



MIDWEST WIRELINE

**DUAL INDUCTION**

Company **Satchell Creek Petroleum LLC**  
 Well **Worcester A #11-21**  
 Field **Alda South**  
 County **Graham** State **Kansas**

Company **Satchell Creek Petroleum LLC**  
 Well **Worcester A #11-21**  
 Field **Alda South**  
 County **Graham**  
 State **Kansas**

Location: **API # : 15-065-24267-00-00**  
**SW NW SE SE**  
**667 FSL & 1310 FEL**  
**SEC 21 TWP 7S RGE 22W**  
 Permanent Datum **Ground Level** Elevation **2268**  
 Log Measured From **Kelly Bushing**  
 Drilling Measured From **Kelly Bushing**  
 Other Services **CNL/CDL**  
**MEL/BHCS**  
 Elevation **2275**  
 K.B. **2275**  
 D.F.  
 G.L. **2268**

Date	7/14/2023
Run Number	One
Depth Driller	3849
Depth Logger	3850
Bottom Logged Interval	3849
Top Log Interval	200
Casing Driller	8:625 @ 222
Casing Logger	221
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1500
Density / Viscosity	9.5 60
pH / Fluid Loss	10.0 6.8
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	0.5 @ 114
Operating Rig Time	4 Hours
Max Rec. Temp. F	114
Equipment Number	P-24
Location	Hays
Recorded By	T. Martin
Witnessed By	Sean Deenihan

<<< Fold Here >>>

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

Hill City, KS, E to 310 Rd, 2.5 N, W into @ TB

Log Measured From: Kelly Bushing 7 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC  
 785-625-3858

**Your Midwest Wireline Crew**

Engineer: T. Martin  
 Operator:  
 Operator:  
 Operator:

**This Log Record Was Witnessed By**

Primary Witness: Sean Deenihan  
 Secondary Witness:  
 Secondary Witness:  
 Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	32.75		GR-M&W (105)	3.00	3.50	50.00
CNLSC CNSSC	29.65 28.90		CNT-M&W (201-M&W)	5.00	3.50	100.00
LSD DCAL SSD	20.60 20.58 20.10		CDL-M&W (307-11)	8.50	4.00	250.00
RLL3F RLL3	15.50 15.50		DIL-M&W (507)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: satchell\_worcester a #11-21.db: field/well/Stack/pass3.1  
 Total length: 34.75 ft  
 Total weight: 620.00 lb  
 O.D.: 4.00 in

# Log Variables

DatabaseC:\ProgramData\Warrrior\Data\satchell\_worcester a #11-21.db  
 Dataset field/well/Stack/pass3.1/\_vars\_

## Top - Bottom

BOREID in 7.875	BOTTEMP degF 114	CASEOD in 5.5	CASETHCK in 0	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	NPORSEL Limestone	PERFS No
SNDERR mmho/m 0	SNDERRM mmho/m 0	SPSHIFT mV 120	SRFTEMP degF 80	SZCOR Off	TDEPTH ft 3850		

## Variable Description

BOREID : Borehole I.D.  
 BOTTEMP : Bottom Hole Temperature  
 CASEOD : Casing O.D.  
 CASETHCK : Casing Thickness  
 FLUIDDEN : Fluid Density  
 MATRXDEN : Matrix Density  
 NPORSEL : Neutron Porosity Curve Select

PERFS : Perforation Flag  
 SNDERR : Deep Sonde Error Correction  
 SNDERRM : Medium Sonde Error Correction  
 SPSHIFT : S.P. Baseline Offset  
 SRFTEMP : Surface Temperature  
 SZCOR : CN Size Cor. ?  
 TDEPTH : Total Depth

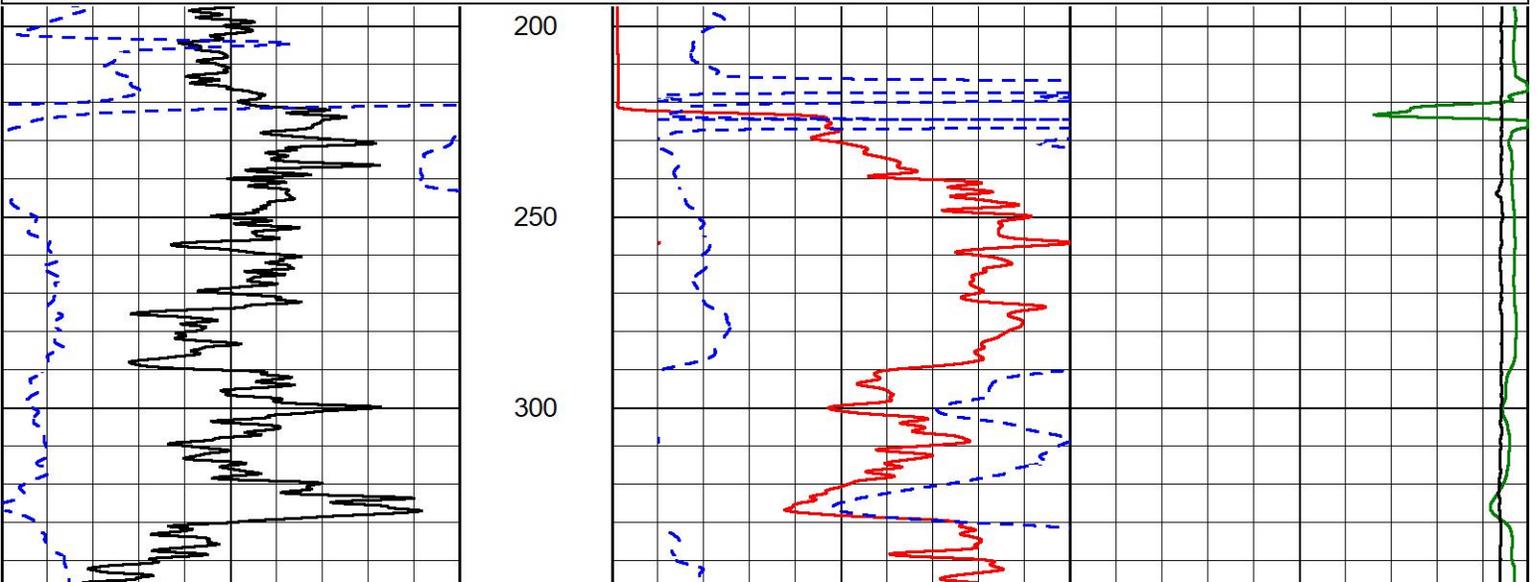


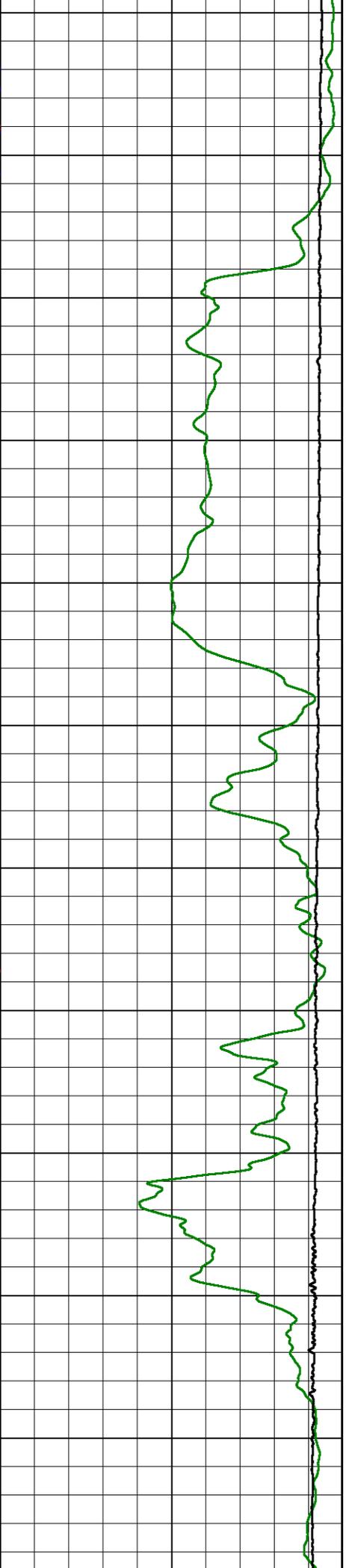
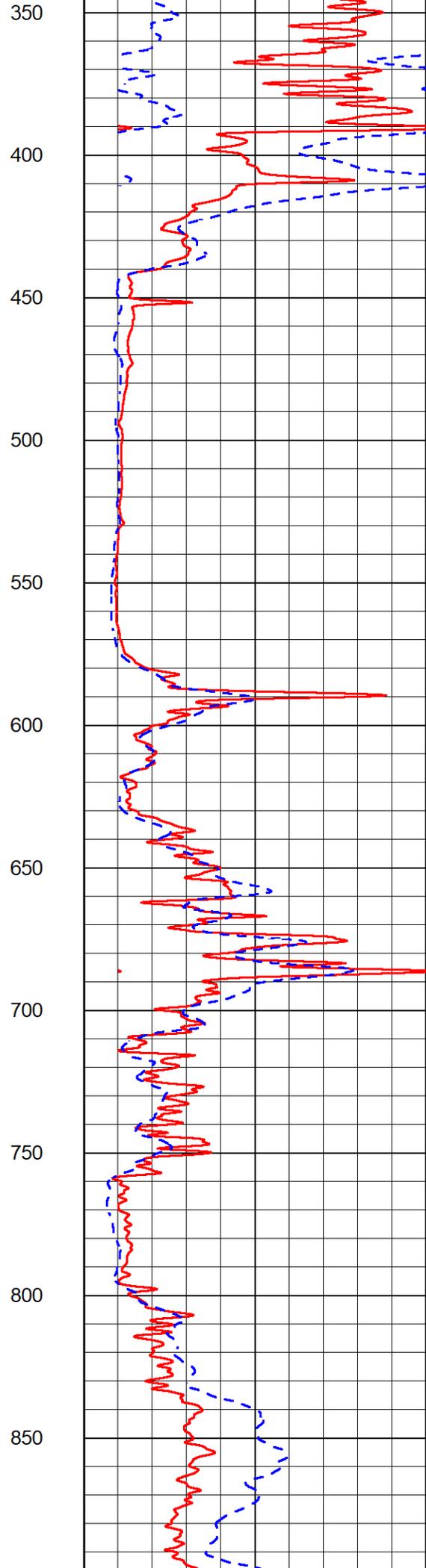
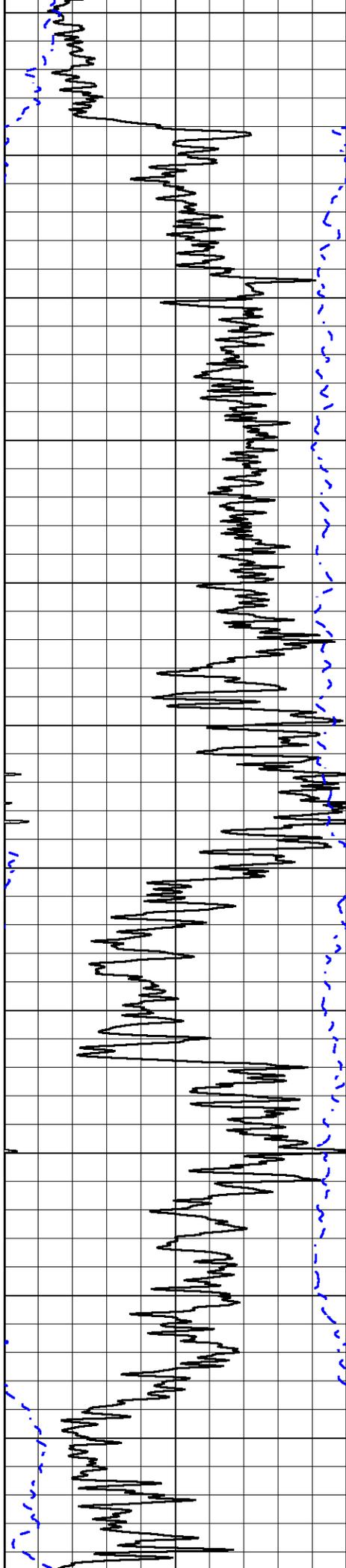
## 2" SCALE RESISTIVITY

