



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company	DOWNING-NELSON OIL CO INC.		
Well	CARL QUINT #1-3		
Field	WILDCAT		
County	GRAHAM	State	KANSAS
Location:	API # : 15-065-23915-00-00		Other Services CNL/CDL MEL/SONIC
Permanent Datum Log Measured From Drilling Measured From		2570' FNL & 1100' FEL SW - SW - SE - NE SEC 3 TWP 9S RGE 23W	Elevation K.B. 2206 D.F. 2204 G.L. 2198
Date	4/9/13		
Run Number	ONE		
Depth Driller	3788		
Depth Logger	3789		
Bottom Logged Interval	3787		
Top Log Interval	00		
Casing Driller	8 5/8" @ 218		
Casing Logger	216		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,000 PPM	
Density / Viscosity	9.1/58		
pH / Fluid Loss	9.5/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.85 @ 79F		
Rmt @ Meas. Temp	0.64 @ 79F		
Rmc @ Meas. Temp	1.02 @ 79F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	0.59 @ 114F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	114F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	RON NELSON		

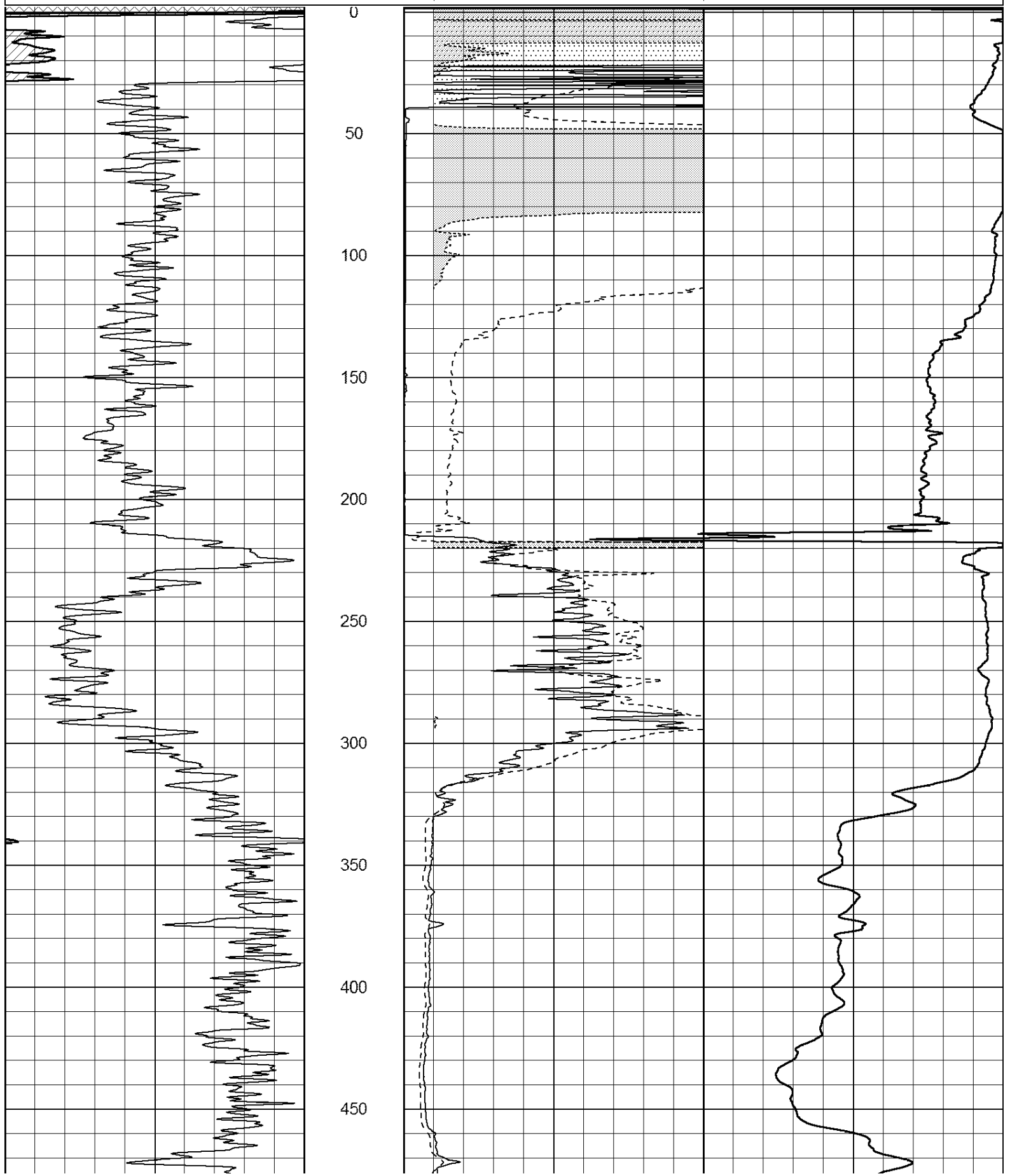
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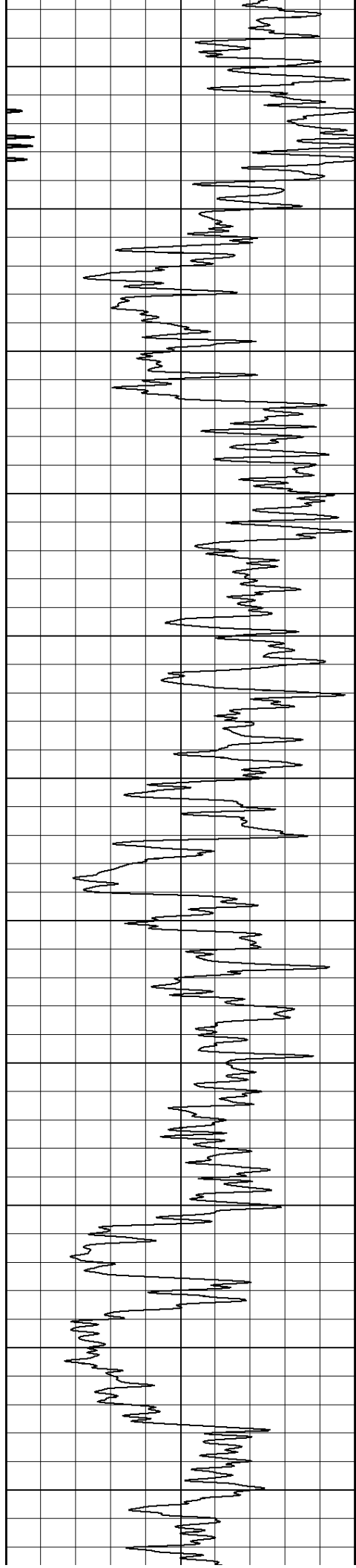
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

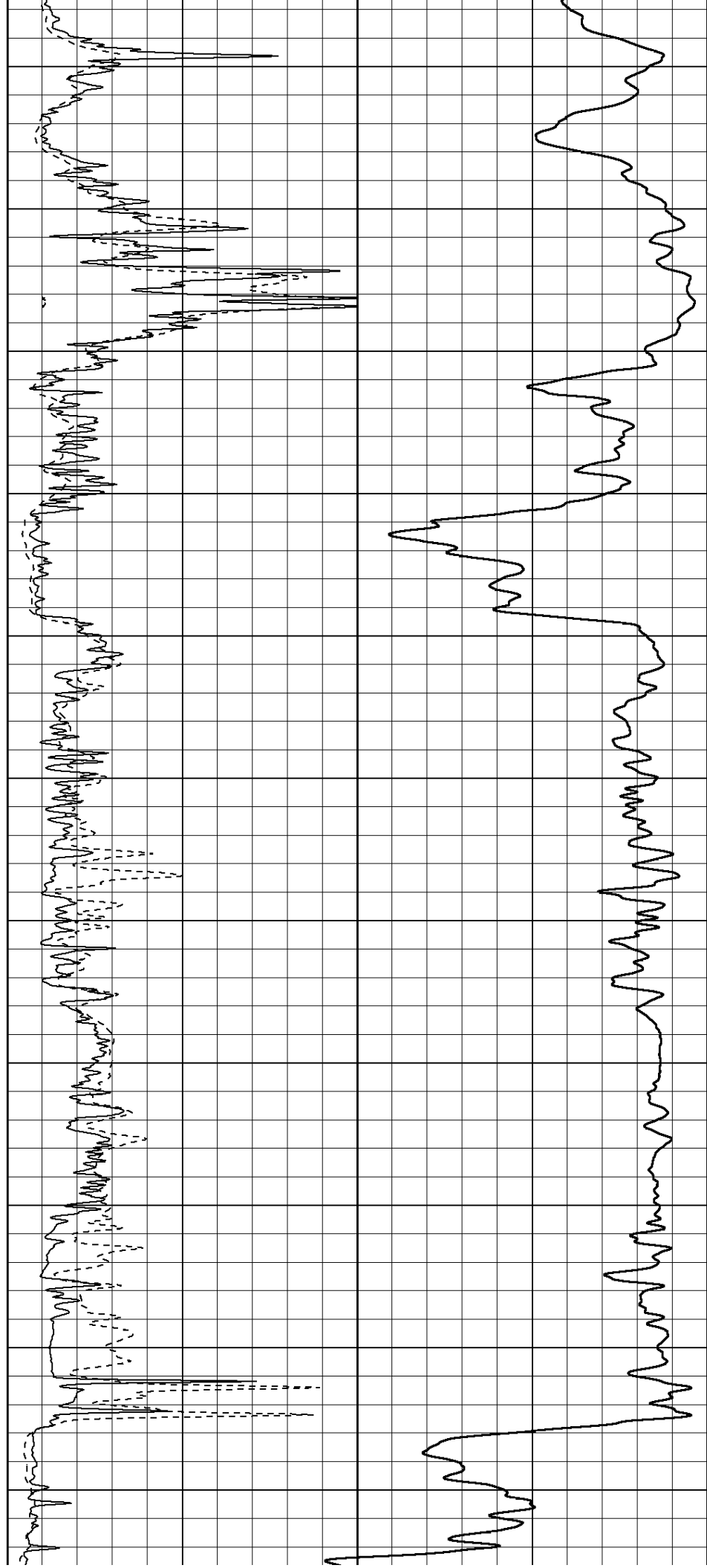
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
WAKEENEY, KS. - 21 MILES NORTH TO RD. M -1 WEST TO THE BEND SOUTH 1/2 MILE - WEST INTO

