



**SUPERIOR  
Hays,  
Kansas**

**DUAL  
INDUCTION  
LOG**

Company I.A. OPERATING, INC.  
Well VIRGINIA K #18-1  
Field PLEASANT S.E.  
County ELLIS  
State KANSAS

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Well VIRGINIA K #18-1  
Field PLEASANT S.E.  
County ELLIS State KANSAS

Location: API #: 15-051-26268  
2180' FNL & 2100' FWL  
SEC 18 TWP 14S RGE 19W  
Permanent Datum GROUND LEVEL Elevation 2215  
Log Measured From KELLY BUSHING 8' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL  
MICRO  
Elevation  
K.B. 2223  
D.F.  
G.L. 2215

Date	3-8-12
Run Number	ONE
Depth Driller	3925
Depth Logger	3924
Bottom Logged Interval	3922
Top Log Interval	00
Casing Driller	221
Casing Logger	221
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2 / 60
pH / Fluid Loss	10.0 / 8.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.65 @ 70F
Rmf @ Meas. Temp	0.49 @ 70F
Rmc @ Meas. Temp	0.78 @ 70F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.400 @ 114F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	11:00 P.M.
Maximum Recorded Temperature	114F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	RANDY KILIAN

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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

SUPERIOR WELL SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: HAYS & GOLF COURSE RD., W TO RD. #170, 1S, 1/2W, S INTO.



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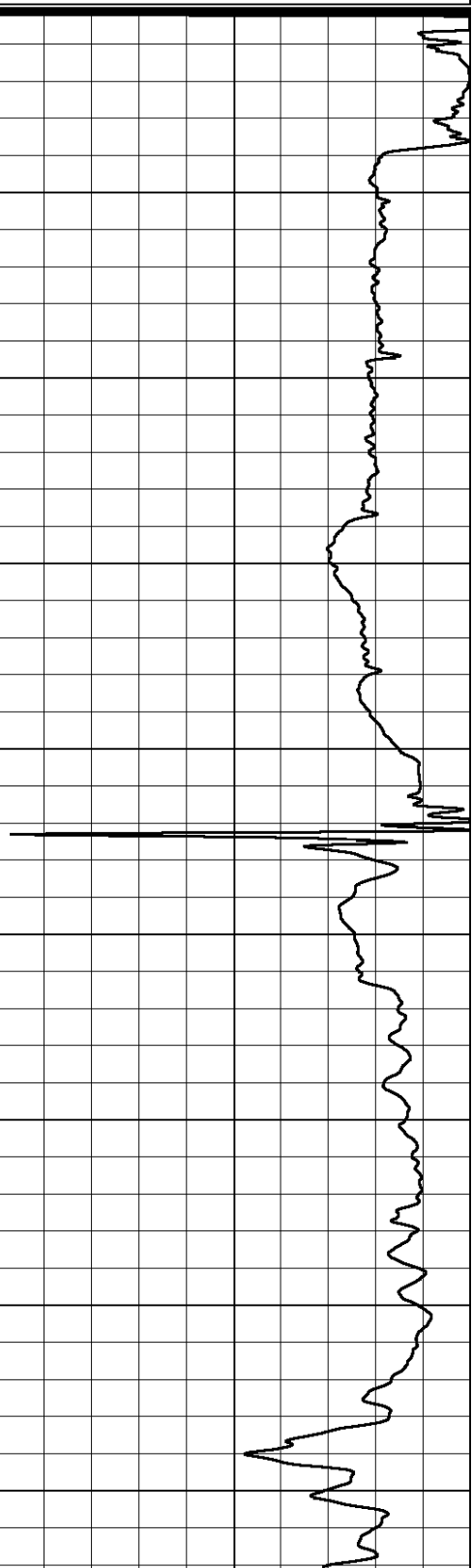
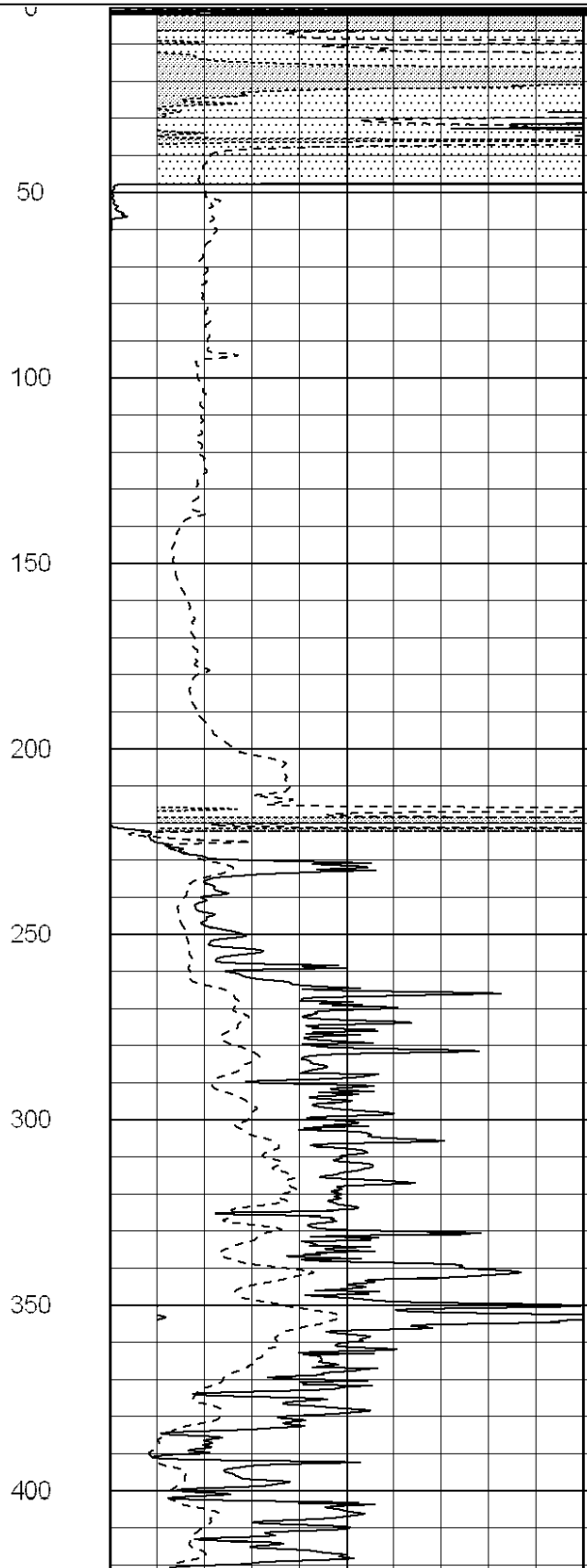
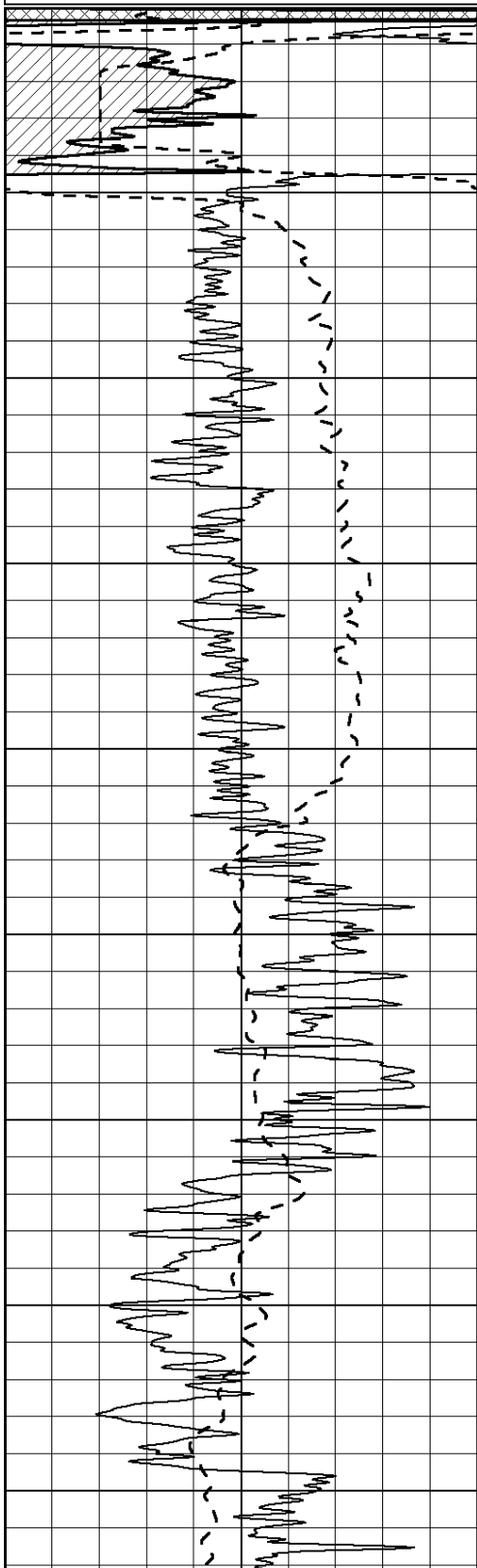
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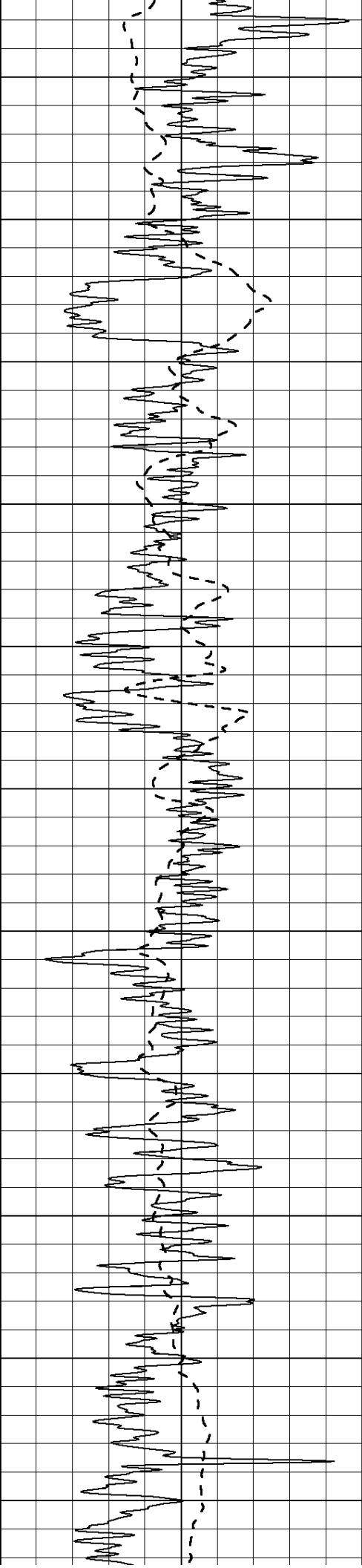
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 Presentation Format: dil2  
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0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

