



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company	CITATION OIL & GAS CORPORATION		
Well	BAUMER NO. 67		
Field	BEMIS-SHUTTS		
County	ELLIS	State	KANSAS
Location:	API # : 15-051-26451-00-00	Other Services	
	E2 - E2	CNL/CDL/PE	
	2640' FSL & 660' FEL	MEL	
	SEC 27 TWP 11 S RGE 17 W	Elevation	
Permanent Datum	GROUND LEVEL	Elevation	1952
Log Measured From	KELLY BUSHING 11' A.G.L.	K.B. 1963	
Drilling Measured From	KELLY BUSHING	D.F. 1961	
		G.L. 1952	
Date	03/27/2013		
Run Number	ONE		
Depth Driller	3514		
Depth Logger	3514		
Bottom Logged Interval	3512		
Top Log Interval	00		
Casing Driller	1176		
Casing Logger	1177		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3 / 40	CHLORIDES 3.400	
pH / Fluid Loss	9.5 / 9.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.75 @ 69 F		
Rmf @ Meas. Temp	.6 @ 69 F		
Rmc @ Meas. Temp	.9 @ 69 F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.46 @ 112 F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112 F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	MIKE GARRISON		
Witnessed By	ED GLASSMAN		

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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

NABORS COMPLETION & PRODUCTION CO.
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: CATHERINE, KS- 2 MILES EAST TO CODELL RD, NORTH TO WILES RD, 1/8 WEST, 1/4 SOUTH INTO



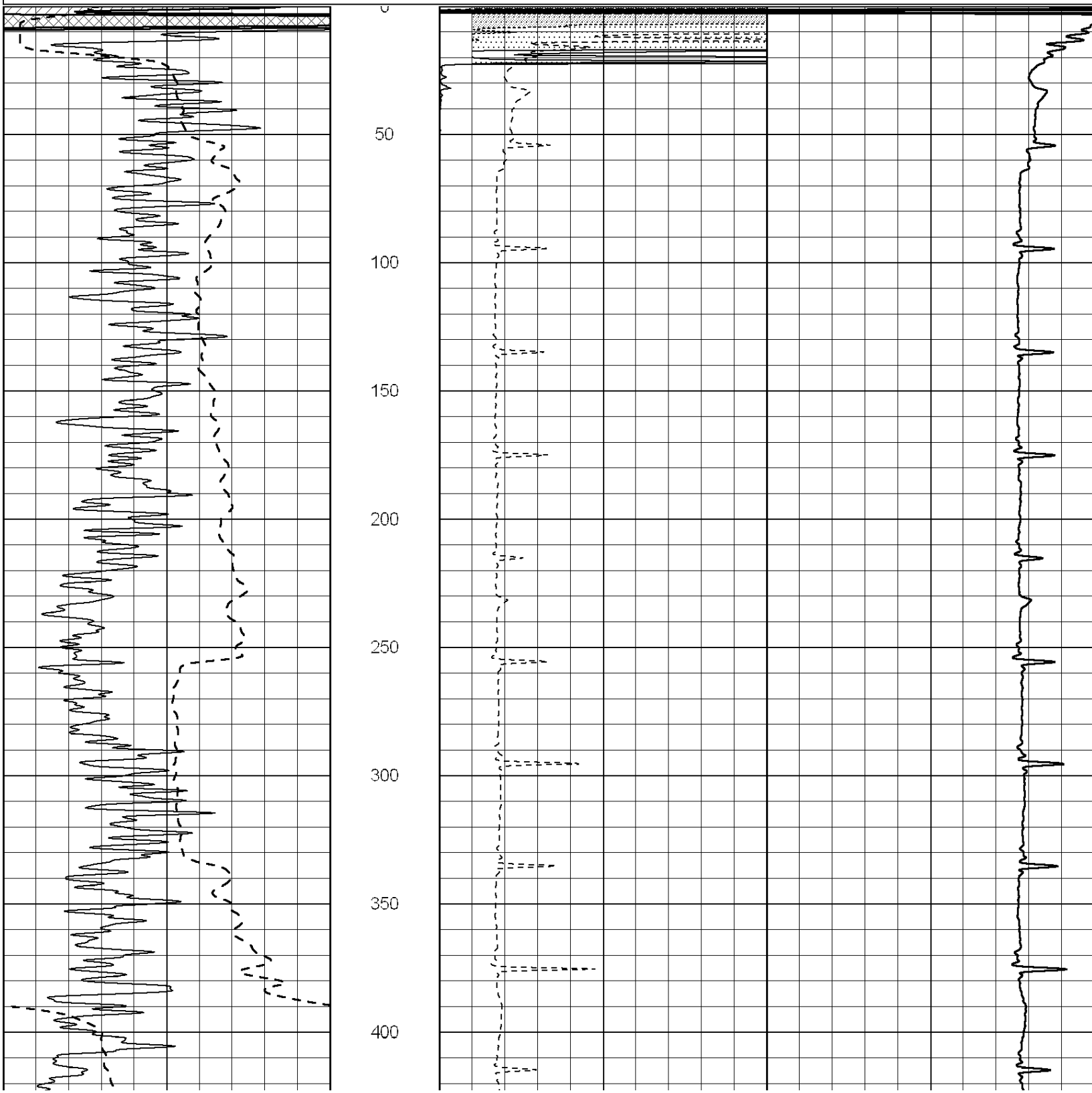
NABORS

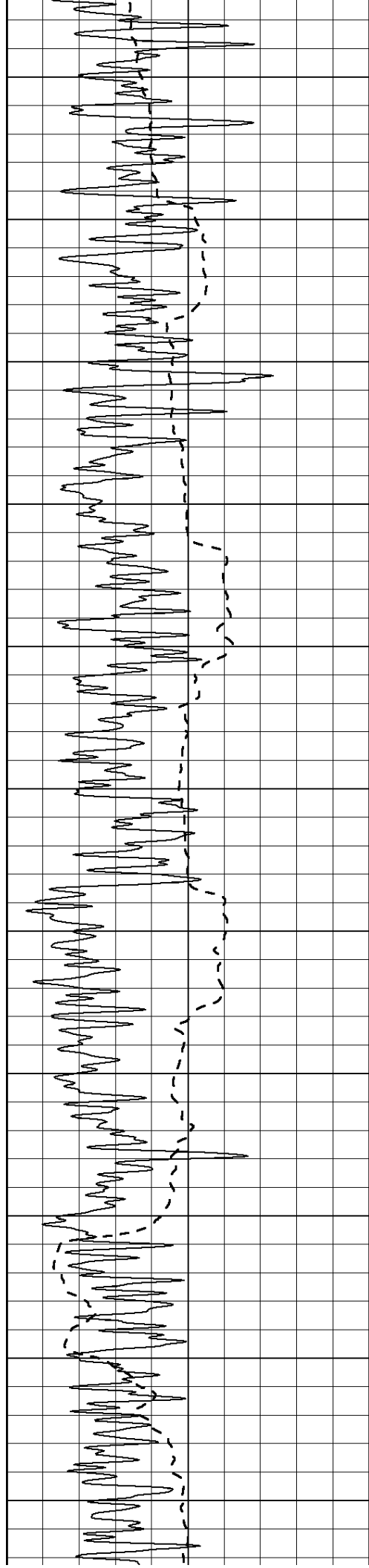
**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File: 010845pe.db
 Dataset Pathname: pass3.1.1
 Presentation Format: dil2
 Dataset Creation: Wed Mar 27 17:40:52 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	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