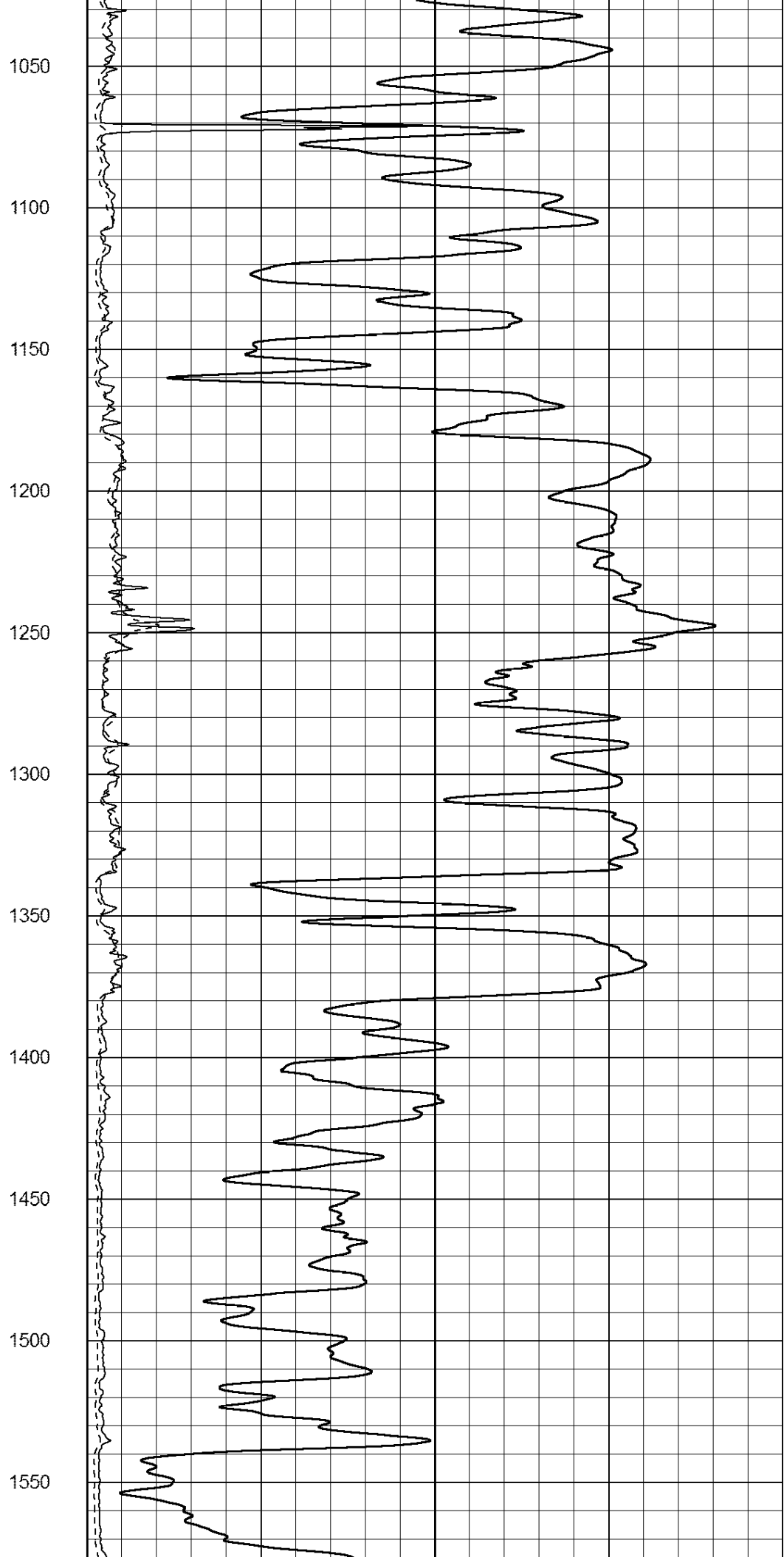
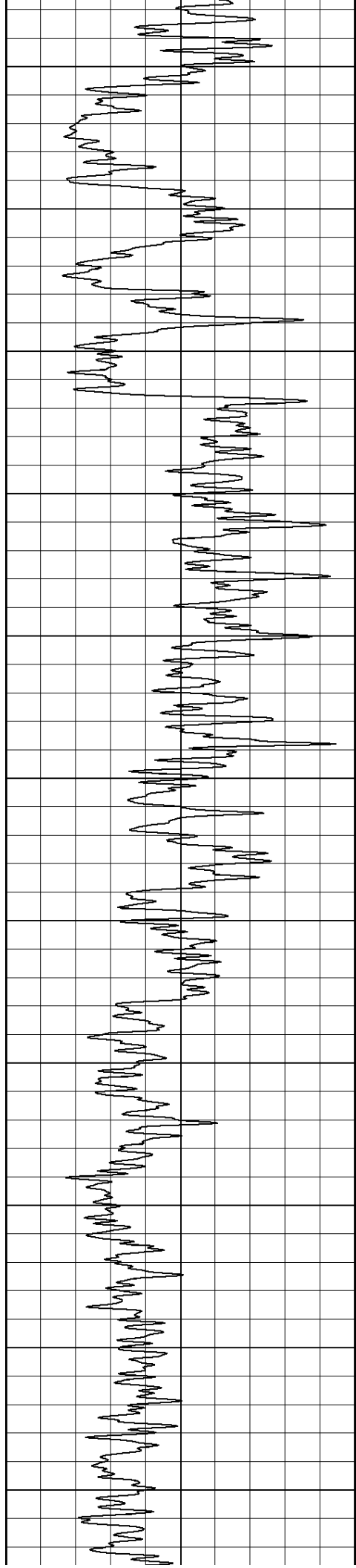
Charted by: Depth in feet scaled 1:500					
0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
			0	RILD (Ohm-m)	50
			1000	CILD (mmho/m)	
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500
			0		

