



DUAL INDUCTION LOG

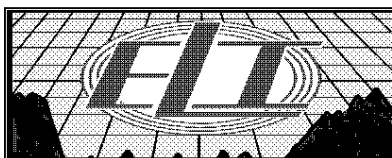
Company Well Field County State		DOWNING - NELSON OIL CO. INC. STECKLEIN #2-34 WILDCAT TREGO KANSAS	
Company Well Field County		DOWNING - NELSON OIL COMPANY, INC. STECKLEIN #2-34 WILDCAT TREGO	
State		KANSAS	
Location:		API # : 15-195-23084-0000	
Permanent Datum Log Measured From Drilling Measured From		335' FNL & 1800' FEL W/2 - NE - NW - NE SEC 34 TWP 13S RGE 22W GROUND LEVEL KELLY BUSHING 8' A.G.L. KELLY BUSHING	
Elevation		CDL/CNL MEL	
Elevation		K.B. 2358 D.F. 2356 G.L. 2350	
Date	3/14/19		
Run Number	ONE		
Depth Driller	4400		
Depth Logger	4400		
Bottom Logged Interval	4398		
Top Log Interval	00		
Casing Driller	8 5/8"@222'		
Casing Logger	222		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,500 PPM	
Density / Viscosity	9.3/46		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.900@60F		
Rmf @ Meas. Temp	.675@60F		
Rmc @ Meas. Temp	1.08@60F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.450@120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	5:15 A.M.		
Maximum Recorded Temperature	120F		
Equipment Number	922339		
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, KANSAS (785) 628-6395
DIRECTIONS
OGALLAH & I-70, 7S. ON HWY 147 TO JUST PAST OLD CHURCH, W. INTO



MAIN SECTION

Database File: 3603ddn.db
Dataset Pathname: pass3.5
Presentation Format: dil2
Dataset Creation: Thu Mar 14 06:21:53 2019 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:600

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

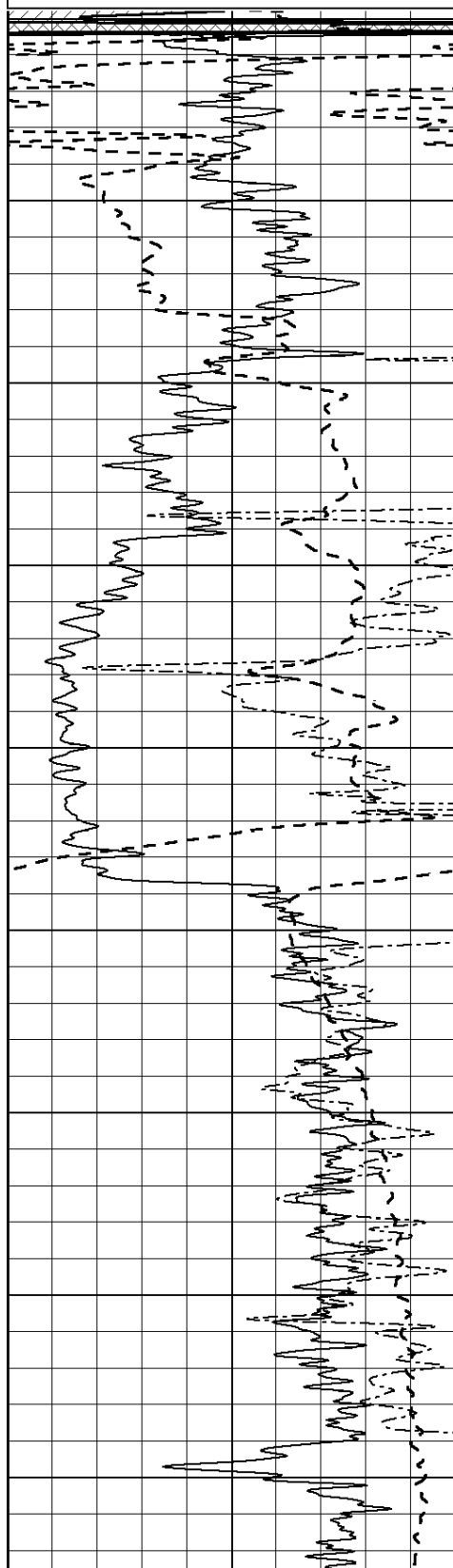
0	RLL3 (Ohm-m)	50
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0	RILD (Ohm-m)	50
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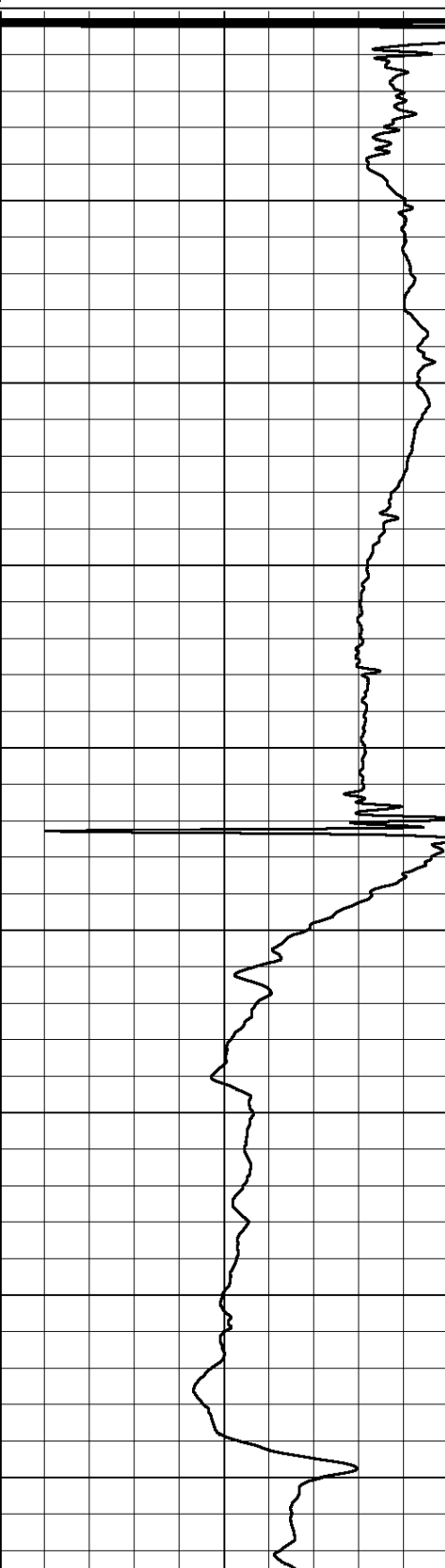
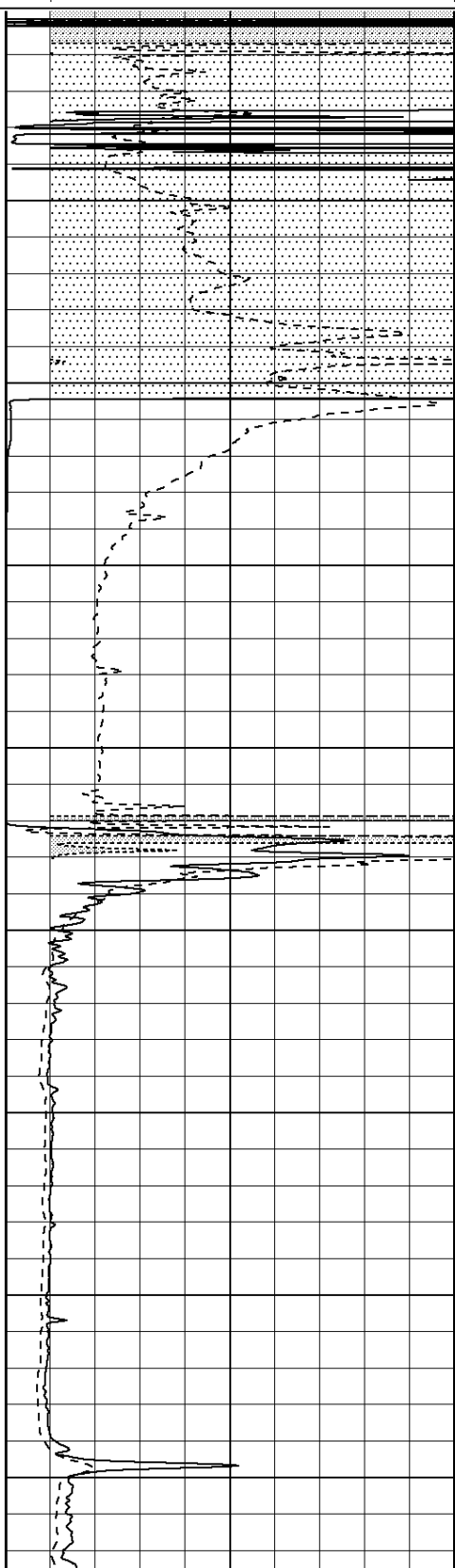
1000	CILD (mmho/m)	0
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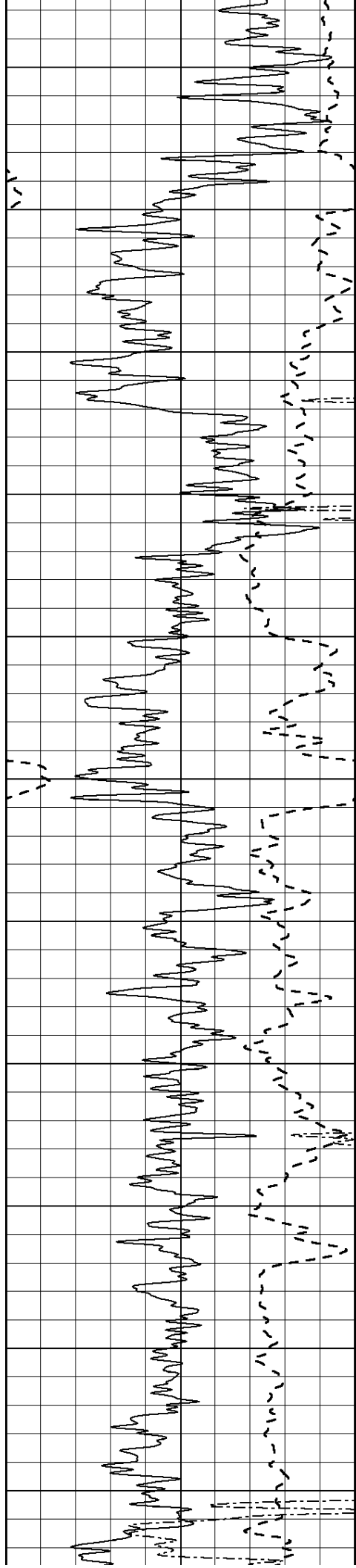
50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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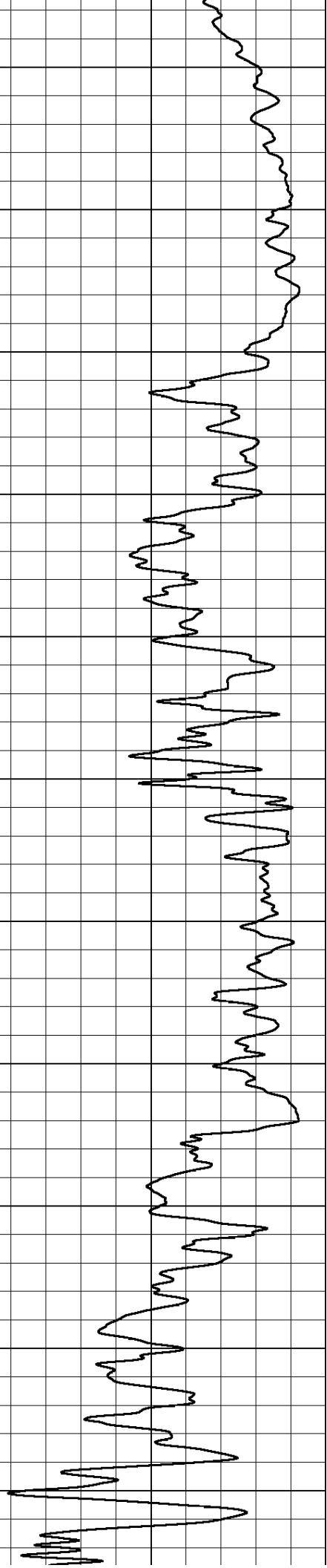
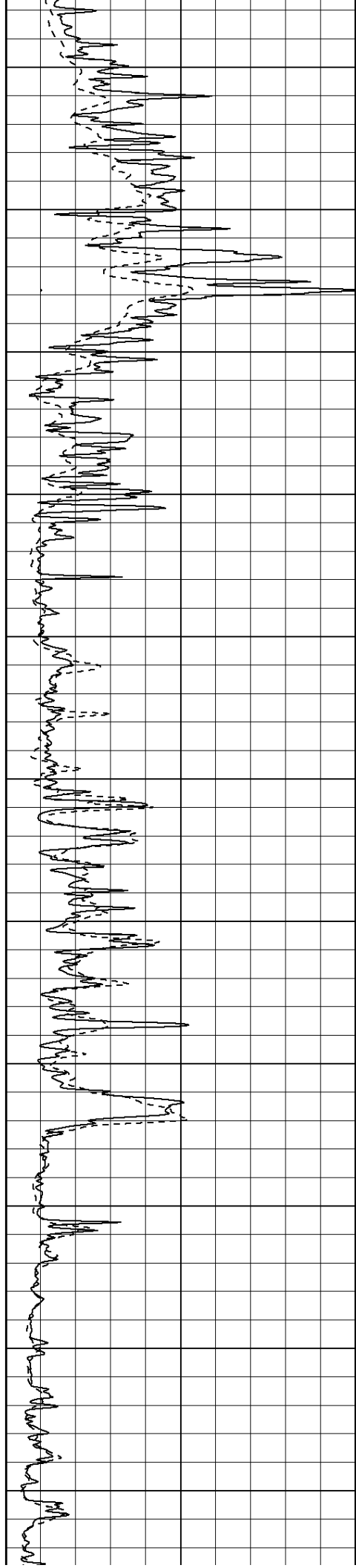


