



PIONEER
Pioneer Energy Services

**DUAL IND / DUAL COMP
POROSITY LOG**

Company EXTRACTION OIL & GAS LLC		Company EXTRACTION OIL & GAS LLC	
Well	MICKEY 7	Well	MICKEY 7
Field	WATTENBERG	Field	WATTENBERG
County	WELD	County	WELD
State	COLORADO	State	COLORADO
Location:		API #: 05-123-43857	Other Services
SHL: 2420' FNL & 1858' FEL			NONE
Permanent Datum	GL	Elevation	4880'
Log Measured From	KB		K.B. 4905'
Drilling Measured From	KB		D.F. N/A
			G.L. 4880'
Date	23 DEC 2016		
Run Number	ONE		
Depth Driller	17605'		
Depth Logger	6680'		
Bottom Logged Interval	6676'		
Top Log Interval	SURFACE CASING		
Casing Driller	9.625 @ 1551		
Casing Logger	1560'		
Bit Size	7.875		
Type Fluid in Hole	OIL BASE		
Salinity, ppm CL	N/A		
Density / Viscosity	9.9	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 @ 212		
Operating Rig Time	3.5		
Max Rec. Temp. F	212		
Equipment Number	108		
Location	COLBY		
Recorded By	SCHOENROGGE		
Witnessed By	MR. HOLGATE		

<<< 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.

NO REPEAT DUE TO HOLE CONDITIONS

S.O. 51238

K.O.P. 6625'

Log Measured From: KB

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: SCHOENROGGE

Operator: PFEIFER

Operator:

Operator:

Primary Witness: MR. HOLGATE











Secondary Witness:

Secondary Witness:

Secondary Witness:

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 212	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 0	degF 50	Off	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 (71-914)	8.50	4.00	250.00
	20.83						
	20.35						
RLL3 RLL3F	15.80						
	15.79						
CILD	8.00			DIL-M&W (1987)	18.50	3.50	220.00

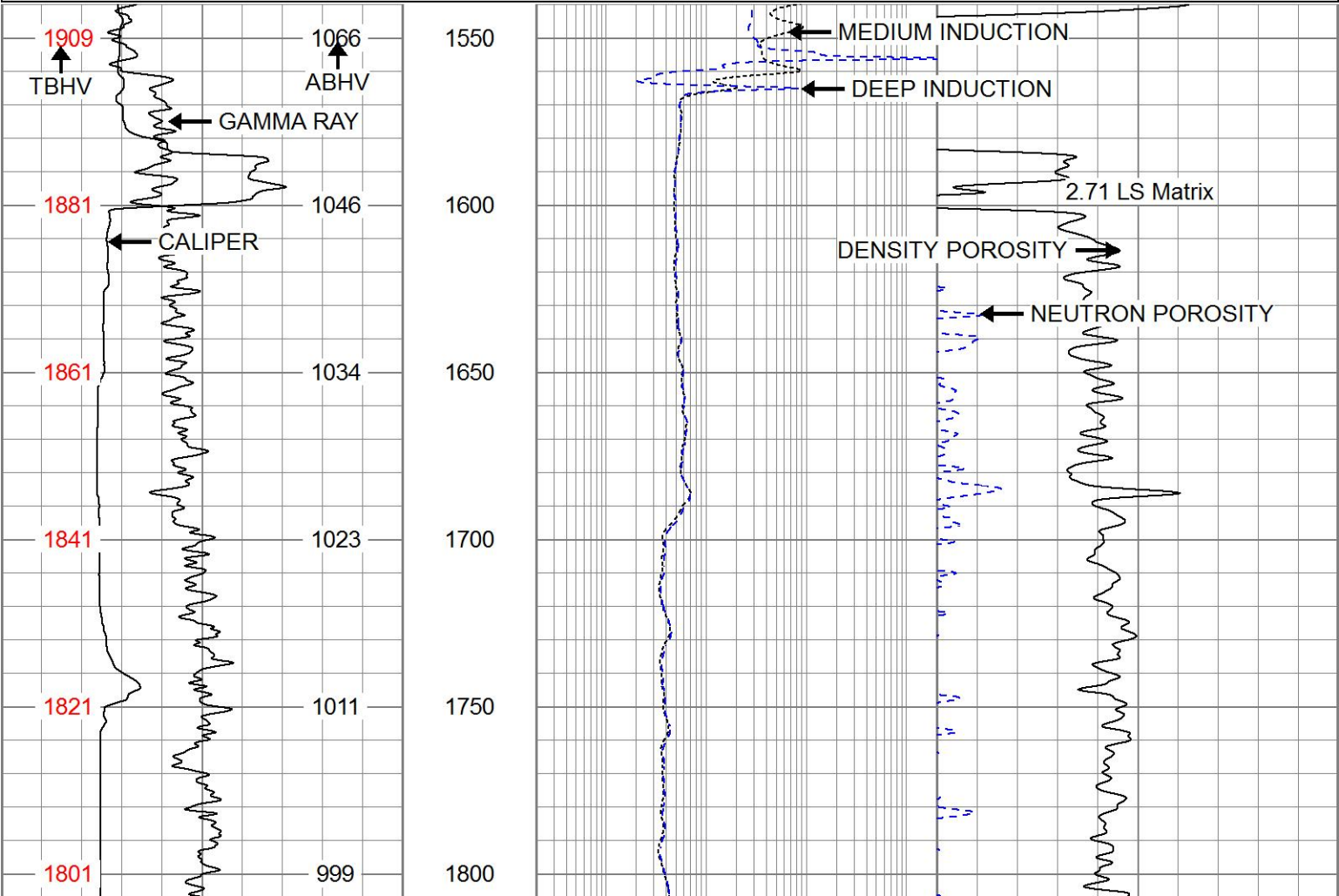
CILM	4.70								
SP	0.20								
Dataset: extractionoil&gas_mickey7.db: field/well/run1/pass2.3									
Total length: 35.50 ft									
Total weight: 620.00 lb									
O.D.: 4.00 in									

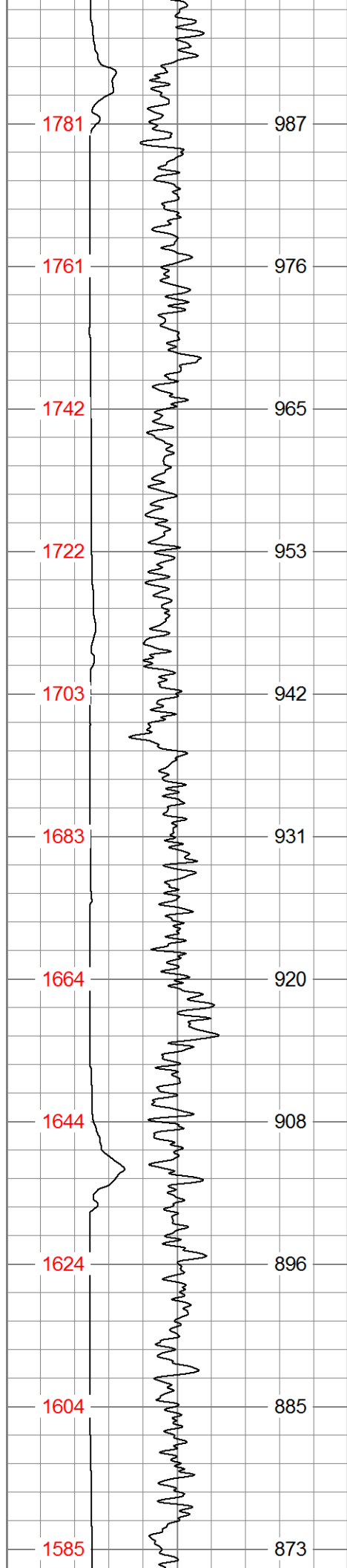


MAIN PASS

Database File	extractionoil&gas_mickey7.db
Dataset Pathname	pass2.3
Presentation Format	split
Dataset Creation	Fri Dec 23 18:01:48 2016
Charted by	Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	200		MEDIUM INDUCTION	30	DENSITY POROSITY (pu)	0		
6	CALIPER (in)	16		0.2	(Ohm-m)	2000	30	NEUTRON POROSITY (pu)	0
6	DCAL (in)	16		DEEP INDUCTION					
				0.2	(Ohm-m)	2000			





