

DUAL INDUCTION LOG

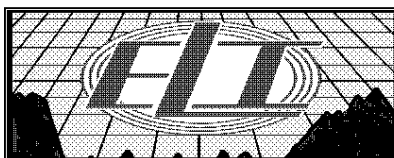
Company	MULL DRILLING COMPANY, INC.	Company	MULL DRILLING COMPANY, INC.
Well	#1-29 COBERLY-BEOUGHER UNIT	Well	#1-29 COBERLY-BEOUGHER UNIT
Field	WILDCAT	Field	WILDCAT
County	GOVE	County	GOVE
State	KANSAS	State	KANSAS
Location:	API # : 15-063-22340-0000 2195' FNL & 3' FWL NW - SW - SW - NW	Permanent Datum Log Measured From Drilling Measured From	GROUND LEVEL KELLY BUSHING 8' A.G.L. KELLY BUSHING
	SEC 29 TWP 13S RGE 27W	Elevation	2675 K.B. 2683 D.F. 2681 G.L. 2675
Date	10/17/18	Run Number	ONE
Depth Driller	4525	Depth Logger	4515
Bottom Logged Interval	4513	Top Log Interval	00
Casing Driller	8 5/8"@221'	Casing Logger	221
Bit Size	7 7/8"	Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.0/55	CHLORIDES 900 PPM	
pH / Fluid Loss	10.5/6.0	FLOWLINE	
Source of Sample	1.60@65F	Rim @ Meas. Temp	1.20@65F
Rim @ Meas. Temp	1.92@65F	Rimc @ Meas. Temp	MEASUREMENT
Source of Rimf / Rimc	.860@121F	Rim @ BHT	2.5 HOURS
Time Circulation Stopped	11:30 A.M.	Time Logger on Bottom	121F
Maximum Recorded Temperature	922339	Equipment Number	HAYS, KANSAS
Location		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 ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
PARK, KS. & I-70 EXIT, 14S., 1 E.



MAIN SECTION

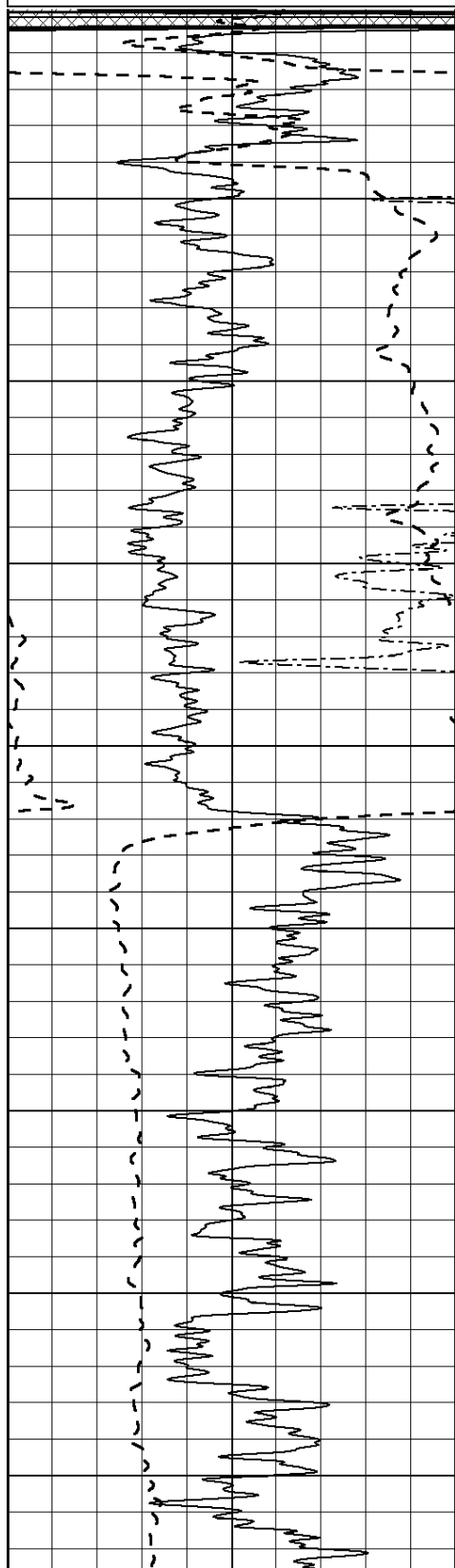
Database File: 2945pe.db
Dataset Pathname: pass4.4
Presentation Format: dil2
Dataset Creation: Wed Oct 17 12:42:49 2018 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

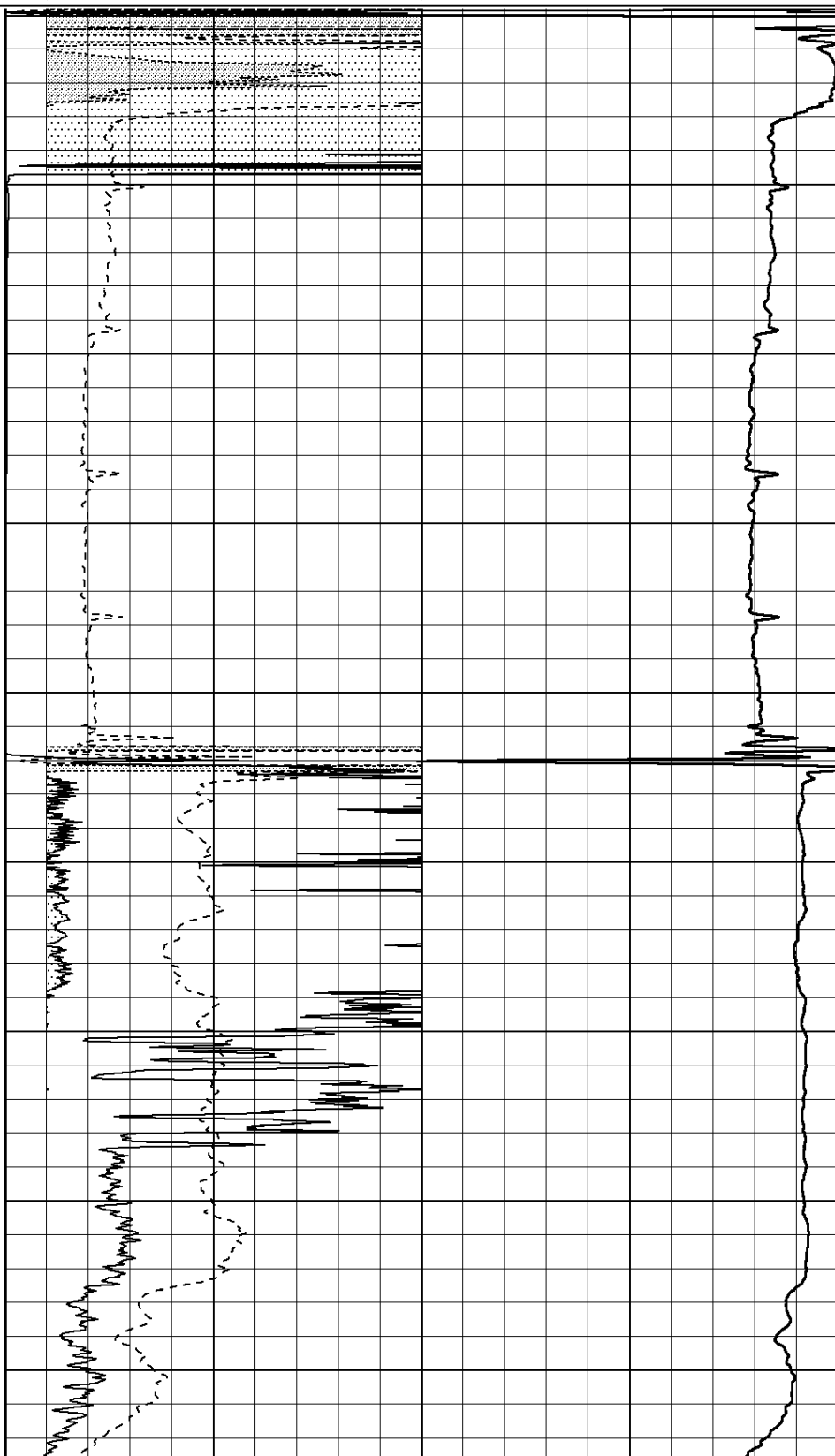
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

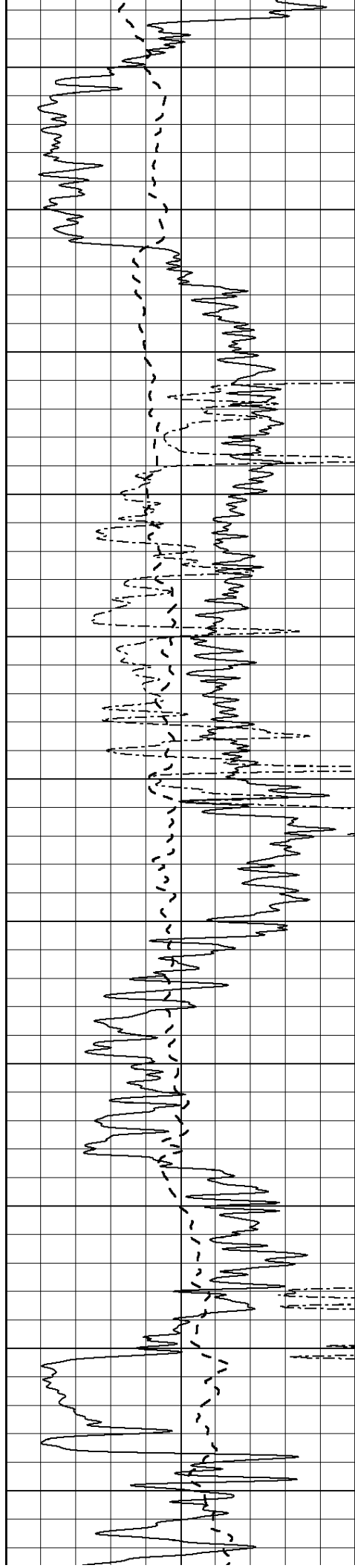
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

