



MIDWEST WIRELINE

DUAL INDUCTION

Company Berexco LLC Well Herman #1-13 Field County Gove State Kansas		Company Berexco LLC Well Herman #1-13 Field County Gove State Kansas	
Location: API #: 15-063-22446-00-00 SE NE SW NE 3530 FSL & 1535 FEL SEC 13 TWP 15S RGE 30W		Other Services CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	2517
Log Measured From	Kelly Bushing	K.B.	2527
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2517
Date	8/3/2024		
Run Number	One		
Depth Driller	4310		
Depth Logger	4310		
Bottom Logged Interval	4309		
Top Log Interval	350		
Casing Driller	8.625 @ 393		
Casing Logger	393		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	2200		
Density / Viscosity	9.0	56	
pH / Fluid Loss	11.0	7.2	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.85 @ 76		
Rmt @ Meas. Temp	0.64 @ 76		
Rmc @ Meas. Temp	1.15 @ 76		
Source of Rmt / Rmc	Charts		
Rm @ BHT	0.54 @ 119		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	119		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Chad Counts		

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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.

Gove City, S to I Rd, 6 W to Rd 32,
5 S, 1 E, S 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	This Log Record Was Witnessed By
Engineer: T. Martin	Primary Witness: Chad Counts
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\berexco_herman #1-13.db
Dataset field/well/Stack/pass3.1/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 119	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 -8	SPSHIFT mV 350	SRFTEMP degF 80	SZCOR Off	TDEPTH ft 4310		

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



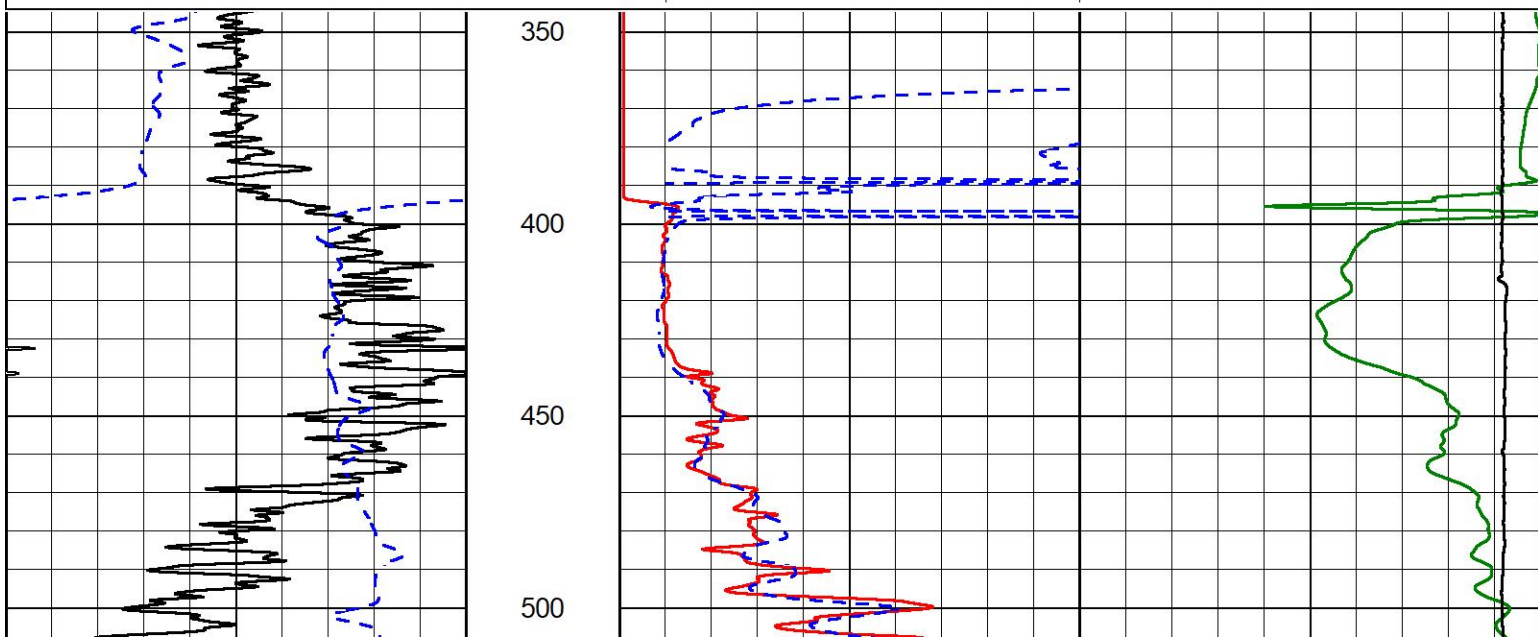
2" SCALE RESISTIVITY

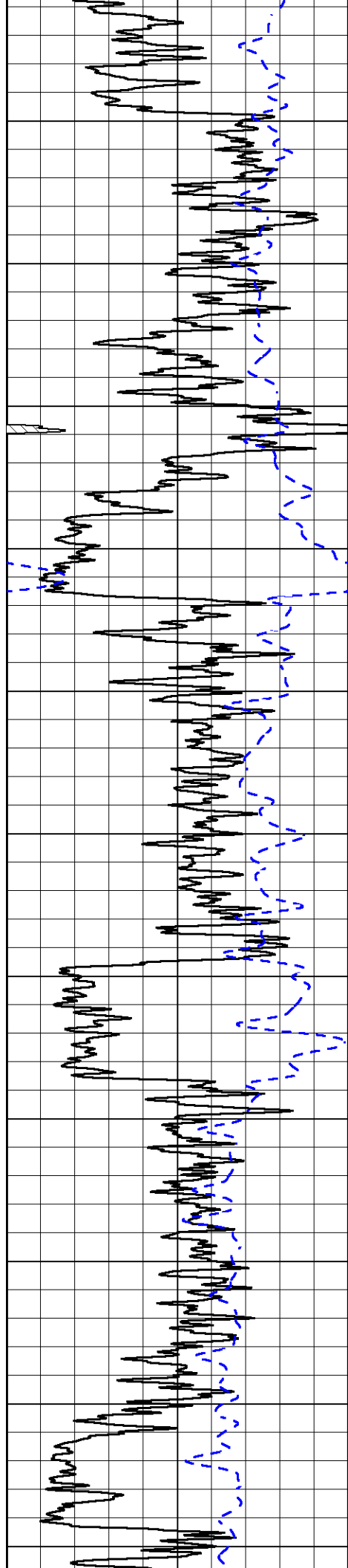
MAIN PASS

Database File berexco_herman #1-13.db
Dataset Pathname Stack/pass3.2
Presentation Format _dil2in
Dataset Creation Sat Aug 03 23:56:27 2024
Charted by Depth in Feet scaled 1:600

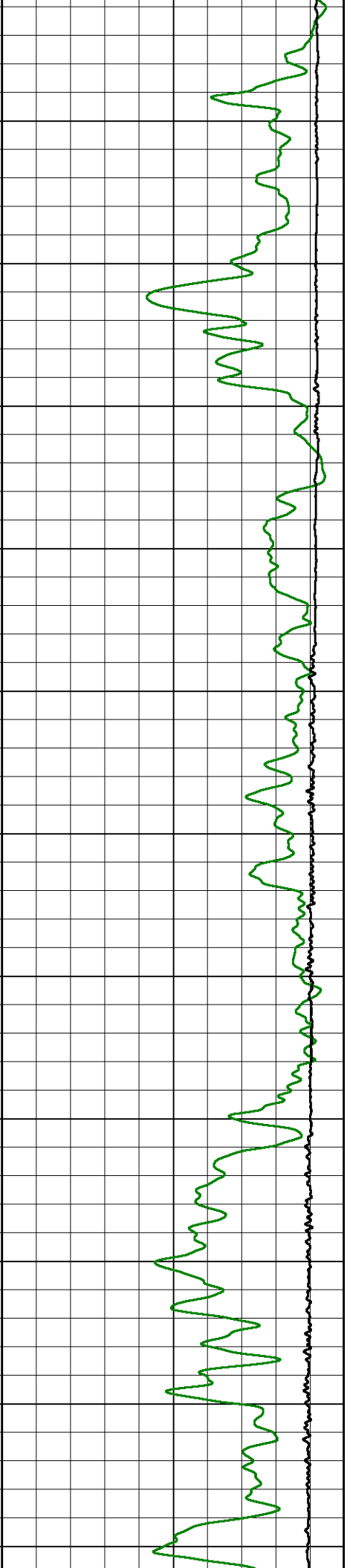
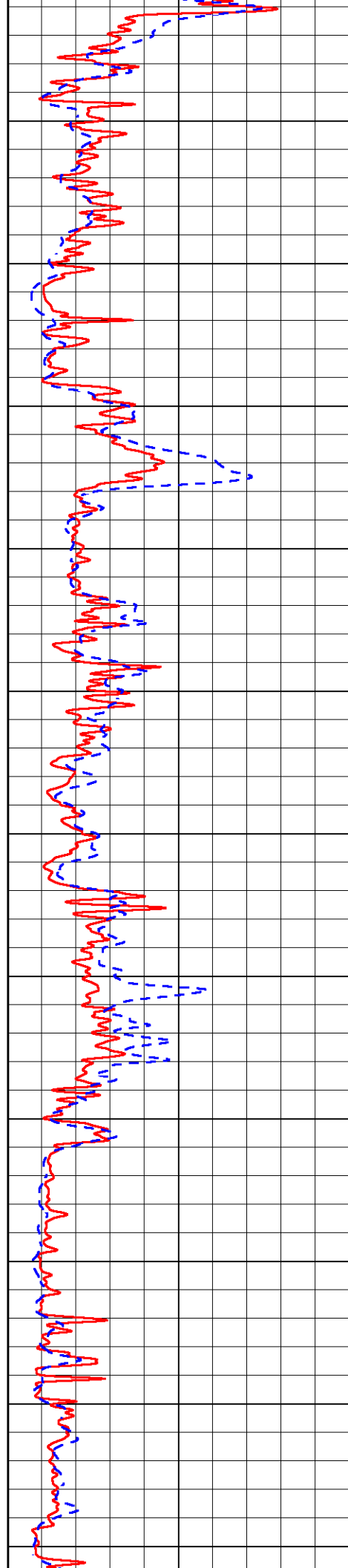
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

