



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	HERTEL OIL COMPANY, LLC.		
Well	ALLENBAUGH #1		
Field			
County	ELLIS	State	KANSAS
Location:	API # : 15-051-26624	Other Services CDL/CNL MICRO	
SEC 30 TWP 14S RGE 19W		Elevation	
Permanent Datum	GROUND LEVEL	Elevation	2126
Log Measured From	KELLY BUSHING 8' A.G.L.	K.B. 2134	D.F.
Drilling Measured From	KELLY BUSHING	G.L. 2126	
Date	11-24-13		
Run Number	ONE		
Depth Driller	3833		
Depth Logger	3838		
Bottom Logged Interval	3836		
Top Log Interval	00		
Casing Driller	222		
Casing Logger	222		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.1 / 52		
pH / Fluid Loss	10.5 / 6.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.85 @ 72F		
Rmf @ Meas. Temp	0.64 @ 72F		
Rmc @ Meas. Temp	1.02 @ 72F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.540 @ 113F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	10:30 P.M.		
Maximum Recorded Temperature	113F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	RUPP		
Witnessed By	HERB DEINES	CHRIS NEELEY	

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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

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: ANTONINO, 4W, 1N, 1/2W, N INTO.

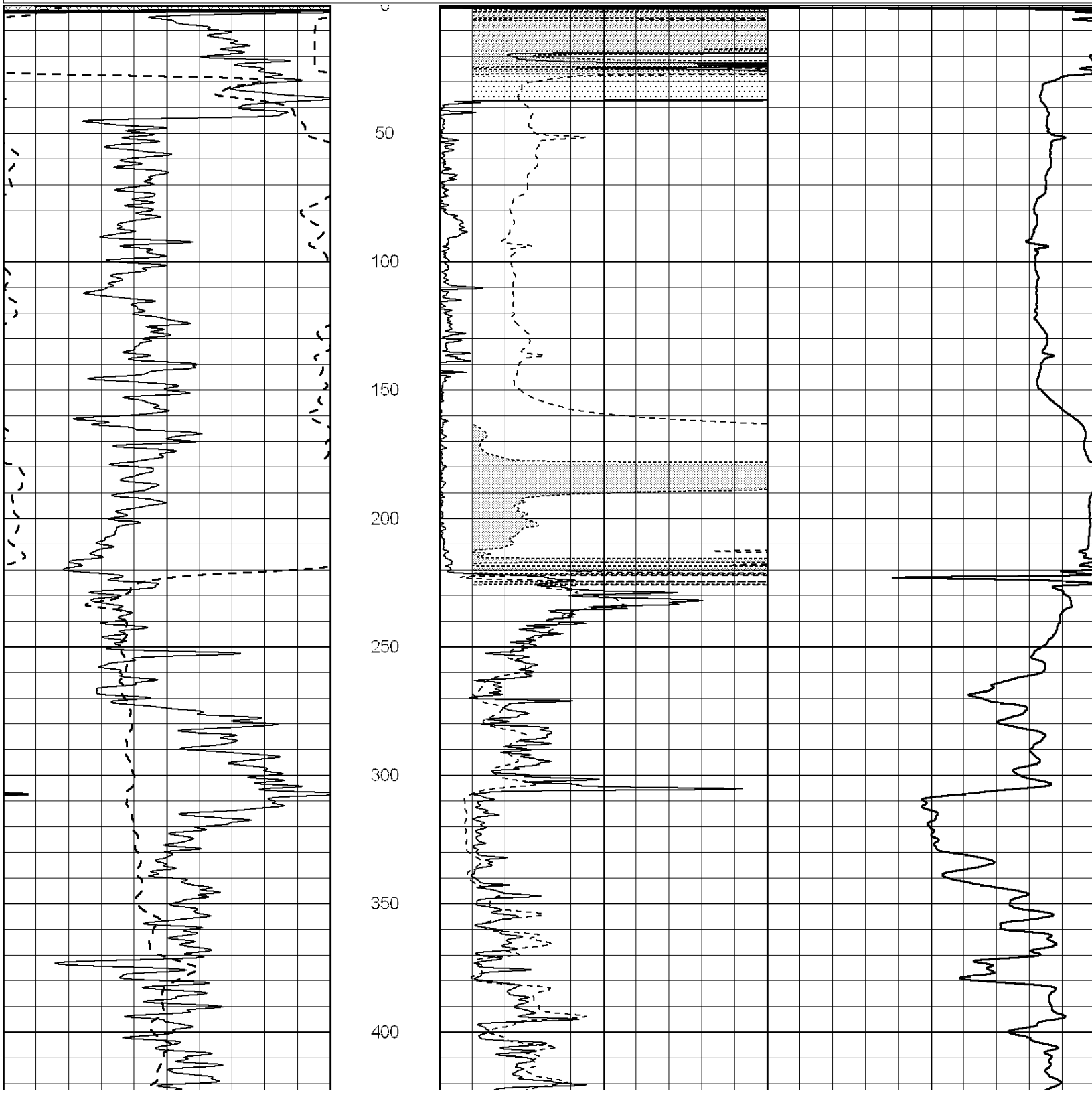


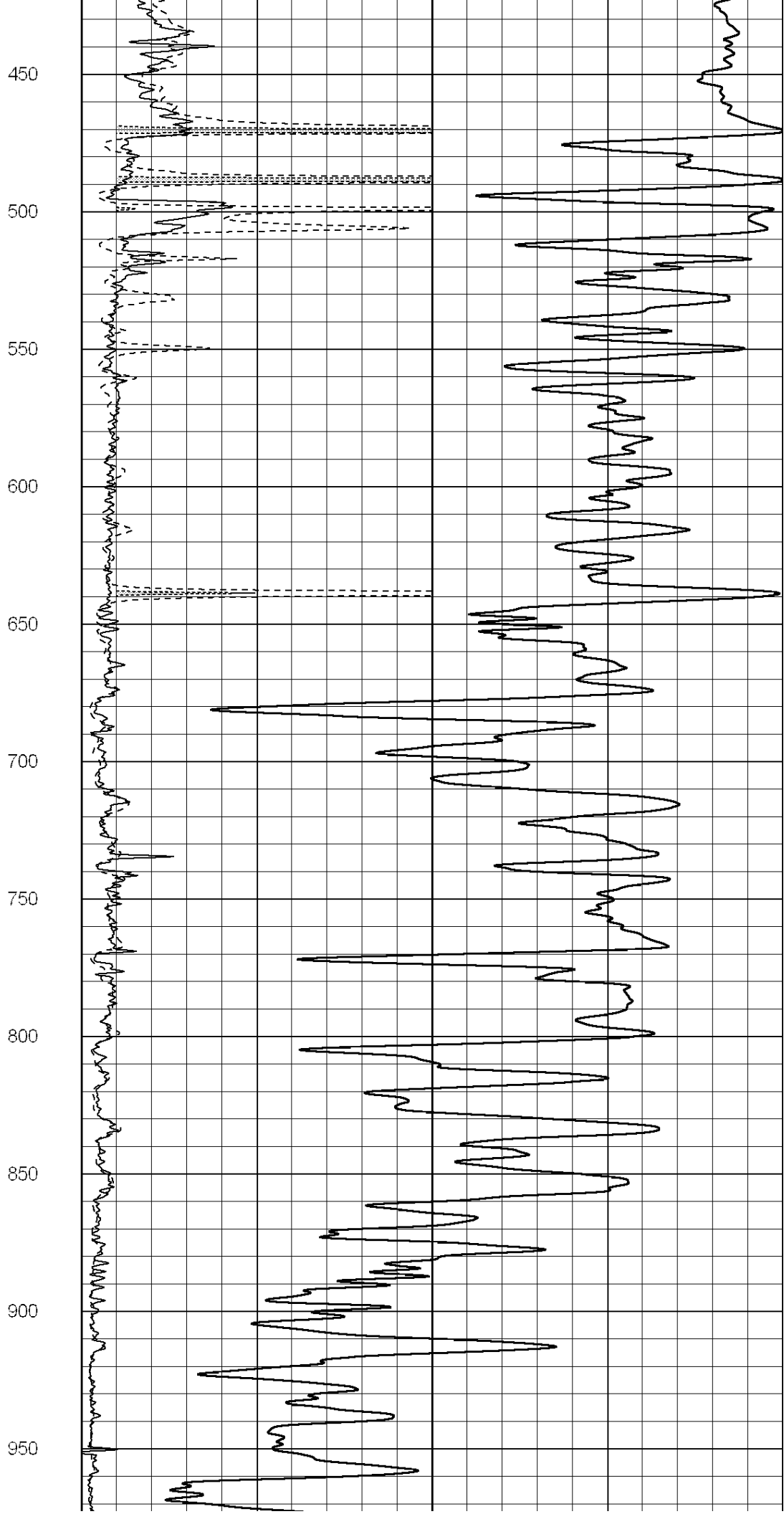
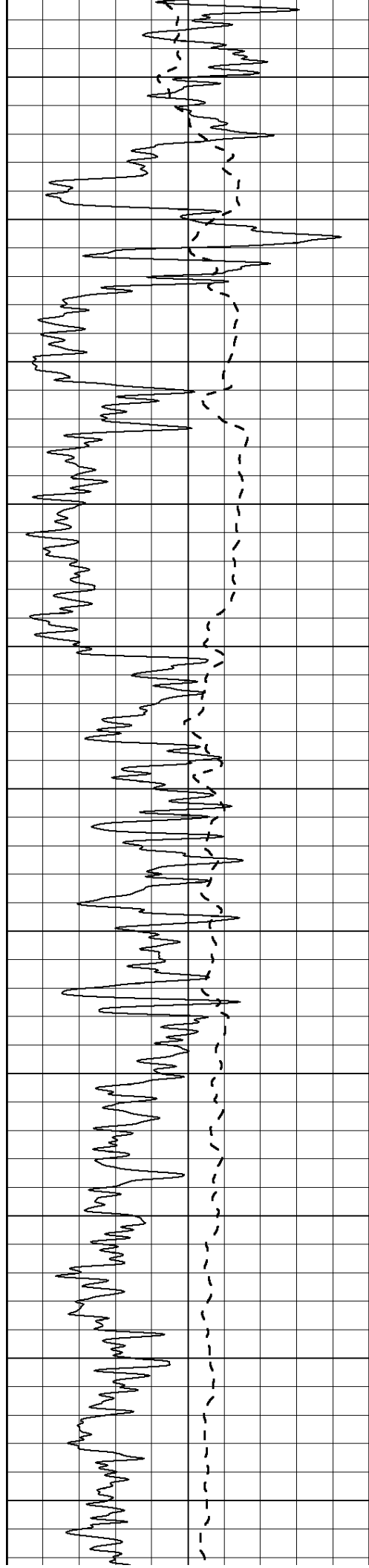
**COMPLETION
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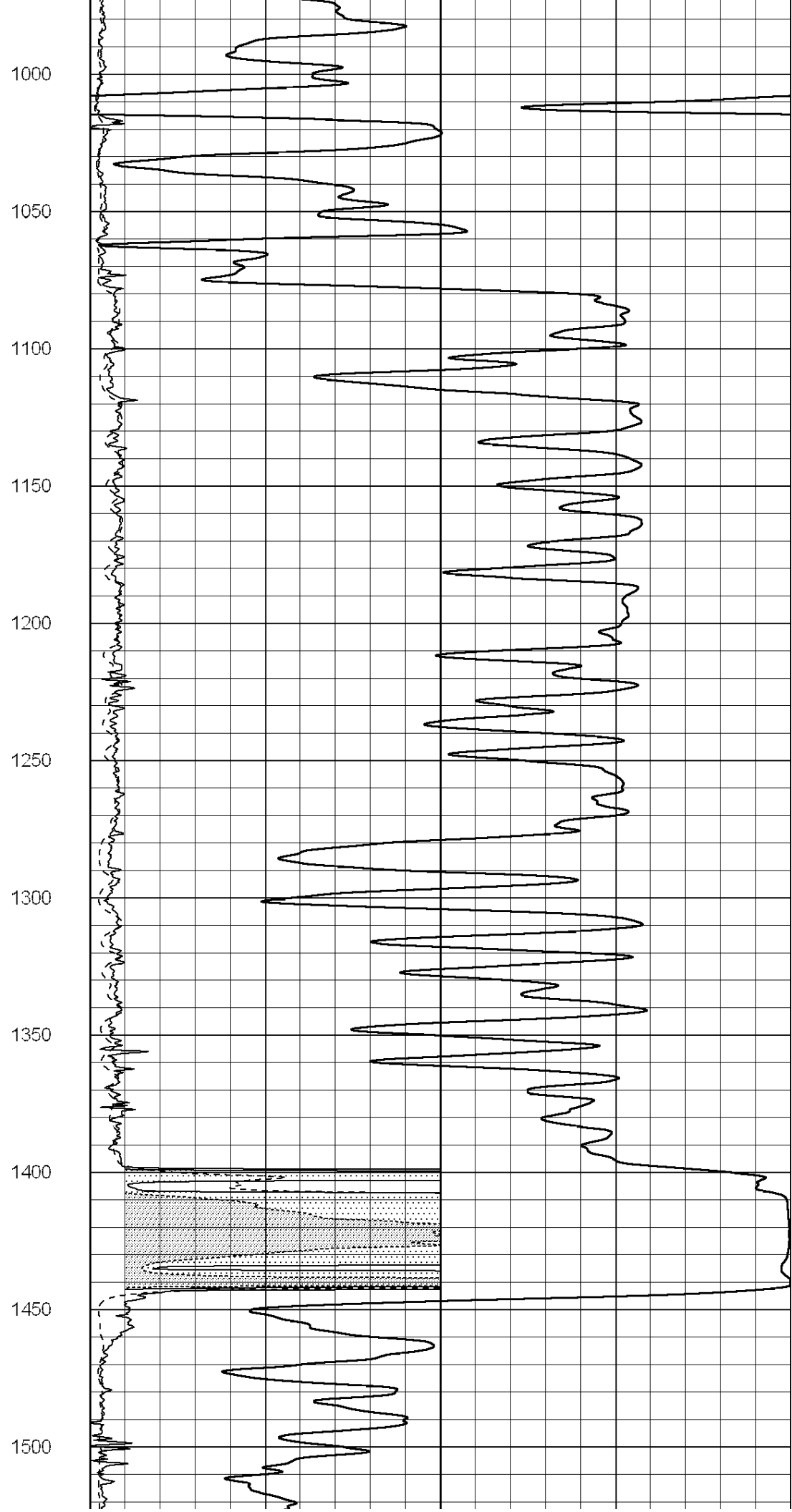
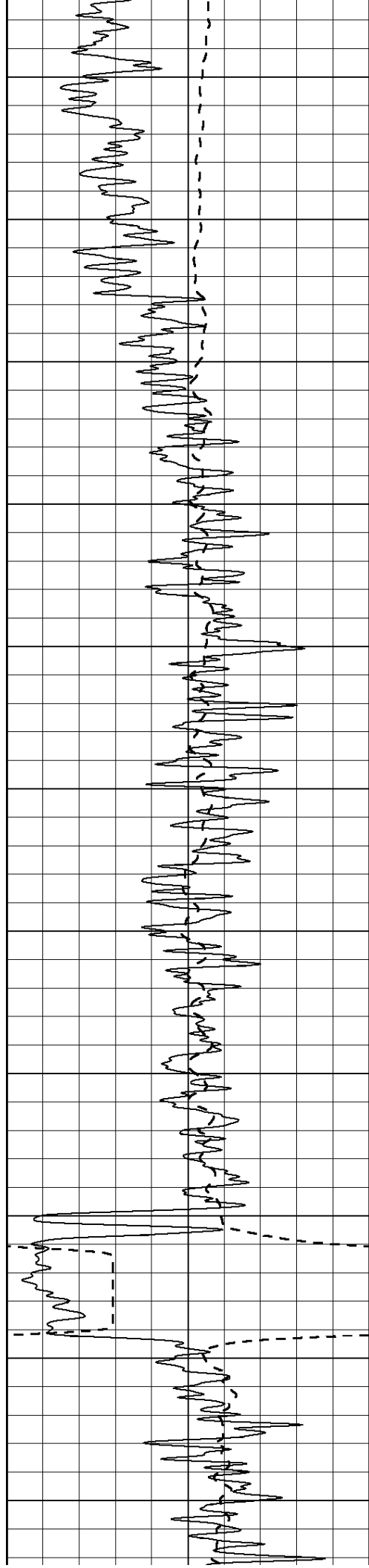
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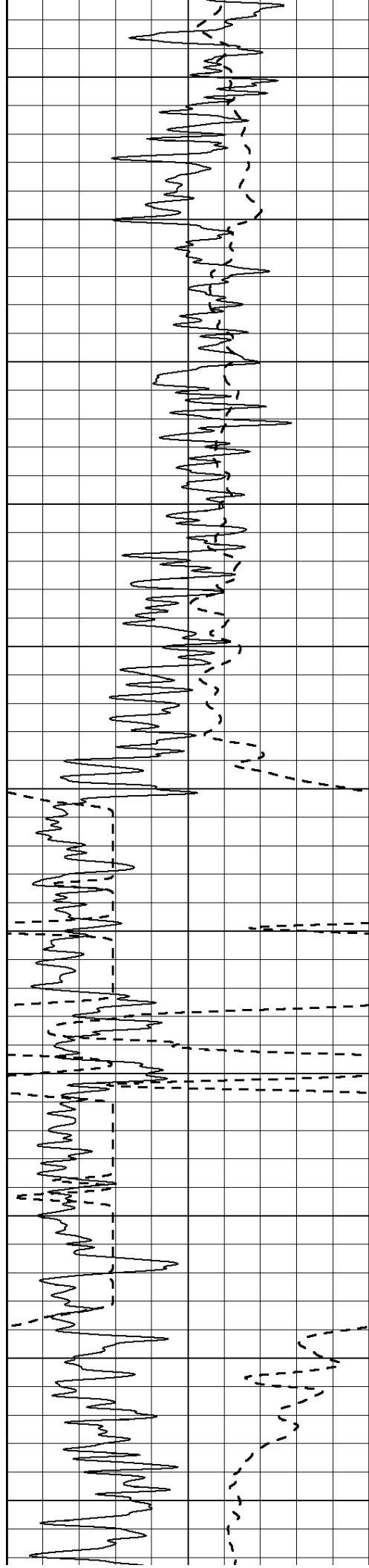
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 Dataset Pathname: pass3.1A
 Presentation Format: _dil2
 Dataset Creation: Sun Nov 24 23:46:25 2013
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	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









1550

1600

1650

1700

1750

1800

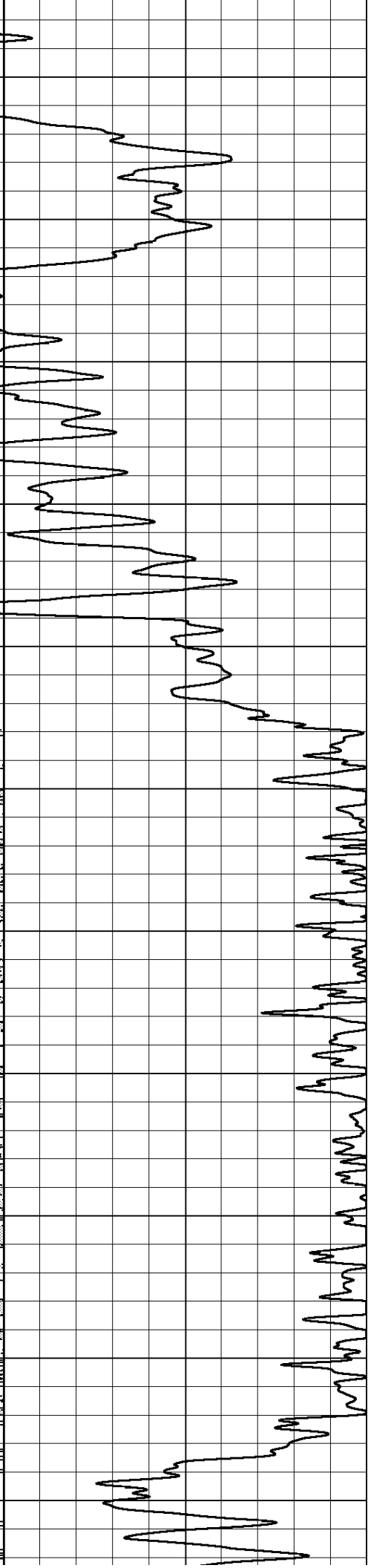
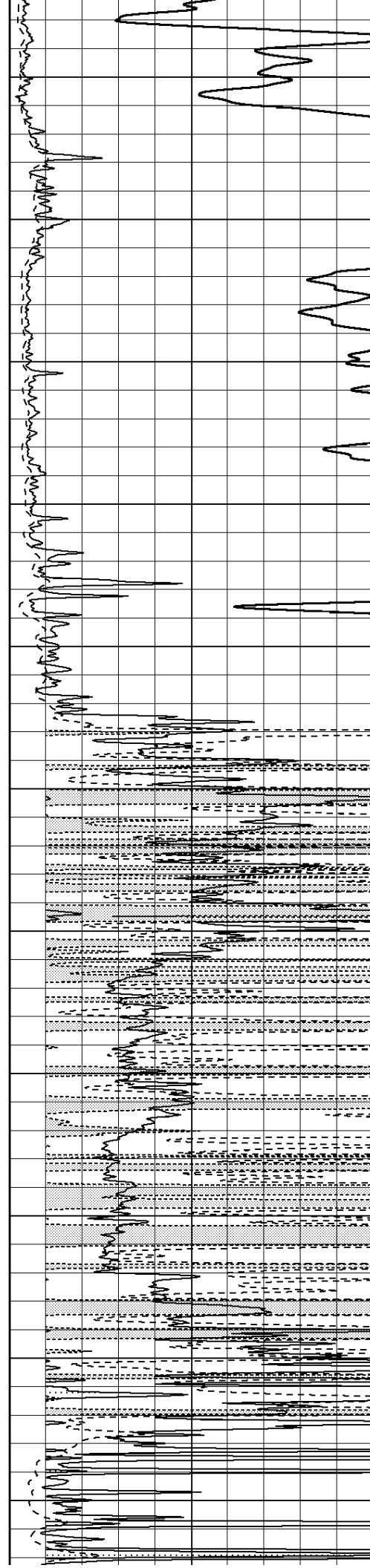
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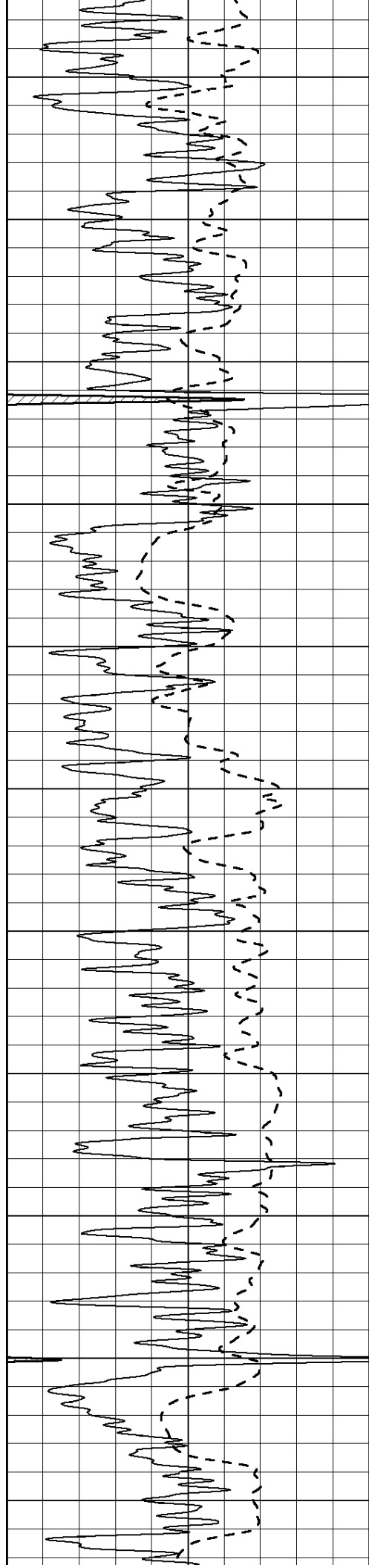
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2000

2050





2100

2150

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2250

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2350

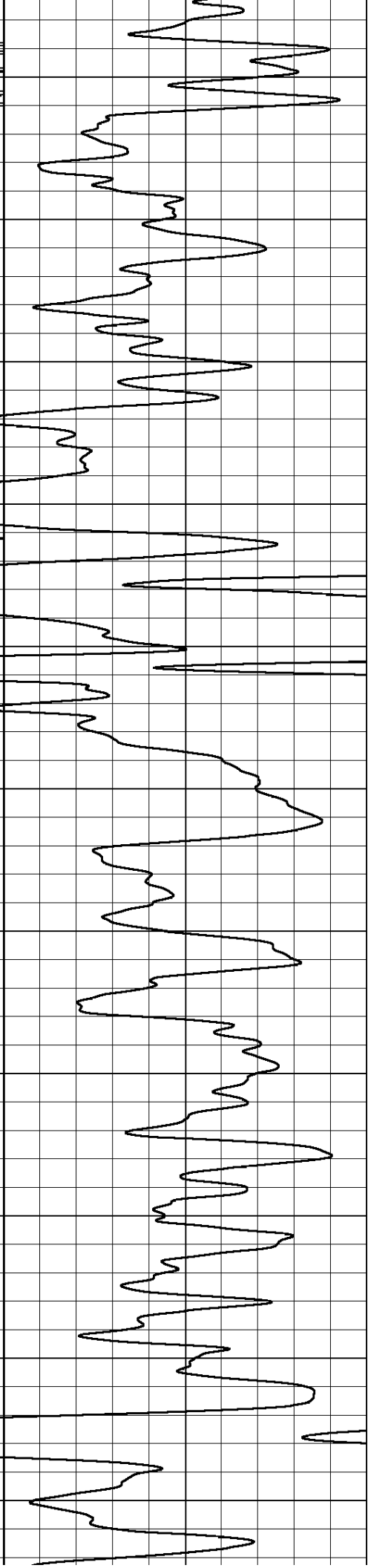
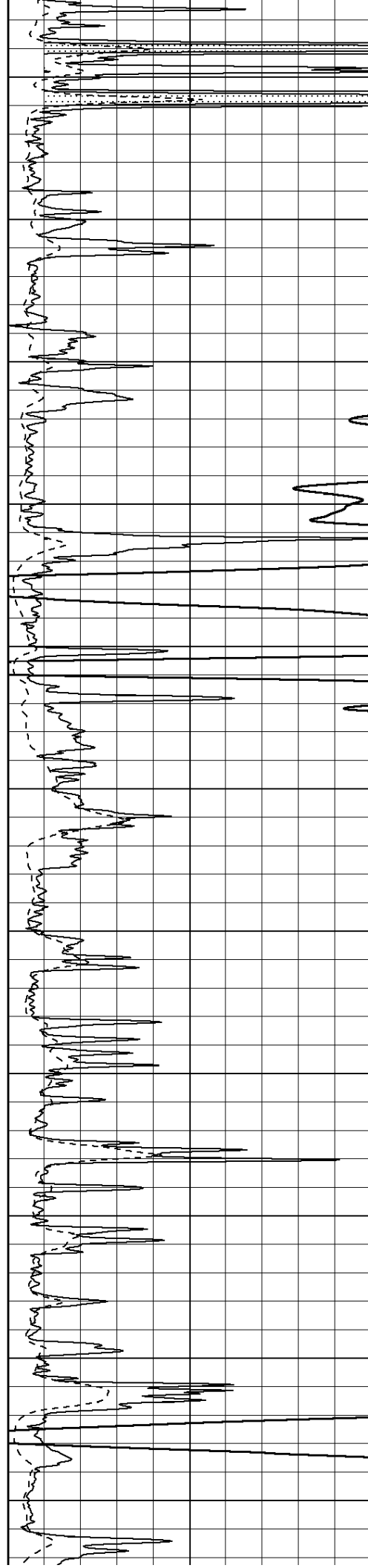
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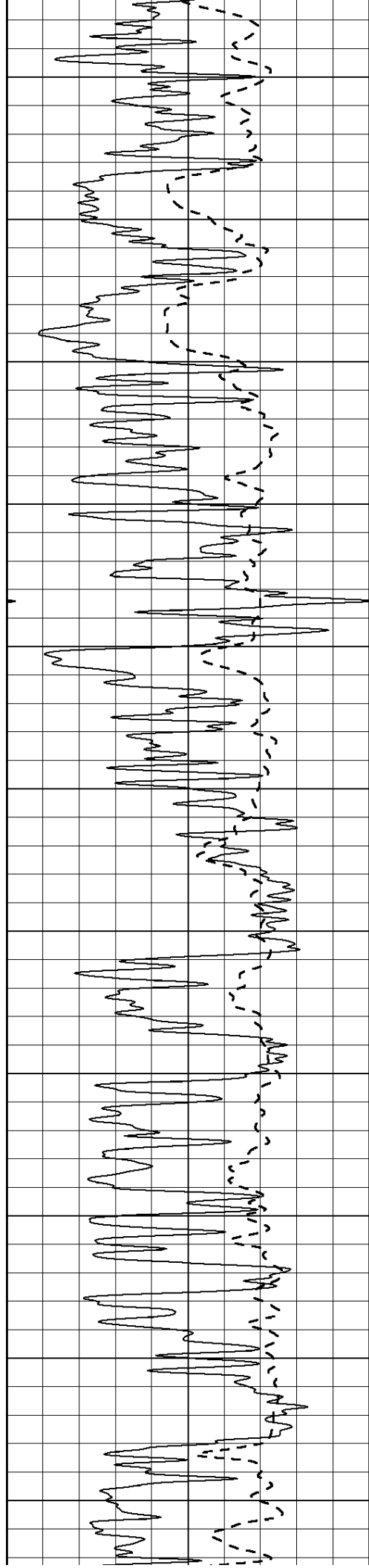
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2550

2600





2650

2700

2750

2800

2850

2900

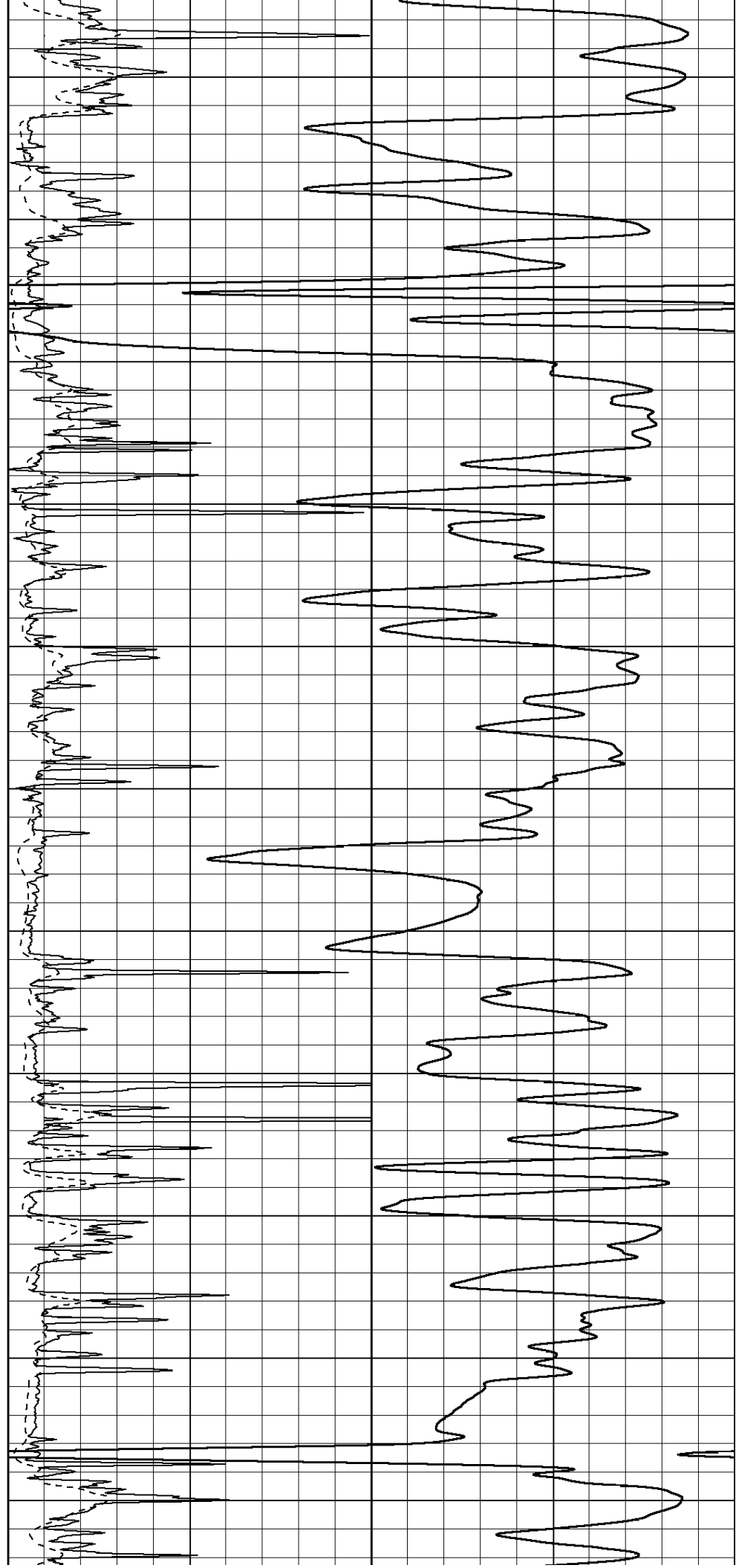
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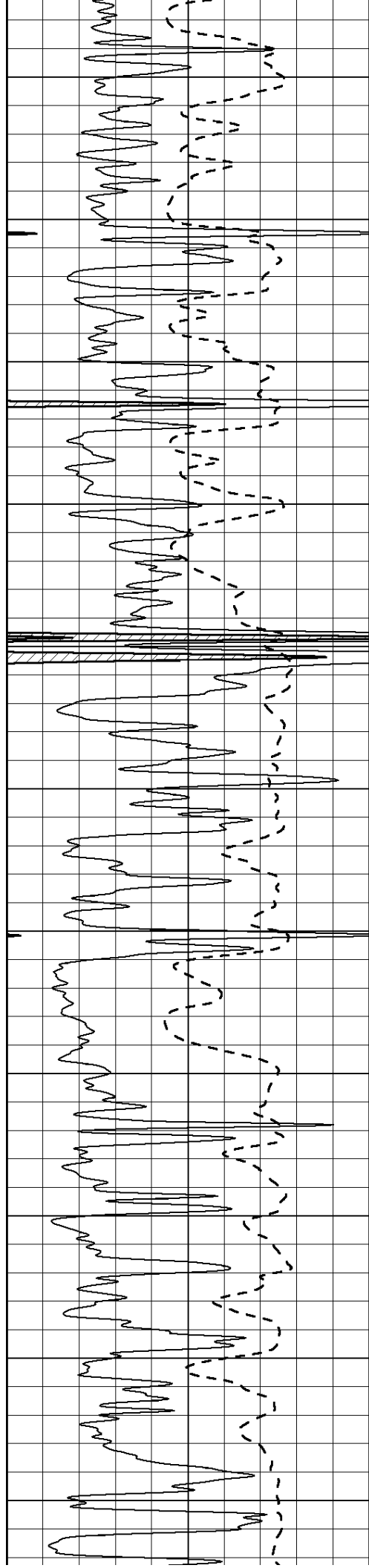
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3050

3100

3150





3200

3250

3300

3350

3400

3450

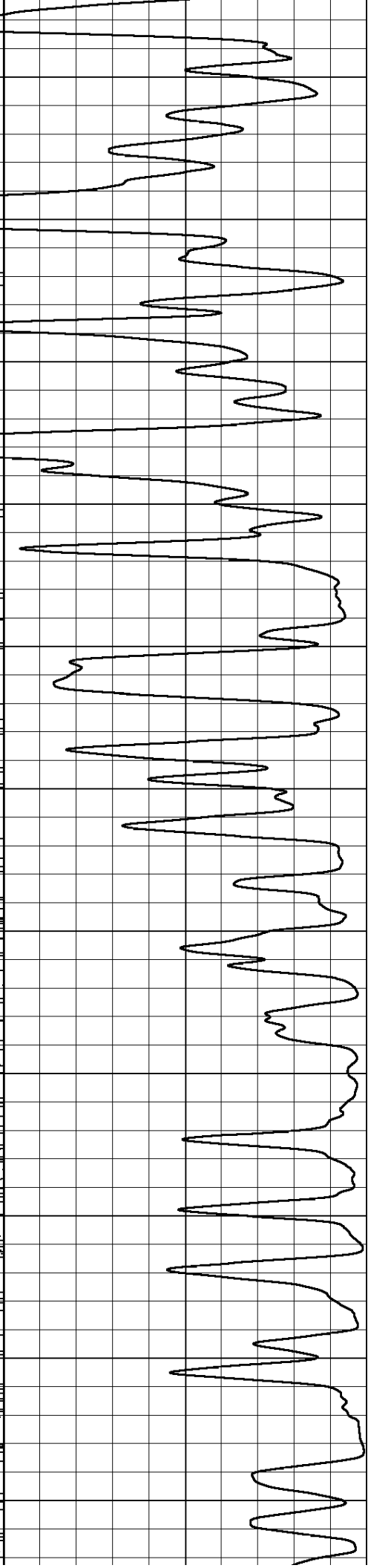
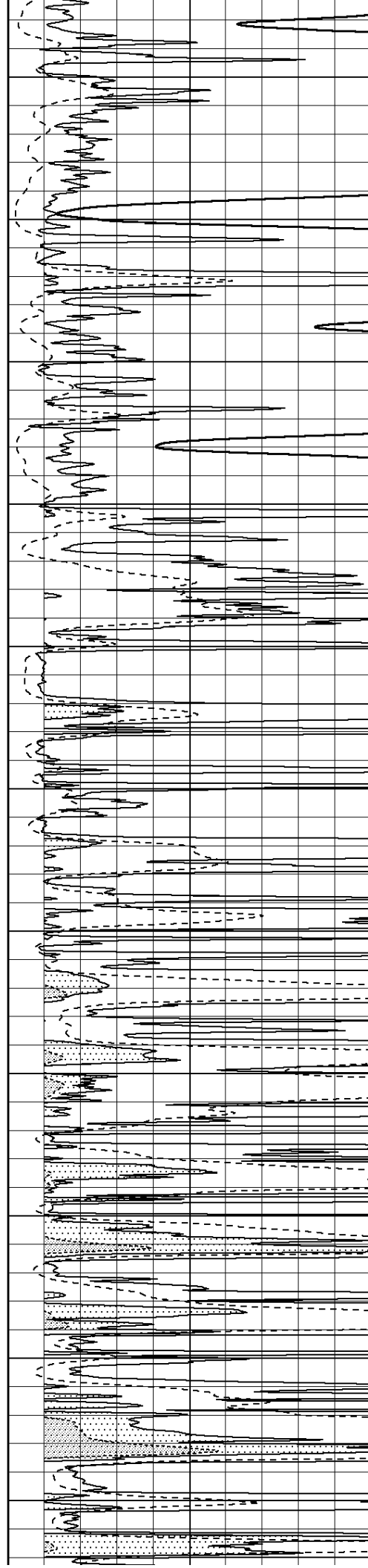
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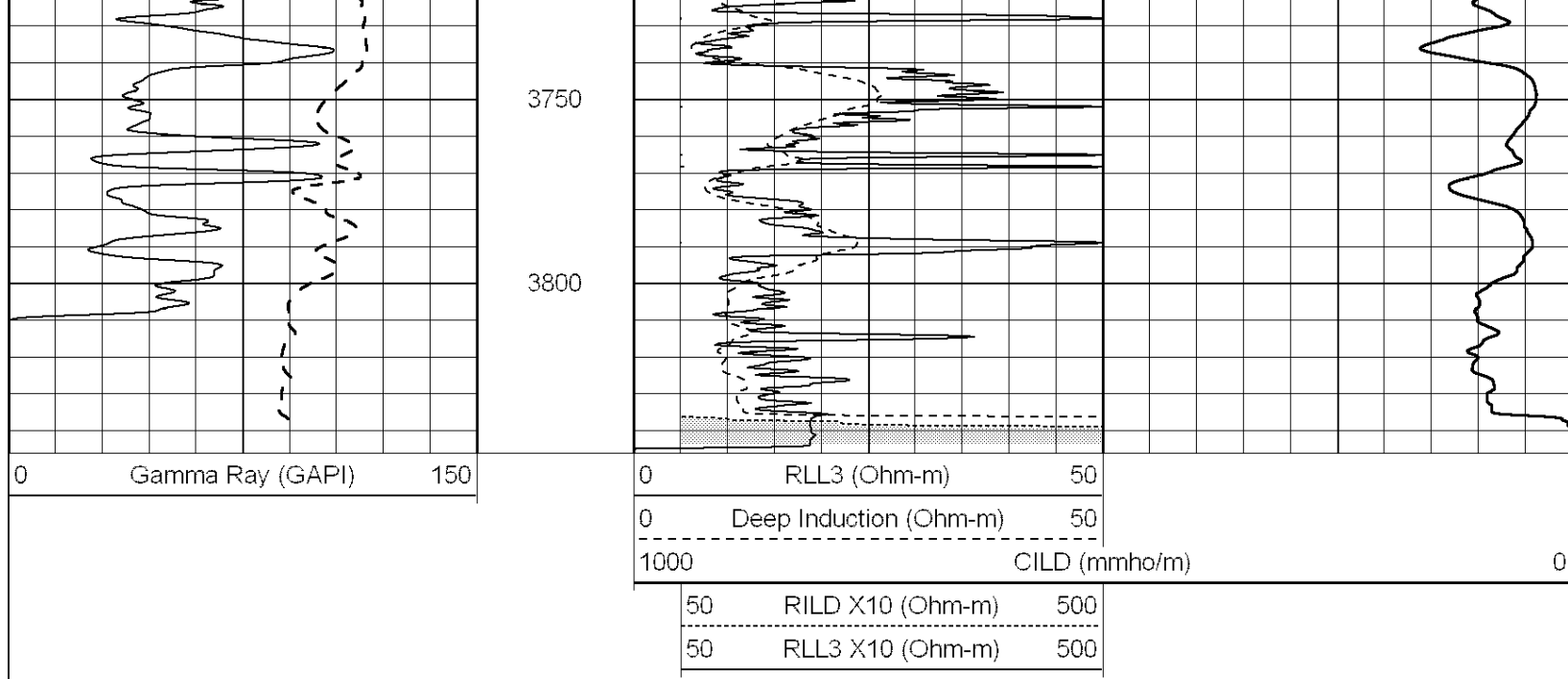
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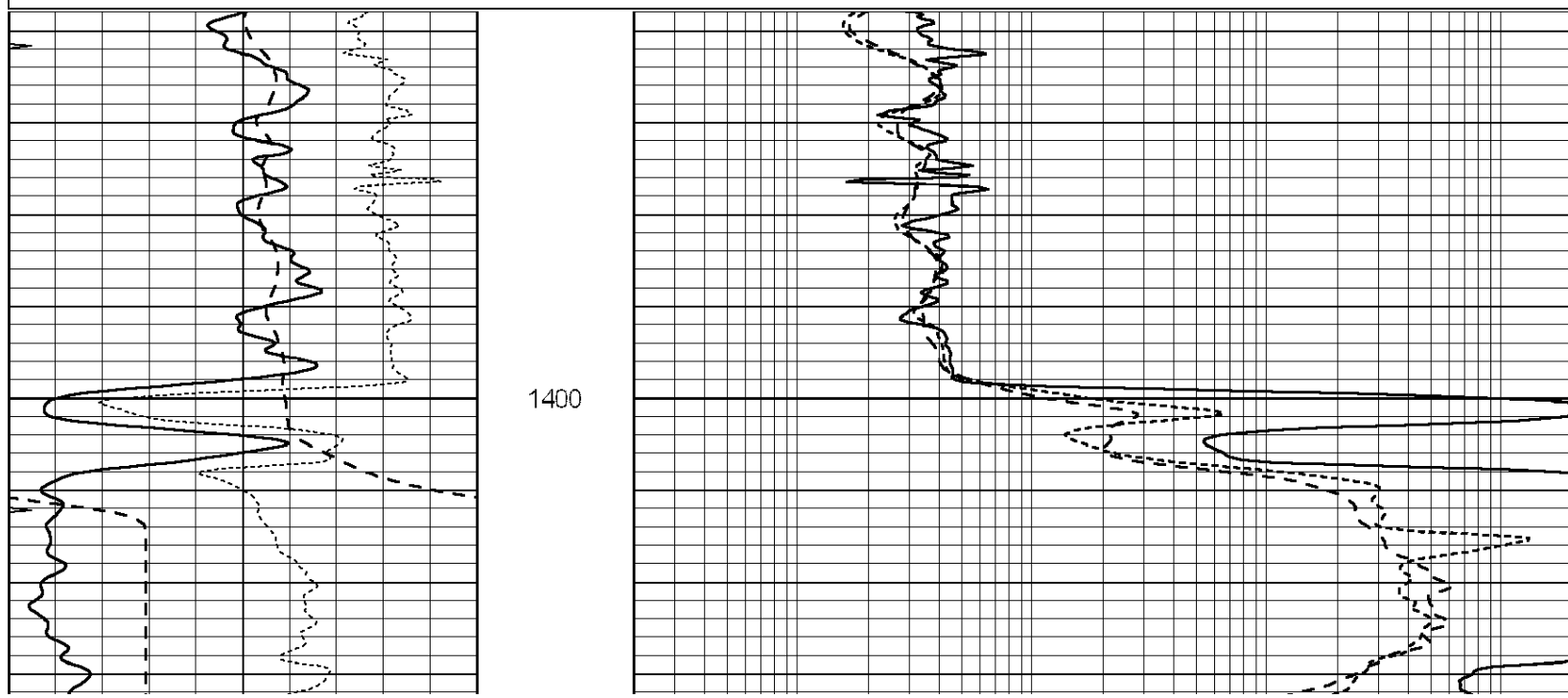


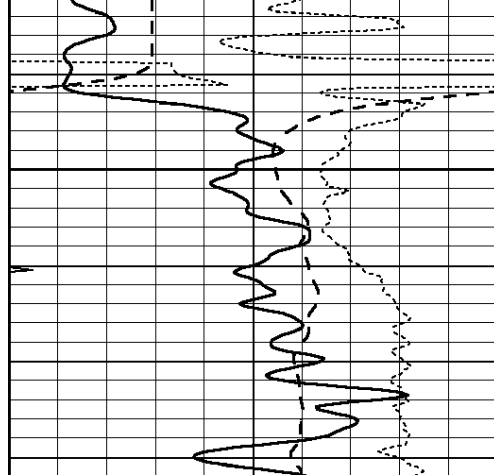


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 Charted by: Depth in Feet scaled 1:240

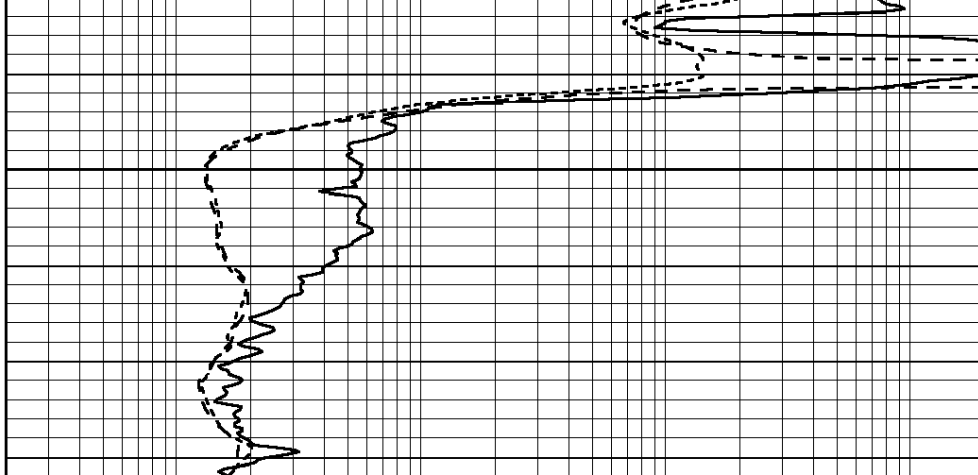
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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





1450

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

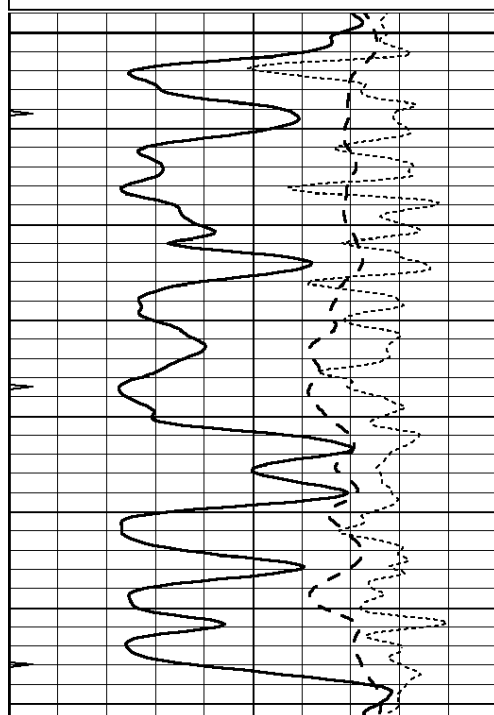


MAIN SECTION

Database File: 012044ddn.db
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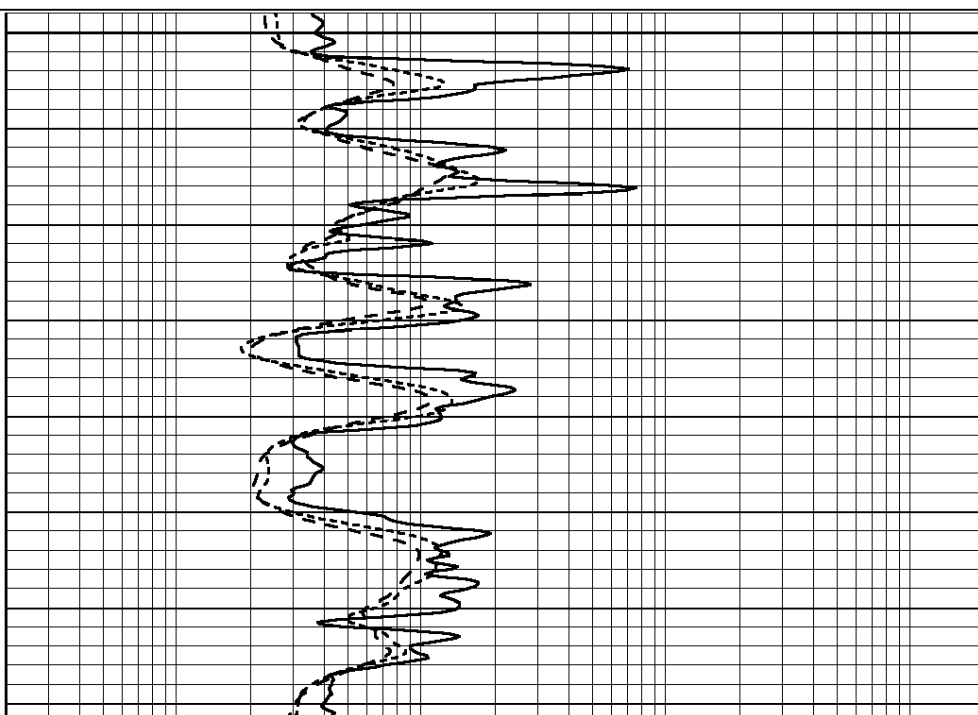
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-250	RxoRt	50
0	MINMK	20

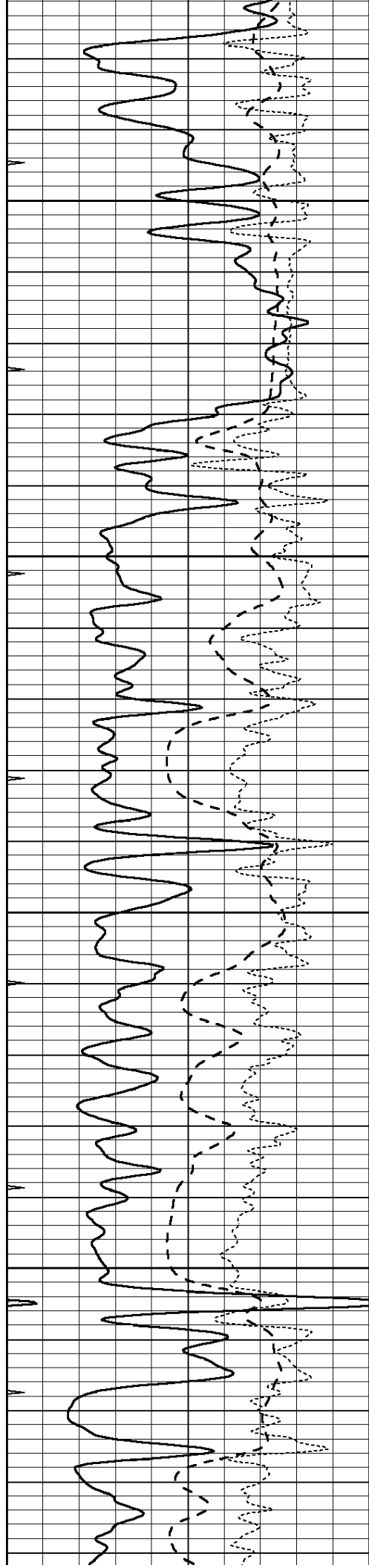
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3000

3050



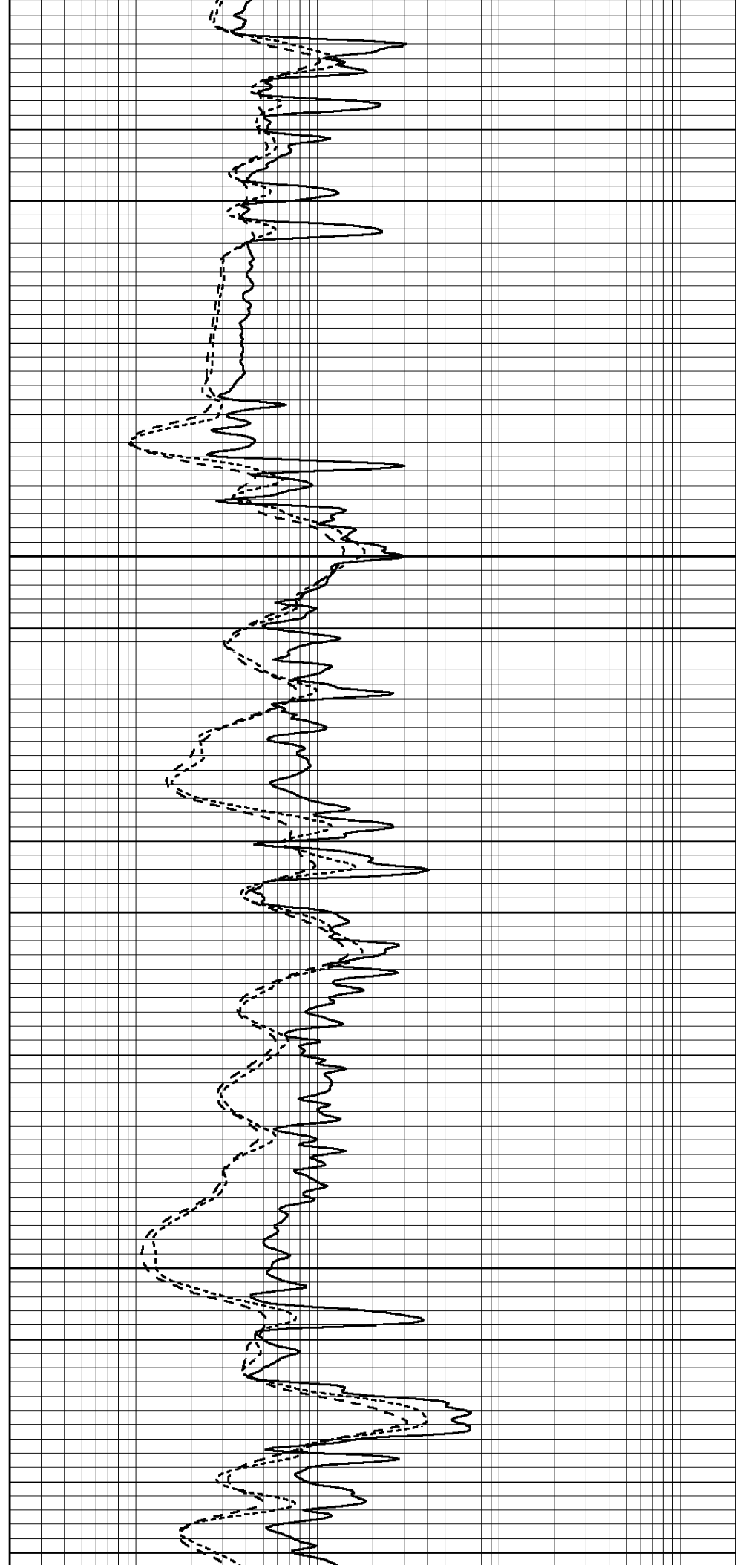


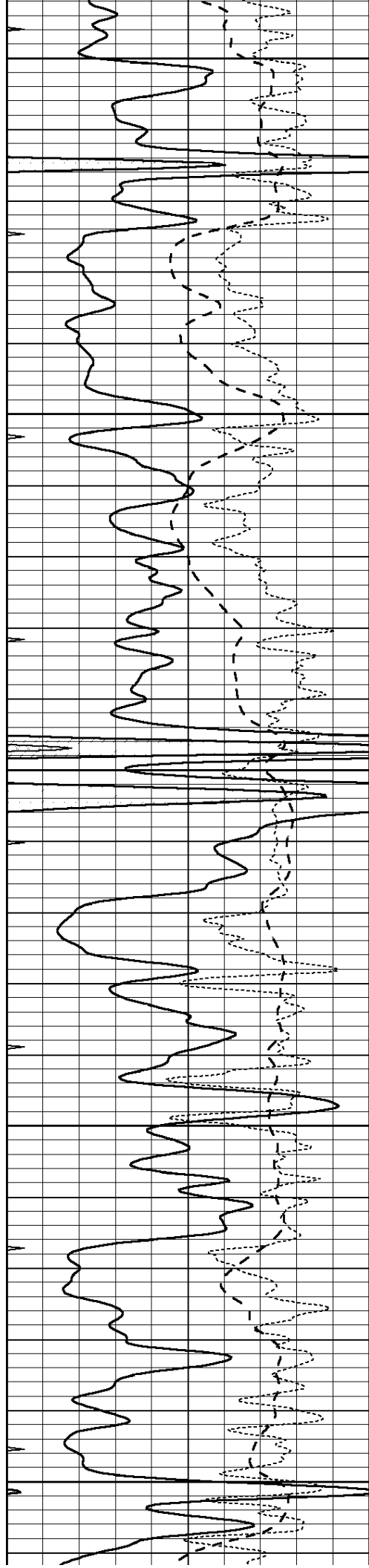
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3150

3200

3250





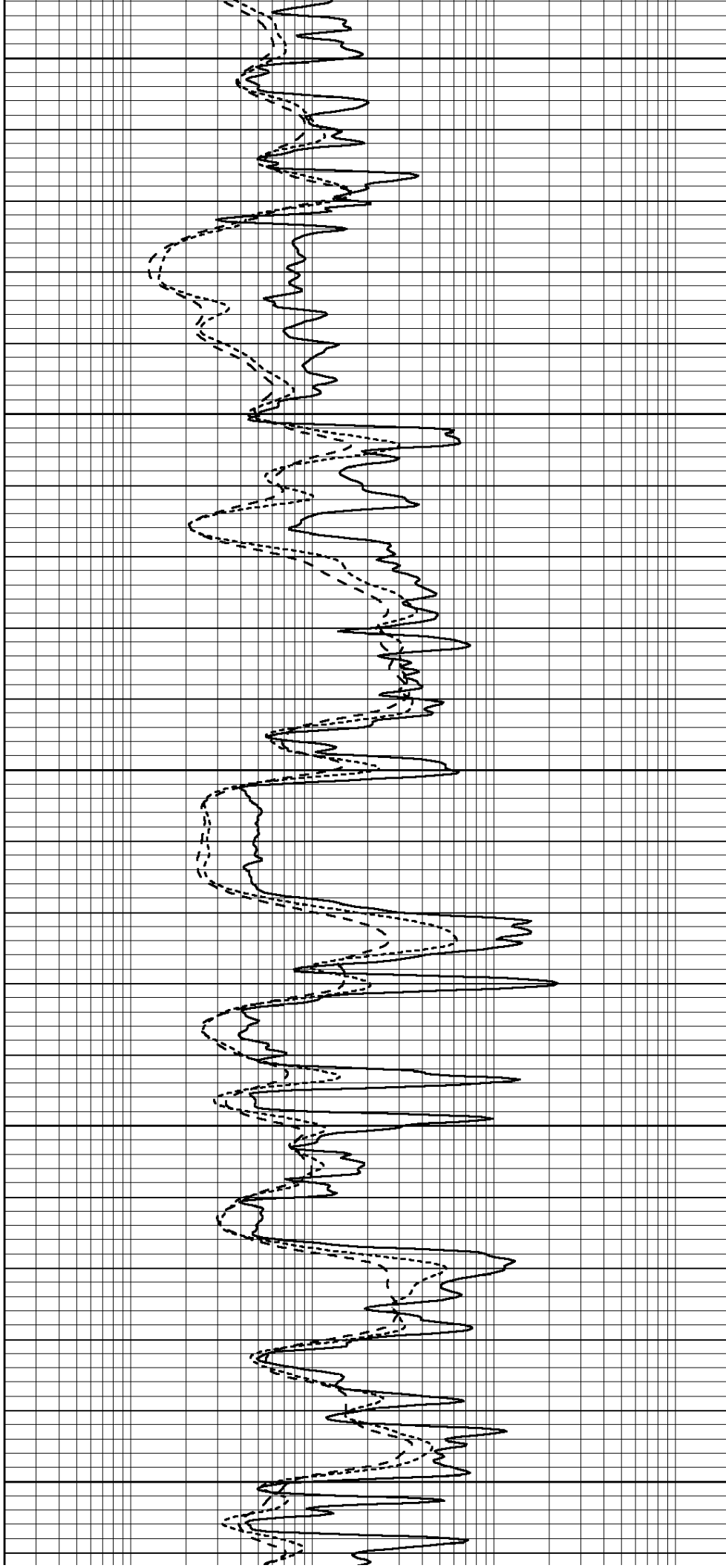
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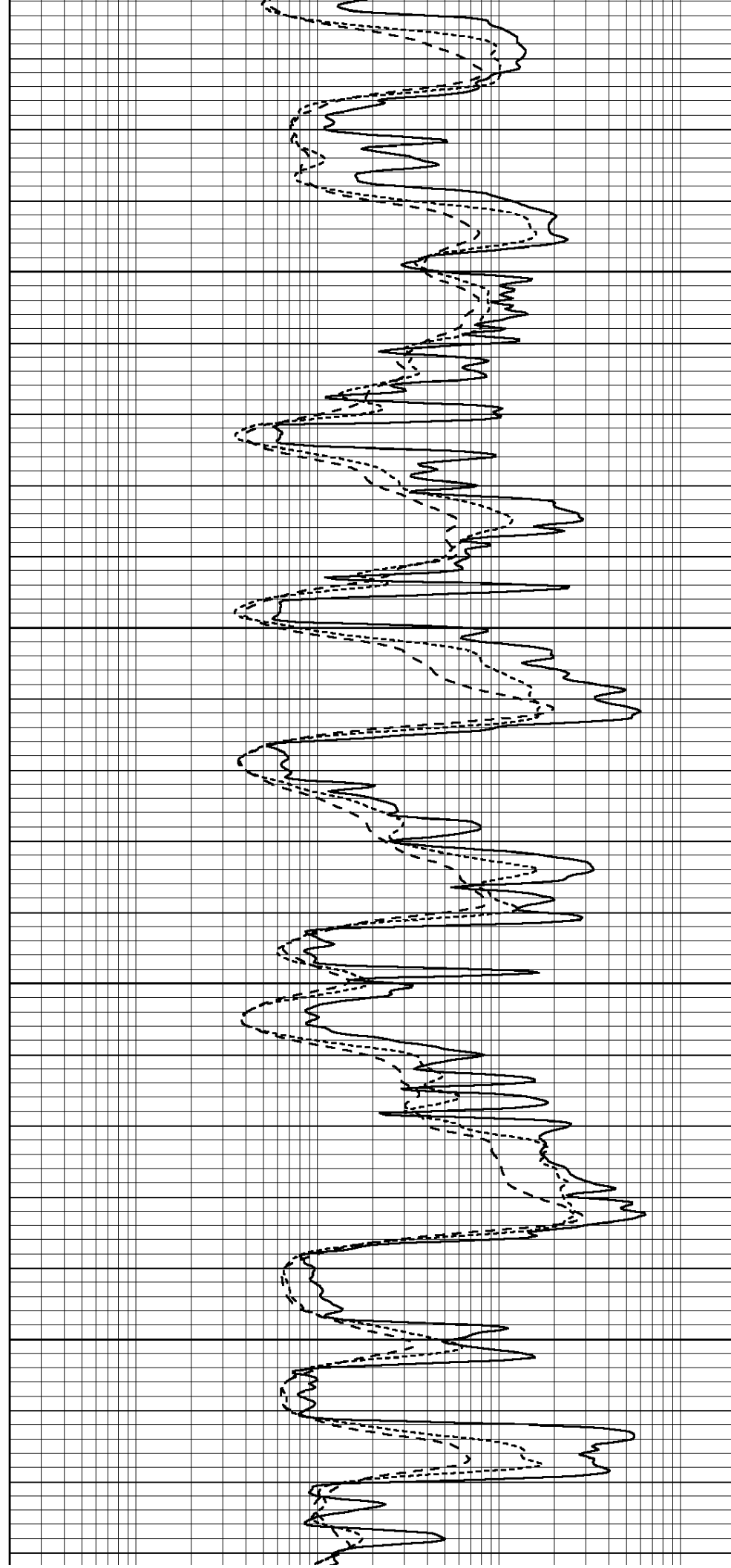
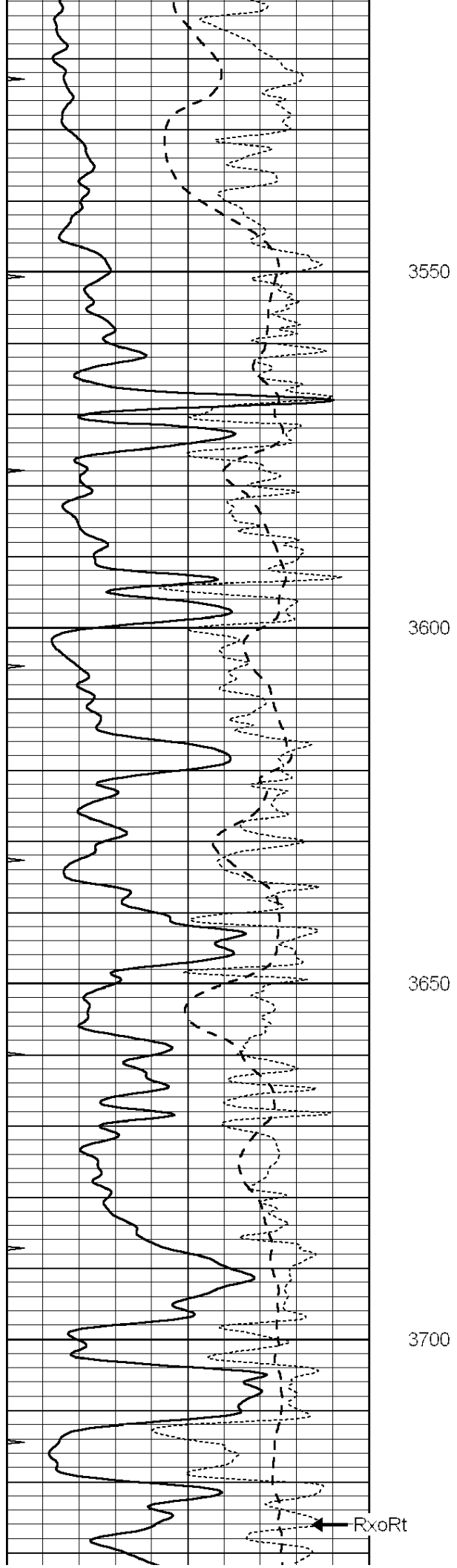
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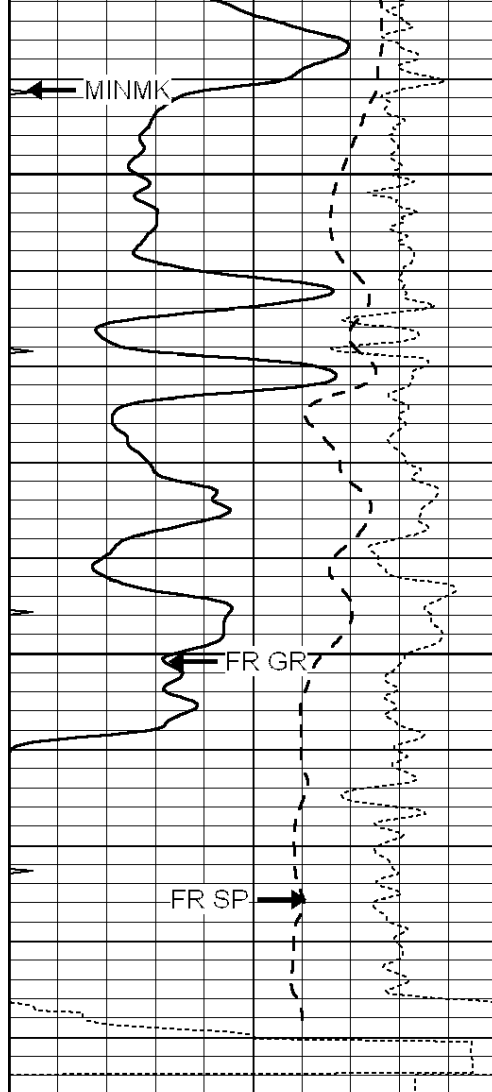
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3500





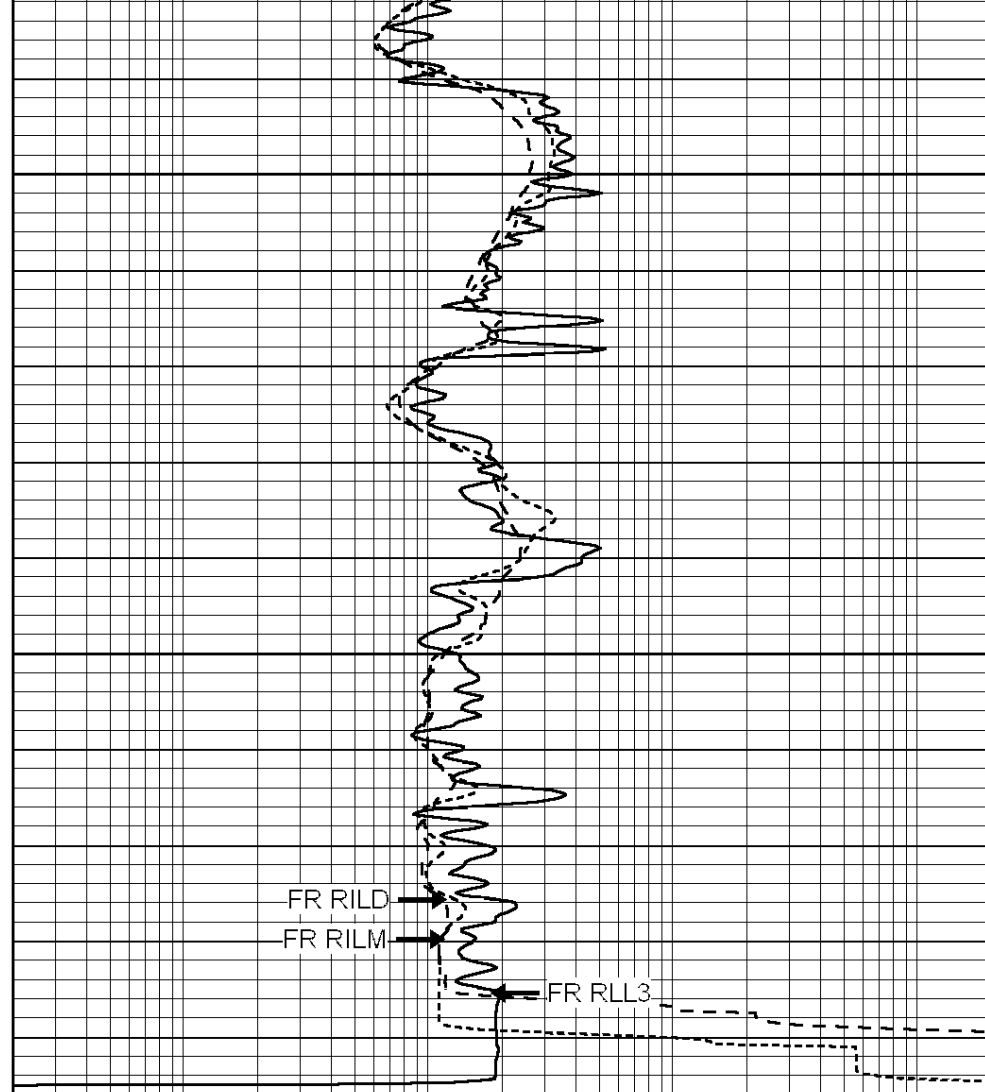


3750

3800

--- 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



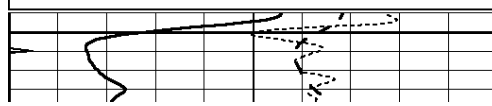
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REPEAT SECTION

Database File: 012044ddn.db
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 Charted by: Depth in Feet scaled 1:240

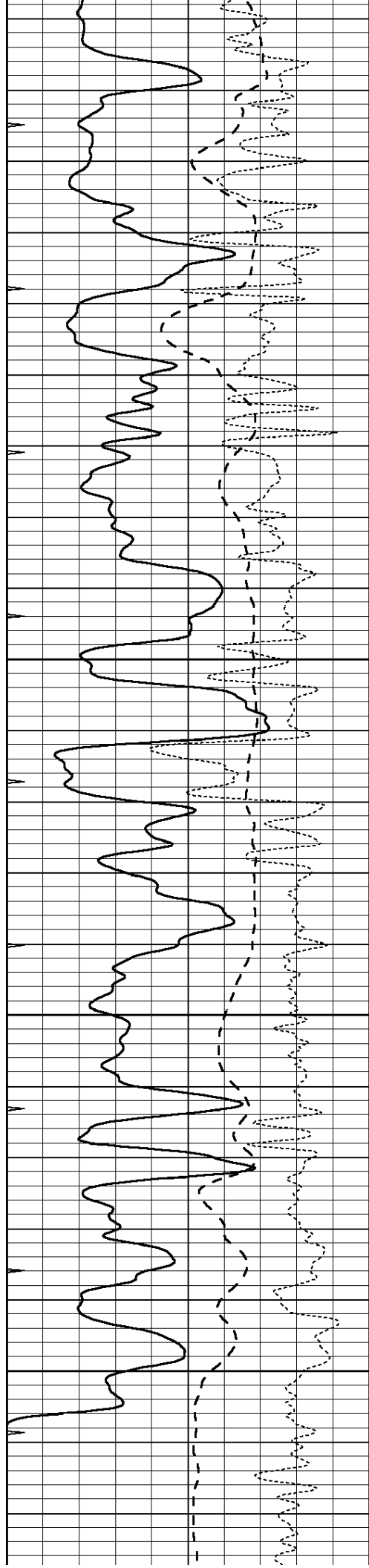
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



3600



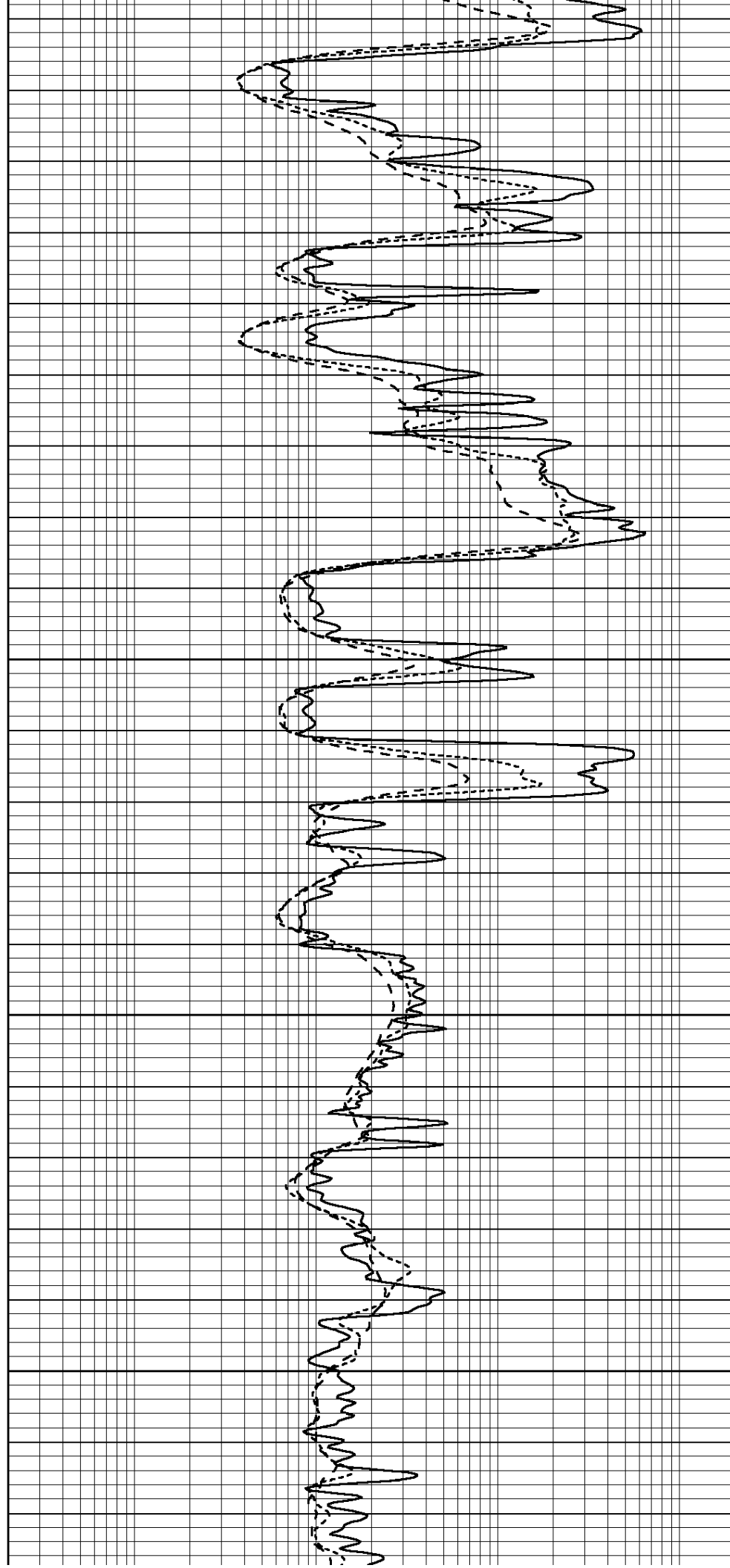


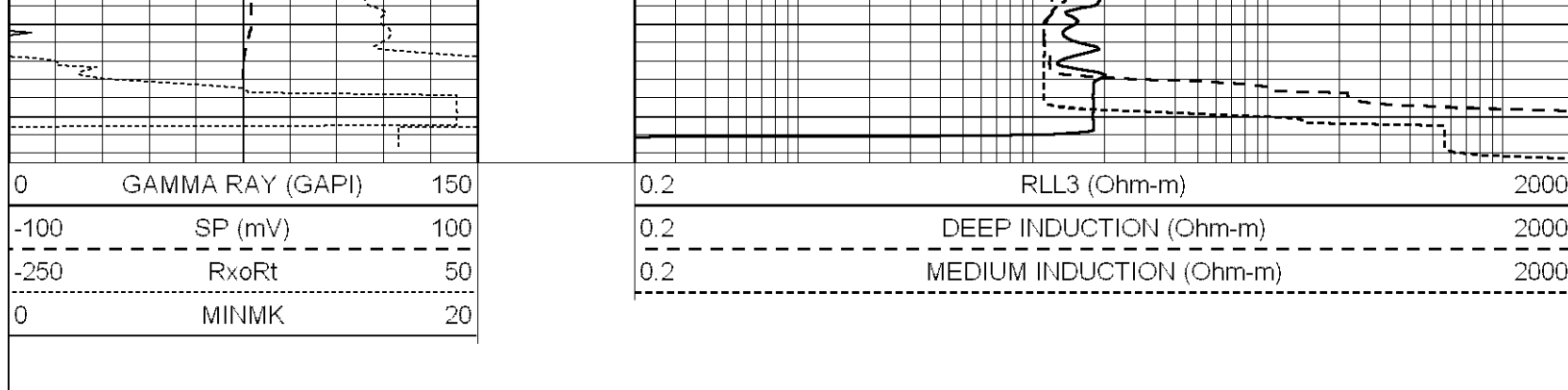
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3700

3750

3800





Calibration Report

Database File: 012044ddn.db
 Dataset Pathname: pass3.1A
 Dataset Creation: Sun Nov 24 23:46:25 2013

Dual Induction Calibration Report								
Serial-Model: Performed:			DIL3-GEAR Sun Nov 24 23:25:37 2013					
Readings			References			Results		
Loop:	Air	Loop	Air	Loop		m	b	
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	580.000	5.000
Internal:	Zero	Cal	Zero	Cal		m	b	
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report						
Serial-Model:			GEAR1-GEARHART			
Source / Verifier:			147 / 147			
Master Calibration Performed:			Sun Nov 24 21:22:19 2013			
Master Calibration						
	Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	1205.77	610.74	cps	
Aluminum	2.580	g/cc	271.21	419.72	cps	
Spine Angle = 75.89			Density/Spine Ratio = 0.566			
	Size		Reading			
Small Ring	8.20	in	4.83	V		
Large Ring	14.00	in	7.01	V		

Compensated Neutron Calibration Report						
Serial Number:			NEU_4I			
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:	Sun Nov 24 23:24:37 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.3000	GAPI/cps