



PIONEER
Pioneer Energy Services

**DUAL IND / DUAL COMP
POROSITY LOG**

Company **EXTRACTION OIL & GAS**
Well **WS-SUNRISE NO. C1-5-5**
Field **WATTENBERG**
County **WELD**
State **COLORADO**

Company **EXTRACTION OIL & GAS**
Well **WS-SUNRISE NO. C1-5-5**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API #: 05-123-46045-00

250' FSL & 1686' FEL

SEC 32 TWP 6N RGE 65W

NONE

Other Services

Permanent Datum **GROUND LEVEL Elevation 4641'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**

Elevation
K.B. 4666'
D.F. N/A
G.L. 4641'

Date **3/8/2018**

Run Number **ONE**

Depth Driller **6713'**

Depth Logger **6530'**

Bottom Logged Interval **6529'**

Top Log Interval **1550'**

Casing Driller **9.625" @ 1585'**

Casing Logger **1585'**

Bit Size **8.5"**

Type Fluid in Hole **OIL BASED MUD**

Salinity, ppm CL **N/A**

Density / Viscosity **9.2 N/A**

pH / Fluid Loss **N/A N/A**

Source of Sample **FLOWLINE**

Rm @ Meas. Temp **N/A @ N/A**

Rmf @ Meas. Temp **N/A @ N/A**

Rmc @ Meas. Temp **N/A @ N/A**

Source of Rmf / Rmc **CHARTS**

Rm @ BHT **N/A @ N/A**

Operating Rig Time **2 HOURS**

Max Rec. Temp. F **N/A**

Equipment Number **108**

Location **HAYS**

Recorded By **J. HENRICKSON**

Witnessed By **HANS CARRIE**

<<< Fold Here >>>

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.

SO # 5E2B

NO FOCUS TOOL DUE TO OIL BASED MUD

Log Measured From: KELLY BUSHING

25 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: HANS CARRIE











Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

A 1	BOREID in 8.5	BOTTEMP degF 100	CASEOD in 5.5	CASETHCK in 0	FLUIDDEN g/cc 1	M 2	MATRXDEN g/cc 2.71
NPORSEL Limestone	PERFS 0	SNDERR mmho/m 0	SNDERRM mmho/m 0	SPSHIFT mV 0	SRFTEMP degF 0	SZCOR Off	TDEPTH ft 0

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00			GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90			CNT-M&W (tk10-MW)	5.50	3.50	100.00
	29.15						
LSD DCAL SSD	20.85			CDL-M&W (168-986)	8.50	4.00	250.00
	20.83						
	20.35						
RLL3 RLL3F	15.80						
	15.79						
CILD	8.00			DIL-M&W (PSI 978)	18.50	3.50	220.00

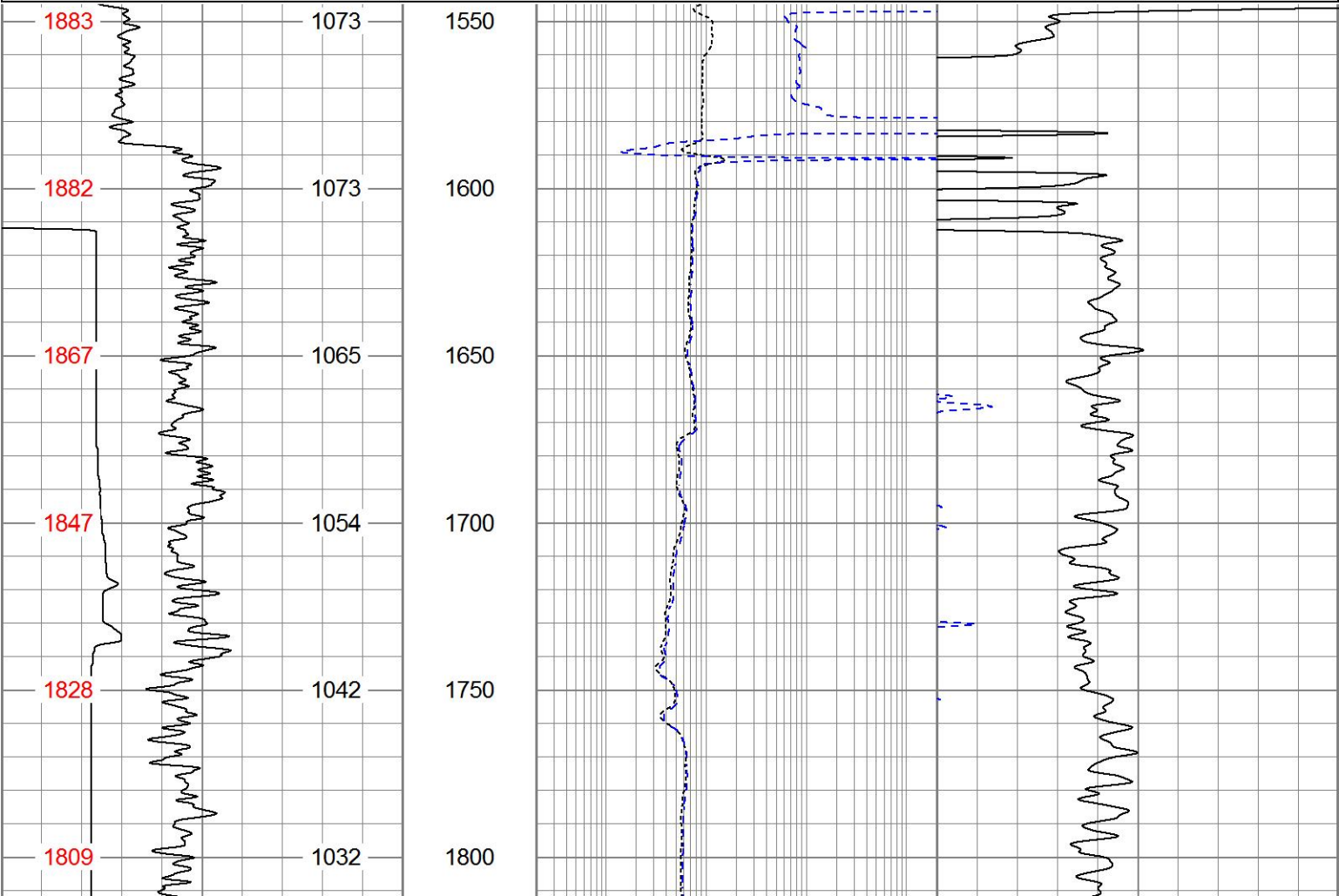
CILM	4.70								
SP	0.20								
Dataset: extraction_ws_sunrise_c1_5_5.db: field/well/stack/pass2.1 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									

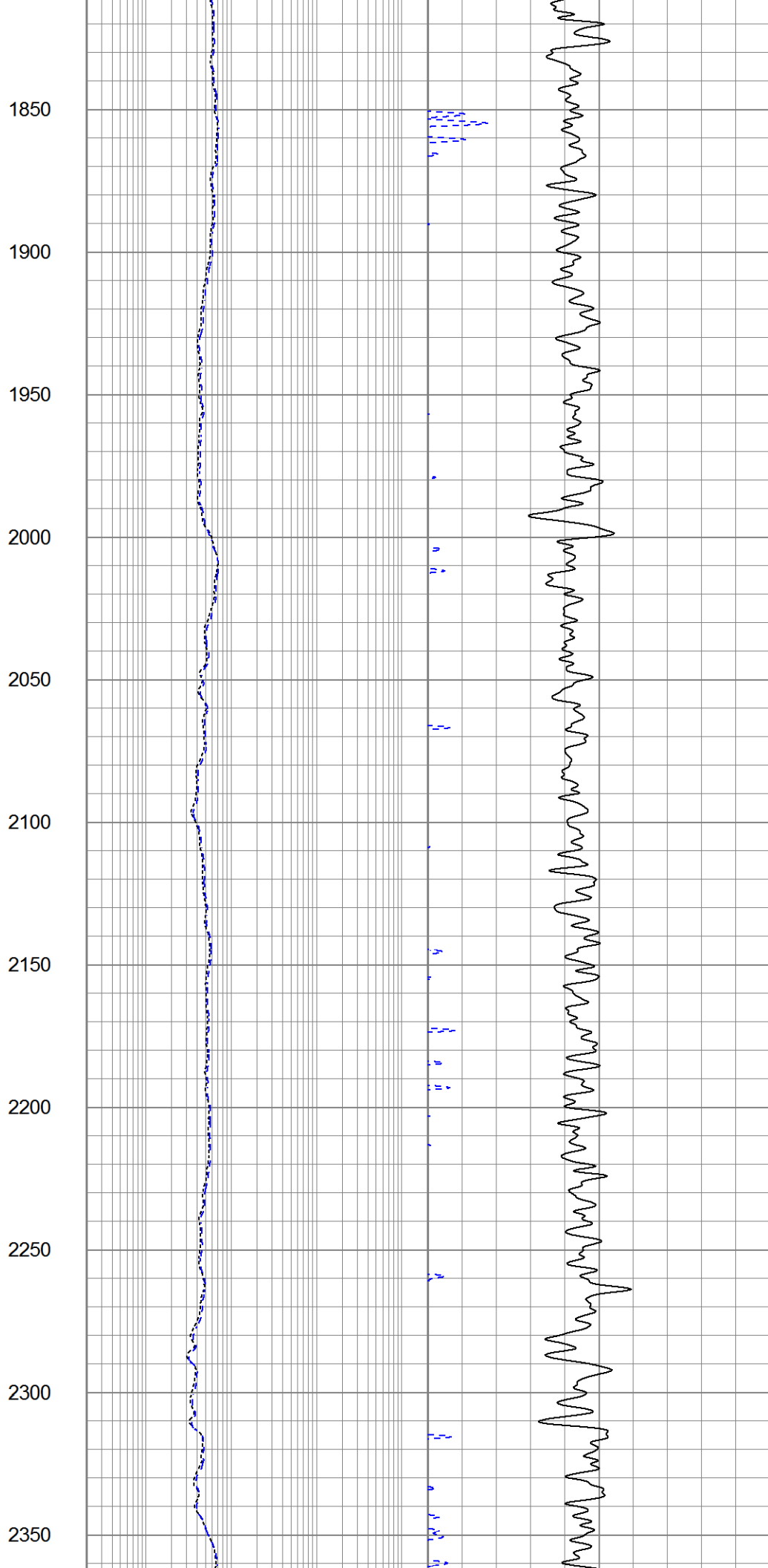
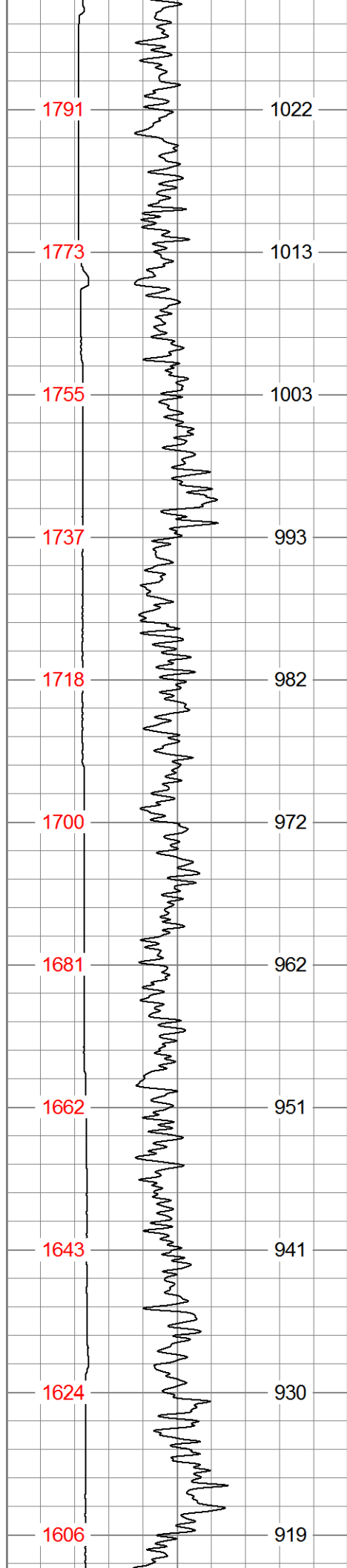


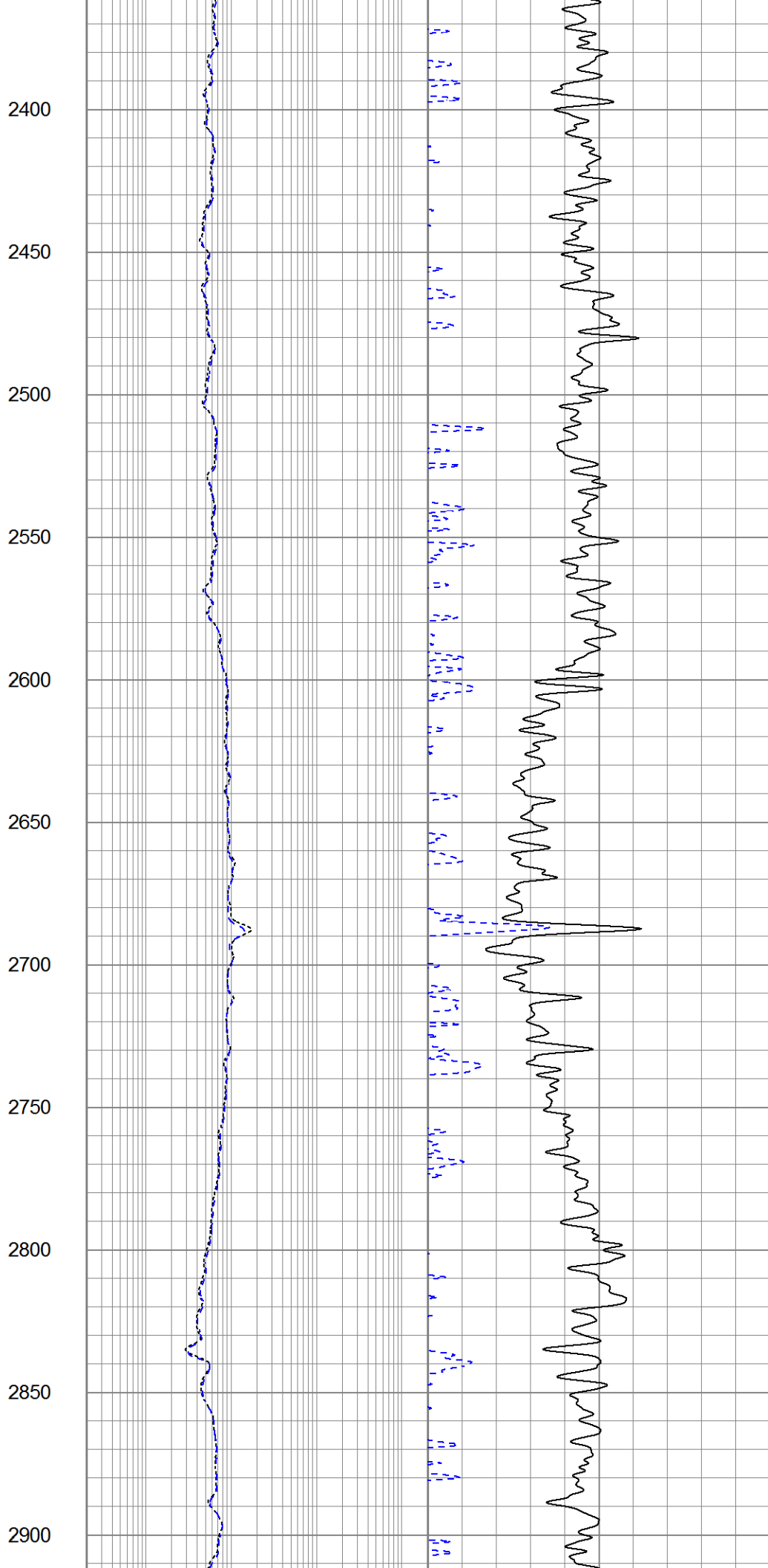
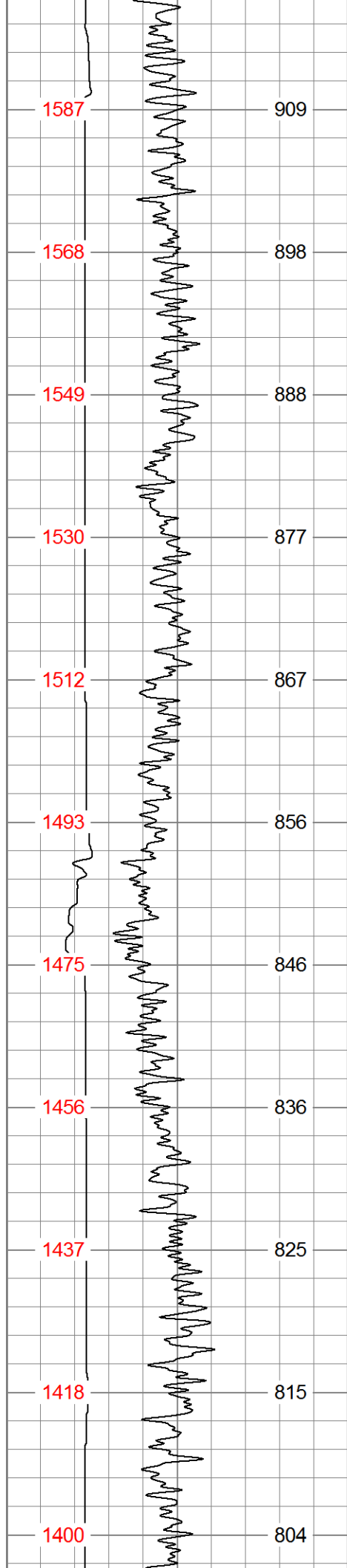
MAIN PASS

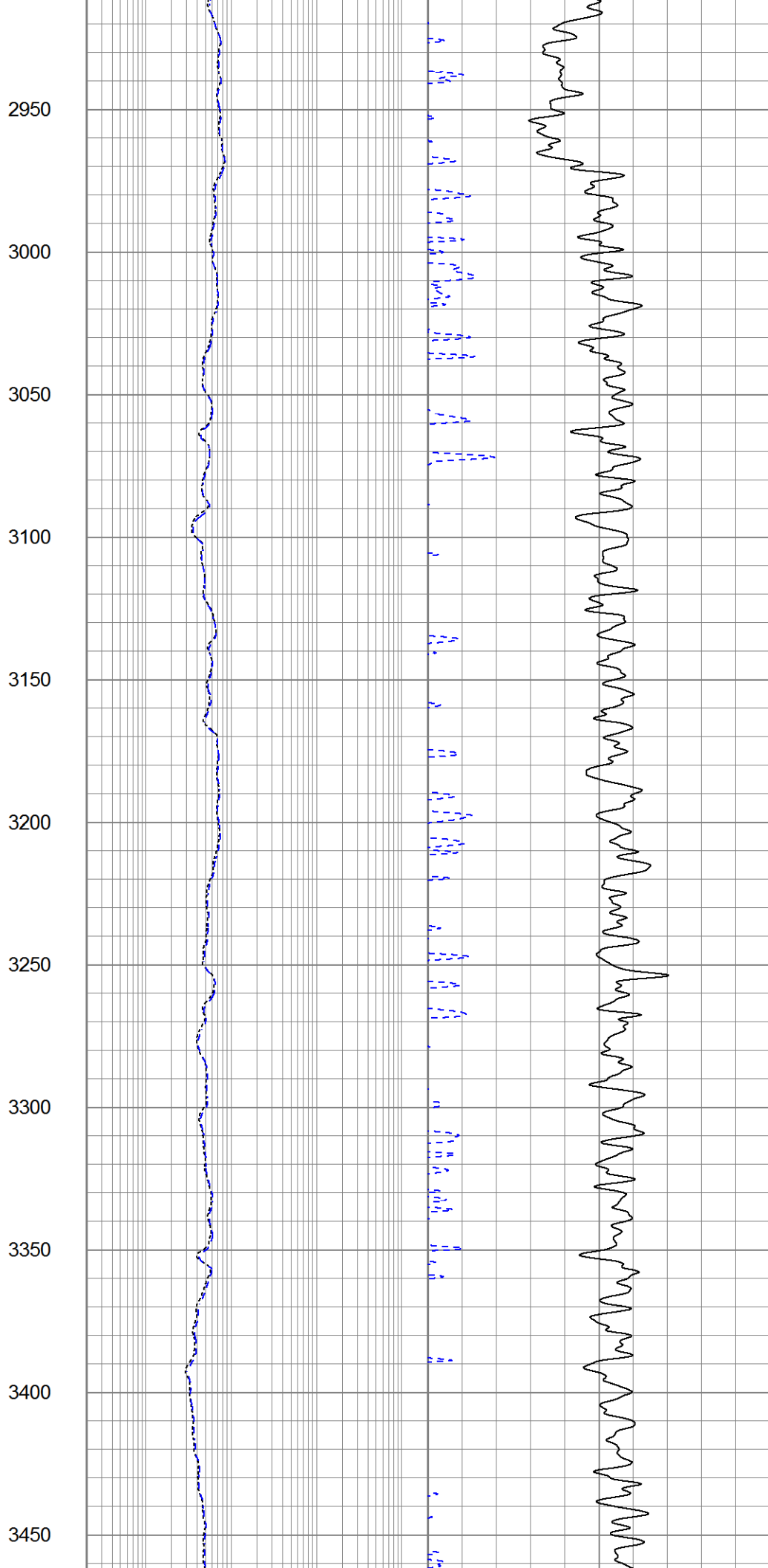
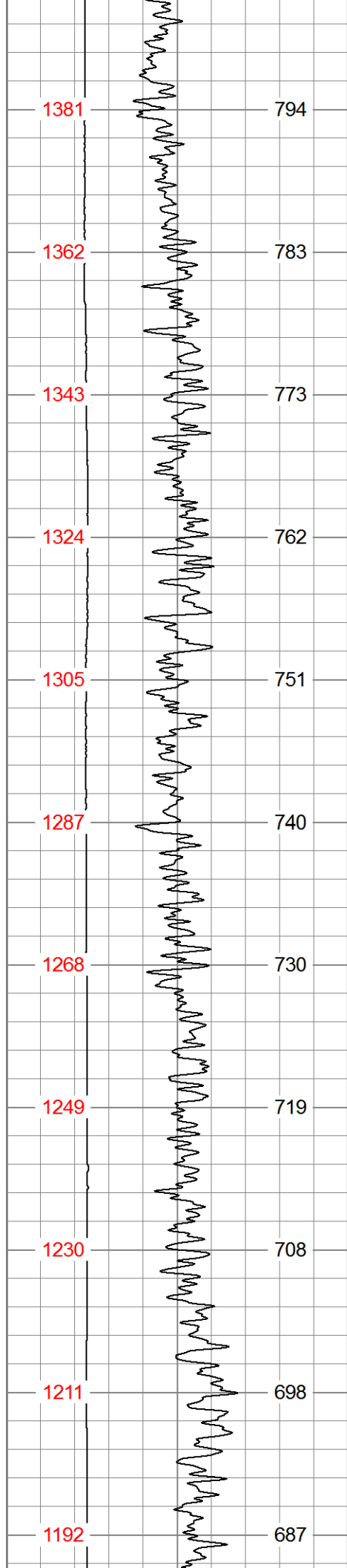
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Dataset Pathname	stack/pass2.1
Presentation Format	split
Dataset Creation	Thu Mar 08 20:19:13 2018
Charted by	Depth in Feet scaled 1:600

