



SUPERIOR
Hays,
Kansas

**DUAL INDUCTION
LOG**

Company MULL DRILLING COMPANY, INC.
Well #1-26 ALBIN "A"
Field WHITNEY WEST
County GOVE
State KANSAS

Company MULL DRILLING COMPANY, INC.
Well #1-26 ALBIN "A"
Field WHITNEY WEST
County GOVE State KANSAS

Location: API # : 15-063-21998-0000
510' FNL & 2250' FWL
SEC 26 TWP 15S RGE 27W
Permanent Datum GROUND LEVEL Elevation 2486
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL/SONIC
Elevation
K.B. 2491
D.F. 2489
G.L. 2486

Date	5/30/12
Run Number	ONE
Depth Driller	4480
Depth Logger	4480
Bottom Logged Interval	4478
Top Log Interval	00
Casing Driller	8 5/8"@215'
Casing Logger	220
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/56
pH / Fluid Loss	9.0/9.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.800@92F
Rmt @ Meas. Temp	.600@92F
Rmc @ Meas. Temp	.960@92F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.613@120F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	2.45 P.M.
Maximum Recorded Temperature	120F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	KEVIN KESSLER

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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 SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
PENDENNIS, KS. & HWY 4, 6 1/2N. ON "RED CHIEF RD." TO "RD. C", 1E. TO CURVE. CONTINUE 3/4
MORE E. ON RIGHT FORK



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MAIN SECTION

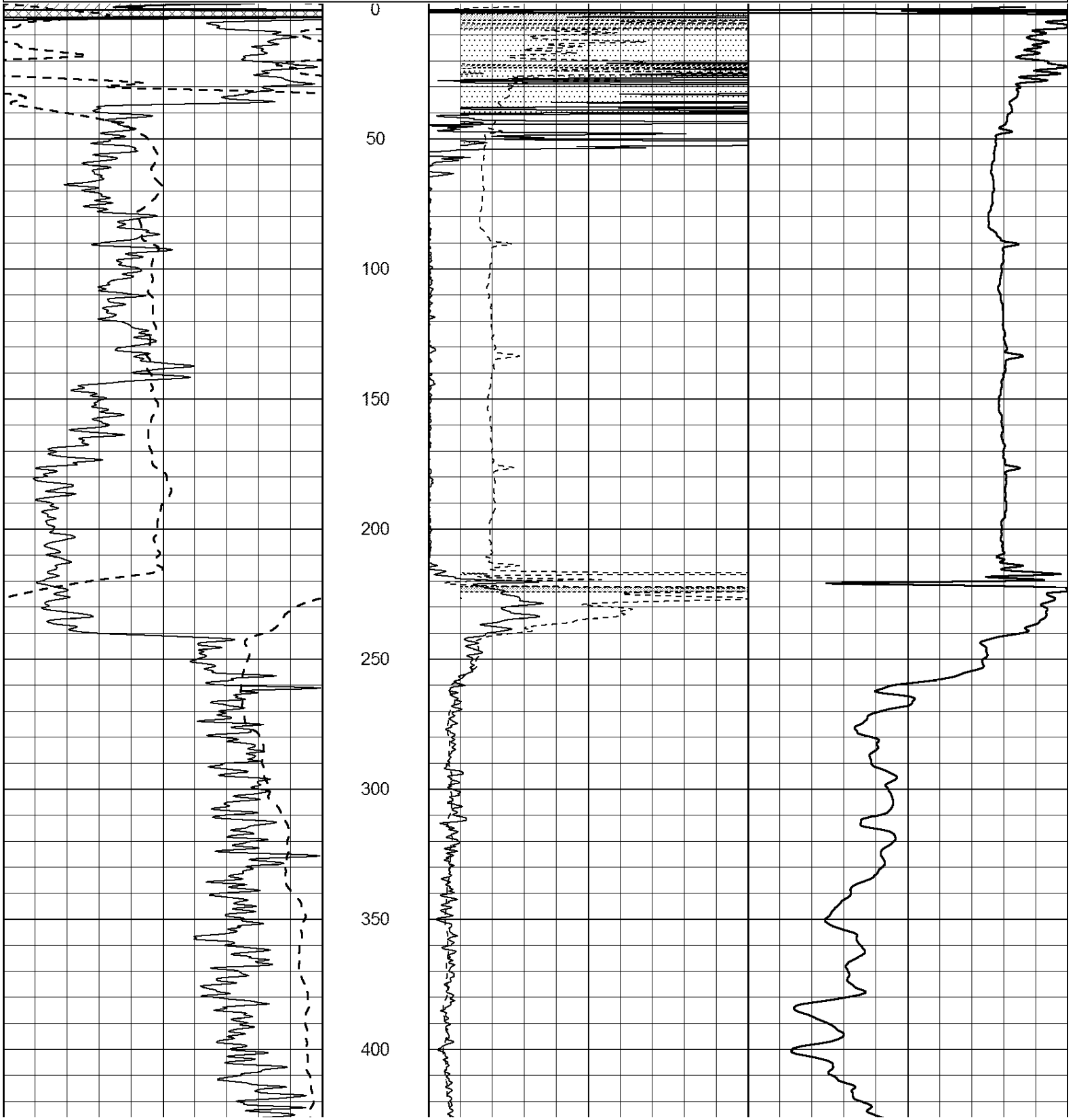
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 Charted by: Depth in Feet scaled 1:600

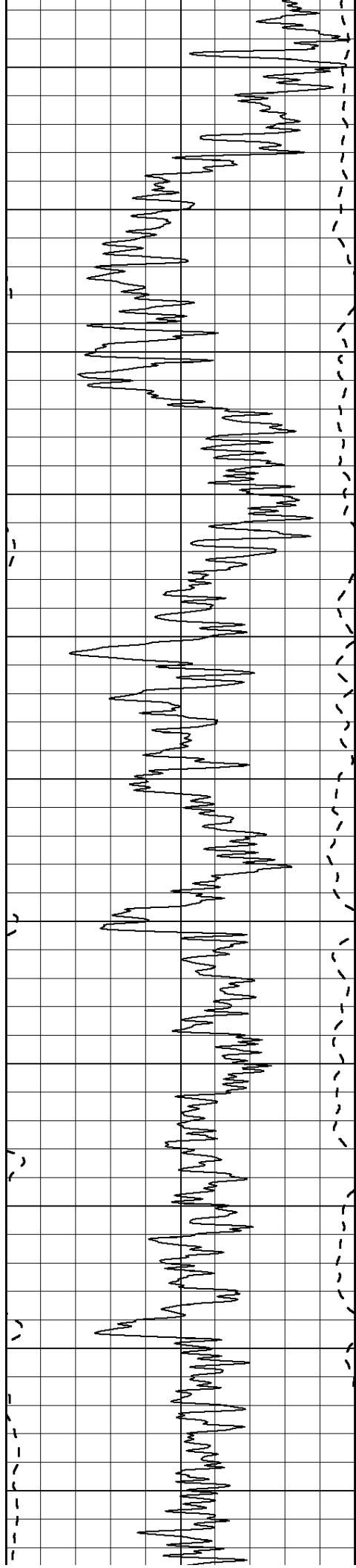
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

