



**Casedhole
Solutions**

DUAL INDUCTION LOG

Company		RAYMOND OIL COMPANY, INC.	
Well		#1 HINEMAN - LAYNE UNIT	
Field		ALAMOTA SOUTH	
County		LANE	
State		KANSAS	
Location:		API # : 15-101-22569-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		725' FNL & 2520' FWL	
Drilling Measured From		NE - SE - NE - NW	
SEC 9		TWP 19S	
RGE 27W		Elevation	
K.B. 2717		CDL/CNL	
D.F. 2715		MEL	
G.L. 2712			
Date	9/28/15		
Run Number	ONE		
Depth Driller	4762		
Depth Logger	4763		
Bottom Logged Interval	4761		
Top Log Interval	00		
Casing Driller	8 5/8"@261'		
Casing Logger	260		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,000 PPM	
Density / Viscosity	9.2/62		
pH / Fluid Loss	10.0/8.8		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.850@82F		
Rinf @ Meas. Temp	.638@82F		
Rinc @ Meas. Temp	1.02@82F		
Source of Rinf / Rinc	MEASUREMENT		
Rin @ BHT	.621@103F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	8:30 A.M.		
Maximum Recorded Temperature	123F		
Equipment Number	22339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KIM SHOEMAKER		

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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 C & J ENERGY (CASED HOLE SOLUTIONS) HAYS, KANSAS (785) 628-6395
DIRECTIONS

DIGHTON, KS., E. ON HWY 96 TO "TURKEY RED RD.", 4S. TO "RD. 110" 1/2W., S. INTO



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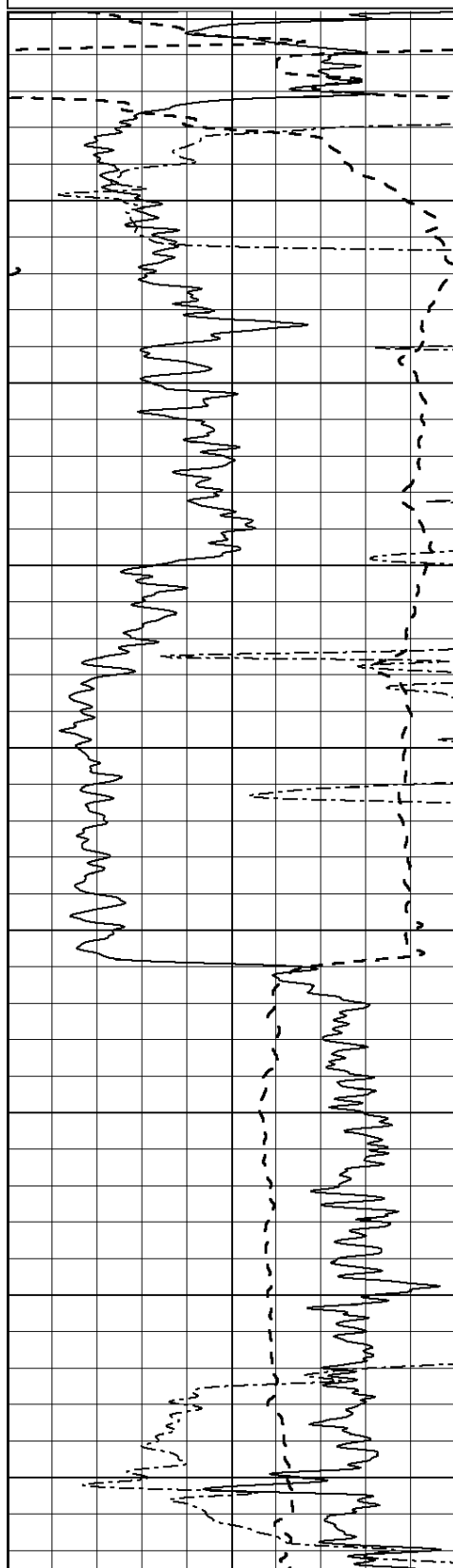
MAIN SECTION

Database File: 26640ddn.db
Dataset Pathname: pass3.10
Presentation Format: dil2
Dataset Creation: Mon Sep 28 10:14:17 2015
Charted by: Depth in Feet scaled 1:600

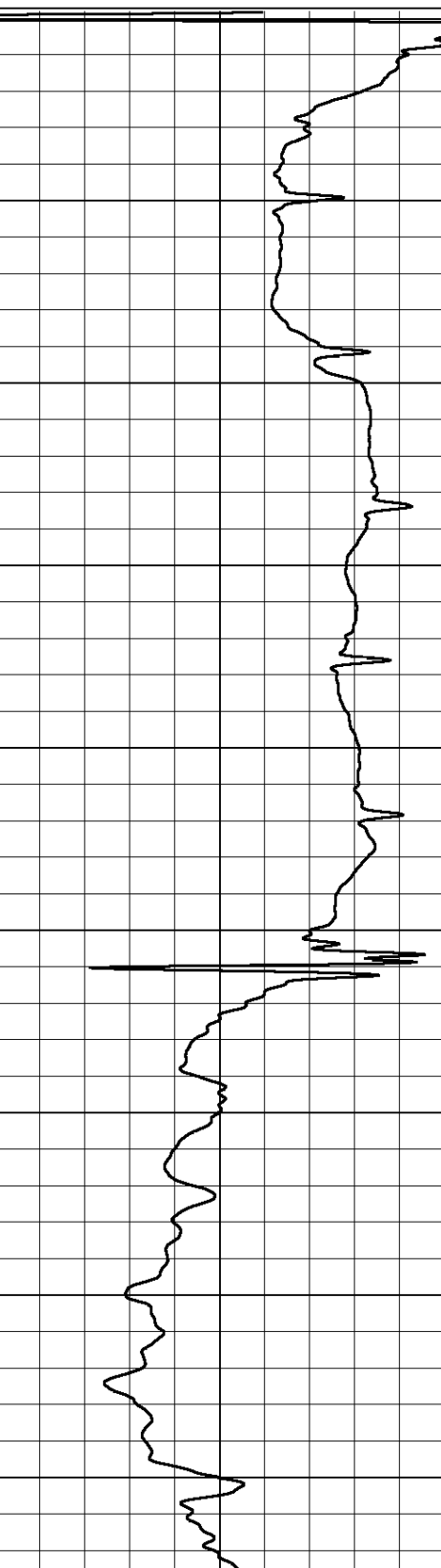
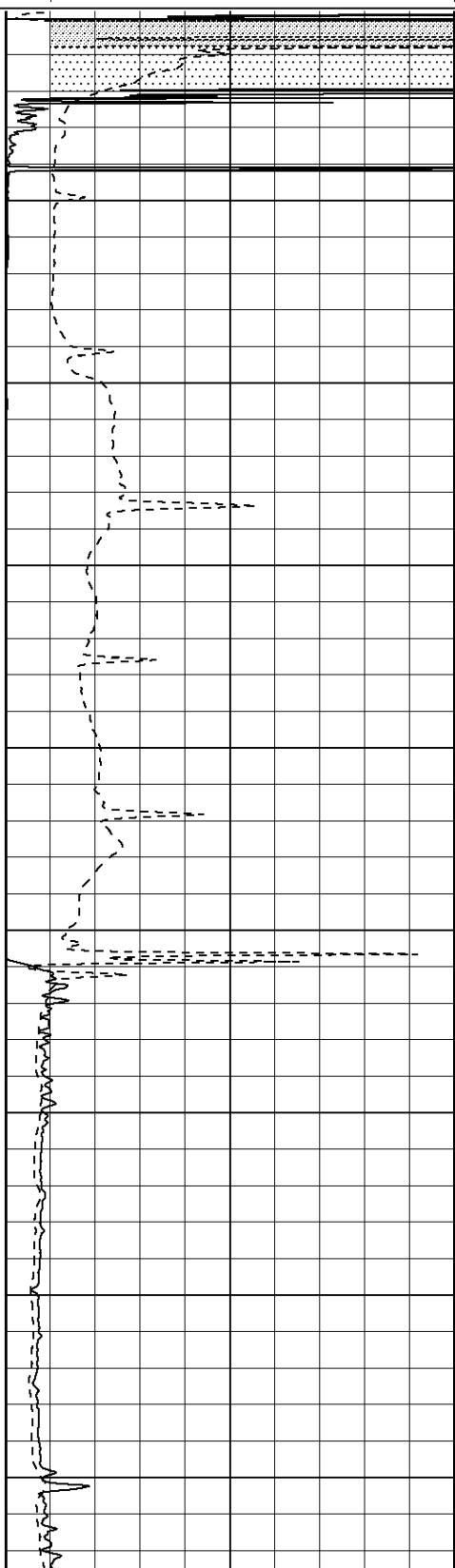
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-100	SP (mV)	100
0	RWA (Ohm-m)	1

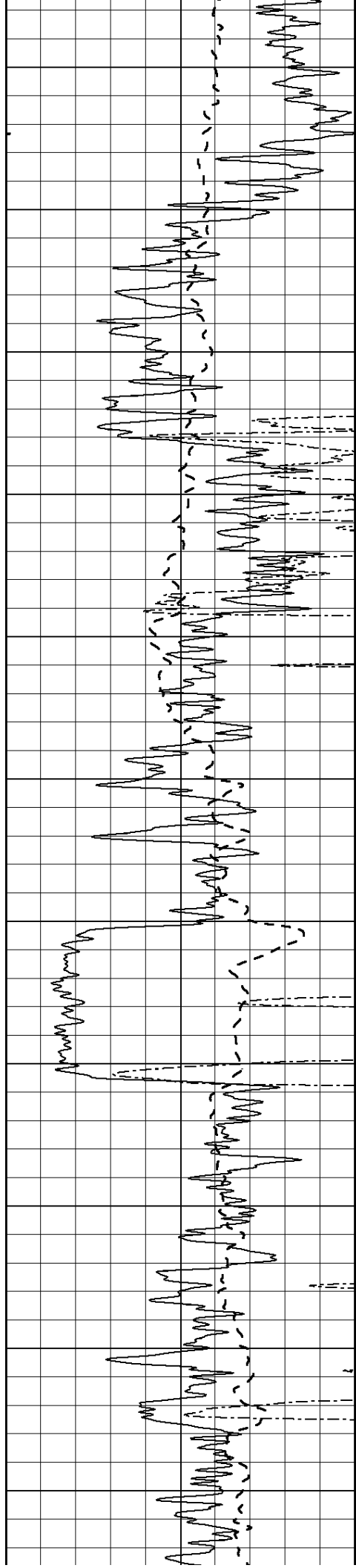
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

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

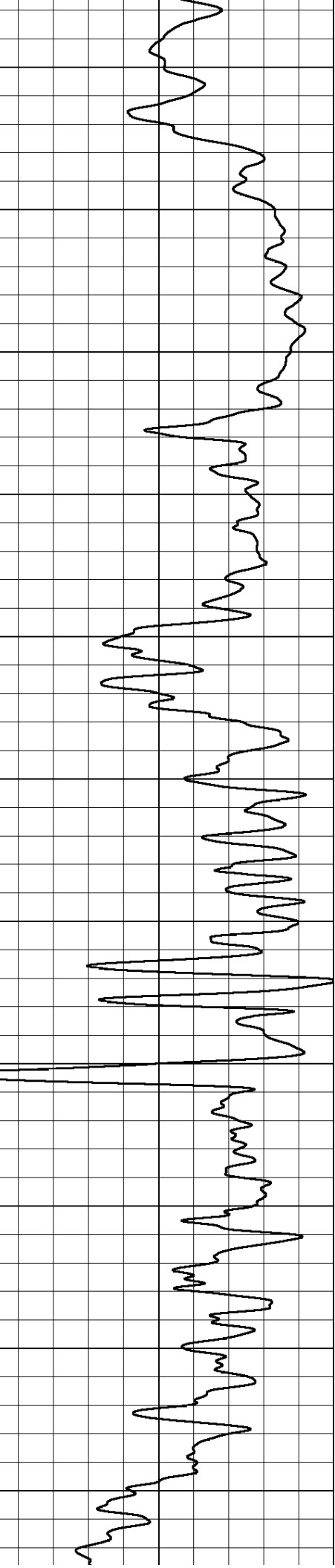
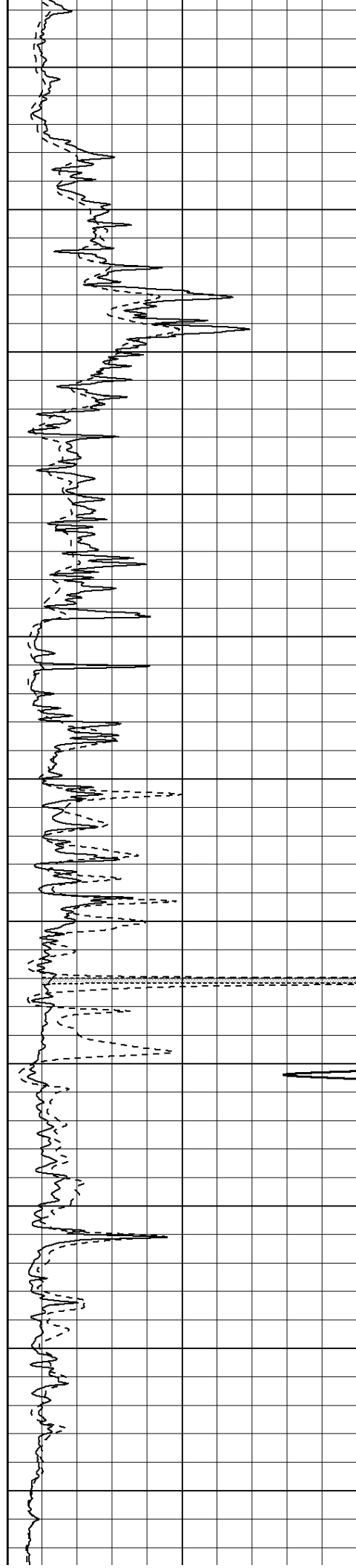
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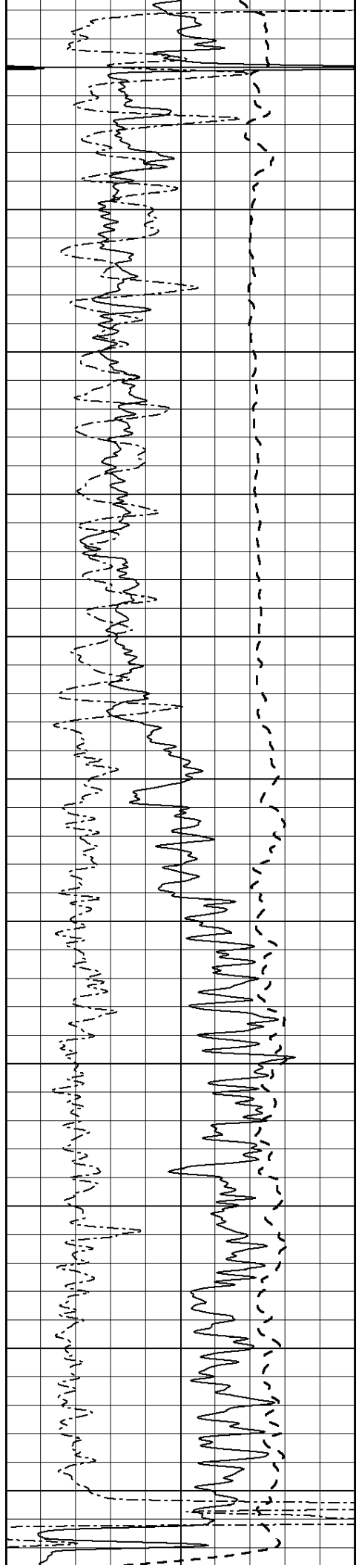
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850