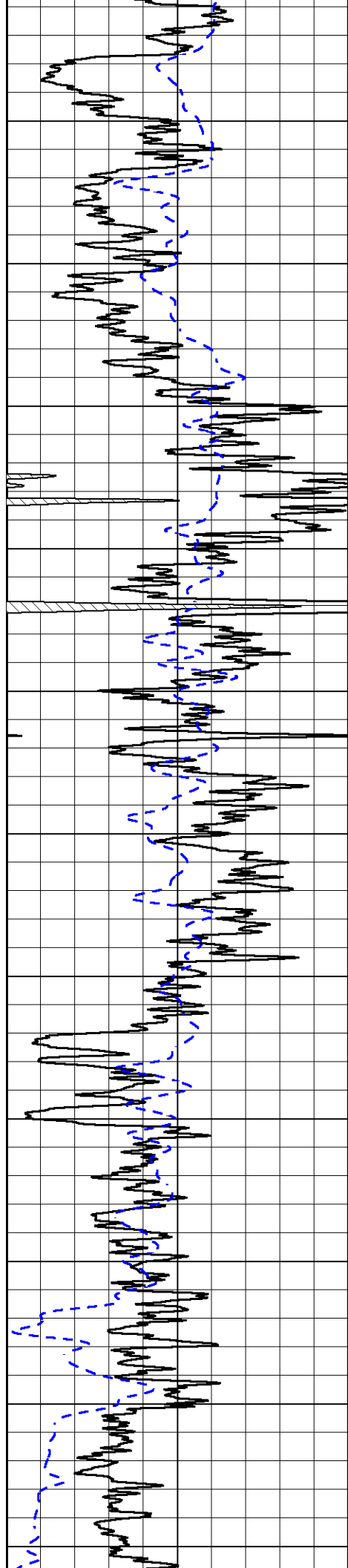
1000	Conductivity (mmho/m)	0
15000	Line Tension (lb)	0
0	RLL3 (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
50	RLL3 (Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200



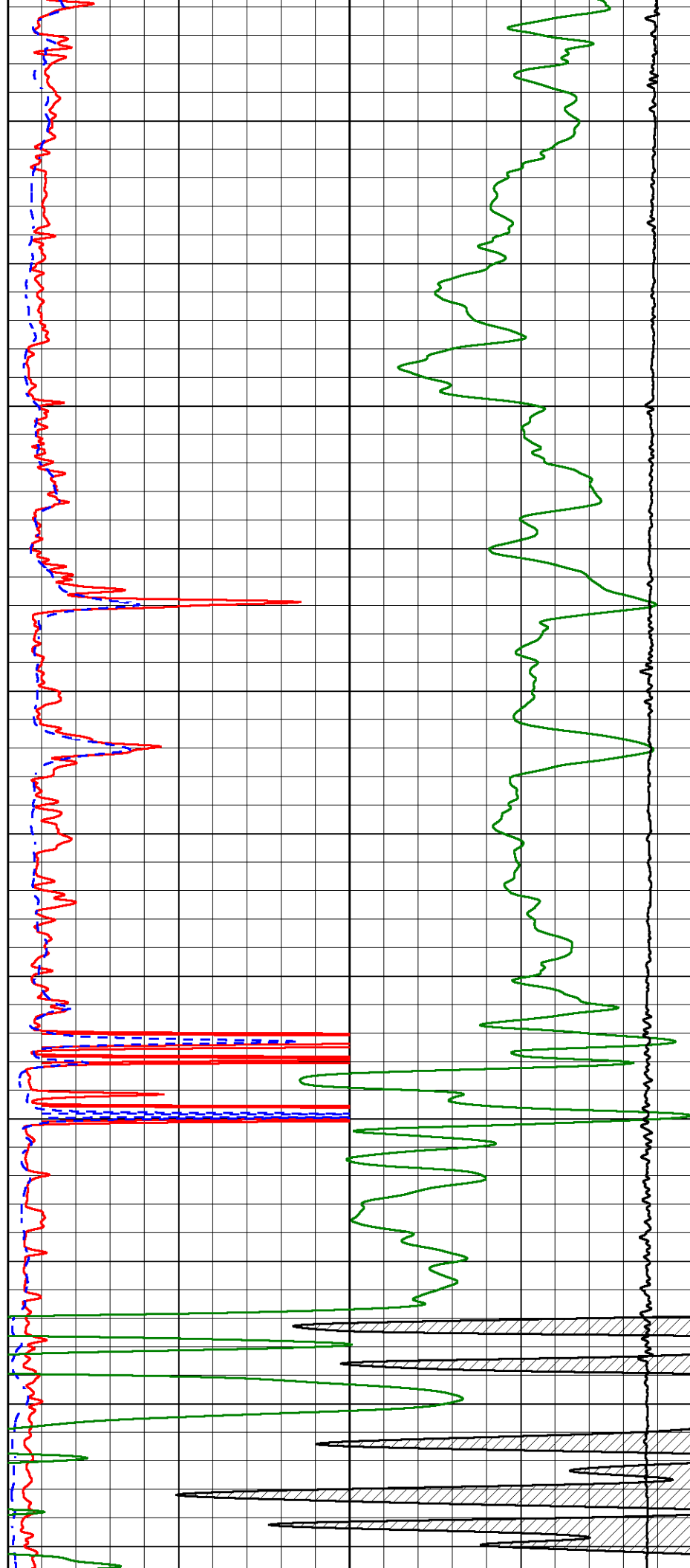


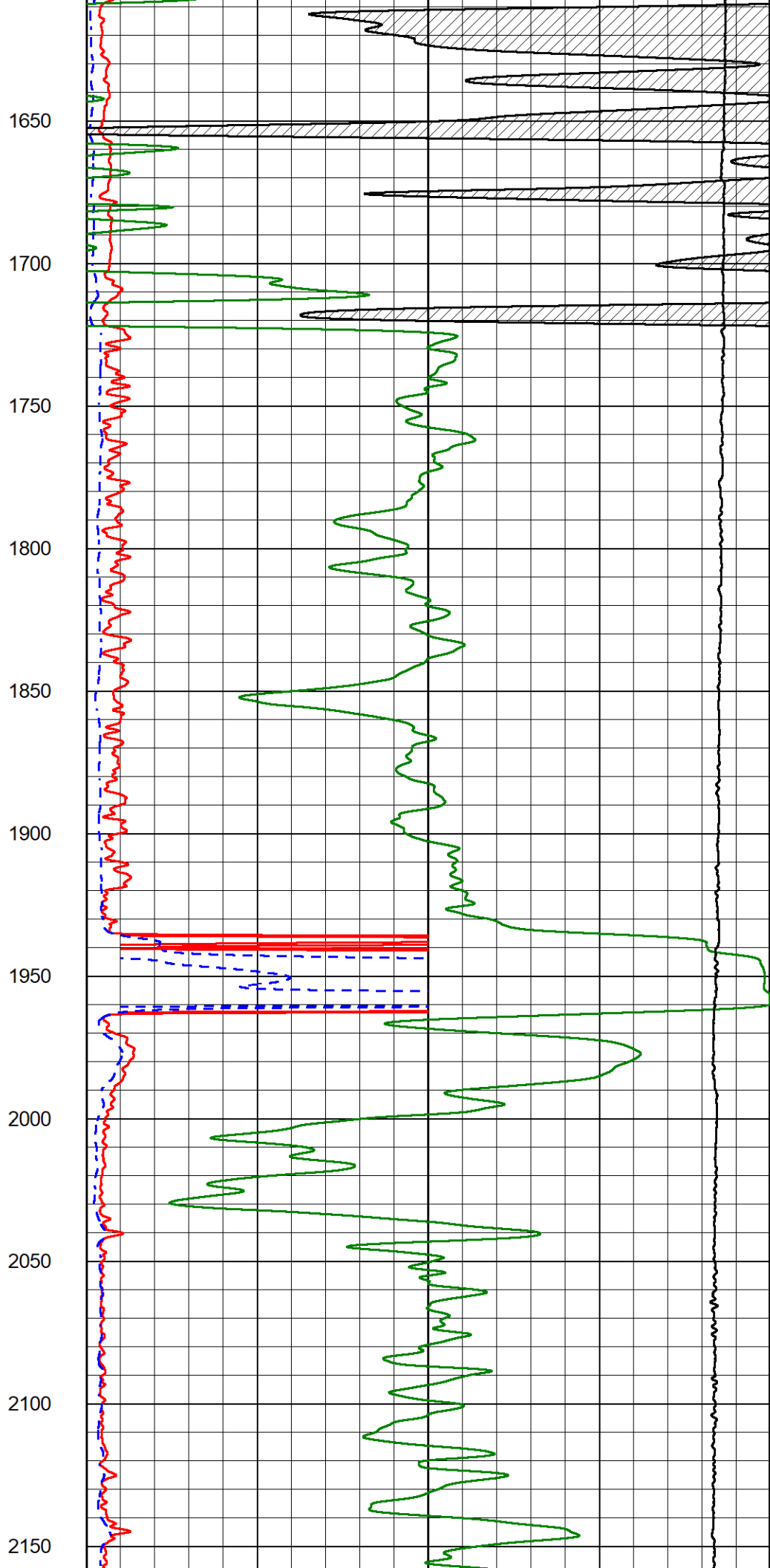
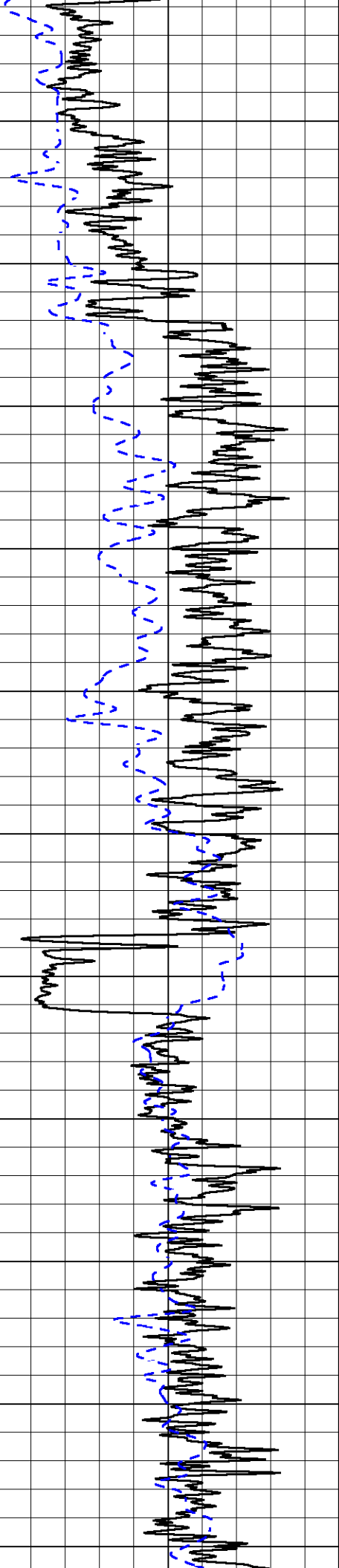
550
600
650
700
750
800
850
900
950
1000
1050

