

**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company CITATION OIL & GAS CORPORATION  
Well GICK #9  
Field BARRY  
County ROOKS State KANSAS

Company CITATION OIL & GAS CORPORATION  
Well GICK #9  
Field BARRY  
County ROOKS  
State KANSAS

Location: API #: 15-163-24086-0000  
1650' FSL & 990' FWL  
SEC 1 TWP 9S RGE 19W  
Permanent Datum GROUND LEVEL Elevation 2027  
Log Measured From KELLY BUSHING 11' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
MEL  
Elevation  
K.B. 2038  
D.F. 2036  
G.L. 2027

Date	1/22/13
Run Number	ONE
Depth Driller	3492
Depth Logger	3494
Bottom Logged Interval	3492
Top Log Interval	00
Casing Driller	1402
Casing Logger	1412
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	8.839
pH / Fluid Loss	9.07/6
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.90 @ 60F
Rmf @ Meas. Temp	.67 @ 60F
Rmc @ Meas. Temp	1.08 @ 60F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.48 @ 111F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	111F
Equipment Number	860
Location	HAYS, KS.
Recorded By	JASON CAPPELLUCCI
Witnessed By	ED GLASSMAN

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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

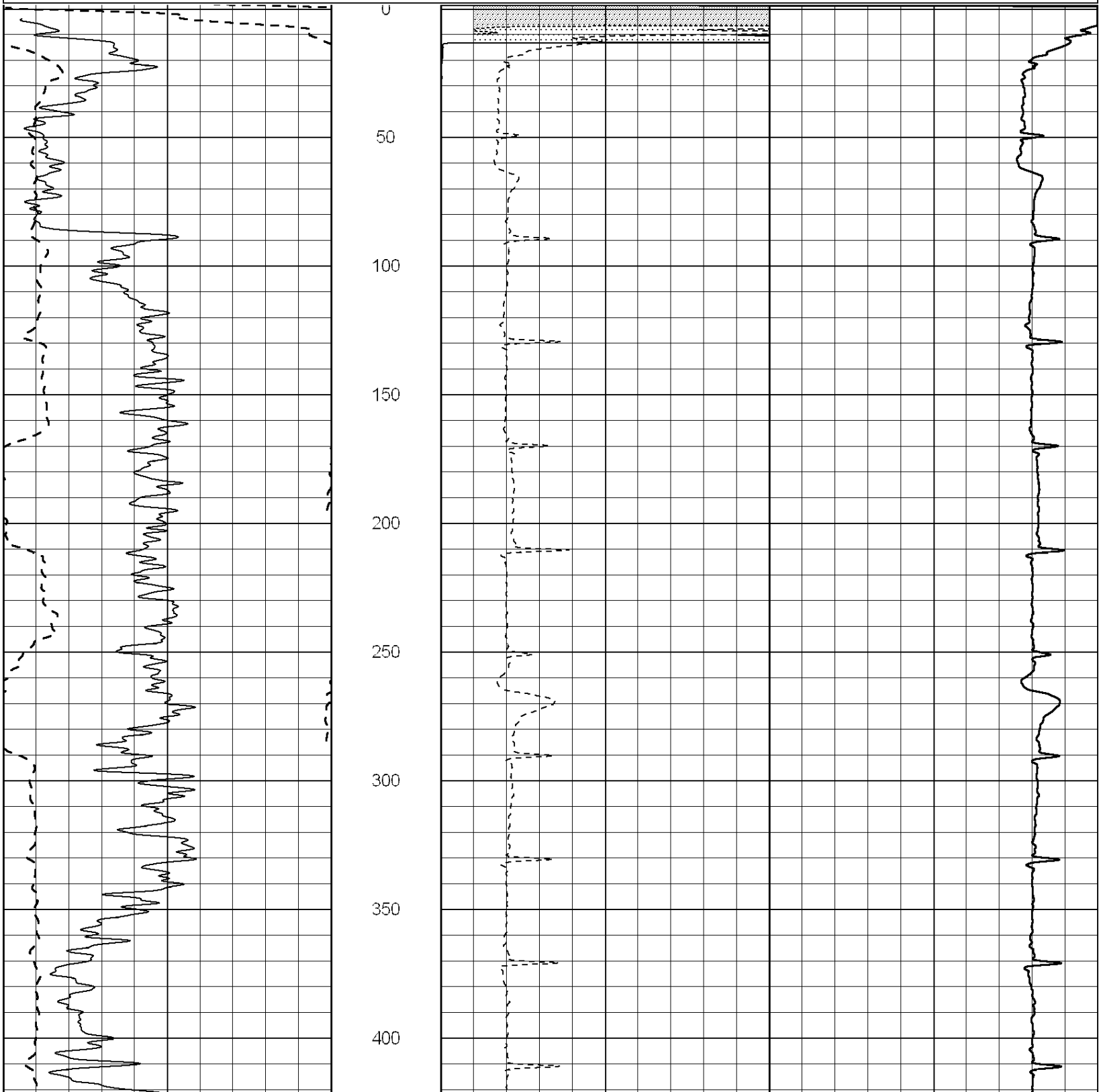
NABORS COMPLETION & PRODUCTION CO.  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: ZURICH, KS. - 4 N. - 2 E. - 1/4 N. - E. INTO

