



DUAL INDUCTION LOG

Company **CASTLE RESOURCES INC.**
 Well **SKOLOUT #1**
 Field **CAHOJ WEST**
 County **RAWLINS**
 State **KANSAS**

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Location: **API #: 15-153-21247-00-00**
650' FSL & 70' FEL
SEC 23 TWP 1S RGE 35W
 Permanent Datum **GROUND LEVEL Elevation 3119'**
 Log Measured From **KELLY BUSHING**
 Drilling Measured From **KELLY BUSHING**
 Other Services **CNL/CDL MEL**
 Elevation **K.B. 3124'**
D.F. N/A
G.L. 3119'

Date	4/4/2020
Run Number	ONE
Depth Driller	4340'
Depth Logger	4342'
Bottom Logged Interval	4341'
Top Log Interval	200'
Casing Driller	8.625" @ 219'
Casing Logger	219'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	1000
Density / Viscosity	8.5 55
pH / Fluid Loss	11.8 8.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.80 @ 60
Rmt @ Meas. Temp	0.60 @ 60
Rmc @ Meas. Temp	1.08 @ 60
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.41 @ 118
Operating Rig Time	3 HOURS
Max Rec. Temp. F	118
Equipment Number	P-24
Location	HAYS
Recorded By	IAN MABB
Witnessed By	JERRY GREEN

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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.
 ATWOOD KS.
 NORTH TO RD Z, WEST 8 MILES TO RD 12,
 1/2 MILES NORTH & 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: IAN MABB Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: JERRY GREEN Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle_resources_skolout_1.db
 Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	118	4.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	-6	-4	305	0	Off	0

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
GR	44.50		GR-M&W (233-M&W)	3.00	3.50	50.00	
CNLSC CNSSC	41.40 40.65		CNT-M&W (207-MW)	5.50	3.50	100.00	
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (817-947)	8.50	4.00	250.00	
ML-PSI UDM ML (UDM-01) Stackable Microlog Tools			11.50	4.00	215.00		
MCAL MI MN	20.87 20.87 20.87						
RLL3F RLL3	15.80 15.80						
CILD	8.00			DIL-PSI HIGH TEMP (952-828)	18.50	3.50	220.00

CILM 4.70

SP 0.20

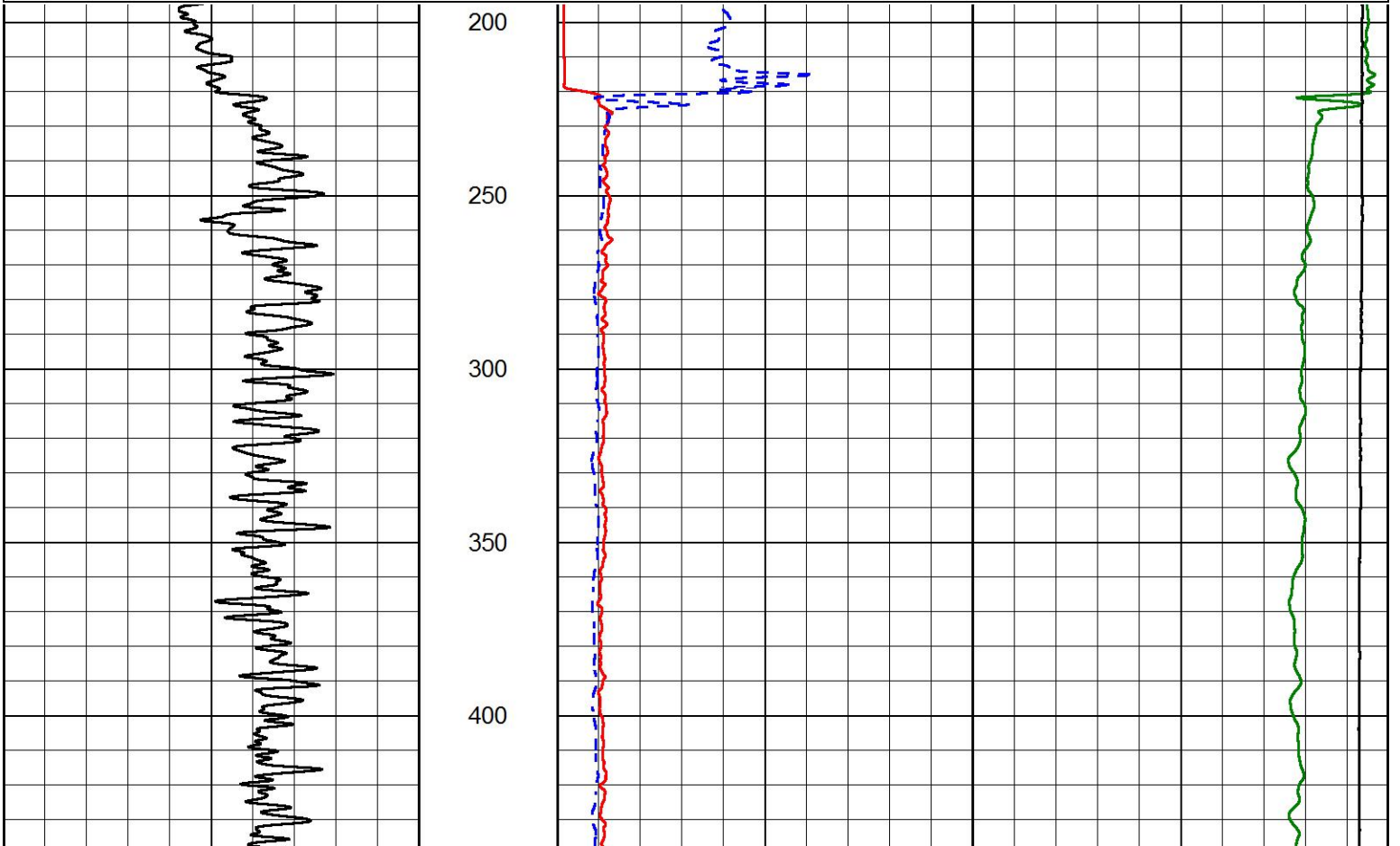
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 Total length: 47.00 ft
 Total weight: 835.00 lb
 O.D.: 4.00 in

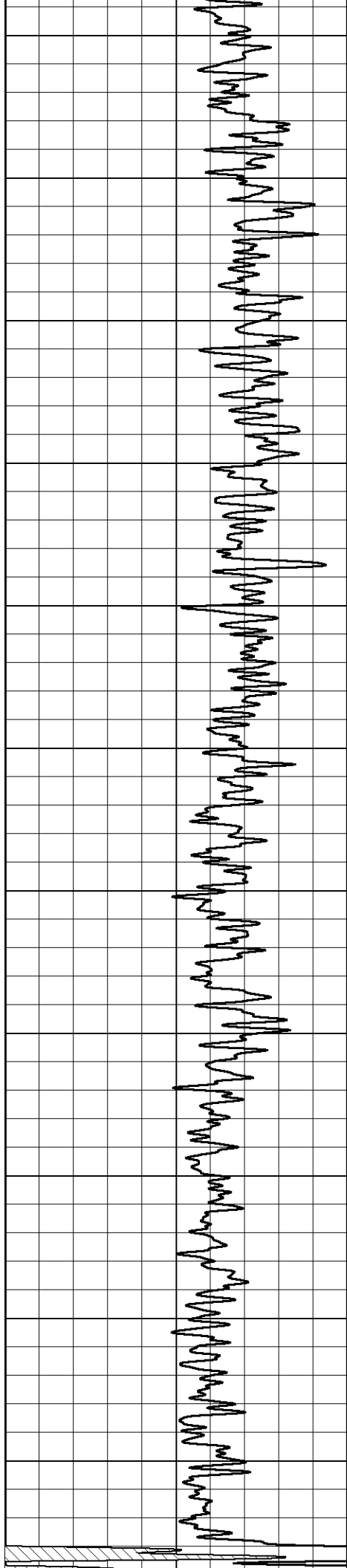


MAIN PASS

Database File castle_resources_skolout_1.db
 Dataset Pathname stackmel/pass4.1
 Presentation Format _dil2in
 Dataset Creation Sat Apr 04 20:20:45 2020
 Charted by Depth in Feet scaled 1:600

GAMMA RAY 0 (GAPI) 150	2000	CONDUCTIVITY (mmho/m)	0
	15000	Line Tension (lb)	0
	0	RLL3 (Ohm-m)	50
	0	RILD (Ohm-m)	50
	50	RLL3 (Ohm-m)	200
	50	Deep Resistivity (Ohm-m)	200





