



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	L.D. DRILLING, INC.	Company	L.D. DRILLING, INC.
Well	#1-22 LORETTA POLZIN TRUST	Well	#1-22 LORETTA POLZIN TRUST
Field	WILDCAT	Field	WILDCAT
County	BARTON	County	BARTON
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-009-25894-0000 1460' FSL & 1710' FWL	Other Services CDL/CNL MEL/SON	
Permanent Datum Log Measured From Drilling Measured From	GROUND LEVEL KELLY BUSHING 5' A.G.L. KELLY BUSHING	Elevation K.B. 1916 D.F. 1914 G.L. 1911	
Date	10/21/13		
Run Number	ONE		
Depth Driller	3550		
Depth Logger	3549		
Bottom Logged Interval	3547		
Top Log Interval	00		
Casing Driller	8 5/8" @ 897'		
Casing Logger	896		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.2/53		
pH / Fluid Loss	9.0/8.8		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.70 @ 86F		
Rinf @ Meas. Temp	.52 @ 86F		
Rinc @ Meas. Temp	.84 @ 86F		
Source of Rinf / Rinc	MEASURED		
Rin @ BHT	.53 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KIM SHOEMAKER		

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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 NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS:

INTERSECTION OF HWY 4 & 281 - 4 MILES SOUTH TO RD. 80 - 1 MILE WEST
3/4 MILE SOUTH - EAST INTO

Database File:

010947ddn.db

Dataset Pathname:

pass3.3

Presentation Format:

_dil2

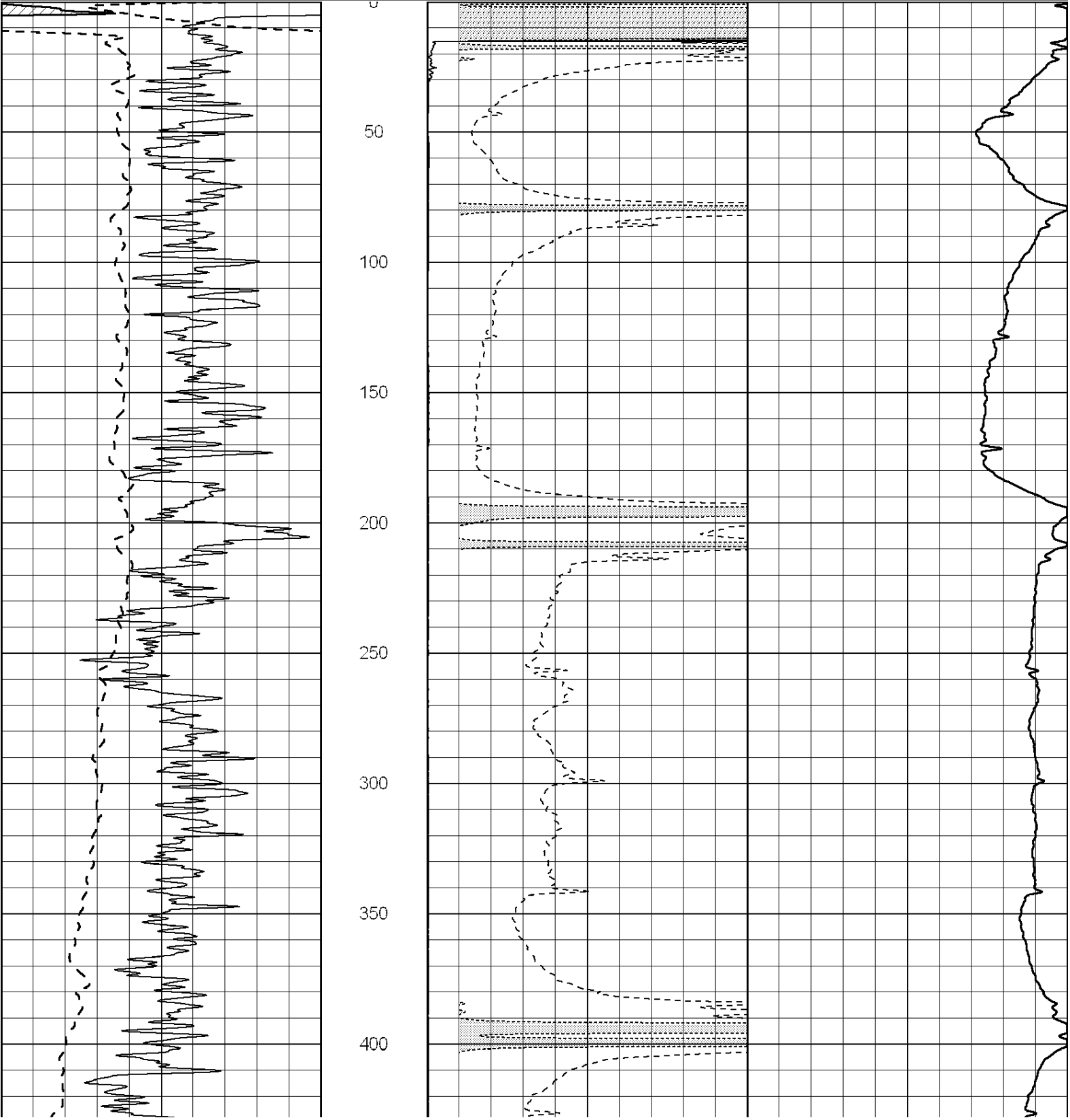
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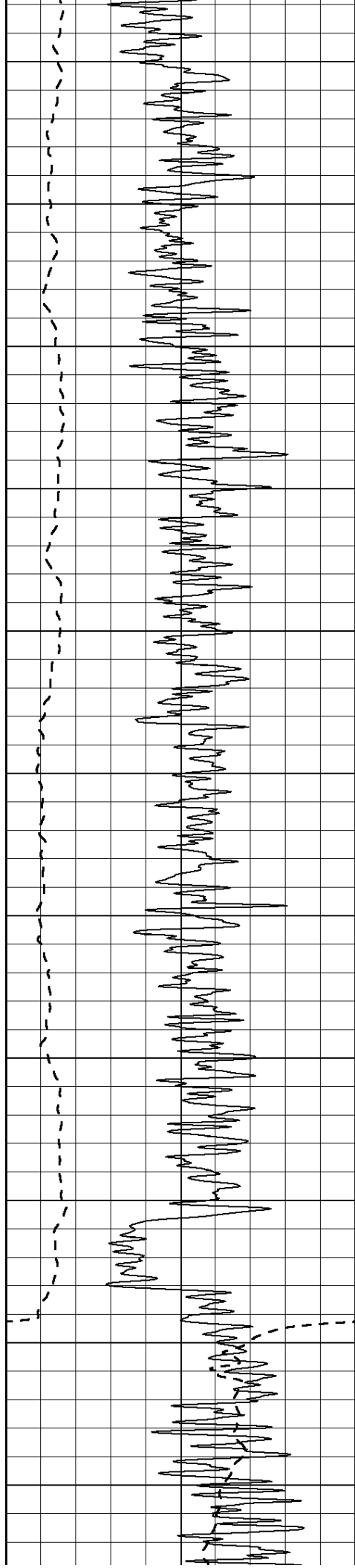
Mon Oct 21 13:54:53 2013 by Calc Open-Cased 090629

Charted by:

Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150	0	RLL3 (Ohm-m)	50
-100	SP (mV)	100	0	Deep Induction (Ohm-m)	50
-----			-----		
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500
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450

