



DUAL INDUCTION LOG

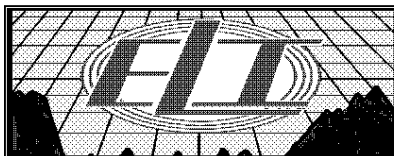
Company	RANEY OIL COMPANY, LLC.		
Well	JONES #1A		
Field	CABIN VALLEY		
County	COWLEY	State	KANSAS
Location:	AP1 # : 15-035-24715-0000 1000' FSL & 1940' FEL NW - NE - SW - SE		Other Services CDL/CNL/PE MEL/SONIC
Permanent Datum	GROUND LEVEL	Elevation	1213
Log Measured From	KELLY BUSHING 8' A.G.L.	Elevation	K.B. 1221 D.F. 1219 G.L. 1213
Drilling Measured From	KELLY BUSHING		
SEC 31 TWP 33S RGE 6E			
Date	1/22/20		
Run Number	ONE		
Depth Driller	3457		
Depth Logger	3454		
Bottom Logged Interval	3452		
Top Log Interval	00		
Casing Driller	8 5/8"@305'		
Casing Logger	305		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,600 PPM	
Density / Viscosity	9.5/55		
pH / Fluid Loss	10.0/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.60@80F		
Rmf @ Meas. Temp	1.20@80F		
Rmc @ Meas. Temp	1.92@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	1.15@111F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	3:00 P.M.		
Maximum Recorded Temperature	111 F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ROGER MARTIN		

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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
WINFIELD, KS., E. ON 160 TO "CR 1", SOUTH TO "CR 20", 3E. TO "RD. 181", 3S. CURVE EAST 1 MILE TO
3RD GATE



MAIN SECTION

Database File: 4526pe.db
Dataset Pathname: pass3.4
Presentation Format: dil2
Dataset Creation: Wed Jan 22 16:49:33 2020
Charted by: Depth in Feet scaled 1:600

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

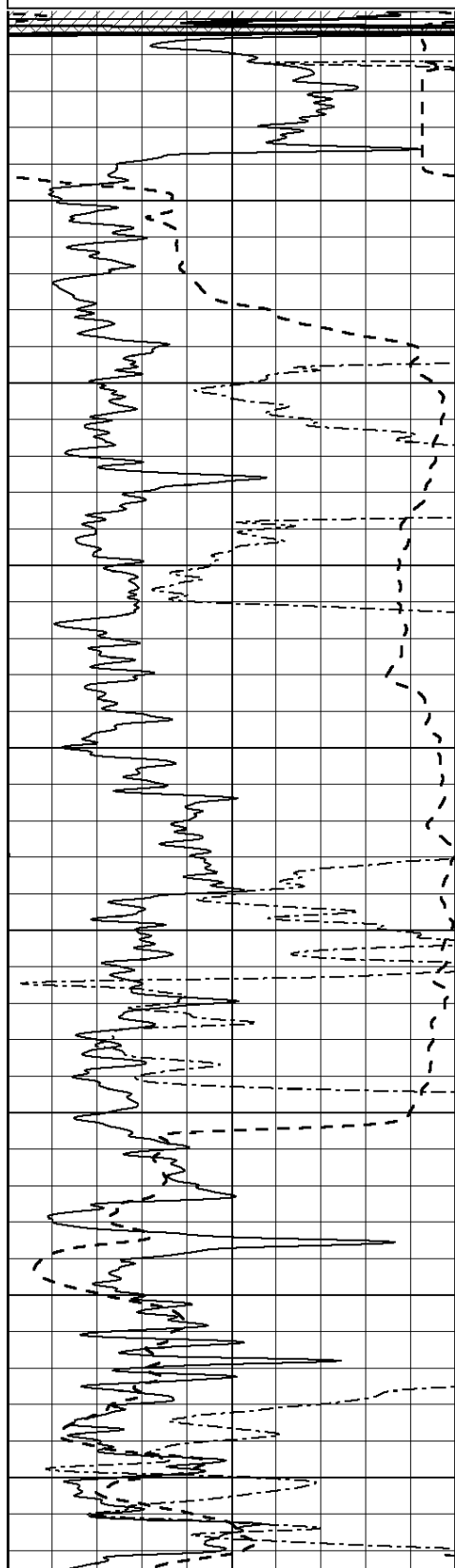
0	RLL3 (Ohm-m)	50
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0	RILD (Ohm-m)	50
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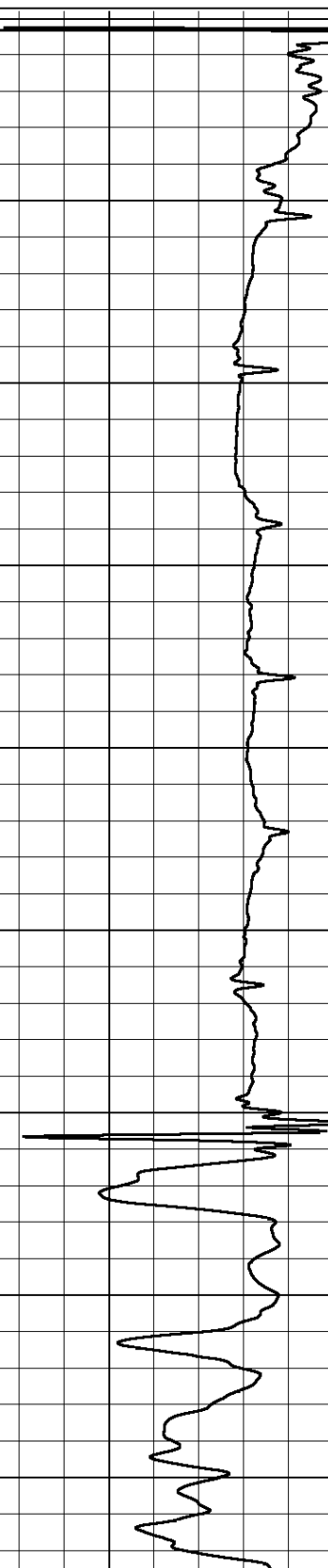
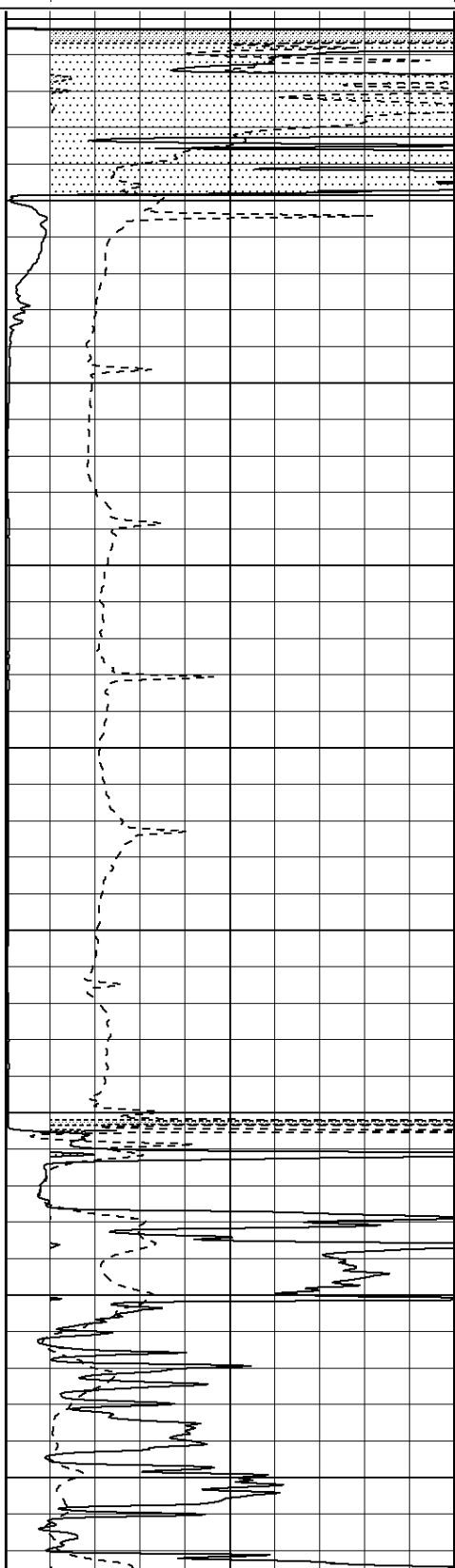
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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0
50
100
150
200
250
300
350
400



450

500

550

600

650

700

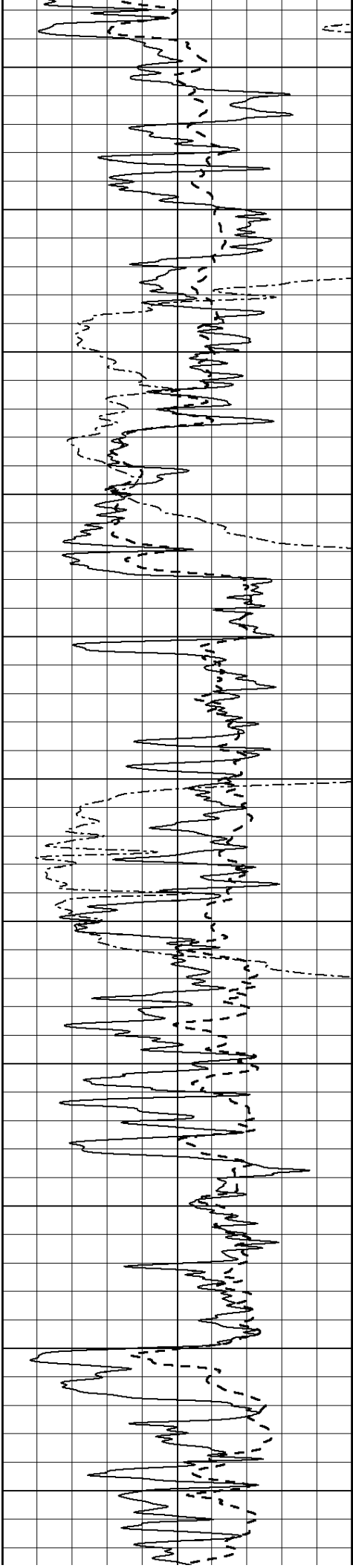
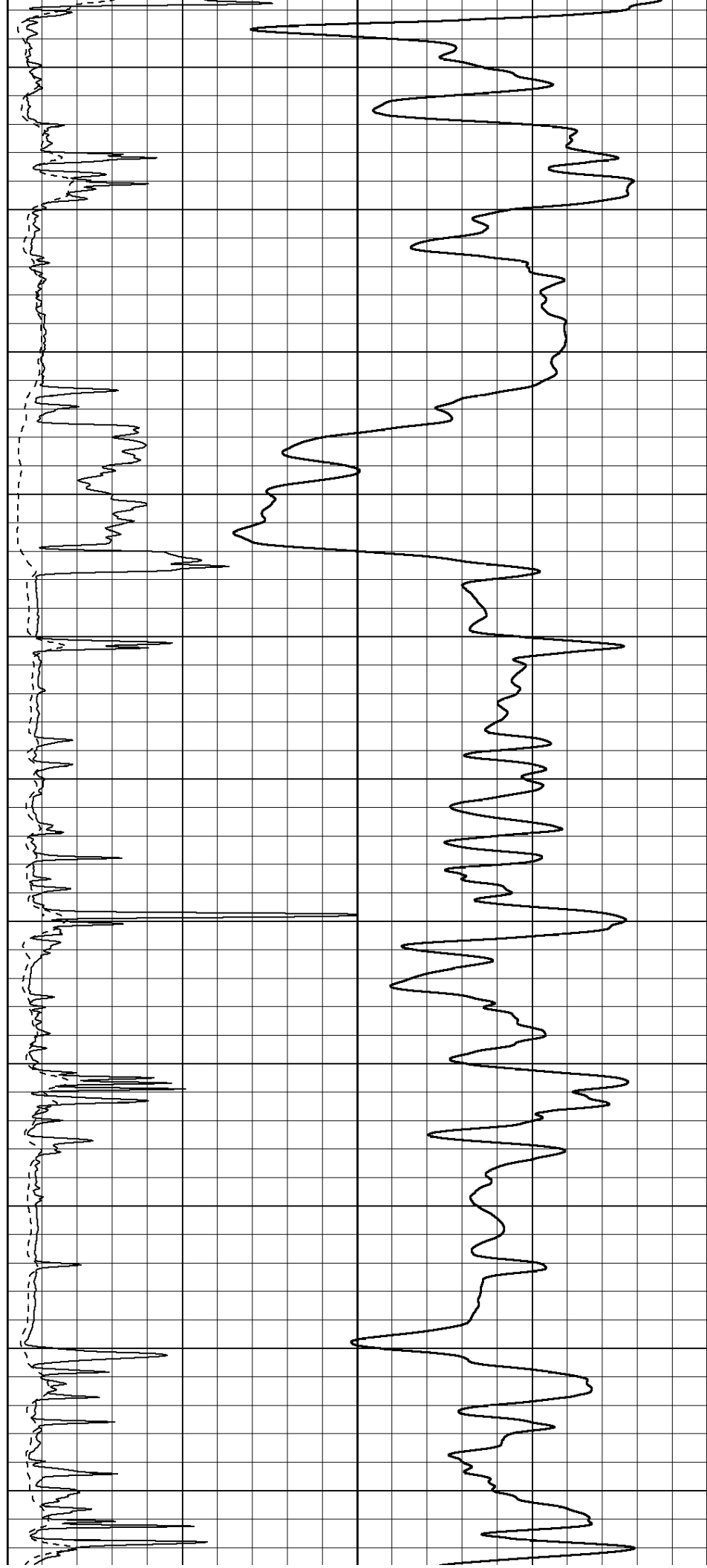
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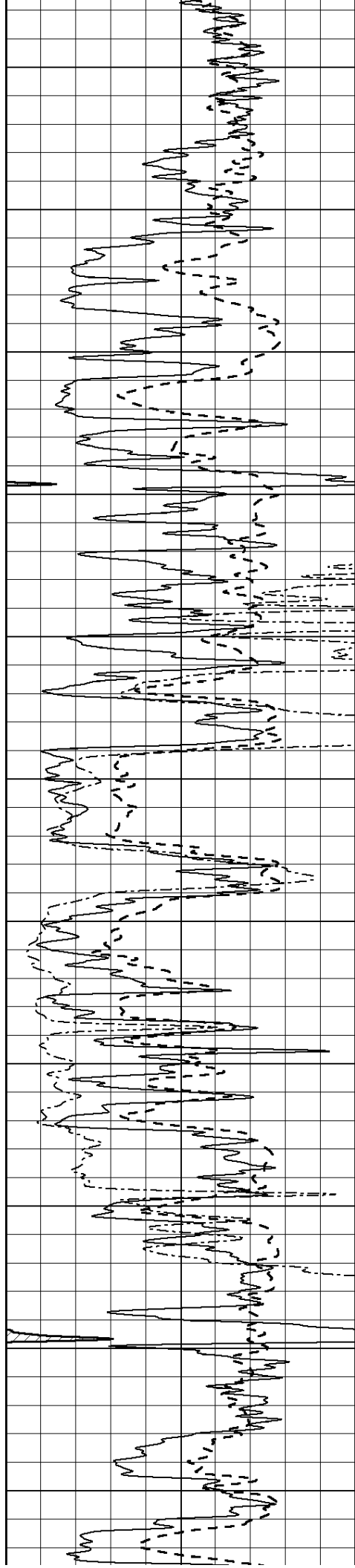
800