1850

1900

1950

2000

2050

2100

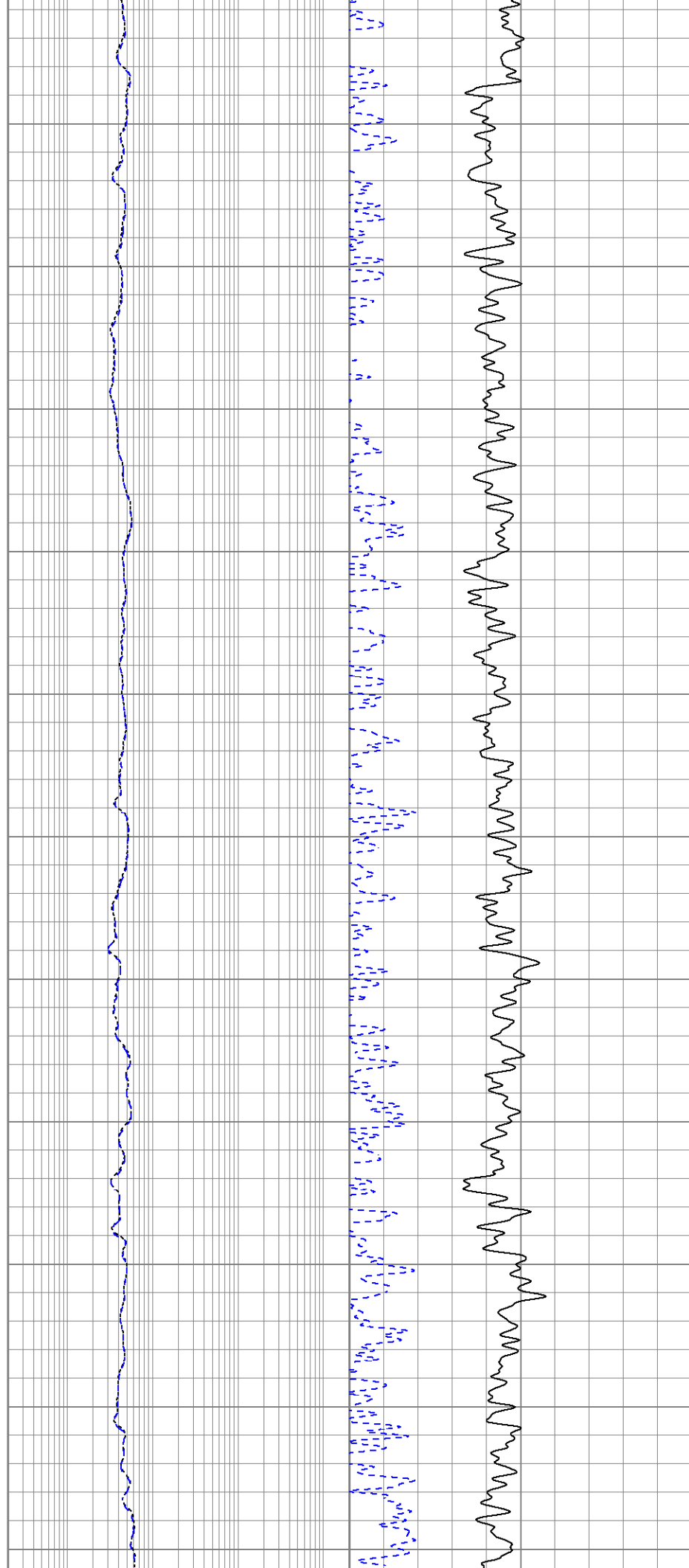
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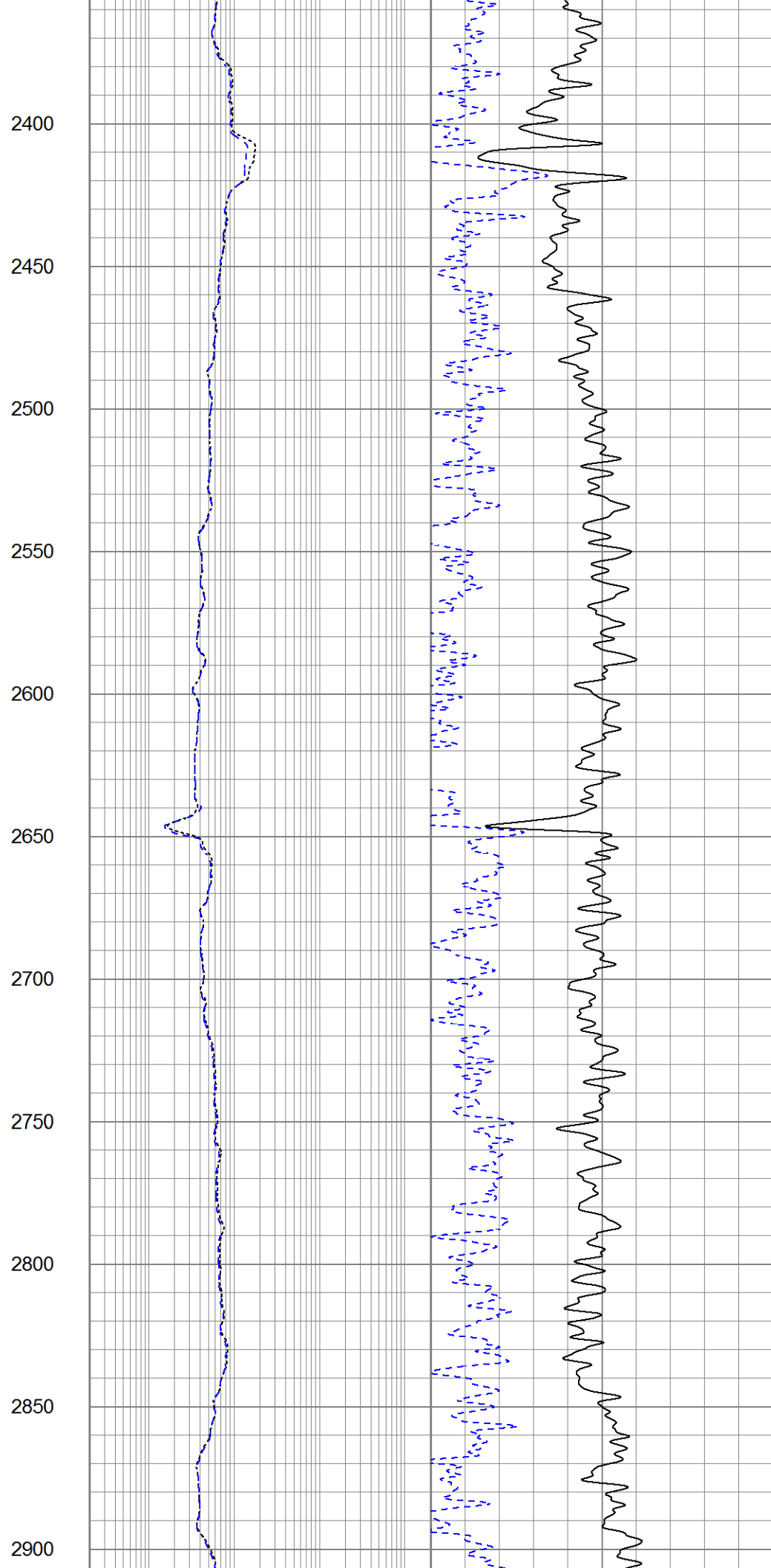
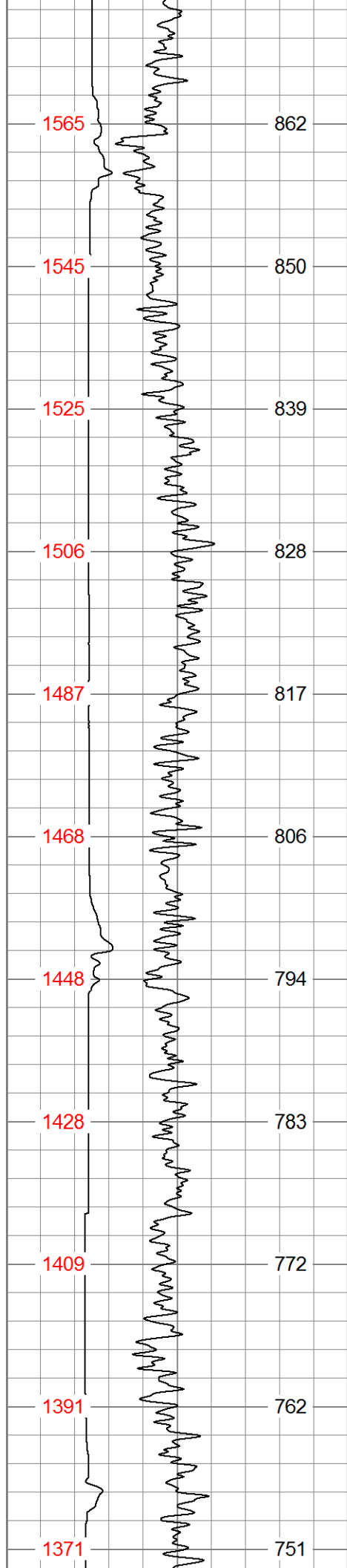
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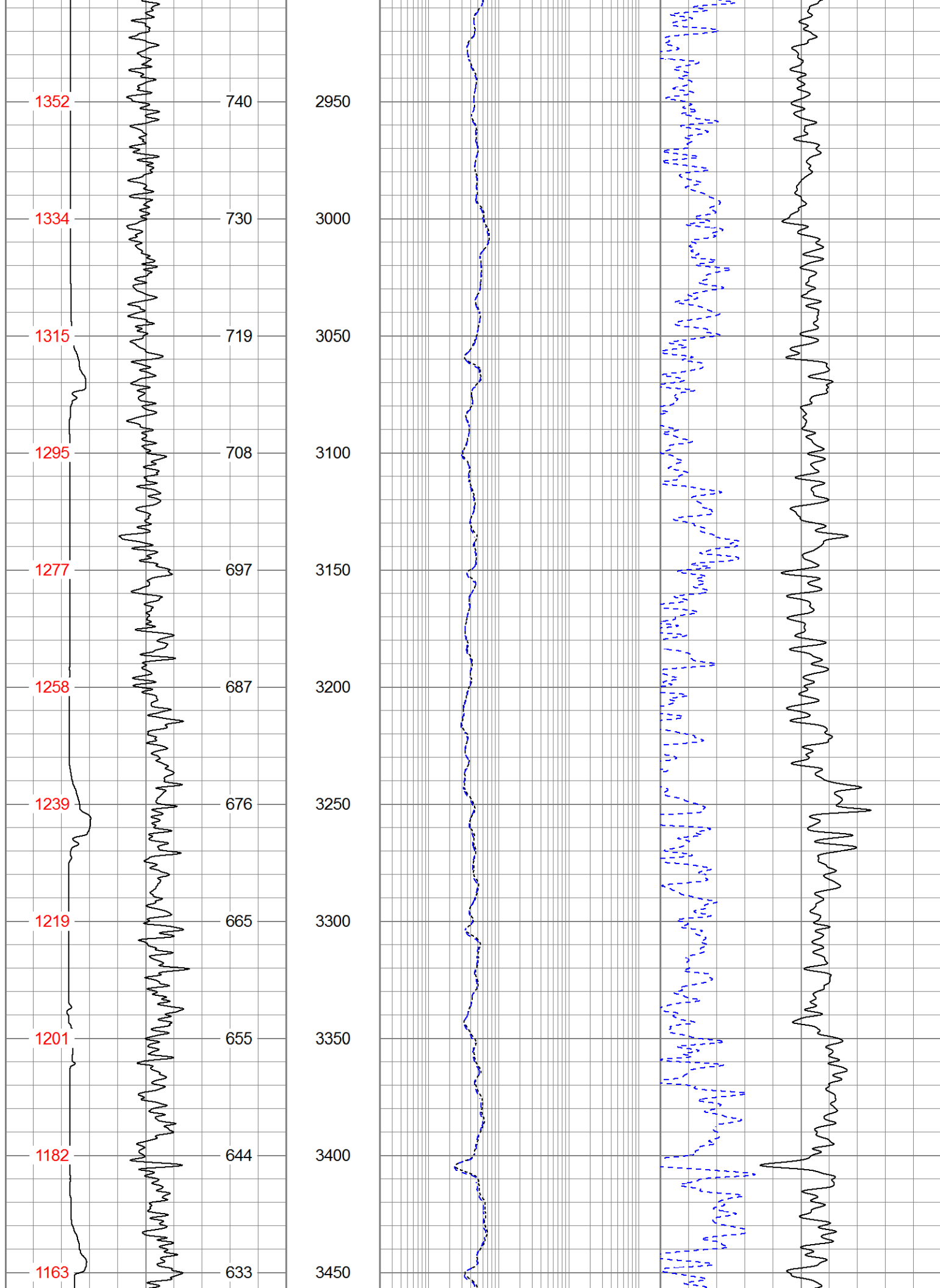
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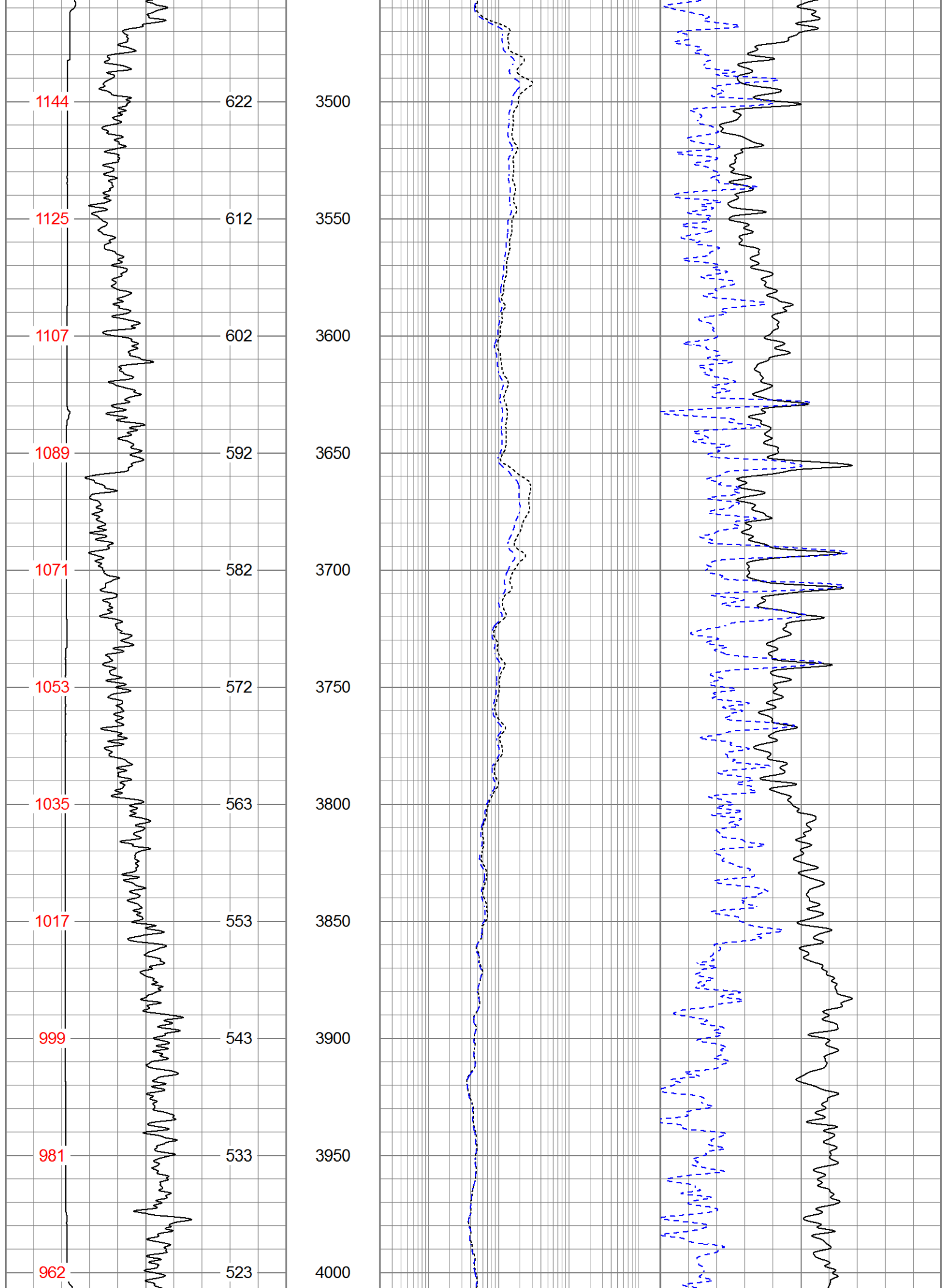
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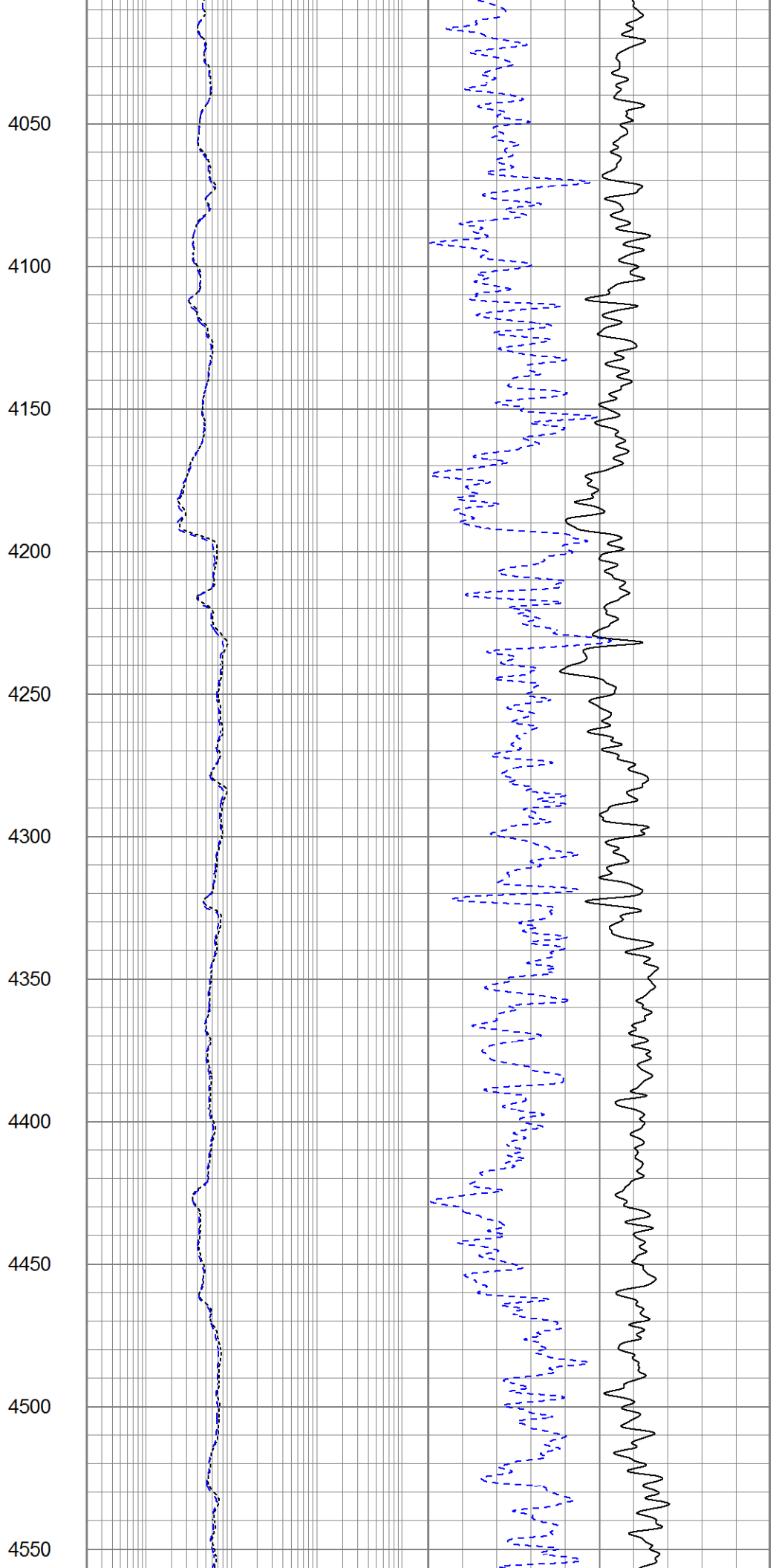
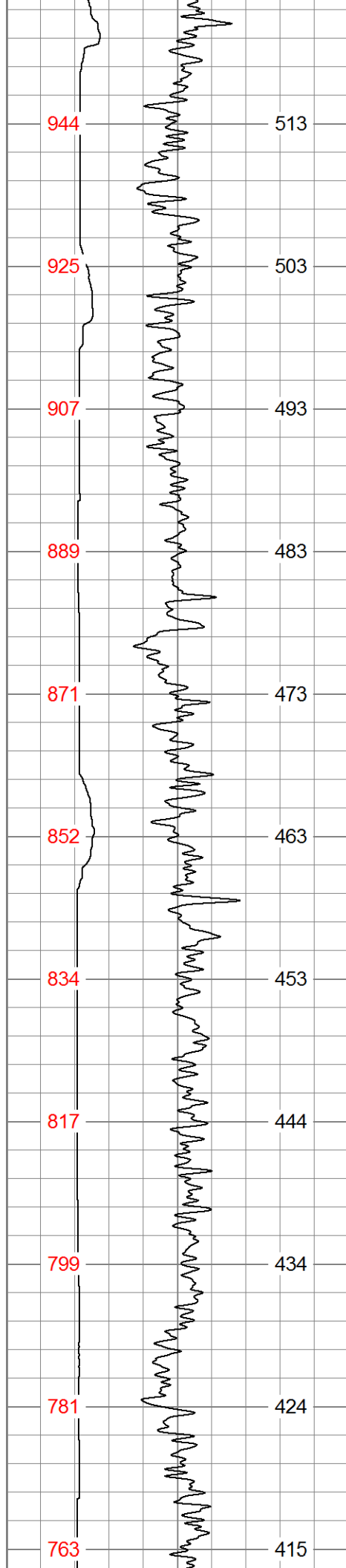
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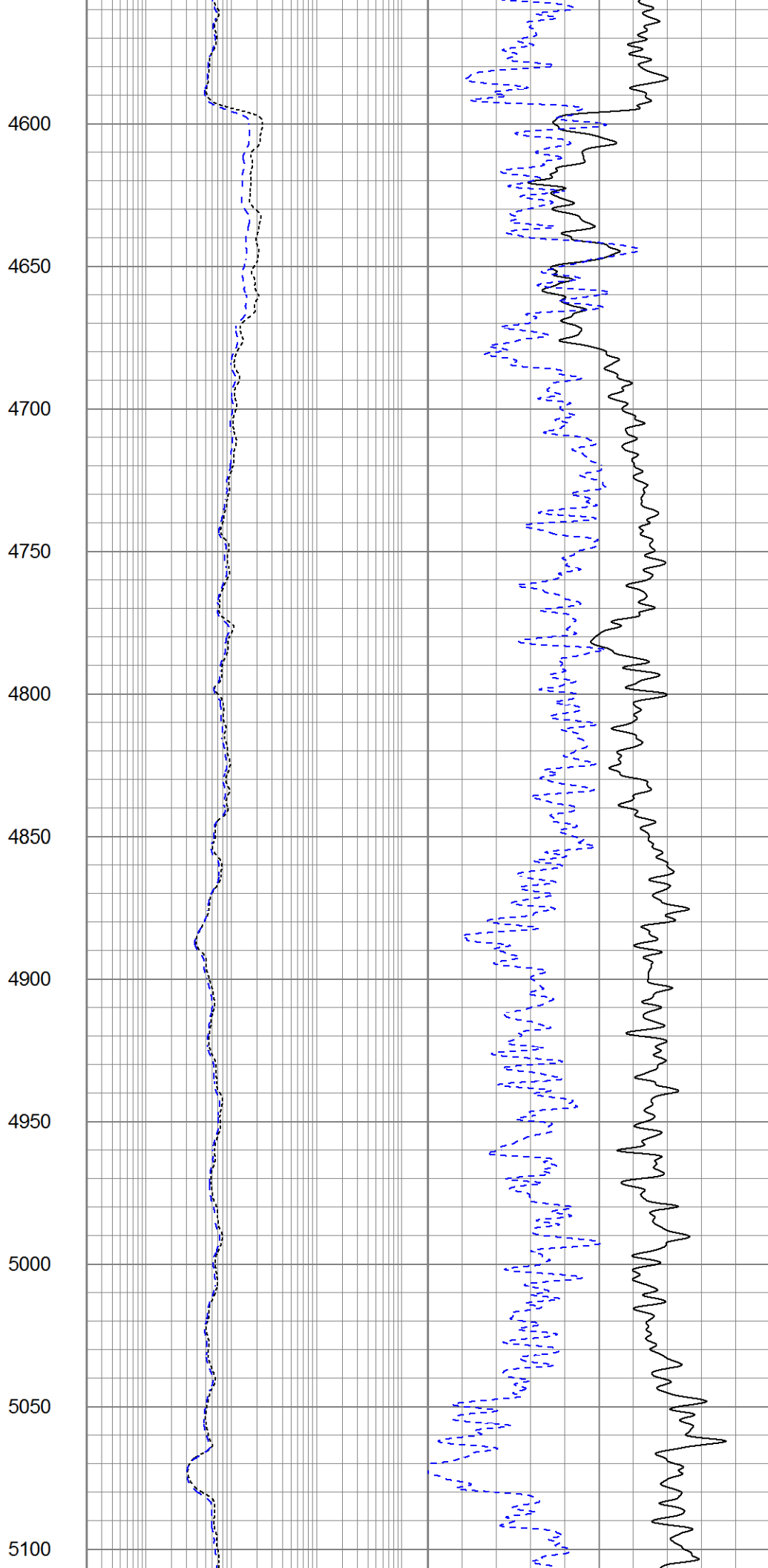
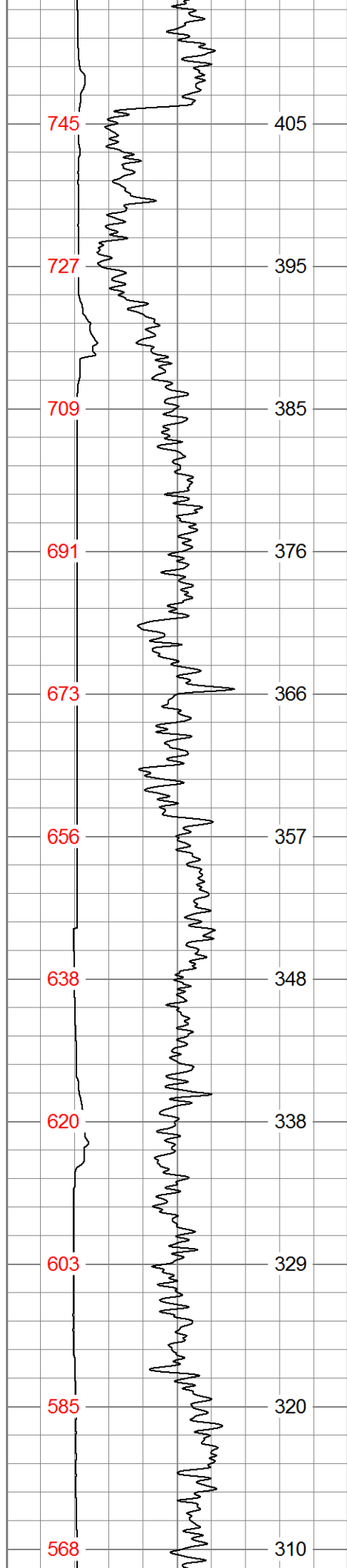


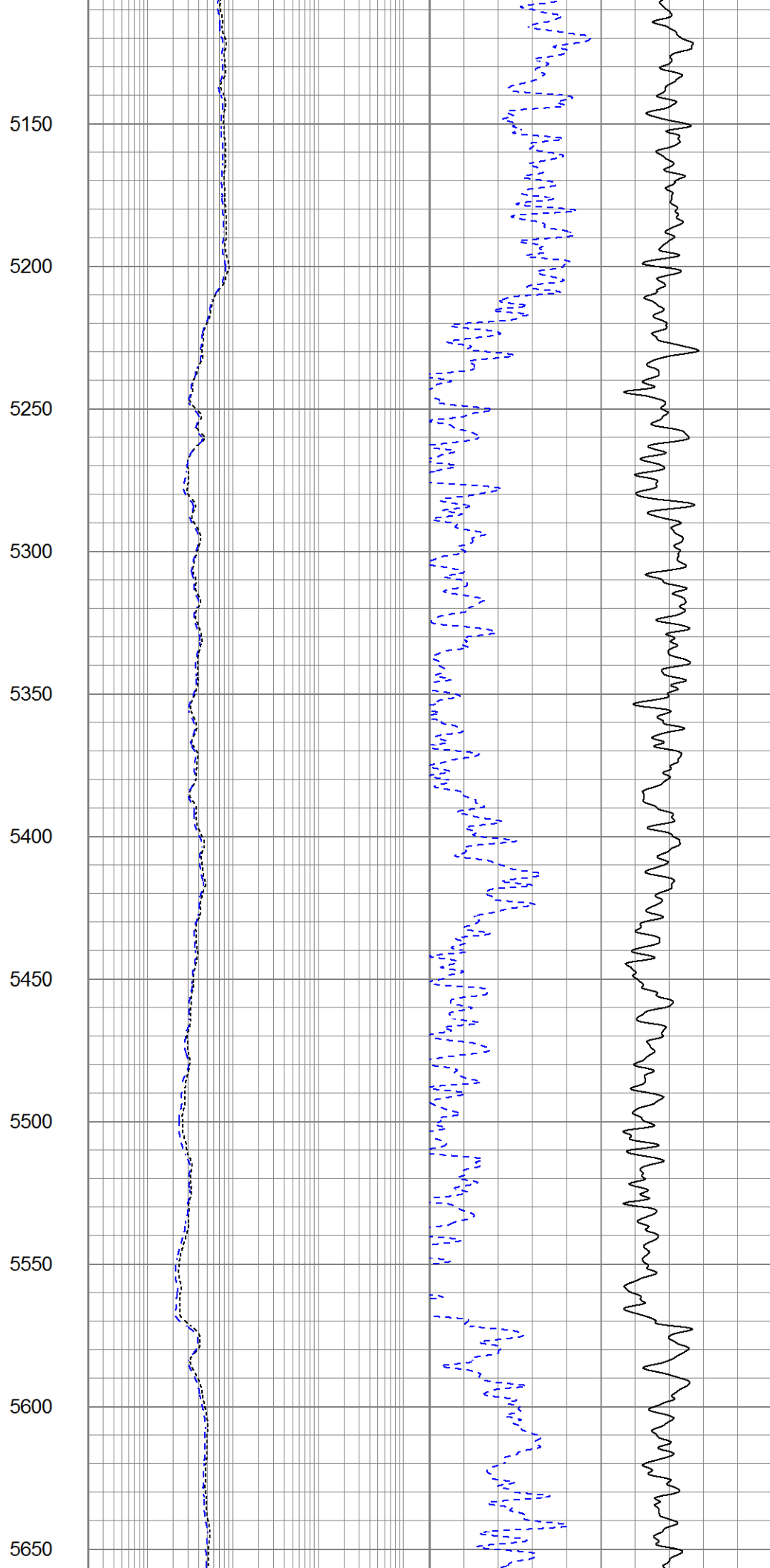
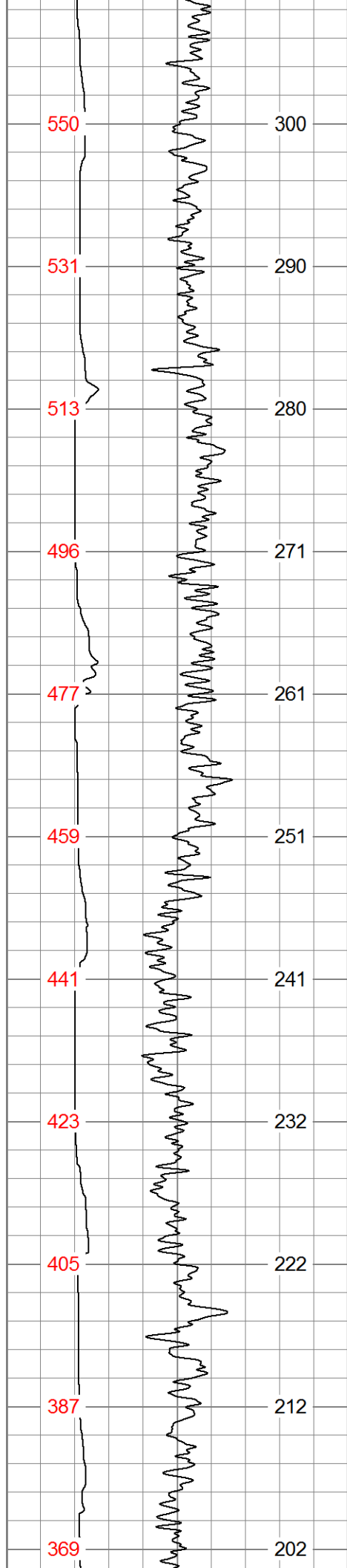