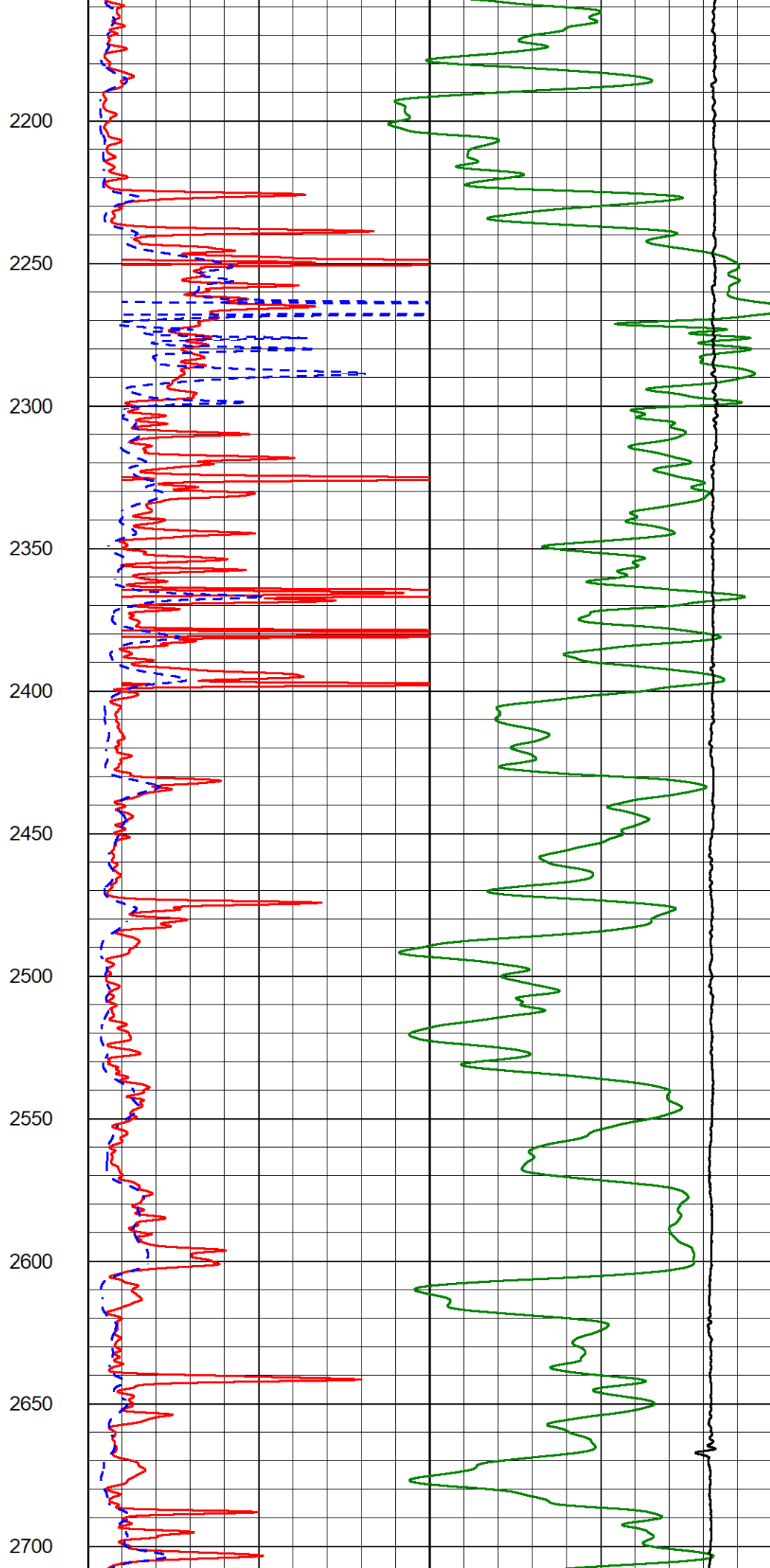
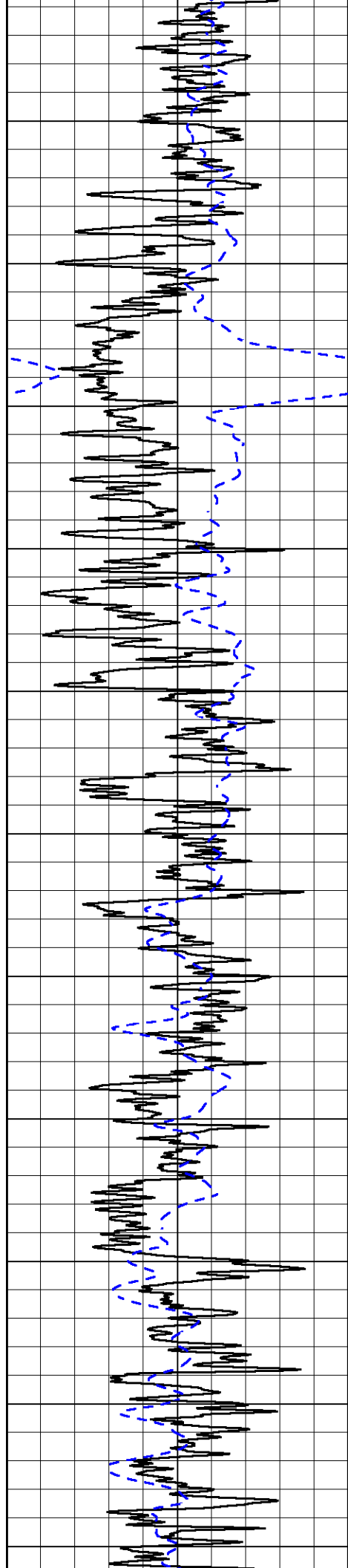


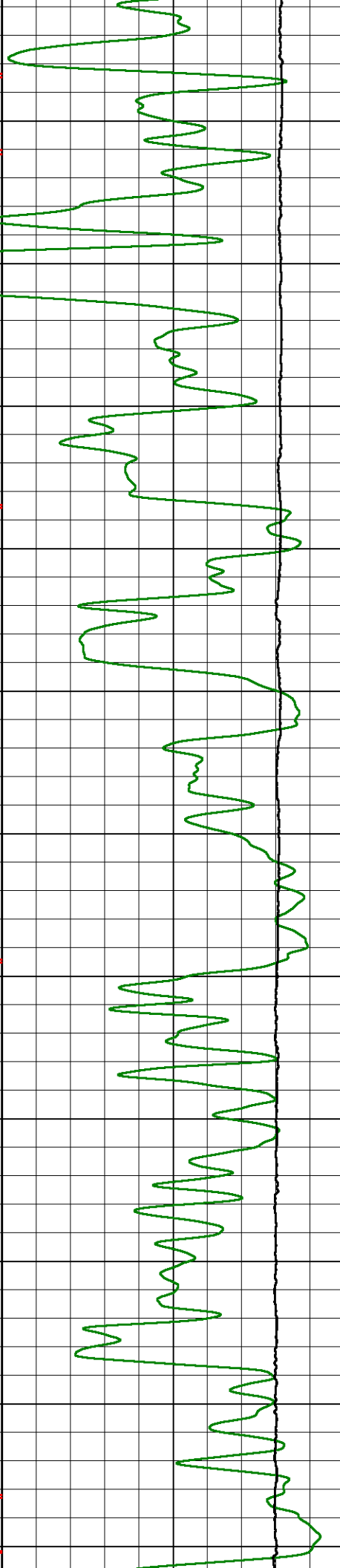
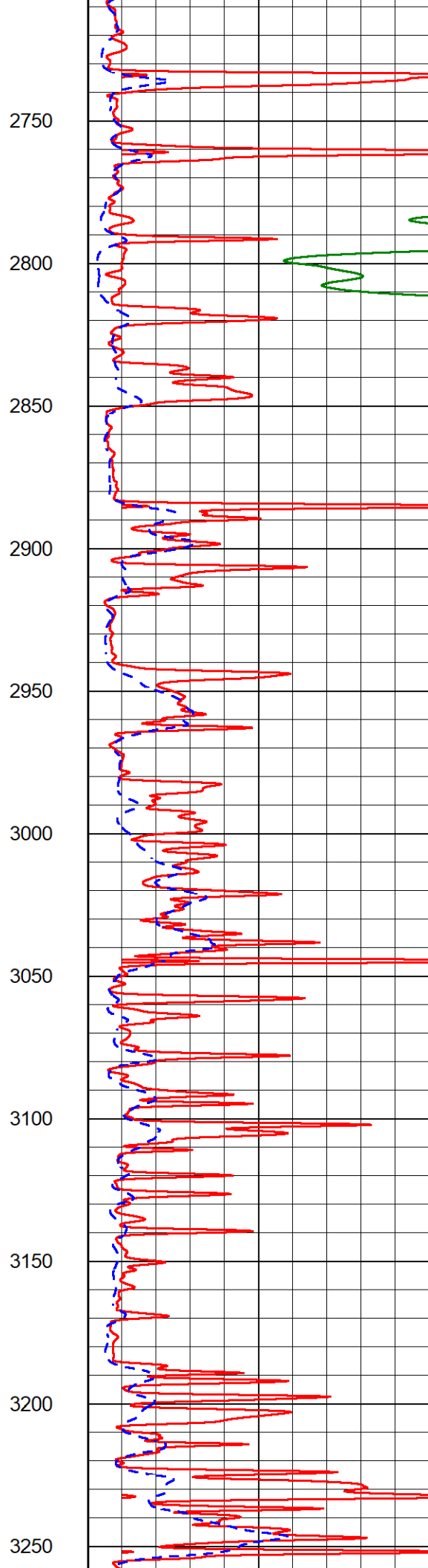
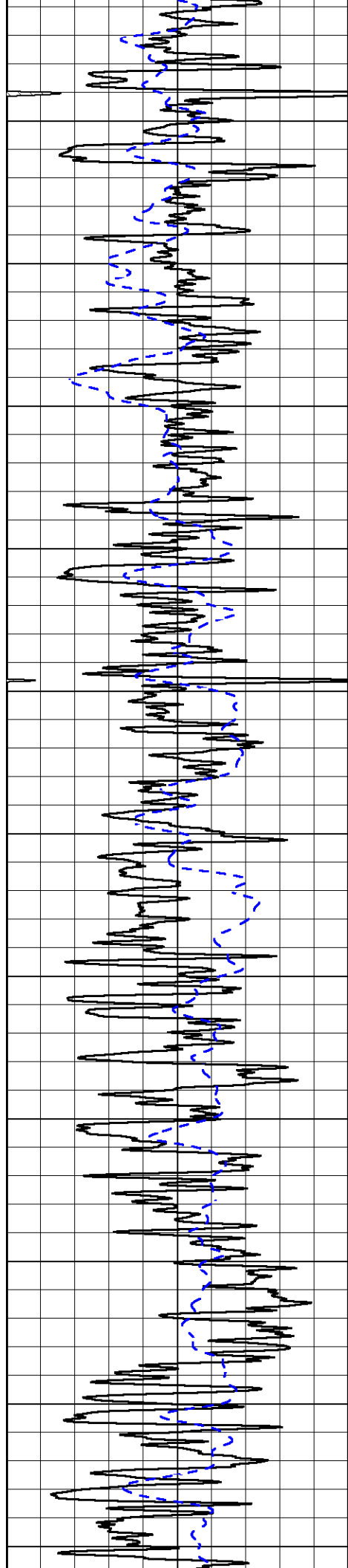


