



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company NORSTAR PETROLEUM, INC.
 Well NORTON #1-28
 Field WILDCAT
 County HODGEMAN
 State KANSAS

Company NORSTAR PETROLEUM, INC.
 Well NORTON #1-28
 Field WILDCAT
 County HODGEMAN State KANSAS

Location: API # : 15-083-21667-0000
 838' FNL & 2306' FWL
 SEC 28 TWP 21S RGE 23W
 Permanent Datum GROUND LEVEL Elevation 2354
 Log Measured From KELLY BUSHING 5' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services
 CDL/CNL
 MEL
 Elevation
 K.B. 2359
 D.F. 2357
 G.L. 2354

Date	8-16-10		
Run Number	ONE		
Depth Driller	4665		
Depth Logger	4667		
Bottom Logged Interval	4665		
Top Log Interval	0		
Casing Driller	8 5/8" @ 209		
Casing Logger	206		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5600 PPM	
Density / Viscosity	9.1/46		
pH / Fluid Loss	9.0/13.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.60 @ 83F		
Rmf @ Meas. Temp	.45 @ 83F		
Rmc @ Meas. Temp	.72 @ 83F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.41 @ 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	TIM LAUER		

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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
 NESS CITY KS. - 14 S. TO UNION SCHOOL (RD V) - 1 E. - 1 S. - 1 1/2 E. - S. INTO



SUPERIOR
Hays,
Kansas

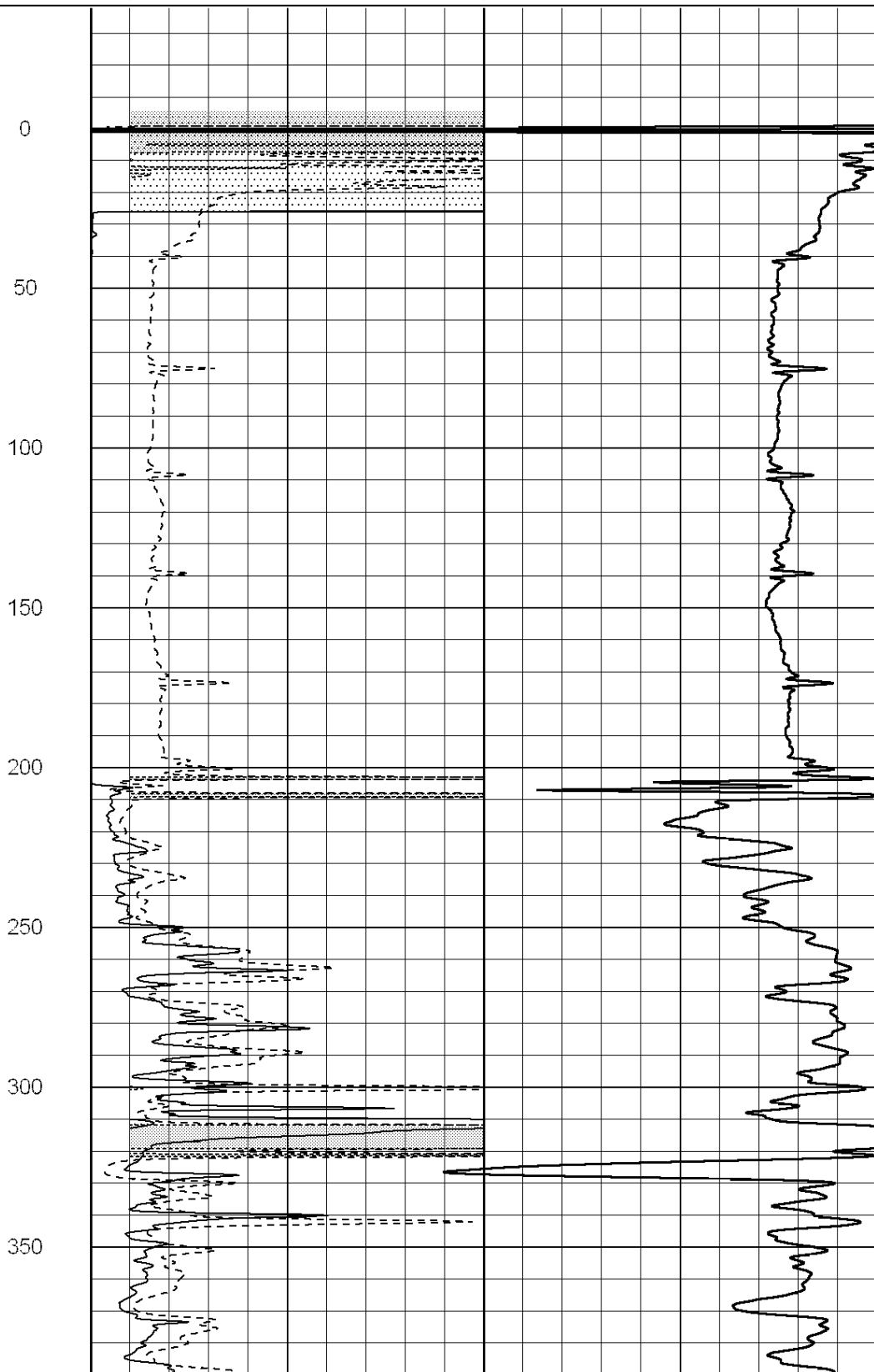
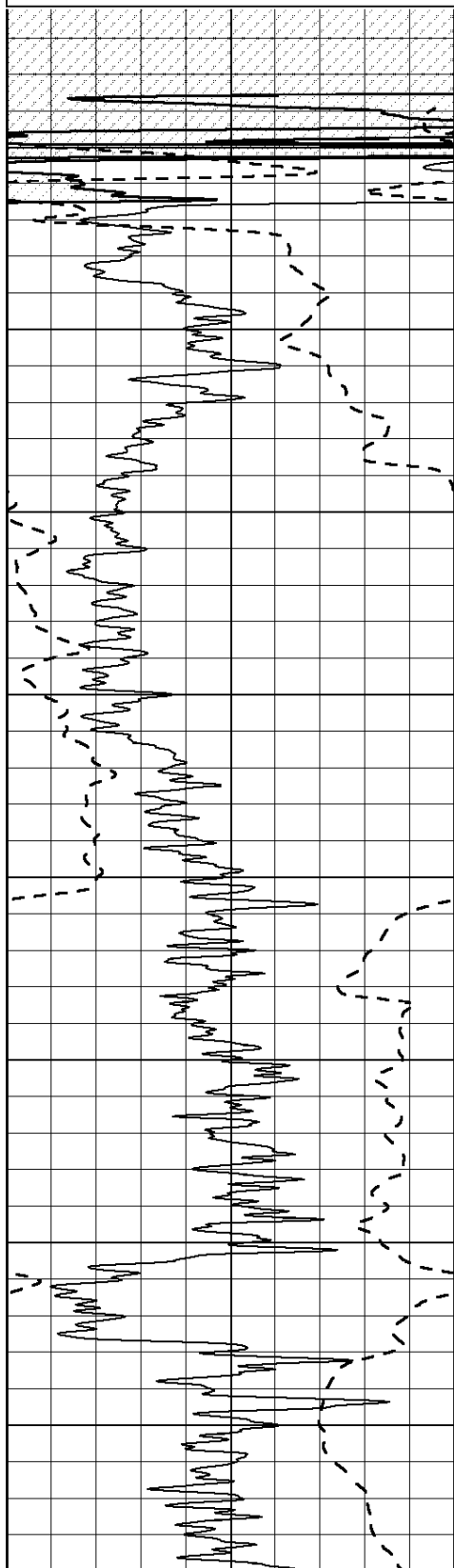
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 Dataset Pathname: pass4.2
 Presentation Format: _dil2
 Dataset Creation: Mon Aug 16 12:21:28 2010
 Charted by: Depth in Feet scaled 1:600

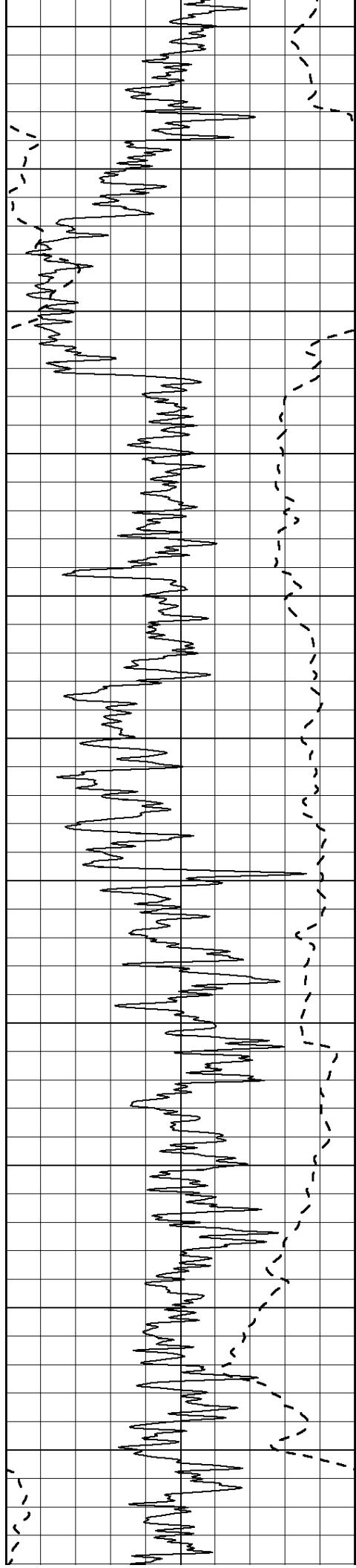
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

