



DUAL INDUCTION LOG

PIONEER
Pioneer Energy Services

Company BRITO OIL COMPANY, INC.
Well COOK NO. 1-10
Field WILDCAT
County THOMAS State KANSAS

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Well COOK NO. 1-10
Field WILDCAT
County THOMAS
State KANSAS

Location: API #: 15-193-21001-00-00
1320' FNL & 330' FEL
SEC 10 TWP 16S RGE 35W
Permanent Datum GROUND LEVEL Elevation 3258'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING
Other Services
CNL/CDL
MEL
Elevation
K.B. 3263'
D.F. N/A
G.L. 3258'

Date	10/7/2017		
Run Number	ONE		
Depth Driller	4800'		
Depth Logger	4799'		
Bottom Logged Interval	4798'		
Top Log Interval	300'		
Casing Driller	8.625" @ 344'		
Casing Logger	345'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4.400		
Density / Viscosity	9.1 63		
pH / Fluid Loss	12.0 5.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.75 @ 57		
Rimf @ Meas. Temp	.56 @ 57		
Rmc @ Meas. Temp	1.01 @ 57		
Source of Rimf / Rmc	CHARTS		
Rim @ BHT	.34 @ 124		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	124 DEG/F		
Equipment Number	108		
Location	HAYS		
Recorded By	J. HENRICKSON		
Witnessed By	SAMAN SHARIFAIE		

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

LEVANT KANSAS
11 NORTH ON RD 11, WEST INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: J. HENRICKSON
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: SAMAN SHARIFAIE
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 124	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV -150	degF 45	Off	ft 4799

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC	37.48			CNT-M&W (tk10-MW)	5.50	3.50	100.00
CNSSC	36.73						
LSD	28.43			CDL-M&W (168-986)	8.50	4.00	250.00
DCAL	28.42			ML-PSI STKBL ML (PSI-02)	7.58	4.00	65.00
SSD	27.93			Stackable Microlog Tools			
MCAL	19.83						
MI	19.83						
MN	19.83						
RLL3	15.80						
RLL3F	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

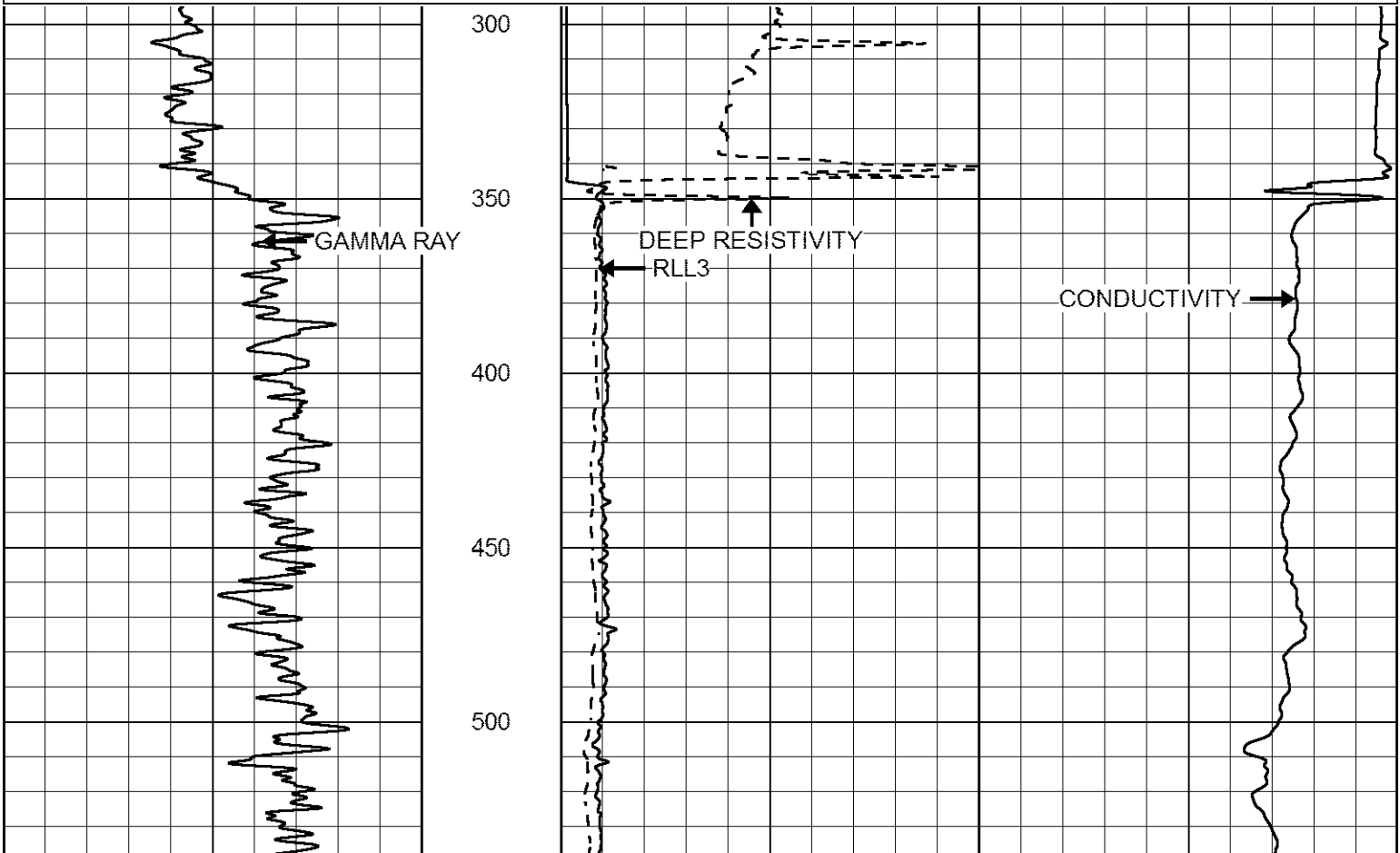
CILM	4.70								
SP	0.20								
Dataset: brito_cook_1_10.db: field/well/stackml/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in									

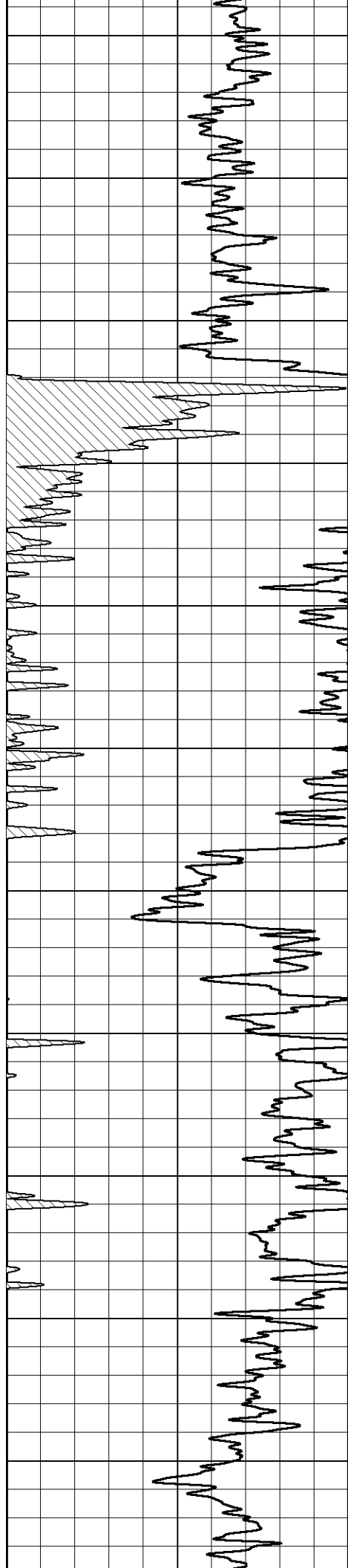


MAIN PASS

Database File	brito_cook_1_10.db
Dataset Pathname	stackml/pass3.1
Presentation Format	dil2in
Dataset Creation	Sat Oct 07 10:31:36 2017
Charted by	Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	150	2000	CONDUCTIVITY (mmho/m)	0
			0	RLL3 (Ohm-m)	50
			0	DEEP RESISTIVITY (Ohm-m)	50
			50	RLL3 (Ohm-m)	500
				DEEP RESISTIVITY	
			50	(Ohm-m)	500





550

600

650

700

750

800

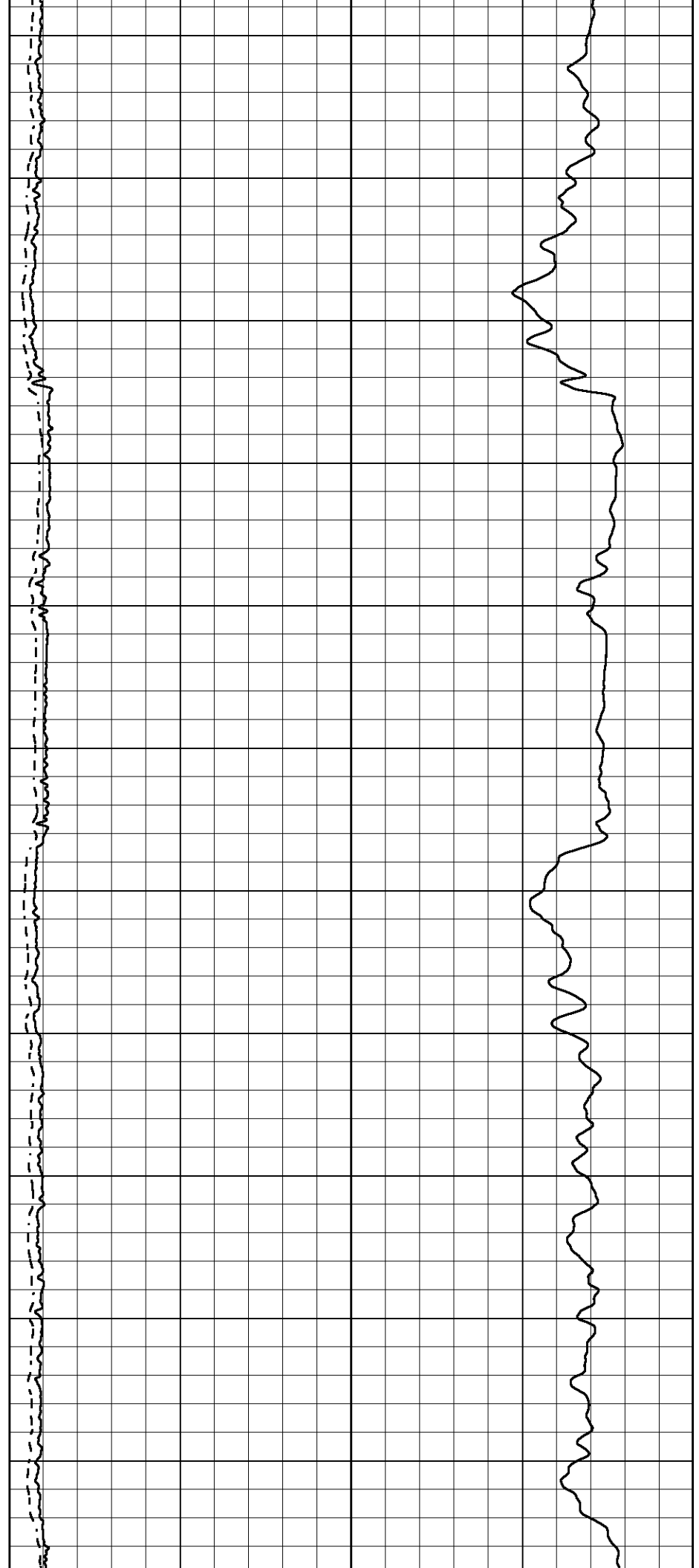
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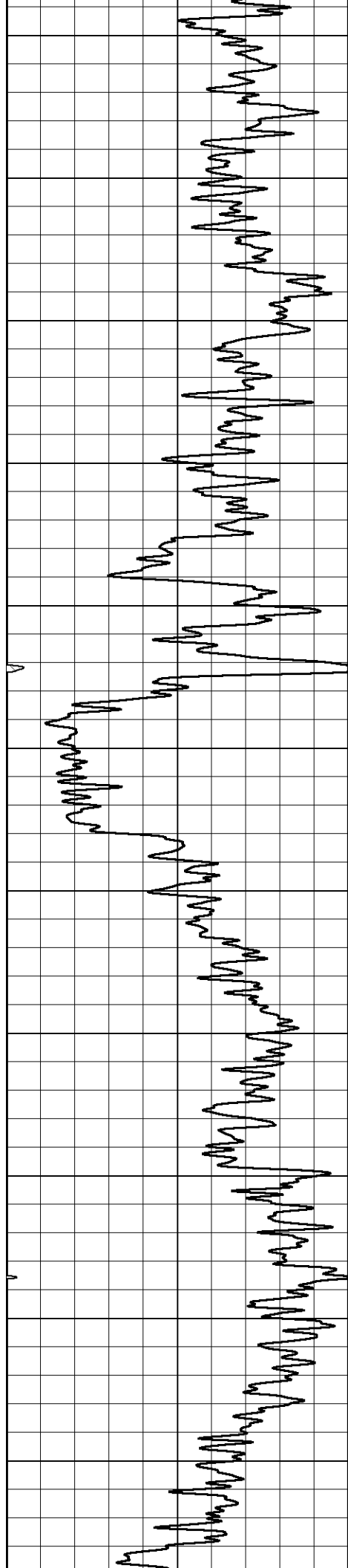
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950