450

500

550

600

650

700

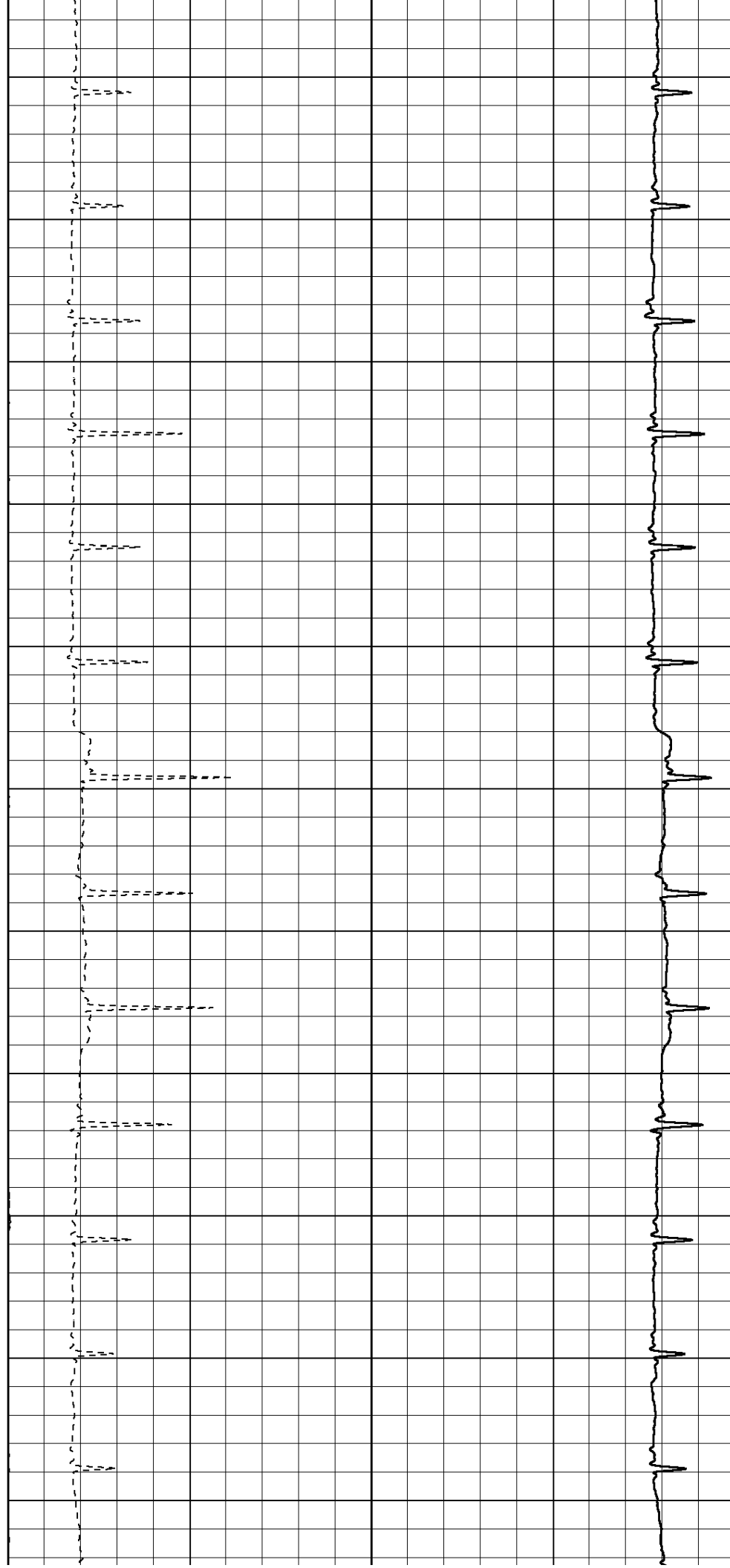
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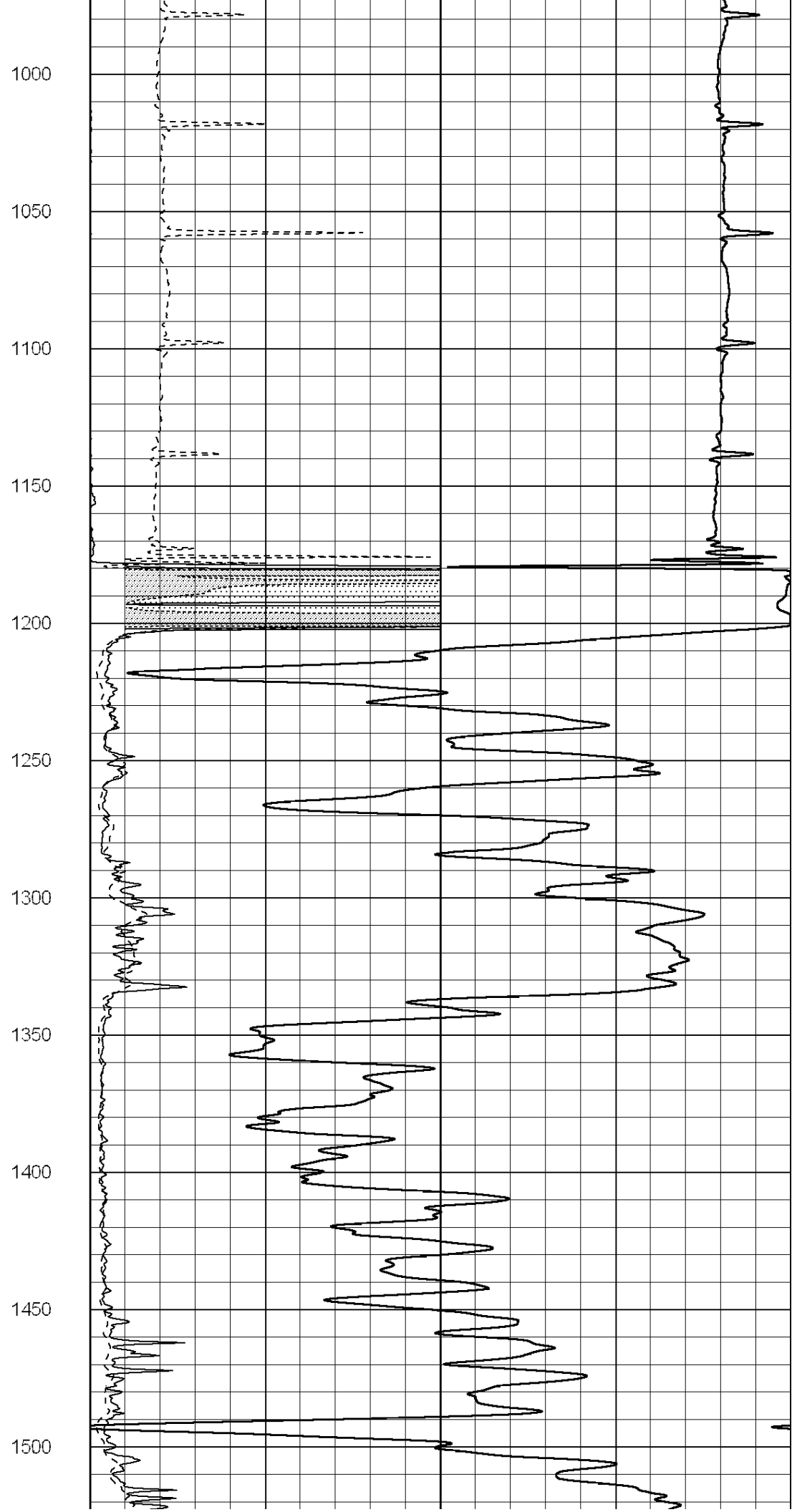
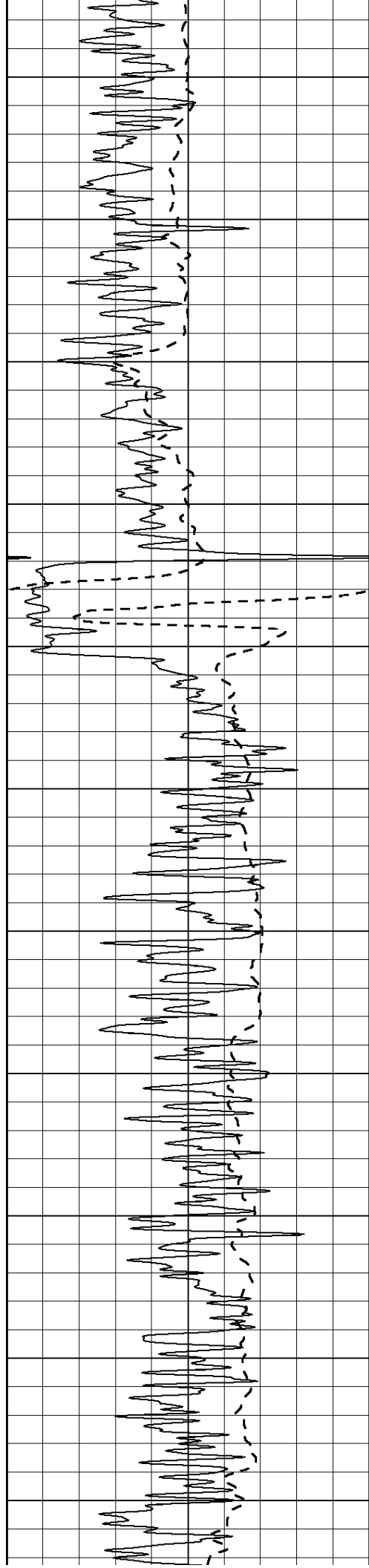
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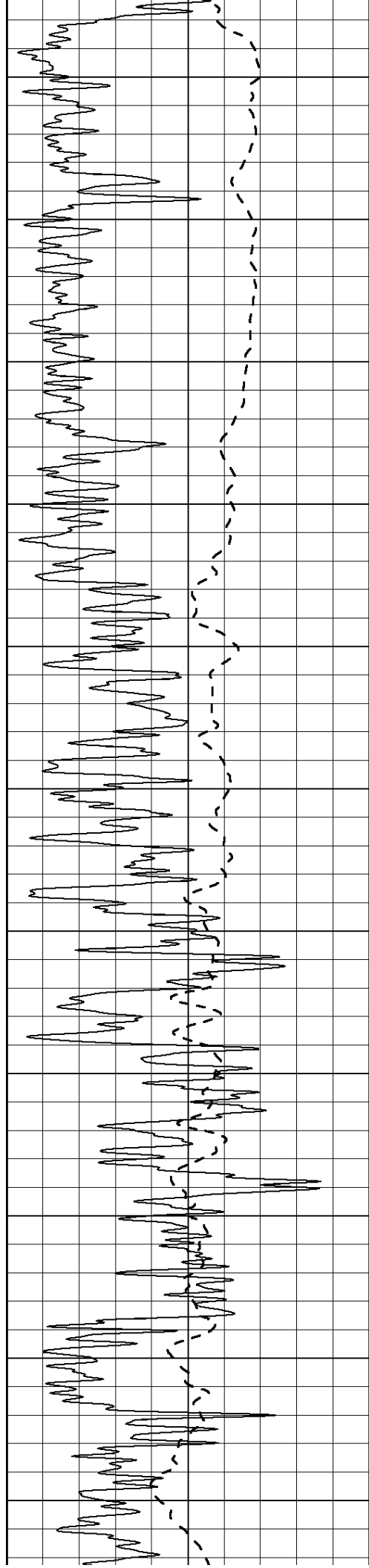
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900