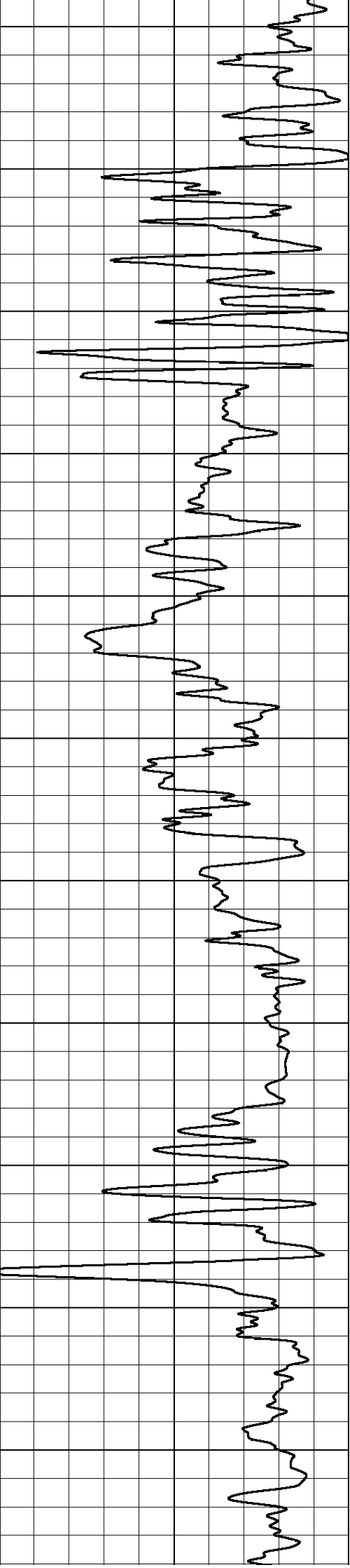
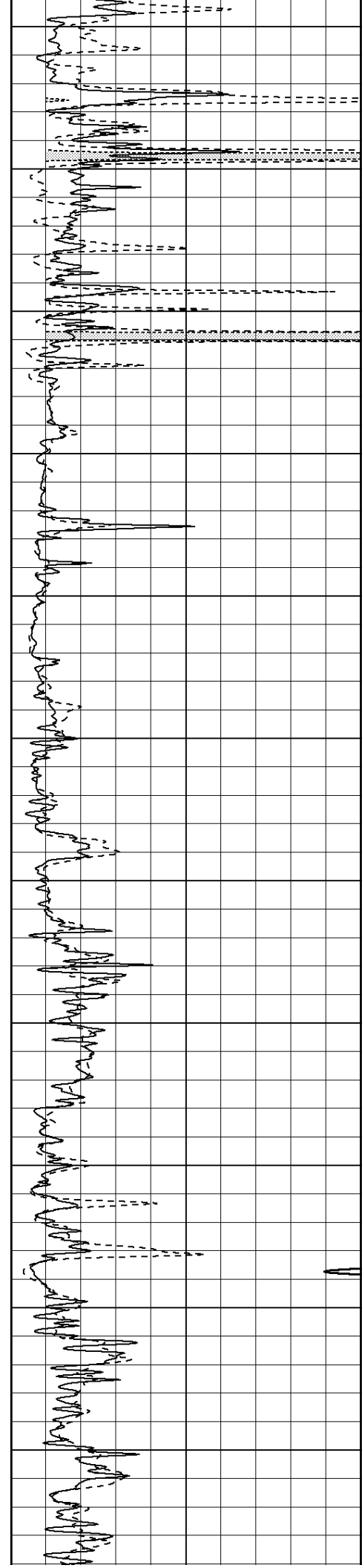
1000	CILD (mmho/m)	0
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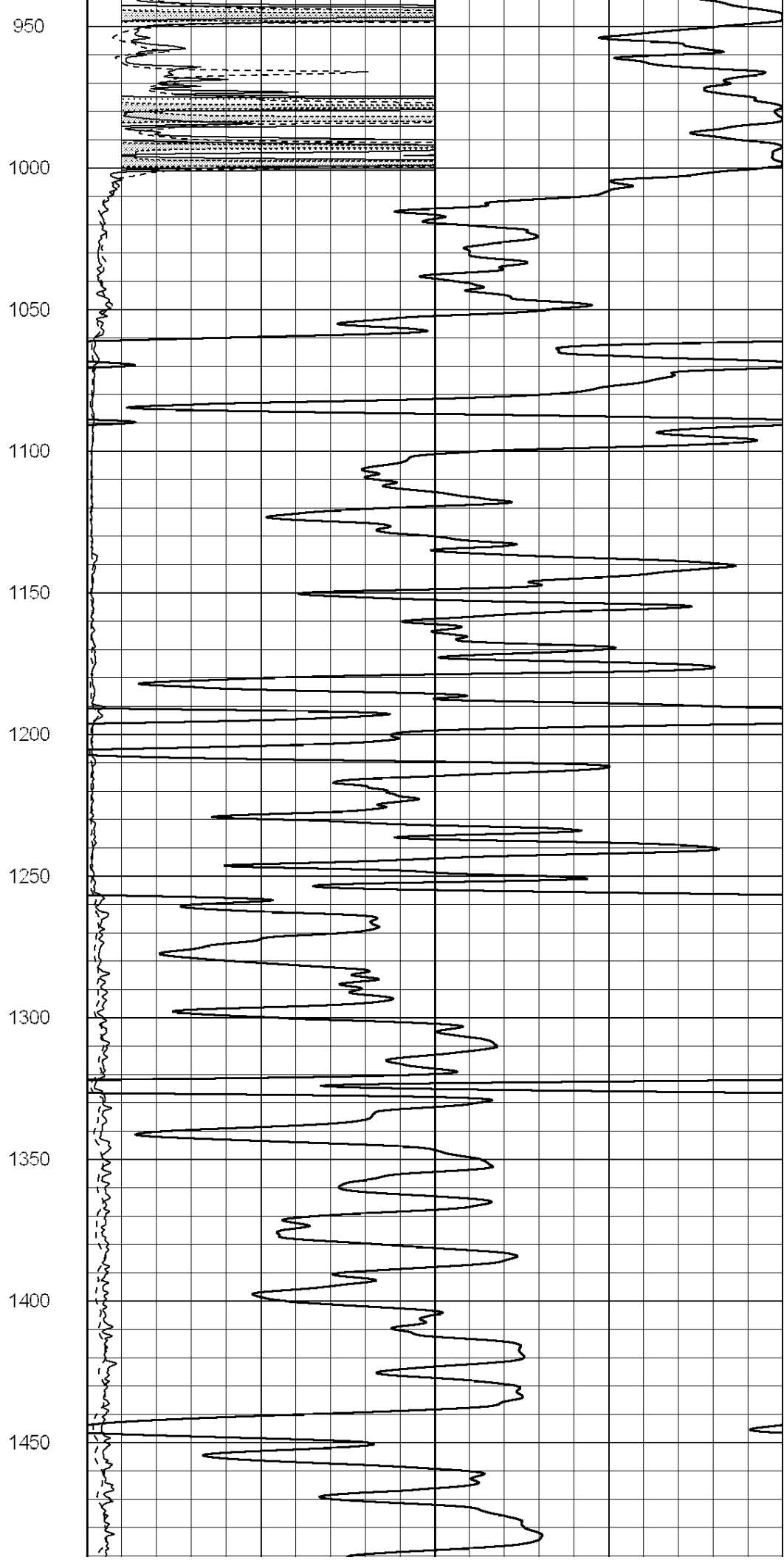
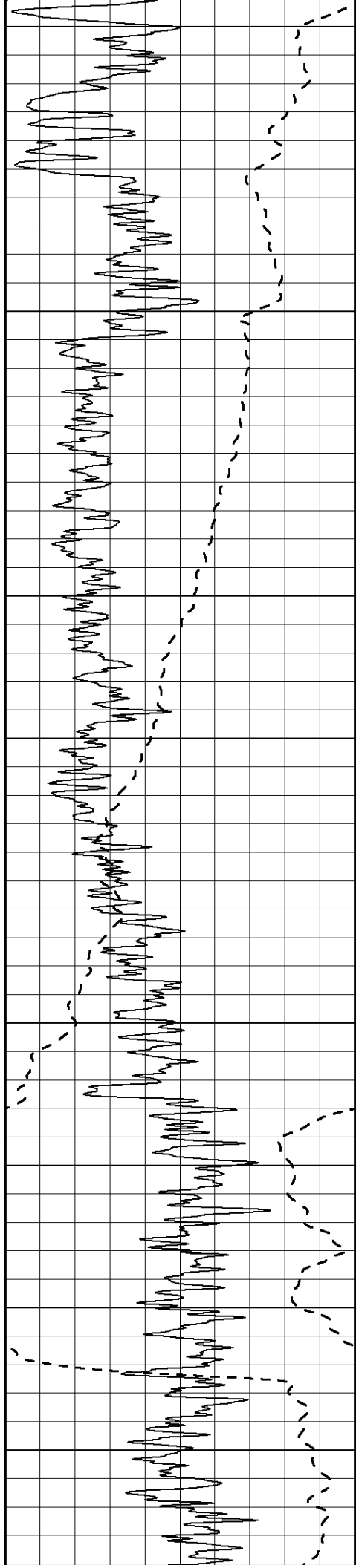
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50	RLL3 X10 (Ohm-m)	500

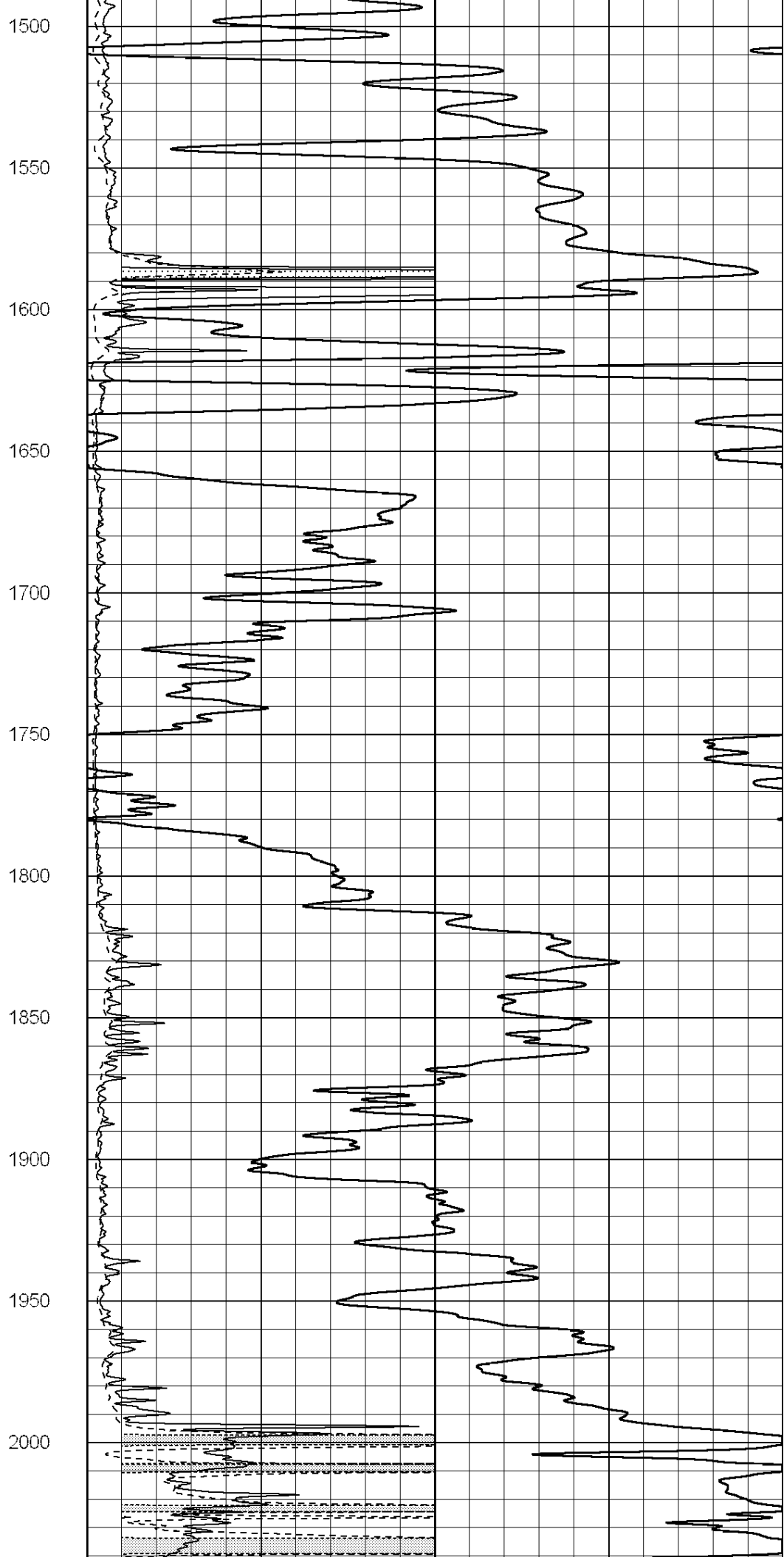
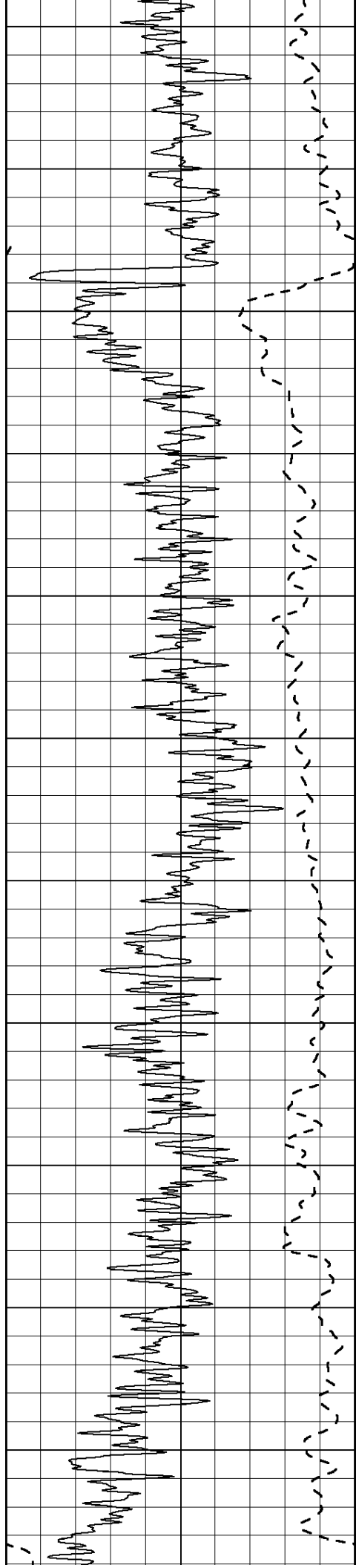