500

550

600

650

700

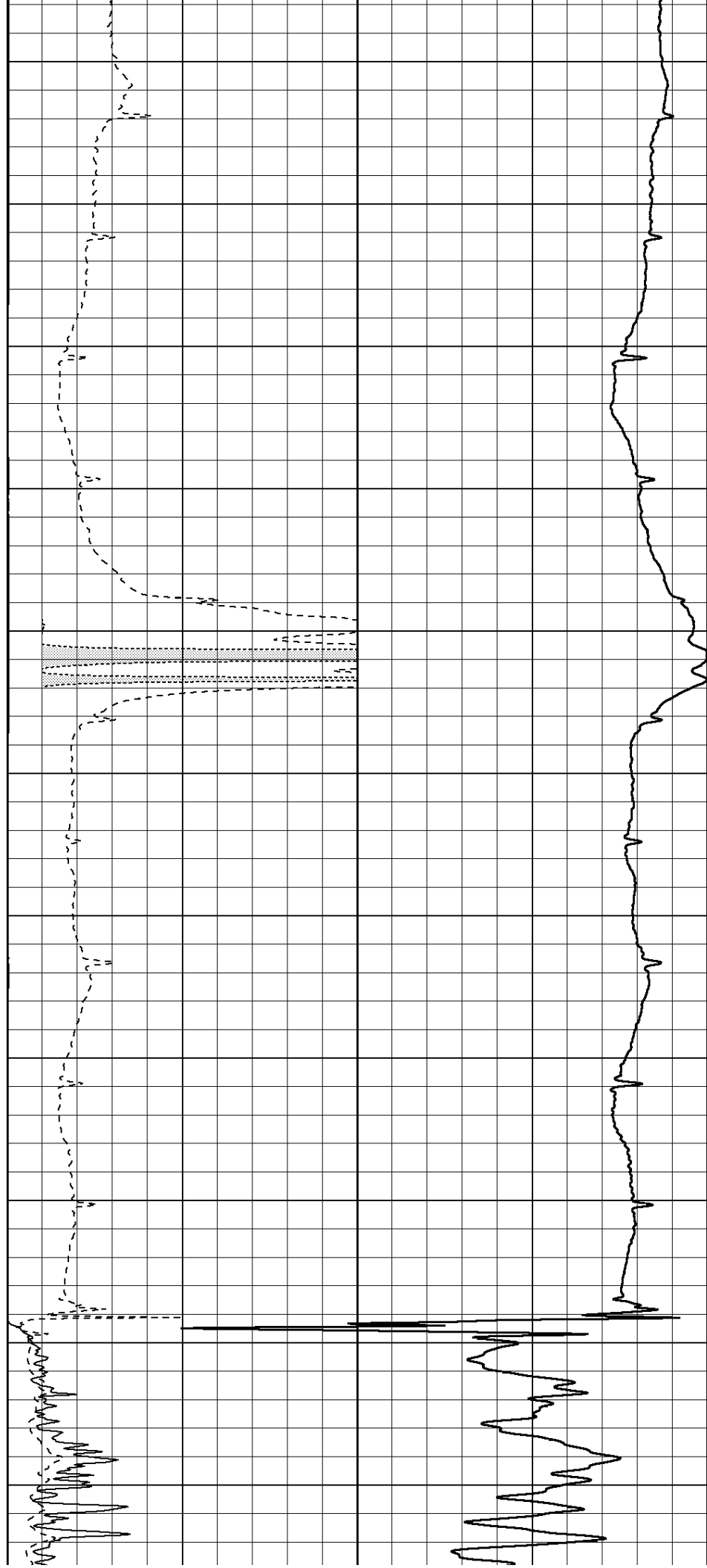
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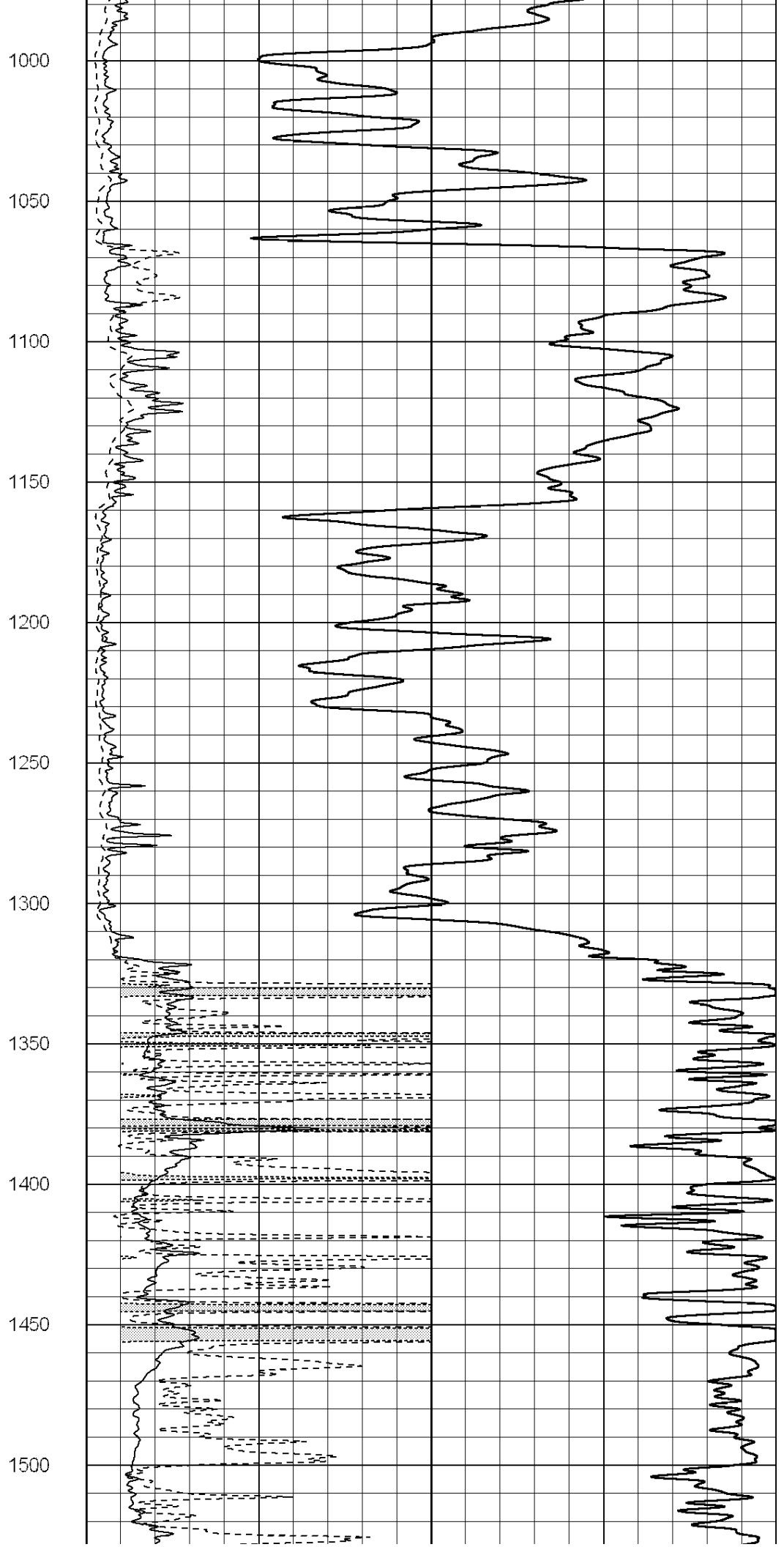
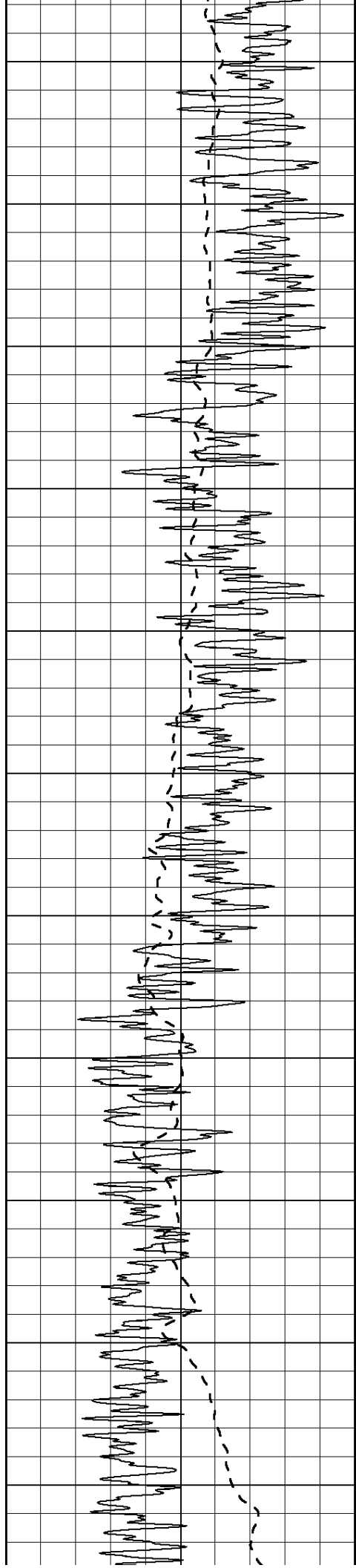