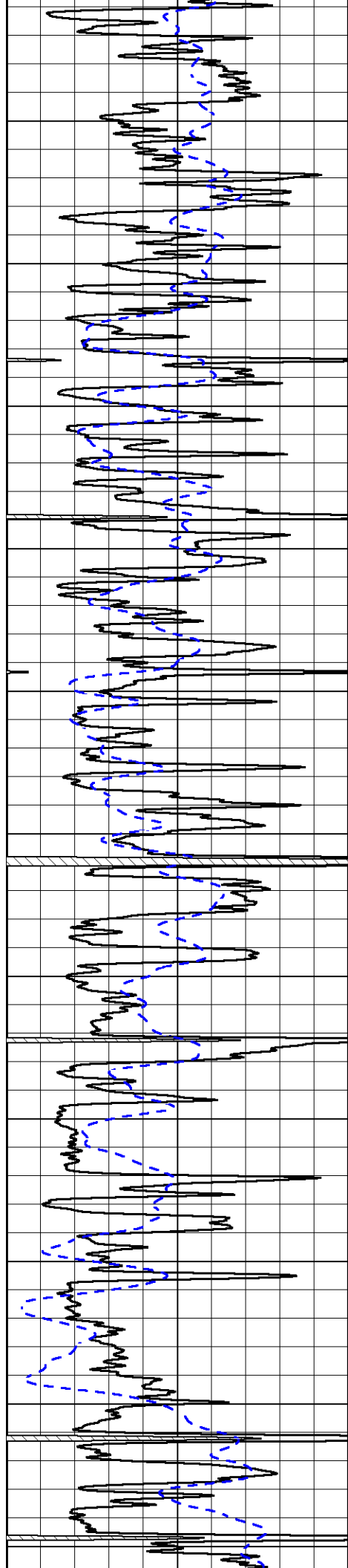
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600











3300

3350

3400

3450

3500

3550

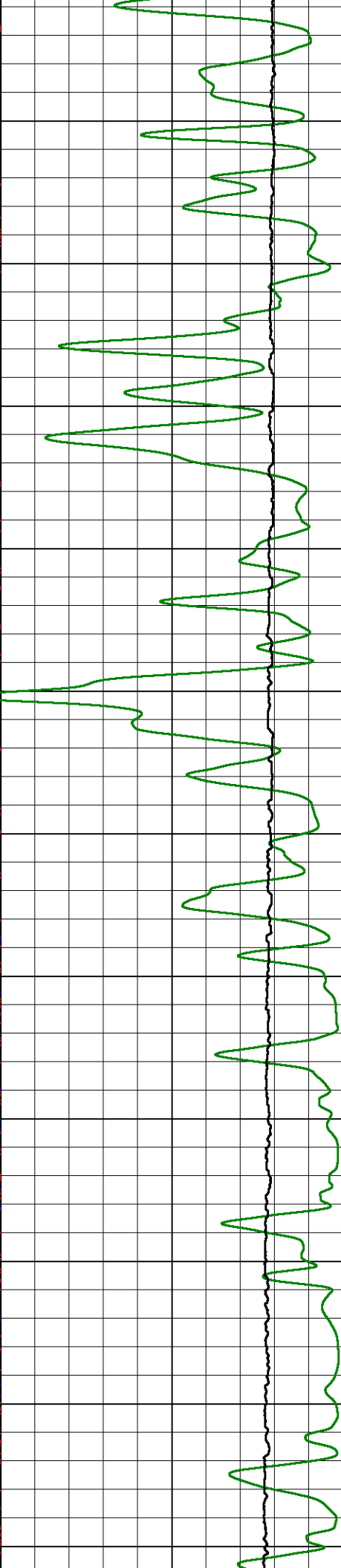
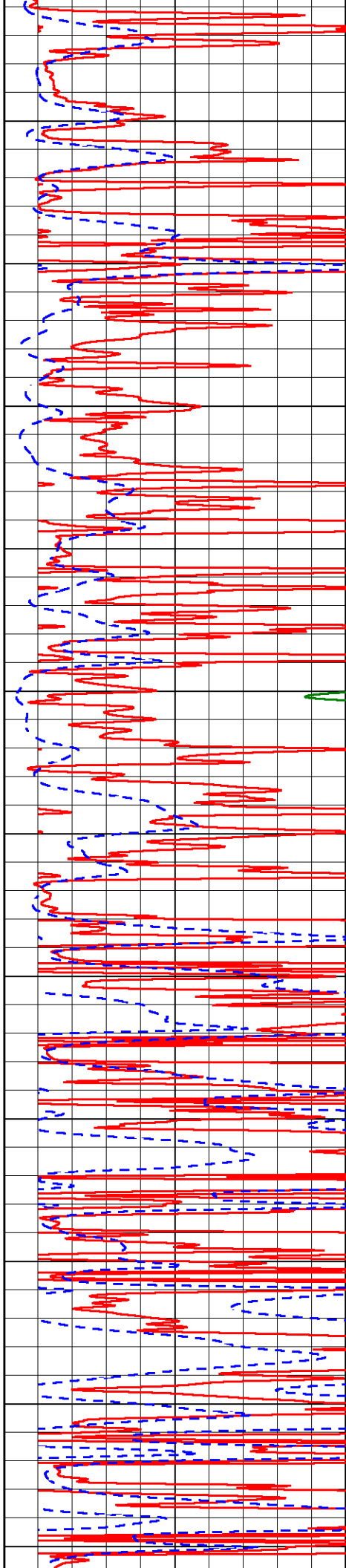
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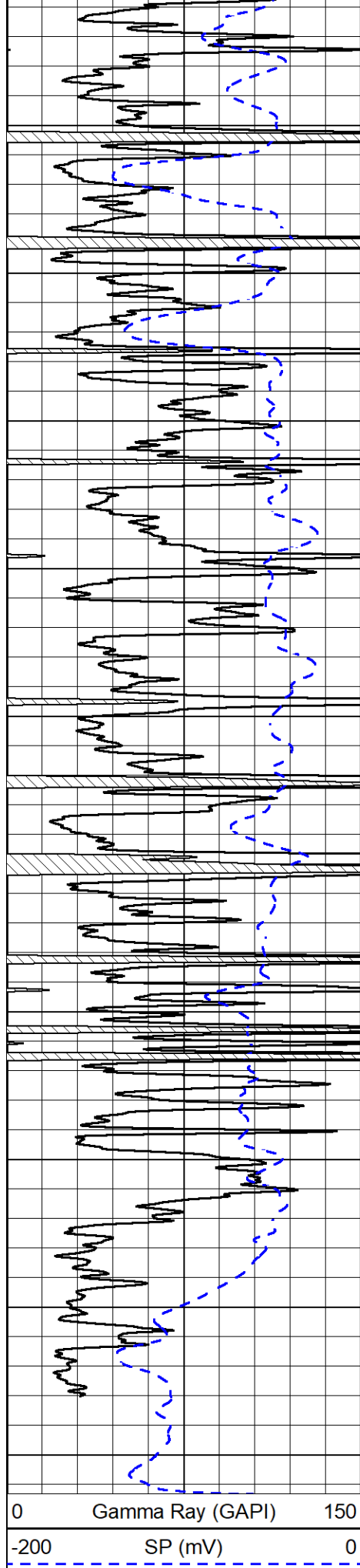
3650

3700

3750

3800





3850

3900

3950

4000

4050

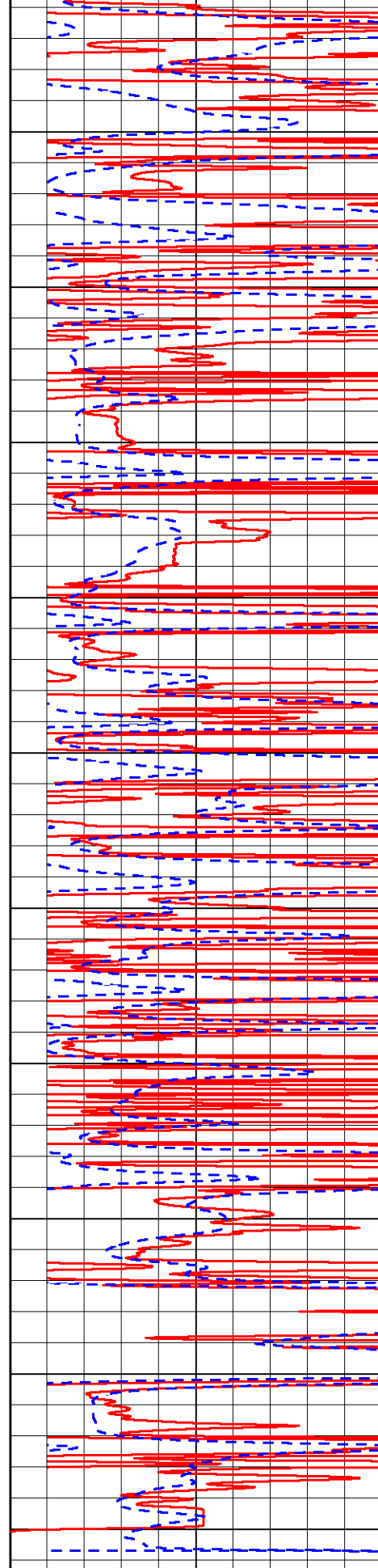
4100

4150

4200

4250

4300



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)	200
50	Deep Resistivity (Ohm-m)	200



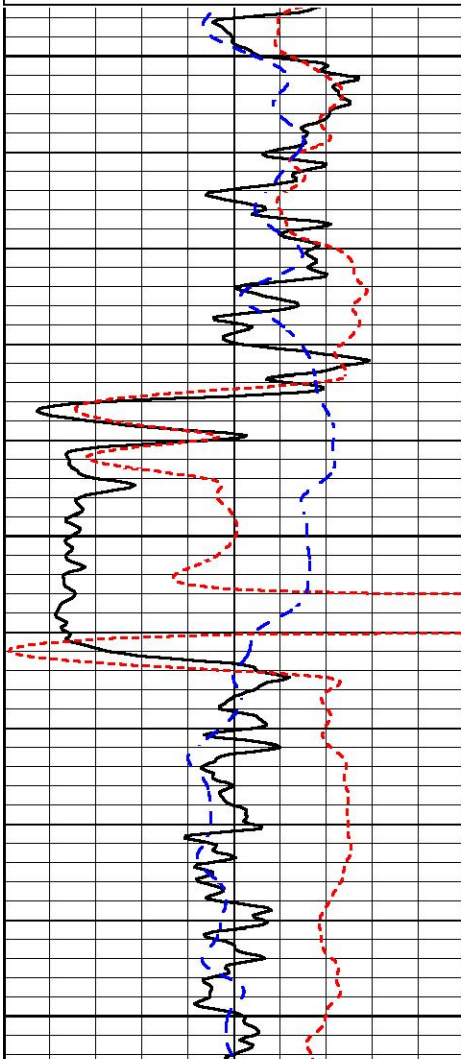
ANHYDRITE SECTION

MAIN PASS

Database File berexco_herman #1-13.db
Dataset Pathname Stack/pass3.4
Presentation Format _dil
Dataset Creation Sat Aug 03 23:39:58 2024
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