450

500

550

600

650

700

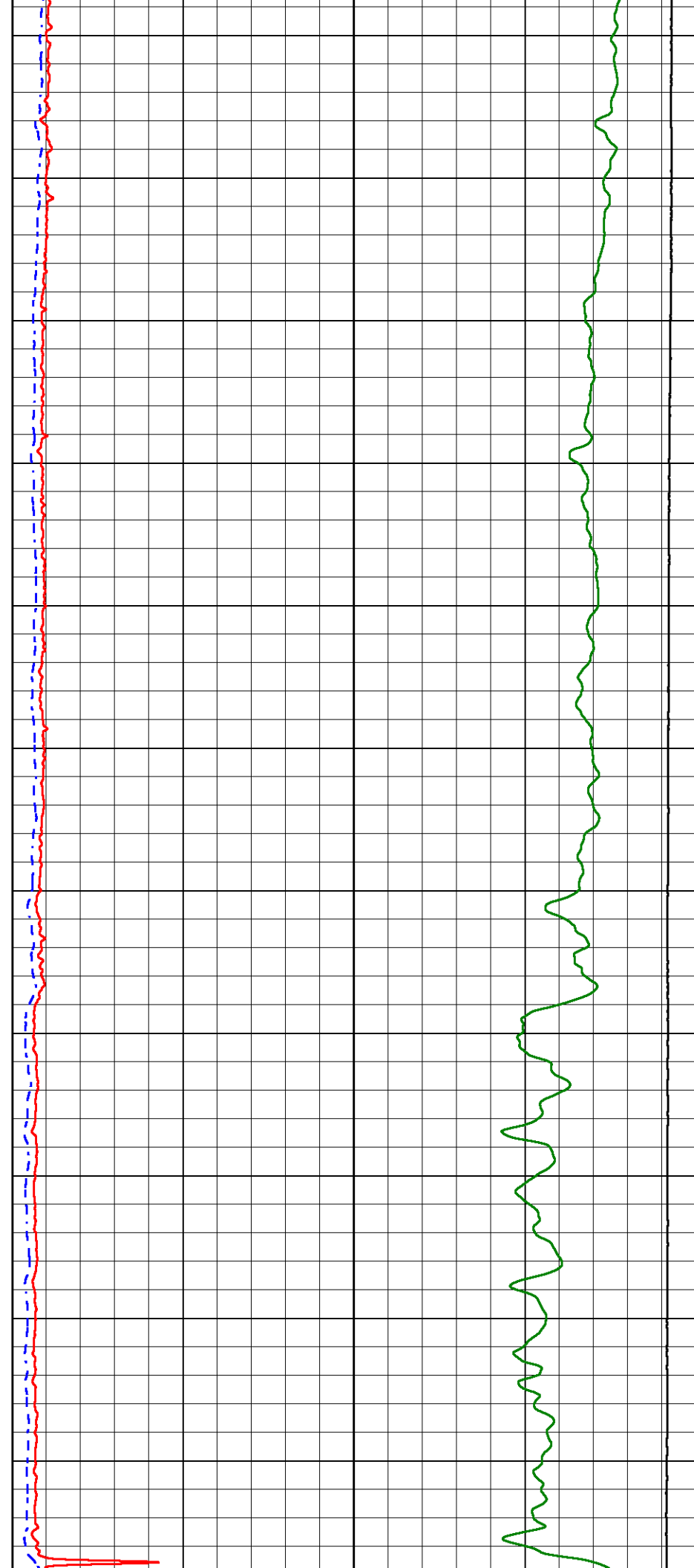
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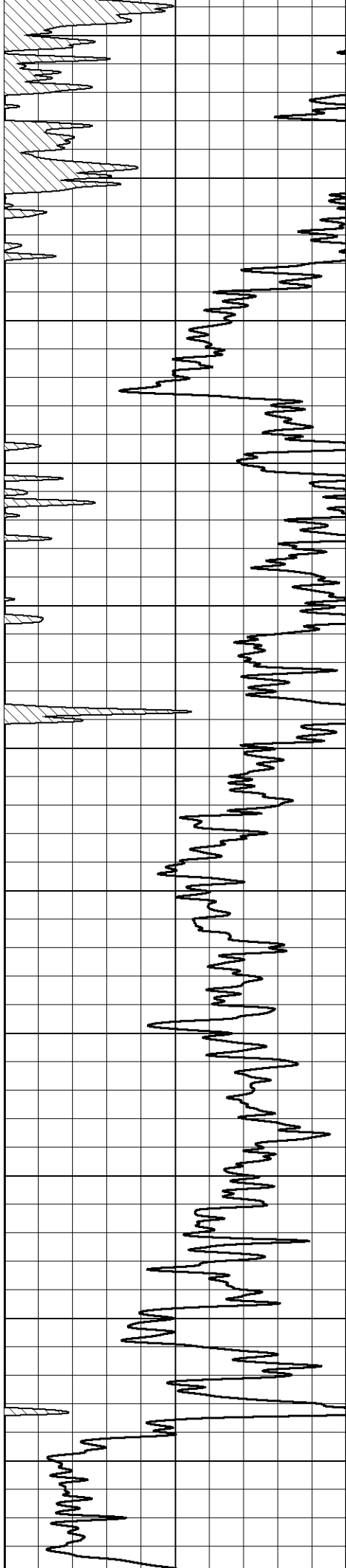
800

850

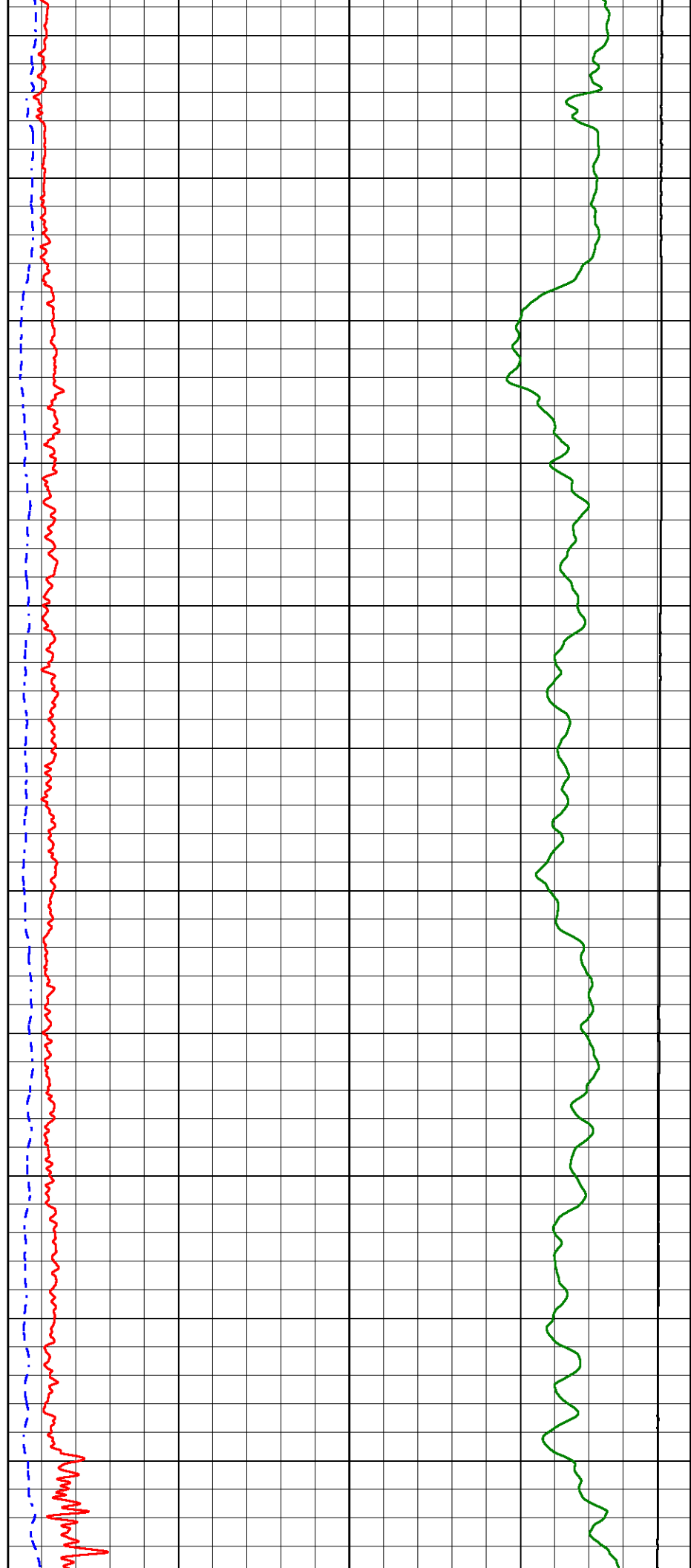
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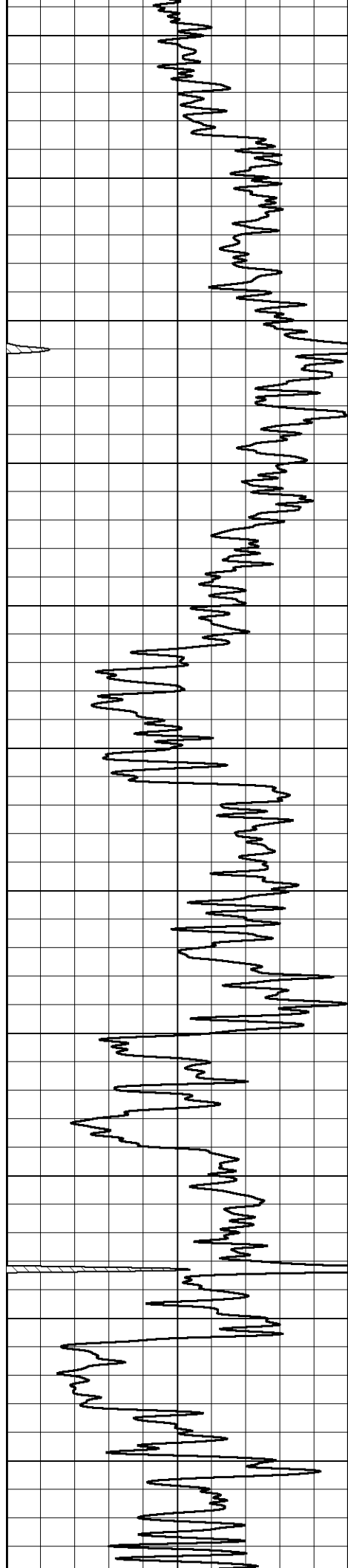
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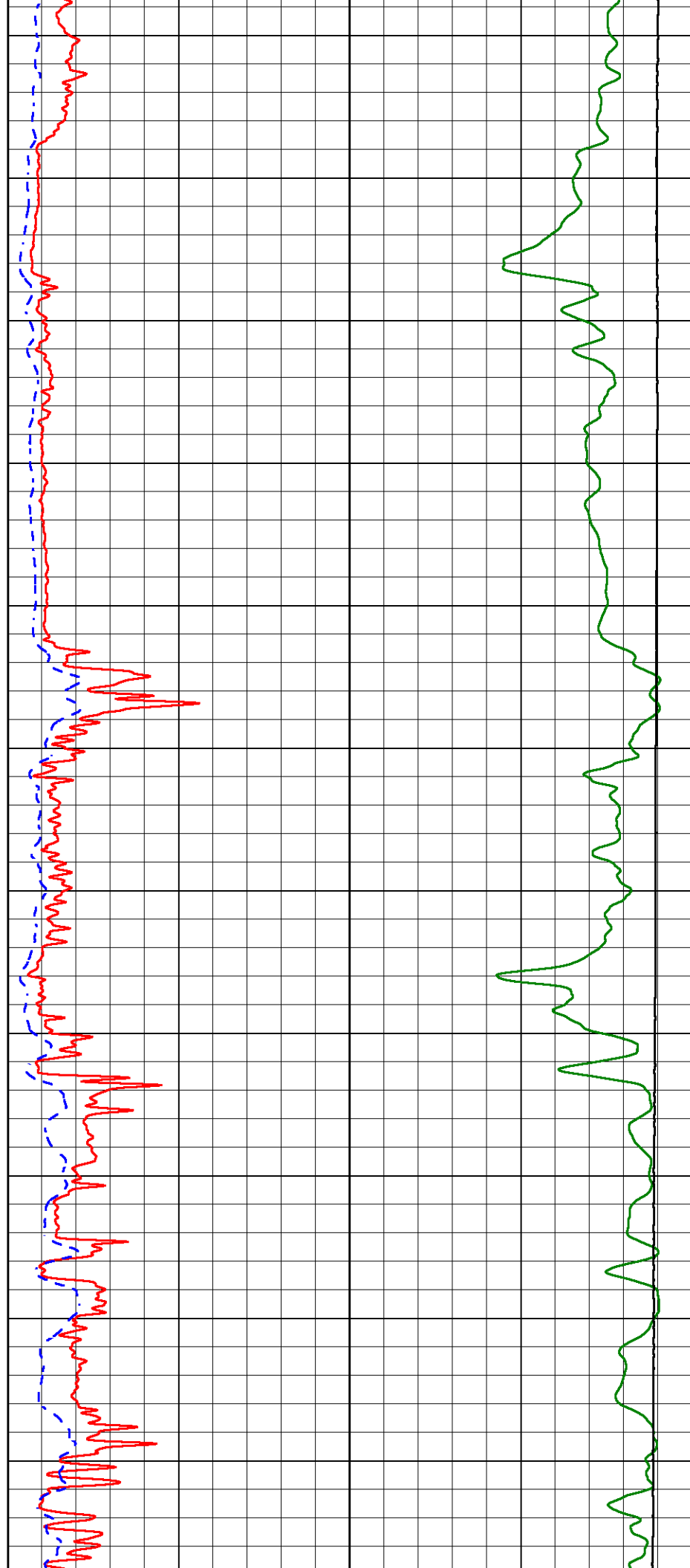