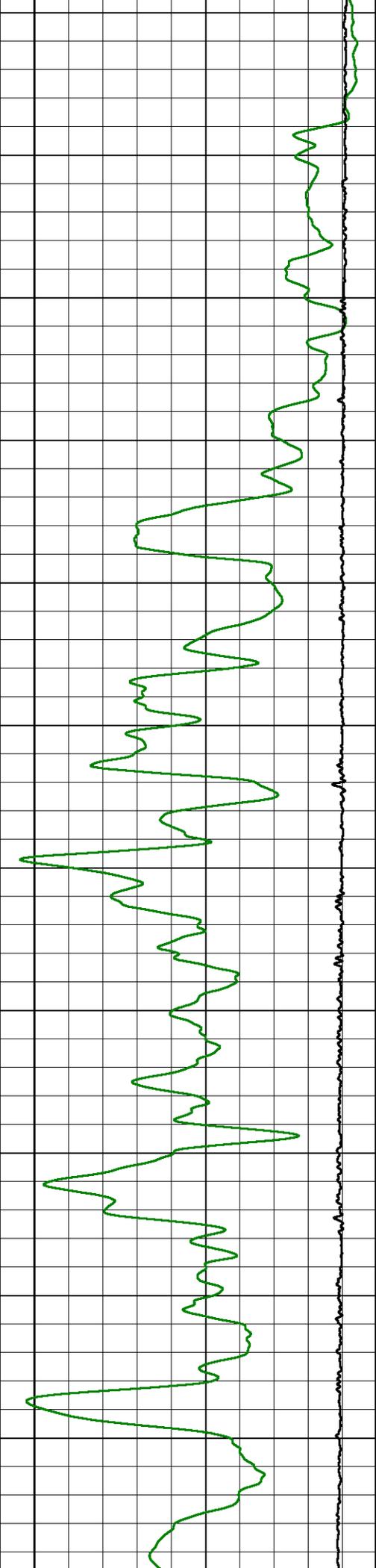
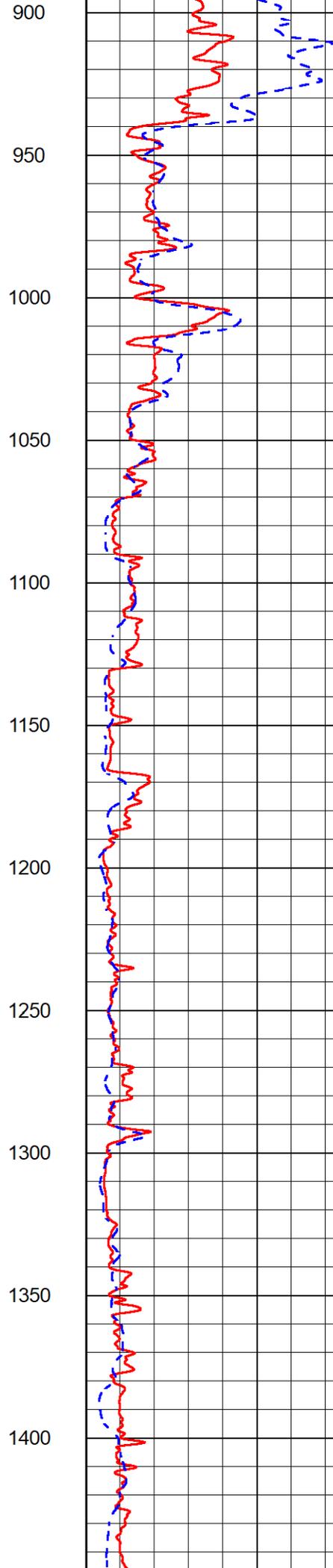
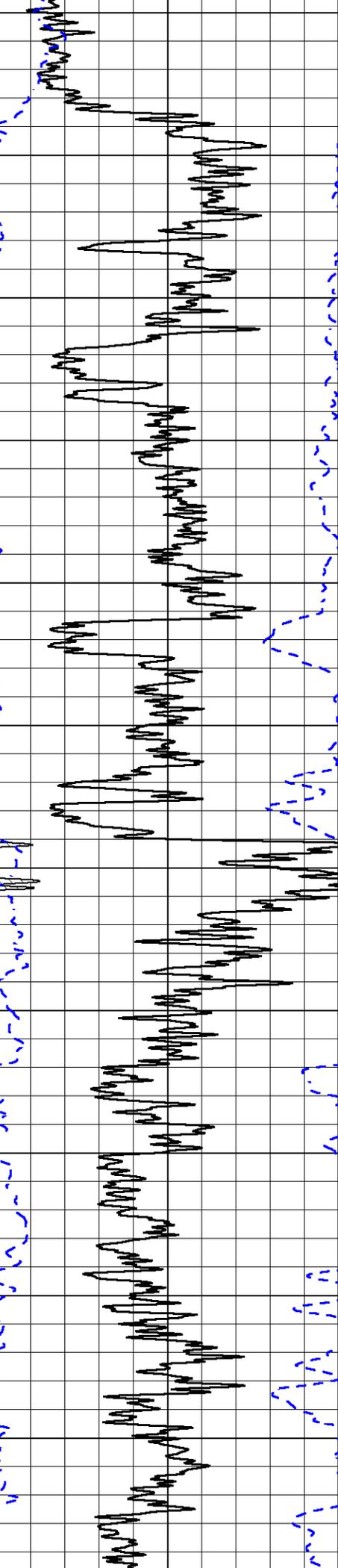
### MAIN PASS

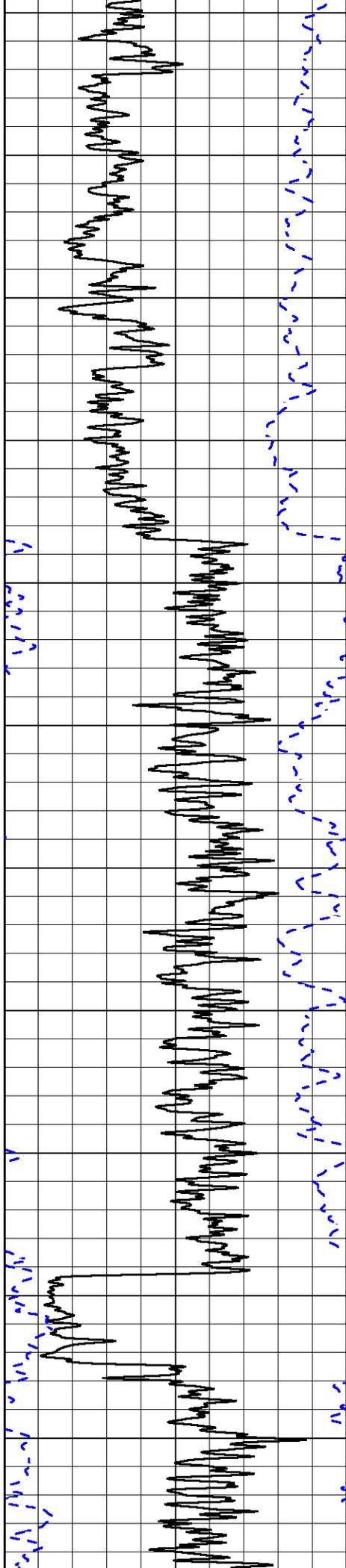
Database File satchell\_worcester a #11-21.db  
 Dataset Pathname Stack/pass3.2  
 Presentation Format \_dil2in  
 Dataset Creation Fri Jul 14 14:02:36 2023  
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			50	Shallow Resistivity (Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