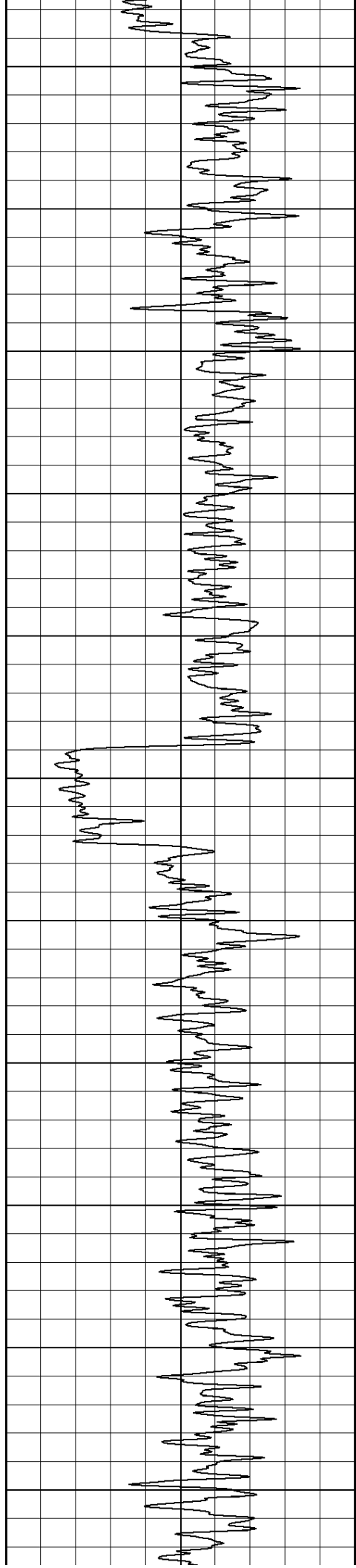




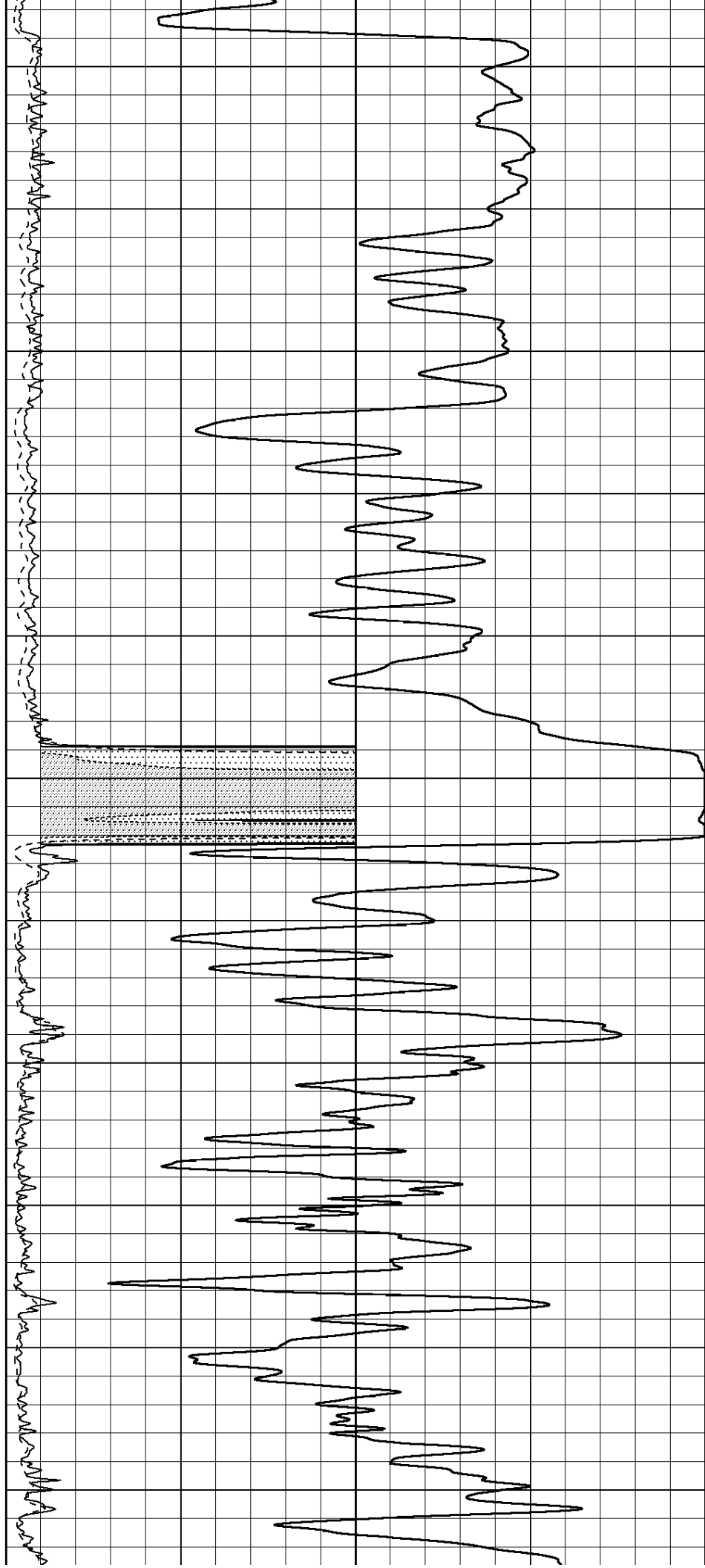
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550
600
650
700
750
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850
900
950
1000

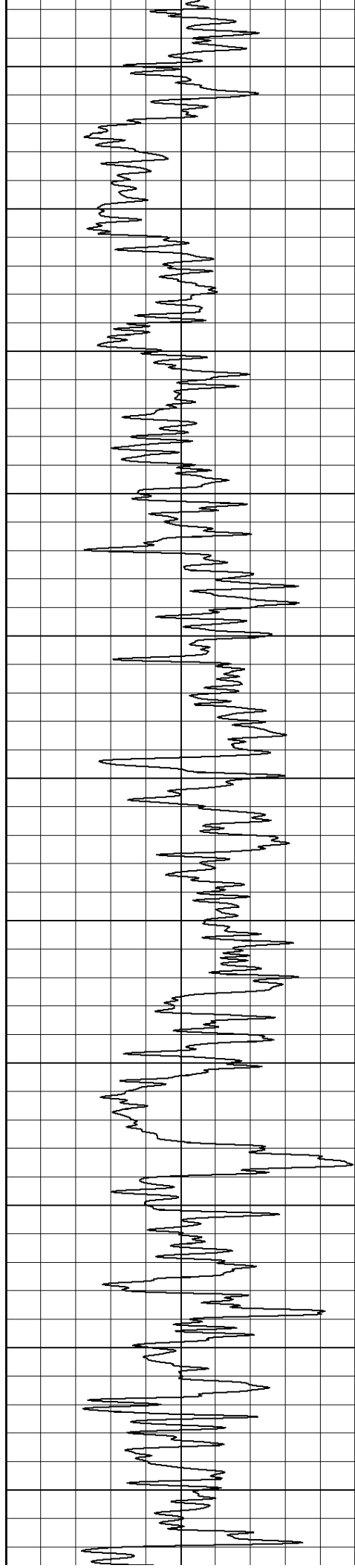






1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100





2150

2200

2250

2300

2350

2400

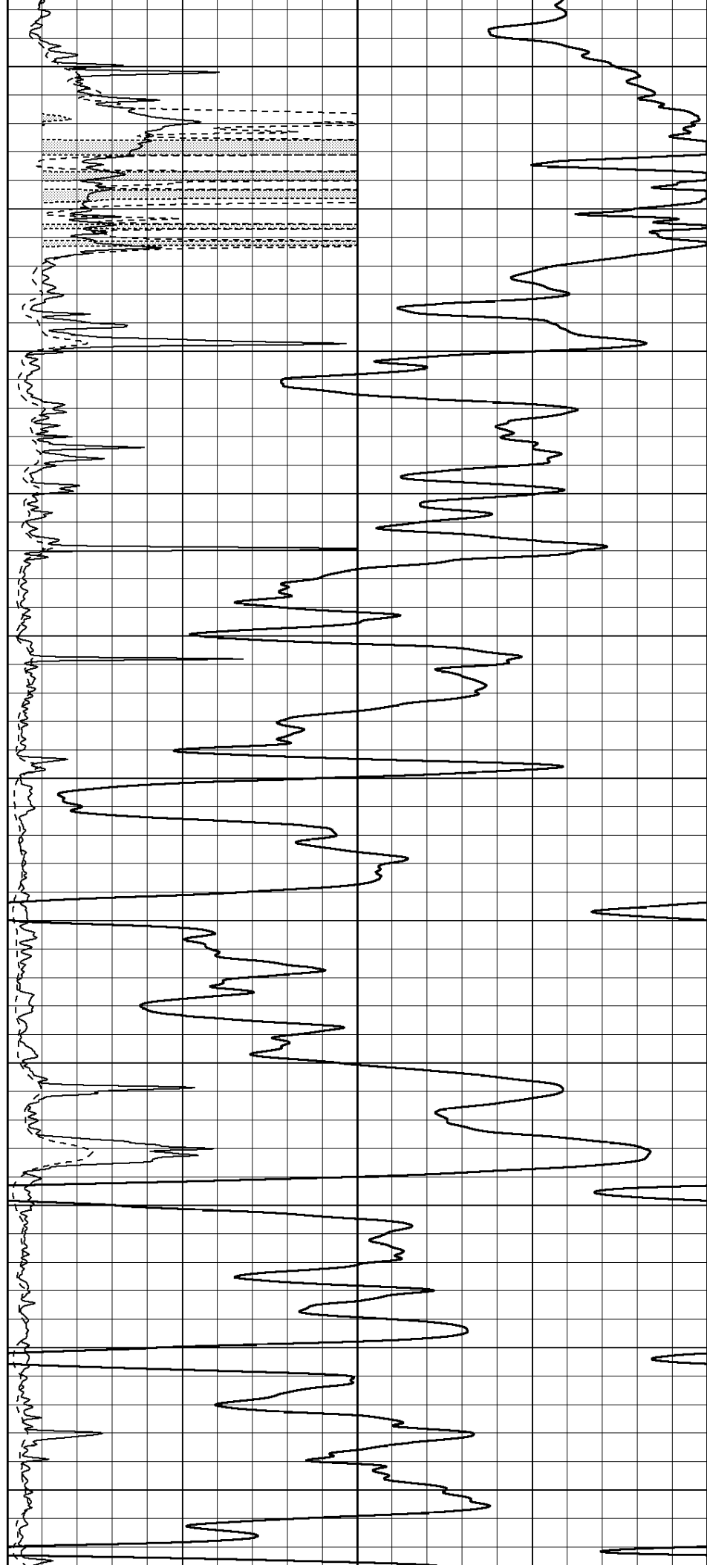
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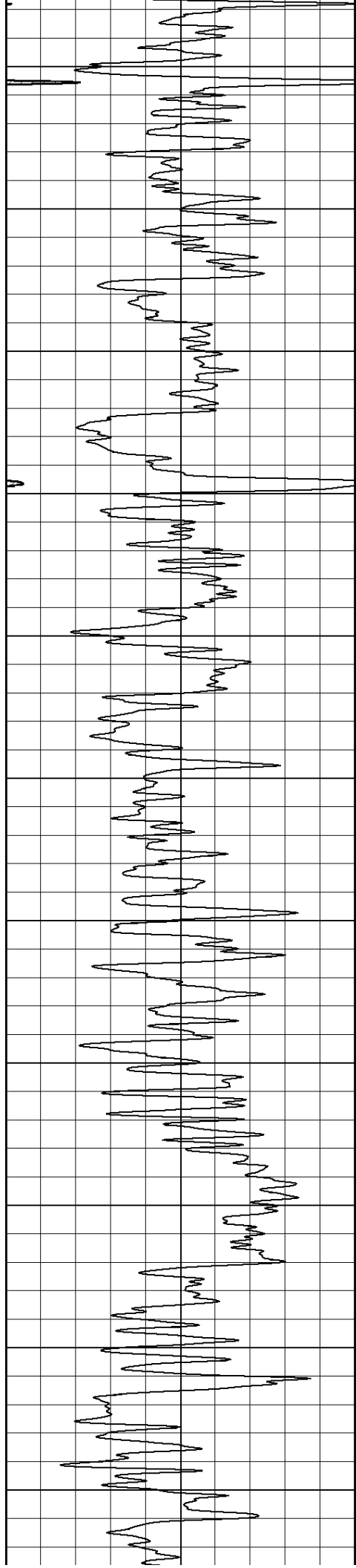
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2600