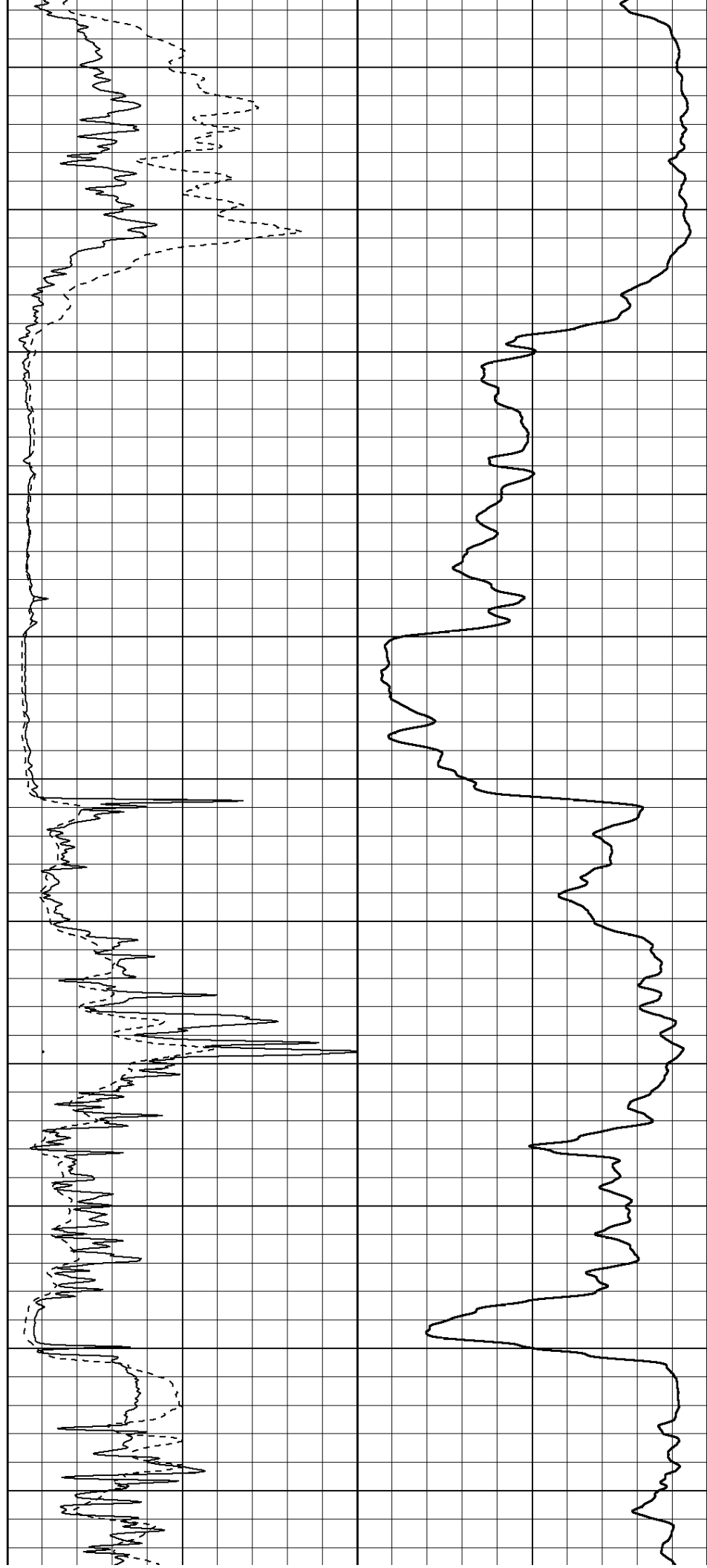
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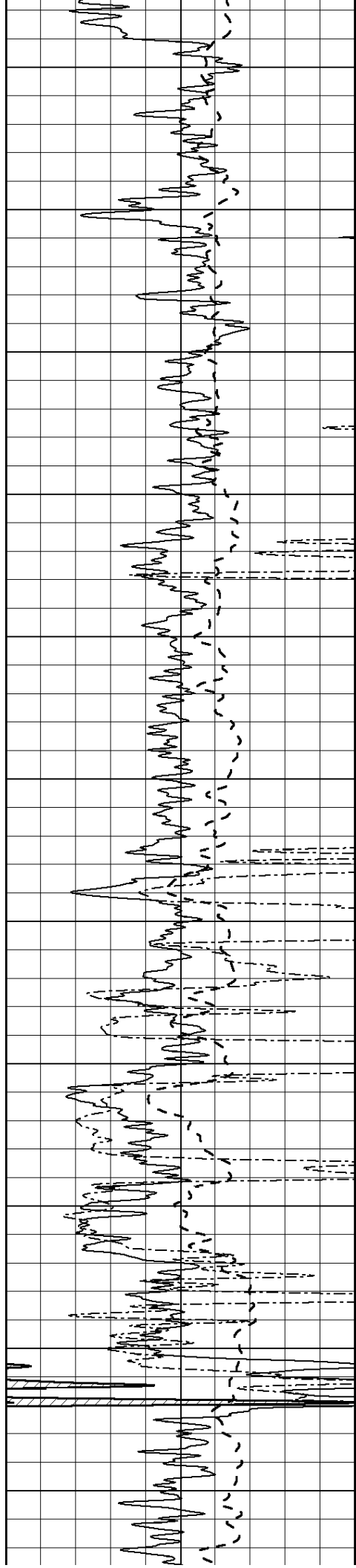
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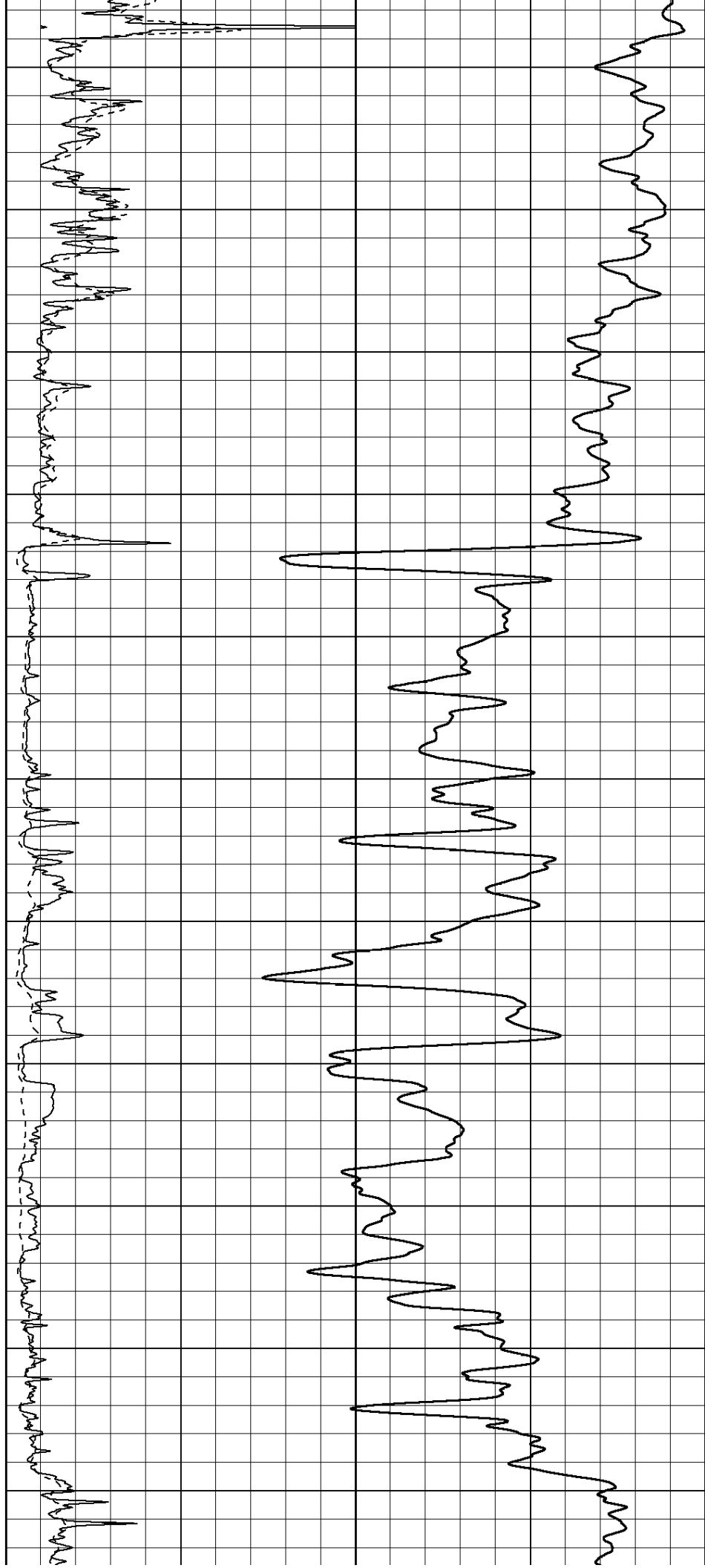
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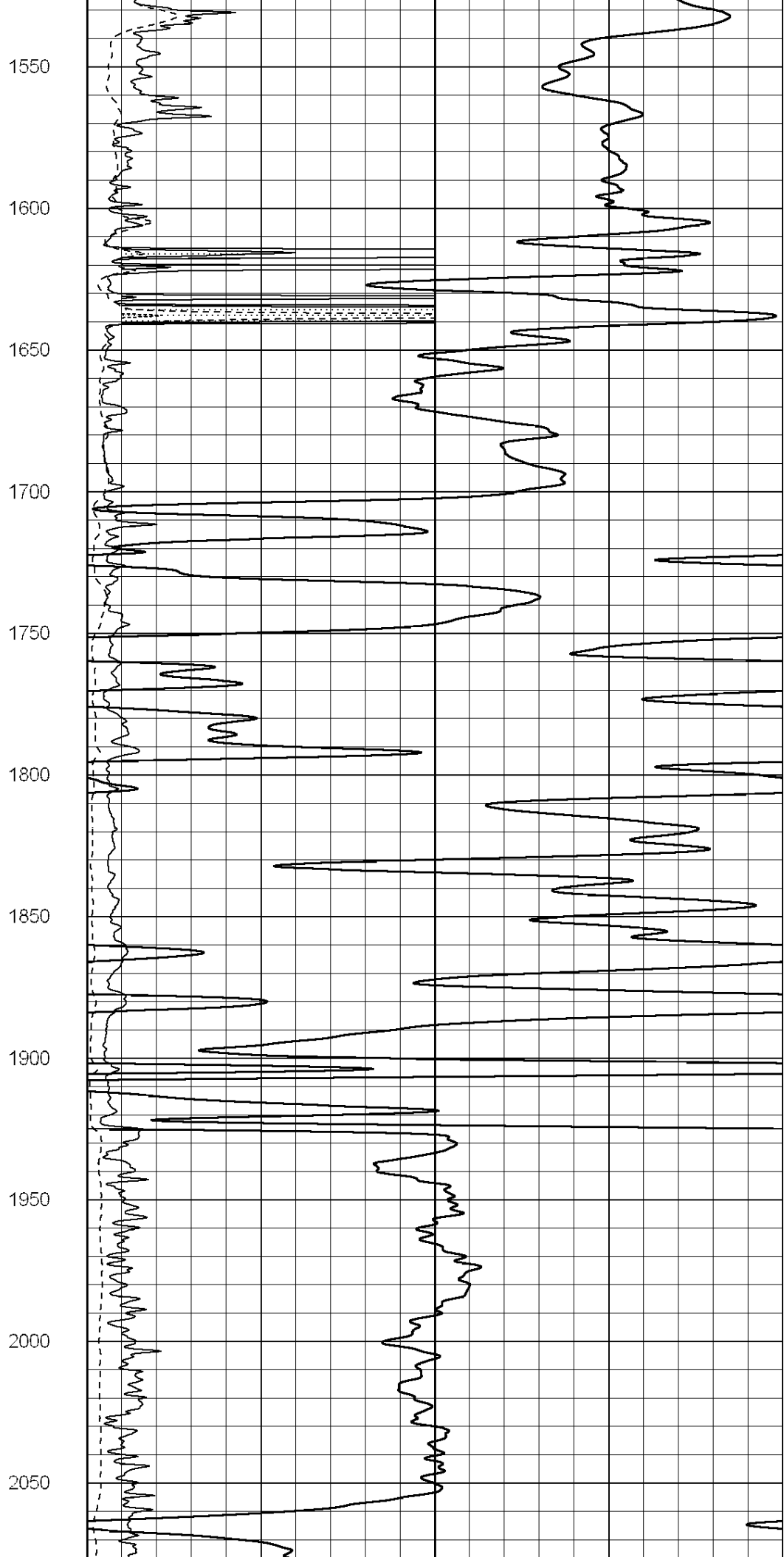
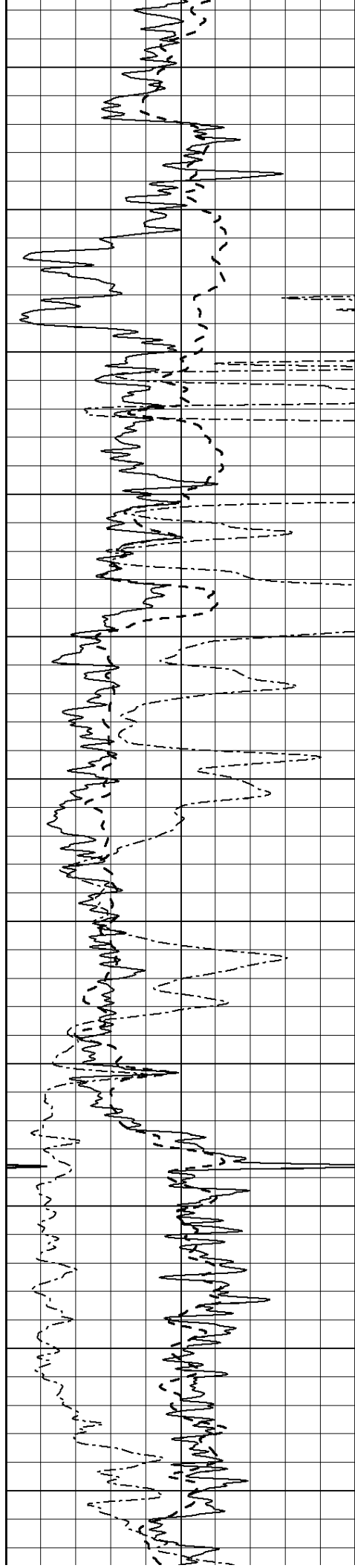
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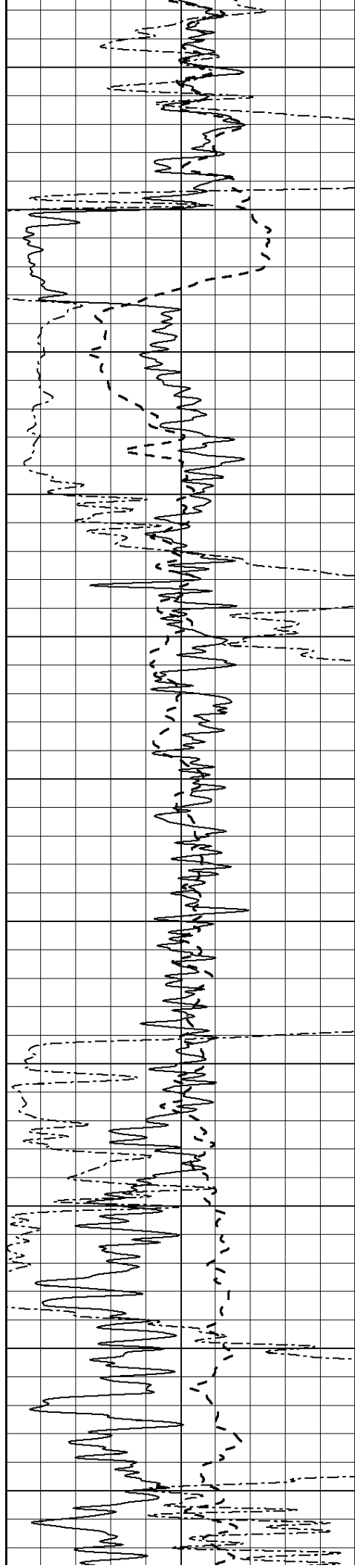