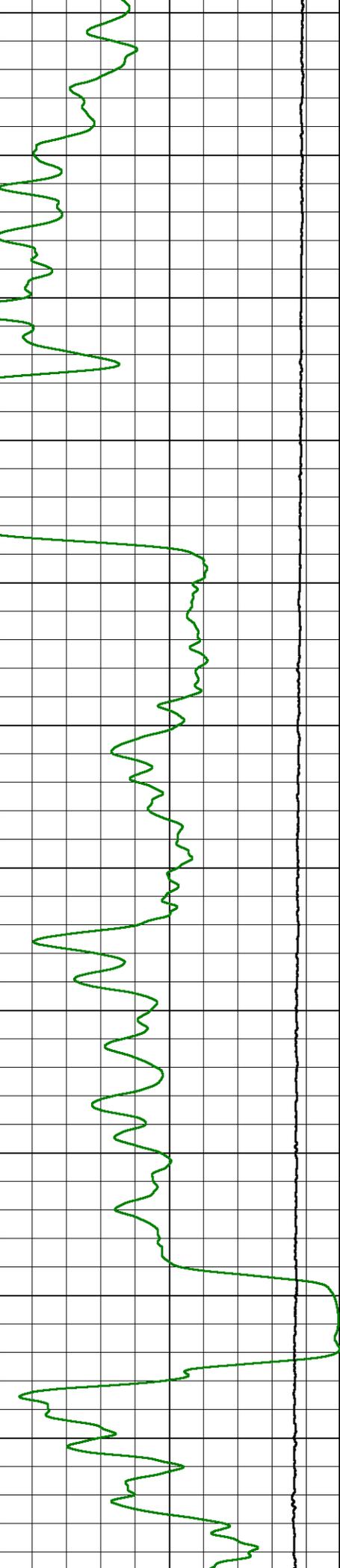
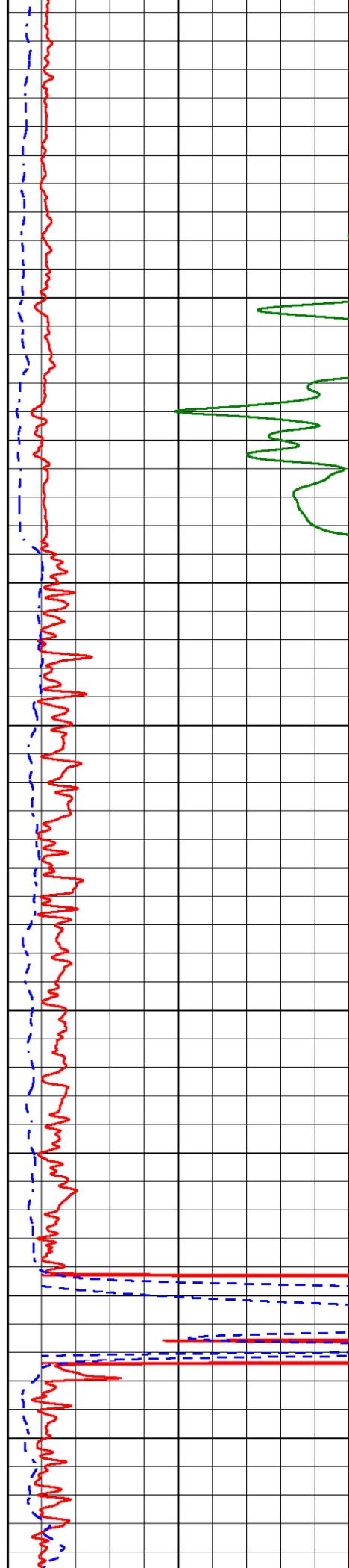


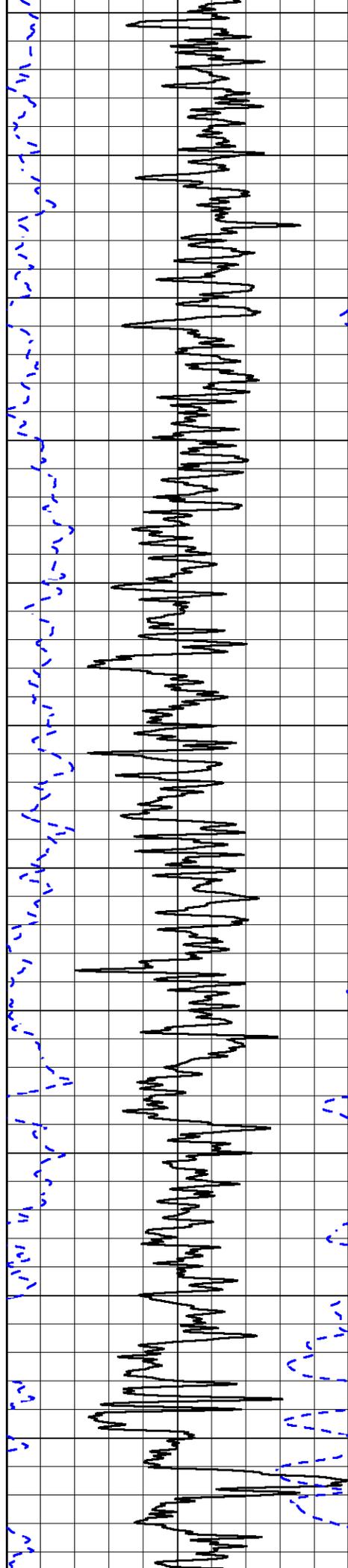




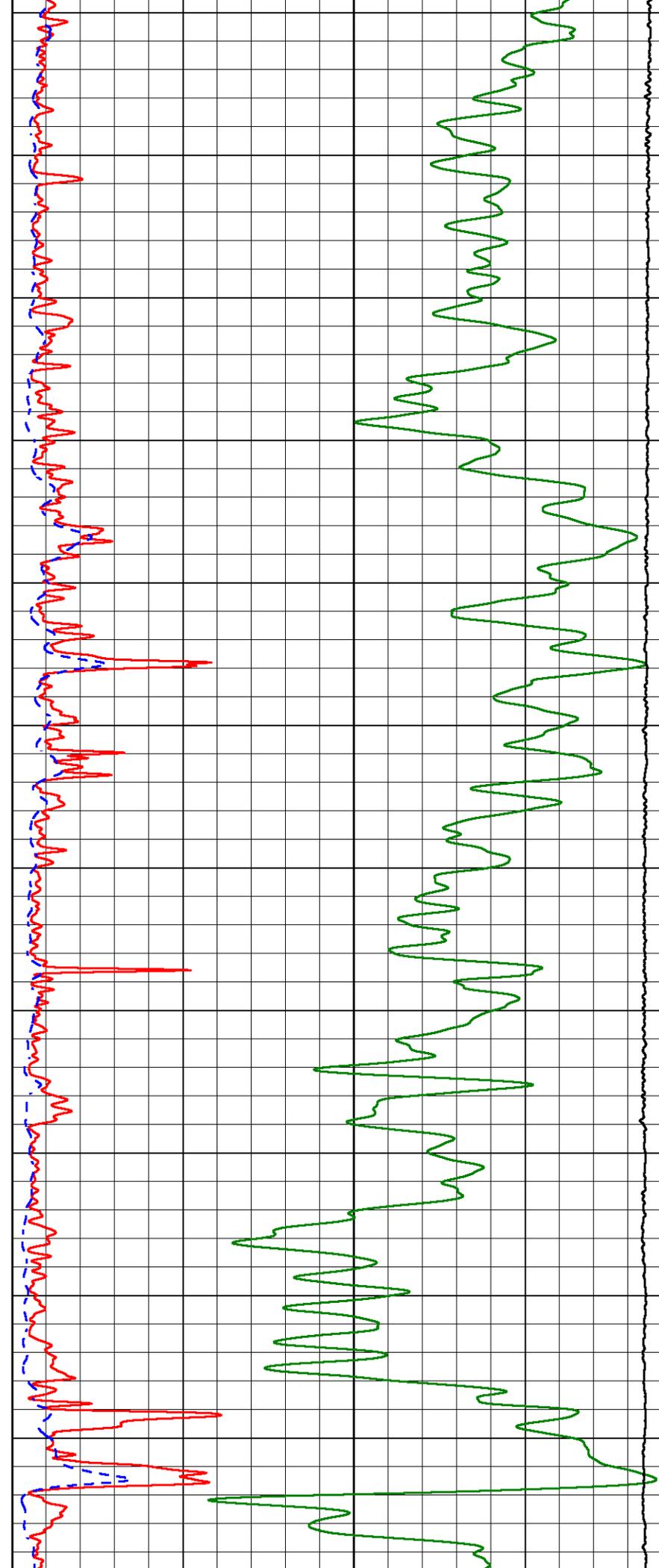


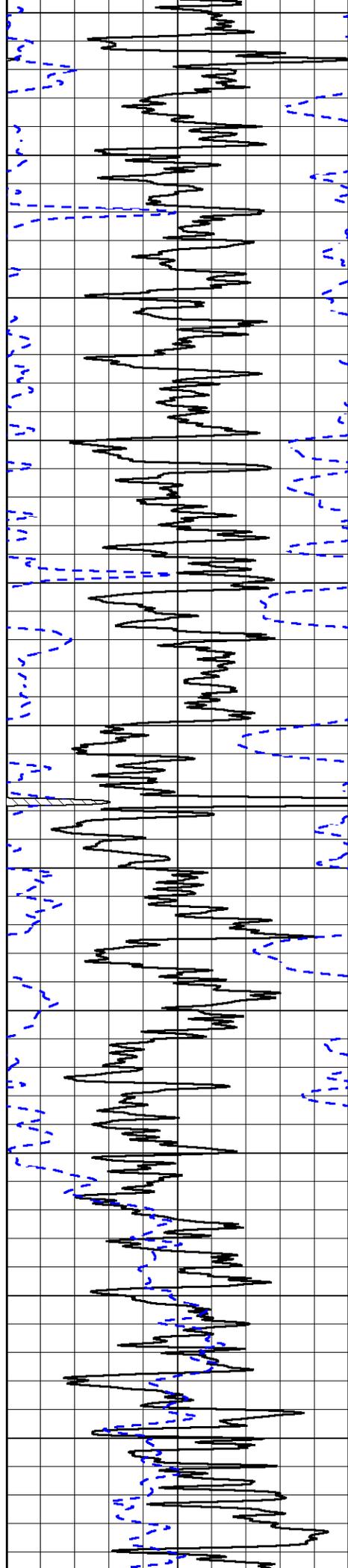
1450  
1500  
1550  
1600  
1650  
1700  
1750  
1800  
1850  
1900  
1950