850

900

950





1000

1050

1100

1150

1200

1250

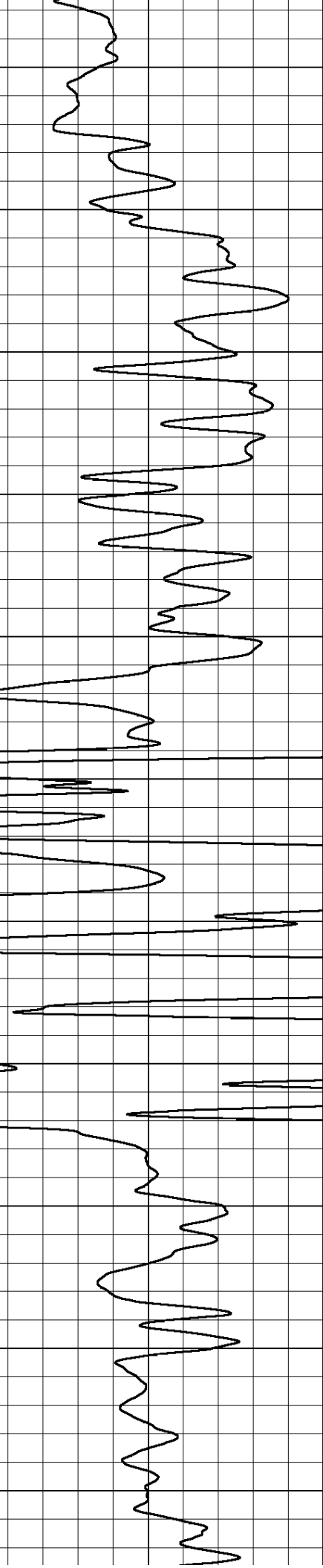
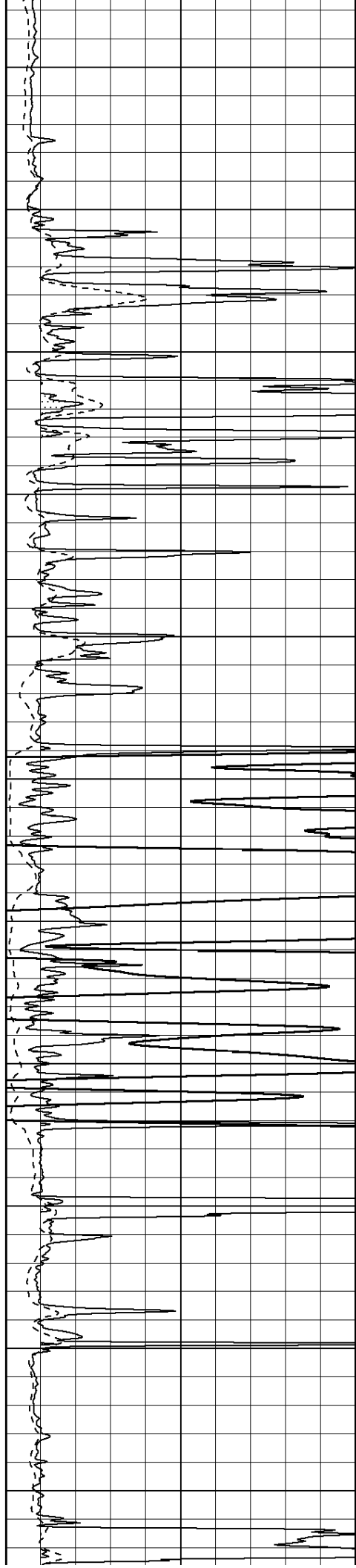
1300

