PIONEER

Pioneer Energy Services

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company Bonanza Creek Energy Operating Co. LLC
Well State Seventy Holes F-J-6HNB
Field Wattenberg
County Weld
State Colorado

Company Bonanza Creek Energy Operating Co. LLC

Well State Seventy Holes F-J-6HNB

Field Wattenberg

County Weld State Colorado

Location: API # : 05 123 39862 00

SHL: 868' FNL & 1675' FWL NENW

SEC 6 TWP 4N RGE 62W

Other Services

None

Permanent Datum	GL	Elevation	4538
Log Measured From	KB		
Drilling Measured From	KB		

Elevation

K.B. 4554
D.F. 4553
G.L. 4538

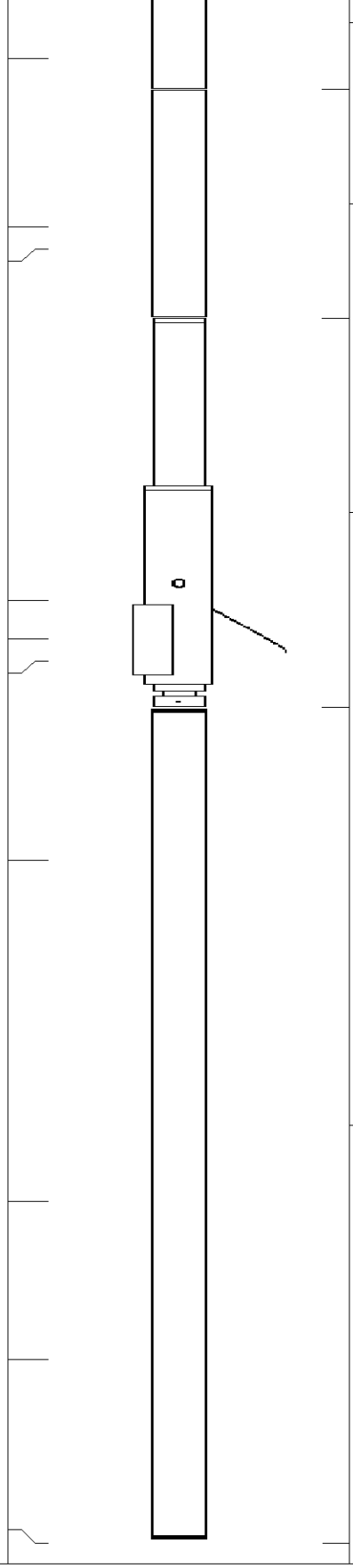
Date	September 21, 2014		
Run Number	1		
Depth Driller	5926		
Depth Logger	5920		
Bottom Logged Interval	5920		
Top Log Interval	Casing		
Casing Driller	468		
Casing Logger	468		
Bit Size	8-3/4"		
Type Fluid in Hole	WBM		
Density / Viscosity	9.5 / 60		
pH / Fluid Loss	7.2 / NA		
Source of Sample	Mudpit		
Rm @ Meas. Temp	1.9 @ 72 F		
Rmf @ Meas. Temp	2.03 @ 72 F		
Rmc @ Meas. Temp	2.7 @ 72 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.84 @ 162 F		
Time Circulation Stopped	0630		
Time Logger on Bottom	1840		
Maximum Recorded Temperature	162 F		
Equipment Number	36		
Location	Ft. Morgan, CO		
Recorded By	Shaun Stump		
Witnessed By	Tim Joel		

<<< Fold Here >>>

Comments

Annular volume calculated for 7" casing
Cade Drilling Rig 26
Thank you for using Pioneer Energy Services

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD (~0)	2.00	3.50	30.00



GR	0.00	GR-PSI (197)	2.92	3.50	40.00
CNLSC	-3.67	CNT-PSI (853)	5.00	3.50	70.00
CNSSC	-4.17				
		CDL-PSI (979)	8.50	5.00	285.00
DCAL	-11.84				
LSD	-12.67				
SSD	-13.17				
RLL3	-17.52				
		DIL-PSI (1010)	18.25	3.75	175.00
CILD	-24.97				
CILM	-28.42				
SP	-32.42				

Dataset:	13710.db: field/well/run1/pass2
Total Length:	36.67 ft
Total Weight:	600.00 lb
O.D.	5.00 in

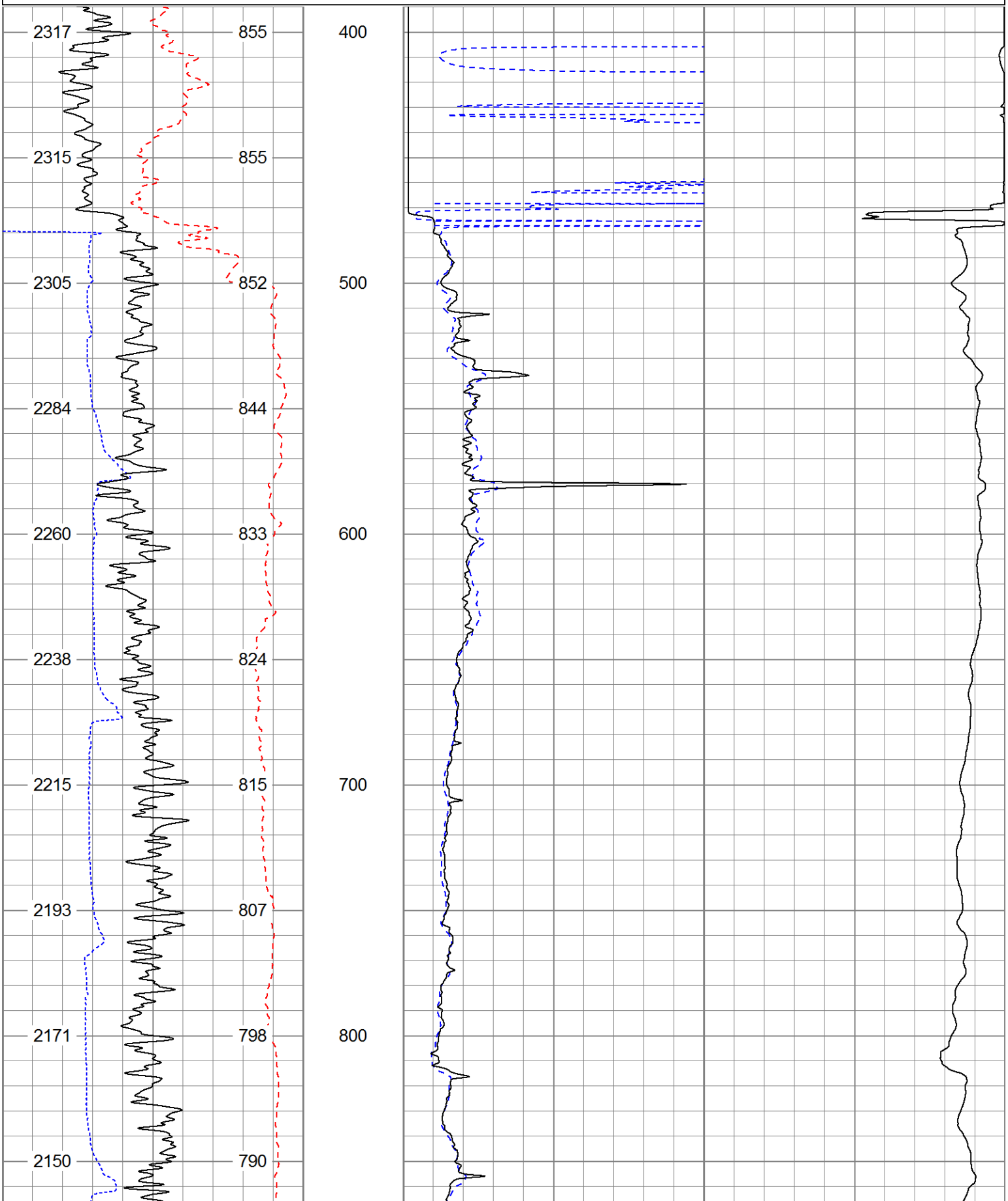
Database File:	13710.db
Dataset Pathname:	pass2
Presentation Format:	dilin5
Dataset Creation:	Sun Sep 21 18:58:51 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:600

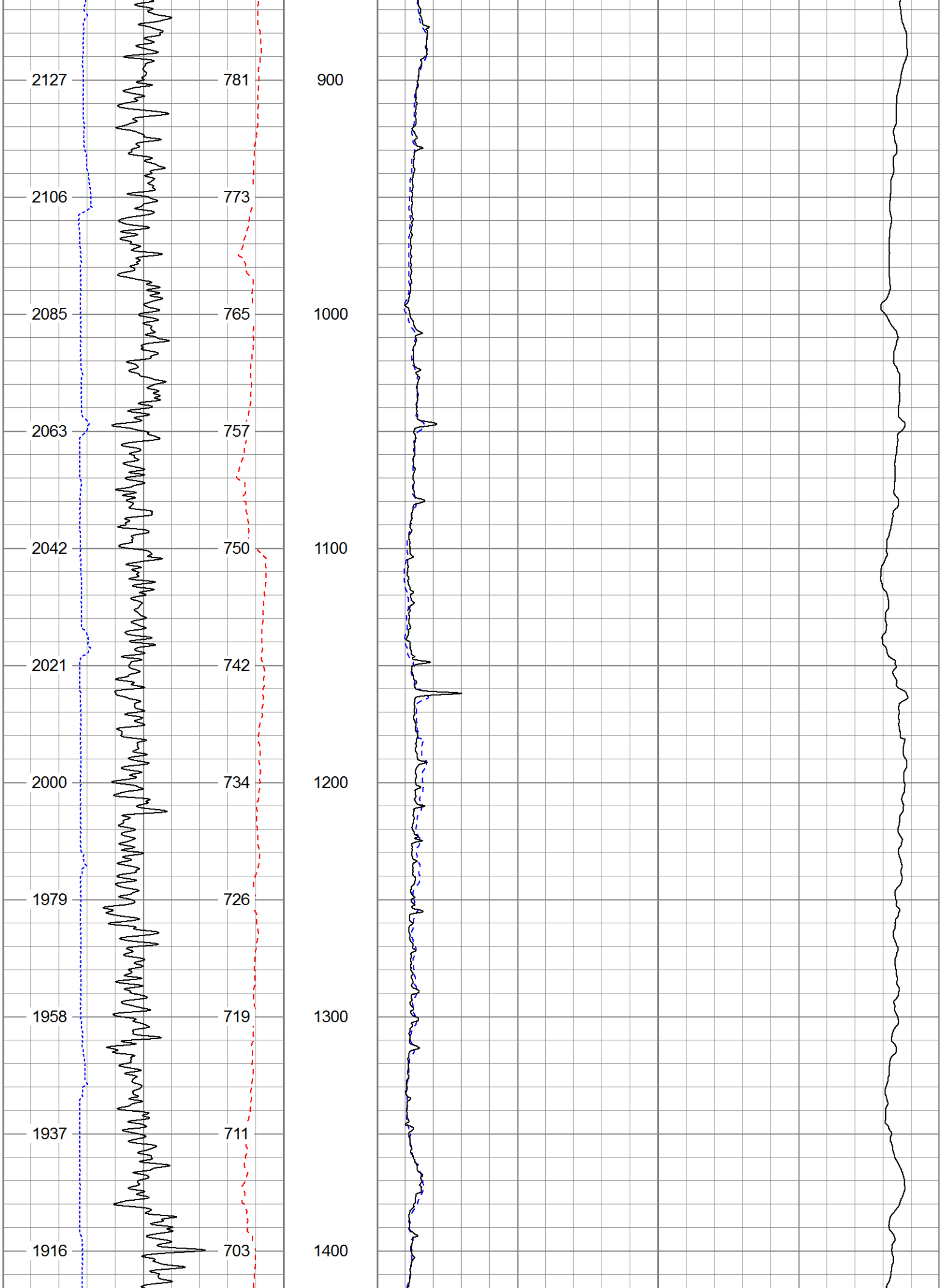
Charted by: Depth in Feet scaled 1:600

0	SP (mV)	200
6	Caliper (in)	16
0	Gamma Ray (GAPI)	200
TBHV (ft3)		ABHV (ft3)

0	Deep Resistivity (Ohm-m)	50
0	Shallow Resistivity (Ohm-m)	50
50	RILD (Ohm-m)	500
50	RLL3 (Ohm-m)	500

1000	CILD (mmho/m)	0

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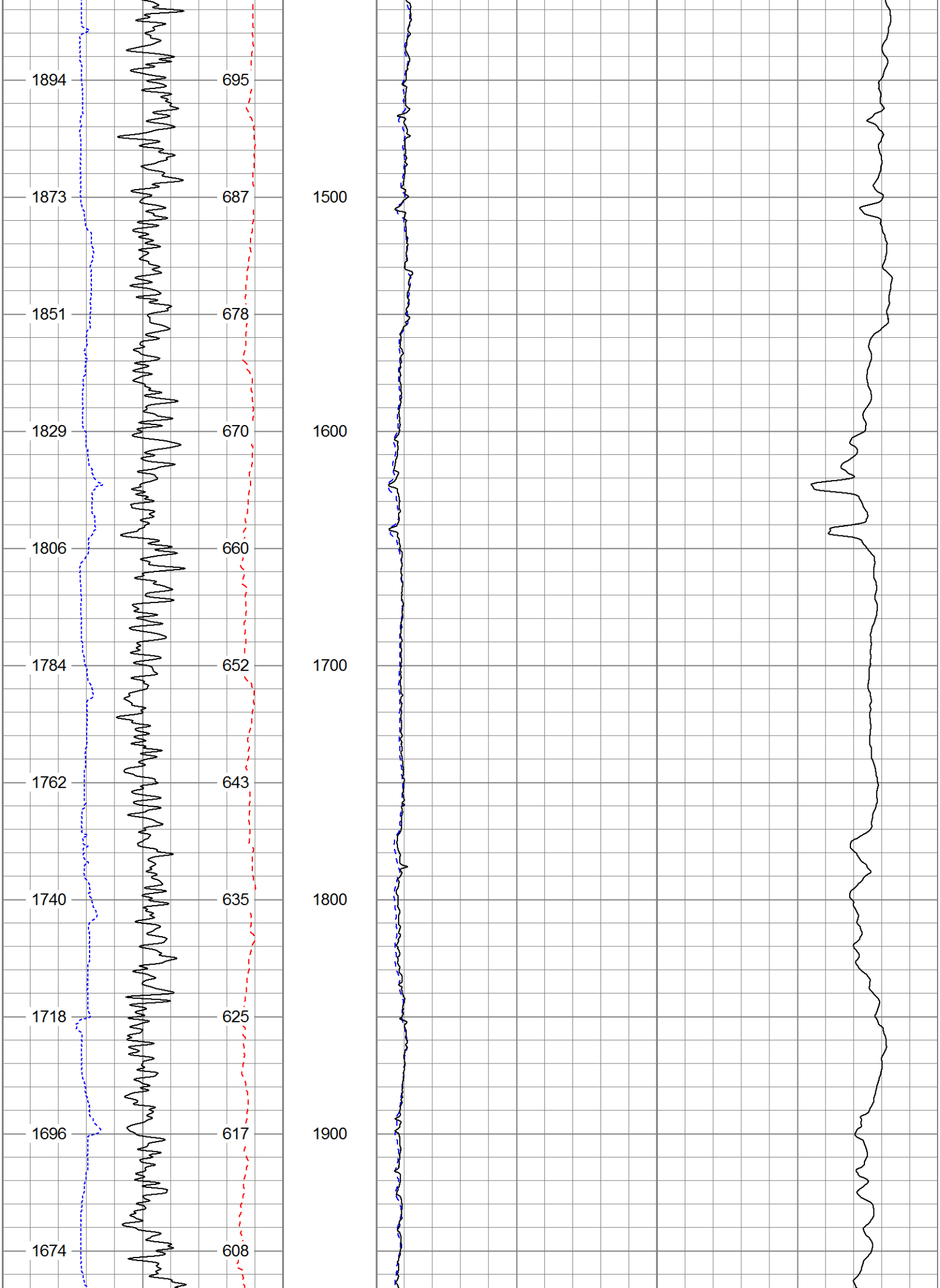
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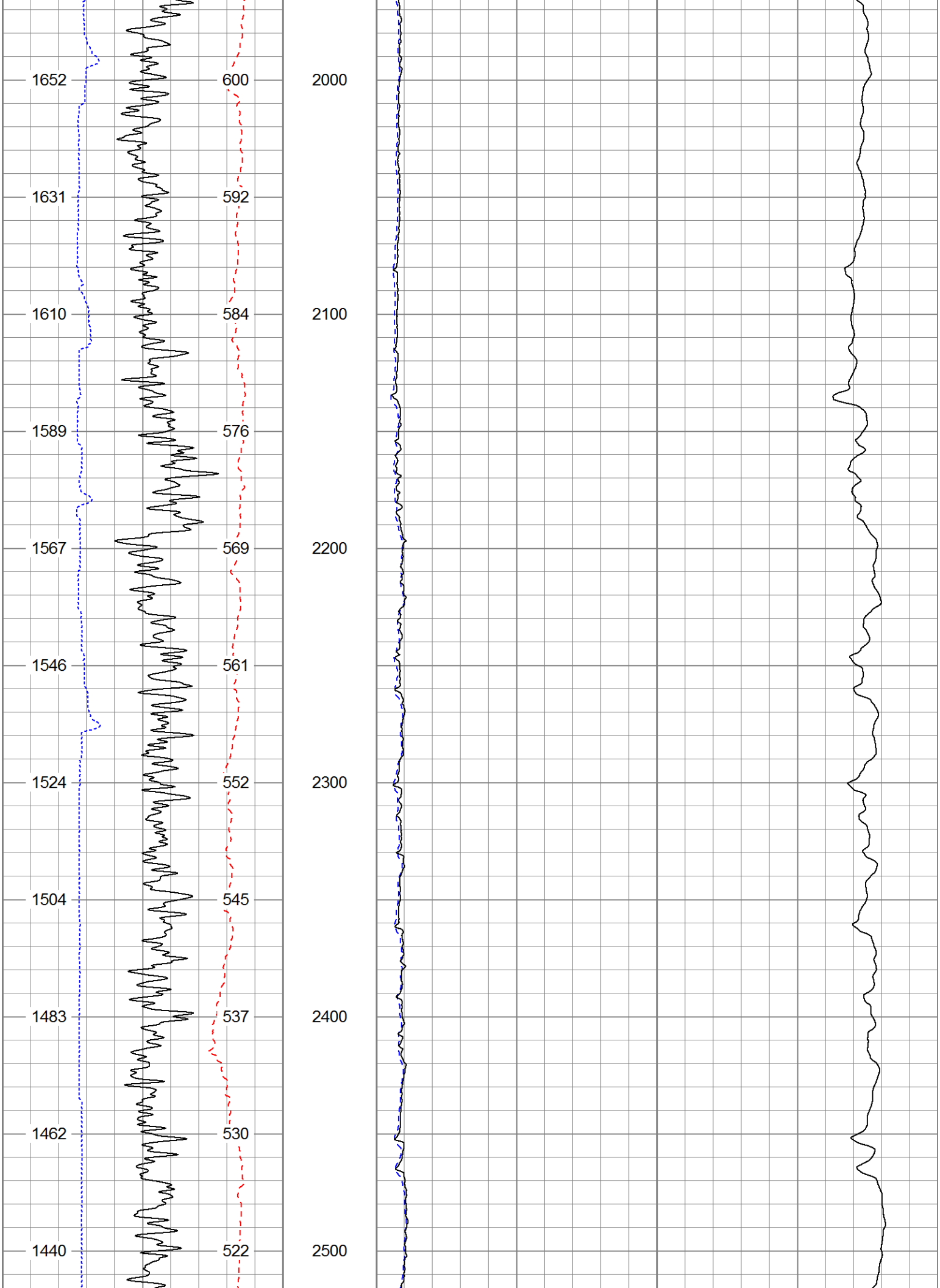
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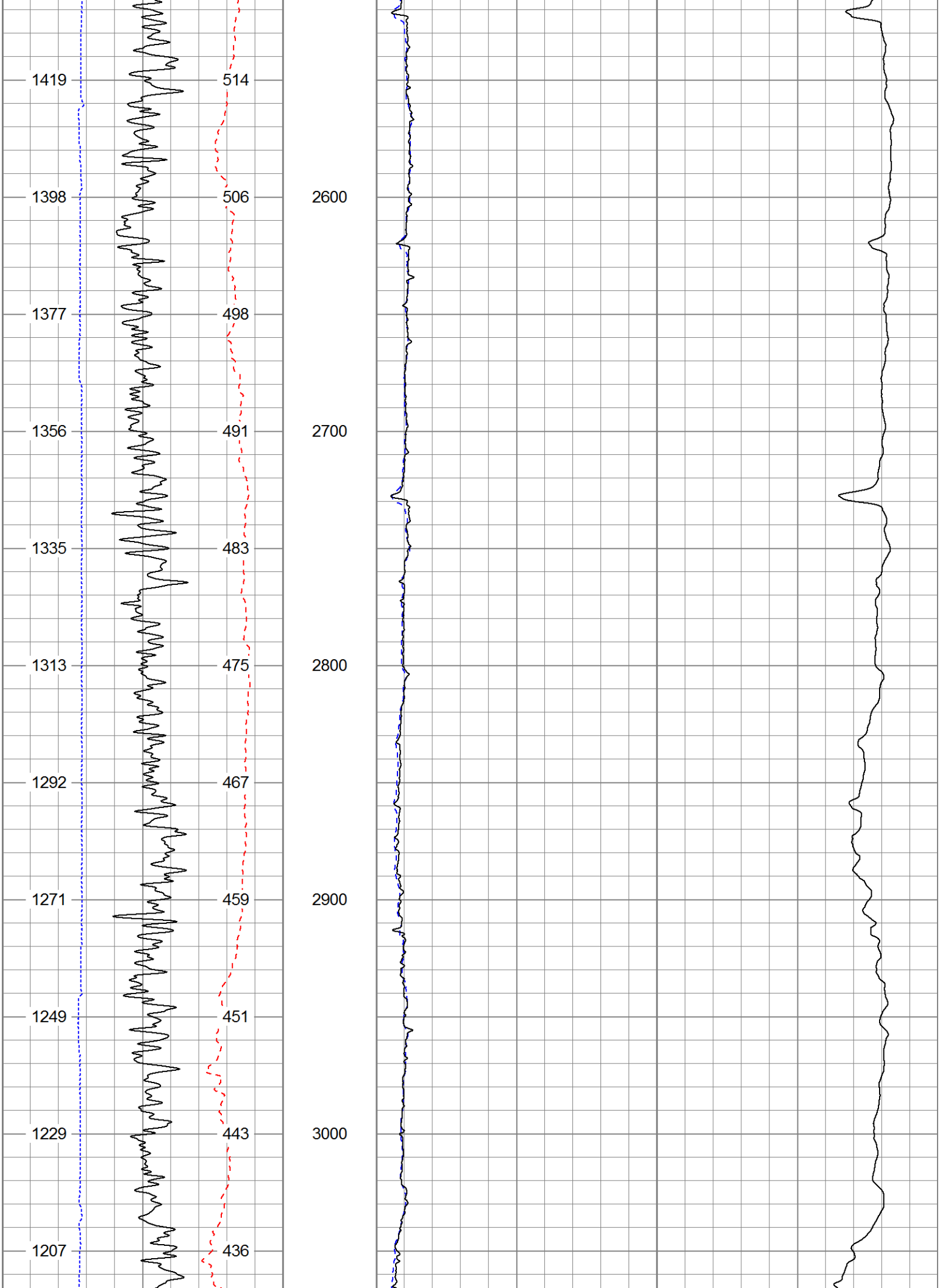
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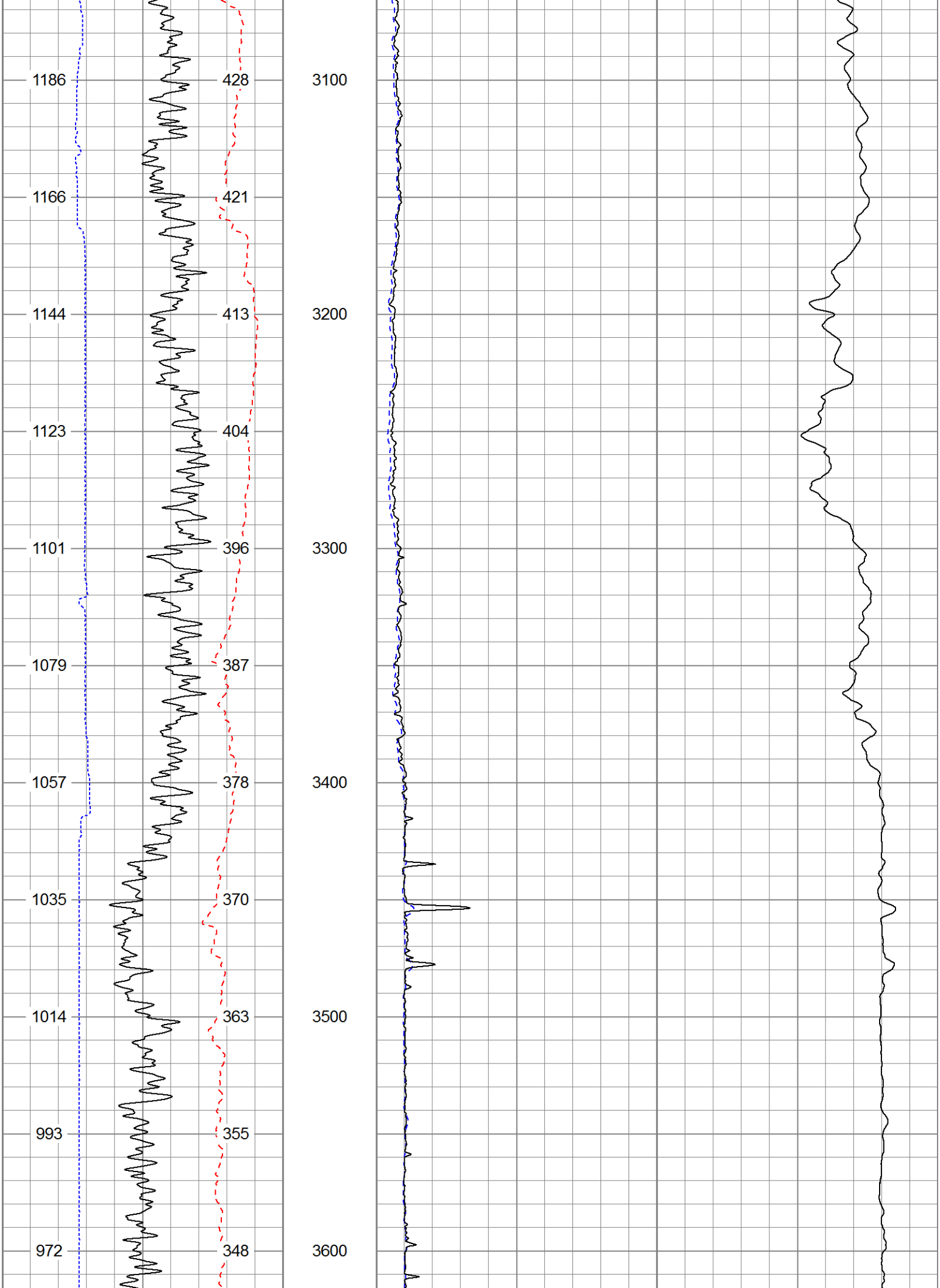
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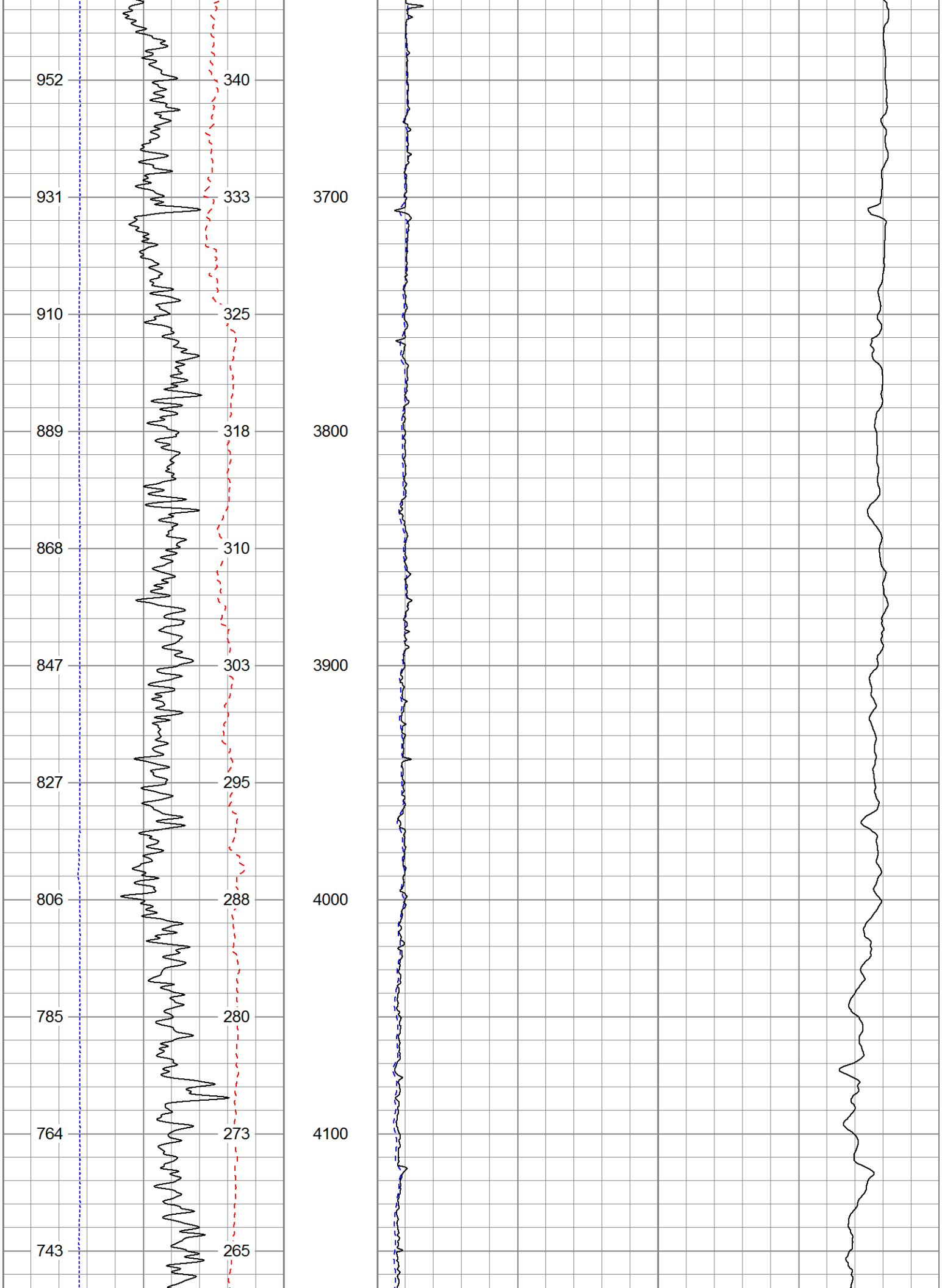
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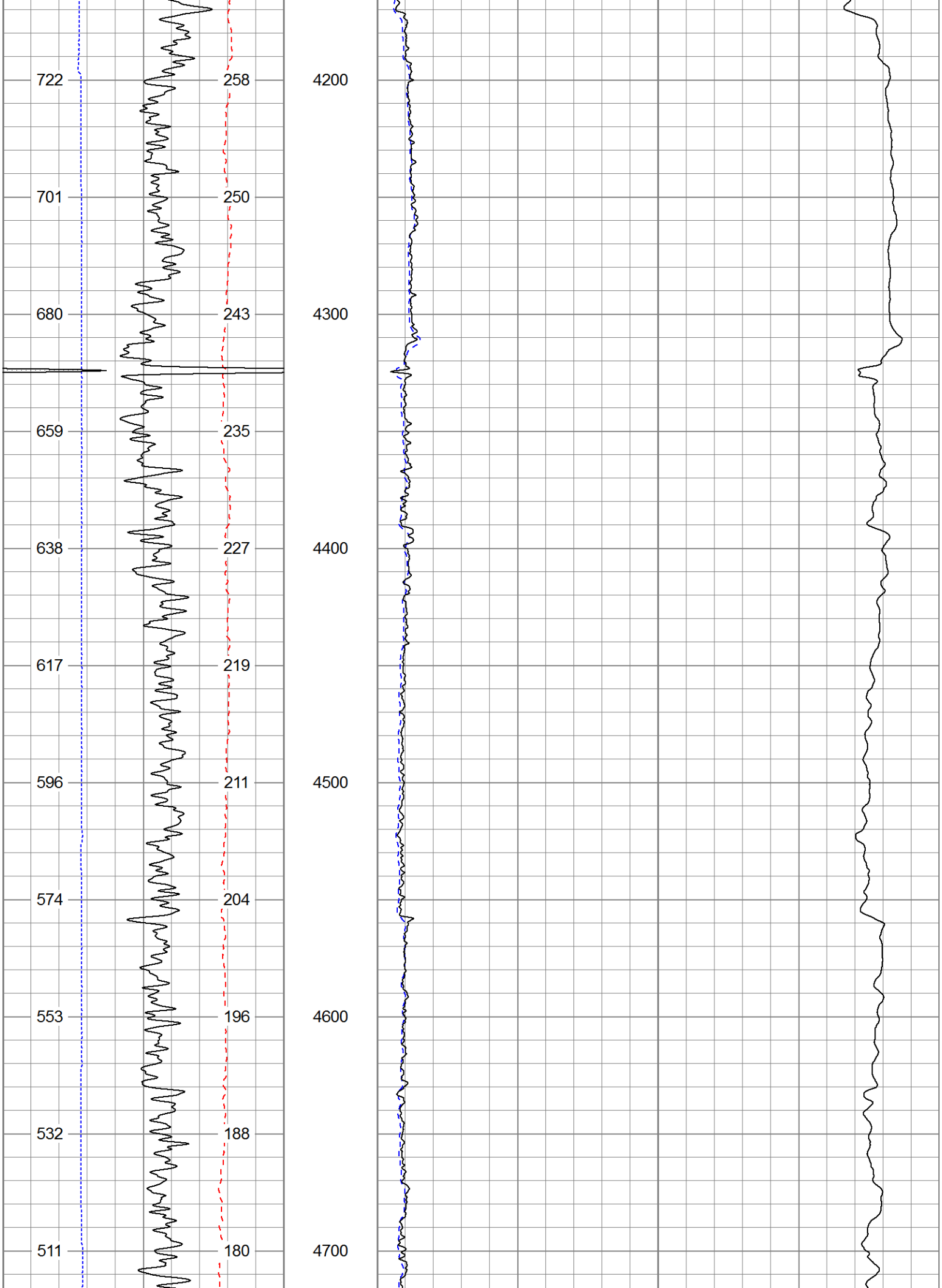
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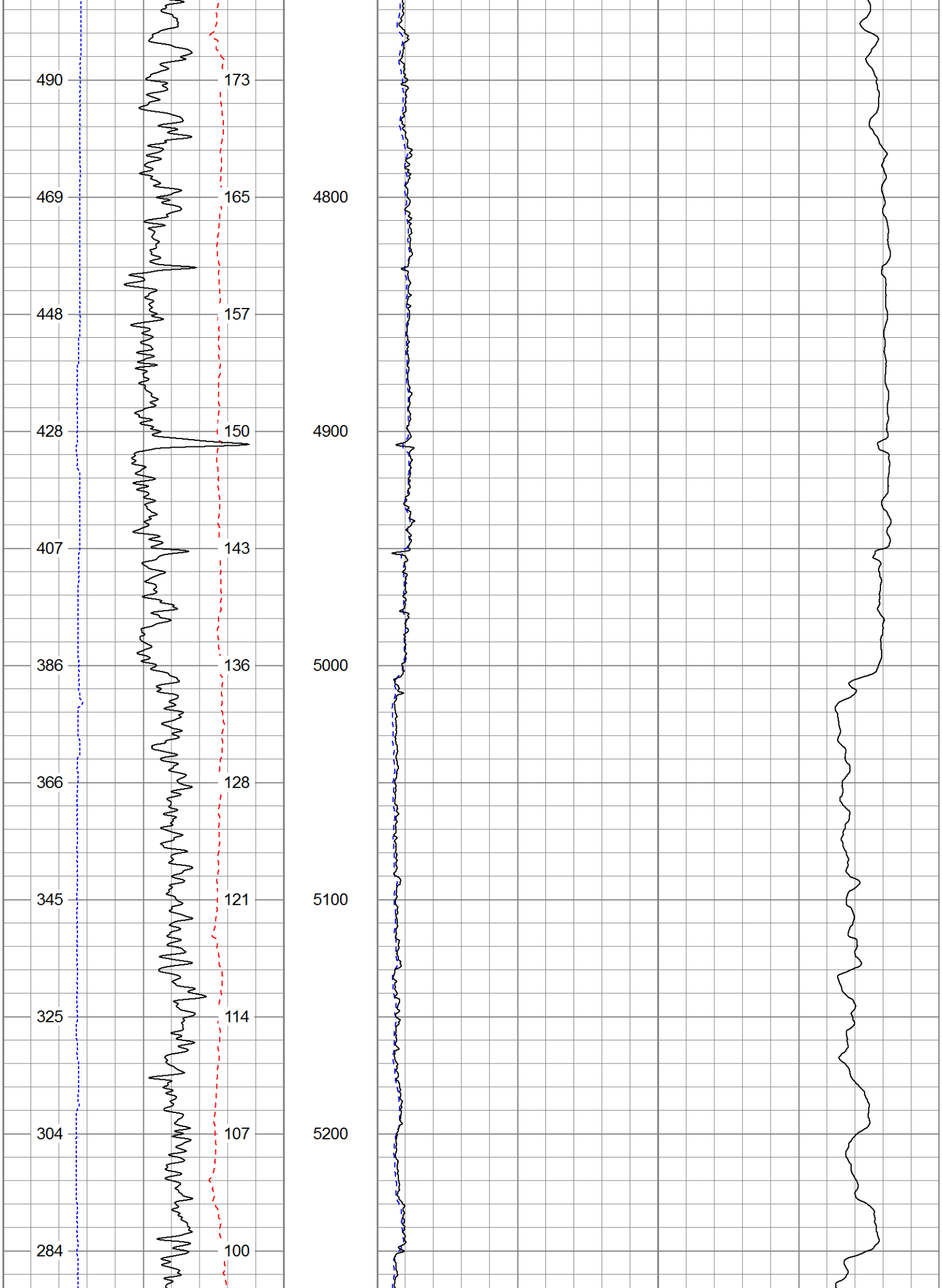
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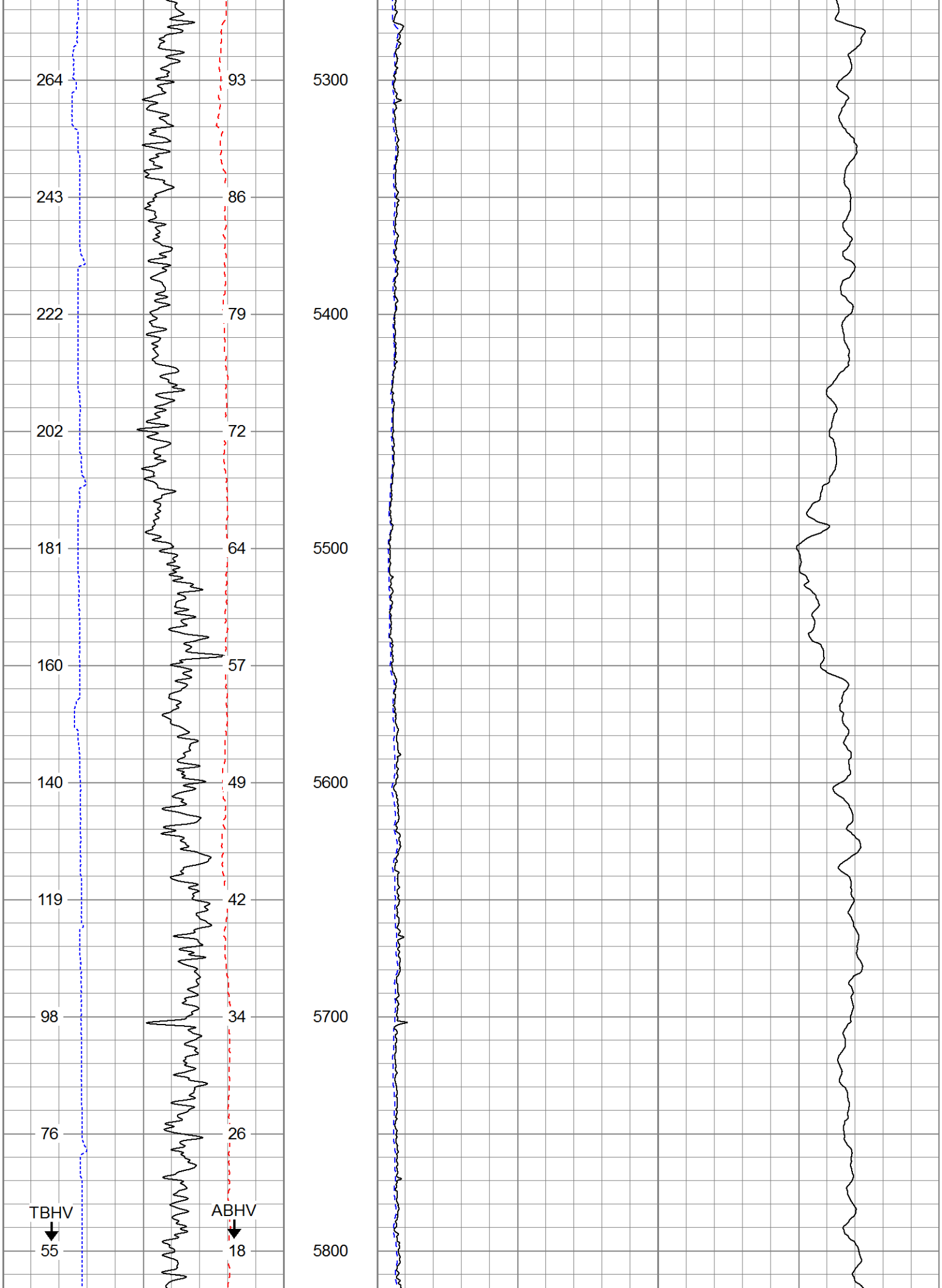
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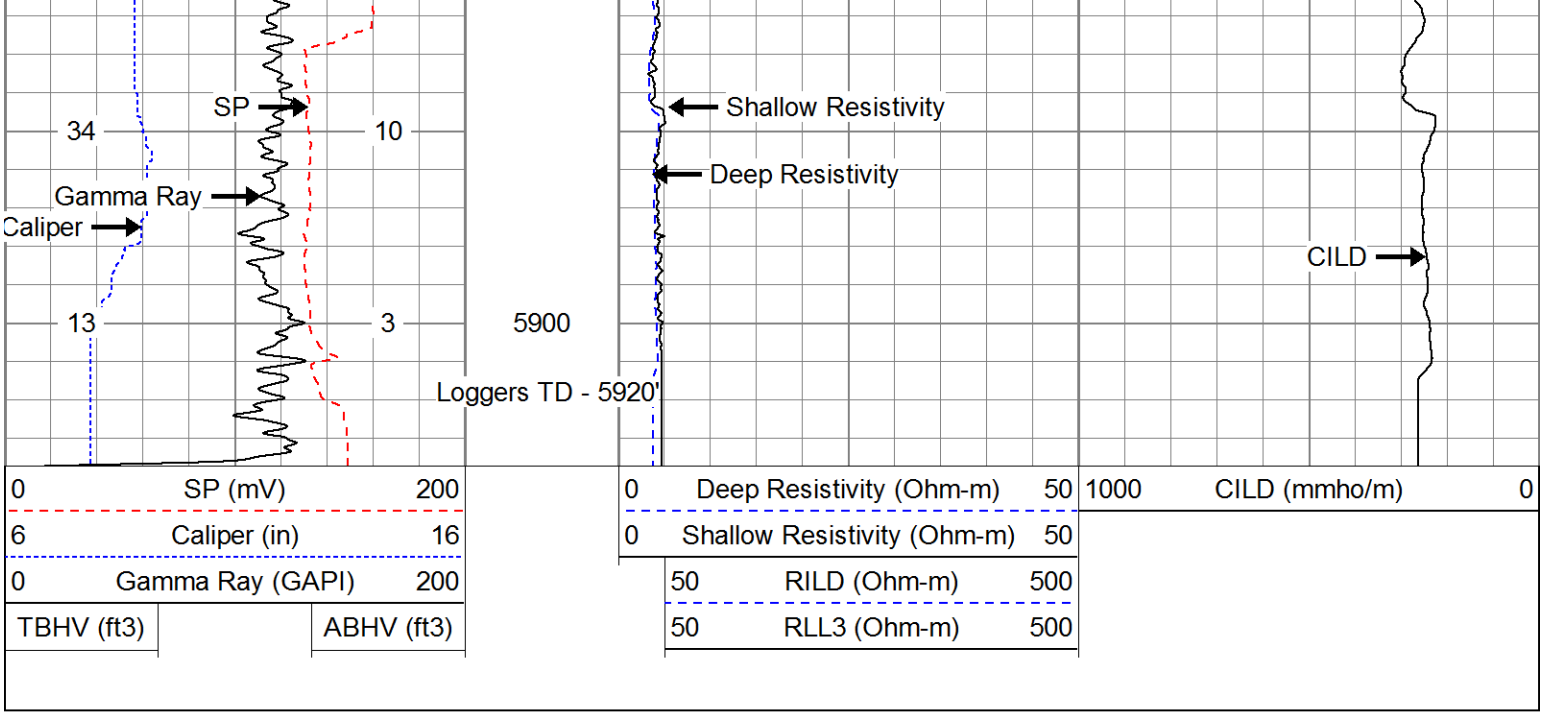

