



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company SHAKESPEARE OIL CO. INC.
Well CL COMMUNITY #1-30
Field WILDCAT
County SCOTT
State KANSAS

Company SHAKESPEARE OIL CO. INC.
Well CL COMMUNITY #1-30
Field WILDCAT
County SCOTT State KANSAS

Location: API #: 15-171-21256-00-00

Other Services

118' FNL & 2456' FWL
SEC 30 TWP 16S RGE 32W

CNL/CDL
MEL/BHCS

Permanent Datum GROUND LEVEL Elevation 2921'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2931'
D.F. N/A
G.L. 2921'

Date 7/21/2019

Run Number	ONE		
Depth Driller	4725'		
Depth Logger	4724'		
Bottom Logged Interval	4723'		
Top Log Interval	250'		
Casing Driller	8.625" @ 265'		
Casing Logger	264'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4000		
Density / Viscosity	9.3 54		
pH / Fluid Loss	11.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 78		
Rmt @ Meas. Temp	.60 @ 78		
Rmc @ Meas. Temp	1.08 @ 78		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.51 @ 123		
Operating Rig Time	5 HOURS		
Max Rec. Temp. F	123 DEGF		
Equipment Number	P-108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	VERN SCHRAG		

<<< 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.

SCOTT CITY KANSAS
11 NORTH TO INGRESS, 1/2 NW ON TRAIL, NORTH 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: J. HENRICKSON
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: VERN SCHRAG
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 100	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 0	degF 0	Off	ft 0

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90			CNT-M&W (tk10-MW)	5.50	3.50	100.00
	29.15						
LSD DCAL SSD	20.85			CDL-M&W (144-84)	8.50	4.00	250.00
	20.83						
	20.35						
RLL3 RLL3F	15.80						
	15.79						
CILD	8.00			DIL-M&W (PSI 988)	18.50	3.50	220.00

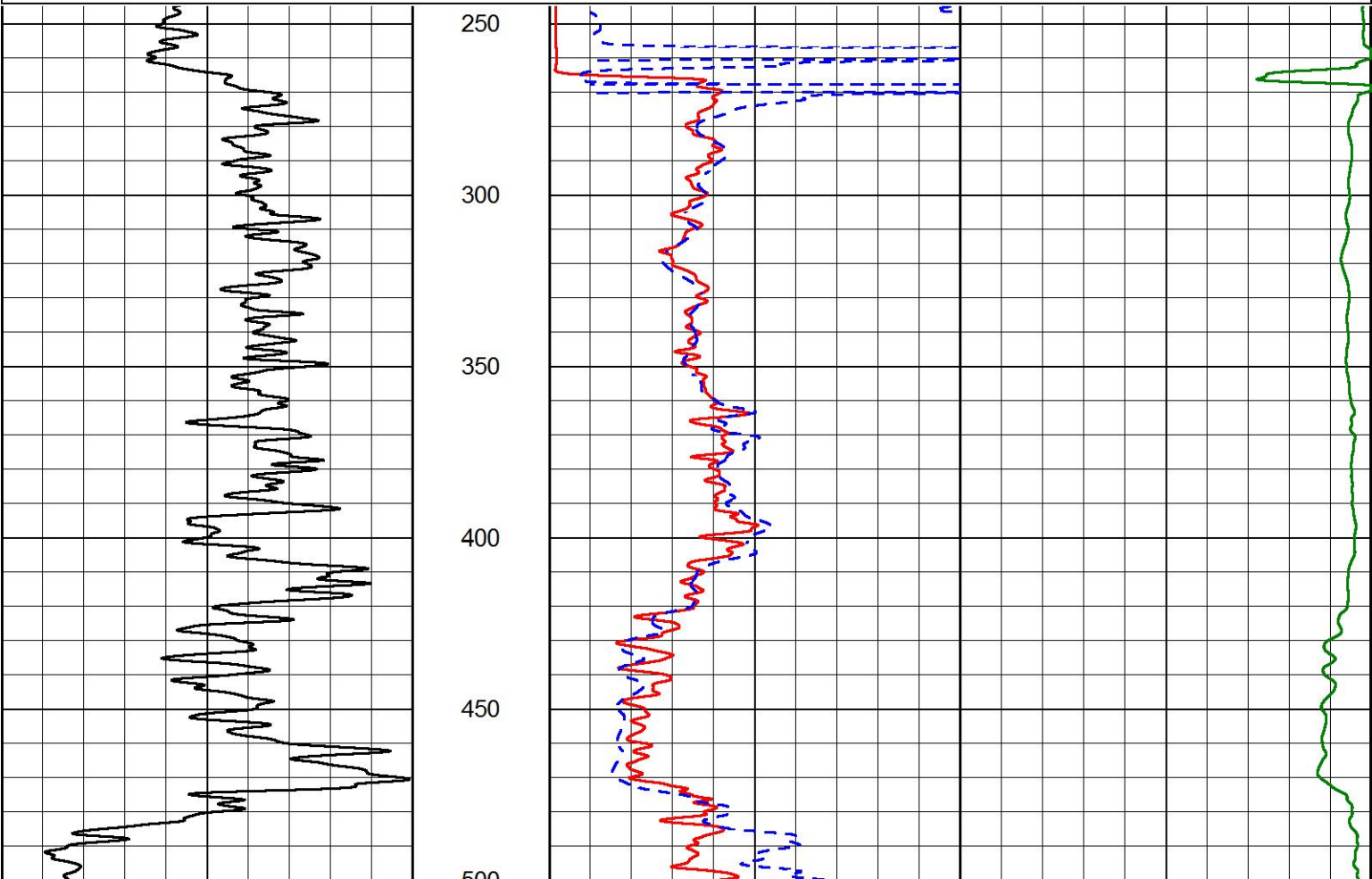
CILM	4.70								
SP	0.20								
Dataset: shakespeare_cl_community_1_30.db: field/well/stack/pass3.1 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									

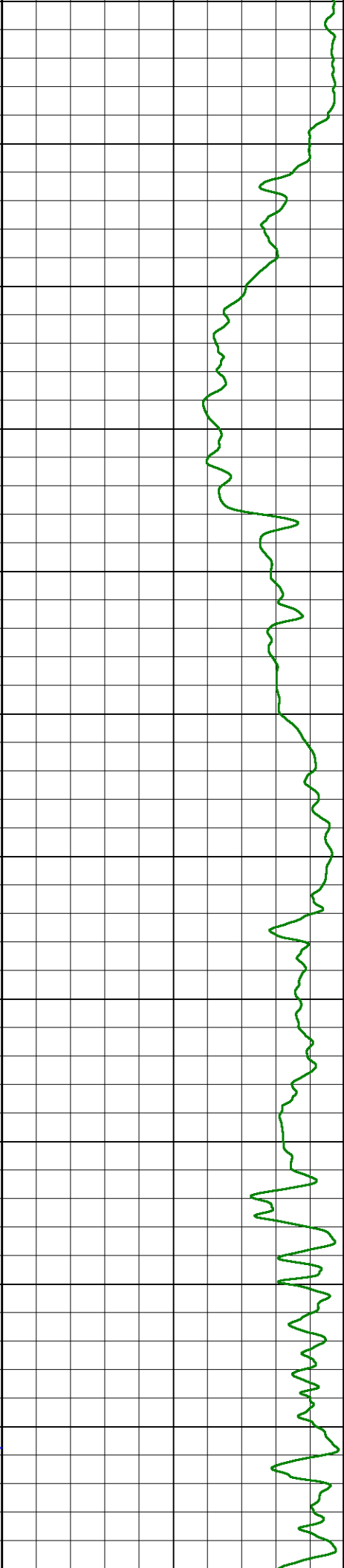
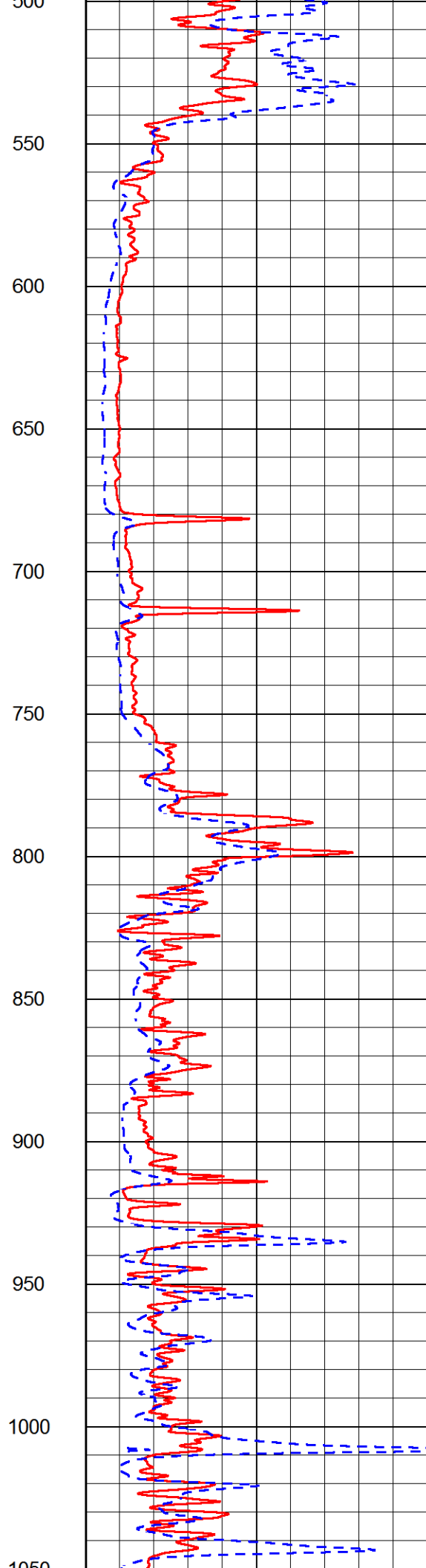
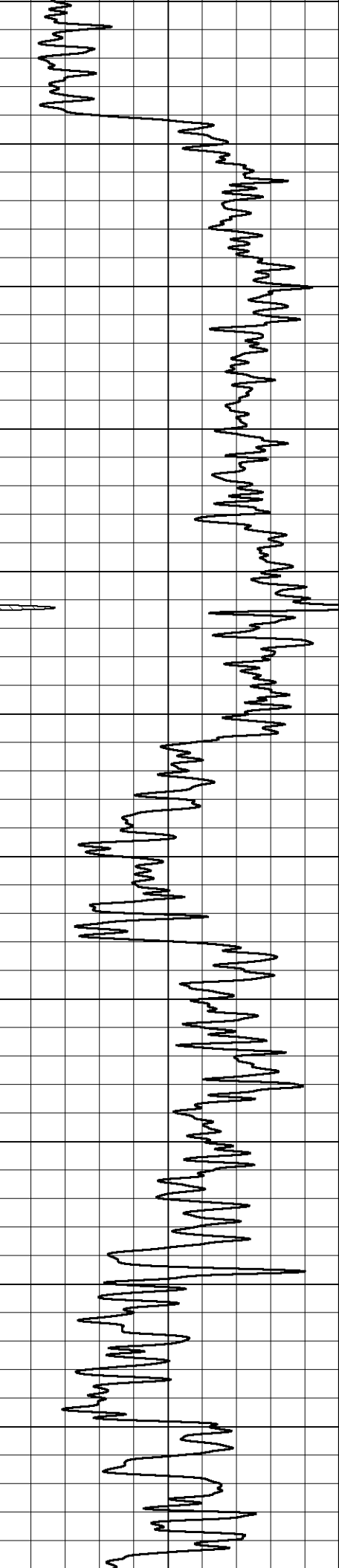