1350

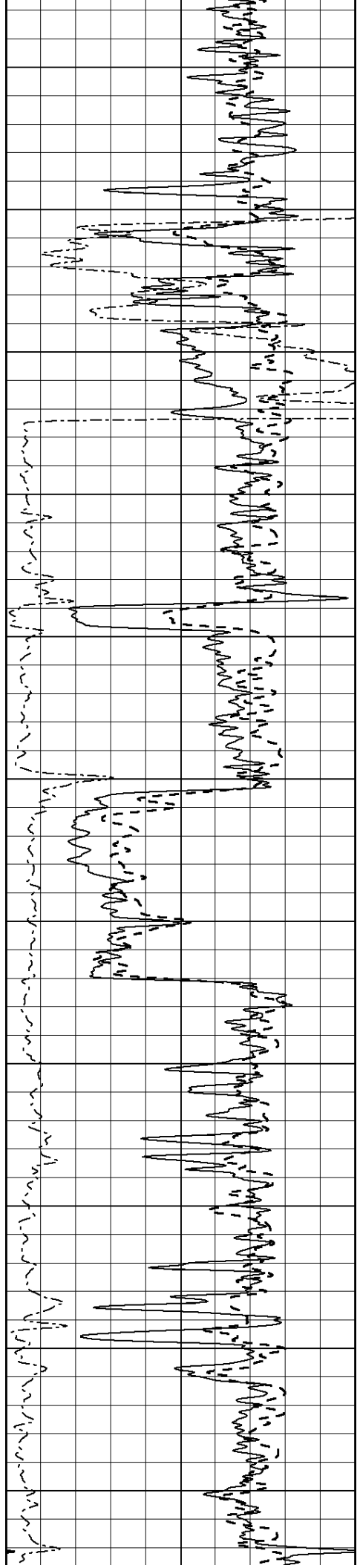
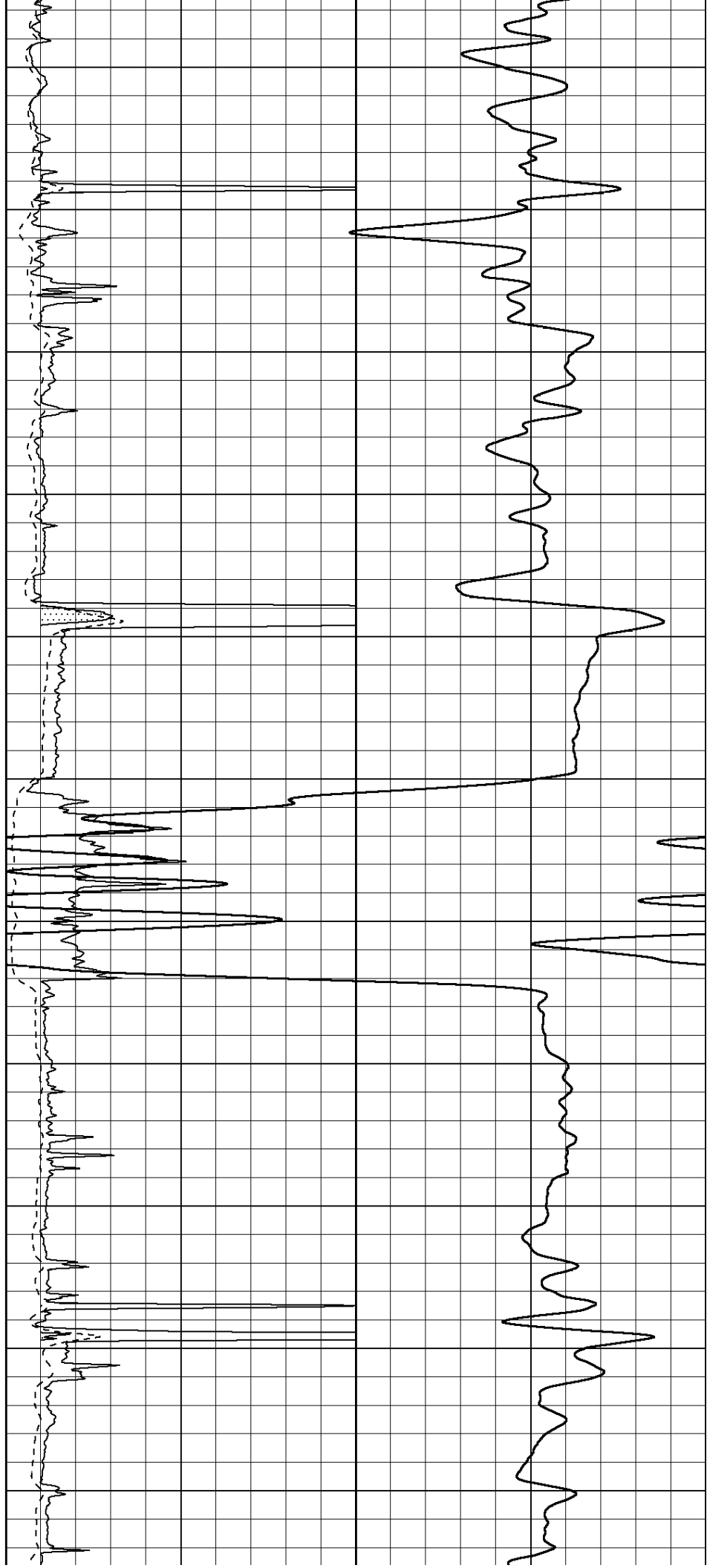
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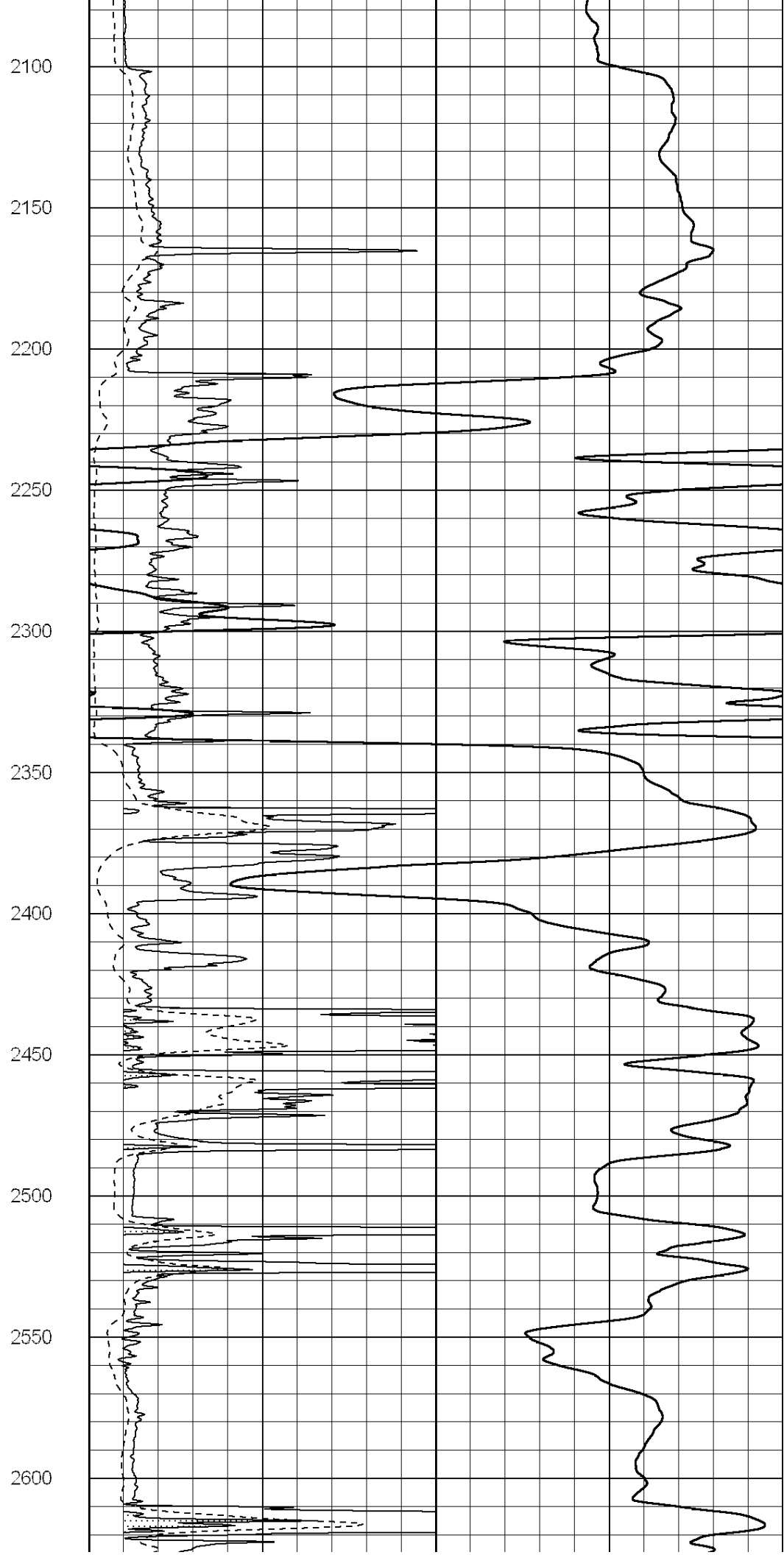
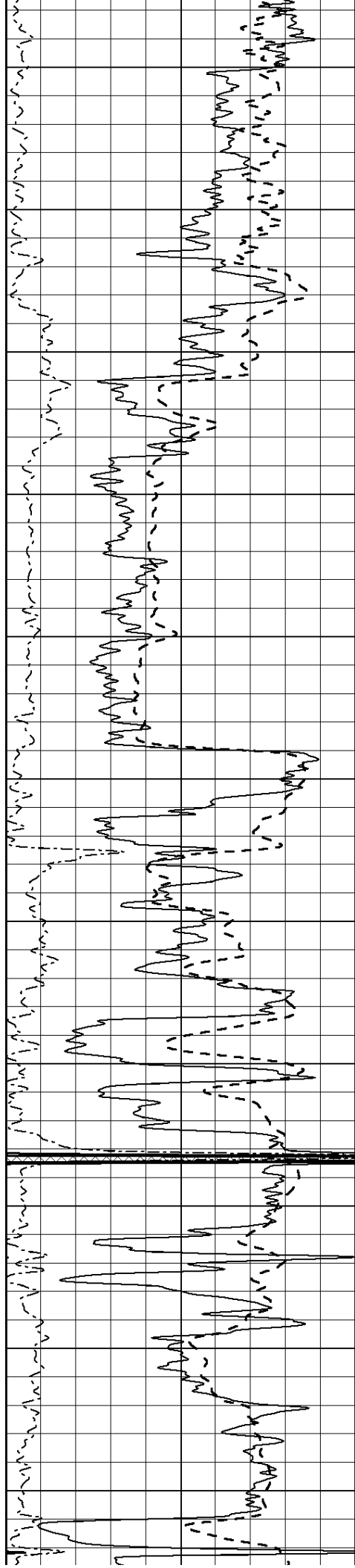
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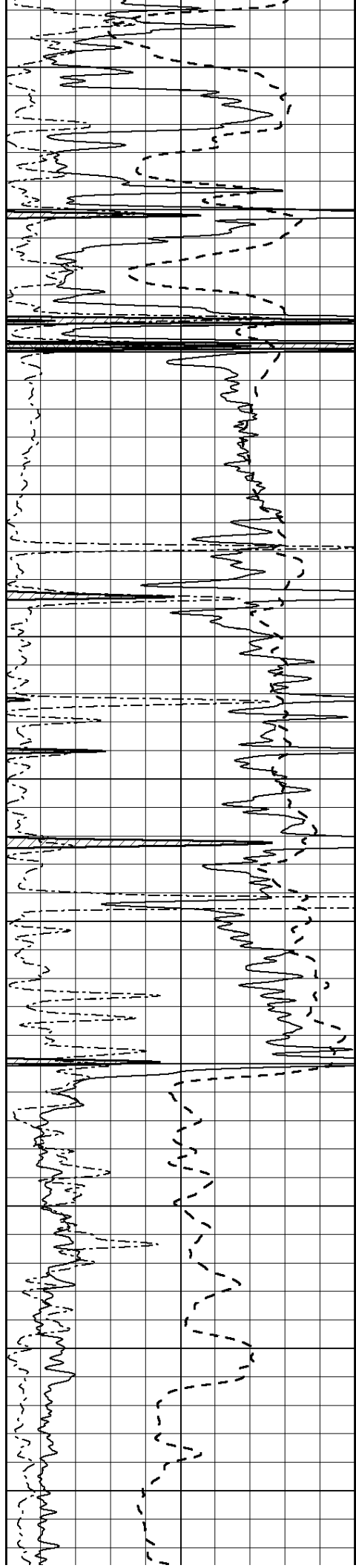
1500



1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050







2650

2700

2750

2800

2850

2900

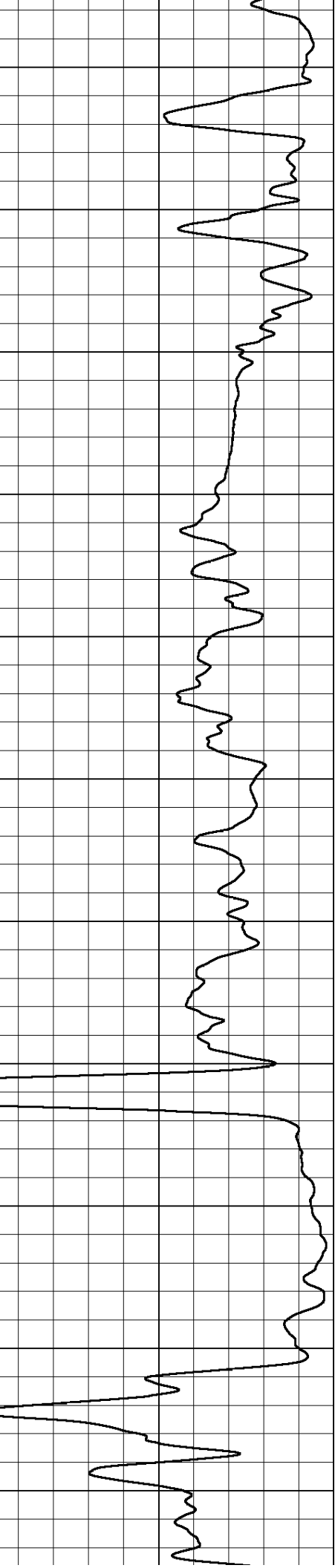
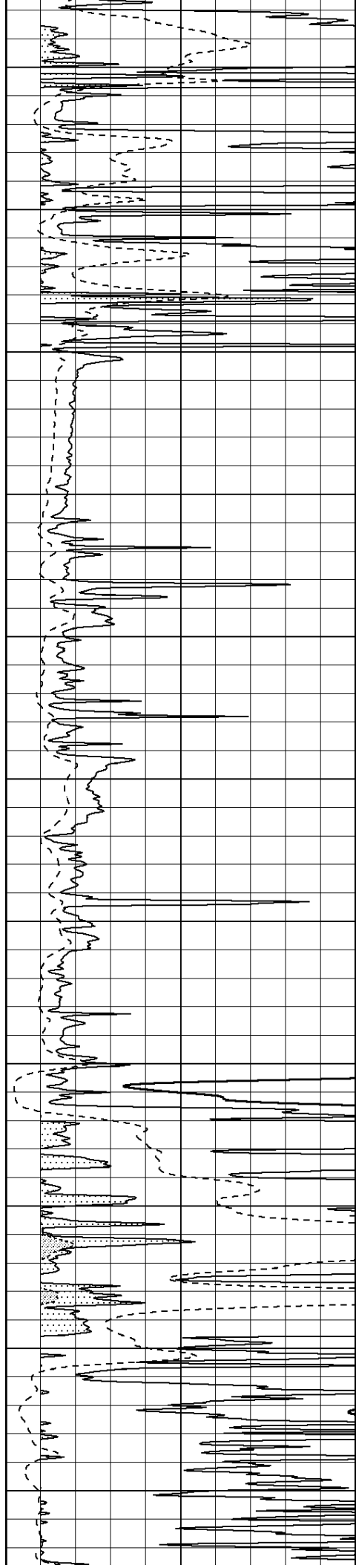
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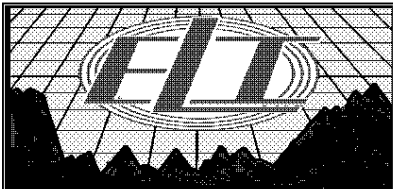
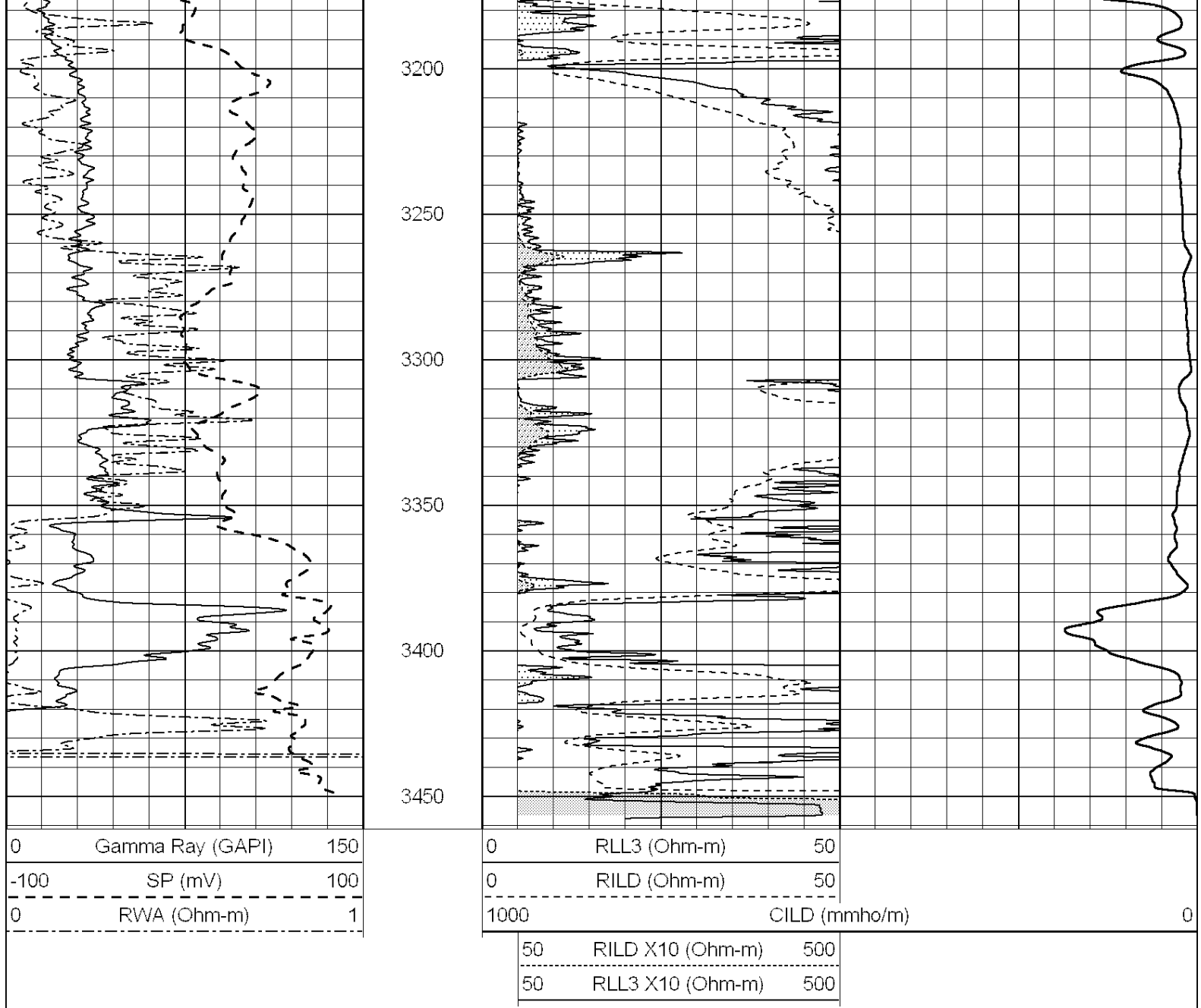
3000

