4 3/4 in. WeatherfordM/LWD™ Gamma Ray & Resistivity 1 in. & 5 in. MEASURED DEPTH RECORDED DATA FINAL PRINT

Company: Anadarko
Well: Griffiths 35N-20HZ
Field: Wattenberg
Rig: H&P 307
County: Weld

COMPANY	**Anadarko**
WELL	**Griffiths 35N-20HZ**
FIELD	**Wattenberg**
RIG	**H&P 307**
COUNTY	**Weld** STATE **Colorado**
API #	**05-123-36635**

Location

Latitude:	40.057105° N	x = 1,264,176.37 ft	Mag Decl: 8.56°
Longitude:	104.921823° W	y = 3,161,841.59 ft	Mag Dip: 66.48°

Other Services: Spectral Azimuthal Gamma Ray, Resistivity, Directional, and Temperature

Permanent Datum:	Mean Sea Level		
Log Measured From:	Drill Floor	Elev: 5095.0 ft	above perm. datum
Depth Reference:	Drillers Tally	Total Depth:	17370 ft
Depth Logged:	7990 ft	to 17370 ft	Runs: 4
Date Logged:	7-Jul-13	to 20-Jul-13	Spud Date: 2-Jul-13

Elevation

K.B.	Top Drive
G.L.	5070.0 ft
D.F.	5095.0 ft
W.D.	Land

Borehole Record

Hole Size	From	To
8.750 in.	Surface	7990 ft
6.125 in.	7990 ft	17370 ft

Casing Record

Size	Weight	From	To
9.625 in.	57.0 lb/ft	Surface	7990 ft
7.000 in.	26.0 lb/ft	Surface	17370 ft

Borehole Deviation Record

Hole Size	Min. Inc.	Max. Inc.
8.750 in.	0.51°	87.90°
6.125 in.	85.99°	92.59°

Mud Record

Type	Weight	From	To
WBM	8.50 - 10.10 ppg	Surface	7990 ft
OBM	10.20 - 10.30 ppg	7990 ft	17370 ft

All interpretations of log data are opinions based on inferences from electrical or other measurements. Weatherford International does not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

RUN SUMMARY

M/LWD Run Number		1	2	3	4			
Bit Size	in.	8.750	6.125	6.125	6.125			
Bit Type		PDC	PDC	PDC	PDC			
Bit TFA	sq.in.	2.262	0.752	0.980	0.910			
Bit Start Depth	ft	6772	7990	11955	16228			
Bit End Depth	ft	7990	11955	16228	17370			
Top Log Interval	ft	6772	7974	11918	16228			
Bottom Log Interval	ft	7990	11955	16228	17370			
Begin Log Time	hrs	13:27	6:11	18:47	14:39			
Begin Log Date	DD-MMM-YY	6-Jul-13	11-Jul-13	14-Jul-13	19-Jul-13			
End Log Time	hrs	10:50	18:05	5:13	12:01			
End Log Date	DD-MMM-YY	7-Jul-13	13-Jul-13	18-Jul-13	20-Jul-13			
Drill or Wipe		Drill	Drill	Drill	Drill			
Flow Rate	gal/min	409	265	270	228			
Max AV / CV @ MWD	ft/min	323 / 291	342 / 301	484 / 356	373 / 354			
Min Inc @ Depth	deg @ ft	0.51 @ 6919	87.90 @ 9063	85.99 @ 14856	86.61 @ 17200			
Max Inc @ Depth	deg @ ft	84.26 @ 7926	92.59 @ 8404	90.62 @ 15985	90.37 @ 16924			
MUD DATA								
Depth	ft	7990	11955	16228	17370			
Fluid Type		WBM	OBM	OBM	OBM			
Mud Weight	ppg	9.90	10.20	10.20	10.20			
Plastic Viscosity	cP	9	15	15	16			
Solids / Sand	%	6.80 / 0.20	13.00 / 0.30	11.40 / 0.03	14.20 / 0.30			
NaCl Equiv. Chlorides	ppm	11550	91740	92070	74250			
pH		8.9	OBM	OBM	OBM			
Oil:Water Ratio	% Vol	0.0 : 100.0	70.0 : 30.0	70.0 : 30.0	70.0 : 30.0			
Rm @ Temperature	ohm-m @ deg F	OBM	OBM	OBM	OBM			
Rmc @ Temperature	ohm-m @ deg F	OBM	OBM	OBM	OBM			
Rmf @ Temperature	ohm-m @ deg F	OBM	OBM	OBM	OBM			
KCl	% Vol	0	0	0	0			
Client Representative		P. Cain	P. Cain	P. Cain	P. Cain			
WeatherfordLWD Engineer		J. Witherspoon	N. Aaron	N. Aaron	N. Aaron			