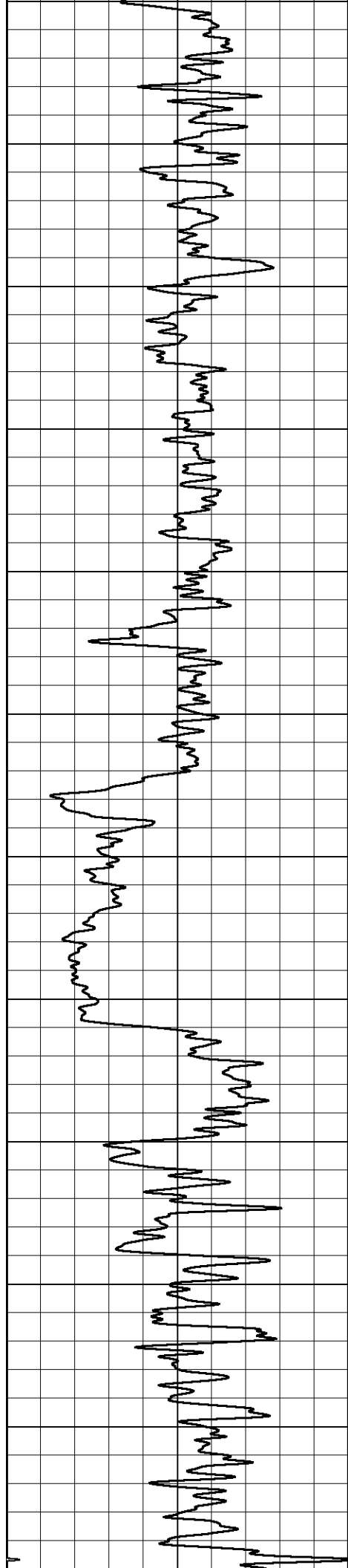
MAIN PASS

Database File	shakespeare_cl_community_1_30.db
Dataset Pathname	stack/pass3.1
Presentation Format	dil2in
Dataset Creation	Sun Jul 21 18:48:39 2019
Charted by	Depth in Feet scaled 1:600

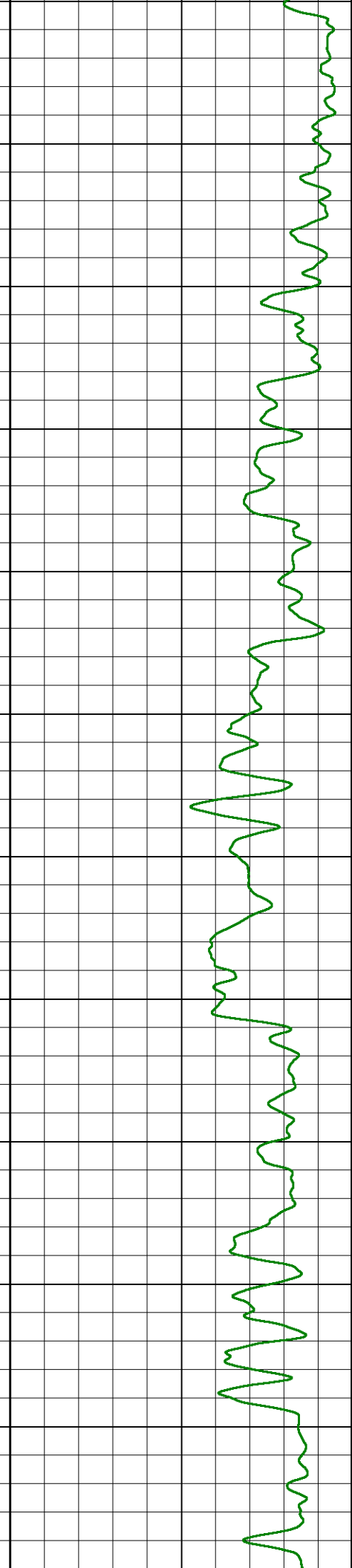
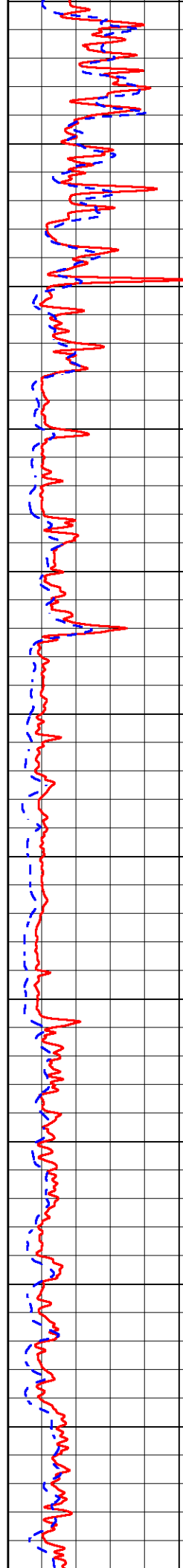
0	GAMMA RAY (GAPI)	150	2000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50			
0	DEEP RESISTIVITY (Ohm-m)	50			
50	RLL3 (Ohm-m)	200			
50	RILD (Ohm-m)	200			

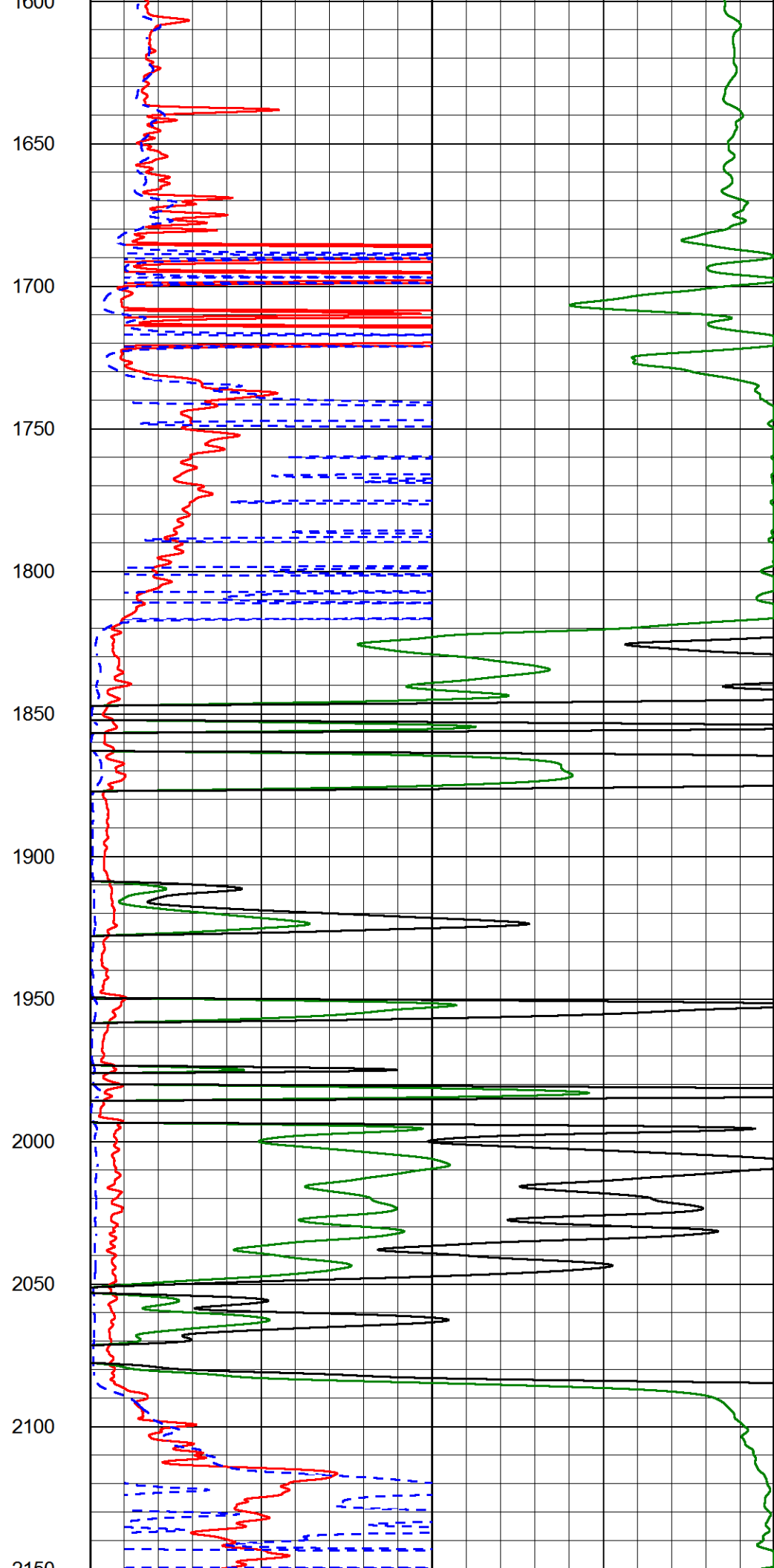
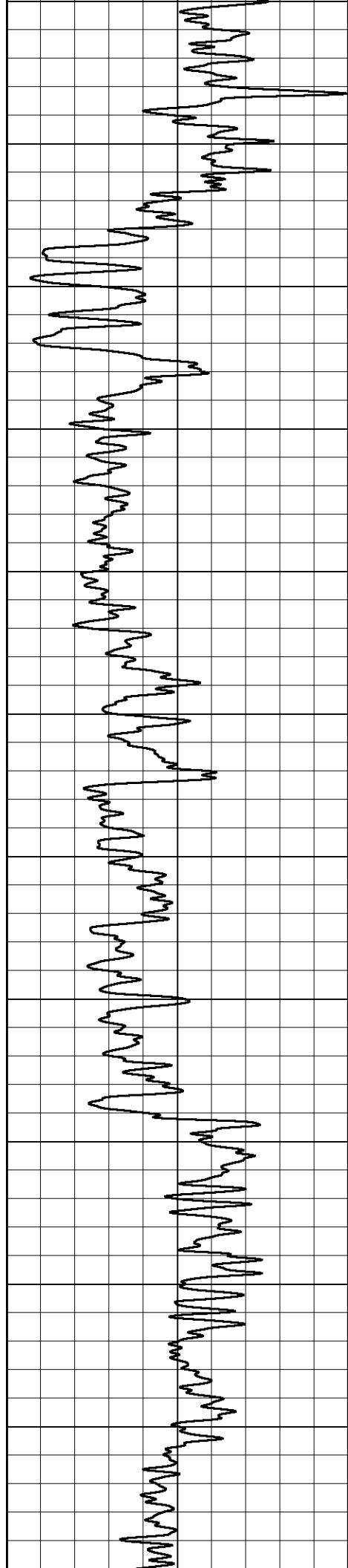