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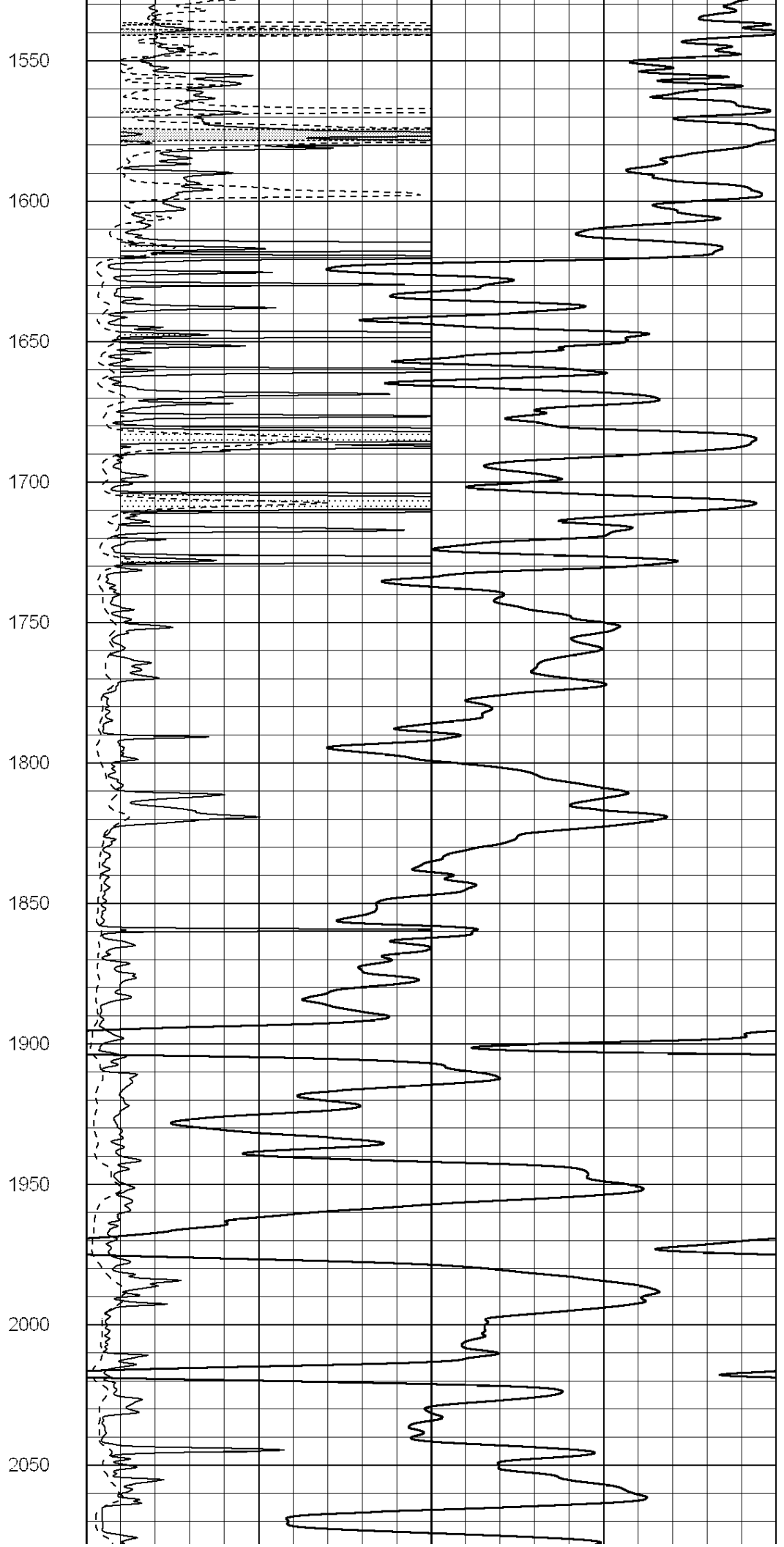
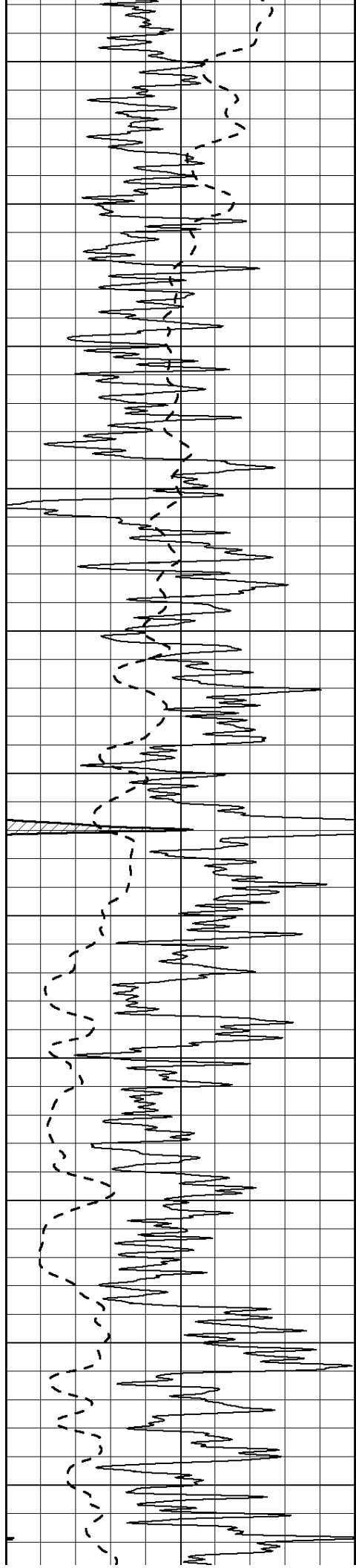
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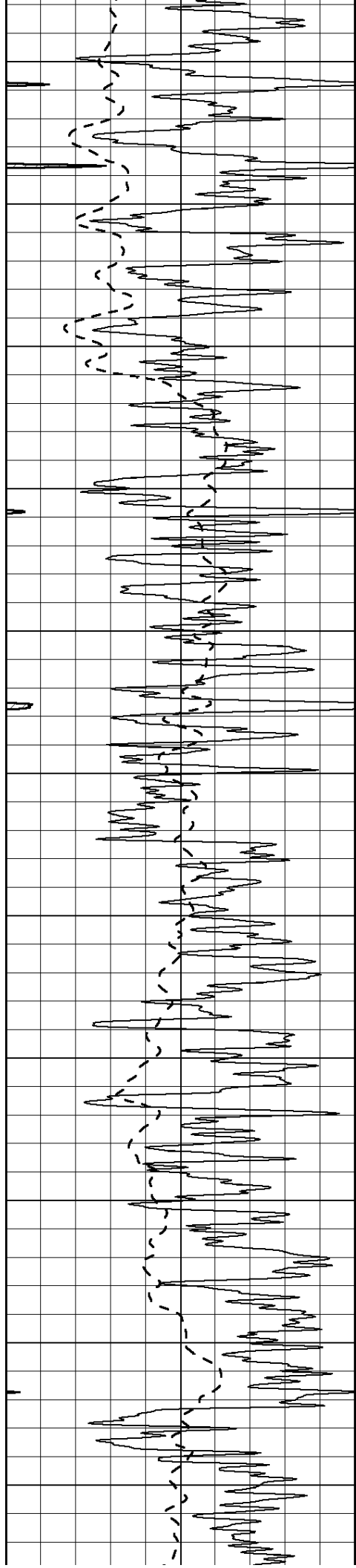
900

