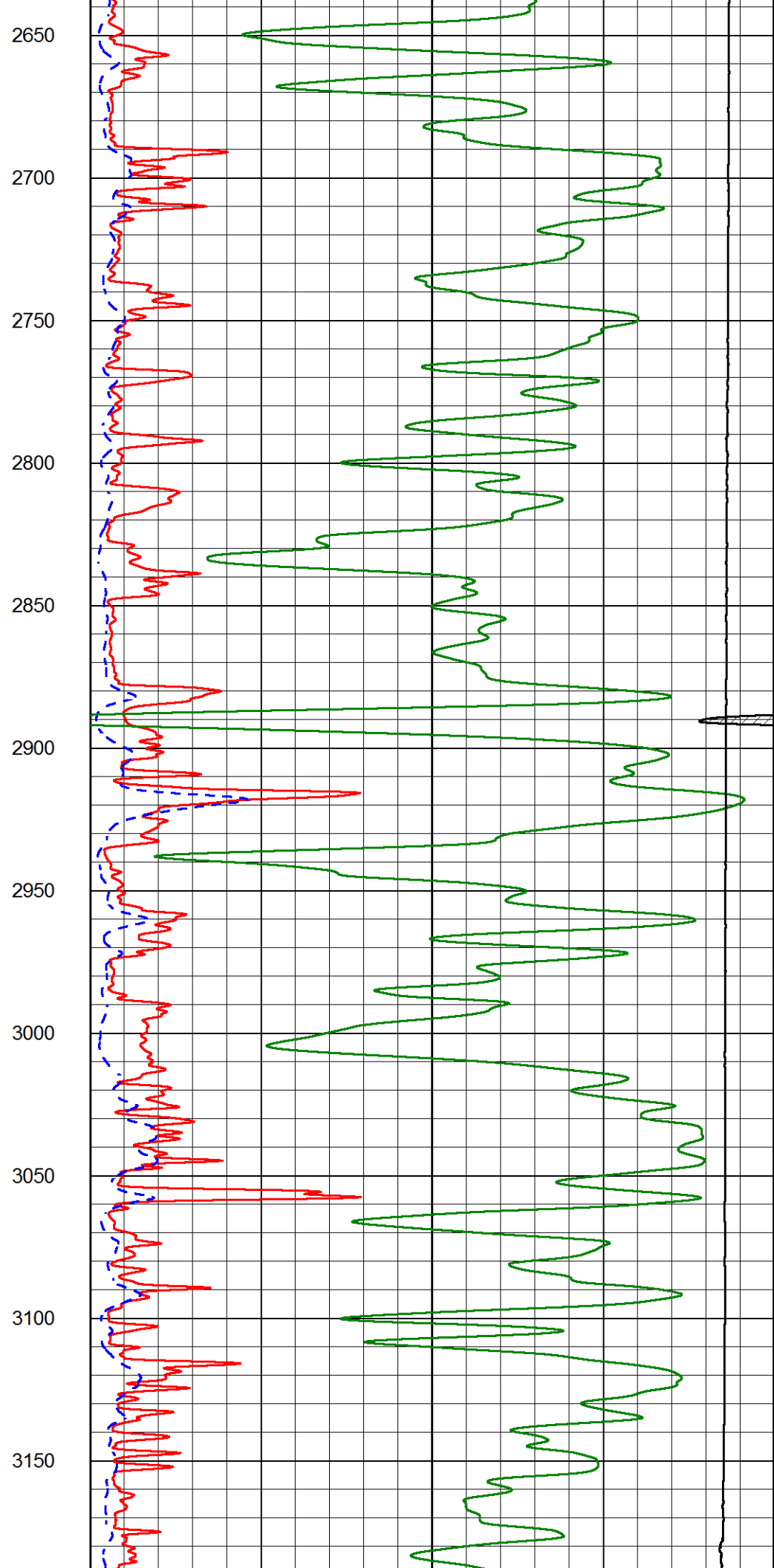
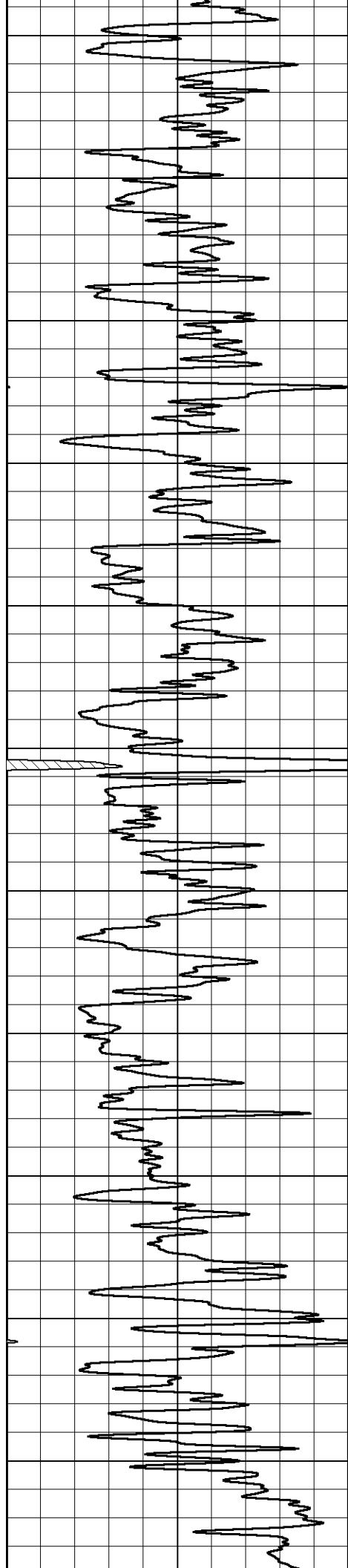