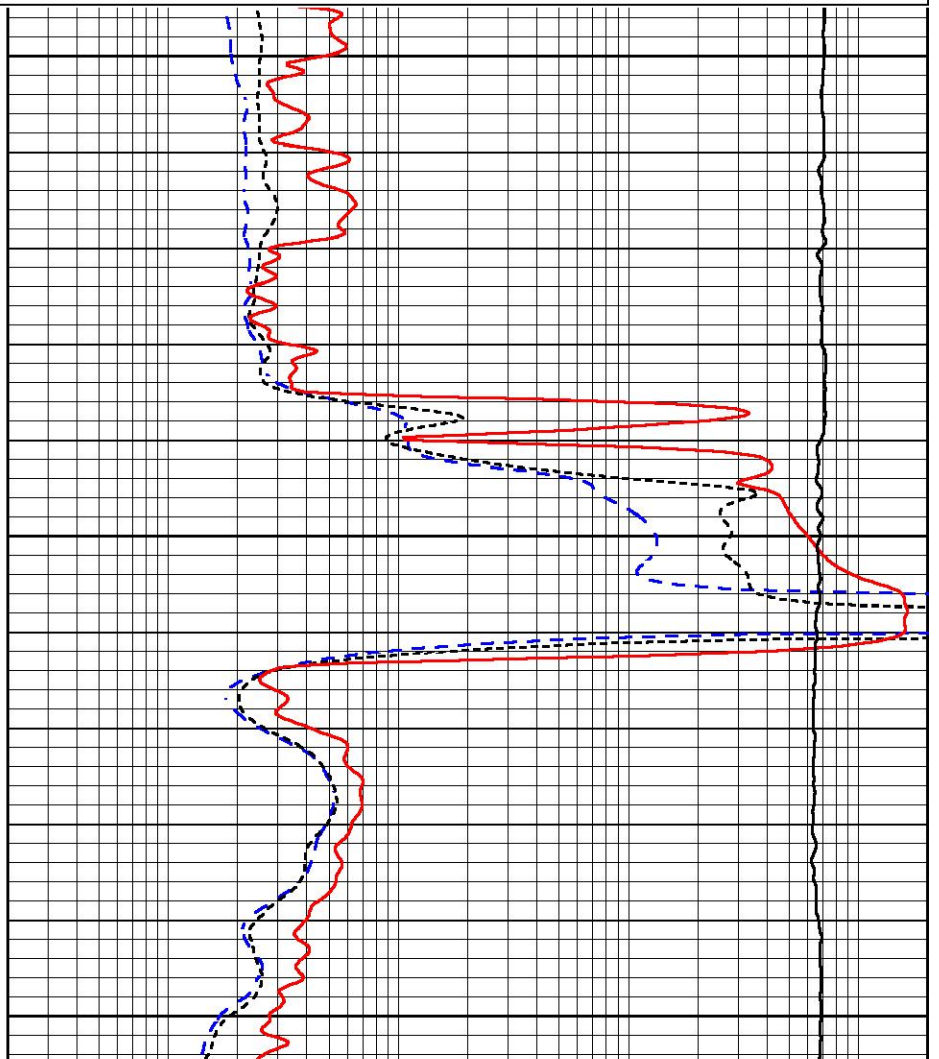


1900

1950

2000

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



DETAIL SECTION



MIDWEST WIRELINE

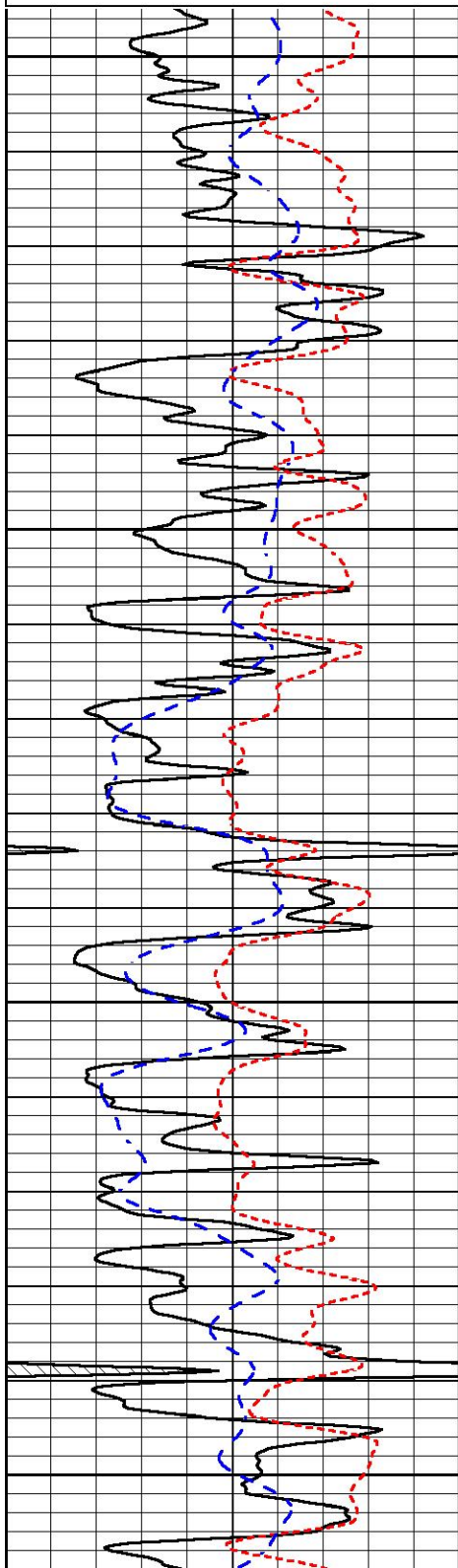
DETAIL SECTION

MAIN PASS

Database File berexco_herman #1-13.db
Dataset Pathname Stack/pass3.1
Presentation Format _dil
Dataset Creation Sat Aug 03 23:56:41 2024
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

