



**Casedhole
Solutions**

DUAL INDUCTION LOG

Company	L.D. DRILLING, INC.		
Well	#1-30 SLAGLE FAMILY TRUST OWWO		
Field	McVICKER		
County	NESS		
State	KANSAS		
Company	L.D. DRILLING, INC.		
Well	#1-30 SLAGLE FAMILY TRUST OWWO		
Field	McVICKER		
County	NESS		
State	KANSAS		
Location:	API # : 15-135-21321-0001		Other Services CDL/CNL MEL
Permanent Datum	GROUND LEVEL		Elevation
Log Measured From	1995 FSL & 650' FWL SE - NW - NW - SW		2408
Drilling Measured From	SEC 30 TWP 20S RGE 25W KELLY BUSHING		K.B. 2413 D.F. 2411 G.L. 2408
Date	2/14/16		
Run Number	ONE		
Depth Driller	4538		
Depth Logger	4538		
Bottom Logged Interval	4536		
Top Log Interval	00		
Casing Driller	8 5/8"@349'		
Casing Logger	349		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		CHLORIDES 8,000 PPM
Density / Viscosity	8.9/34		
pH / Fluid Loss	7.5/10.4		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	.500@77F		
Rinf @ Meas. Temp	.375@77F		
Rinc @ Meas. Temp	.600@77F		
Source of Rinf / Rinc	MEASUREMENT		
Rin @ BHT	.218@121F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	11:45 A.M.		
Maximum Recorded Temperature	121F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
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 (C & J ENERY/ CASEDHOLE SOLUTIONS) HAYS, KANSAS (785) 628-6395
DIRECTIONS
NESS CITY, KS., 6W. ON HWY 96 TO (LAIRD RD.) "RD. J", 11S. TO "RD. 20", 4W. TO "RD. F", 1/2S., E. INTO



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MAIN SECTION

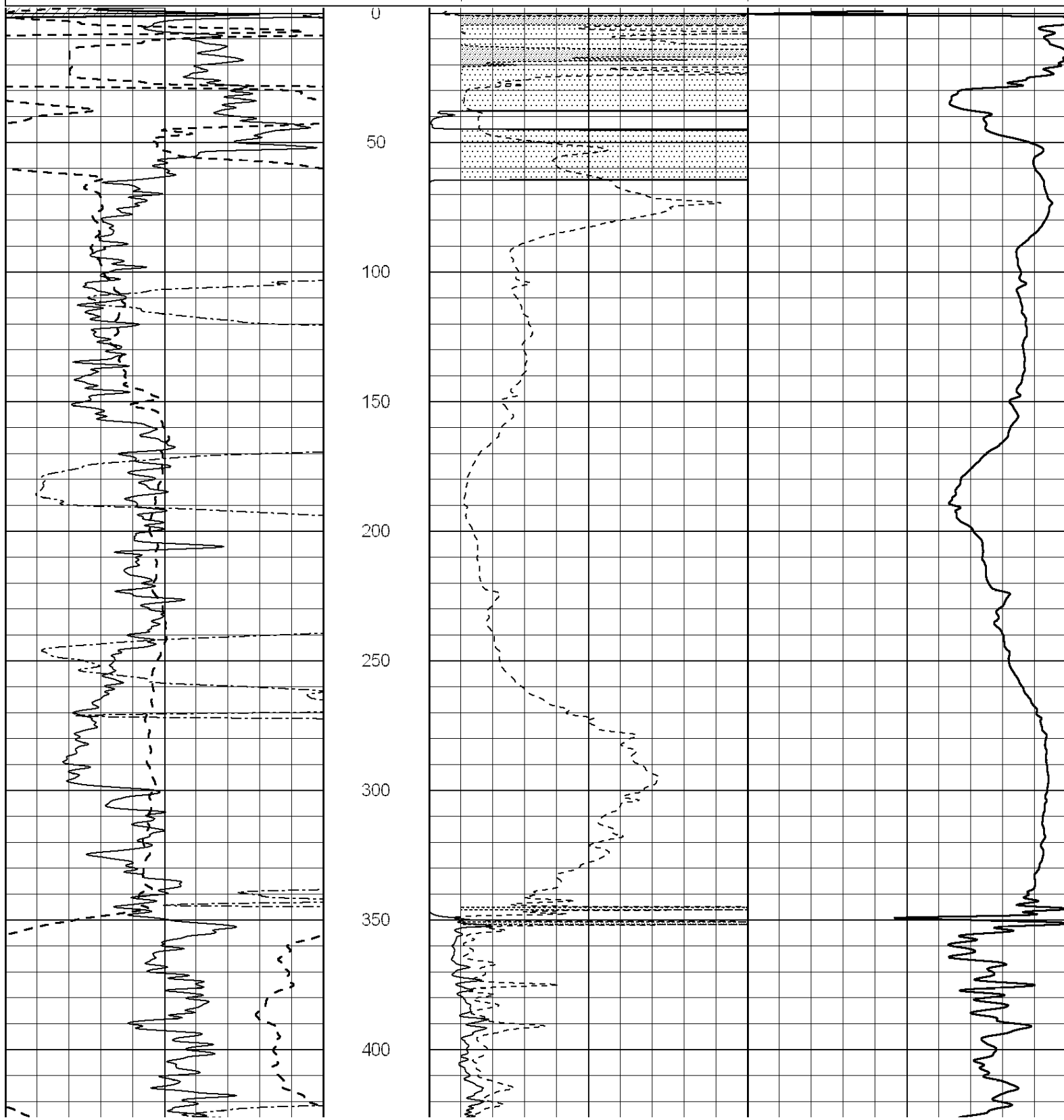
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Dataset Pathname: pass3.8
Presentation Format: dil2
Dataset Creation: Sun Feb 14 13:00:26 2016
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

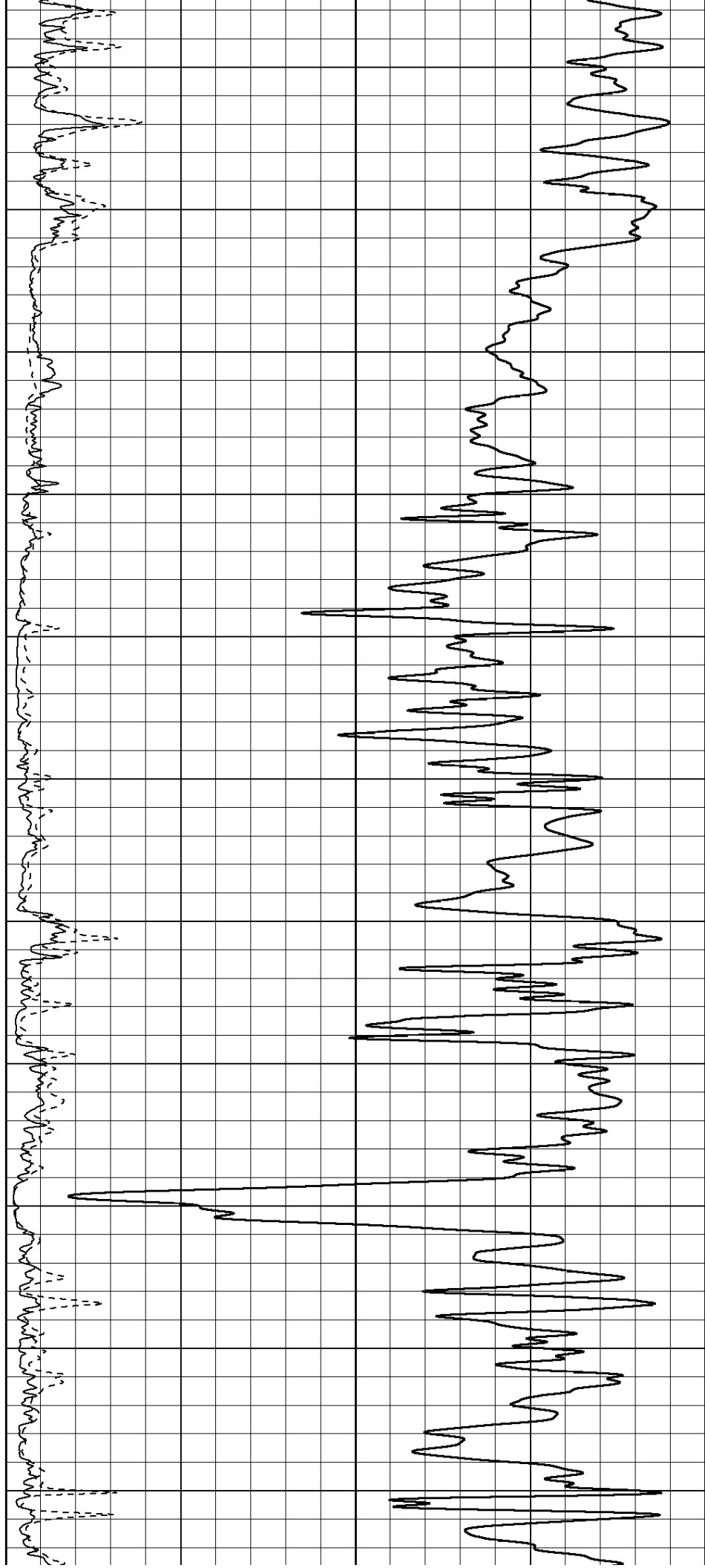
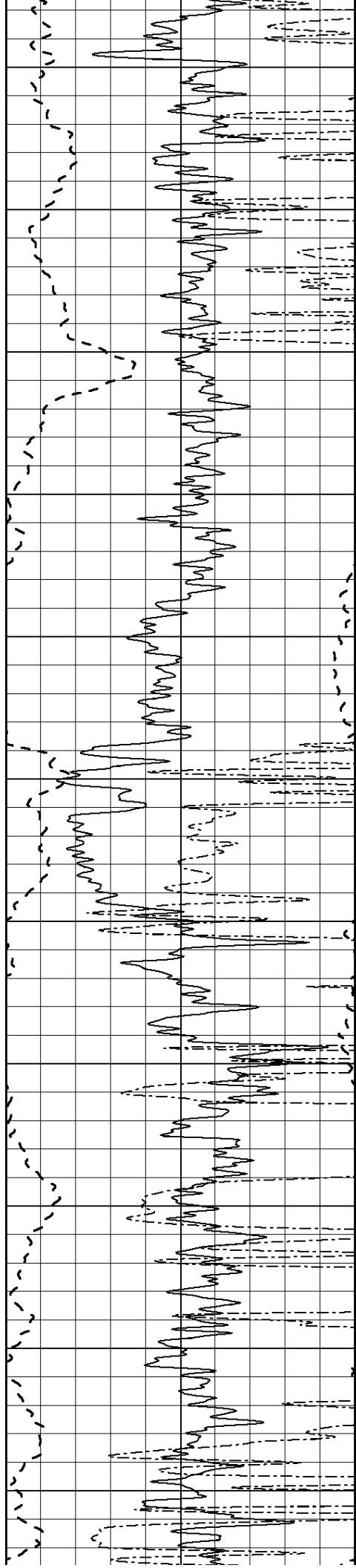
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

