



DUAL INDUCTION LOG

Company	L. D. DRILLING, INC.	Company	L. D. DRILLING, INC.
Well	#1-2 CARTER	Well	#1-2 CARTER
Field	BROUGHTON NORTH	Field	BROUGHTON NORTH
County	LANE	County	LANE
State	KANSAS	State	KANSAS
Location:	API # : 15-101-22690-0000	Other Services CDL/CNL MEL/SONIC	
Permanent Datum	540' FNL & 1833' FWL	Elevation	
Log Measured From	SEC 2 TWP 16S RGE 27W	K.B. 2450	
Drilling Measured From	GROUND LEVEL	D.F. 2448	
	KELLY BUSHING 5' A.G.L	G.L. 2445	
Date	1/3/24		
Run Number	ONE		
Depth Driller	4424		
Depth Logger	4426		
Bottom Logged Interval	4424		
Top Log Interval	00		
Casing Driller	8.625@304		
Casing Logger	304		
Bit Size	7.785		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,900 PPM	
Density / Viscosity	9.4/57		
pH / Fluid Loss	10.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.800@80F		
Rmf @ Meas. Temp	.600@80F		
Rmc @ Meas. Temp	.960@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.533@120F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	2:30 P.M.		
Maximum Recorded Temperature	120F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS	JEREMEY PASEK	
Witnessed By	KIM SHOEMAKER		

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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.

15-101-22690-0000

Comments

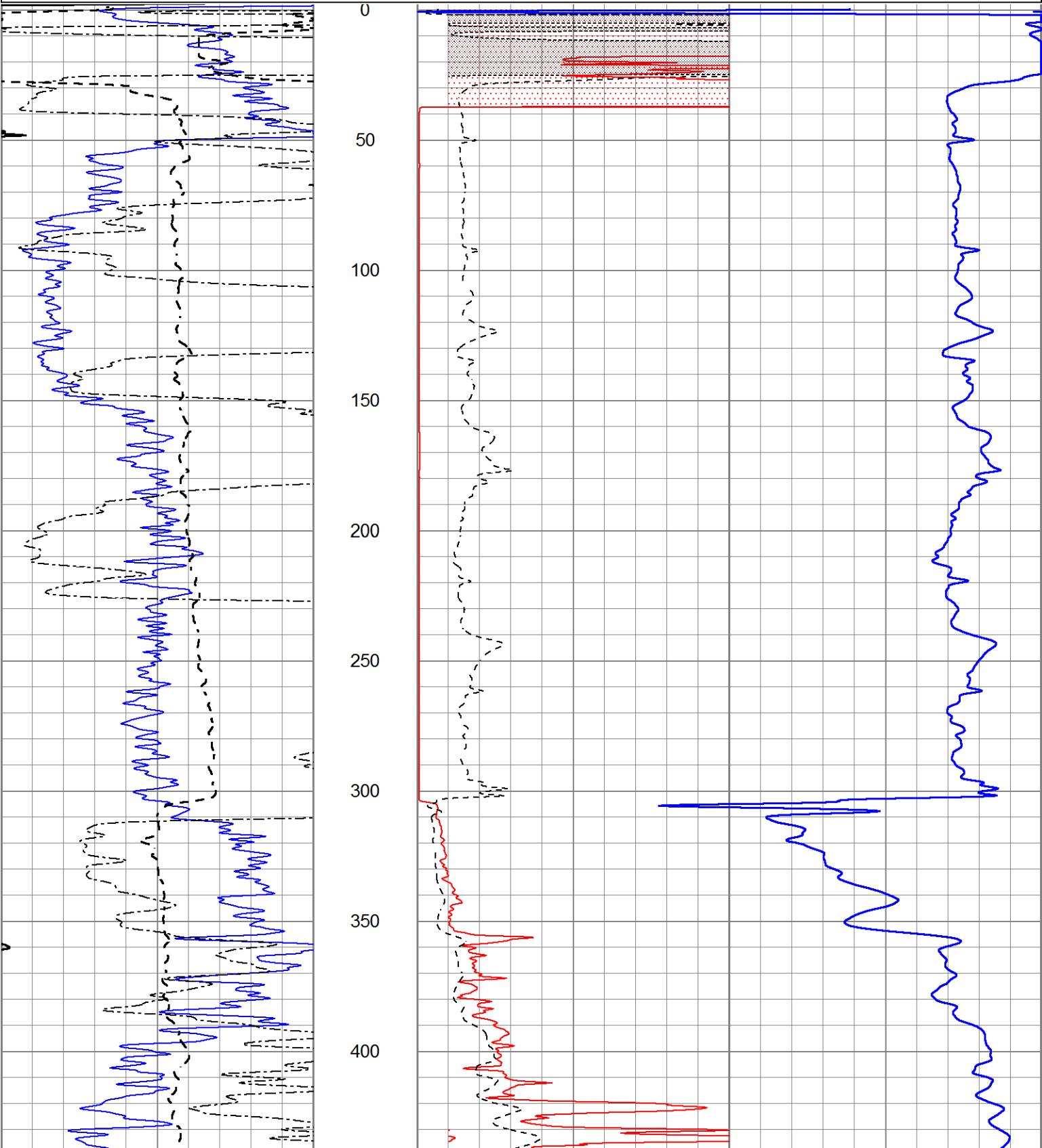
THANK YOU FOR USING ELI WIRELINE HAYS. KANSAS (785) 628-6395
DIRECTIONS
UTICA, KS., 3W. ON HWY 4 TO "RD. A" (CASTLE ROCK RD.) 4N. TO VESS TANK BATTERY, W. ON
LEASE RD. TO CATTLE GUARD, S. TO CURVE W. THEN BACK N. & W. PAST TANK BATTERY 3 1/2
MILES TOTAL



MAIN SECTION

Database File	8403ddn.db
Dataset Pathname	pass3.1M
Presentation Format	_dil2
Dataset Creation	Wed Jan 03 16:21:56 2024
Charted by	Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	1000	CILD (mmho/m)	0
-100	SP (mV)	100	0	RLL3 (Ohm-m)	50
0	RWA (Ohm-m)	1	0	RILD (Ohm-m)	50
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500



450

500

550

600

650

700

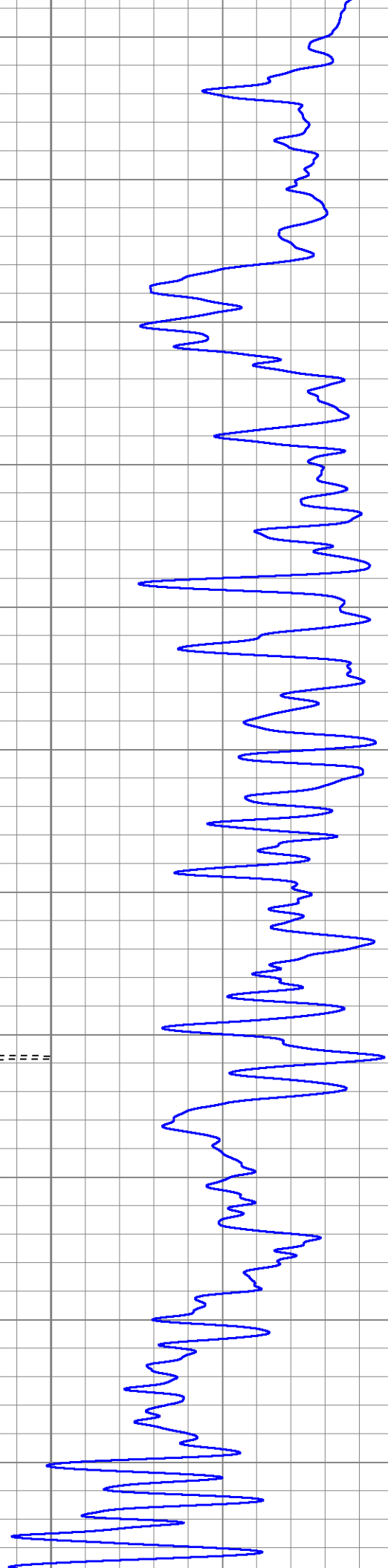
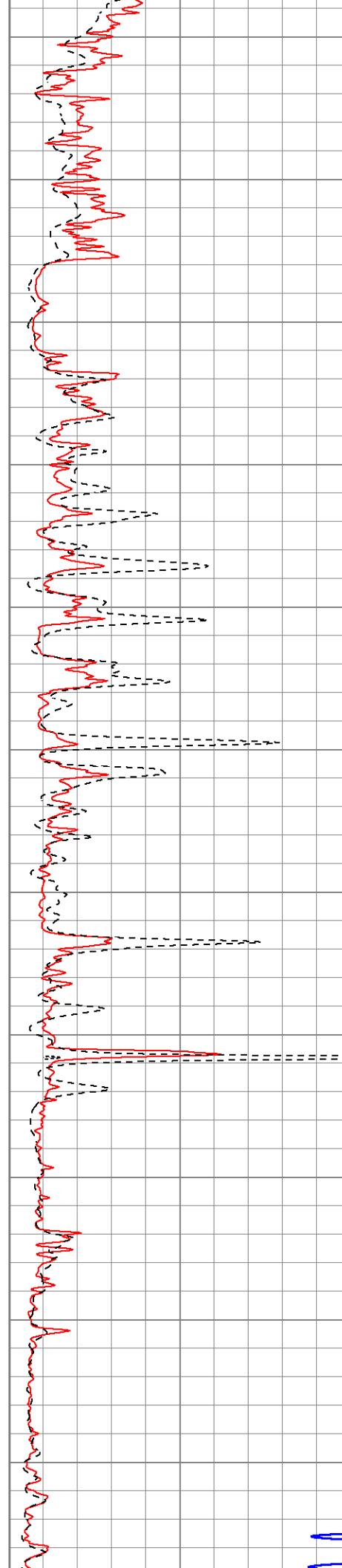
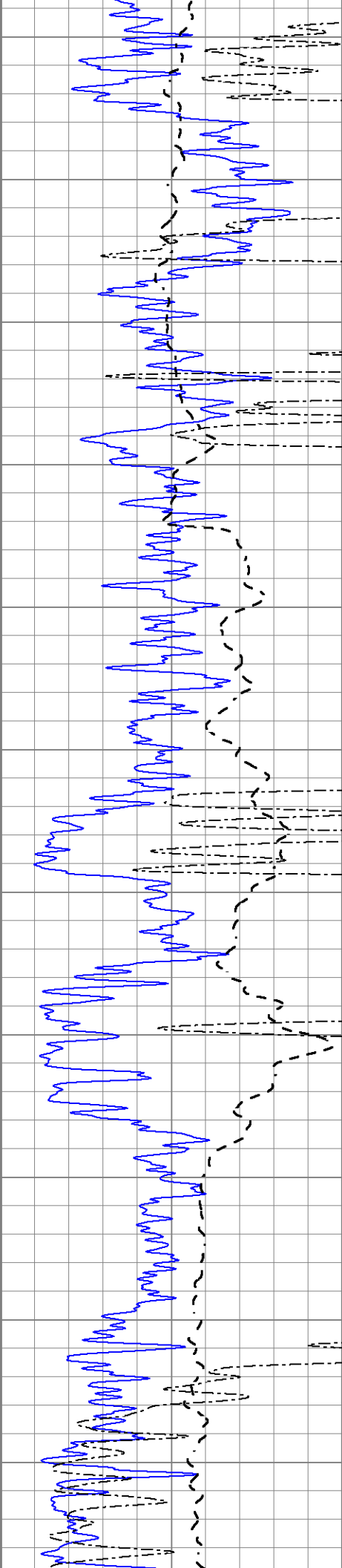
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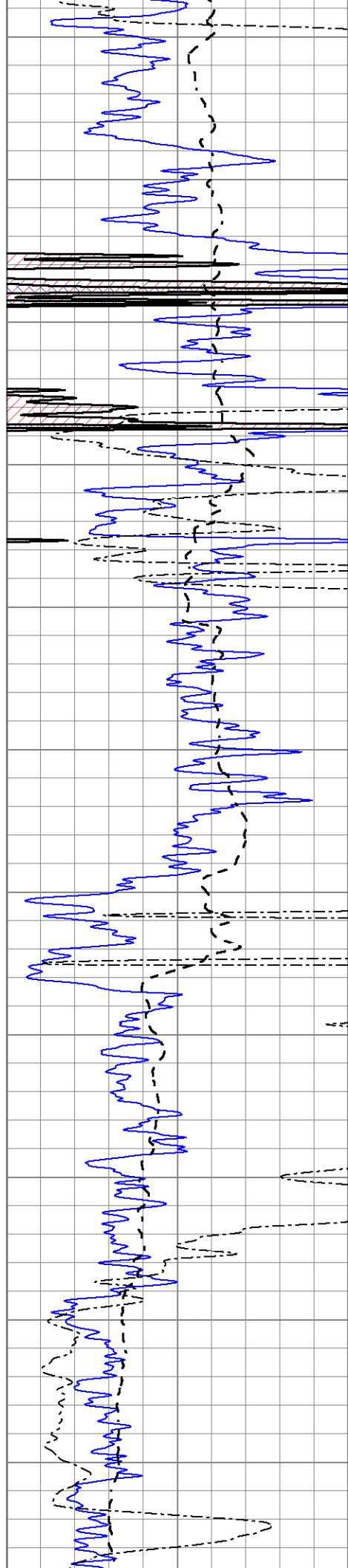
800