950







1550

1600

1650

1700

1750

1800

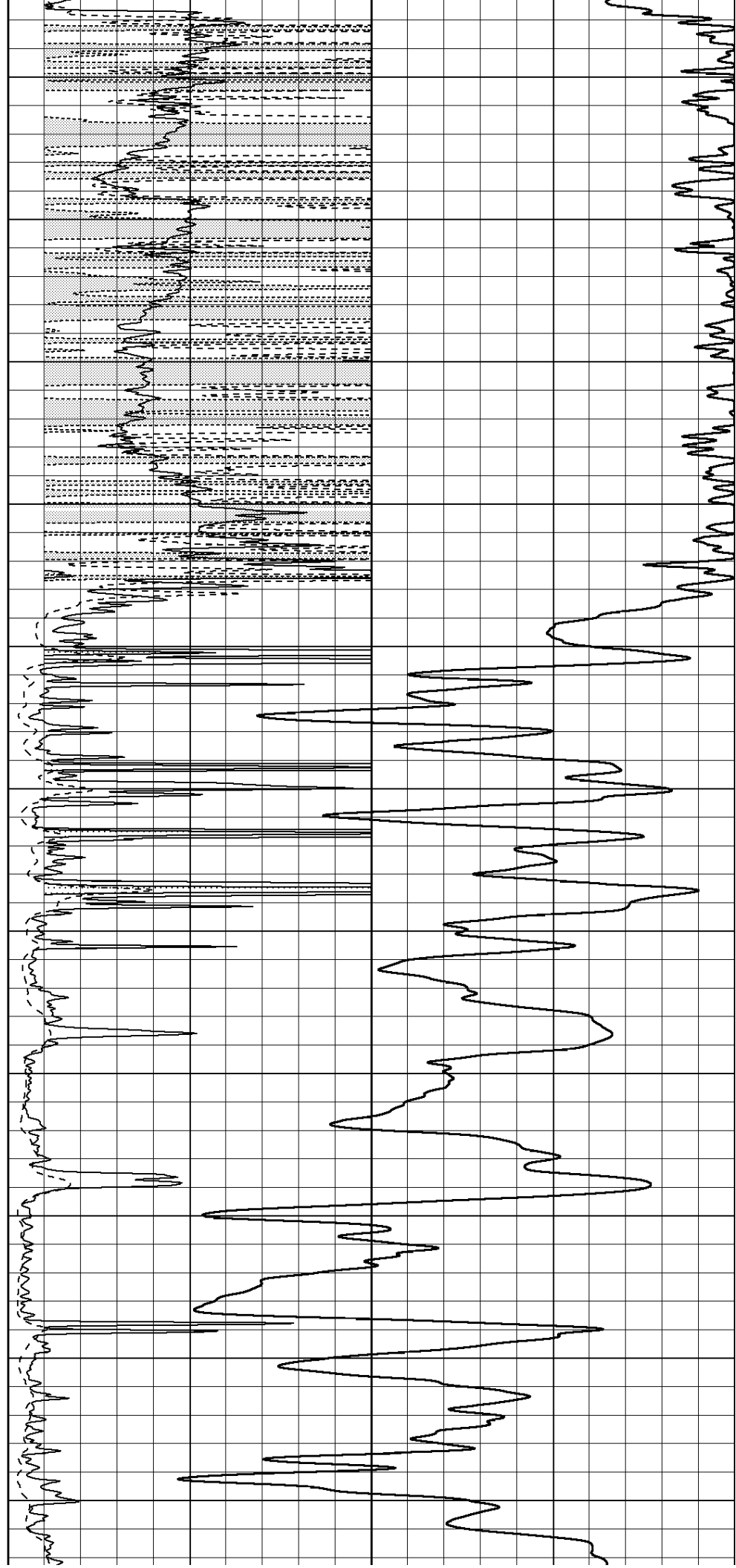
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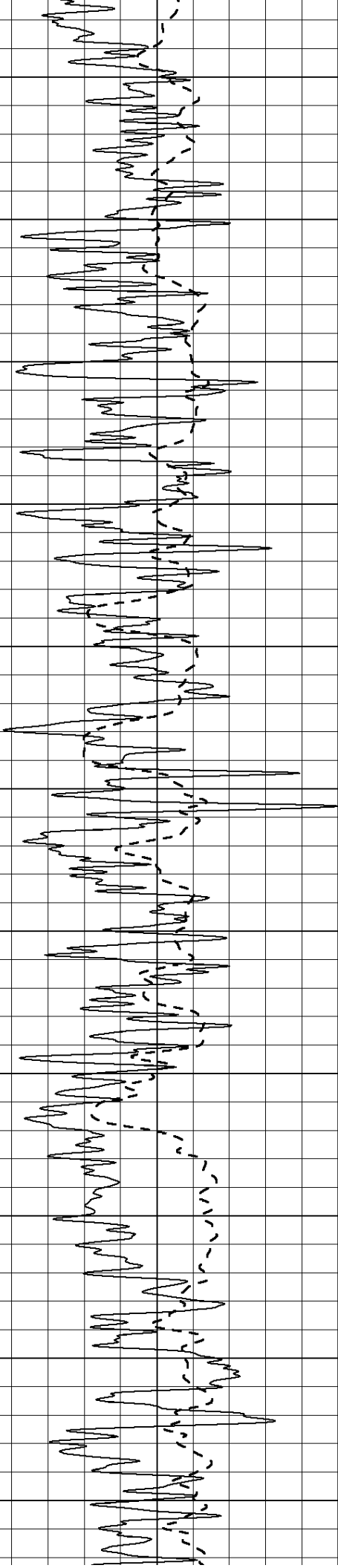
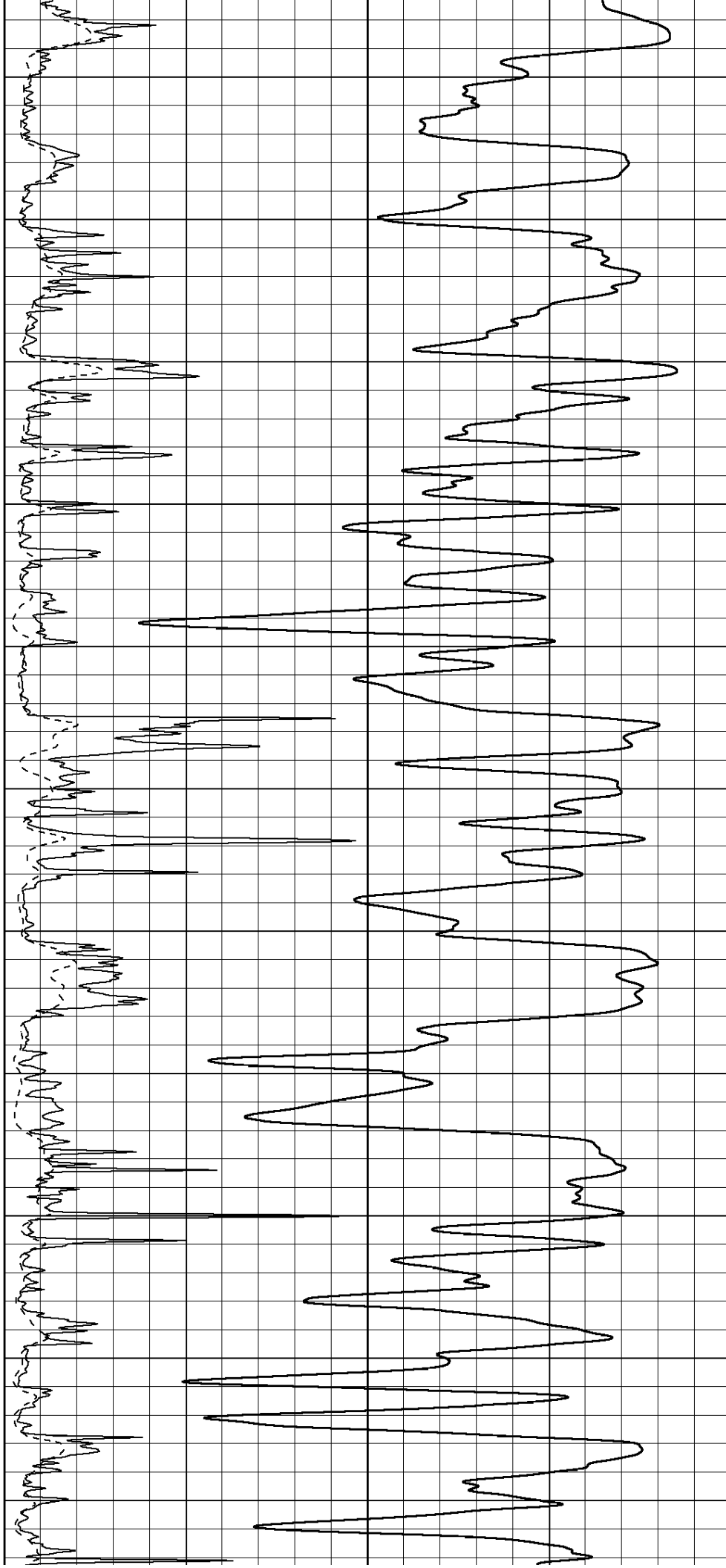
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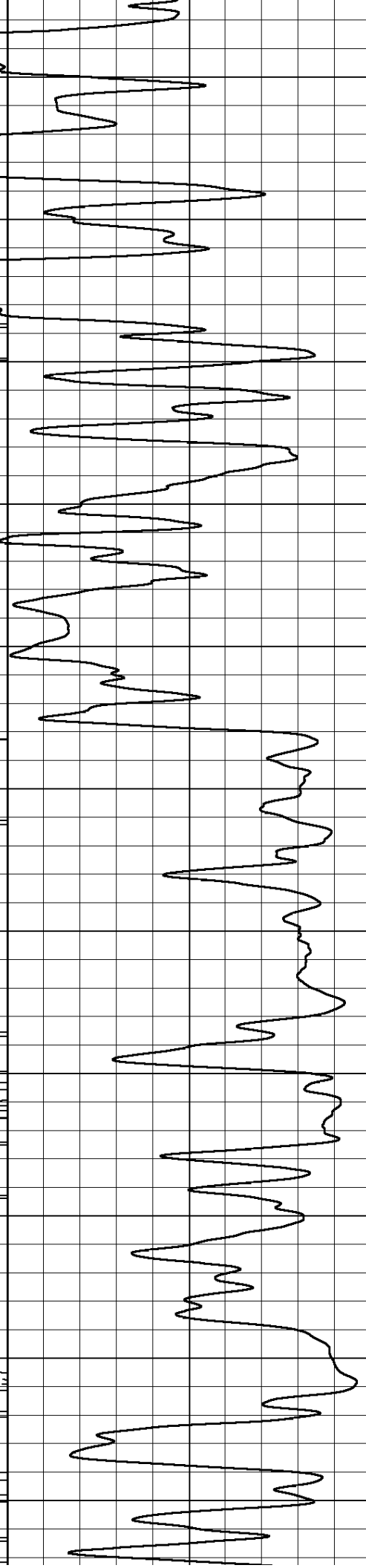
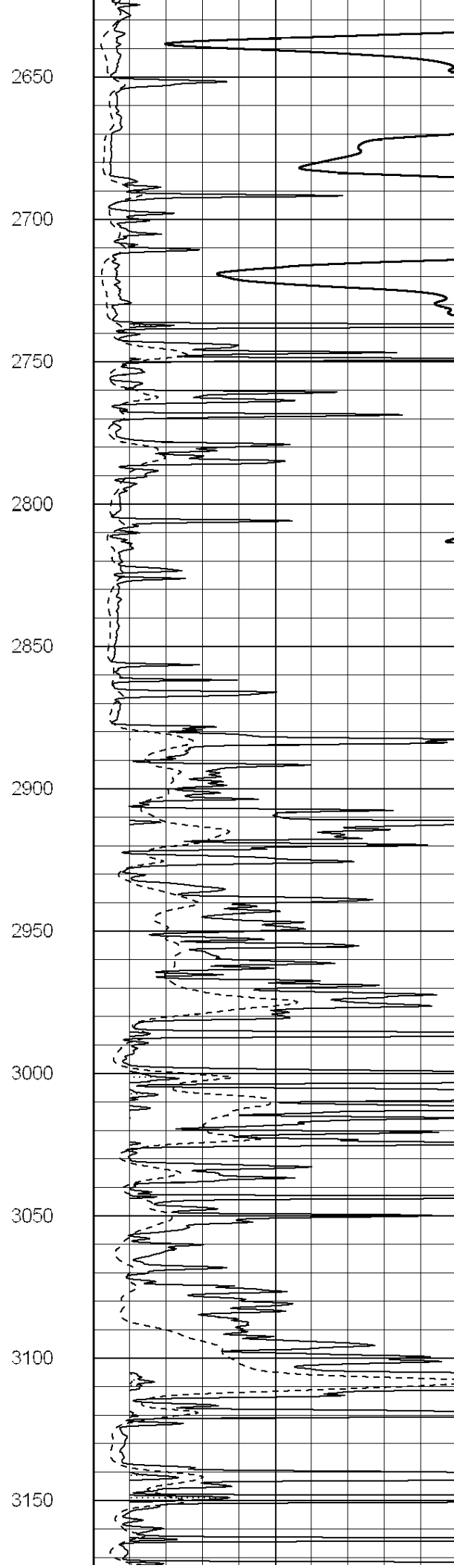
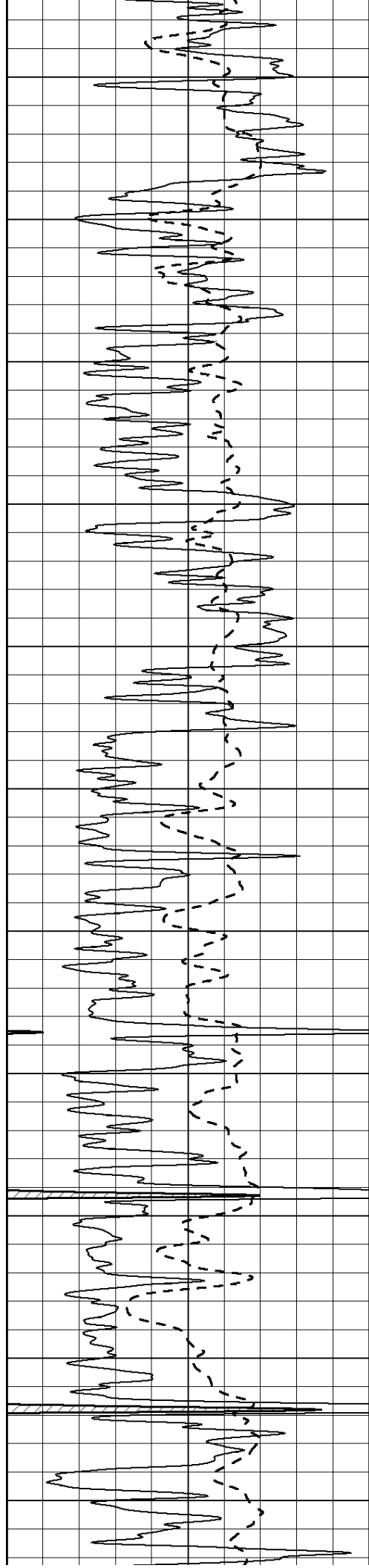
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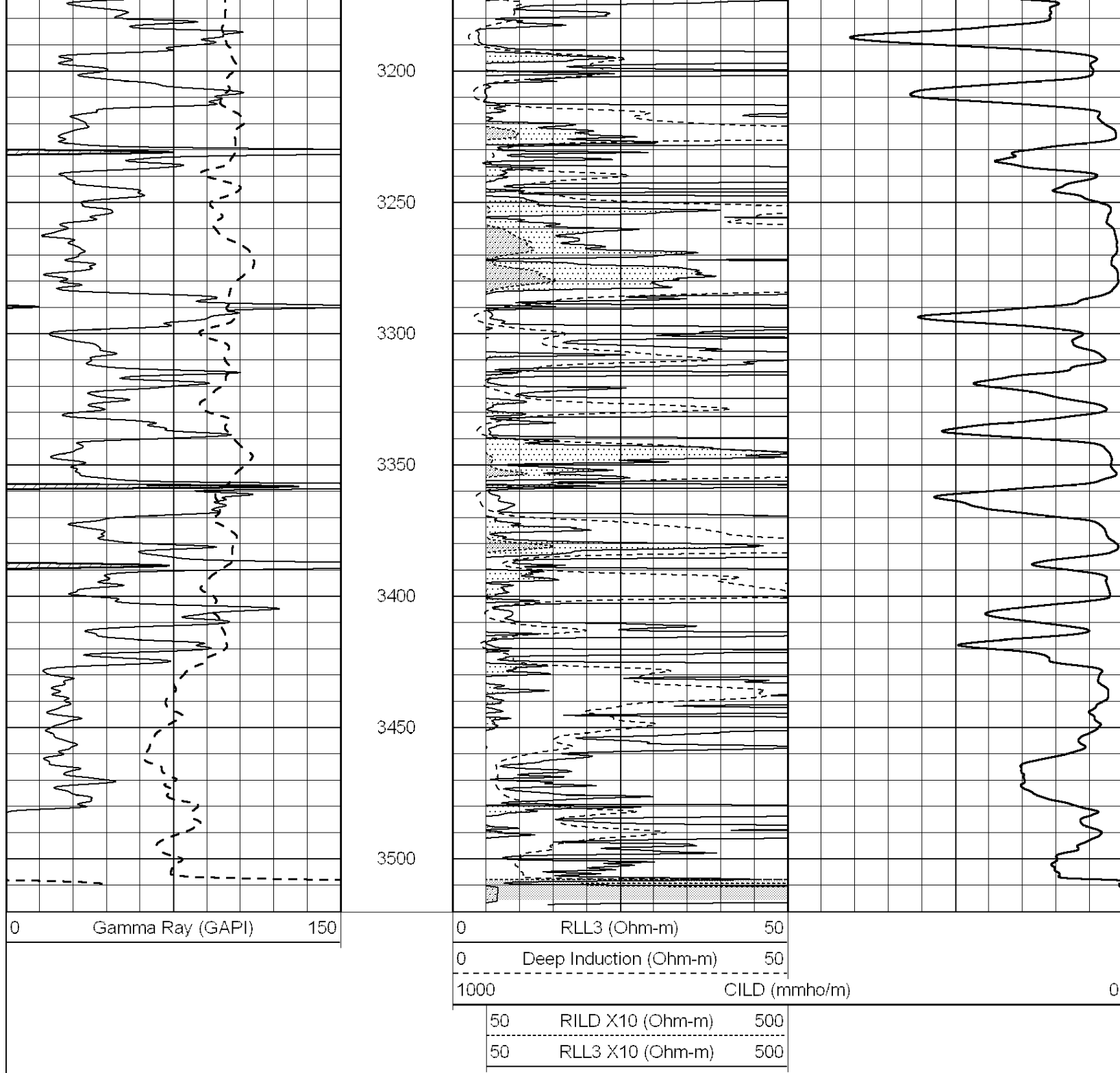
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2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600





