



# DUAL INDUCTION LOG

Company DOWNING - NELSON OIL COMPANY, INC  
 Well KRAMER - SCOTT "B" #1-16  
 Field WILDCAT  
 County RAWLINS  
 State KANSAS

Company DOWNING - NELSON OIL COMPANY, INC.  
 Well KRAMER - SCOTT "B" #1-16  
 Field WILDCAT  
 County RAWLINS State KANSAS

Location: API #: 15-153-21302-0000  
 494' FNL & 144' FEL  
 SEC 16 TWP 5S RGE 36W  
 Permanent Datum GROUND LEVEL Elevation 3322  
 Log Measured From KELLY BUSHING 11' A.G.L.  
 Drilling Measured From KELLY BUSHING  
 Other Services CDL/CNL MEL/SON  
 Elevation K.B. 3333 D.F. 3331 G.L. 3322

Date	1/5/23
Run Number	ONE
Depth Driller	4900
Depth Logger	4900
Bottom Logged Interval	4898
Top Log Interval	00
Casing Driller	8 5/8"@481'
Casing Logger	476
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.5/70
pH / Fluid Loss	10.5/8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	2.40@62F
Rmf @ Meas. Temp	1.80@62F
Rmc @ Meas. Temp	2.88@62F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	1.20@124F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	5:30 P.M.
Maximum Recorded Temperature	124F
Equipment Number	8916
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	MARC DOWNING

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

### Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395  
 DIRECTIONS:  
 BREWSTER, KS., N. TO "BEAVER CREEK RD.", 1E. TO CURVE, N. TO FORK, W. TO OLD FARMSTAED, N. INTO

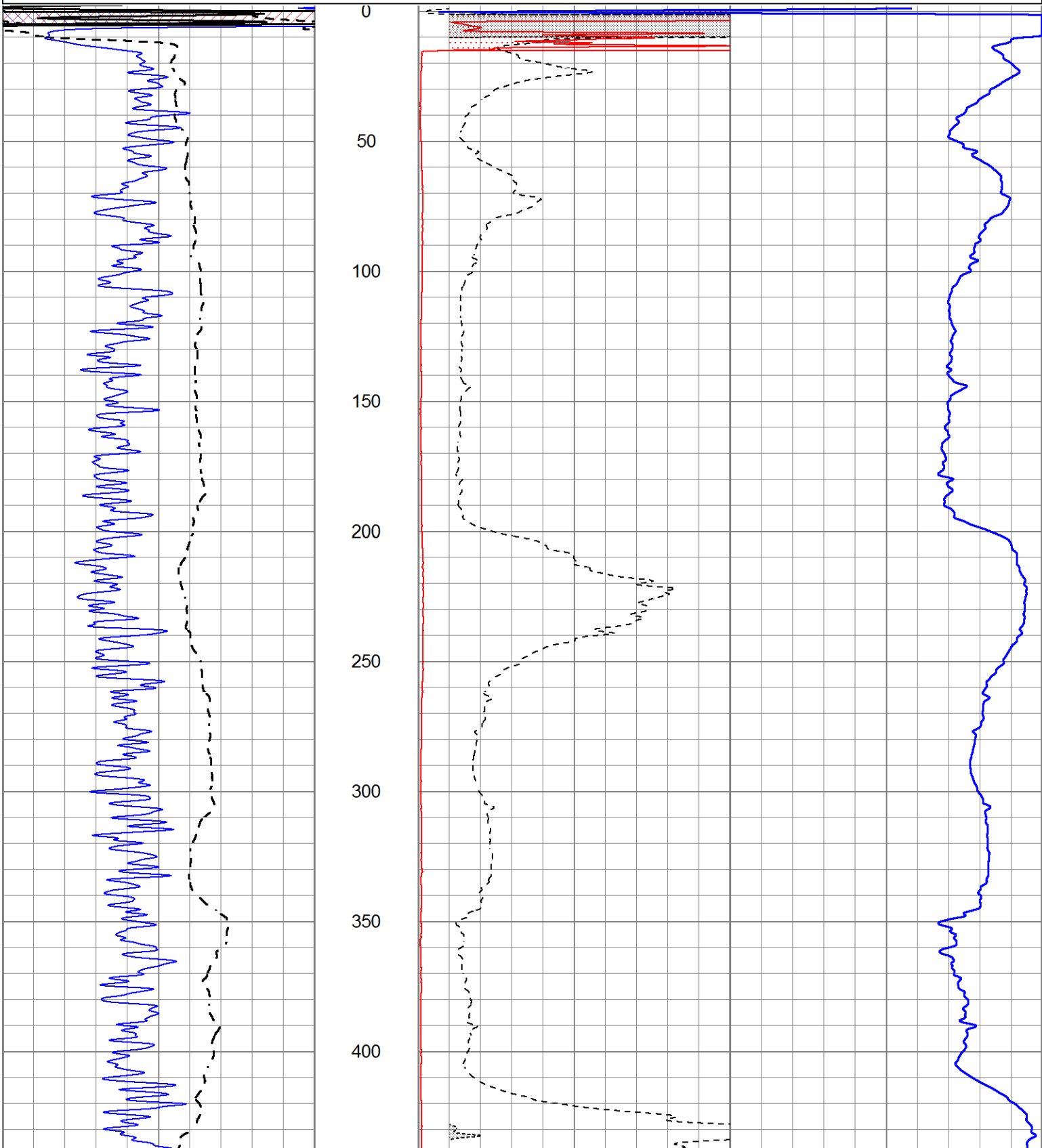


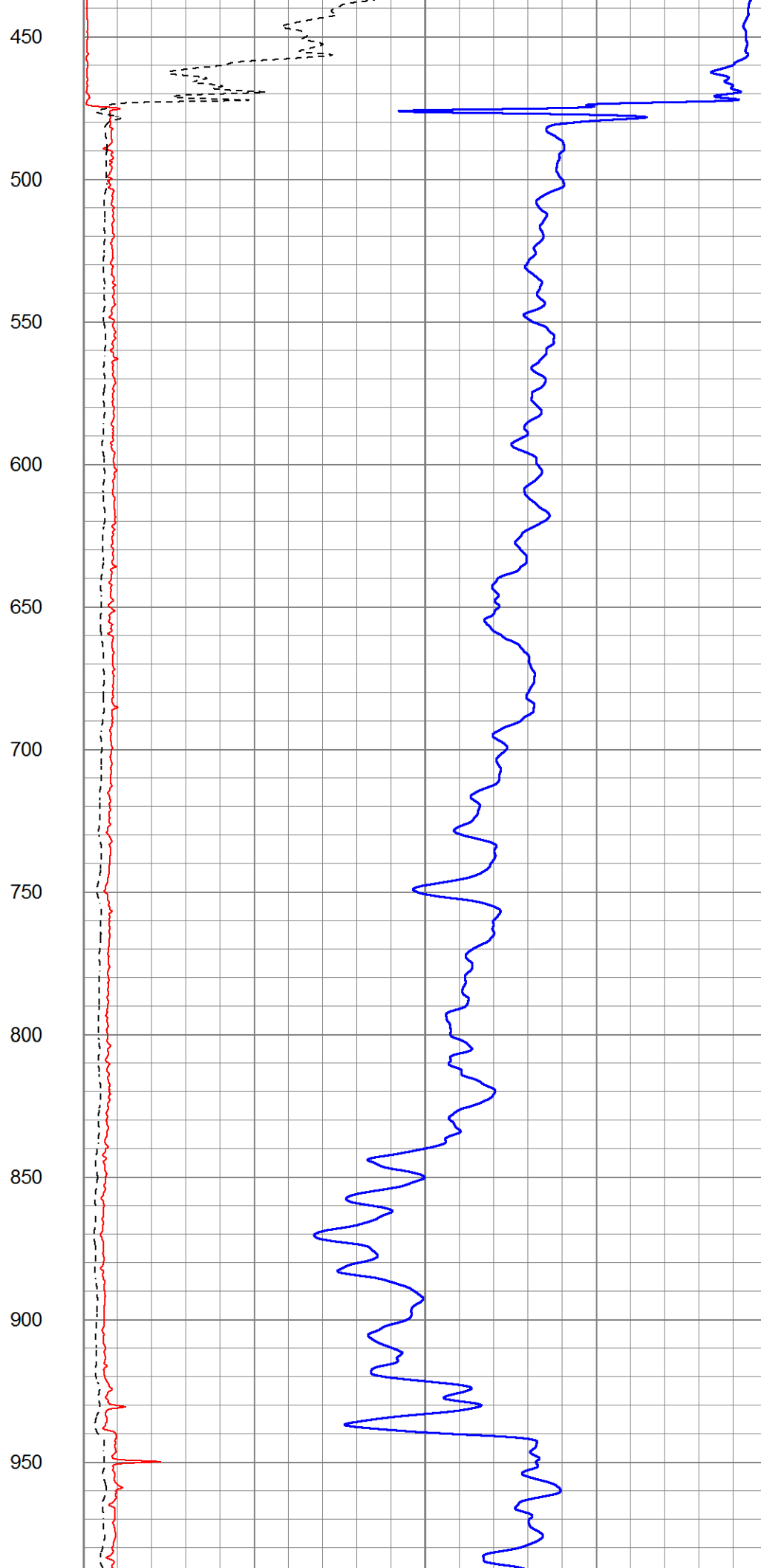
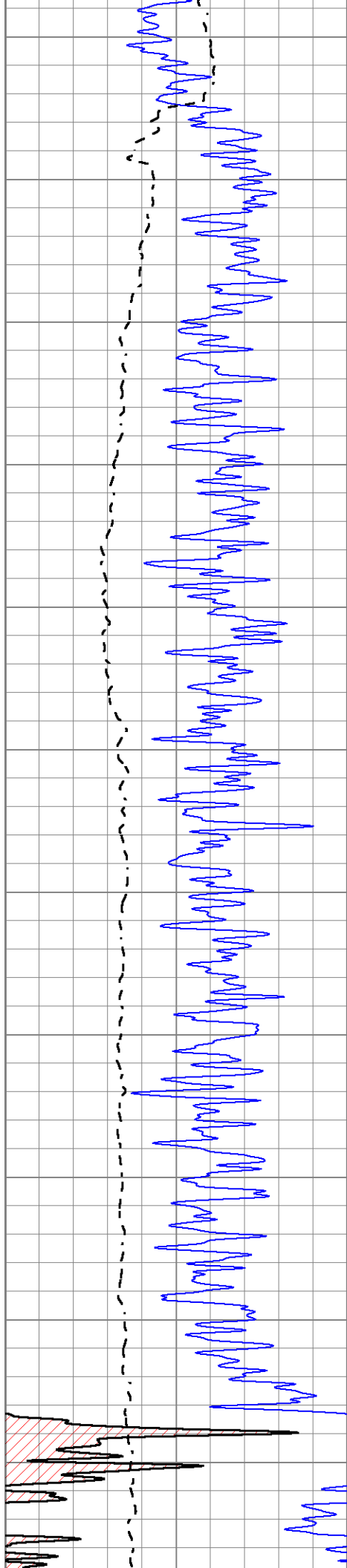
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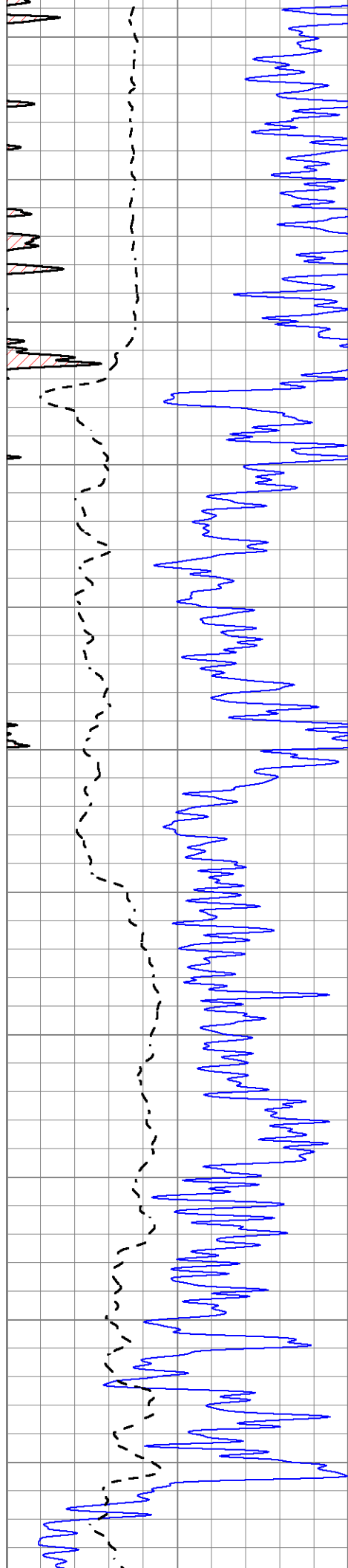
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 Dataset Pathname pass3.1M  
 Presentation Format \_dil2  
 Dataset Creation Thu Jan 05 19:21:34 2023  
 Charted by Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500