850

900

950





1000

1050

1100

1150

1200

1250

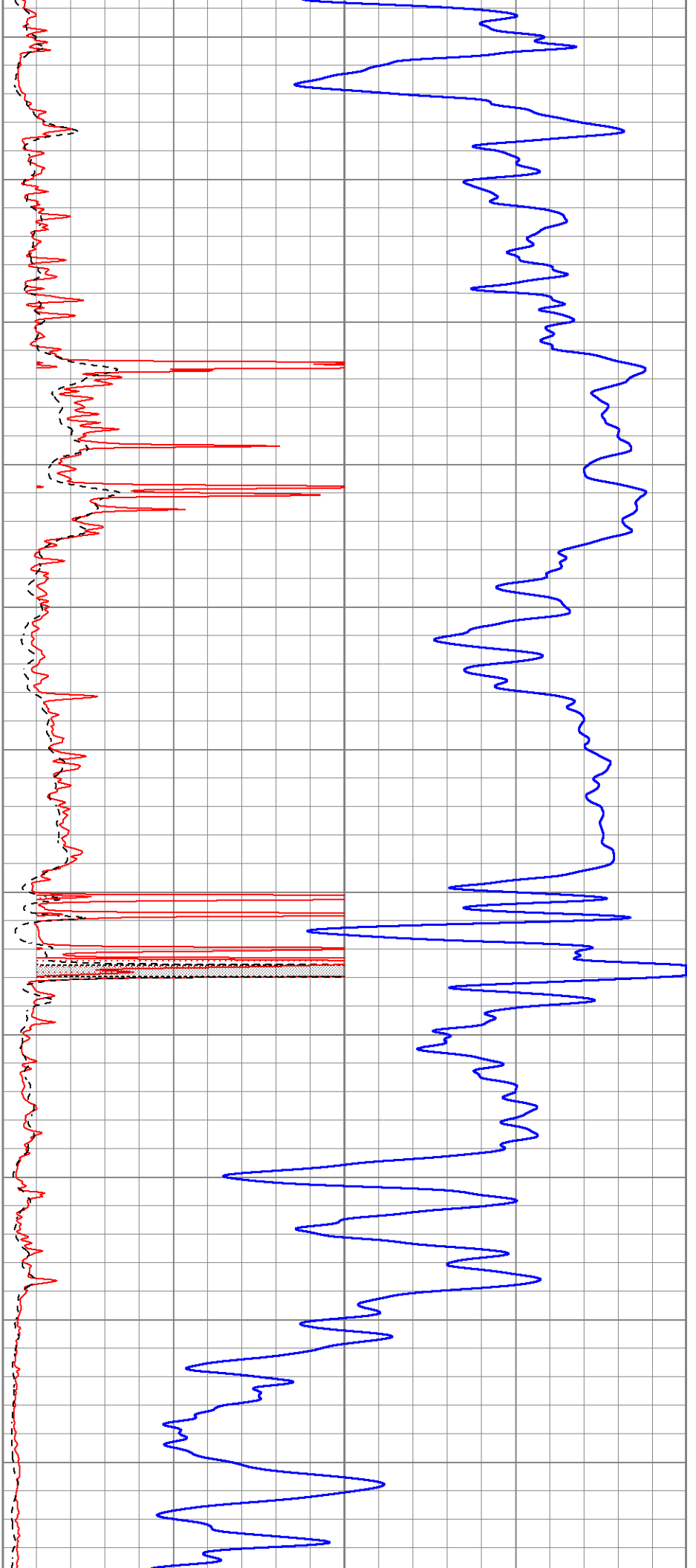
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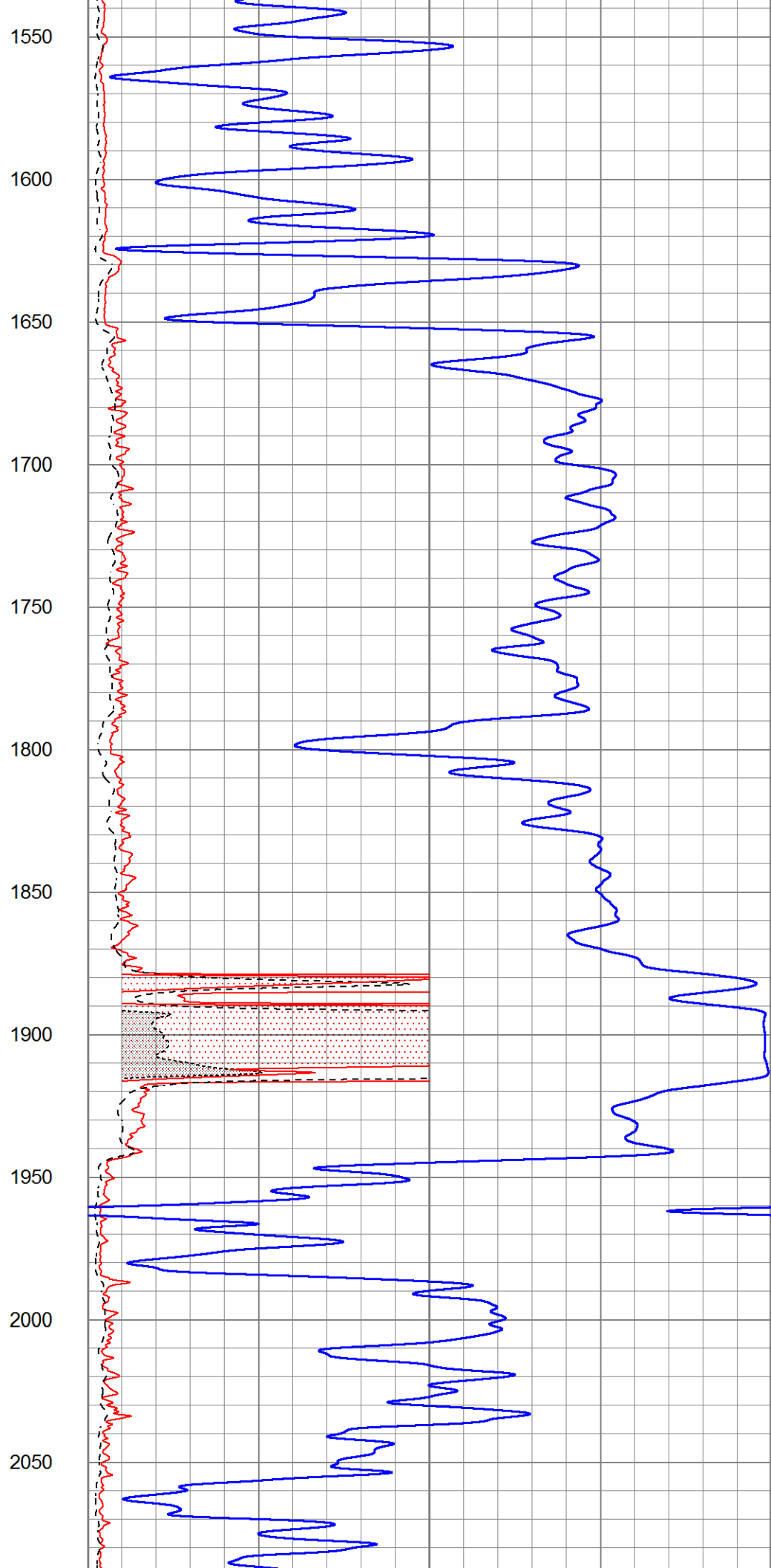
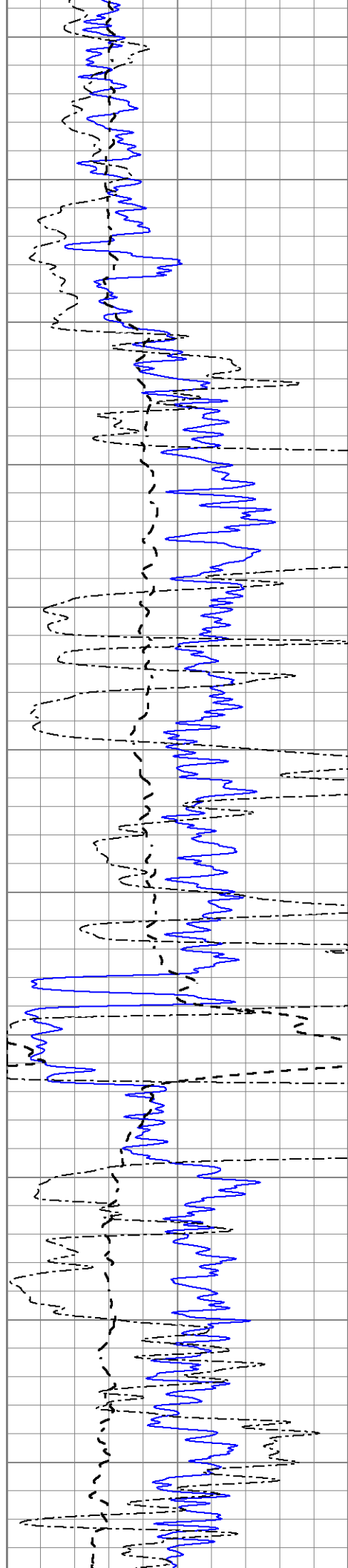
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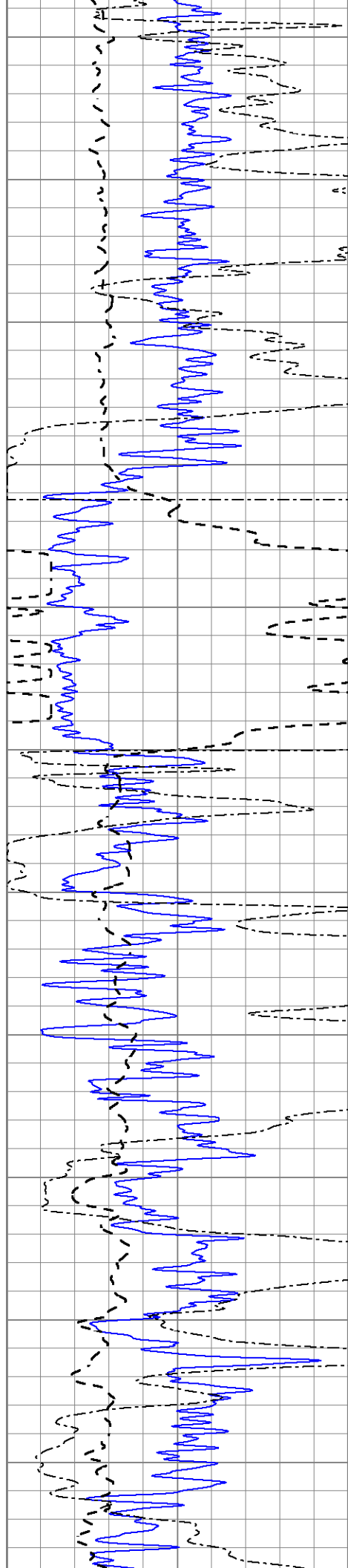
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1450