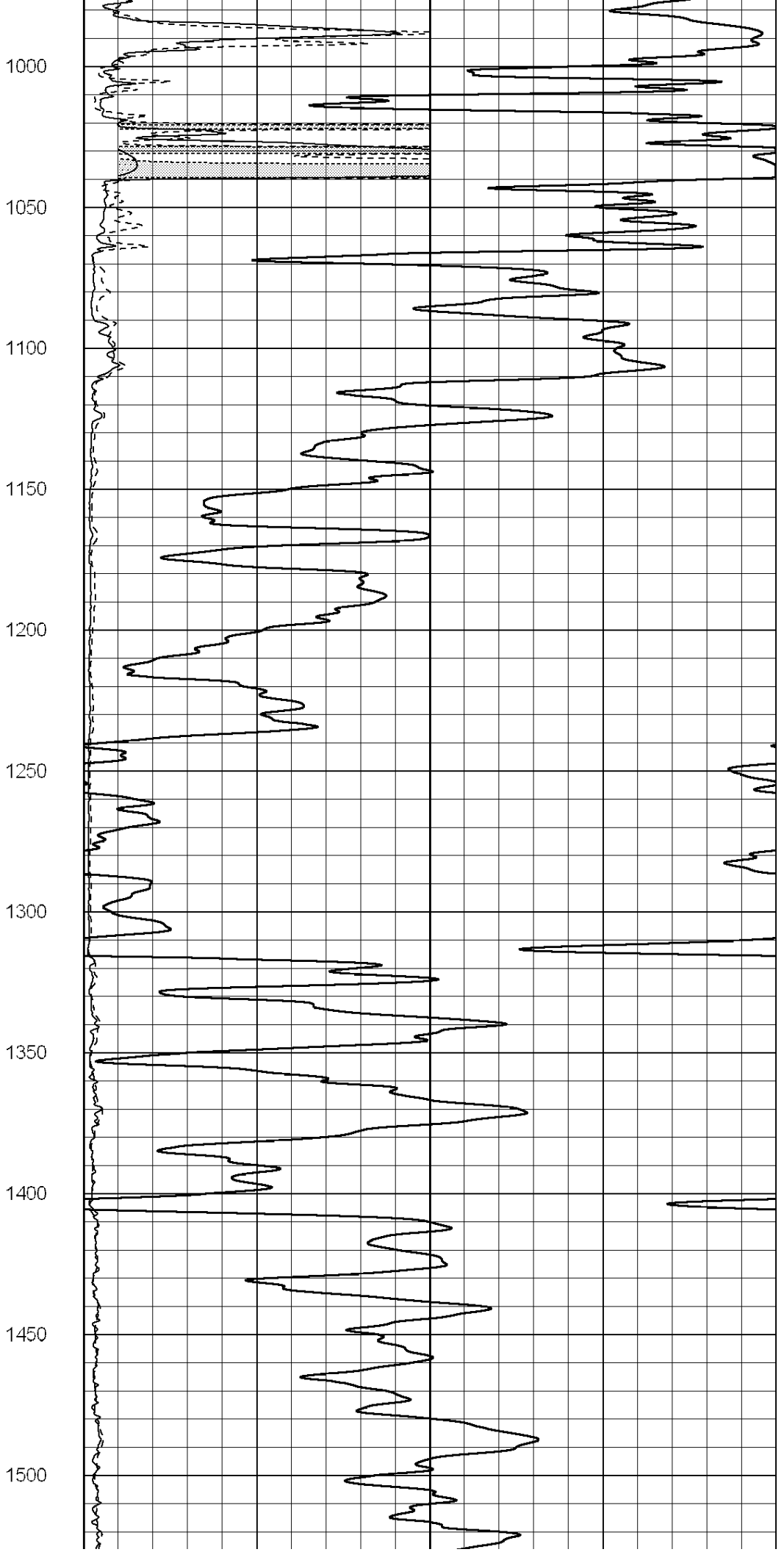
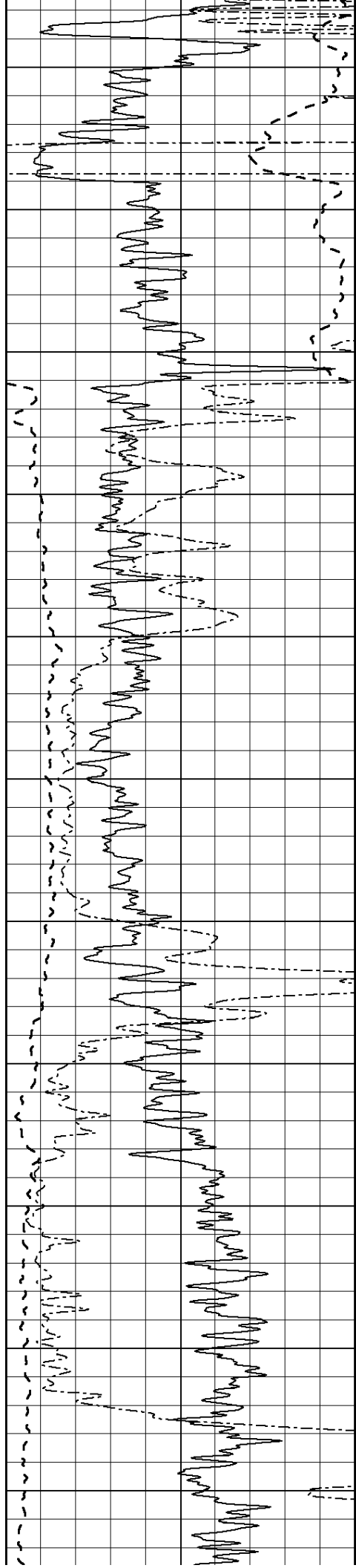
1000	CILD (mmho/m)	0
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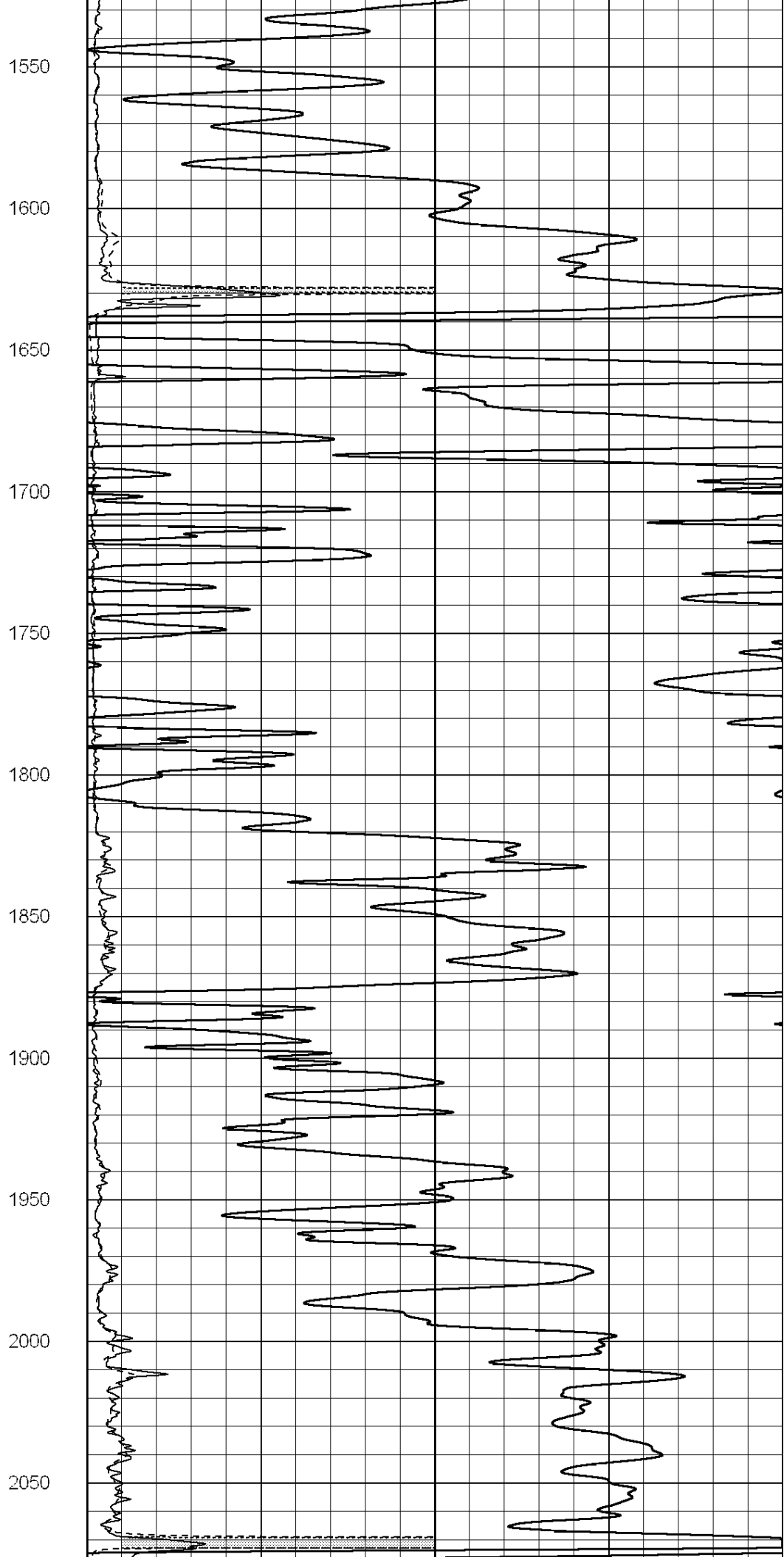
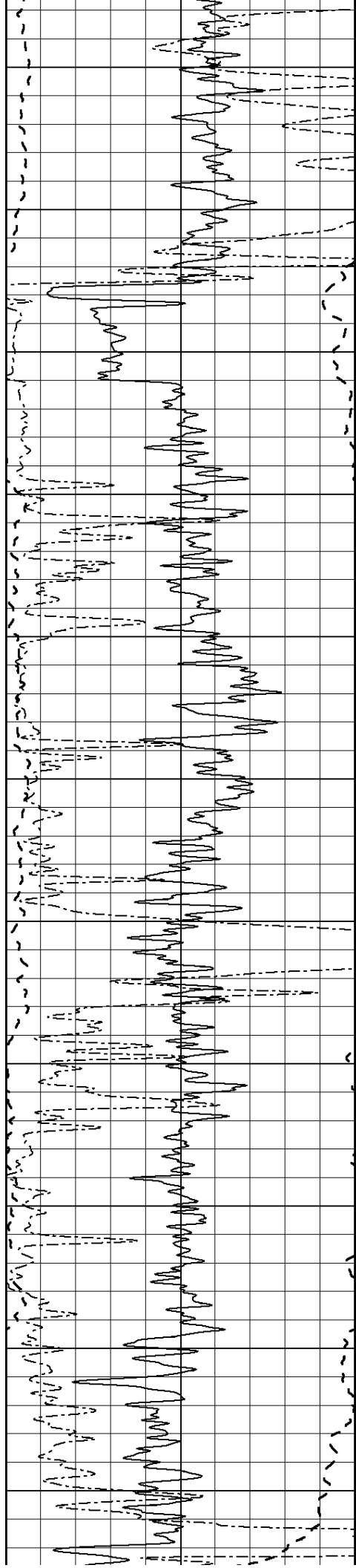
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50	RLL3 X10 (Ohm-m)	500

