



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company **CARMEN SCHMITT, INC.**
Well **BAALMAN #1-23**
Field **WILDCAT**
County **THOMAS** State **KANSAS**

Company **CARMEN SCHMITT, INC.**
Well **BAALMAN #1-23**
Field **WILDCAT**
County **THOMAS**
State **KANSAS**

Location: **API #: 15-193-21077-00-00**
750' FNL & 2220' FEL
SEC 23 TWP 8S RGE 31W
Permanent Datum **GROUND LEVEL Elevation 2968'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**
Other Services **CNL/CDL MEL/BHCS**
Elevation **K.B. 2978'**
D.F. N/A
G.L. 2968'

Date	5/18/2020
Run Number	ONE
Depth Driller	4700'
Depth Logger	4702'
Bottom Logged Interval	4701'
Top Log Interval	250'
Casing Driller	8.625" @ 253'
Casing Logger	262'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	4,000
Density / Viscosity	9.4 57
PH / Fluid Loss	8.0 10.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.75 @ 73
Rmt @ Meas. Temp	.56 @ 73
Rmc @ Meas. Temp	1.01 @ 73
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.45 @ 123
Operating Rig Time	4 HOURS
Max Rec. Temp. F	123 DEGF
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	BRAD RINE

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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.

**HOXIE KANSAS
WEST TO 36 ROAD, 2 SOUTH TO P ROAD,
3/8 WEST, SOUTH INTO**

Log Measured From: **KELLY BUSHING** 10 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. HENRICKSON	Primary Witness: BRAD RINE
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\carmen_schmitt_baalman_1_23.db
 Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	123	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	150	74	Off	4702

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 (915-956)	8.50	4.00	250.00
DCAL	28.42					
SSD	27.93					
ML-PSI STKBL ML (PSI-01) Stackable Microlog Tools				7.58	4.00	65.00
MCAL	19.83		ML-PSI STKBL ML (PSI-01) Stackable Microlog Tools	7.58	4.00	65.00
MI	19.83					
MN	19.83					
RLL3	15.80	DIL-M&W (55-222)	18.50	3.50	220.00	
RLL3F	15.79					
CILD	8.00					

CILM 4.70

SP 0.20

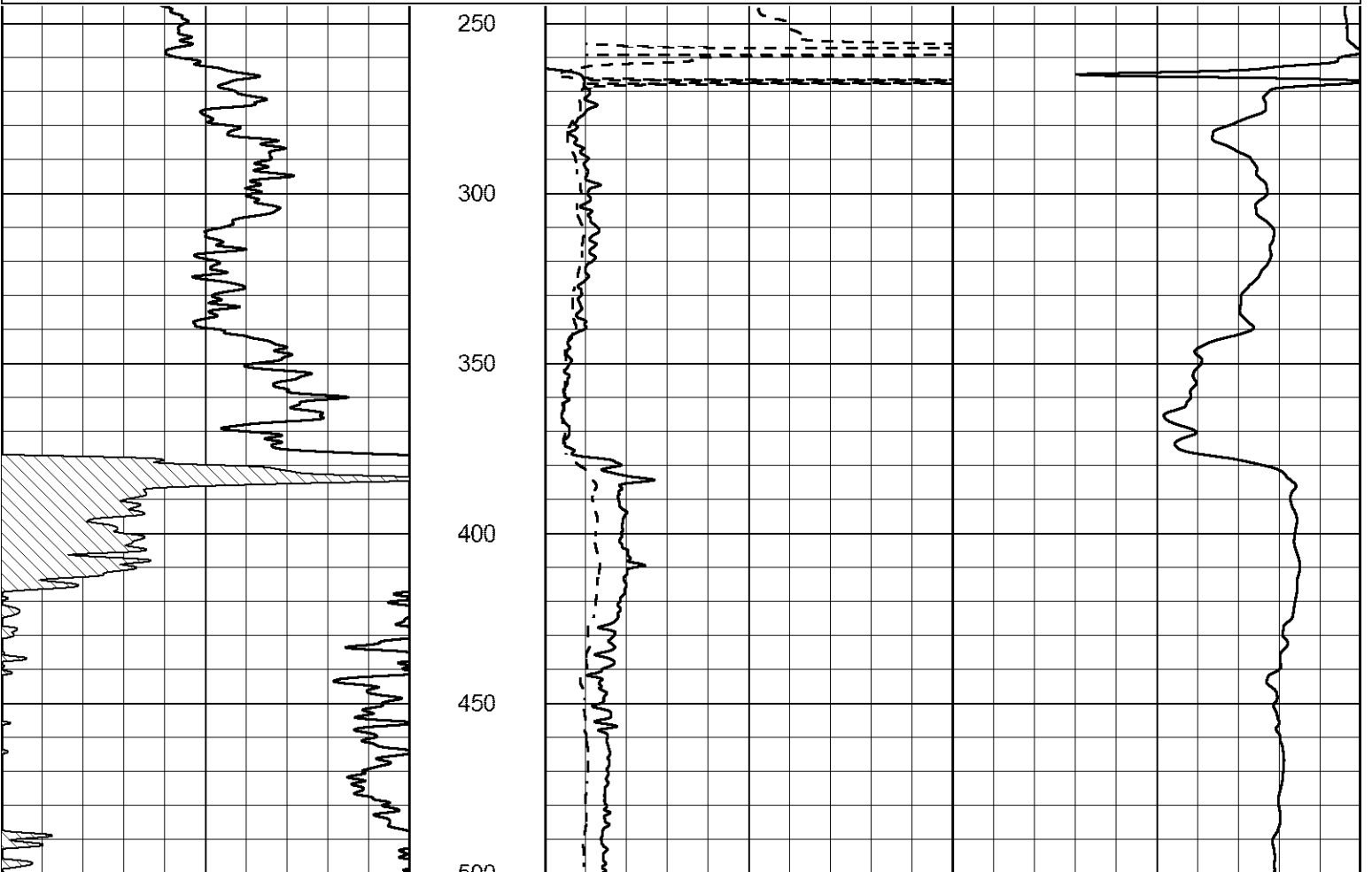
Dataset: carmen_schmitt_baalman_1_23.db: field/well/stackml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

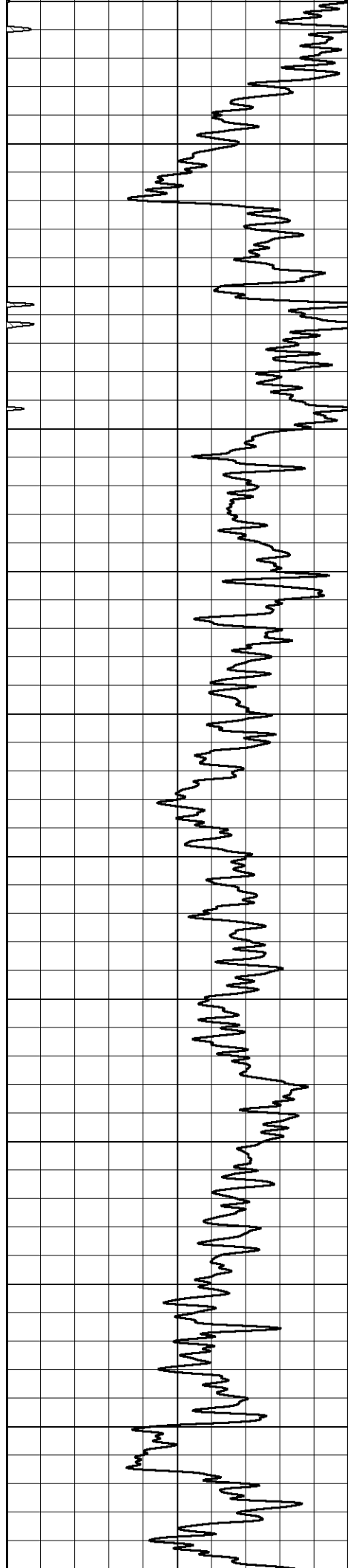


MAIN PASS

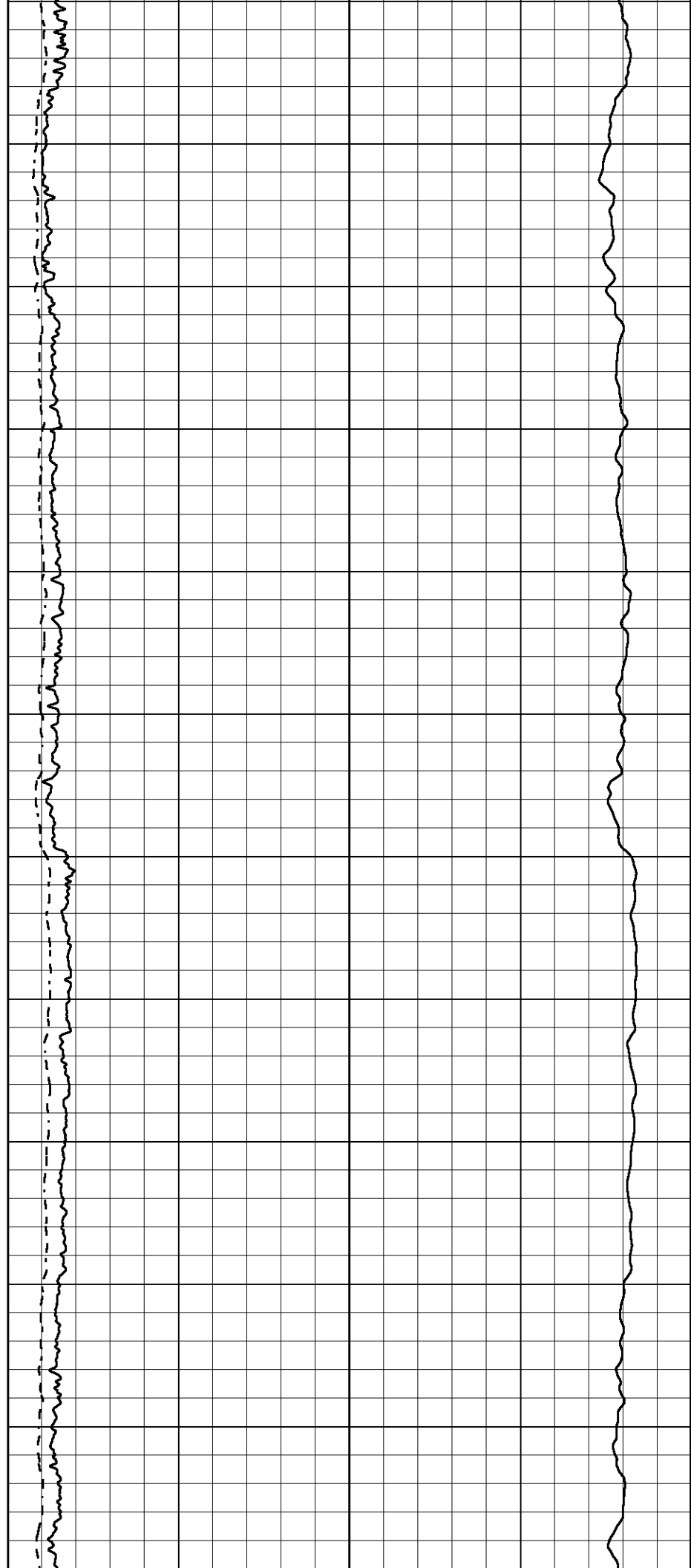
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 Presentation Format dil2in
 Dataset Creation Mon May 18 21:58:57 2020
 Charted by Depth in Feet scaled 1:600