1500







2100

2150

2200

2250

2300

2350

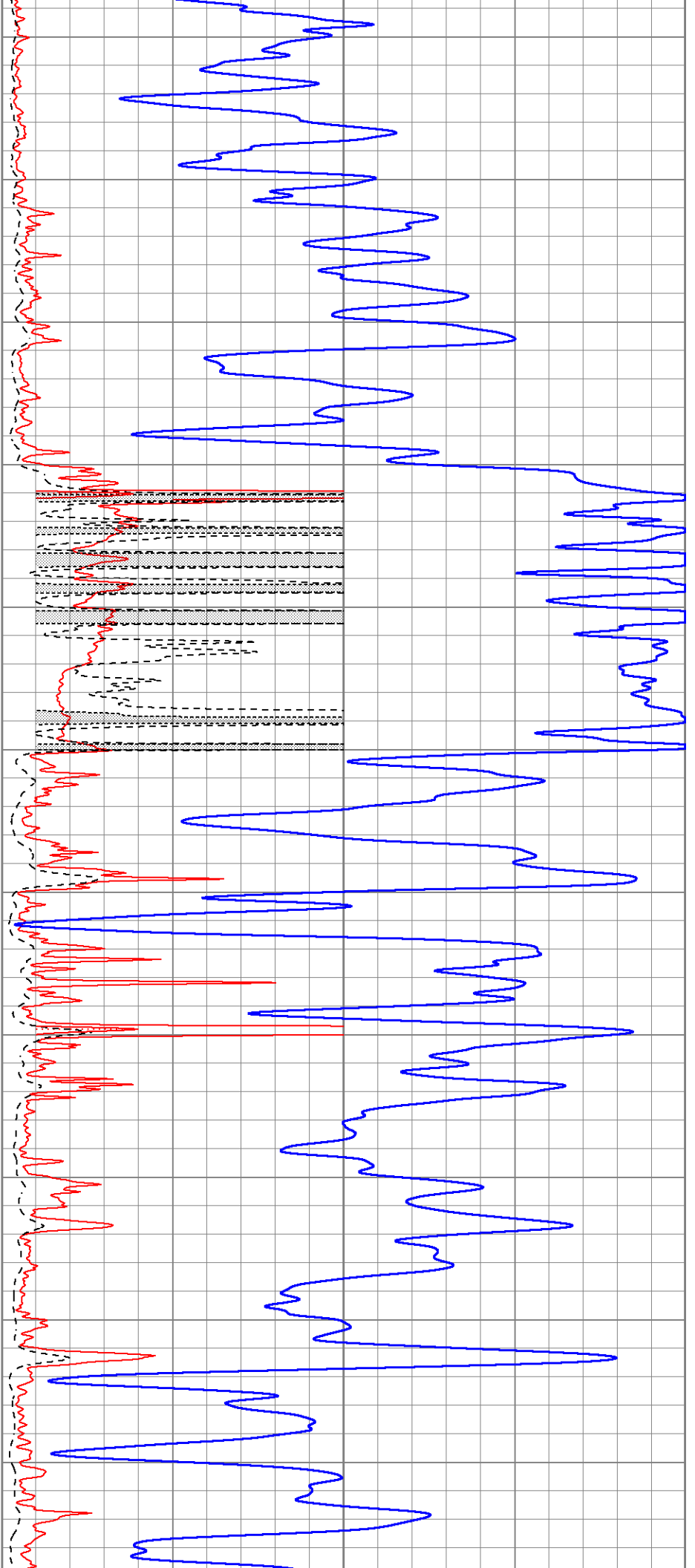
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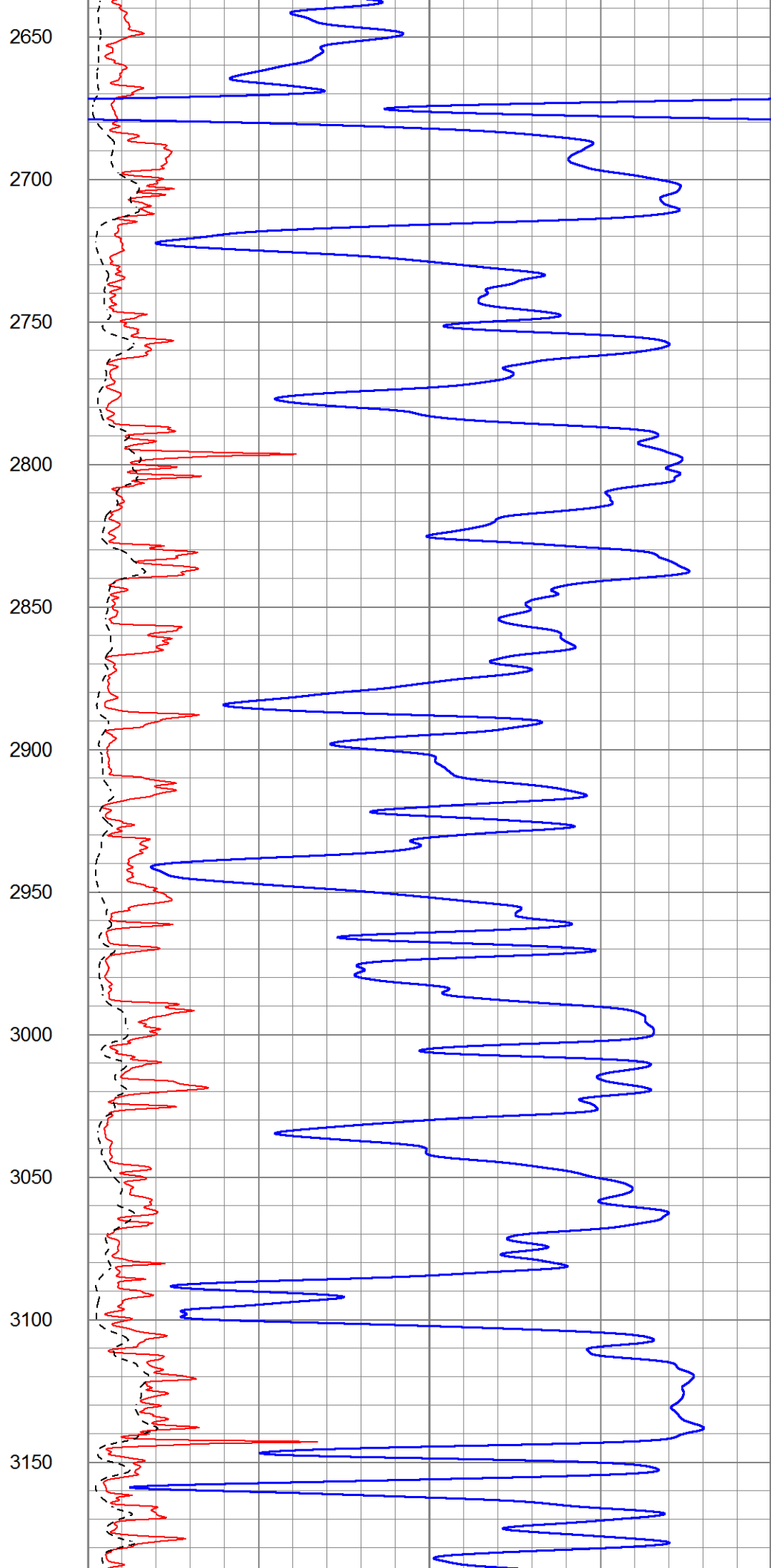
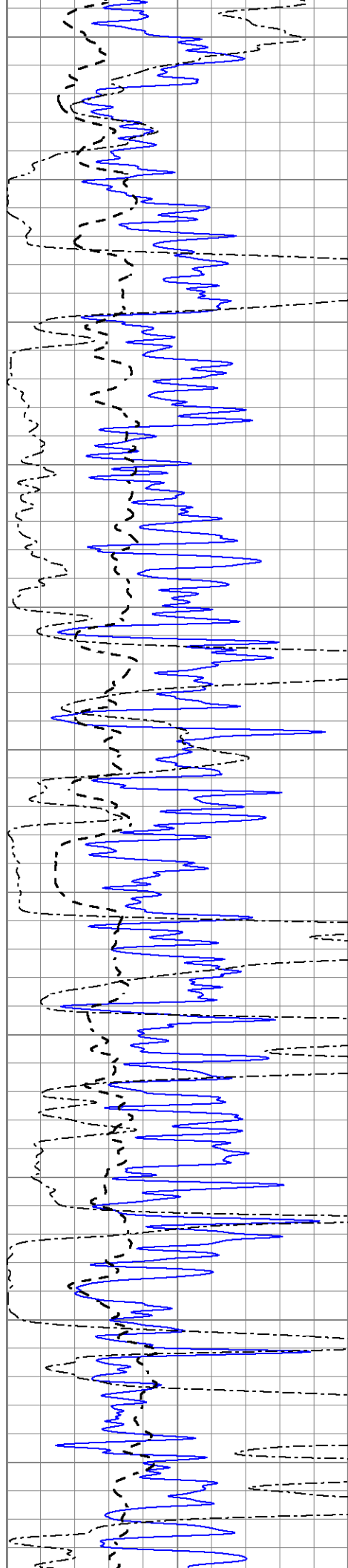
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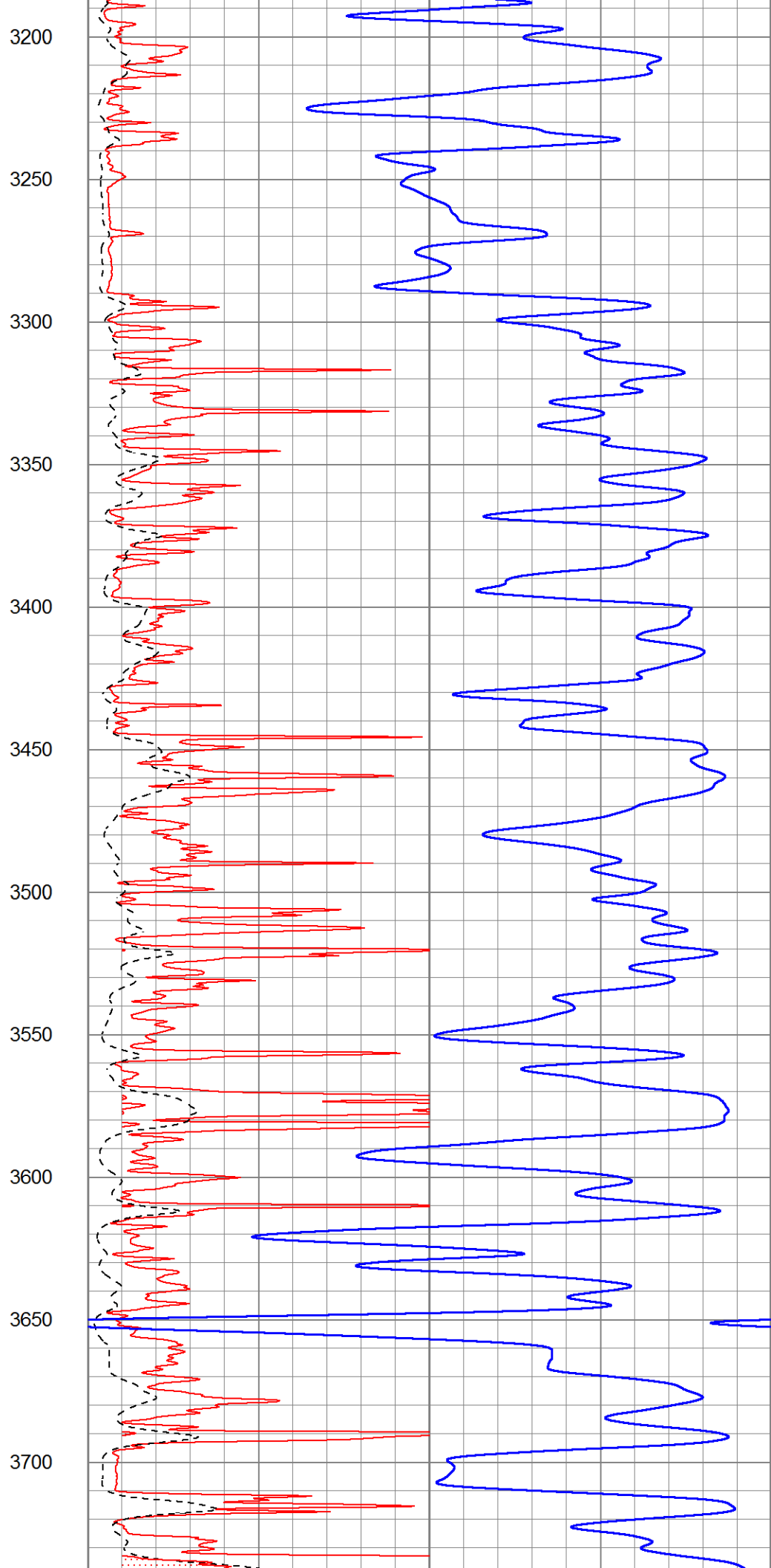
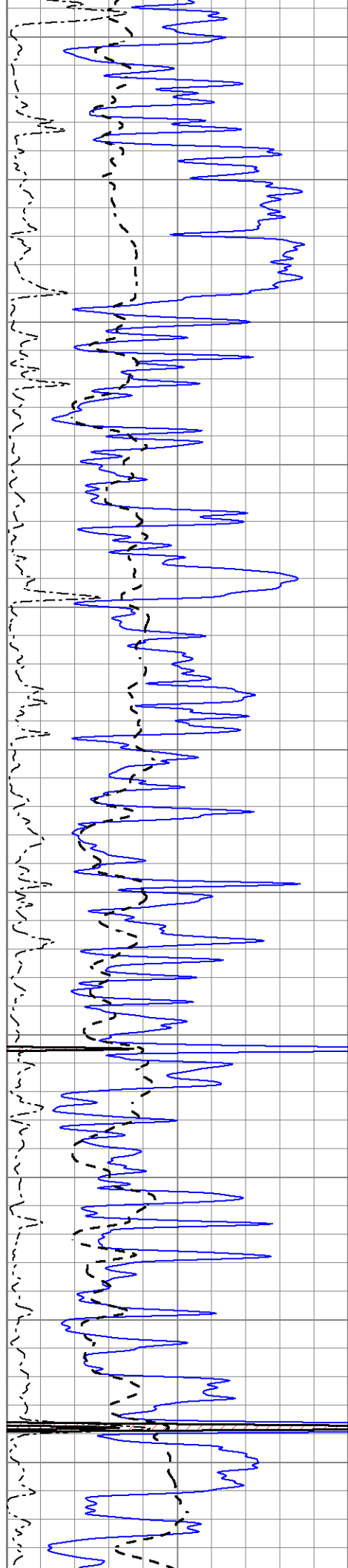
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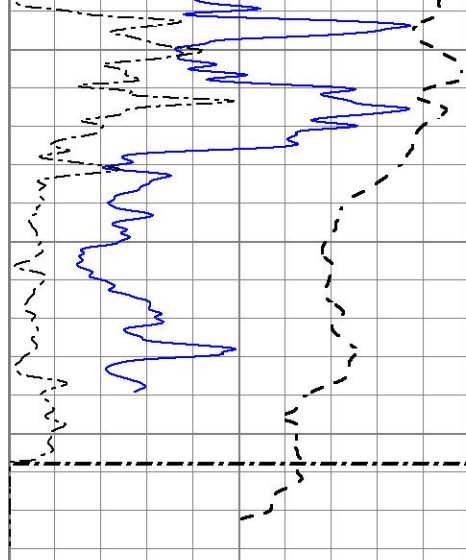
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2600