950









2100

2150

2200

2250

2300

2350

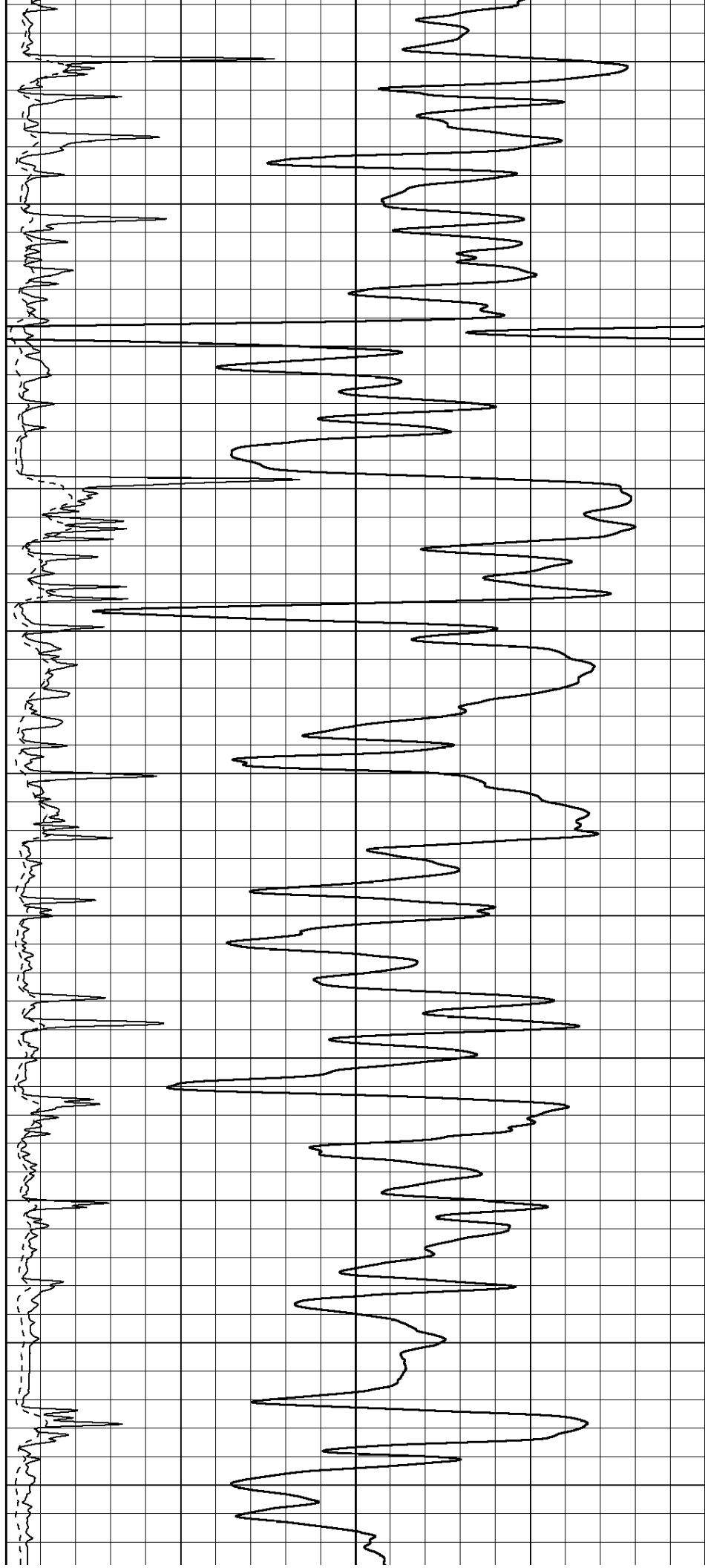
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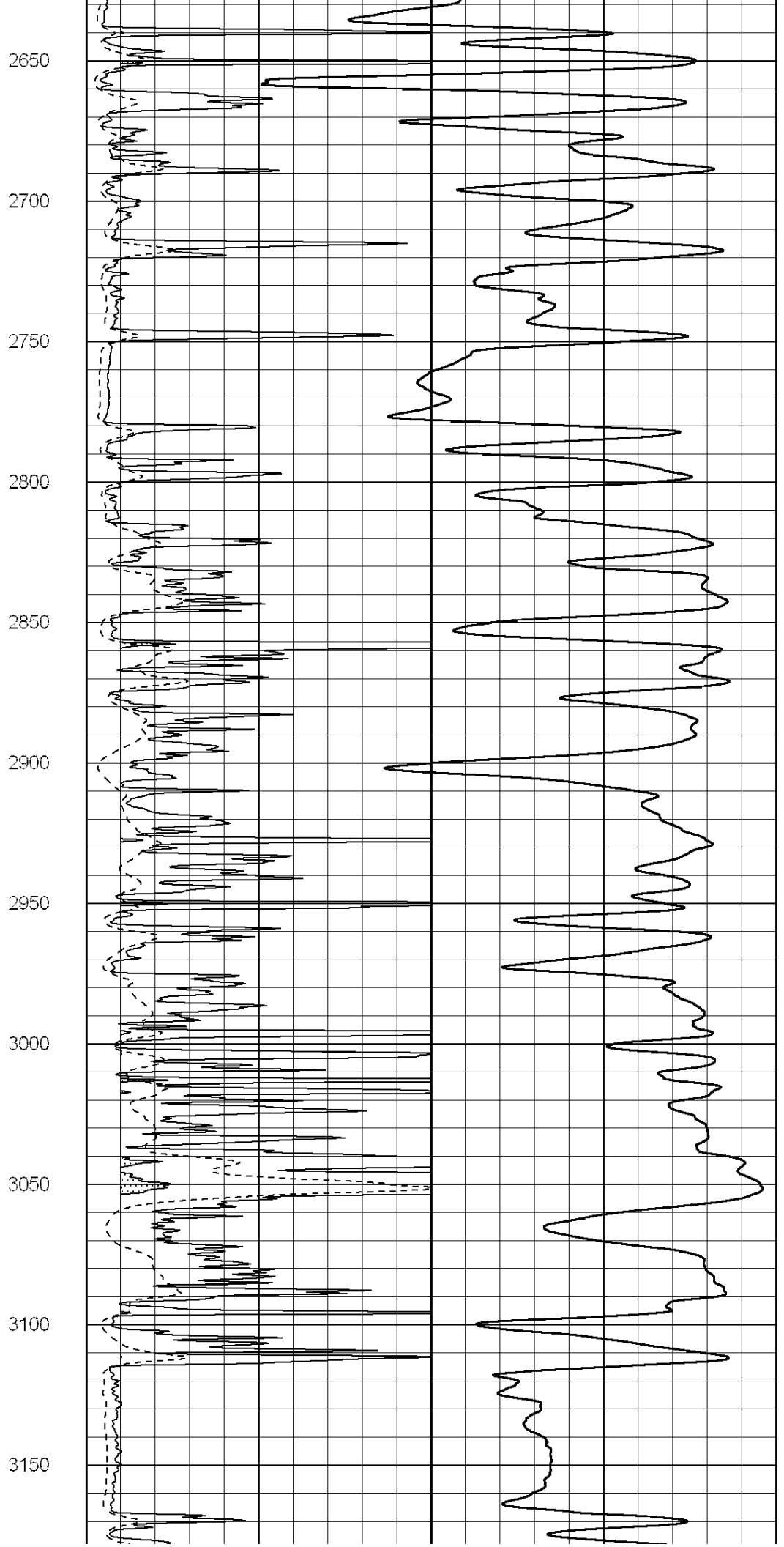
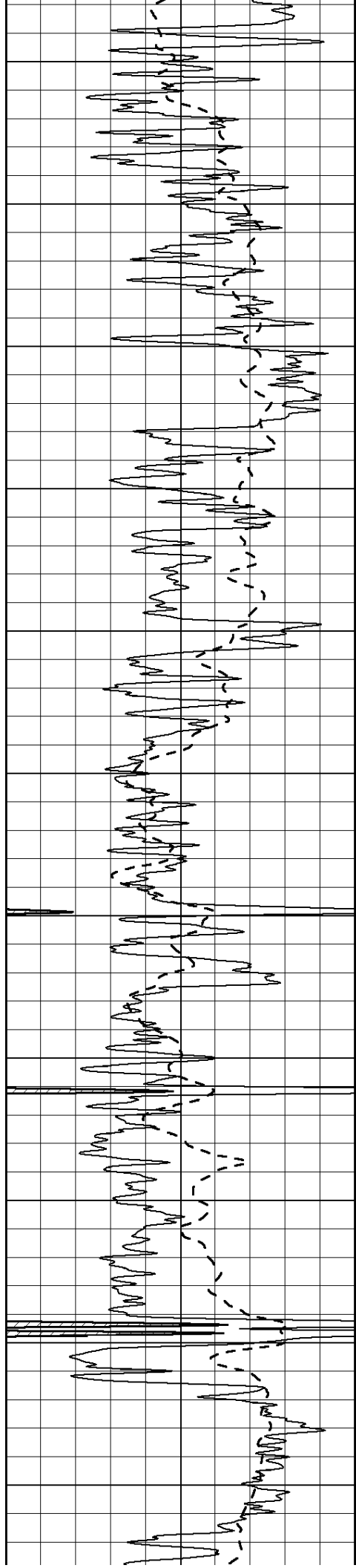
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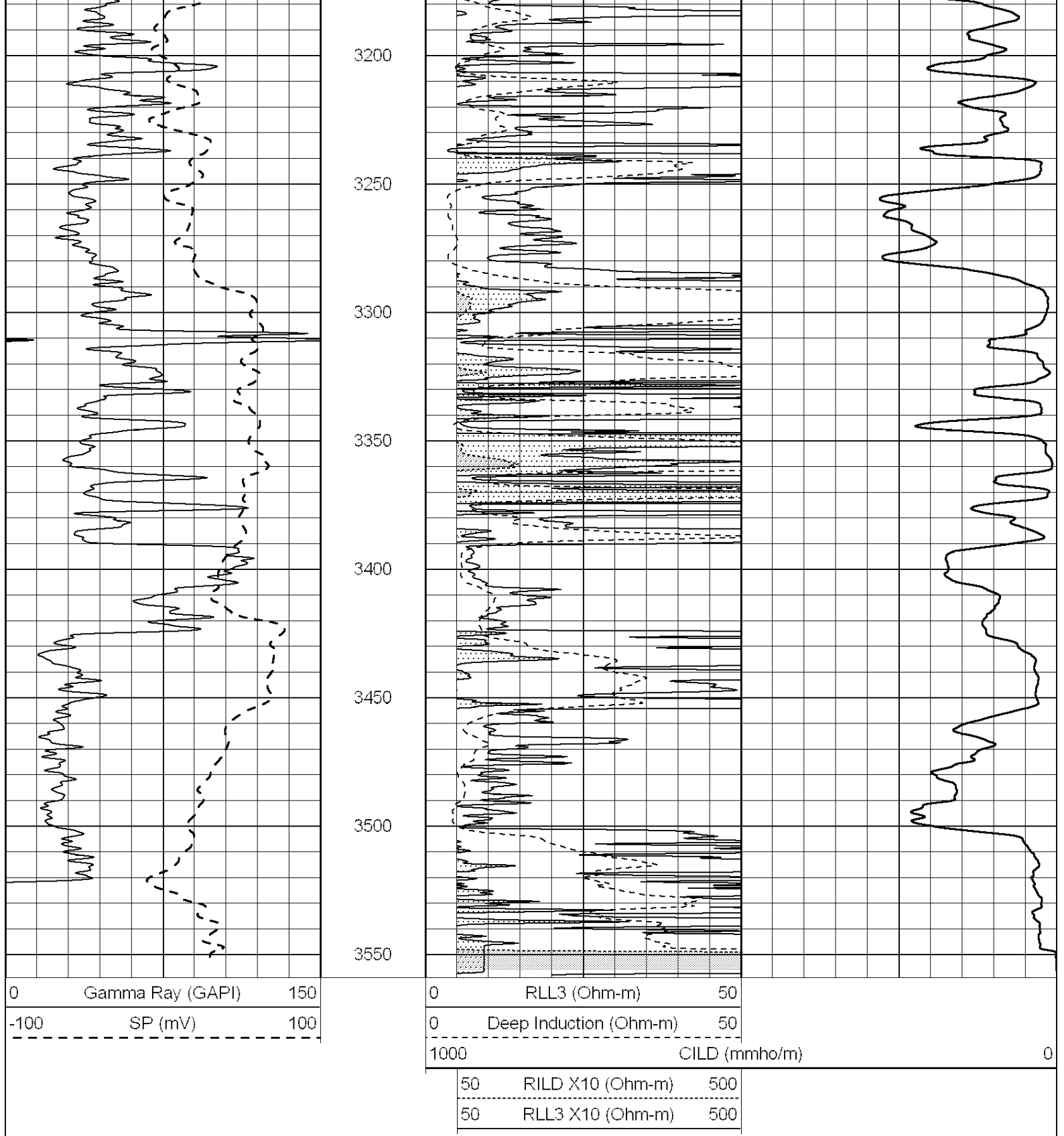
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2550