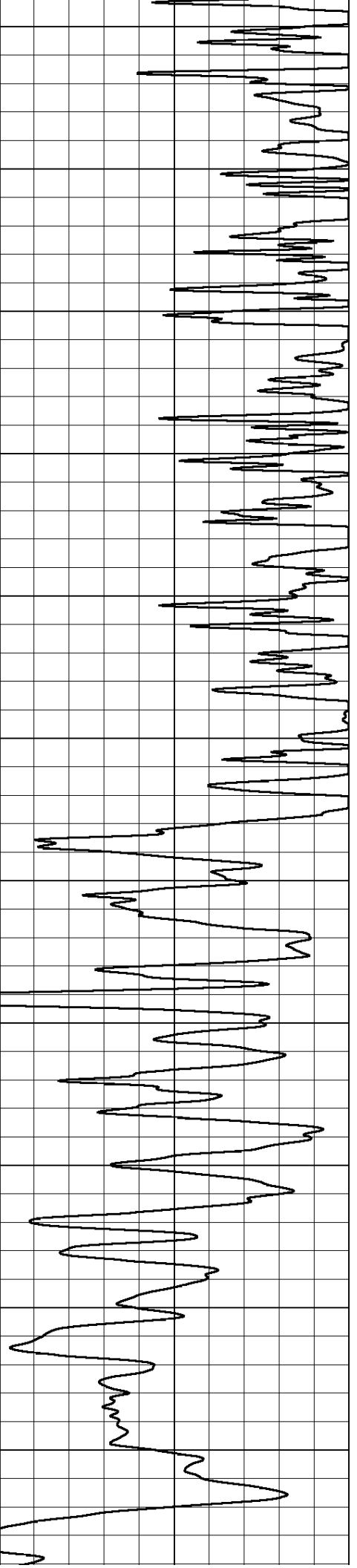
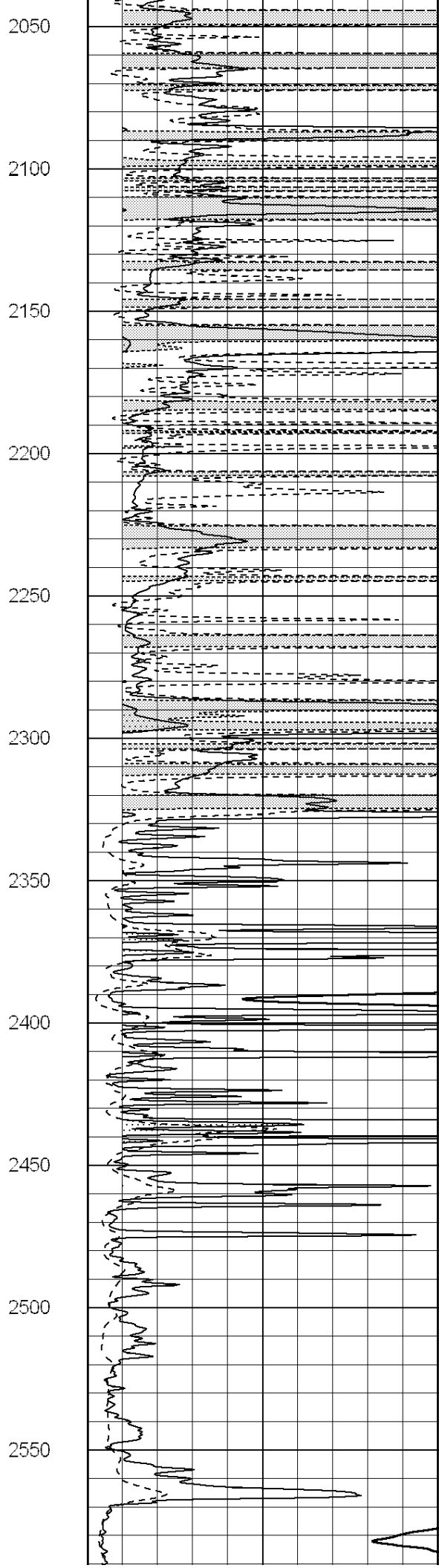
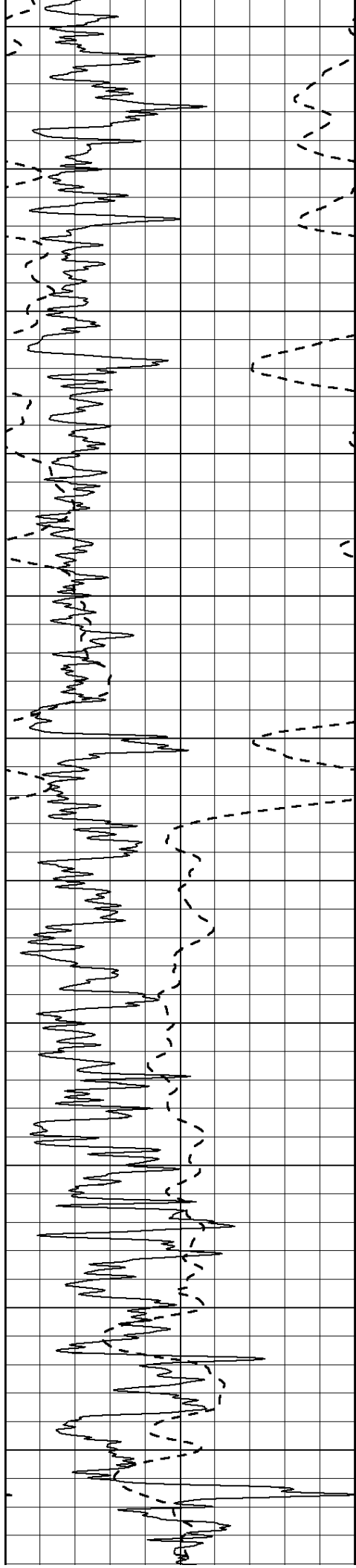


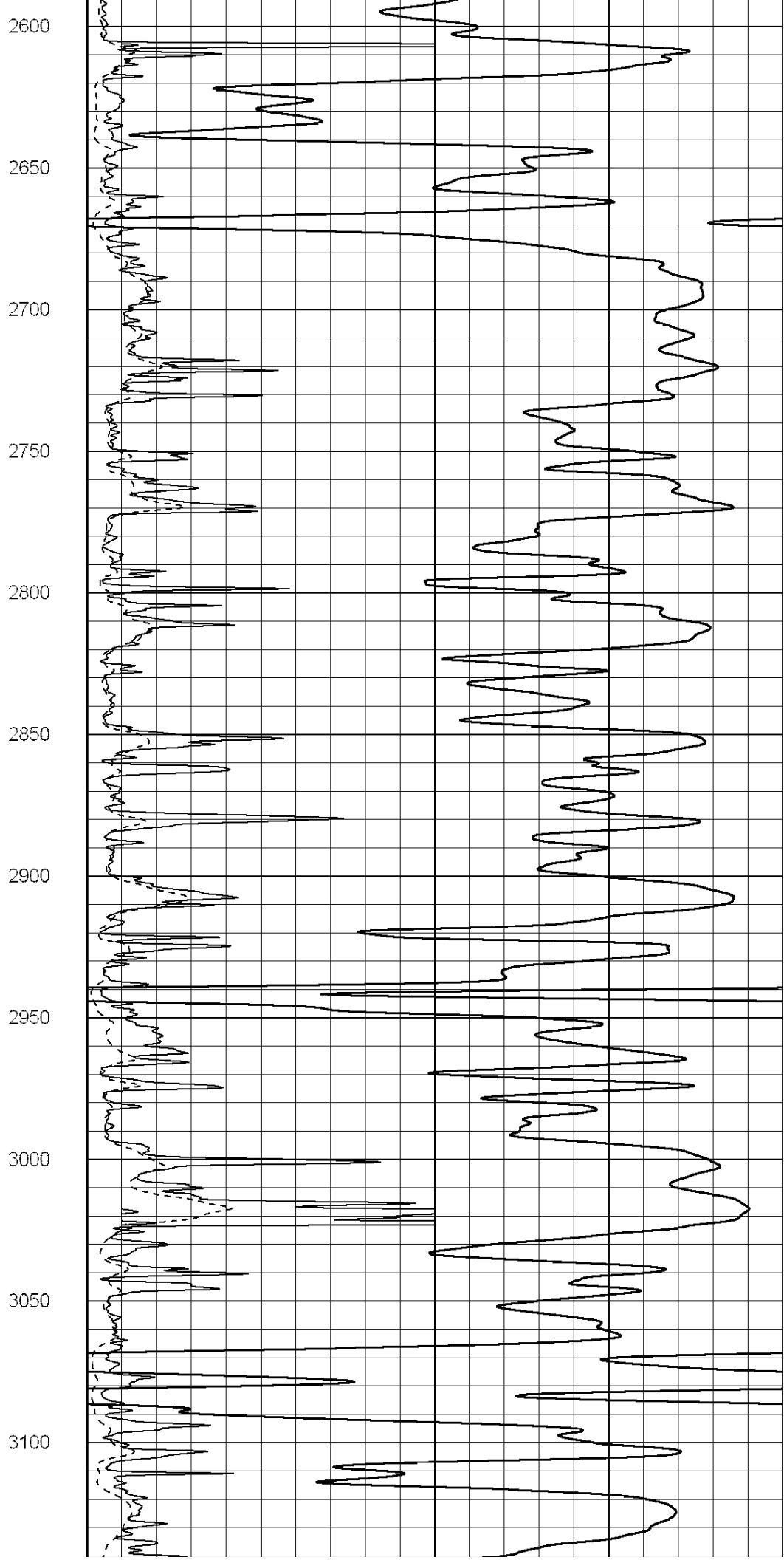
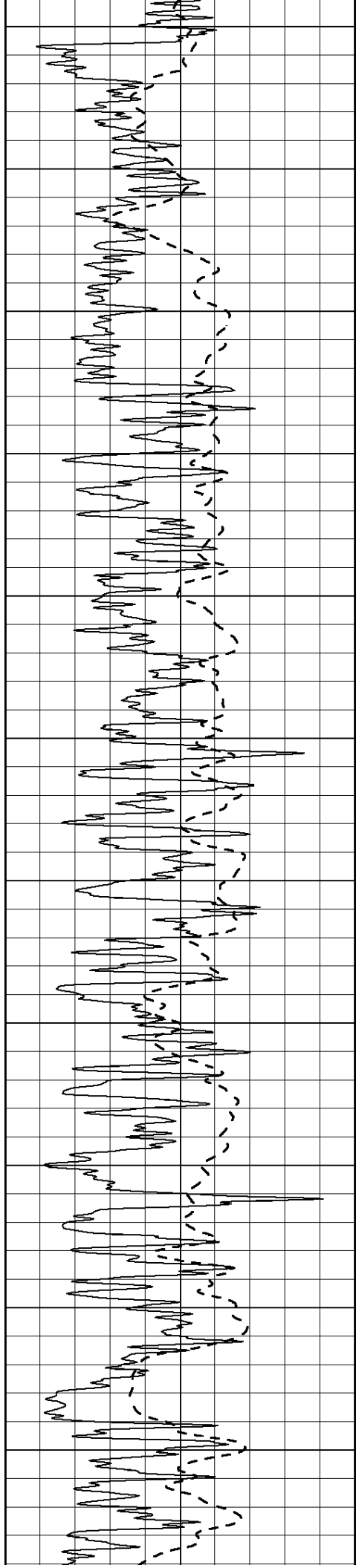
400
450
500
550
600
650
700
750
800
850
900

