



**Casedhole Solutions**

**DUAL INDUCTION LOG**

Company	RAYMOND OIL COMPANY, INC.	Company	RAYMOND OIL COMPANY, INC.
Well	MEYERS #1	Well	MEYERS #1
Field	WILD CAT	Field	WILD CAT
County	LOGAN	County	LOGAN
State	KANSAS	State	KANSAS
Location:	SEC 24 TWP 14S RGE 33W	Location:	335' FSL & 955' FWL
Permanent Datum	GROUND LEVEL	API # :	15-109-21446-0000
Log Measured From	KELLY BUSHING 5' A.G.L.	Other Services	CDL/CNL
Drilling Measured From	KELLY BUSHING		MEL
		Elevation	

Date	12/18/15
Run Number	ONE
Depth Driller	4623
Depth Logger	4625
Bottom Logged Interval	4623
Top Log Interval	00
Casing Driller	8 5/8" @ 260
Casing Logger	258
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/57
pH / Fluid Loss	10.0/10.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.50 @ 60F
Rmt @ Meas. Temp	.37 @ 60F
Rmc @ Meas. Temp	.60 @ 60F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.24 @ 122F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	122F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	JASON CAPPELLUCCI
Witnessed By	MAX LOVELLY

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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:

OAKLEY, KS. - 22 SOUTH TO GOLD RD. - 4 1/2 WEST TO THE T - NORTH TO JOG WEST - WEST TO JOG NORTH - NORTH TO NEXT CURVE EAST INTO (STAY RIGHT AT Y AND CIRCLE AROUND TO THE NORTH)



**MAIN SECTION**

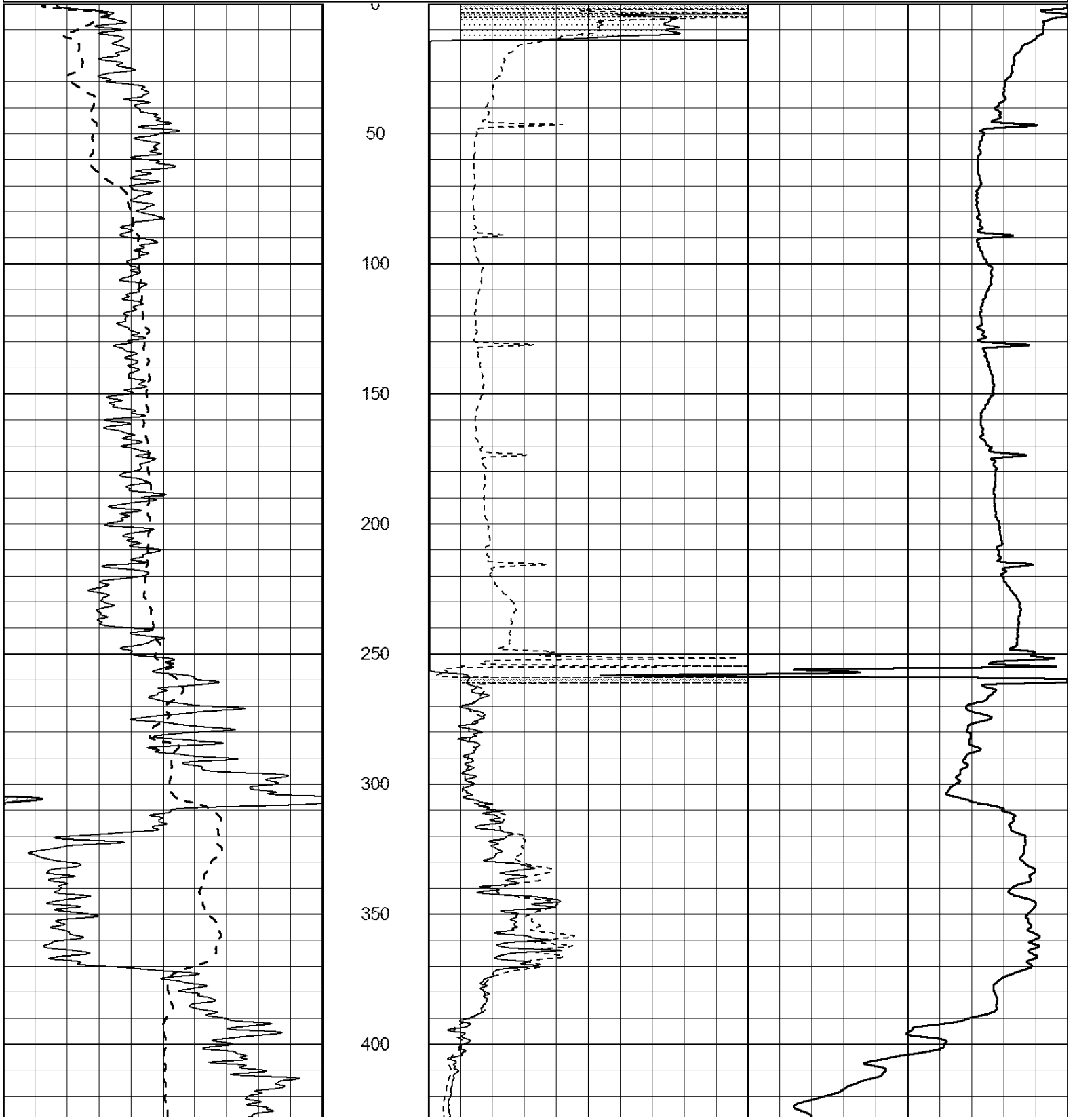
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 Charted by: Depth in Feet scaled 1:600

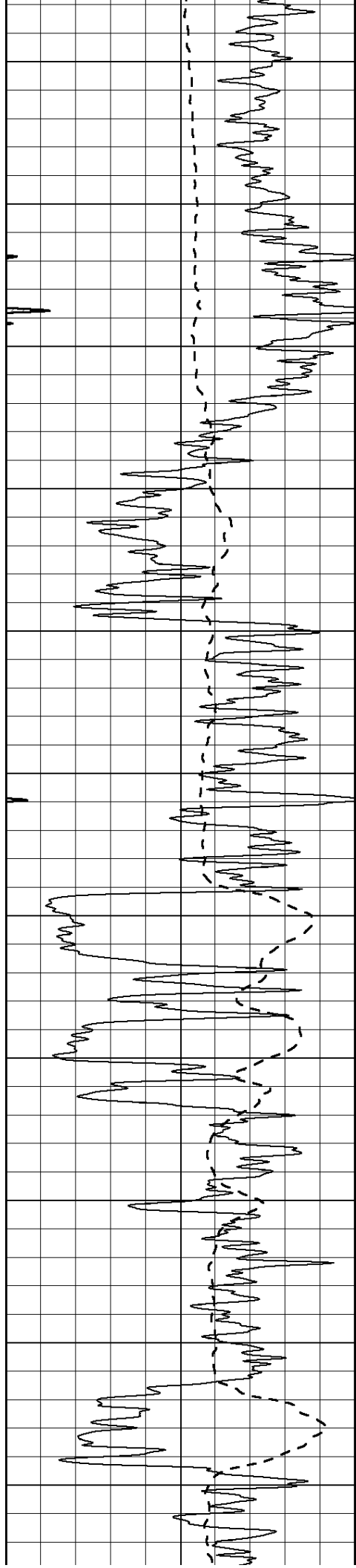
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-100	SP (mV)	100

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

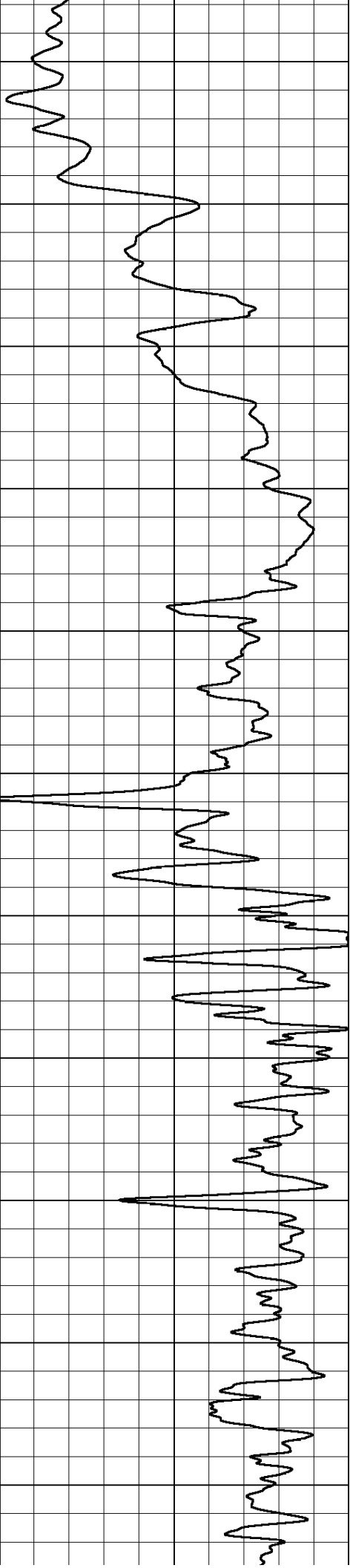
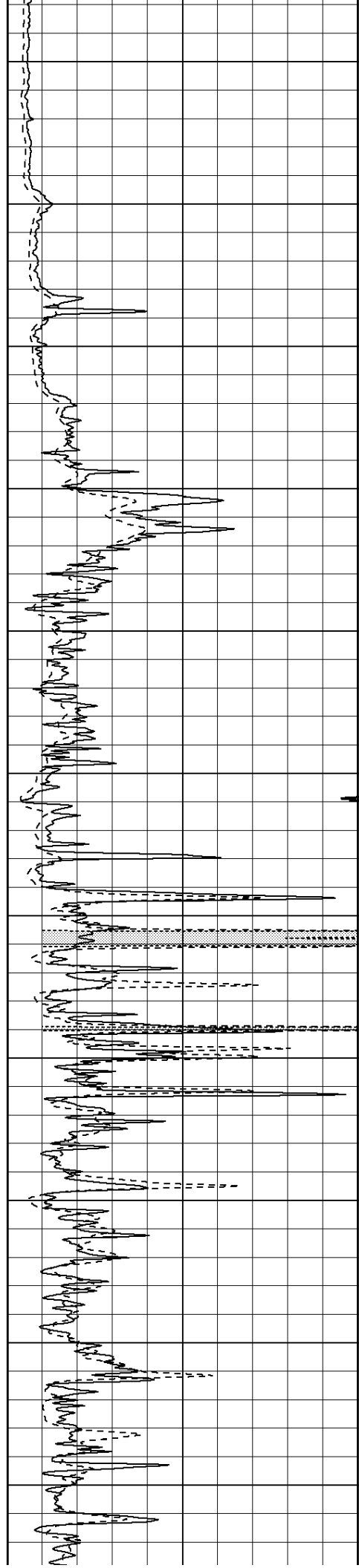
1000	CILD (mmho/m)	0
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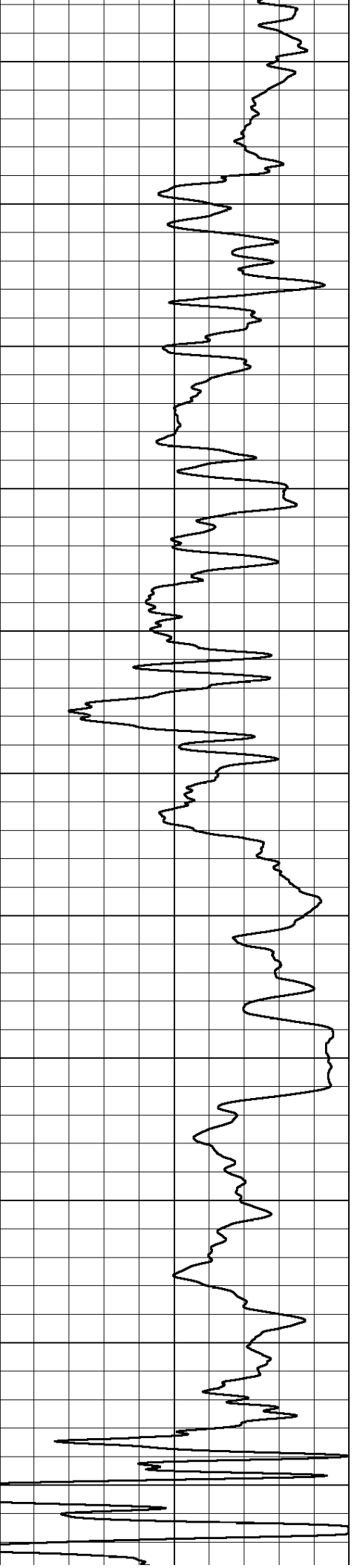
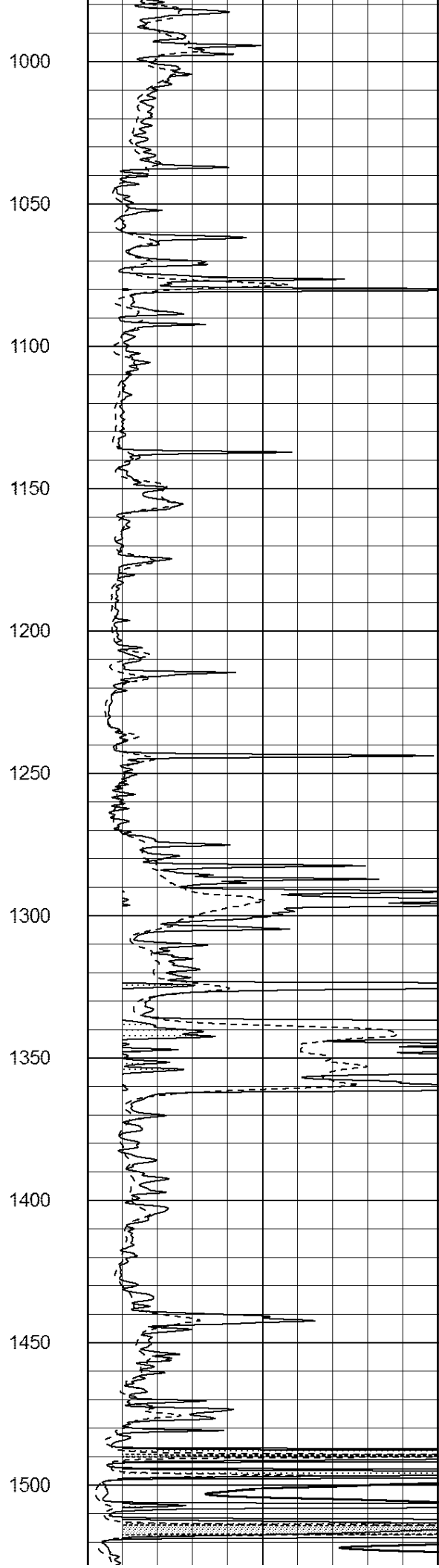
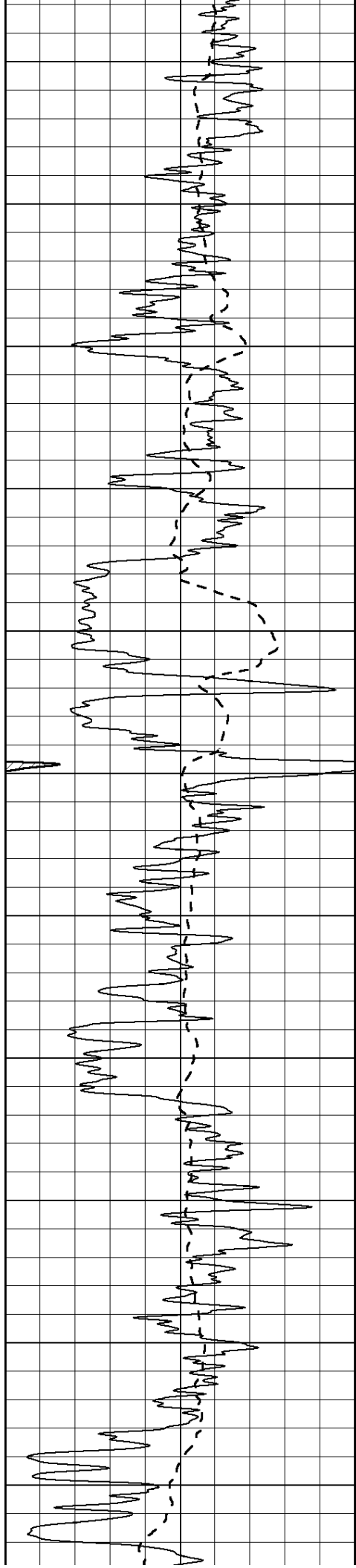
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50	RLL3 X10 (Ohm-m)	500