1000

1050

1100

1150

1200

1250

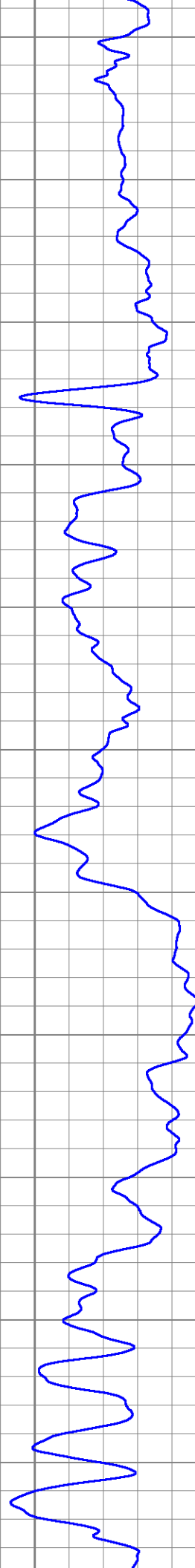
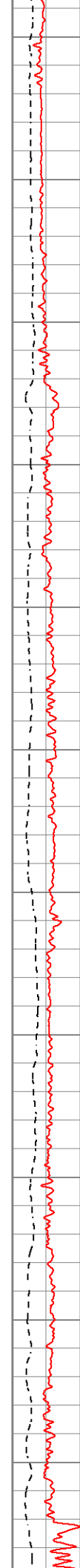
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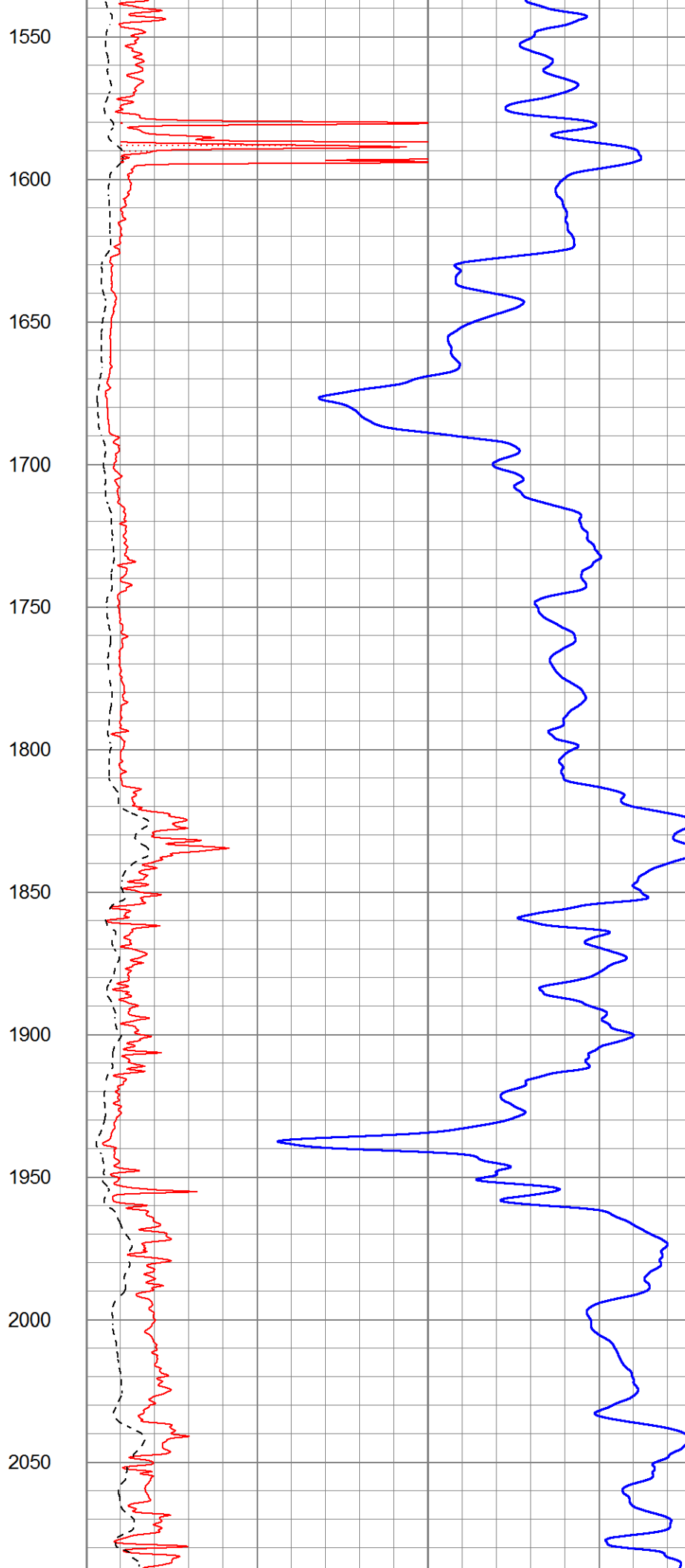
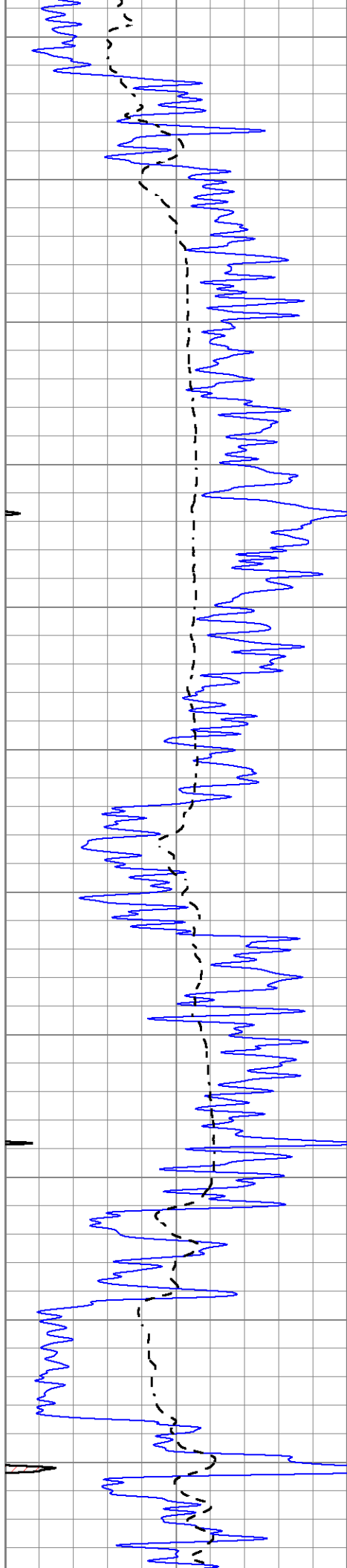
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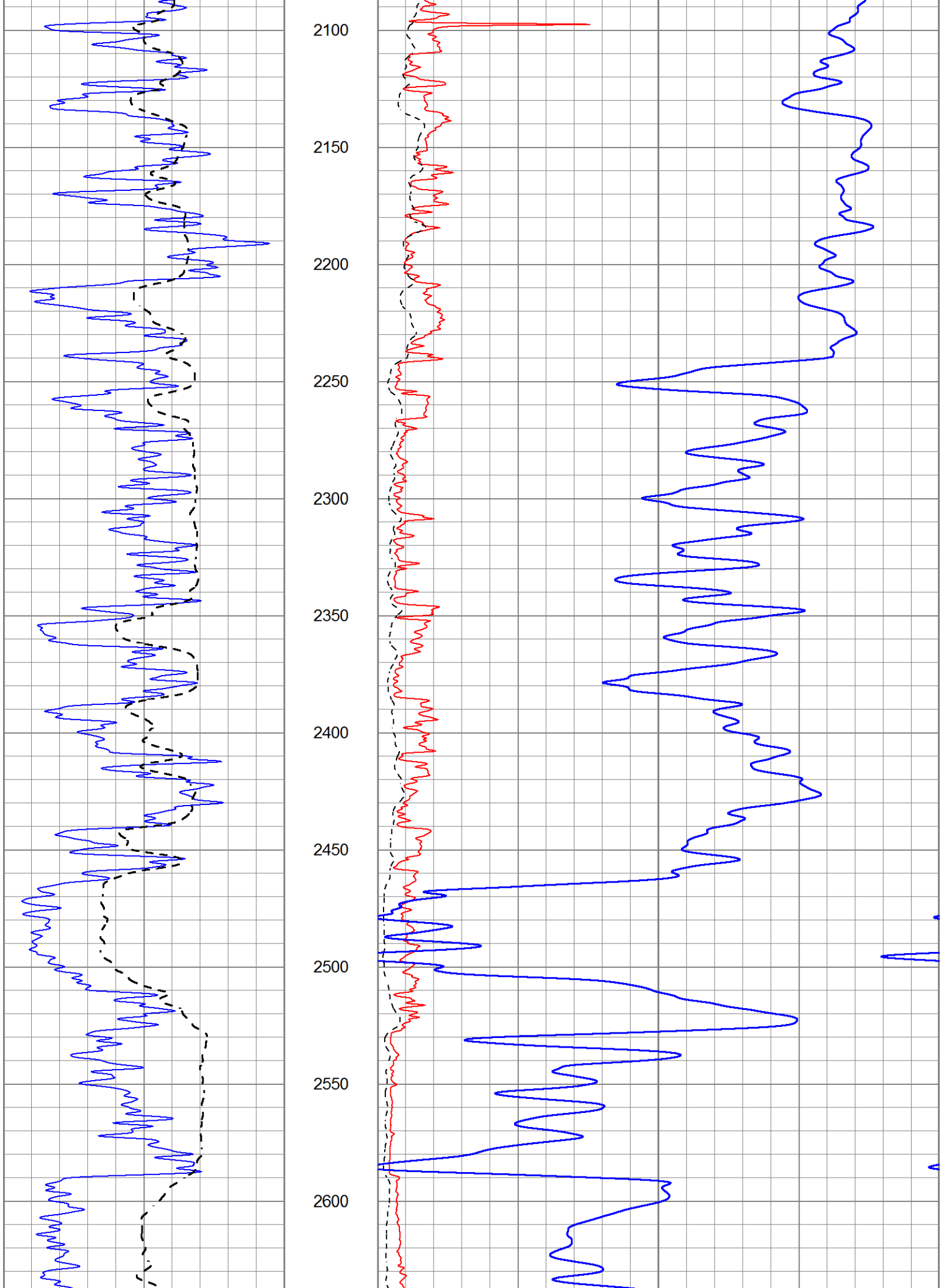
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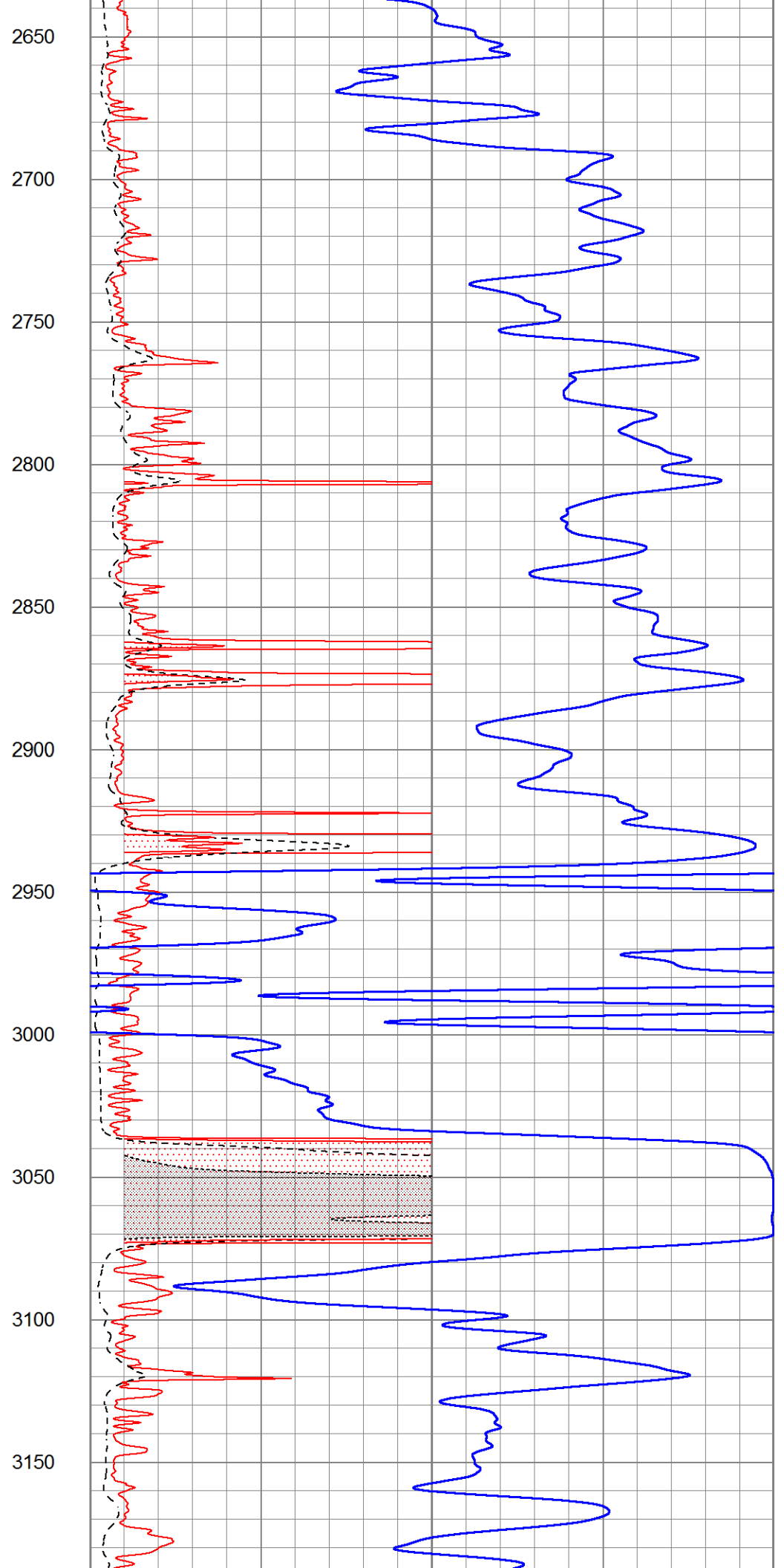