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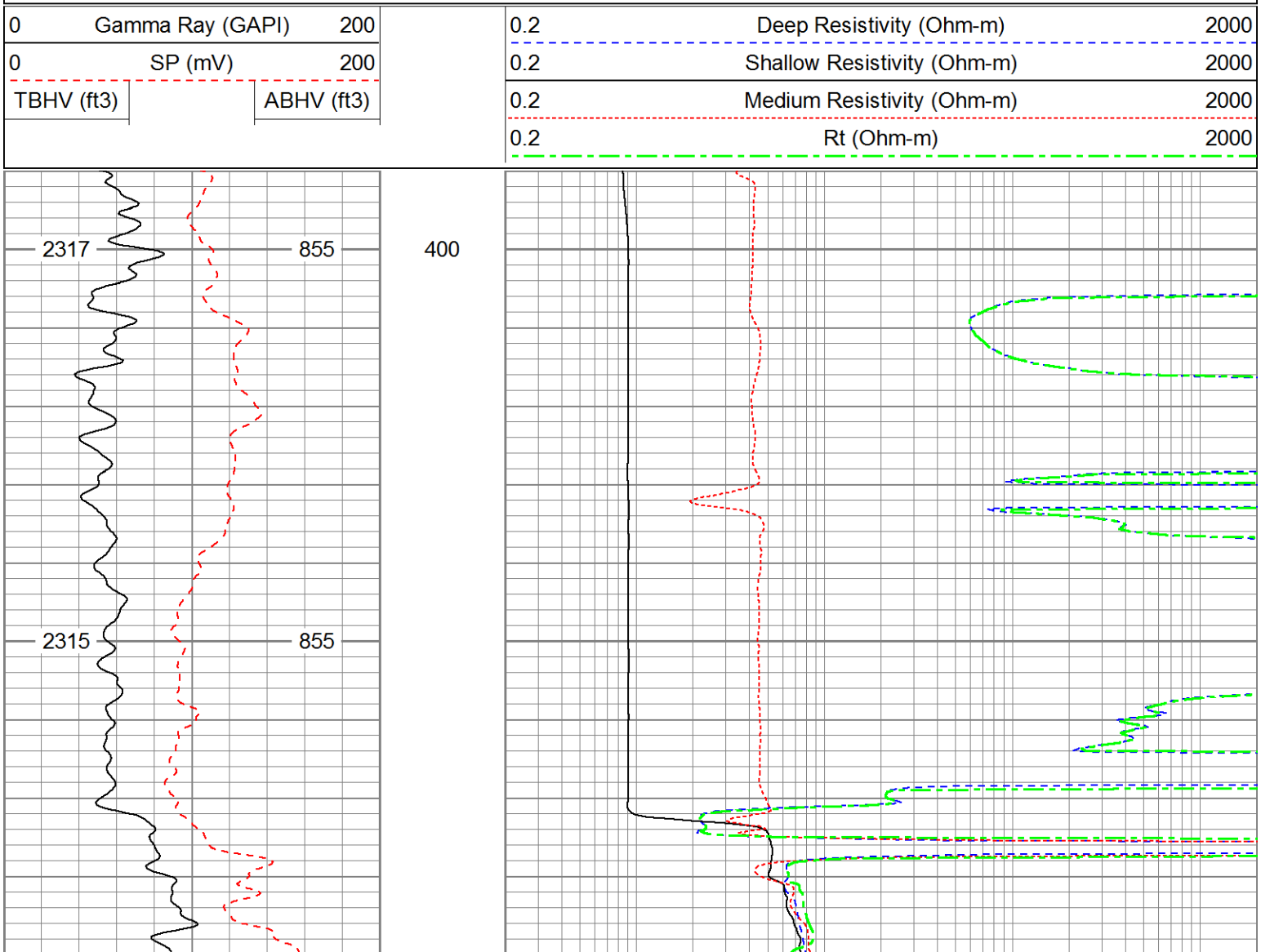
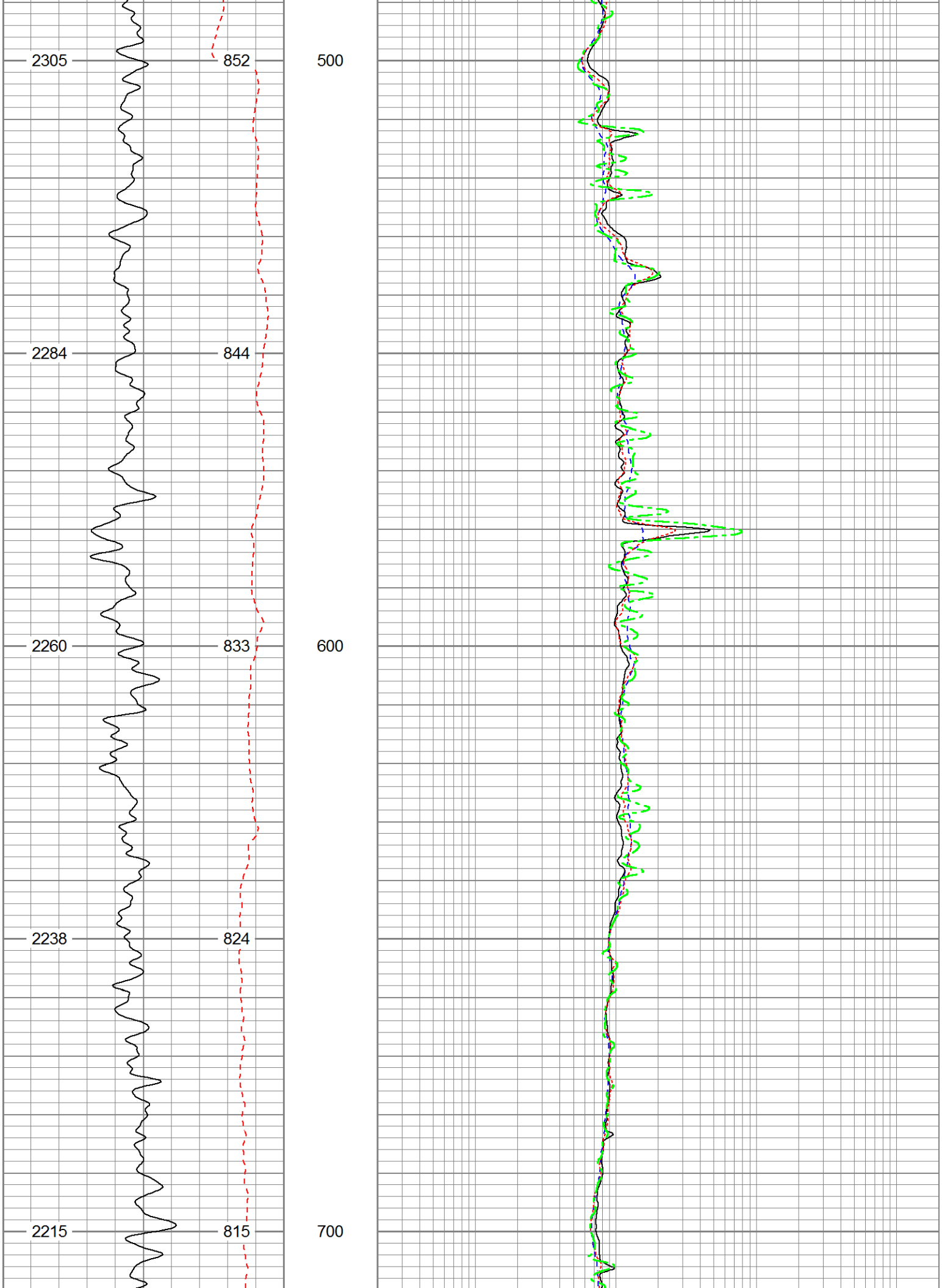
Presentation Format: dil
Dataset Creation: Sun Sep 21 18:58:51 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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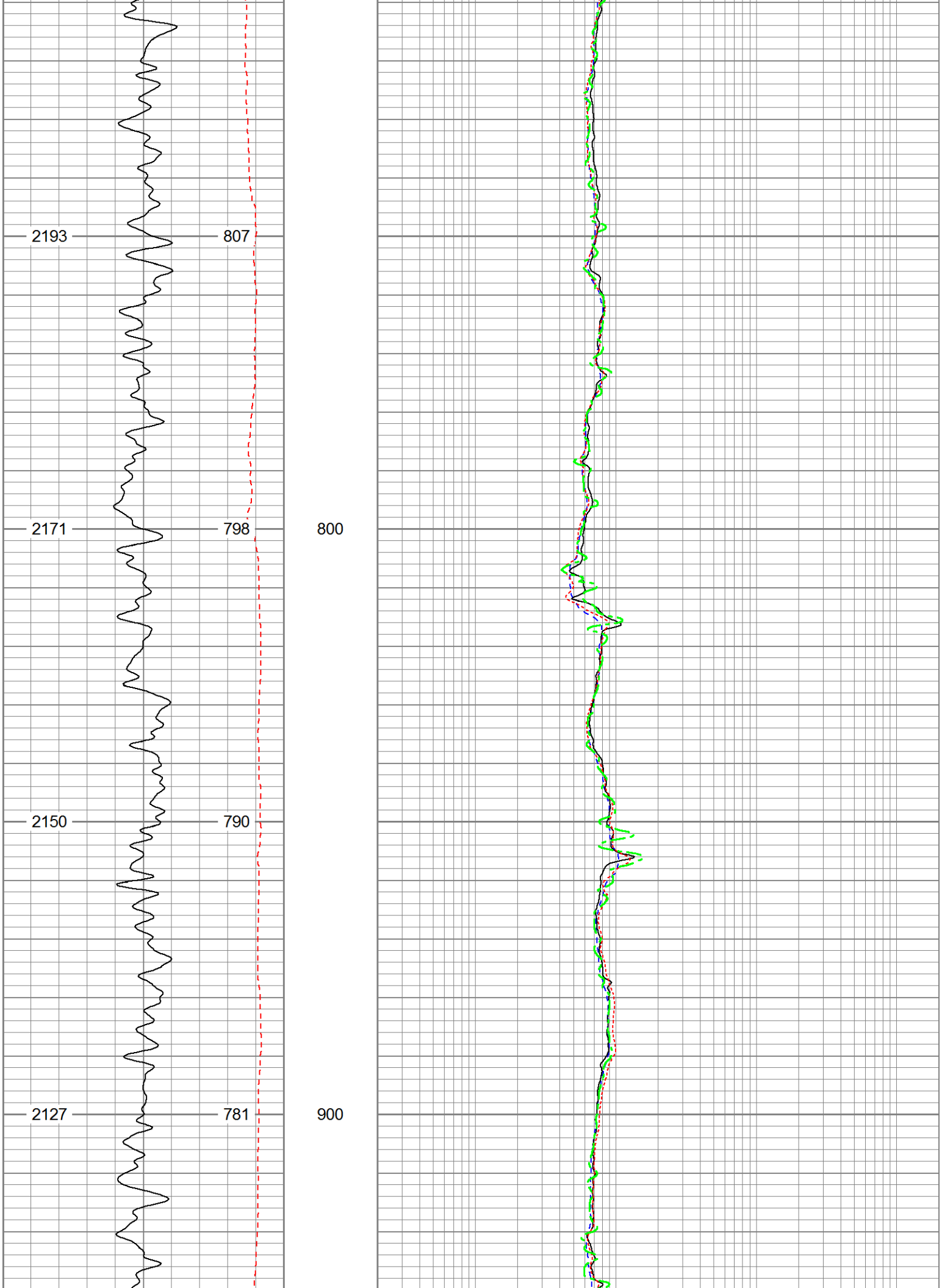
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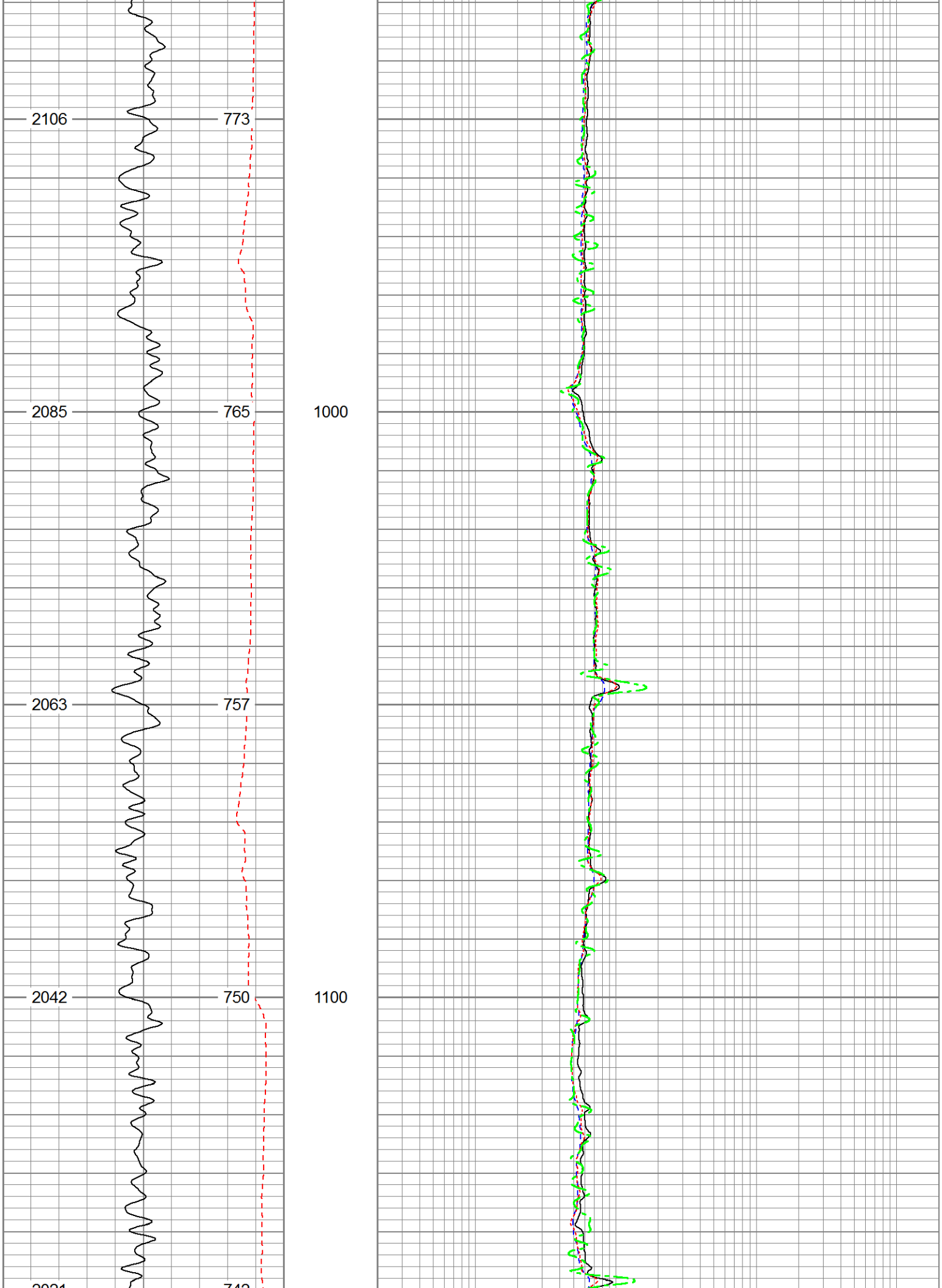
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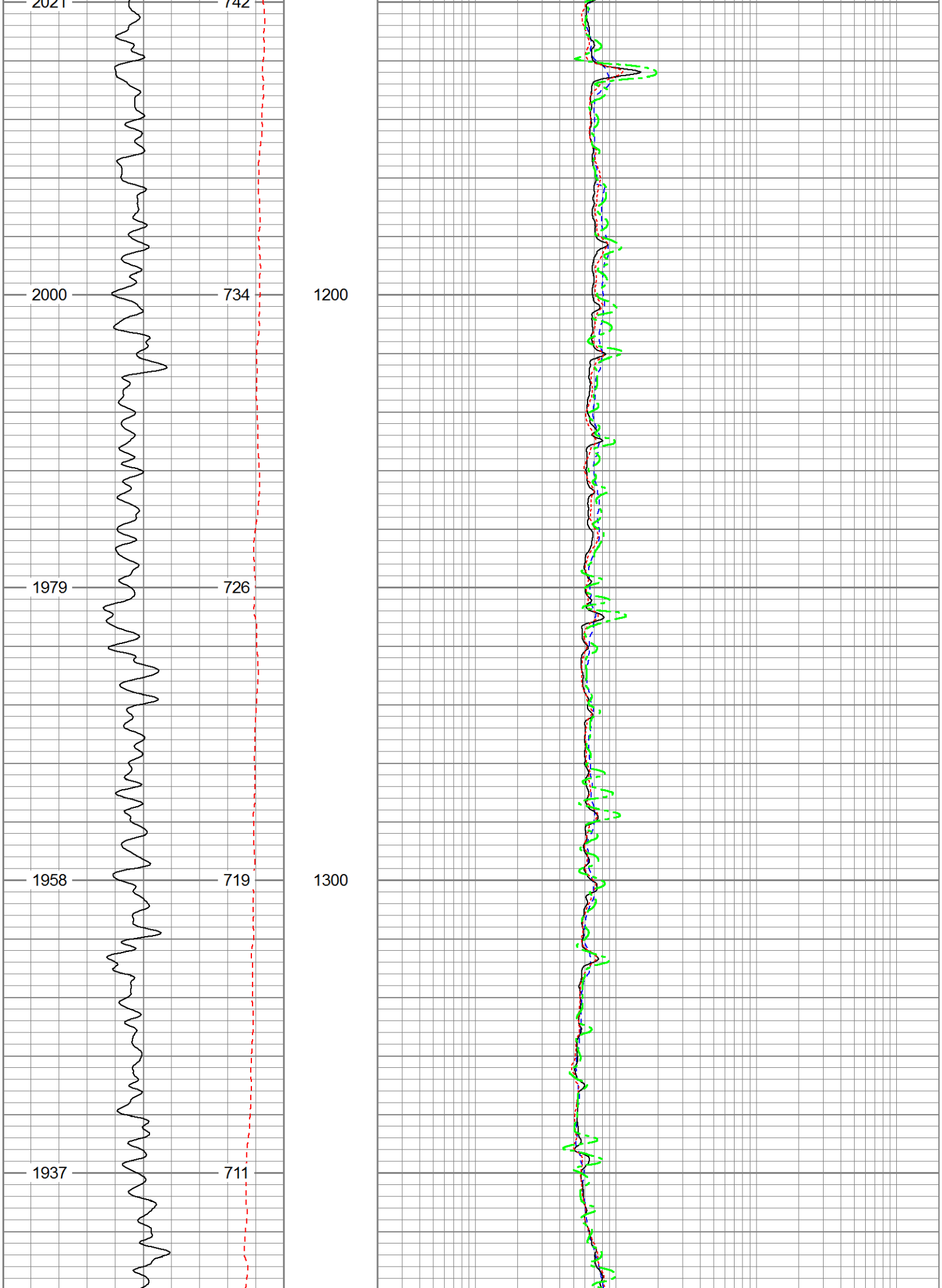
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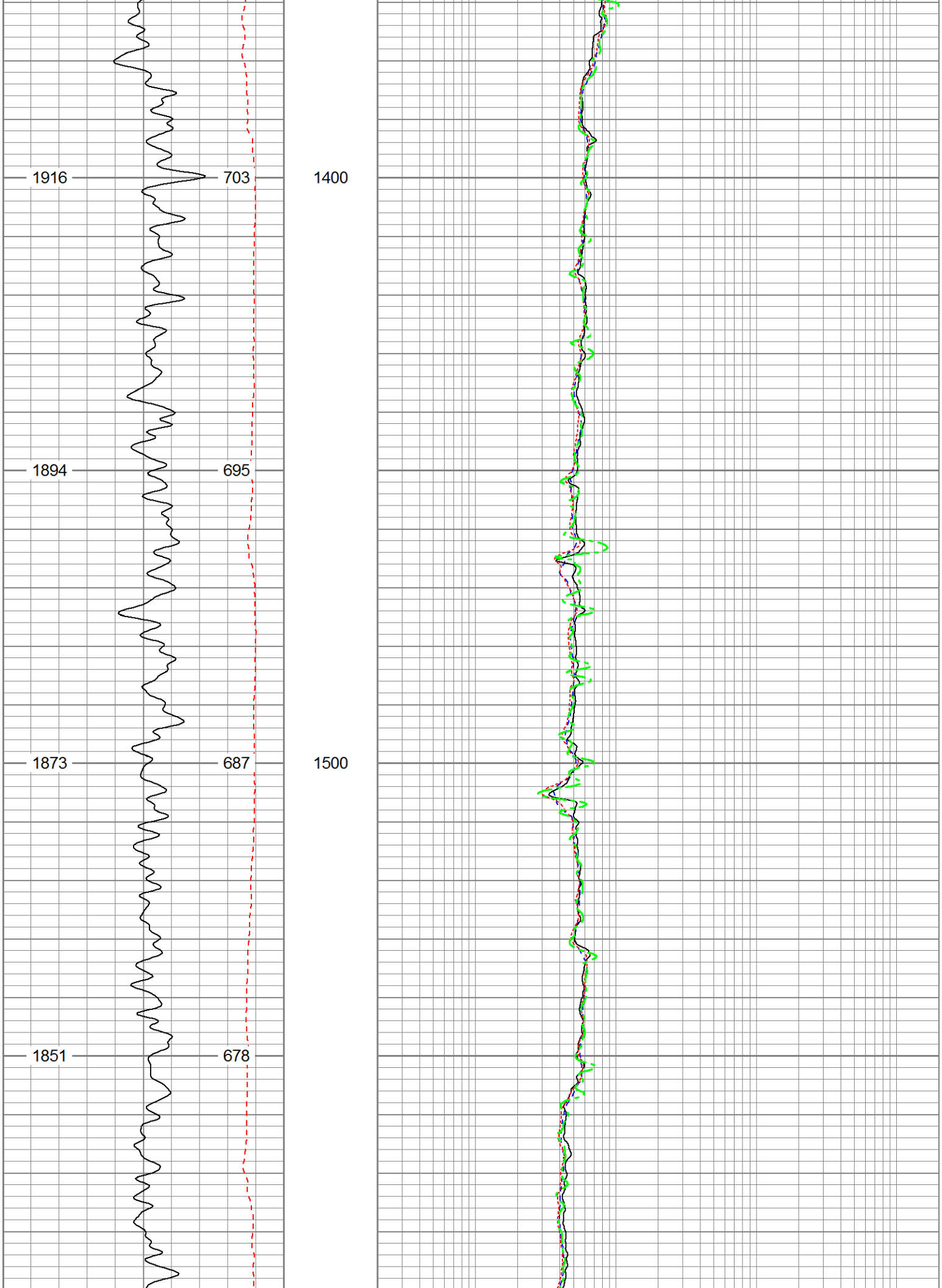
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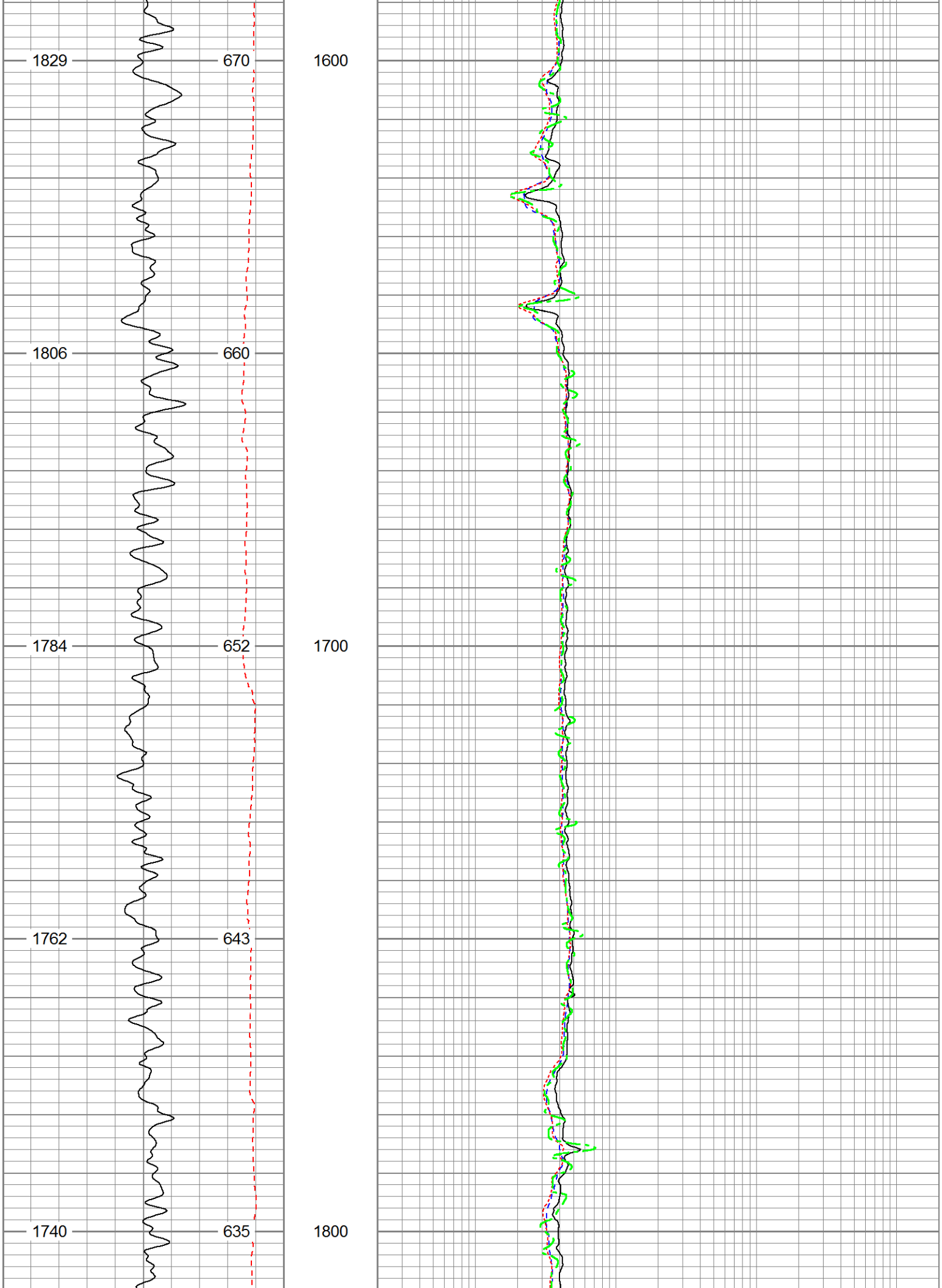
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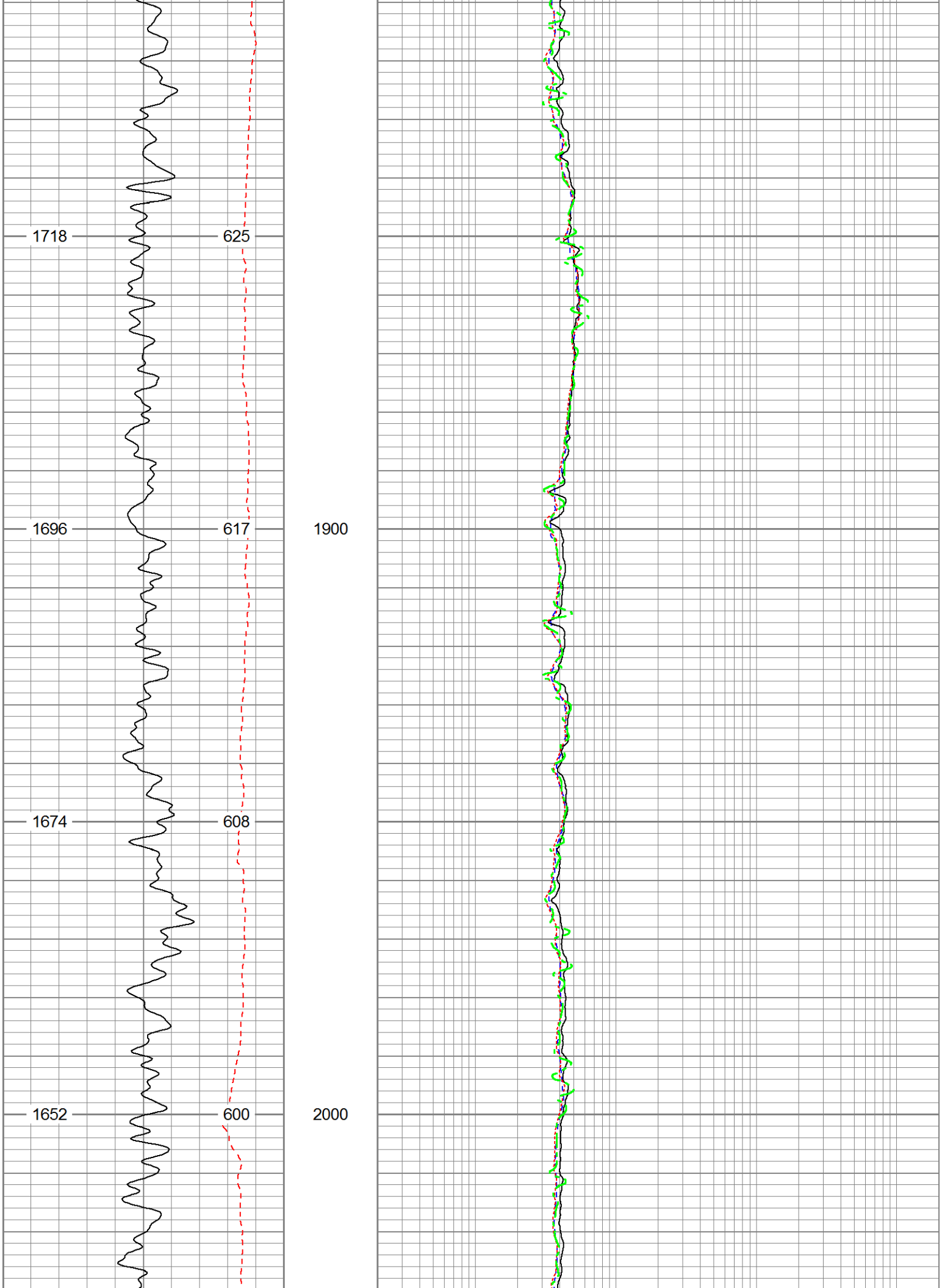