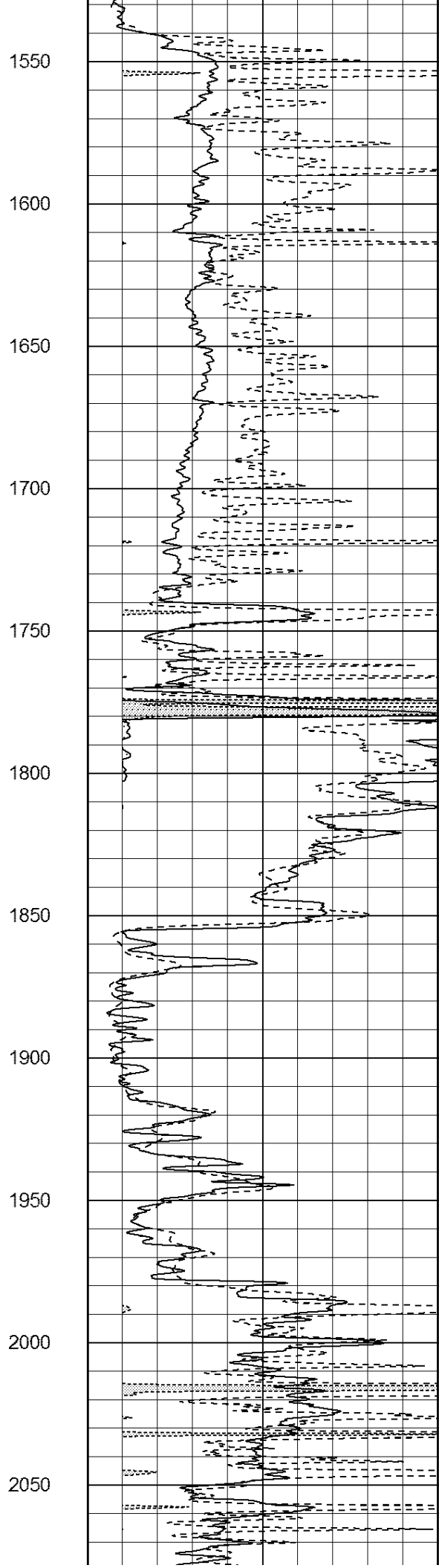
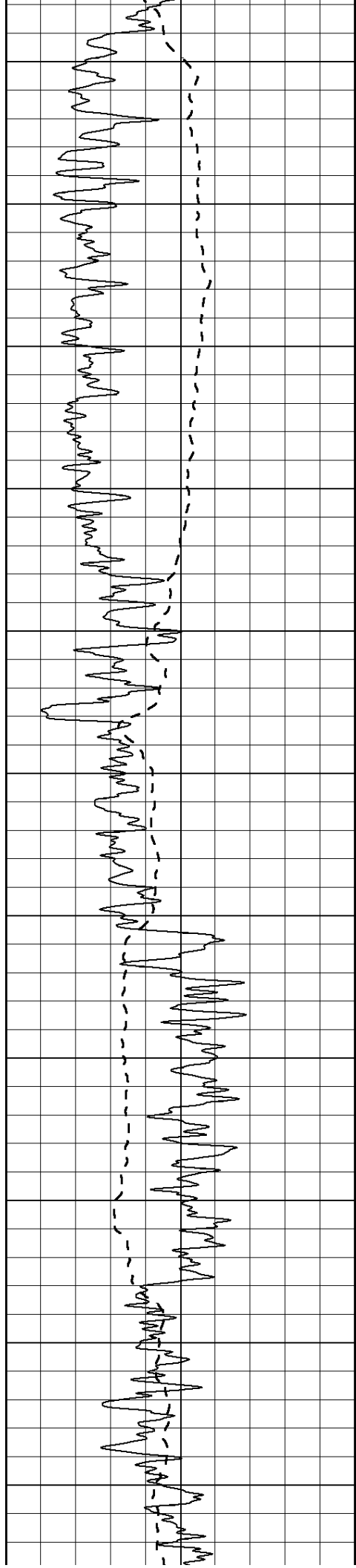


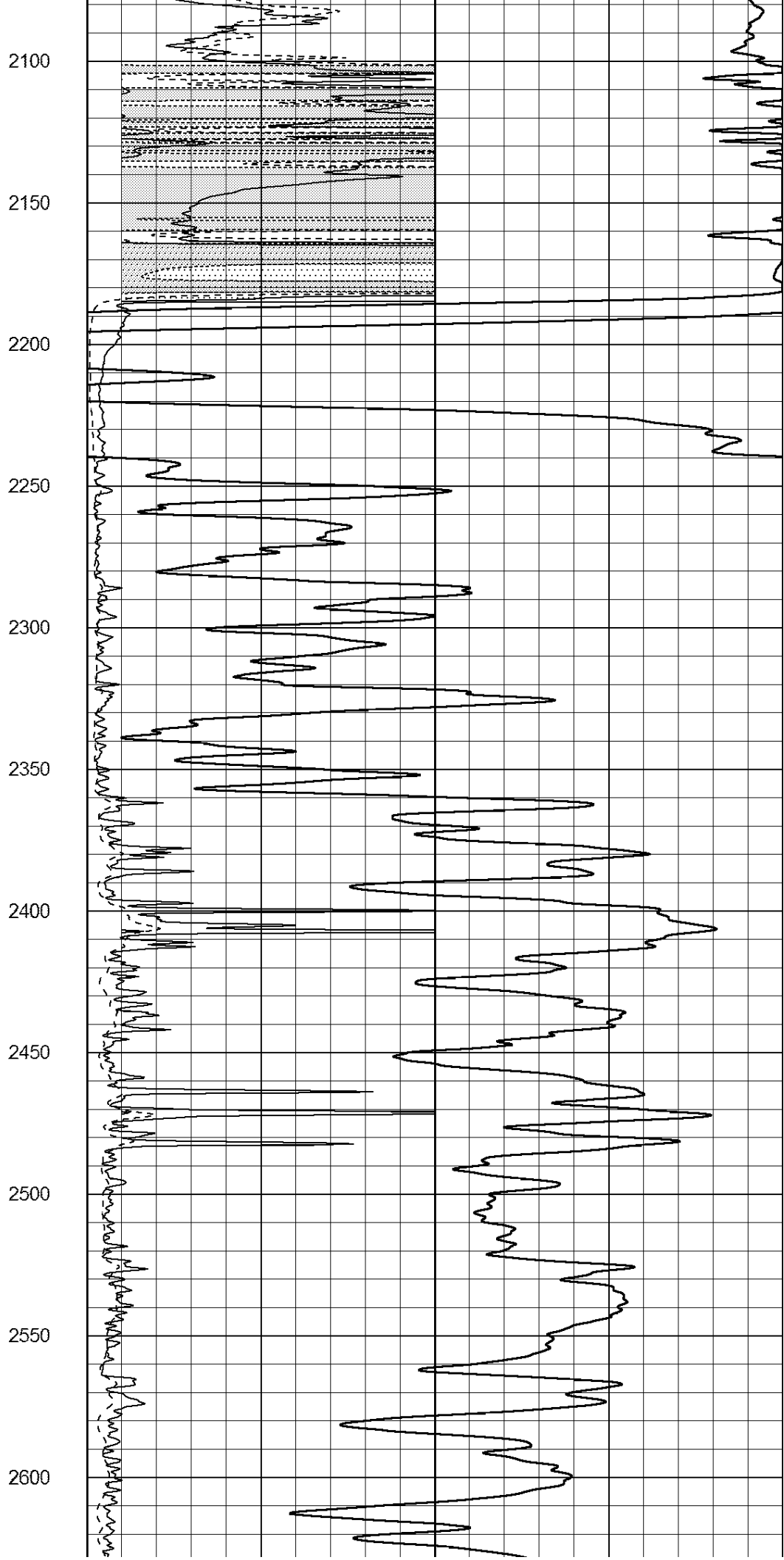
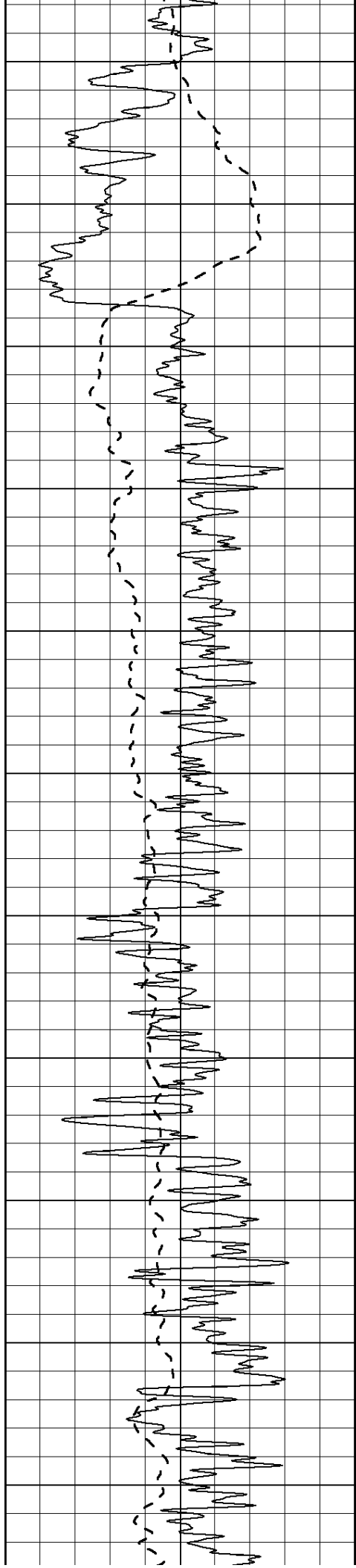