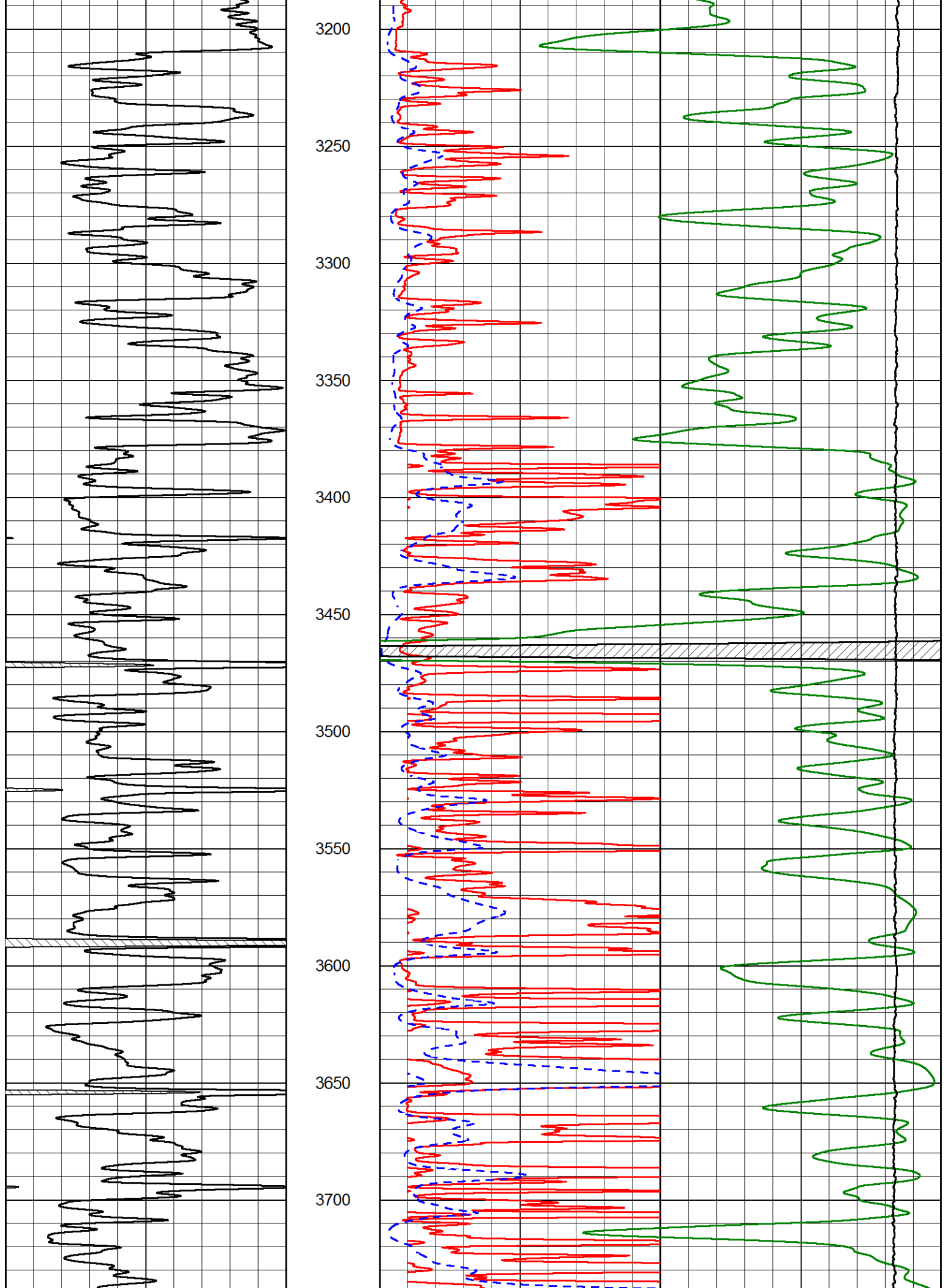
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