900

950





1550

1600

1650

1700

1750

1800

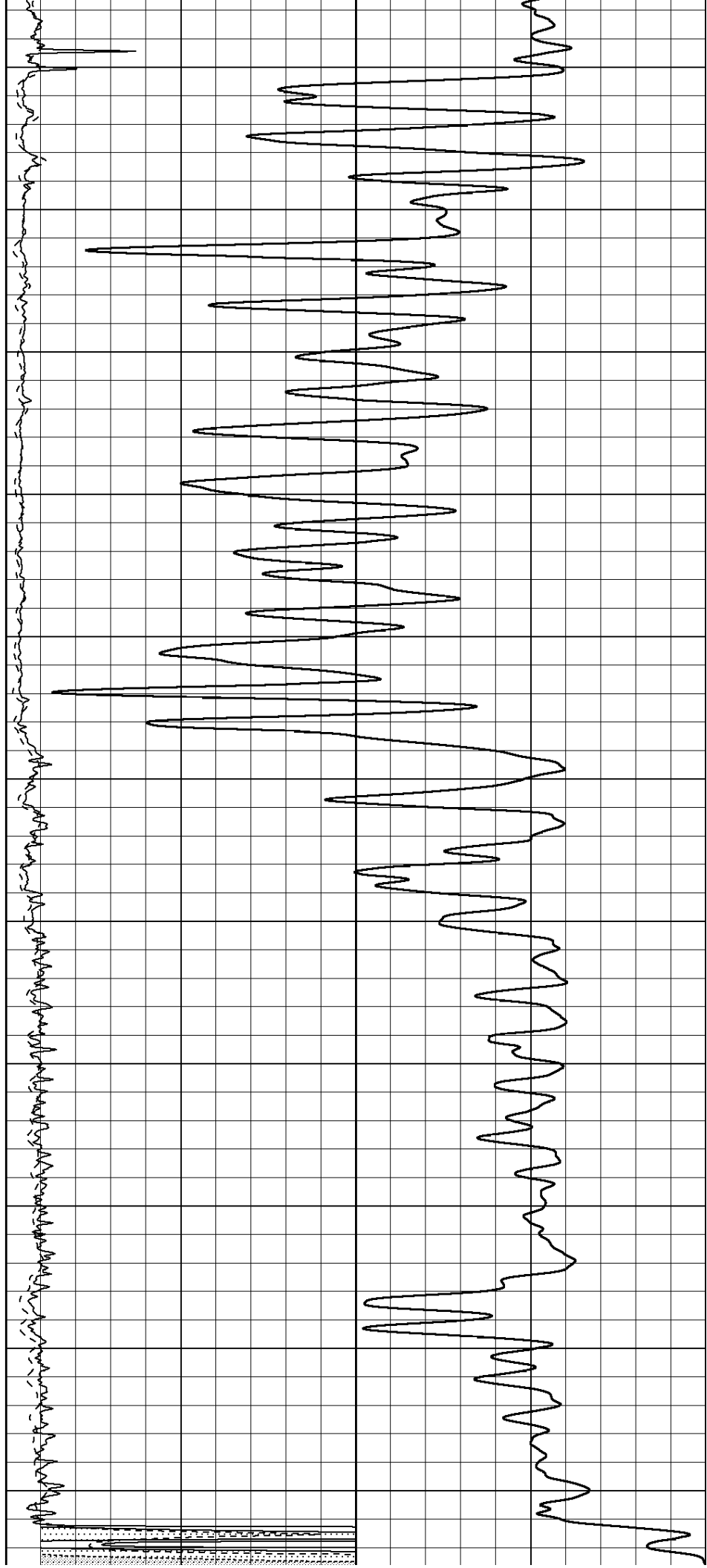
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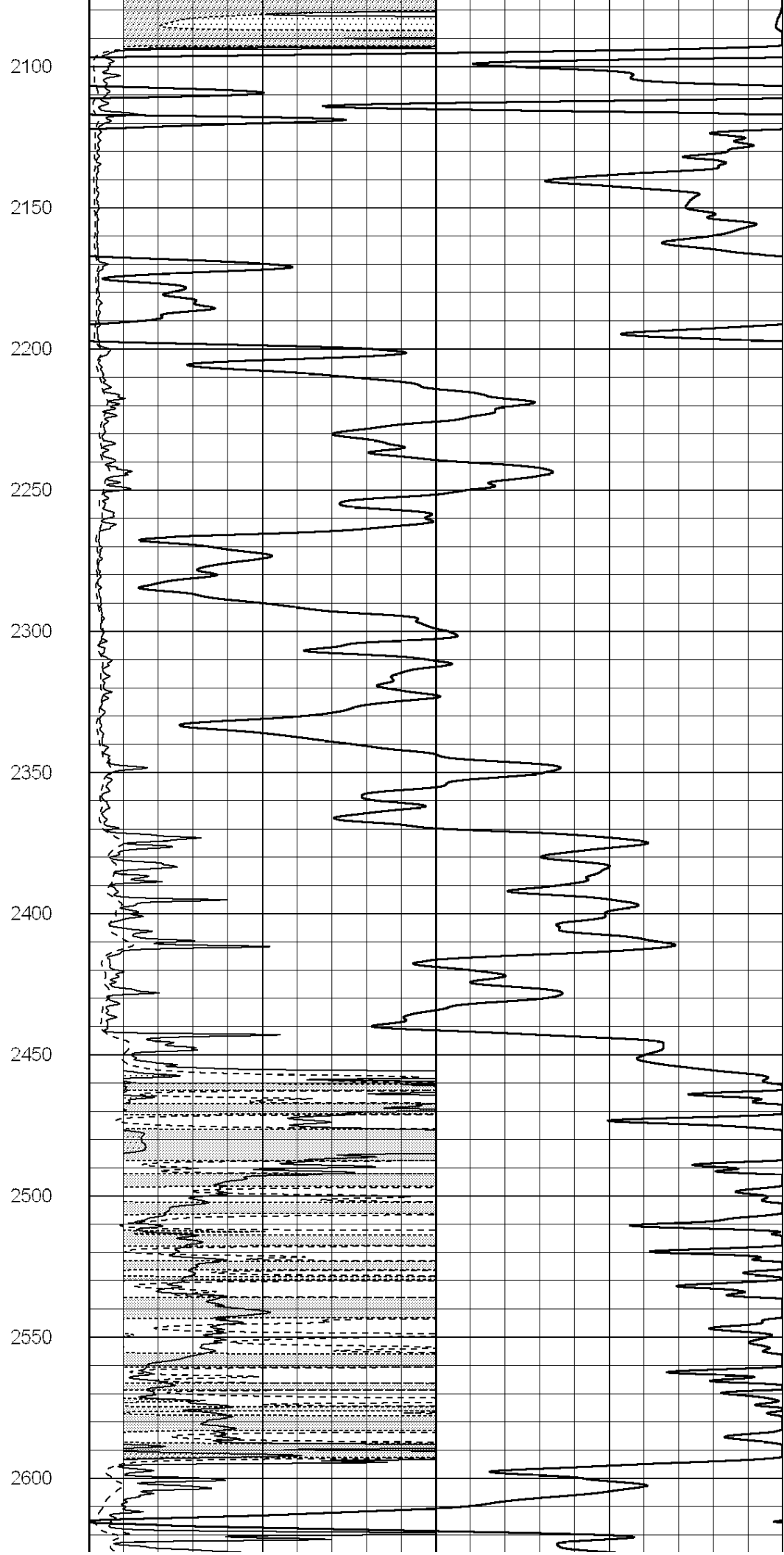
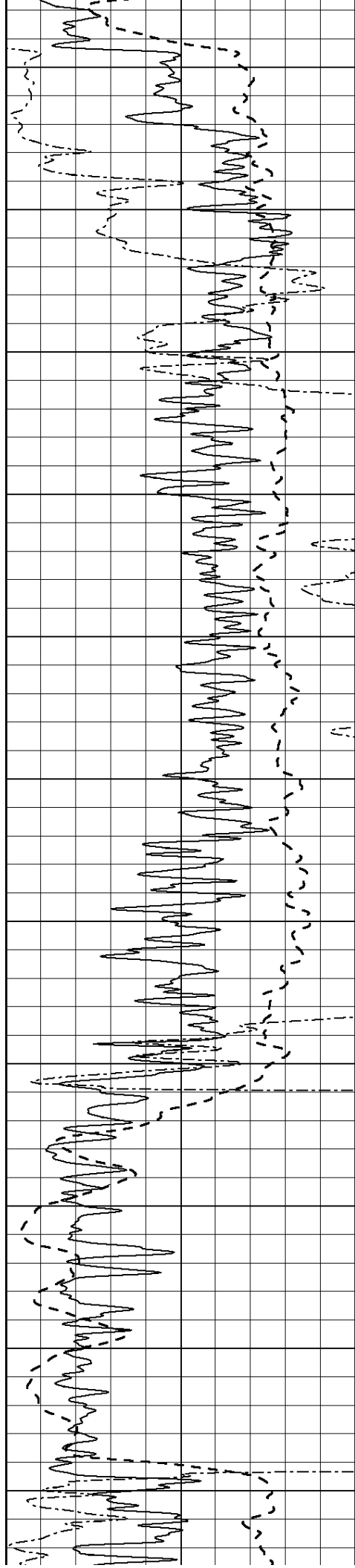
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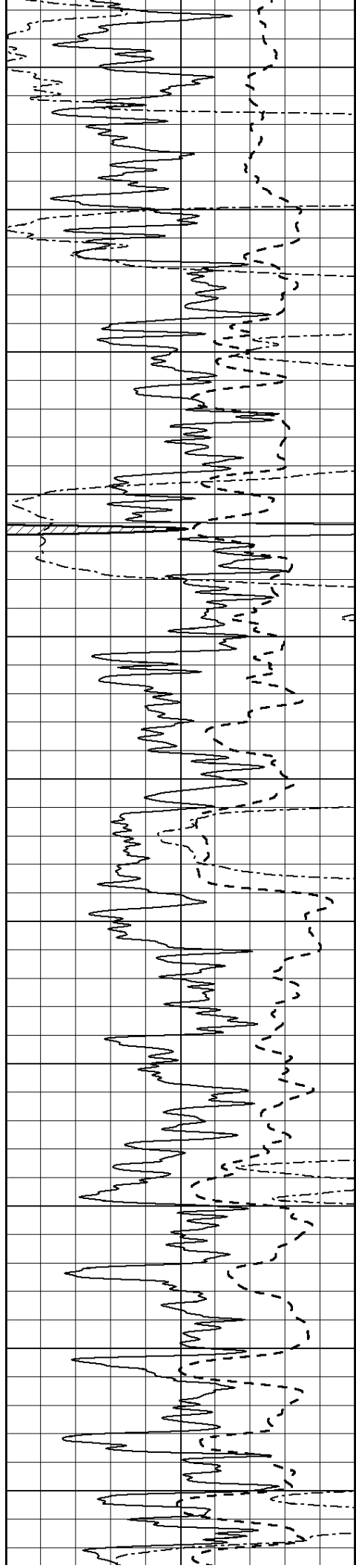
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2000