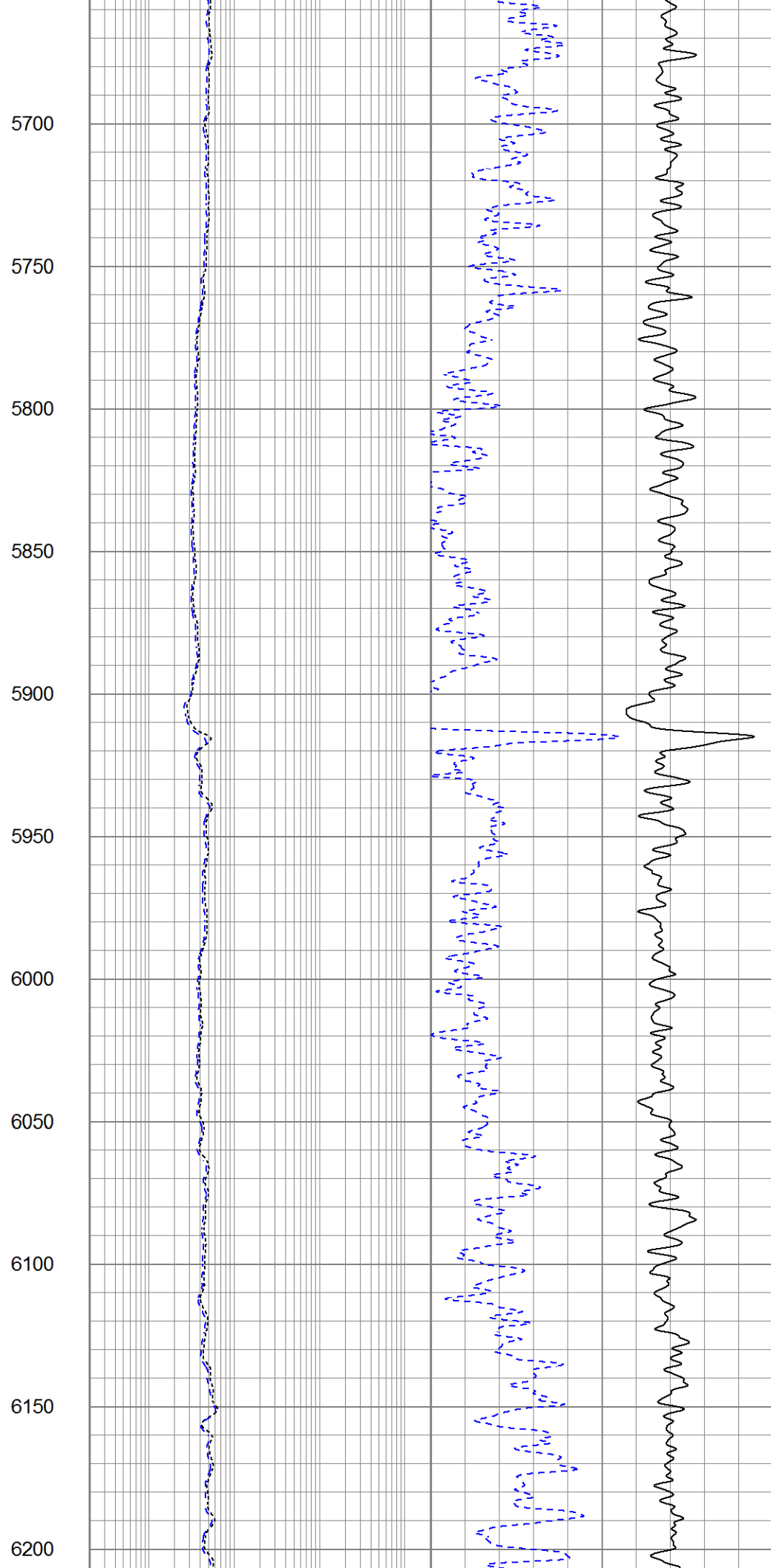
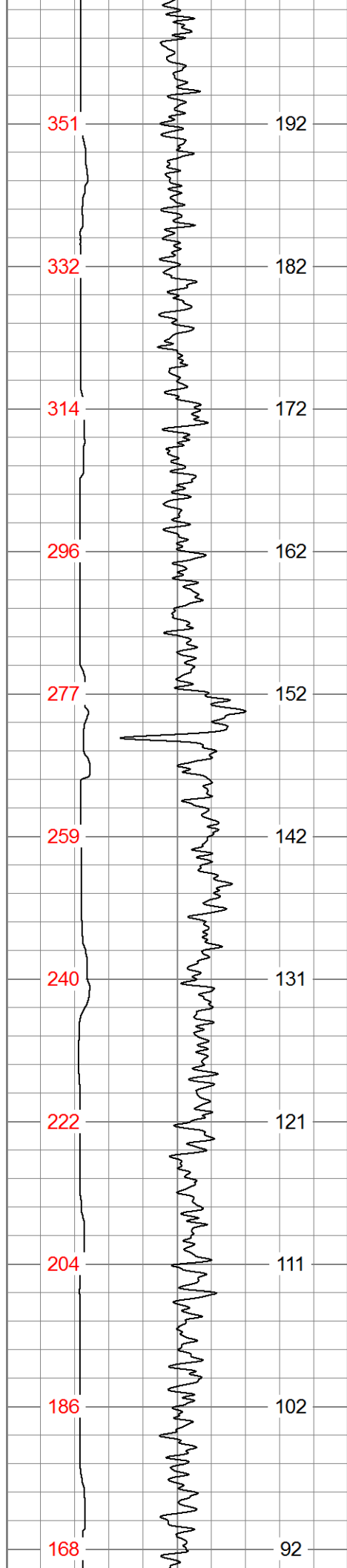


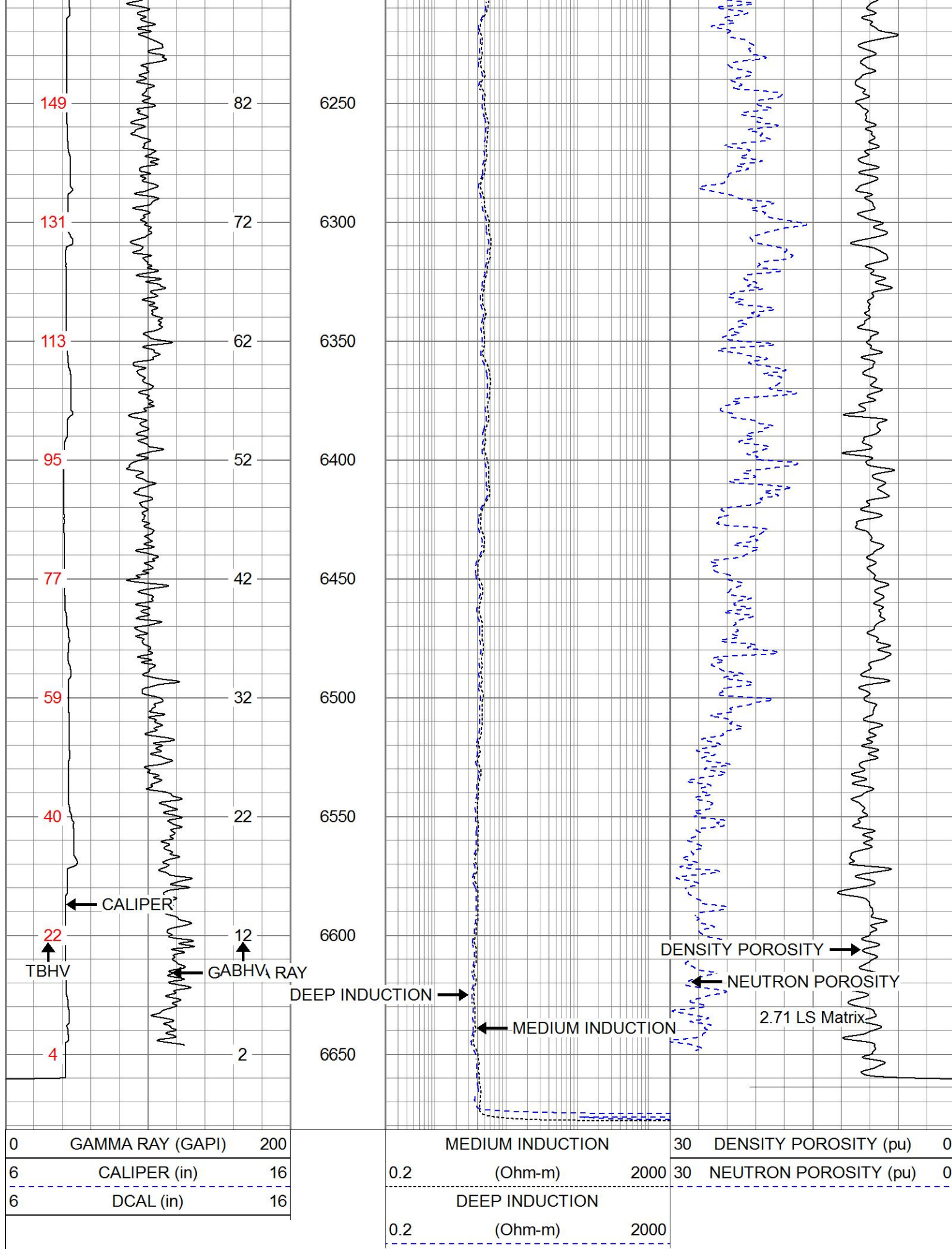






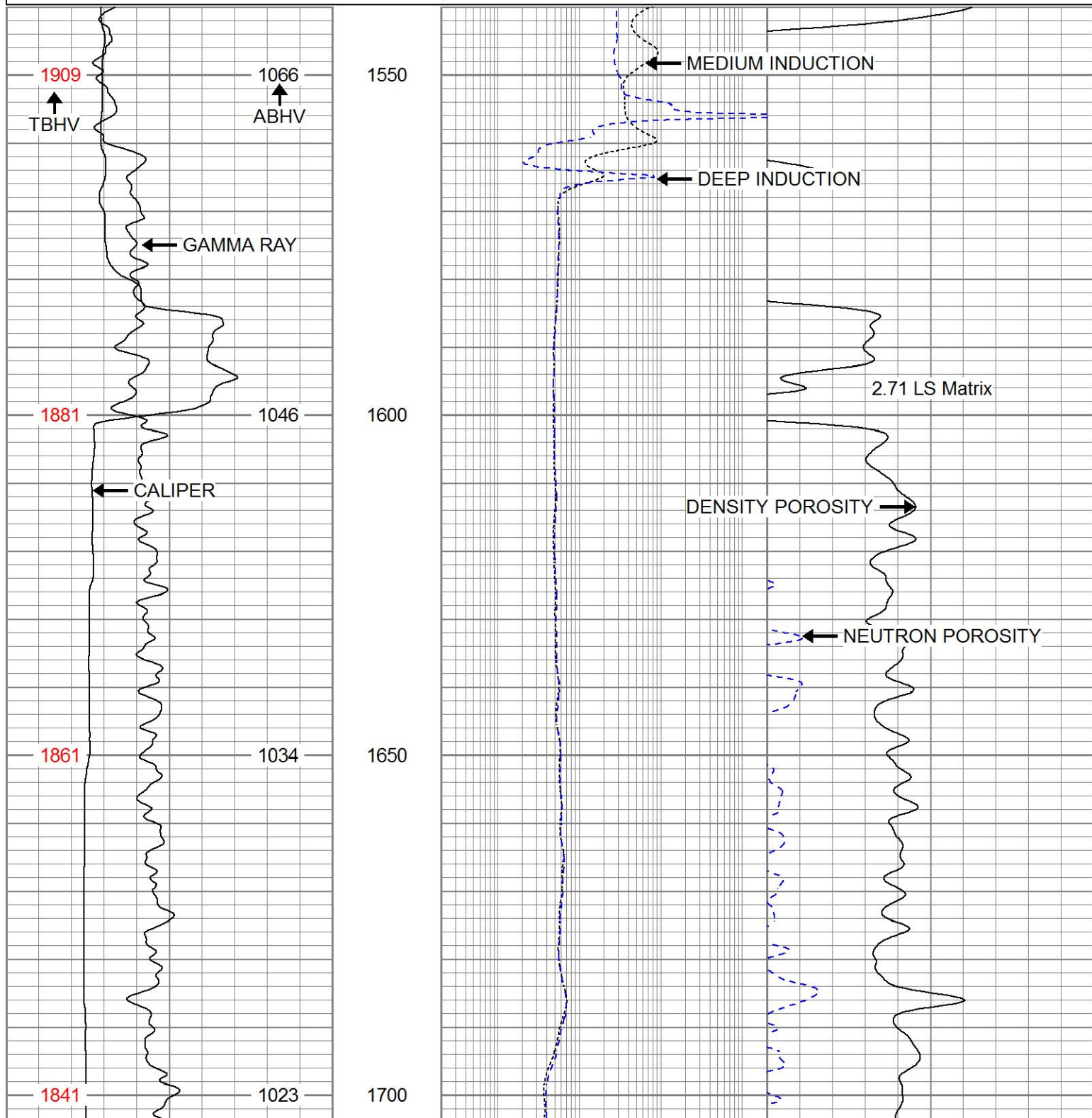


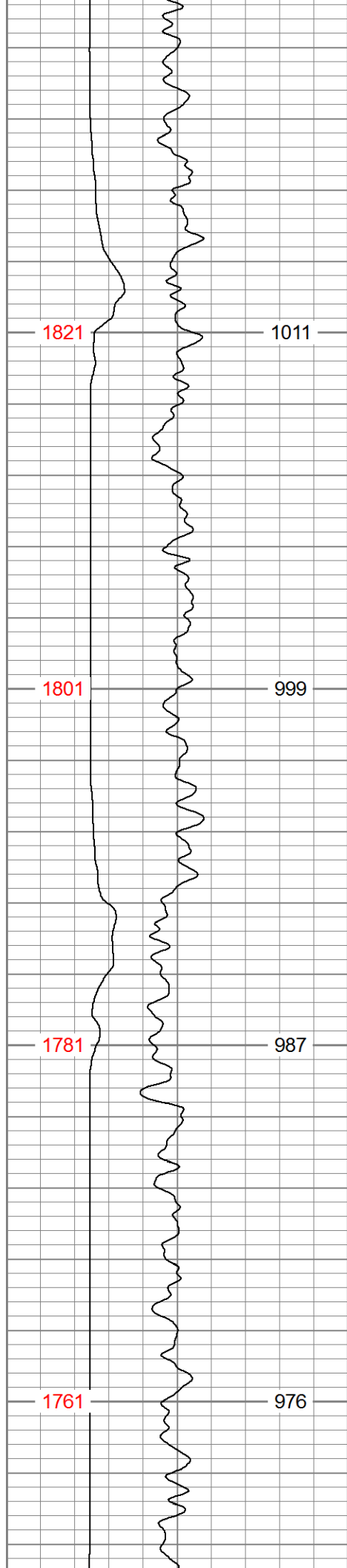




Database File extractionoil&gas_mickey7.db
 Dataset Pathname pass2.3
 Presentation Format split
 Dataset Creation Fri Dec 23 18:01:48 2016
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	200		MEDIUM INDUCTION	30	DENSITY POROSITY (pu)	0		
6	CALIPER (in)	16		0.2	(Ohm-m)	2000	30	NEUTRON POROSITY (pu)	0
6	DCAL (in)	16		DEEP INDUCTION					
				0.2	(Ohm-m)	2000			





1821

1801

1781

1761

1011

999

987

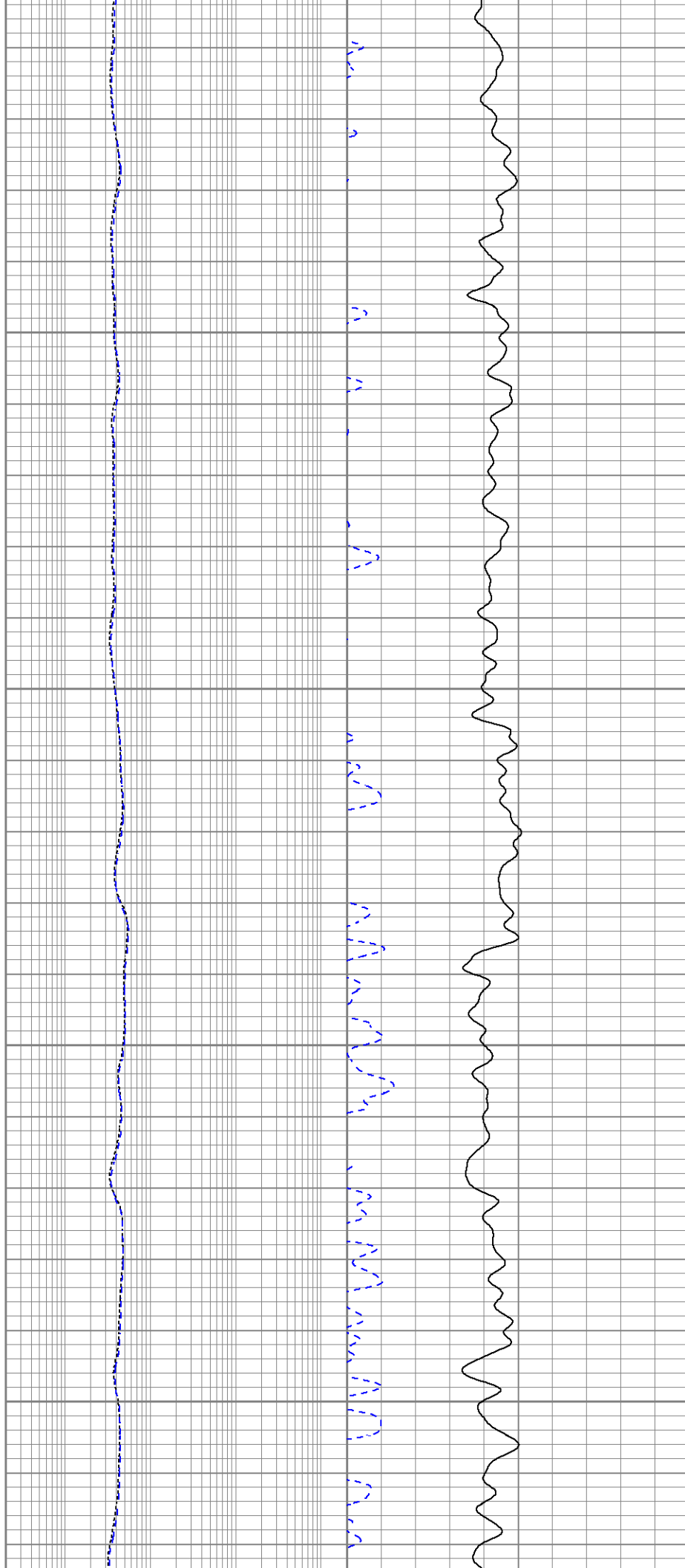
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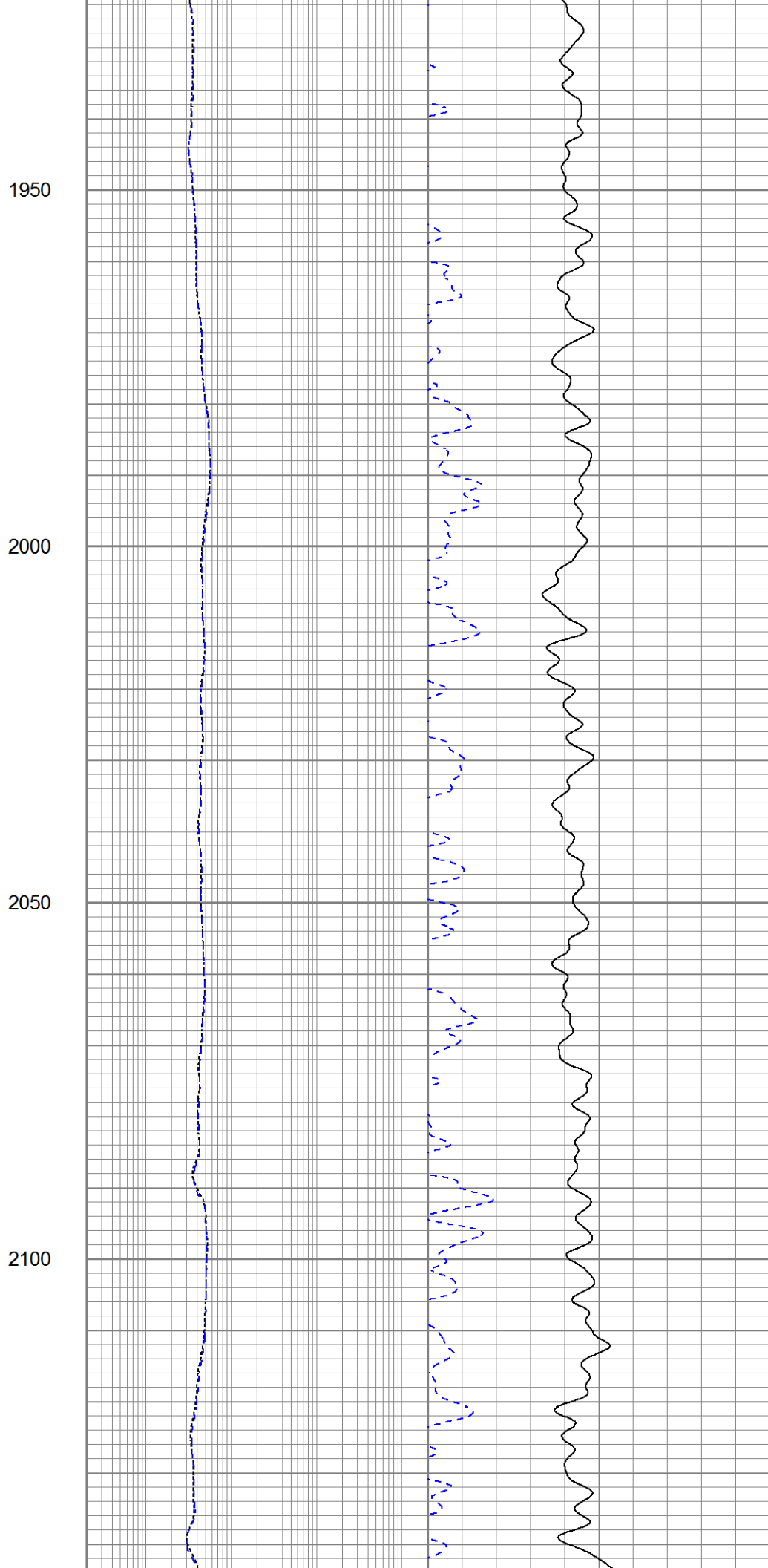
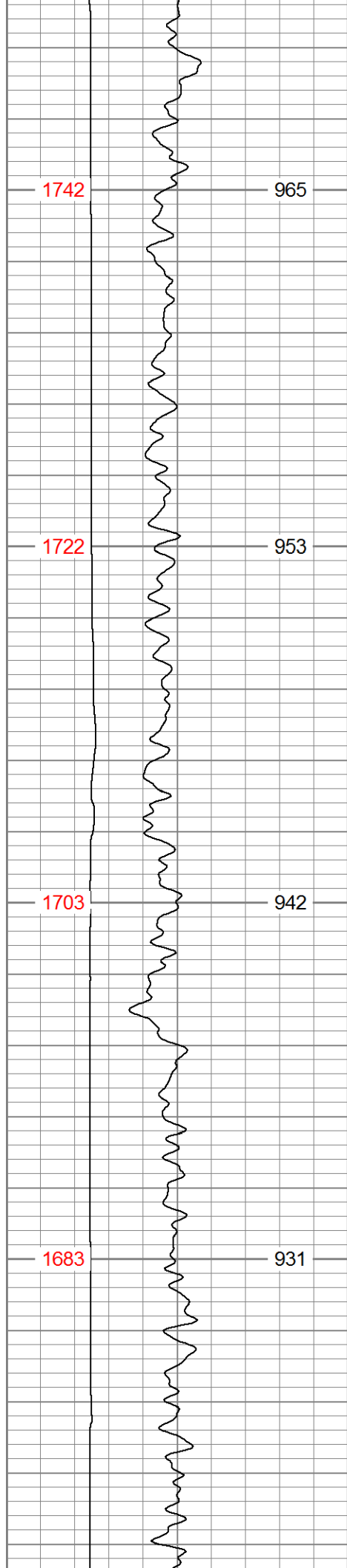
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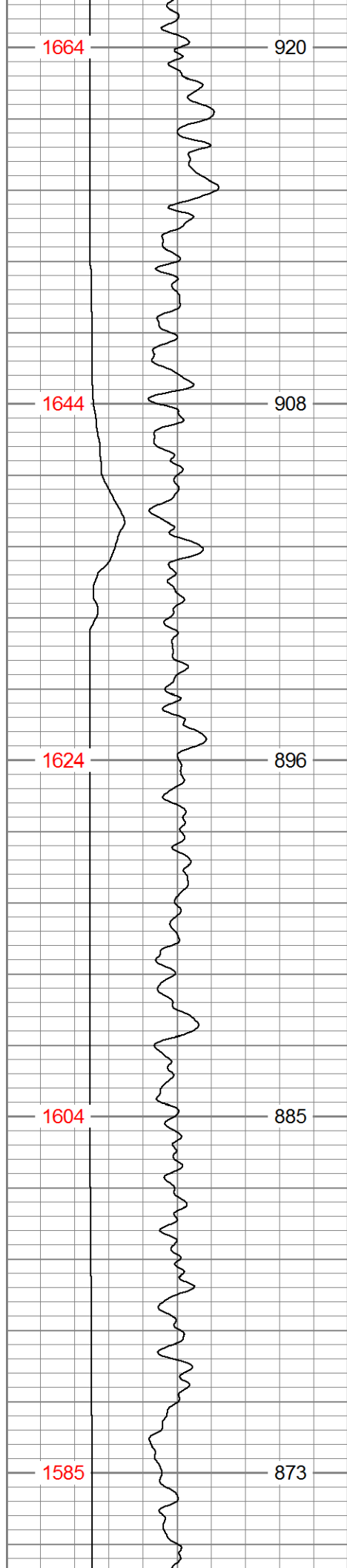
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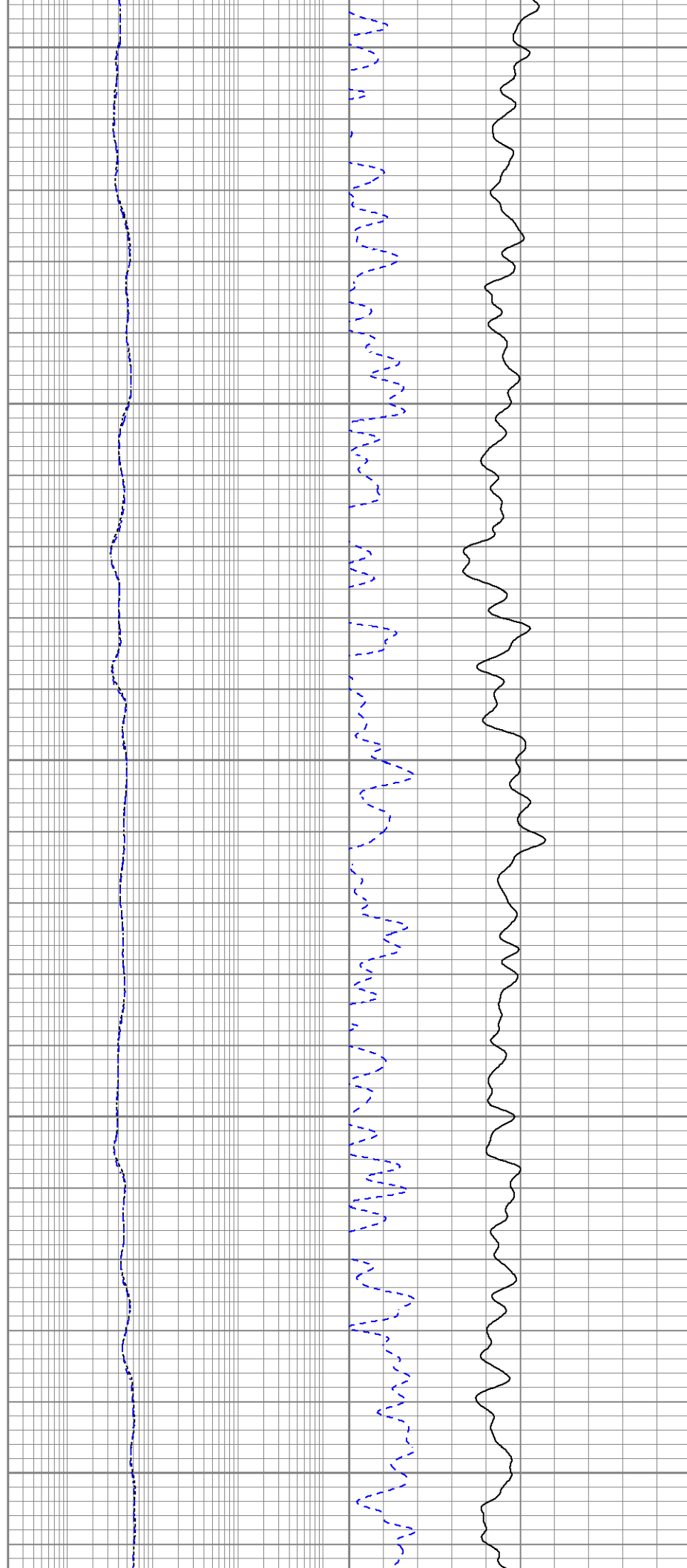
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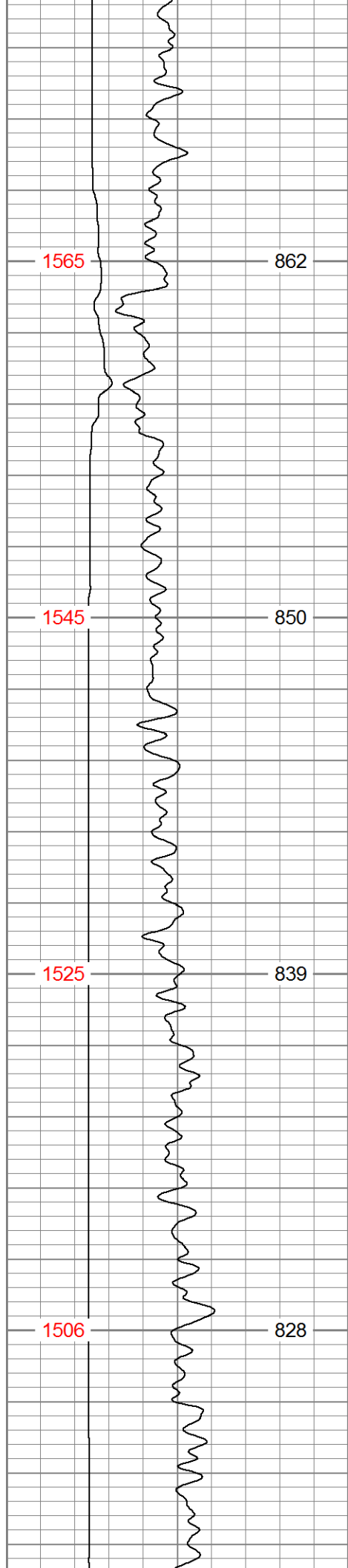