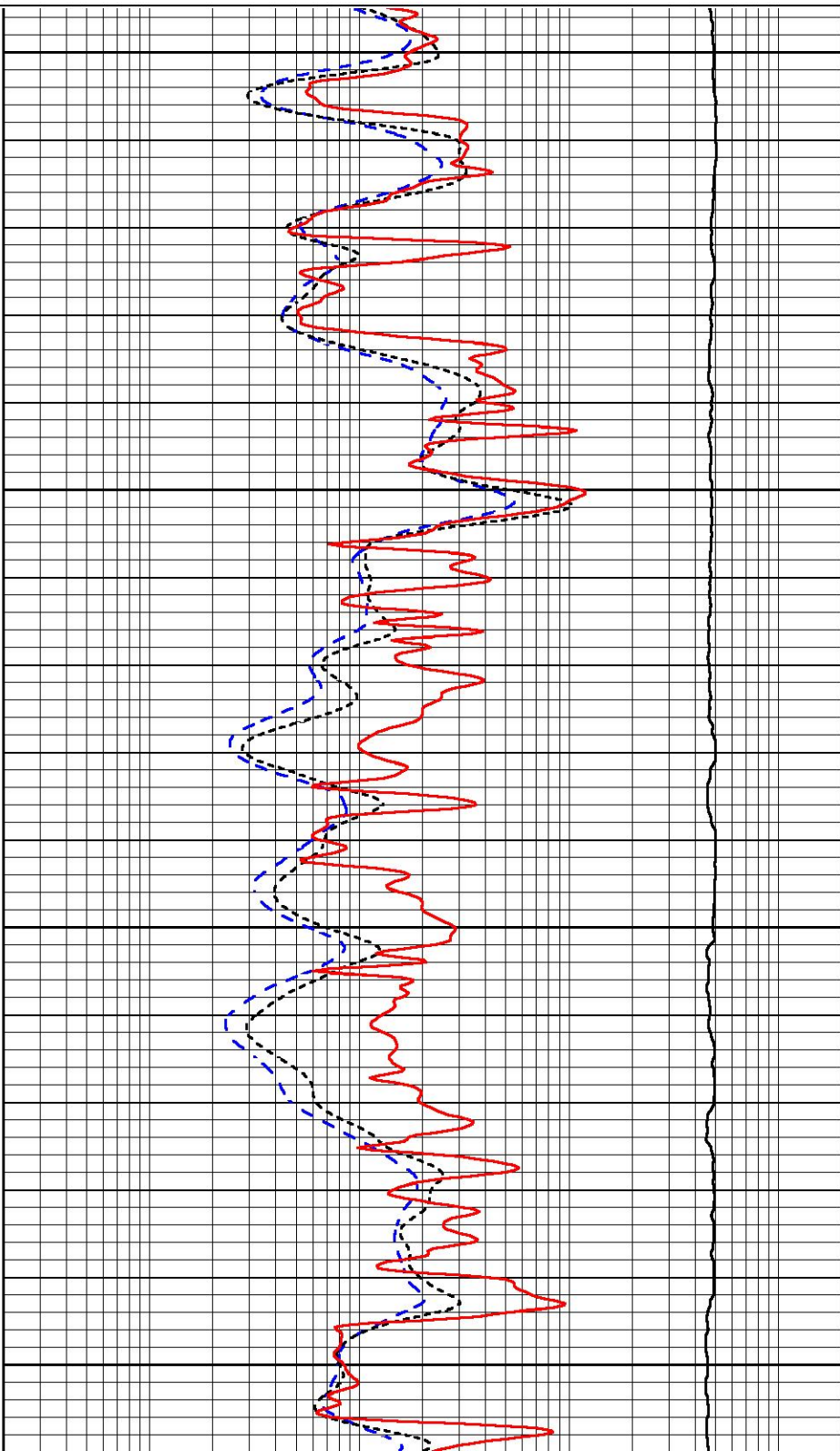


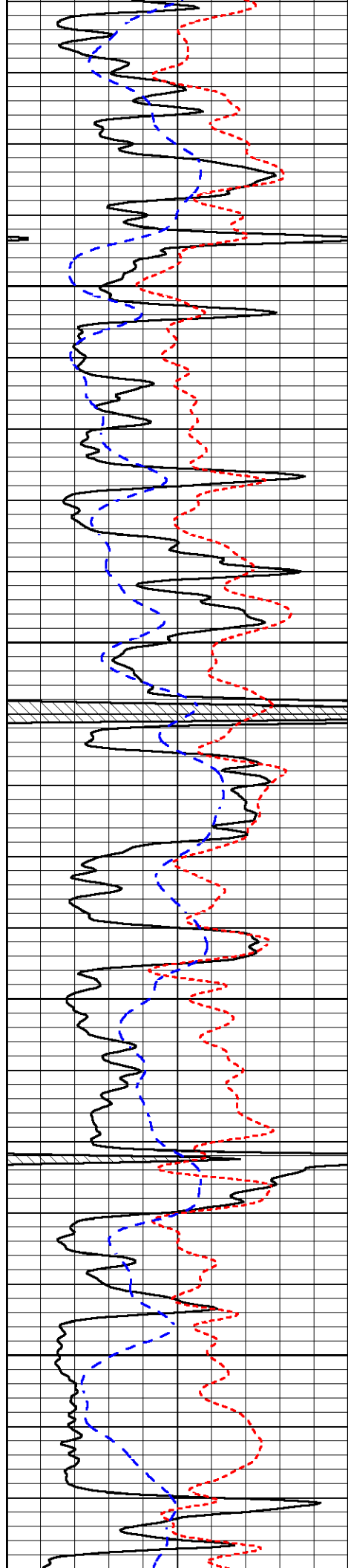
3300

3350

3400

3450



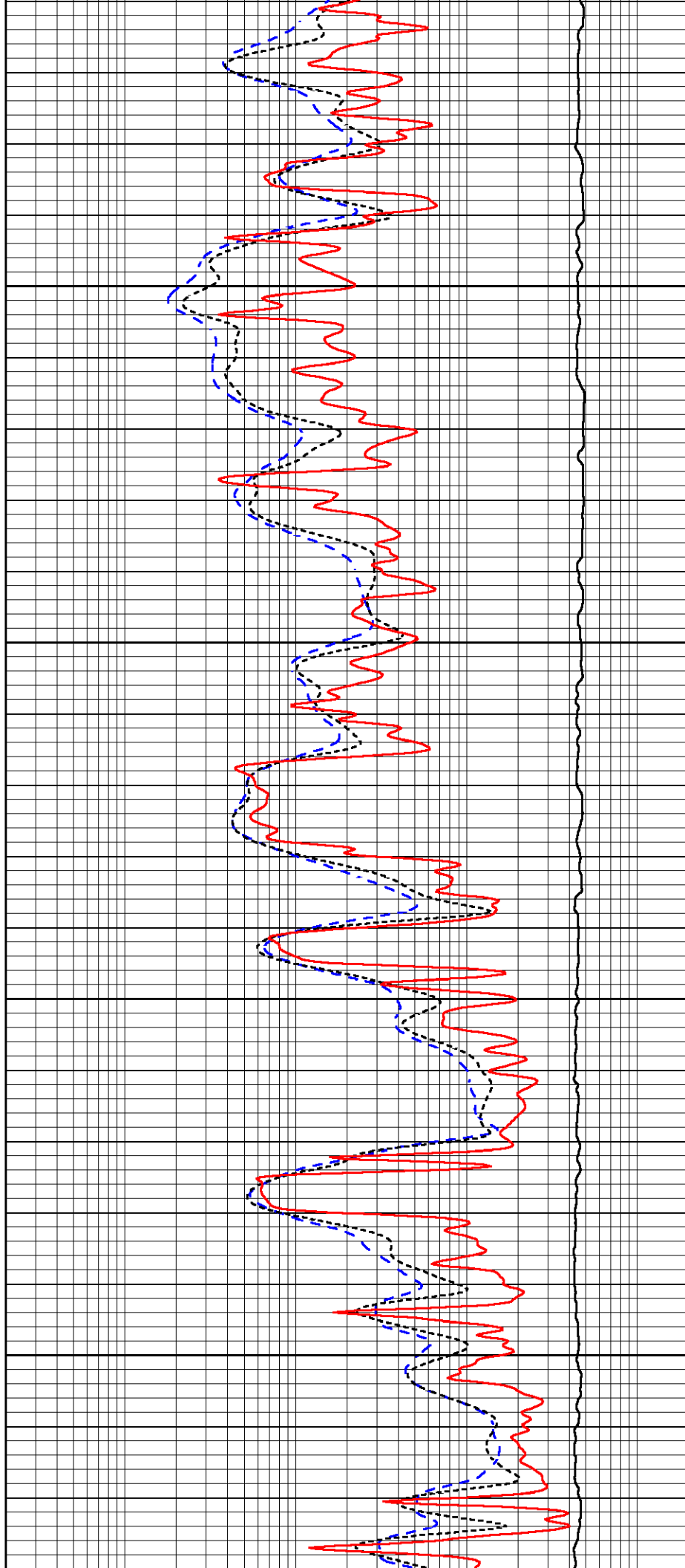


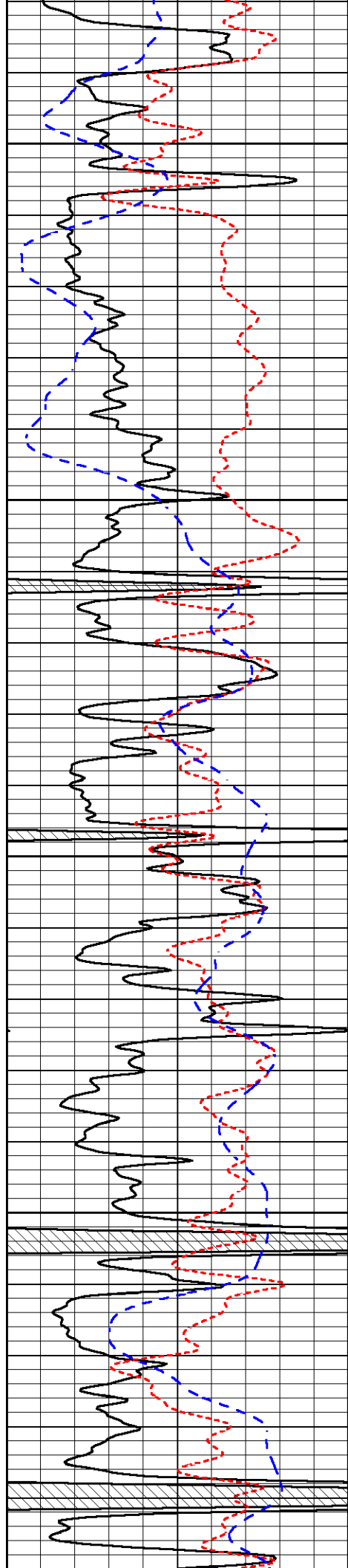
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3550

3600

3650





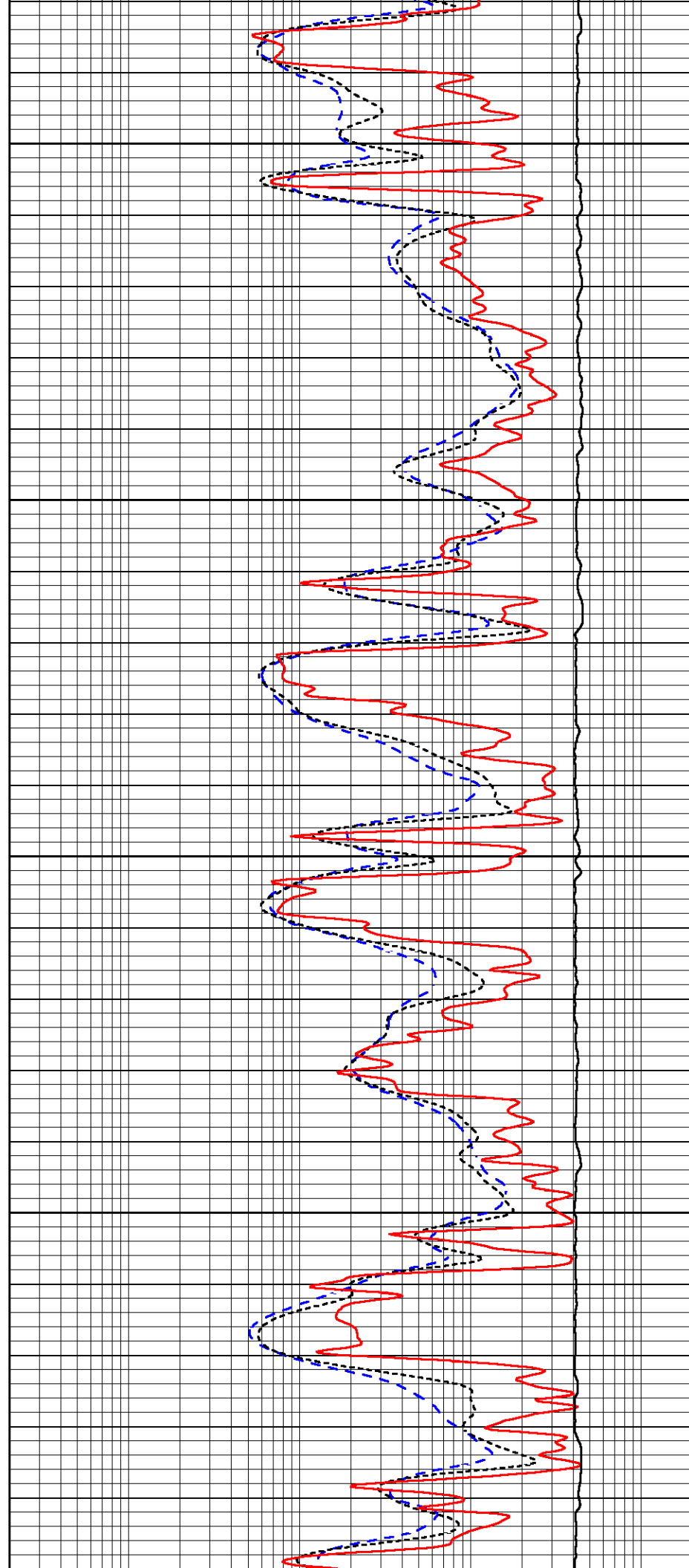
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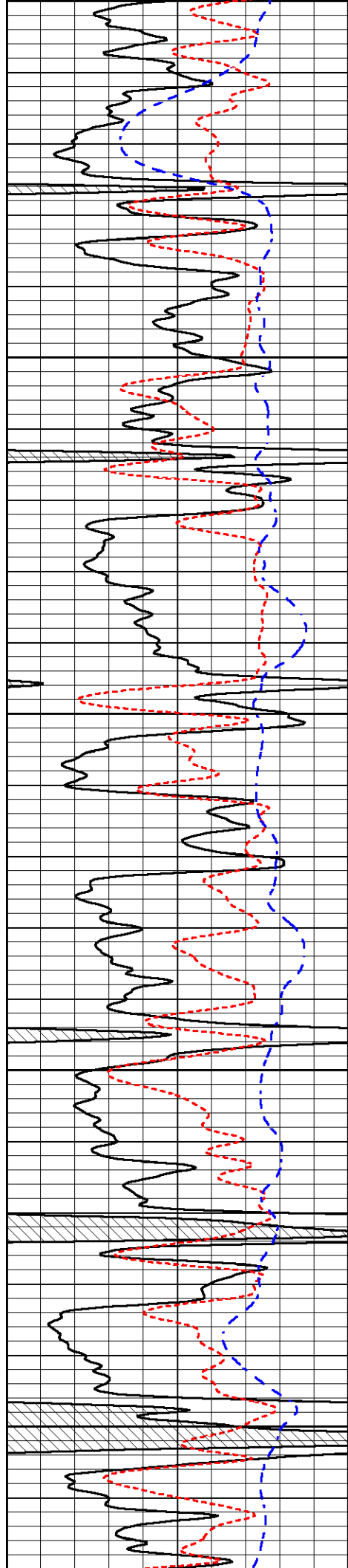
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3800