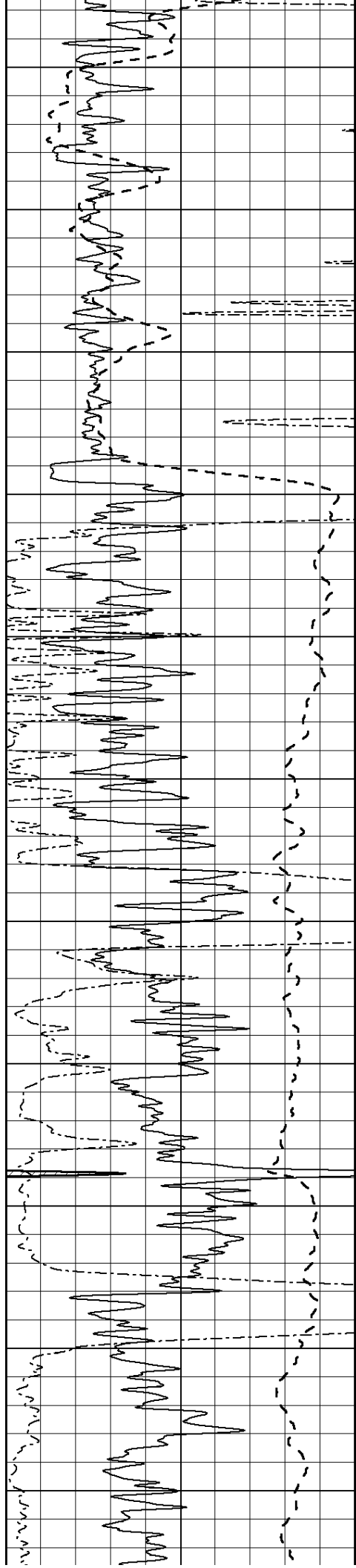


450
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700
750
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850
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950









2100

2150

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2300

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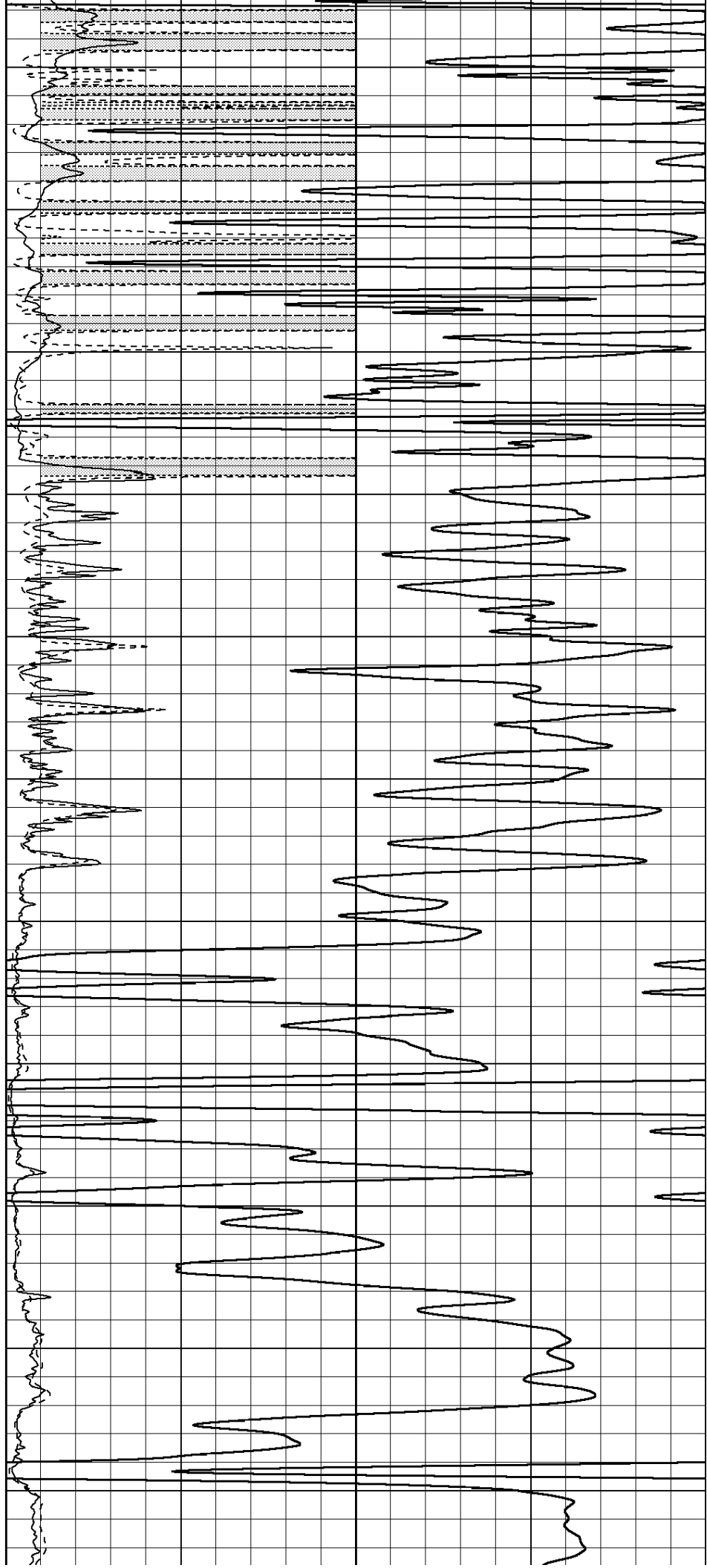
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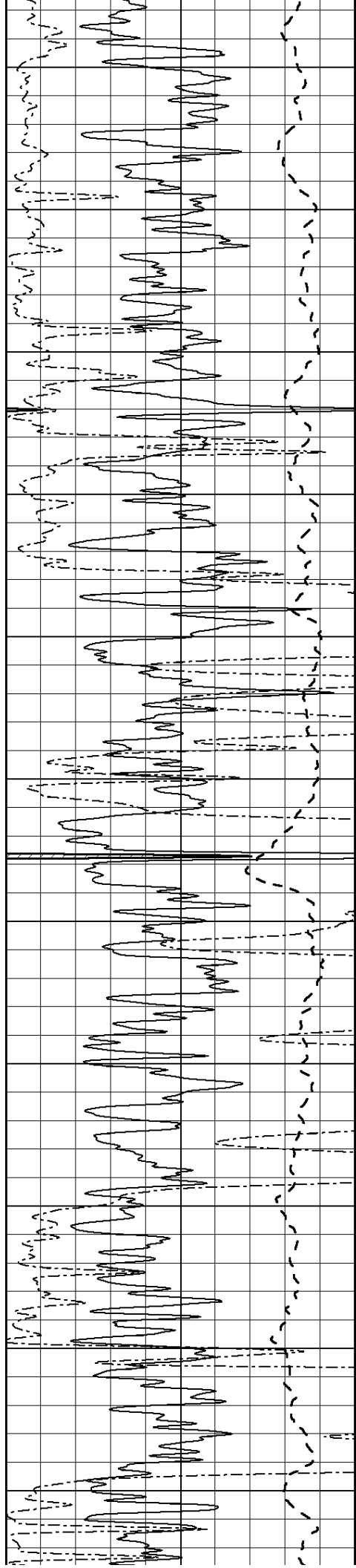
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2500

2550

2600





2650

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2900

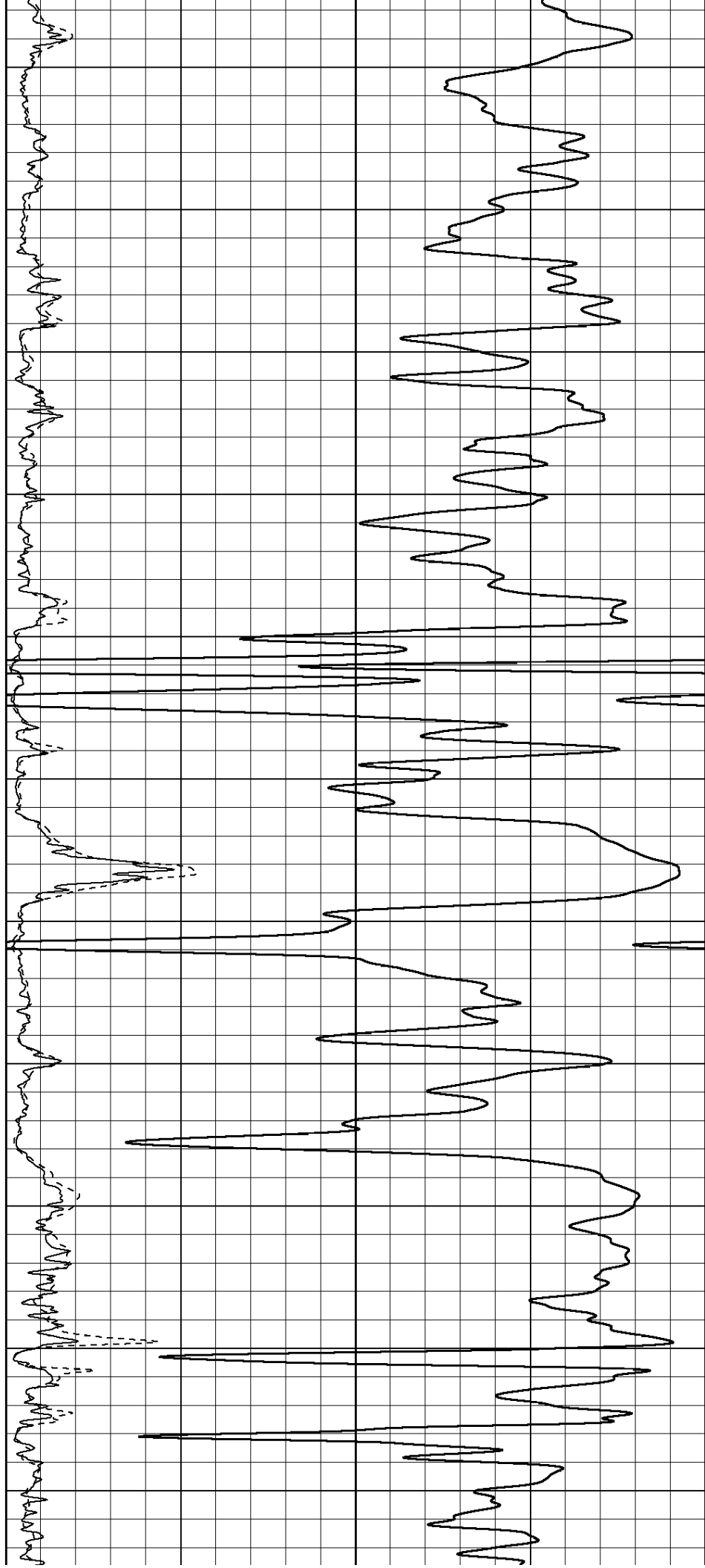
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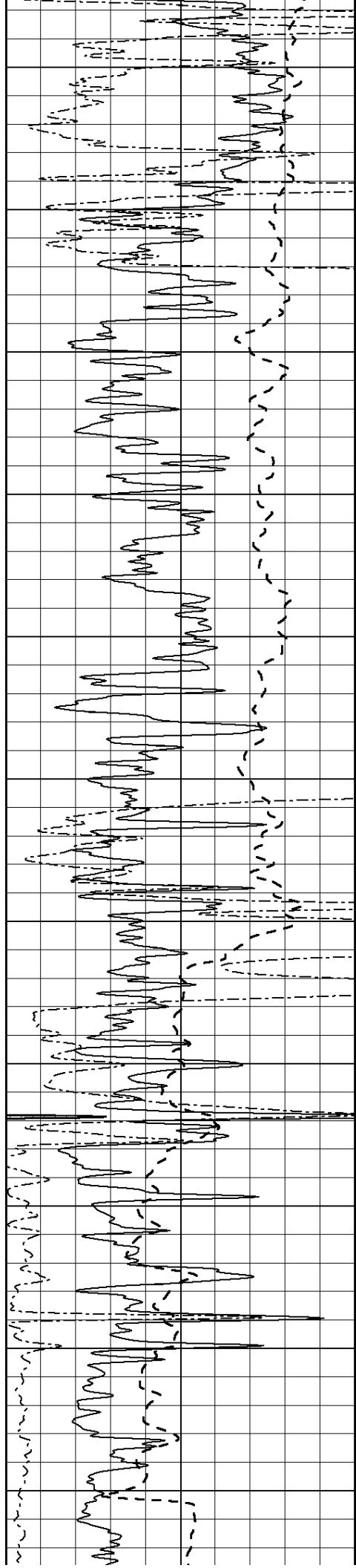
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3050