2150
2200
2250
2300
2350



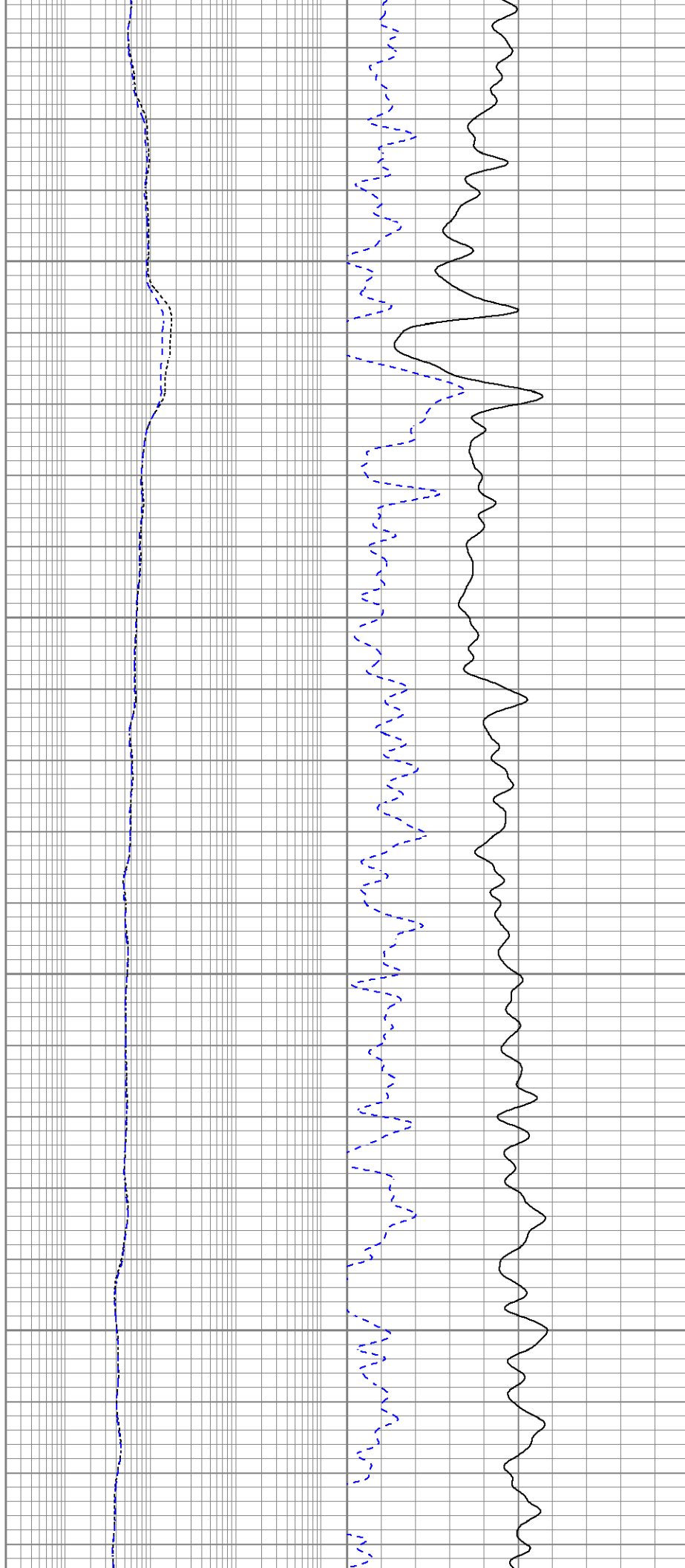


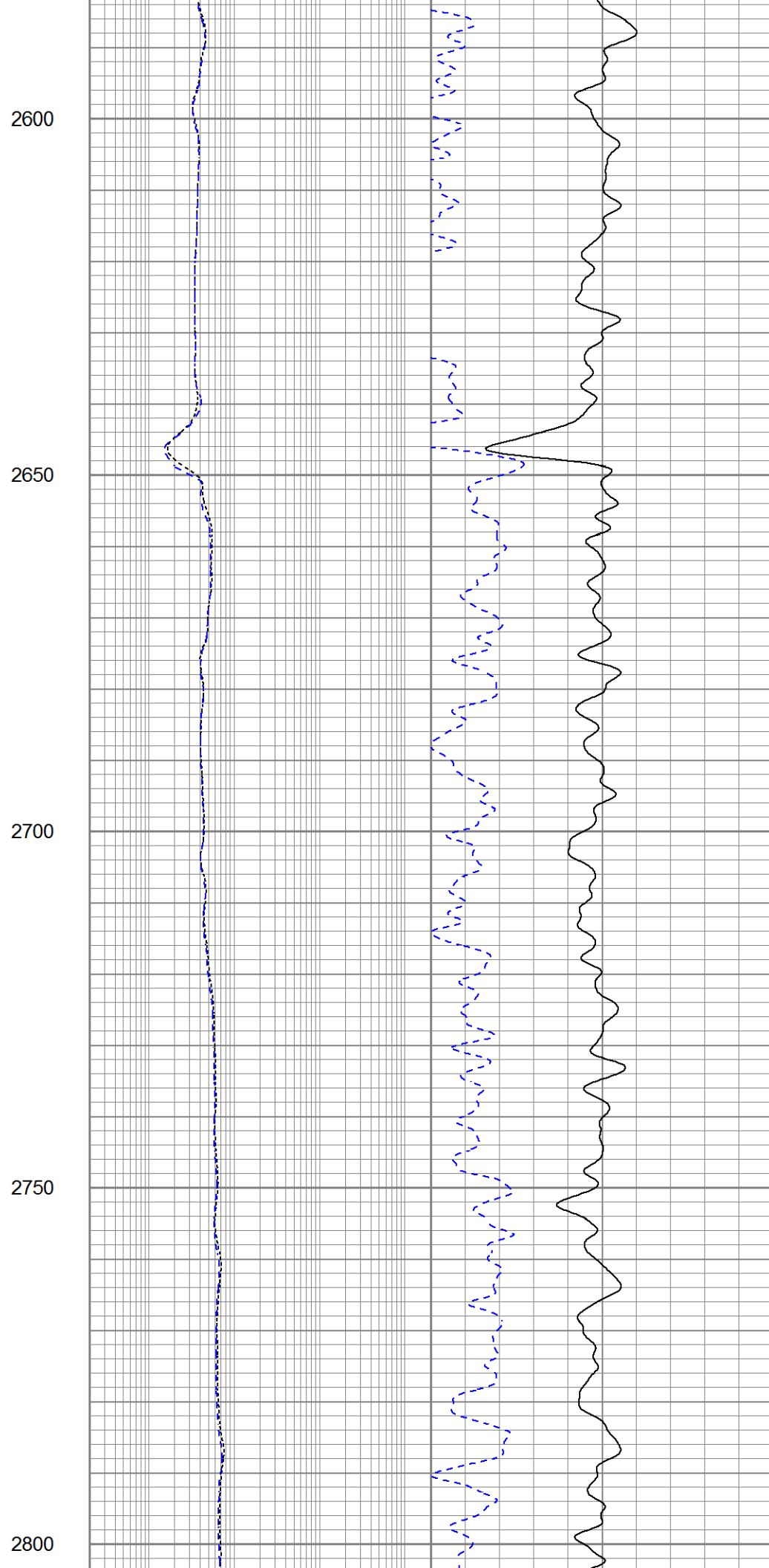
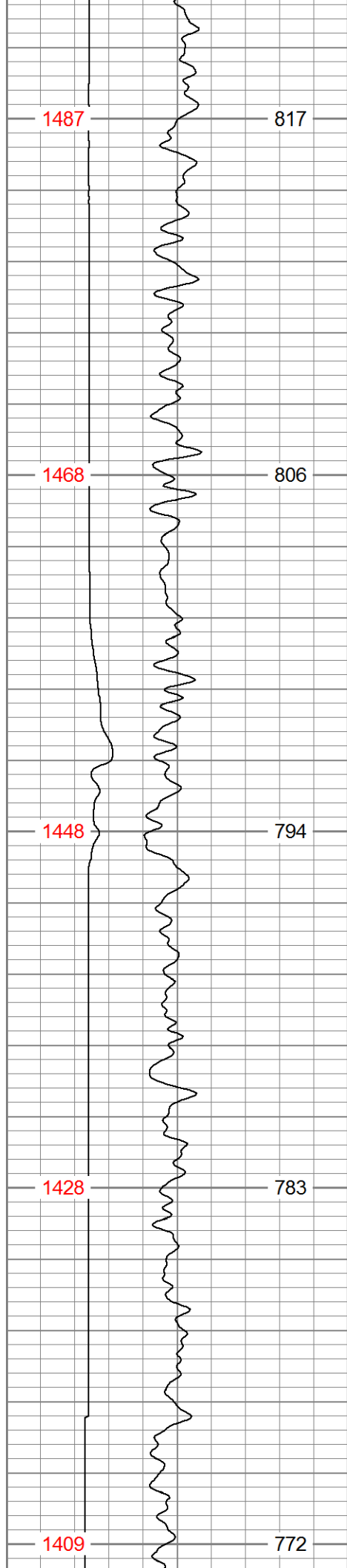
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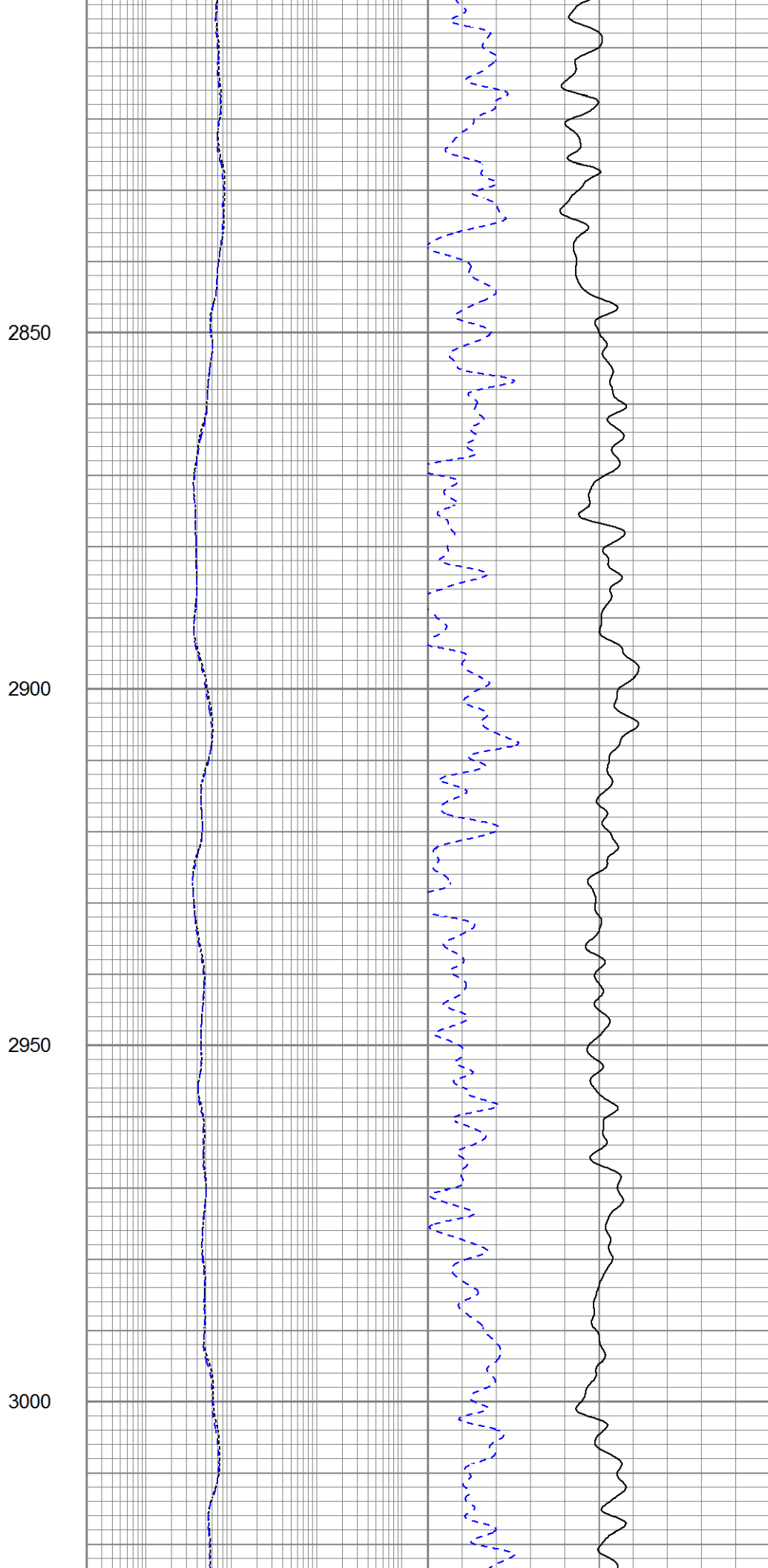
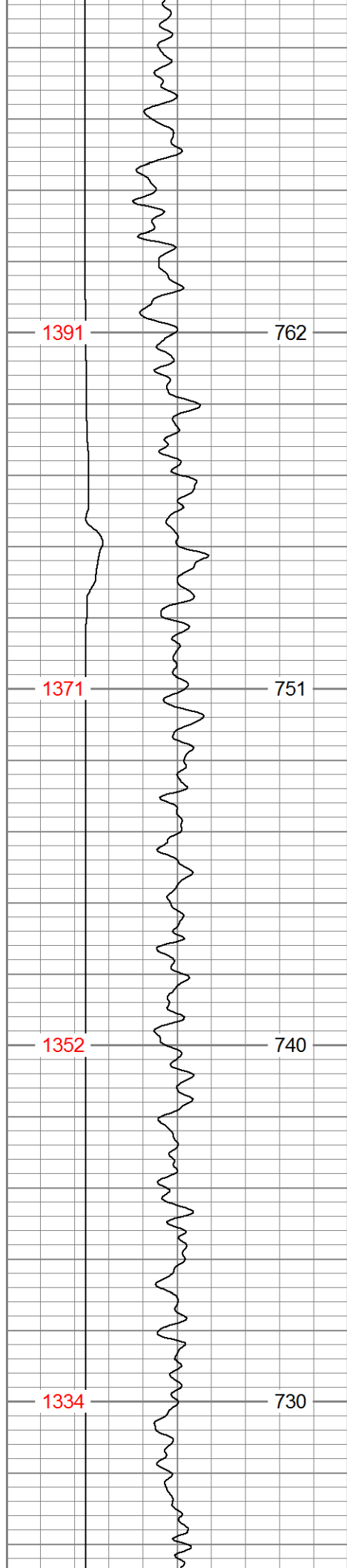
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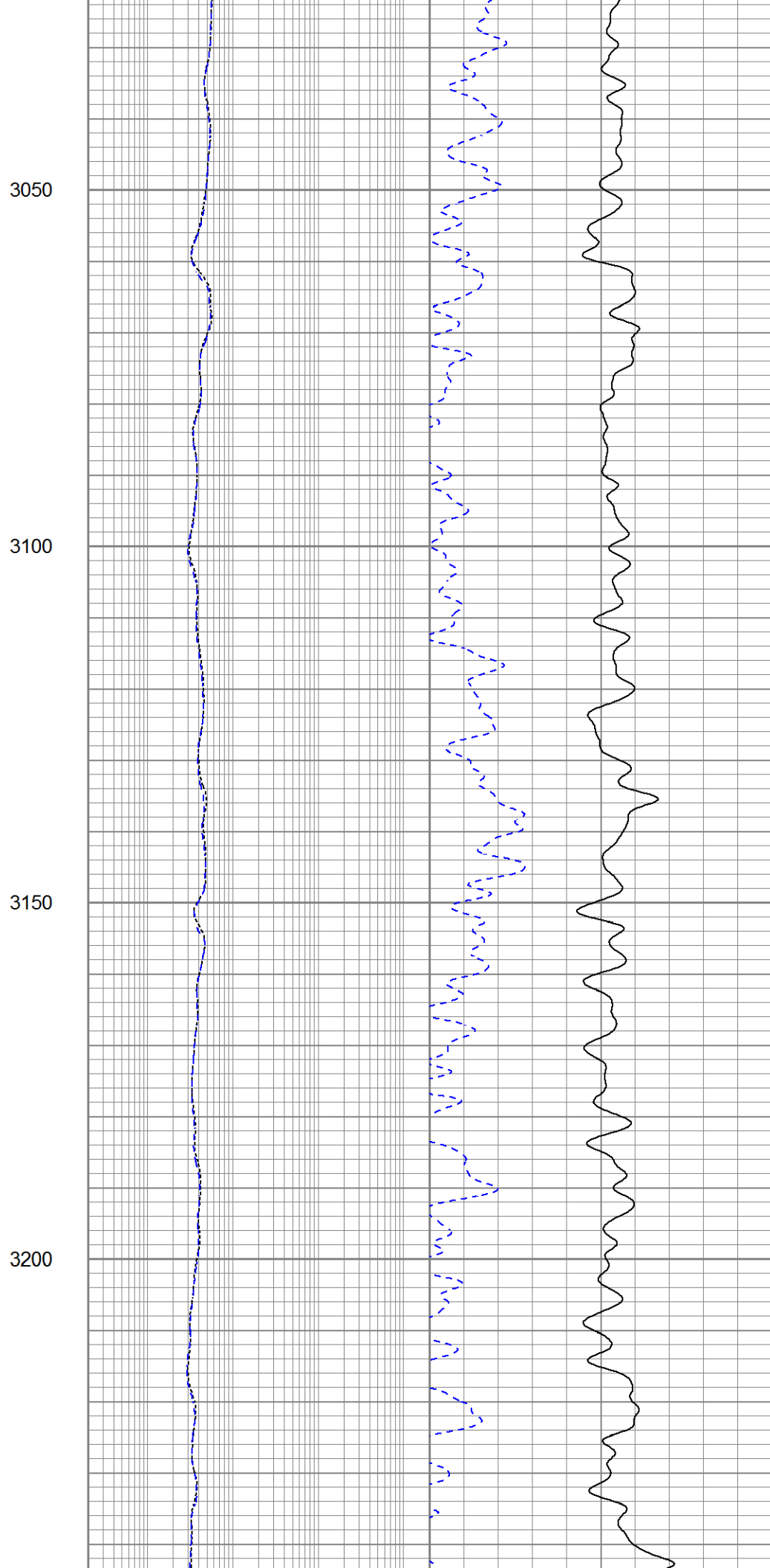
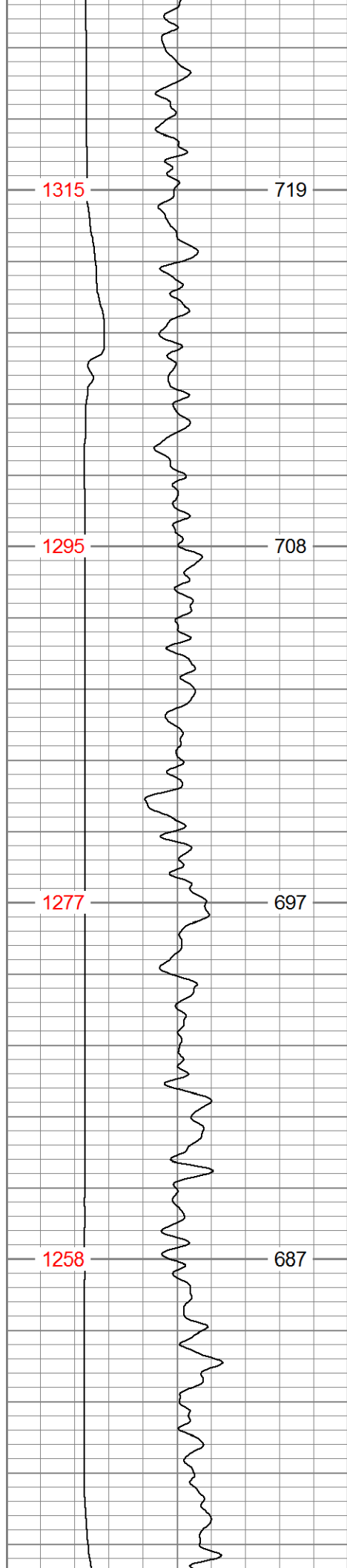
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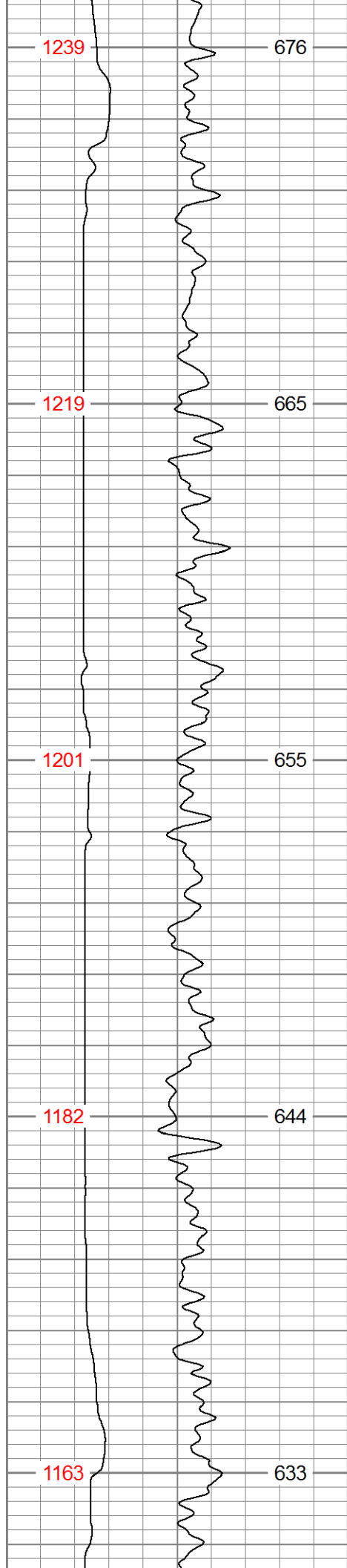
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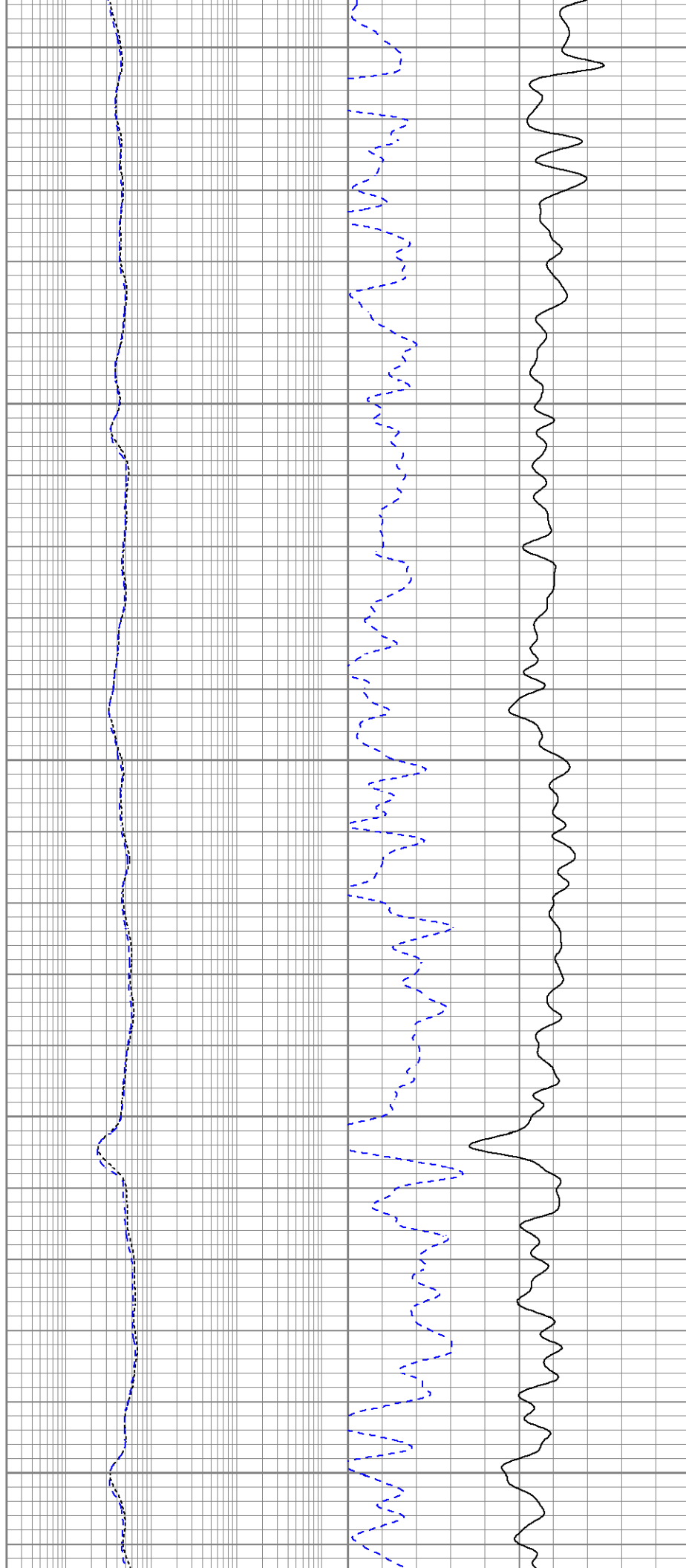
