



**Casedhole
Solutions**

**DUAL
INDUCTION
LOG**

Company	RED OAK ENERGY, INC.	Company	RED OAK ENERGY, INC.
Well	SCHEMM TRUST #1-16	Well	SCHEMM TRUST #1-16
Field	WILDCAT	Field	WILDCAT
County	WALLACE	County	WALLACE
State	KANSAS	State	KANSAS
Location:		API # : 15-199-20432-0000	Other Services
77' FSL & 1476' FEL			CDL/CNL MEL/SON
Permanent Datum	GROUND LEVEL	Elevation	
Log Measured From	KELLY BUSHING 11' A.G.L.	K.B. 3697	
Drilling Measured From	KELLY BUSHING	D.F. 3695	
		G.L. 3686	
SEC 16	TWP 14S	RGE 40W	
Date	9/25/15		
Run Number	ONE		
Depth Driller	5173		
Depth Logger	5174		
Bottom Logged Interval	5172		
Top Log Interval	00		
Casing Driller	8 5/8" @ 307		
Casing Logger	306		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2700 PPM	
Density / Viscosity	9.3/55		
pH / Fluid Loss	10.0/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 85F		
Rmt @ Meas. Temp	.60 @ 85F		
Rmc @ Meas. Temp	.96 @ 85F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.53 @ 127F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	127F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	SEAN DEENIHAN		

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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

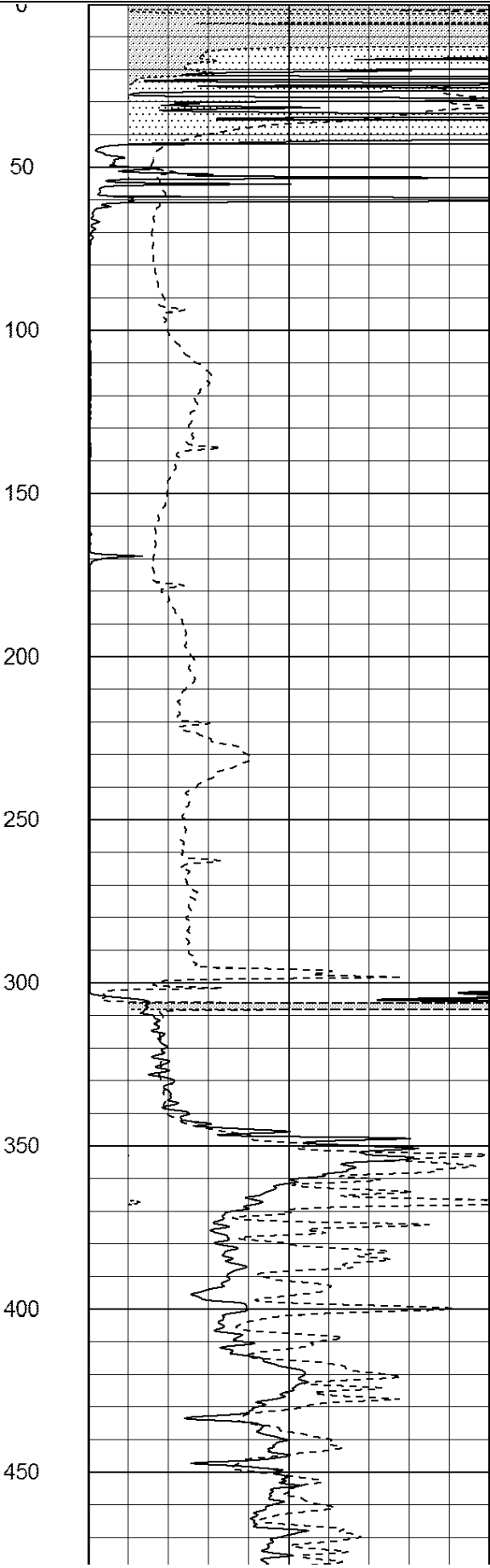
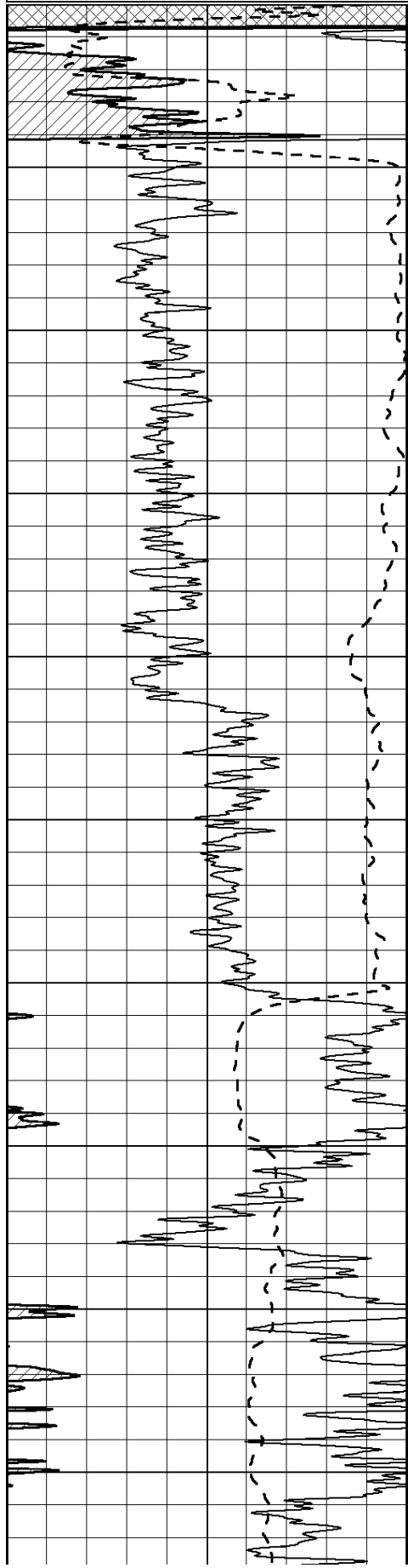
THANK YOU FOR USING CASEDHOLE SOLUTIONS, HAYS, KS. (785) 628-6395
DIRECTIONS:
SHARON SPRINGS, KS. - 5 SOUTH TO JACKRABBIT RD. - 3/4 WEST - NORTH INTO

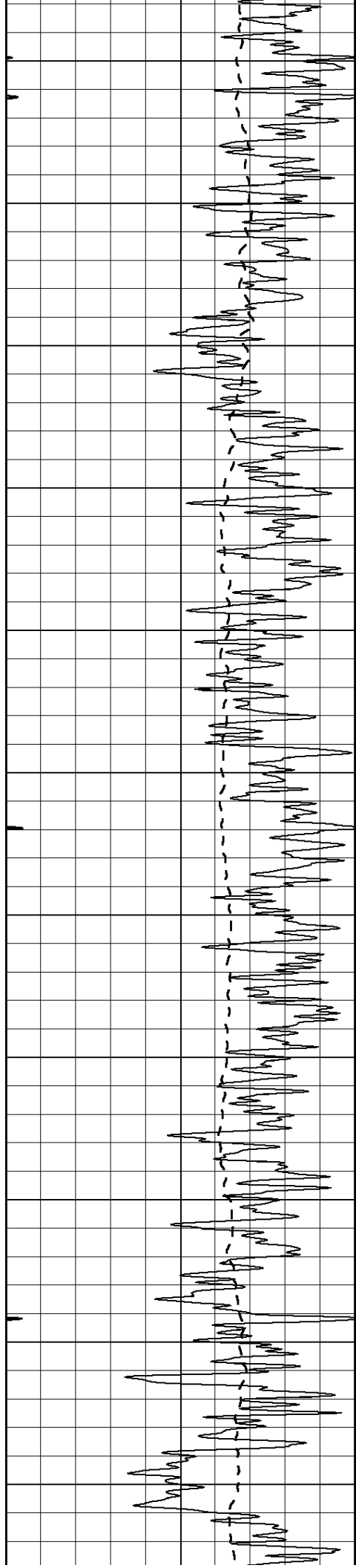
Database File: 30523ddn.db
Dataset Pathname: pass3.3
Presentation Format: _dil2
Dataset Creation: Fri Sep 25 07:10:11 2015 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:600

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

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

0





500

550

600

650

700

750

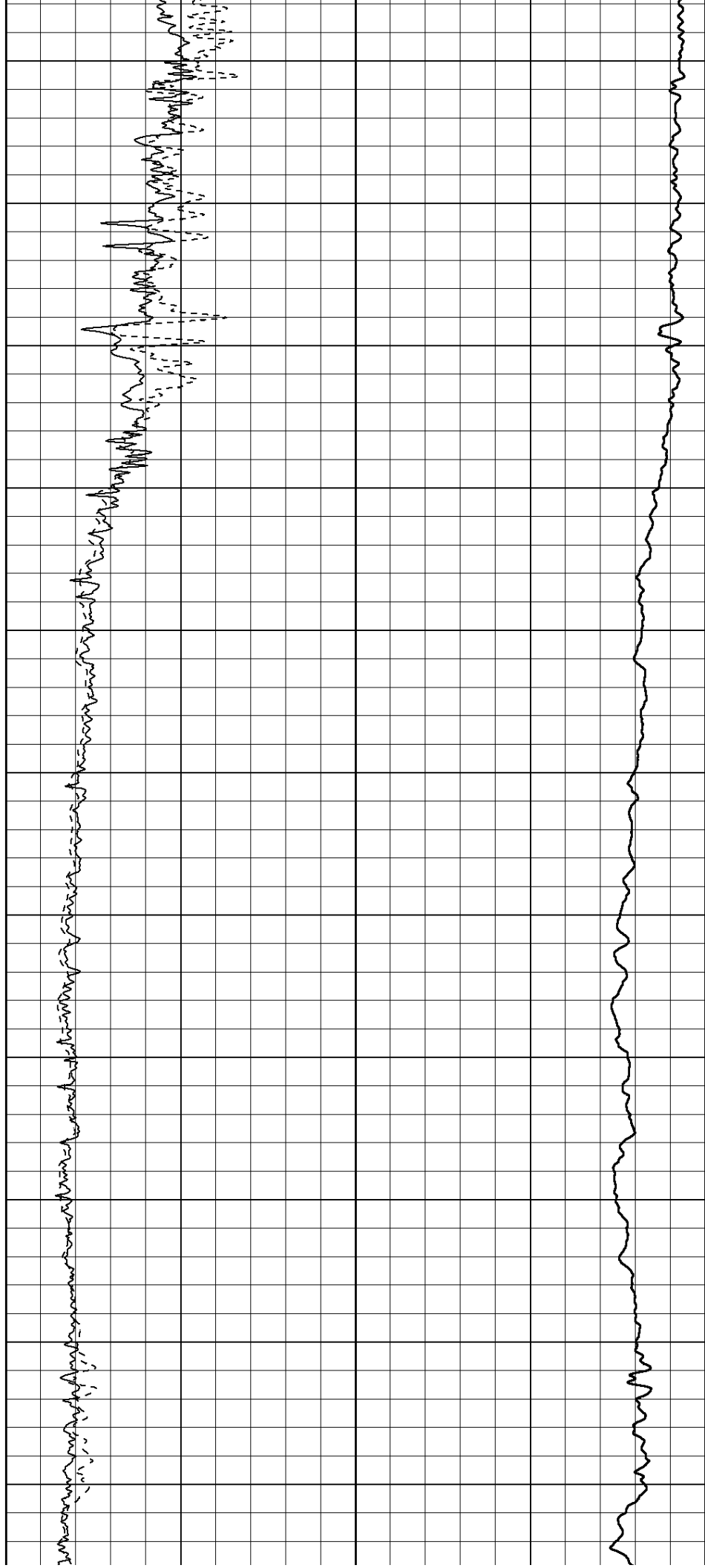
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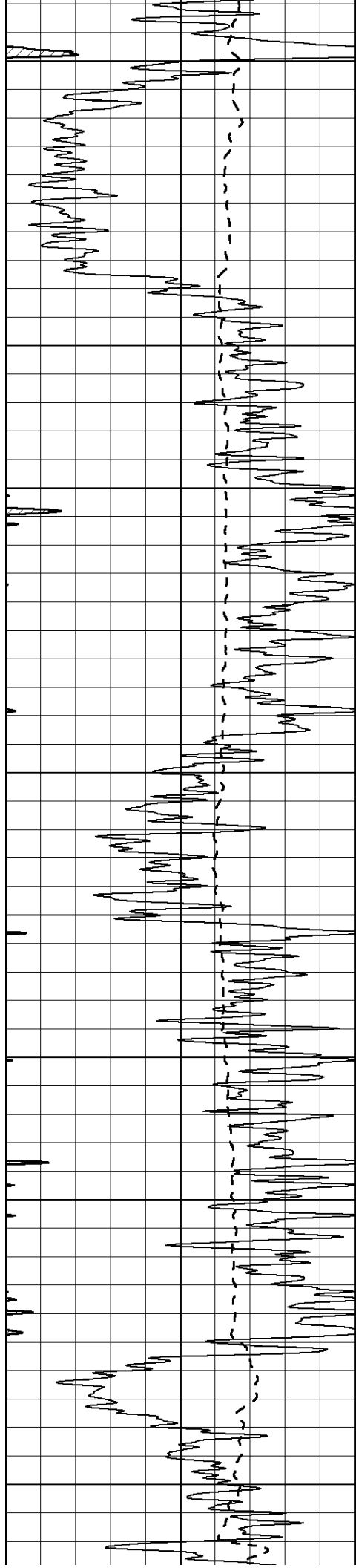
850