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





450

500

550

600

650

700

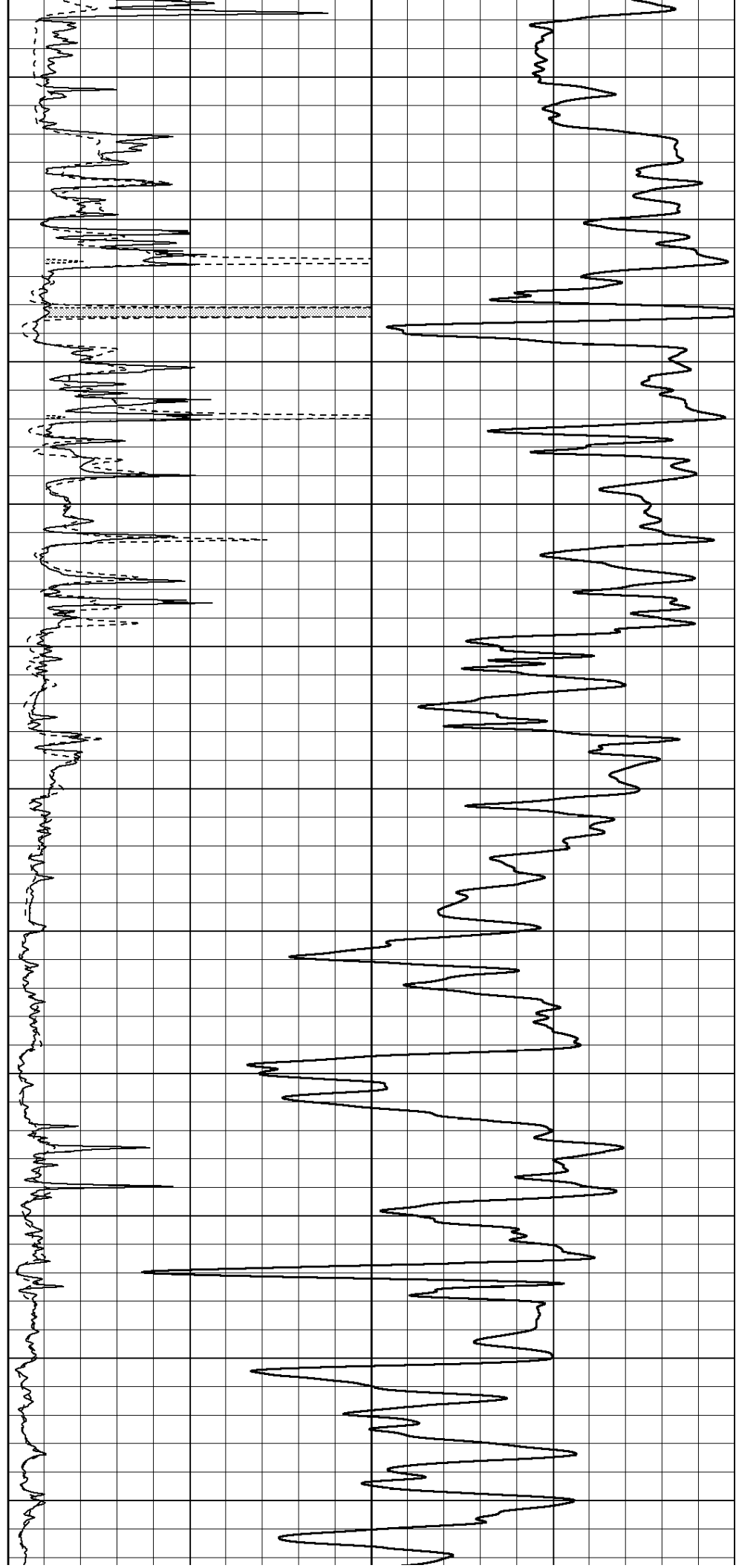
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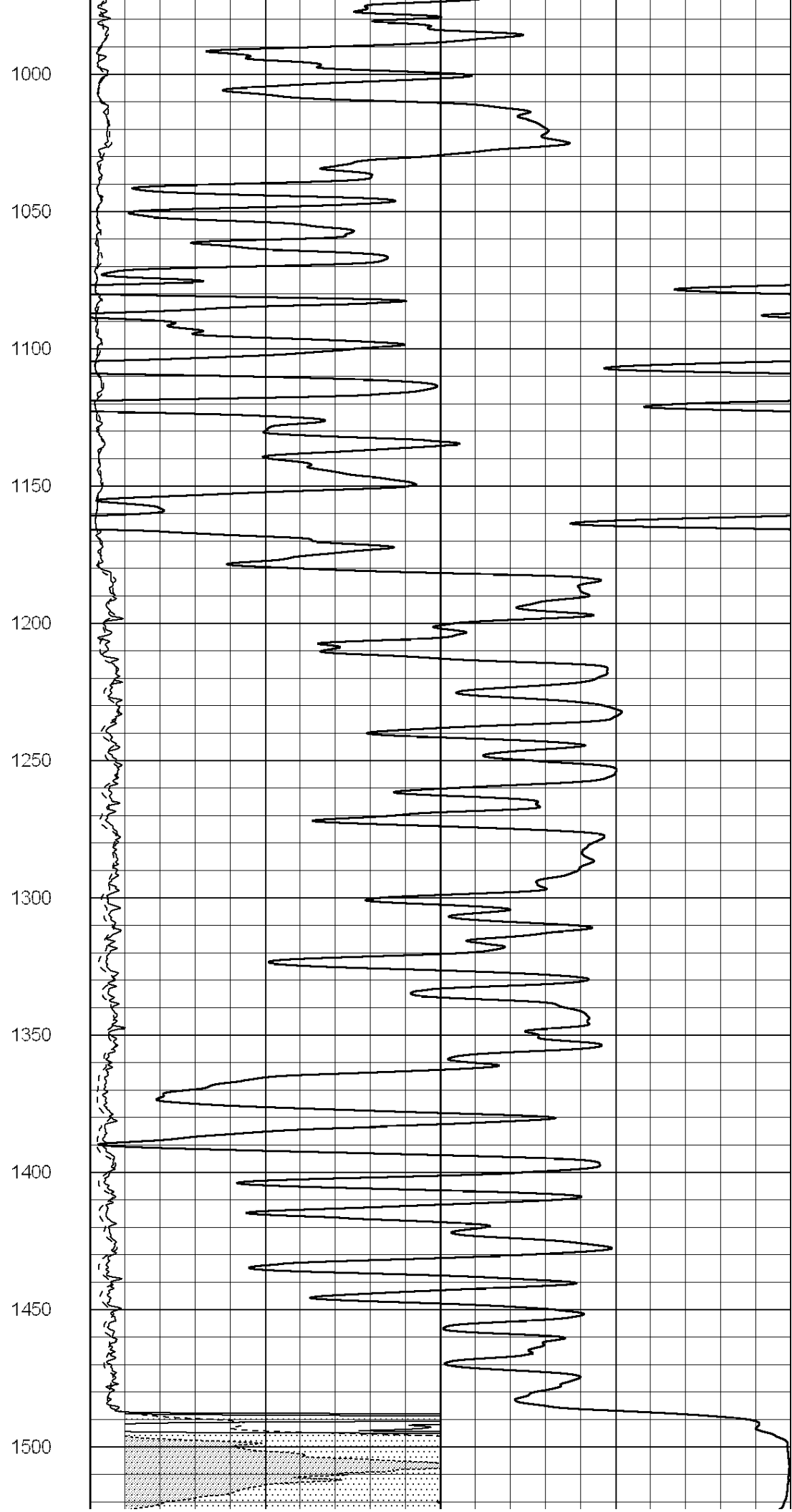
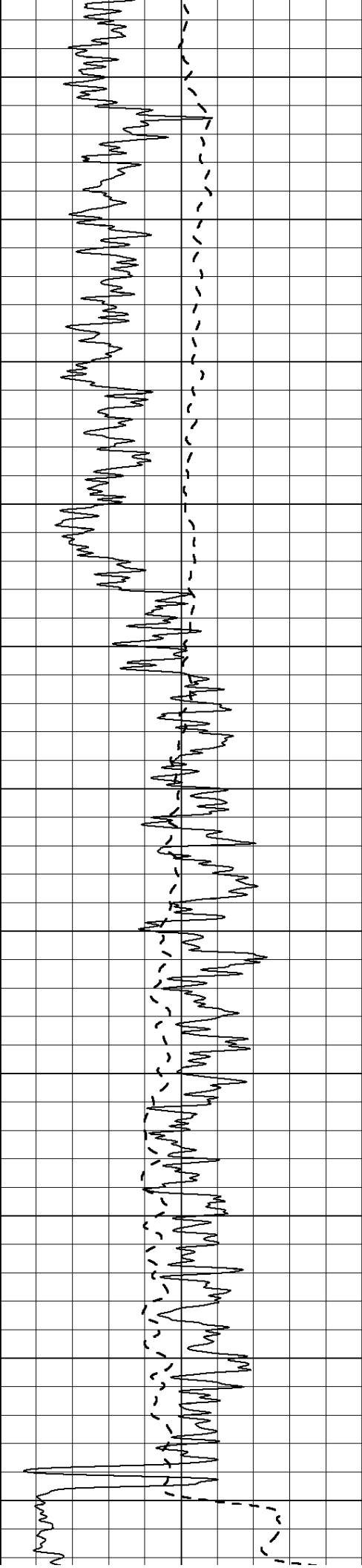
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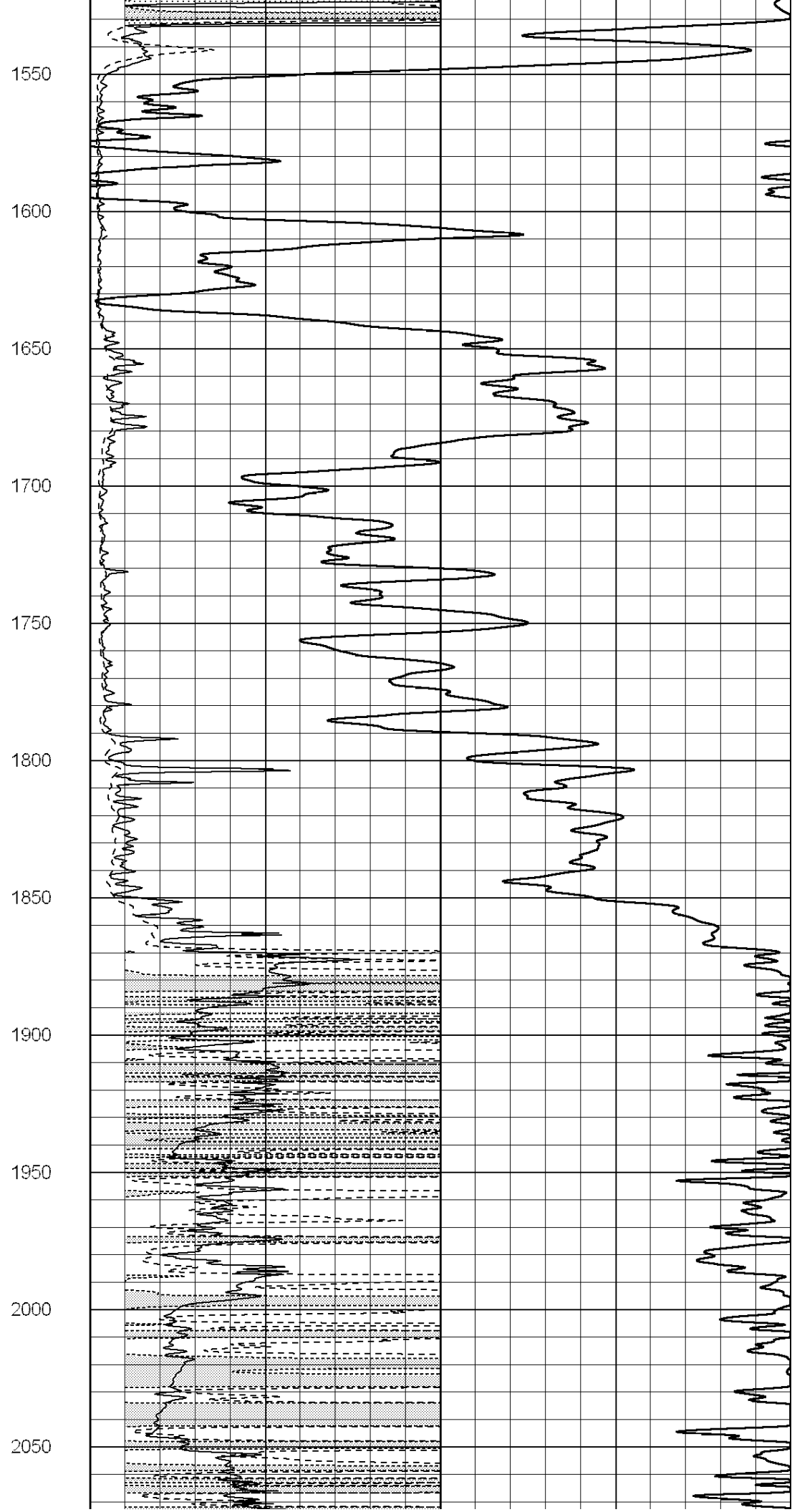