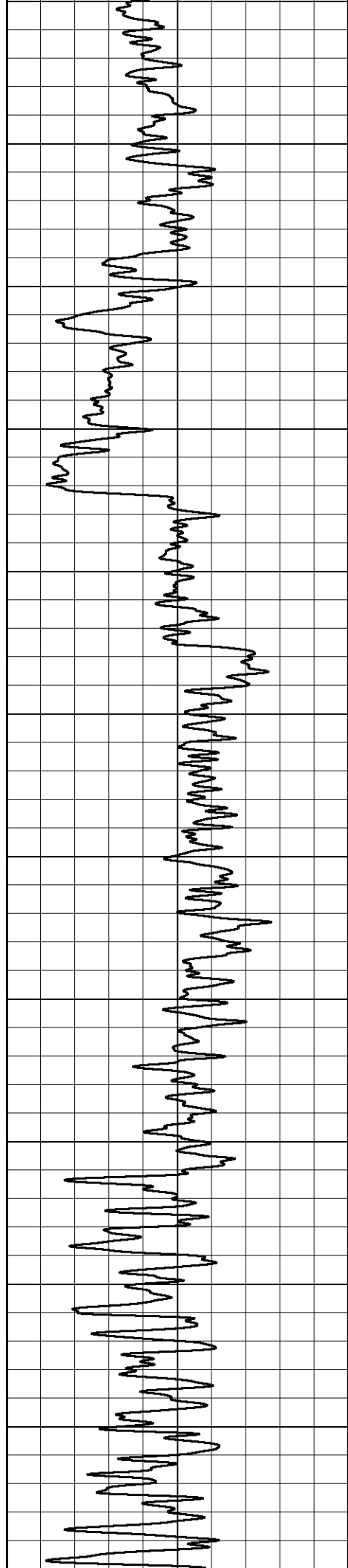




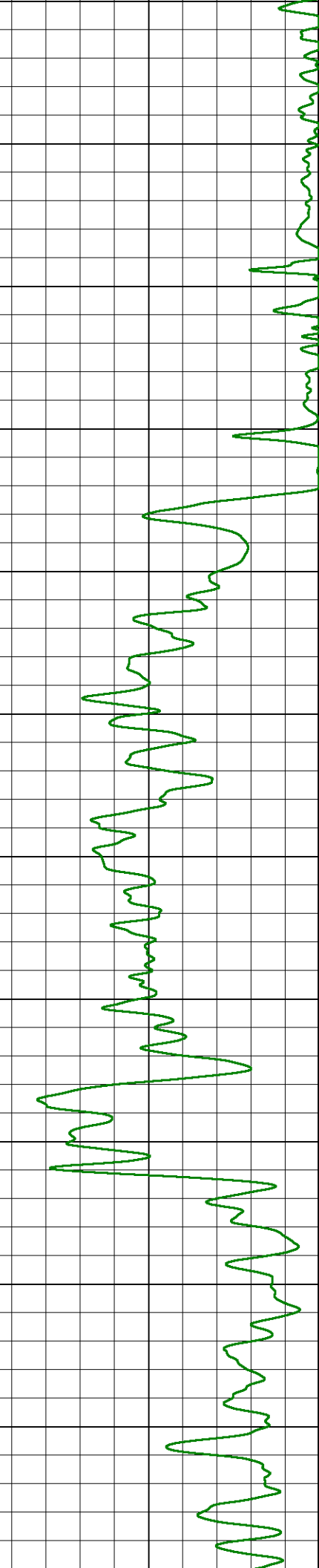
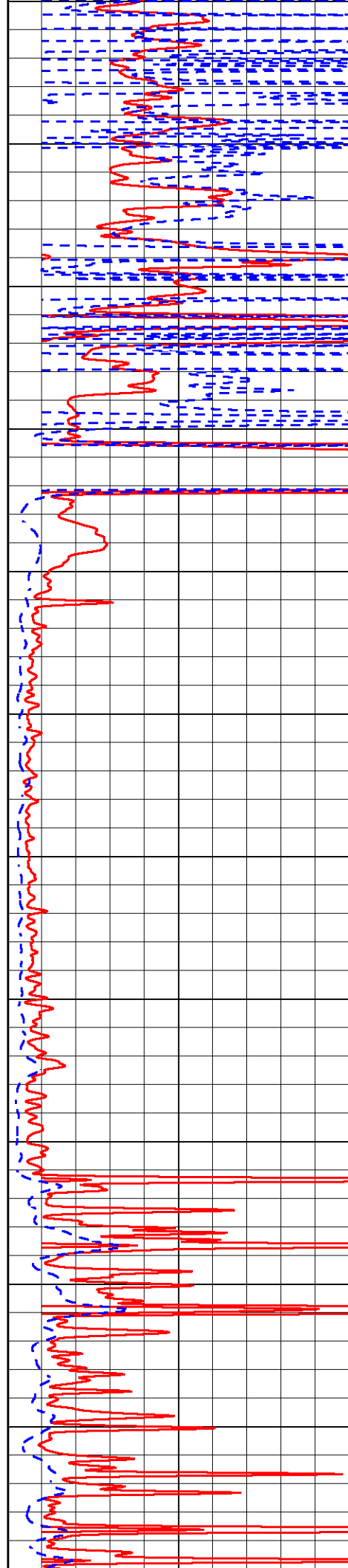
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600

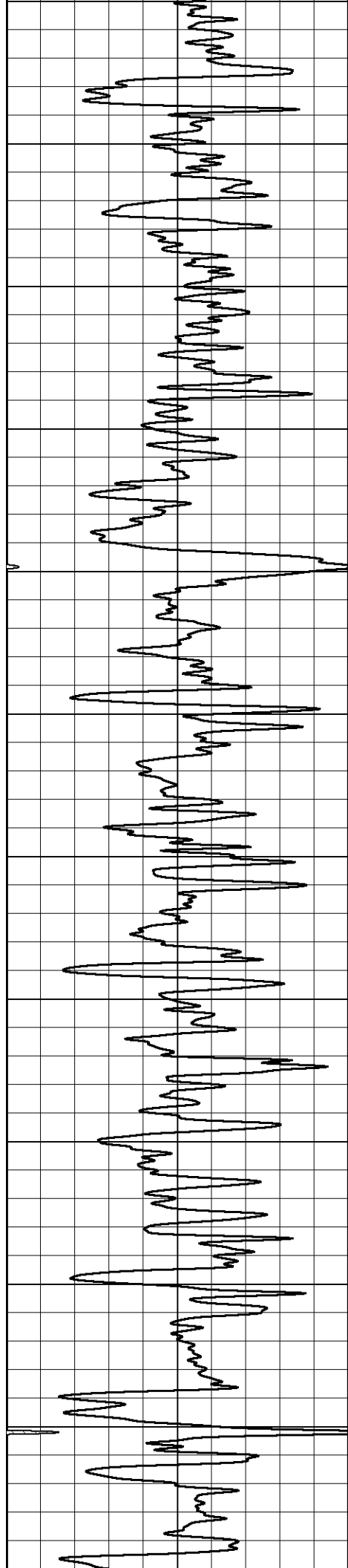




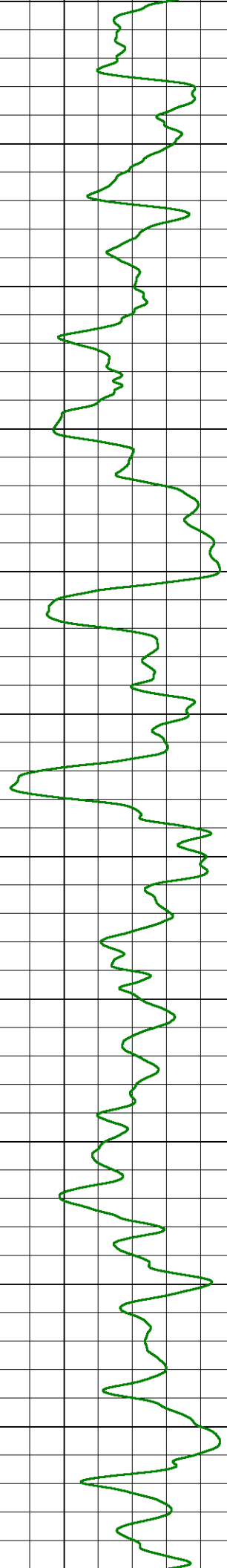
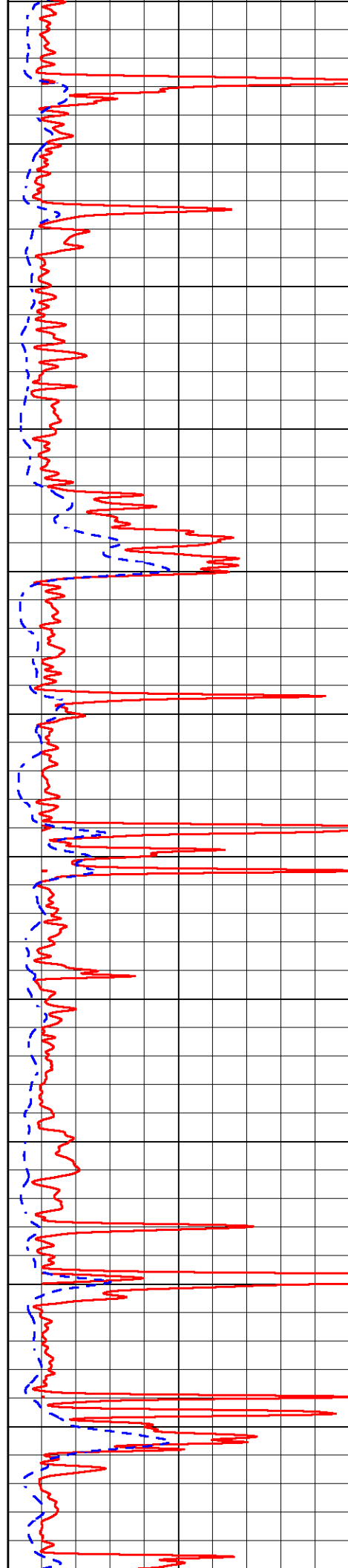