2600





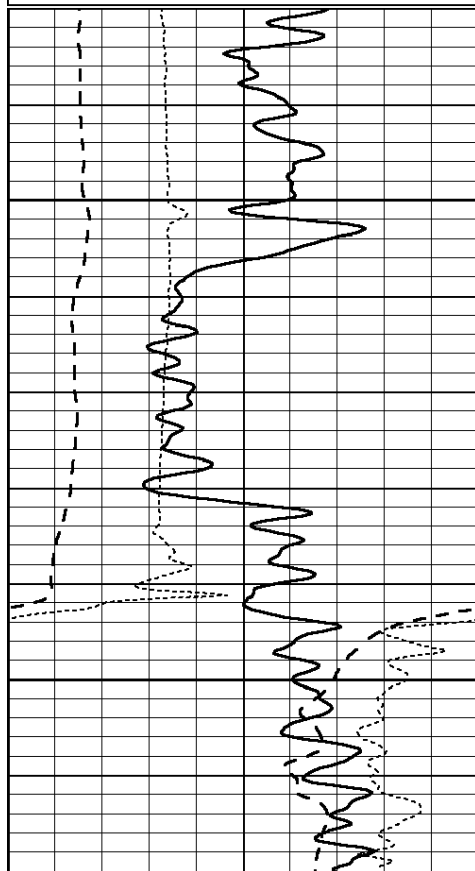


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ANHYDRITE

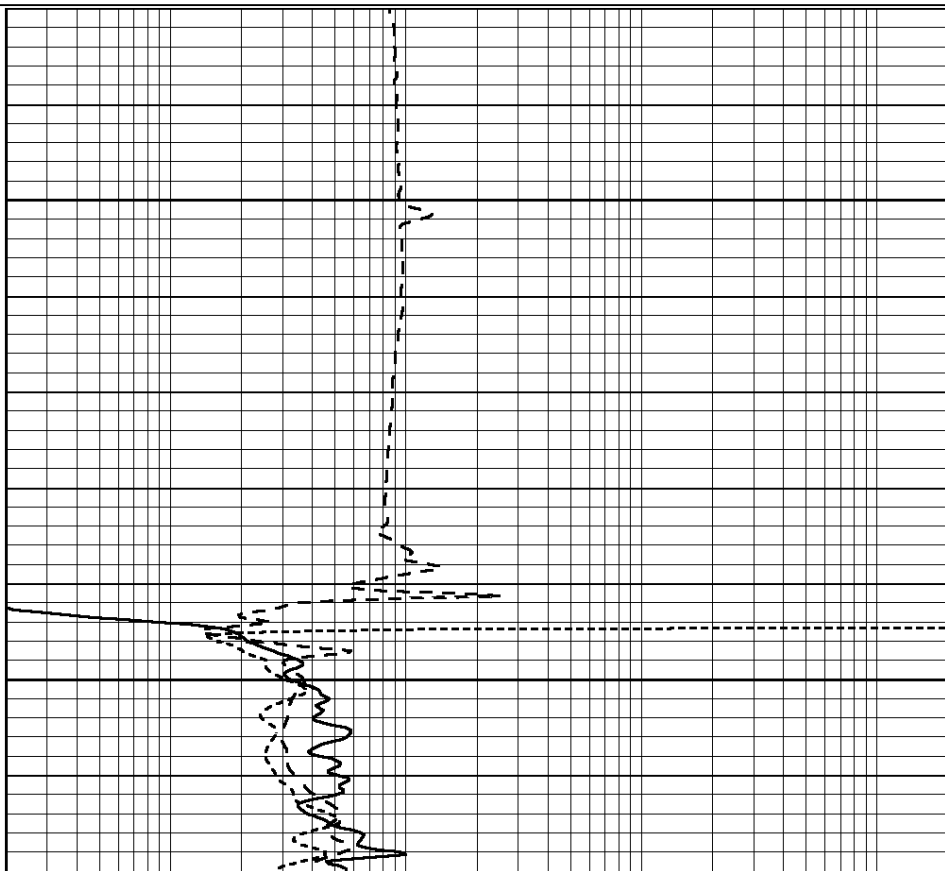
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Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Mon Oct 21 13:31:24 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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



0	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



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

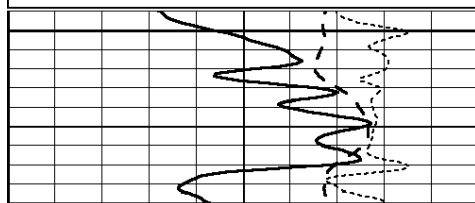


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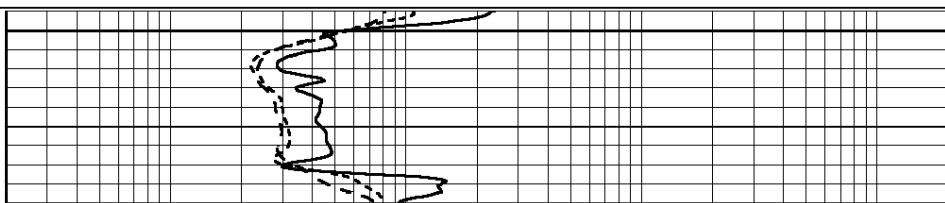
MAIN SECTION

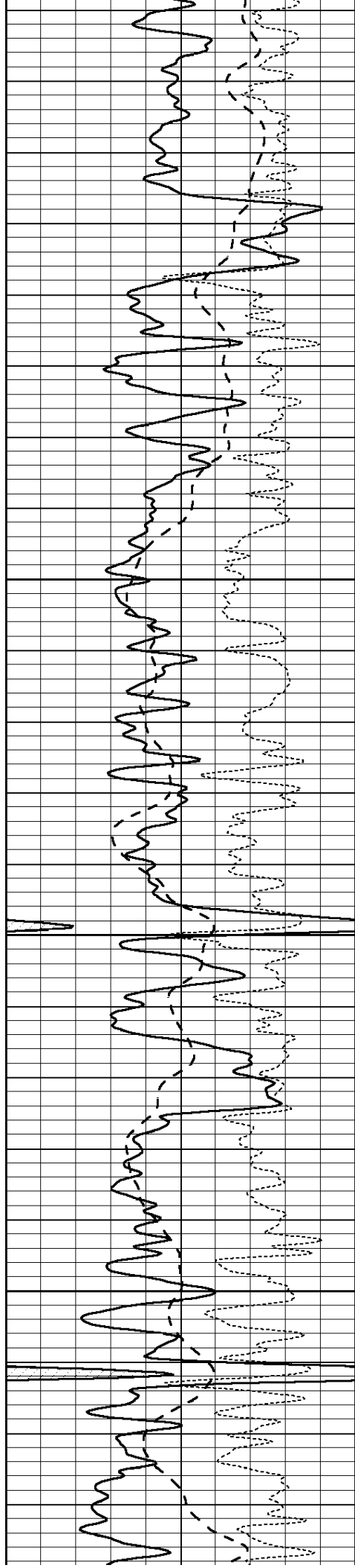
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Dataset Pathname: pass3.1
Presentation Format: _dil
Dataset Creation: Mon Oct 21 13:15:52 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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



