



DUAL INDUCTION LOG

MIDWEST WIRELINE

CompanyChris Batchman Inc		Company Chris Batchman Inc	
Well	MS 1	Well	MS 1
Field		Field	
County	Barton	County	Barton
State	Kansas	State	Kansas
Location: API #: 15-009-26423-00-00		Other Services	
2310 FSL & 2170 FEL		CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	1802
Log Measured From	Kelly Bushing		
Drilling Measured From	Kelly Bushing		
SEC 14 TWP 20S RGE 12W			
Date	7/8/2024		
Run Number	One		
Depth Driller	3460		
Depth Logger	3460		
Bottom Logged Interval	3459		
Top Log Interval	250		
Casing Driller	8.625 @ 264		
Casing Logger	262		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	4050		
Density / Viscosity	9.5 53		
pH / Fluid Loss	11.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.65 @ 71		
Rmt @ Meas. Temp	.49 @ 71		
Rmc @ Meas. Temp	.88 @ 71		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	.42 @ 111		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	111		
Equipment Number	110		
Location	HAYS		
Recorded By	J. Henrickson		
Witnessed By	Jim Musgrove		

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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.

Ellinwood Kansas
South to 40th, 1 1/2 West, North Into

Log Measured From: Kelly Bushing 10 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew

Engineer: J. Henrickson
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Jim Musgrove
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

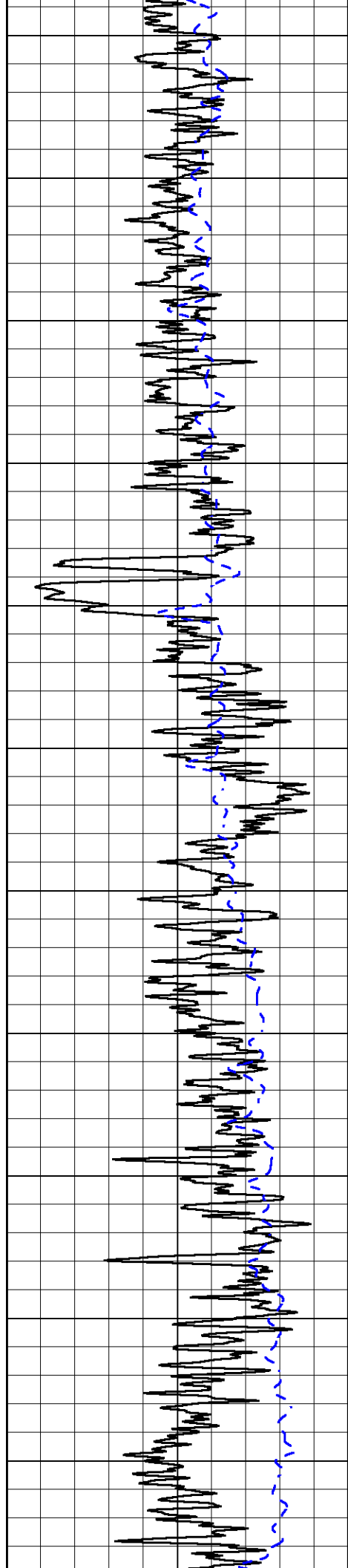
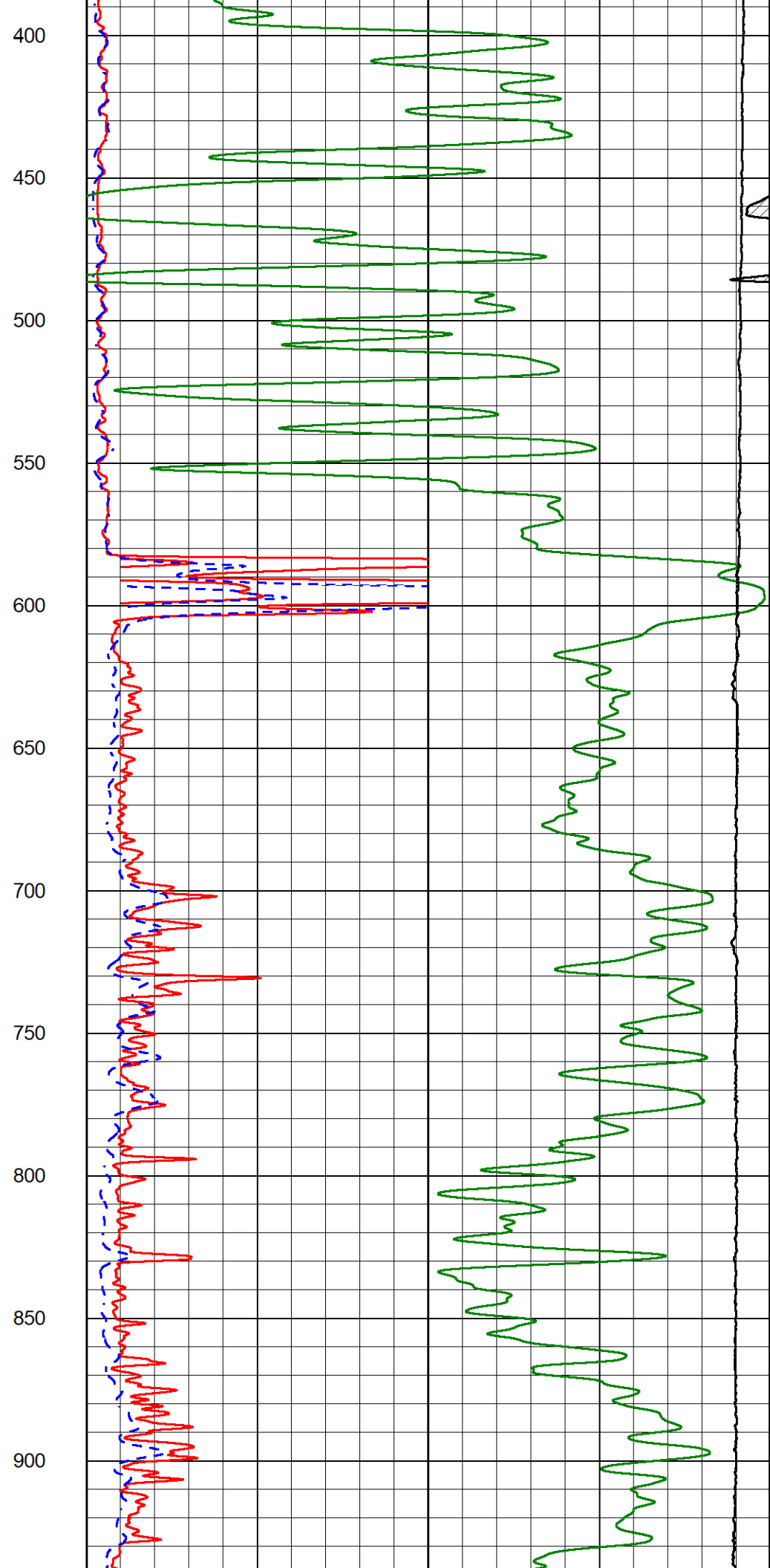
A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 111	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m 3	mmho/m 1	mV 187	degF 68	Off	ft 3460

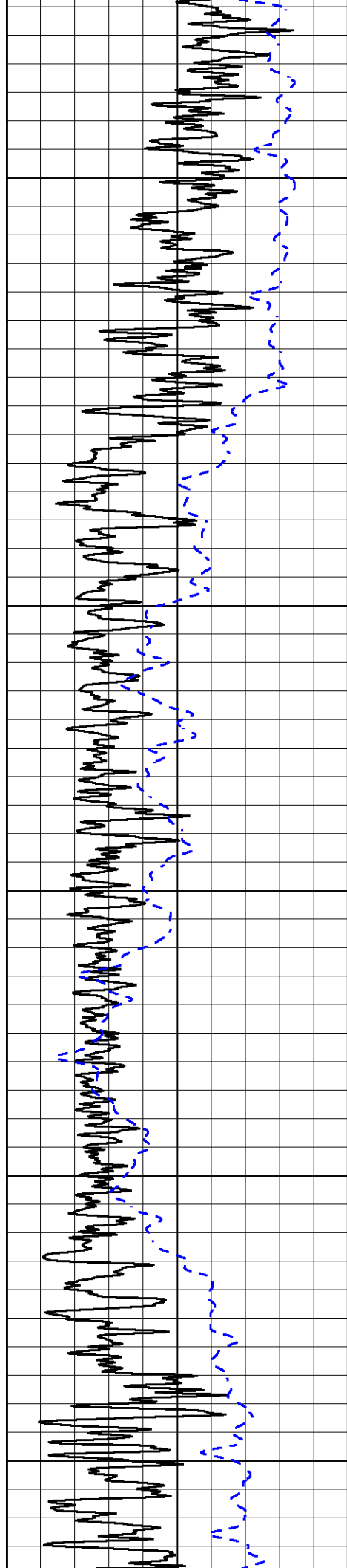
Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

