



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company	NOBLE PETROLEUM, INC.		
Well	ANDES #2		
Field	MADDIX		
County	COWLEY	State	KANSAS
Location:	API # : 15-035-24329-0000		Other Services
	2850FNL & 1250FEL SW-SW-SE-NE		CDL/CNL
	SEC 10 TWP 33S RGE 5E		Elevation
Permanent Datum	GROUND LEVEL	Elevation	1257
Log Measured From	KELLY BUSHING 9' A.G.L.		K.B. 1266 D.F. 1264 G.L. 1257
Drilling Measured From	KELLY BUSHING		
Date	04/27/2009		
Run Number	CNE		
Depth Driller	3205		
Depth Logger	3204		
Bottom Logged Interval	3202		
Top Log Interval	0		
Casing Driller	8 5/8 @ 200'		
Casing Logger	208'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	8.9 / 35	CHLORIDES 500	
pH / Fluid Loss	8.0 / 11.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	3.50 @ 78F		
Rmf @ Meas. Temp	2.63 @ 78F		
Rmc @ Meas. Temp	4.20 @ 78F		
Source of Rmf / Rmc	CAL/CAL		
Rm @ BHT	2.50 @ 109F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	6:40 AM		
Maximum Recorded Temperature	109F		
Equipment Number	680		
Location	HAYS, KS		
Recorded By	JEFF GRONEWEG	JOE CRATHORNE	
Witnessed By	JERRY HONAS	JAY ABLAH	

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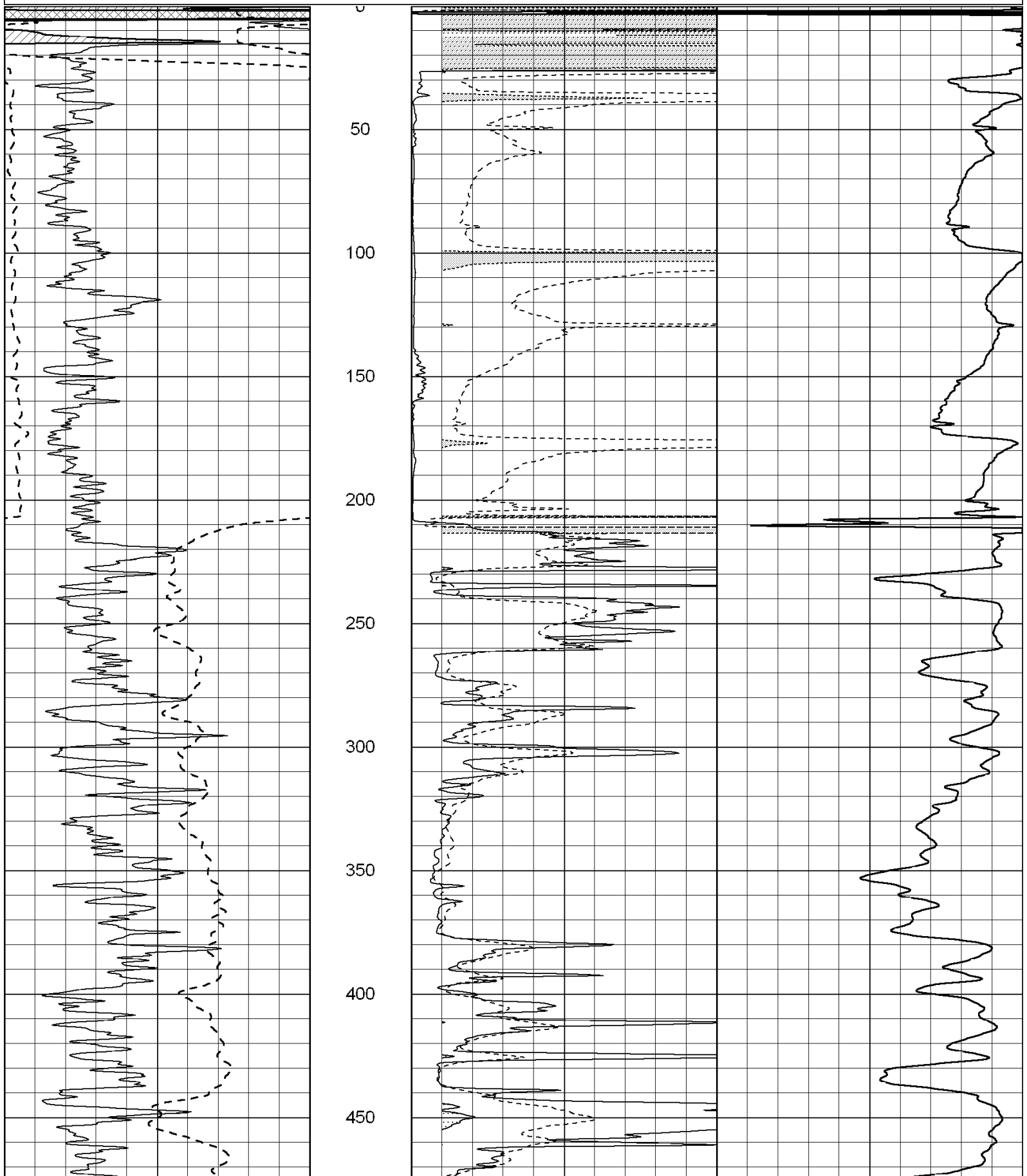
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 SUPERIOR WELL SERVICES
HAYS, KS. 785-628-6395

DIRECTIONS: WINFIELD, KS. (JUNCTION OF HWYS 160 & 77) 7E. ON HWY 160 TO COWLEY COUNTY RD. #1, 3S. TO 192ND, 1E TO 161ST, 1/2S TO TANK BATTERY, WEST INTO