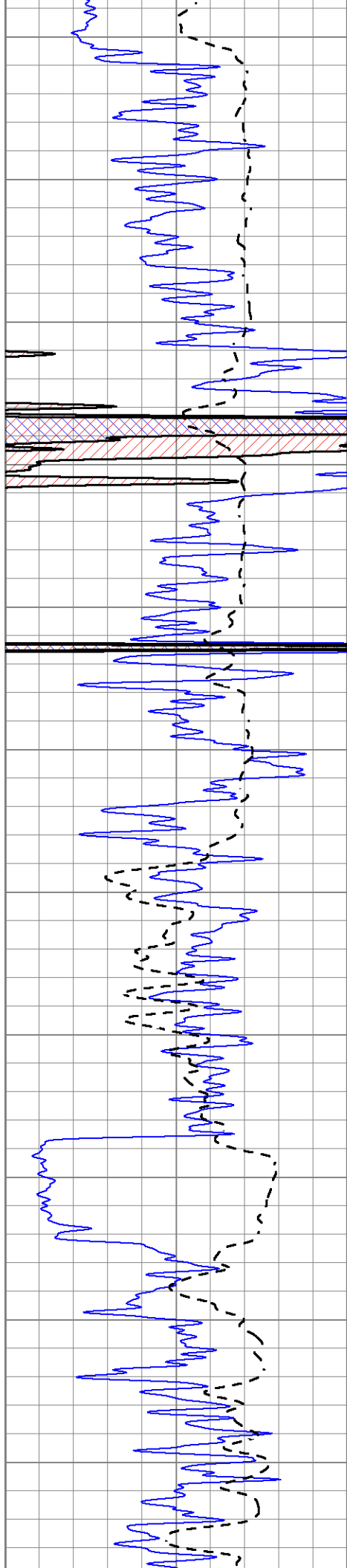
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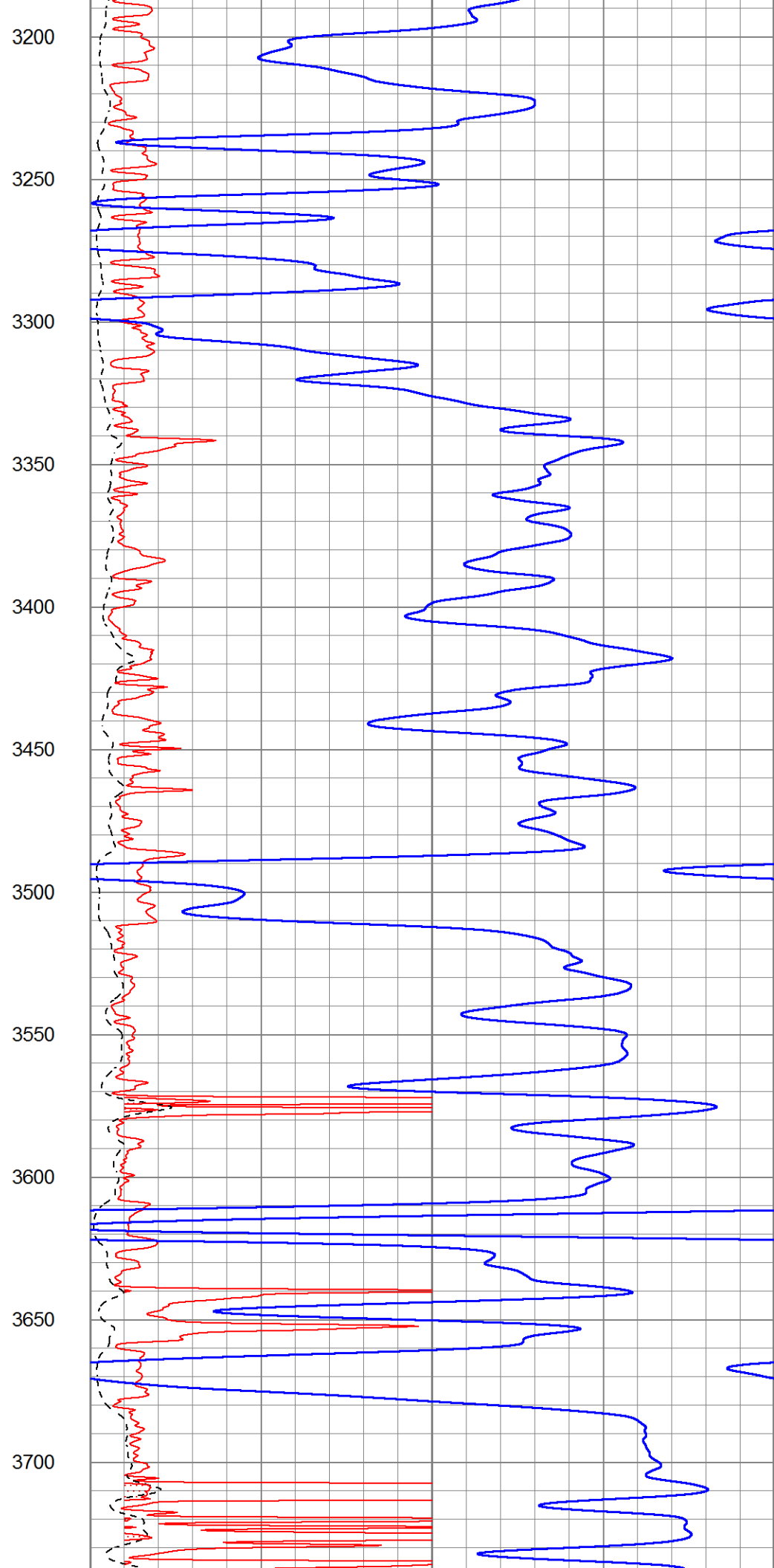
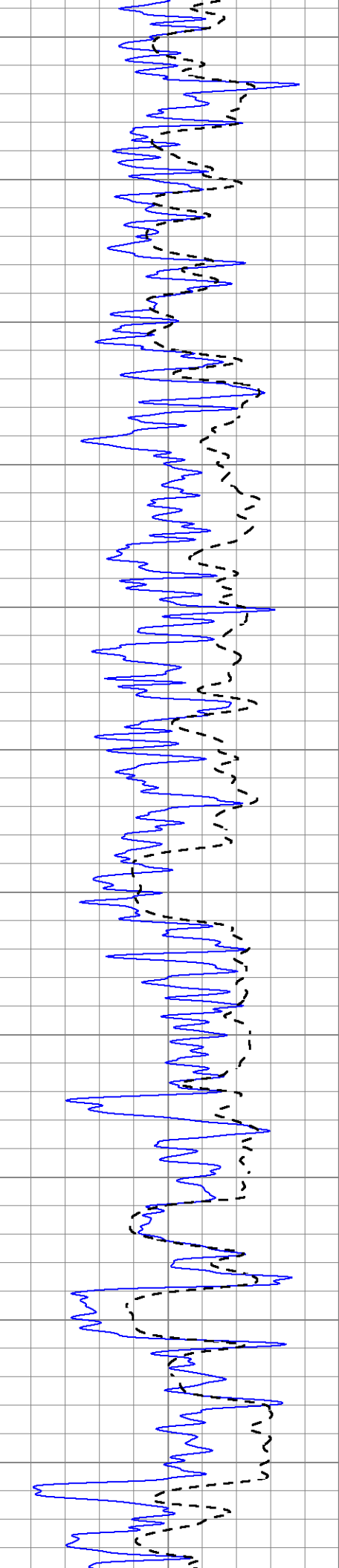
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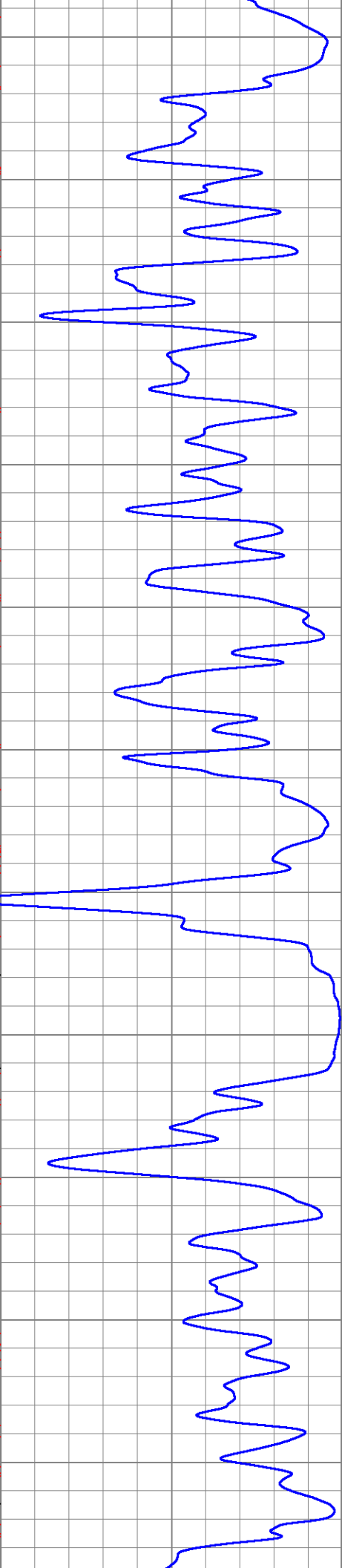
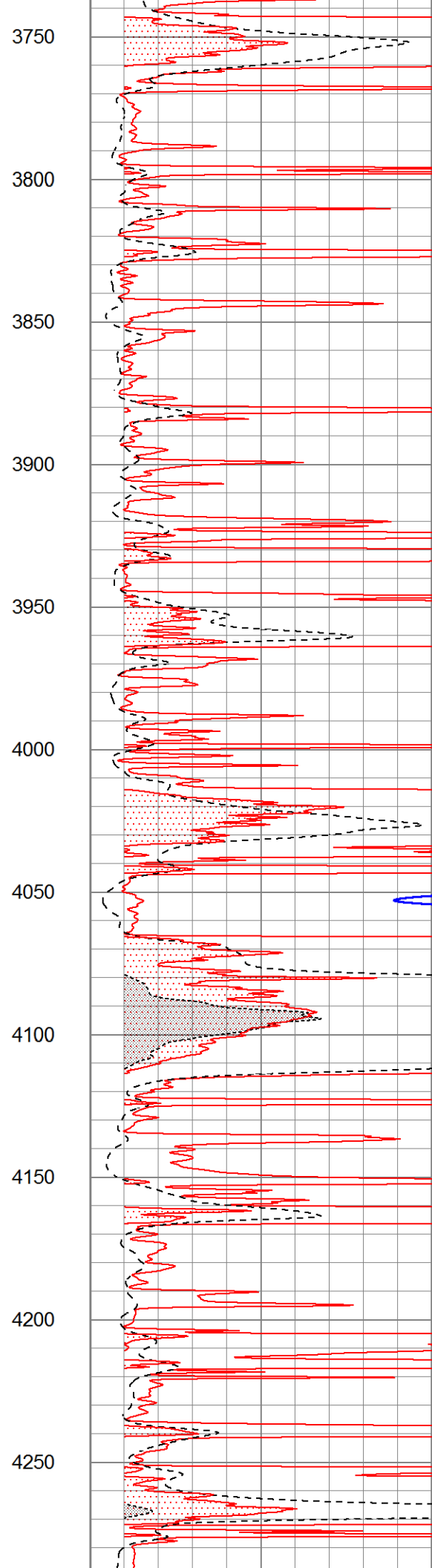
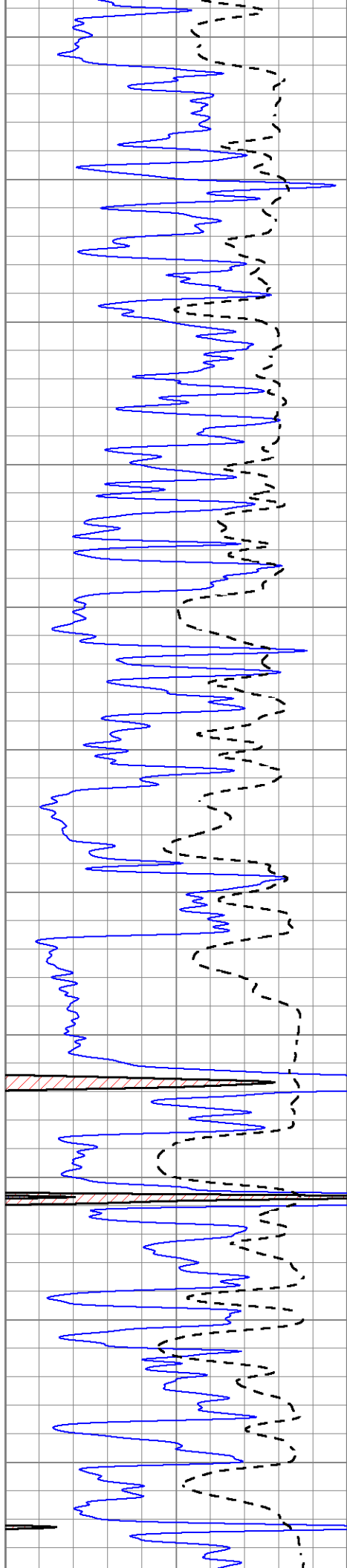


