



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company		MULL DRILLING COMPANY, INC.	
Well	ALBERS #3-17		
Field	WILDCAT		
County	NESS	State	KANSAS
Location:		API # : 15-135-25084-0000	Other Services
SEC 17 TWP 17S RGE 23W		CDL/CNL/PE	MEL/SON
Permanent Datum	GROUND LEVEL	Elevation	2456
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	7-23-10		
Run Number	ONE		
Depth Driller	4550		
Depth Logger	4550		
Bottom Logged Interval	4548		
Top Log Interval	0		
Casing Driller	8 5/8" @ 218'		
Casing Logger	218		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7500 PPM	
Density / Viscosity	9.0/64		
pH / Fluid Loss	9.0/10.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.65 @ 83F		
Rmf @ Meas. Temp	.48 @ 83F		
Rmc @ Meas. Temp	.78 @ 83F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.44 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	120F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
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 SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
HWY 283 & HWY 4 - S. TO RD 210 - 1/2 E. TO FIRST CATTLEGUARD ON N.SIDE
OF RD. - 1 N. INTO

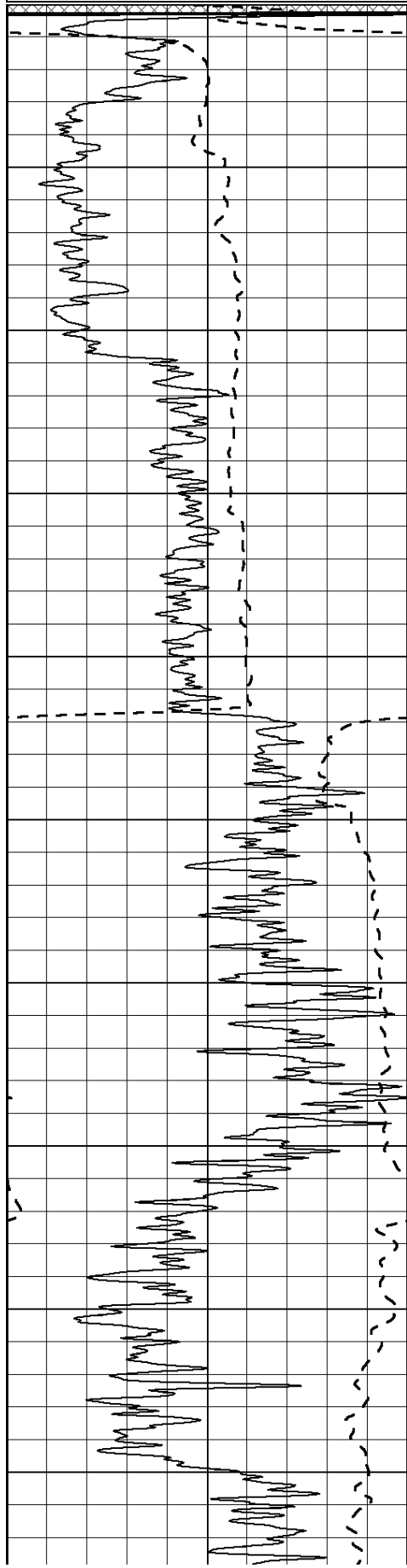
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Dataset Pathname: pass4.2
Presentation Format: _dil2
Dataset Creation: Fri Jul 23 05:54:00 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

Charted by: _____ Depth in Feet scaled 1:1000		
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-100	SP (mV)	100

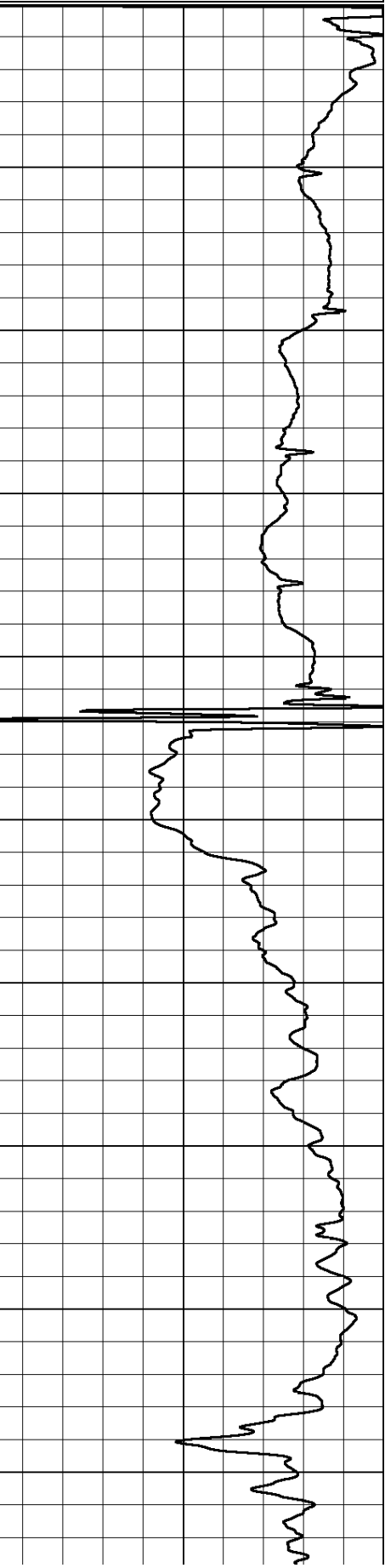
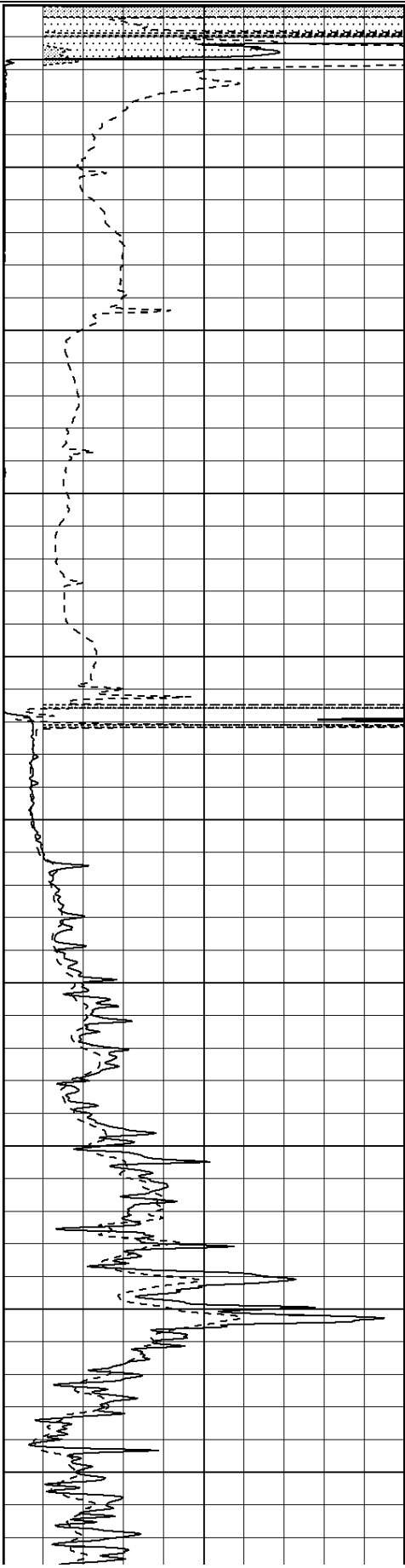
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0	Deep Induction (Ohm-m)	50

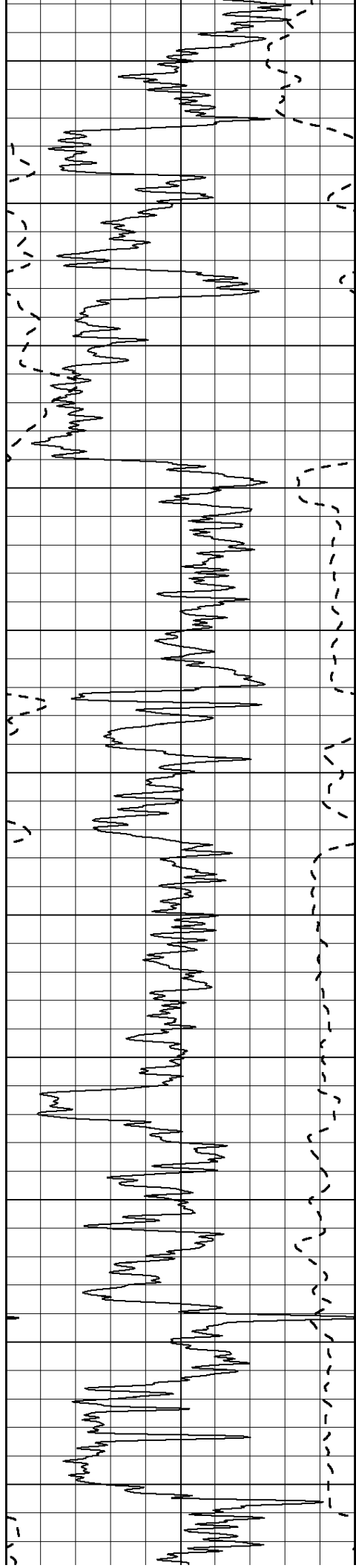
1000	CILD (mmho/m)	
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