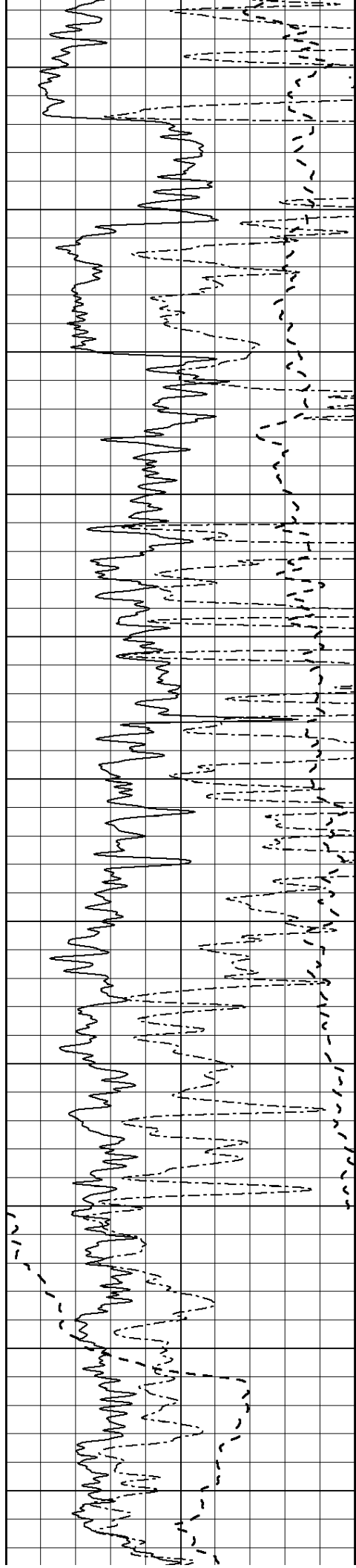
0
50
100
150
200
250
300
350
400





450
500
550
600
650
700
750
800
850
900
950





1000

1050

1100

1150

1200

1250

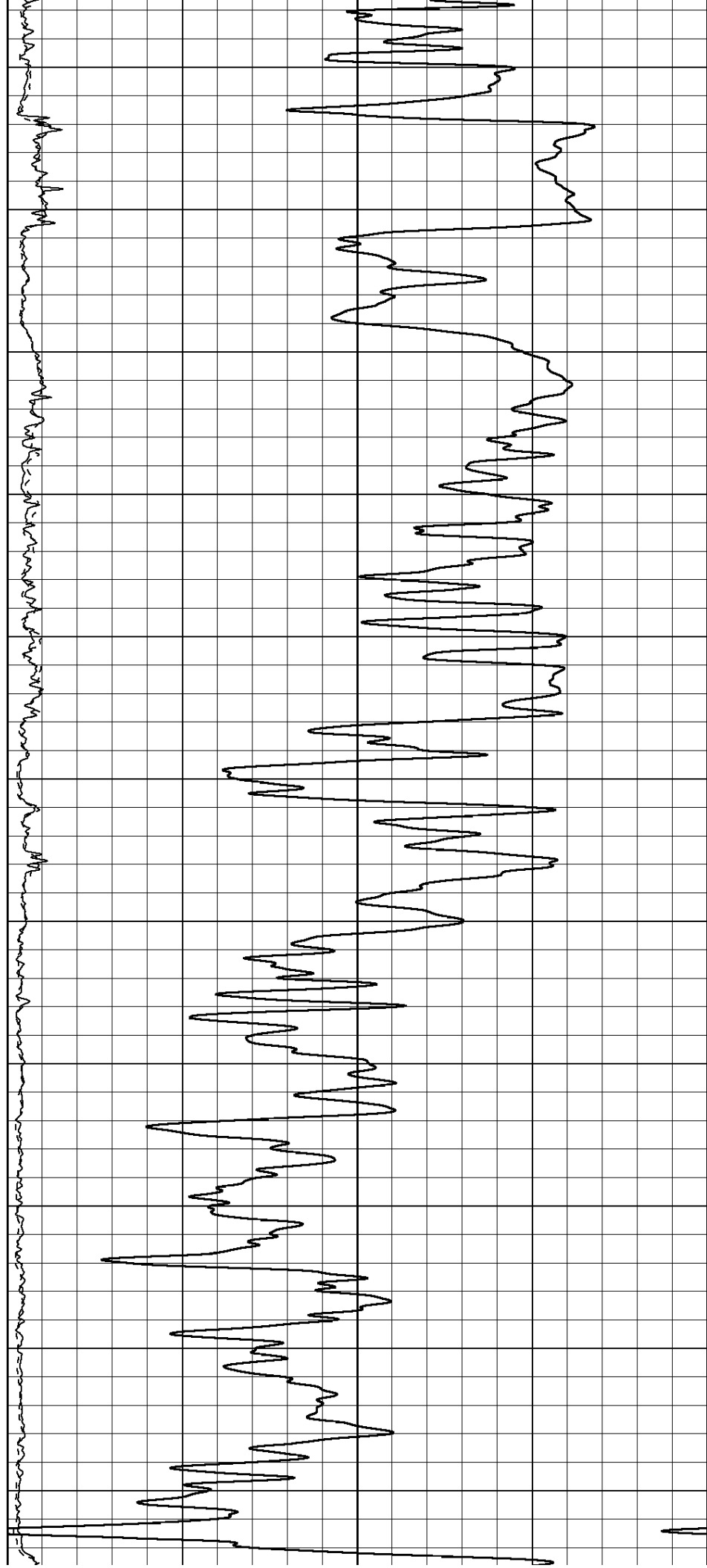
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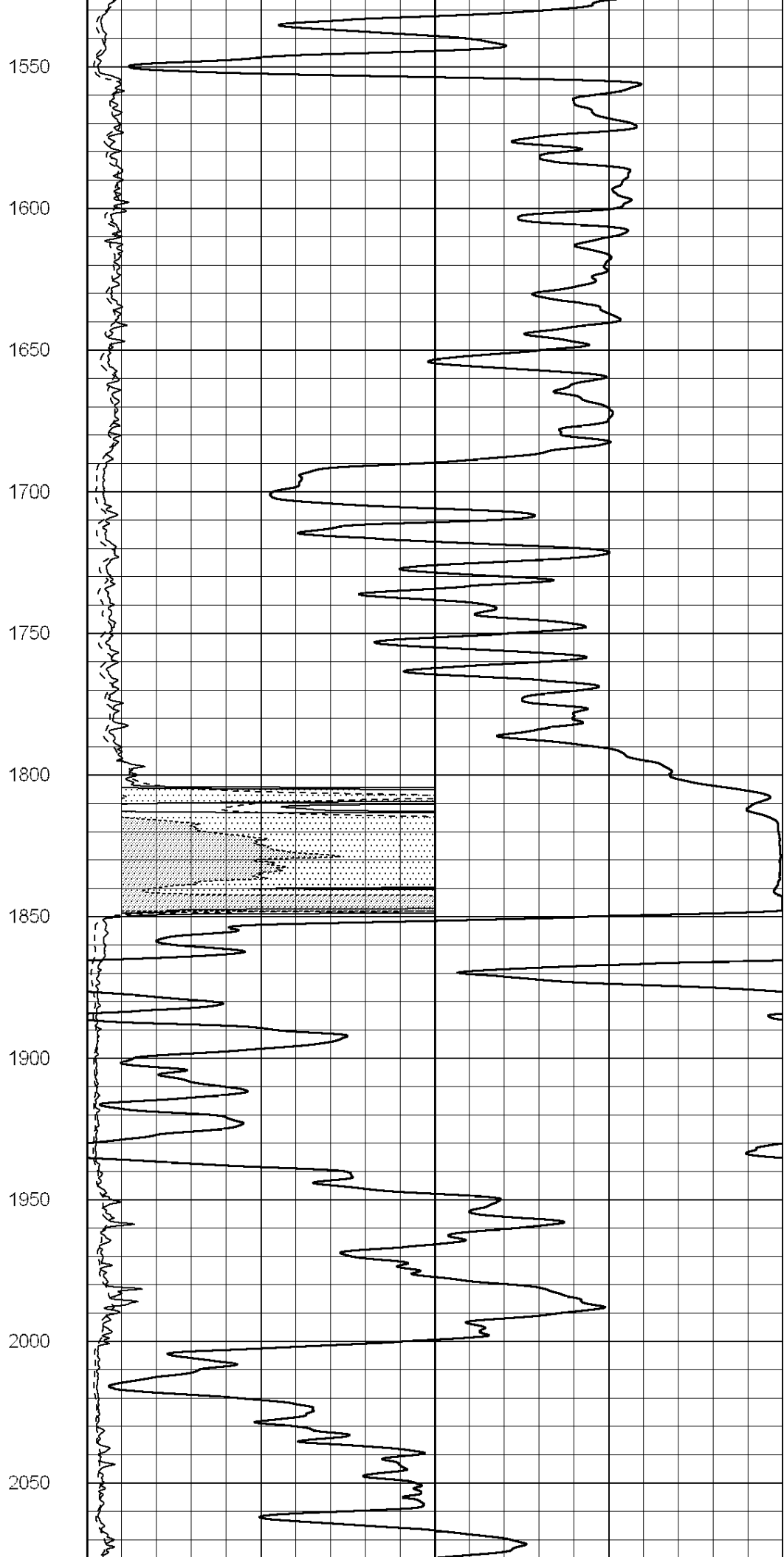
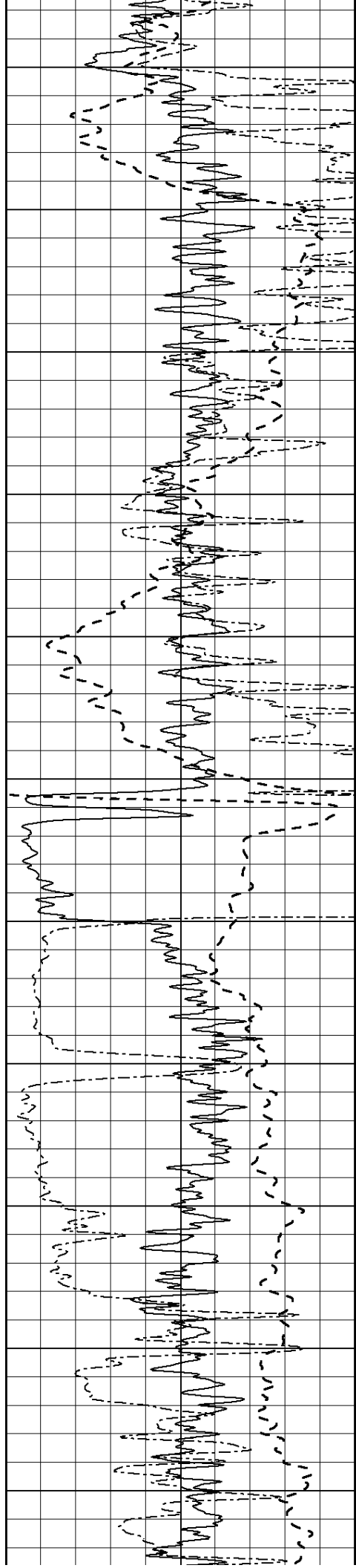
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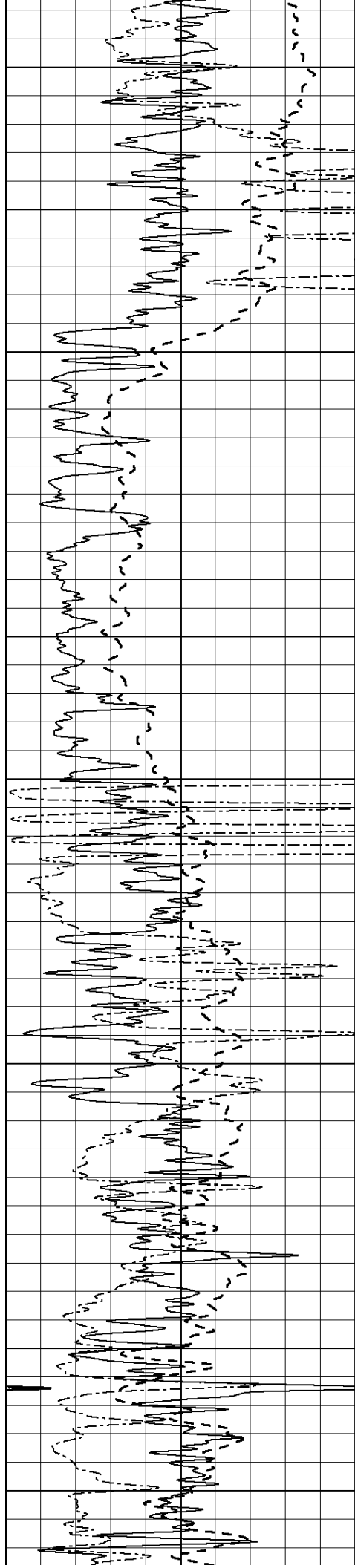
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1450

