



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company CAERUS KANSAS, LLC.		Company CAERUS KANSAS, LLC.	
Well MORTIMER #31-32 B		Well MORTIMER #31-32 B	
Field SETTE		Field SETTE	
County BARTON		County BARTON	
State KANSAS		State KANSAS	
Location: 1650' FNL & 1650' FEL		API # : 15-009-25736-0000	
SEC 31 TWP 17S RGE 13W		Other Services CDL/CNL/PE MEL/SON	
Permanent Datum	GROUND LEVEL	Elevation	1860
Log Measured From	KELLY BUSHING 10' A.G.L.	K.B. 1870	
Drilling Measured From	KELLY BUSHING	D.F. 1868	
		G.L. 1860	
Date	8/19/12		
Run Number	ONE		
Depth Driller	3550		
Depth Logger	3552		
Bottom Logged Interval	3550		
Top Log Interval	00		
Casing Driller	8 5/8" @ 825		
Casing Logger	825		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.4/44		
pH / Fluid Loss	9.0/9.8		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	0.80 @ 81F		
Rinf @ Meas. Temp	0.60 @ 81F		
Rinc @ Meas. Temp	0.96 @ 81F		
Source of Rinf / Rinc	MEASURED		
Rin @ BHT	.57 @ 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	JUSTIN CARTER		

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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 SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
HOISINGTON, KS. - W. TO CURVE - FOLLOW CURVE N. 1/4 MILE - W. INTO



SUPERIOR
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Kansas

MAIN SECTION

Database File: 009584ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil2
Dataset Creation: Sun Aug 19 03:48:12 2012 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

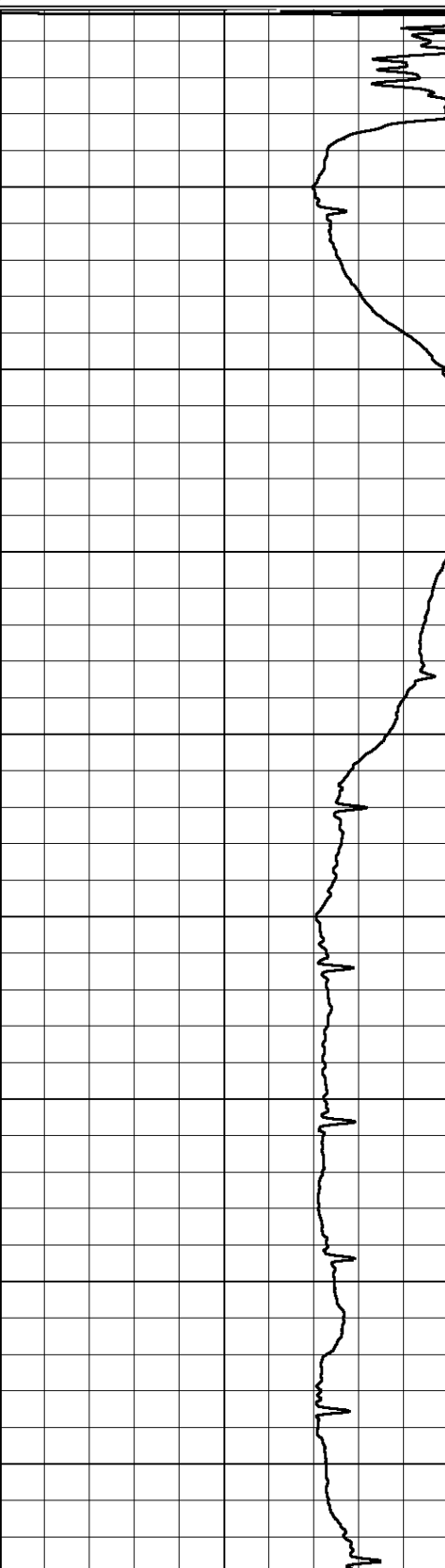
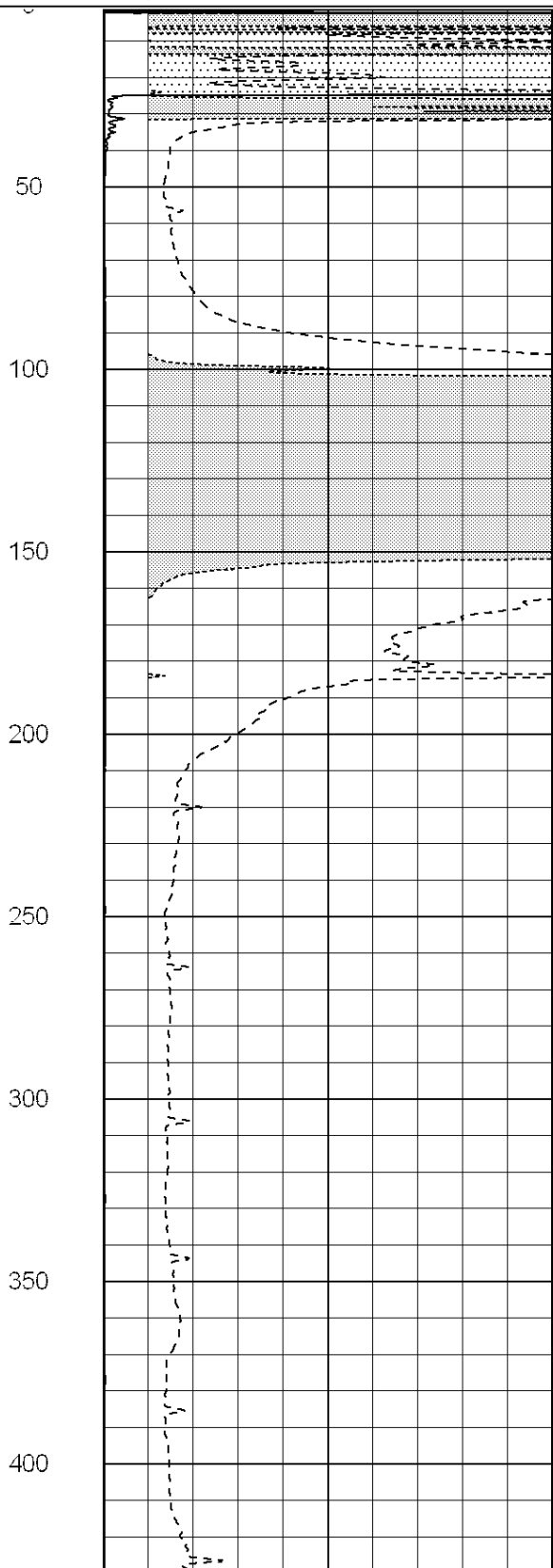
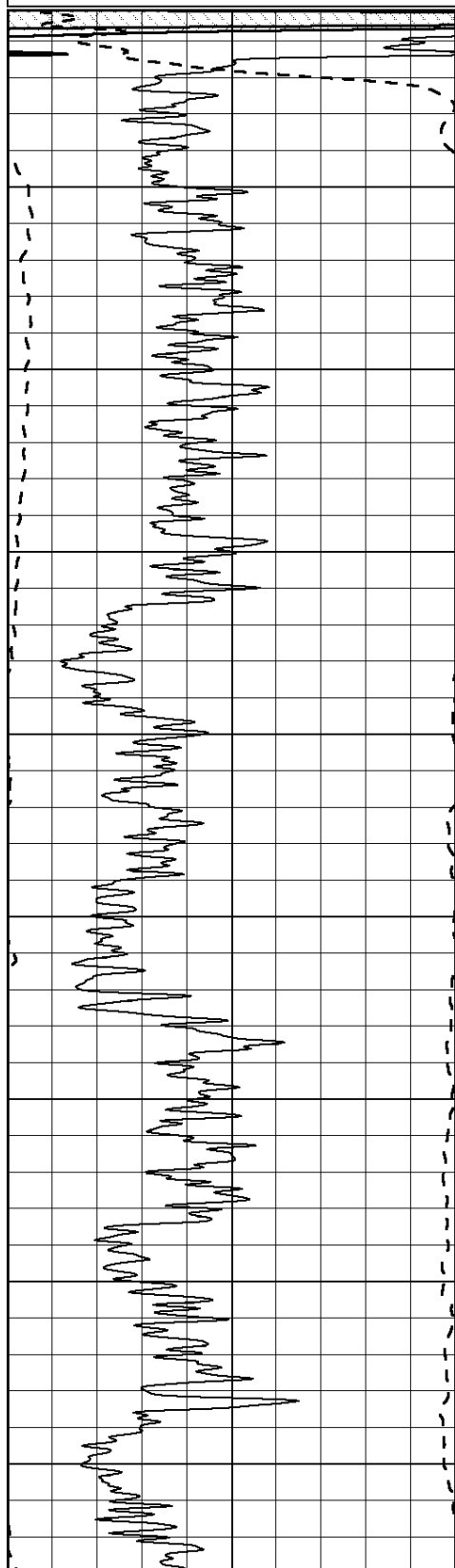
0	RLL3 (Ohm-m)	50
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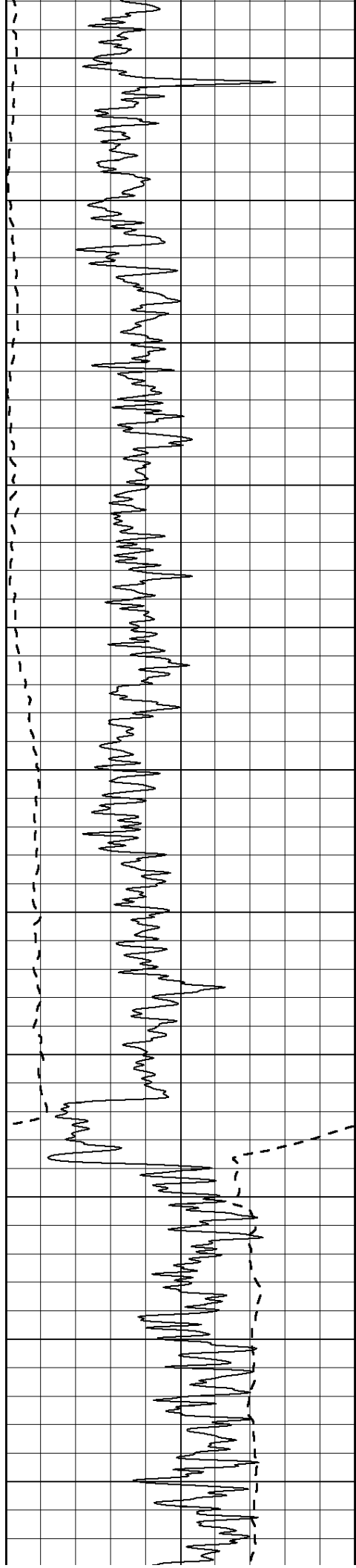
0	Deep Induction (Ohm-m)	50
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1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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450