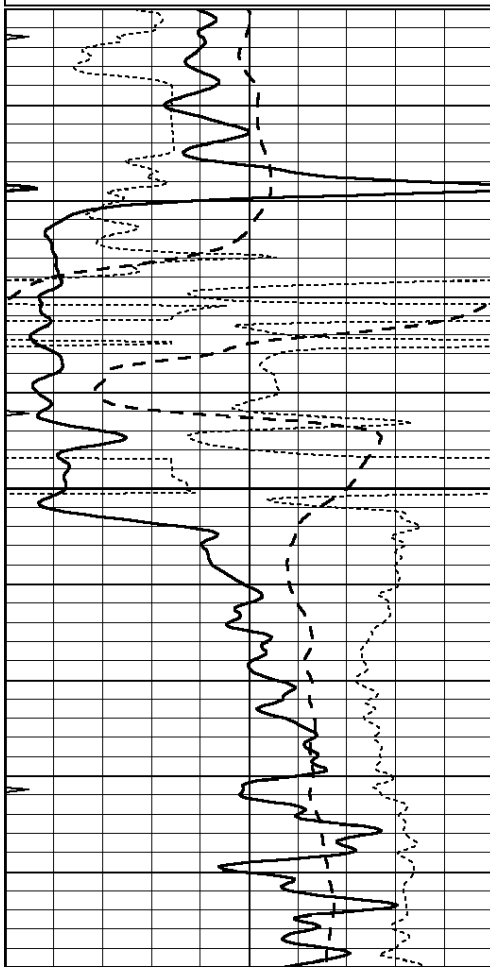


MAIN SECTION

Database File: 010845pe.db
 Dataset Pathname: pass3.1.1
 Presentation Format: dil
 Dataset Creation: Wed Mar 27 17:40:52 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