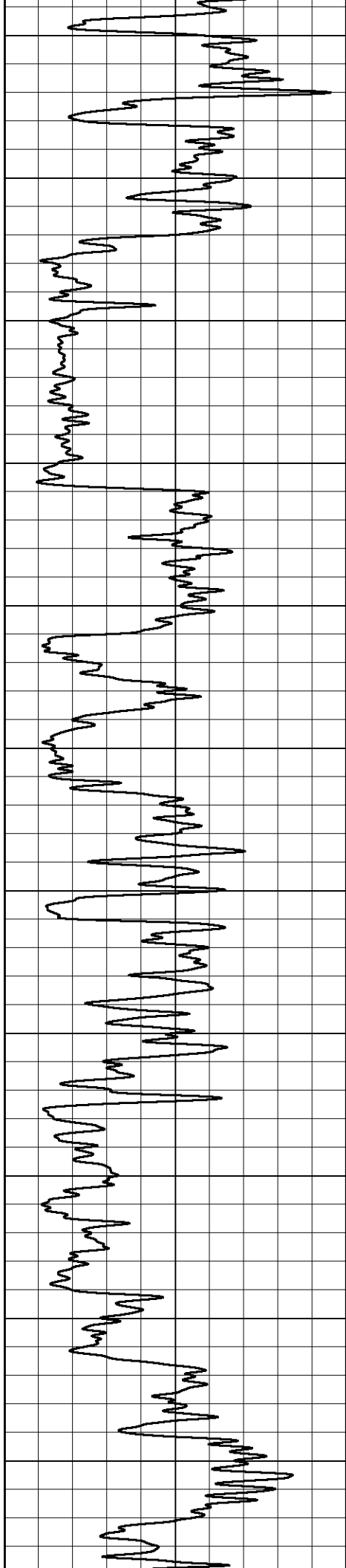
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050





2100

2150

2200

2250

2300

2350

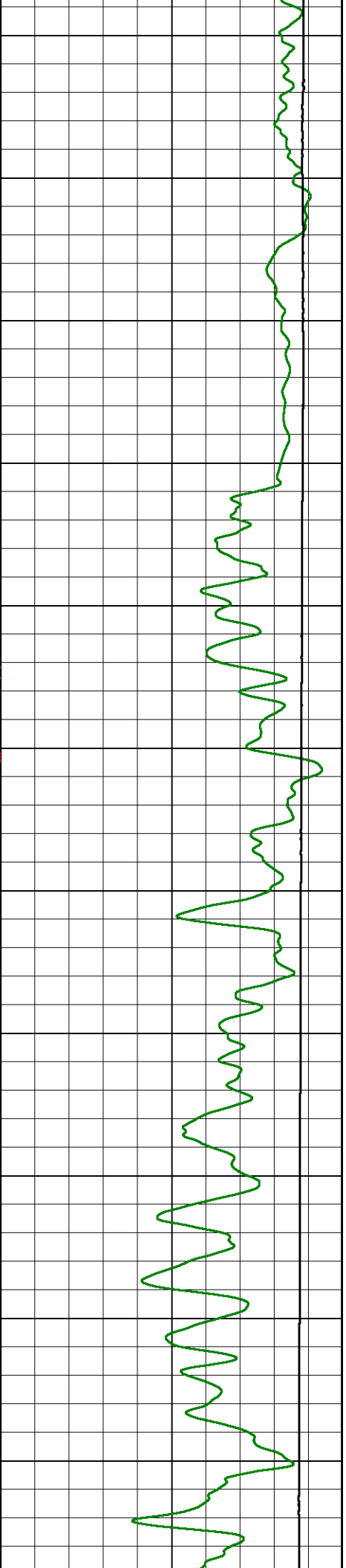
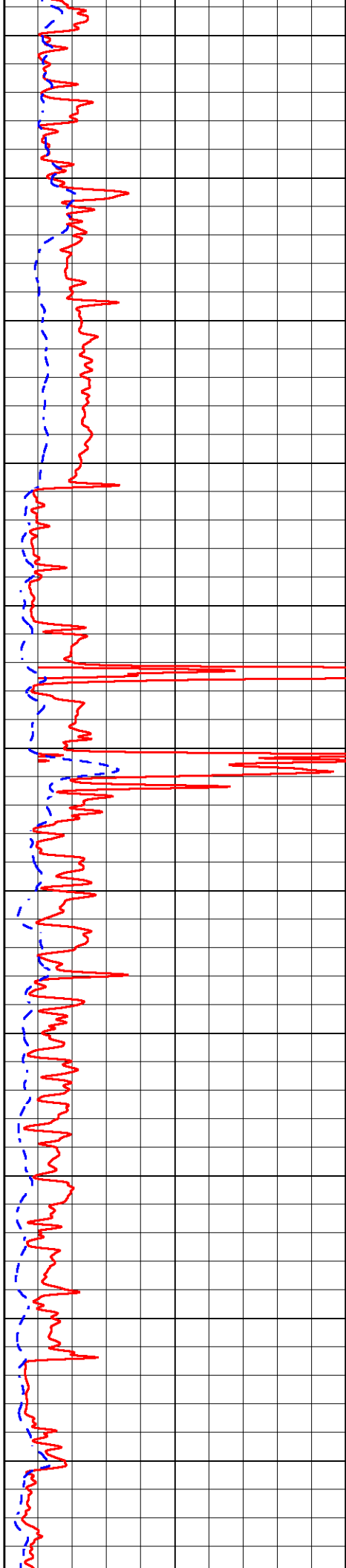
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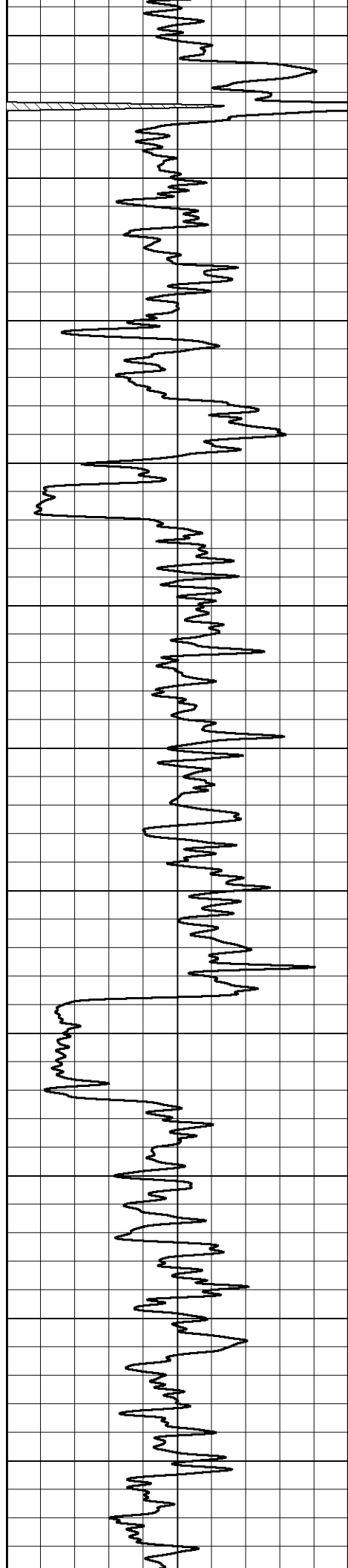
2450