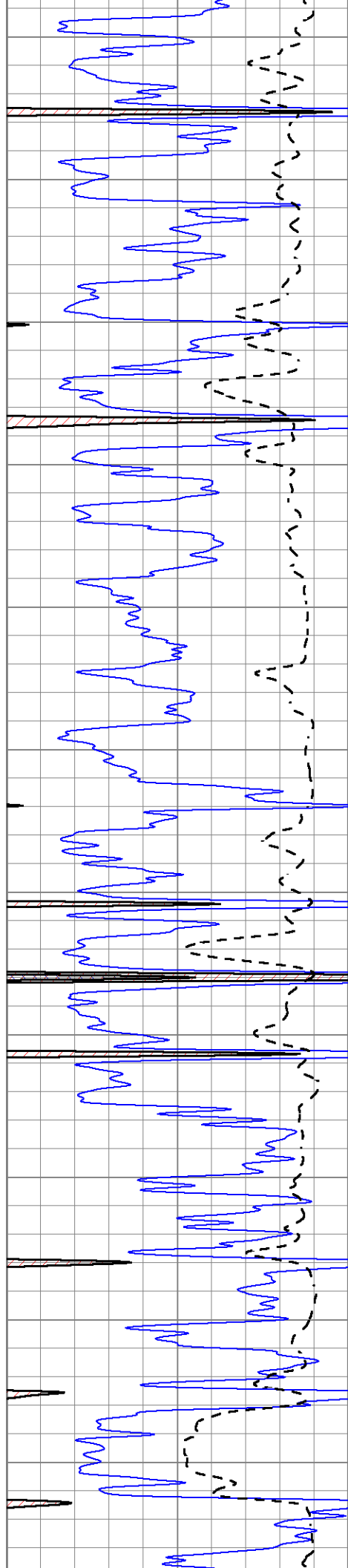












4300

4350

4400

4450

4500

4550

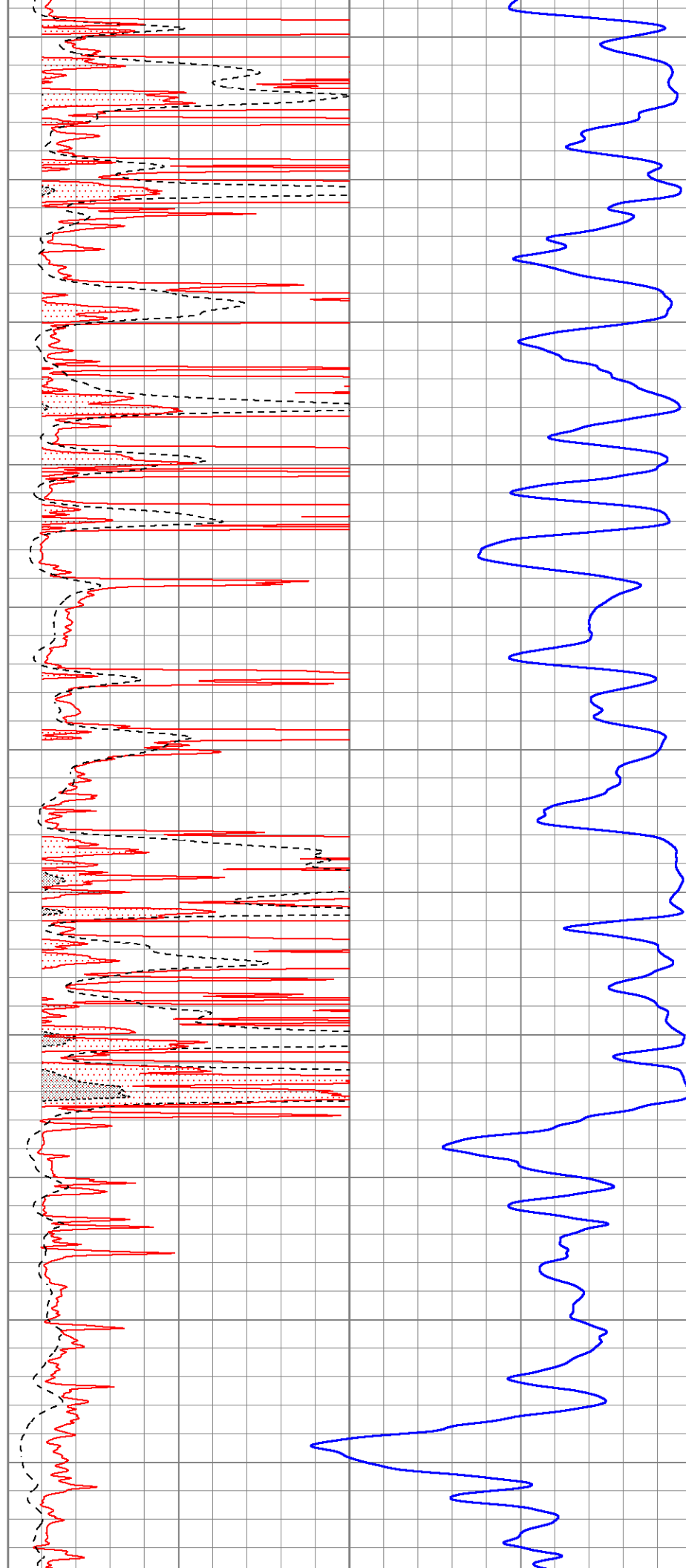
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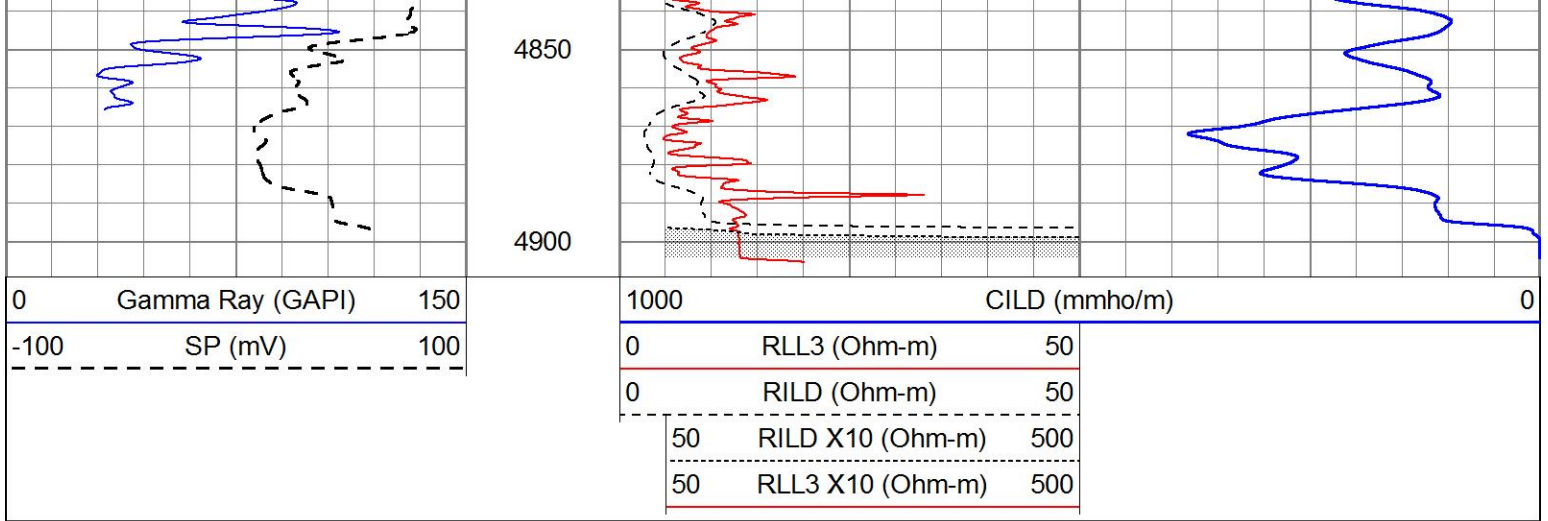
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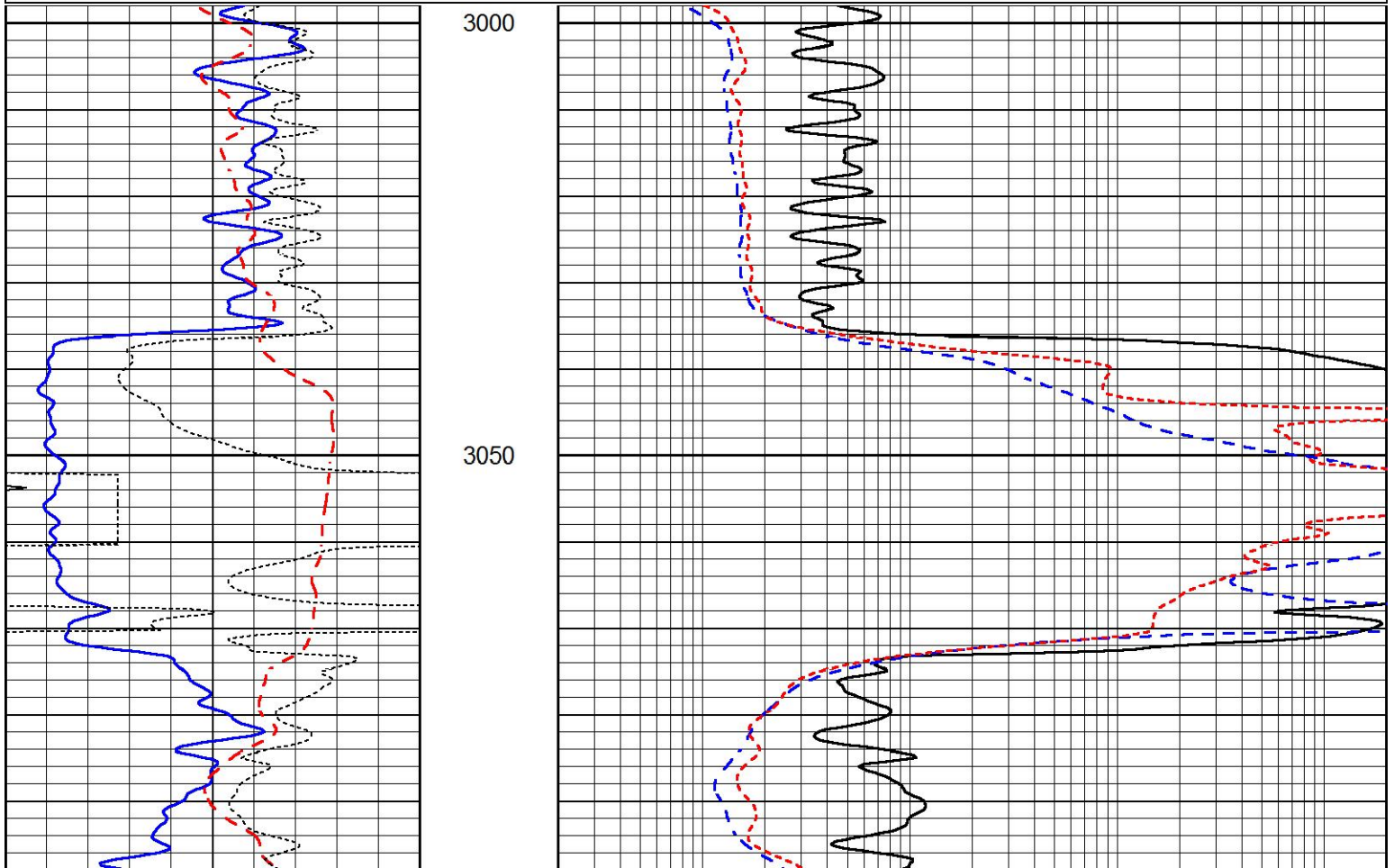
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# ANHYDRITE