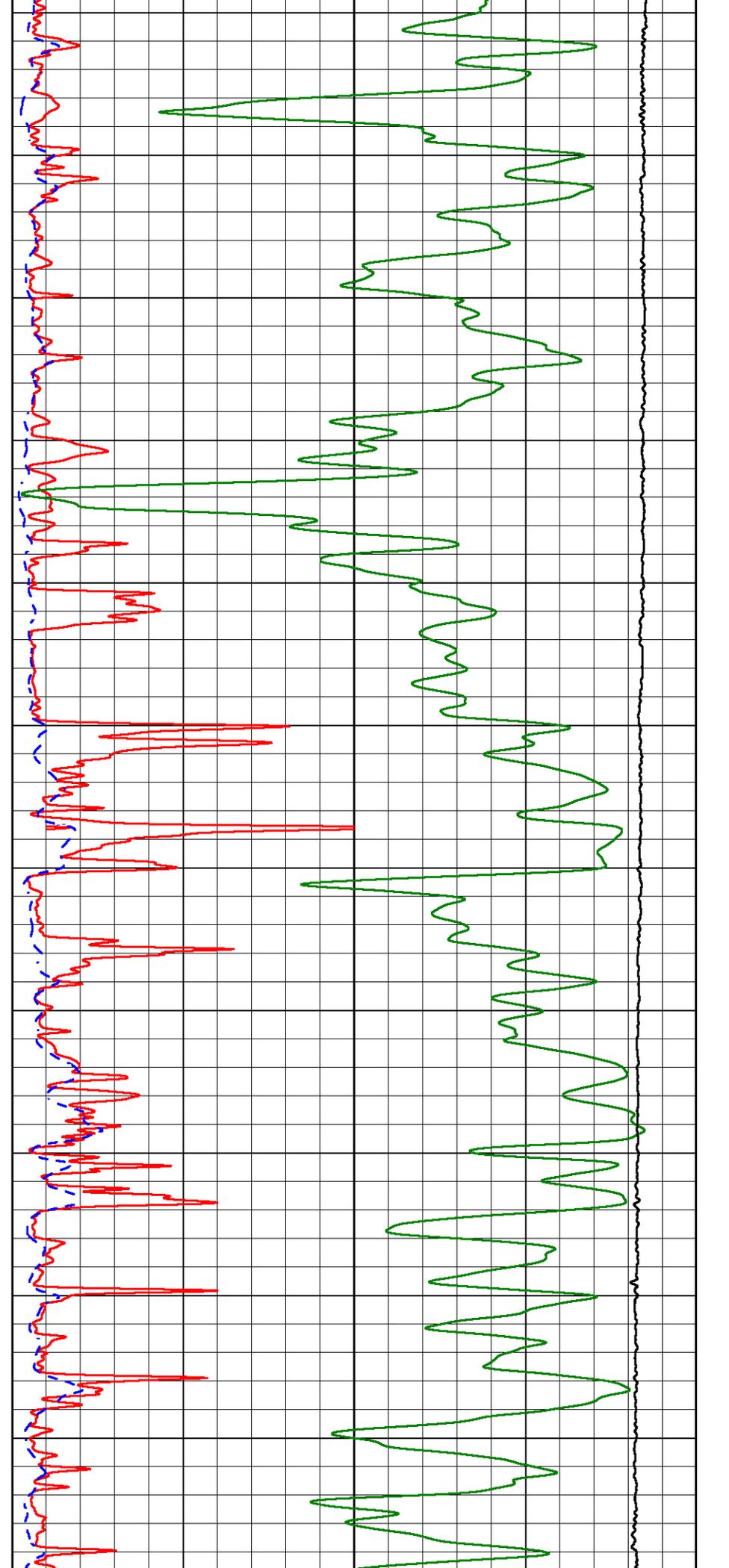


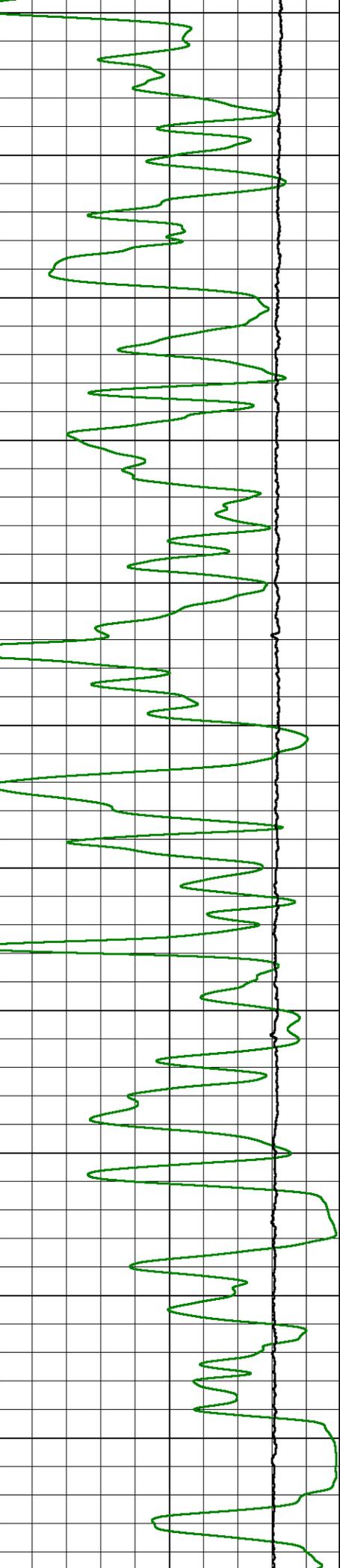
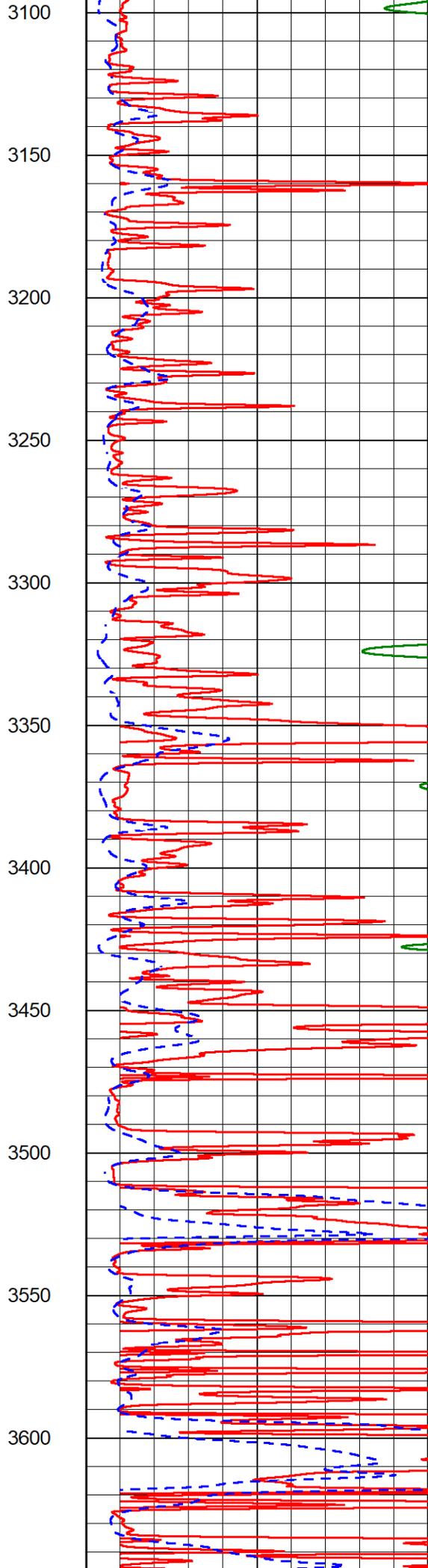
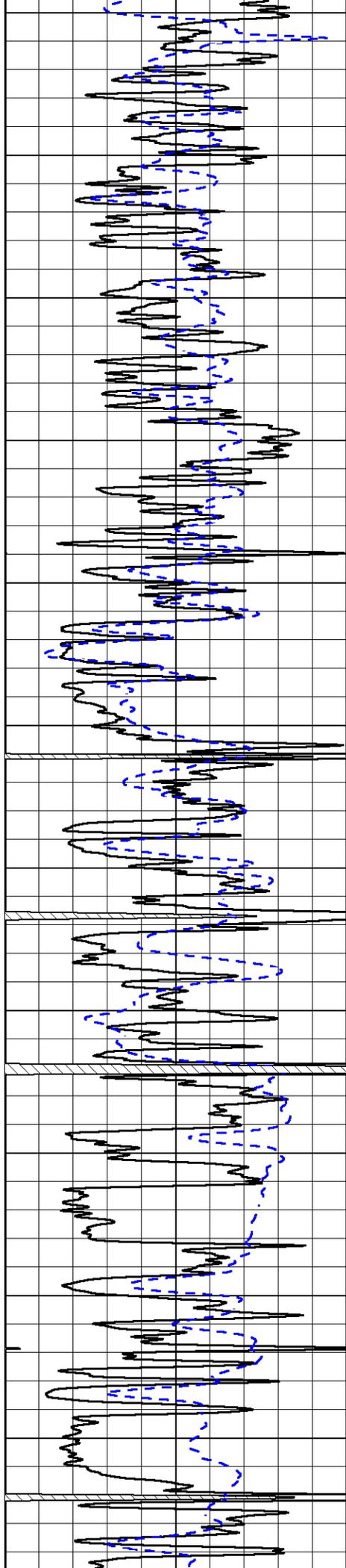
2000  
2050  
2100  
2150  
2200  
2250  
2300  
2350  
2400  
2450  
2500