3050

3100

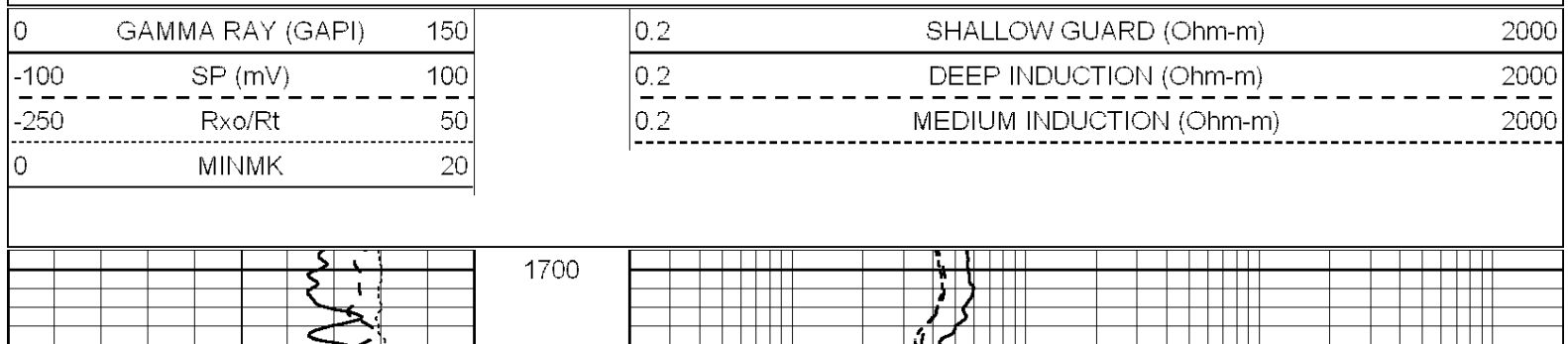
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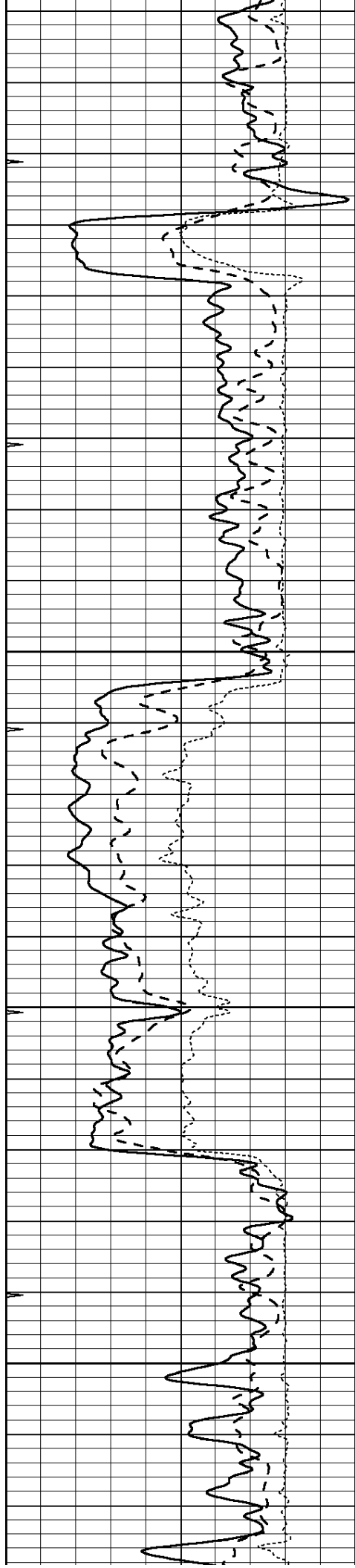




MAIN SECTION

Database File: 4526pe.db
 Dataset Pathname: pass3.4
 Presentation Format: _dil
 Dataset Creation: Wed Jan 22 16:49:33 2020
 Charted by: Depth in Feet scaled 1:240