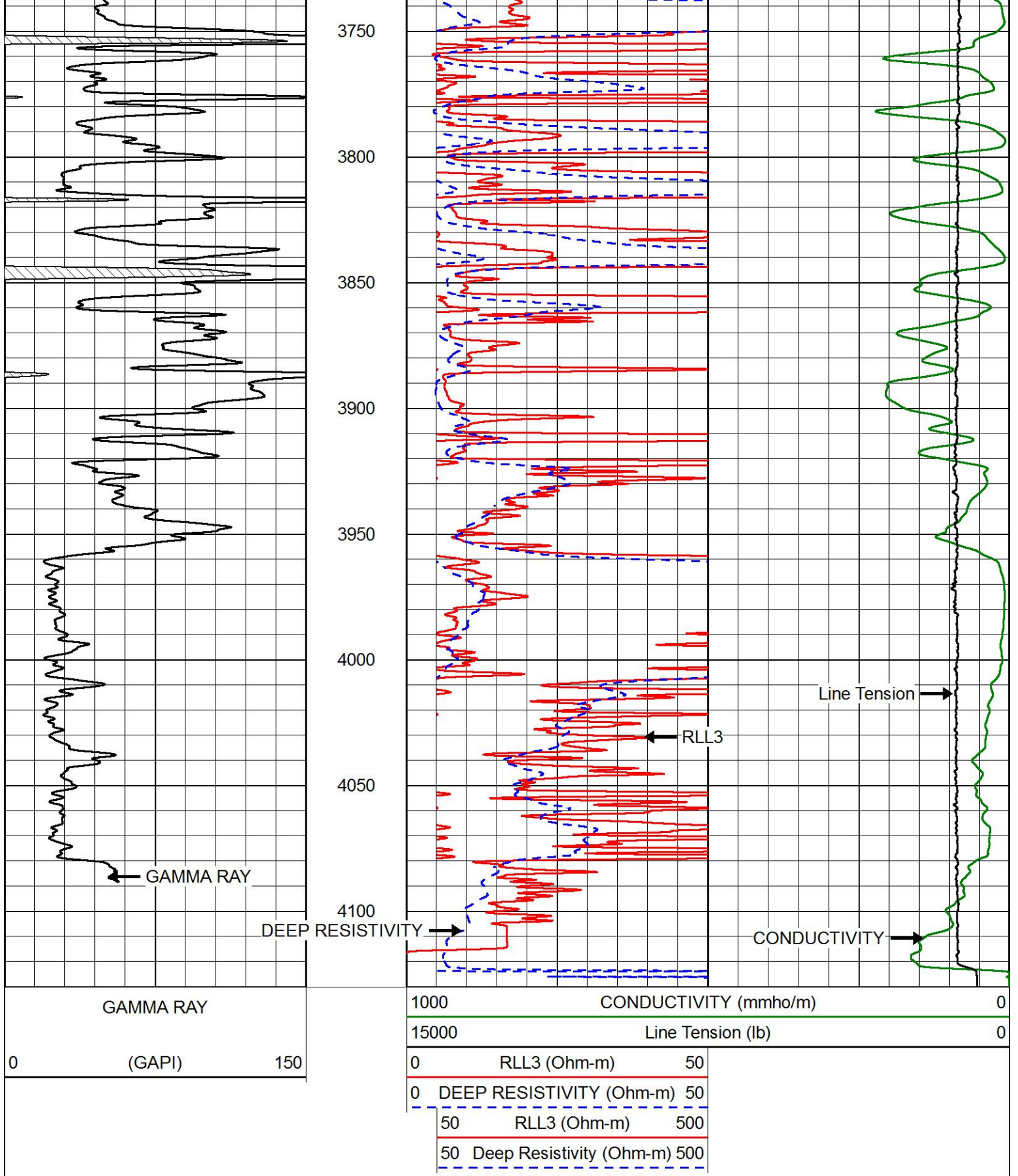








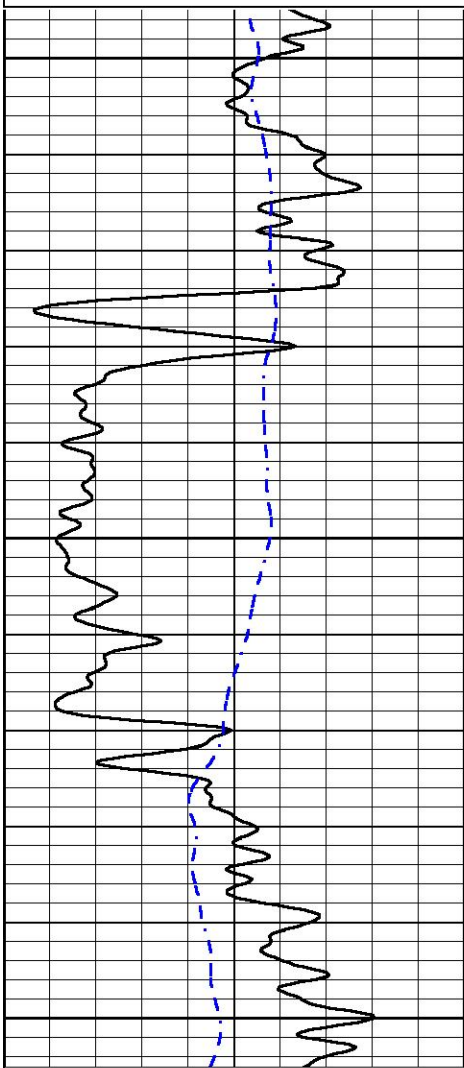




MAIN PASS

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

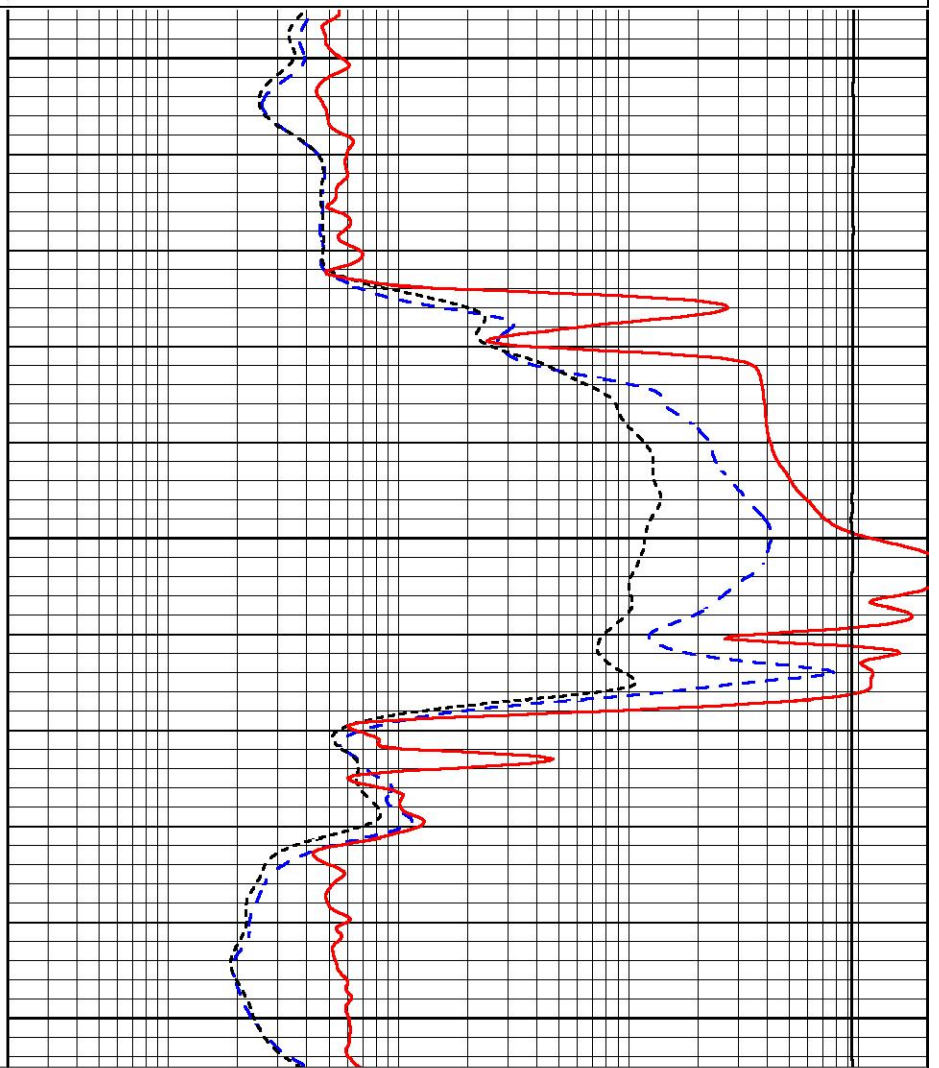