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

550

600

650

700

750

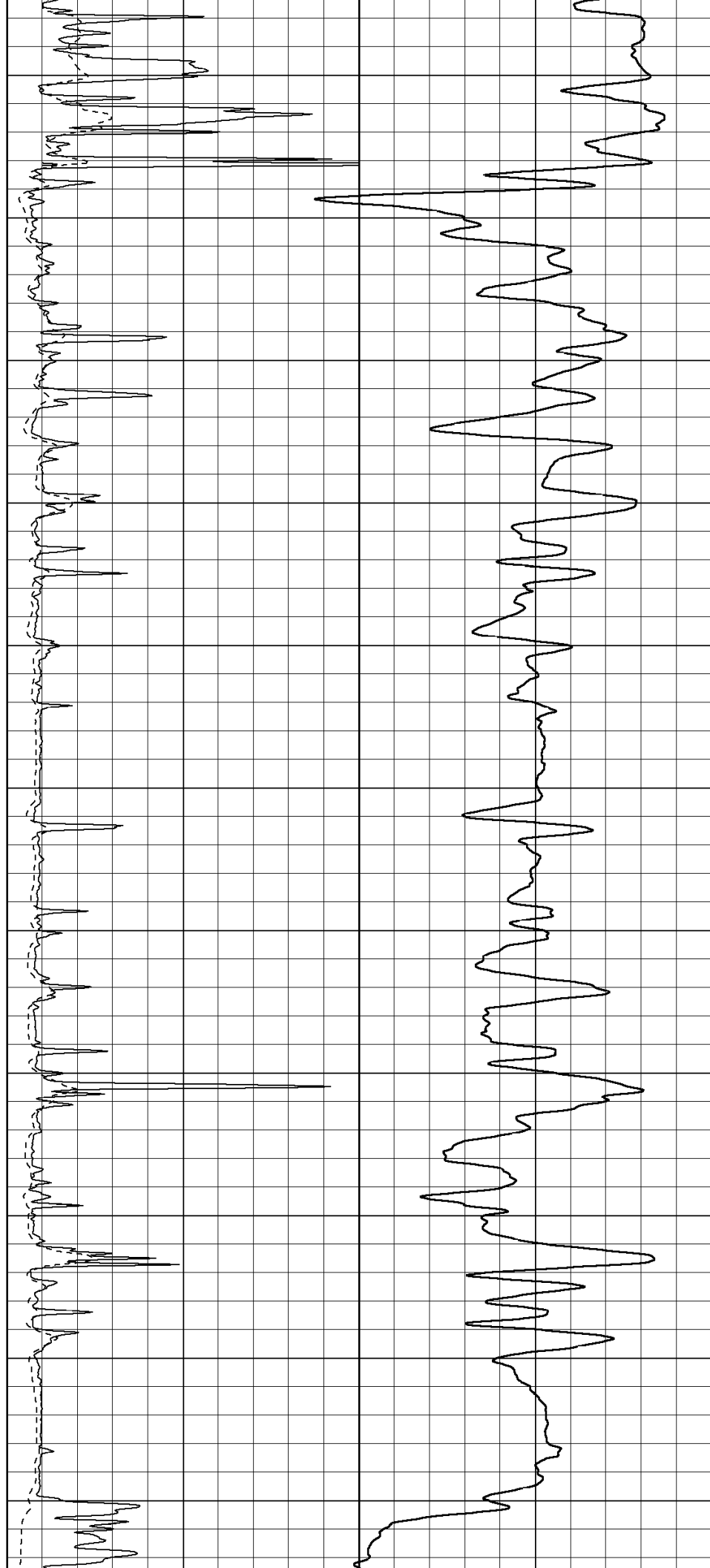
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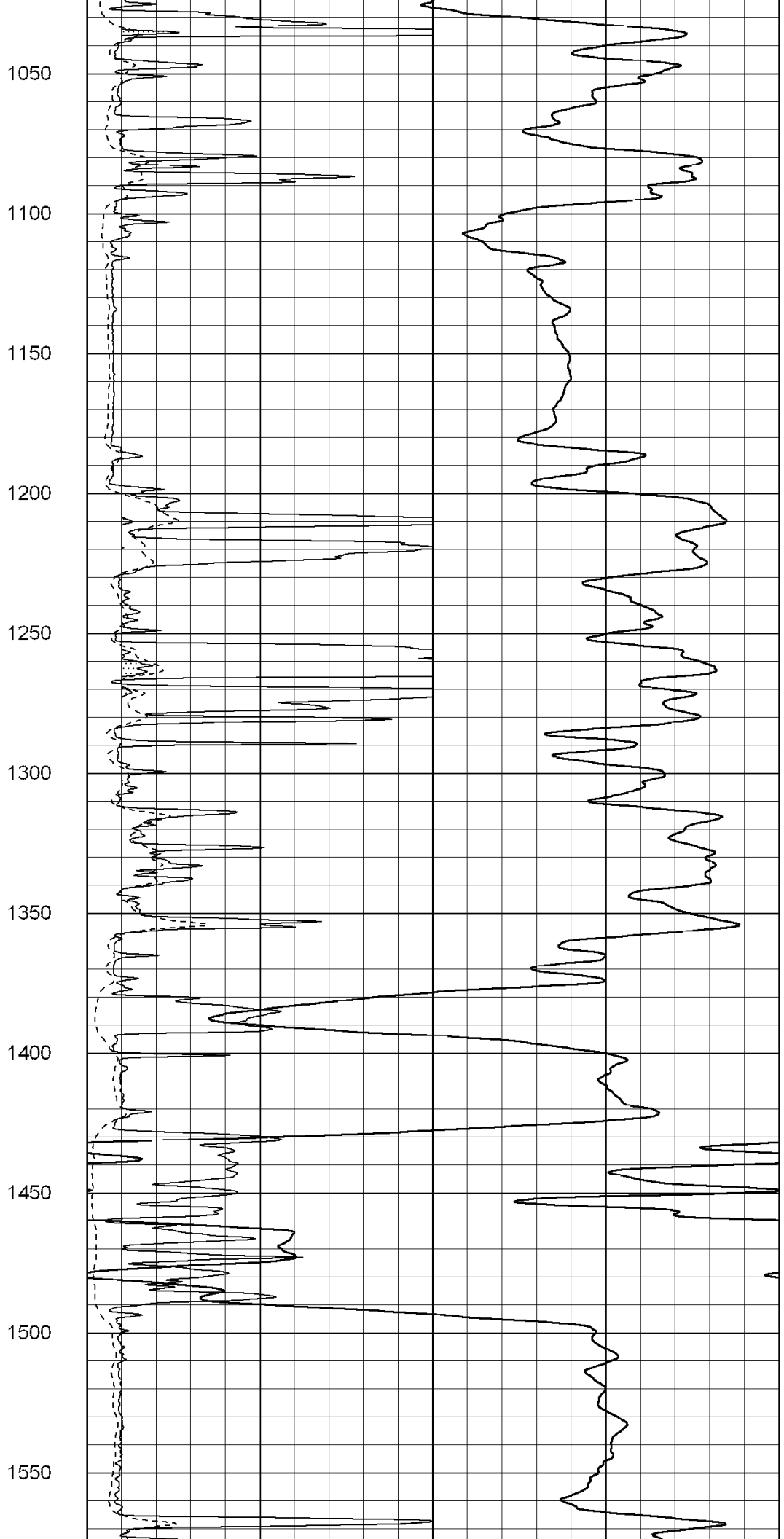
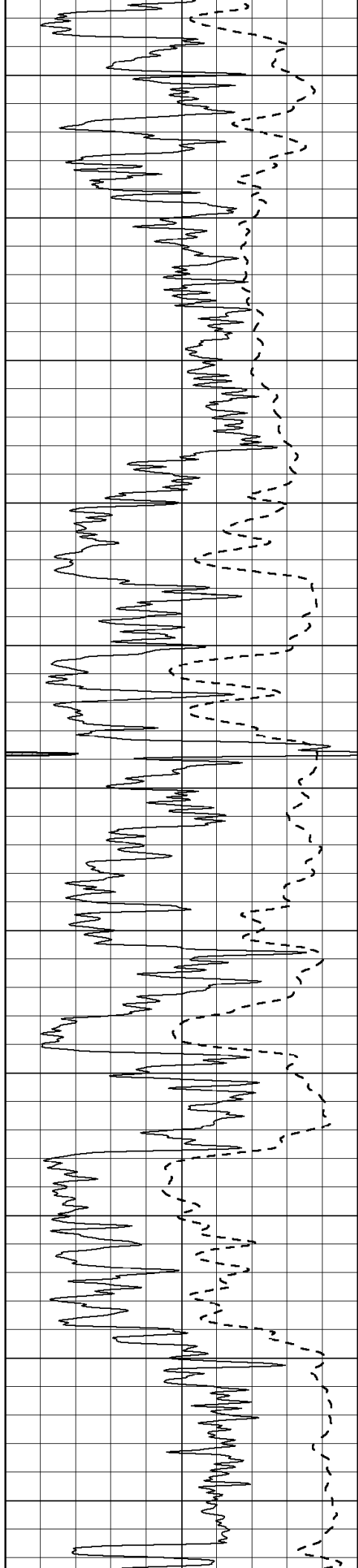
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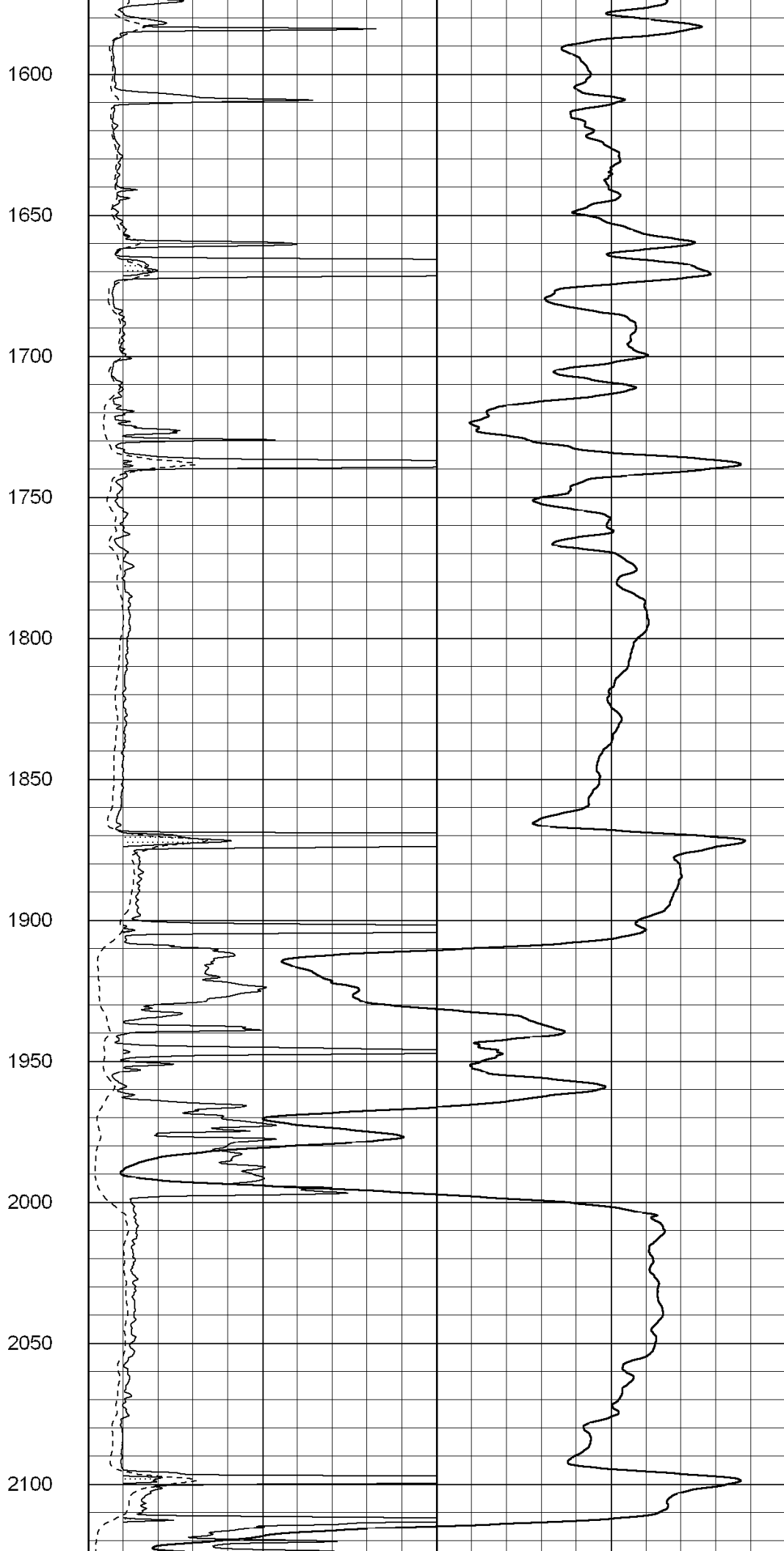
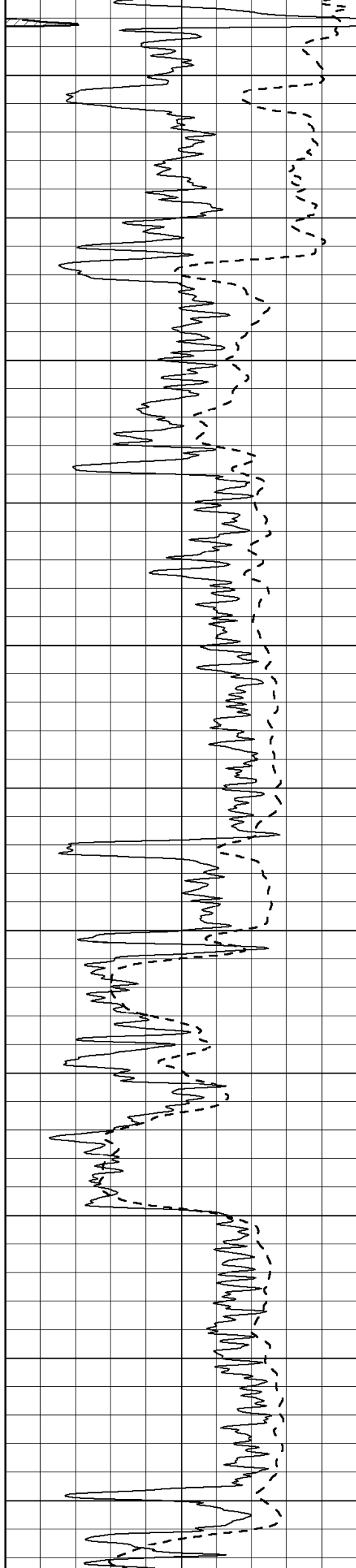
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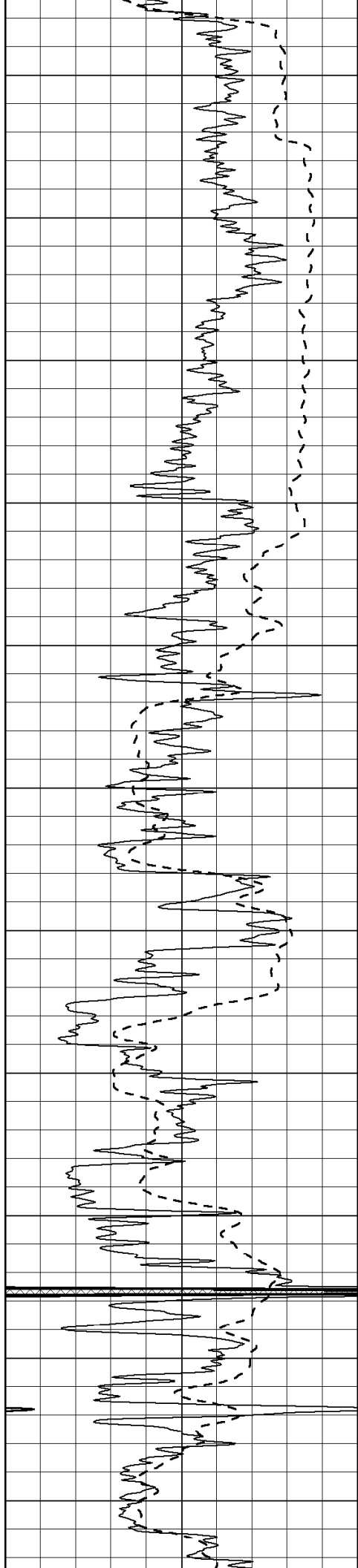
950