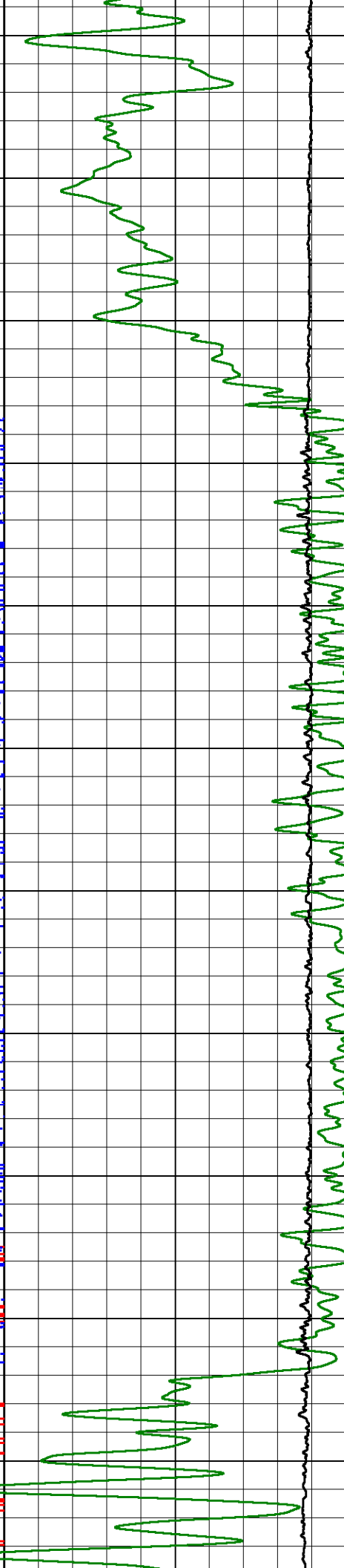
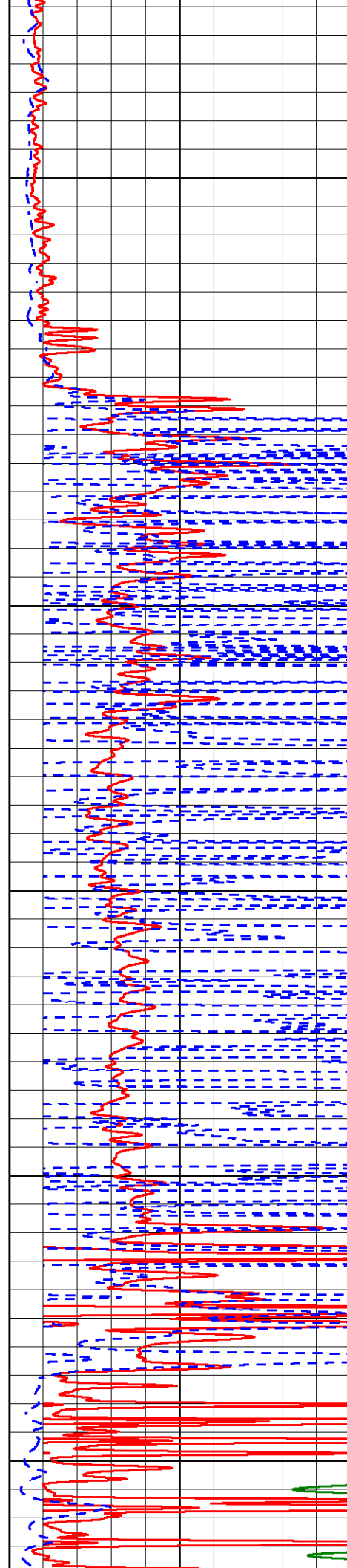
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

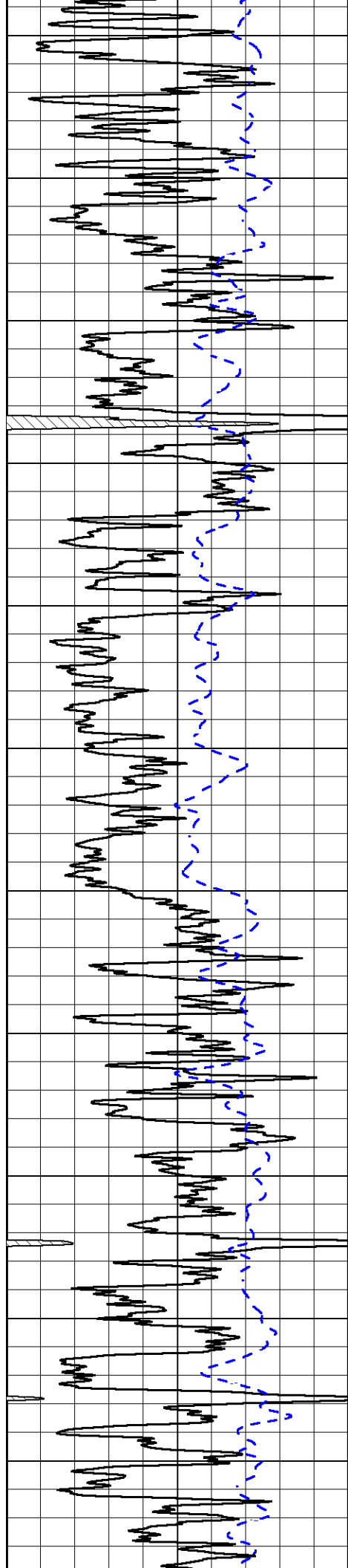
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.23		GR-M&W (105)	3.00	3.50	50.00
CNLSC CNSSC	37.13 36.38		CNT-M&W (210)	5.00	3.50	100.00
			MWLith-STEP LITHO Short (703-03)	8.40	5.00	250.00
LCAL	28.21					
LLW8N	28.21					
LLW7N	28.21					
LLW6N	28.21					
LLW5N	28.21					
LLW4N	28.21					
LLW3N	28.21					
LLW2N	28.21		ML-PSI STKBL ML (402)	7.58	4.00	65.00
LLW1N	28.21					
LSLOCK	27.96					
LLLOCK	27.96					
PELTMPR	27.96					
LSHVNG	27.96					
LLHVNG	27.96					
LSW8N	27.71					
LSW7N	27.71					
LSW6N	27.71					





950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450





1500

1550

1600

1650

1700

1750

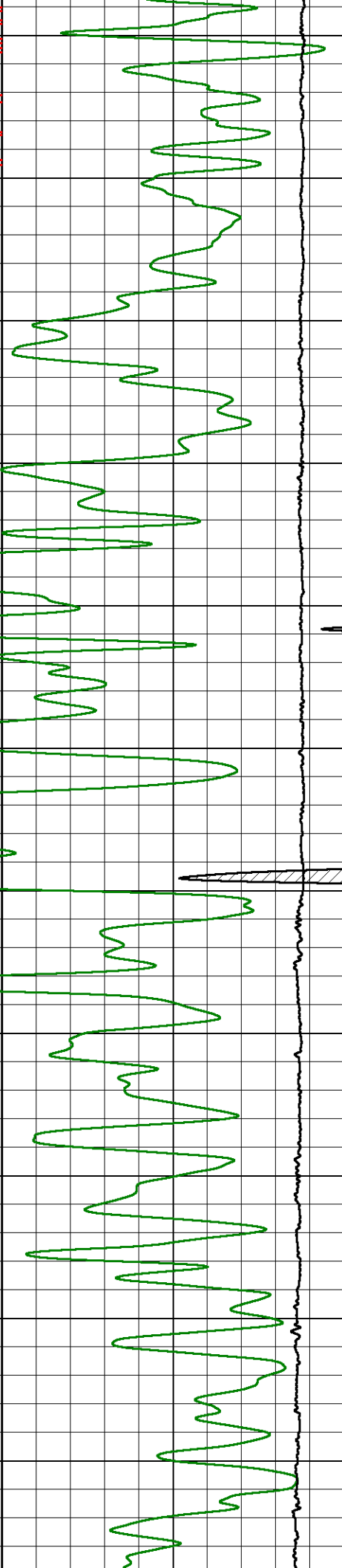
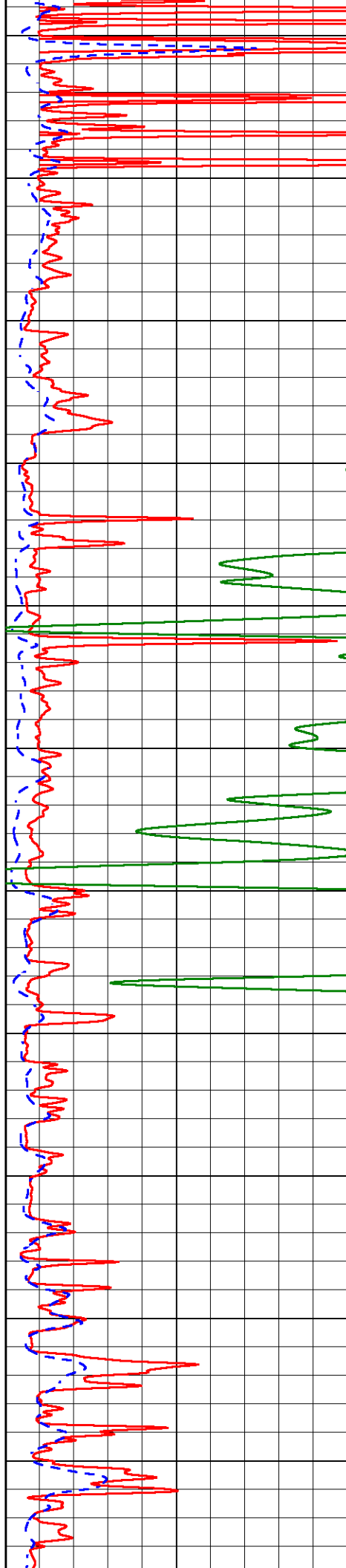
1800