2500

2550

2600





2650

2700

2750

2800

2850

2900

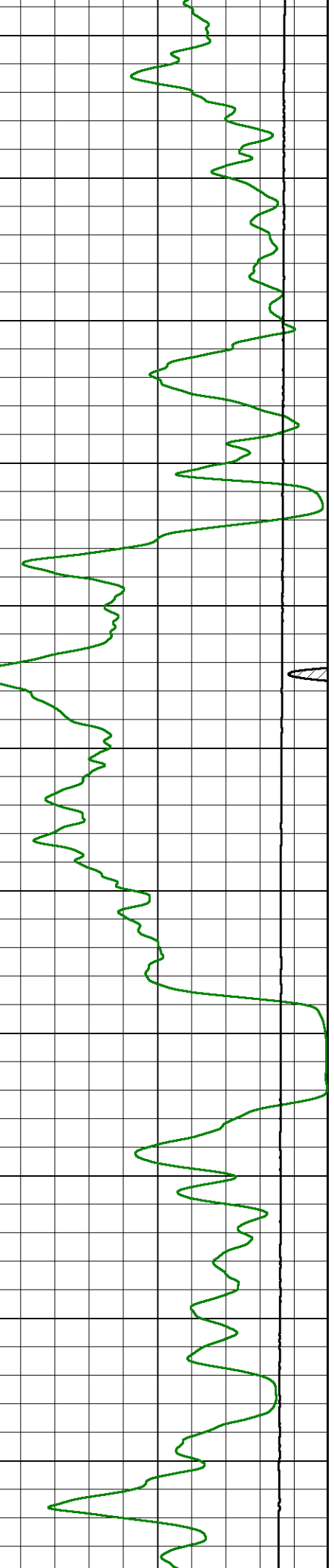
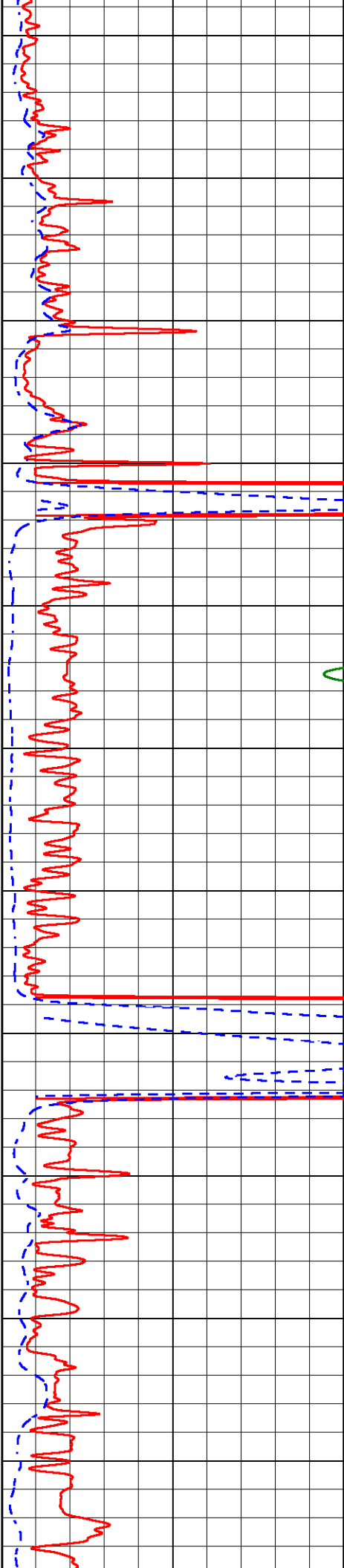
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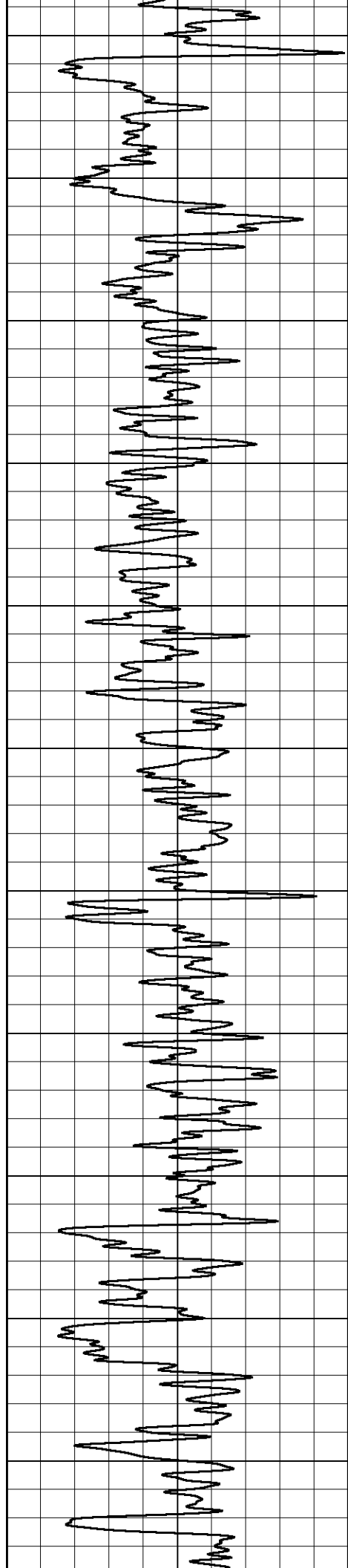
3000

3050

3100

3150





3200

3250

3300

3350

3400

3450

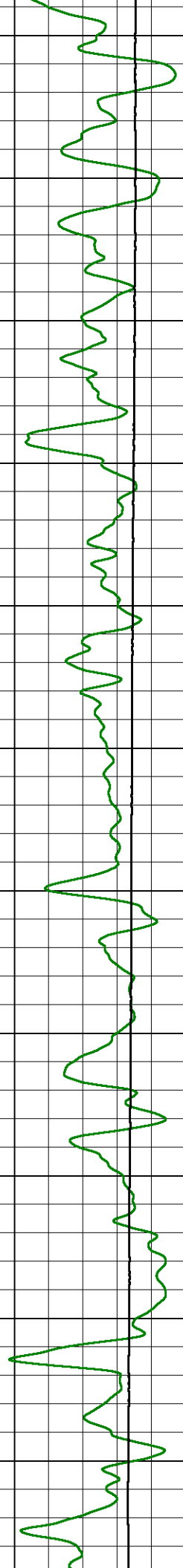
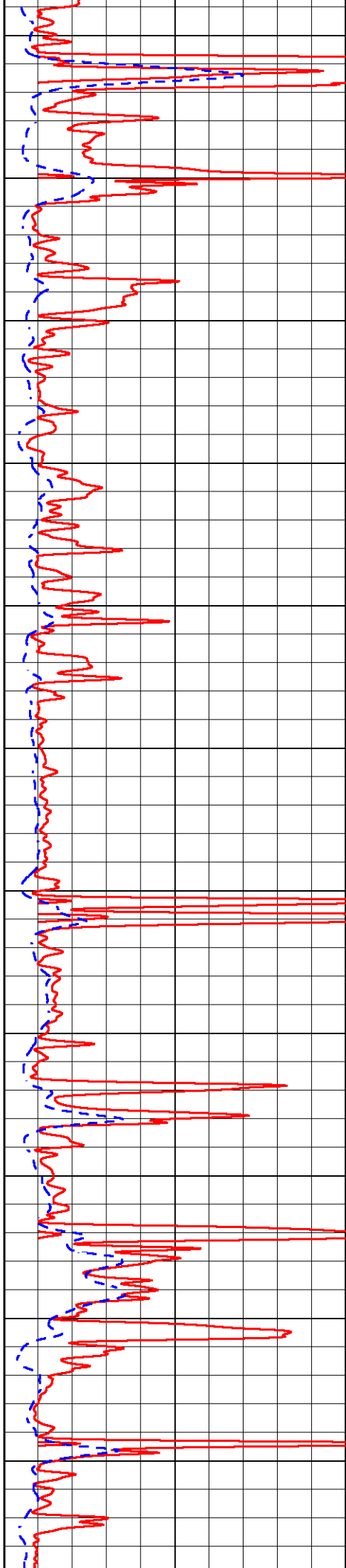
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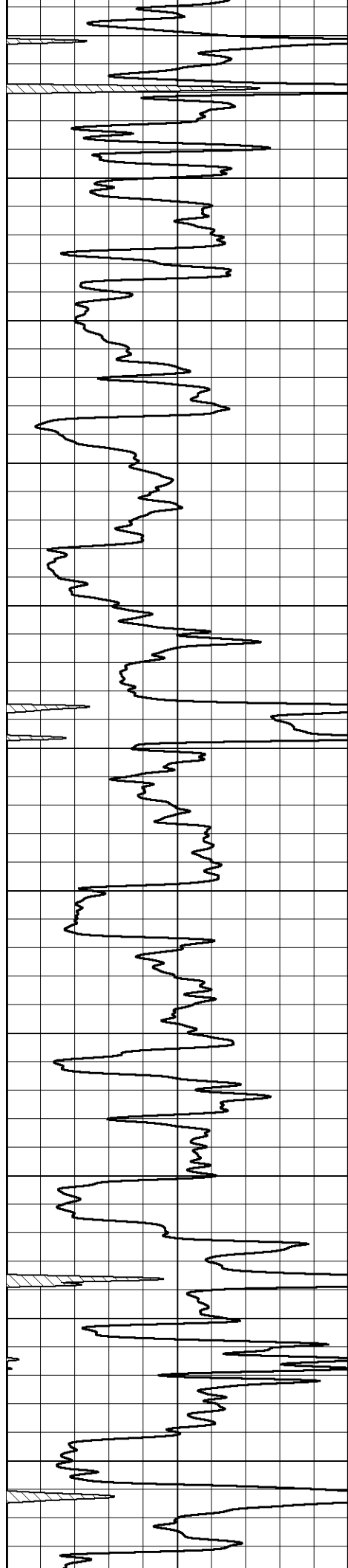
3550