2050







2650

2700

2750

2800

2850

2900

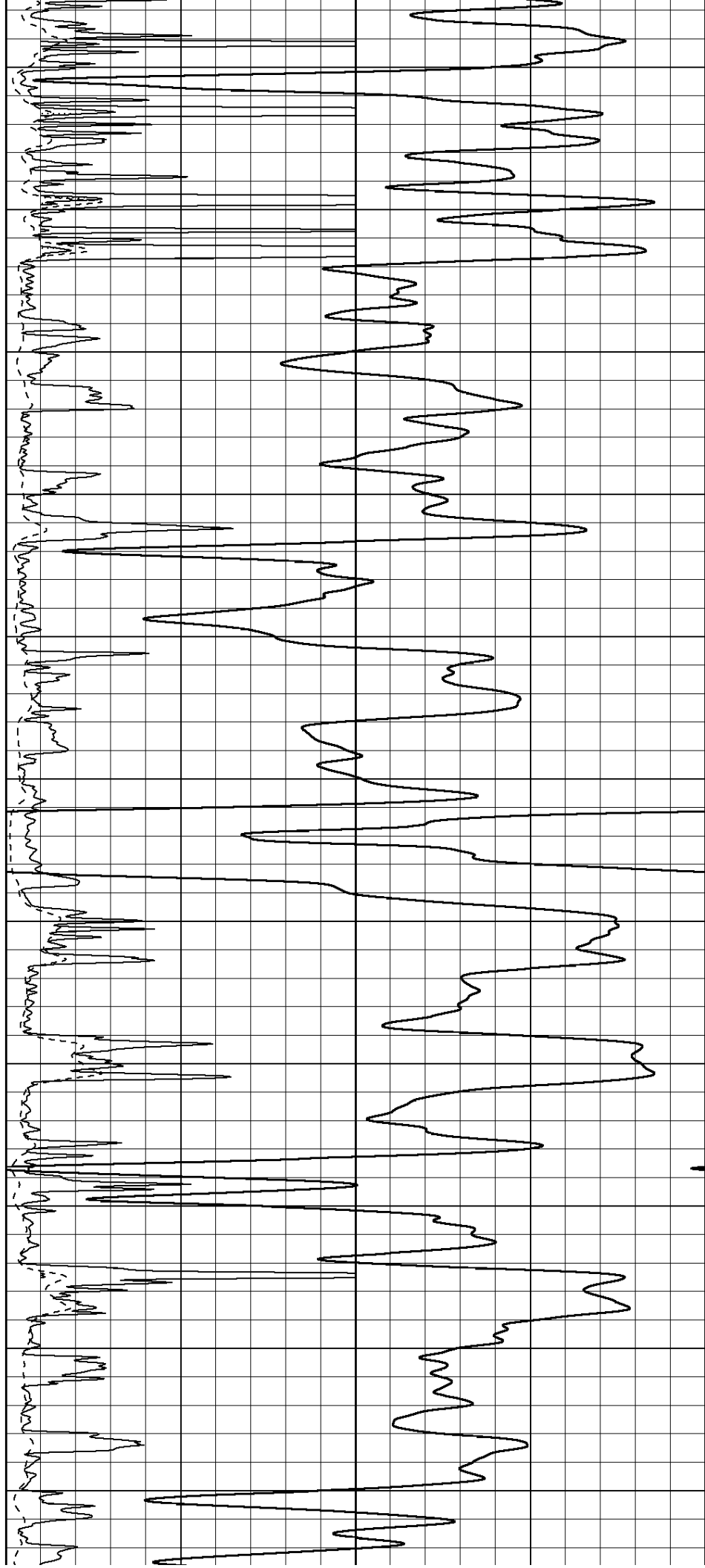
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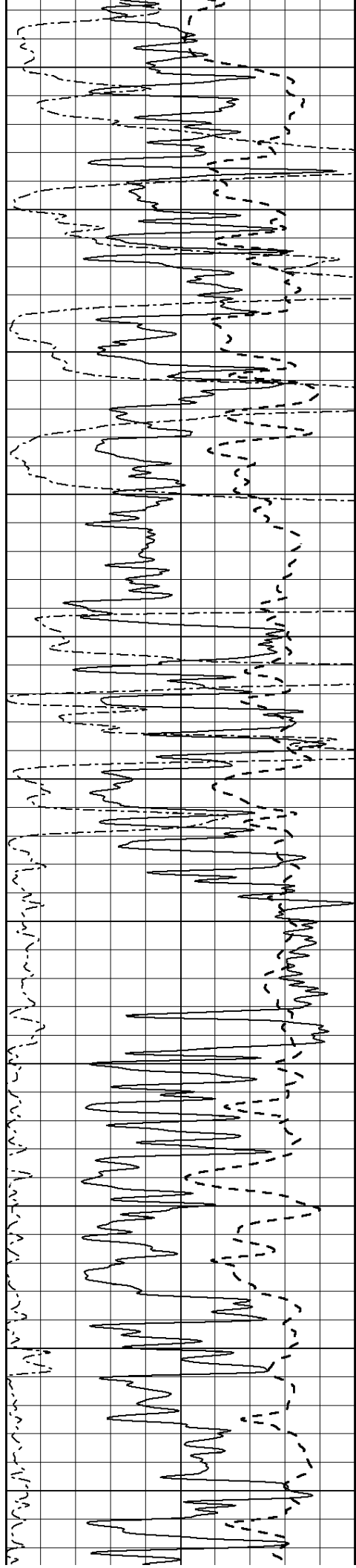
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3050

3100

3150





3200

3250

3300

3350

3400

3450

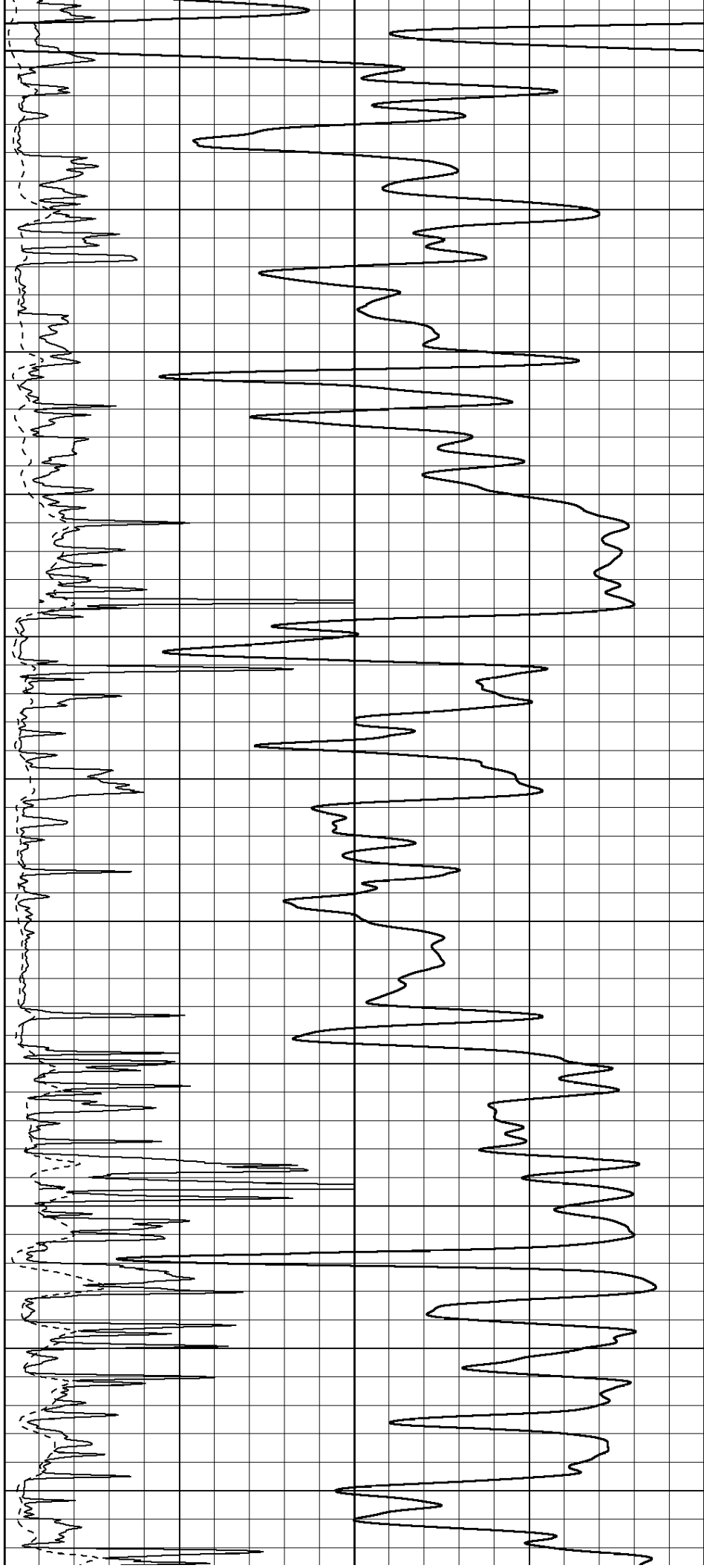
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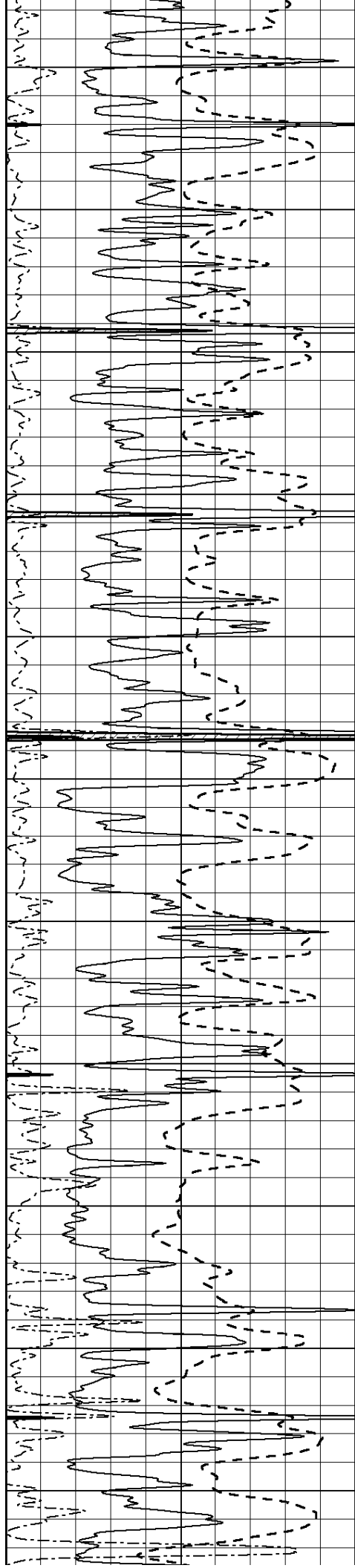
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

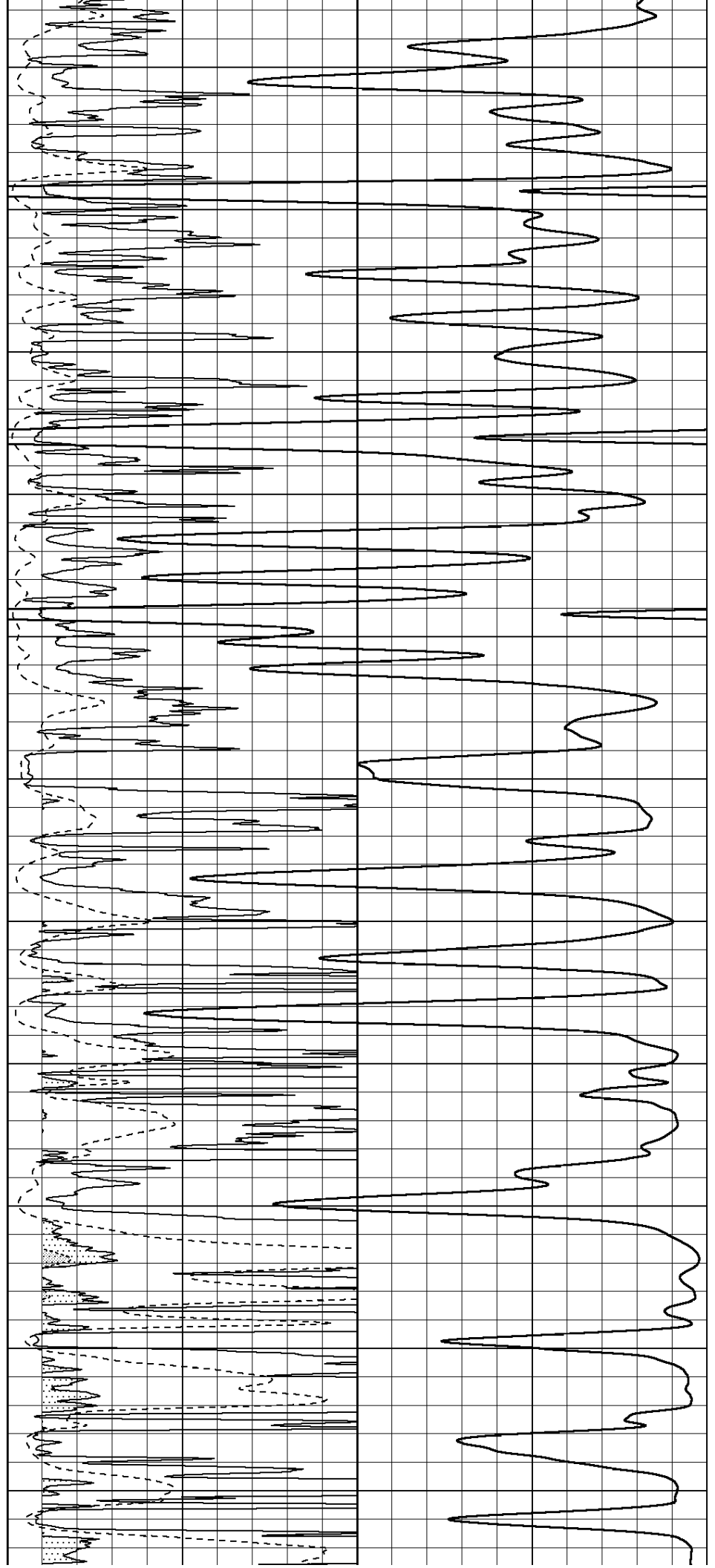
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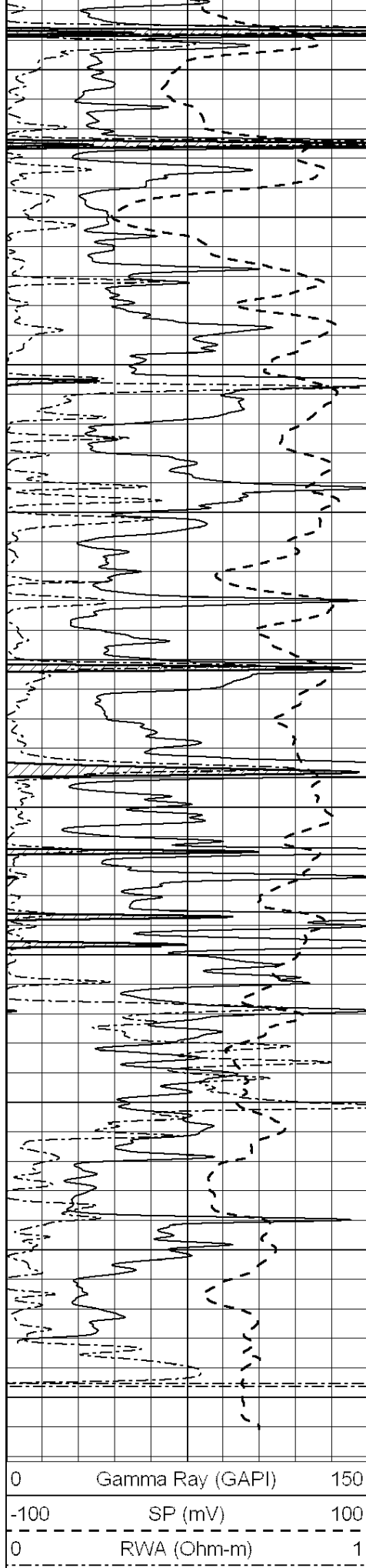
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4150