500

550

600

650

700

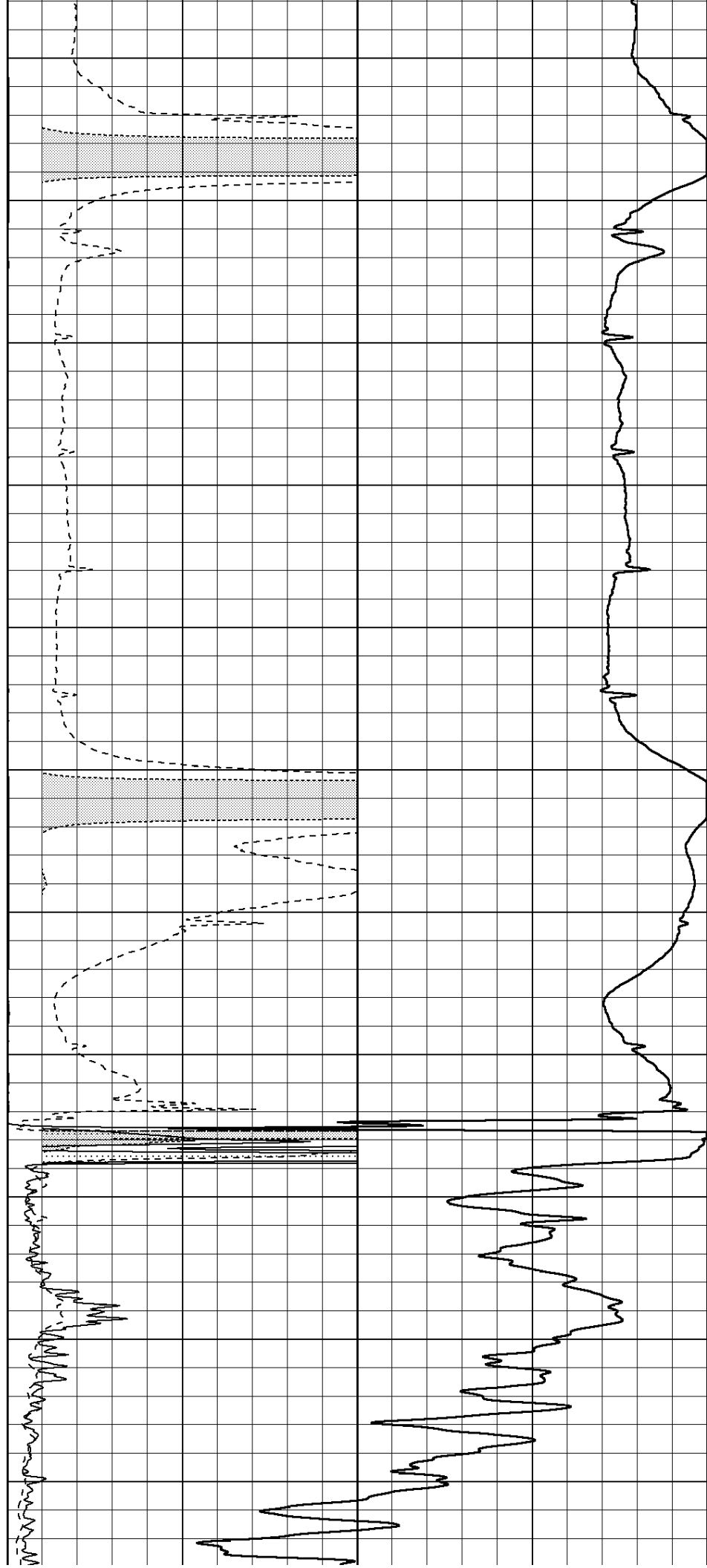
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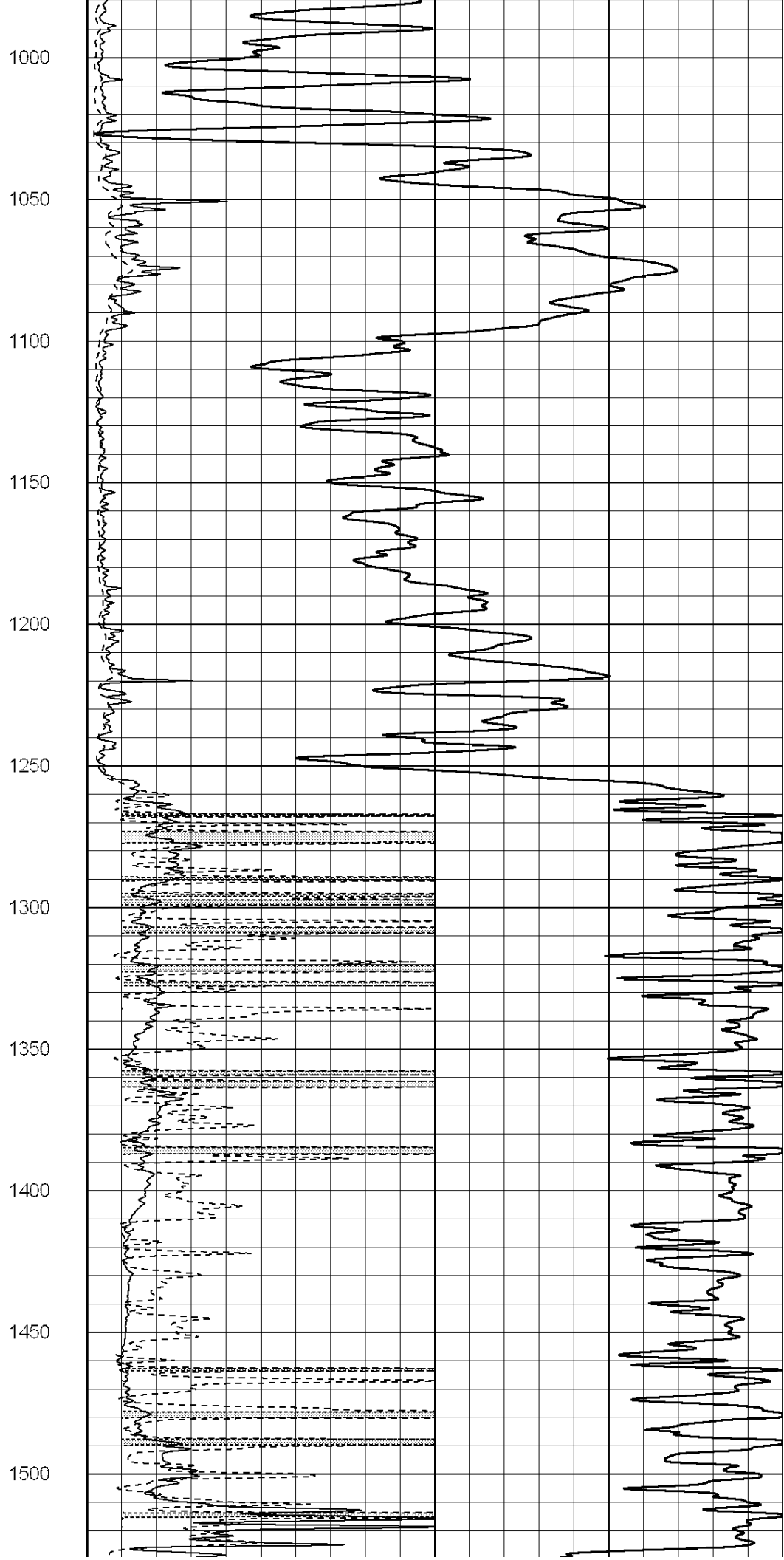
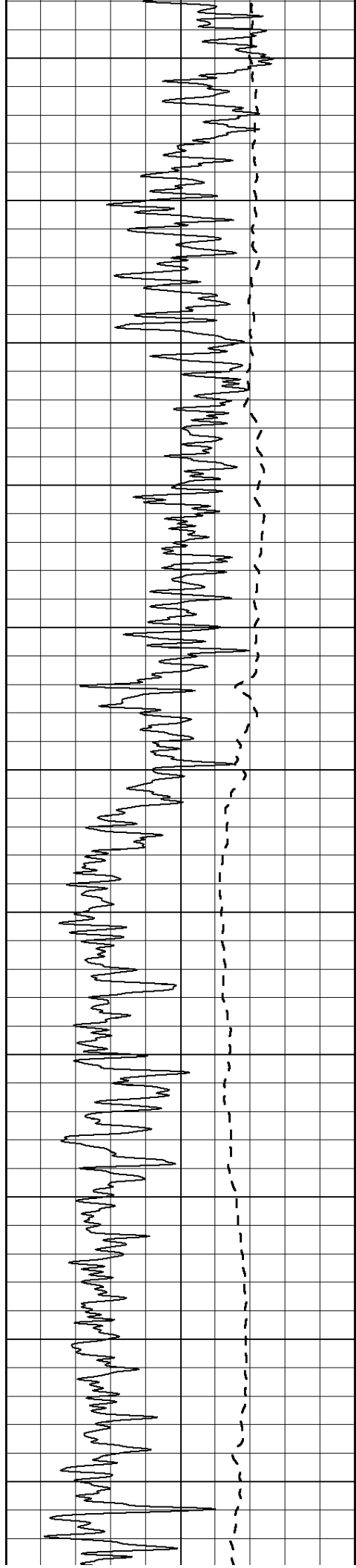
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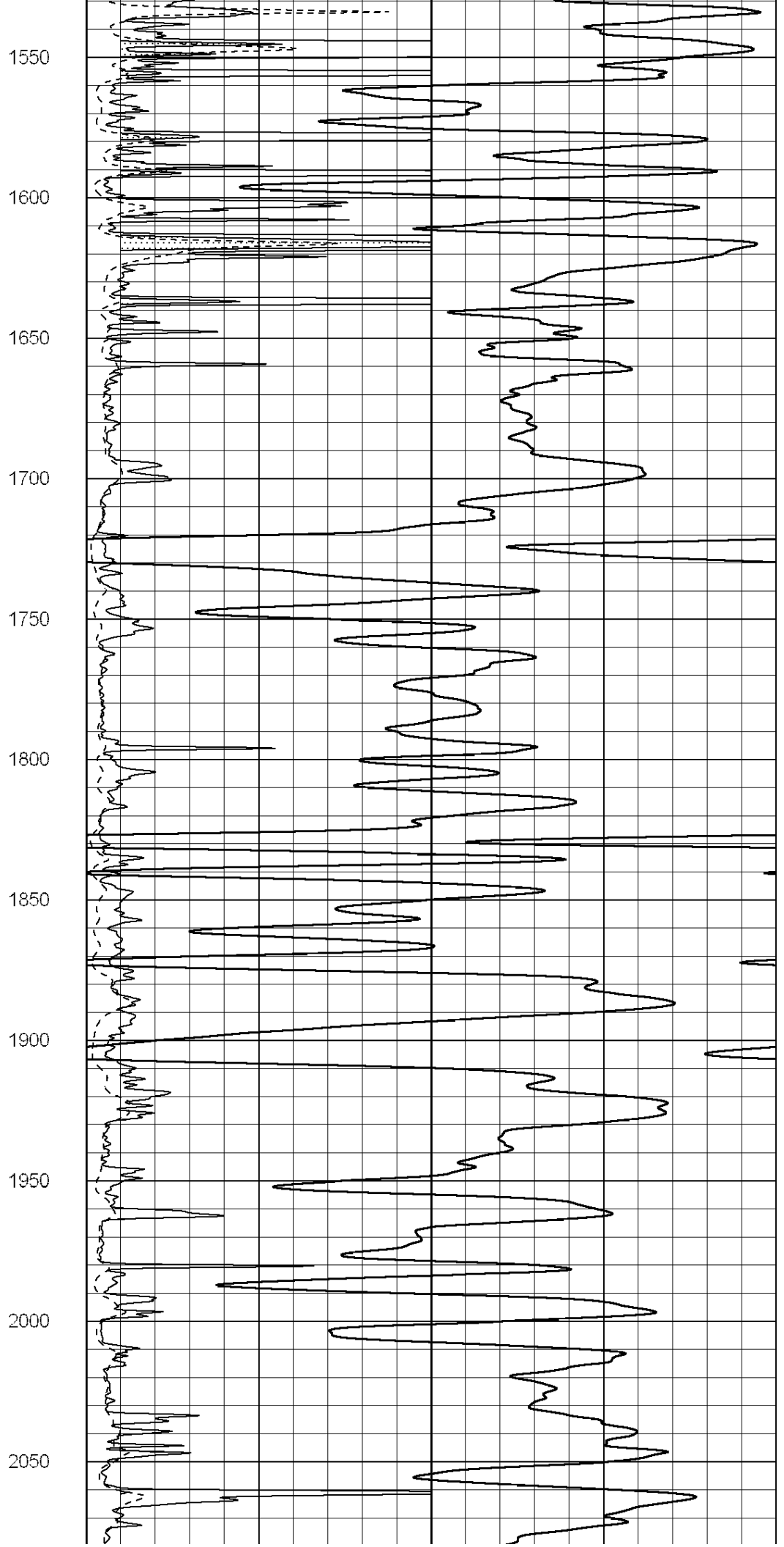
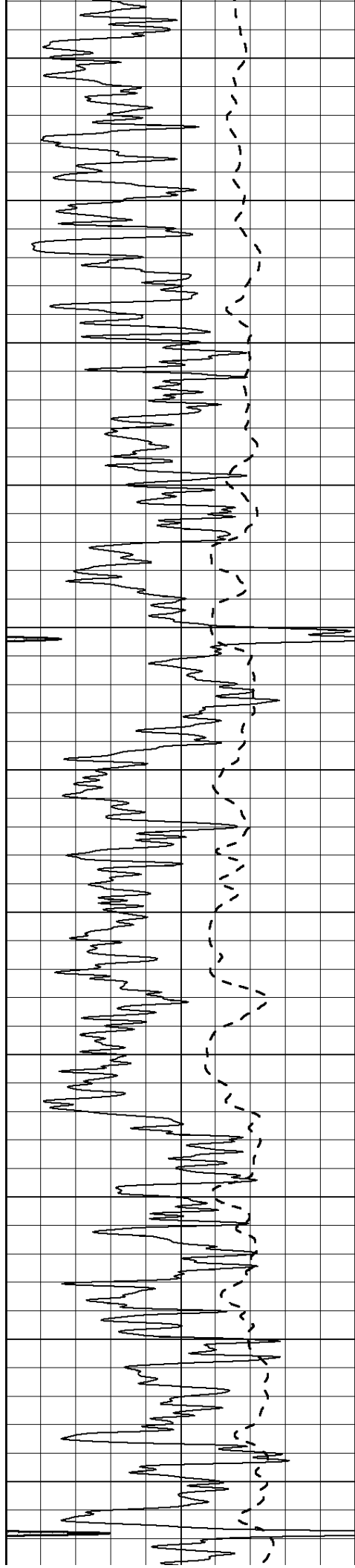
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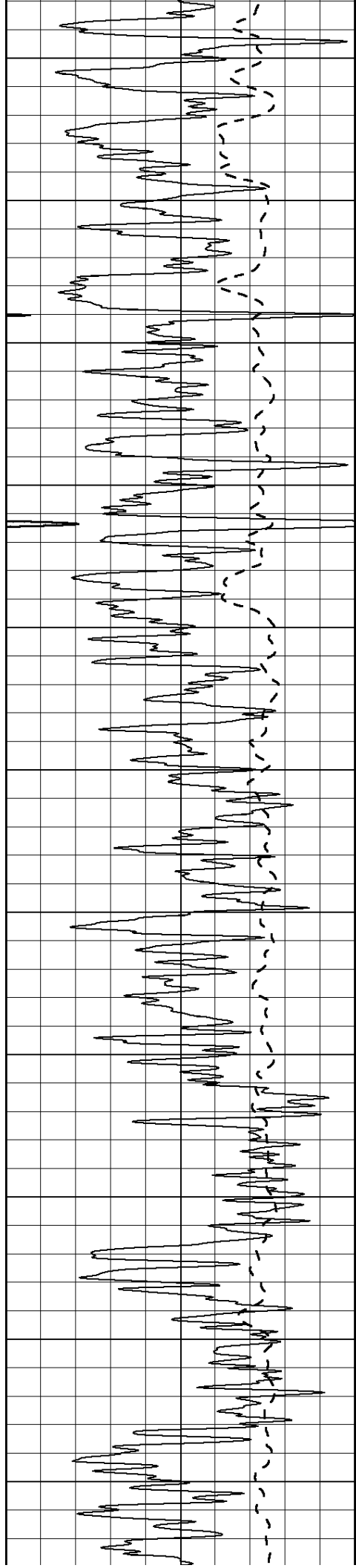
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950