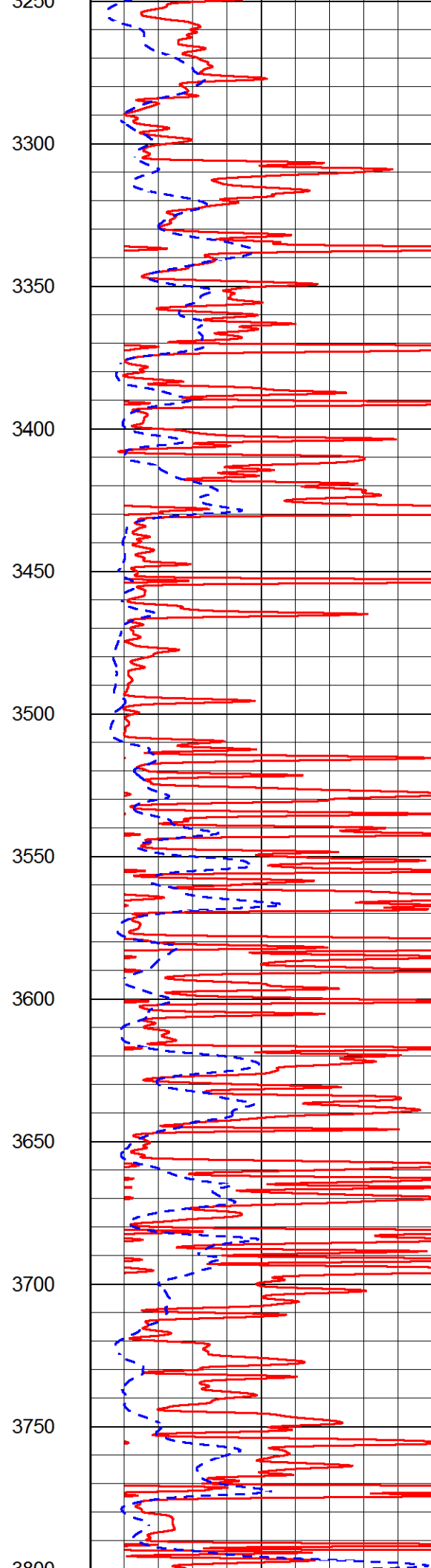
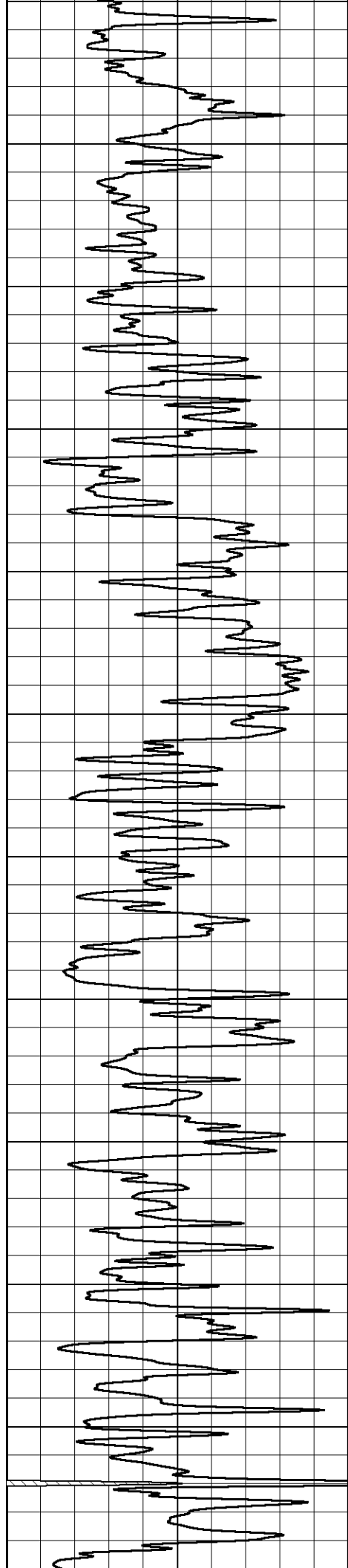
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700

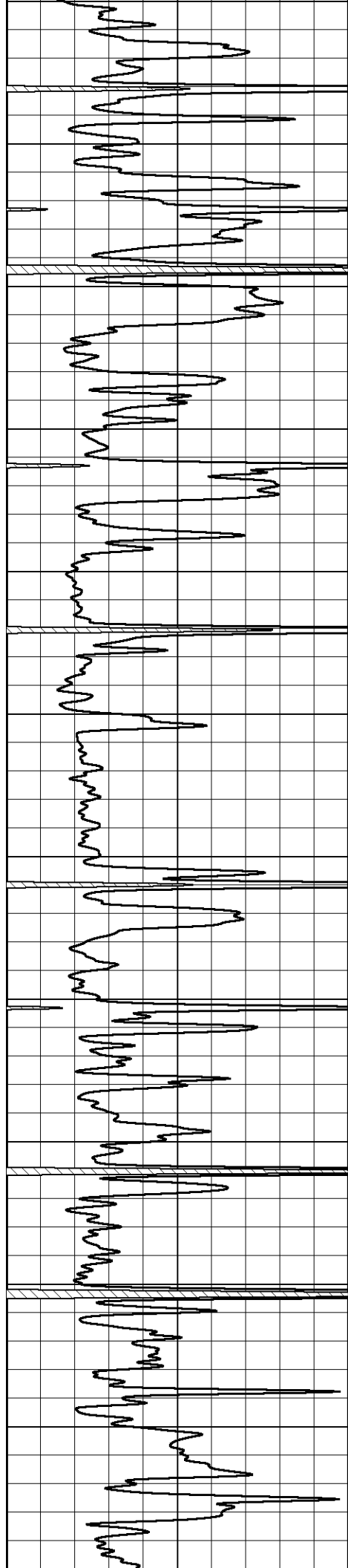




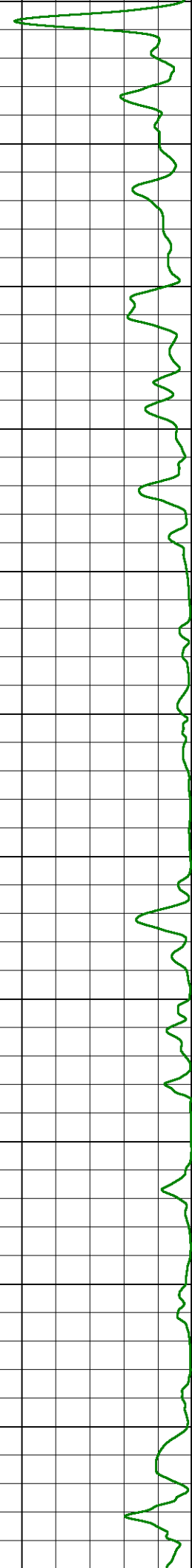
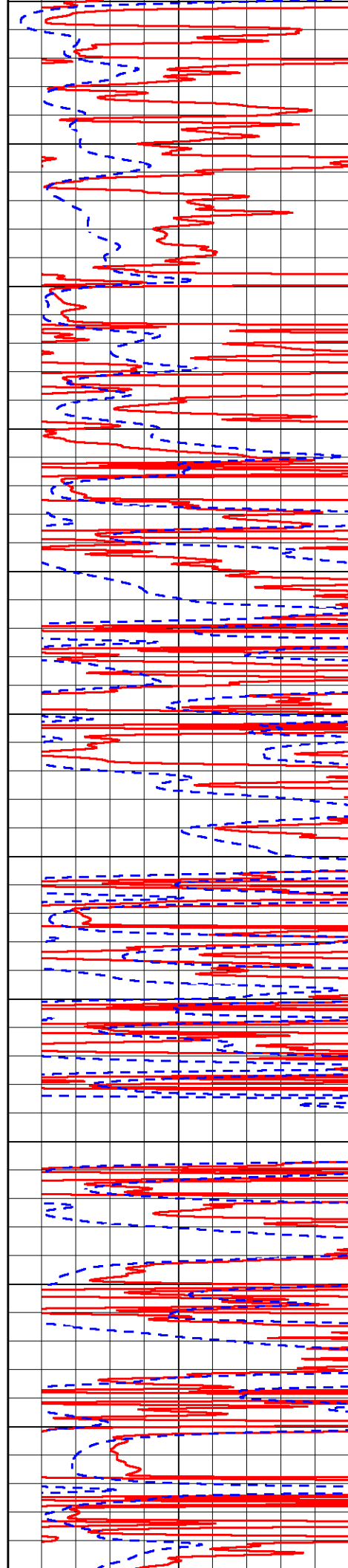
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250