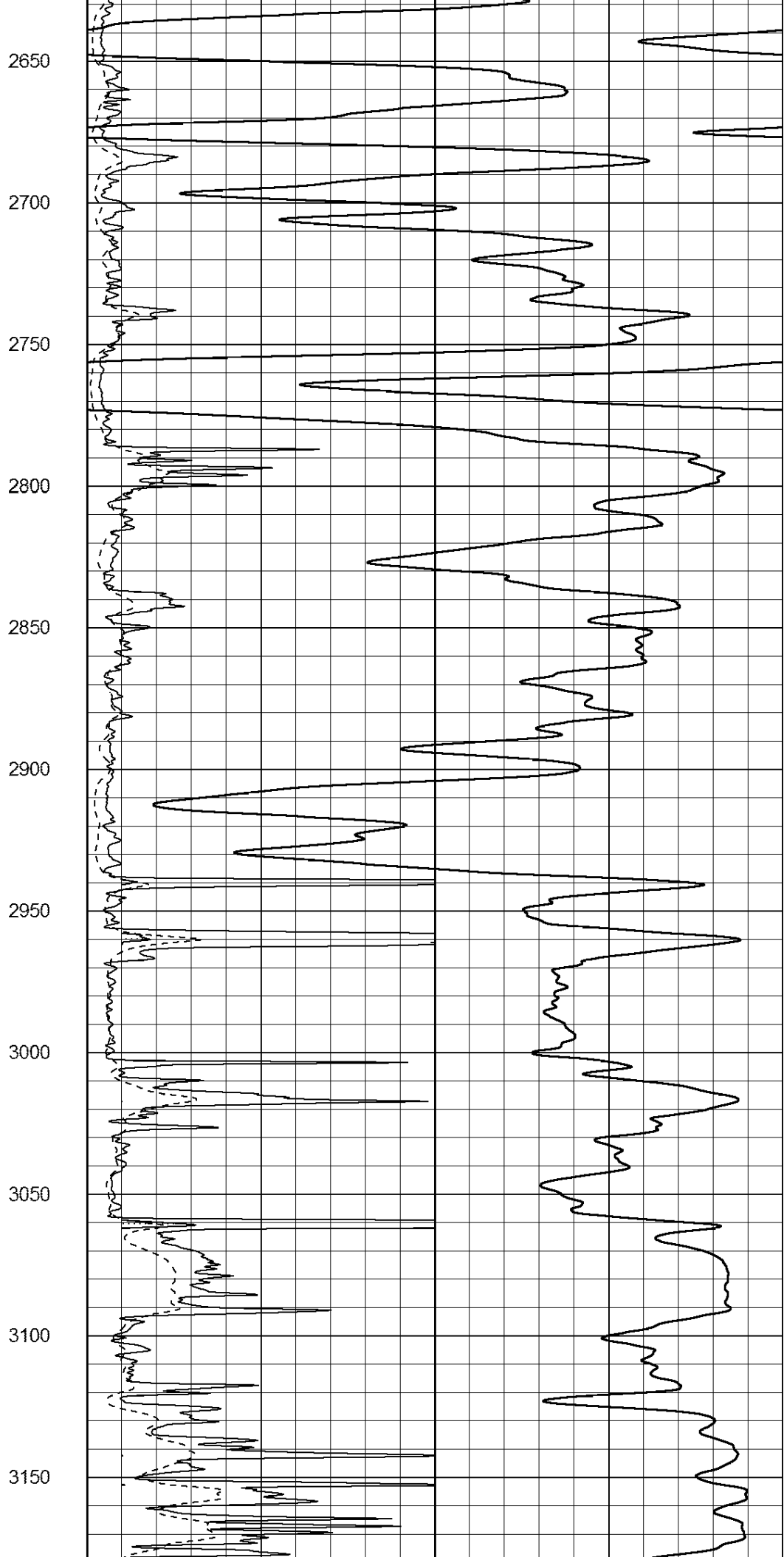
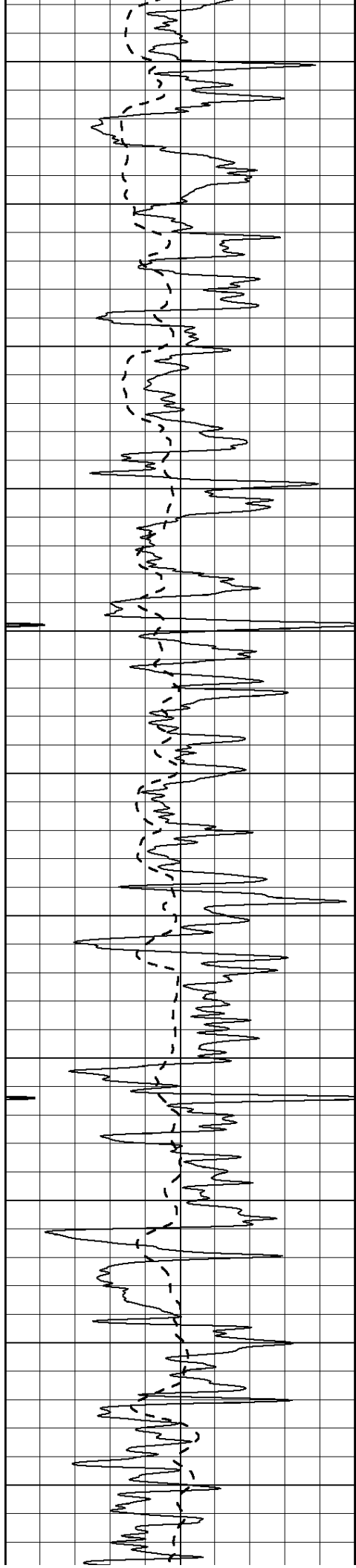
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550  
600  
650  
700  
750  
800  
850  
900  
950

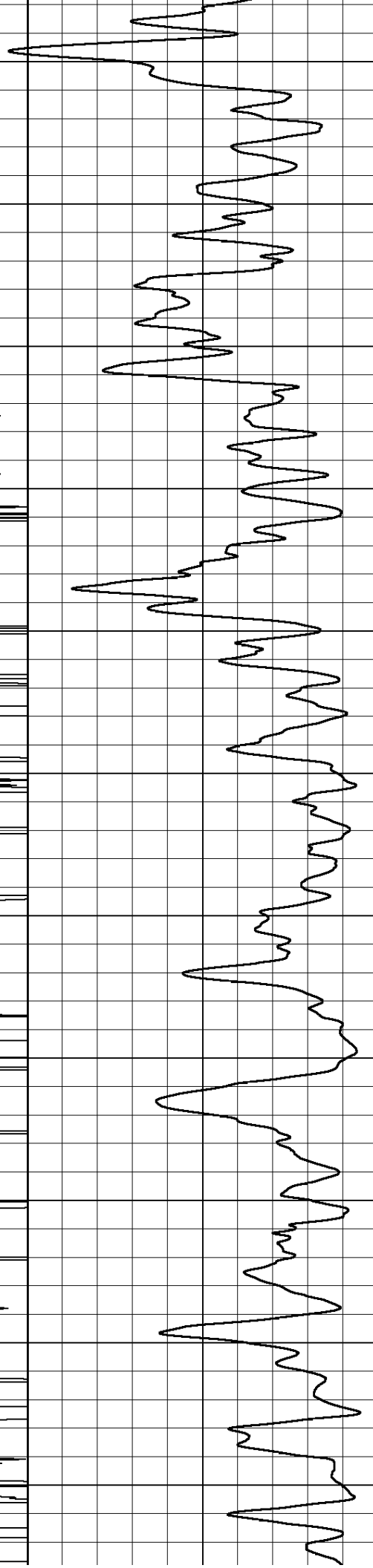
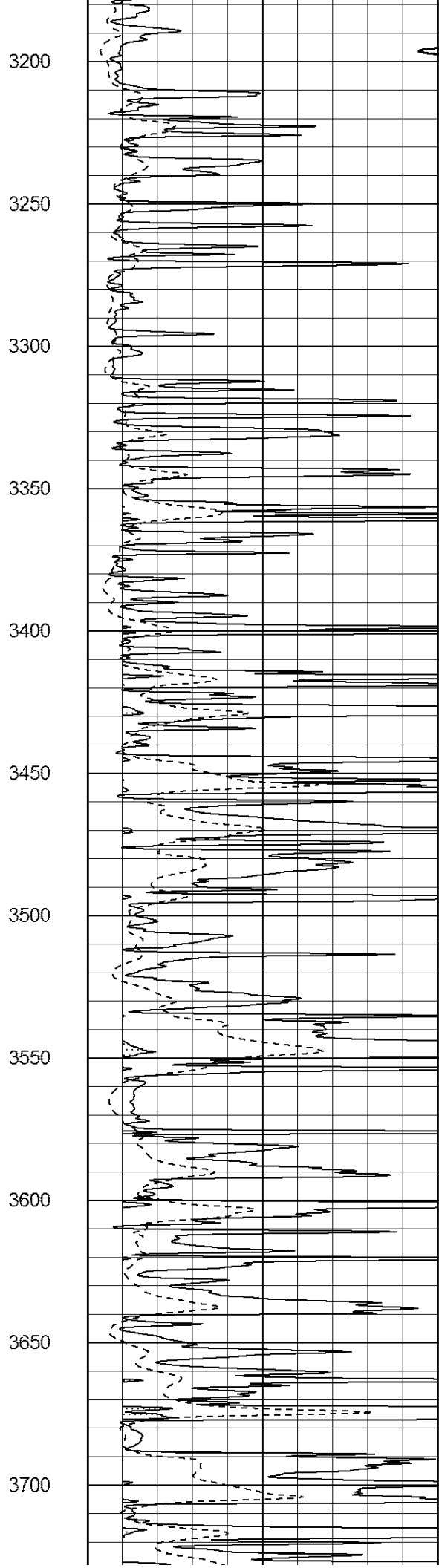
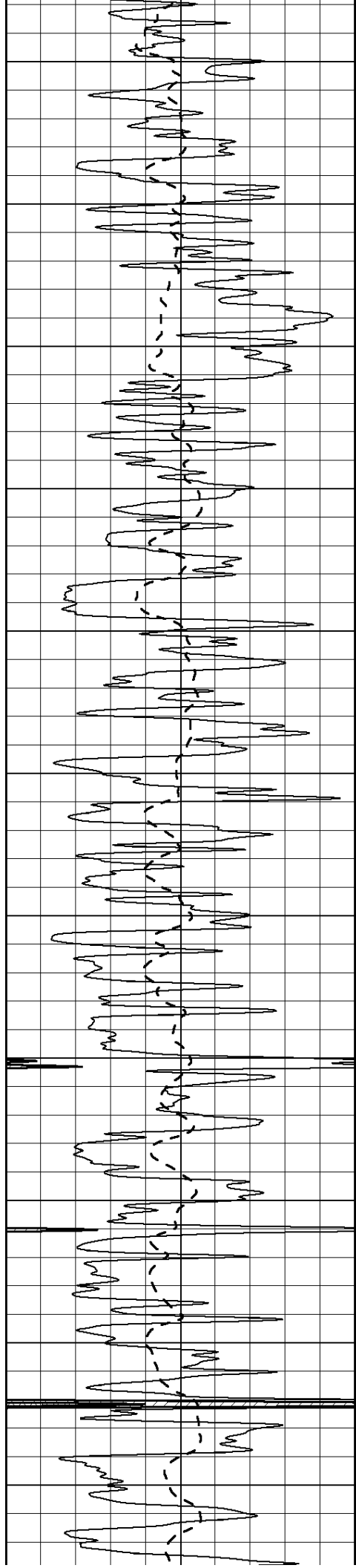