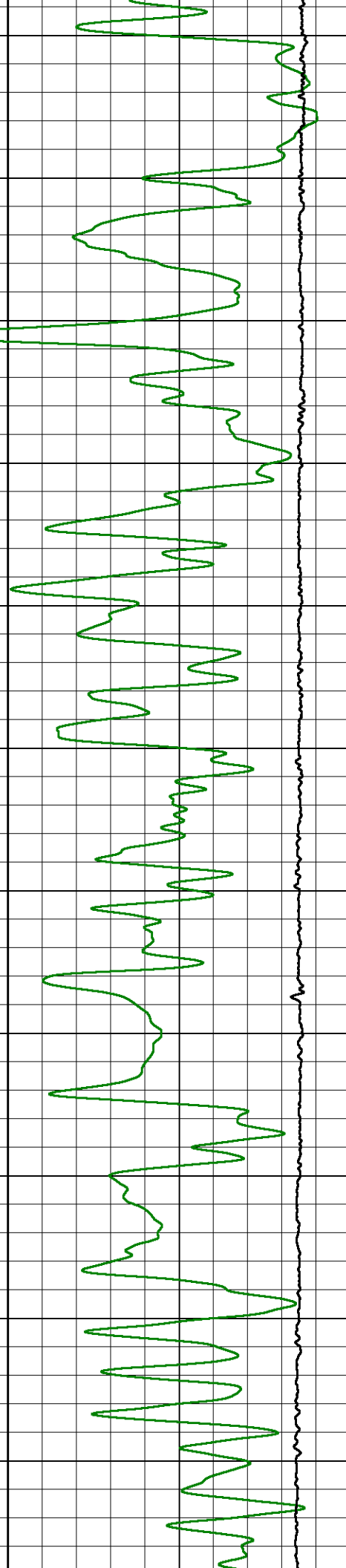
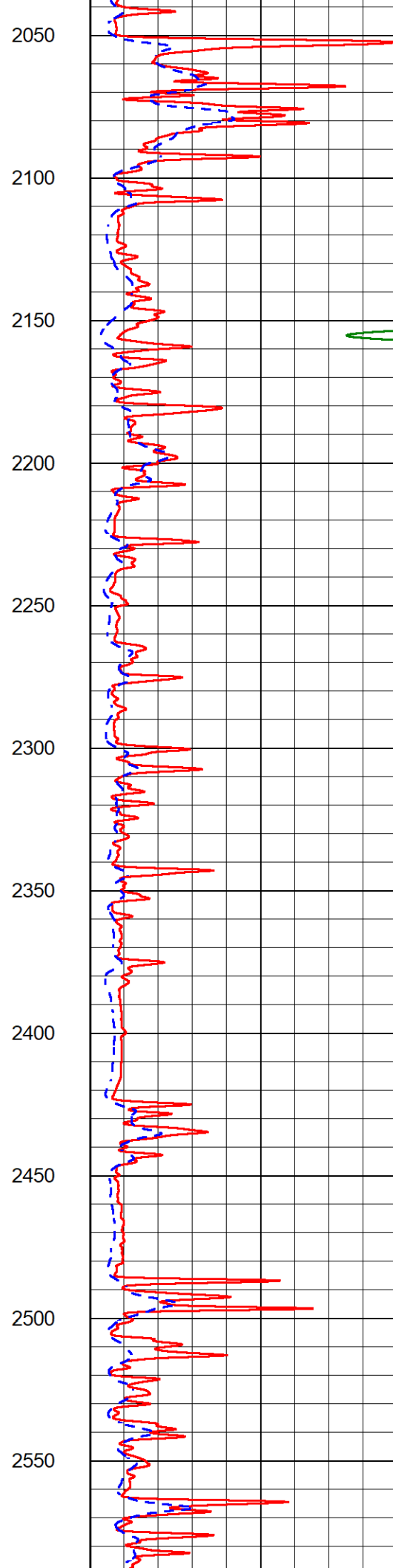
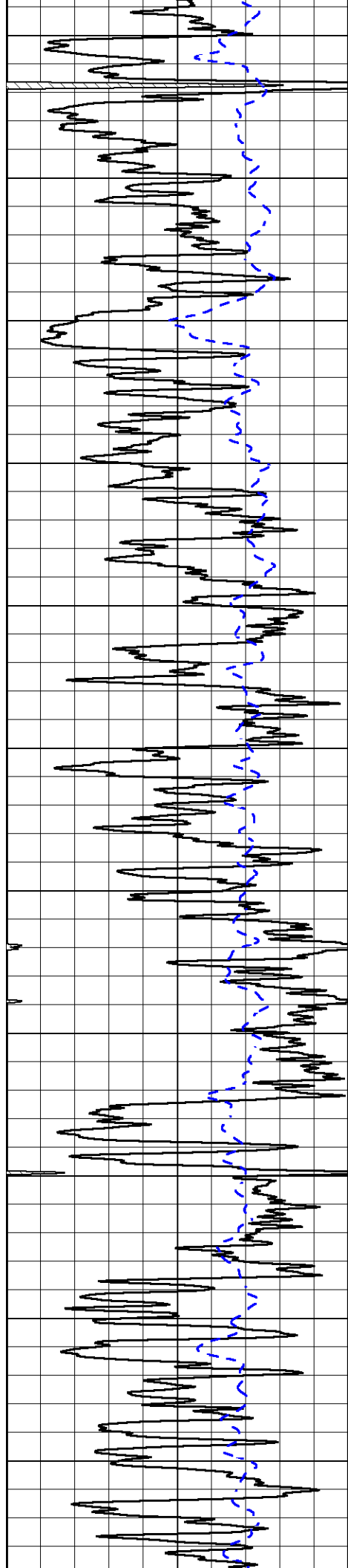
1850

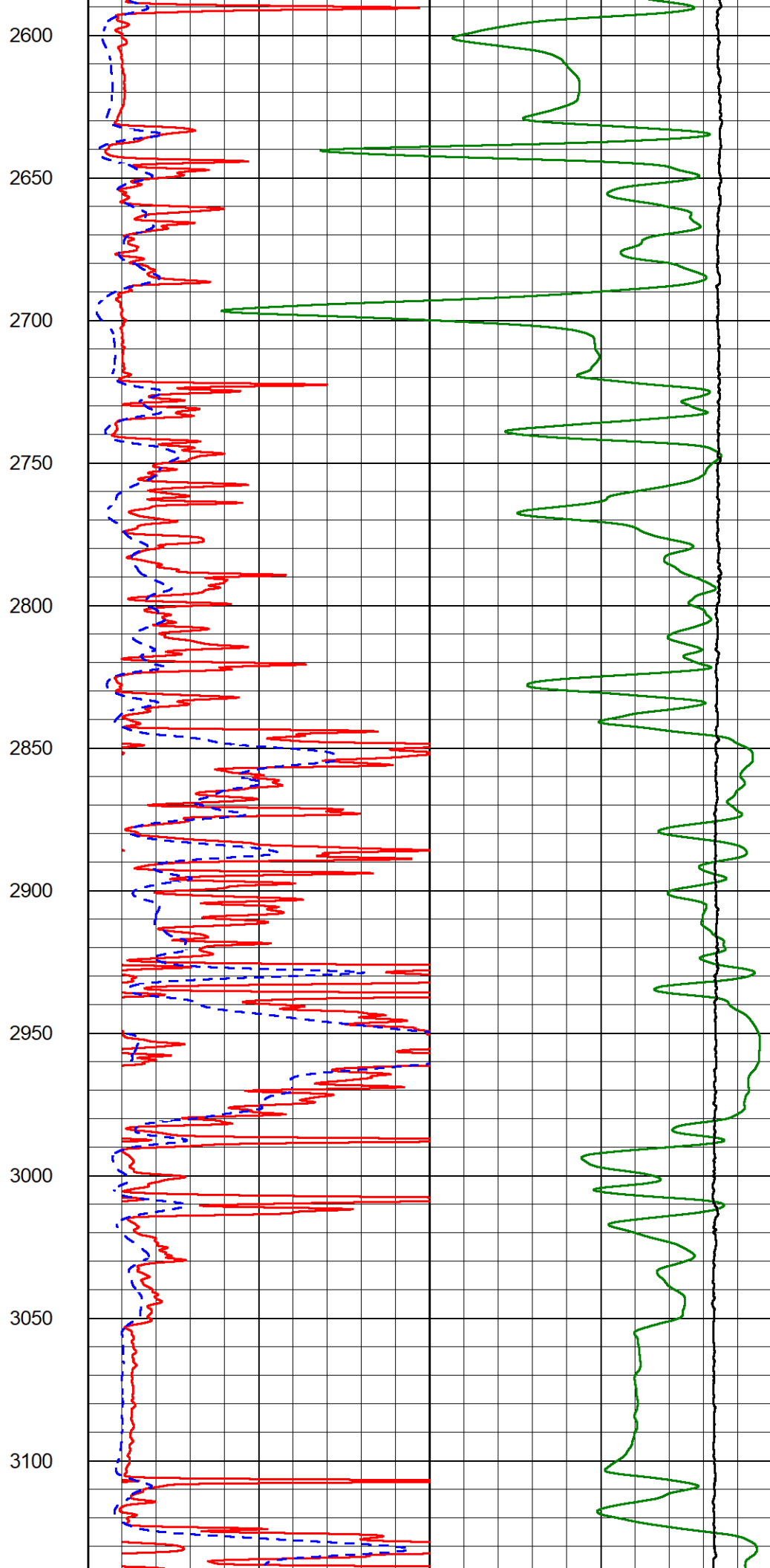
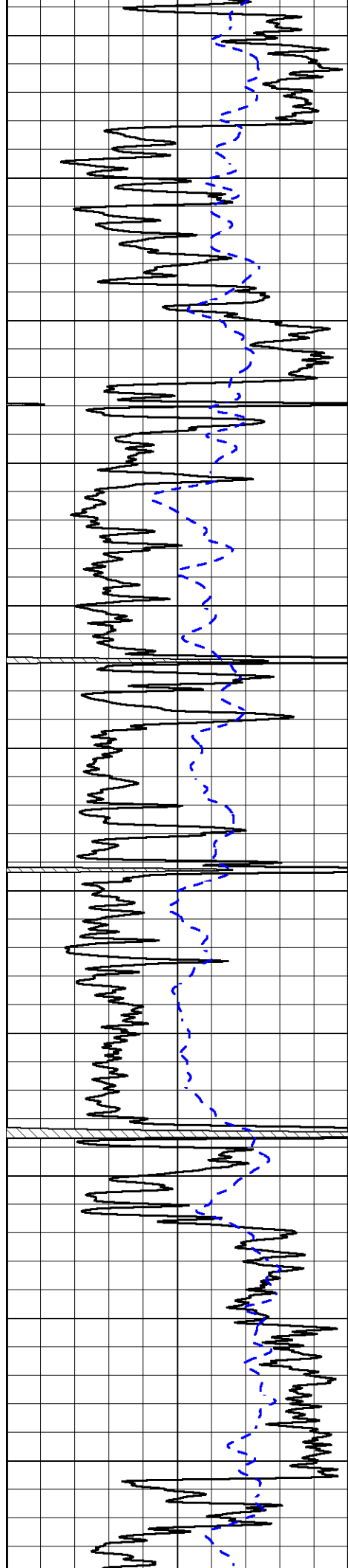
1900