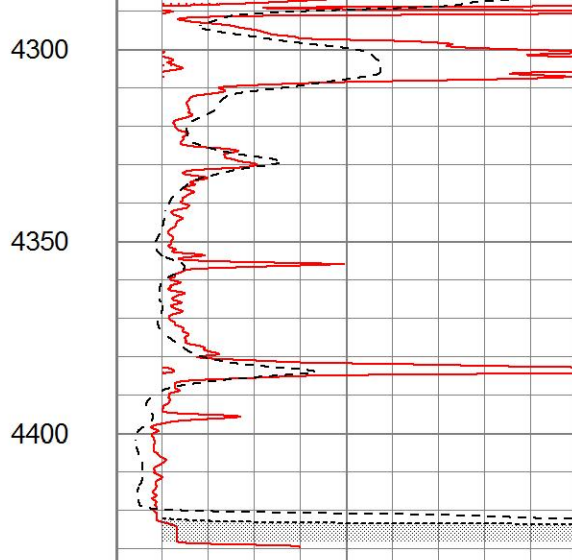








0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1



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

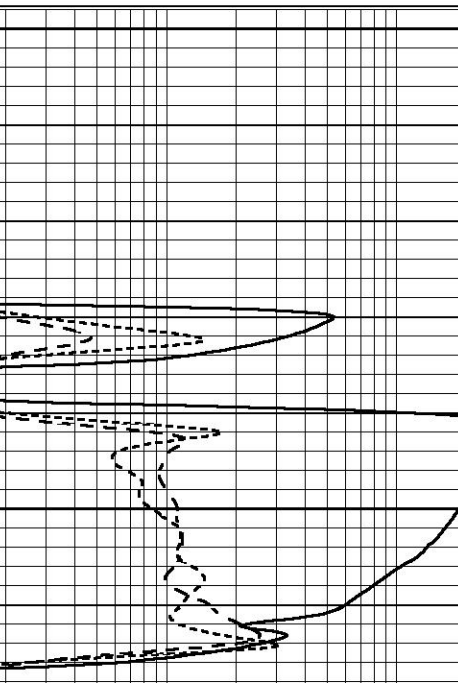
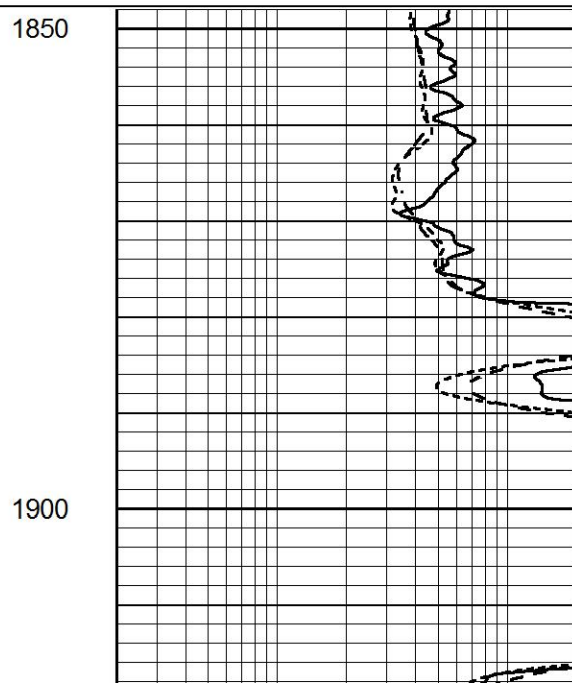
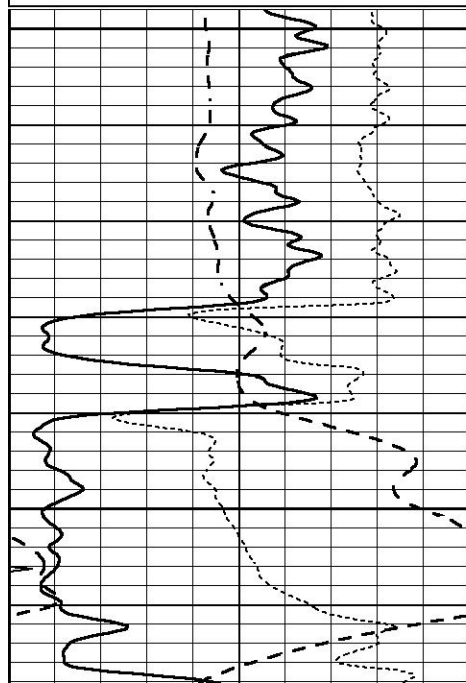