900

950

1000





1050

1100

1150

1200

1250

1300

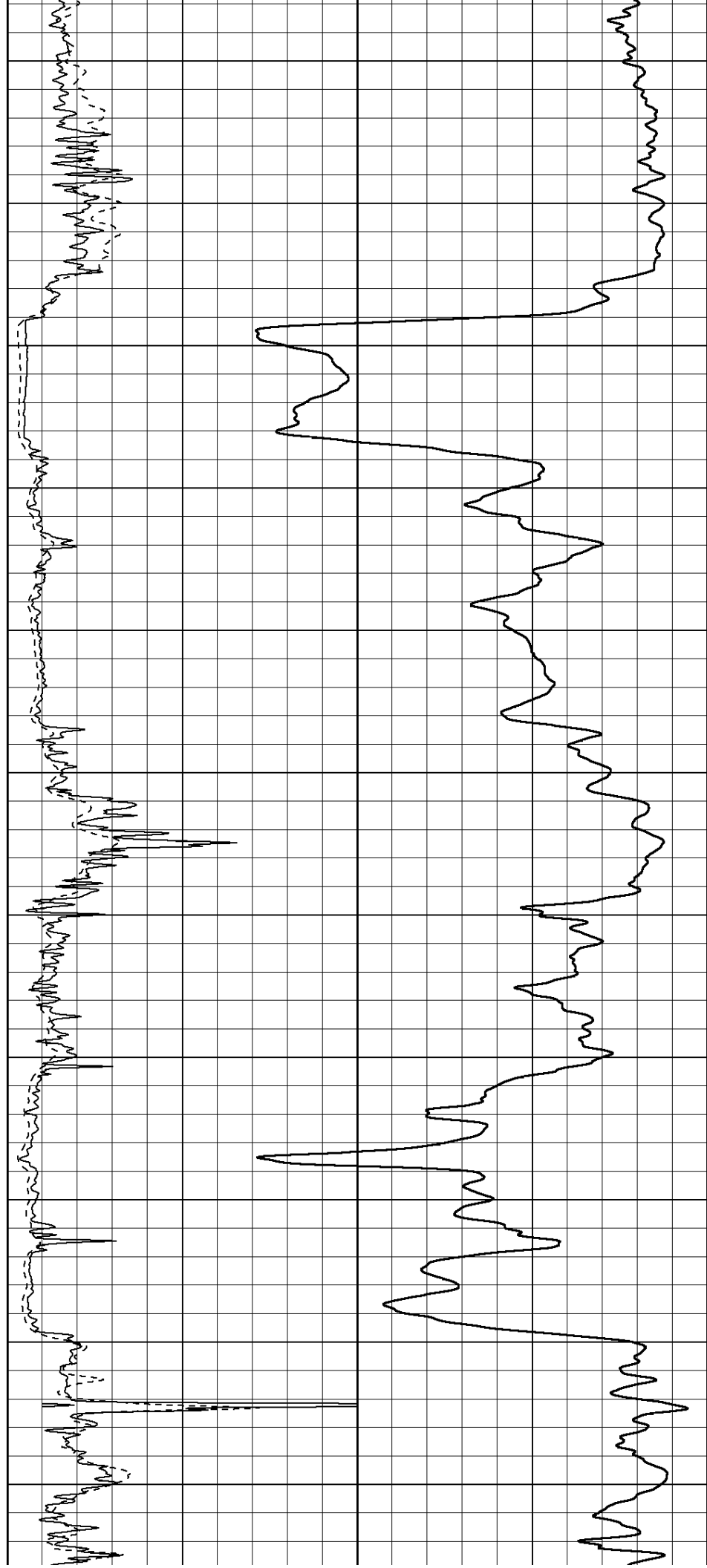
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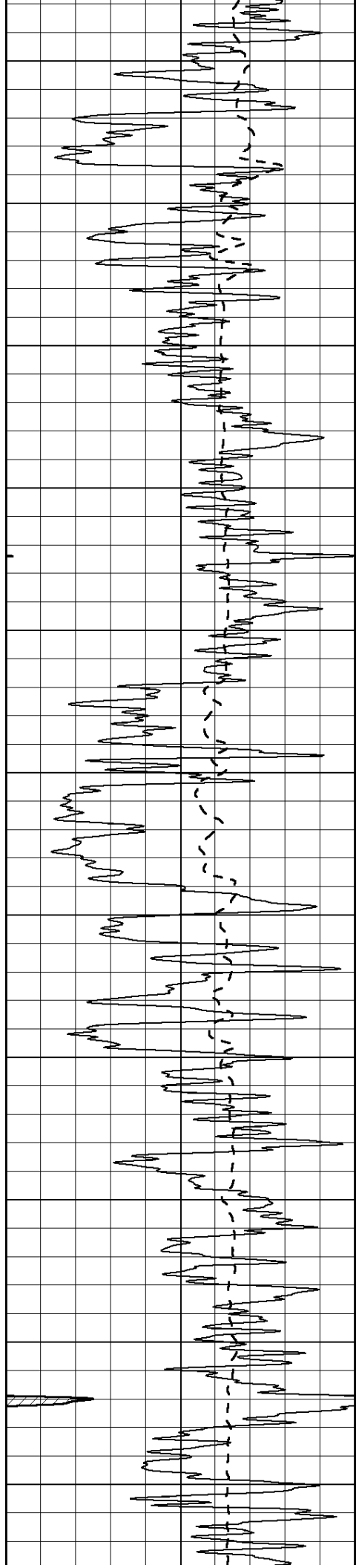
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1450

1500

1550





1600

1650

1700

1750

1800

1850

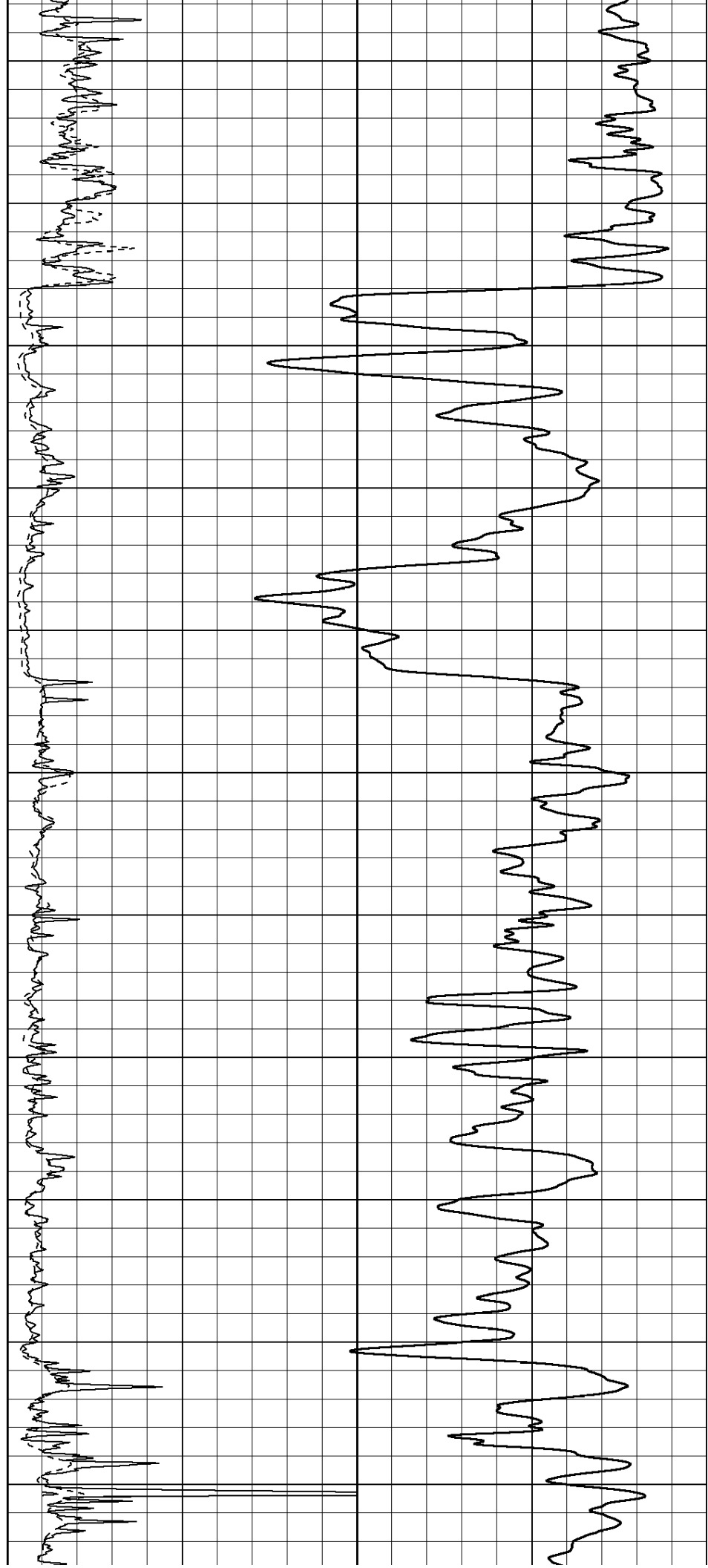
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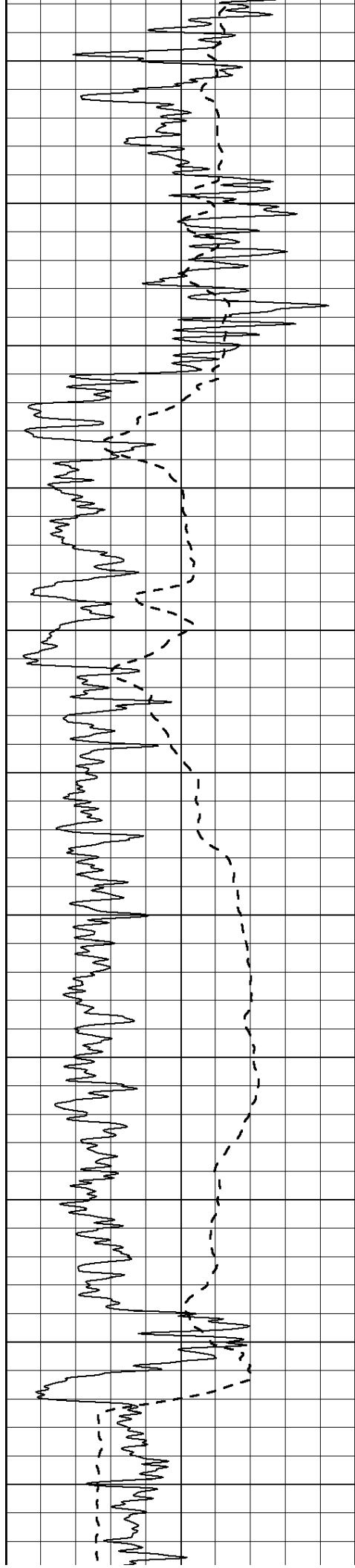
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2000