1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500







2100

2150

2200

2250

2300

2350

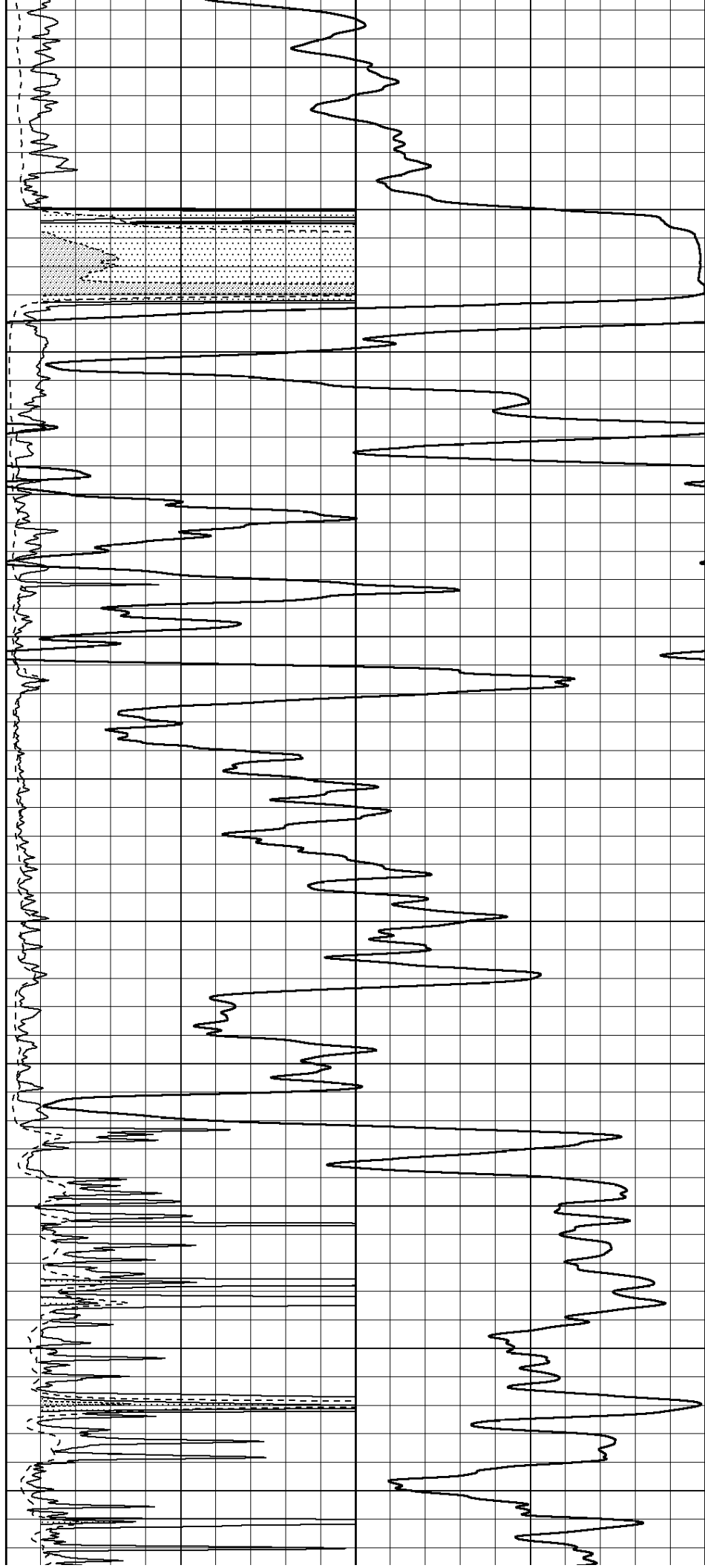
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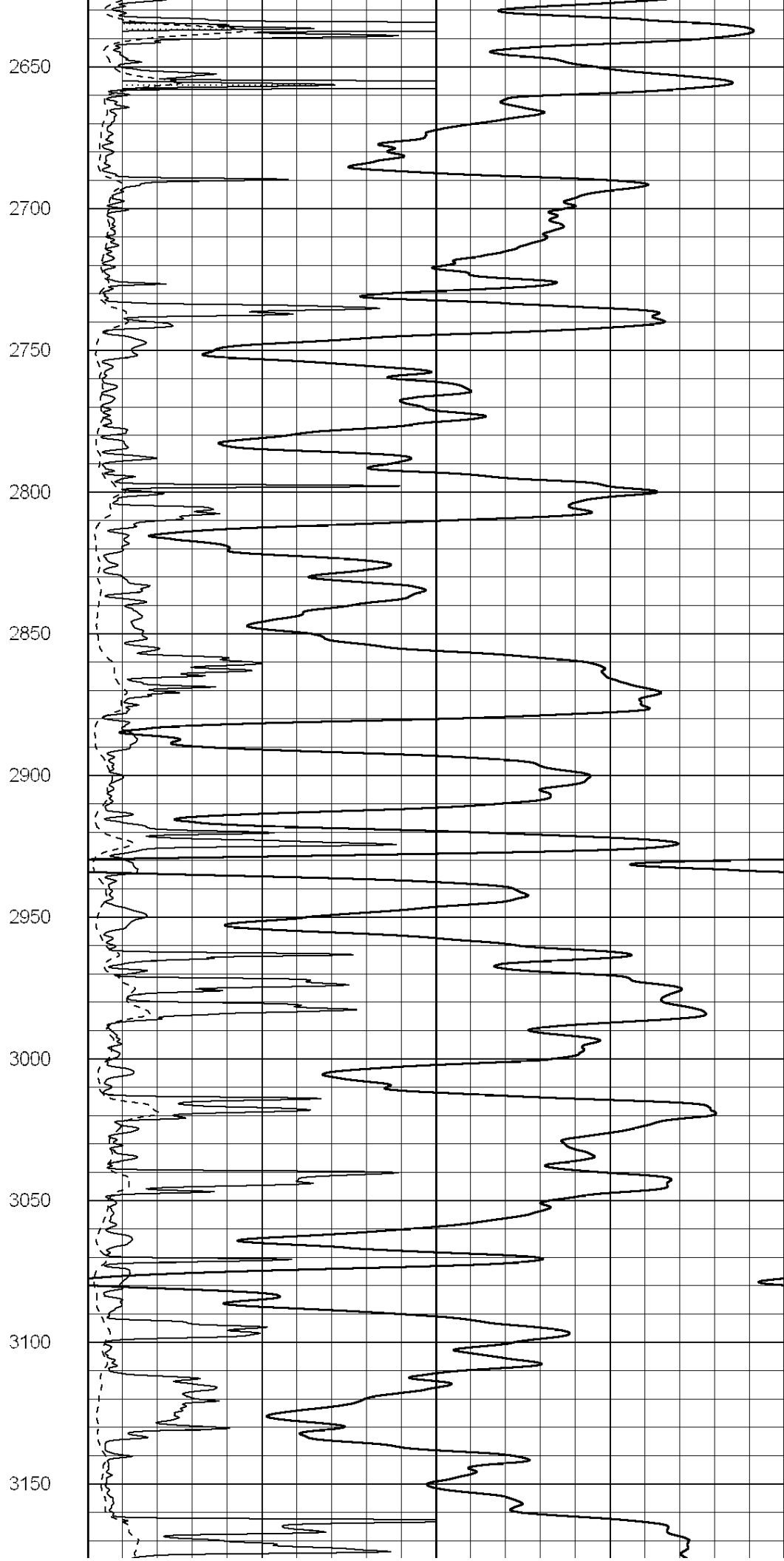
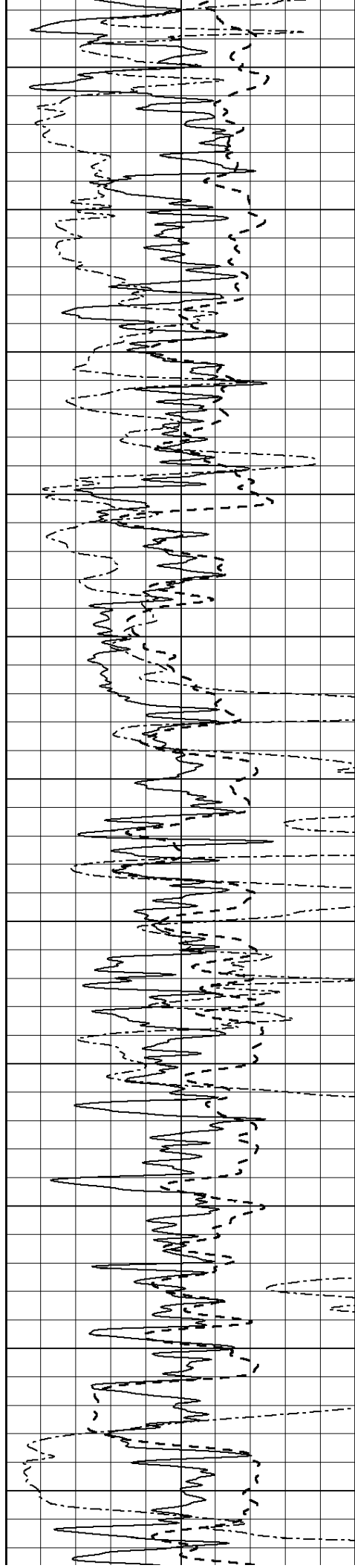
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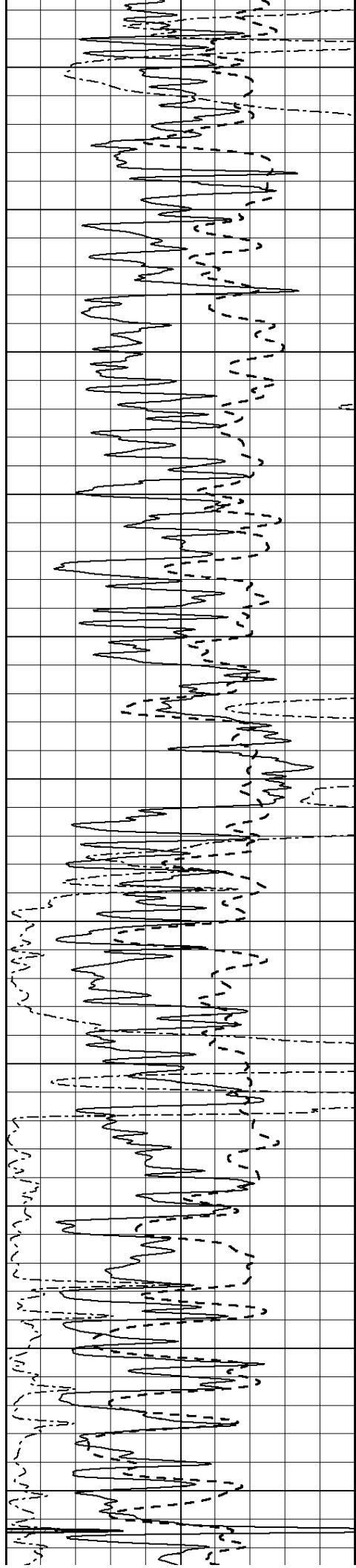
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2550