EQUIPMENT SUMMARY

M/LWD Run Number		1	2	3	4	
BTR / CDS Serial Number		44708 / 44792	NA	NA	NA	
Battery Serial Number		403467636	NA	NA	NA	
Gamma Ray Serial Number		44786	NA	NA	NA	
CMS Serial Number		2040	NA	NA	NA	
Pulser Serial Number		7651	NA	NA	NA	
SAGR Serial Number		NA	NW131663JB4.75	NW131663JB4.75	NW131663JB4.75	
HEL Serial Number		NA	NW131662PDBBI4.75	NW131662PDBBI4.75	NW131662PDBBI4.75-M1	
MFR Serial Number		NA	NW131107RBBK4.75-M2	NW131107RBBK4.75-M2	NW131107RBBK4.75-M2	
Sensor to Bit Offsets / Acquisition Rates						
Spectral Gamma Ray	ft / sec	NA	36.55 / 5	36.55 / 5	36.68 / 5	
Directional	ft / sec	62.32 / RT	51.20 / RT	51.20 / RT	51.33 / RT	
Gamma Ray	ft / sec	48.11 / 16	70.01 / 10	70.01 / 10	70.14 / 10	
Resistivity	ft / sec	NA	79.58 / 5	79.58 / 5	79.71 / 5	
Other Information						
Total BHA Length	ft	105.83	141.38	141.38	141.51	
BHA Assembly Type		Steerable	Steerable	Steerable	Steerable	
Stabilizer Location	ft	NA	25.43	25.43	25.56	
Stabilizer Location	ft	NA	94.37	94.37	94.50	
Run Circulating Time	hr	23.85	46.85	73.71	23.47	
Run Drilling Time	hr	11.54	29.31	41.98	13.19	

MUD SUMMARY

Date and Time	Run	Bit Depth	Mud Weight	% K	Rm @ Temp	Rmf @ Temp	Rmc @ Temp	BHCT
07 July 13 @ 10:50	01	7990 ft	9.90 ppg	0	OBM	OBM	OBM	177 F
07 July 13 @ 18:05	02	11955 ft	10.20 ppg	0	OBM	OBM	OBM	231 F
18 July 18 @ 05:13	03	16228 ft	10.20 ppg	0	OBM	OBM	OBM	250 F
20 July 13 @ 12:01	04	17370 ft	10.20 ppg	0	OBM	OBM	OBM	256 F

M/LWD RUN REMARKS

Run Number: 1 :: RECORDED DATA LOG

WFT Services Provided:

Recorded and Real Time Logging: Gamma Ray and Temperature.

Directional Services: On demand Inclination and Azimuth.

Borehole and Environmental Correction:

Hole Size:	8.750 in.	**Gamma Ray: Hole size, mudweight, Collar O.D., Collar I.D. and K1 factor.**	
Mud Weight:	10.0 ppg	**Collar O.D.:**	6.750 in.
K1 Factor:	3.23	Collar I.D.:	3.250 in.

Run Number: 2 :: RECORDED DATA LOG

WFT Services Provided:

Recorded and Real Time Logging: Spectral Gamma Ray, Resistivity and Temperature.

Directional Services: On demand Inclination and Azimuth.

Borehole and Environmental Correction:

Hole Size:	6.125 in.	**Gamma Ray:** Corrected for mud weight, hole size and KCl concentration.
Mud Weight:	9.9 ppg	**Resistivities:** Corrected for borehole temperature, hole size, drilling fluid resistivity
Borehole Temperature:	200° F	and dielectric correction.
Drilling Fluid Resistivity:	OBM (500 ohm-m)	
KCl Concentration:	0%	

Run Number: 3 :: RECORDED DATA LOG

WFT Services Provided:

Recorded and Real Time Logging: Spectral Gamma Ray, Resistivity and Temperature.