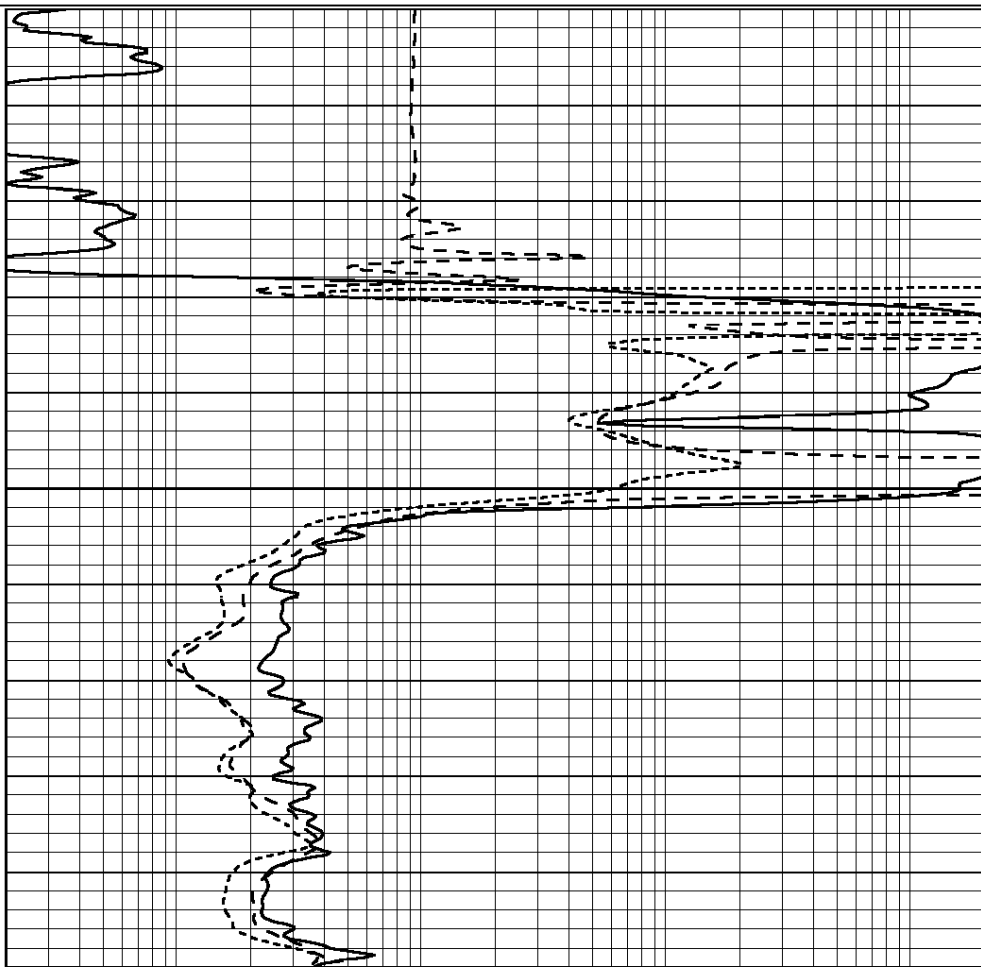
0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000

-250	RxoRt	50
0	MINMK	20



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000
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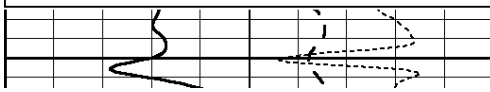
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



MAIN SECTION

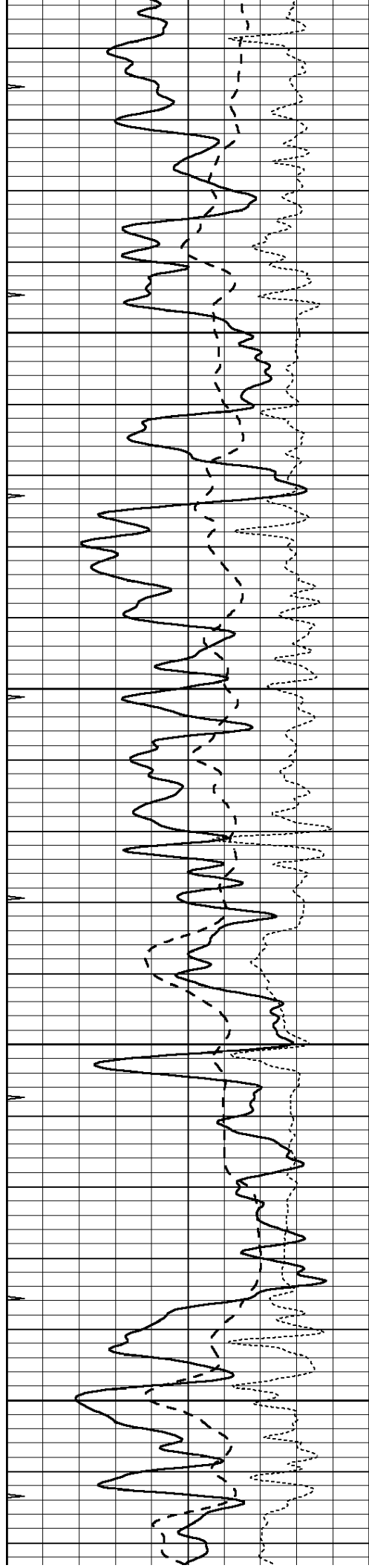
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Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



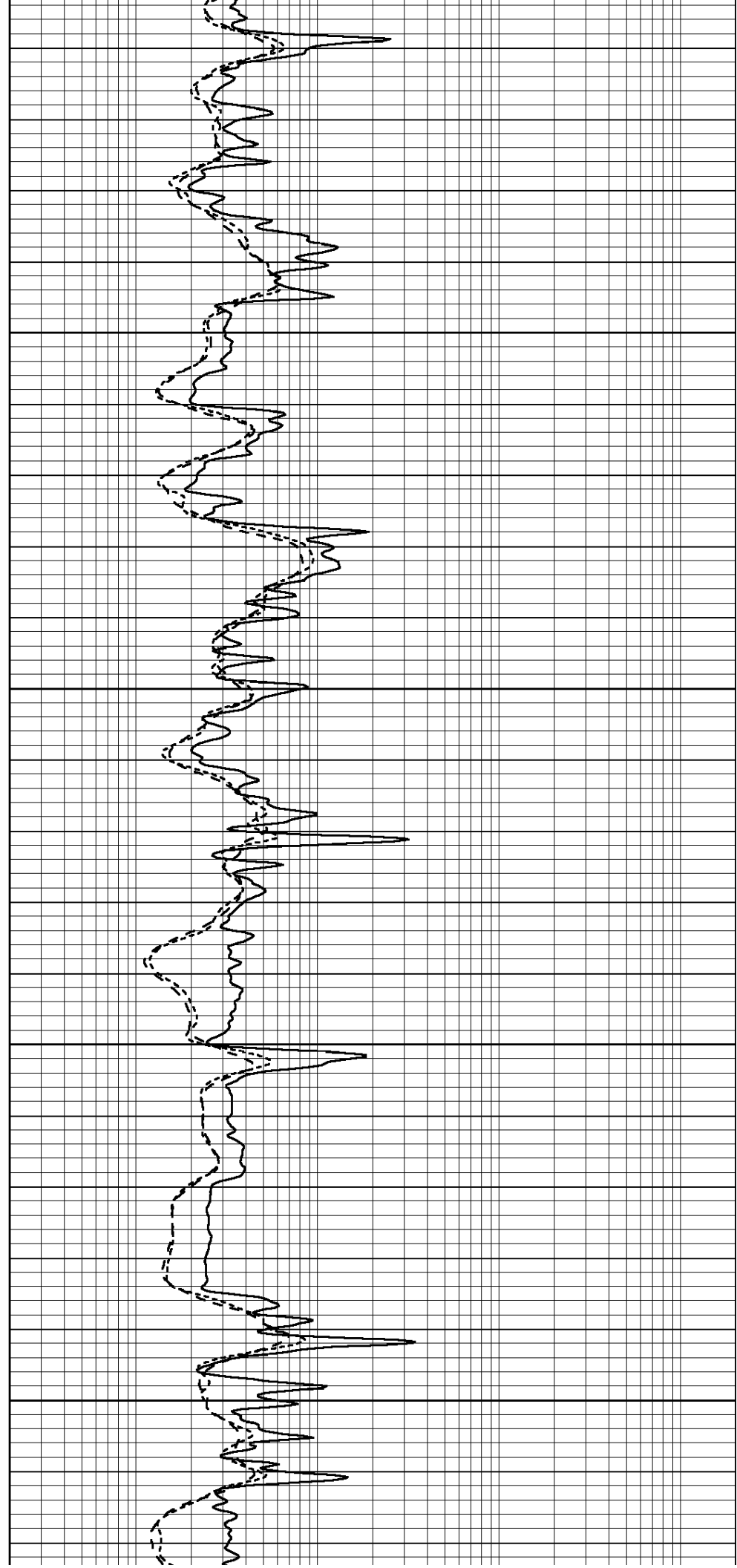


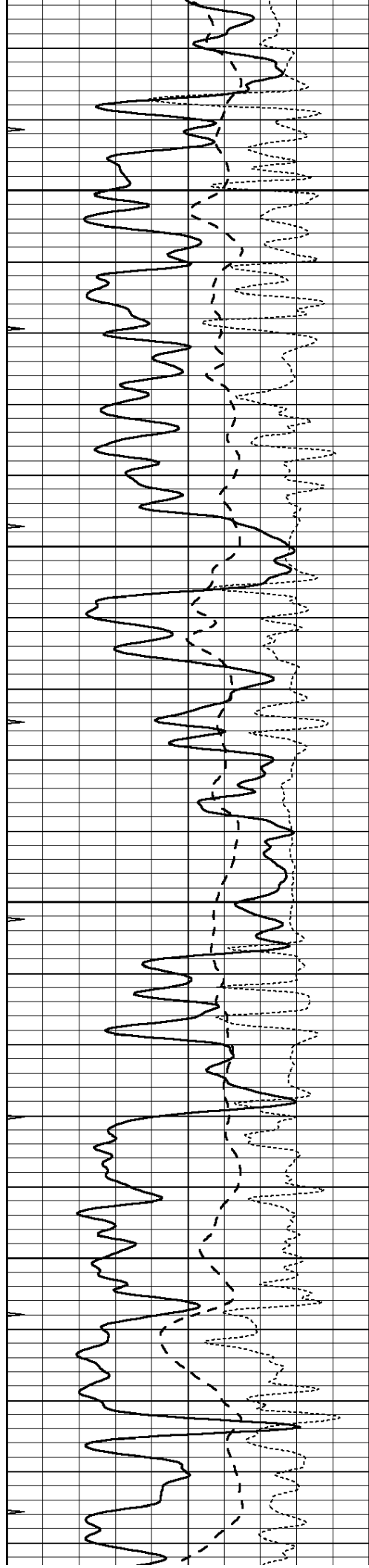
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2600

