



SUPERIOR
Hays,
Kansas

**DUAL
INDUCTION
LOG**

Company MAI OIL OPERATIONS INC.
Well LICHTER-LINDSEY UNIT #1
Field REIMER
County BARTON
State KANSAS

Company MAI OIL OPERATIONS, INC.
Well LICHTER-LINDSEY UNIT #1
Field REIMER
County BARTON State KANSAS

Location: API # : 15-009-25592-0000
2500' FSL & 2100' FWL
NW - NE - NE - SW
SEC 25 TWP 17S RGE 15W
Permanent Datum GROUND LEVEL Elevation 1987
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL
MEL
Elevation
K.B. 1995
D.F. 1993
G.L. 1987

Date	8/12/11		
Run Number	ONE		
Depth Driller	3625		
Depth Logger	3624		
Bottom Logged Interval	3622		
Top Log Interval	0		
Casing Driller	8 5/8"@939'		
Casing Logger	939'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7000 PPM	
Density / Viscosity	9.1/48		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.650@90F		
Rmt @ Meas. Temp	.488@90F		
Rmc @ Meas. Temp	.780@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.518@113F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONWEG		
Witnessed By	STEVE MURPHY		

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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.

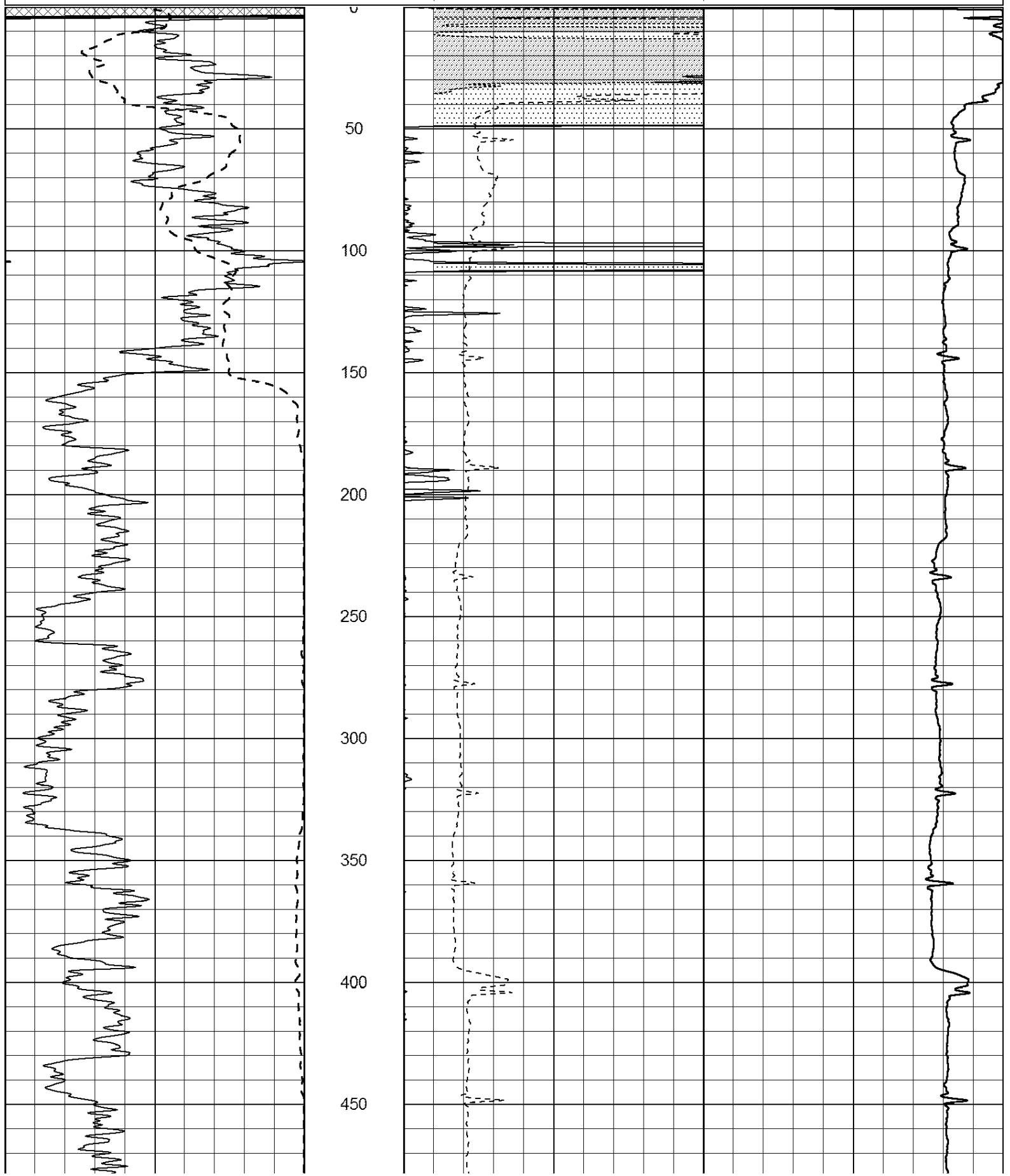
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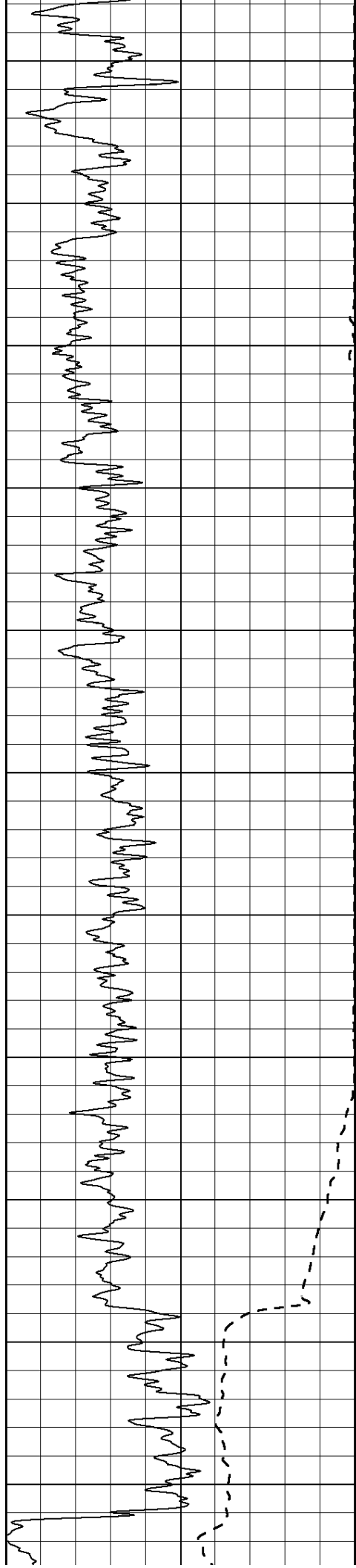
THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
INTERSECTION OF HWY 4 & OLMITZ BLACKTOP - 1/4 MILE NORTH
EAST & NORTH INTO

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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