2650





2700

2750

2800

2850

2900

2950

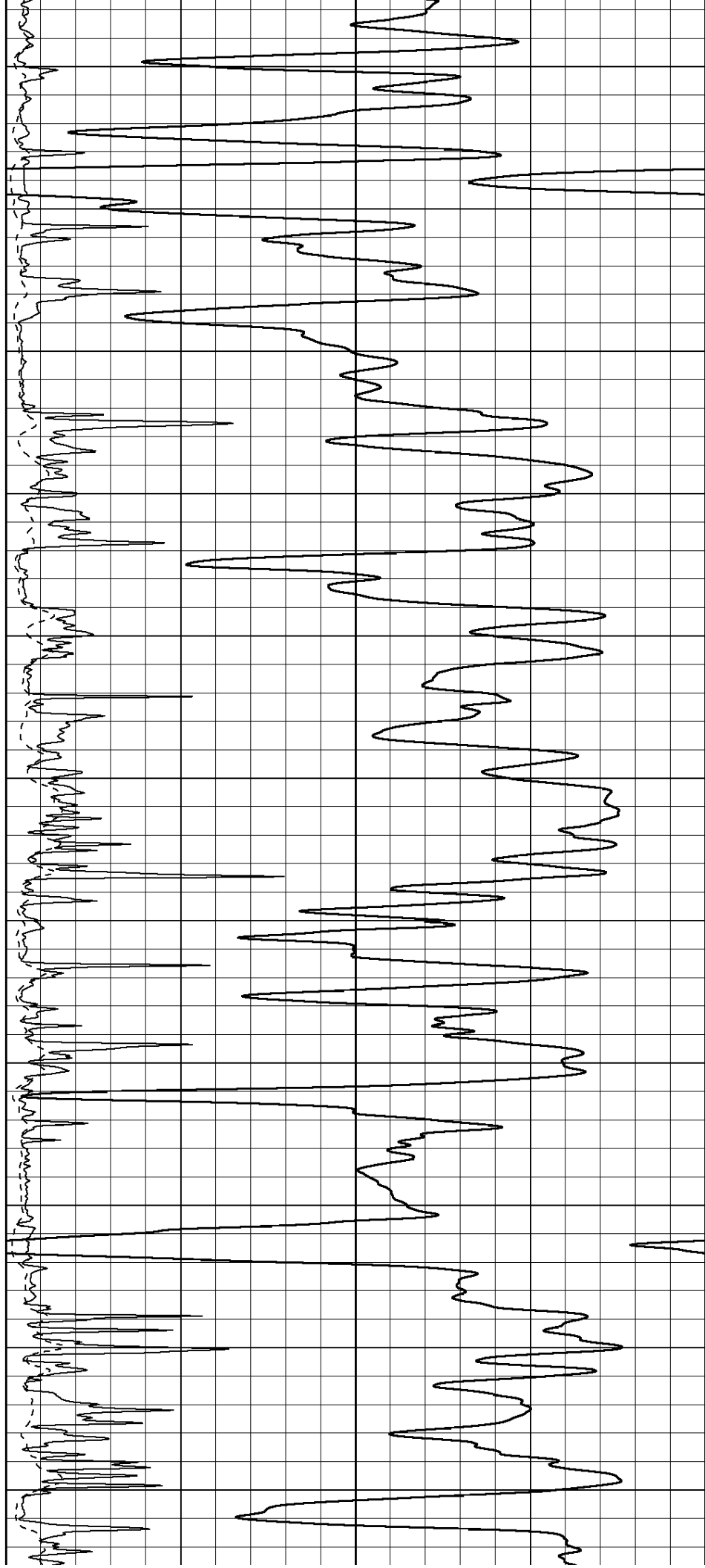
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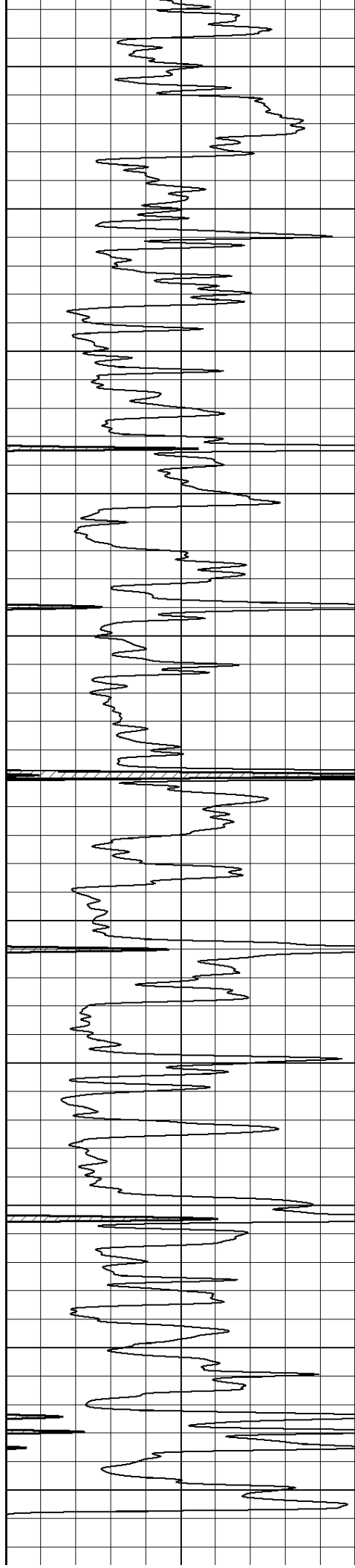
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3100