3850

3900





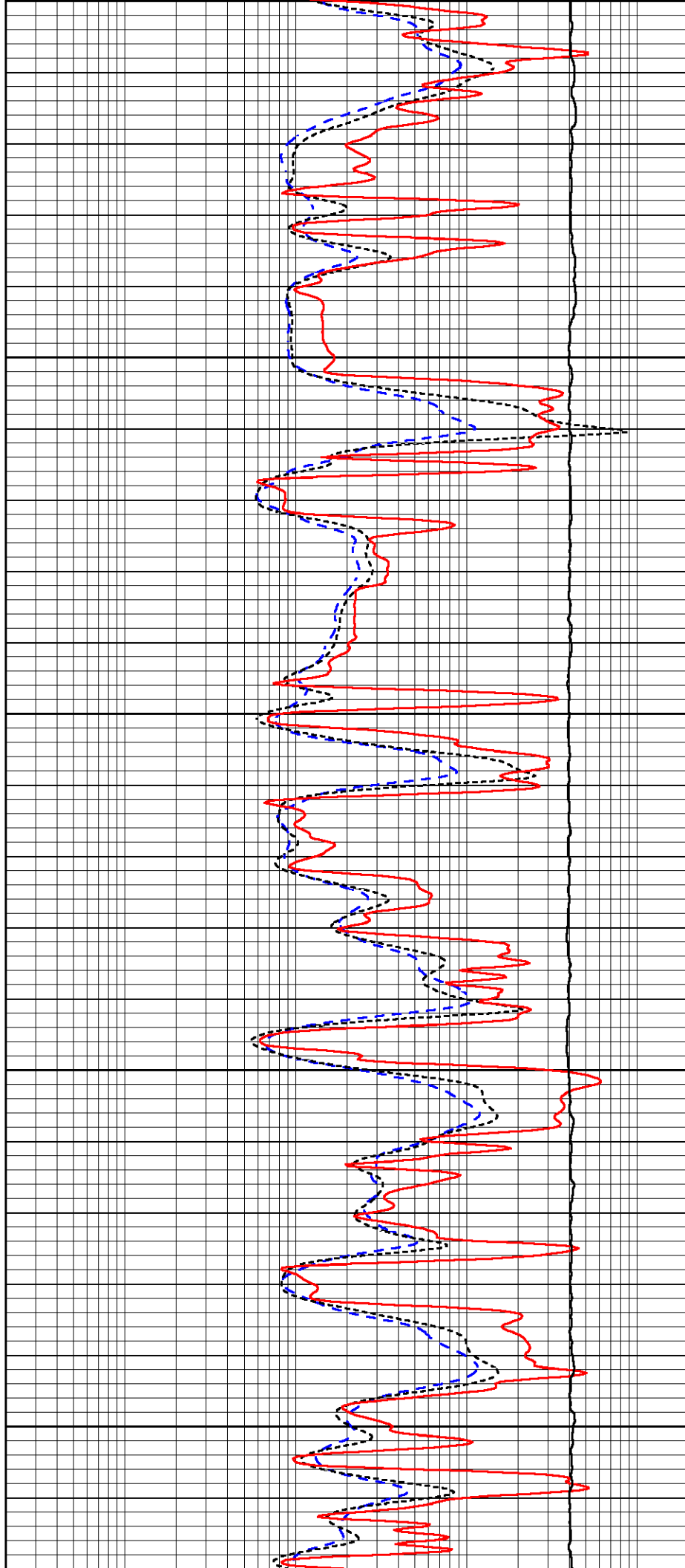
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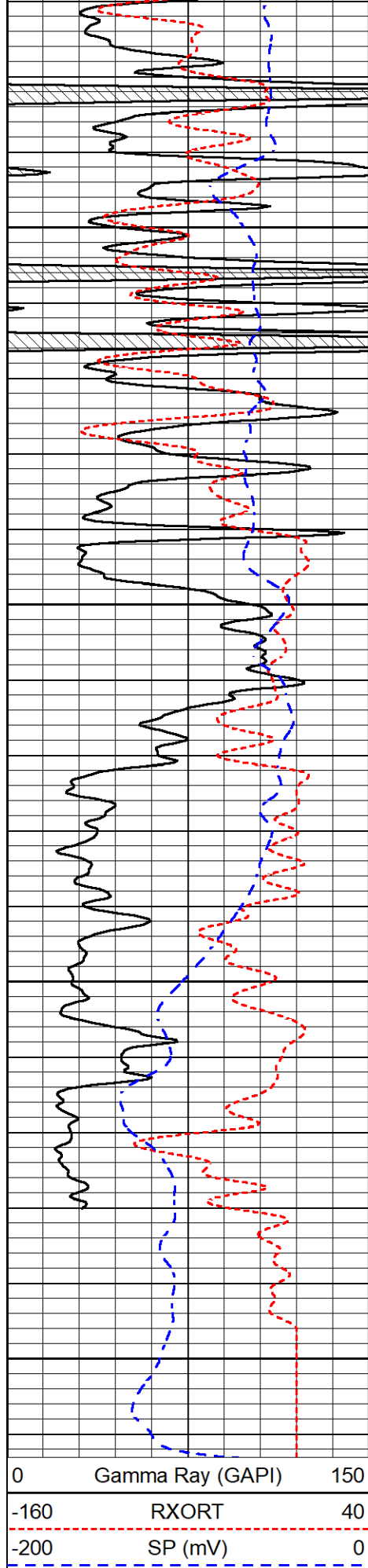
3950

4000

4050

4100



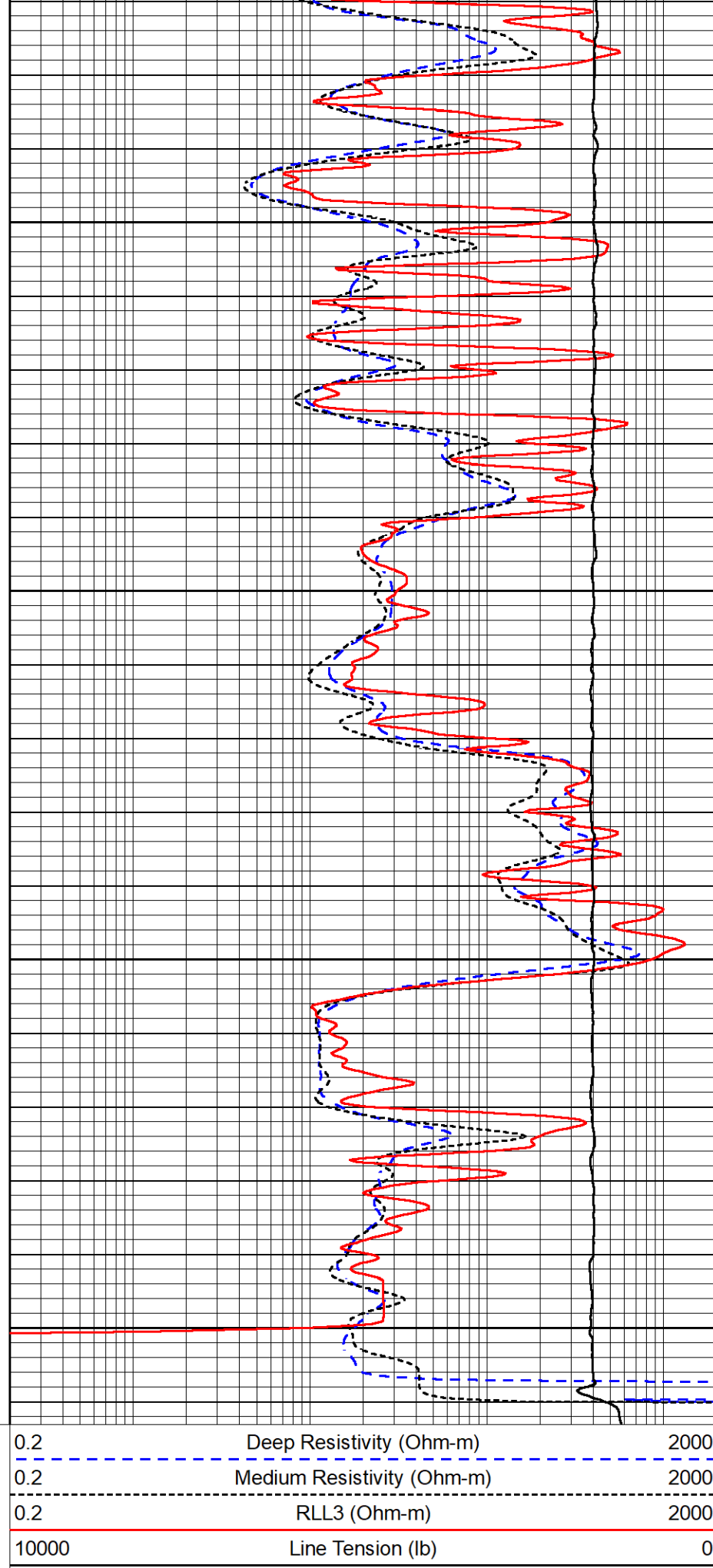


4150

4200

4250

4300





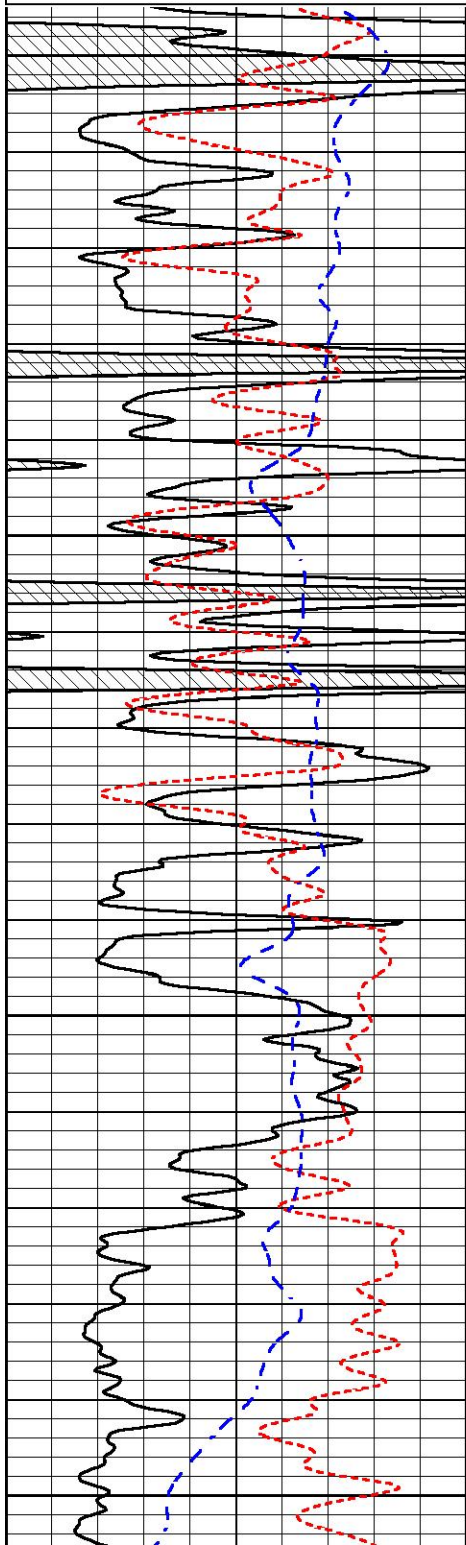
REPEAT SECTION

REPEAT PASS

Database File berexco_herman #1-13.db
Dataset Pathname Stack/pass2.1
Presentation Format _dil
Dataset Creation Sat Aug 03 23:11:17 2024
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