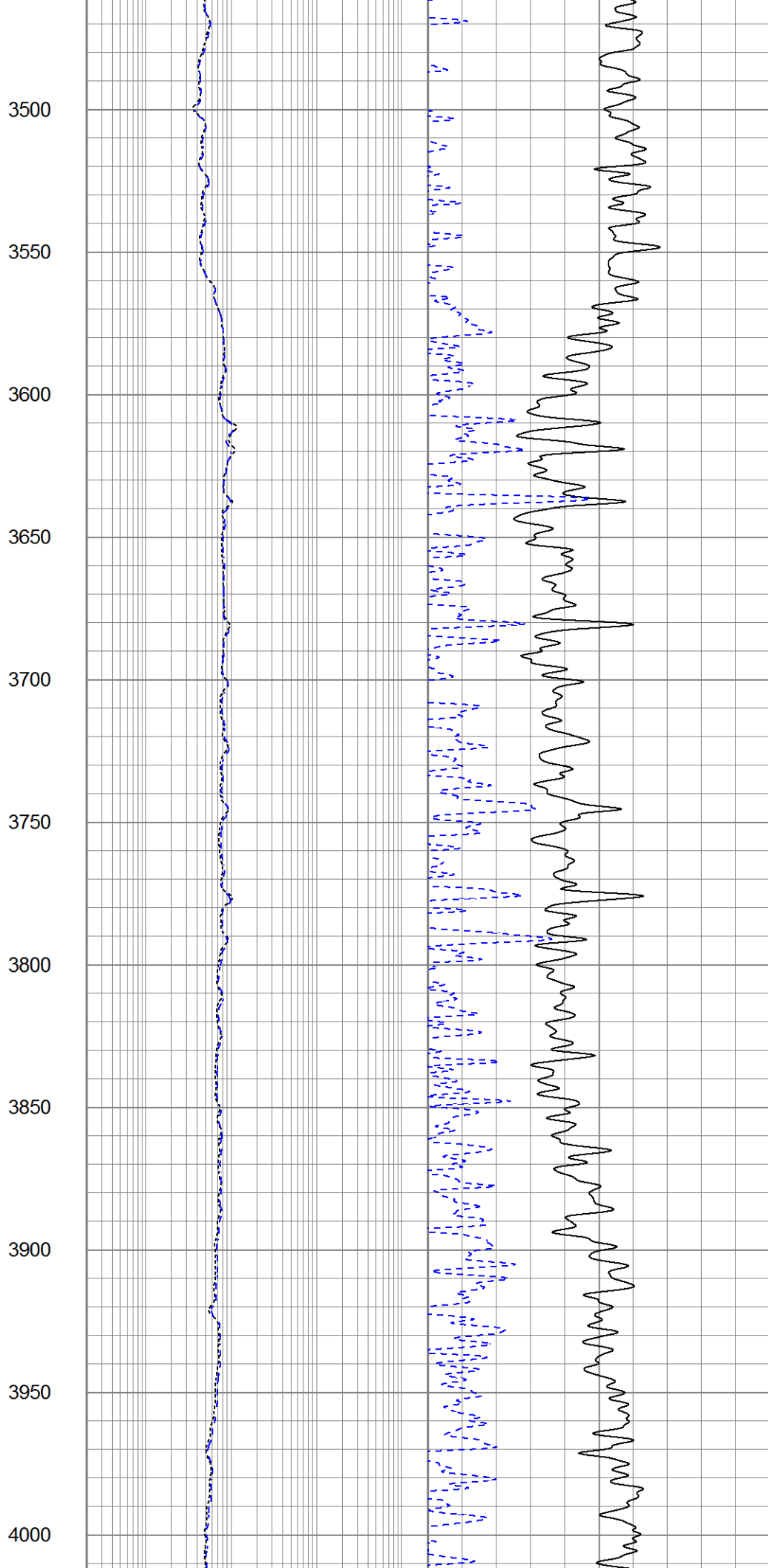
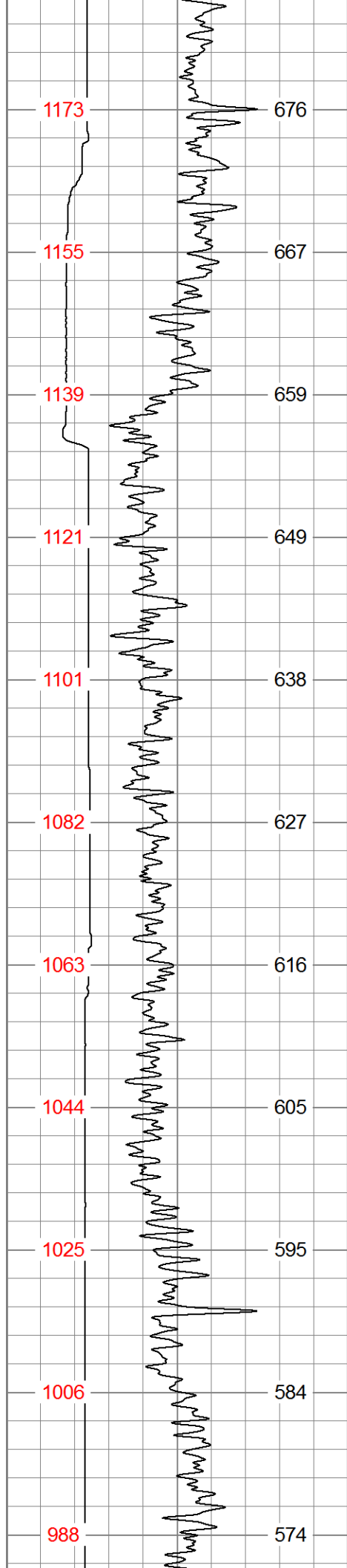
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6	DCAL (in)	16		0.2 (Ohm-m) 2000	30	CNLS (pu)	0
6	DCAL (in)	16		DEEP INDUCTION			
				0.2 (Ohm-m) 2000			

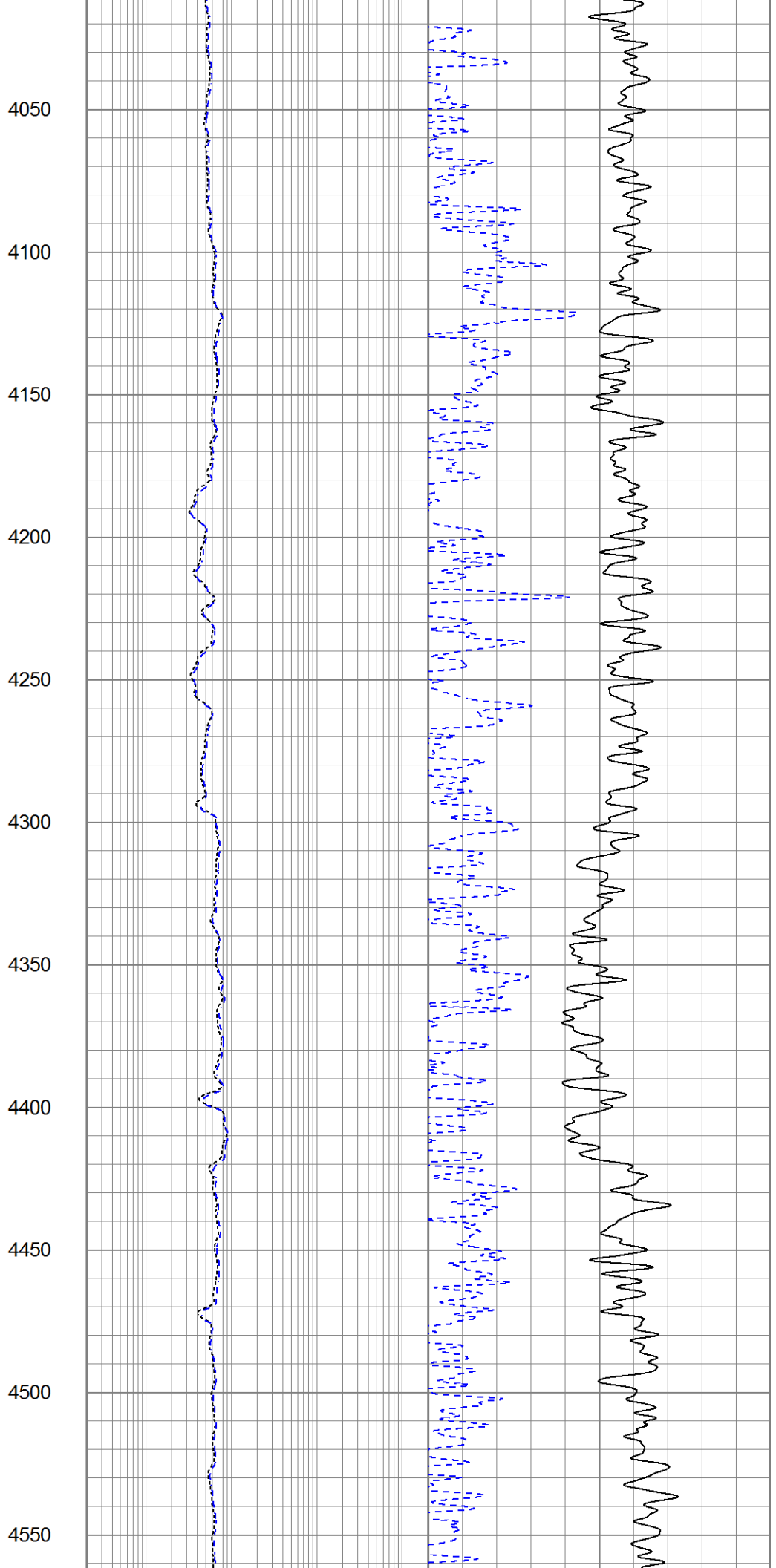
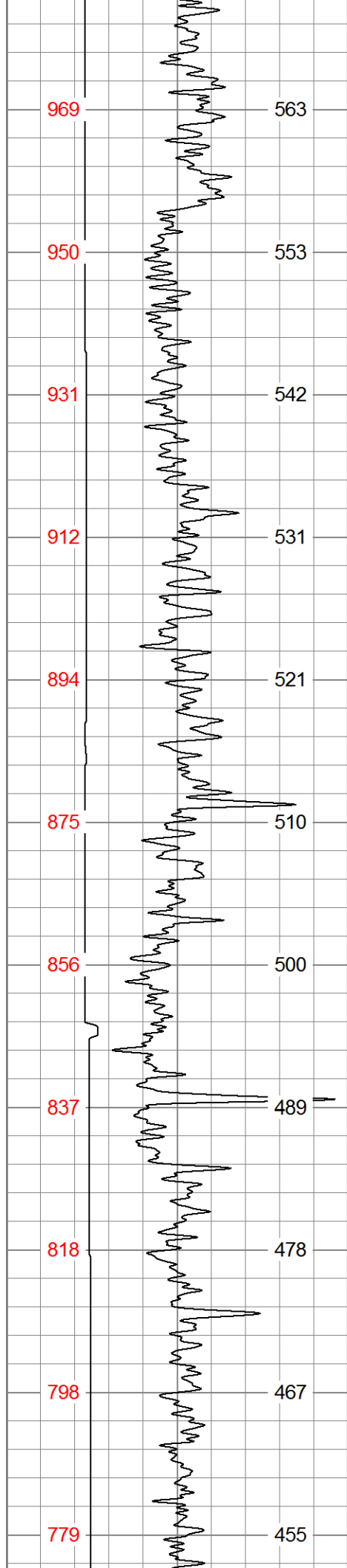


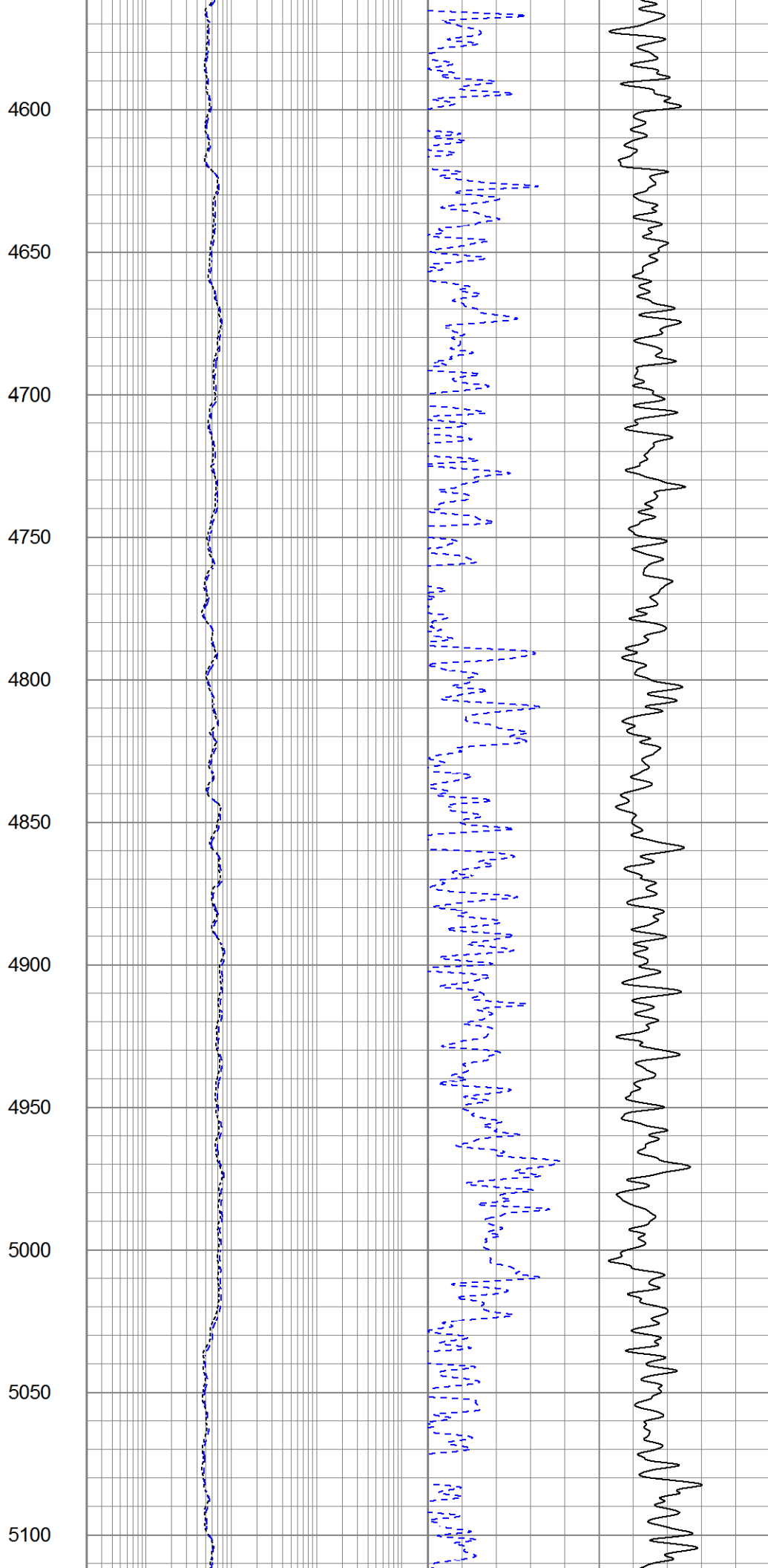
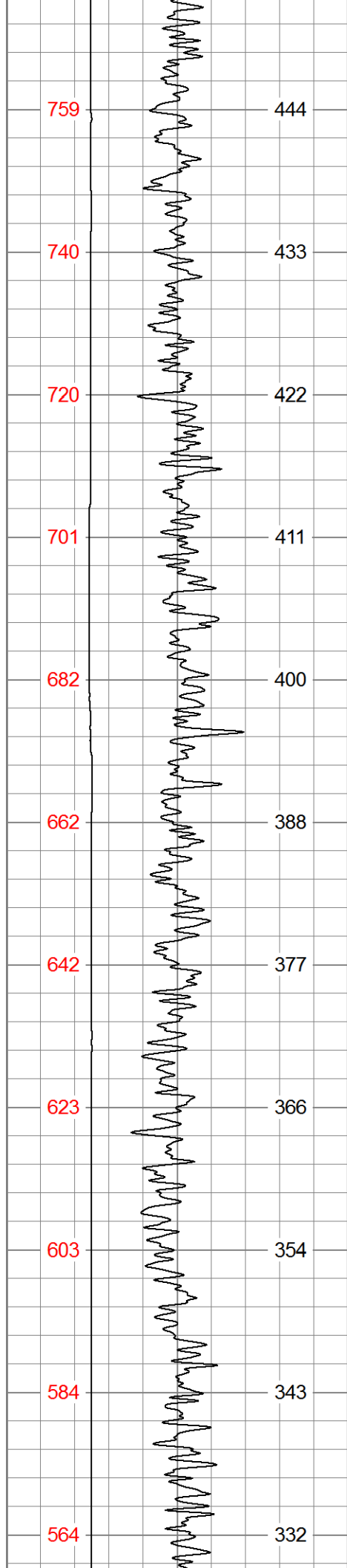


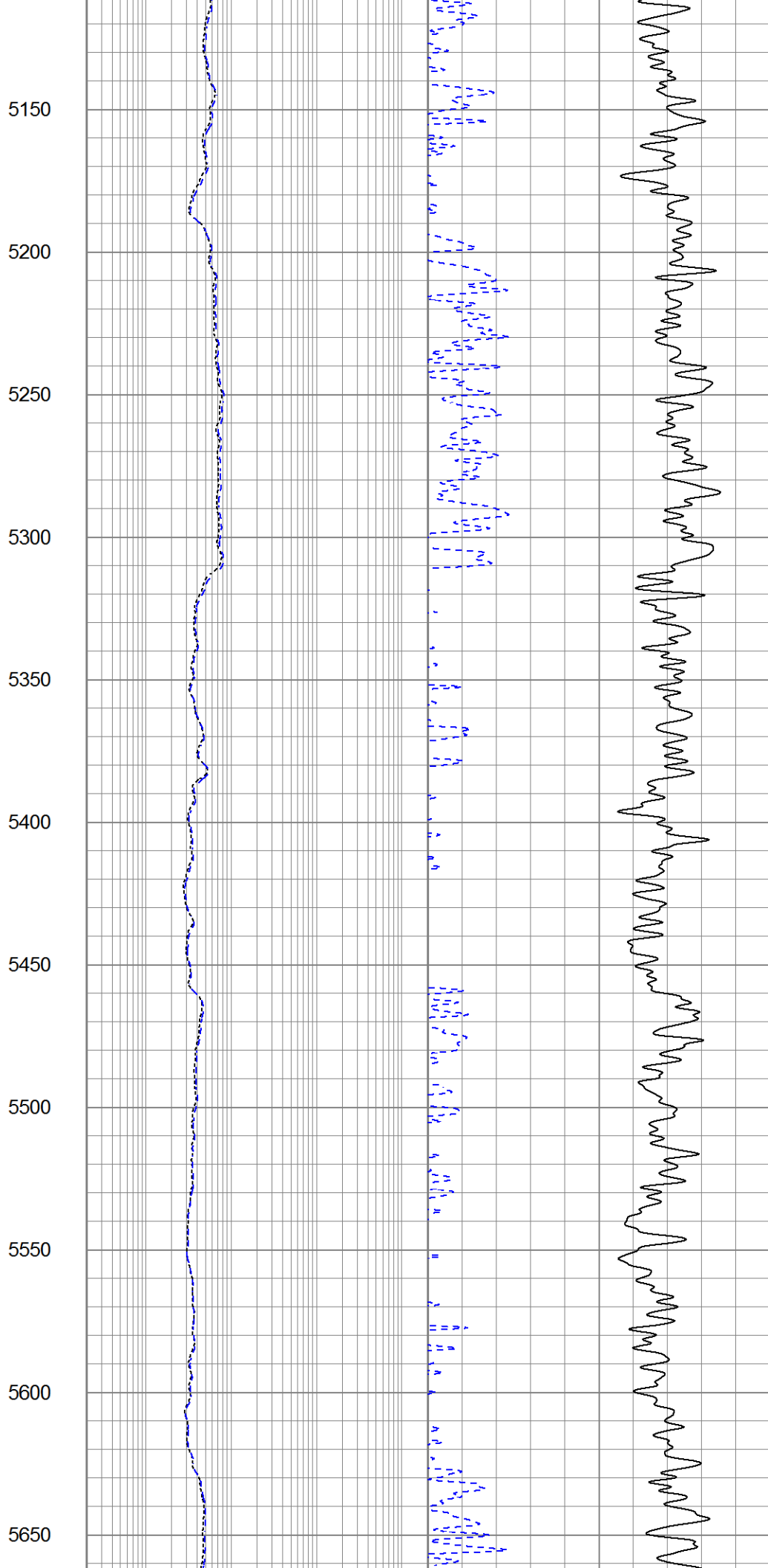
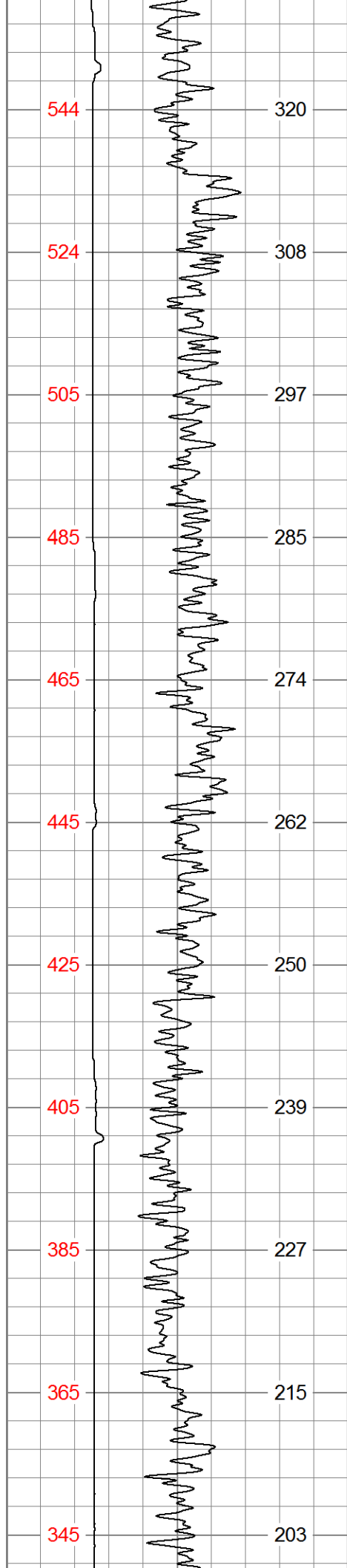