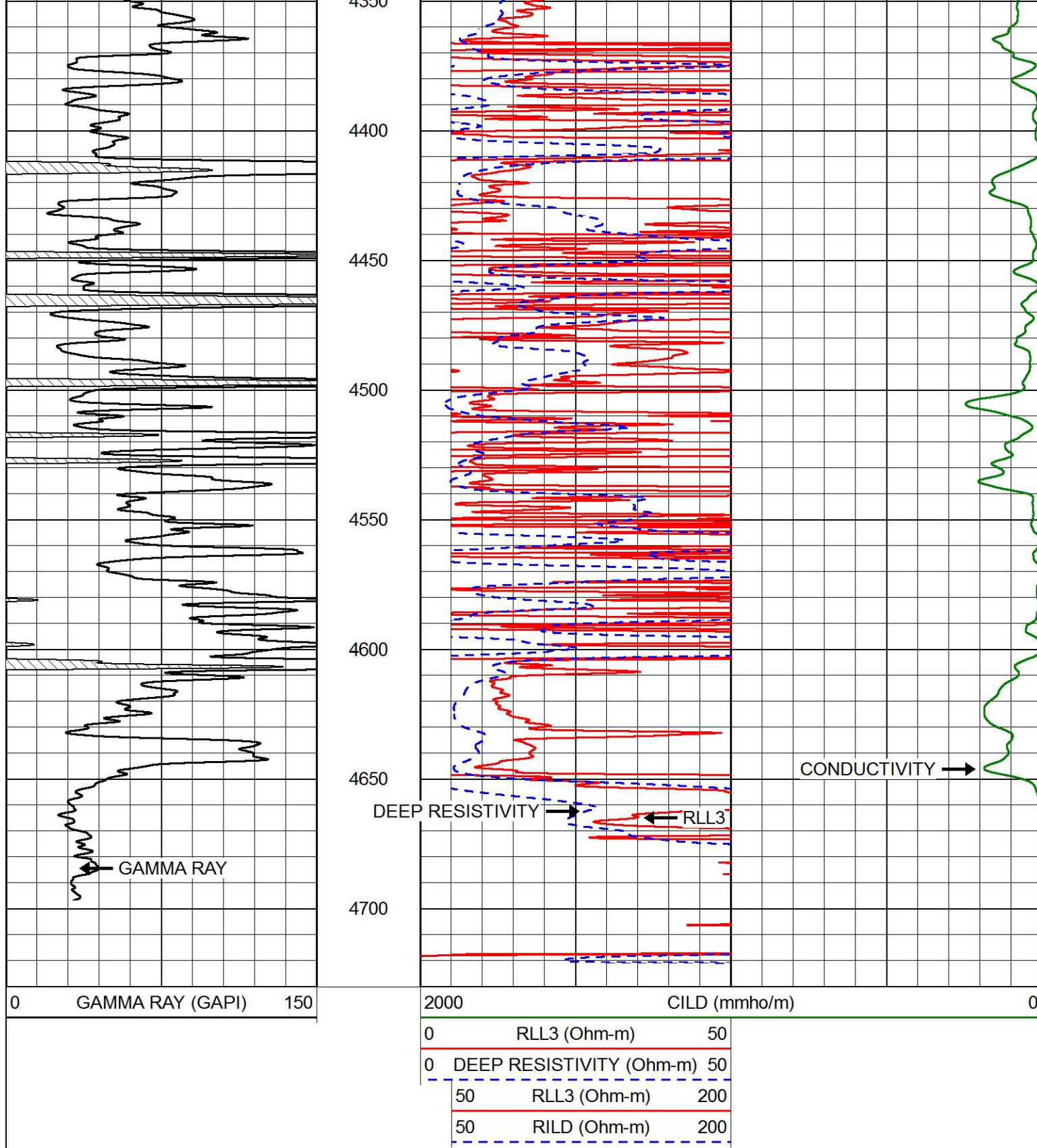






3800
3850
3900
3950
4000
4050
4100
4150
4200
4250
4300
4350

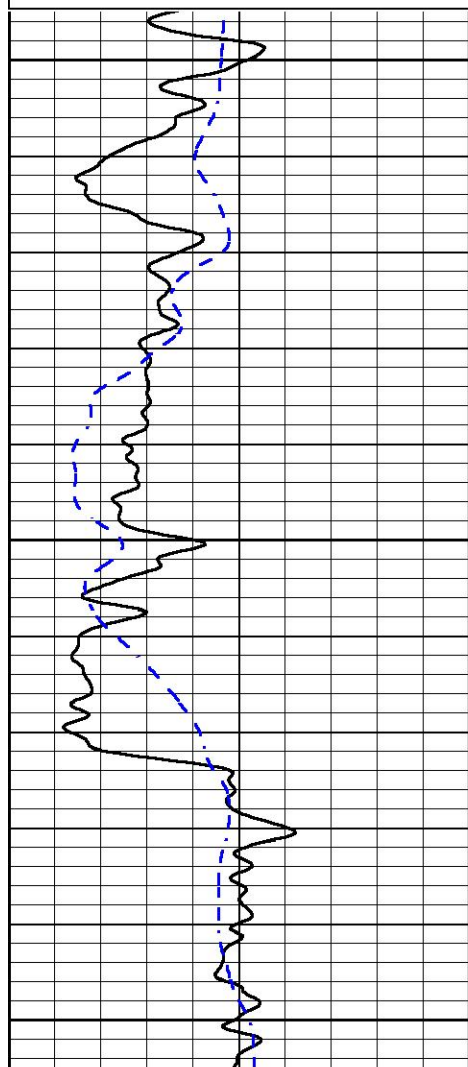




MAIN PASS

Database File shakespeare_cl_community_1_30.db
 Dataset Pathname stack/pass3.1
 Presentation Format dil
 Dataset Creation Sun Jul 21 18:48:39 2019
 Charted by Depth in Feet scaled 1:240

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



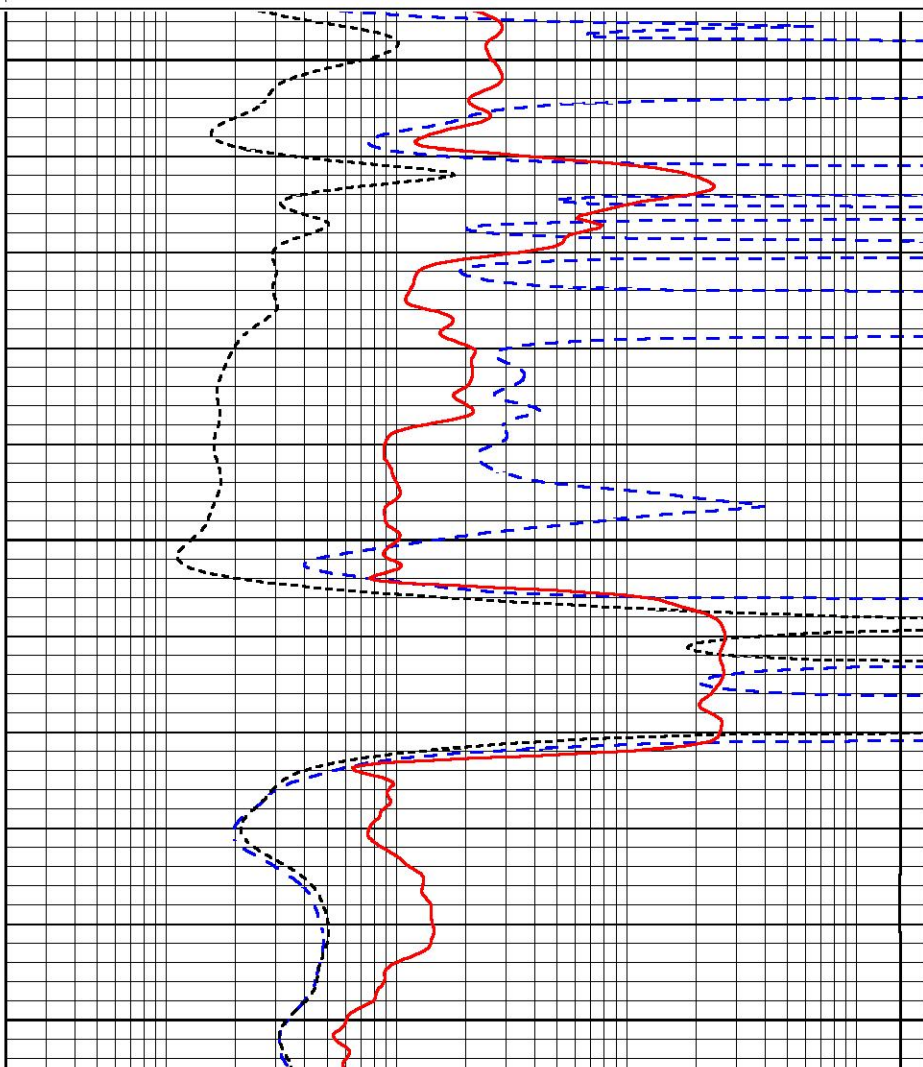
0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

2250

2300

2350

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



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

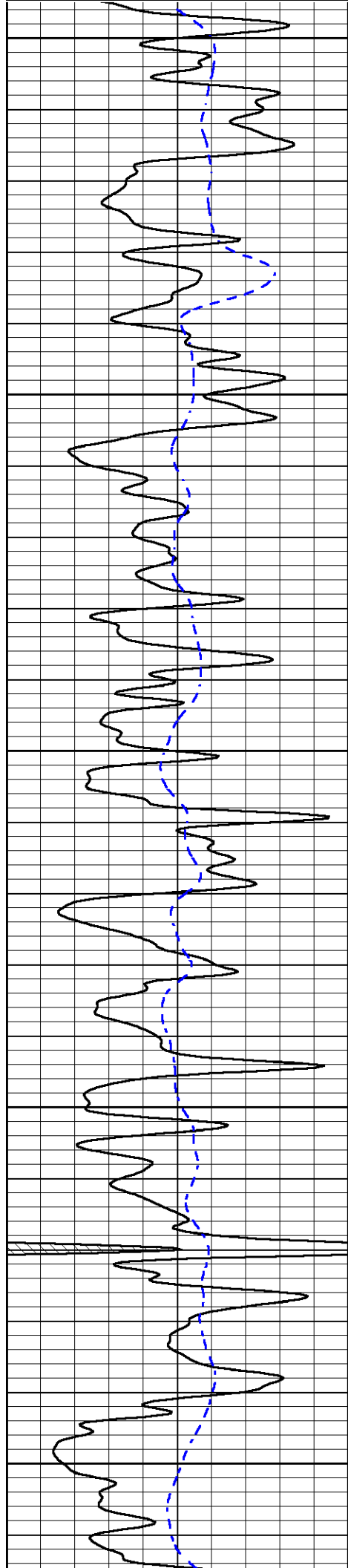


MAIN PASS

Database File: shakespeare_cl_community_1_30.db
 Dataset Pathname: stack/pass3.1
 Presentation Format: dil
 Dataset Creation: Sun Jul 21 18:48:39 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
15000	LINE TENSION (lb)	0