1000

1050





1100

1150

1200

1250

1300

1350

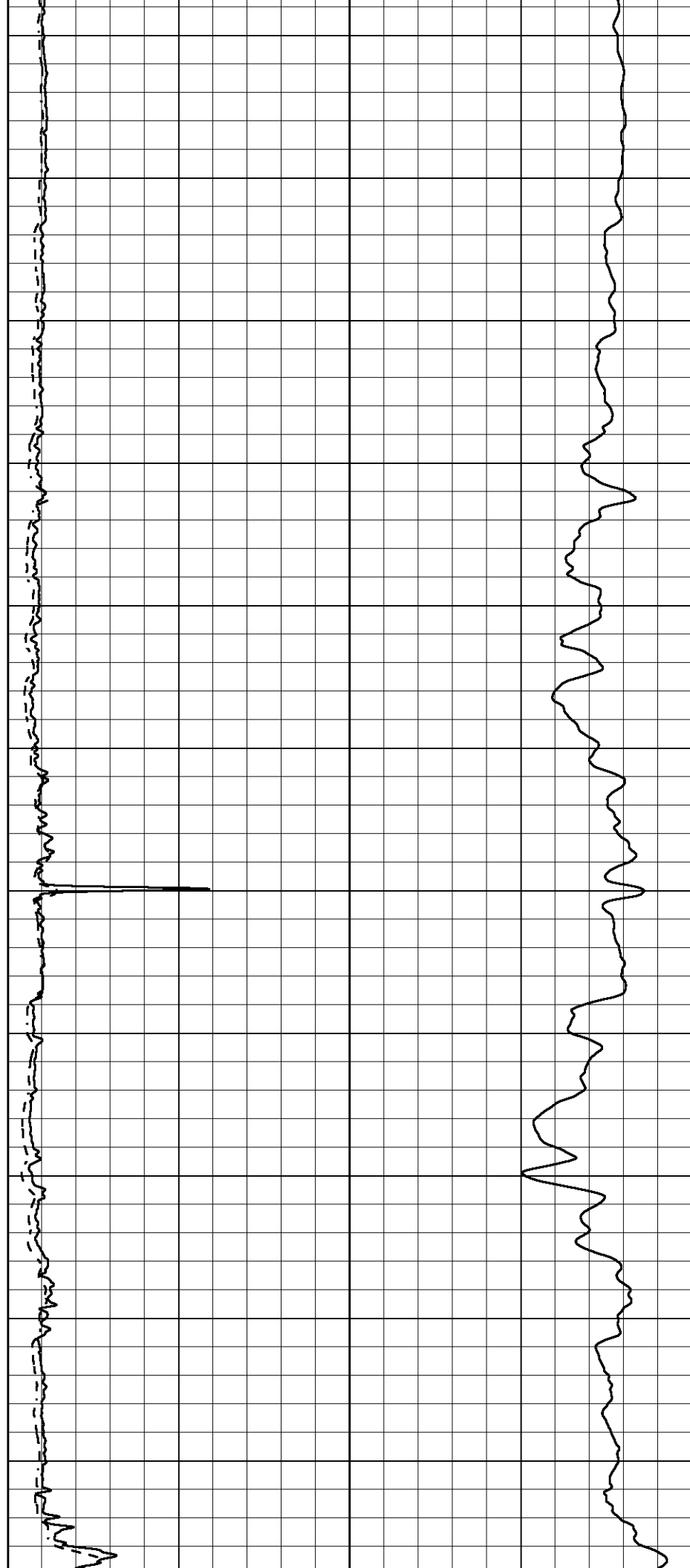
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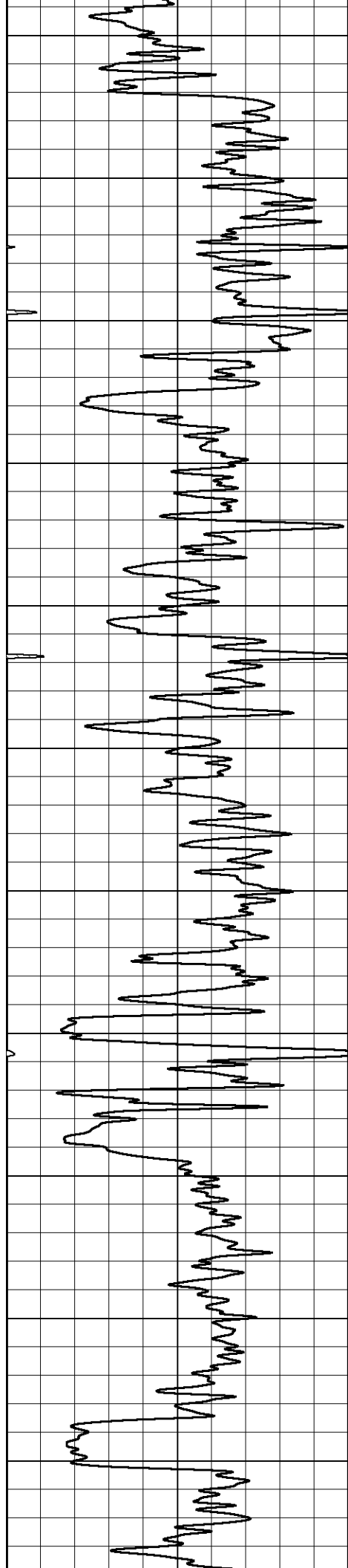
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1500

1550

1600





1650

1700

1750

1800

1850

1900

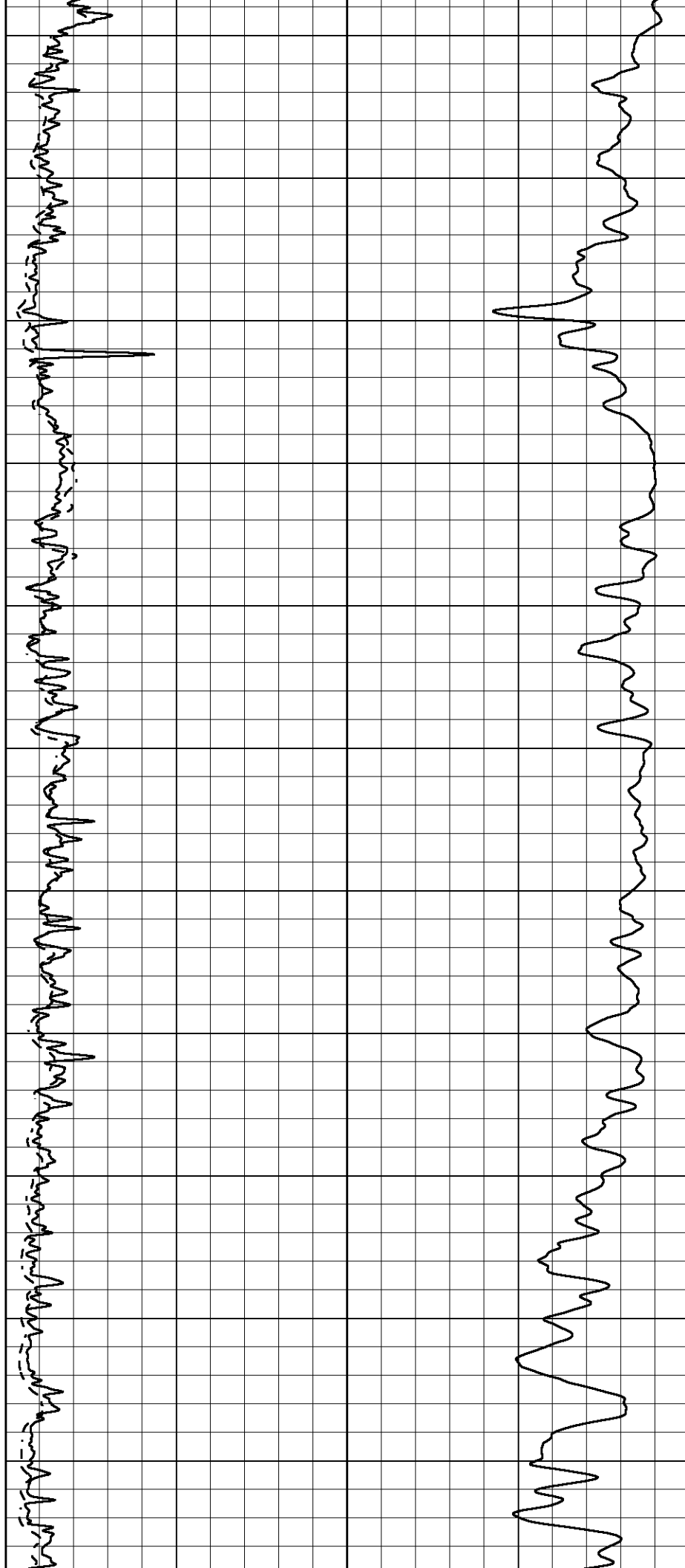
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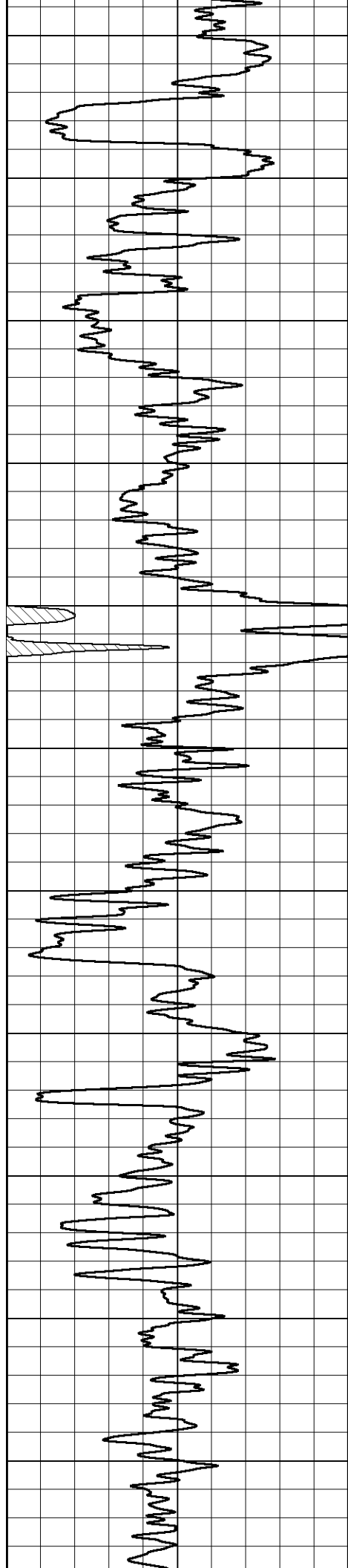
2000