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





450

500

550

600

650

700

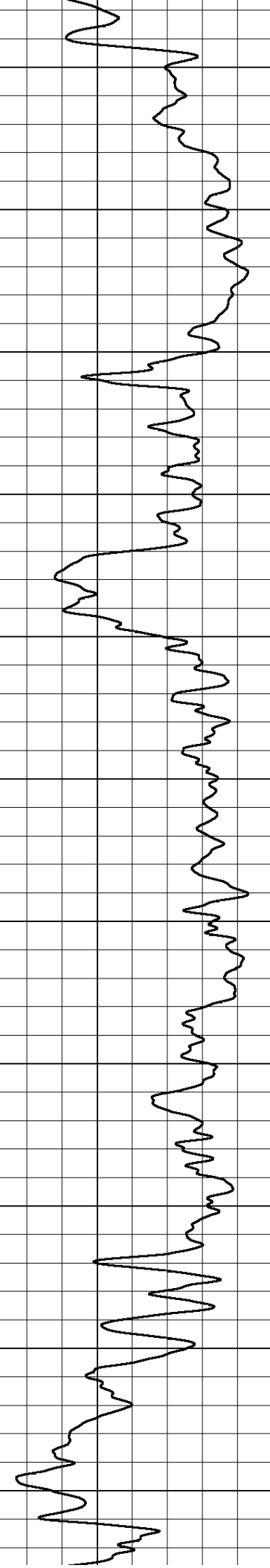
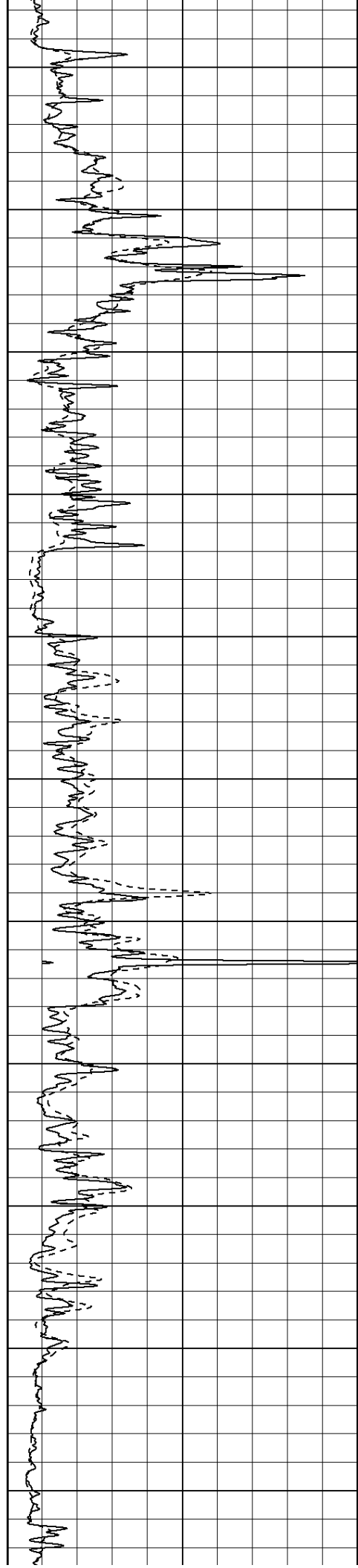
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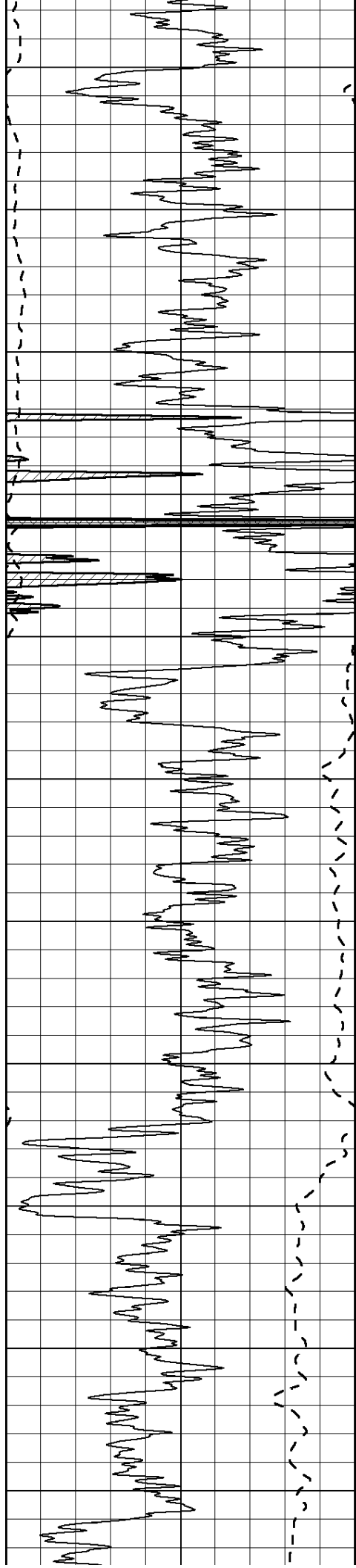
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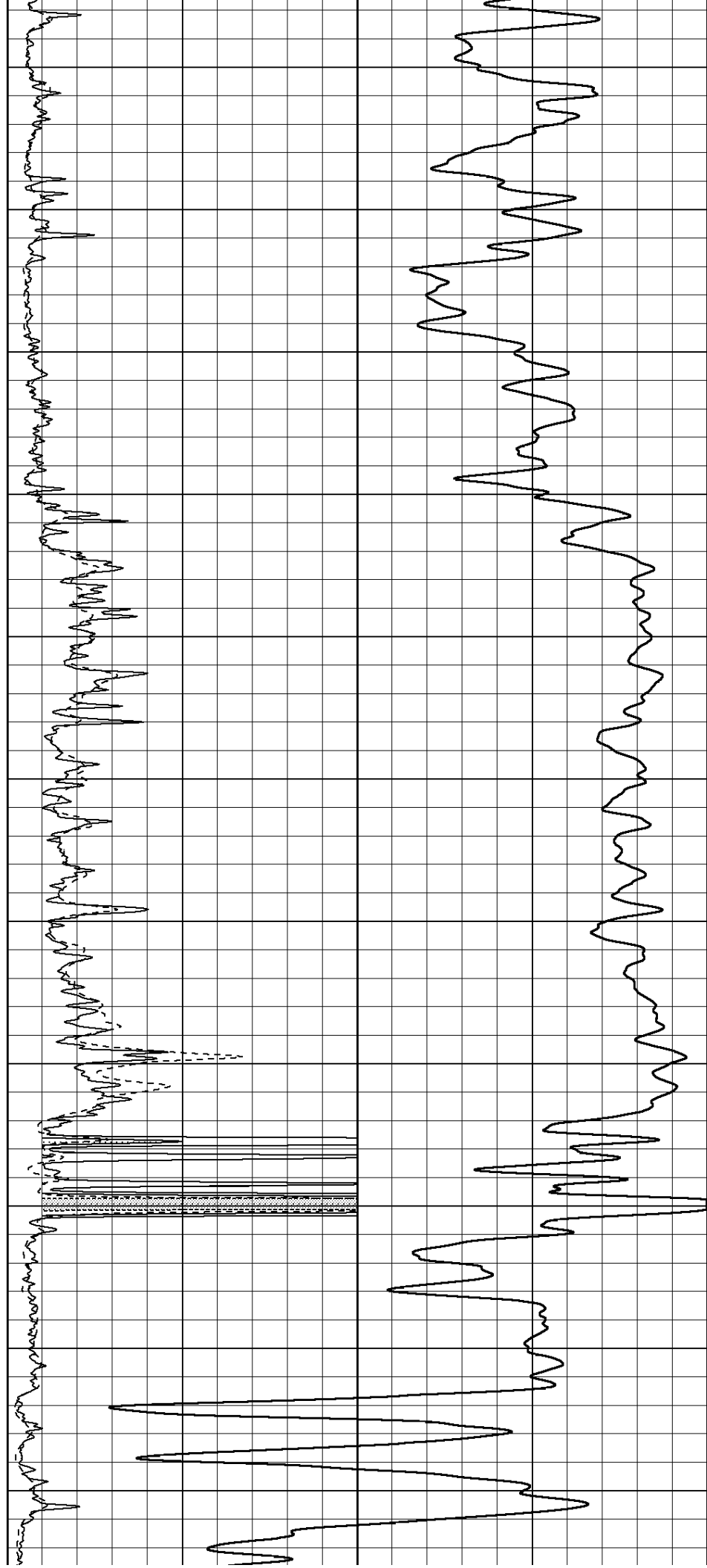
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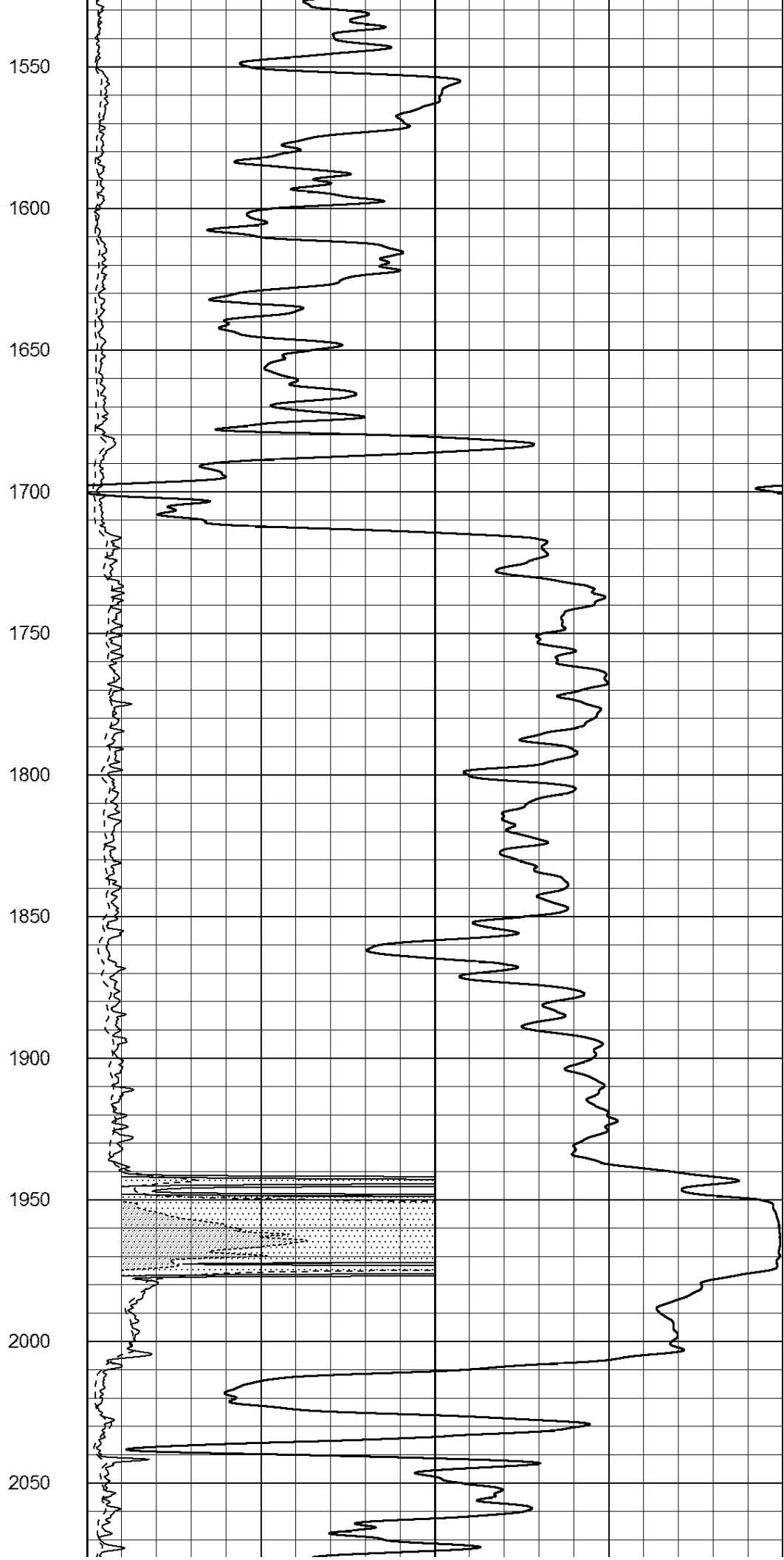
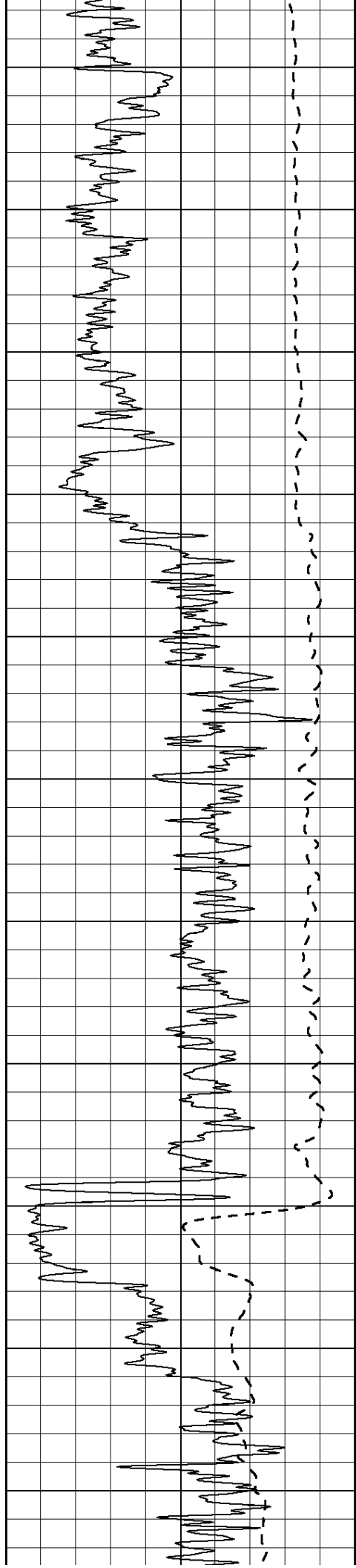
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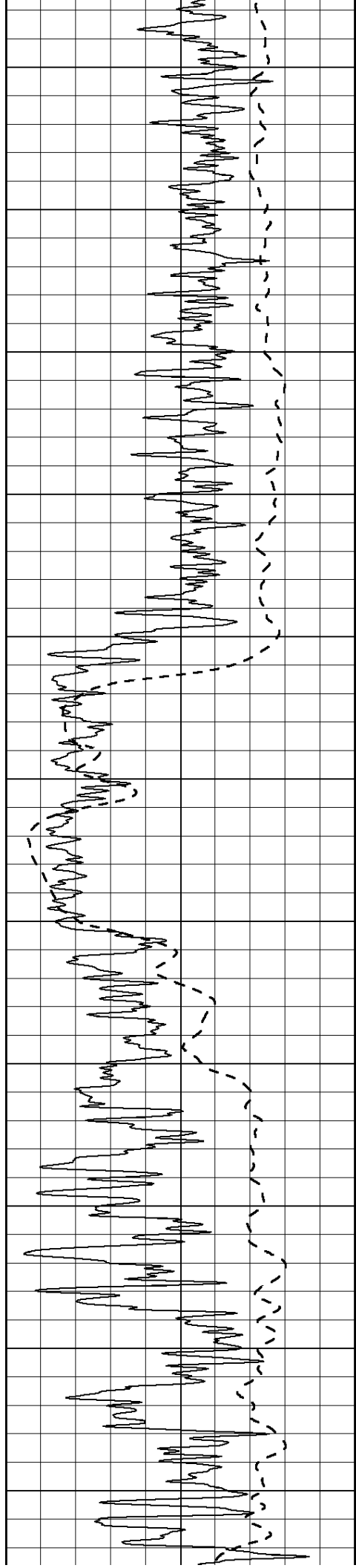