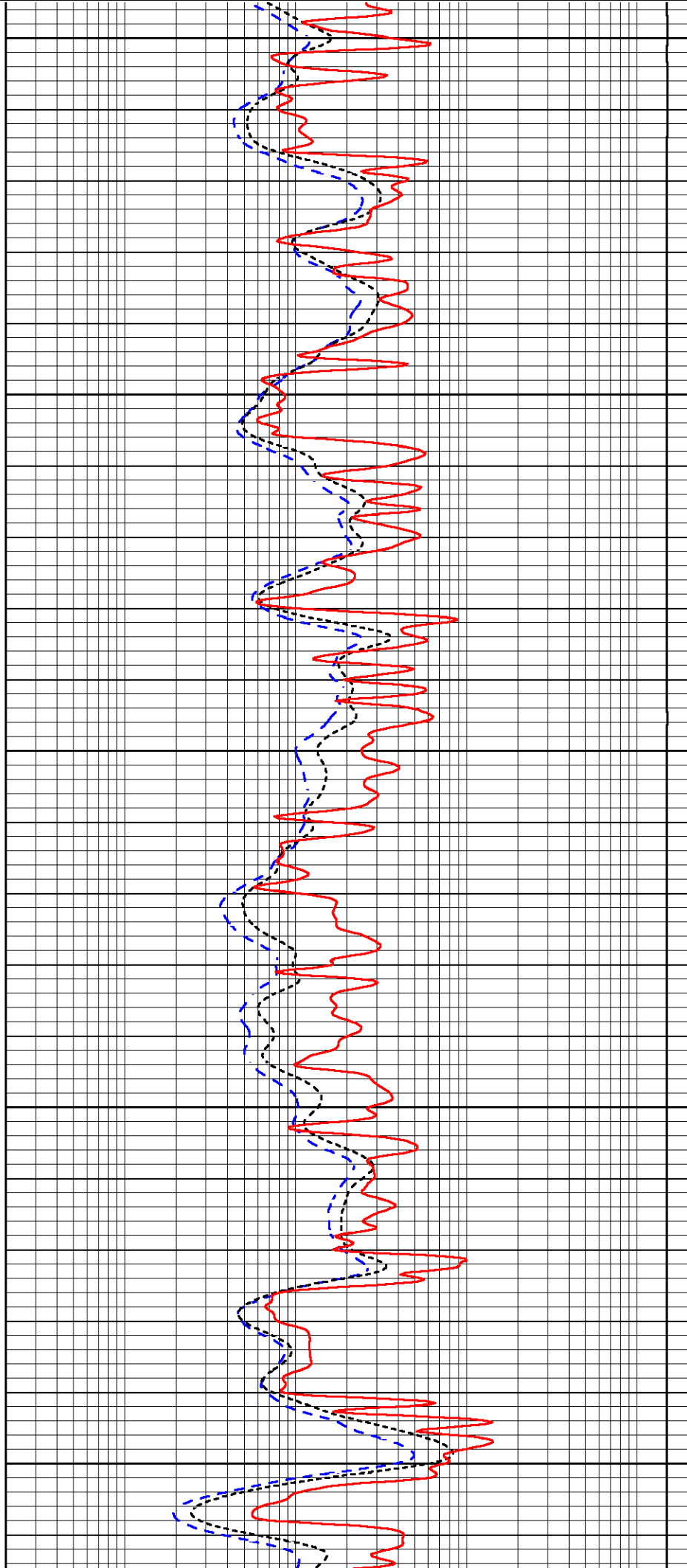
3600

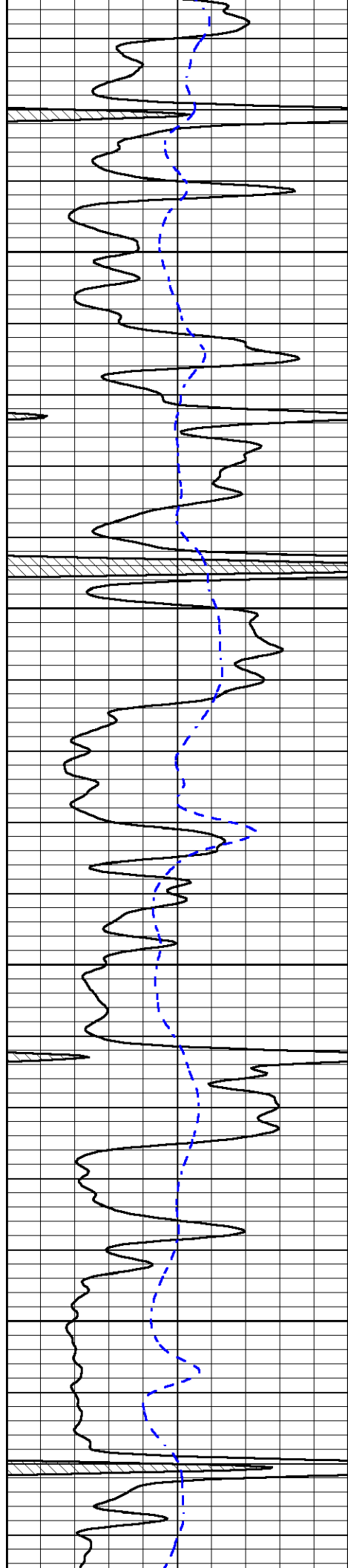
3650

3700

3750

3800



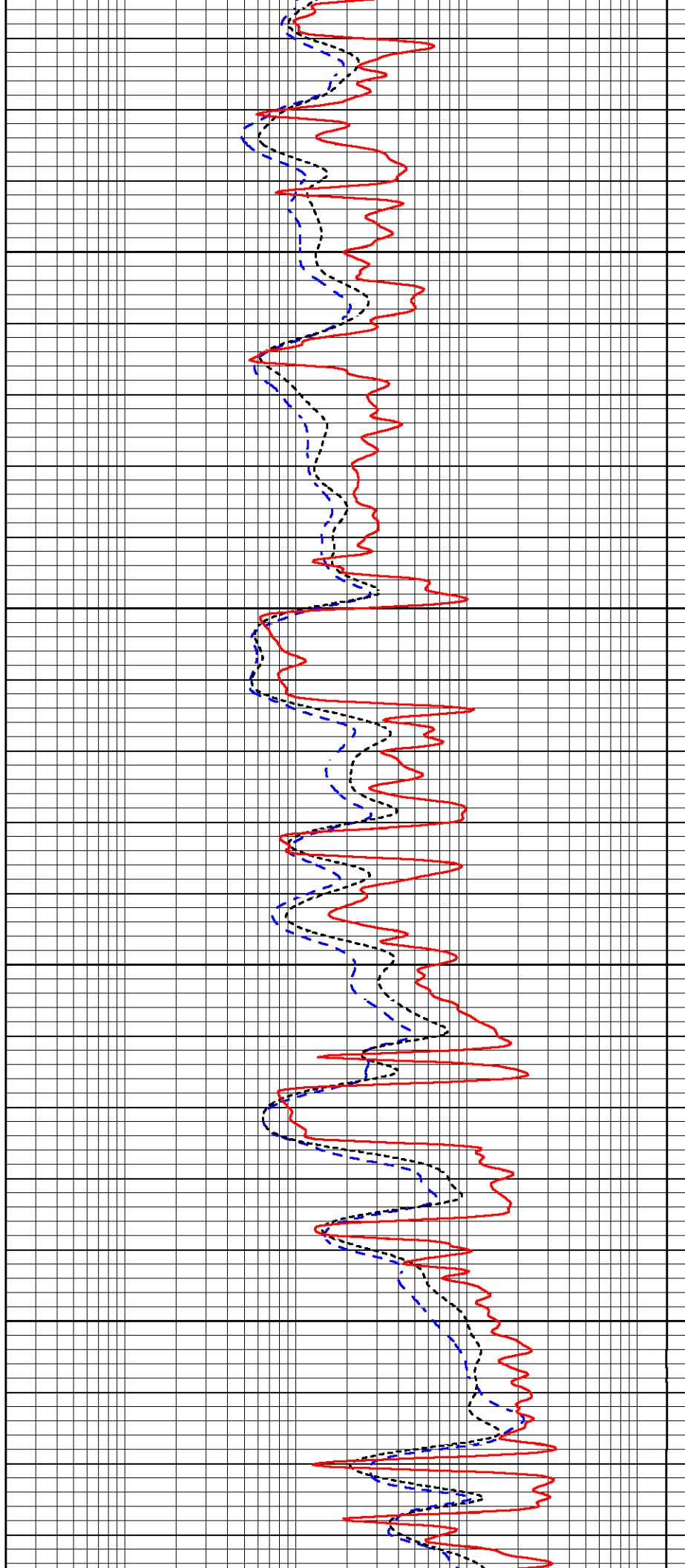


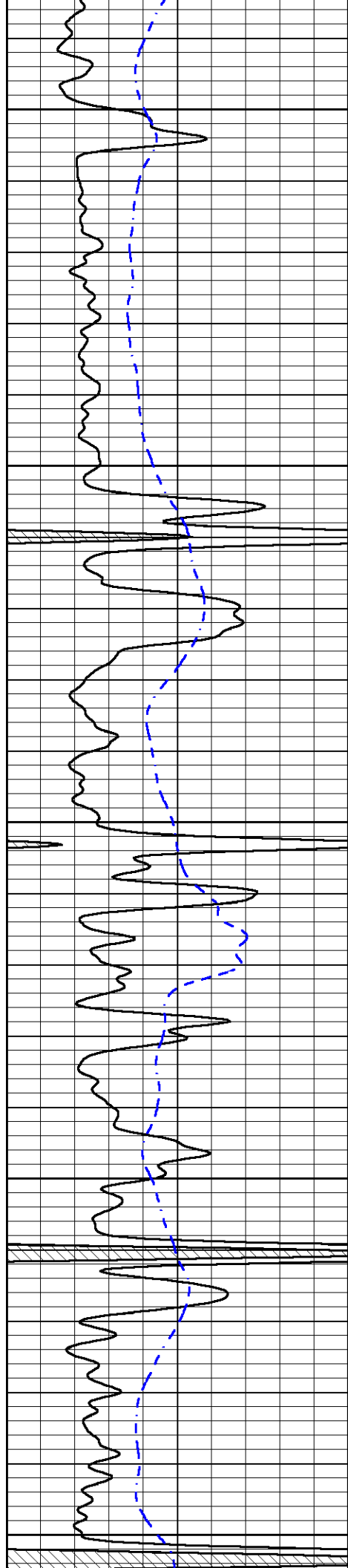
3850

3900

3950

4000





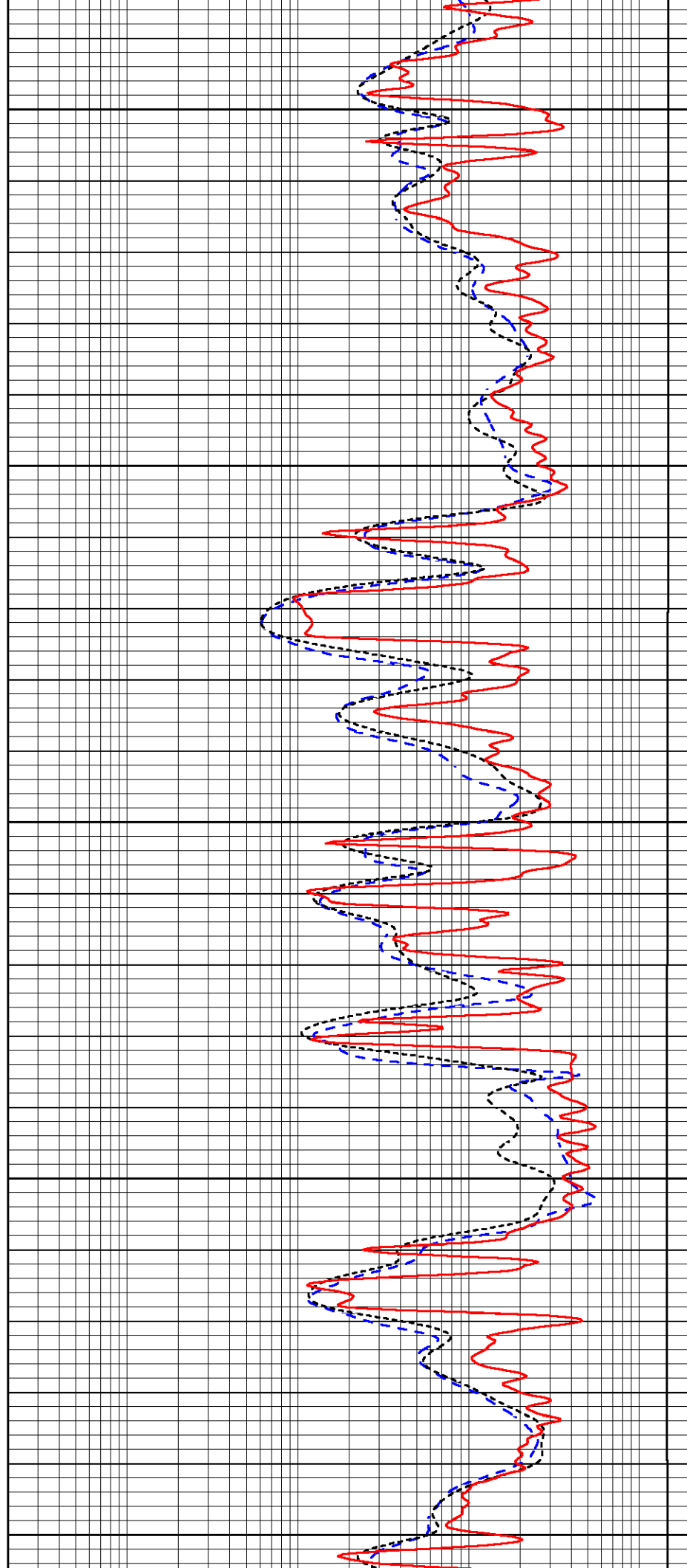
4050

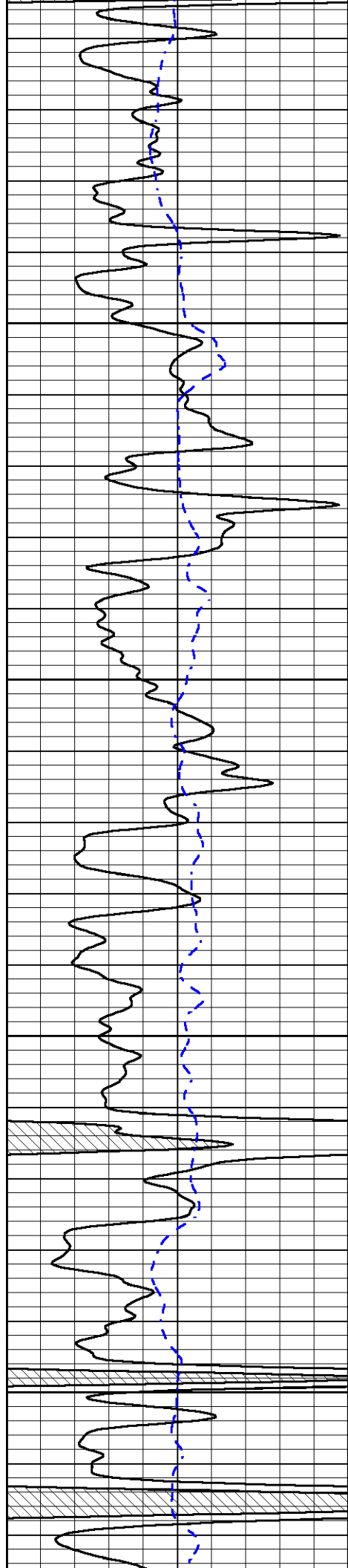
4100

4150

4200

4250



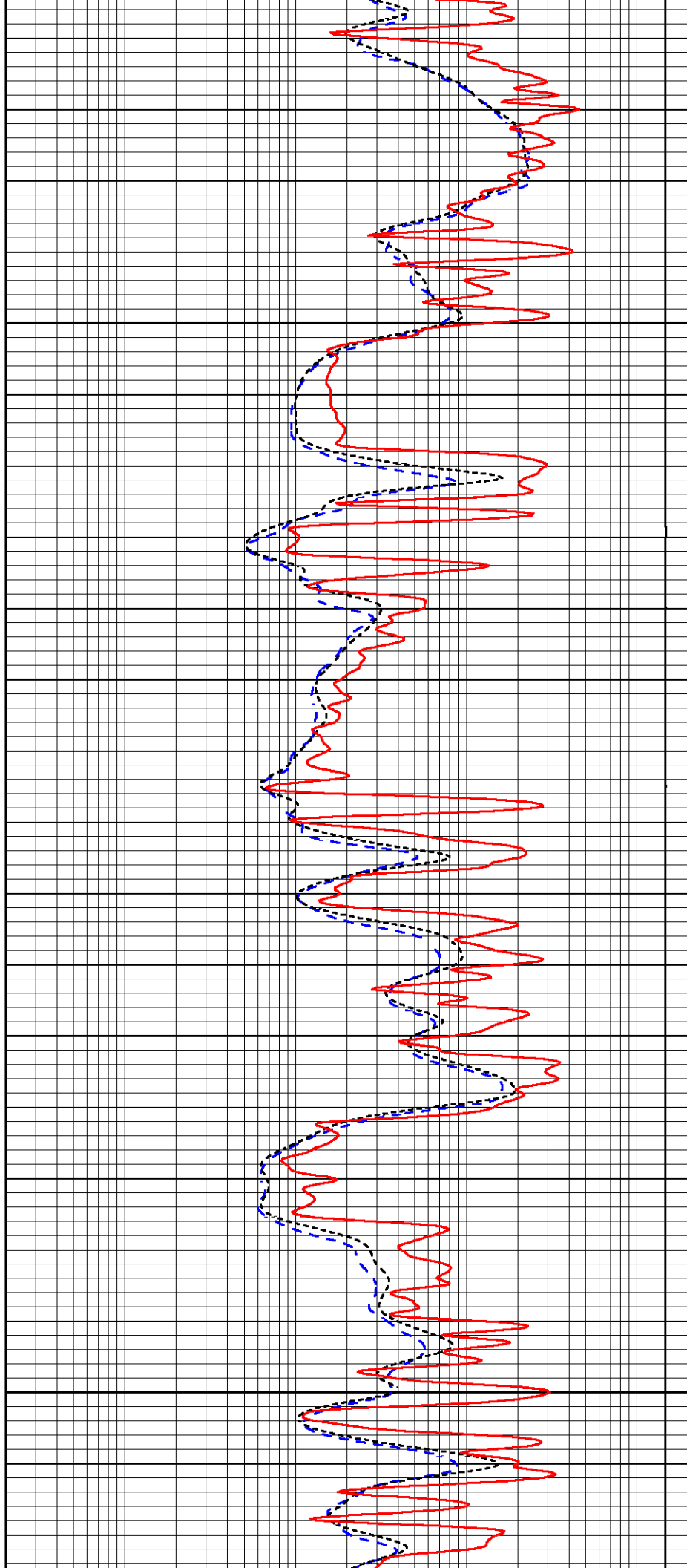


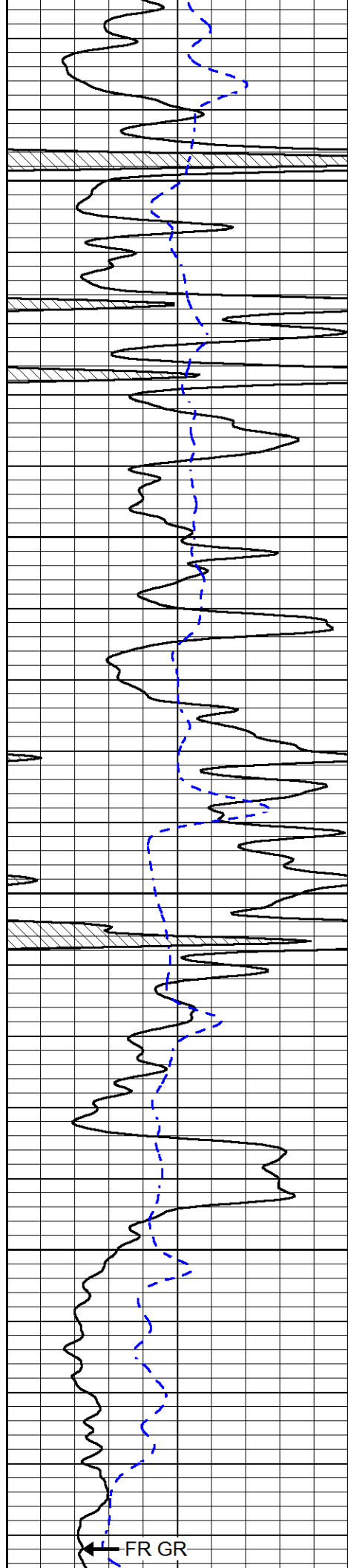
4300

4350

4400

4450





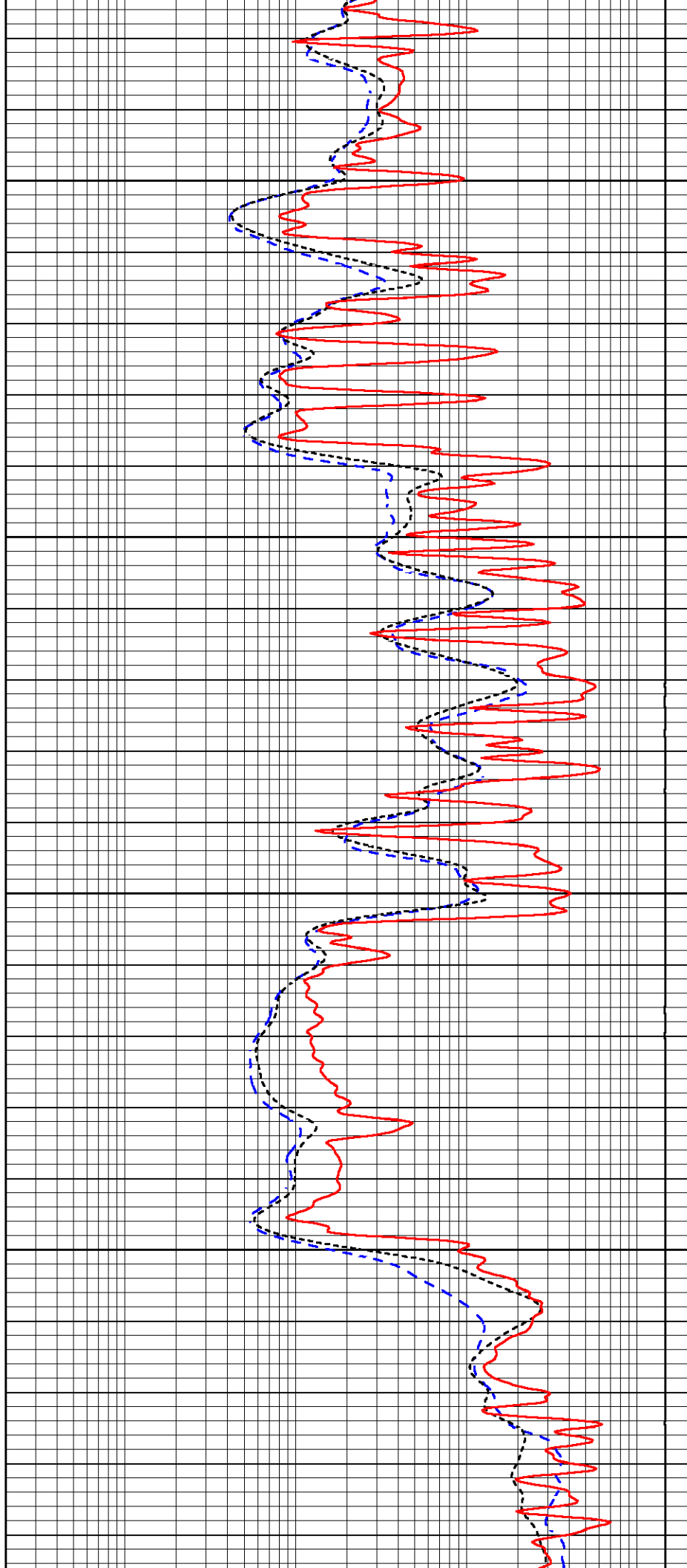
4500

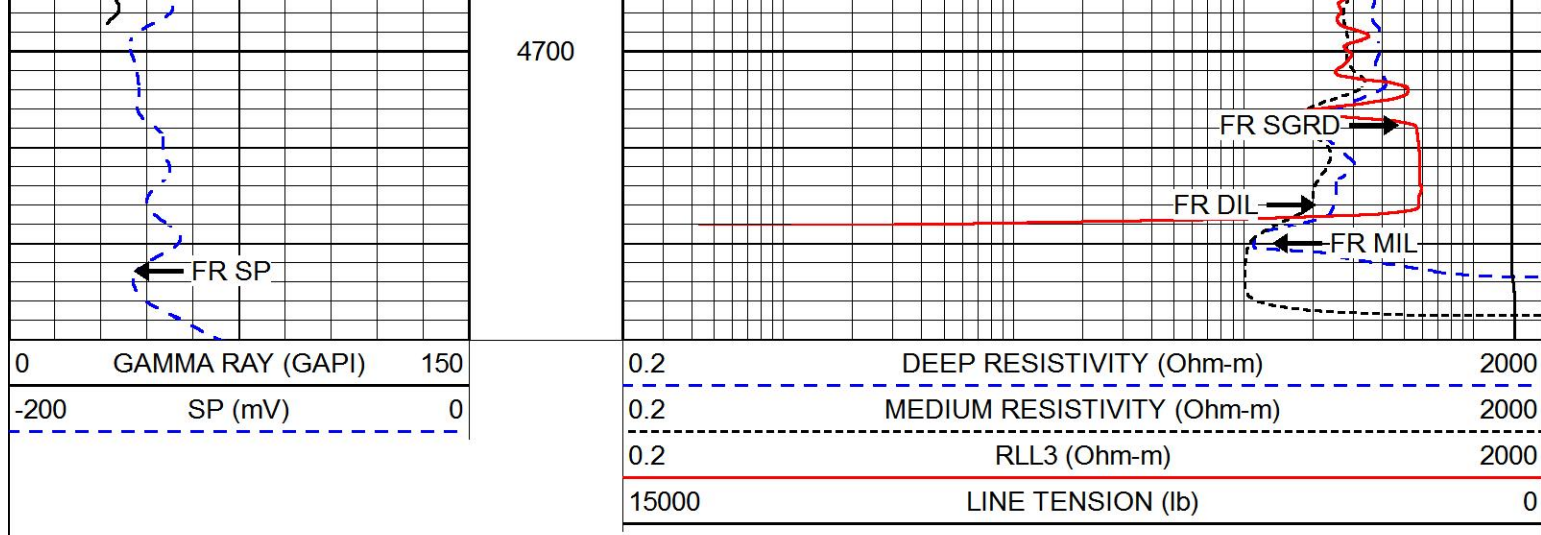
4550

4600

4650

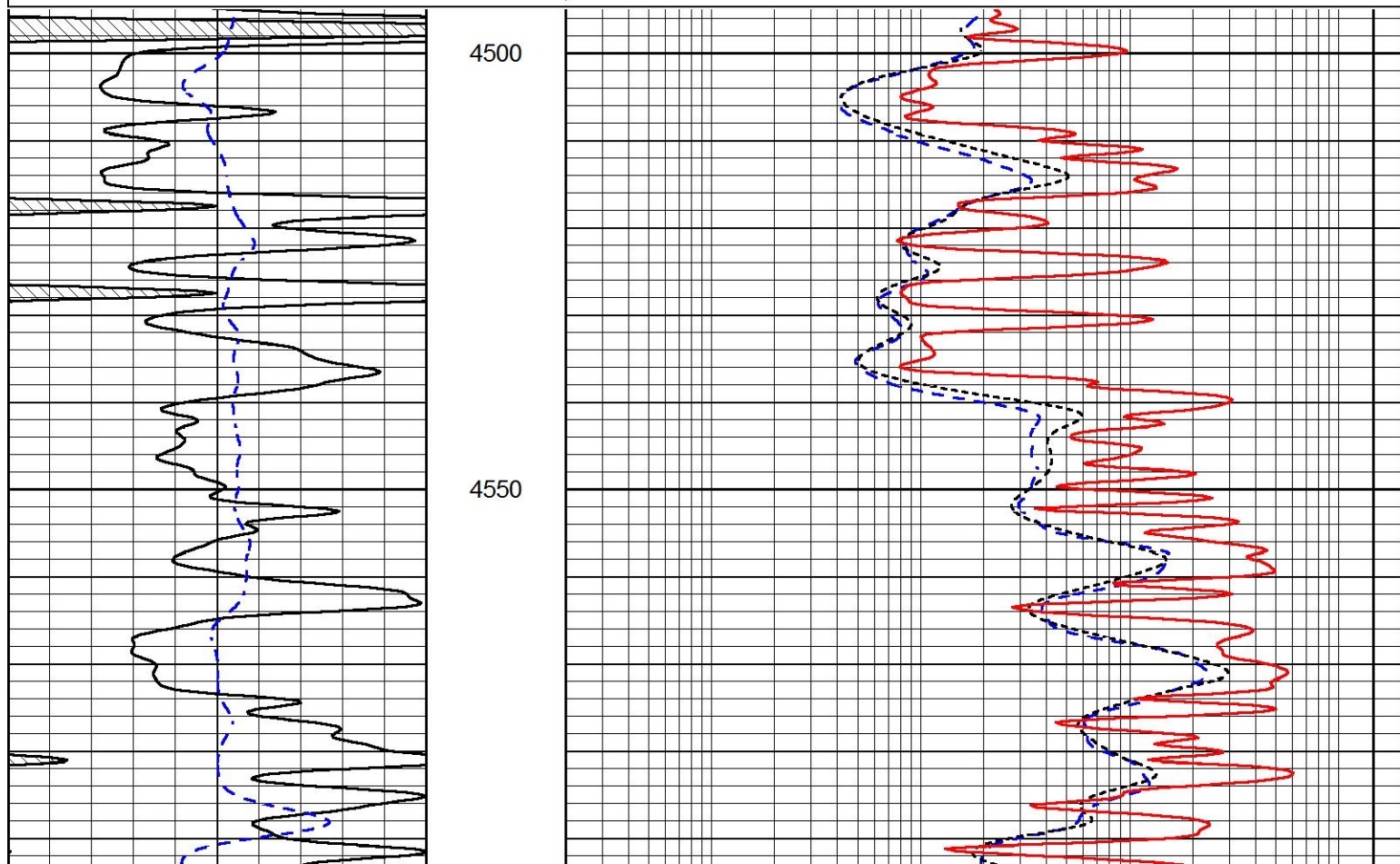
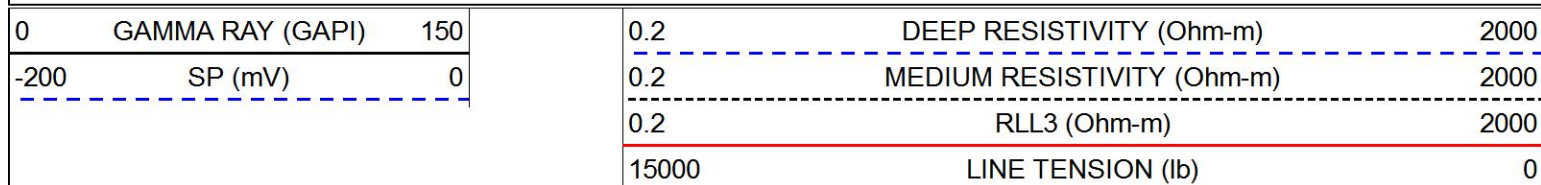