2050

2100

2150





2200

2250

2300

2350

2400

2450

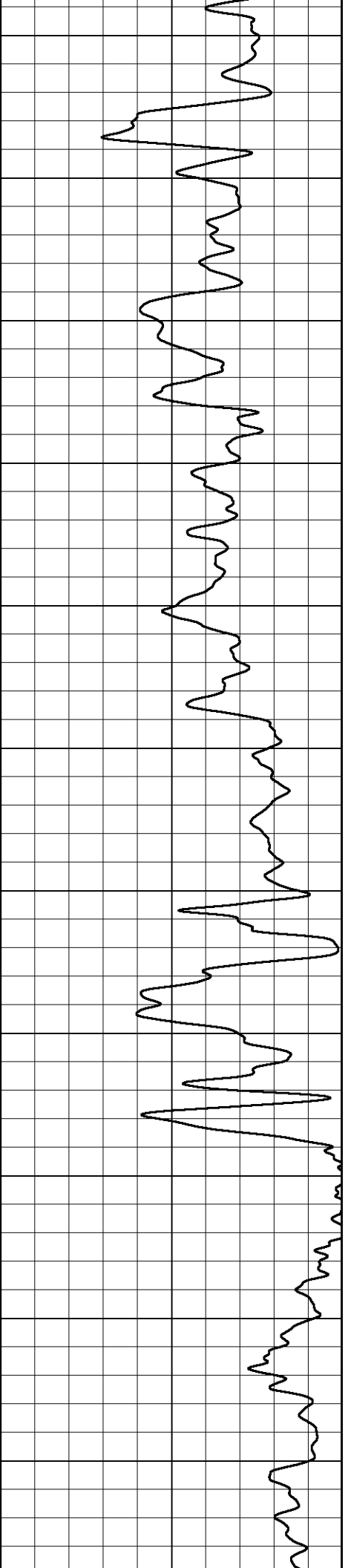
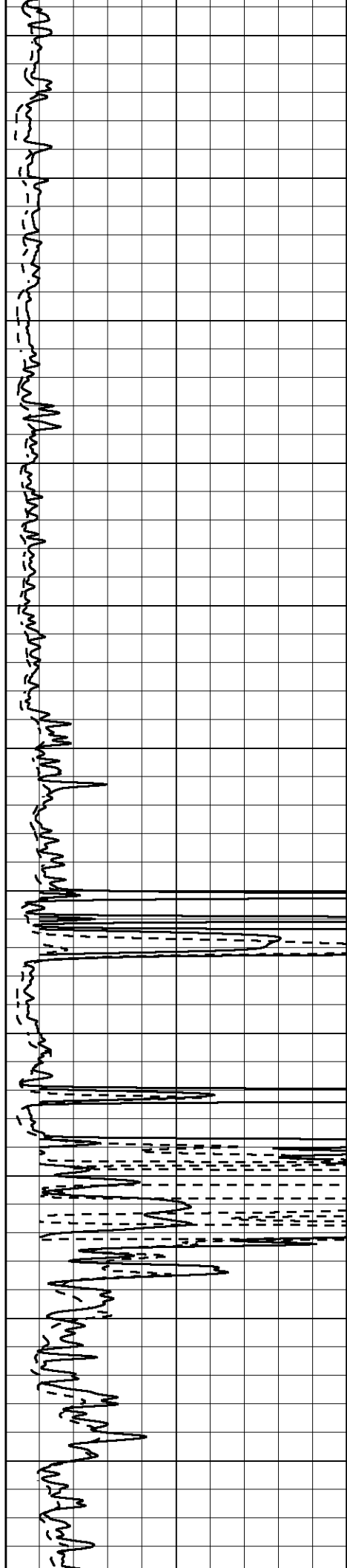
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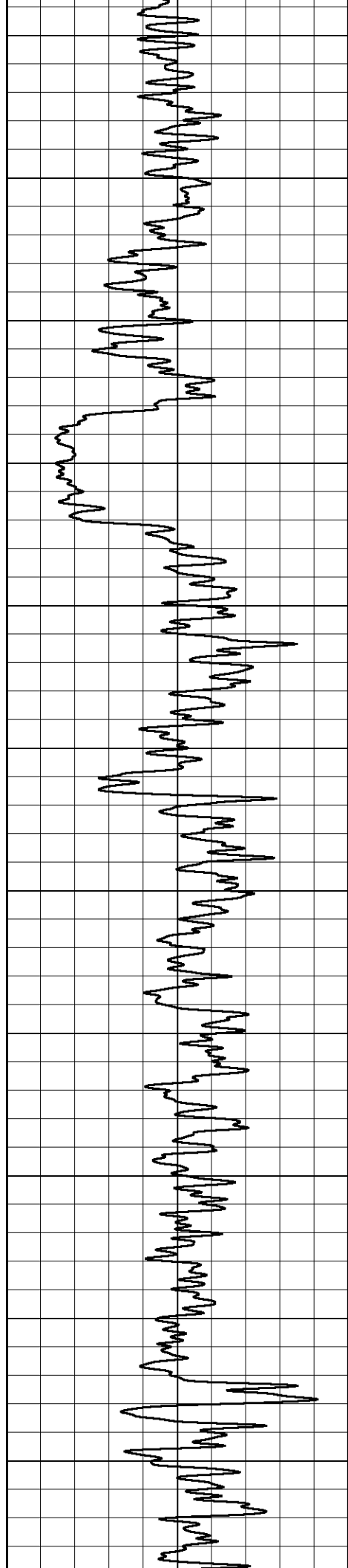
2550

2600

2650

2700





2750

2800

2850

2900

2950

3000

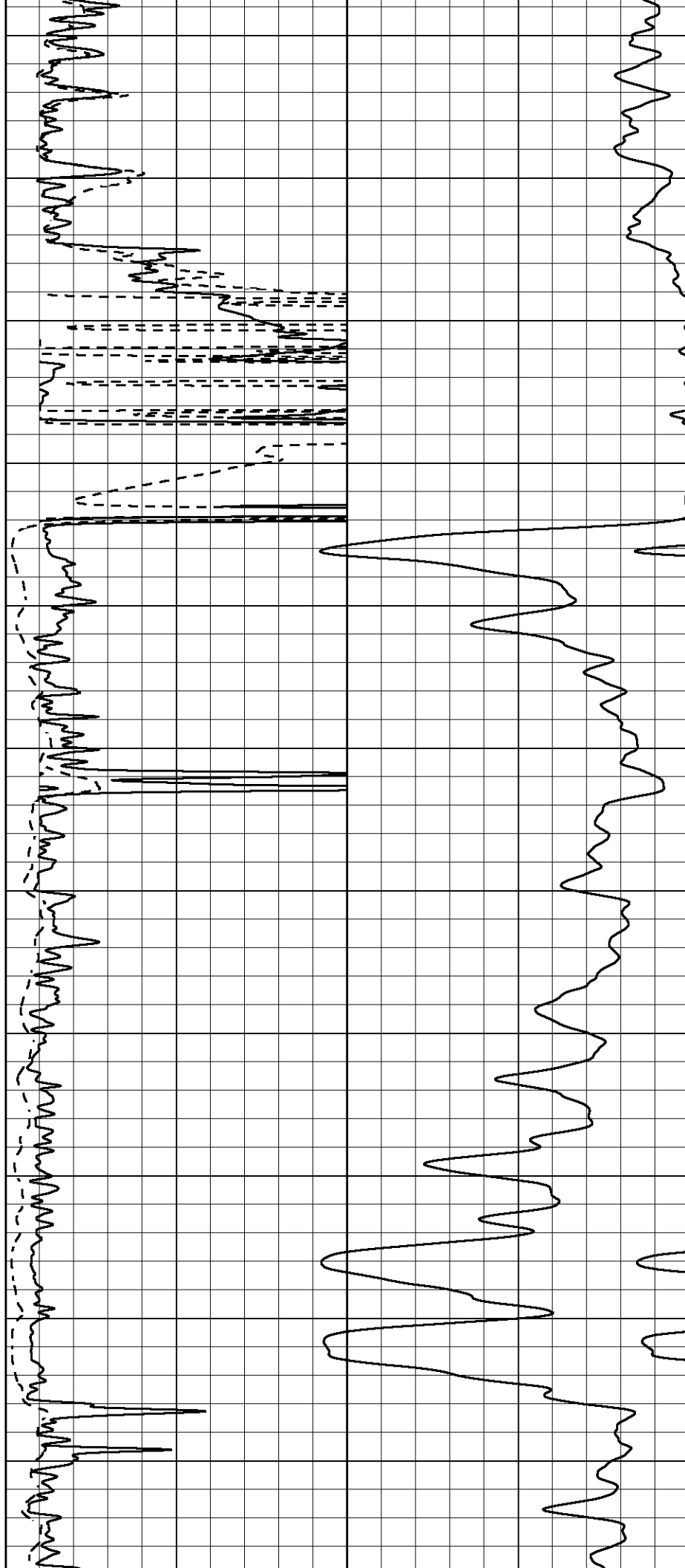
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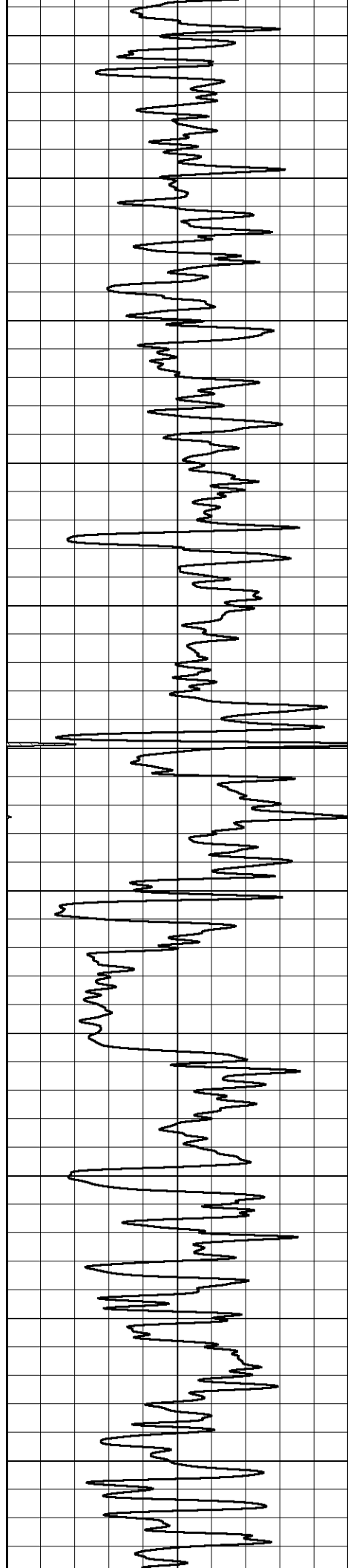
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3150