3100

3150





3200

3250

3300

3350

3400

3450

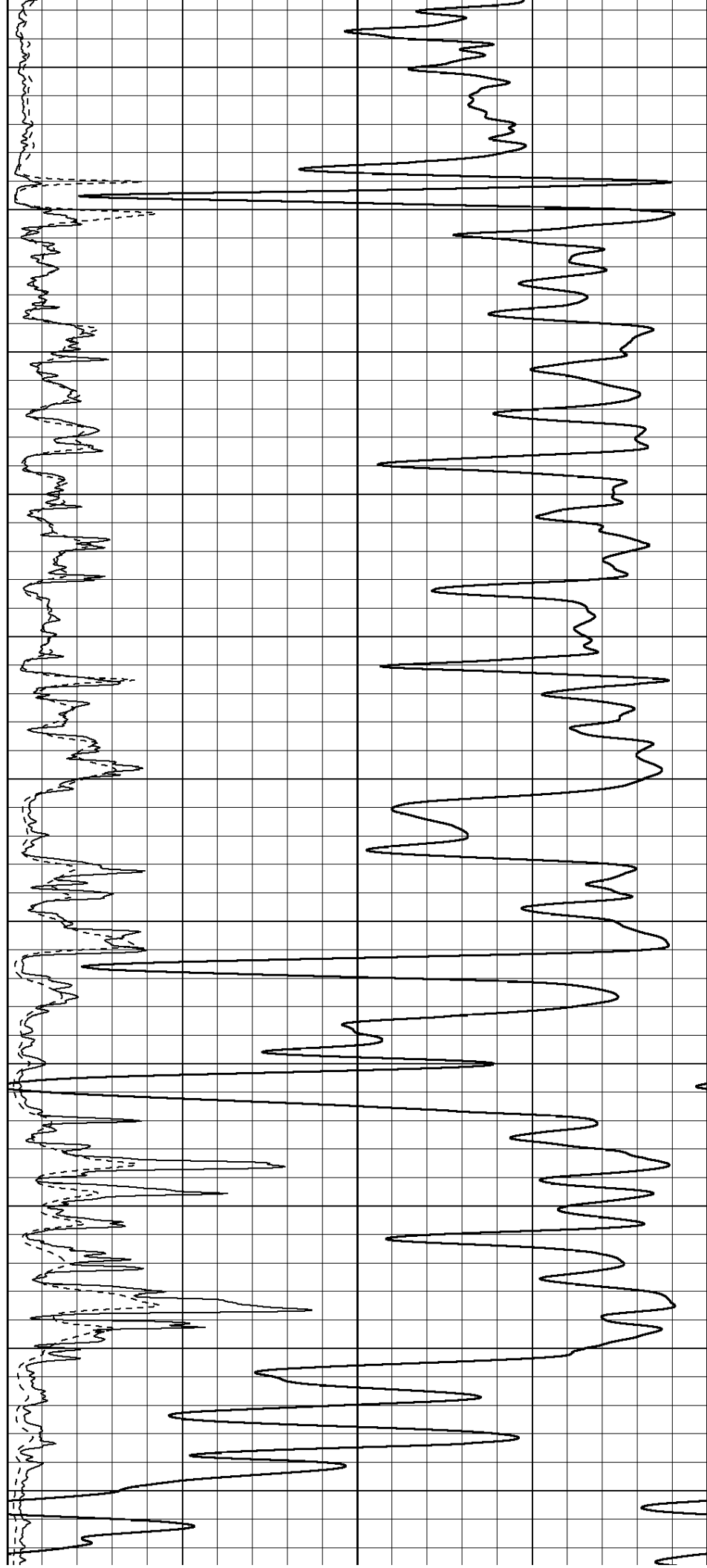
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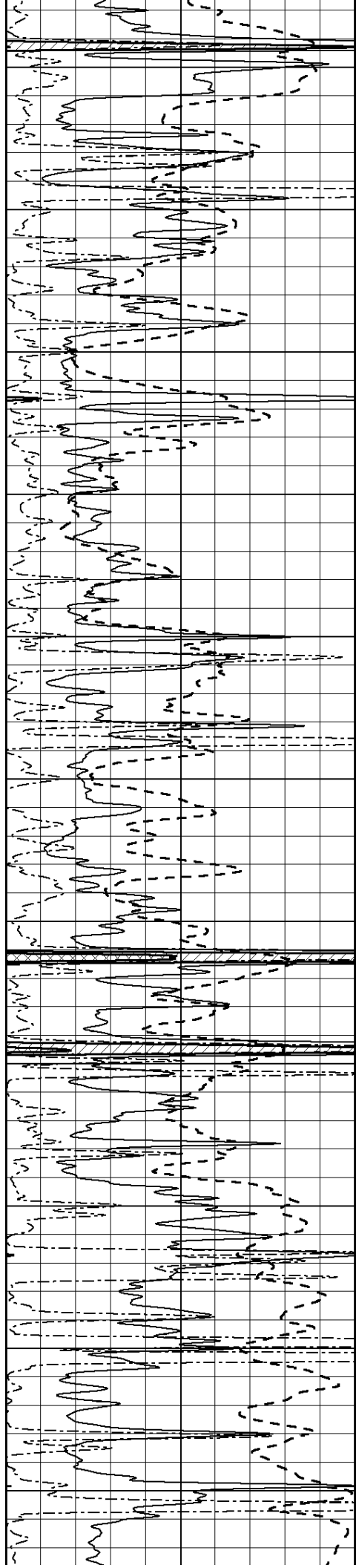
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3600

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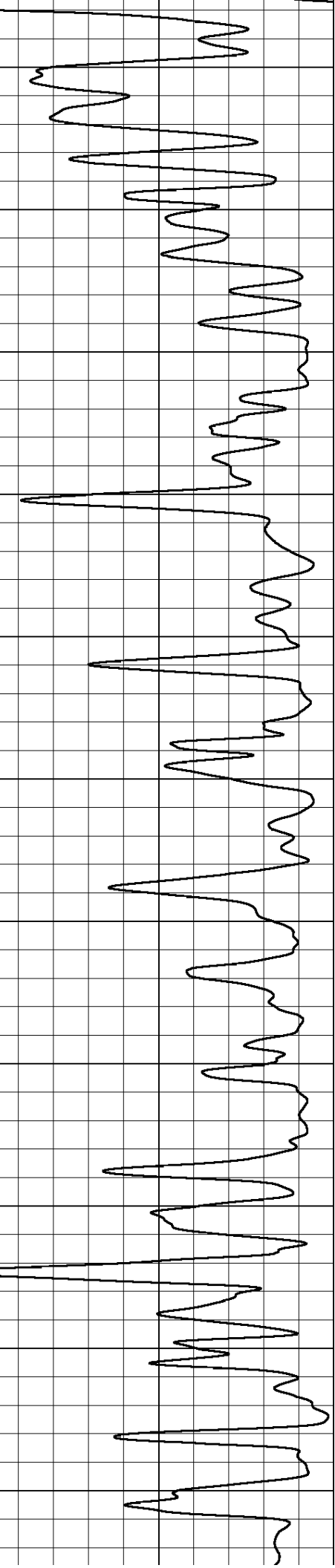
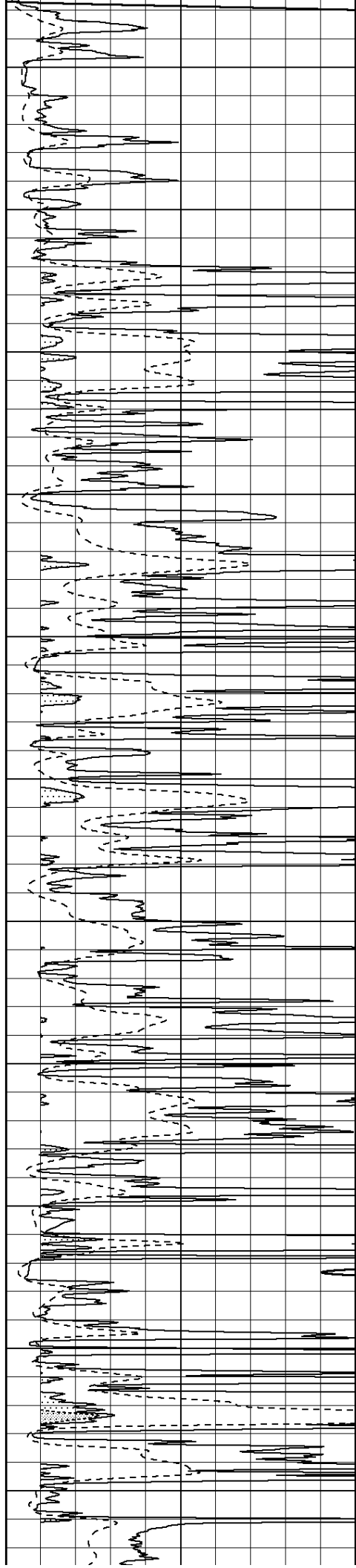
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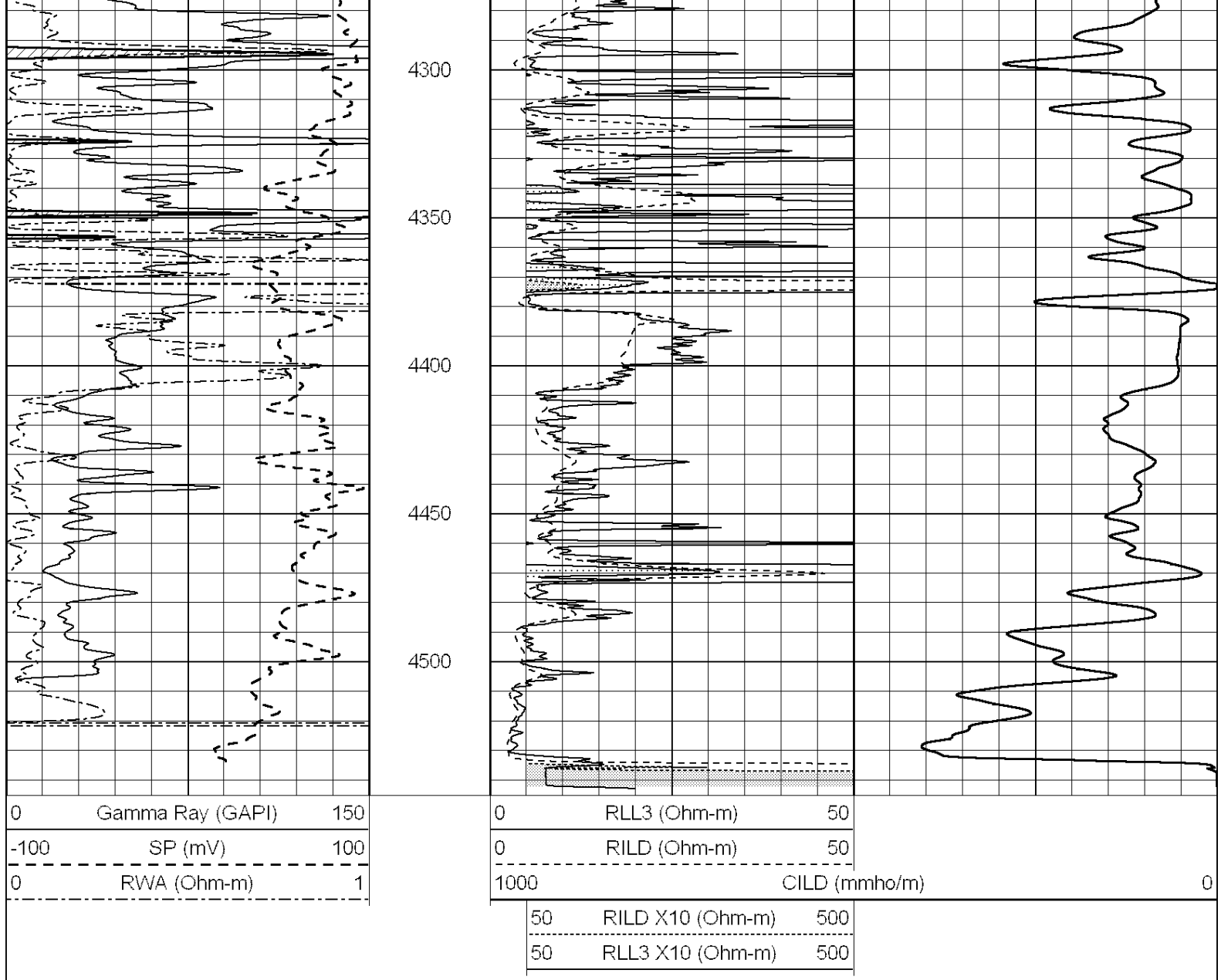
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4250

