



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company		PHILLIPS EXPLORATION CO., LC	
Well		MINER #2-7	
Field		WILDCAT	
County		NESS	
State		KANSAS	
Company		PHILLIPS EXPLORATION COMPANY, LC	
Well		MINER #2-7	
Field		WILDCAT	
County		NESS	
State		KANSAS	
Location:		API # : 15-135-25110-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		330' FNL & 330' FEL	
Drilling Measured From		NE - NE - NE	
SEC 7		TWP 18S	
RGE 24W		Elevation	
K.B. 2338		CDL/CNL	
D.F. 2336		MEL	
G.L. 2333			
Date	7-26-10		
Run Number	ONE		
Depth Driller	4480		
Depth Logger	4480		
Bottom Logged Interval	4478		
Top Log Interval	0		
Casing Driller	8 5/8" @ 218'		
Casing Logger	218'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4600 PPM	
Density / Viscosity	9.5/60		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10 @ 92F		
Rmf @ Meas. Temp	0.83 @ 92F		
Rmc @ Meas. Temp	1.32 @ 92F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.84 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	120F		
Equipment Number	680		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONEMEG		
Witnessed By	JAMES PHILLIPS		

<<< Fold Here >>>

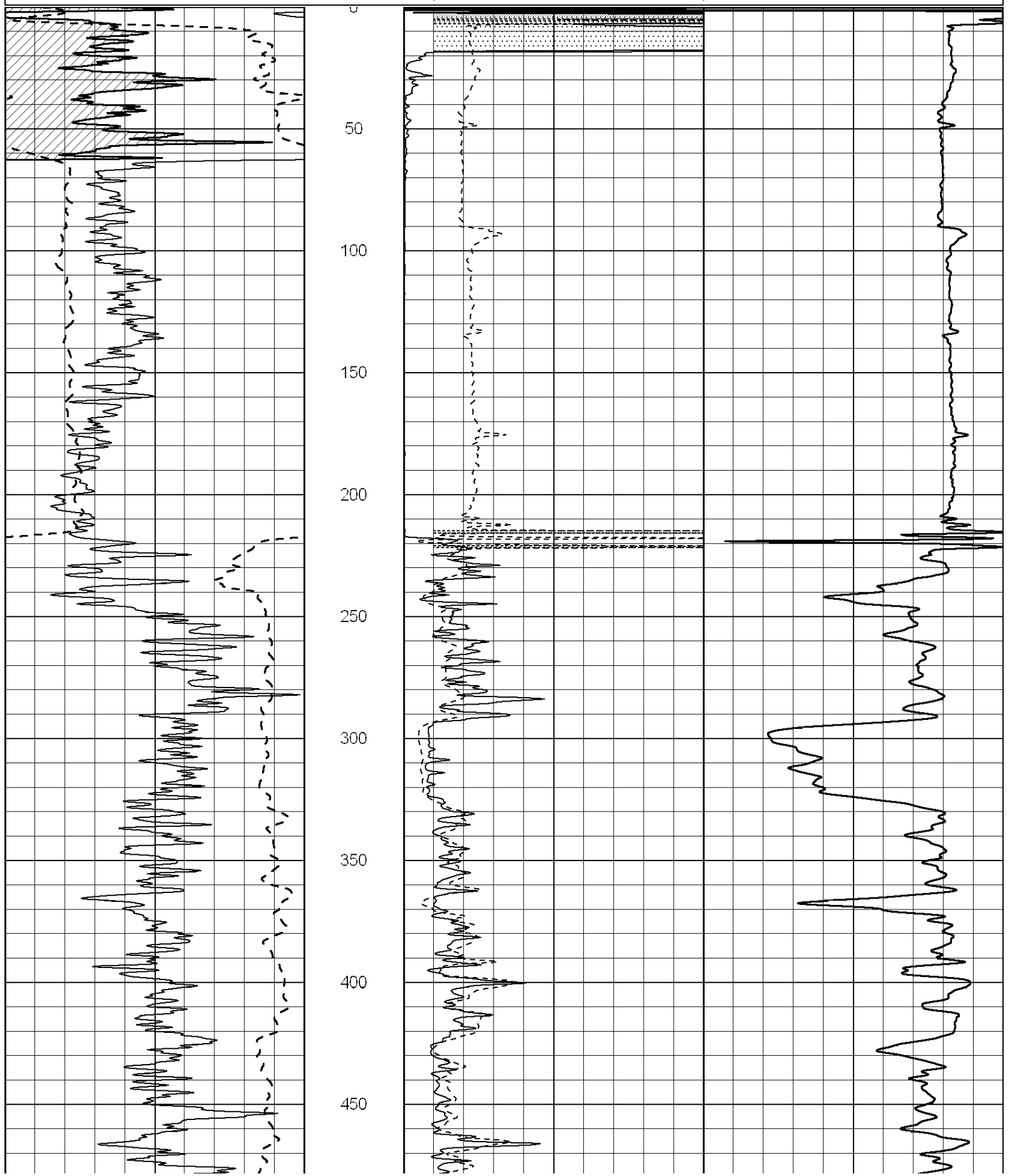
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

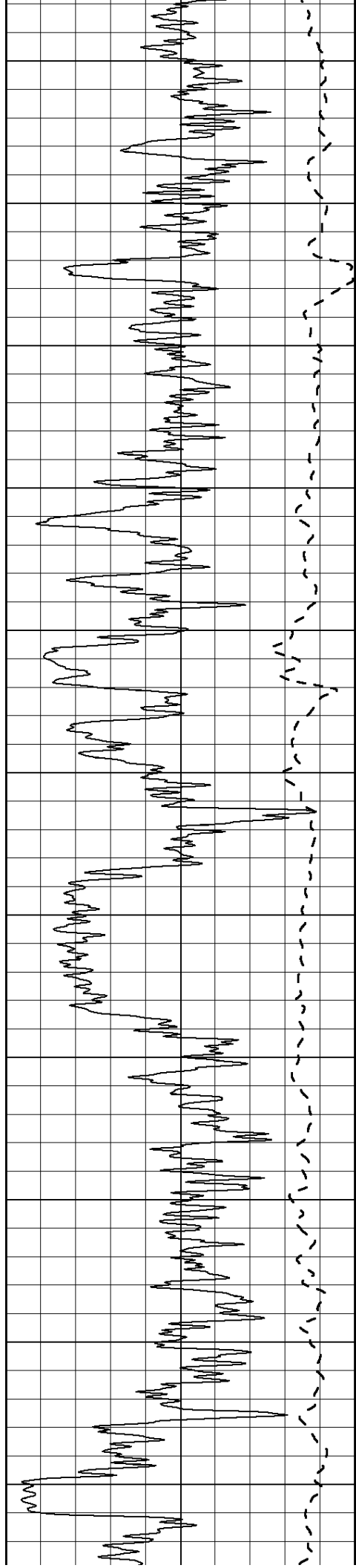
Comments

THANK YOU FOR USING SUPERIOR WELL SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
INTERSECTION OF HWYS 283 & 4 - 9 MILES SOUTH TO RD 170
5 1/2 MILES WEST - SOUTH INTO

Database File: 005416ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Mon Jul 26 11:07:01 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

Charted by: _____ Depth in feet scaled 1:600					
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
-----			-----		
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