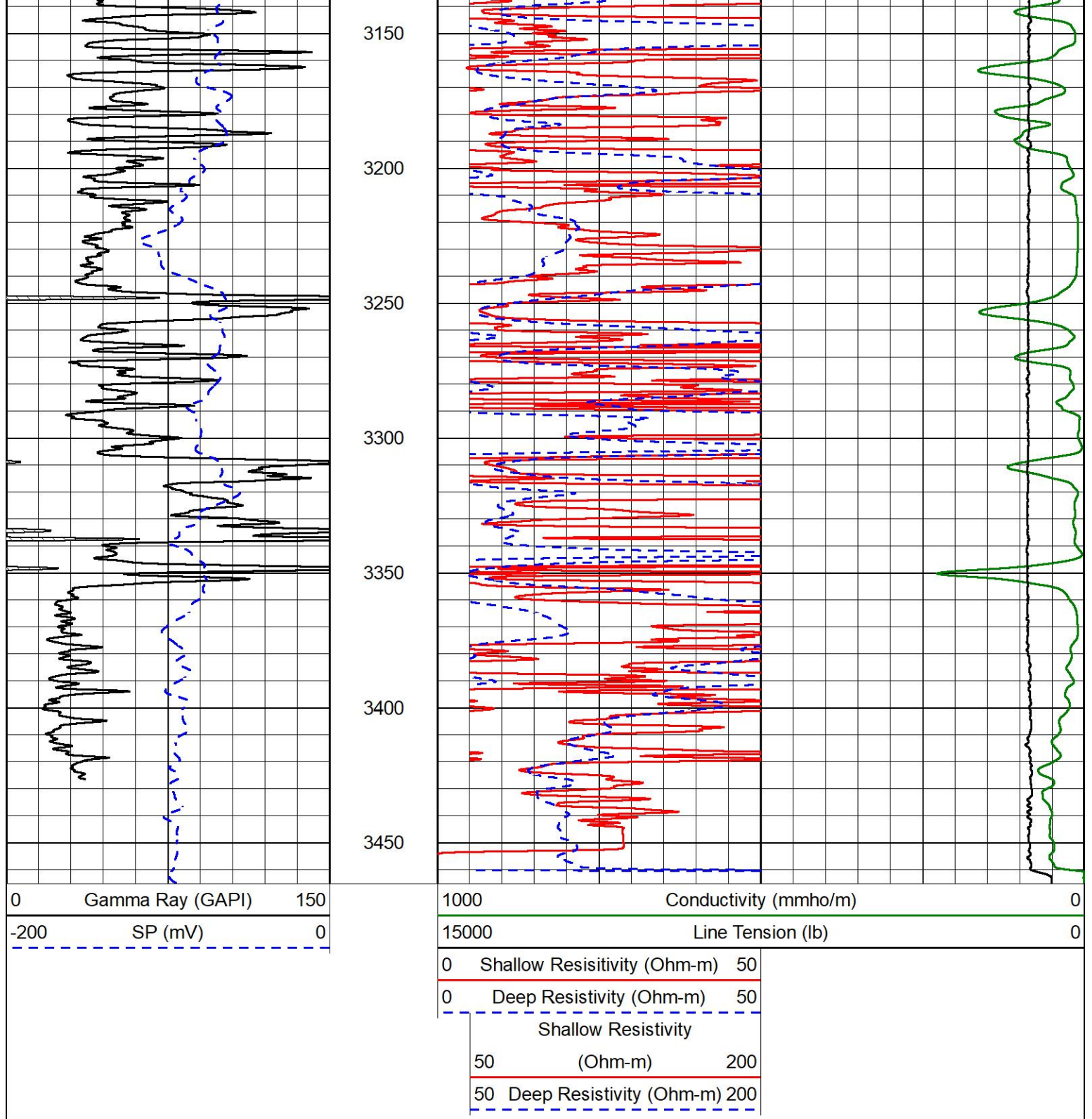
1950

2000







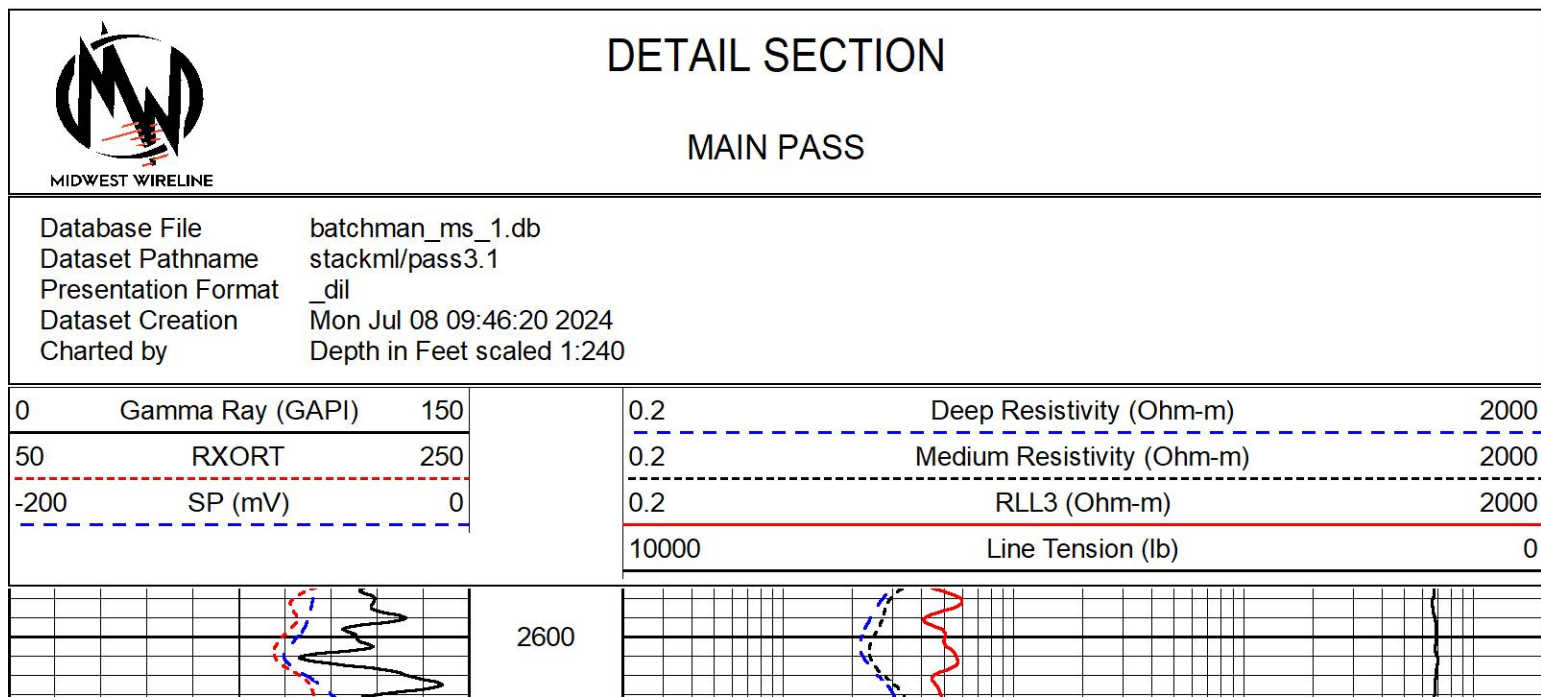
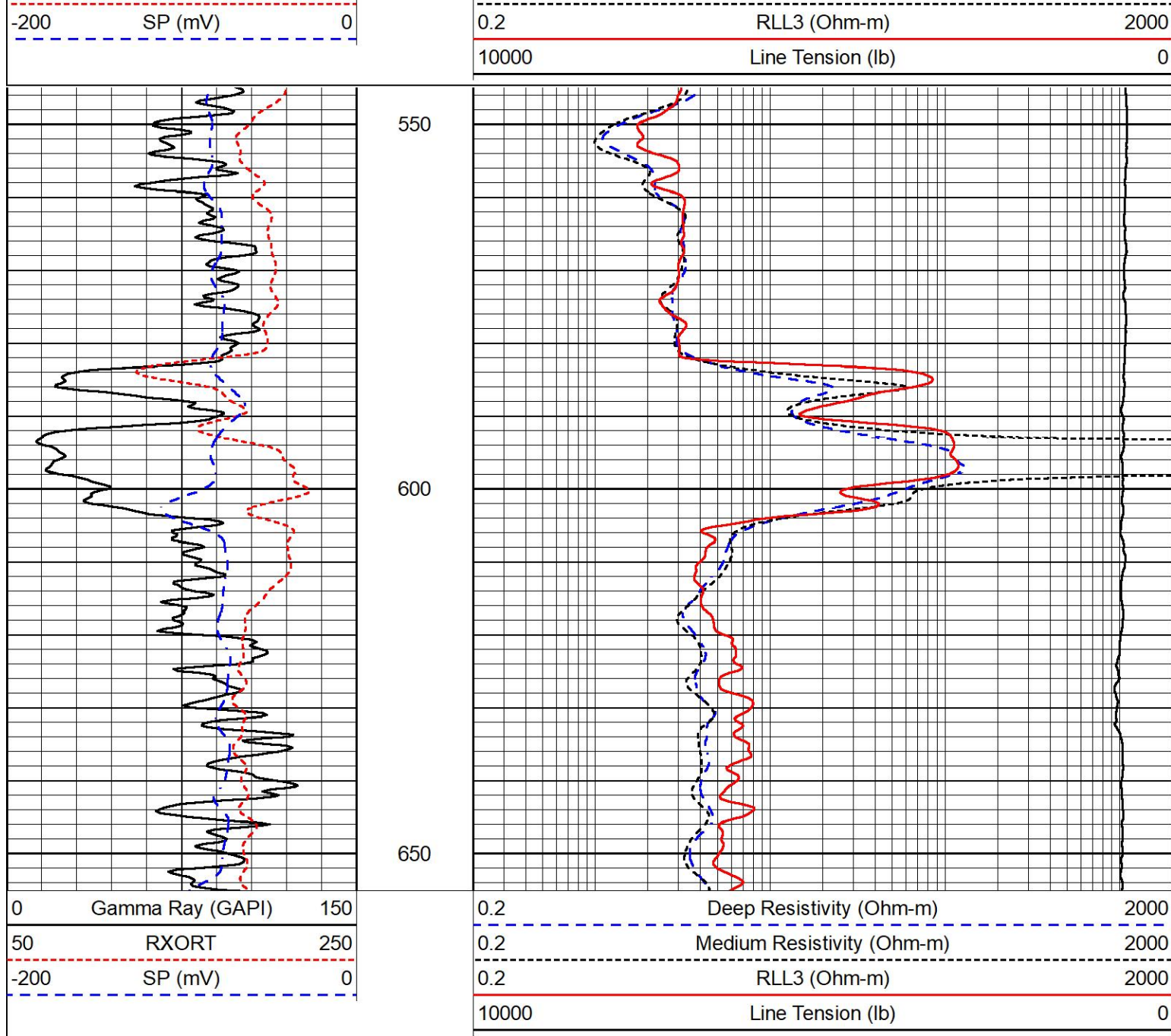


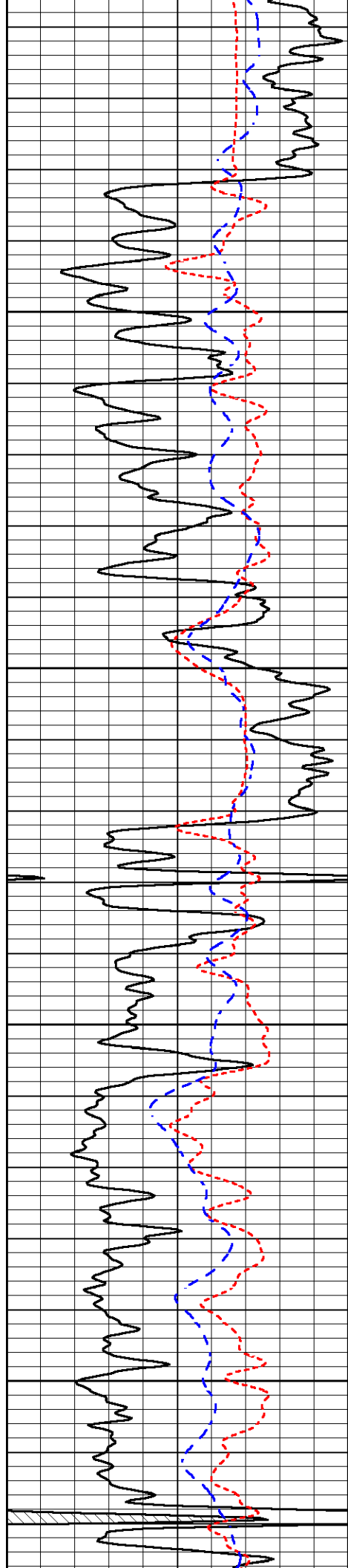
ANHYDRITE SECTION

MAIN PASS

Database File batchman_ms_1.db
 Dataset Pathname stackml/pass3.4
 Presentation Format _dil
 Dataset Creation Mon Jul 08 09:40:54 2024
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
50	RXORT	250	0.2	Medium Resistivity (Ohm-m)	2000