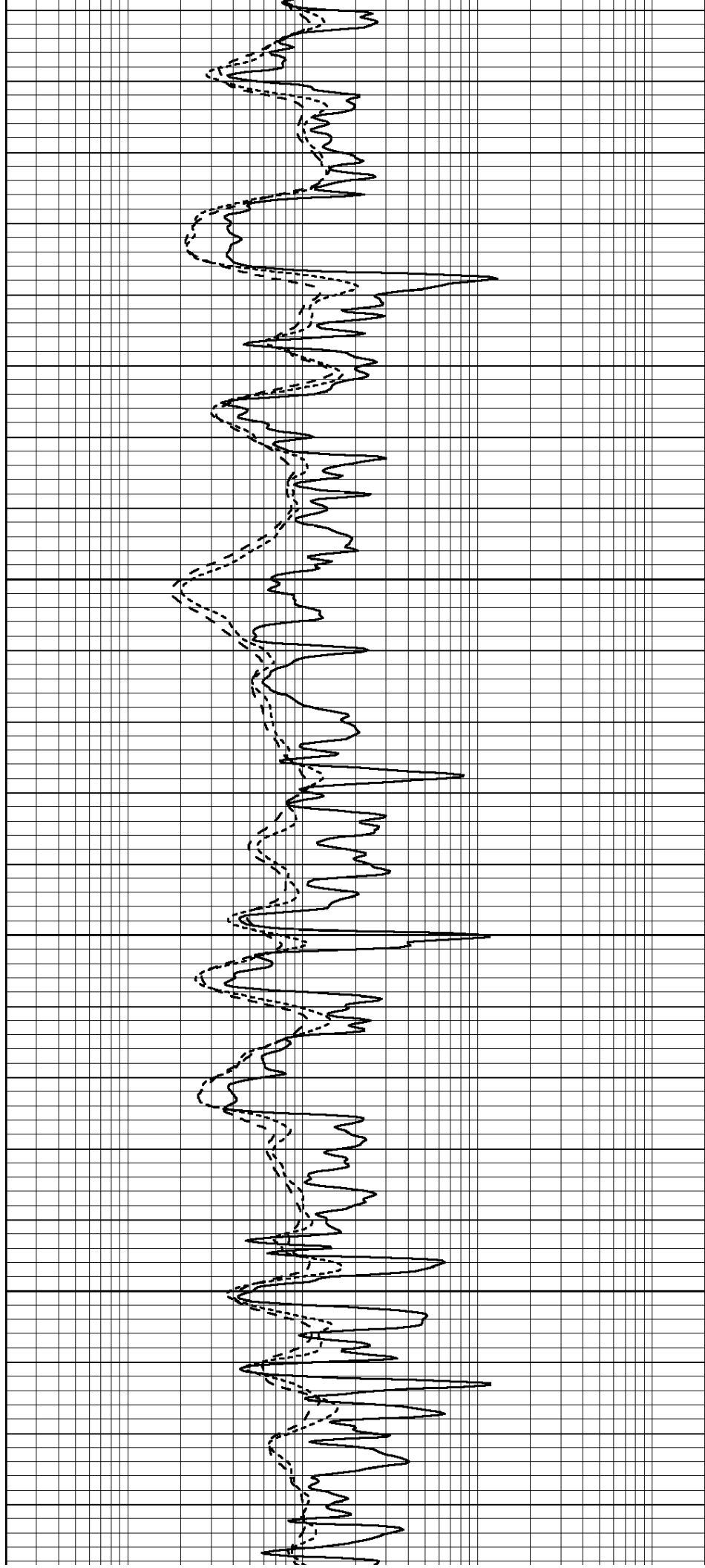


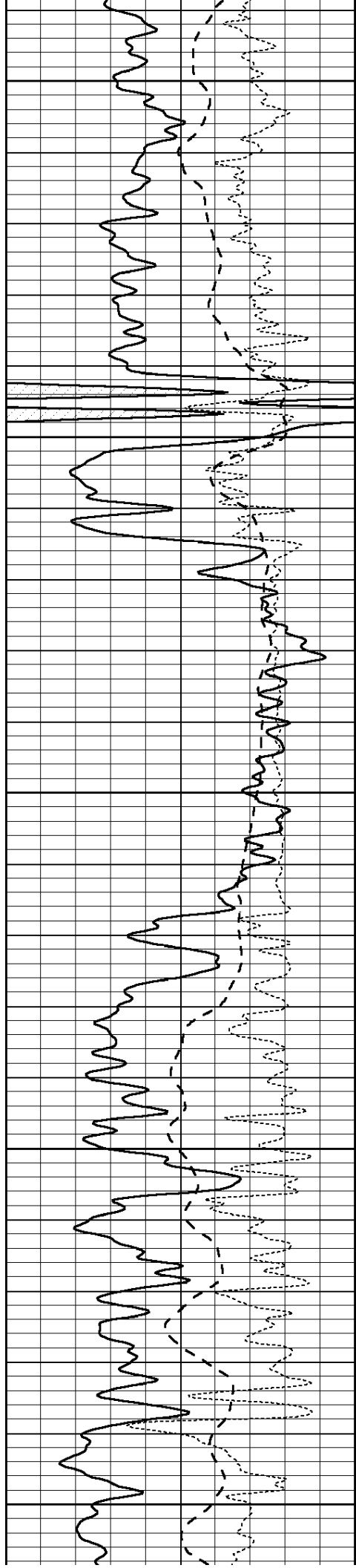
2850

2900

2950

3000





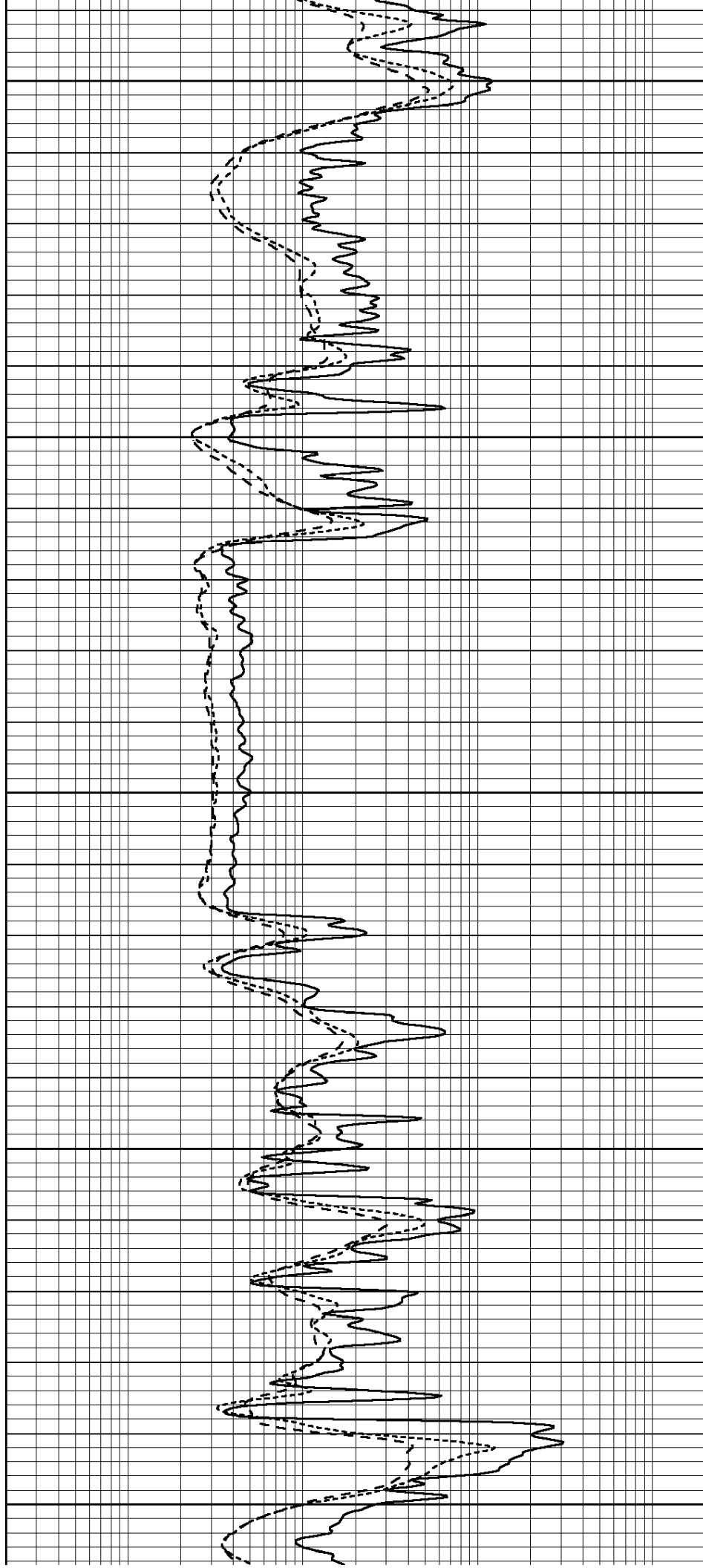
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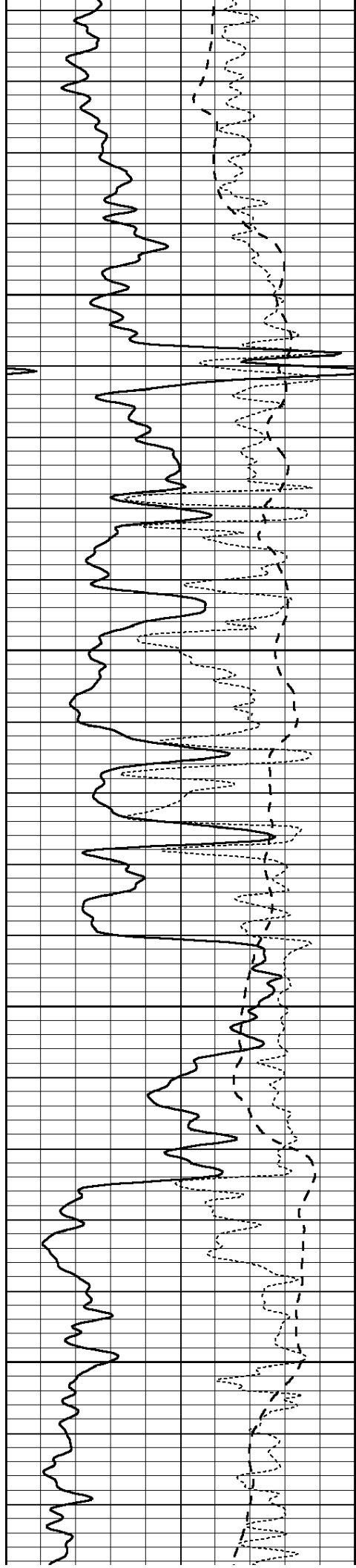
3100