FR GR

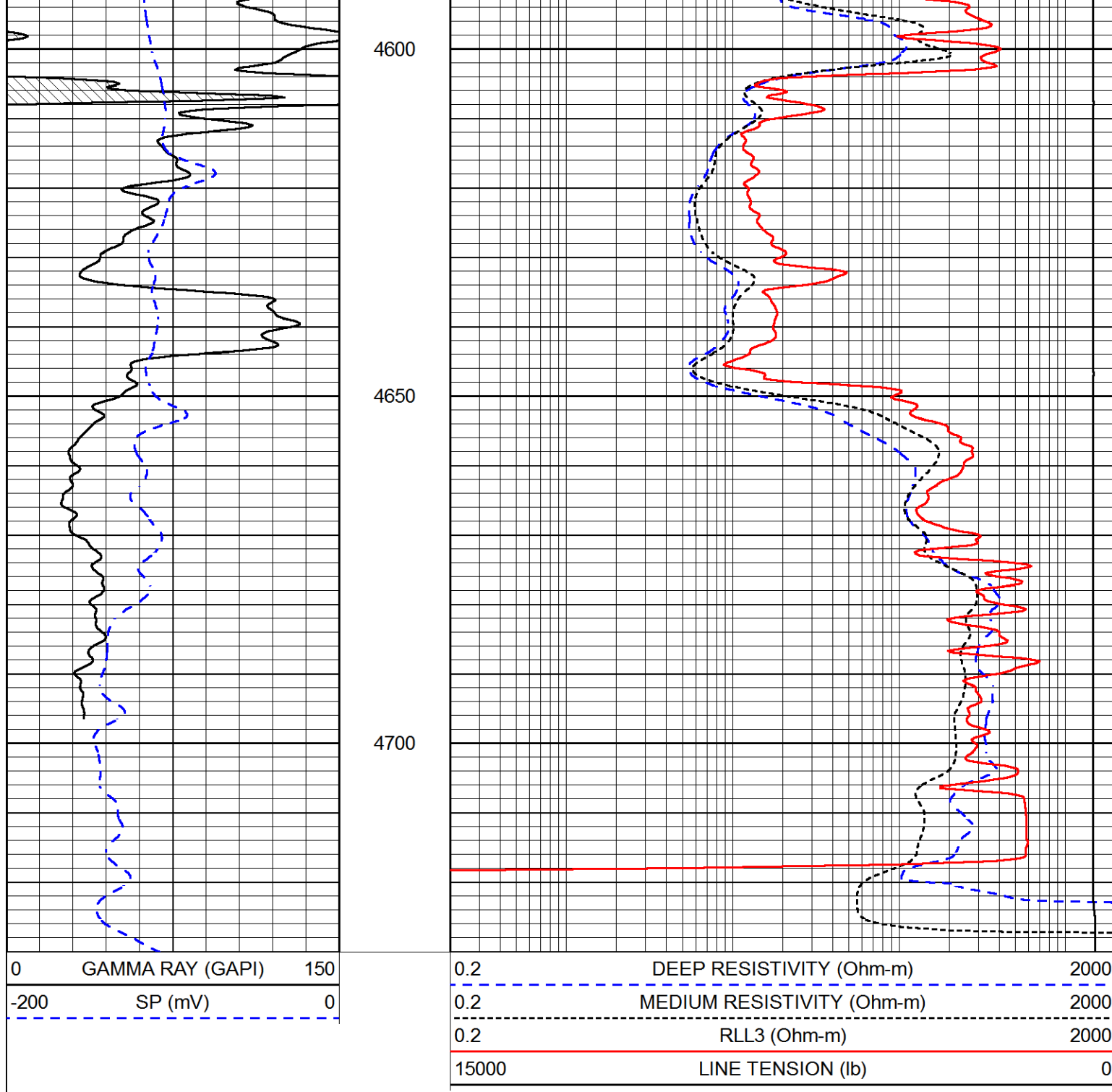




REPEAT SECTION

Database File: shakespere_cl_community_1_30.db
 Dataset Pathname: stack/pass2.1
 Presentation Format: dil
 Dataset Creation: Sun Jul 21 18:10:53 2019
 Charted by: Depth in Feet scaled 1:240





Calibration Report							
Database File	shakespeare_cl_community_1_30.db						
Dataset Pathname	stack/pass3.1						
Dataset Creation	Sun Jul 21 18:48:39 2019						
Dual Induction Calibration Report							
Serial-Model:				PSI 988-M&W			
Calibration Performed:				Tue Nov 20 10:50:19 2018			
Readings			References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-44.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.000

Compensated Density Calibration Report

Serial-Model:	144-84-M&W
Source / Verifier:	/
Master Calibration Performed:	Mon Jan 07 15:00:31 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4315.49	5309.89	cps
Aluminum	2.675	g/cc	825.26	3443.46	cps
Spine Angle = 75.33			Density/Spine Ratio = 0.538		
	Size		Reading		
Small Ring	4.00	in	0.69		
Large Ring	14.00	in	0.04		

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 17:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



Company	SHAKESPEARE OIL CO. INC.
Well	CL COMMUNITY #1-30
Field	WILDCAT
County	SCOTT
State	KANSAS