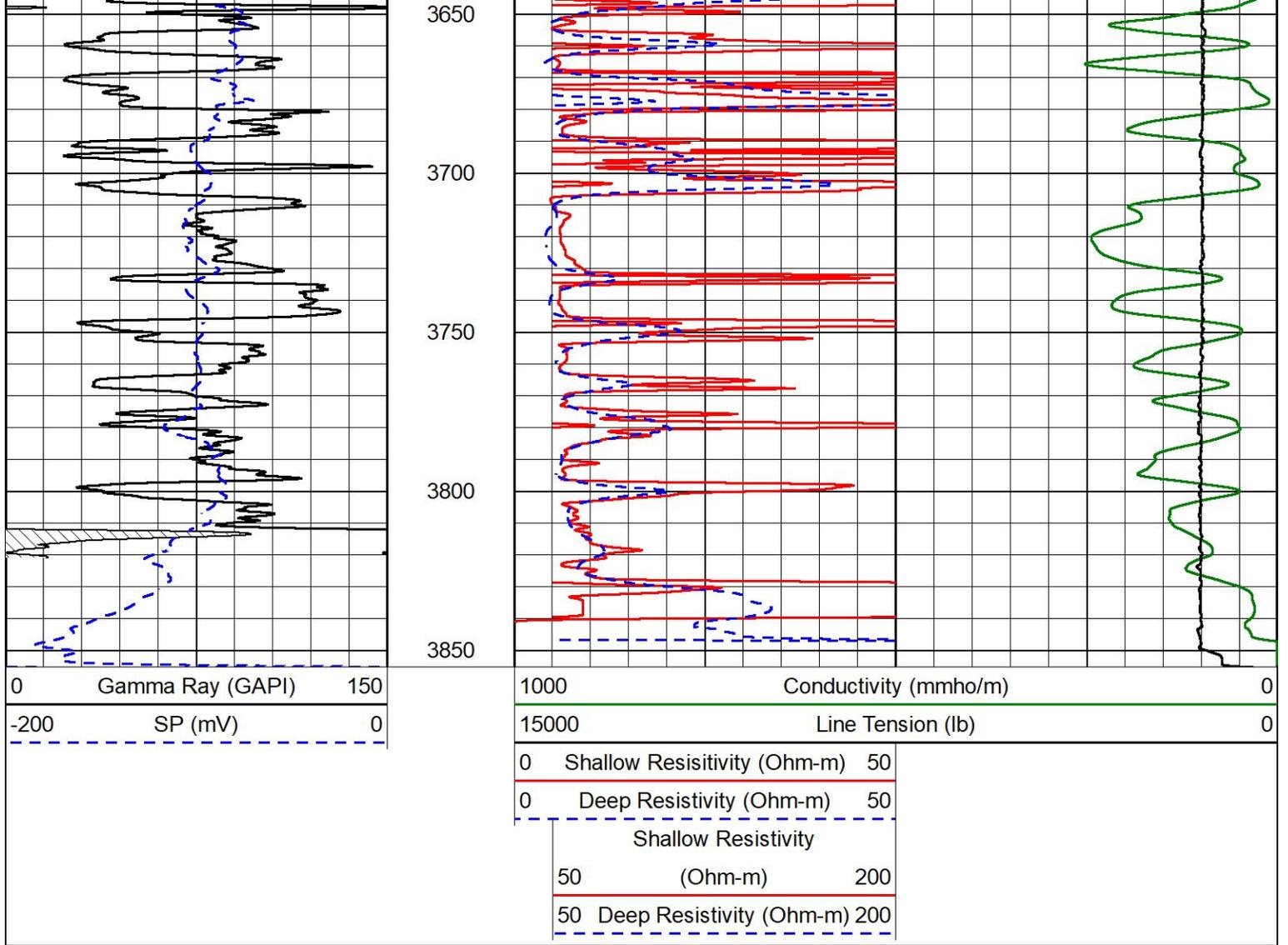




2550  
2600  
2650  
2700  
2750  
2800  
2850  
2900  
2950  
3000  
3050



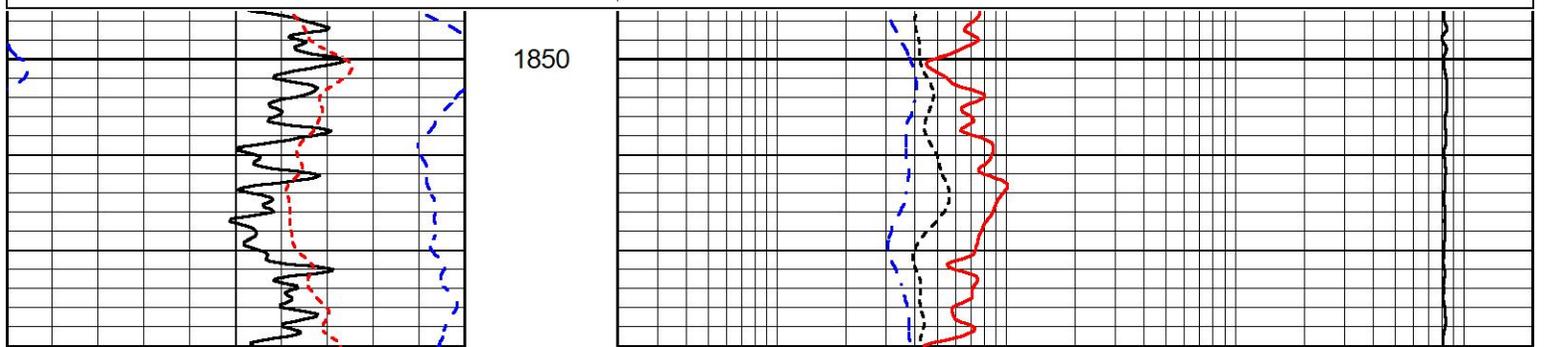
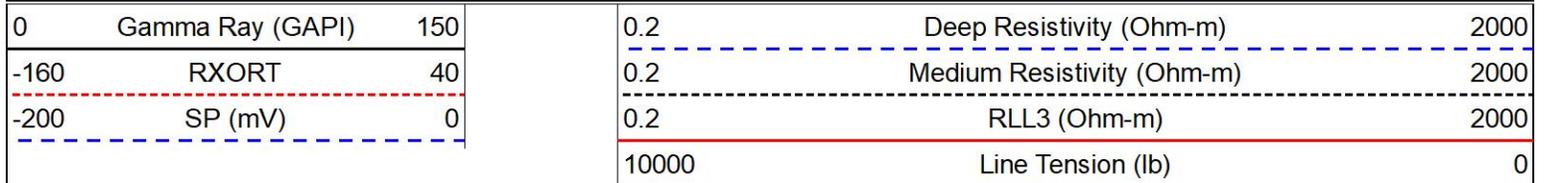


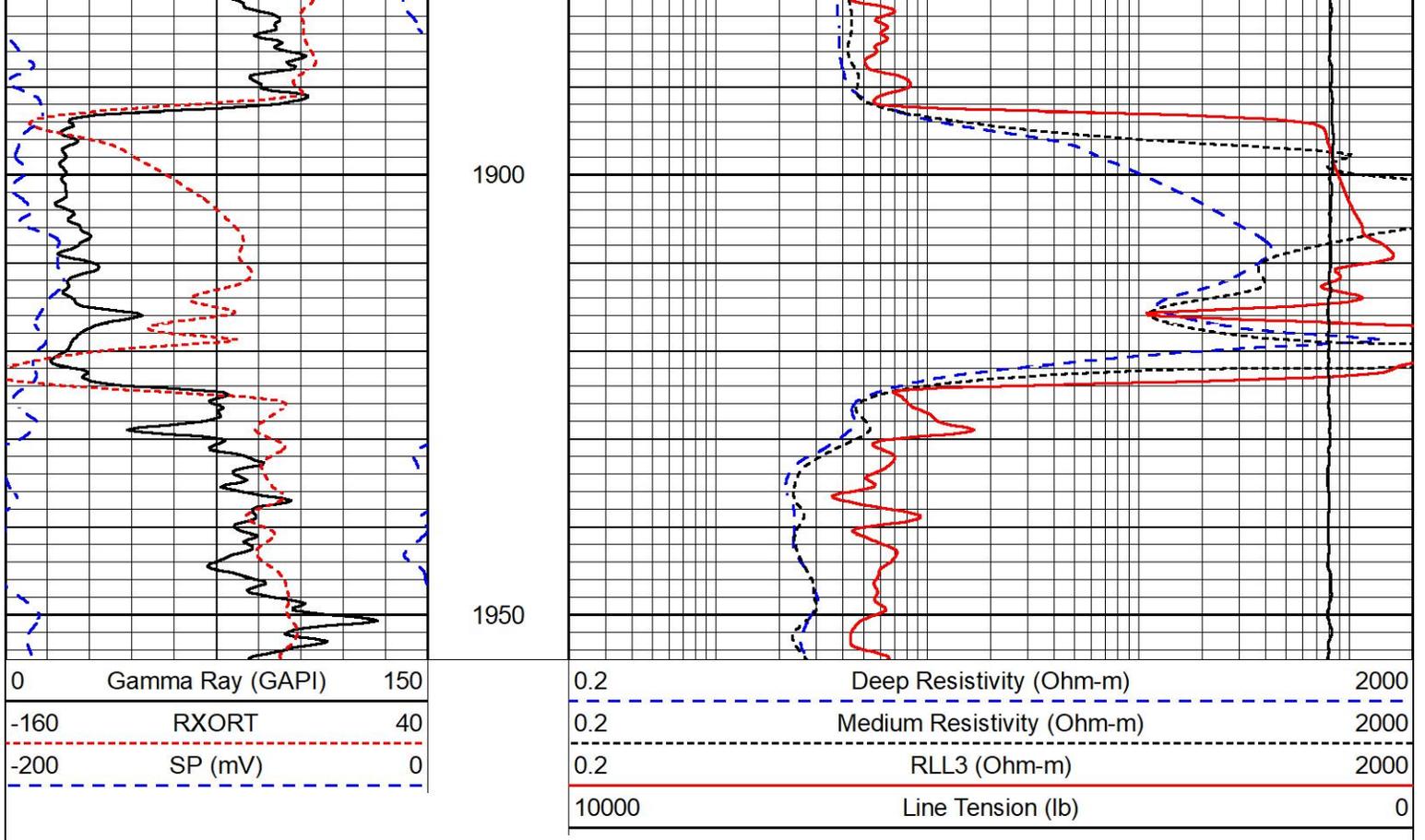


# ANHYDRITE SECTION

## MAIN PASS

Database File satchell\_worcester a #11-21.db  
 Dataset Pathname Stack/pass3.4  
 Presentation Format \_dil  
 Dataset Creation Fri Jul 14 13:40:51 2023  
 Charted by Depth in Feet scaled 1:240