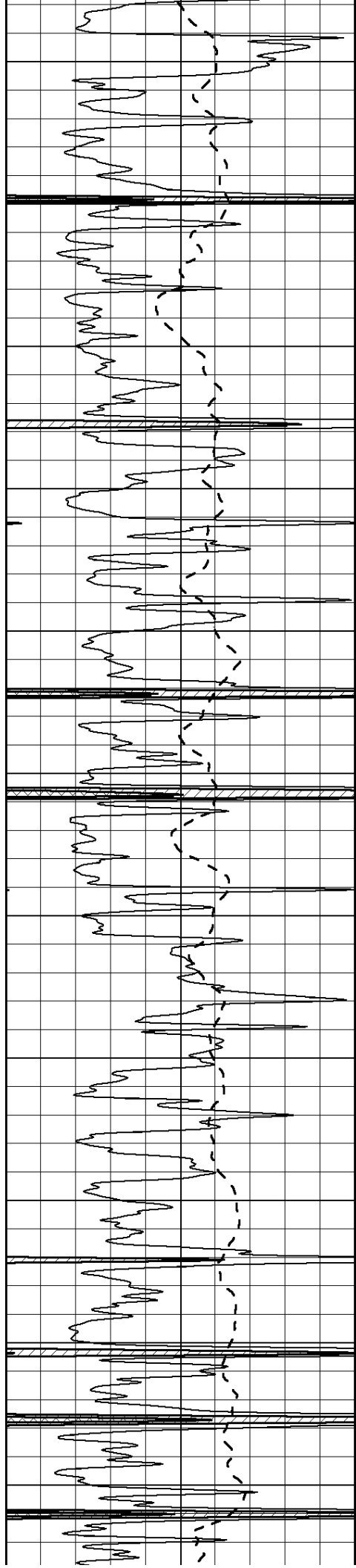












3750

3800

3850

3900

3950

4000

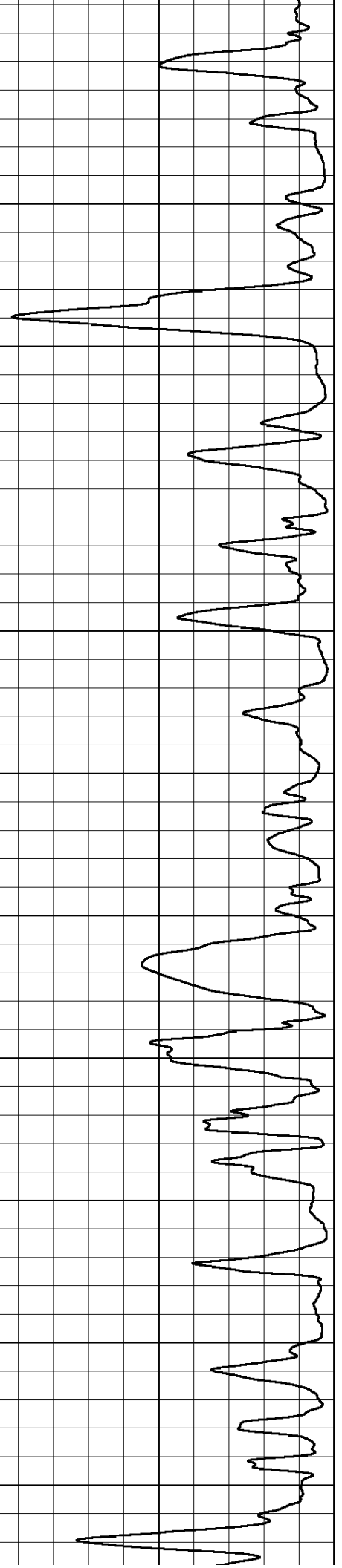
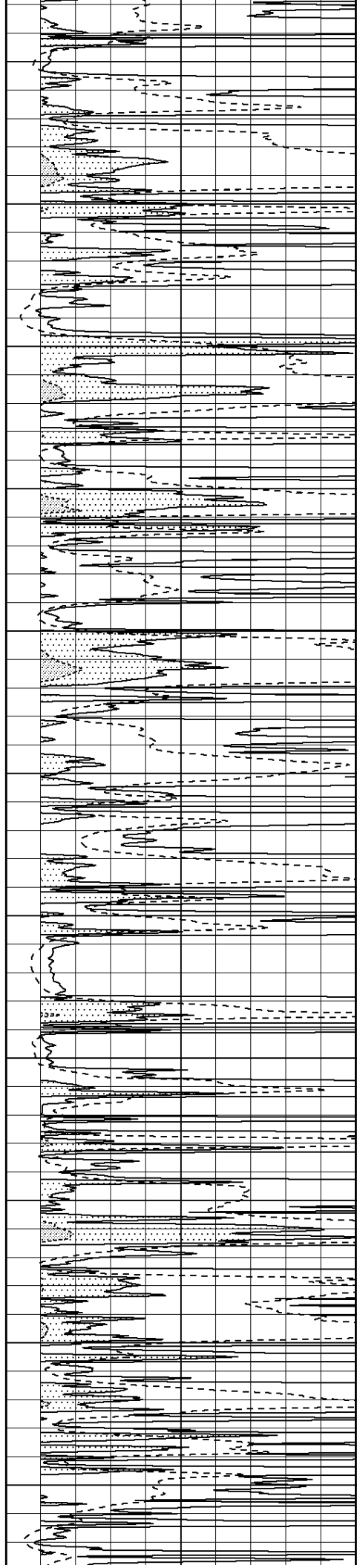
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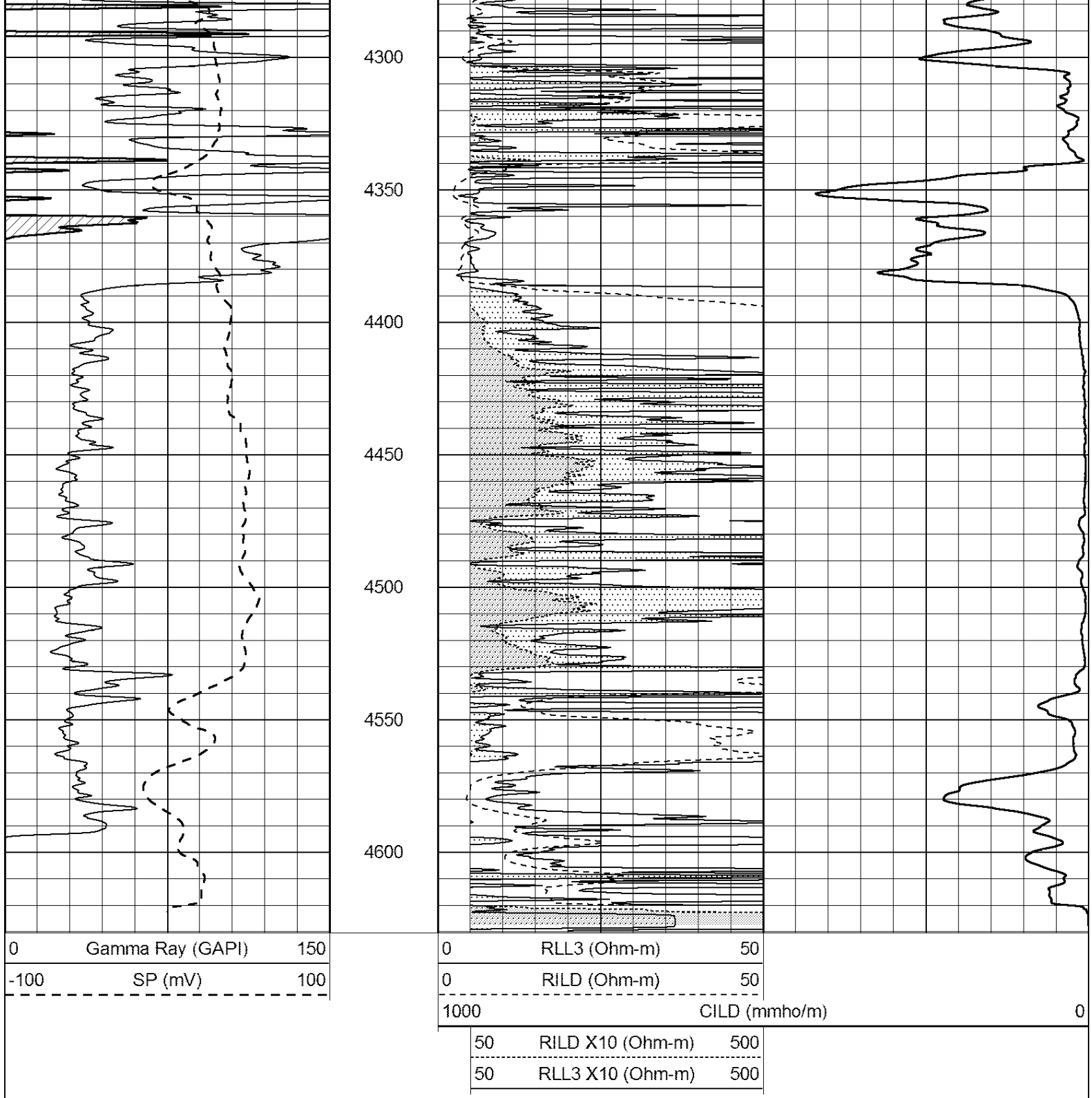
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4150

4200

4250





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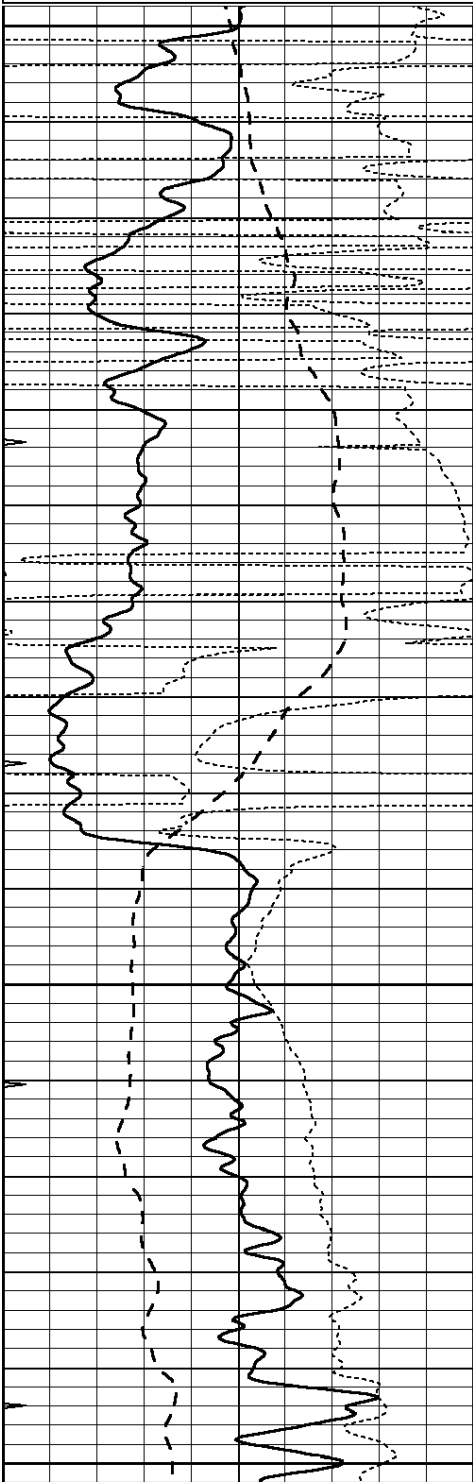
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 Charted by: Depth in Feet scaled 1:240