2100

2150

2200

2250

2300

2350

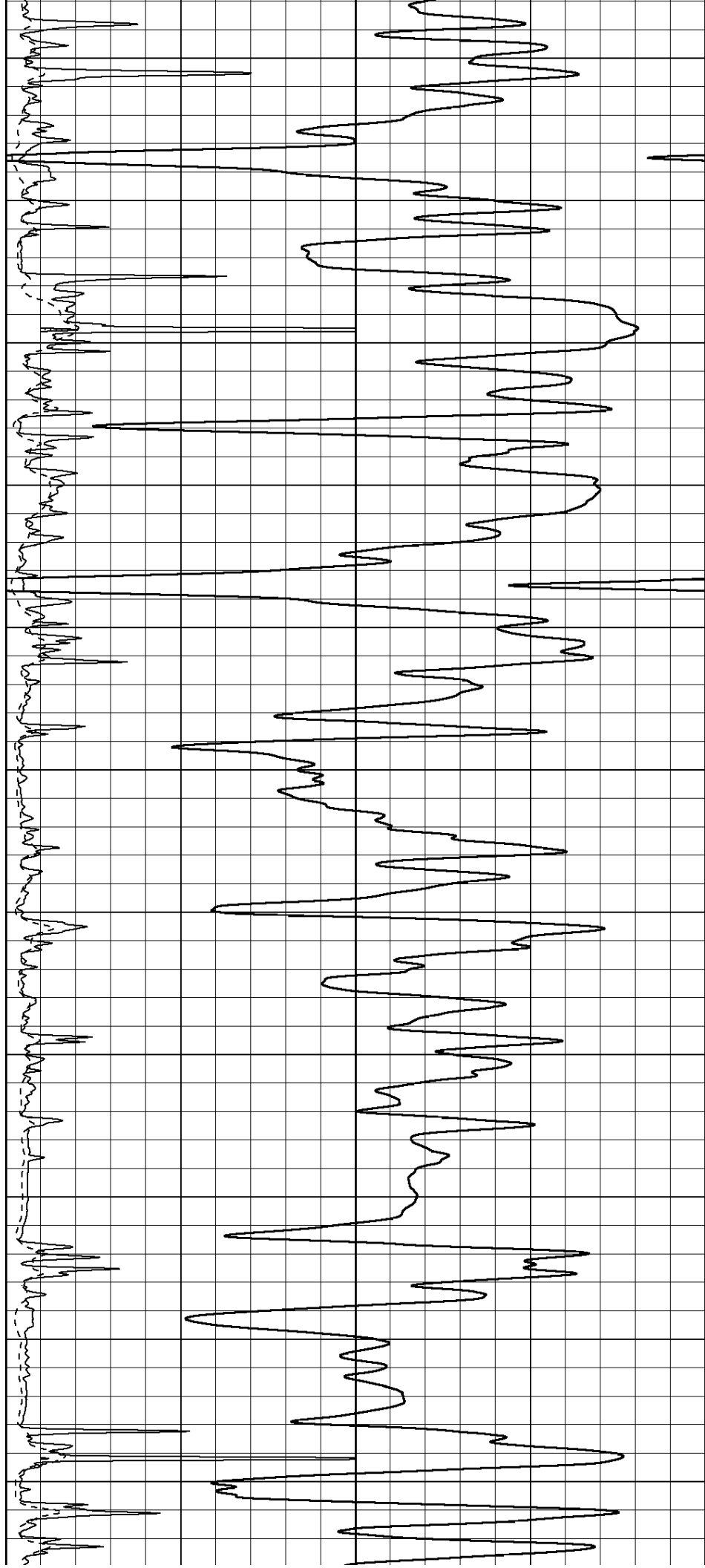
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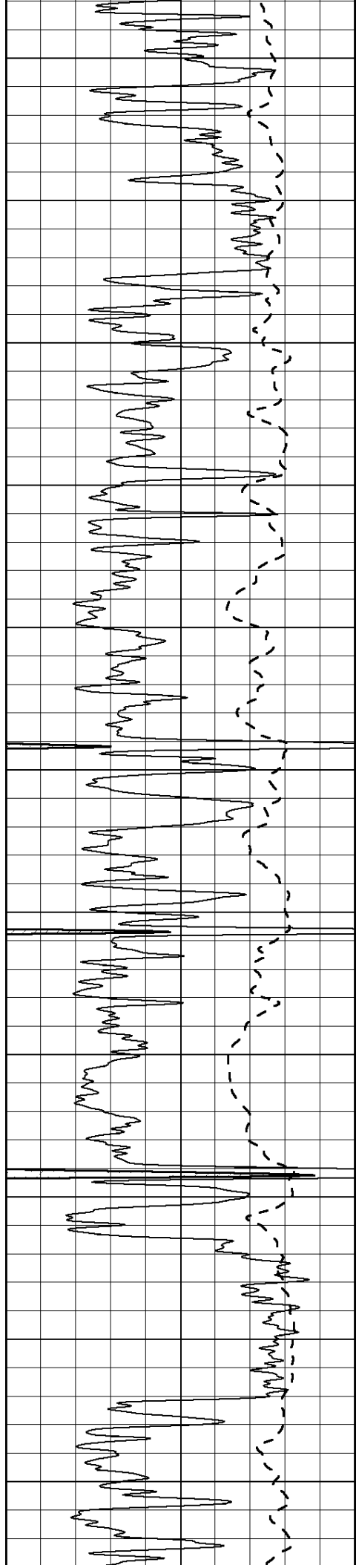
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2500