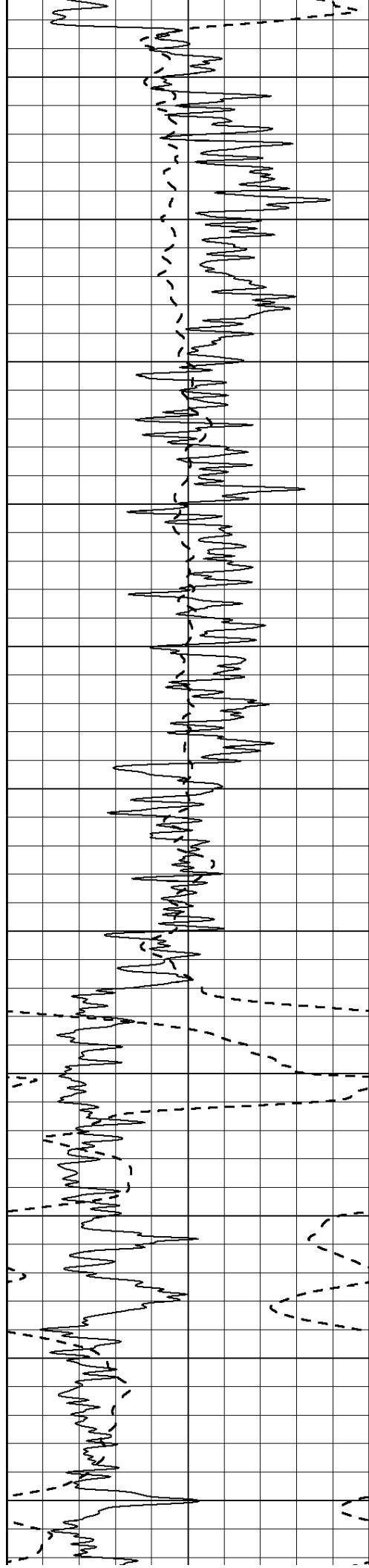
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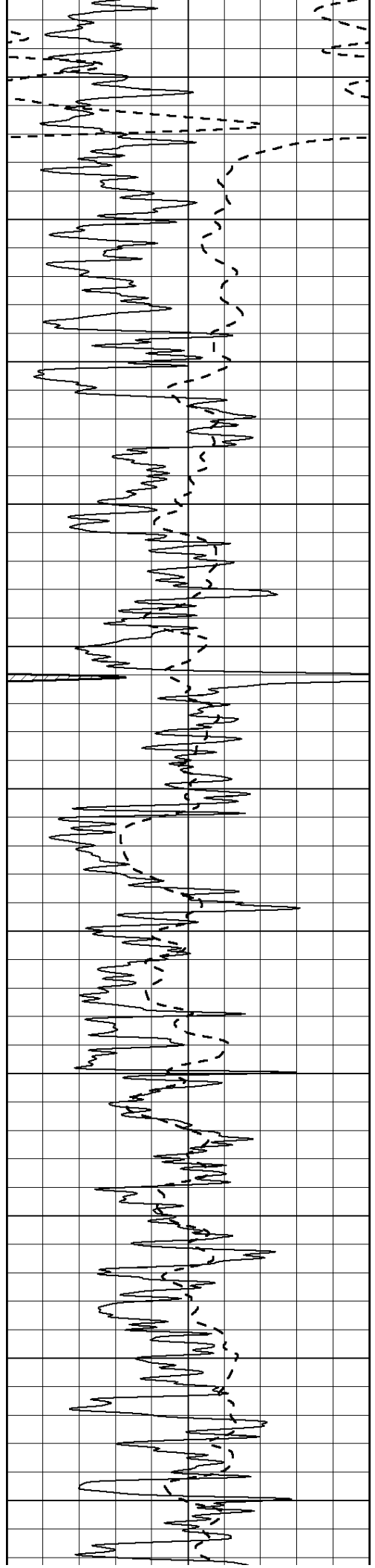
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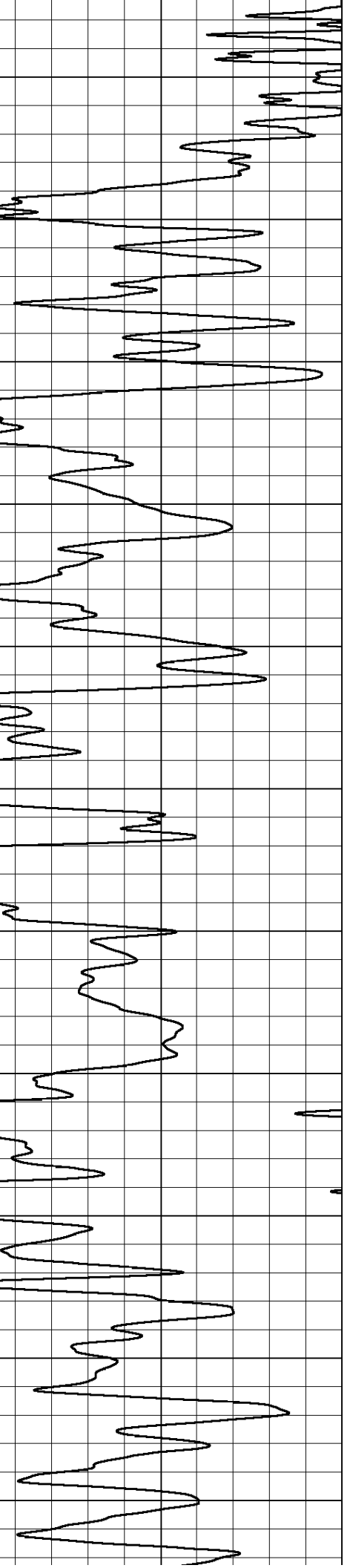
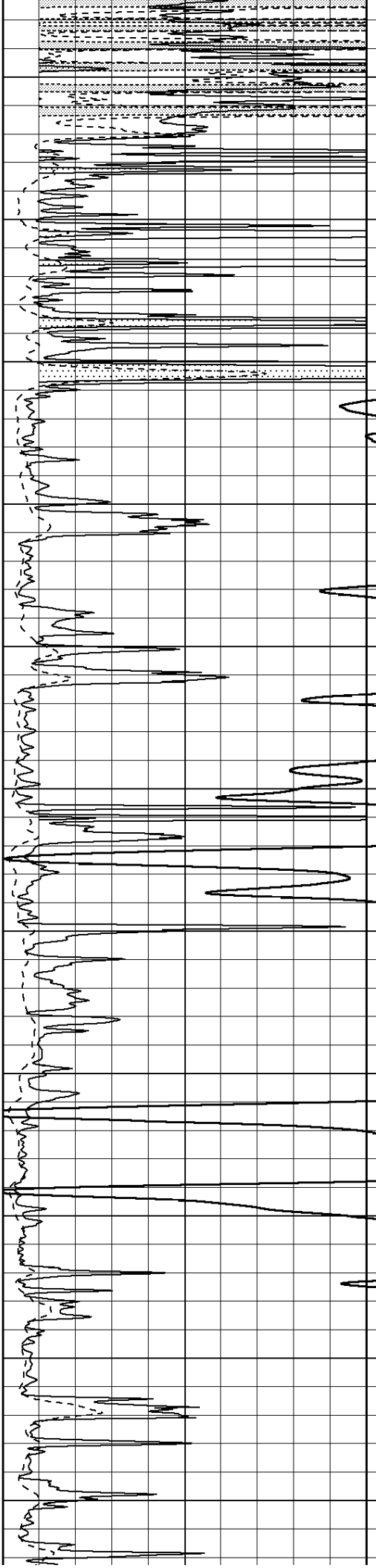