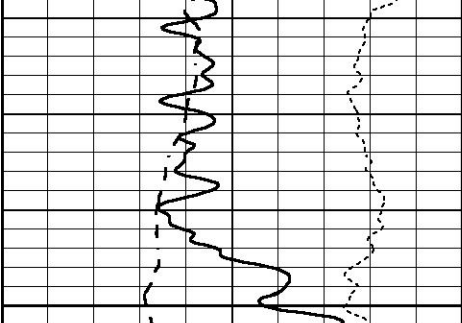
ANHYDRITE

Database File 8403ddn.db
 Dataset Pathname pass3.1A
 Presentation Format _dil
 Dataset Creation Wed Jan 03 16:22:13 2024
 Charted by Depth in Feet scaled 1:240

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

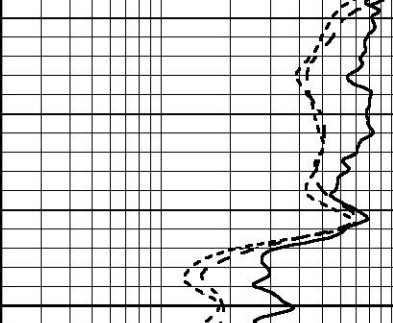
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





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

1950



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

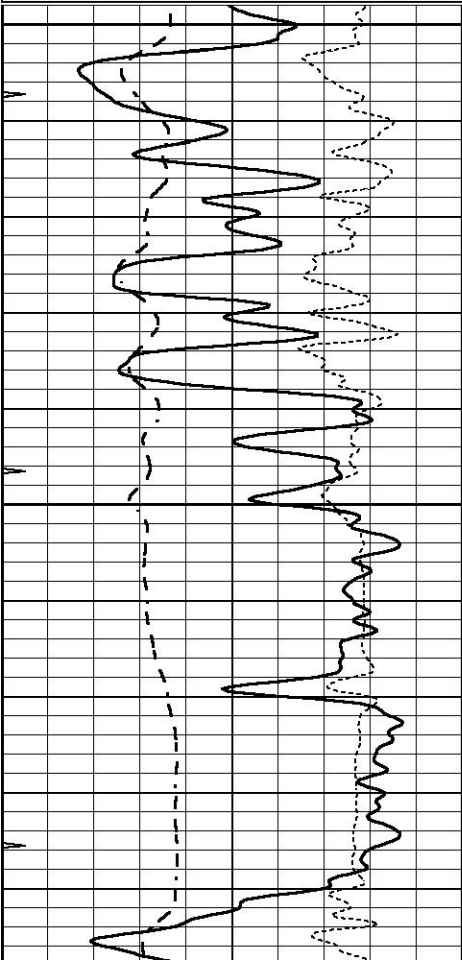


MAIN SECTION

Database File 8403ddn.db
Dataset Pathname pass3.1M
Presentation Format _dil
Dataset Creation Wed Jan 03 16:21:56 2024
Charted by Depth in Feet scaled 1:240

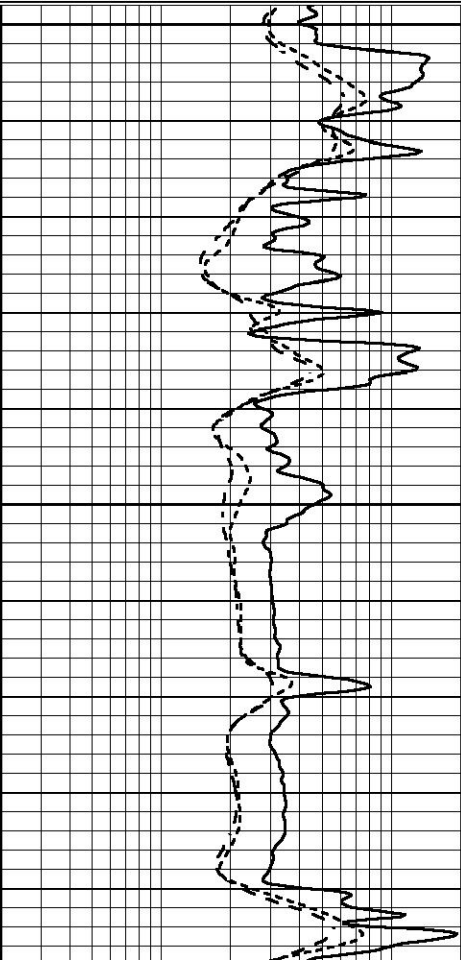
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

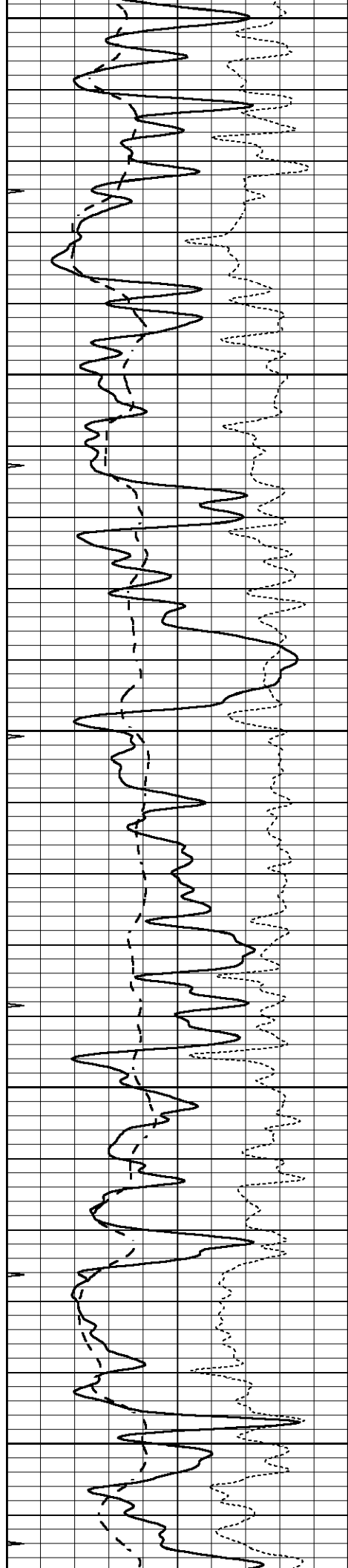
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3200

3250





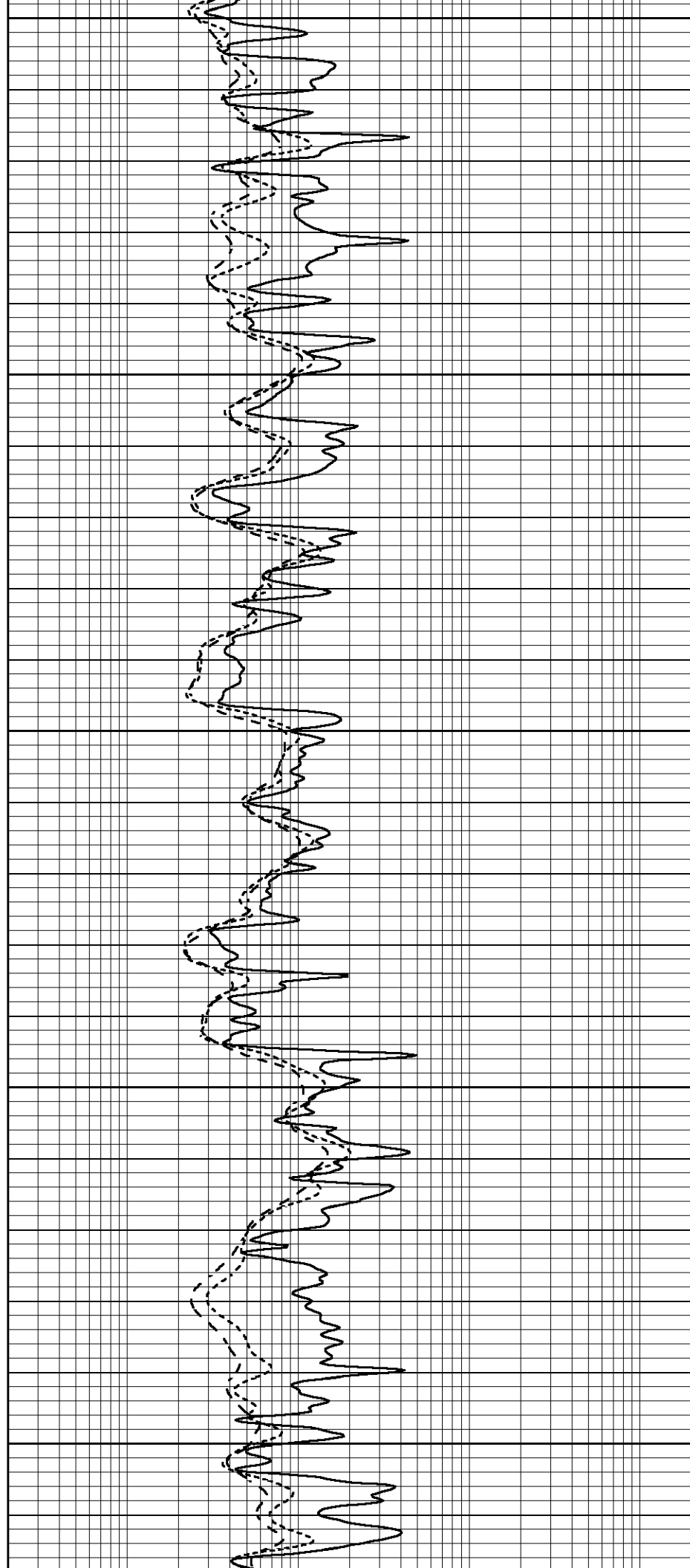
3300

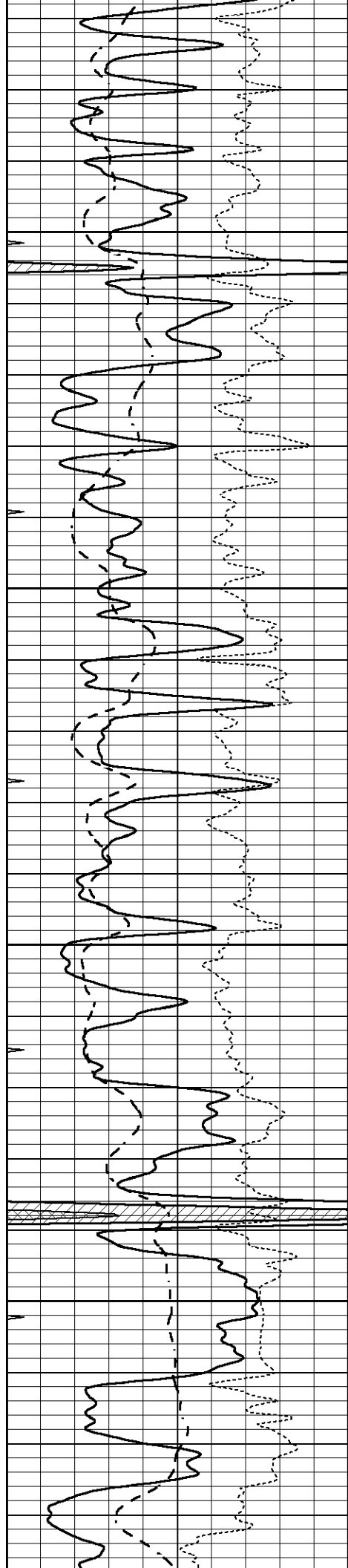
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3400