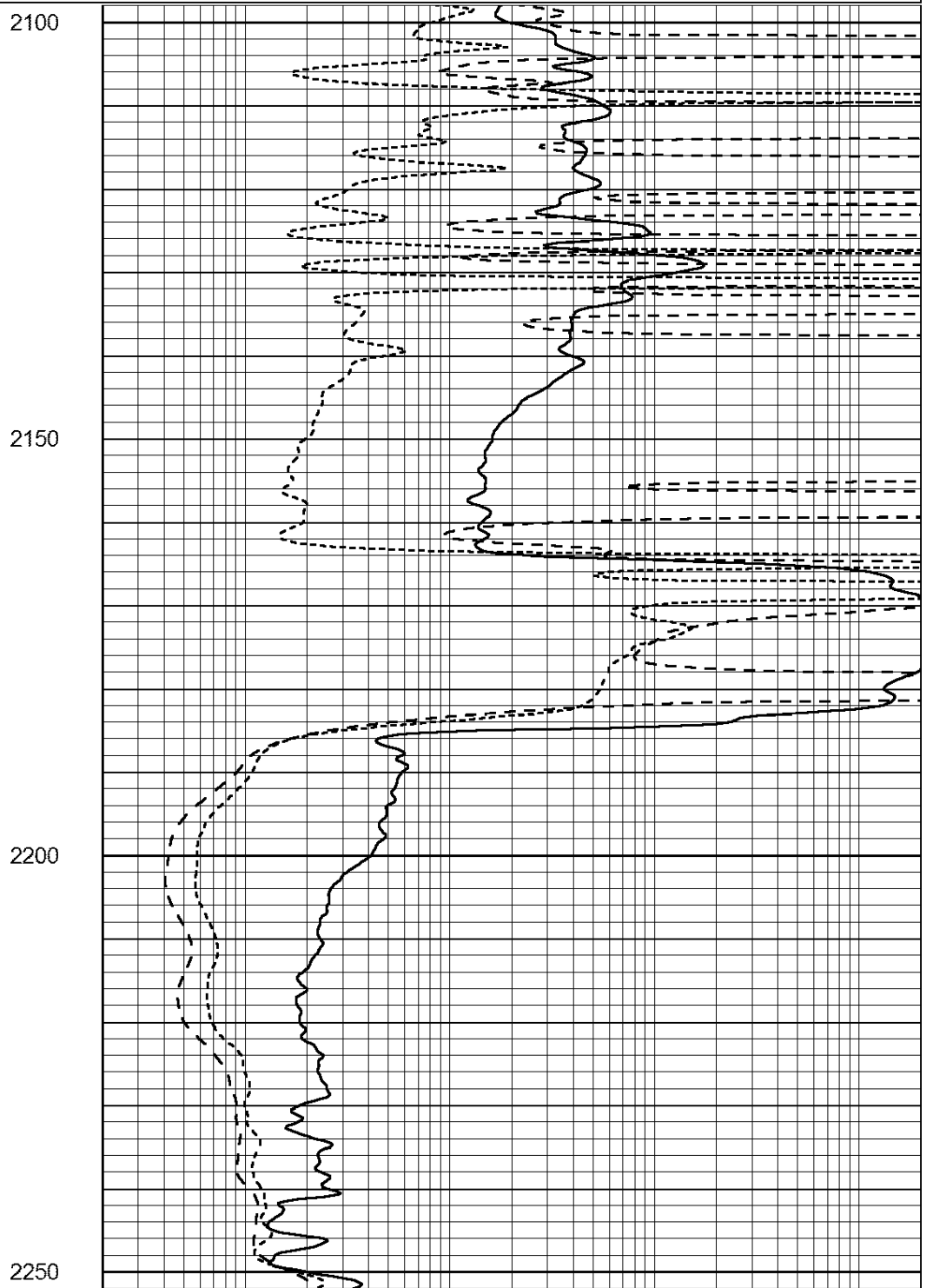
0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000

-250	Rxo/Rt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000
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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



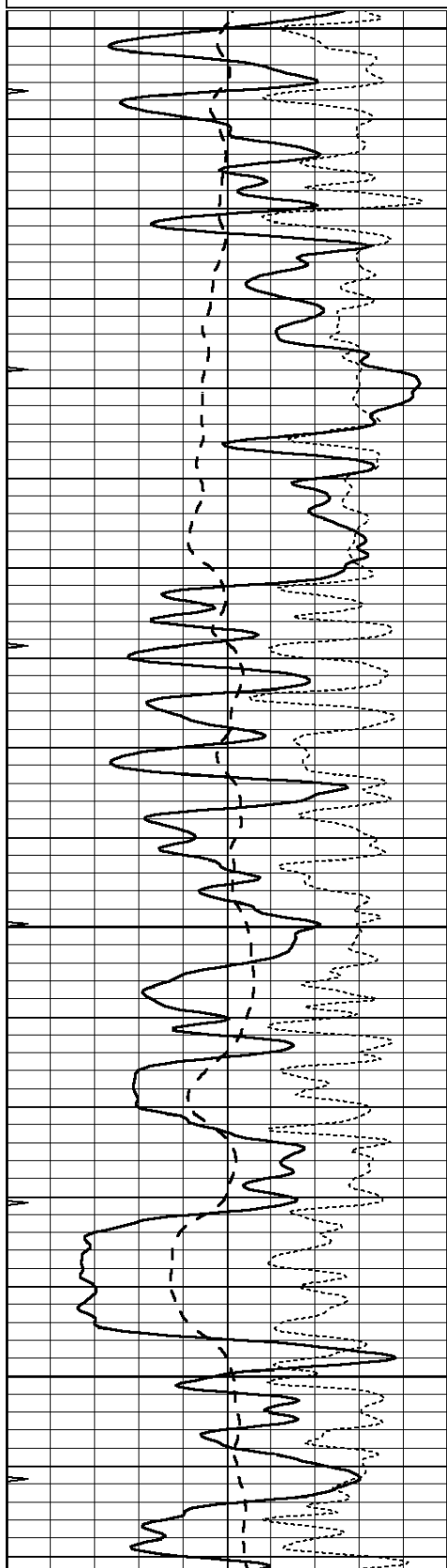
**Casedhole  
Solutions**

# MAIN SECTION

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 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

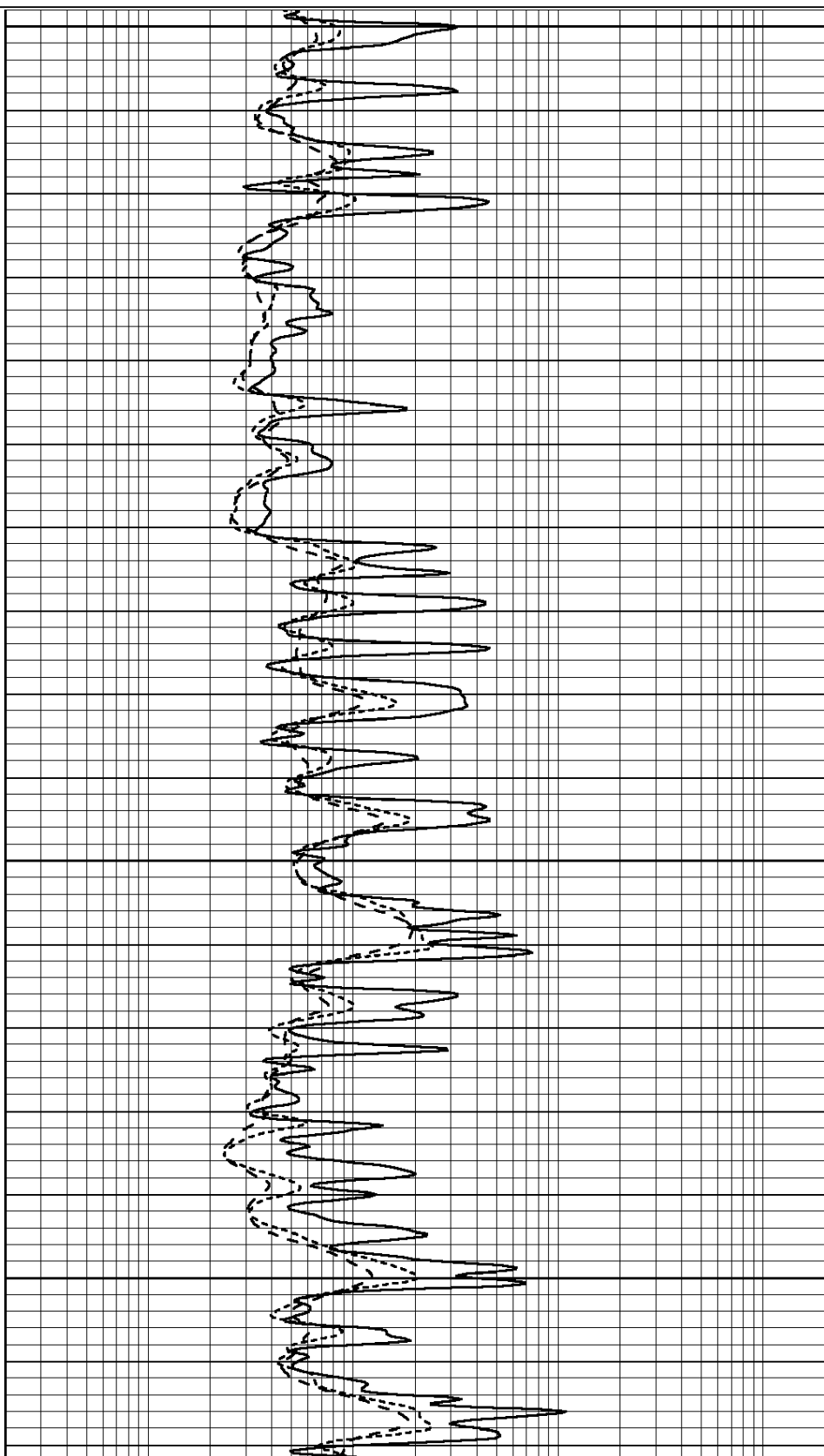


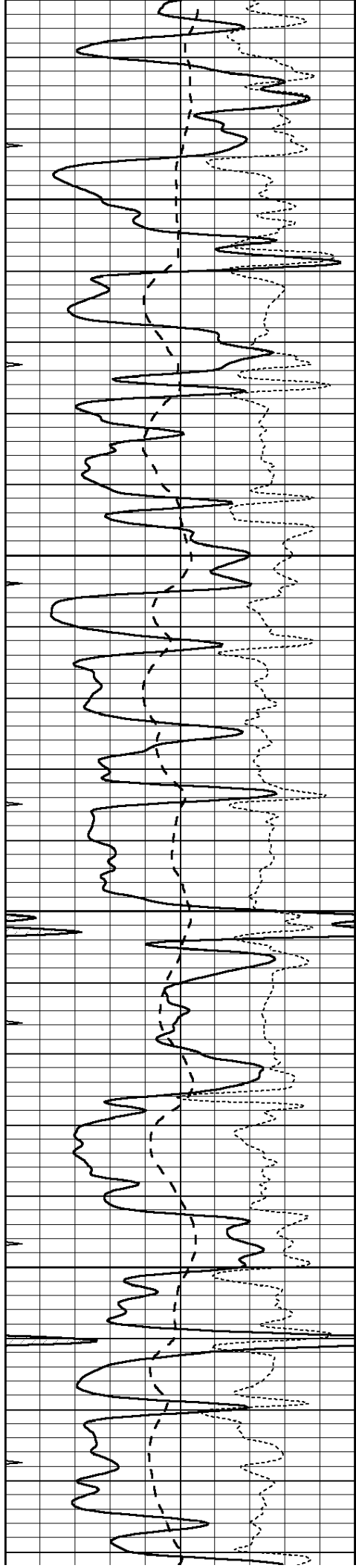
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3300