Directional Services: On demand Inclination and Azimuth.

Borehole and Environmental Correction:

Hole Size:	6.125 in.	**Gamma Ray:** Corrected for mud weight, hole size and KCl concentration.
Mud Weight:	10.2 ppg	**Resistivities:** Corrected for borehole temperature, hole size, drilling fluid resistivity
Borehole Temperature:	230° F	and dielectric correction.
Drilling Fluid Resistivity:	OBM (500 ohm-m)	
KCl Concentration:	0%	

Run Number: 4 :: RECORDED DATA LOG

WFT Services Provided:

Recorded and Real Time Logging: Spectral Gamma Ray, Resistivity and Temperature.

Directional Services: On demand Inclination and Azimuth.

Borehole and Environmental Correction:

Hole Size:	6.125 in.	**Gamma Ray:** Corrected for mud weight, hole size and KCl concentration.
Mud Weight:	10.2 ppg	**Resistivities:** Corrected for borehole temperature, hole size, drilling fluid resistivity
Borehole Temperature:	250° F	and dielectric correction.
Drilling Fluid Resistivity:	OBM (500 ohm-m)	
KCl Concentration:	0%	

M/LWD LOG COMMENTS

Comment No. 1-1

RECORDED DATA LOG
Start of MWD Drilling Run 01
Weatherford International provided 6 3/4 in. Directional, Gamma Ray and Temperature for Run 03.
Run 01 started formation drilling July 6, 2013 at 13:27 at 6772 MD / 6702 TVD. Weatherford International logged the 8.750 in. borehole.
The WBM at the start of drilling was 9.90 ppg.

Comment No. 1-2

End of MWD Drilling Run 01
Run 01 ended drilling formation July 7, 2013 at 10:50 at 7990 MD / 7503 TVD.
The WBM at the end of drilling was 9.90 ppg.

Comment No. 2-1

RECORDED DATA LOG
Start of LWD Drilling Run 02
Weatherford International provided 4 3/4 in. Directional, Resistivity, Spectral Azimuthal Gamma Ray, and Temperature for Run 02.
Run 02 started formation drilling July 11, 2013 at 6:11 at 7990 MD / 11955 TVD. Weatherford International logged the 6.125 in. borehole.
The OBM at the start of drilling was 9.90 ppg. Detection issue with missing data at 8140 MD to 8189 MD.

Comment No. 2-2

End of LWD Drilling Run 02
Run 02 ended drilling formation July 13, 2013 at 18:05 at 11955 MD / 7537 TVD.
The OBM at the end of drilling was 10.20 ppg.

Comment No. 3-1

RECORDED DATA LOG
Start of LWD Drilling Run 03
Weatherford International provided 4 3/4 in. Directional, Resistivity, Spectral Azimuthal Gamma Ray, and Temperature for Run 03.
Run 03 started formation drilling July 14, 2013 at 18:47 at 11955 MD / 7537 TVD. Weatherford International logged the 6.125 in. borehole.
The OBM at the start of drilling was 10.20 ppg.

Comment No. 3-2

End of LWD Drilling Run 03
Run 04 ended drilling formation July 18, 2013 at 5:13 at 16228 MD / 7584 TVD.
The OBM at the end of drilling was 10.20 ppg.

Comment No. 4-1

RECORDED DATA LOG
Start of LWD Drilling Run 04
Weatherford International provided 4 3/4 in. Directional, Resistivity, Spectral Azimuthal Gamma Ray, and Temperature for Run 03.
Run 04 started formation drilling July 19, 2013 at 14:39 at 16228 MD / 7537 TVD. Weatherford International logged the 6.125 in. borehole.
The OBM at the start of drilling was 10.20 ppg.