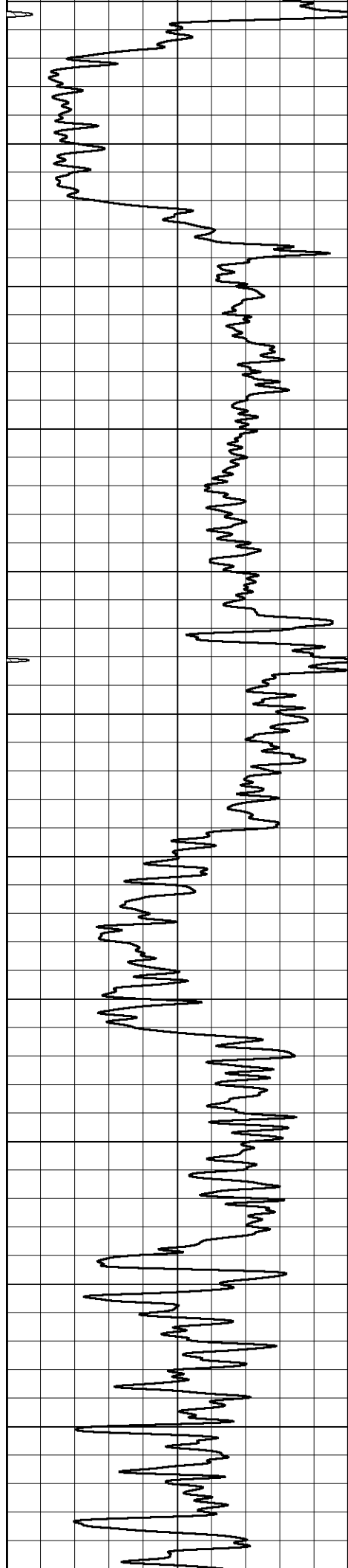
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			0	RLL3 (Ohm-m)	50
			0	DEEP RESISTIVITY (Ohm-m)	50
			50	RLL3 (Ohm-m)	200
			50	RILD (Ohm-m)	200



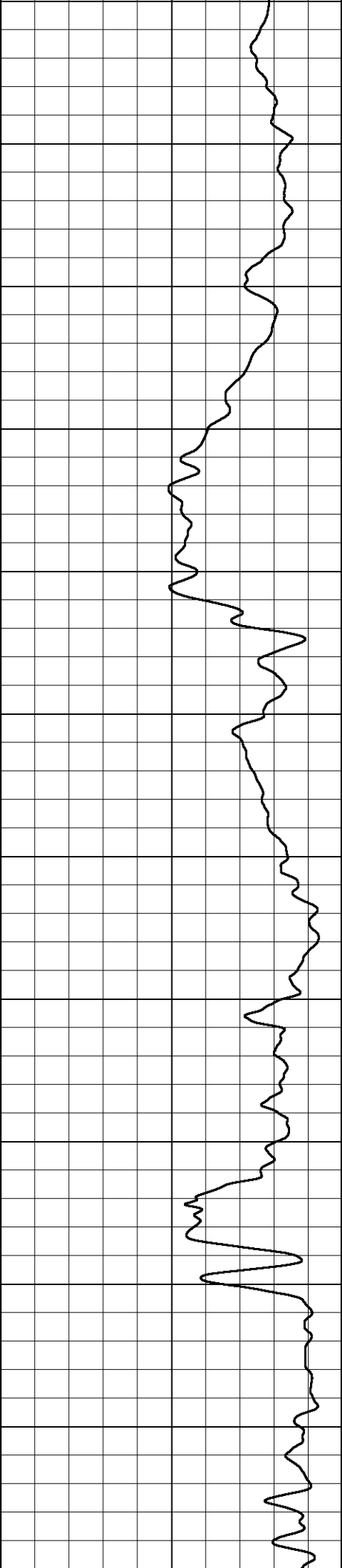
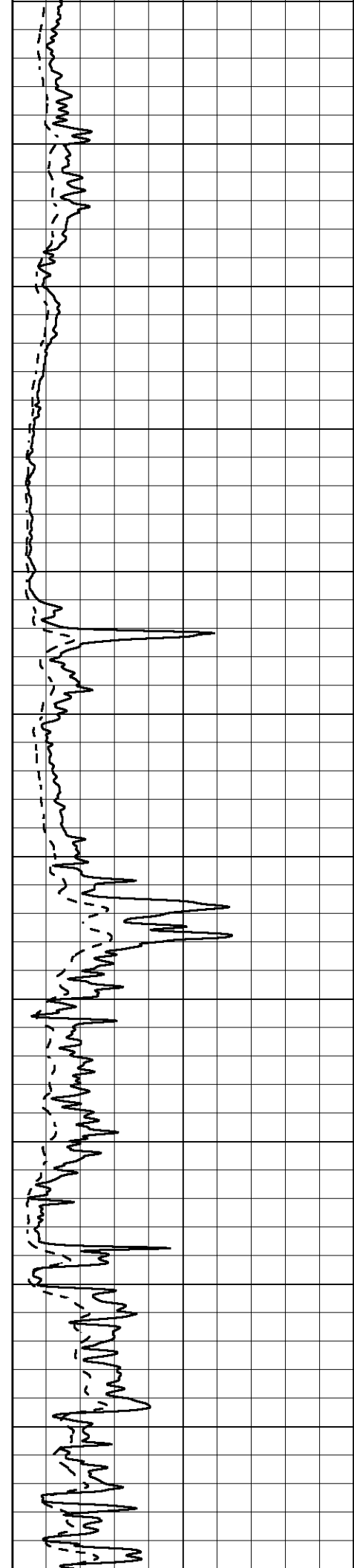


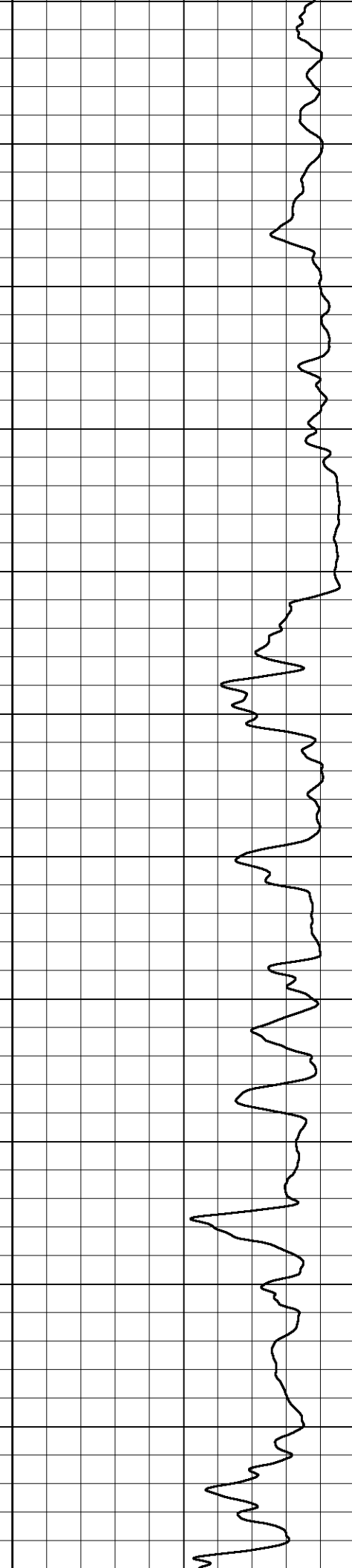
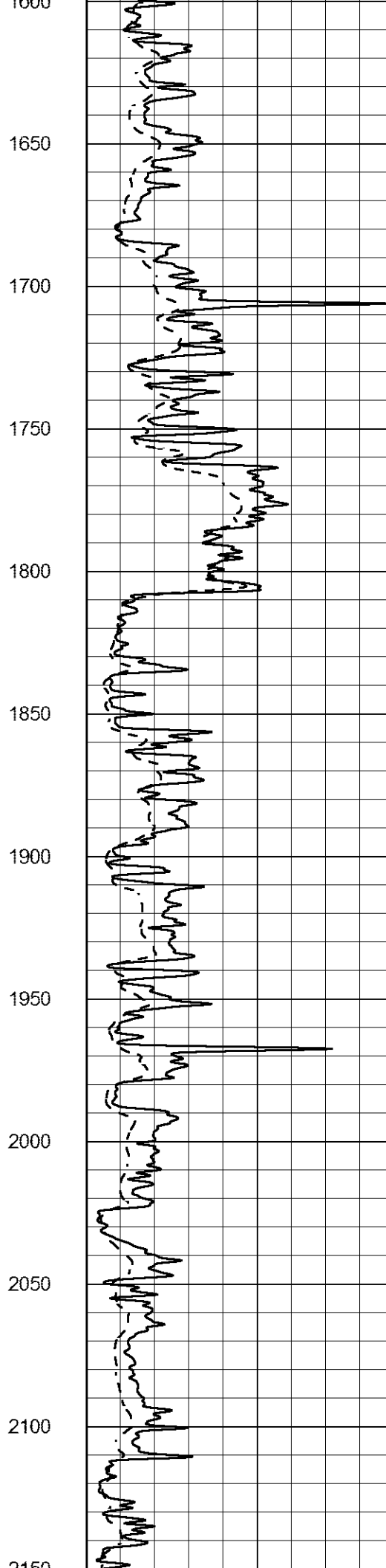
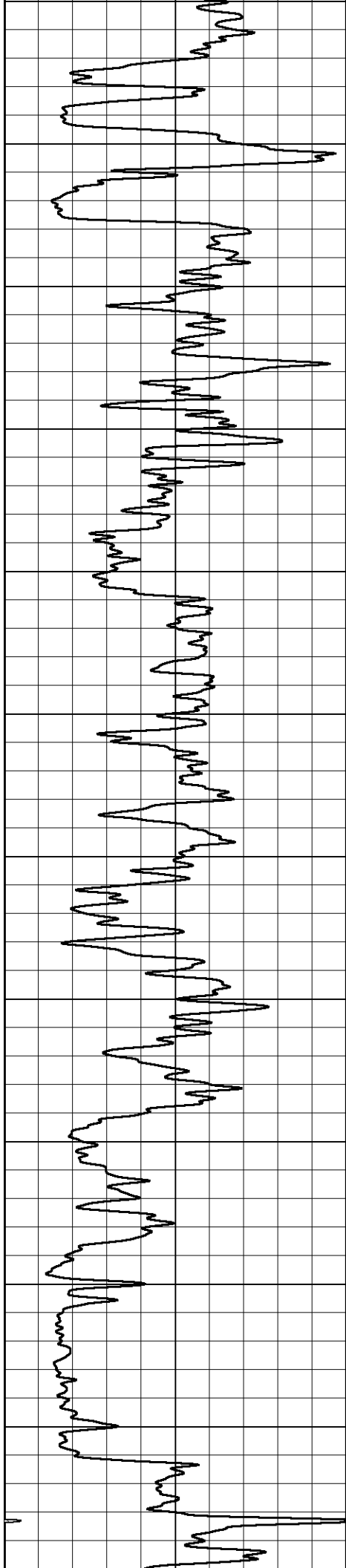
500
550
600
650
700
750
800
850
900
950
1000
1050