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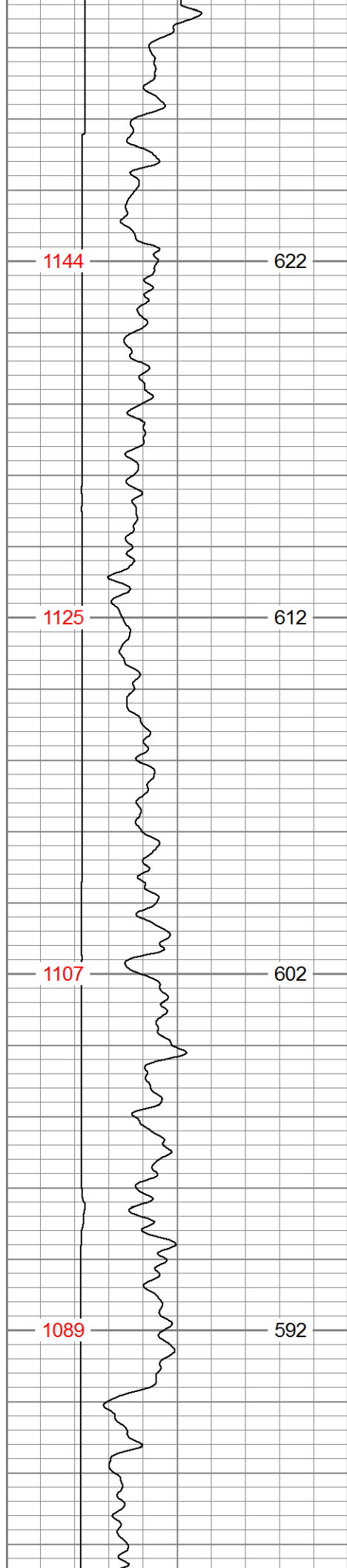
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3450



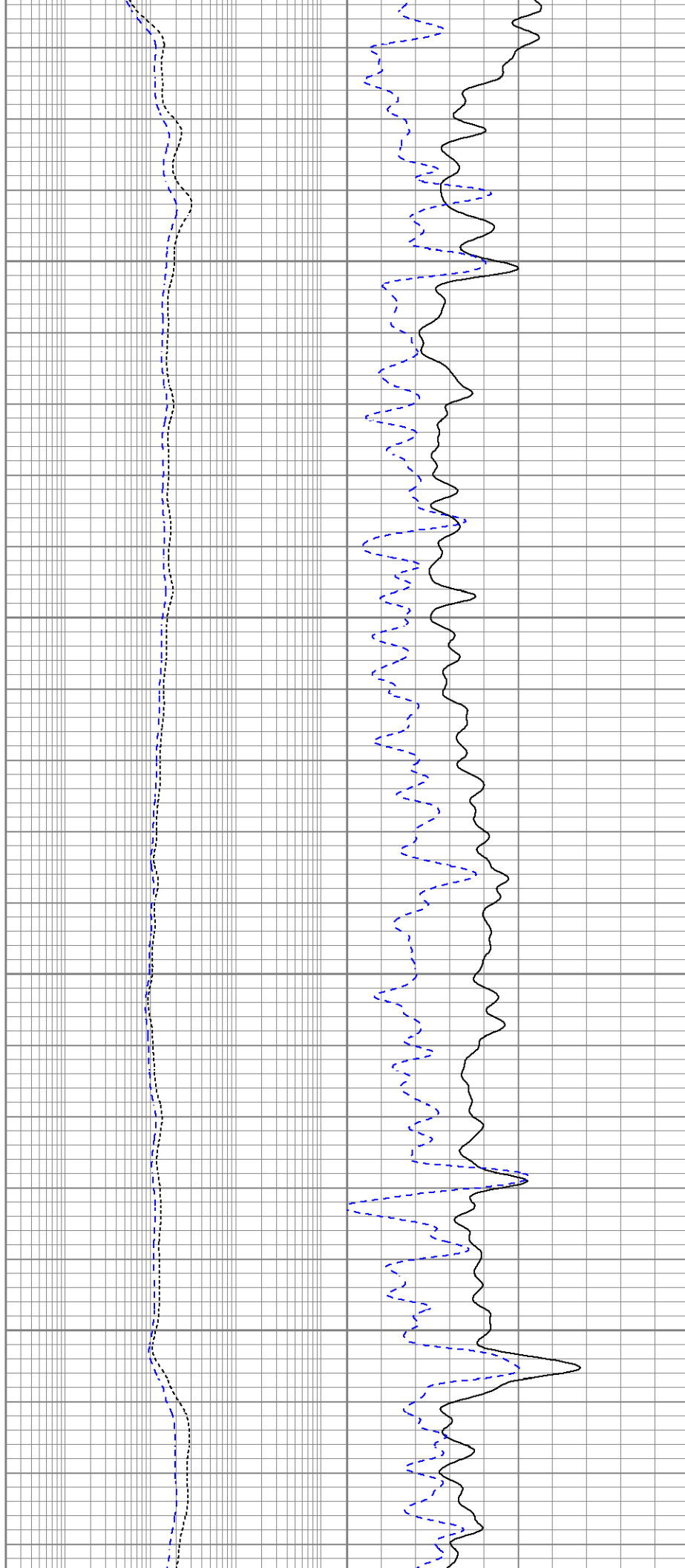


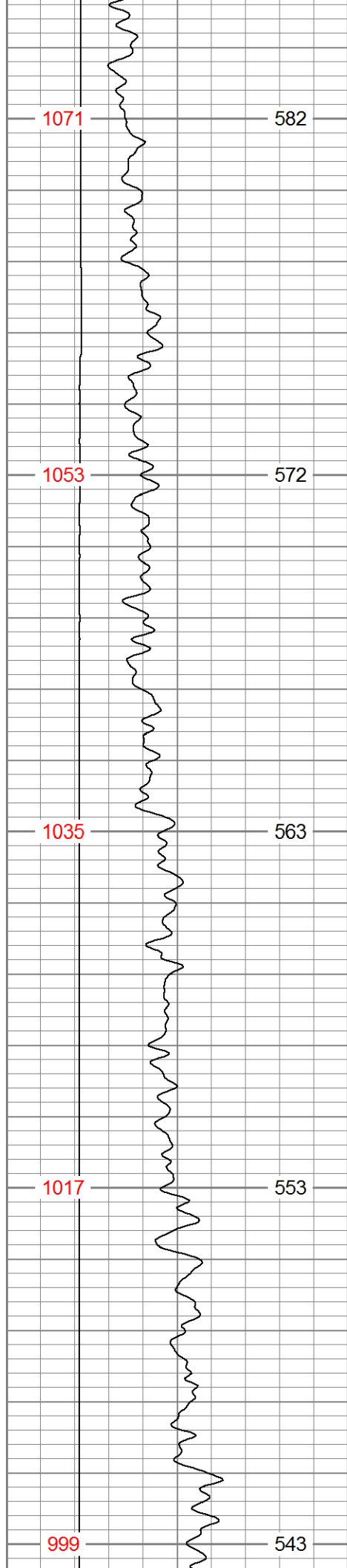
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3650





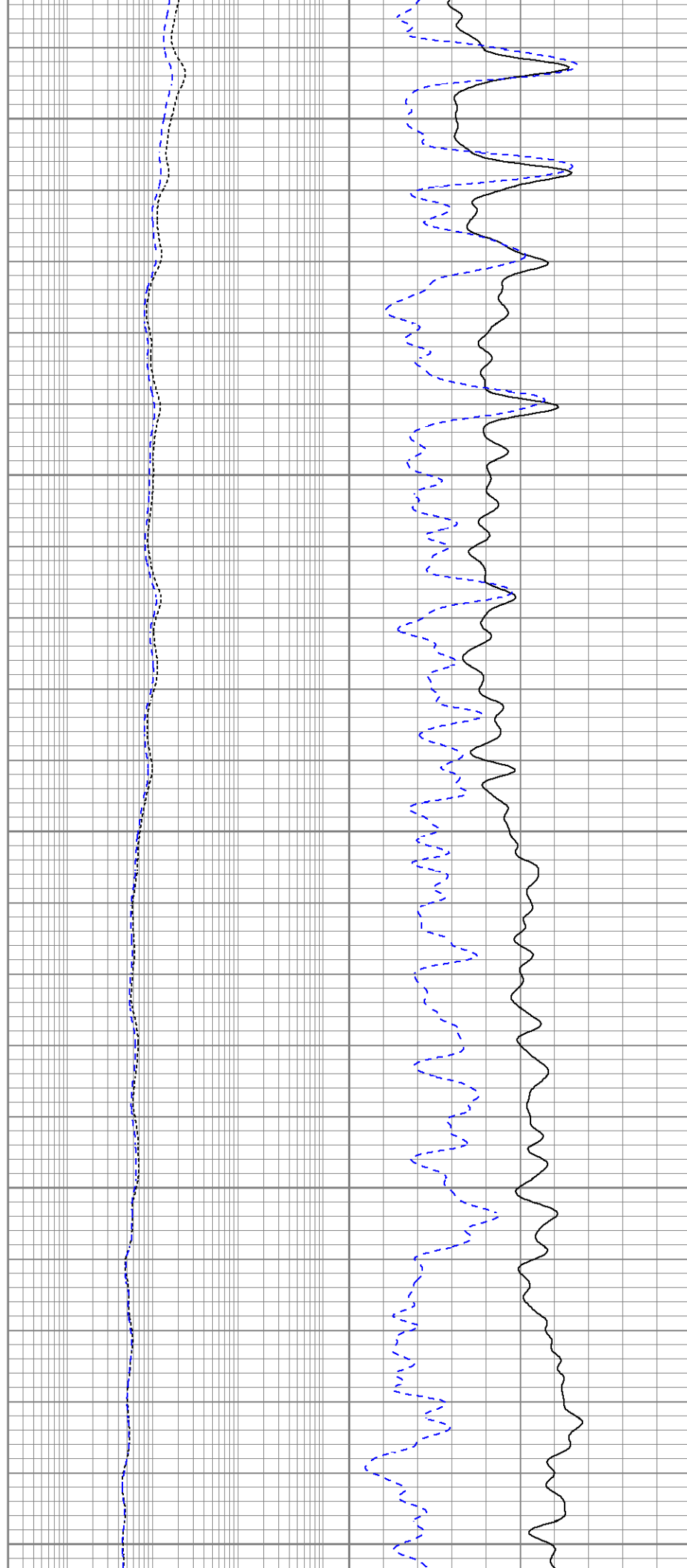
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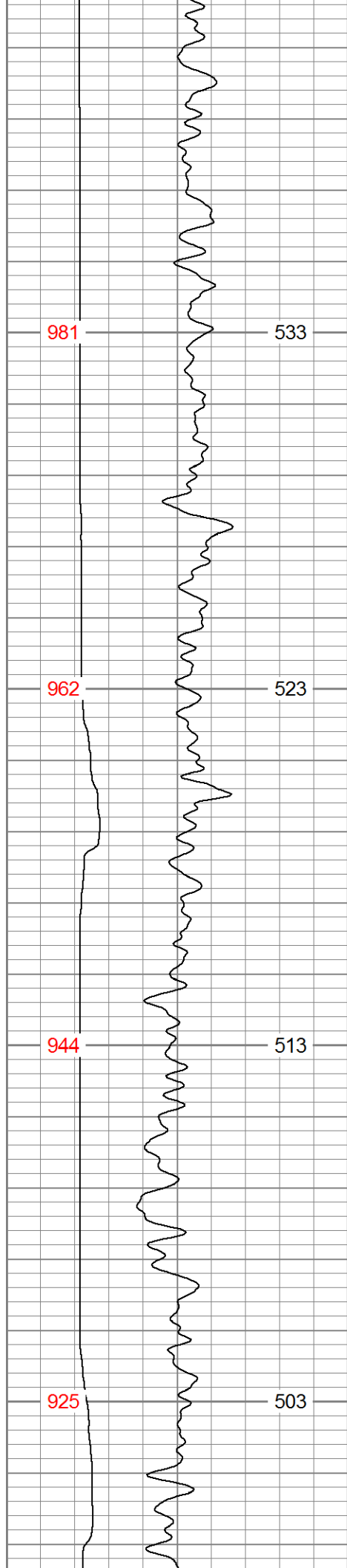
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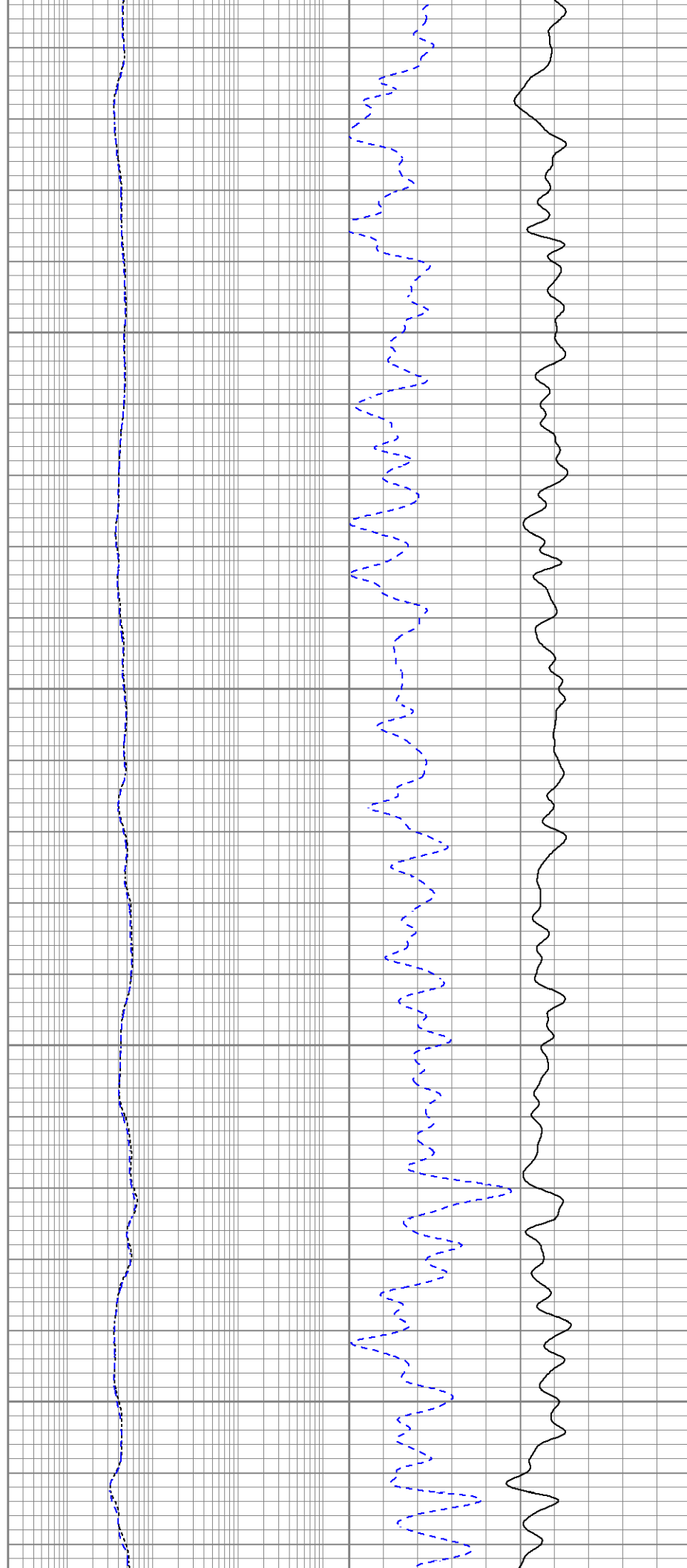