1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

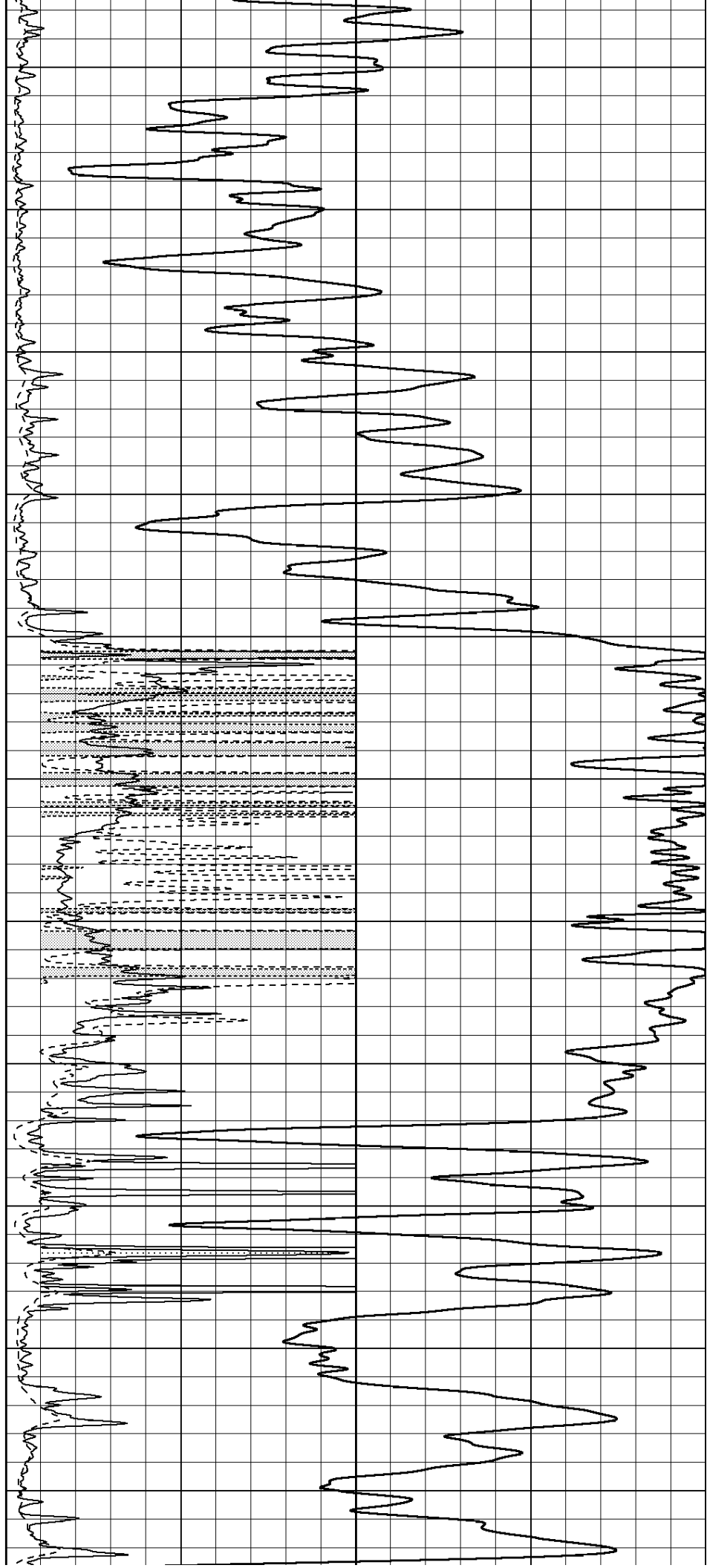
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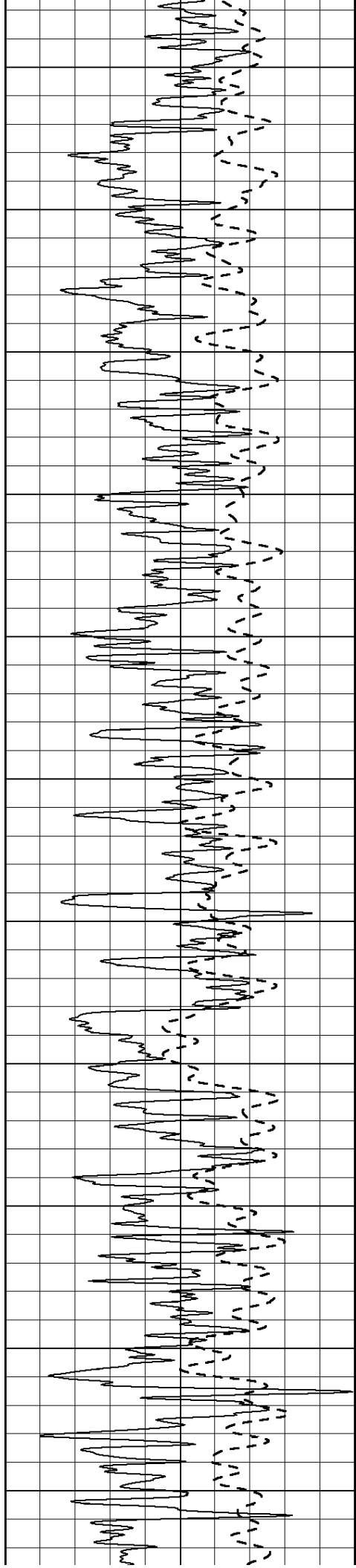
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2500