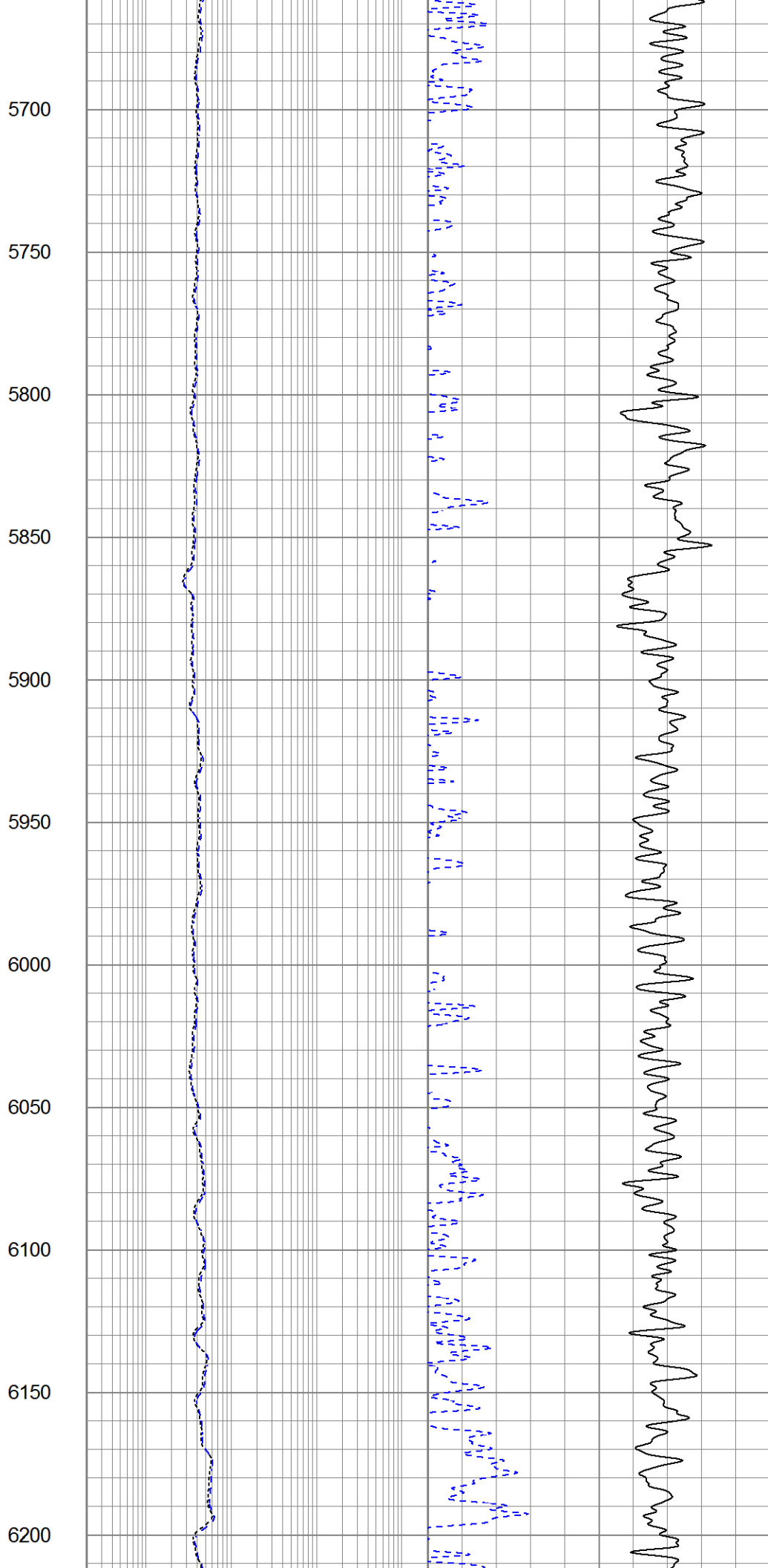
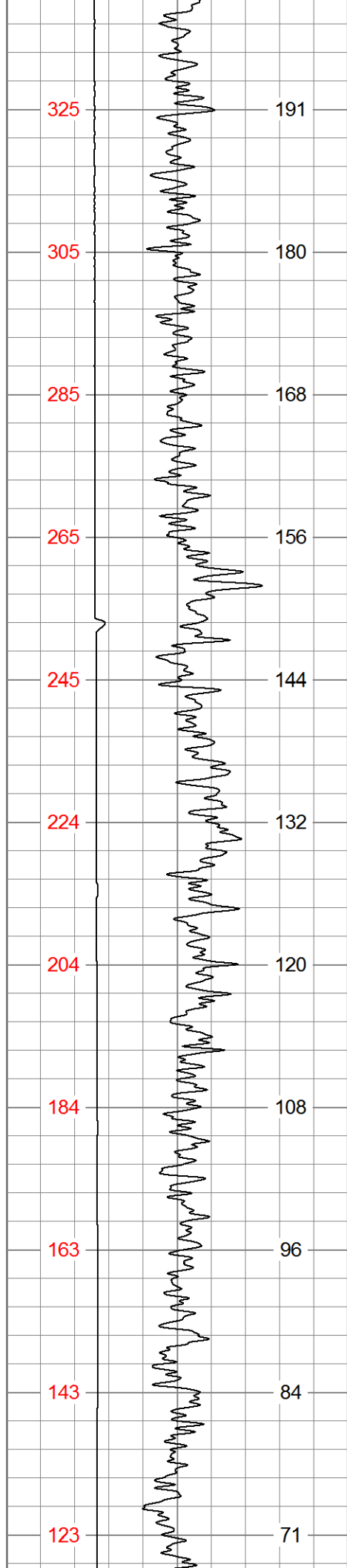


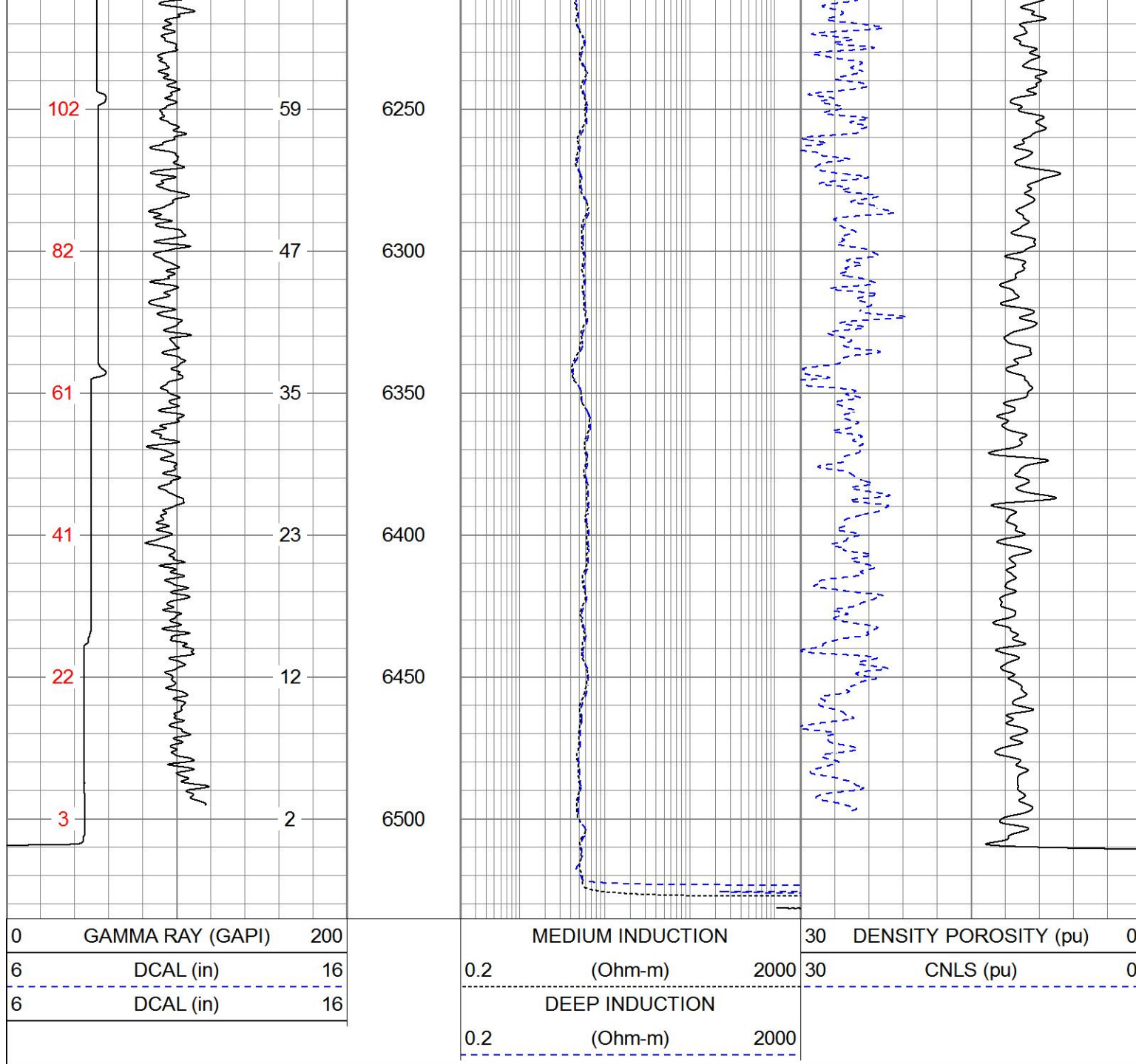















PIONEER
Pioneer Energy Services

MAIN PASS

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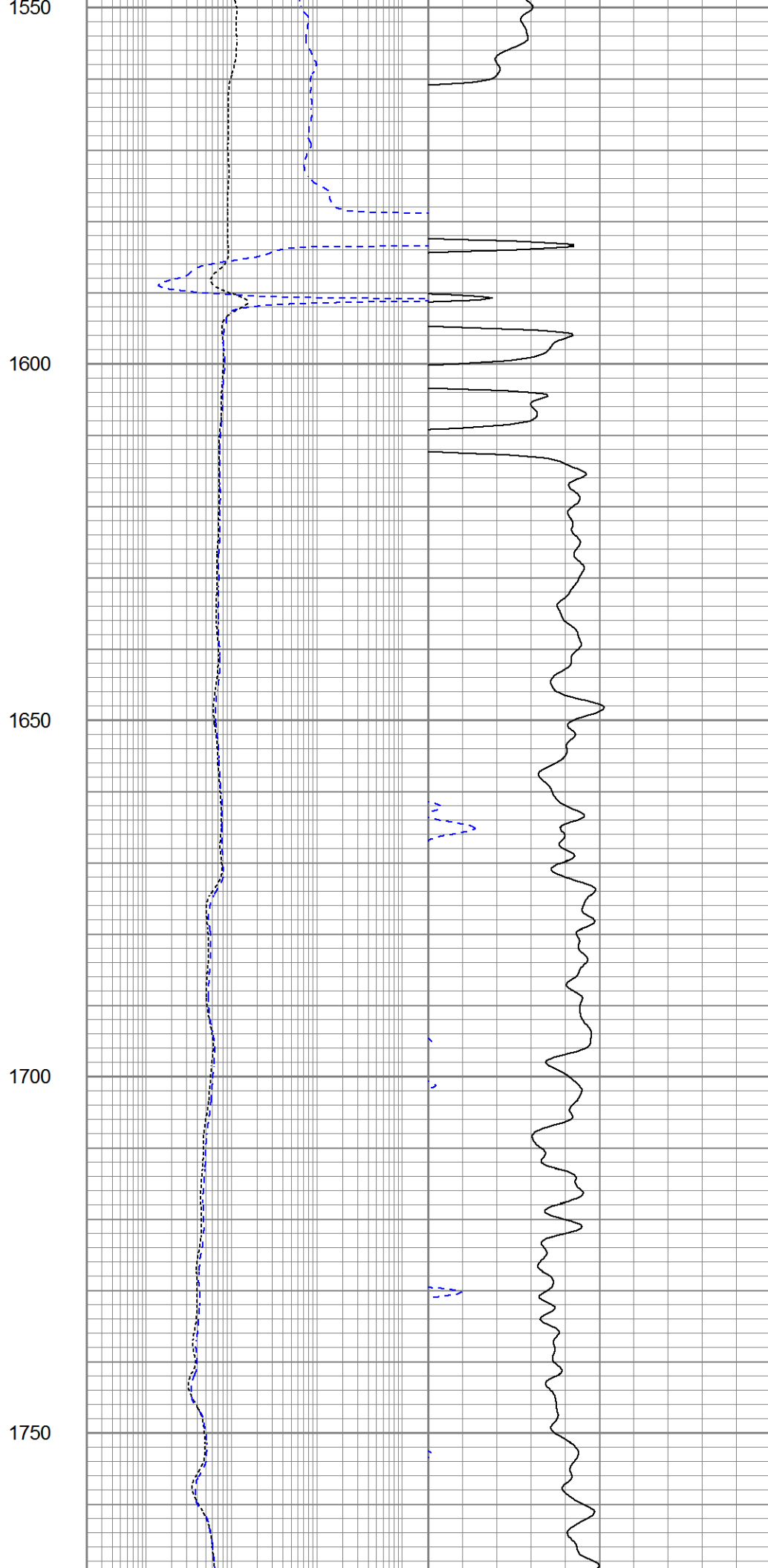
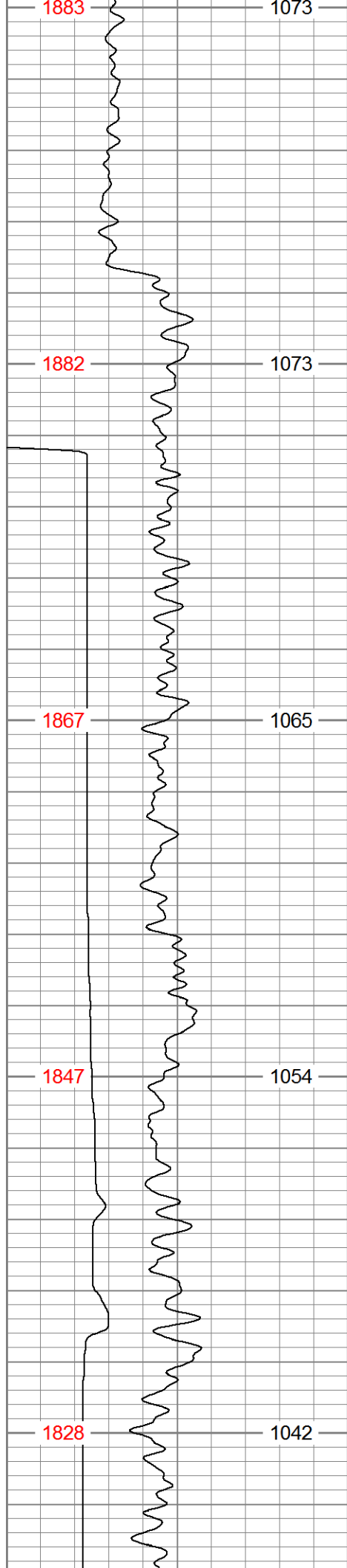
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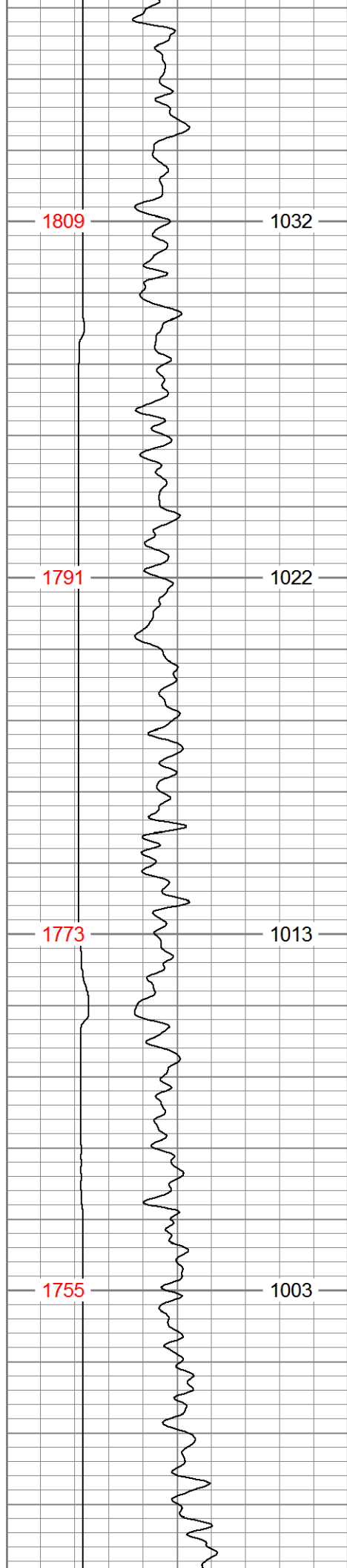
Presentation Format: split

Dataset Creation: Thu Mar 08 20:19:13 2018

Charted by: Depth in Feet scaled 1:240

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6	DCAL (in)	16	0.2 (Ohm-m) 2000	30	CNLS (pu)	0
6	DCAL (in)	16	DEEP INDUCTION			
			0.2 (Ohm-m) 2000			