3200

3250





3300

3350

3400

3450

3500

3550

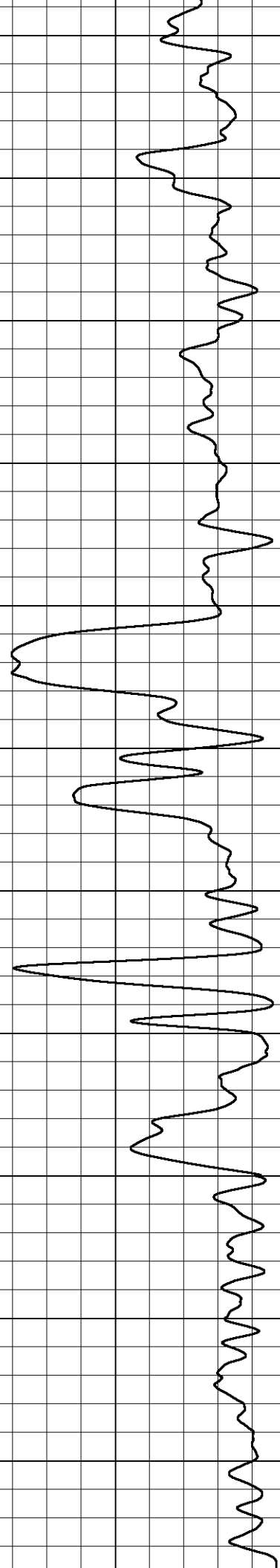
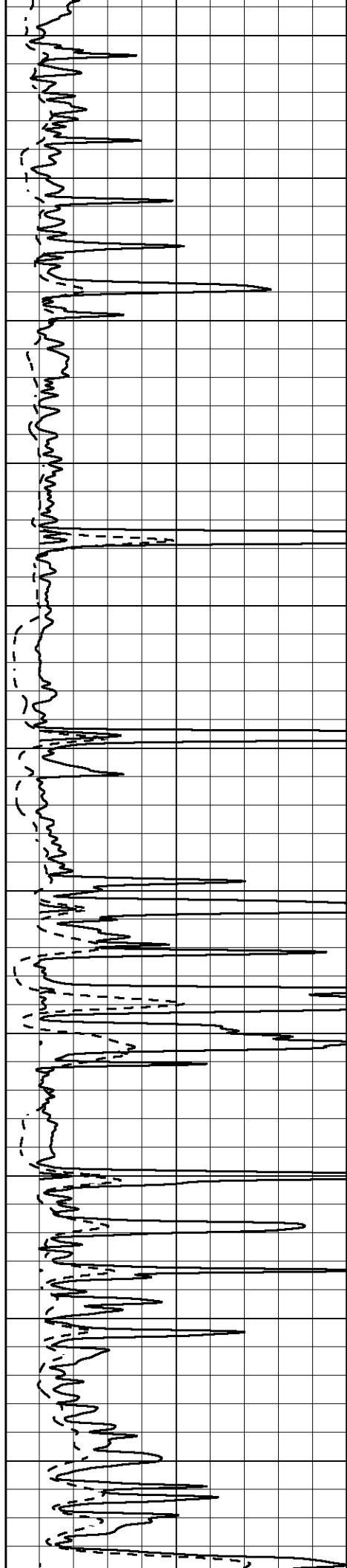
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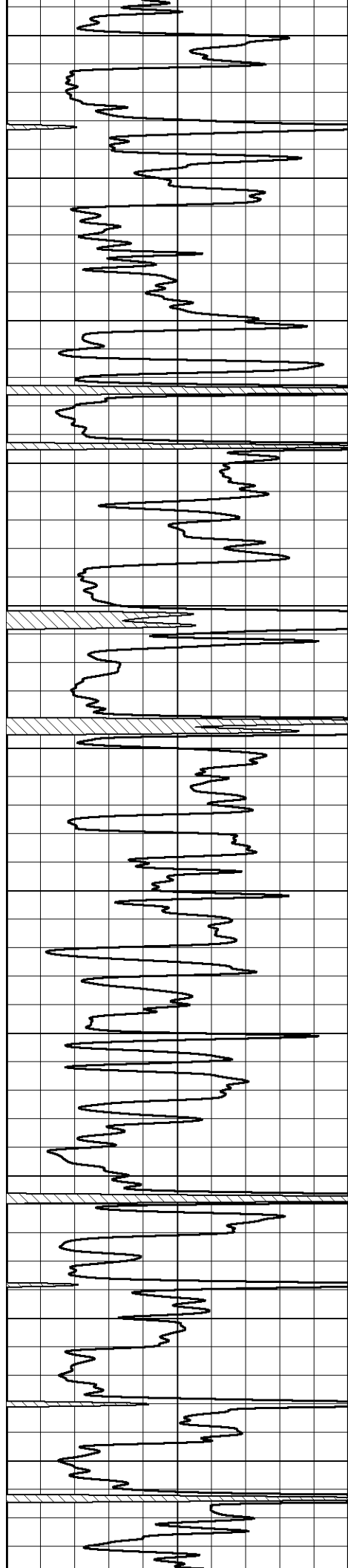
3650

3700

3750

3800





3850

3900

3950

4000

4050

4100

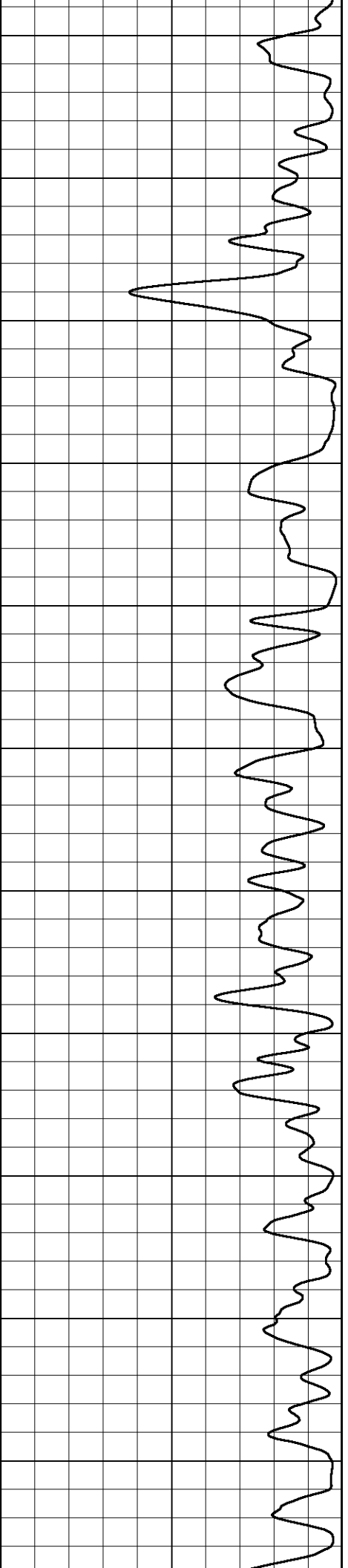
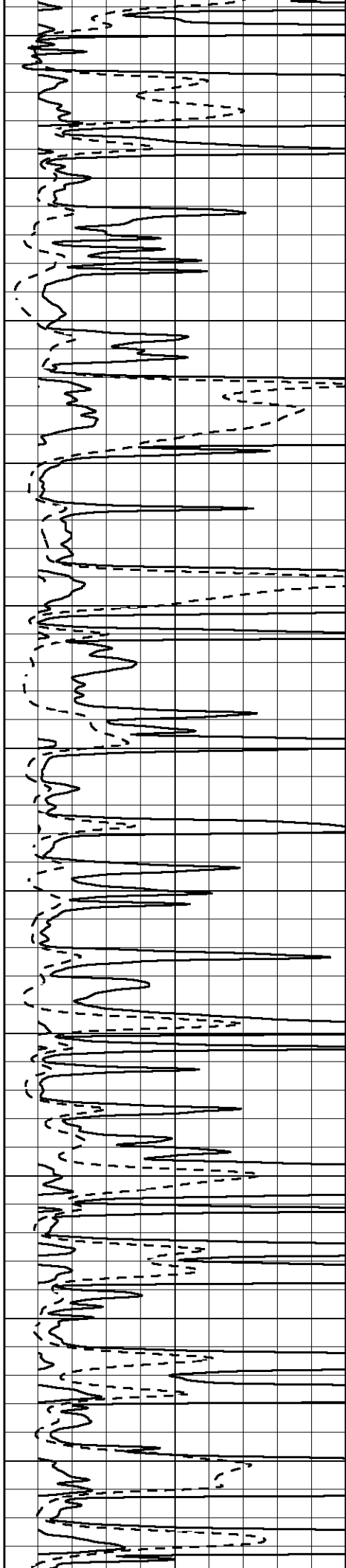
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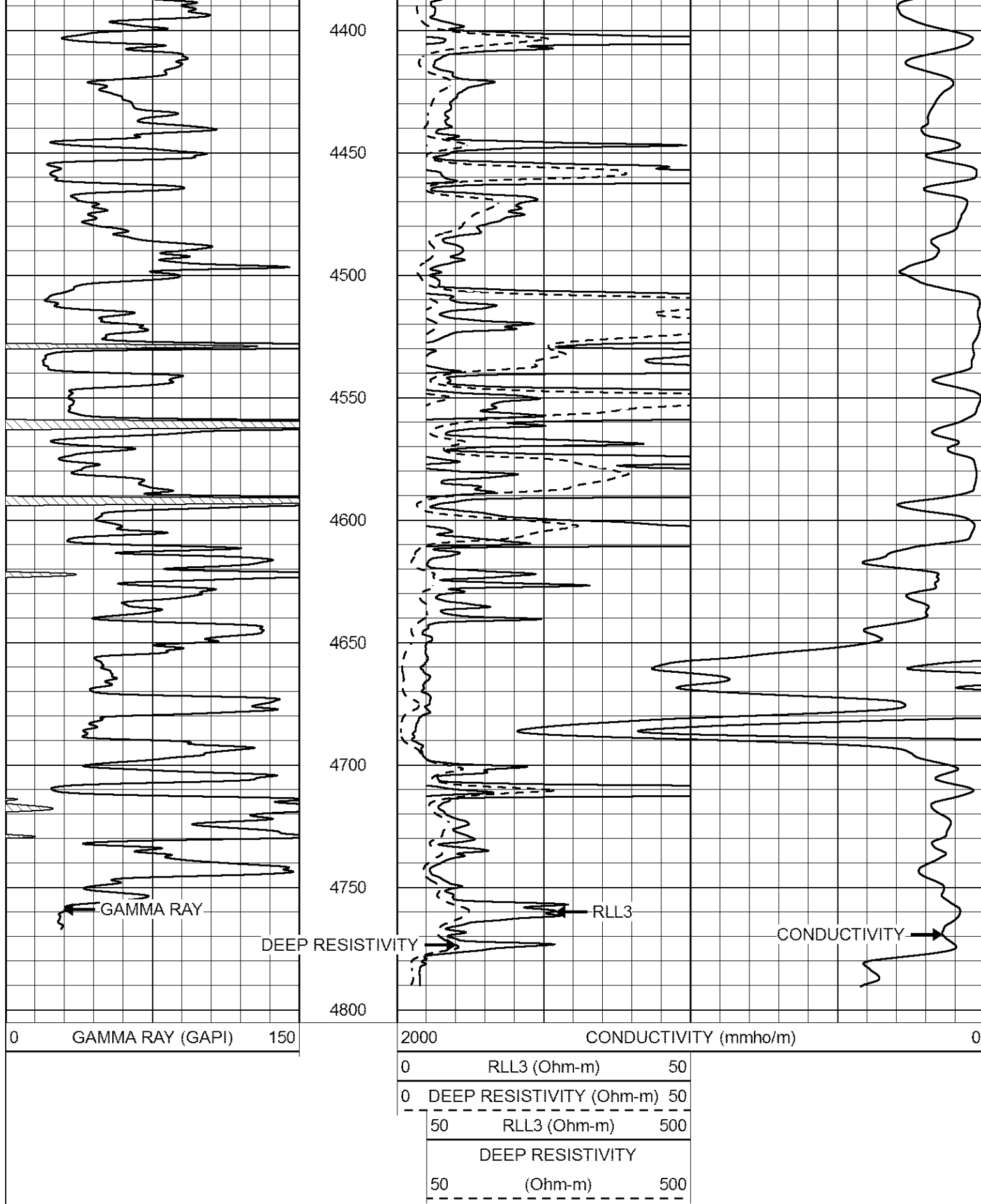
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4250