500

550

600

650

700

750

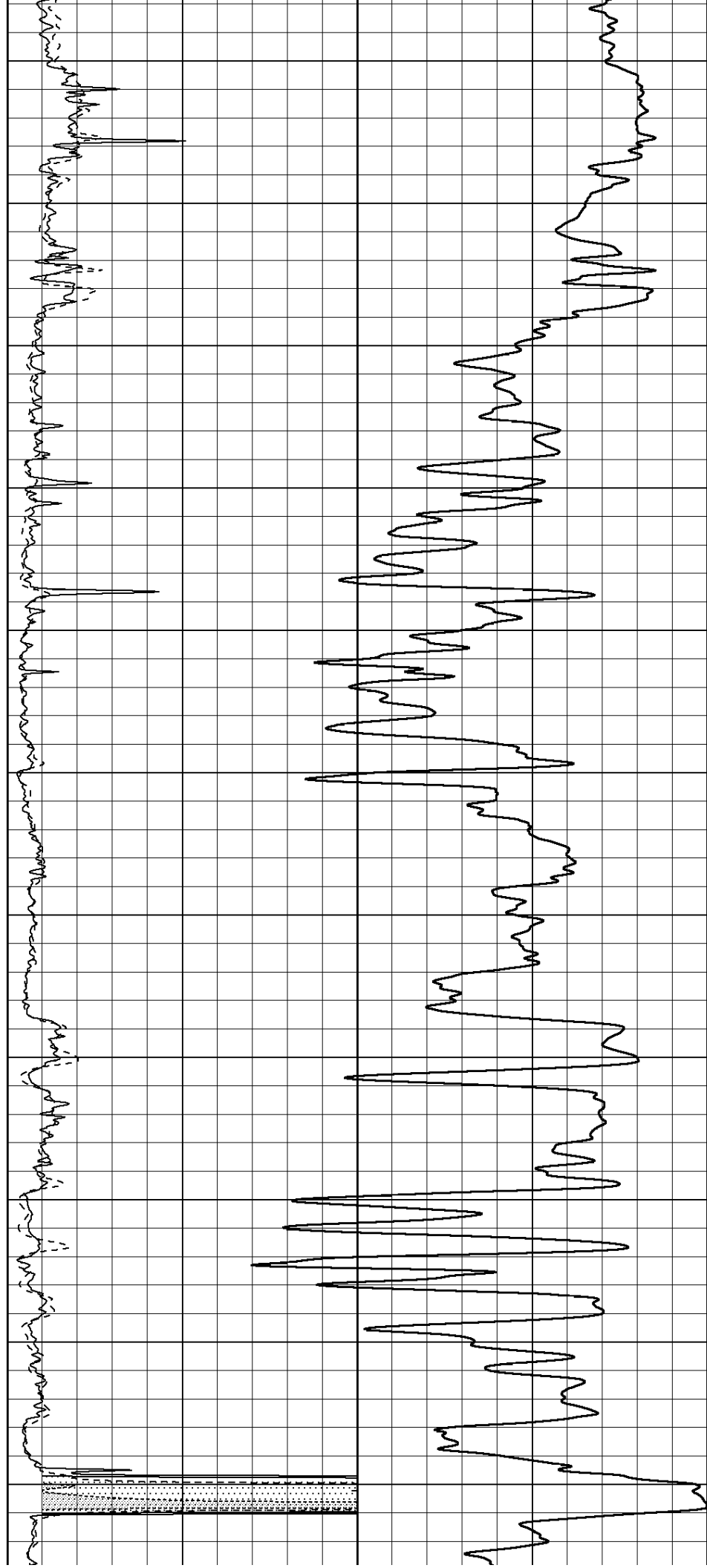
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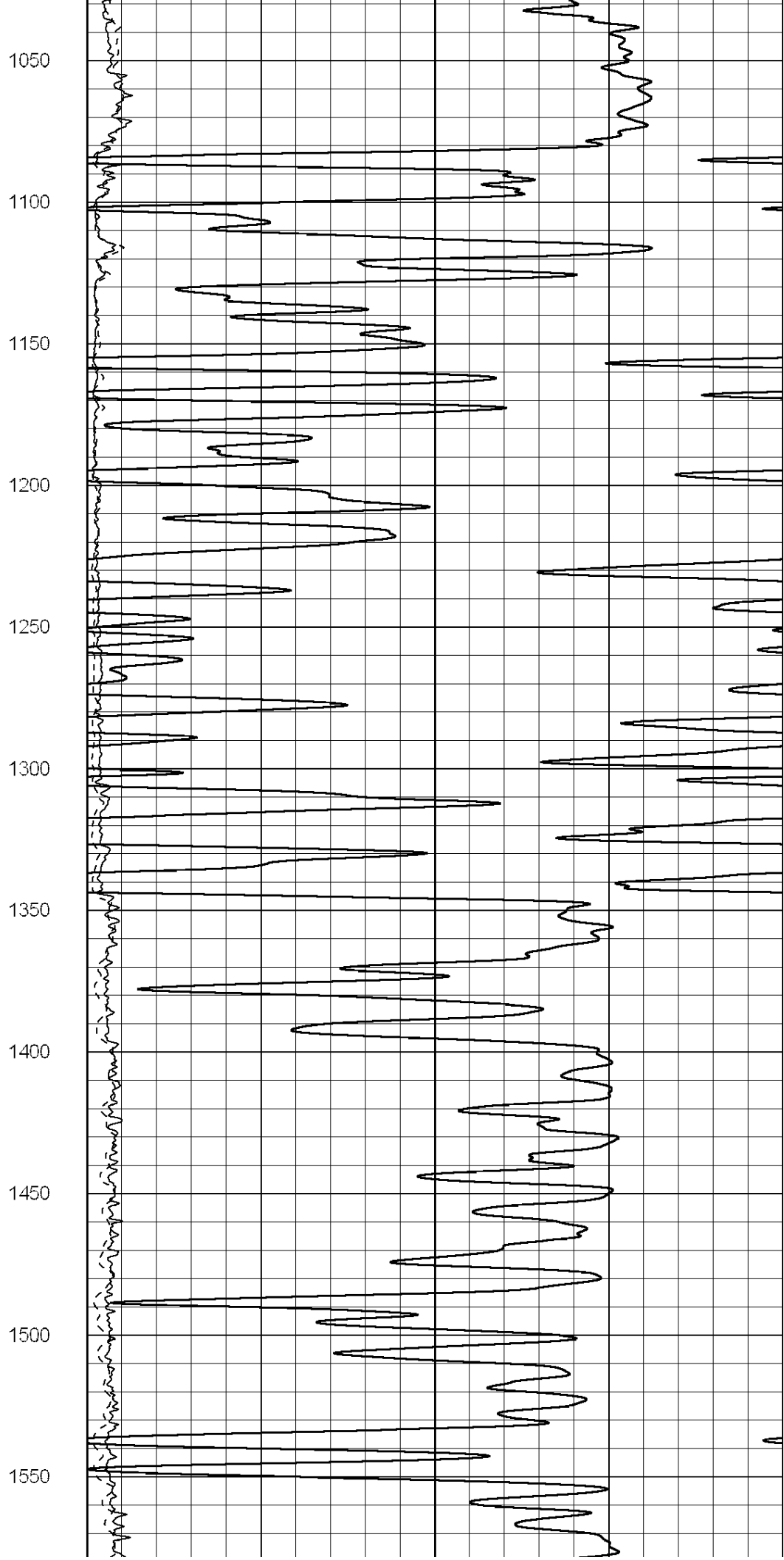
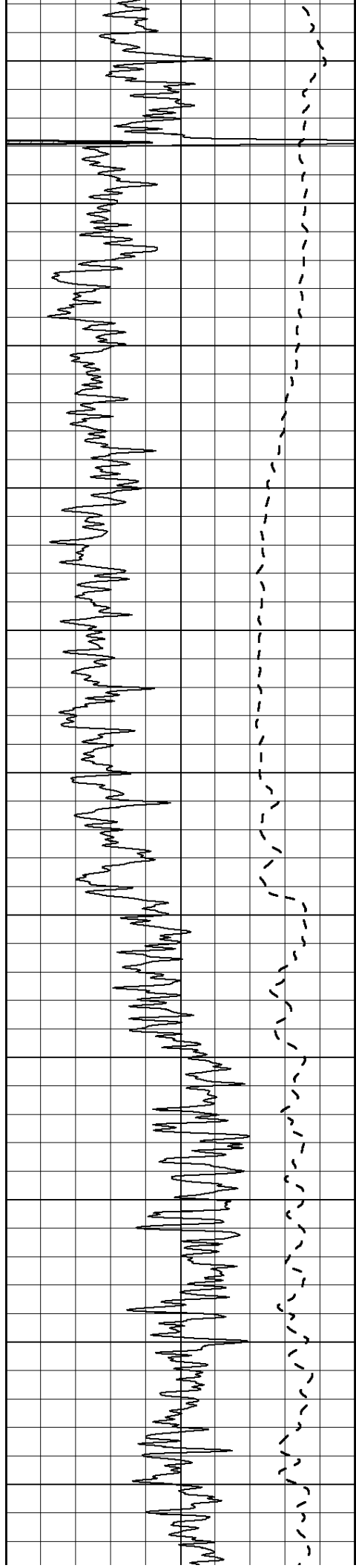
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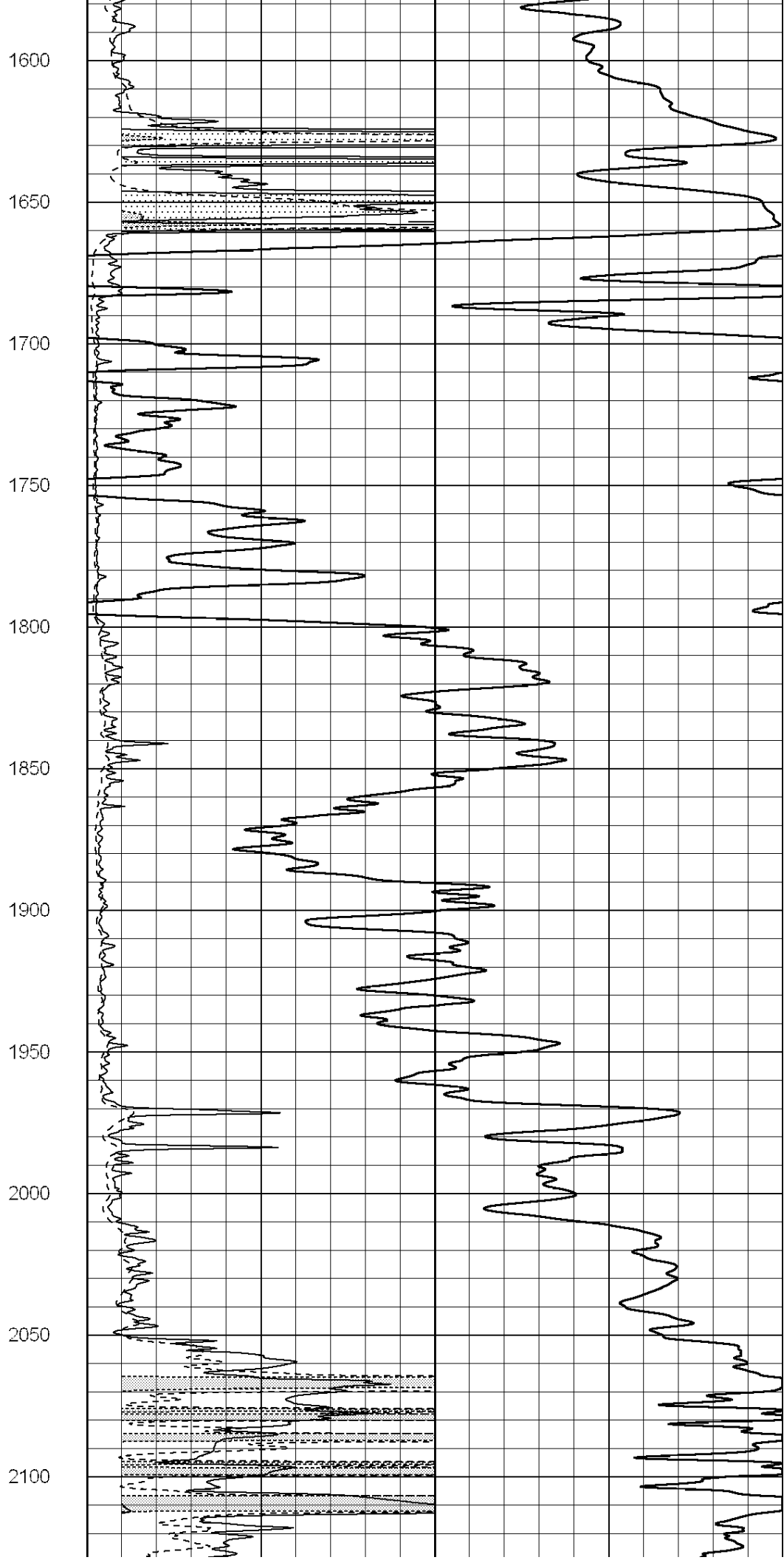
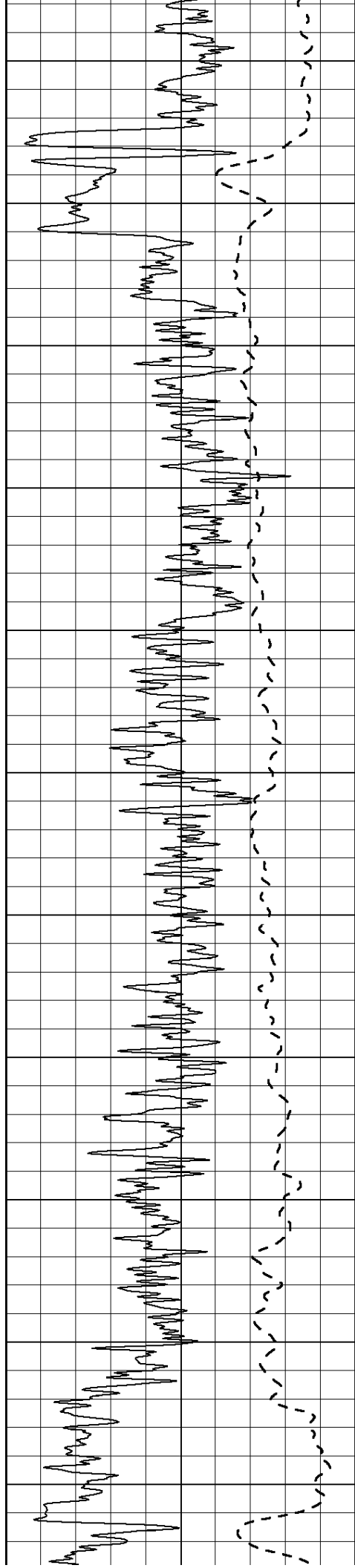
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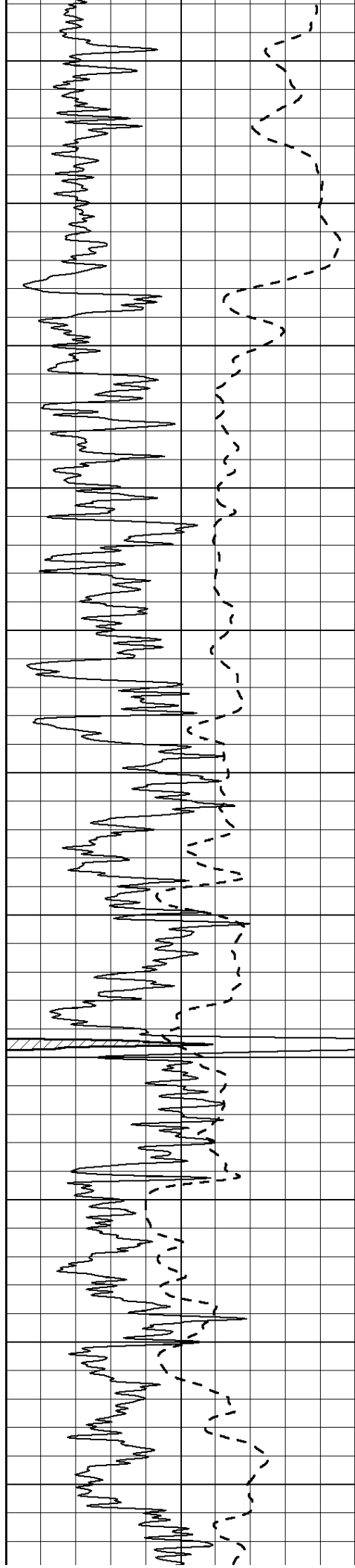
950