0



0
50
100
150
200
250
300
350
400
450





500

550

600

650

700

750

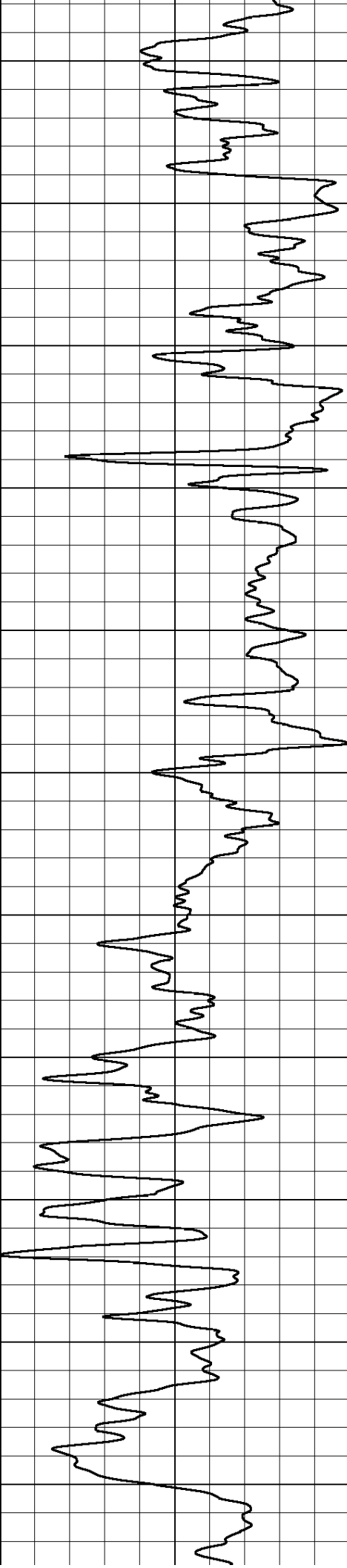
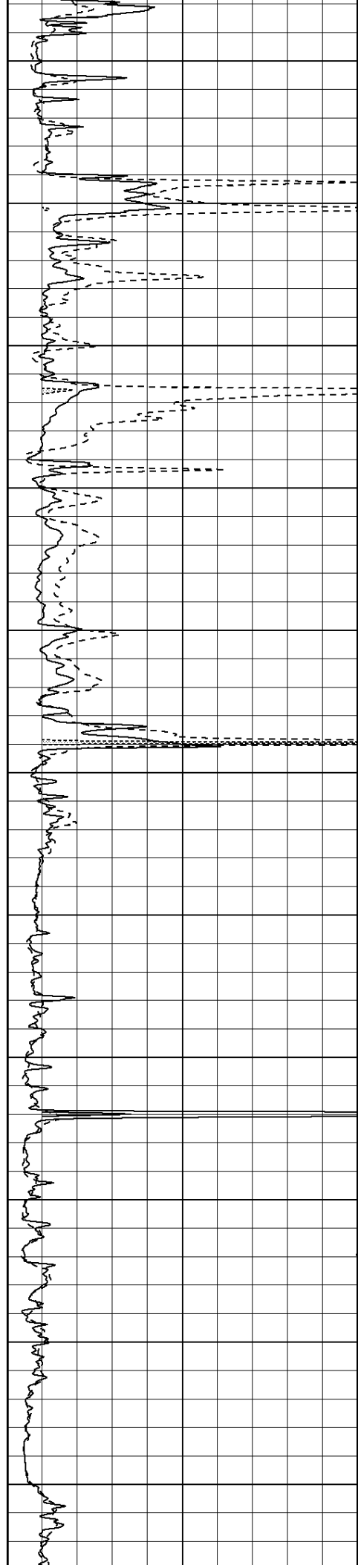
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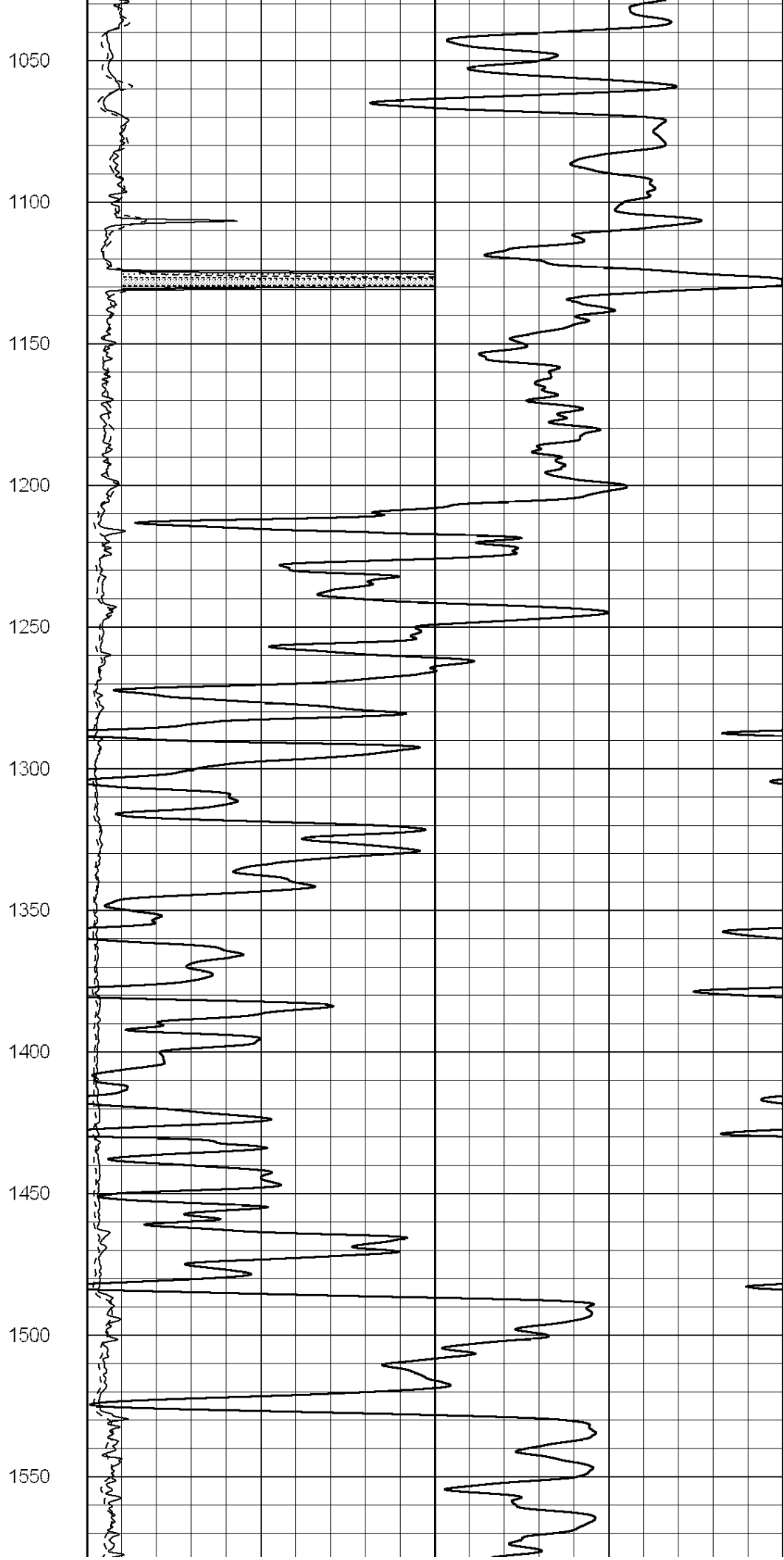
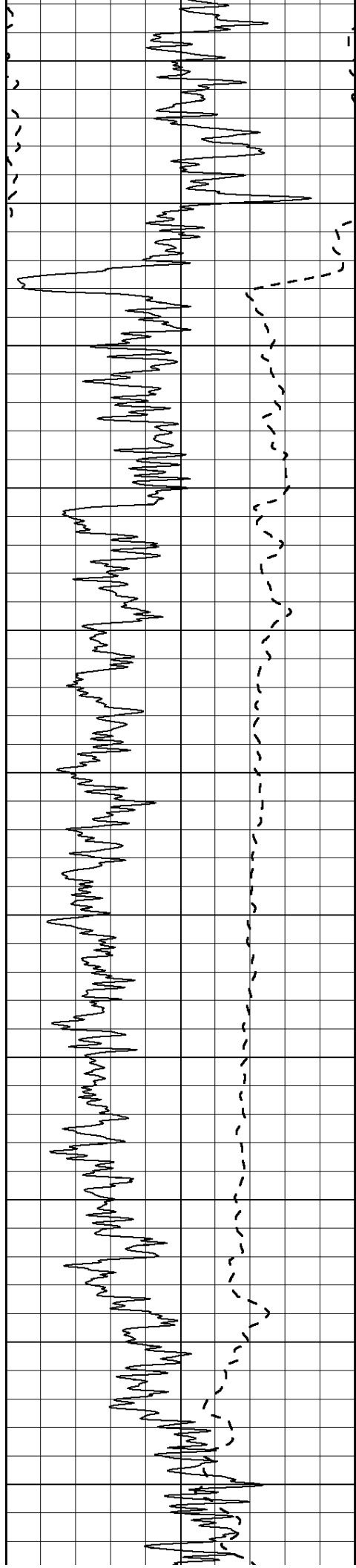
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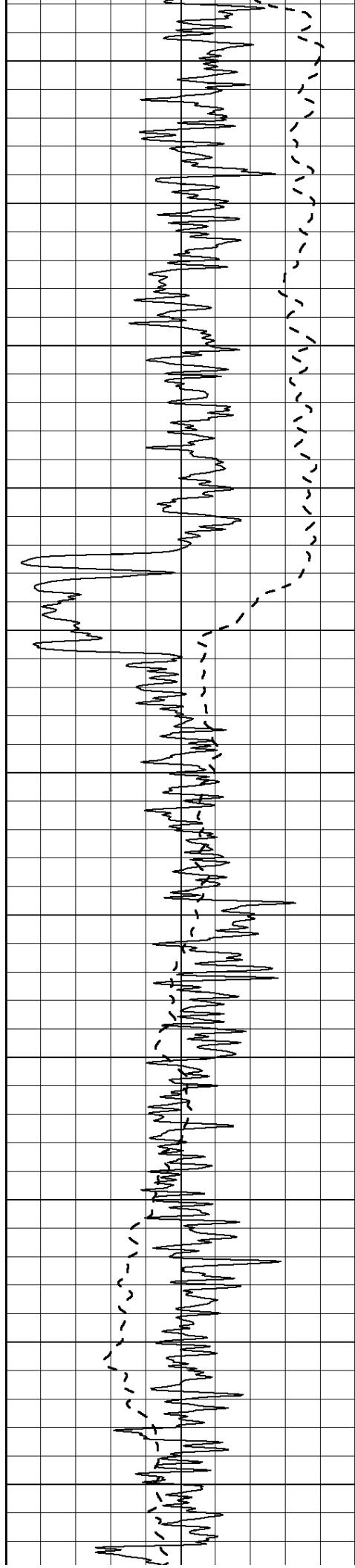
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950