0





500

550

600

650

700

750

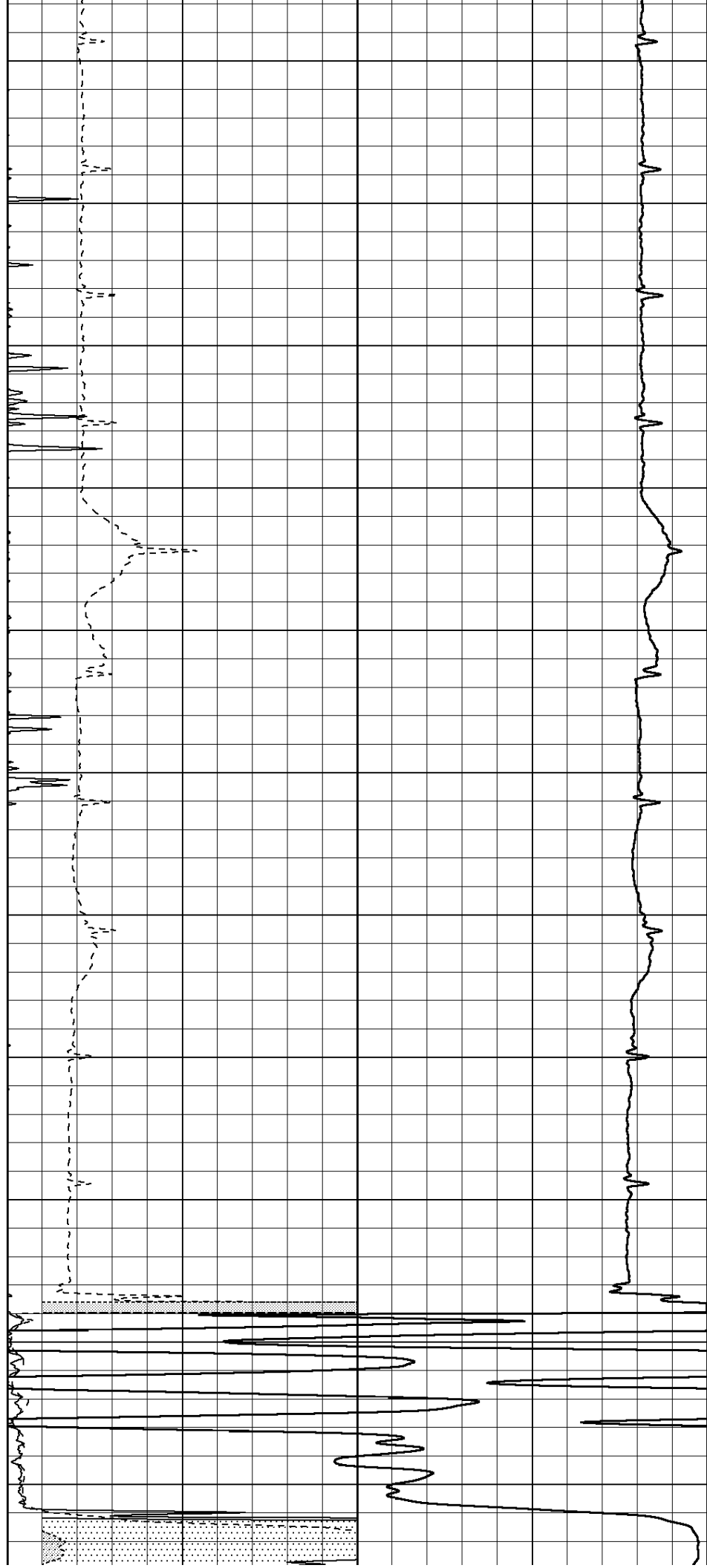
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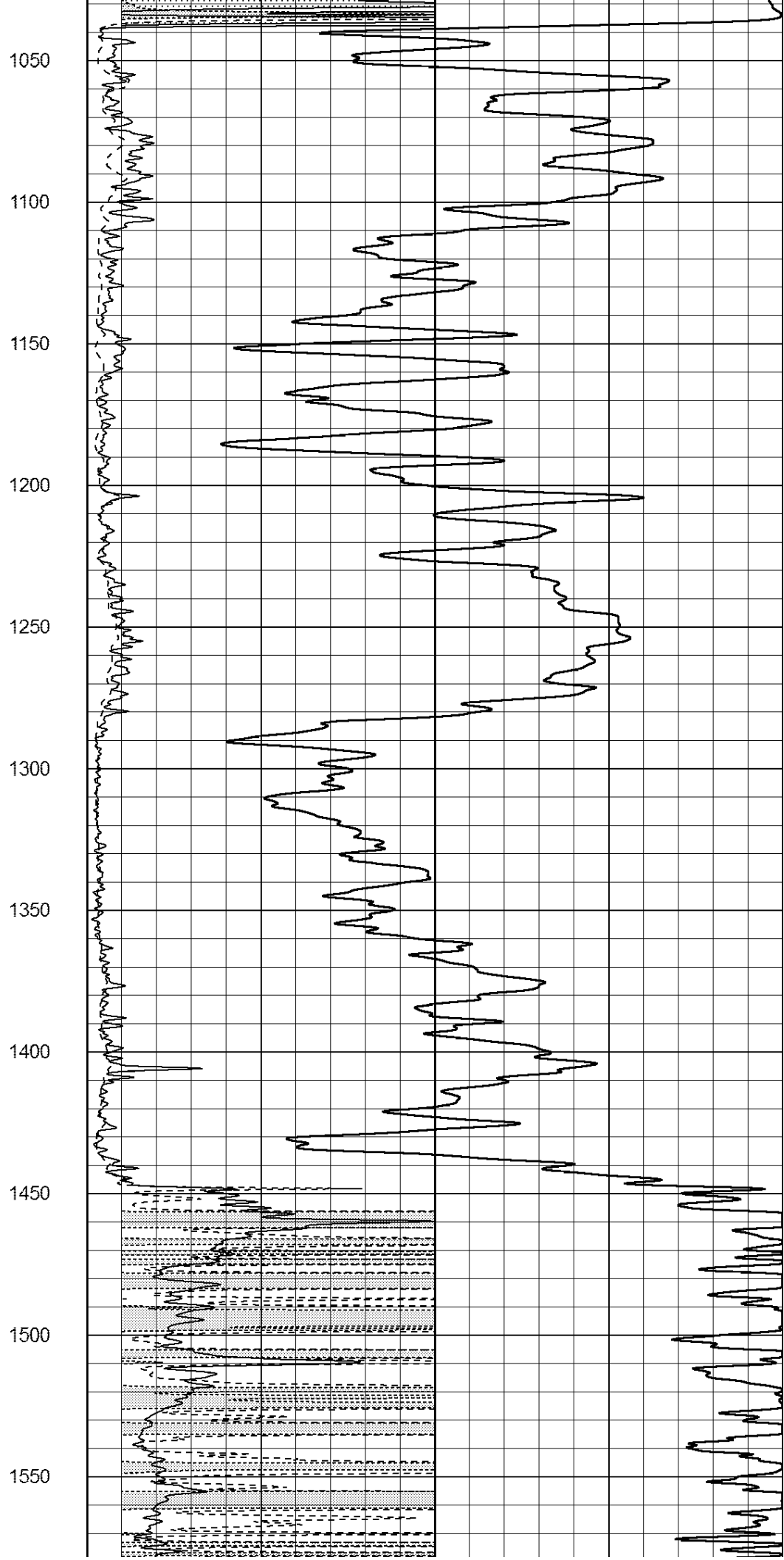
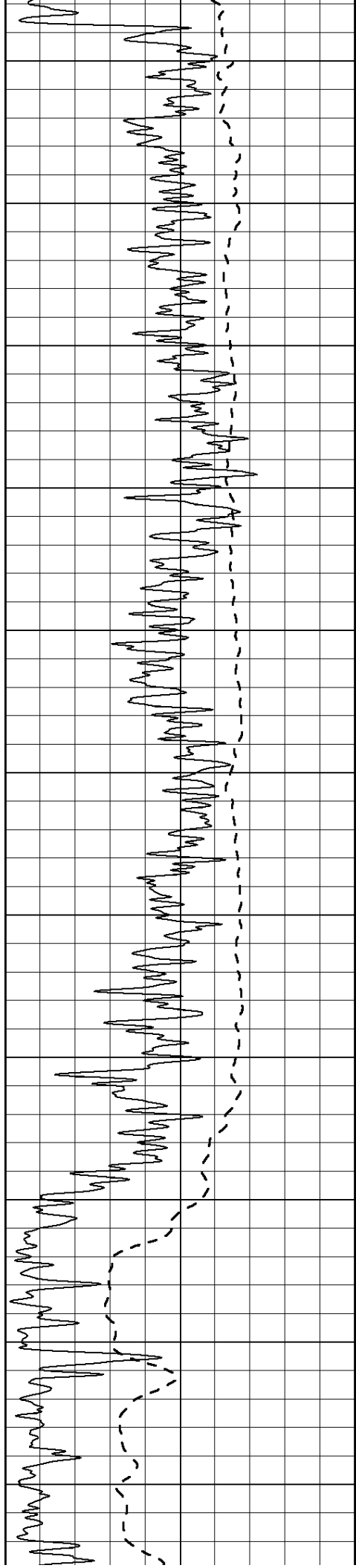