2550

2600





2650

2700

2750

2800

2850

2900

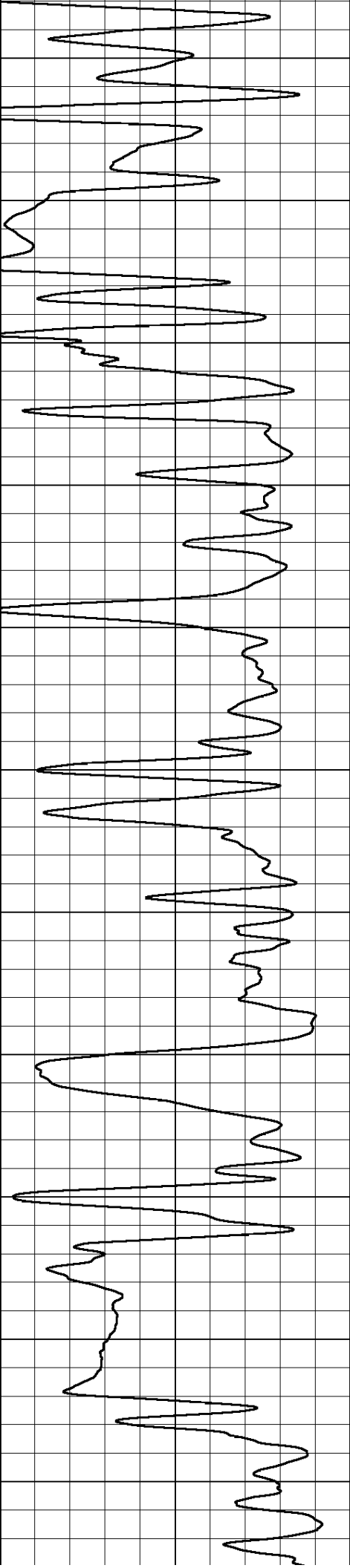
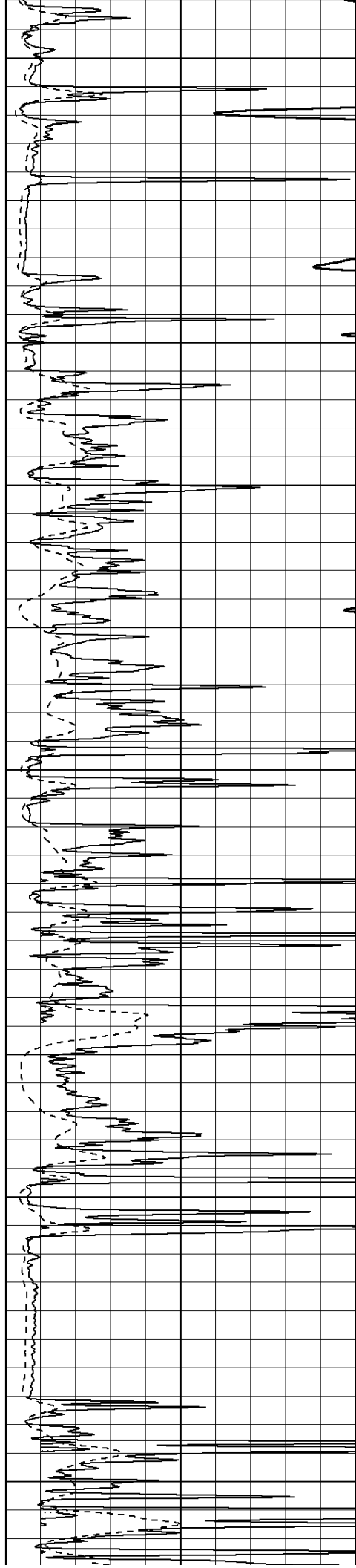
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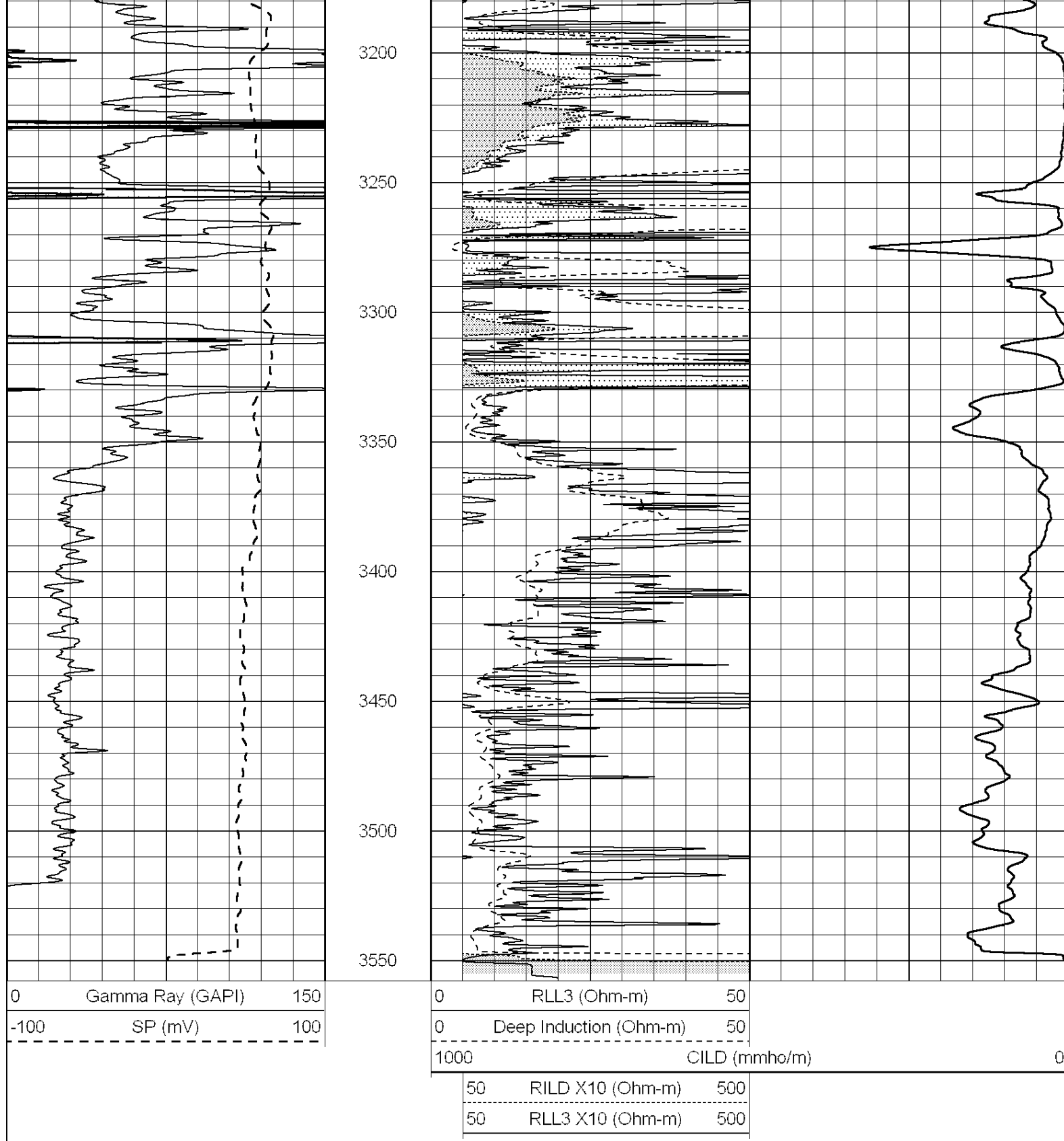
3000