4300

4350

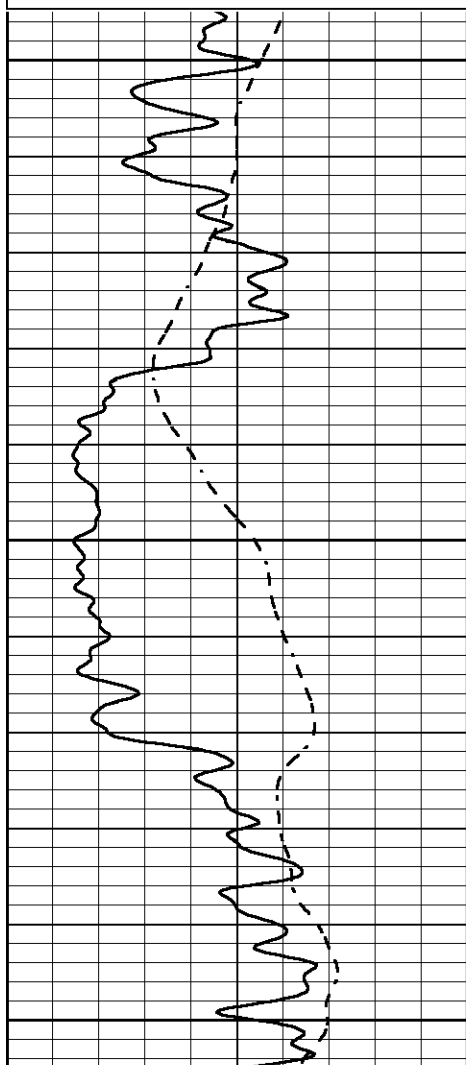




Database File brito_cook_1_10.db
 Dataset Pathname stackml/pass3.1
 Presentation Format dil
 Dataset Creation Sat Oct 07 10:31:36 2017
 Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

0.2 DEEP RESISTIVITY (Ohm-m) 2000
 0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
 0.2 RLL3 (Ohm-m) 2000
 15000 LINE TENSION (lb) 0

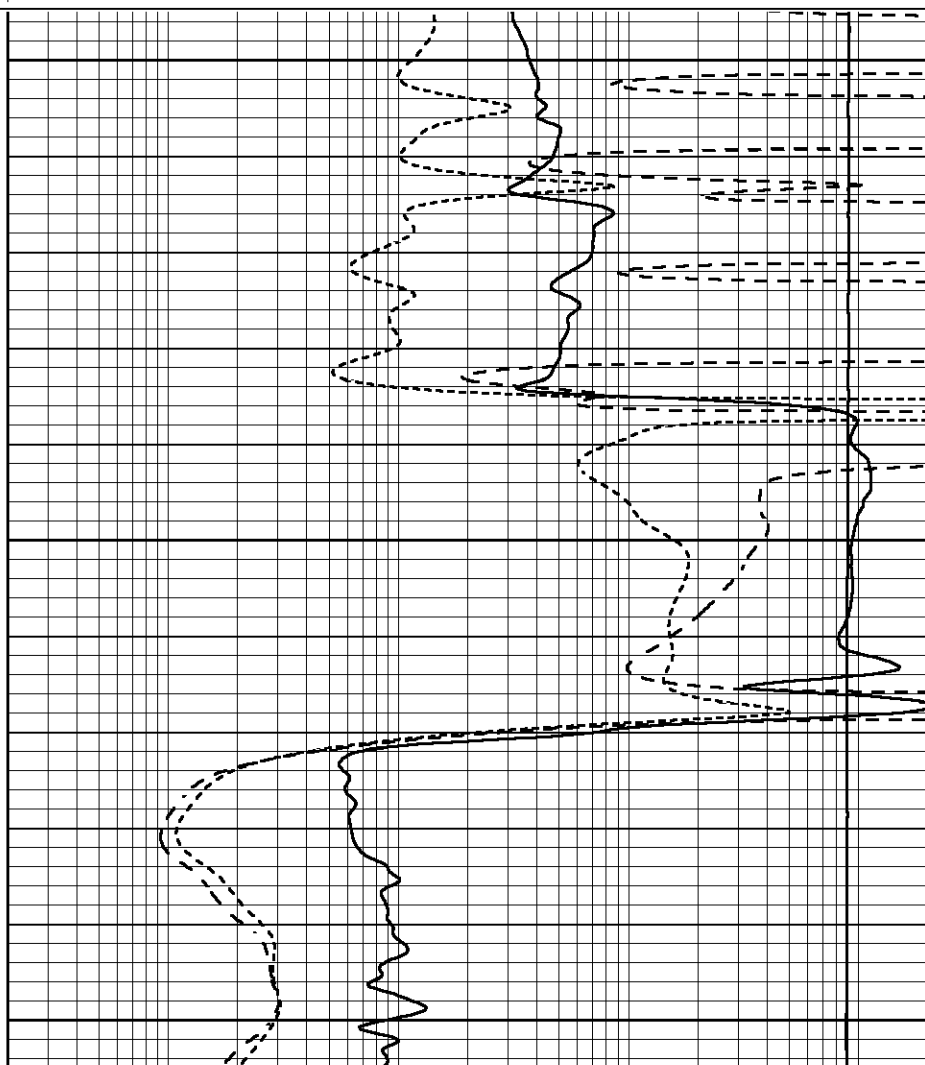


2850

2900

2950

0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0



0.2 DEEP RESISTIVITY (Ohm-m) 2000
 0.2 MEDIUM RESISTIVITY (Ohm-m) 2000
 0.2 RLL3 (Ohm-m) 2000
 15000 LINE TENSION (lb) 0

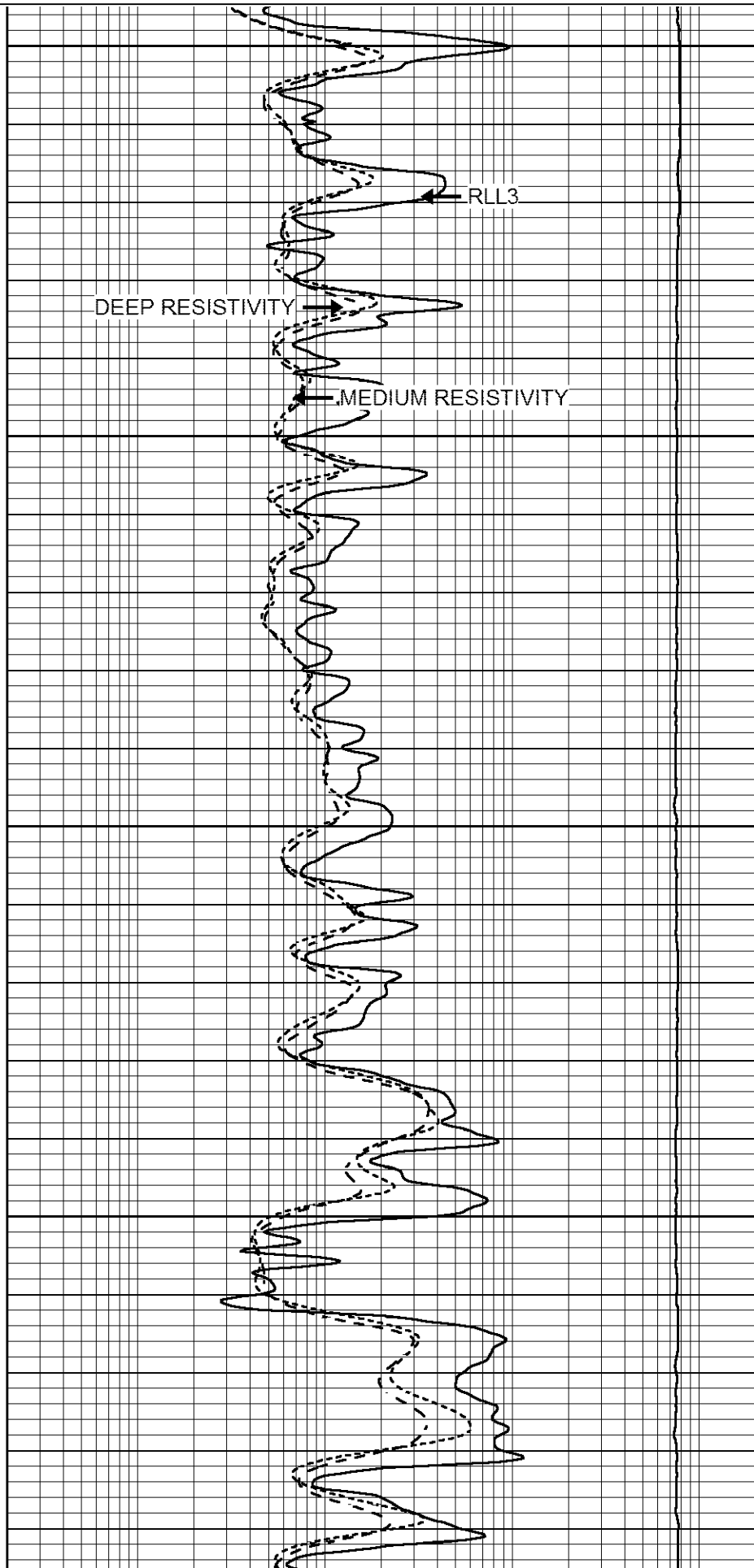
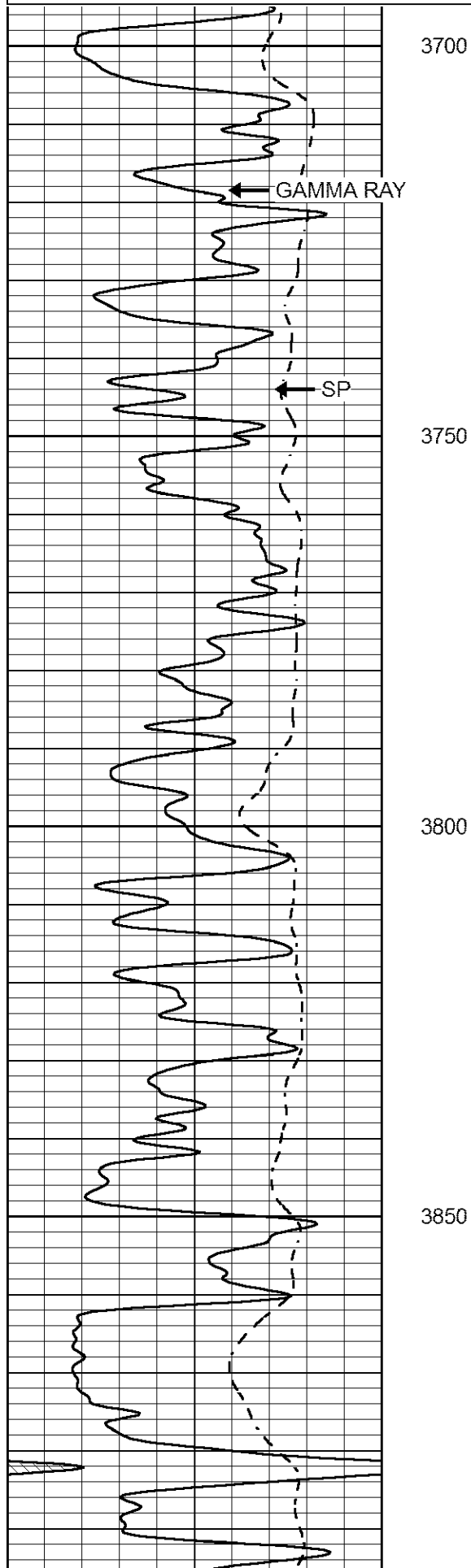