1000









2150

2200

2250

2300

2350

2400

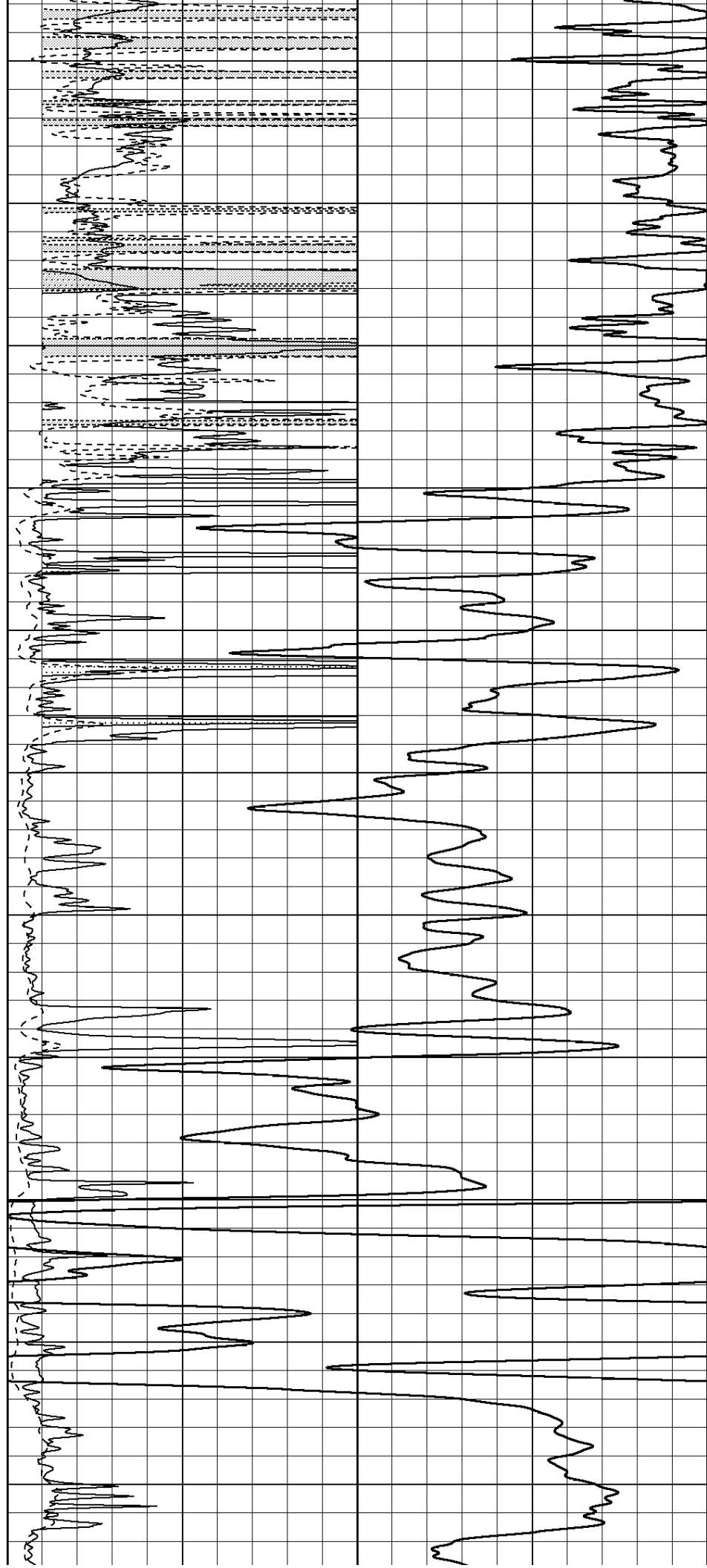
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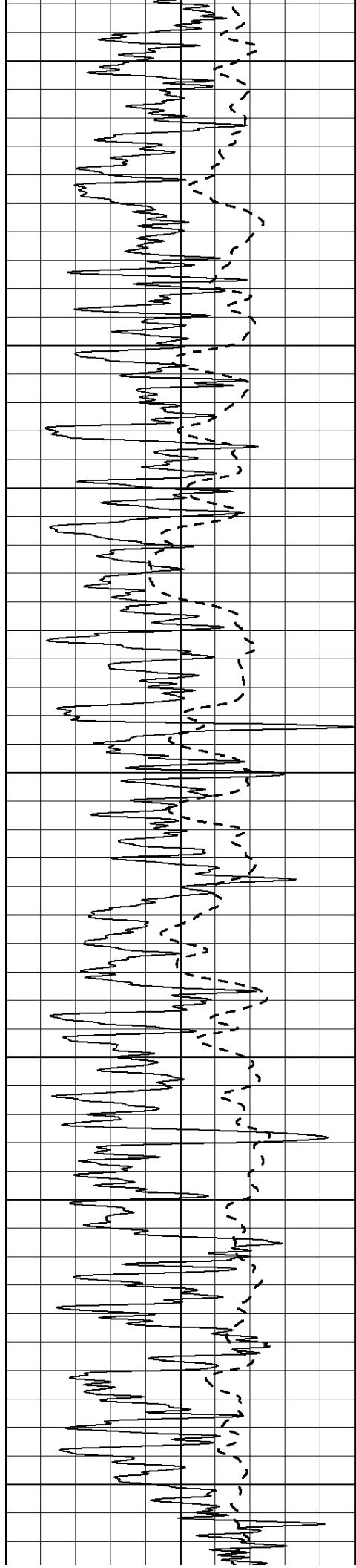
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2550

2600

2650





2700

2750

2800

2850

2900

2950

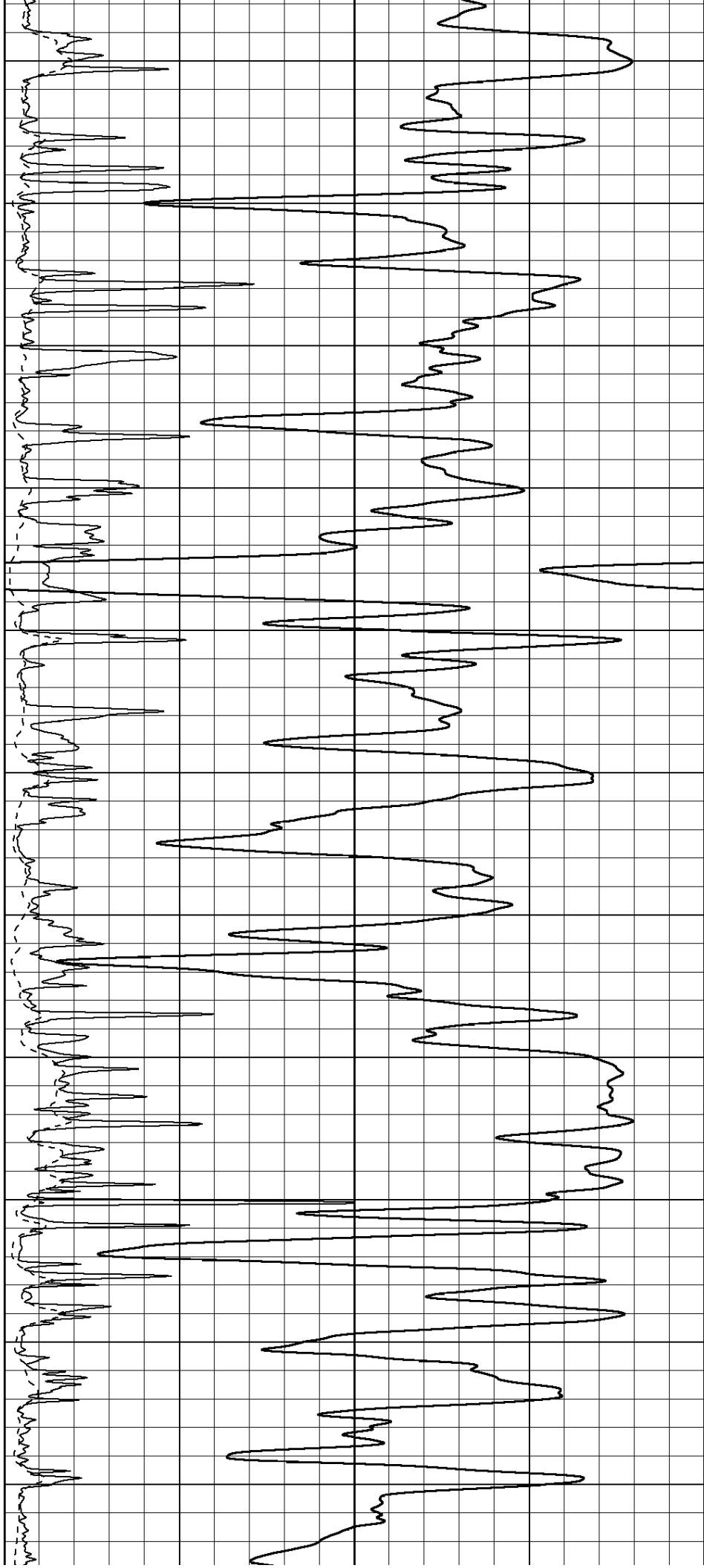
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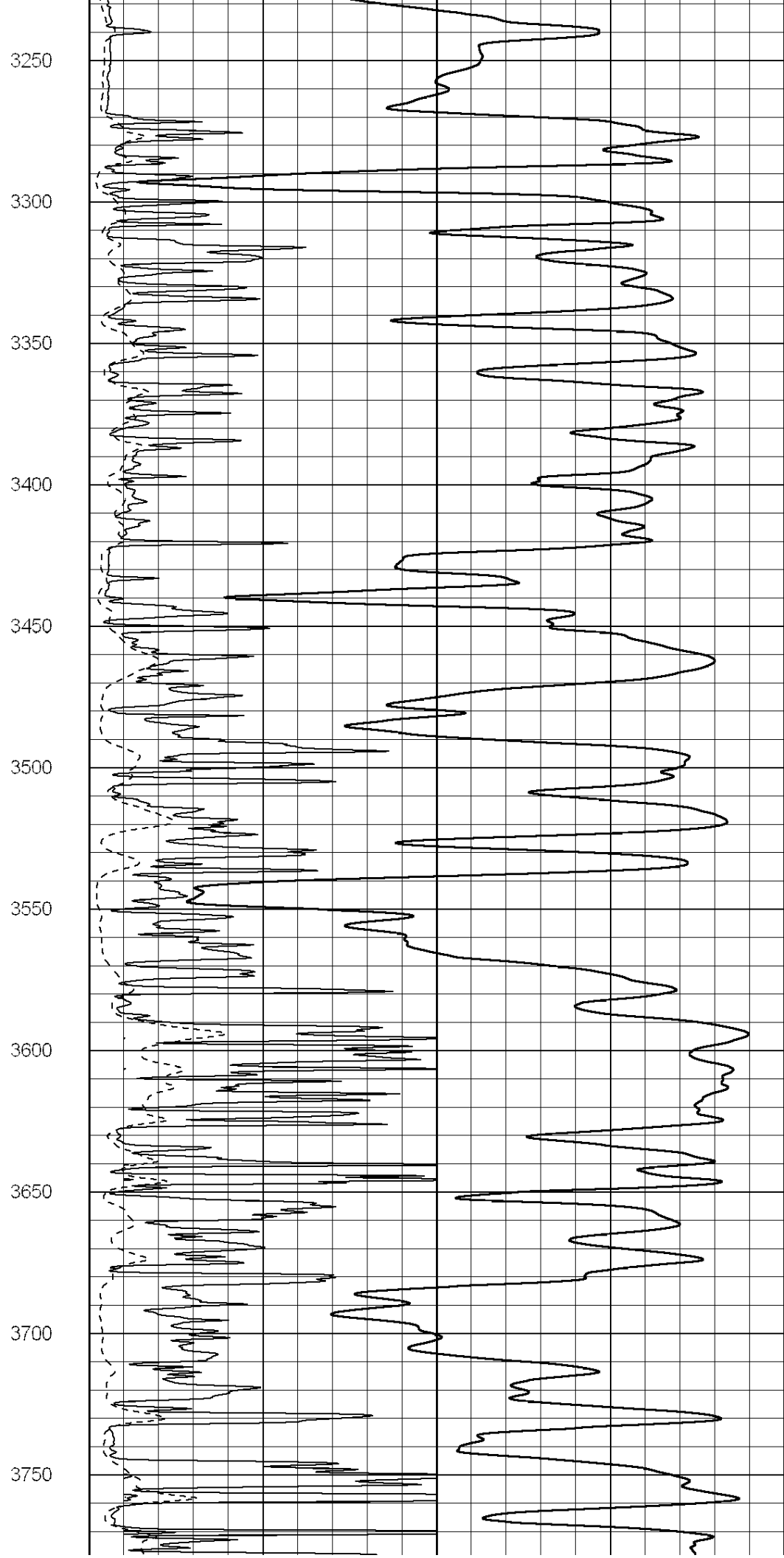
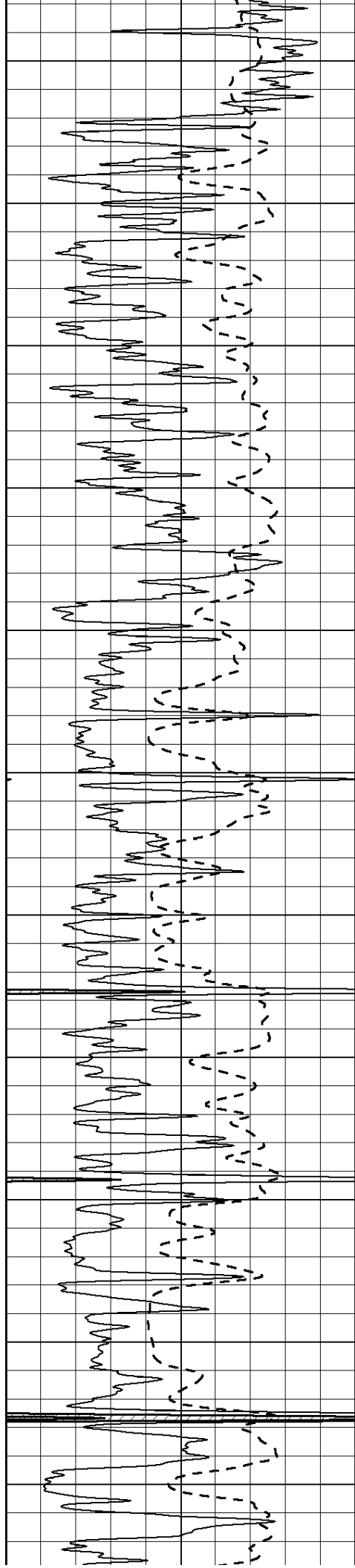
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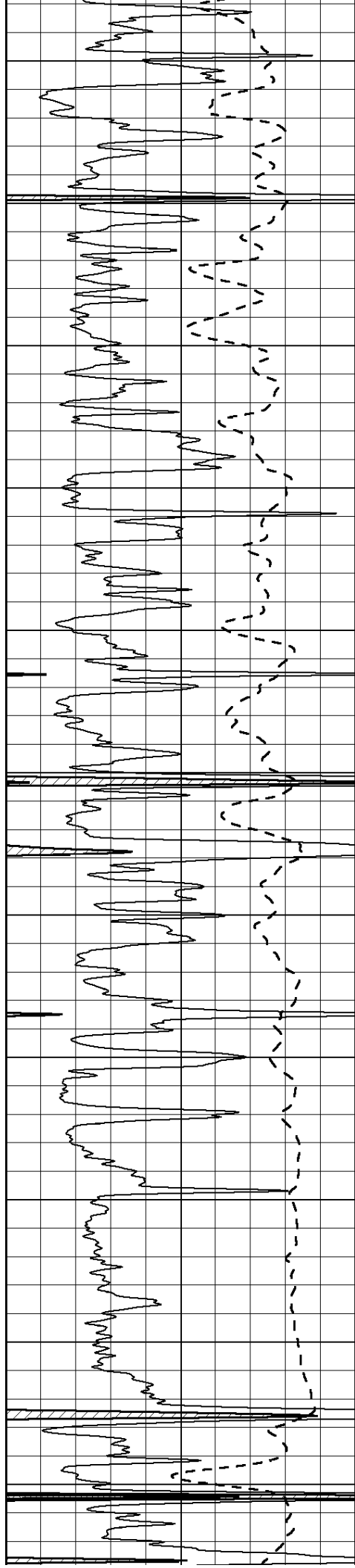
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3150