2650

2700



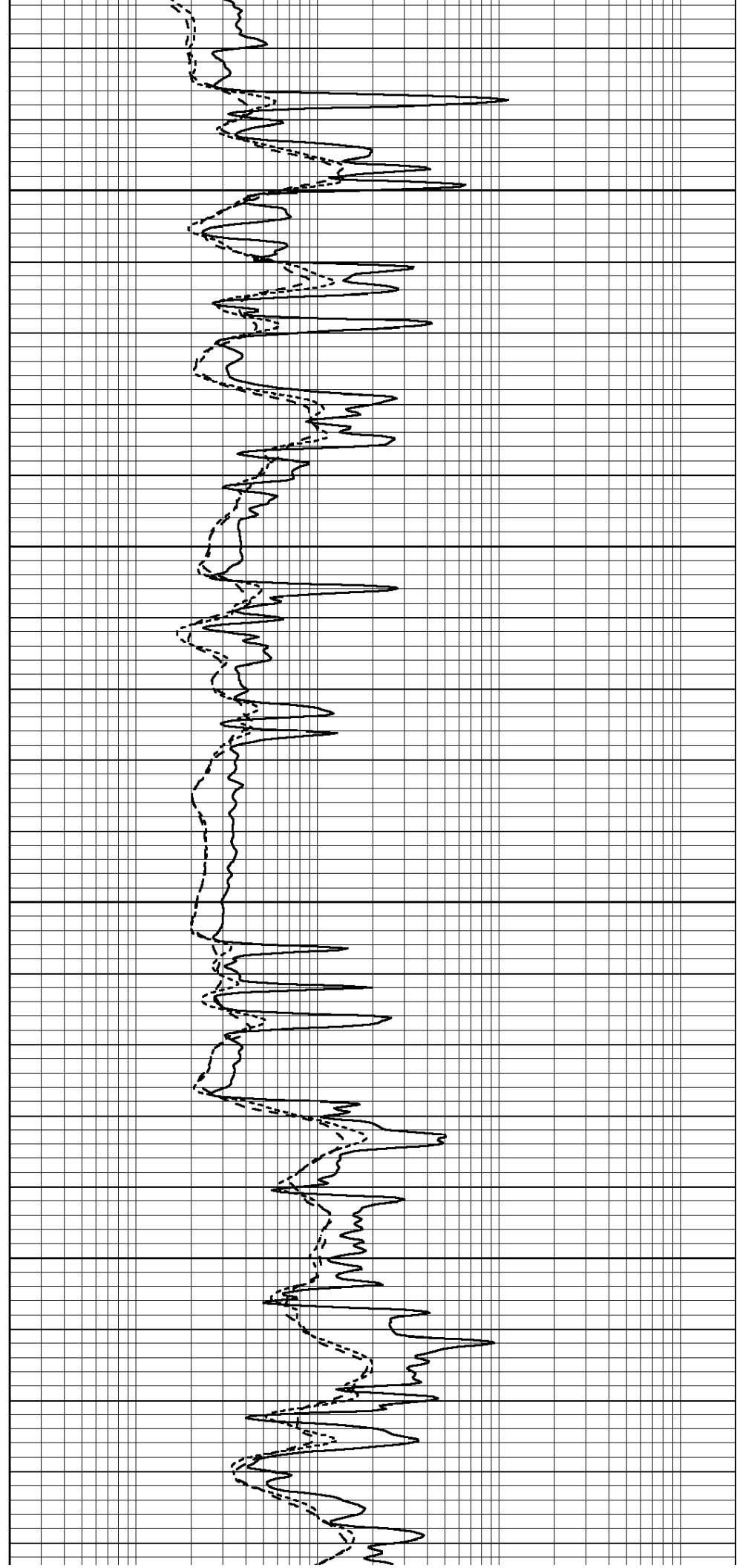


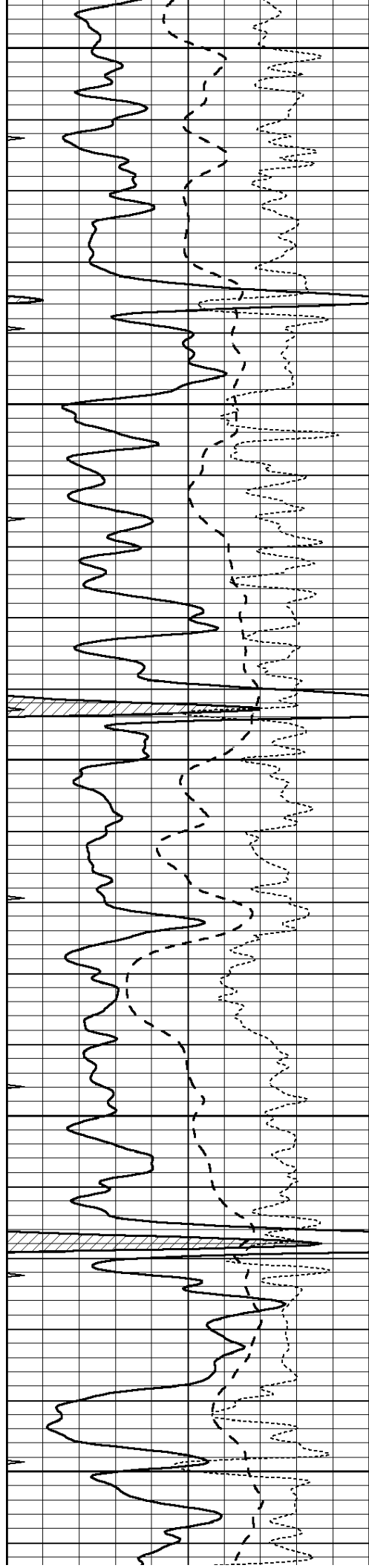
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2800

2850

2900





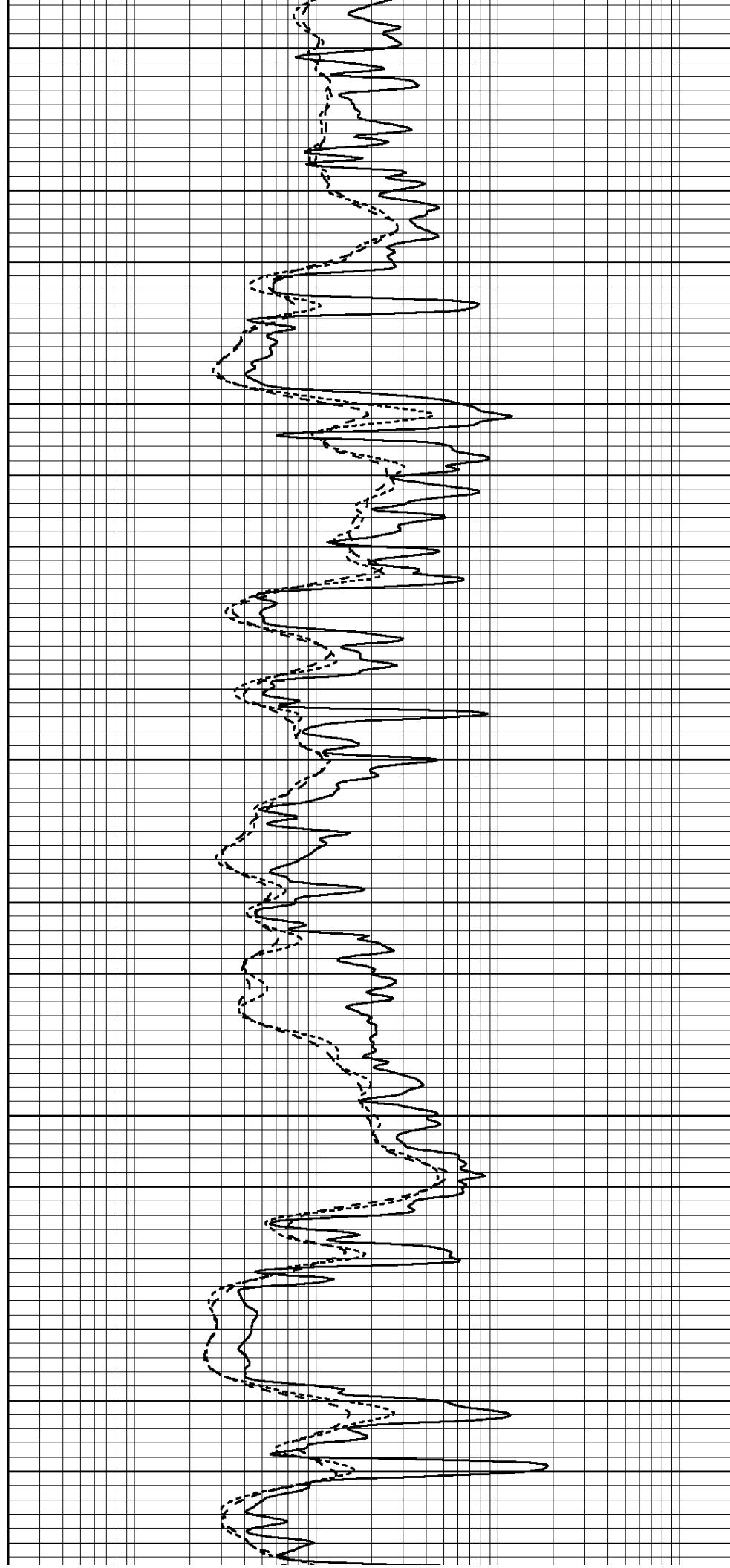
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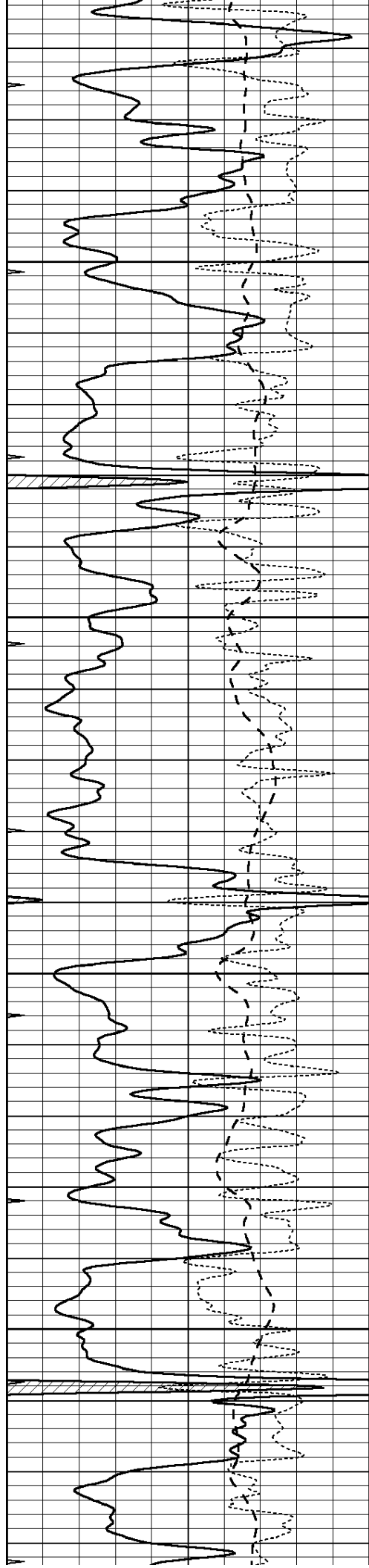
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3050