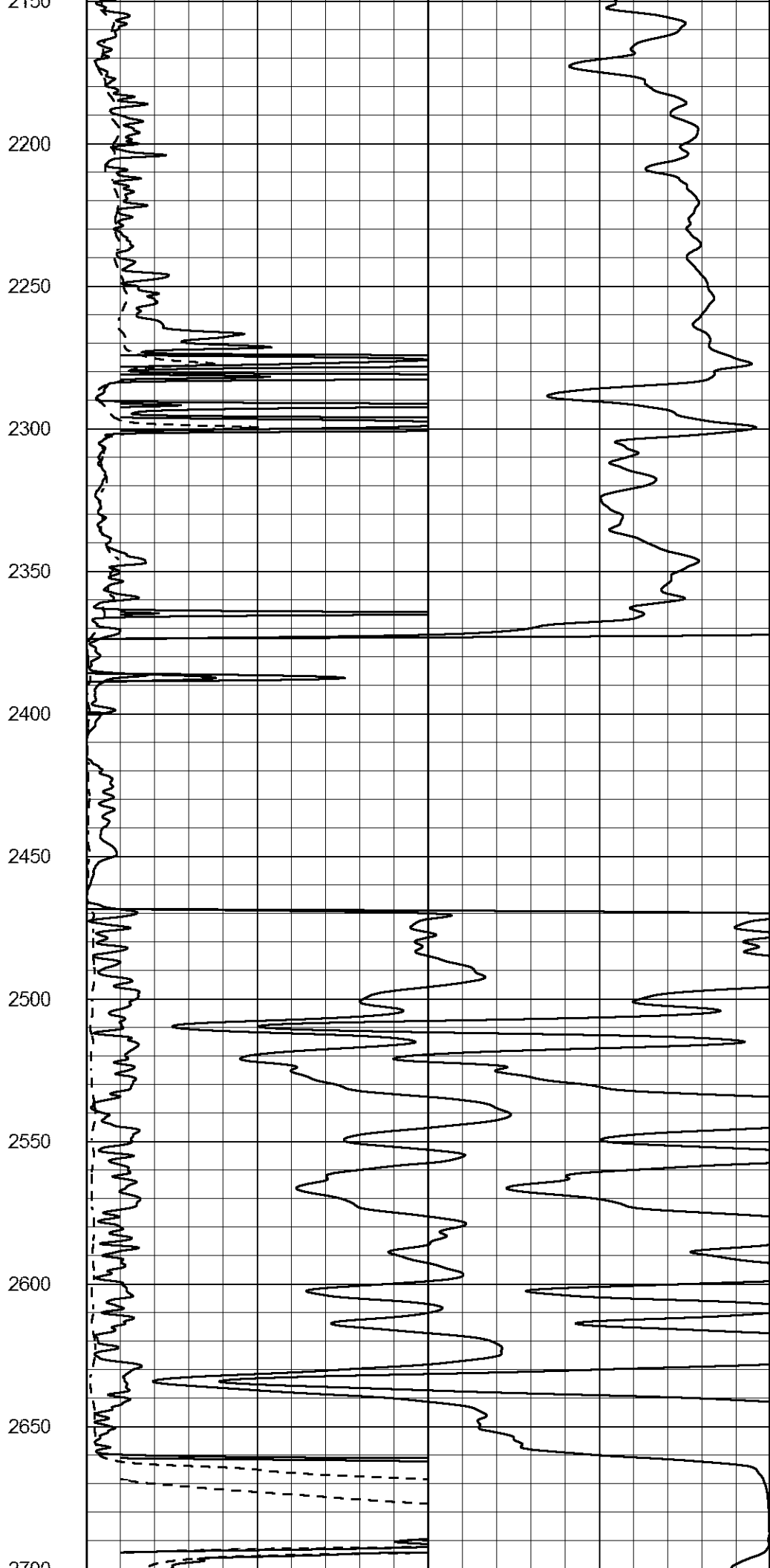
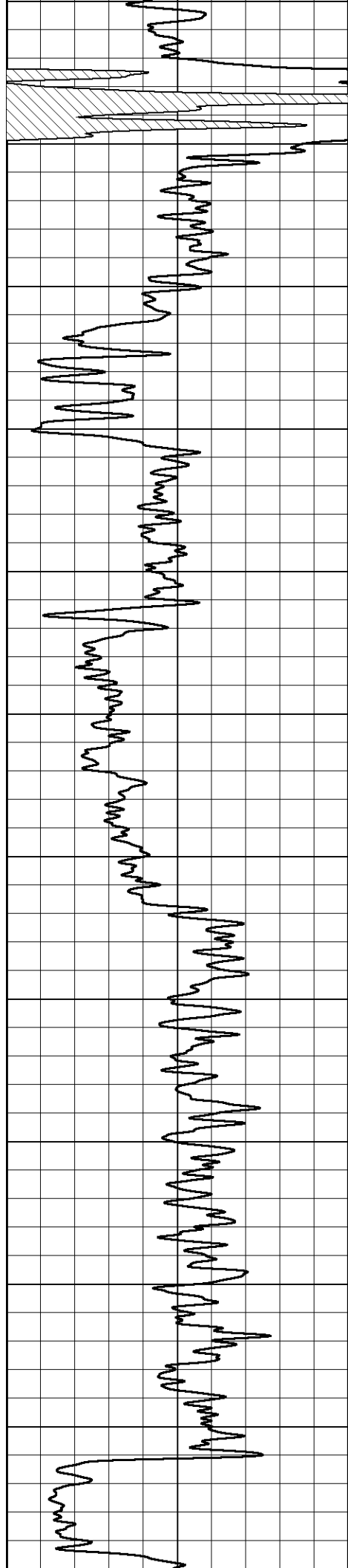


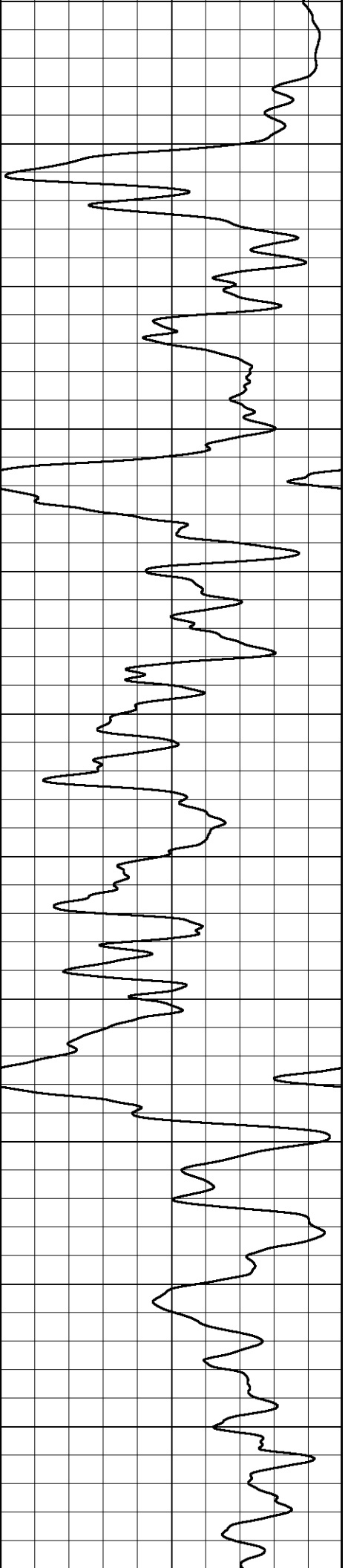
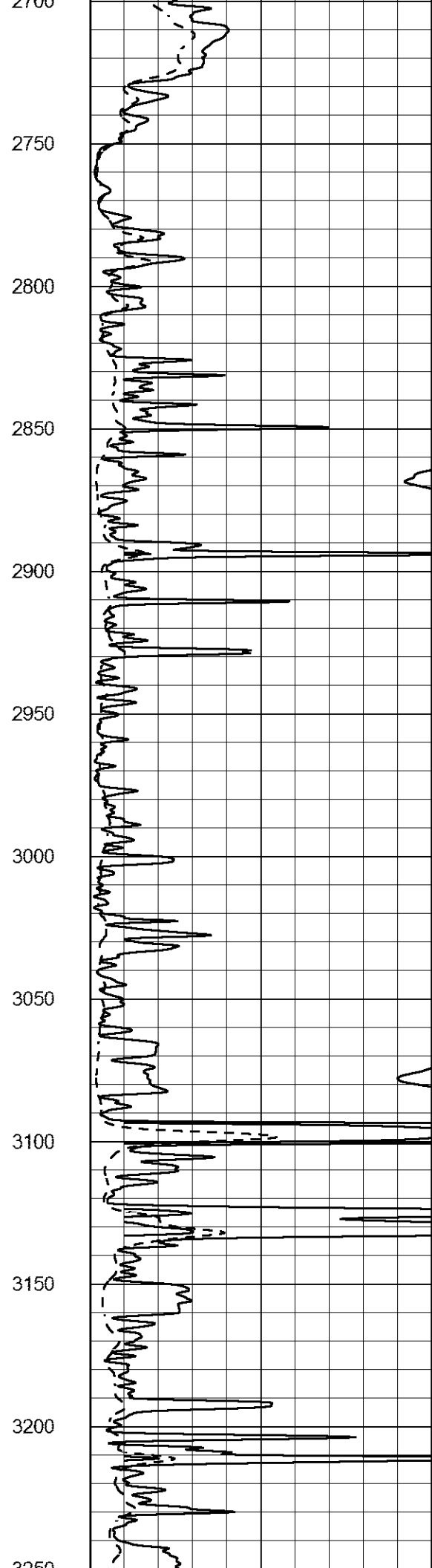
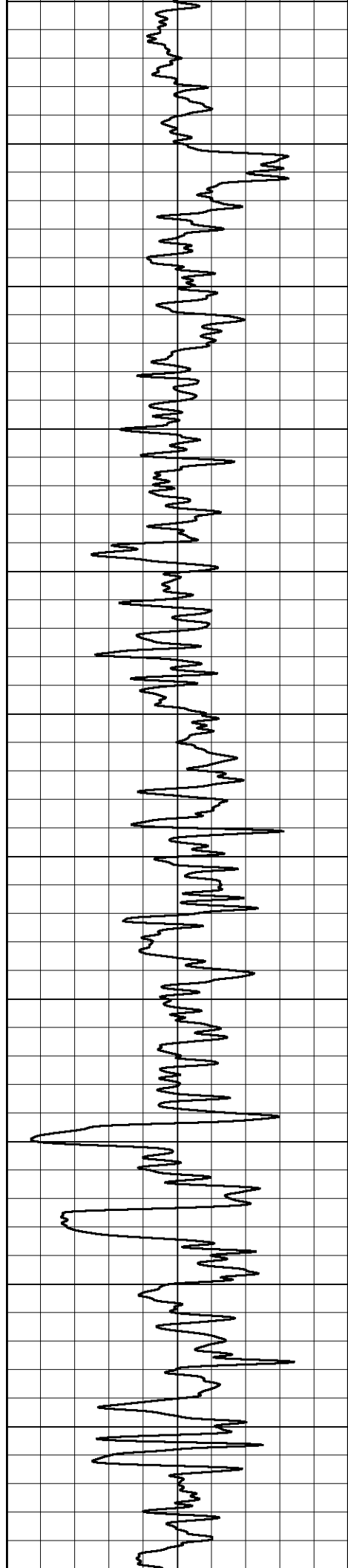