3150

3200





3250

3300

3350

3400

3450

3500

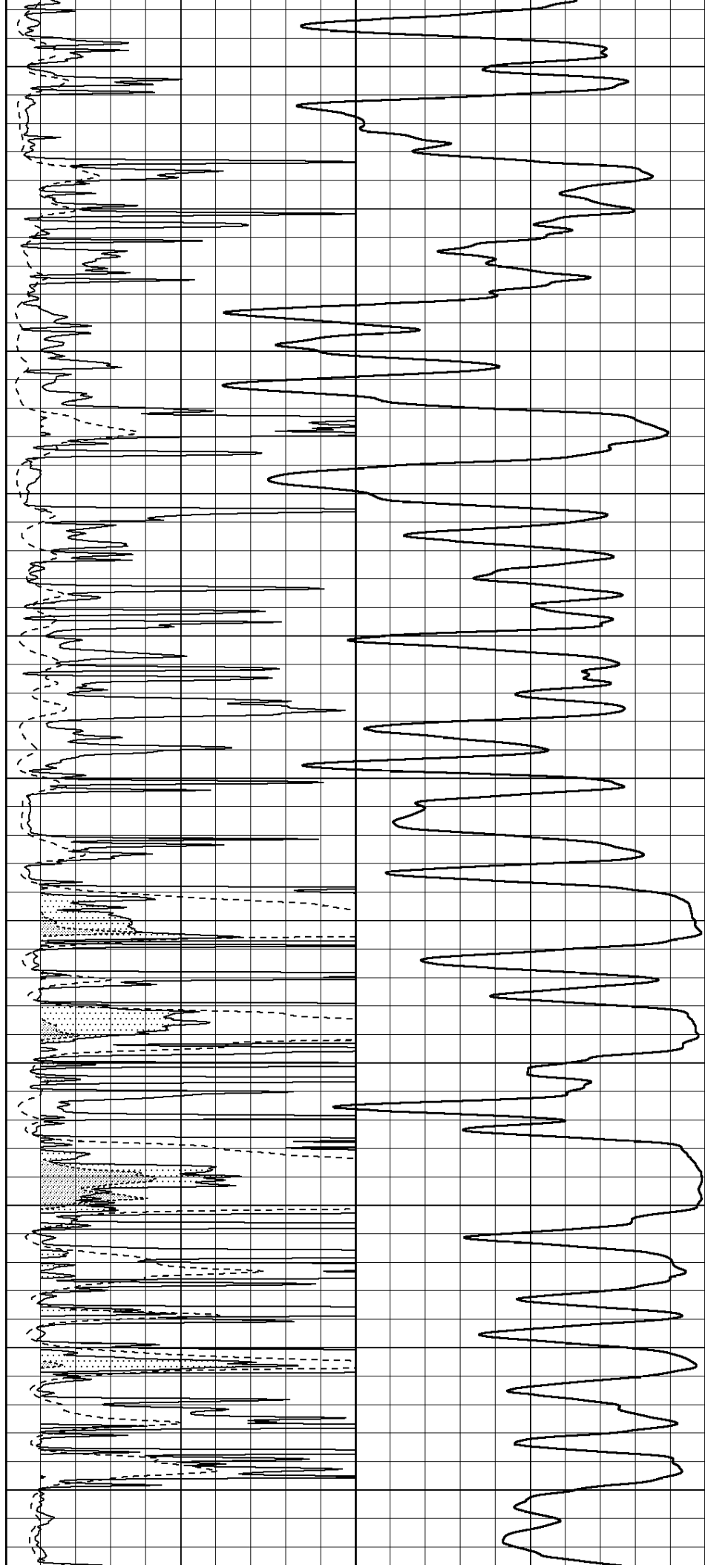
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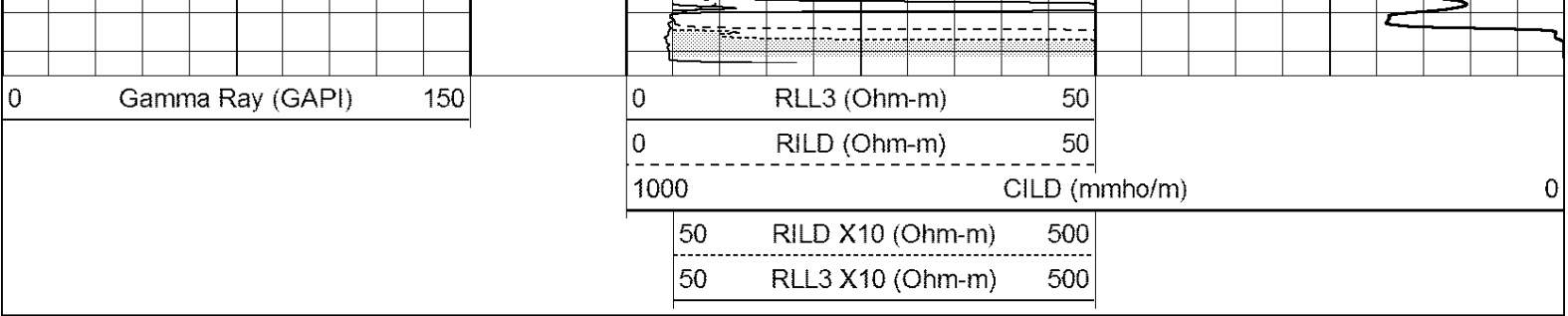
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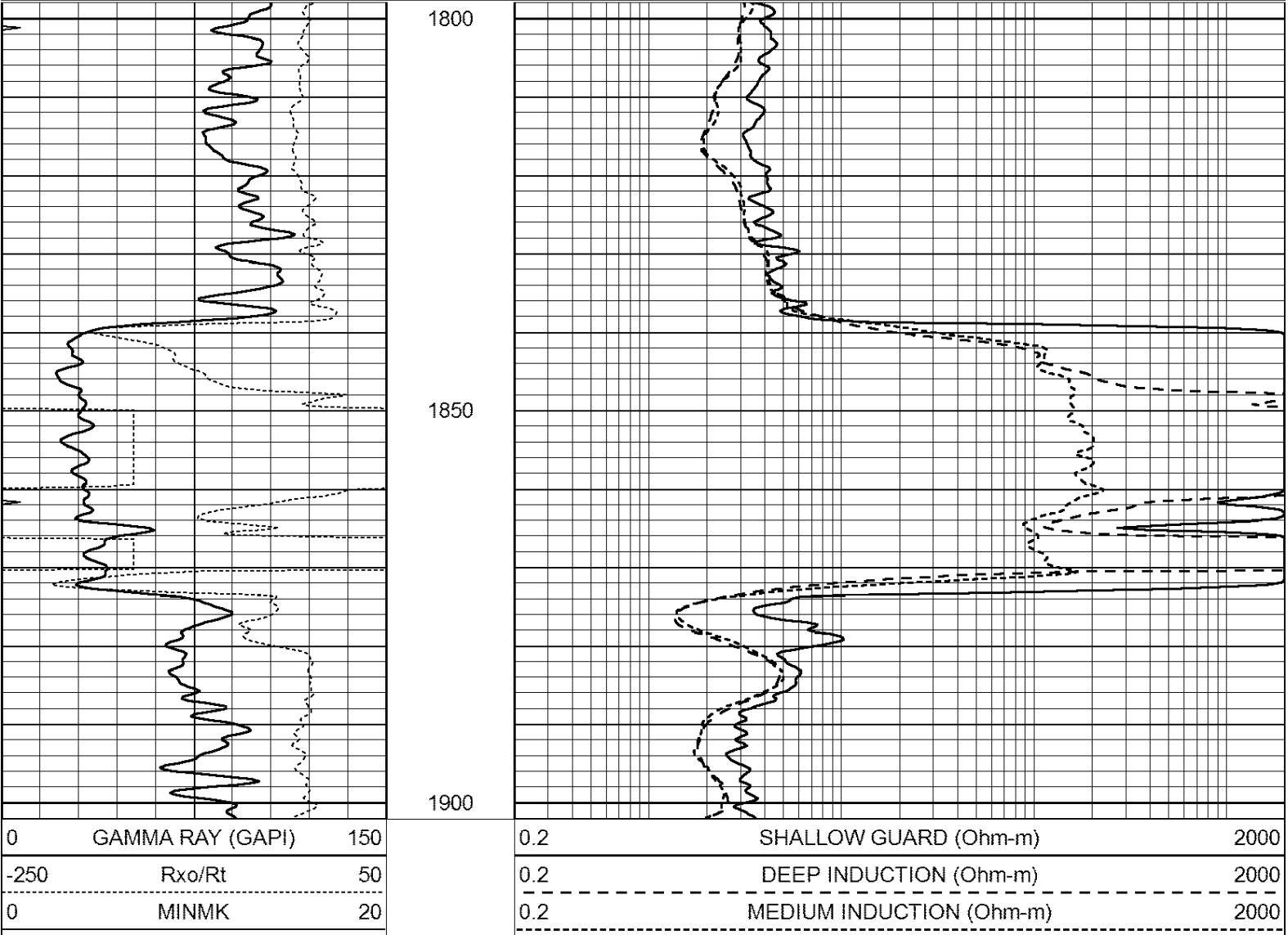
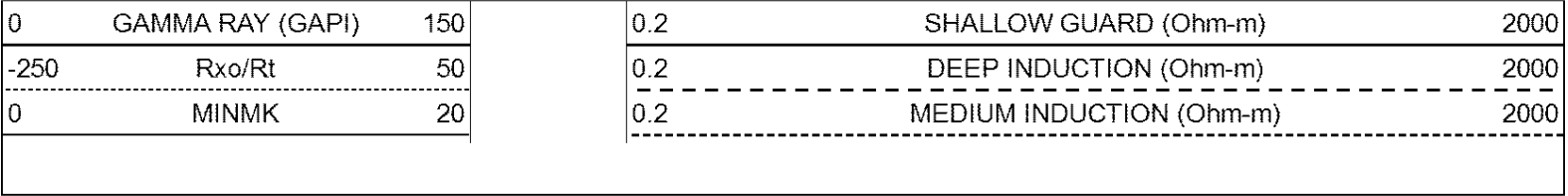
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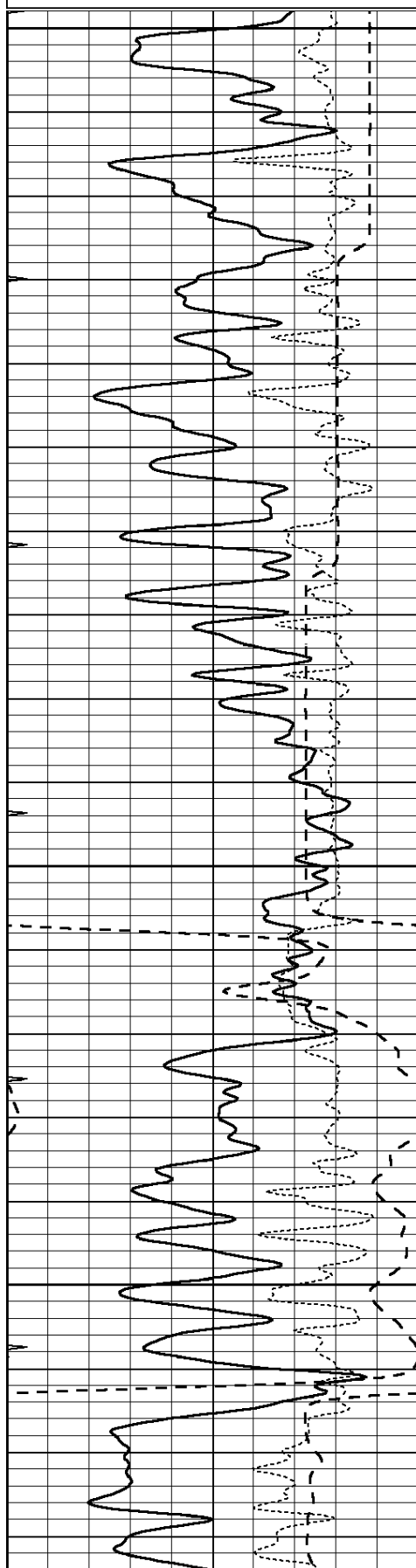
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Presentation Format: _dil
Dataset Creation: Tue Apr 09 14:11:15 2013
Charted by: Depth in Feet scaled 1:240



