



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company **CONCORDE RESOURCES CORP.**
Well **RETA NO. 2-27**
Field **WILDCAT**
County **LOGAN**
State **KANSAS**

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Location: API #: 15-109-21515-00-00
1924' FNL & 335' FEL
38.723883988
-101.077984948
SEC 27 TWP 15S RGE 34W
Permanent Datum **GROUND LEVEL Elevation 2977'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**
Other Services
CNL/CDL
MEL
Elevation
K.B. 2987'
D.F. N/A
G.L. 2977'

Date	8/2/2017		
Run Number	ONE		
Depth Driller	4658'		
Depth Logger	4657'		
Bottom Logged Interval	4656'		
Top Log Interval	300'		
Casing Driller	8.625" @ 306'		
Casing Logger	303'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4,500		
Density / Viscosity	9.1 51		
pH / Fluid Loss	10.5 9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.65 @ 65		
Rmt @ Meas. Temp	.49 @ 65		
Rmc @ Meas. Temp	.88 @ 65		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.34 @ 123		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	123 DEGF		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	LARRY NICHOLSON		

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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.

OAKLEY KANSAS

SOUTH TO GOLD, WEST TO 390, SOUTH TO ELK, WEST TO 340,
SOUTH TO COYOTE, WEST TO 320, 1/2 SOUTH, WEST INTO
(NEXT TO GRAIN BINS)

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: J. HENRICKSON

Operator:

Operator:

Operator:

This Log Record Was Witnessed By

Primary Witness: LARRY NICHOLSON

Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 123	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -360	degF 75	Off	ft 4657

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (168-986)	8.50	4.00	250.00
ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58				7.58	4.00	65.00
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

CILM

4.70

SP

0.20

Dataset: concorde_reta_2_27.db: field/well/stackml/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

**PIONEER**

Pioneer Energy Services

MAIN PASS

Database File concorde_reta_2_27.db
Dataset Pathname stackml/pass3.1
Presentation Format dil2in
Dataset Creation Wed Aug 02 23:17:08 2017
Charted by Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 150

2000 CONDUCTIVITY (mmho/m) 0

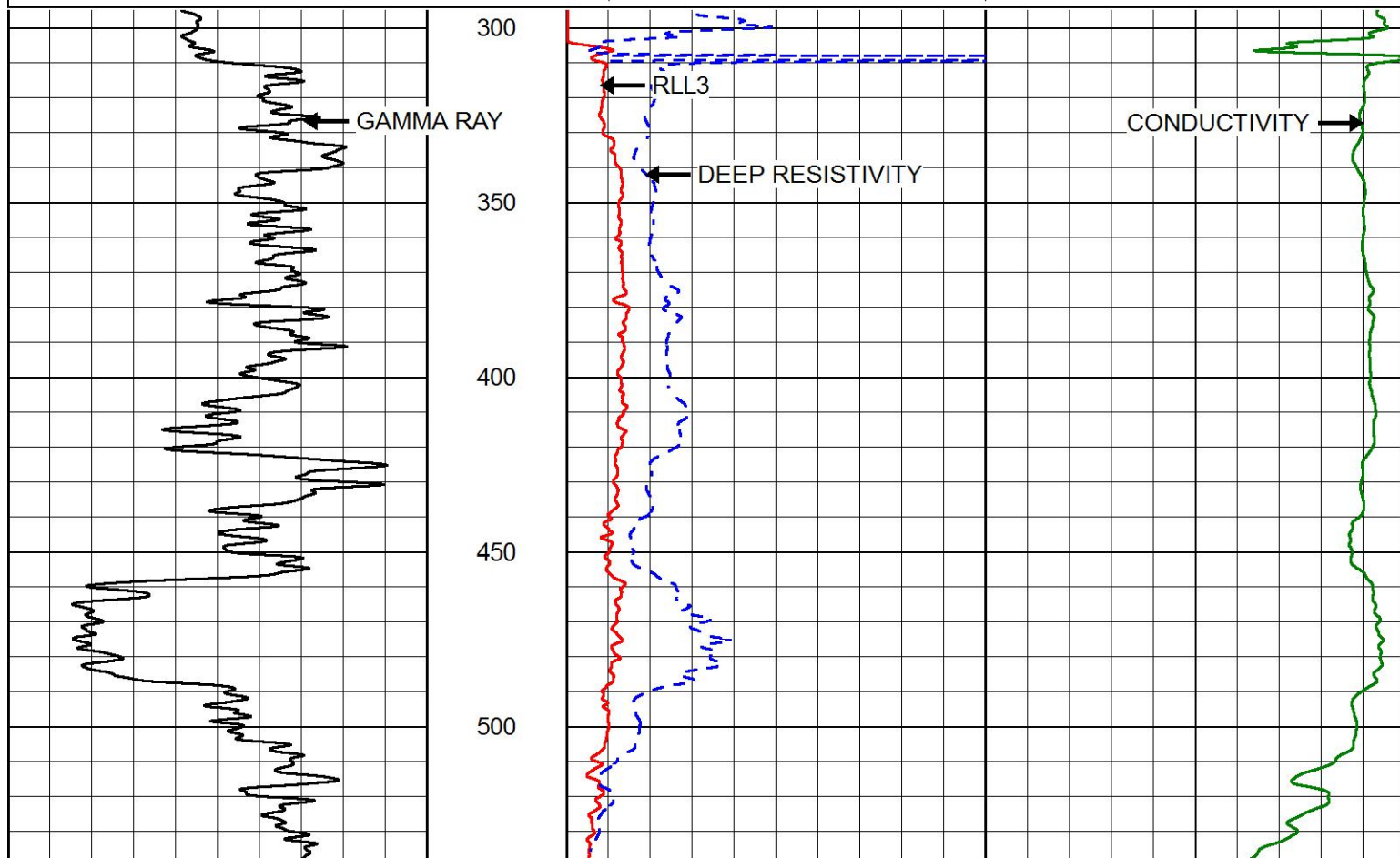
0 RLL3 (Ohm-m) 50

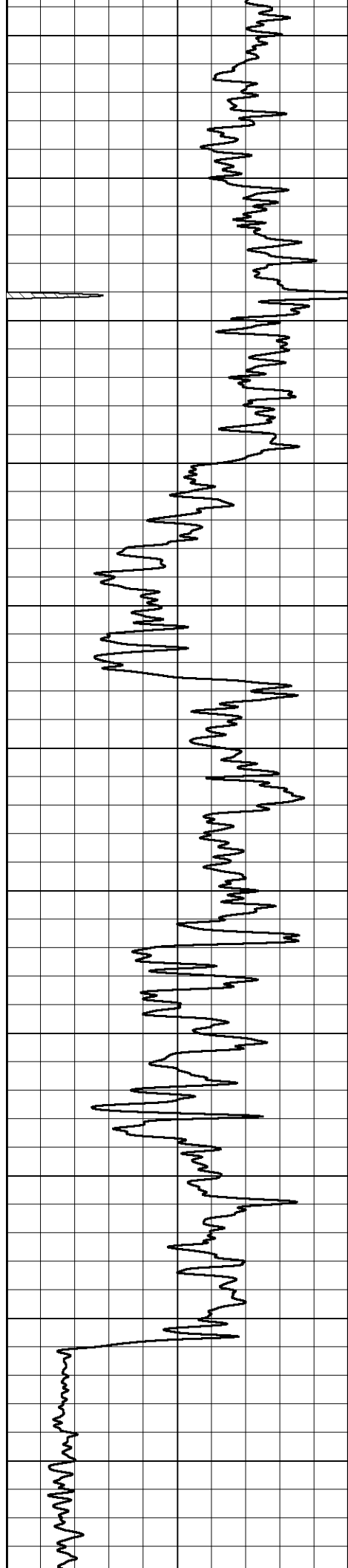
0 DEEP RESISTIVITY (Ohm-m) 50

50 RLL3 (Ohm-m) 500

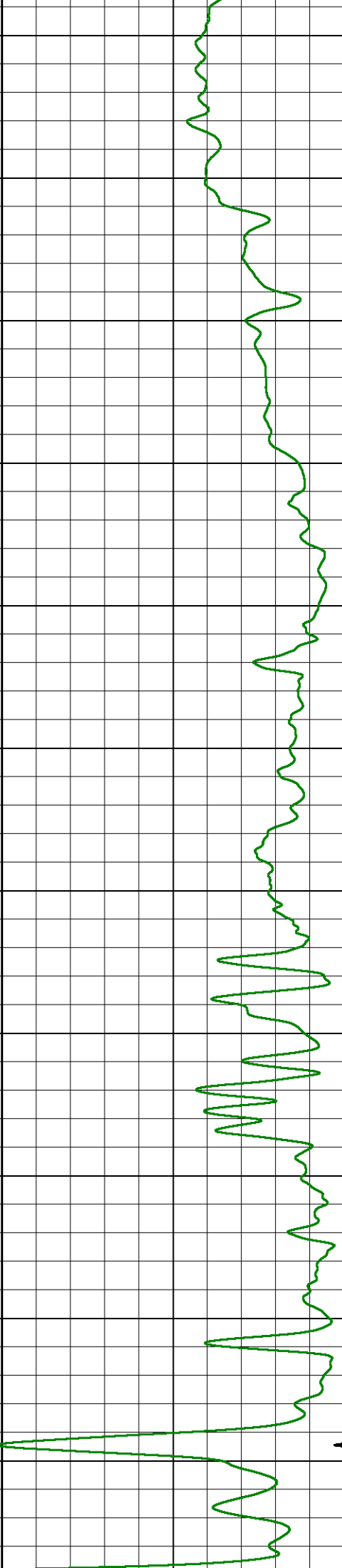
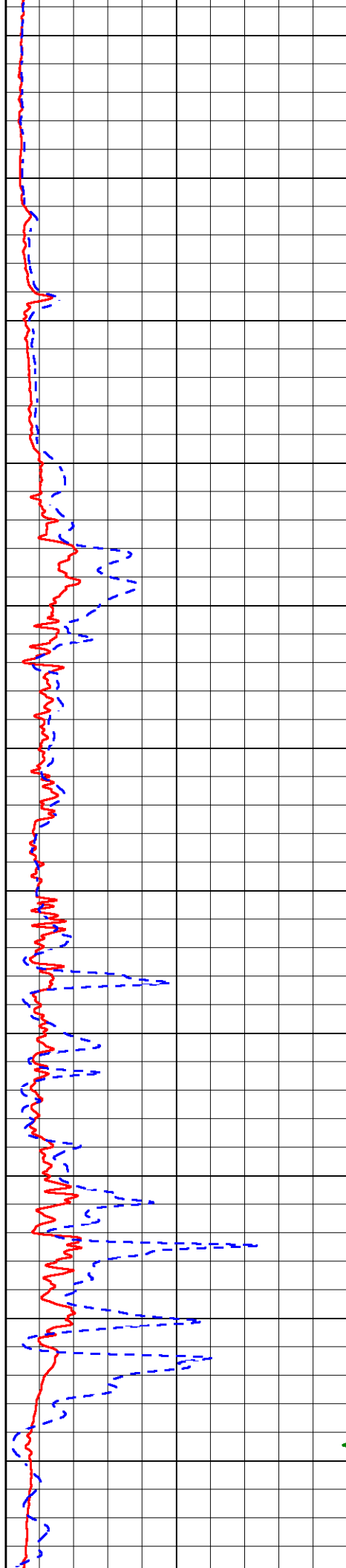
DEEP RESISTIVITY