Database File 7431ddn.db  
 Dataset Pathname pass3.1A  
 Presentation Format \_dil  
 Dataset Creation Thu Jan 05 19:21:55 2023  
 Charted by Depth in Feet scaled 1:240



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

3100

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

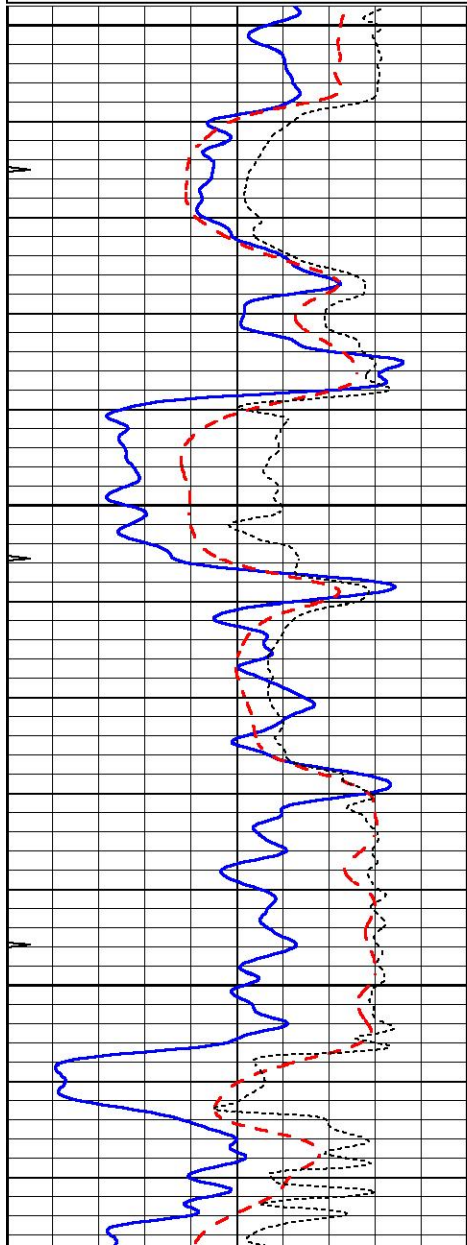


# MAIN SECTION

Database File 7431ddn.db  
 Dataset Pathname pass3.1M  
 Presentation Format \_dil  
 Dataset Creation Thu Jan 05 19:21:34 2023  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

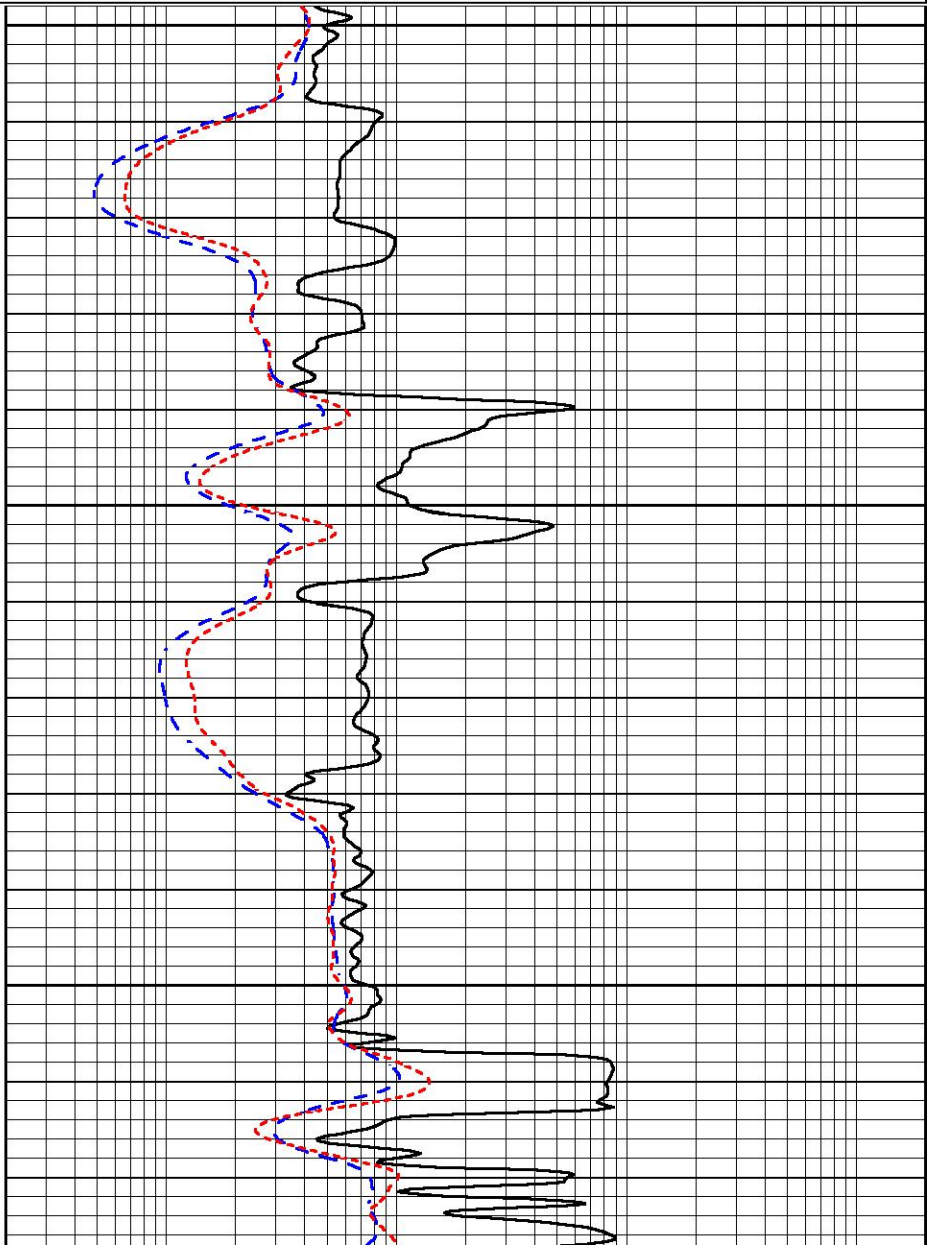
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

