



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company	CITATION OIL & GAS CORP.		
Well	SLIMMER #9		
Field	BEMIS-SHUTTS		
County	ELLIS	State	KANSAS
Location:	API # : 15-051-26542-00-00		Other Services
	2310' FSL & 2014' FWL		CNL/CDL/PE
	W2 - NE - NE - SW		MEL
	SEC 19 TWP 11S RGE 16W		
Permanent Datum	GROUND LEVEL	Elevation	1926
Log Measured From	KELLY BUSHING 11' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Elevation		K.B. 1937	
		D.F. 1935	
		G.L. 1926	
Date	6/15/13		
Run Number	ONE		
Depth Driller	3518		
Depth Logger	3518		
Bottom Logged Interval	3516		
Top Log Interval	00		
Casing Driller	1205		
Casing Logger	1120		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2.250	
Density / Viscosity	9.1 / 52		
pH / Fluid Loss	10.5 / 8.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.55 @ 92F		
Rmf @ Meas. Temp	0.41 @ 96F		
Rmc @ Meas. Temp	0.66 @ 96F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.47 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
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 SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HAYS, KS. - SOUTH HWY 183 TO RIVER RD. - EAST 8.5 MILES SOUTH INTO

0 Gamma Ray (GAPI) 150

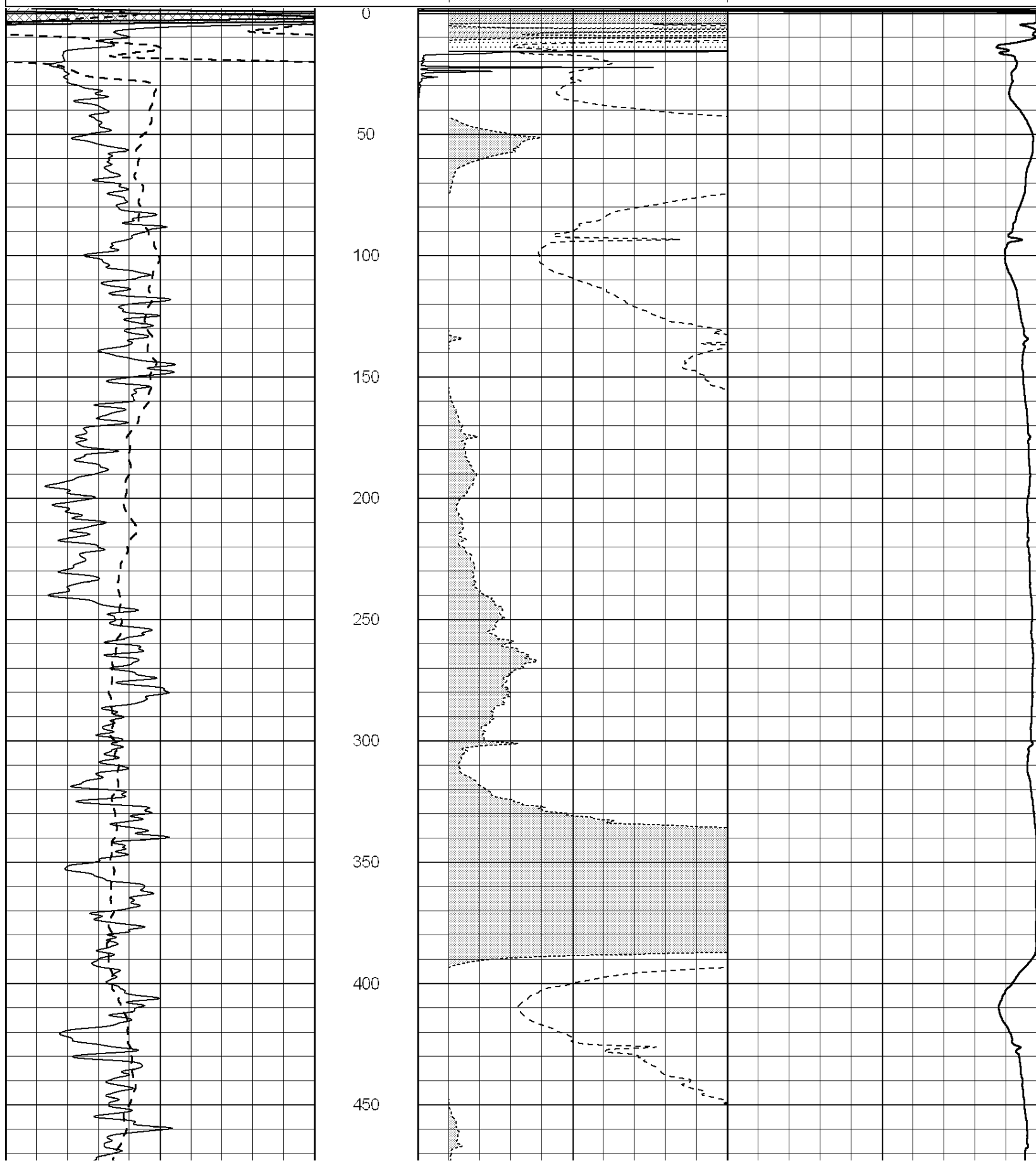
0 RLL3 (Ohm-m) 50

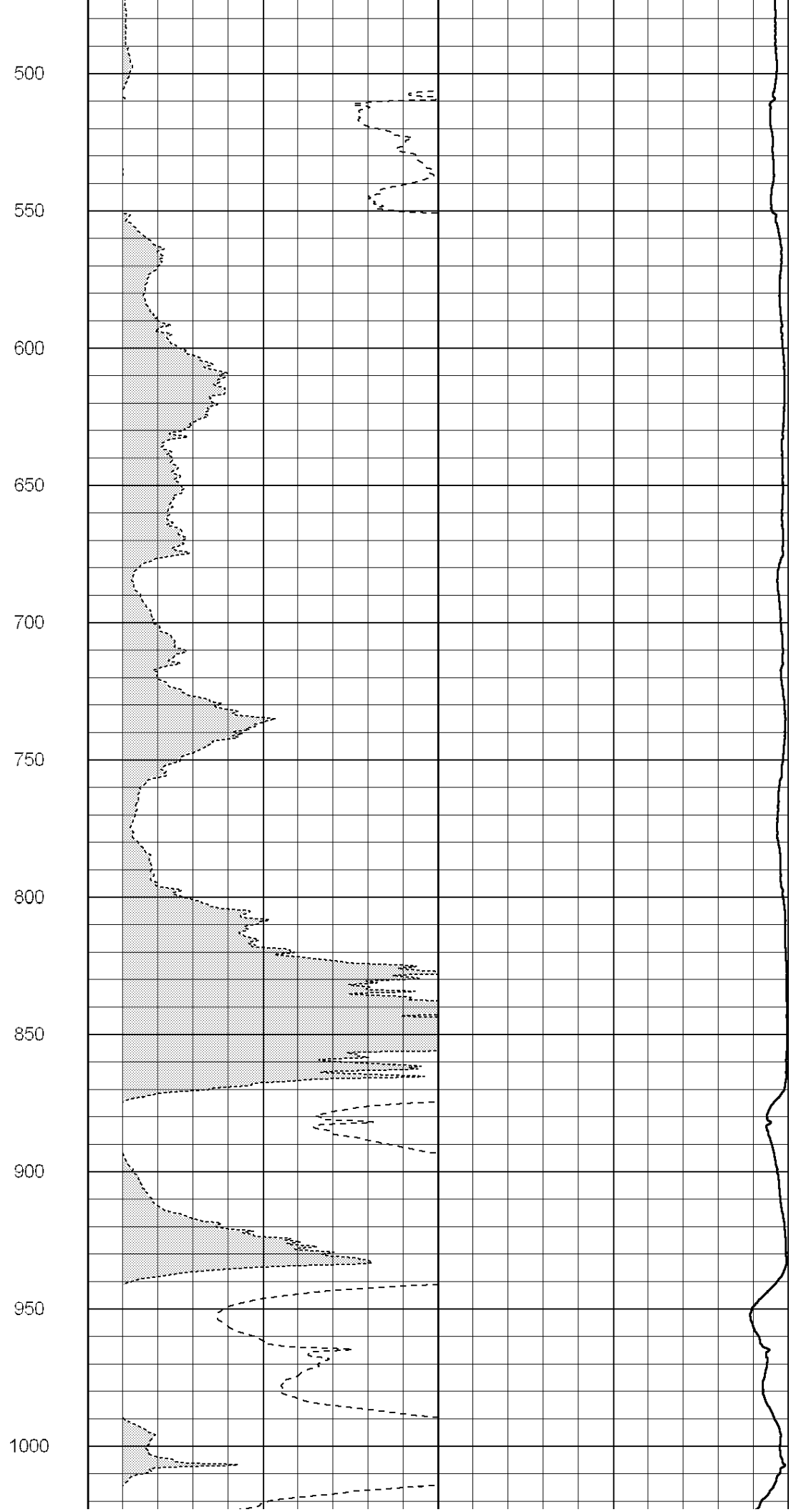
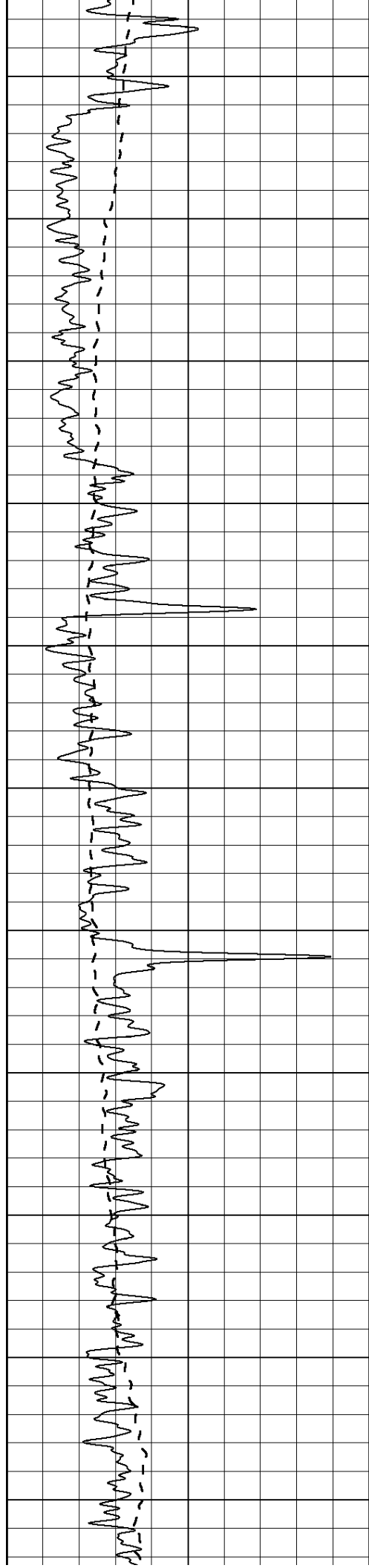
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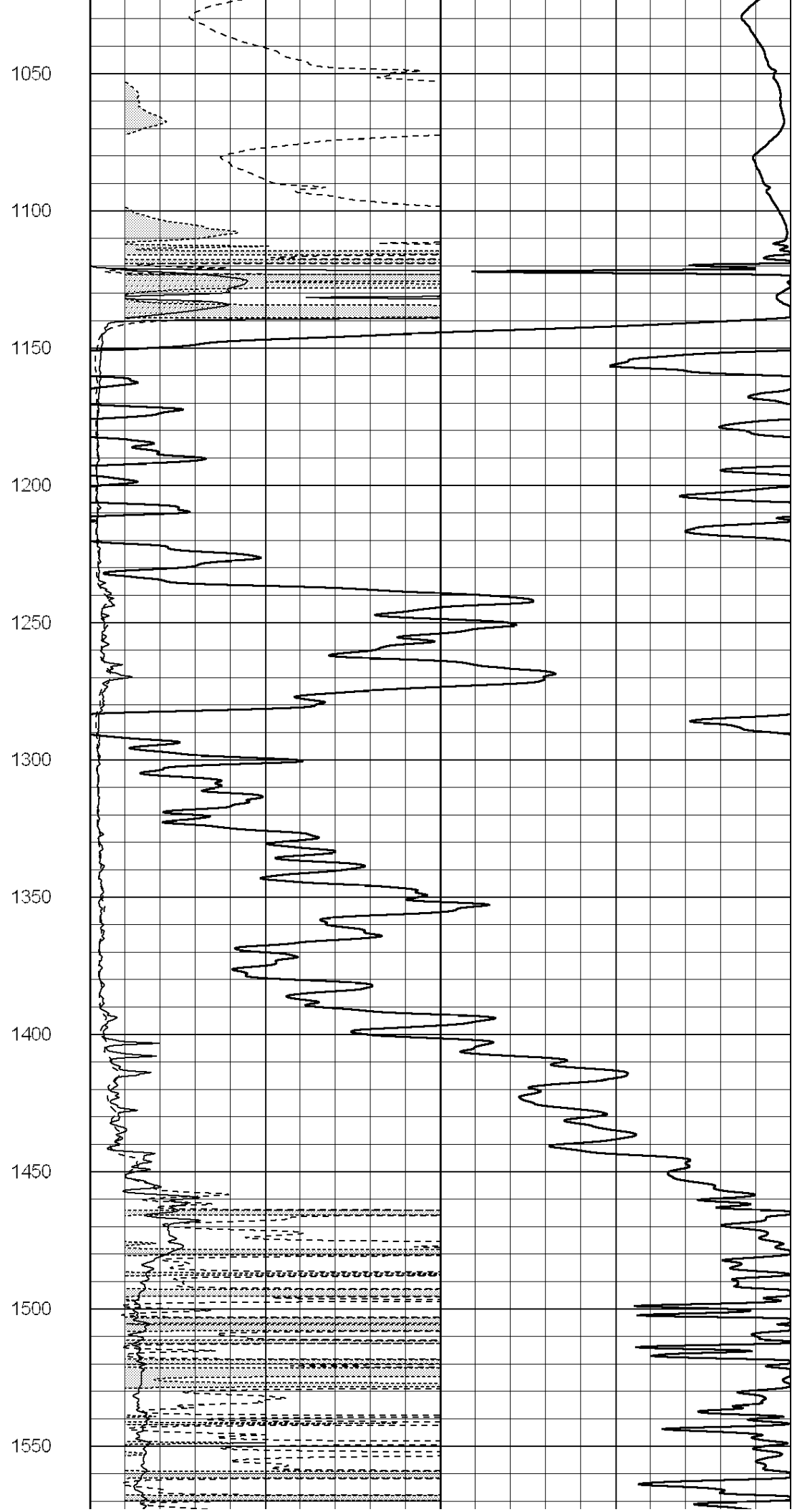
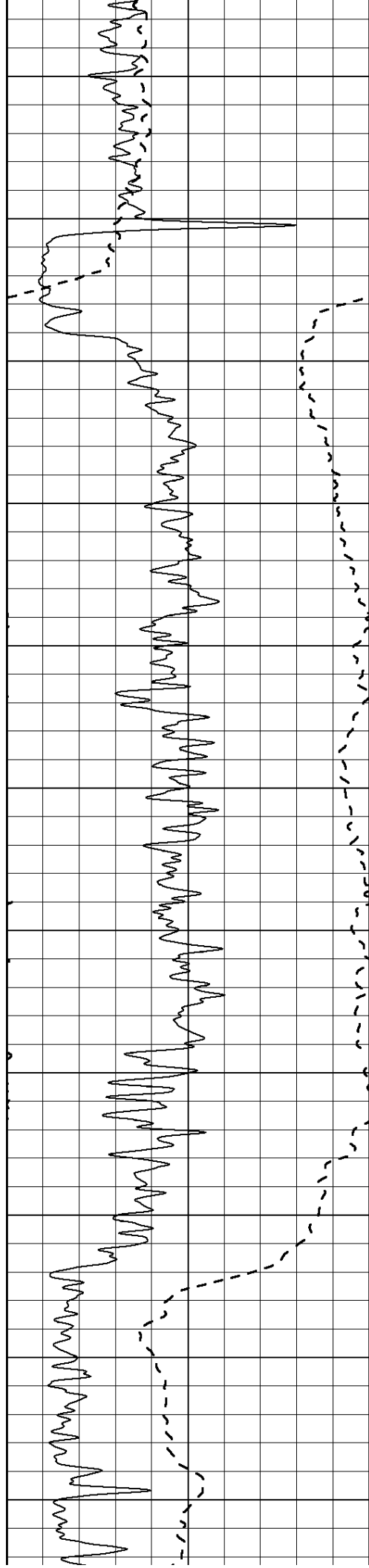
1000 CILD (mmho/m) 0