Database File: 010868ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil

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

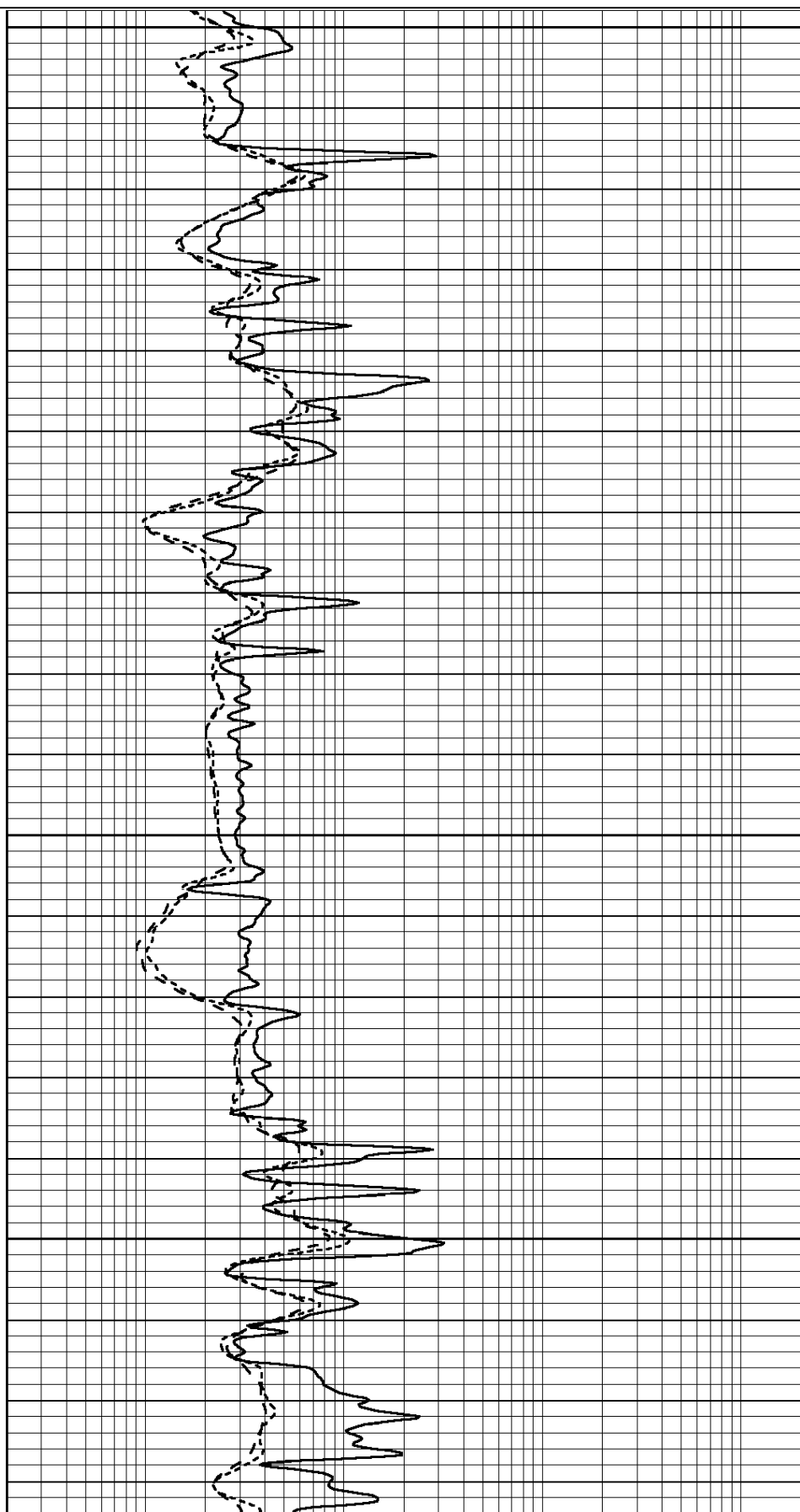


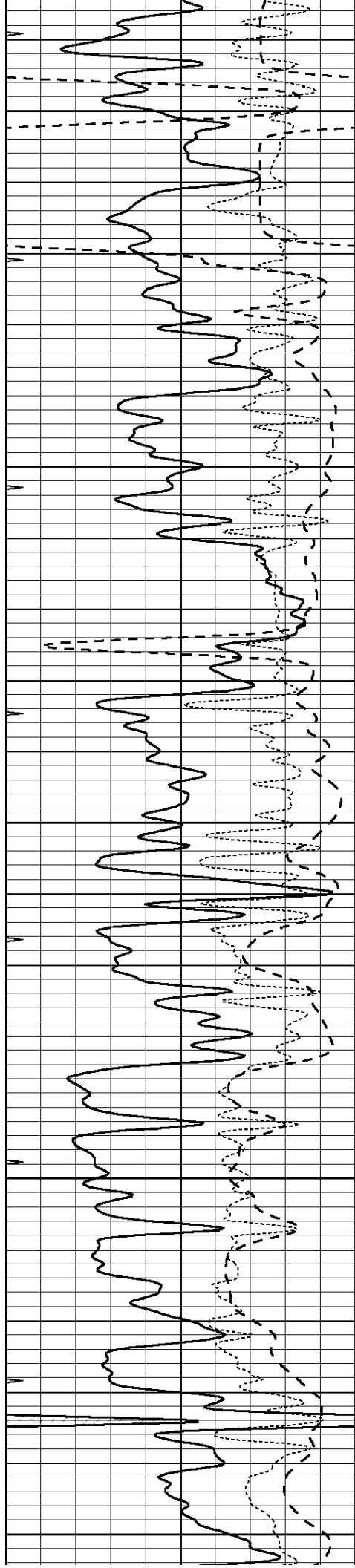
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3050

3100

3150





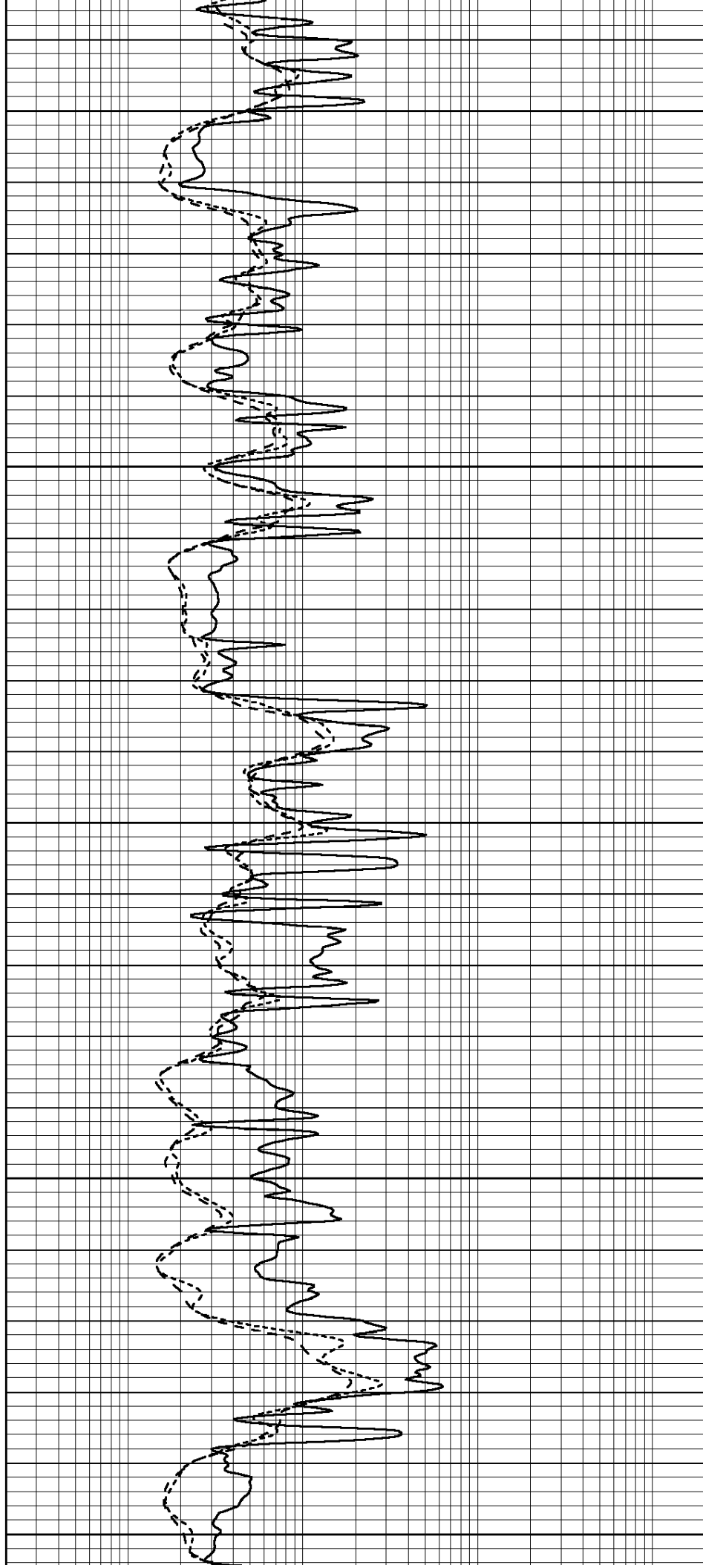
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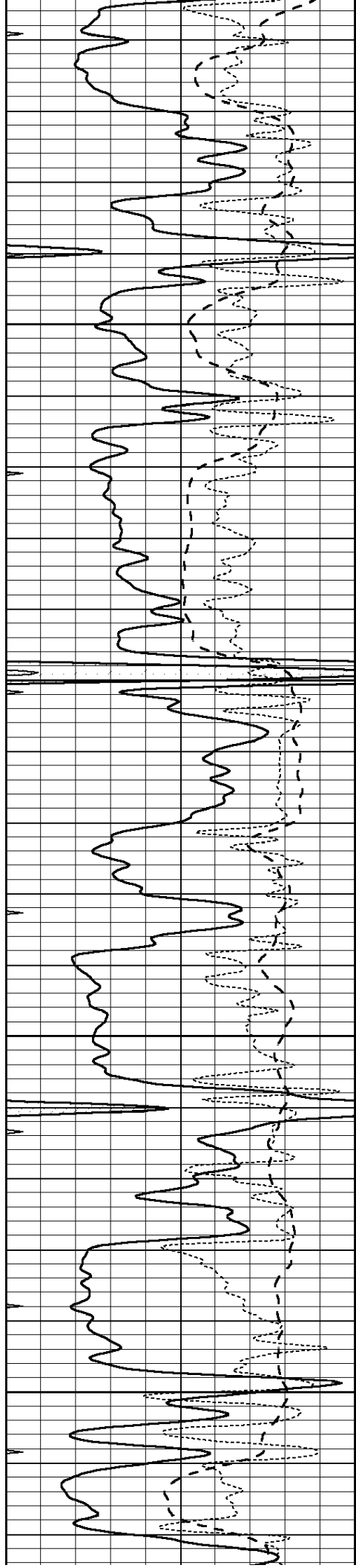
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3300