2550

2600





2650

2700

2750

2800

2850

2900

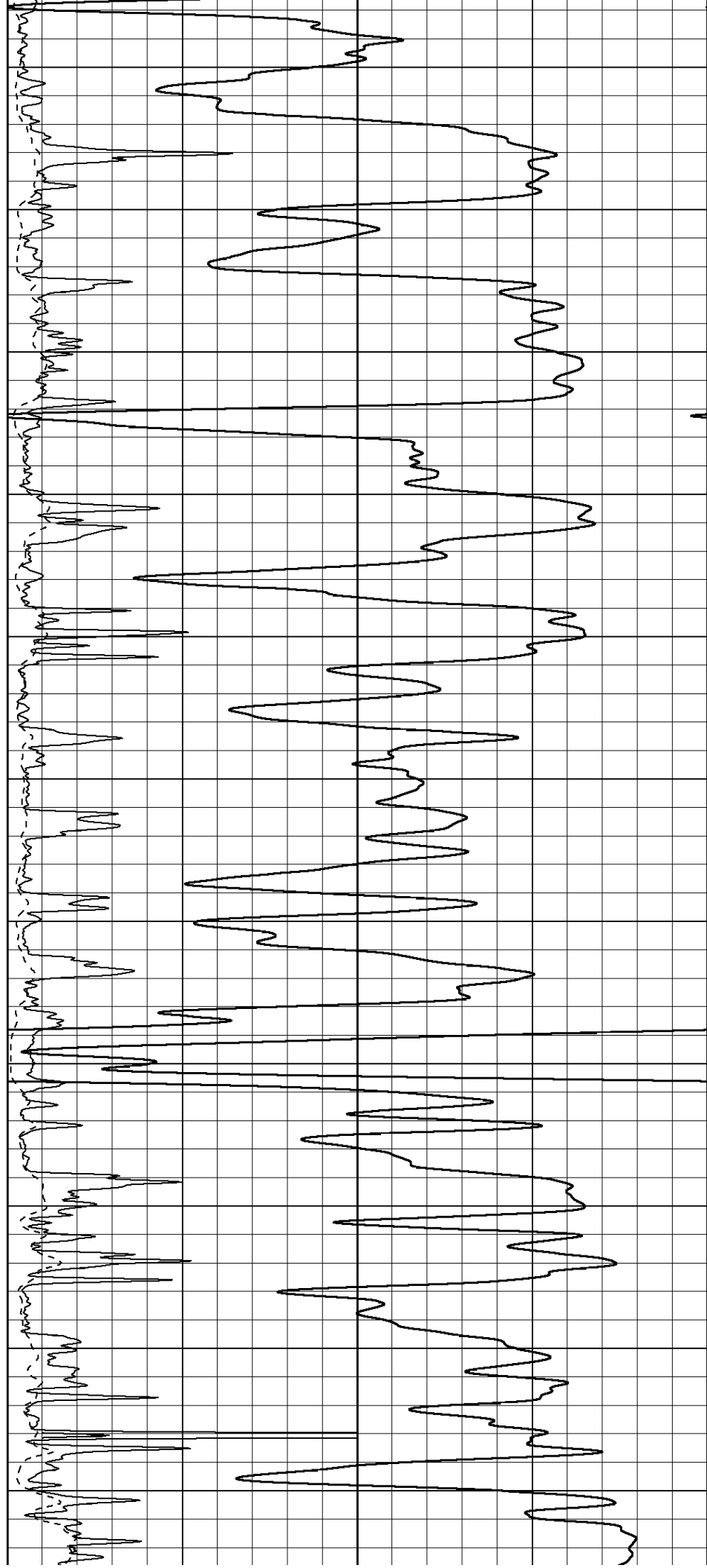
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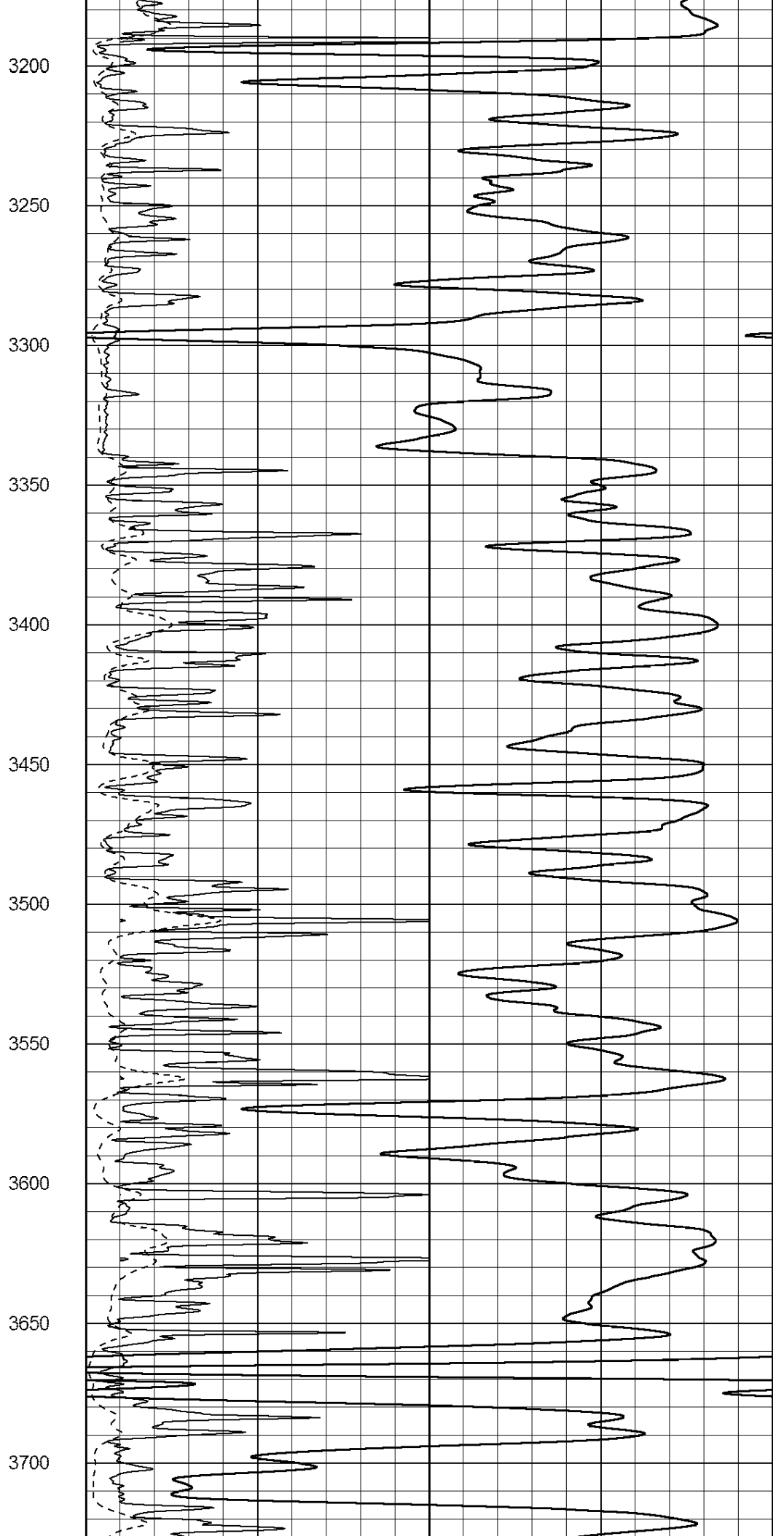
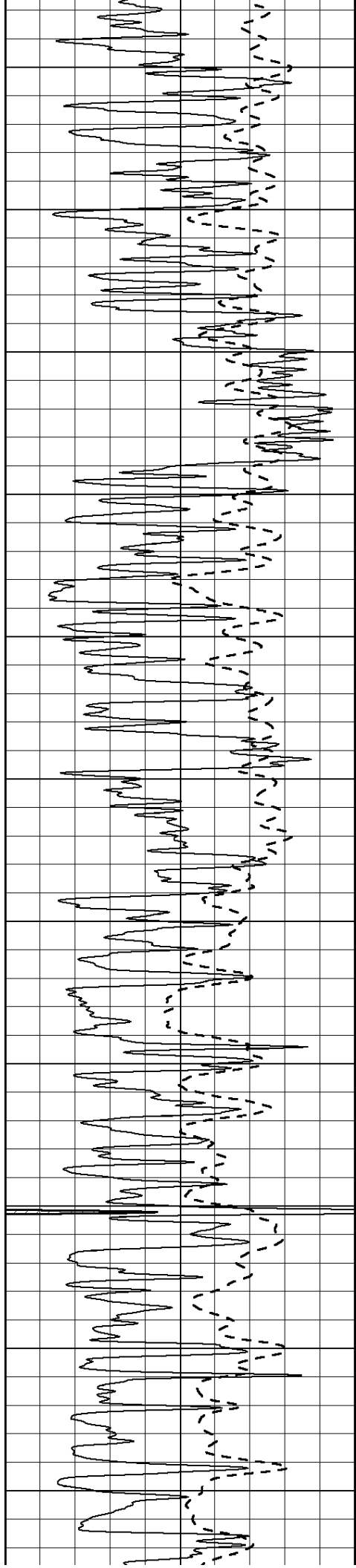
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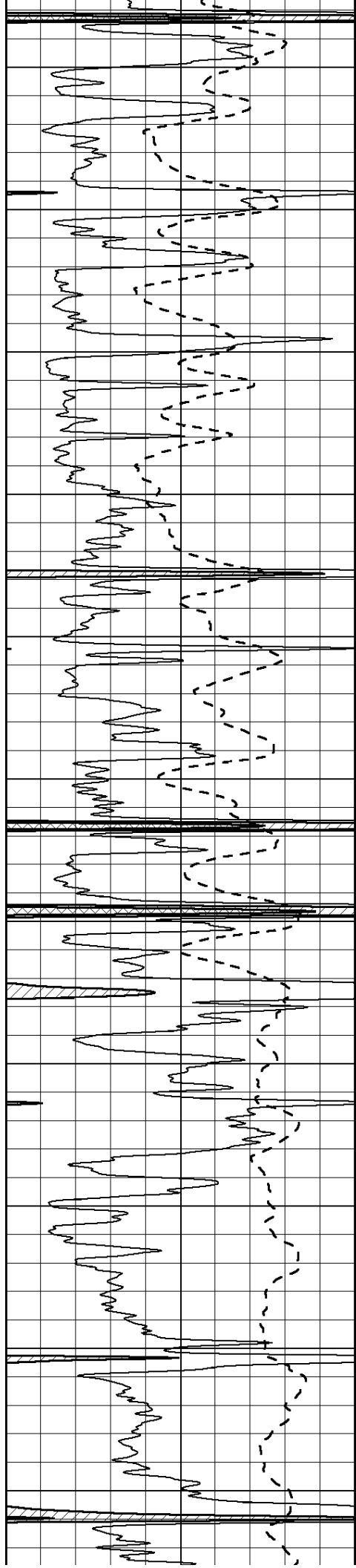
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3100