3150

3200

3250



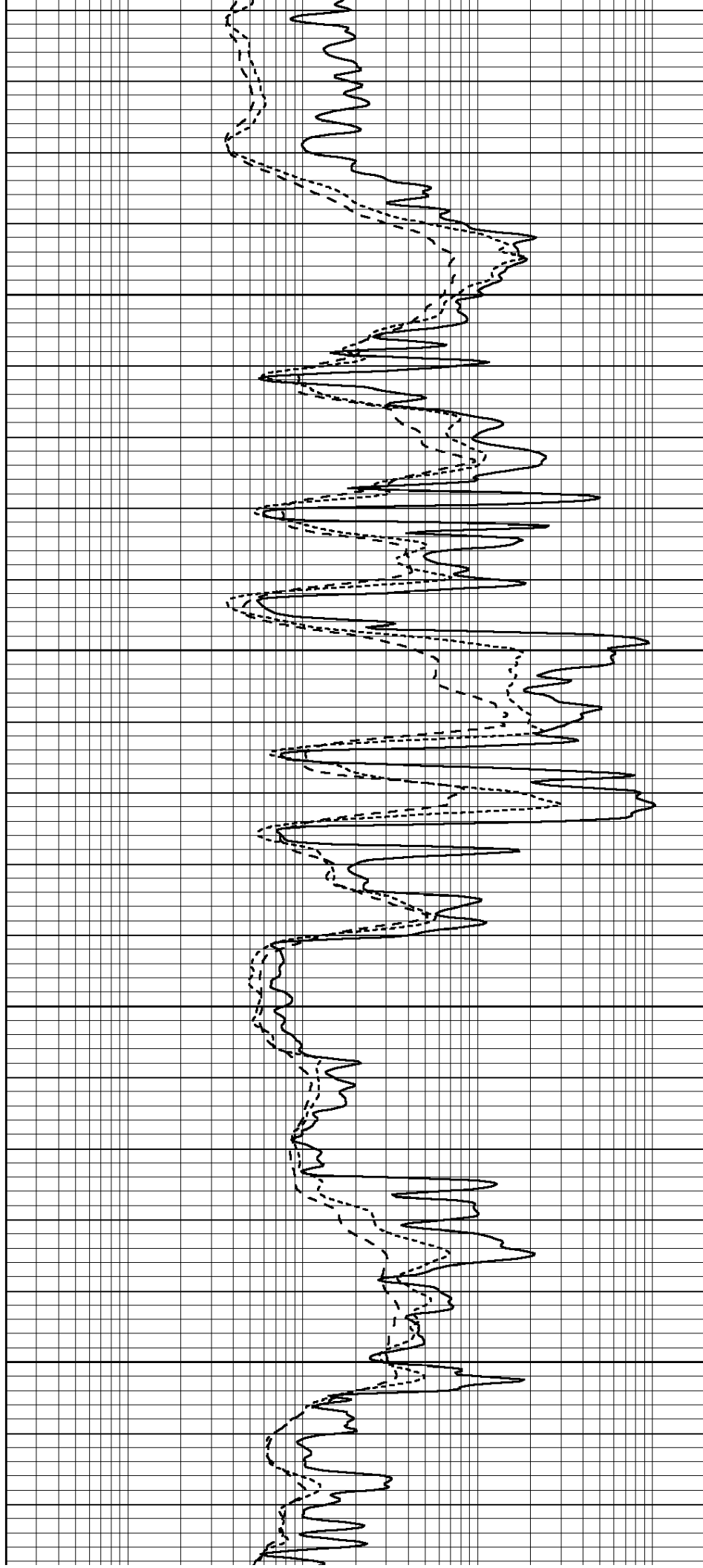


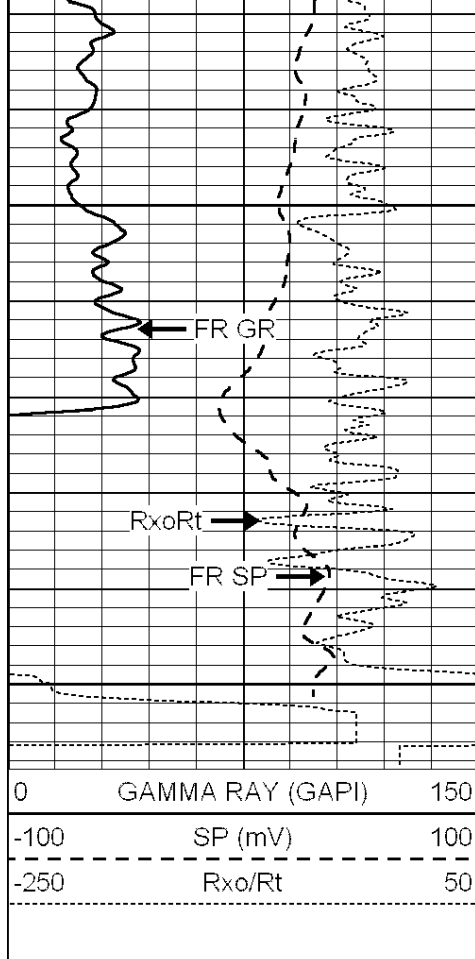
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3350

3400

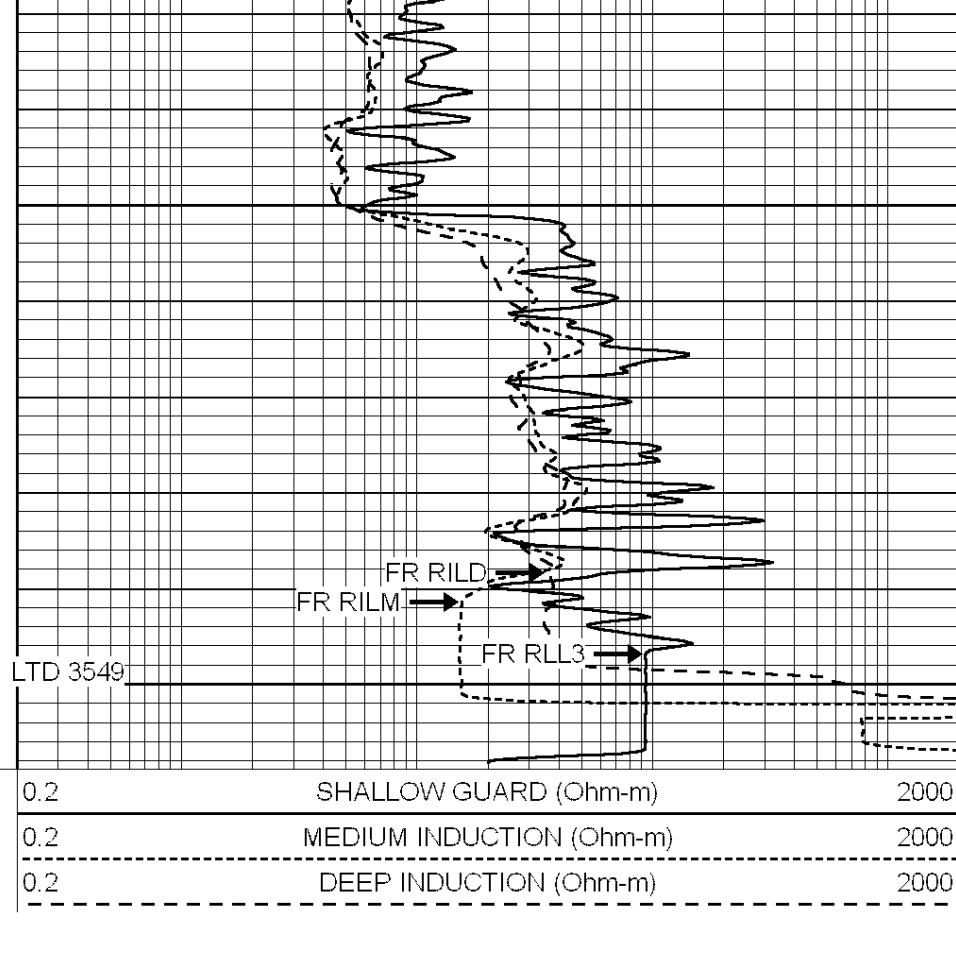
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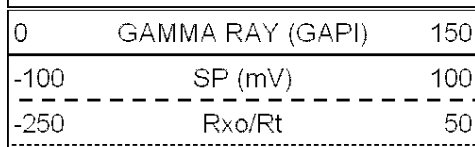
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3550