3350

3400



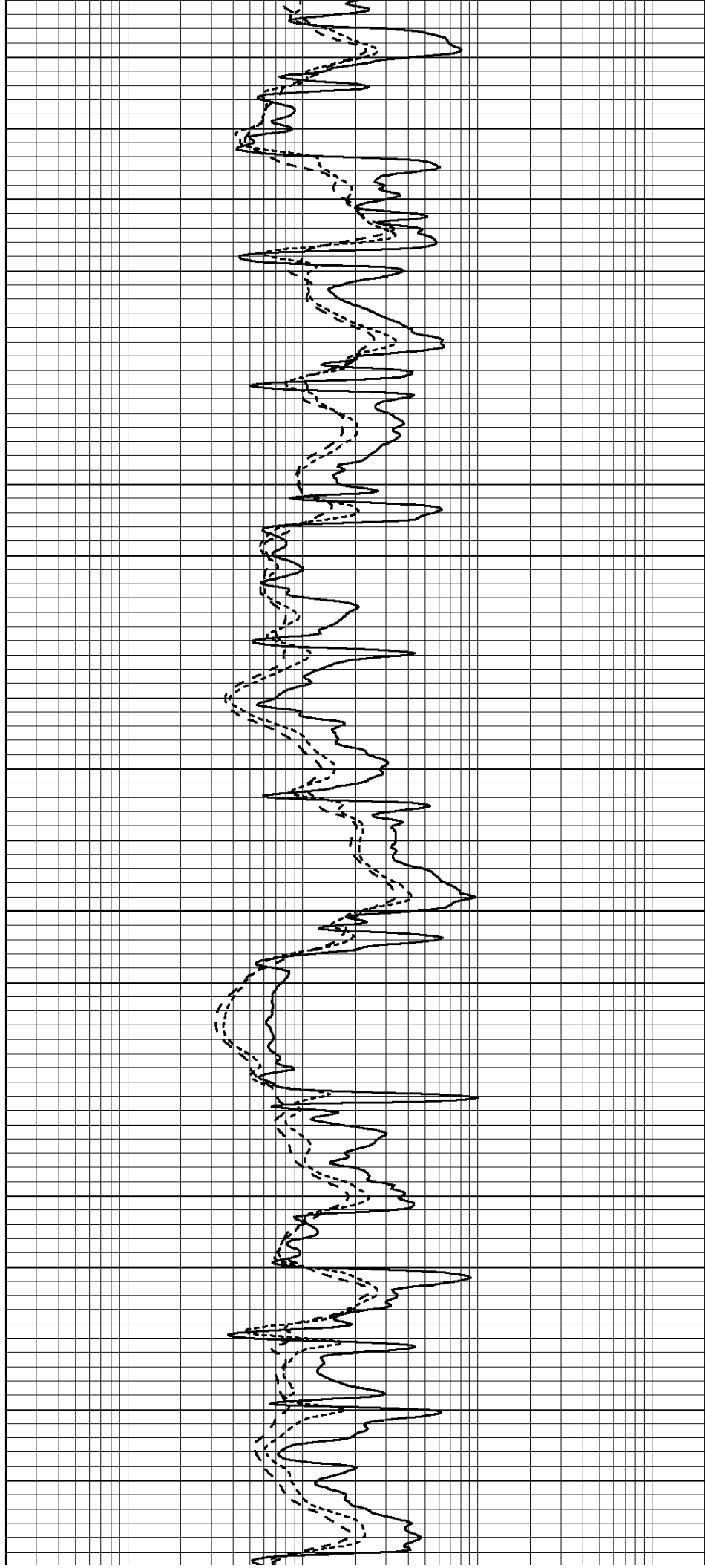


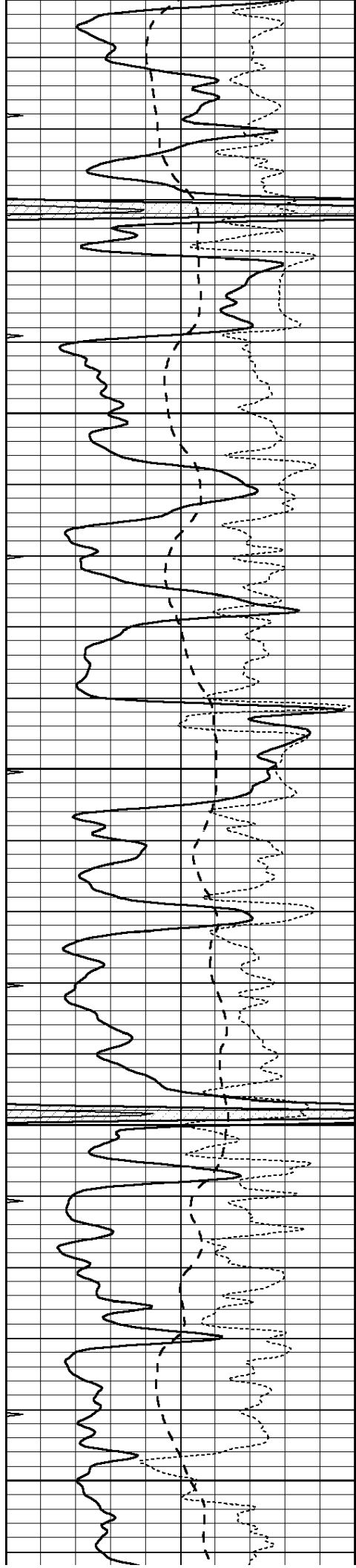
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3500

3550

3600





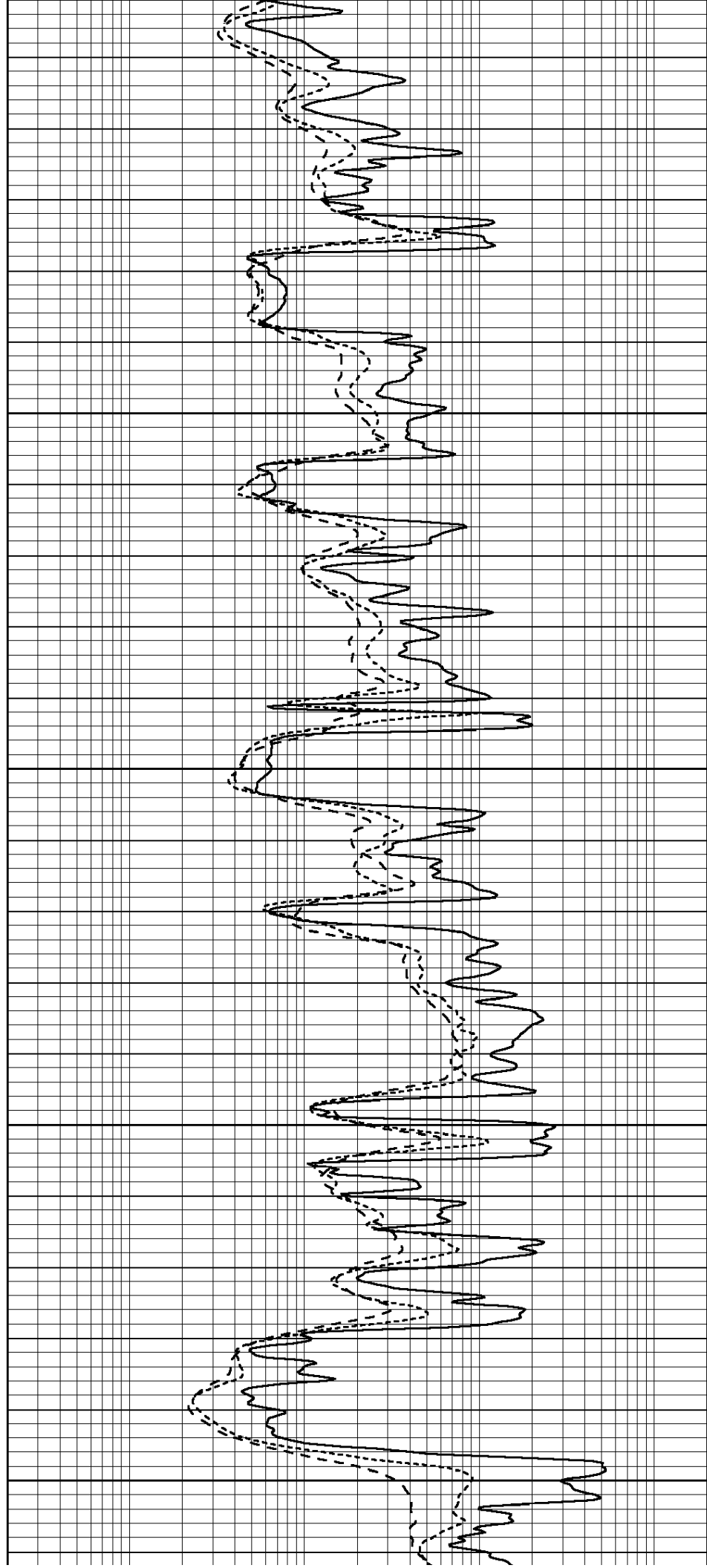
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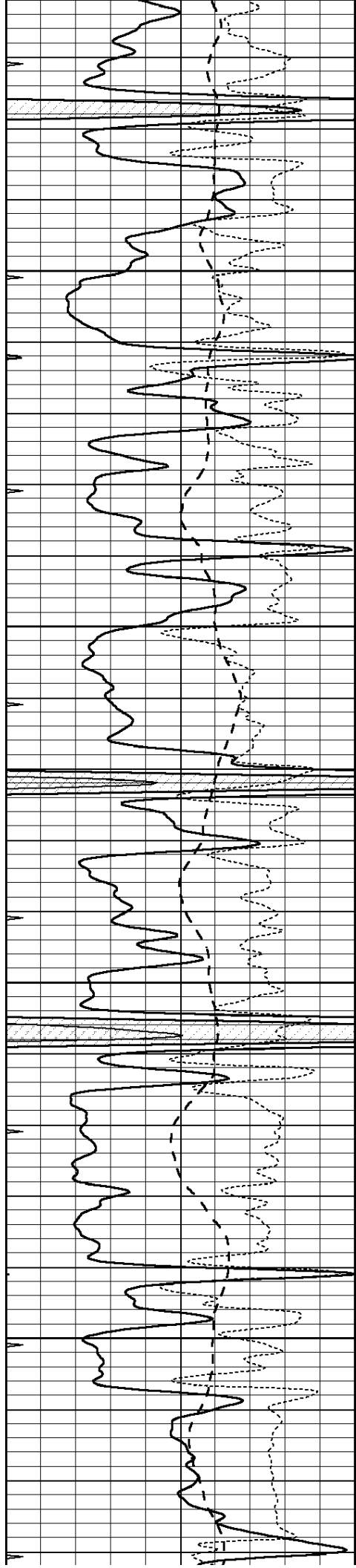
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3750