3150







3750

3800

3850

3900

3950

4000

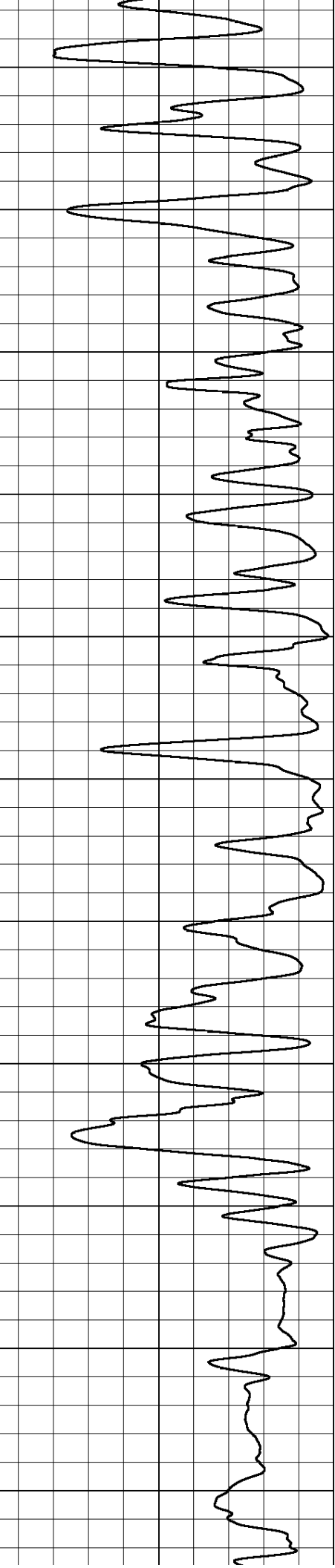
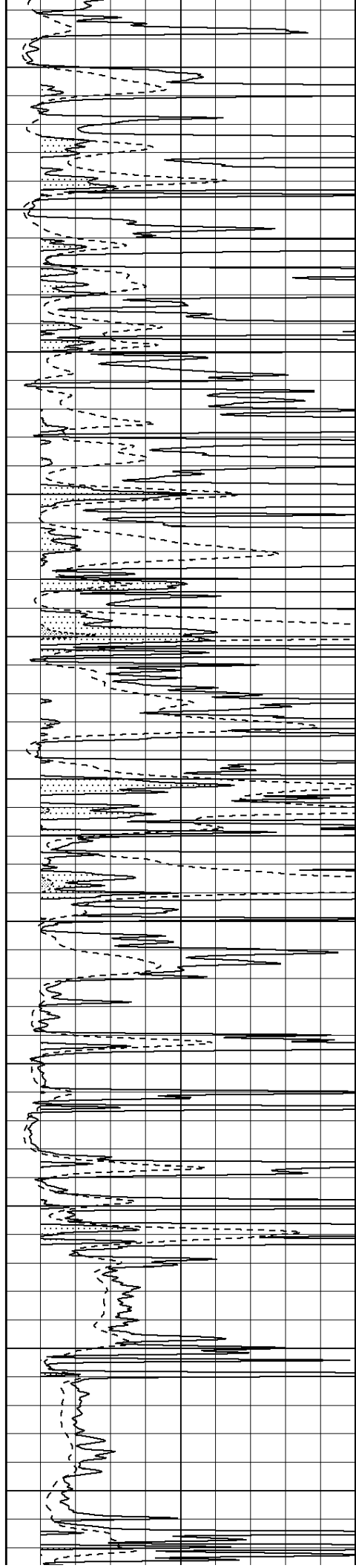
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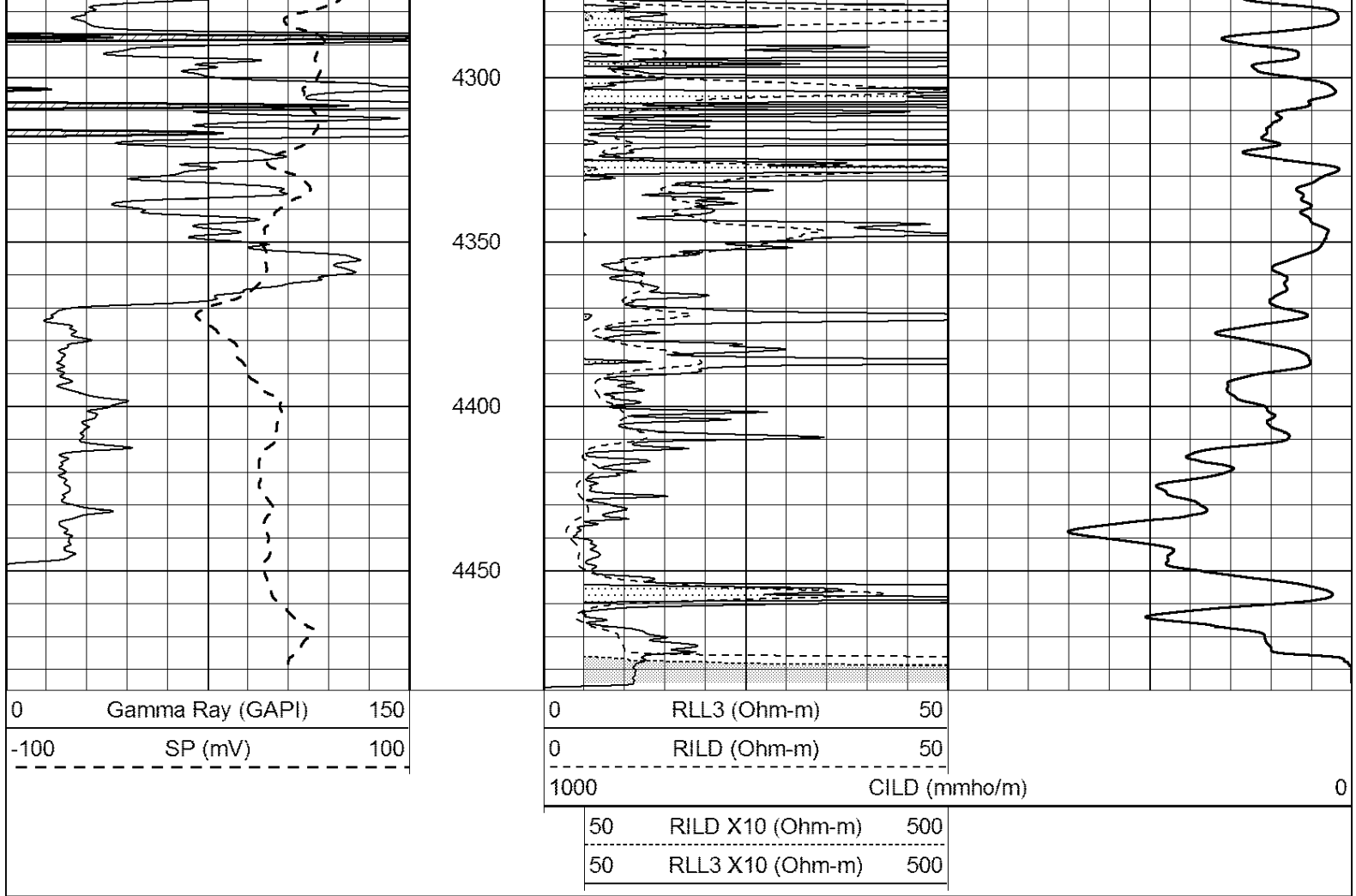
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4150

4200

4250



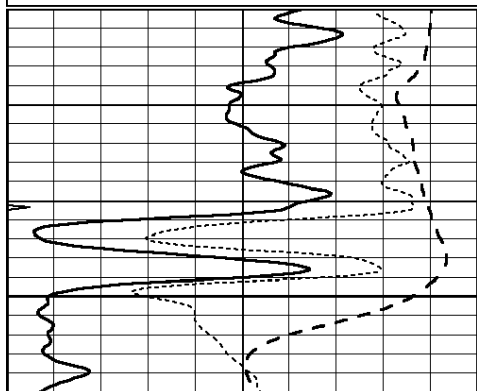


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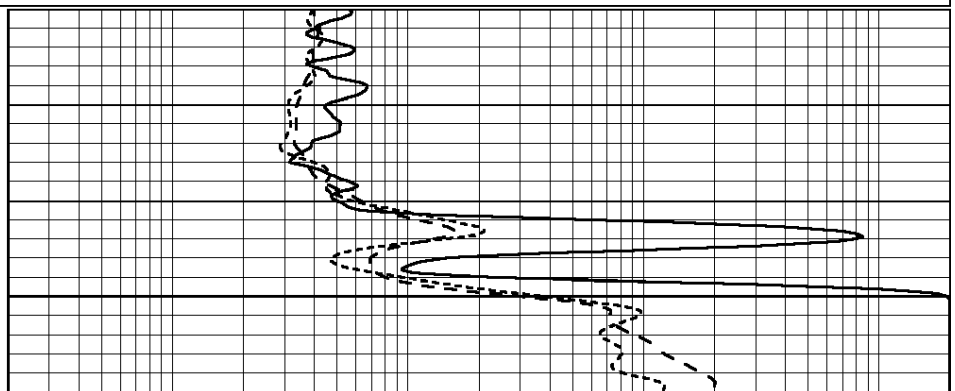
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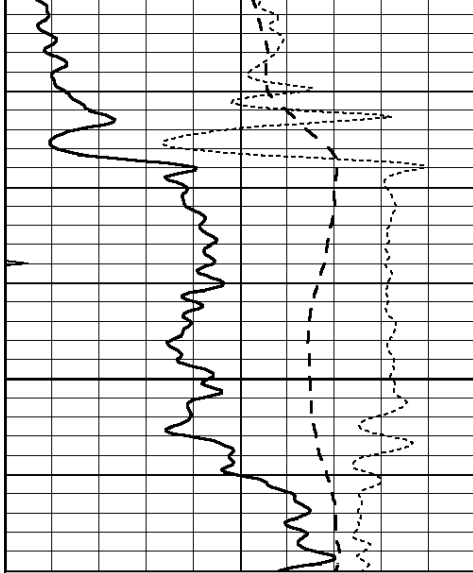
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 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