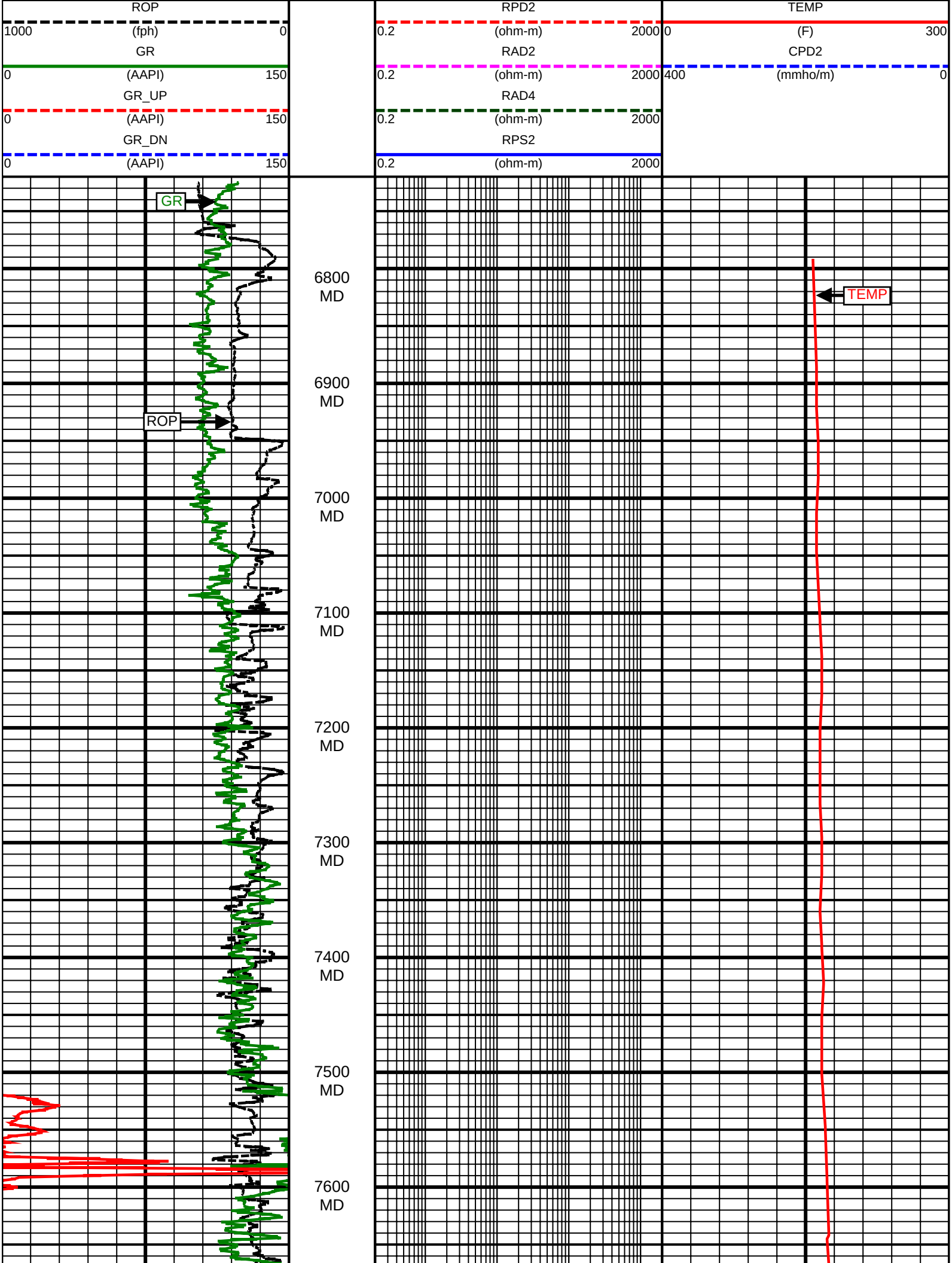
Comment No. 4-2

End of LWD Drilling Run 04
Run 04 ended drilling formation July 20, 2013 at 12:01 at 17370 MD / 7617 TVD.
The OBM at the end of drilling was 10.20 ppg.