2050

2100





2150

2200

2250

2300

2350

2400

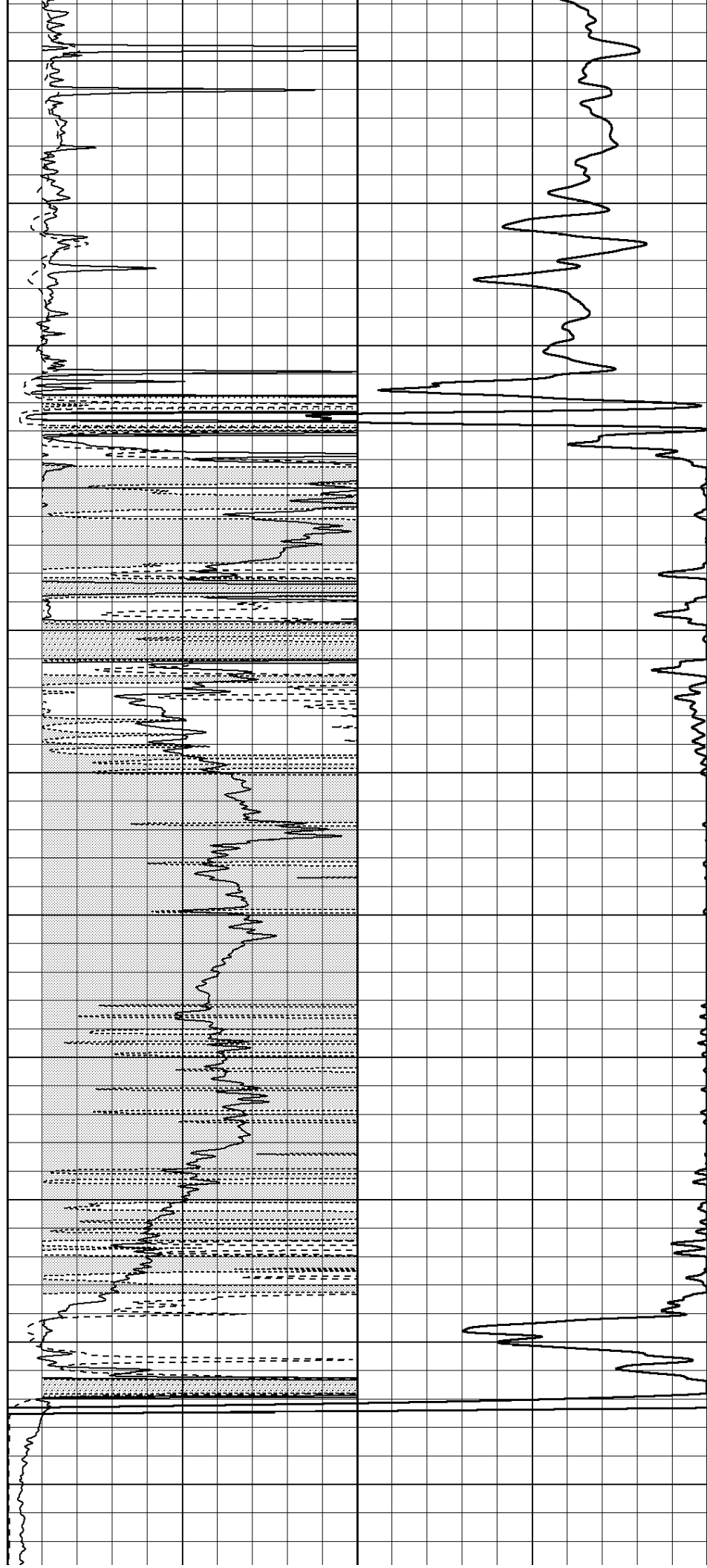
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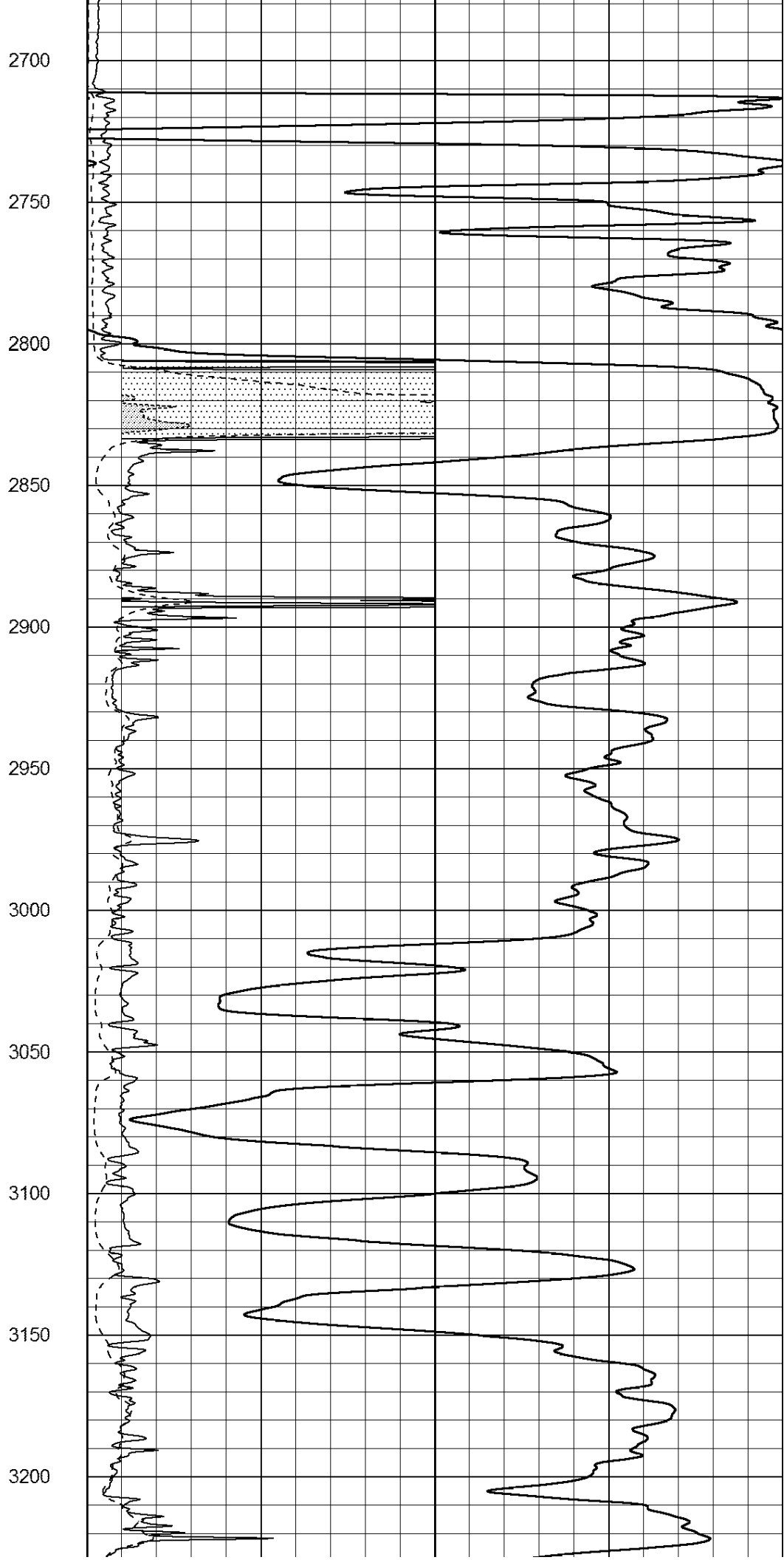
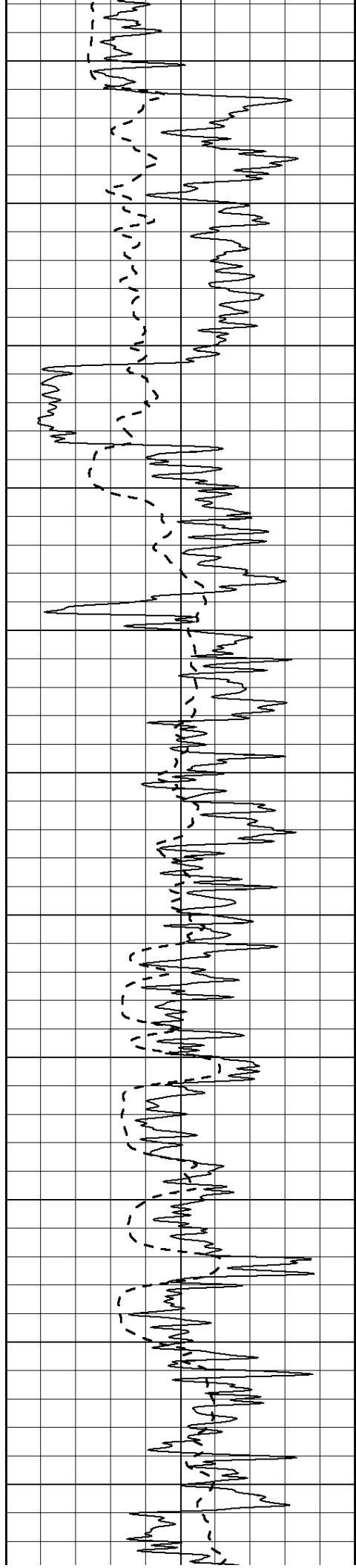
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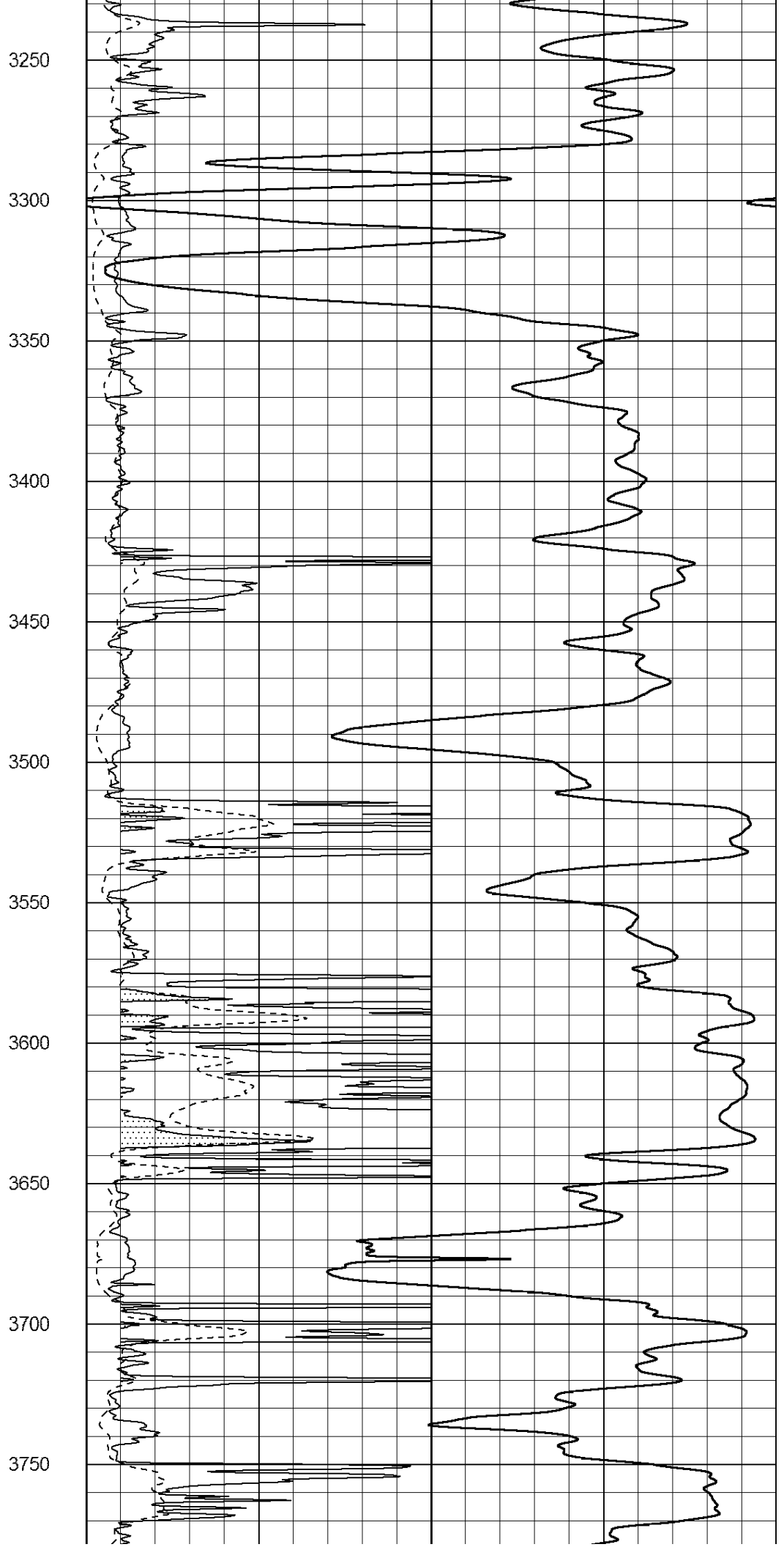
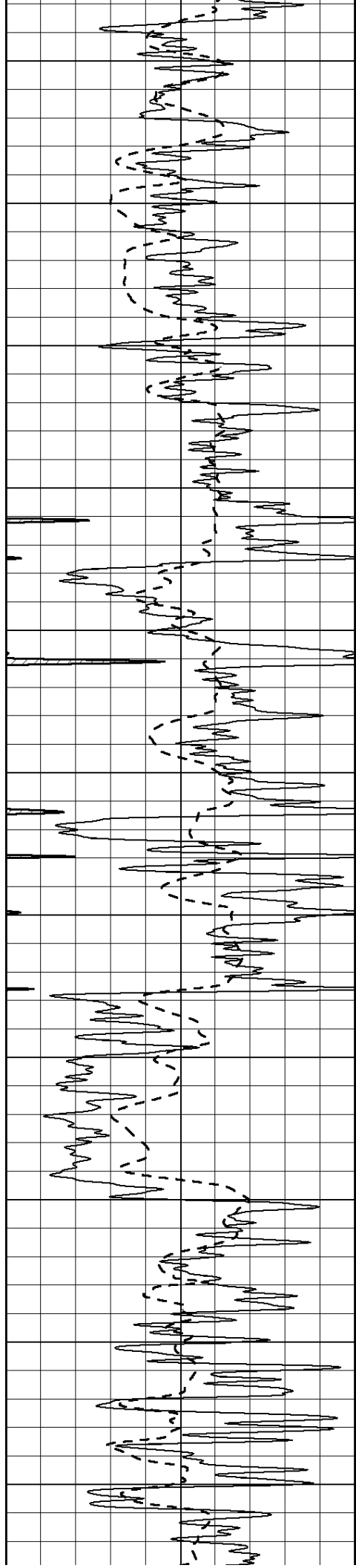
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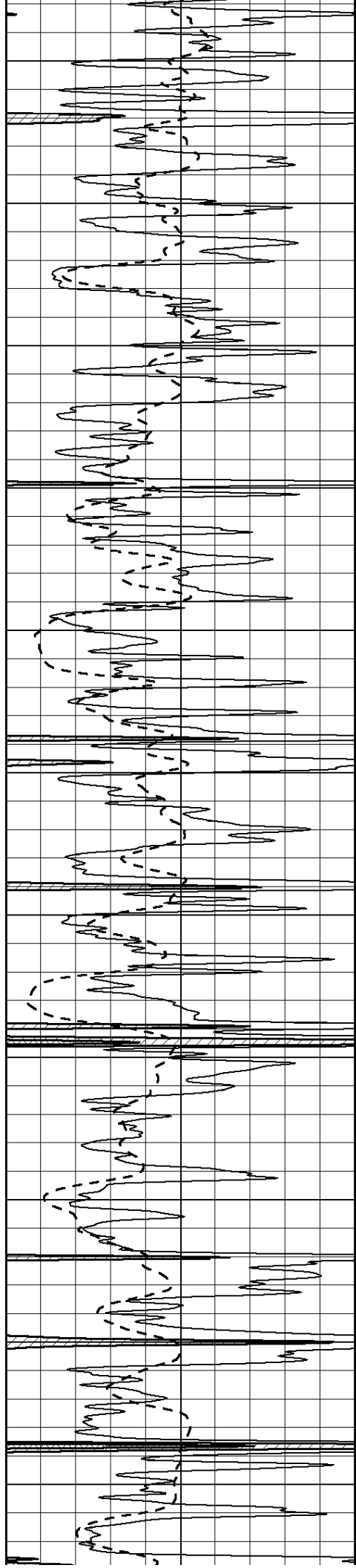
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2650