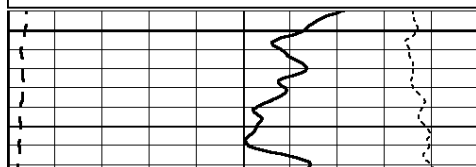
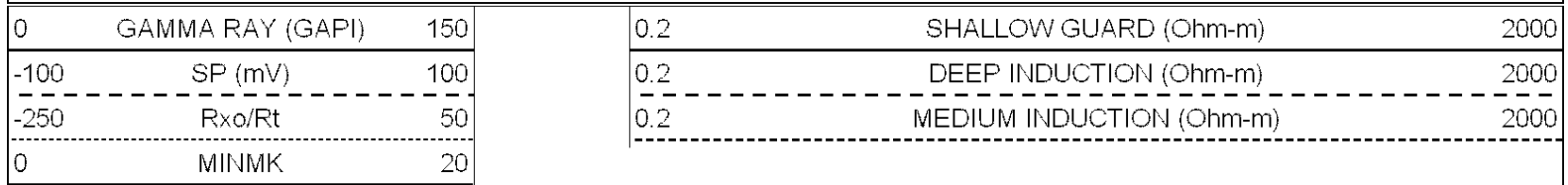




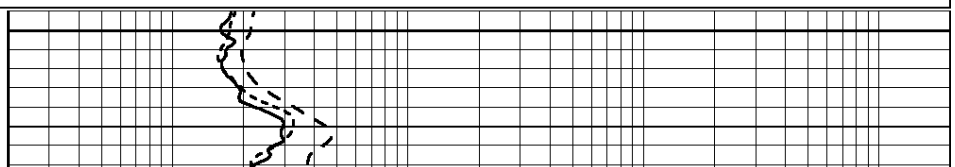
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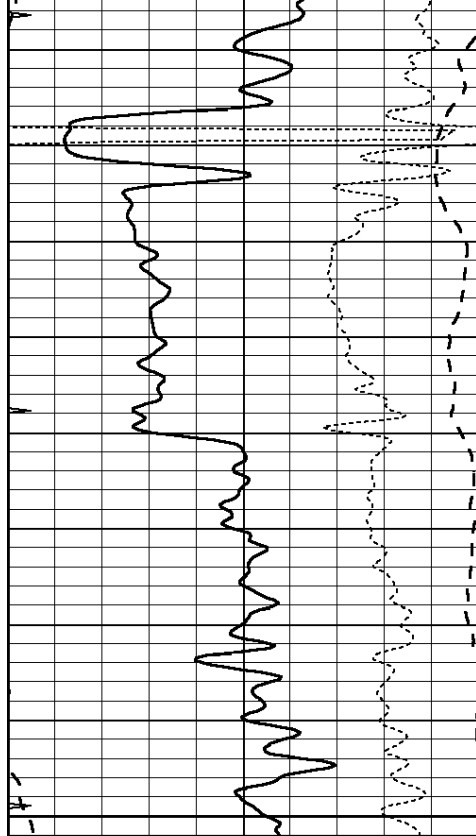
ANHYDRITE

Database File: 30686ddn.db
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 Presentation Format: _dil
 Dataset Creation: Sun Feb 14 13:01:07 2016
 Charted by: Depth in Feet scaled 1:240



1600

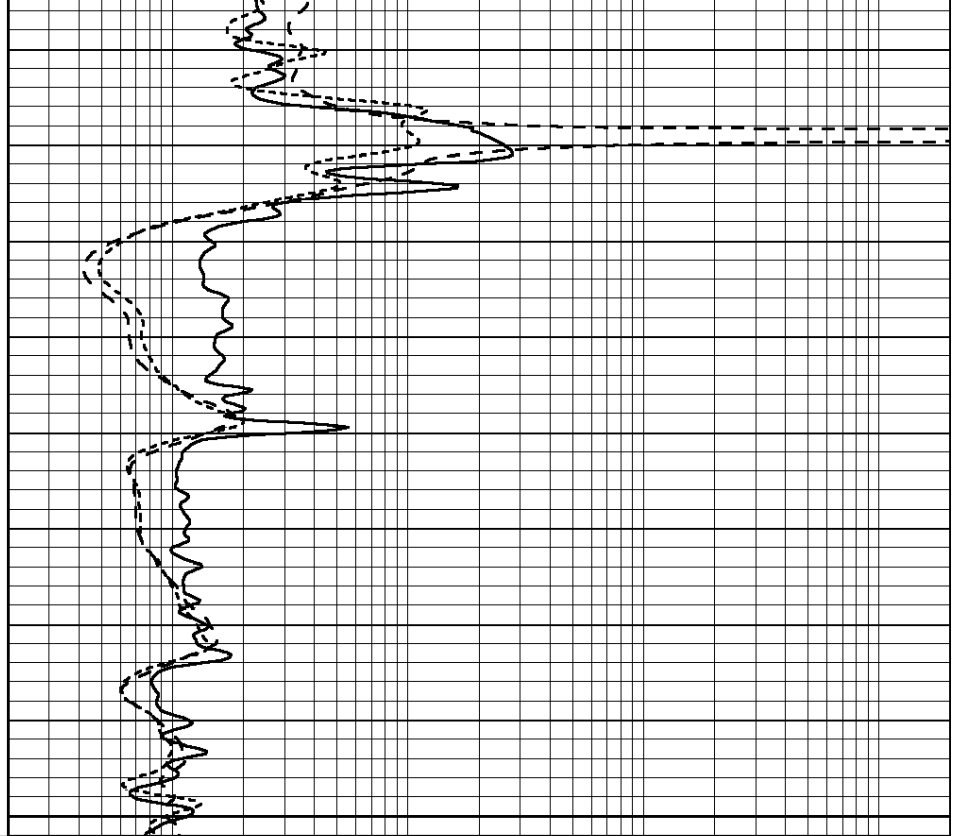




1650

1700

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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



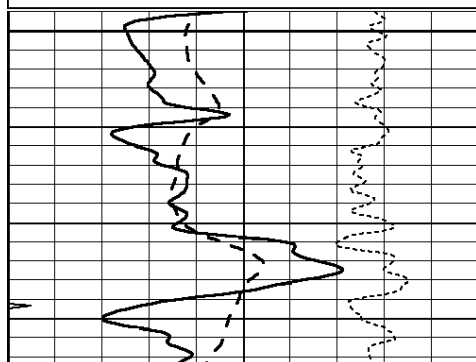
**Casedhole
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MAIN SECTION

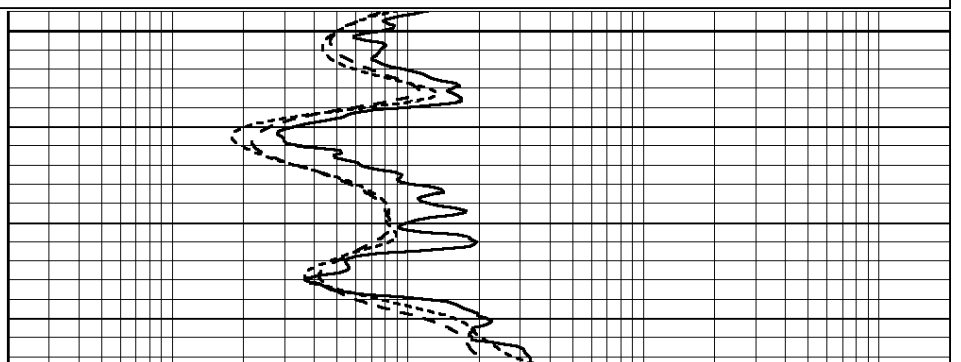
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 Dataset Creation: Sun Feb 14 13:00:26 2016
 Charted by: Depth in Feet scaled 1:240

