



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	MAI OIL OPERATIONS, INC.		
Well	G.D. MAIER #10		
Field	TRAPP		
County	RUSSELL	State	KANSAS
Location:	API # : 15-167-24004-00-00		Other Services CNL/CDL MEL
Permanent Datum Log Measured From Drilling Measured From		1610' FNL & 1300' FEL NW - NW - SE - NE SEC 15 TWP 15S RGE 14W	Elevation K.B. 1803 D.F. 1801 G.L. 1795
Date	12/3/14		
Run Number	ONE		
Depth Driller	3310		
Depth Logger	3312		
Bottom Logged Interval	3310		
Top Log Interval	00		
Casing Driller	8 5/8 @ 516'		
Casing Logger	515'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4/68	CHLORIDES 7,000 PPM	
pH / Fluid Loss	10.0/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.70 @ 66F		
Rmf @ Meas. Temp	0.52 @ 66F		
Rmc @ Meas. Temp	0.84 @ 66F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.42 @ 110F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	110F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	WMATT URBAN		

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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.

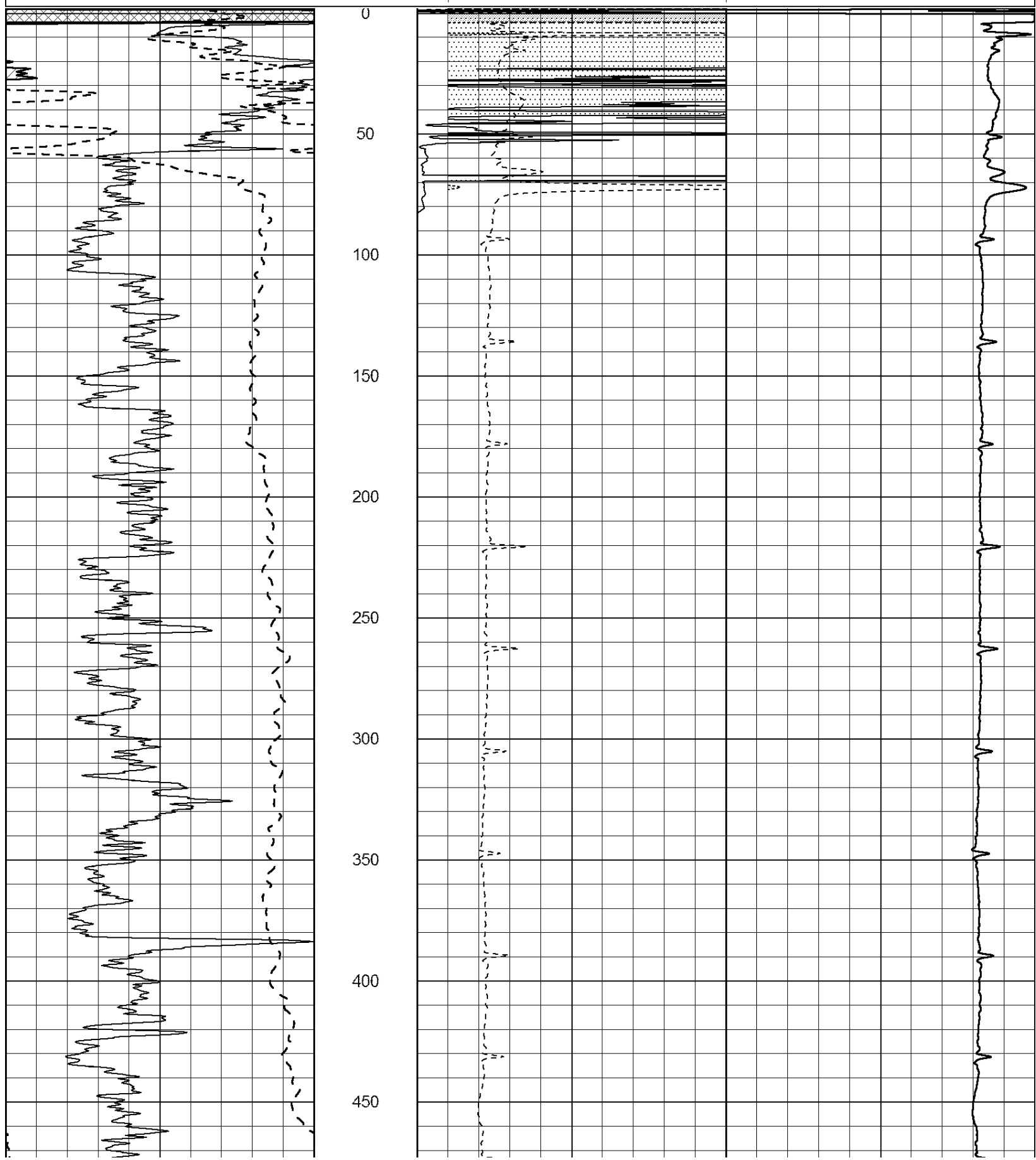
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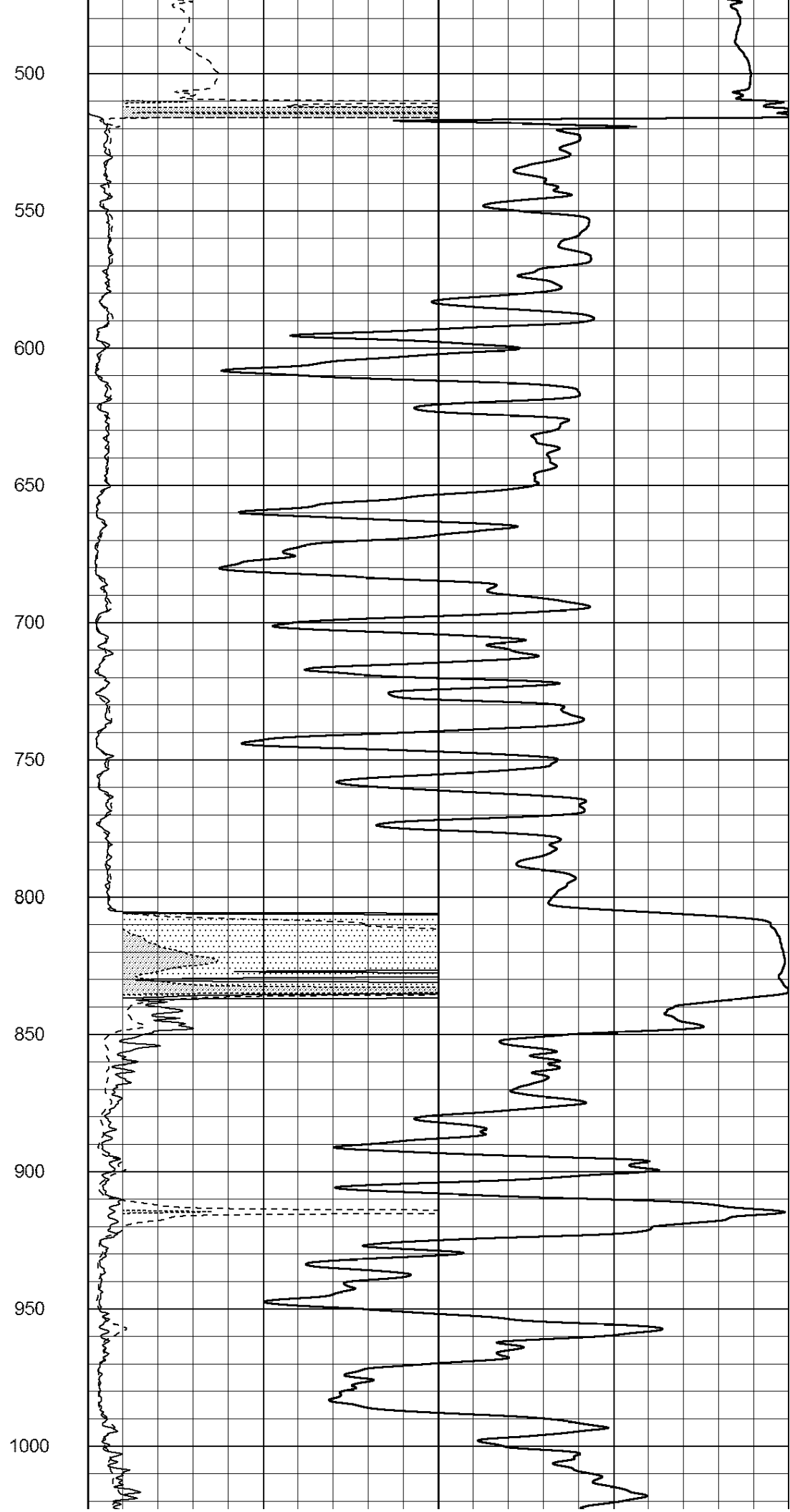
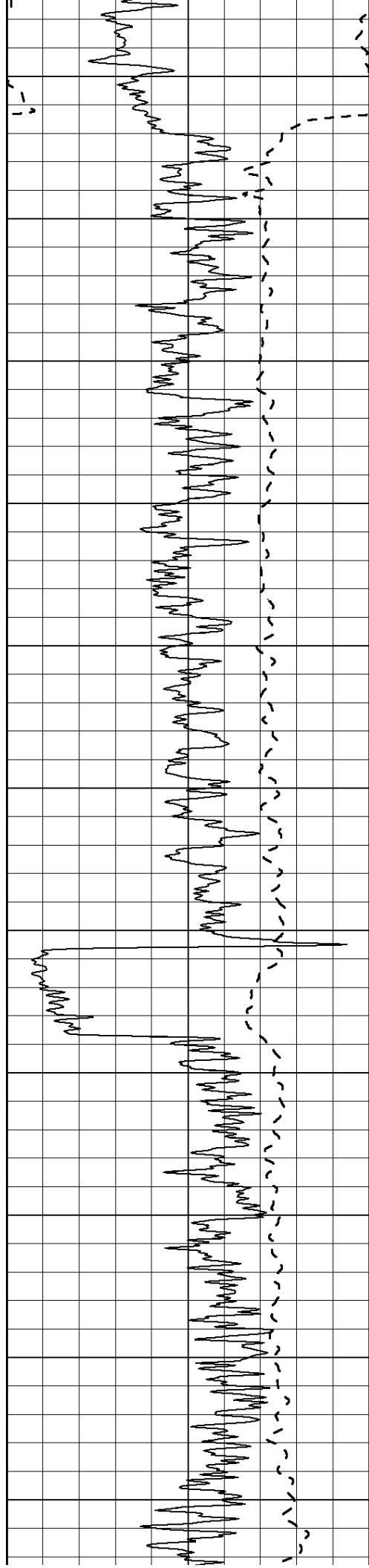
NABORS COMPLETION & PRODUCTION SERVICES CO.
785 (628 - 6395)
THANK YOU FOR YOUR BUSINESS
DIRECTIONS : RUSSELL, KS. - SOUTH 6 MILES TO MITCHELL RD. - WEST 1/2 MILE - SOUTH INTO