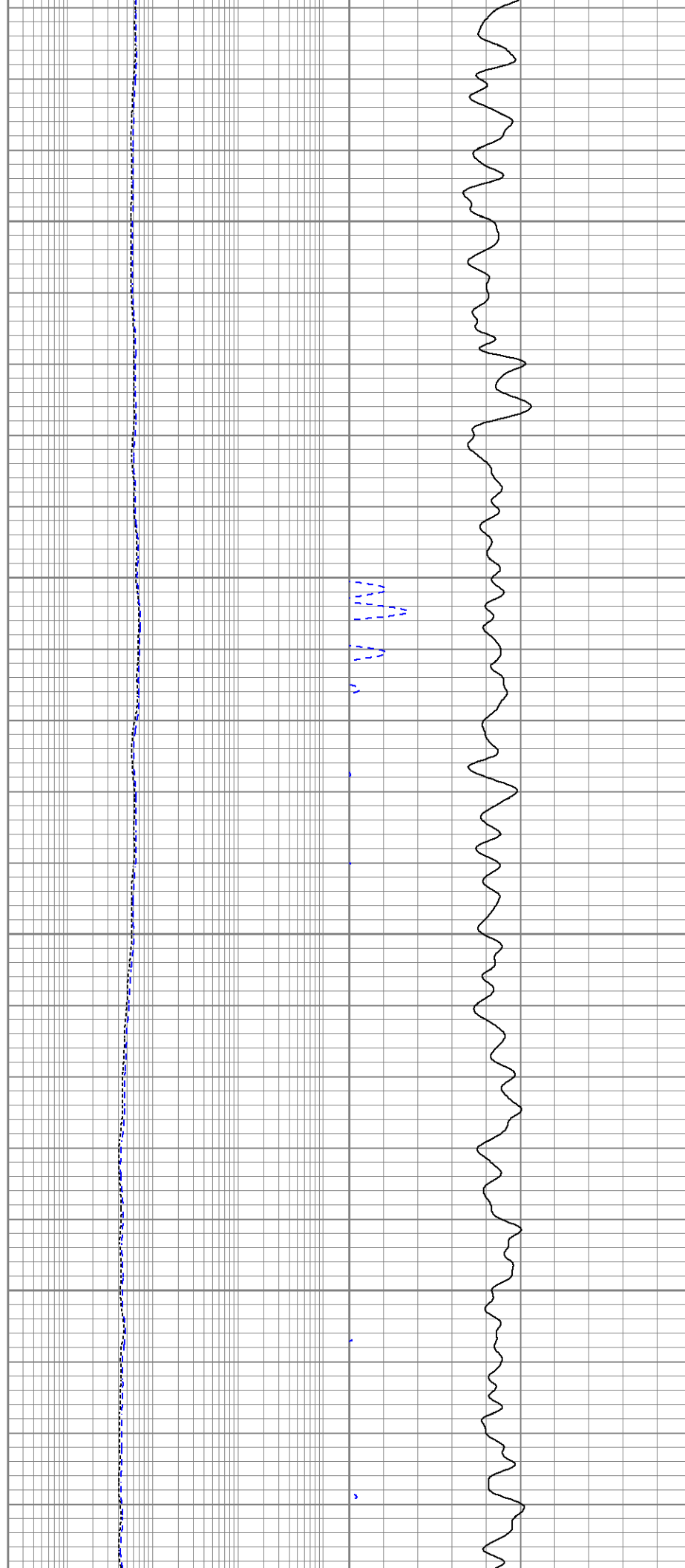


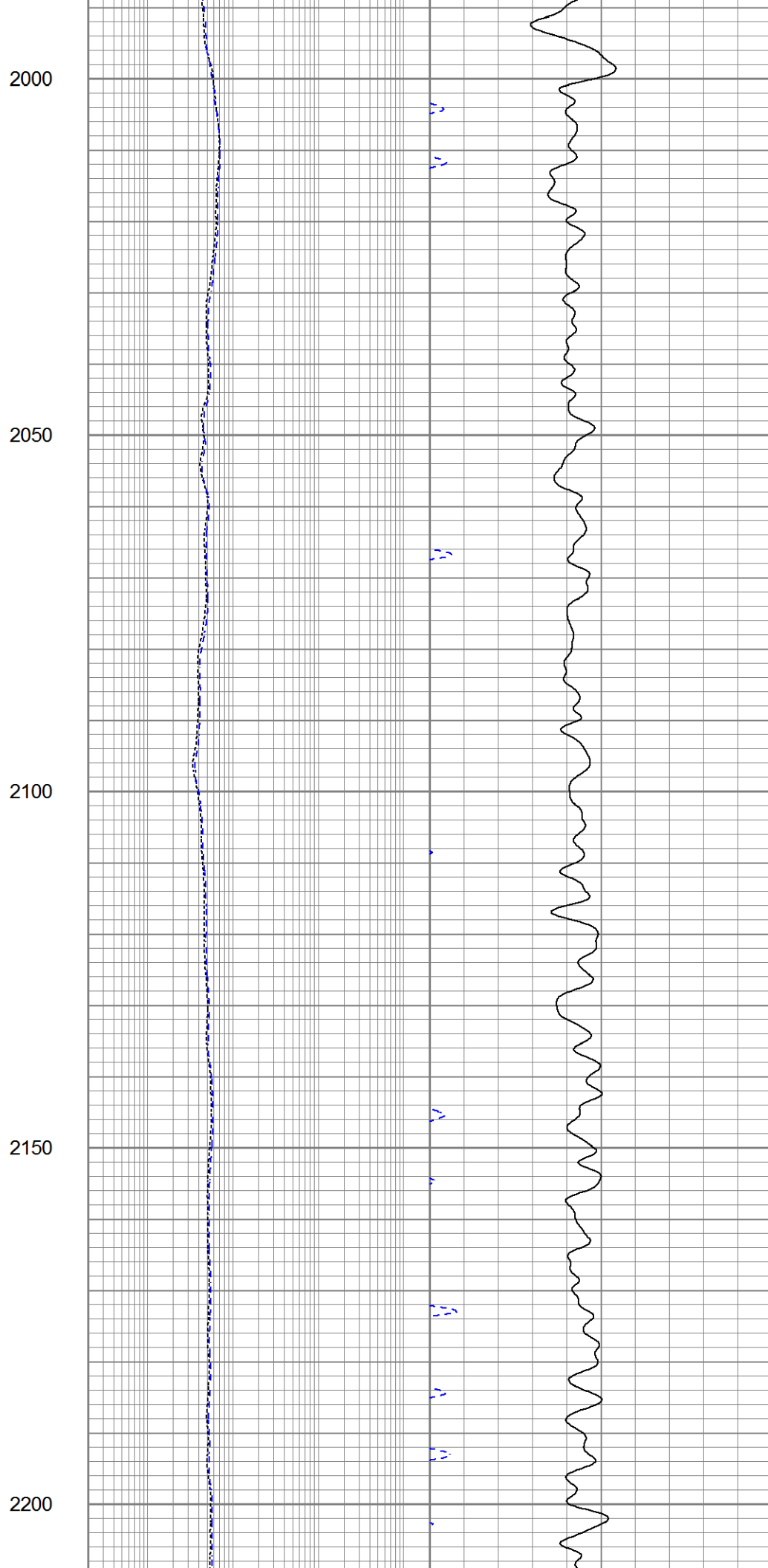
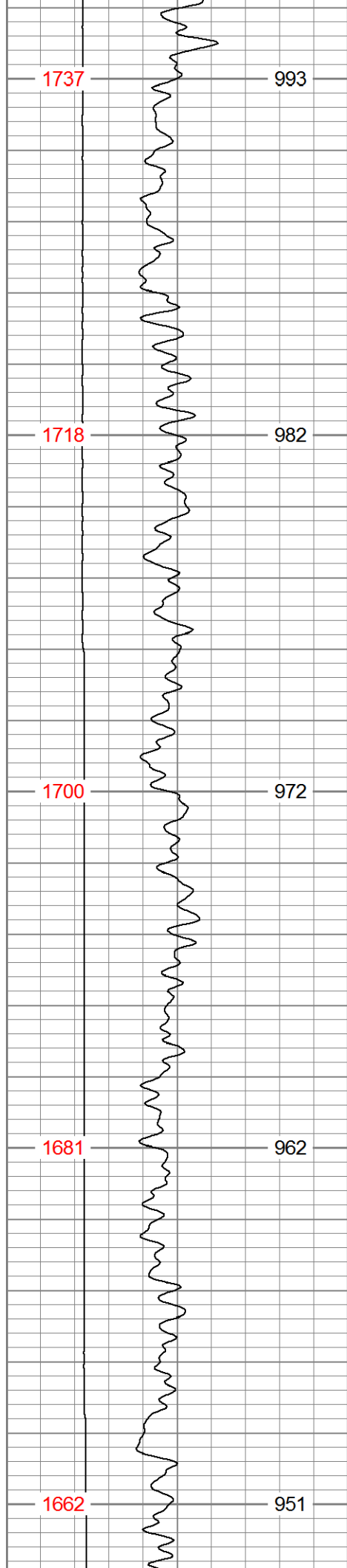
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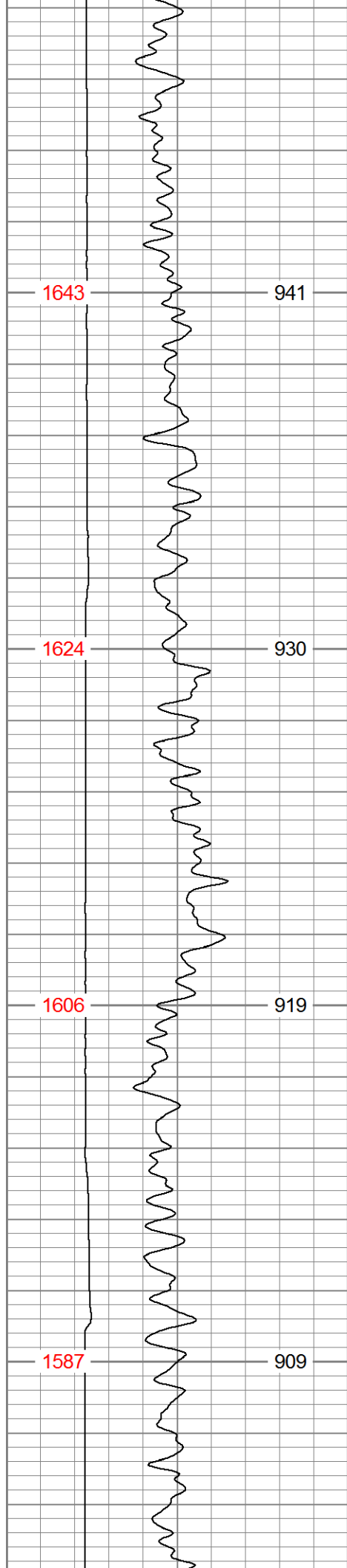
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1900

1950





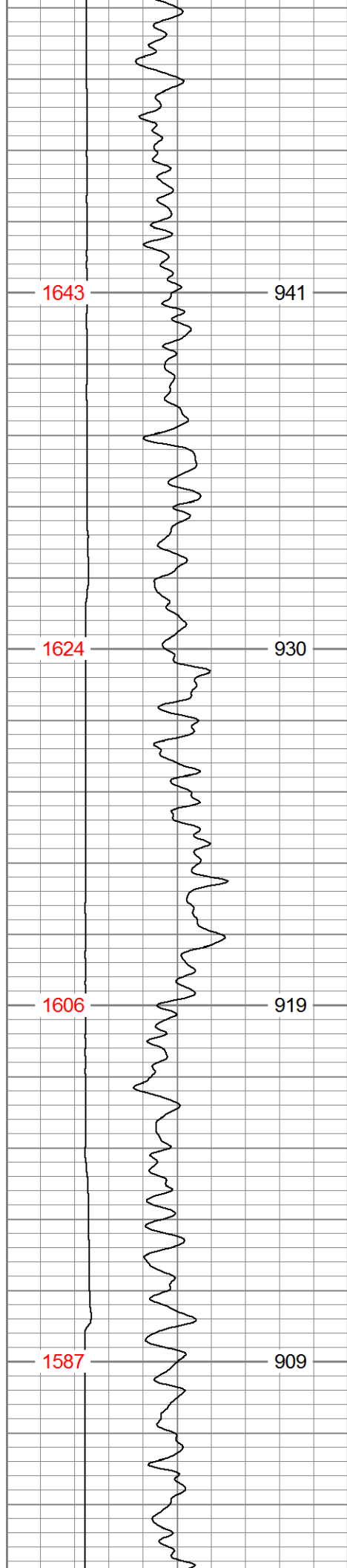
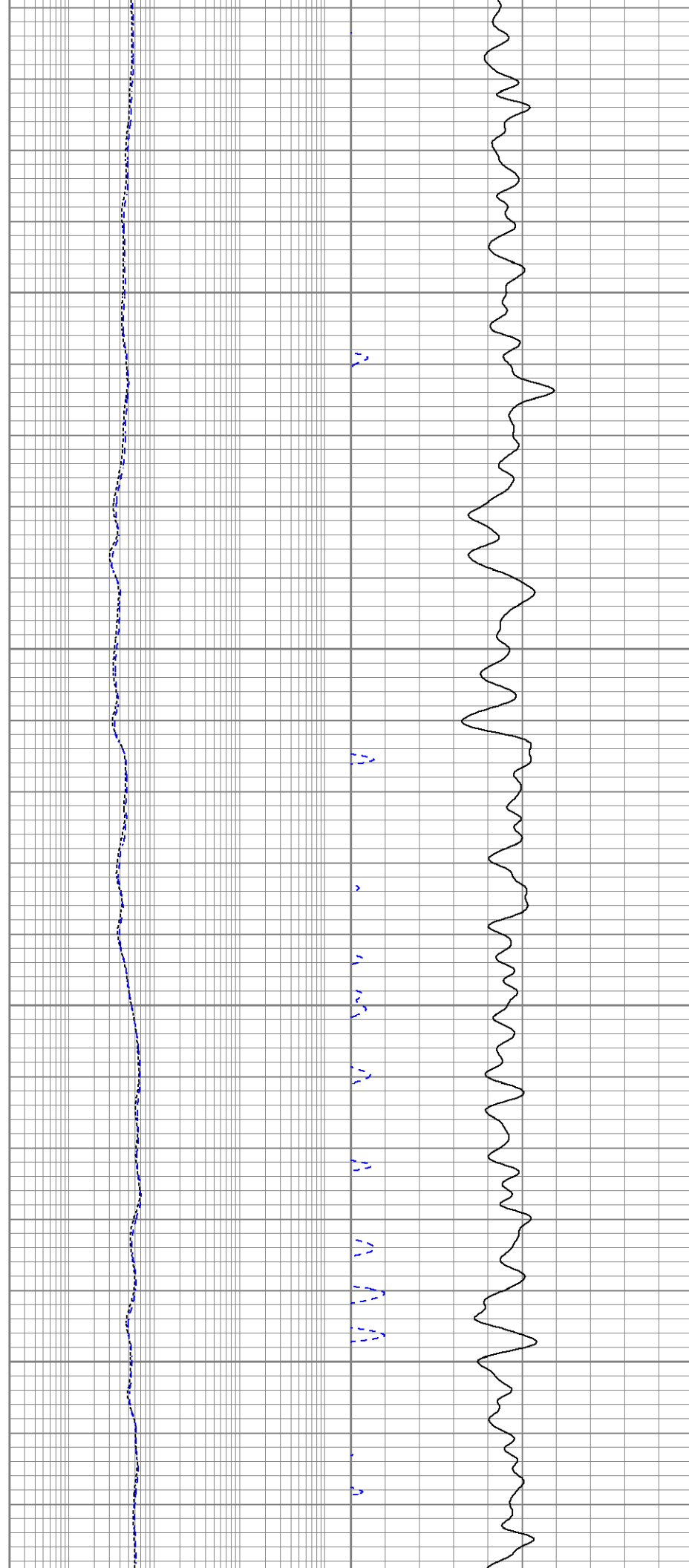