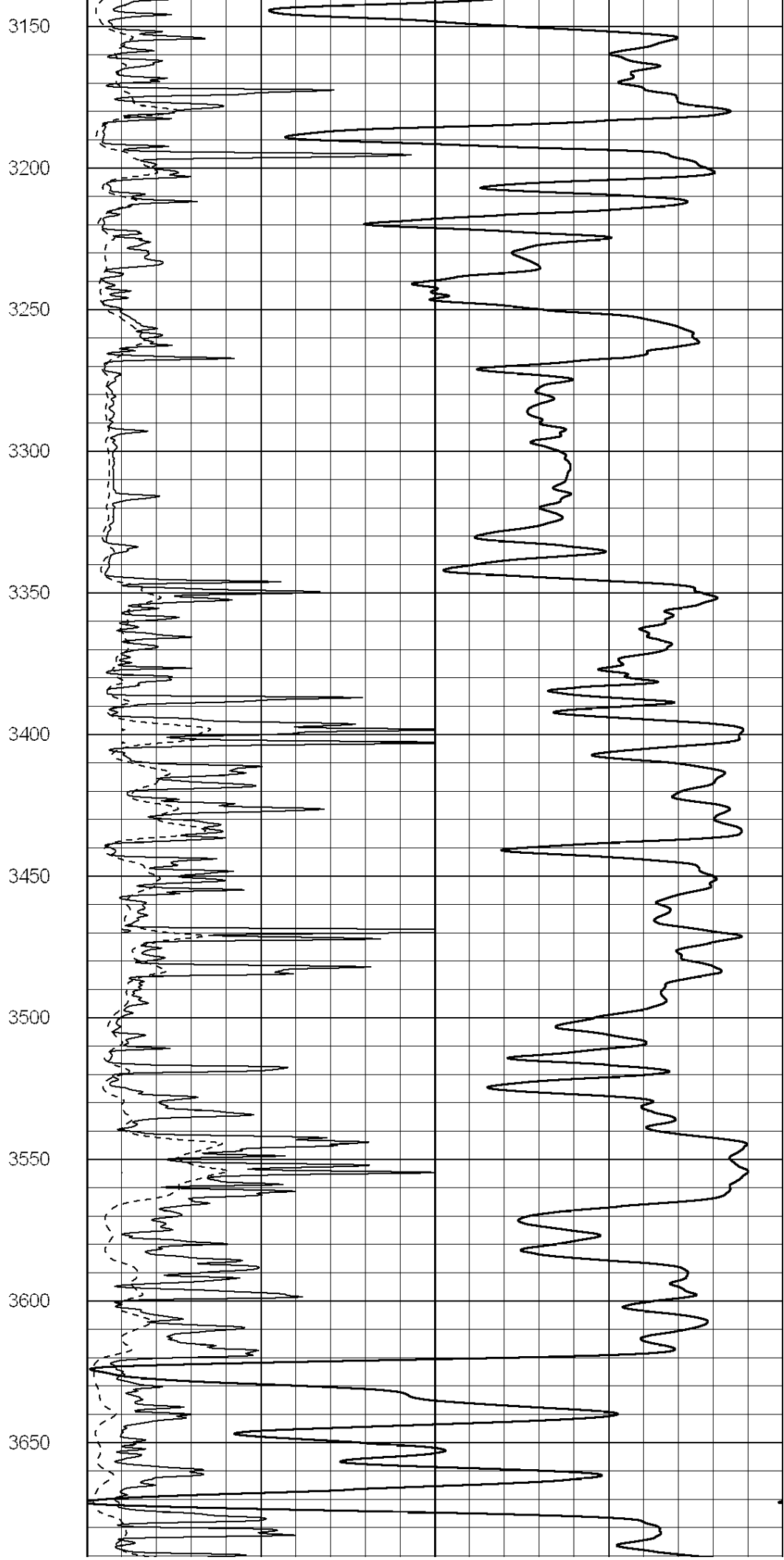
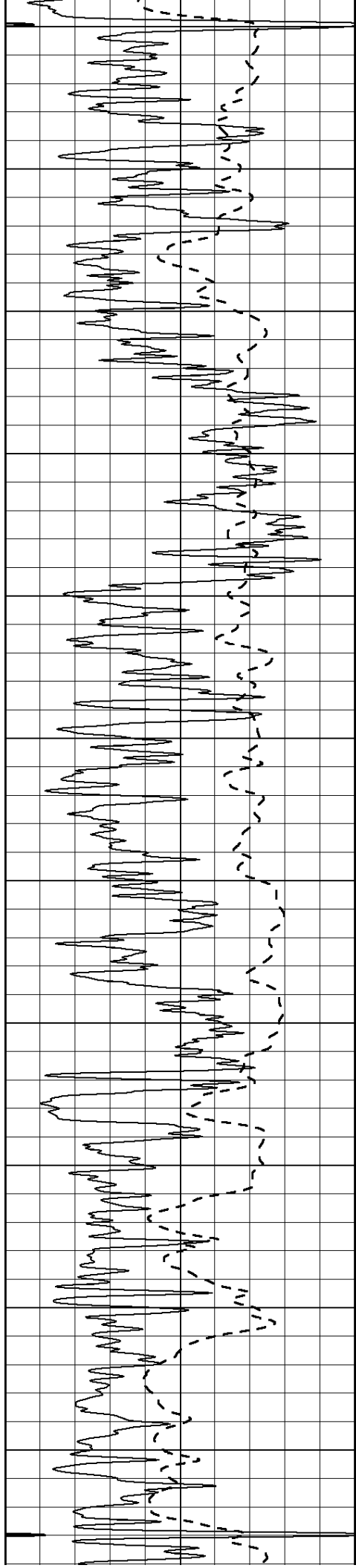


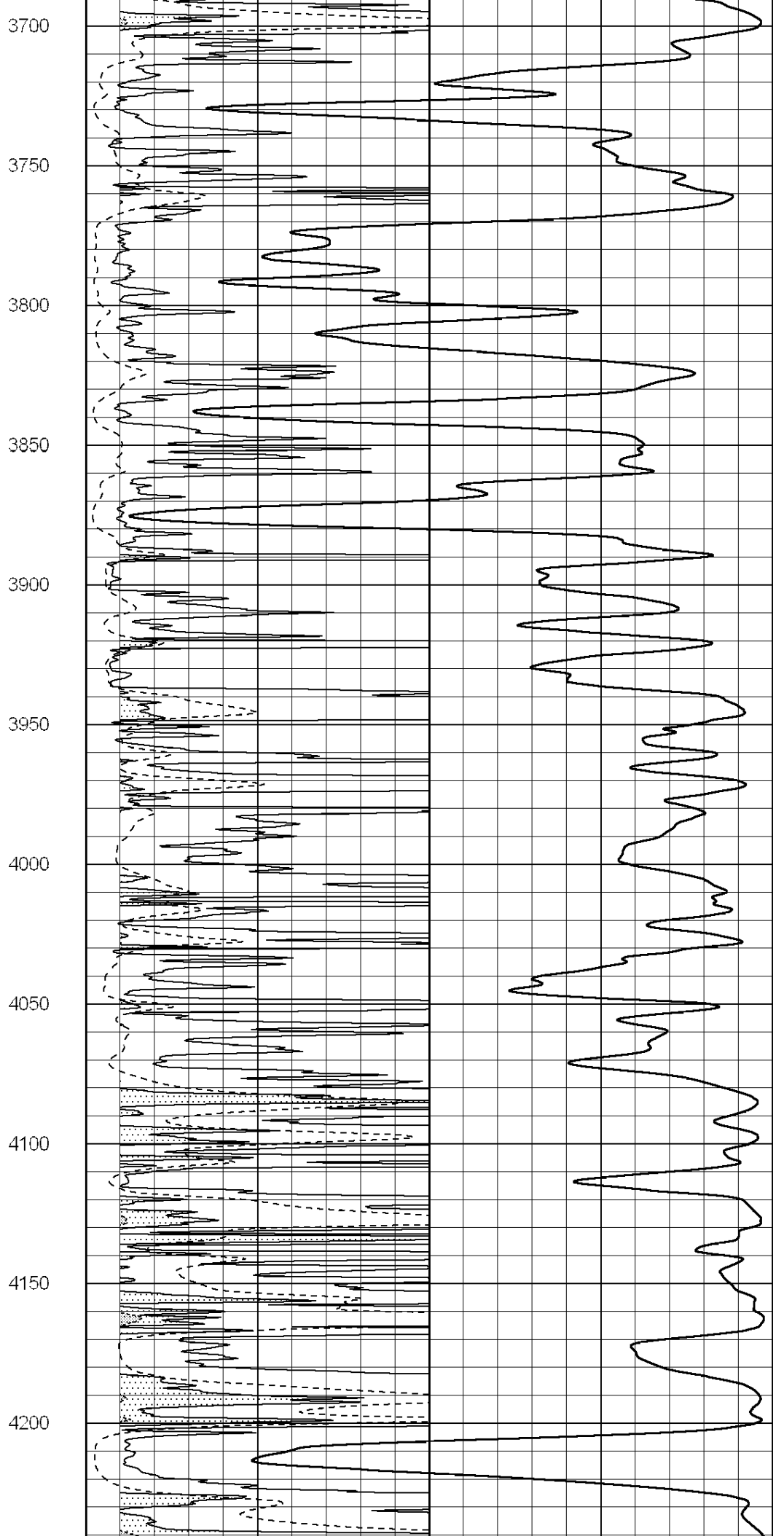
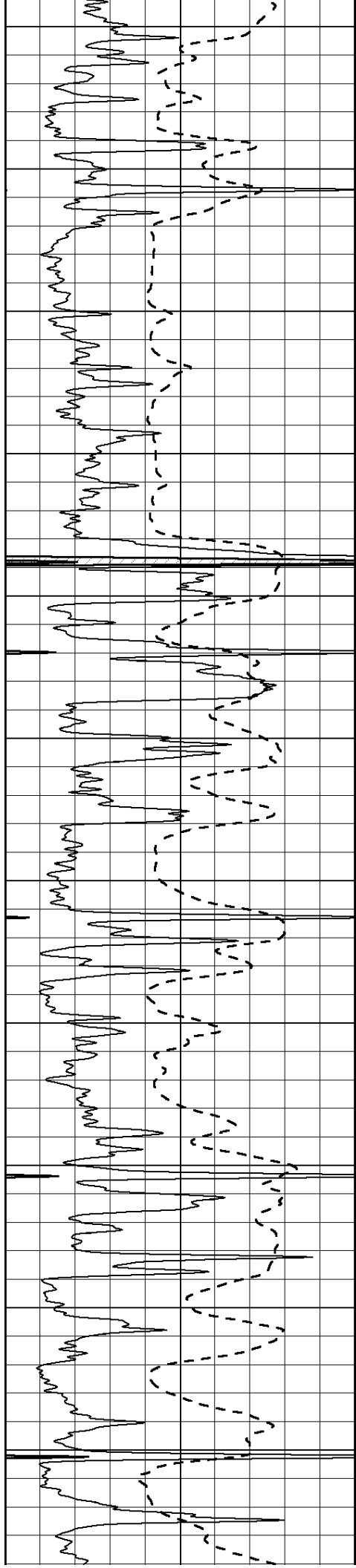