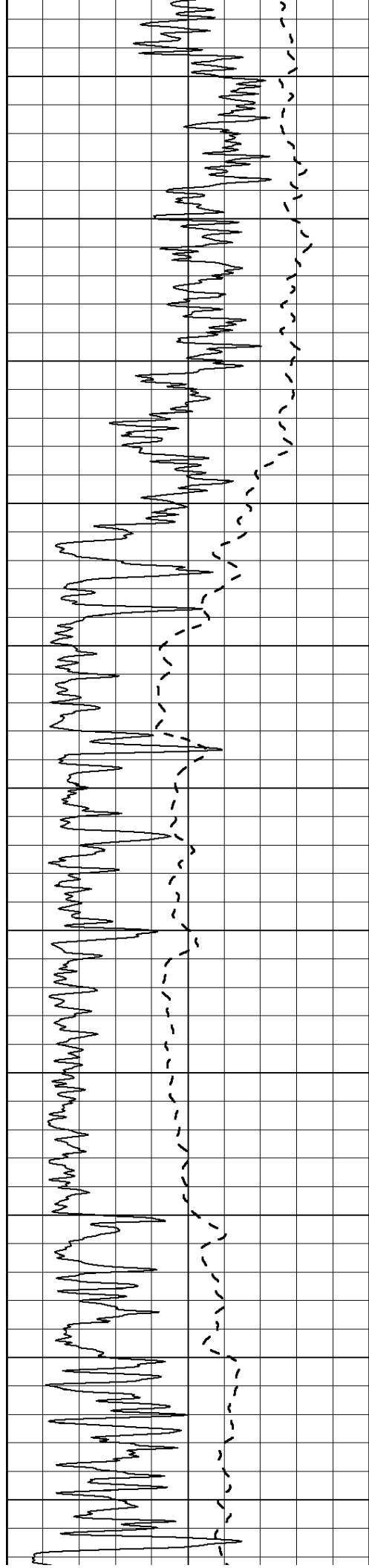
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-100	SP (mV)	100

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







1050

1100

1150

1200

1250

1300

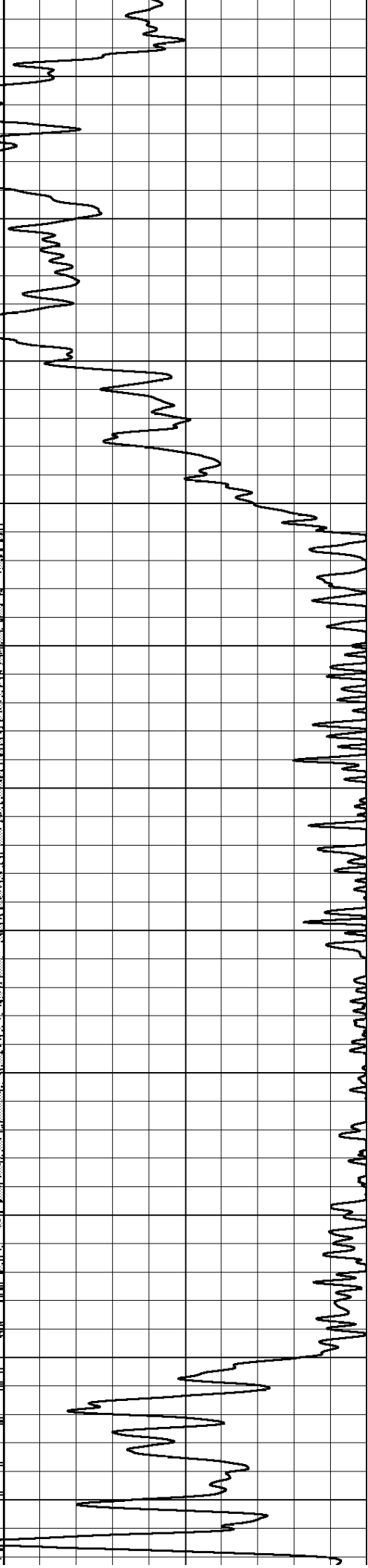
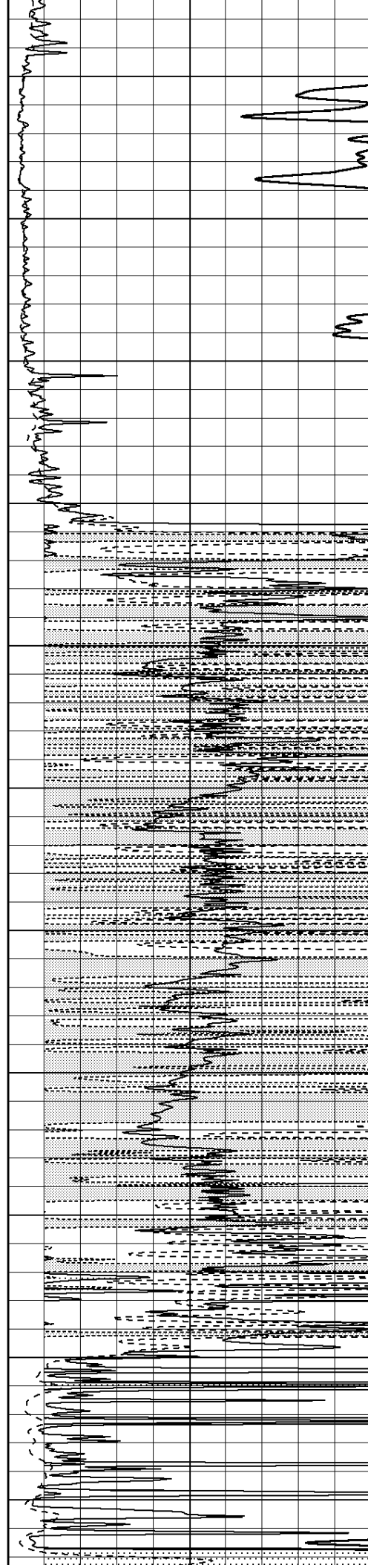
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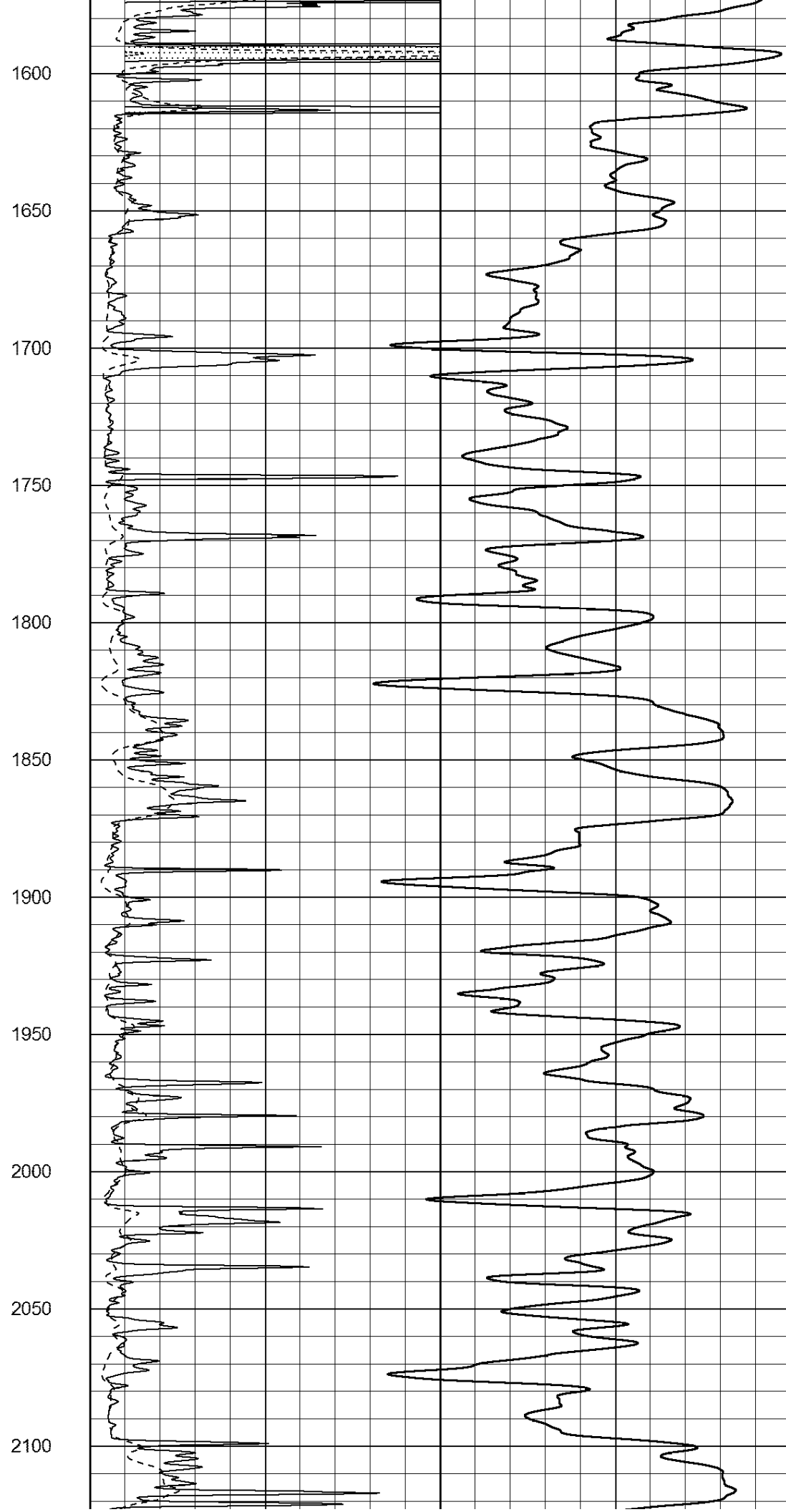
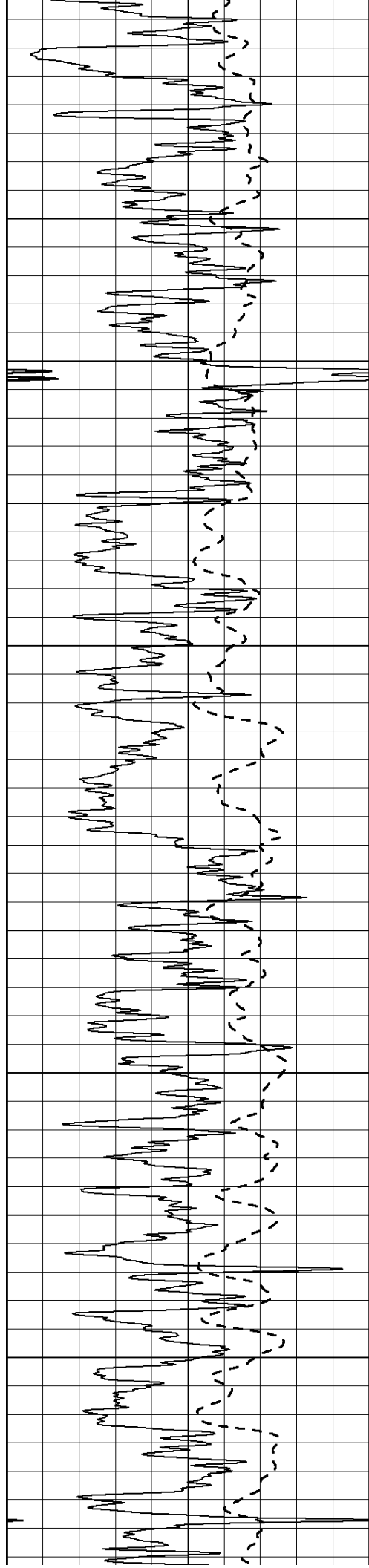
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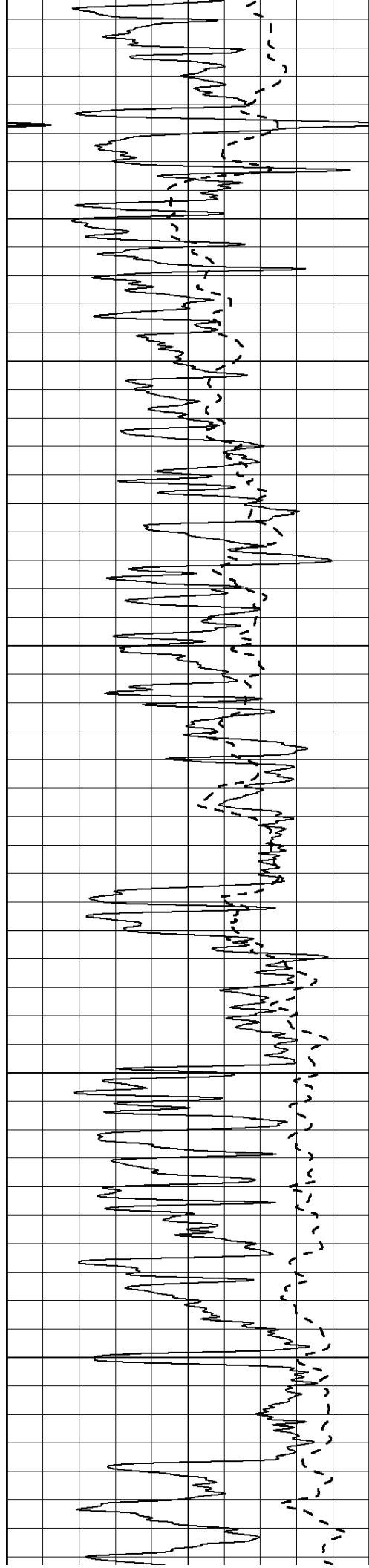
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1500