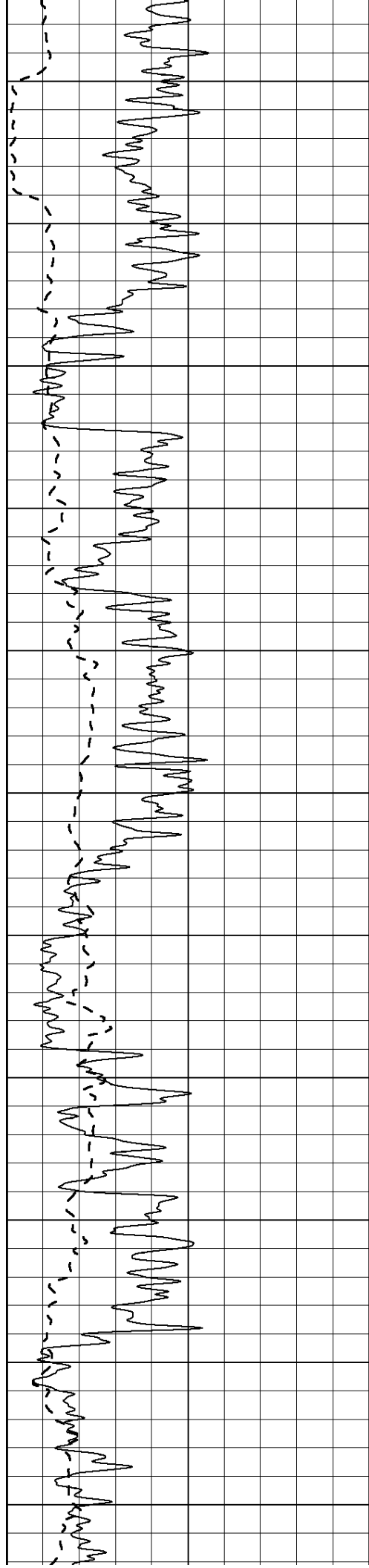


**MAIN SECTION**

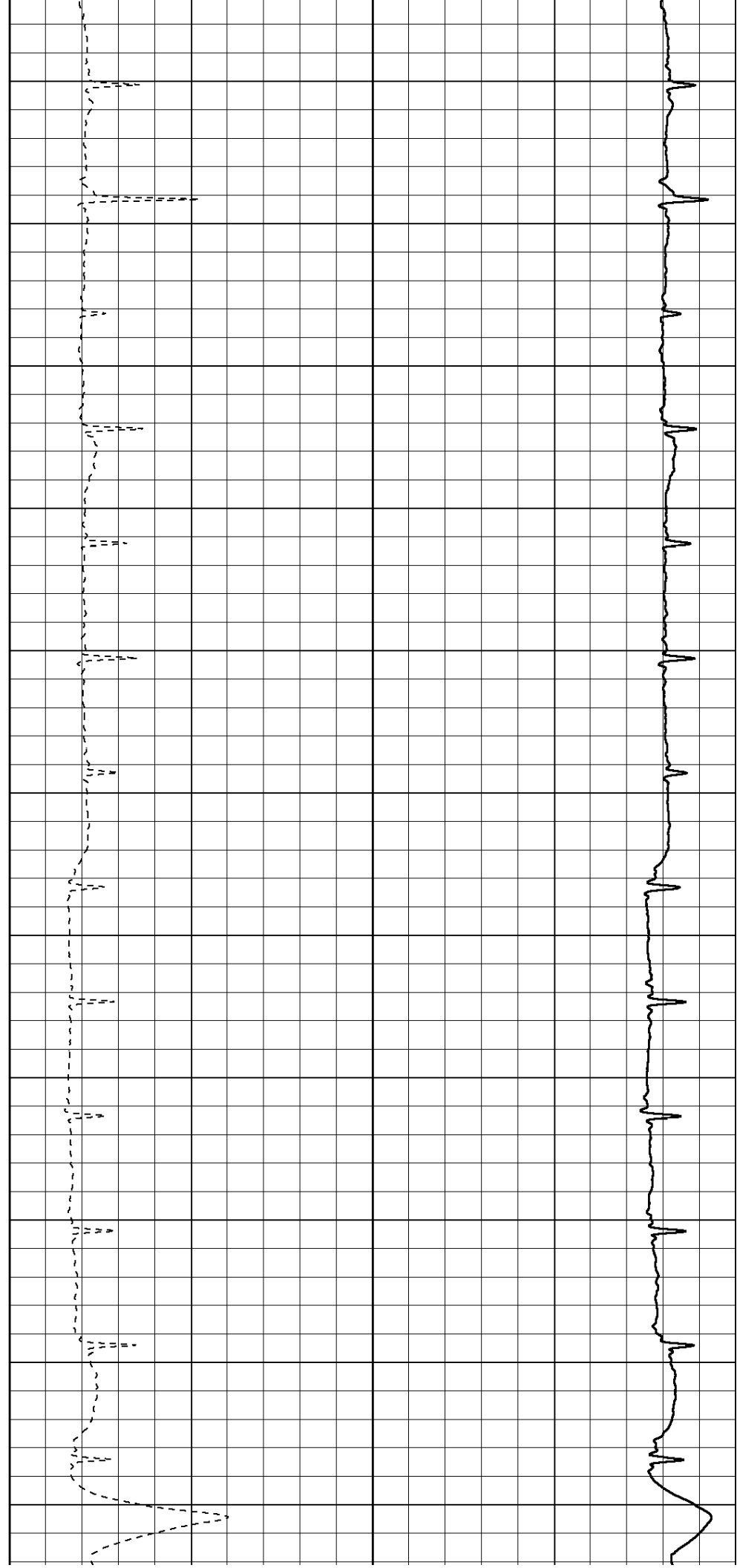
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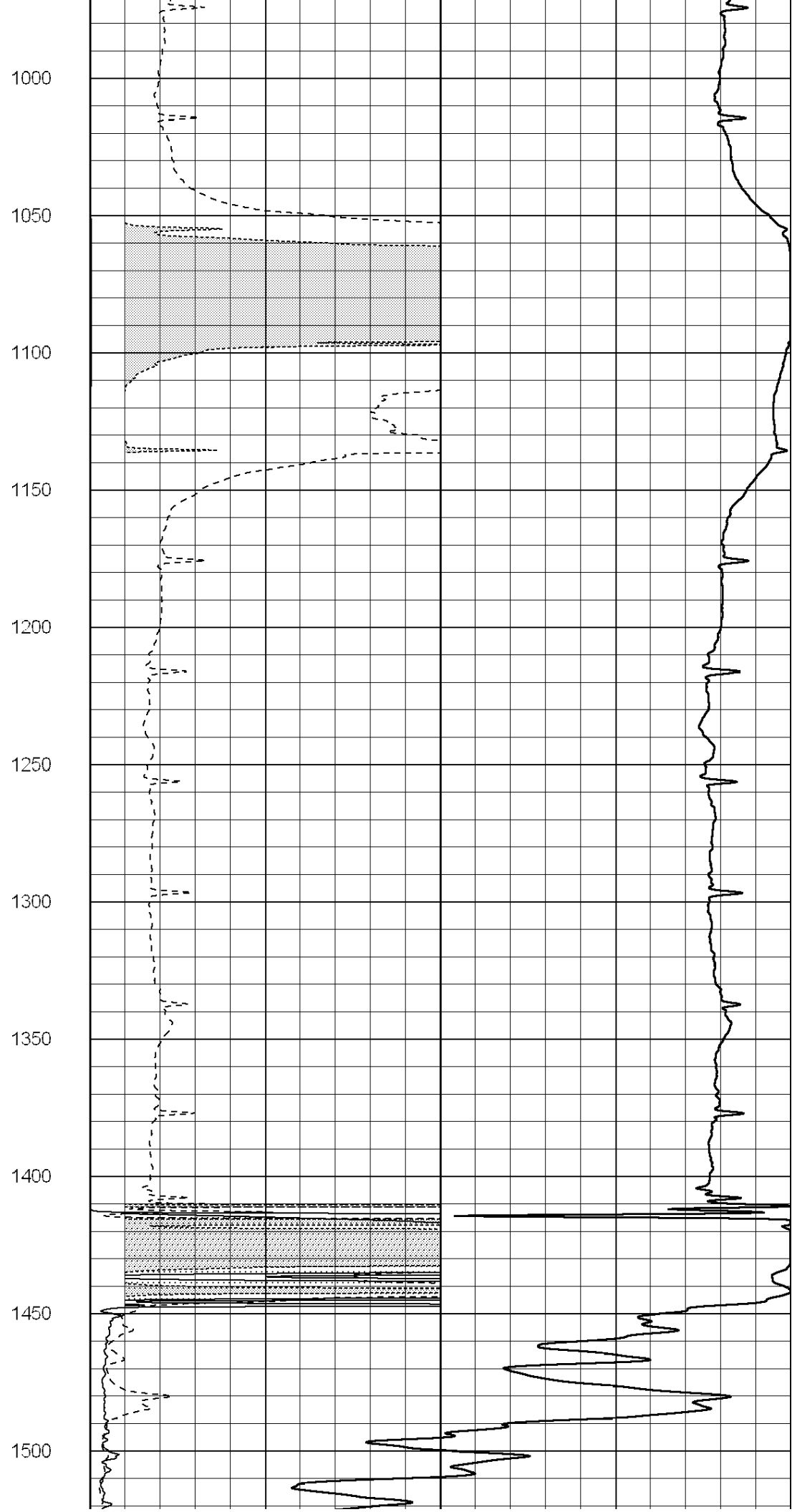
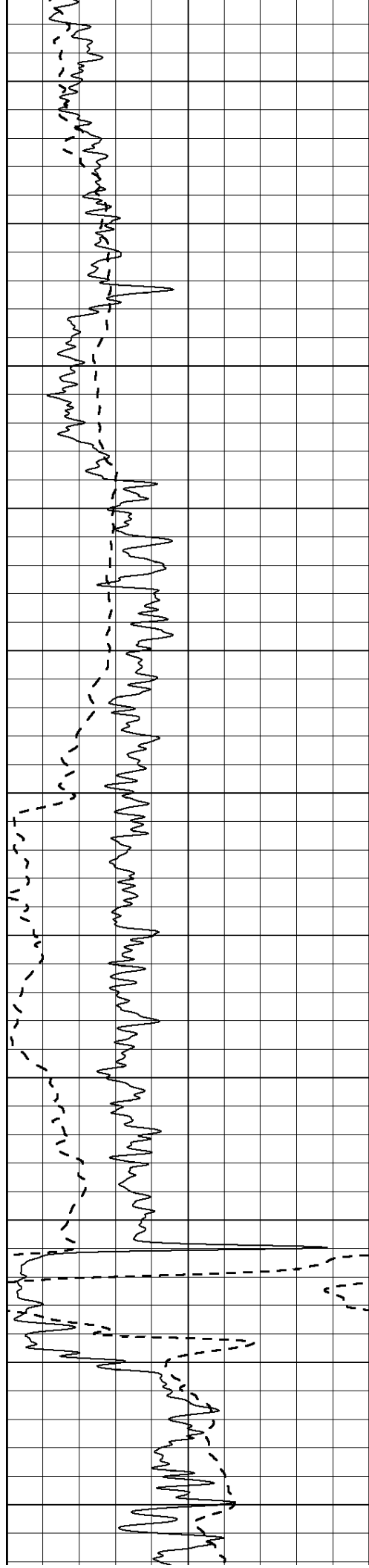
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			0	Deep Induction (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