2100  
2150  
2200  
2250  
2300  
2350  
2400  
2450  
2500  
2550  
2600



2650

2700

2750

2800

2850

2900

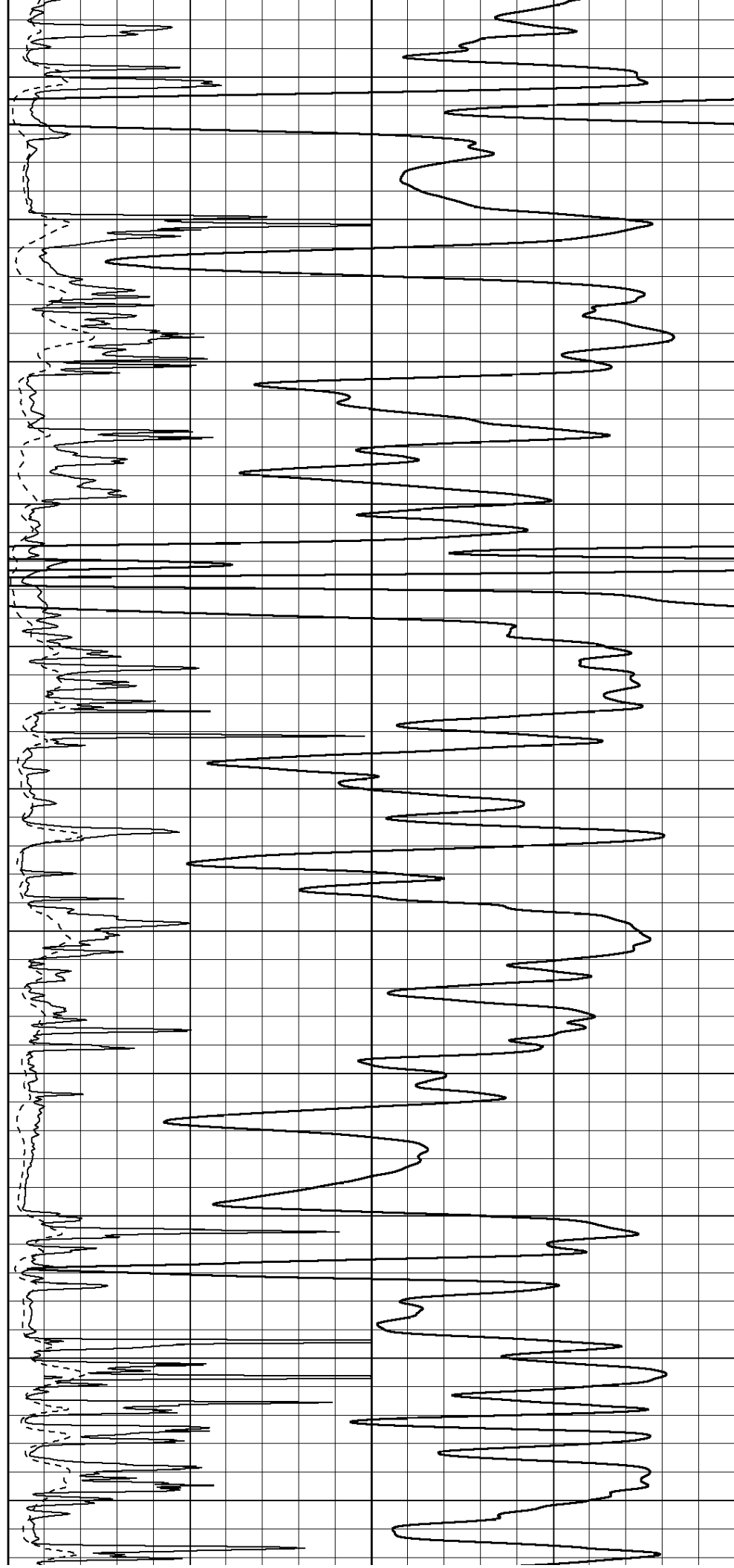
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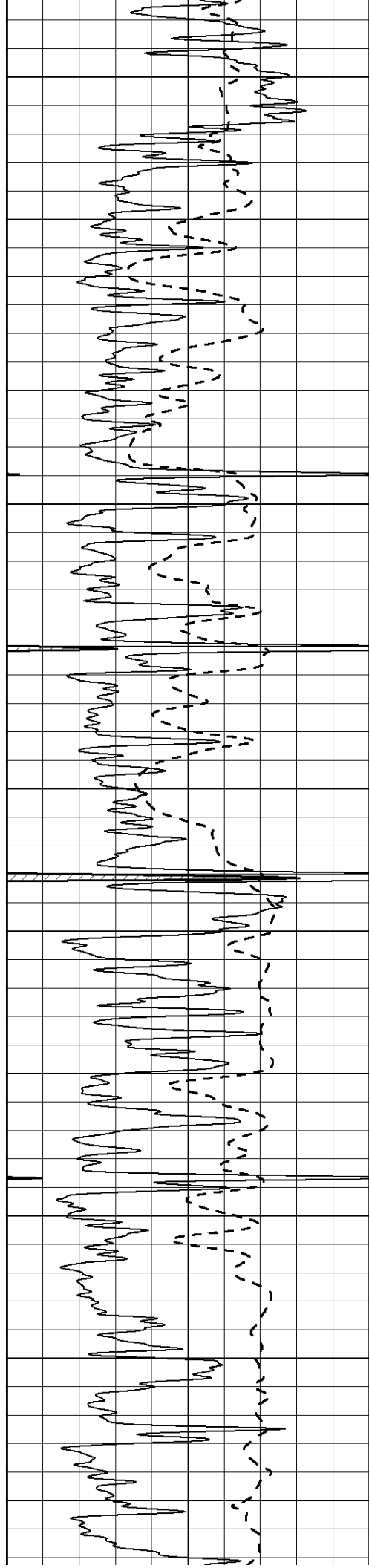
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3050

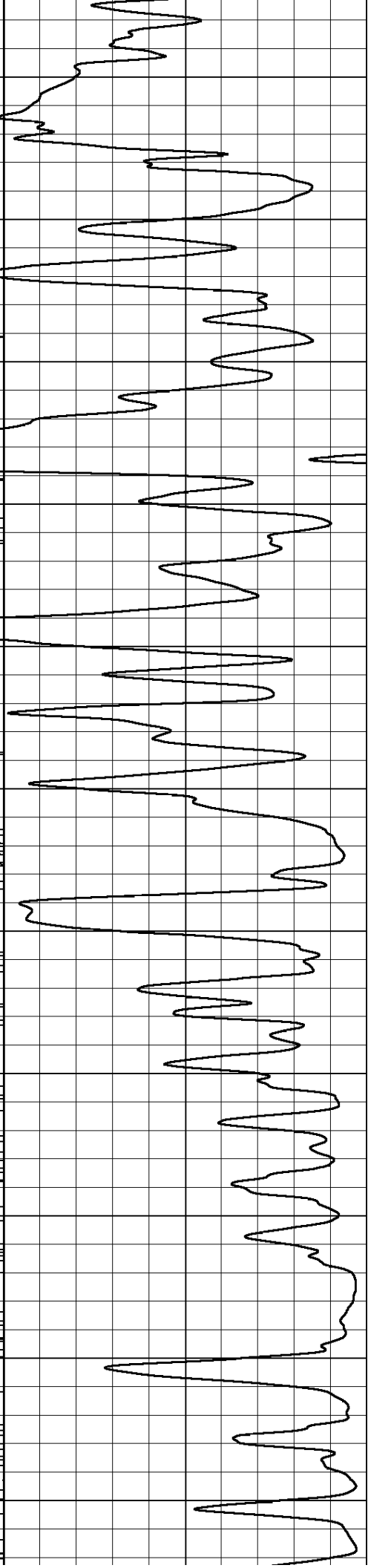
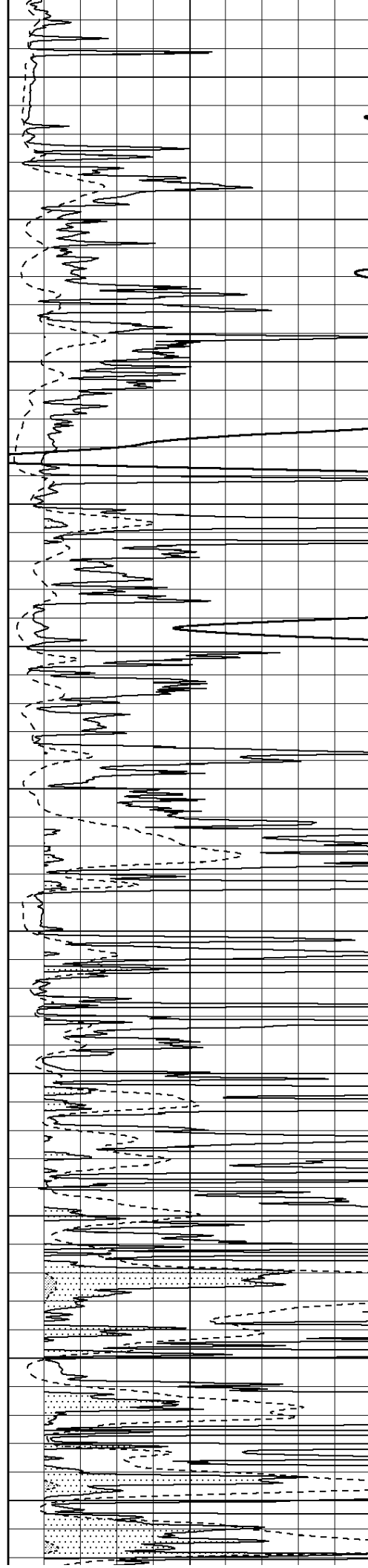
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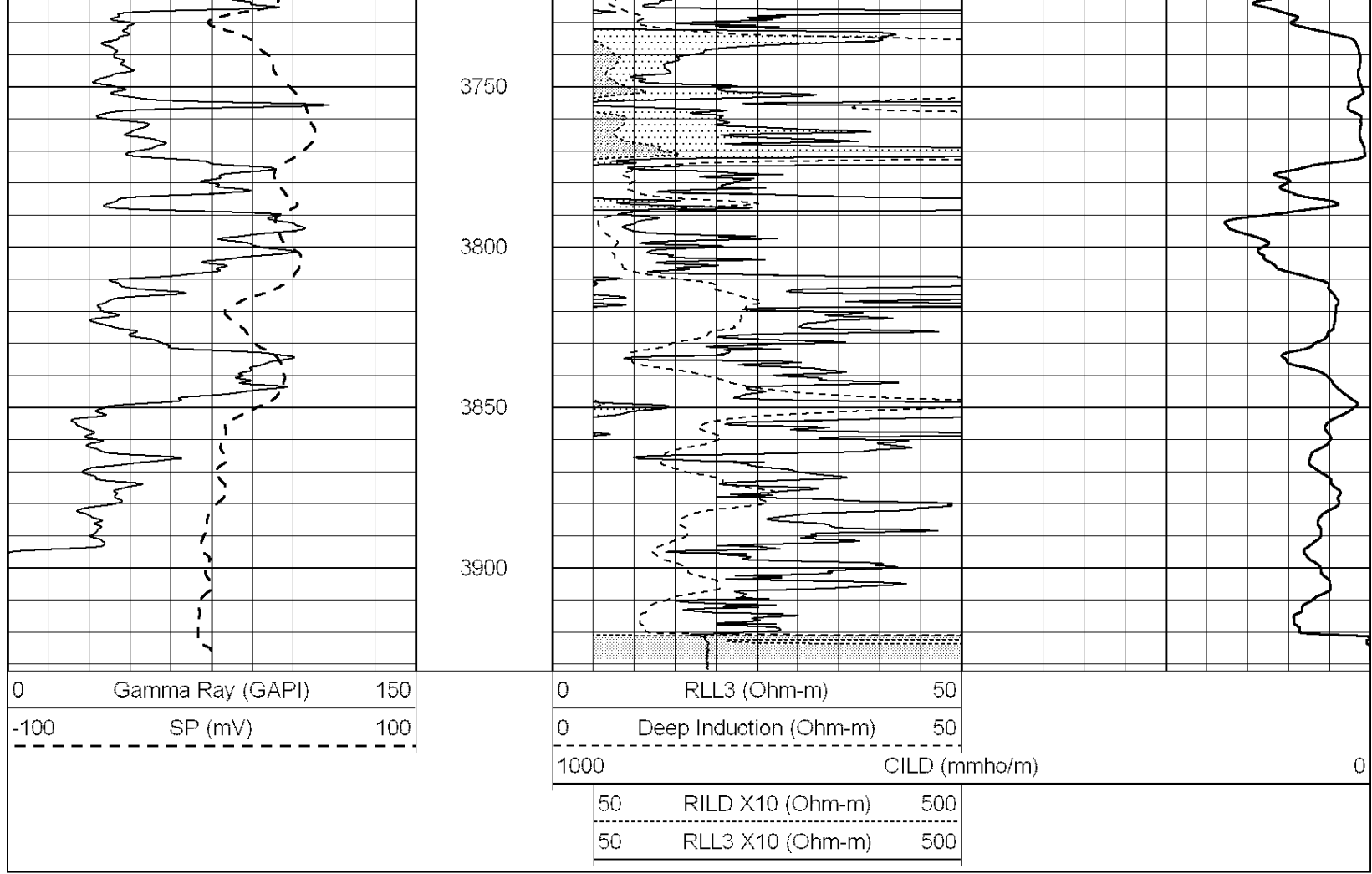
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3200  
3250  
3300  
3350  
3400  
3450  
3500  
3550  
3600  
3650  
3700