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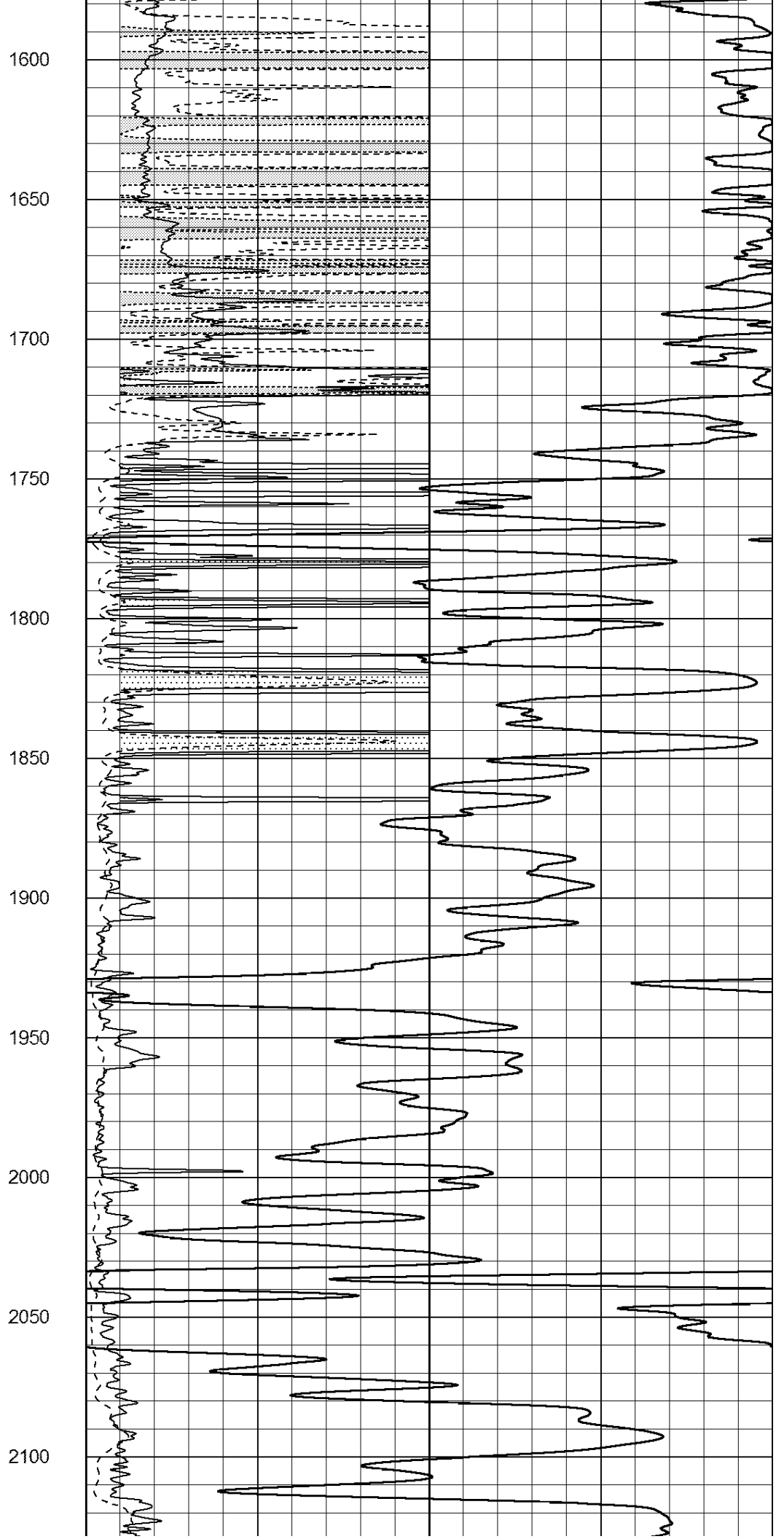
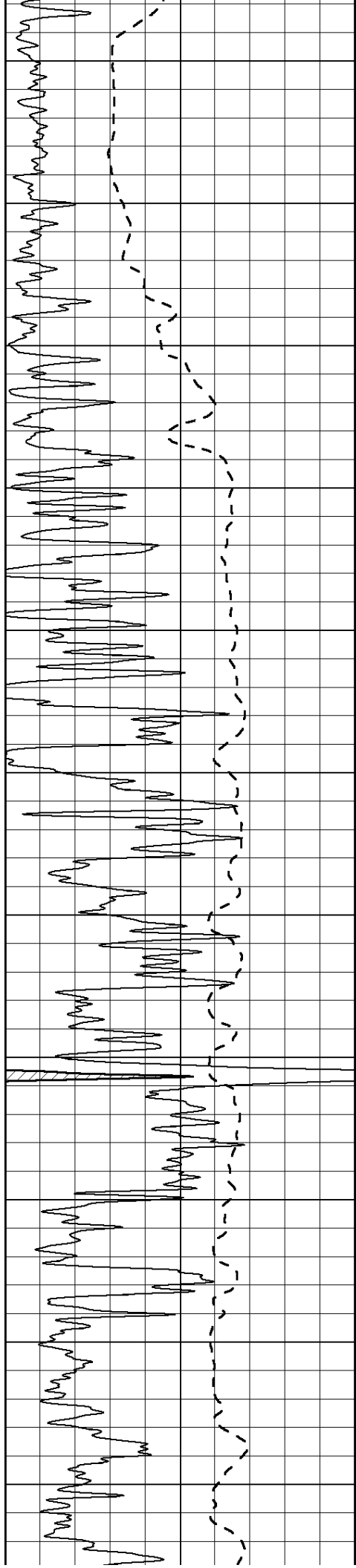
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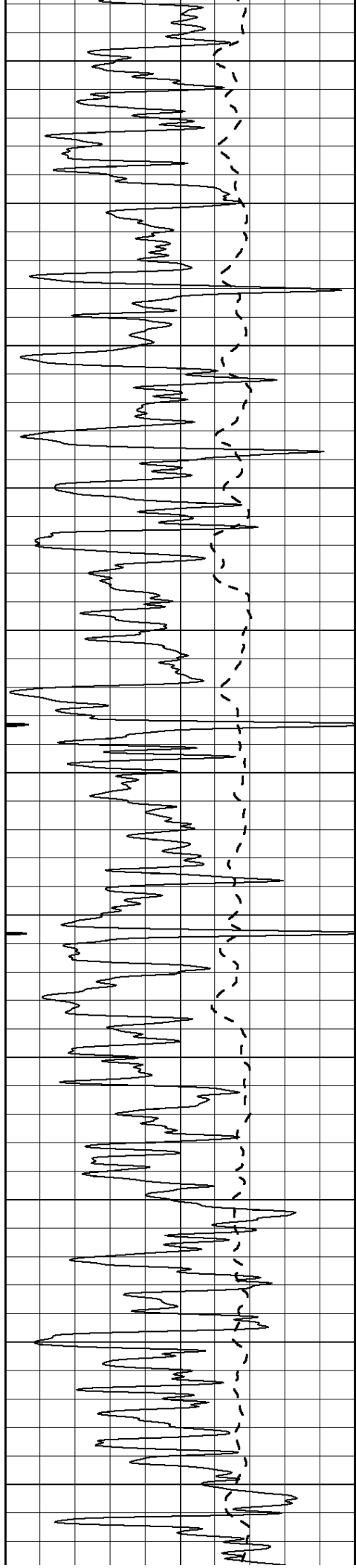
950