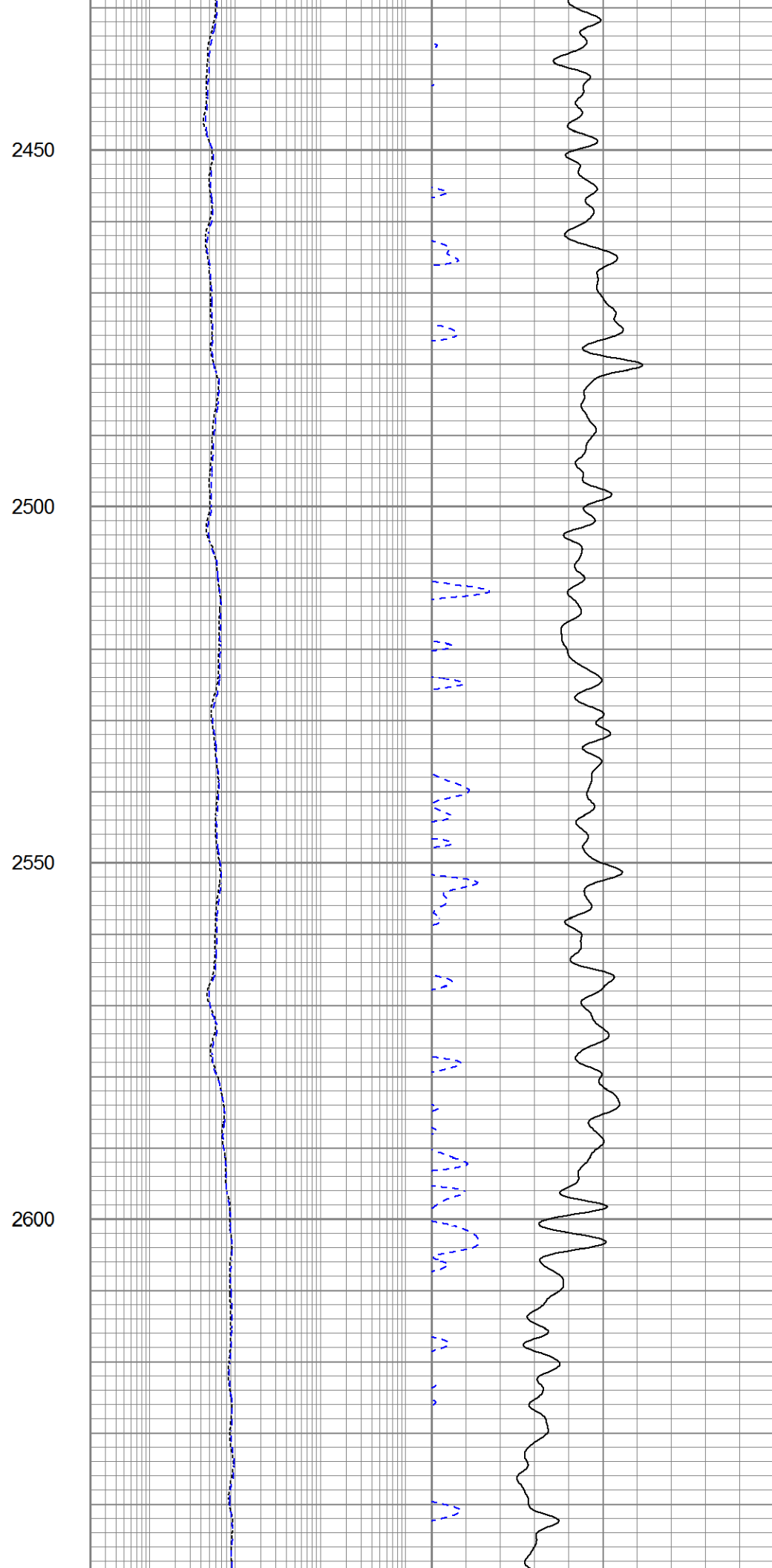
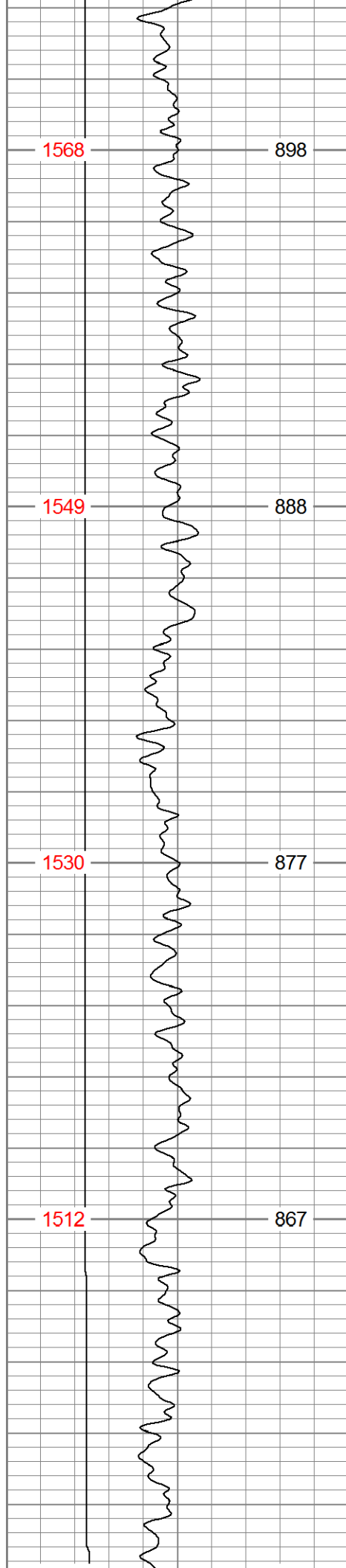
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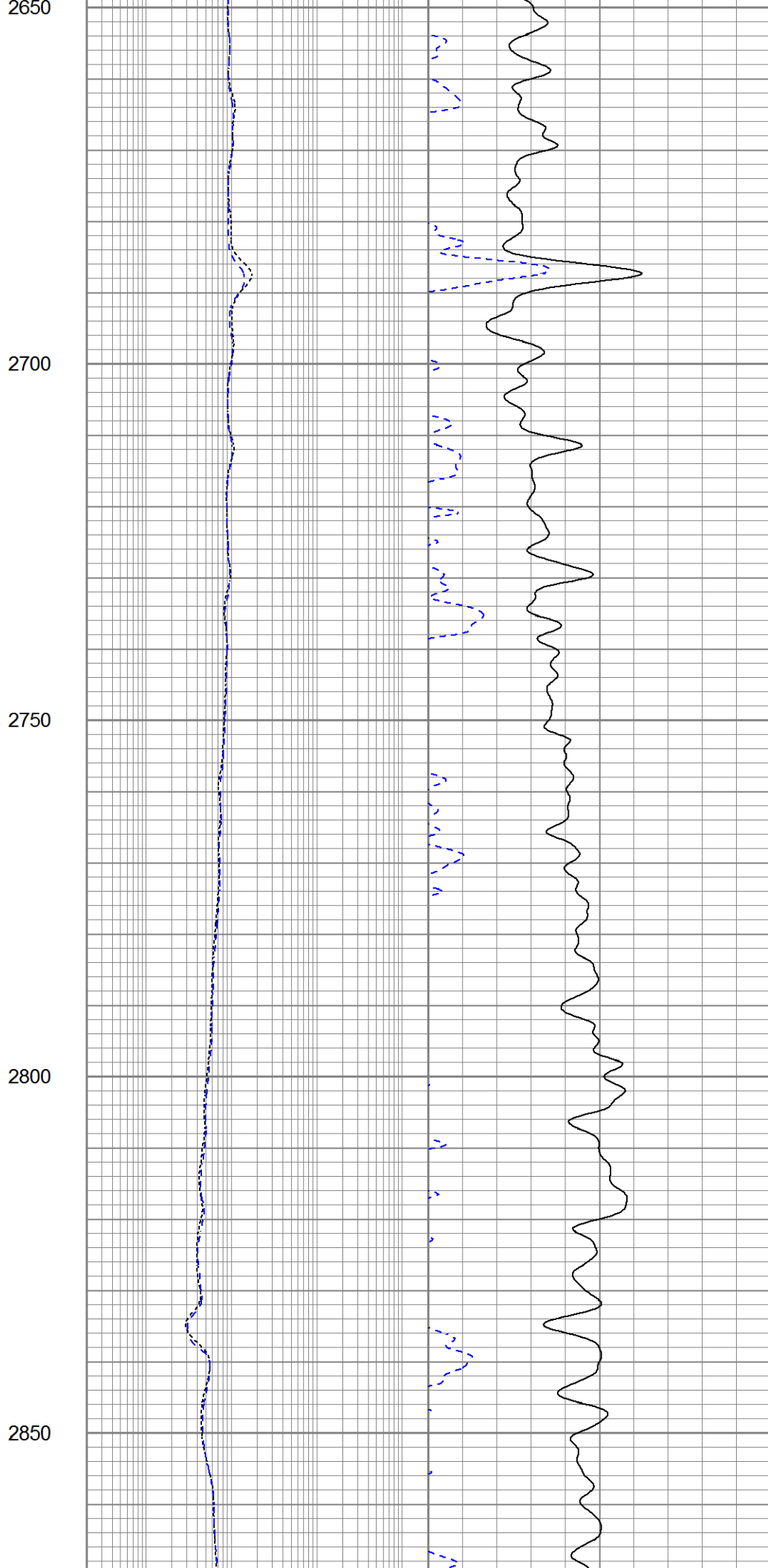
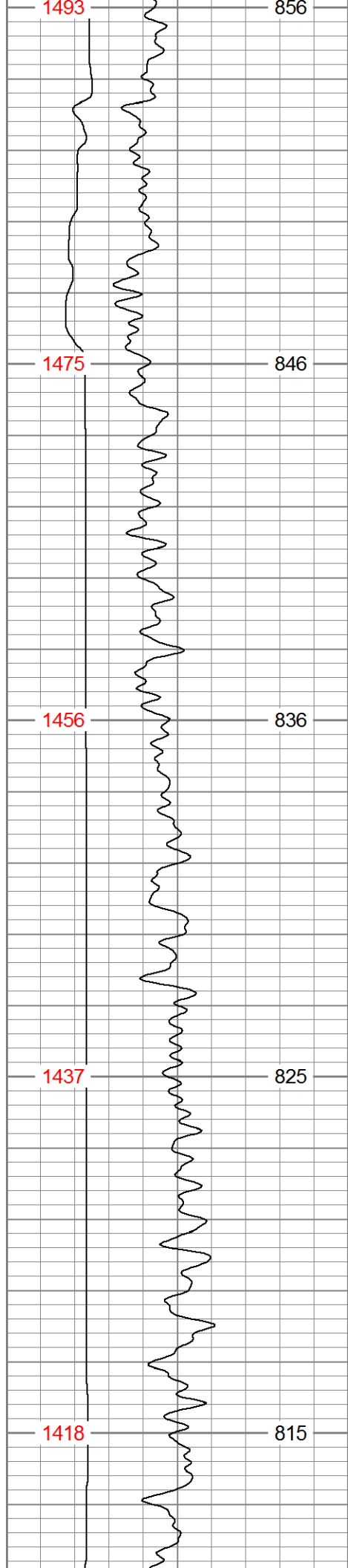
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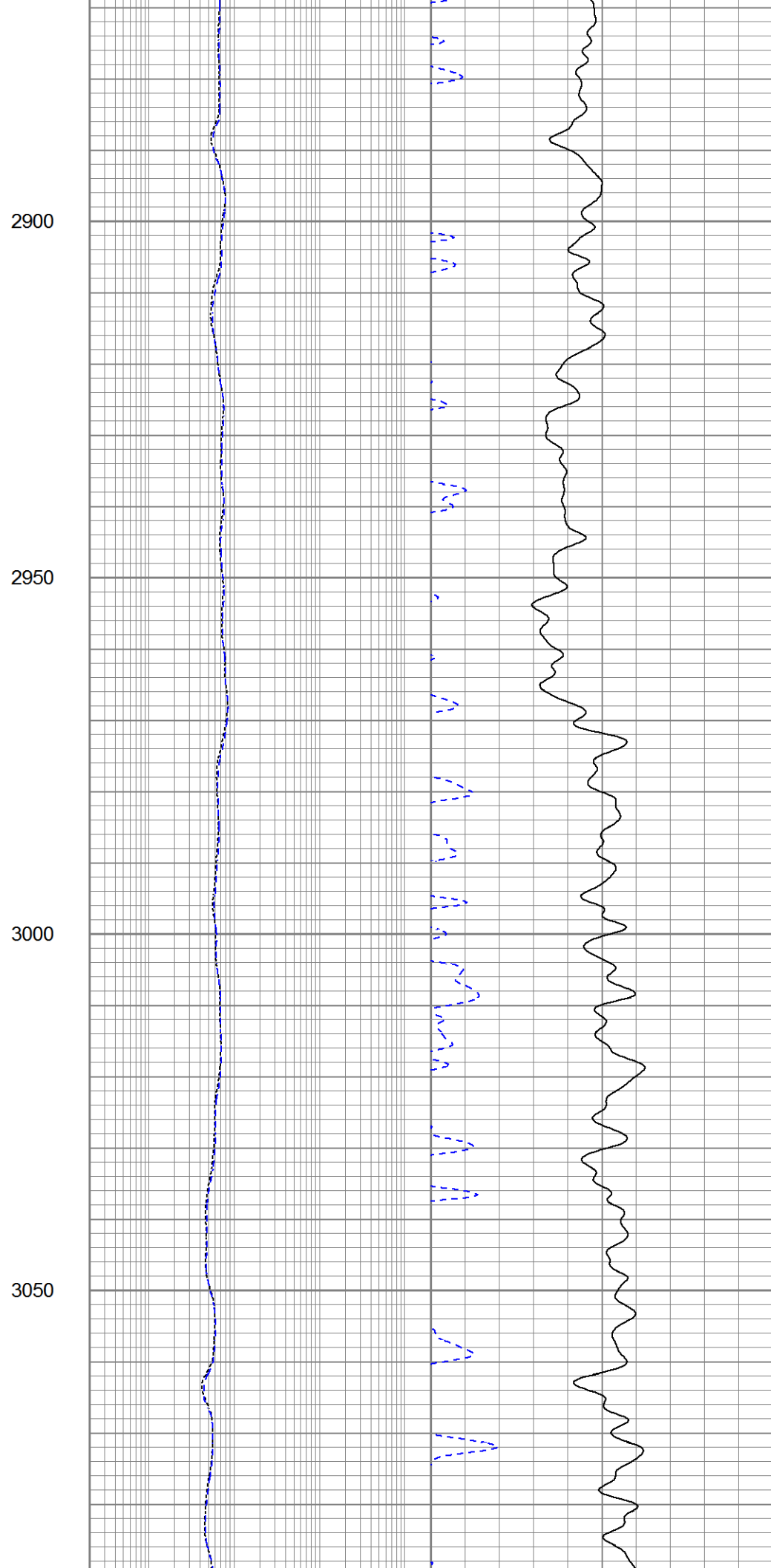
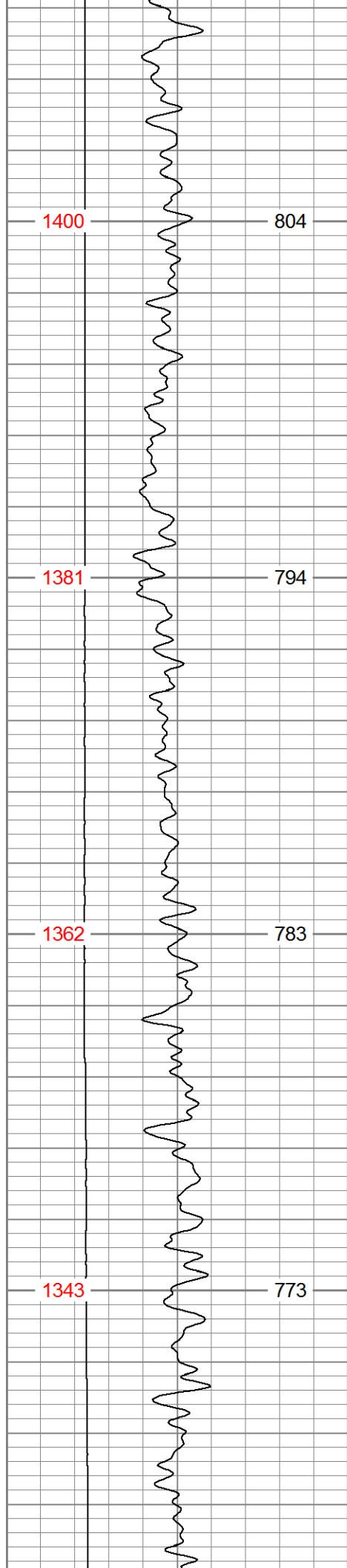
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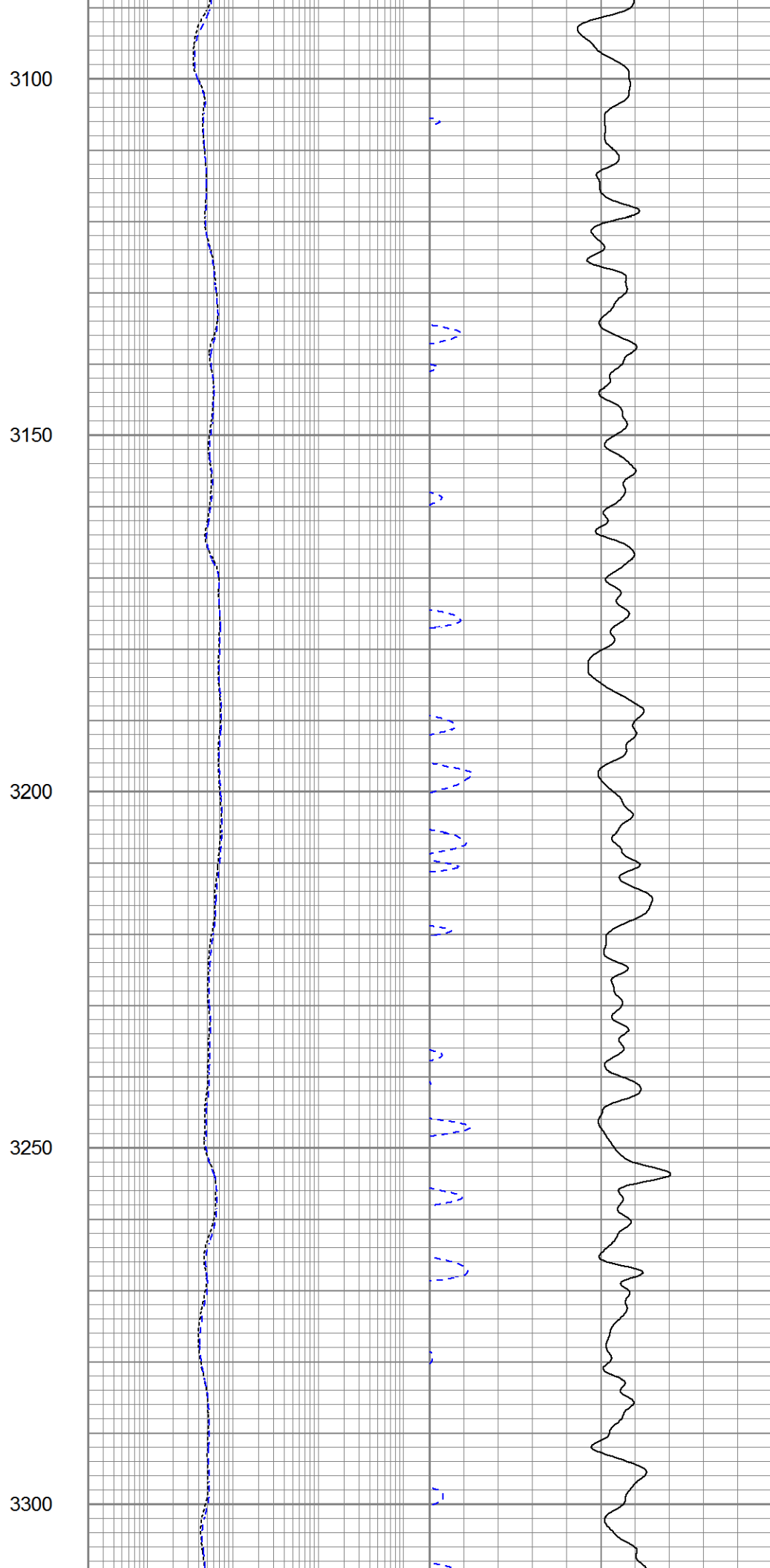
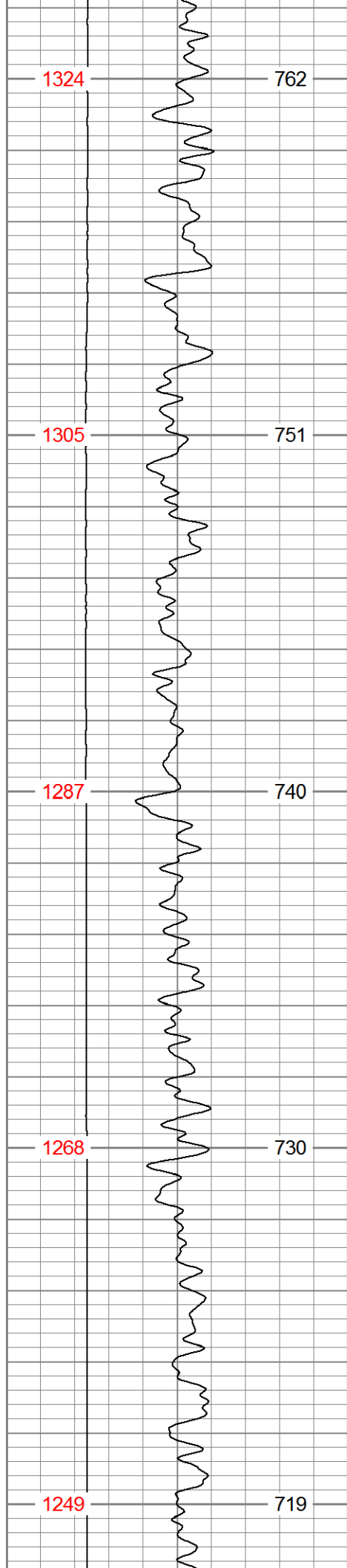
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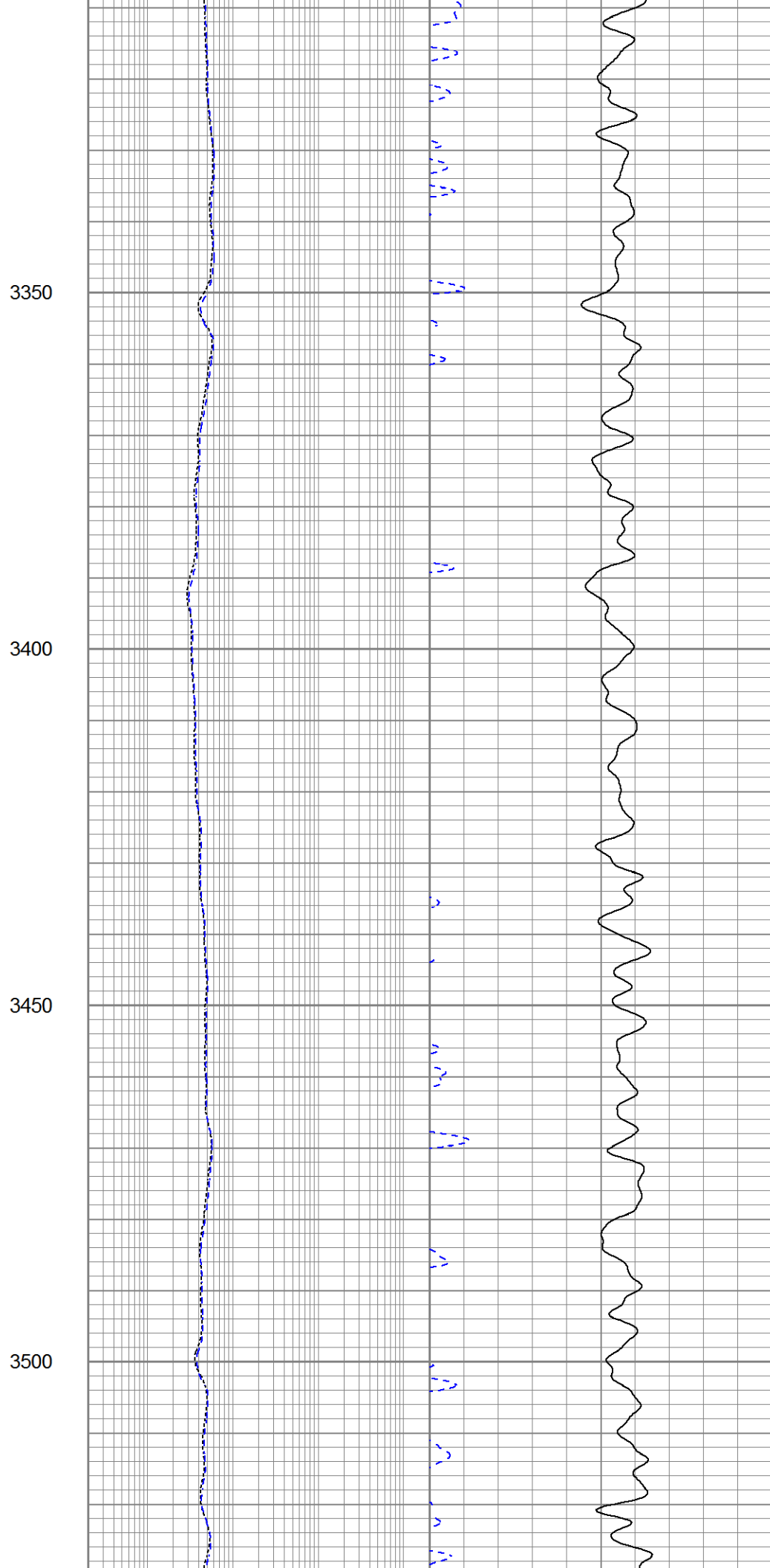
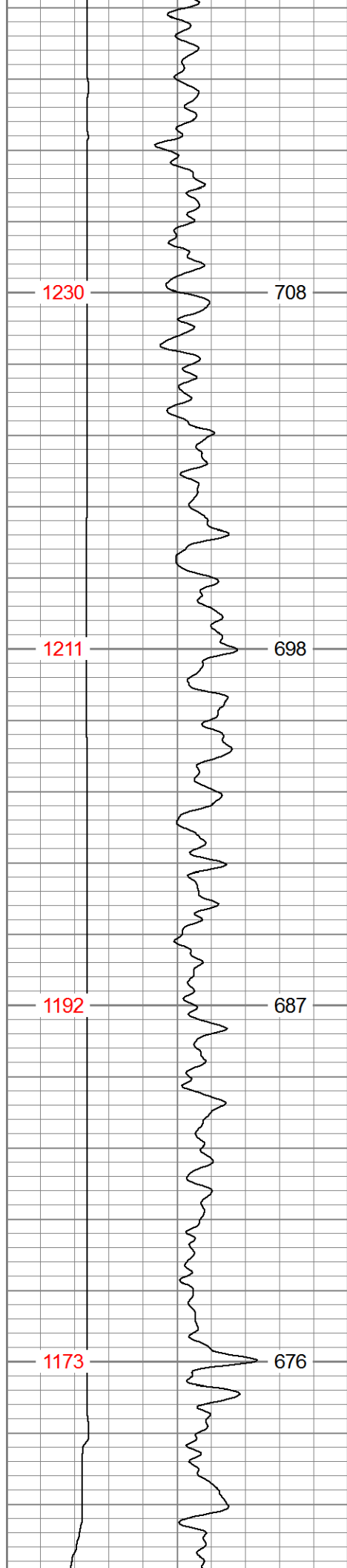


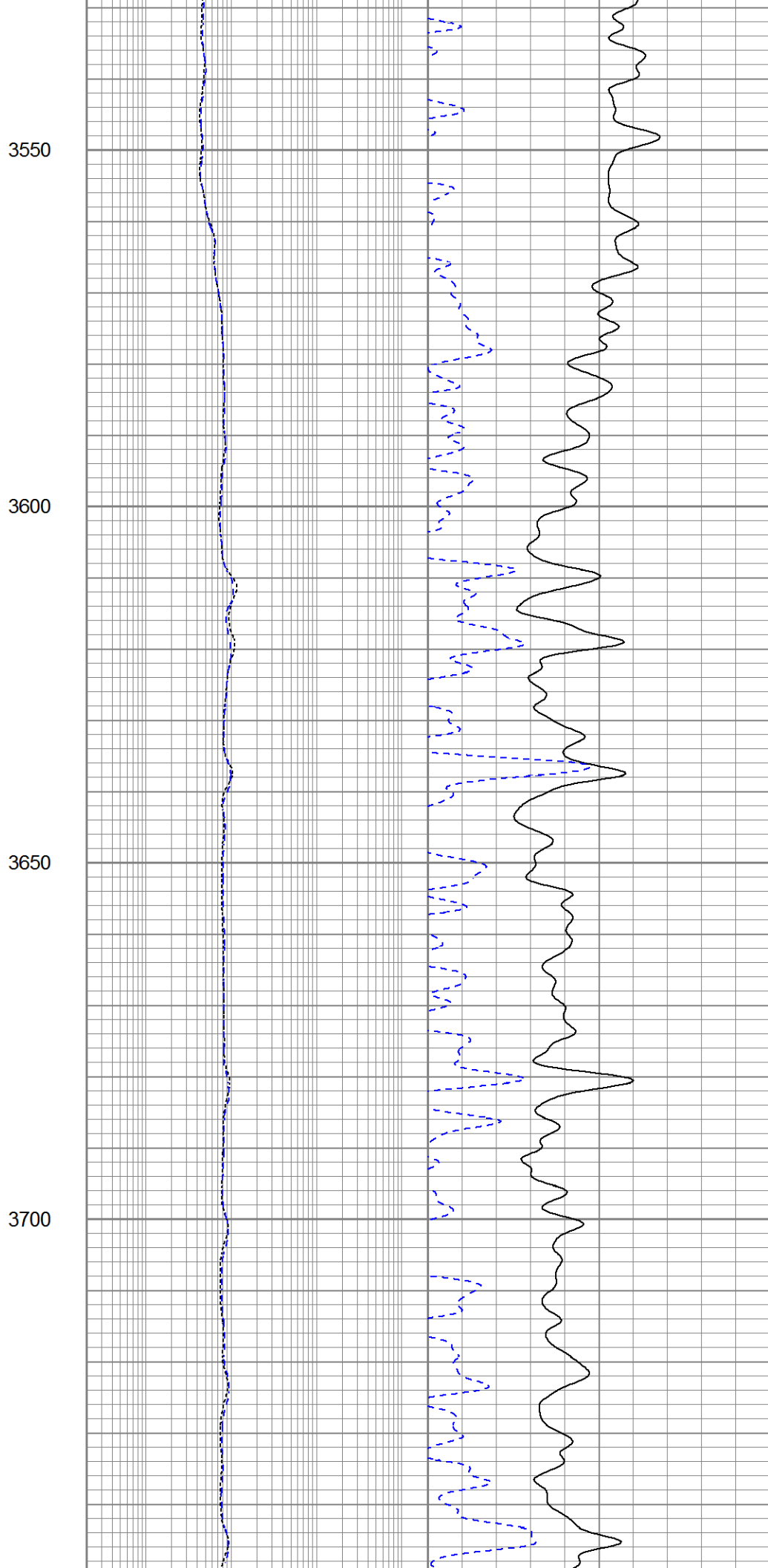
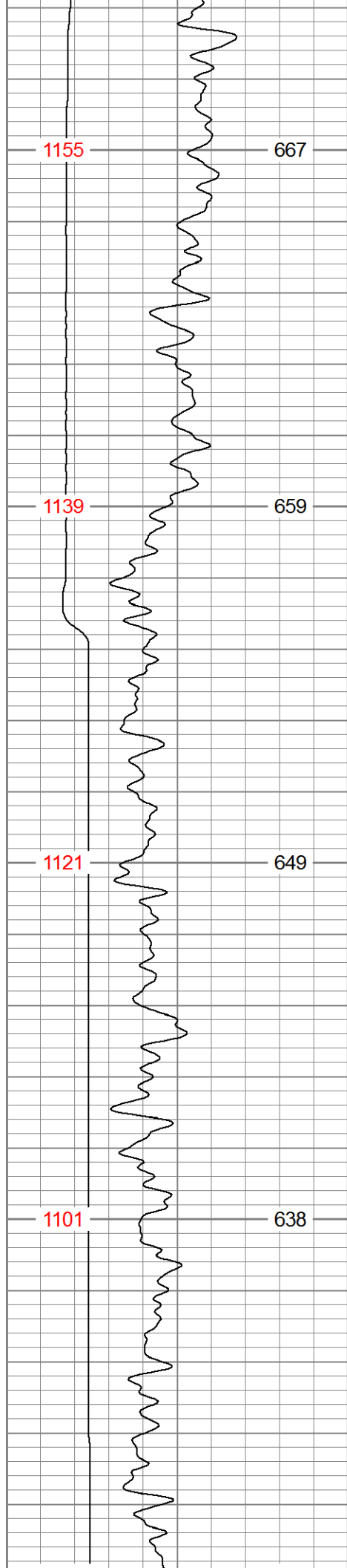