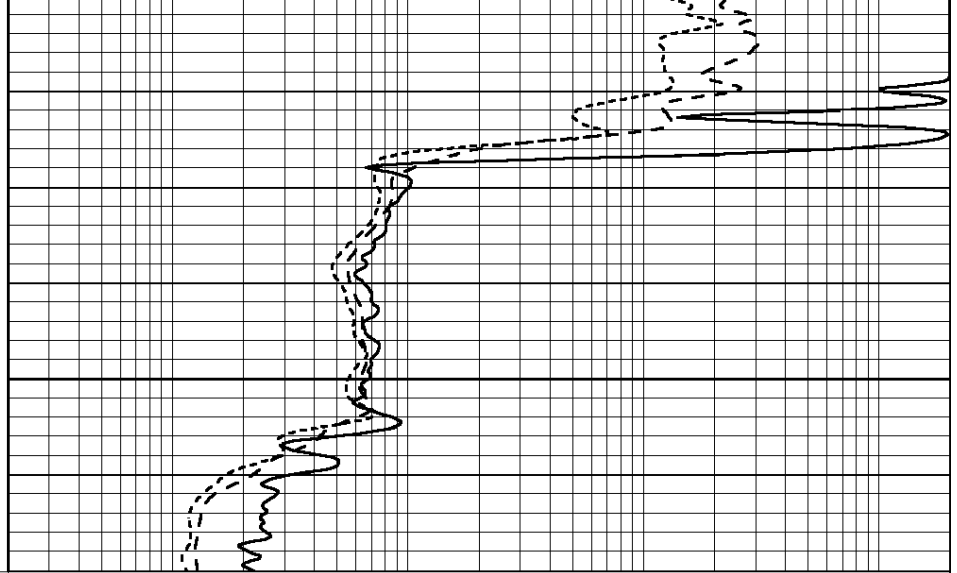
1950





2000

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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



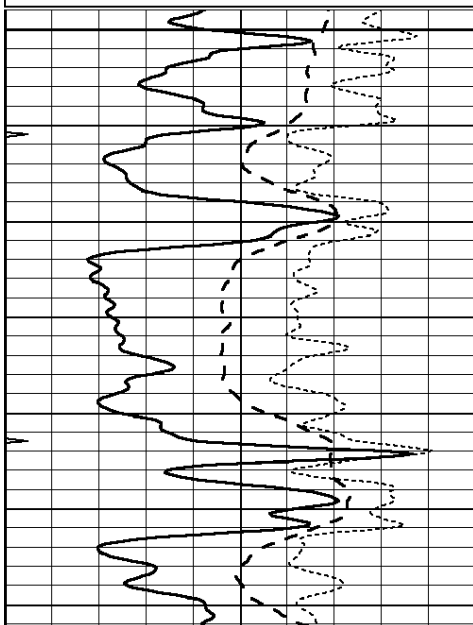
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MAIN SECTION

Database File: 409130pe.db
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 Charted by: Depth in Feet scaled 1:240

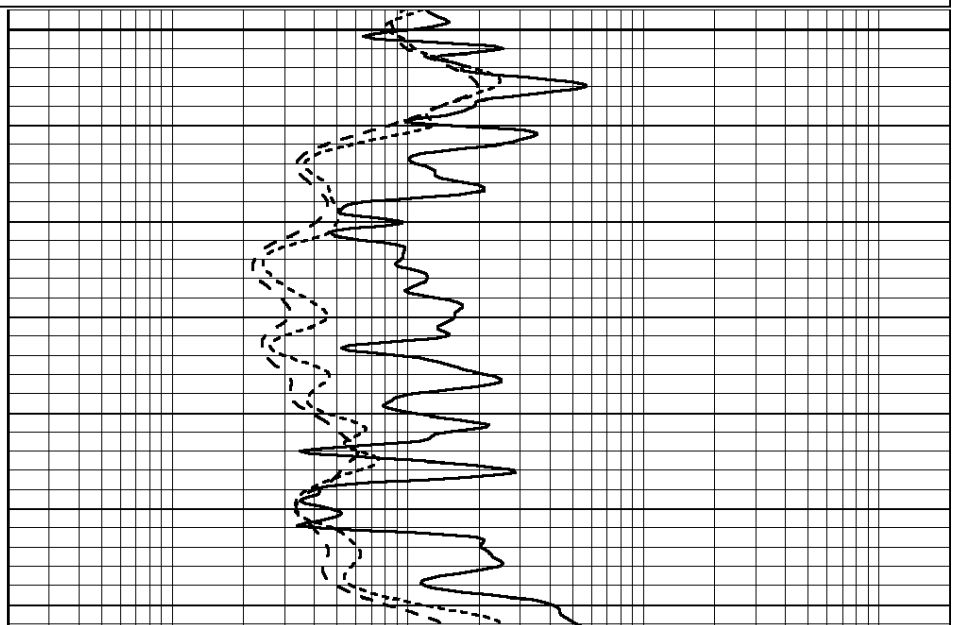
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

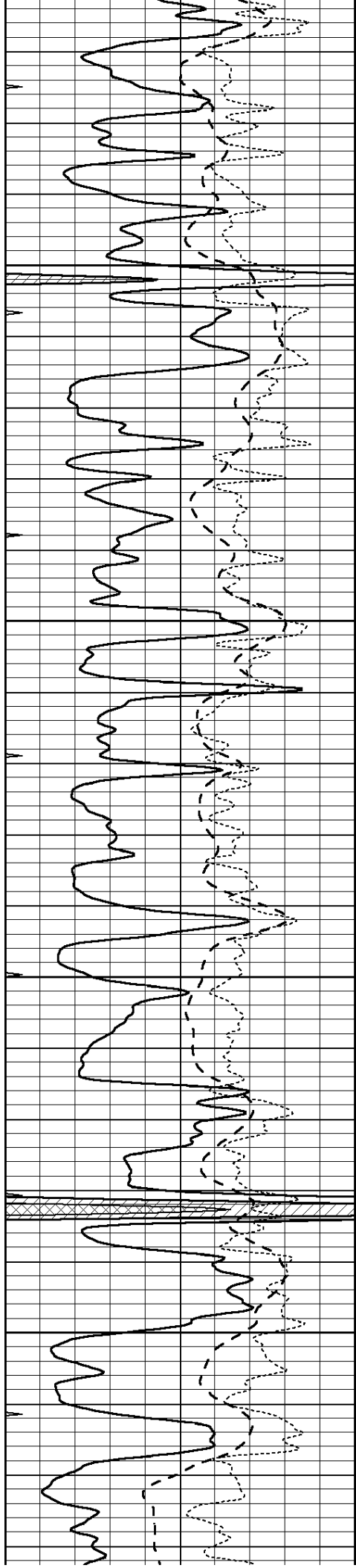
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3500

3550



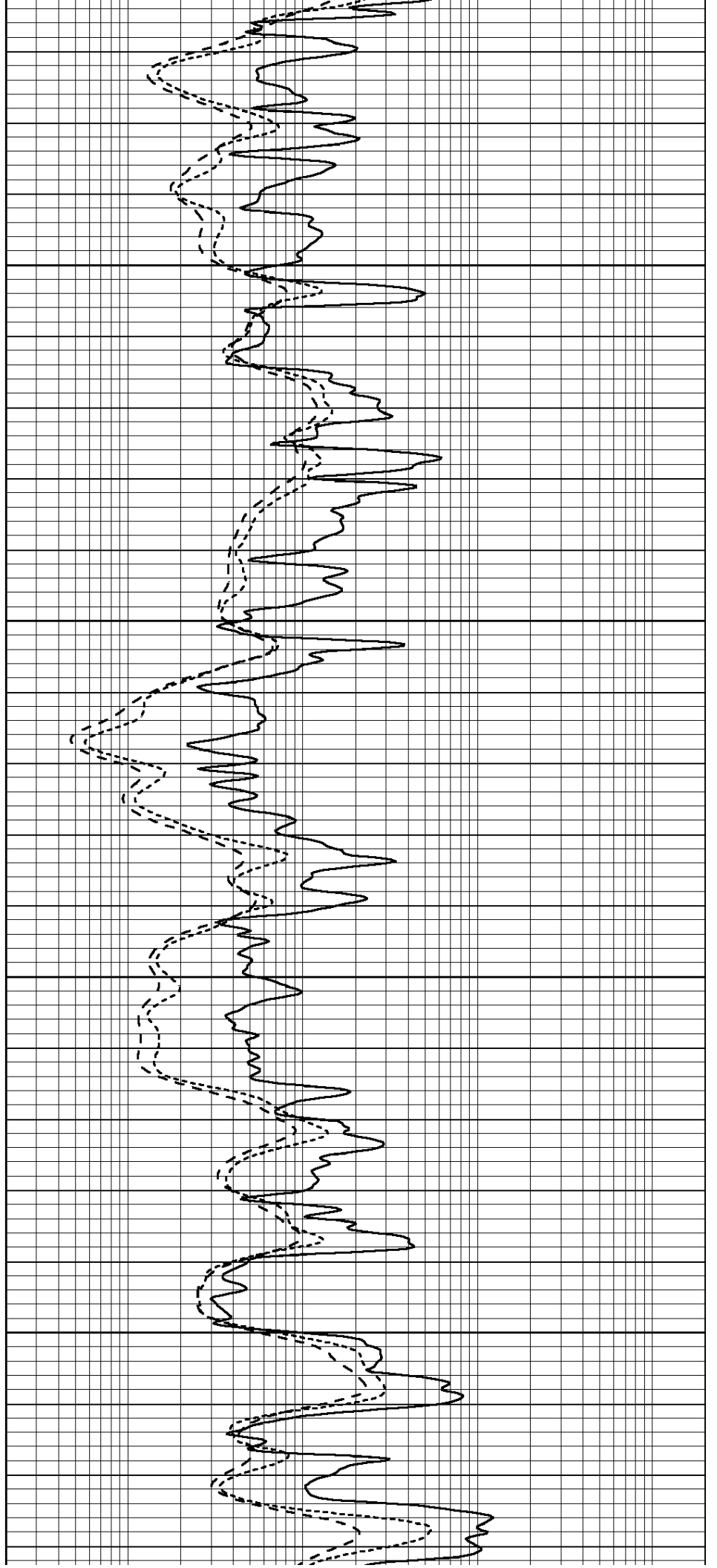


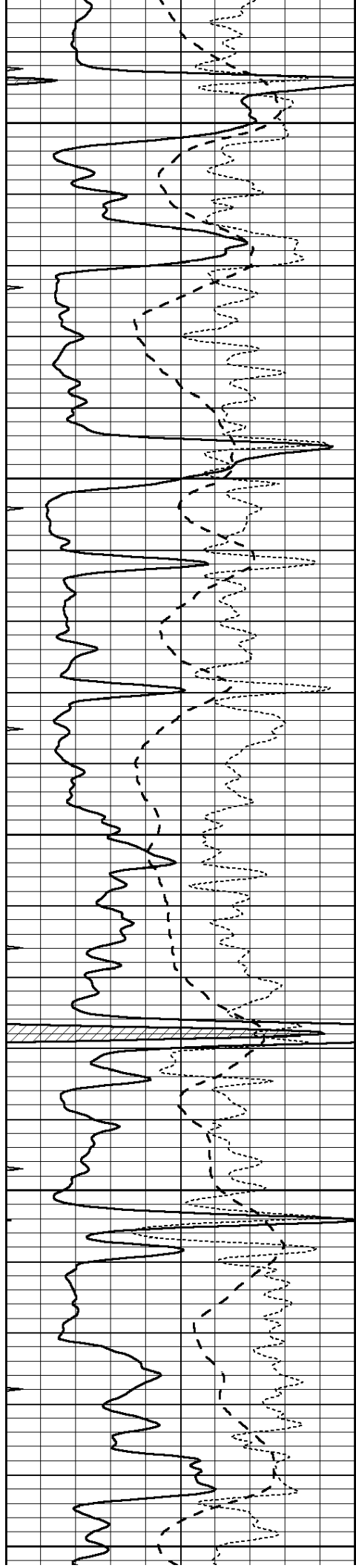
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3650