3450

3500



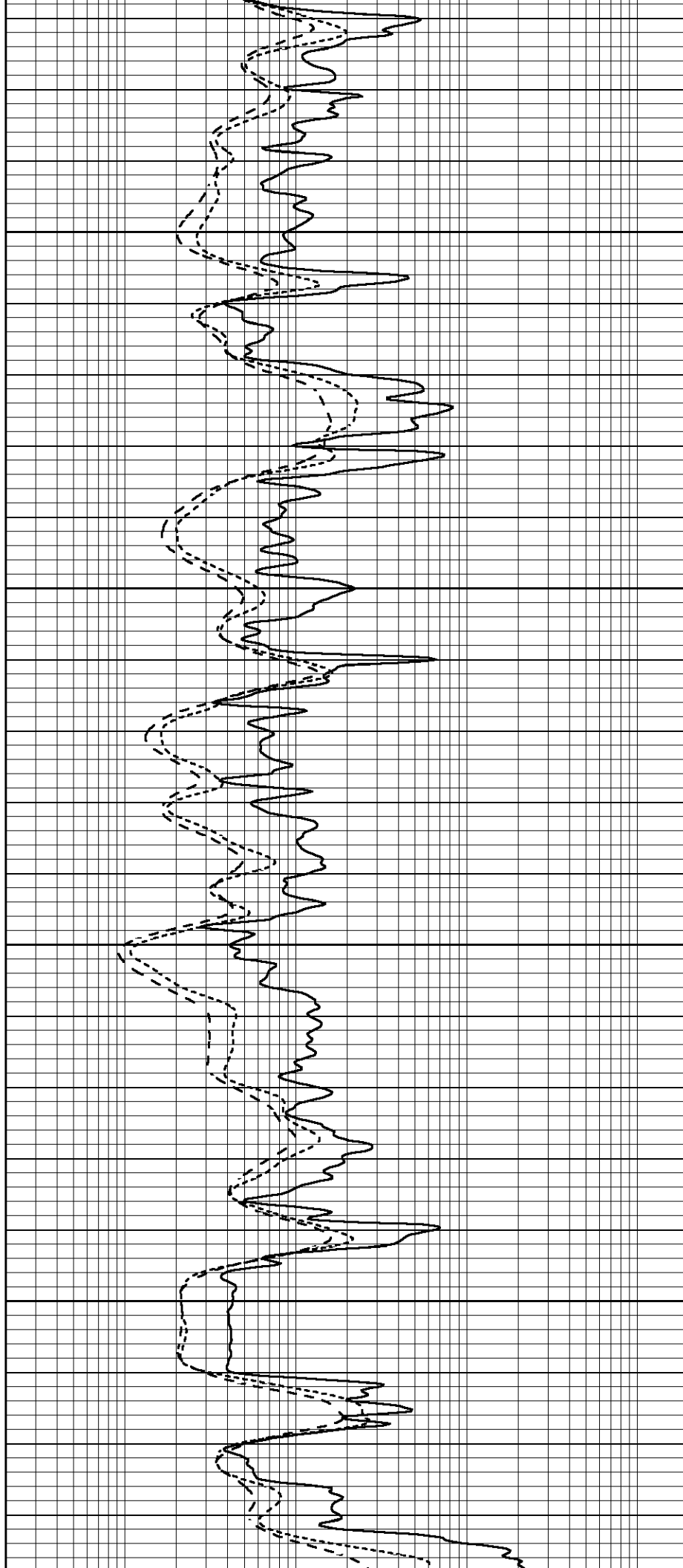


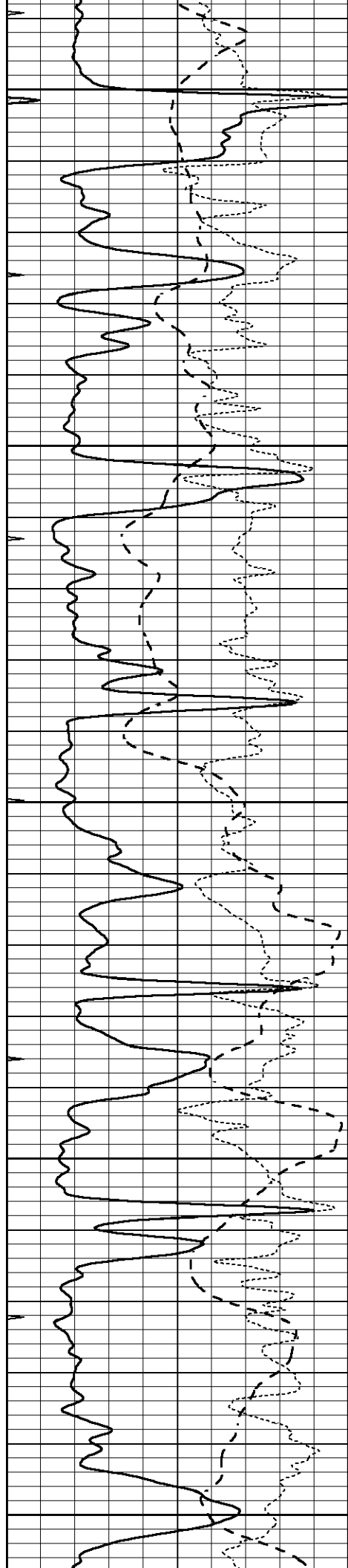
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3600

3650

3700





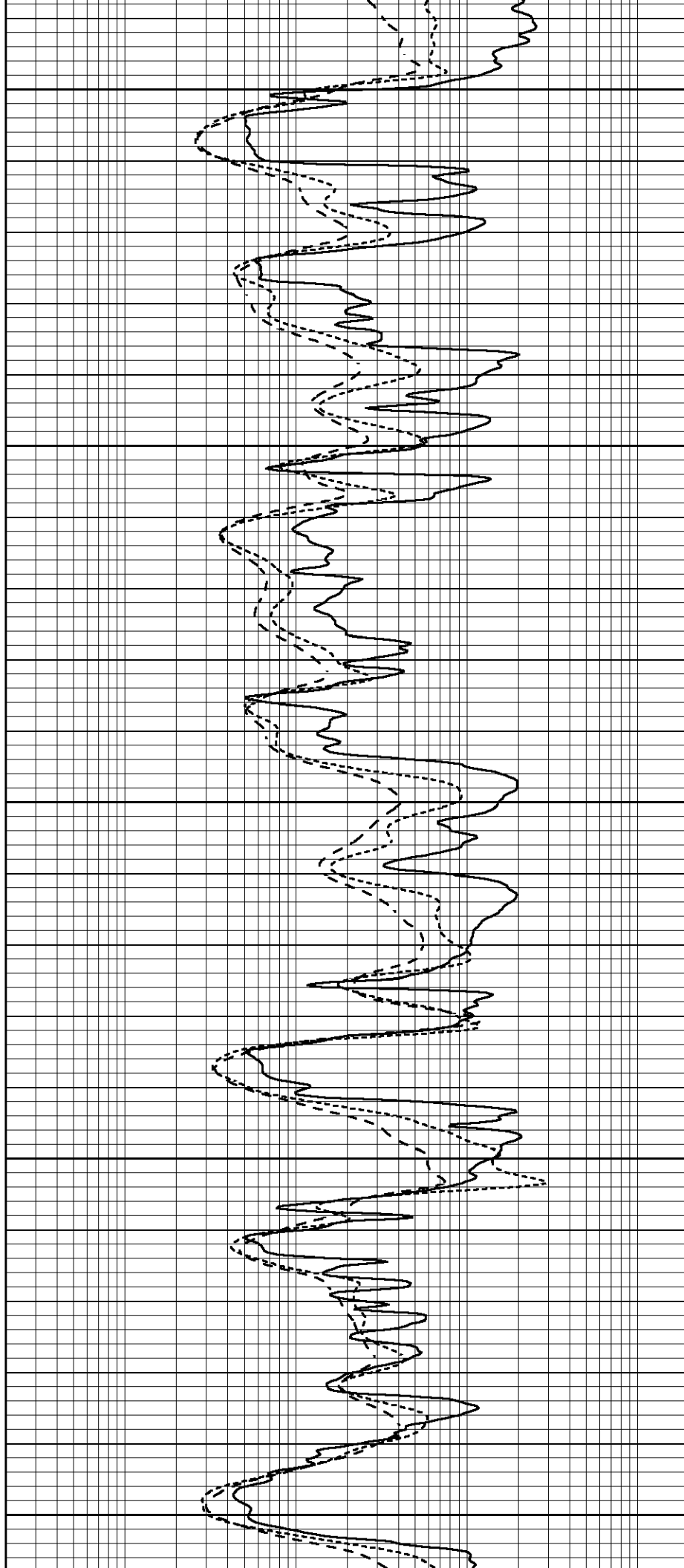
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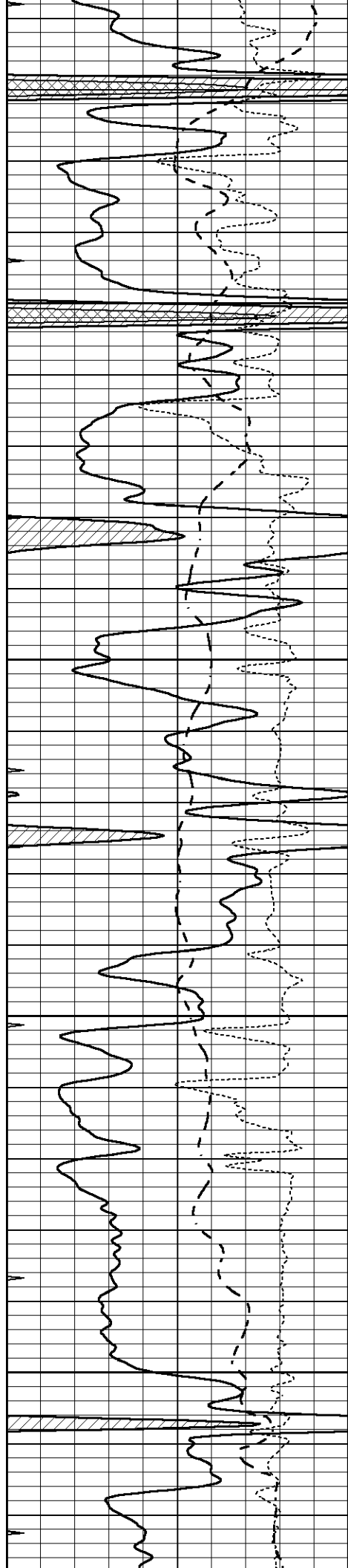
3800