1500







2100

2150

2200

2250

2300

2350

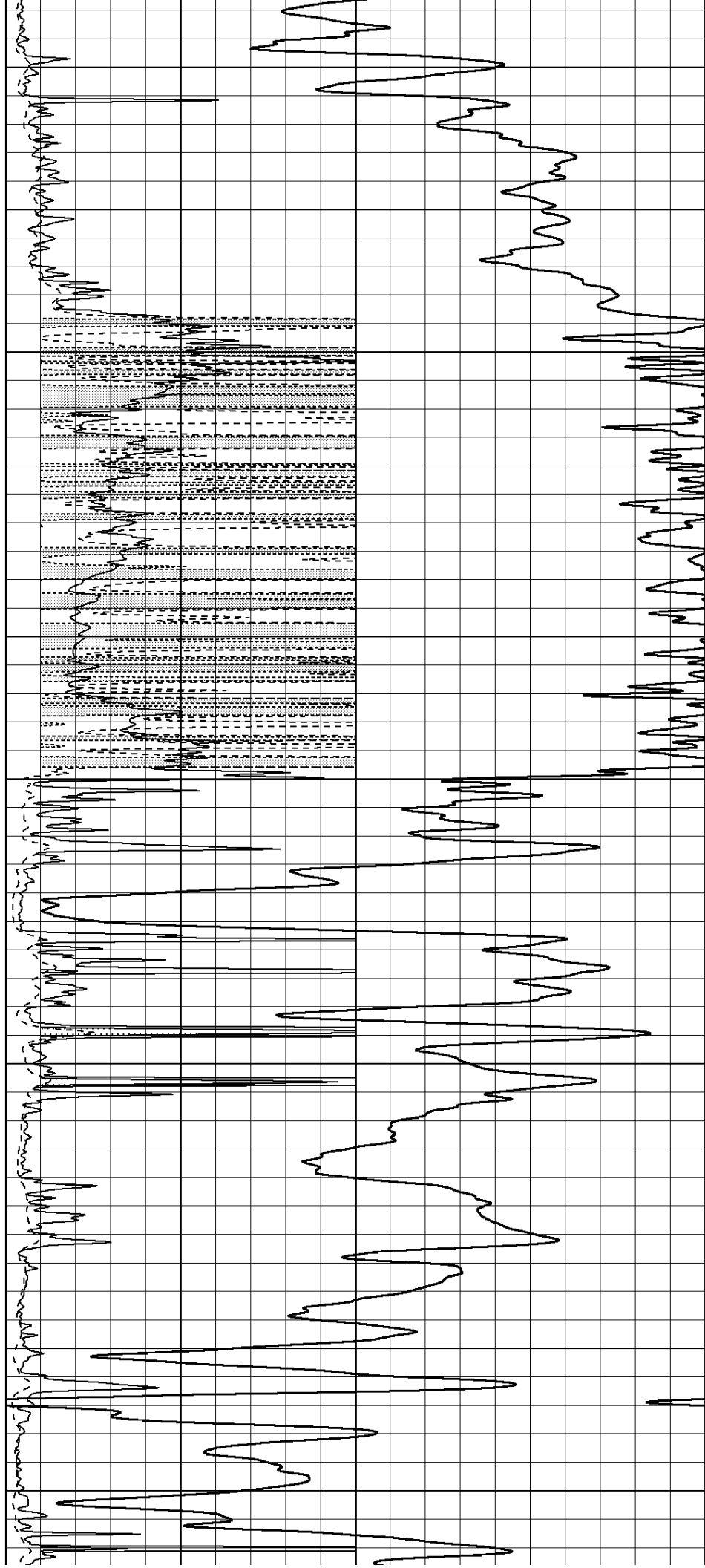
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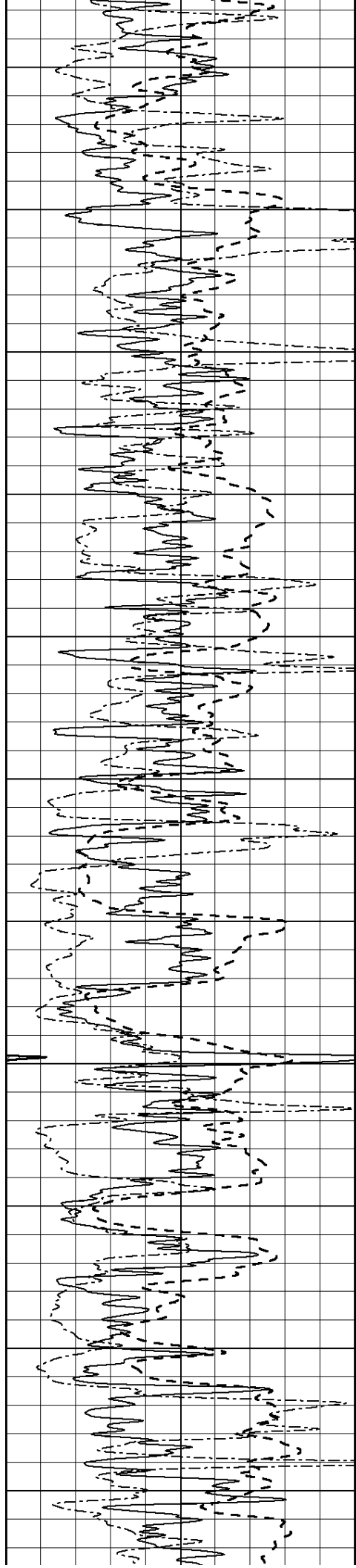
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

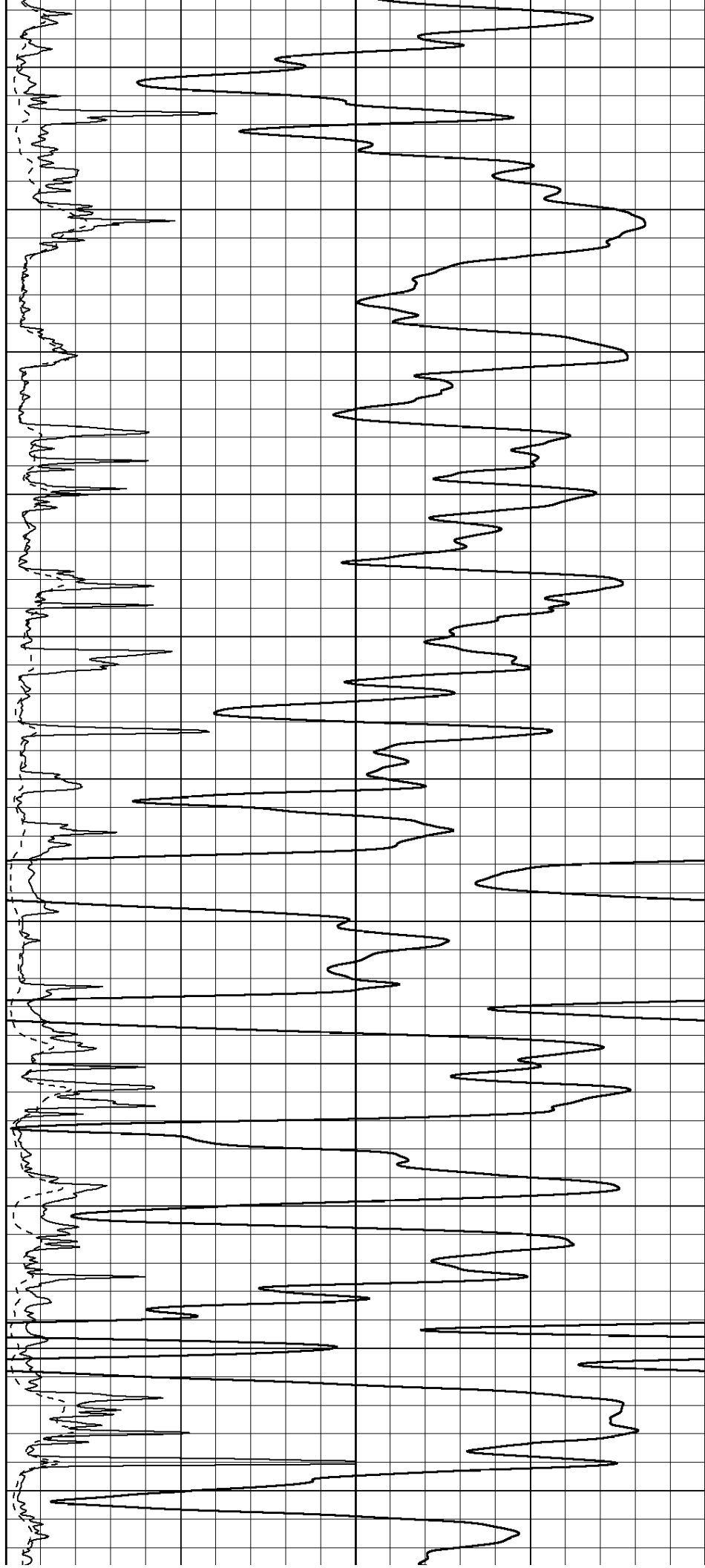
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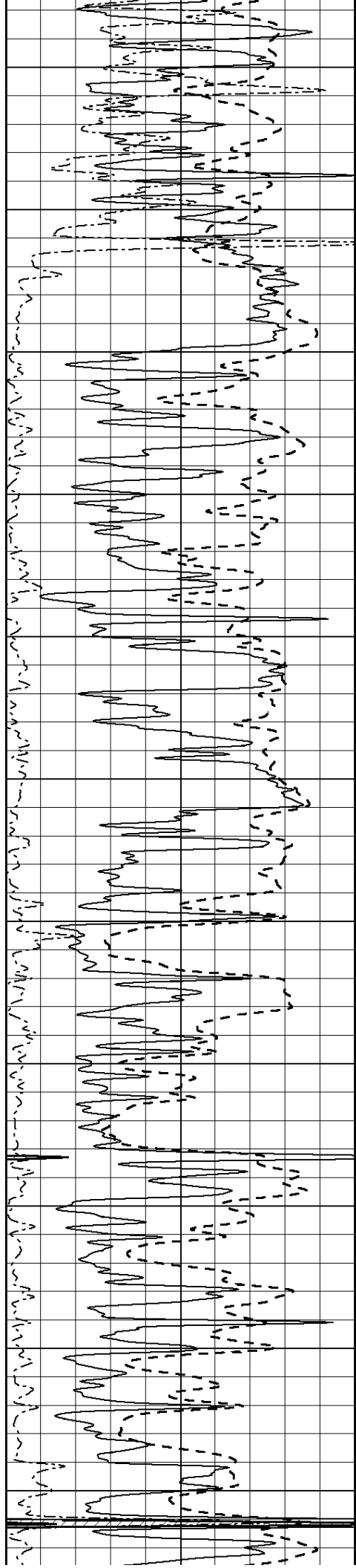
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3050