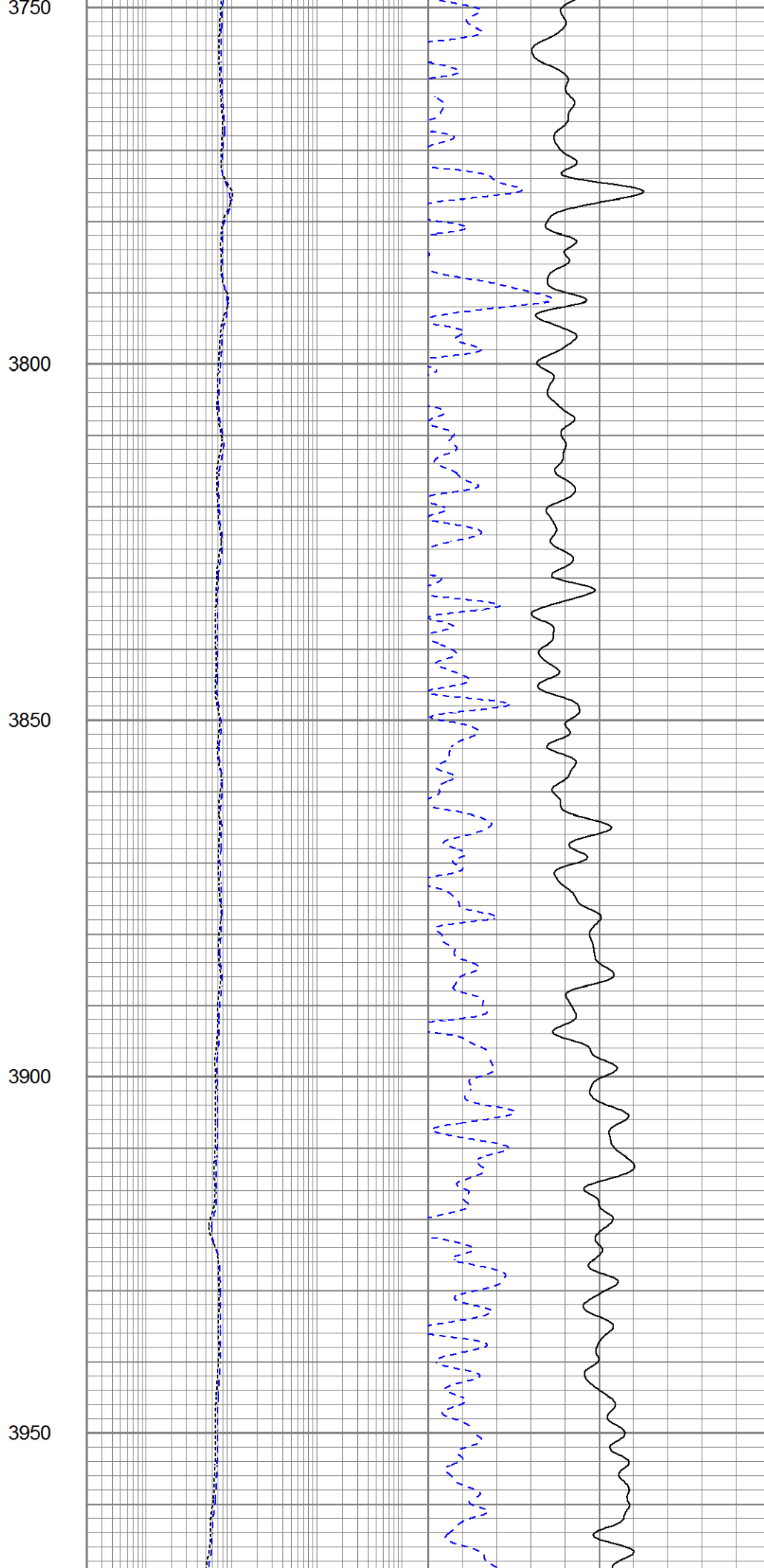
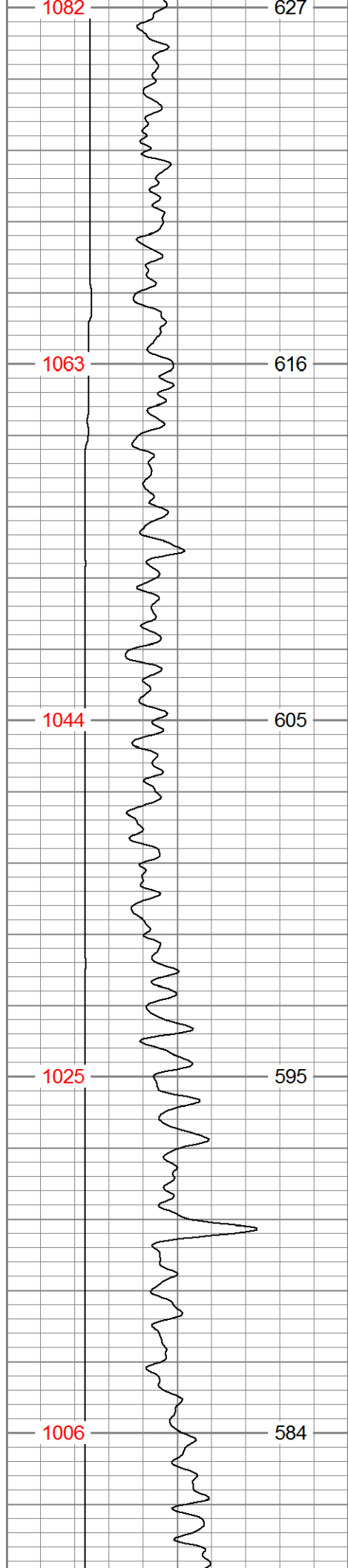


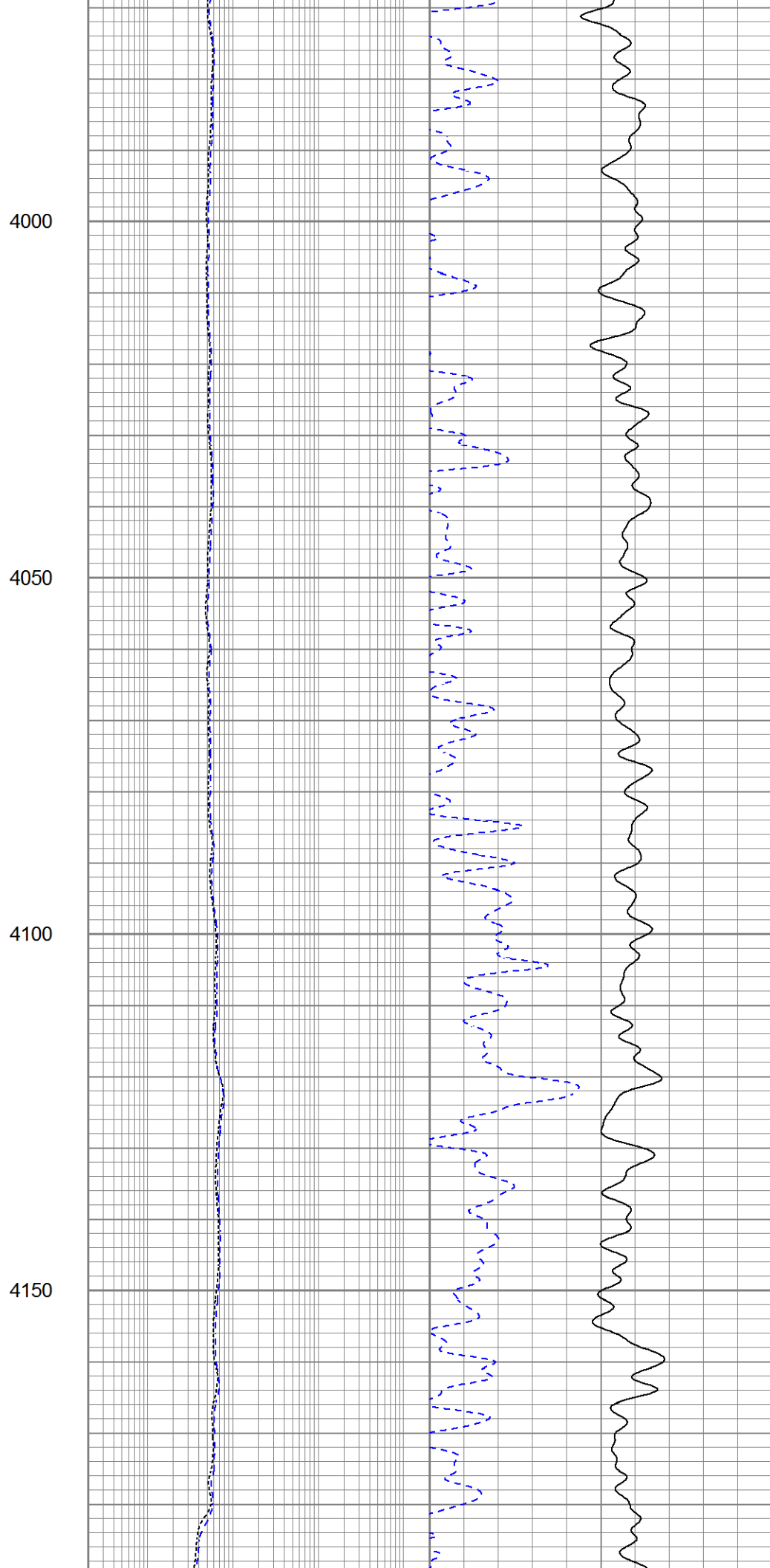
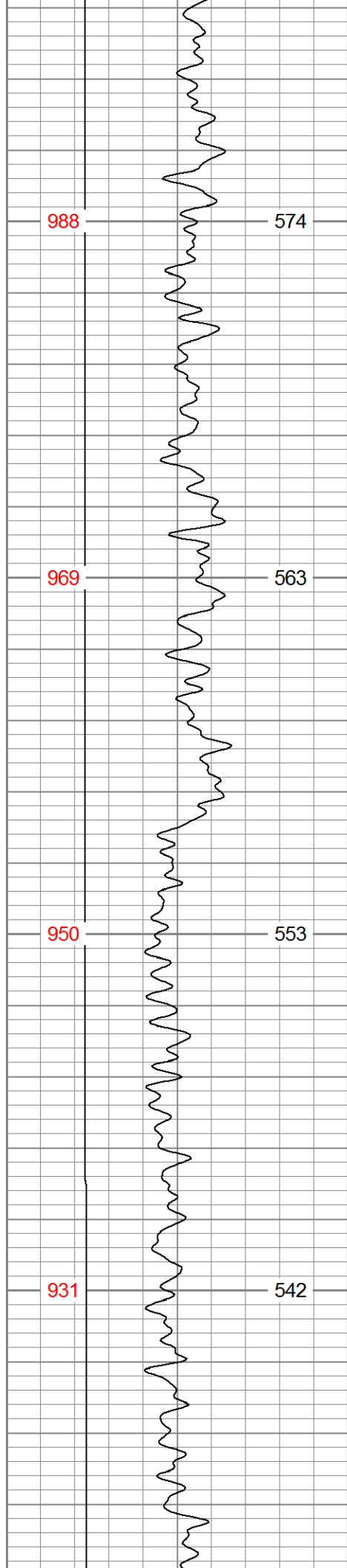


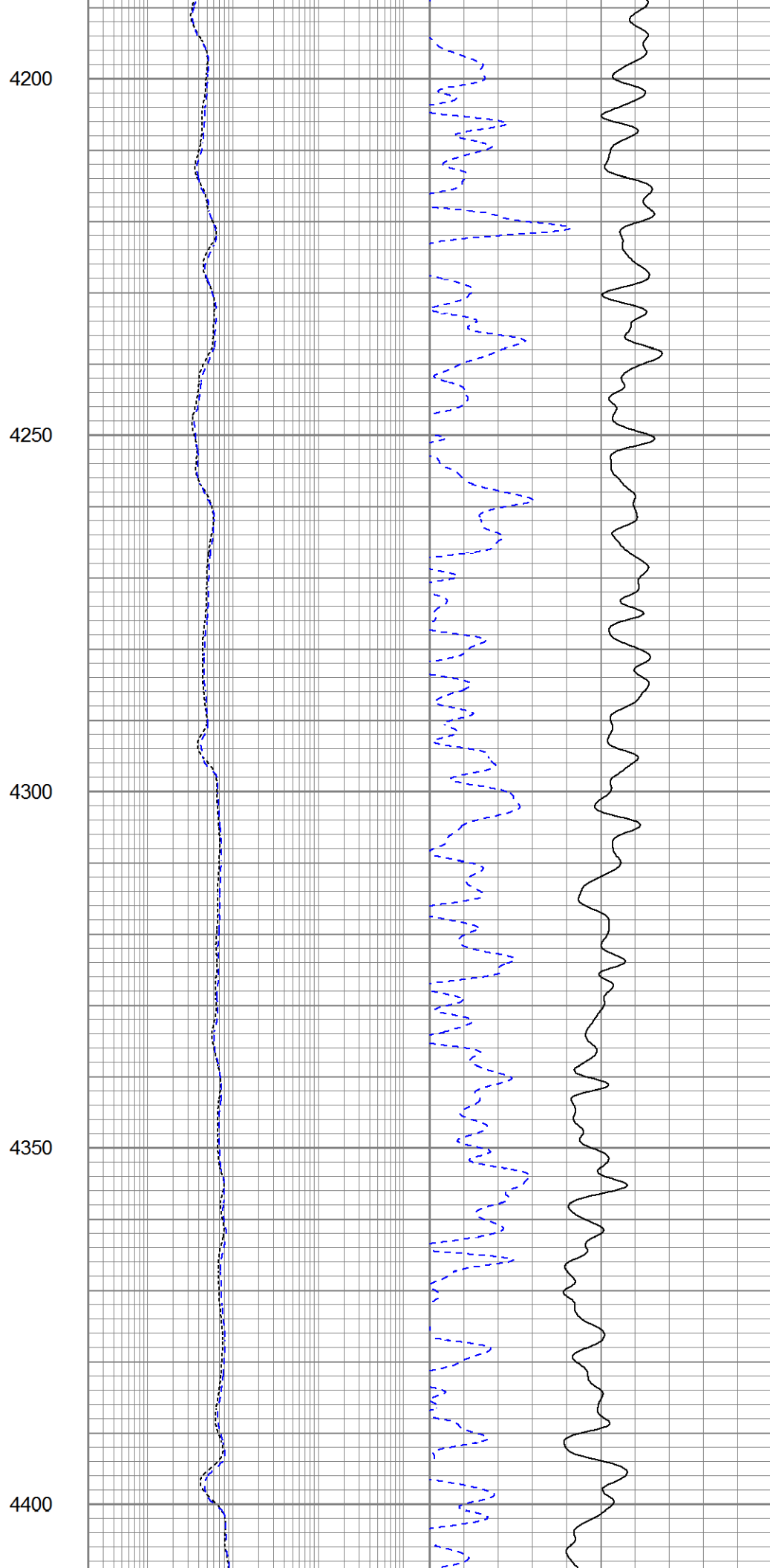
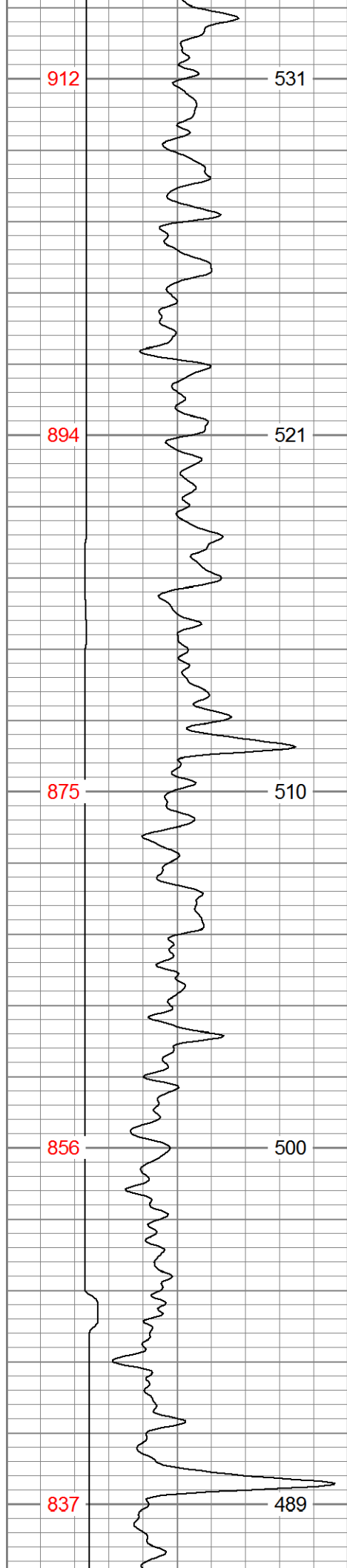


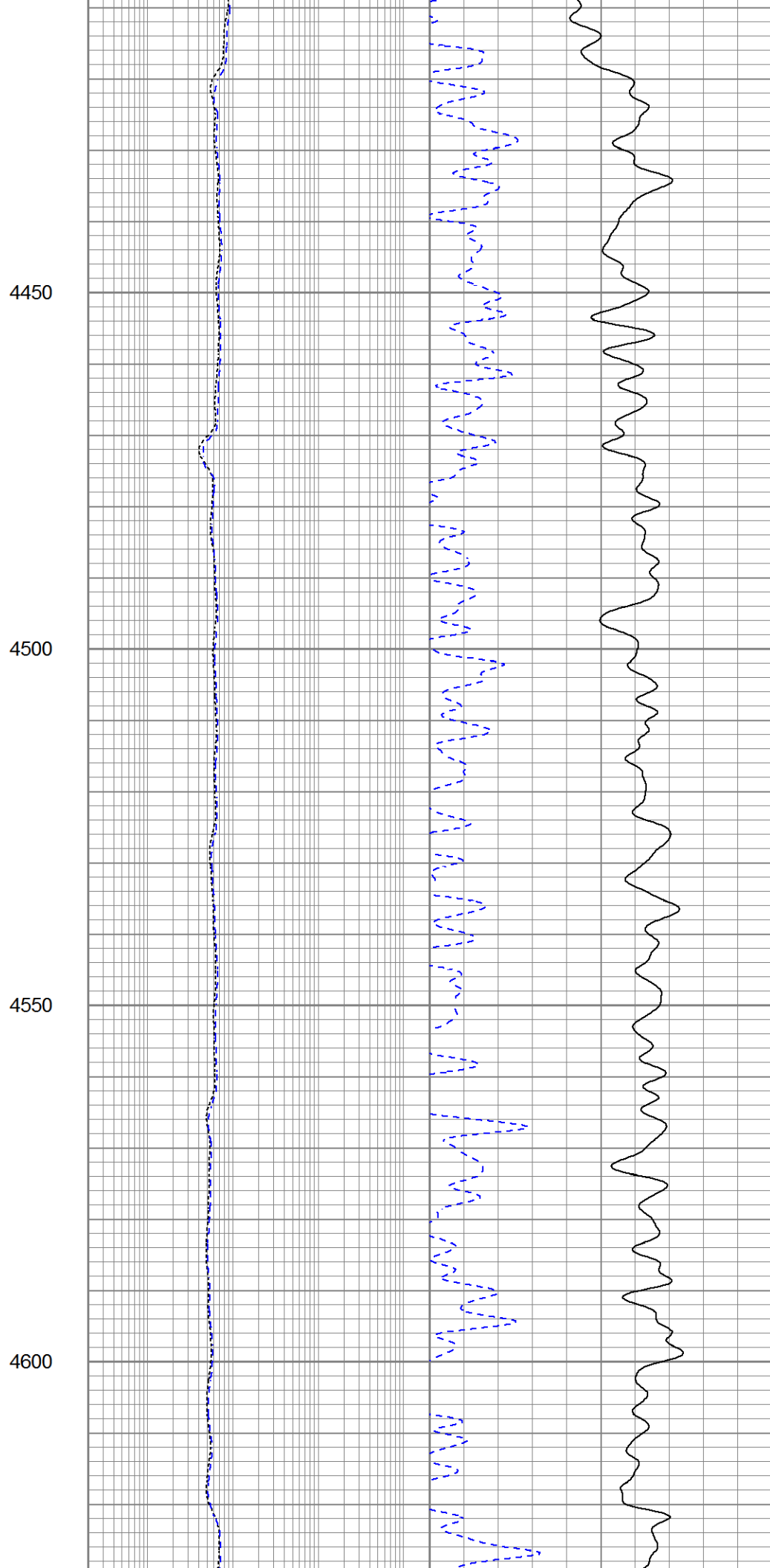
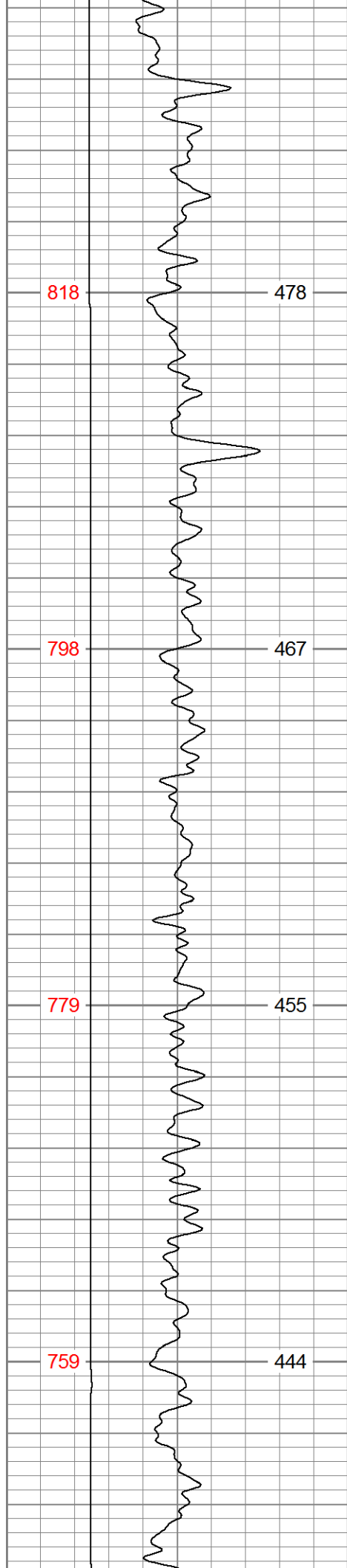