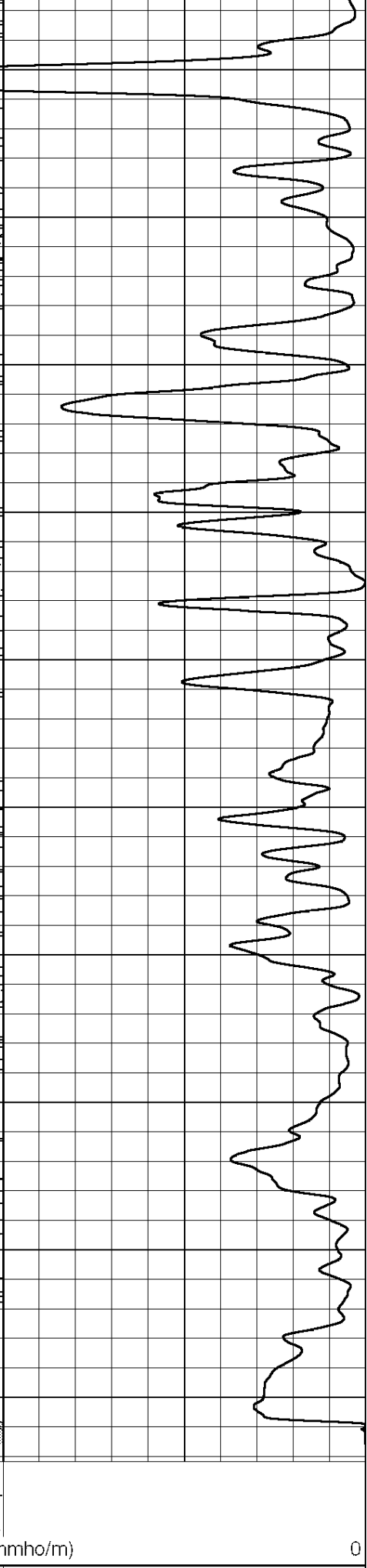
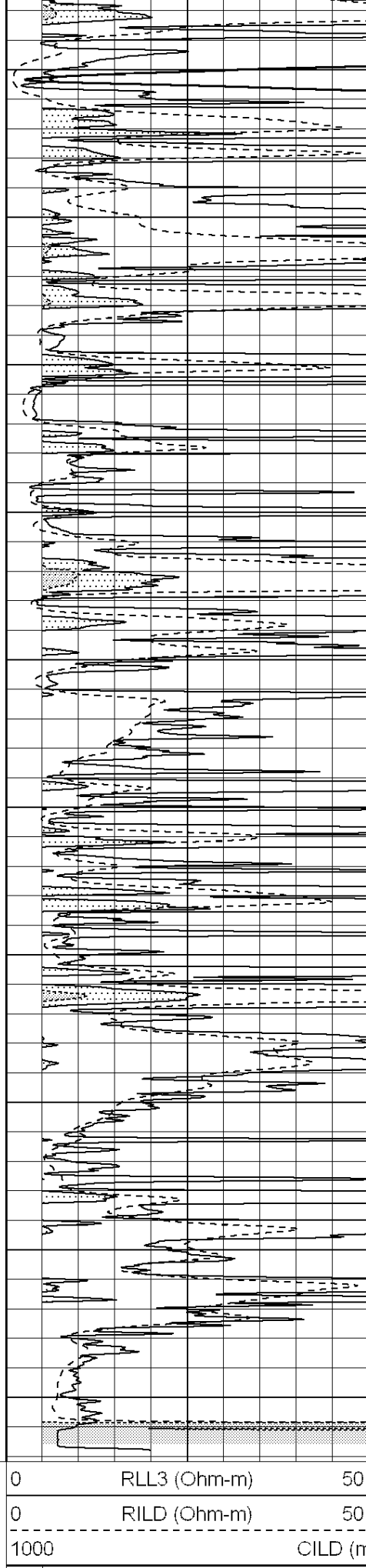
4200

4250





4300
4350
4400
4450
4500
4550
4600
4650
4700
4750



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

50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500



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UPPER SECTION

Database File: 26640ddn.db
Dataset Pathname: pass3.8
Presentation Format: _dil
Dataset Creation: Mon Sep 28 10:03:28 2015 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

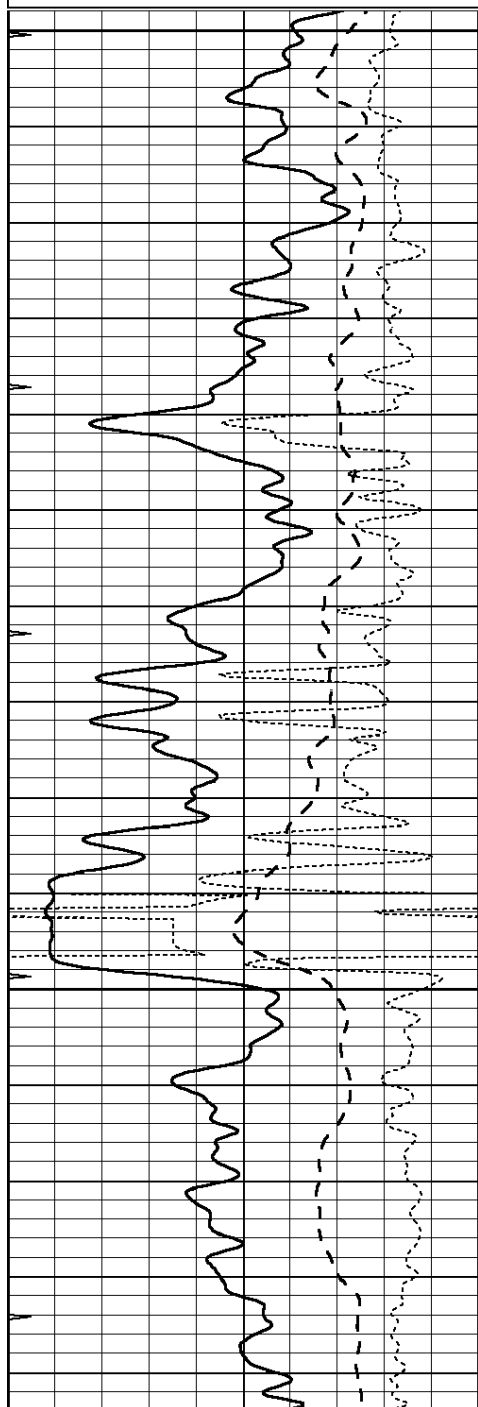
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100