3800

3850

3900

3950

4000

4050

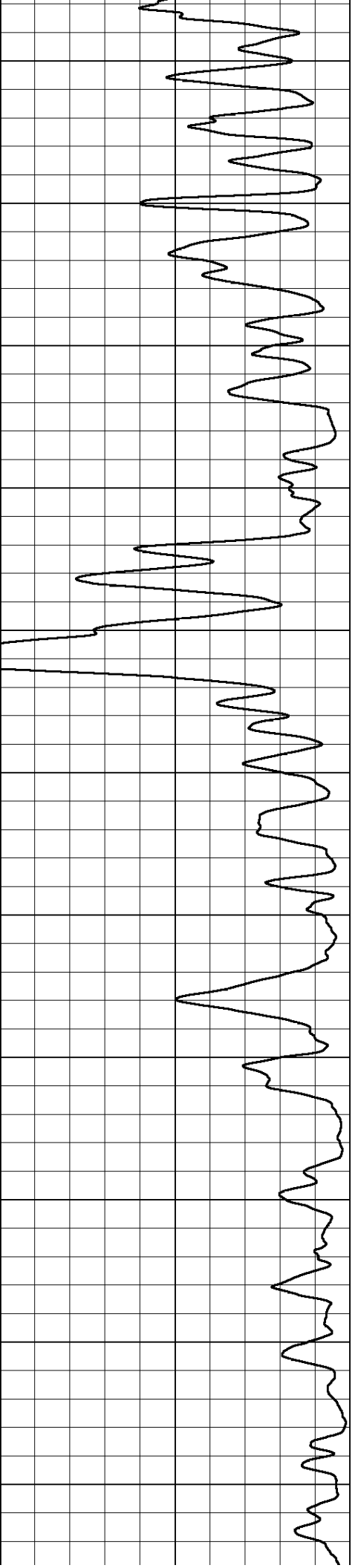
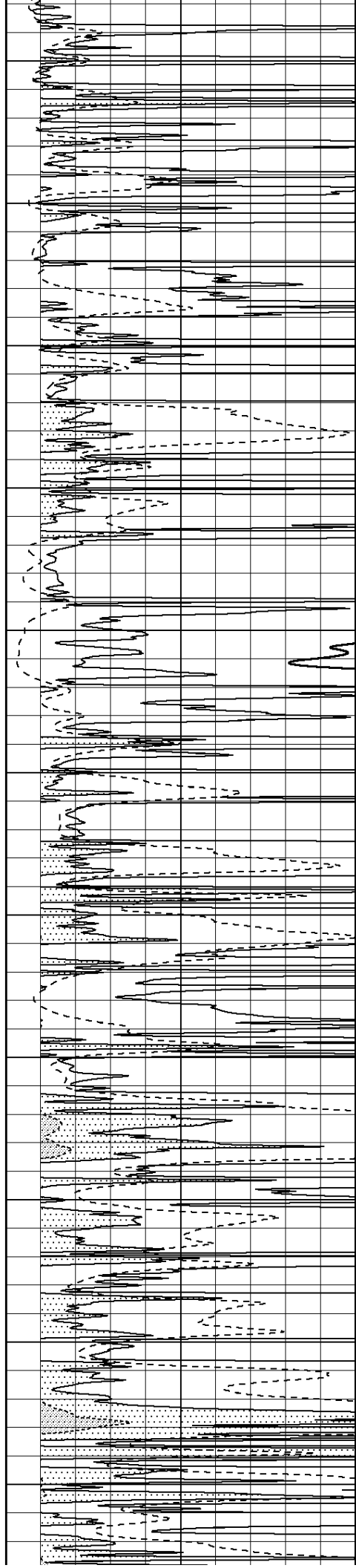
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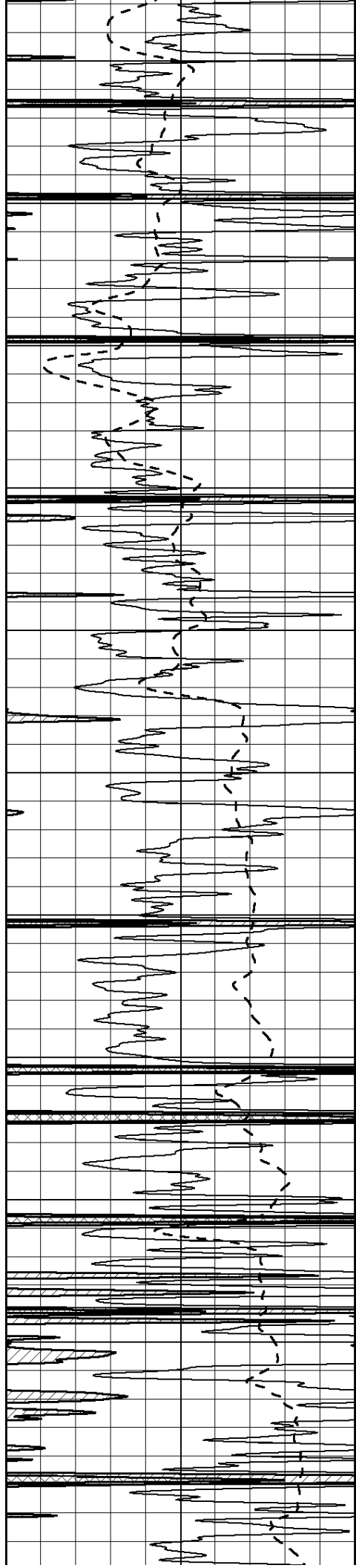
4150

4200

4250

4300





4350

4400

4450

4500

4550

4600

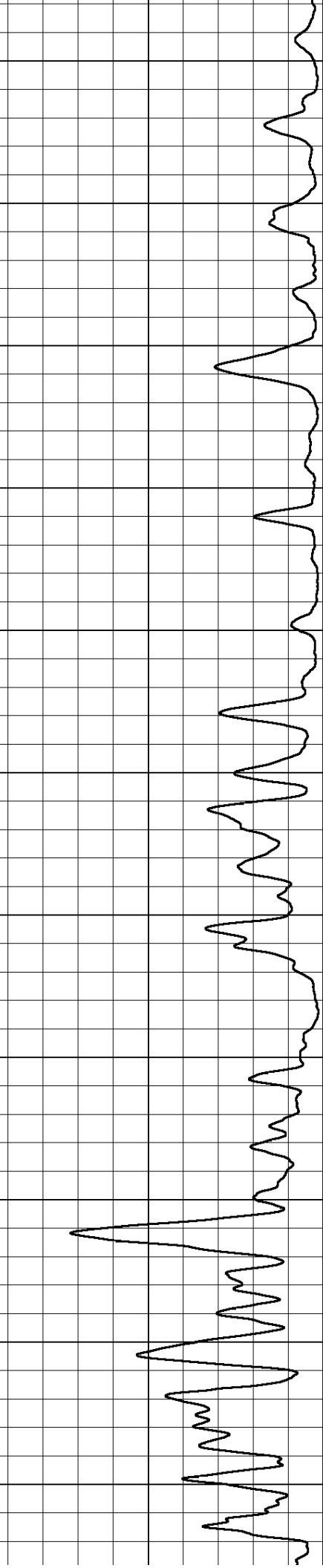
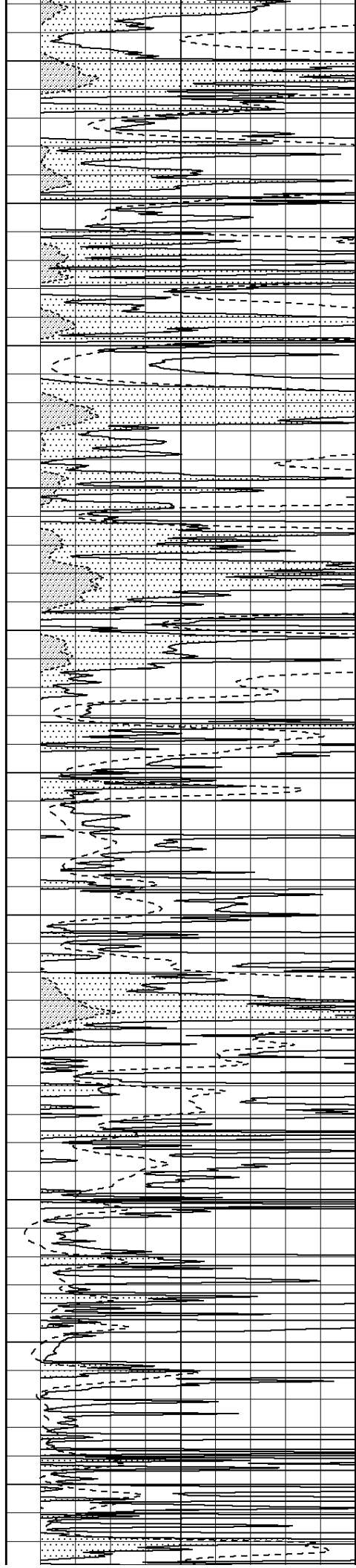
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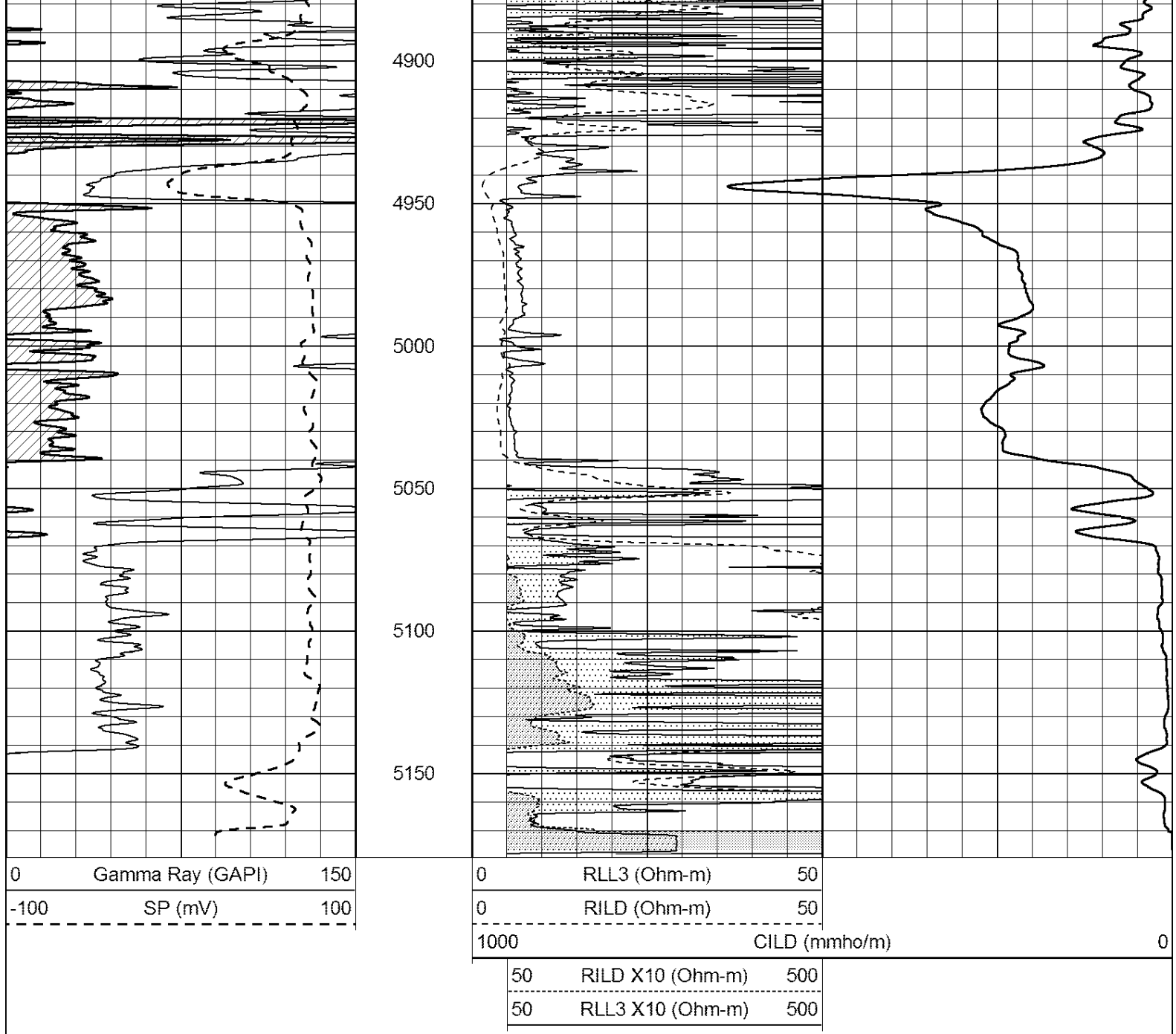
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4750

4800

4850





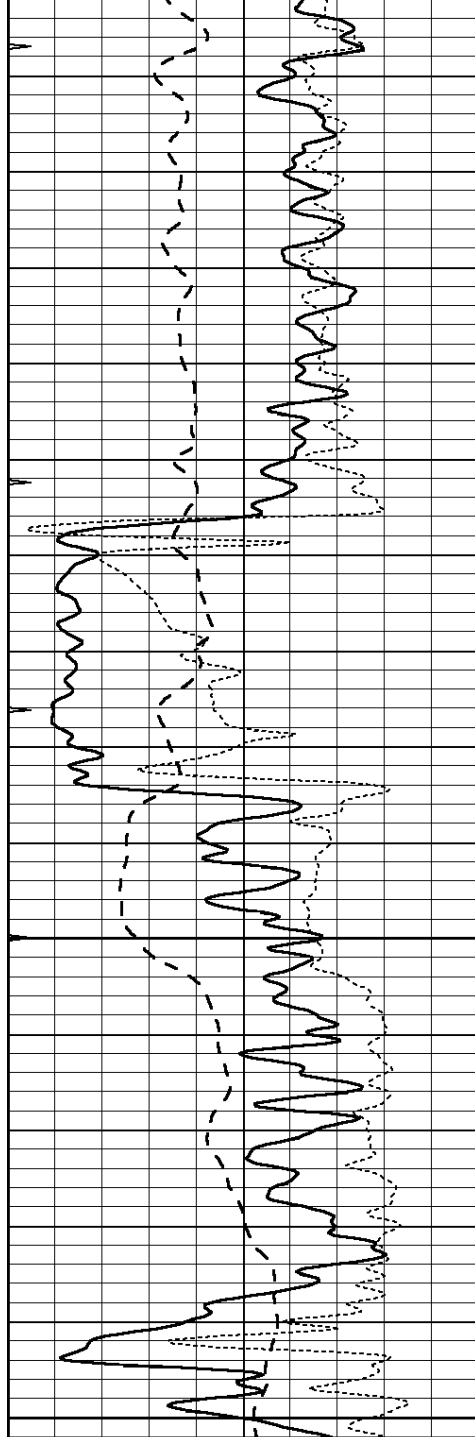
**Casedhole
Solutions**

ANHYDRITE

Database File: 30523ddn.db
Dataset Pathname: pass3.2
Presentation Format: _dil
Dataset Creation: Fri Sep 25 06:18:38 2015 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	MINMK	20