CURVE SPECIFICATIONS

CURVE TYPE	MNEMONIC	UNITS	COMMENTS	CORRECTIONS
Rate of Penetration	ROP	fph	Rate of Penetration 3.0 ft window 0.5 ft Exponential Smoothing	None
Gamma Ray	GR	AAPI	Gamma Ray 3.0 ft window 0.5 ft Exponential Smoothing	See LWD Run Remarks
Gamma Ray Up	GR UP	ohm-m	Azimuthal Gamma Ray 3.0 ft window 0.5 ft Exponential Smoothing	
Gamma Ray Down	GR DN	ohm-m	Azimuthal Gamma Ray 3.0 ft window 0.5 ft Exponential Smoothing	
Deep Phase Resistivity	RPD2	ohm-m	2 MHz Deep Phase Resistivity 3.0 ft window 0.5 ft Exponential Smoothing	
Deep Attenuation Resistivity	RAD2	ohm-m	2 MHz Deep Attenuation Resistivity 3.0 ft window 0.5 ft Exponential Smoothing	
Deep Attenuation Resistivity	RAD4	mmho/m	400 kHz Deep Attenuation Resistivity 3.0 ft window 0.5 ft Exponential Smoothing	
Shallow Phase Resistivity	RPS2	ohm-m	2 MHz Shallow Phase Resistivity 3.0 ft window 0.5 ft Exponential Smoothing	
Deep Phase Conductivity	CPD2	mmho/m	2 MHz Deep Phase Conductivity 3.0 ft window 0.5 ft Exponential Smoothing	
Temperature	TEMP	deg Fahrenheit	Recorded Borehole Tmperature 3.0 ft window 0.5 m Exponential Smoothing	None

1 Inch - Measured Depth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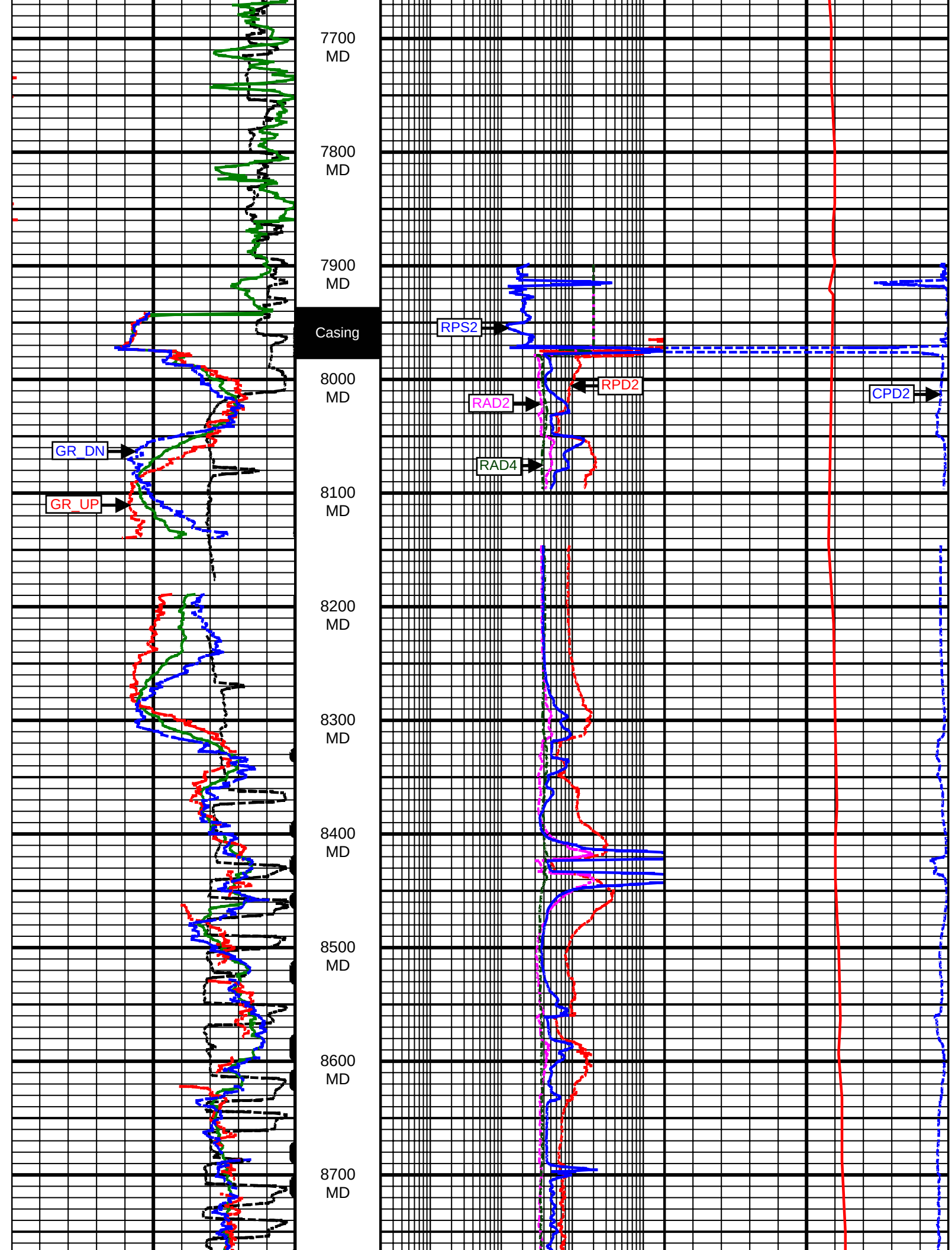
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