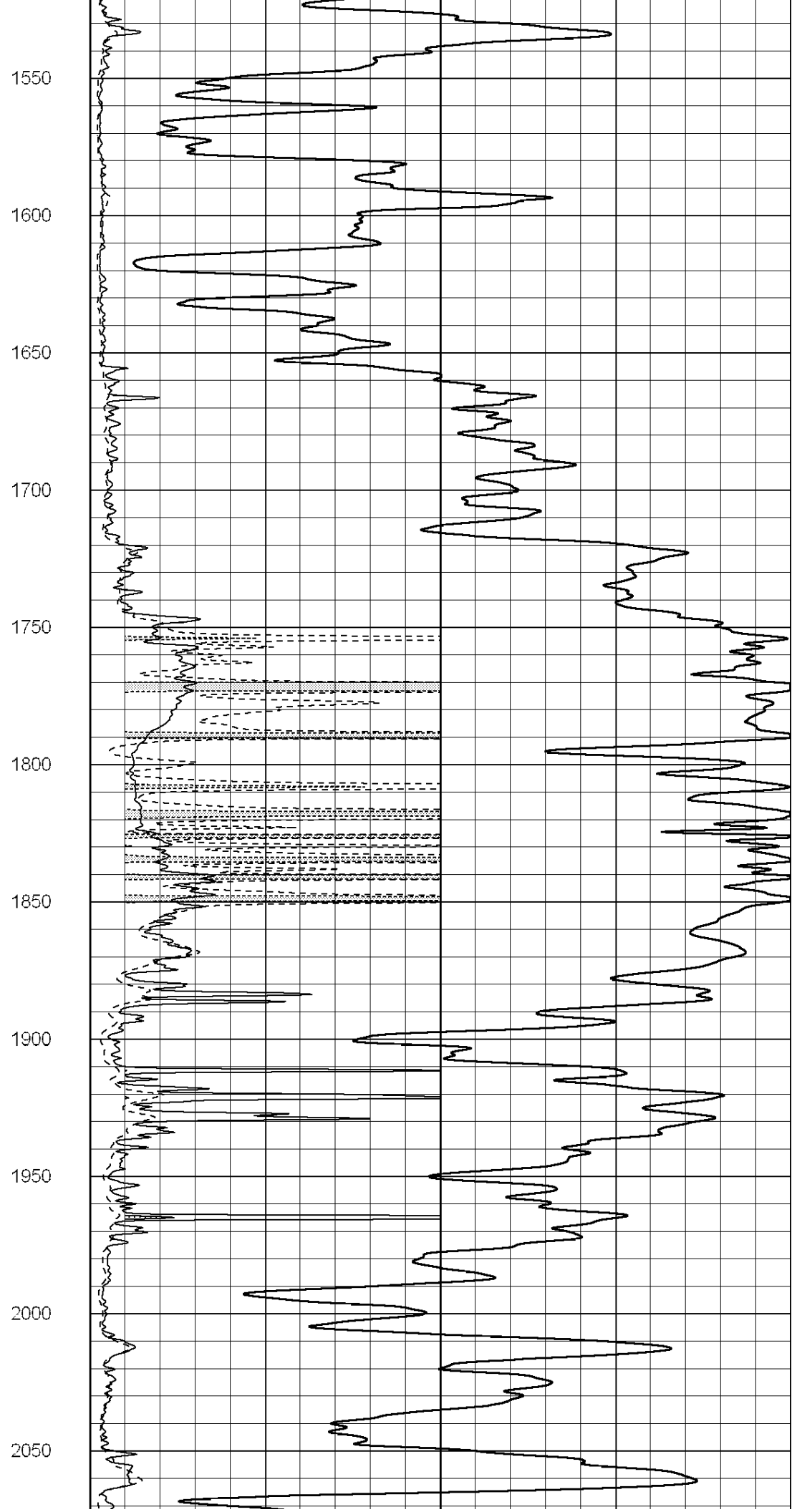
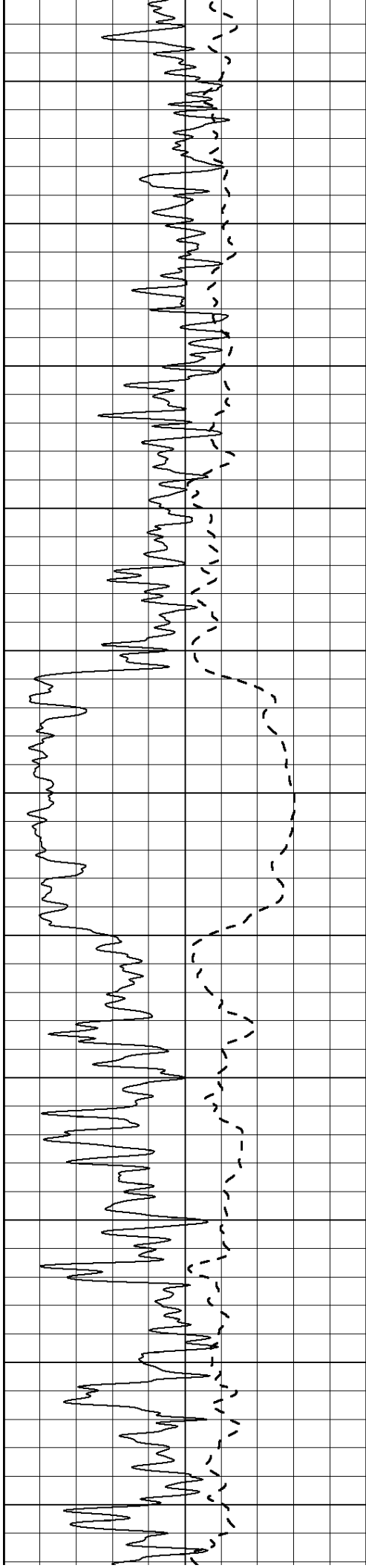


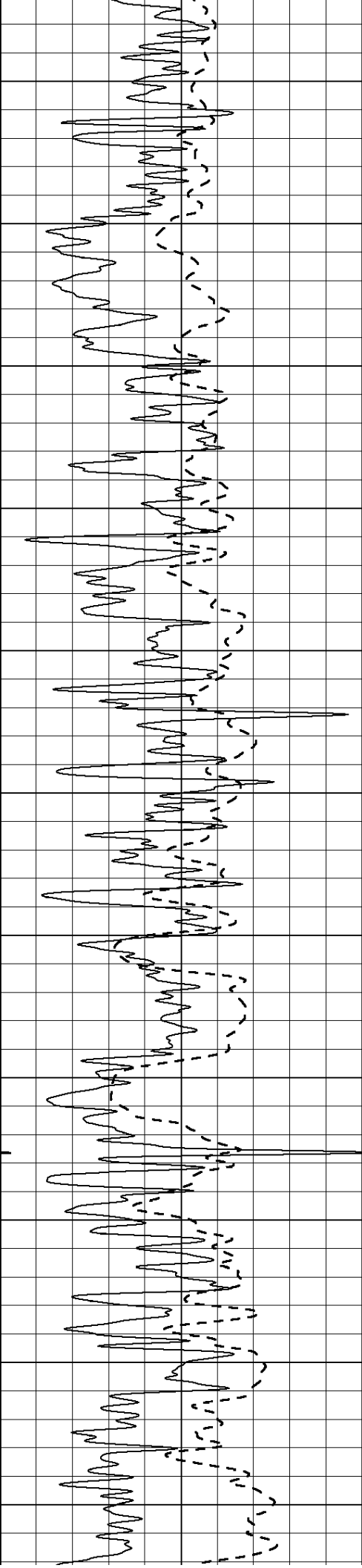


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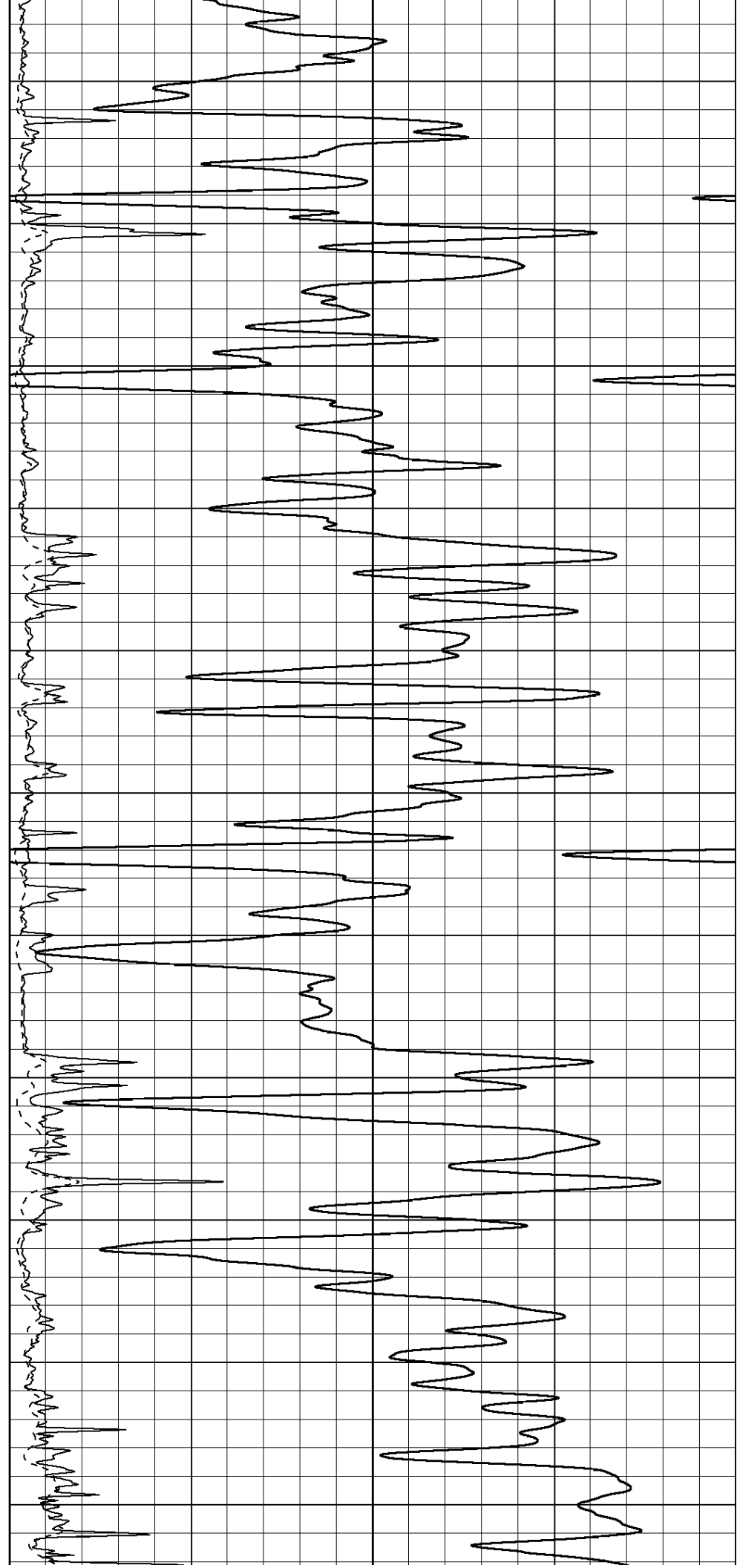