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

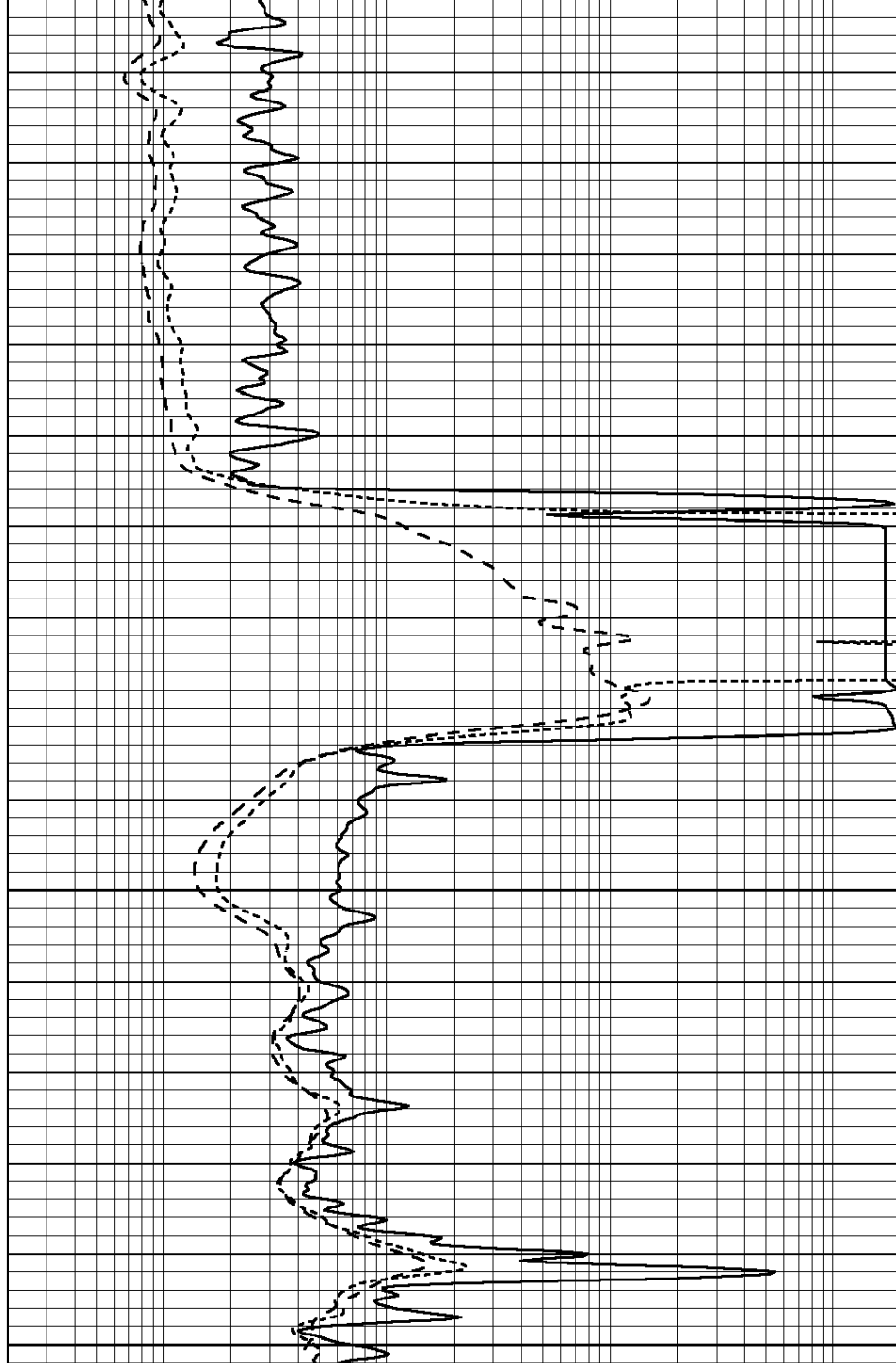


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

2800

2850

2900



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

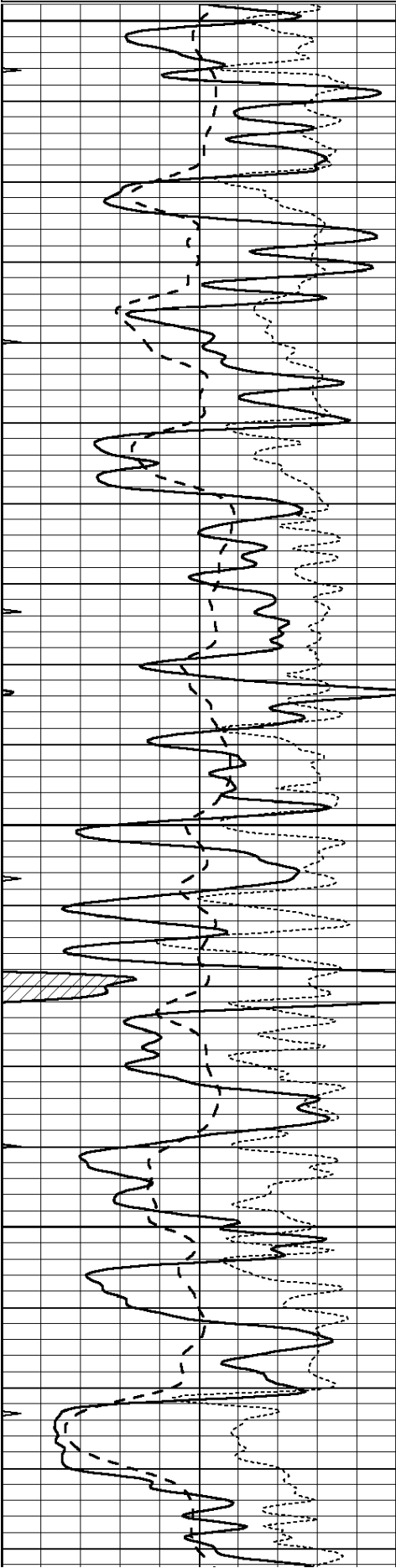


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Solutions**

MAIN SECTION

Database File: 30523ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: _dil
 Dataset Creation: Fri Sep 25 06:03:34 2015 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	MINMK	20



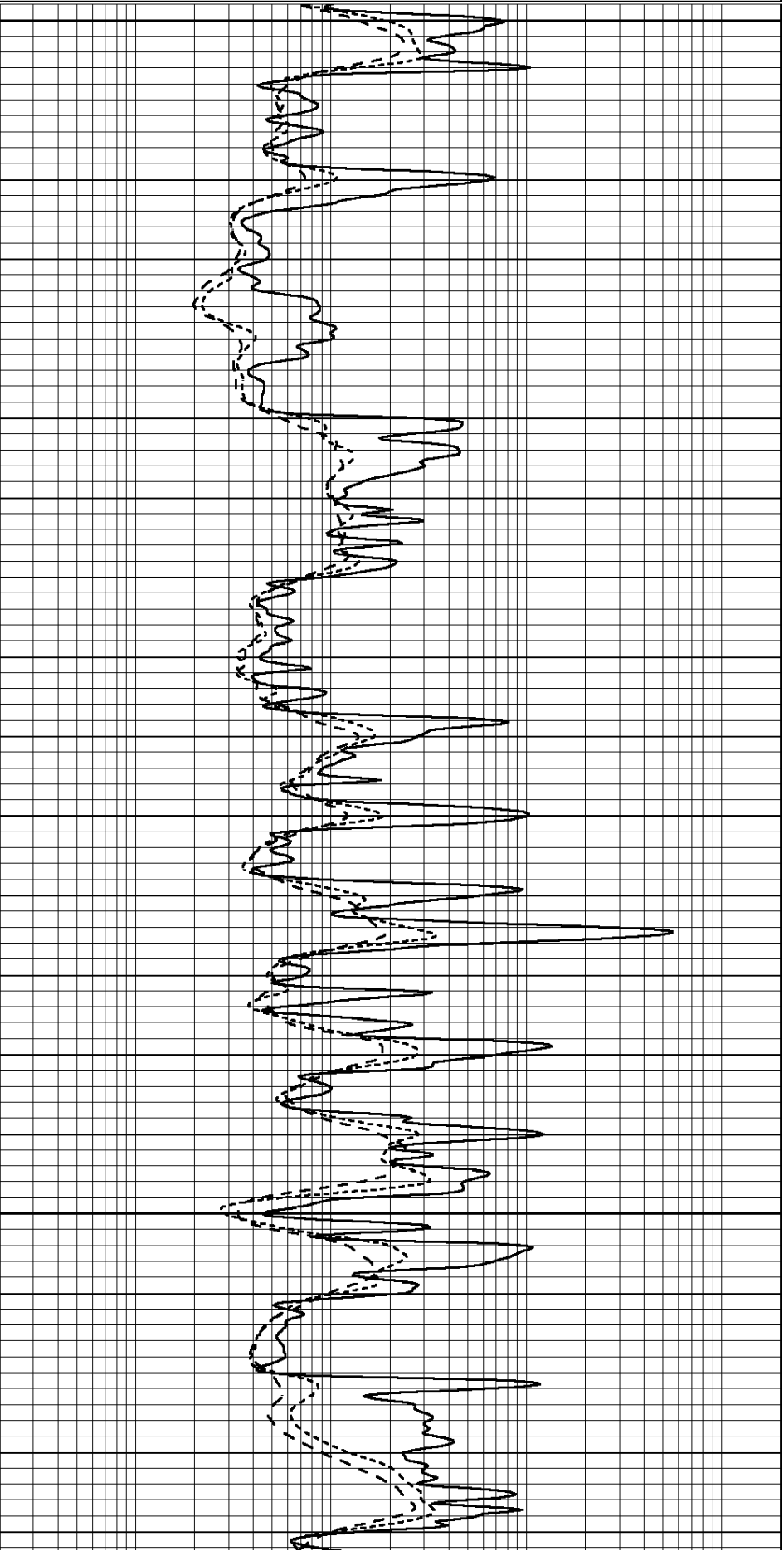
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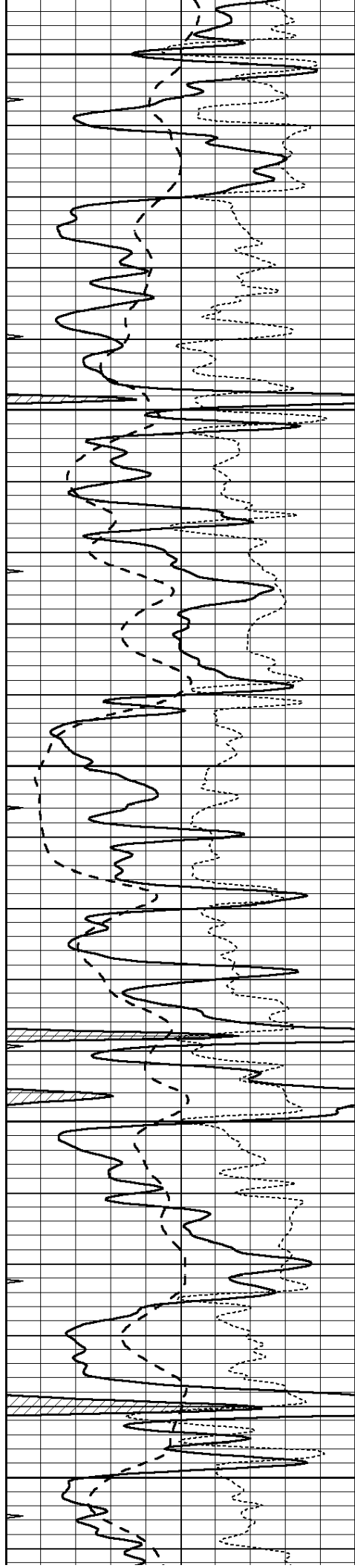
3750