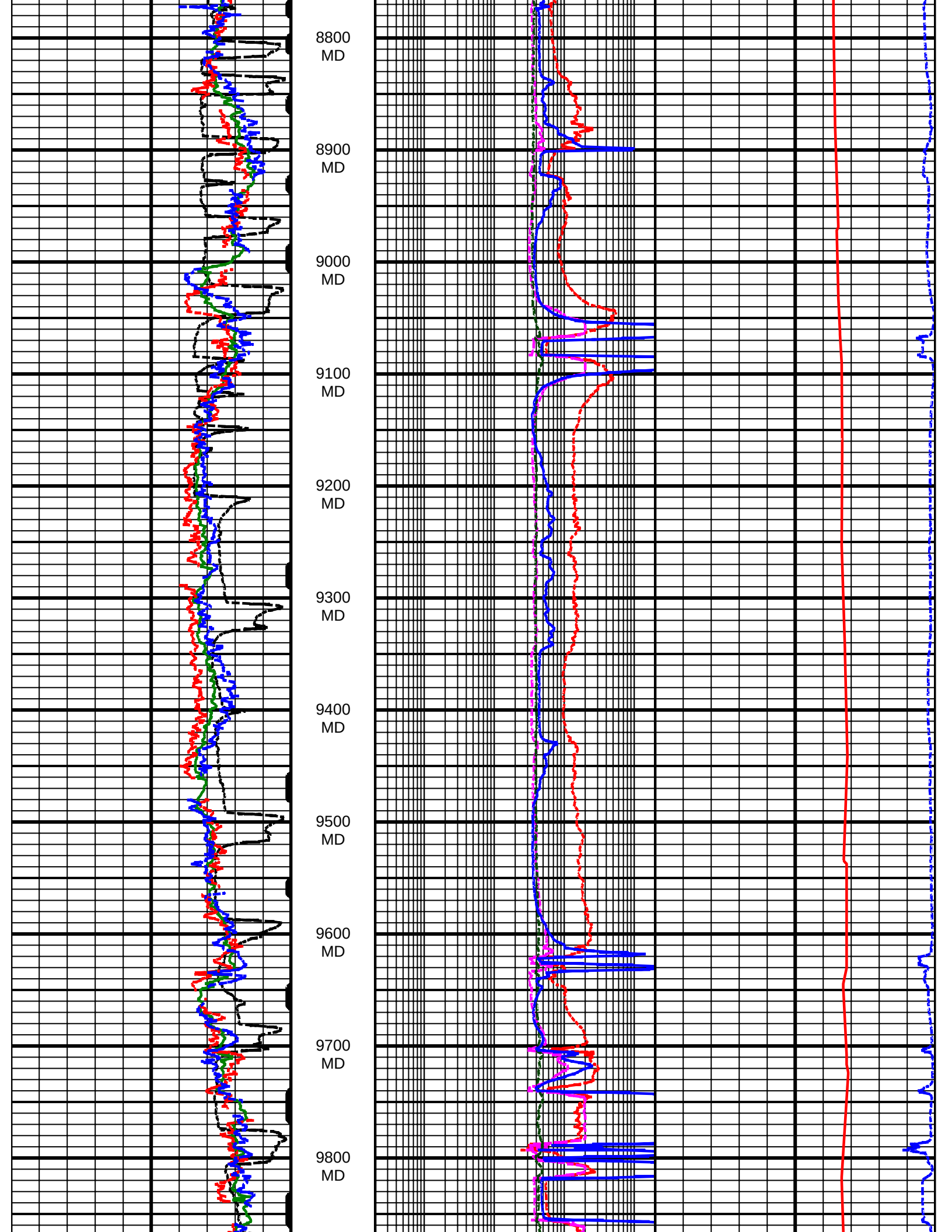
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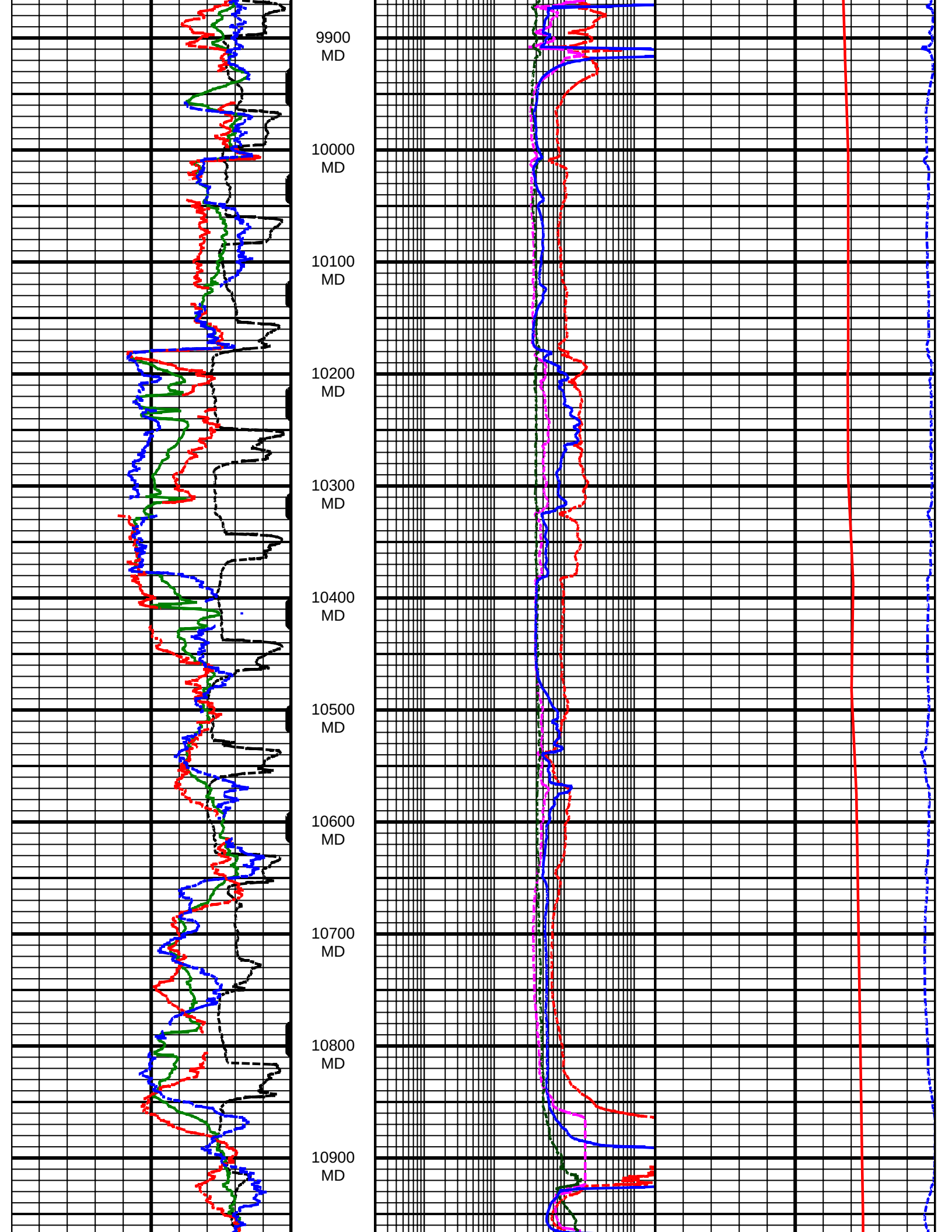