3850

3900

3950



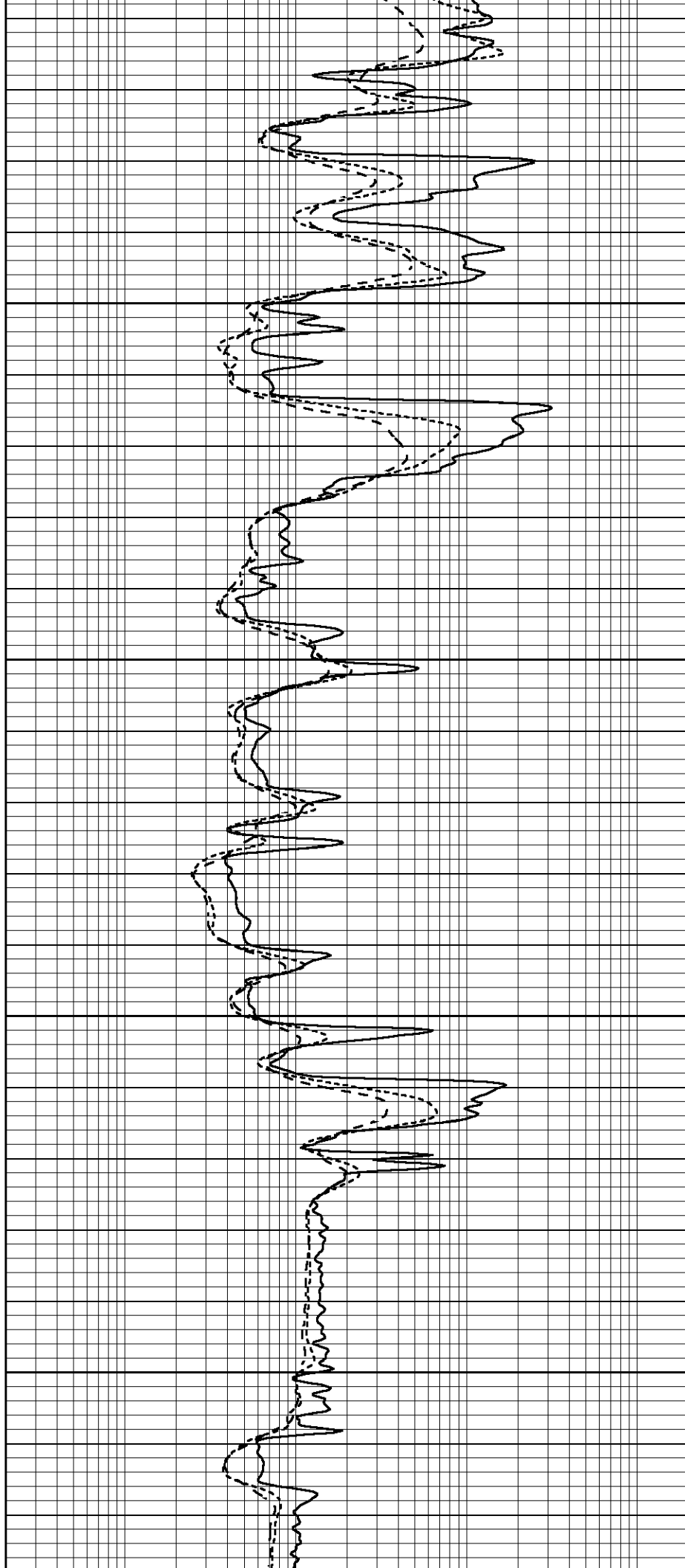


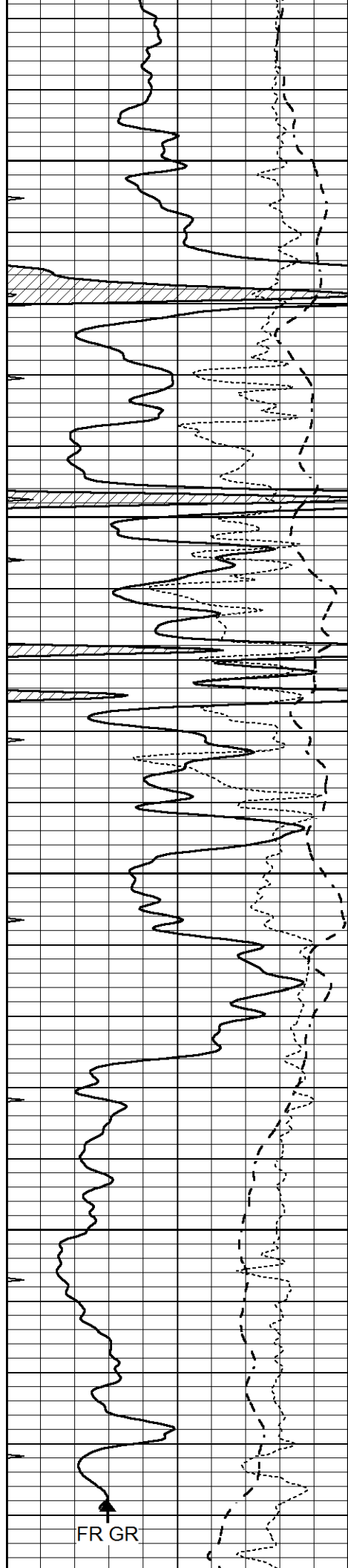
4000

4050

4100

4150





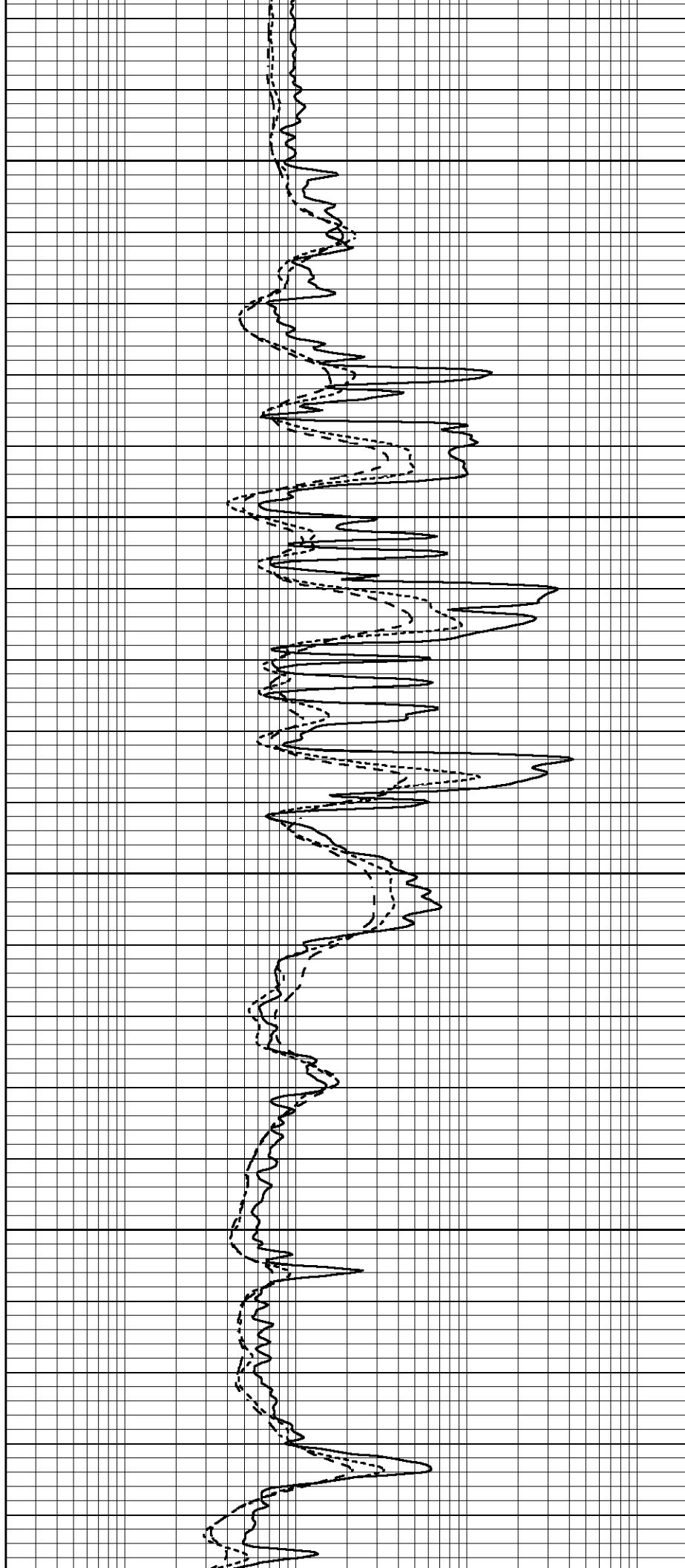
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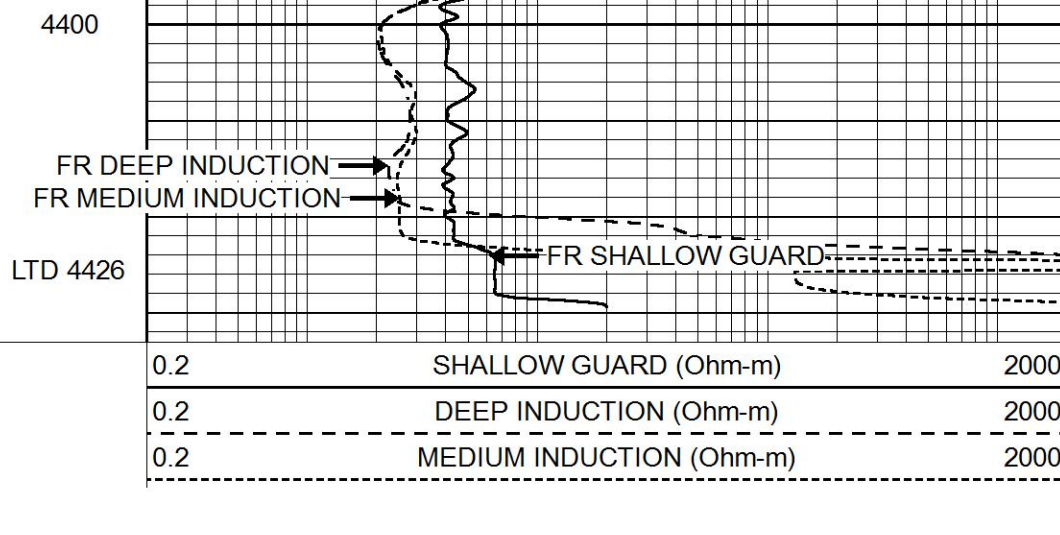
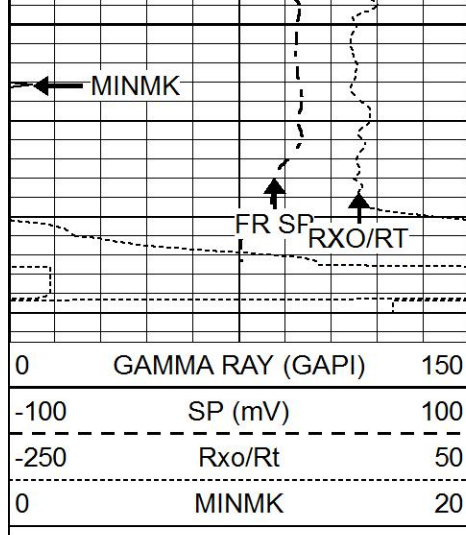
4250