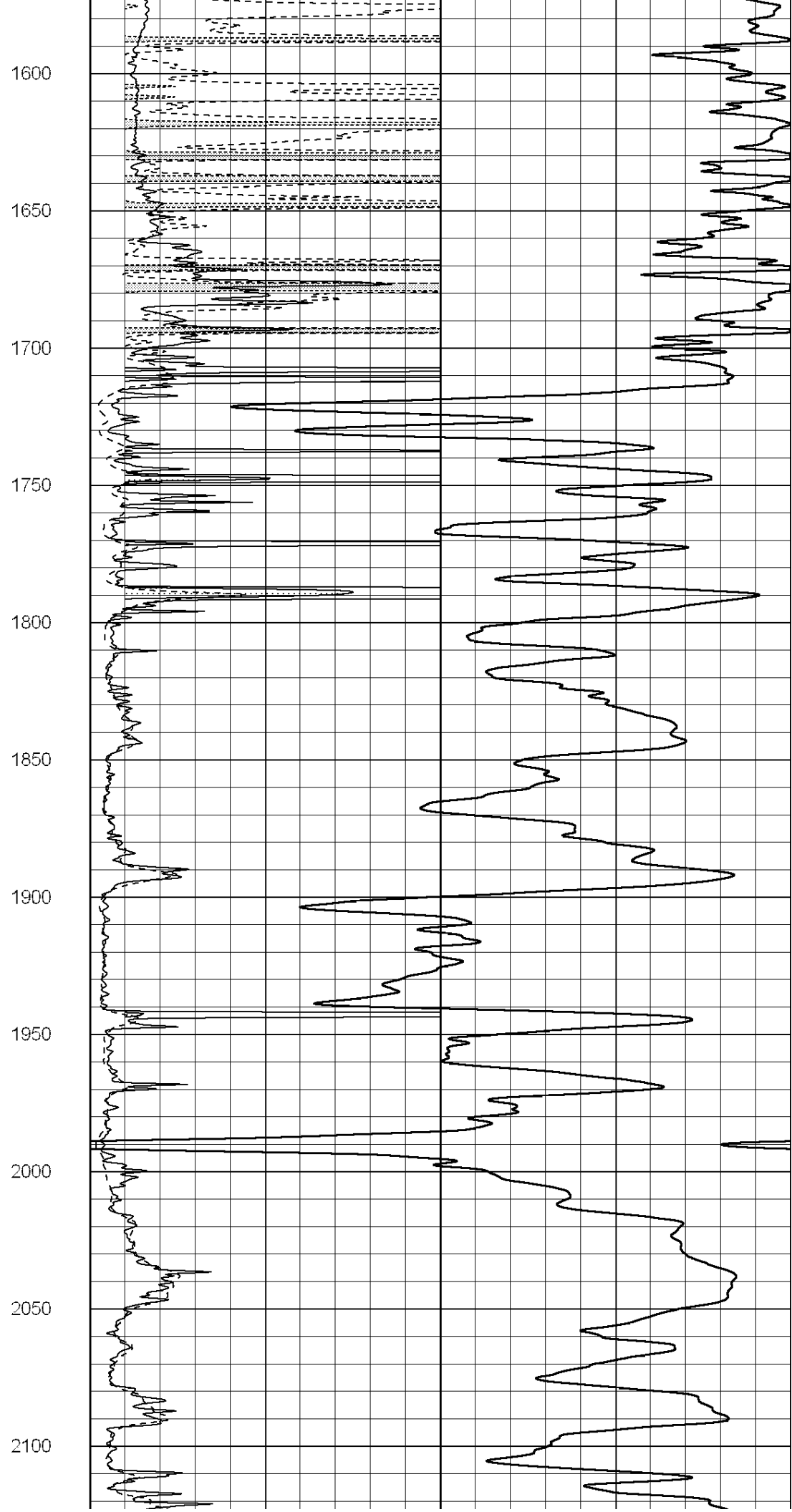
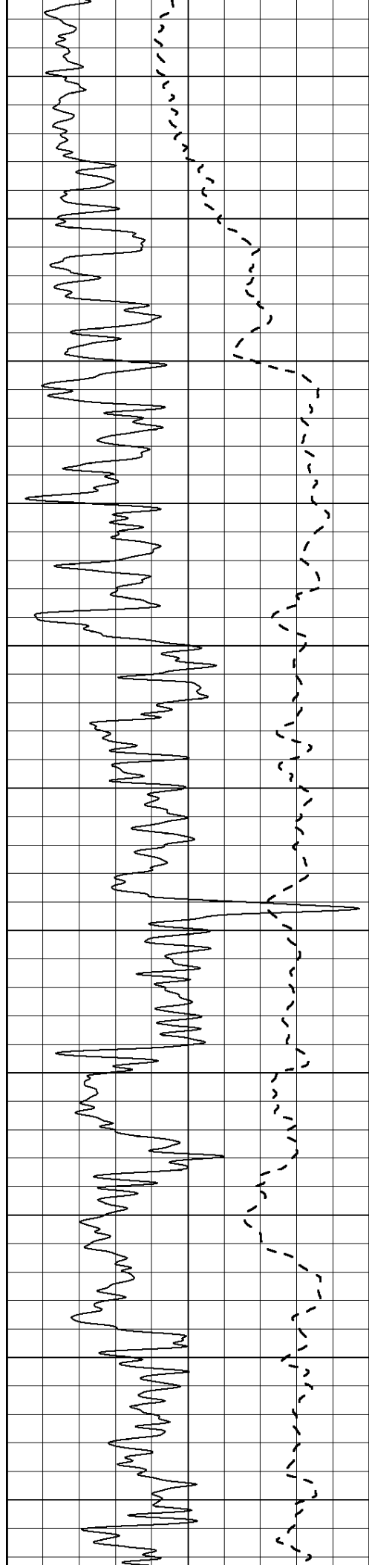
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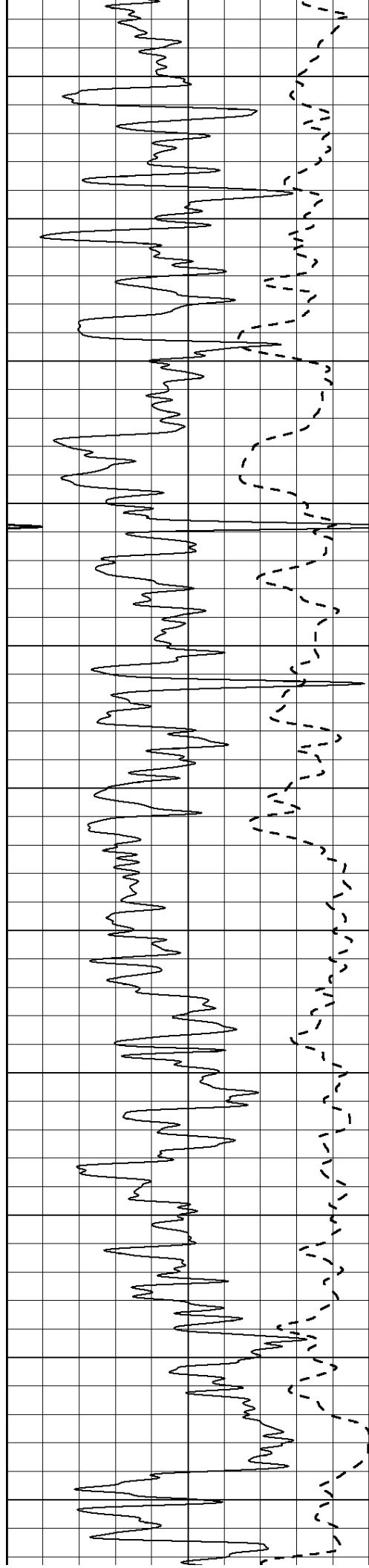
50 RLL3 X10 (Ohm-m) 500











2150

2200

2250

2300

2350

2400

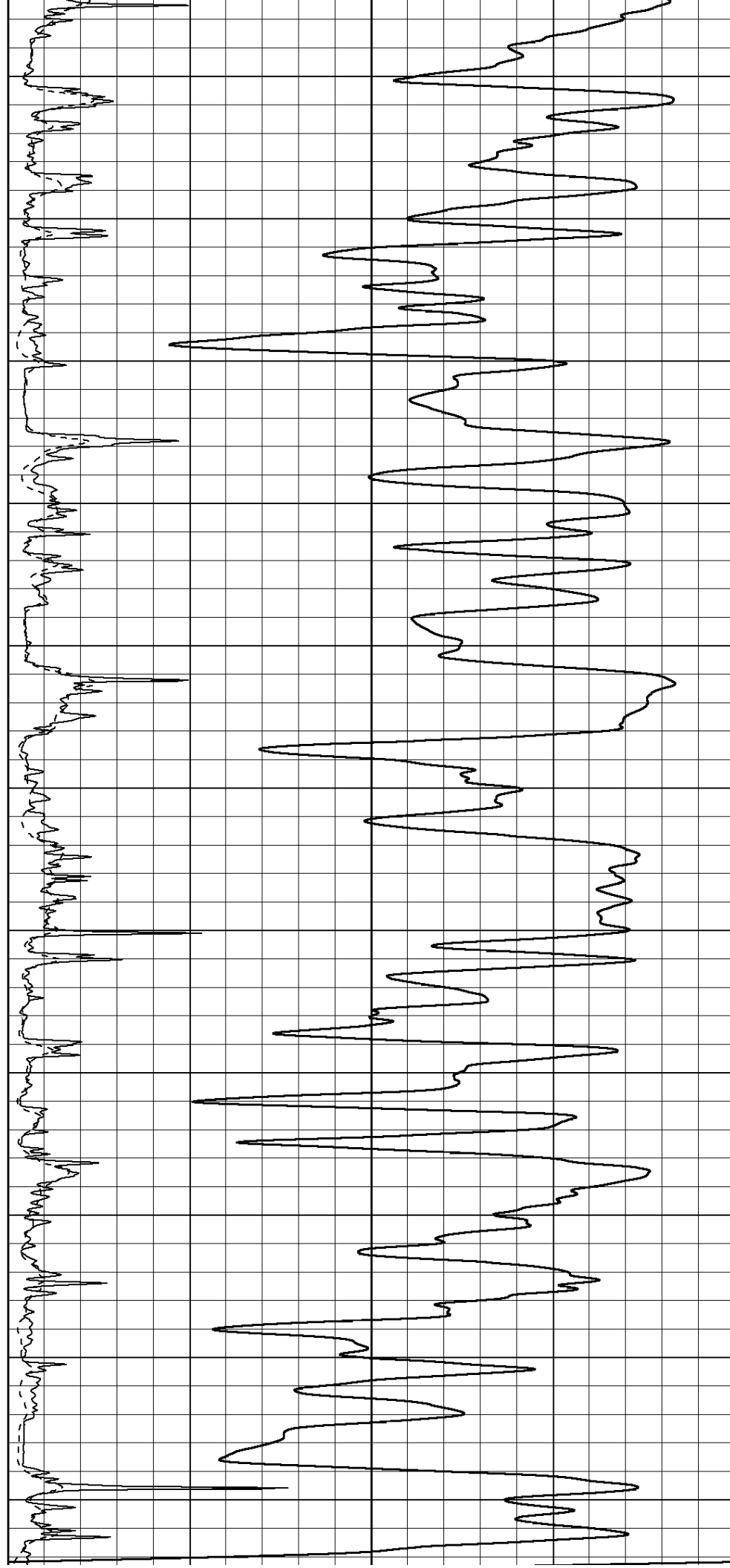
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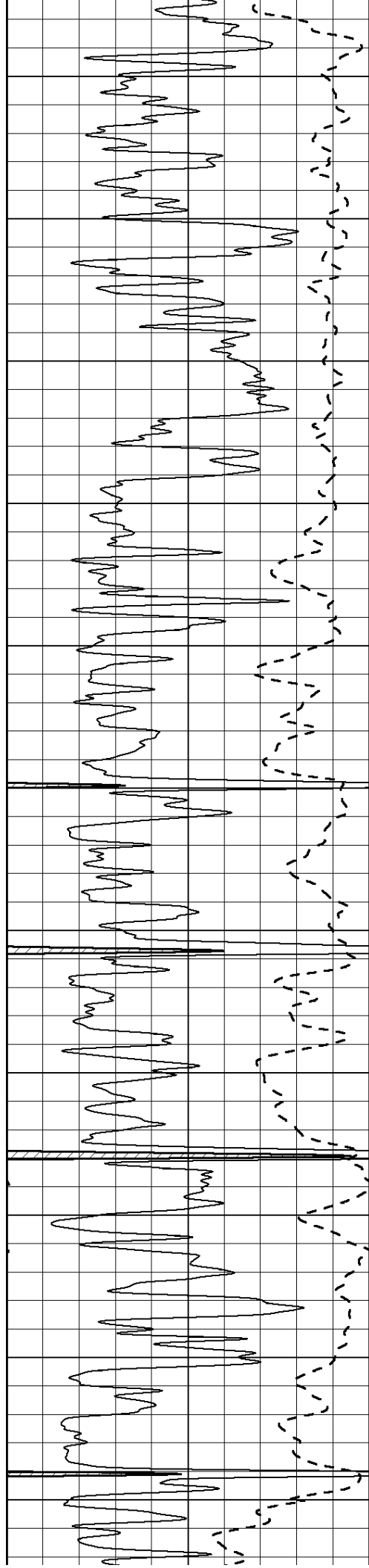
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2550