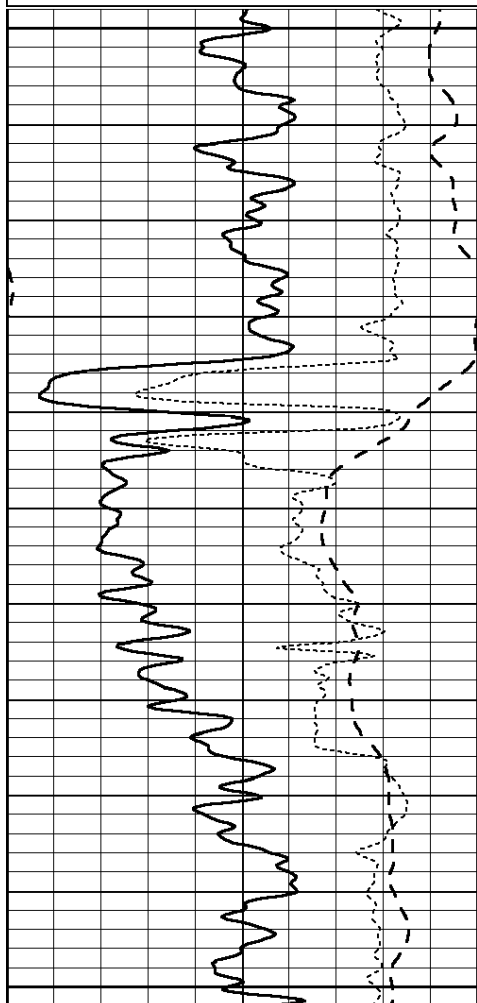


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Database File: 004946pe.db
 Dataset Pathname: pass4.2
 Presentation Format: _dil
 Dataset Creation: Mon Aug 16 12:21:28 2010
 Charted by: Depth in Feet scaled 1:240

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

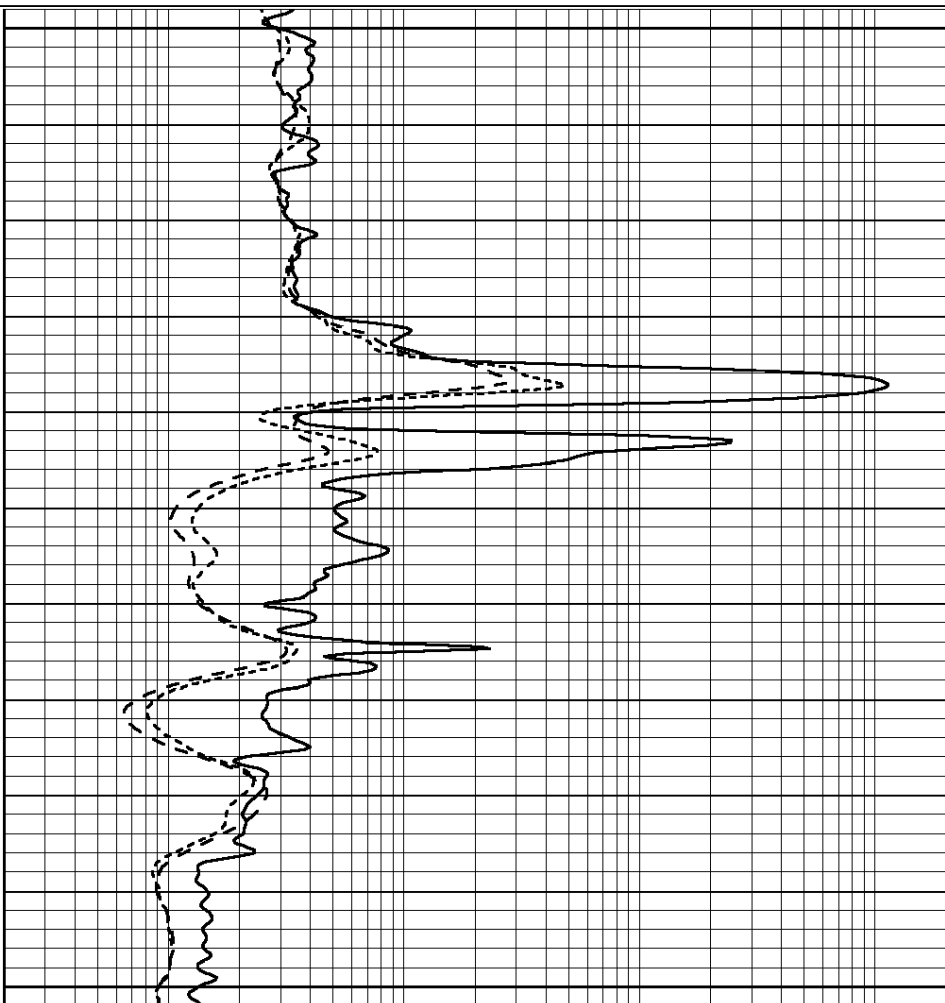
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



1550

1600

1650



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

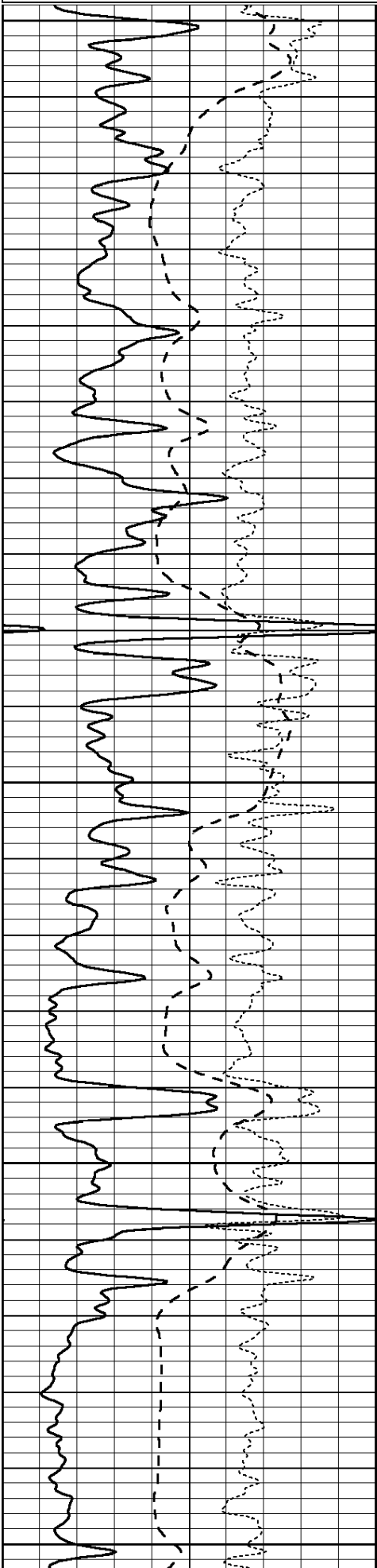
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 Dataset Pathname: pass4.1
 Presentation Format: _dil
 Dataset Creation: Mon Aug 16 11:21:44 2010
 Charted by: Depth in Feet scaled 1:240