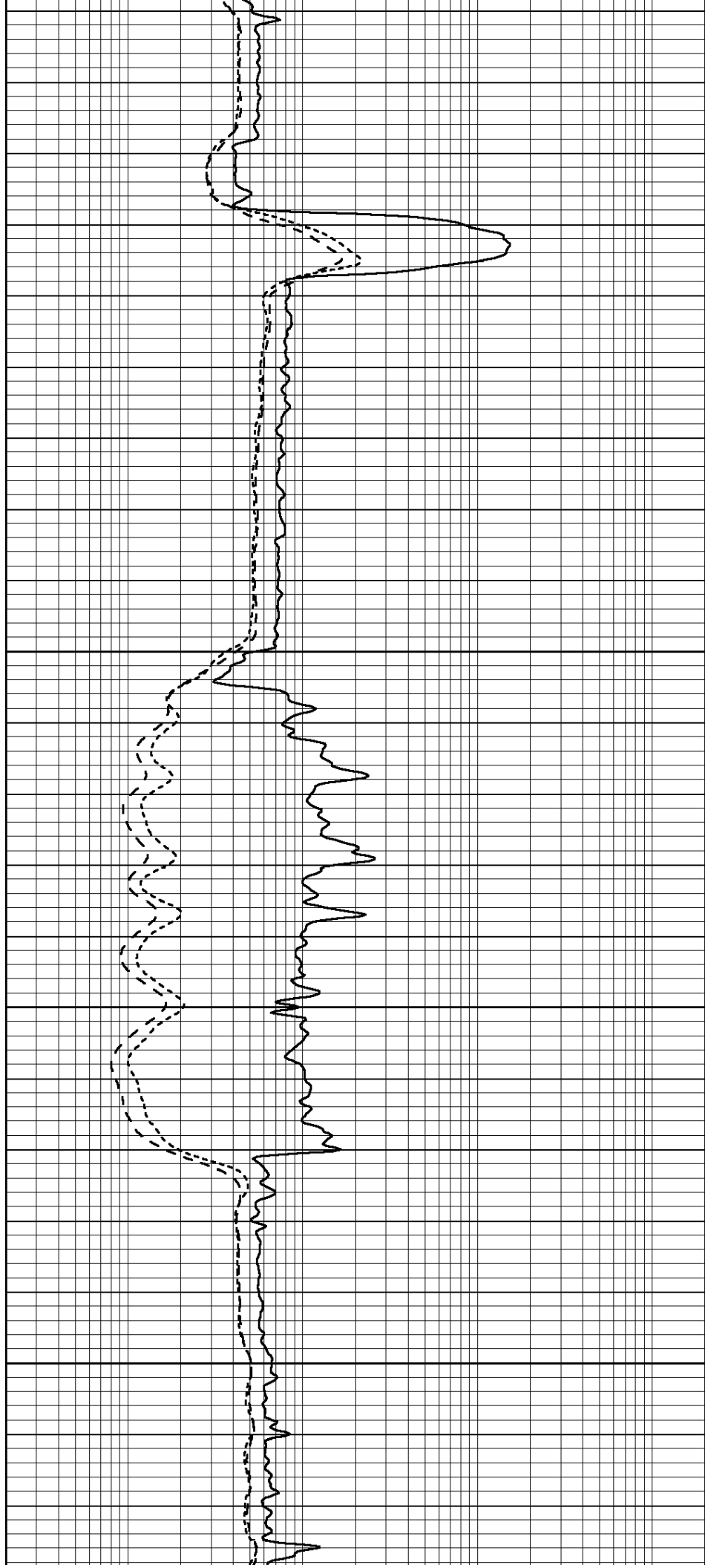


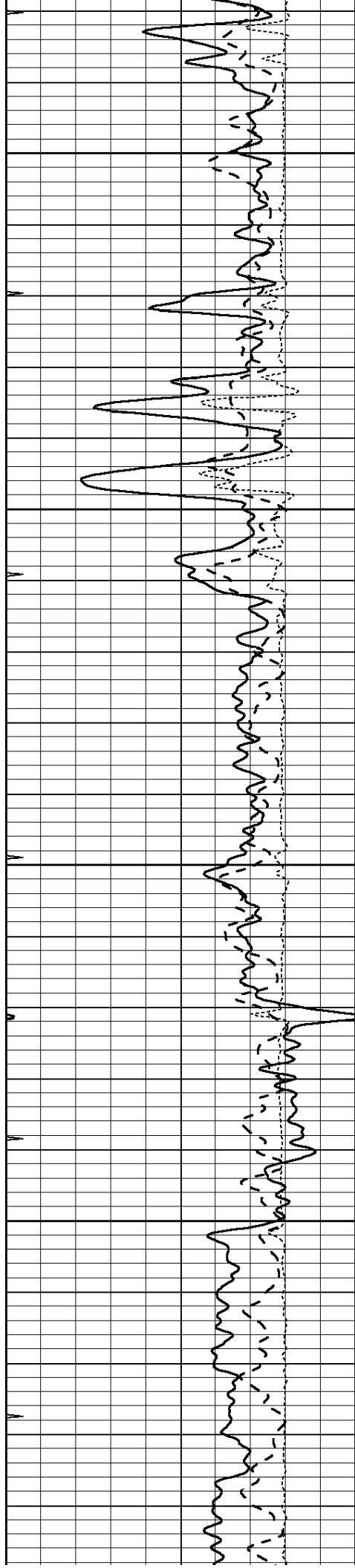
1750

1800

1850

1900



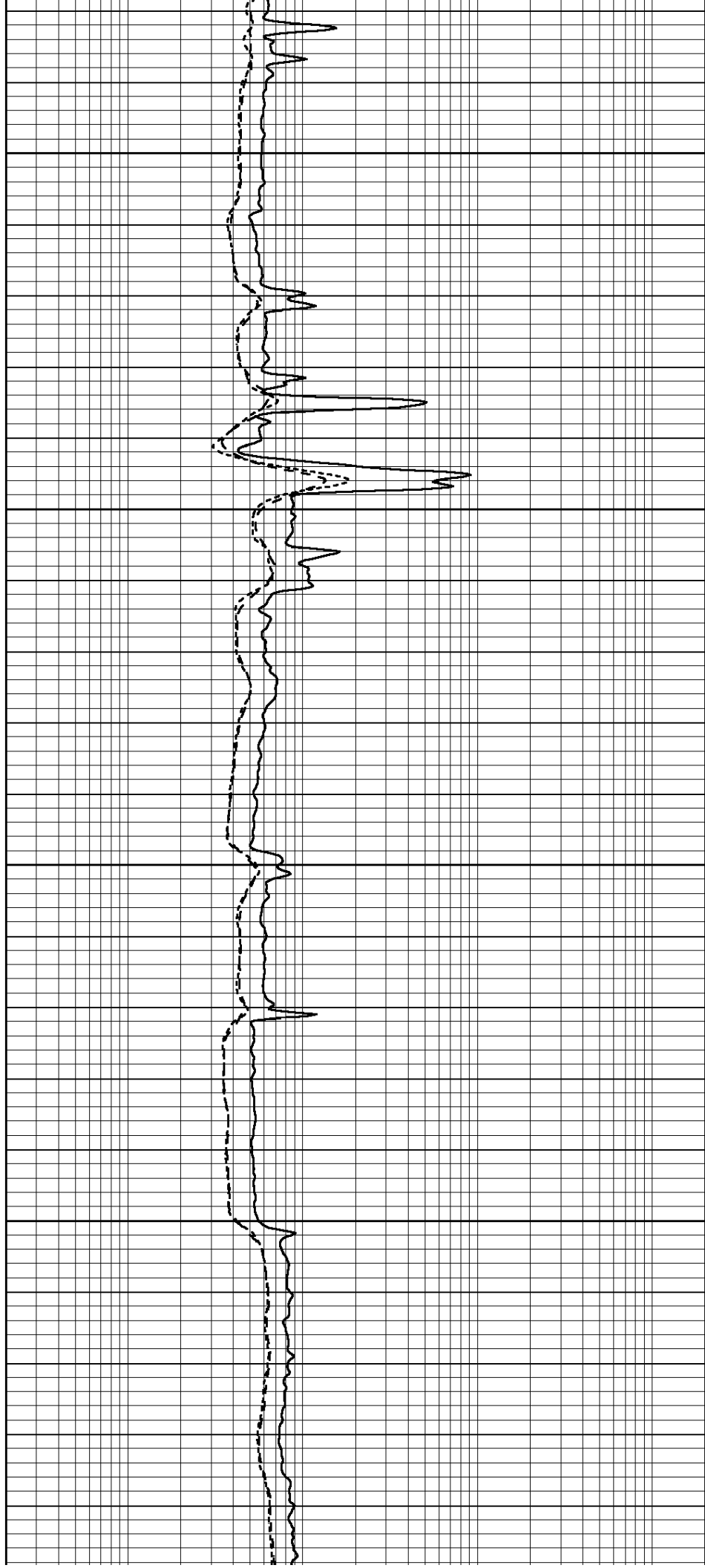


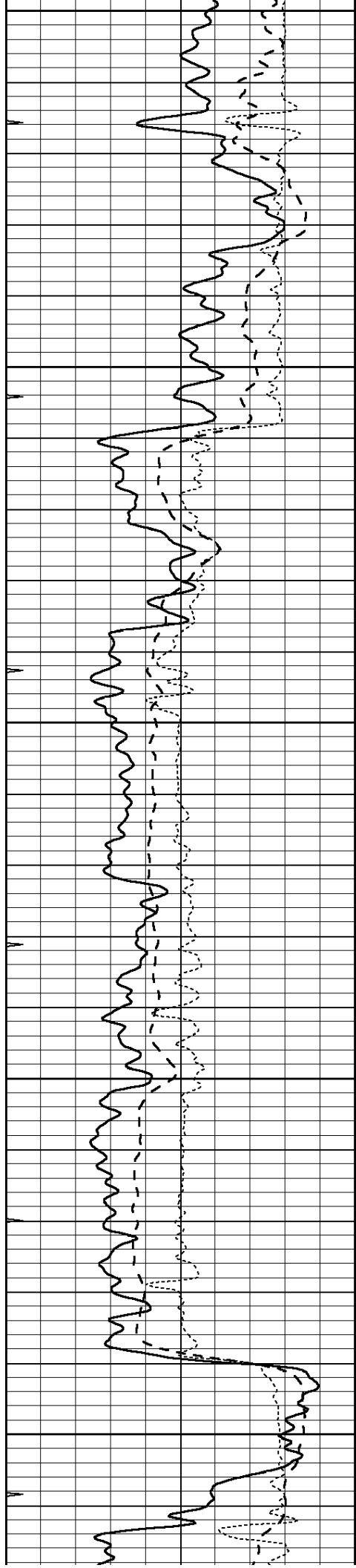
1950

2000

2050

2100





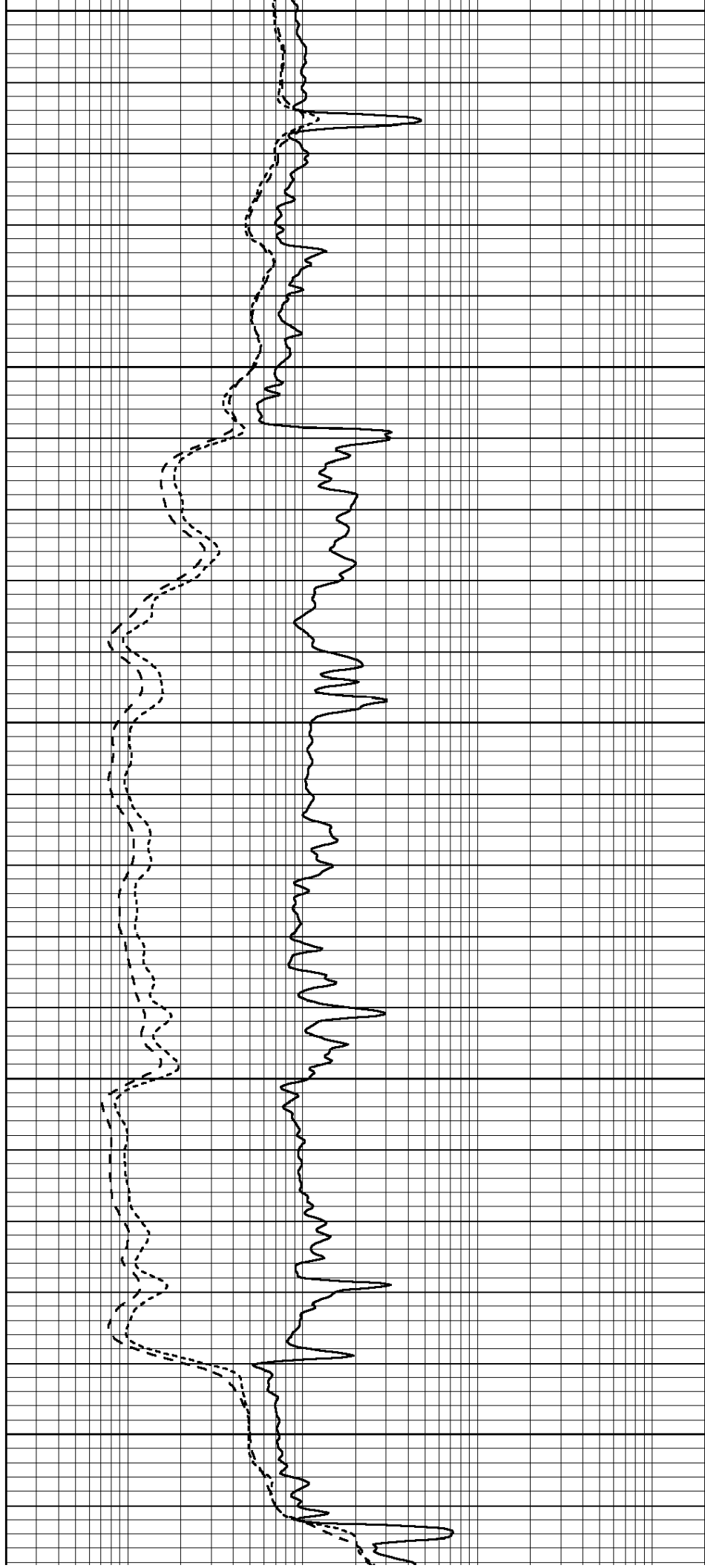
2150

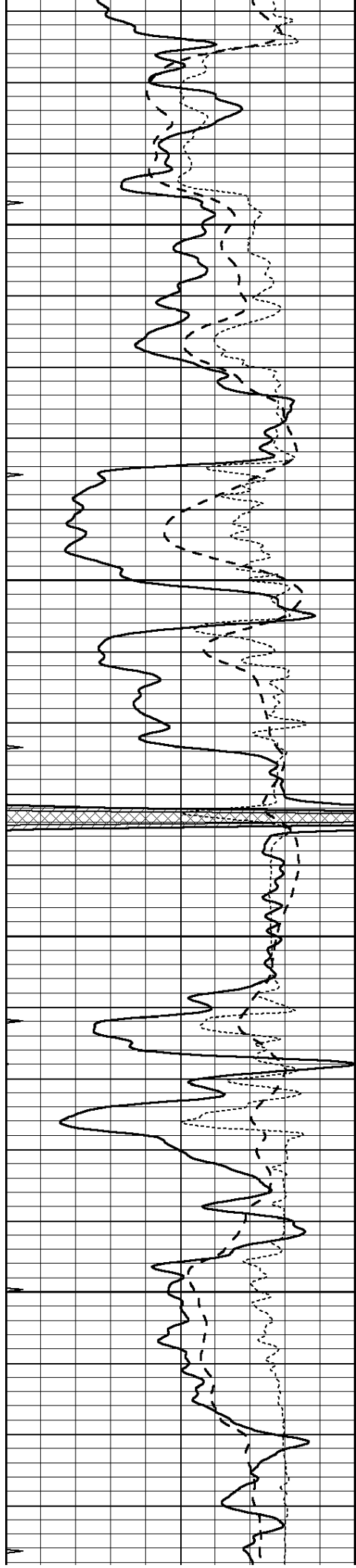
