



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company		RITCHIE EXPLORATION, INC.	
Well		#1 ROEMER UNIT	
Field		LANE	
County		KANSAS	
State		KANSAS	
Company		RITCHIE EXPLORATION, INC.	
Well		#1 ROEMER UNIT	
Field		LANE	
County		KANSAS	
State		KANSAS	
Location:		API # : 15-101-22449-0000 2385' FEL & 1235' FNL 85' N. & 75' W. OF W/2 - W/2 - NE 1/4 SEC 7 TWP 16S RGE 29W	
Permanent Datum		GROUND LEVEL Elevation 2711	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Other Services		CDL/CNL	
Elevation		K.B. 2719 D.F. 2717 G.L. 2711	
Date	7/20/13		
Run Number	ONE		
Depth Driller	4530		
Depth Logger	4532		
Bottom Logged Interval	4530		
Top Log Interval	00		
Casing Driller	8 5/8" @ 235'		
Casing Logger	234'		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4/5.1		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.5 @ 94F		
Rmf @ Meas. Temp	1.1 @ 94F		
Rmc @ Meas. Temp	1.8 @ 94F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	1.1 @ 121F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	121F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	DAVE WILLIAMS		

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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 NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS:

GOVE, KS. - S. TO GOVE LANE CO. LINE RD. - 2 W. TO HICKOCK RD.
S. TO RD. 275 - 1/2 W. - N. INTO



NABORS
**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File: 011274ddn.db
 Dataset Pathname: pass3.3
 Presentation Format: _dil2
 Dataset Creation: Sat Jul 20 20:01:31 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:600

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

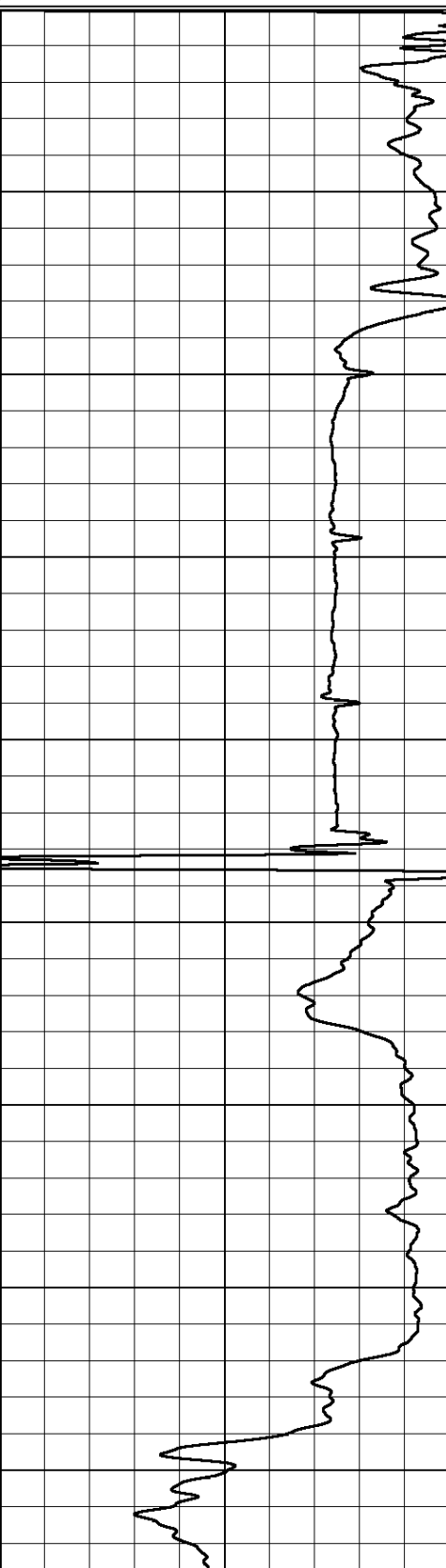
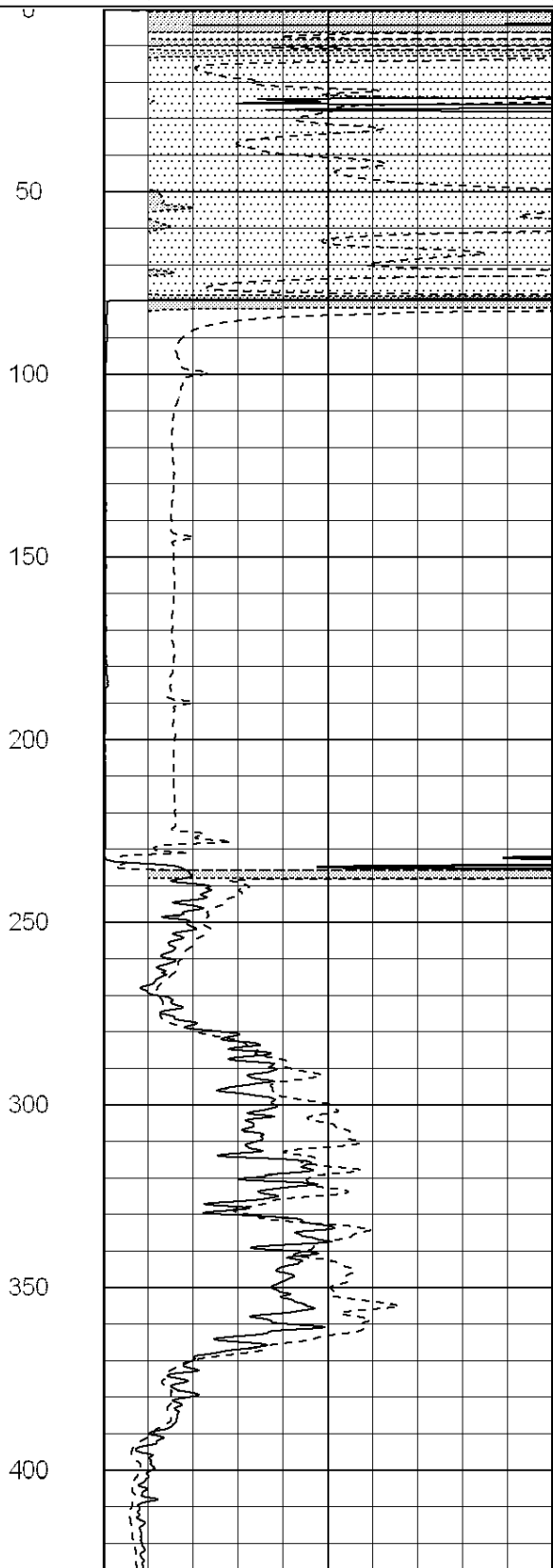
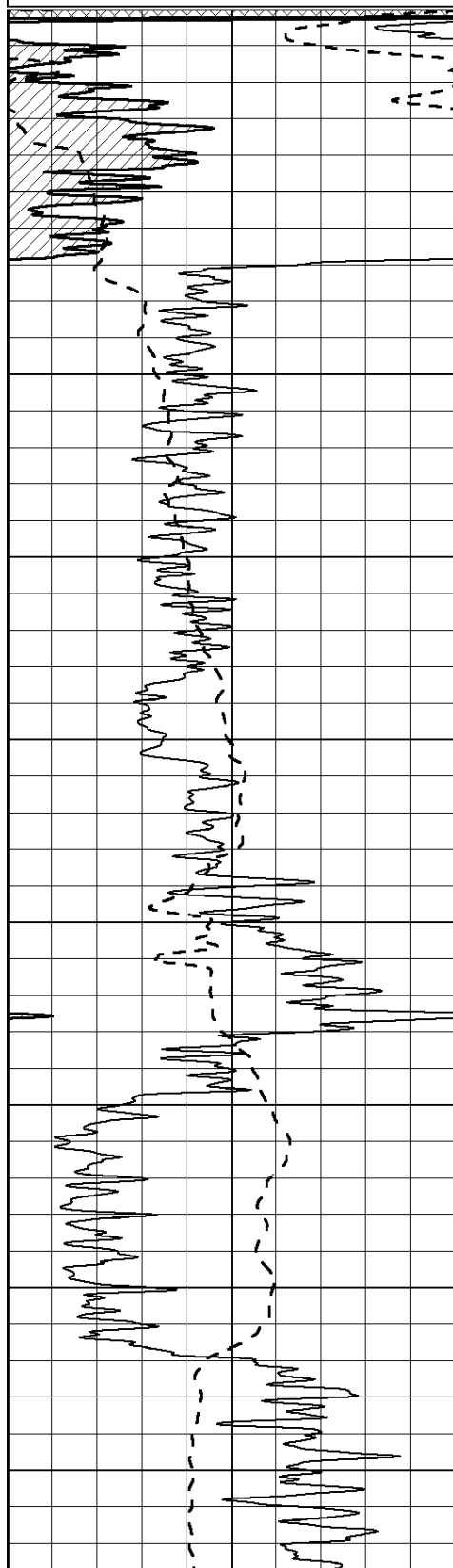
0 RLL3 (Ohm-m) 50