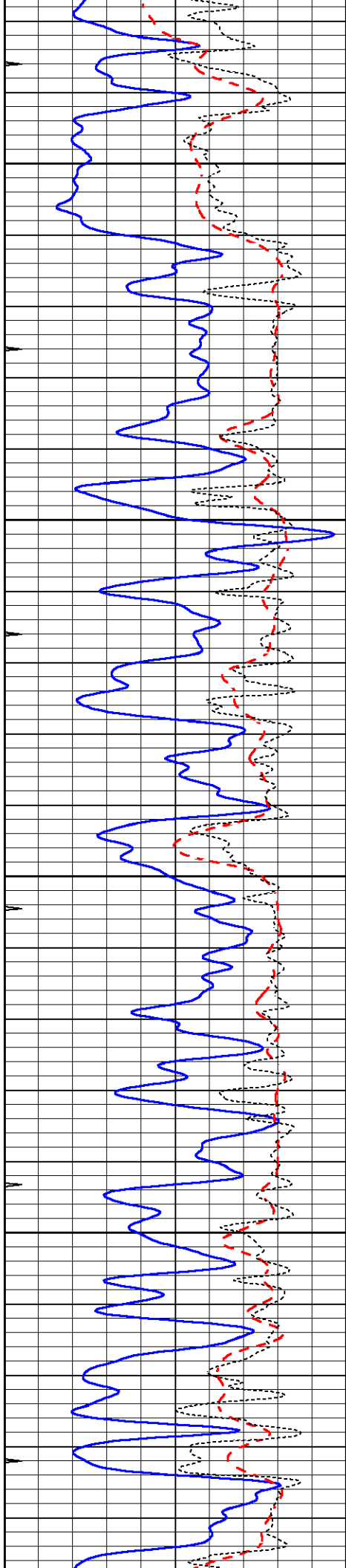


3600

3650

3700



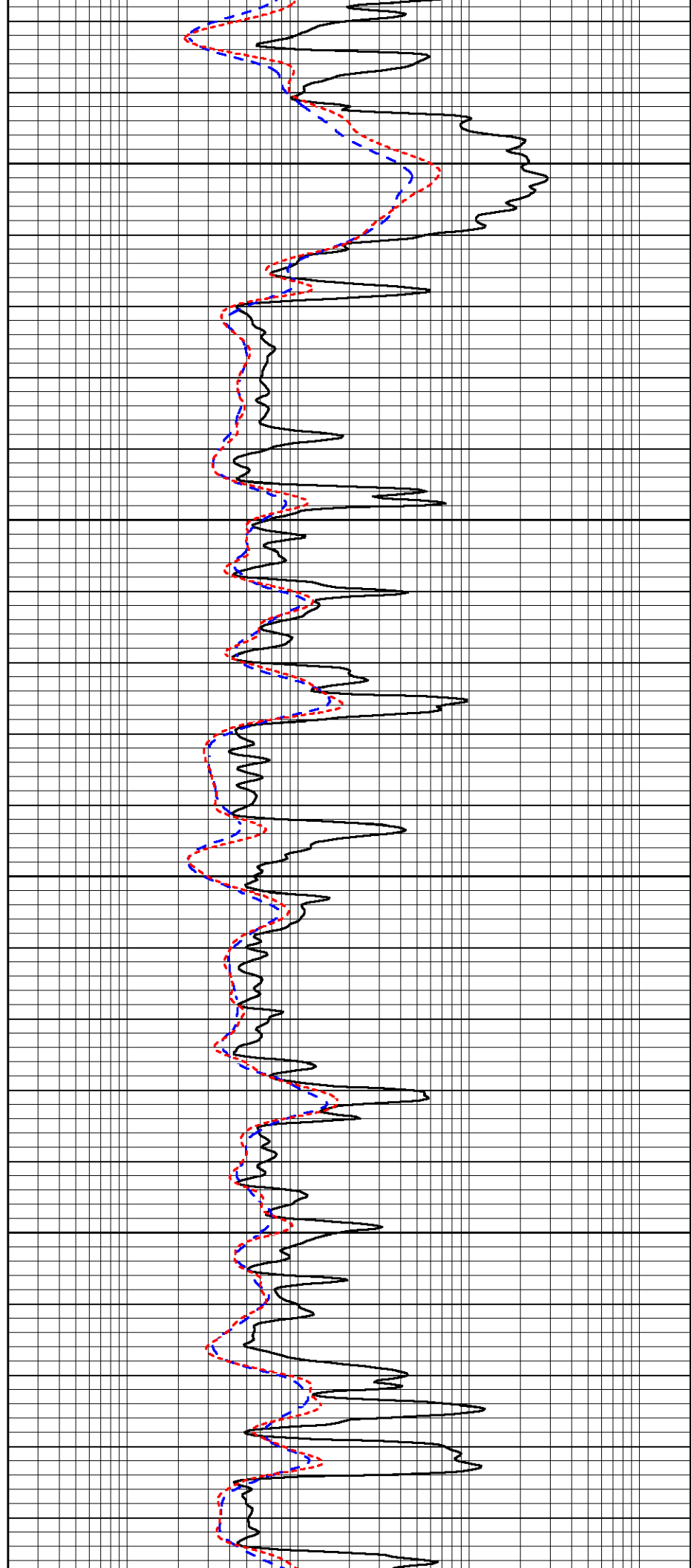


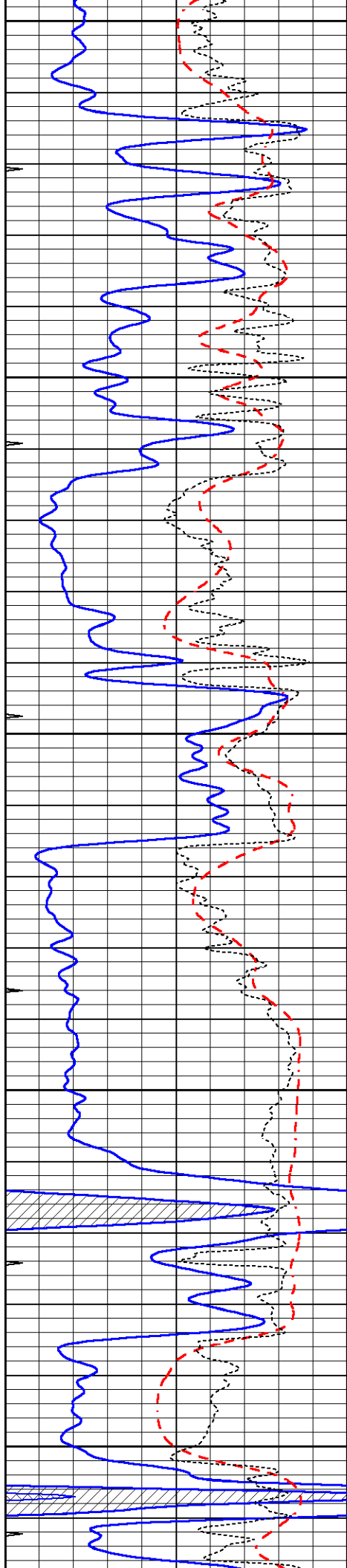
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3800

3850

3900





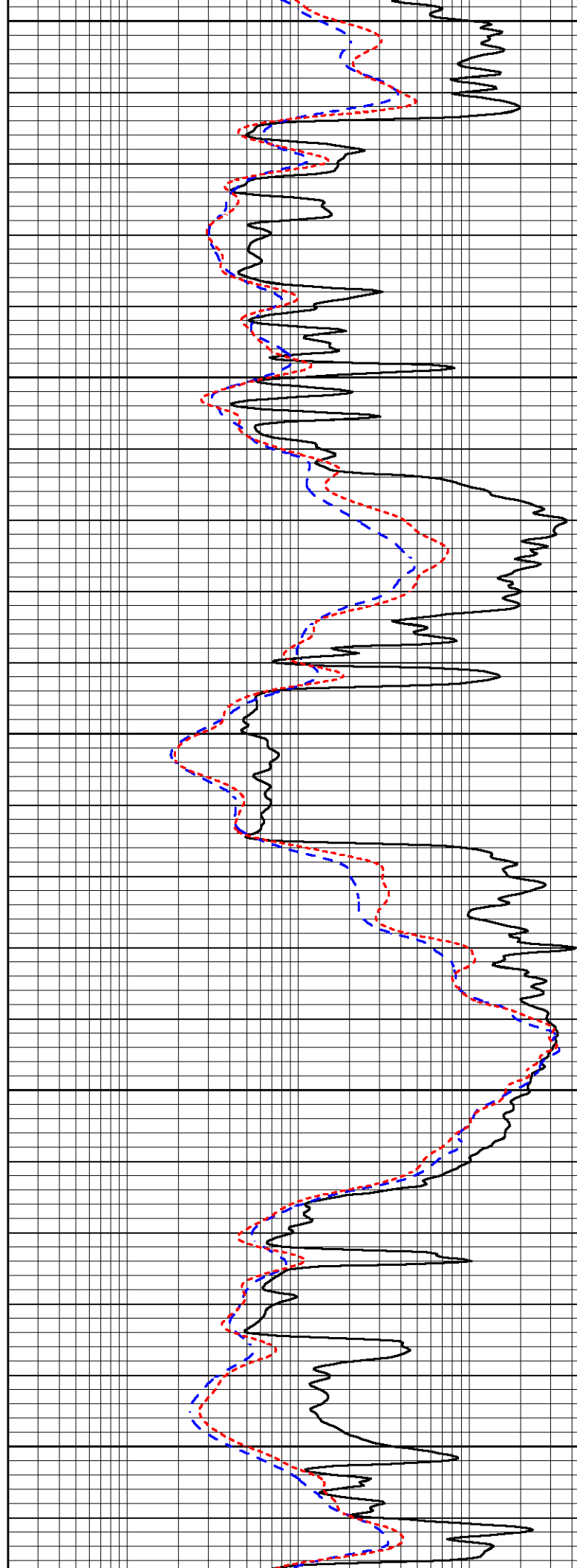
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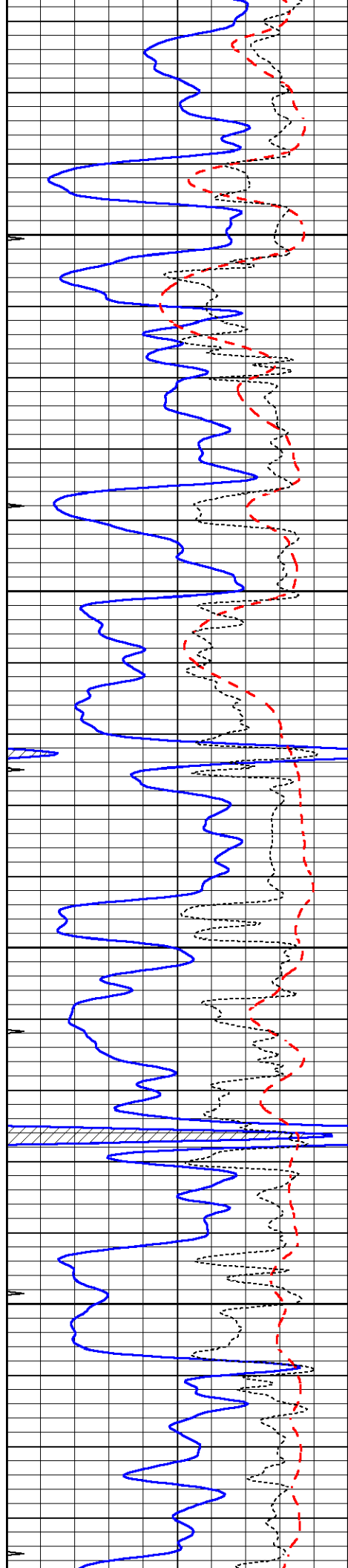
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4050