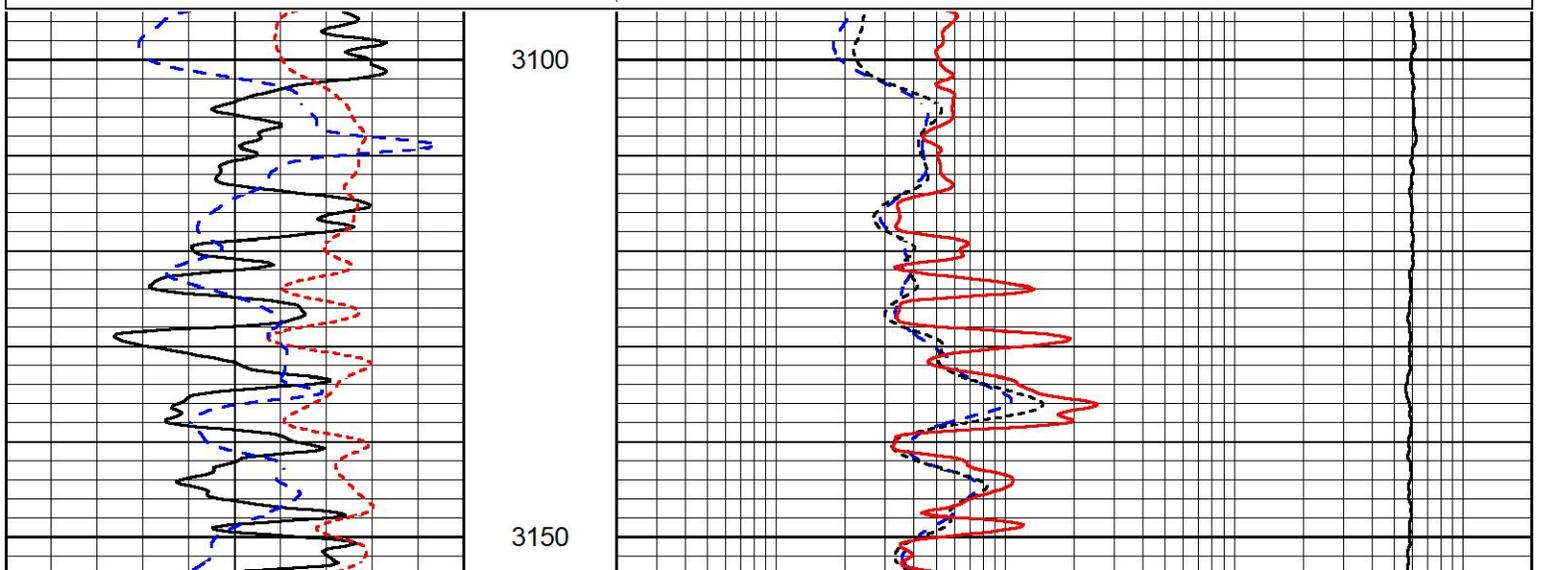
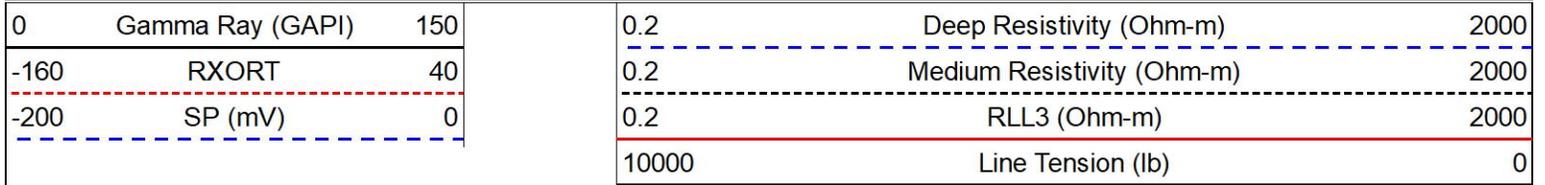


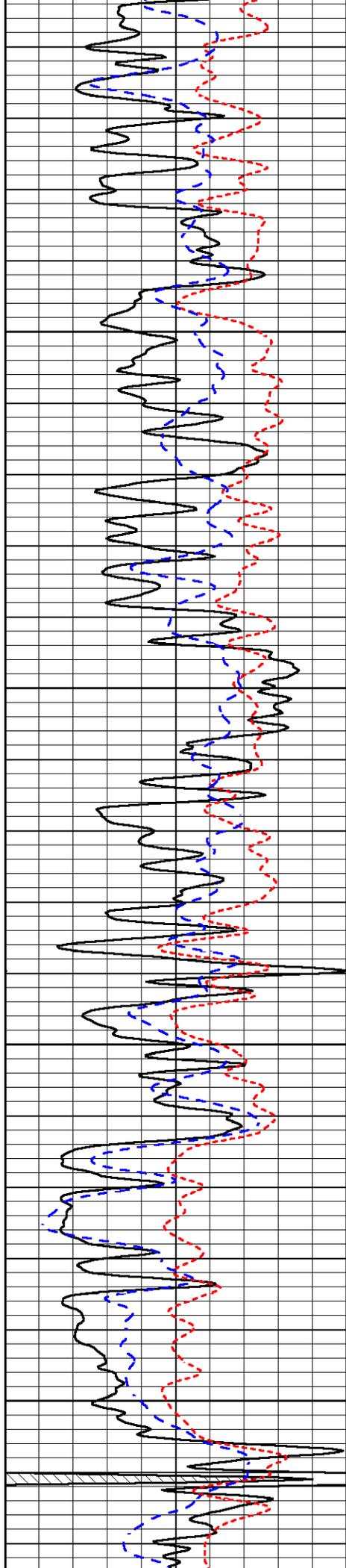


## DETAIL SECTION

### MAIN PASS

Database File      satchell\_worcester a #11-21.db  
 Dataset Pathname    Stack/pass3.1  
 Presentation Format    \_dil  
 Dataset Creation      Fri Jul 14 14:02:44 2023  
 Charted by            Depth in Feet scaled 1:240