3200







3800

3850

3900

3950

4000

4050

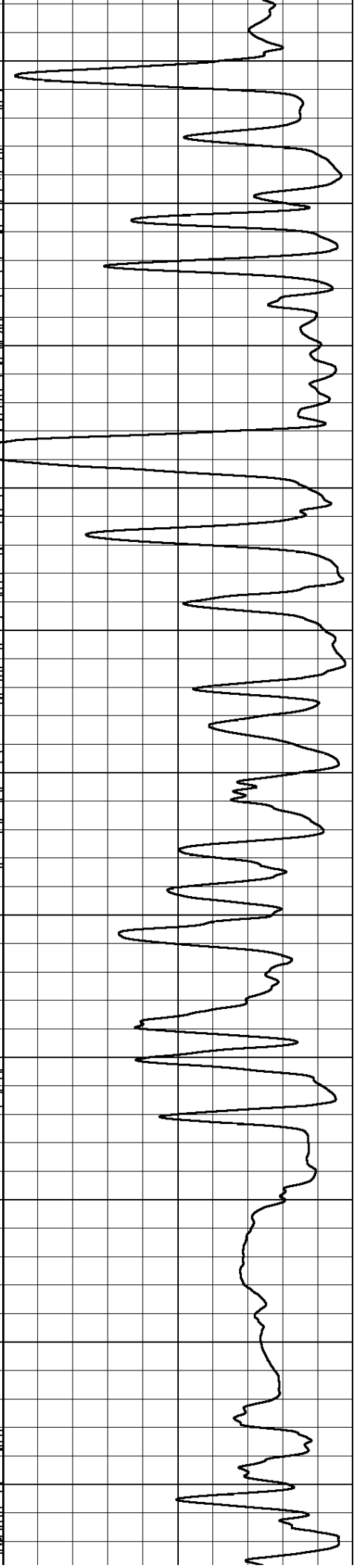
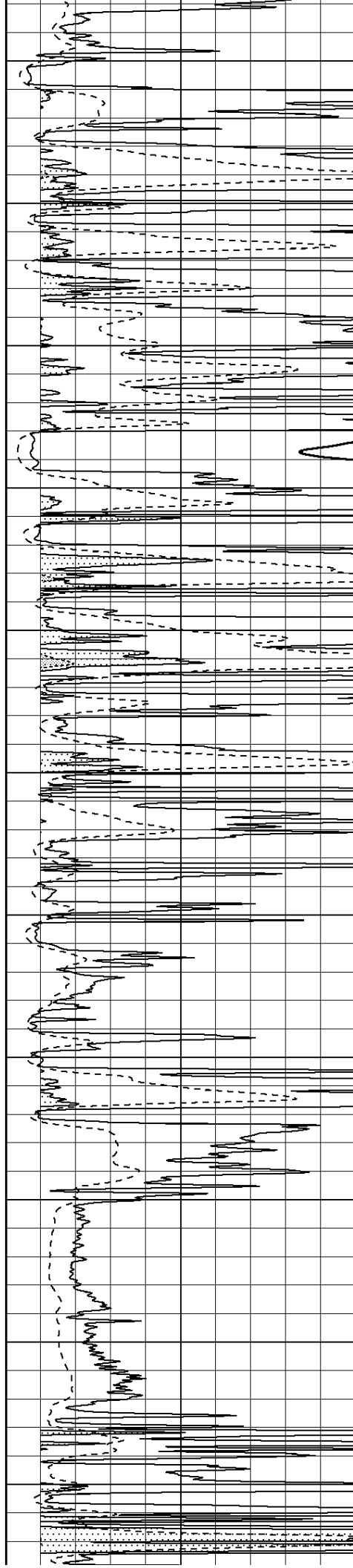
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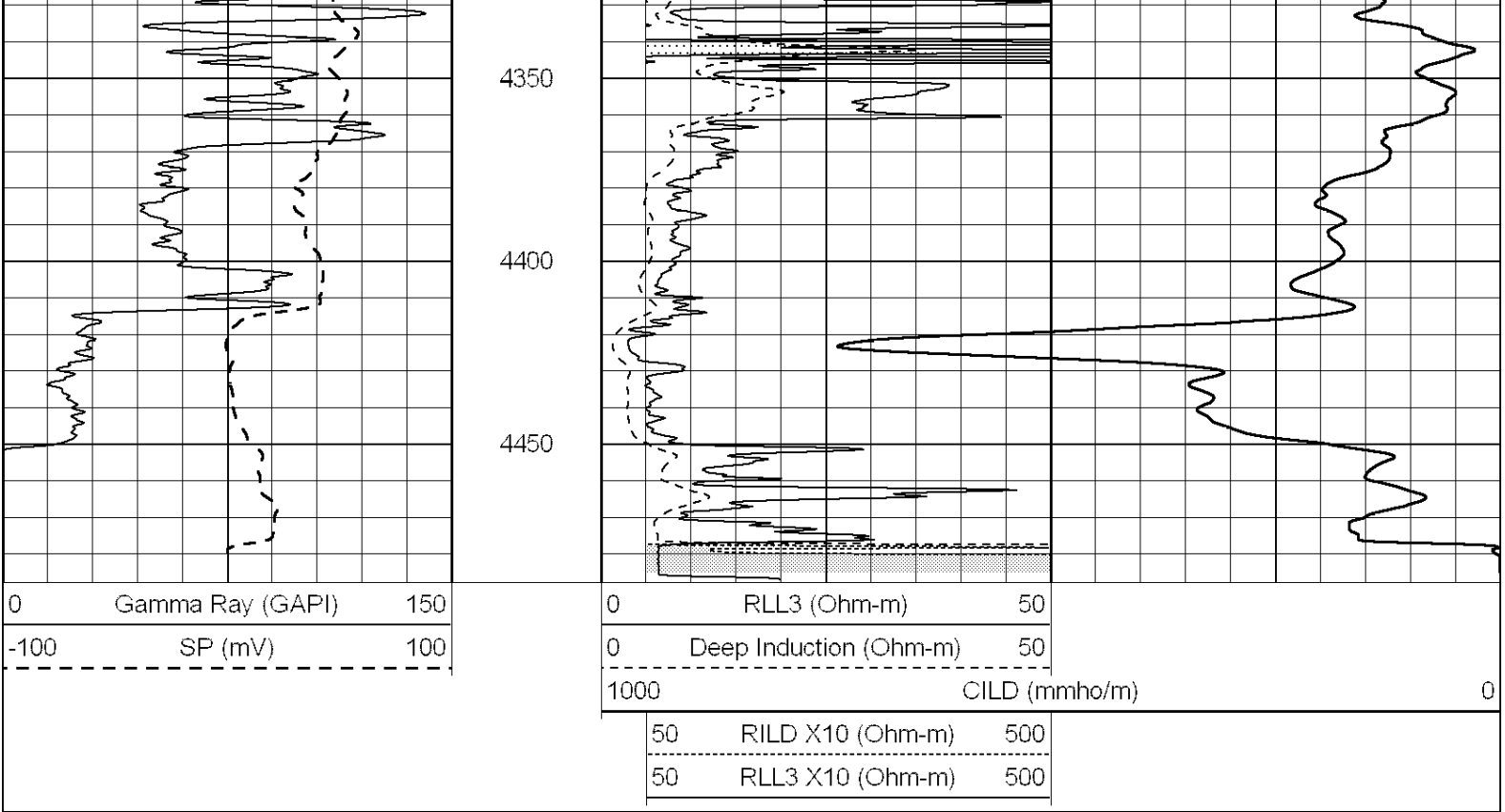
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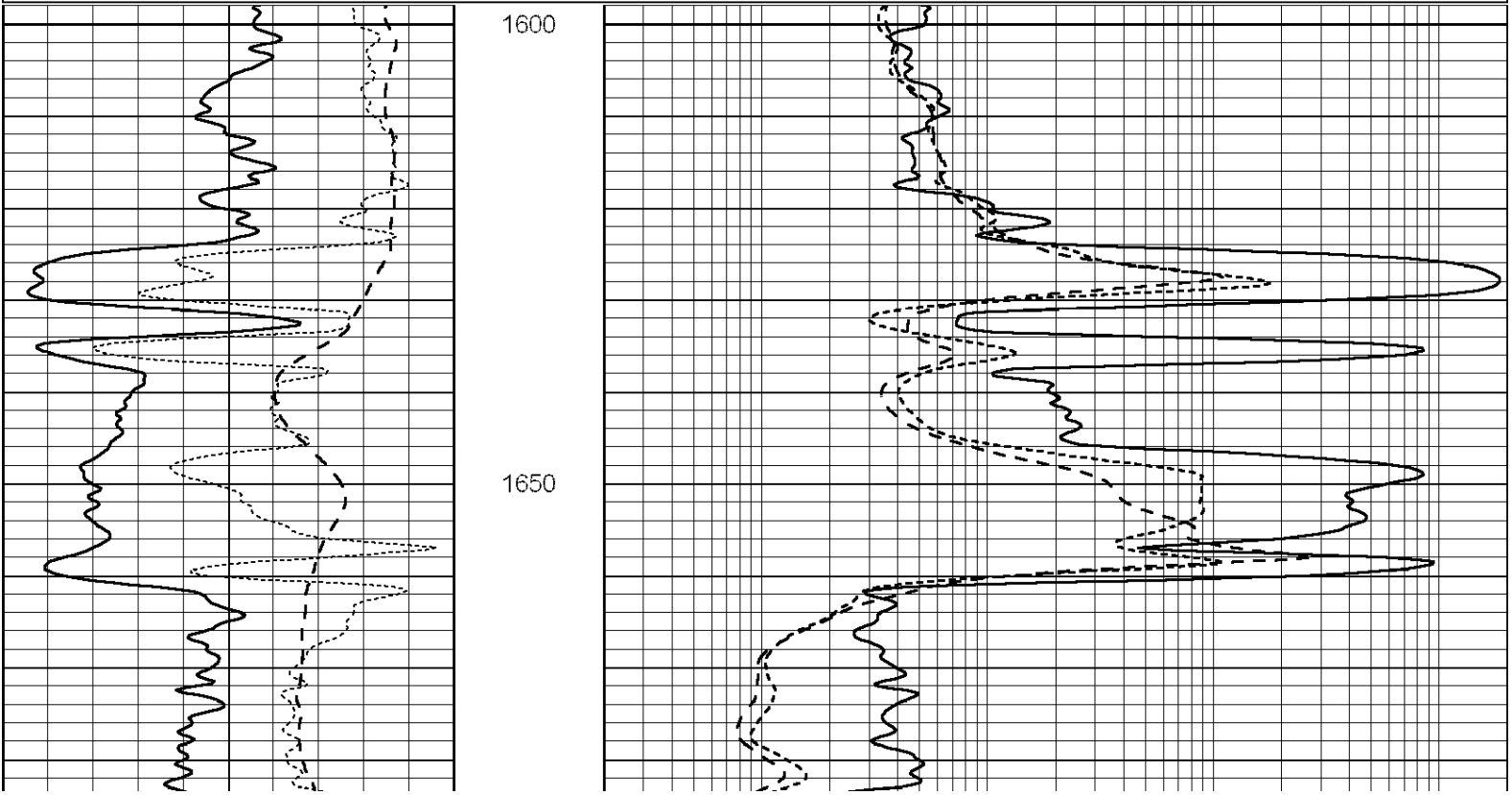
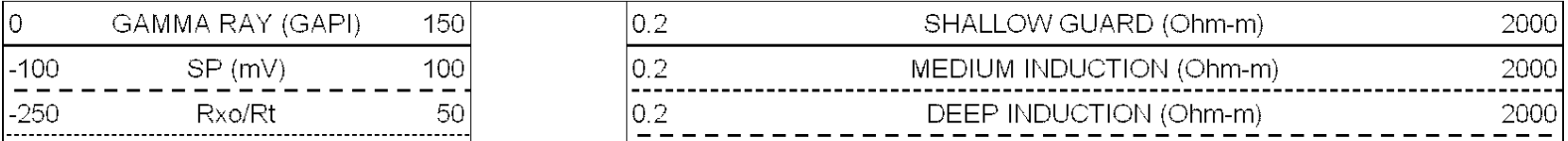
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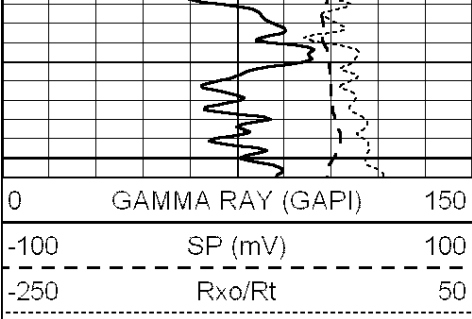
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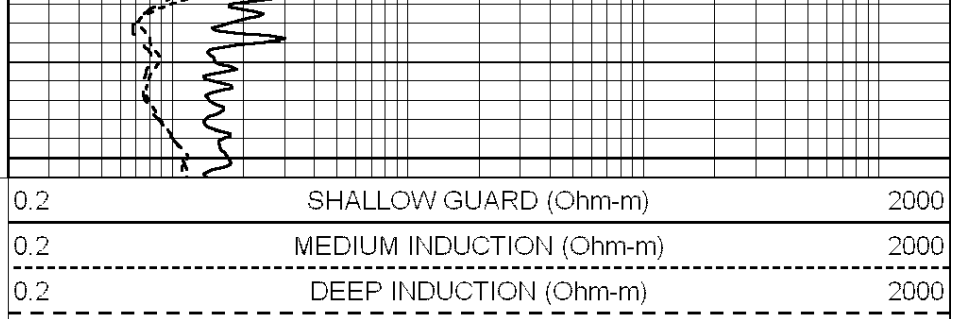