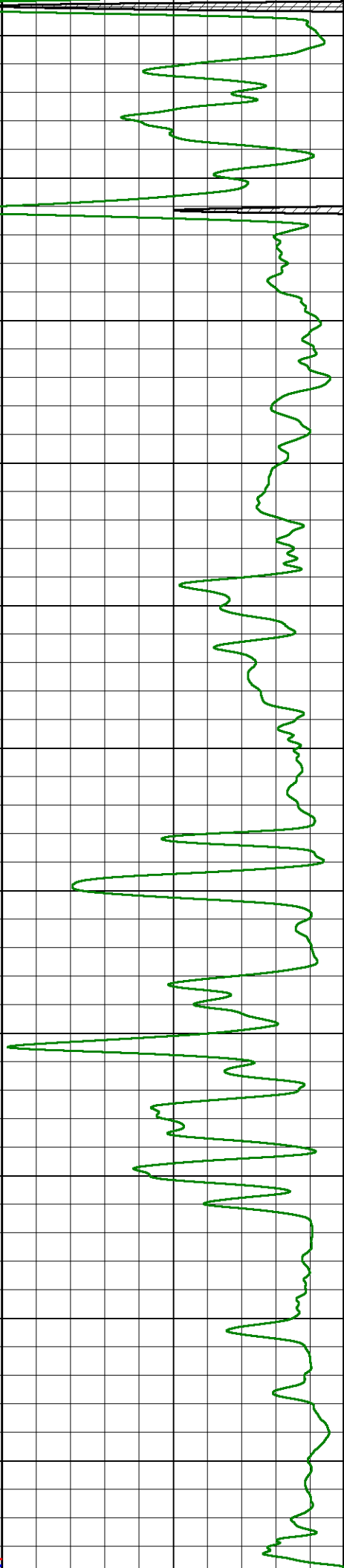
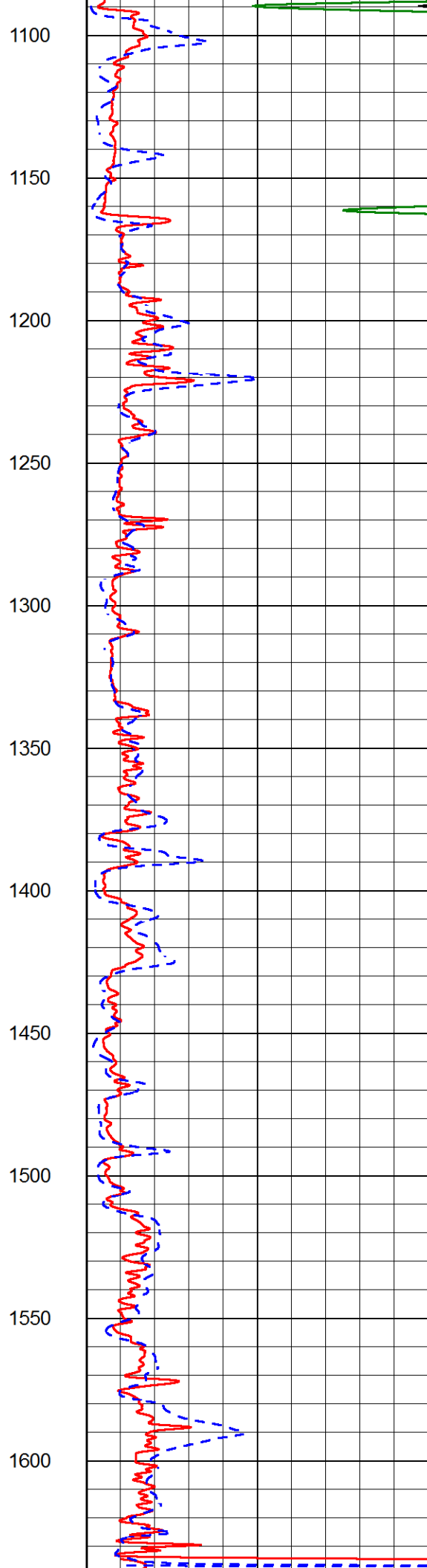
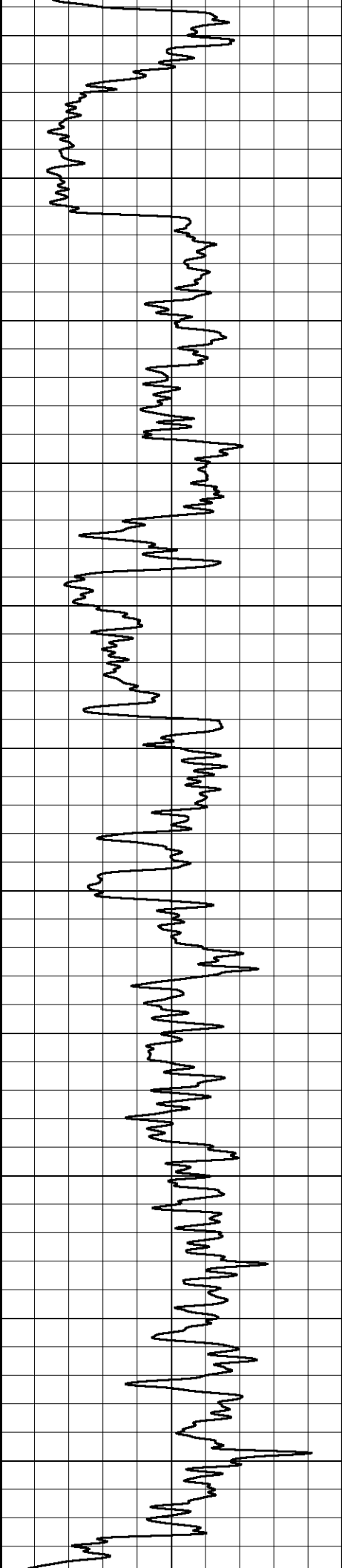
50 (Ohm-m) 500

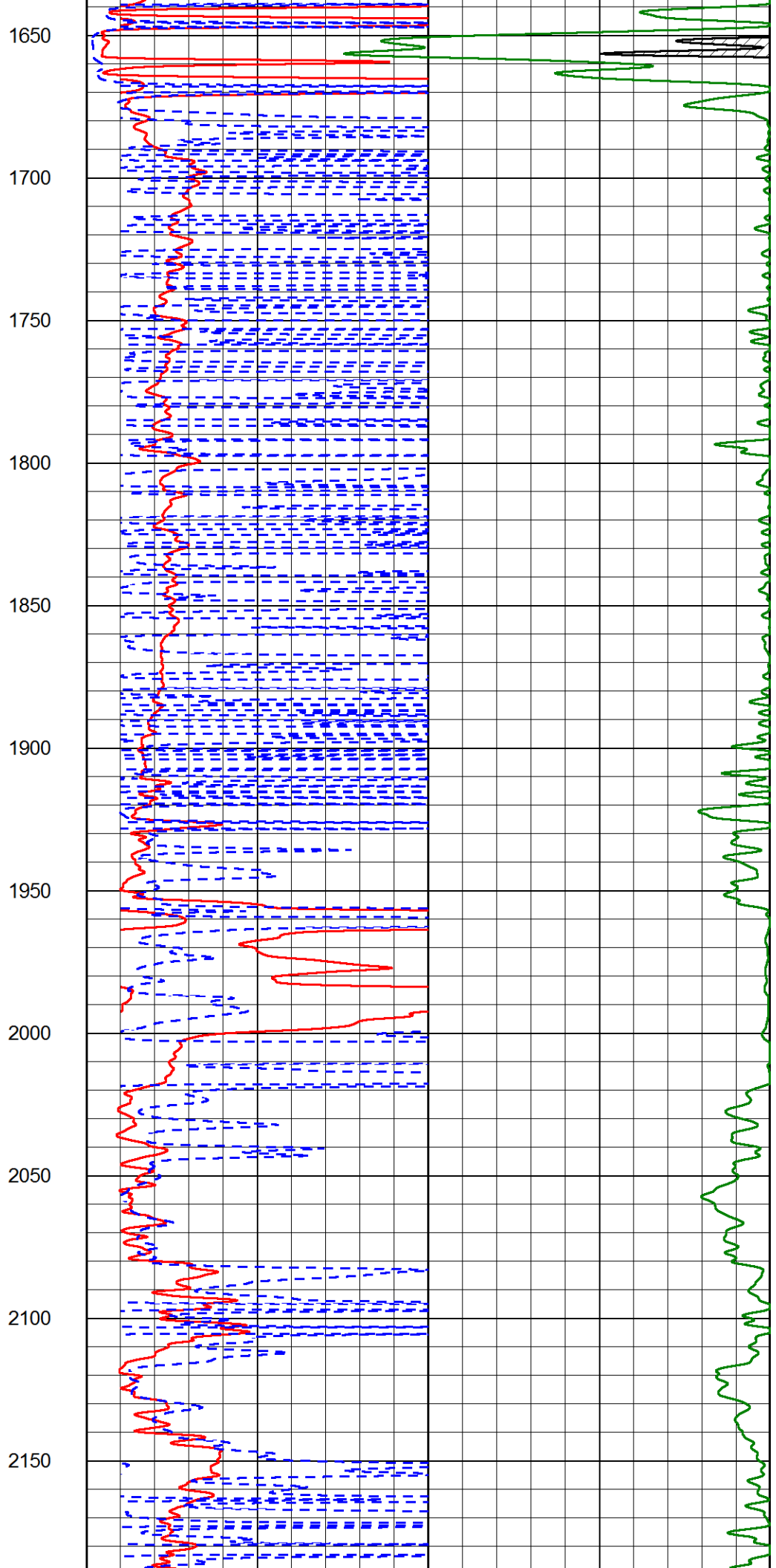
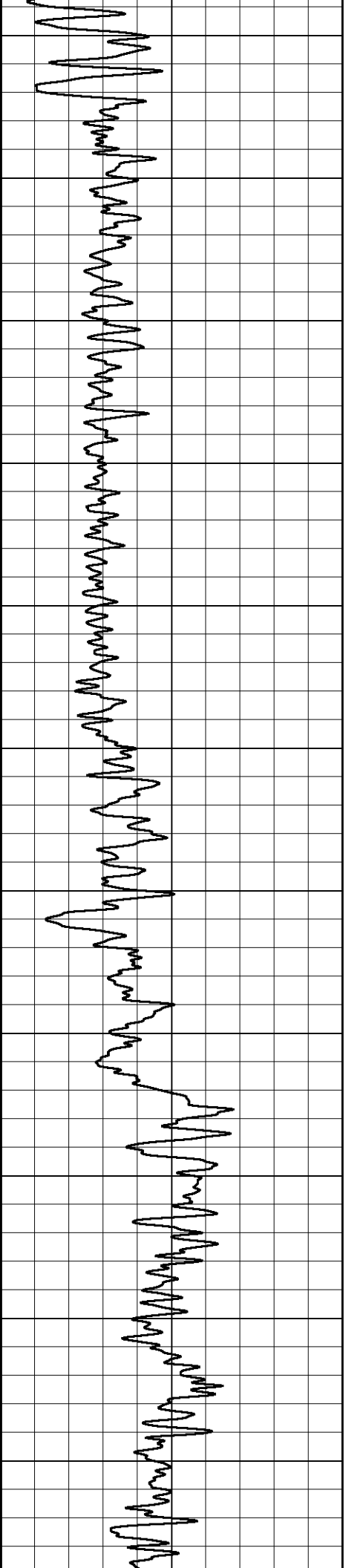