3050

3100

3150



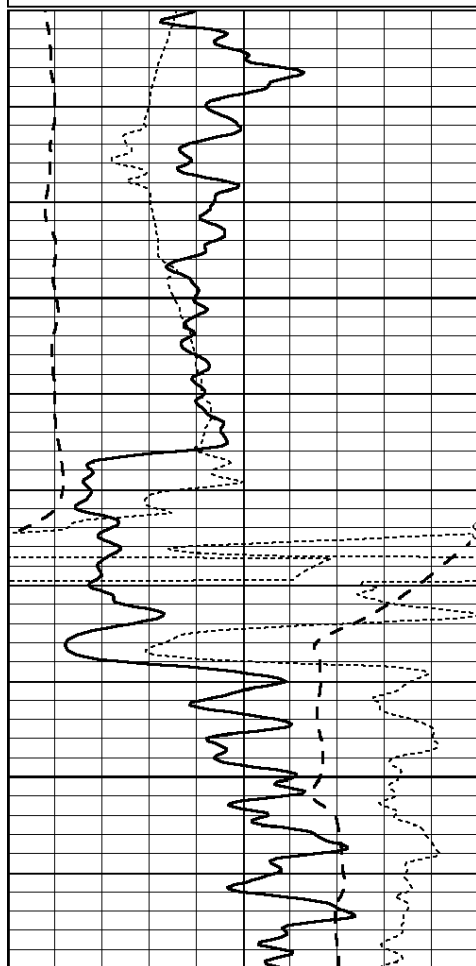


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ANHYDRITE

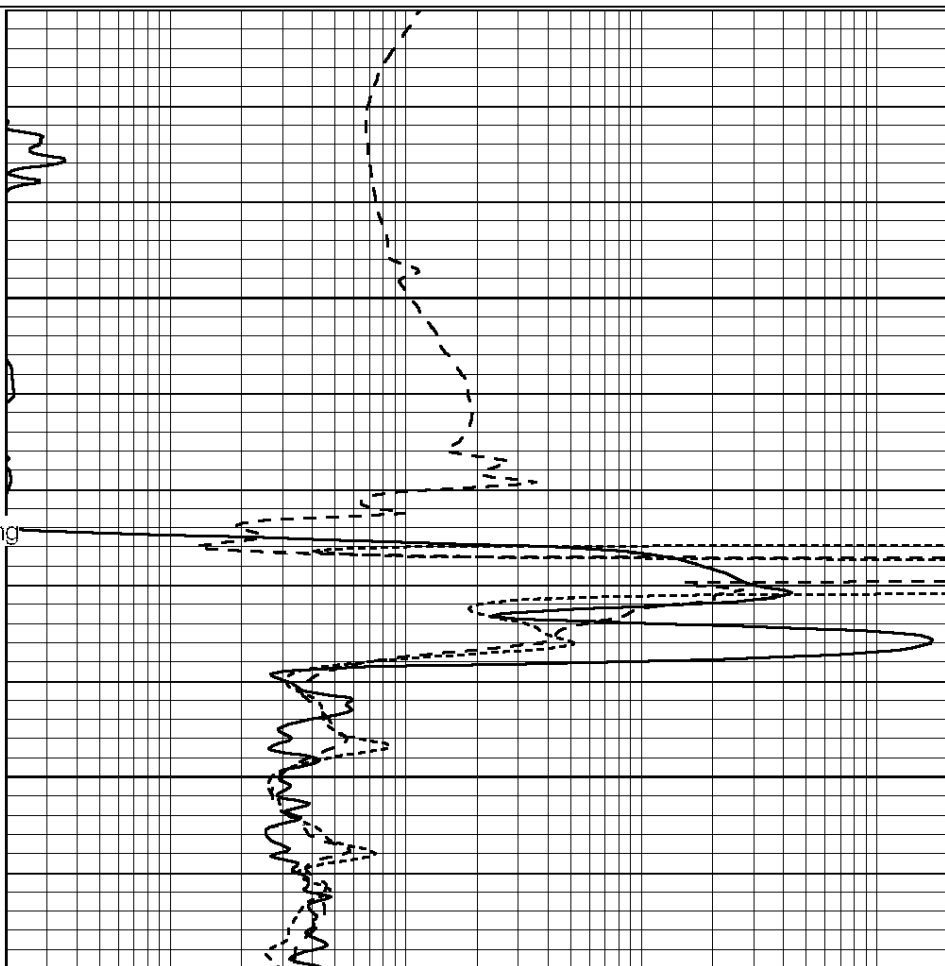
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 Dataset Pathname: pass3.3
 Presentation Format: _dil
 Dataset Creation: Sun Aug 19 03:26:25 2012 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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

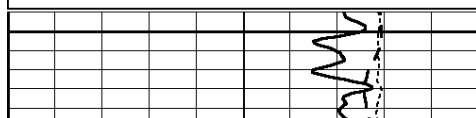


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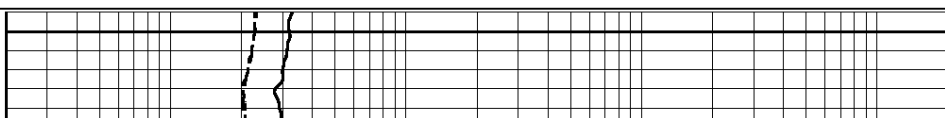
MAIN SECTION

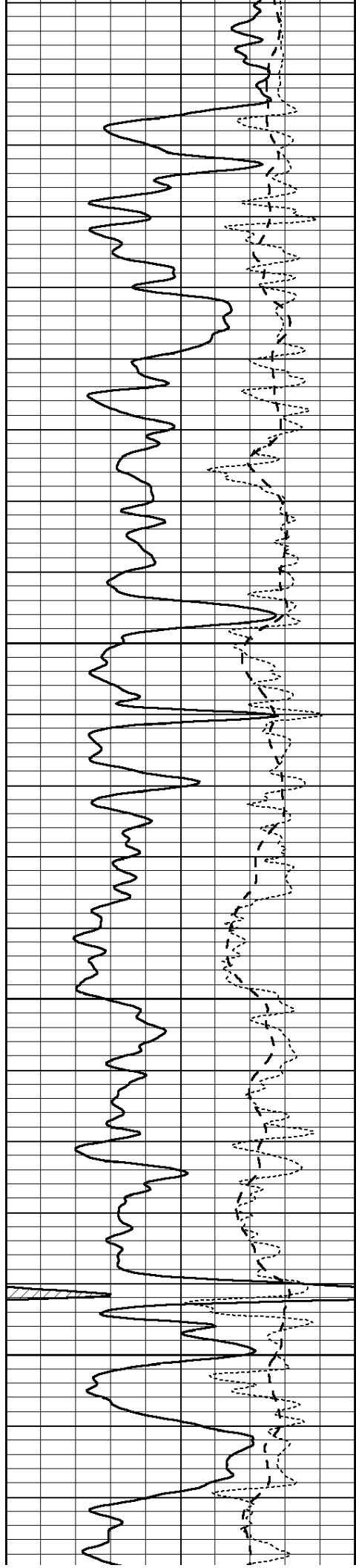
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 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Sun Aug 19 03:06:19 2012 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

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



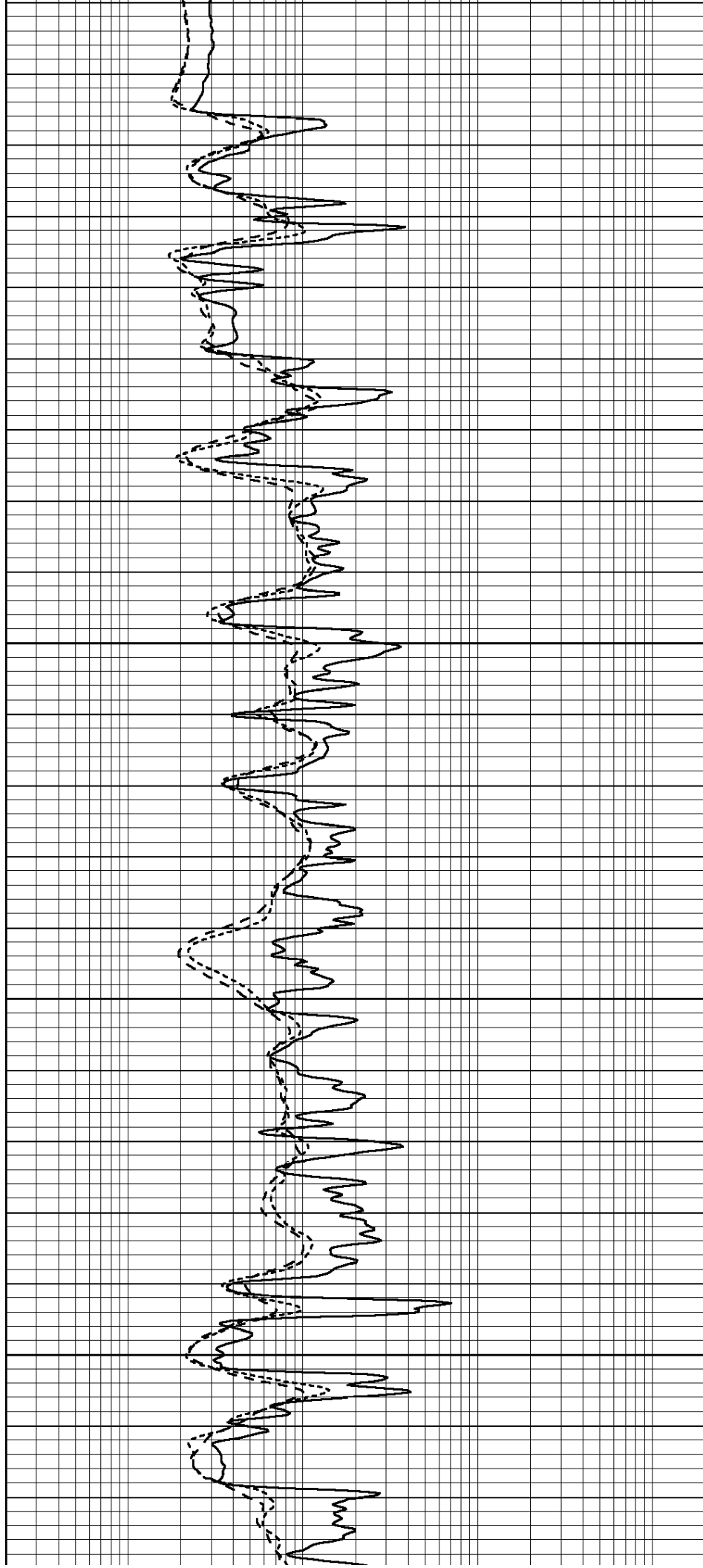


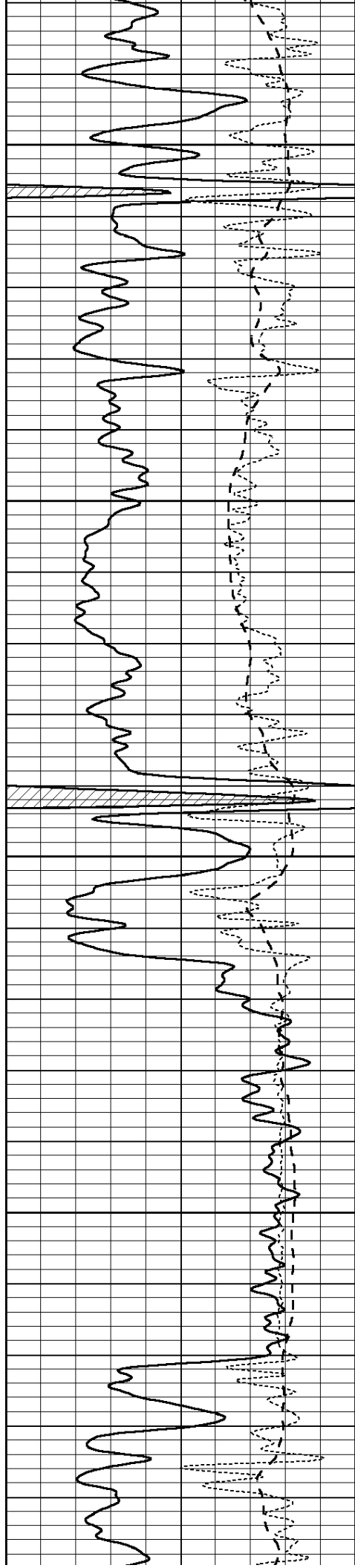
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2800