3800

3850

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





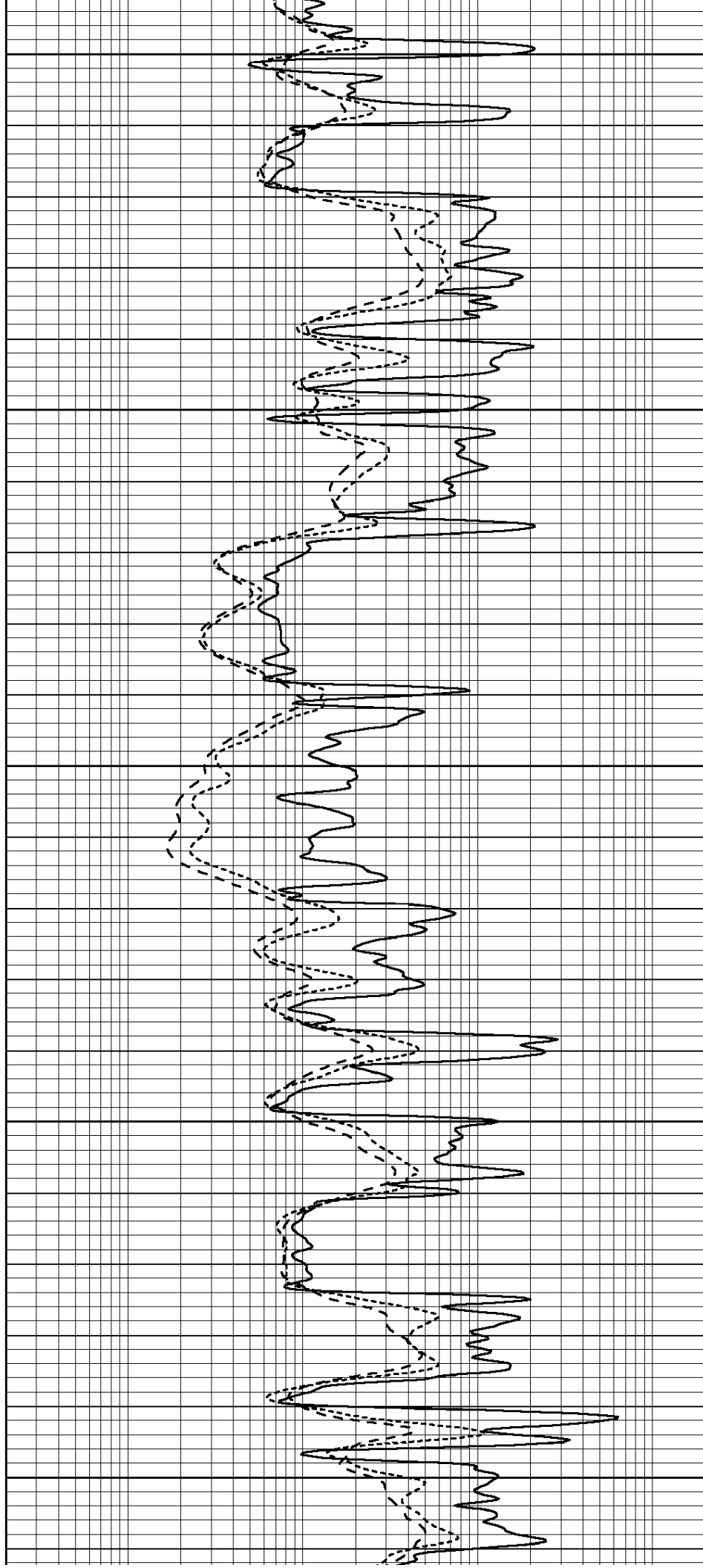
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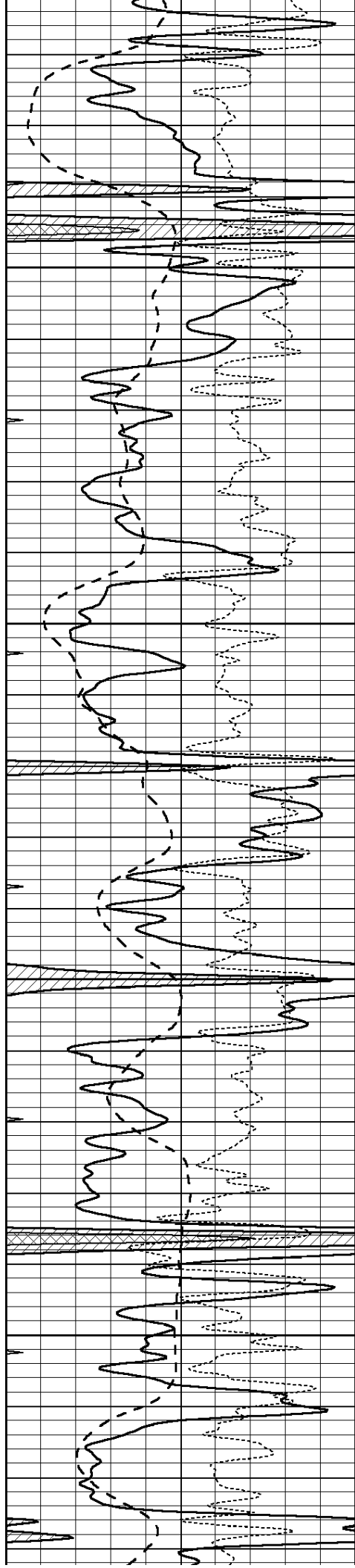
3950

4000

4050

4100



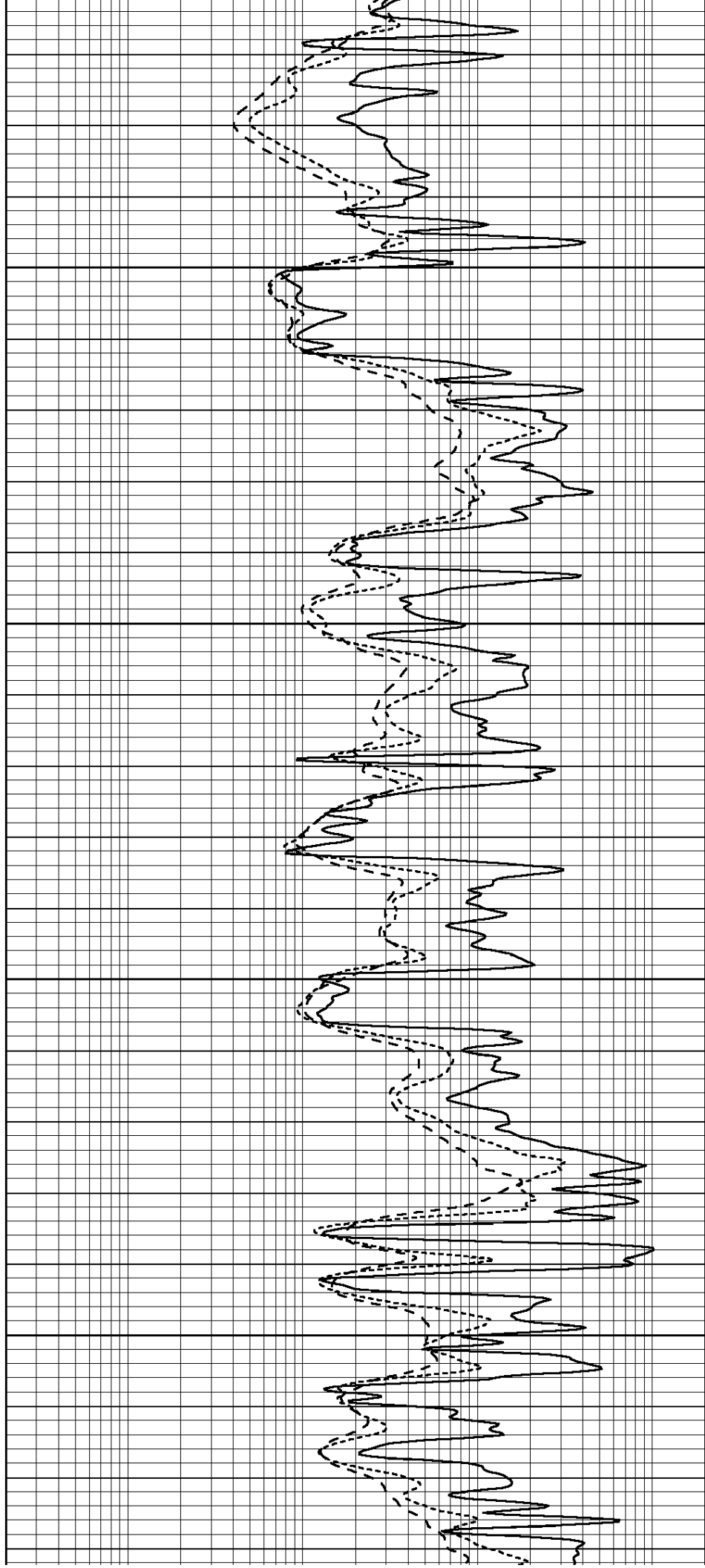


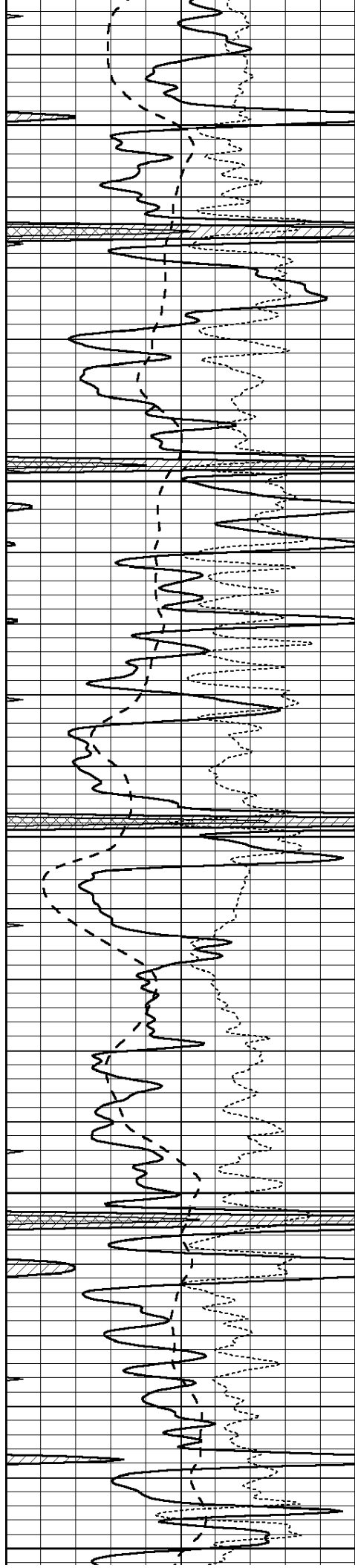
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4200

4250

4300





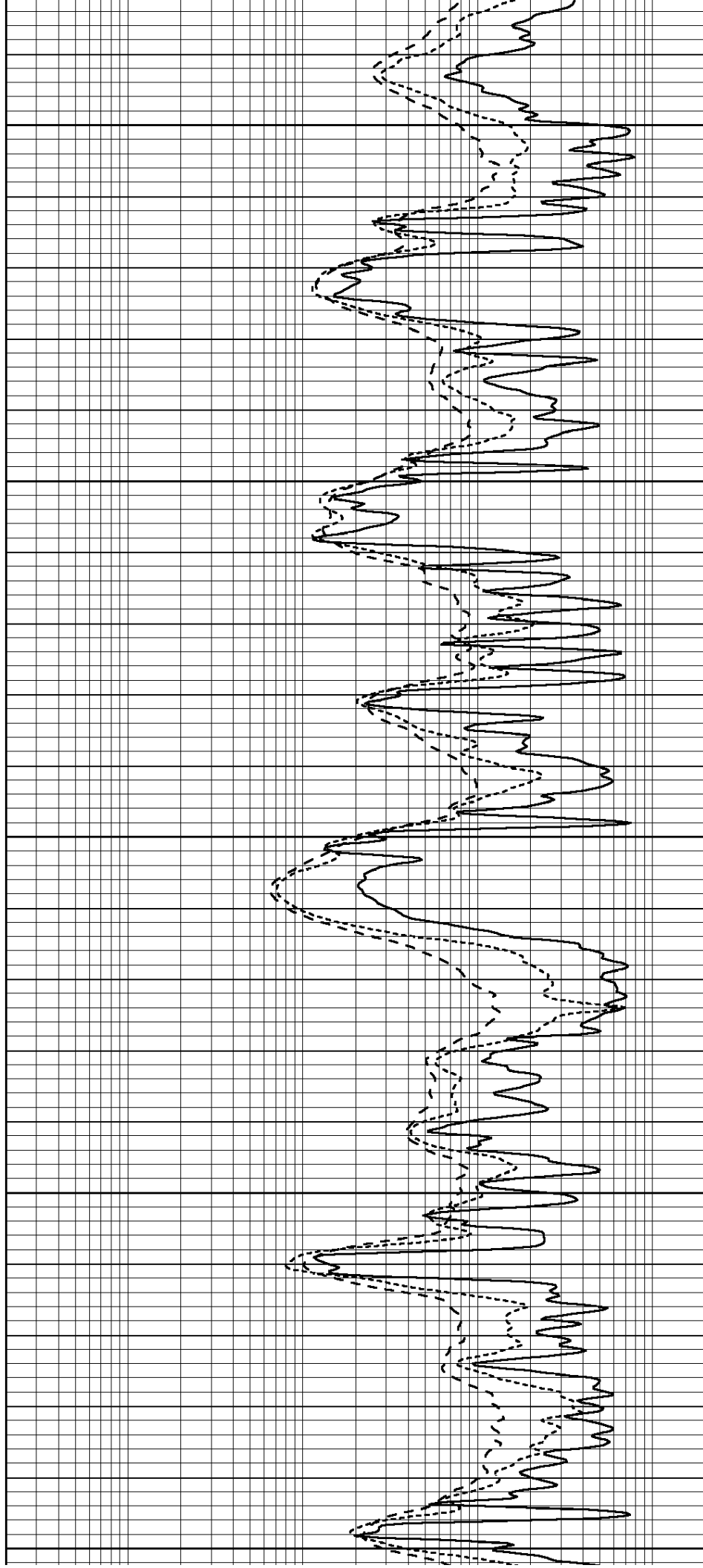
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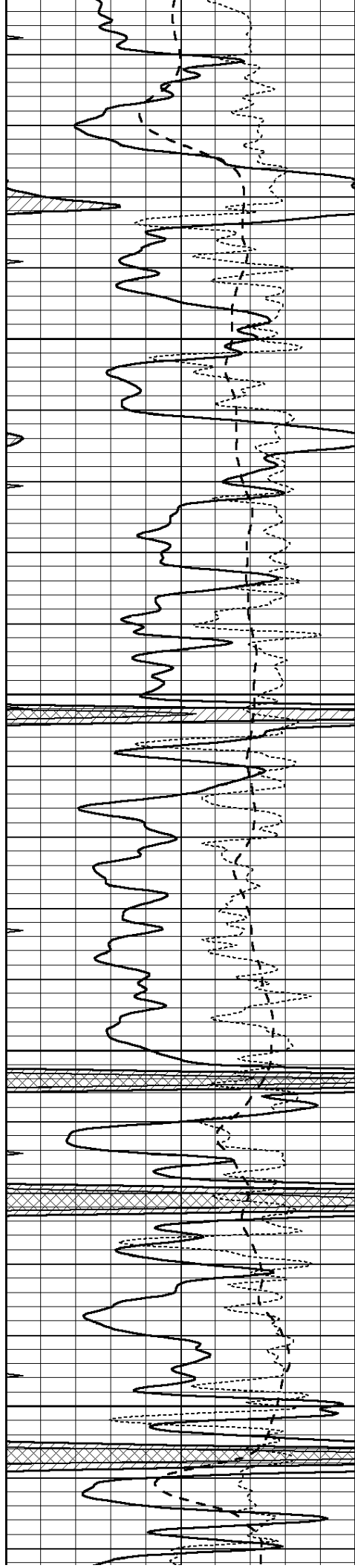
4400