1000







1600

1650

1700

1750

1800

1850

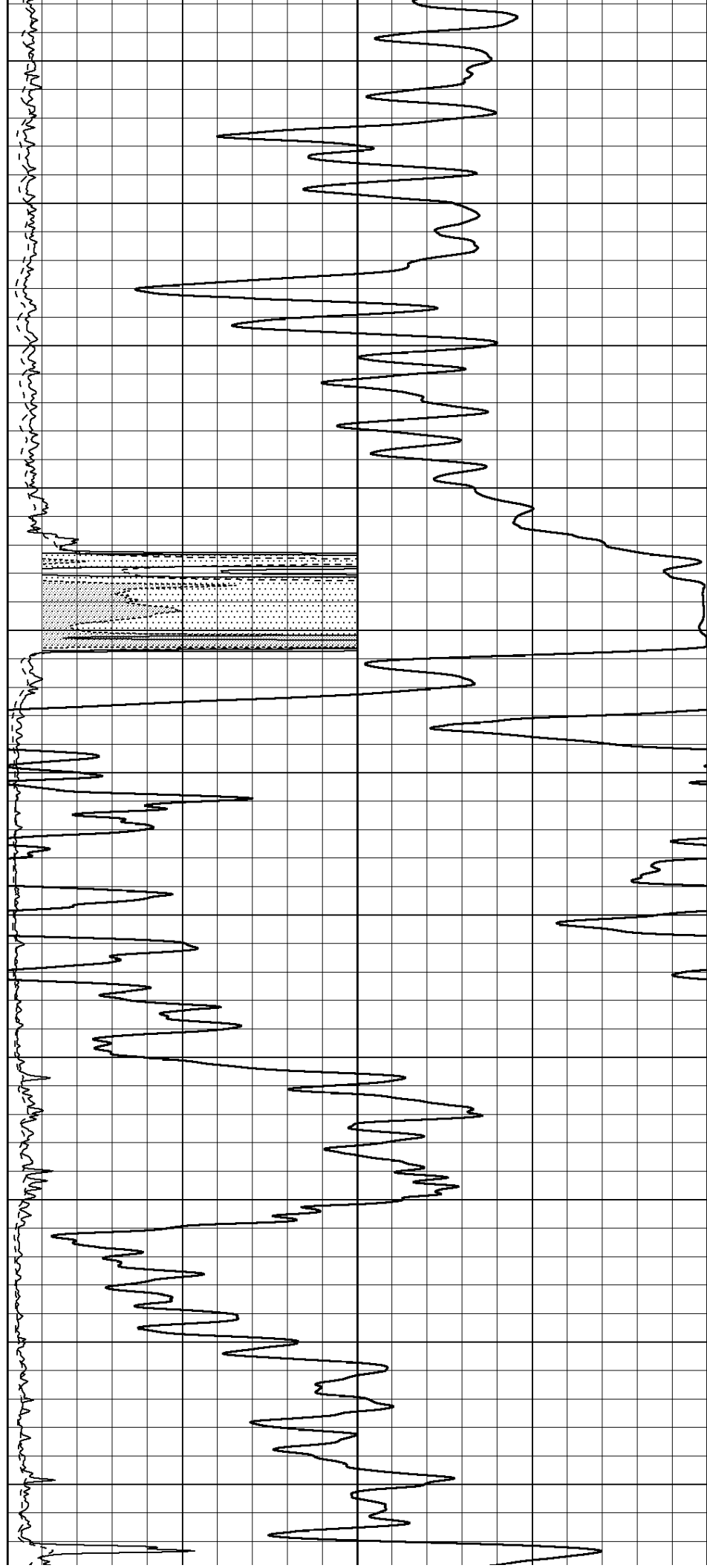
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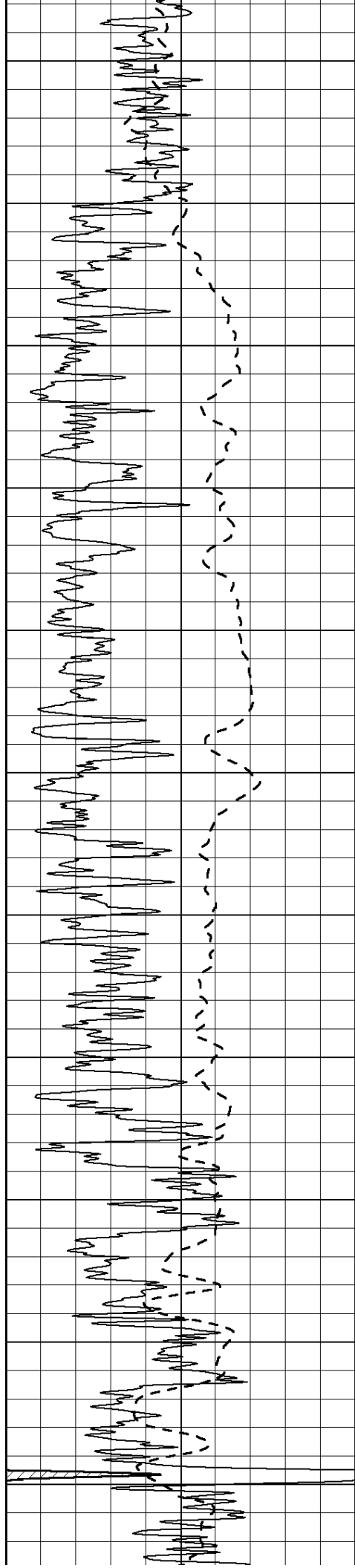
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2000

2050

2100





2150

2200

2250

2300

2350

2400

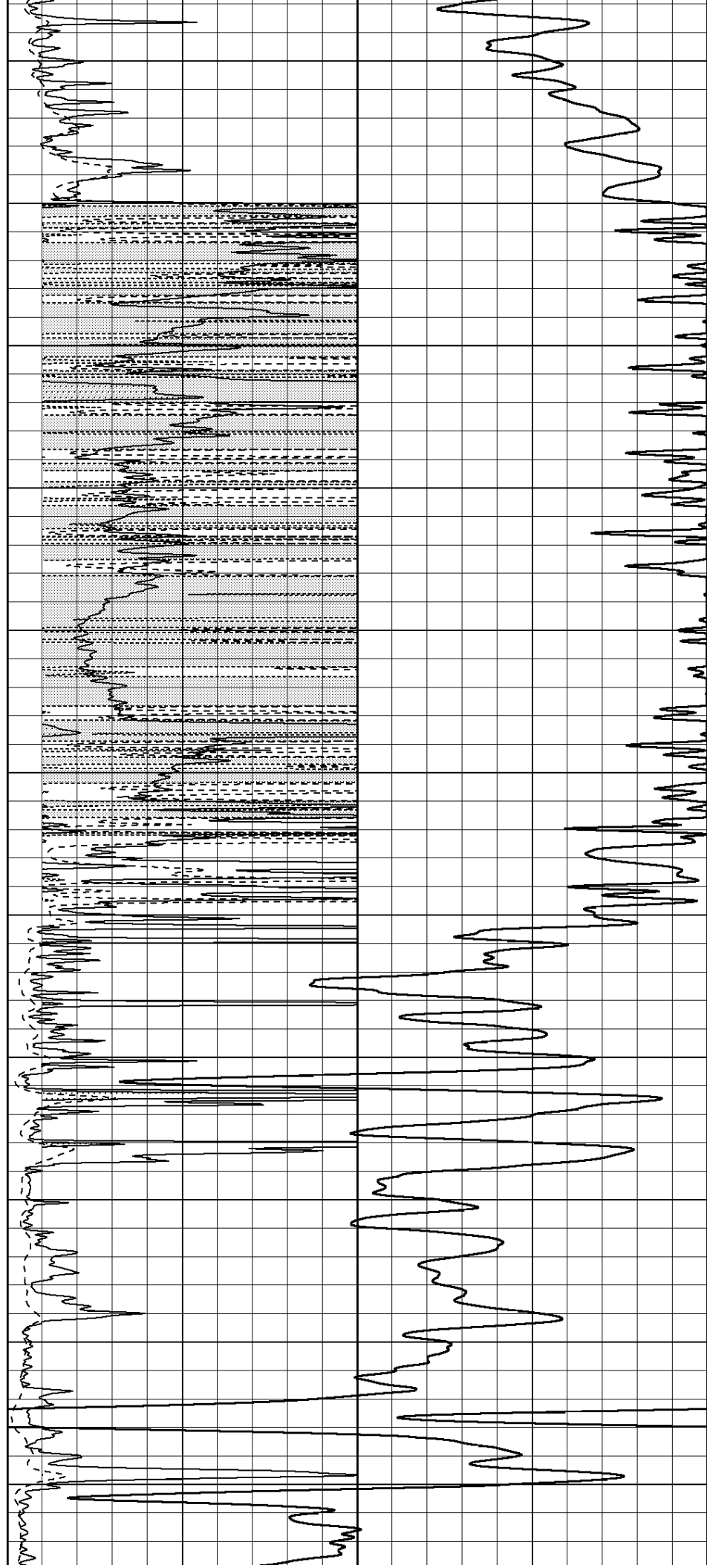
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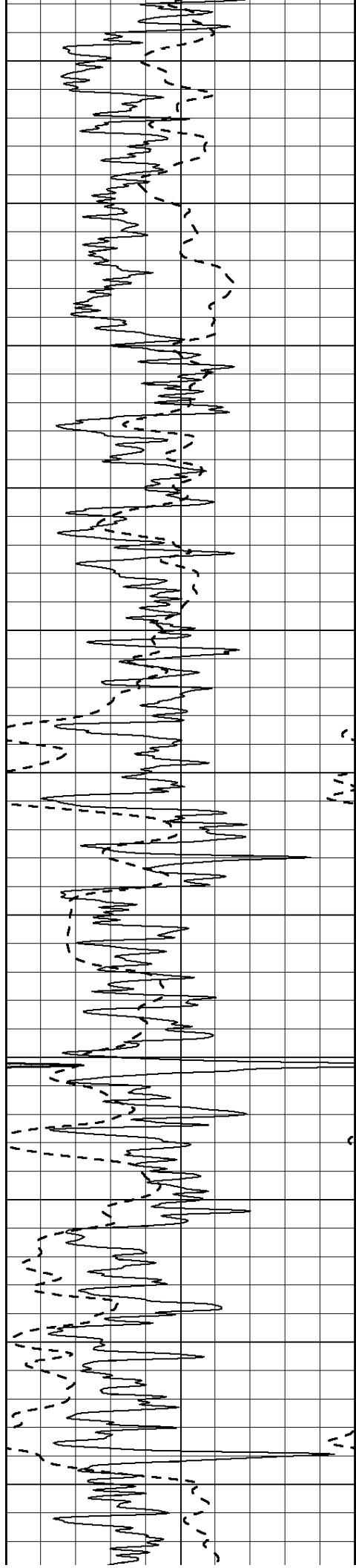
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2550