4100

4150



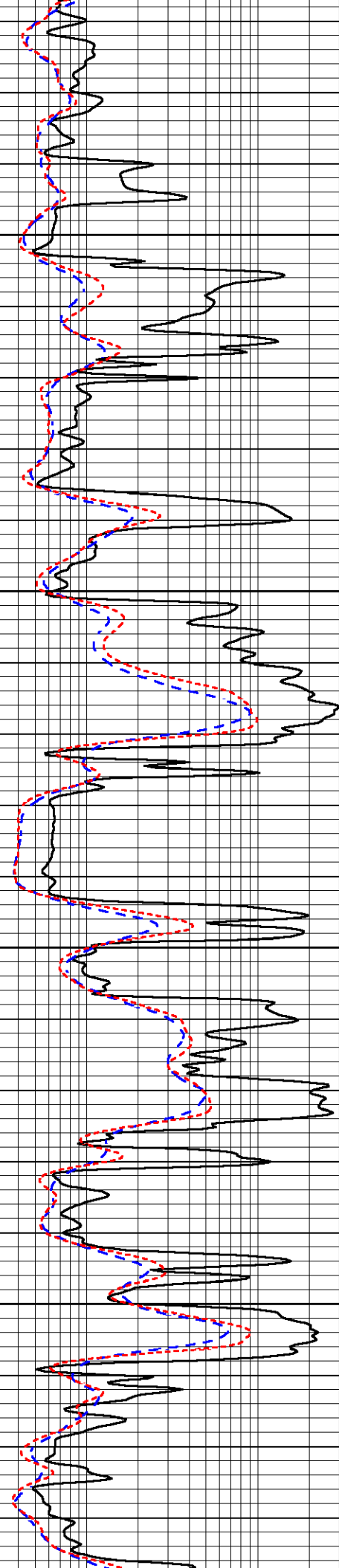


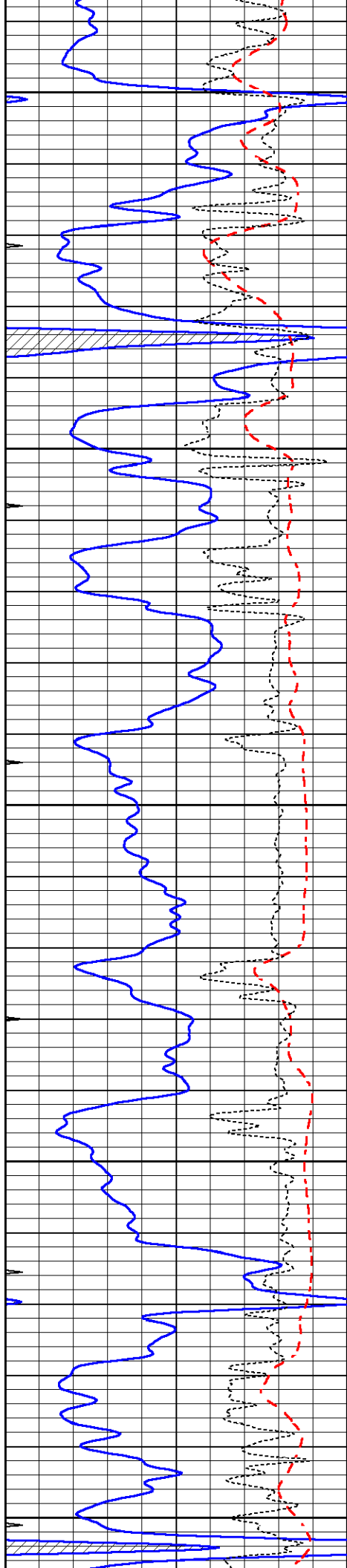
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4250

4300

4350





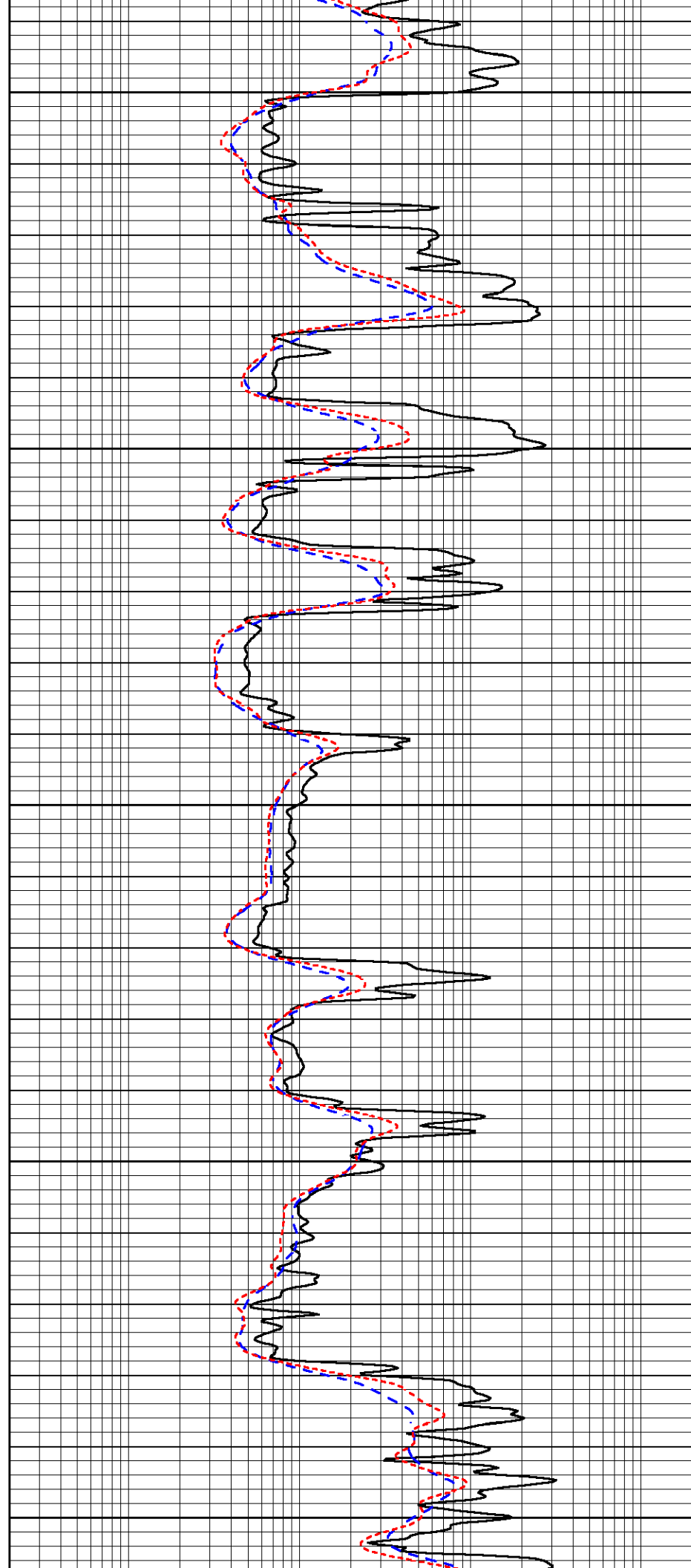
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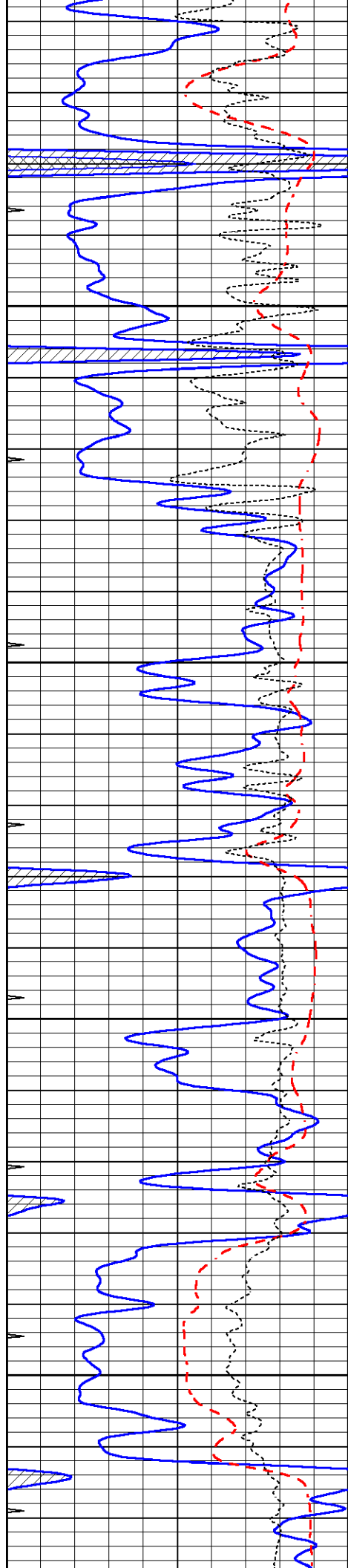
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4600