1550







2150

2200

2250

2300

2350

2400

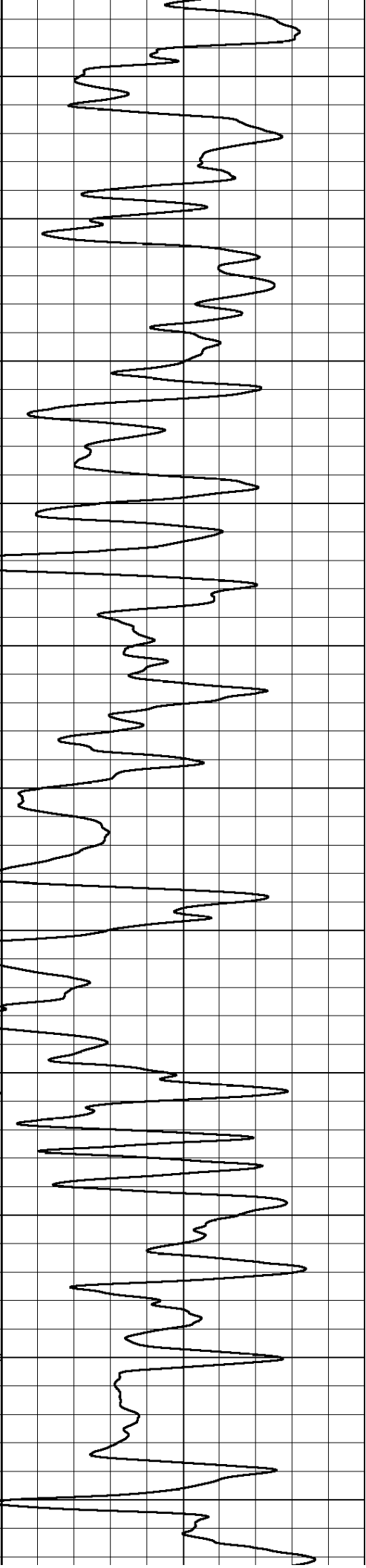
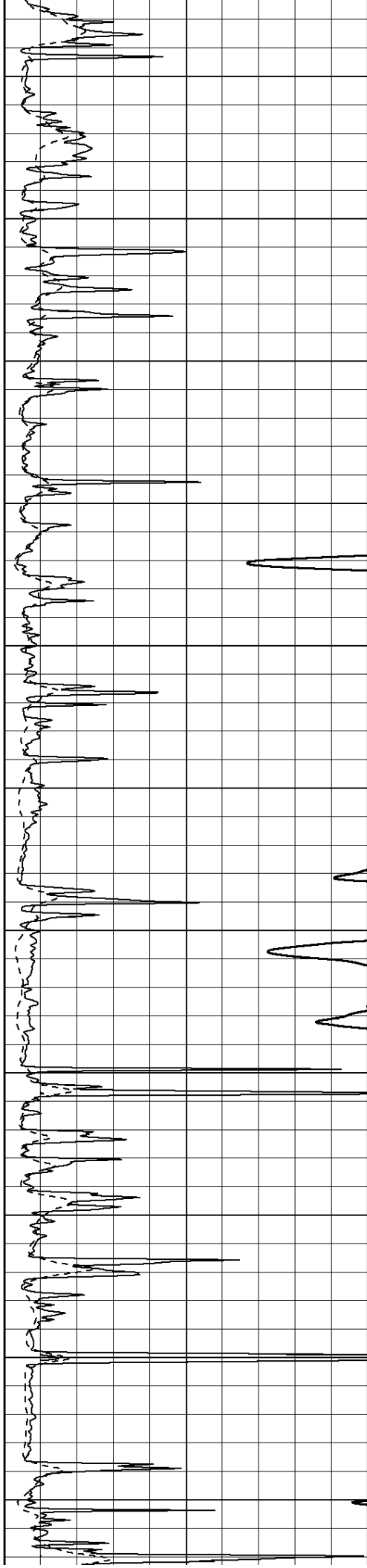
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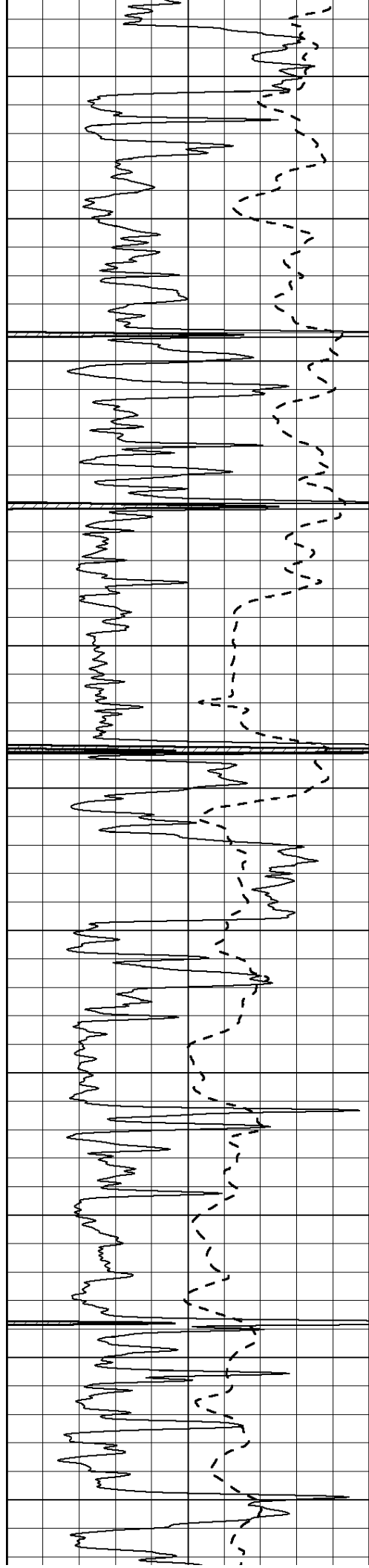
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2550