2600







3200

3250

3300

3350

3400

3450

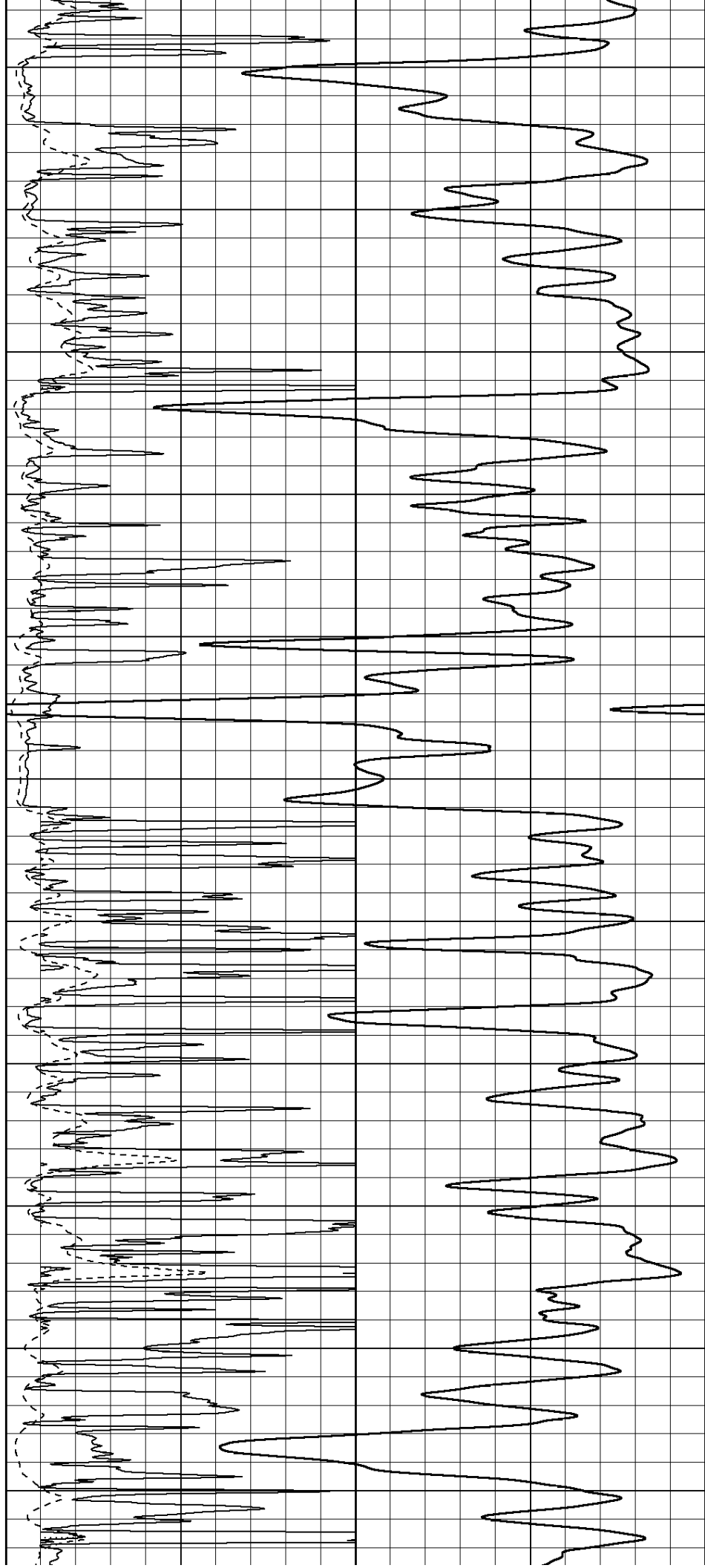
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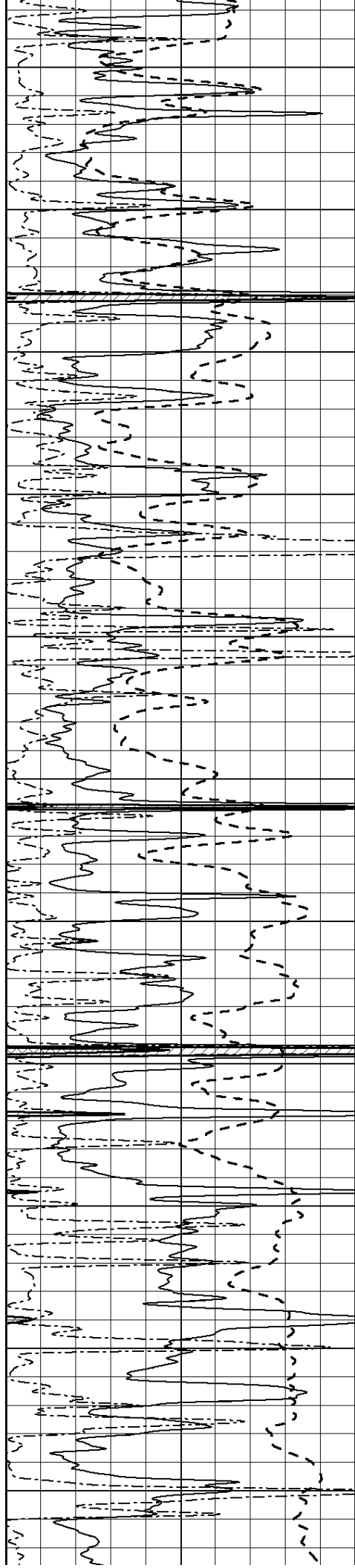
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3600