3100

3150



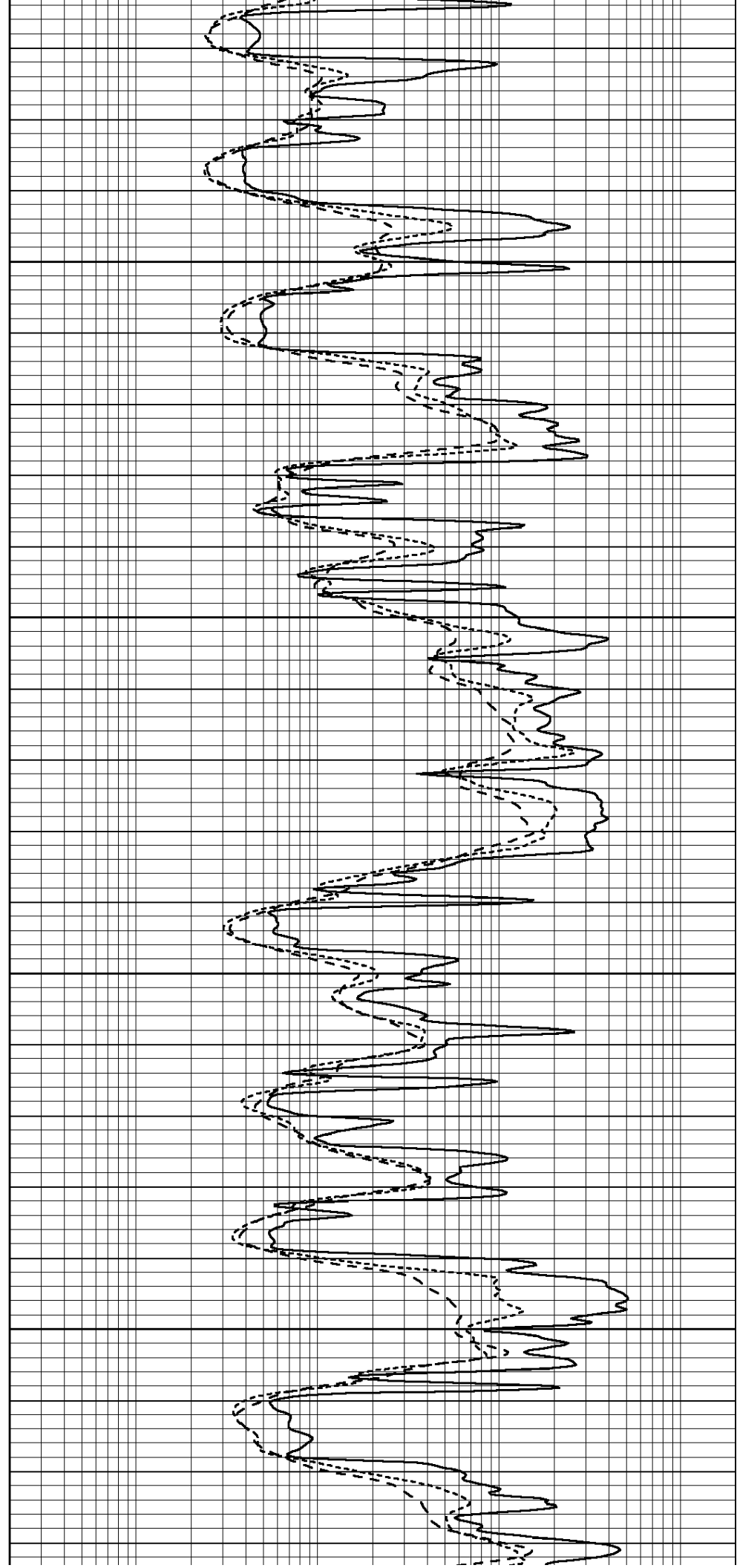


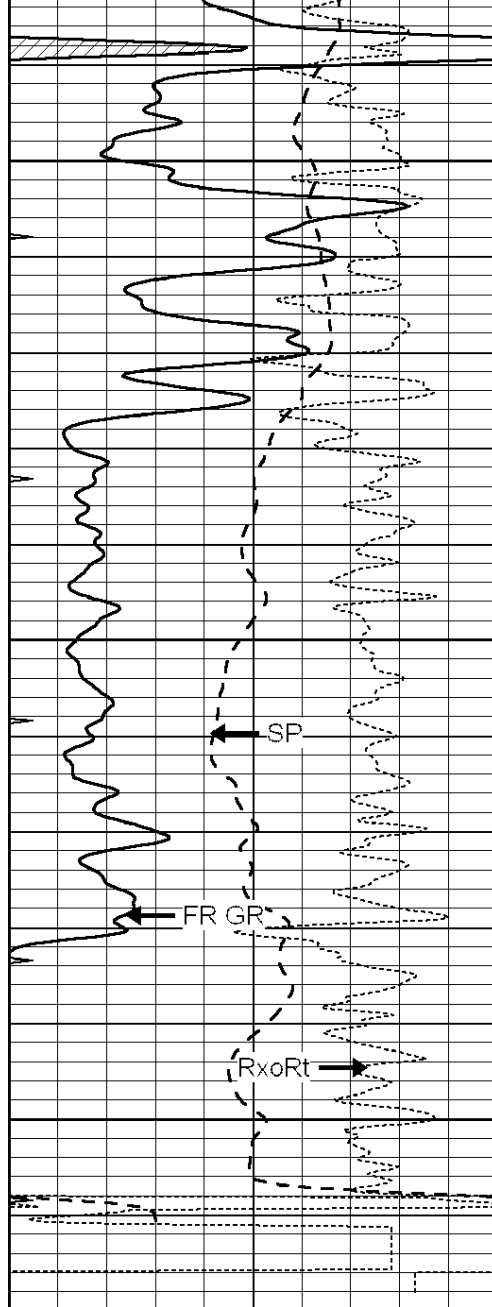
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3250