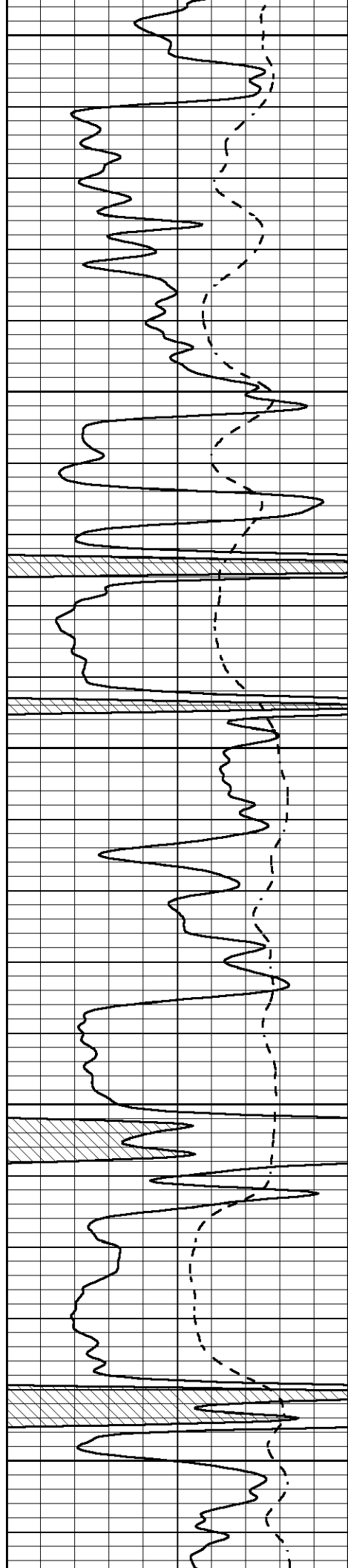
MAIN PASS

Database File brito_cook_1_10.db
 Dataset Pathname stackml/pass3.1
 Presentation Format dil
 Dataset Creation Sat Oct 07 10:31:36 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0





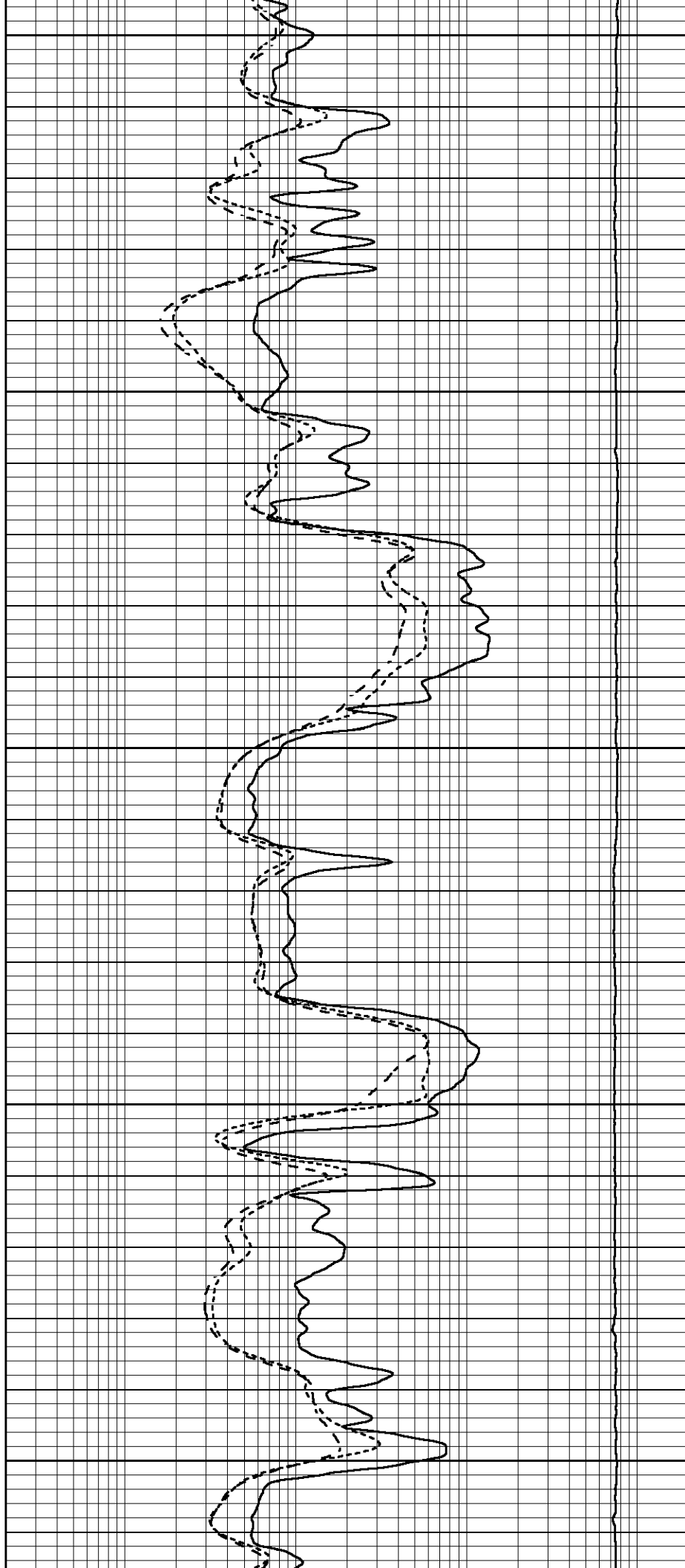
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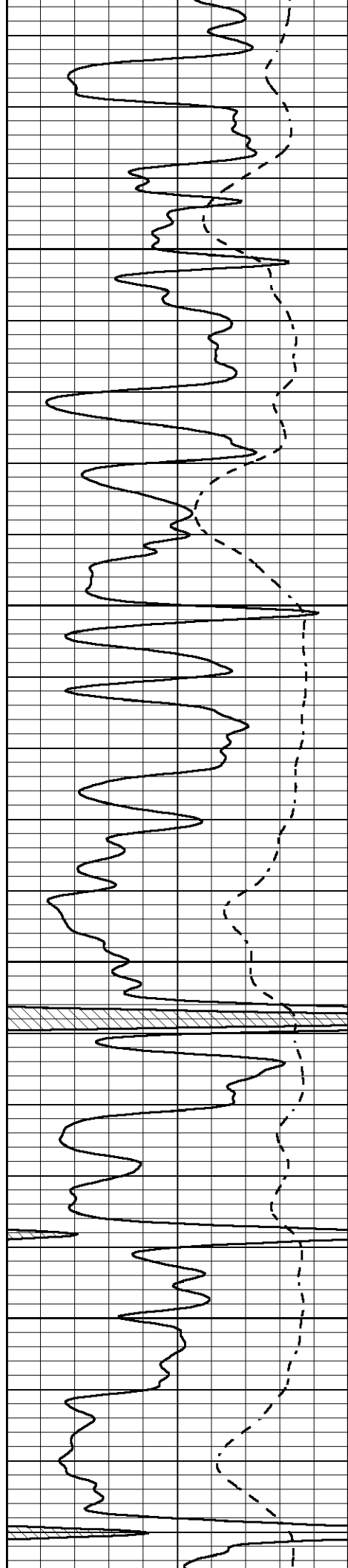
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4000

4050

4100



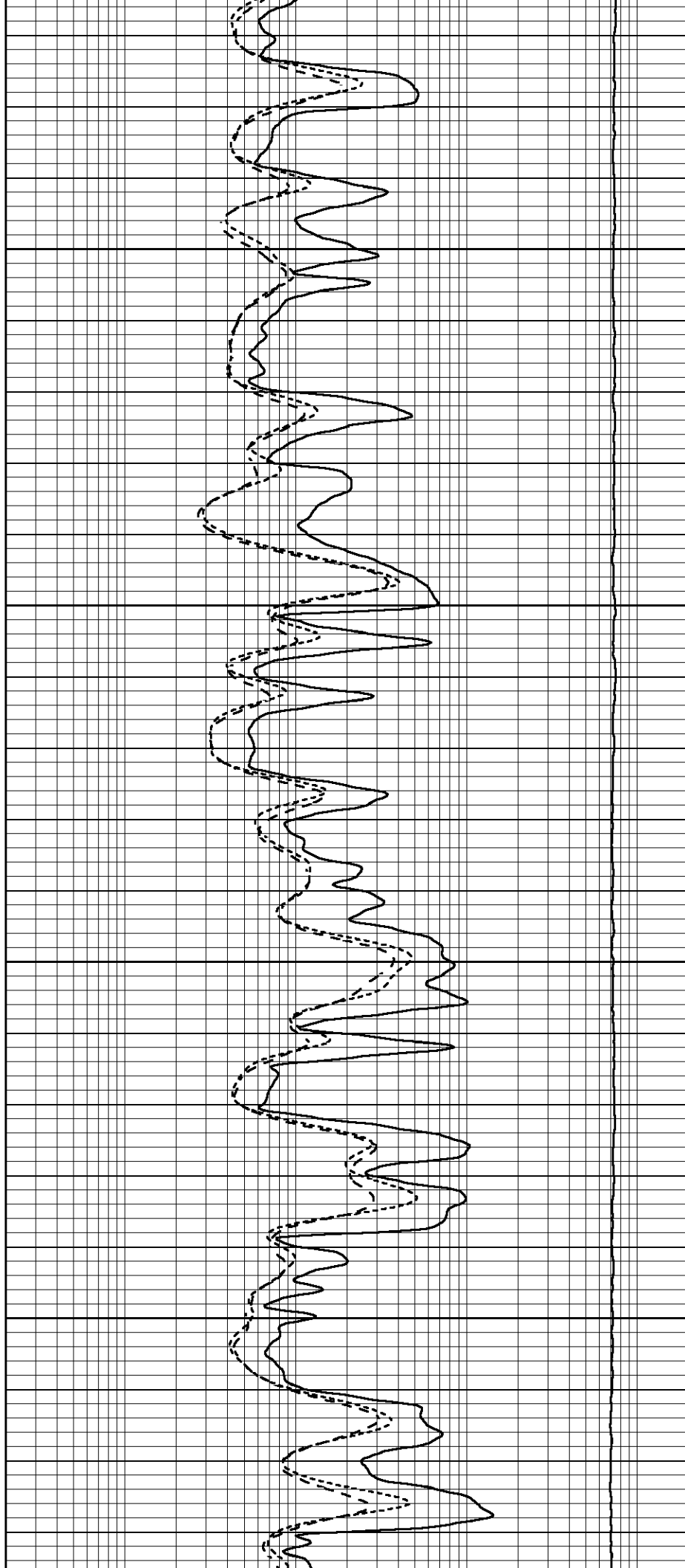


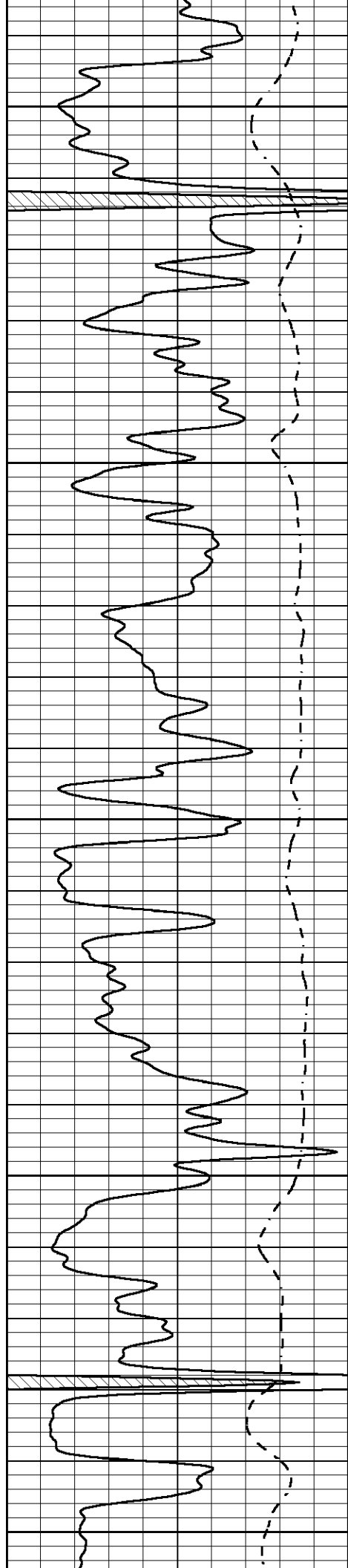
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4200