4450

4500

4550



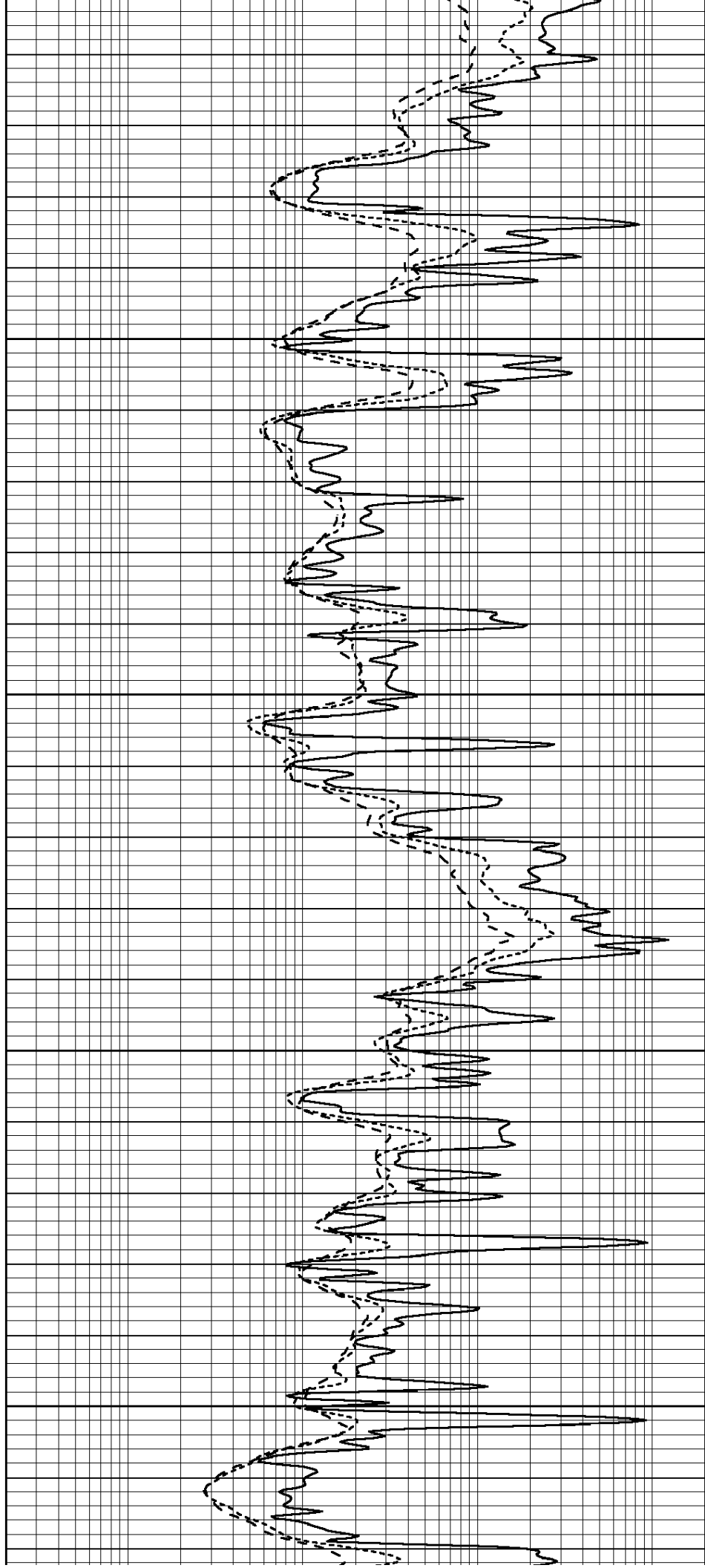


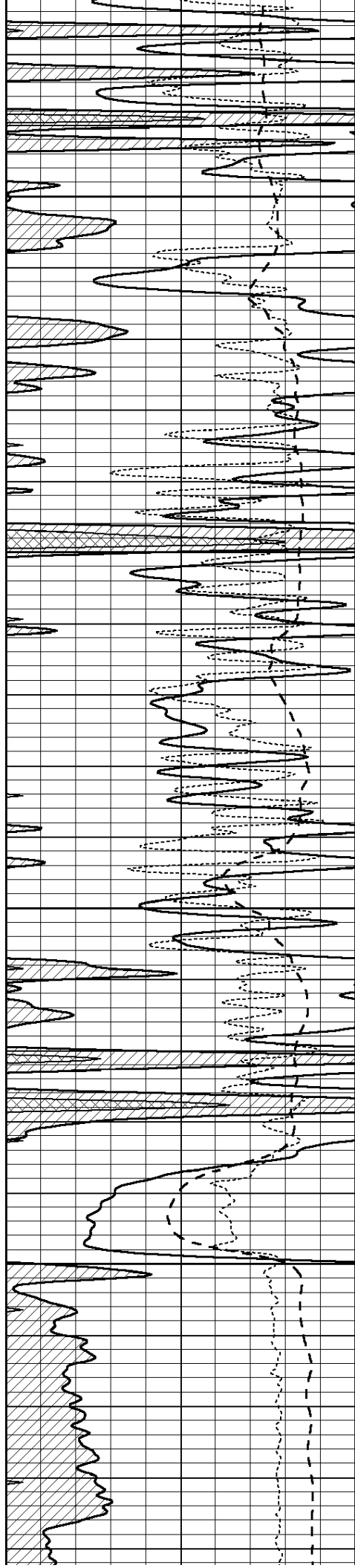
4600

4650

4700

4750



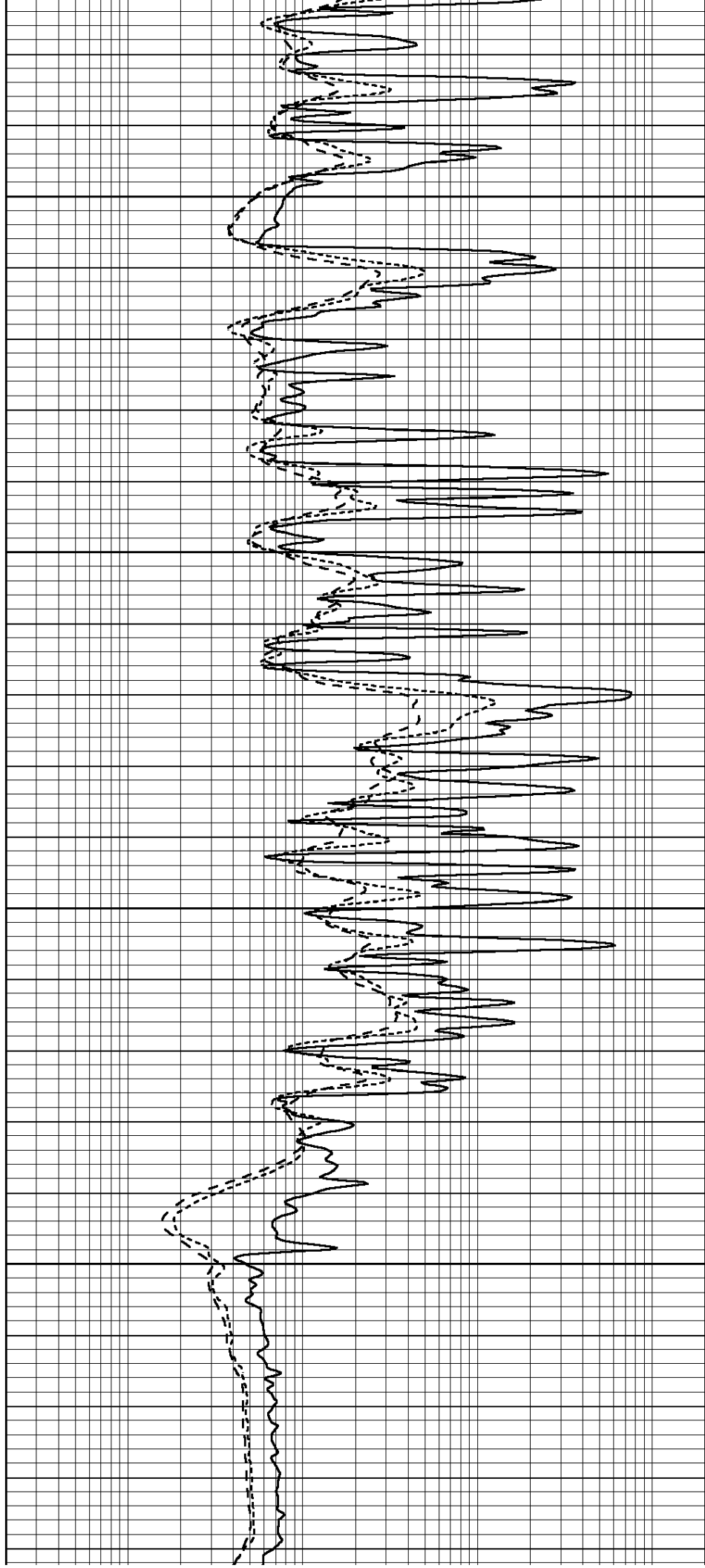


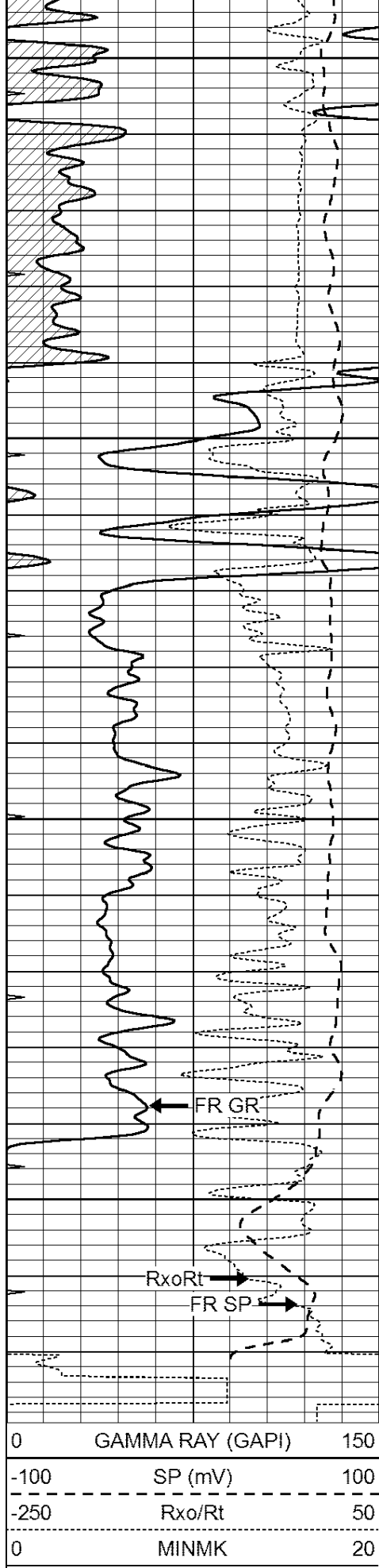
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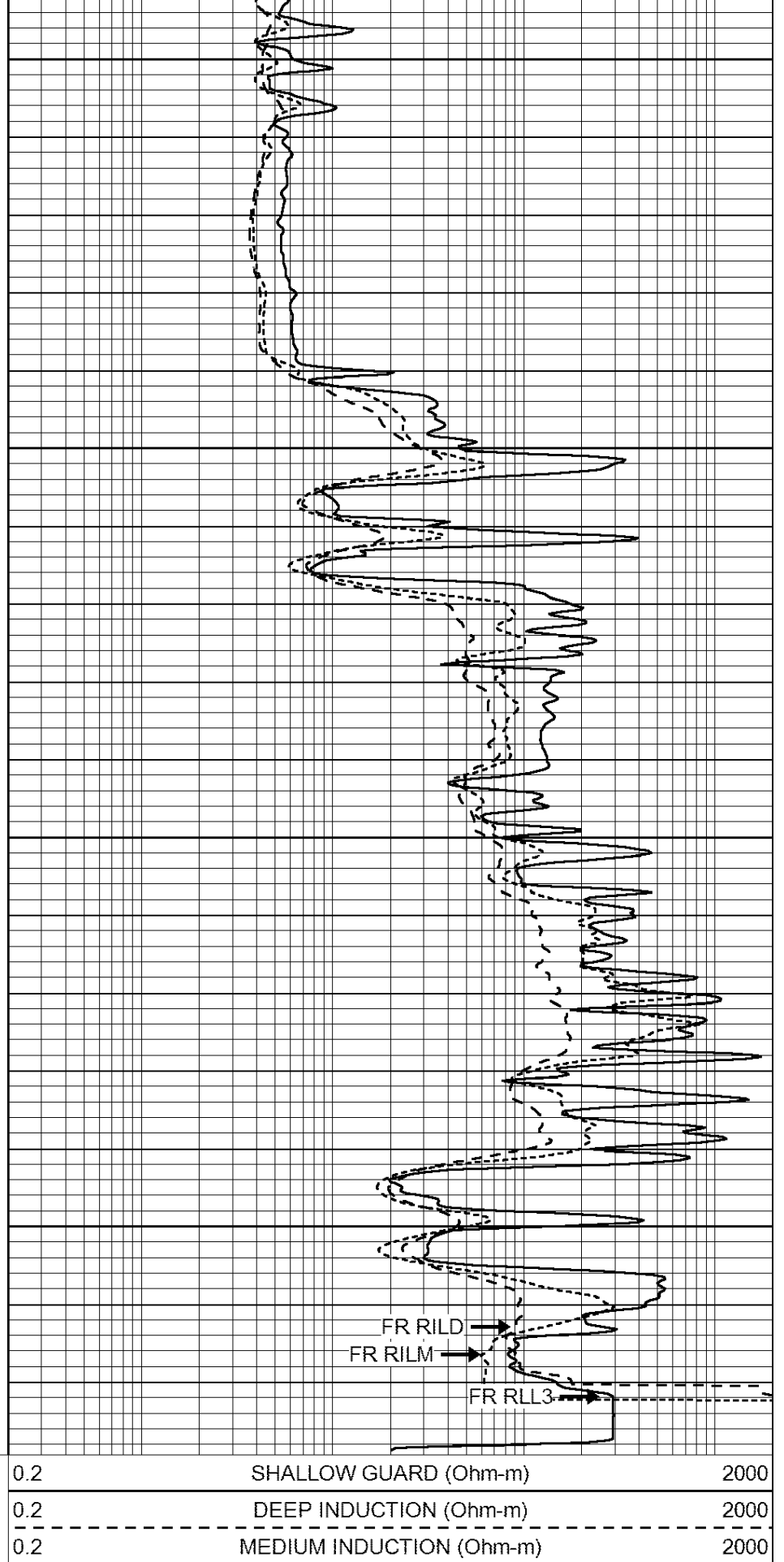
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4950