2200

2250

2300

2350



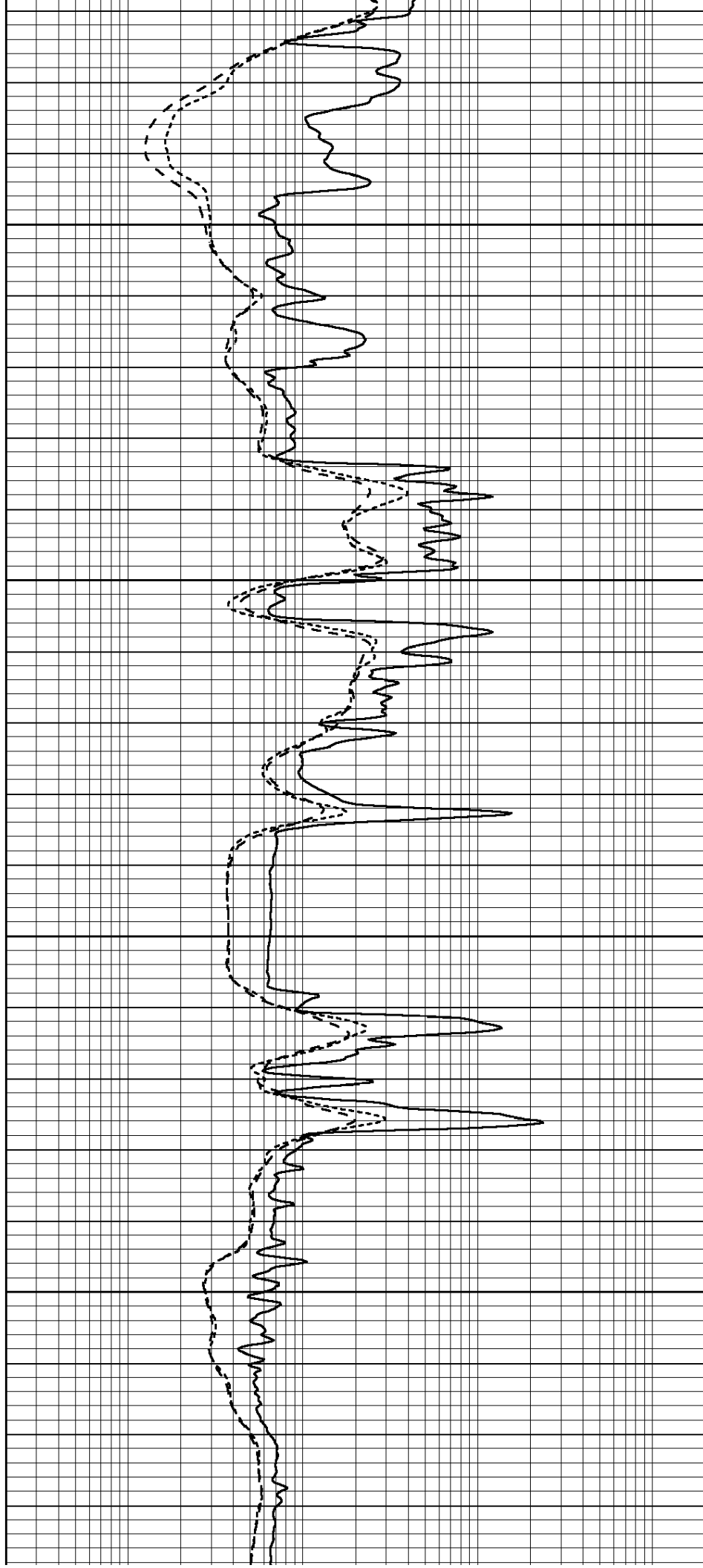


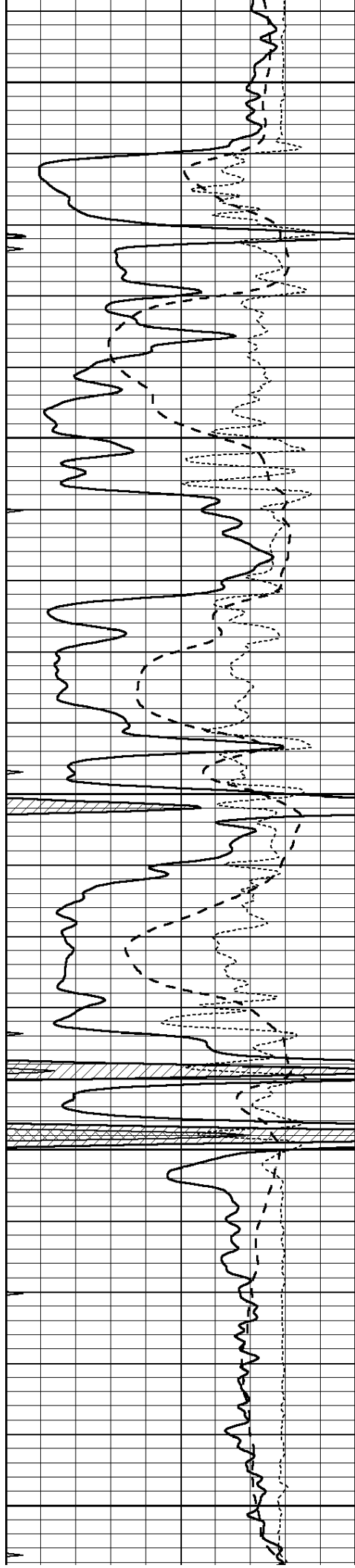
2400

2450

2500

2550





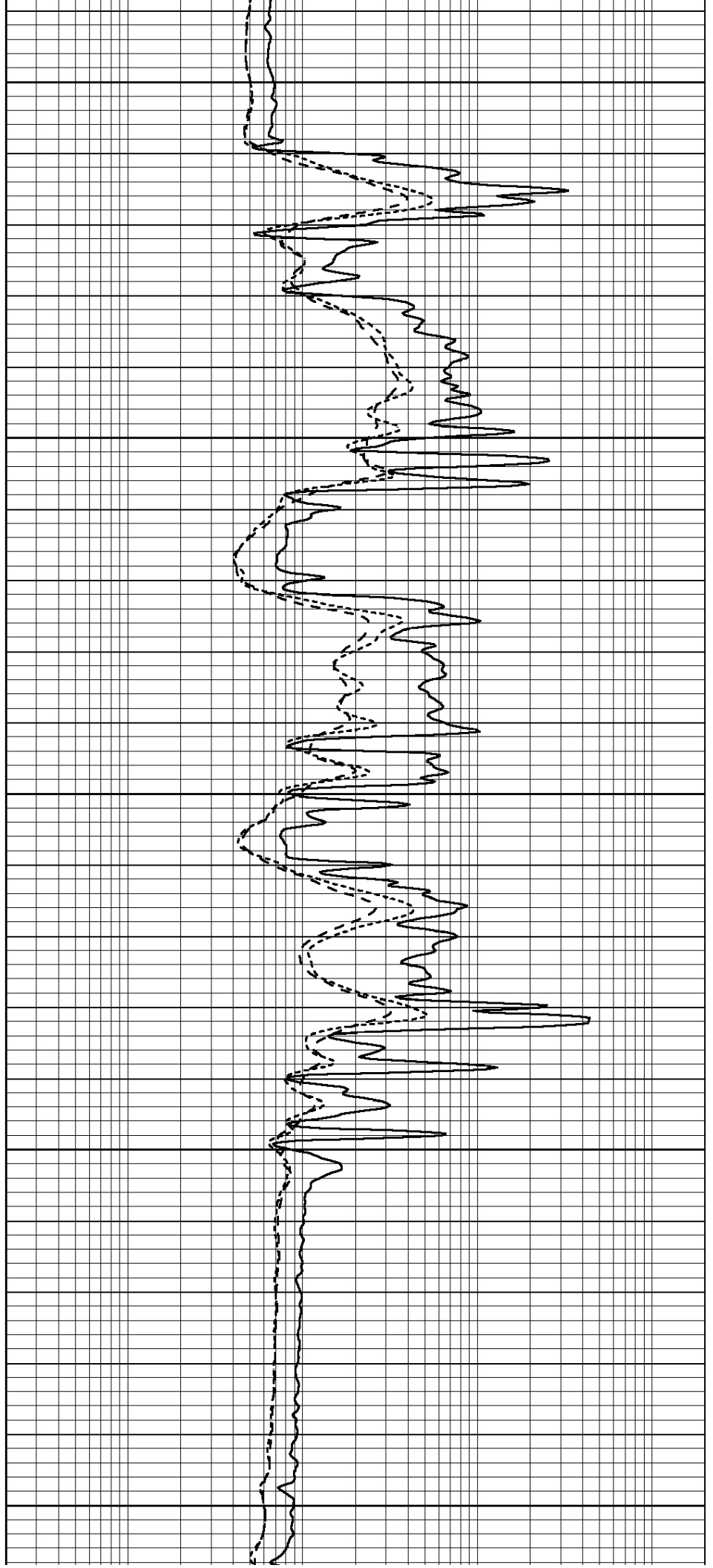
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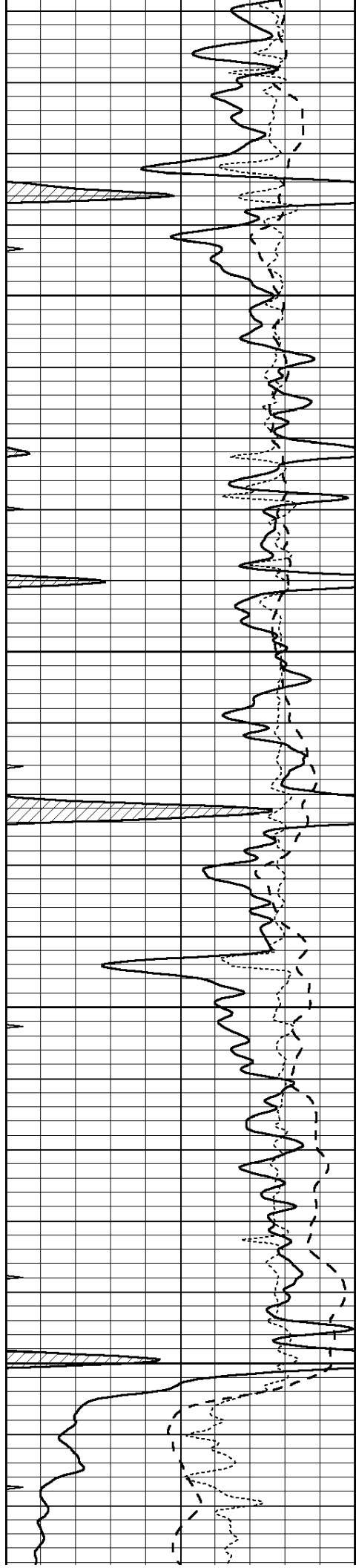
2650