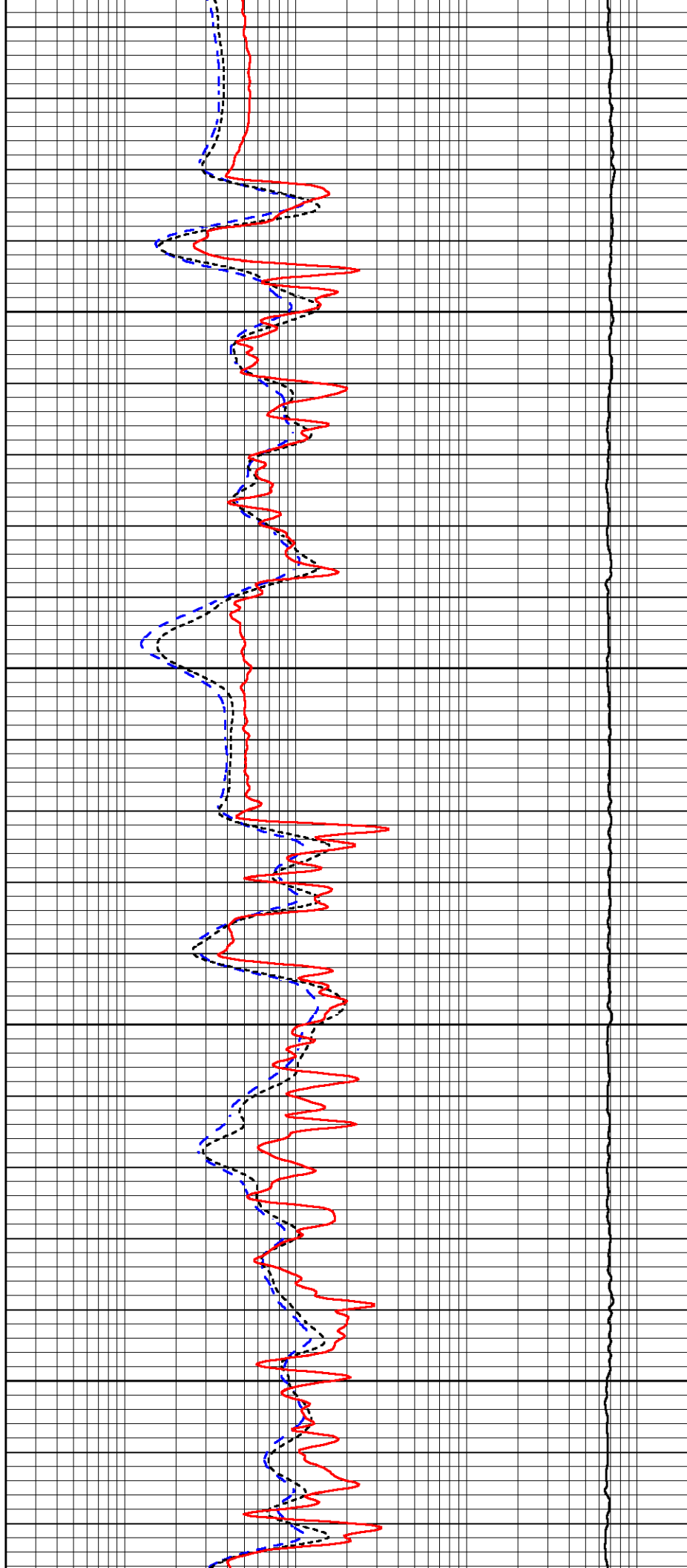


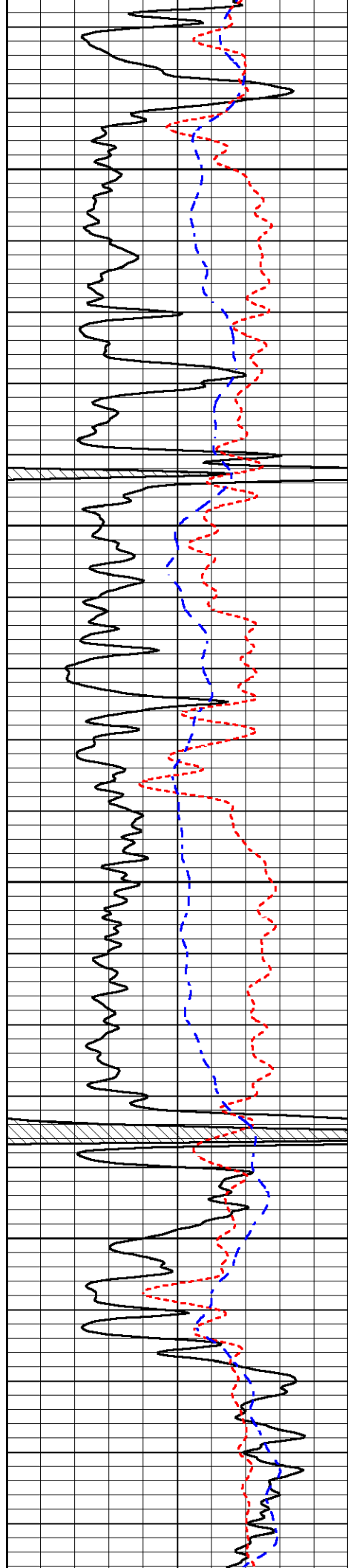
2650

2700

2750

2800



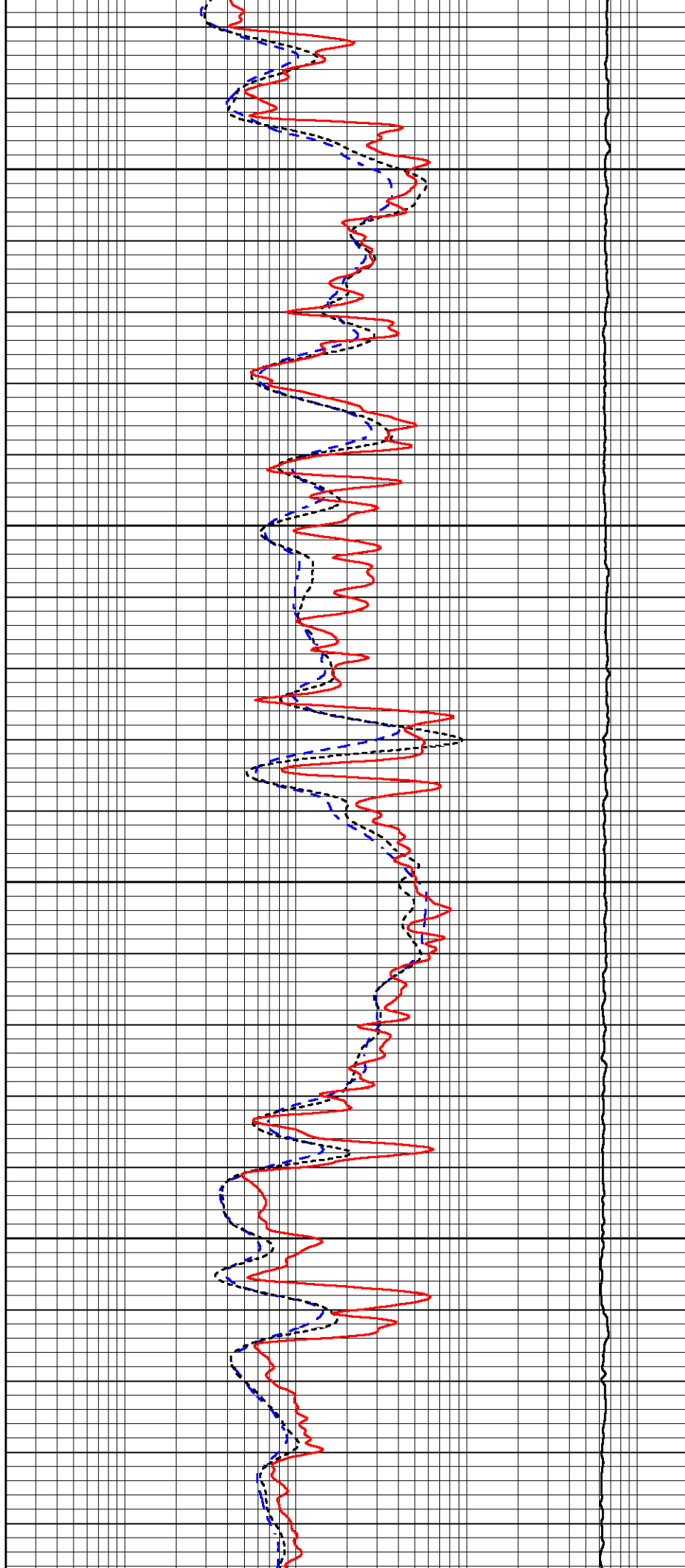


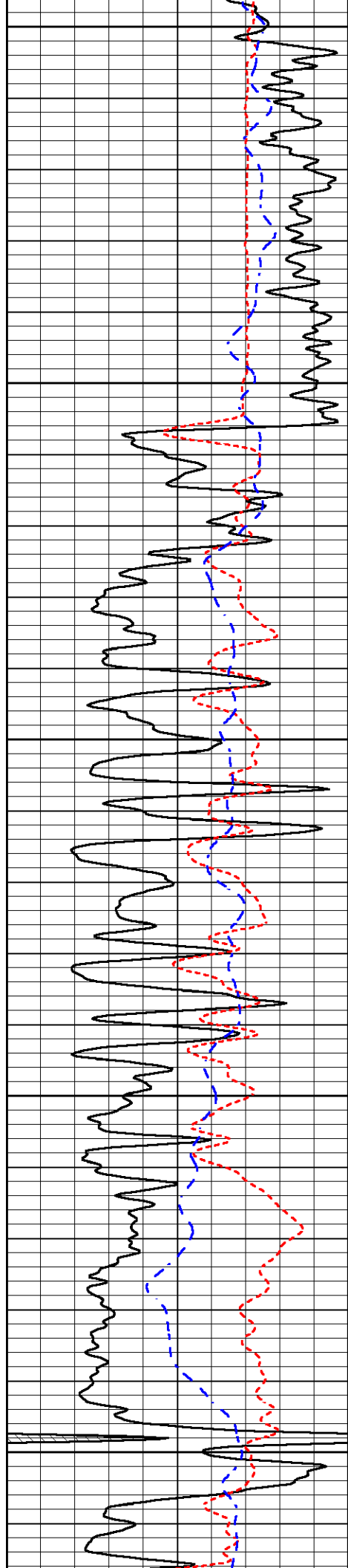
2850

2900

2950