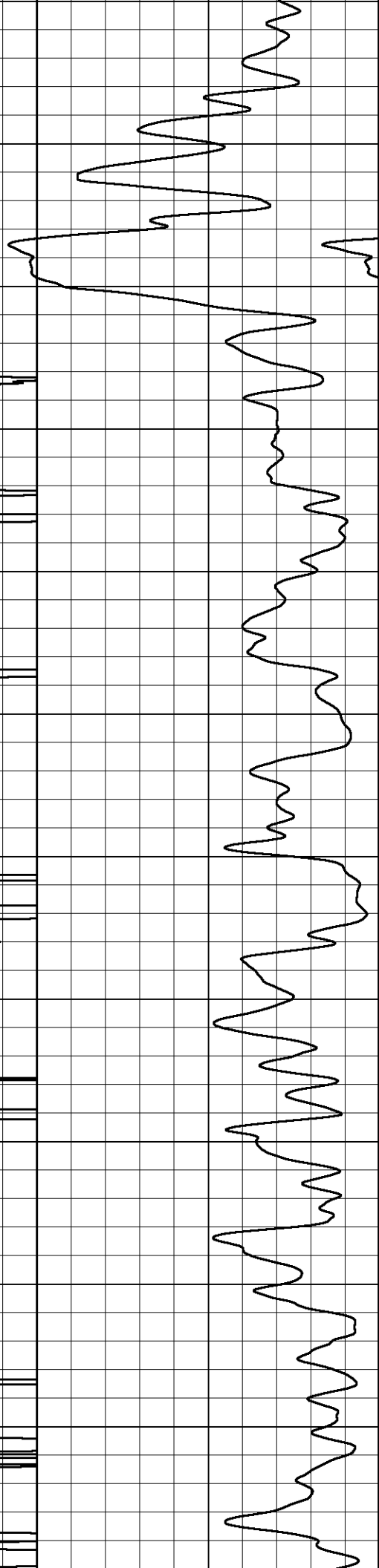
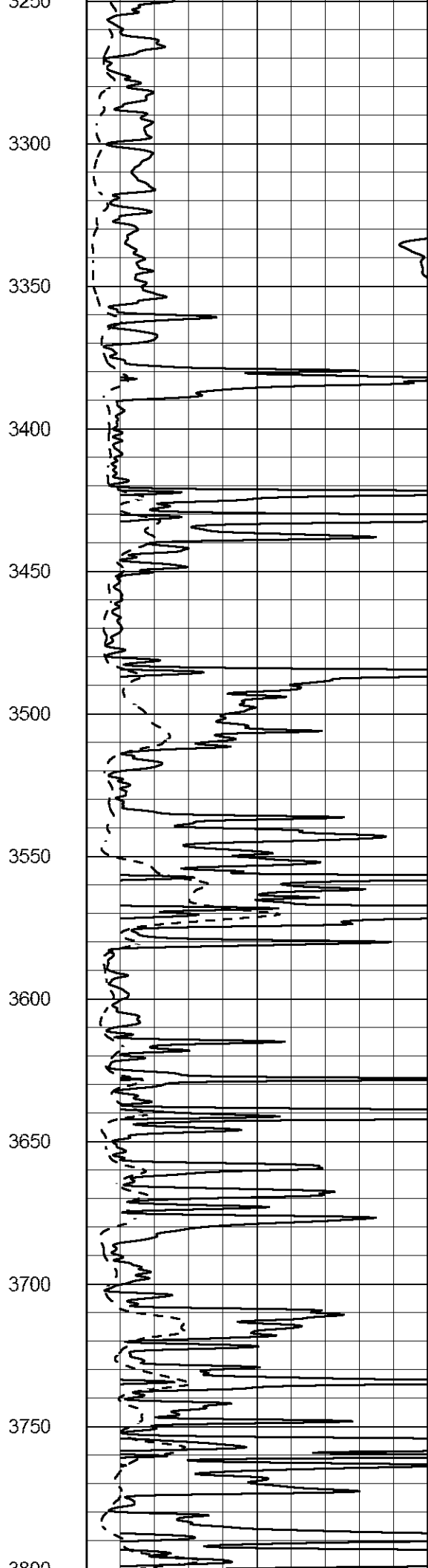
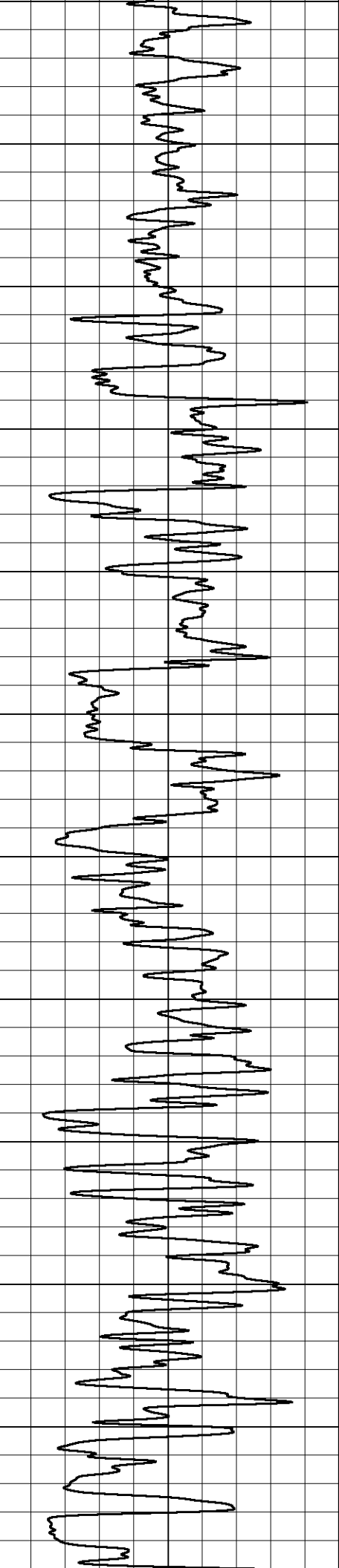
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1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600

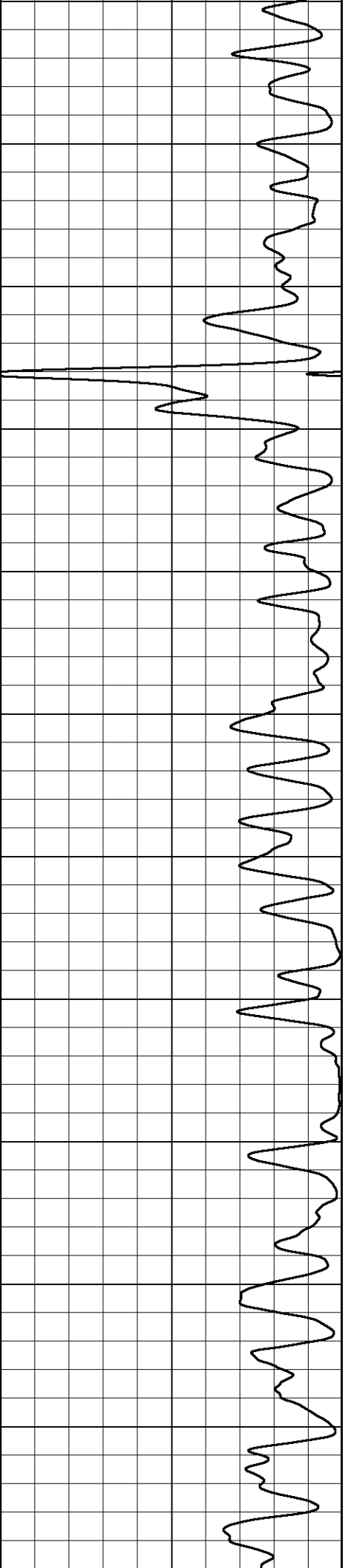
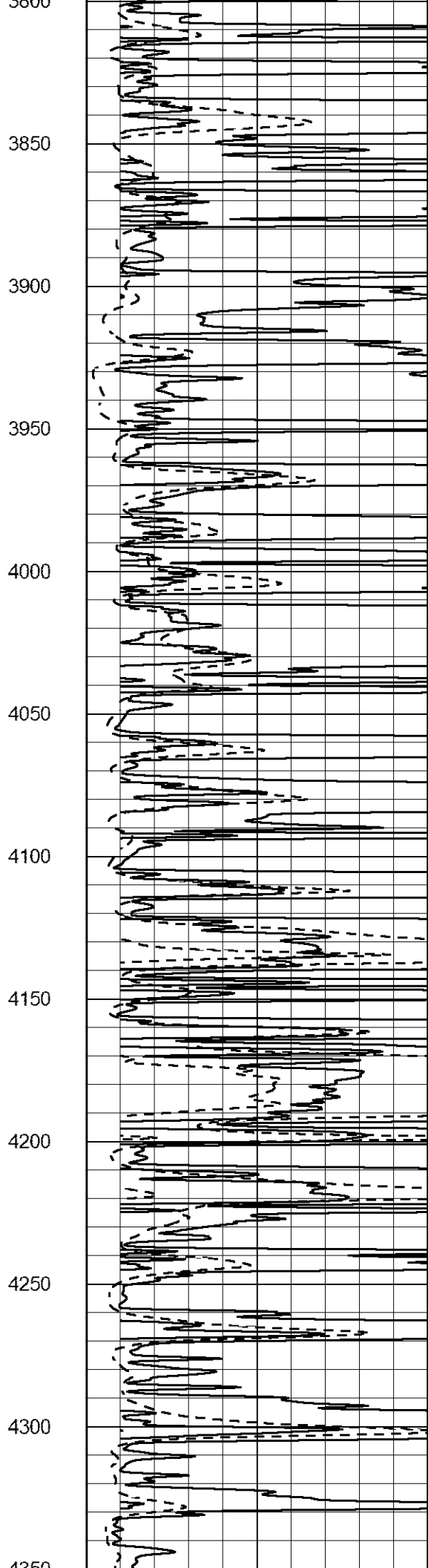
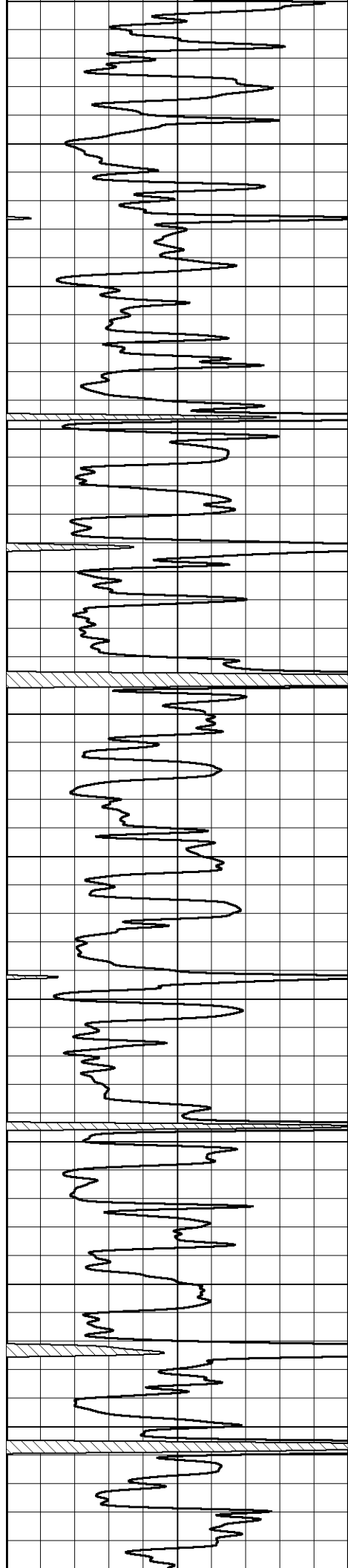