2600

2650





2700

2750

2800

2850

2900

2950

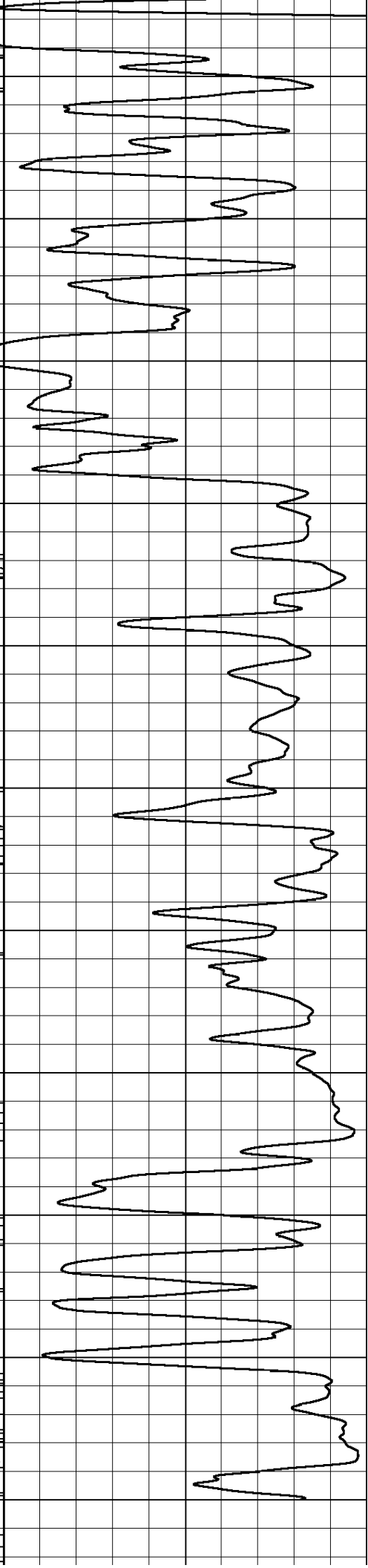
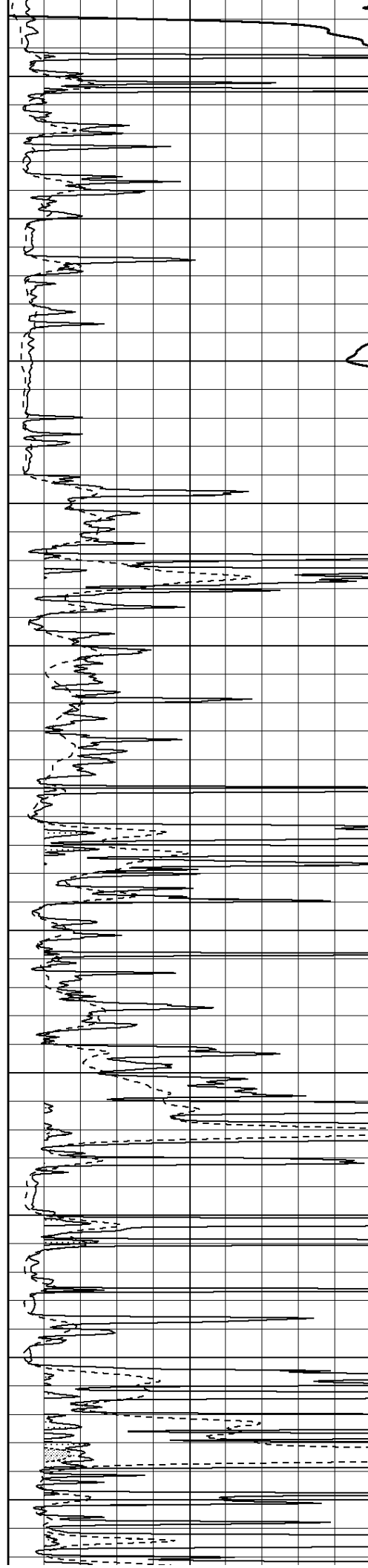
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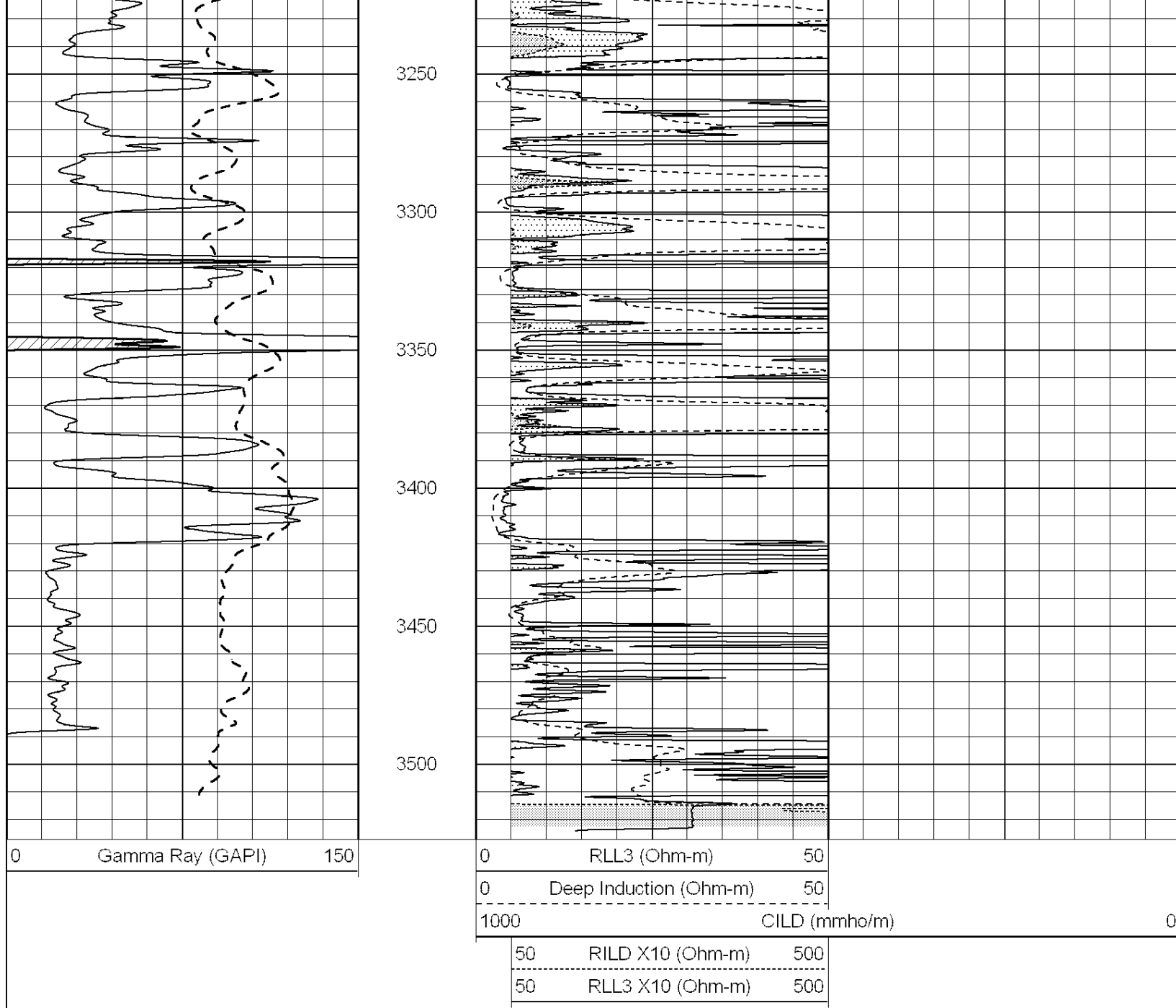
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3100