3000





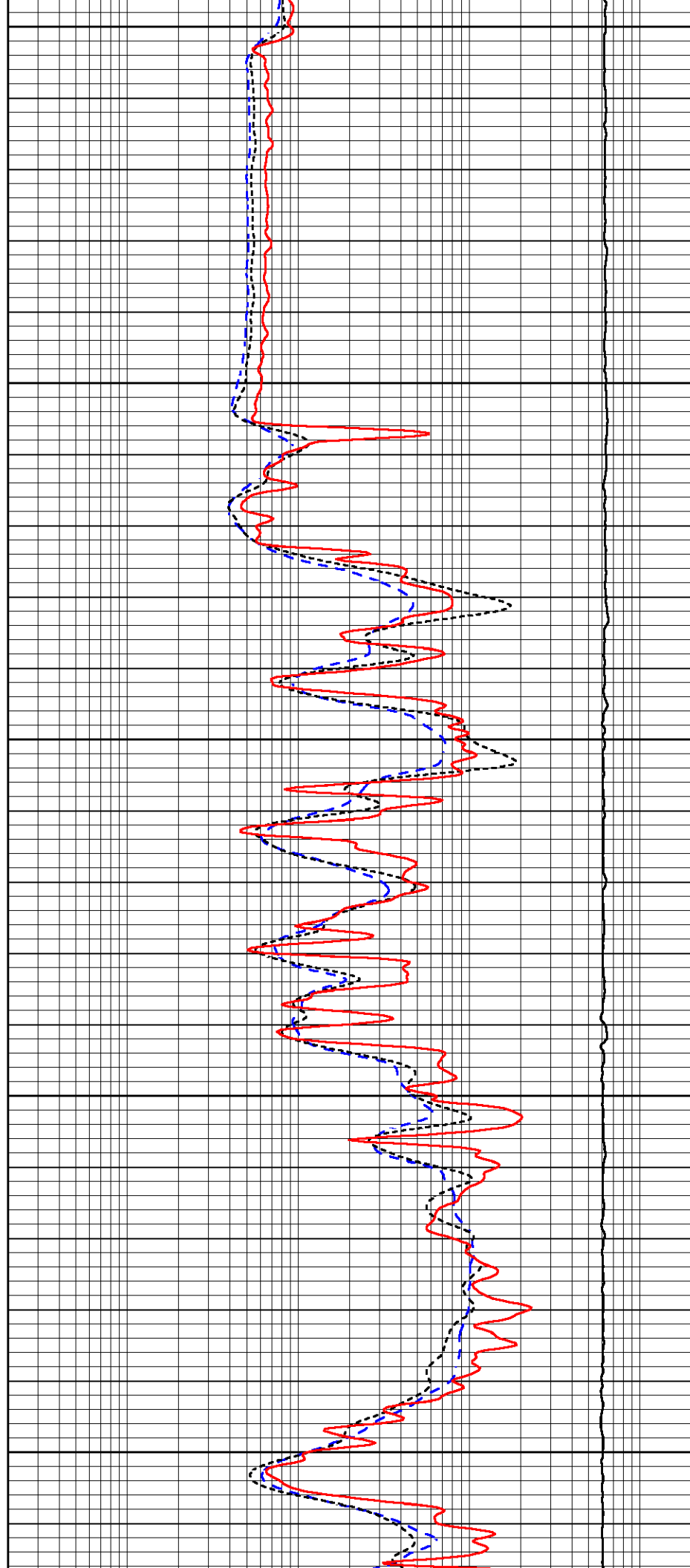
3050

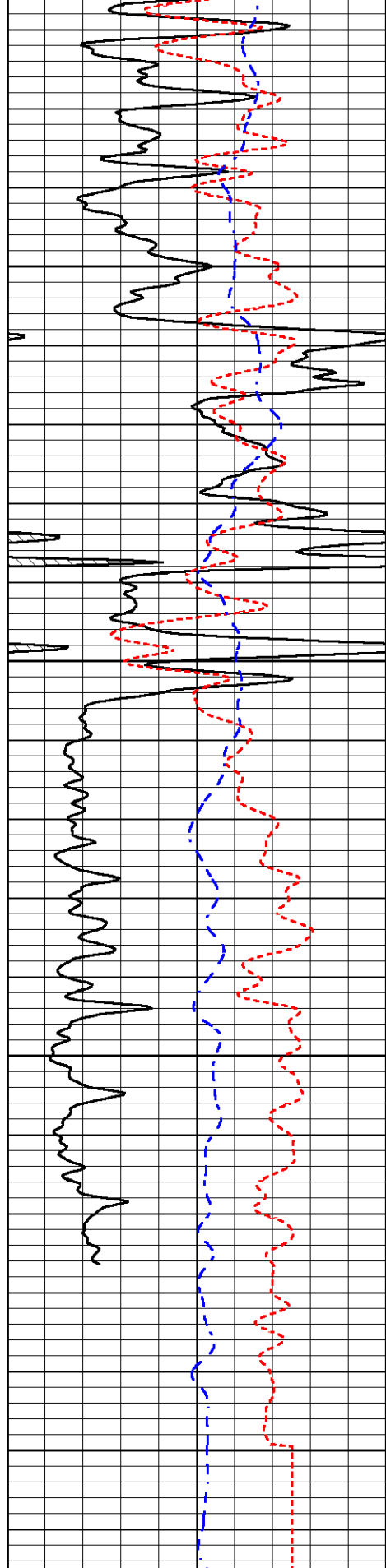
3100

3150

3200

3250





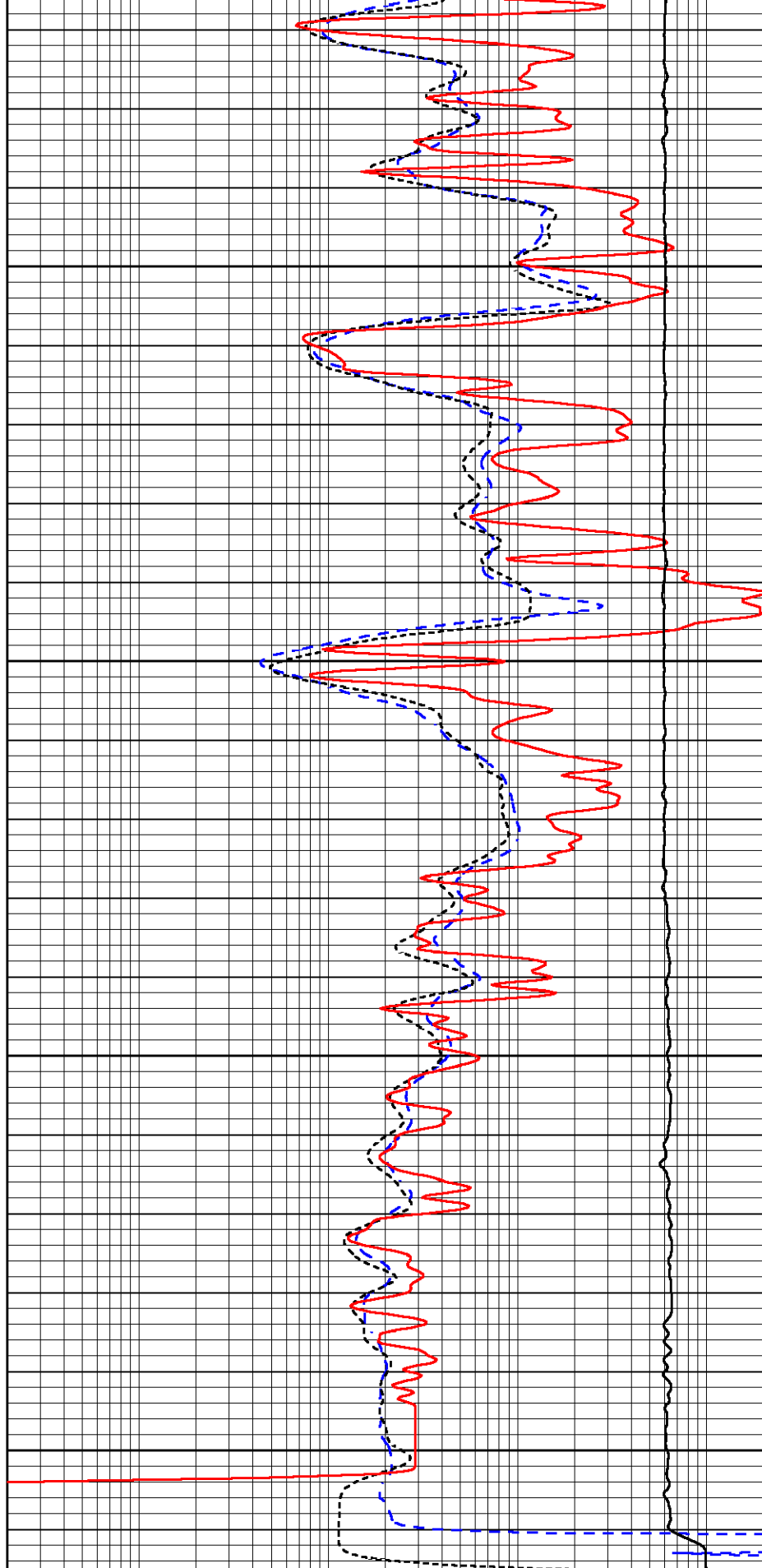
0	Gamma Ray (GAPI)	150
50	RXORT	250
-200	SP (mV)	0