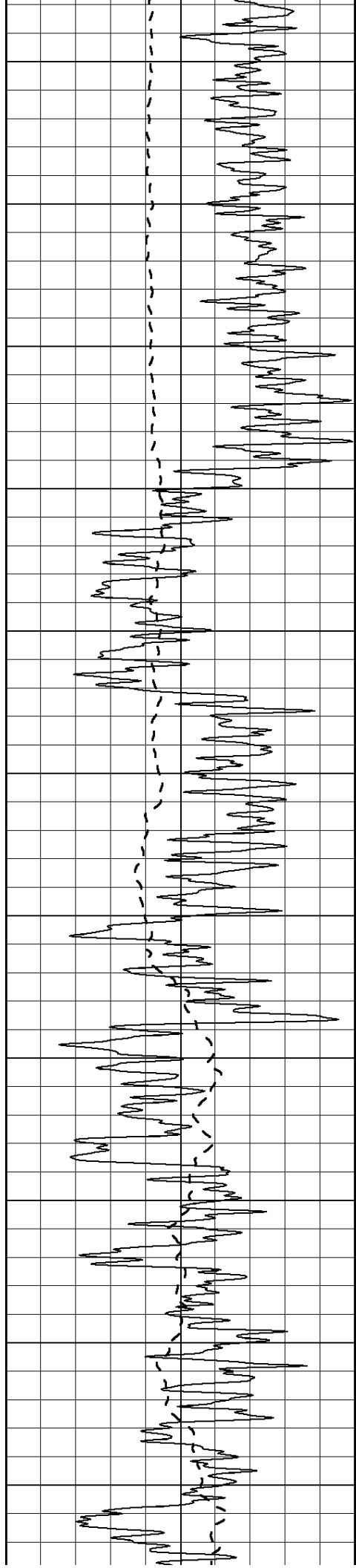
0 Deep Induction (Ohm-m) 50

1000 CILD (mmho/m) 0

50 RILD X10 (Ohm-m) 500

50 RLL3 X10 (Ohm-m) 500





450

500

550

600

650

700

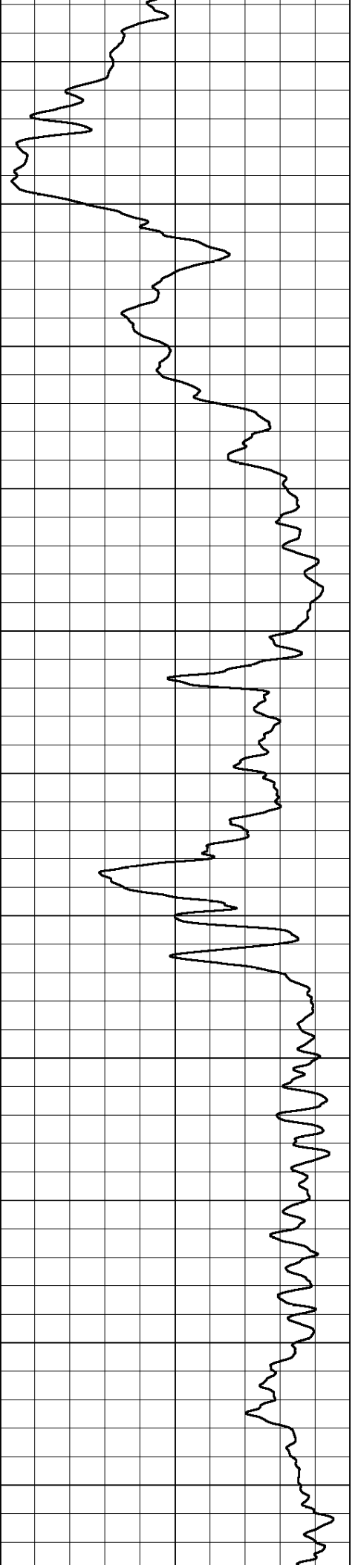
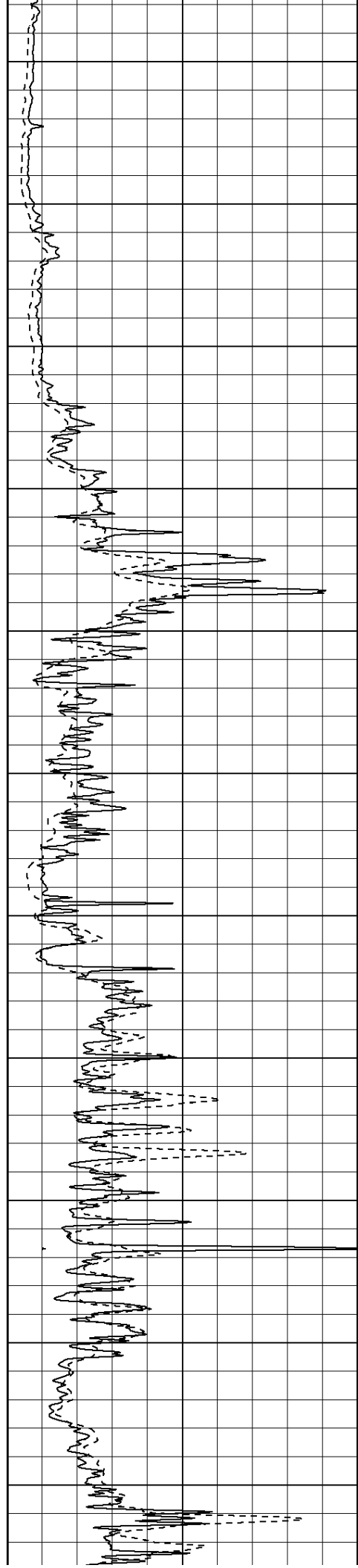
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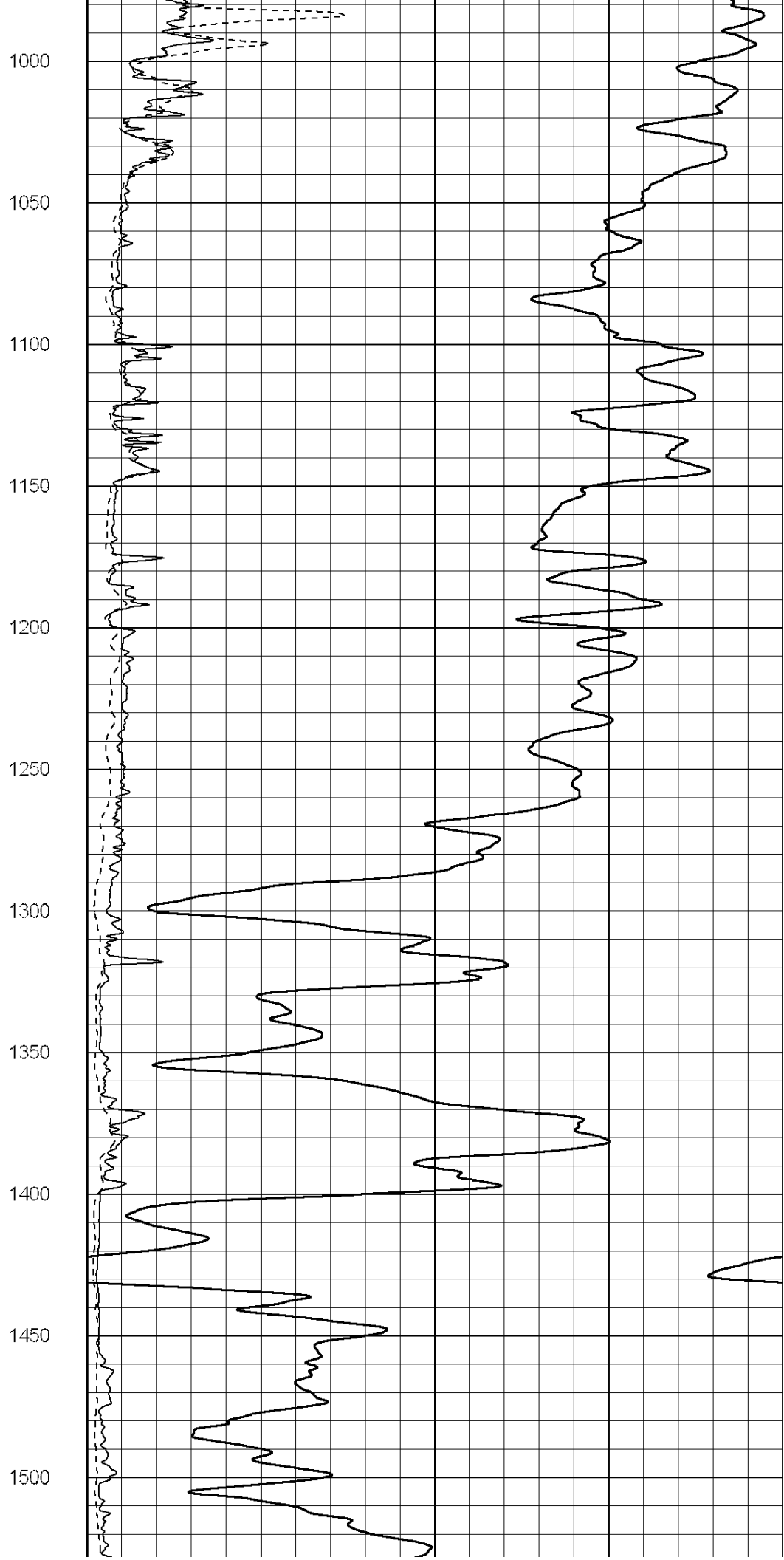
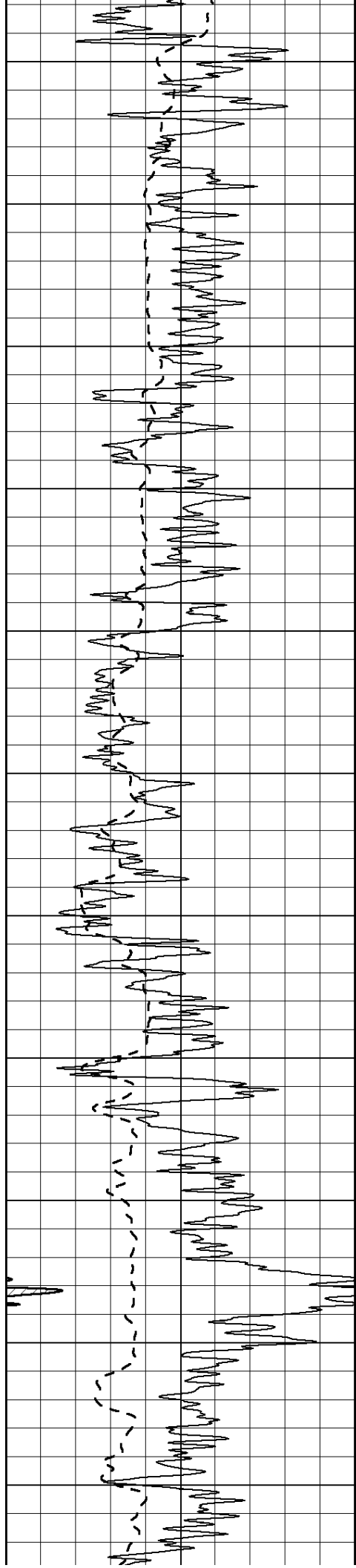
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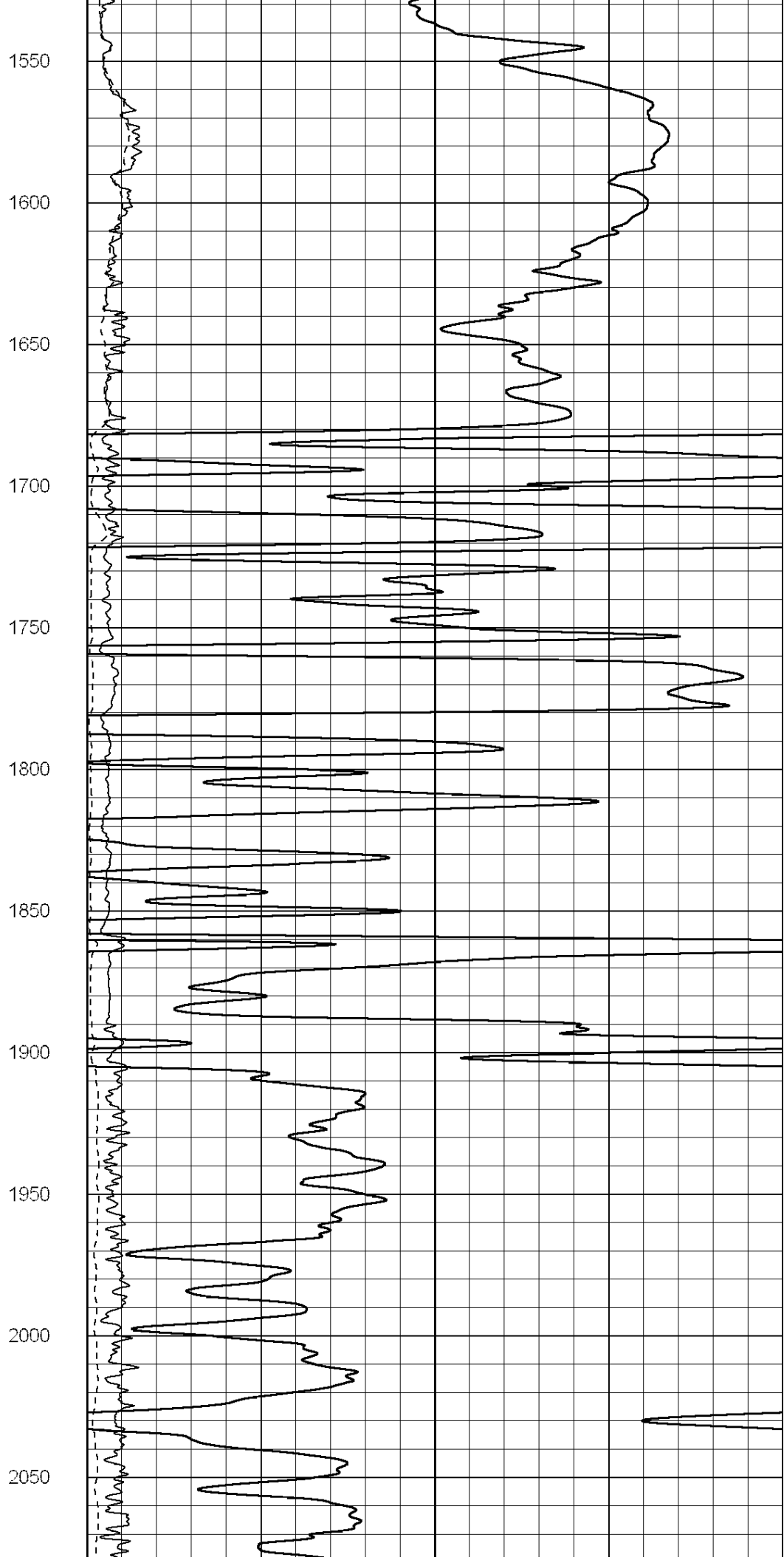