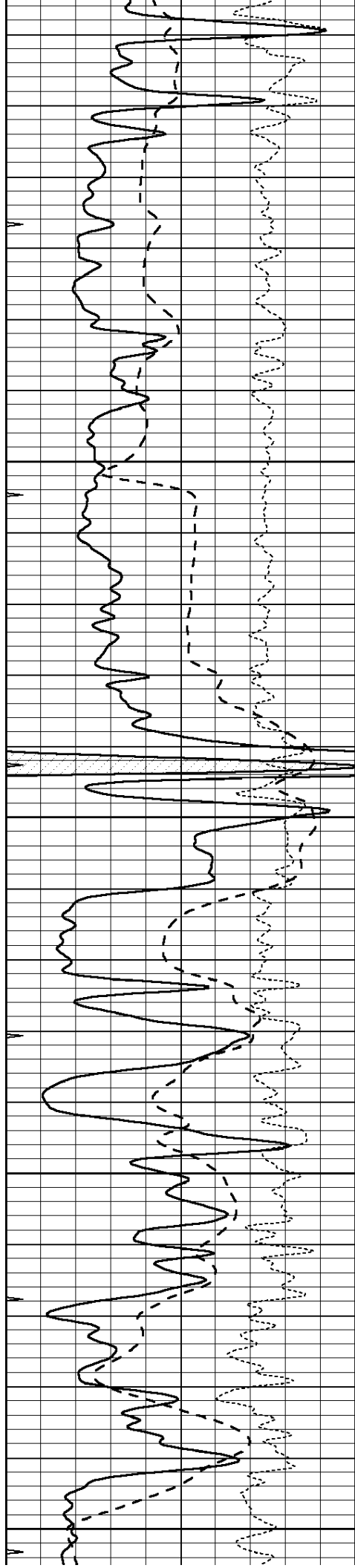
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3600





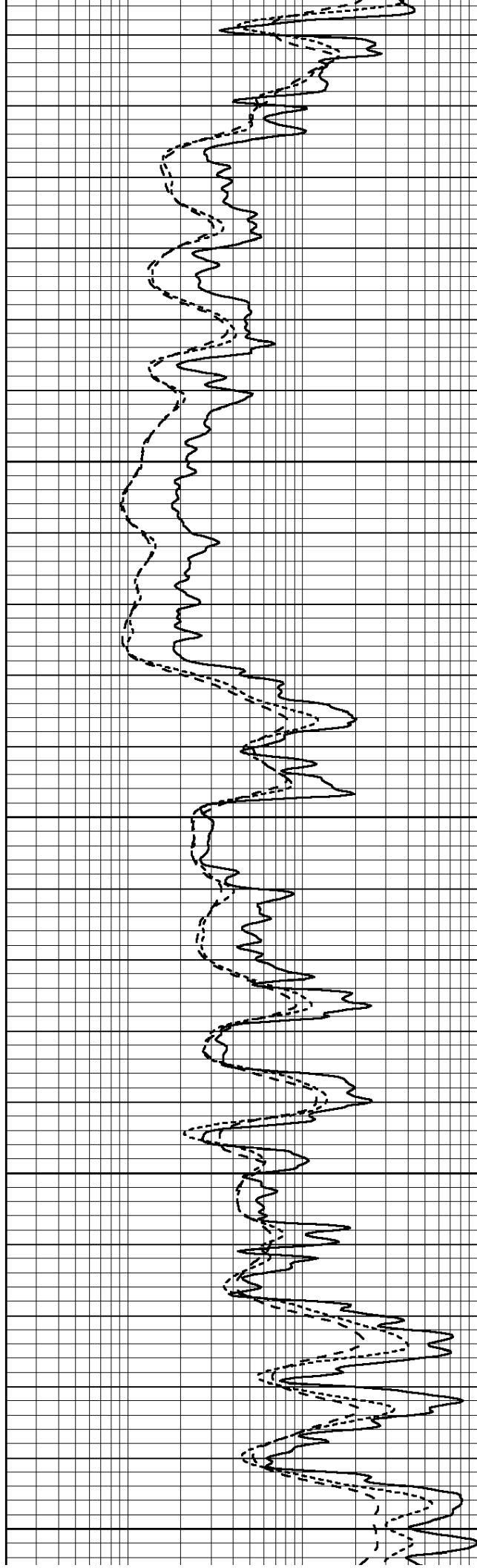
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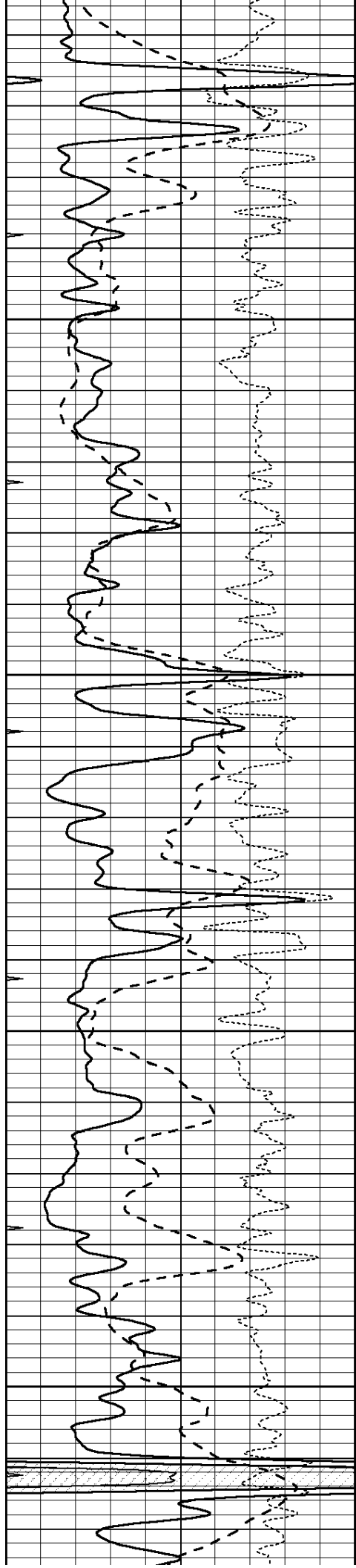
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3750

3800

3850



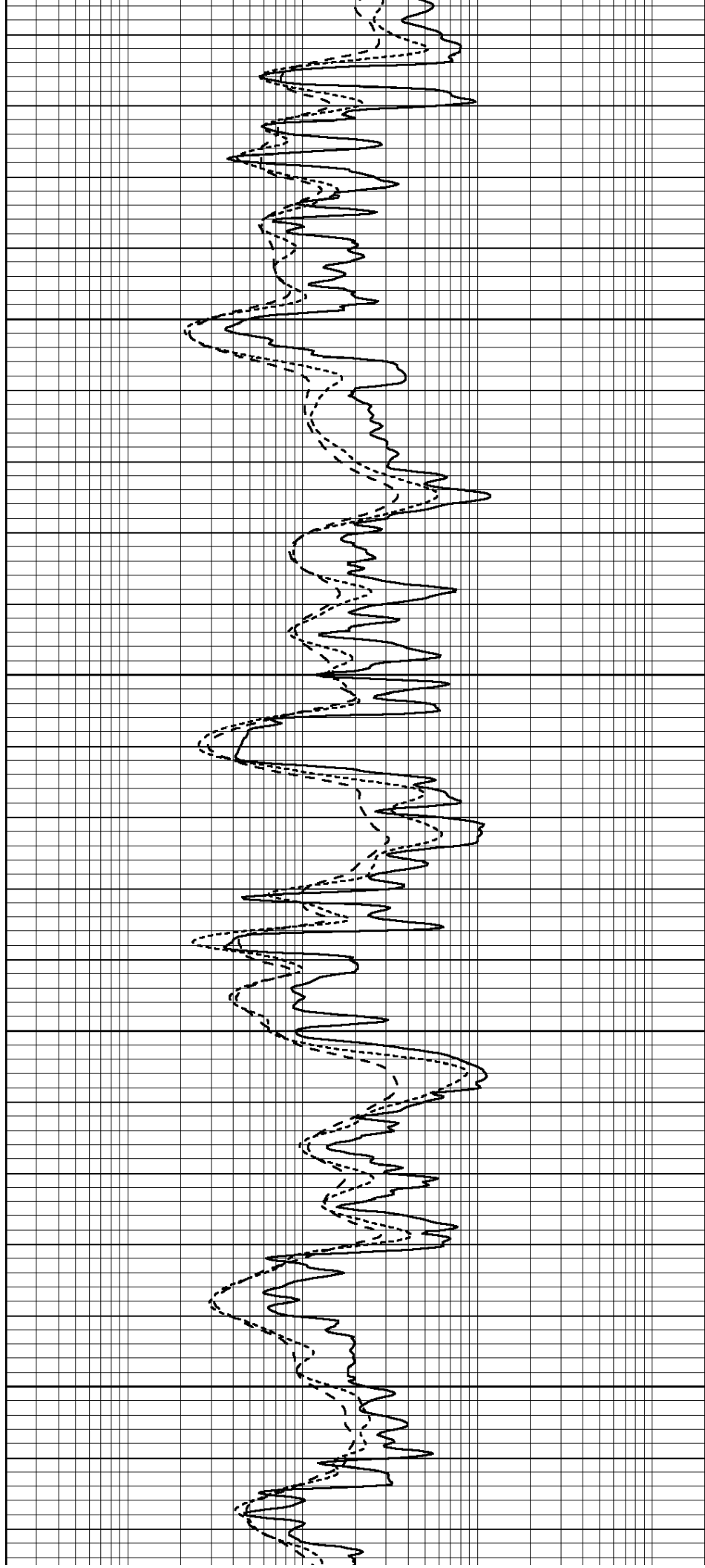


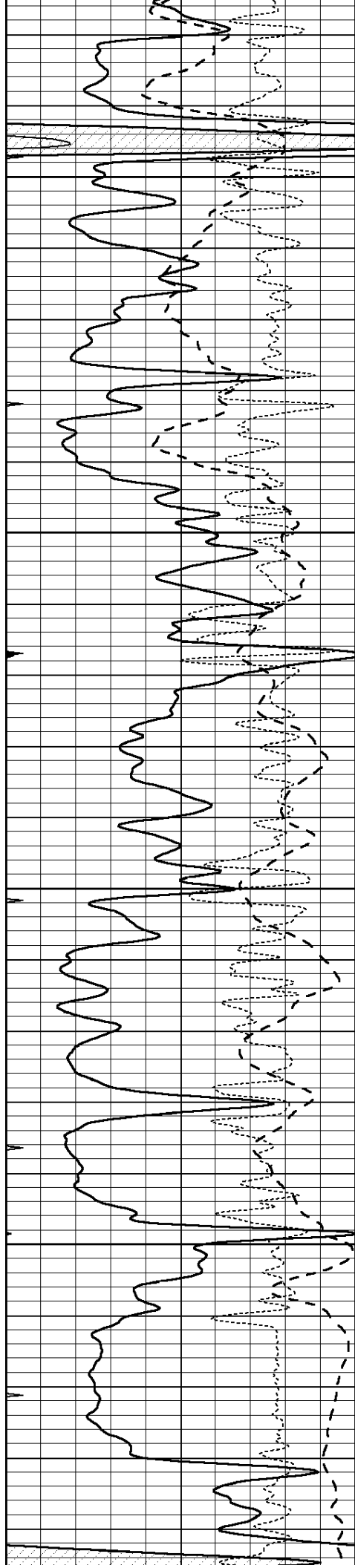
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3950