3800

3850



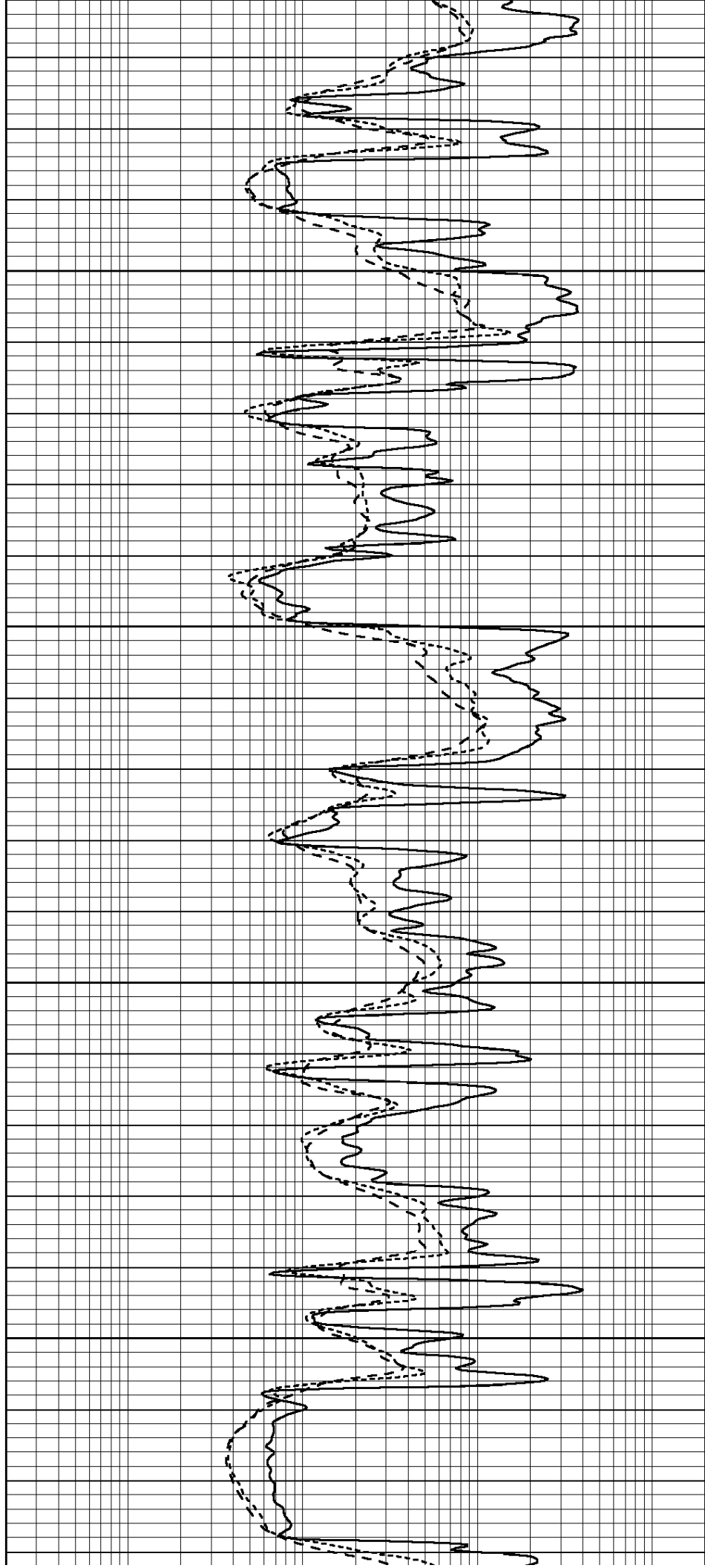


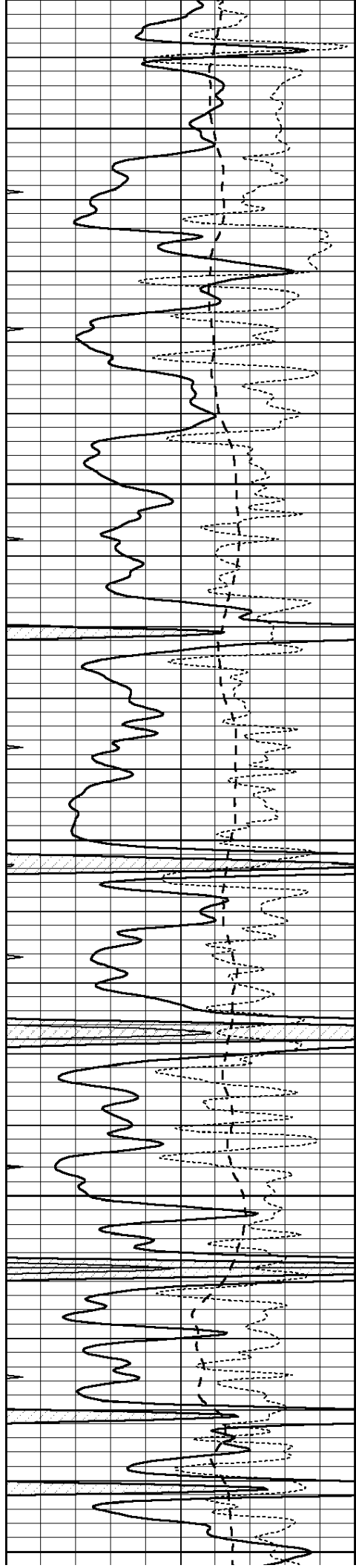
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3950

4000

4050





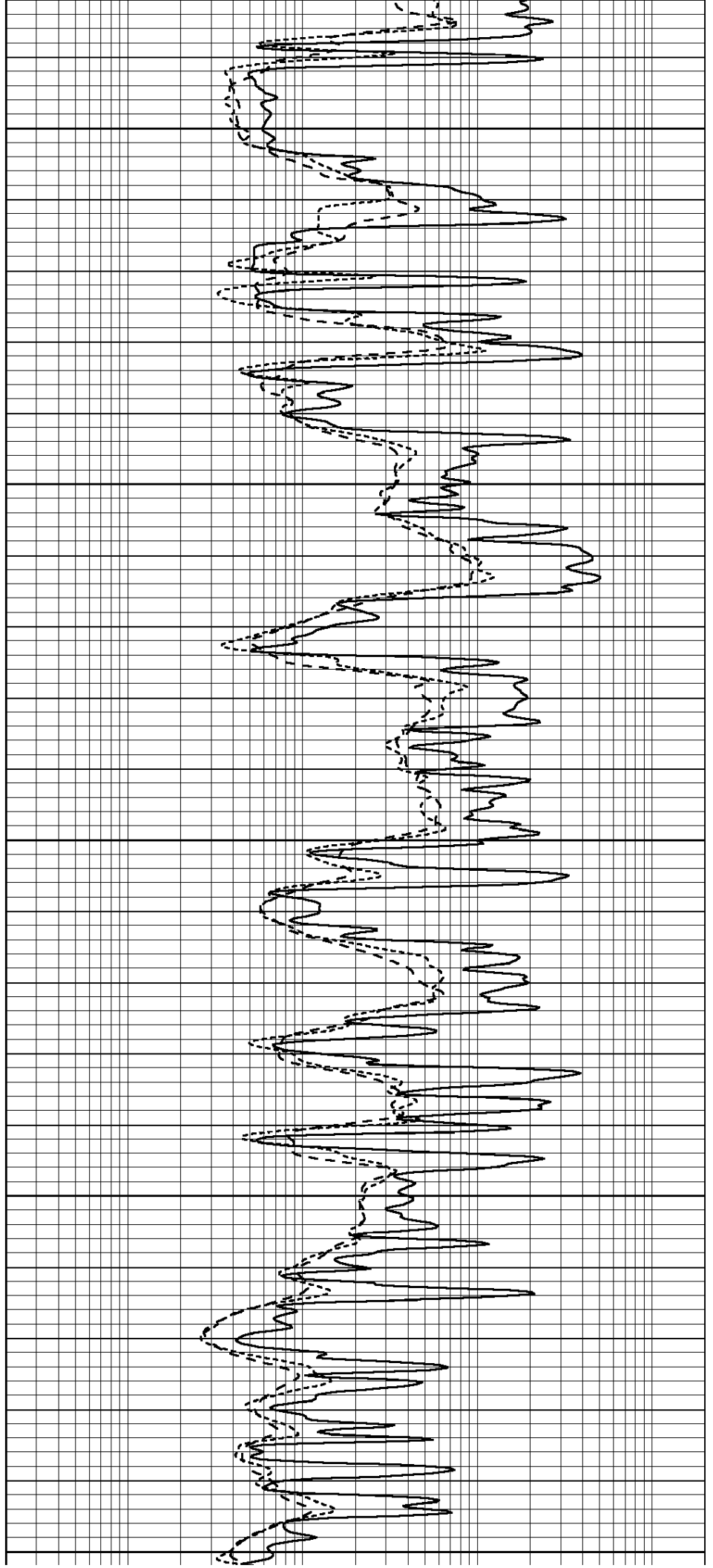
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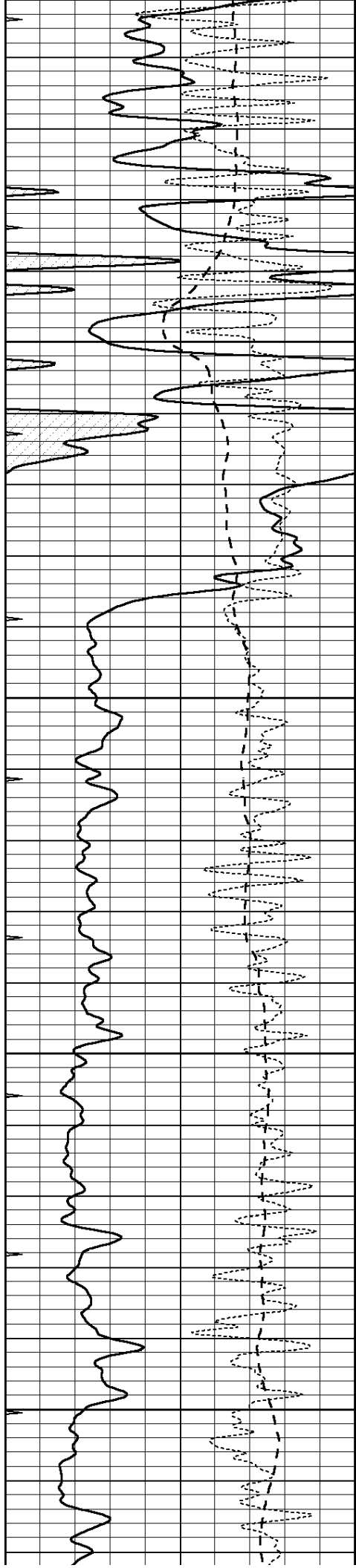
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4200

4250

4300



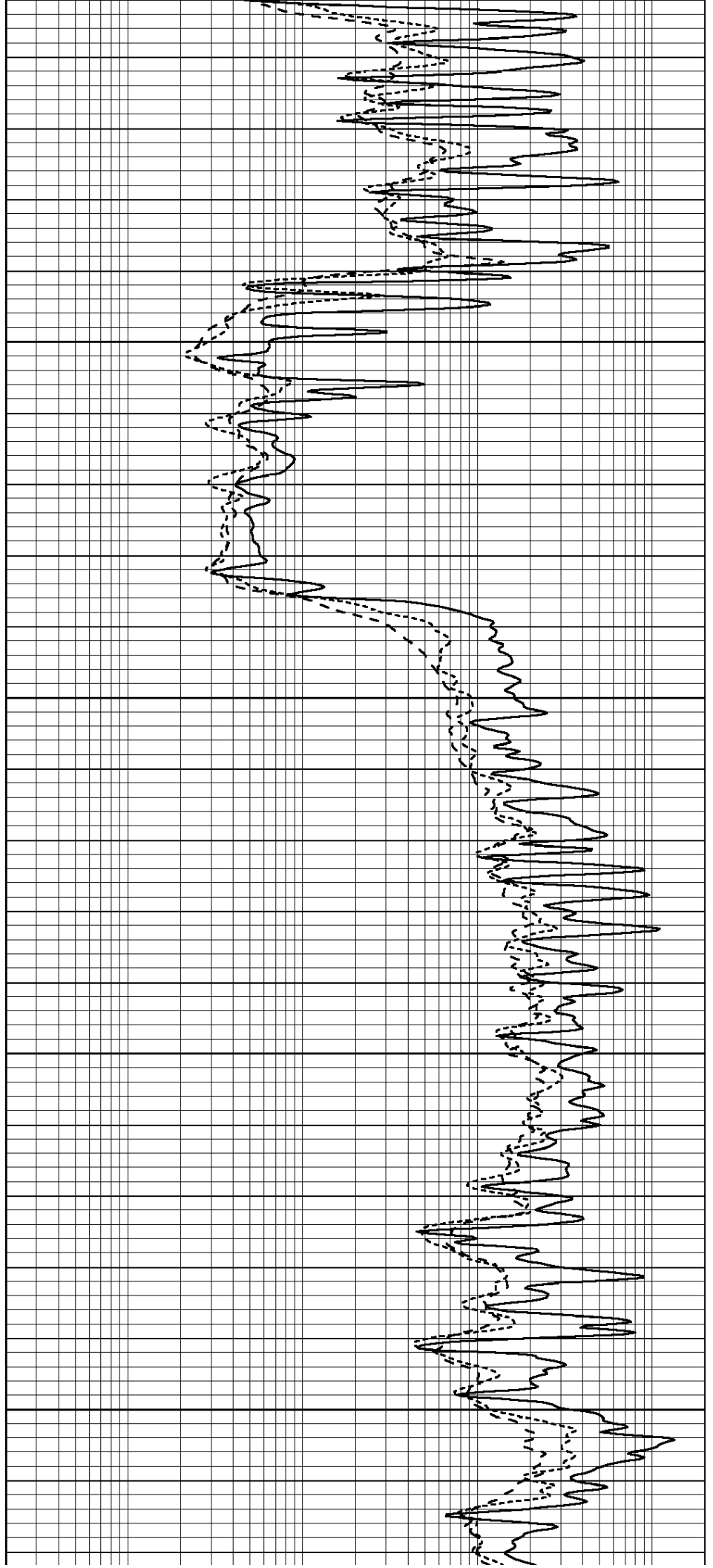


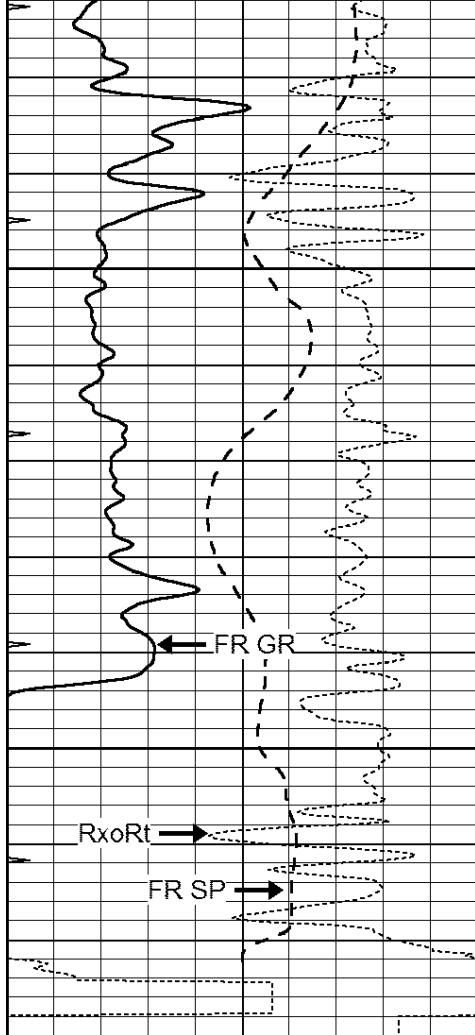
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4400