1000









2150

2200

2250

2300

2350

2400

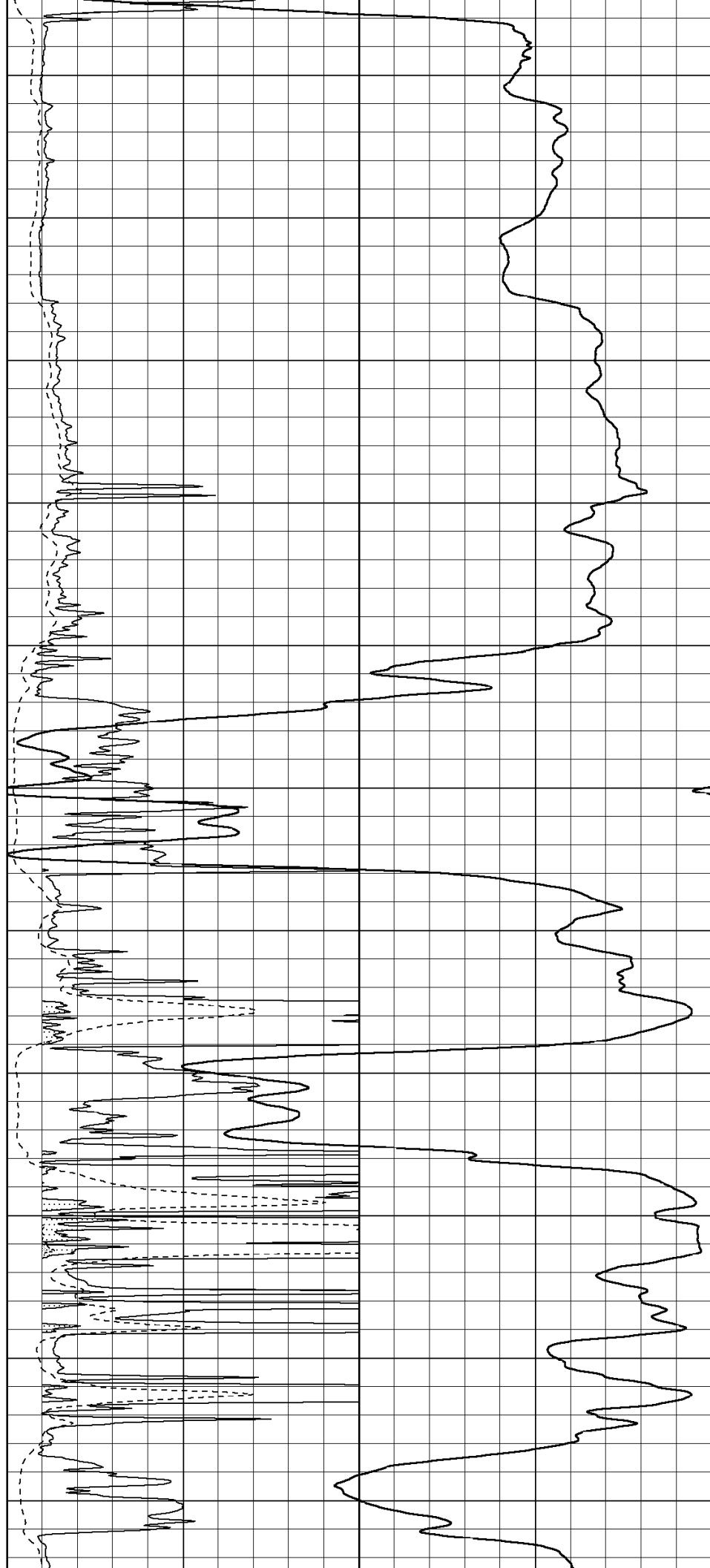
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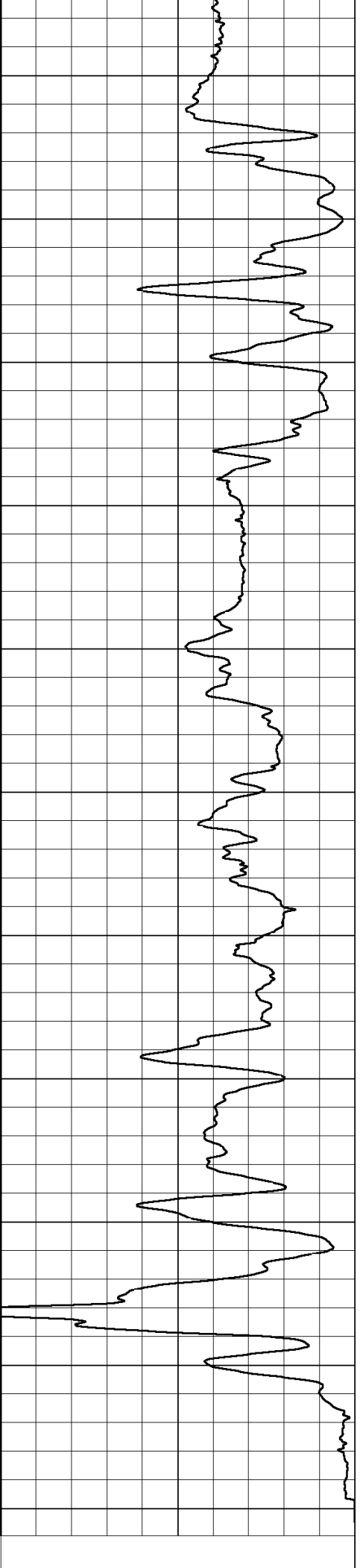
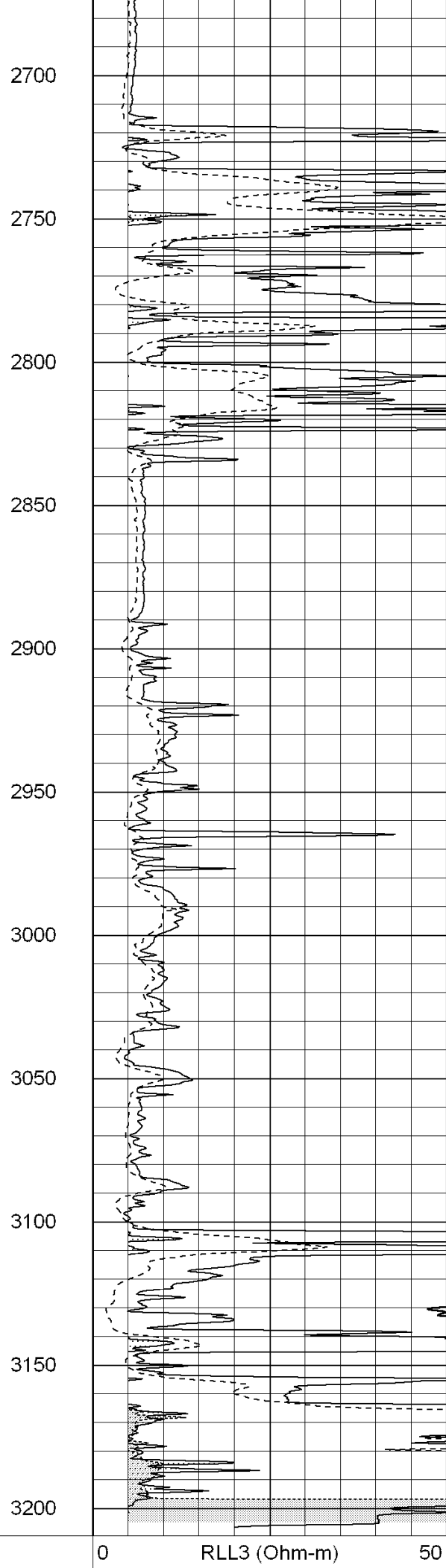
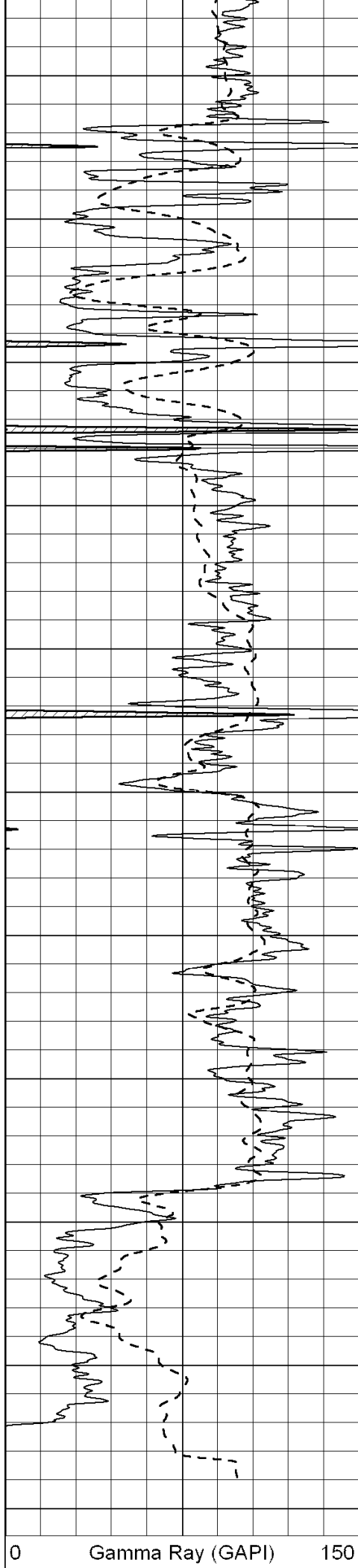
2500

2550

2600

2650





-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

Database File: 003713ddn.db
Dataset Pathname: pass3.71
Presentation Format: _dil
Dataset Creation: Mon Apr 27 08:29:11 2009
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150