1000









2150

2200

2250

2300

2350

2400

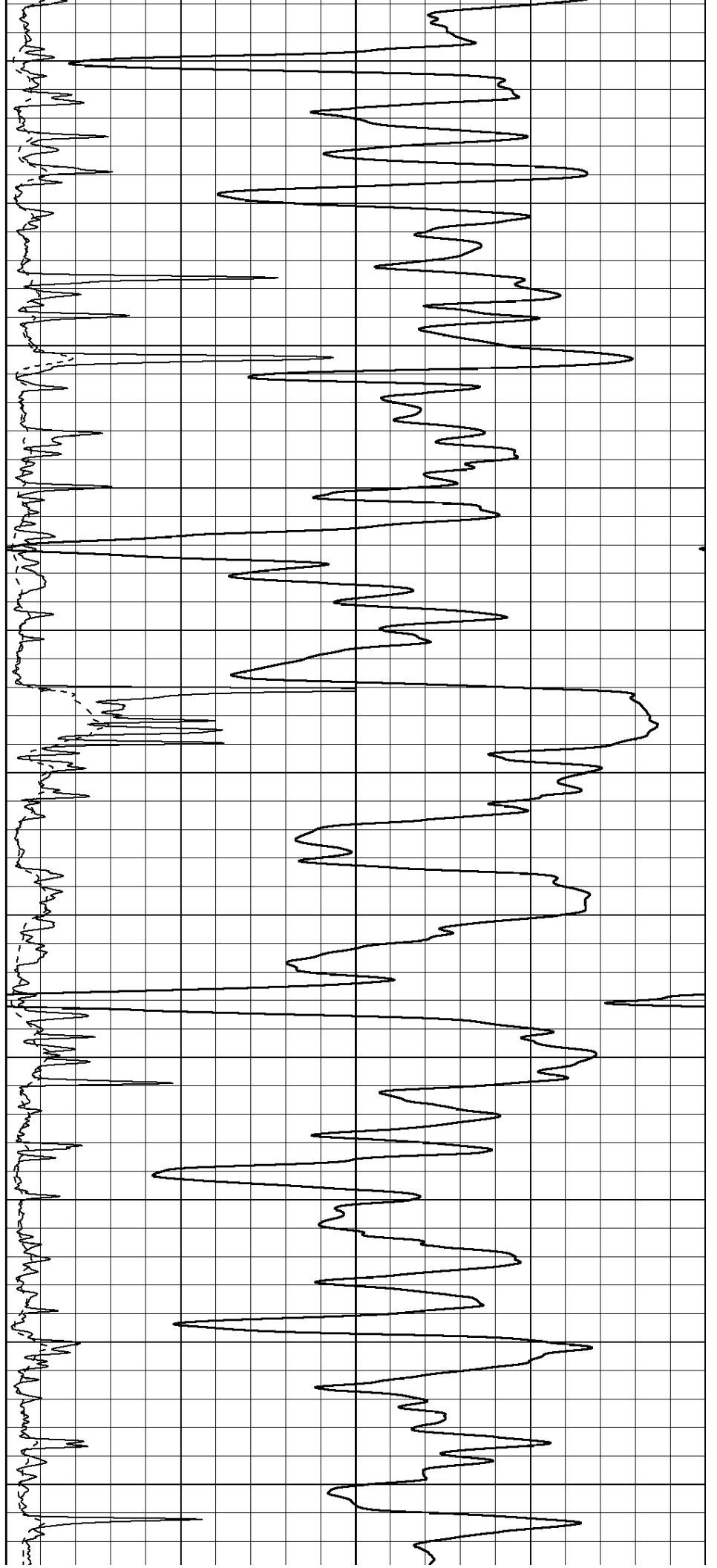
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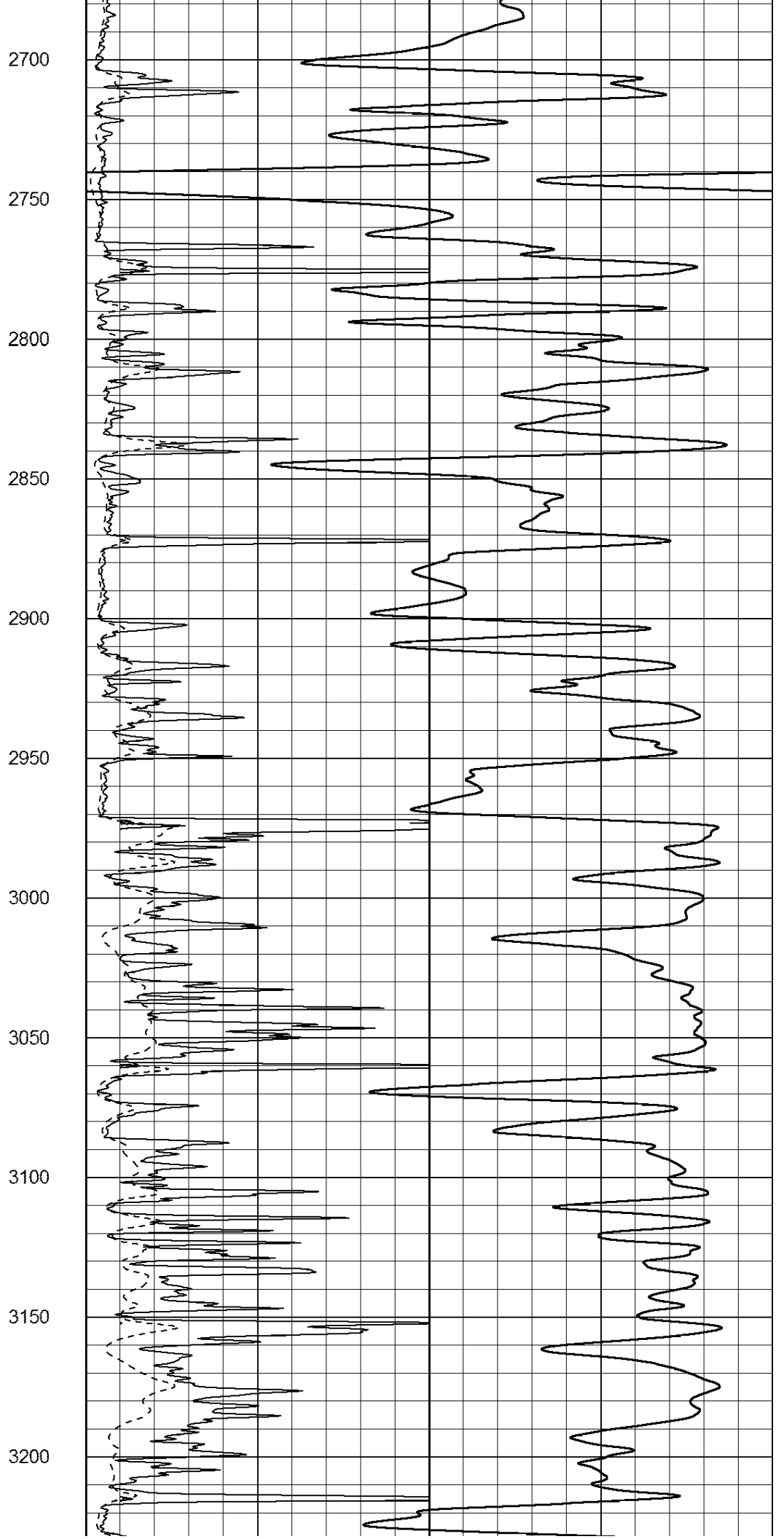
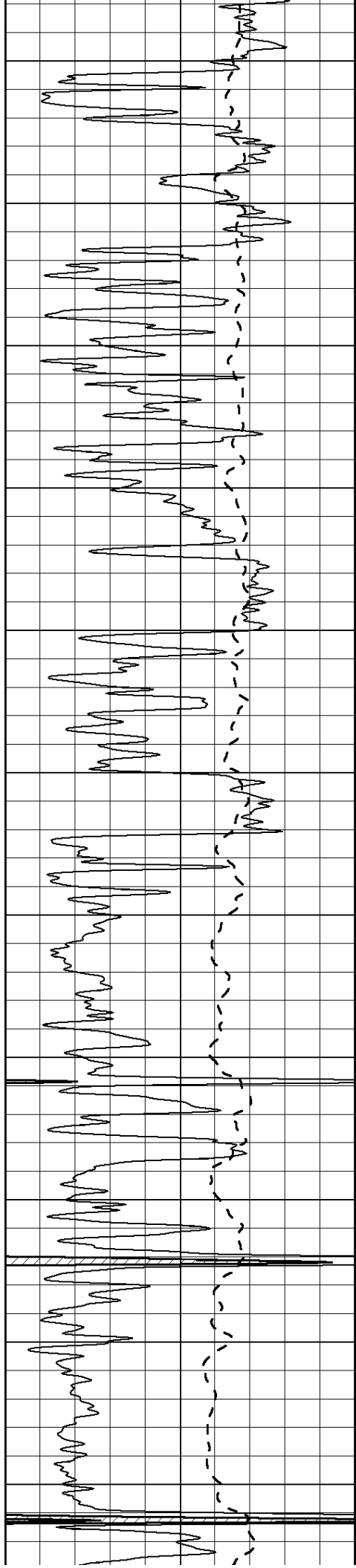
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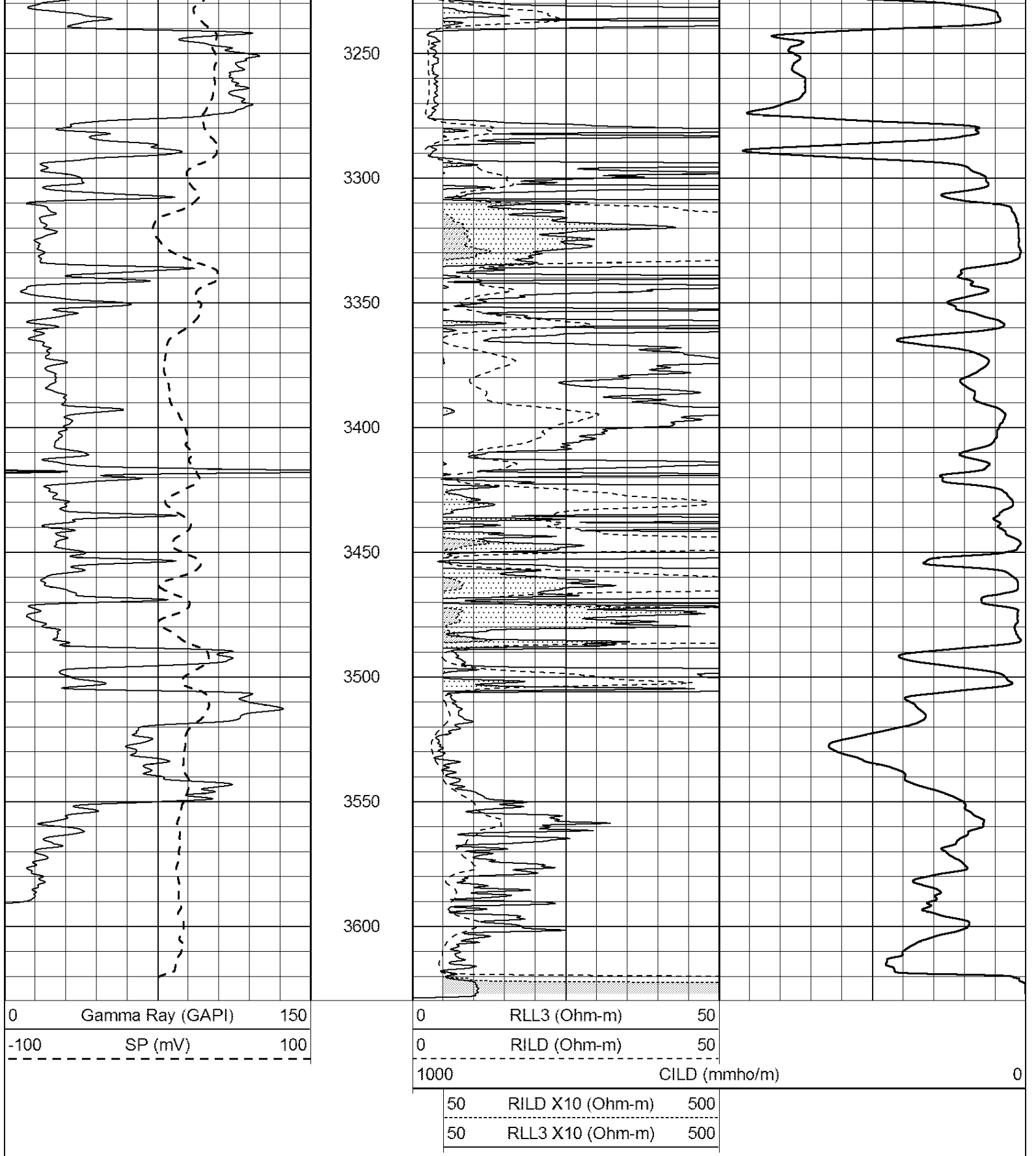
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2600