2850

2900





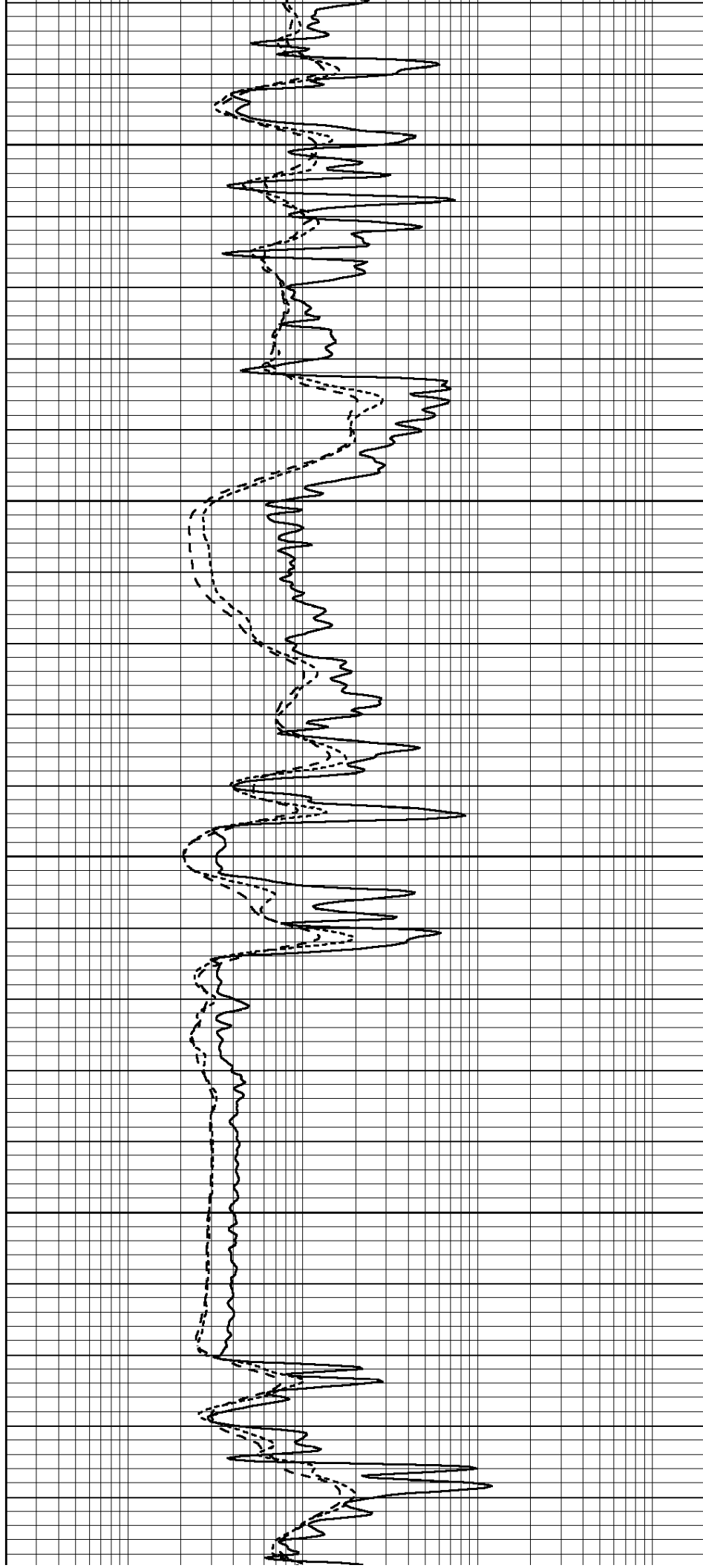
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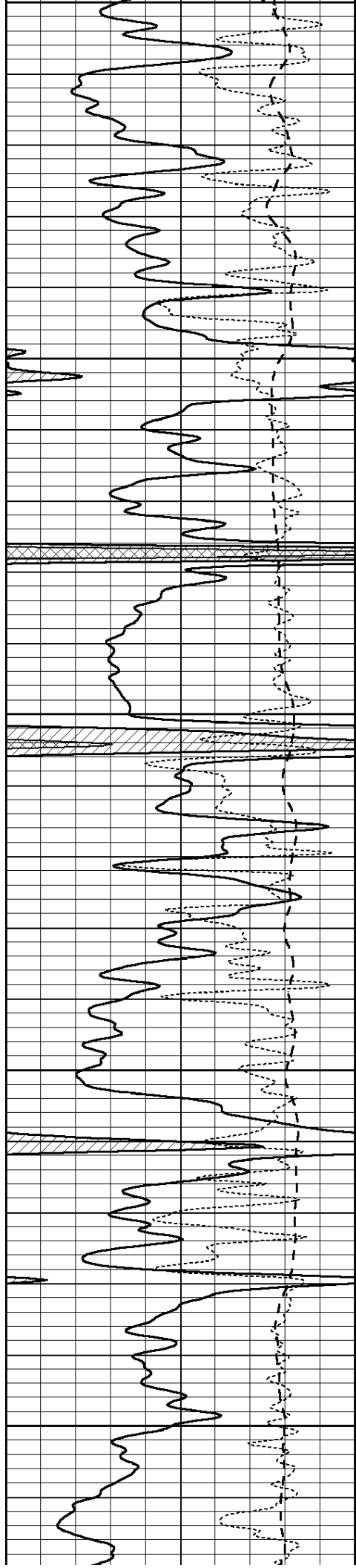
3000

3050

3100

3150





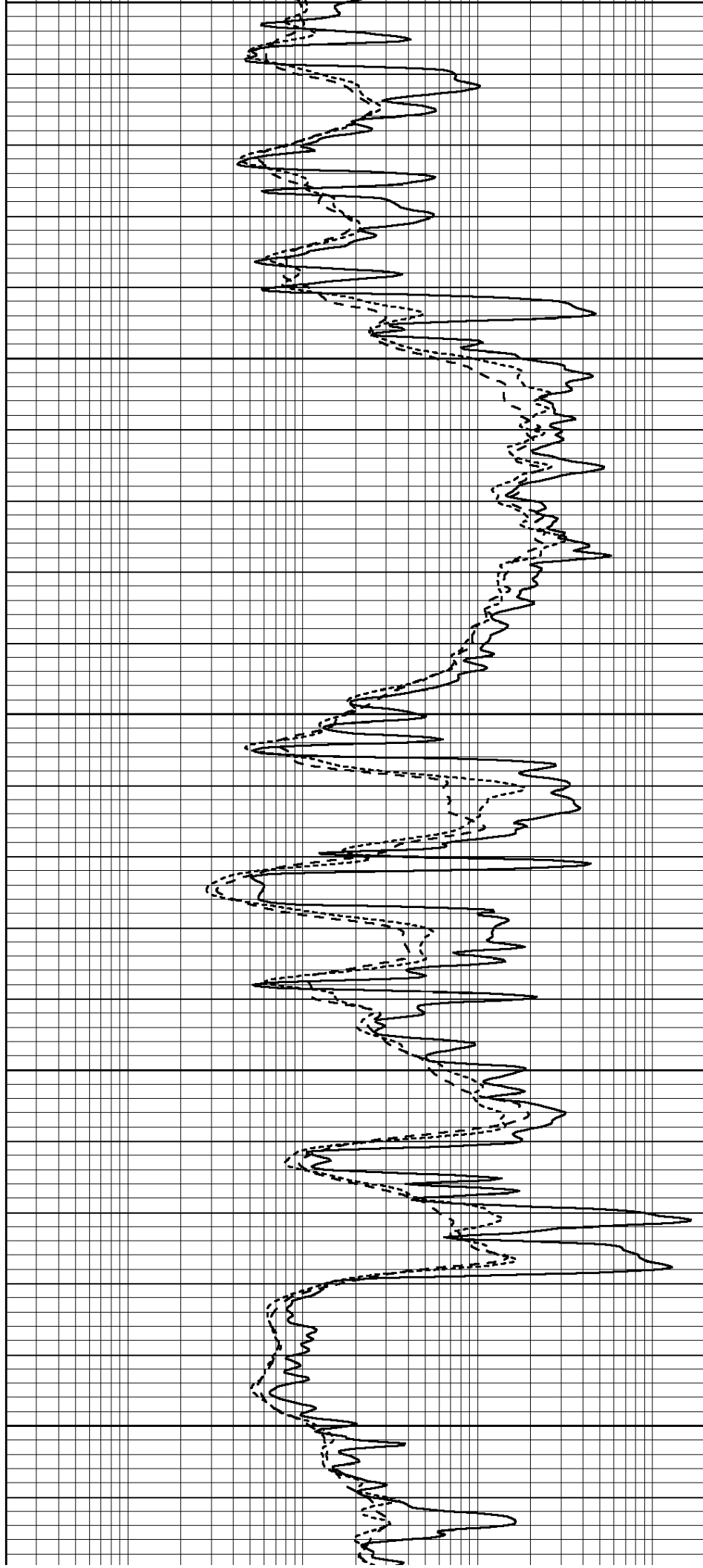
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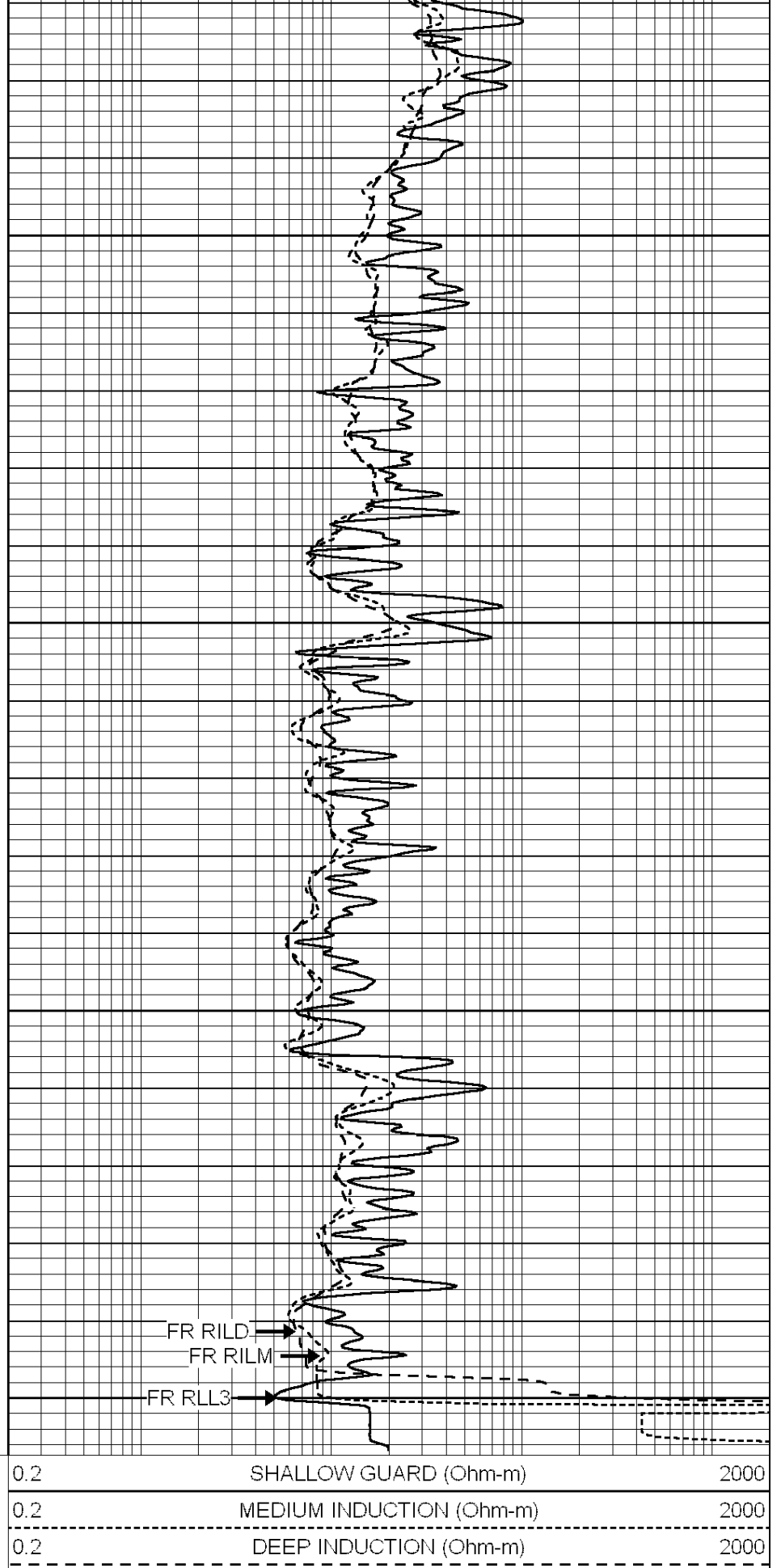
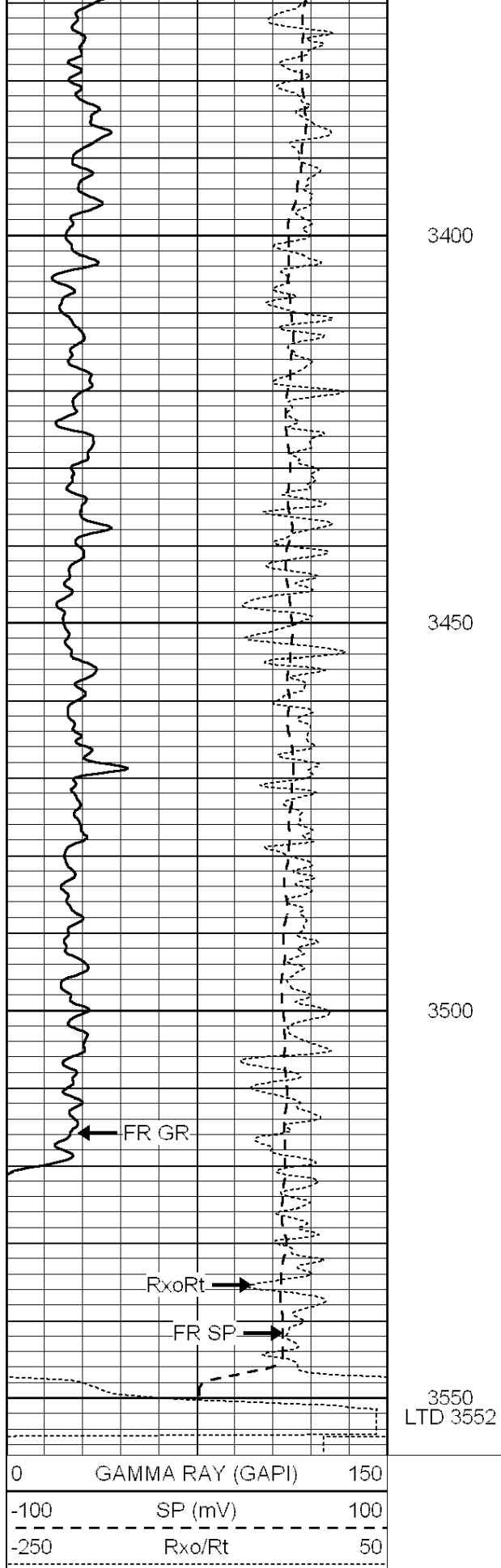
3200