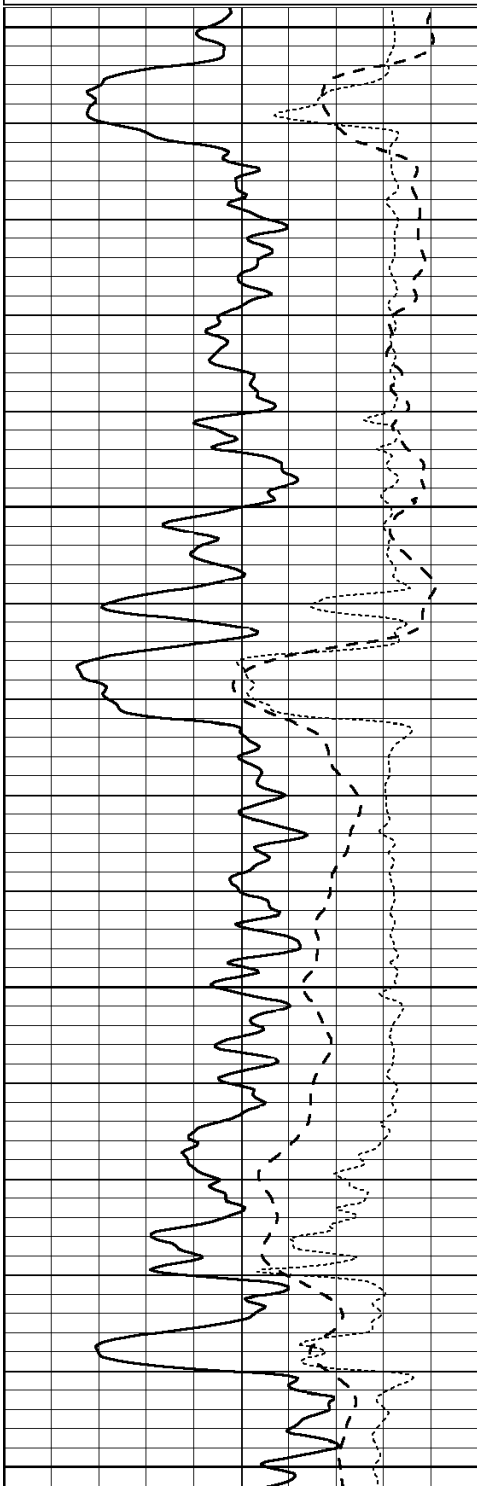
-100 SP (mV) 100

-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

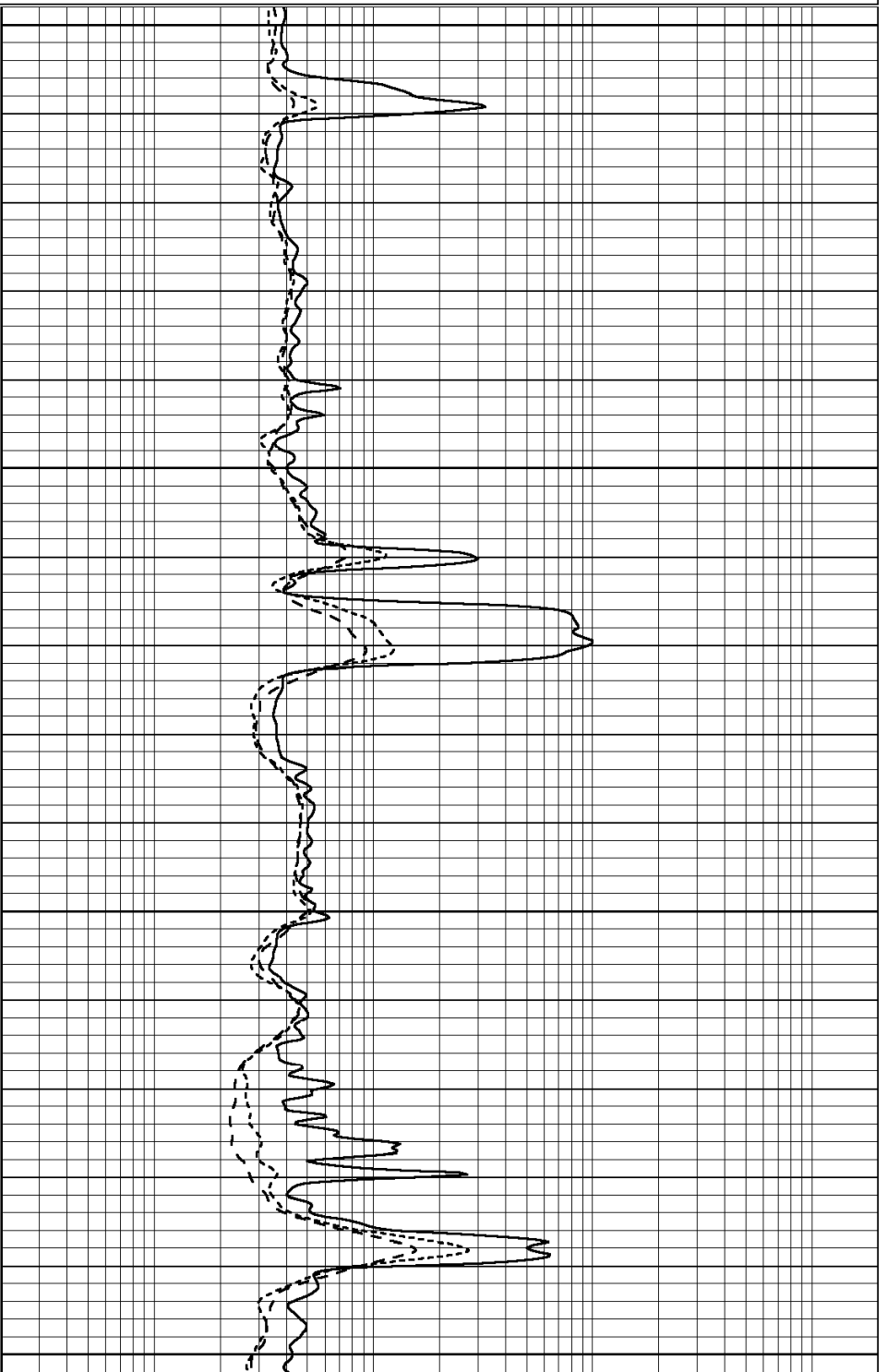


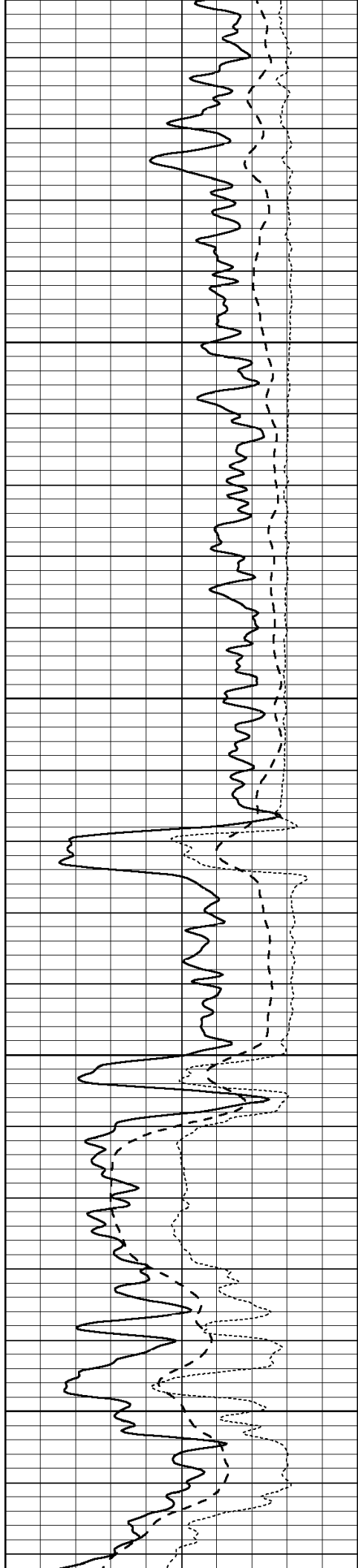
1600

1650

1700

1750



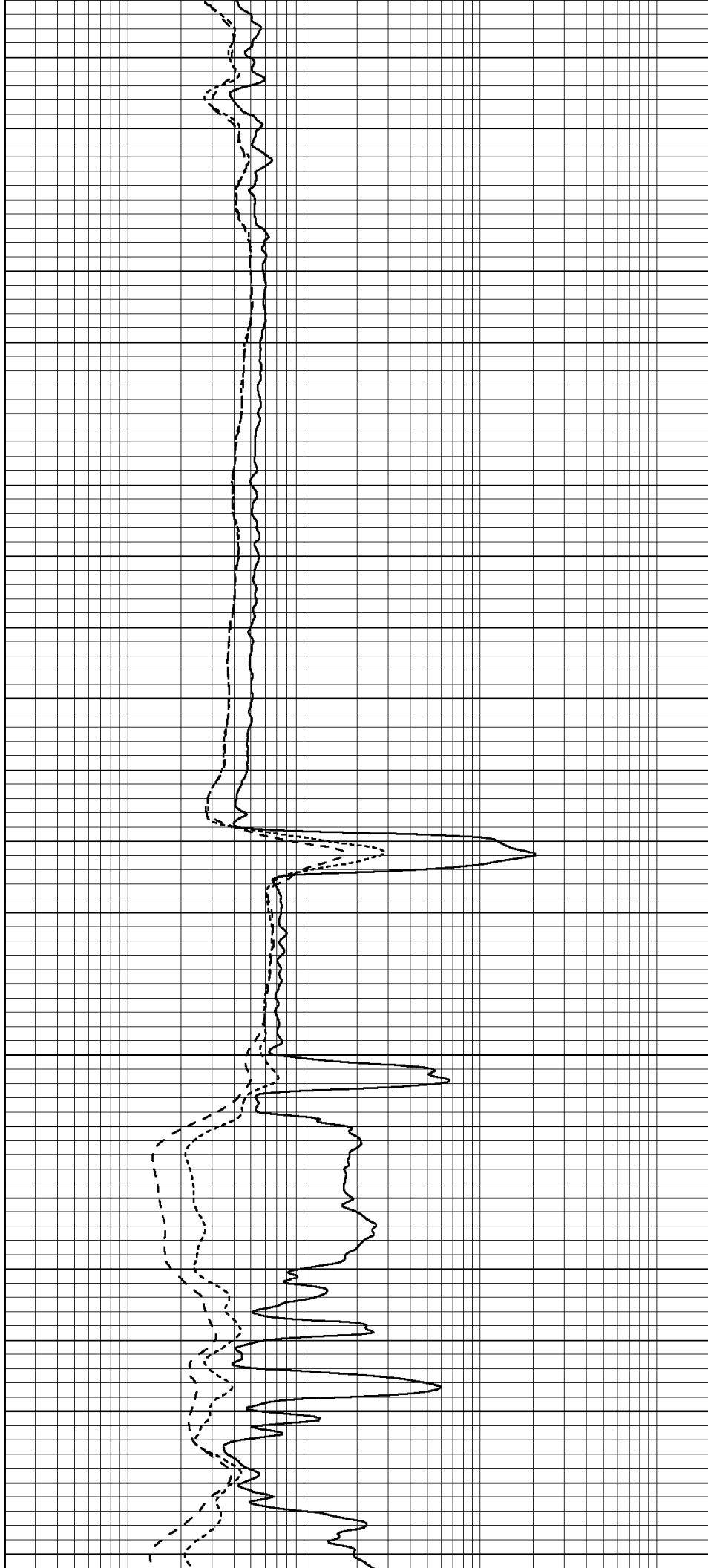


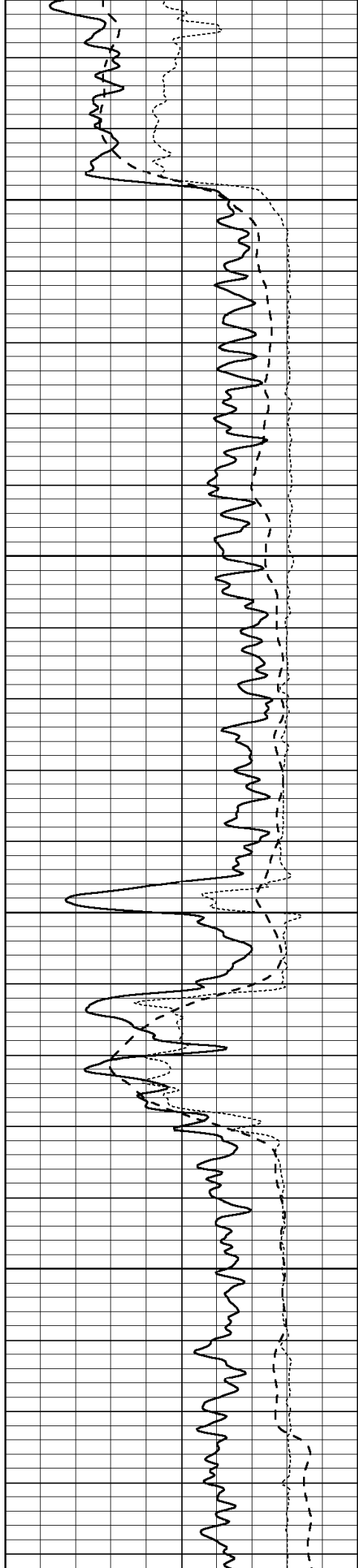