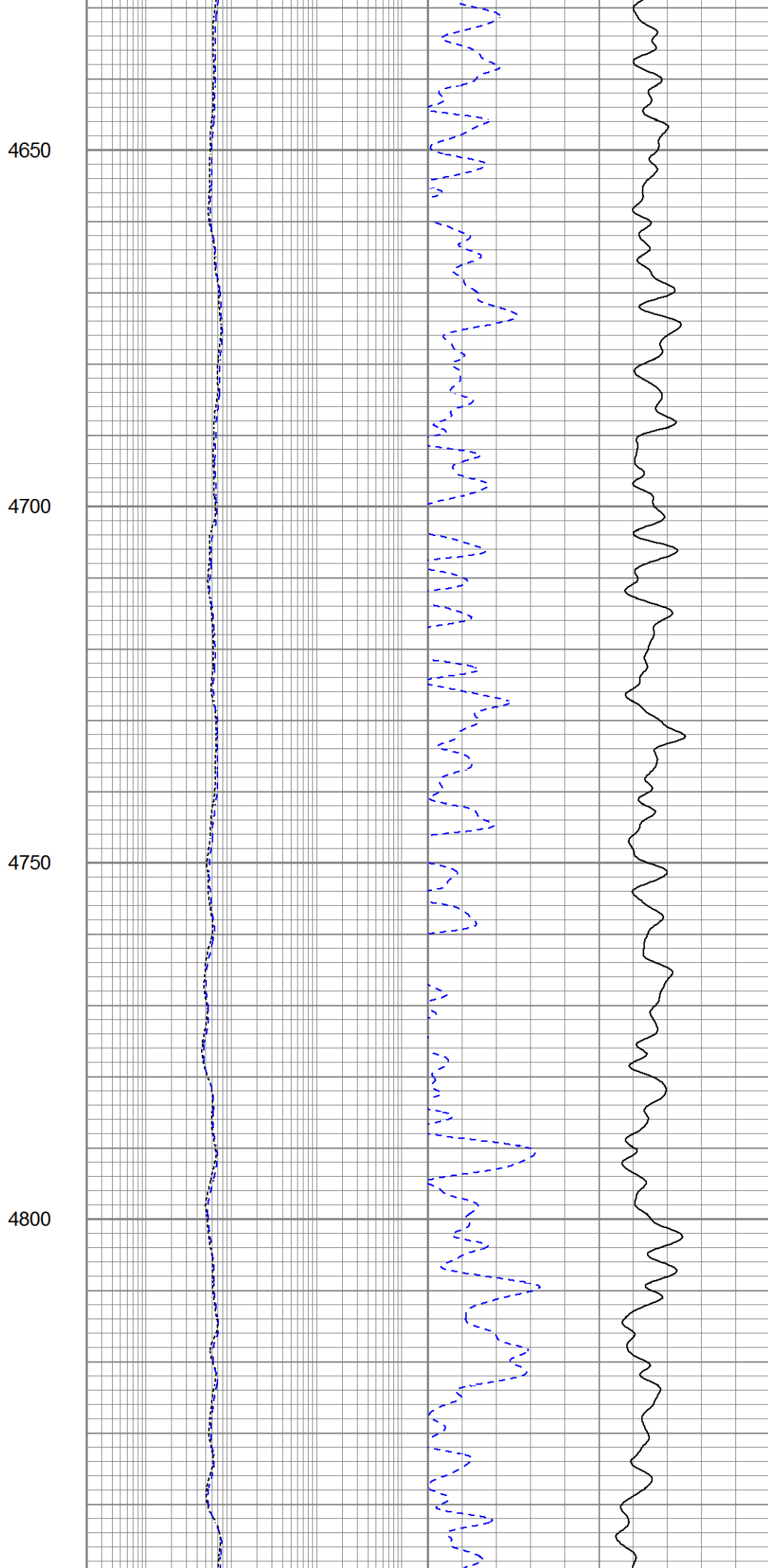
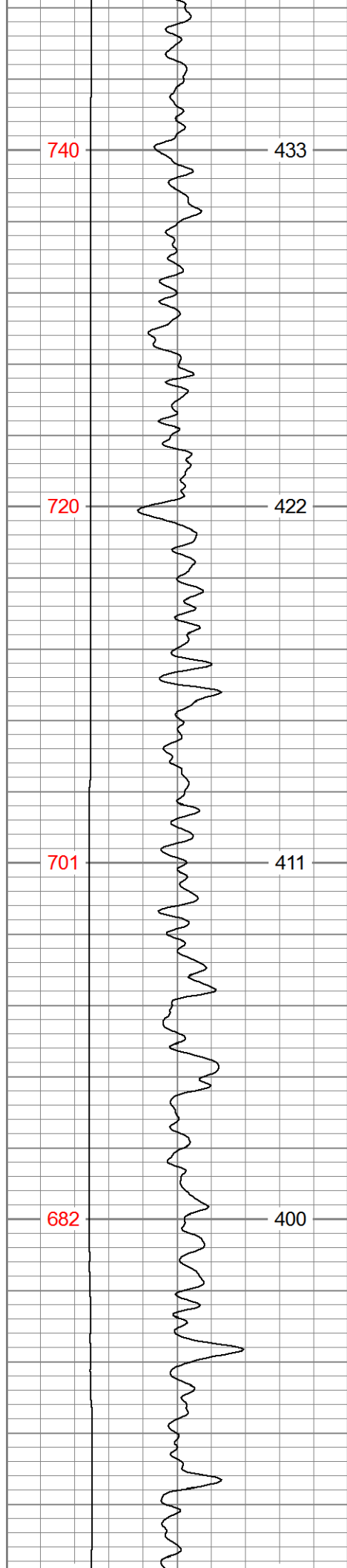


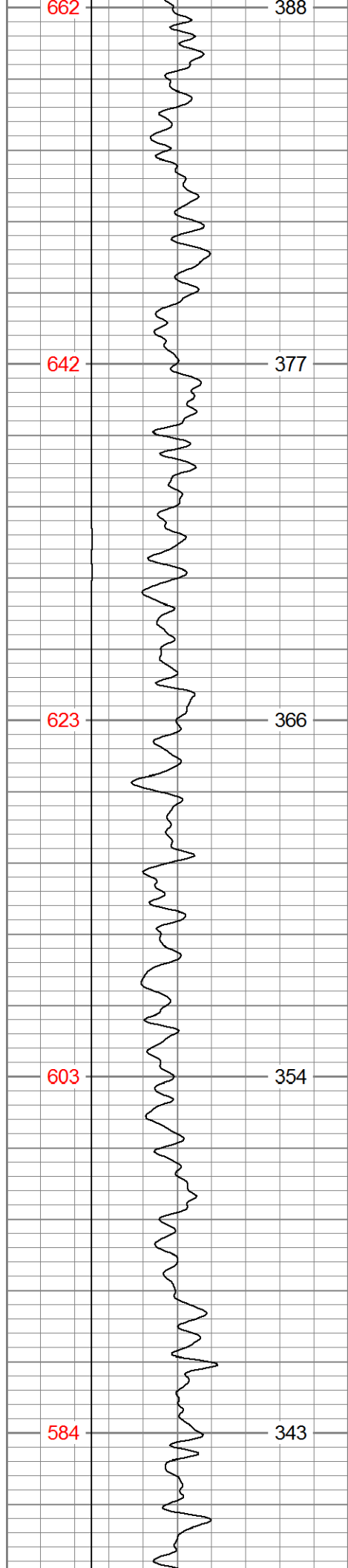




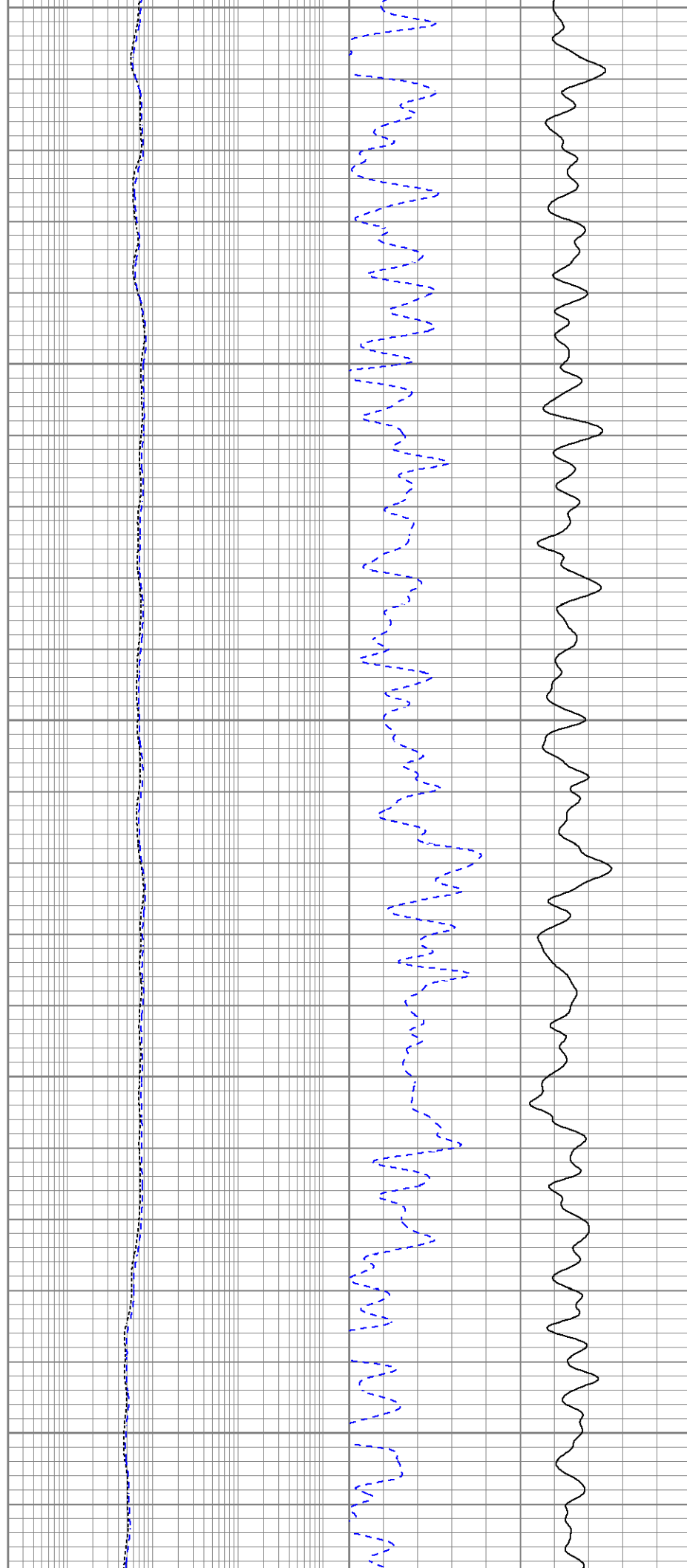


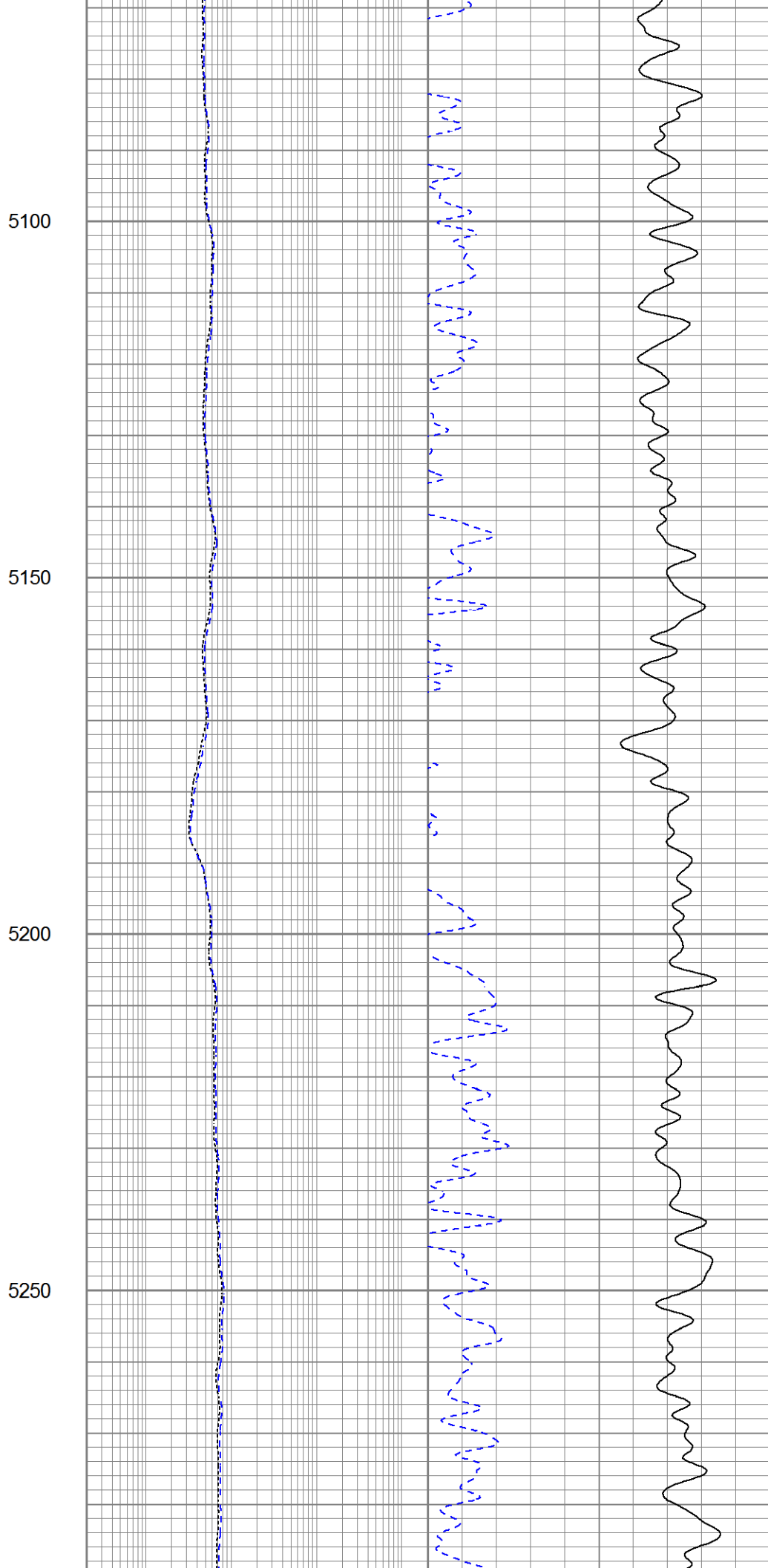
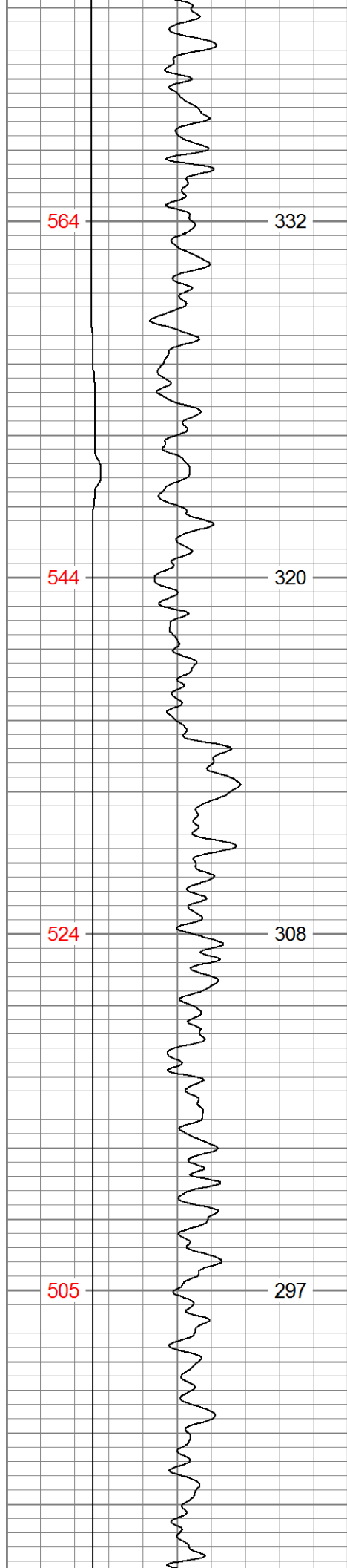


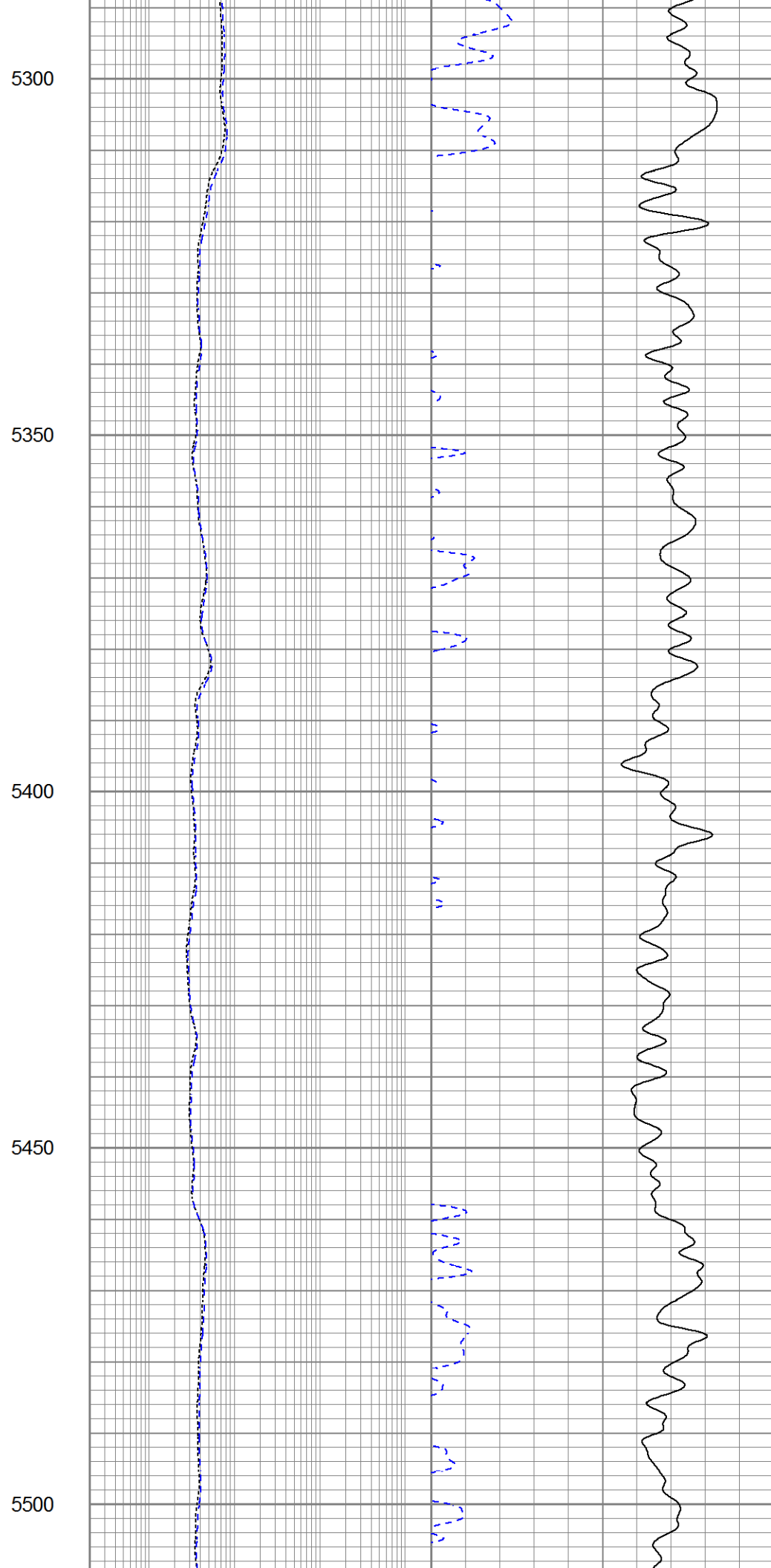
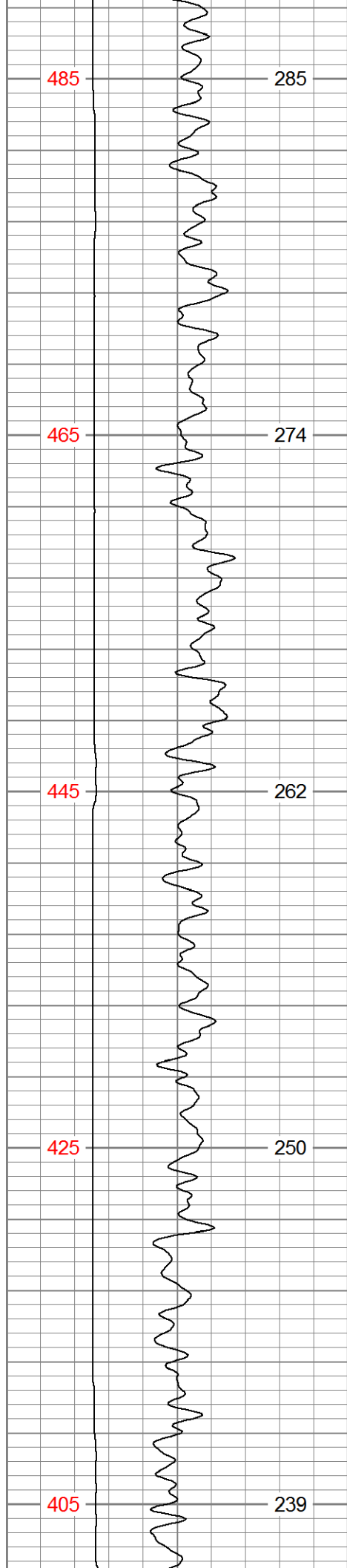


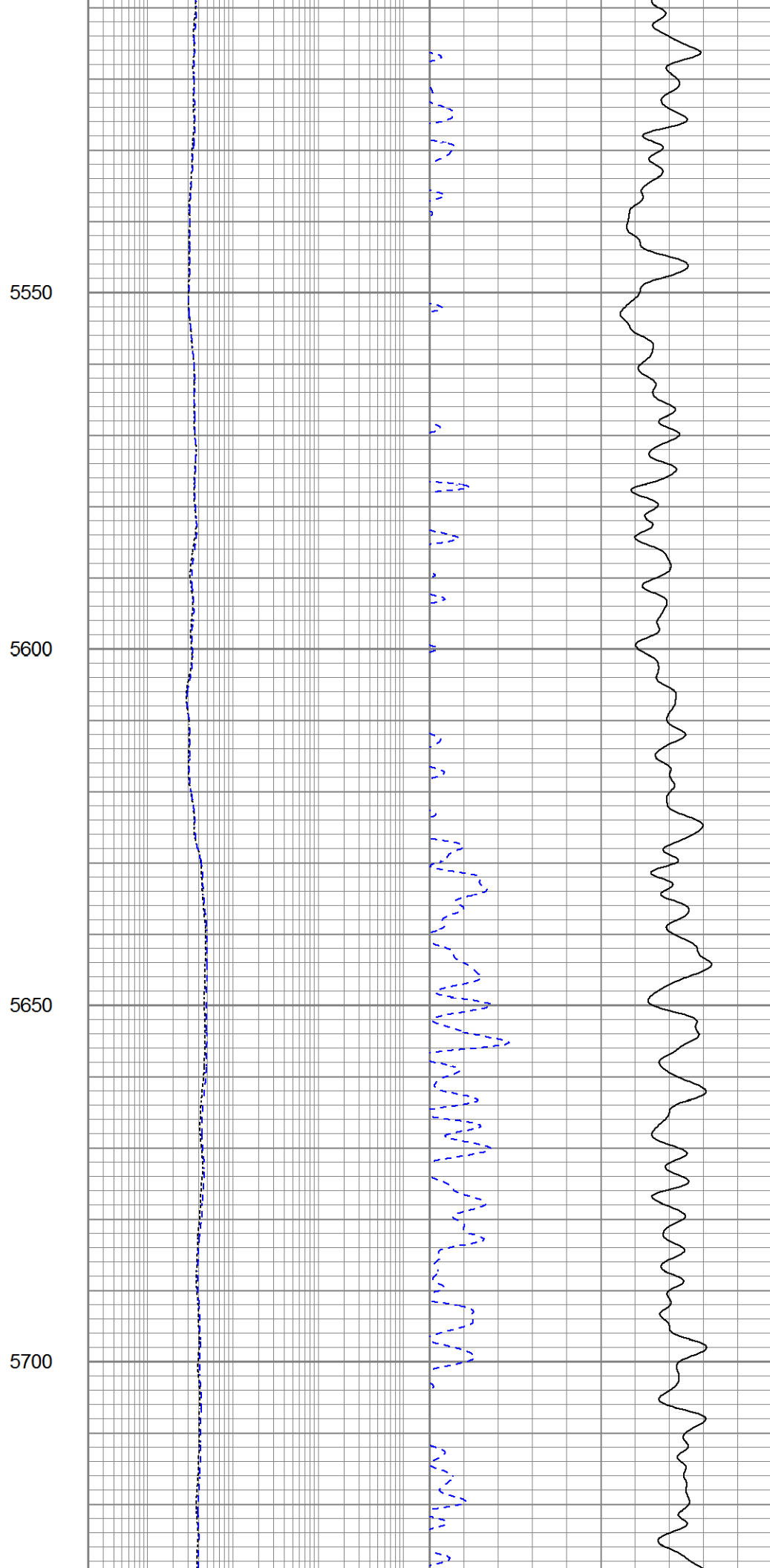
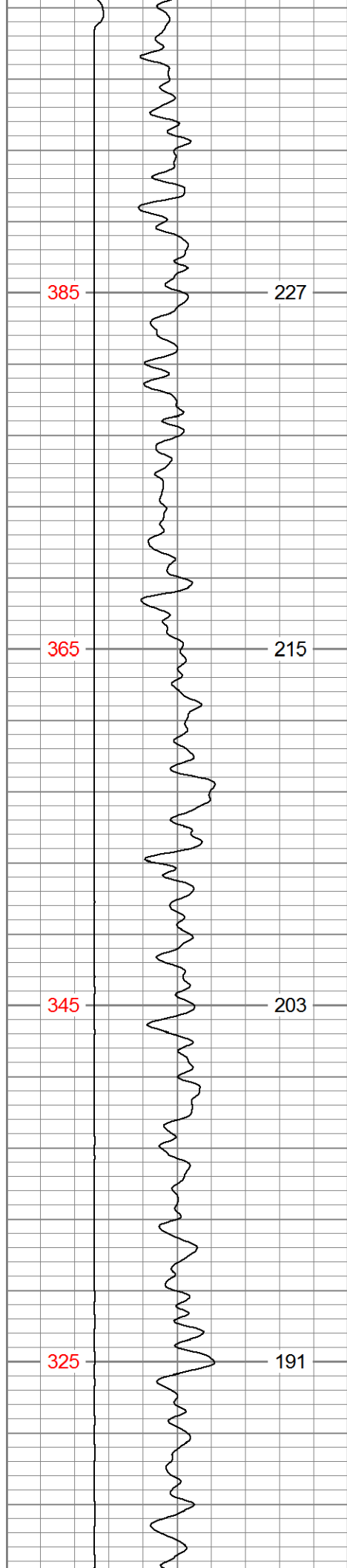