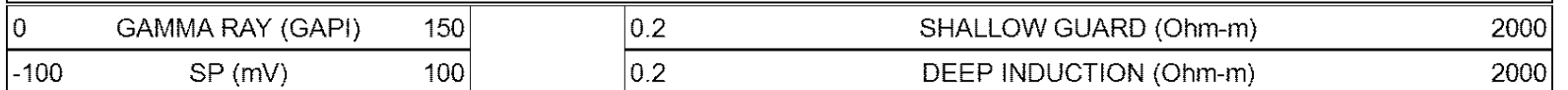
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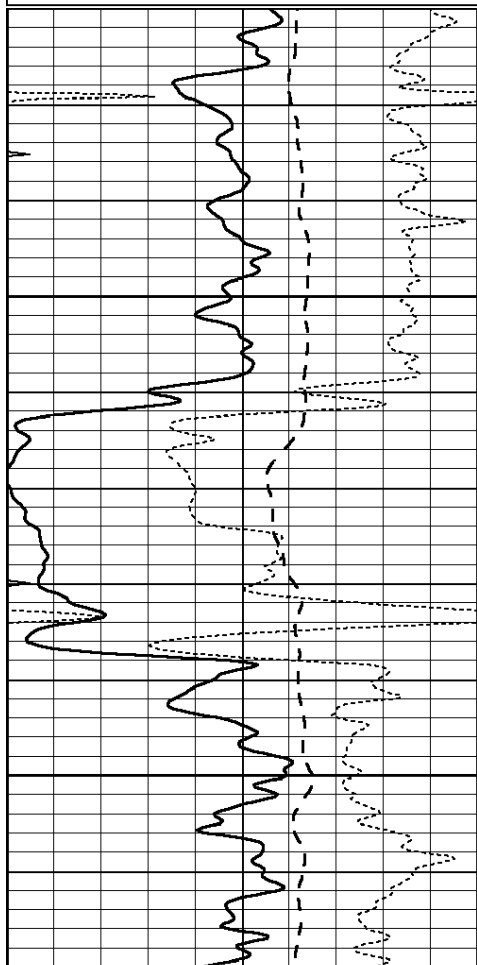


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 Dataset Pathname: pass3.2
 Presentation Format: dil
 Dataset Creation: Fri Aug 12 10:37:54 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240



-250	Rxo/Rt	50
0	MINMK	20

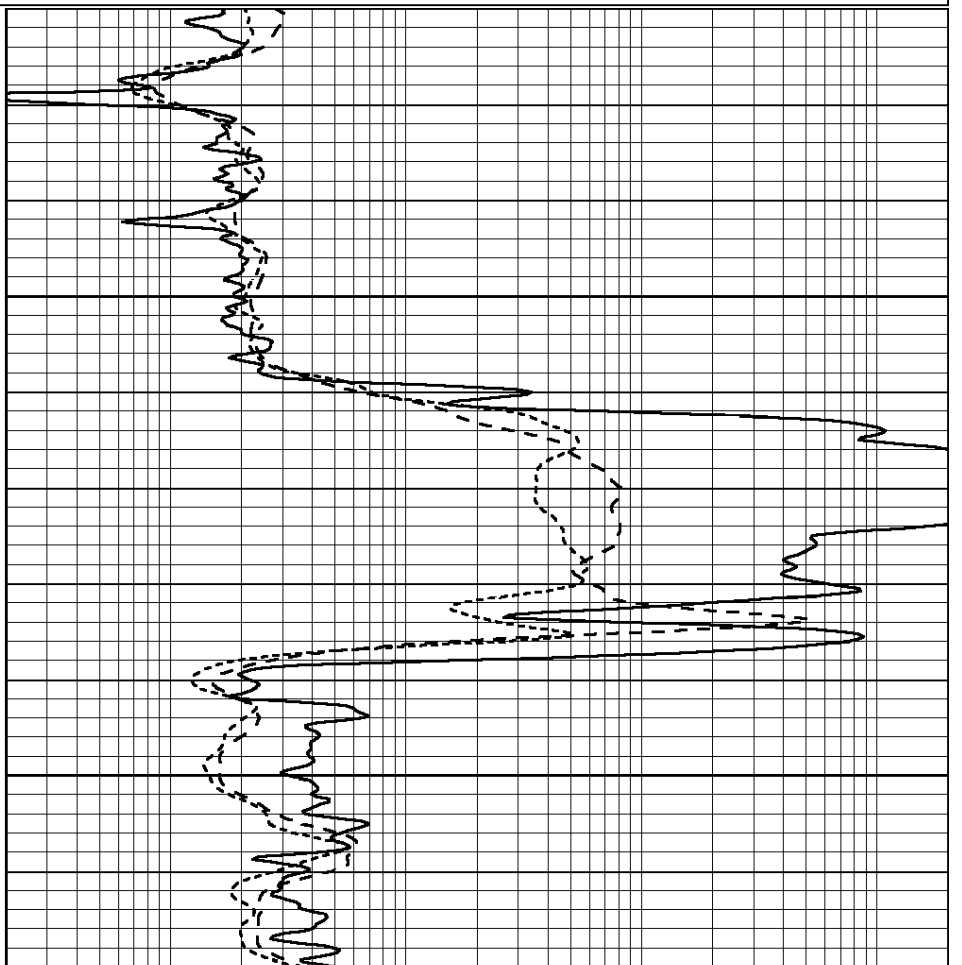
0.2	MEDIUM INDUCTION (Ohm-m)	2000
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1000