1750

1800

1850

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



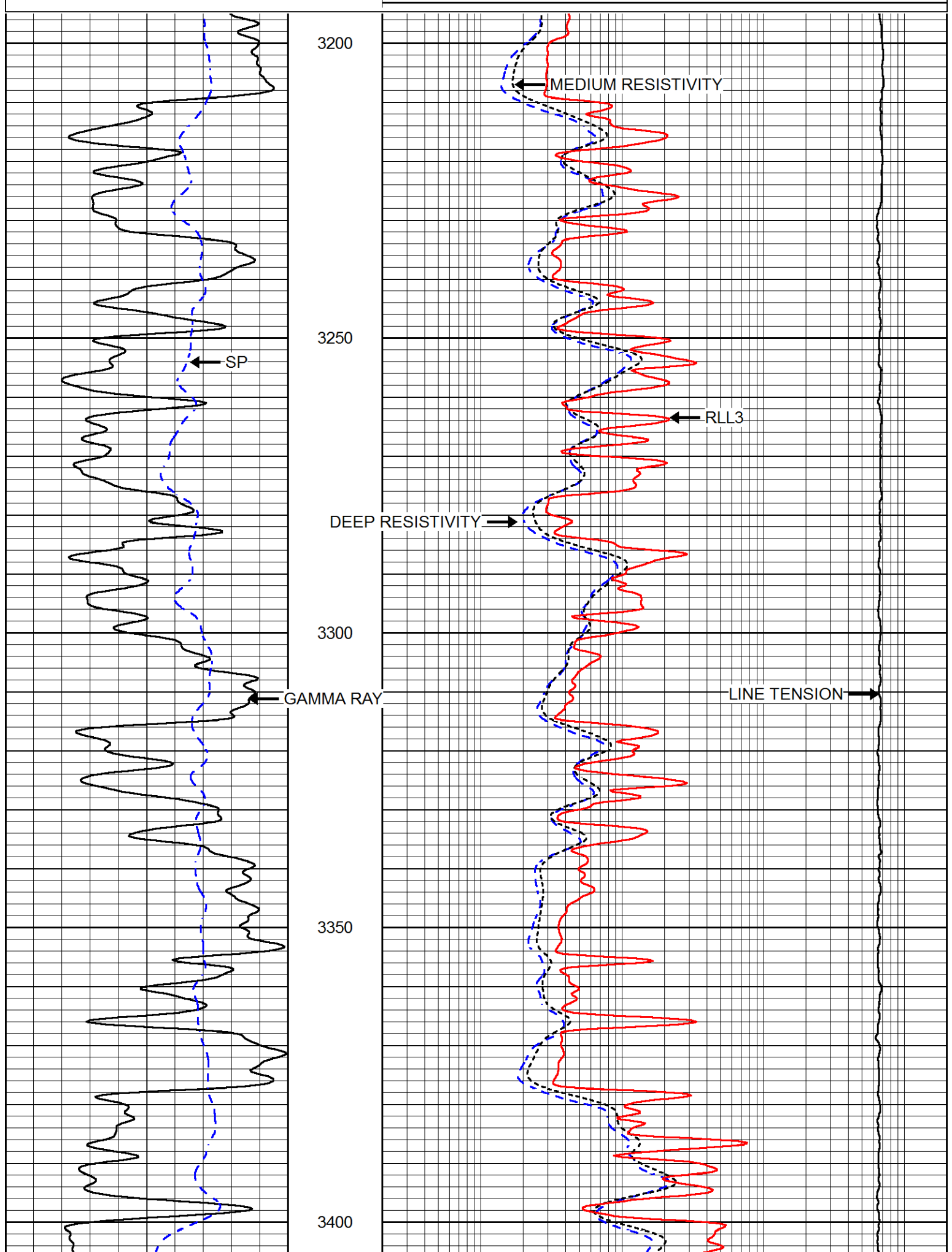
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0

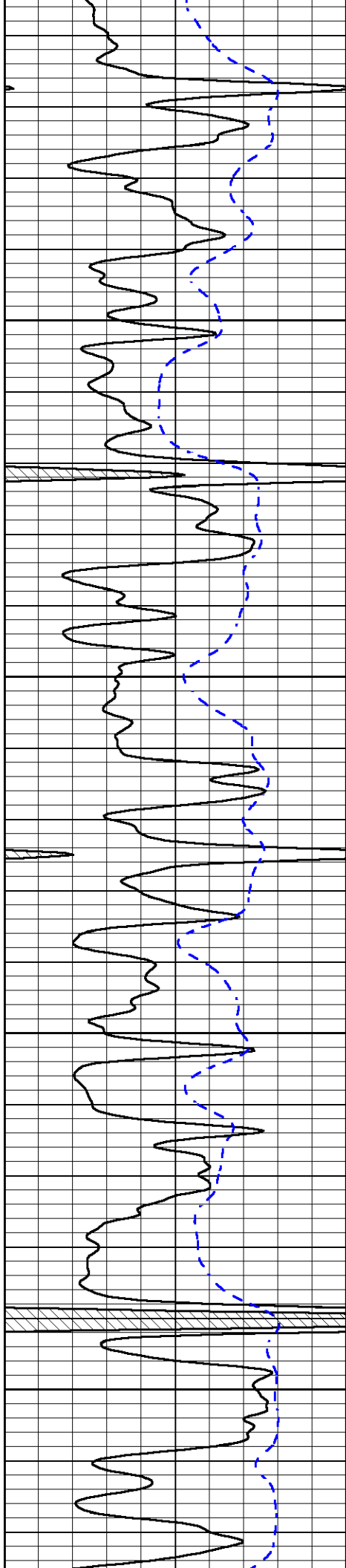


MAIN PASS

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

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000



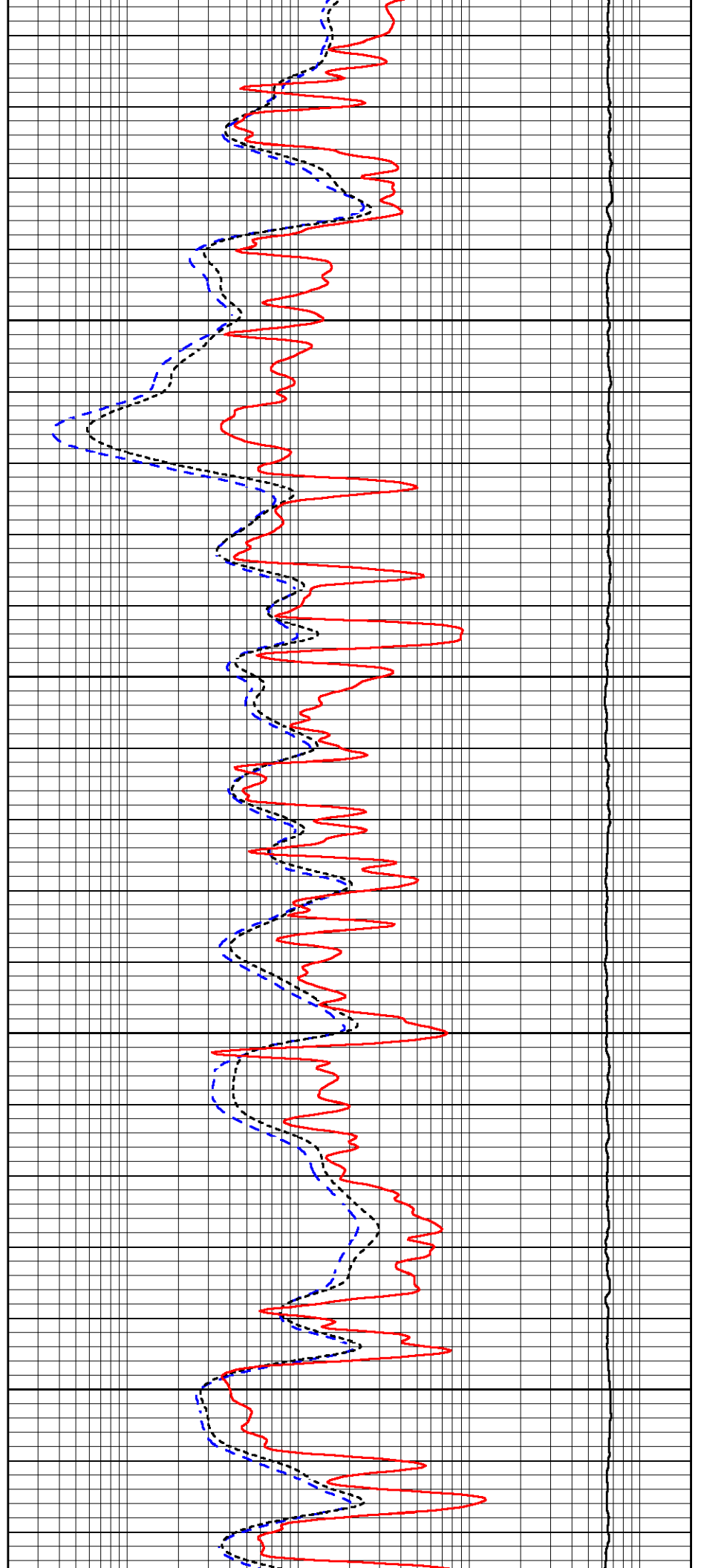