3150

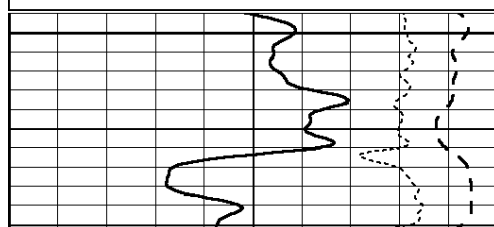
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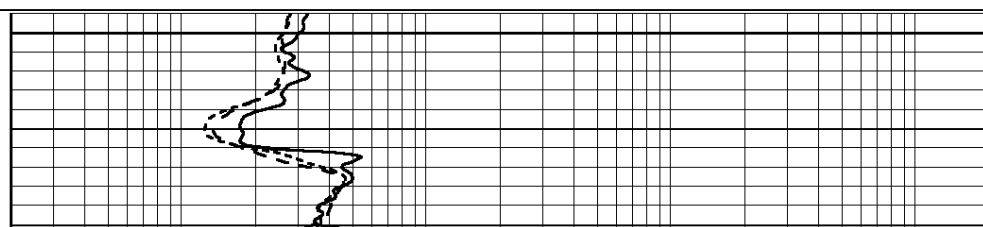


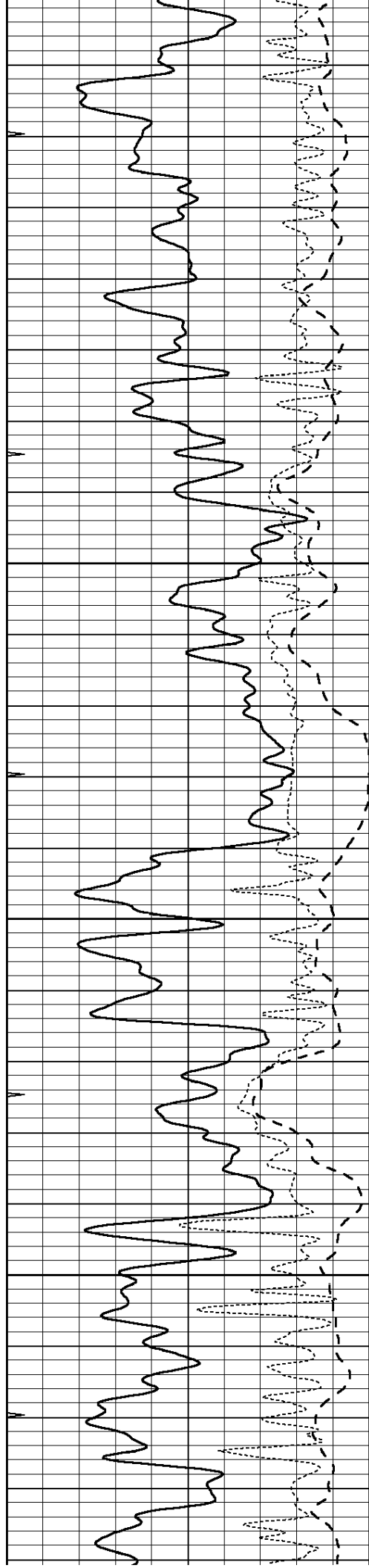
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 Presentation Format: _dil
 Dataset Creation: Sun Jun 16 00:42:50 2013
 Charted by: Depth in Feet scaled 1:240

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	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



2500



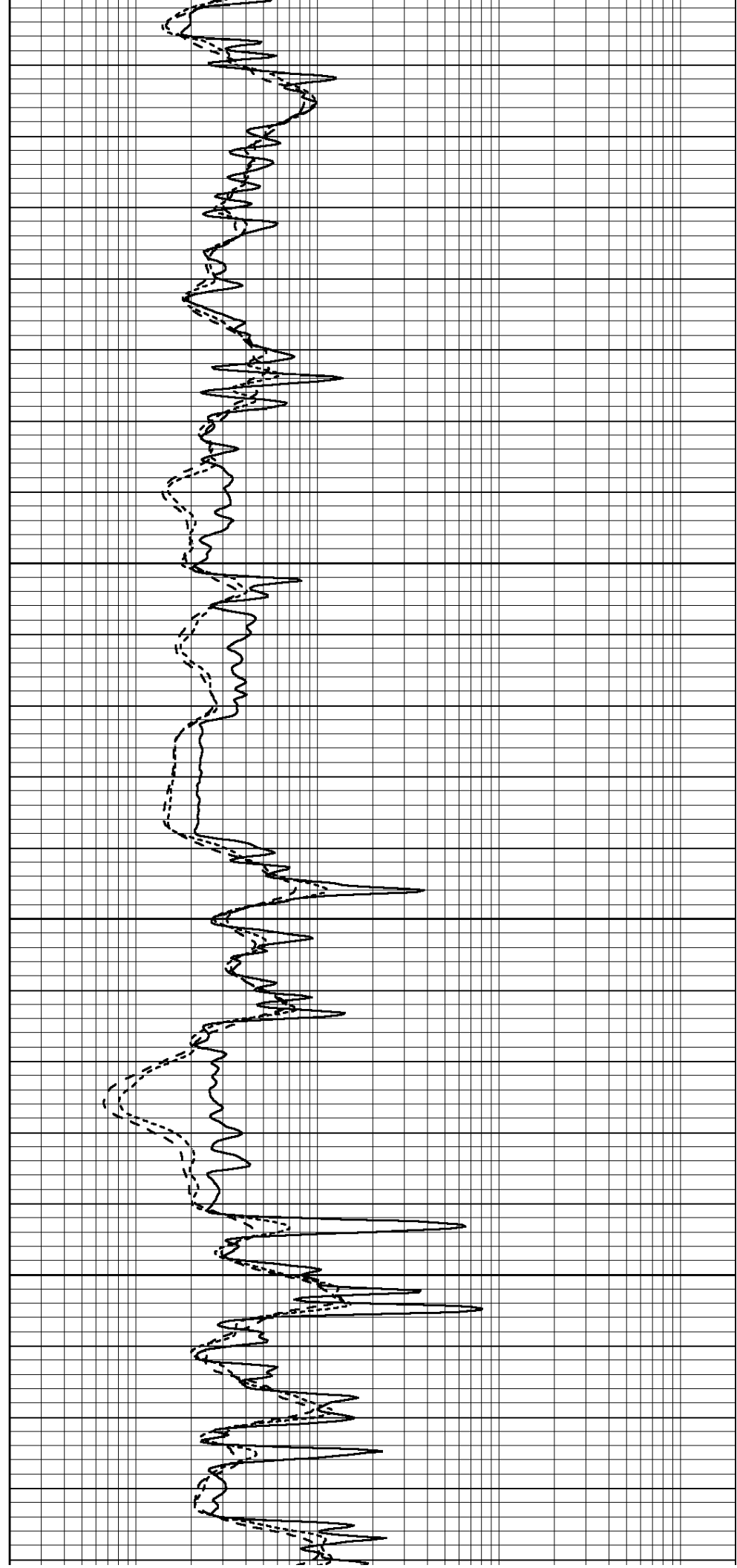


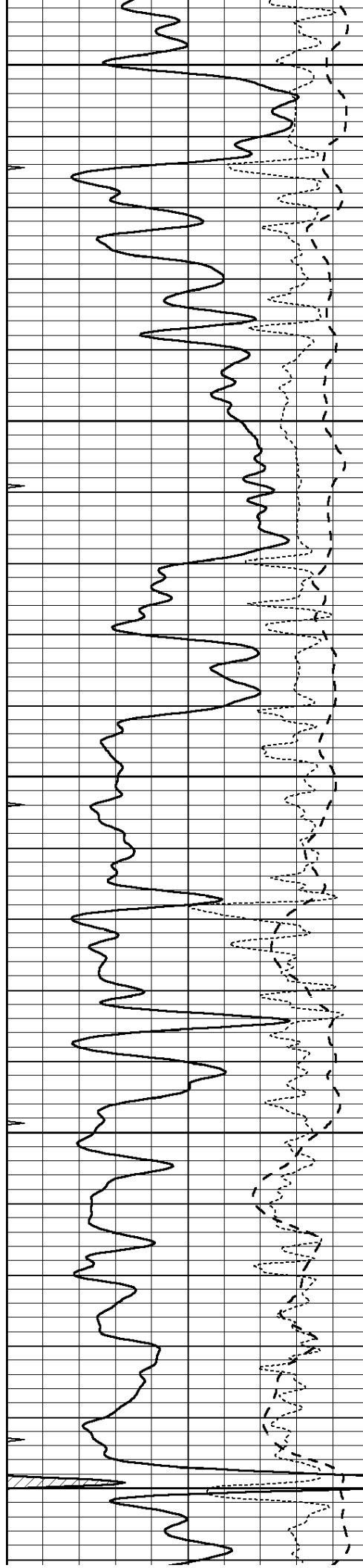
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2600