2600

2650





2700

2750

2800

2850

2900

2950

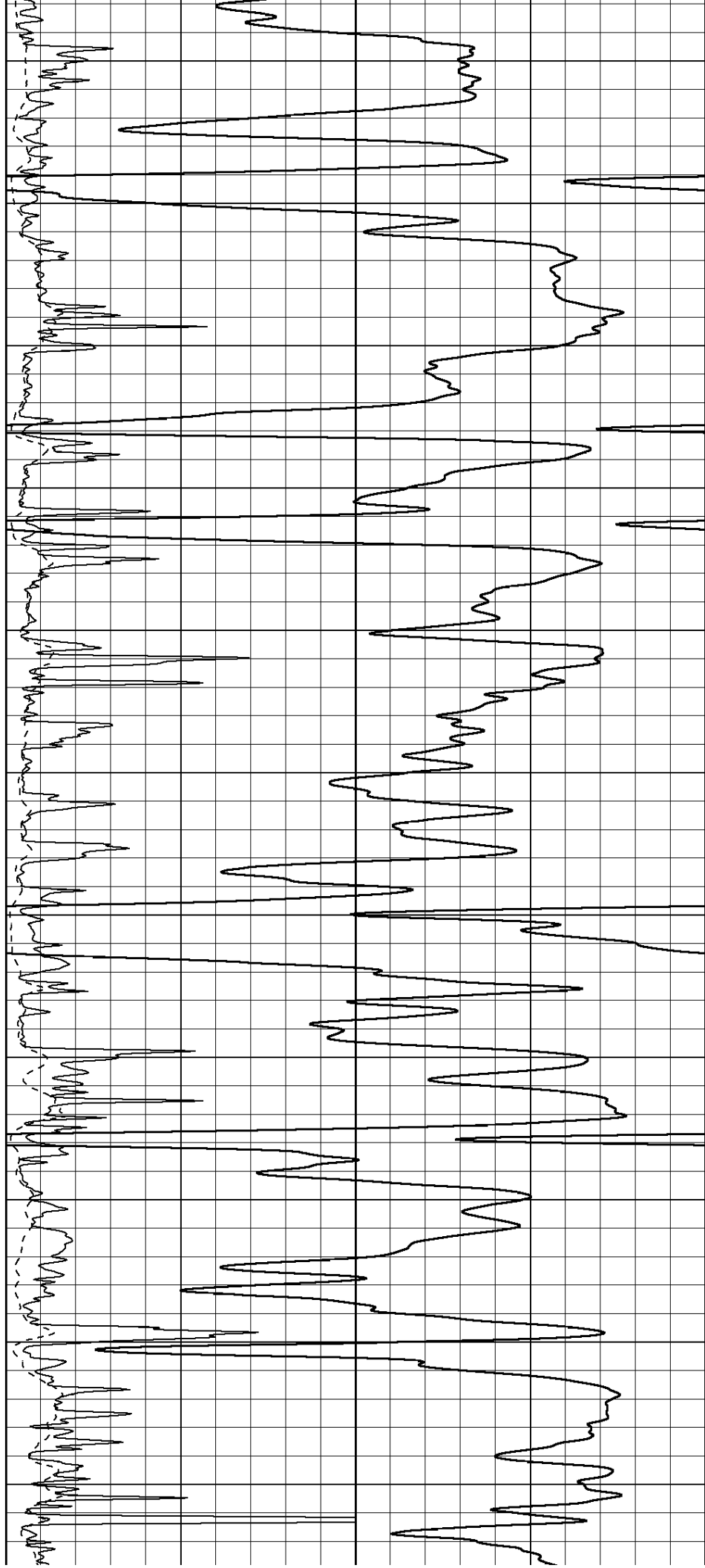
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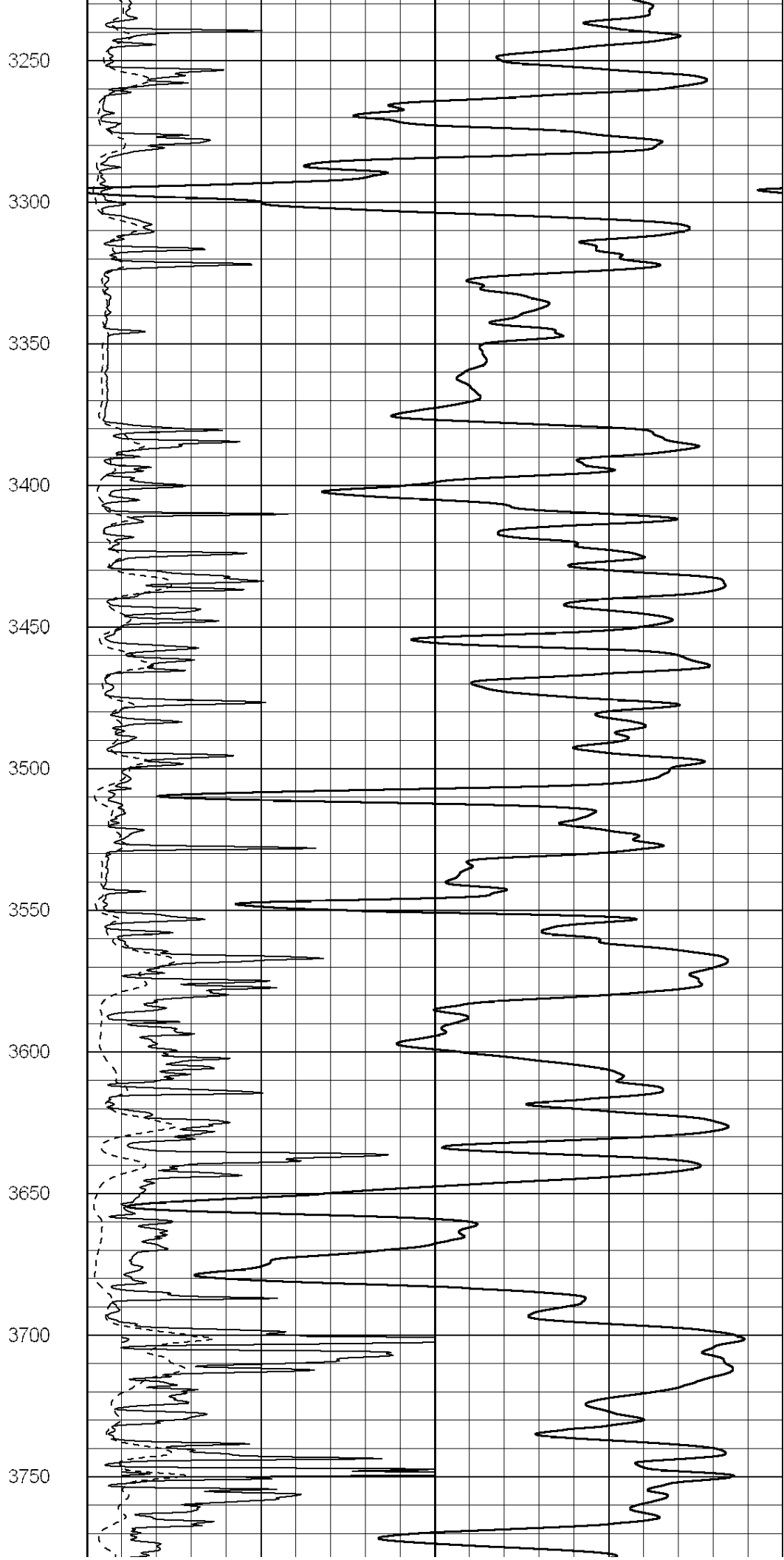
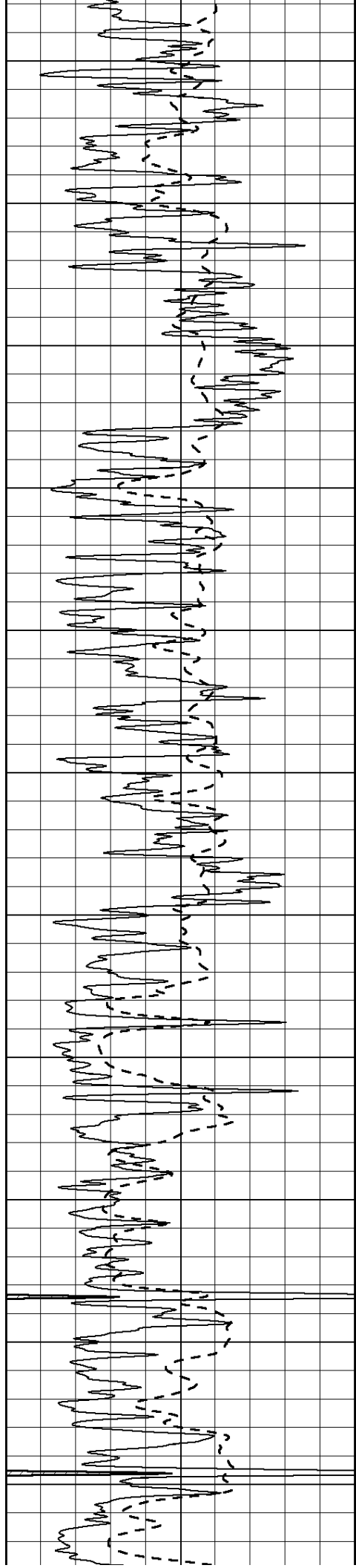
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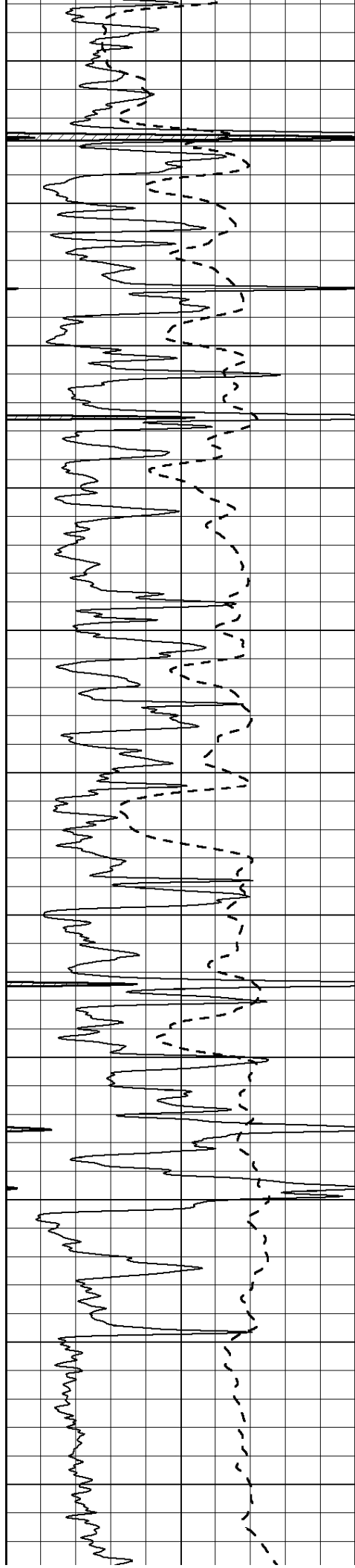
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3150