2600

2650





2700

2750

2800

2850

2900

2950

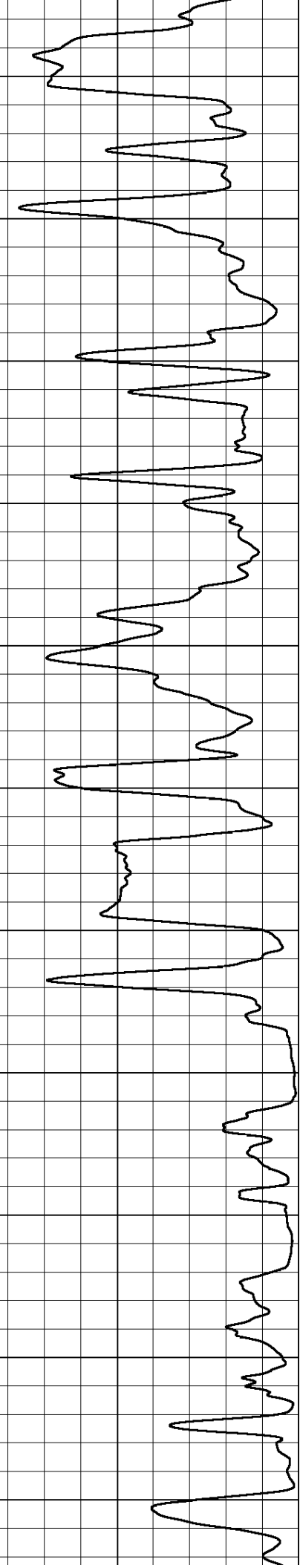
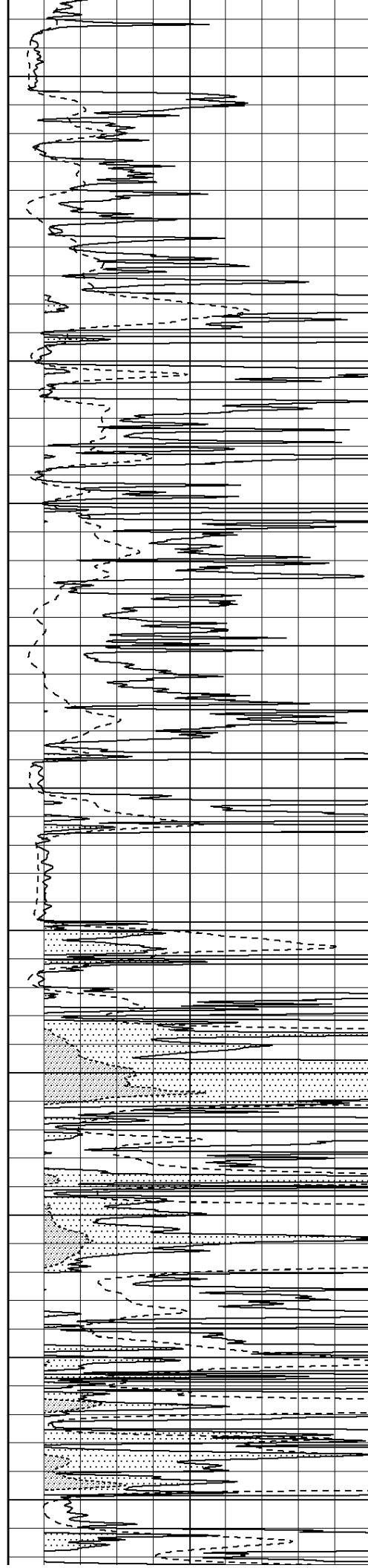
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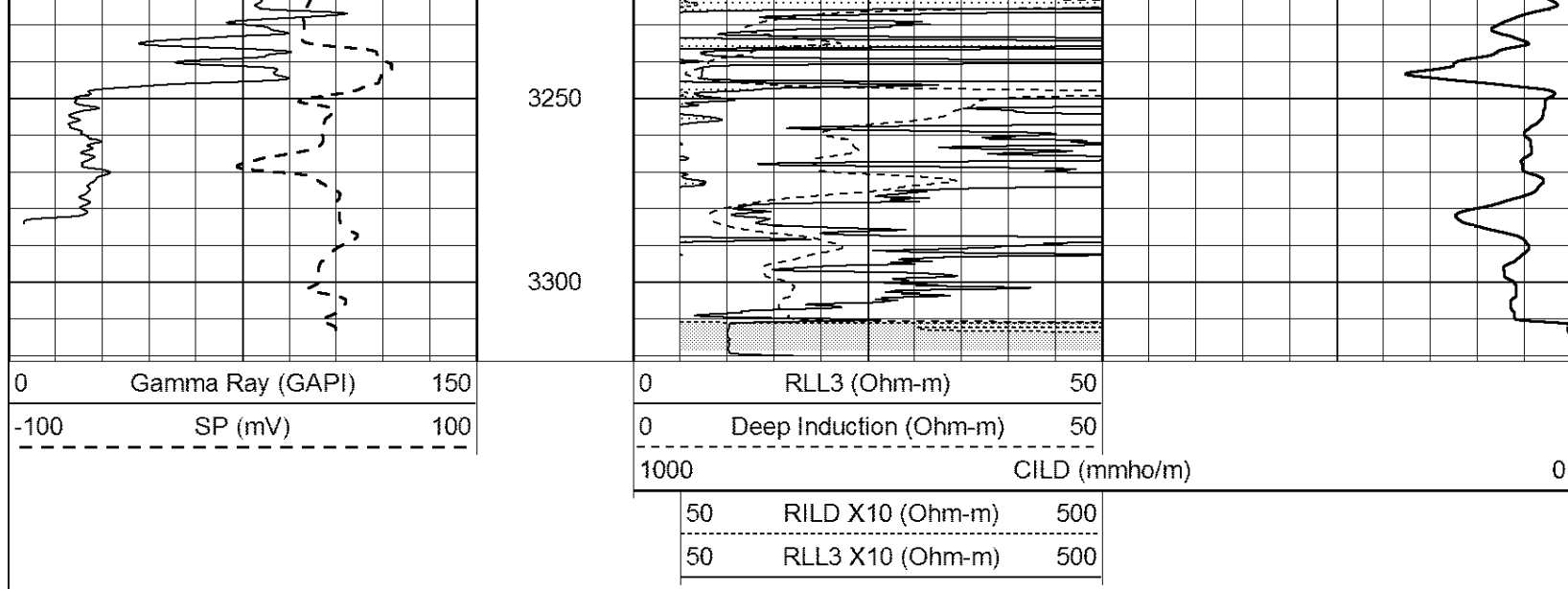
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3100

3150

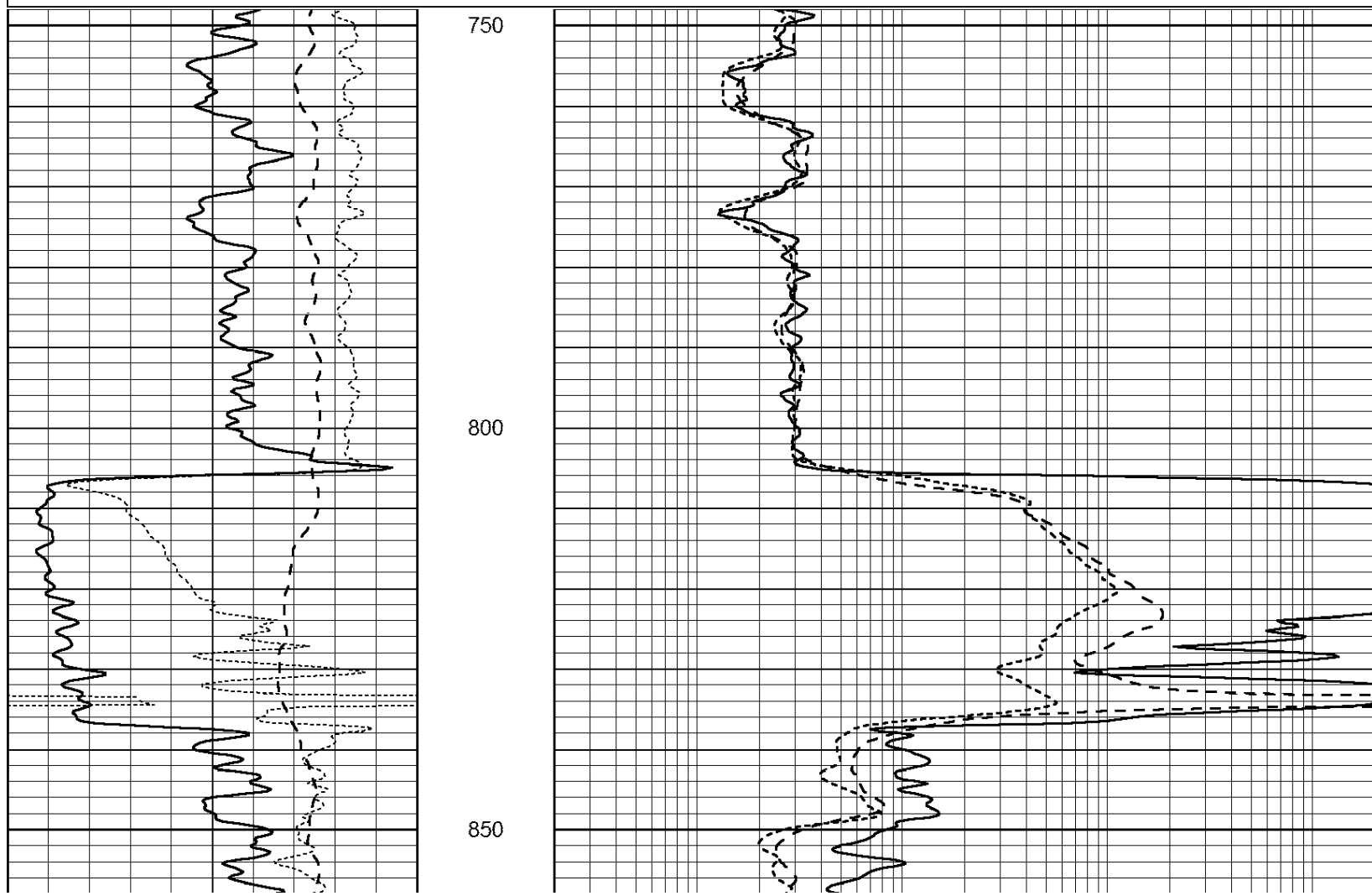
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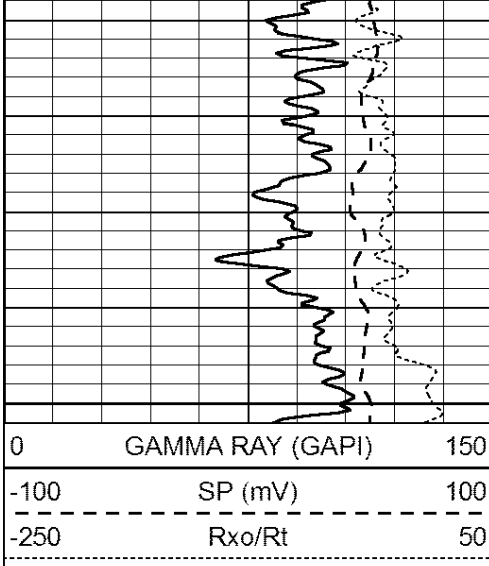