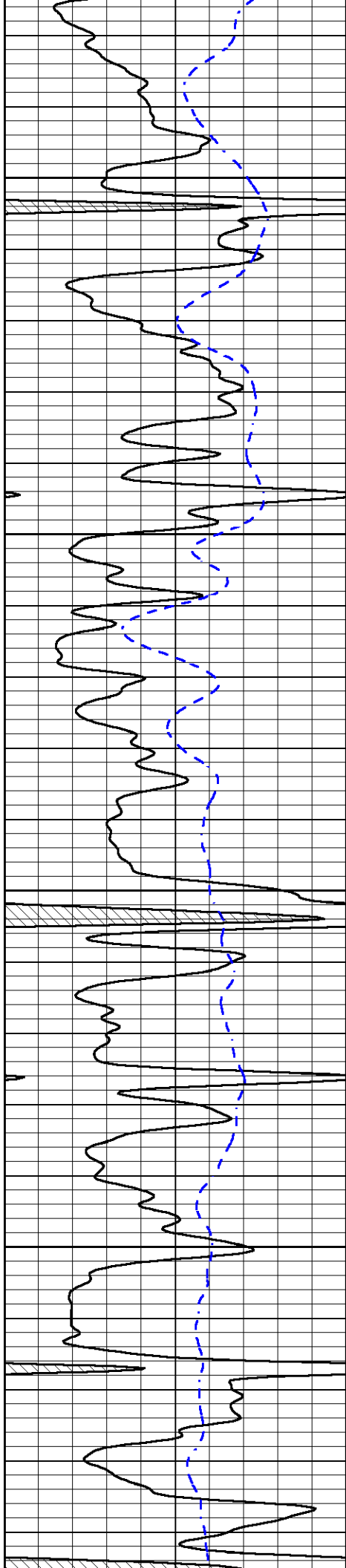
3450

3500

3550

3600



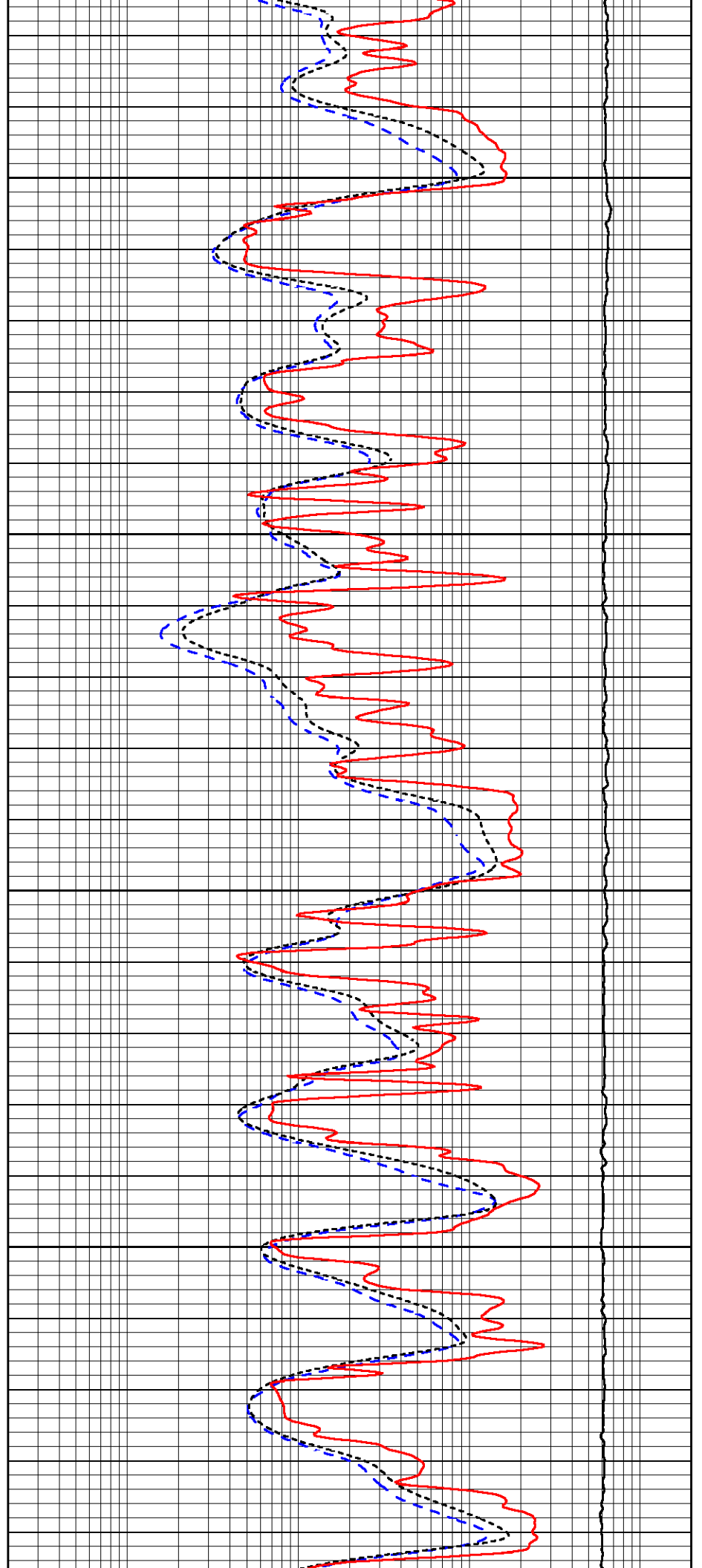


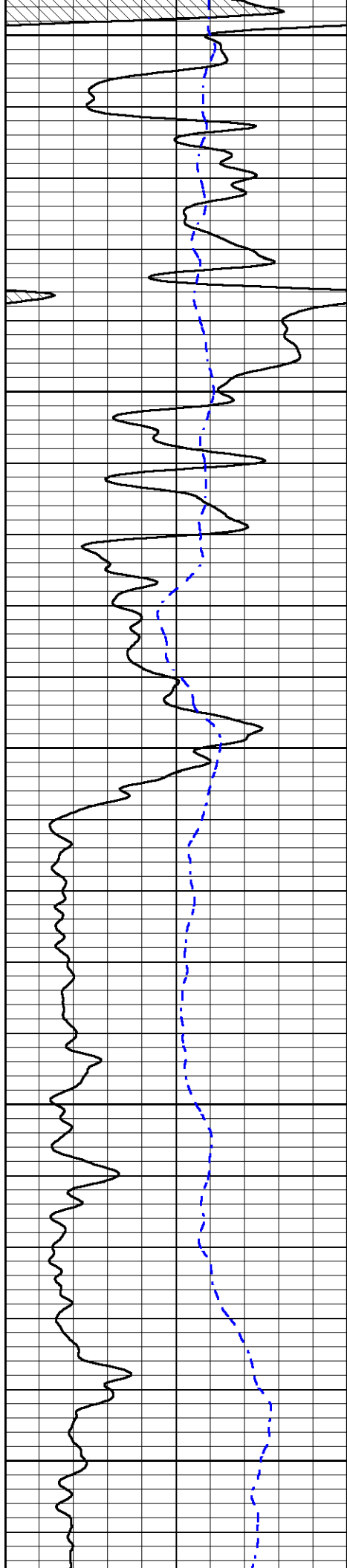
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3700