3700

3750





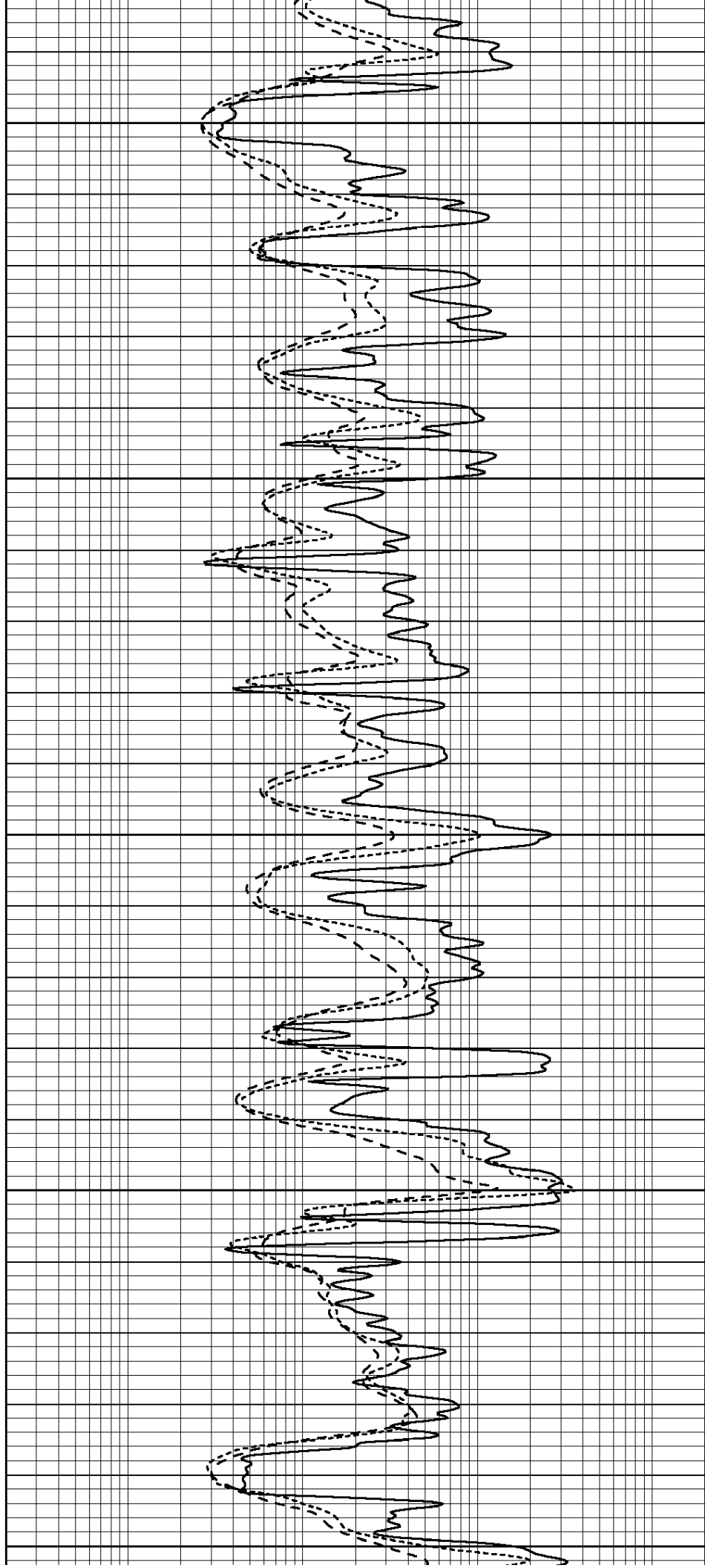
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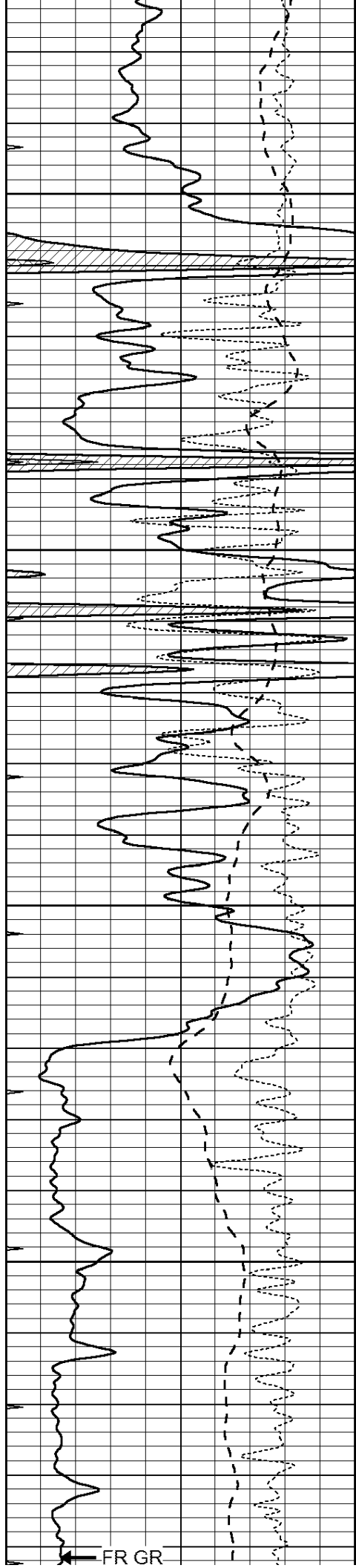
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3900

3950

4000





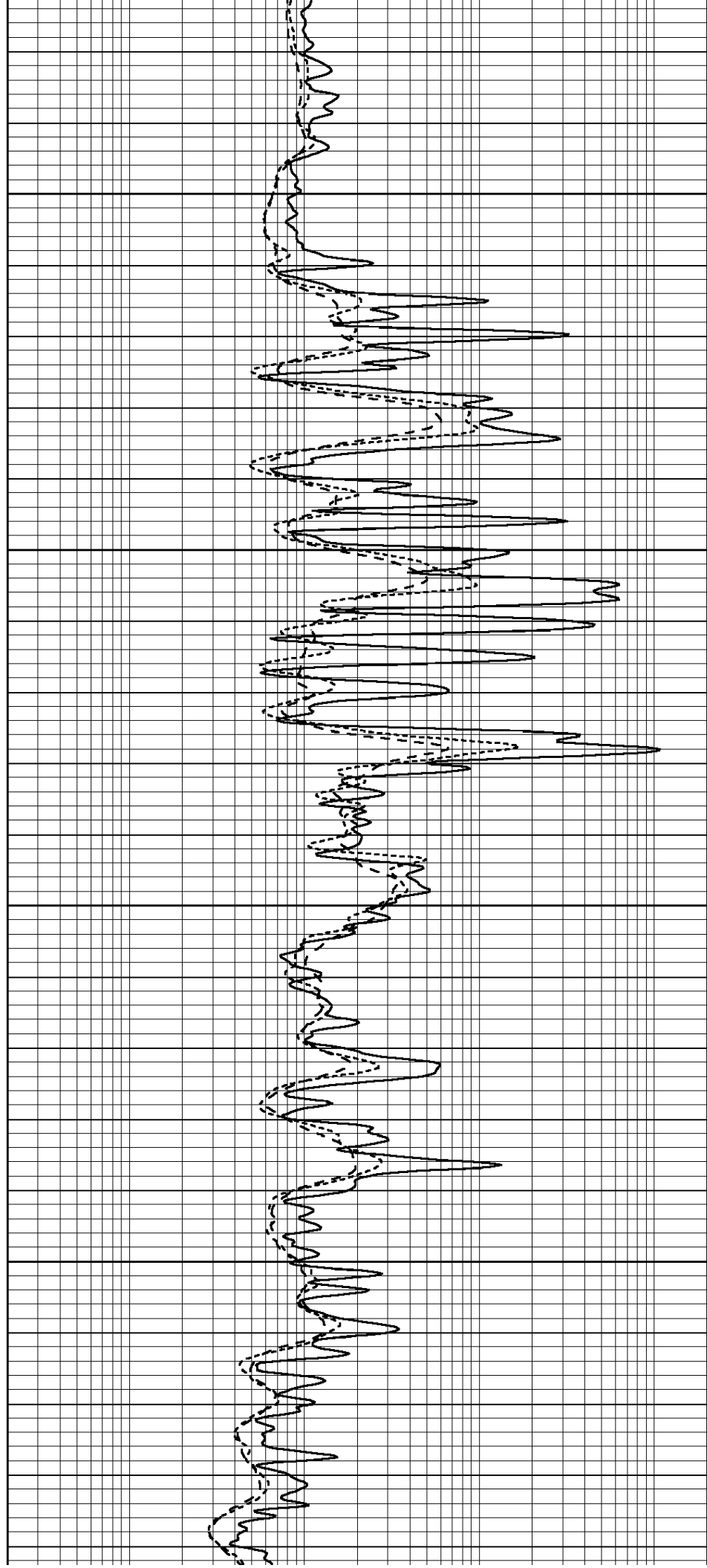
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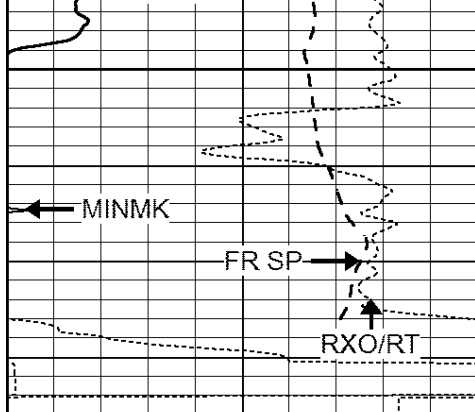
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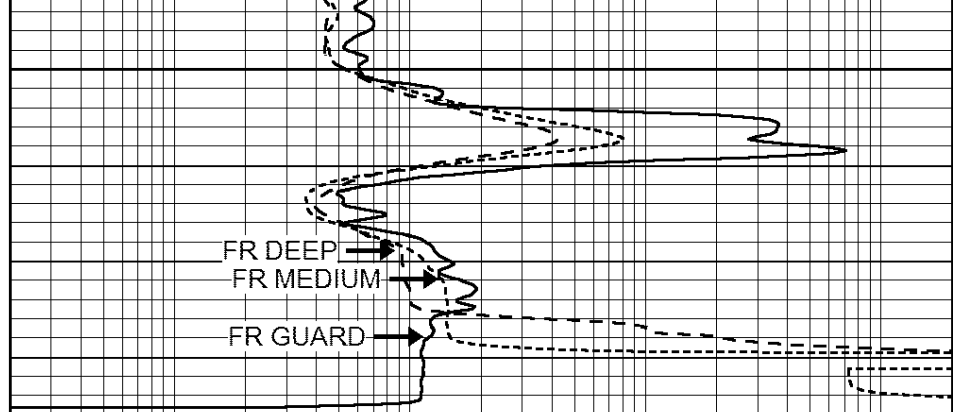
FR GR