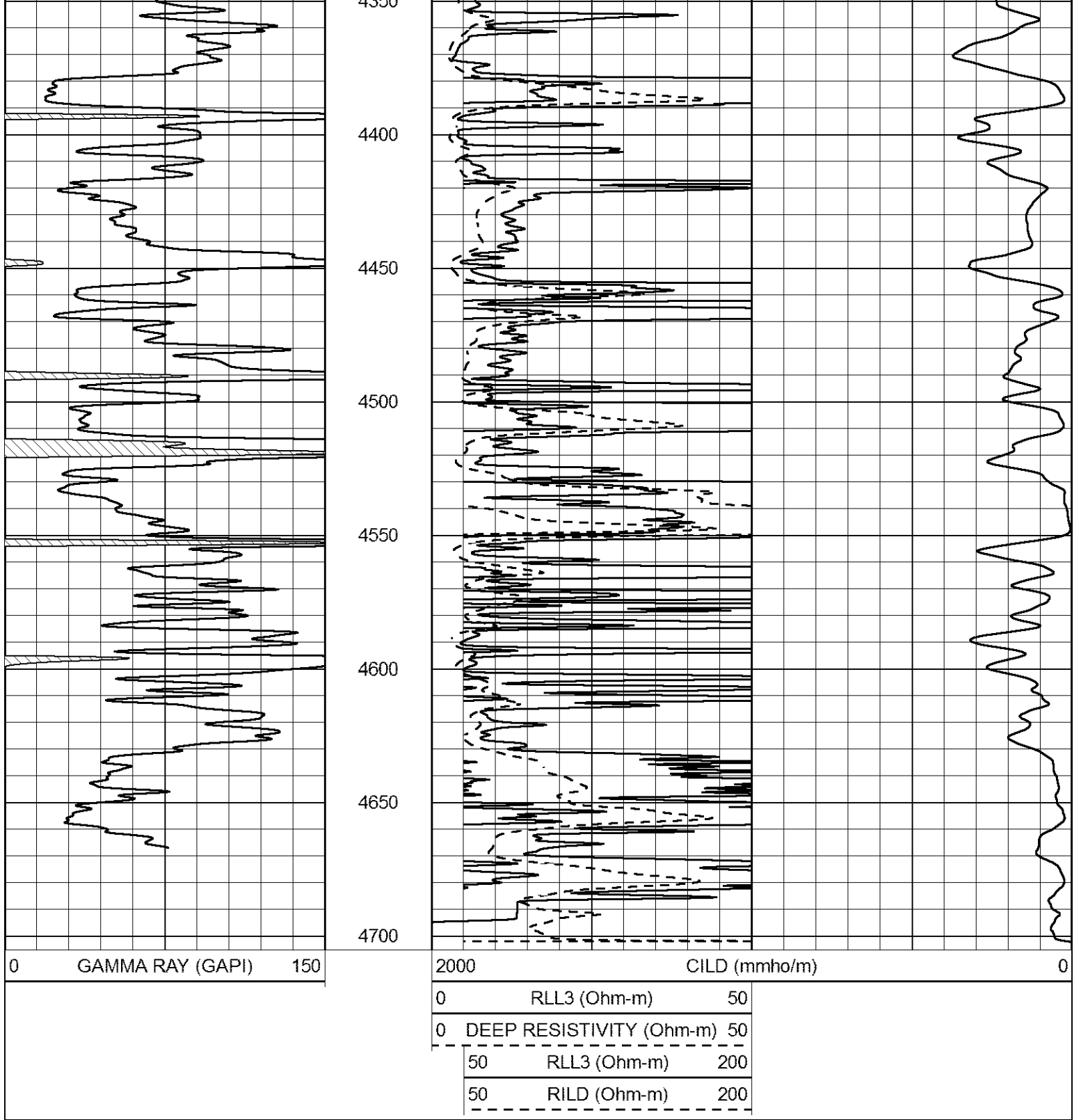






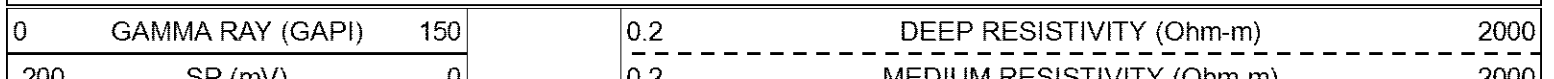






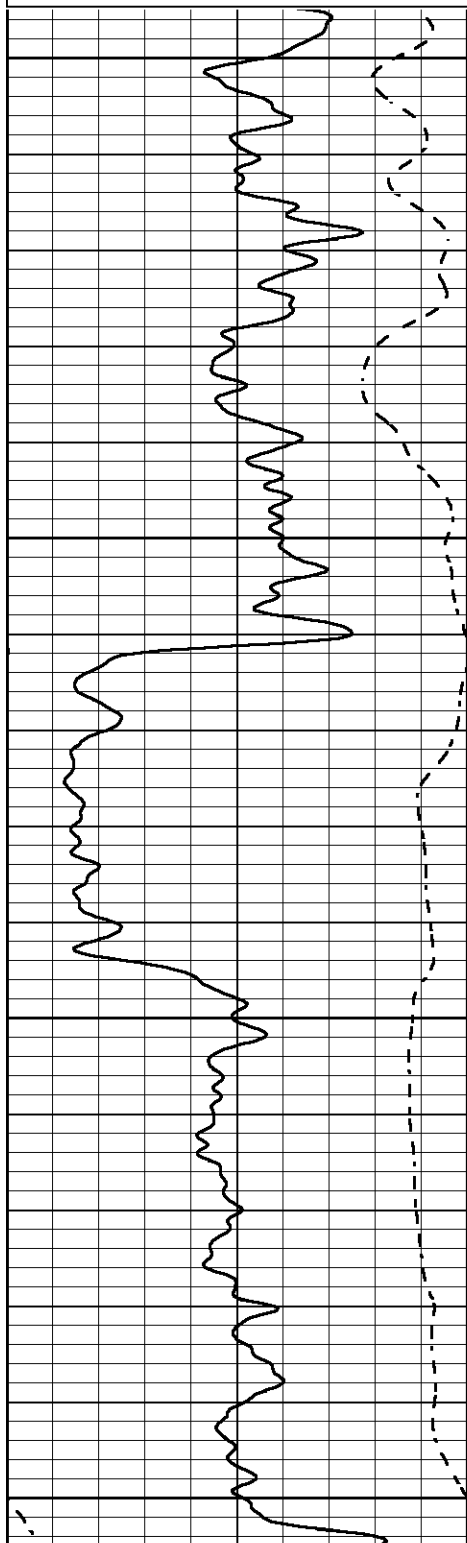
MAIN PASS

Database File carmen_schmitt_baalman_1_23.db
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 Presentation Format dil
 Dataset Creation Mon May 18 21:58:57 2020
 Charted by Depth in Feet scaled 1:240