4300

4350

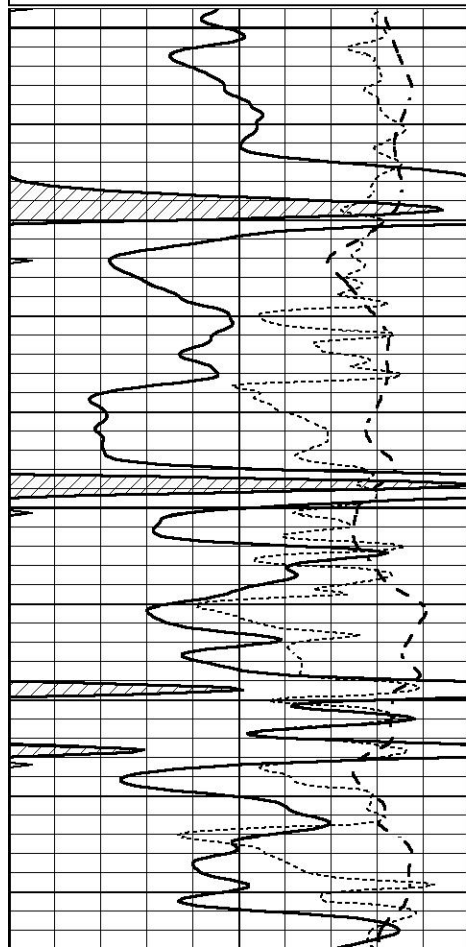
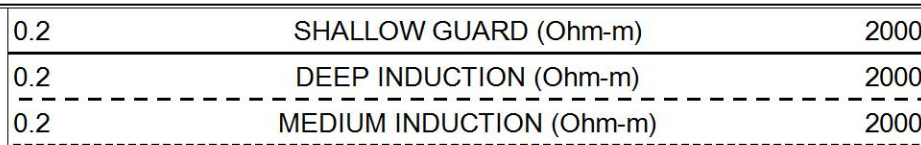
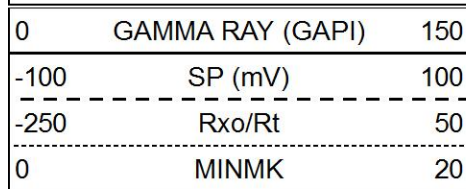
FR GR





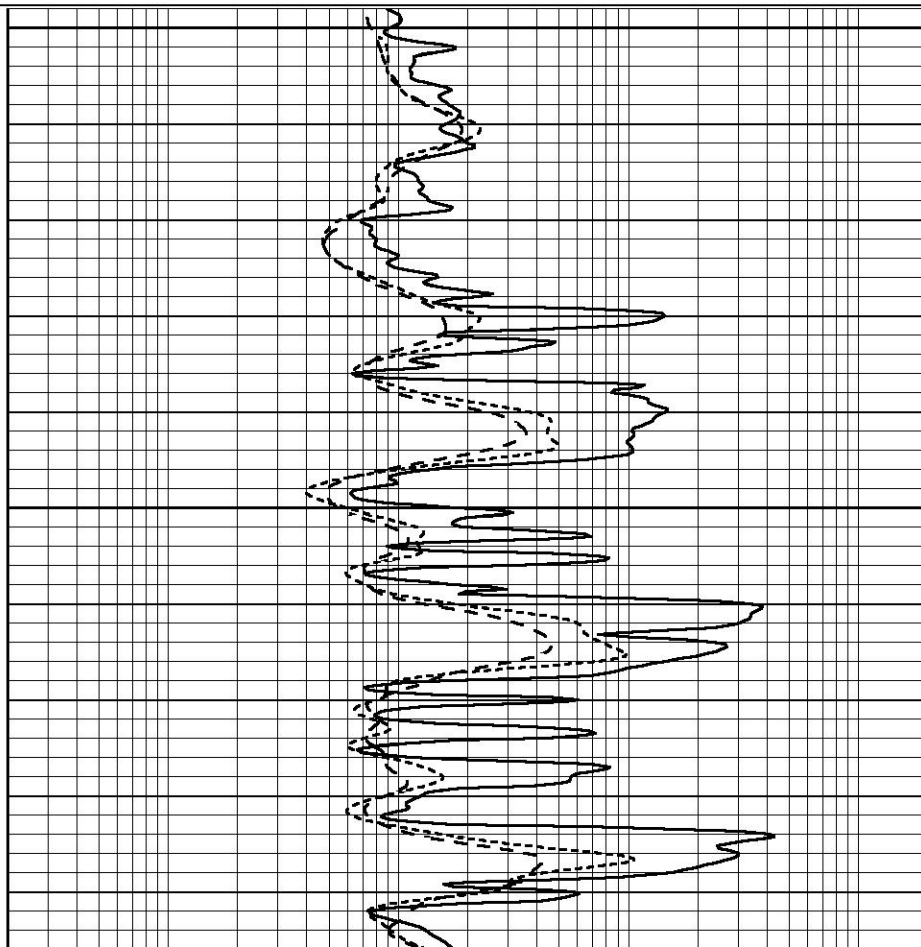
REPEAT SECTION

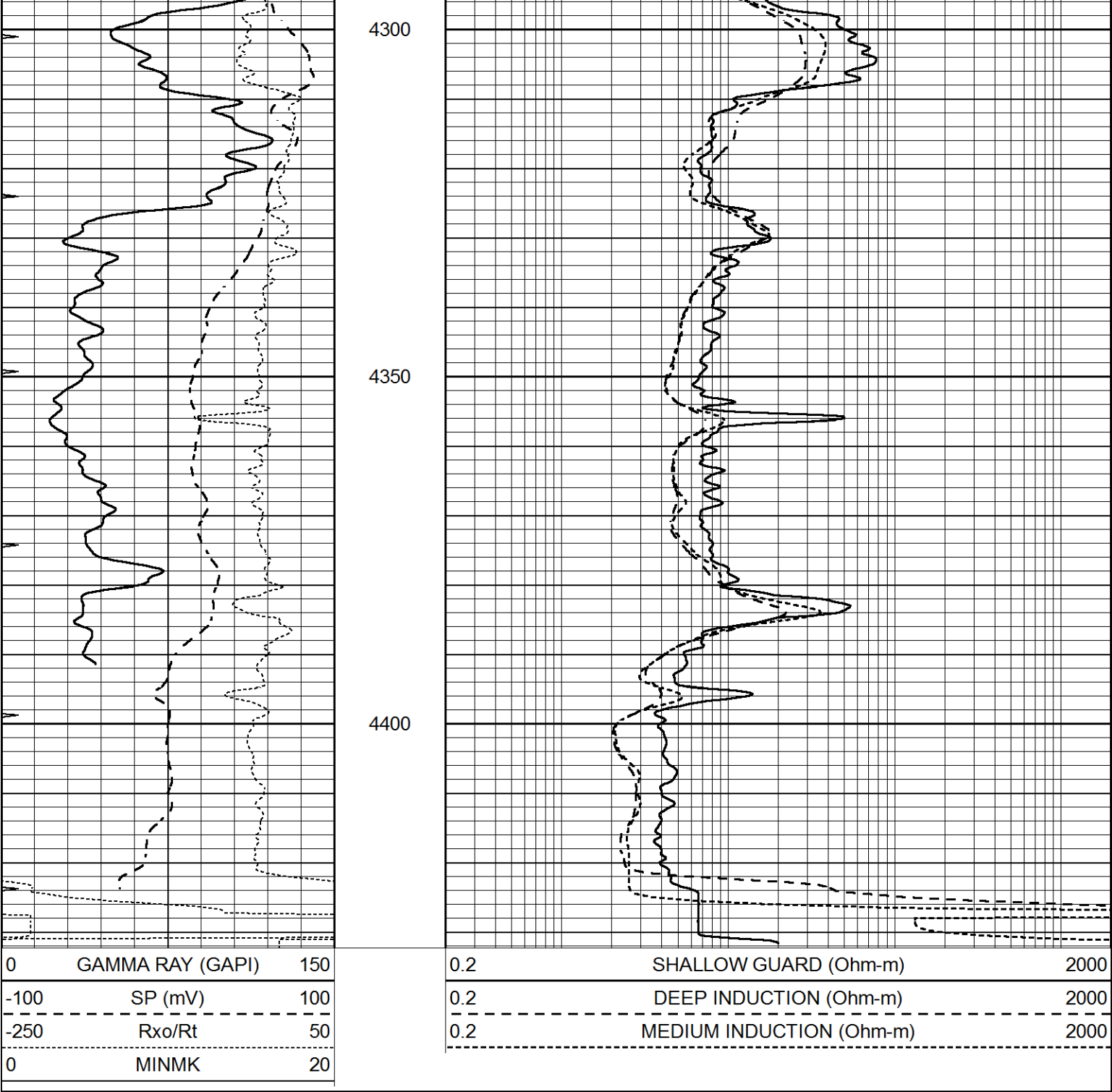
Database File 8403ddn.db
 Dataset Pathname pass2.1R
 Presentation Format _dil
 Dataset Creation Wed Jan 03 16:03:15 2024
 Charted by Depth in Feet scaled 1:240



4200

4250





Calibration Report							
Database File	8403ddn.db						
Dataset Pathname	pass3.1M						
Dataset Creation	Wed Jan 03 16:21:56 2024						
Dual Induction Calibration Report							
Serial-Model:				PROBE8-DILG			
Surface Cal Performed:				Wed Jan 03 15:39:55 2024			
Downhole Cal Performed:				Mon Aug 14 00:39:25 2023			
After Survey Verification Performed:				Mon Jul 28 11:08:27 2008			
Surface Calibration							
		Readings		References		Results	
Loop:	Air	Loop		Air	Loop	m	b
D	0.015	0.010	M	0.000	100.000	1.000	1.000

Deep	0.015	0.648	V	0.000	400.000	mmho/m	660.000	4.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	650.000	-10.000
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: 002 Model: PRB								
Master Calibration					Performed Tue Aug 02 15:13:46 2022			
	Background	Magnesium		Aluminum		Aluminum+Fe		
Window 1	756.0	9803.2		2626.7		2317.1		cps
Window 2	695.1	8255.1		2265.2		2043.1		cps
Window 3	550.8	3929.2		1238.3		1173.3		cps
Window 4	165.8	166.7		163.3		164.0		cps
Long Space	0.0	7560.0		1570.1		1348.0		cps
Short Space	1.7	1555.8		1144.9		997.1		cps
Rho		1.7100		2.5900		0.0000		g/cc
Pe		2.0000		2.7500		5.7900		
Rib Angle	: 49.0	Rib Slope	: 1.149	Density/Spine Ratio		: 0.550		
Spine Angle	: 79.0	Spine Slope	: 5.125	Spine Intercept		: -28.7		
Before 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		
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:	070808PMC		
		Tool Model:	NABORS		
PRE-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
POST-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
Gamma Ray Calibration Report					
Serial Number:		070558			
Tool Model:		OPEN_GR			
Performed:		Wed Dec 20 03:59:02 2023			
Calibrator Value:		1.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		1.0	cps		
Sensitivity:		0.3000	GAPI/cps		