3600

3650

3700





3750

3800

3850

3900

3950

4000

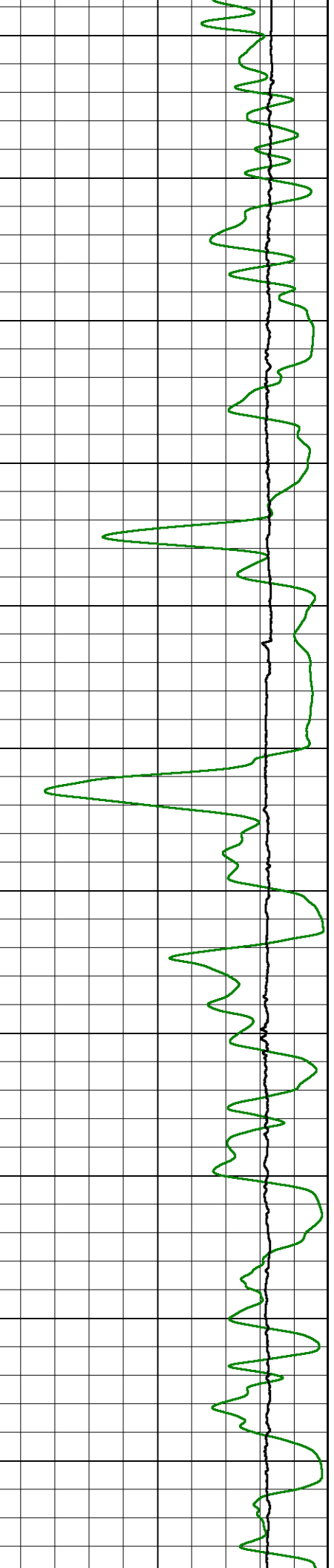
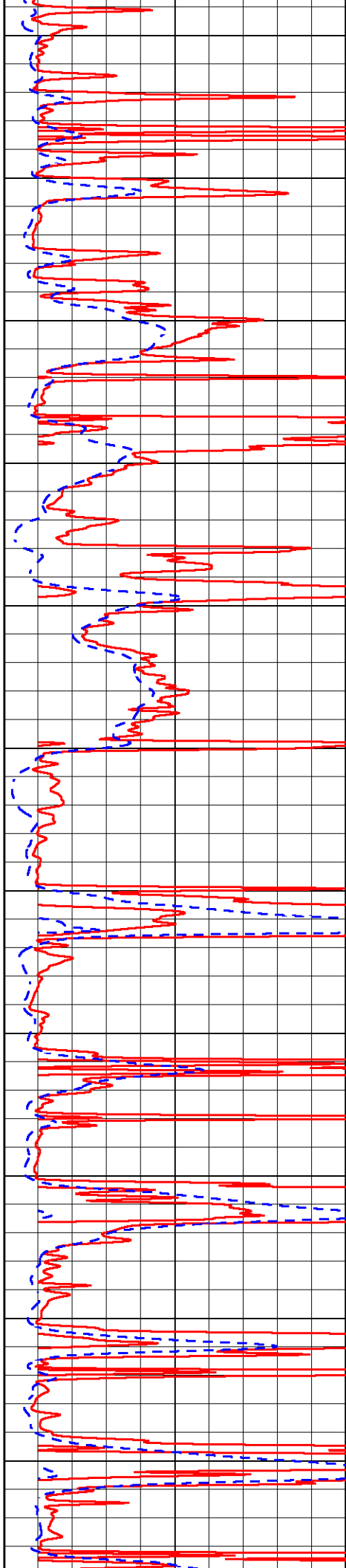
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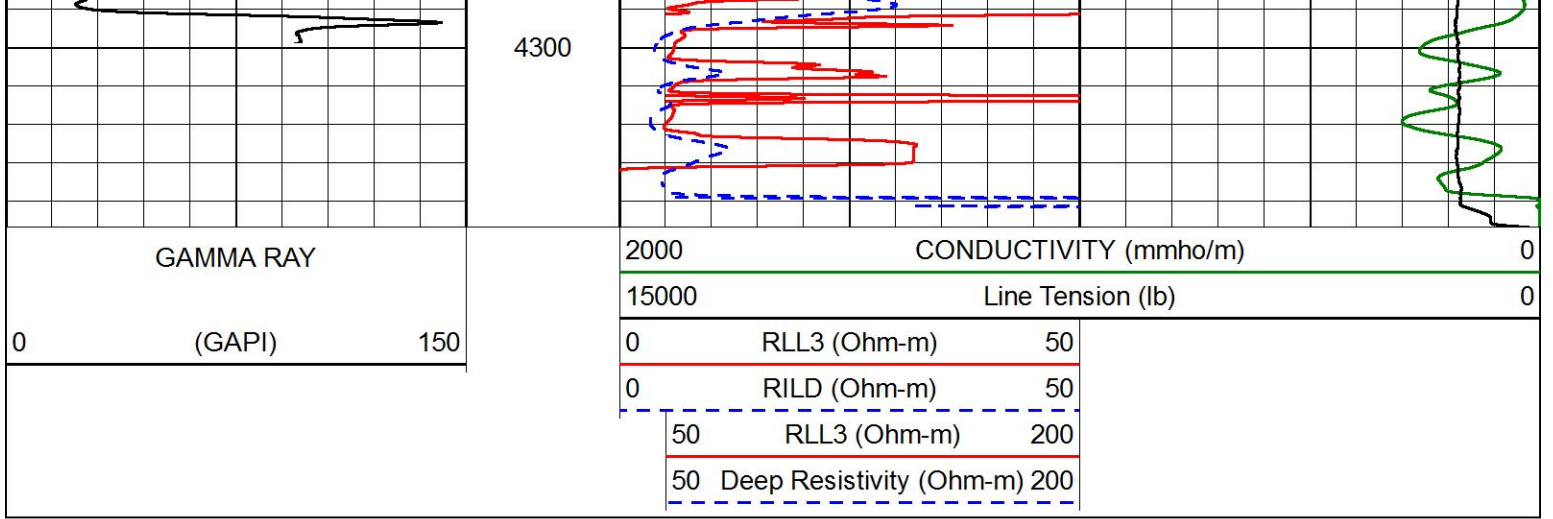
4100

4150

4200

4250

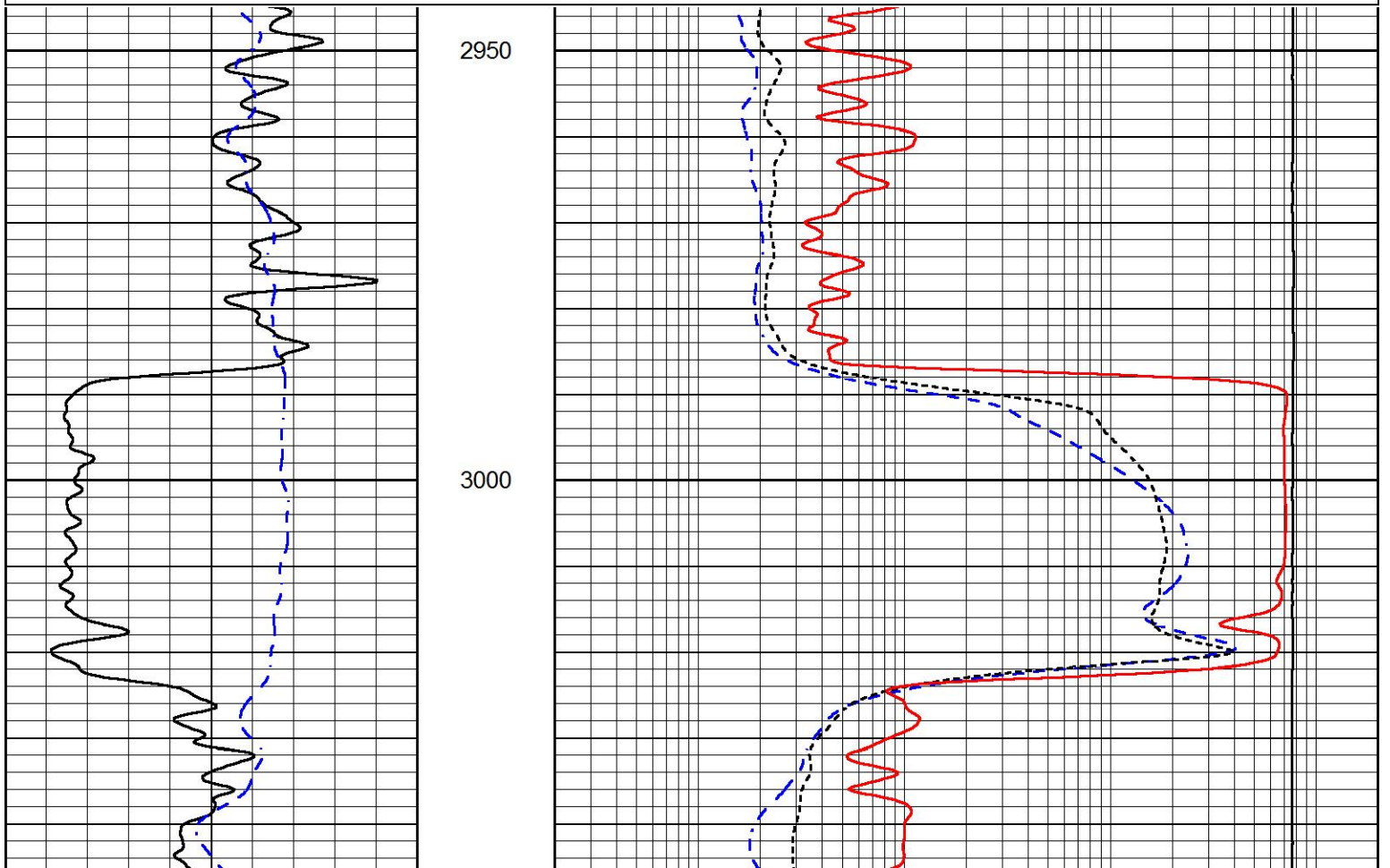


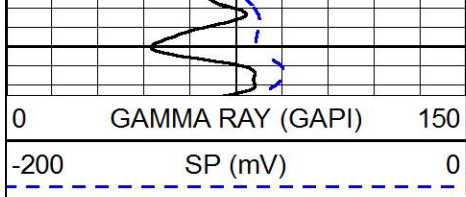



MAIN PASS

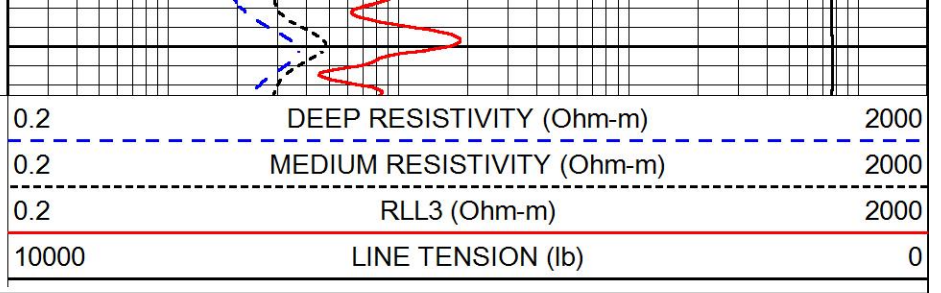
Database File: castle_resources_skolout_1.db
 Dataset Pathname: stackmel/pass4.1
 Presentation Format: _dil
 Dataset Creation: Sat Apr 04 20:20:45 2020
 Charted by: Depth in Feet scaled 1:240

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
			10000	LINE TENSION (lb)	0





3050

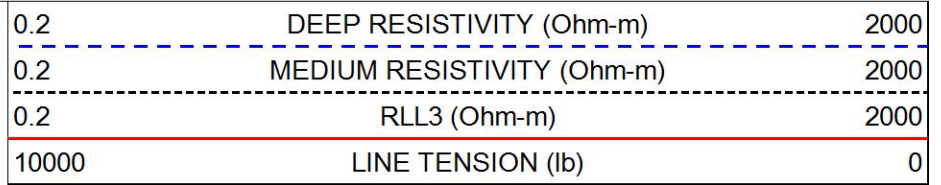
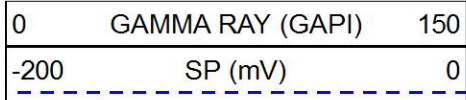


10000 LINE TENSION (lb) 0

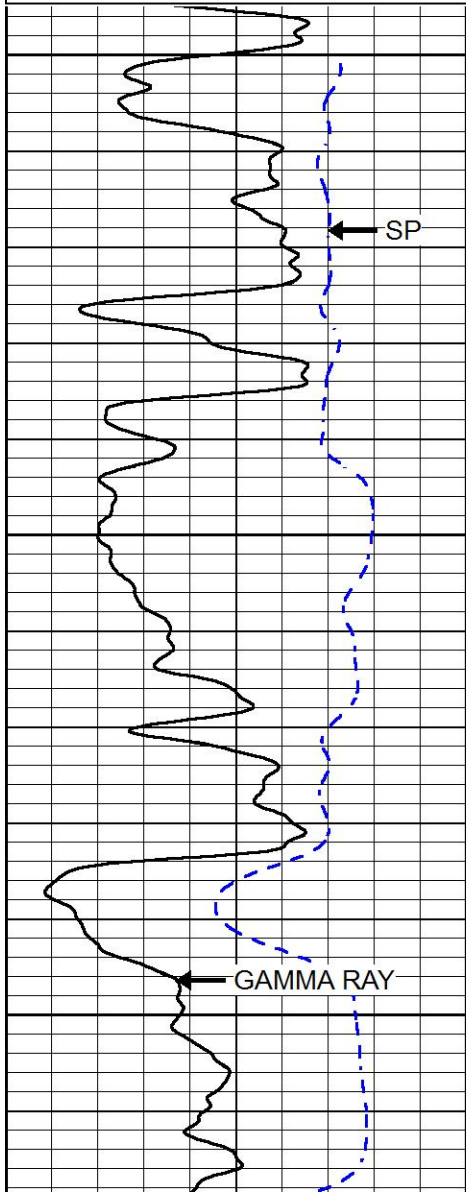


MAIN PASS

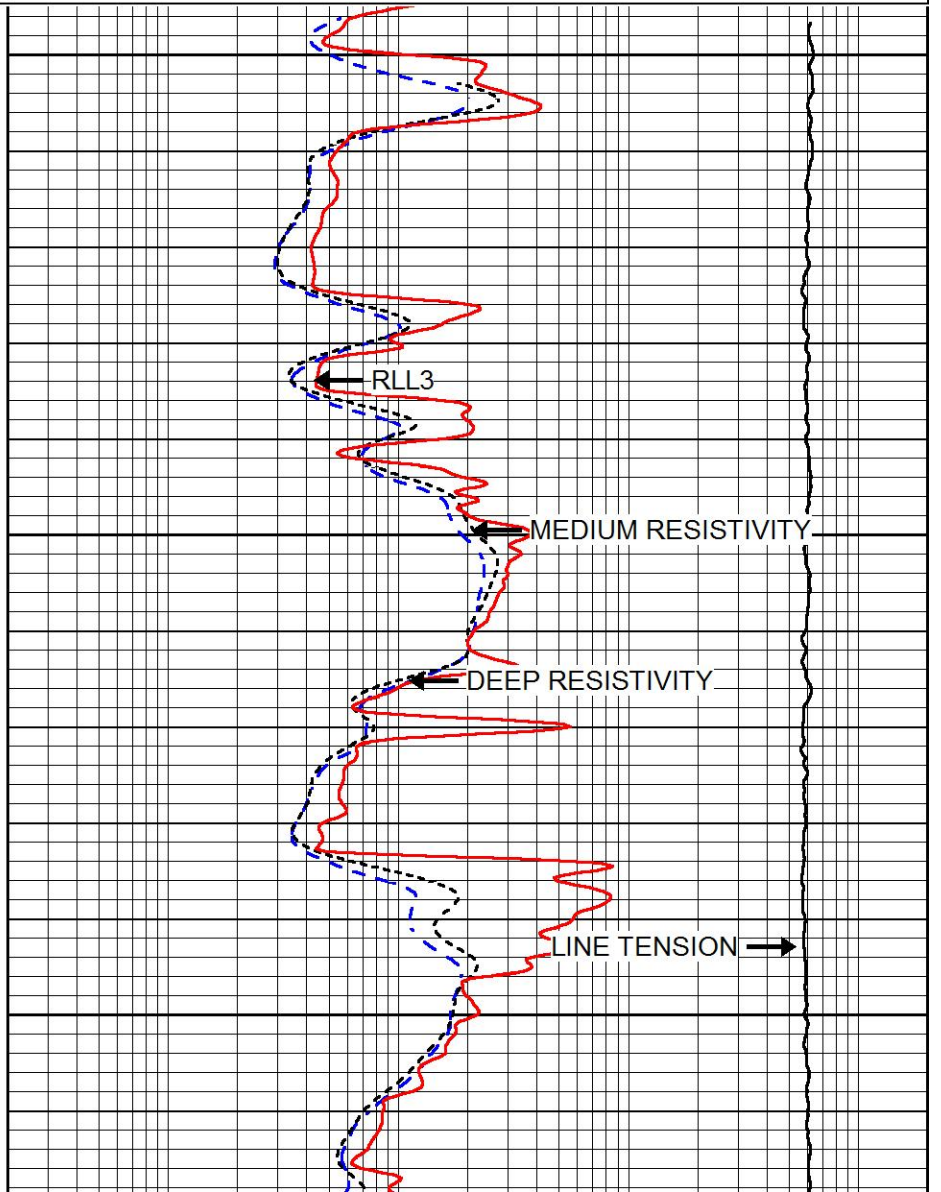
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 Dataset Pathname stackmel/pass3.1
 Presentation Format _dil
 Dataset Creation Sat Apr 04 19:42:36 2020
 Charted by Depth in Feet scaled 1:240