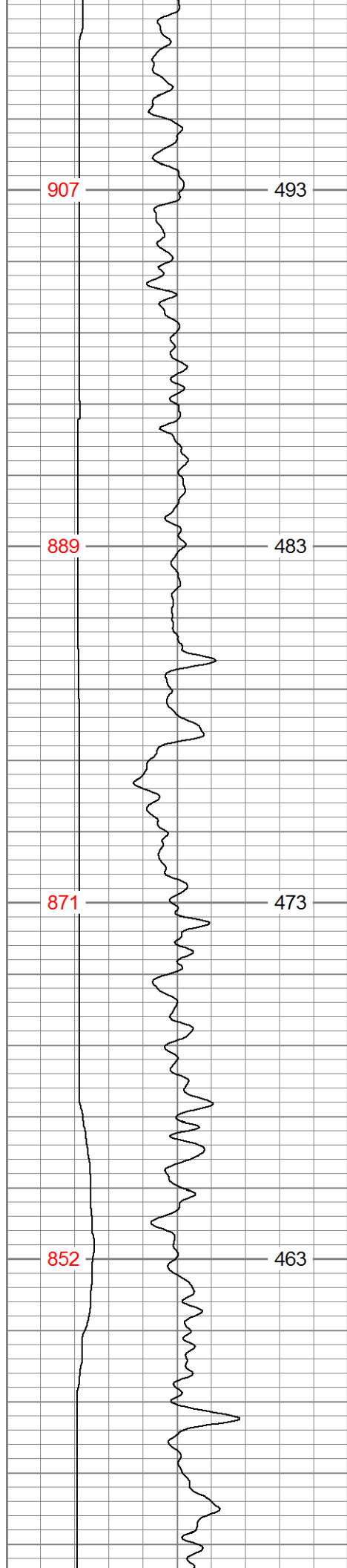
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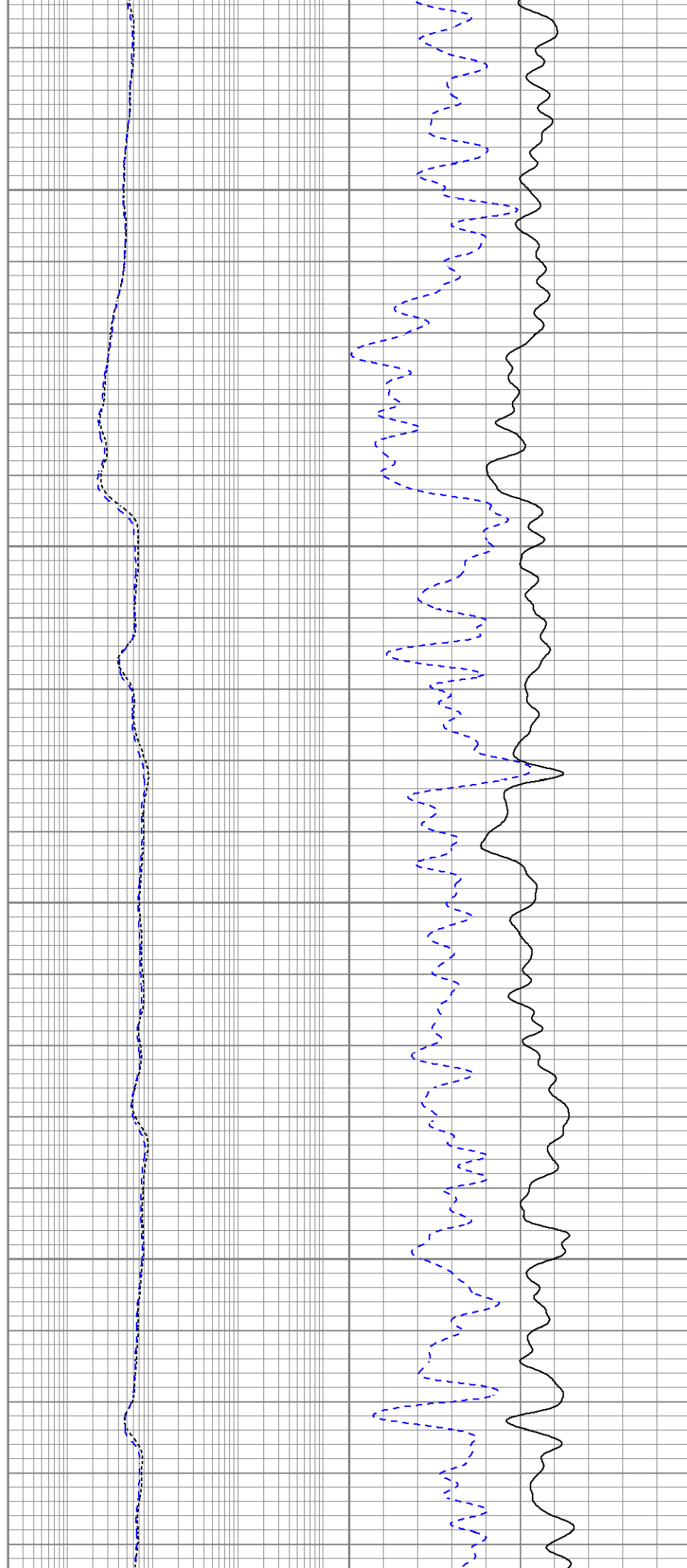


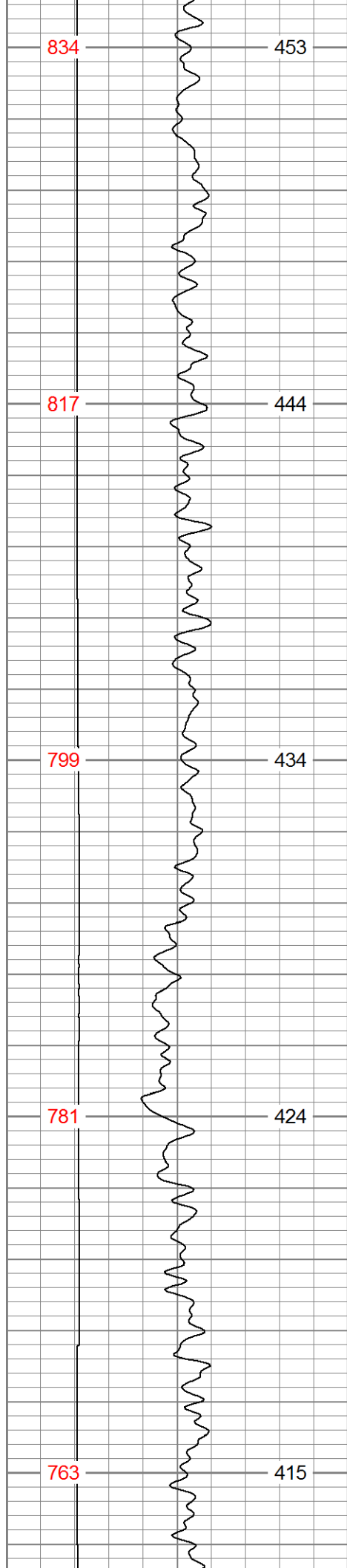
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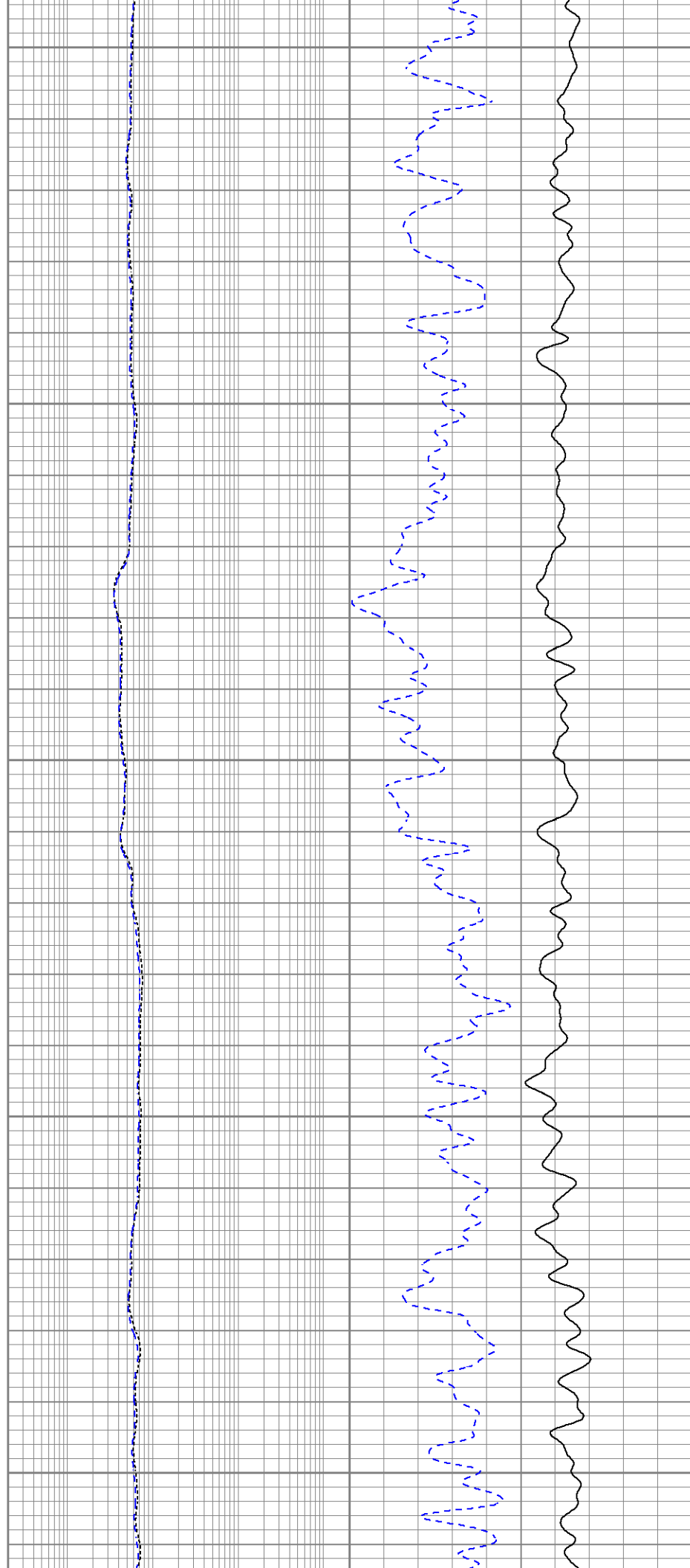
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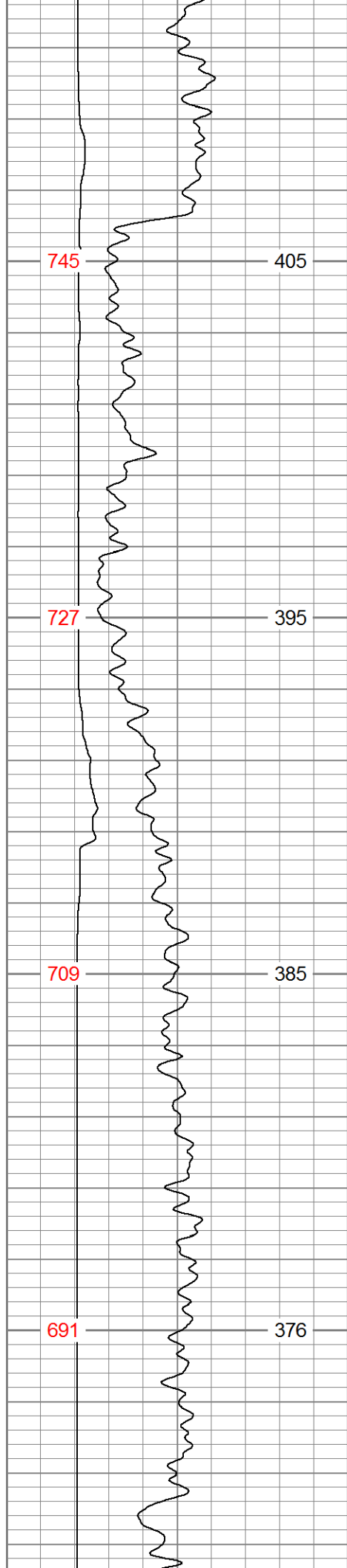
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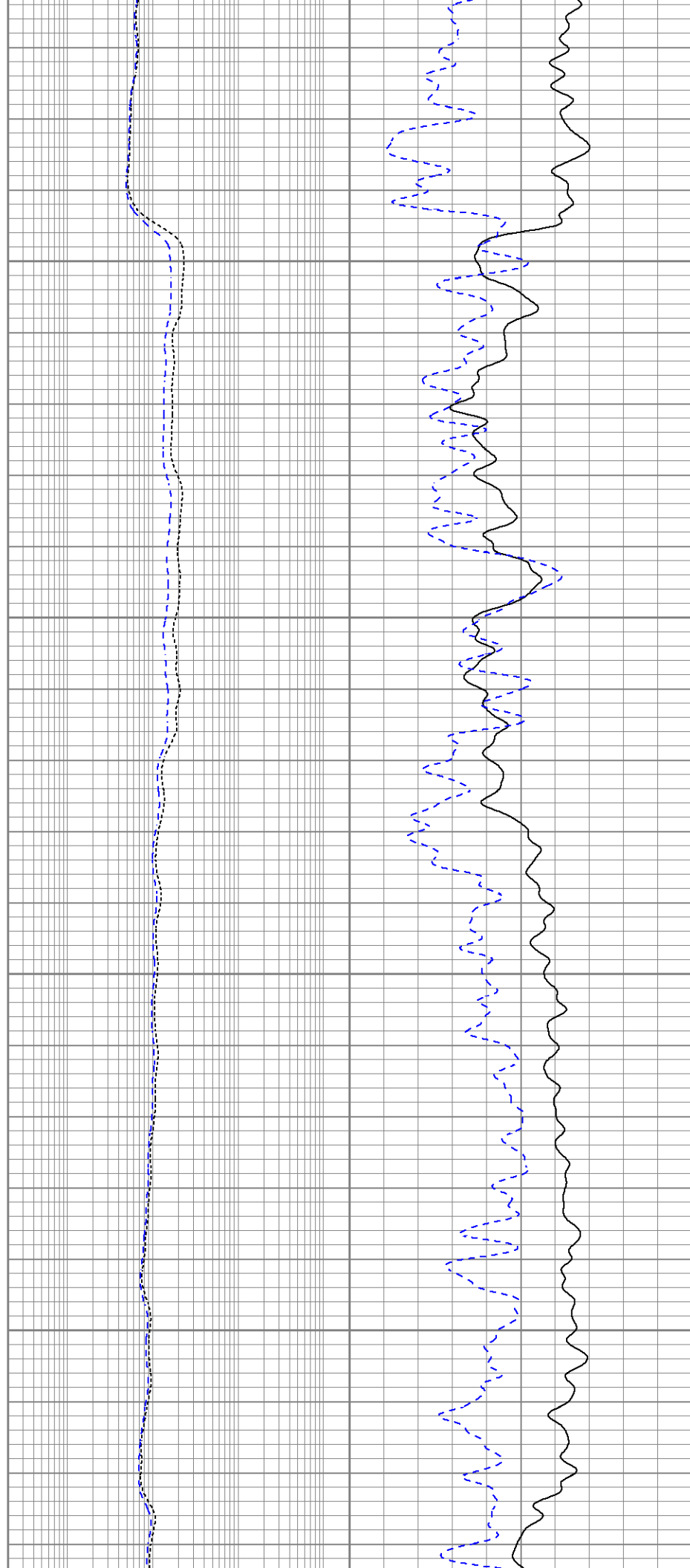