3650

3700





3750

3800

3850

3900

3950

4000

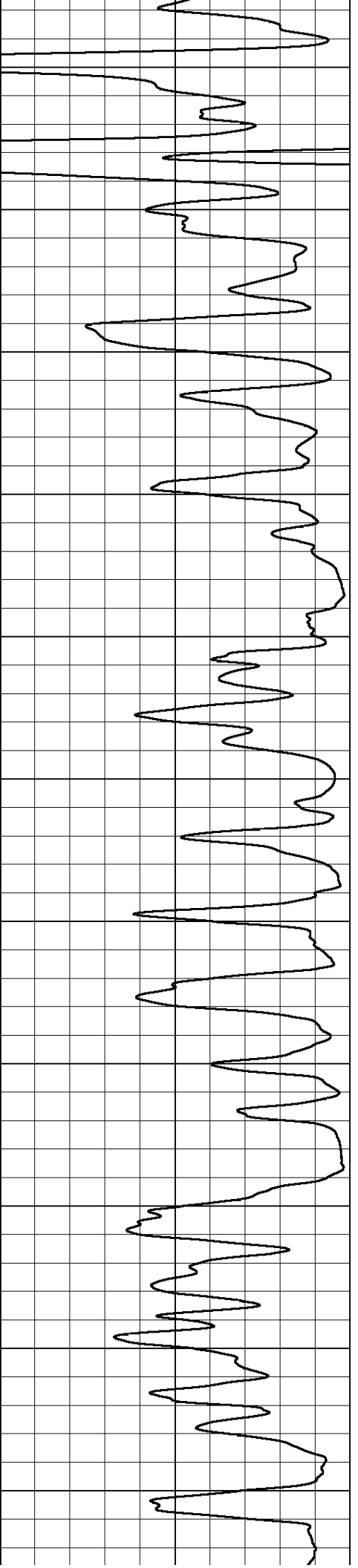
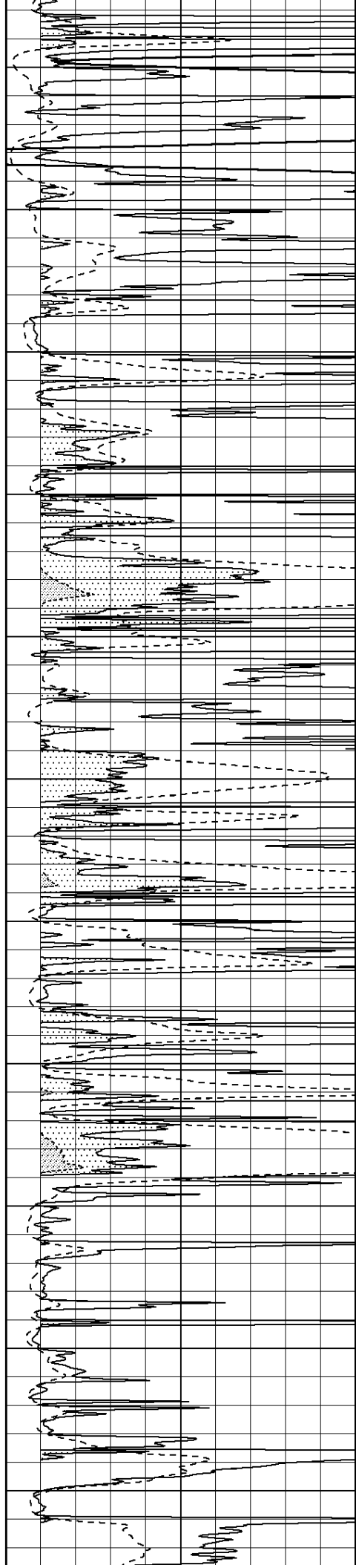
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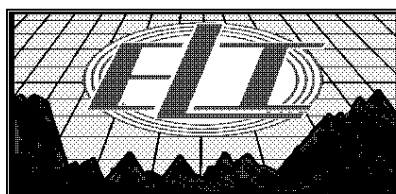
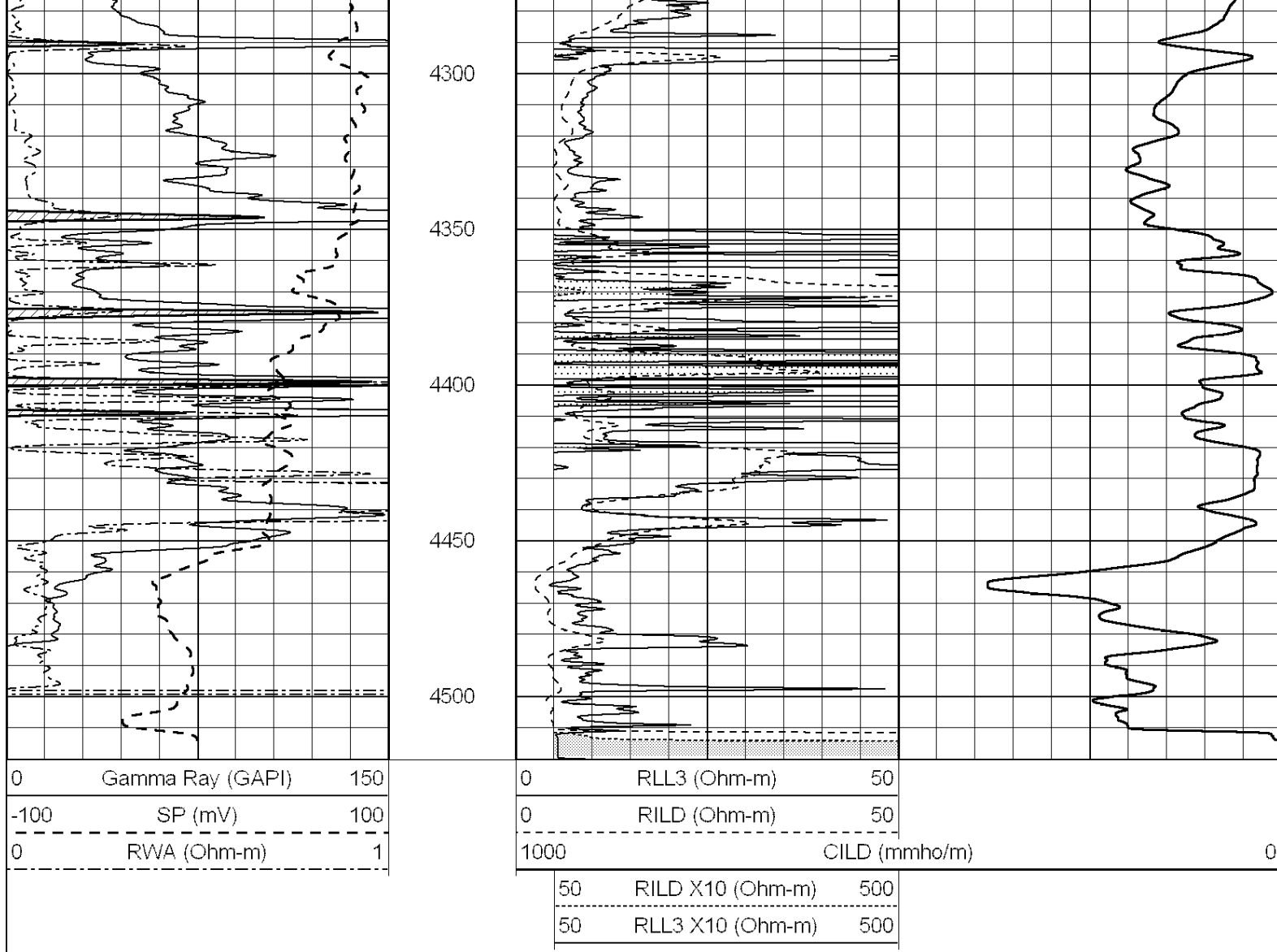
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4150

4200

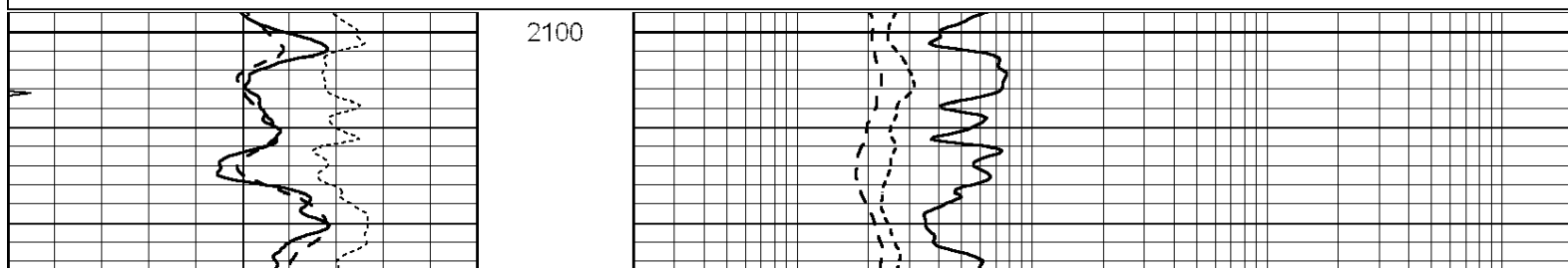
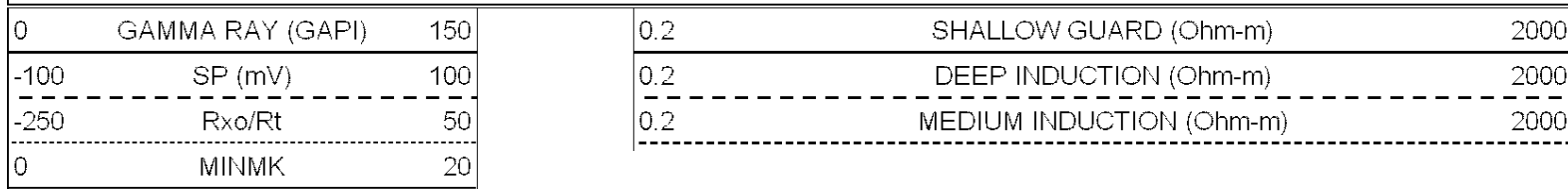
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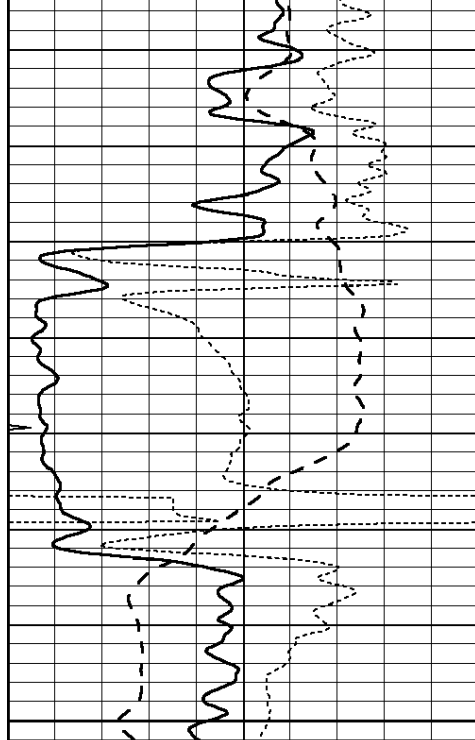




ANHYDRITE

Database File: 2945pe.db
 Dataset Pathname: pass4.5
 Presentation Format: _dil
 Dataset Creation: Wed Oct 17 12:43:08 2018 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