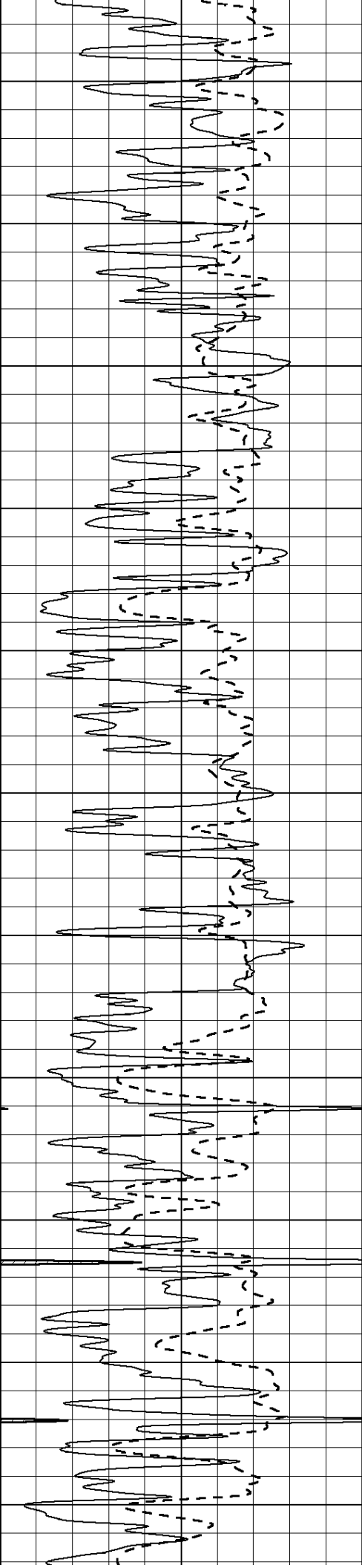




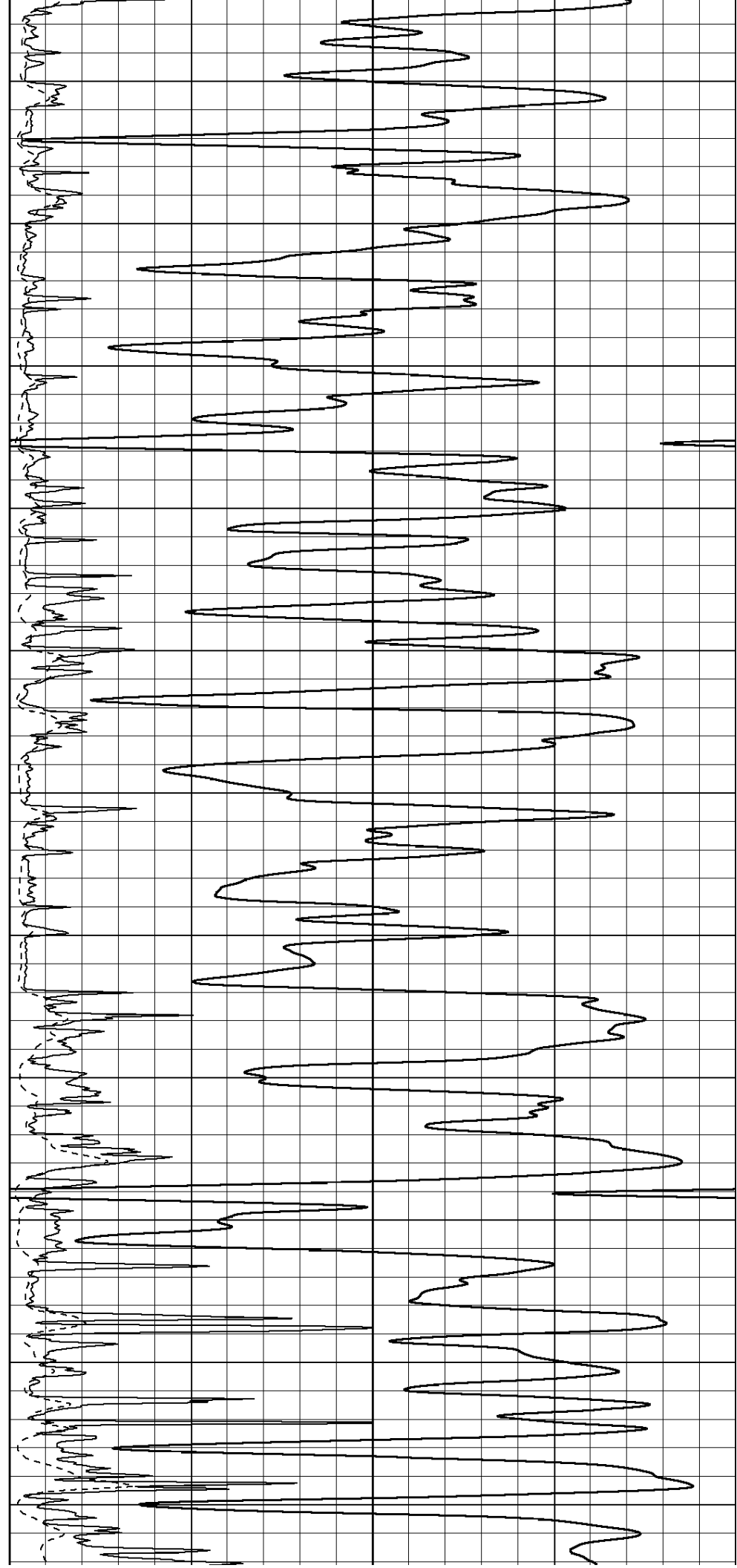


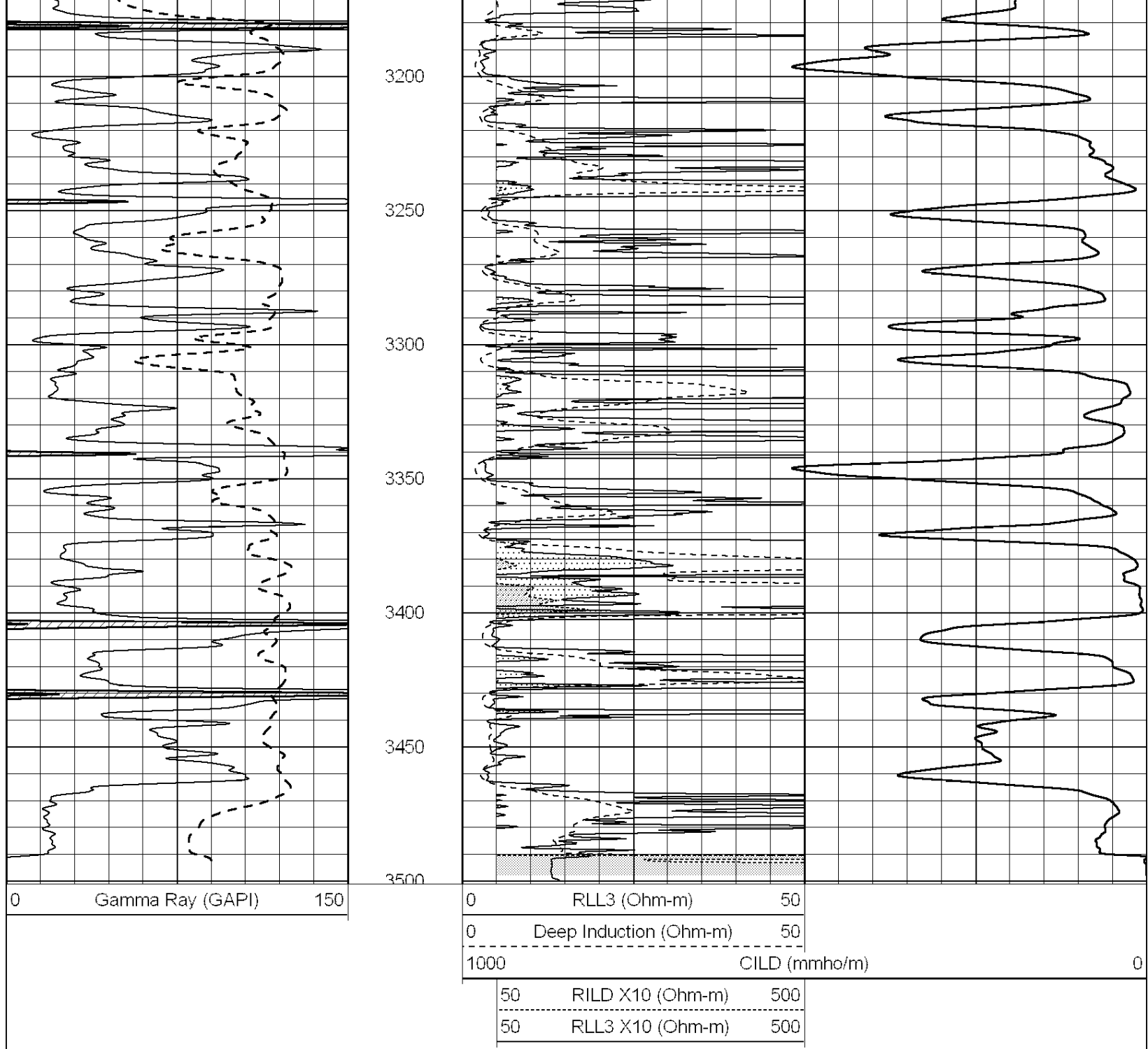
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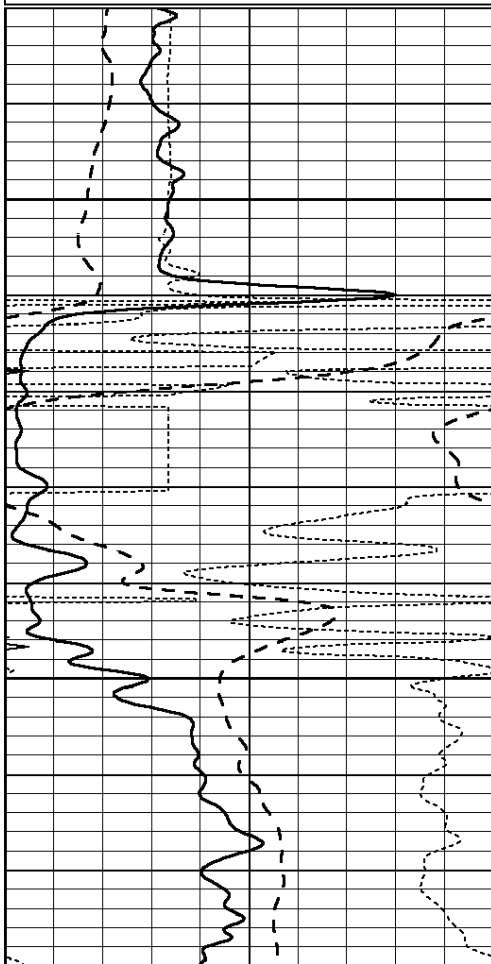