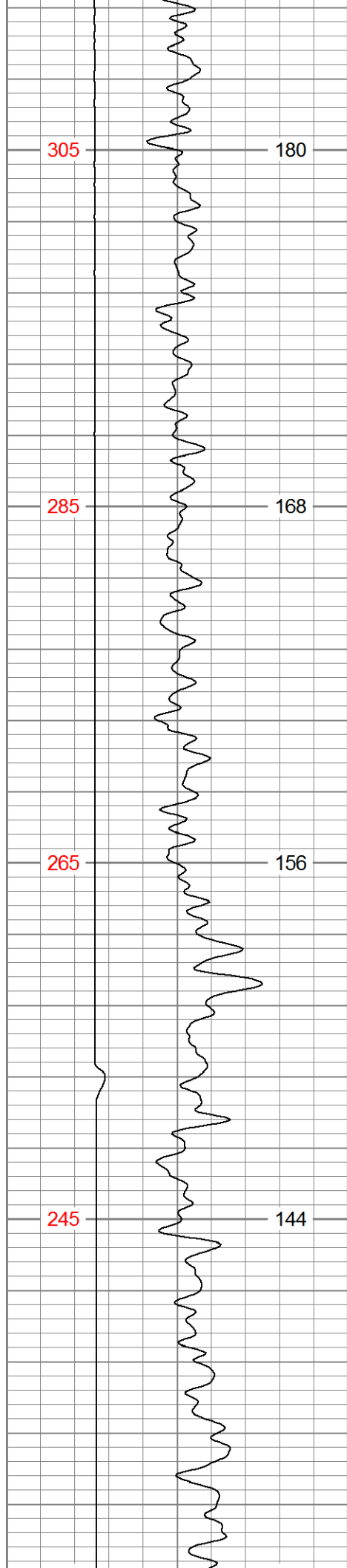
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4900
4950
5000
5050









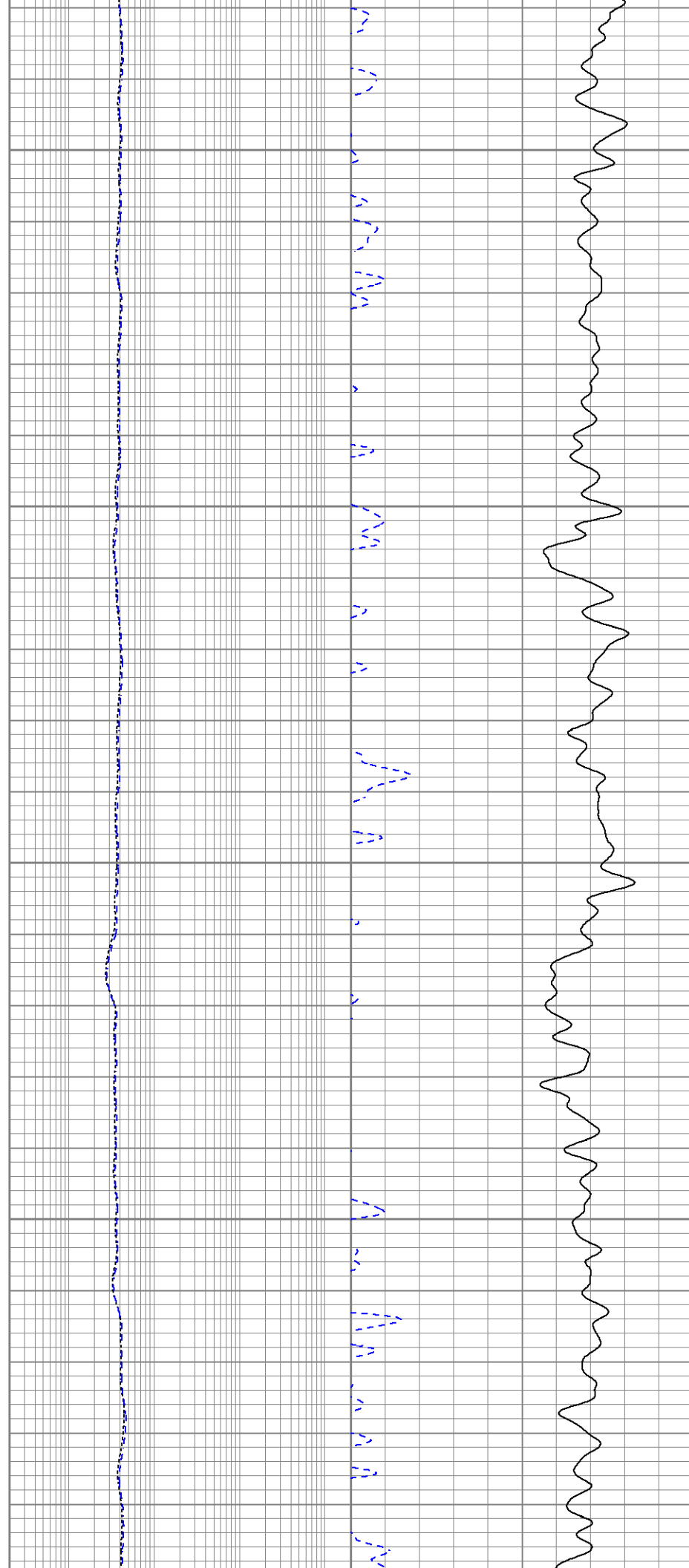


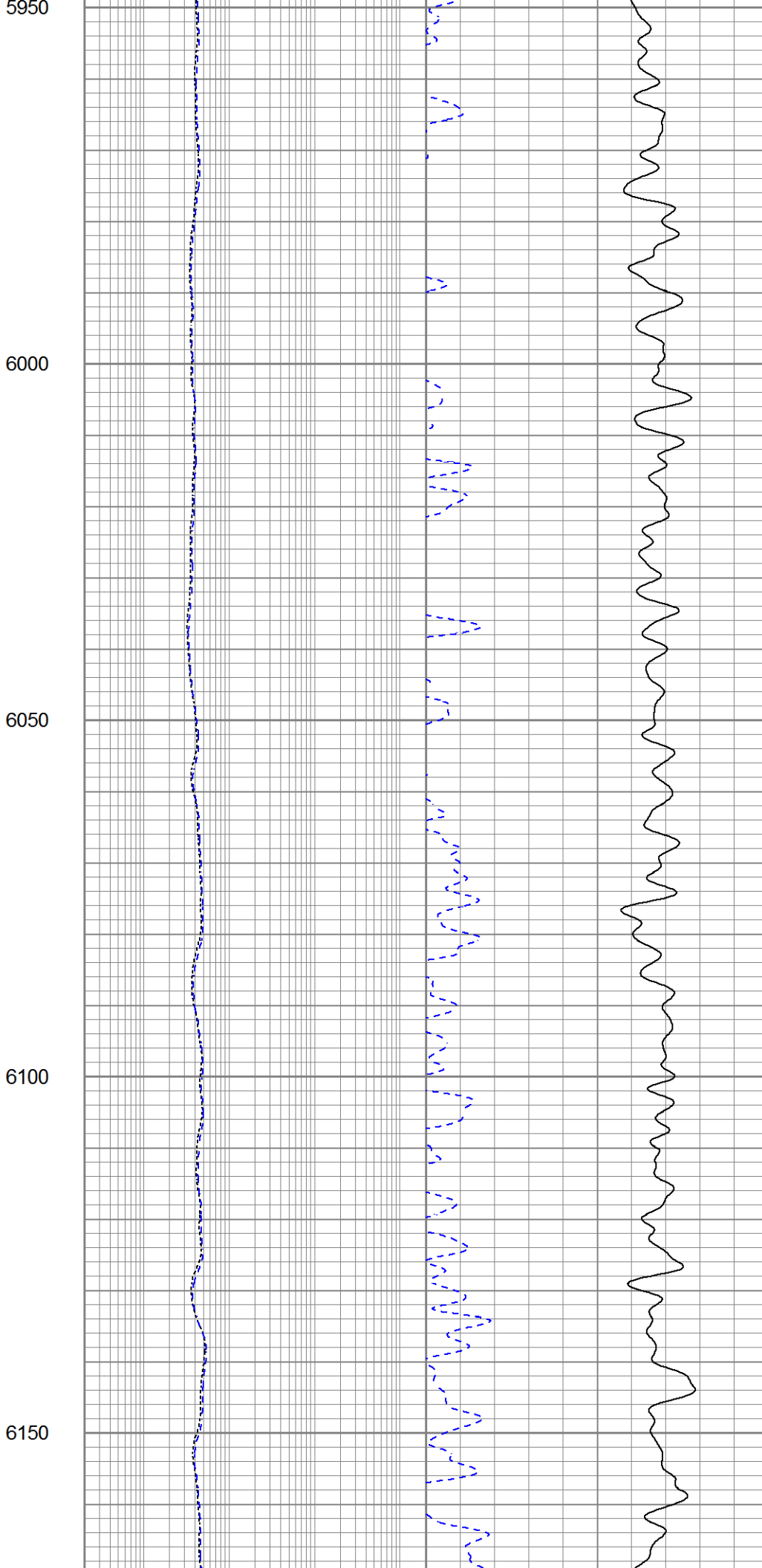
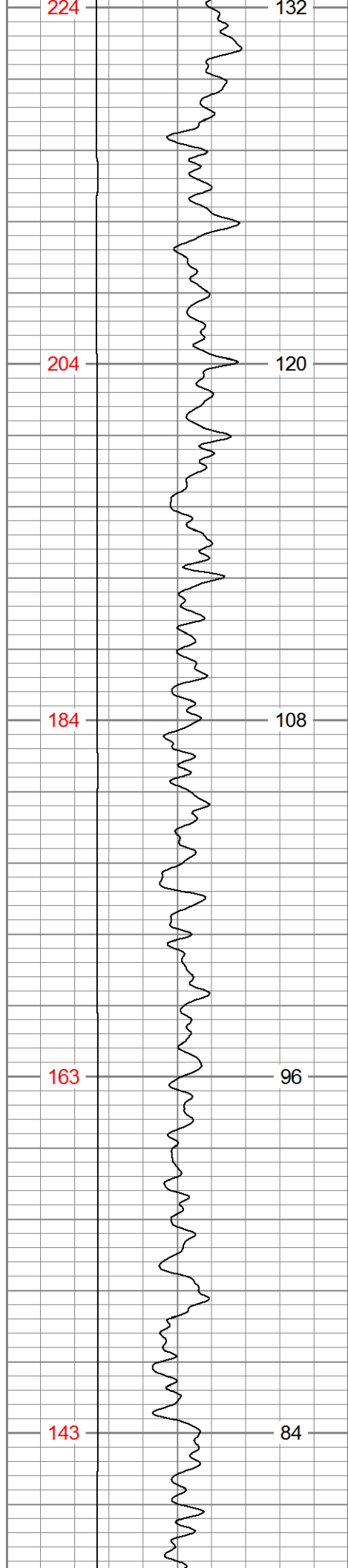
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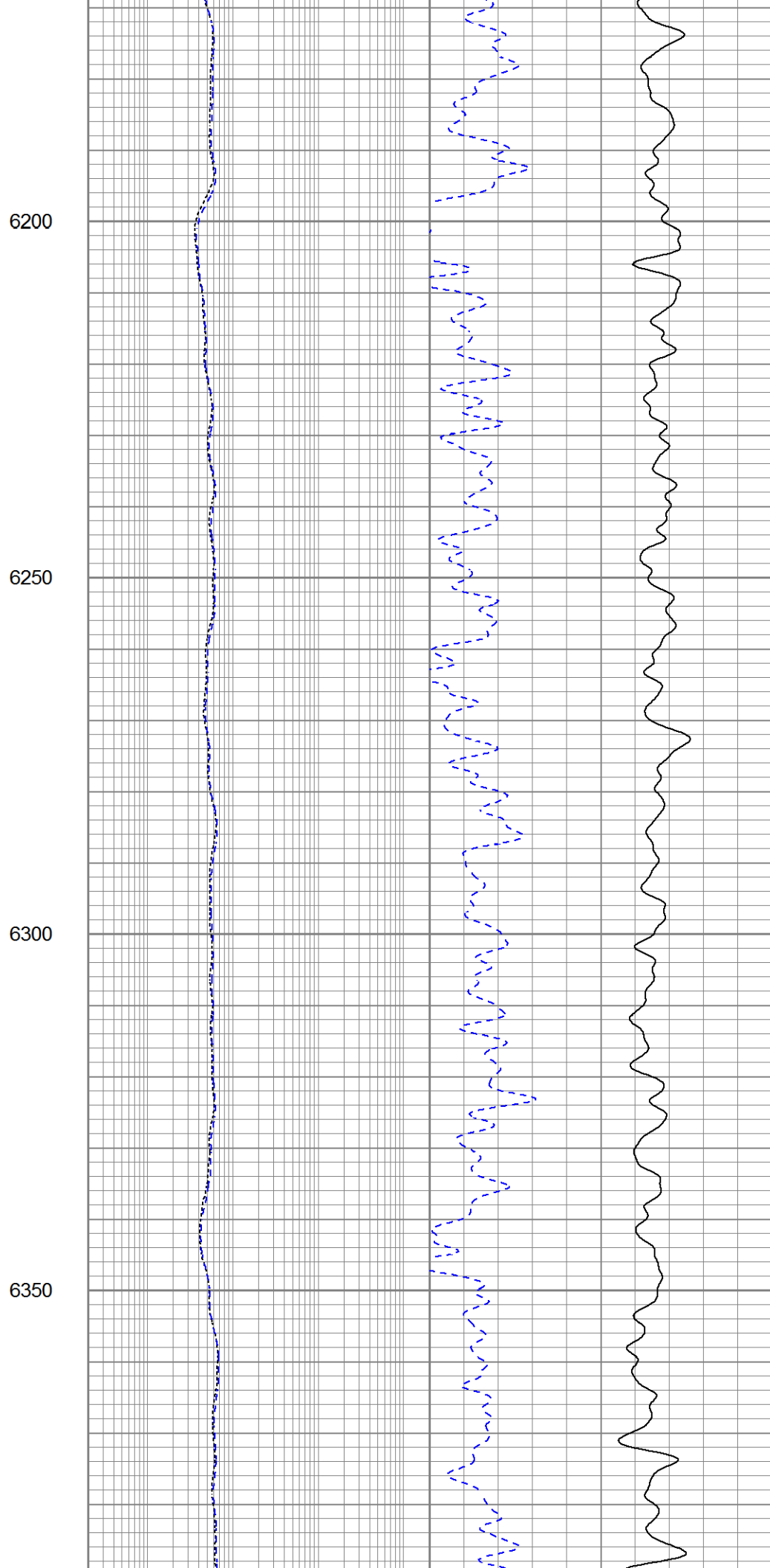
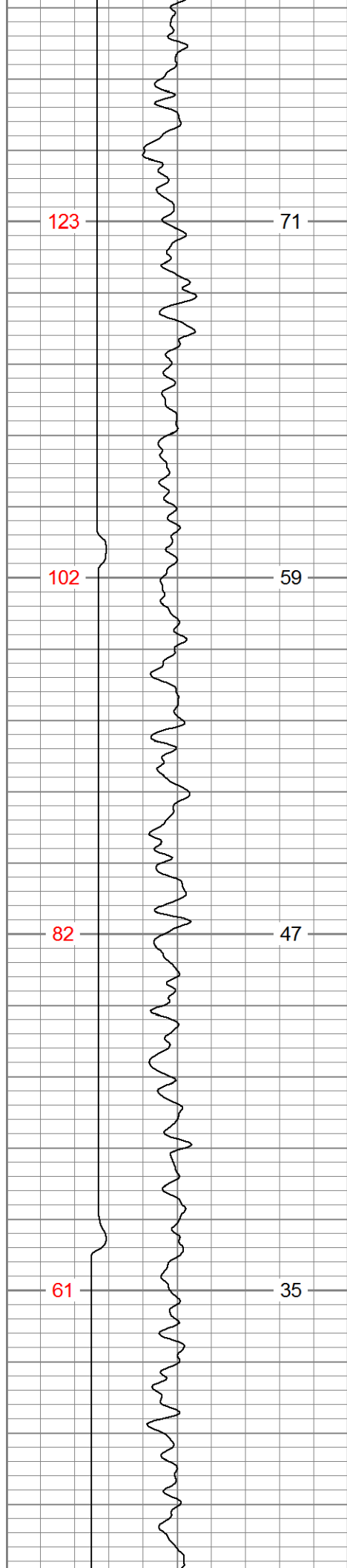
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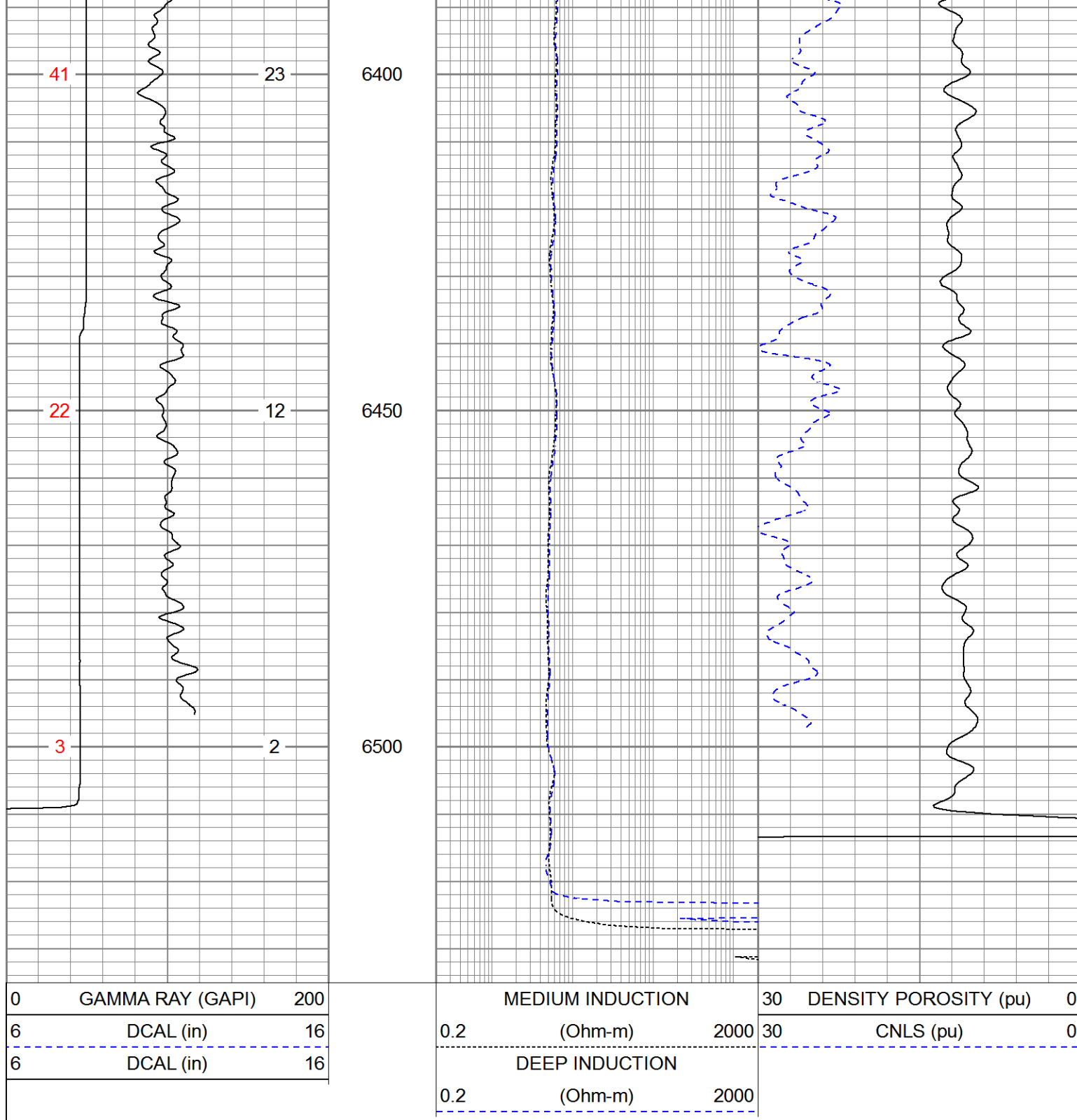
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5900









Calibration Report						
Database File	extraction_ws_sunrise_c1_5_5.db					
Dataset Pathname	stack/pass2.1					
Dataset Creation	Thu Mar 08 20:19:13 2018					
Dual Induction Calibration Report						
Serial-Model:			PSI 978-M&W			
Calibration Performed:			Sun Feb 04 11:50:02 2018			
Readings			References		Results	
Loop:	Air	Loop	Air	Loop	Gain	Offset

Deep	178.615	710.235	0.000	255.800	mmho/m	0.570	-40.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.400	-37.000

Compensated Density Calibration Report

Serial-Model: 168-986-M&W
 Source / Verifier: /
 Master Calibration Performed: Tue Apr 11 17:07:47 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	1.00		
Large Ring	14.00	in	1.20		

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 17:08:01 2017
 Calibrator Value: 1000.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps
 Sensitivity: 0.5200 GAPI/cps



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