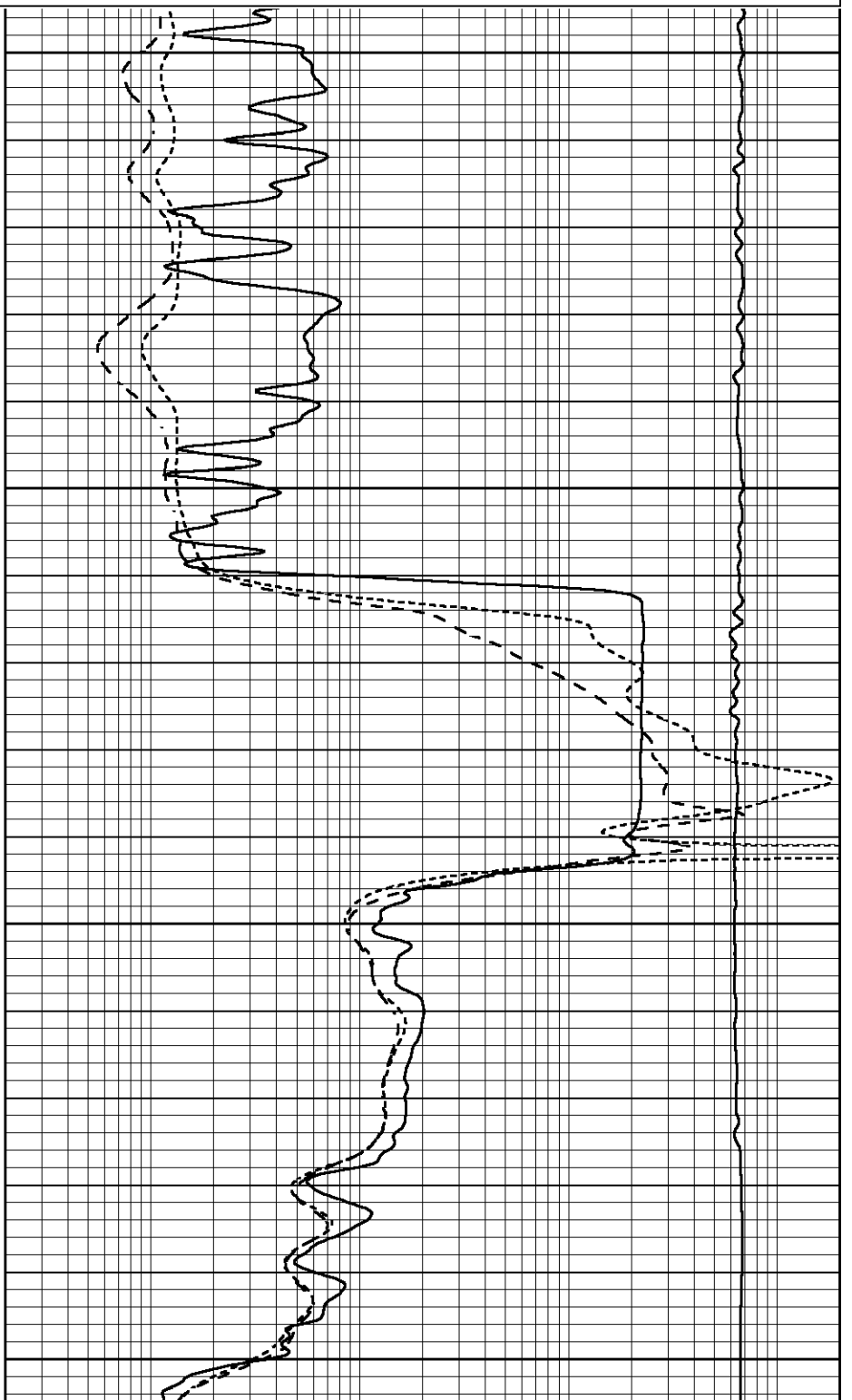


200 SP (mV) 0

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



2600
 2650
 2700
 2750



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

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

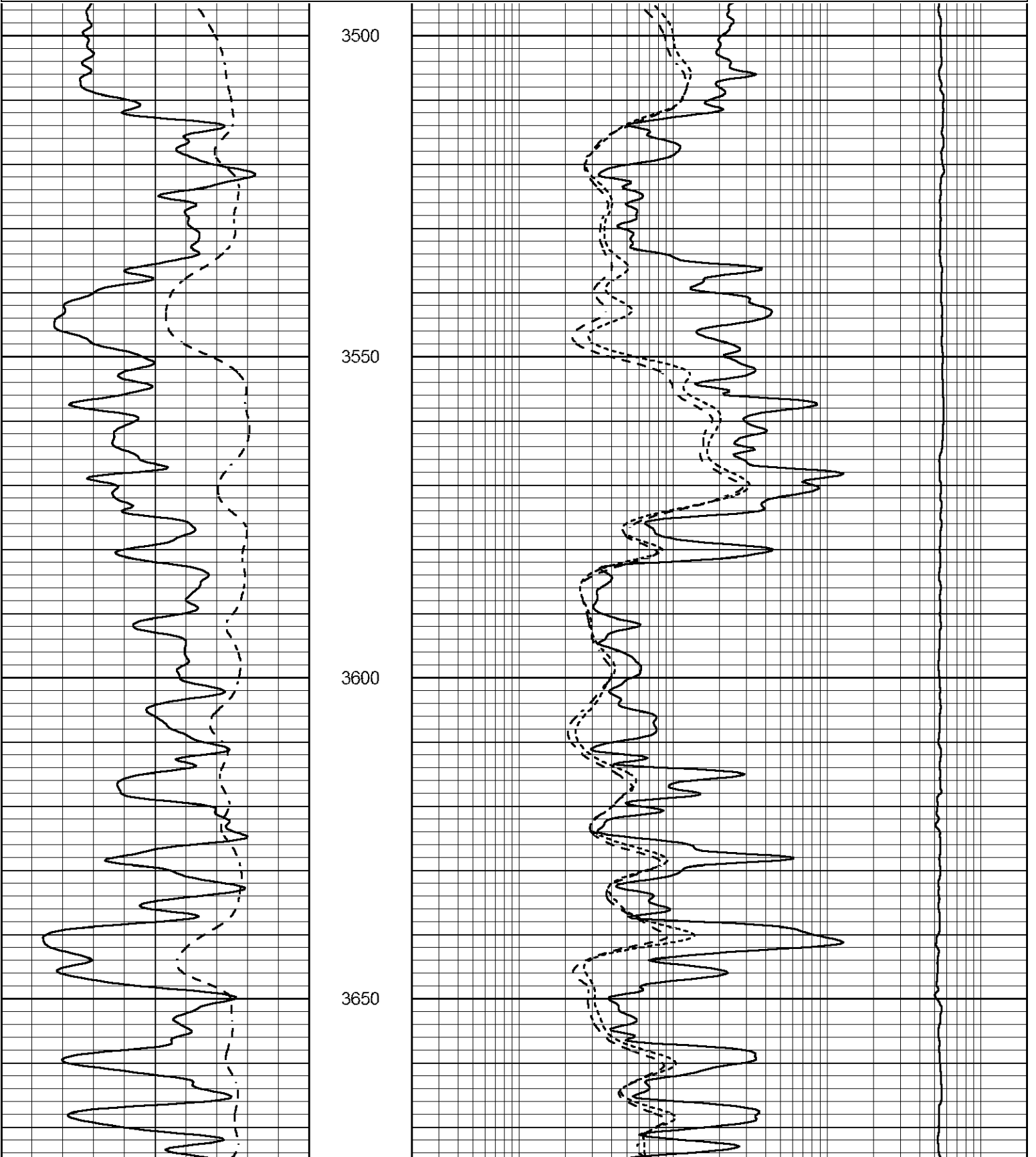


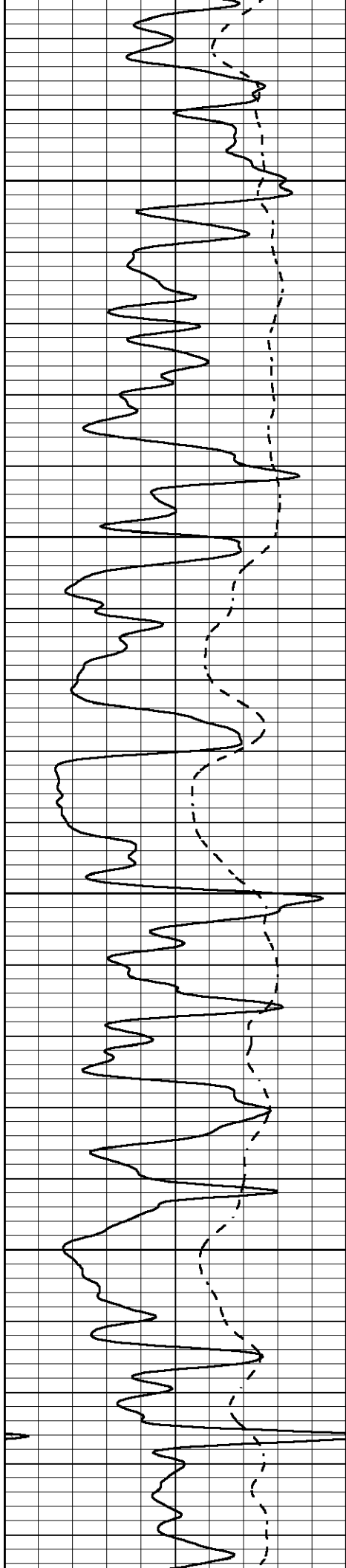
MAIN PASS

Database File carmen_schmitt_baalman_1_23.db
 Dataset Pathname stackml/pass3.1
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 Dataset Creation Mon May 18 21:58:57 2020
 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



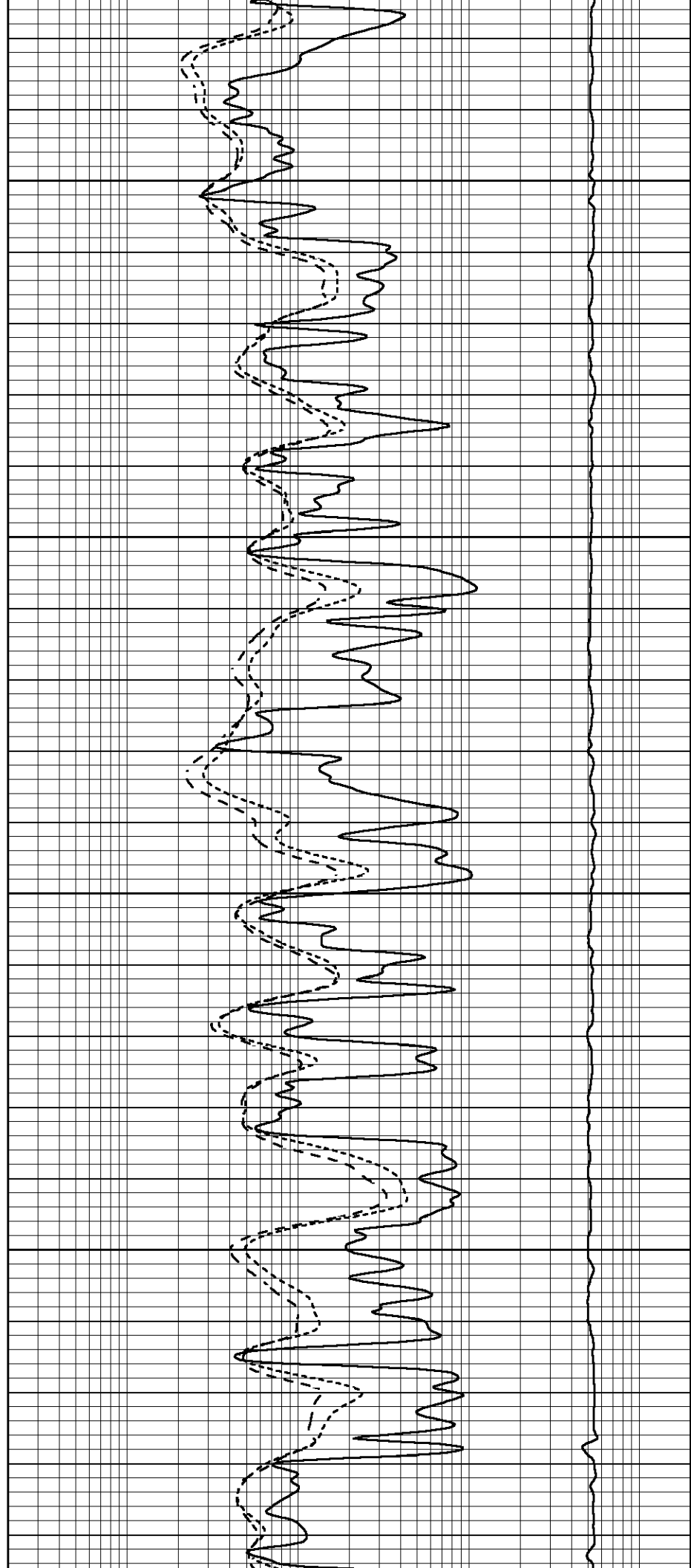


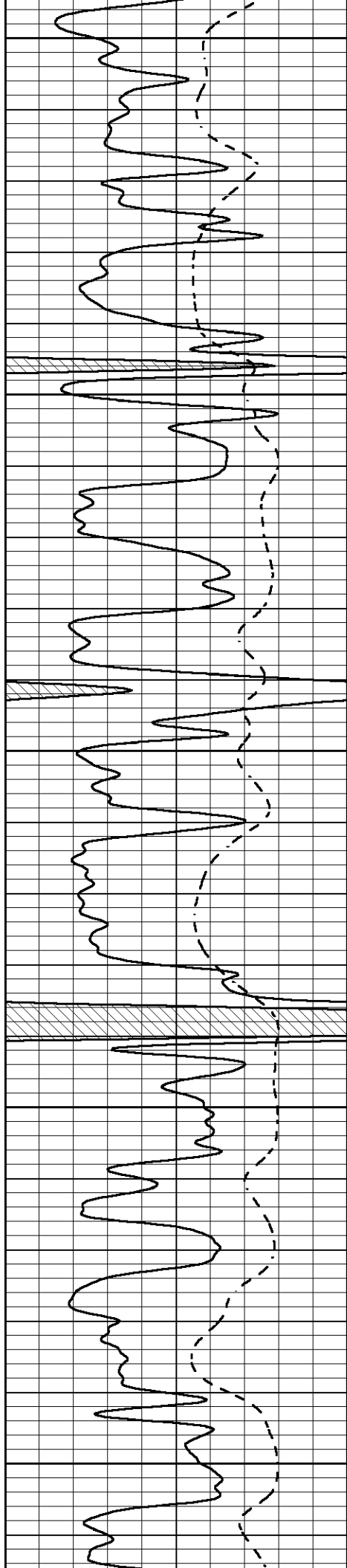
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3750

3800

3850





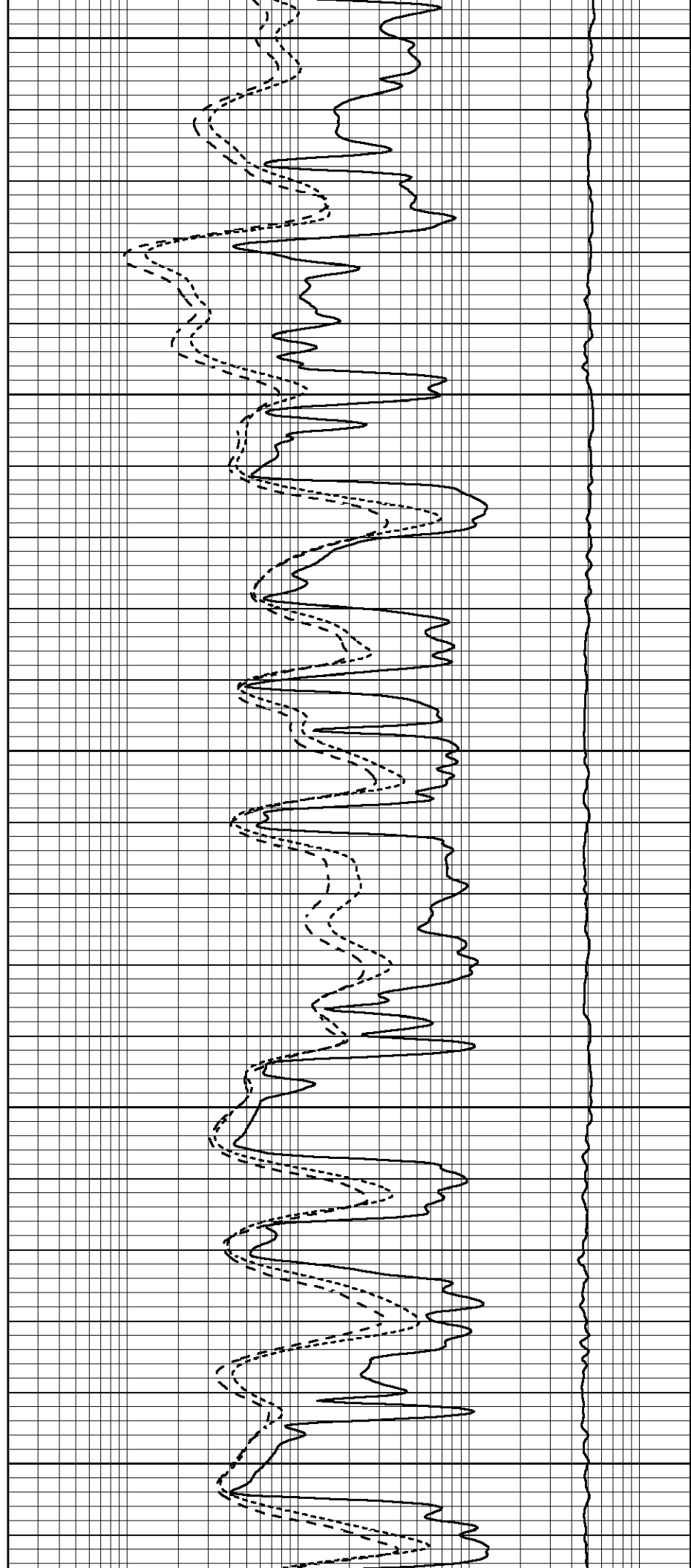
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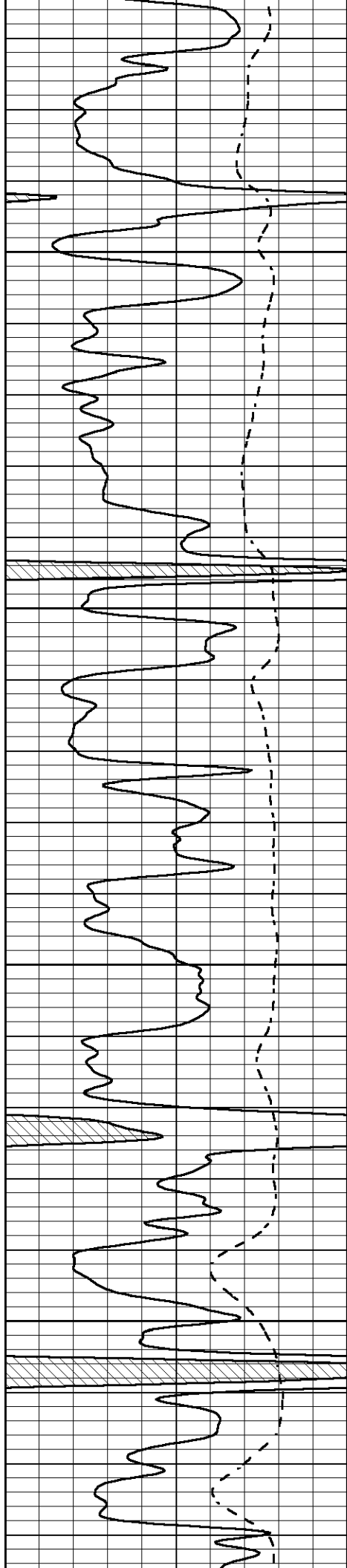
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4000