10000 LINE TENSION (lb) 0

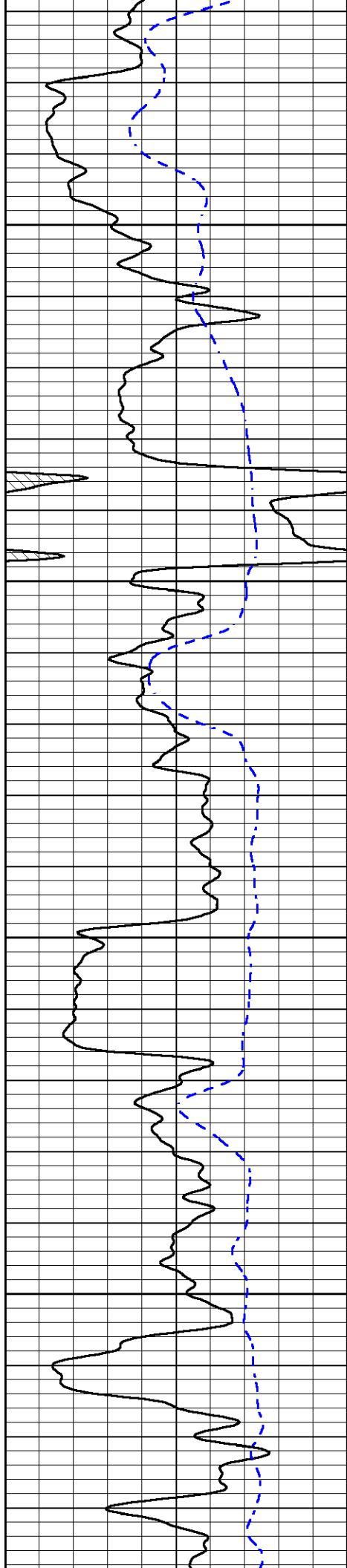


3800



3850

3900

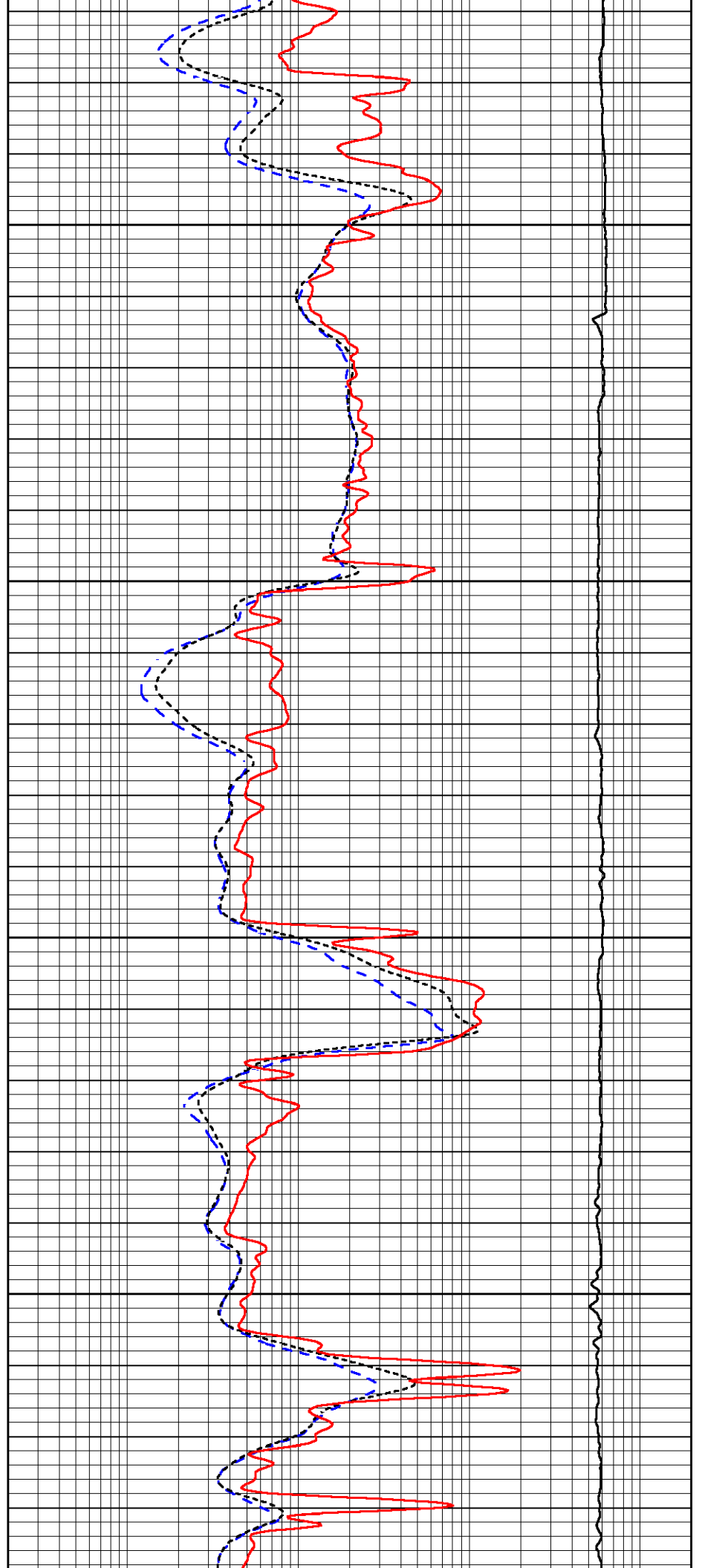


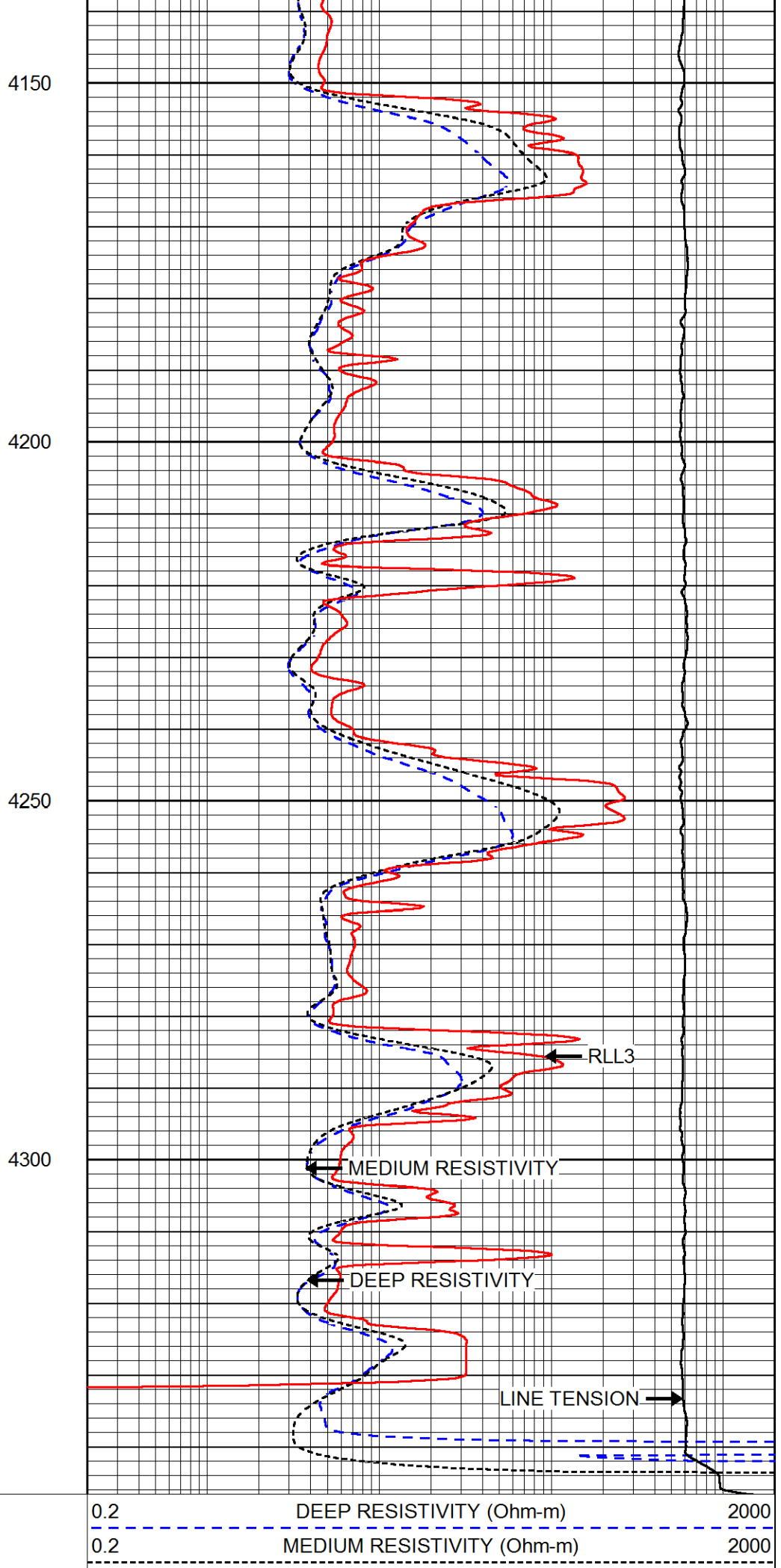
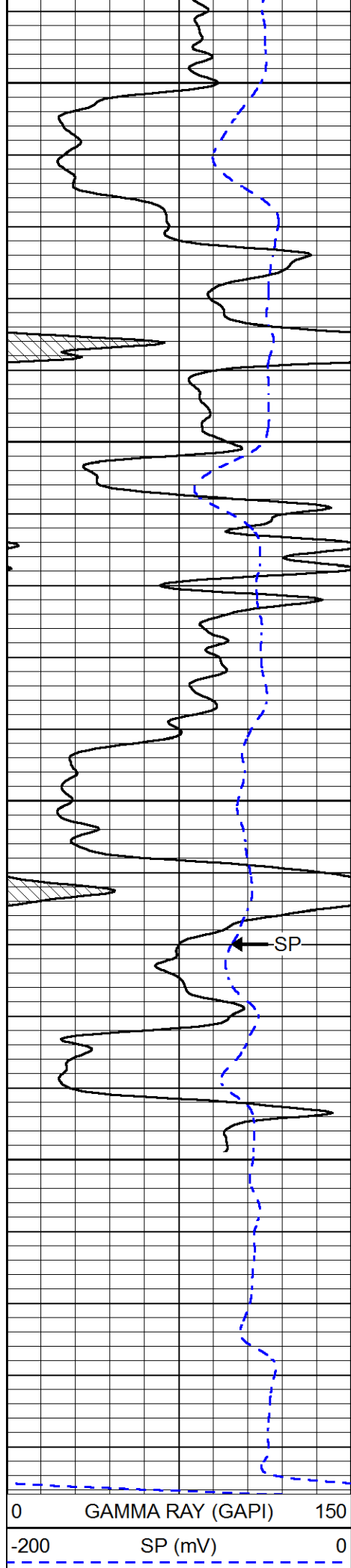
3950