3750

3800





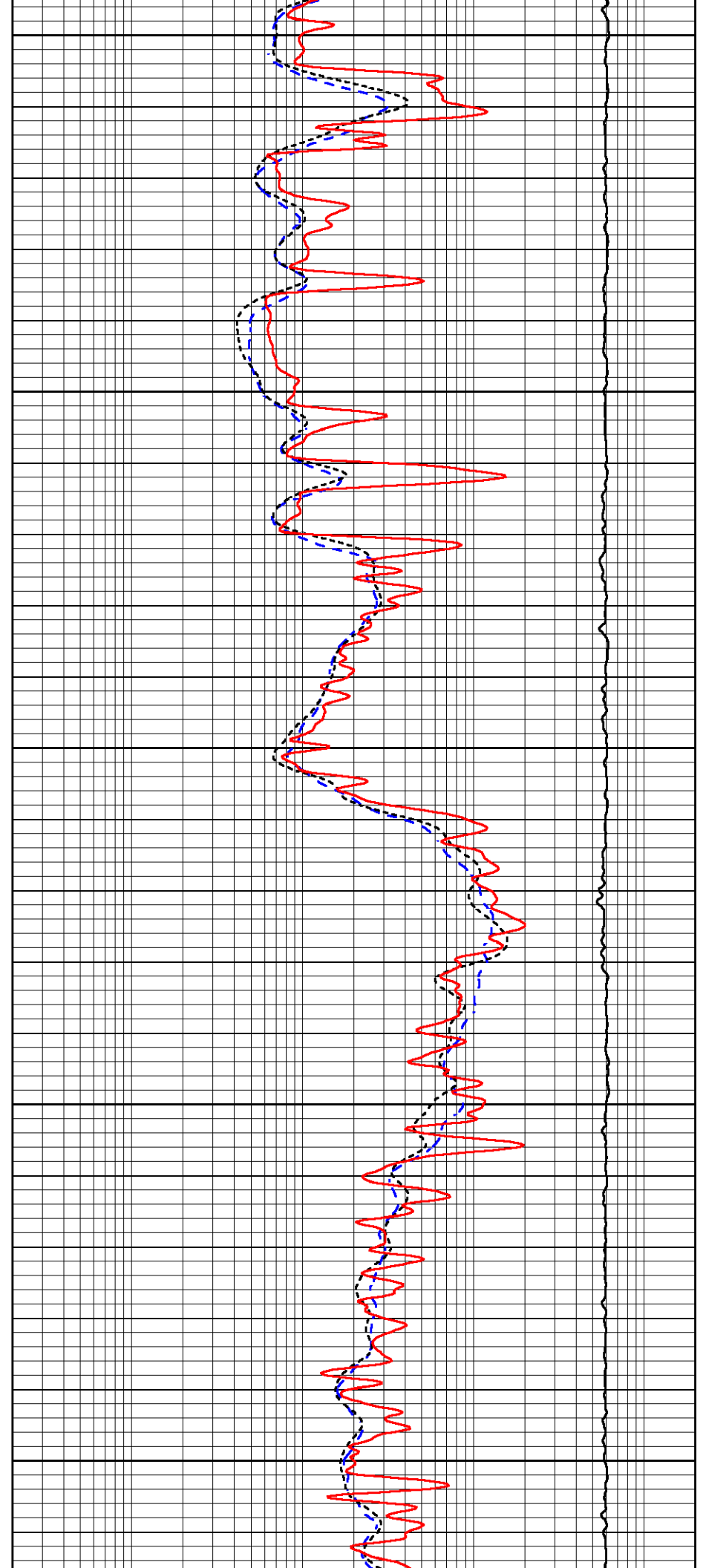
3850

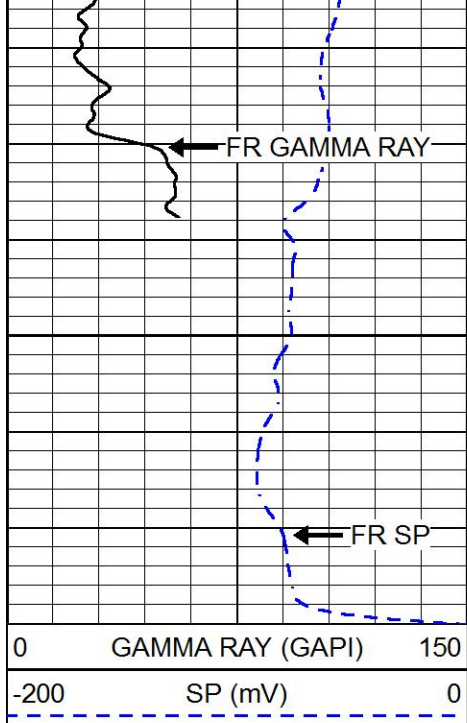
3900

3950

4000

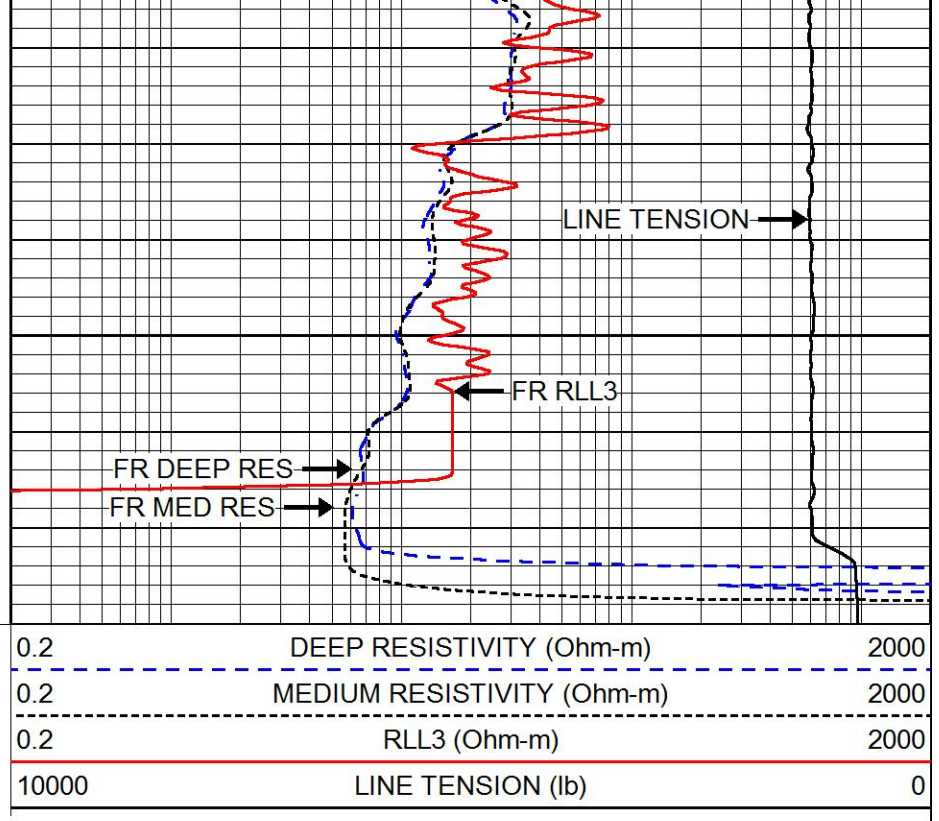
4050





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

4100



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

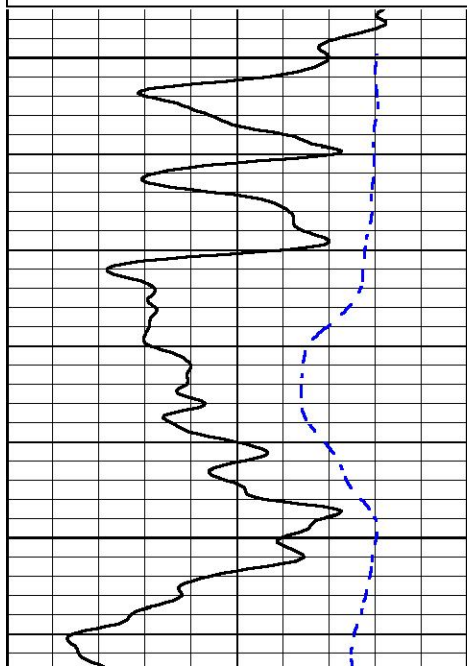


REPEAT SECTION

Database File gore_lynd_7.db
 Dataset Pathname stackmel/pass4.1
 Presentation Format _dil
 Dataset Creation Mon Apr 01 13:28:18 2019
 Charted by Depth in Feet scaled 1:240

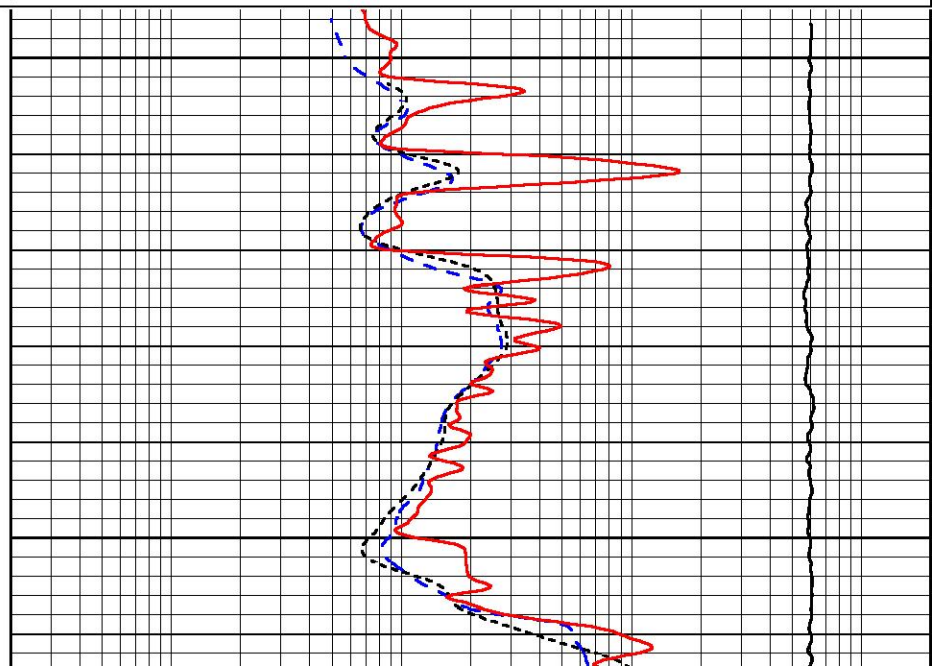
0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