4250

4300





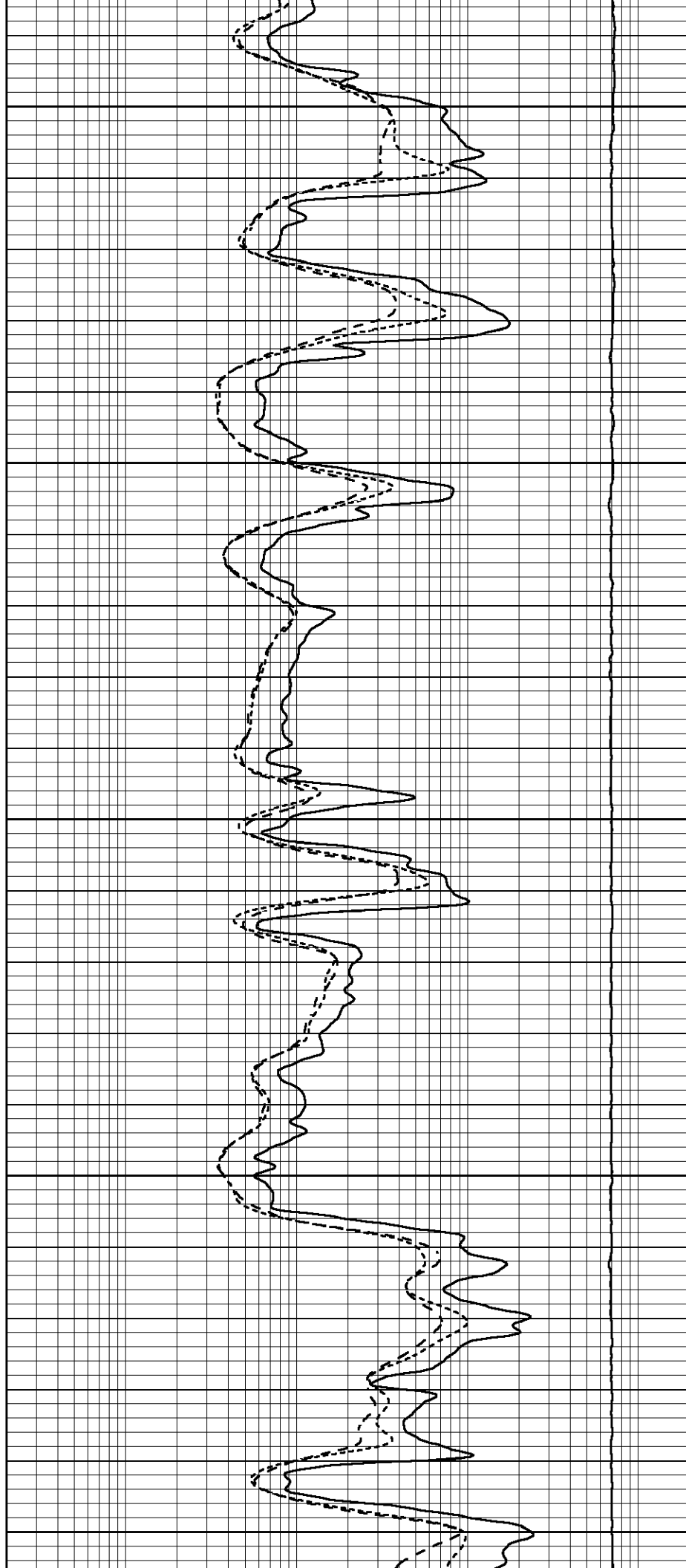
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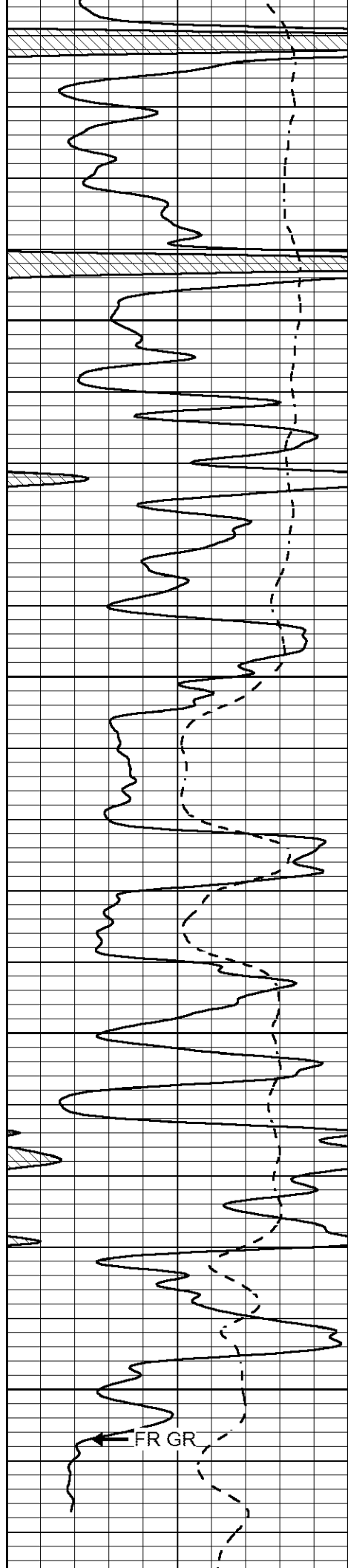
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4450

4500

4550





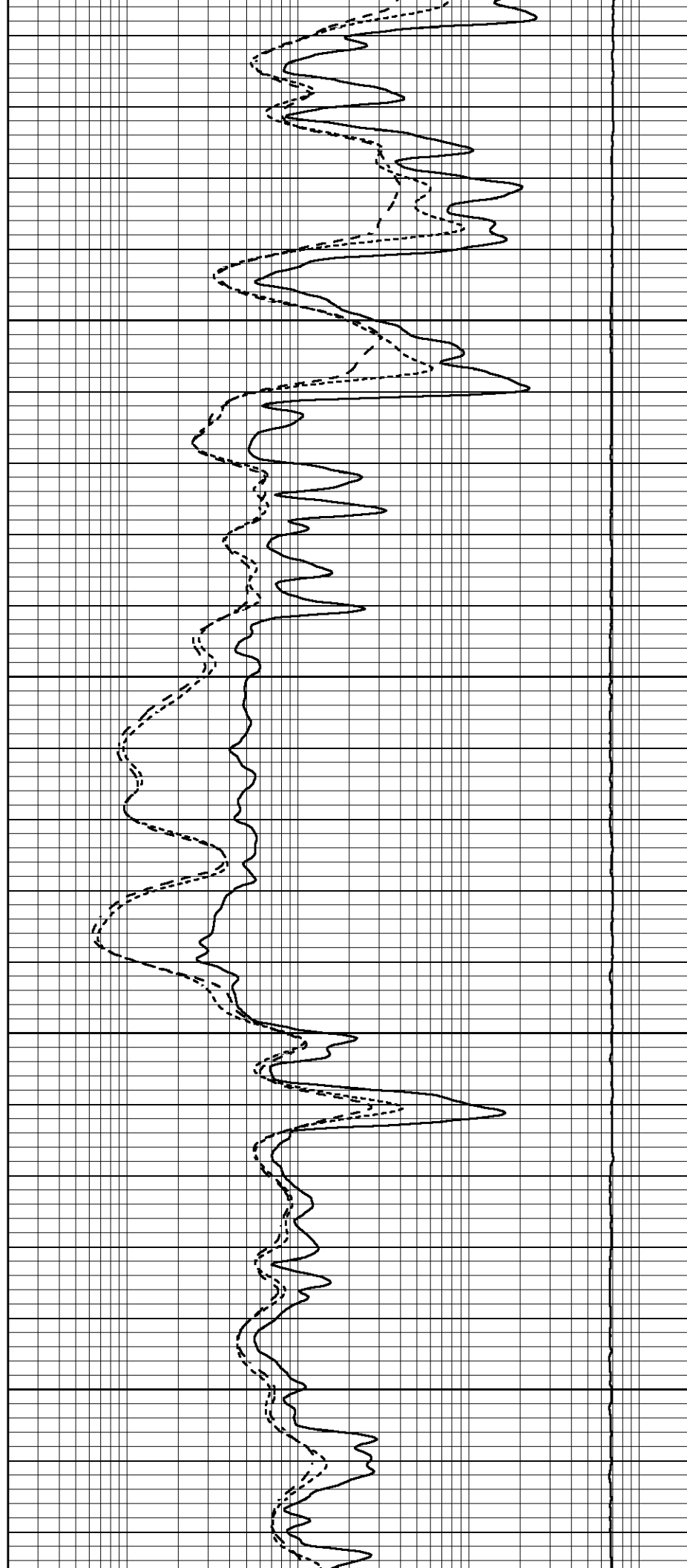
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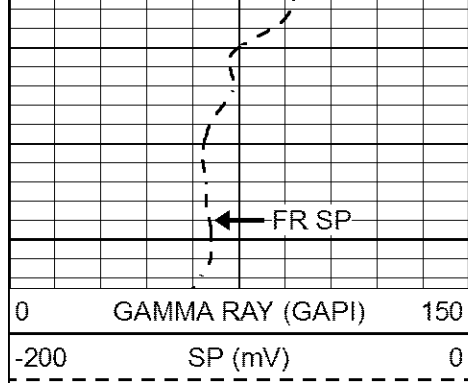
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4700