1050

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

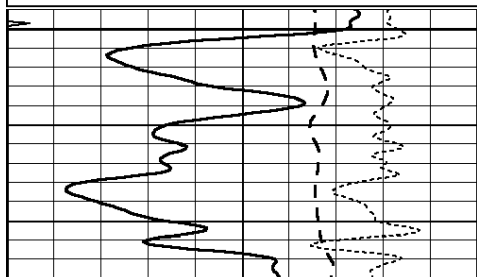


0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

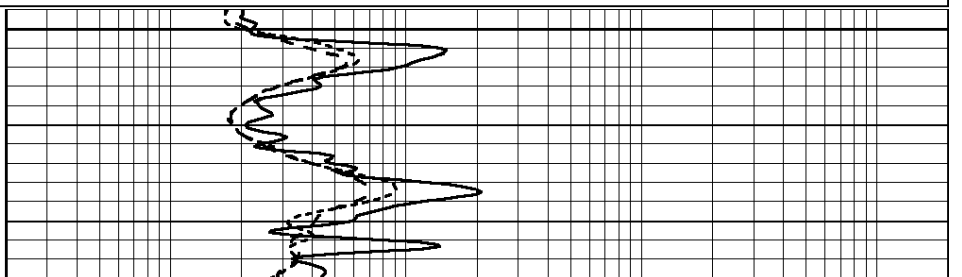
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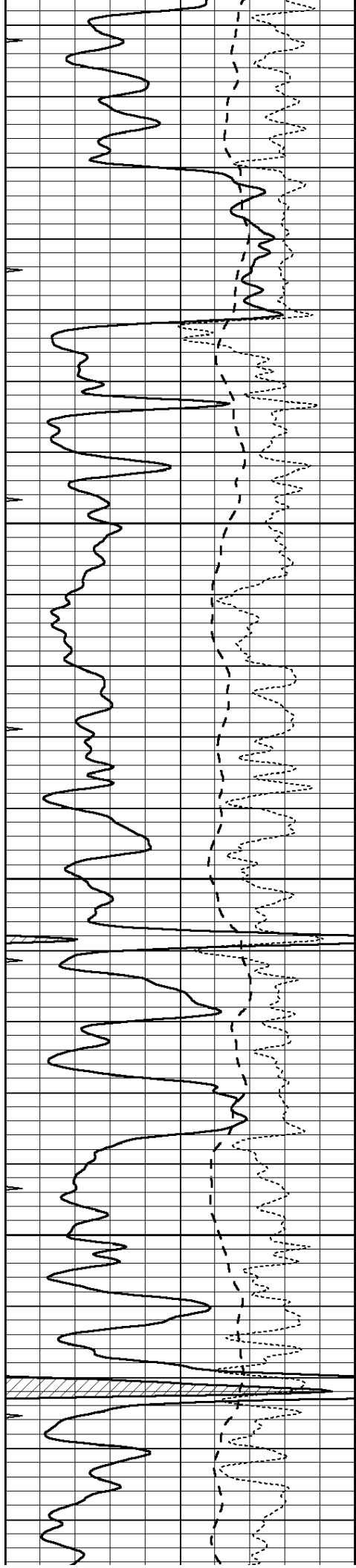
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