3300

3350

3400

3450



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



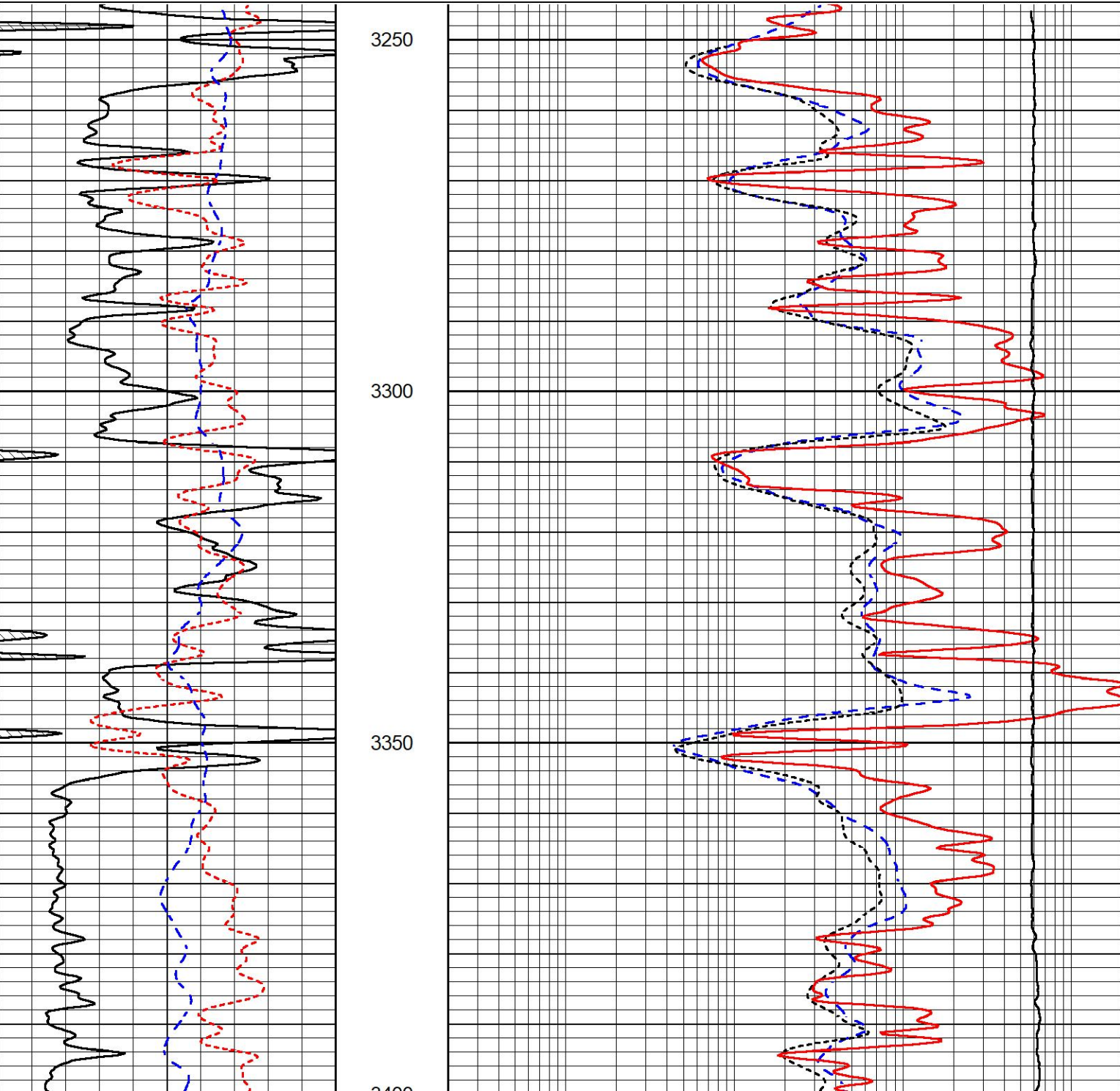
REPEAT SECTION

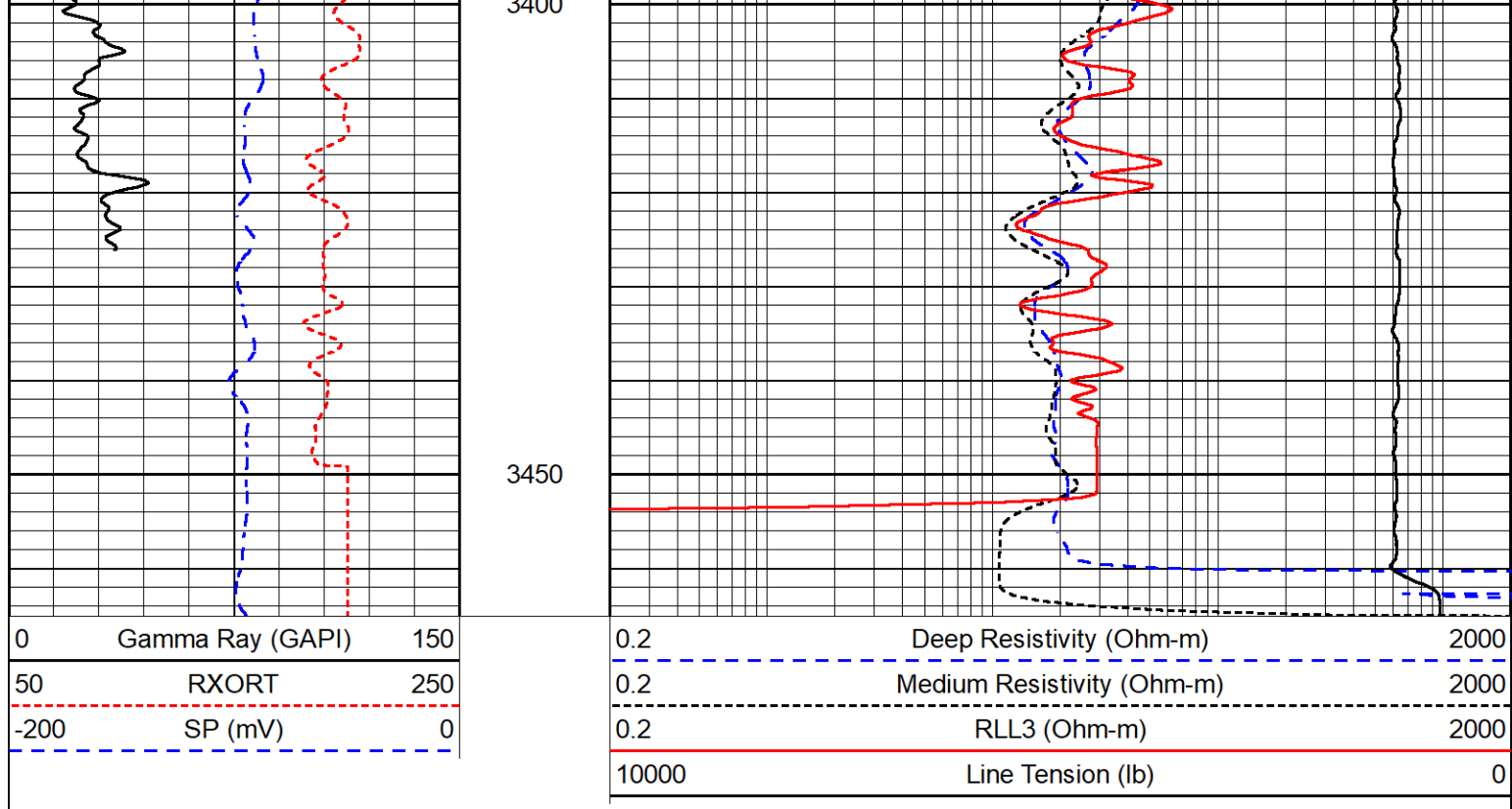
REPEAT PASS

Database File batchman_ms_1.db
Dataset Pathname stackml/pass2.1
Presentation Format _dil
Dataset Creation Mon Jul 08 09:19:27 2024
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
50	RXORT	250
-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





Calibration Report

Database File	batchman_ms_1.db
Dataset Pathname	stackml/pass3.1
Dataset Creation	Mon Jul 08 09:46:20 2024

Dual Induction Calibration Report

Serial-Model: 506-M&W
Surface Cal Performed: Sun Jun 30 20:32:27 2024

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	84.211	428.152	0.000	255.800	mmho/m	0.465	-28.000
Medium	141.000	670.654	0.000	255.800	mmho/m	0.390	-10.000

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
Performed: Thu May 30 05:58:00 2024

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	13000.0000	-0.4000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	20500.0000	-0.5000
Caliper	1.0046	1.1419	5.5000	20.0000	in	50.0000	-44.6250

LITHODENSITY Calibration Report

Serial Number: 703-03
Tool Model: STEP LITHO Short
Performed: Fri May 31 13:59:15 2024

Source:

	Win1	Win2	Win3	Win4	Win5	Win6	Win7	Win8	
Background:									
SS:	56	59	223	276	25	75	46	1	cps
LS:	83	90	344	441	51	132	90	3	cps
Aluminum:									
SS:	1063	1260	2893	2631	48	80	48	3	cps
LS:	1179	2084	3854	1823	62	133	86	5	cps
Magnesium:									
SS:	1756	2035	4740	3894	55	79	49	4	cps
LS:	4981	8390	15059	6054	115	127	85	14	cps
Aluminum+Iron:									
SS:	676	887	2426	2310	45	79	52	2	cps
LS:	700	1495	3280	1630	60	131	90	5	cps
		Density			PE				
		Actual	Calibrated		Actual	Calibrated	Quality		
Background:									
SS:							0.236		
LS:							0.189		
Aluminum:									
SS:		2.6000	2.6000	g/cc			0.249		
LS:		2.6000	2.6000	g/cc			0.216		
Magnesium:									
SS:		1.6800	1.6800	g/cc	2.5700	2.5700	0.232		
LS:		1.6800	1.6800	g/cc	2.5700	2.5700	0.198		
Aluminum+Iron:									
SS:						6.1800	0.208		
LS:						6.1800	0.188		
Caliper:			Reference:		Reading:				
Small Ring:			6.0	in	1.0				
Large Ring:			14.0	in	1.0				
Gain:			12.300						
Offset:			2.050						
Compensated Neutron Calibration Report									
			Serial Number:		210				
			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:			Sat Oct 21 23:48:19 2023						
Calibrator Value:			500.0		GAPI				
Background Reading:			24.0		cps				
Calibrator Reading:			637.0		cps				
Sensitivity:			0.6000		GAPI/cps				



MIDWEST WIRELINE

Company	Onne Duttonman Inc
Well	MS 1
Field	
County	Barton
State	Kansas