2700

2750

2800



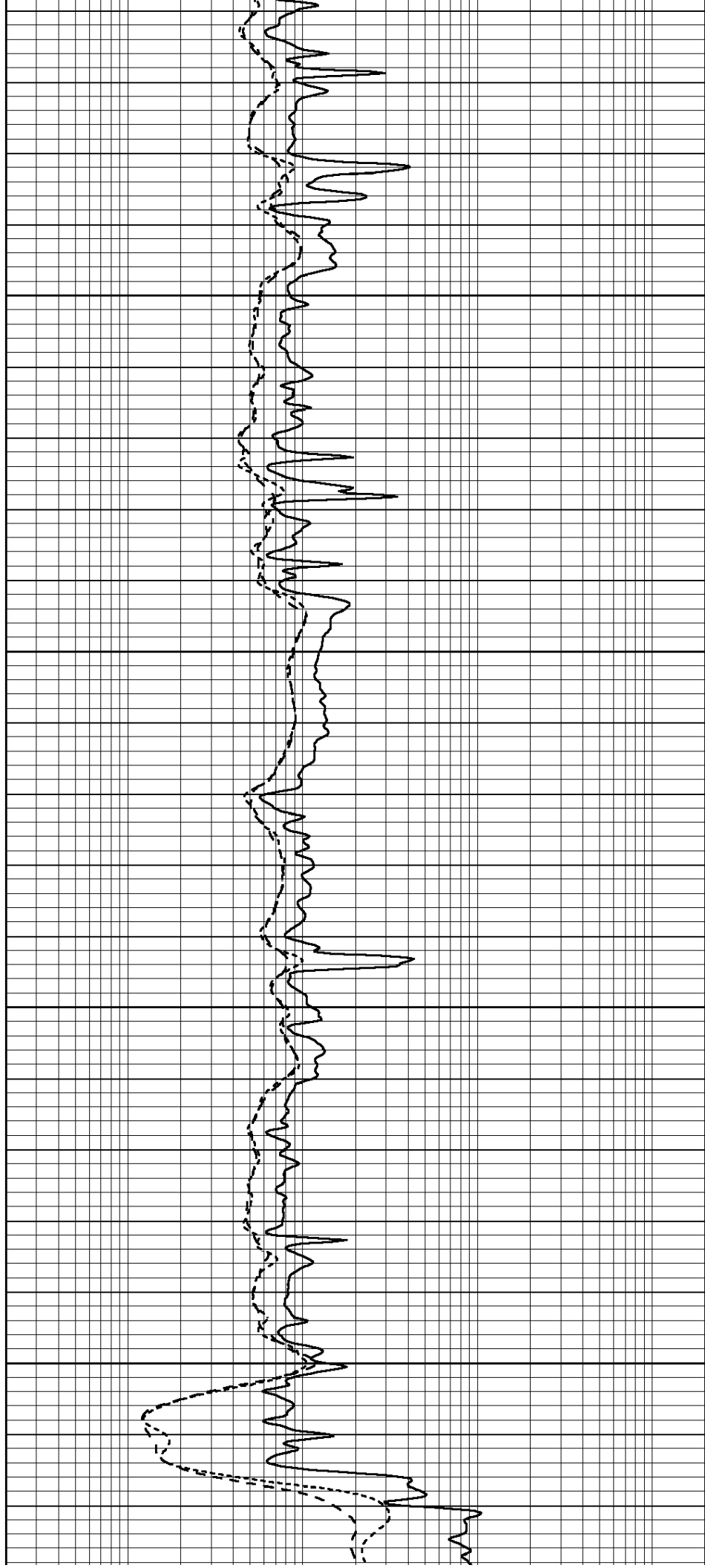


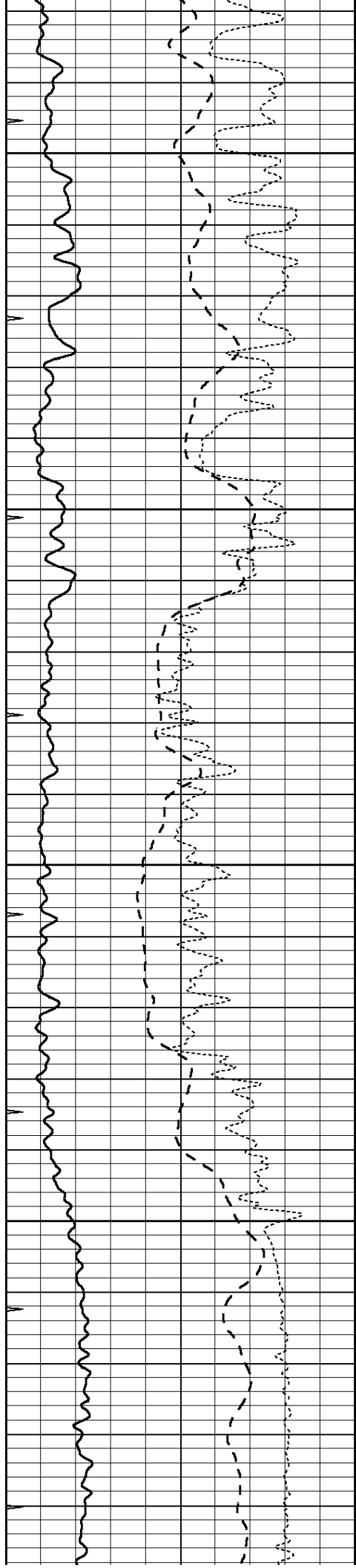
2850

2900

2950

3000



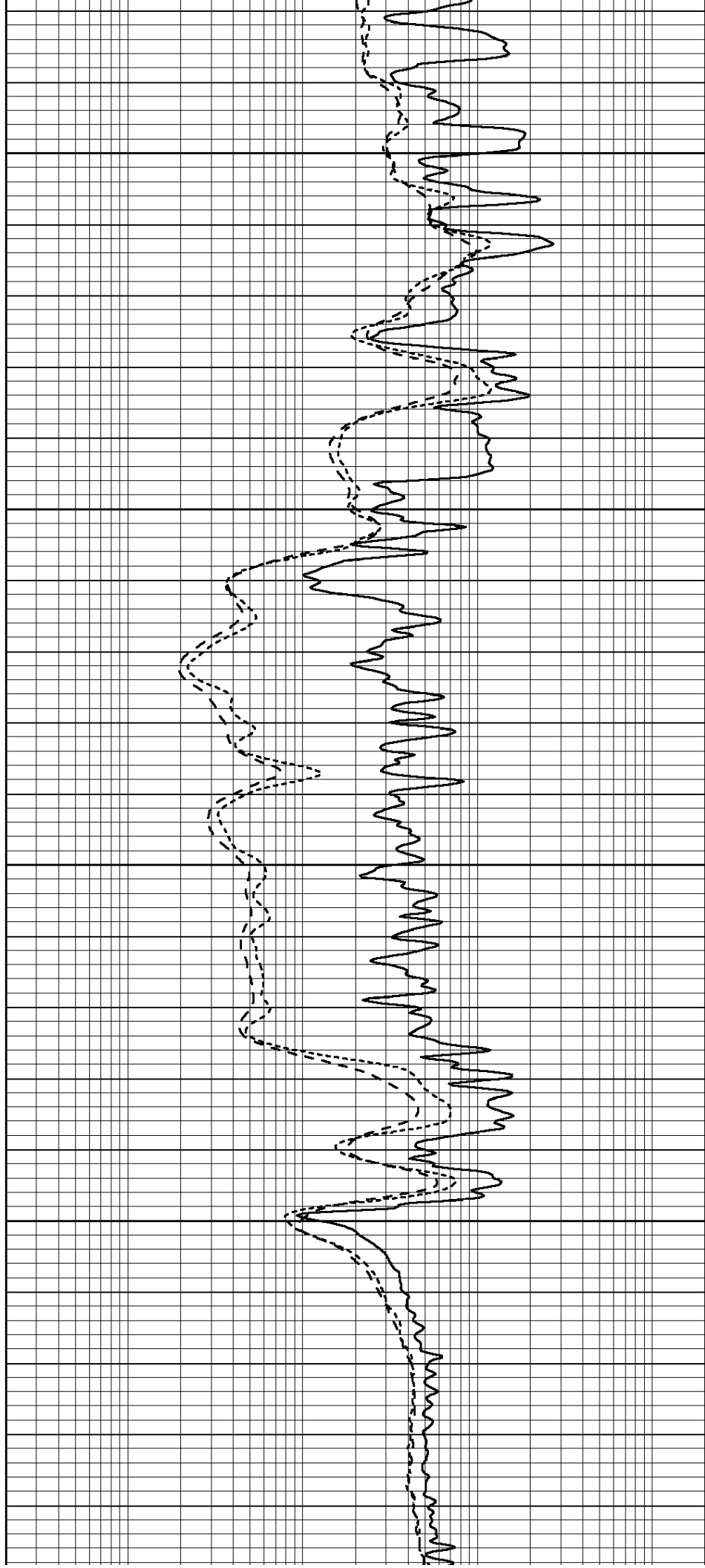


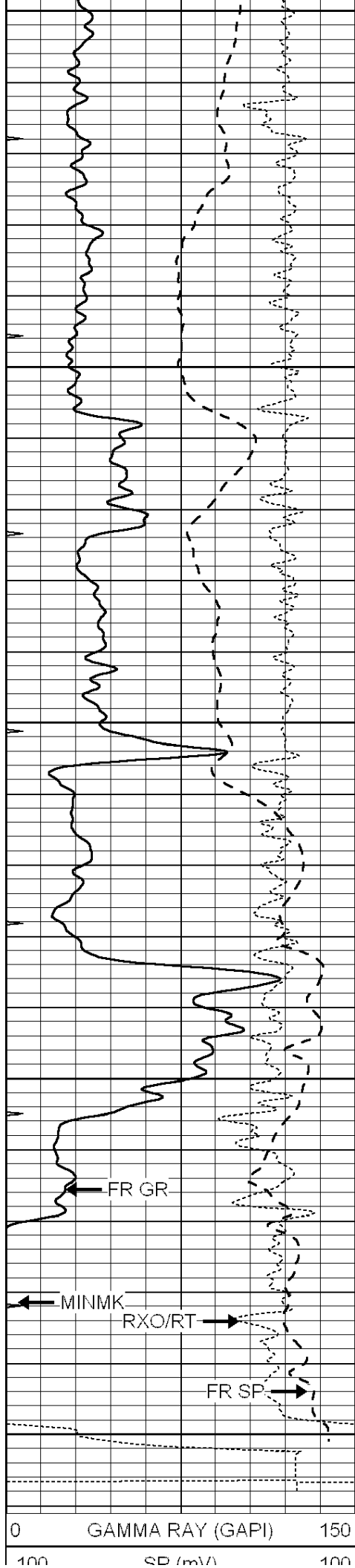
3050

3100

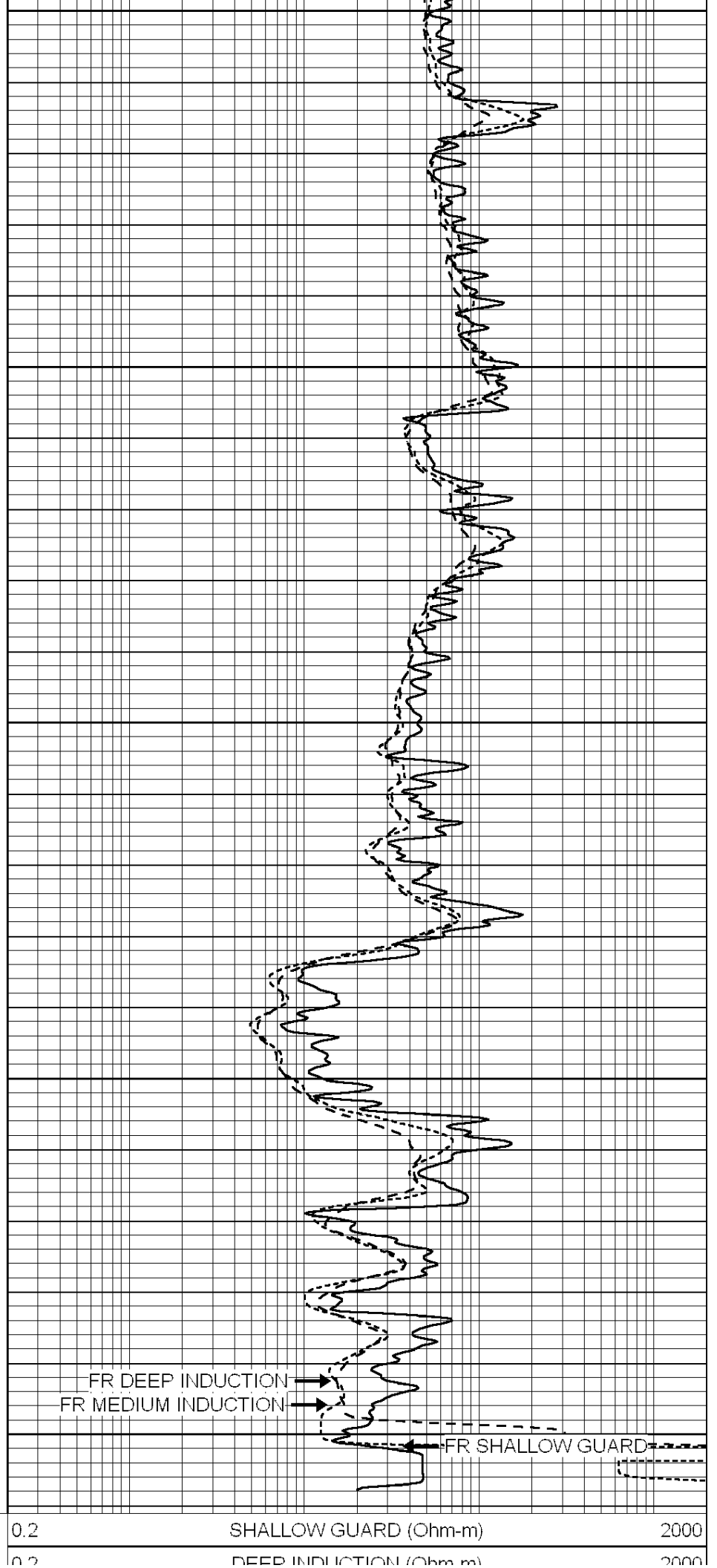
3150

3200



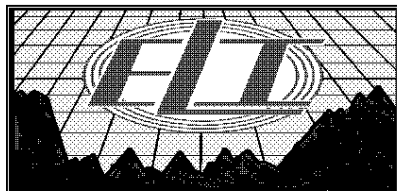


3250
3300
3350
3400
3450
LTD 3454



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

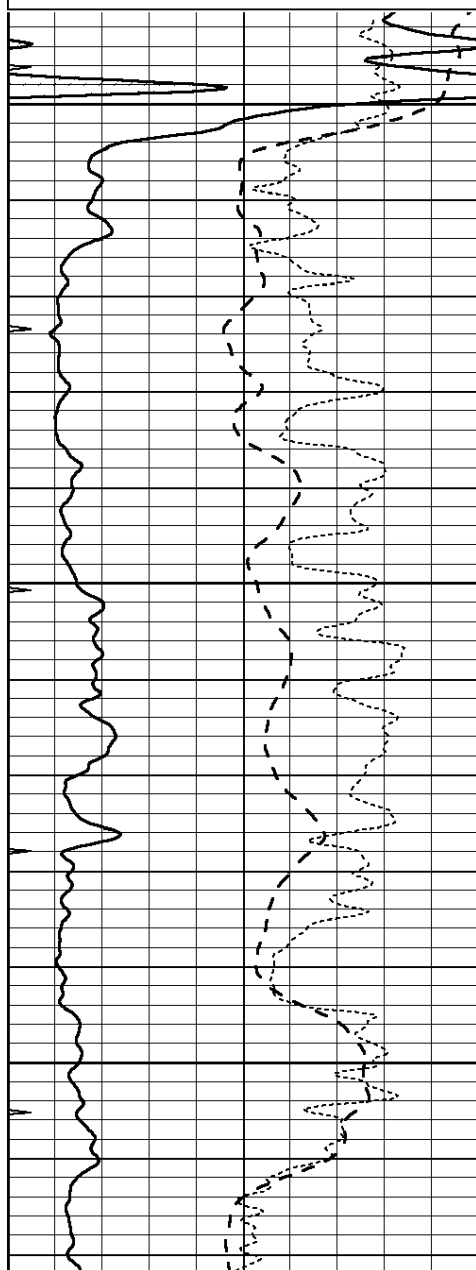


REPEAT SECTION

Database File: 4526pe.db
 Dataset Pathname: pass2.5
 Presentation Format: _dil
 Dataset Creation: Wed Jan 22 16:38:58 2020 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