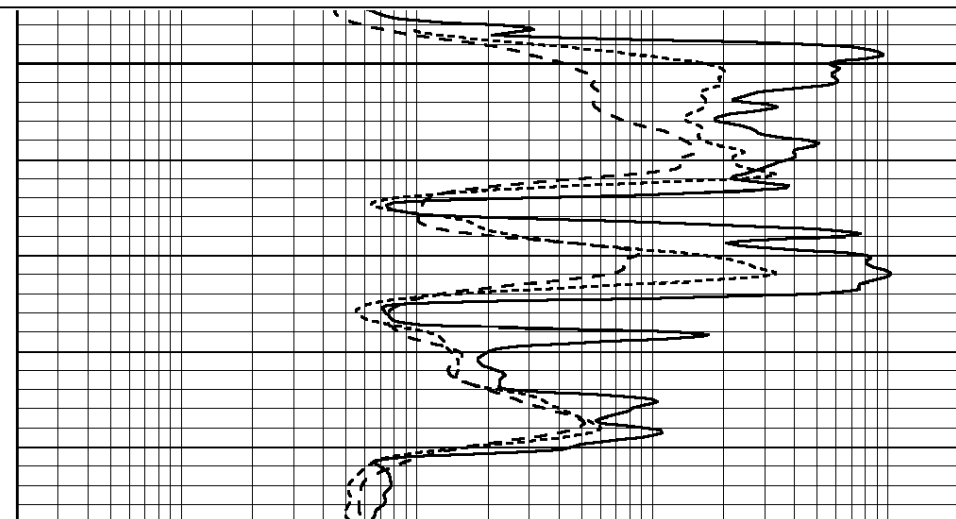
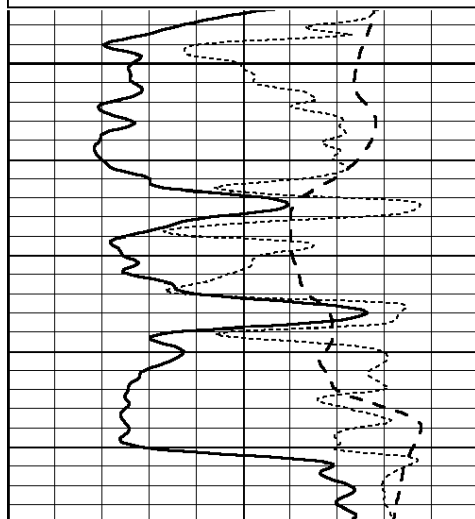
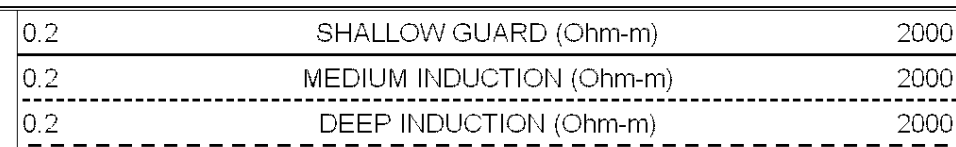


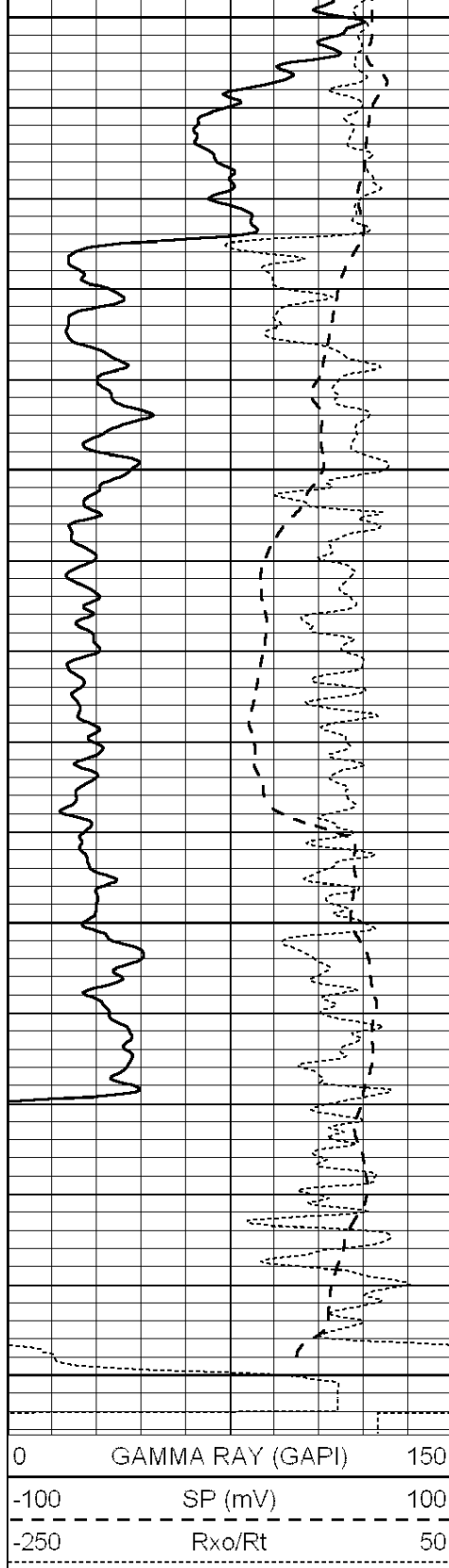
REPEAT SECTION

Database File: 010947ddn.db
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 Presentation Format: _dil
 Dataset Creation: Mon Oct 21 13:14:02 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

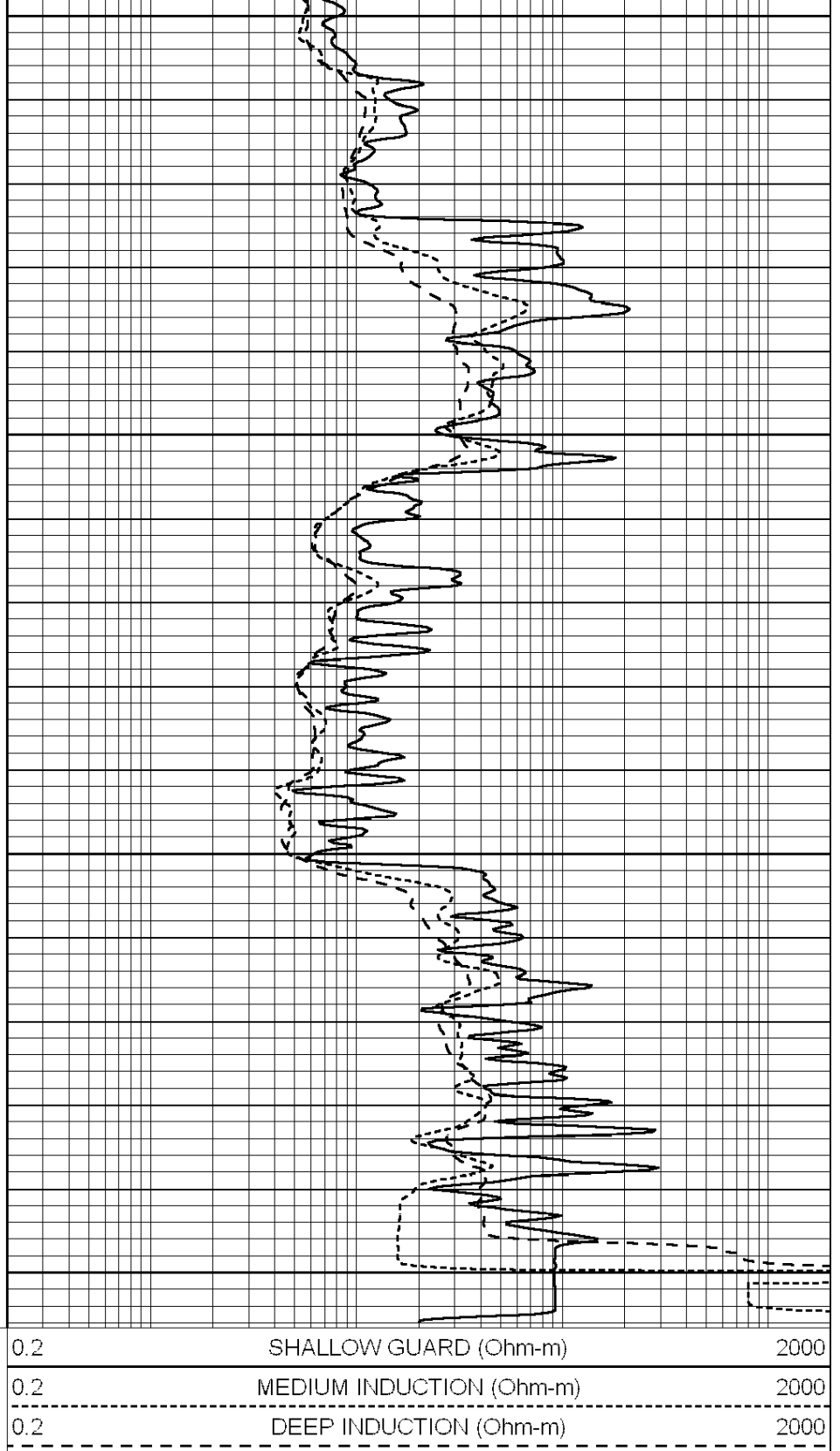


3350





3400
3450
3500
3550



Calibration Report

Database File: 010947ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Mon Oct 21 13:14:02 2013 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		

Compensated Density Calibration Report

Serial-Model:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Mar 19 19:07:19 2012

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1015.91	497.51	cps
Aluminum	2.600	g/cc	227.67	350.20	cps
Spine Angle = 76.79			Density/Spine Ratio = 0.579		
	Size		Reading		
Small Ring	8.00	in	3.21	V	
Large Ring	14.00	in	5.46	V	

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
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Background Reading:	0.0	cps
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Calibrator Reading:	175.0	cps
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Sensitivity:	0.8371	GAPI/cps
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