LTD 5174

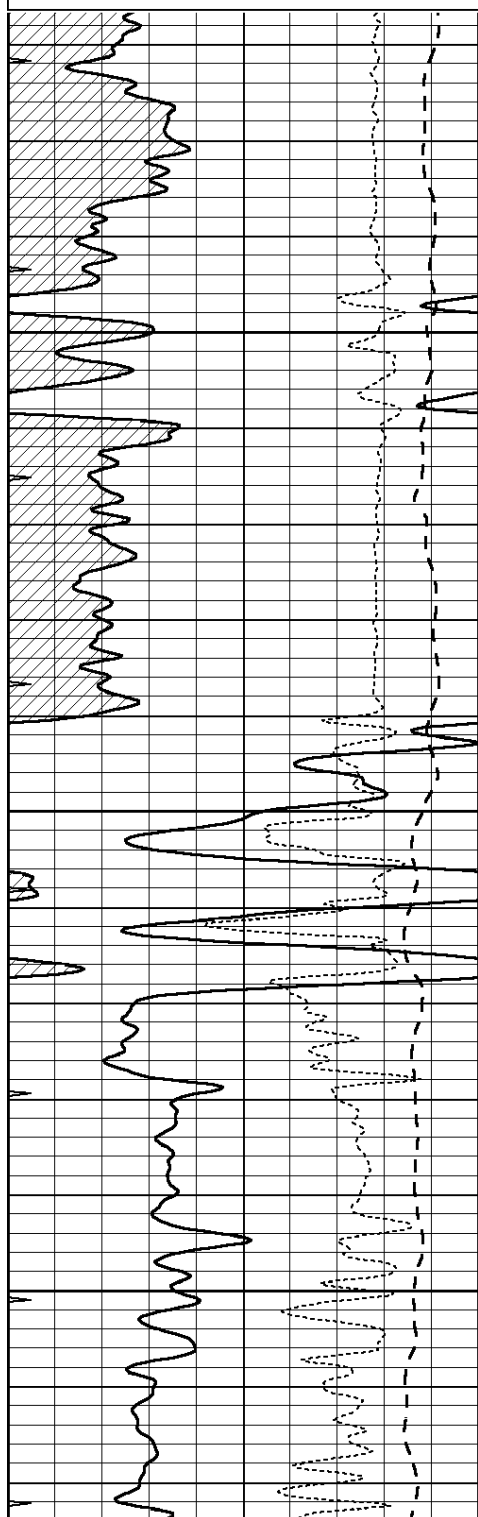


REPEAT SECTION

Database File: 30523ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: _dil
 Dataset Creation: Fri Sep 25 06:12:43 2015 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	MINMK	20

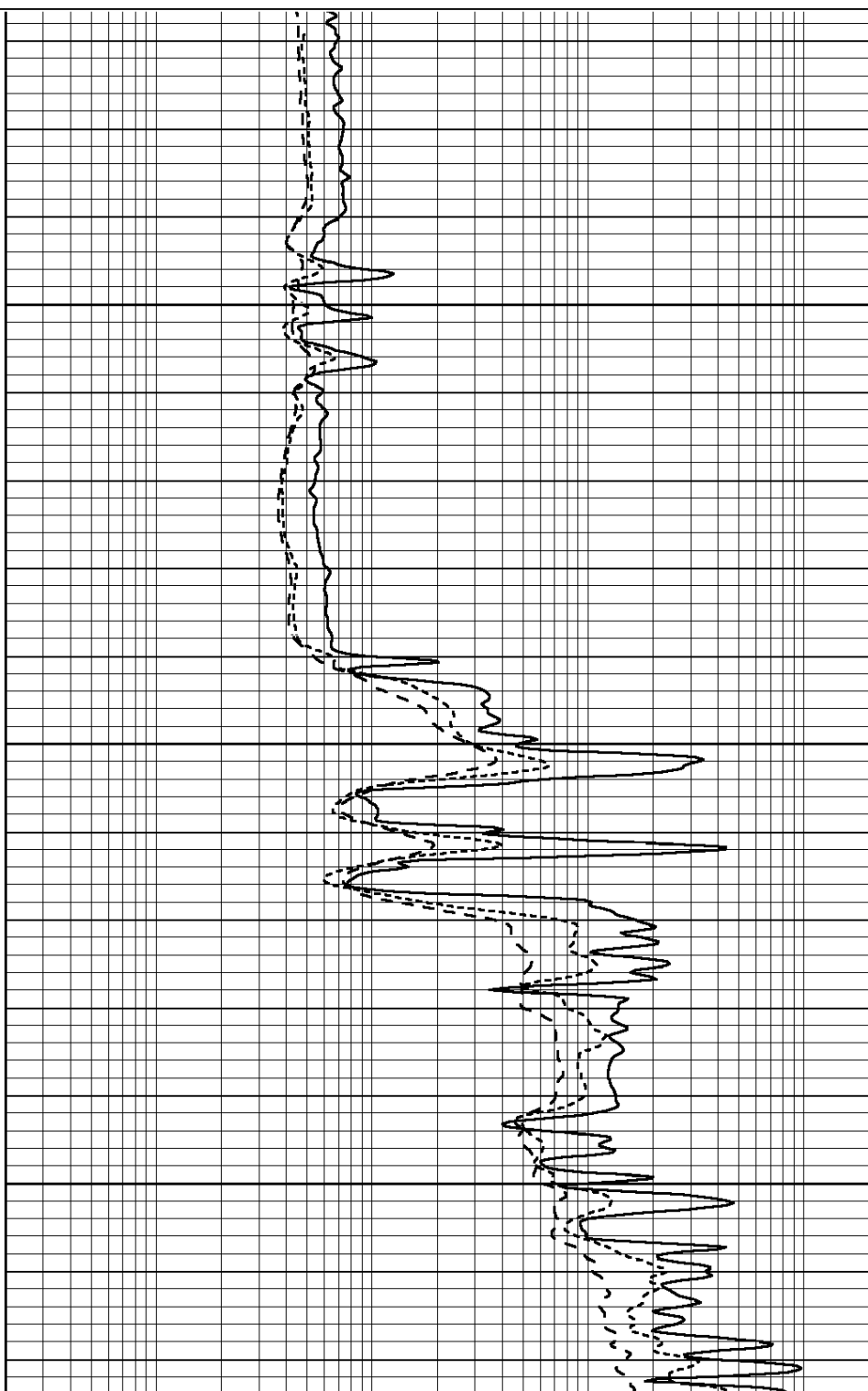
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

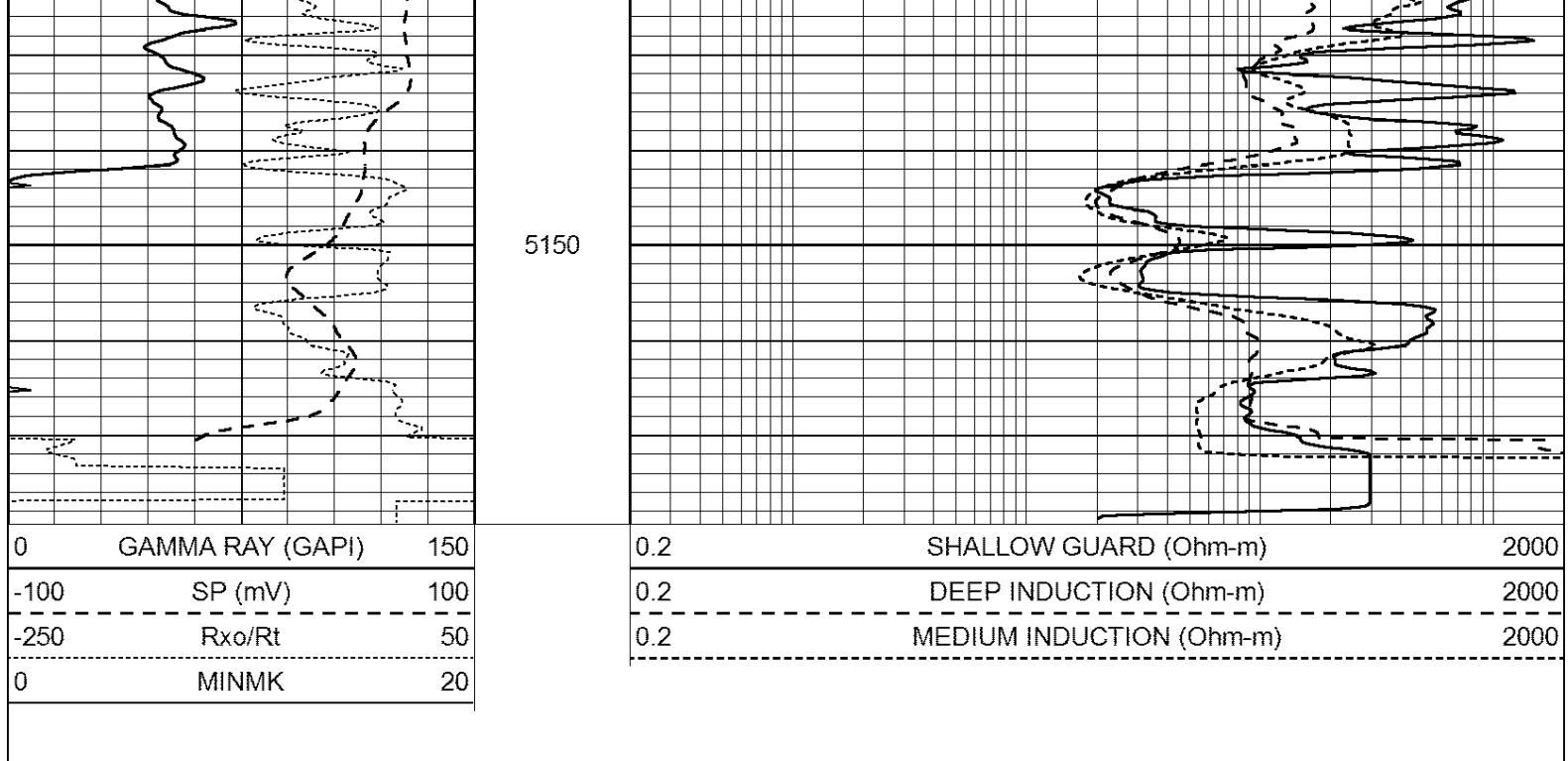


5000

5050

5100





Calibration Report									
Database File:		30523ddn.db							
Dataset Pathname:		pass2.1							
Dataset Creation:		Fri Sep 25 06:12:43 2015 by Calc Open-Cased 090629							
Dual Induction Calibration Report									
Serial-Model:					PROBE8-DILG				
Surface Cal Performed:					Sun May 10 19:54:09 2015				
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	620.000	0.000	
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000	
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: 006 Model: PRB

Master Calibration	Performed Wed Mar 12 14:26:38 2014							
	Background	Magnesium		Aluminum		Sandstone		
Window 1	1296.6	7199.0		2625.4		7833.2		
Window 2	1218.8	5956.6		2257.8		6372.0		
Window 3	926.7	2990.0		1318.7		3107.7		
Window 4	314.3	319.6		320.3		326.2		
Long Space	0.0	4737.9		1039.0		5153.3		
Short Space	1.3	1655.6		1074.2		1728.4		
Rho		1.7100		2.5960		1.3800		
Pe		0.0000		2.5700		1.5500		
Rib Angle	: 44.1	Rib Slope		: 0.969	Density/Spine Ratio		: 0.562	
Spine Angle	: 74.1	Spine Slope		: 3.507	Spine Intercept		: -17.5	

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

Compensated Neutron Calibration Report
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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	

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	

POST-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report				
Serial Number:	GR6			
Tool Model:	OPEN			
Performed:	Fri Sep 04 01:07:14 2015			
Calibrator Value:	150.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	276.0	cps		
Sensitivity:	0.8000	GAPI/cps		