4050

4100



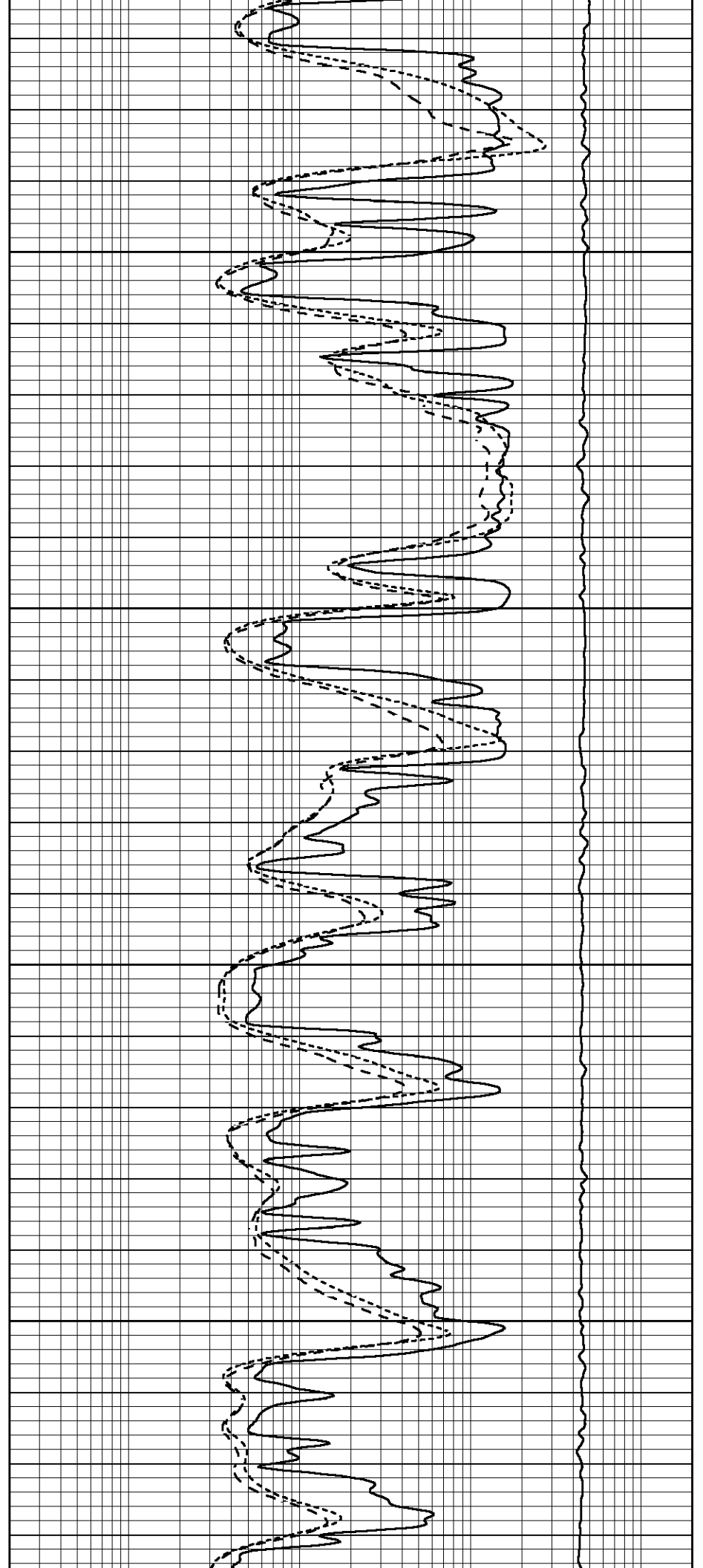


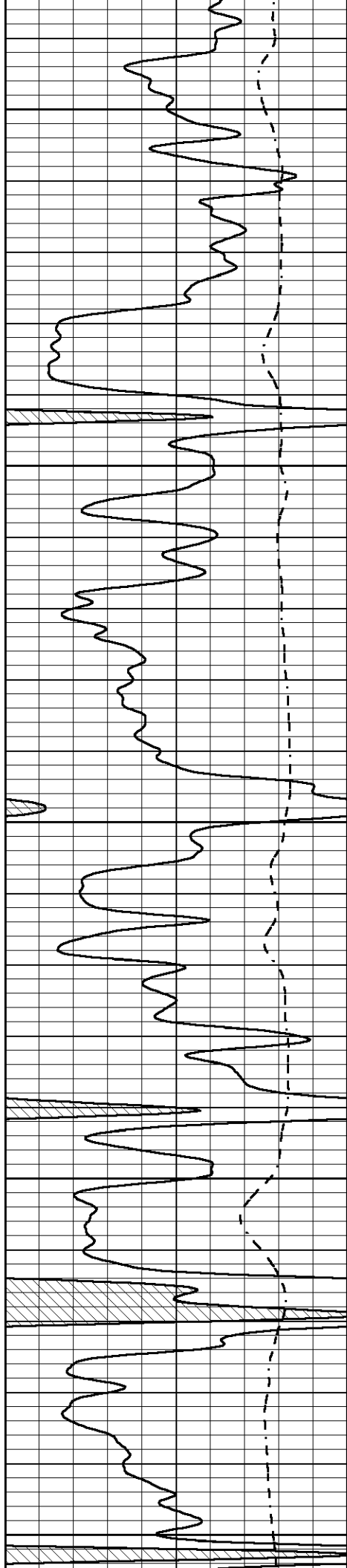
4150

4200

4250

4300





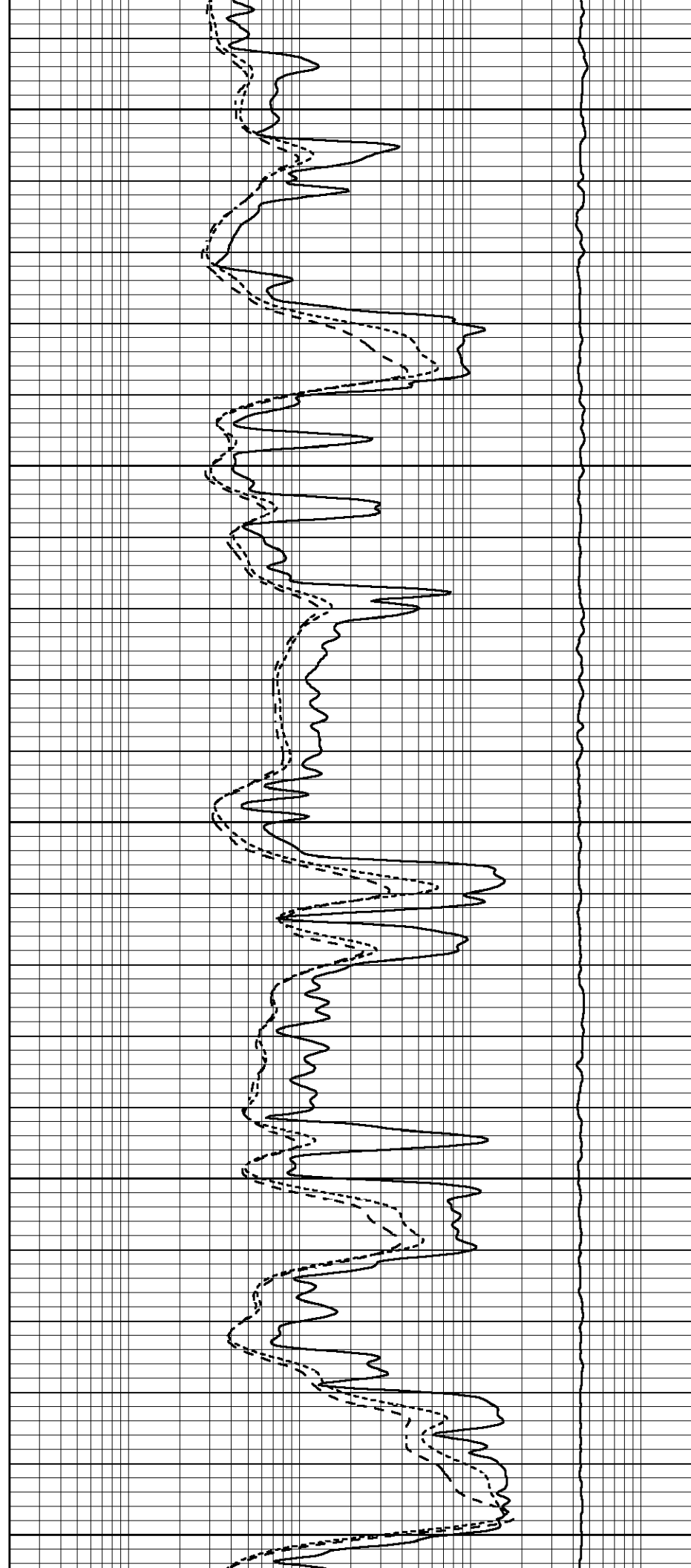
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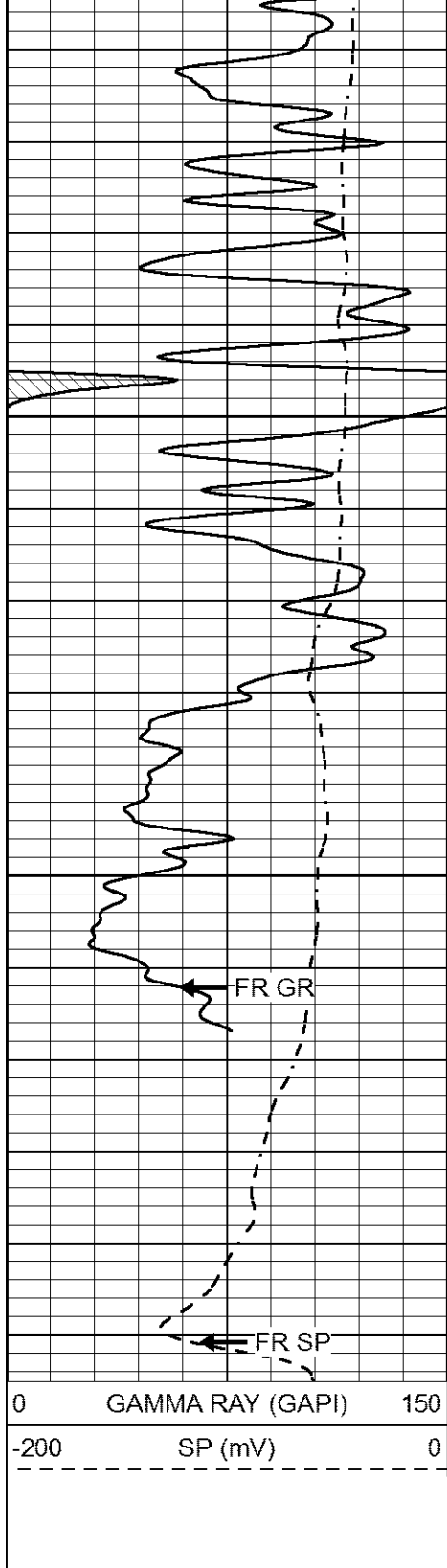
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4450