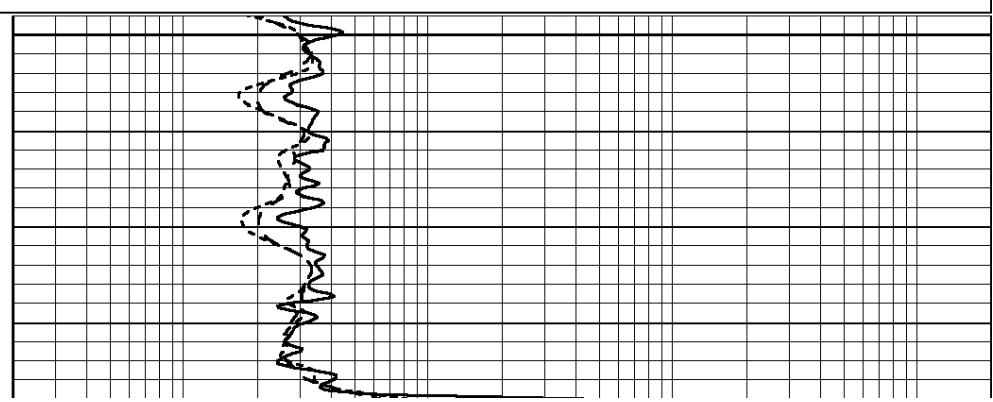
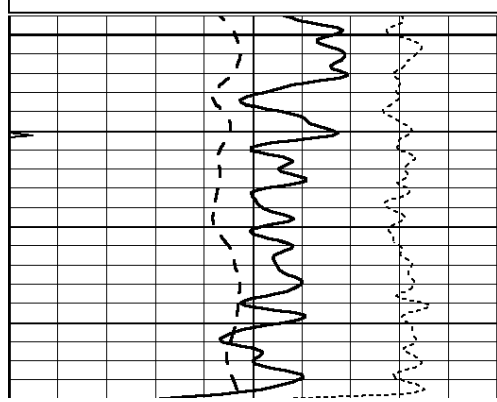


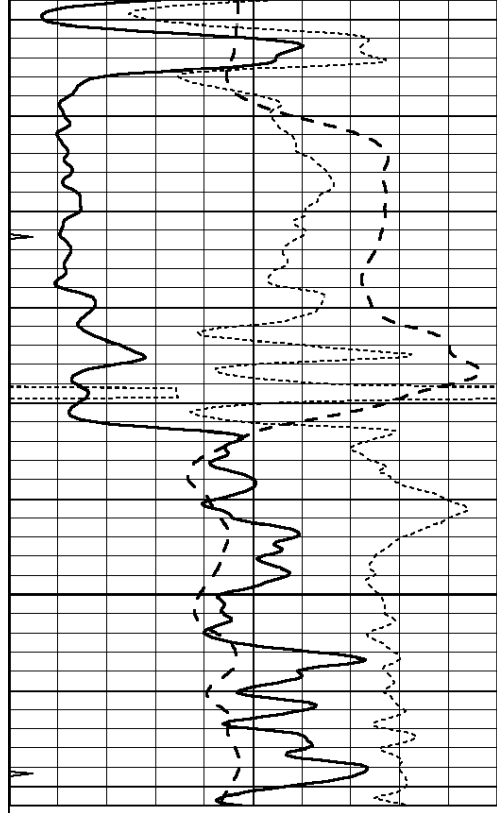
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Kansas

# MAIN SECTION

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 Dataset Pathname: pass4.1A  
 Presentation Format: dil  
 Dataset Creation: Thu Mar 08 01:07:32 2012  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