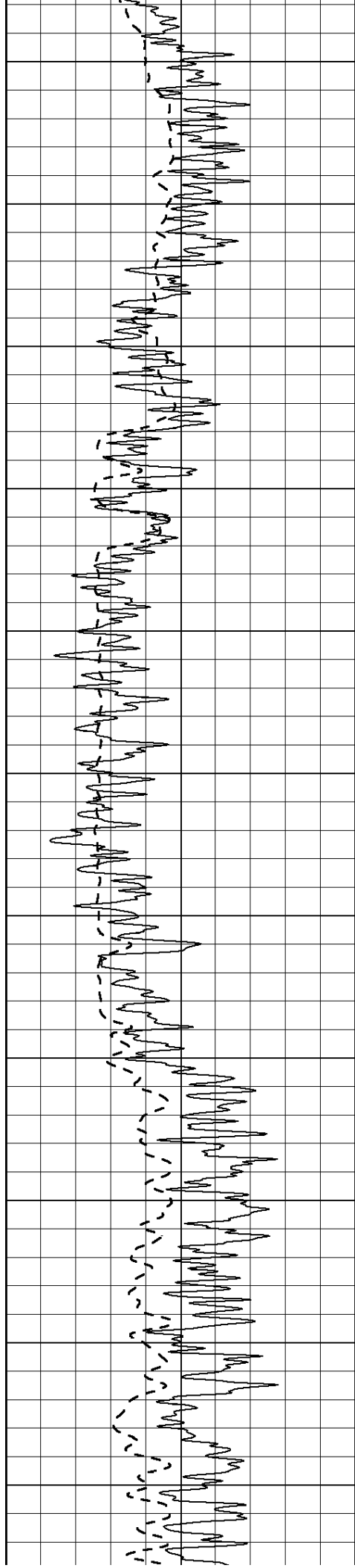
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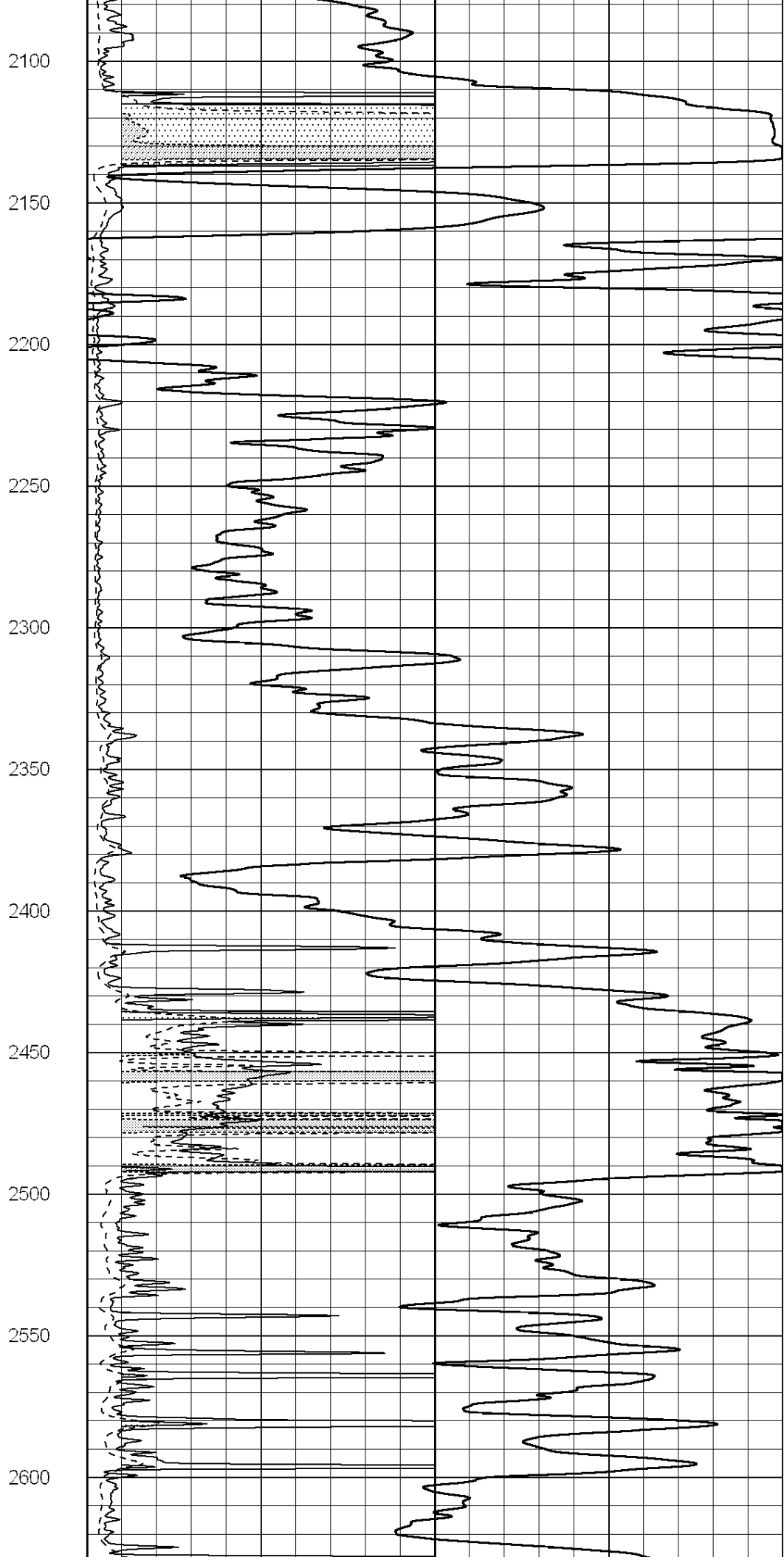
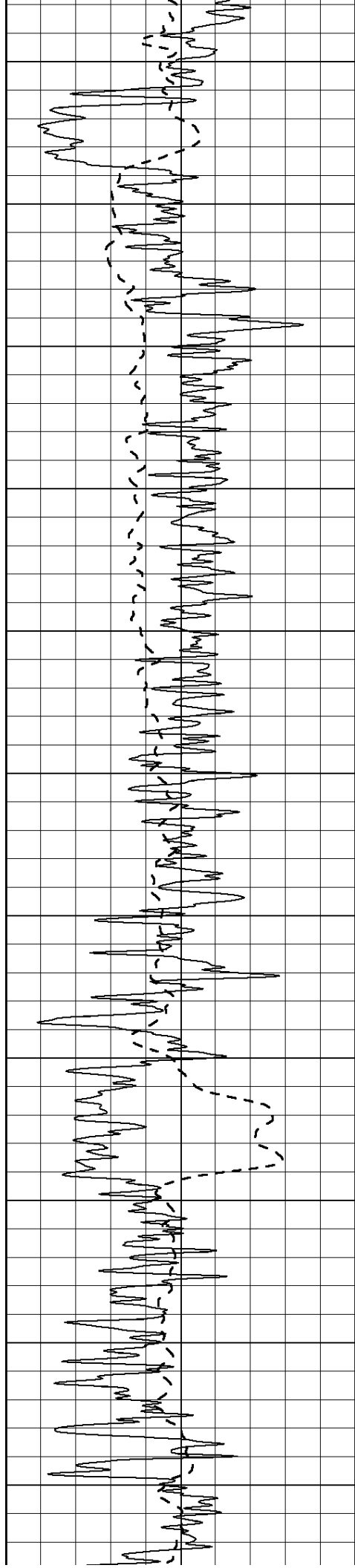
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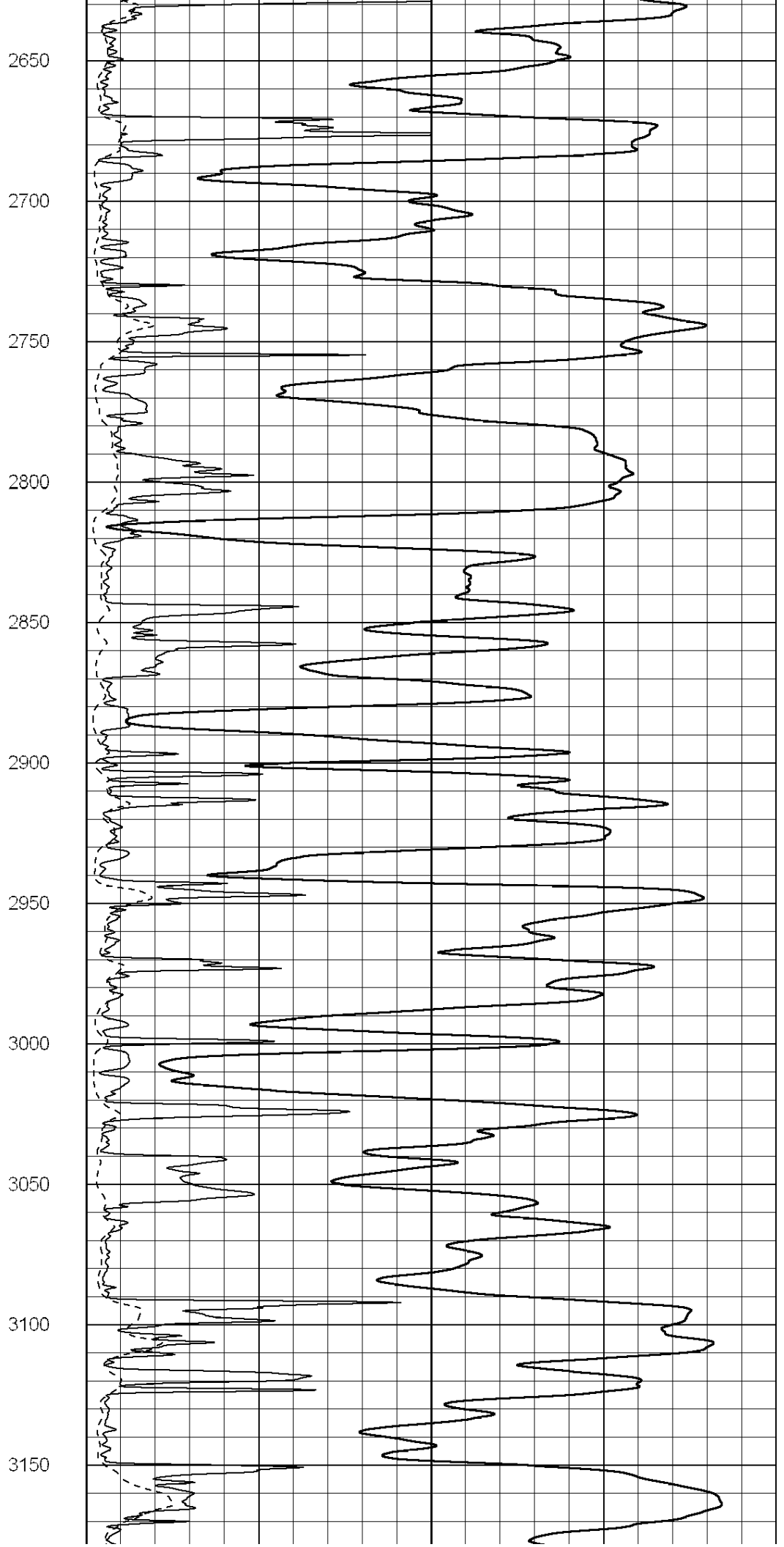
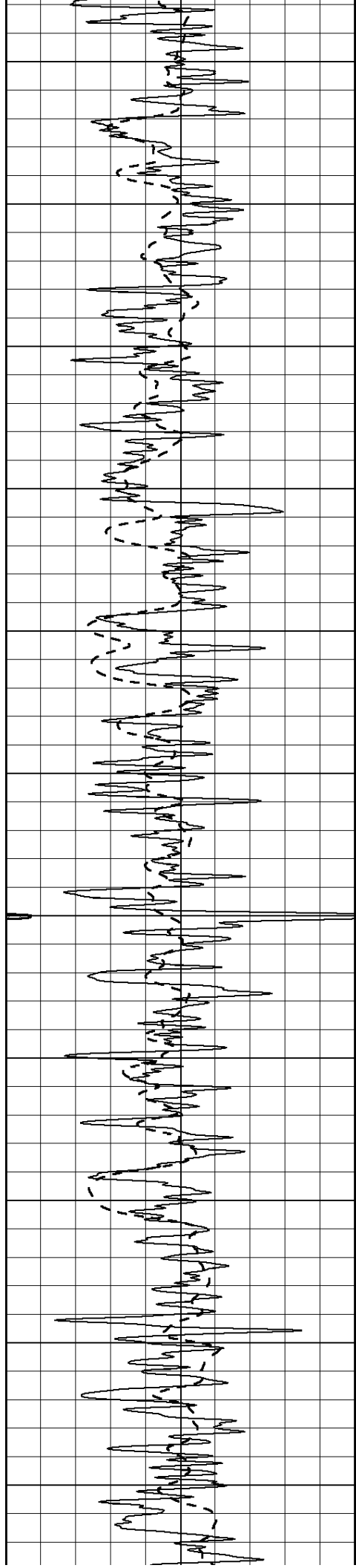
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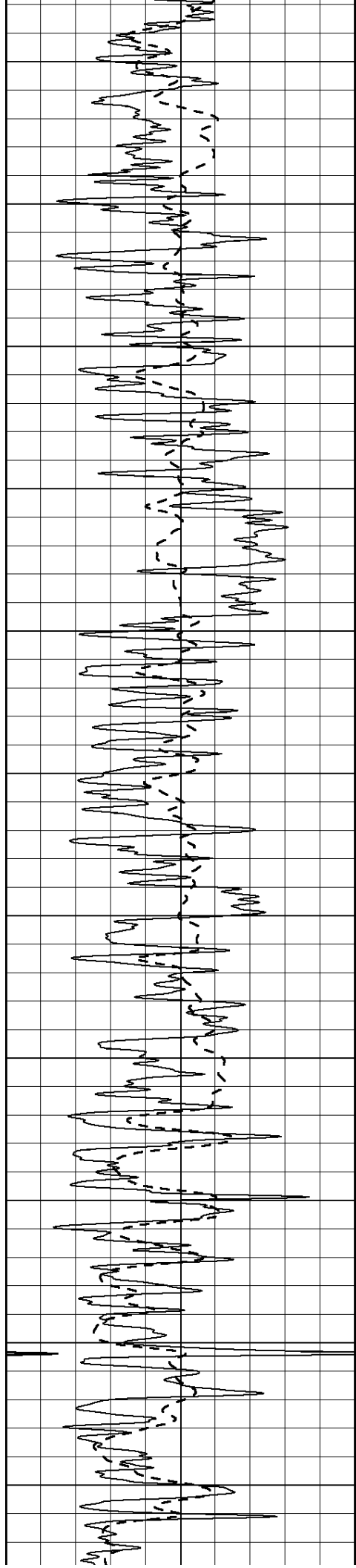












3200

3250

3300

3350

3400

3450

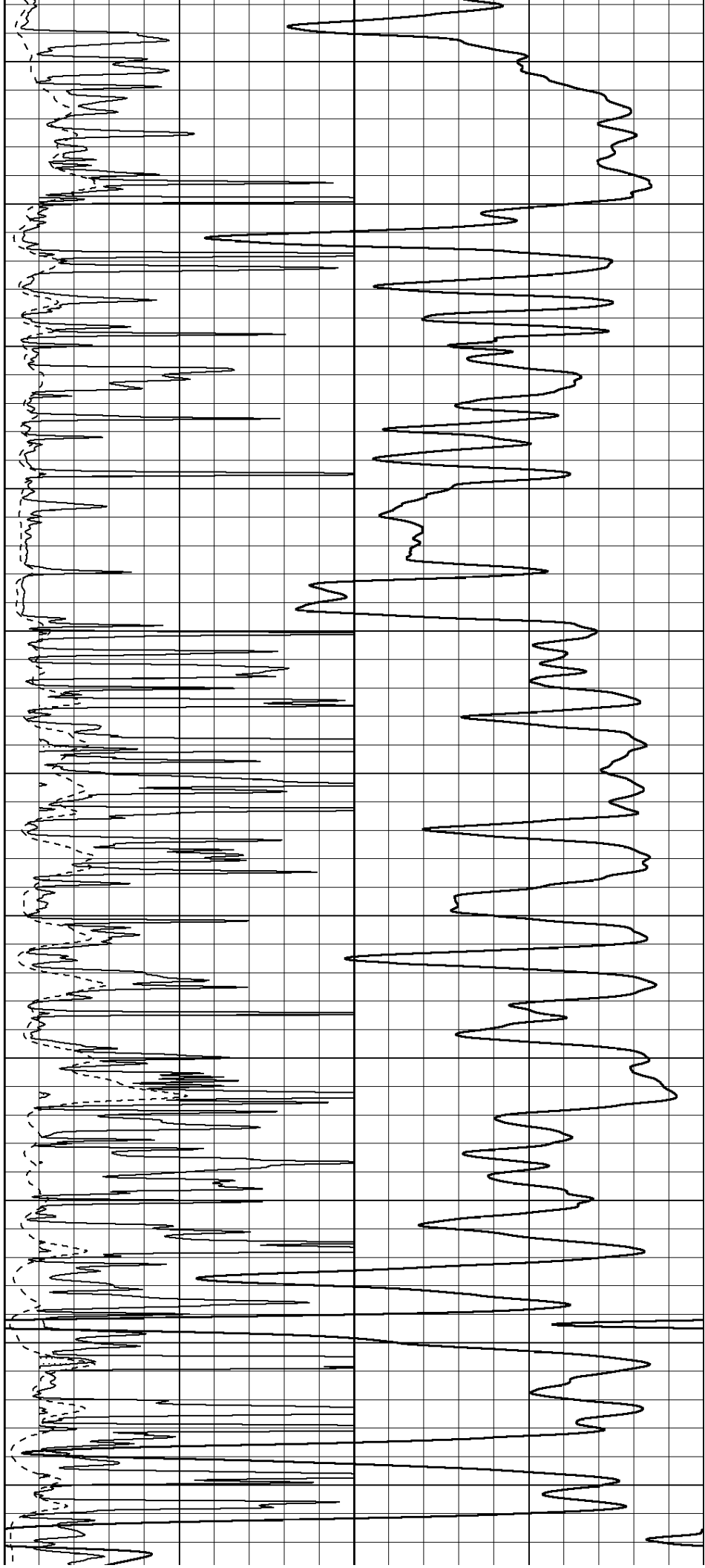
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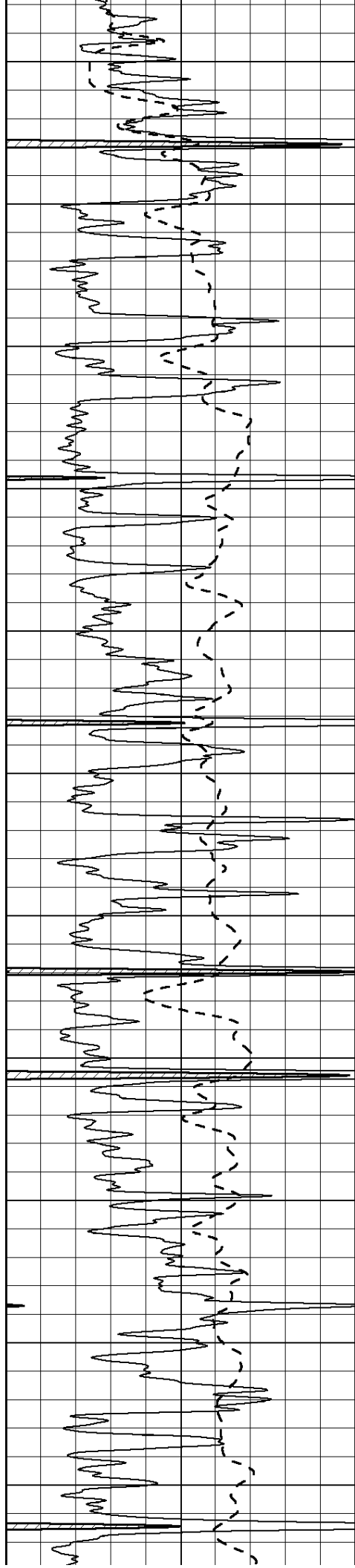
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3600

3650

3700





3750

3800

3850

3900

3950

4000

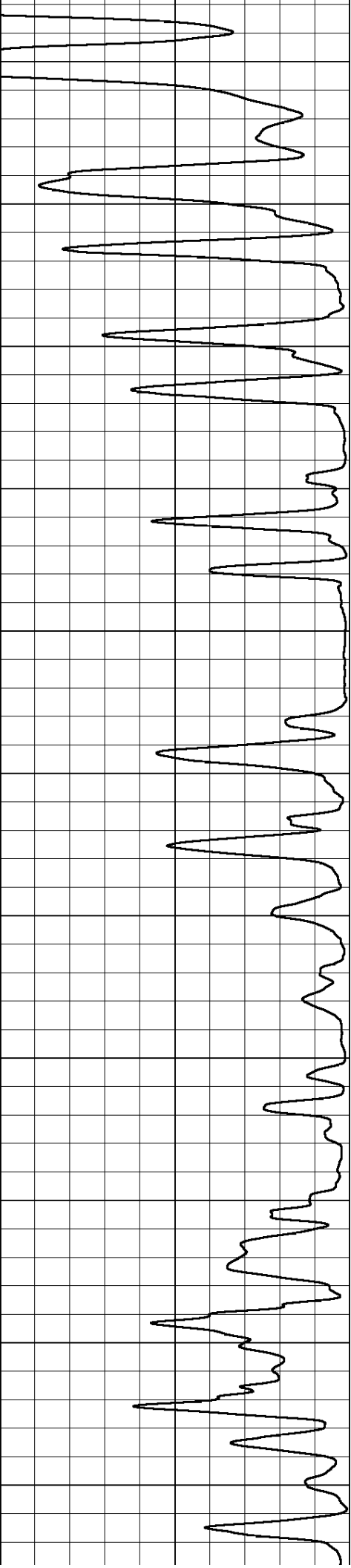
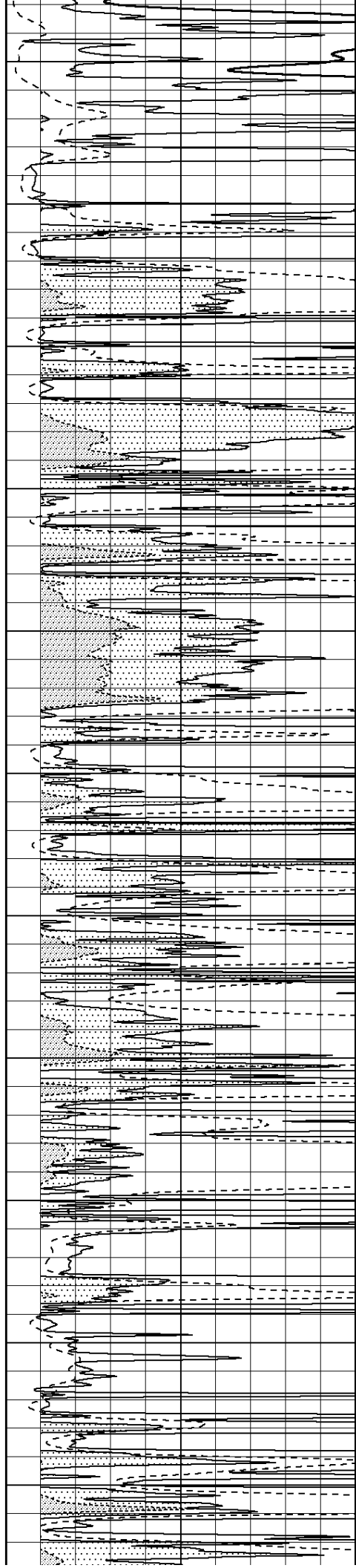
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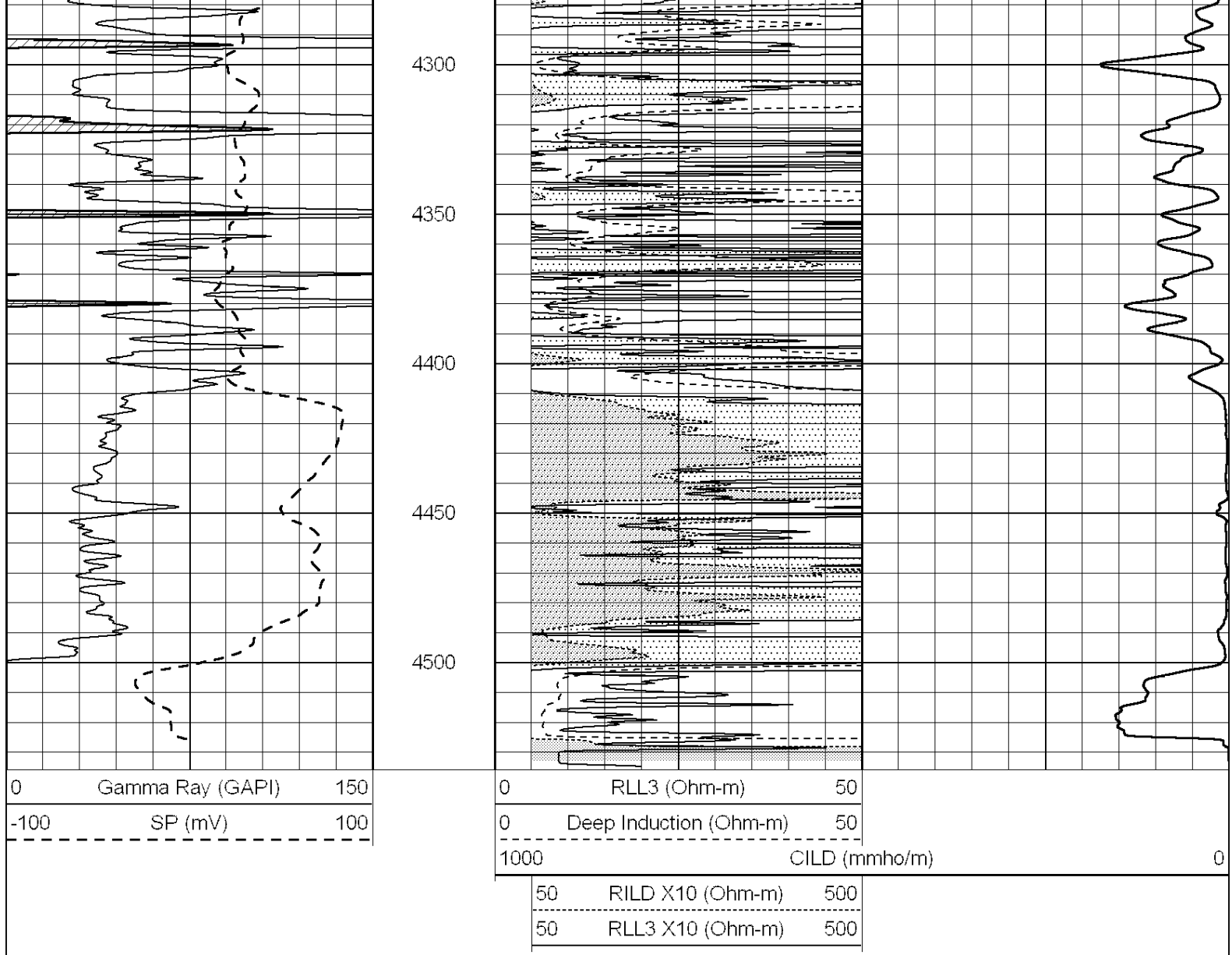
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4150

4200

4250

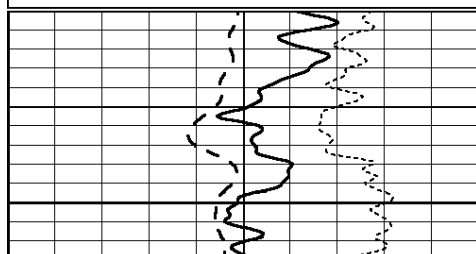




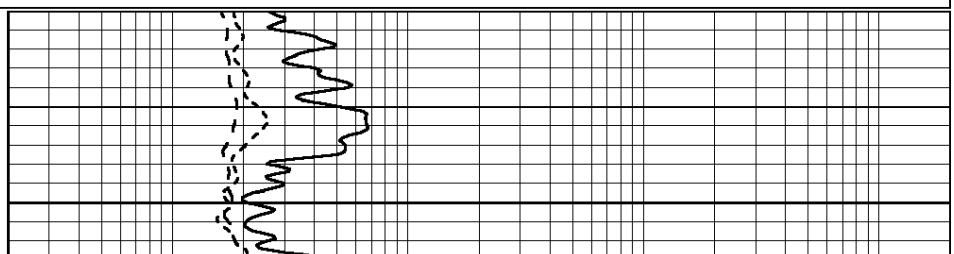
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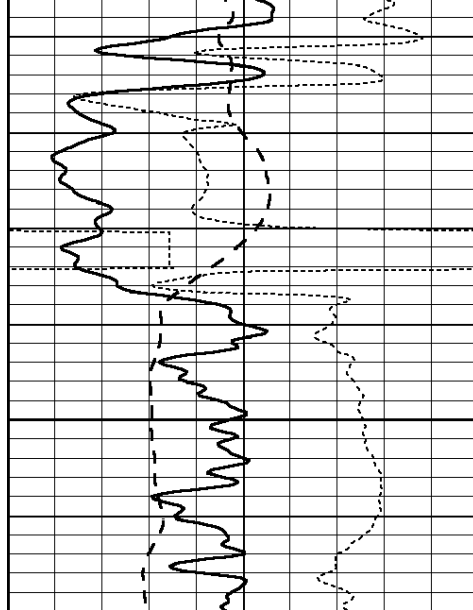
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 Dataset Pathname: pass3.2
 Presentation Format: _dil
 Dataset Creation: Sat Jul 20 19:22:16 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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



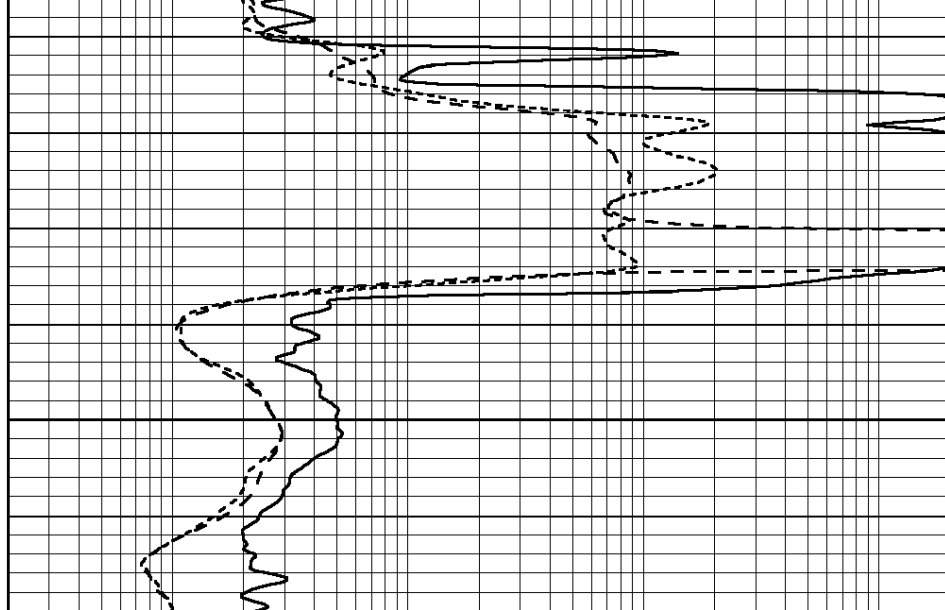
2100





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

2150



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



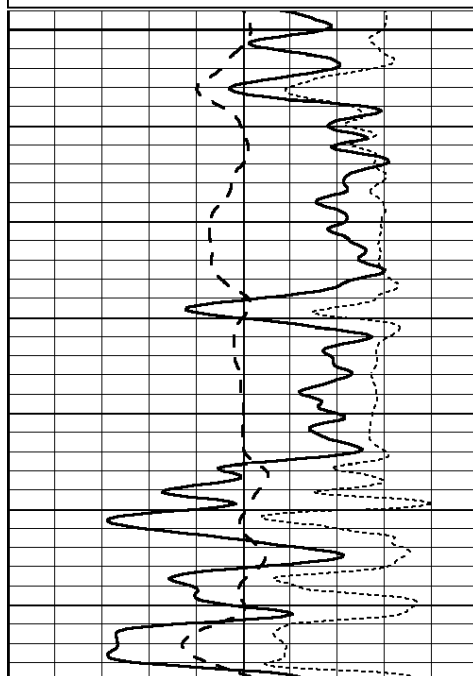
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MAIN SECTION

Database File: 011274ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Sat Jul 20 19:16:10 2013
 Charted by: Depth in Feet scaled 1:240

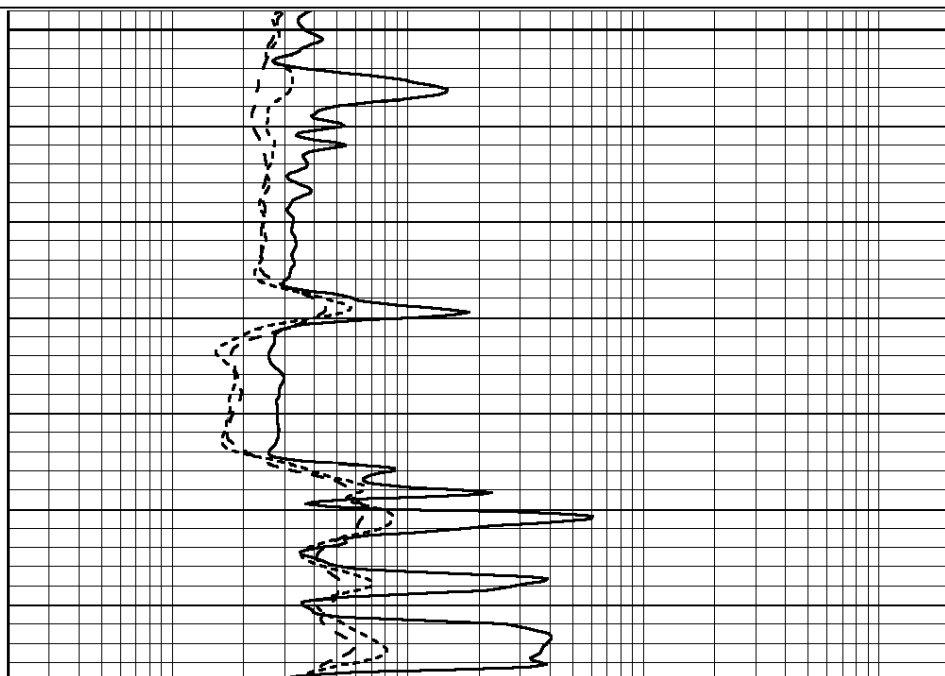
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

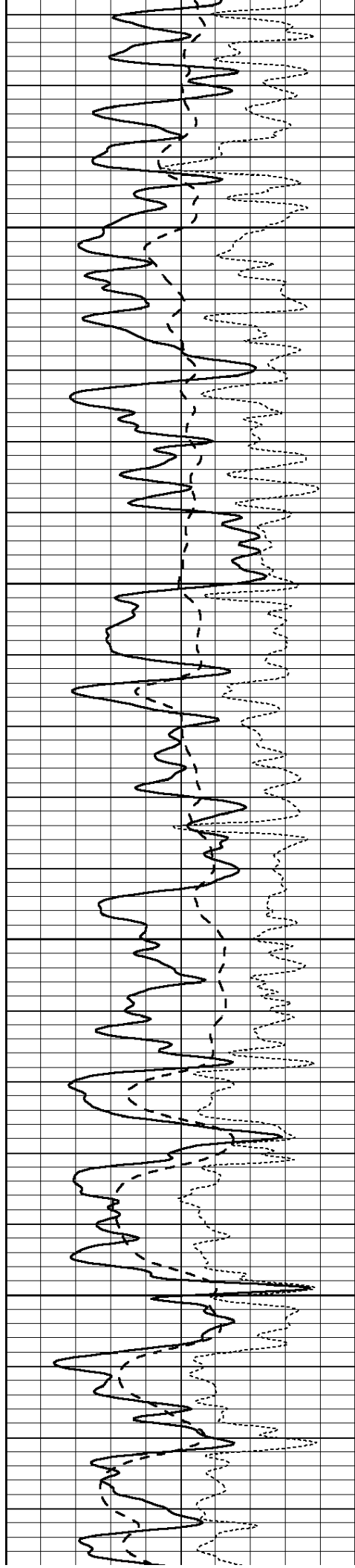
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3350