3200







3800

3850

3900

3950

4000

4050

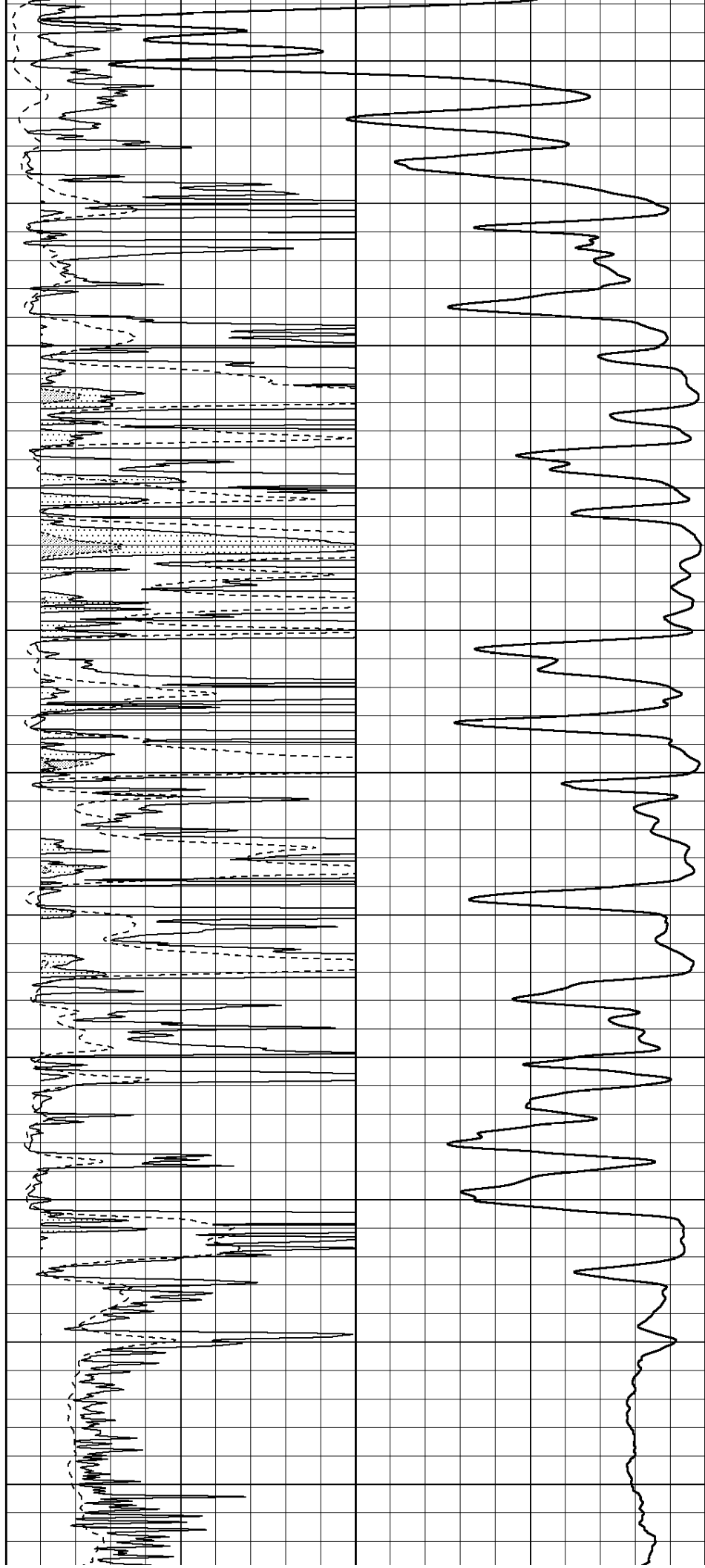
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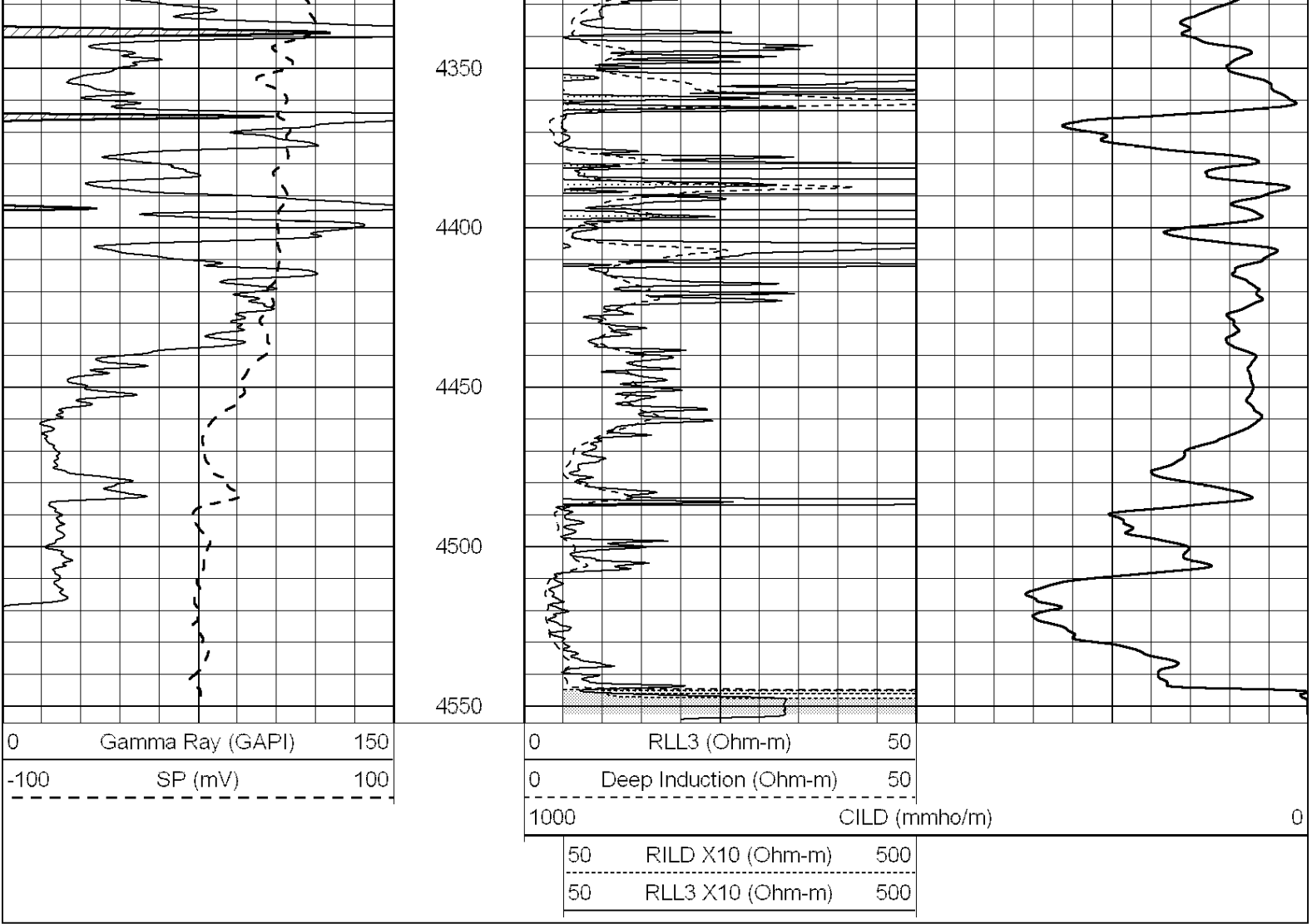
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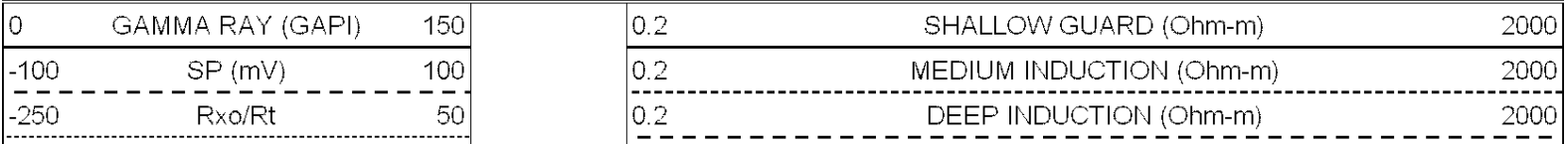
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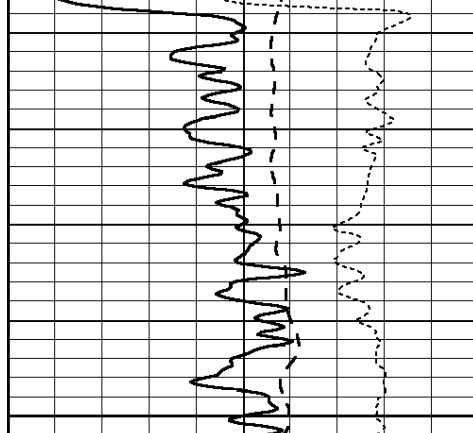
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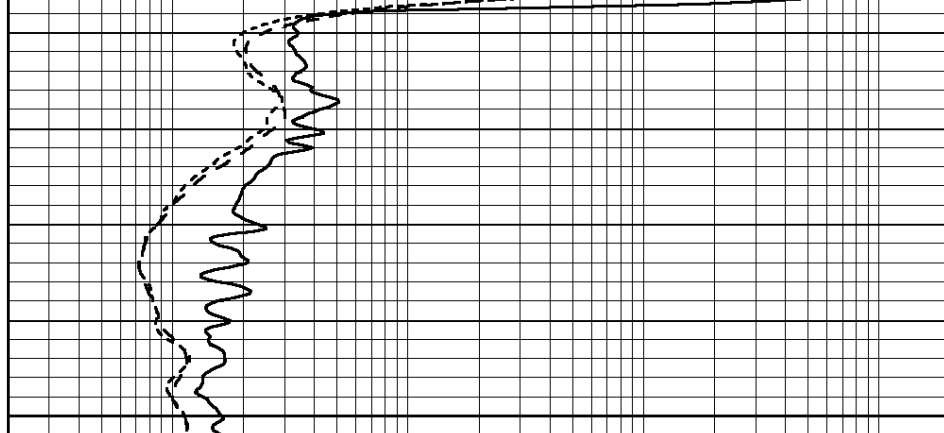
Database File: 005414pe.db
Dataset Pathname: pass4.2
Presentation Format: _dil
Dataset Creation: Fri Jul 23 05:54:00 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240





1850

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



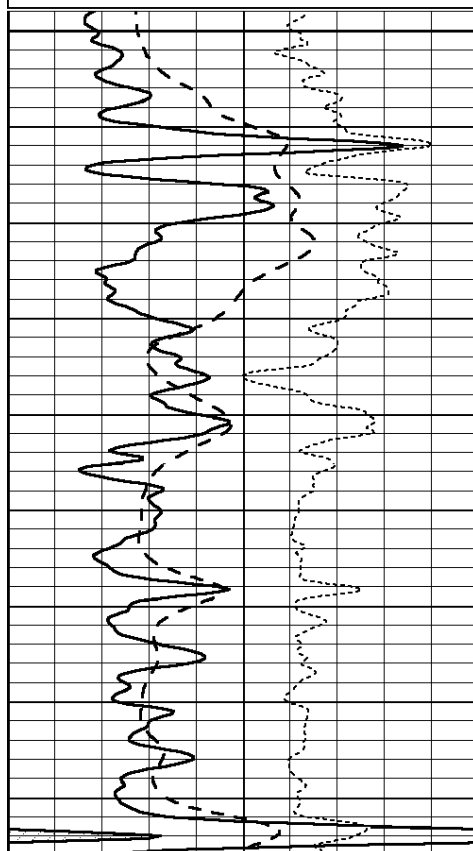
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MAIN SECTION

Database File: 005414pe.db
Dataset Pathname: pass4.1
Presentation Format: _dil
Dataset Creation: Fri Jul 23 05:01:48 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

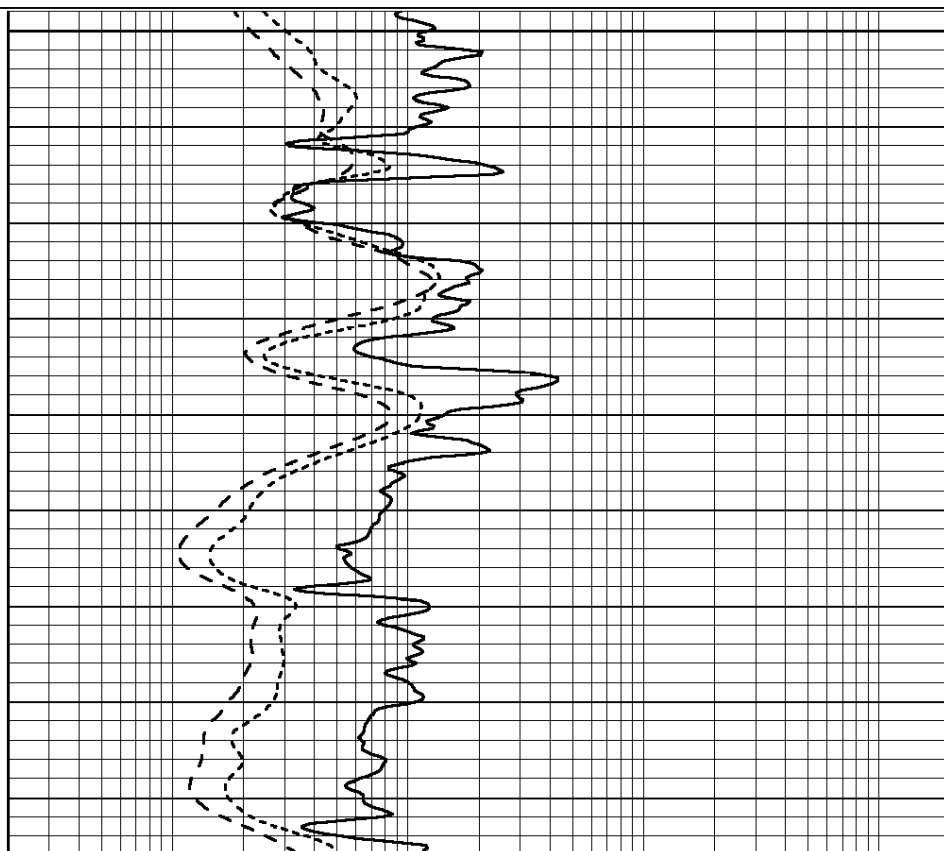
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

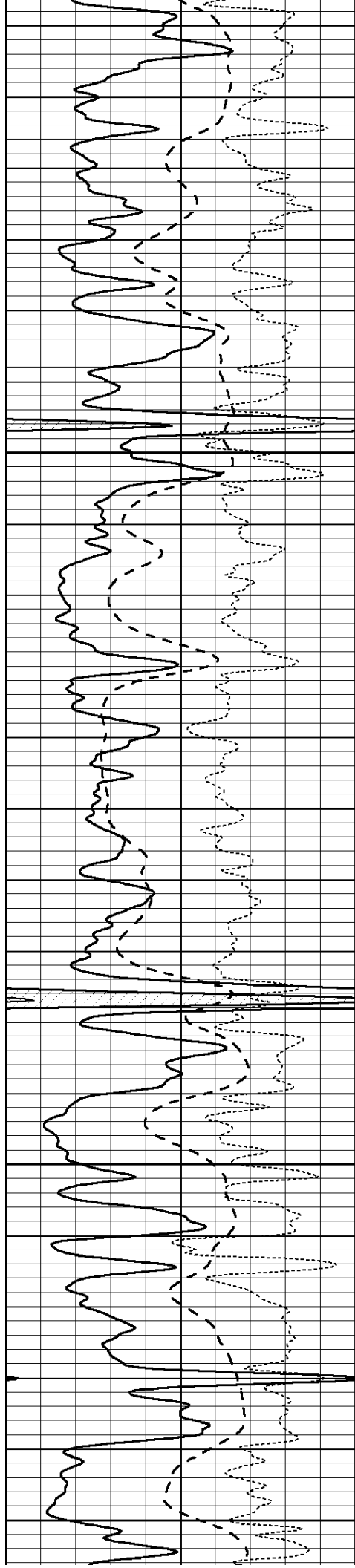
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3600

3650





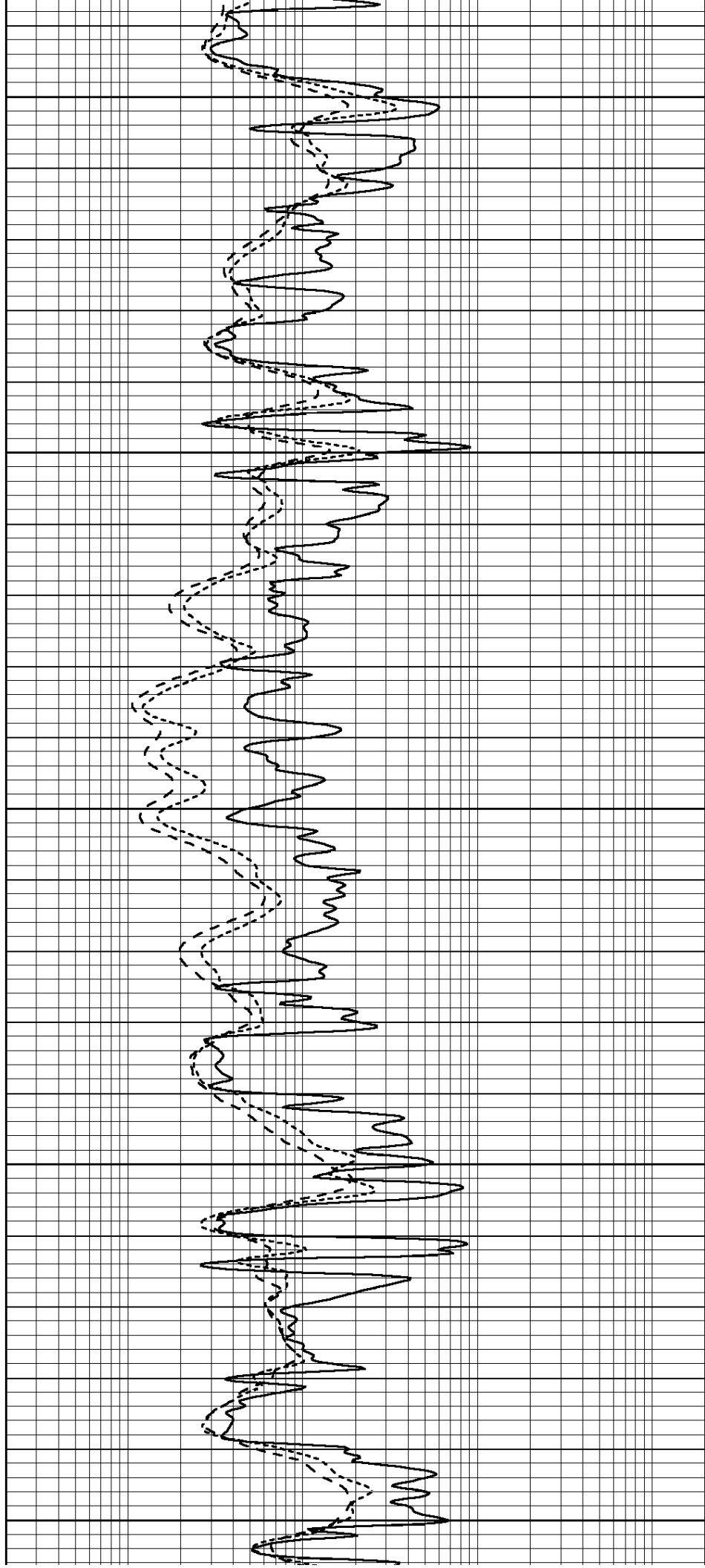
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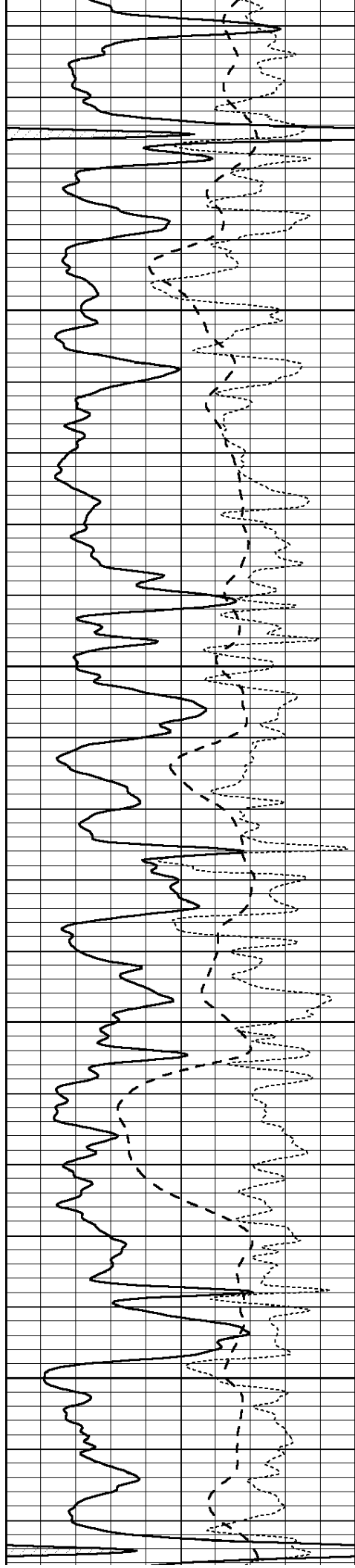
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3800