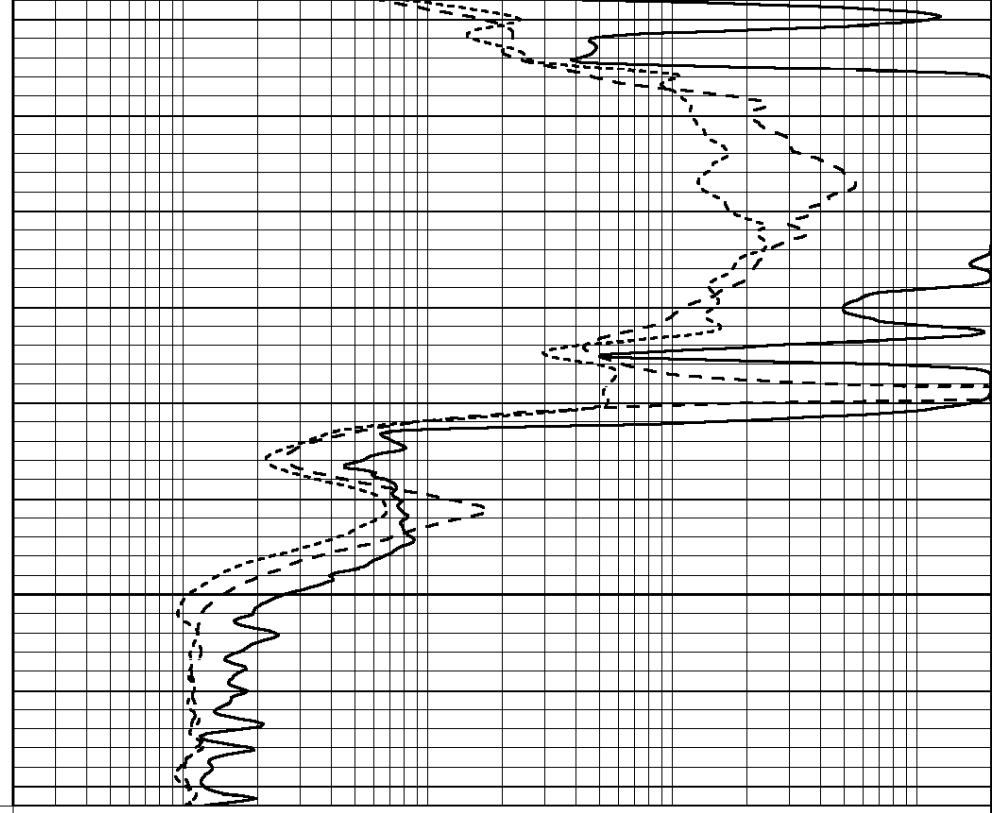




1500

1550

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



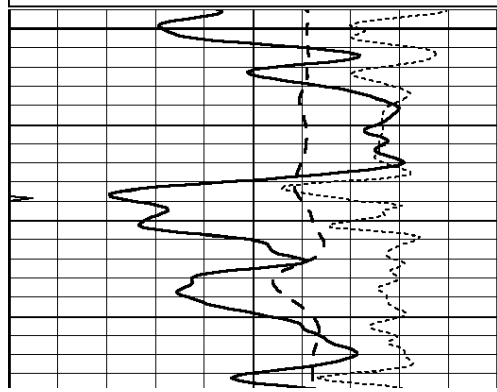
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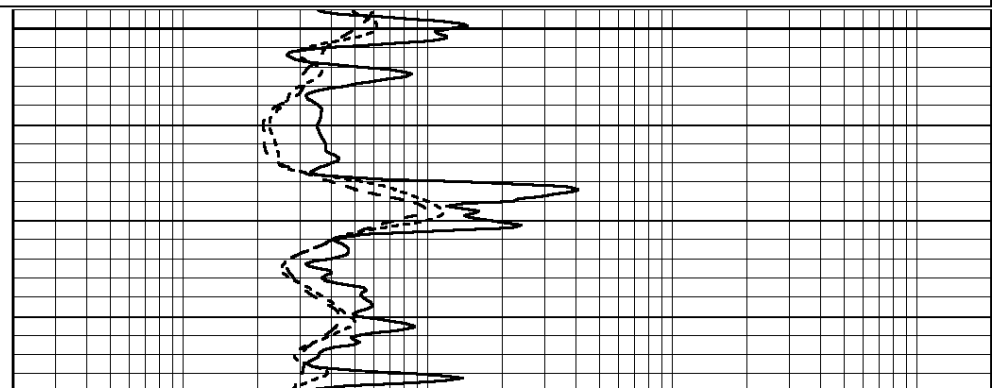
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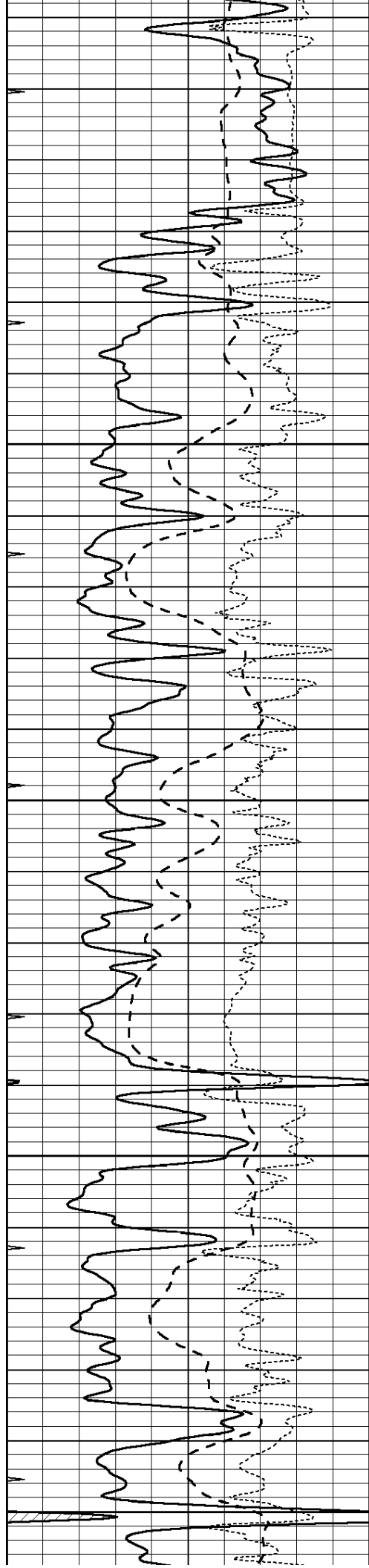
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3150





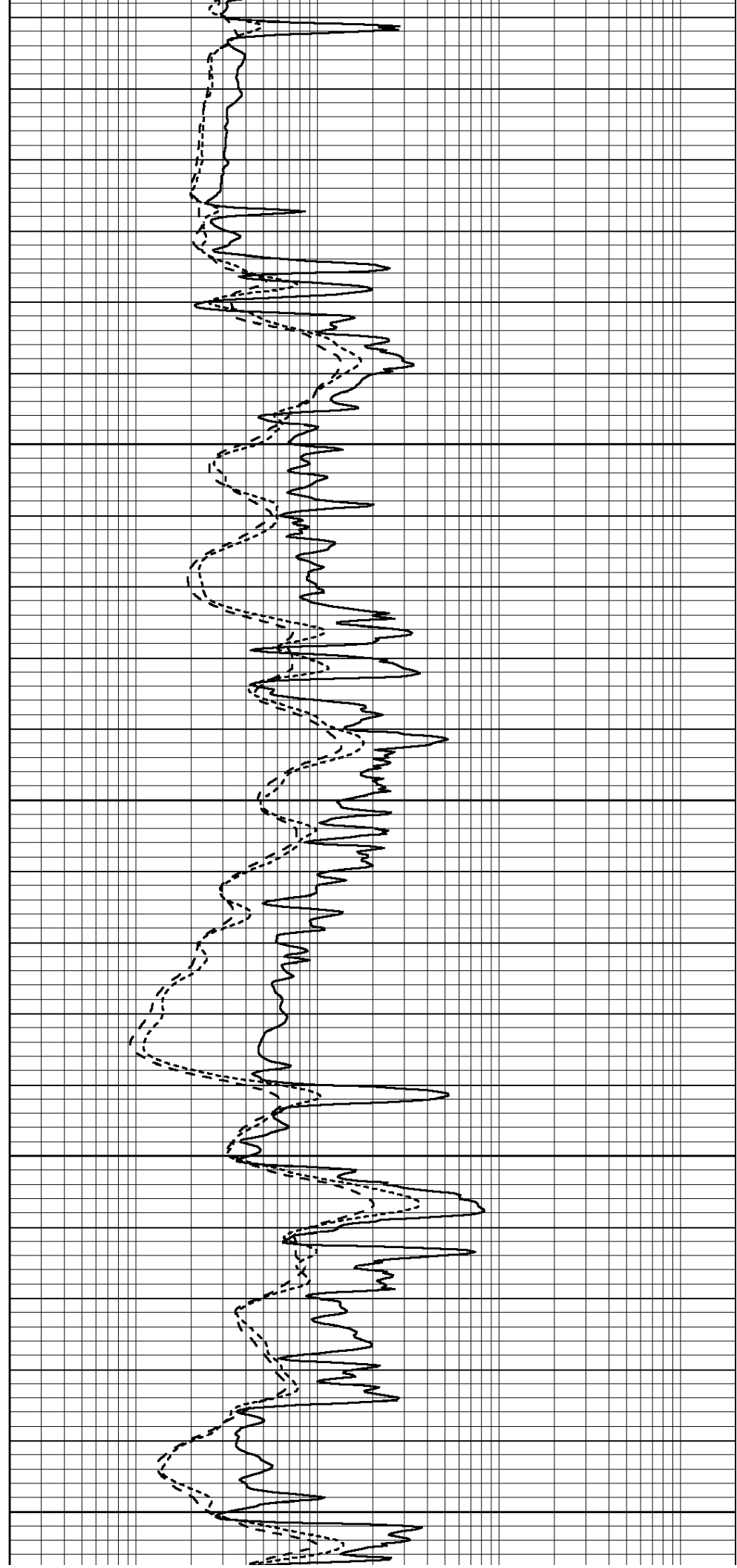
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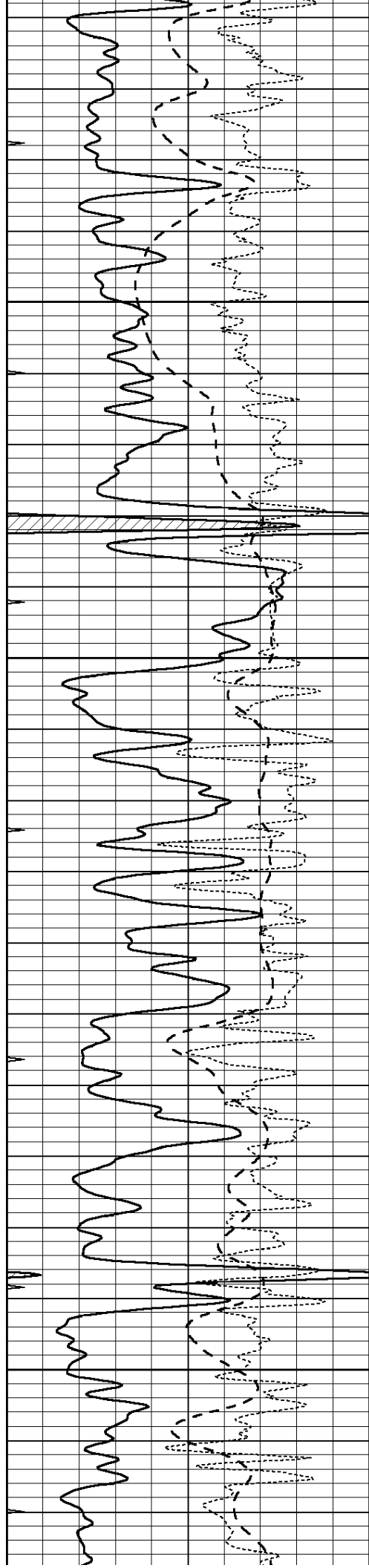
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3300

3350

3400



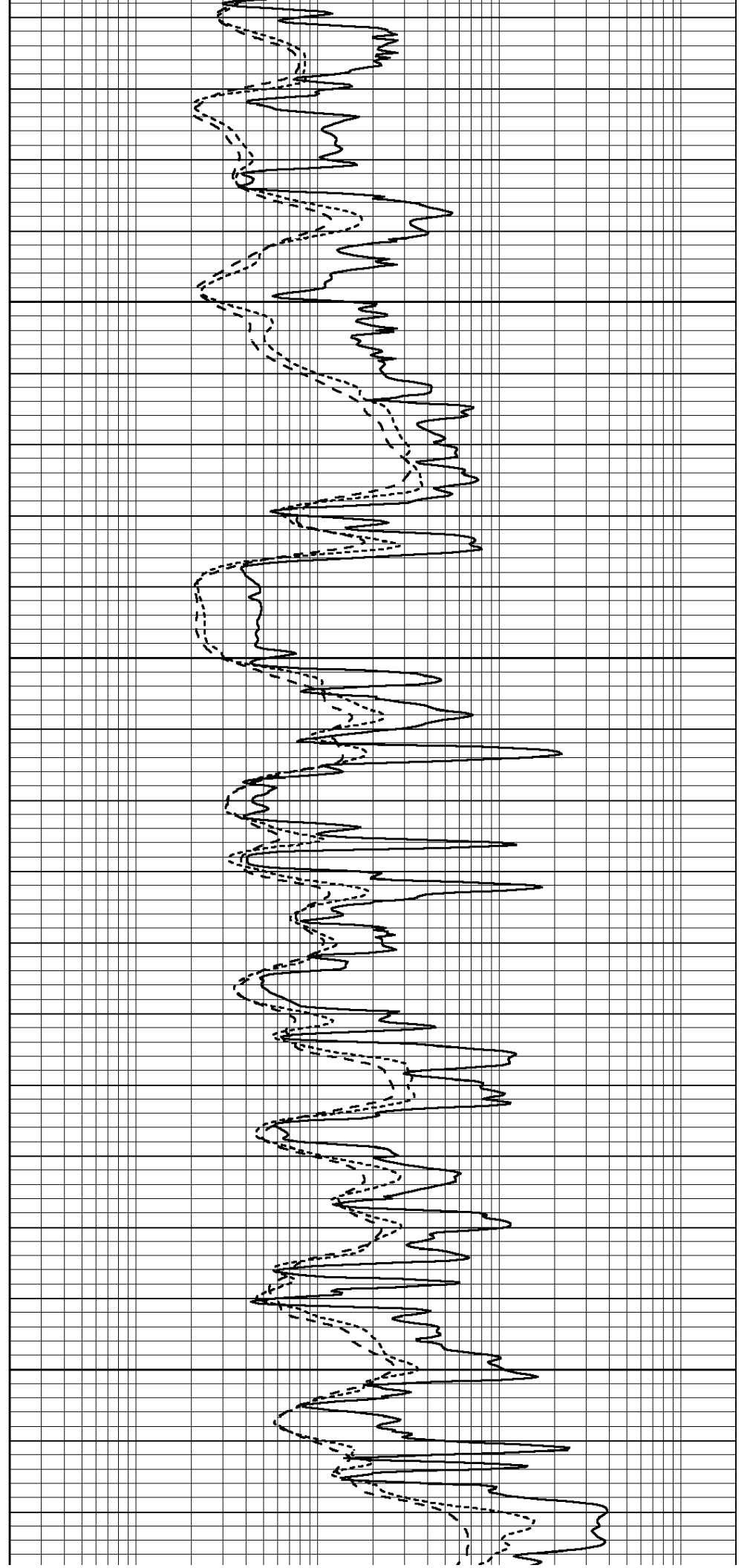


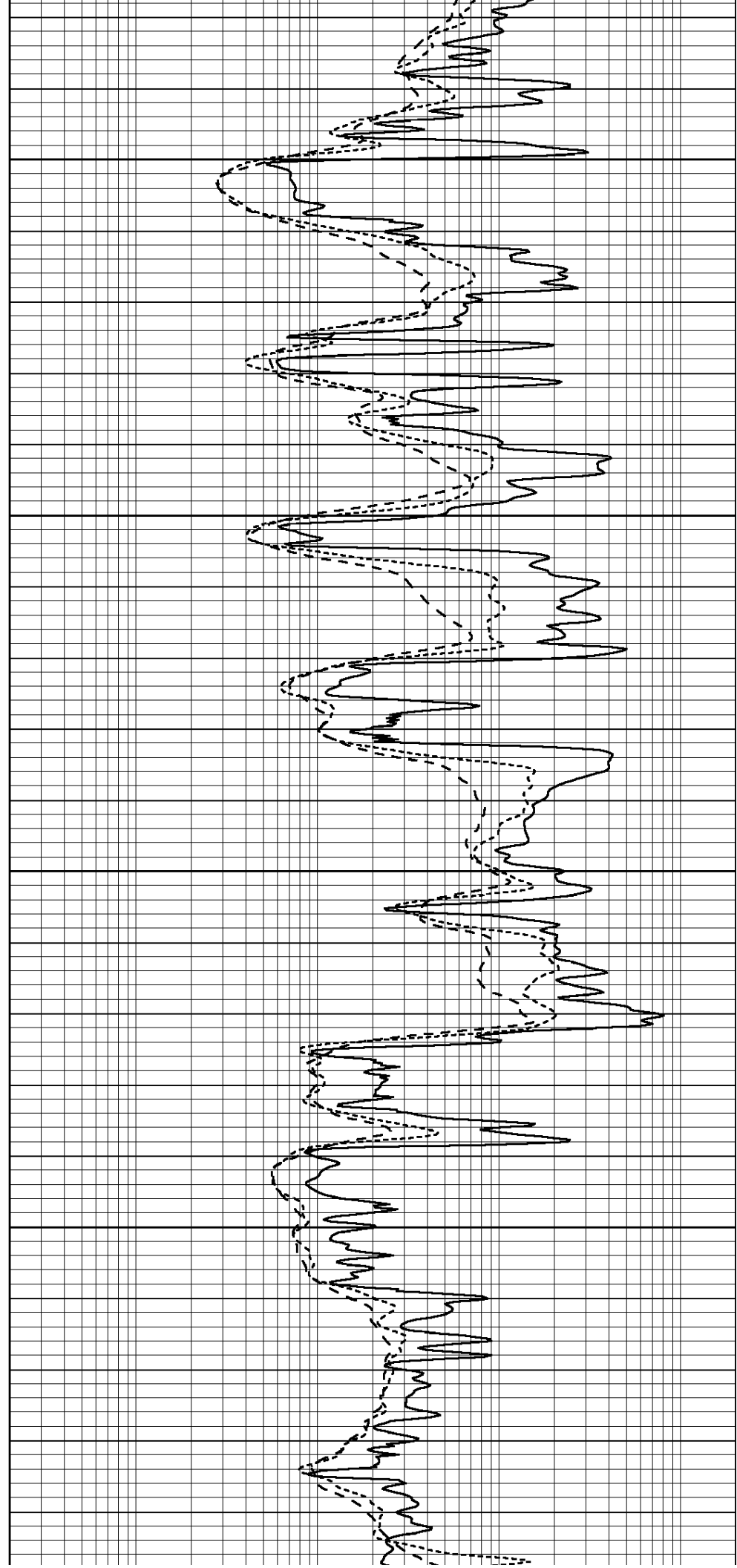
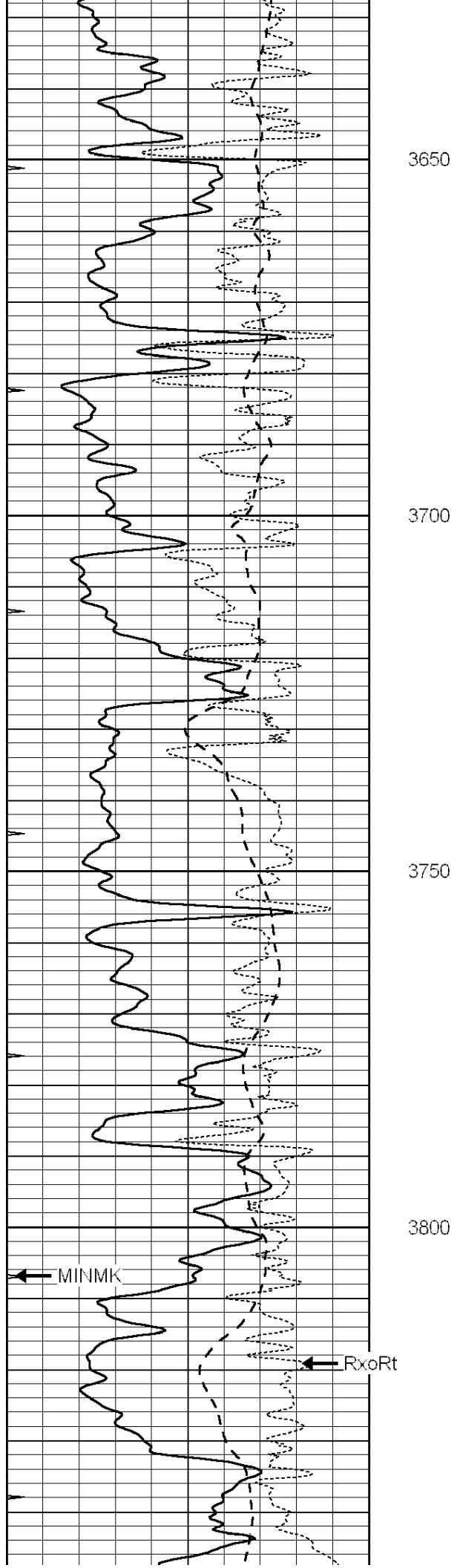
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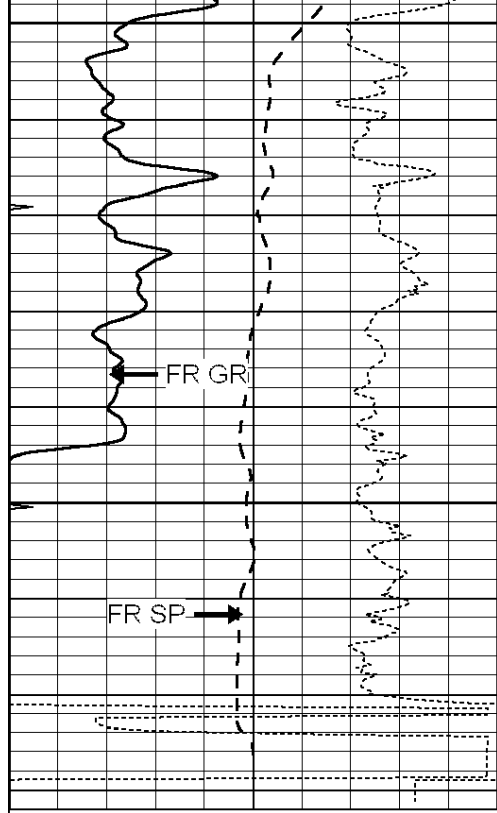
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3550