3400



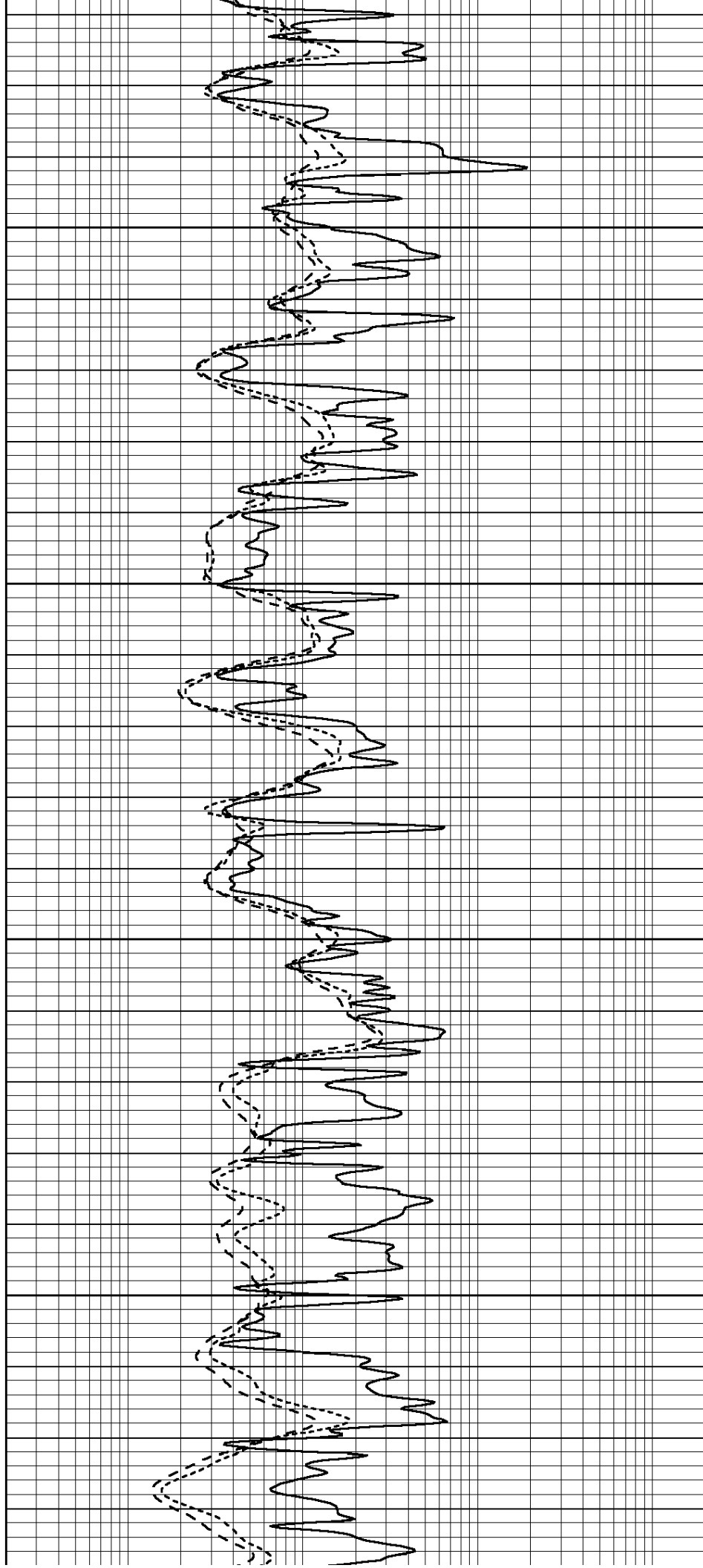


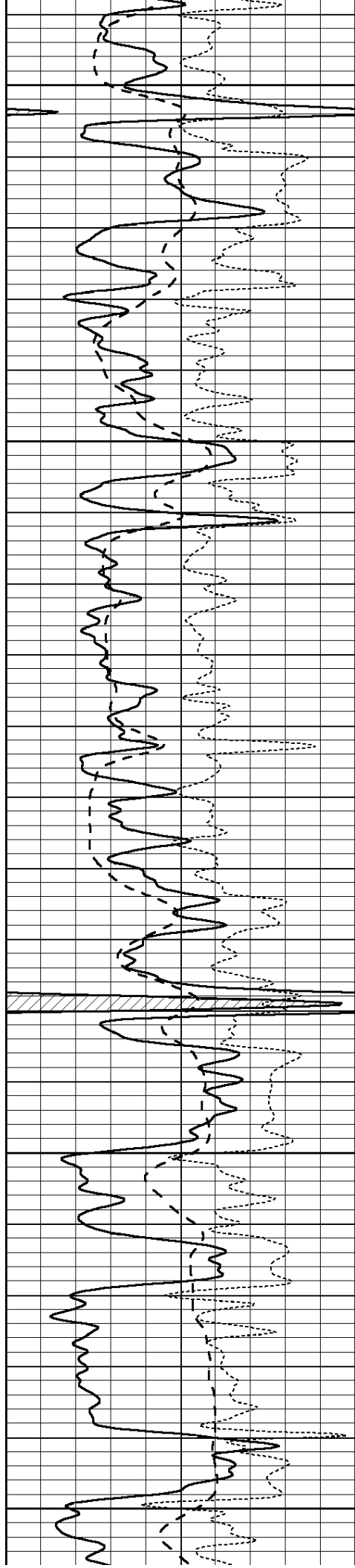
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3500

3550

3600





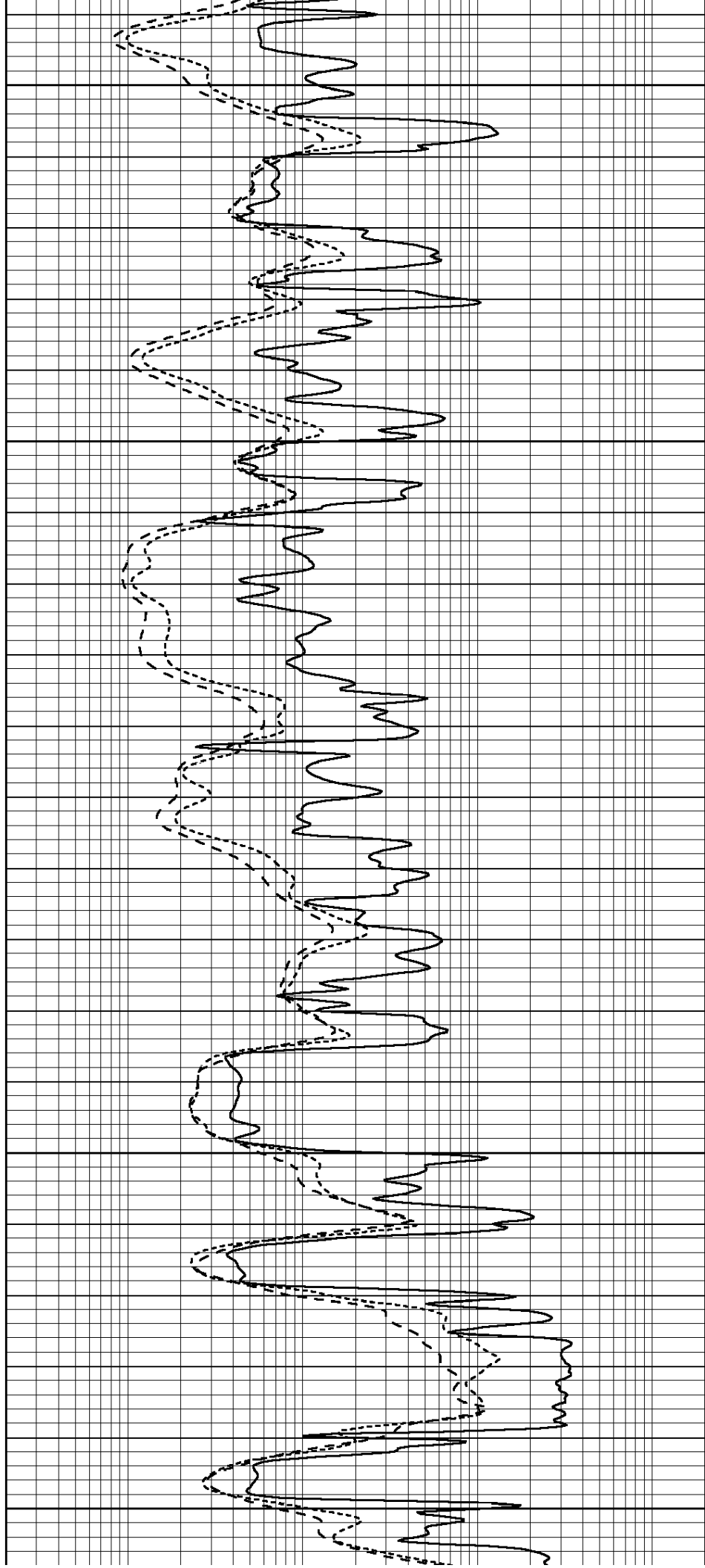
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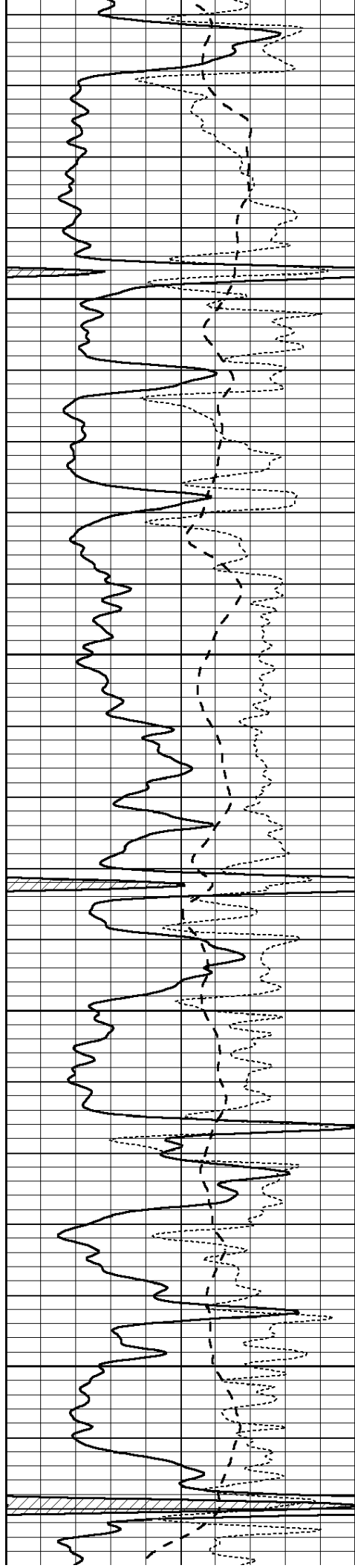
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3750