3350

3400



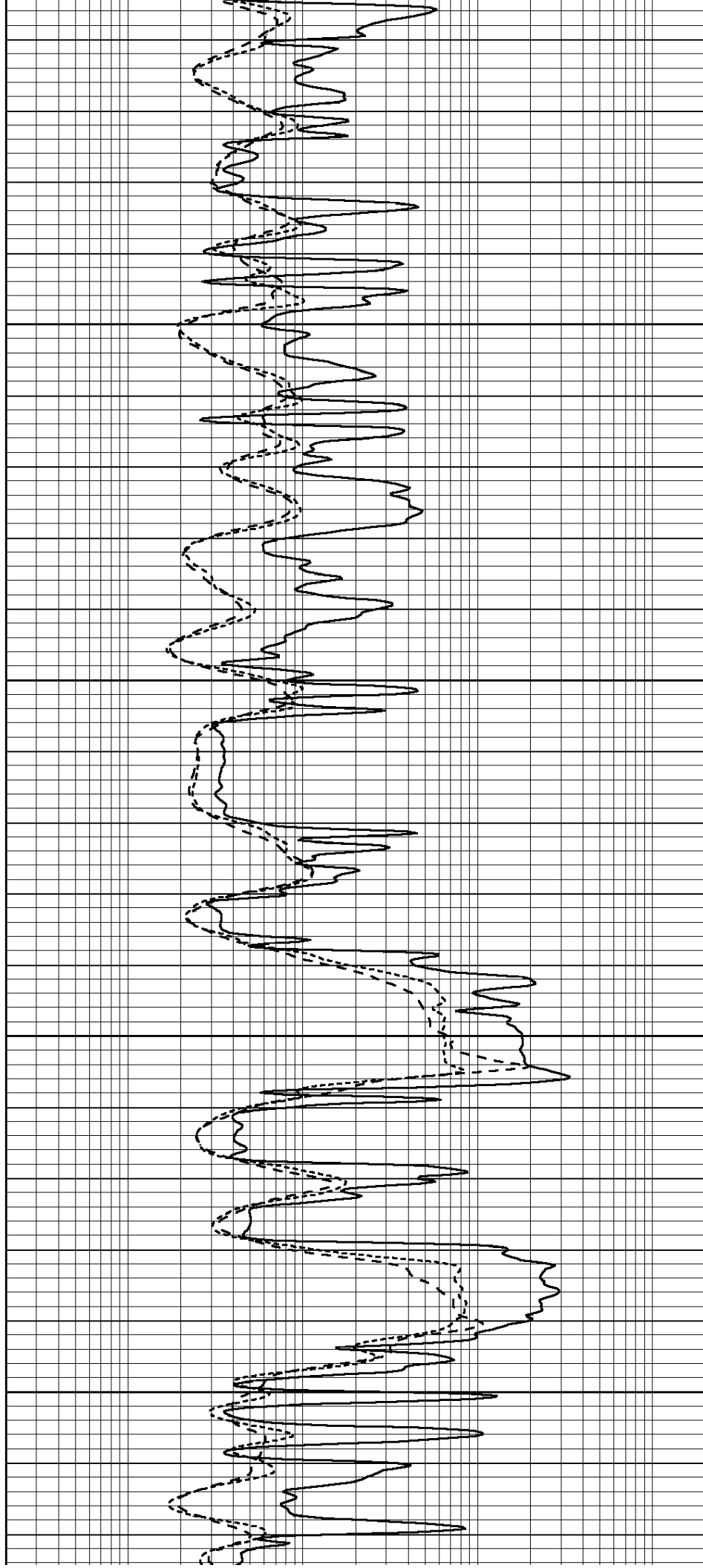


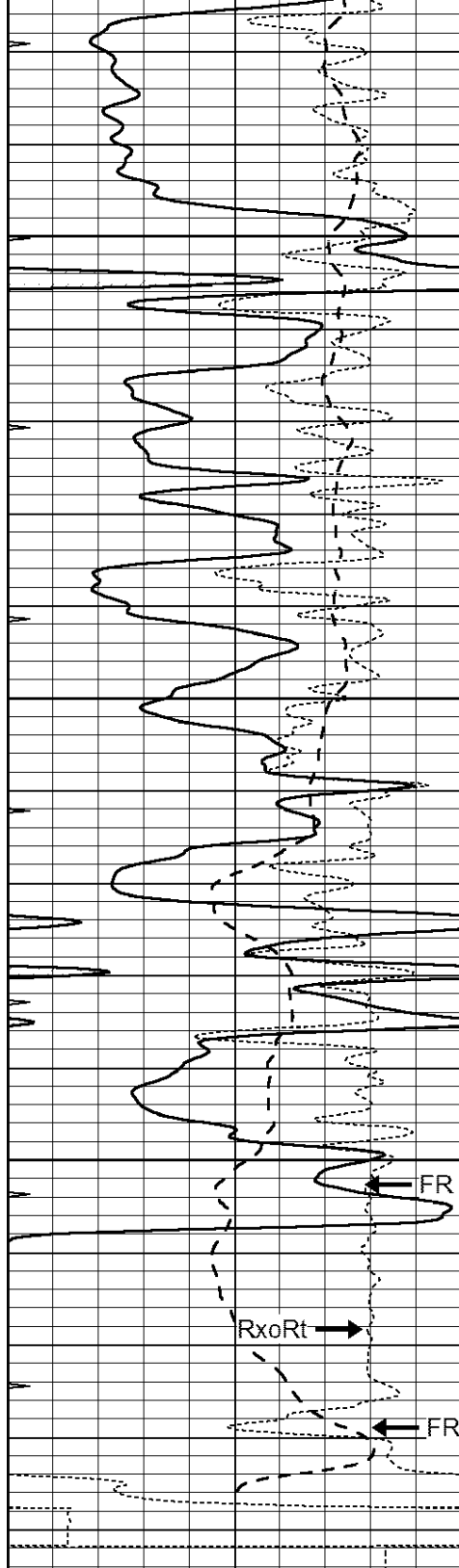
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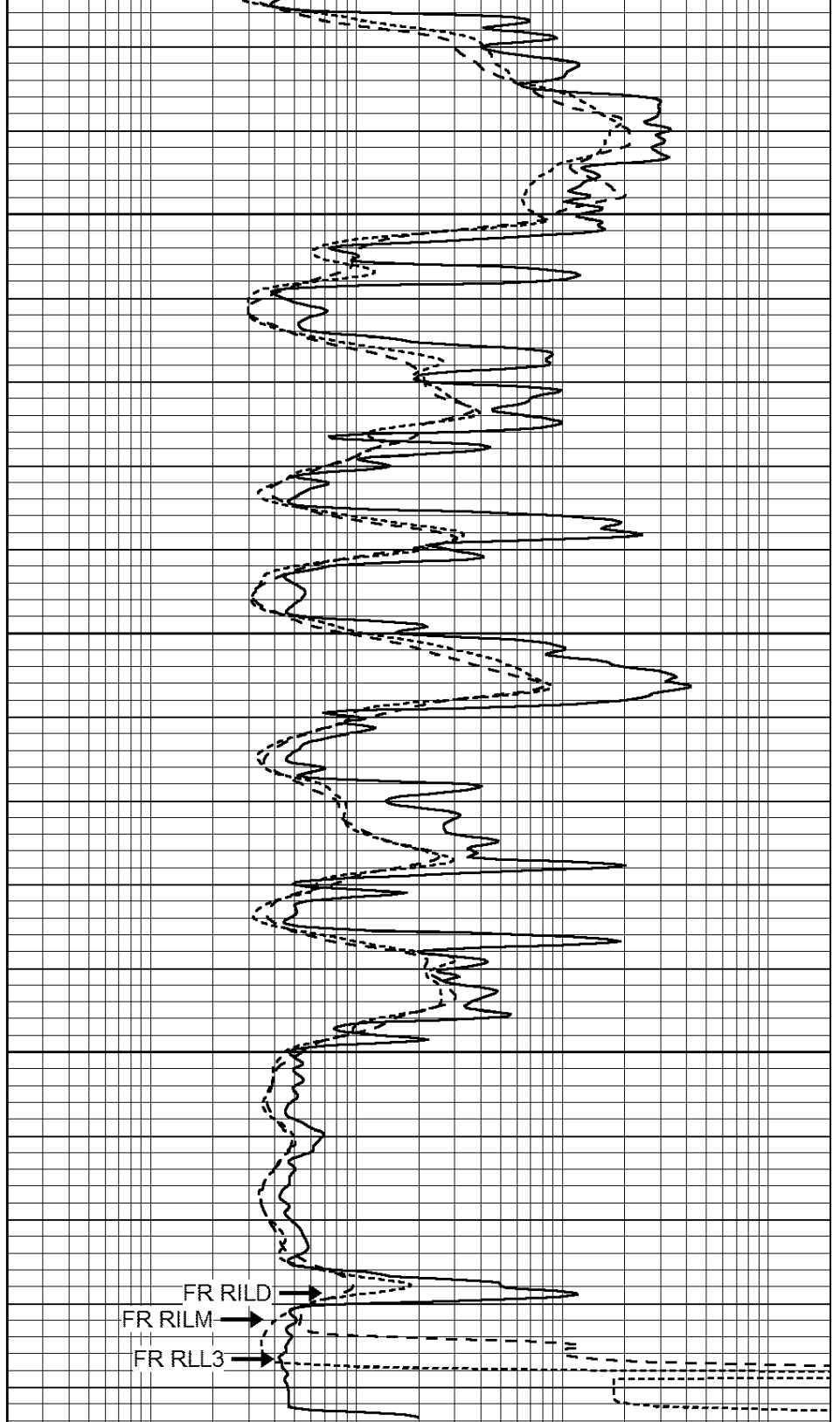
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3750

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

LTD 3789



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



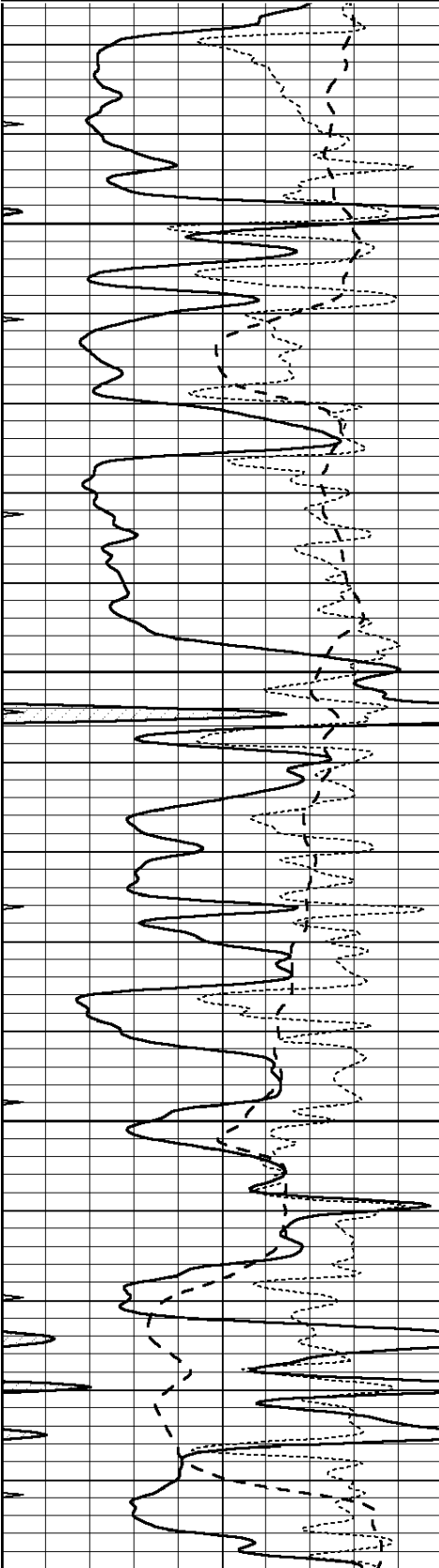
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REPEAT SECTION