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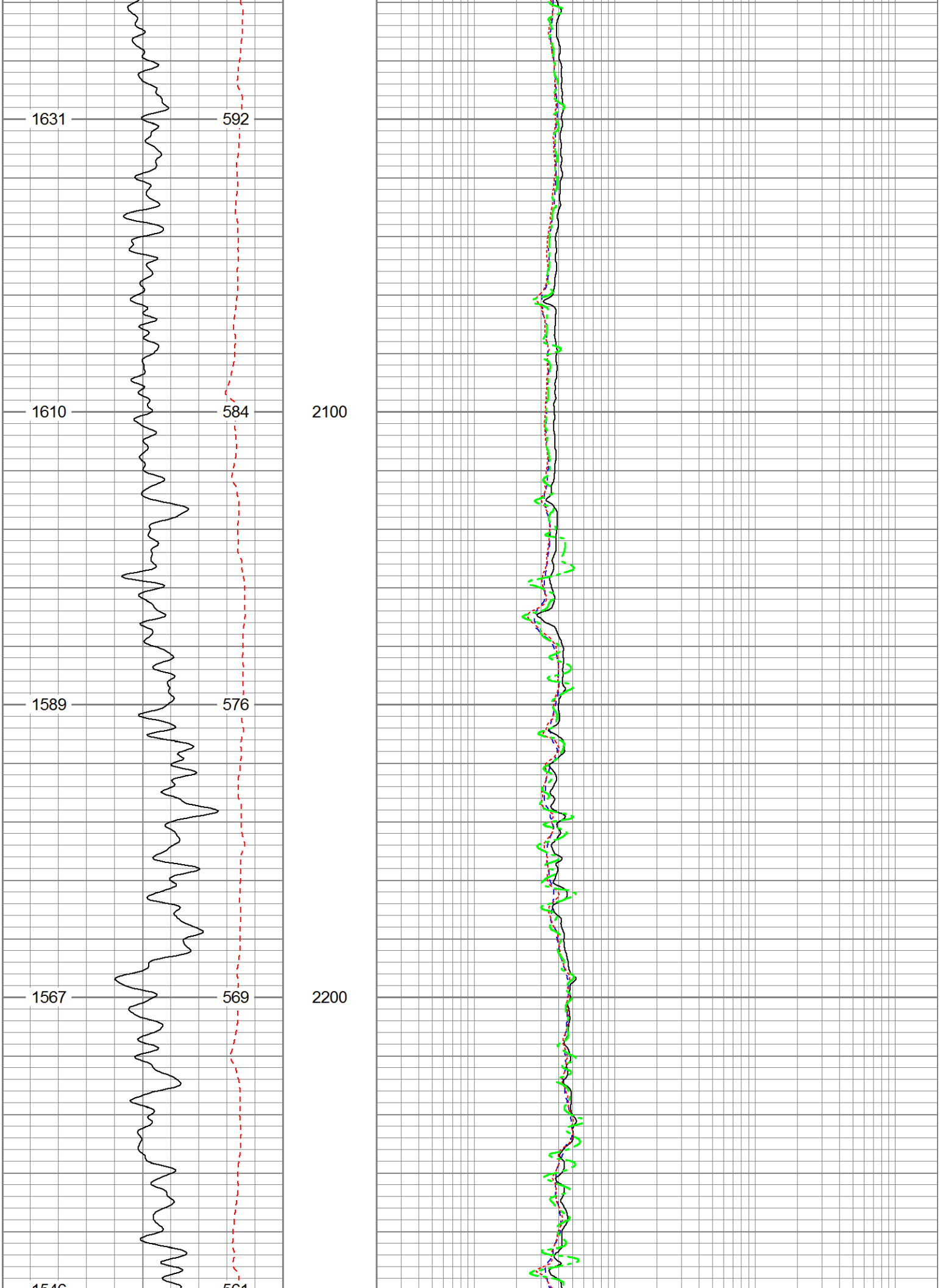
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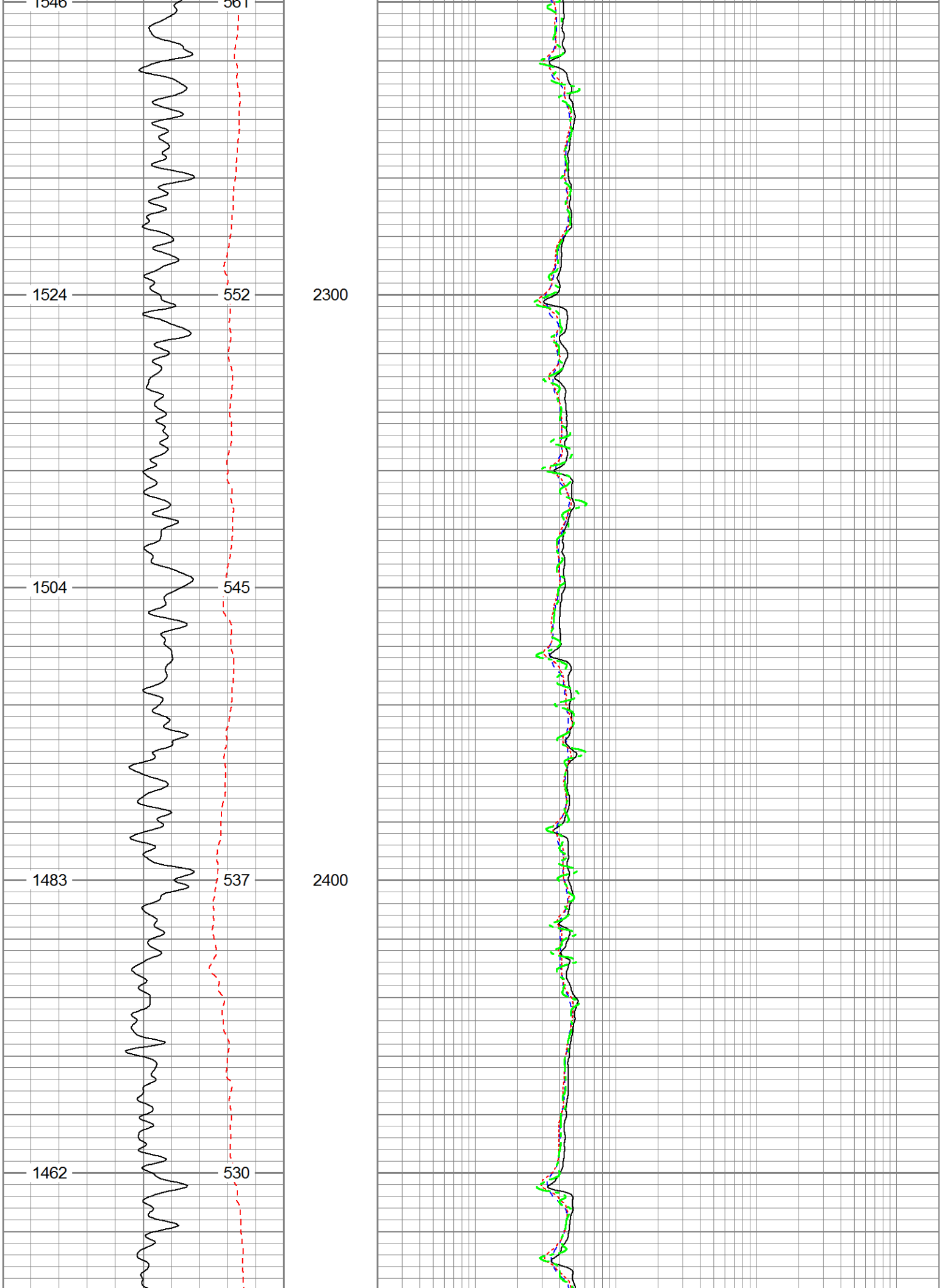
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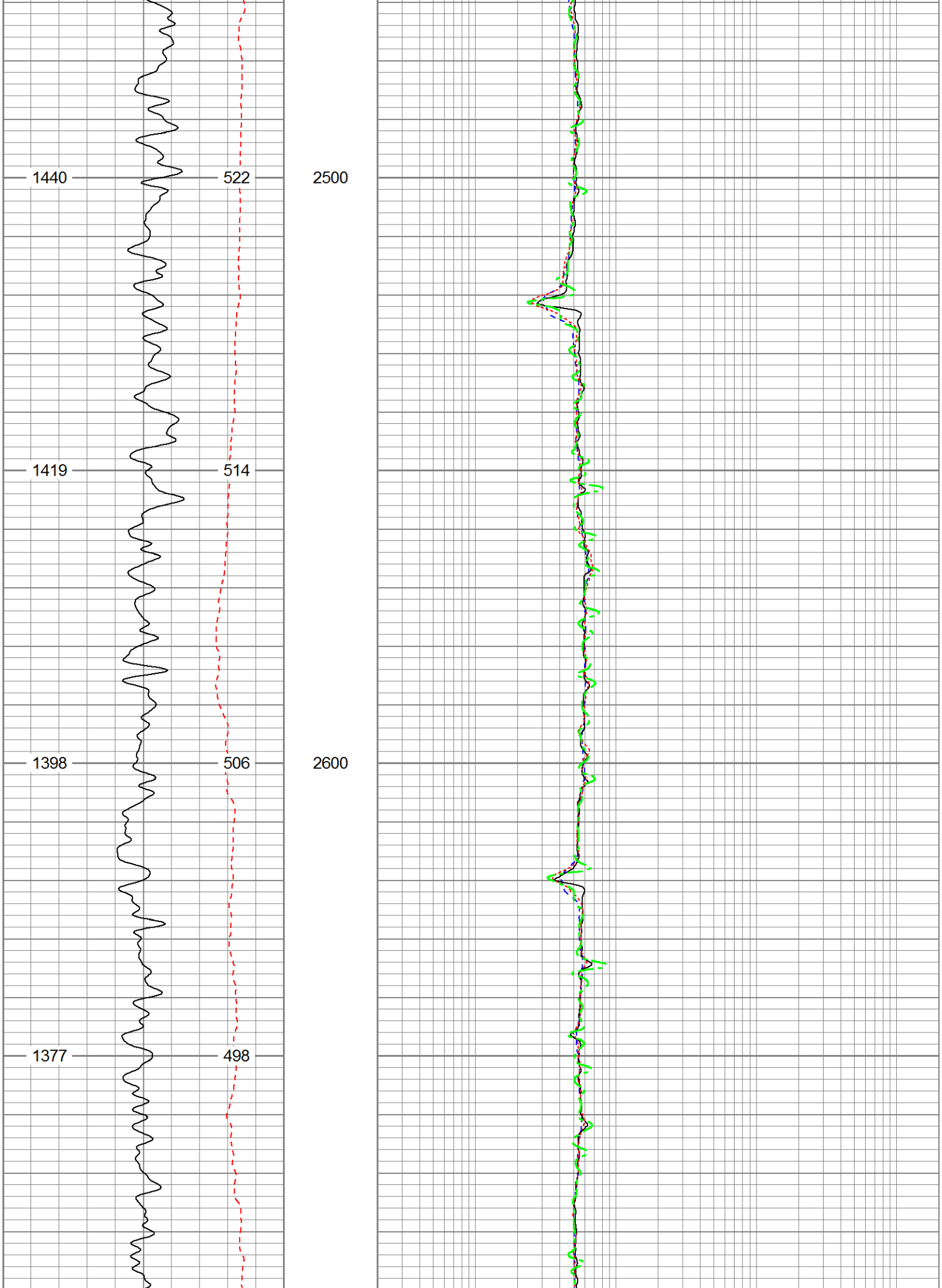
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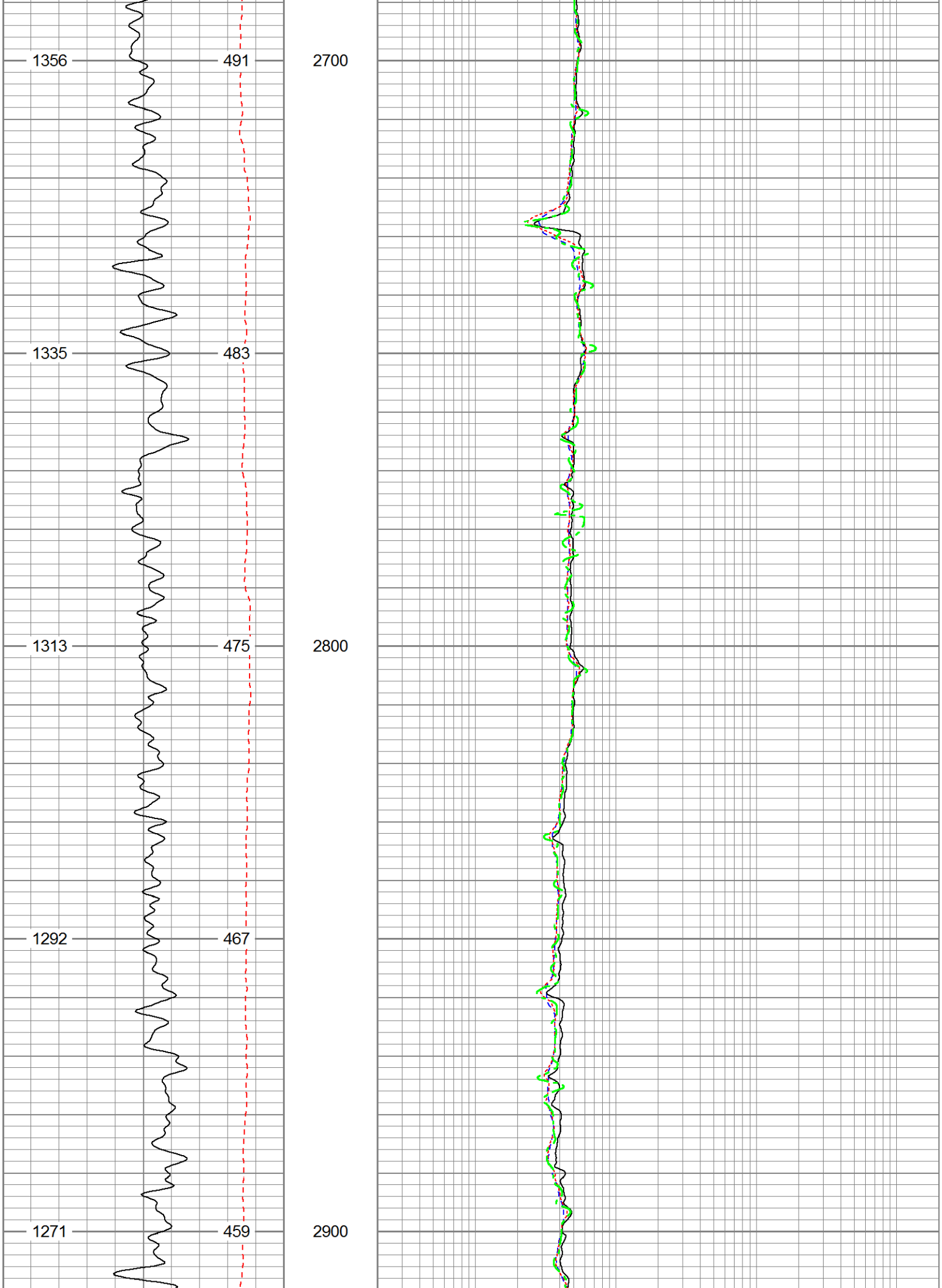
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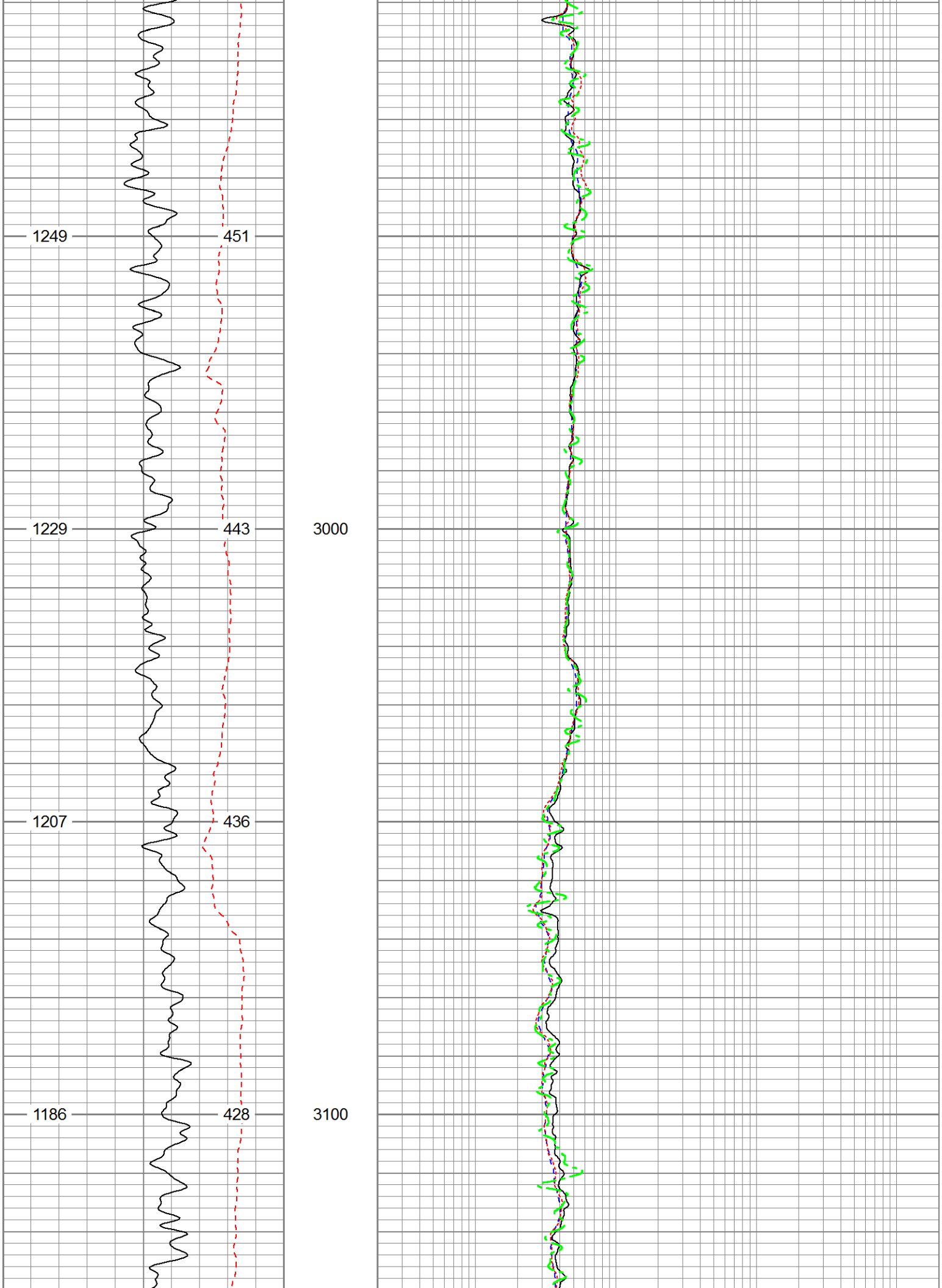
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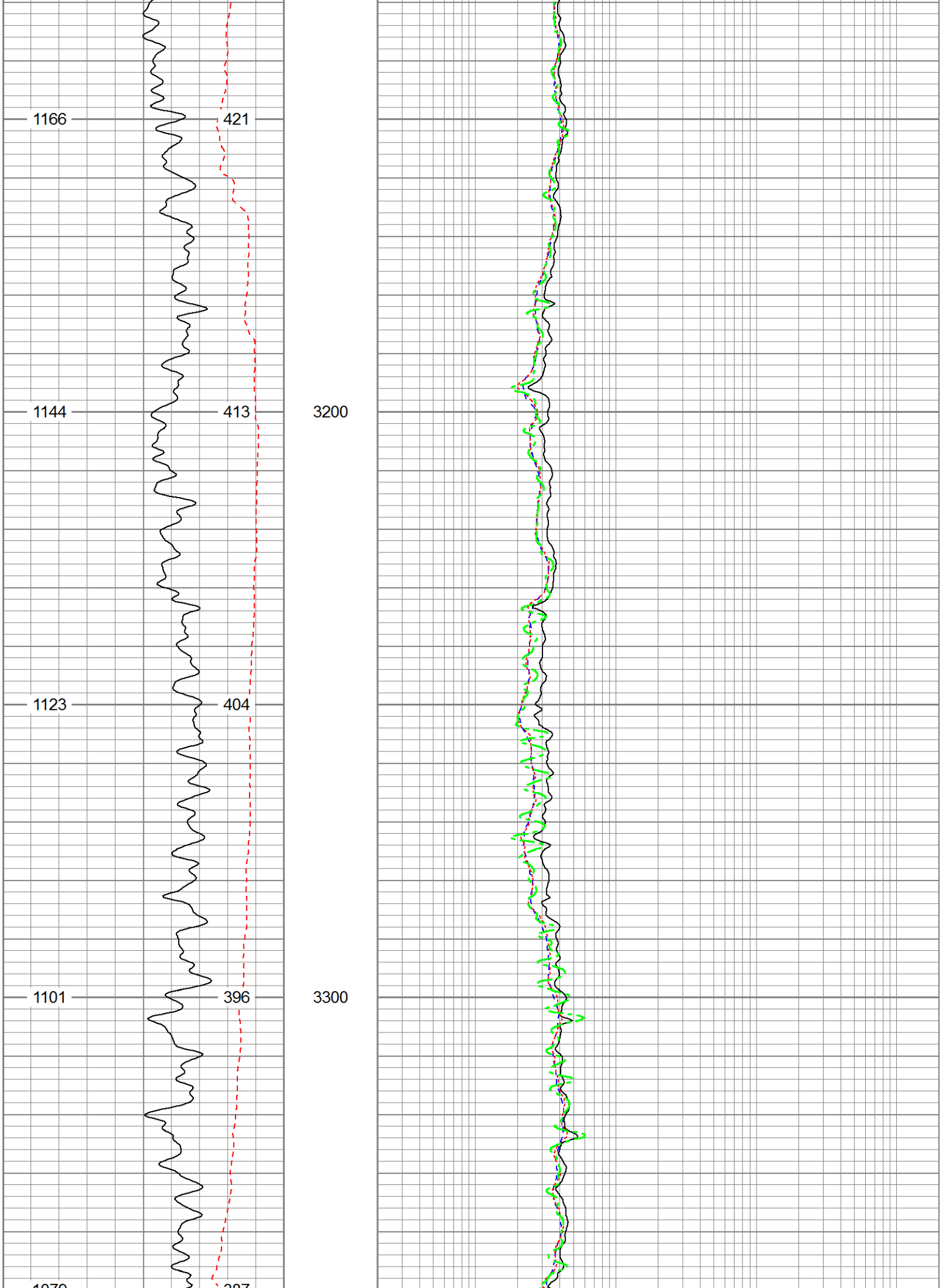
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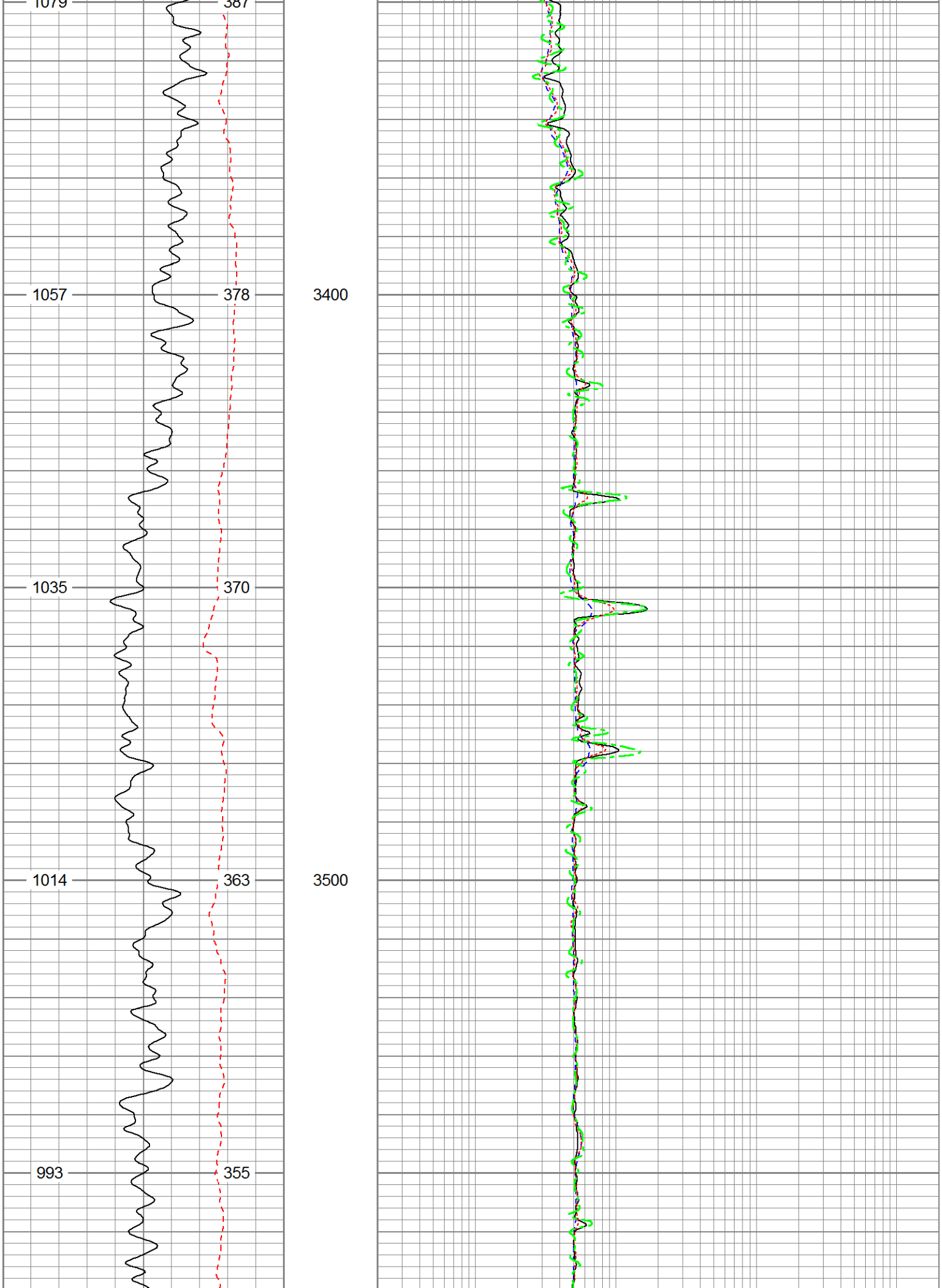
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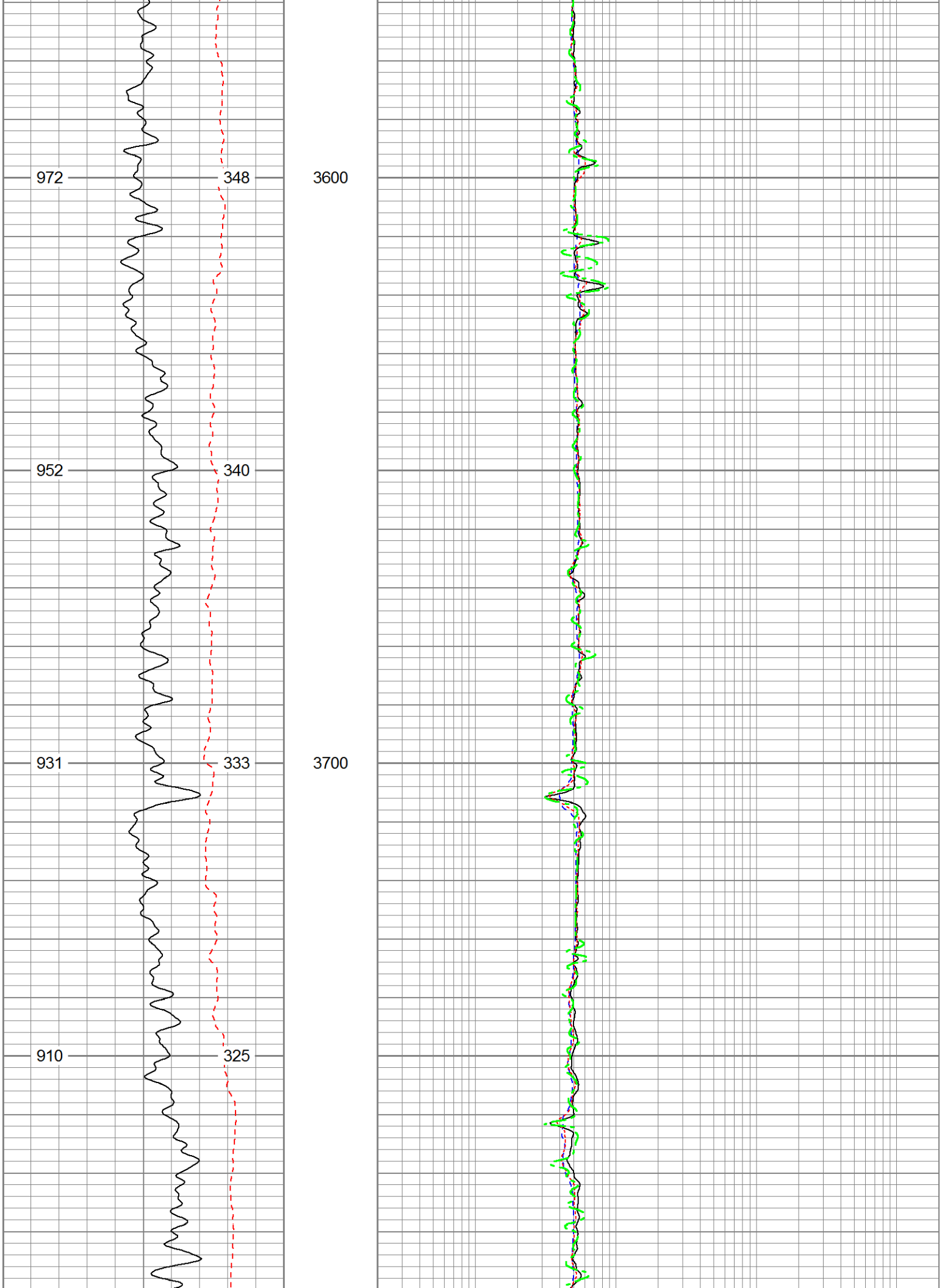
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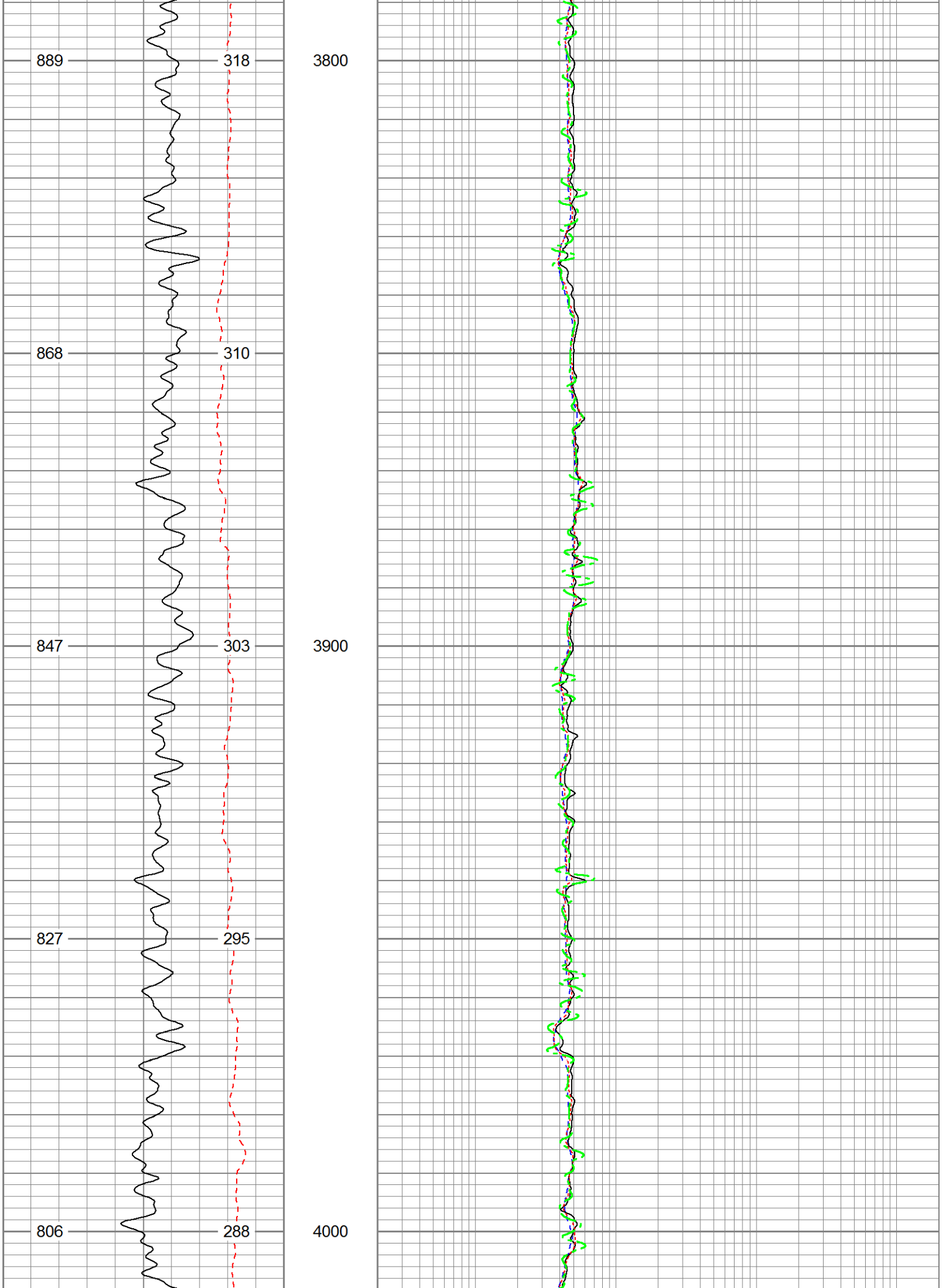