3250

3300

3350





SUPERIOR



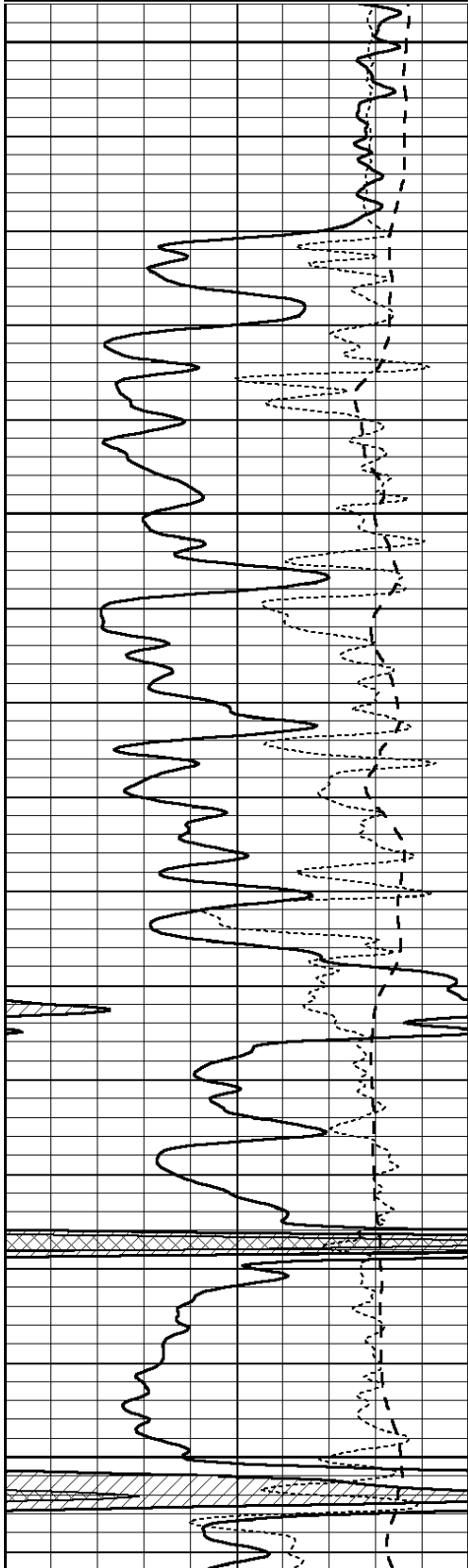
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REPEAT SECTION

Database File: 009584ddn.db
Dataset Pathname: pass2.1
Presentation Format: _dil
Dataset Creation: Sun Aug 19 02:46:07 2012 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