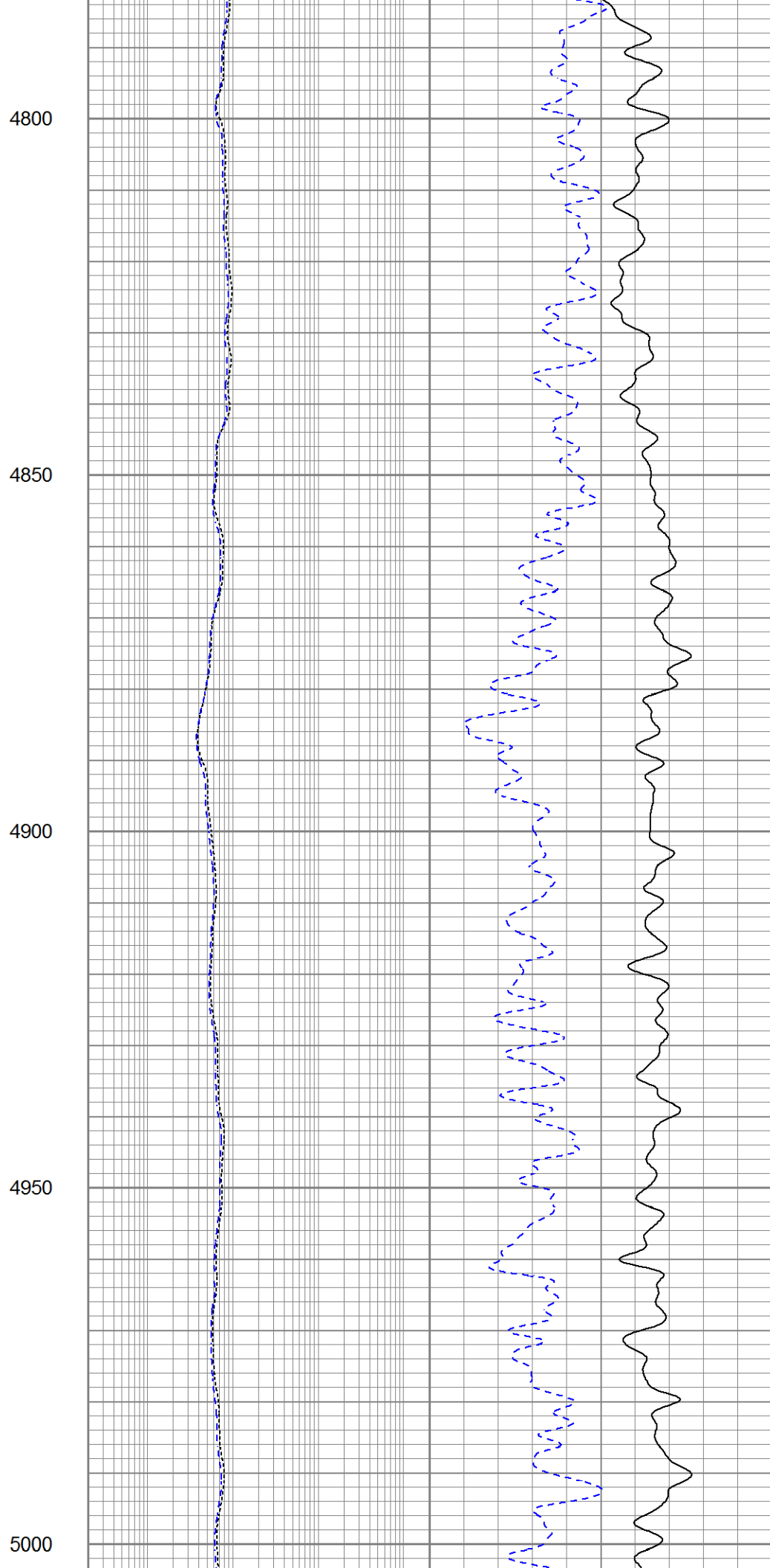
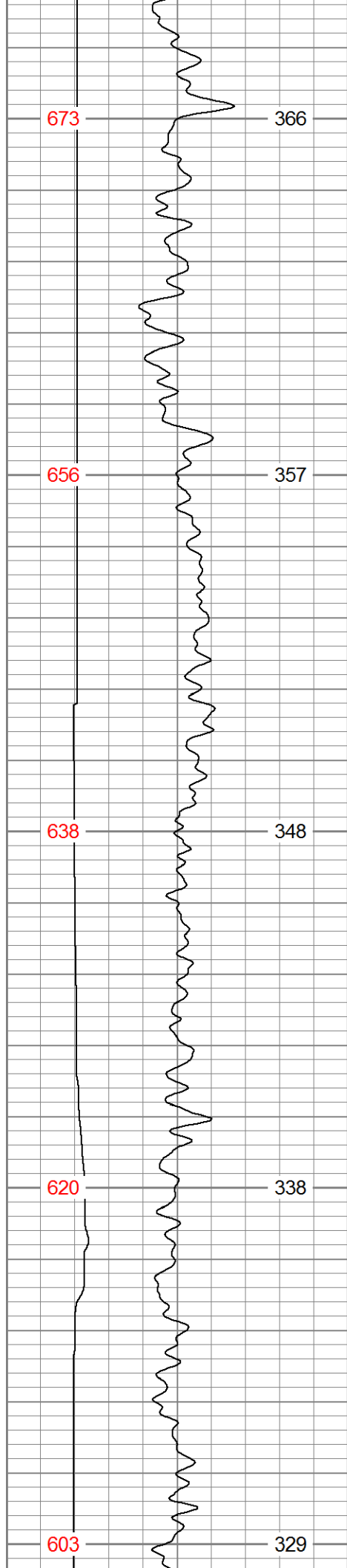
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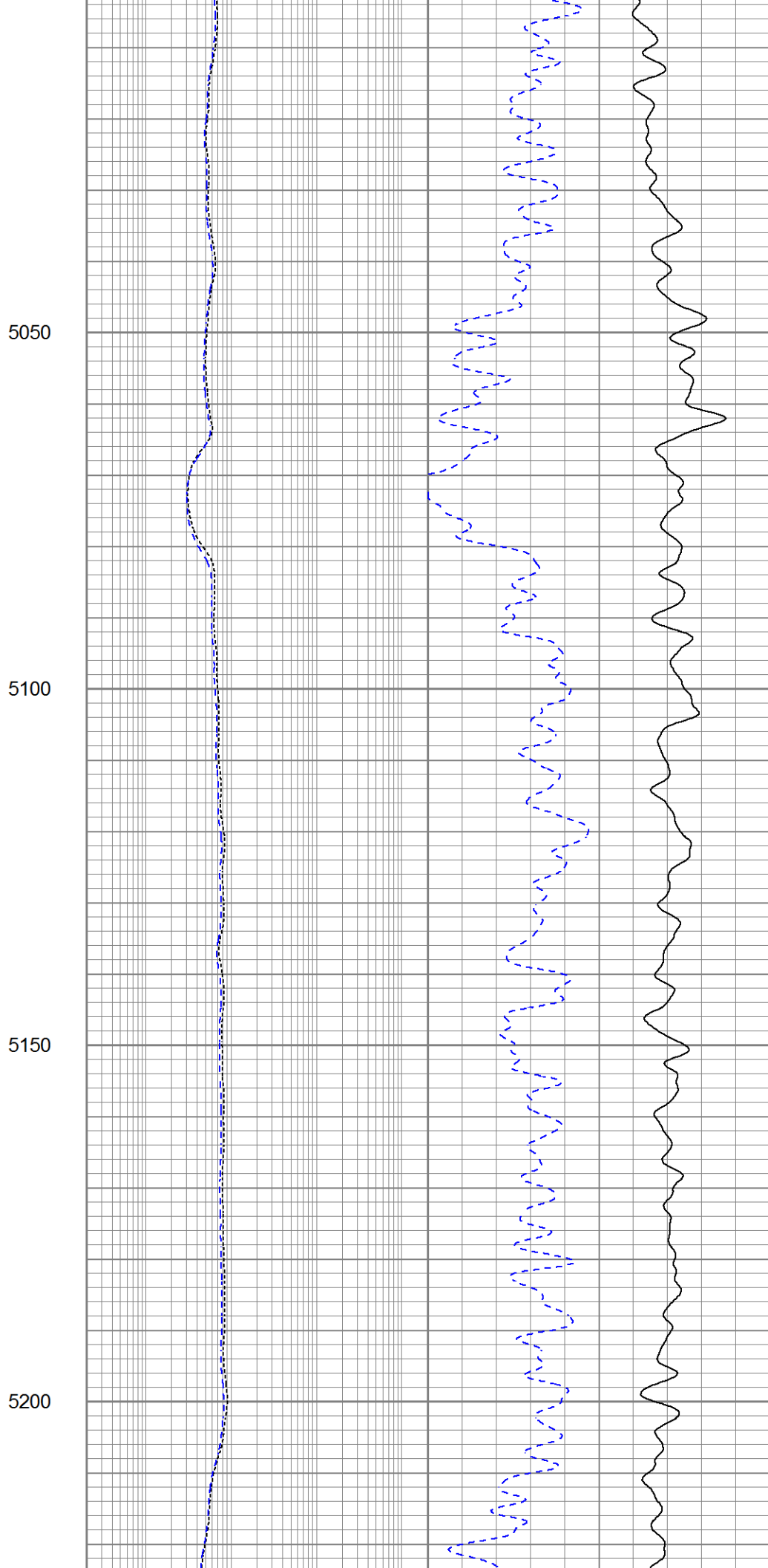
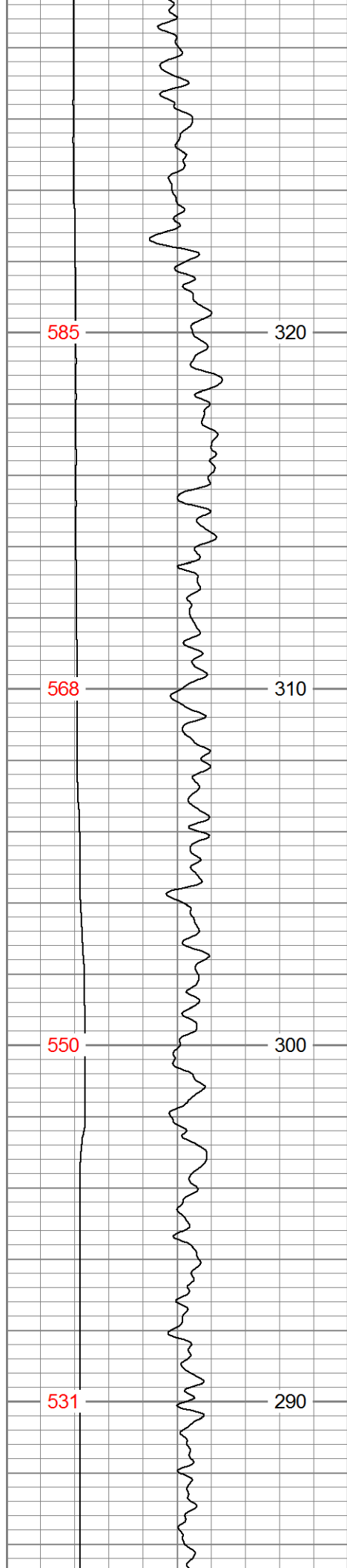
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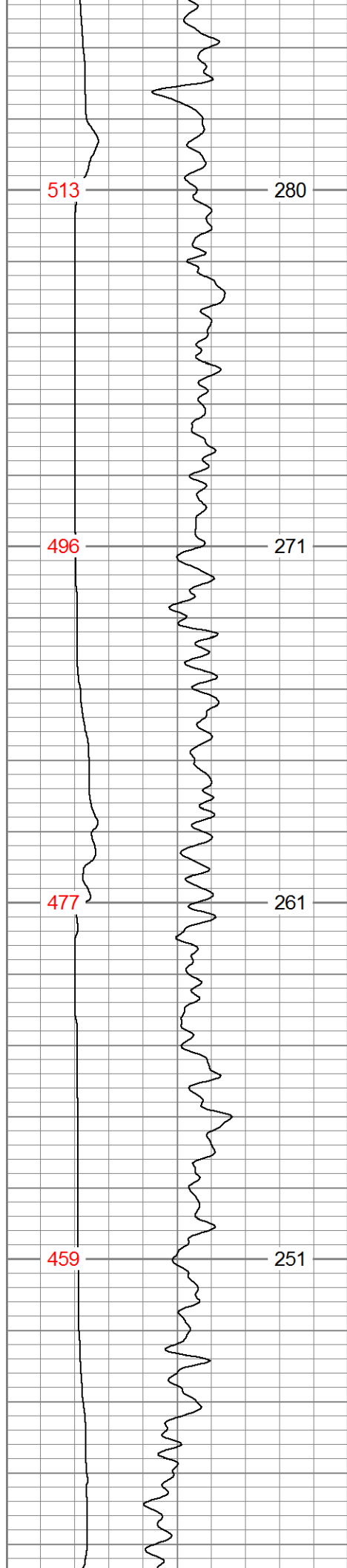
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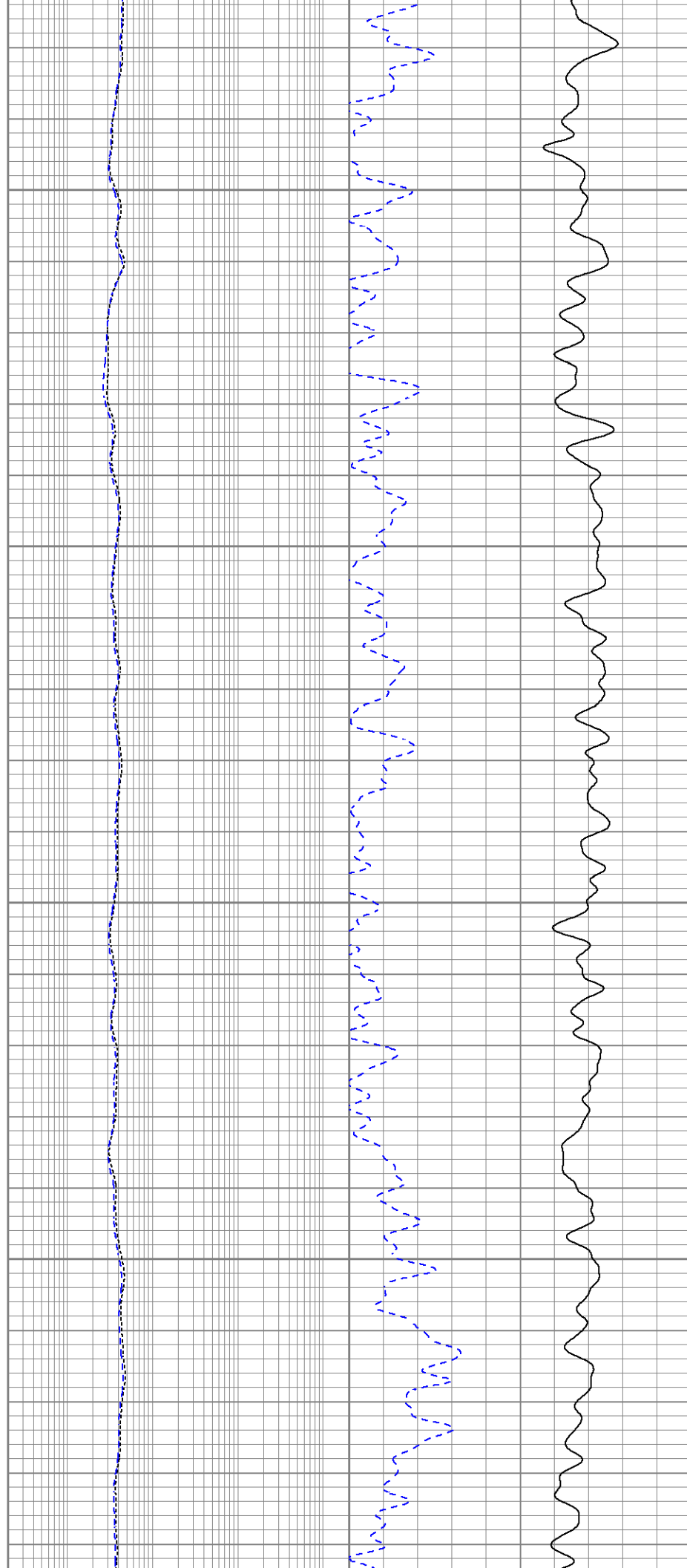


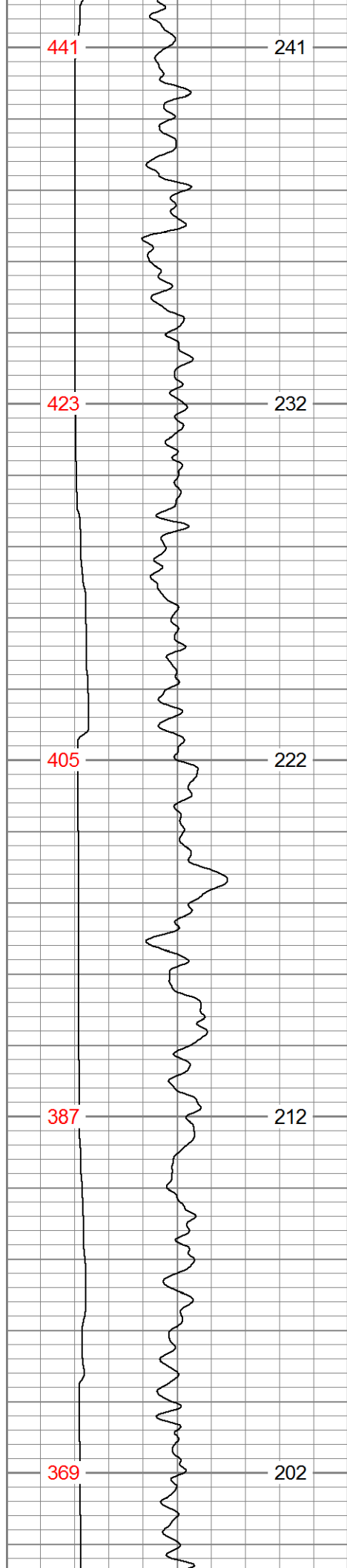
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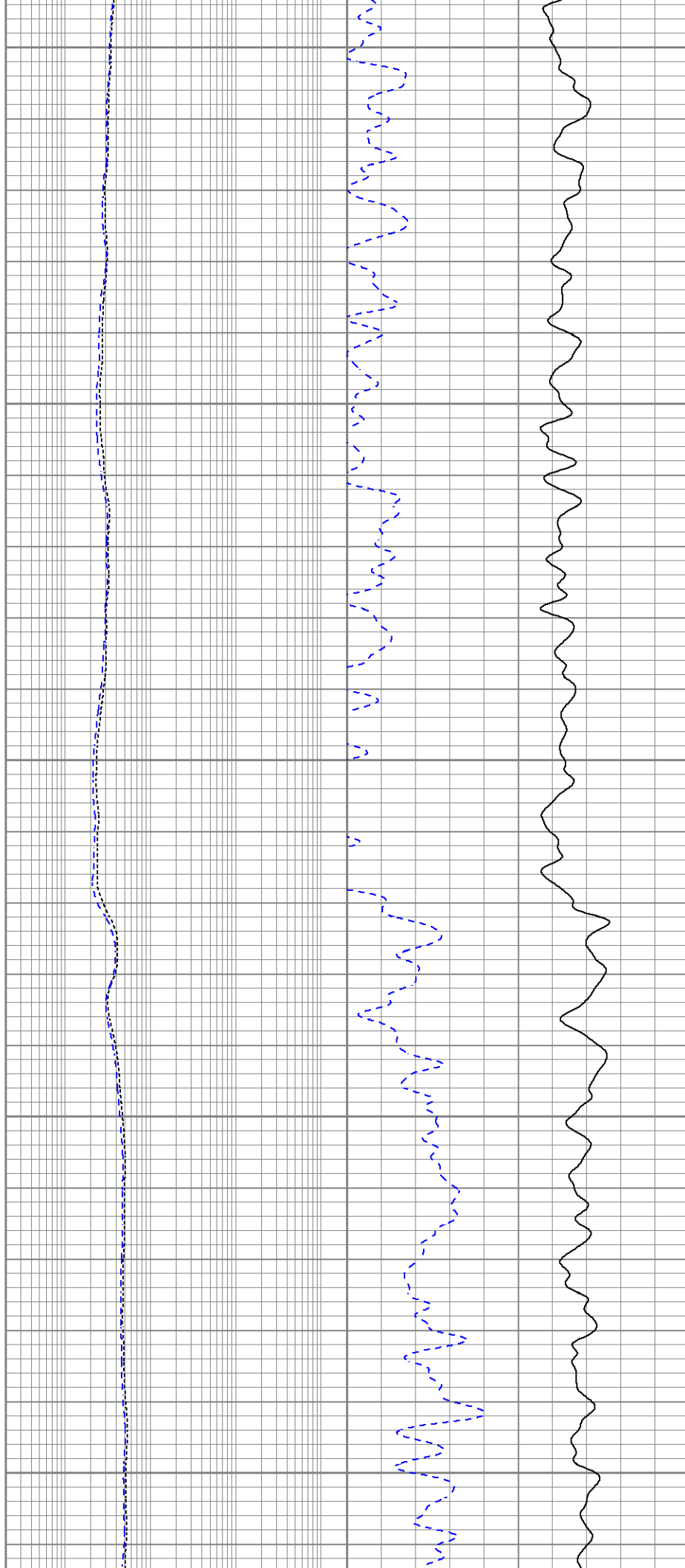
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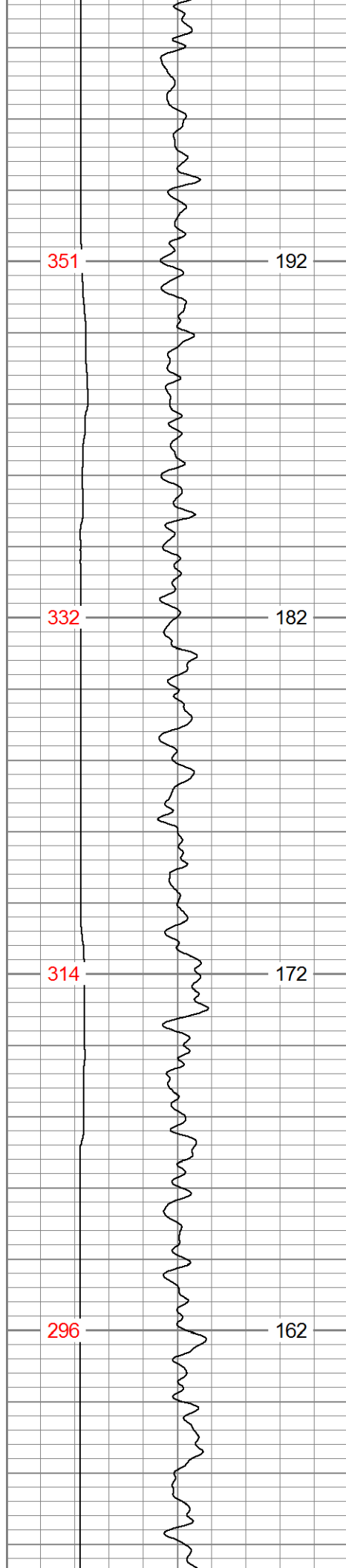
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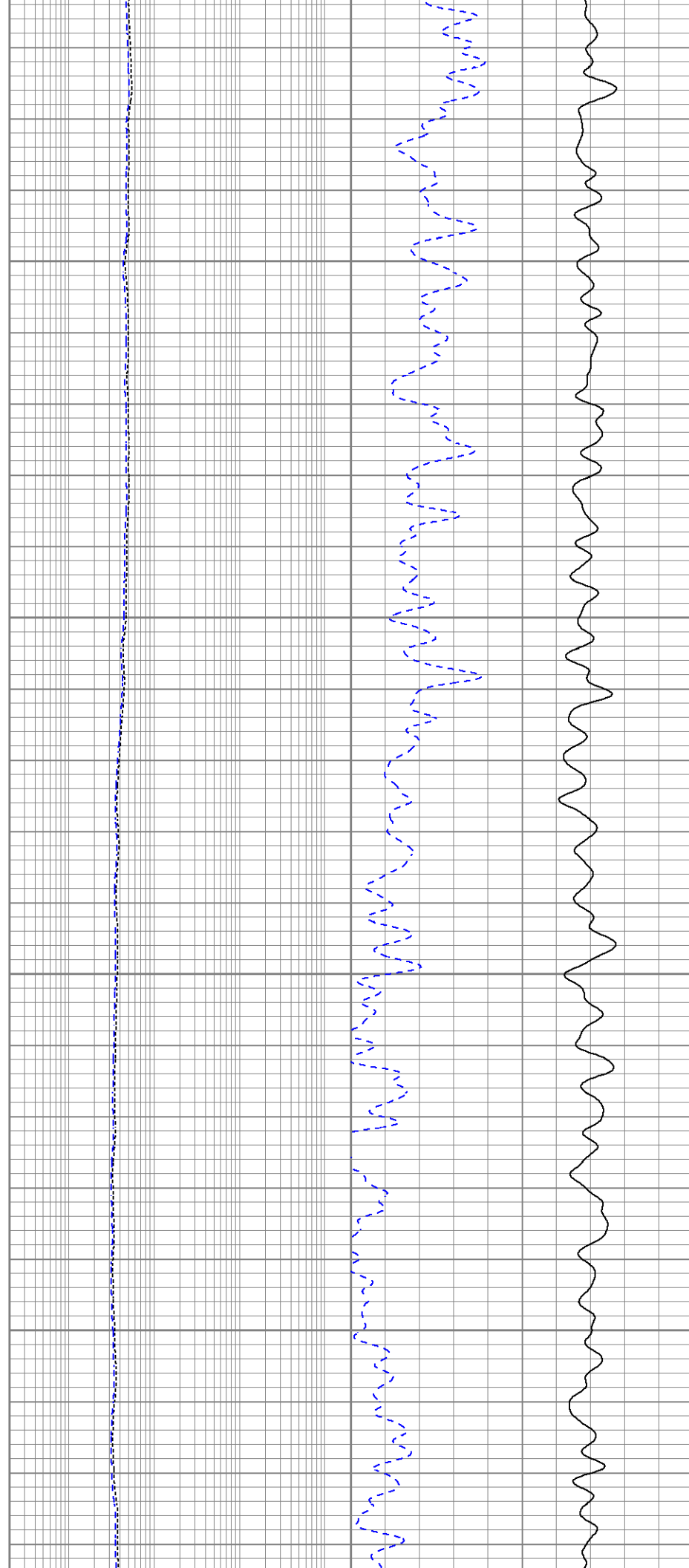