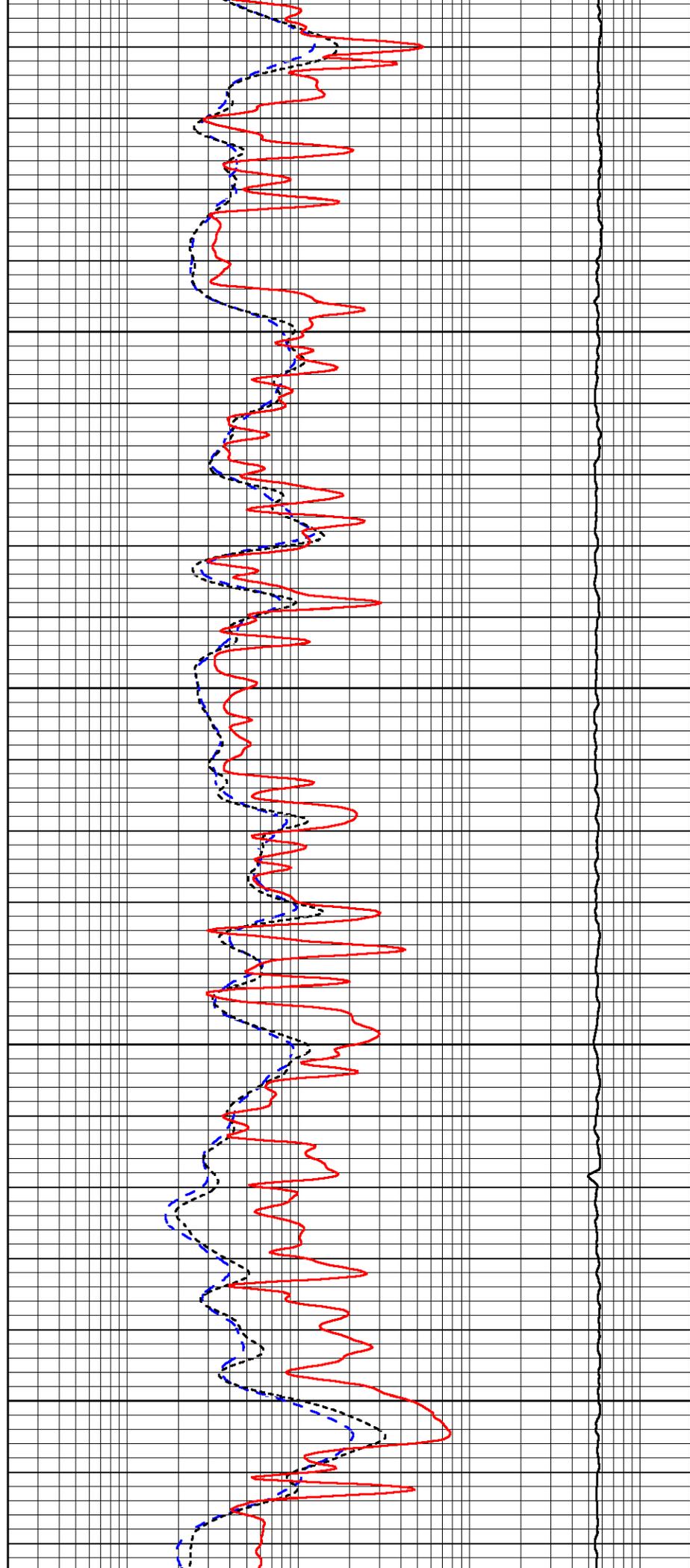


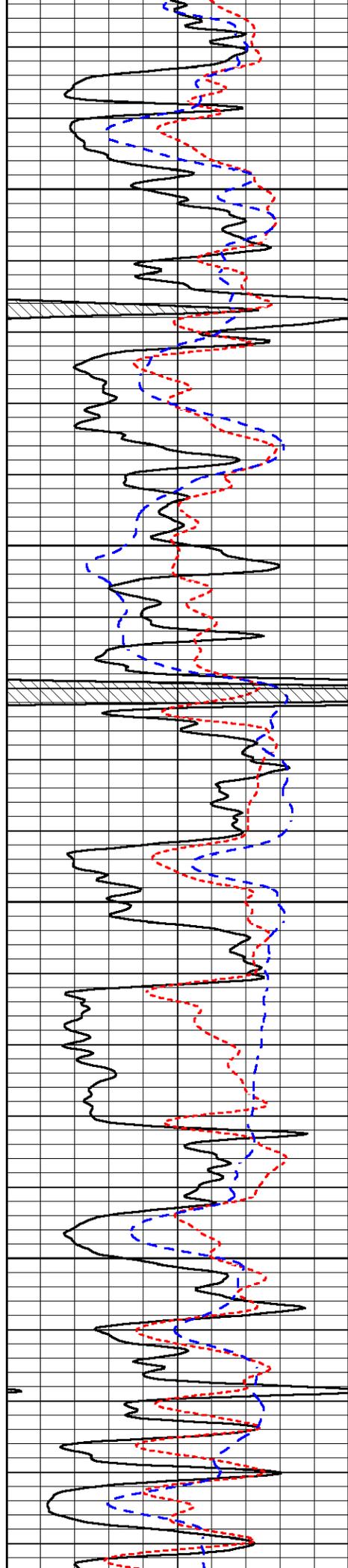
3200

3250

3300

3350



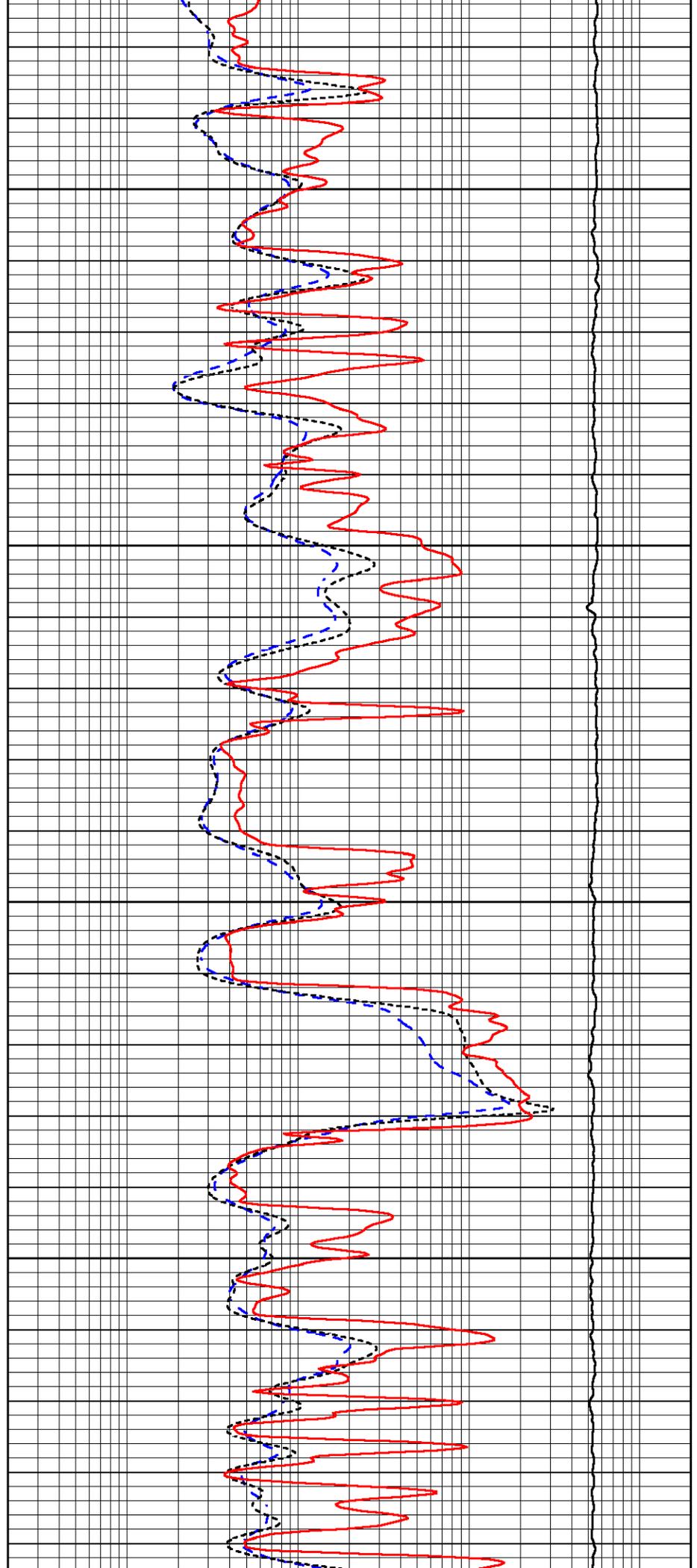


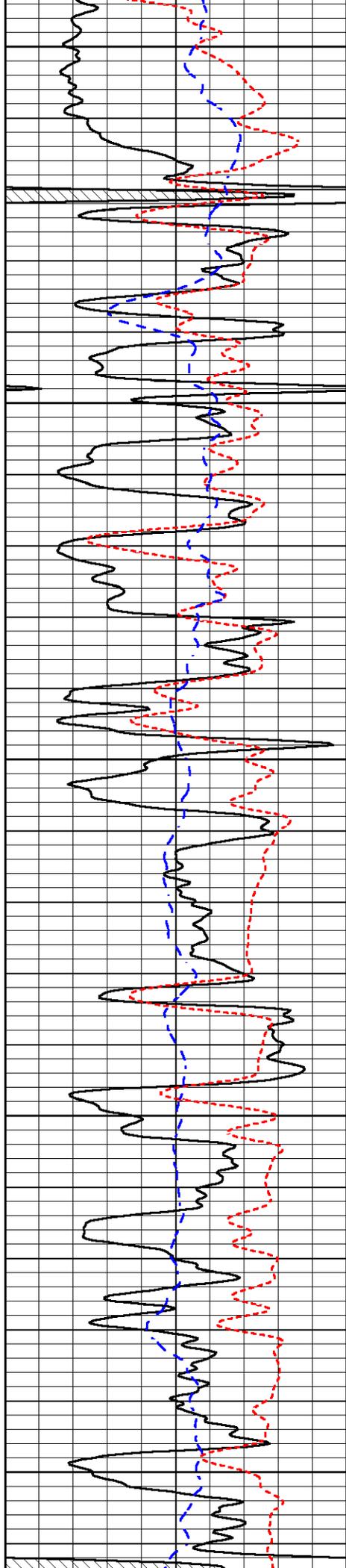
3400

3450

3500

3550





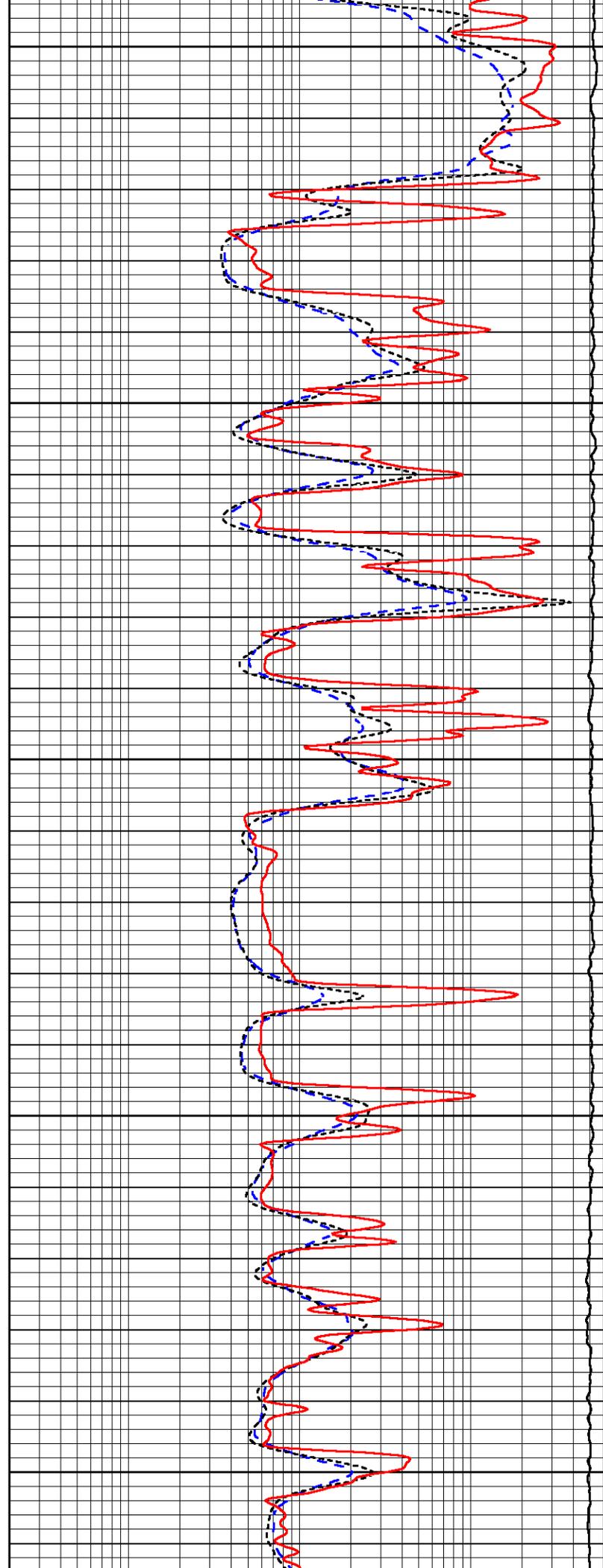
3600

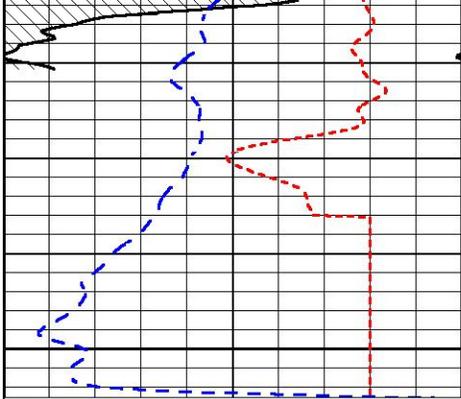
3650

3700

3750

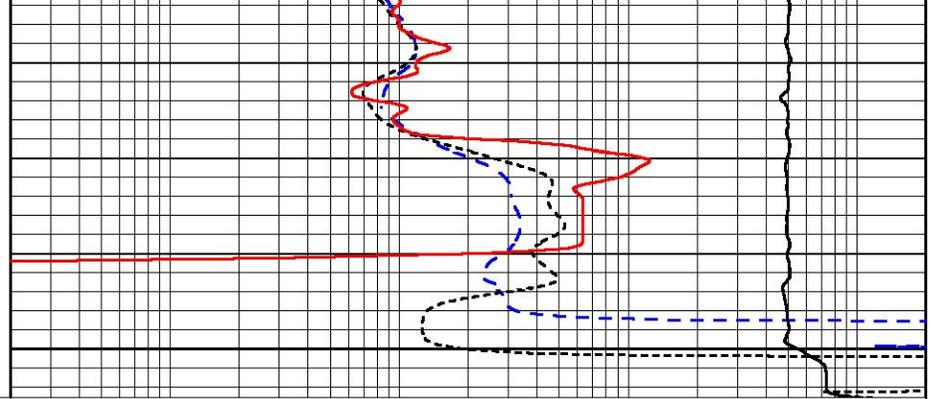
3800





0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

3850



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



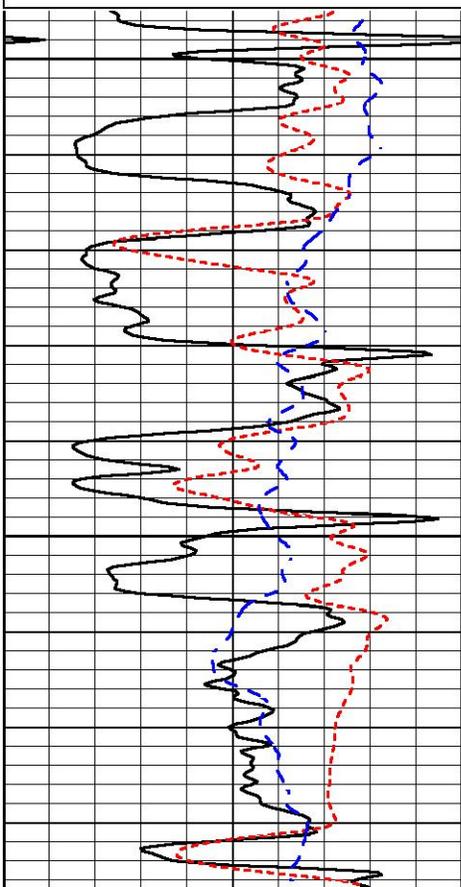
# REPEAT SECTION

## REPEAT PASS

Database File satchell\_worcester a #11-21.db  
 Dataset Pathname Stack/pass2.1  
 Presentation Format \_dil  
 Dataset Creation Fri Jul 14 13:24:03 2023  
 Charted by Depth in Feet scaled 1:240

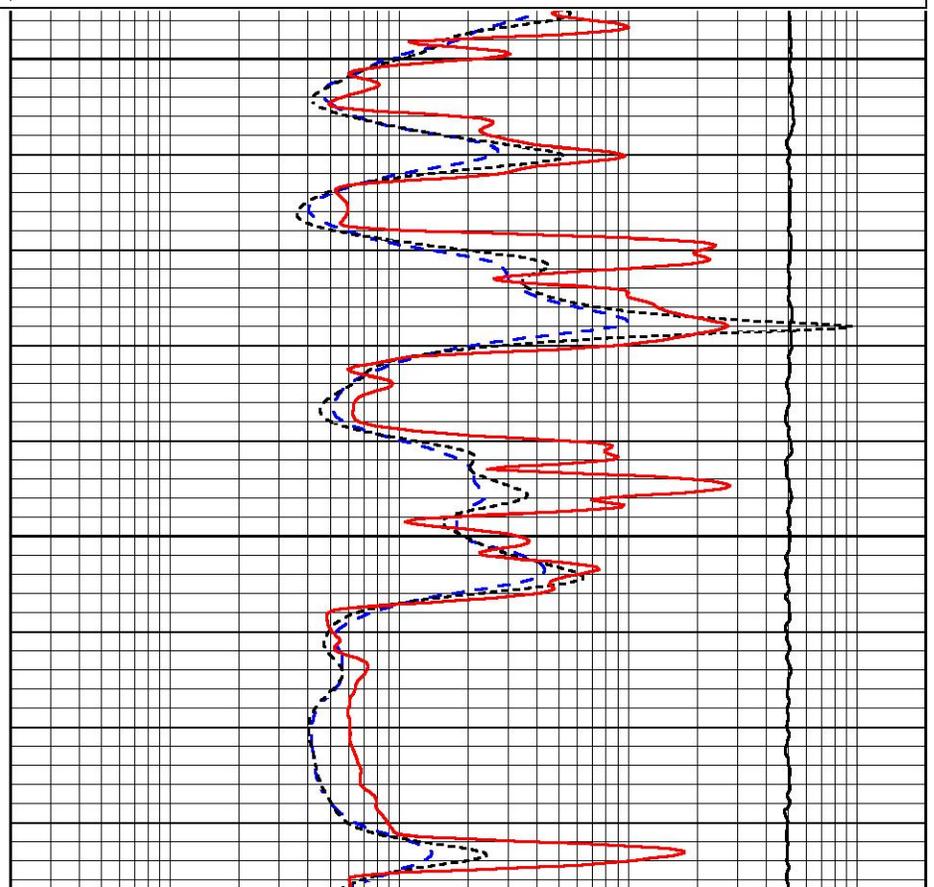
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

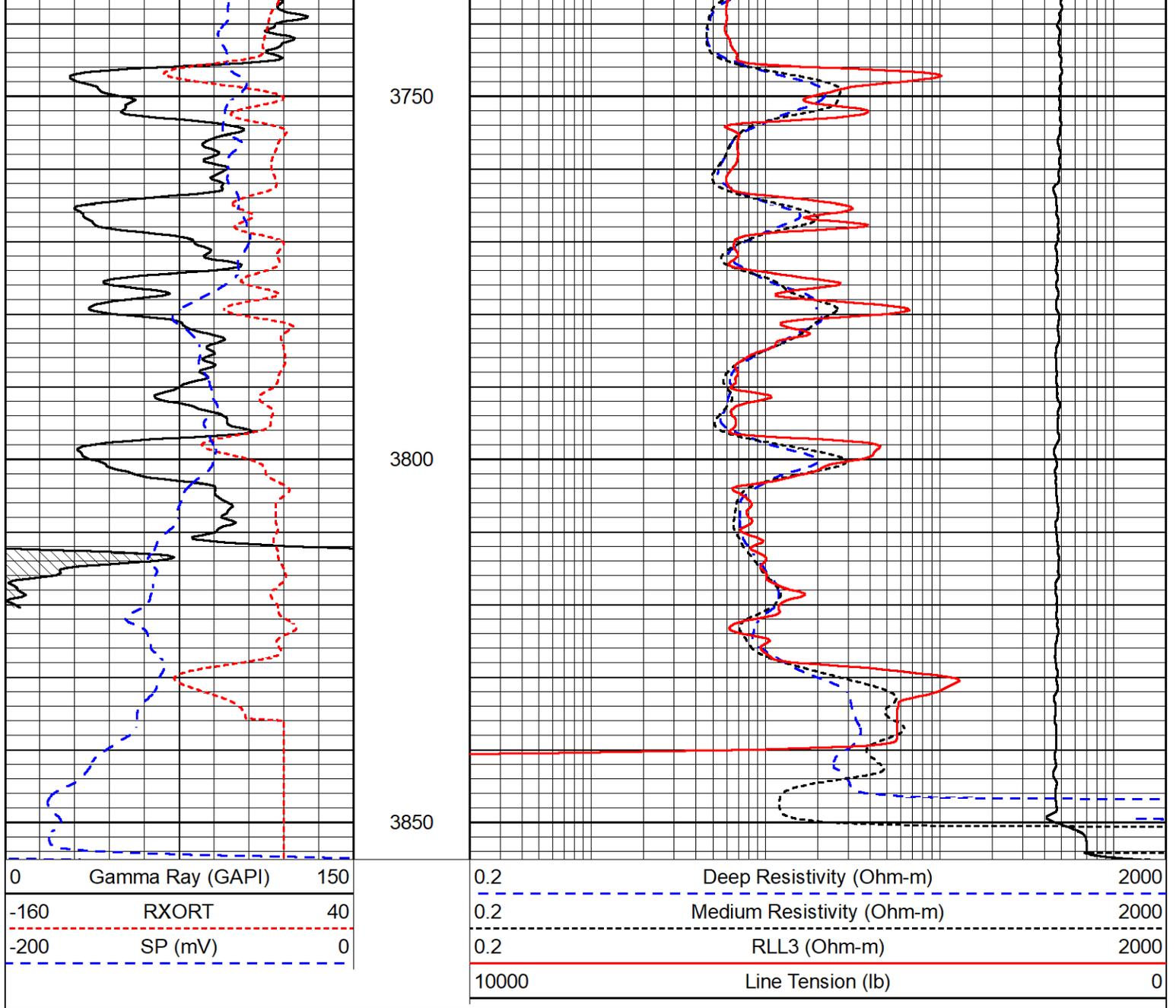
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



3650

3700





### Calibration Report

Database File satchell\_worcester a #11-21.db  
 Dataset Pathname Stack/pass3.1  
 Dataset Creation Fri Jul 14 14:02:44 2023

### Dual Induction Calibration Report

Serial-Model: 507-M&W  
 Surface Cal Performed:

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	68.570	638.100	0.000	255.800	mmho/m	0.500	-37.000
Medium	184.288	716.191	0.000	255.800	mmho/m	0.470	-84.000

### Compensated Density Calibration Report

Serial-Model: 307-11-M&W  
 Source / Verifier: 20762B / 2ci

Master Calibration Performed:  
 Before Survey Verification Performed:  
 After Survey Verification Performed:

Tue Jun 6 21:48:20 2023

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3689.70	4749.82	cps
Aluminum	2.590	g/cc	822.19	3221.38	cps
Spine Angle = 75.50			Density/Spine Ratio = 0.538		
	Size		Reading		
Small Ring	6.00	in	1.16		
Large Ring	18.00	in	1.01		

Compensated Neutron Calibration Report

Serial Number: 201-M&W  
 Tool Model: M&W

CALIBRATION

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: 105  
 Tool Model: M&W  
 Performed: Fri Dec 3 15:10:46 2021

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps  
 Calibrator Reading: 637.0 cps

Sensitivity: 0.6000 GAPI/cps



MIDWEST WIRELINE

Company Satchell Creek Petroleum LLC  
 Well Worcester A #11-21  
 Field Alda South  
 County Graham  
 State Kansas