4450
LTD 4480

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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



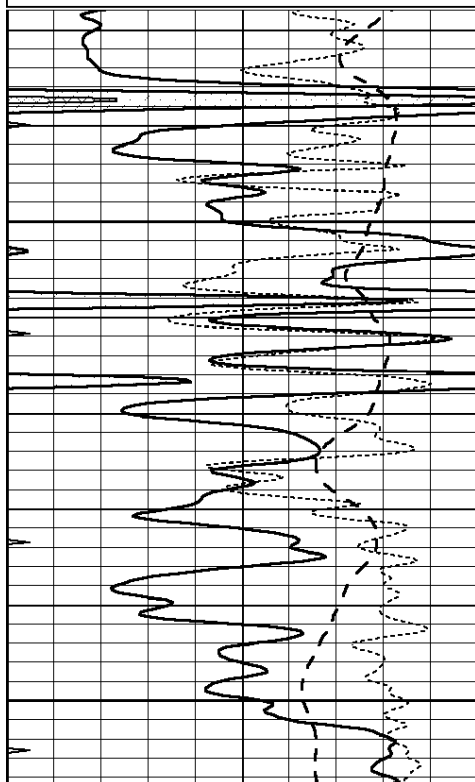
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REPEAT SECTION

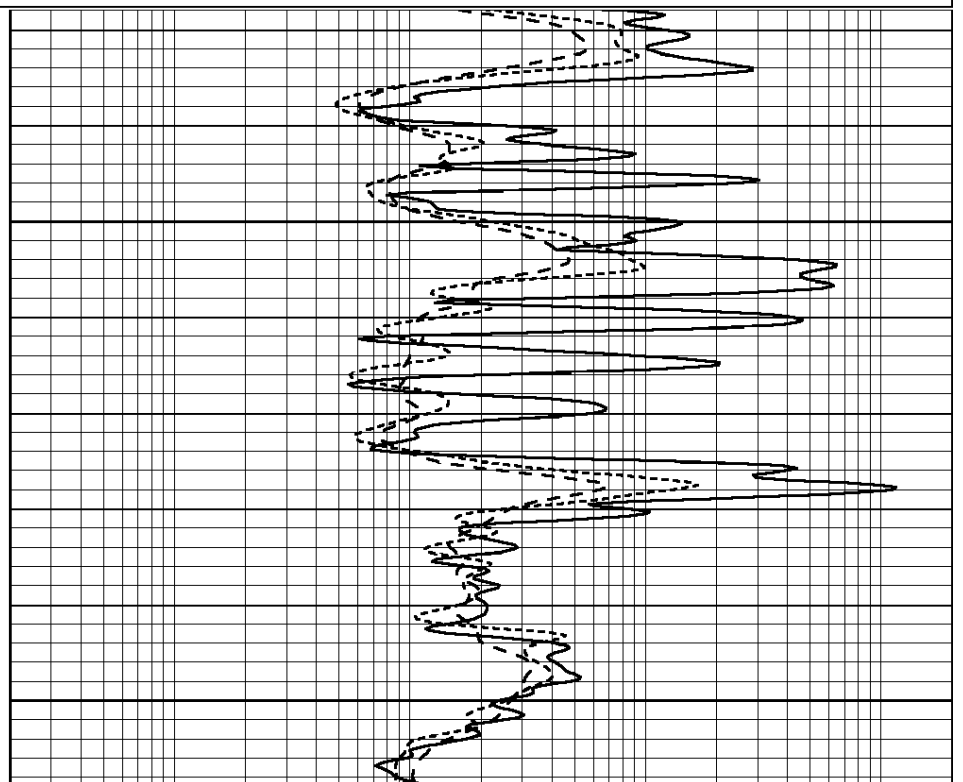
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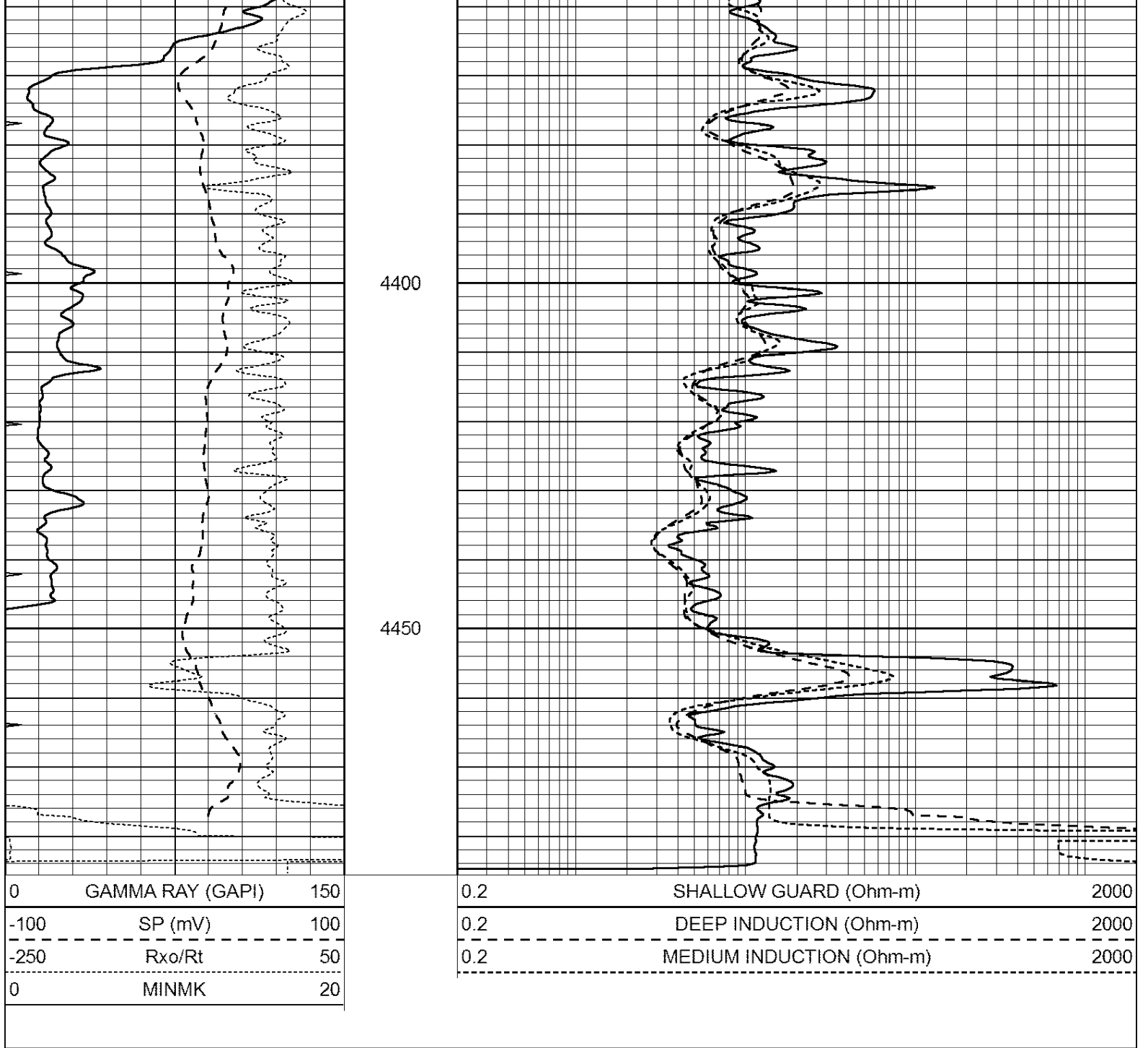
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



4300
4350





Calibration Report

Database File: 409130pe.db
 Dataset Pathname: pass3.3
 Dataset Creation: Wed May 30 16:10:31 2012 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Wed May 30 15:24:33 2012

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-9.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.045	V	0.000	400.000	mmho/m	600.000	1.074

Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report
 Serial: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper	Readings	Reference	
Low Ref	4.0	8.4	
High Ref	5.9	15.0	
	Gain: 3.4		Offset: -5.2

Compensated Neutron Calibration Report

Serial Number: 070808
 Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	070559
Tool Model:	OPEN_GR
Performed:	Tue May 22 19:38:45 2012
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	1.0 cps
Sensitivity:	0.3000 GAPI/cps