3800

3850



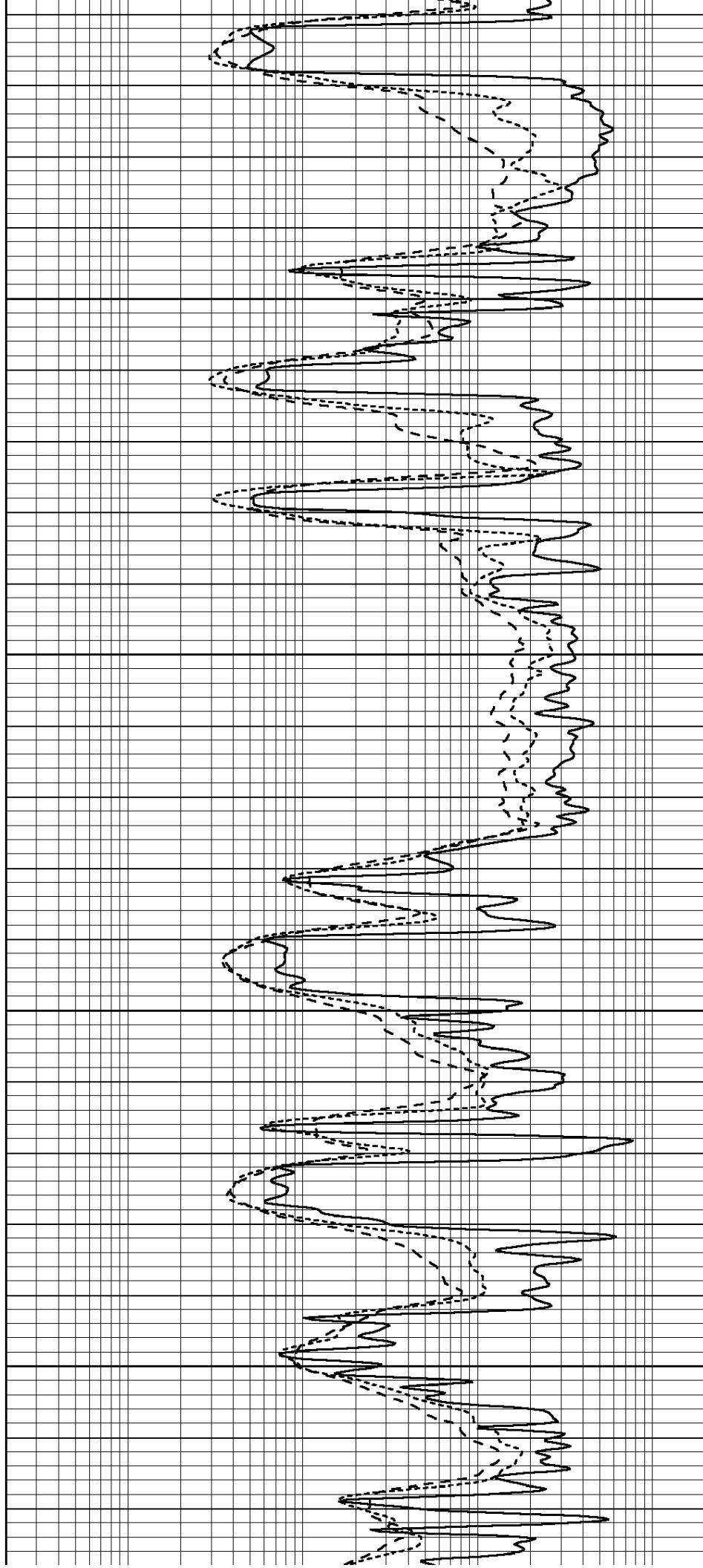


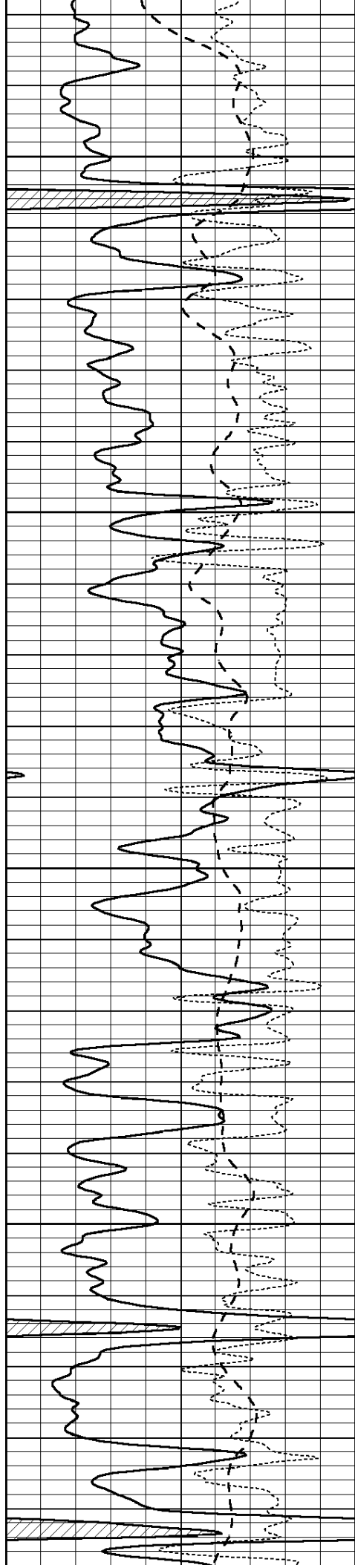
3900

3950

4000

4050



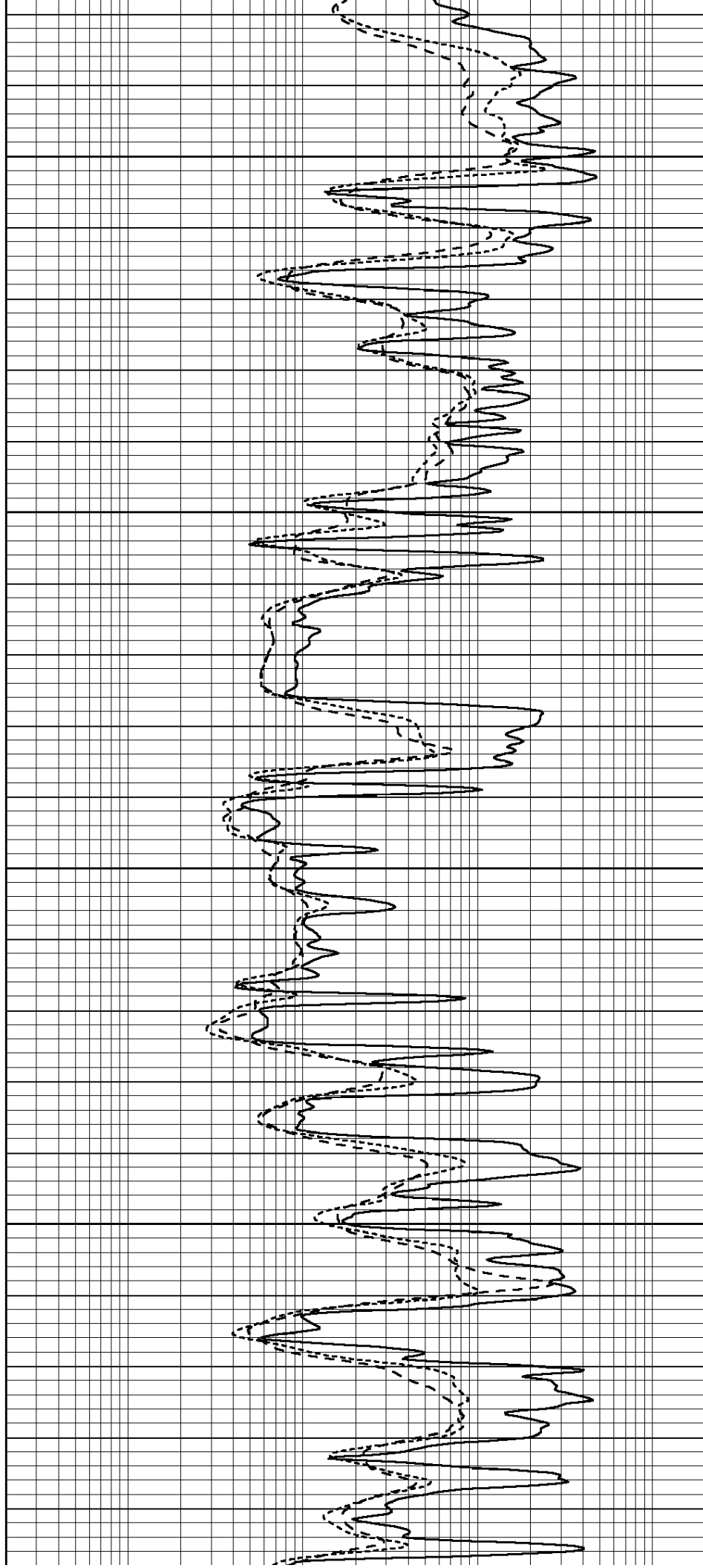


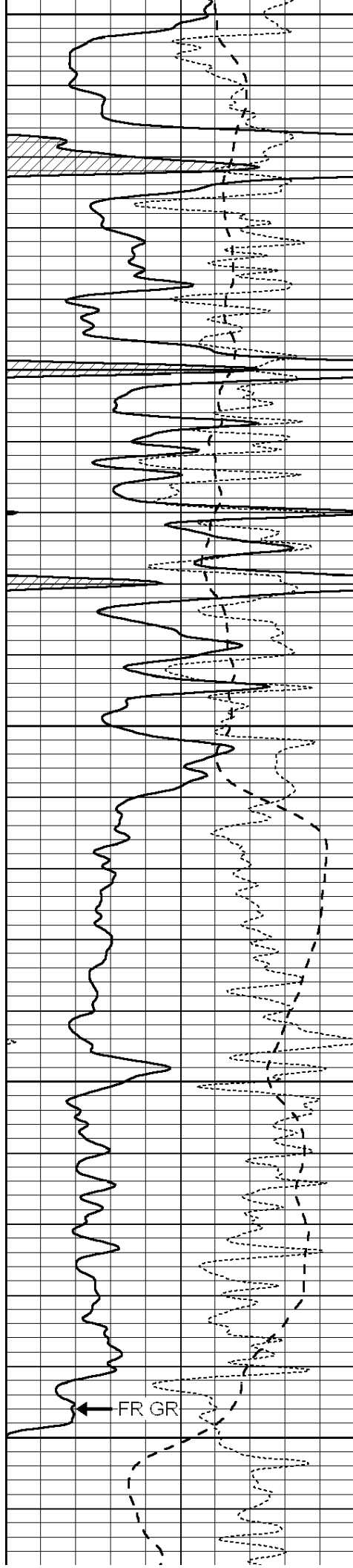
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4150

4200

4250





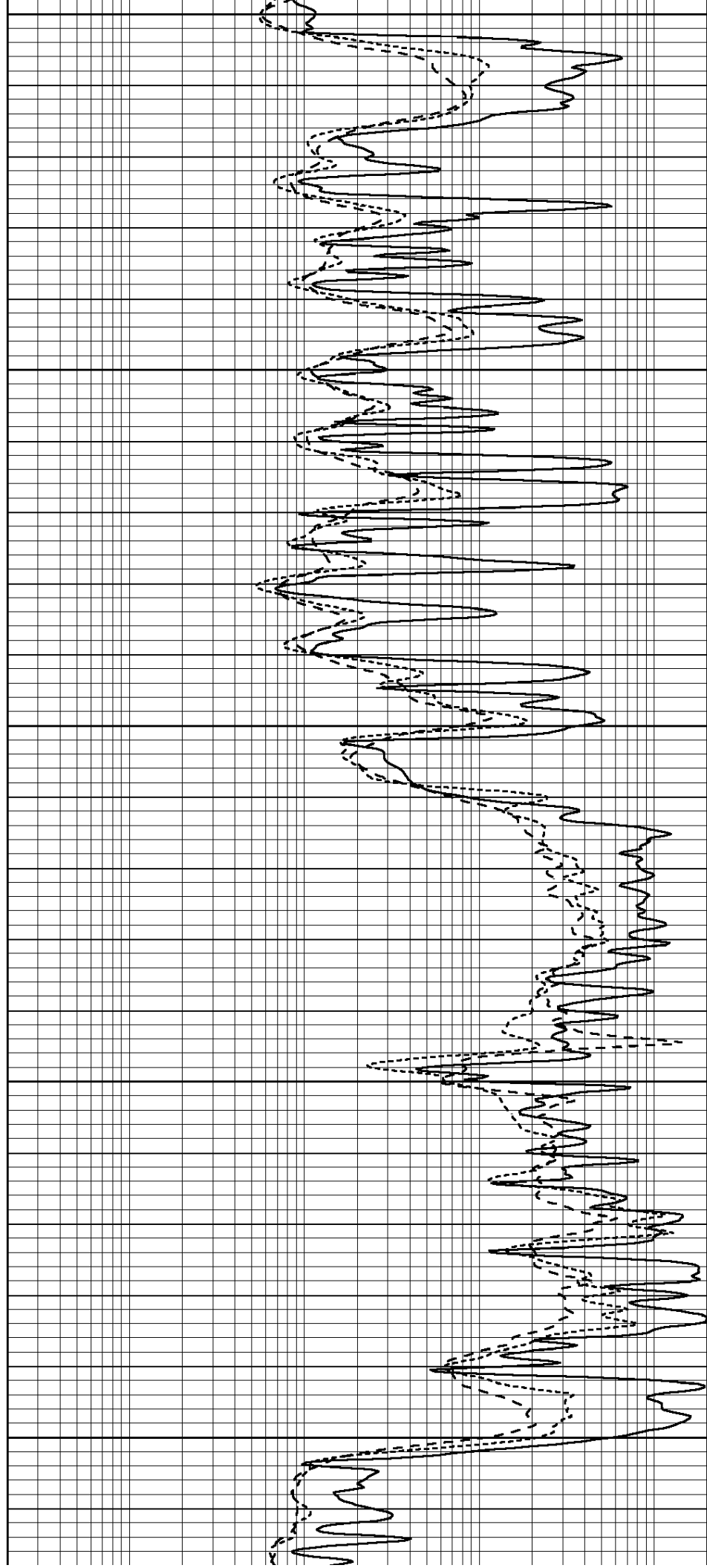
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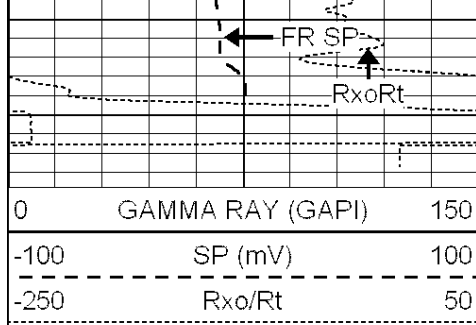
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4400