4500

4550

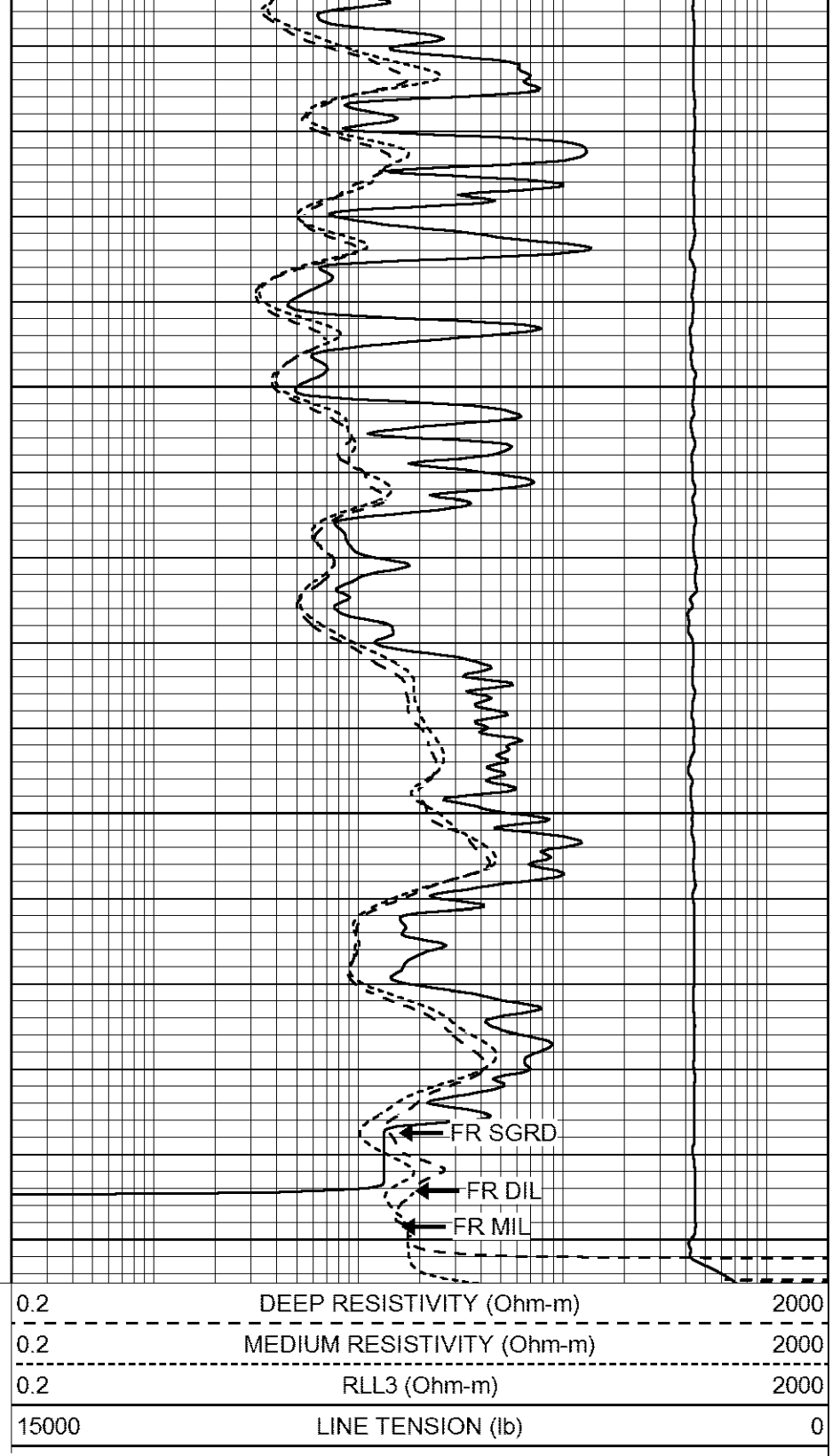




4600

4650

4700



REPEAT SECTION

Database File carmen_schmitt_baalman_1_23.db
 Dataset Pathname stackml/pass2.1
 Presentation Format dil
 Dataset Creation Mon May 18 21:59:07 2020
 Charted by Depth in Feet scaled 1:240

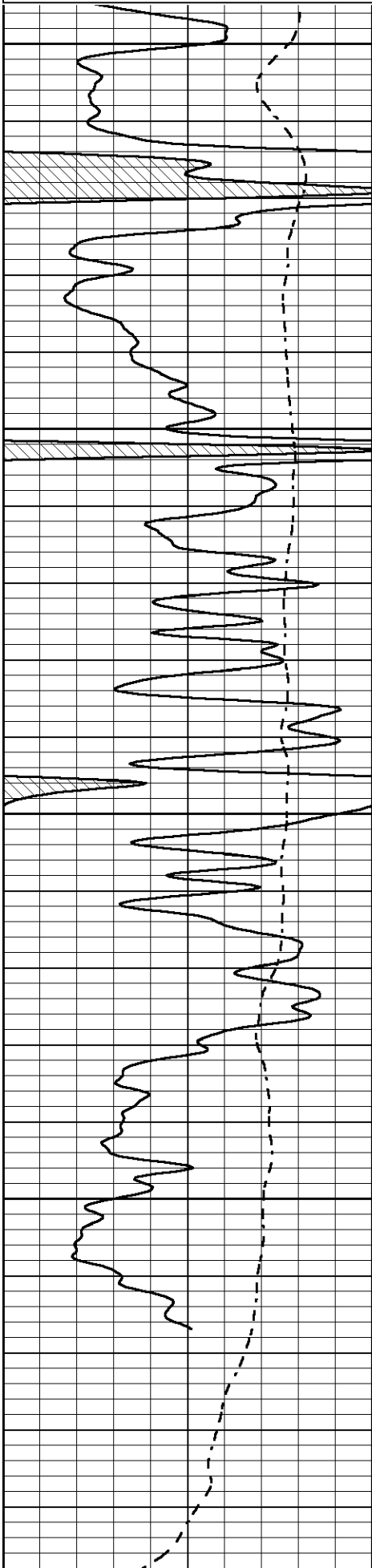


-200 SP (mV) 0

0.2 MEDIUM RESISTIVITY (Ohm-m) 2000

0.2 RLL3 (Ohm-m) 2000

15000 LINE TENSION (lb) 0

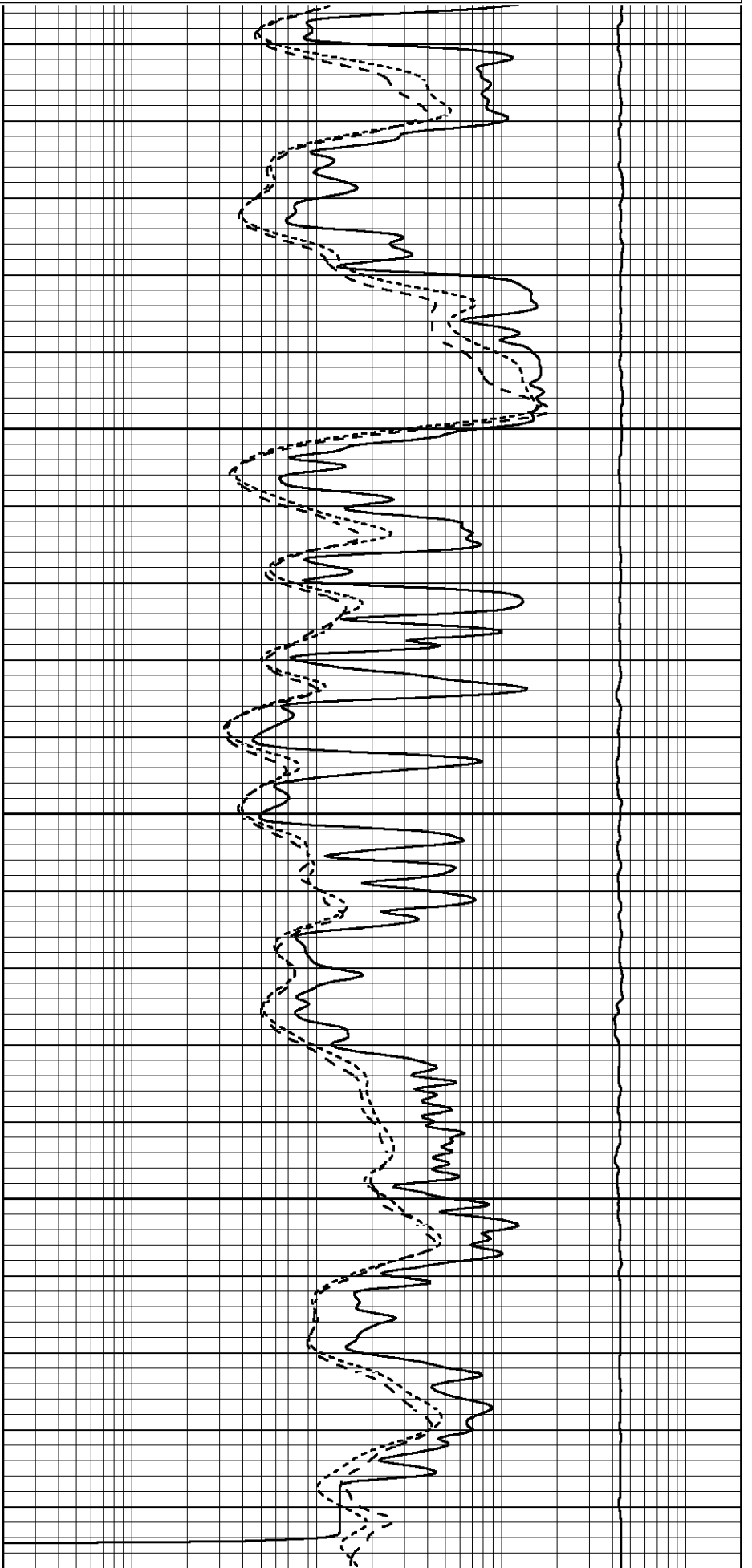


4500

4550

4600

4650



			4700						
0	GAMMA RAY (GAPI)	150		0.2	DEEP RESISTIVITY (Ohm-m)				2000
-200	SP (mV)	0		0.2	MEDIUM RESISTIVITY (Ohm-m)				2000
				0.2	RLL3 (Ohm-m)				2000
				15000	LINE TENSION (lb)				0

Calibration Report

Database File carmen_schmitt_baalman_1_23.db
 Dataset Pathname stackml/pass3.1
 Dataset Creation Mon May 18 21:58:57 2020

Dual Induction Calibration Report

Serial-Model: 55-222-M&W
 Calibration Performed: Tue Dec 10 05:11:10 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.540	-41.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.410	-15.000

Microlog Calibration Report

Serial-Model: PSI-01-PSI STKBL ML
 Performed: Thu Mar 31 18:14:32 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	17500.0000	-1.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	22500.0000	-1.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-80.5000

Compensated Density Calibration Report

Serial-Model: 915-956-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Mar 19 09:21:34 2020

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3668.53	4669.61	cps
Aluminum	2.675	g/cc	710.88	3056.05	cps
Spine Angle = 75.51			Density/Spine Ratio = 0.543		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.05		

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

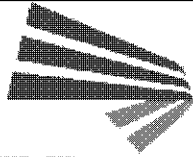
Gamma Ray Calibration Report

Serial Number: 89-M&W
Tool Model: M&W
Calibration Performed: Tue Dec 10 05:11:34 2019

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



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County THOMAS
State KANSAS