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Dataset Pathname: pass3.3
Presentation Format: _dil
Dataset Creation: Mon Jul 26 11:07:01 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

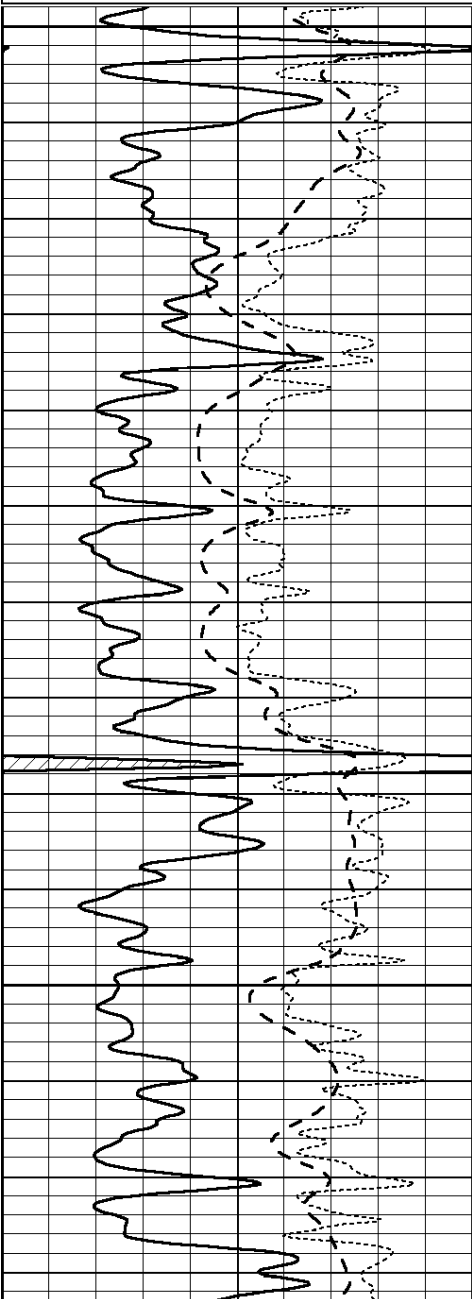
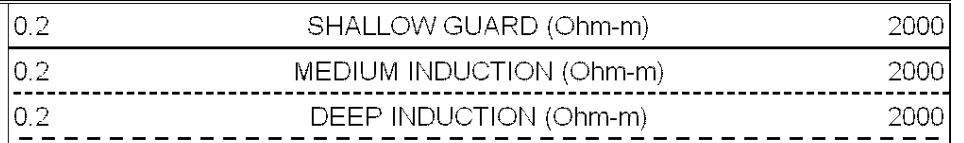
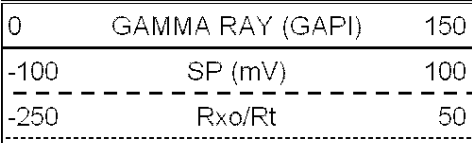




1700



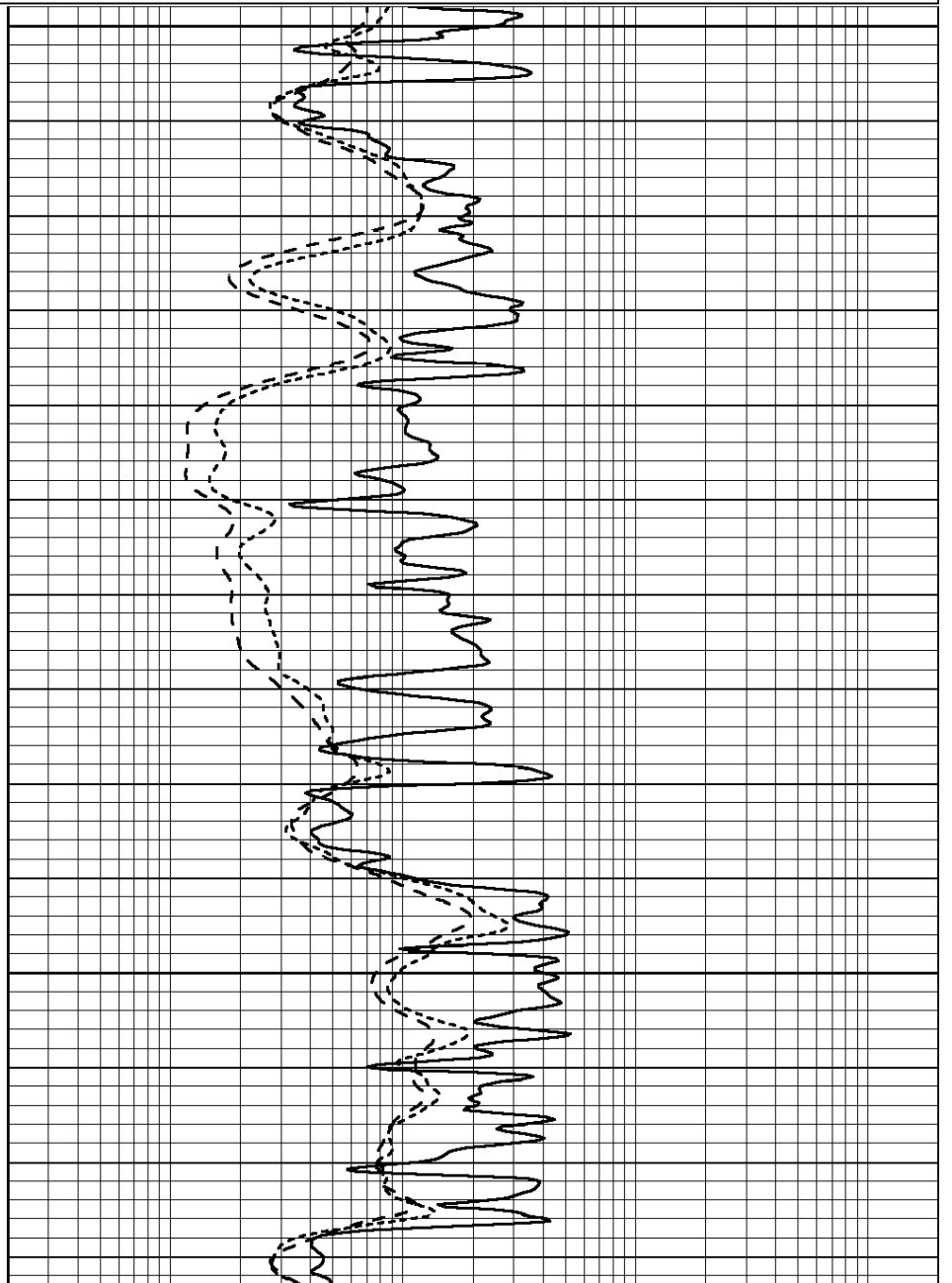
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Presentation Format: _dil
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Charted by: Depth in Feet scaled 1:240