-250	Rxo/Rt	50

0	MINMK	20

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

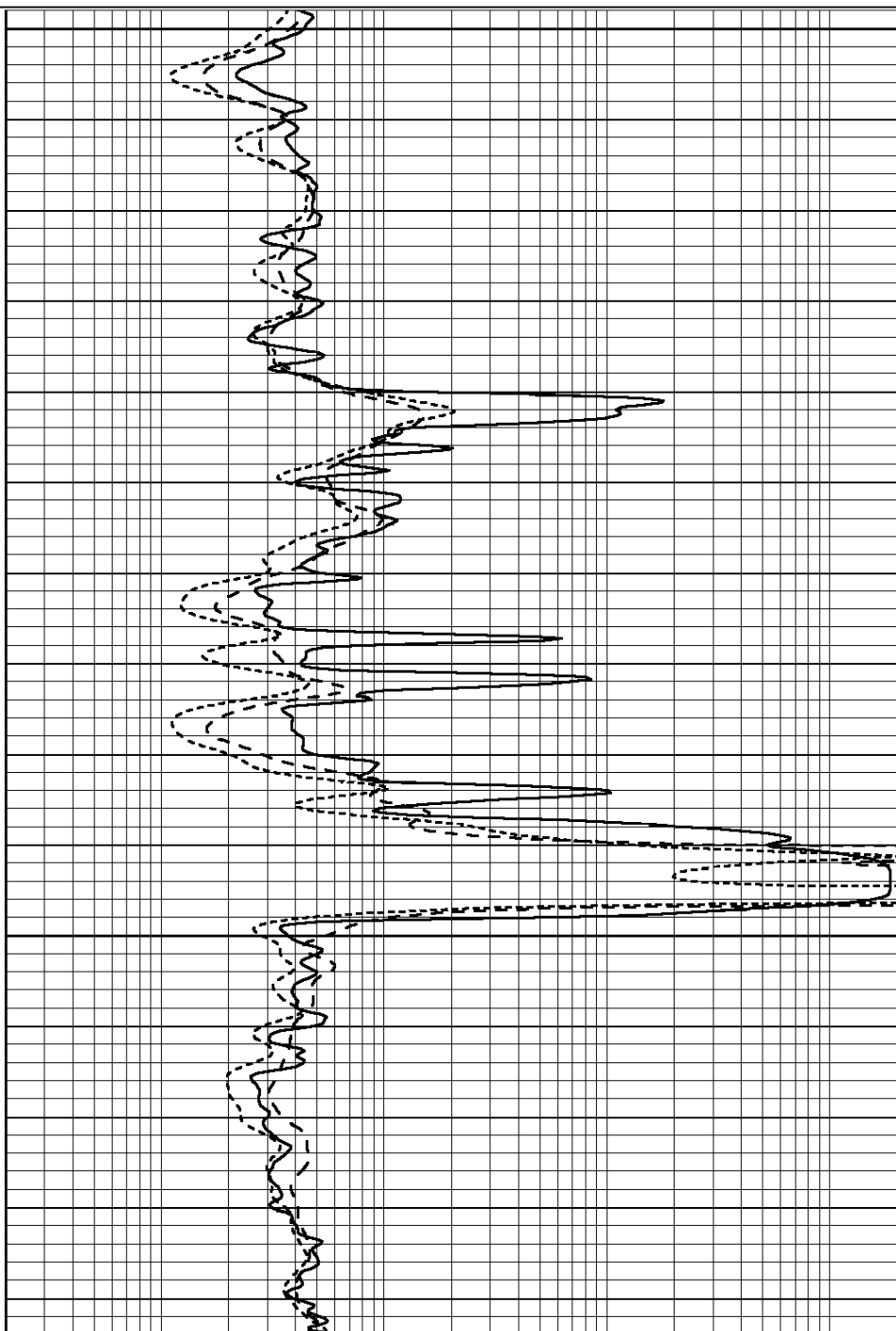
0.2	MEDIUM INDUCTION (Ohm-m)	2000

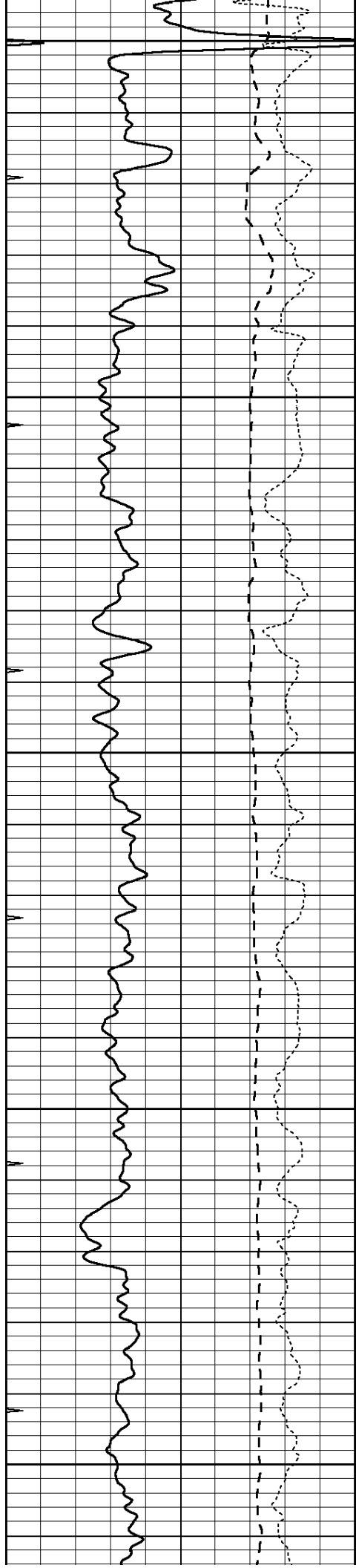


1400

1450

1500





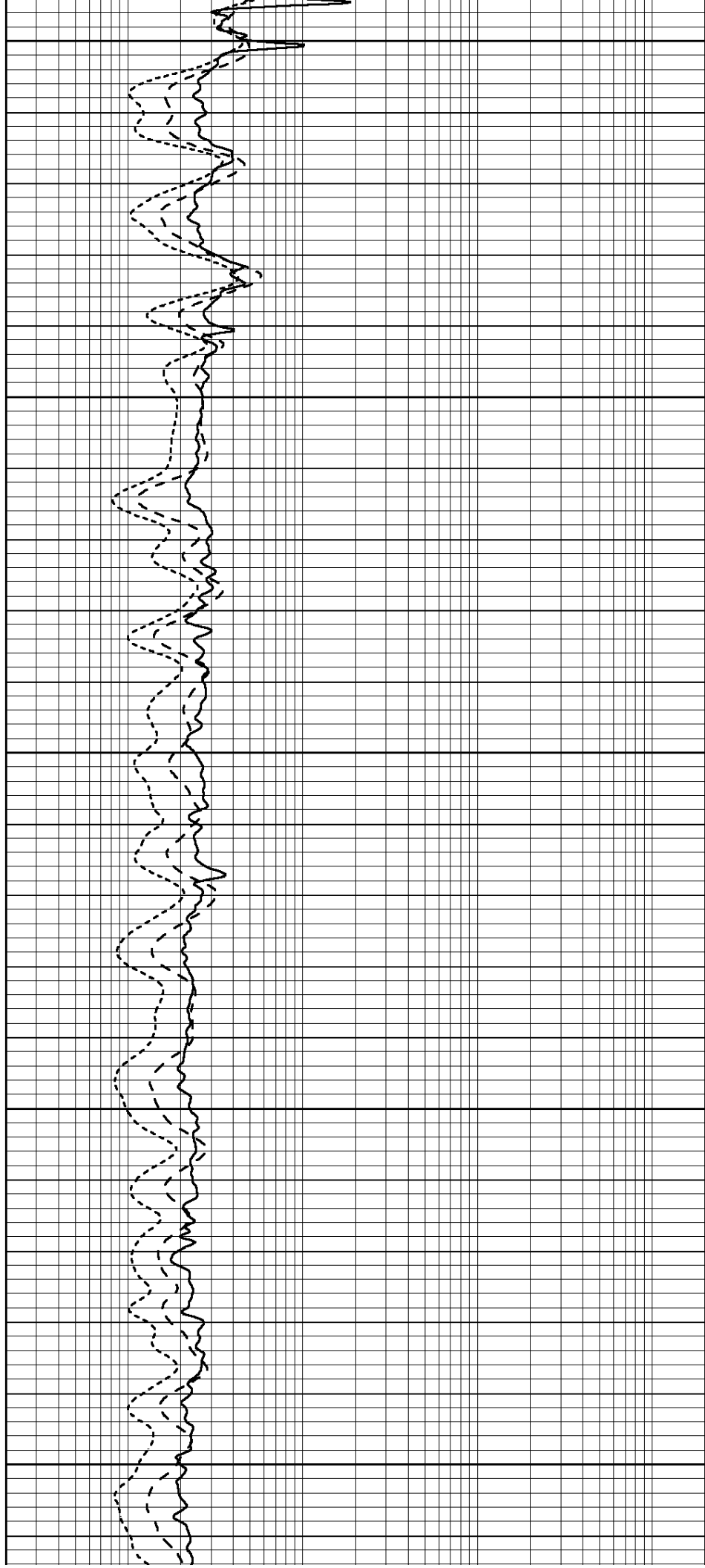
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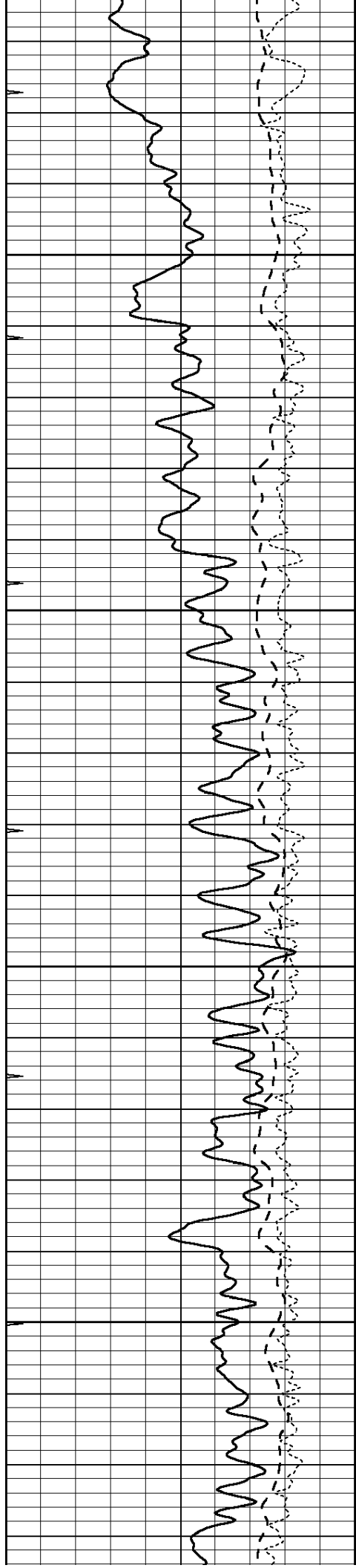
1600

1650

1700

1750



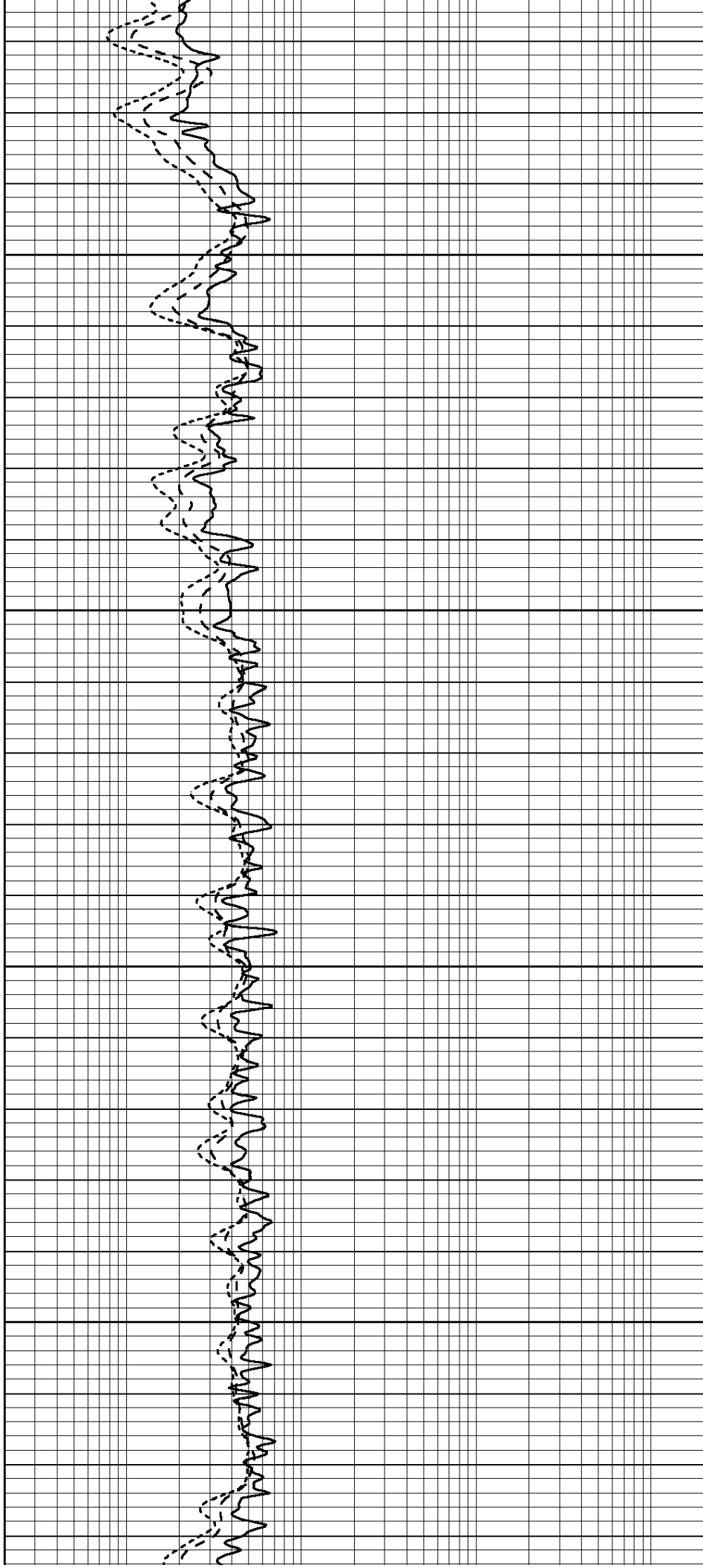


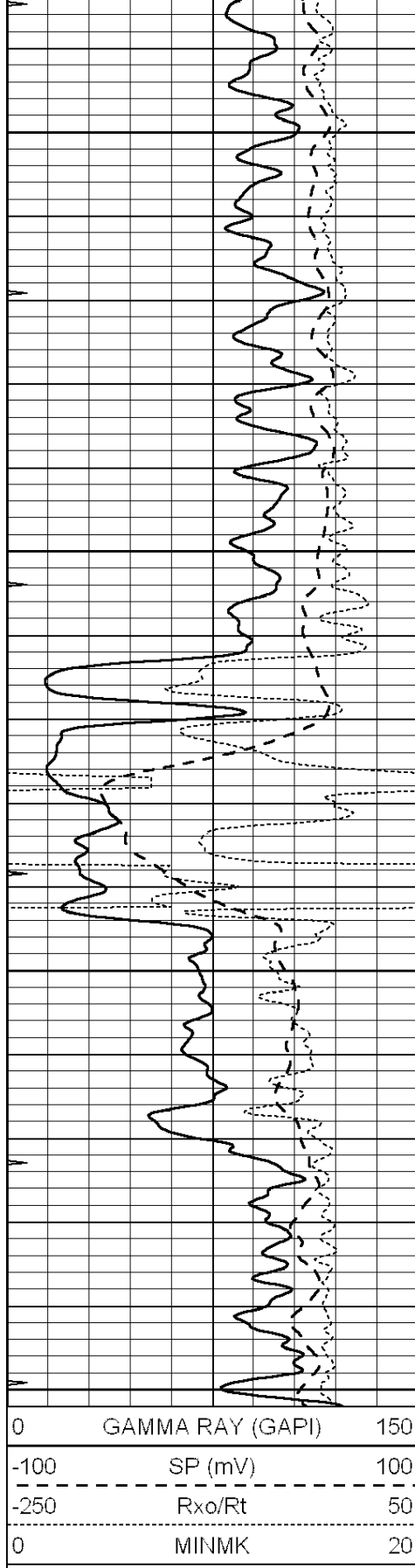
1800

1850

1900

1950



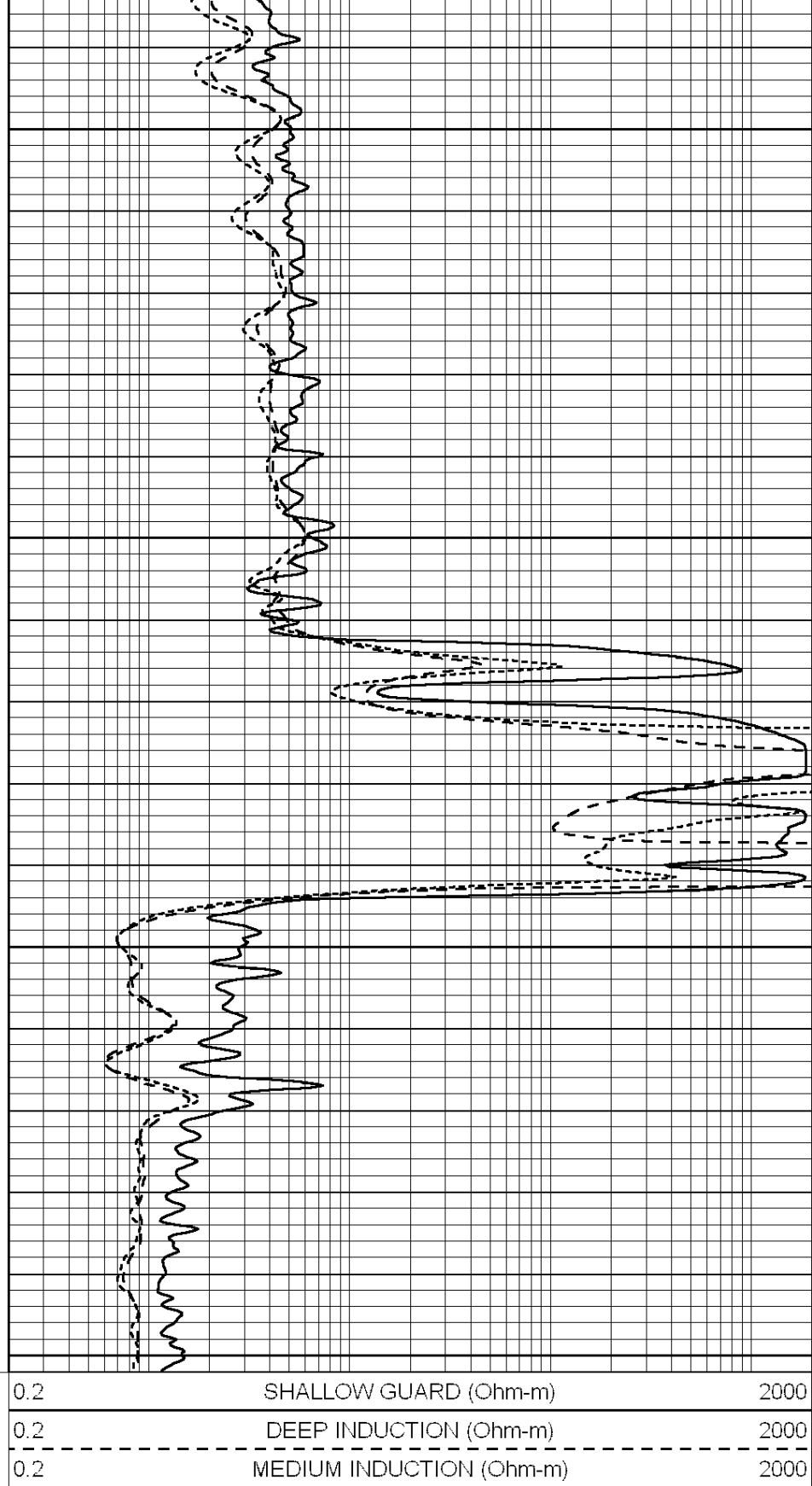


2000

2050

2100

2150



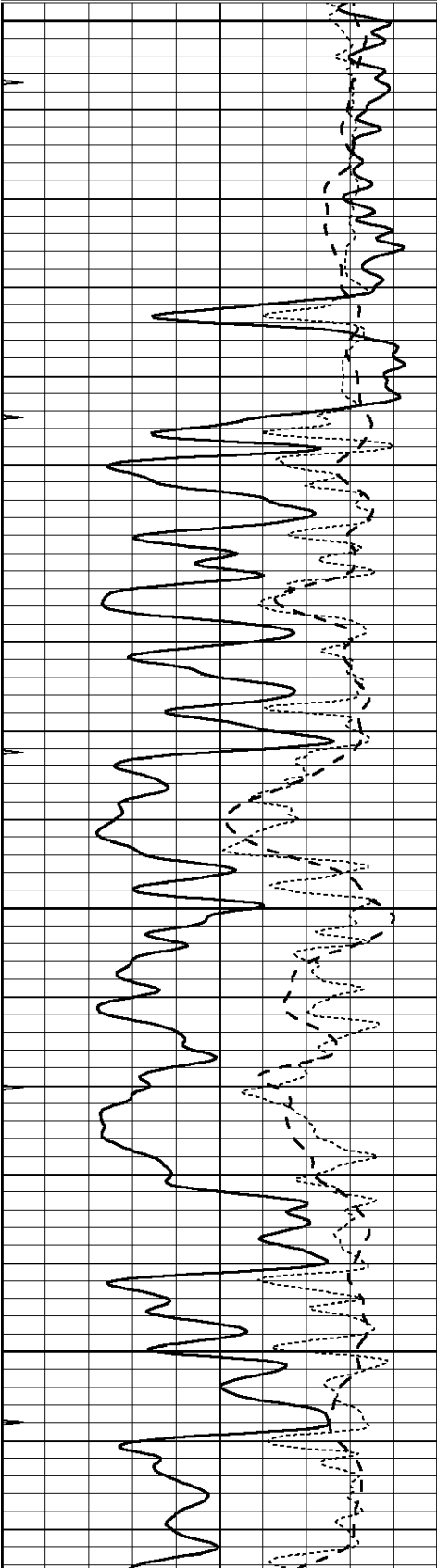
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MAIN SECTION