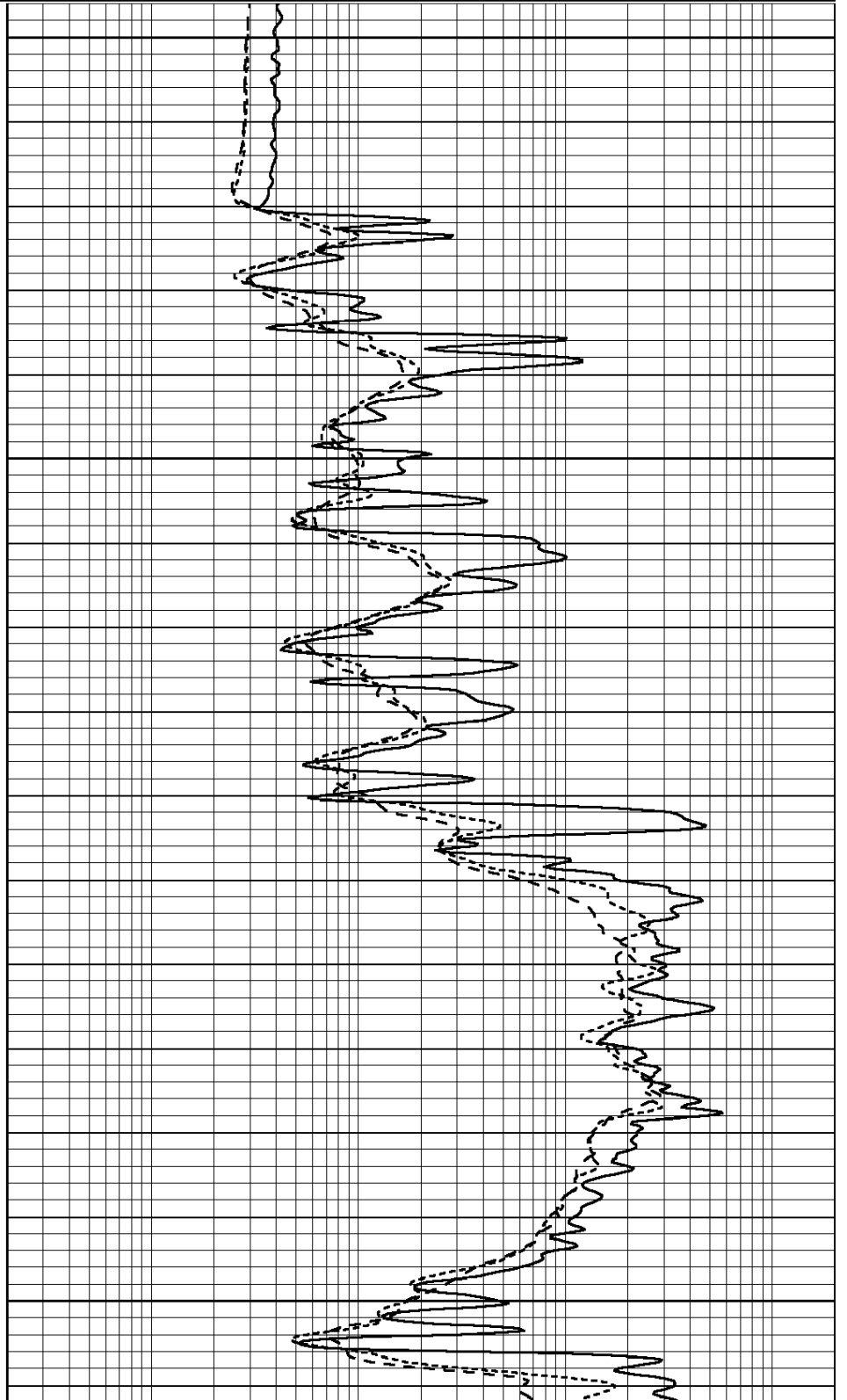


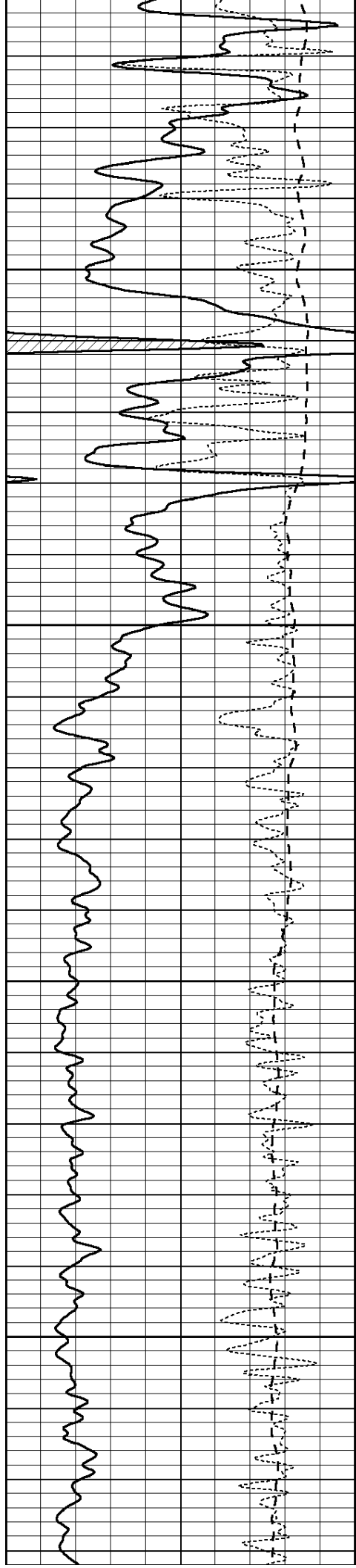
3100

3150

3200

3250



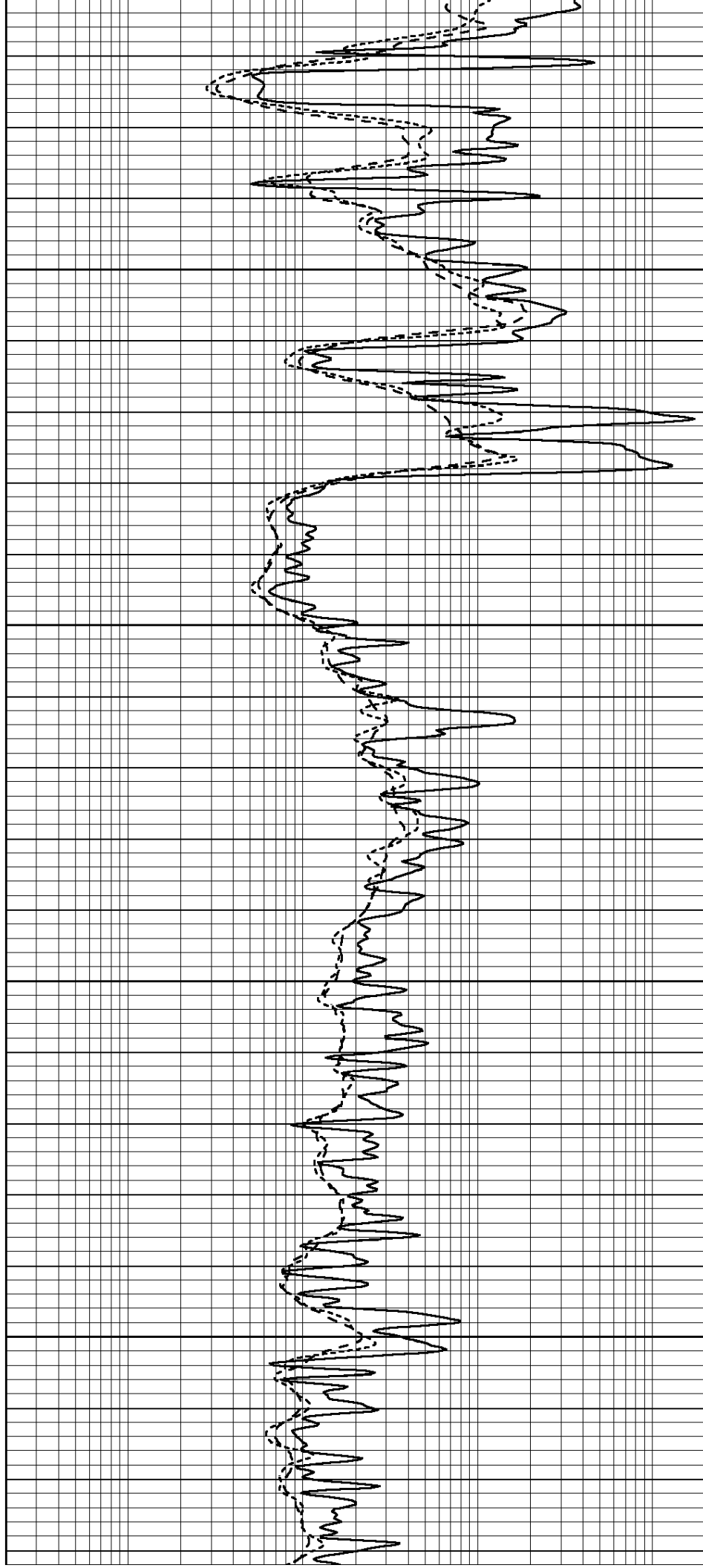


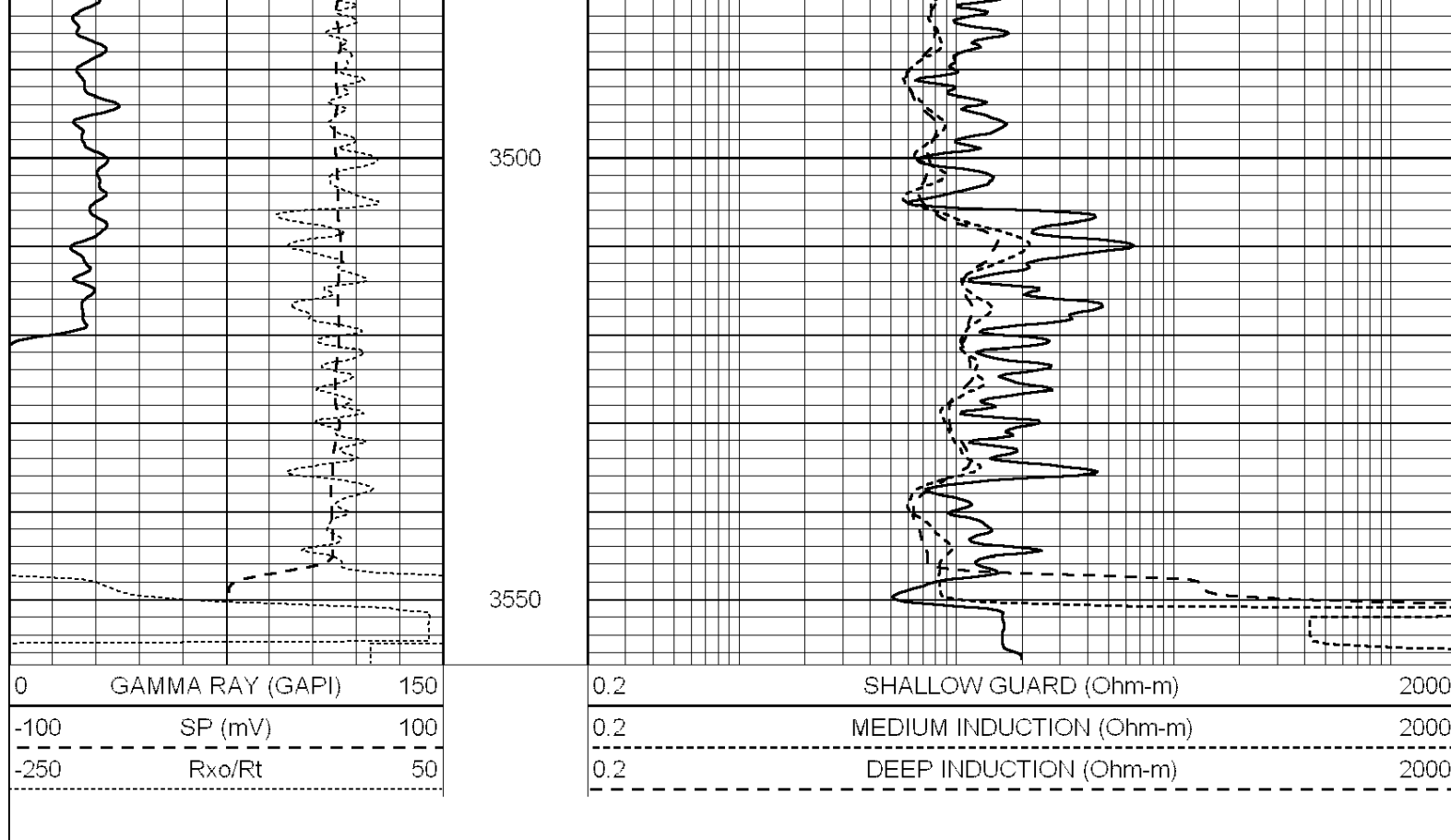
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3350

3400

3450





Calibration Report

Database File: 009584ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Sun Aug 19 03:06:19 2012 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

Loop:	Readings			References			Results	
	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		

Litho Density Calibration Report
Serial: 001 Model: PRB
Performed Thu Sep 17 09:57:21 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2056.0	9796.8	3673.1	10821.3	cps
Window 2	1920.0	8541.1	3303.5	9307.2	cps
Window 3	1563.1	4735.7	2212.8	5017.5	cps
Window 4	466.0	466.1	465.6	471.5	cps
Long Space	0.0	6621.1	1383.5	7387.2	cps
Short Space	2.5	2361.7	1523.2	2534.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.978	Density/Spine Ratio	: 0.541
Spine Angle	: 74.4	Spine Slope	: 3.570	Spine Intercept	: -18.9

Caliper

	Readings	Reference
Low Ref	3.1	8.4
High Ref	4.3	14.3
	Gain: 4.6	Offset: -7.7

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

Background Reading: 0.0 cps
Calibrator Reading: 175.0 cps

Sensitivity: 0.8371 GAPI/cps