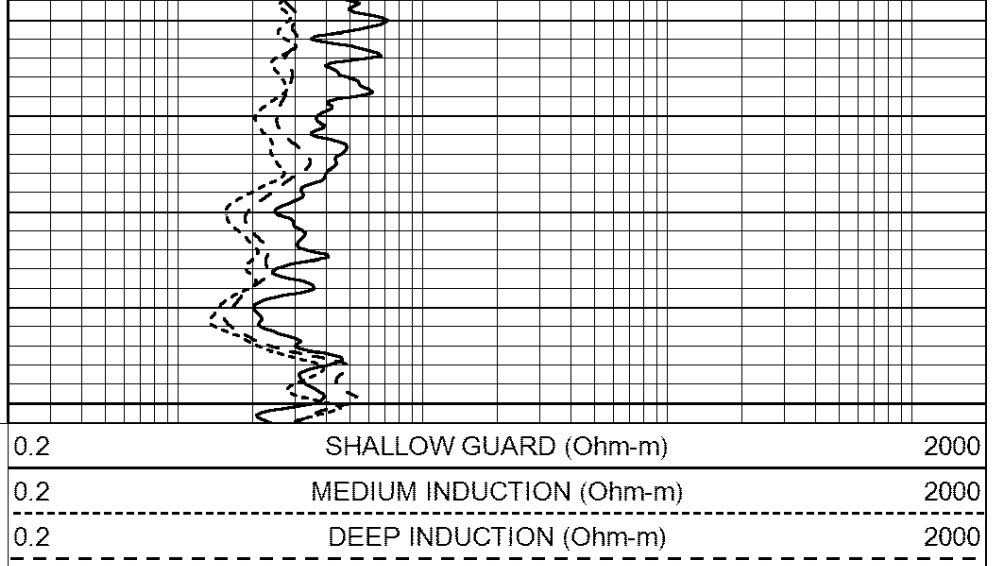
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Dataset Pathname: pass3.4
Presentation Format: _dil
Dataset Creation: Thu Dec 04 00:10:57 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	MEDIUM INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	DEEP INDUCTION (Ohm-m)	2000

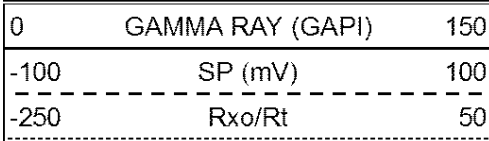




900



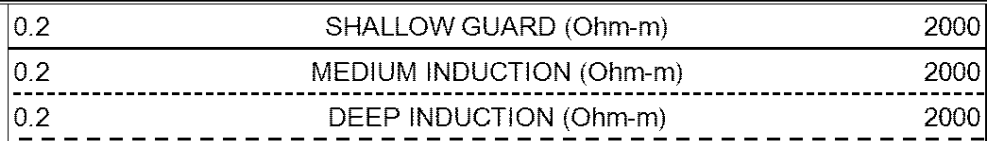
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 Dataset Pathname: pass3.3
 Presentation Format: _dil
 Dataset Creation: Wed Dec 03 23:45:11 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