3300

3350



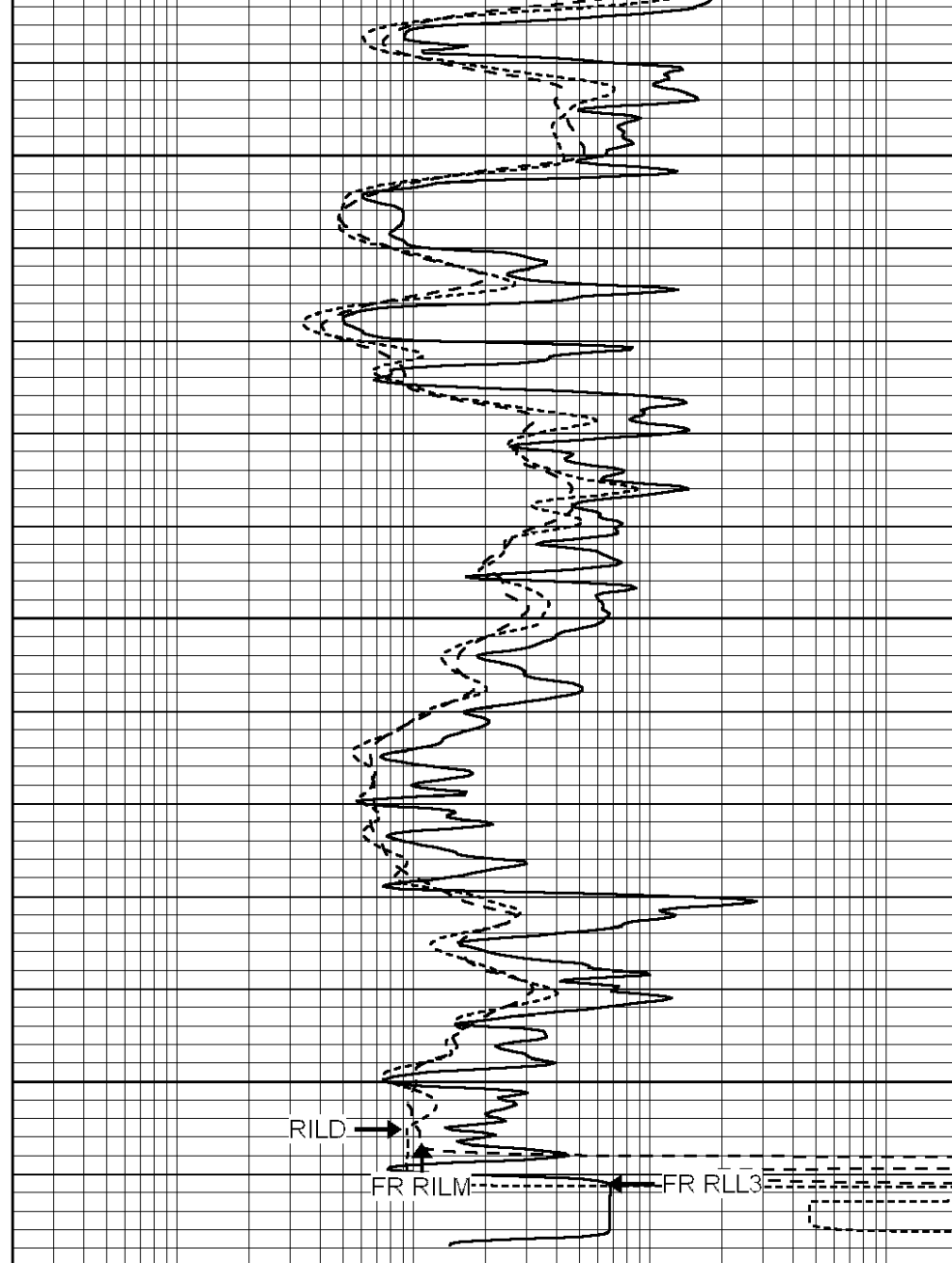


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

3400

3450

3500



0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



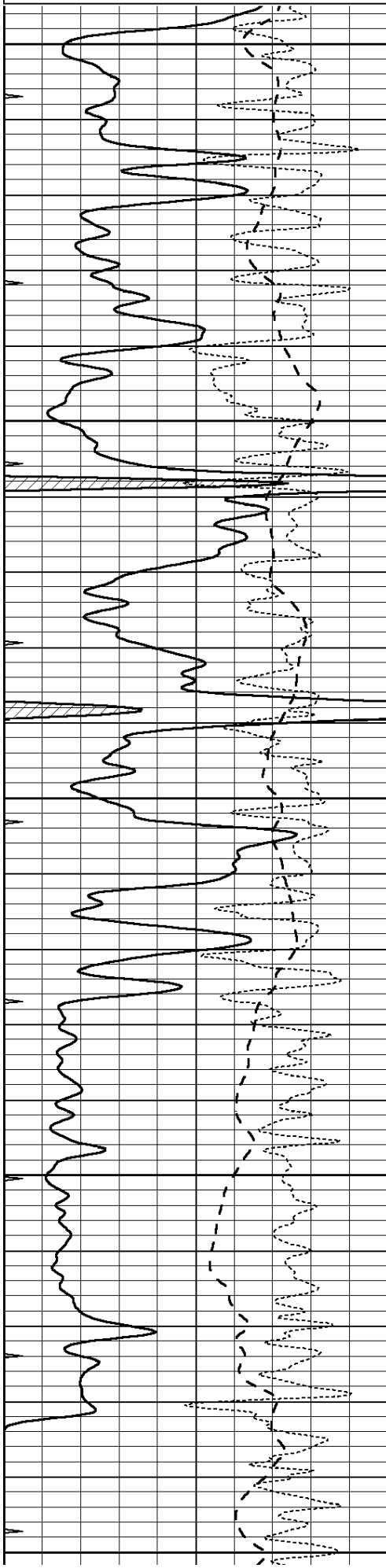
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REPEAT SECTION

Database File: 010845pe.db
 Dataset Pathname: pass2.8
 Presentation Format: dil
 Dataset Creation: Wed Mar 27 17:14:15 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



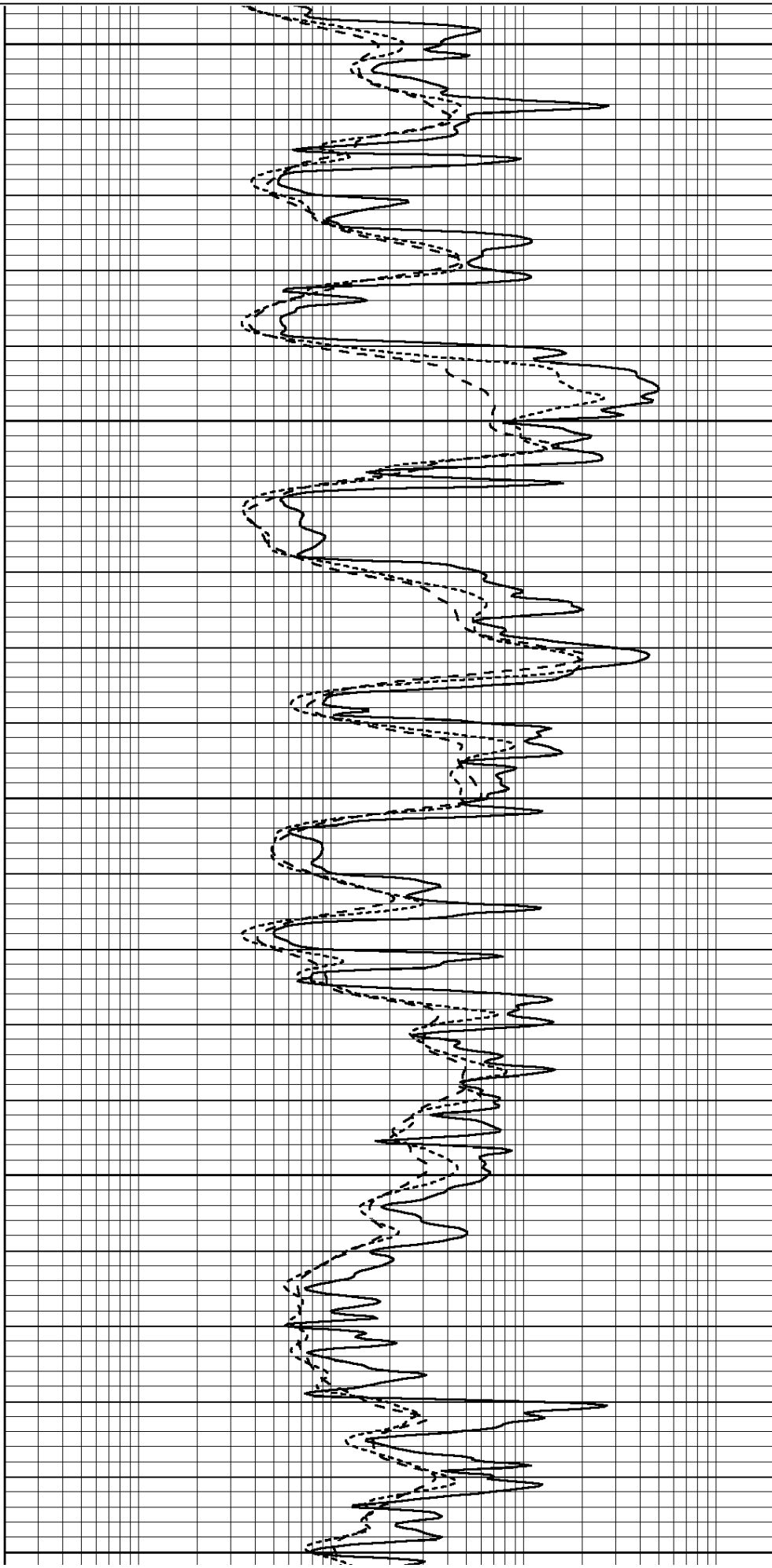
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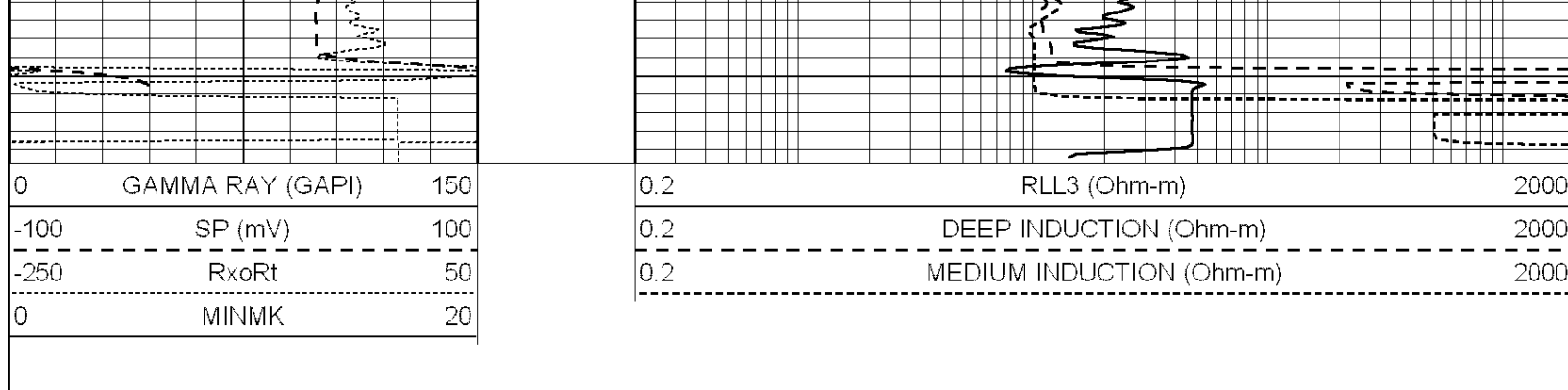
3350

3400

3450

3500





Calibration Report									
Database File:		010845pe.db							
Dataset Pathname:		pass3.1.1							
Dataset Creation:		Wed Mar 27 17:40:52 2013 by Calc Open-Cased 090629							
Dual Induction Calibration Report									
		Serial-Model:		PROBE7-DILG					
		Surface Cal Performed:		Tue Mar 26 01:01:54 2013					
		Downhole Cal Performed:		Sat Jan 19 19:51:38 2013					
		After Survey Verification Performed:		Sat Jan 19 19:51:38 2013					
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.793	0.790	V	0.000	400.000	mmho/m	620.000	0.000	
Medium	0.992	1.002	V	0.000	464.000	mmho/m	680.000	-48.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011	
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367	
Downhole Calibration									
		Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'	
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259	
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154	
LL3		7.322	V		1400.000	Ohm-m			
		0.038	V		20.000	Ohm-m			
		-7.273	V		4000.000	mmho-m			
After Survey Verification									
		Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000	
LL3		0.000	Ohm-m		1400.000	Ohm-m			
		0.000	Ohm-m		20.000	Ohm-m			
		0.000	mmho-m		4000.000	mmho-m			
Litho Density Calibration Report									
		Serial: 002		Model: PRB					
		Performed Mon Apr 02 17:56:53 2012							
Litho Density Calibration									

Window 1	872.3	7266.3	2292.6	7931.5	cps
Window 2	822.9	5957.5	1958.0	6389.6	cps
Window 3	670.4	3219.9	1211.9	3388.2	cps
Window 4	201.6	201.1	202.3	204.6	cps
Long Space	0.0	5134.6	1135.0	5566.6	cps
Short Space	1.1	994.2	674.4	1059.2	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.6	Rib Slope	: 1.020	Density/Spine Ratio	: 0.569
Spine Angle	: 75.6	Spine Slope	: 3.888	Spine Intercept	: -18.3

Caliper	Readings	Reference	
Low Ref	4.3	8.4	
High Ref	6.1	14.0	
	Gain: 3.0		Offset: -4.4

Compensated Neutron Calibration Report

Serial Number:	NEU_4I
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:	GR5	
Tool Model:	OPEN	
Performed:	Tue Mar 26 03:22:48 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	2.4000	GAPI/cps