4000

4050



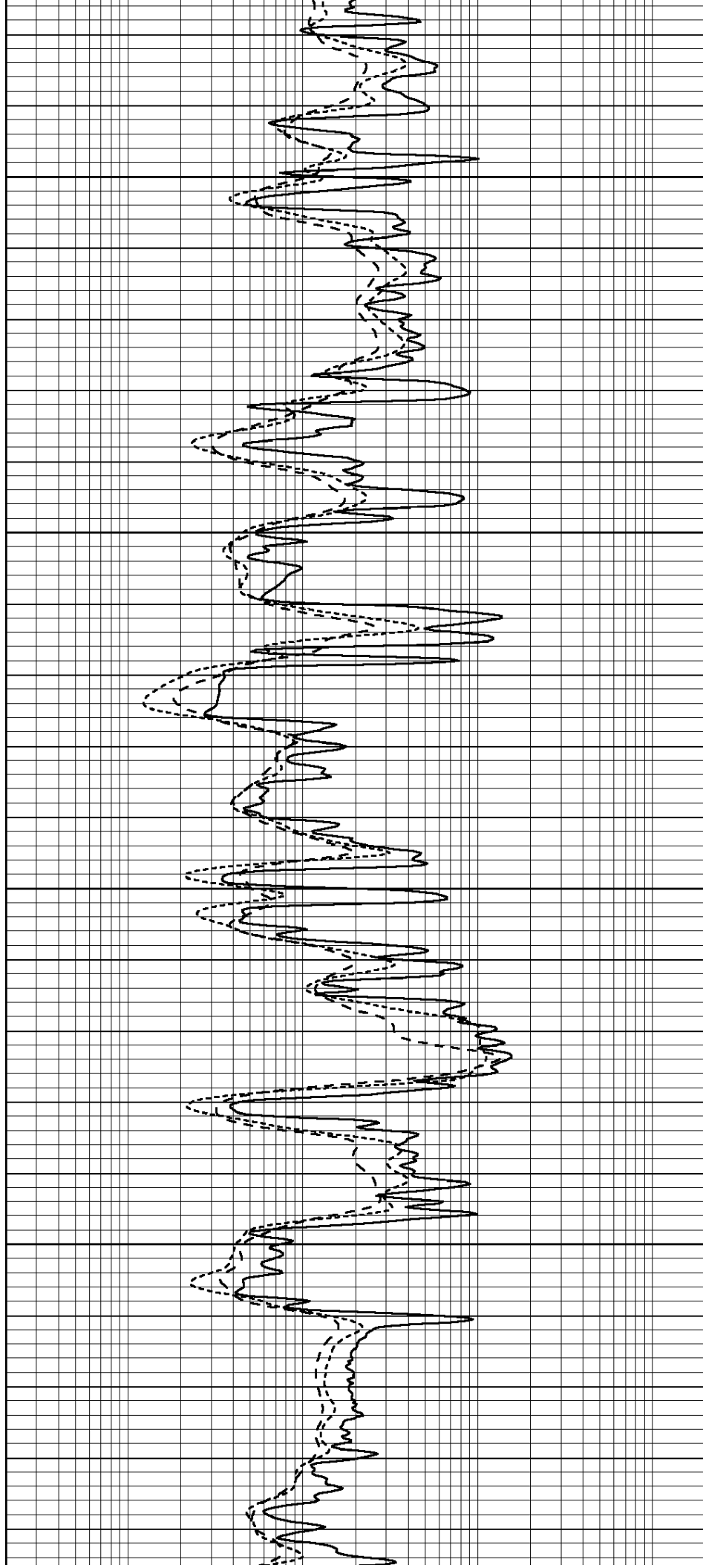


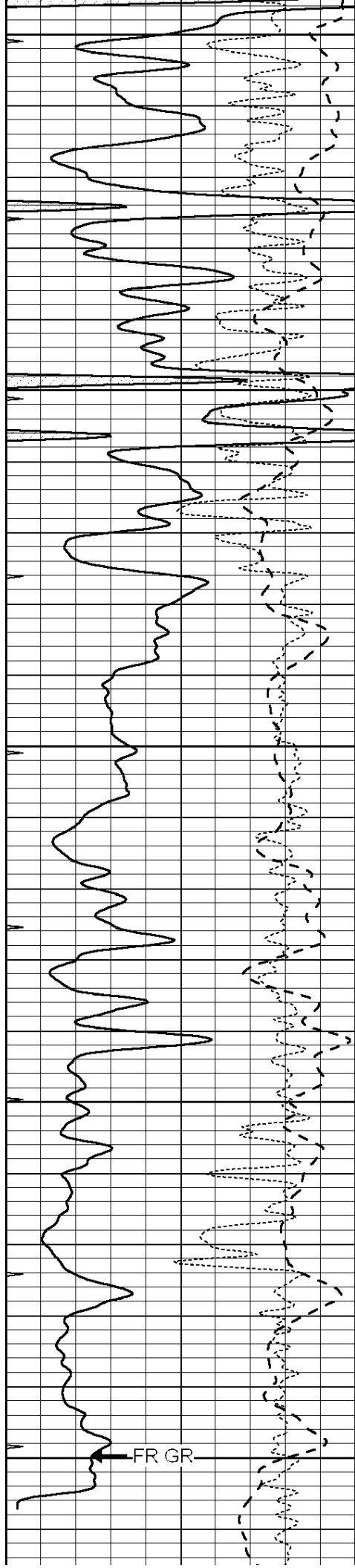
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4150

4200

4250





4300

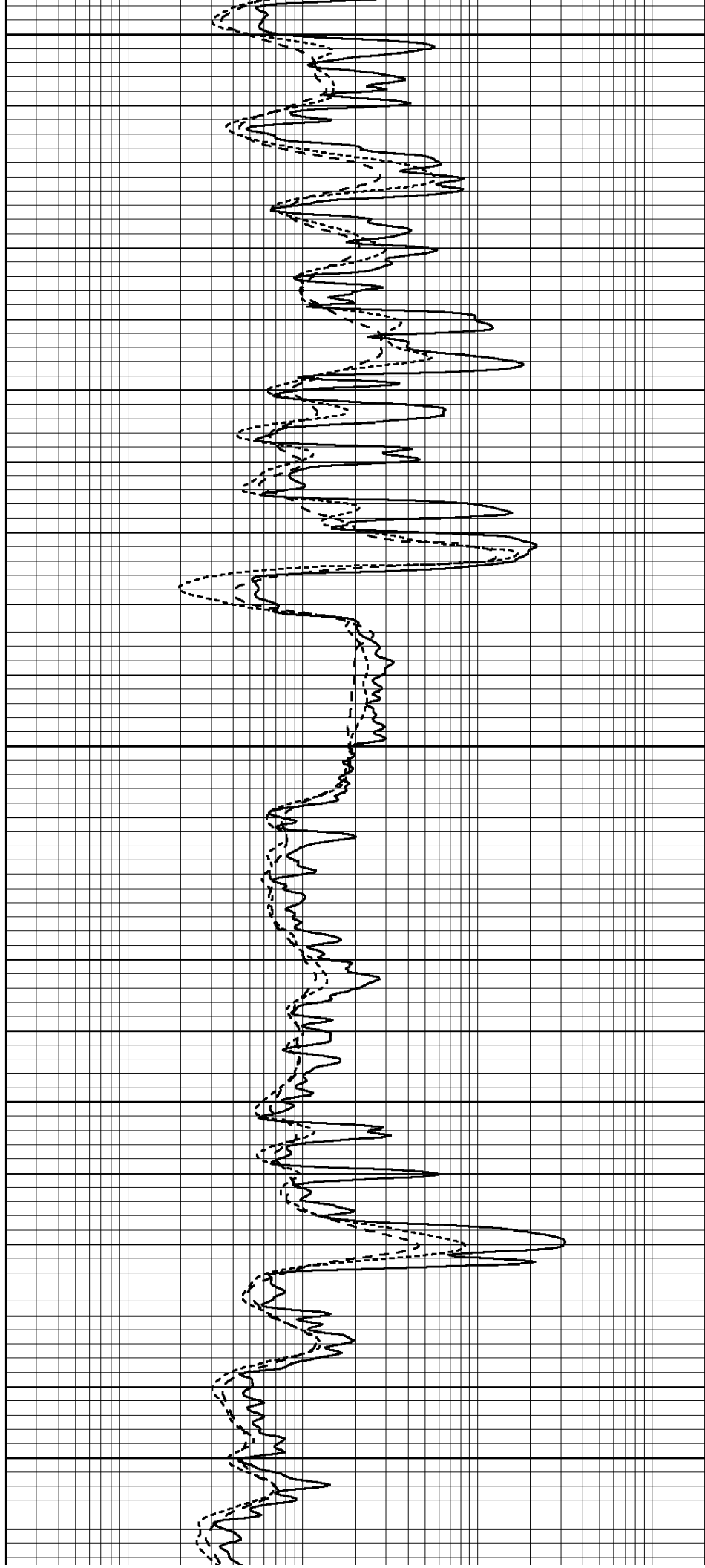
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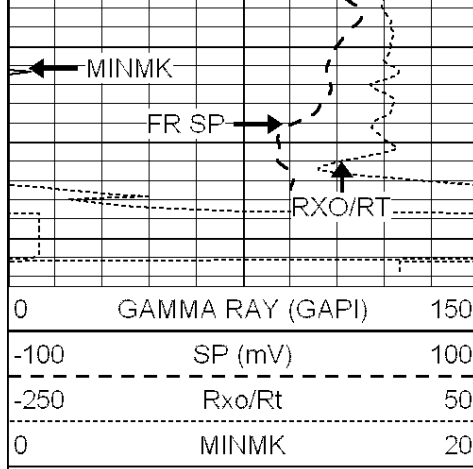
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4450

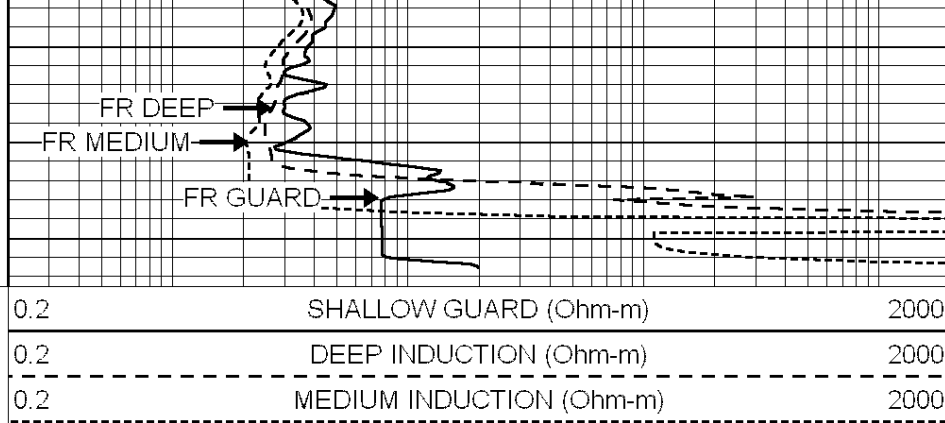
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FR GR