3100

3150





3200

3250

3300

3350

3400

3450

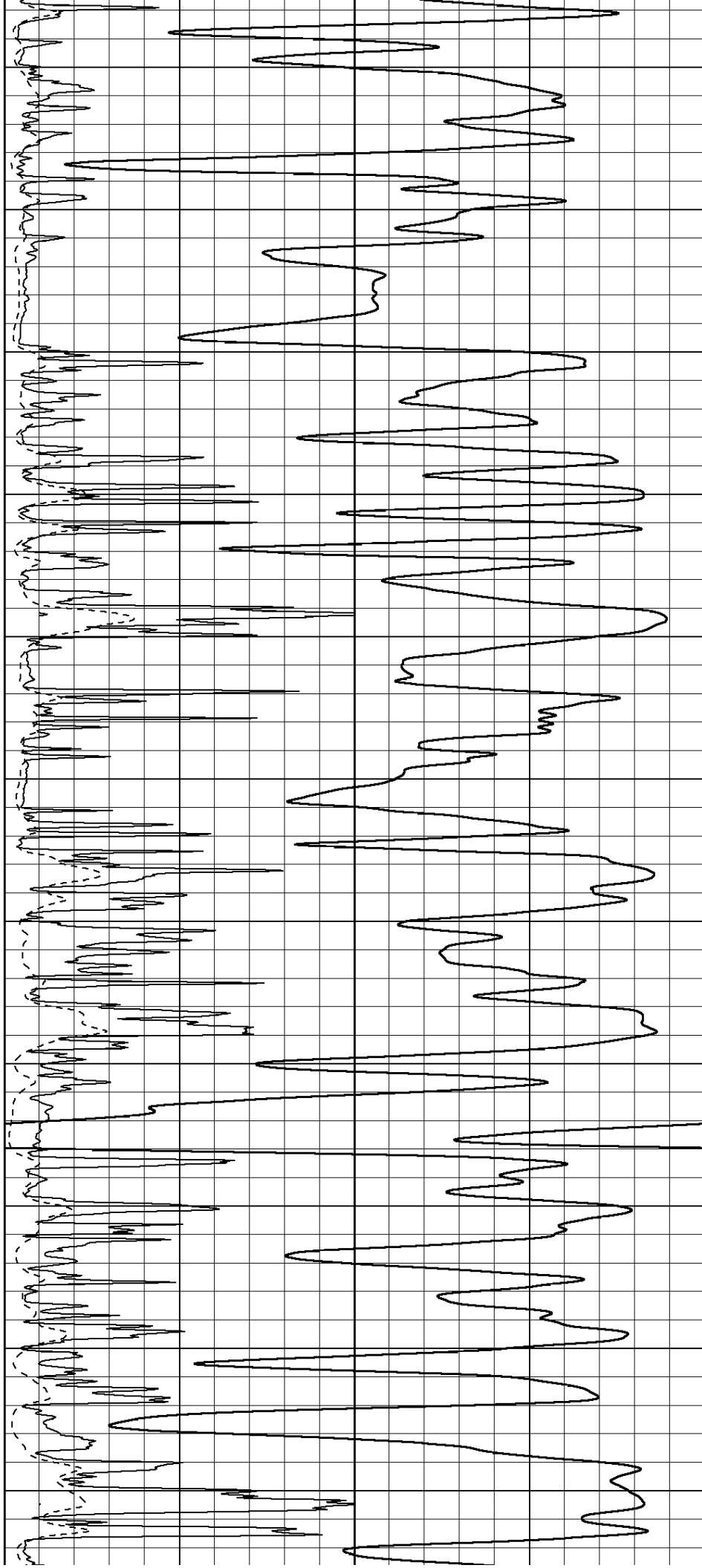
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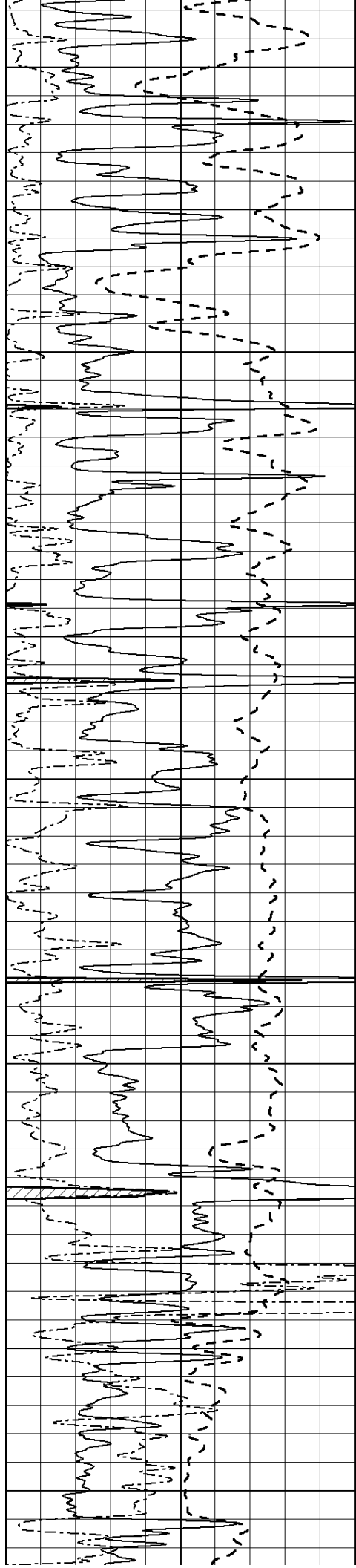
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3600

3650

3700





3750

3800

3850

3900

3950

4000

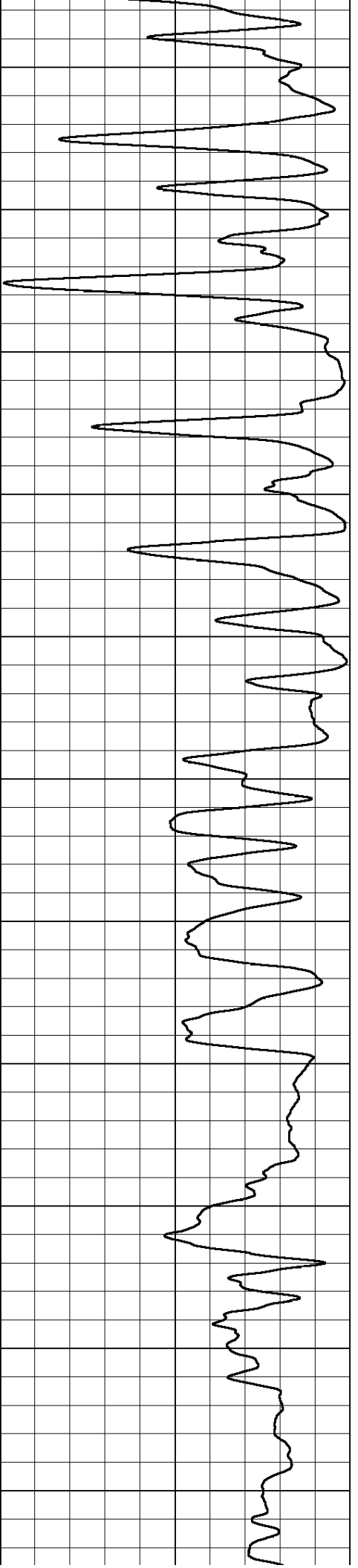
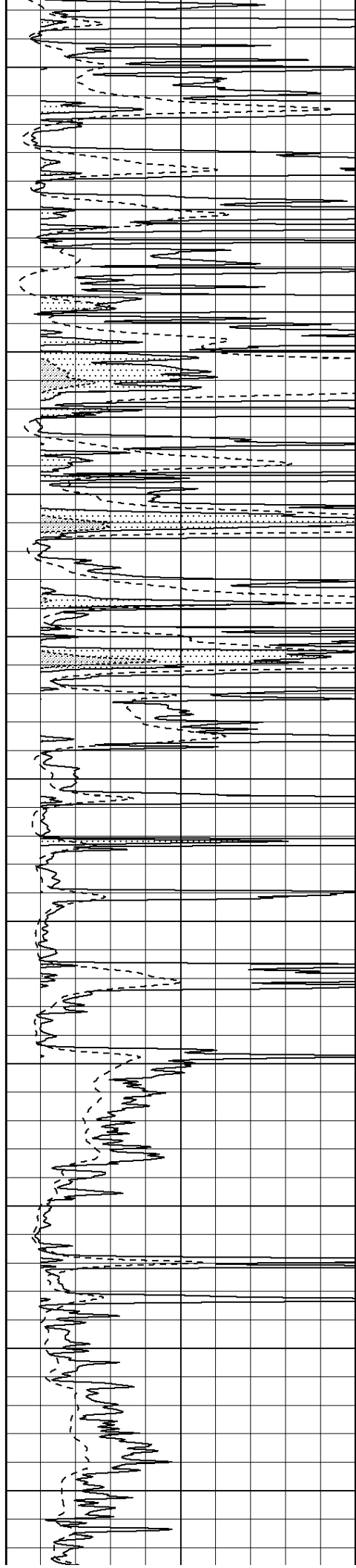
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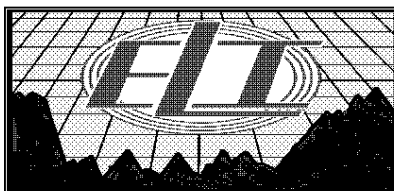
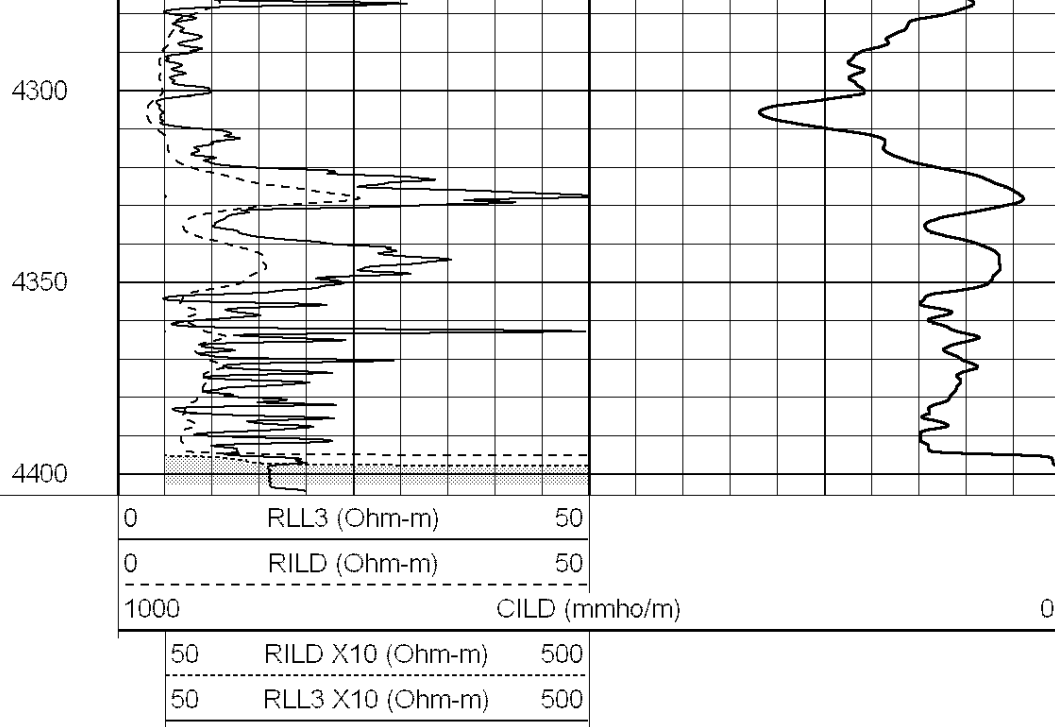
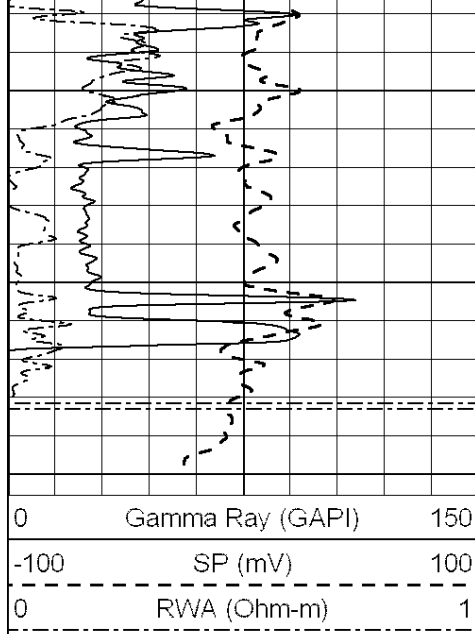
4100

4150

4200

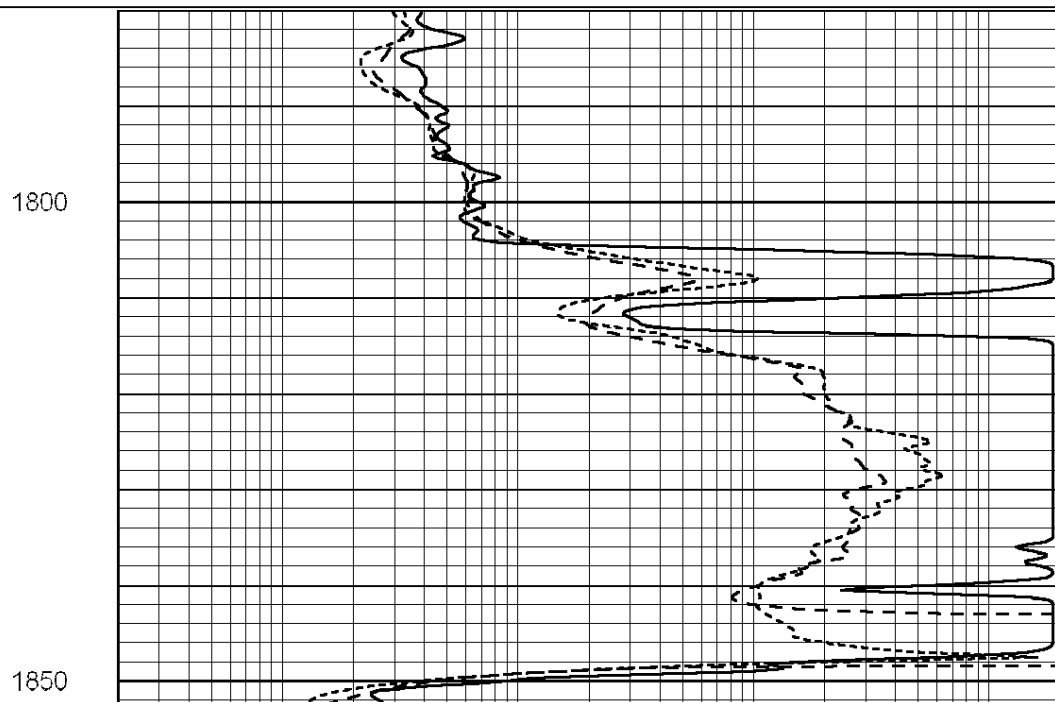
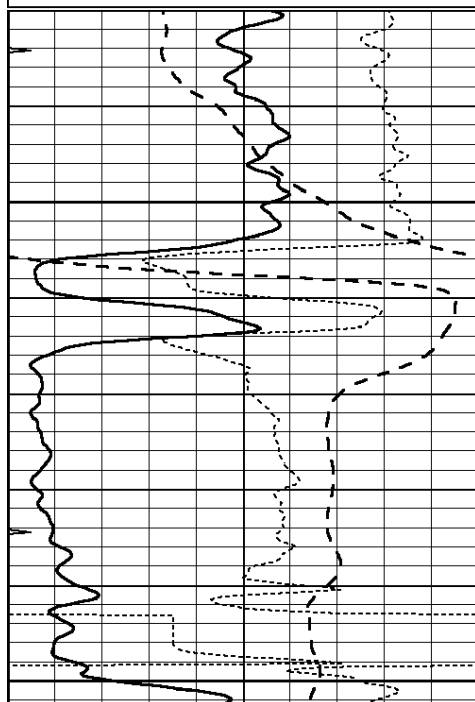
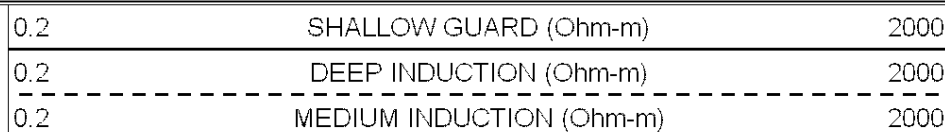
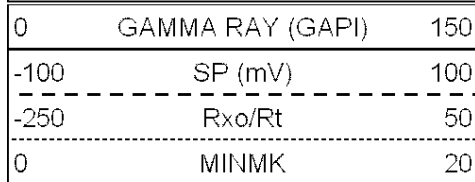
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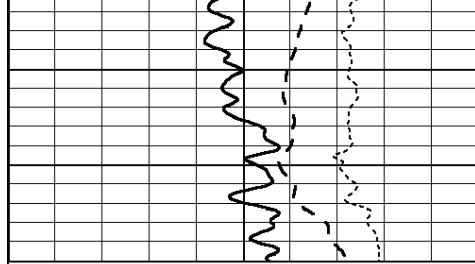




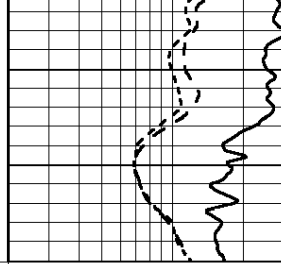
ANHYDRITE

Database File: 3603ddn.db
 Dataset Pathname: pass3.6
 Presentation Format: _dil
 Dataset Creation: Thu Mar 14 06:22:48 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

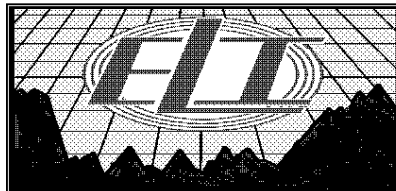




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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

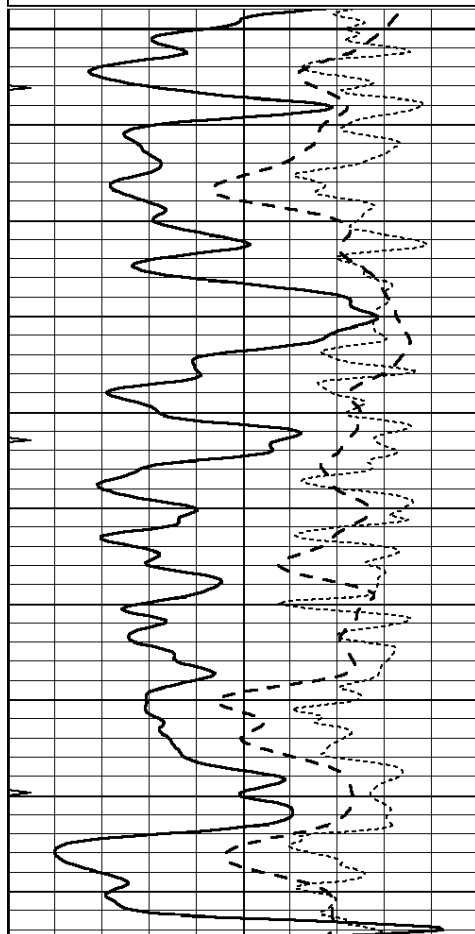


MAIN SECTION

Database File: 3603ddn.db
 Dataset Pathname: pass3.5
 Presentation Format: _dil
 Dataset Creation: Thu Mar 14 06:21:53 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

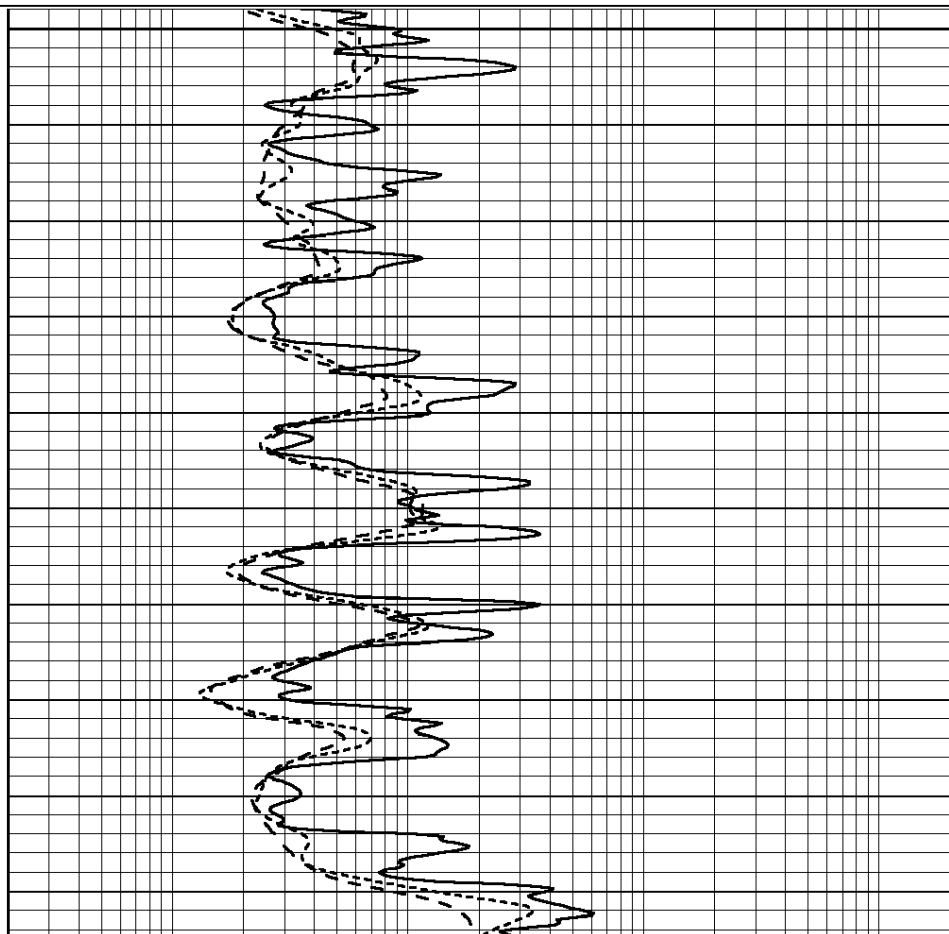
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

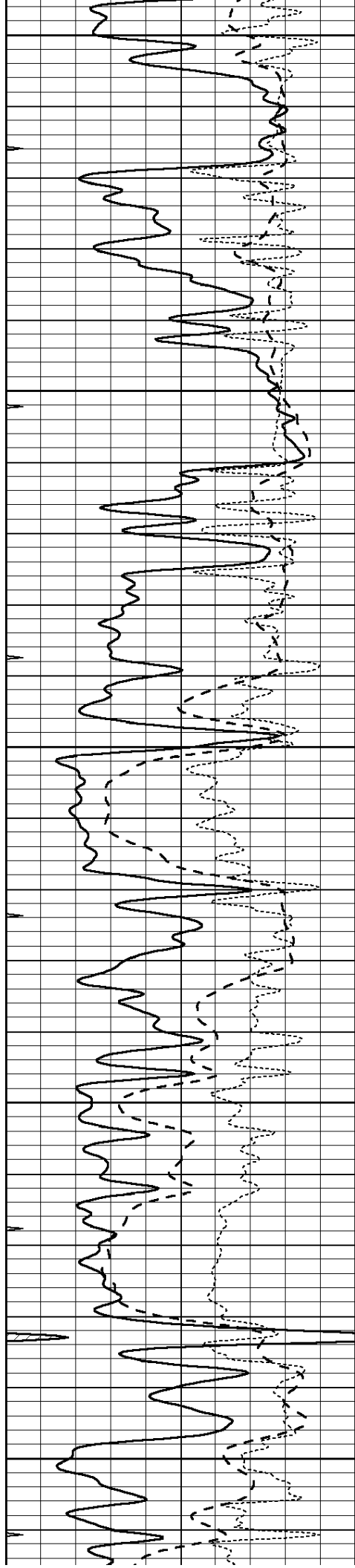
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3300

3350





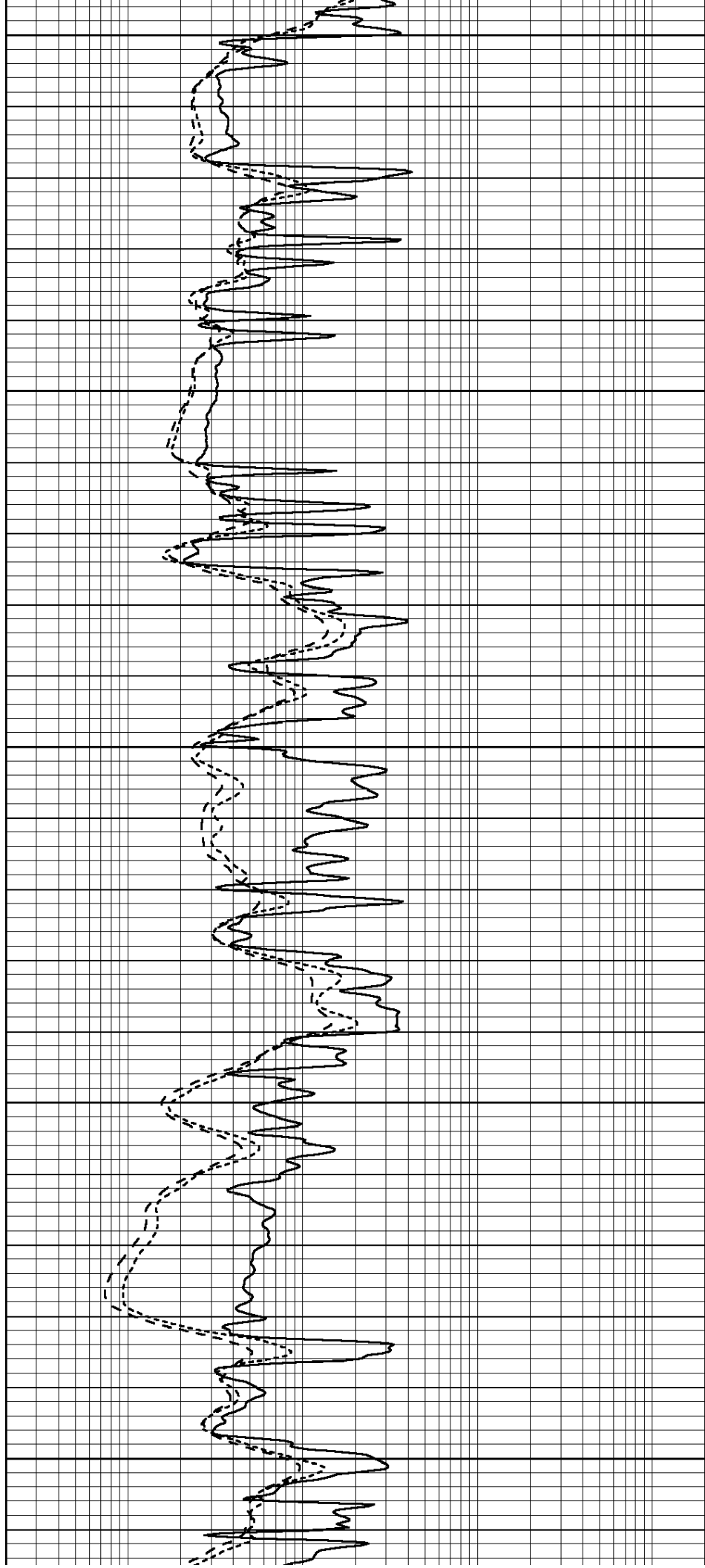
3400

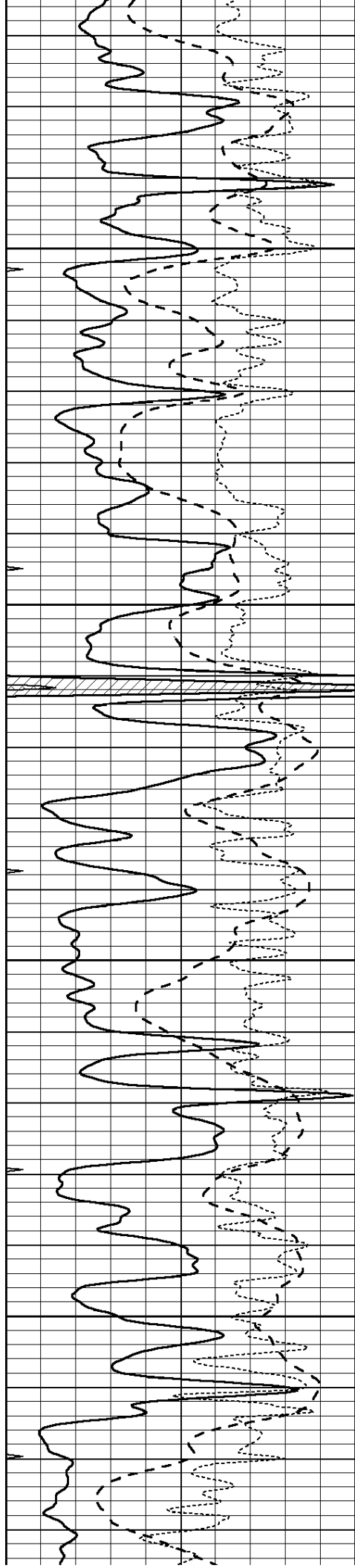
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3500