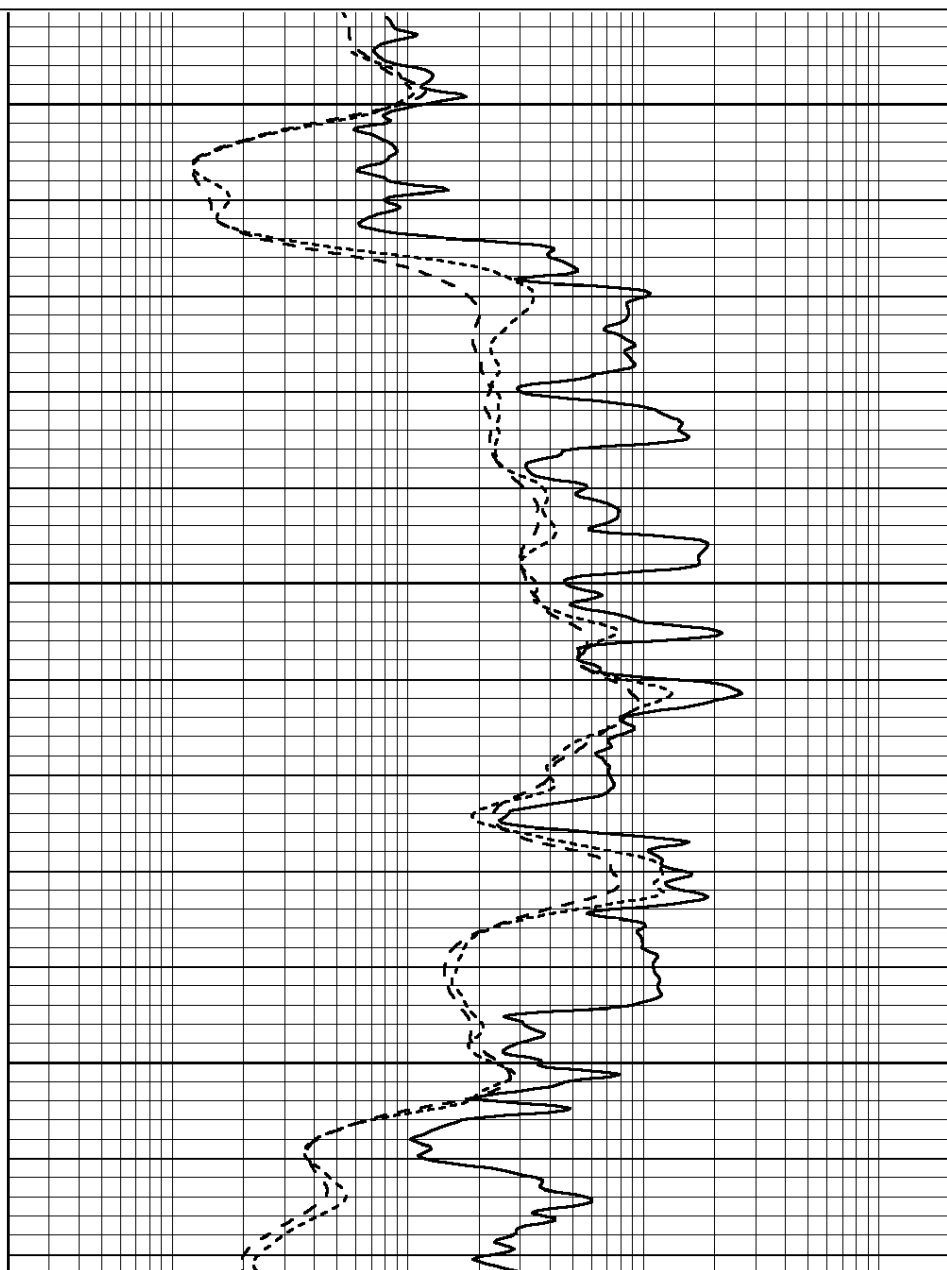
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

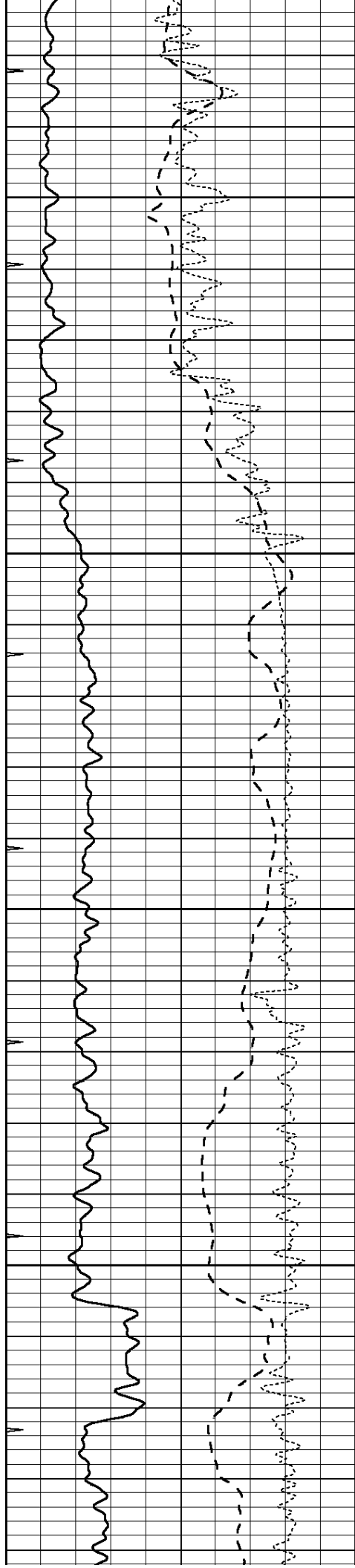


3000

3050

3100



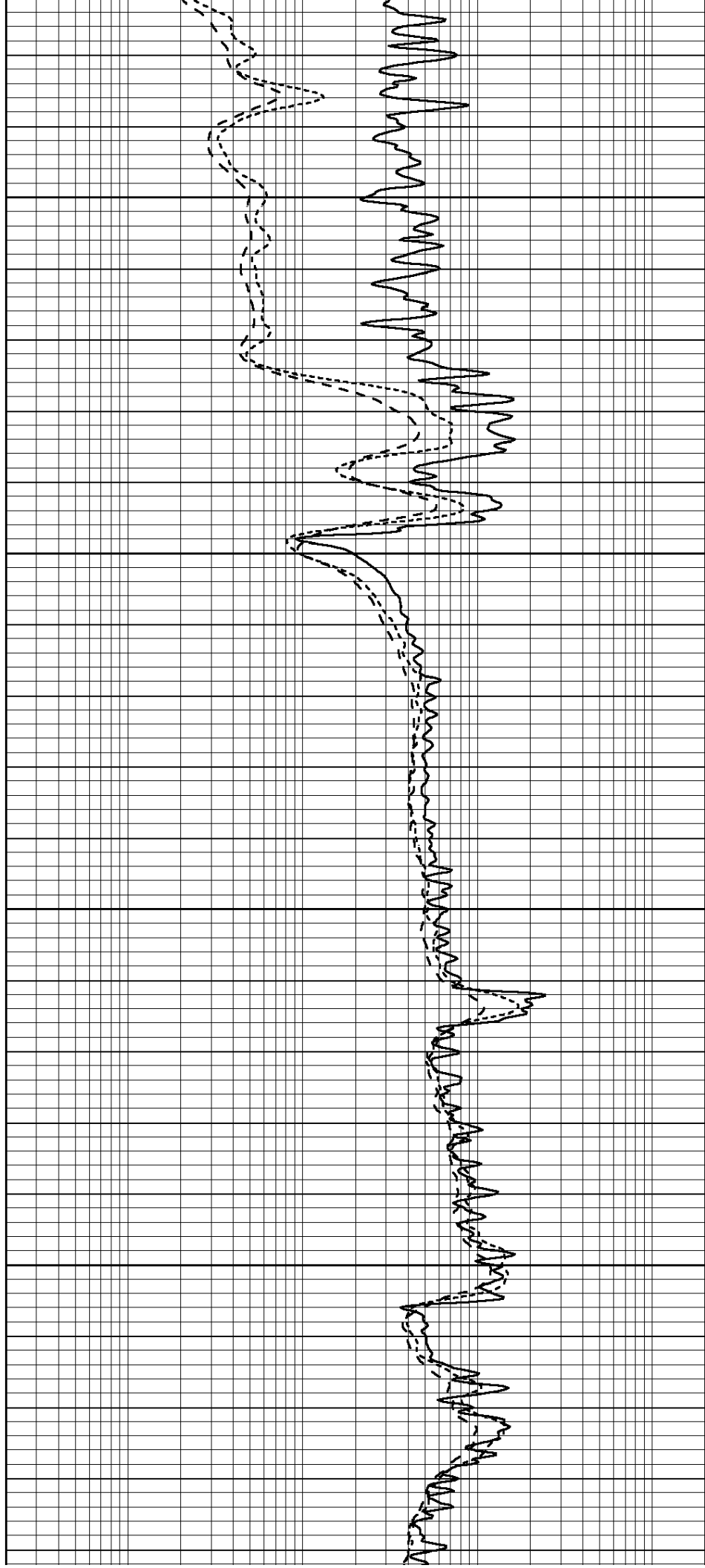


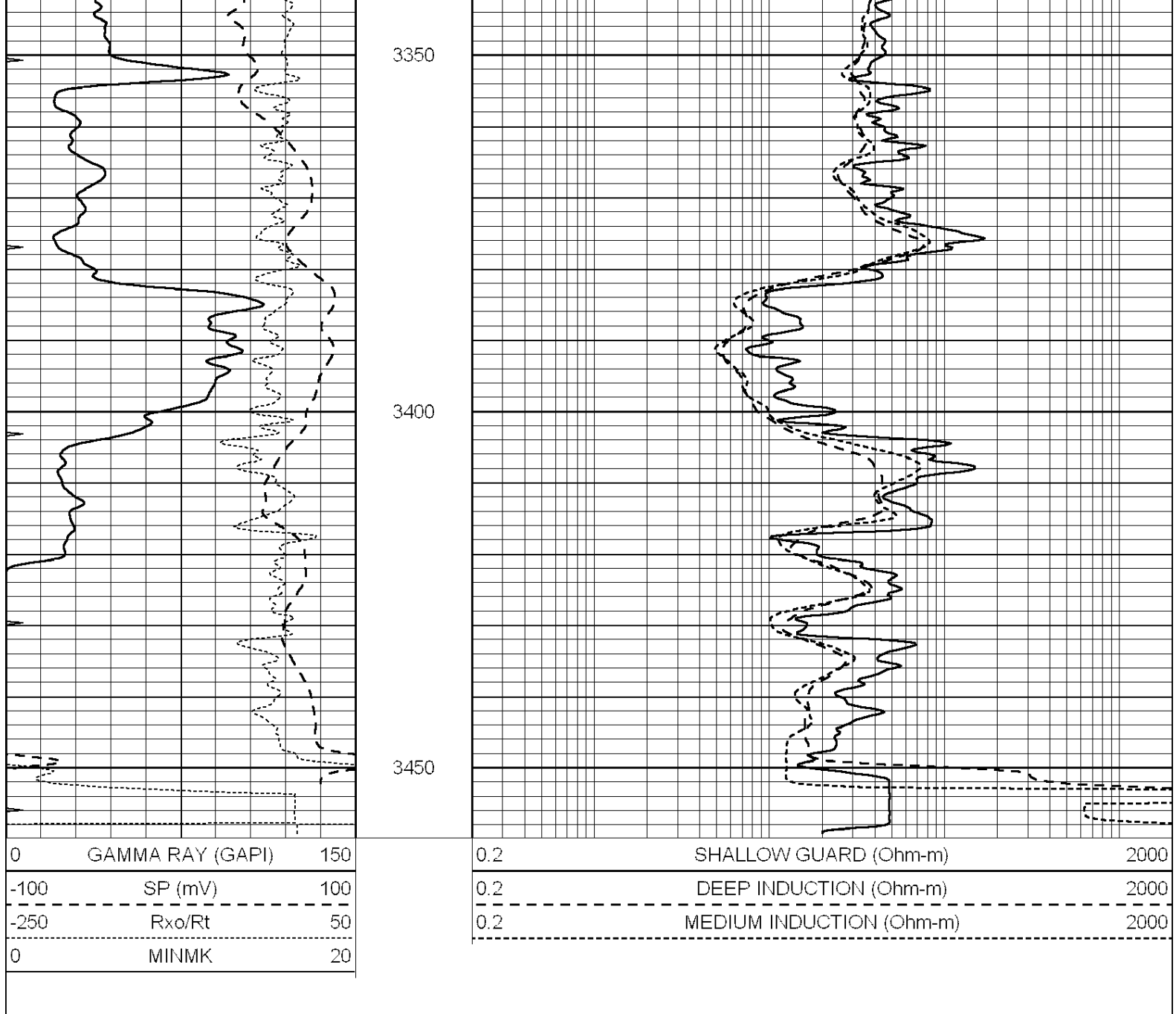
3150

3200

3250

3300





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'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		
Litho Density Calibration Report								
Serial: 002 Model: PRB								
Master Calibration			Performed Mon Aug 21 11:27:42 2017					
	Background	Magnesium	Aluminum	Sandstone				
Window 1	837.1	10632.5	2945.1	12110.1				cps
Window 2	772.0	9117.4	2570.1	10197.3				cps
Window 3	631.7	4669.0	1481.9	5042.9				cps
Window 4	187.0	187.5	185.9	189.9				cps
Long Space	0.0	8345.4	1798.1	9425.3				cps
Short Space	1.1	1927.9	1285.9	2050.2				cps
Rho		1.7100	2.5960	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio				: 0.558
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept				: -19.6
Before Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps
Measured Rho		0.0000	0.0000	0.0000				g/cc
Measured Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				
After Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps

Measured Rho	0.0000	0.0000	0.0000	g/cc
Measured Correction	0.0000	0.0000	0.0000	g/cc
Measured Pe		0.0000	0.0000	
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:	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		