# ANHYDRITE

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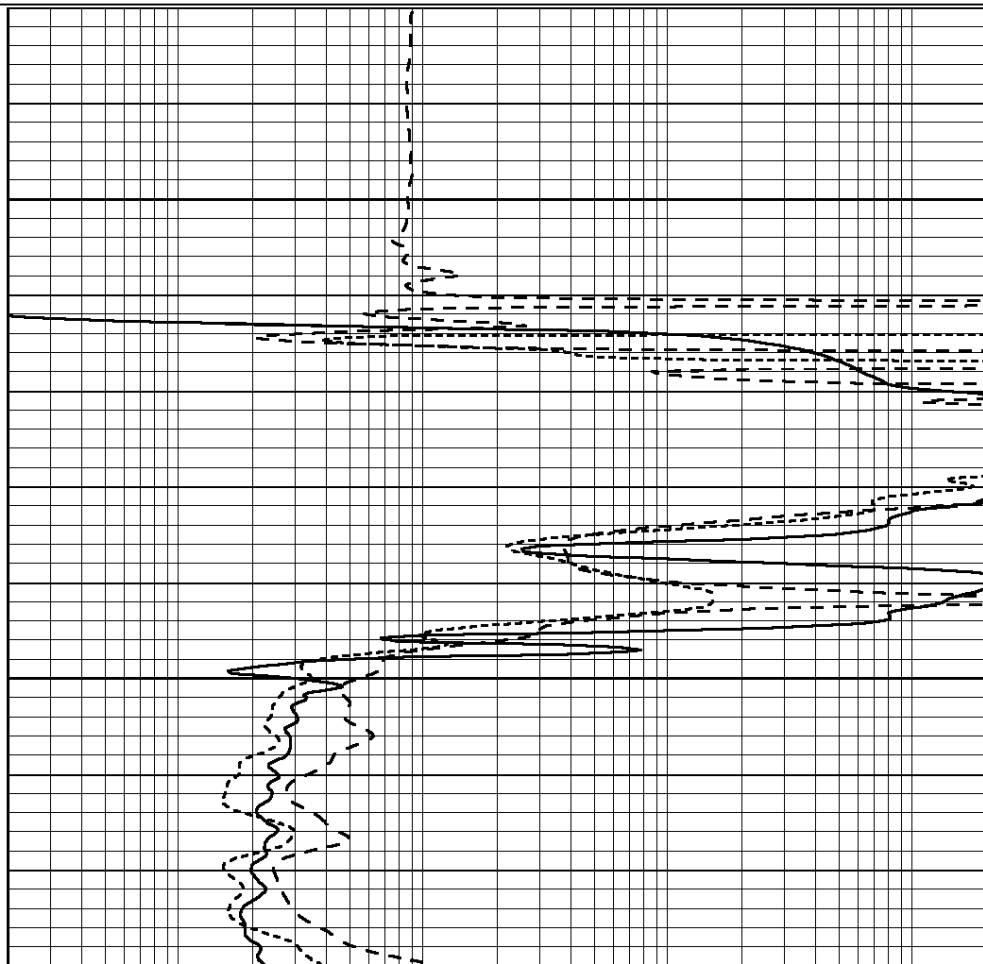
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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



1400

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



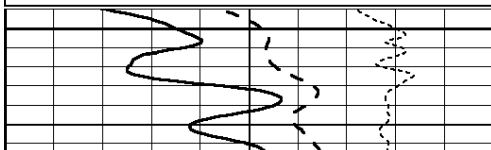
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# MAIN SECTION

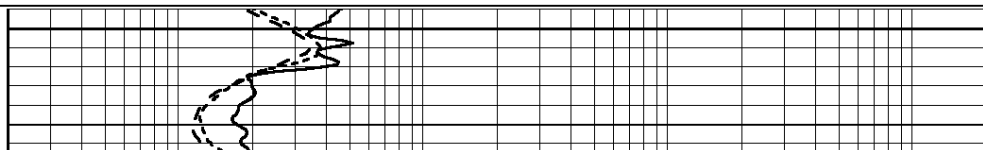
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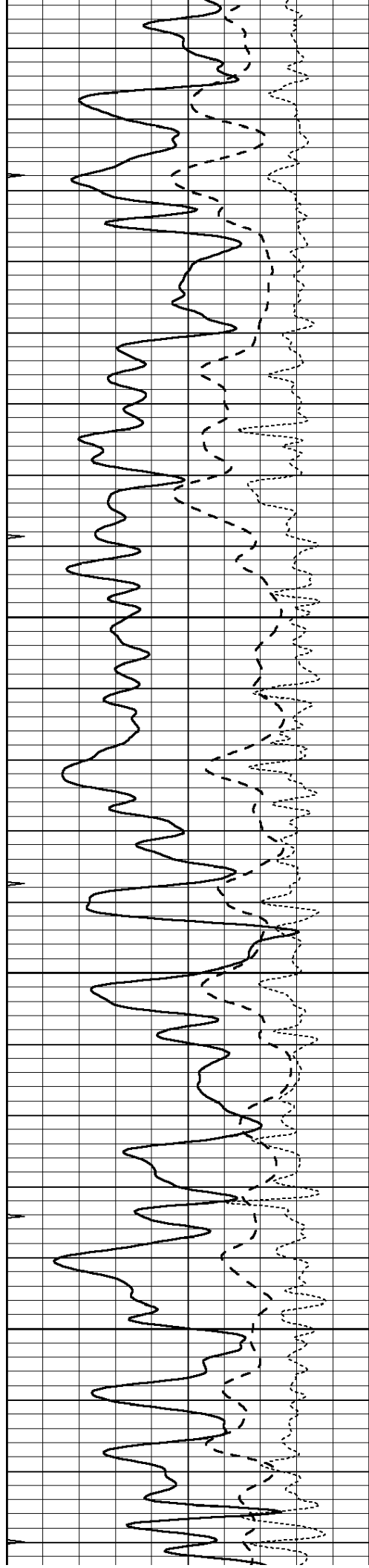
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



2500



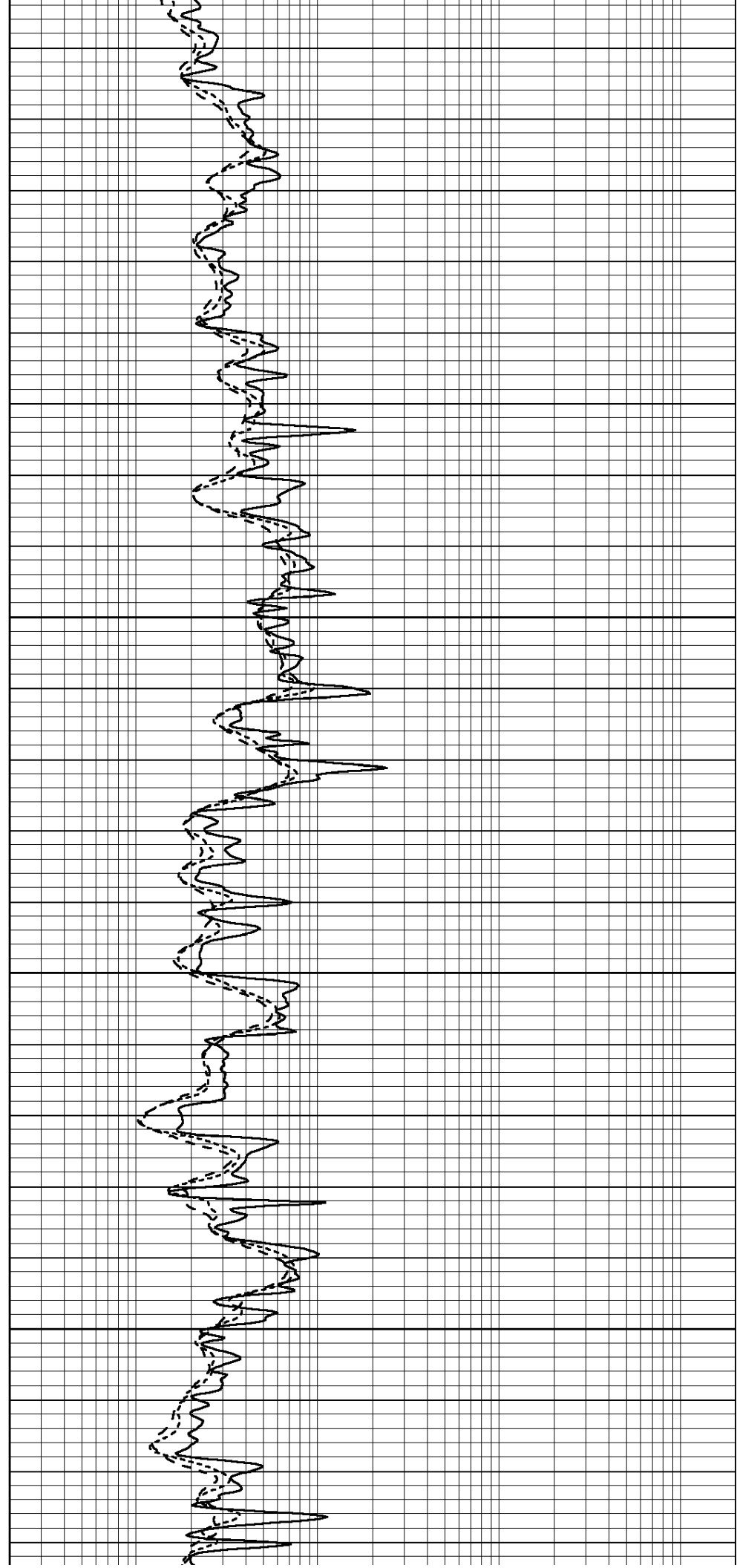


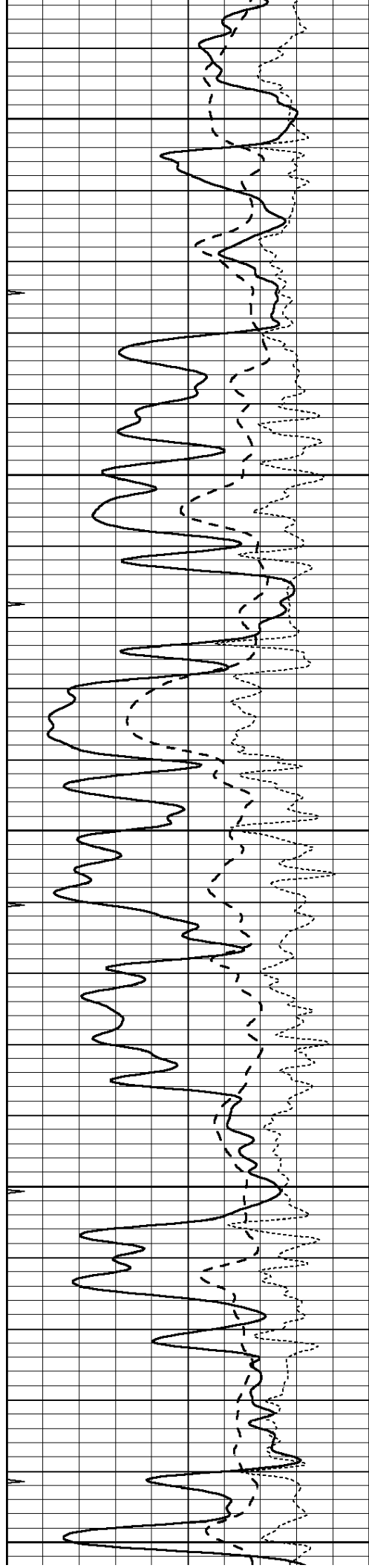
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2600

2650

2700





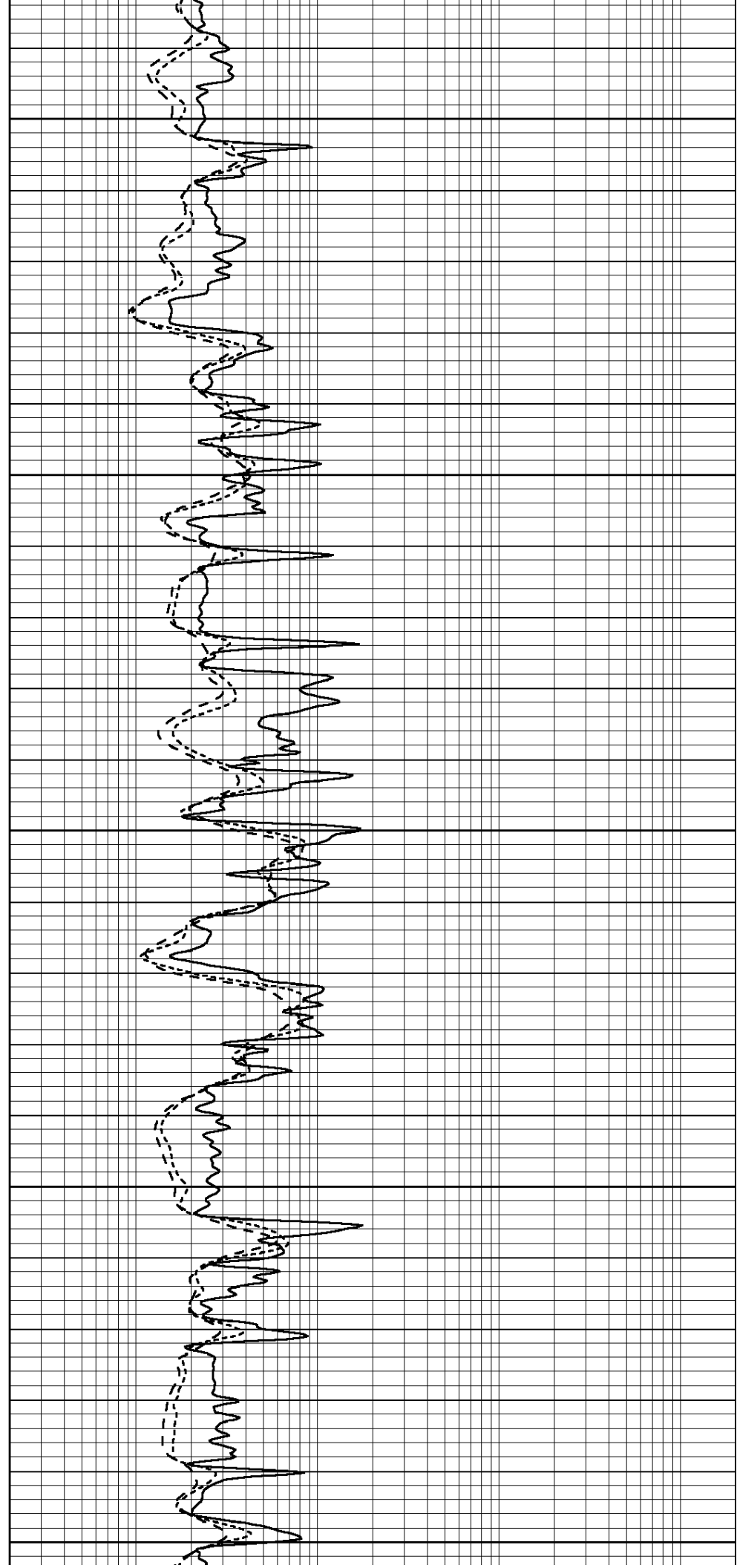
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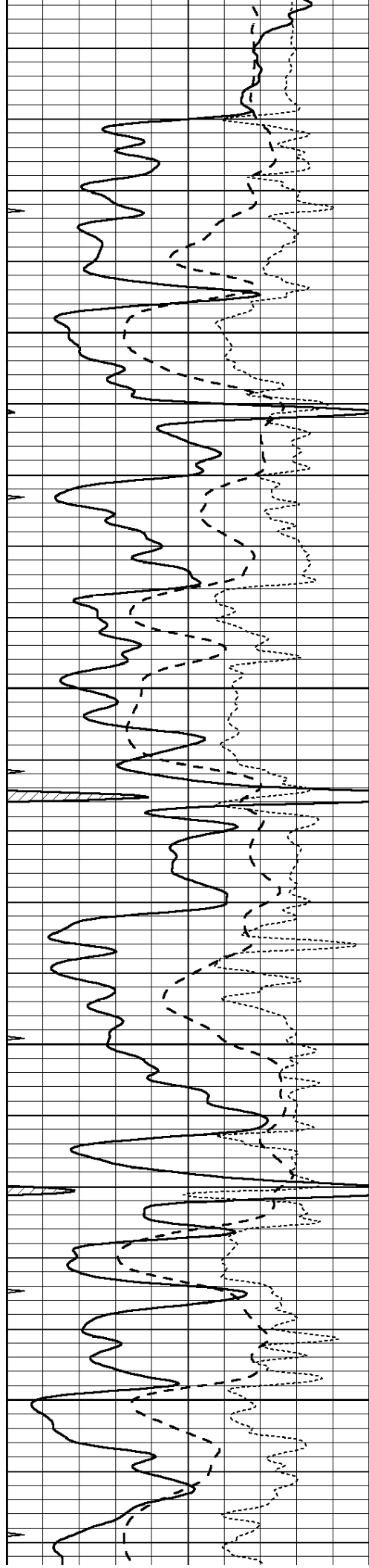
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2850

2900

2950



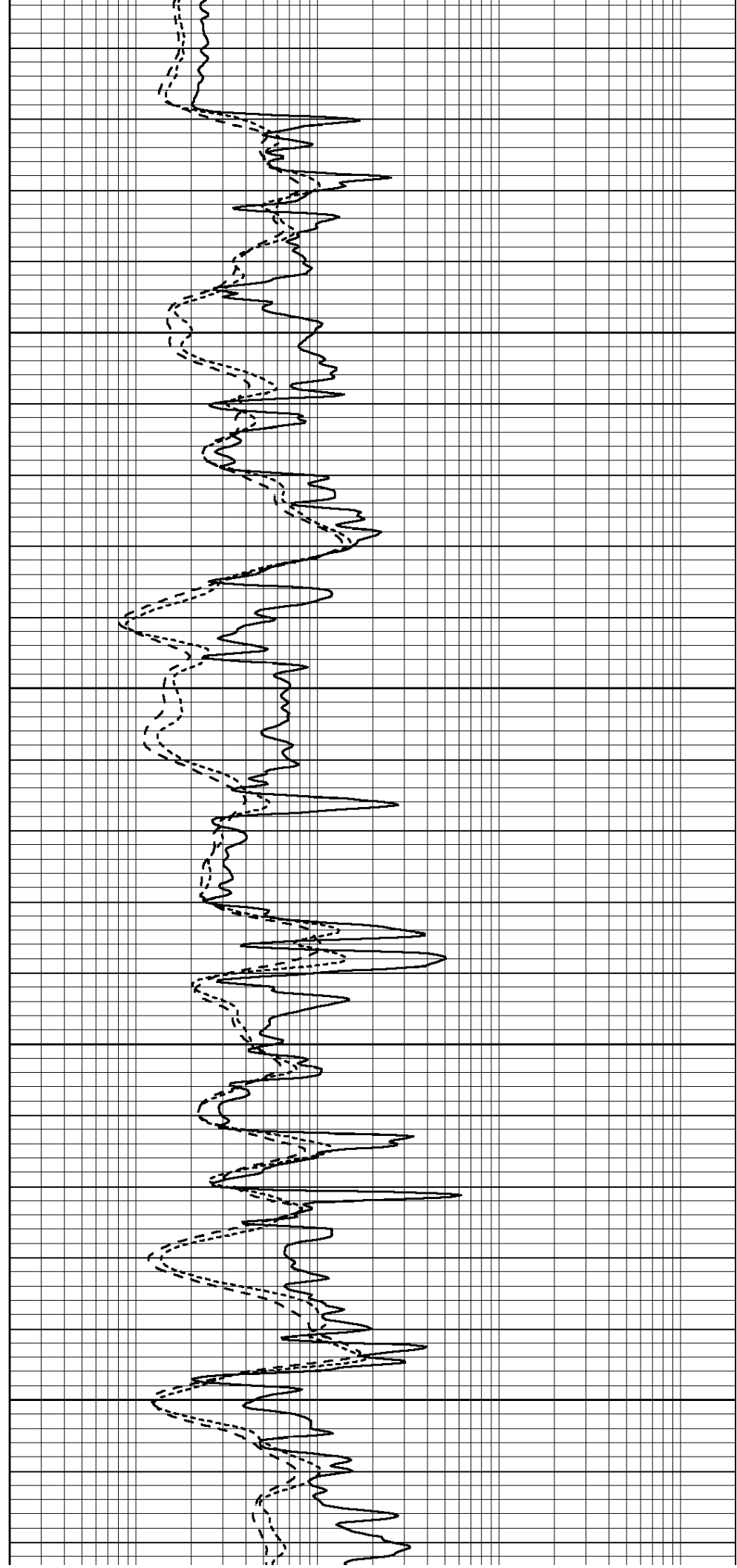


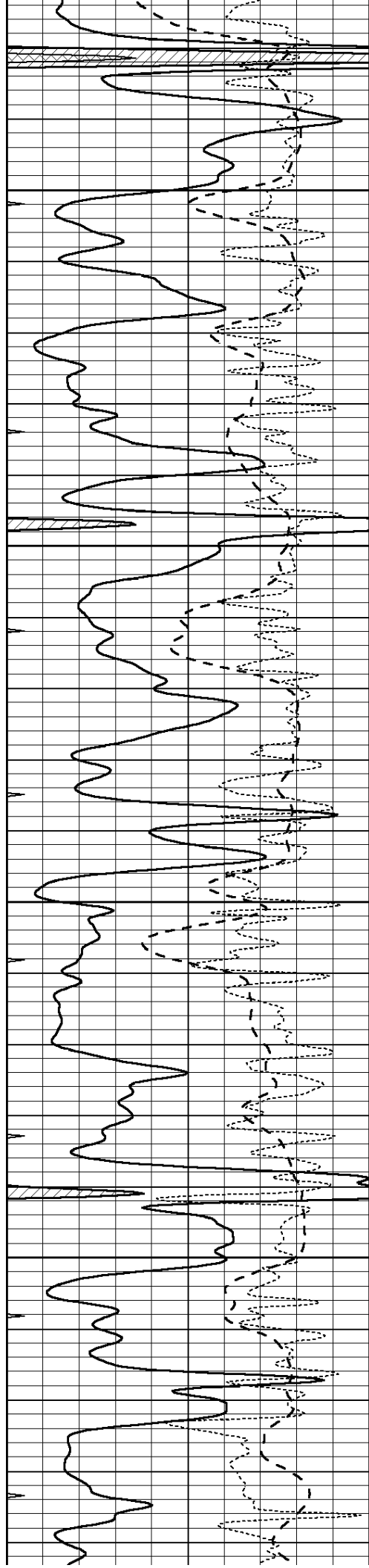
3000

3050

3100

3150



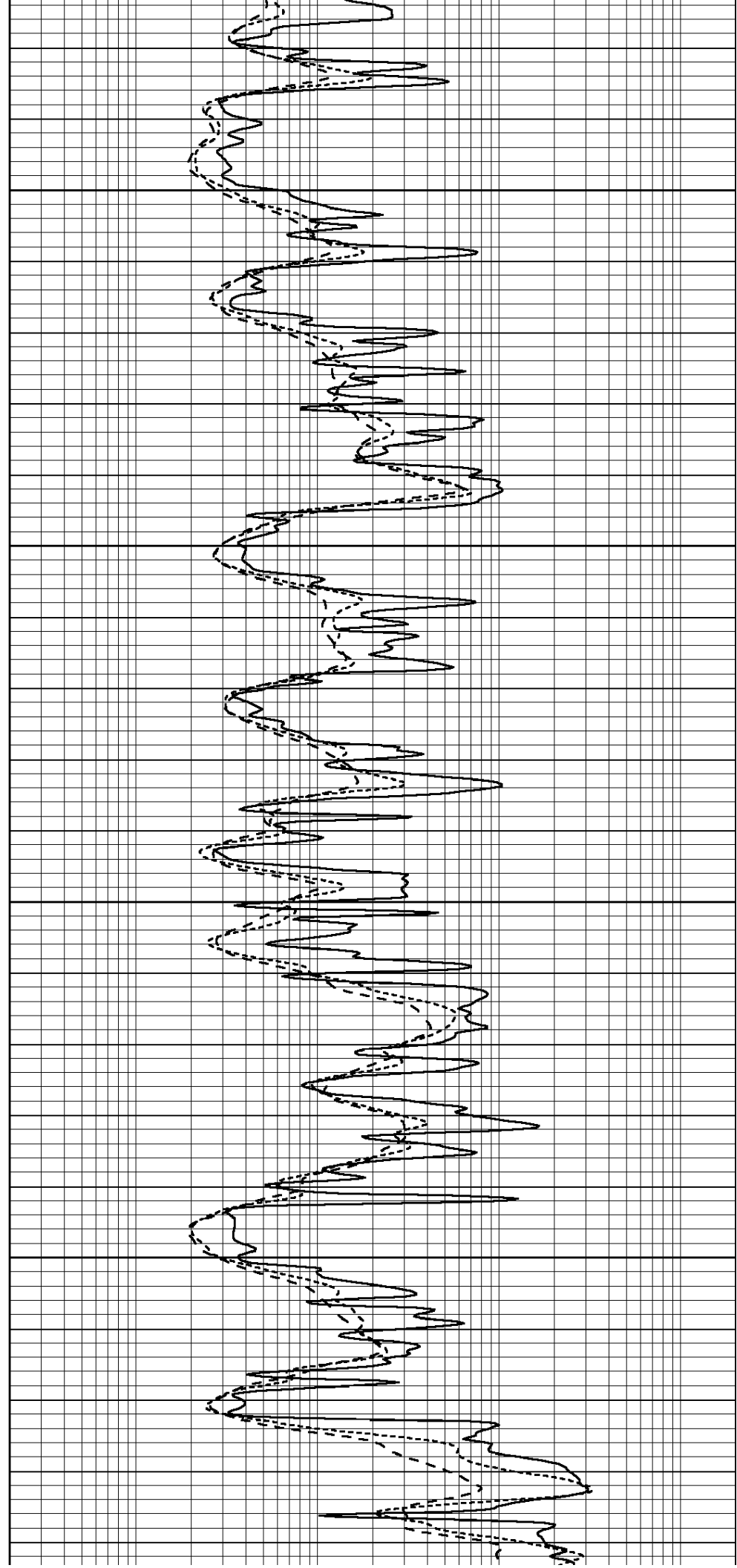


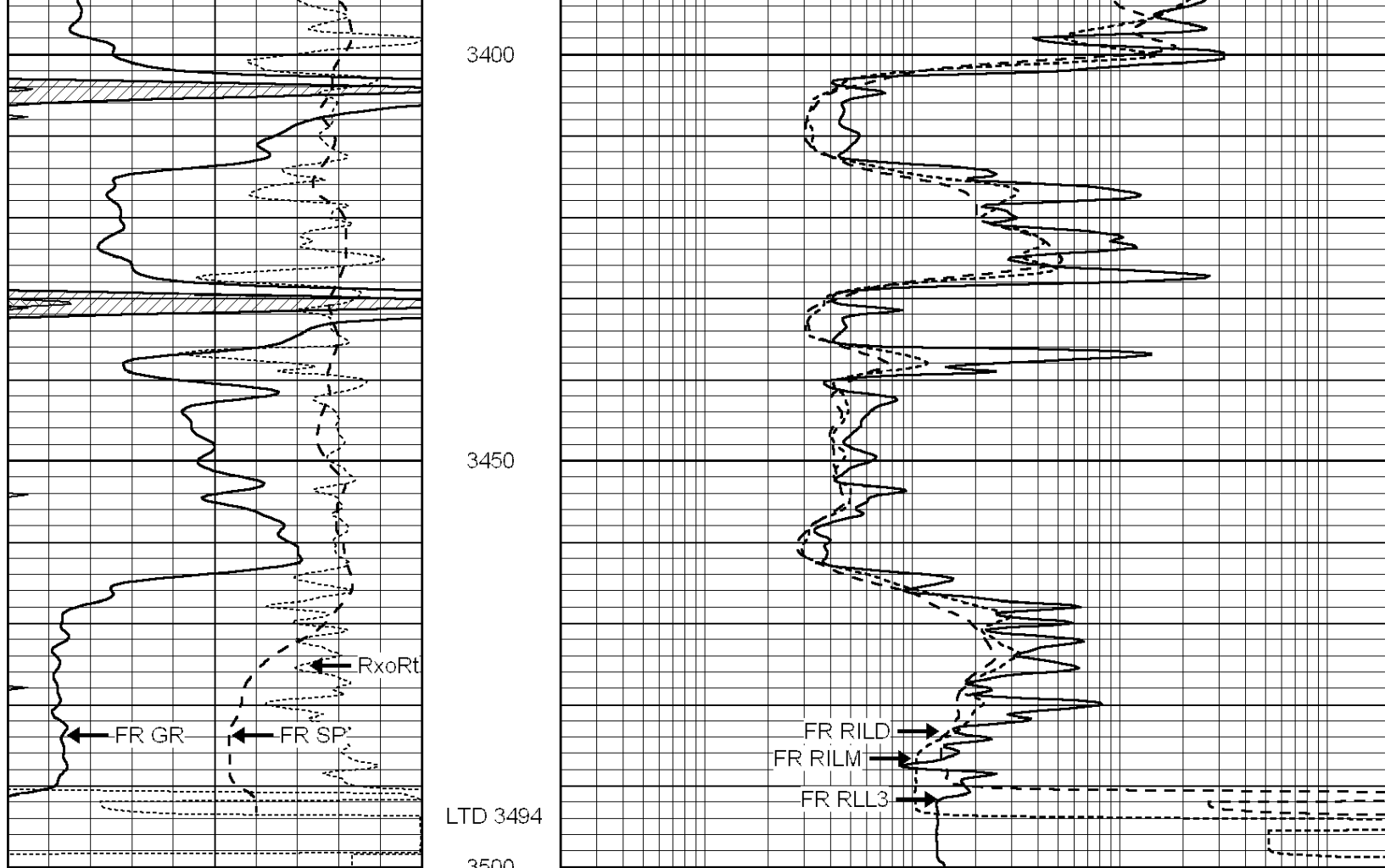
3200

3250

3300

3350





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

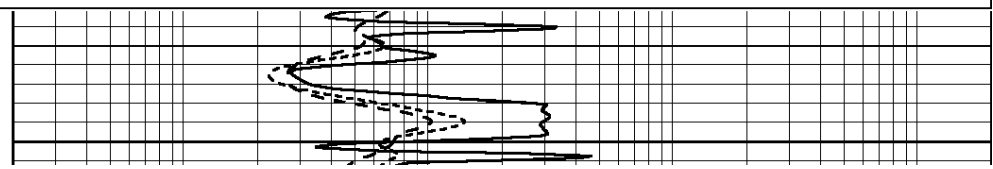
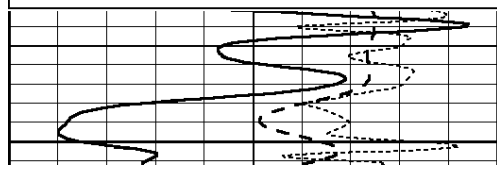


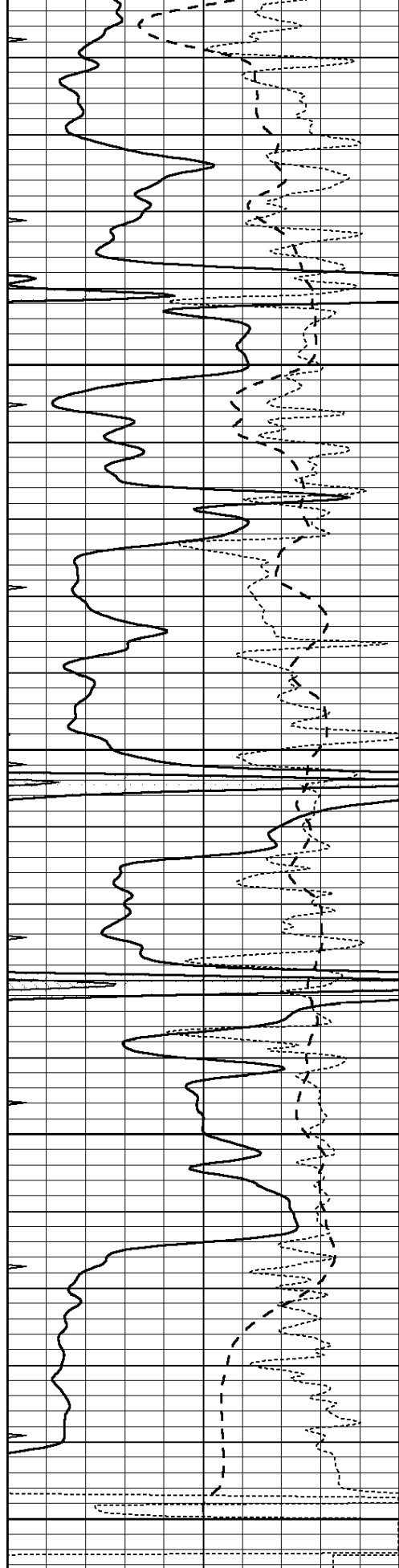
# REPEAT SECTION

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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





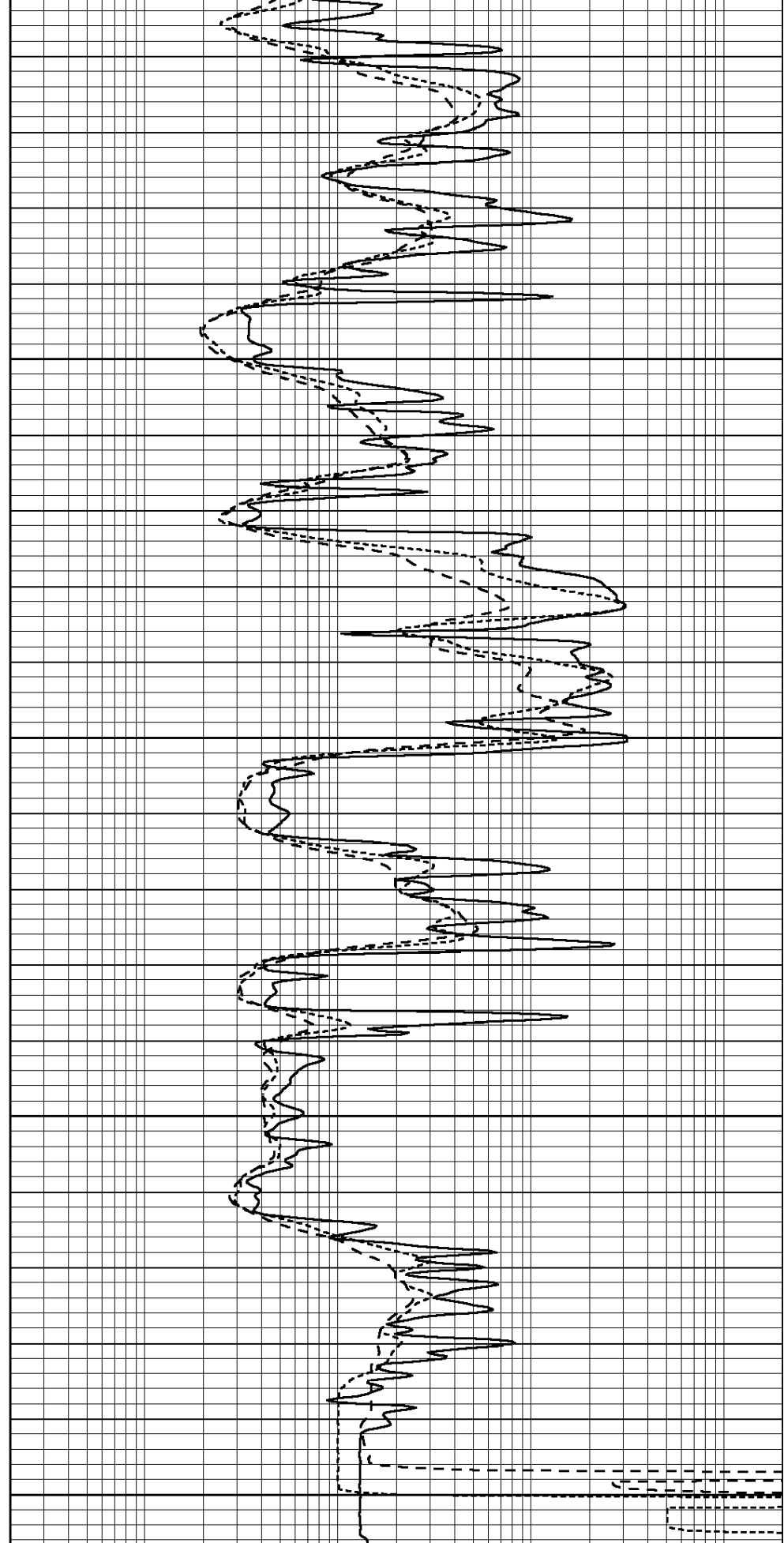
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50

3350

3400

3450

3500



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

## Calibration Report

Database File: 010656pe.db  
 Dataset Pathname: pass4.1  
 Dataset Creation: Tue Jan 22 07:55:54 2013 by Calc Open-Cased 090629

## Dual Induction Calibration Report

Serial-Model: PROBE7-DILG  
 Surface Cal Performed: Sat Jan 19 20:58:30 2013  
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013  
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

## Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	670.000	-6.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	700.000	-55.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

## Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

## After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

## Litho Density Calibration Report

Serial: 001 Model: PRB  
 Performed Tue Jul 03 11:37:32 2007

## Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2170.6	9915.1	3855.3	11241.6	cps
Window 2	2029.2	8716.5	3483.5	9750.8	cps
Window 3	1665.0	4929.7	2356.8	5332.0	cps
Window 4	493.3	492.1	490.0	486.8	cps
Long Space	0.0	6687.3	1454.3	7721.6	cps
Short Space	1.9	2149.3	1403.9	2354.5	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept	: -18.7

Caliper			
Low Ref	Readings	Reference	
High Ref	3.5	8.1	
	5.4	14.0	
	Gain: 3.1		Offset: -2.6

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:	GR2
Tool Model:	OPEN
Performed:	Sat Jan 19 22:43:37 2013
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	740.0 cps
Sensitivity:	1.8000 GAPI/cps