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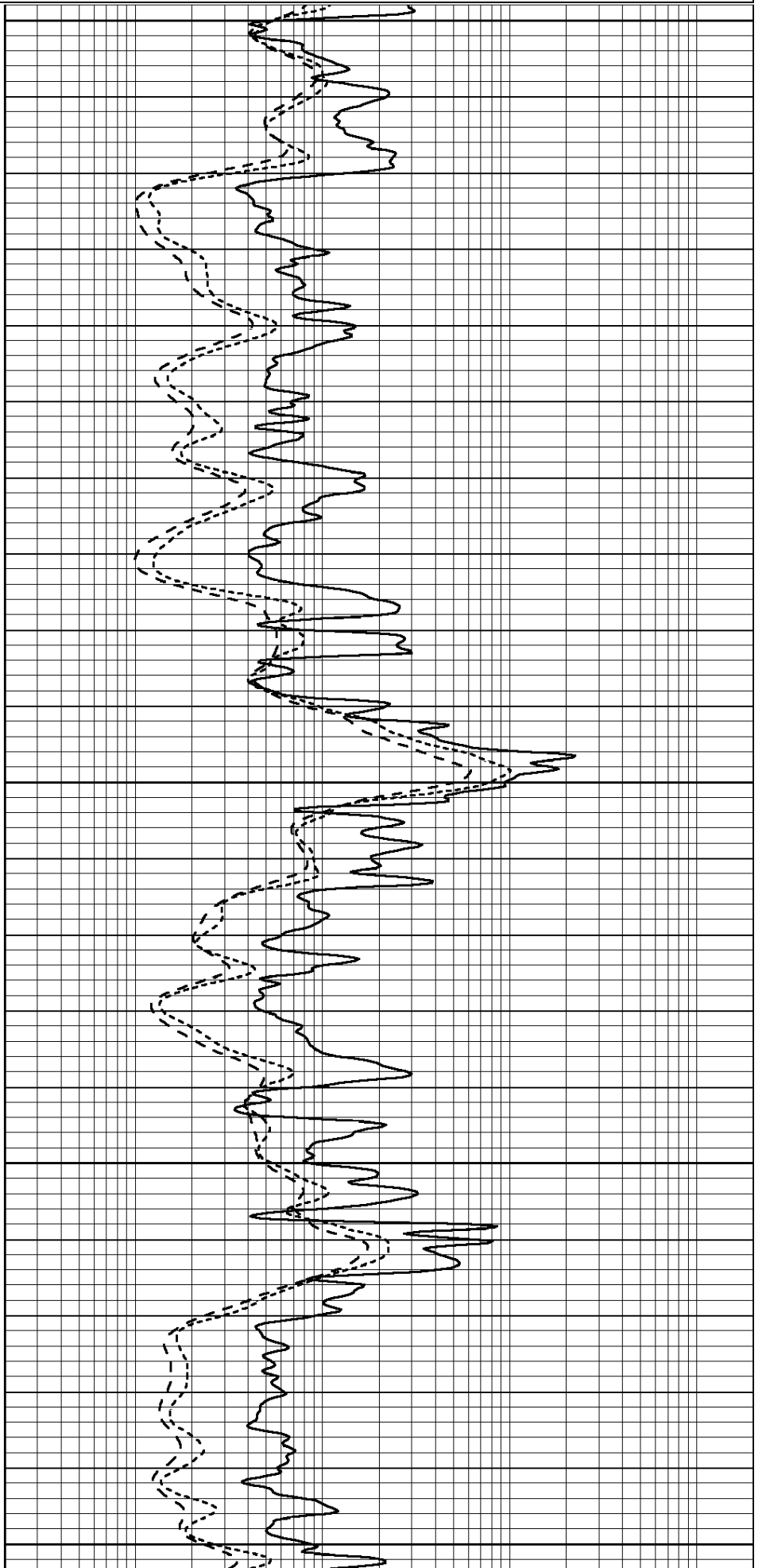
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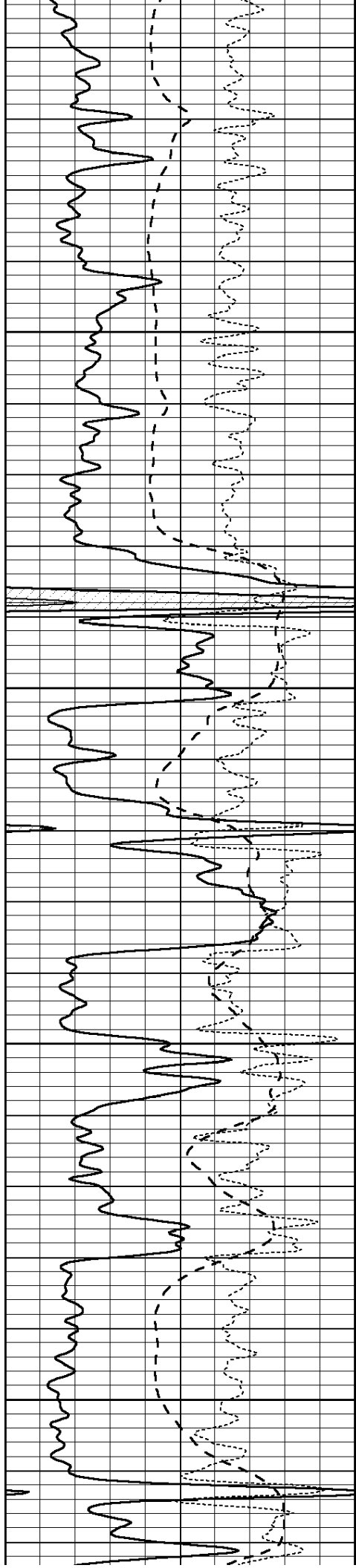
-100 SP (mV) 100
-250 Rxo/Rt 50

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



3600
3650
3700
3750
3800



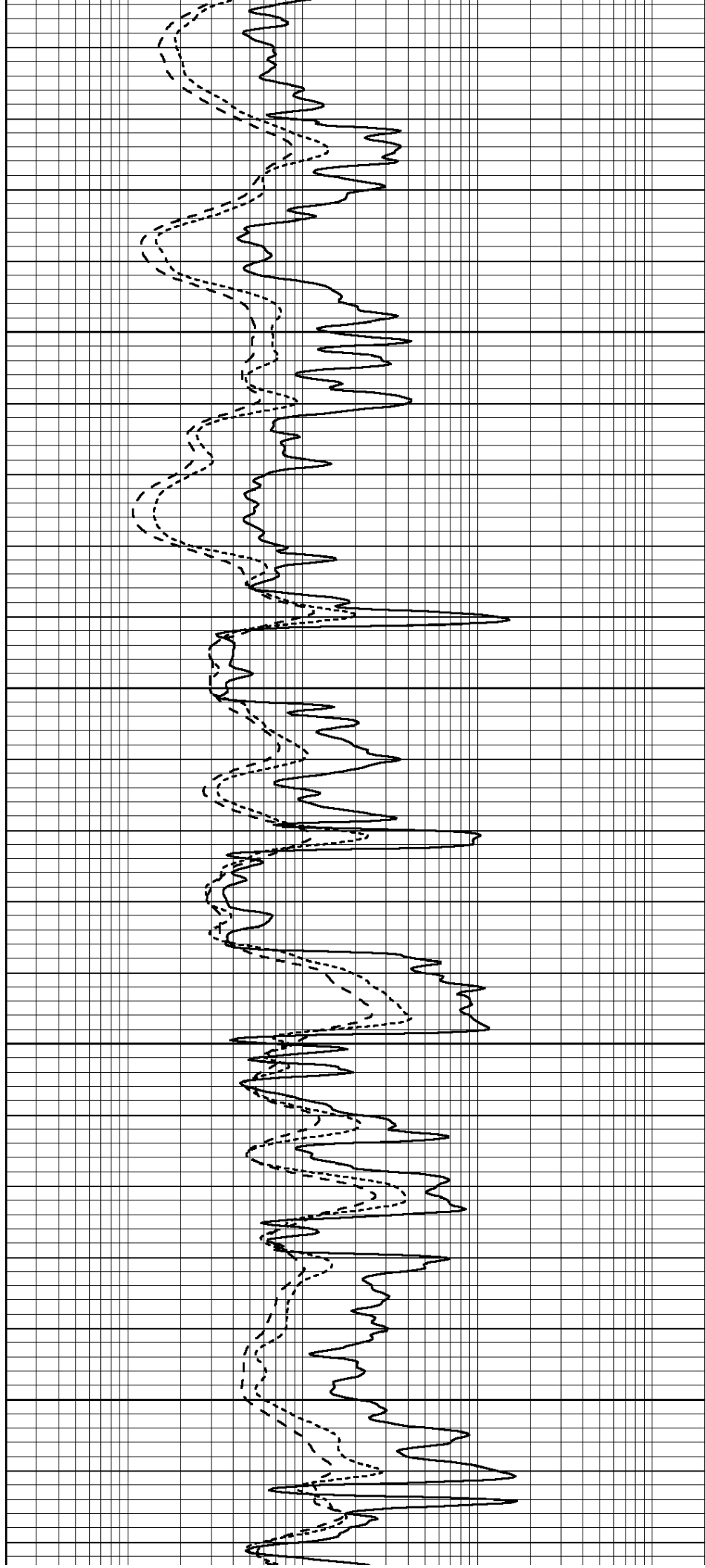


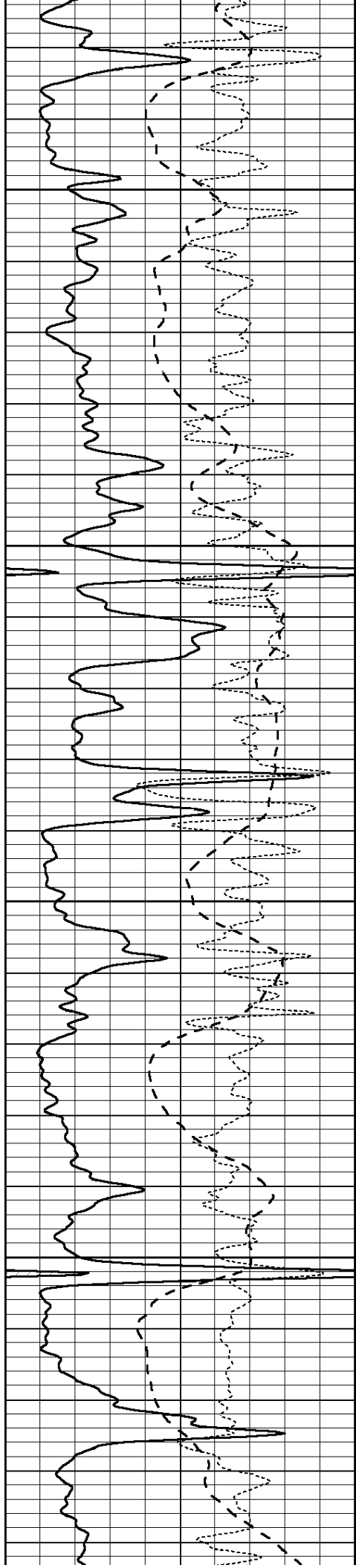
3850

3900

3950

4000



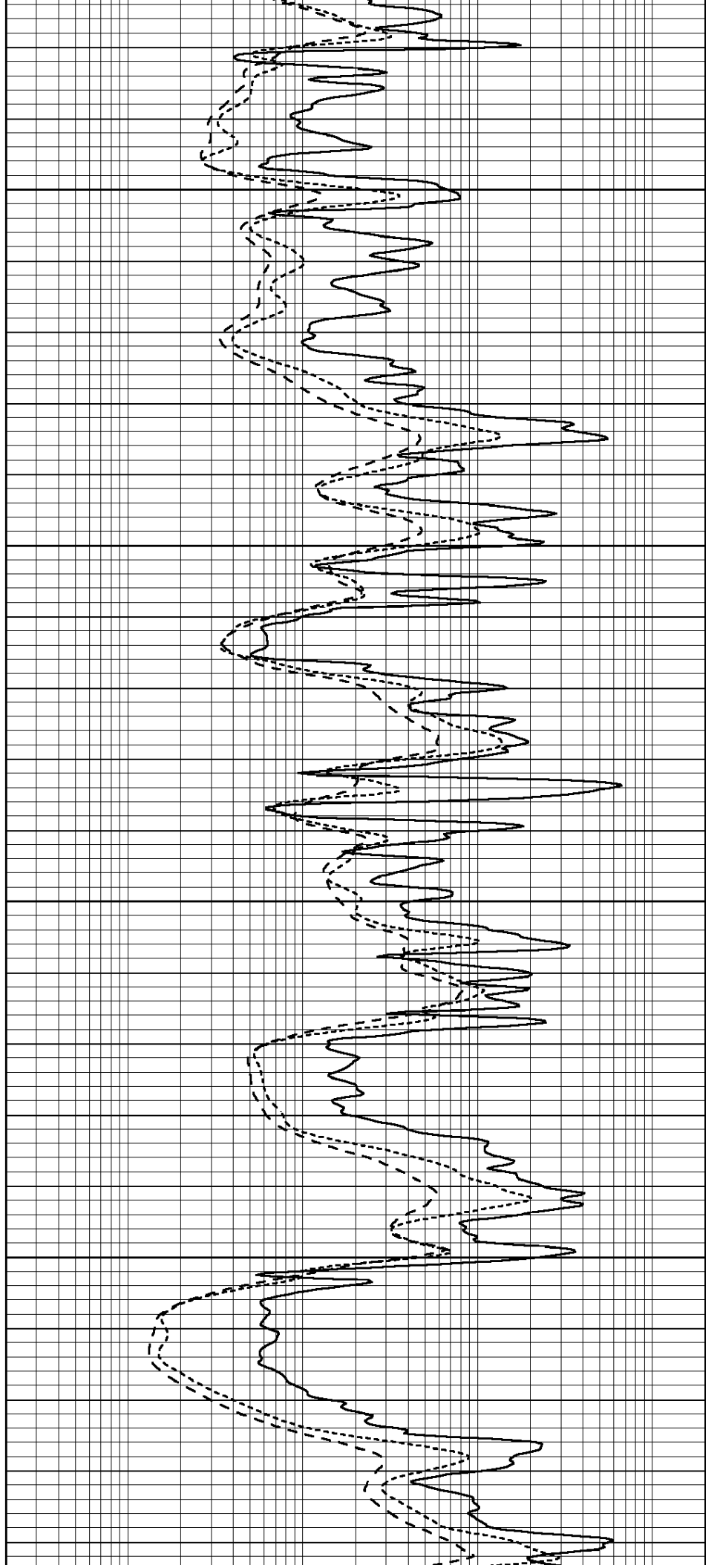


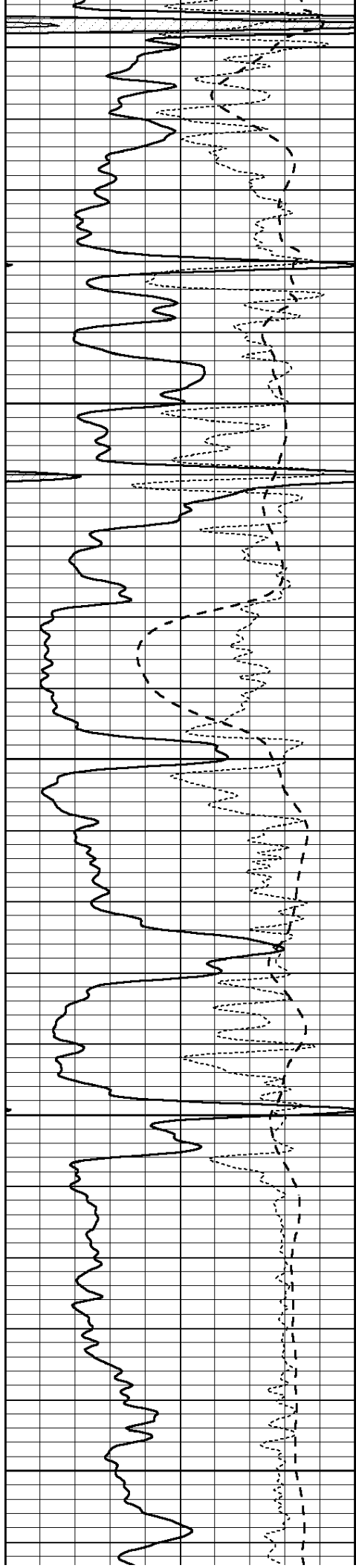
4050

4100

4150

4200





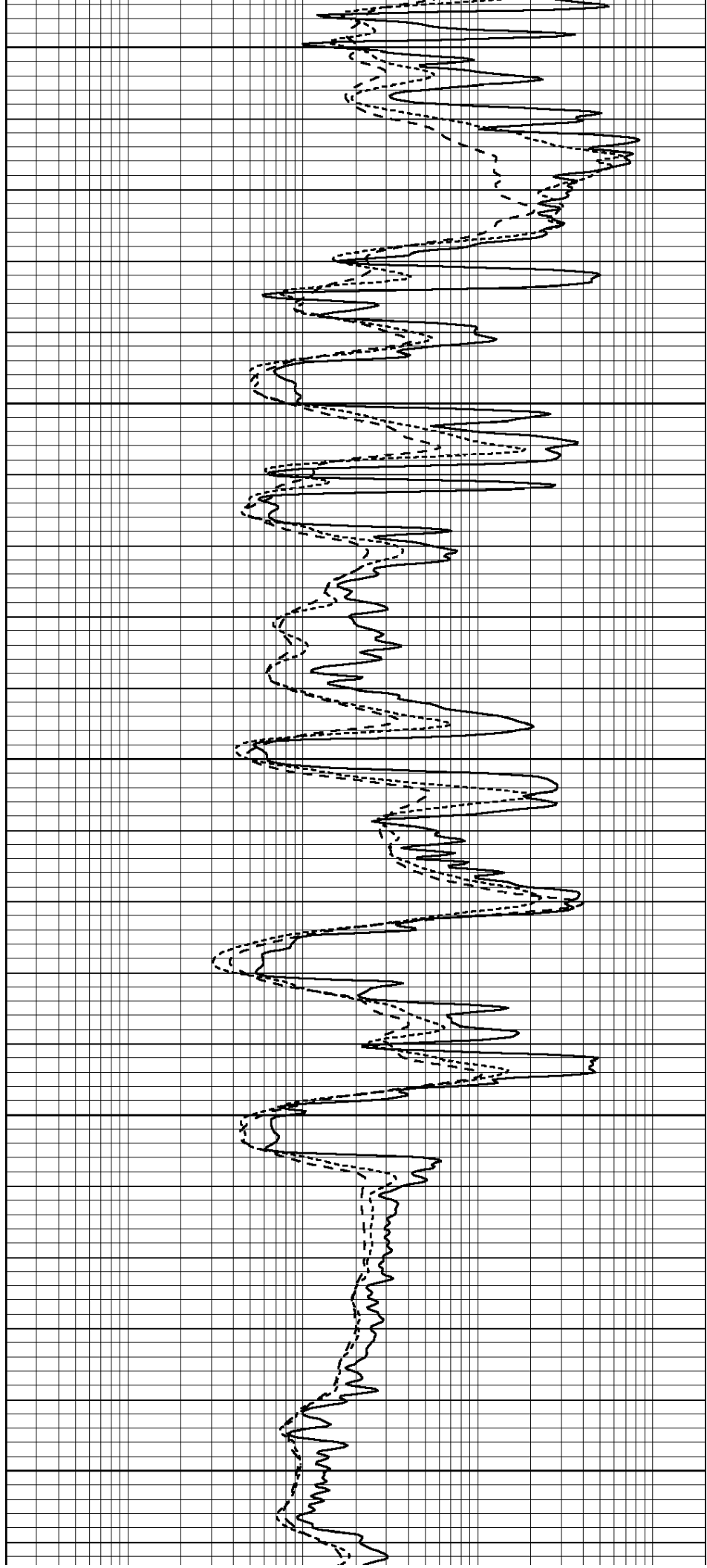
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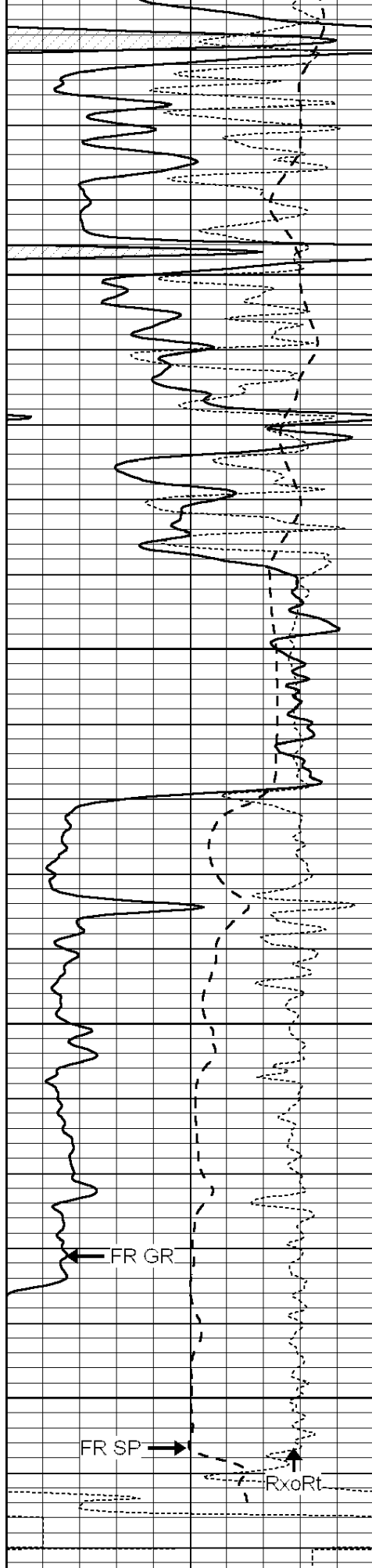
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4350