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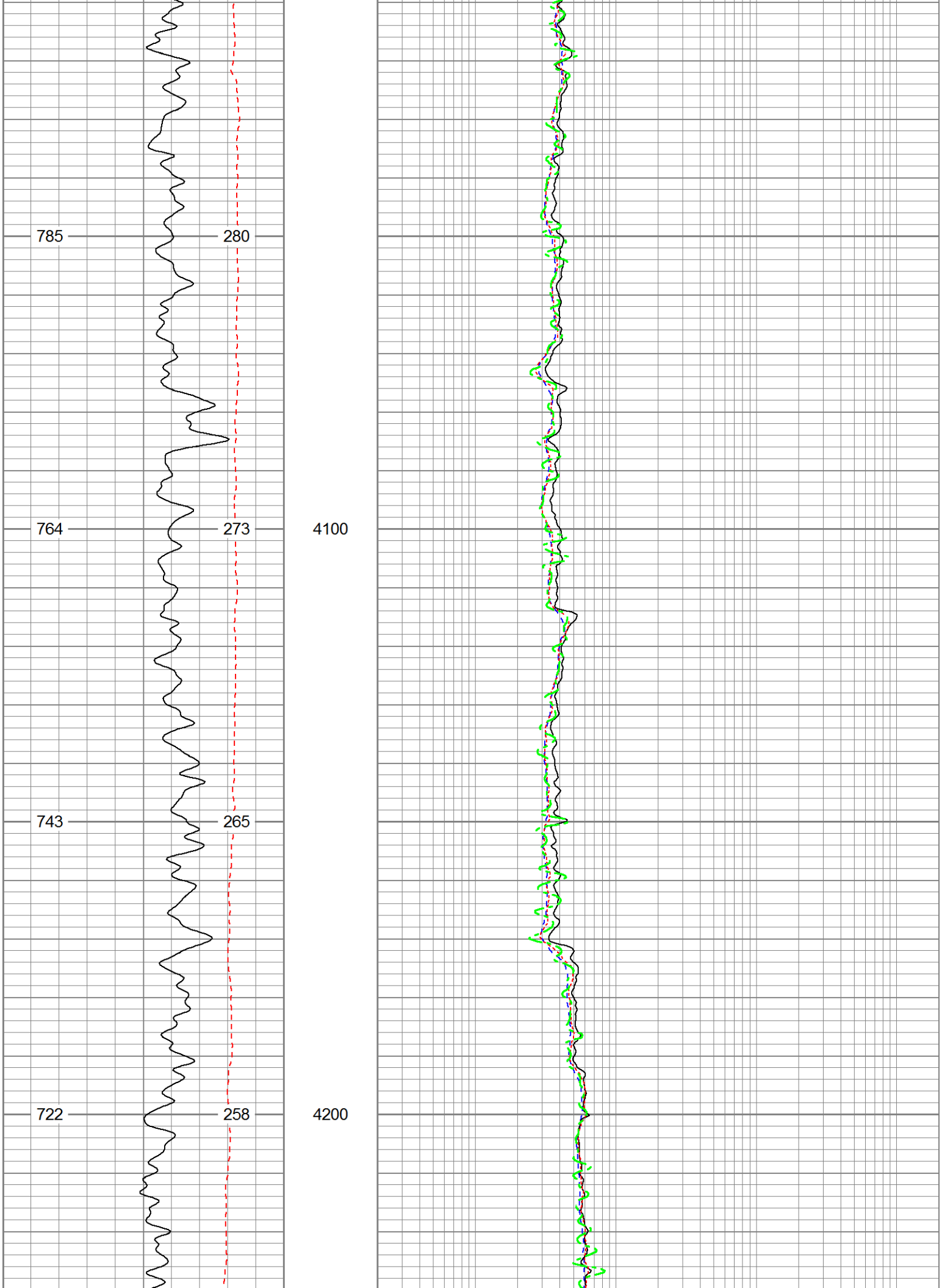
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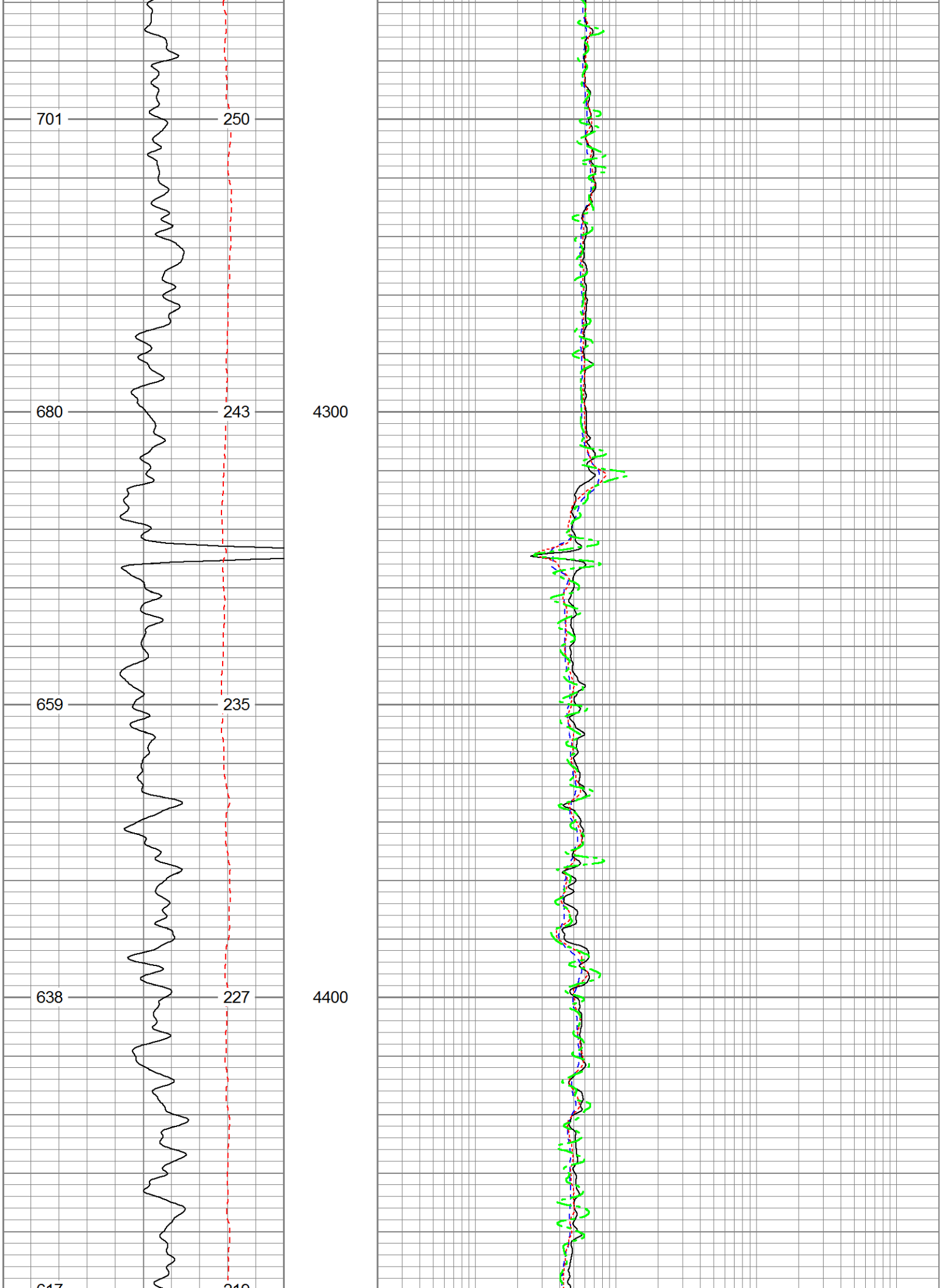
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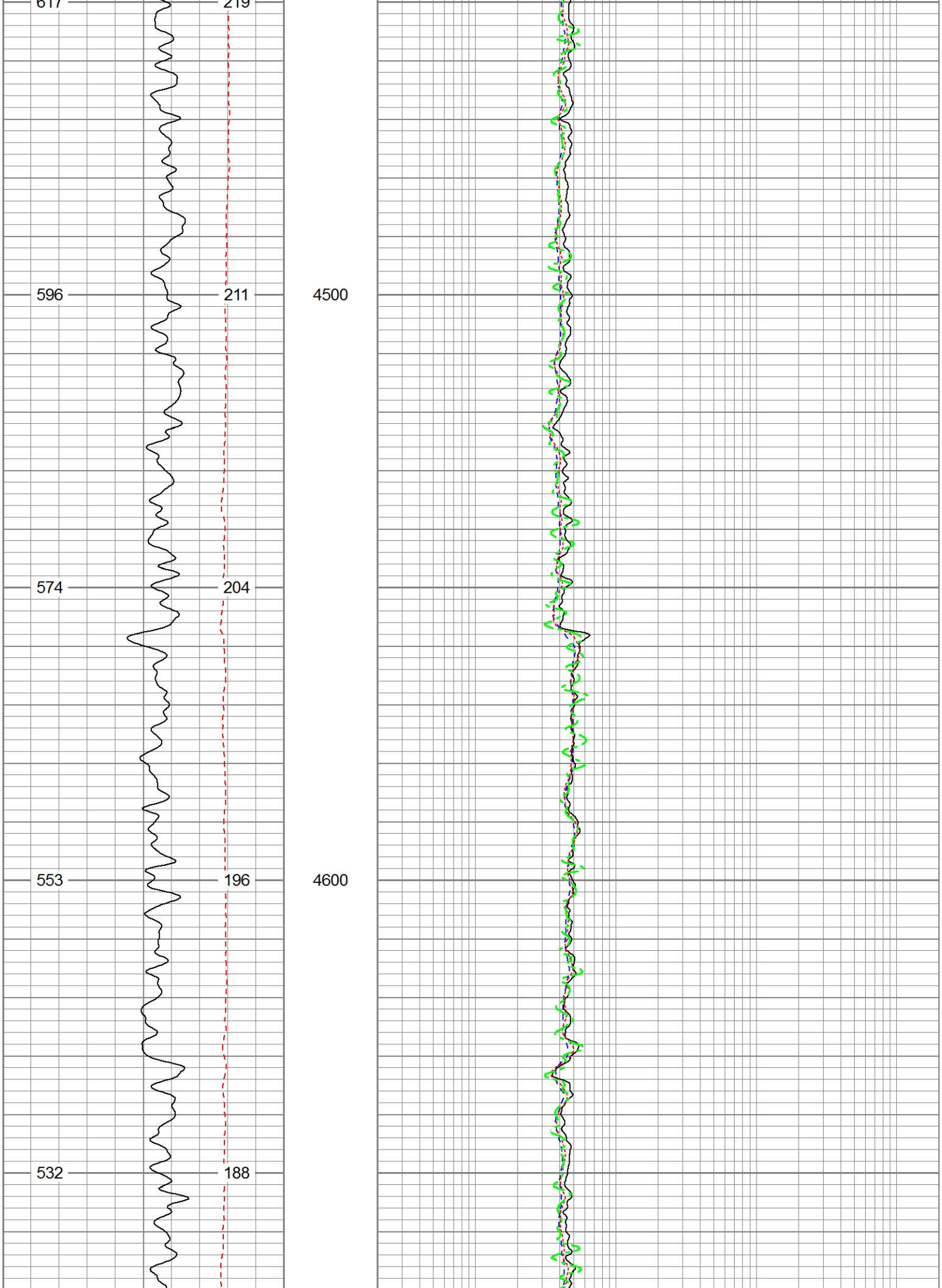
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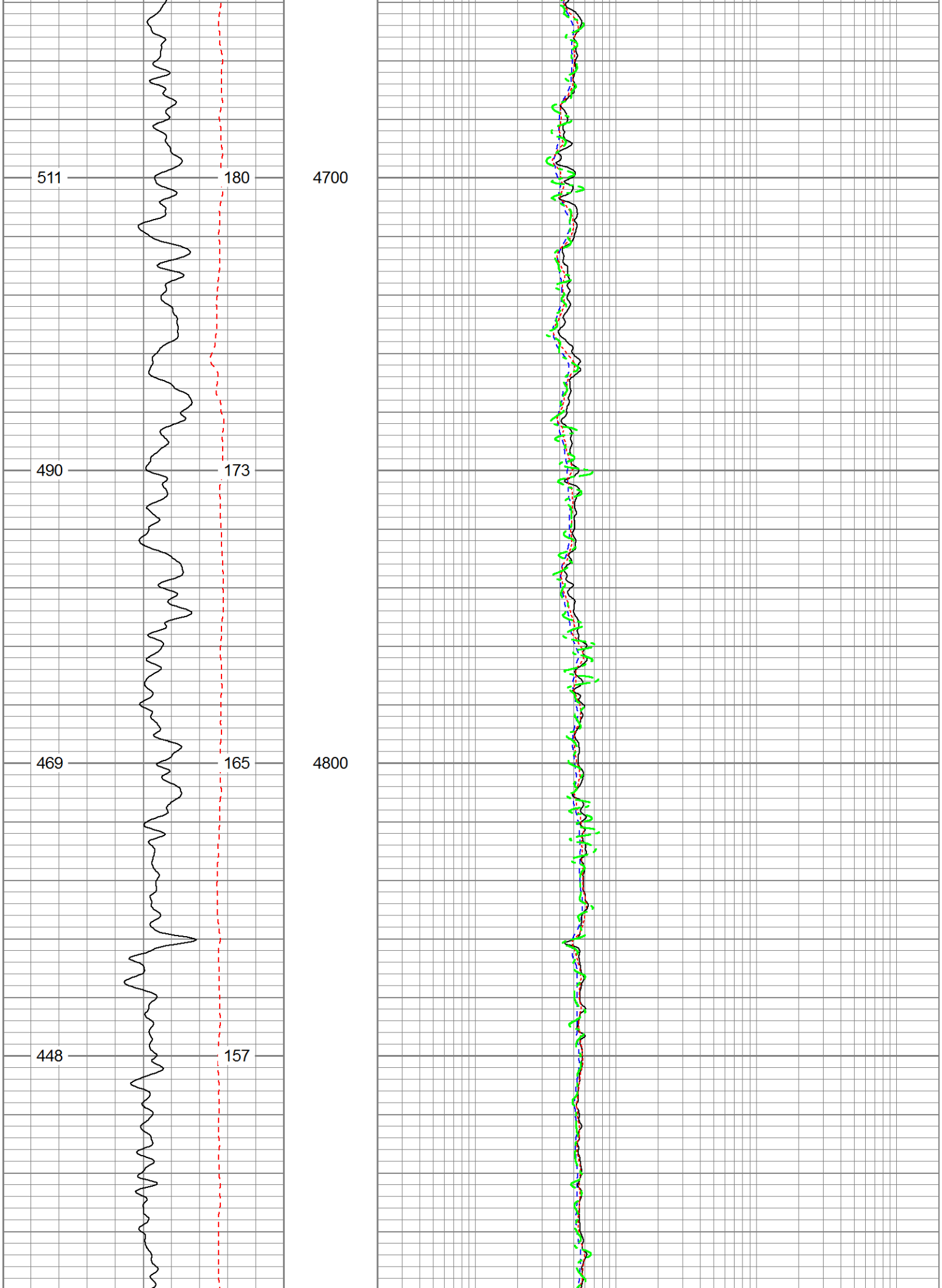
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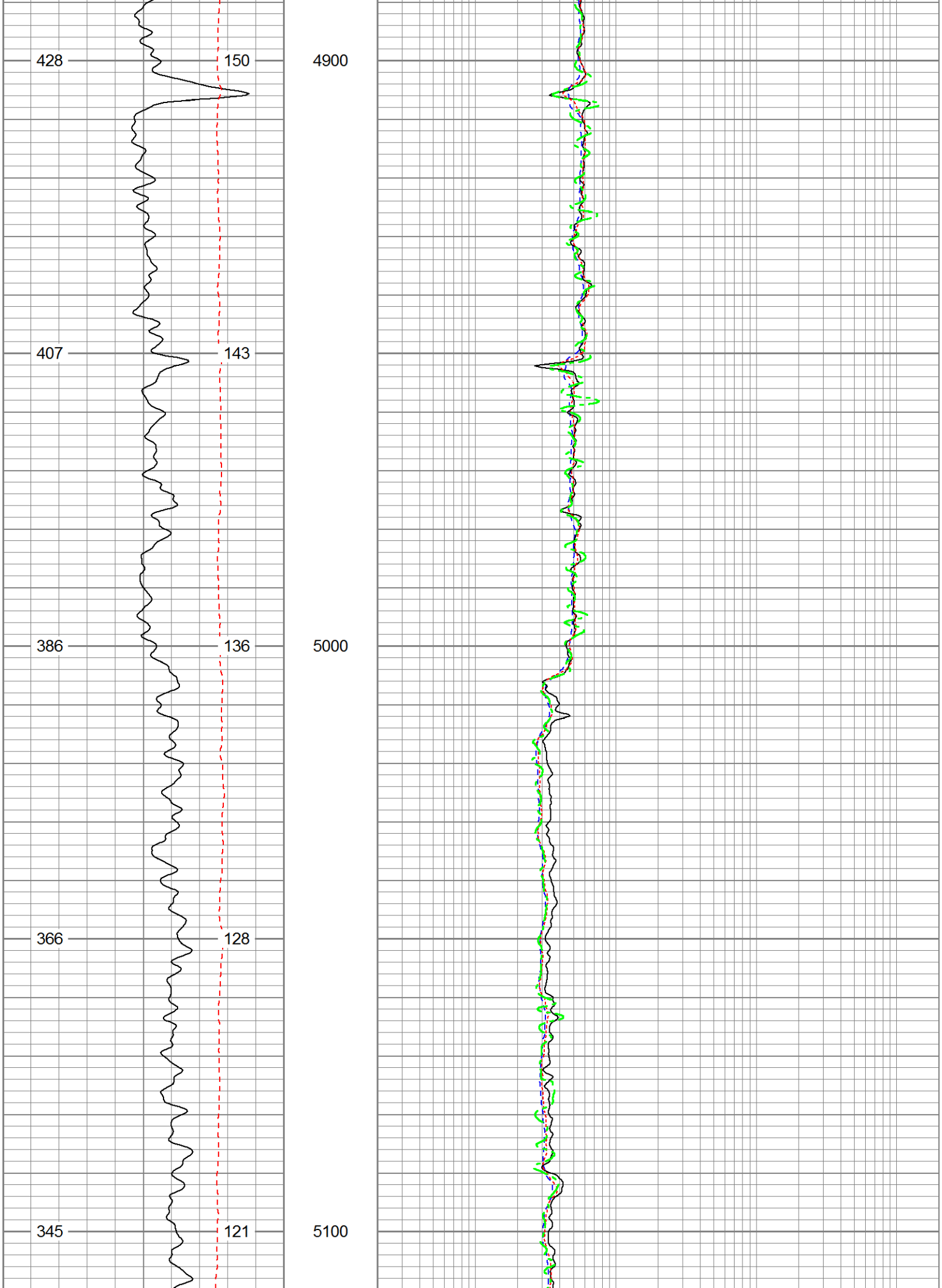
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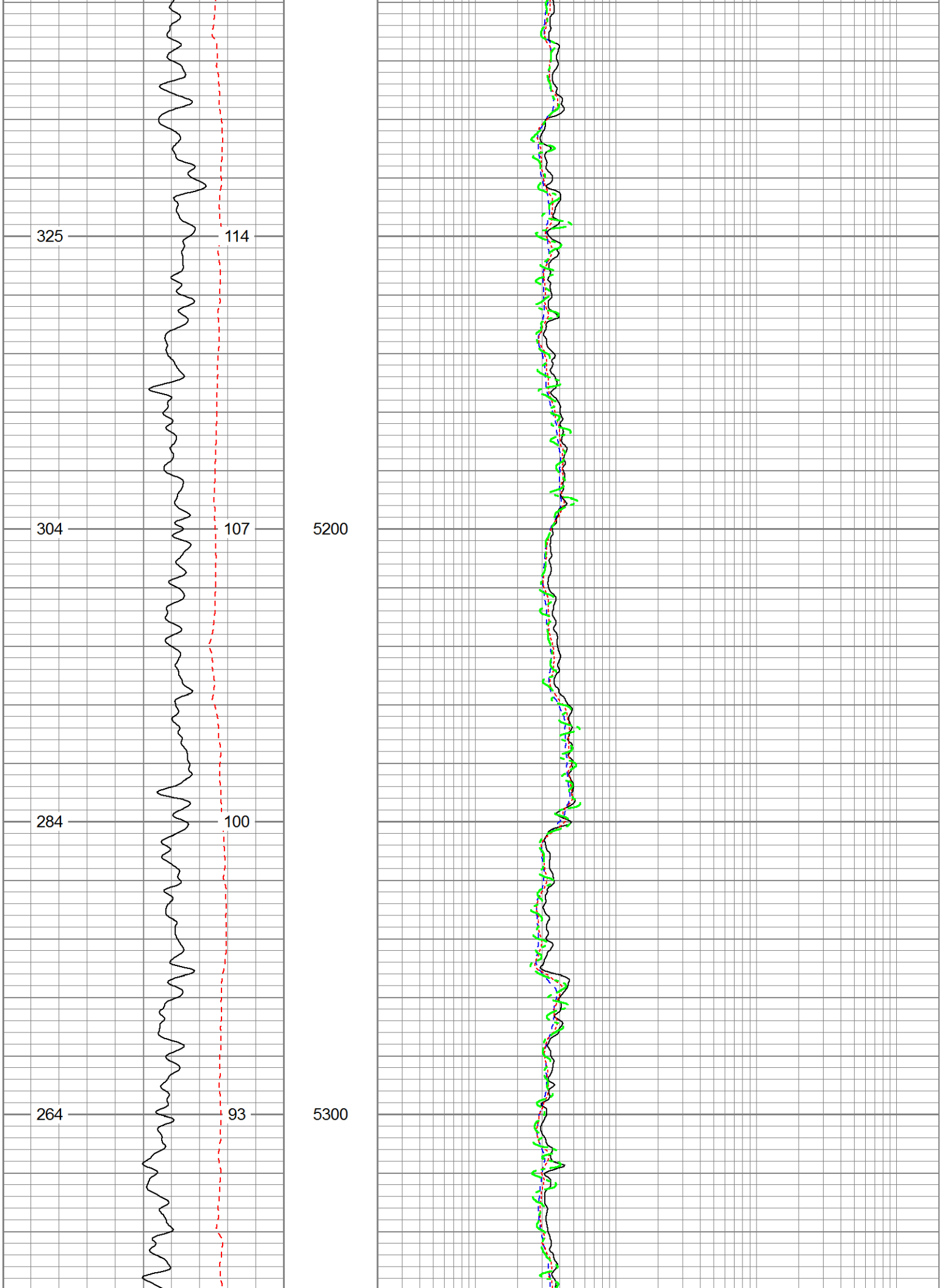
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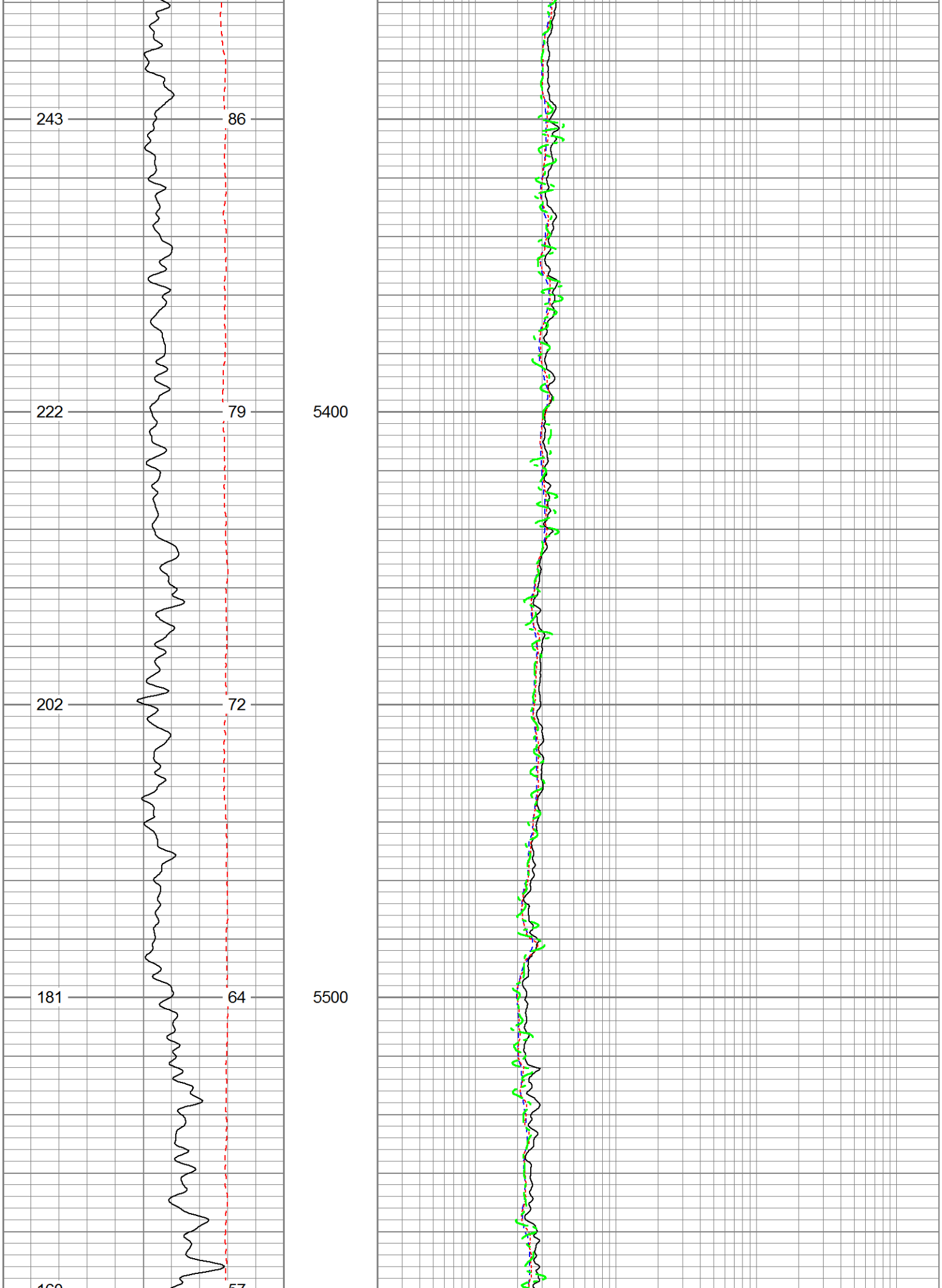
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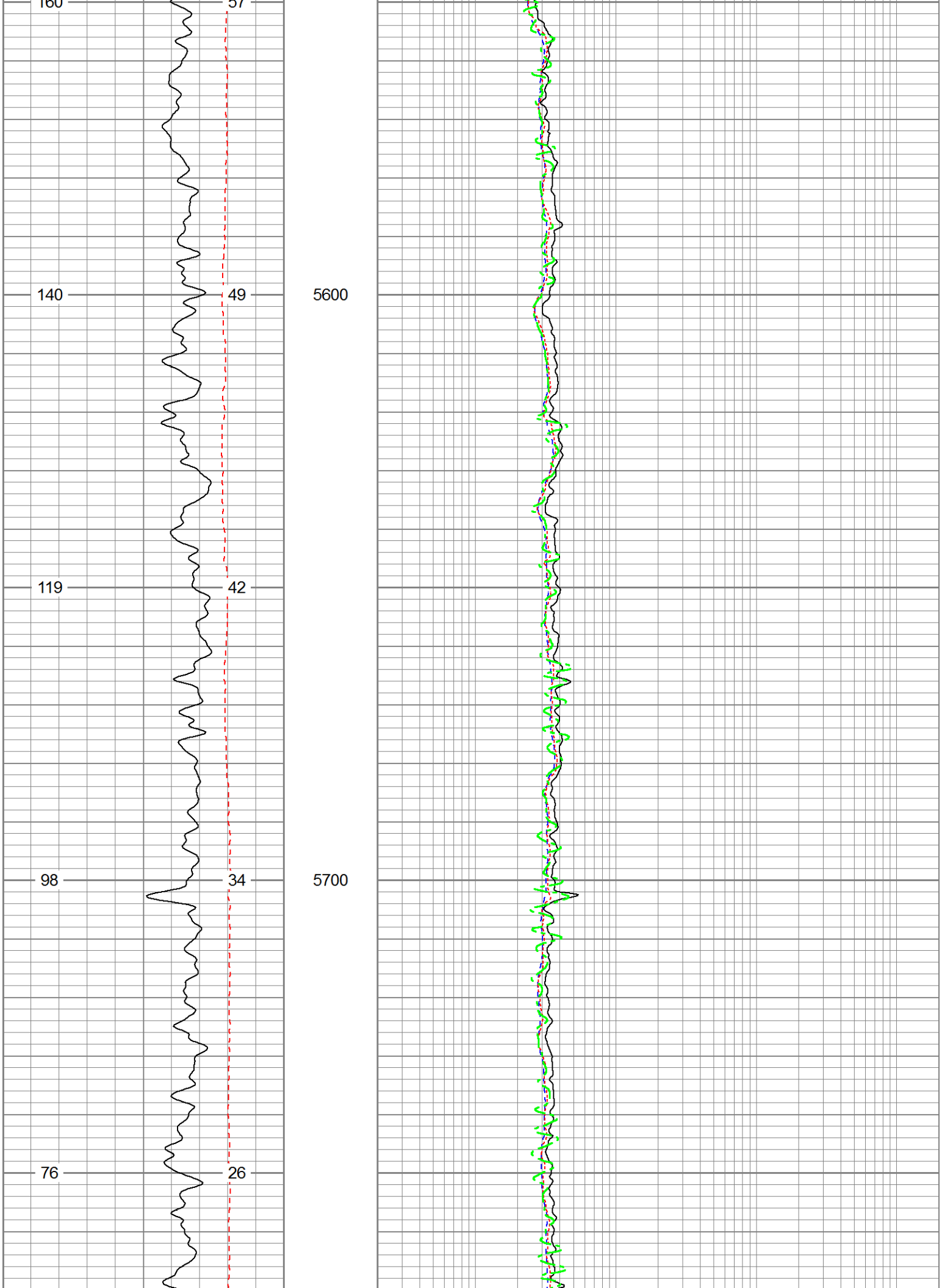
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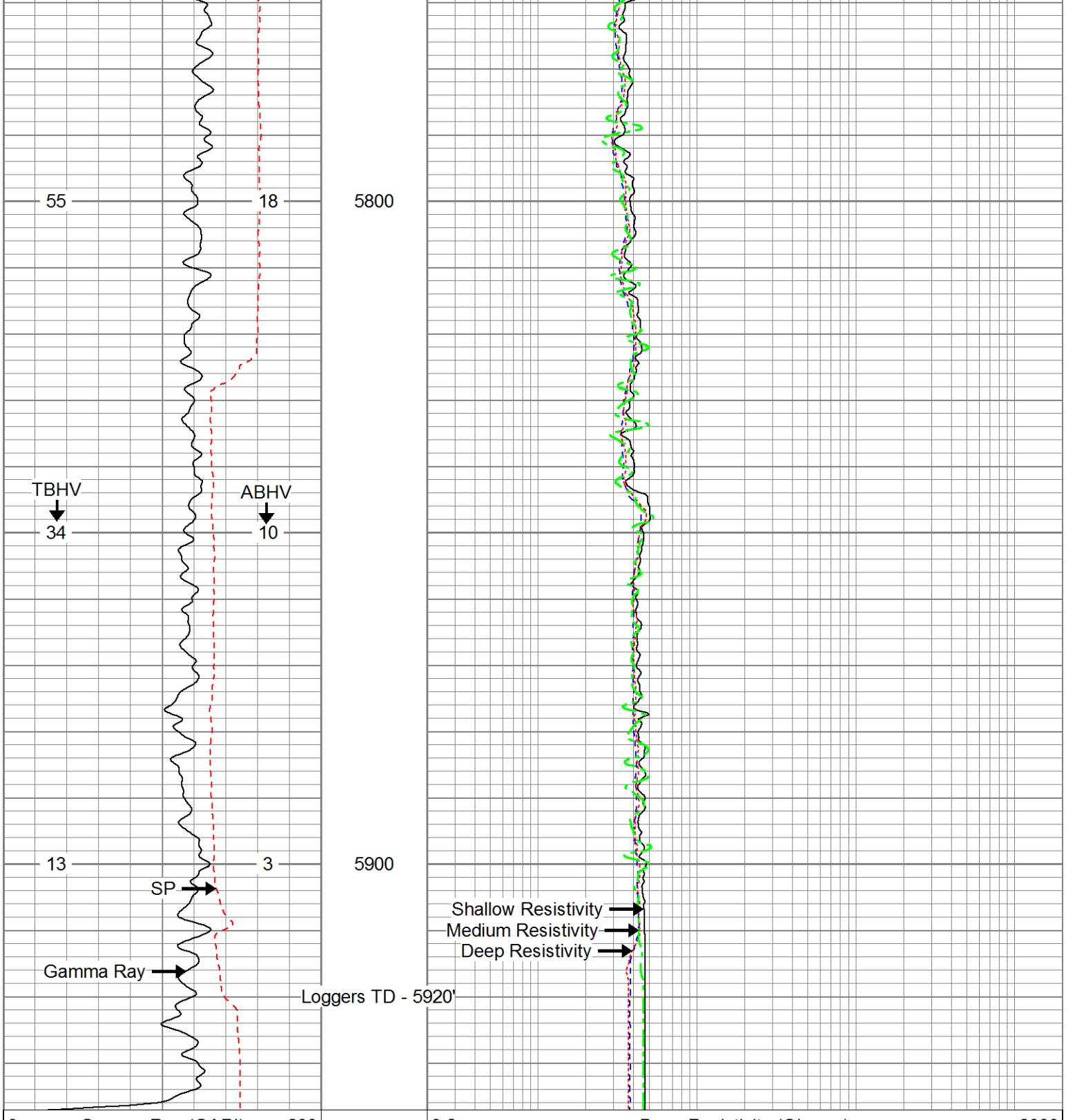
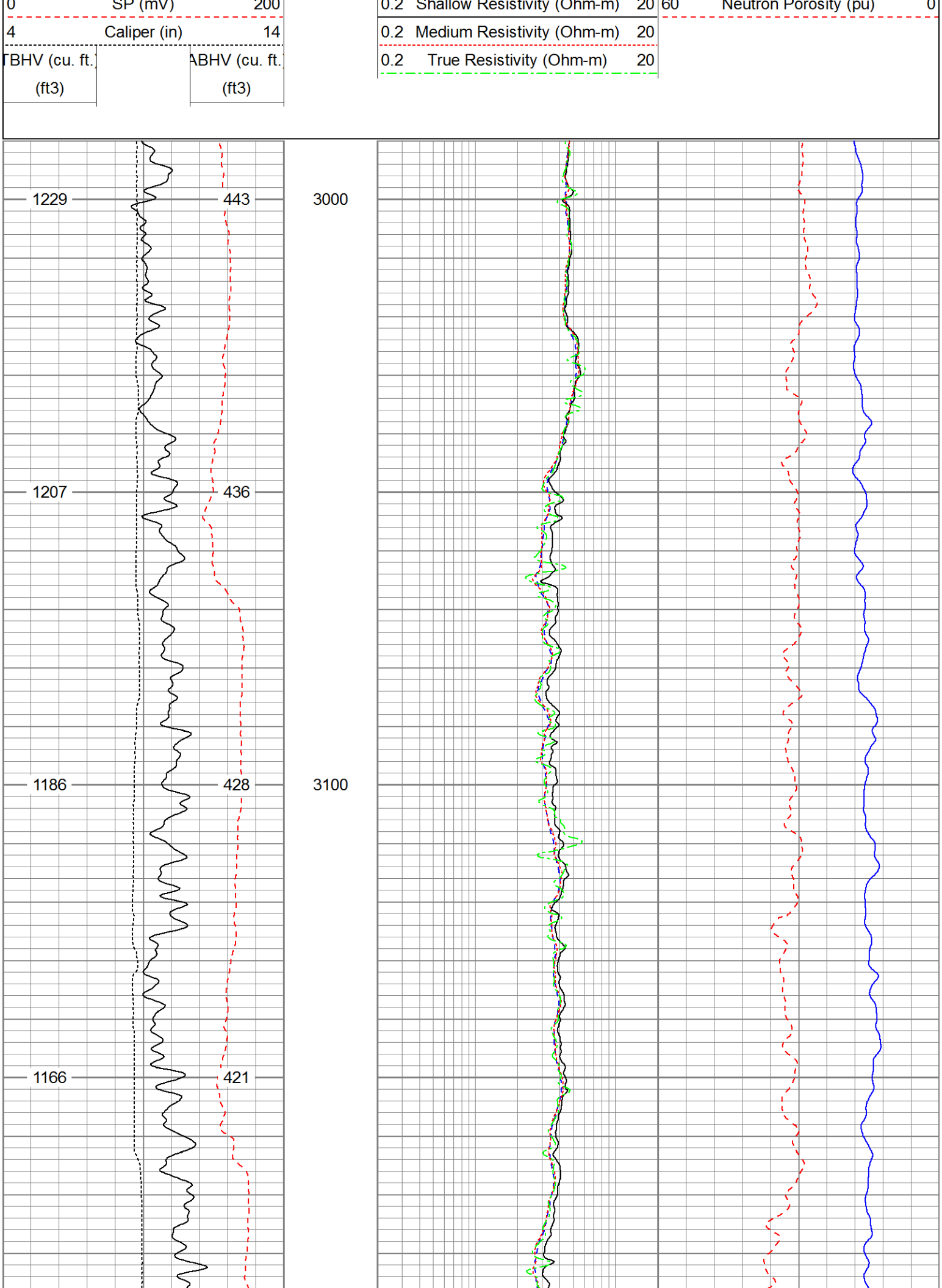