2650

2700





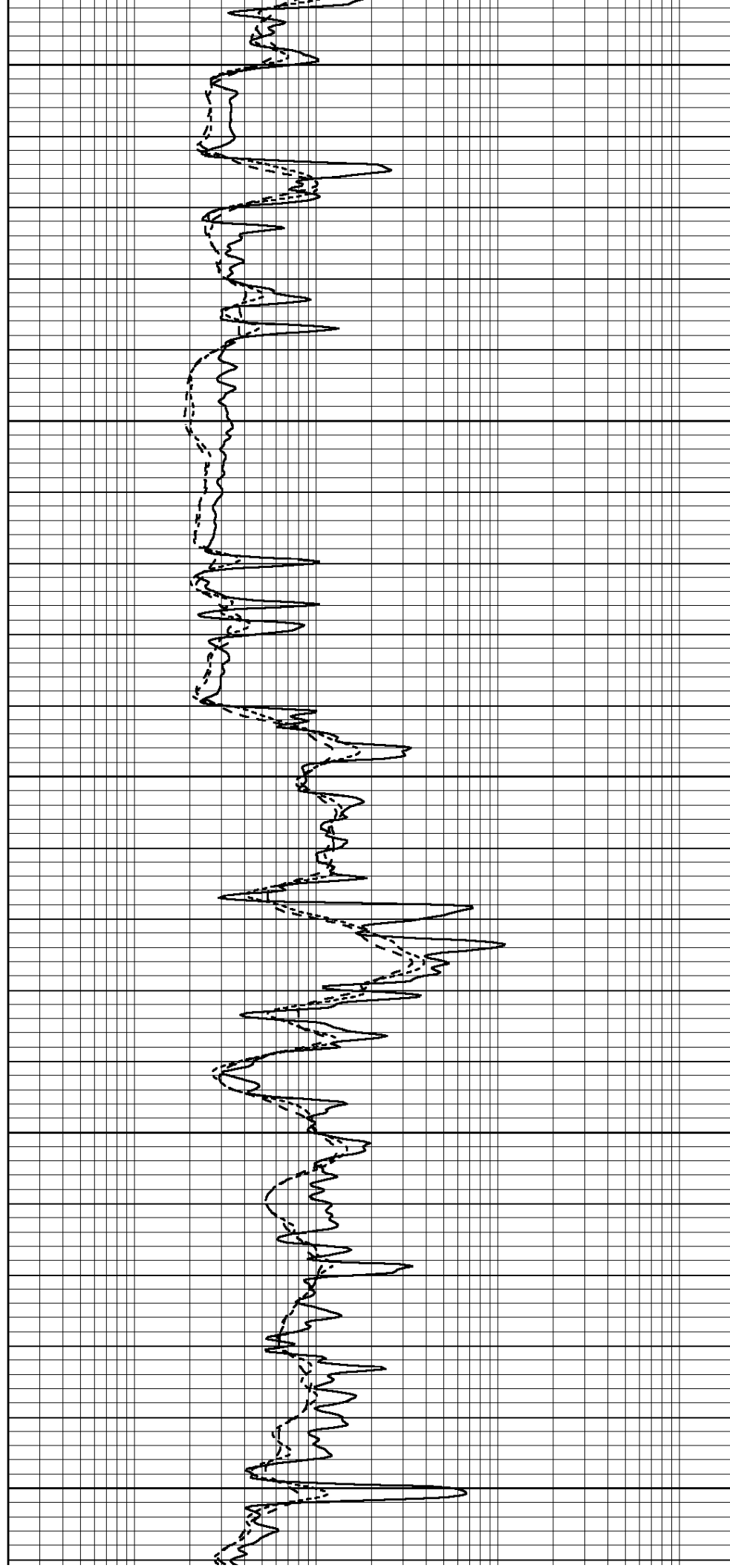
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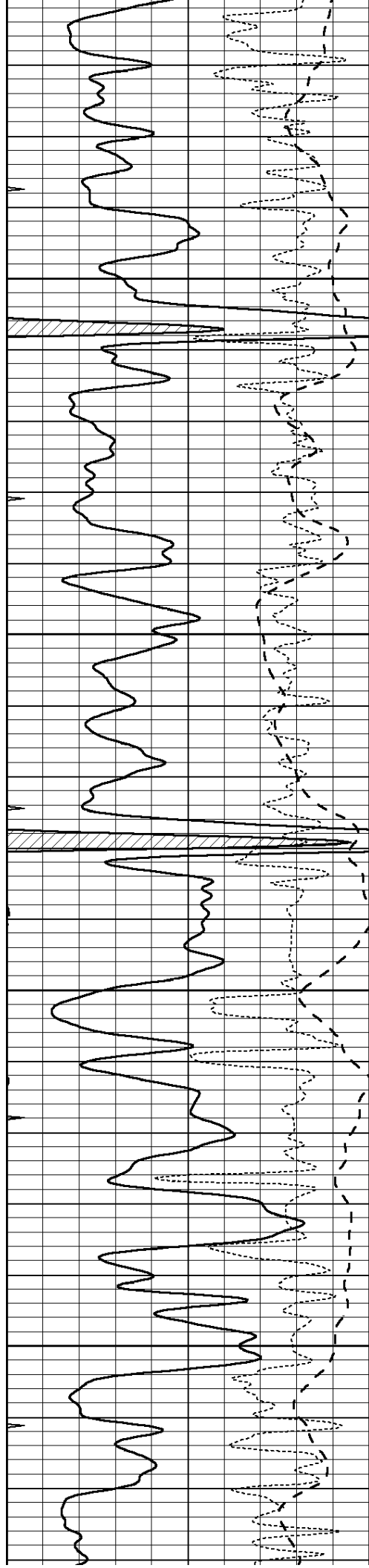
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2850