3850

3900



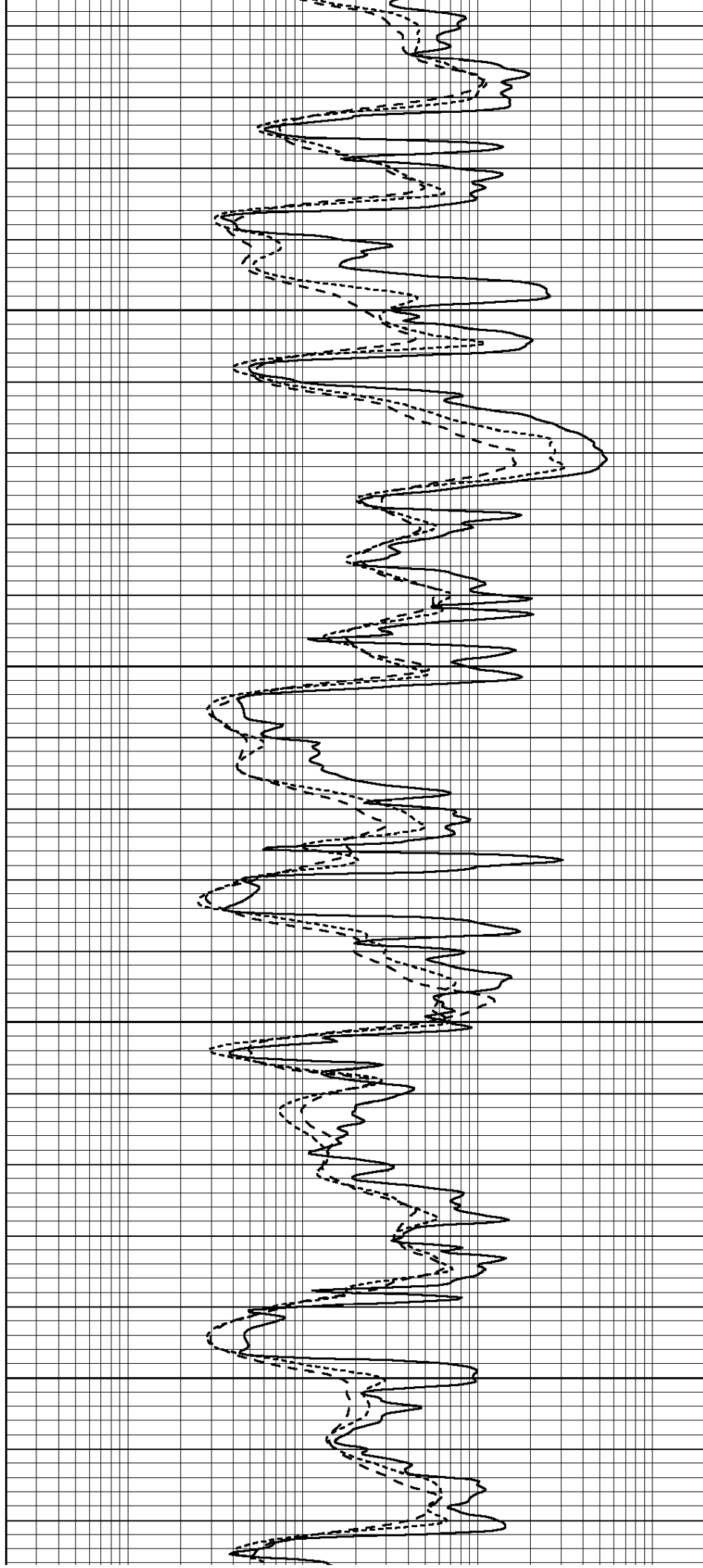


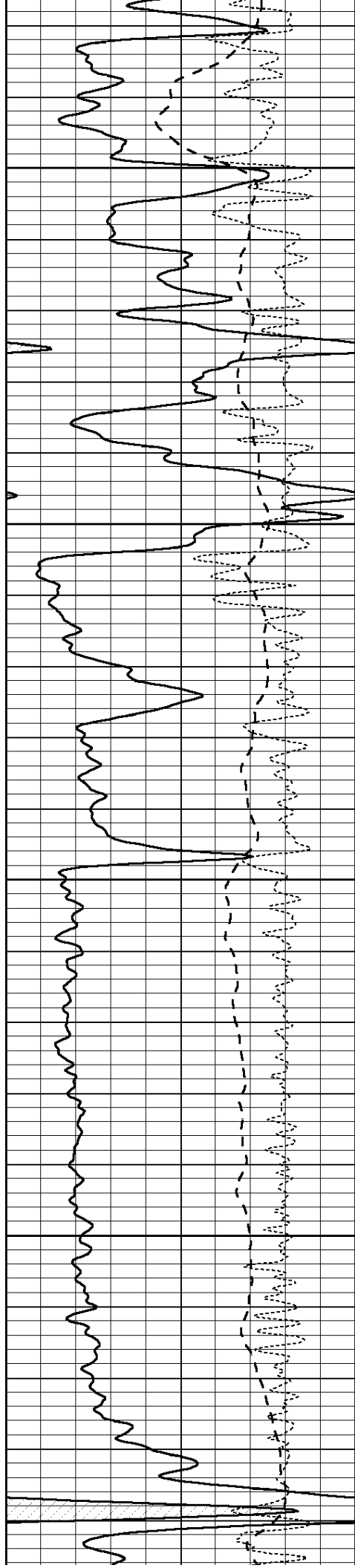
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4000

4050

4100



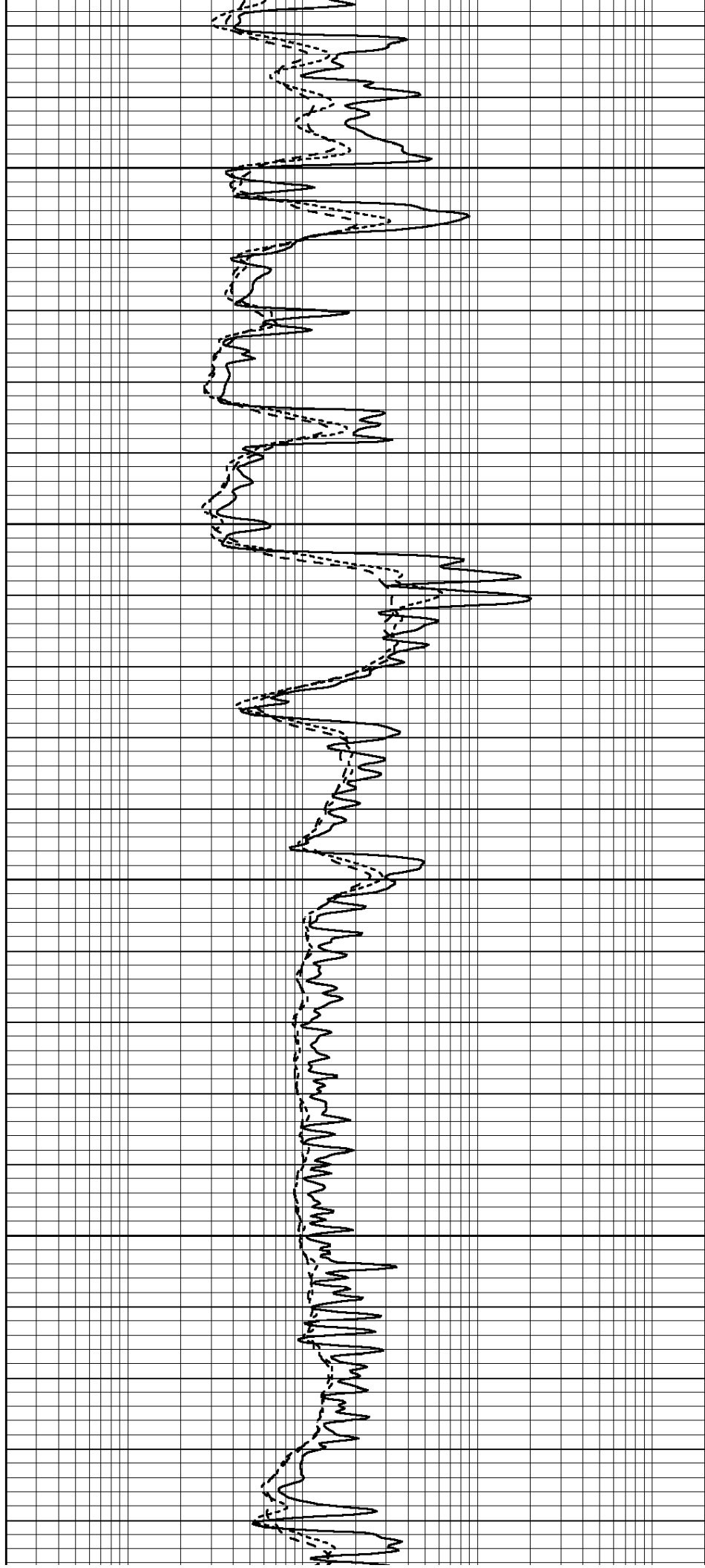


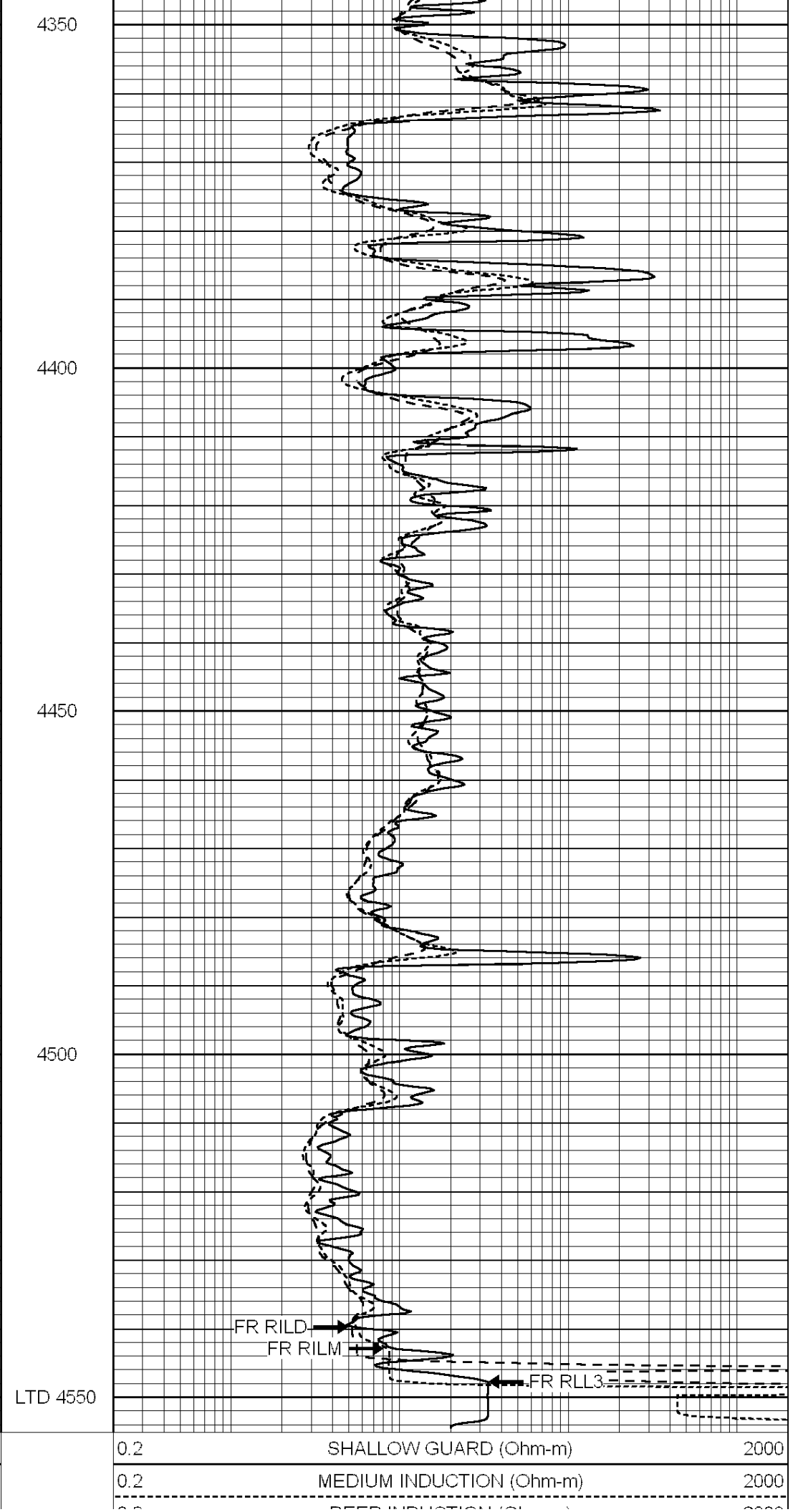
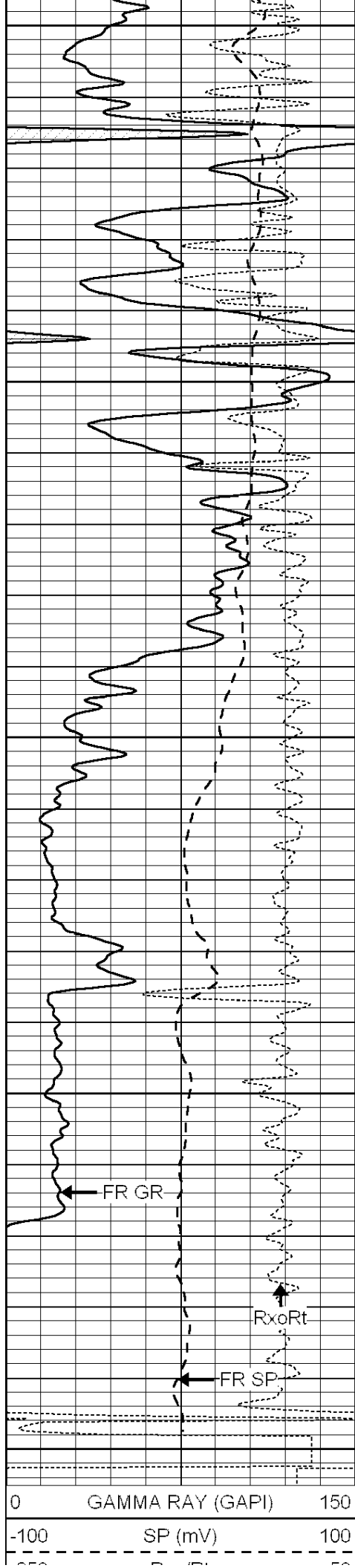
4150