0	Gamma Ray (GAPI)	200
0	SP (mV)	200
TBHV (ft3)		ABHV (ft3)

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Rt (Ohm-m)	2000

Database File:	13710.db
Dataset Pathname:	pass2
Presentation Format:	pdce
Dataset Creation:	Sun Sep 21 18:58:51 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	200	0.2	Deep Resistivity (Ohm-m)	20	60	Density Porosity (pu)	0


0 SP (mV) 200
4 Caliper (in) 14
TBHV (cu. ft.) (ft3)
ABHV (cu. ft.) (ft3)
0.2 Shallow Resistivity (Ohm-m) 20
0.2 Medium Resistivity (Ohm-m) 20
0.2 True Resistivity (Ohm-m) 20
60 Neutron Porosity (pu) 0
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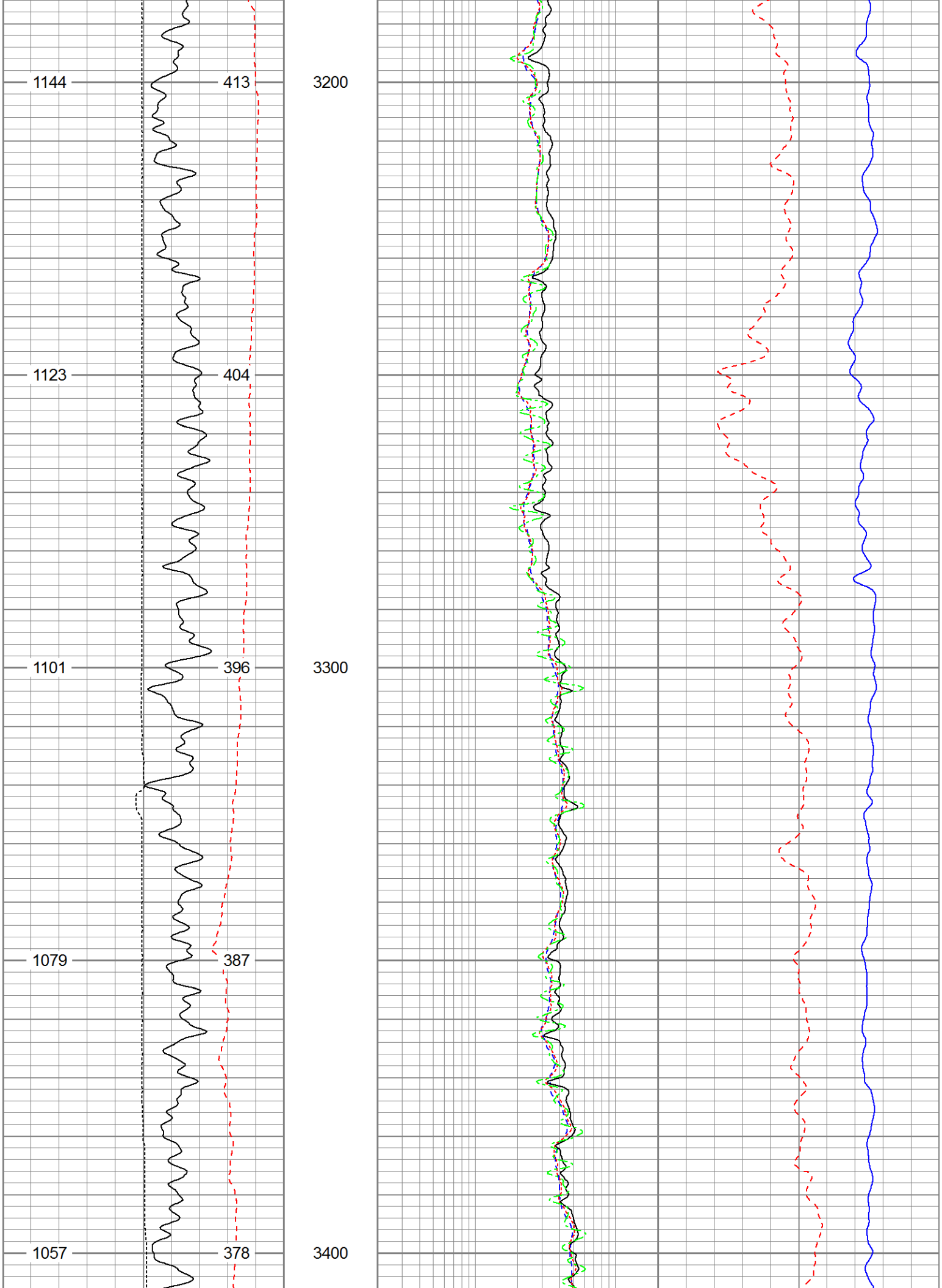
443
1207
436
1186
428
1166
421
3000
3100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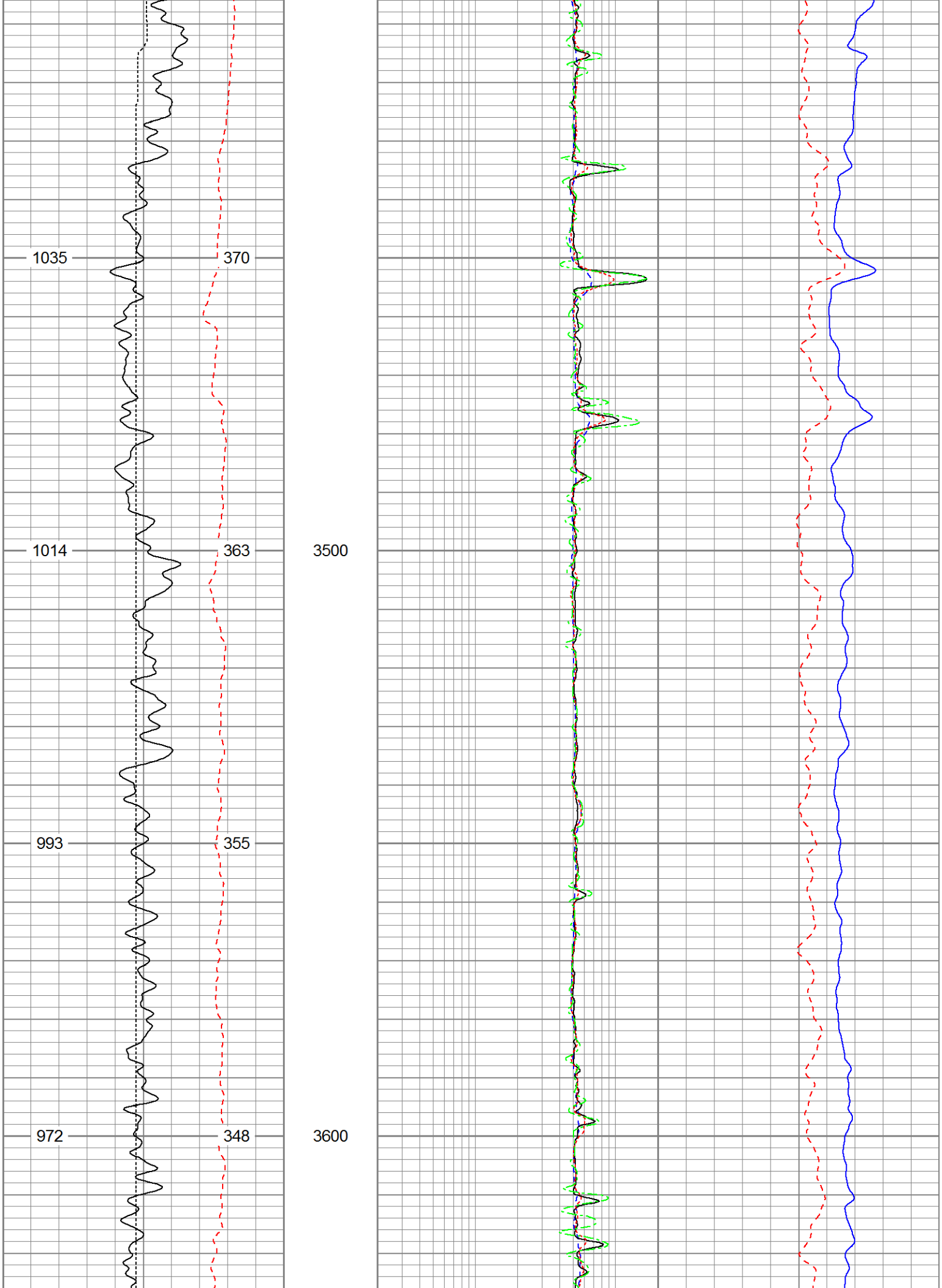
3400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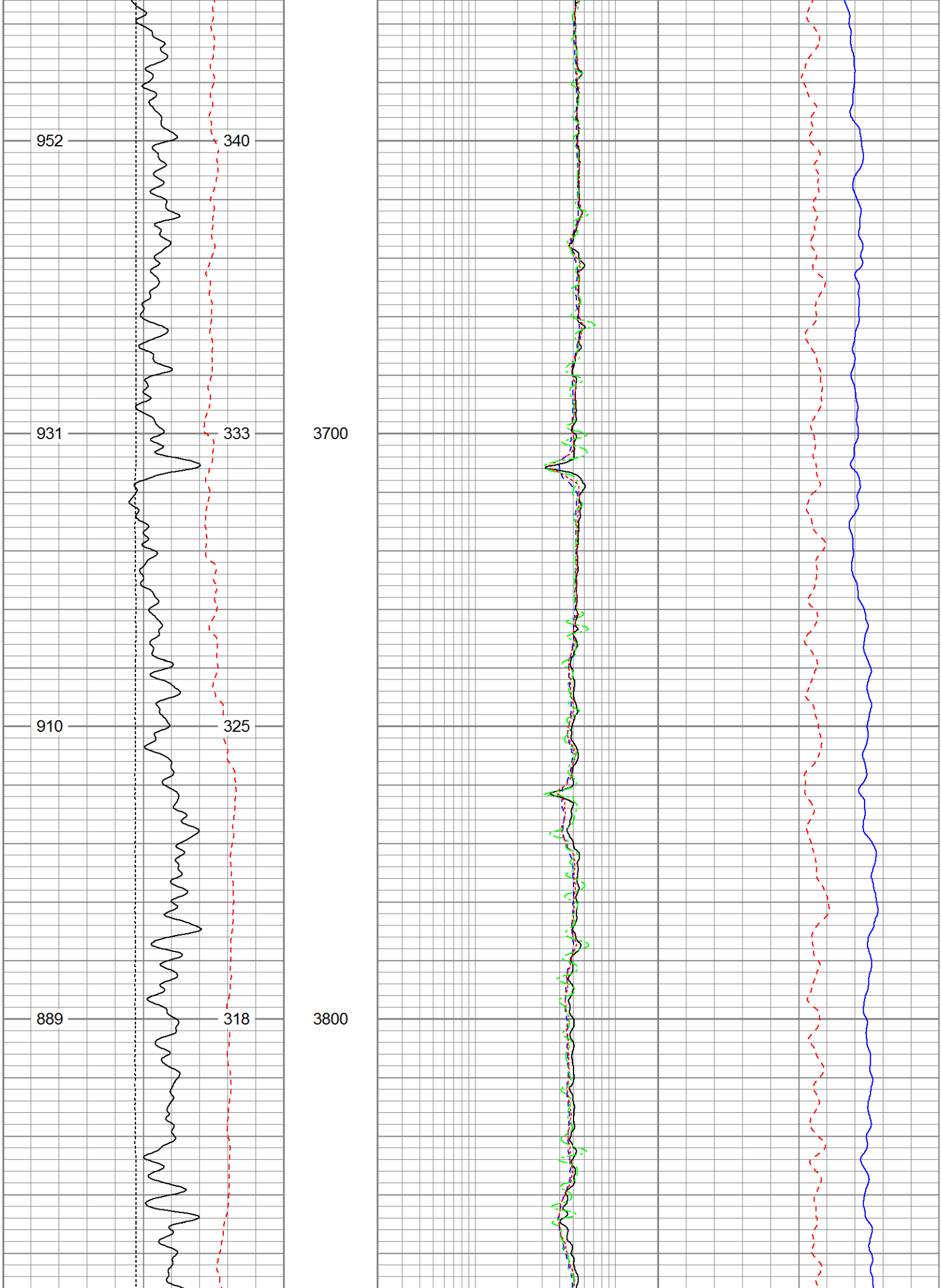