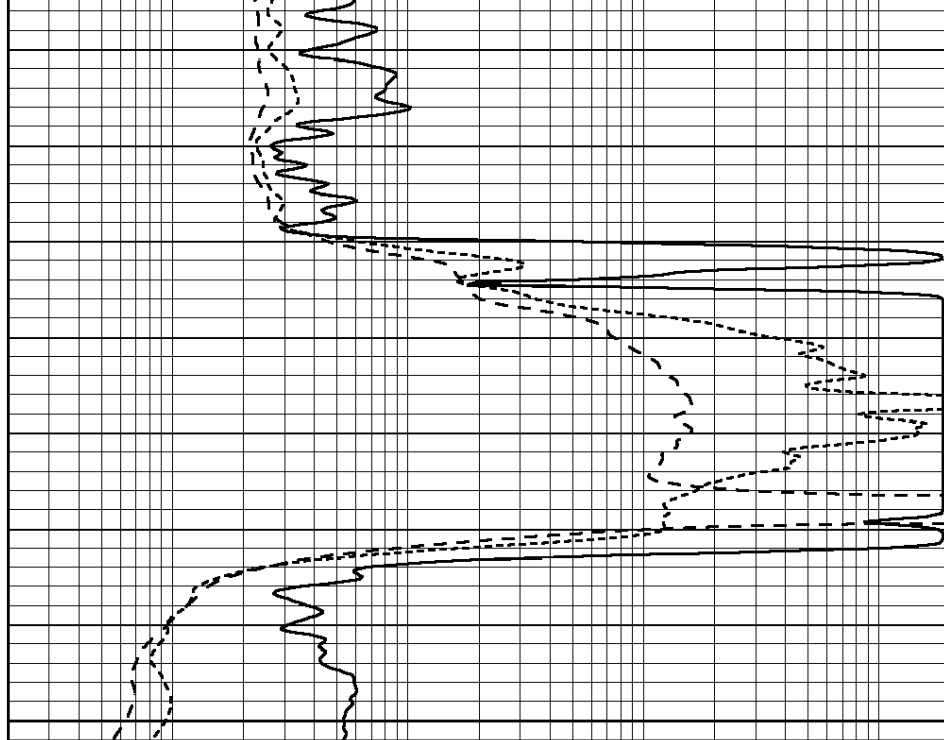




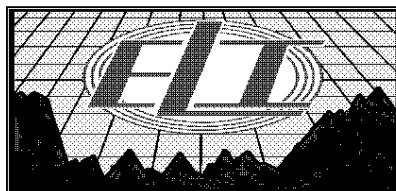
2150

2200

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

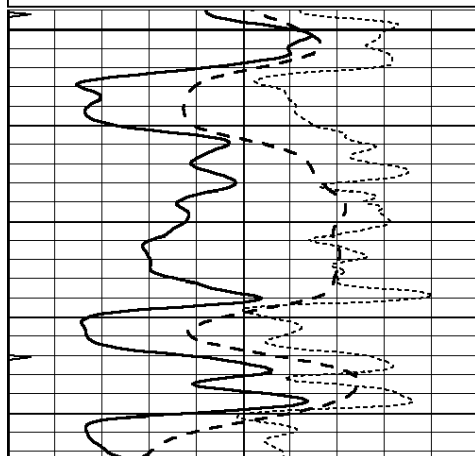


MAIN SECTION

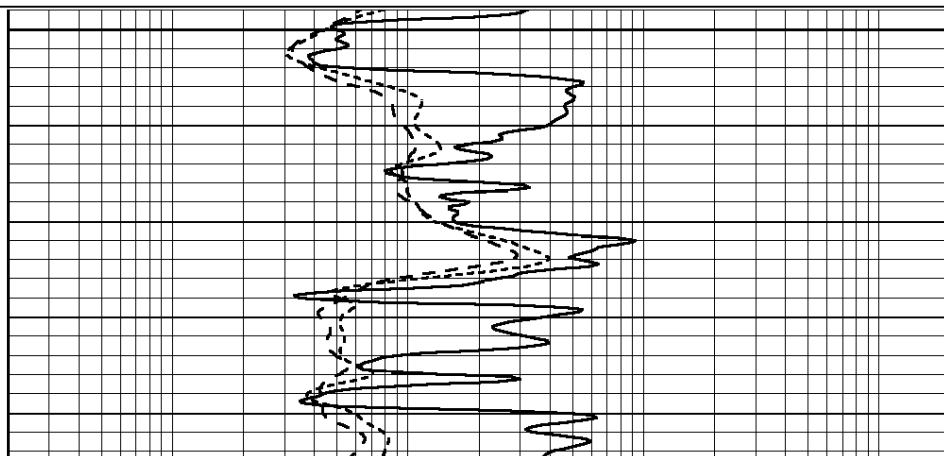
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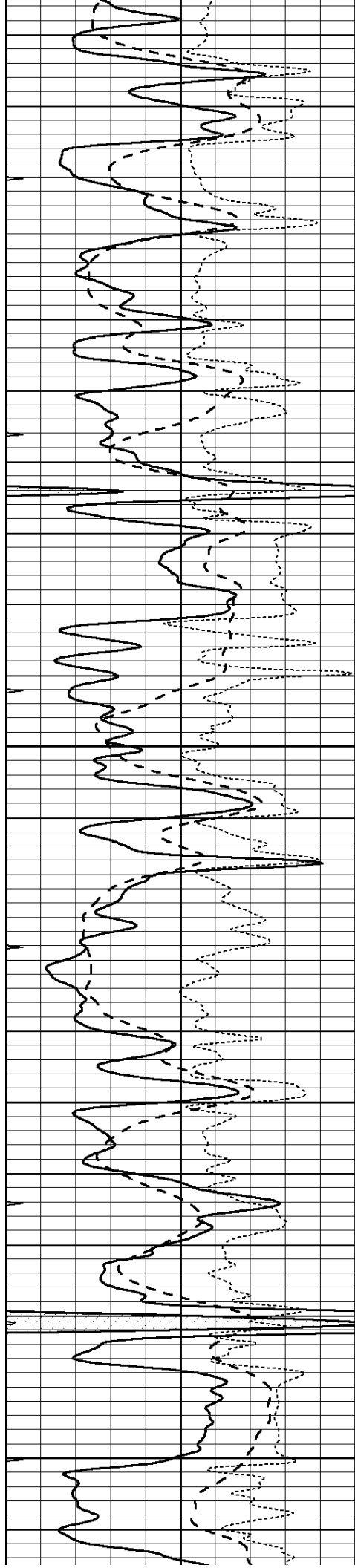
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3600





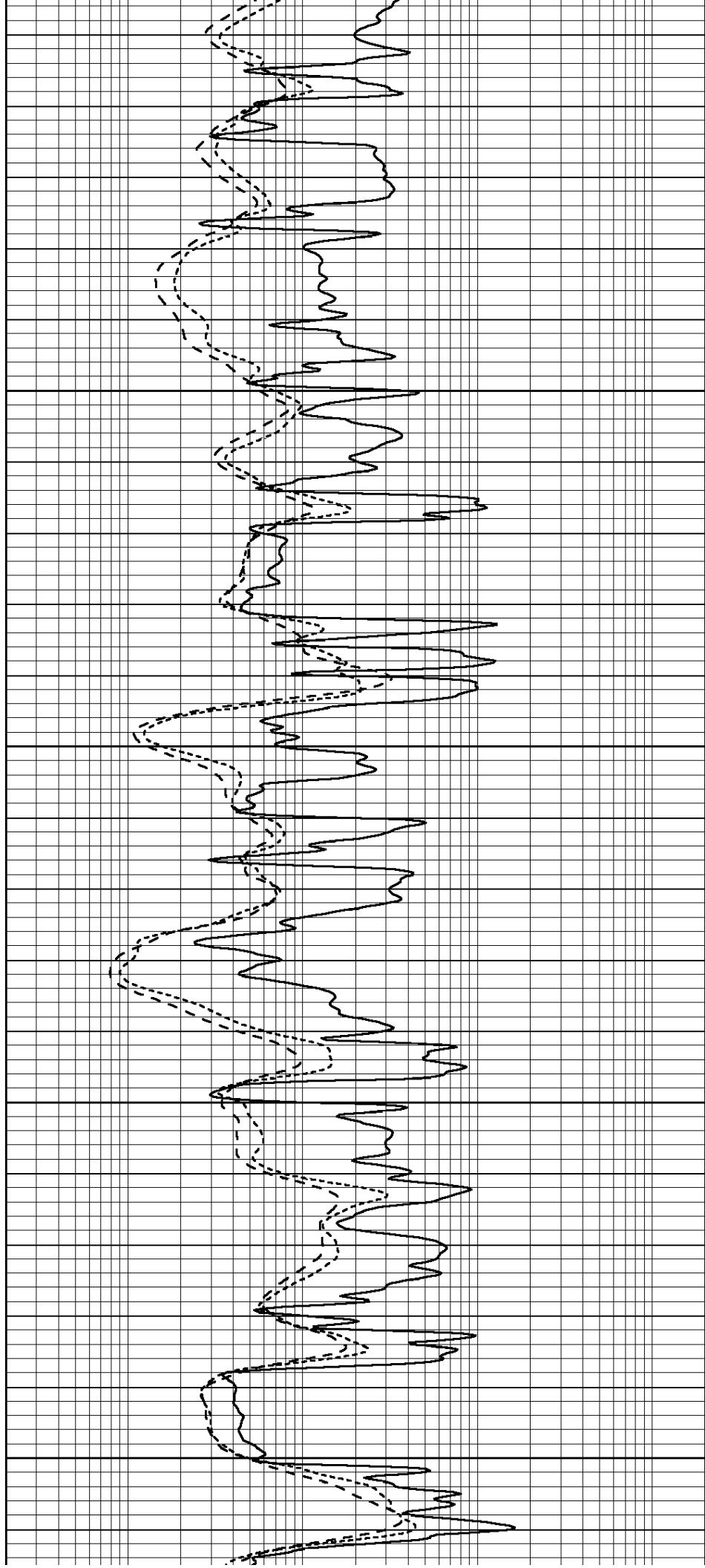
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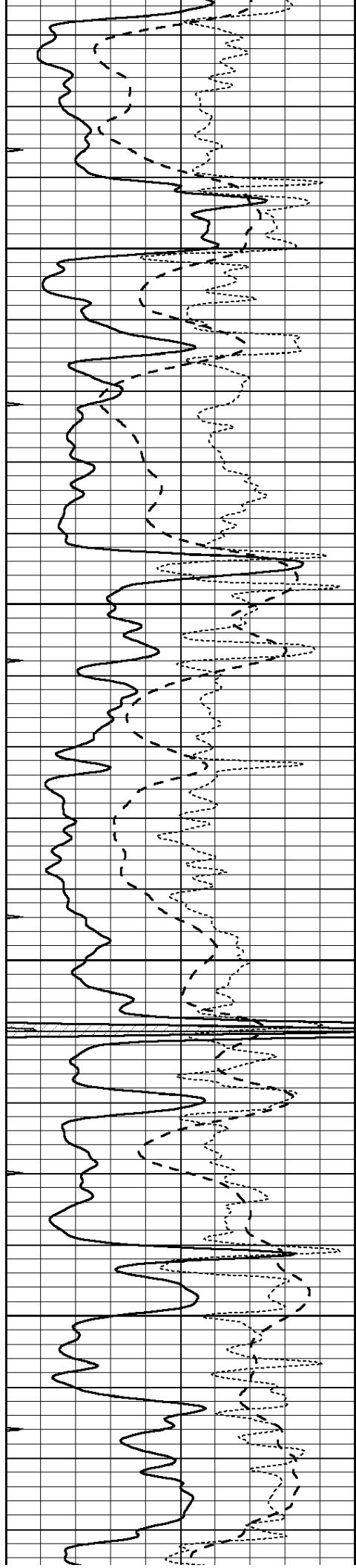
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3750