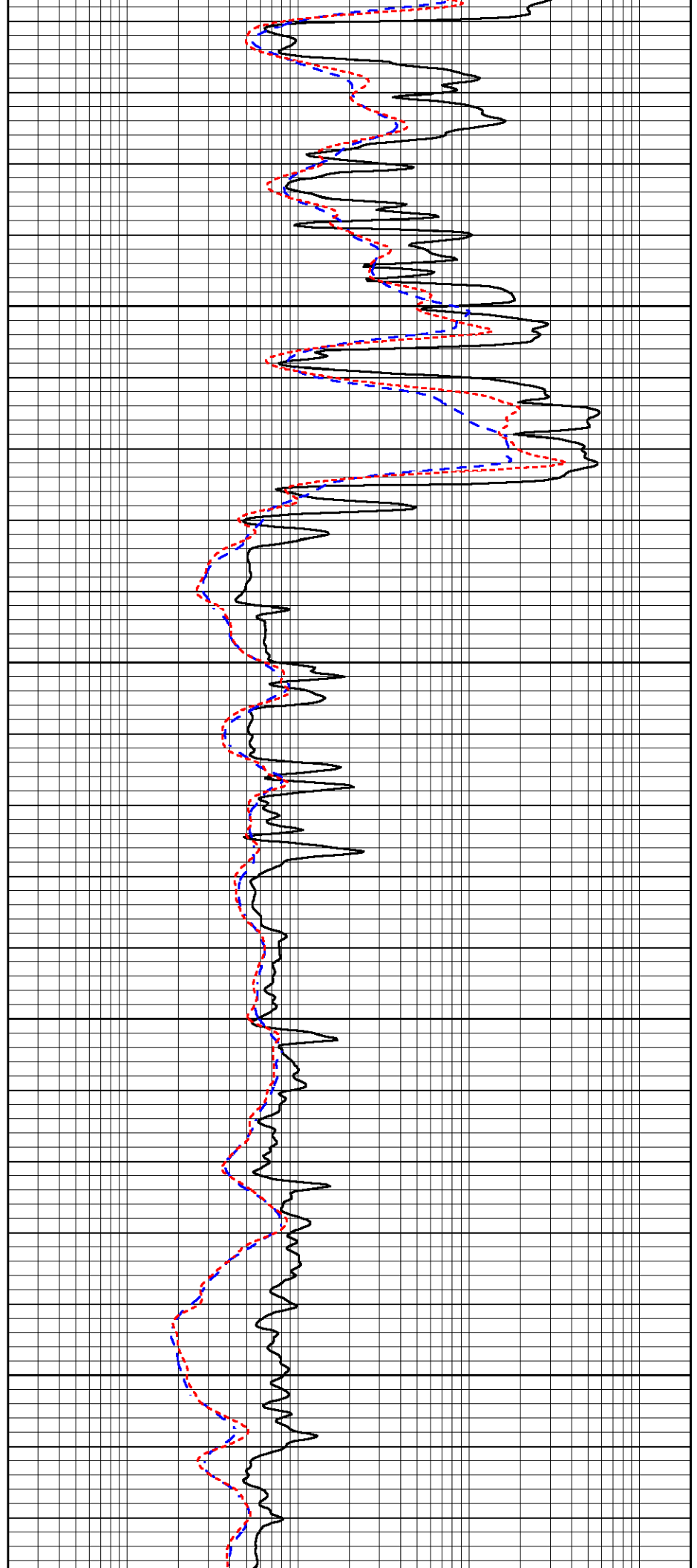


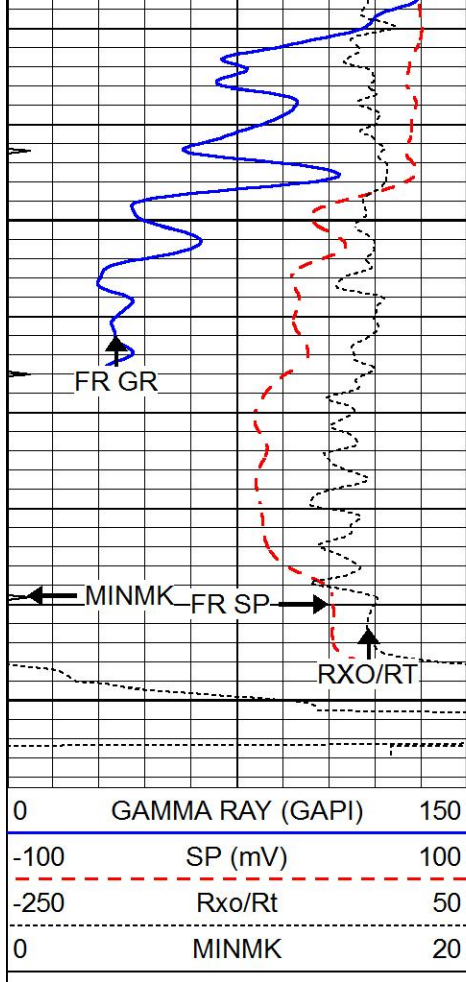
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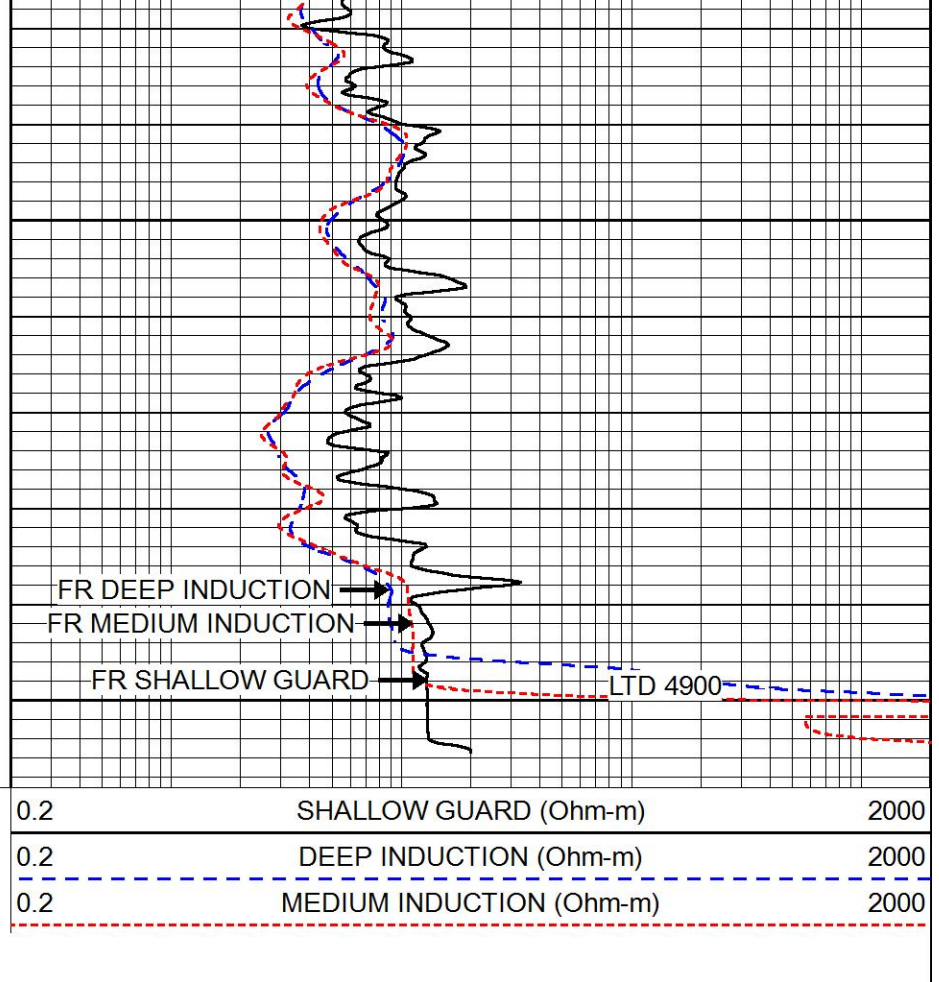
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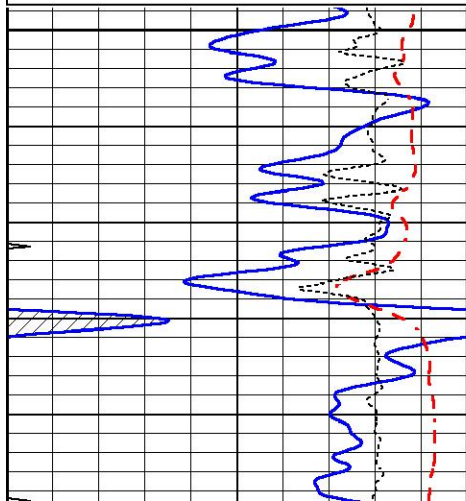
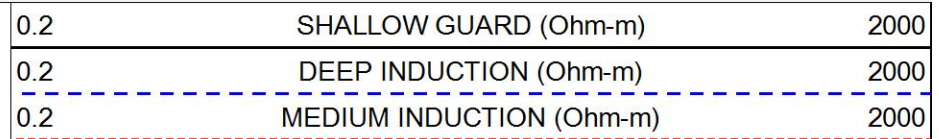
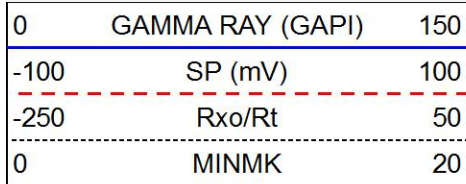
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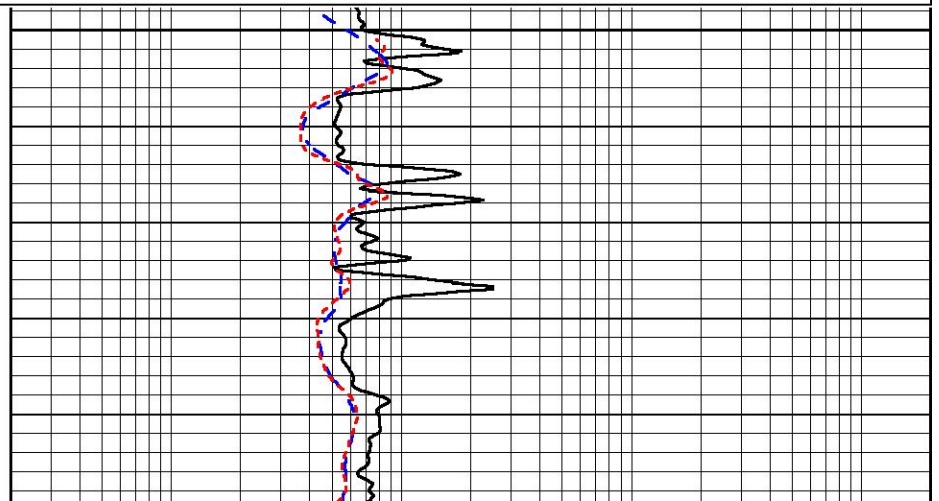


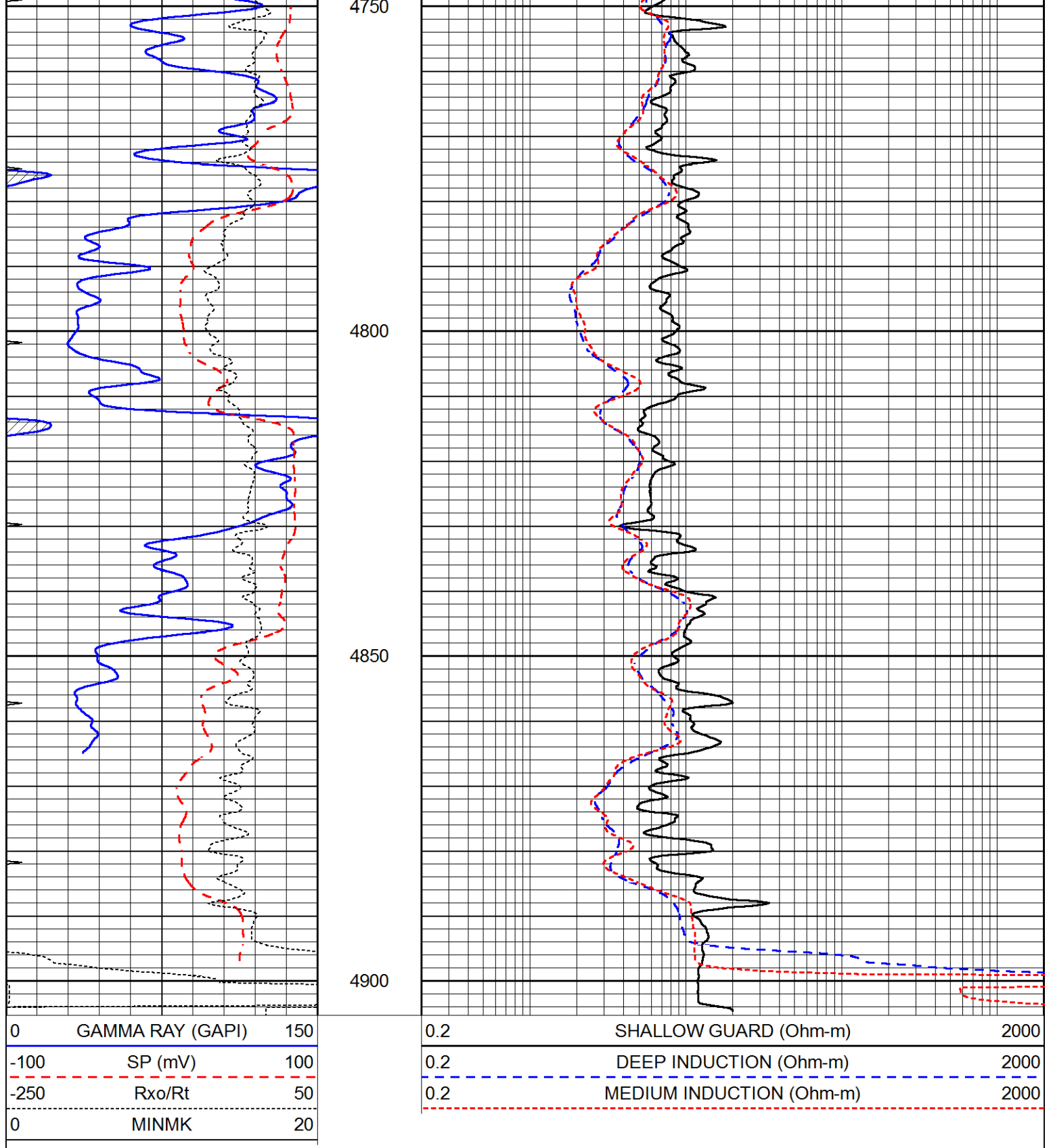
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 Dataset Pathname pass2.1R  
 Presentation Format \_dil  
 Dataset Creation Thu Jan 05 19:34:01 2023  
 Charted by Depth in Feet scaled 1:240



4700





Calibration Report

Database File 7431ddn.db  
 Dataset Pathname pass3.1M  
 Dataset Creation Thu Jan 05 19:21:34 2023

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Thu Jan 05 18:16:36 2023
Downhole Cal Performed:	Mon Sep 10 14:28:38 2018
After Survey Verification Performed:	Mon Sep 10 14:28:40 2018

Surface Calibration								
Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	2.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	620.000	-7.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report  
Serial: 004      Model: PRB

Master Calibration					Performed Fri Nov 04 15:19:59 2022			
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	1153.2	7232.1	2536.8	2279.5				cps
Window 2	1055.6	6225.5	2222.3	2030.5				cps
Window 3	902.5	3849.3	1546.4	1462.0				cps
Window 4	254.4	258.2	253.1	253.9				cps
Long Space	0.0	5169.9	1166.7	974.9				cps
Short Space	4.7	1383.0	950.5	792.1				cps
Rho		1.7100	2.5900	0.0000				g/cc
Pe		2.0000	2.7500	5.7900				
Rib Angle	: 45.9	Rib Slope	: 1.031	Density/Spine Ratio				: 0.573
Spine Angle	: 75.9	Spine Slope	: 3.970	Spine Intercept				: -20.2

Before Survey Verification					Performed Wed Dec 31 18:00:00 1969			
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps
Measured Rho		0.0000	0.0000	0.0000				g/cc
Measured Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 6I  
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

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	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: GR6  
Tool Model: OPEN  
Performed: Tue Nov 08 13:43:57 2022

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 276.0 cps

Sensitivity: 0.8500 GAPI/cps