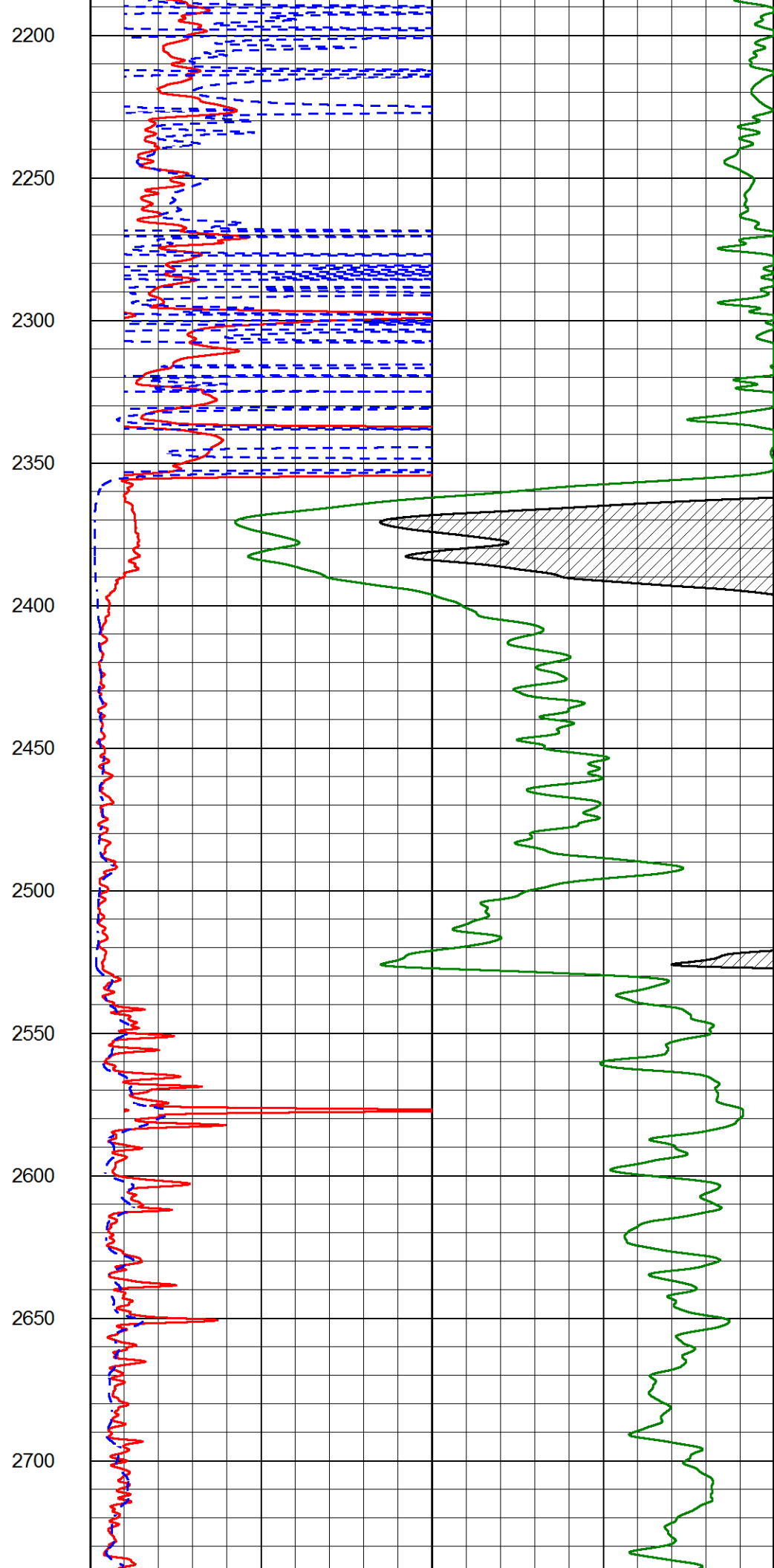
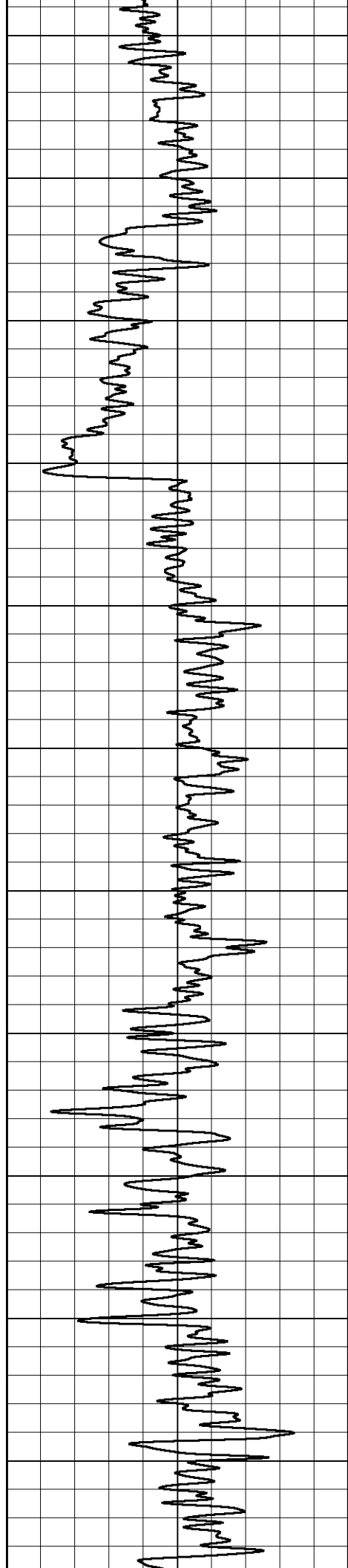


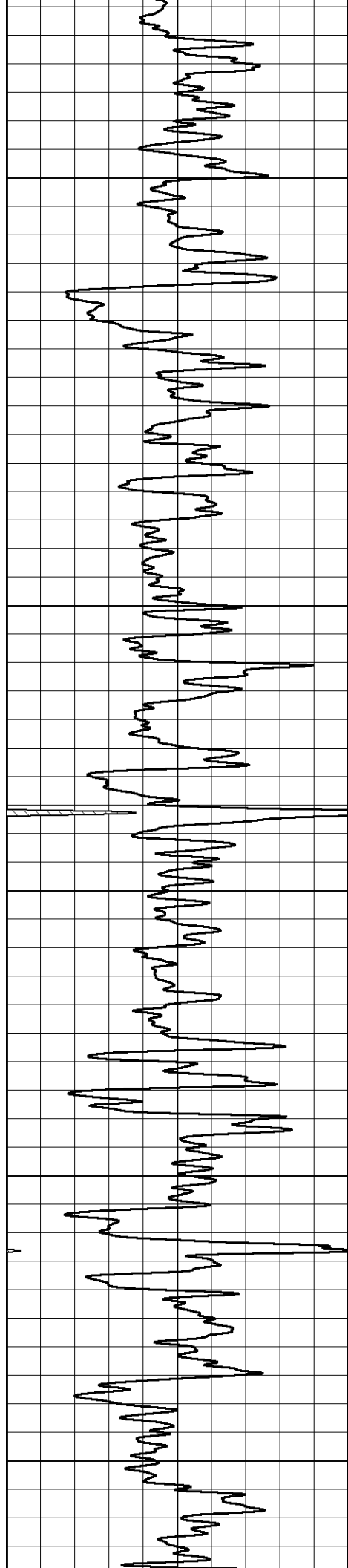
550
600
650
700
750
800
850
900
950
1000
1050



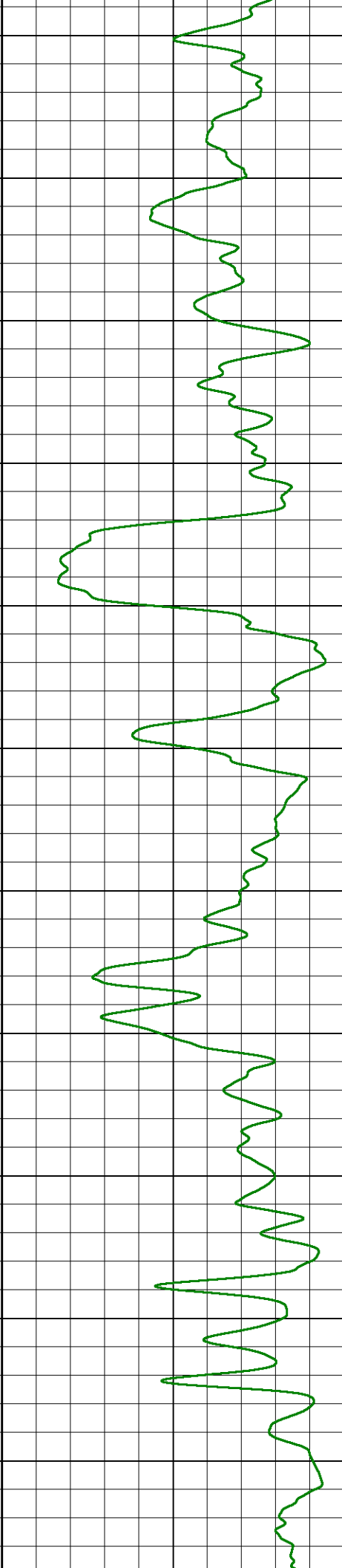
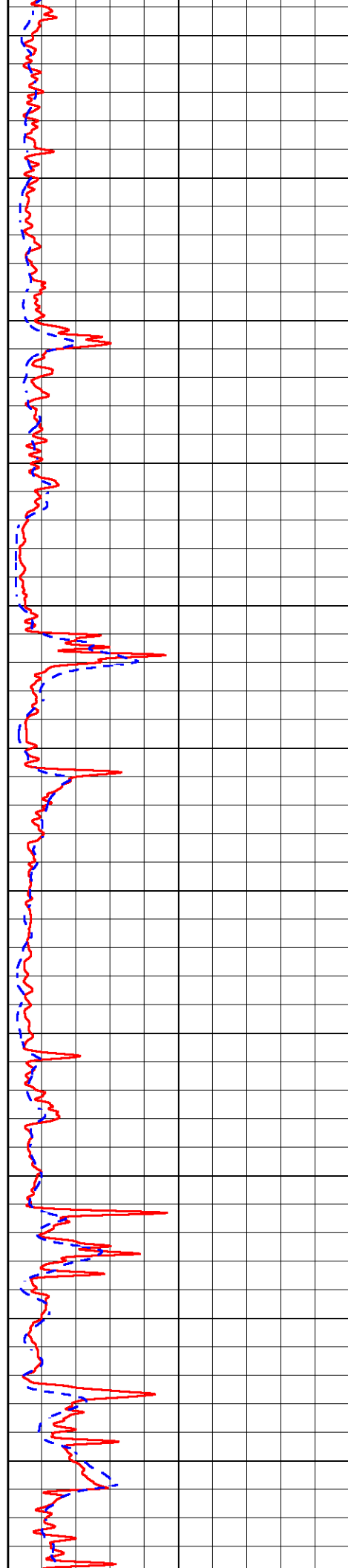


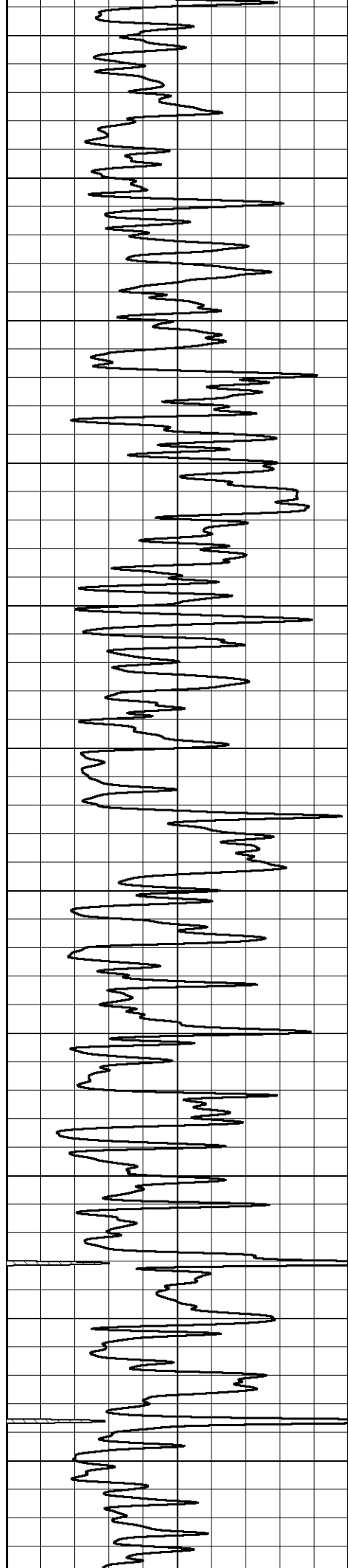






2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250





3300

3350

3400

3450

3500

3550

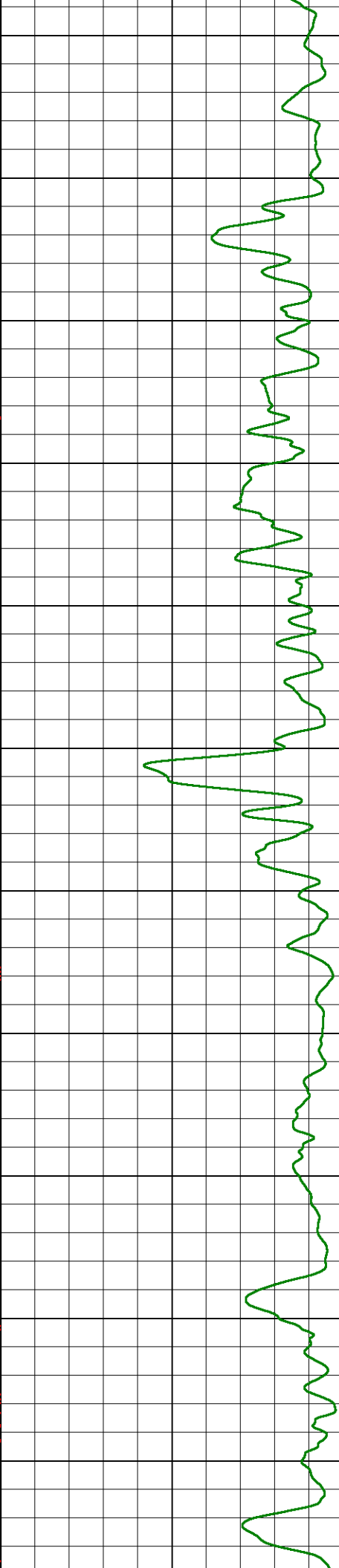
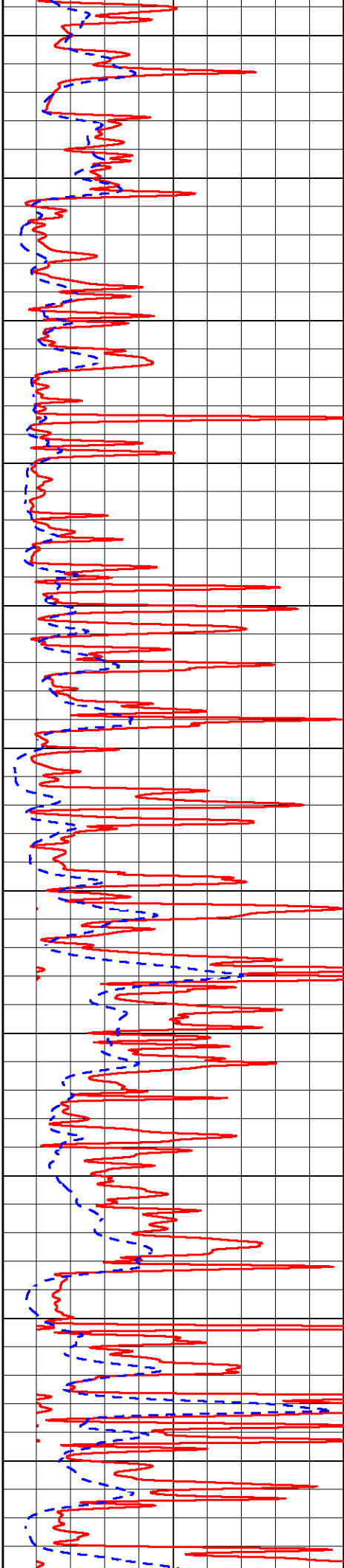
3600

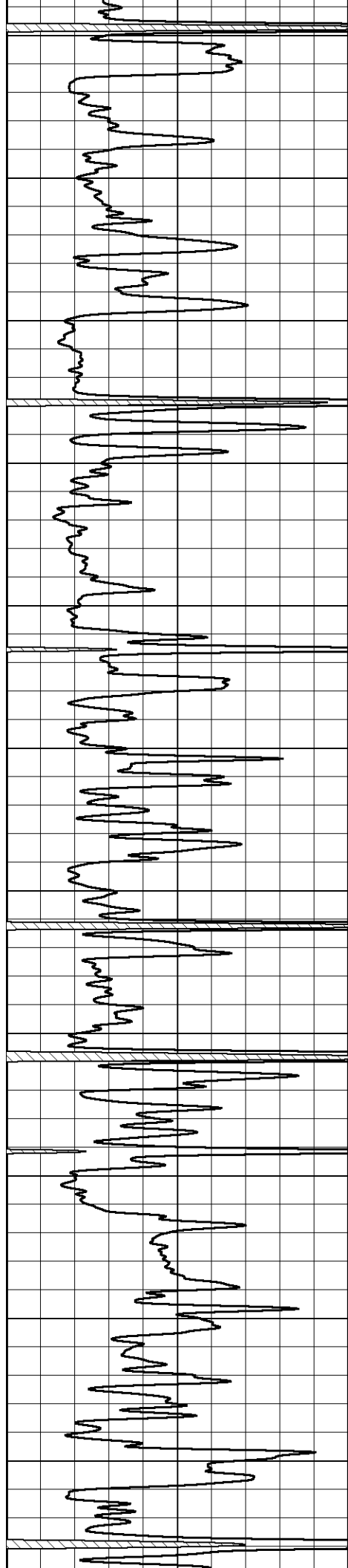
3650

3700

3750

3800





3850

3900

3950

4000

4050

4100

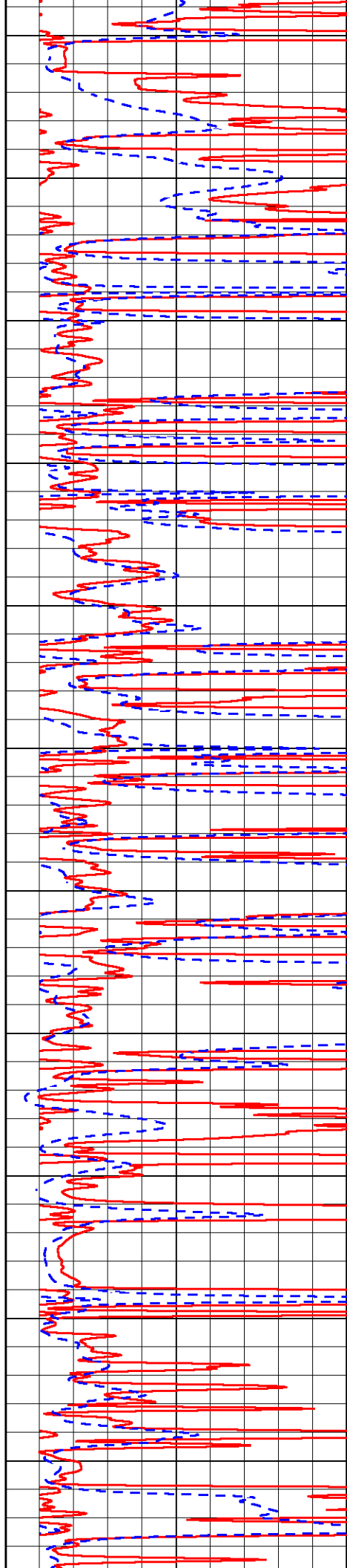
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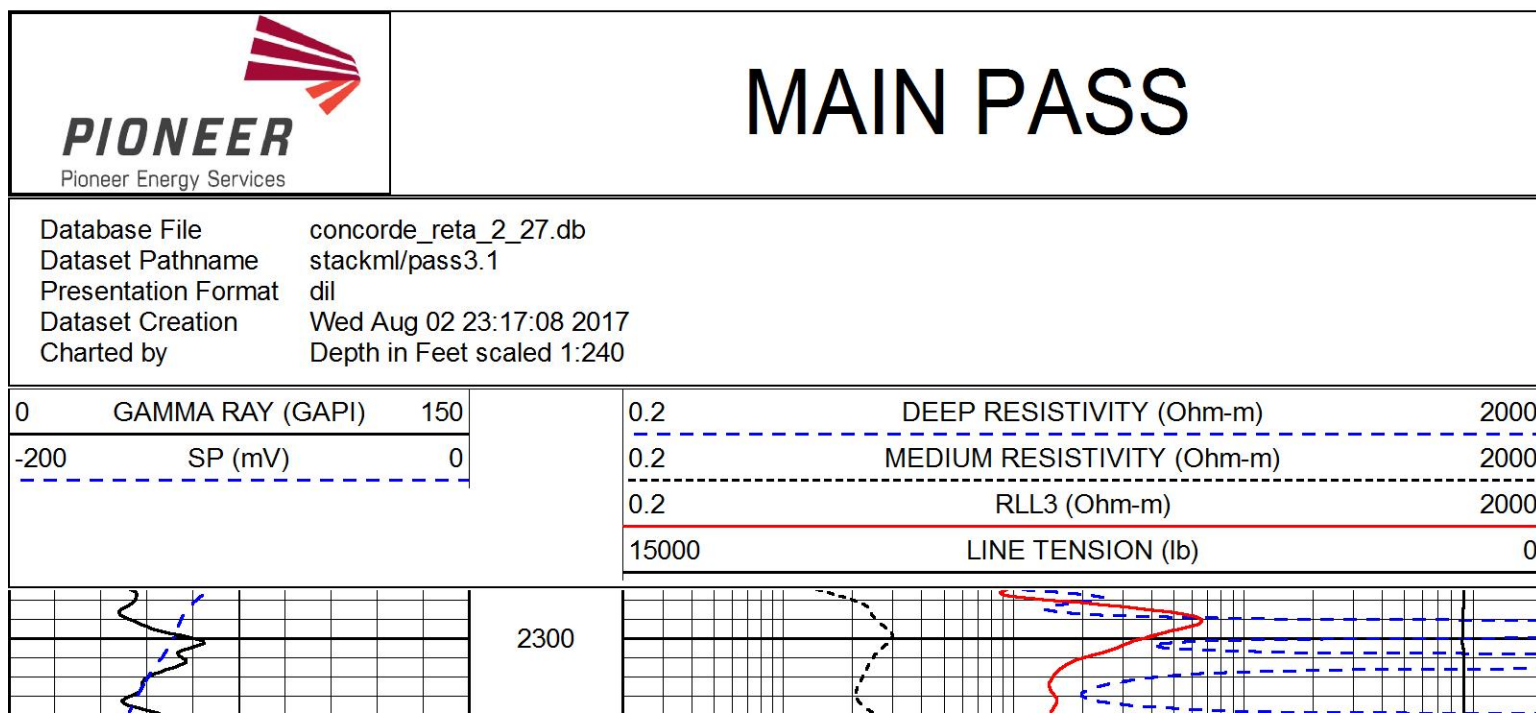
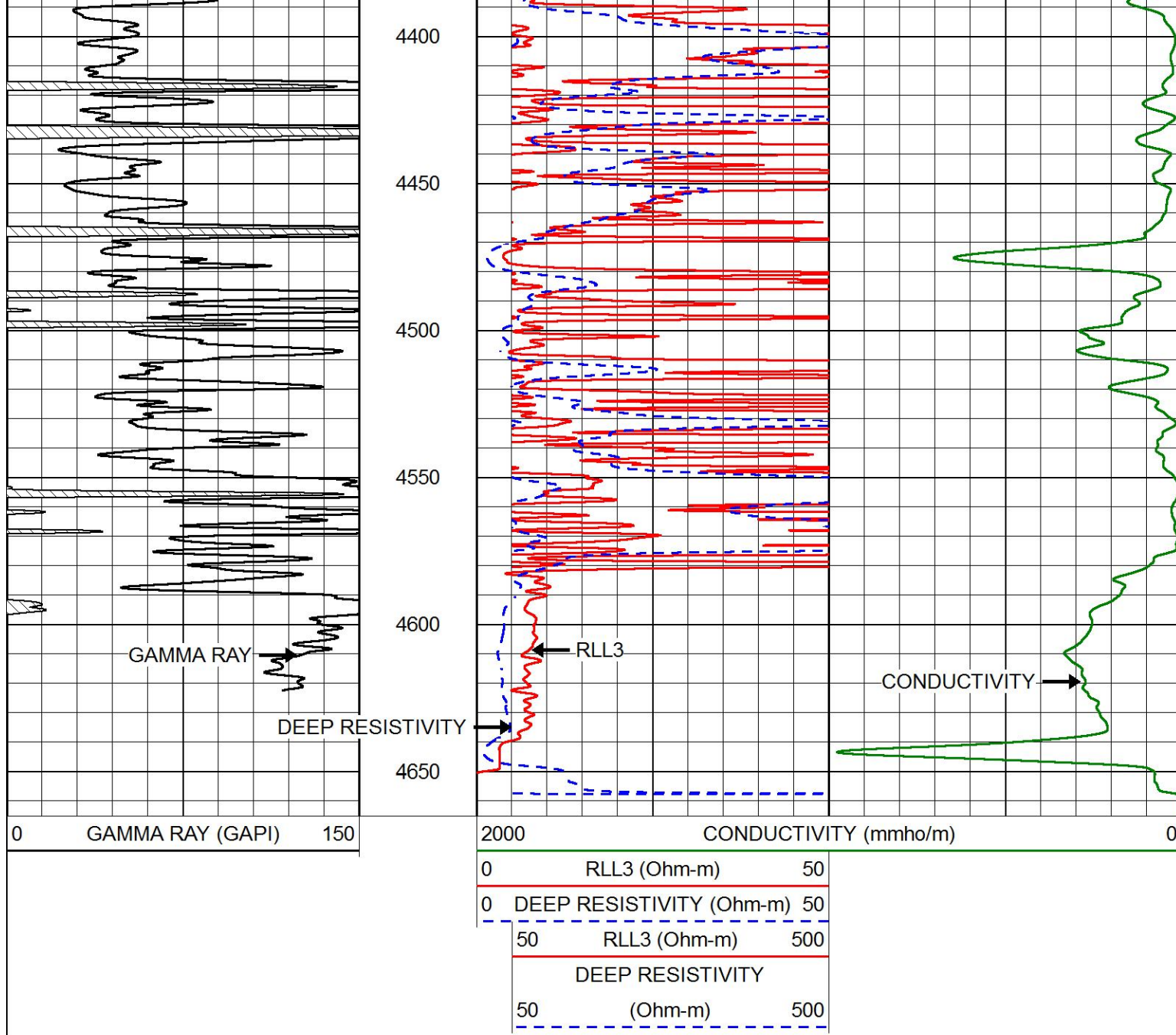
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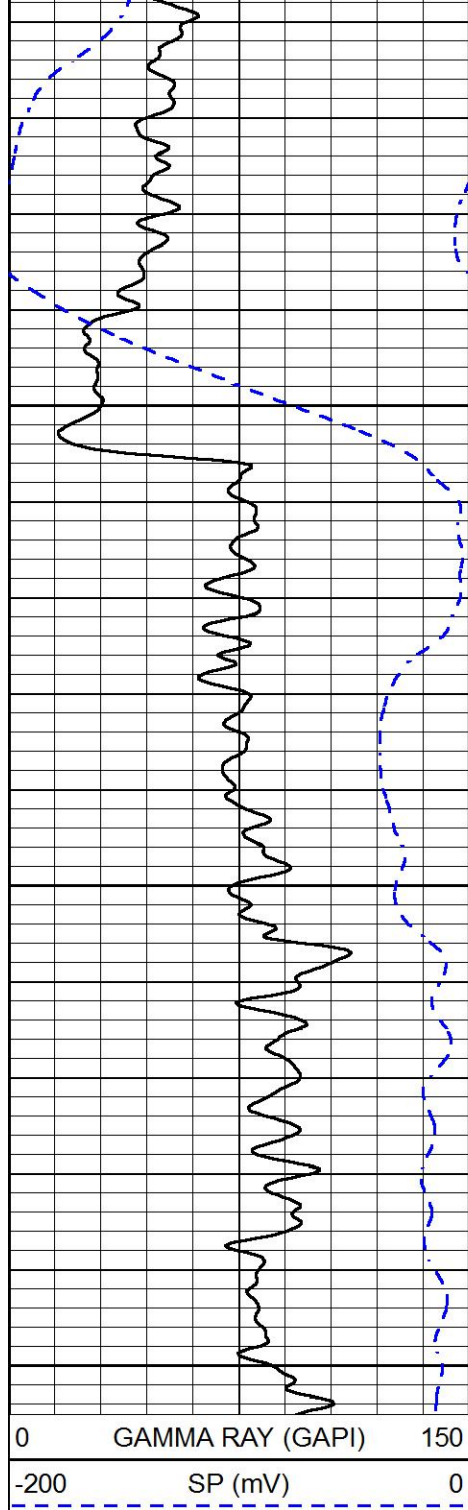
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4300

4350



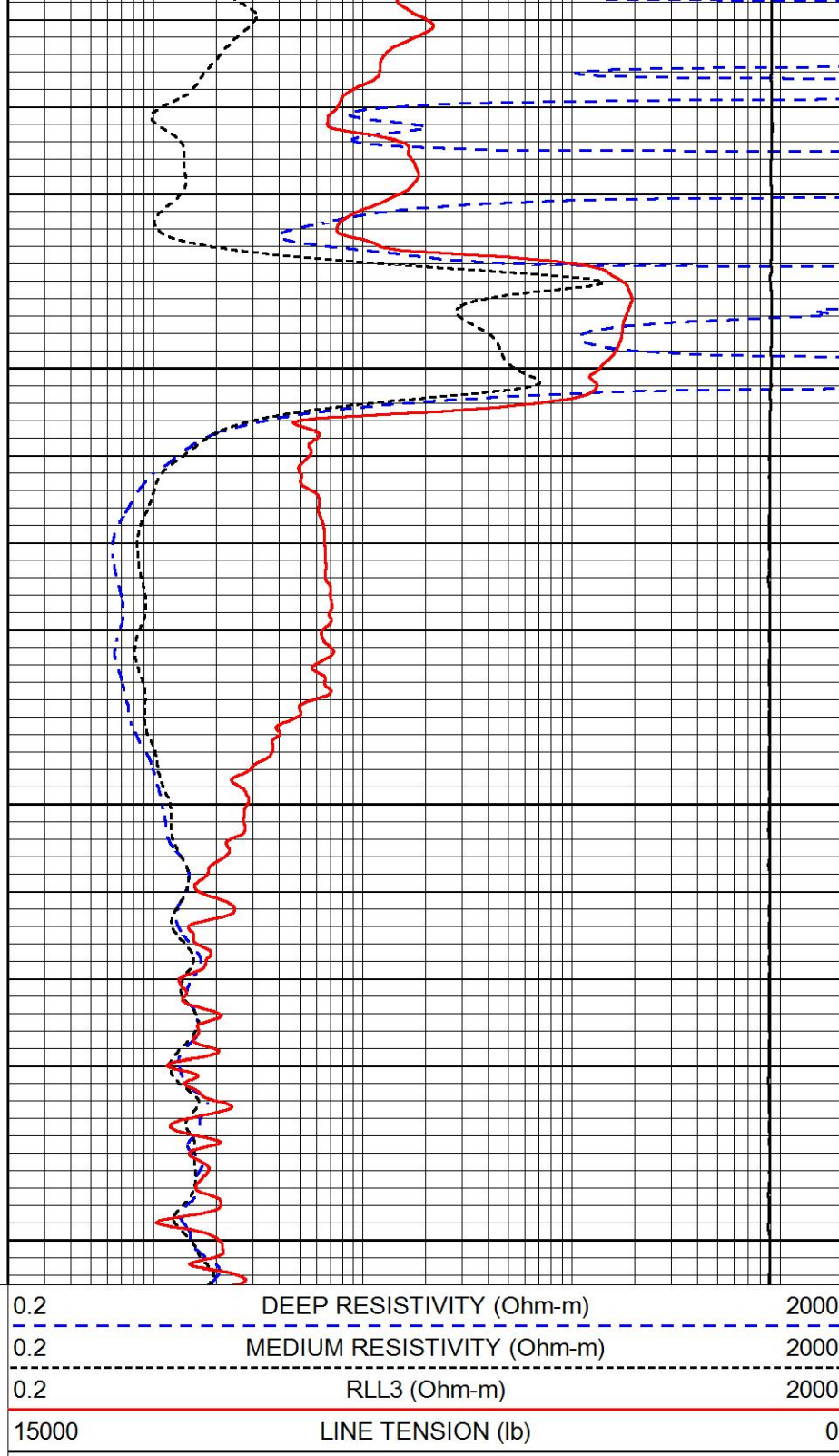




2350

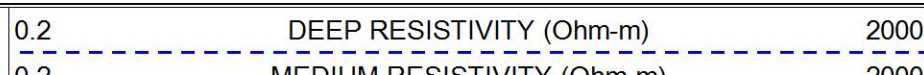
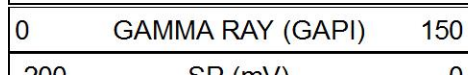
2400

2450



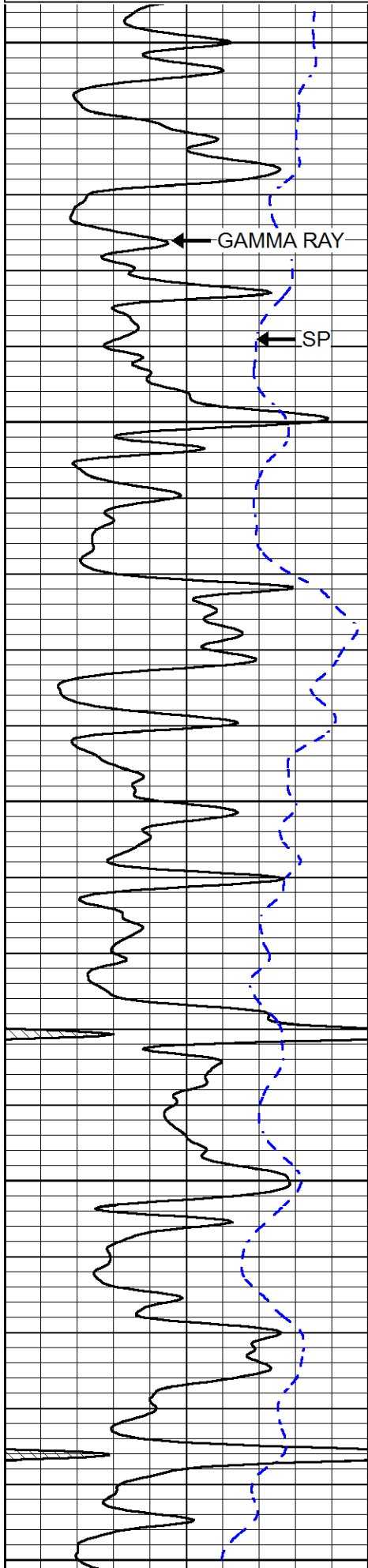
MAIN PASS

Database File concorde_reta_2_27.db
 Dataset Pathname stackml/pass3.1
 Presentation Format dil
 Dataset Creation Wed Aug 02 23:17:08 2017
 Charted by Depth in Feet scaled 1:240



-200 SP (mV) 0

0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0



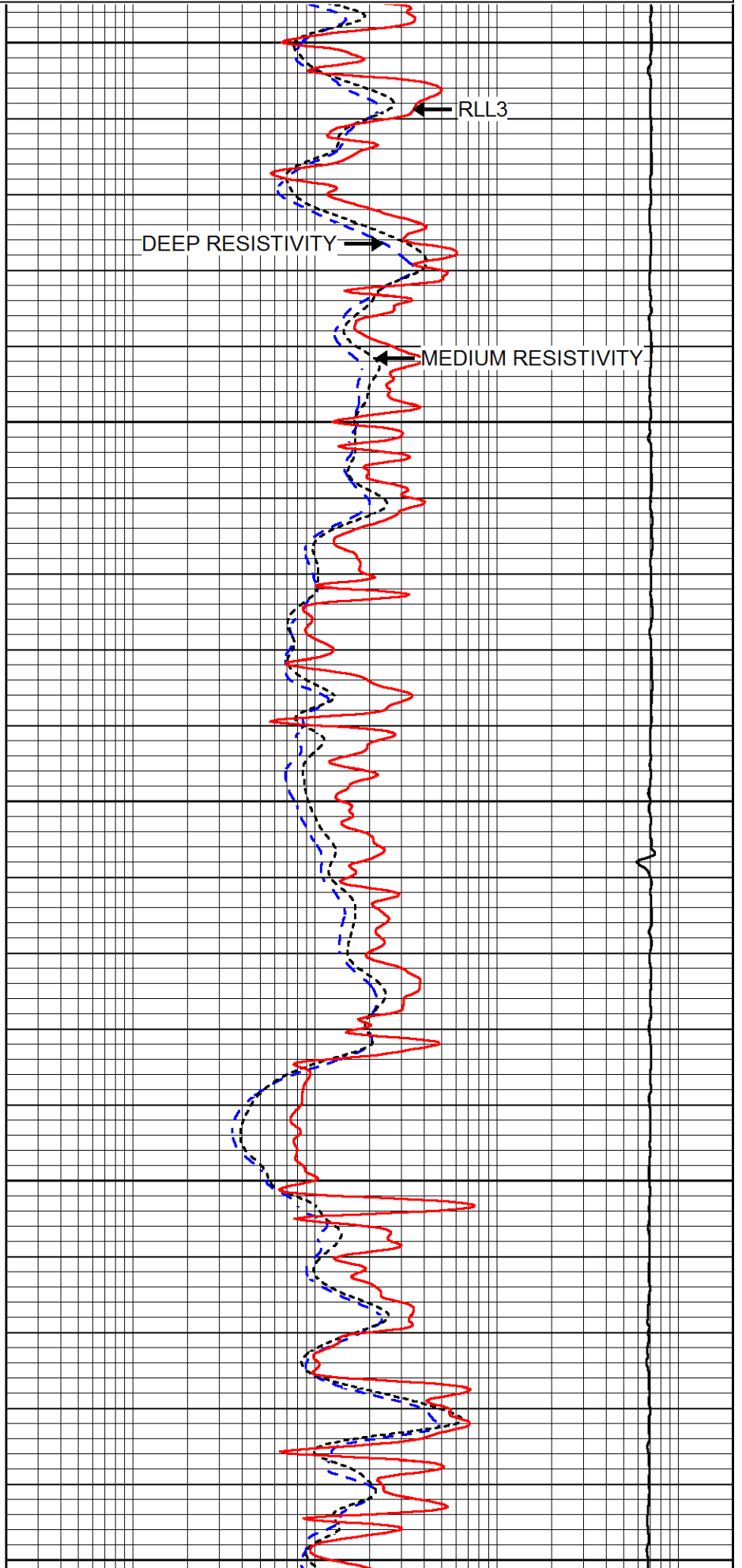
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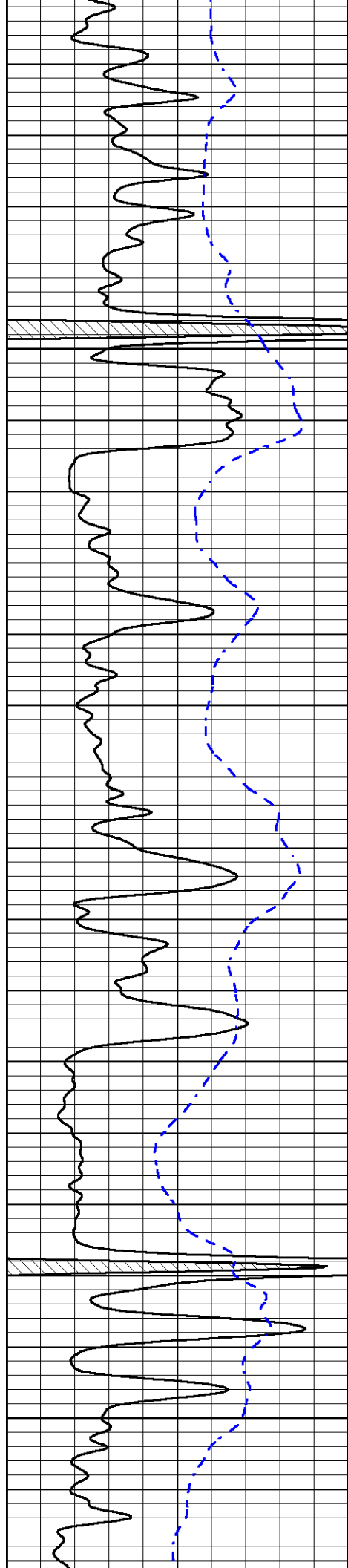
3650

3700

3750

3800



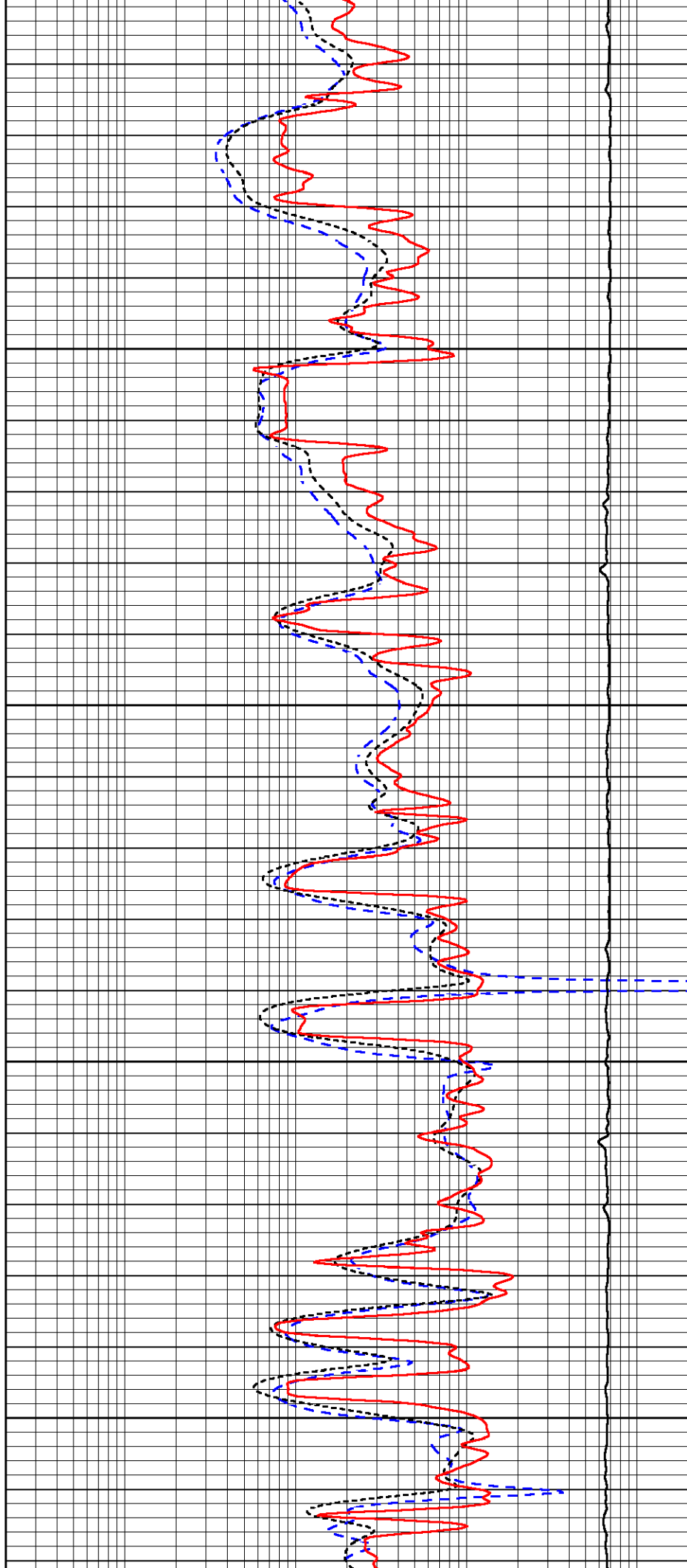


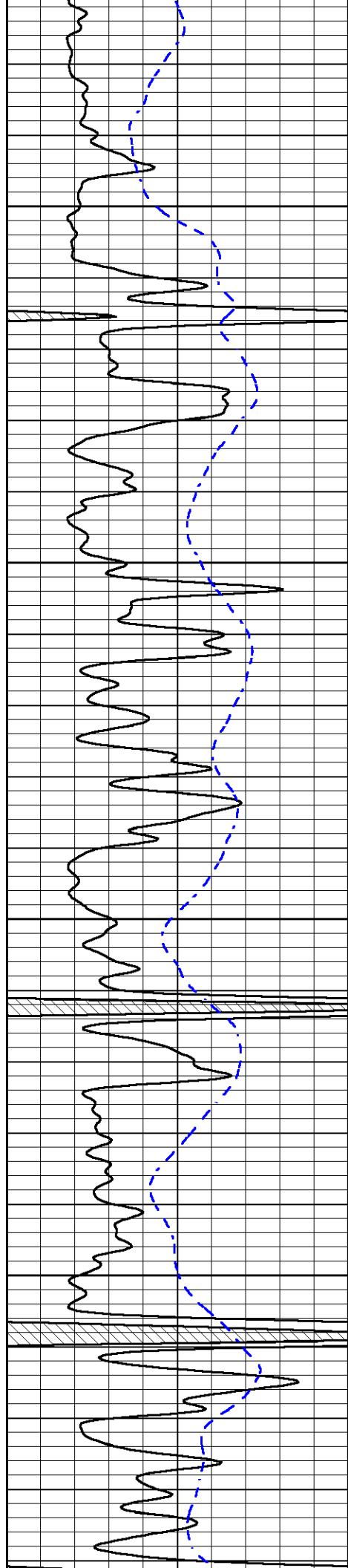
3850

3900

3950

4000



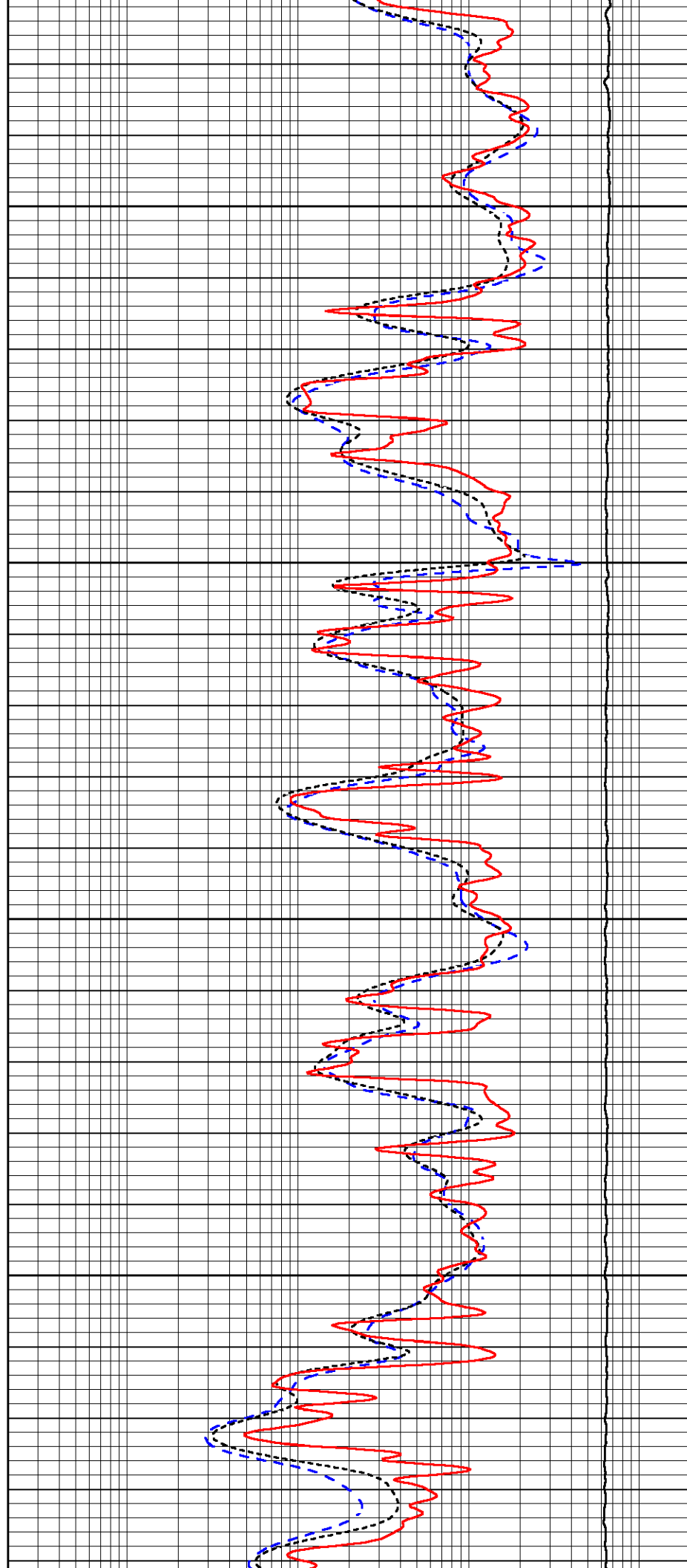


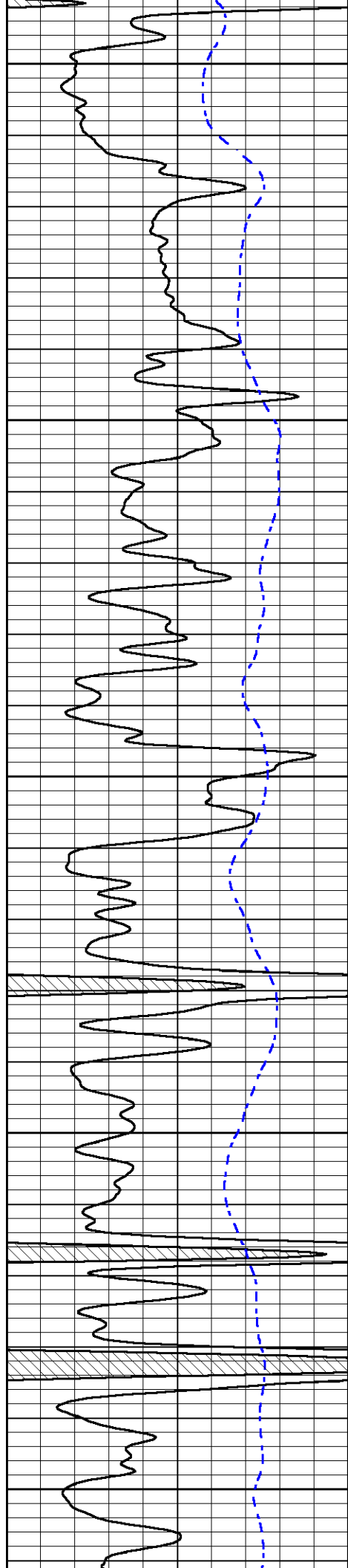
4050

4100

4150

4200





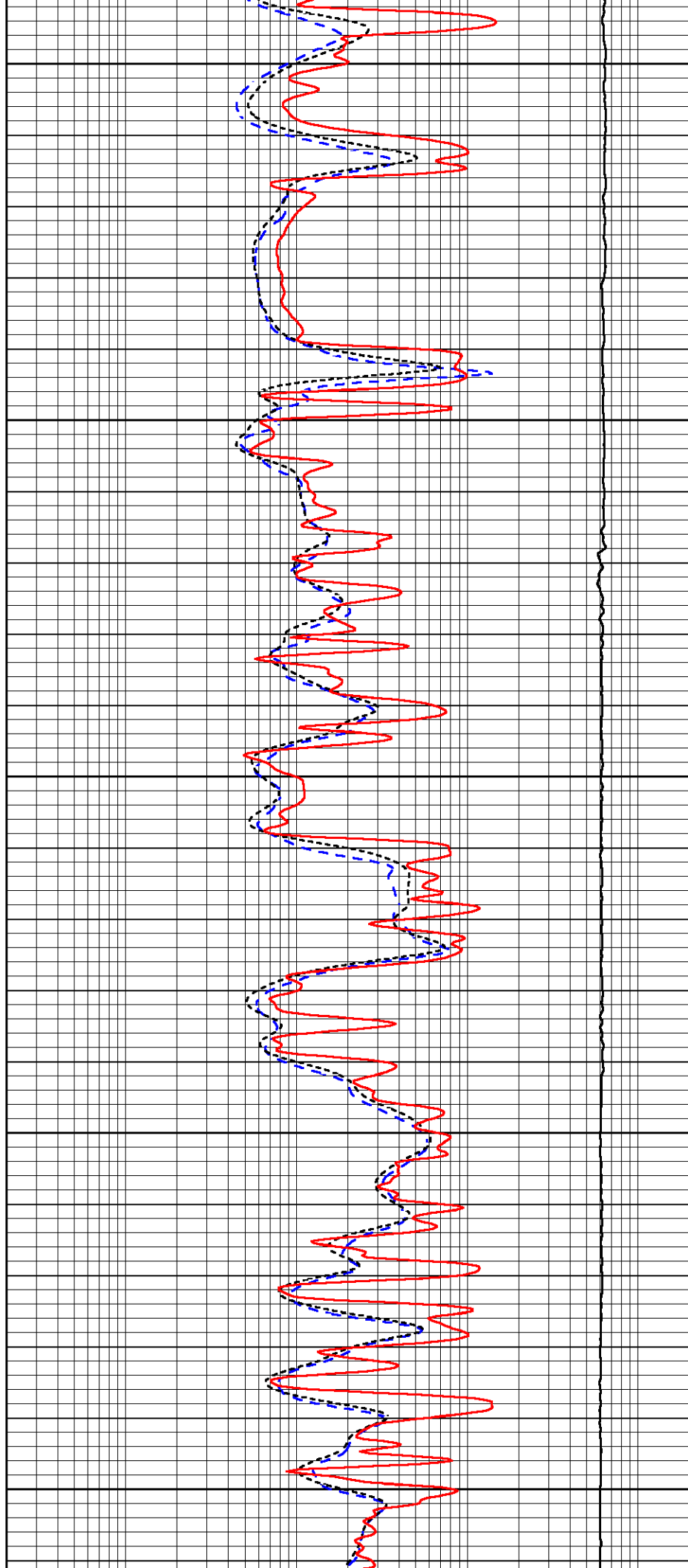
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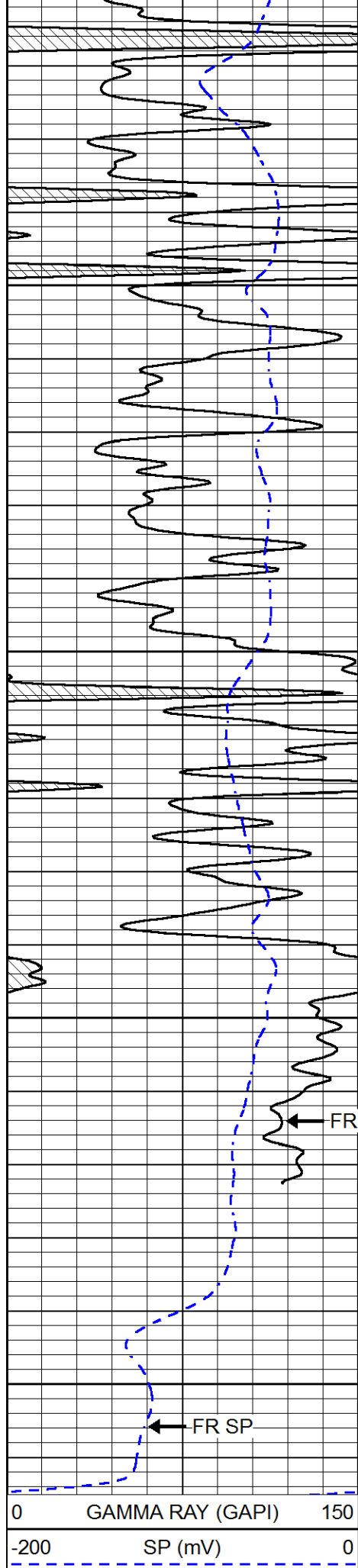
4300

4350

4400

4450





4500

4550

4600

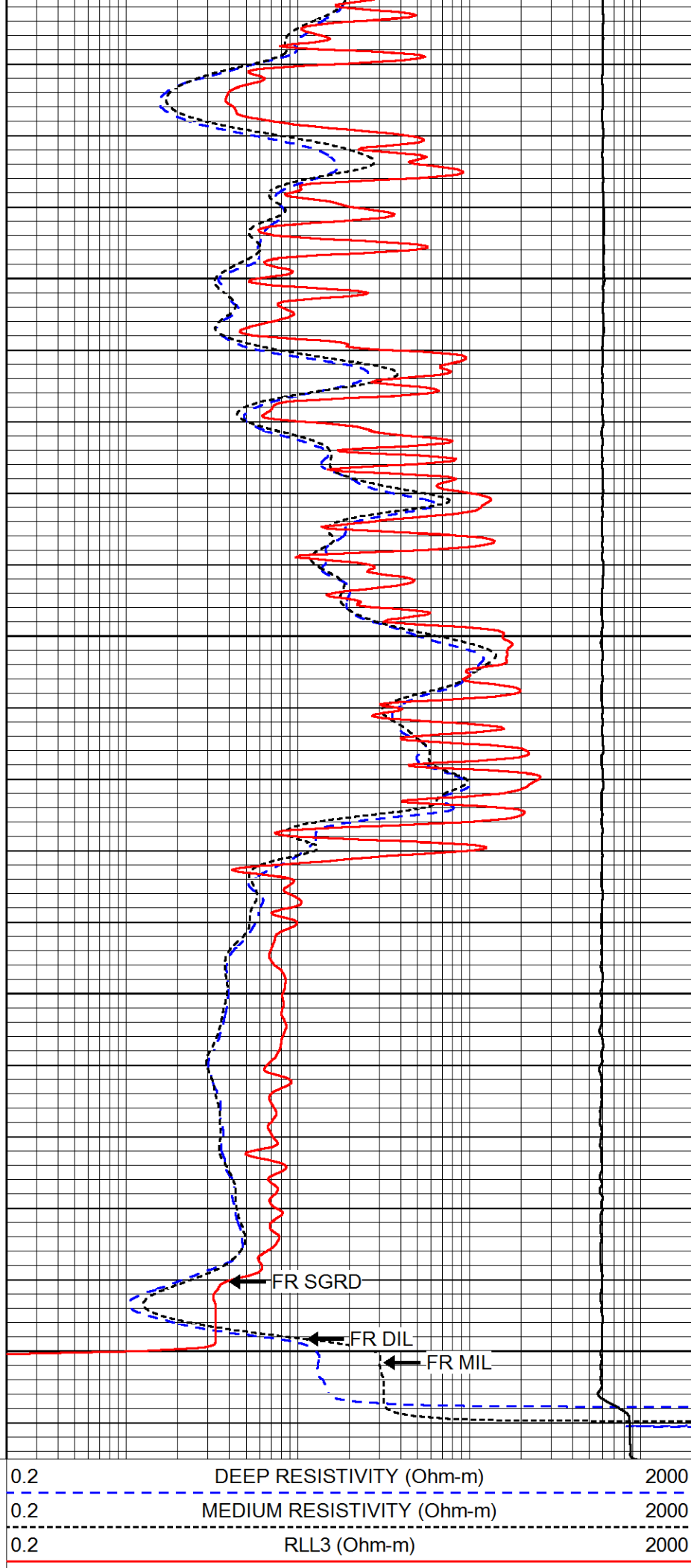
4650

FR GR

FR SP

0 GAMMA RAY (GAPI) 150

-200 SP (mV) 0



FR SGRD

FR DIL

FR MIL

0.2 DEEP RESISTIVITY (Ohm-m) 2000

0.2 MEDIUM RESISTIVITY (Ohm-m) 2000

0.2 RLL3 (Ohm-m) 2000

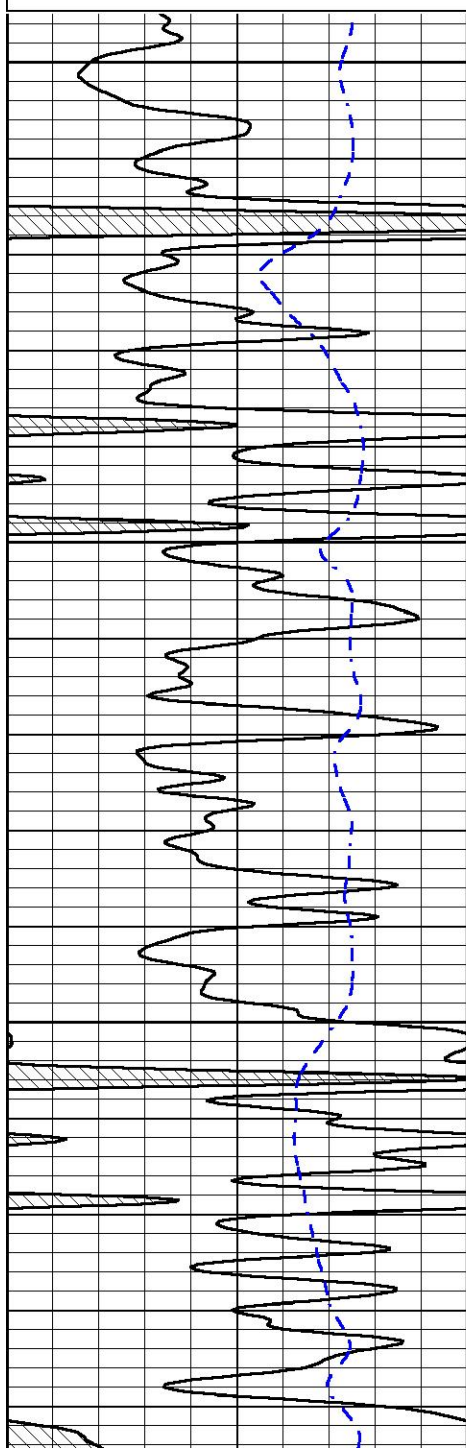


REPEAT SECTION

Database File concorde_reta_2_27.db
Dataset Pathname stackml/pass2.1
Presentation Format dil
Dataset Creation Wed Aug 02 23:10:25 2017
Charted by Depth in Feet scaled 1:240

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

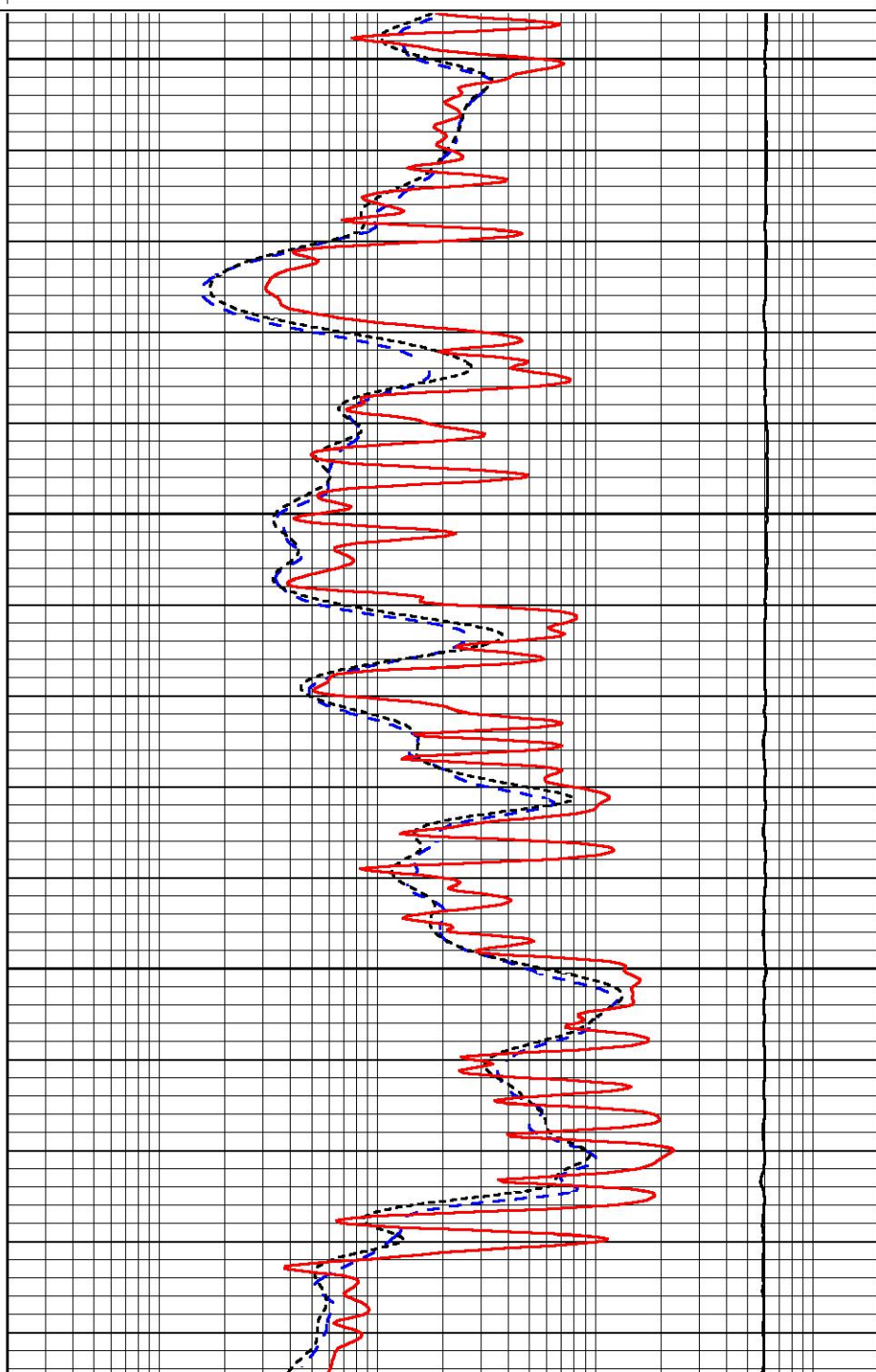
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0

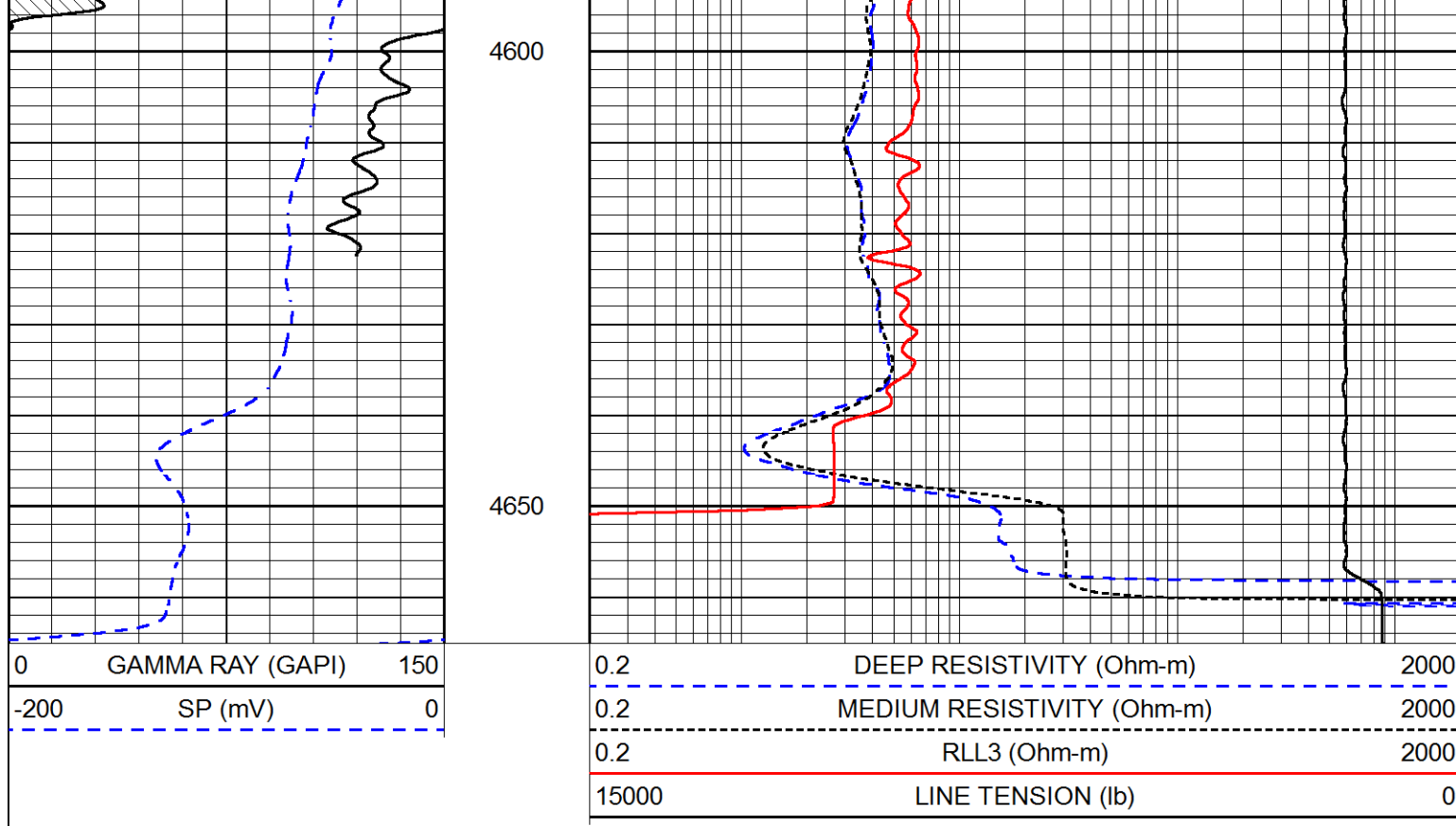


4450

4500

4550





Calibration Report

Database File concorde_reta_2_27.db
 Dataset Pathname stackml/pass3.1
 Dataset Creation Wed Aug 02 23:17:08 2017

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Tue Apr 11 16:07:38 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Fri Jun 23 00:25:19 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	29000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	34000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.5000

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
 Source / Verifier: /
 Master Calibration Performed: Tue Apr 11 16:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.23		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W
Calibration Performed: Wed Nov 16 11:21:36 2016

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-M&W
Tool Model: M&W
Calibration Performed: Tue Apr 11 16:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company CONCORDE RESOURCES CORP.
Well RETA NO. 2-27
Field WILDCAT
County LOGAN
State KANSAS