2900

2950



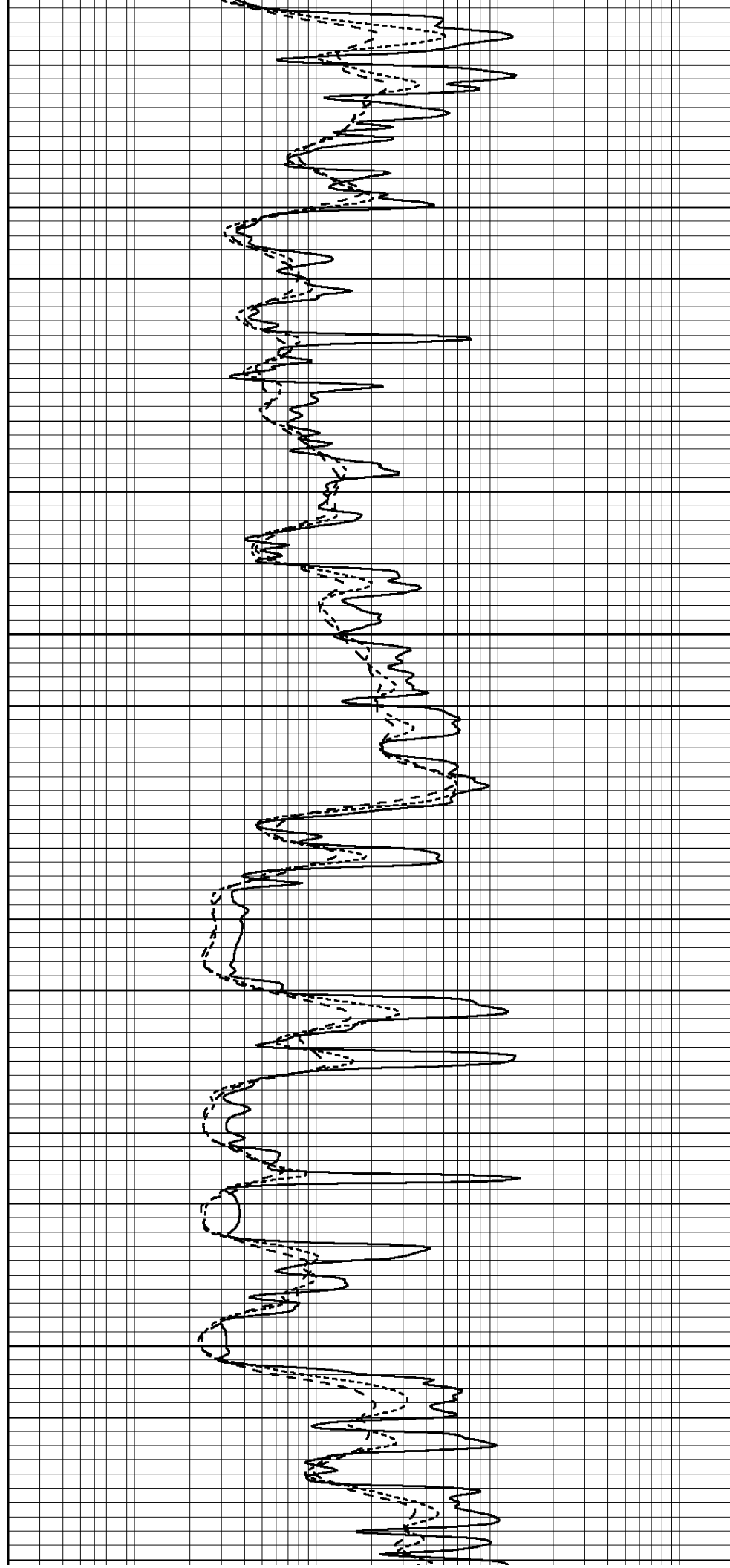


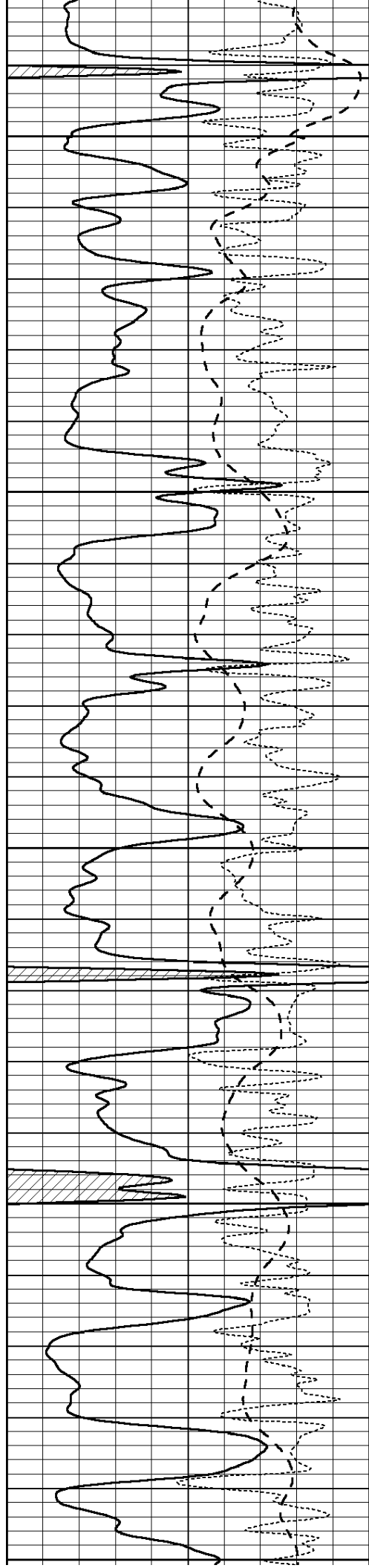
3000

3050

3100

3150





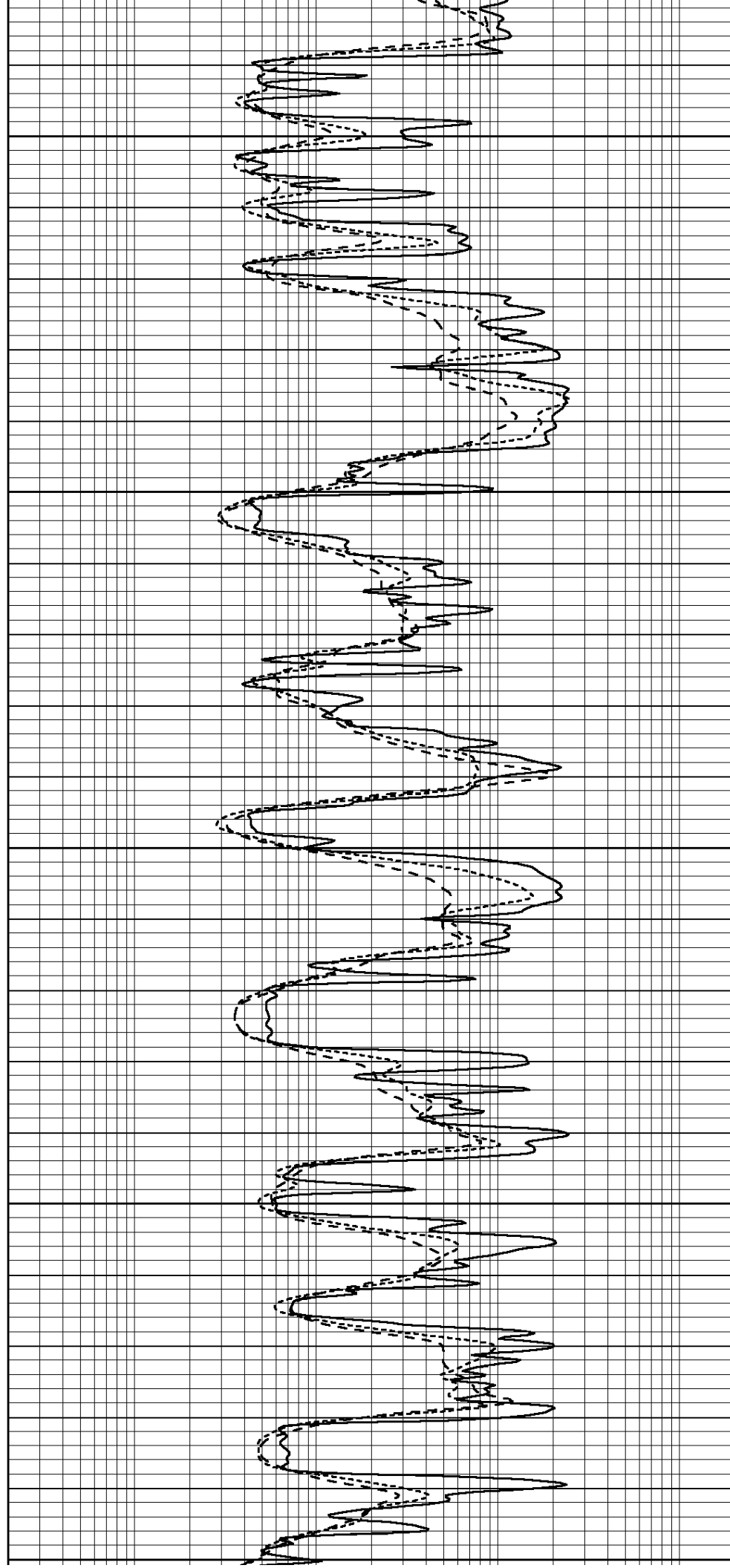
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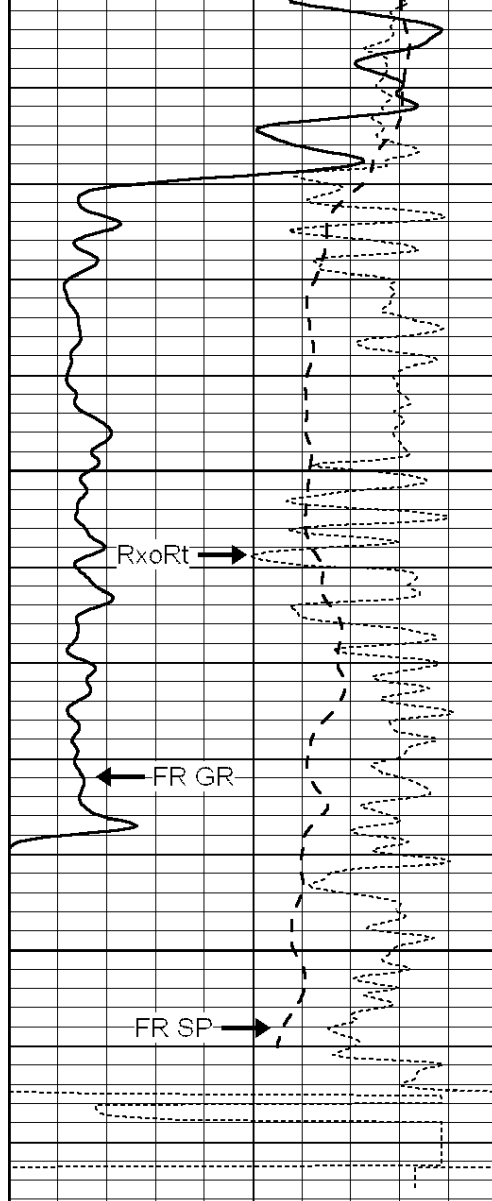
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3300