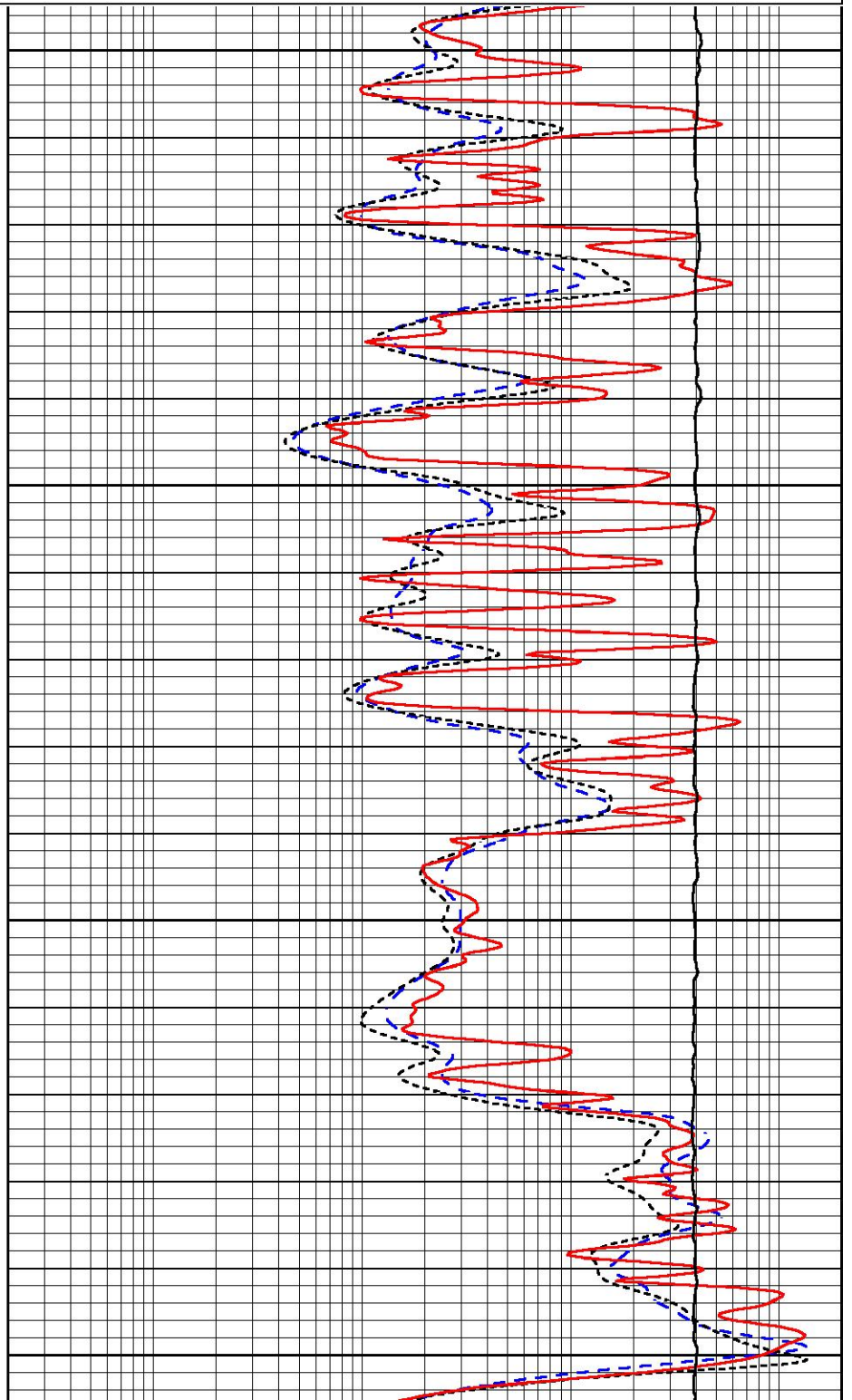


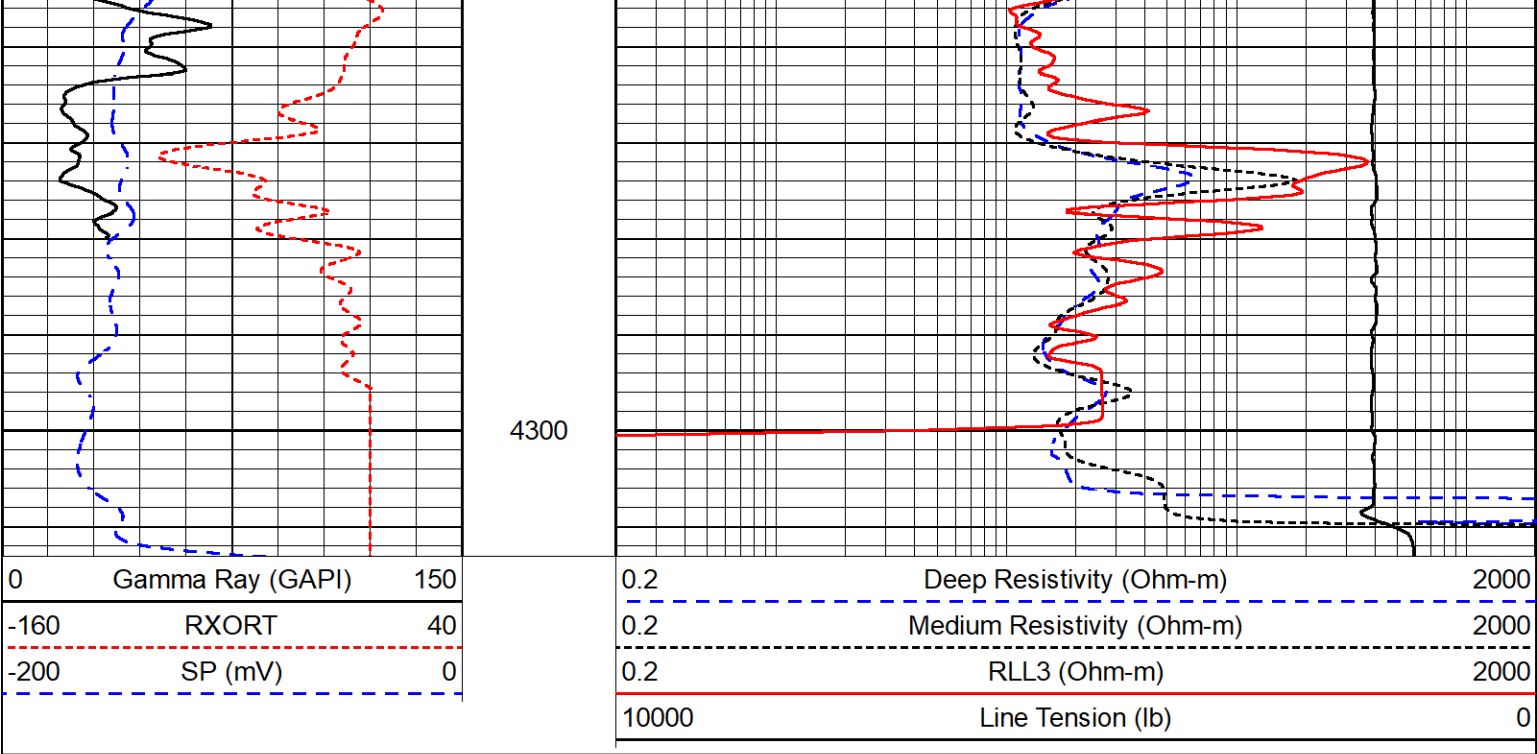
4100

4150

4200

4250





Calibration Report							
Database File	berexco_herman #1-13.db						
Dataset Pathname	Stack/pass3.1						
Dataset Creation	Sat Aug 03 23:56:41 2024						
Dual Induction Calibration Report							
Serial-Model:		507-M&W					
Surface Cal Performed:							
		Readings		References		Results	
Loop:	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	0.450	-79.000

LITHODENSITY Calibration Report									
Serial Number:		704-10							
Tool Model:		STEP LITHO							
Performed:		Wed Oct 11 14:52:04 2023							
Source:									
	Win1	Win2	Win3	Win4	Win5	Win6	Win7	Win8	
Background:									
SS:	52	56	202	260	22	71	45	1	cps
LS:	82	93	356	462	52	144	94	3	cps
Aluminum:									
SS:	868	1009	2312	2012	39	73	47	2	cps
LS:	1063	1847	3324	1556	63	146	95	6	cps
Magnesium:									
SS:	1458	1686	3853	2923	42	73	48	3	cps
LS:	4604	7631	13124	4967	100	134	94	14	cps
Aluminum+Iron:									
SS:	538	708	1910	1720	37	73	47	1	cps

LS:	619	1309	2817	1400	60	147	97	5	cps
		Density			PE				
		Actual	Calibrated		Actual	Calibrated	Quality		
Background:									
SS:							0.225		
LS:							0.208		
Aluminum:									
SS:		2.6000	2.6000	g/cc			0.210		
LS:		2.6000	2.6000	g/cc			0.210		
Magnesium:									
SS:		1.6800	1.6800	g/cc	2.5700	2.5700	0.207		
LS:		1.6800	1.6800	g/cc	2.5700	2.5700	0.173		
Aluminum+Iron:									
SS:						6.1800	0.215		
LS:						6.1800	0.205		

Before Survey									
Performed:		Wed Feb	9 13:15:42	2022					
SS:	0	0	0	0	0	0	0	0	cps
LS:	1370	1580	3705	3037	48	80	50	4	cps
After Survey									
Performed:		Wed Feb	9 13:16:02	2022					
SS:	0	0	0	0	0	0	0	0	cps
LS:	1400	1600	3800	3100	60	100	70	6	cps

Caliper:		Reference:	Reading:						
Small Ring:		6.0 in	0.2						
Large Ring:		16.0 in	0.8						
Gain:		16.161							
Offset:		1.100							

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		

PRE-SURVEY VERIFICATION									
	Detector		Readings		Measured		Target		
1)	Short Space		cps						
	Long Space		cps		pu		pu		
2)	Short Space		cps						
	Long Space		cps		pu				
3)	Short Space		cps						
	Long Space		cps		pu				

POST-SURVEY VERIFICATION									
	Detector		Readings		Measured		Target		
1)	Short Space		cps						
	Long Space		cps		pu		pu		
2)	Short Space		cps						
	Long Space		cps		pu		pu		

3)	Short Space Long Space	cps cps	pu	pu
Gamma Ray Calibration Report				
Serial Number:		105		
Tool Model:		M&W		
Performed:		Mon Aug 7 20:46:01 2023		
Calibrator Value:		500.0	GAPI	
Background Reading:		24.0	cps	
Calibrator Reading:		637.0	cps	
Sensitivity:		0.6000	GAPI/cps	

	Company	Berexco LLC
	Well	Herman #1-13
	Field	
	County	Gove
	State	Kansas