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1850

1900

1950



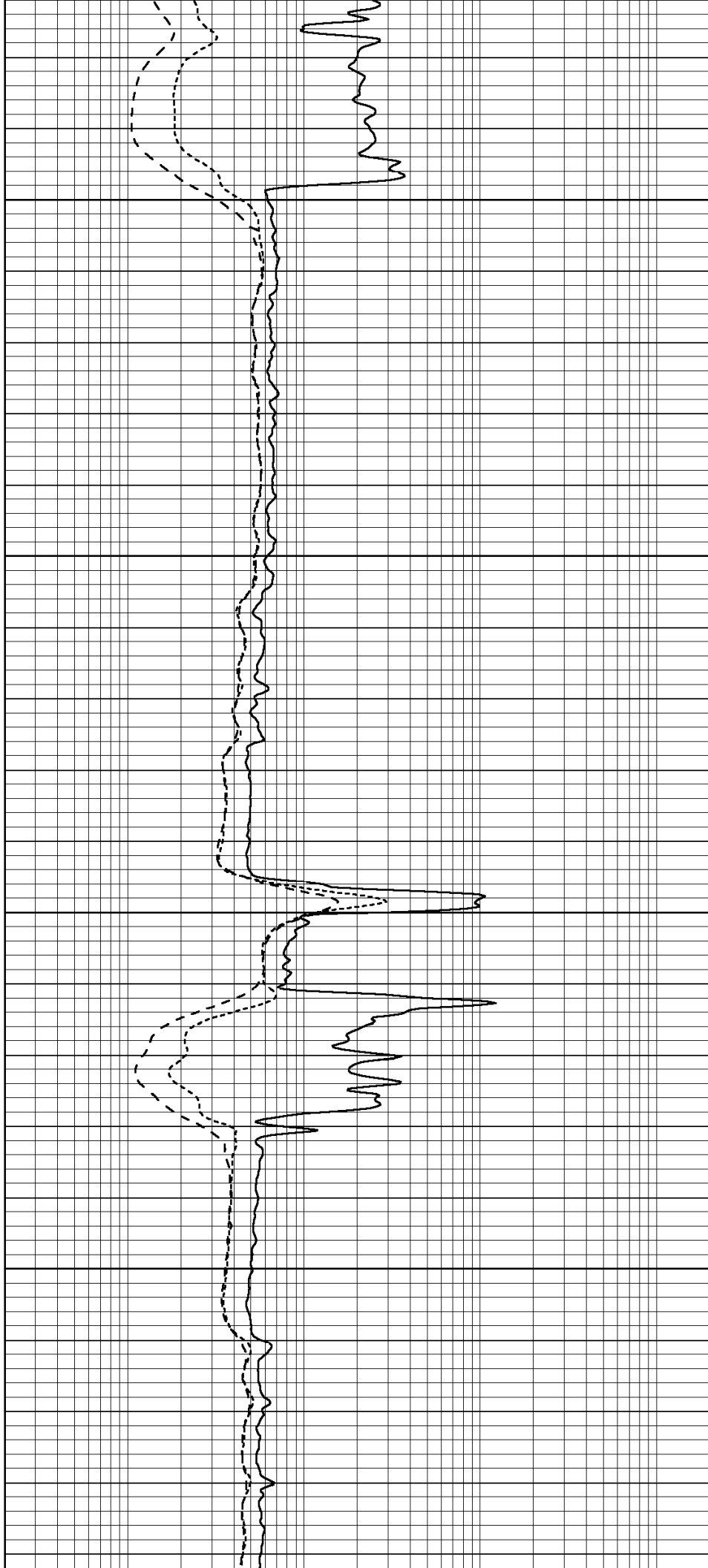


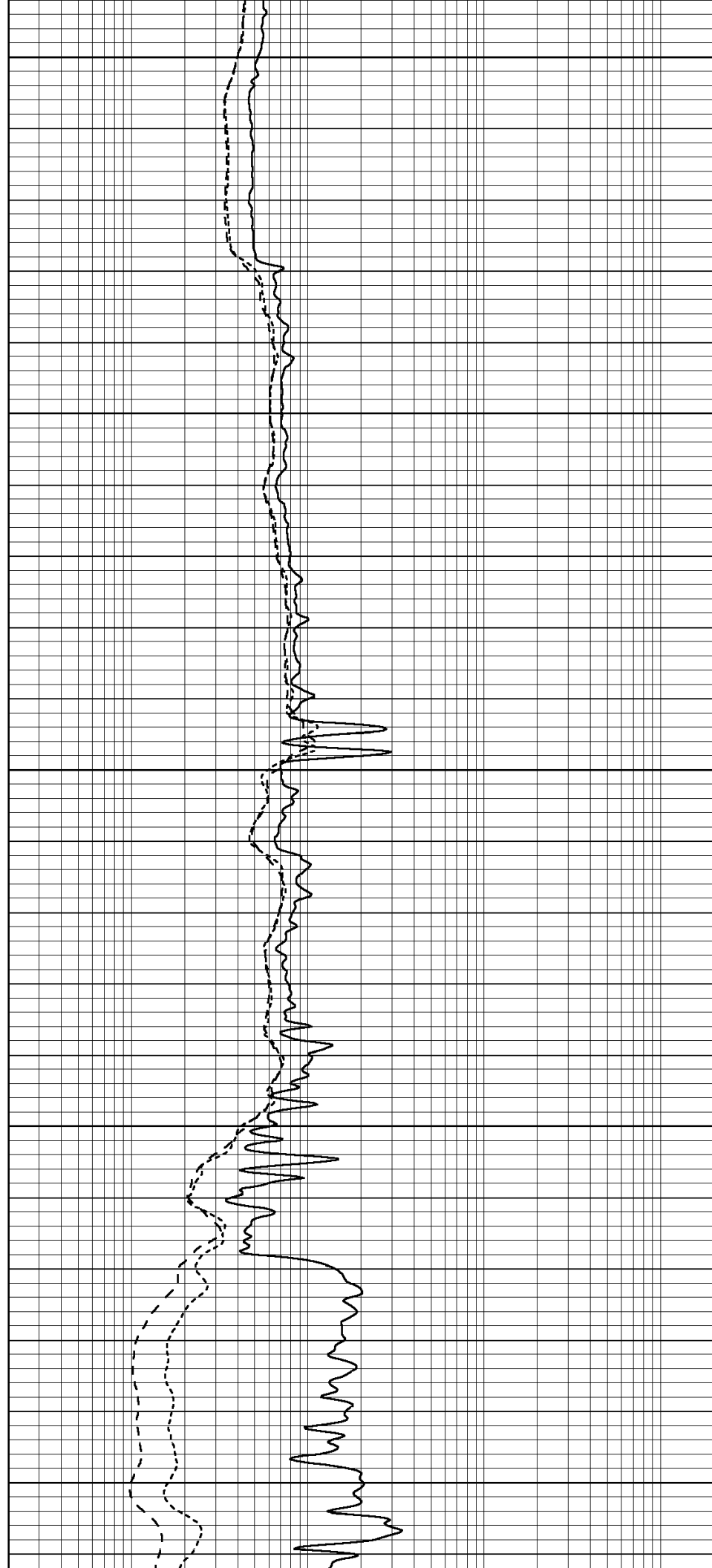
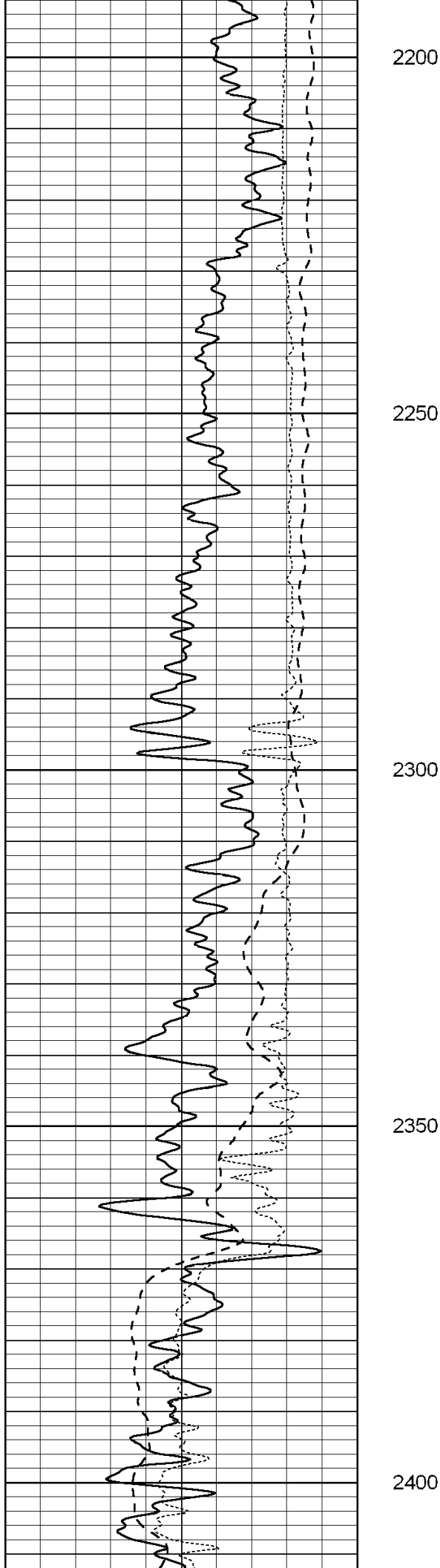
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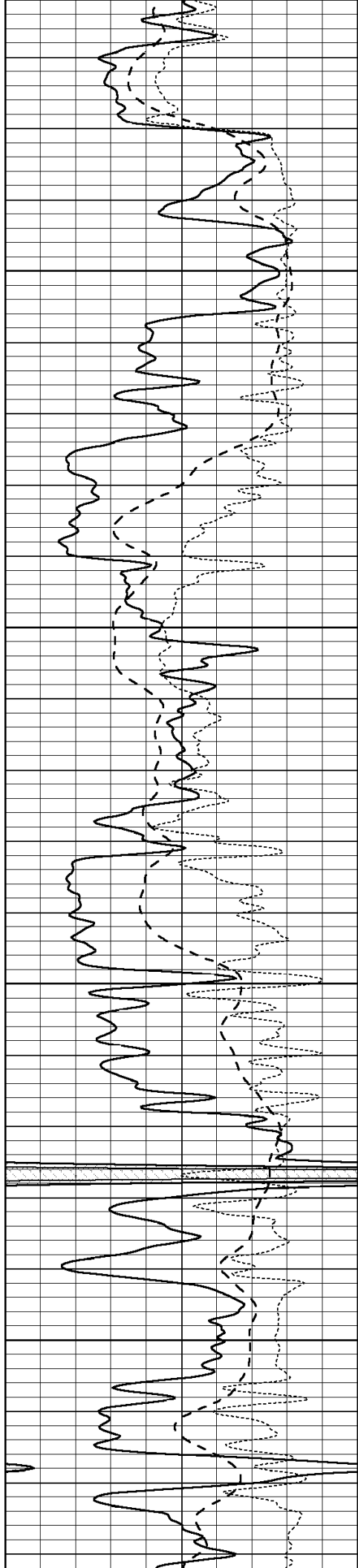
2050