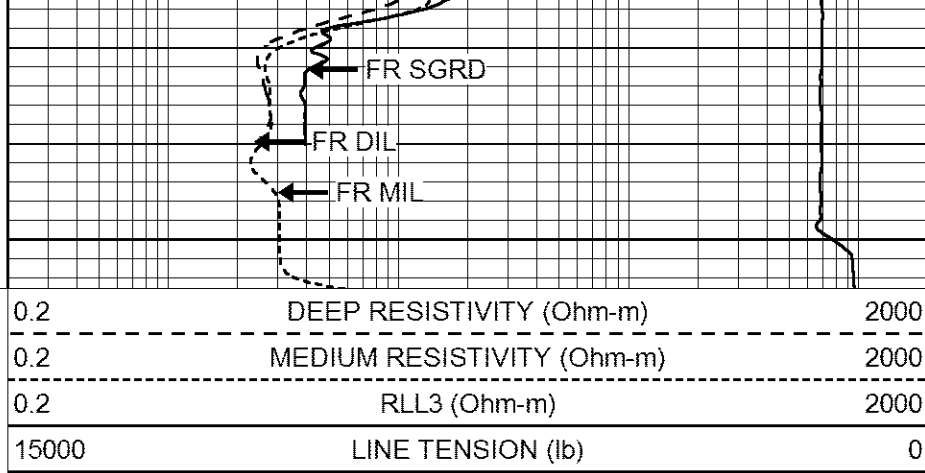
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FR GR



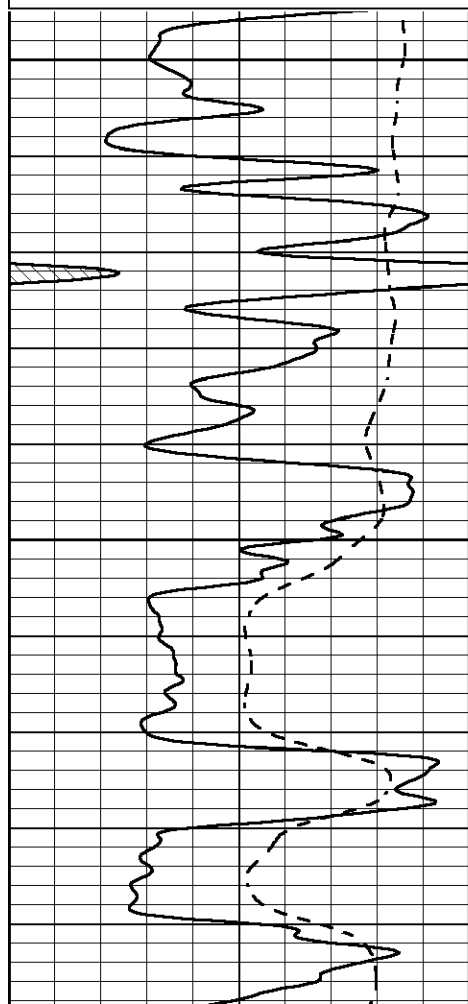
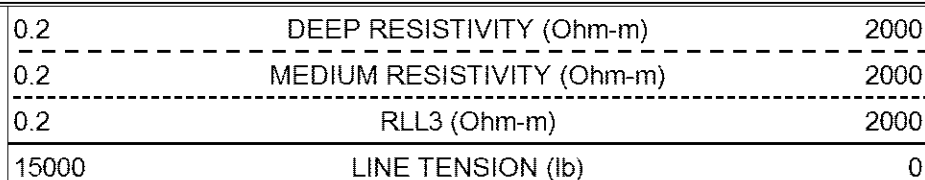
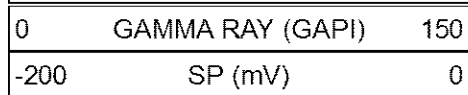


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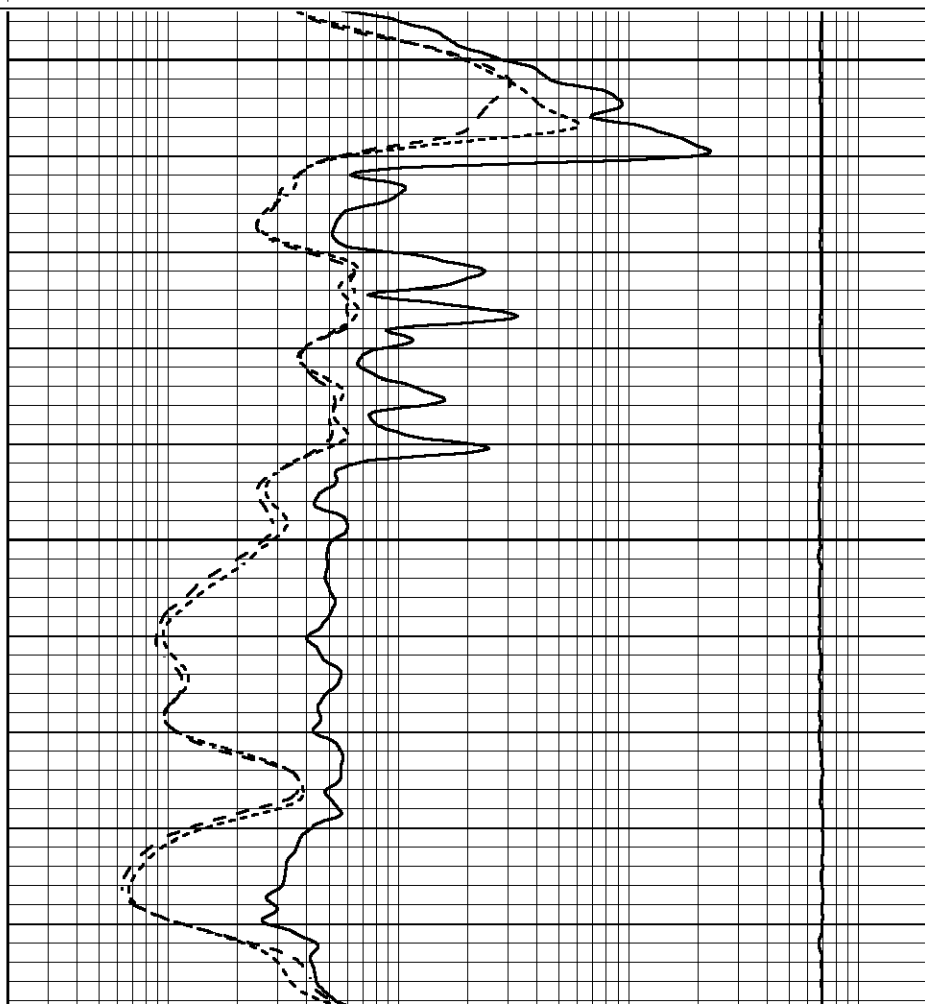
REPEAT SECTION

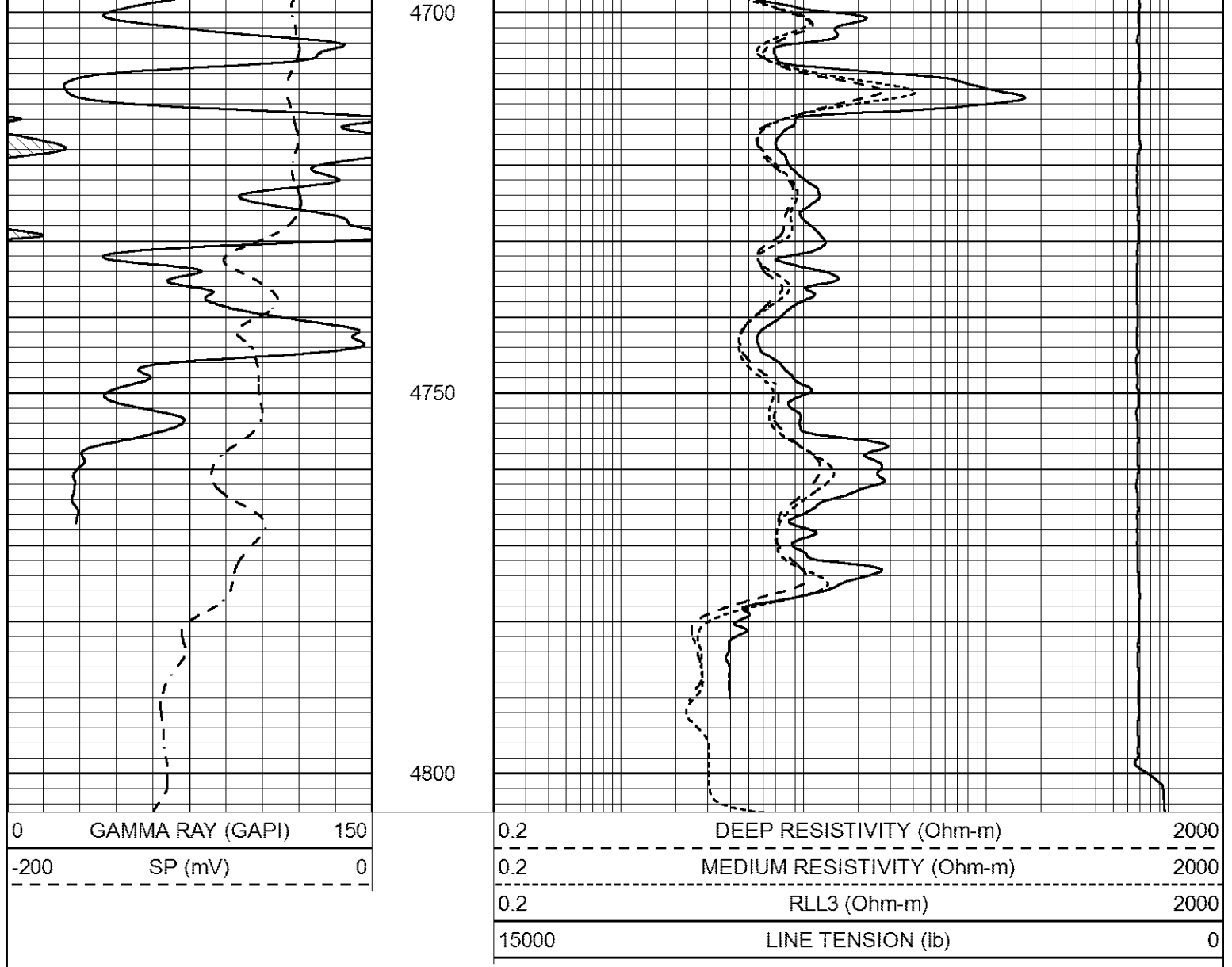
Database File brito_cook_1_10.db
Dataset Pathname stackml/pass2.1
Presentation Format dil
Dataset Creation Sat Oct 07 10:36:16 2017
Charted by Depth in Feet scaled 1:240



4600

4650





Calibration Report							
Database File	brito_cook_1_10.db						
Dataset Pathname	stackml/pass3.1						
Dataset Creation	Sat Oct 07 10:31:36 2017						
Dual Induction Calibration Report							
Serial-Model:		1987-M&W					
Calibration Performed:		Tue Apr 11 16:07:38 2017					
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
	Deep	178.615	710.235	0.000	255.800	mmho/m	0.530
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500
Microlog Calibration Report							
Serial-Model:		PSI-02-PSI STKBL ML					
Performed:		Fri Jun 23 00:25:19 2017					
	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	h

	Zero	Cal	Zero	Cal	in	in	in
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	14000.0000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	16000.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.3500

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
 Source / Verifier: /
 Master Calibration Performed: Tue Apr 11 16:07:47 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.675	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.523		
	Size		Reading		
Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.23		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Nov 16 11:21:36 2016

Detector	Readings		Target	Normalization	
Short Space	6240.00	cps	1000.00 cps	1.6025	
Long Space	460.00	cps	1000.00 cps	1.9500	

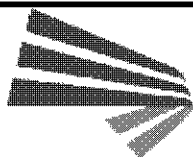
Gamma Ray Calibration Report

Serial Number: 89-M&W
 Tool Model: M&W
 Calibration Performed: Tue Apr 11 16:08:01 2017

 Calibrator Value: 1000.0 GAPI

 Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

 Sensitivity: 0.5200 GAPI/cps



PIONEER

Pioneer Energy Services

Company BRITO OIL COMPANY, INC.
 Well COOK NO. 1-10
 Field WILDCAT
 County THOMAS
 State KANSAS