3800

3850



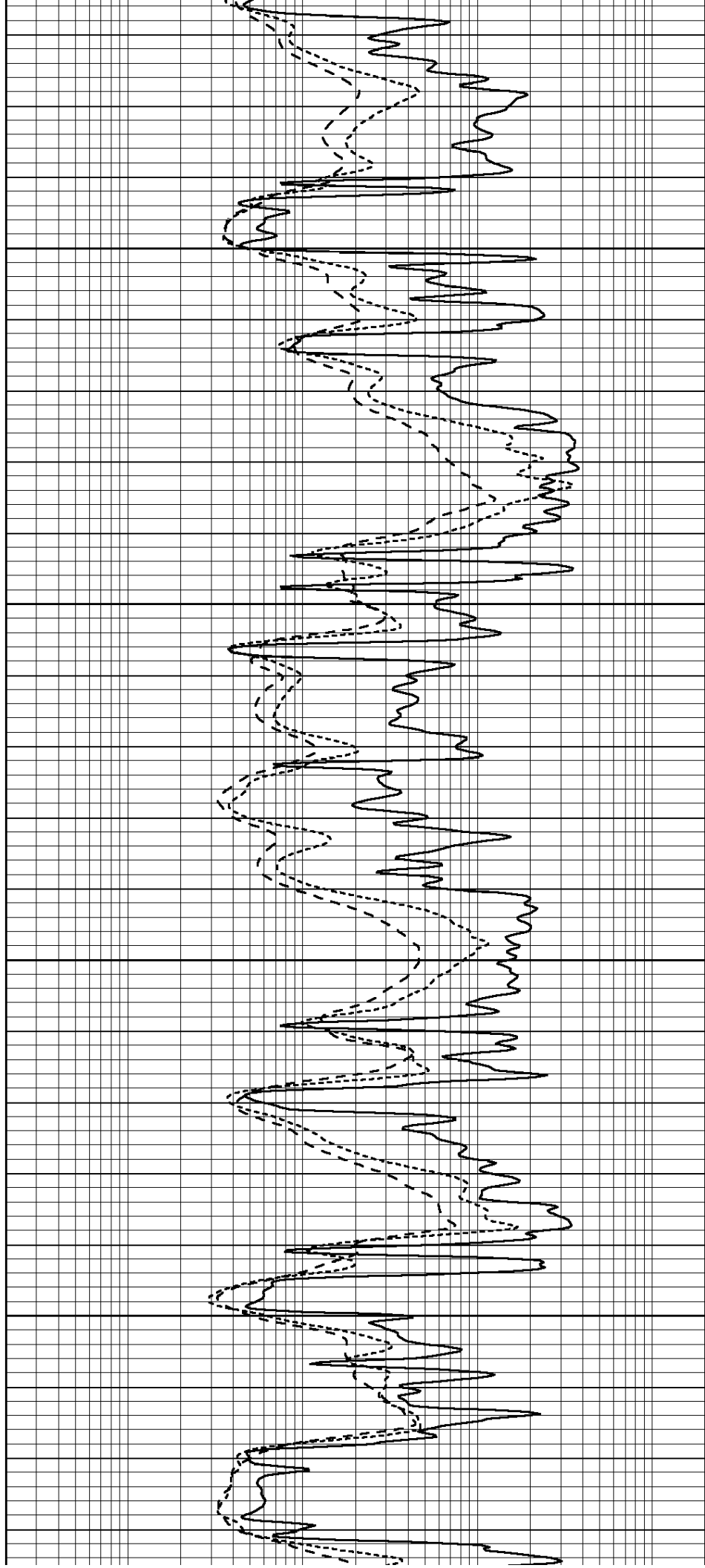


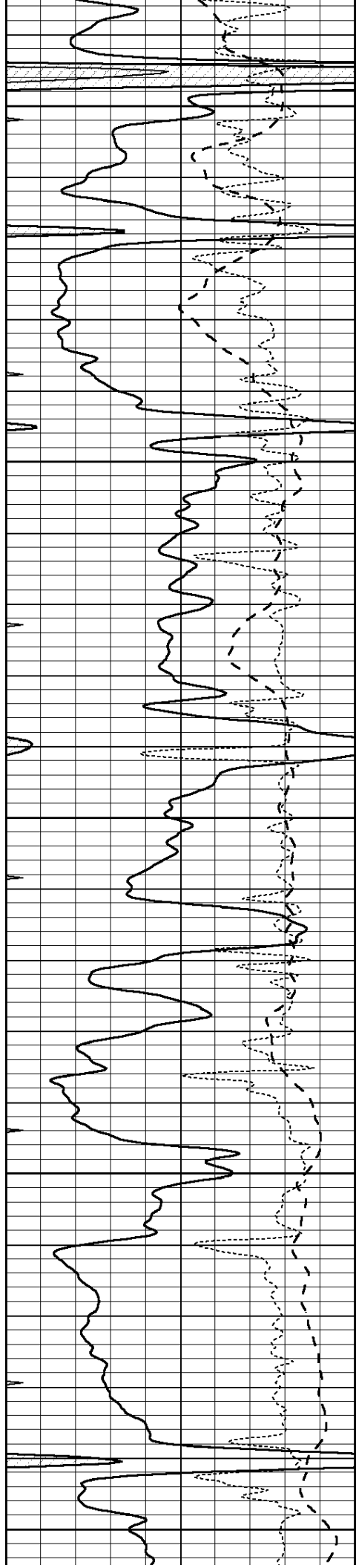
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4050





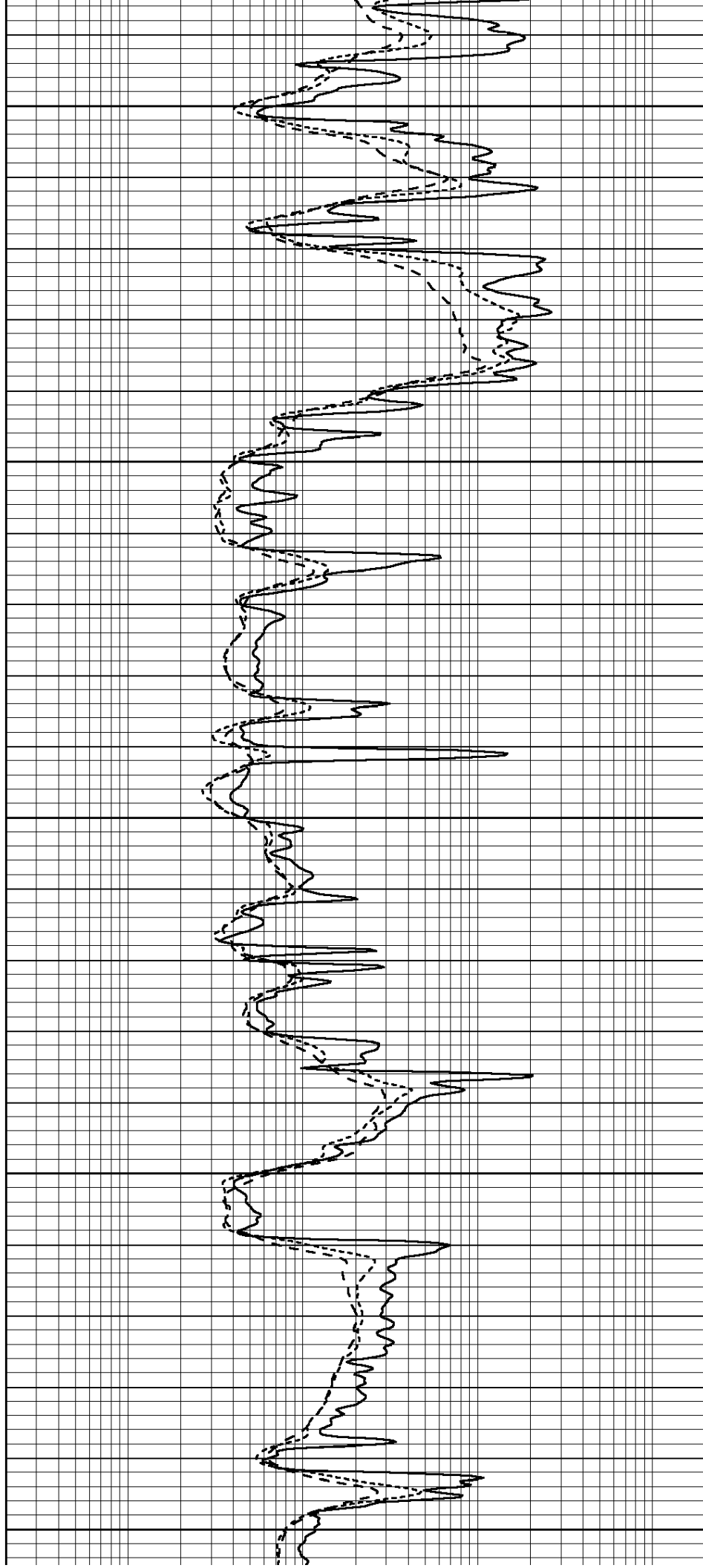
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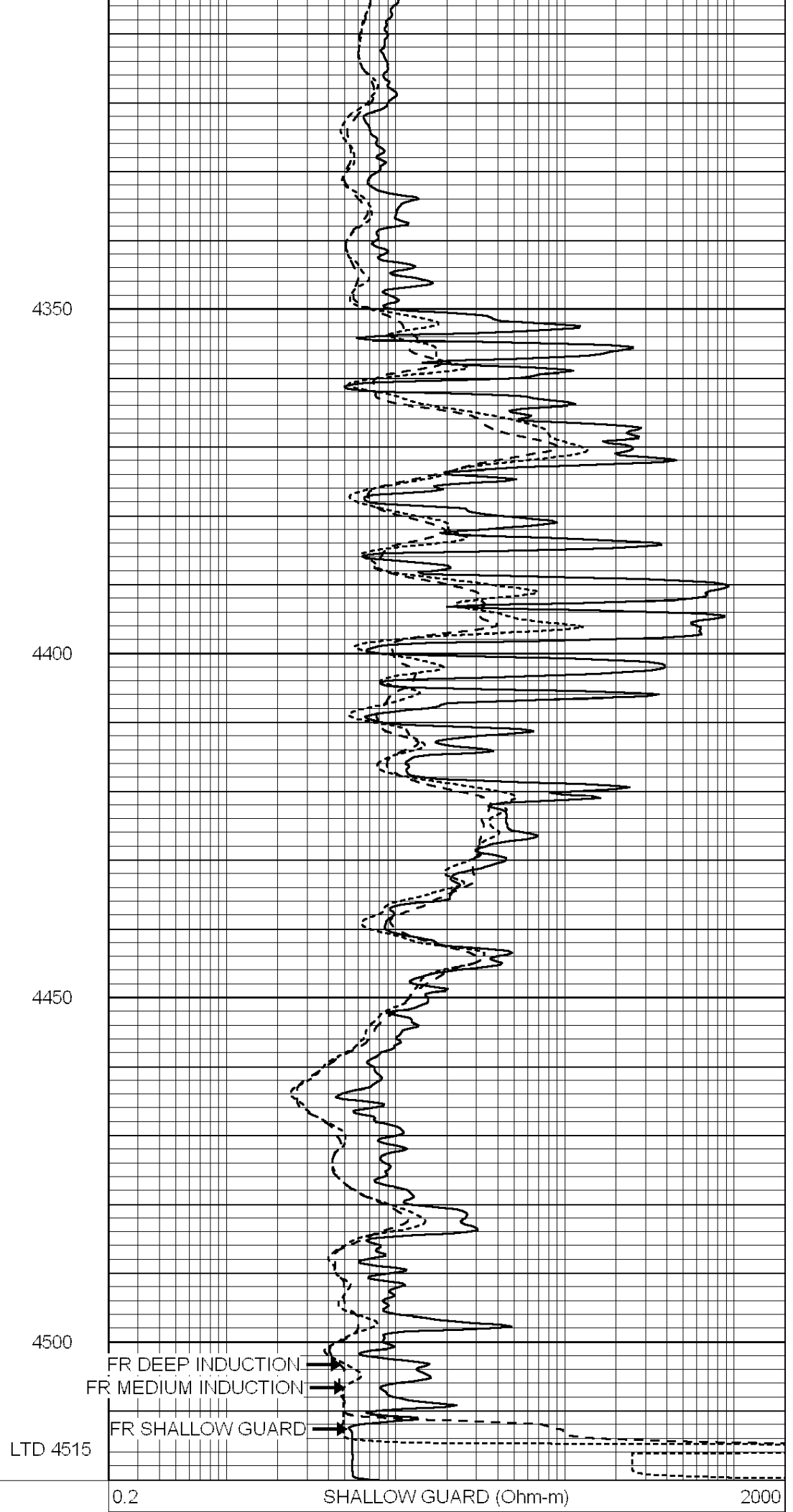
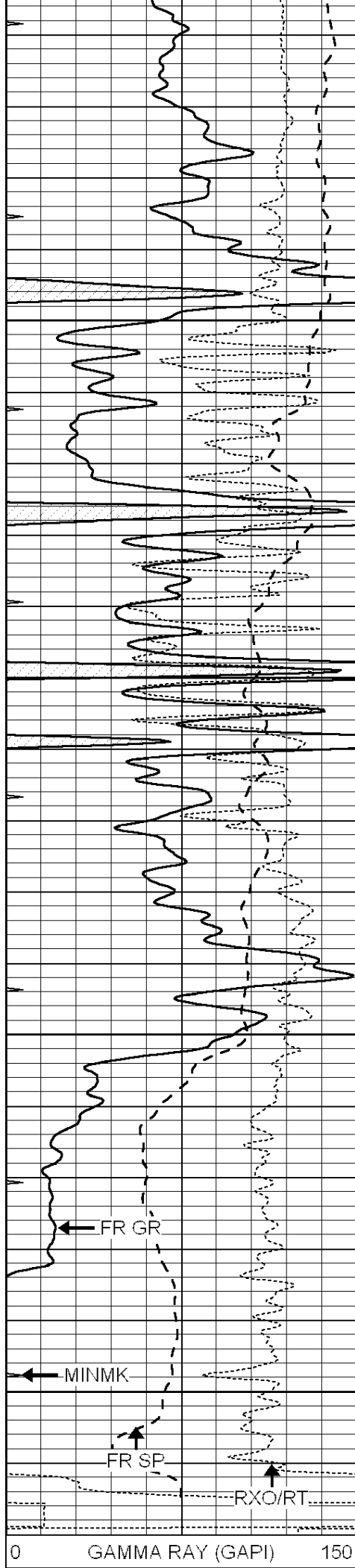
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4200