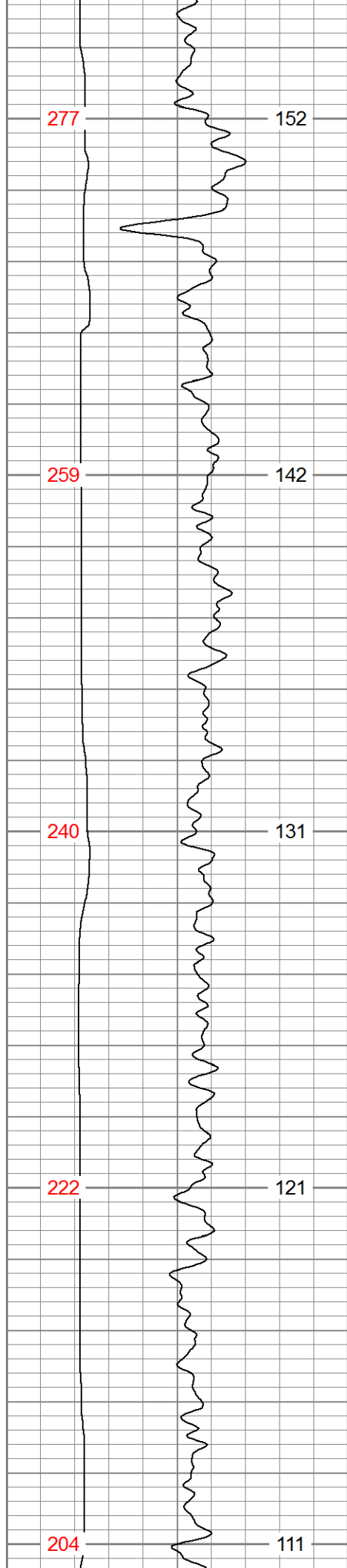
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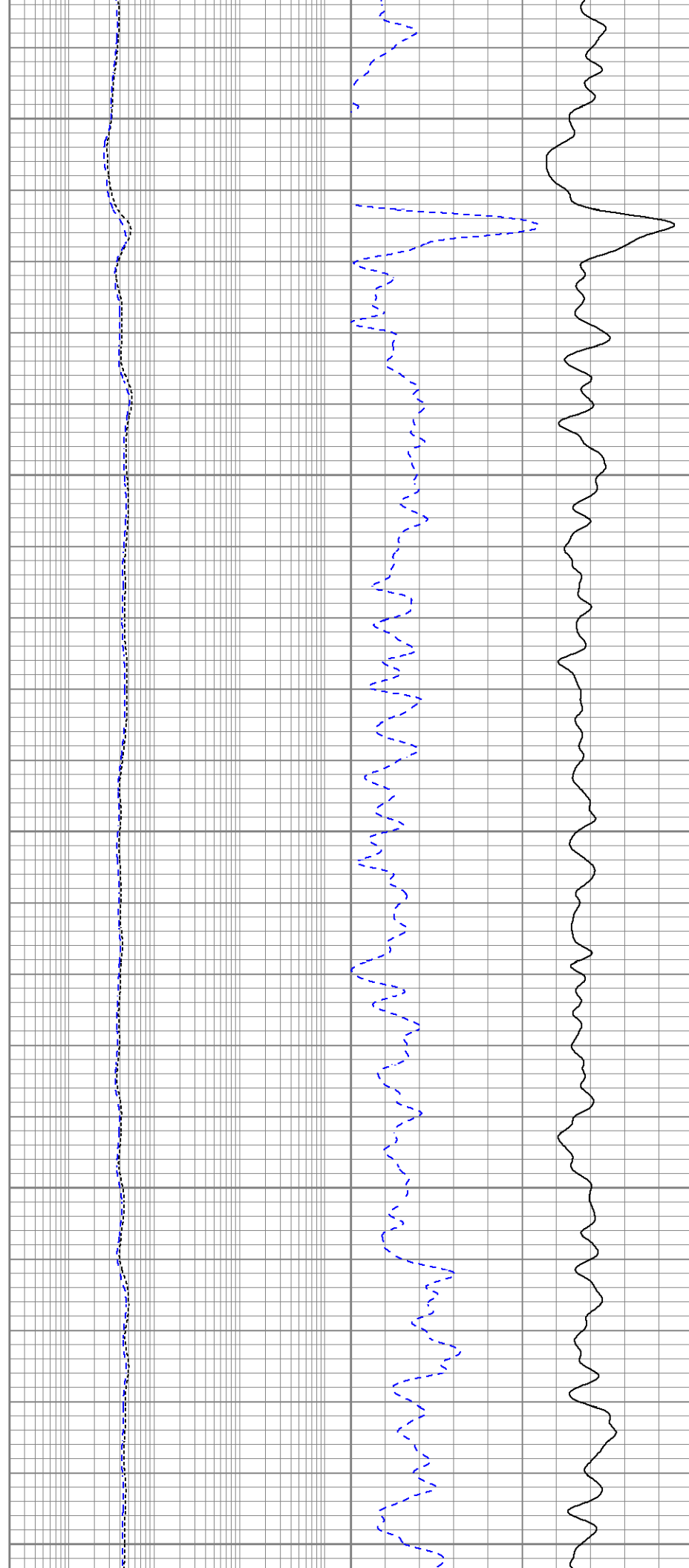
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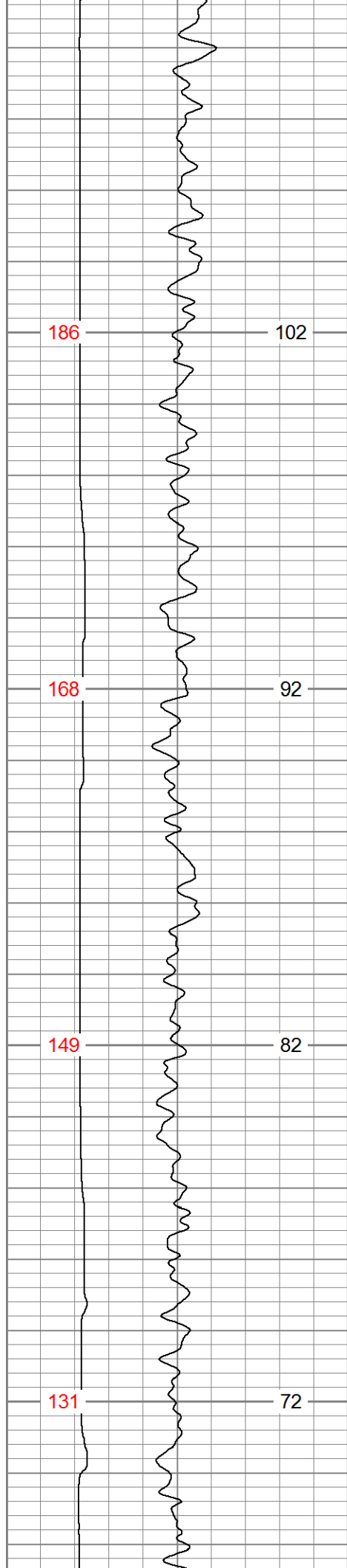
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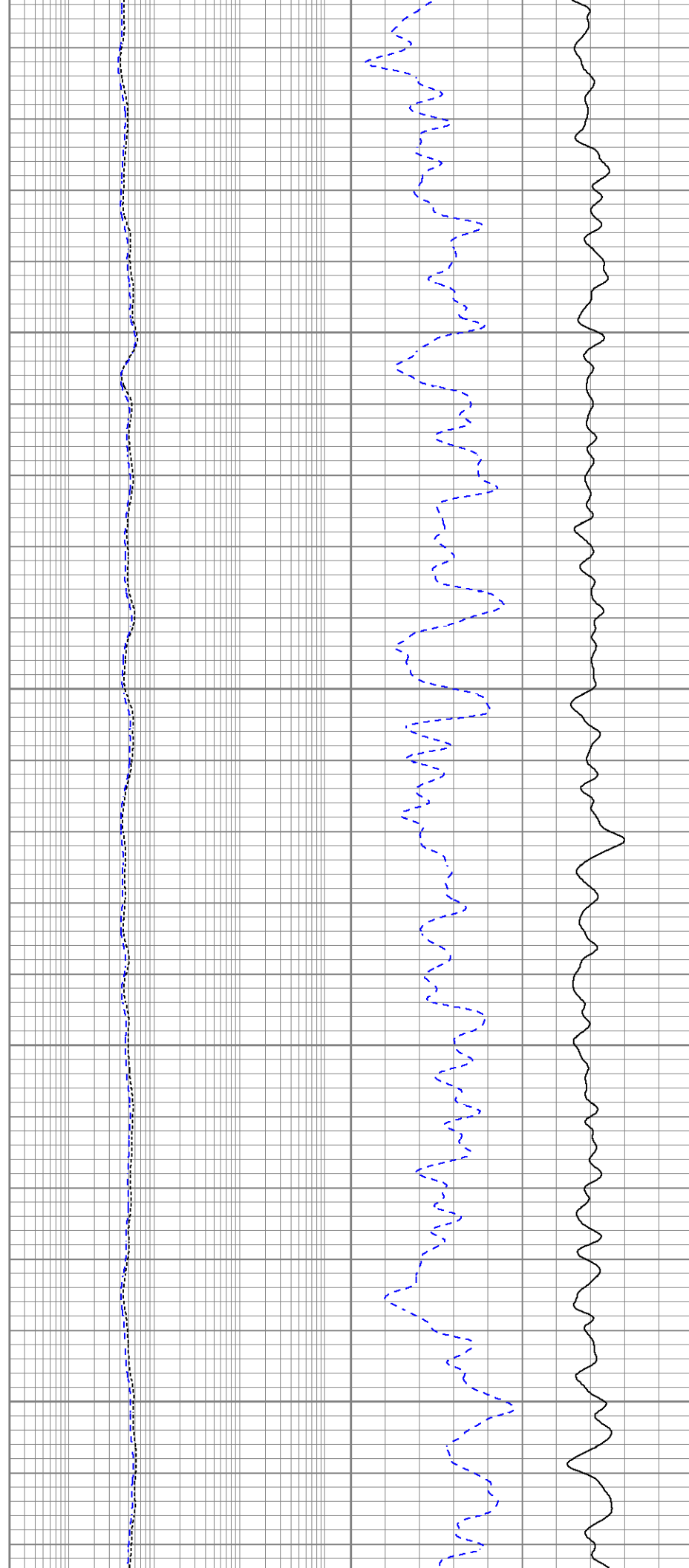


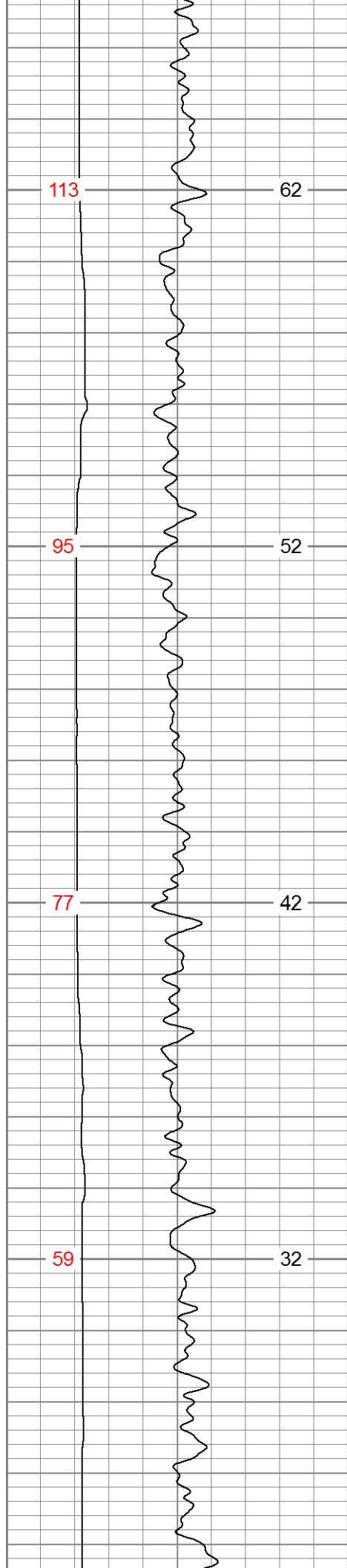
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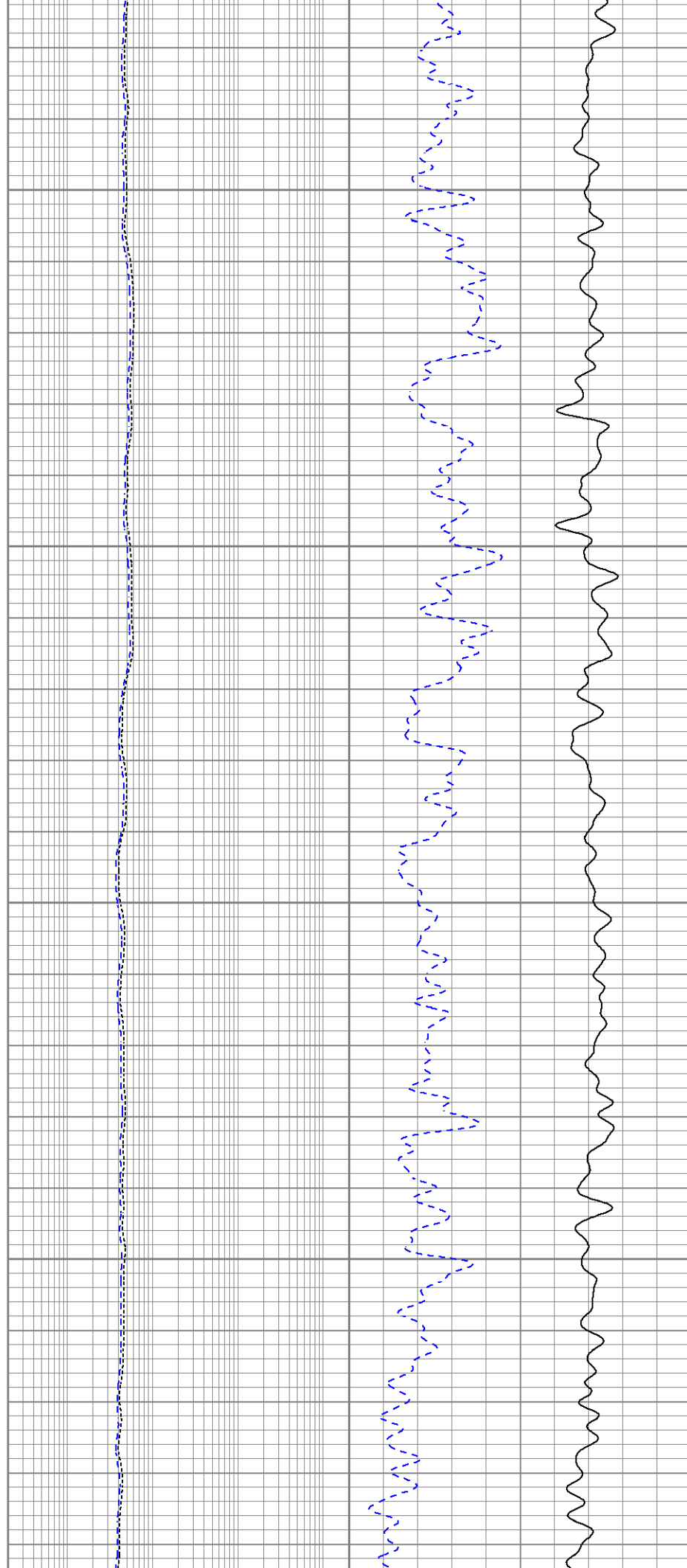


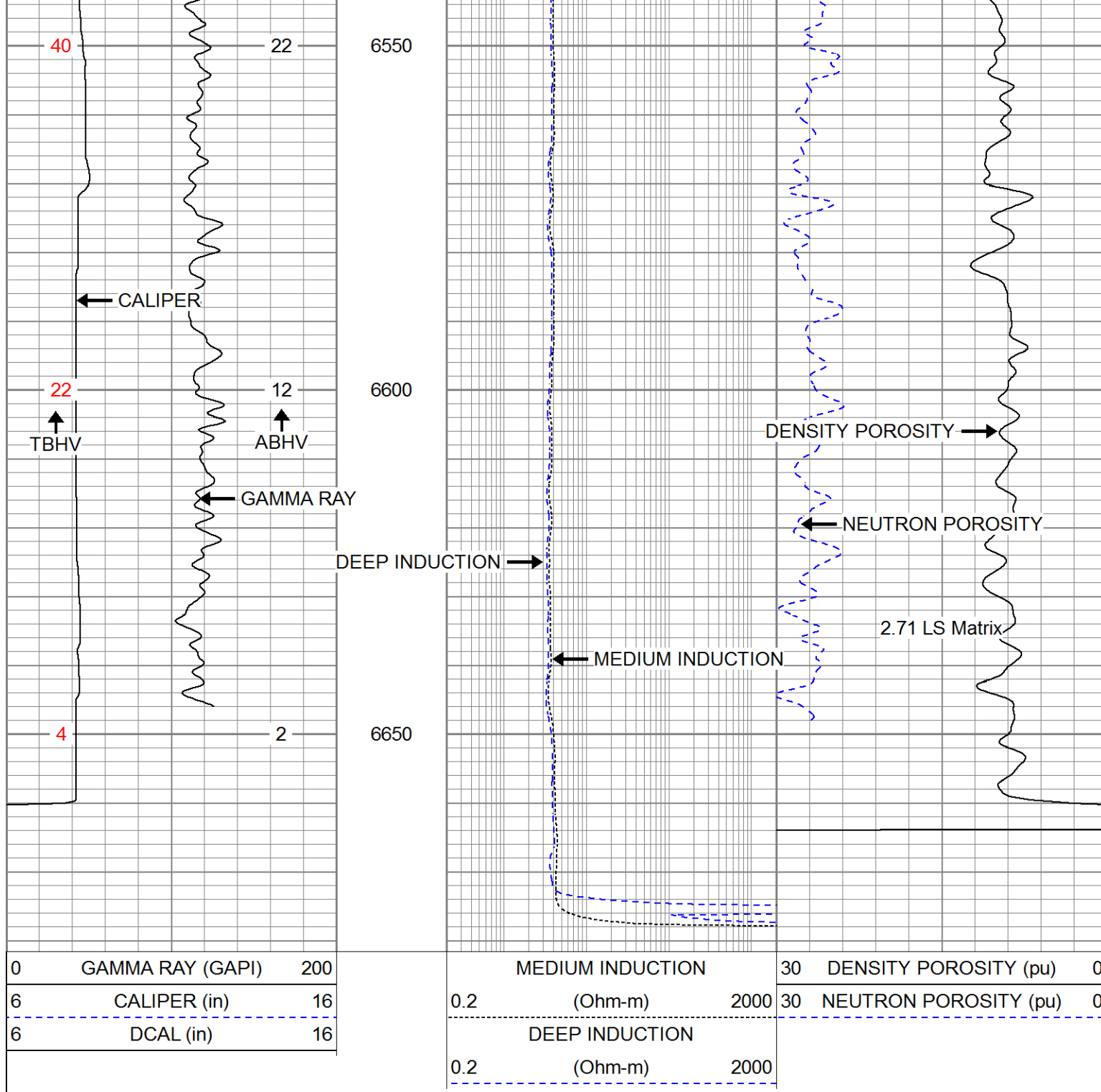
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6400

6450

6500





Calibration Report							
Database File	extractionoil&gas_mickey7.db						
Dataset Pathname	pass1						
Dataset Creation	Fri Dec 23 15:47:13 2016						
Dual Induction Calibration Report							
Serial-Model:		1987-M&W					
Calibration Performed:		Fri Dec 23 14:41:51 2016					
Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.510	-16.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.390	-70.000

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Fri Dec 23 14:42:24 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.675	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

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: Fri Dec 23 14:43:38 2016

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 EXTRACTION OIL & GAS LLC
 Well MICKEY 7
 Field WATTENBERG
 County WELD
 State COLORADO