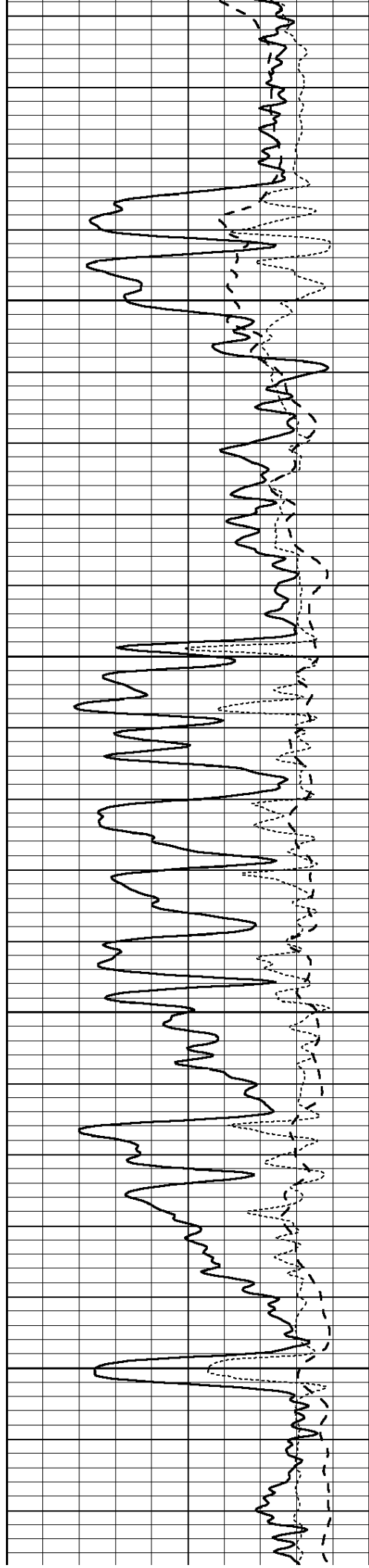


2300

2350

2400



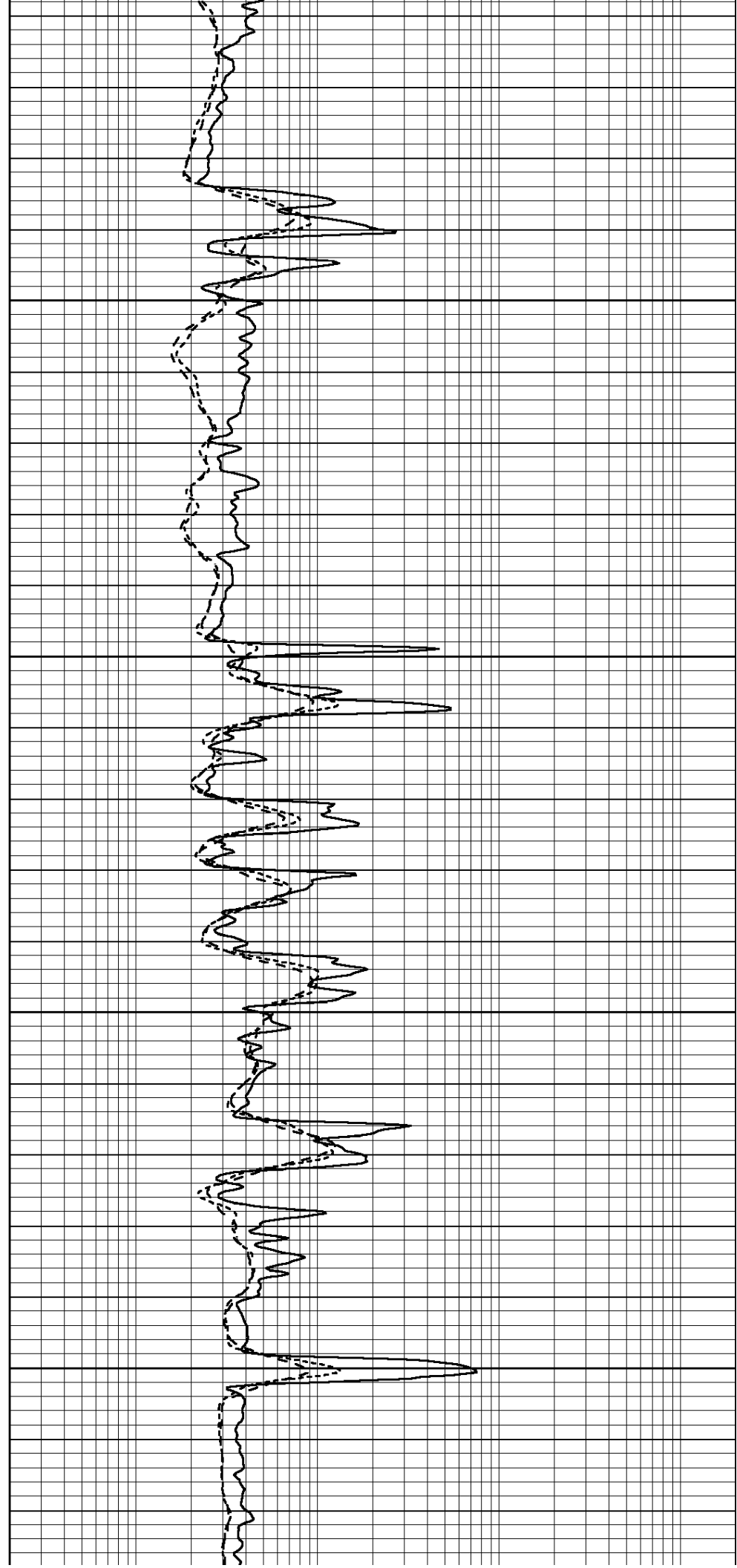


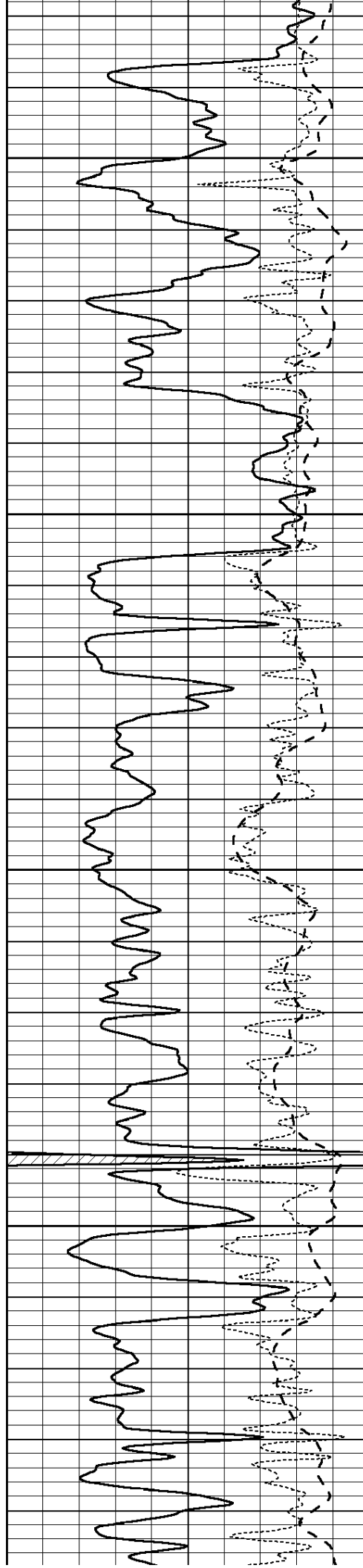
2450

2500

2550

2600



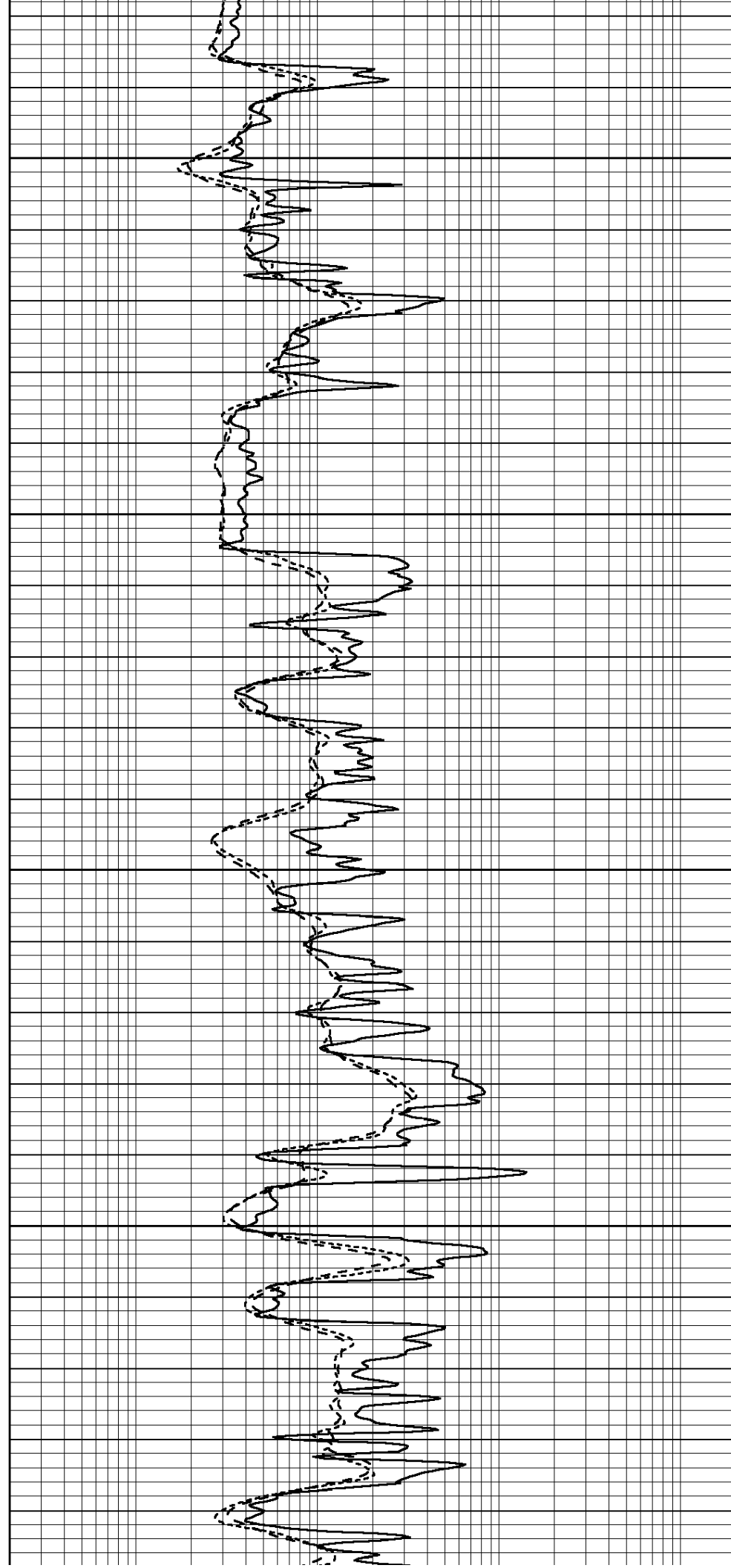


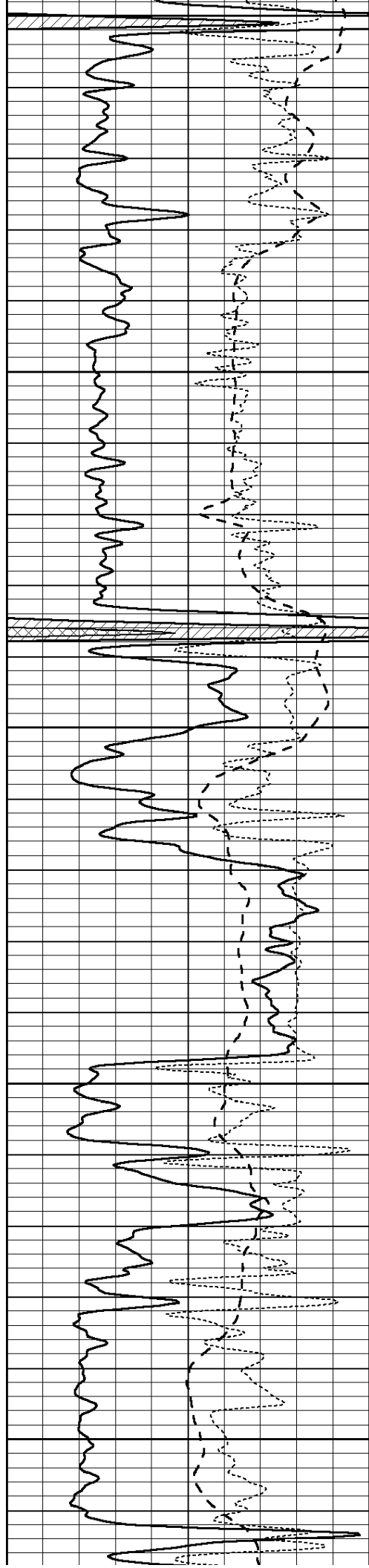
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2700