4000

4050

4100





0.2	RLL3 (Ohm-ft)	2000
10000	LINE TENSION (lb)	0

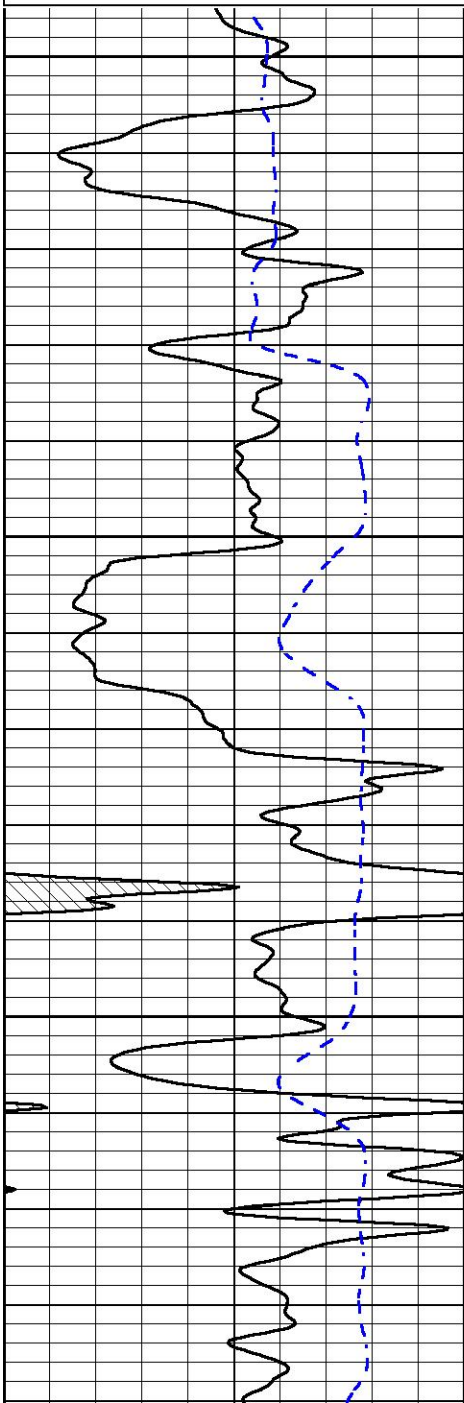


REPEAT SECTION

Database File: castle_resources_skolout_1.db
 Dataset Pathname: stackmel/pass2.1
 Presentation Format: _dil
 Dataset Creation: Sat Apr 04 20:04:18 2020
 Charted by: Depth in Feet scaled 1:240

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

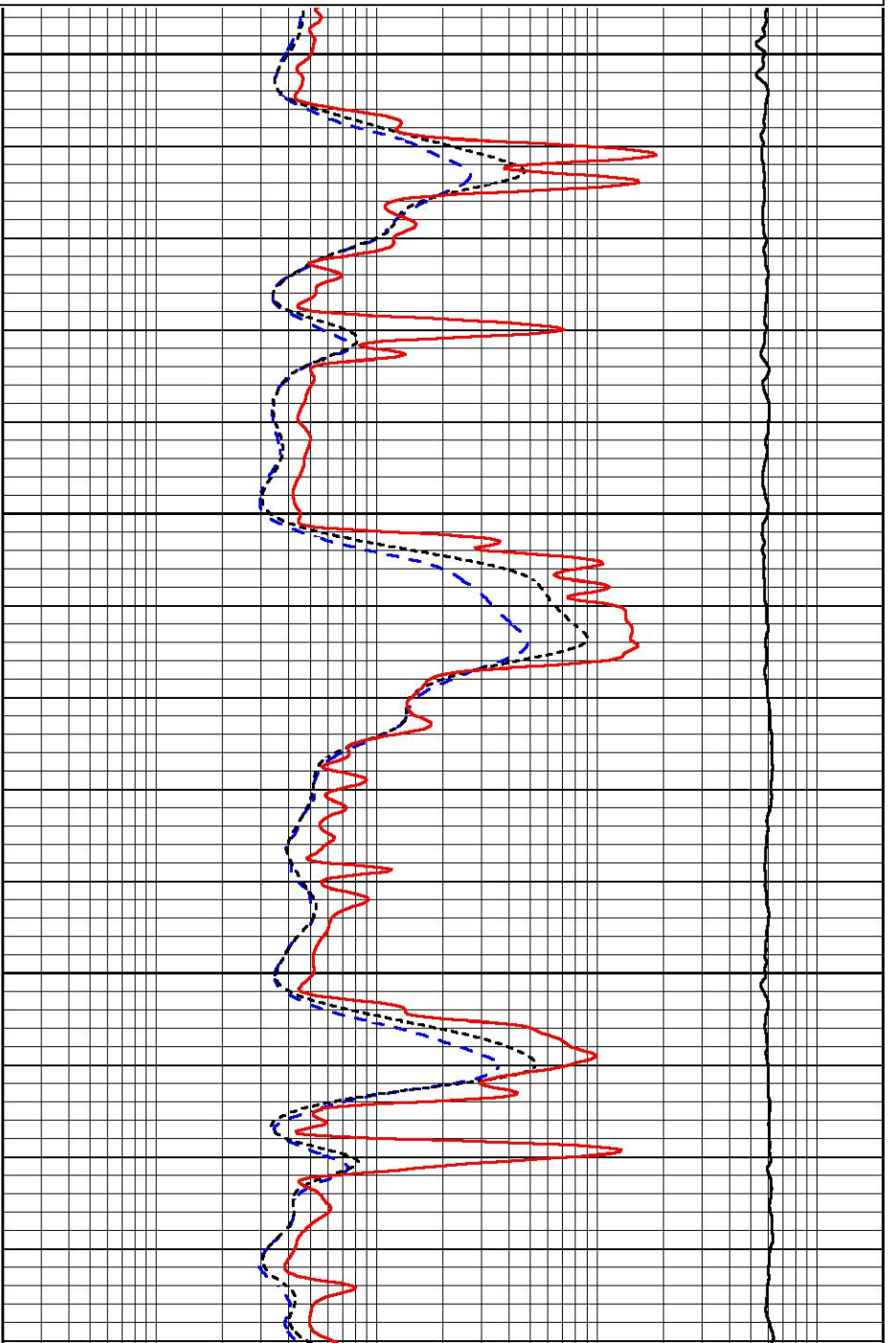
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0

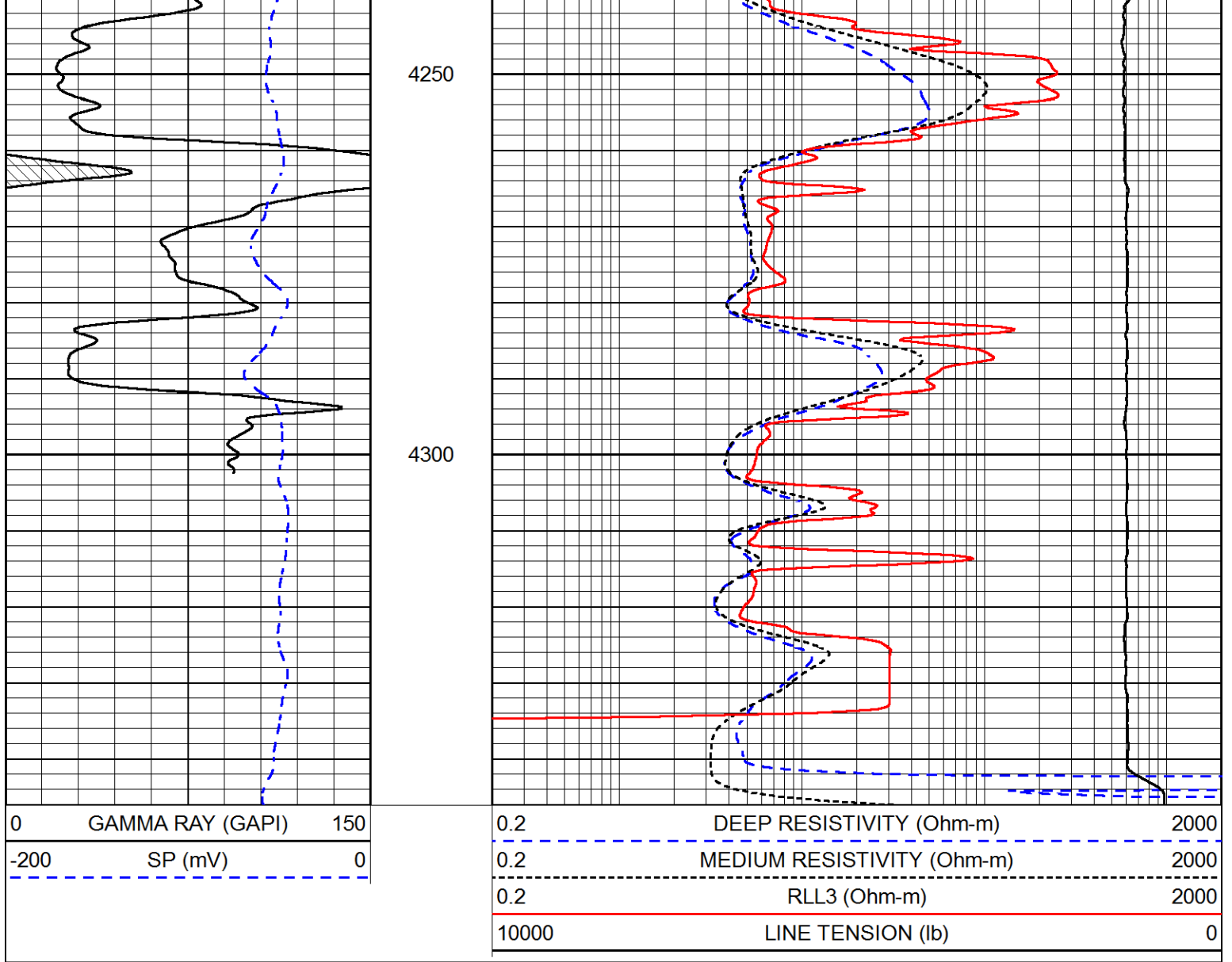


4100

4150

4200





Calibration Report

Database File castle_resources_skolout_1.db
 Dataset Pathname stackmel/pass3.1
 Dataset Creation Sat Apr 04 19:42:36 2020

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Sun Mar 01 09:43:59 2020

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.500	-27.500
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.350	-27.000

Microlog Calibration Report

Serial-Model: UDM-01-PSI UDM ML
 Performed: Sun Jan 05 15:35:23 2020

Readings		References		Results	
Zero	Cal	Zero	Cal	m	b

Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	7000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	7000.0000	0.0000
Caliper	1.0020	1.2631	6.5000	21.0000	in	55.5374	-49.9000

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Tue Sep 24 21:18:50 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.680	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.532		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	15.00	in	1.33		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W
 Tool Model: M&W
 Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



PIONEER
 Pioneer Energy Services

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