3350

3400



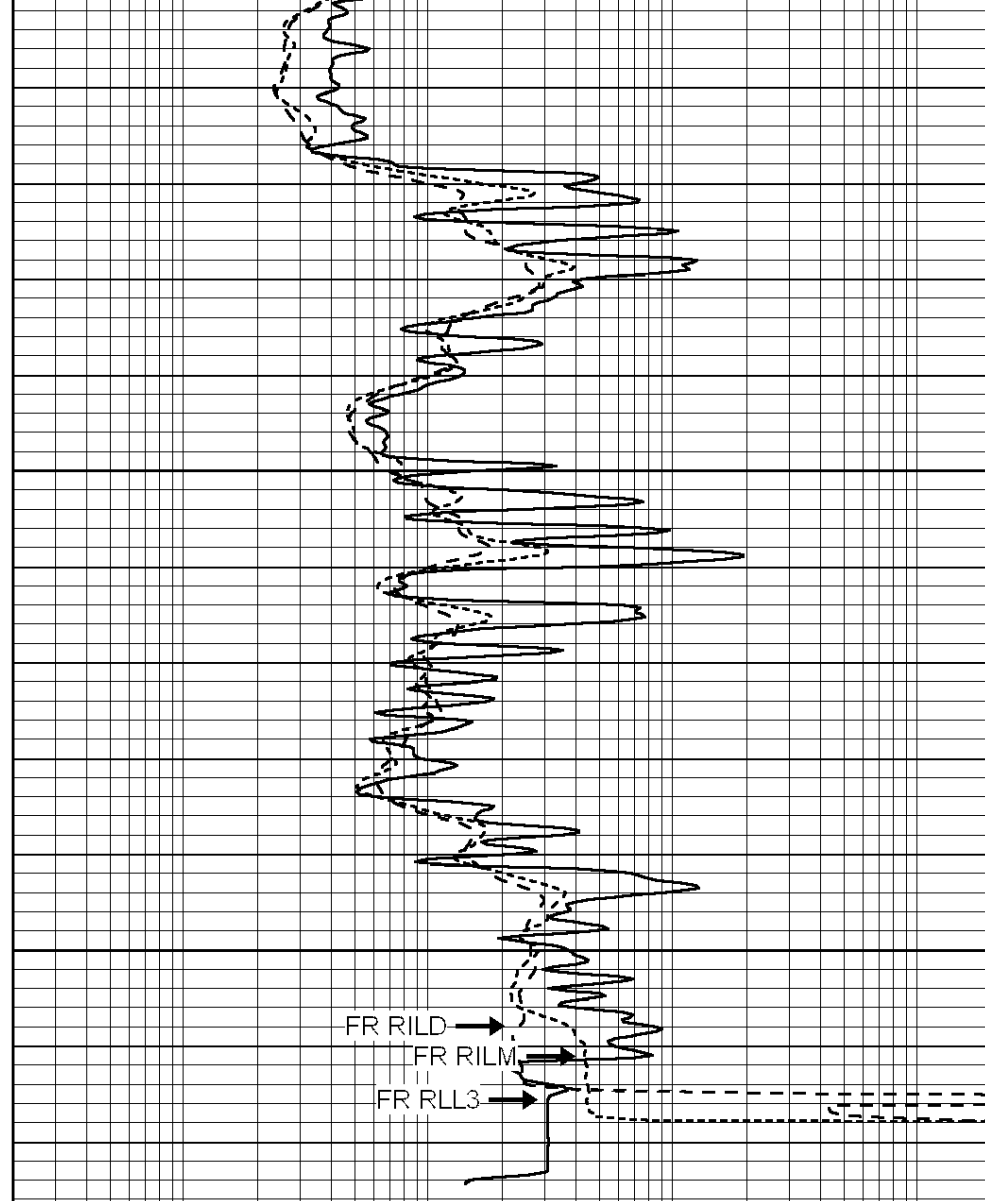


3450

3500

LTD 3518

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



FR RILD

FR RILM

FR RLL3

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



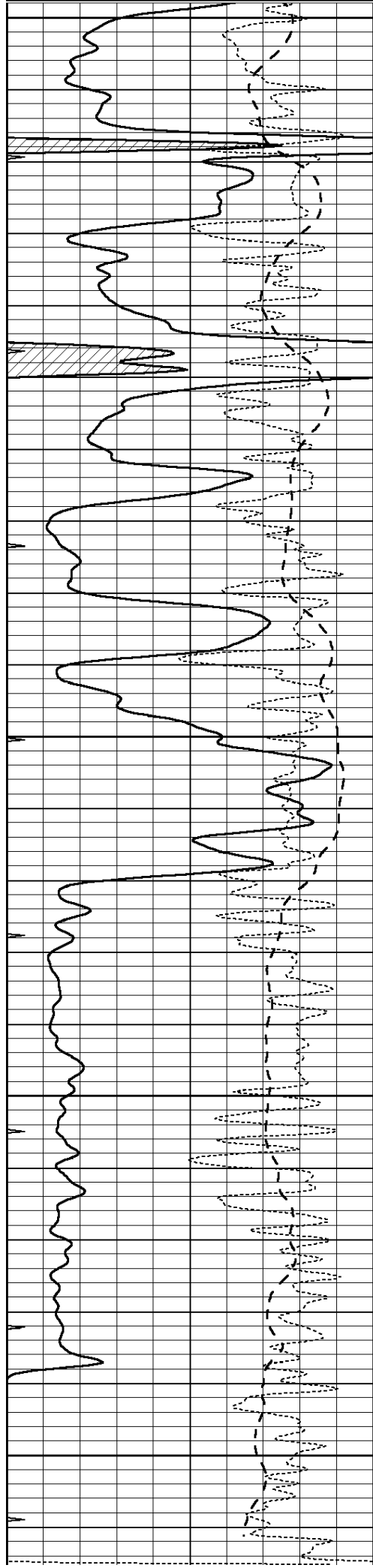
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REPEAT SECTION

Database File: 010192pe.db
 Dataset Pathname: pass2.6
 Presentation Format: _dil
 Dataset Creation: Sat Jun 15 22:22:40 2013
 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



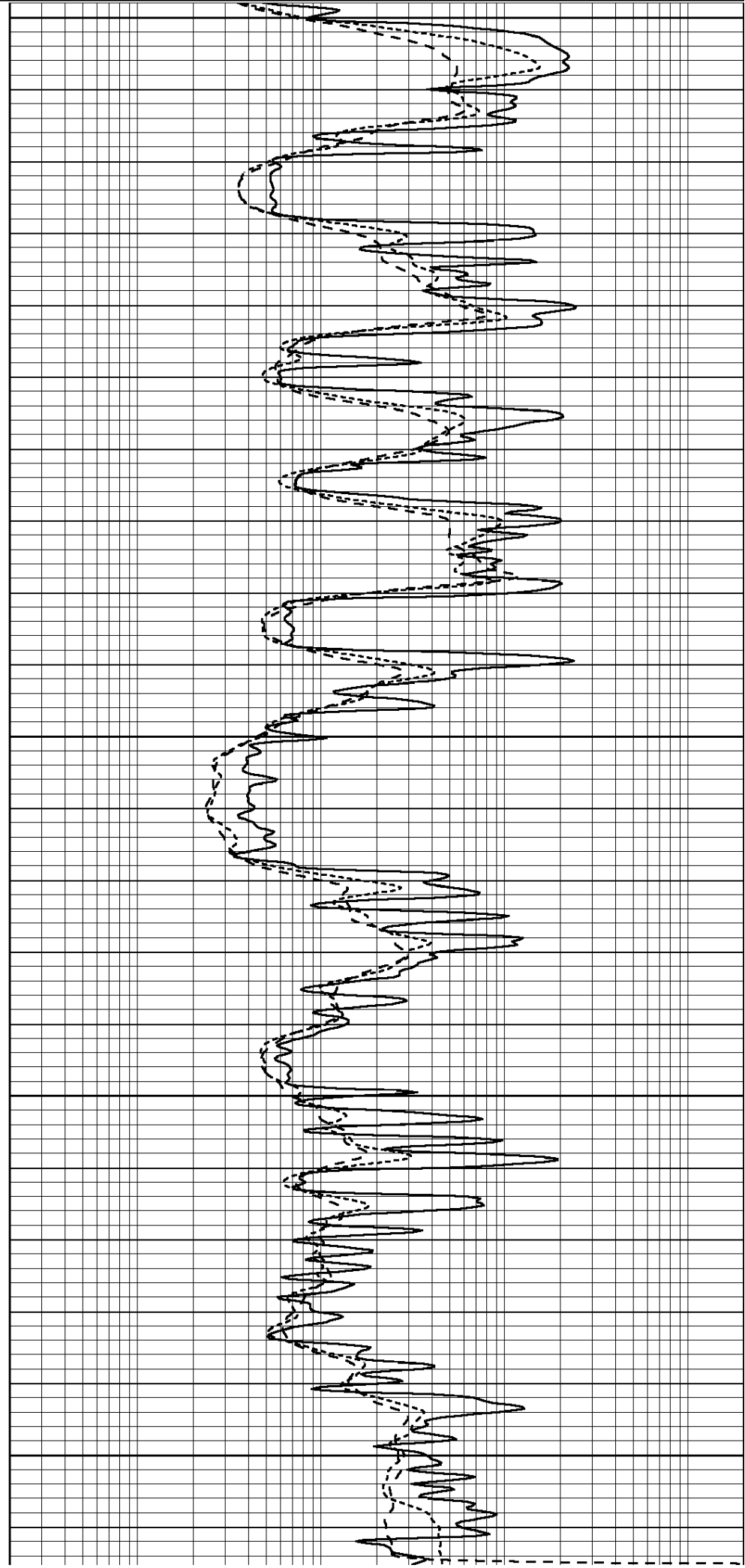
3300

3350

3400

3450

3500



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	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

Calibration Report	
Database File:	010192pe.db
Dataset Pathname:	pass3.4
Dataset Creation:	Sun Jun 16 00:42:50 2013

Dual Induction Calibration Report	
Serial-Model:	PROBE7-DILG
Surface Cal Performed:	Fri May 10 07:15:47 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
Medium	0.992	1.002	V	0.000	464.000	mmho/m	660.000
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936

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	

Litho Density Calibration Report	
Serial: 004	Model: PRB
Performed Mon Jun 03 10:24:18 2013	

Litho Density Calibration					
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1409.0	7846.4	2797.9	8972.6	cns

Window 1	1287.9	6800.2	2477.8	7699.9	cps
Window 2	1100.8	4248.0	1752.5	4716.1	cps
Window 3	313.2	317.4	312.8	317.0	cps
Window 4	0.0	5512.4	1190.0	6412.1	cps
Long Space	1.5	1109.3	719.3	1155.3	cps
Short Space		1.7100	2.5960	1.3800	g/cc
Rho			2.5700	1.5500	
Pe					
Rib Angle	: 44.2	Rib Slope	: 0.973	Density/Spine Ratio	: 0.556
Spine Angle	: 74.2	Spine Slope	: 3.539	Spine Intercept	: -16.2

Caliper					
Low Ref	Readings	Reference			
High Ref	2.2	8.6			
	4.2	14.0			
	Gain: 2.7		Offset: 2.6		

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:	Fri May 10 07:15:14 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.9000	GAPI/cps