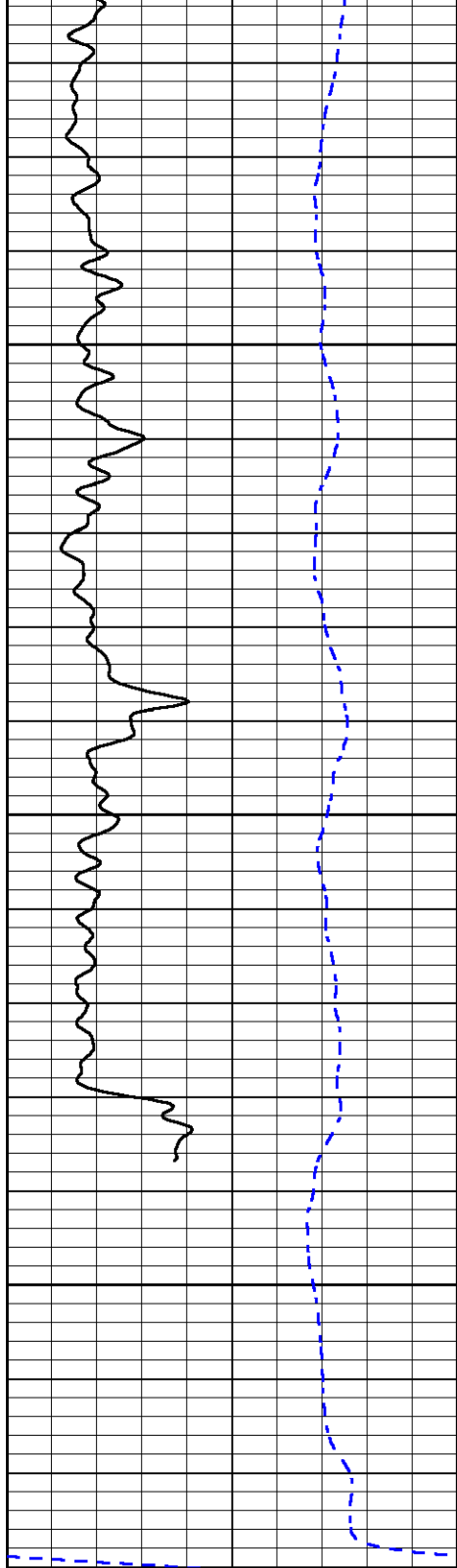
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0



3900

3950



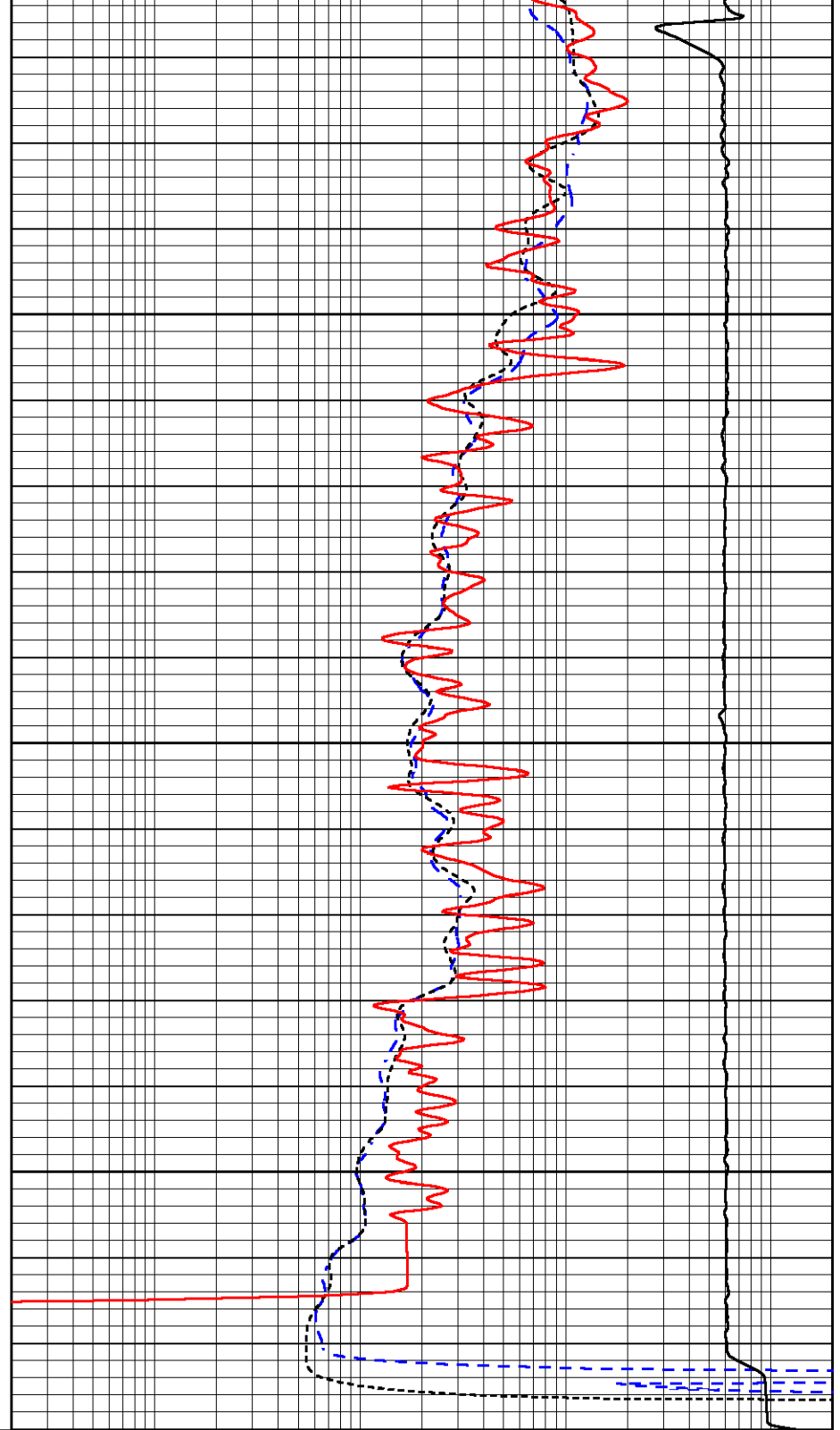


0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

4000

4050

4100



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 gore_lynd_7.db
 Dataset Pathname stackmel/pass5.1
 Dataset Creation Mon Apr 01 13:43:01 2019

Dual Induction Calibration Report

Serial-Model:

967 (HT)-PSI HIGH TEMP

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.565	-17.500
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.390	-40.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sun Feb 24 09:53:40 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	30000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9000

Compensated Density Calibration Report

Serial-Model: 96-916-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Mar 27 11:00:53 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8943.64	10054.60	cps
Aluminum	2.655	g/cc	1595.61	6242.82	cps
Spine Angle = 74.54			Density/Spine Ratio = 0.503		
	Size		Reading		
Small Ring	6.00	in	1.75		
Large Ring	16.00	in	1.46		

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: 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



PIONEER

Pioneer Energy Services

Company	GORE OIL COMPANY
Well	LYND #7
Field	ZEMAN NORTH
County	TREGO
State	KANSAS