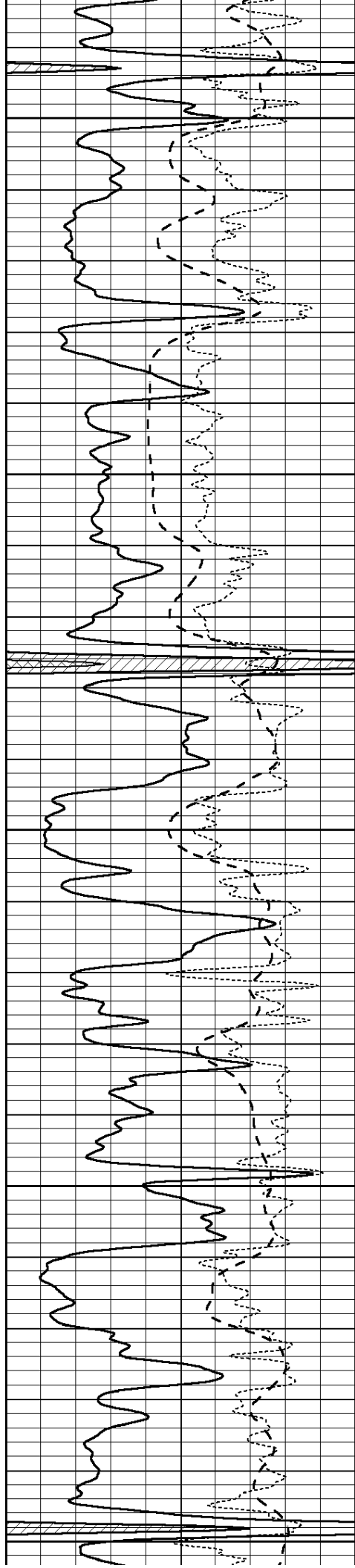


3500

3550

3600





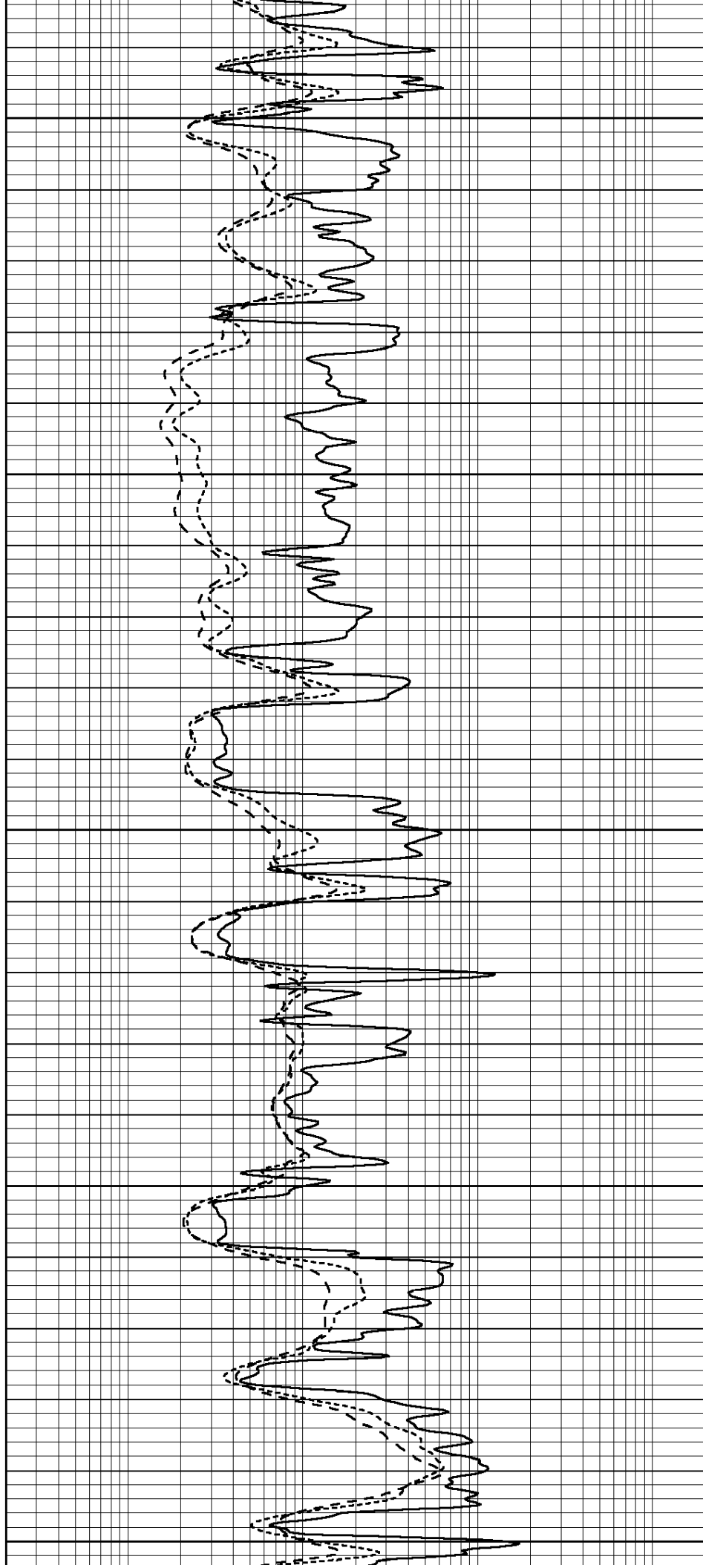
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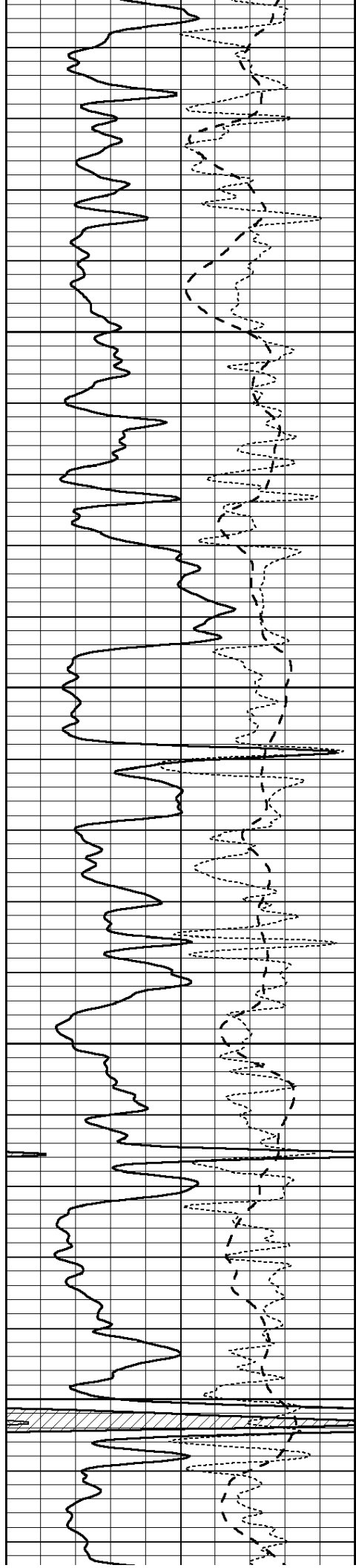
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3750