Database File: 010868ddn.db
Dataset Pathname: pass2.1.4
Presentation Format: _dil
Dataset Creation: Tue Apr 09 11:45:06 2013 by Calc Open-Cased 090629
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

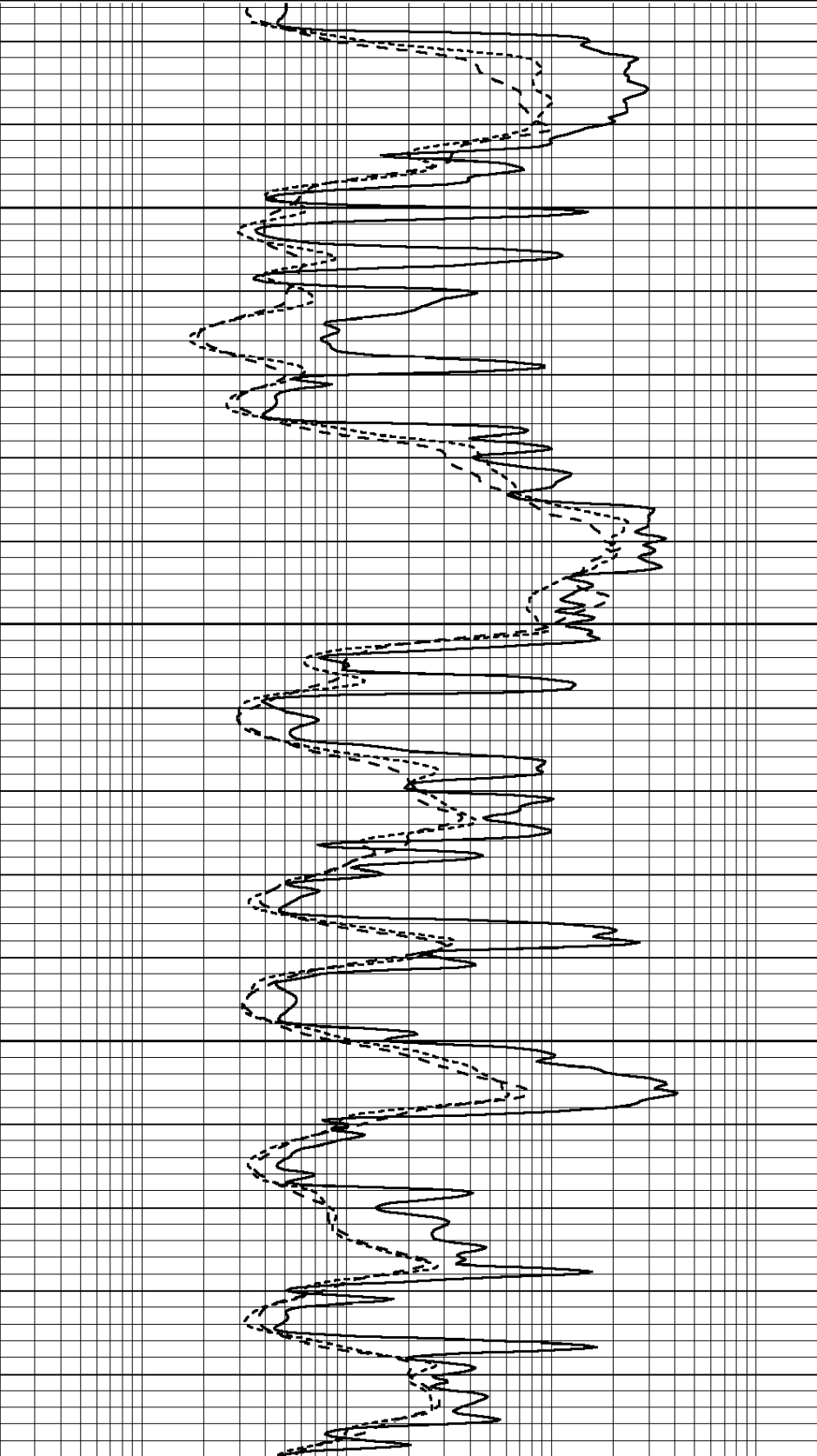


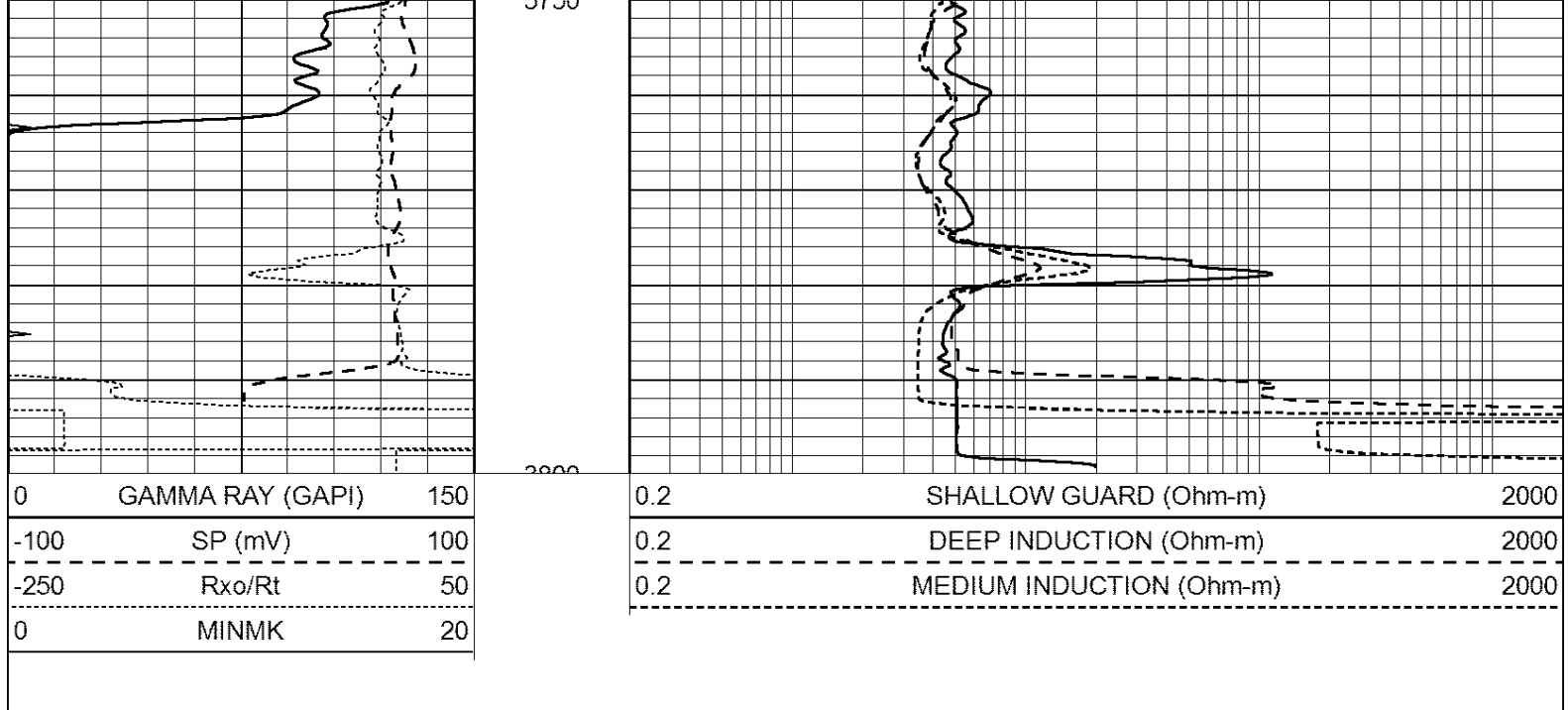
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3650

3700

3750





Calibration Report

Database File: 010868ddn.db
 Dataset Pathname: pass7.2
 Dataset Creation: Tue Apr 09 14:11:15 2013

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

Loop:	Readings			References			Results	
	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	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:	Fri Jan 04 15:48:16 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration					
	Density		Far Detector		Near Detector
Magnesium	1.710	g/cc	935.36	501.55	cps
Aluminum	2.580	g/cc	209.32	357.01	cps
Spine Angle = 77.21			Density/Spine Ratio = 0.567		
	Size		Reading		
Small Ring	8.00	in	4.29	V	
Large Ring	14.00	in	6.24	V	

Before Survey Verification					
	Target		Measured		
		g/cc		g/cc	
		g/cc		g/cc	
		g/cc		g/cc	

After Survey Verification					
	Target		Measured		
		g/cc		g/cc	
		g/cc		g/cc	
		g/cc		g/cc	

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

PRE-SURVEY VERIFICATION						
	Detector	Readings		Measured		Target
1)	Short Space		cps			
	Long Space		cps	pu		pu
2)	Short Space		cps			
	Long Space		cps	pu		
3)	Short Space		cps			
	Long Space		cps	pu		

POST-SURVEY VERIFICATION						
	Detector	Readings		Measured		Target

1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

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