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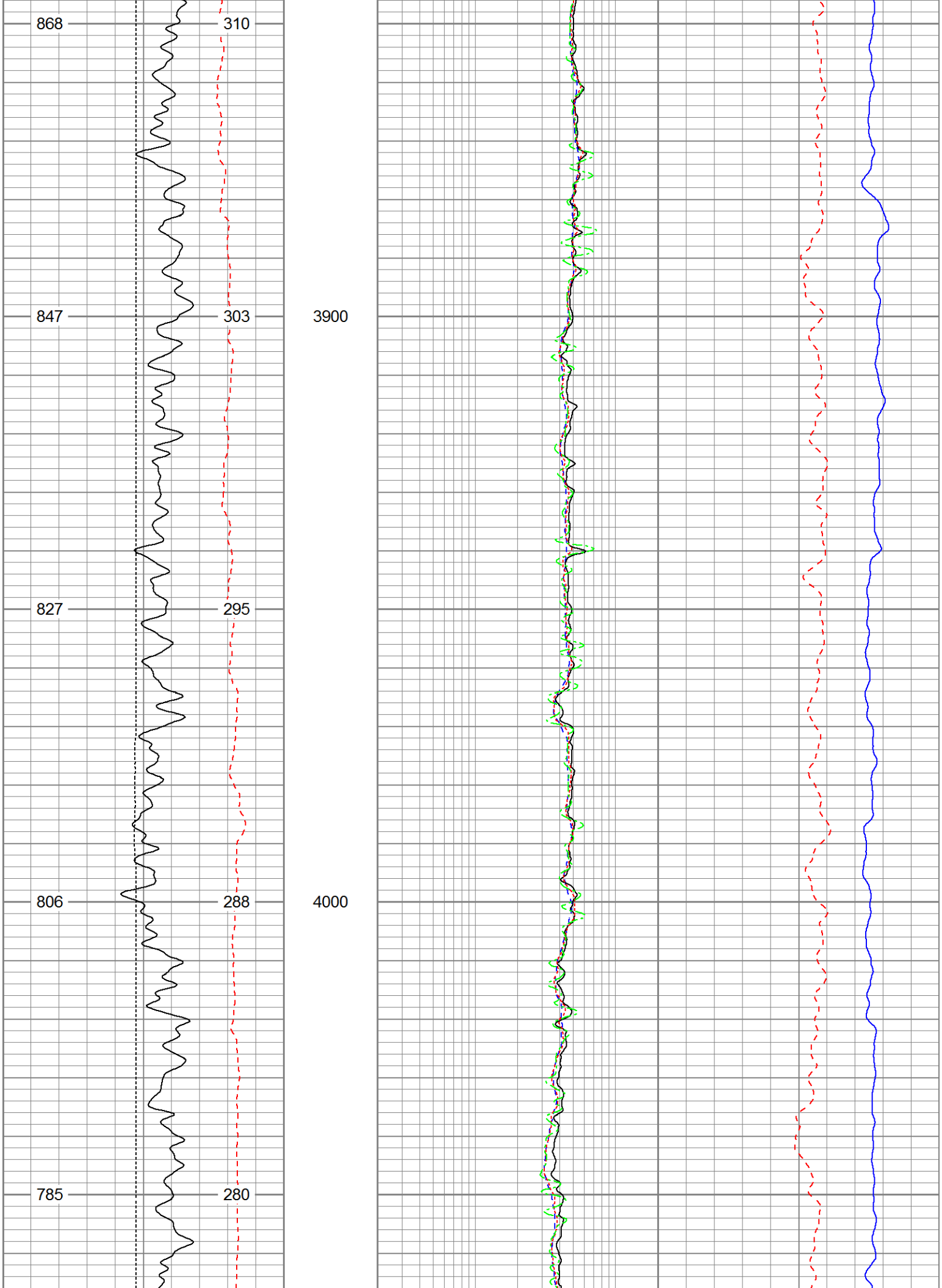
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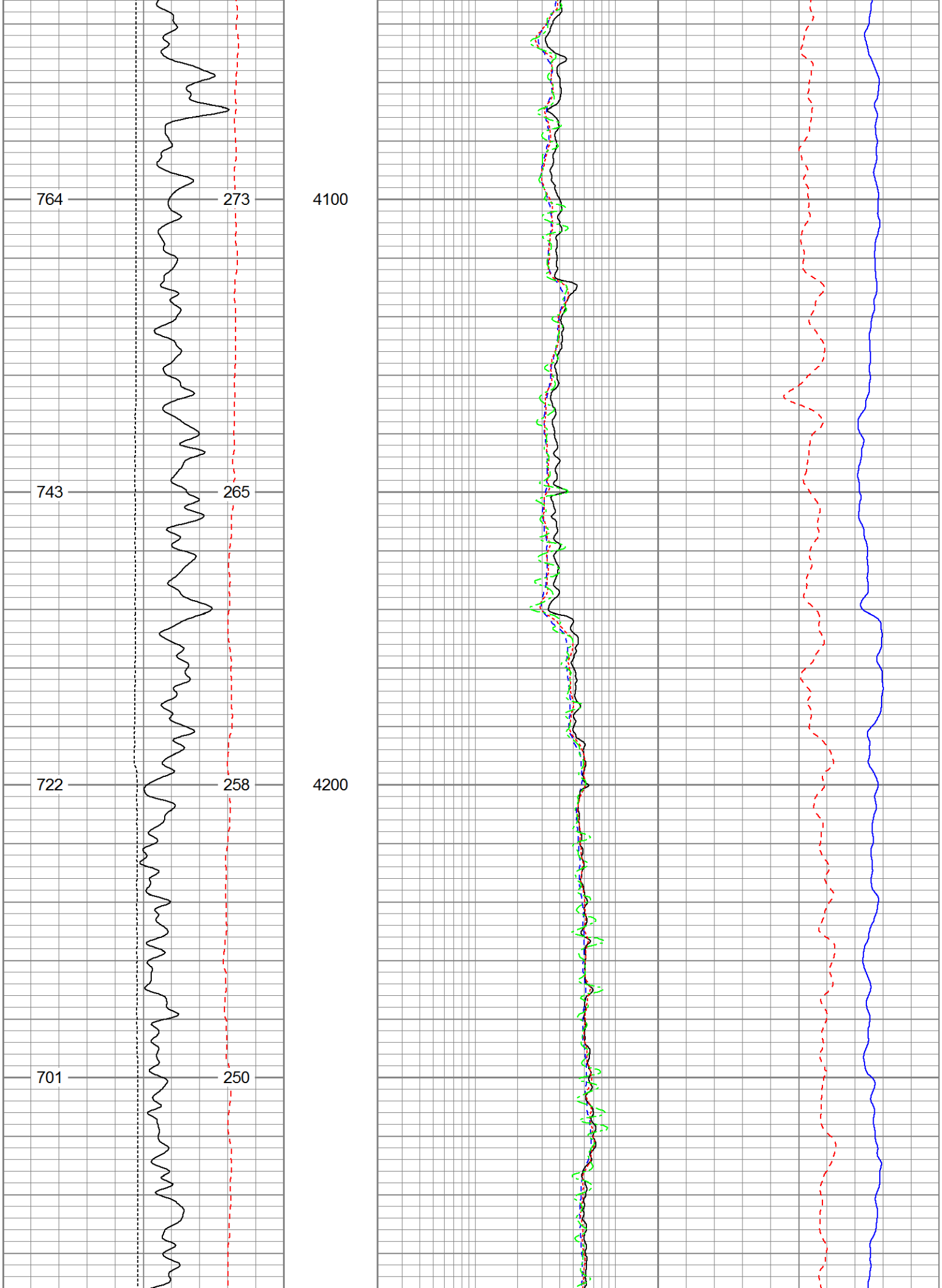
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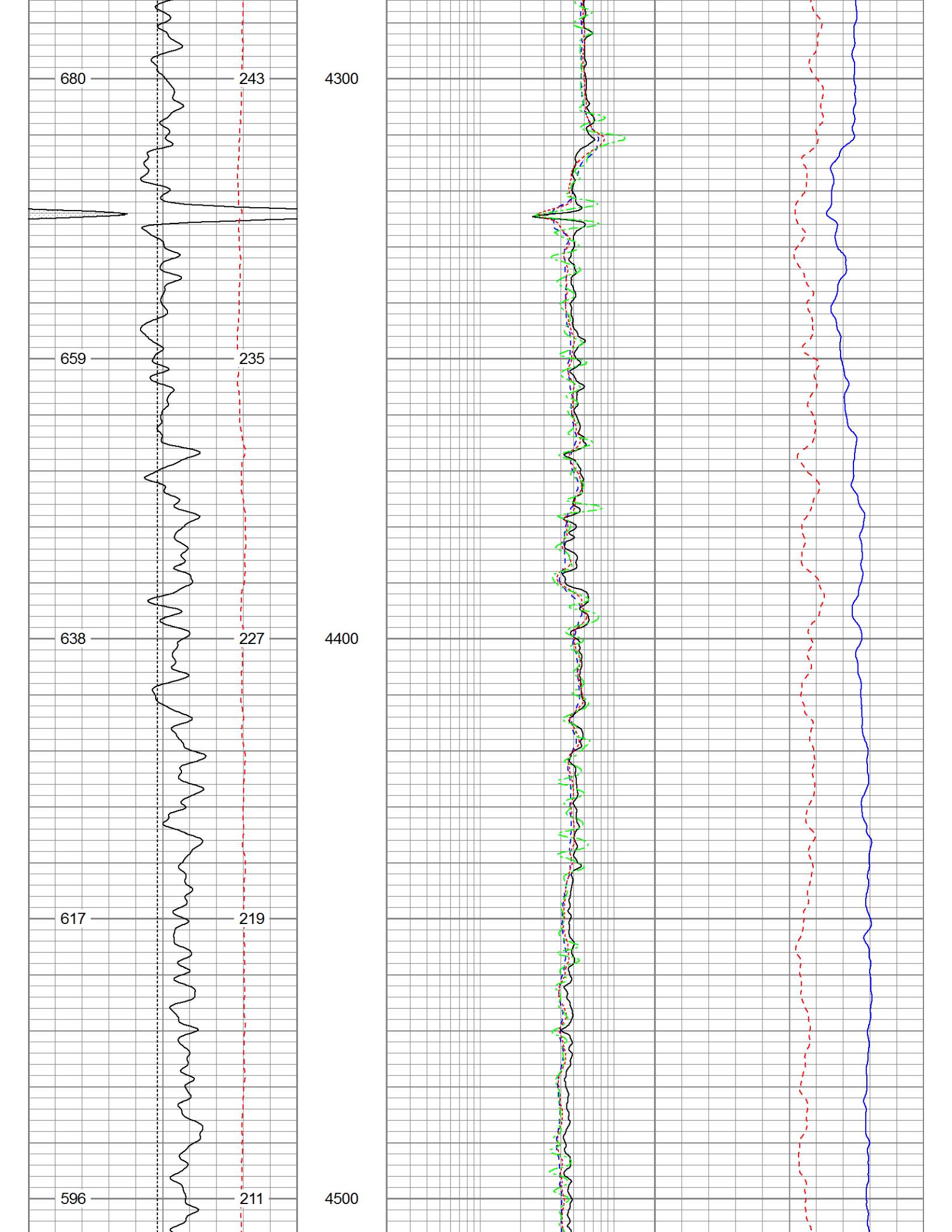
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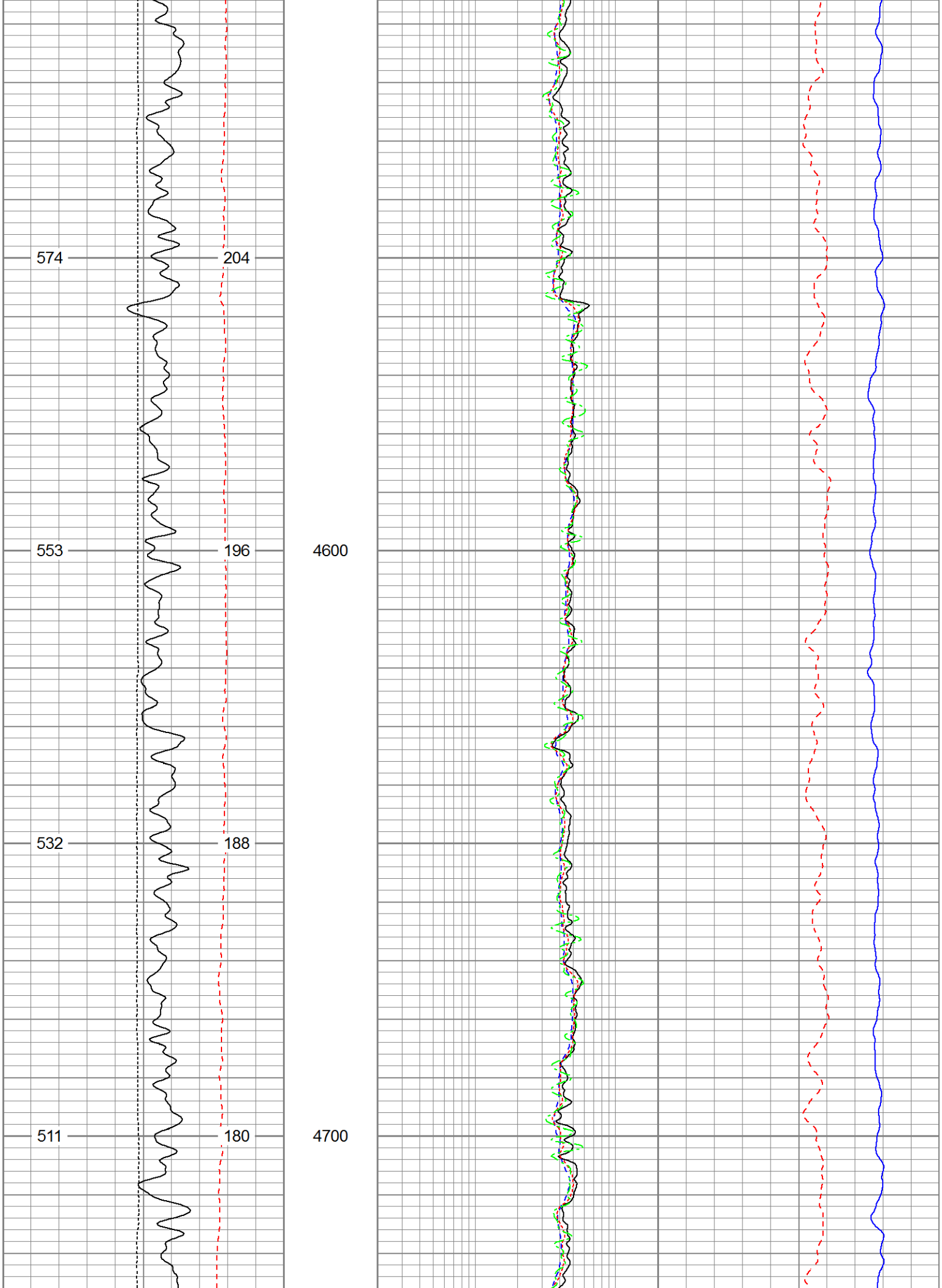
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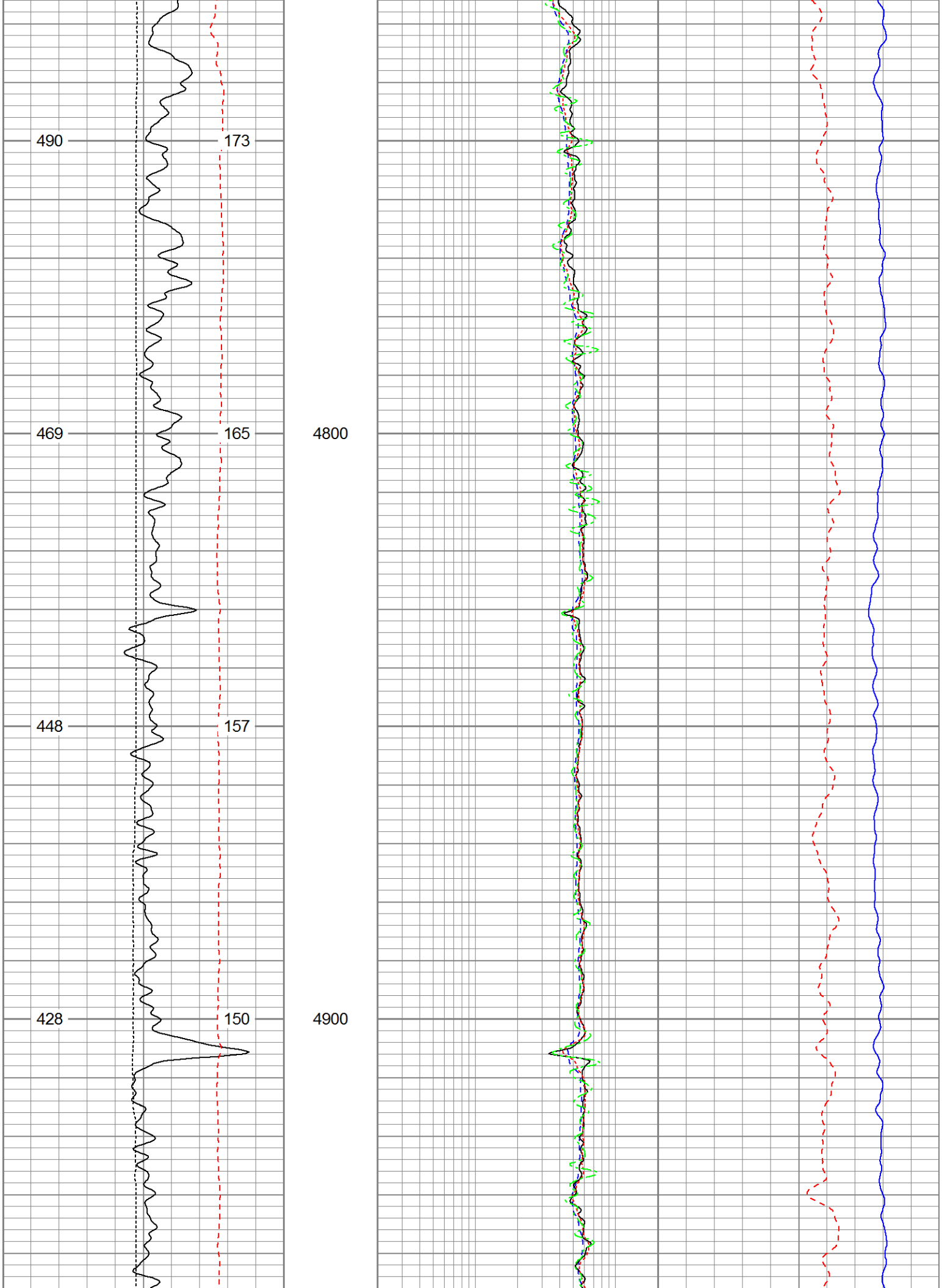
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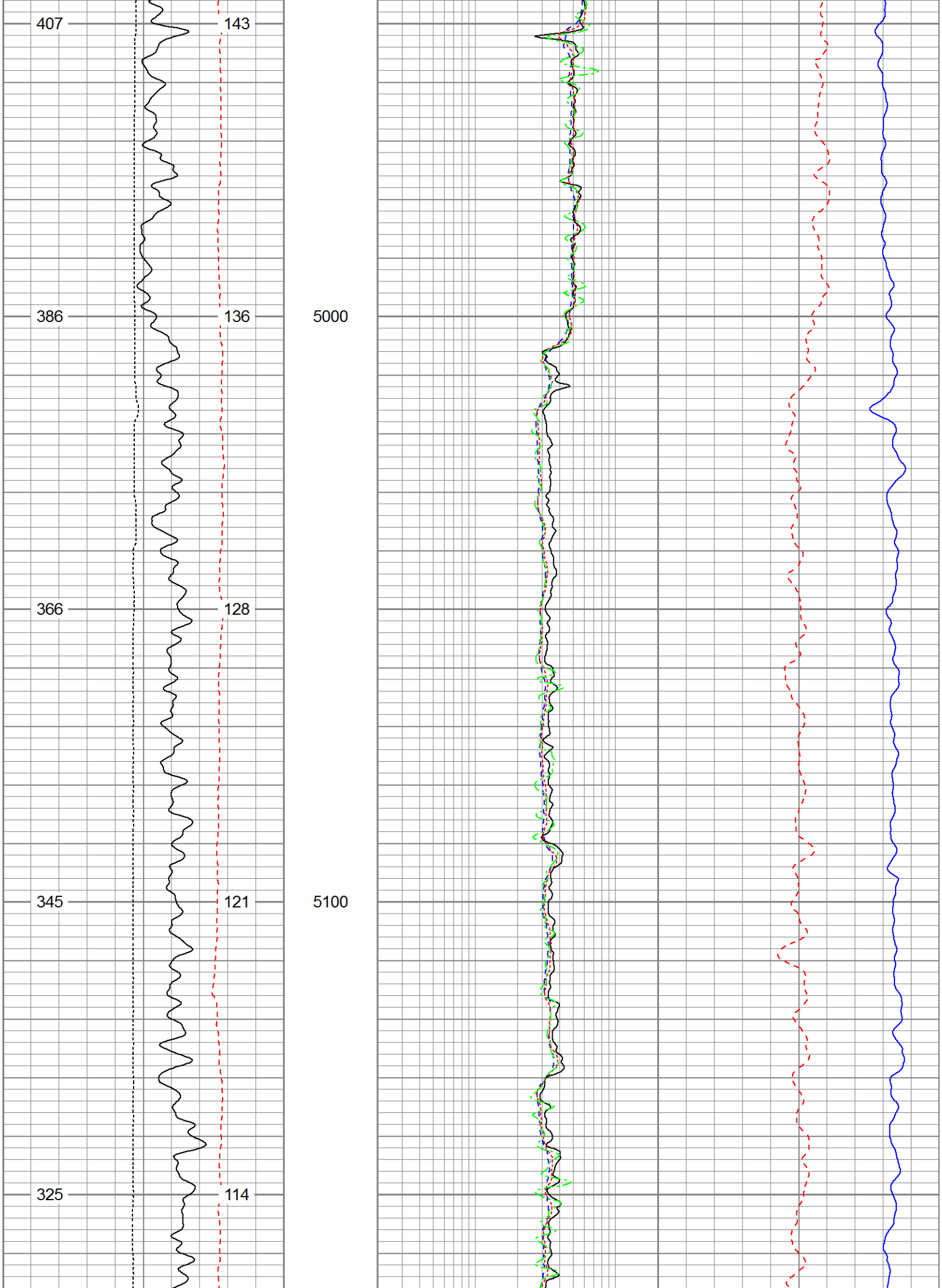
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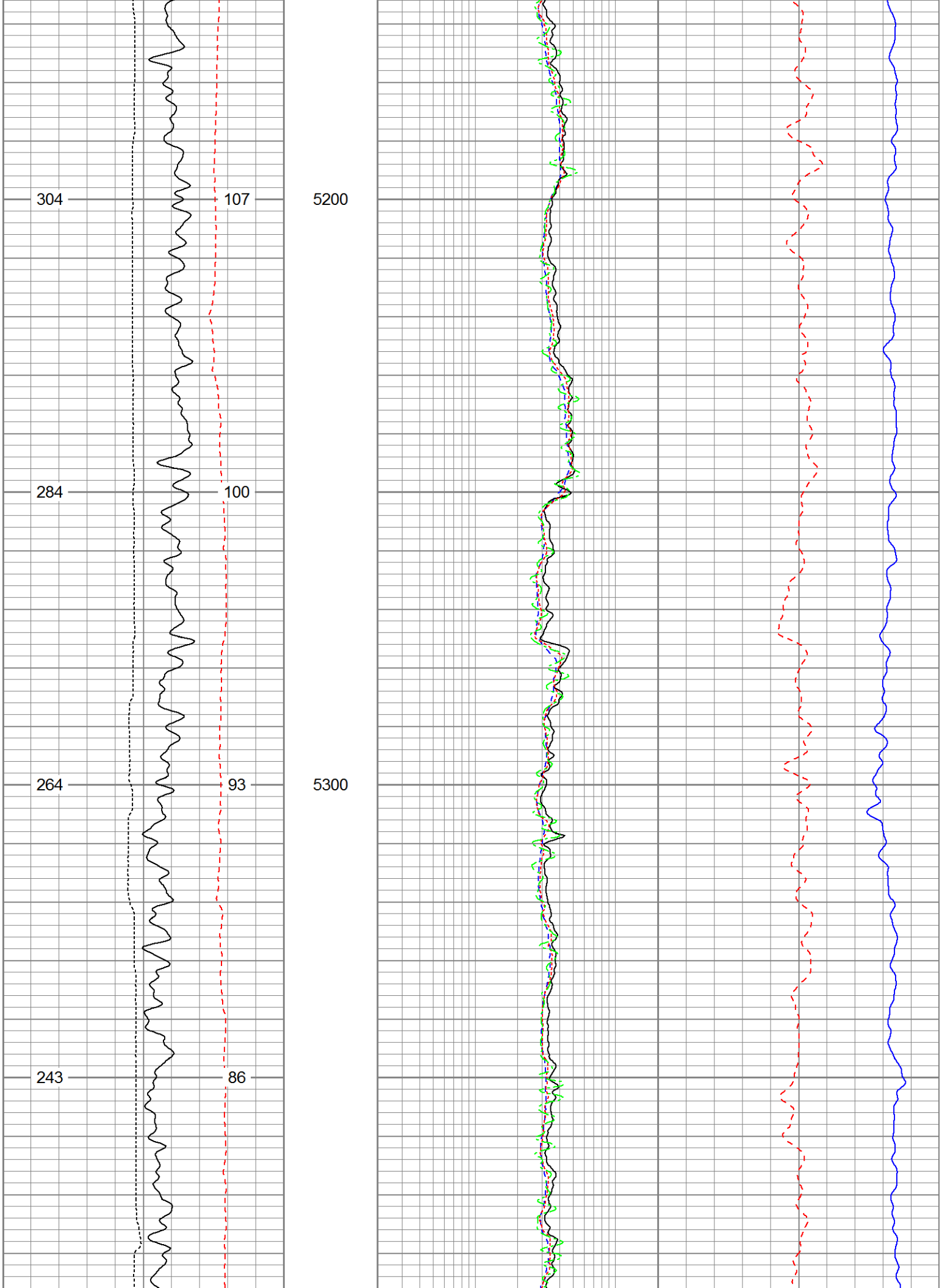
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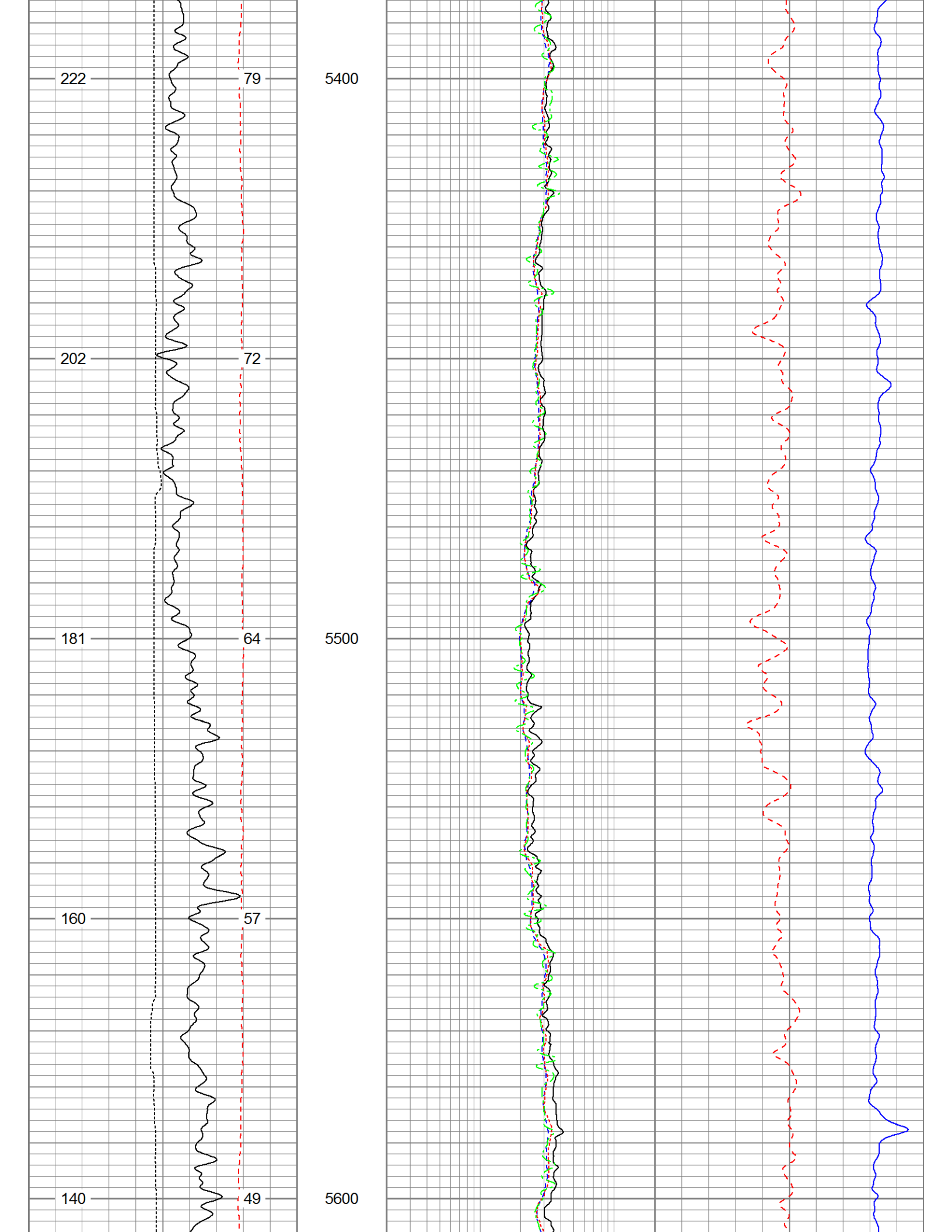
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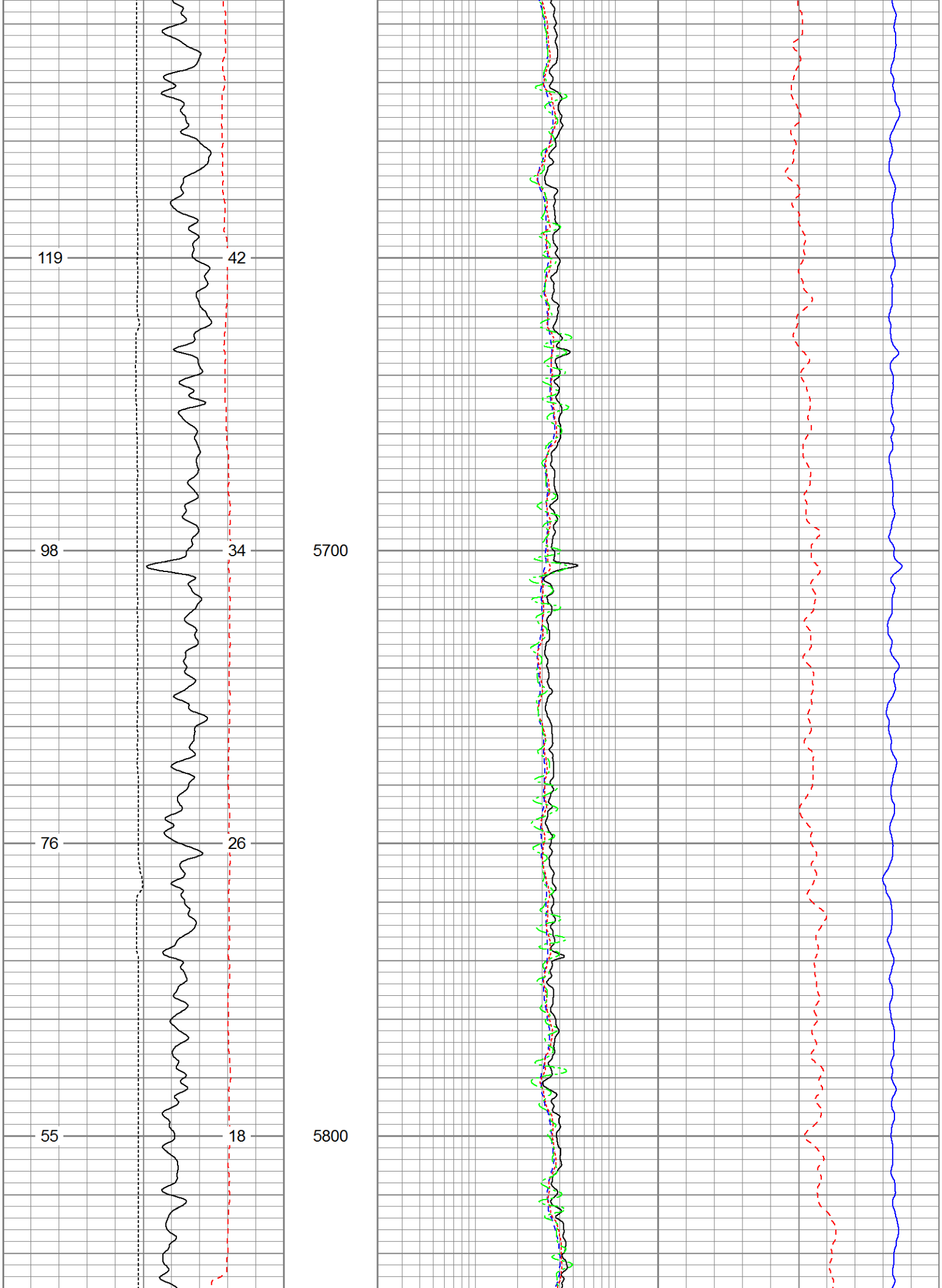
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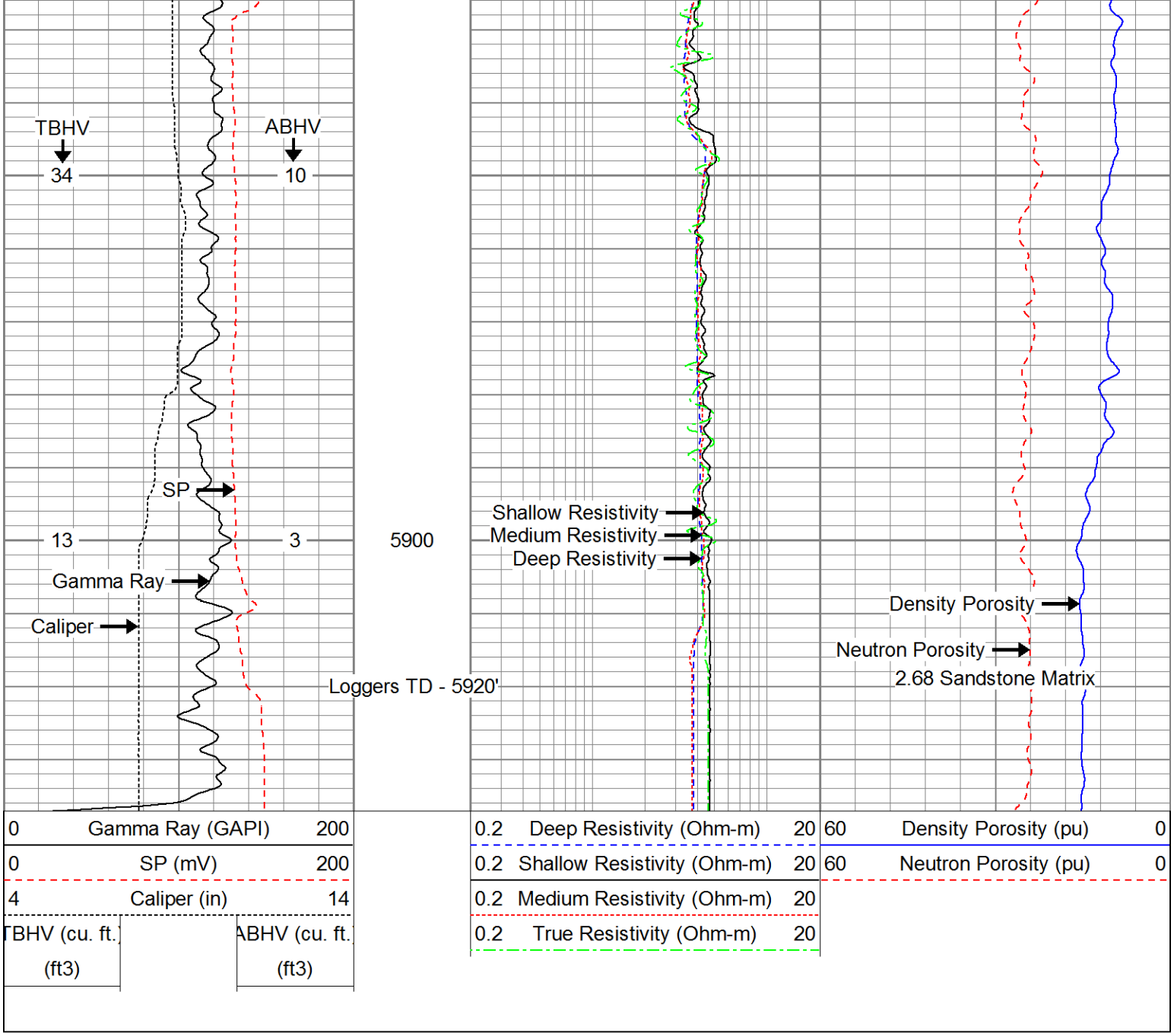