Database File: 26640ddn.db
Dataset Pathname: pass3.6
Presentation Format: _dil
Dataset Creation: Mon Sep 28 09:57:45 2015
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

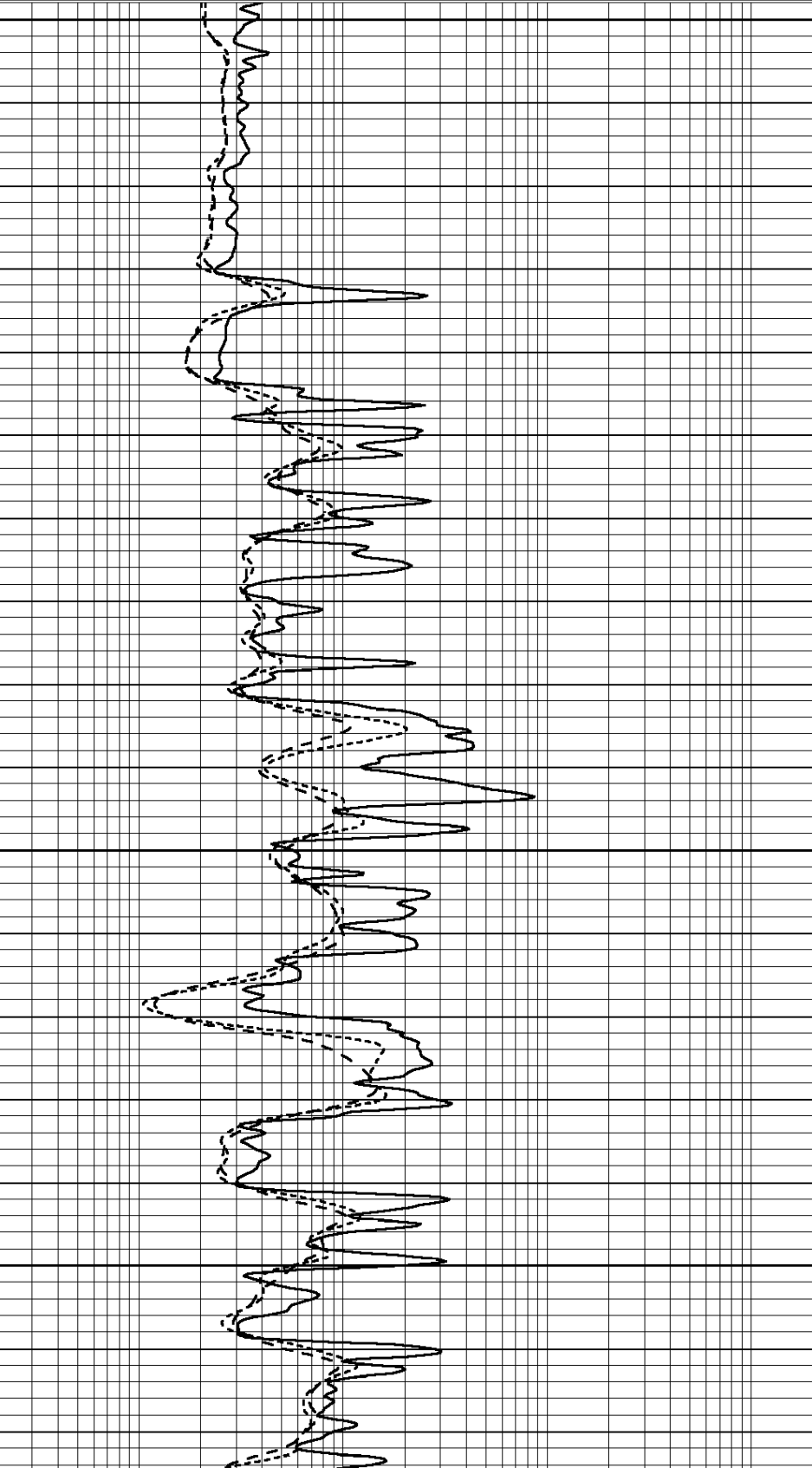


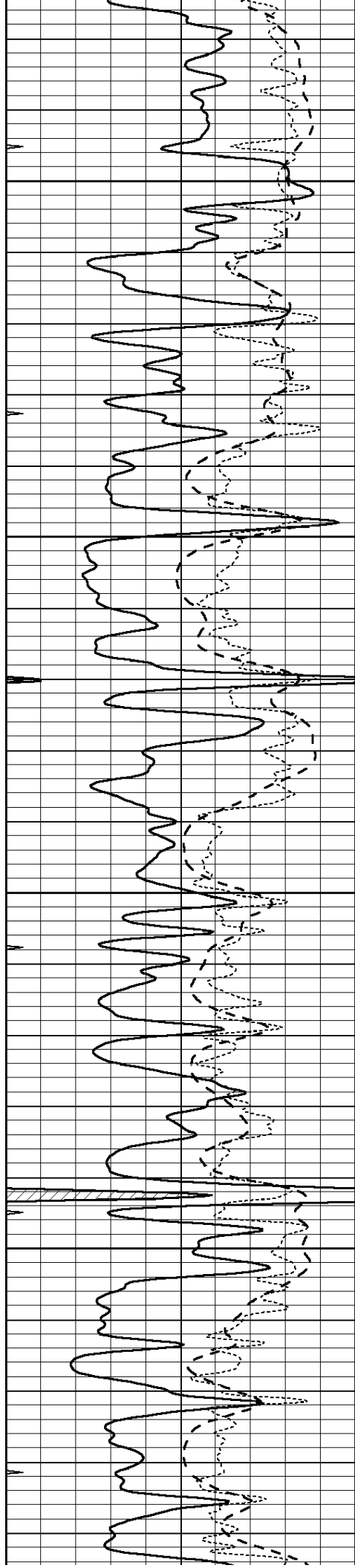
3500

3550

3600

3650



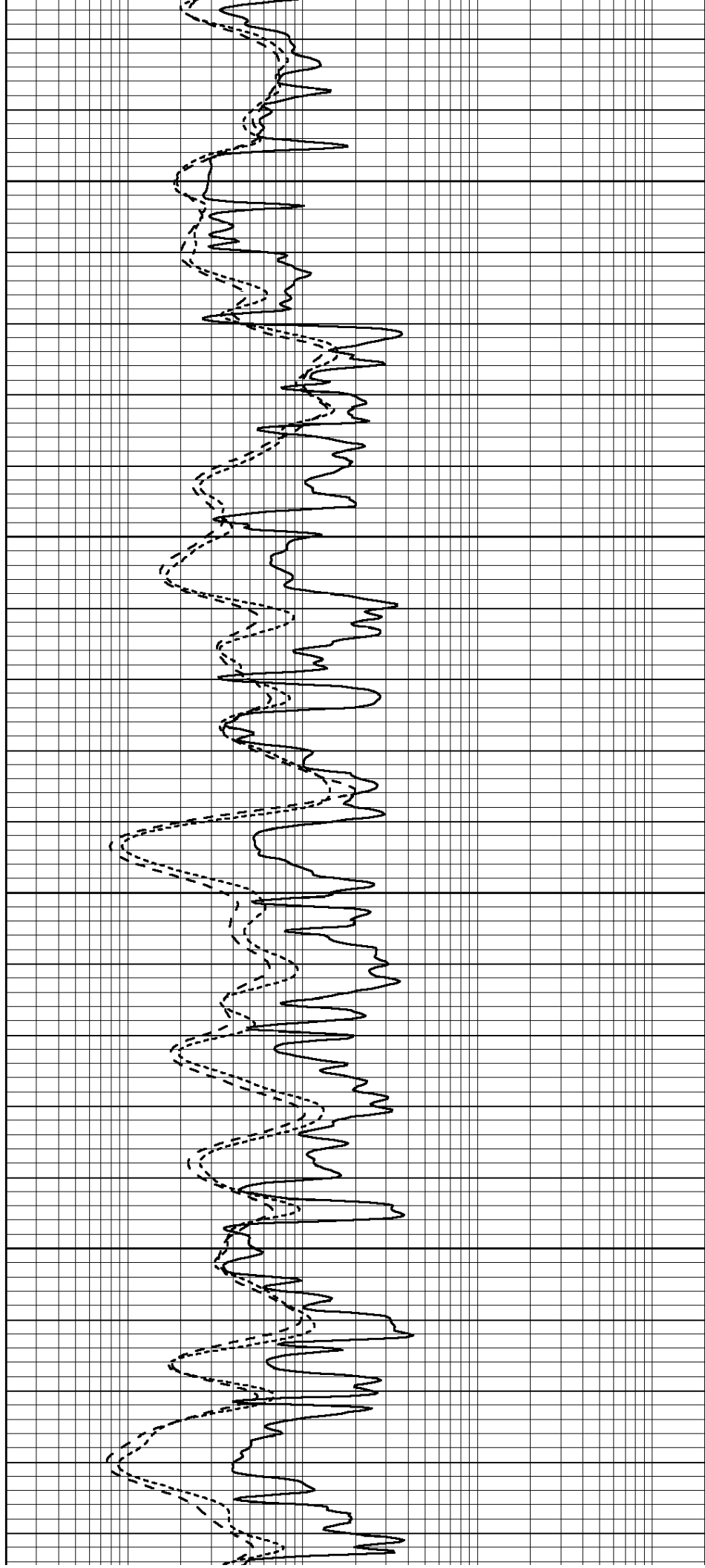


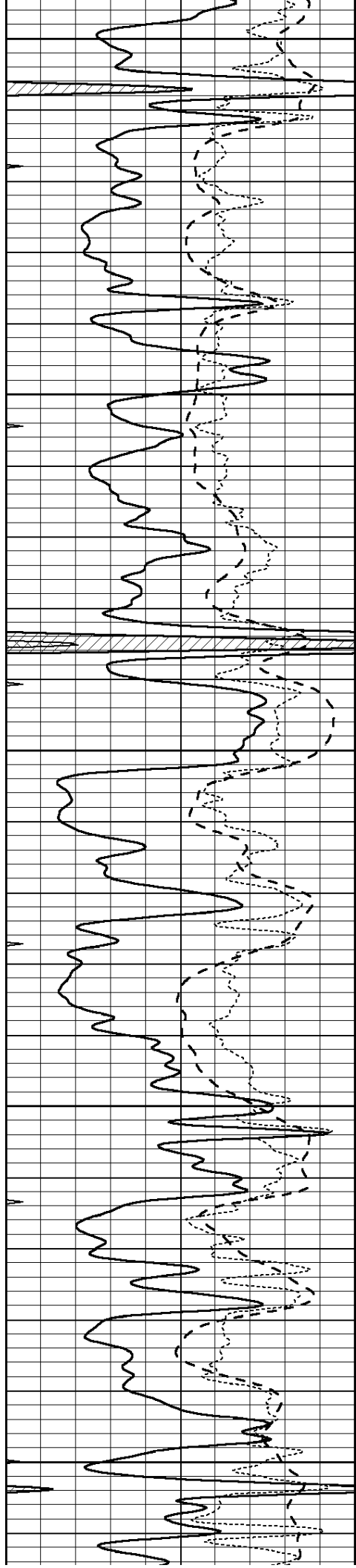
3700

3750

3800

3850