4450

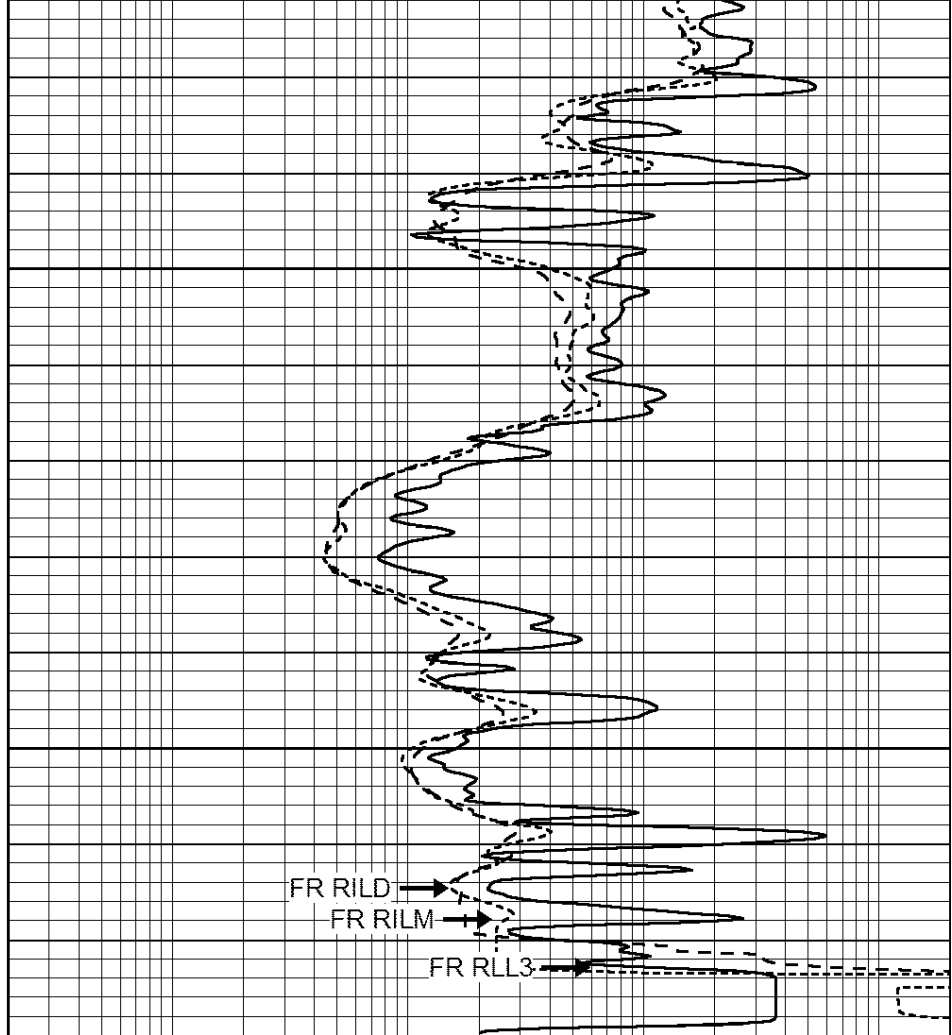
4500





4550  
4600  
LTD 4625

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



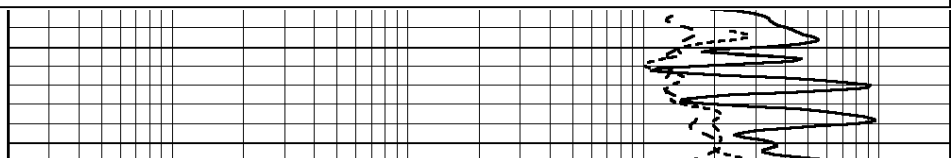
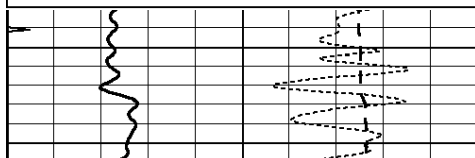
**Casedhole Solutions**

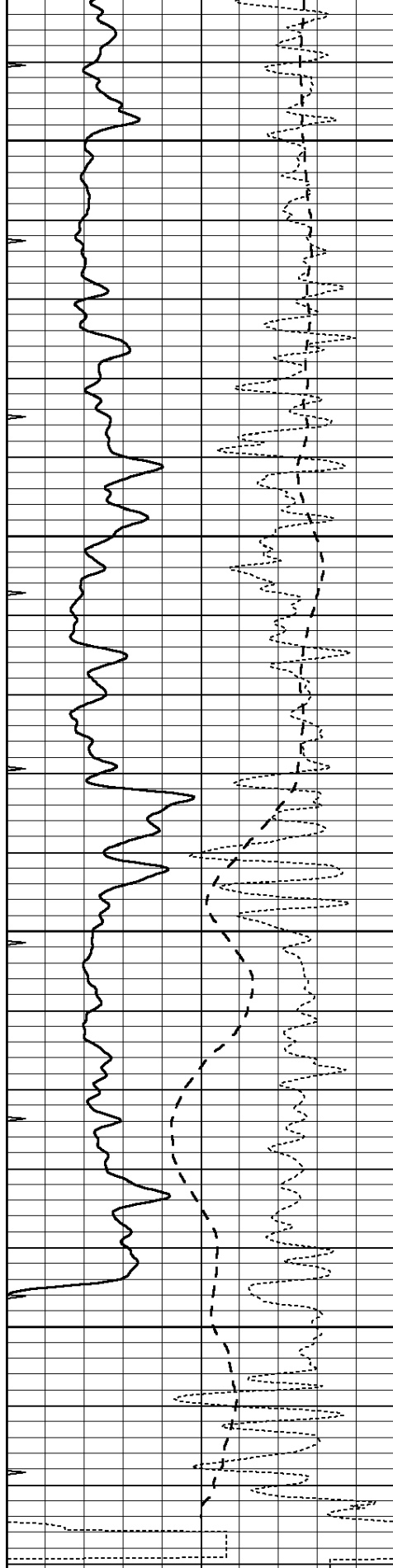
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 Dataset Pathname: pass2.2  
 Presentation Format: \_dil  
 Dataset Creation: Fri Dec 18 02:57:37 2015 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

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

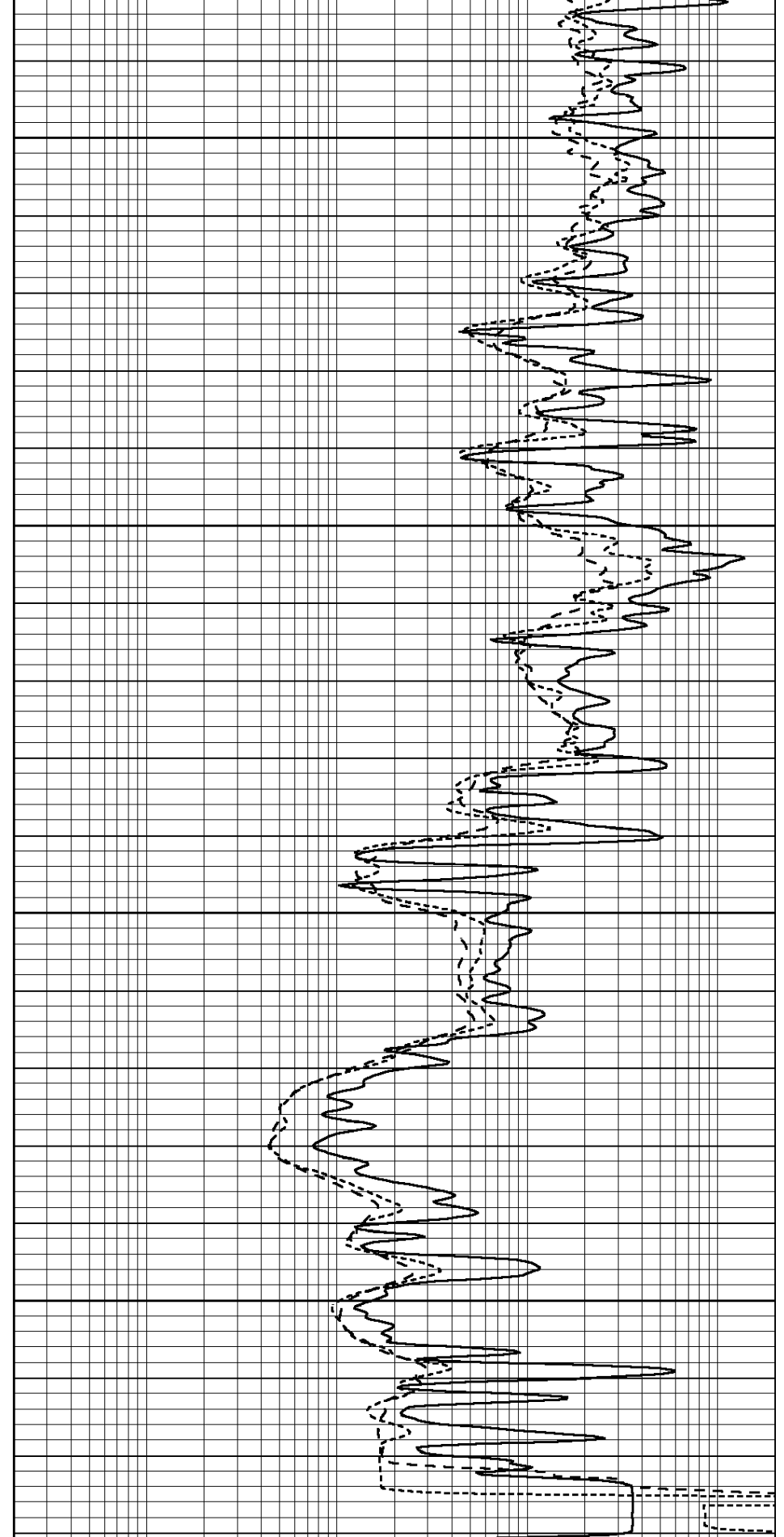
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





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

4450  
4500  
4550  
4600



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

Calibration Report

Database File: 30889ddn.db  
 Dataset Pathname: pass2.2  
 Dataset Creation: Fri Dec 18 02:57:37 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

Loop:	Readings			References			Results	
	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		

Compensated Density Calibration Report

Serial-Model: GEAR5-GEARHART  
 Source / Verifier: /  
 Master Calibration Performed: Sun Dec 06 13:45:22 2015  
 Before Survey Verification Performed:  
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	798.83	465.02	cps
Aluminum	2.570	g/cc	178.16	323.19	cps

Spine Angle = 76.37

Density/Spine Ratio = 0.557

Size

Reading

Small Ring	7.00	in	1.47	V
Large Ring	14.00	in	3.01	V

Before Survey Verification

<u>Target</u>		<u>Measured</u>
	g/cc	g/cc
	g/cc	g/cc
	g/cc	g/cc

After Survey Verification

<u>Target</u>		<u>Measured</u>
	g/cc	g/cc
	g/cc	g/cc
	g/cc	g/cc

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

PRE-SURVEY VERIFICATION

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

POST-SURVEY VERIFICATION

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

Gamma Ray Calibration Report

Serial Number:	GR6
Tool Model:	OPEN
Performed:	Thu Nov 12 05:47:01 2015
Calibrator Value:	150.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	276.0 cps
Sensitivity:	0.4500 GAPI/cps