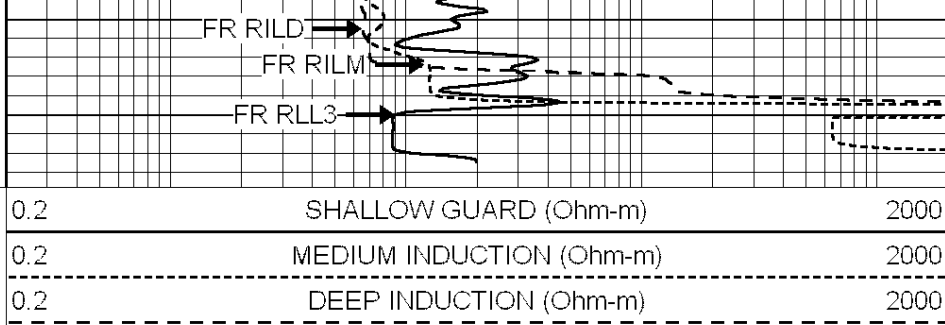
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4500





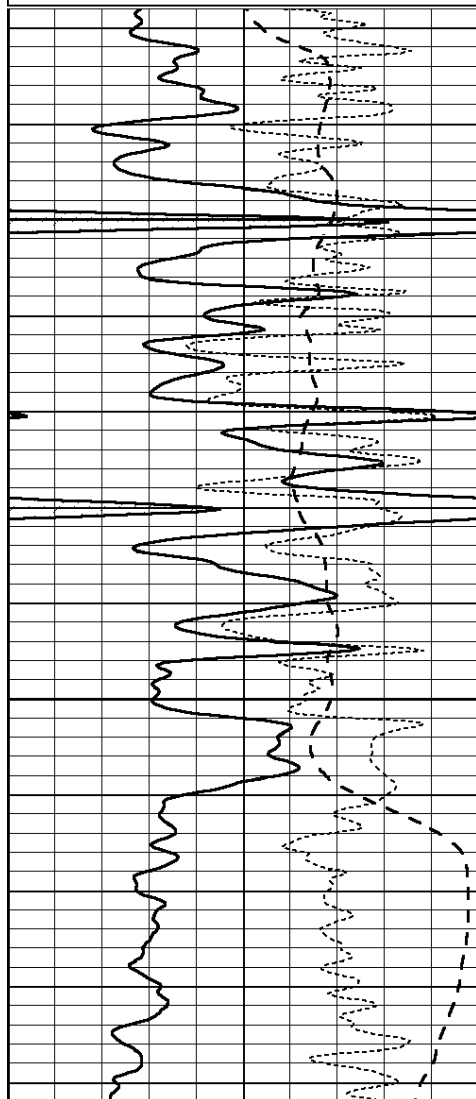
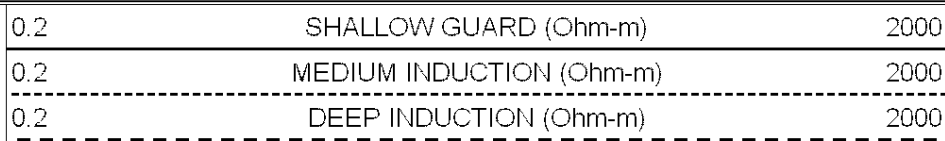
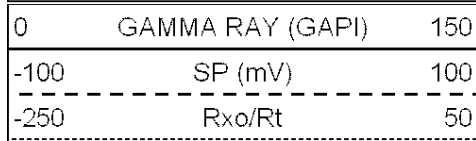
LTD 4532



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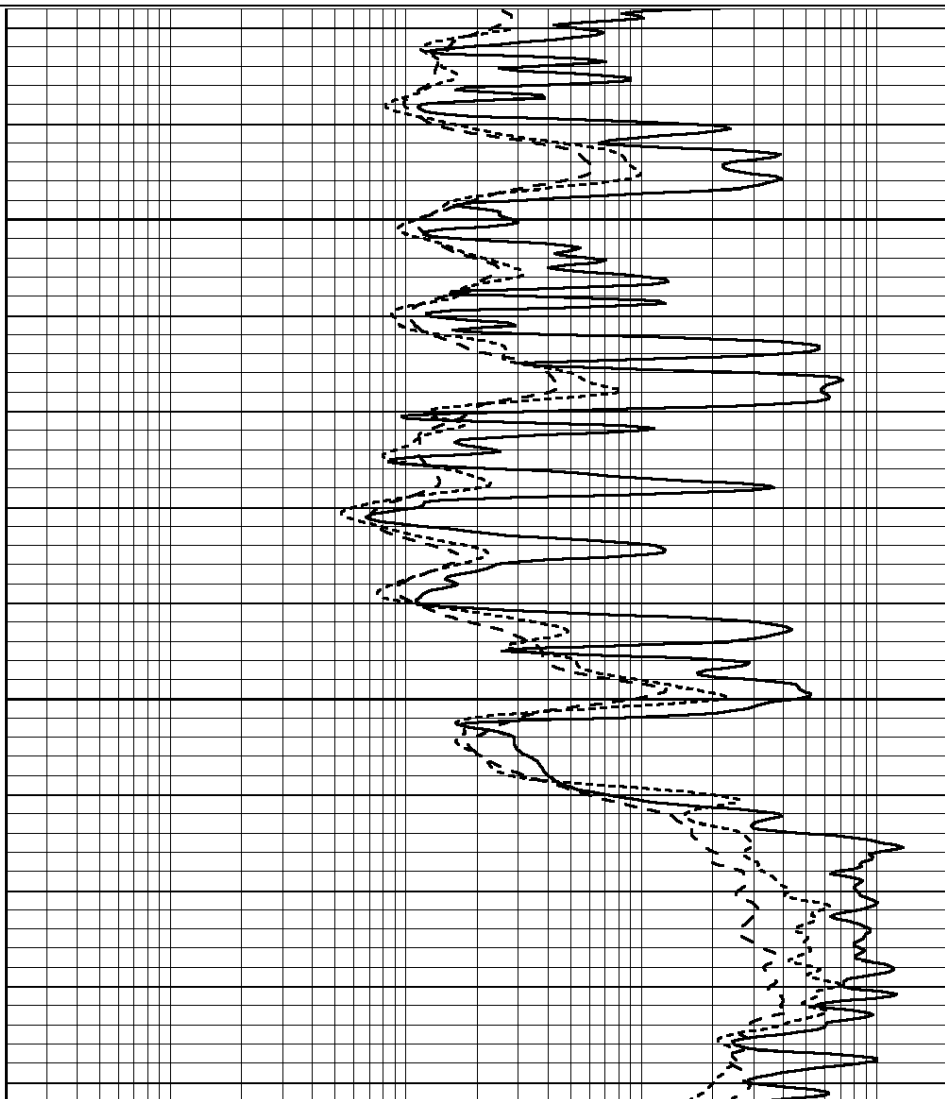
REPEAT SECTION

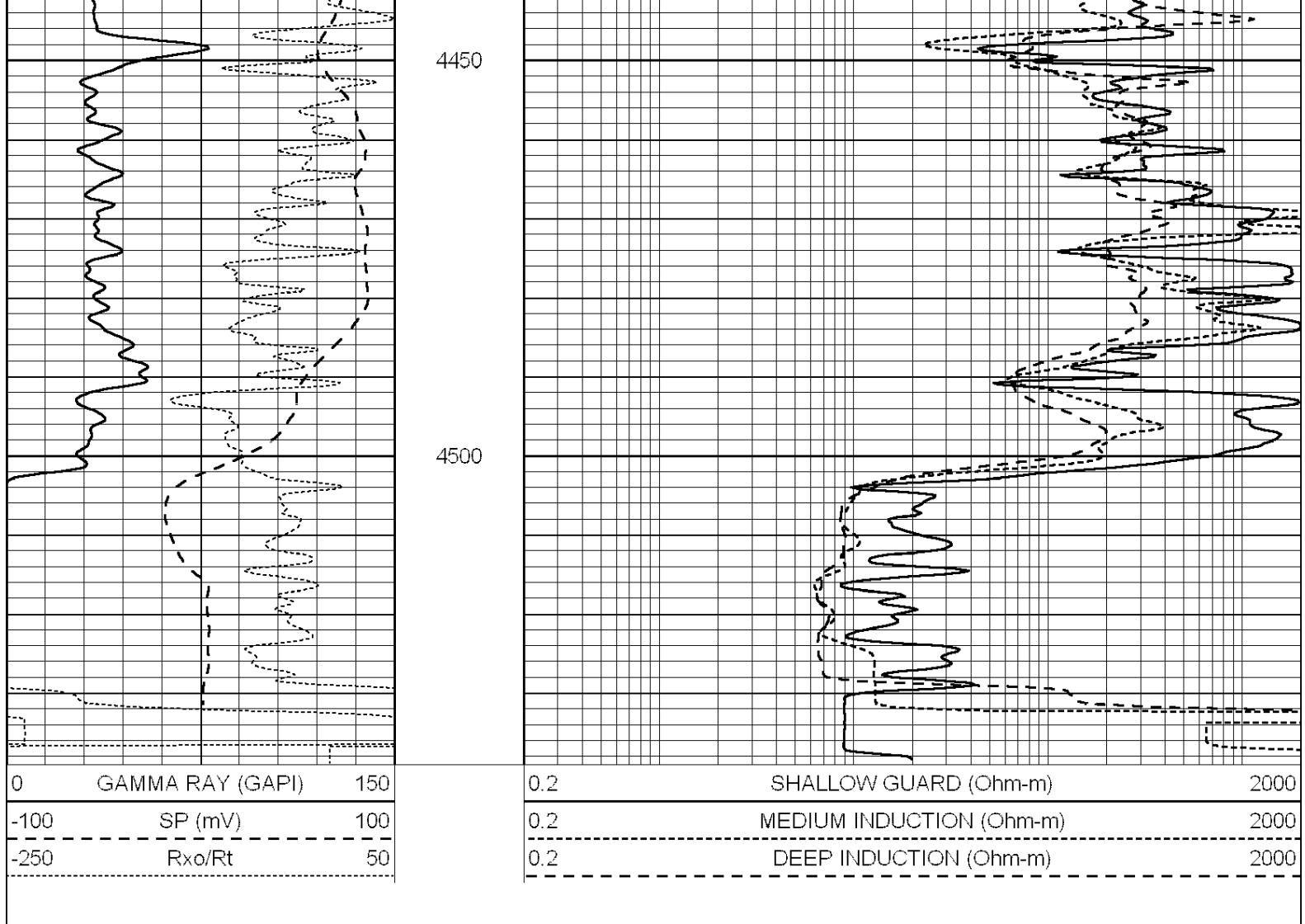
Database File: 011274ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: _dil
 Dataset Creation: Sat Jul 20 18:57:56 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



4350

4400





Calibration Report									
Database File:		011274ddn.db							
Dataset Pathname:		pass2.1							
Dataset Creation:		Sat Jul 20 18:57:56 2013 by Calc Open-Cased 090629							
Dual Induction Calibration Report									
Serial-Model:		PROBE8-DILG							
Surface Cal Performed:		Fri Aug 01 06:33:19 2008							
Downhole Cal Performed:		Mon Jul 28 11:08:27 2008							
After Survey Verification Performed:		Mon Jul 28 11:08:27 2008							
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730	
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619	
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739	
Downhole Calibration									
		Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	V	0.014	400.000	mmho/m	1.000	0.000	
Medium	0.000	0.000	V	0.014	464.000	mmho/m	1.000	0.000	

Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		
After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		
Compensated Density Calibration Report								
Serial-Model:				GEAR3-GEARHART				
Source / Verifier:				143 / 143				
Master Calibration Performed:				Tue May 28 03:33:01 2013				
Master Calibration								
	Density			Far Detector		Near Detector		
Magnesium	1.710	g/cc		971.18		557.33	cps	
Aluminum	2.600	g/cc		212.31		367.26	cps	
	Spine Angle = 74.66			Density/Spine Ratio = 0.564				
	Size			Reading				
Small Ring	8.00	in		4.29	V			
Large Ring	14.00	in		6.24	V			
Compensated Neutron Calibration Report								
Serial Number:				6I				
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:			#8					
Tool Model:			OPEN					
Performed:			Mon Jun 13 16:56:43 2011					
Calibrator Value:			150.0	GAPI				
Background Reading:			0.0	cps				
Calibrator Reading:			175.0	cps				
Sensitivity:			0.8371	GAPI/cps				