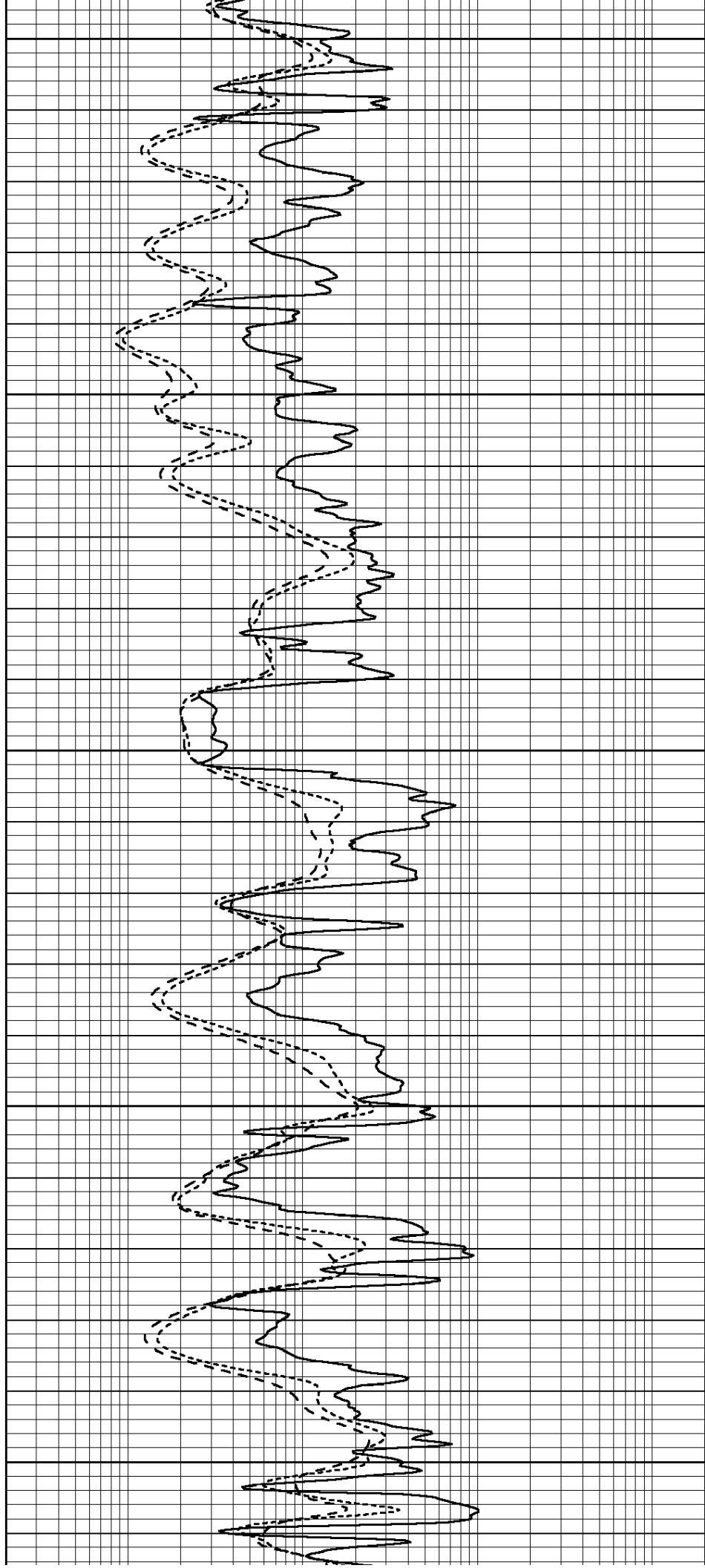
3900

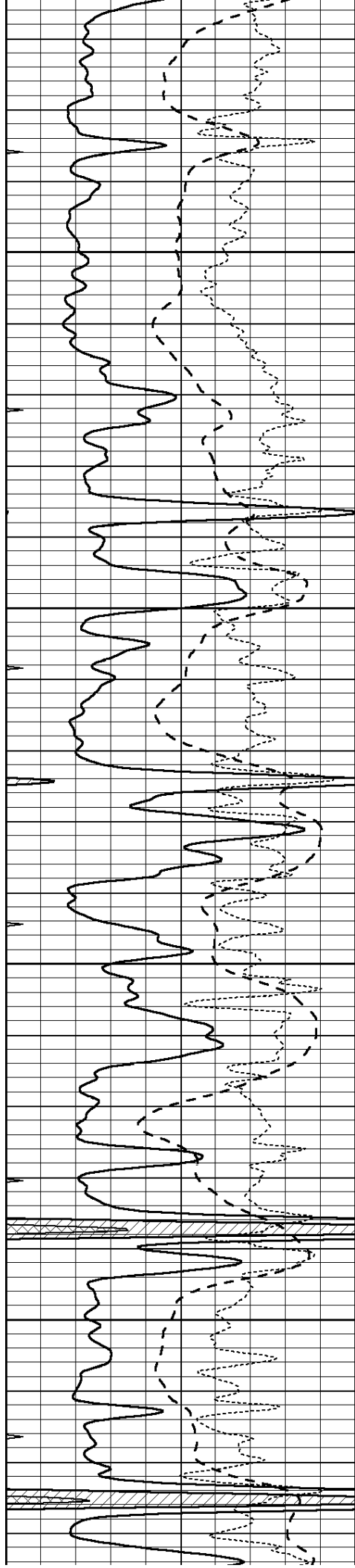
3950

4000

4050

4100



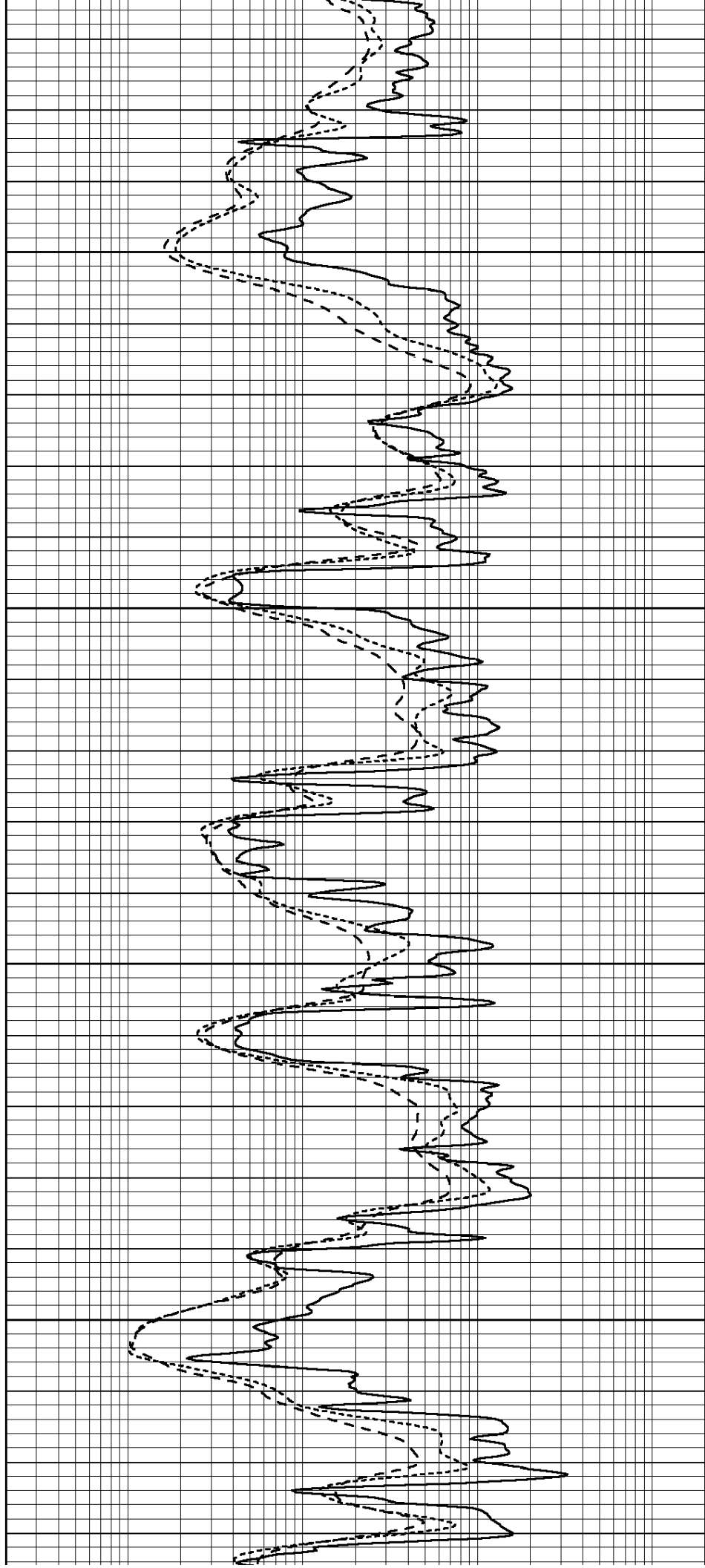


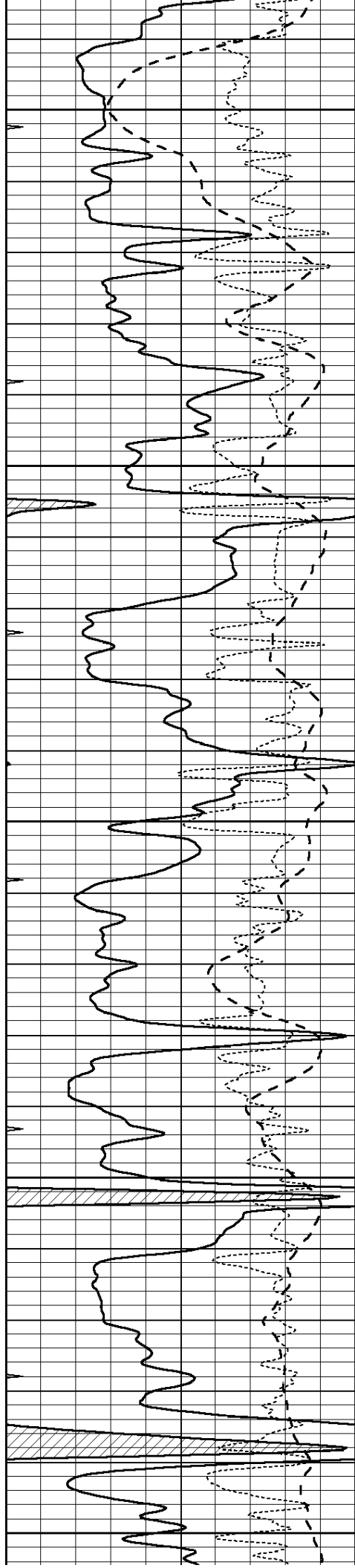
4150

4200

4250

4300





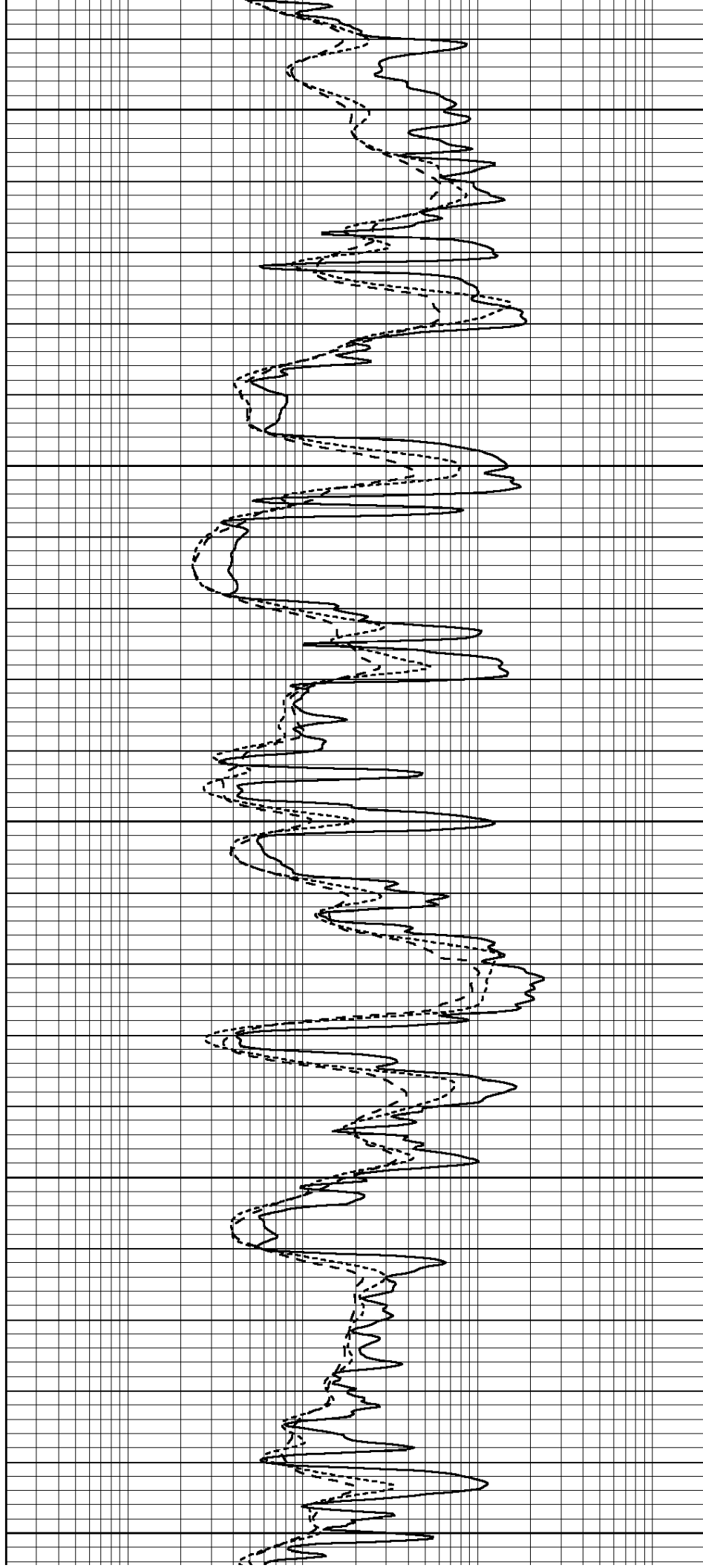
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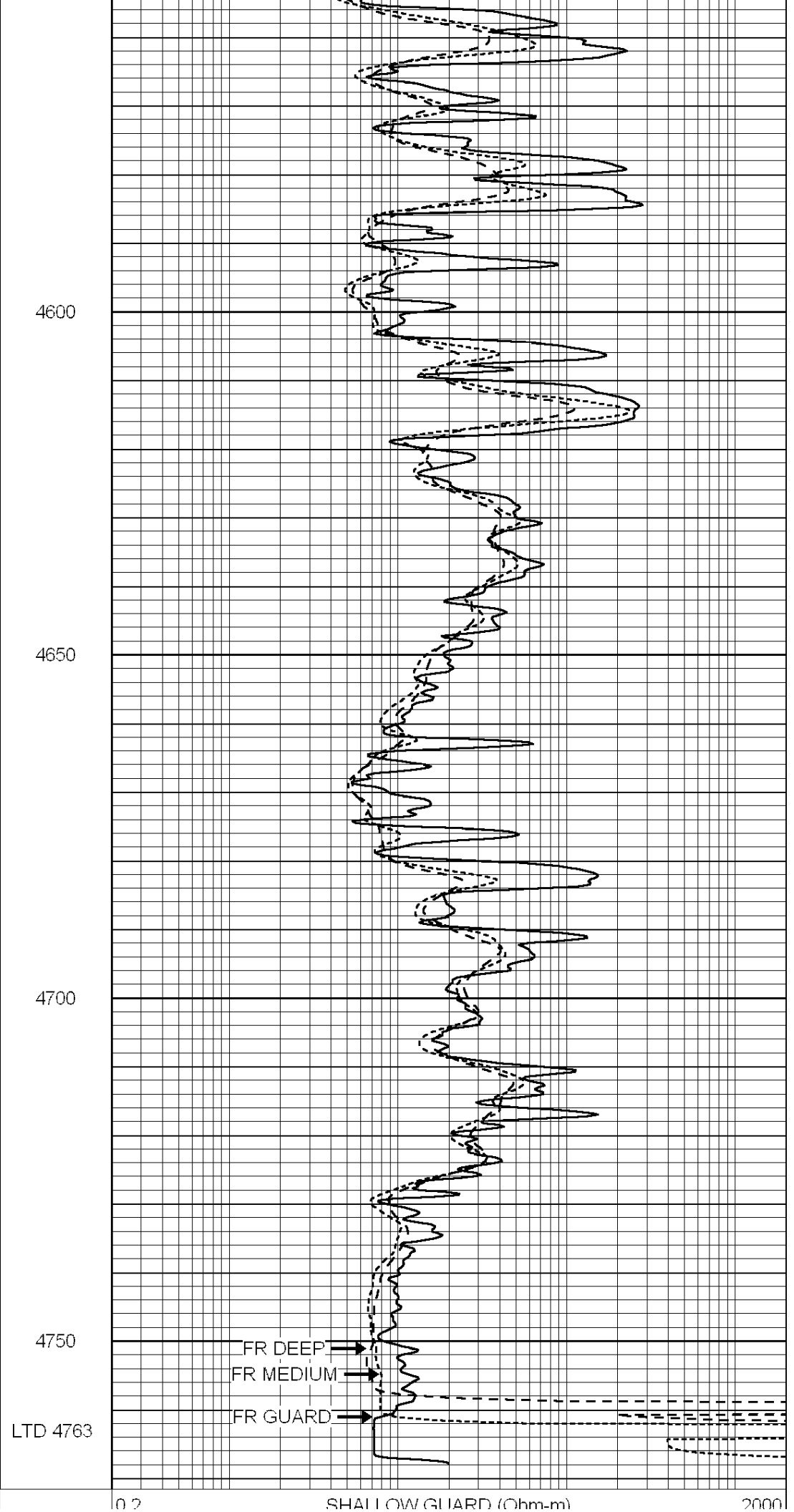
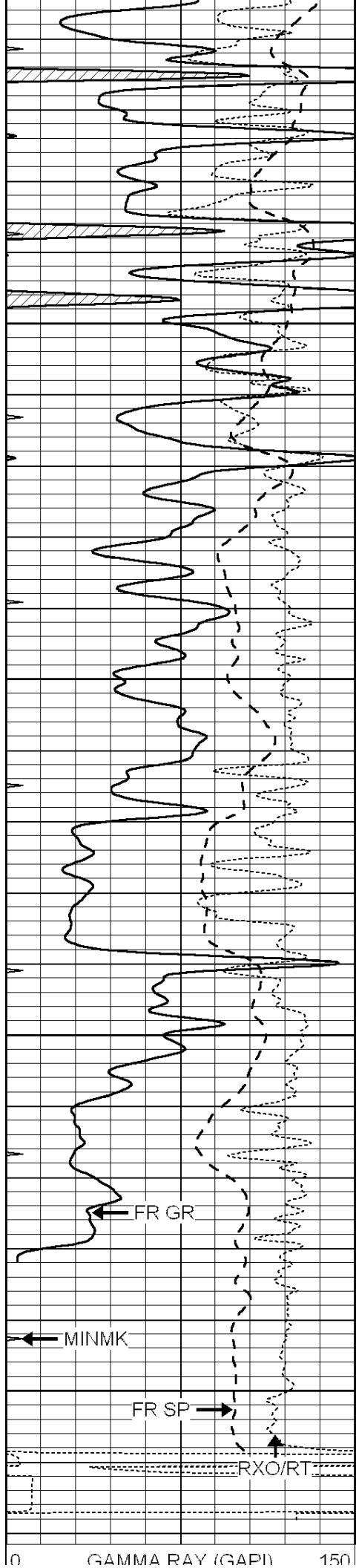
4400