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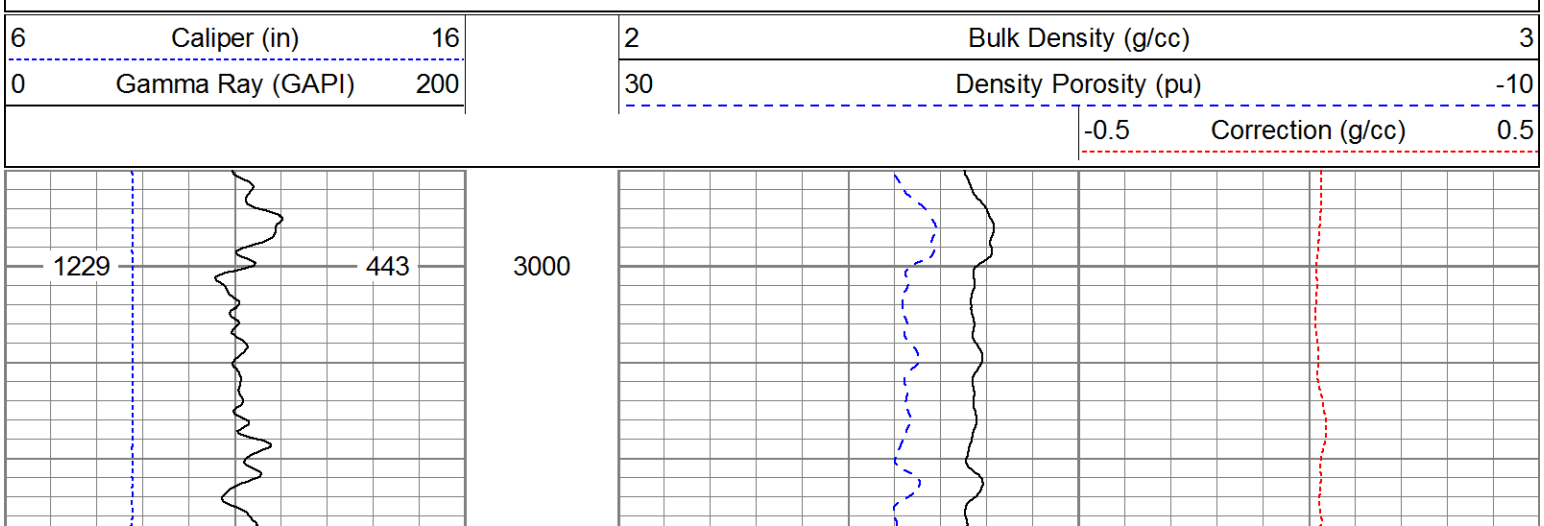
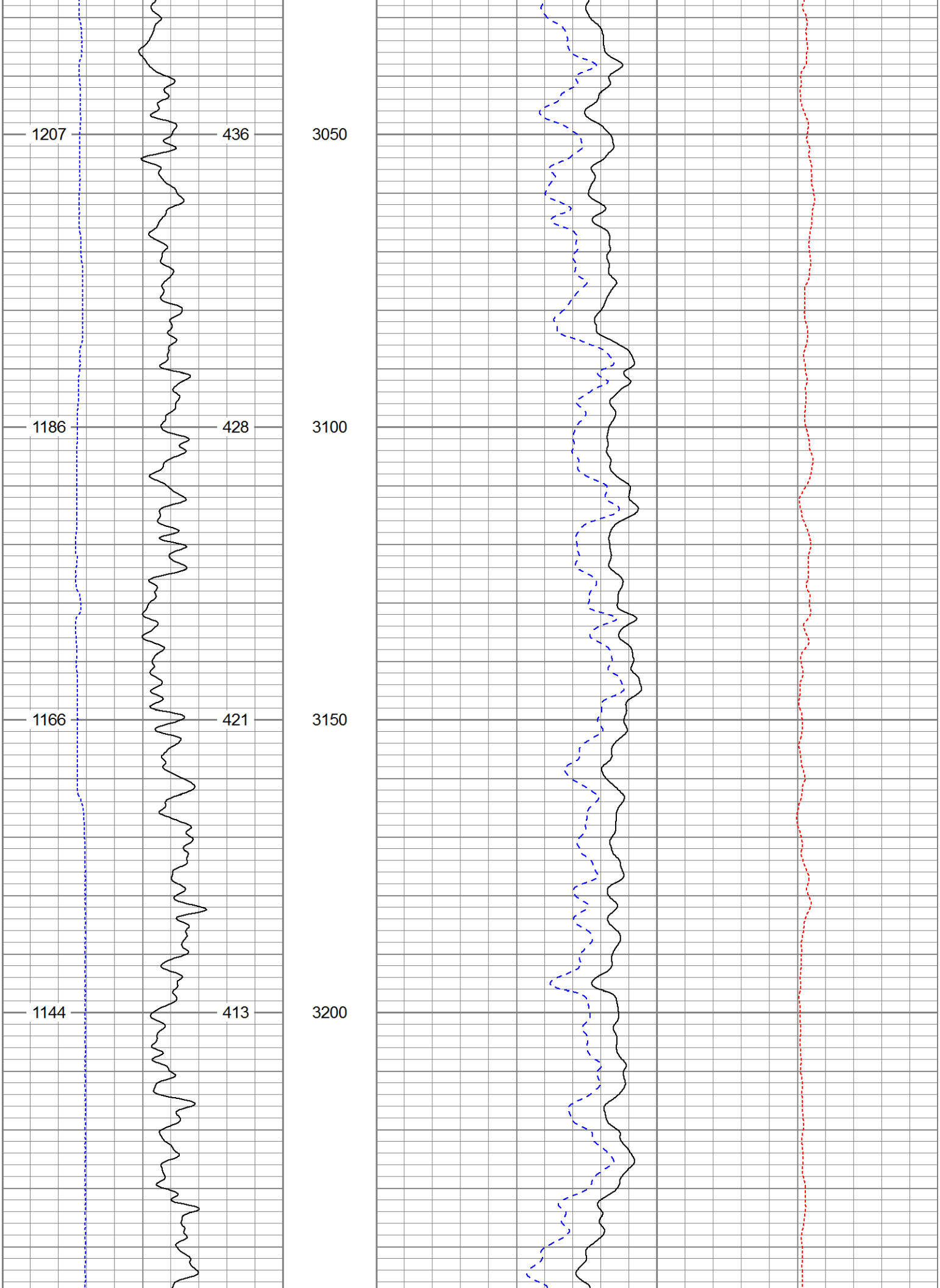
Dataset Pathname: pass2
Presentation Format: cdl
Dataset Creation: Sun Sep 21 18:58:51 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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1186
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3100
1166
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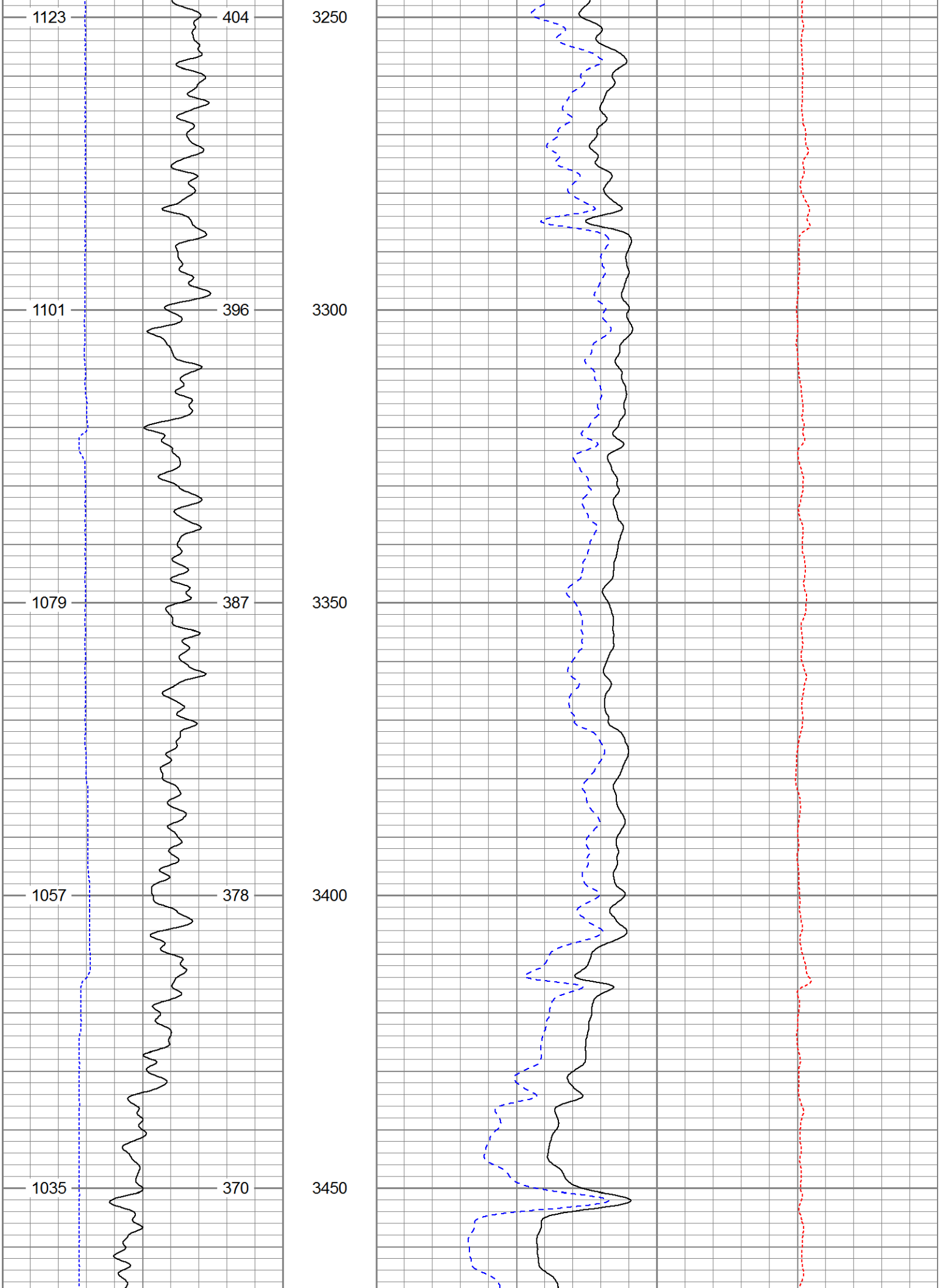
413
3200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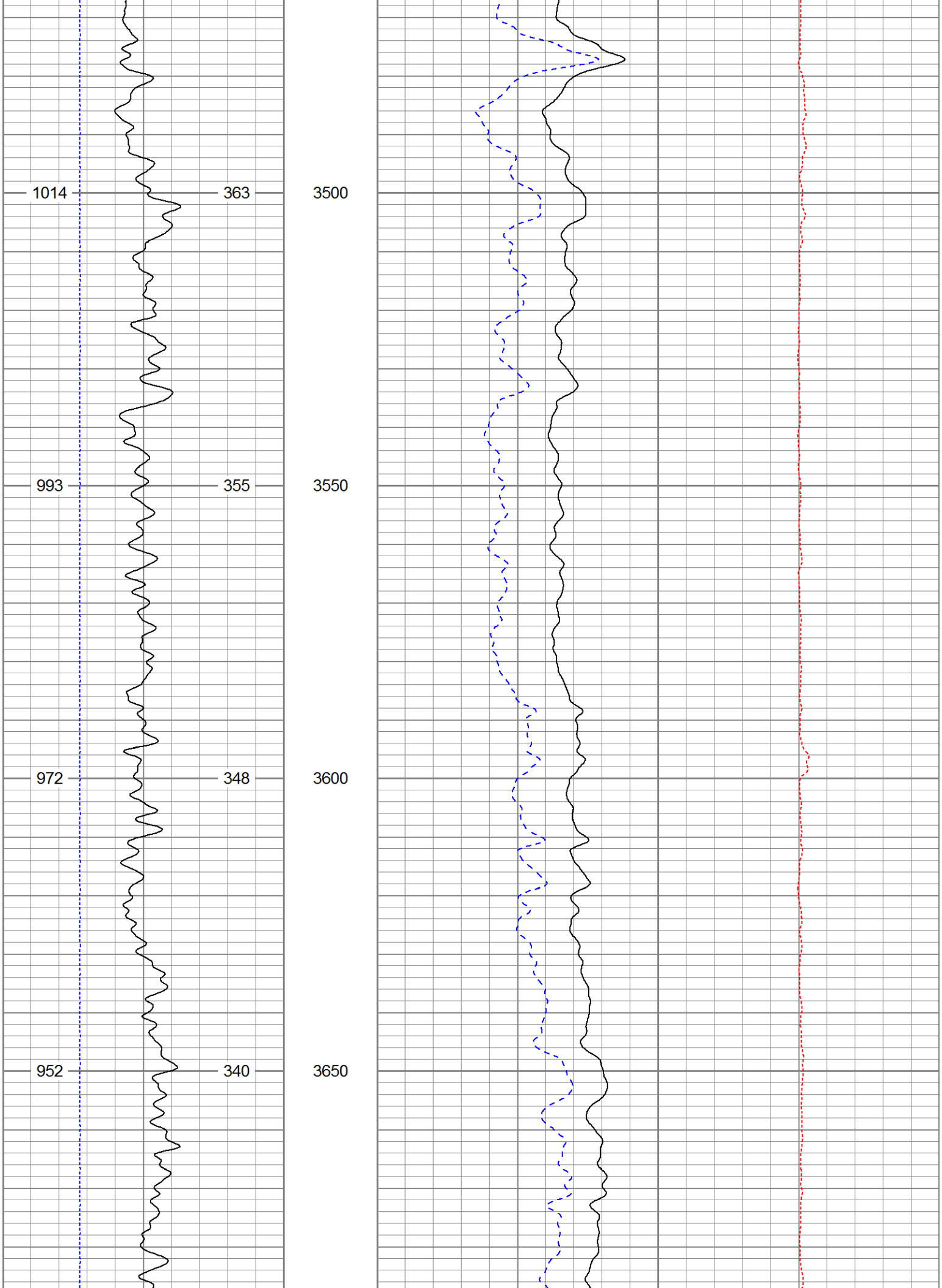
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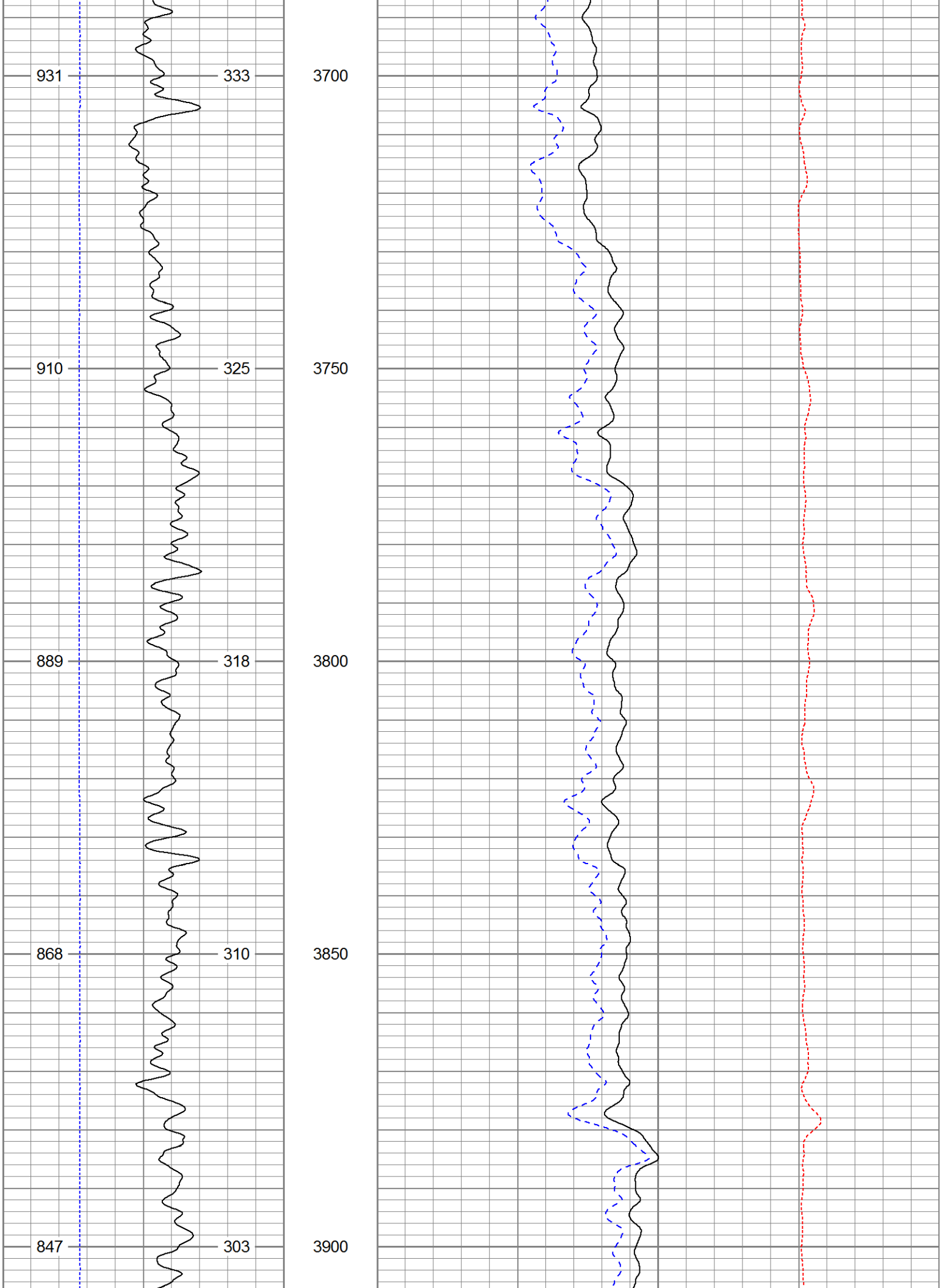
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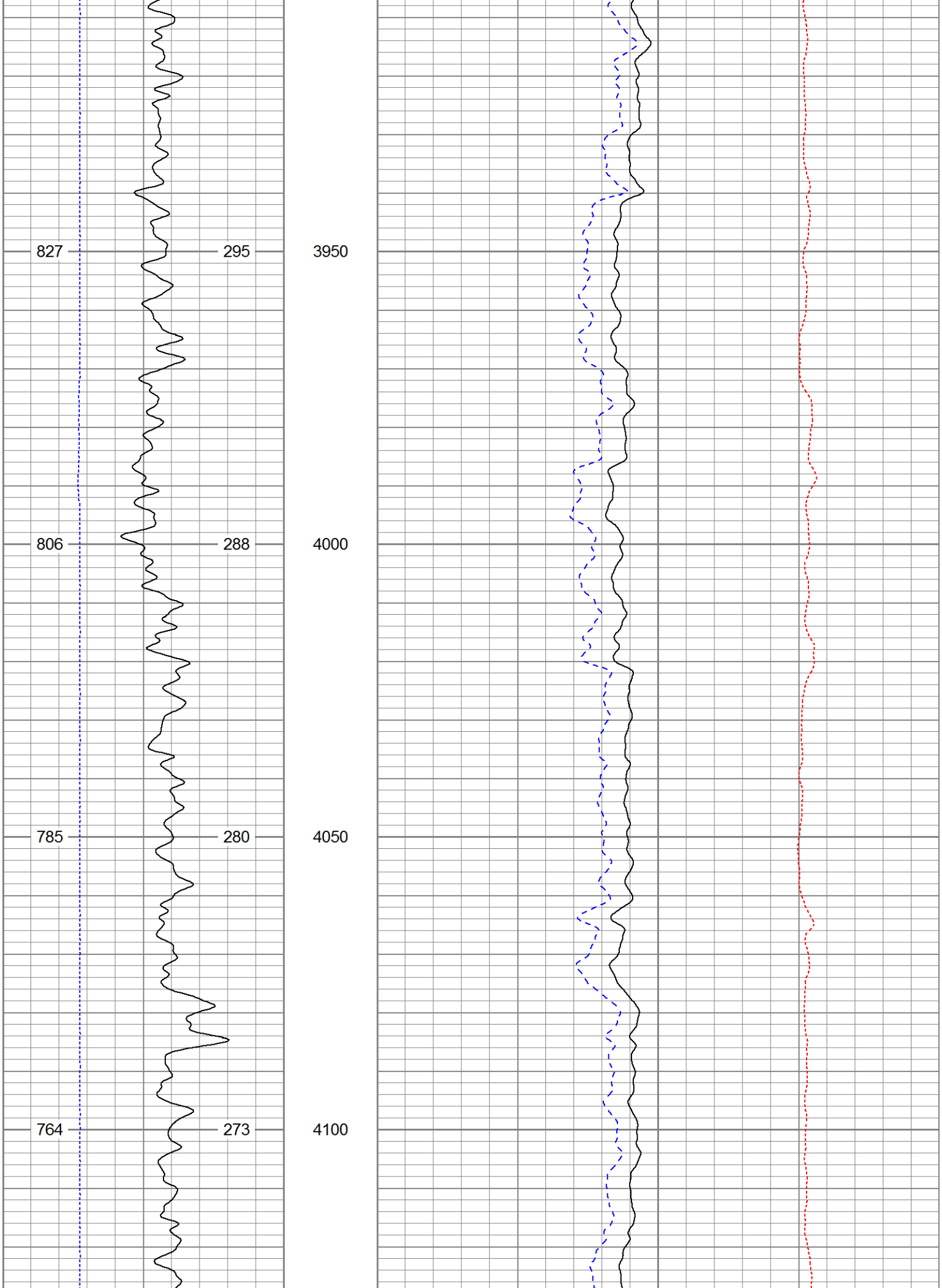
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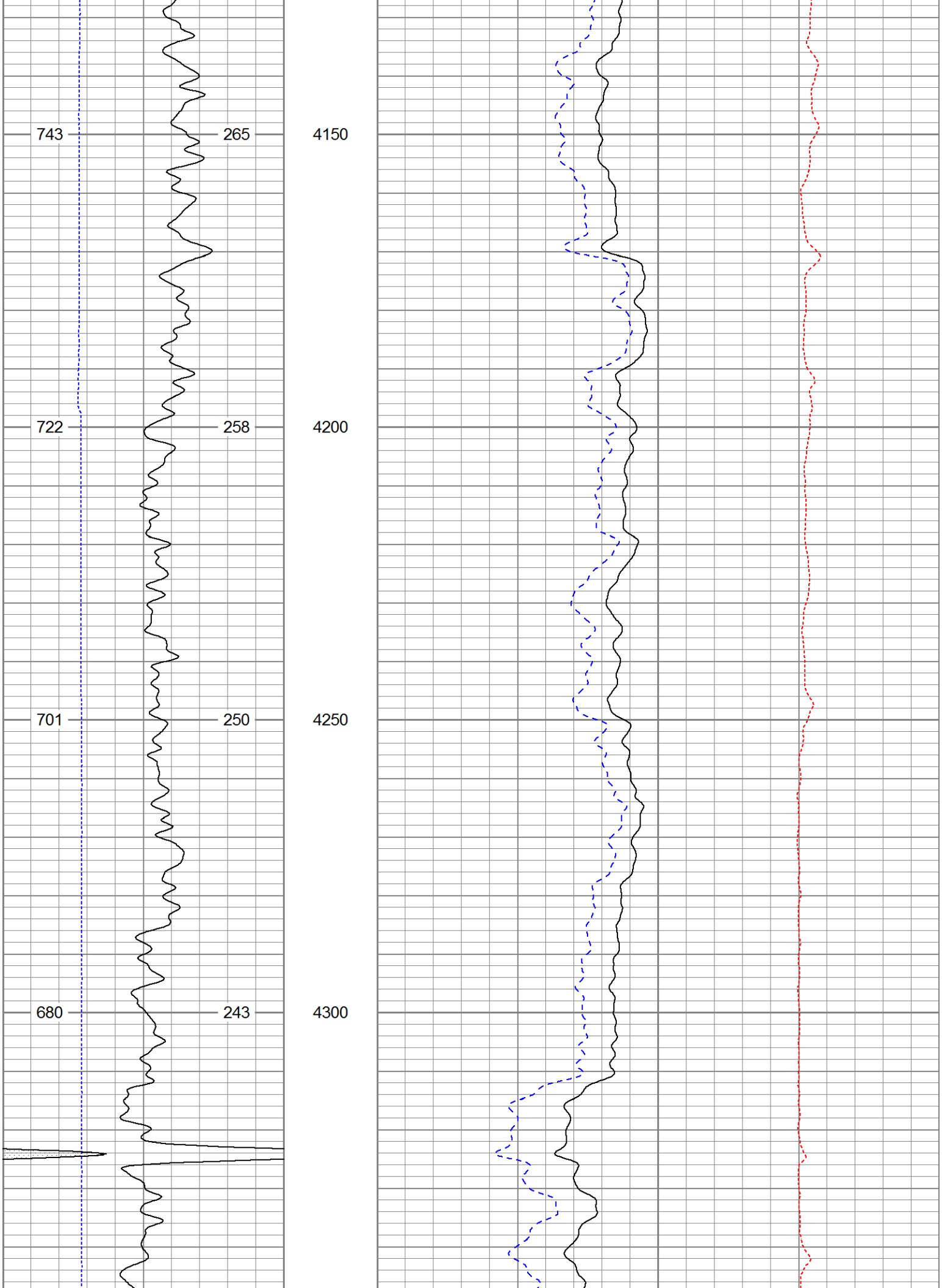
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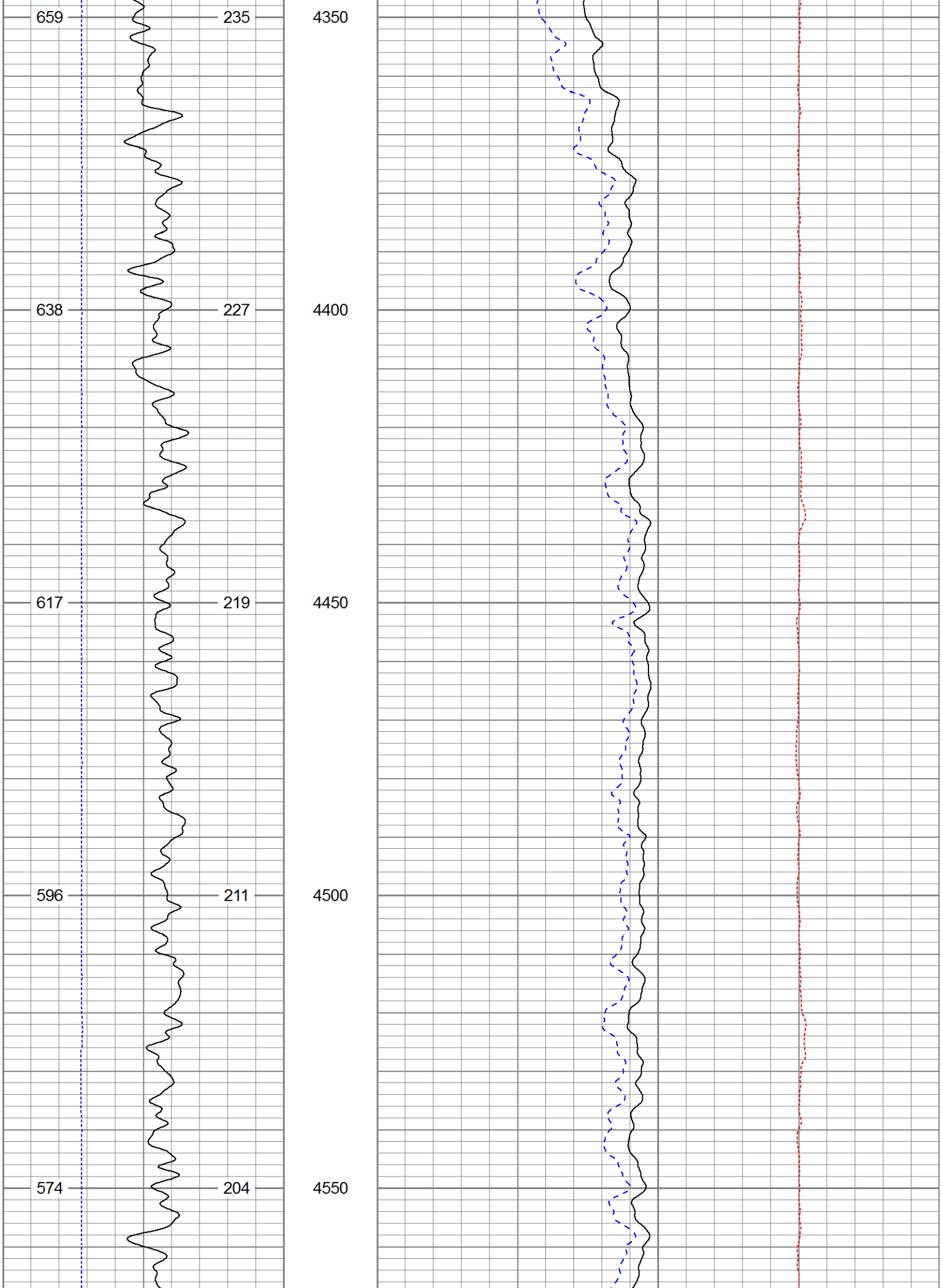
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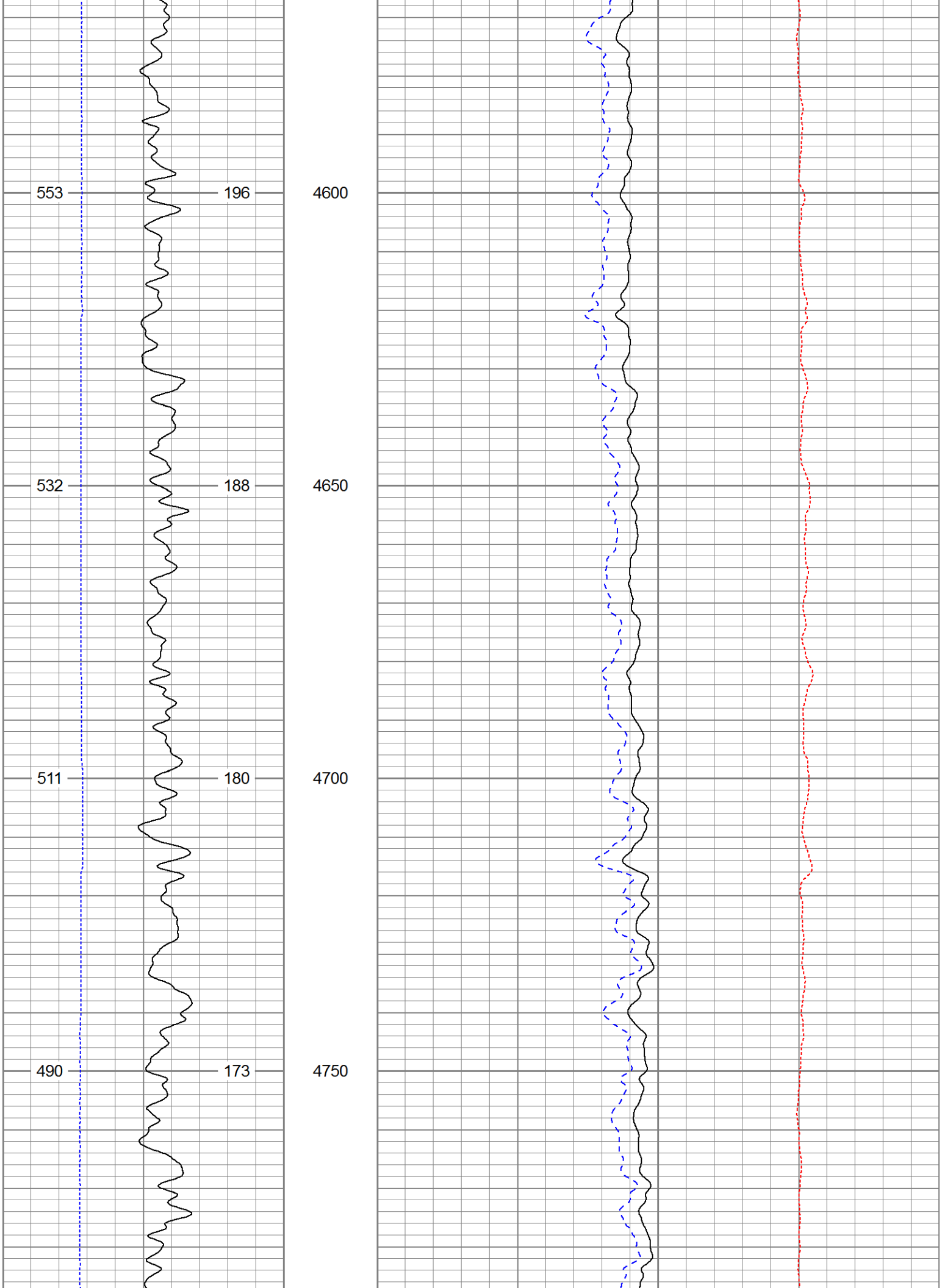
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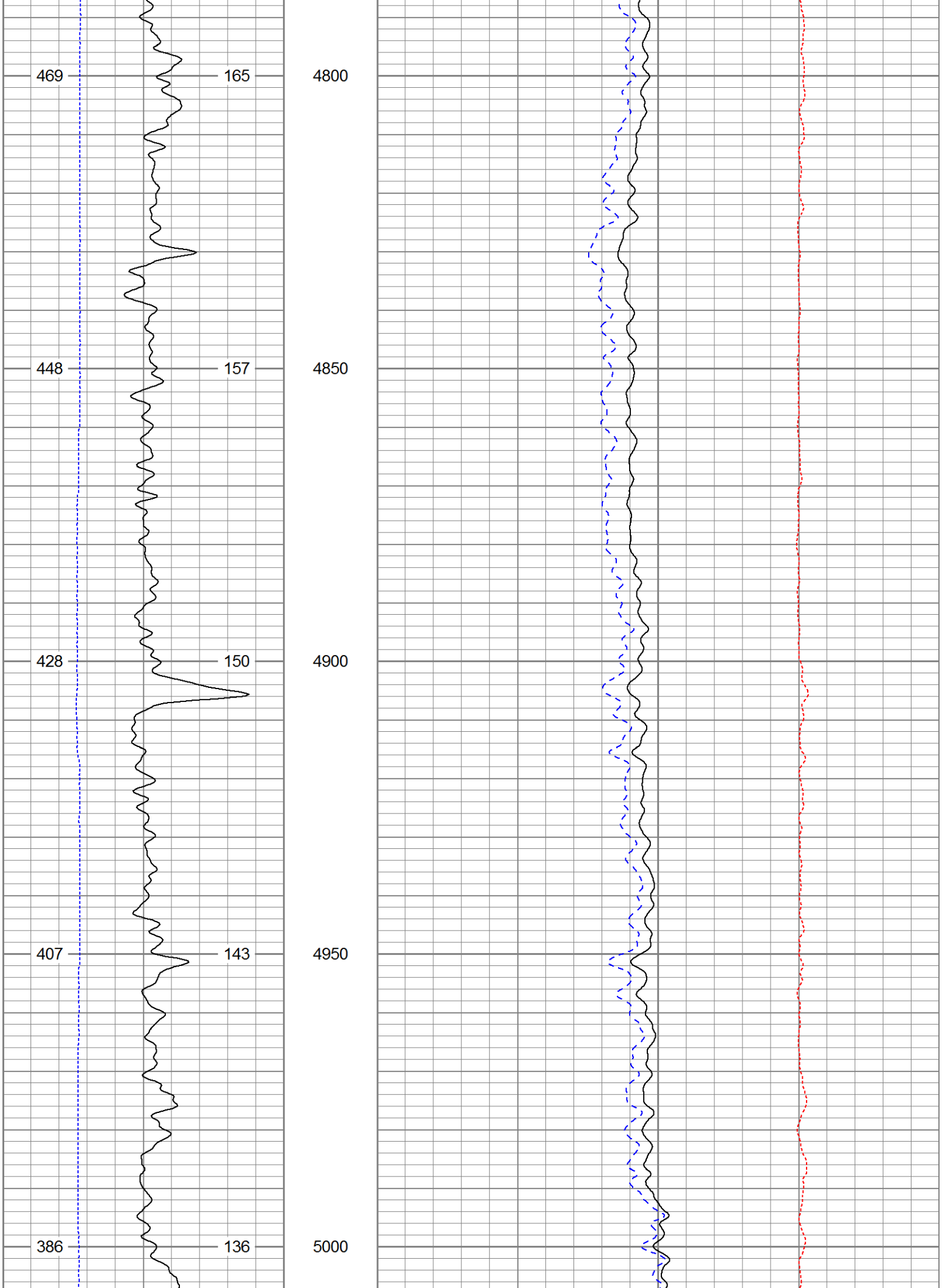
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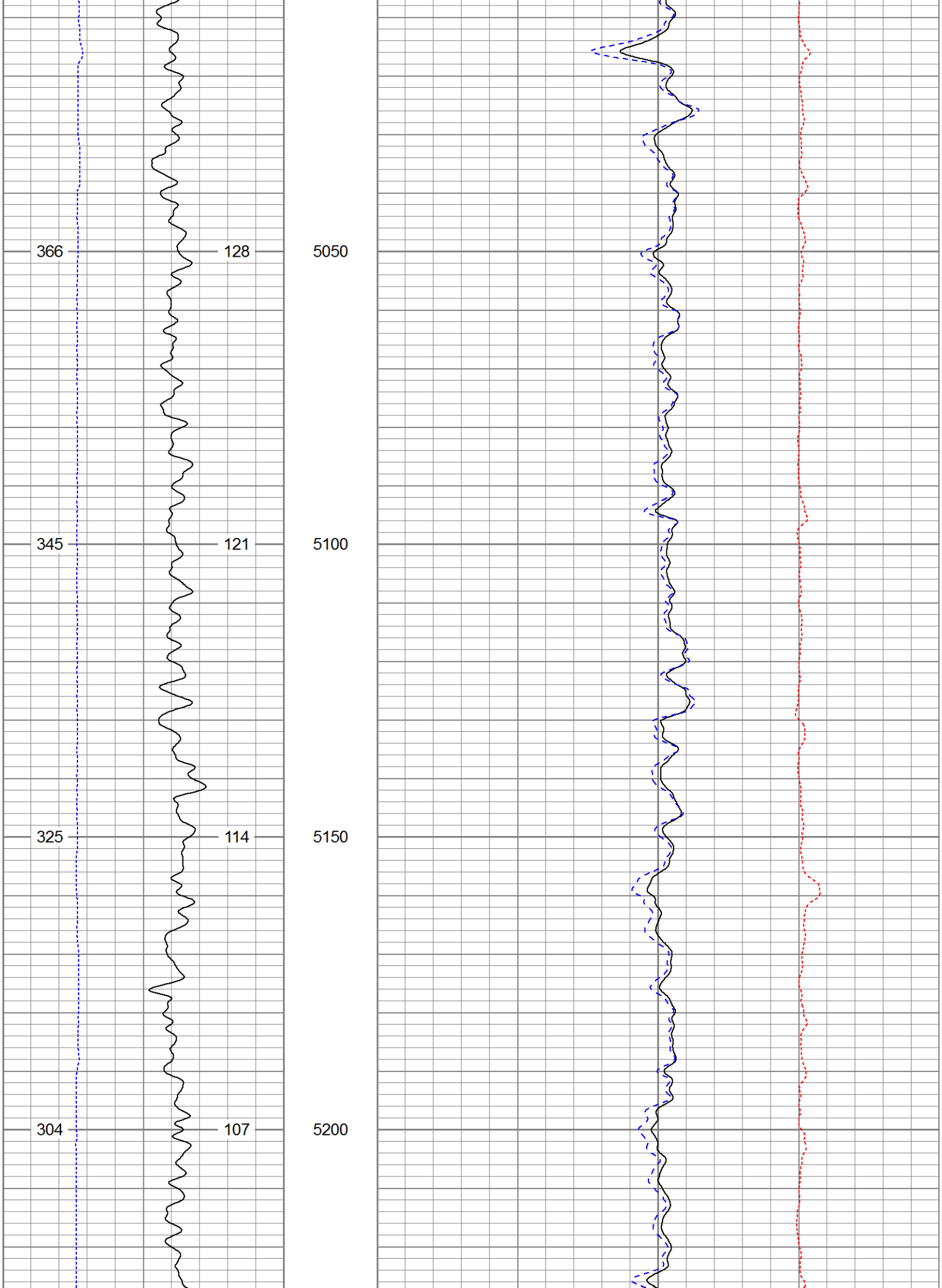
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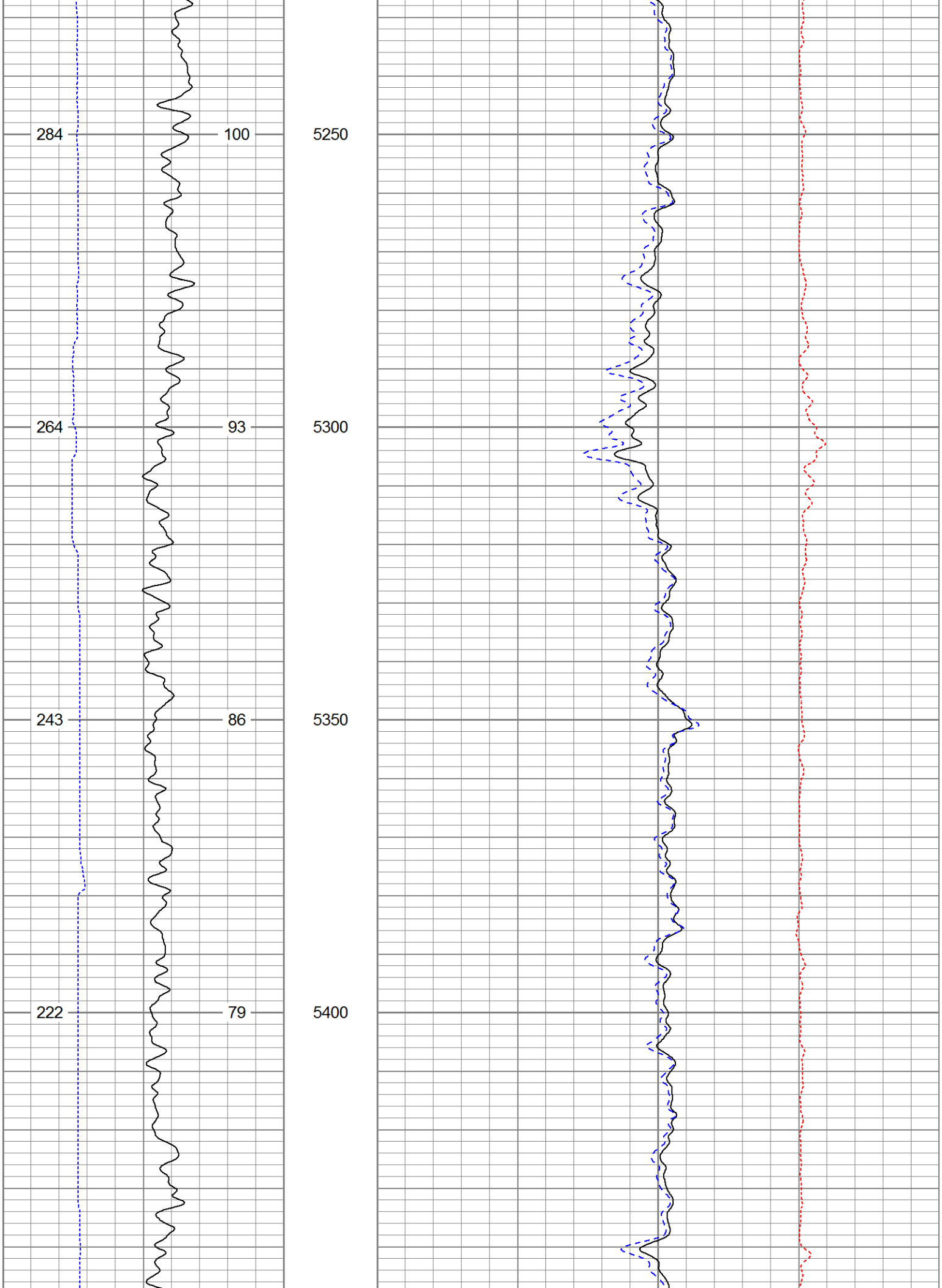