2750

2800





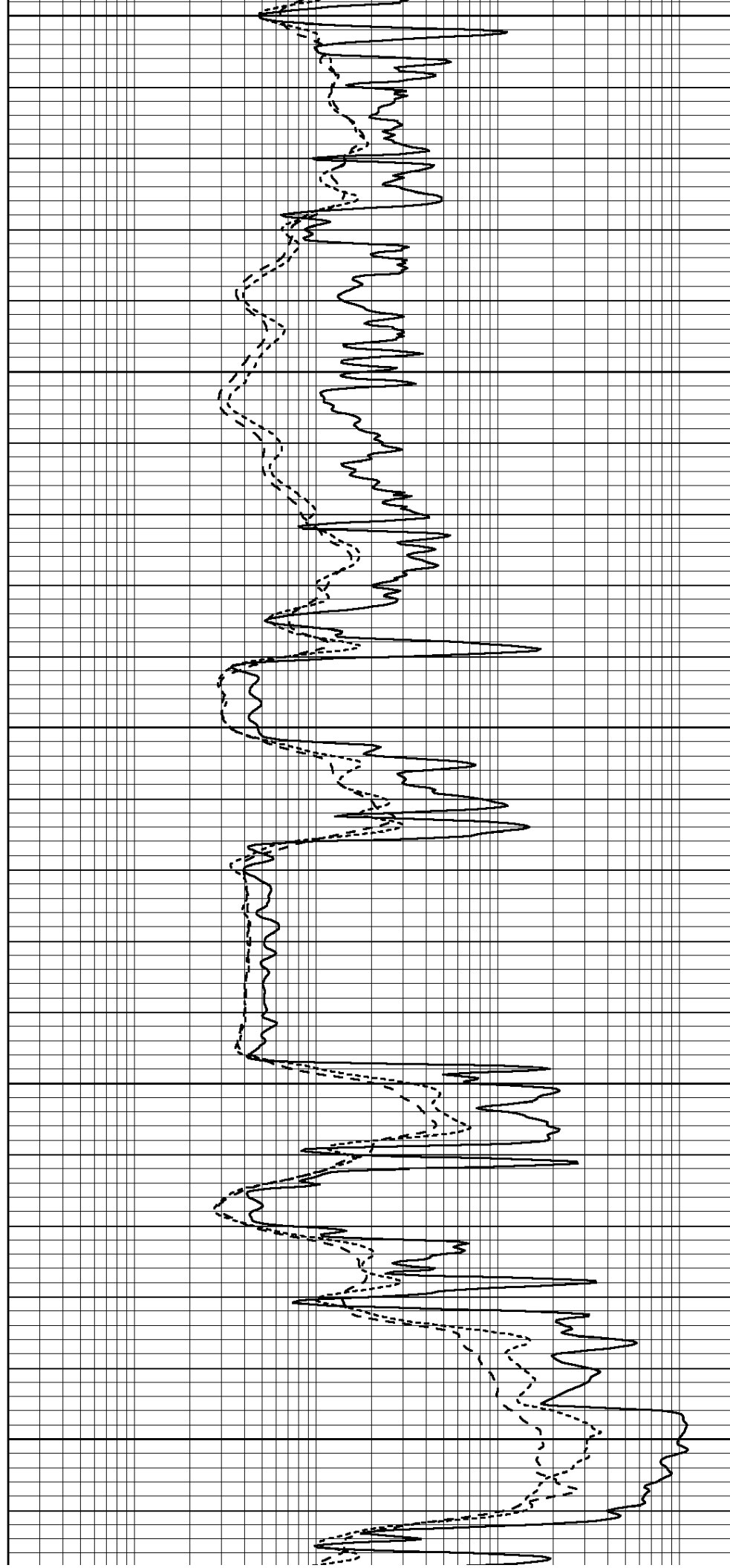
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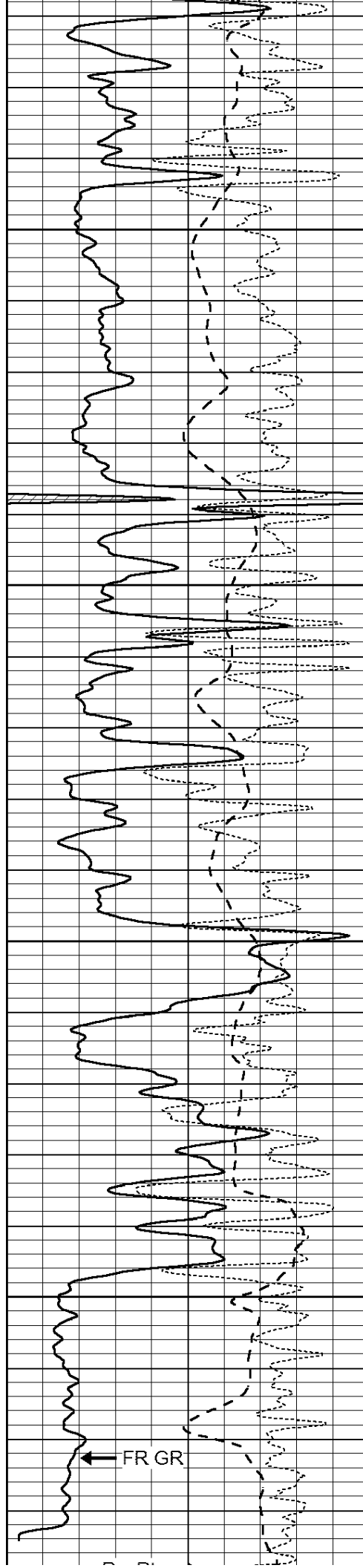
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2950

3000

3050





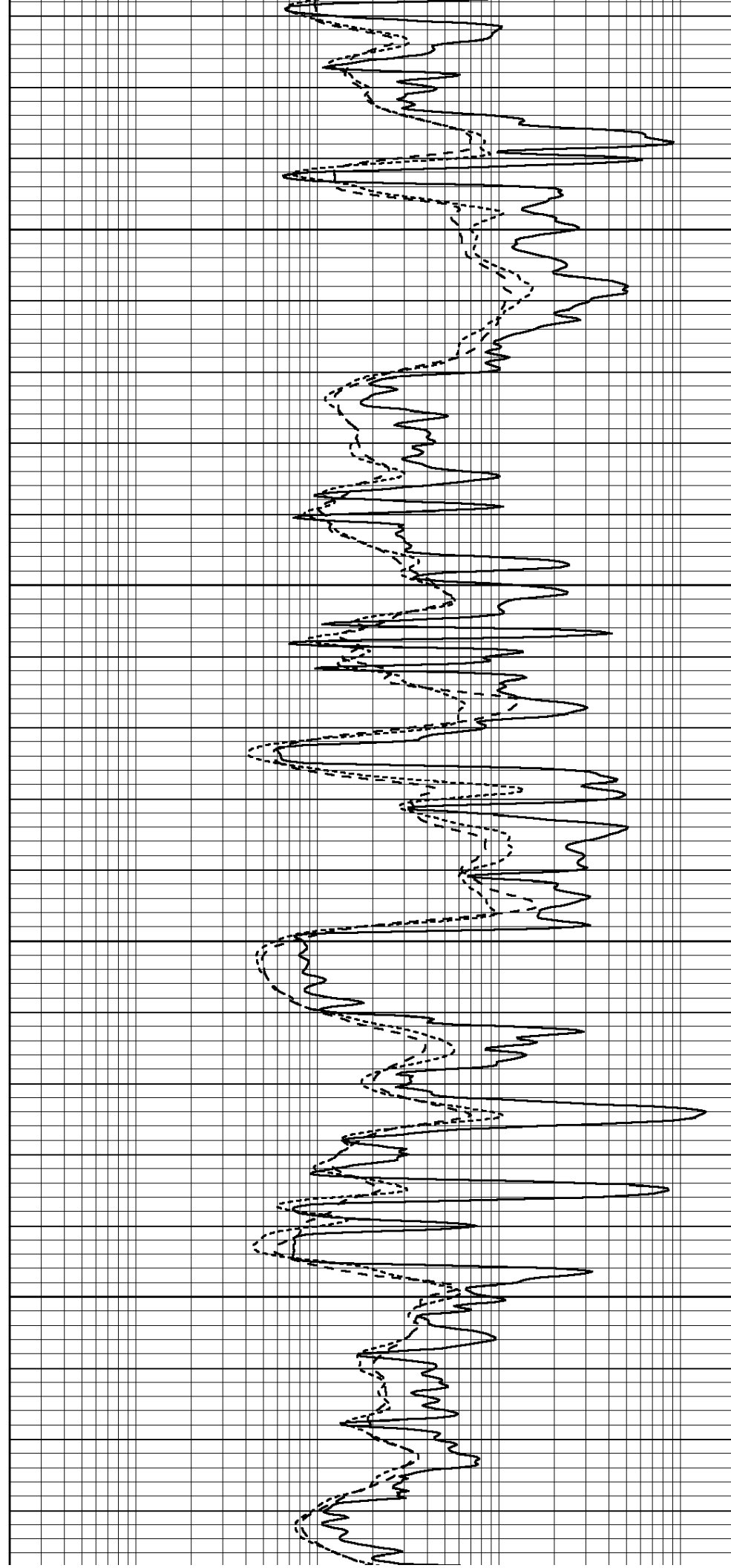
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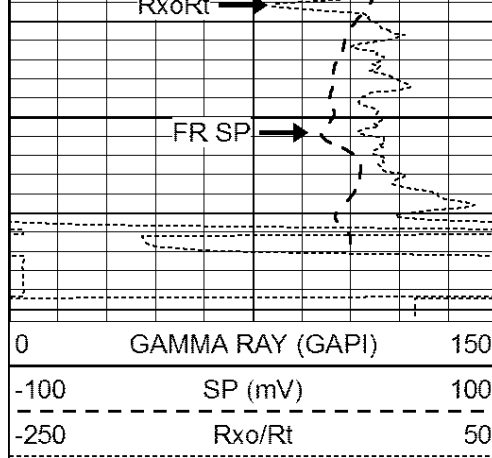
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3200

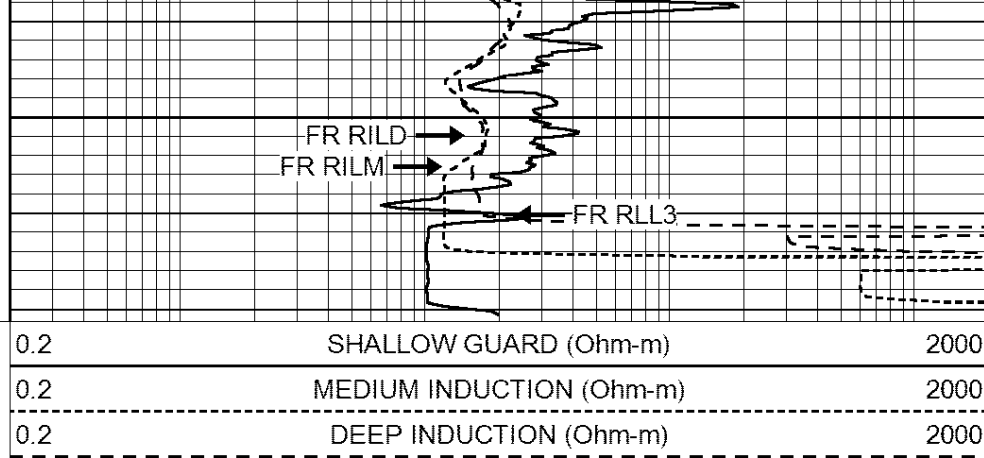
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FR GR