2100

2150





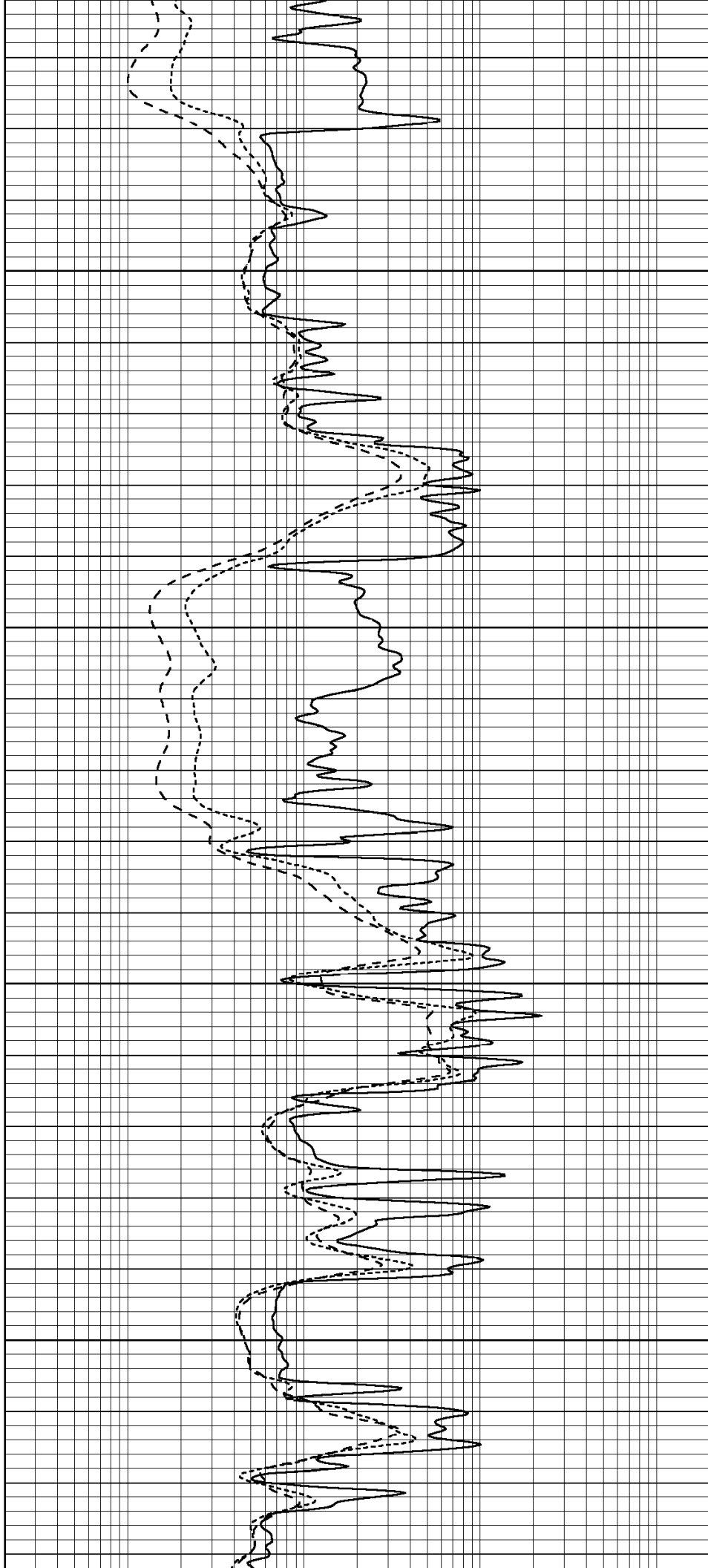


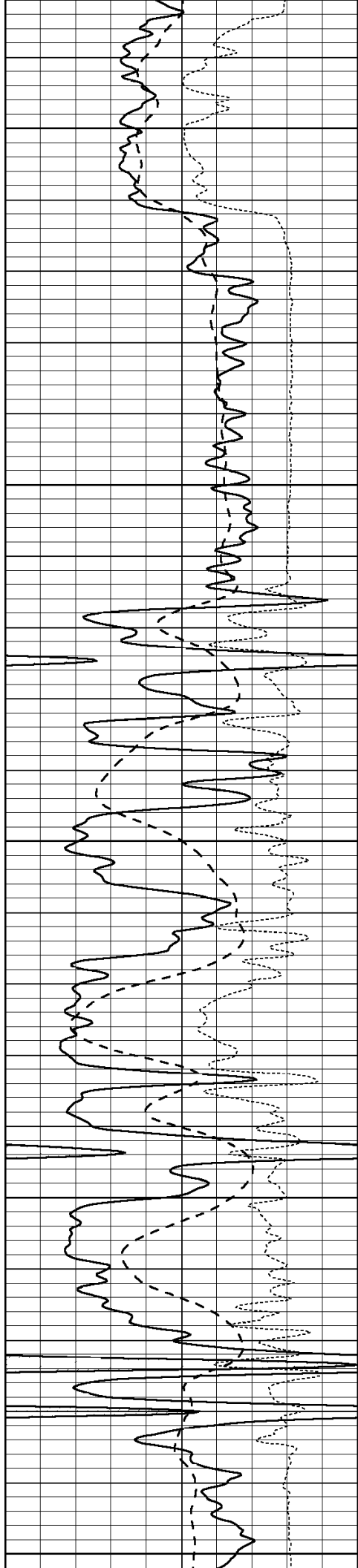
2450

2500

2550

2600





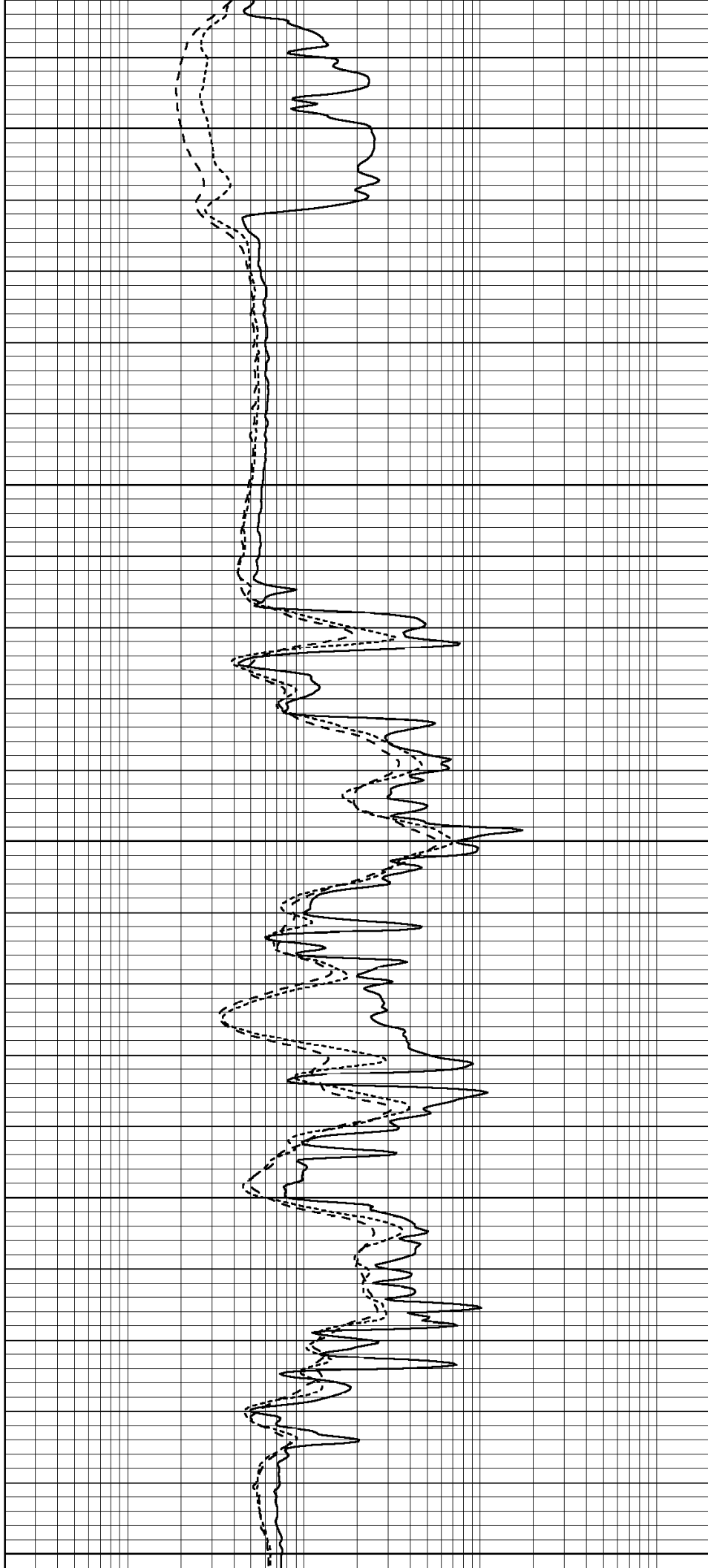
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