4250

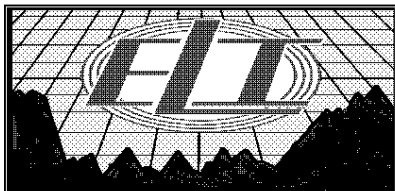
4300





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

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

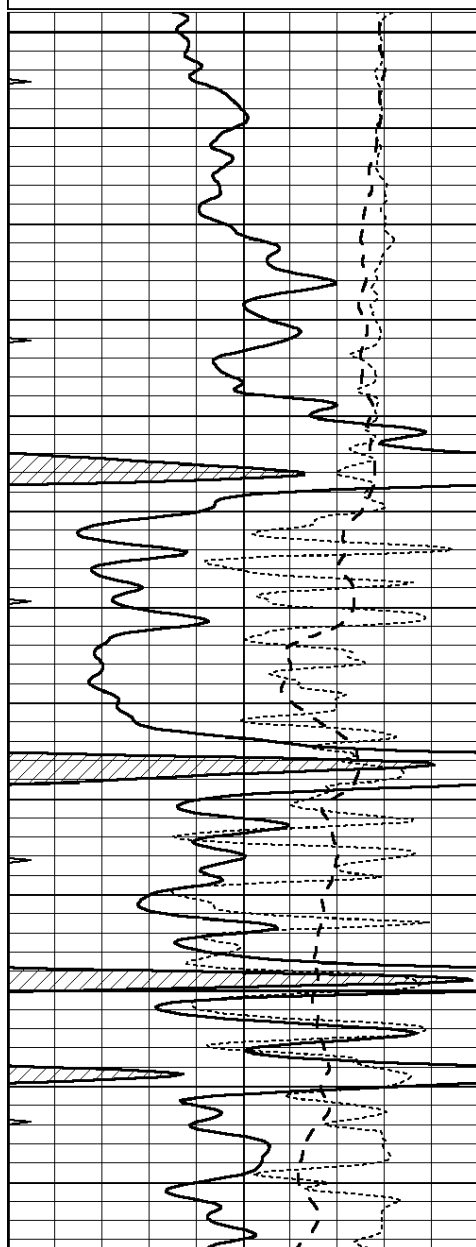


REPEAT SECTION

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 Presentation Format: _dill
 Dataset Creation: Wed Oct 17 11:35:01 2018 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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

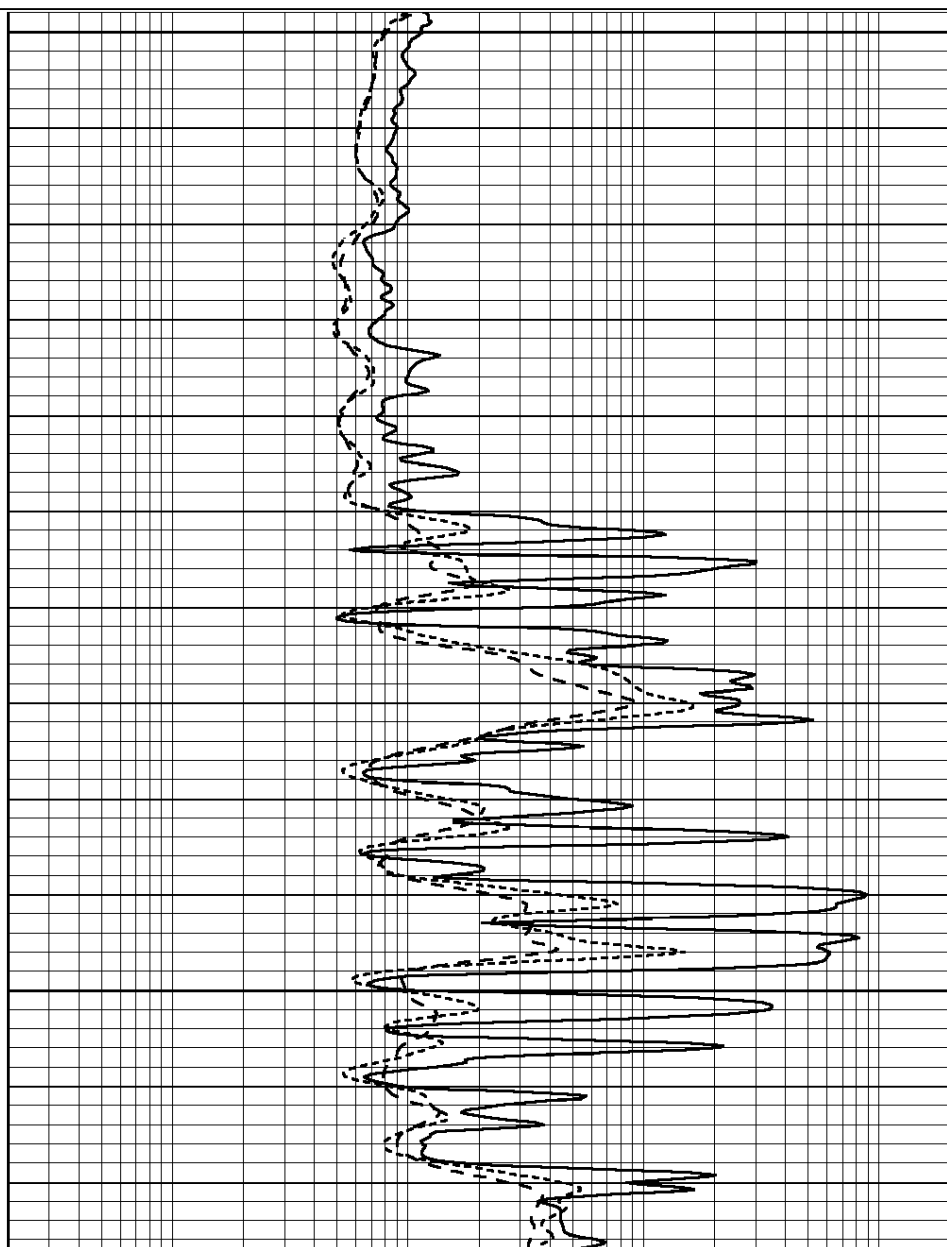
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

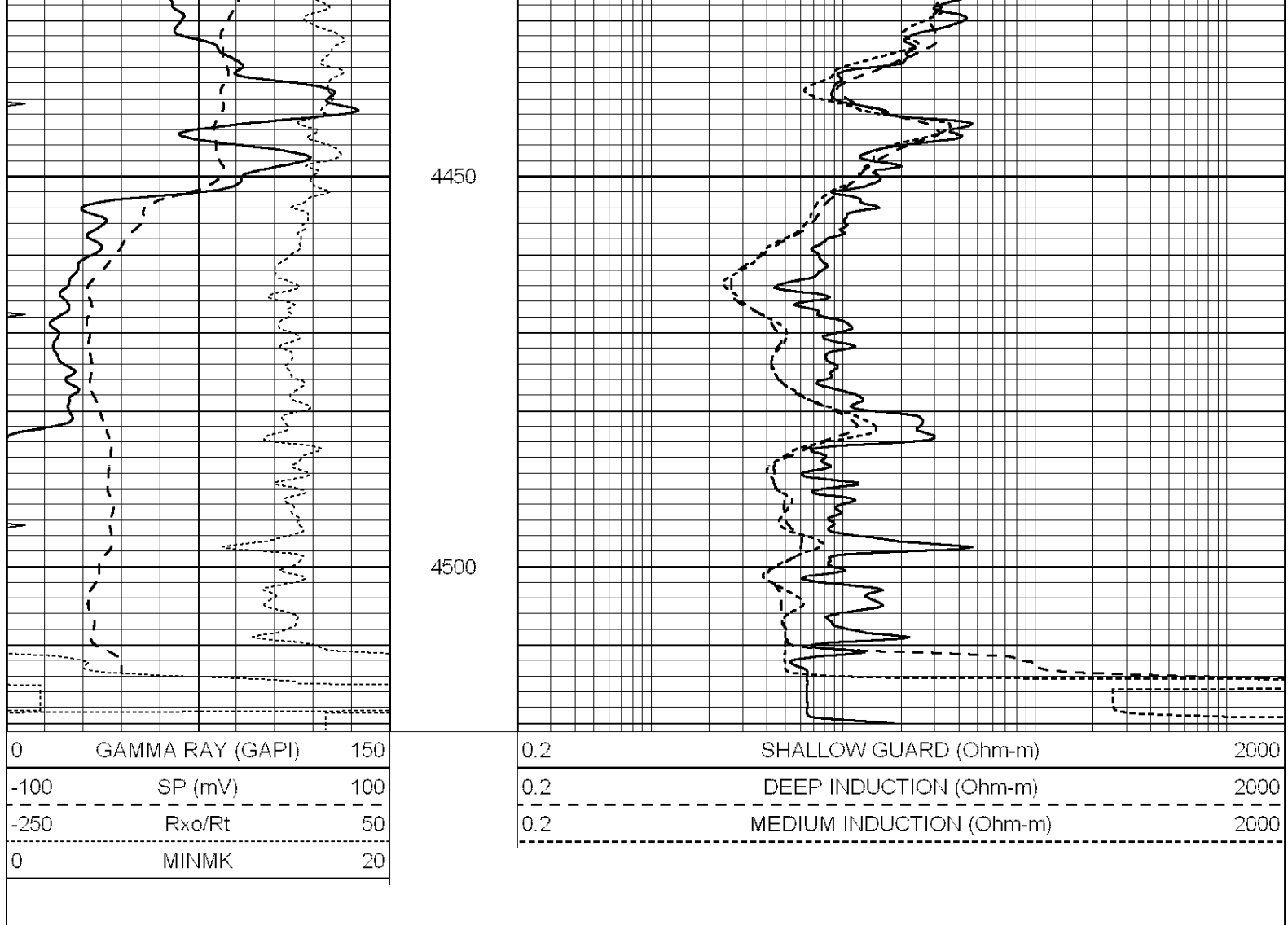


4300

4350

4400





Calibration Report									
Database File:		1598ddn.db							
Dataset Pathname:		pass4							
Dataset Creation:		Wed Aug 30 02:13:00 2017 by Log SOC 120430							
Dual Induction Calibration Report									
Serial-Model:		PROBE7-DILG							
Surface Cal Performed:		Wed Aug 30 00:06:33 2017							
Downhole Cal Performed:		Mon Jul 28 12:02:56 2008							
After Survey Verification Performed:		Mon Jul 28 12:02:56 2008							
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000	
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'	

		Serial Number: Tool Model:	070808 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:	070558		
Tool Model:	OPEN_GR		
Performed:	Wed May 31 00:09:32 2017		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	