3600

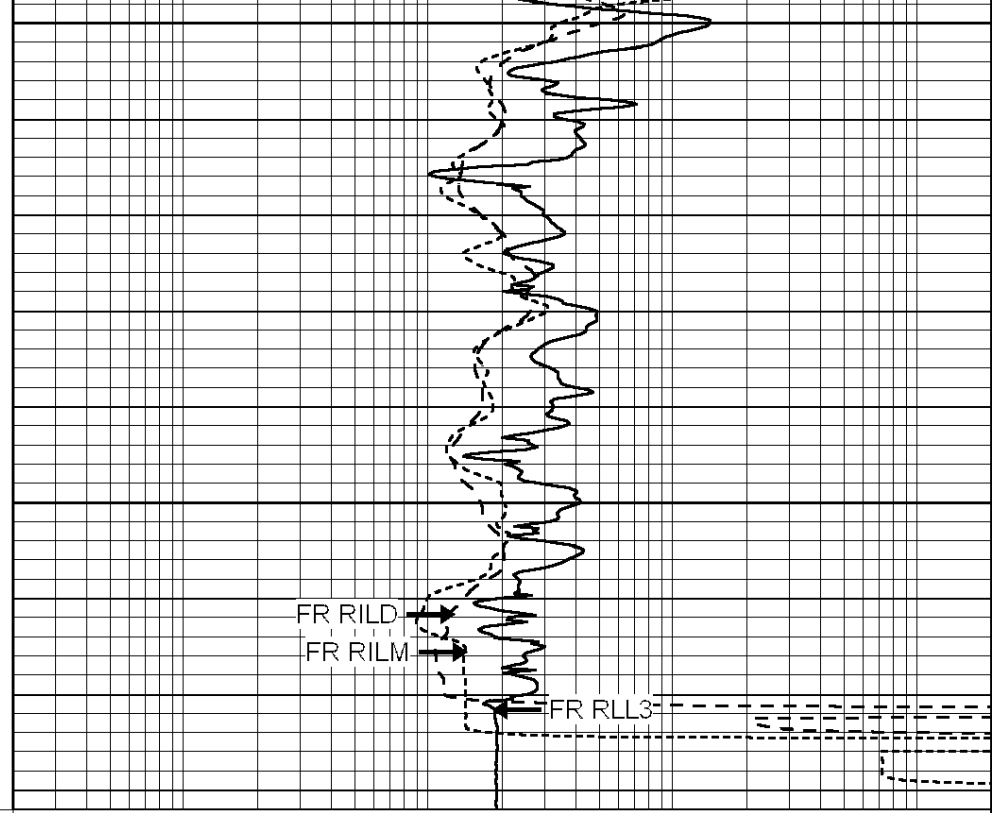






3850  
3900  
--- TD ---

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



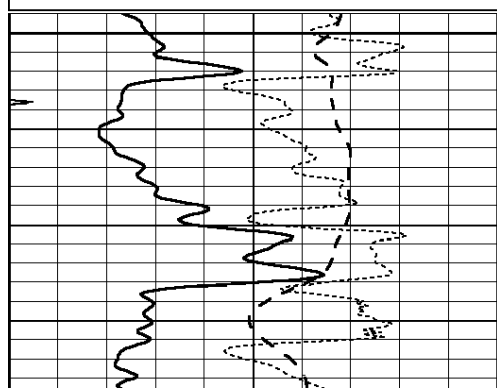
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# REPEAT SECTION

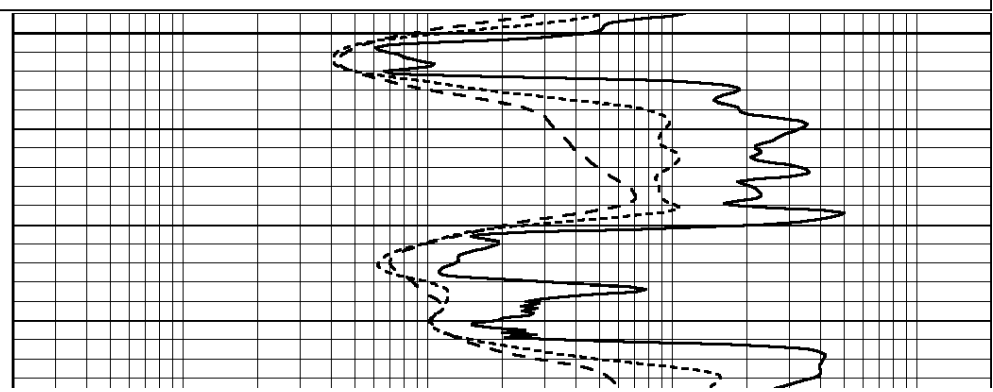
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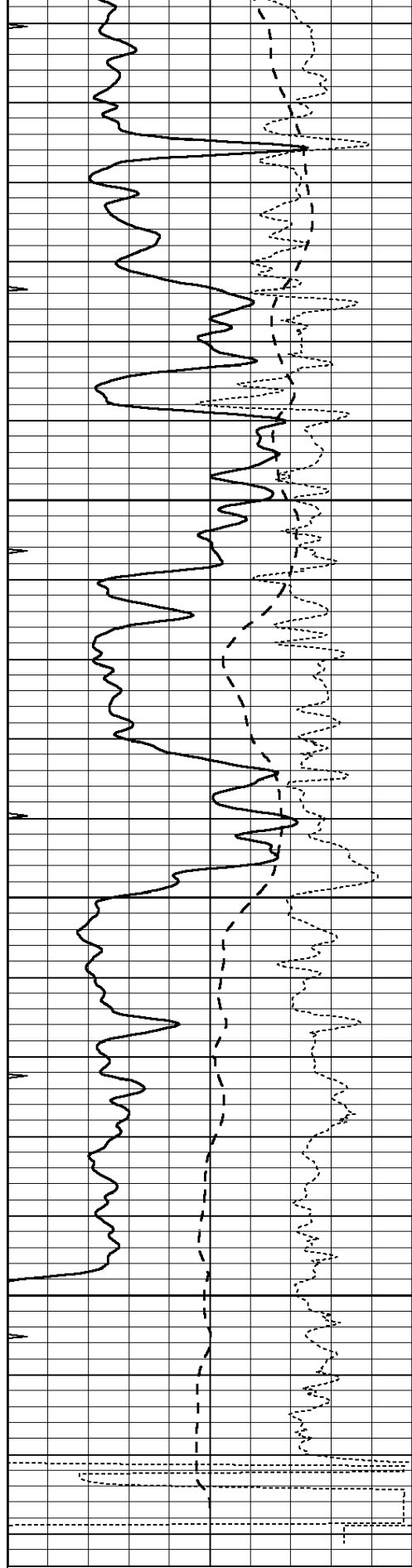
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



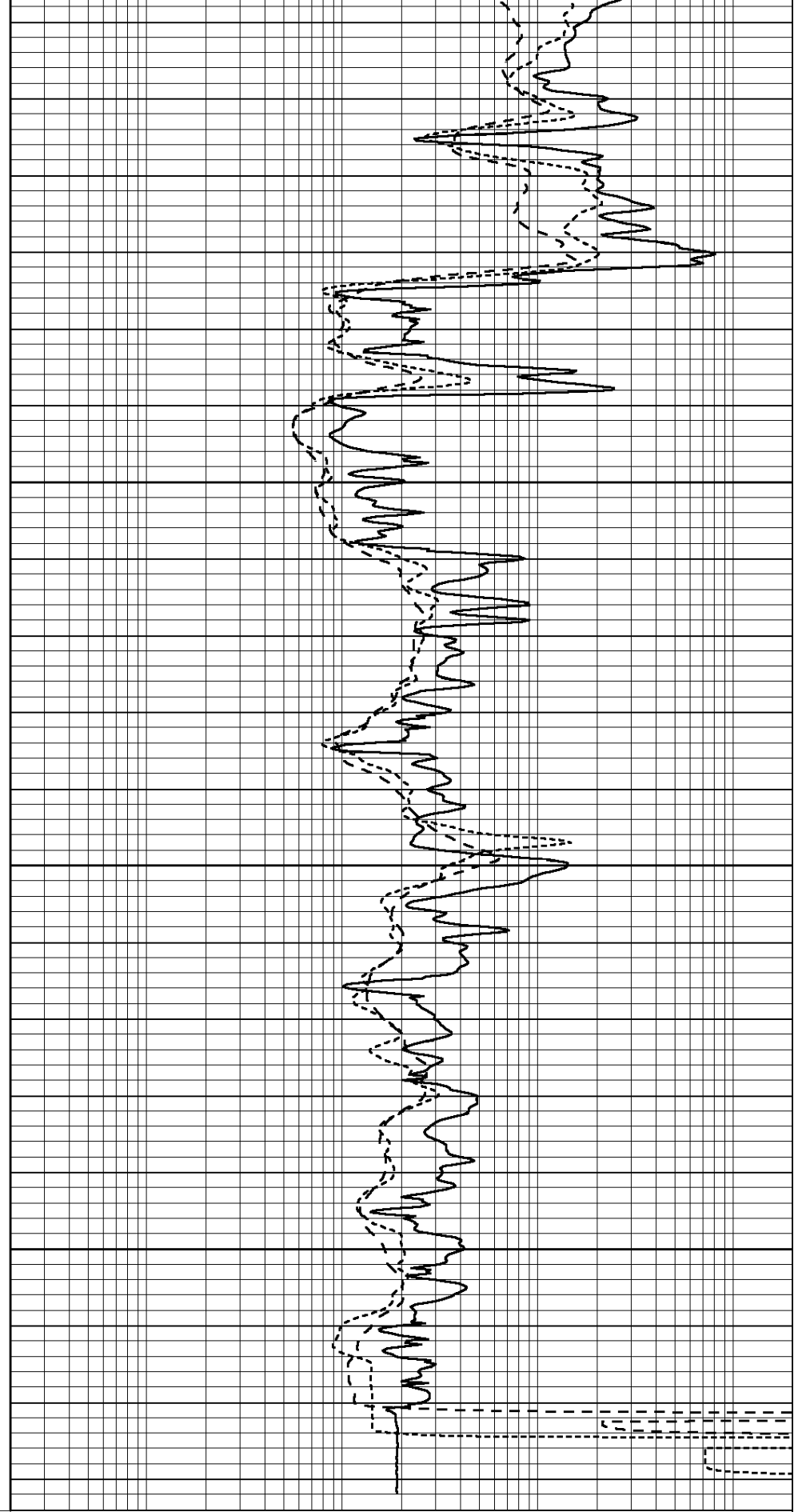
3700





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

3750  
3800  
3850  
3900



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report

Database File: 008491ddn.db  
 Dataset Pathname: pass4.1A  
 Dataset Creation: Thu Mar 08 01:07:32 2012

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Wed Mar 07 23:46:32 2012  
 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	580.000	-12.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	560.000	-15.000
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		3970.000	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

Serial-Model: GEAR1-GEARHART  
 Source / Verifier: 147 / 147  
 Master Calibration Performed: Wed Mar 07 18:28:46 2012

Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	1243.76		629.14	cps
Aluminum	2.590	g/cc	282.16		435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.576			
	Size		Reading			
Small Ring	9.35	in	3.50	V		
Large Ring	14.00	in	5.30	V		

Compensated Neutron Calibration Report

Serial Number: NUE\_2I  
 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: GR5  
 Tool Model: OPEN  
 Performed: Wed Mar 07 23:46:02 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.7000 GAPI/cps