2900



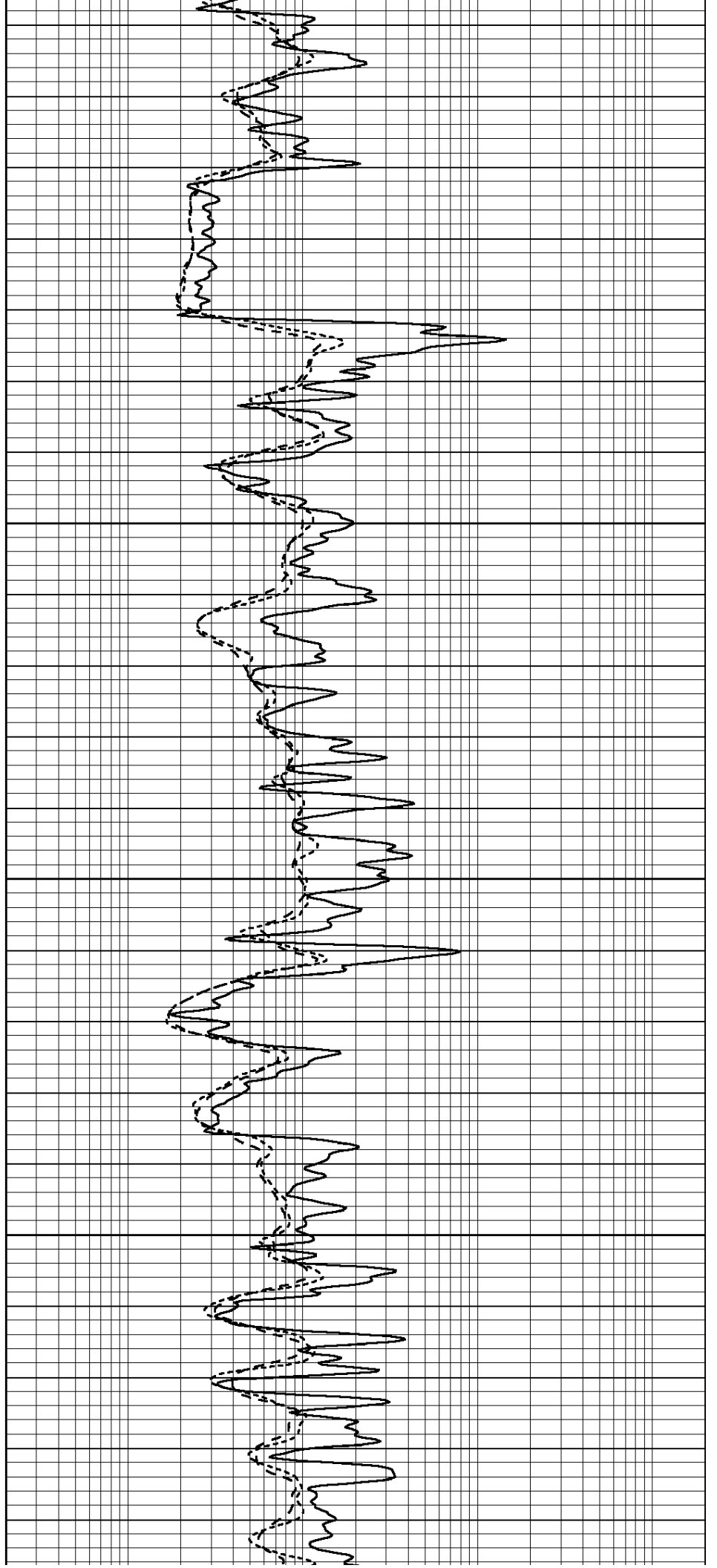


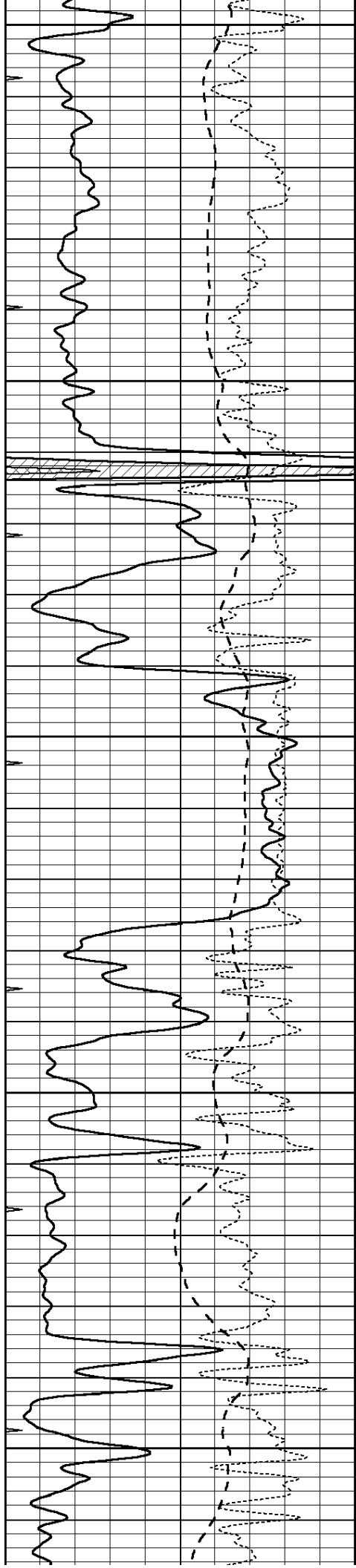
2950

3000

3050

3100





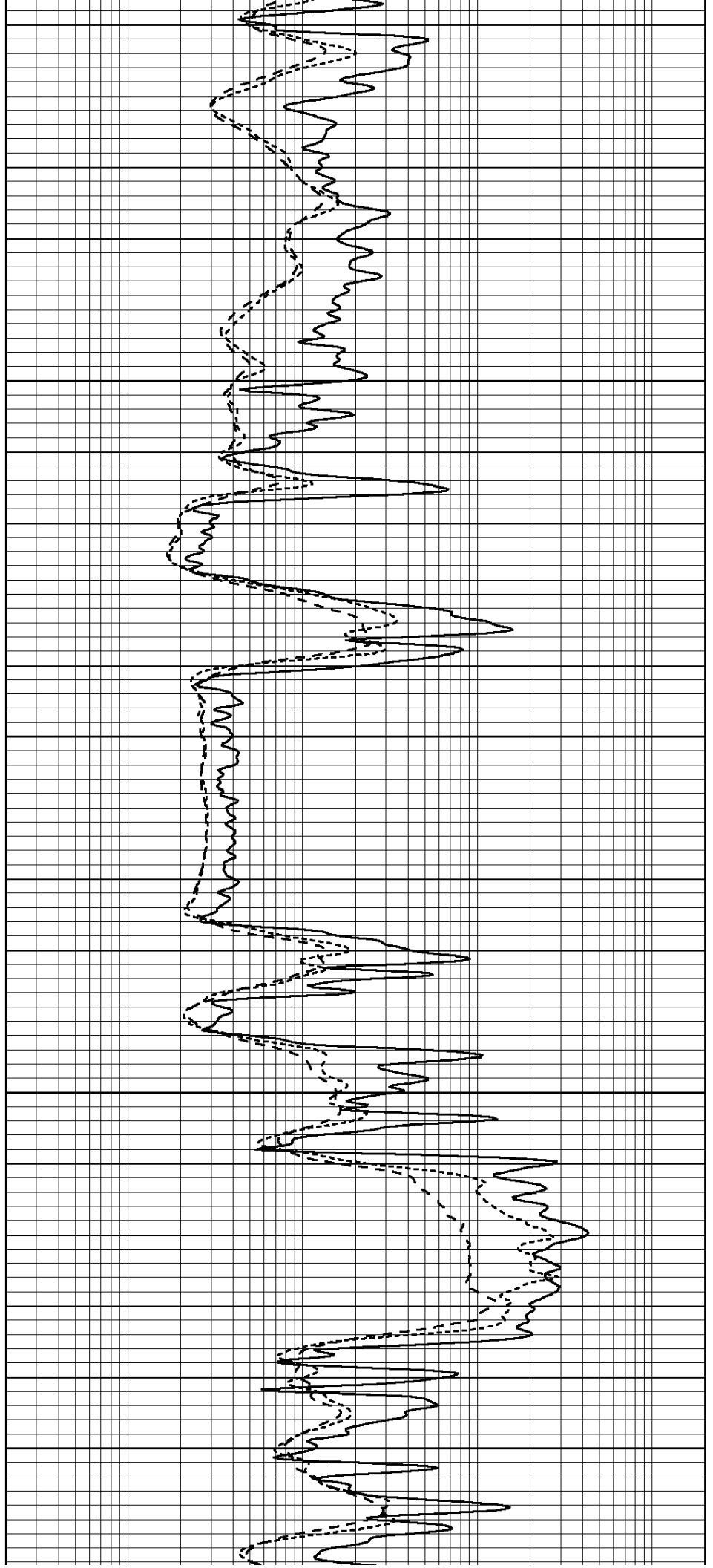
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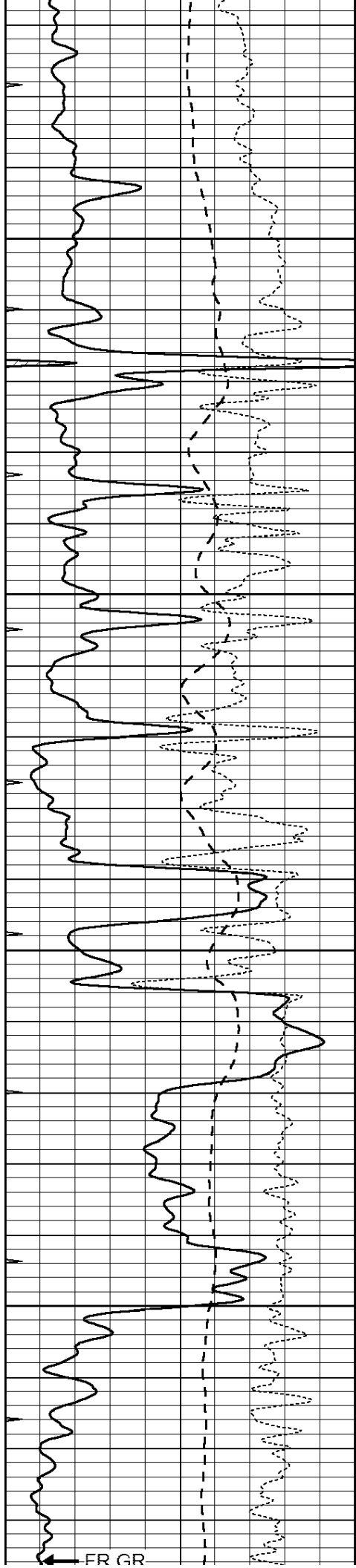
3200

3250

3300

3350





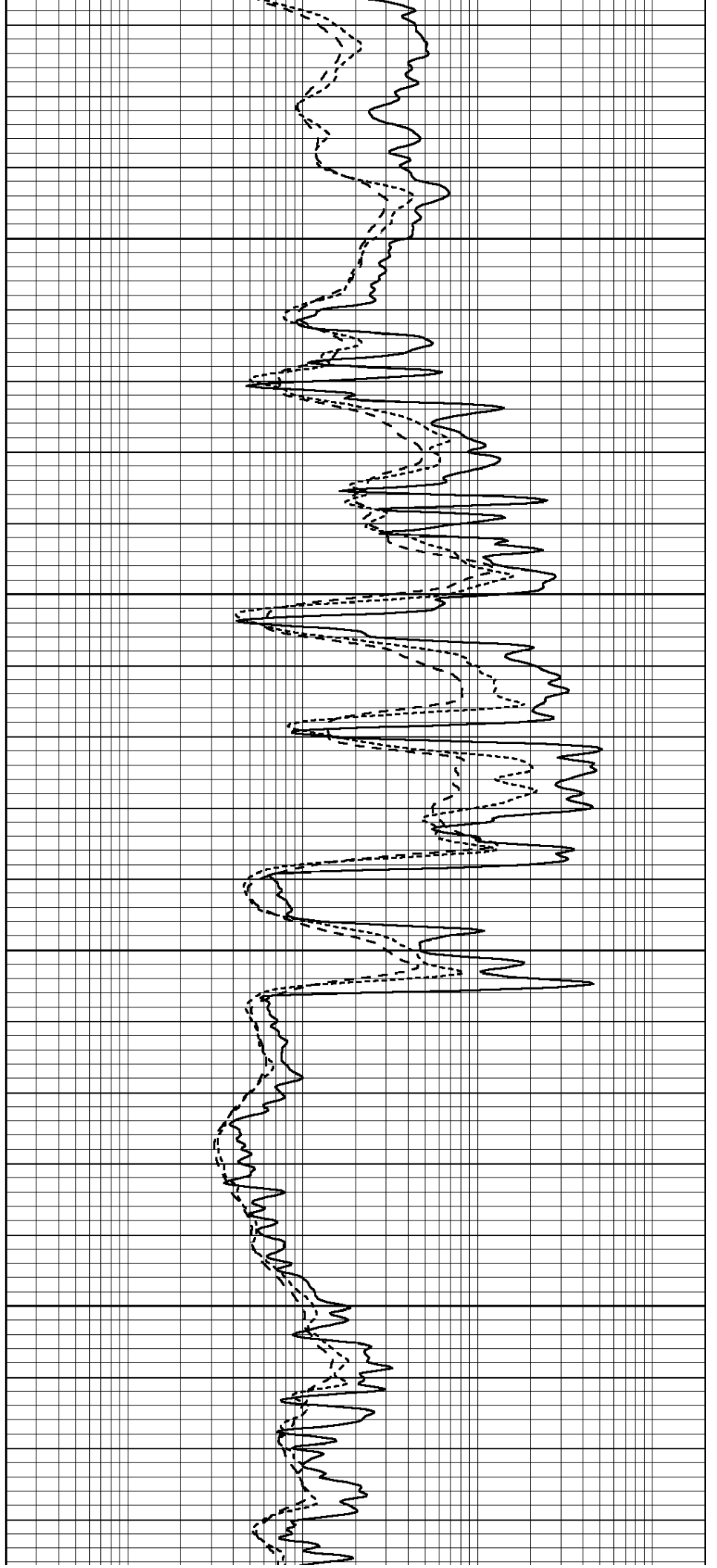
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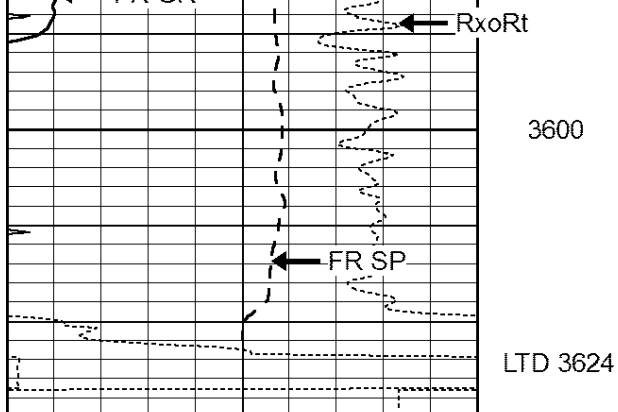
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3500