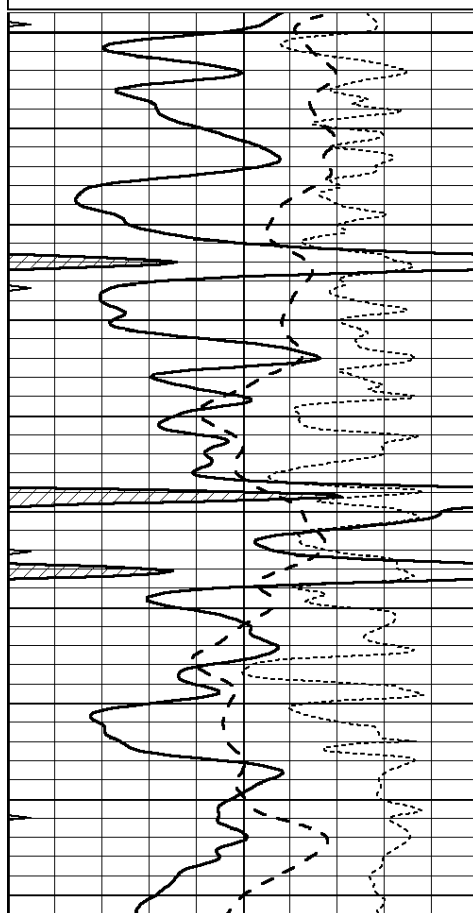
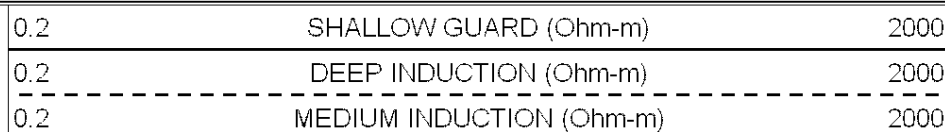
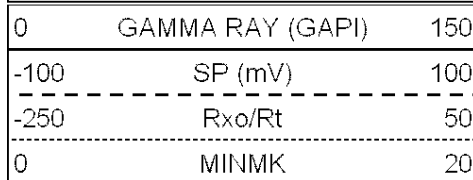
LTD 4538



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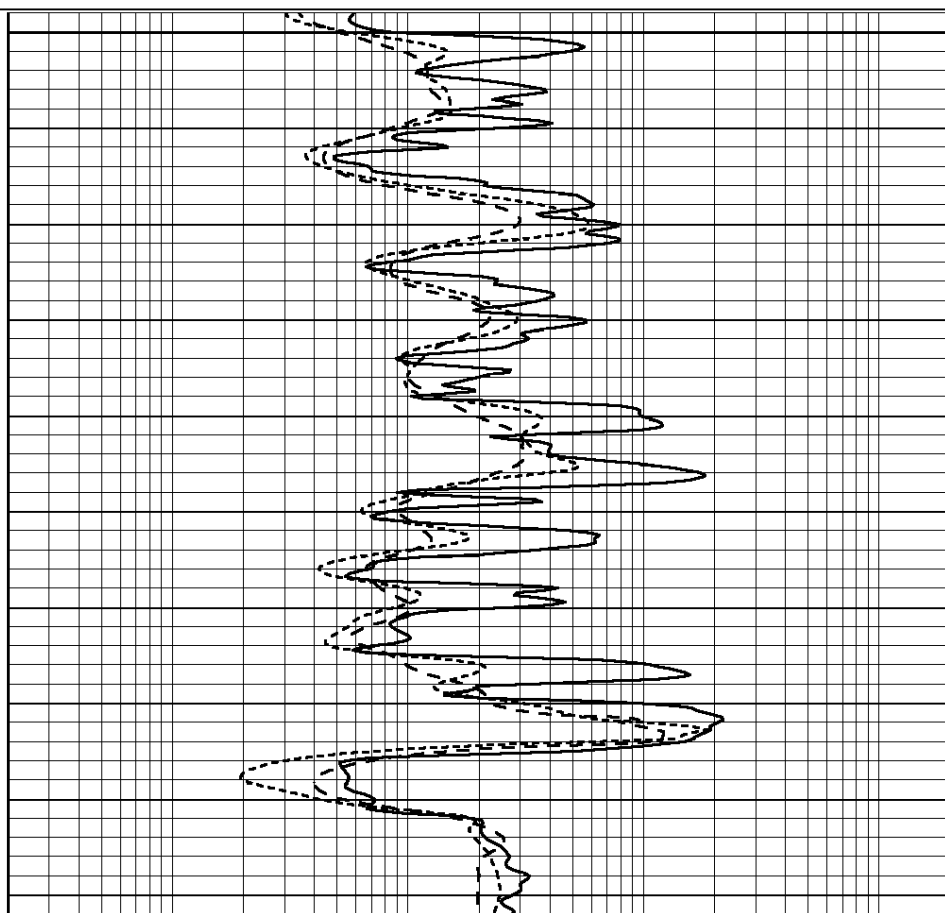
REPEAT SECTION

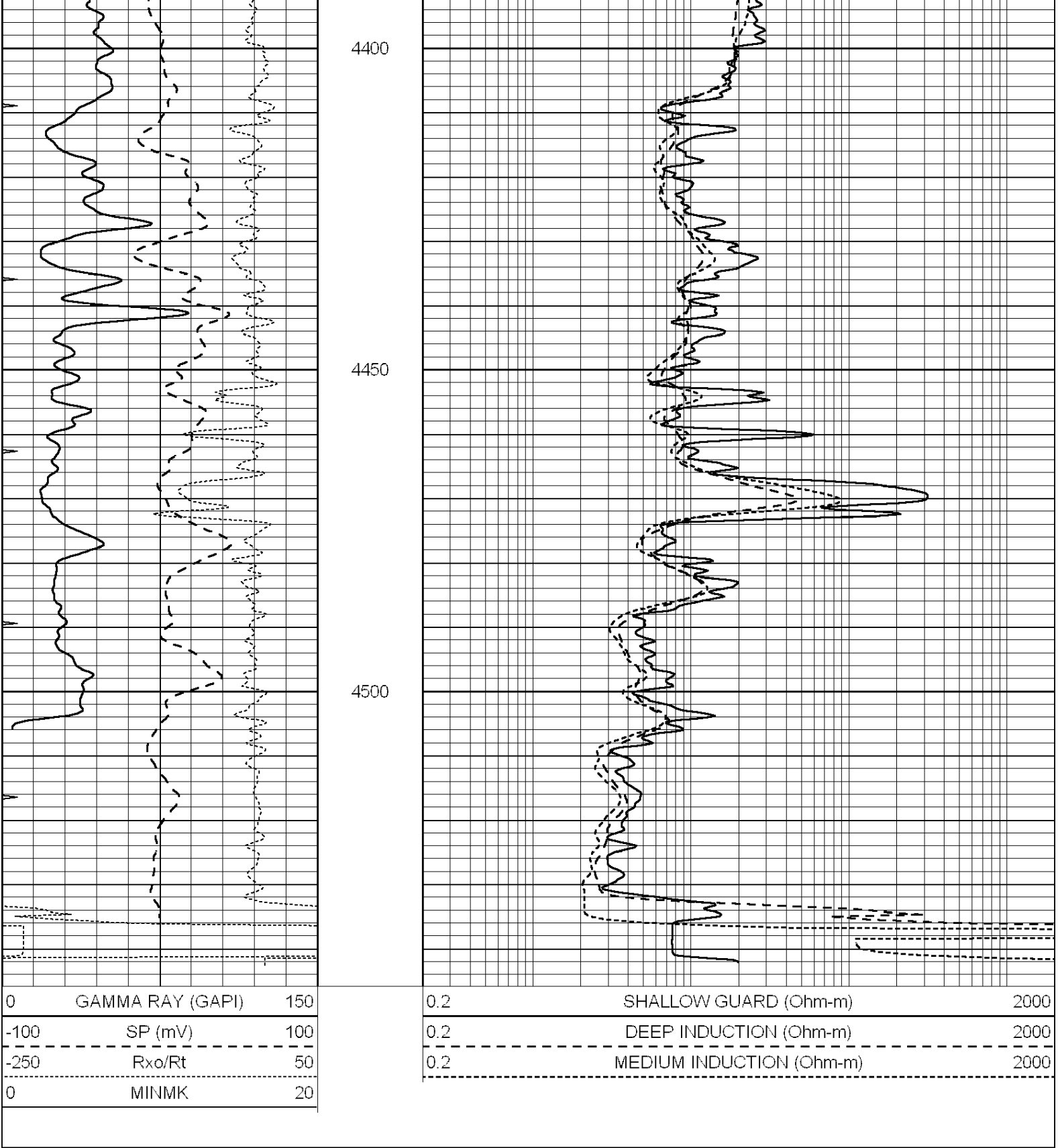
Database File: 30686ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: _dil
 Dataset Creation: Sun Feb 14 11:56:04 2016
 Charted by: Depth in Feet scaled 1:240



4300

4350





Calibration Report

Database File: 30686ddn.db
Dataset Pathname: pass3.8
Dataset Creation: Sun Feb 14 13:00:26 2016

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Sun Feb 14 11:27:24 2016
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Mon Jul 28 12:02:56 2008

Surface Calibration								
Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	670.000	-10.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	685.000	-25.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
Readings			References			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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: 004N Model: PRB								

Master Calibration					Performed Fri May 30 11:01:00 2014			
	Background	Magnesium	Aluminum	Sandstone				
Window 1	1378.8	10804.6	3492.0	12453.4	cps			
Window 2	1262.4	9313.5	3076.7	10594.7	cps			
Window 3	1077.6	5668.7	2076.0	6314.8	cps			
Window 4	306.4	313.0	306.4	315.6	cps			
Long Space	0.0	8051.0	1814.3	9332.3	cps			
Short Space	1.9	1706.1	1146.0	1707.6	cps			
Rho		1.7100	2.5900	1.3800	g/cc			
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.0	Rib Slope	: 1.002	Density/Spine Ratio	: 0.571			
Spine Angle	: 75.0	Spine Slope	: 3.745	Spine Intercept	: -18.9			

Before Survey Verification					Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps			
Window 2	0.0	0.0	0.0	0.0	cps			
Window 3	0.0	0.0	0.0	0.0	cps			
Window 4	0.0	0.0	0.0	0.0	cps			
Long Space	0.0	0.0	0.0	0.0	cps			
Short Space	0.0	0.0	0.0	0.0	cps			
Measured Rho		0.0000	0.0000	0.0000	g/cc			
Measured Correction		0.0000	0.0000	0.0000	g/cc			
Measured Pe			0.0000	0.0000				

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 070808
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: 070558
Tool Model: OPEN_GR
Performed: Wed Jan 13 07:49:22 2016

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps