



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company		TENGASCO INC.	
Well		SCHNELLER #6	
Field		WORTH NORTH	
County		ELLIS	
State		KANSAS	
Location:		API # : 15-051-26282-0000	
SEC 34 TWP 12S RGE 20W		CDL/CNL PE/MEL	
Permanent Datum Log Measured From Drilling Measured From		GROUND LEVEL Elevation KELLY BUSHING 9' A.G.L. KELLY BUSHING	
2181		Elevation K.B. 2190 D.F. 2188 G.L. 2181	
Date	4/16/12		
Run Number	ONE		
Depth Driller	3990		
Depth Logger	3991		
Bottom Logged Interval	3989		
Top Log Interval	0		
Casing Driller	8 5/8" @ 268		
Casing Logger			
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,700 PPM	
Density / Viscosity	9.2 / 61		
pH / Fluid Loss	10.5 / 608		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	0.50 @ 88F		
Rmf @ Meas. Temp	0.38 @ 88F		
Rmc @ Meas. Temp	0.60 @ 88F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	0.38 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	116F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
Witnessed By	MIKE BAIR		

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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
ELLIS, KS - 1 MILE NORTH TO EMMERAM RD - 2 MILES EAST
1/2 MILE NORTH - WEST INTO

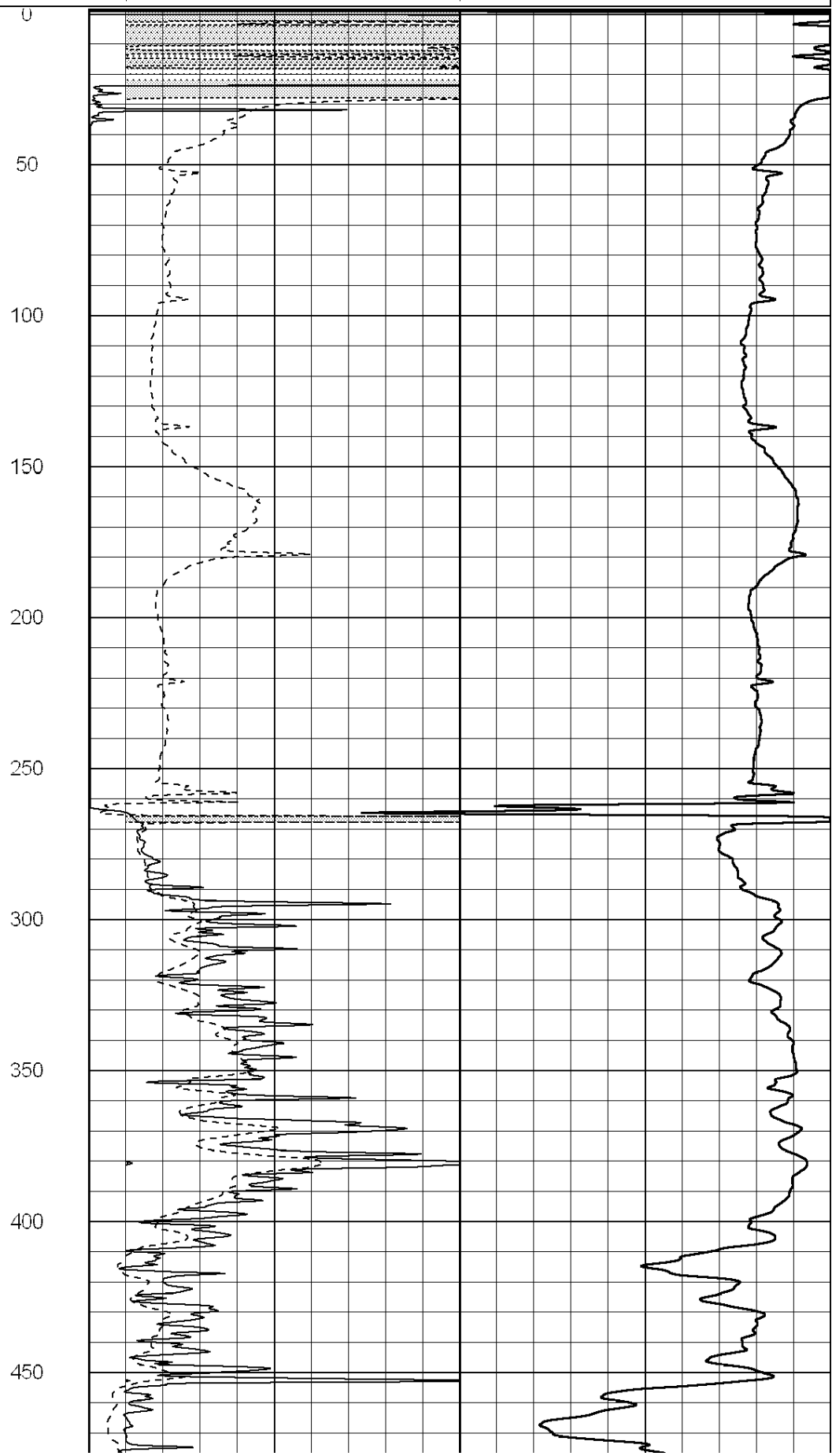
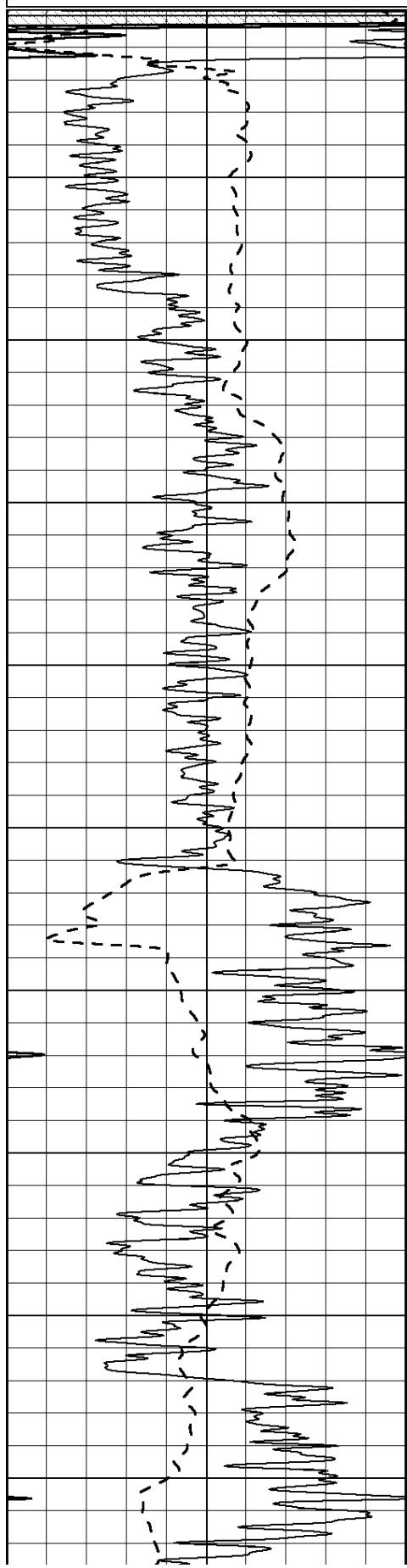
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Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Mon Apr 16 14:19:42 2012 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

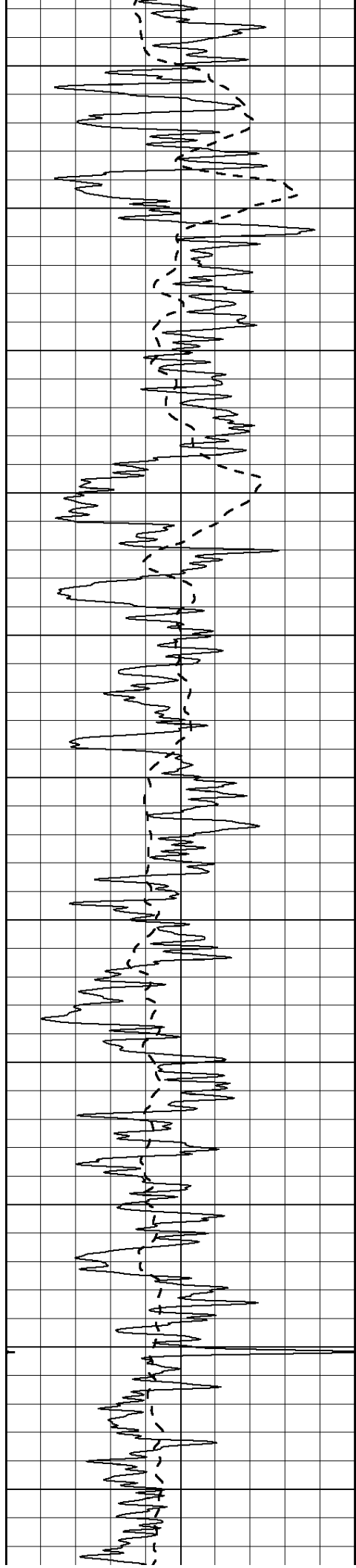
Charted by: Depth (m) Est. scaled (m)		
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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

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

50	RLL3 X10 (Ohm-m)	500





500

550

600

650

700

750

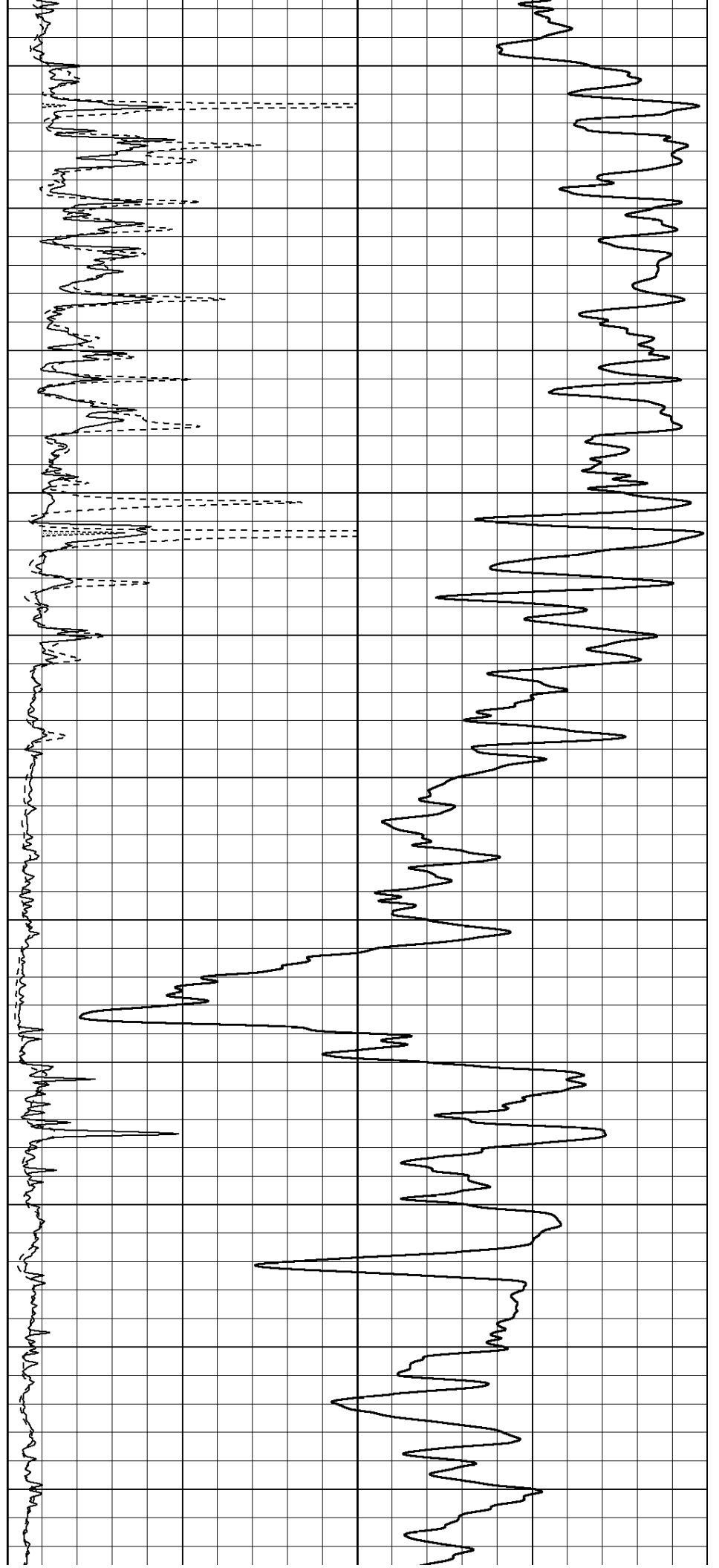
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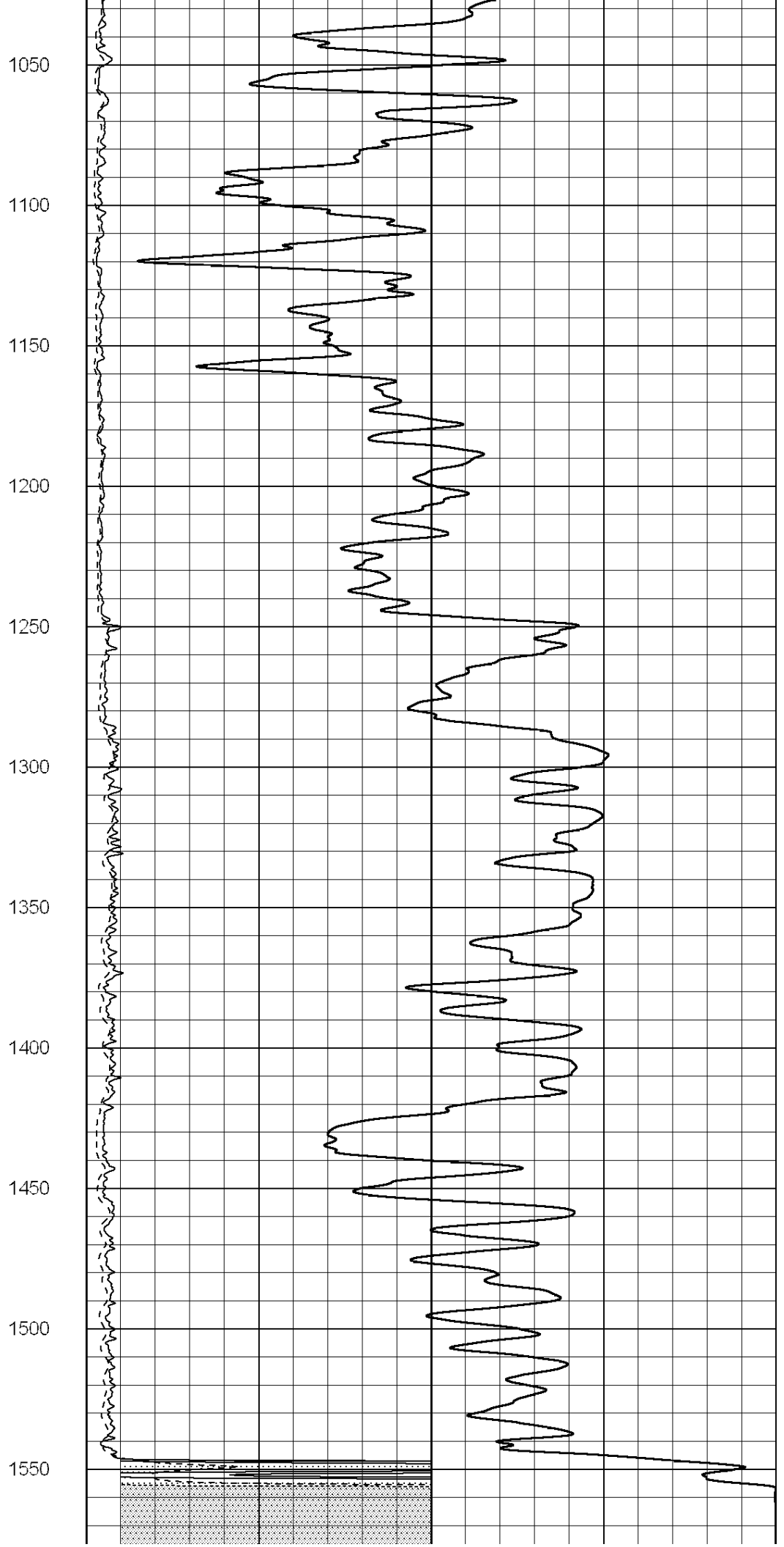
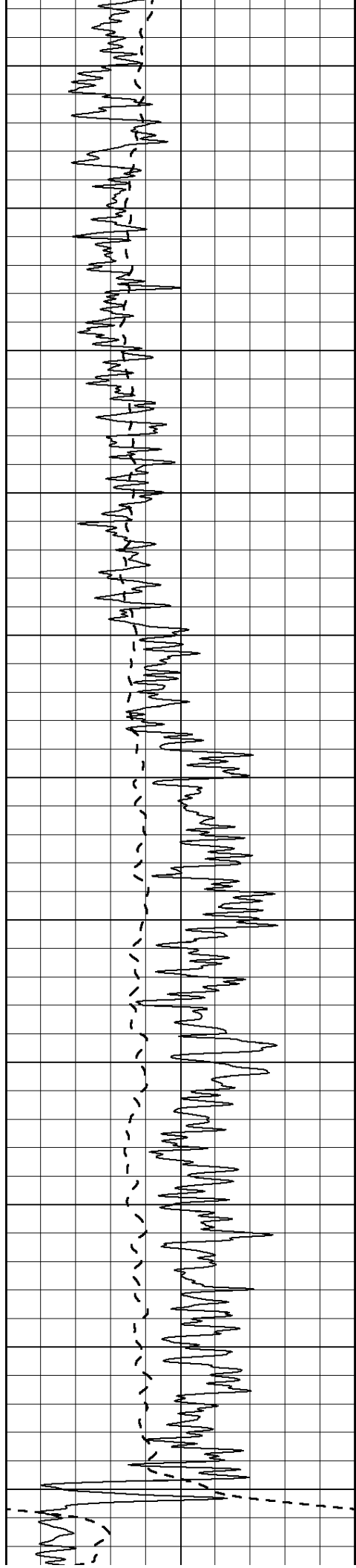
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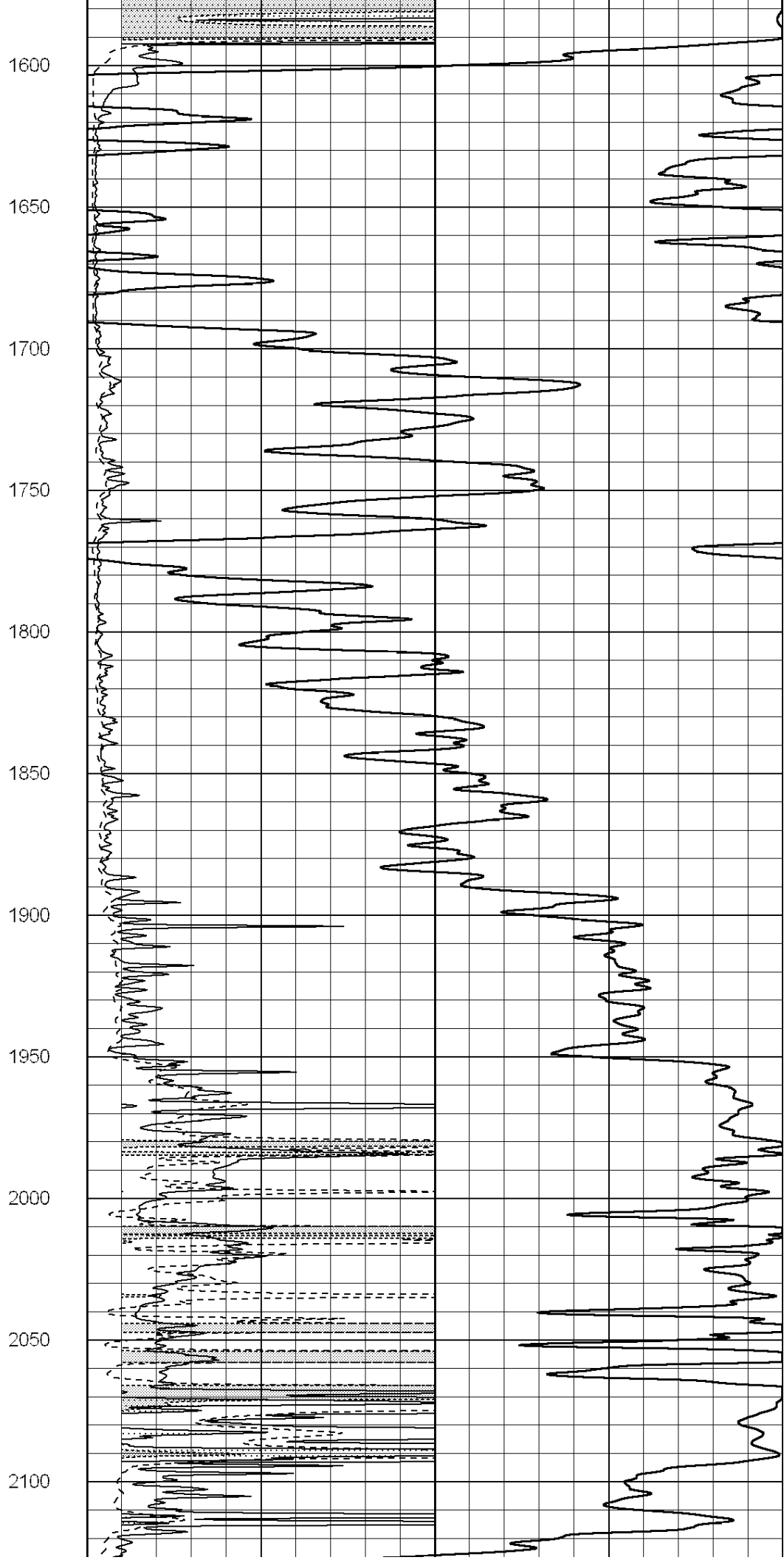
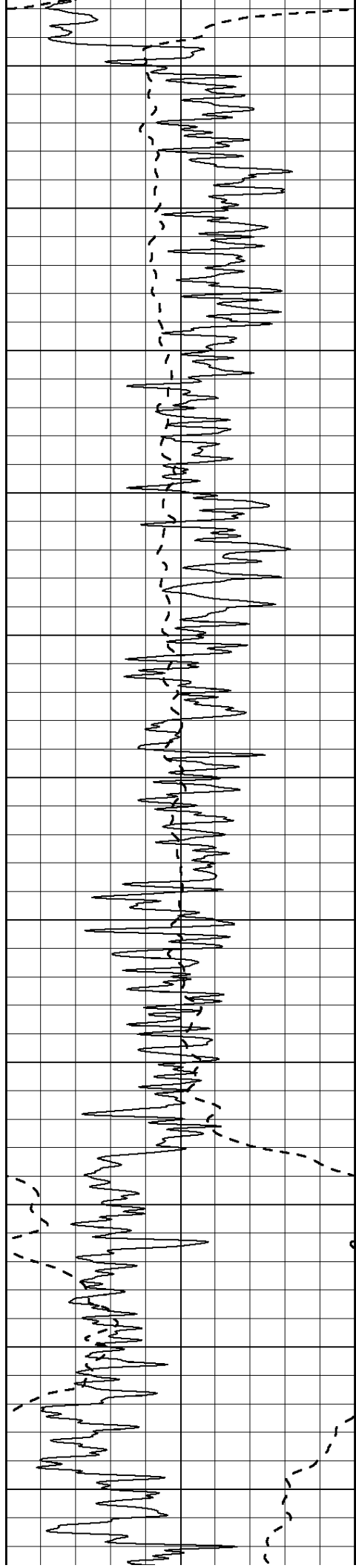
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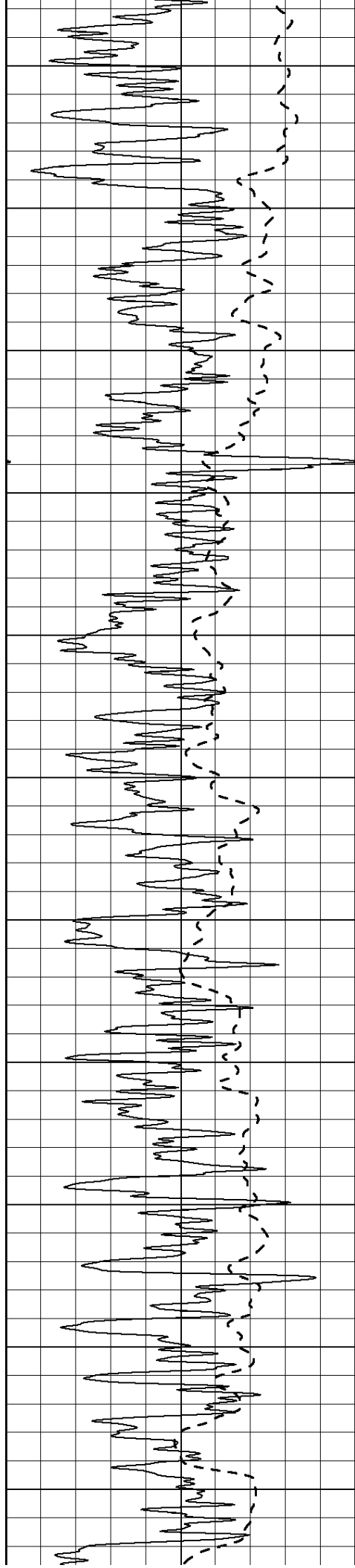
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1000









2150

2200

2250

2300

2350

2400

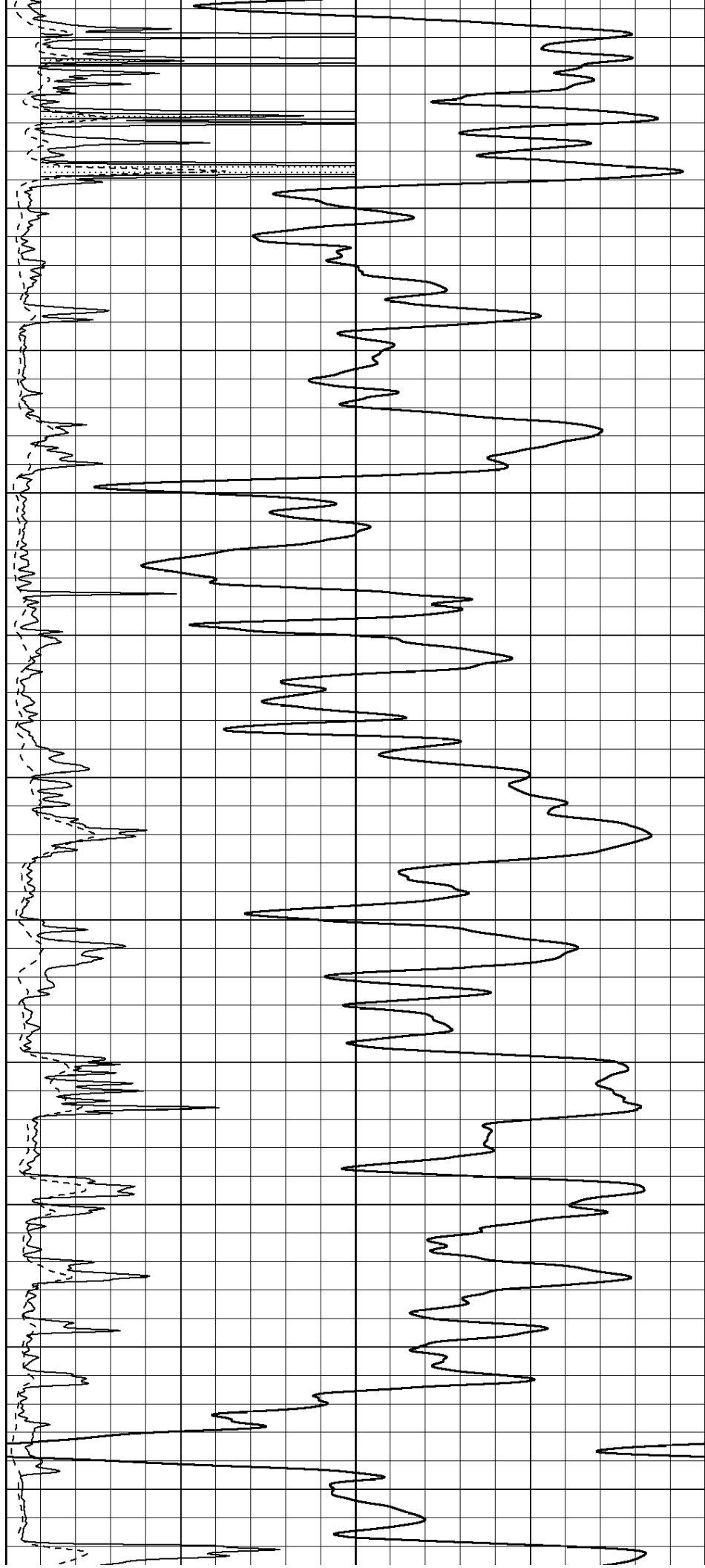
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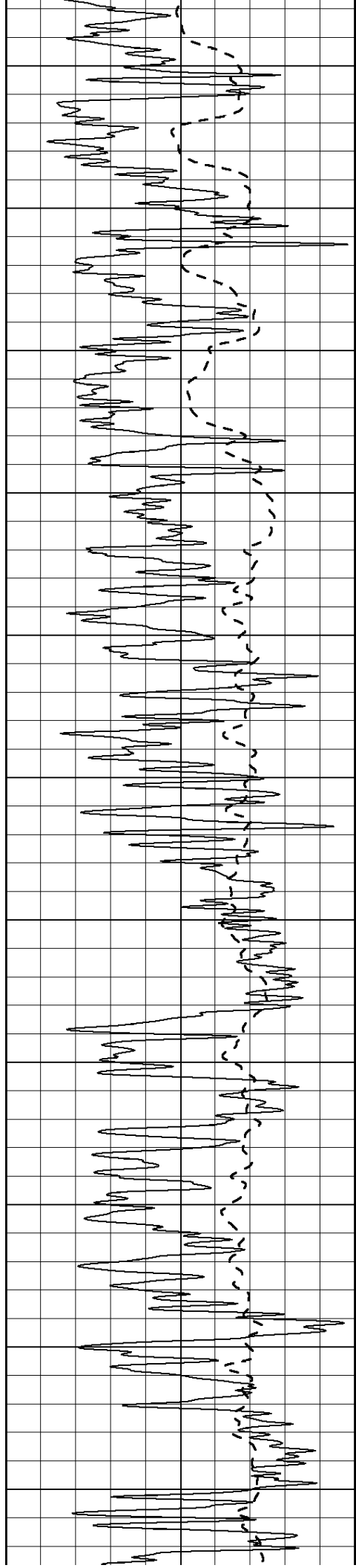
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2550

2600

2650





2700

2750

2800

2850

2900

2950

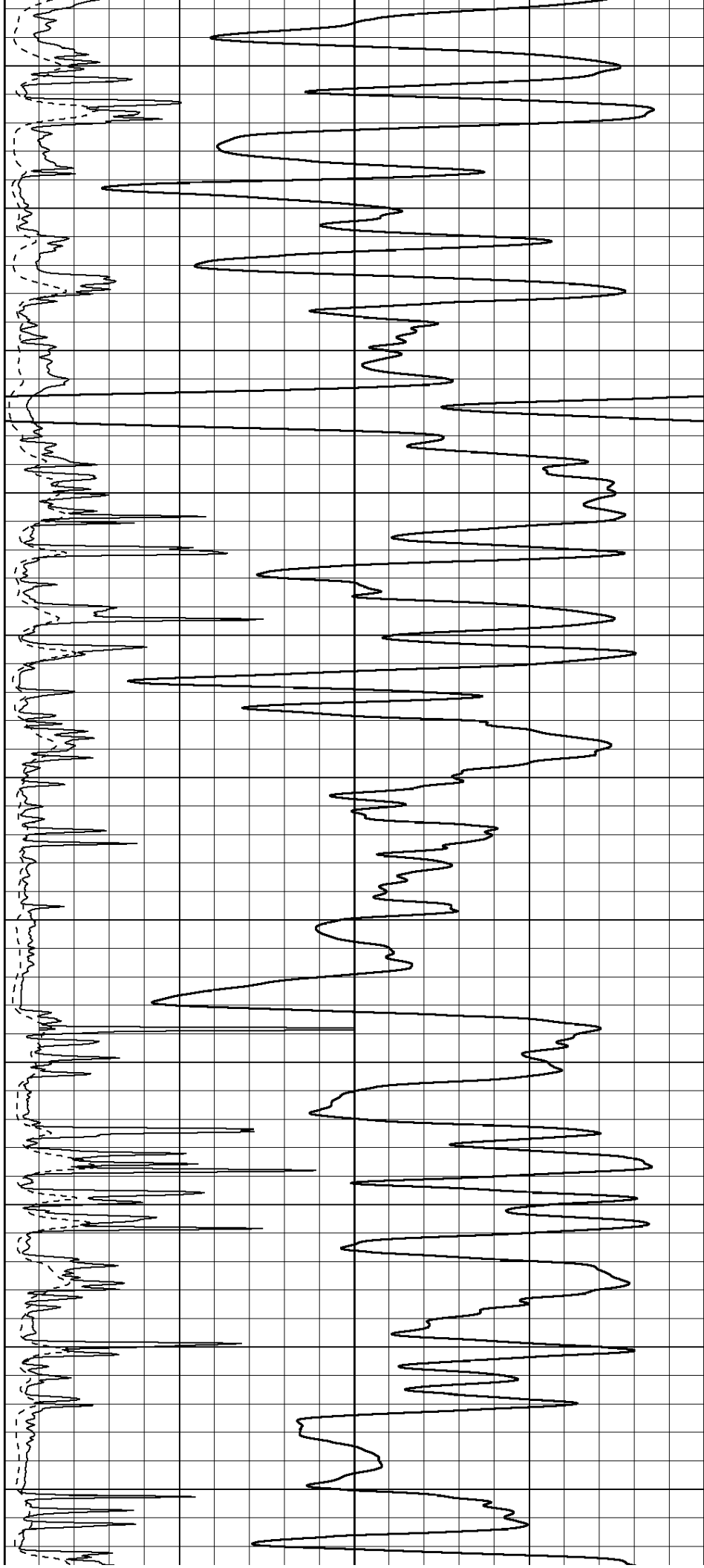
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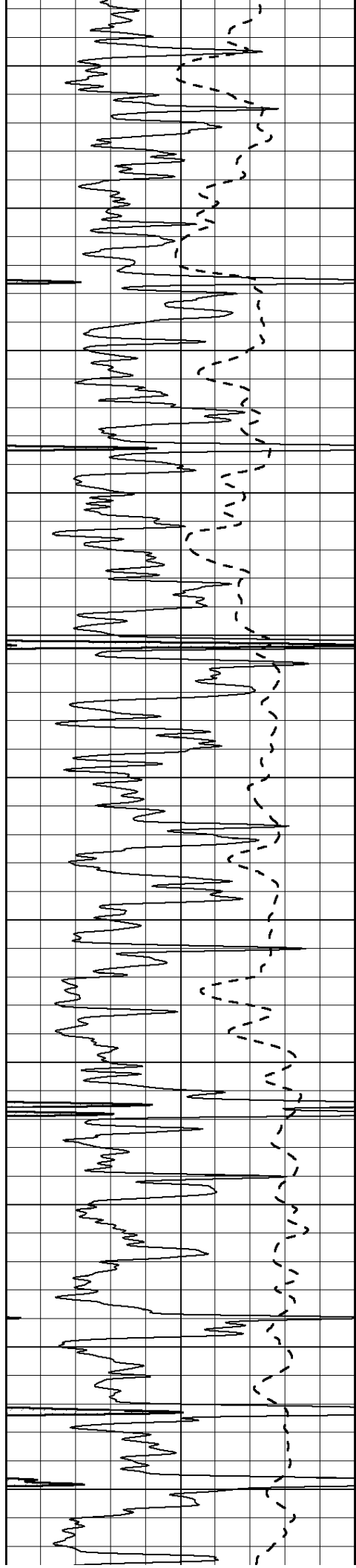
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3100

3150

3200





3250

3300

3350

3400

3450

3500

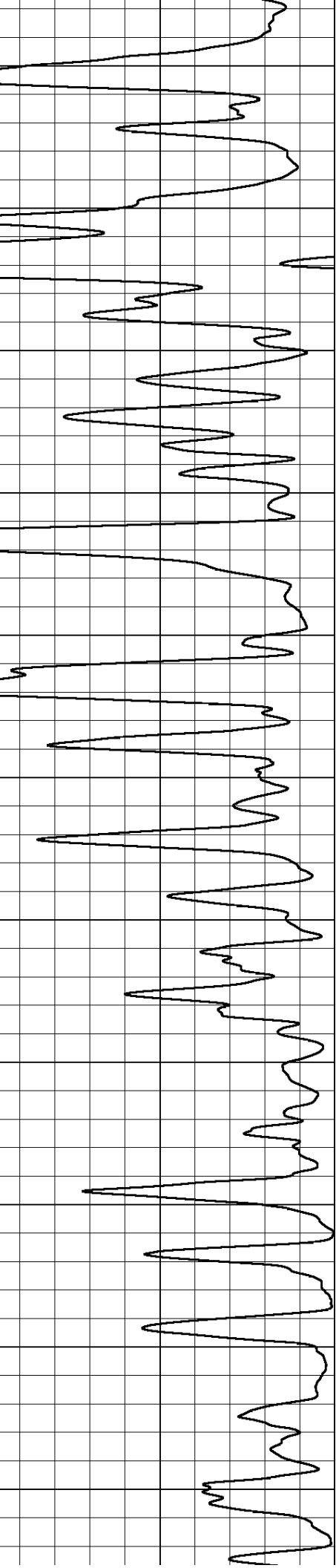
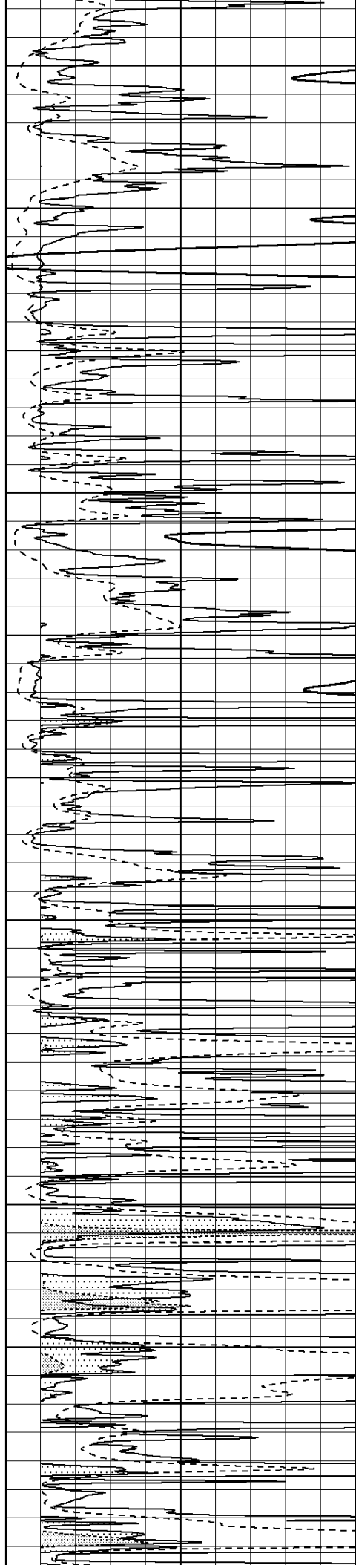
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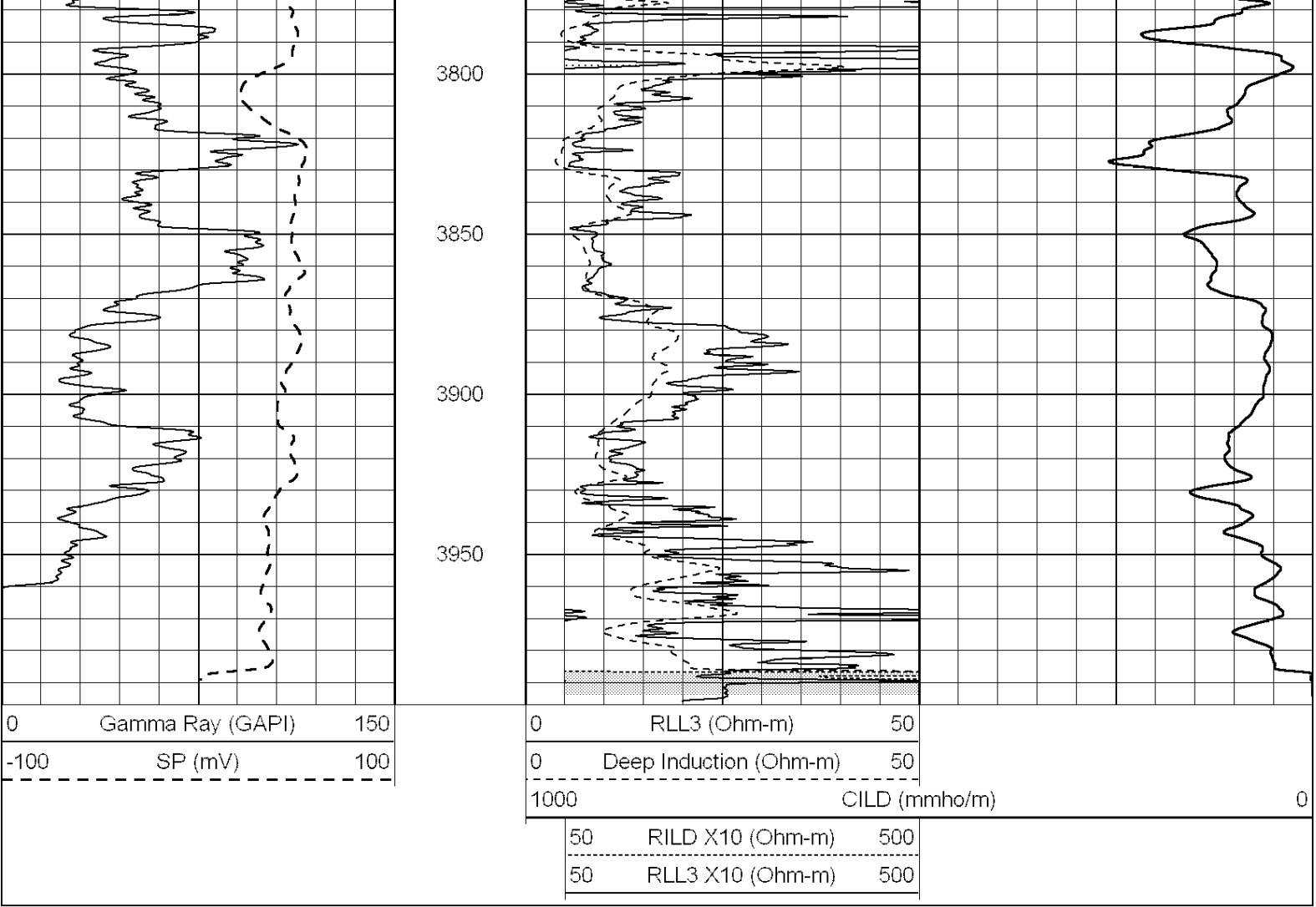
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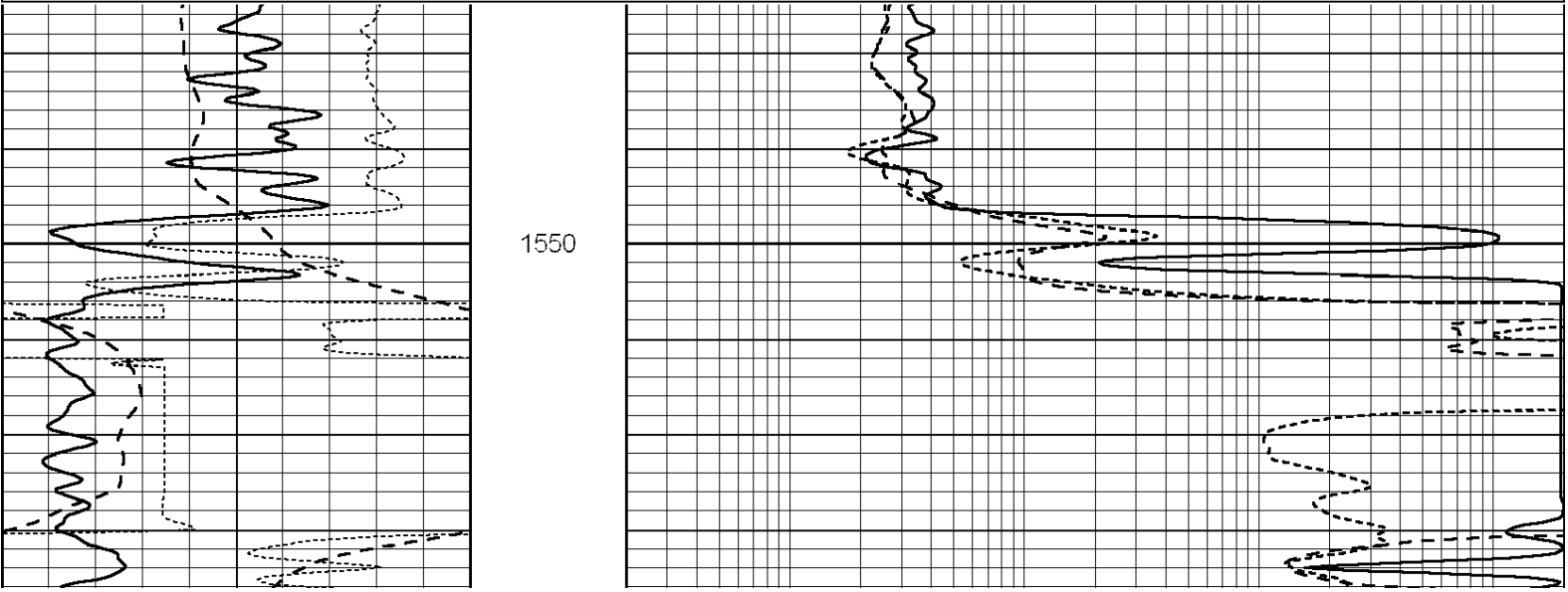
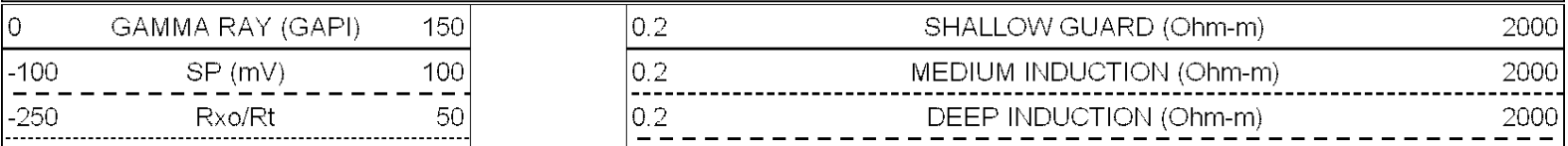
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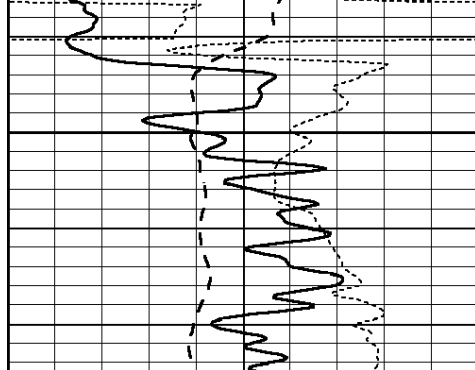
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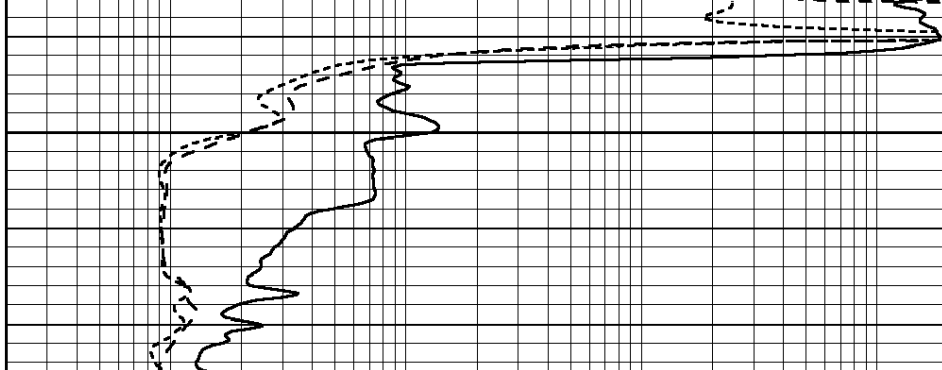
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Dataset Pathname: pass3.3
Presentation Format: _dil
Dataset Creation: Mon Apr 16 14:19:42 2012 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240





1600

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

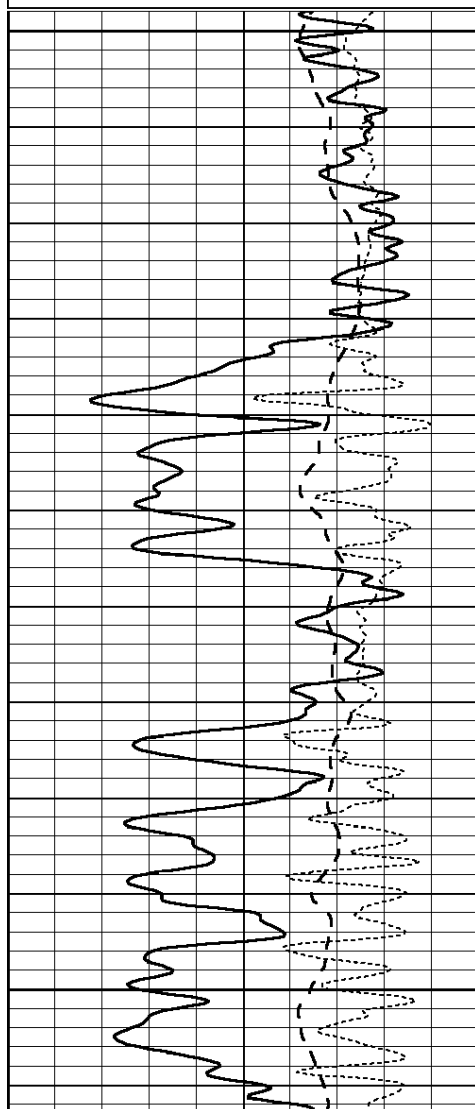


0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

Database File: 008842pe.db
 Dataset Pathname: pass3.2
 Presentation Format: _dil
 Dataset Creation: Mon Apr 16 13:11:19 2012 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

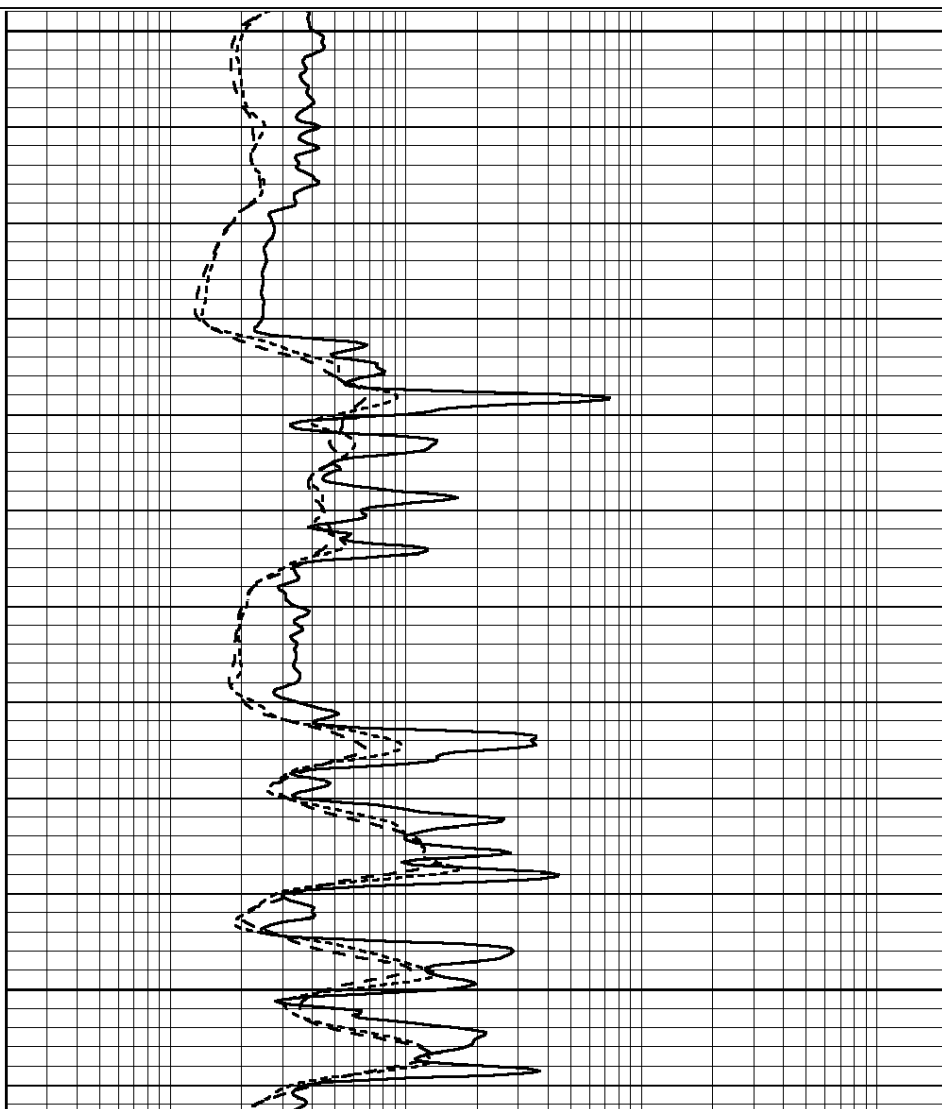
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

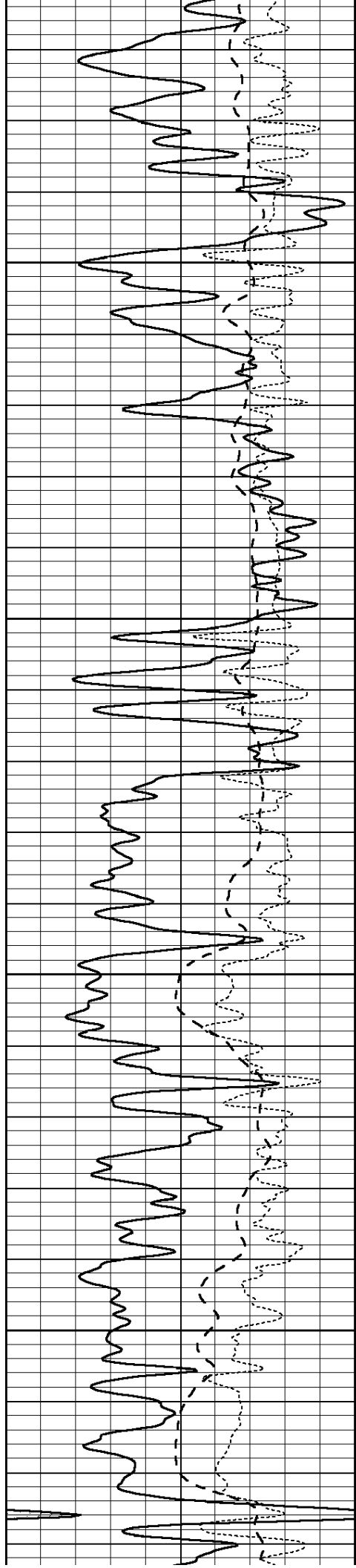


3000

3050

3100



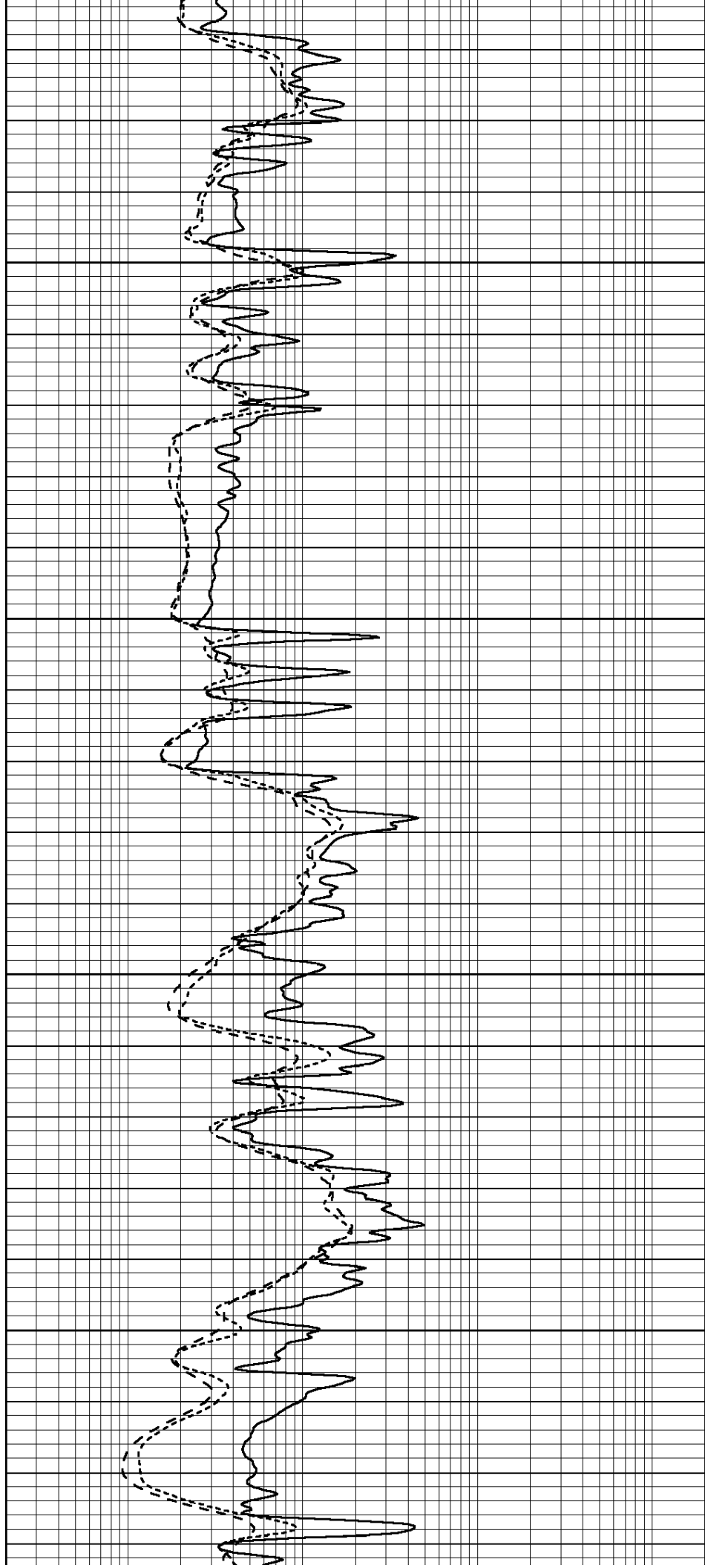


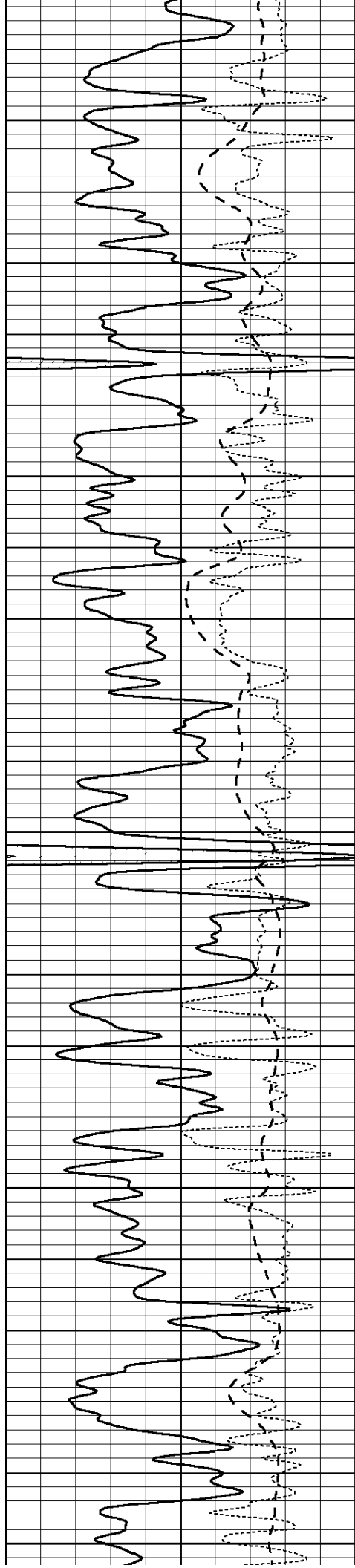
3150

3200

3250

3300





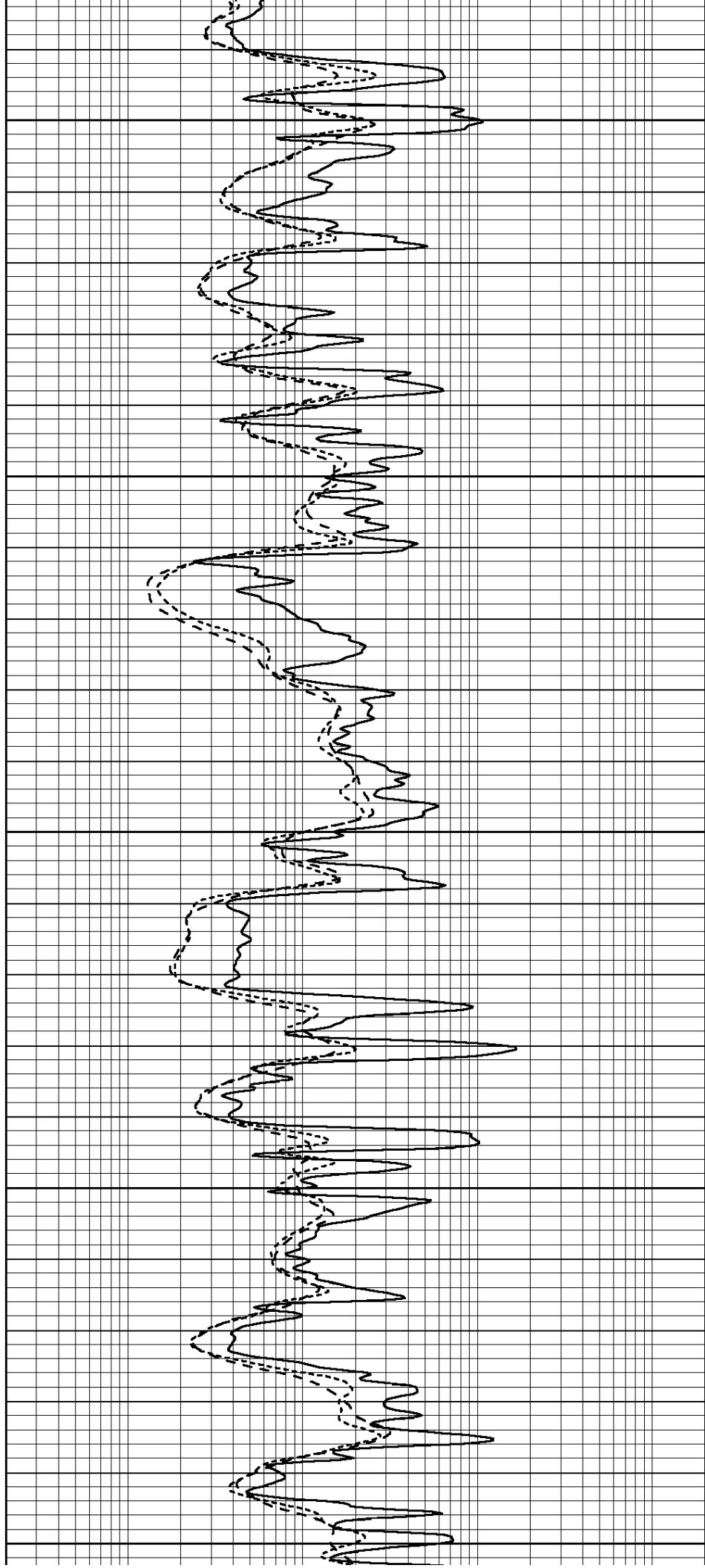
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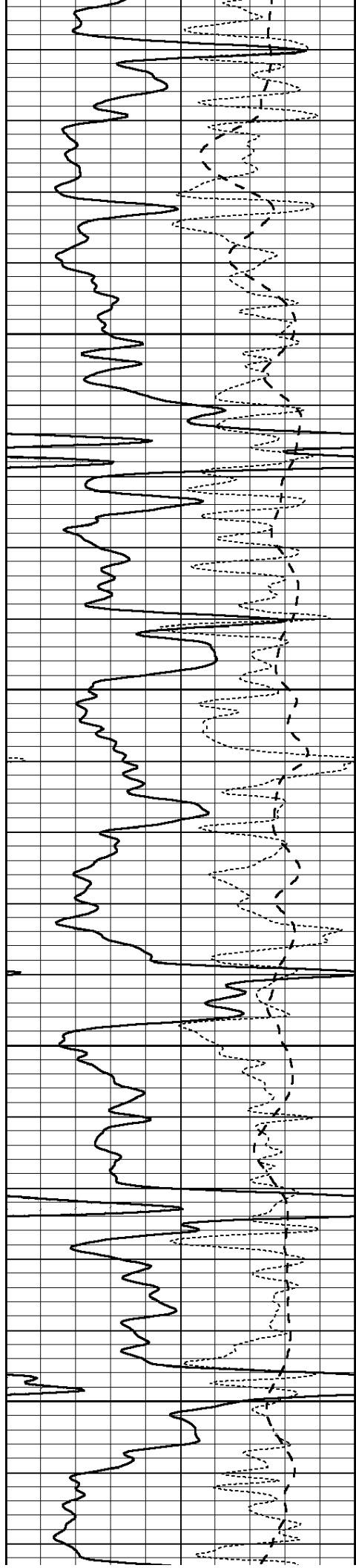
3400

3450

3500

3550



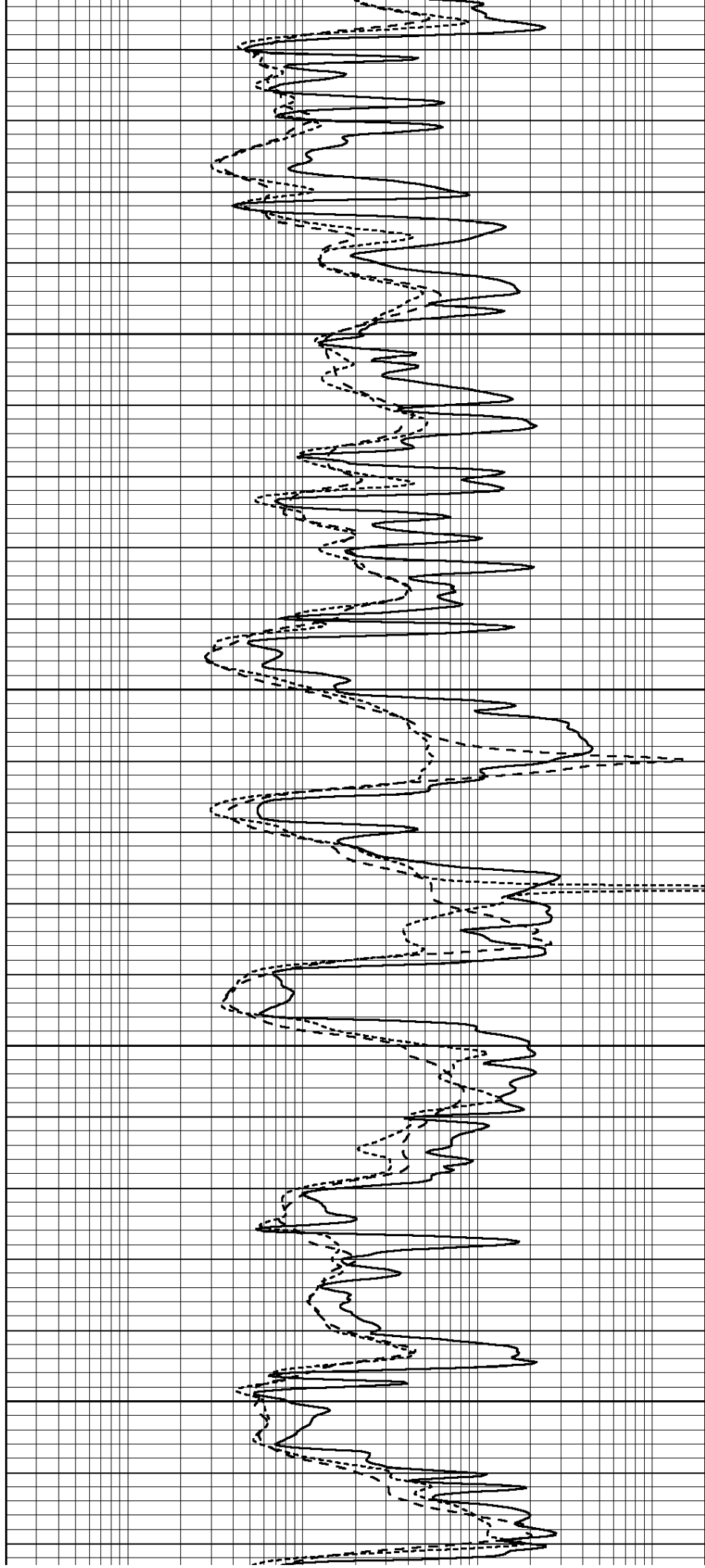


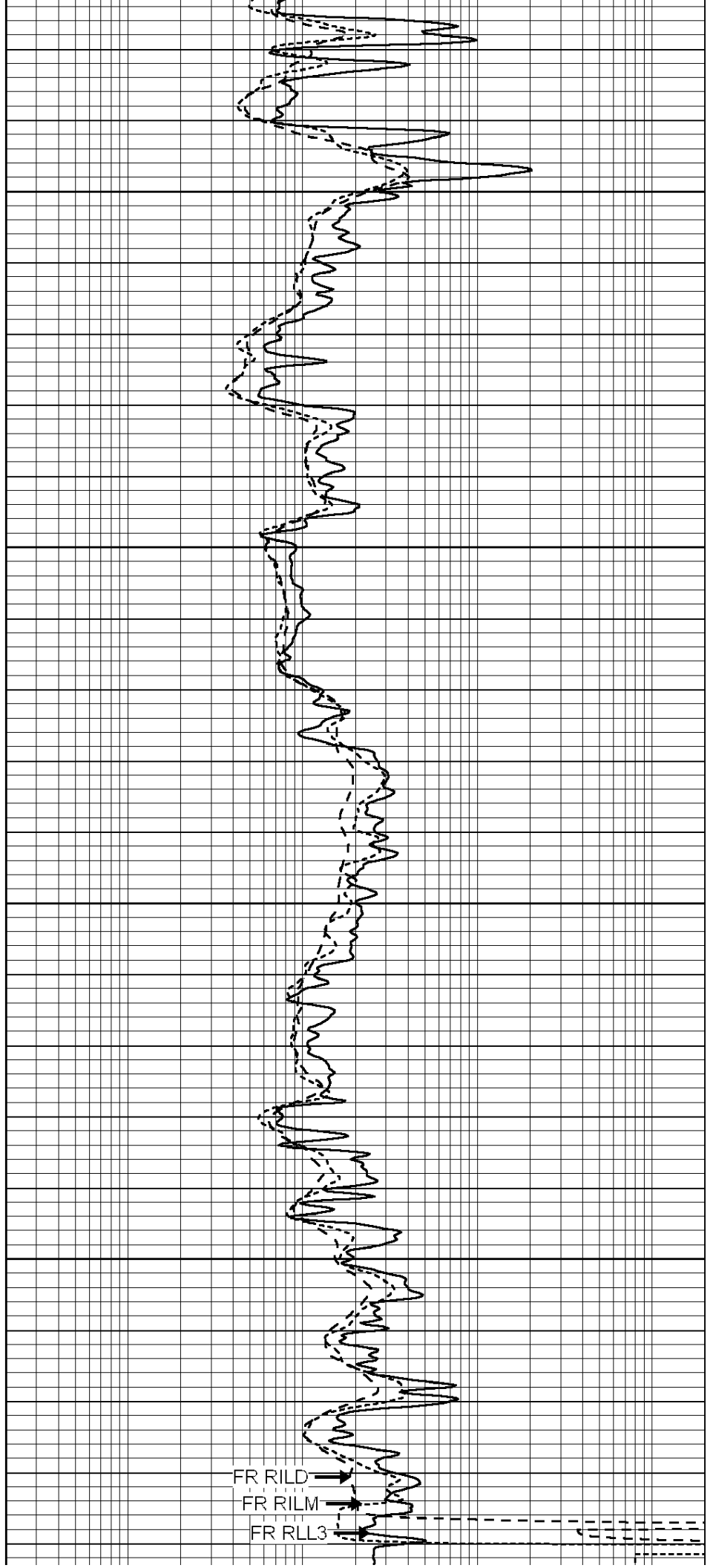
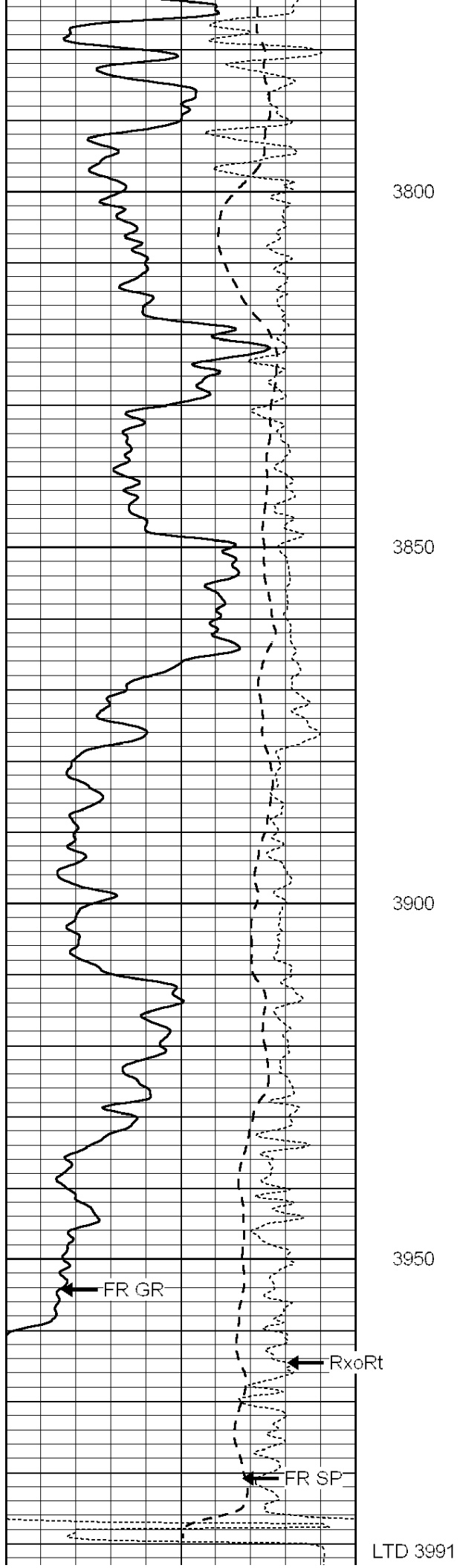
3600

3650

3700

3750





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



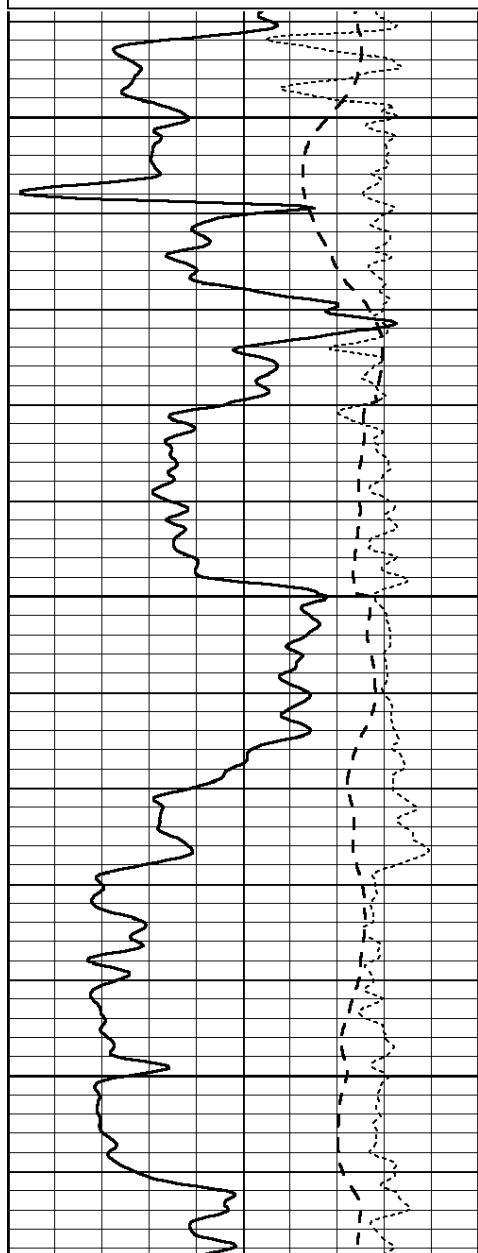
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 008842pe.db
Dataset Pathname: pass2.2
Presentation Format: _dil
Dataset Creation: Mon Apr 16 13:14:20 2012
Charted by: Depth in Feet scaled 1:240

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

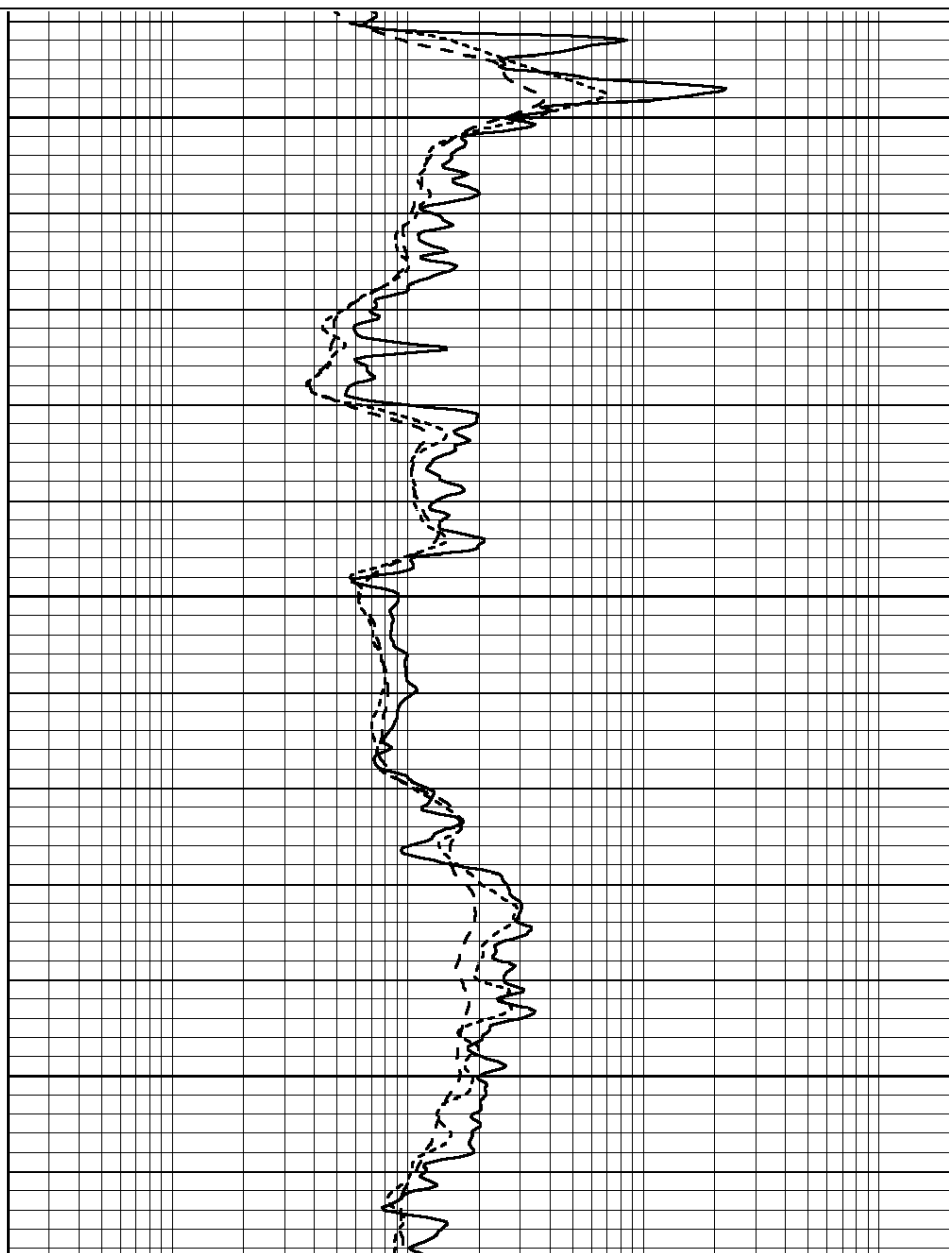
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

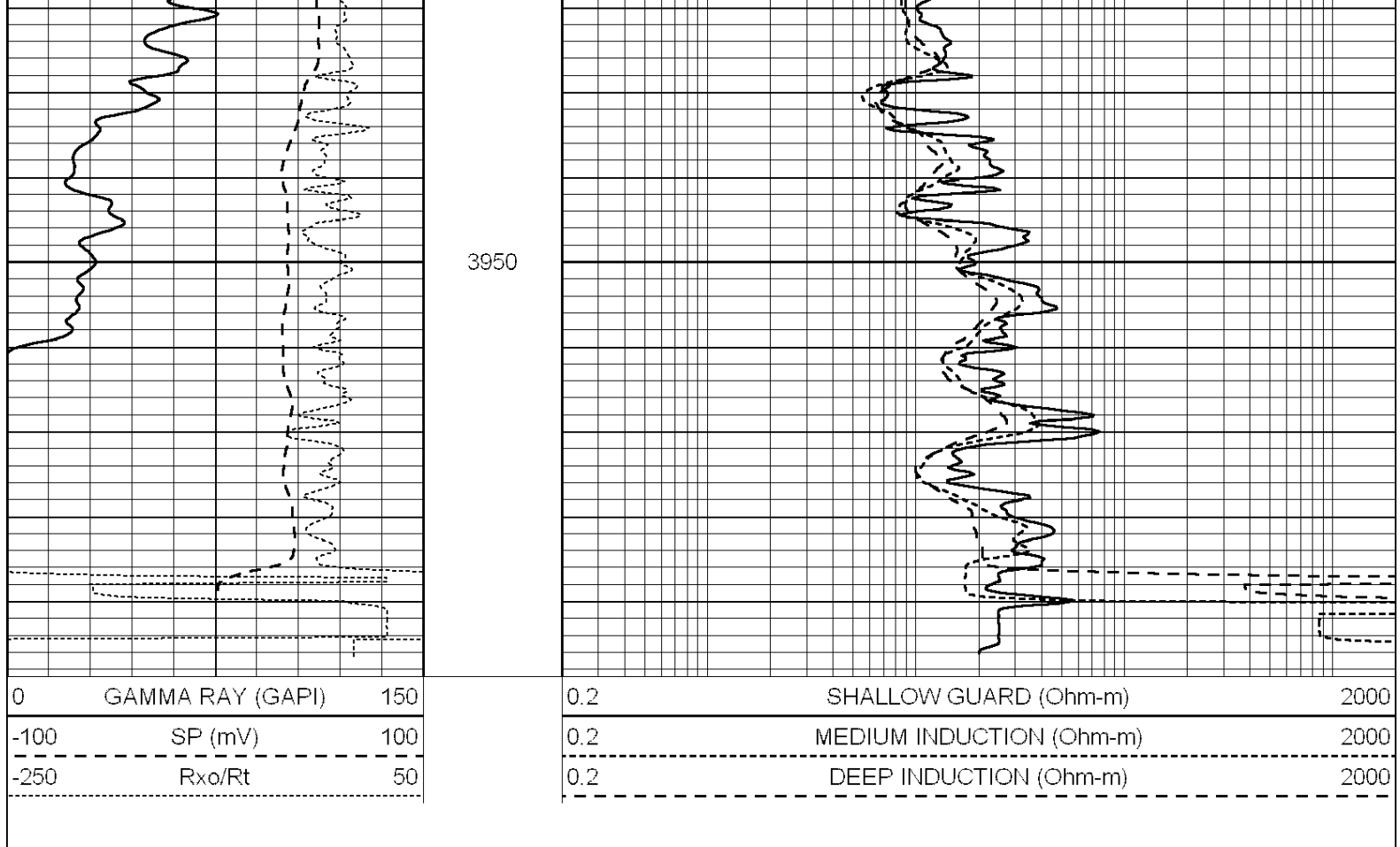


3800

3850

3900





Calibration Report

Database File: 008842pe.db
 Dataset Pathname: pass3.3
 Dataset Creation: Mon Apr 16 14:19:42 2012 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

Readings				References			Results	
Loop:	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		
Litho Density Calibration Report Serial: 001 Model: PRB Performed Thu Sep 17 09:57:21 2009								
Litho Density Calibration								
	Background	Magnesium		Aluminum		Sandstone		
Window 1	2056.0	9796.8		3673.1		10821.3		cps
Window 2	1920.0	8541.1		3303.5		9307.2		cps
Window 3	1563.1	4735.7		2212.8		5017.5		cps
Window 4	466.0	466.1		465.6		471.5		cps
Long Space	0.0	6621.1		1383.5		7387.2		cps
Short Space	2.5	2361.7		1523.2		2534.0		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe				2.5700		1.5500		
Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio		: 0.541		
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept		: -18.9		
Caliper								
Low Ref	Readings	Reference						
High Ref	3.1	8.4						
	4.3	14.3						
	Gain: 4.6			Offset: -7.7				
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		
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			