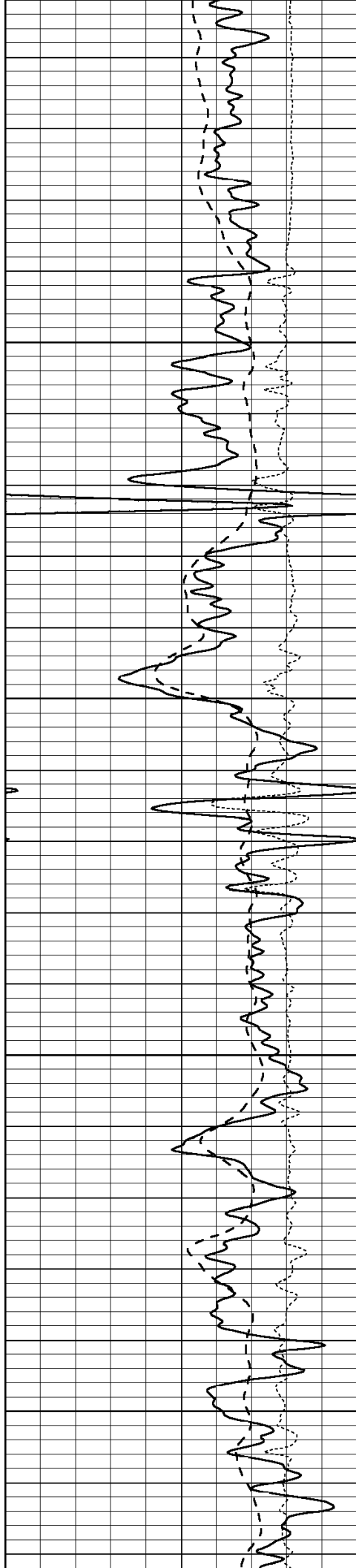
2700

2750

2800

2850



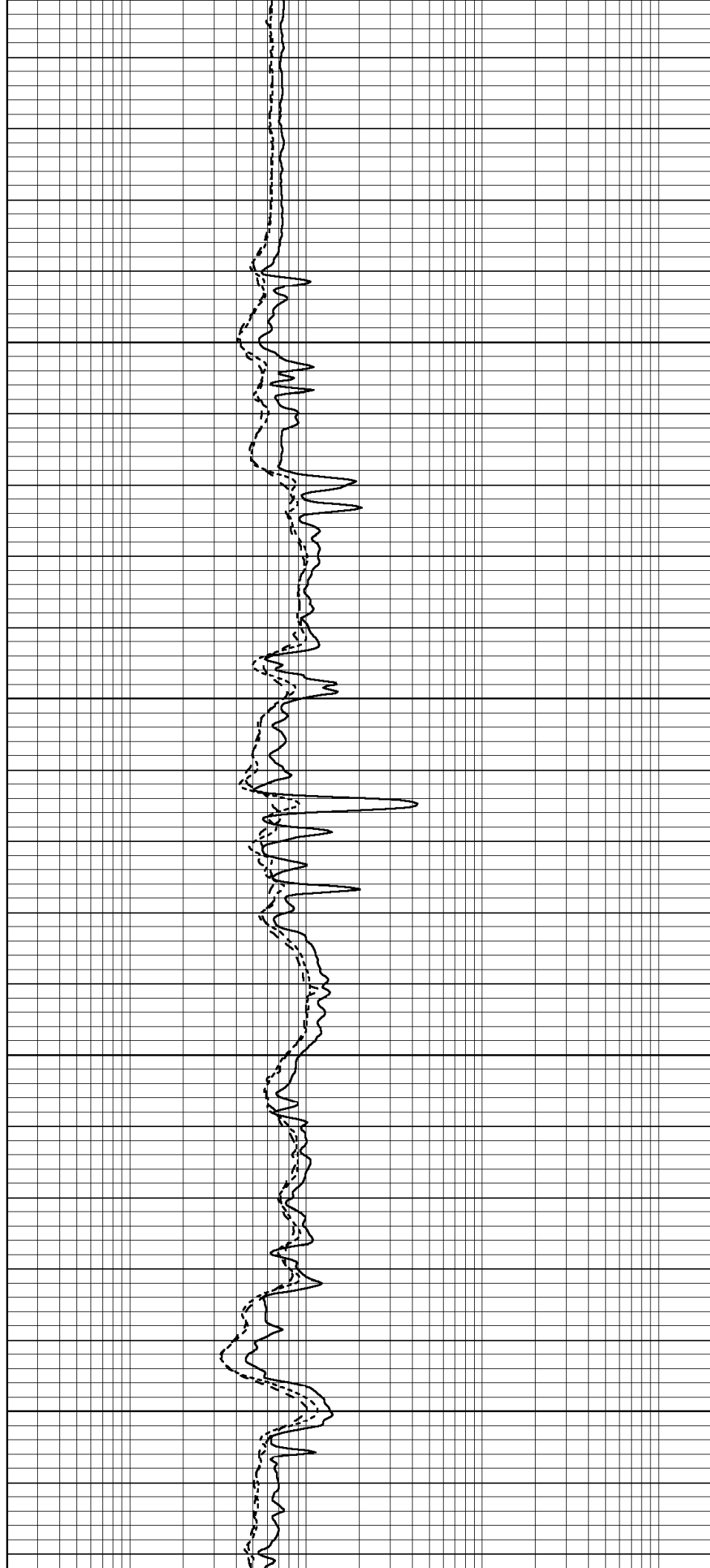


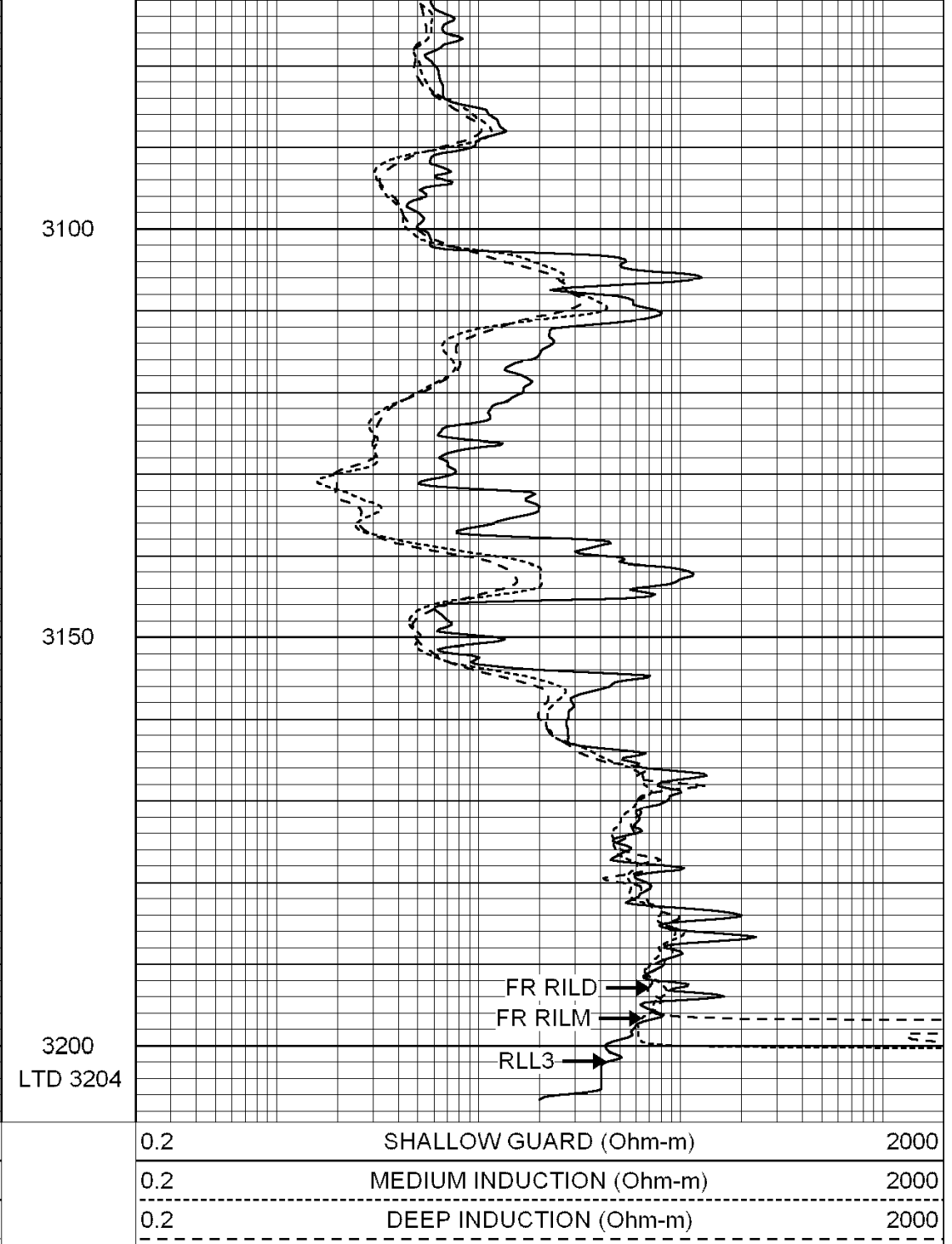
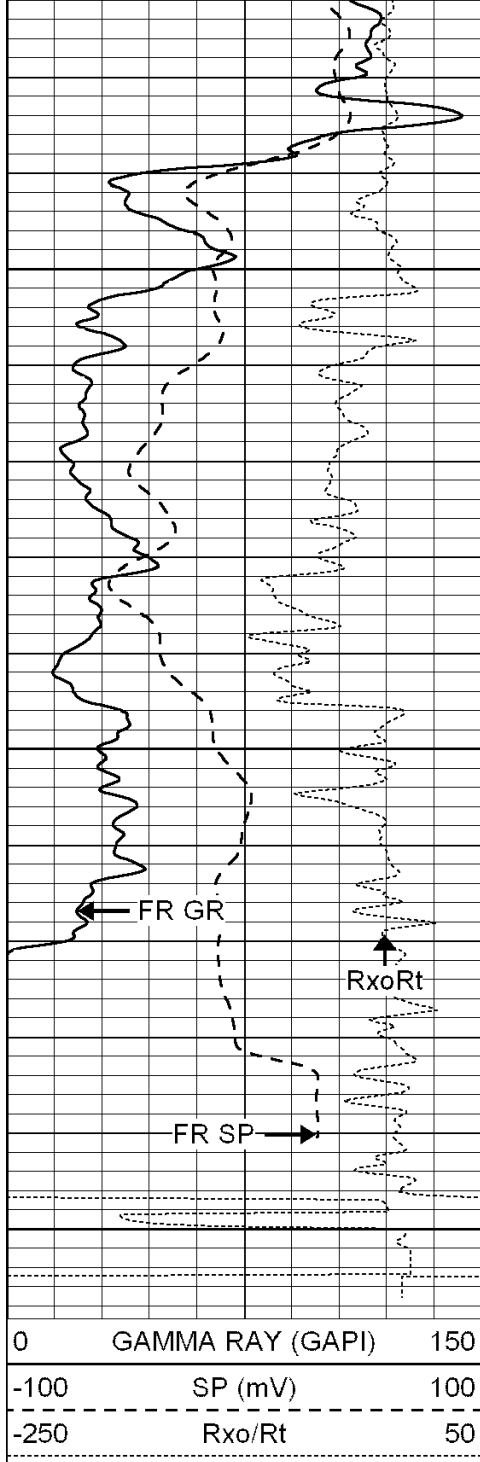
2900