4200

4250

4300





-250 Rxo/Rt 50

0.2 DEEP INDUCTION (Ohm-m) 2000



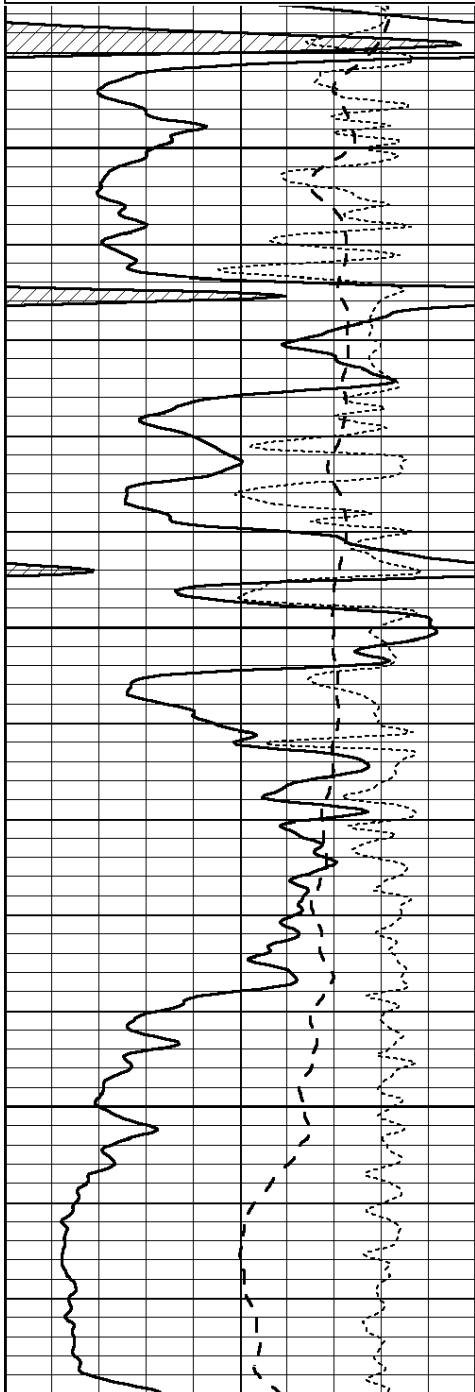
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REPEAT SECTION

Database File: 005414pe.db
Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Fri Jul 23 04:49:19 2010 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

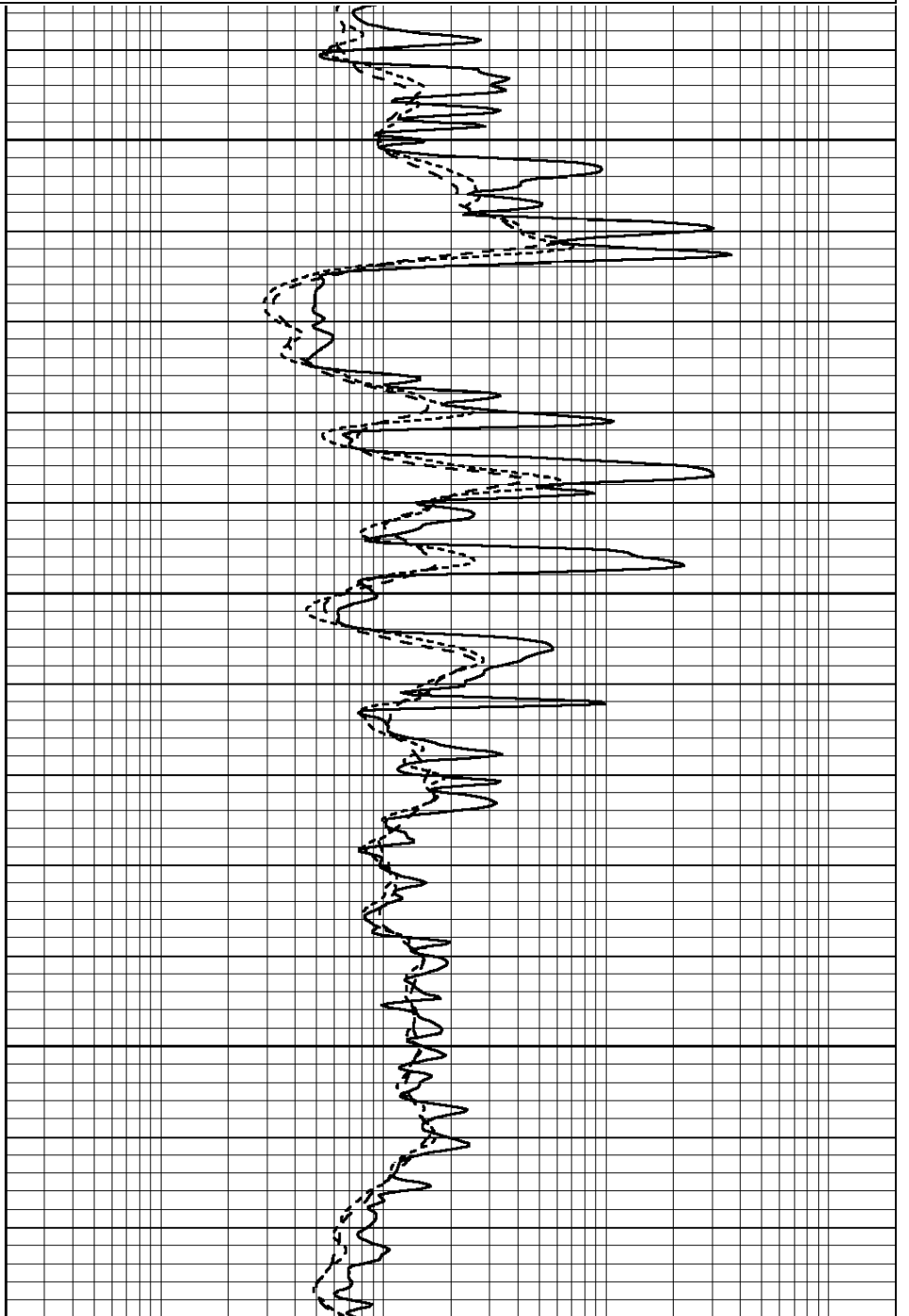
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

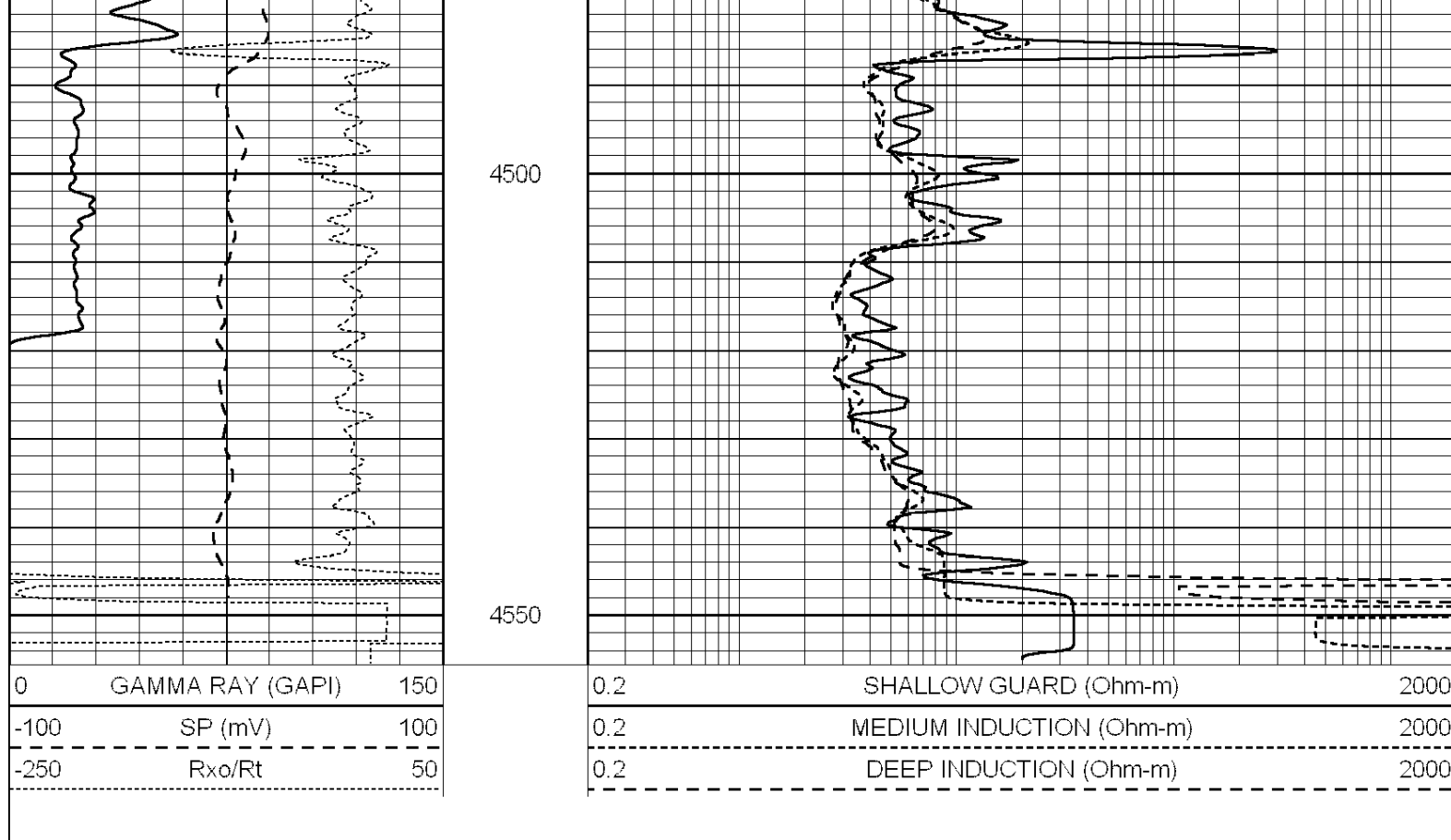


4350

4400

4450





Calibration Report

Database File: 005414pe.db
 Dataset Pathname: pass4.1
 Dataset Creation: Fri Jul 23 05:01:48 2010 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

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		
		-6.500	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		

Litho Density Calibration Report
Serial: 002 Model: PRB
Performed Mon Oct 29 15:40:49 2007

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1056.3	9118.0	2809.7	10378.4	cps
Window 2	969.9	7671.9	2431.6	8565.8	cps
Window 3	683.8	2939.8	1161.0	3161.8	cps
Window 4	231.4	231.6	226.7	230.8	cps
Long Space	0.0	6702.0	1461.7	7595.9	cps
Short Space	1.2	1433.6	959.4	1568.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio	: 0.559
Spine Angle	: 75.2	Spine Slope	: 3.791	Spine Intercept	: -18.7

Caliper

	Readings	Reference
Low Ref	3.1	8.0
High Ref	5.4	14.0
	Gain: 2.5	Offset: 2.0

Compensated Neutron Calibration Report

Serial Number: 5I
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: GR6
Tool Model: OPEN
Performed: Wed Jul 14 14:14:30 2010

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 276.0 cps

Sensitivity: 0.5335 GAPI/cps