3800

3850



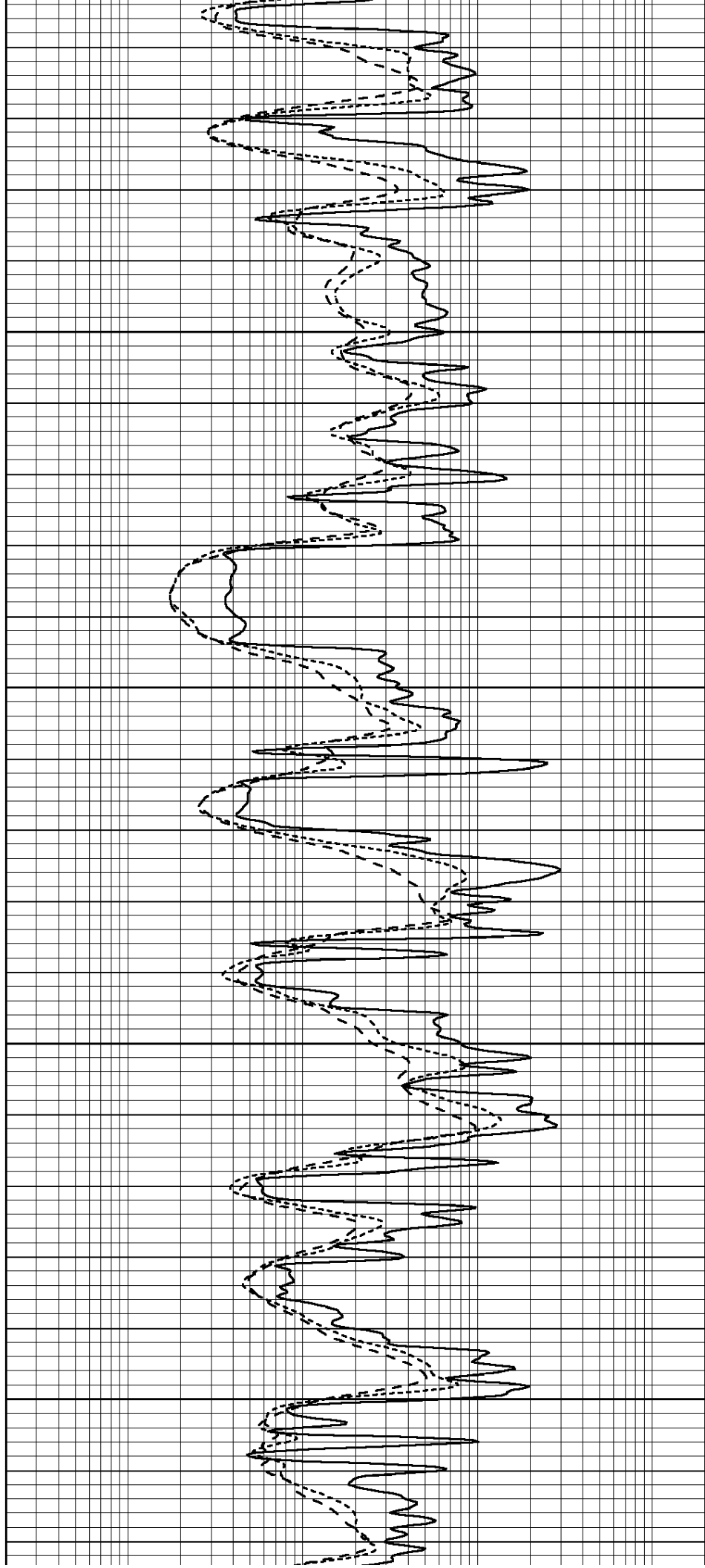


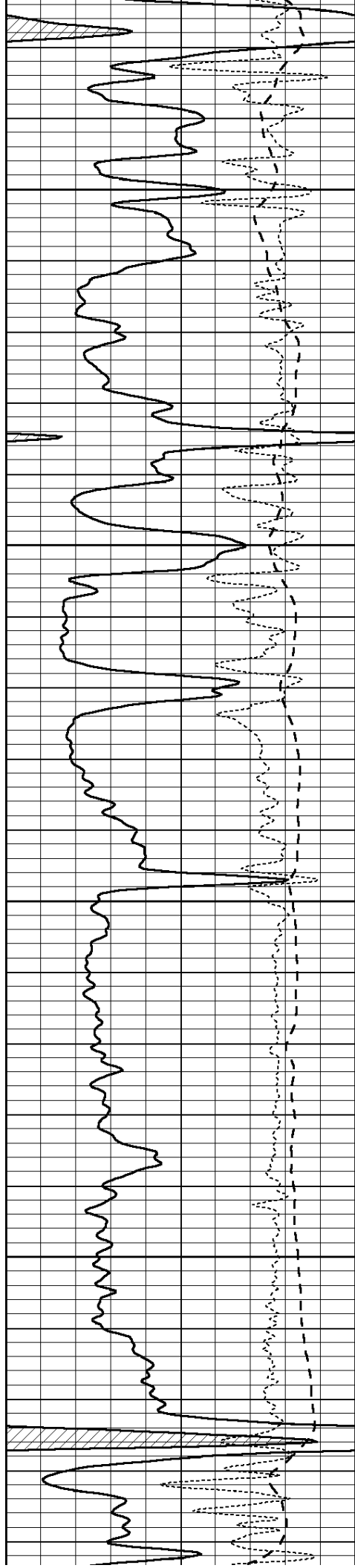
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3950

4000

4050



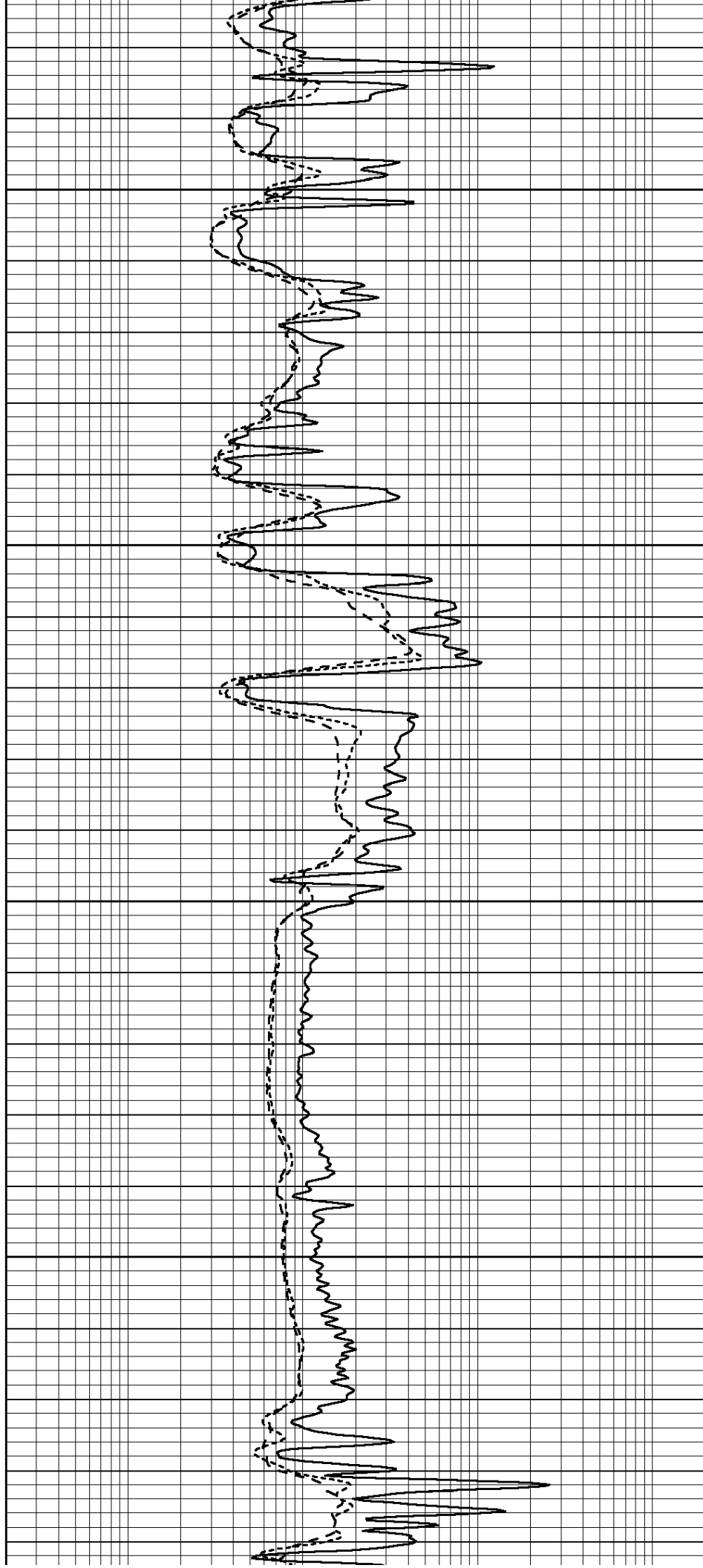


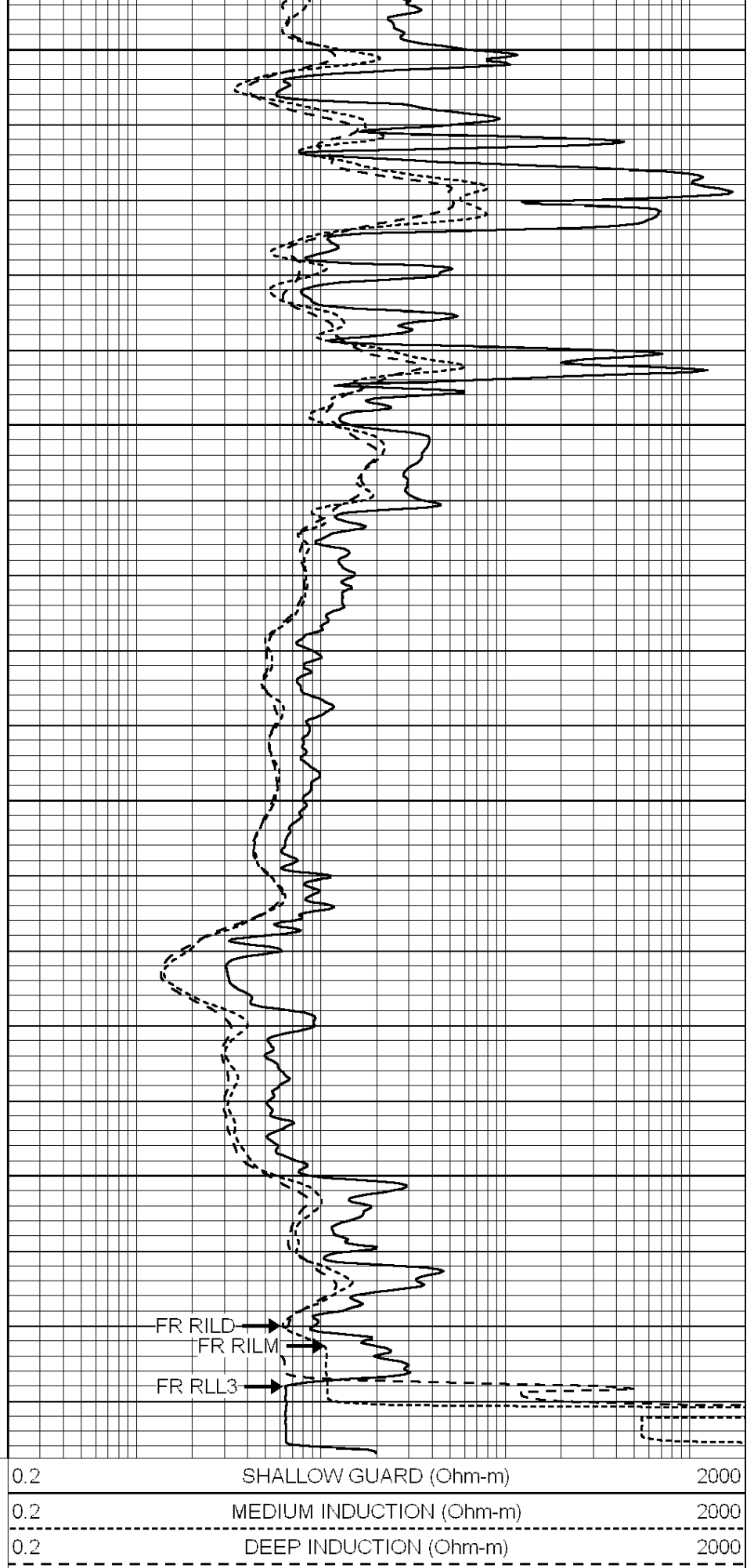
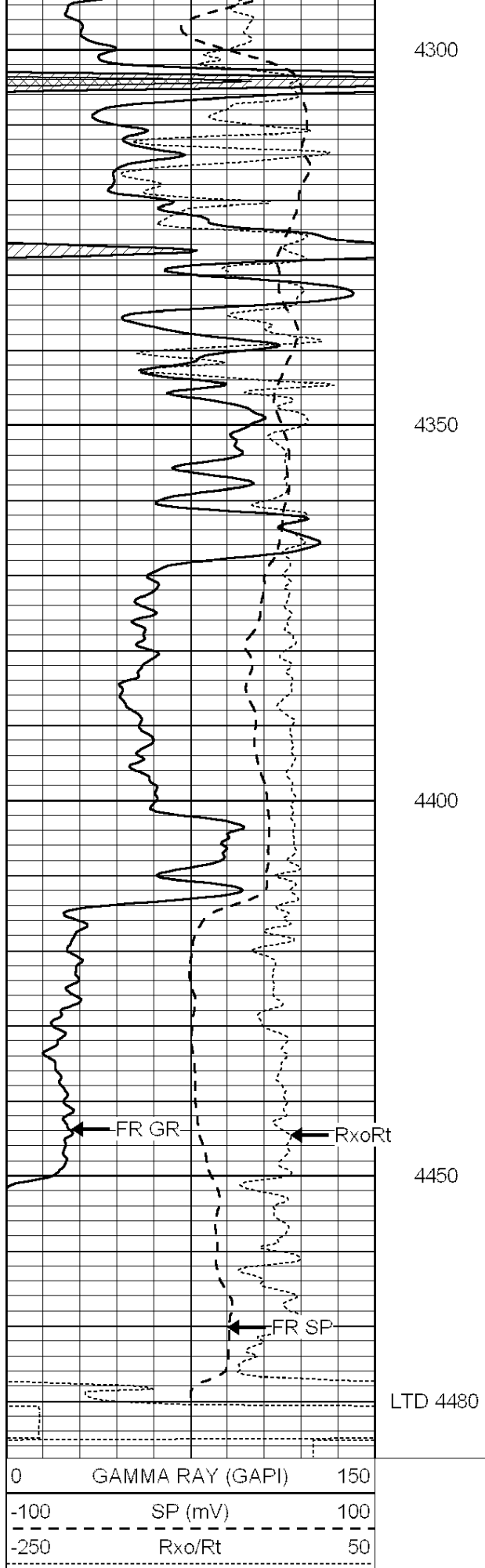
4100