2950

3000

3050

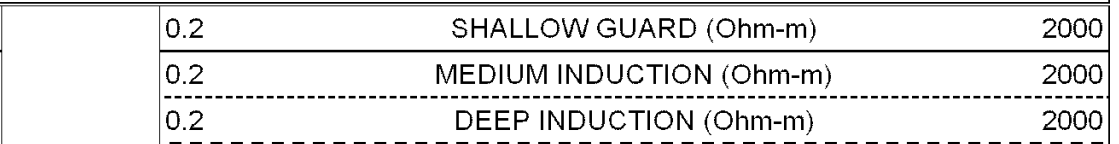
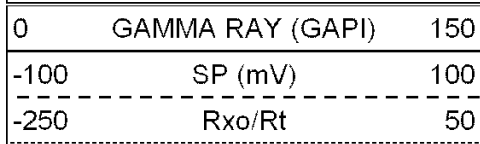


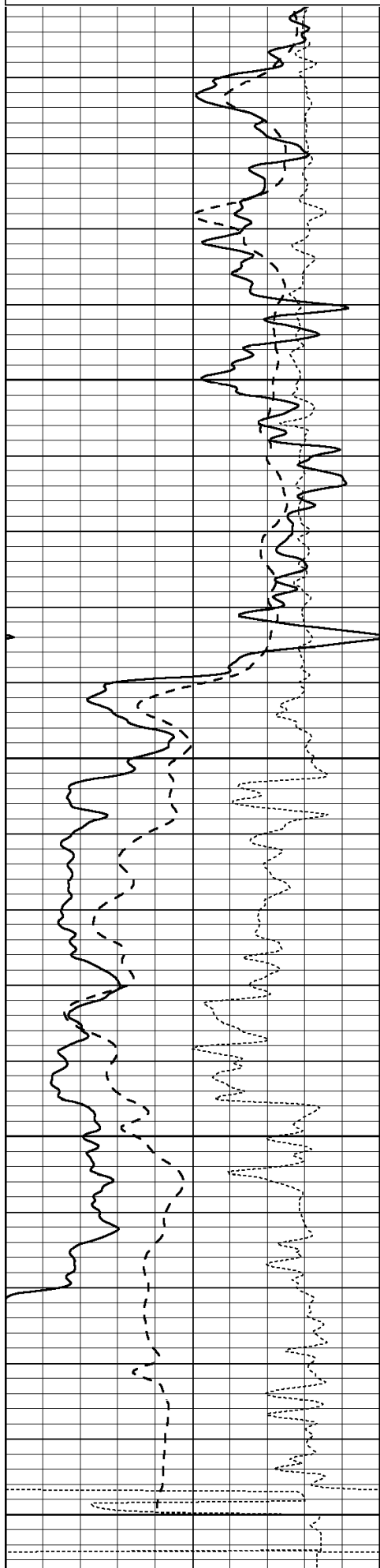


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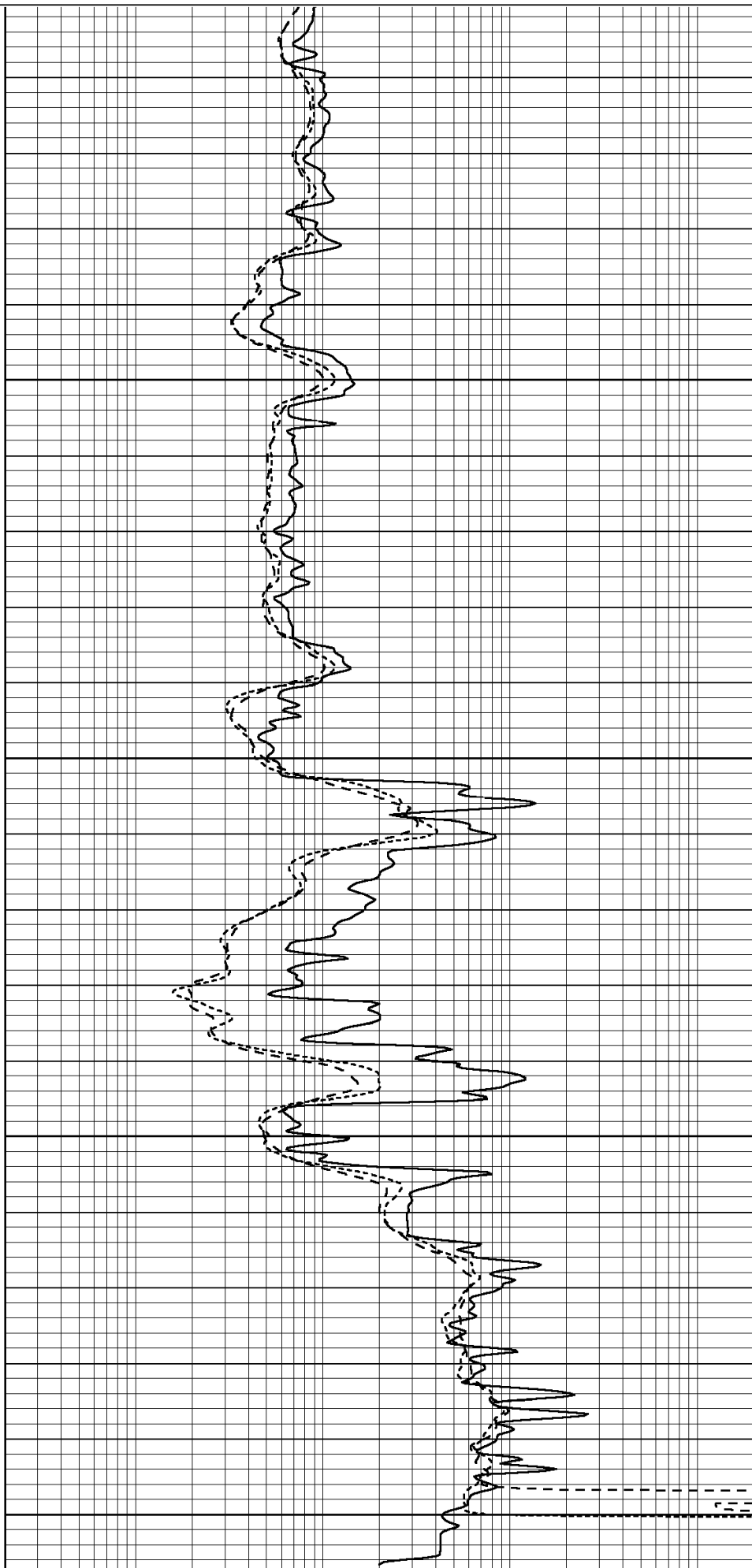
REPEAT SECTION

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 Dataset Pathname: pass2.7
 Presentation Format: _dil
 Dataset Creation: Mon Apr 27 08:39:52 2009 by Calc Open-Cased 070814
 Charted by: Depth in Feet scaled 1:240





3050
3100
3150
3200



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

-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000
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Calibration Report					
Database File:	003713ddn.db				
Dataset Pathname:	pass3.71				
Dataset Creation:	Mon Apr 27 08:29:11 2009				

Dual Induction Calibration Report					
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Serial-Model:	PROBE8-DILG				
Surface Cal Performed:	Fri Aug 01 06:33:19 2008				
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008				
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008				

Surface Calibration								
Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho-m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho-m	605.049	-17.680
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		
		-6.500	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		

Compensated Density Calibration Report					
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Serial-Model:	GEAR3-GEARHART				
Source / Verifier:	143 / 143				
Master Calibration Performed:	Fri Mar 06 10:44:04 2009				

Master Calibration					
	Density			Far Detector	Near Detector
Magnesium	1.710	g/cc		1127.25	444.45 cps
Aluminum	2.600	g/cc		260.89	307.54 cps
Spine Angle = 75.88			Density/Spine Ratio = 0.590		
Size			Reading		

Small Ring	8.00	in	4.25	V	
Large Ring	14.00	in	6.21	V	
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
Gamma Ray Calibration Report					
Serial Number:		GR6			
Tool Model:		OPEN			
Performed:		Mon Apr 06 01:29:18 2009			
Calibrator Value:		150.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		276.0	cps		
Sensitivity:		0.6035	GAPI/cps		