4450

4500

4550





-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



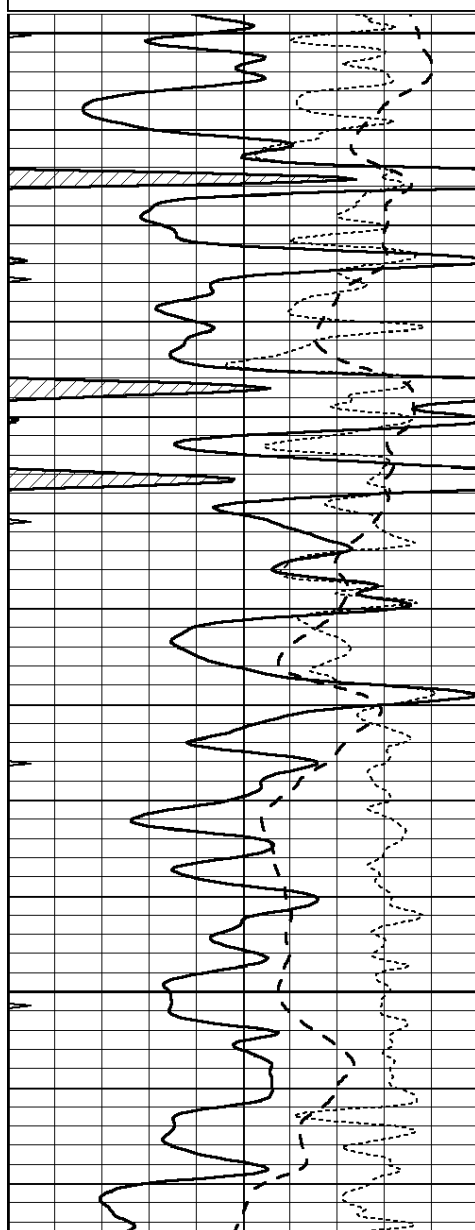
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REPEAT SECTION

Database File: 26640ddn.db
Dataset Pathname: pass2.3
Presentation Format: _dil
Dataset Creation: Mon Sep 28 08:37:28 2015 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

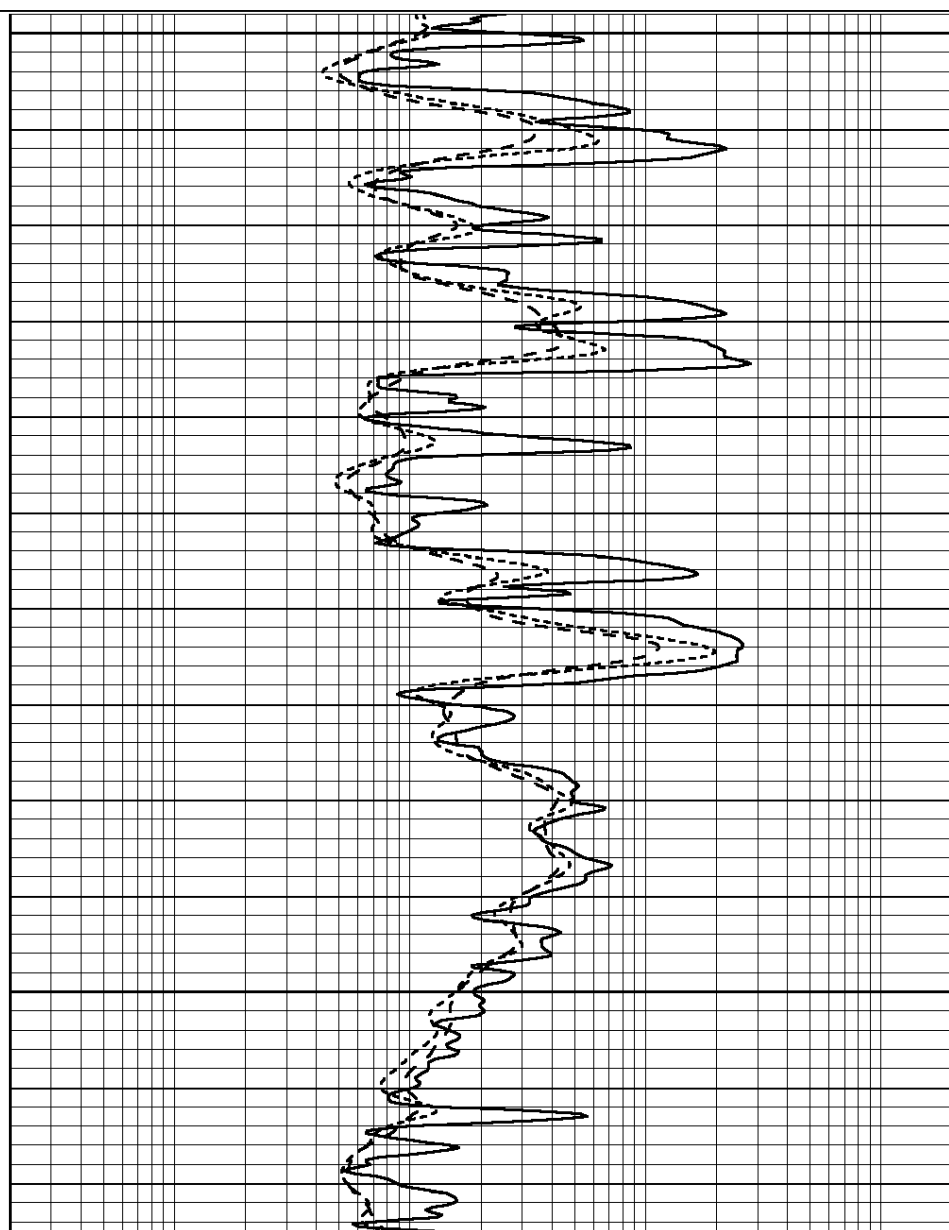
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

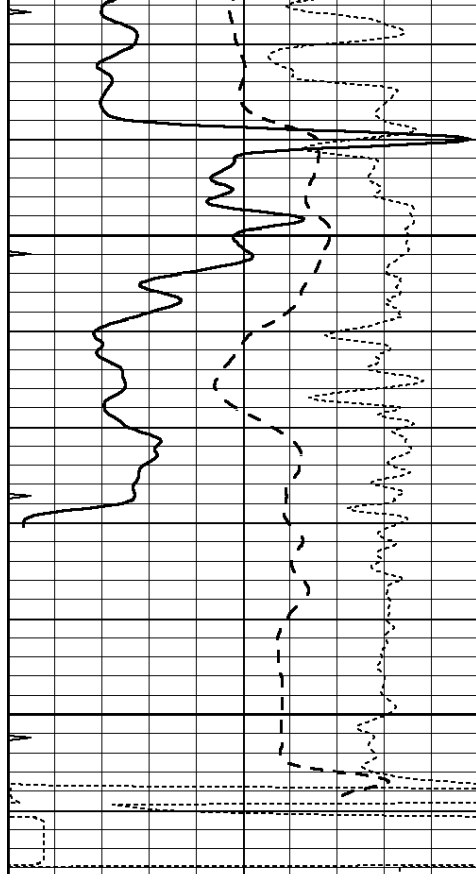


4550

4600

4650

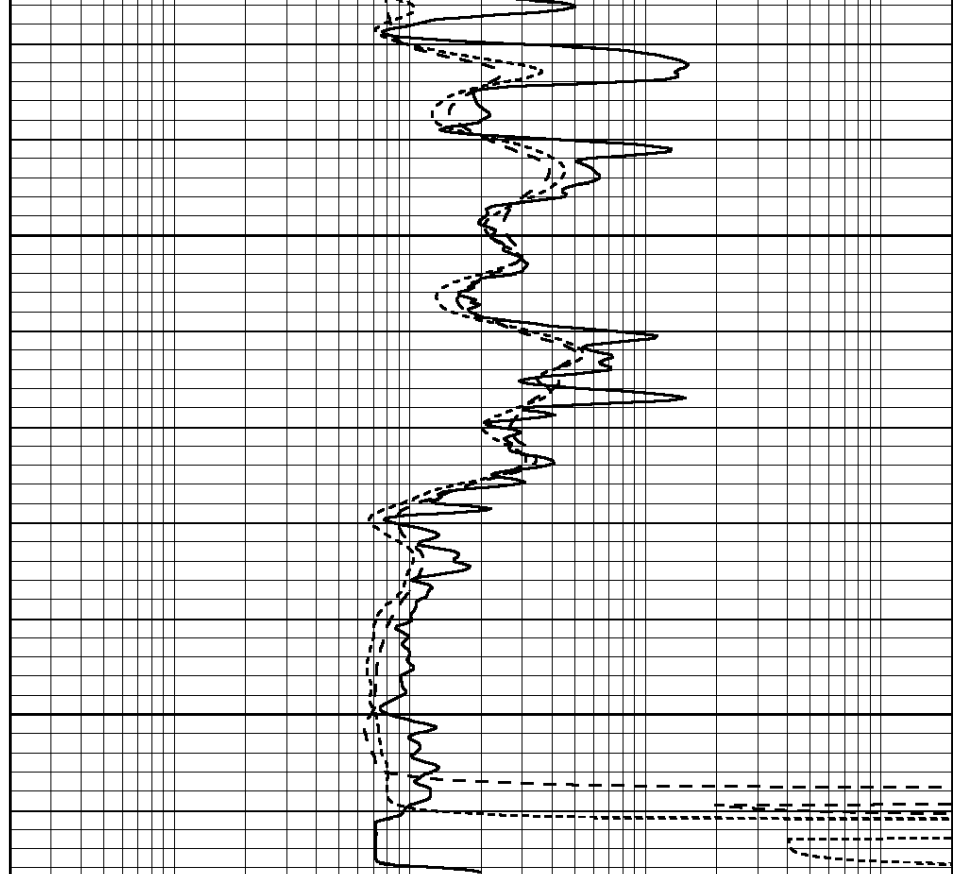




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

4700

4750



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

Calibration Report

Database File: 26640ddn.db
 Dataset Pathname: pass3.6
 Dataset Creation: Mon Sep 28 09:57:45 2015

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Mon Sep 28 08:37:56 2015
 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	670.000	-20.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	670.000	-28.000
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	11.500	000.004	mmho/m	1.000	0.000

		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:	Thu Sep 03 14:11:59 2015		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	