4150

4200

4250







SUPERIOR

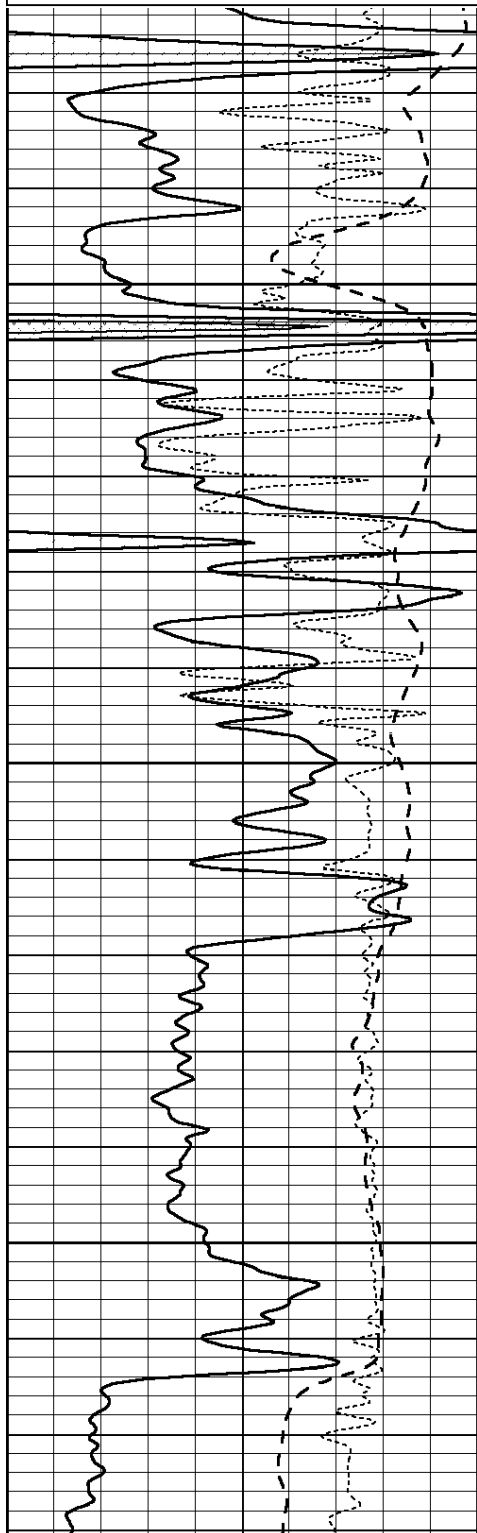
Hays,
Kansas

REPEAT SECTION

Database File: 005416ddn.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Mon Jul 26 10:25:31 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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

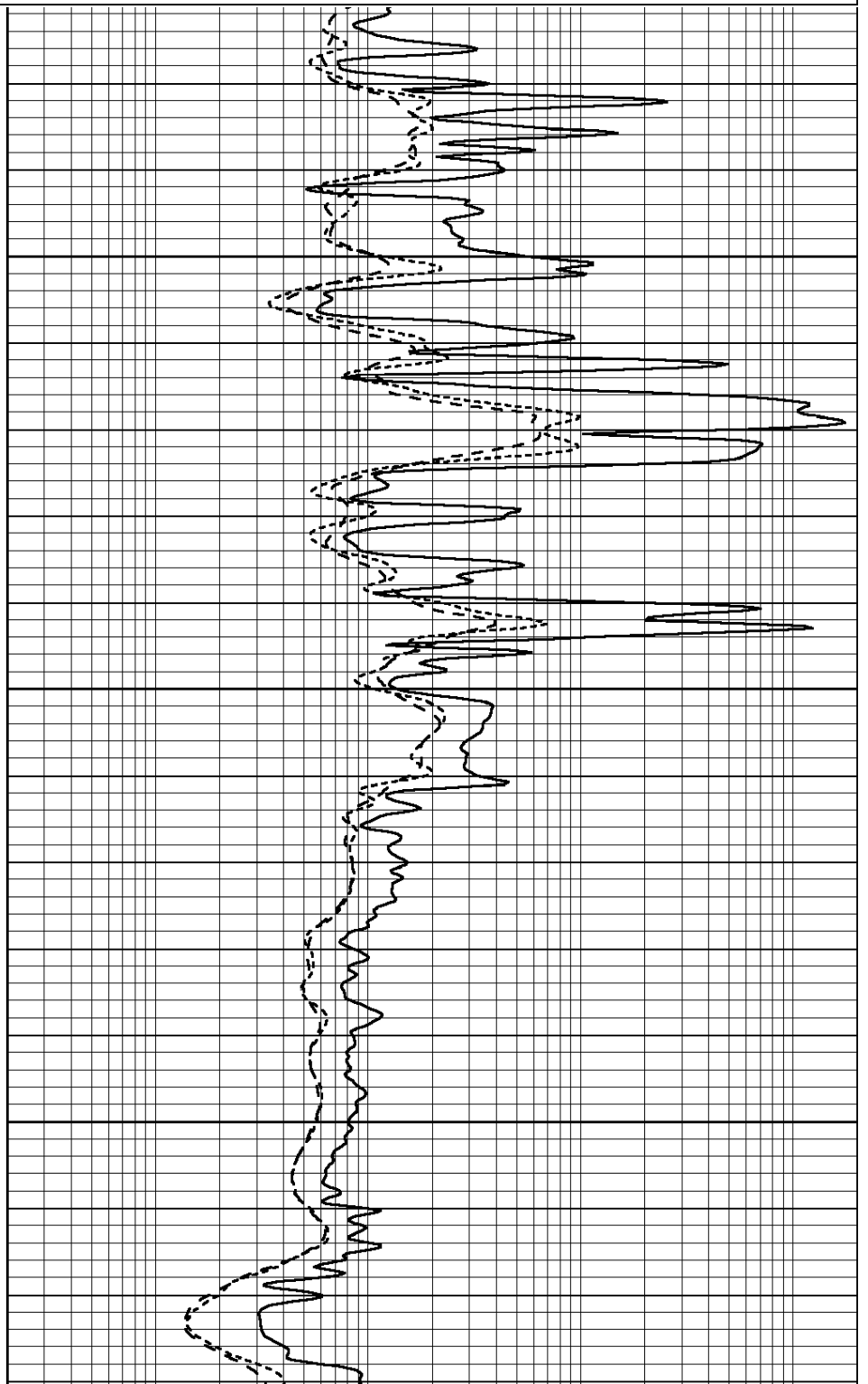
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

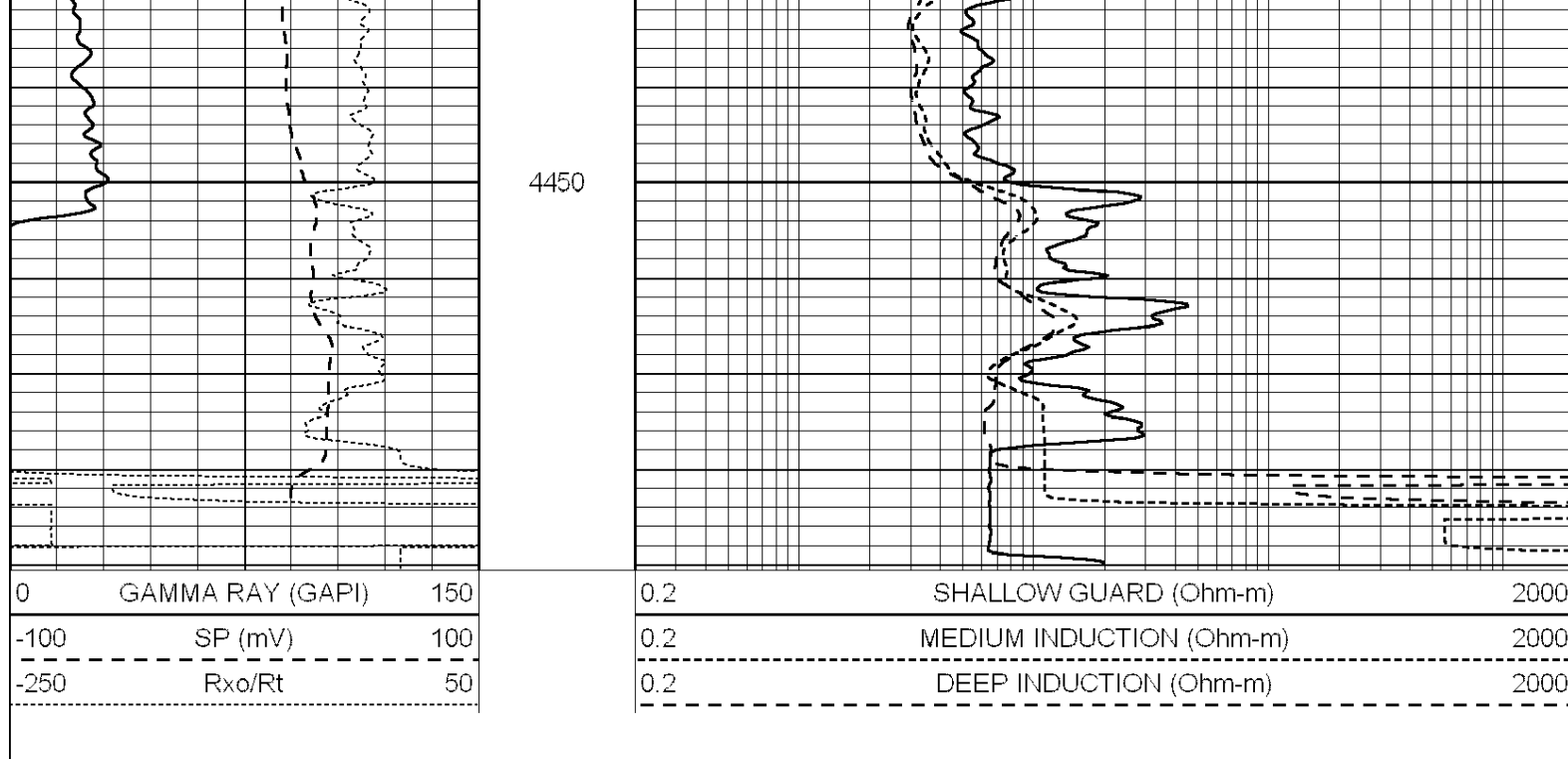


4300

4350

4400





Calibration Report		
Database File:	005416ddn.db	
Dataset Pathname:	pass3.3	
Dataset Creation:	Mon Jul 26 11:07:01 2010 by Calc Open-Cased 090629	

Dual Induction Calibration Report

Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Wed Jul 30 06:14:24 2008
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	621.923	8.759
Medium	0.039	0.728	V	0.000	464.000	mmho/m	673.322	-26.058
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		

Compensated Density Calibration Report
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Serial-Model:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Jul 12 15:52:10 2010

Master Calibration					
	<u>Density</u>			<u>Far Detector</u>	<u>Near Detector</u>
Magnesium	1.710	g/cc		1340.07	579.11 cps
Aluminum	2.640	g/cc		298.20	382.22 cps
	Spine Angle = 74.54			Density/Spine Ratio = 0.597	
	<u>Size</u>			<u>Reading</u>	
Small Ring	8.00	in		4.15	V
Large Ring	14.00	in		5.96	V

Compensated Neutron Calibration Report
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Serial Number:	5I
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	

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Wed Jul 14 14:14:30 2010	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5335	GAPI/cps