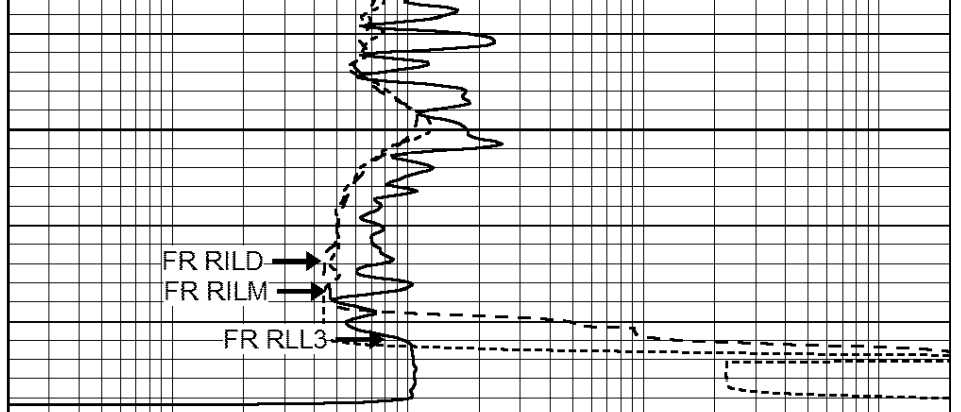
3550

FR GR





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



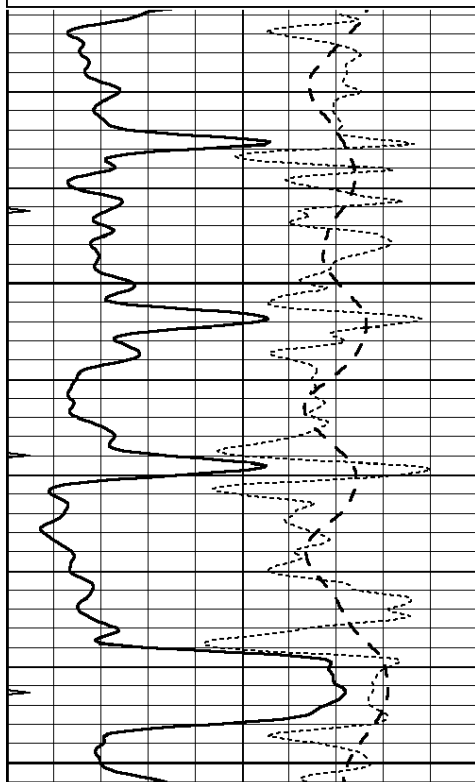
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 007280ddn.db
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 Charted by: Depth in Feet scaled 1:240

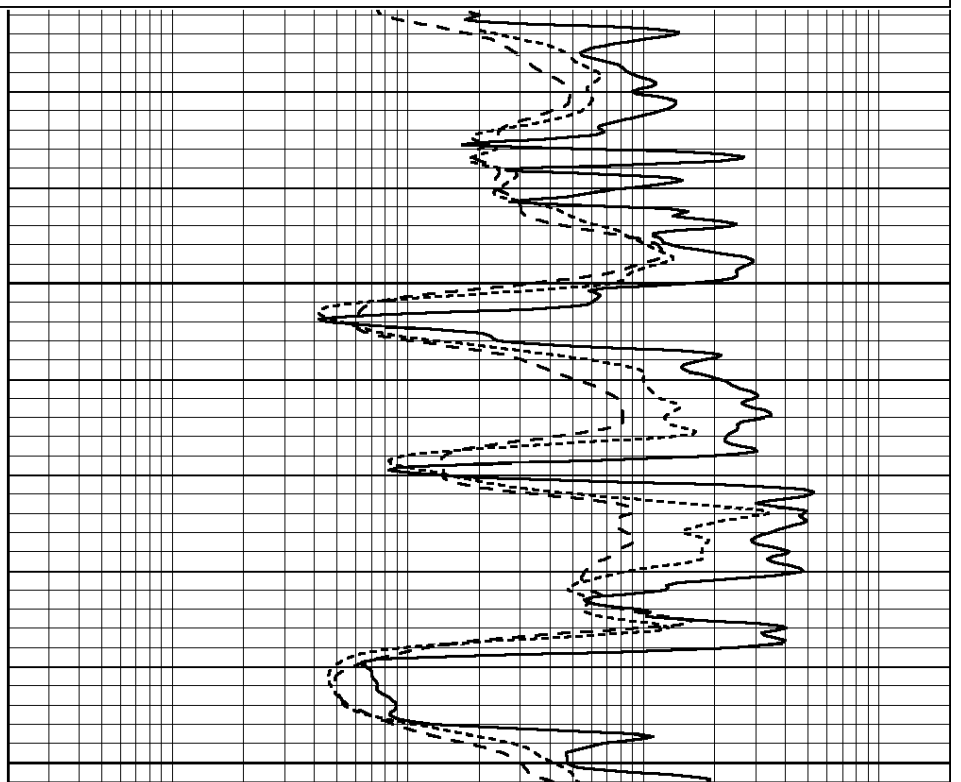
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

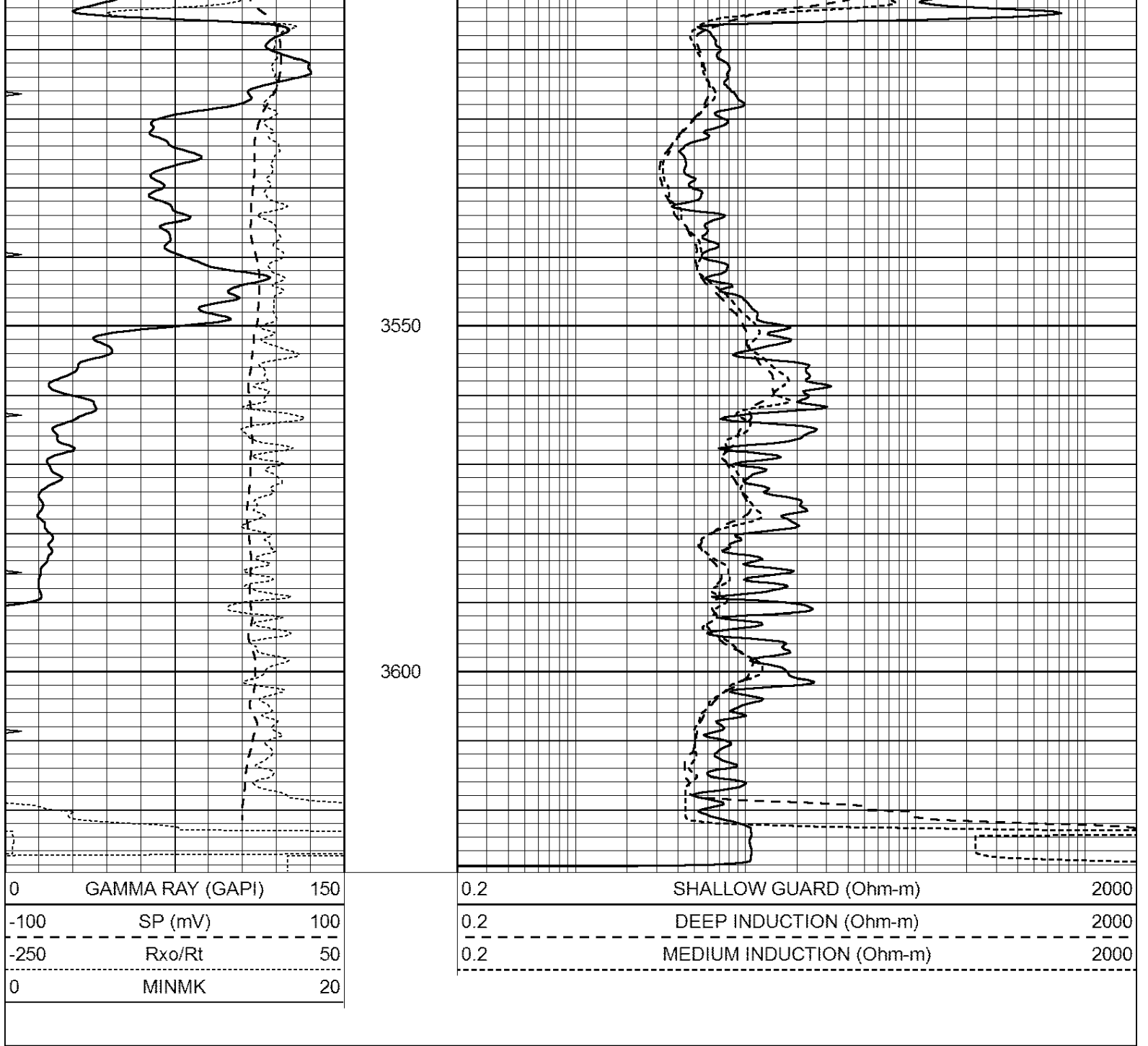
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3450

3500





Calibration Report

Database File: 007280ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Fri Aug 12 10:37:54 2011 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Wed Aug 10 18:50:36 2011

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	8.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-5.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.050	1.074

Deep	0.002	0.043	V	0.000	400.000	mmho/m	622.039	-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	4.4	8.0	
High Ref	6.5	15.0	
	Gain: 3.2		Offset: -5.9

Compensated Neutron Calibration Report

Serial Number: NEU_11
 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:	GR1
Tool Model:	OPEN
Performed:	Wed Aug 10 18:50:10 2011
Calibrator Value:	200.0 GAPI
Background Reading:	3.0 cps
Calibrator Reading:	186.0 cps
Sensitivity:	0.2500 GAPI/cps