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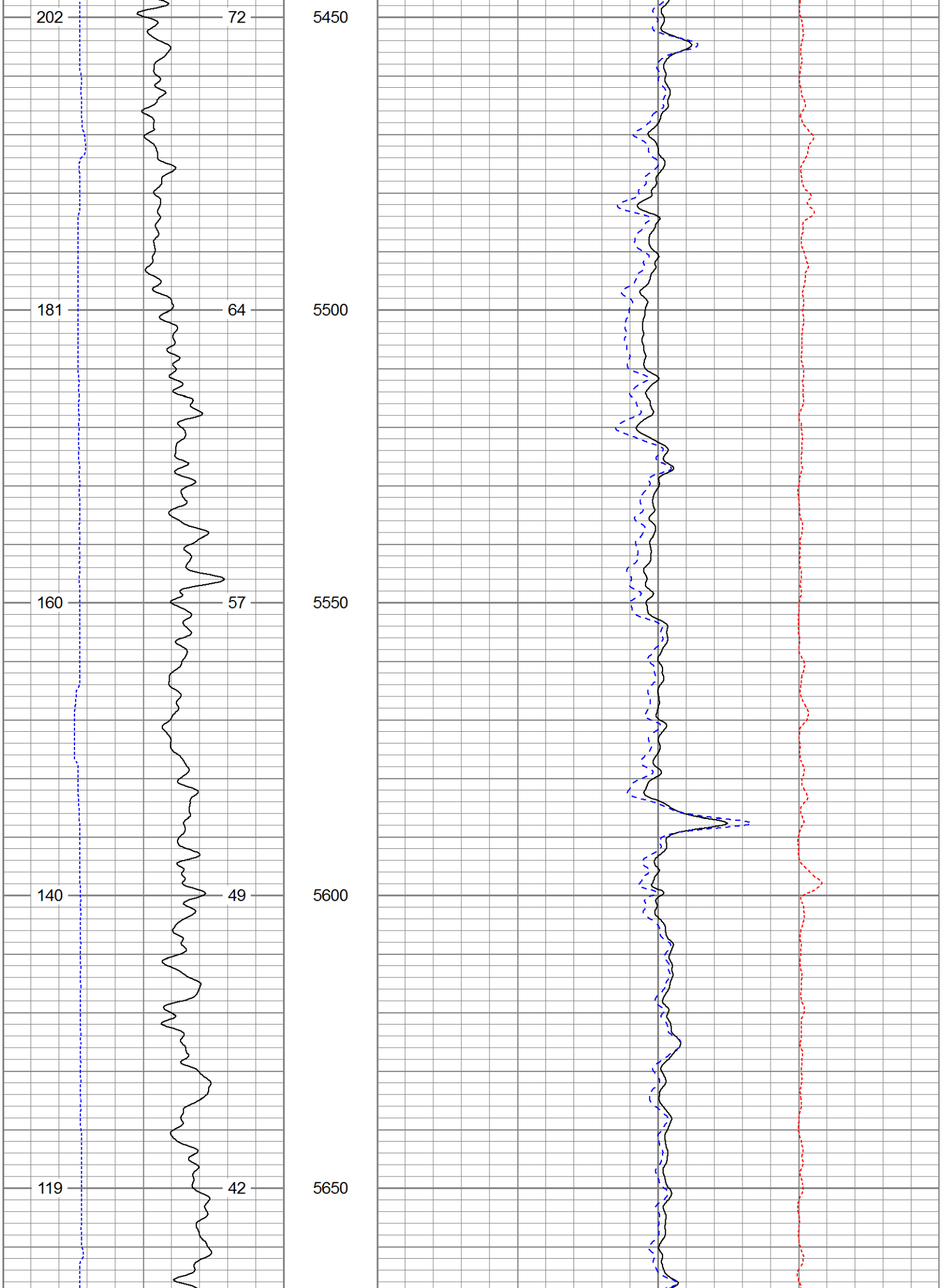
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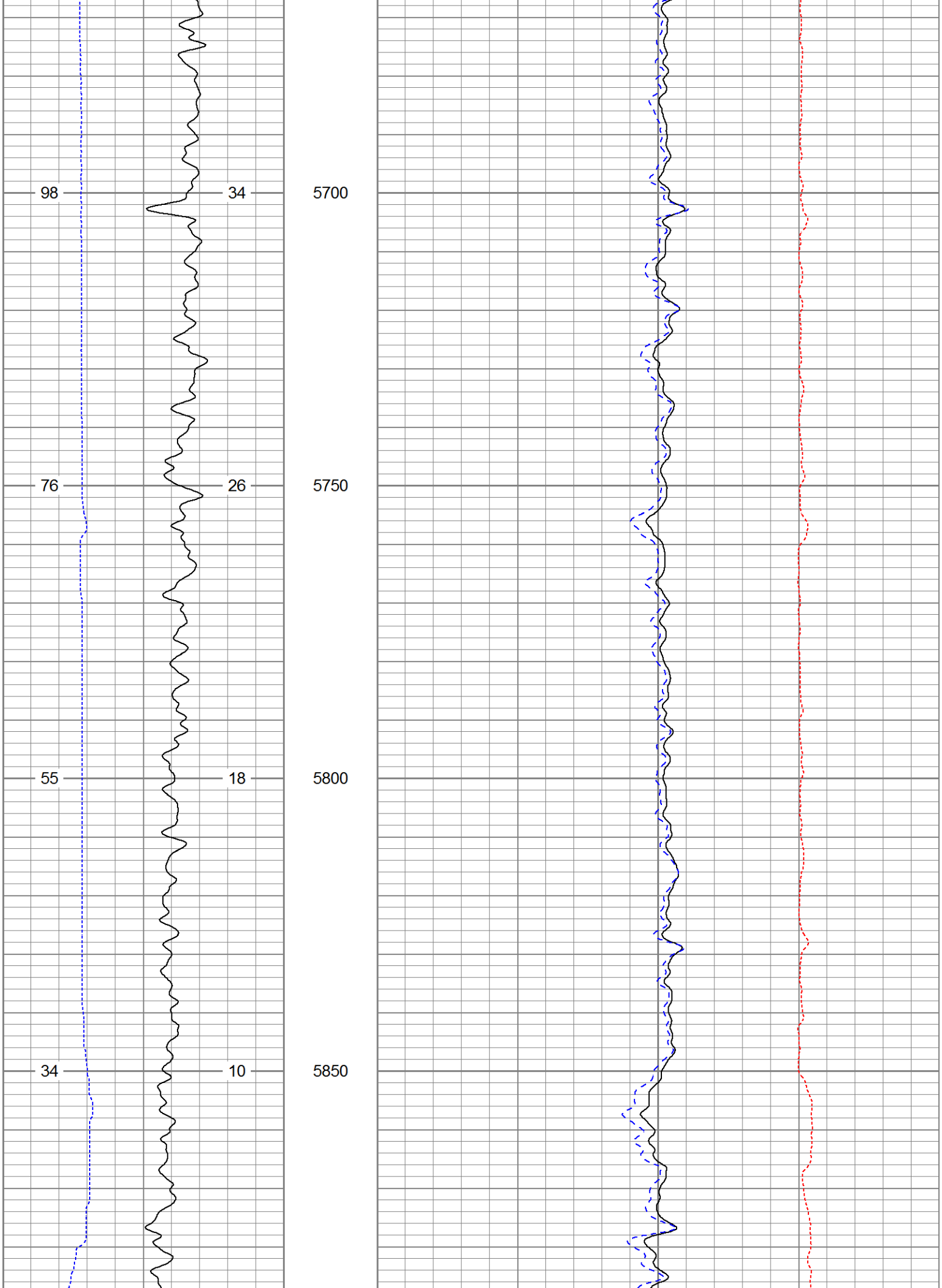
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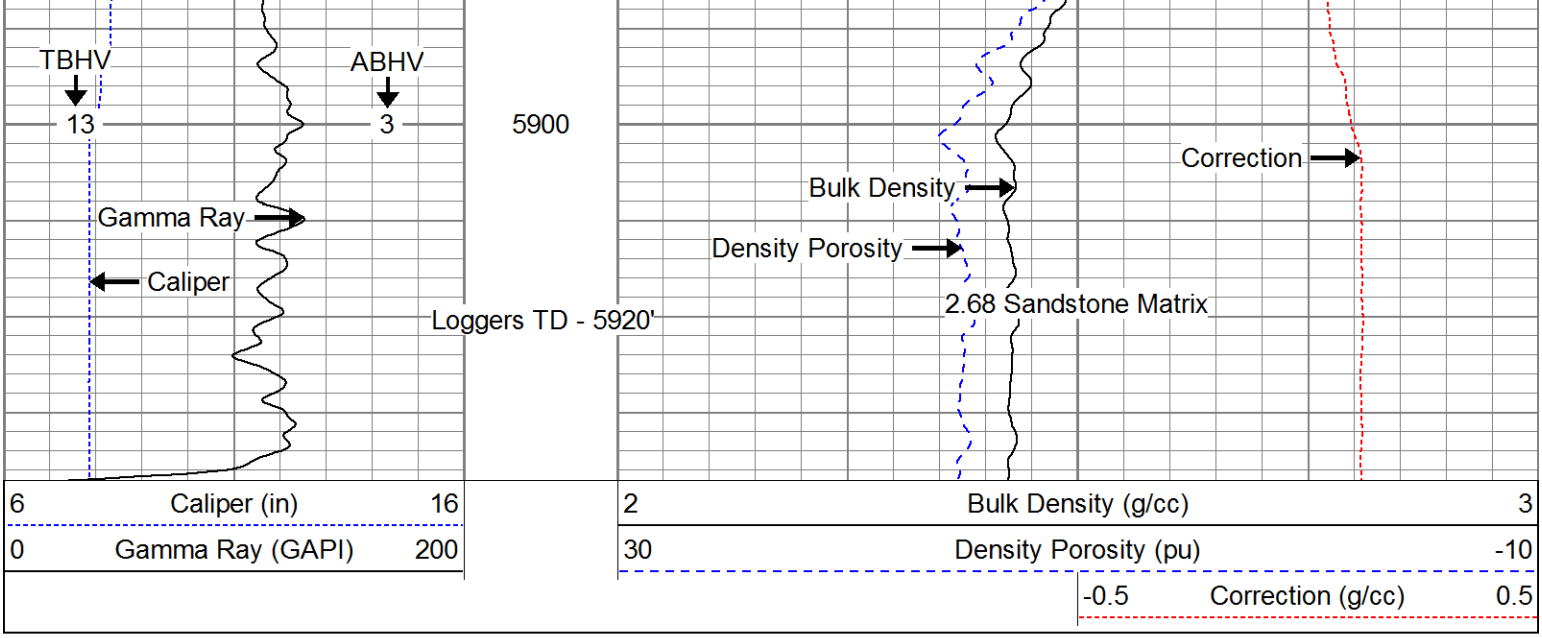

Calibration Report

Database File: 13710.db
Dataset Pathname: pass1
Dataset Creation: Sun Sep 21 18:36:31 2014 by Log Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: 1010-PSI
Surface Cal Performed:

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.550	-33.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.480	-27.000

Compensated Density Calibration Report

Serial-Model: 979-PSI
Master Calibration Performed: Wed Aug 20 14:34:48 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	11187.10	15127.80	cps
Aluminum	2.690	g/cc	2023.73	9655.31	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 853
Tool Model: PSI

CALIBRATION

Detector	Readings	Target	Normalization

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.7800
Long Space	1.00	cps	1.00	cps	1.9200

Gamma Ray Calibration Report

Serial Number:	197	
Tool Model:	PSI	
Performed:	Tue Oct 18 17:42:20 2011	
Calibrator Value:	275.0	GAPI
Background Reading:	32.0	cps
Calibrator Reading:	340.0	cps
Sensitivity:	0.6000	GAPI/cps