3550

3600



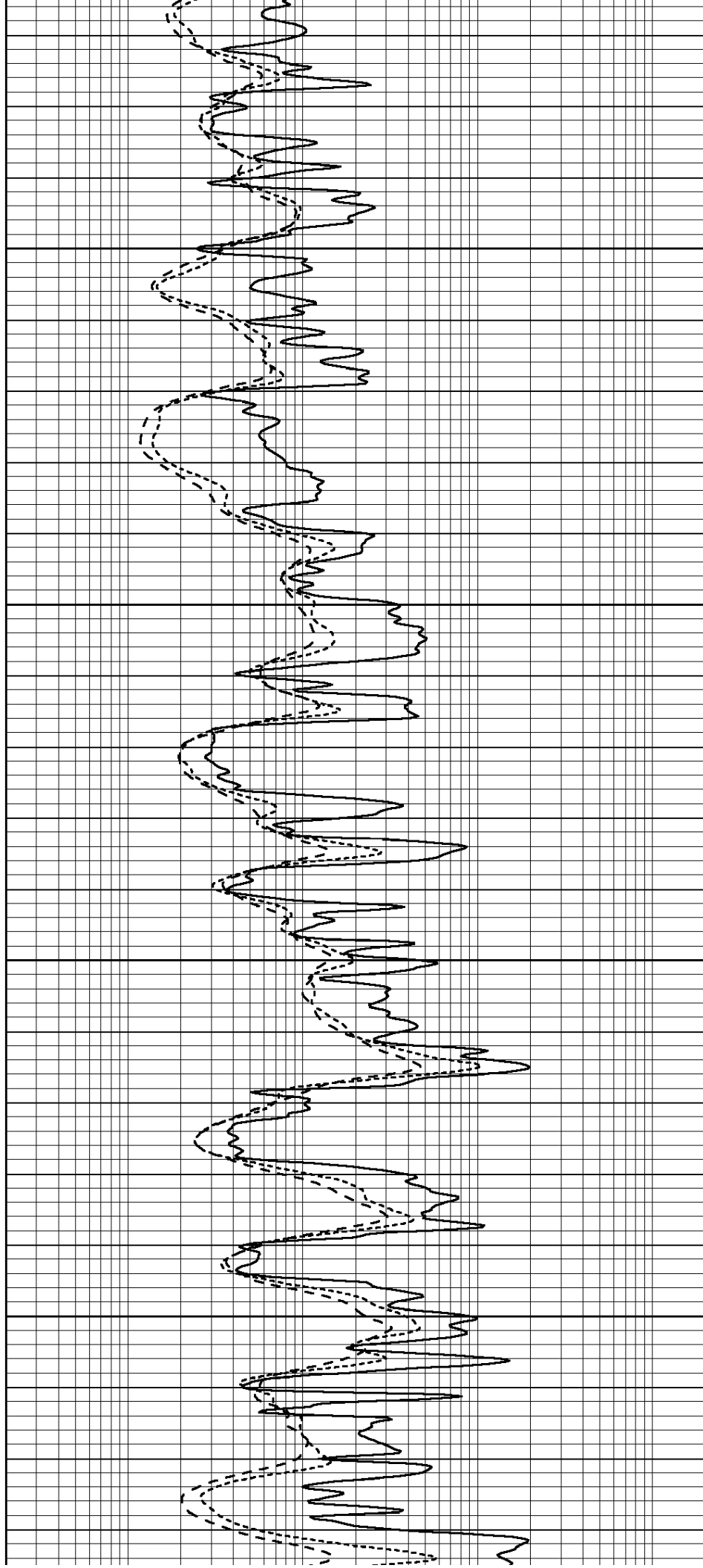


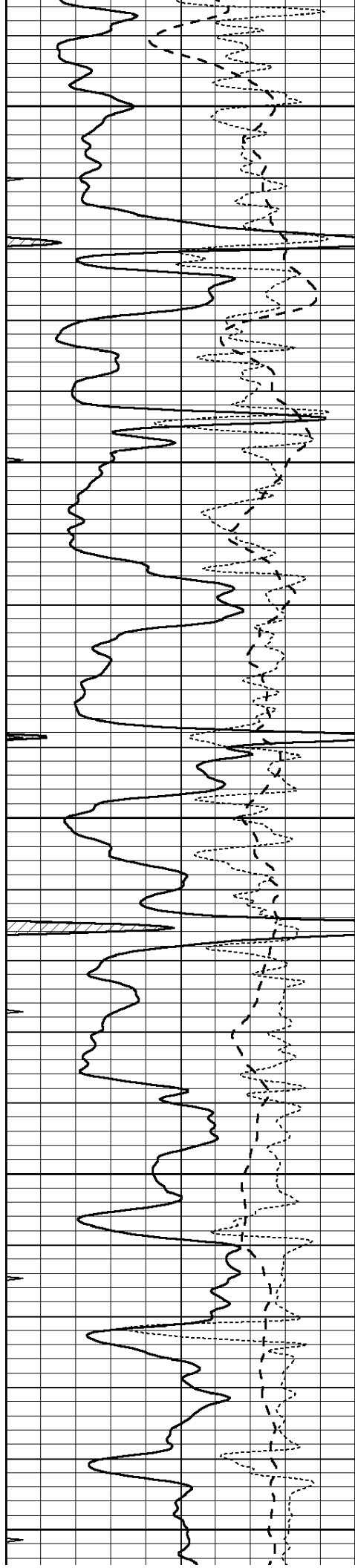
3650

3700

3750

3800





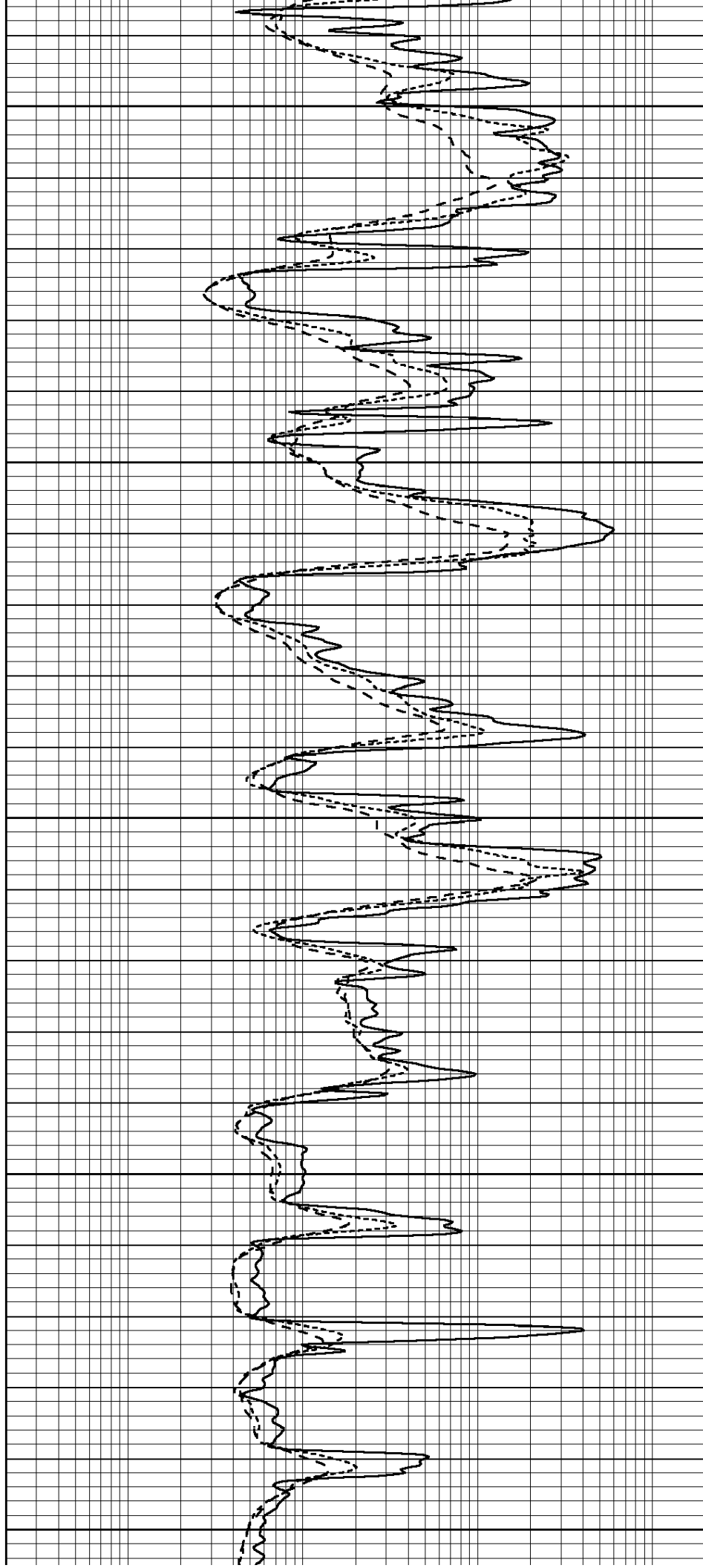
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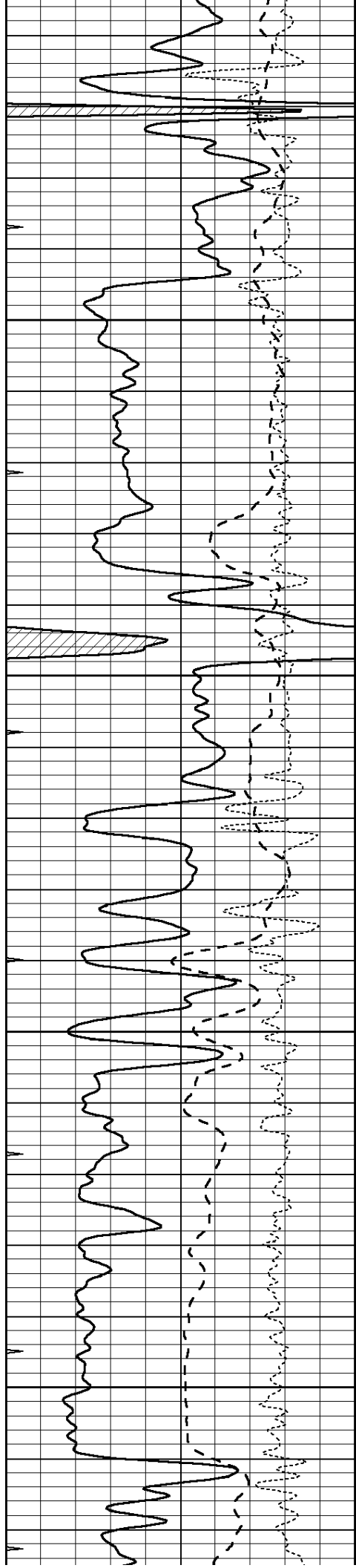
3900