4400

4450





4500

4550

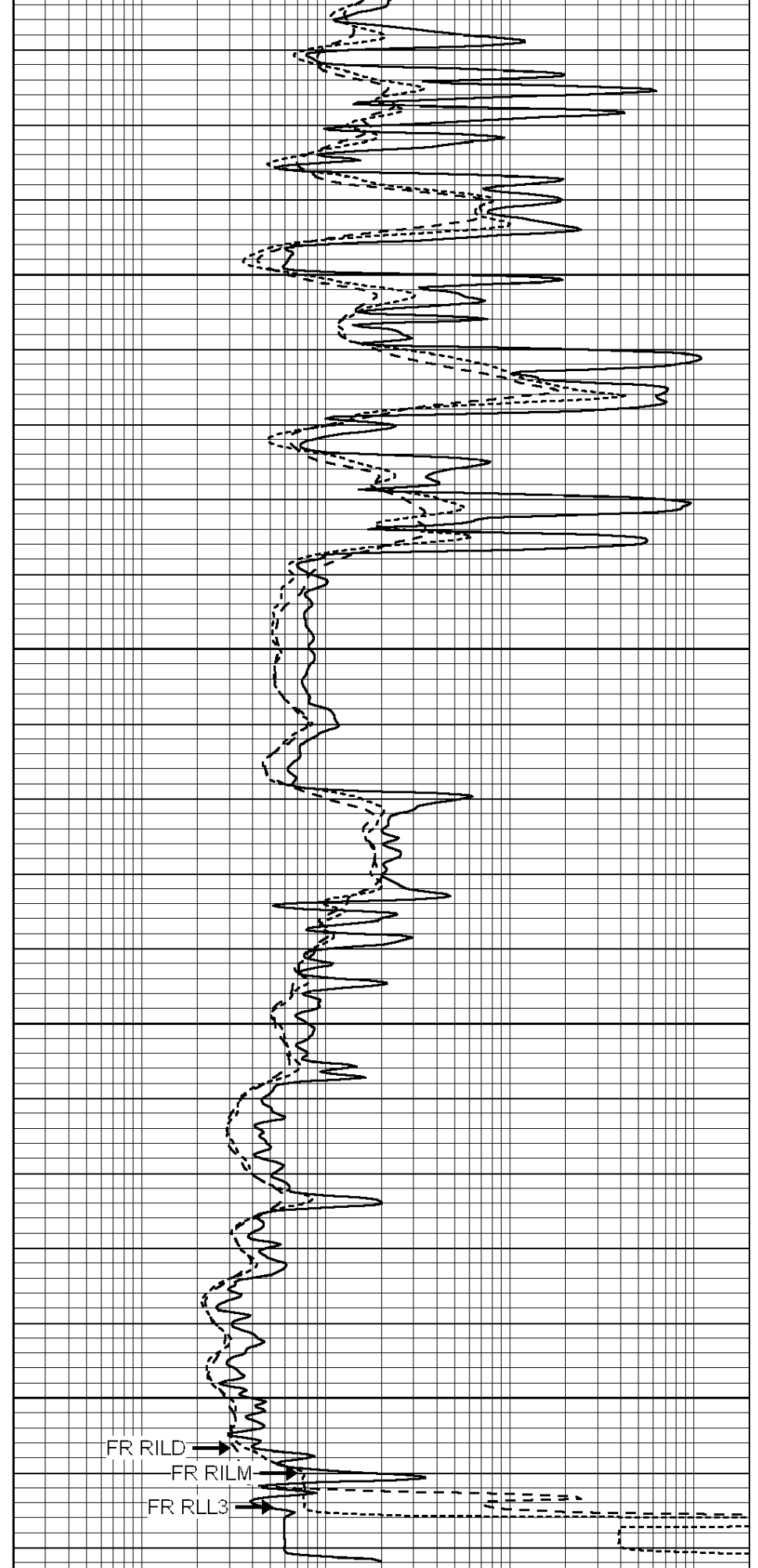
4600

4650

LTD 4667

0 GAMMA RAY (GAPI) 150

-100 SP (mV) 100



0.2 SHALLOW GUARD (Ohm-m) 2000

0.2 MEDIUM INDUCTION (Ohm-m) 2000



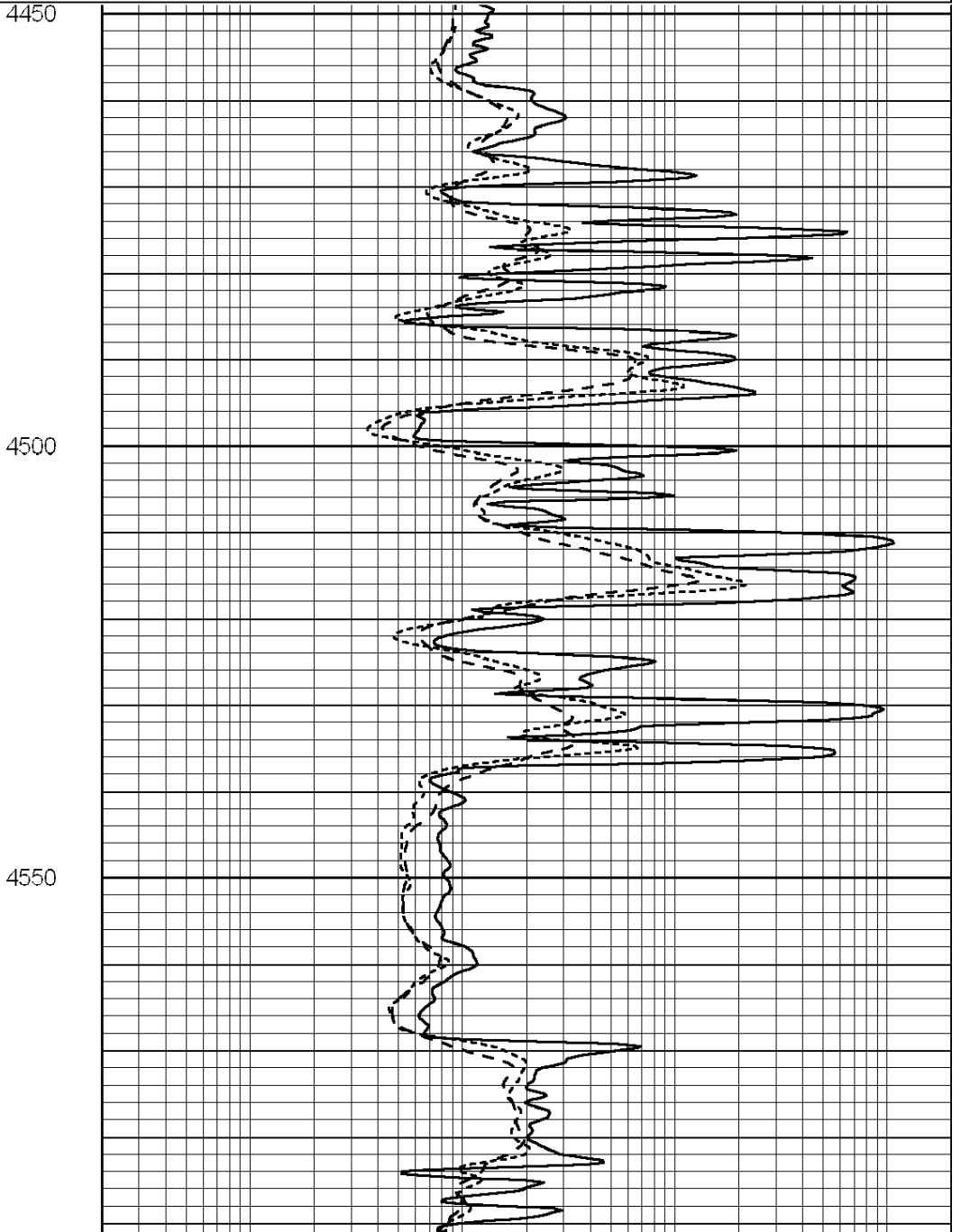
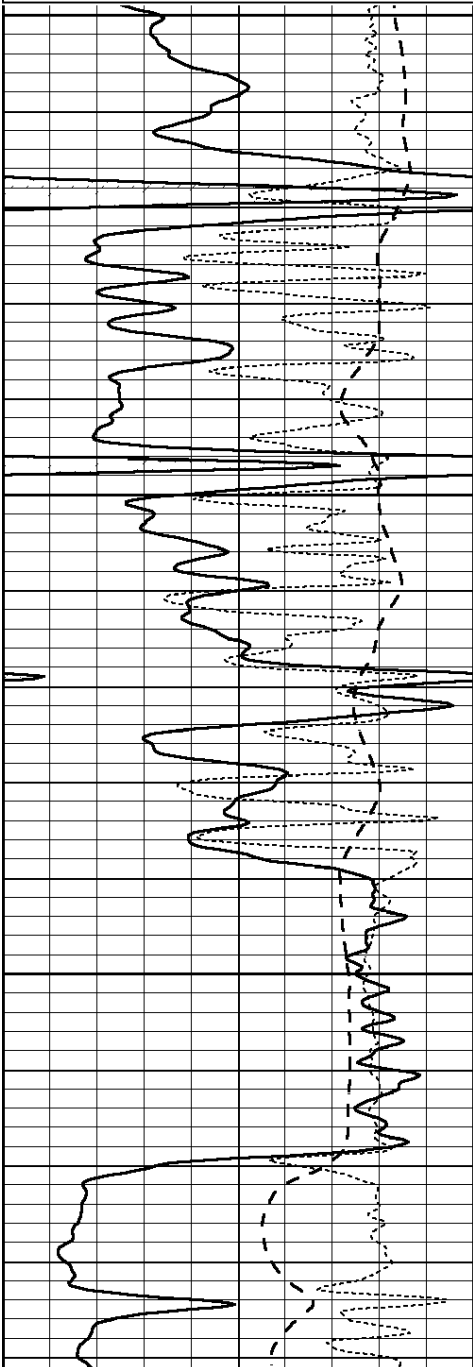
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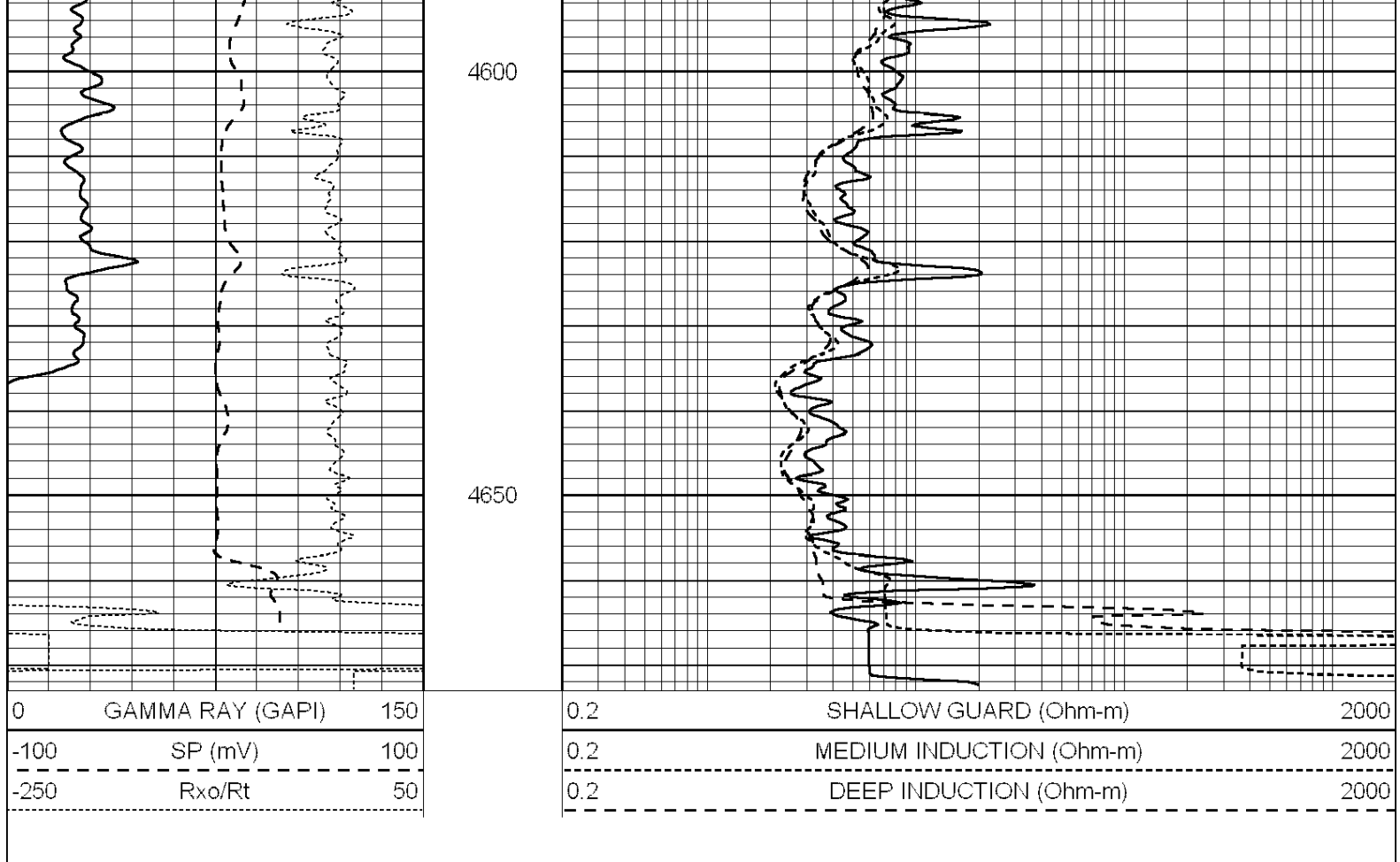
REPEAT SECTION

Database File: 004946pe.db
Dataset Pathname: pass2.1
Presentation Format: _dil
Dataset Creation: Mon Aug 16 10:52:00 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





Calibration Report

Database File: 004946pe.db
 Dataset Pathname: pass2.1
 Dataset Creation: Mon Aug 16 10:52:00 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			V	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	2.3	8.0	
High Ref	4.3	14.0	
	Gain: 3.1		Offset: -0.3

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