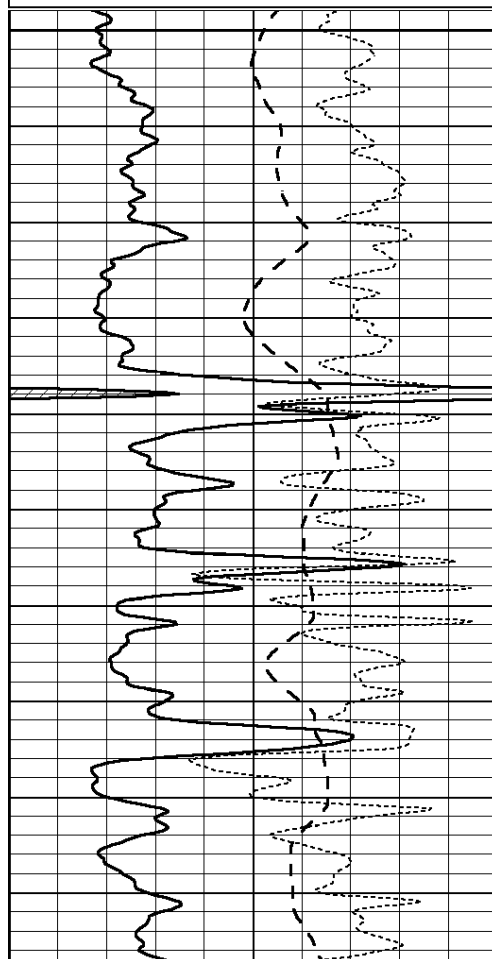
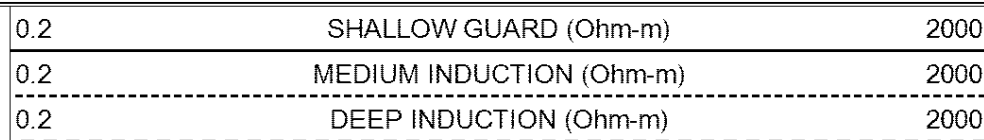
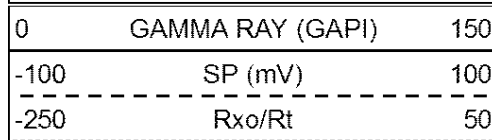


3300
LTD 3312

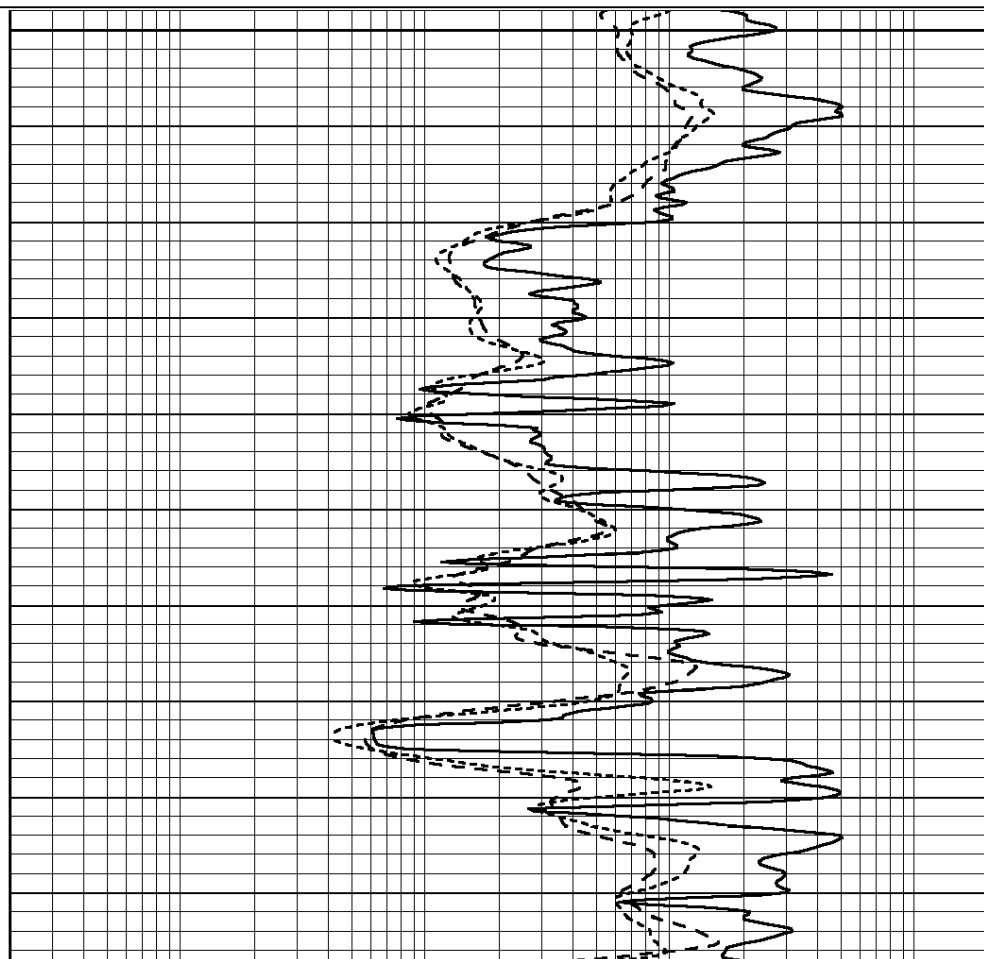


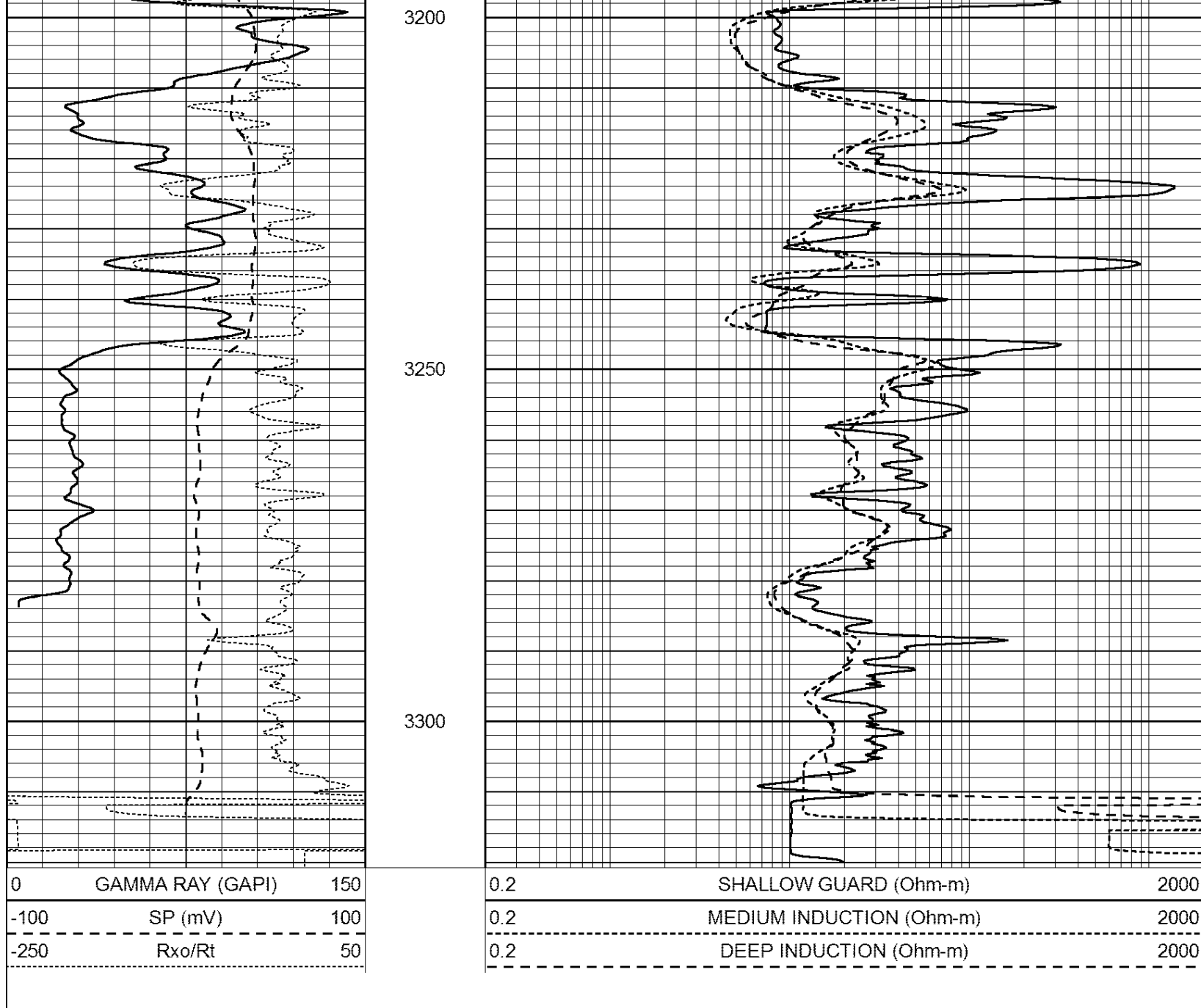
REPEAT SECTION

Database File: 26268ddn.db
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 Presentation Format: _dil
 Dataset Creation: Wed Dec 03 23:04:33 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



3100
3150





Calibration Report								
Database File:		26268ddn.db						
Dataset Pathname:		pass3.4						
Dataset Creation:		Thu Dec 04 00:10:57 2014 by Calc Open-Cased 090629						
Dual Induction Calibration Report								
Serial-Model:		PROBE7-DILG						
Surface Cal Performed:		Mon Nov 24 11:09:57 2014						
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	520.000	14.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	570.000	-28.000
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
Medium	-47330.100	-9381.740	mmho/m		-47327.100	-9389.280	mmho/m	1.000
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
Medium	0.000	0.000	mmho/m		-47330.100	-9381.740	mmho/m	1.000
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	

Compensated Density Calibration Report

Serial-Model:					GEAR5-GEARHART			
Source / Verifier:					147 / 147			
Master Calibration Performed:					Sat Nov 29 00:24:07 2014			
Before Survey Verification Performed:								
After Survey Verification Performed:								

Master Calibration								
			Density		Far Detector		Near Detector	
Magnesium		1.710	g/cc		848.07		511.00	cps
Aluminum		2.610	g/cc		183.22		341.84	cps
			Spine Angle = 75.30		Density/Spine Ratio = 0.568			
			Size		Reading			
Small Ring		8.20	in		1.64	V		
Large Ring		14.00	in		2.93	V		

Before Survey Verification								
			Target		Measured			
			g/cc				g/cc	
			g/cc				g/cc	
			g/cc				g/cc	

After Survey Verification								
			Target		Measured			
			g/cc				g/cc	
			g/cc				g/cc	
			g/cc				g/cc	

Compensated Neutron Calibration Report

Serial Number:					080620			
Tool Model:					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:	46001		
Tool Model:	Probe1		
Performed:	Mon Nov 24 09:45:18 2014		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2600	GAPI/cps	