3950

4000

4050



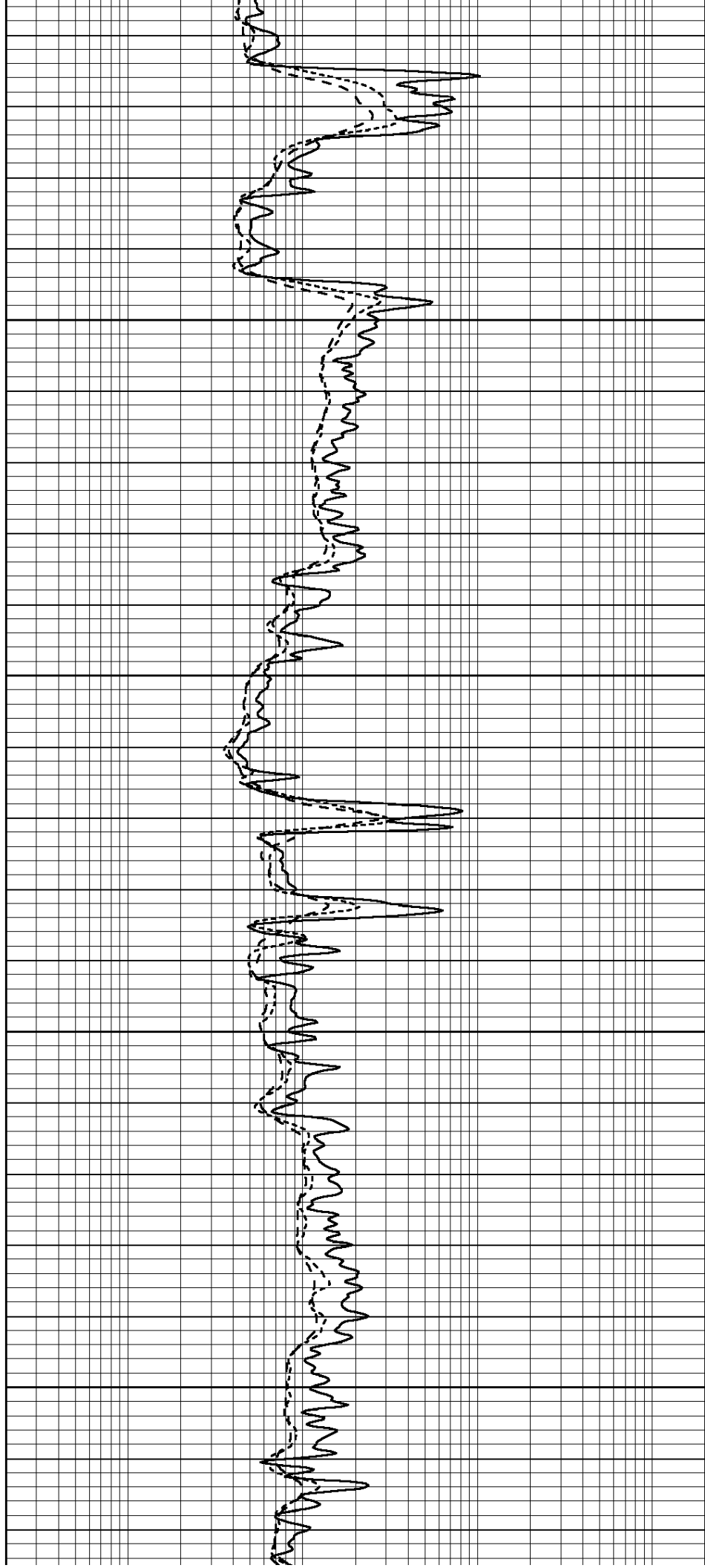


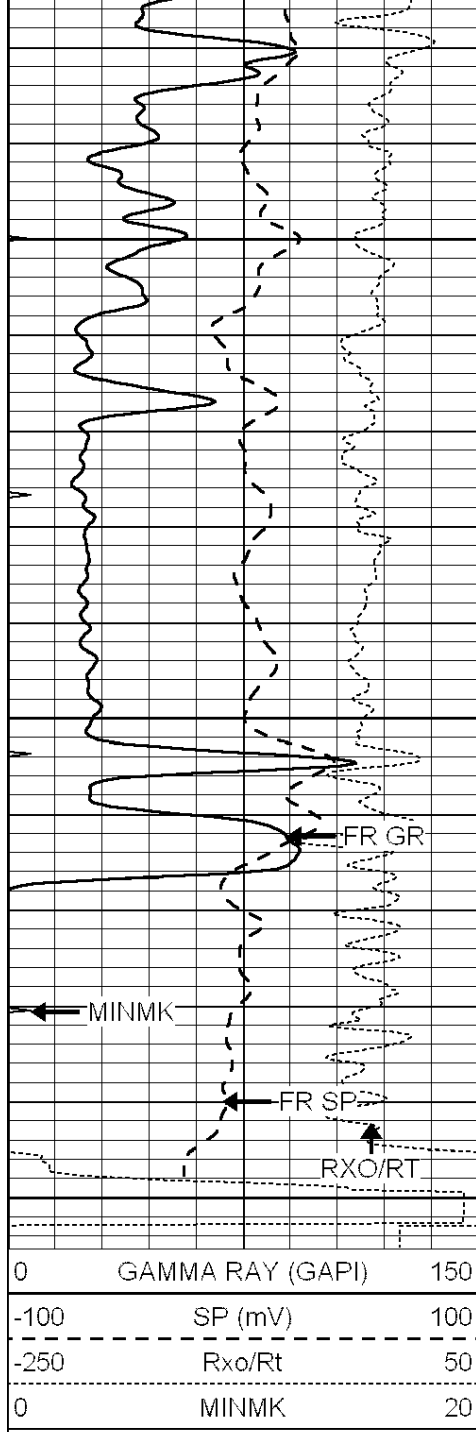
4100

4150

4200

4250





4300

4350

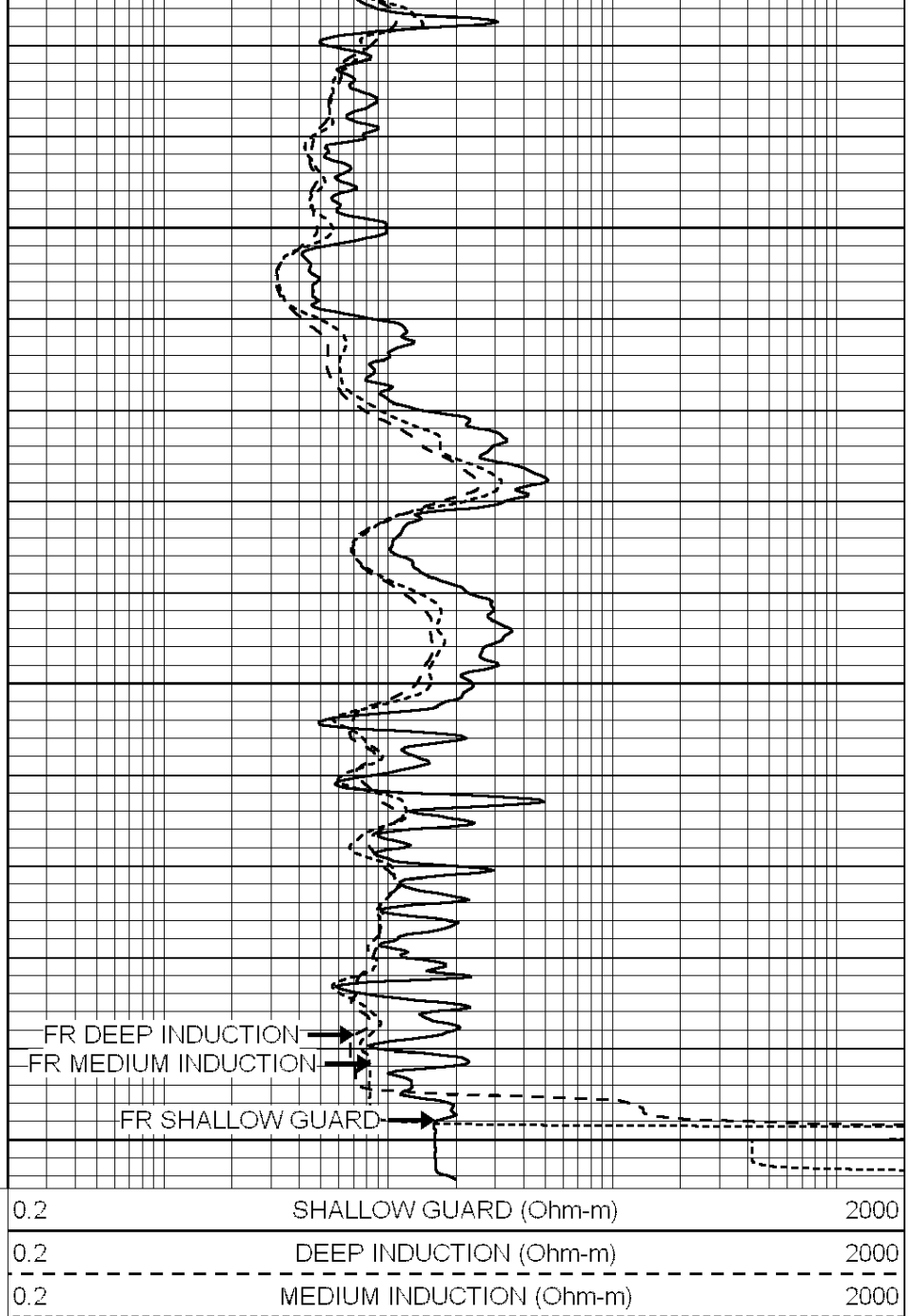
4400

FR GR

MINMK

FR SP

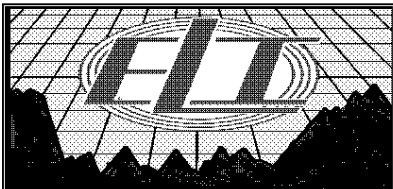
RXO/RT



FR DEEP INDUCTION

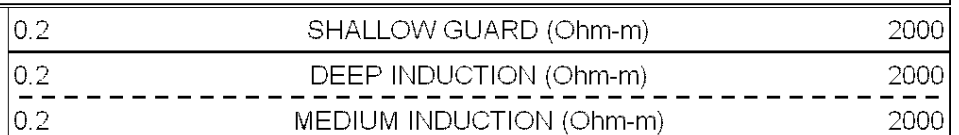
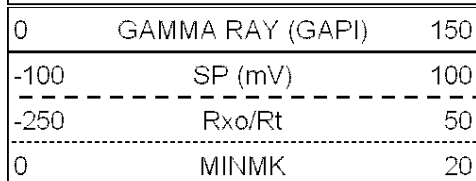
FR MEDIUM INDUCTION

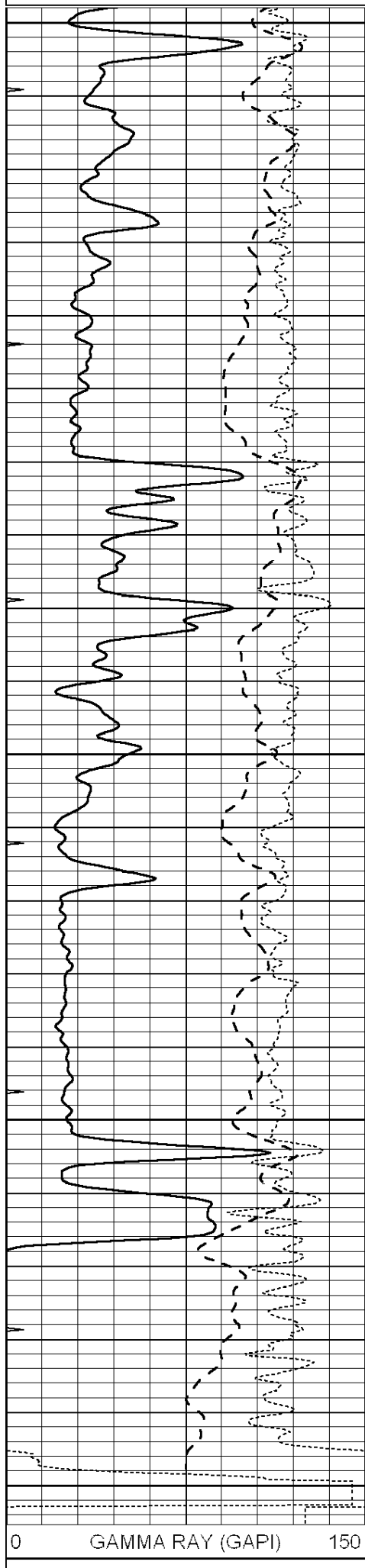
FR SHALLOW GUARD



REPEAT SECTION

Database File: 3603ddn.db
 Dataset Pathname: pass2.6
 Presentation Format: _dil
 Dataset Creation: Thu Mar 14 05:56:33 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240





4200

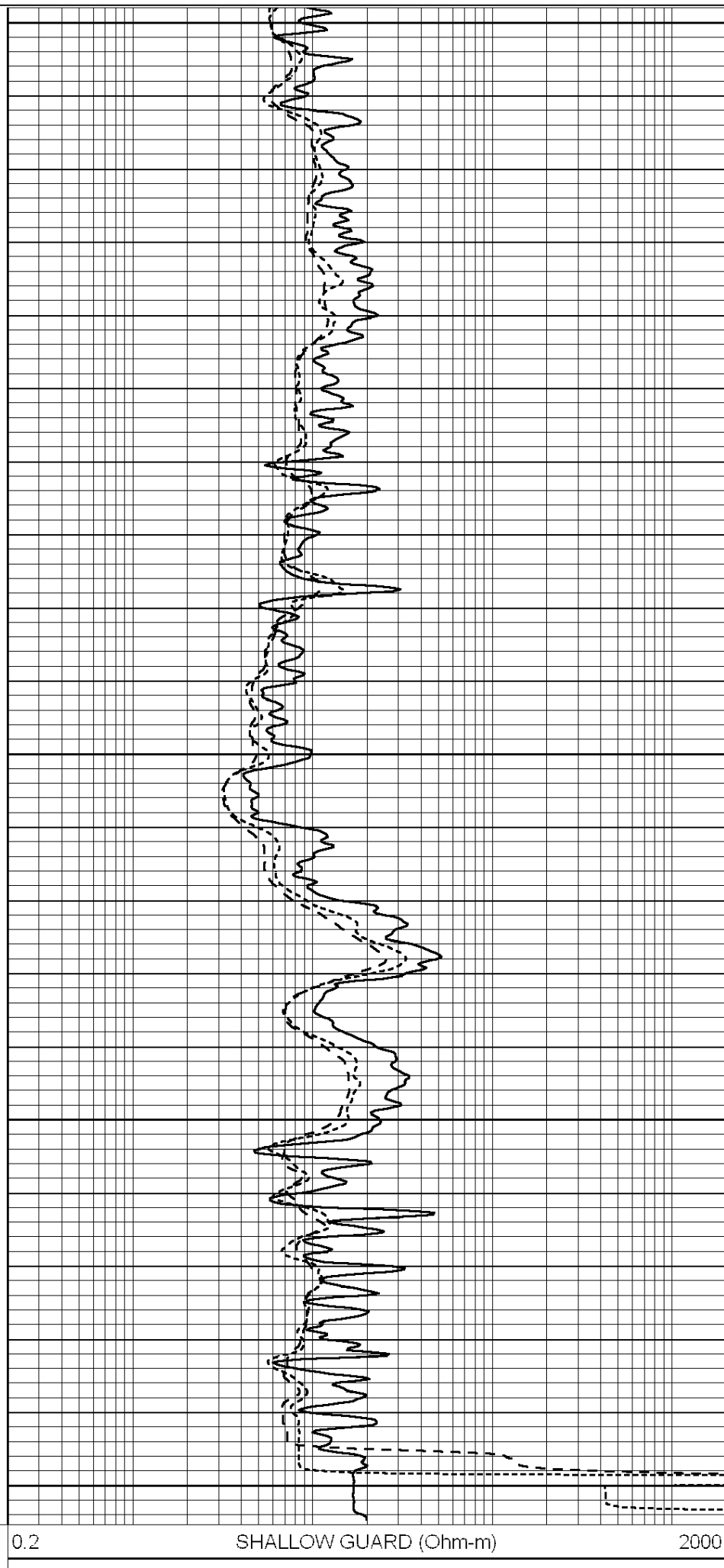
4250

4300

4350

4400

0 GAMMA RAY (GAPI) 150



0.2 SHALLOW GUARD (Ohm-m) 2000

100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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

Calibration Report

Database File: 1598ddn.db
Dataset Pathname: pass4
Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
Surface Cal Performed: Wed Aug 30 00:06:33 2017
Downhole Cal Performed: Mon Jul 28 12:02:56 2008
After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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 Mon Aug 21 11:27:42 2017

	Background	Magnesium	Aluminum	Sandstone	
Window 1	837.1	10632.5	2945.1	12110.1	cps
Window 2	772.0	9117.4	2570.1	10197.3	cps
Window 3	631.7	4669.0	1481.9	5042.9	cps
Window 4	187.0	187.5	185.9	189.9	cps
Long Space	0.0	8345.4	1798.1	9425.3	cps
Short Space	1.1	1927.9	1285.9	2050.2	cps
Rho		1.7100	2.5960	1.3800	g/cc
Rho		0.0000	2.5700	1.5500	

PC		0.0000		2.9700		1.0000	
Rib Angle : 45.2		Rib Slope : 1.008		Density/Spine Ratio : 0.558			
Spine Angle : 75.2		Spine Slope : 3.790		Spine Intercept : -19.6			
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:		070808					
Tool Model:		Probe					
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 May 31 00:09:32 2017					
Calibrator Value:		1.0		GAPI			
Background Reading:		0.0		cps			
Calibrator Reading:		1.0		cps			
Sensitivity:		0.2800		GAPI/cps			