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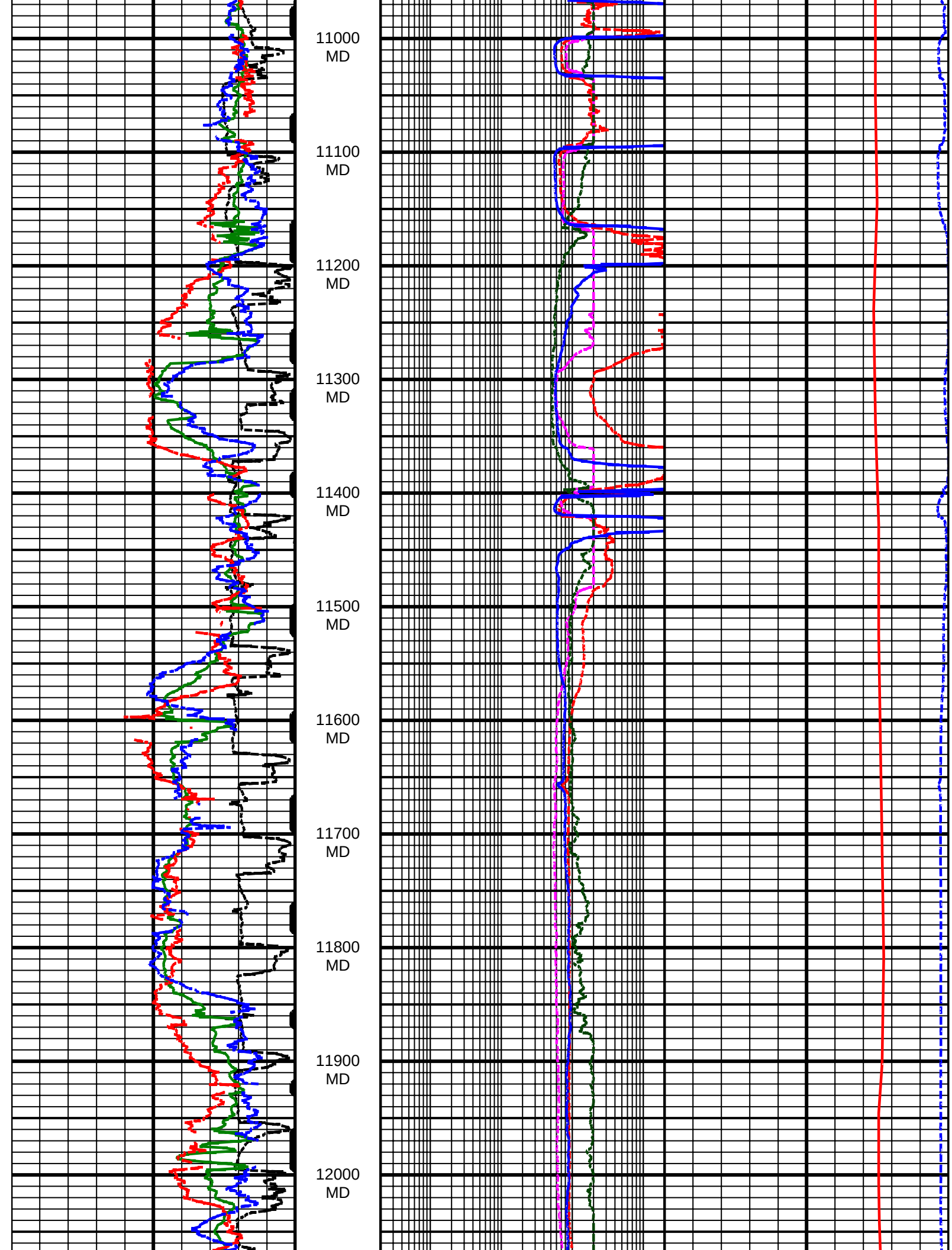
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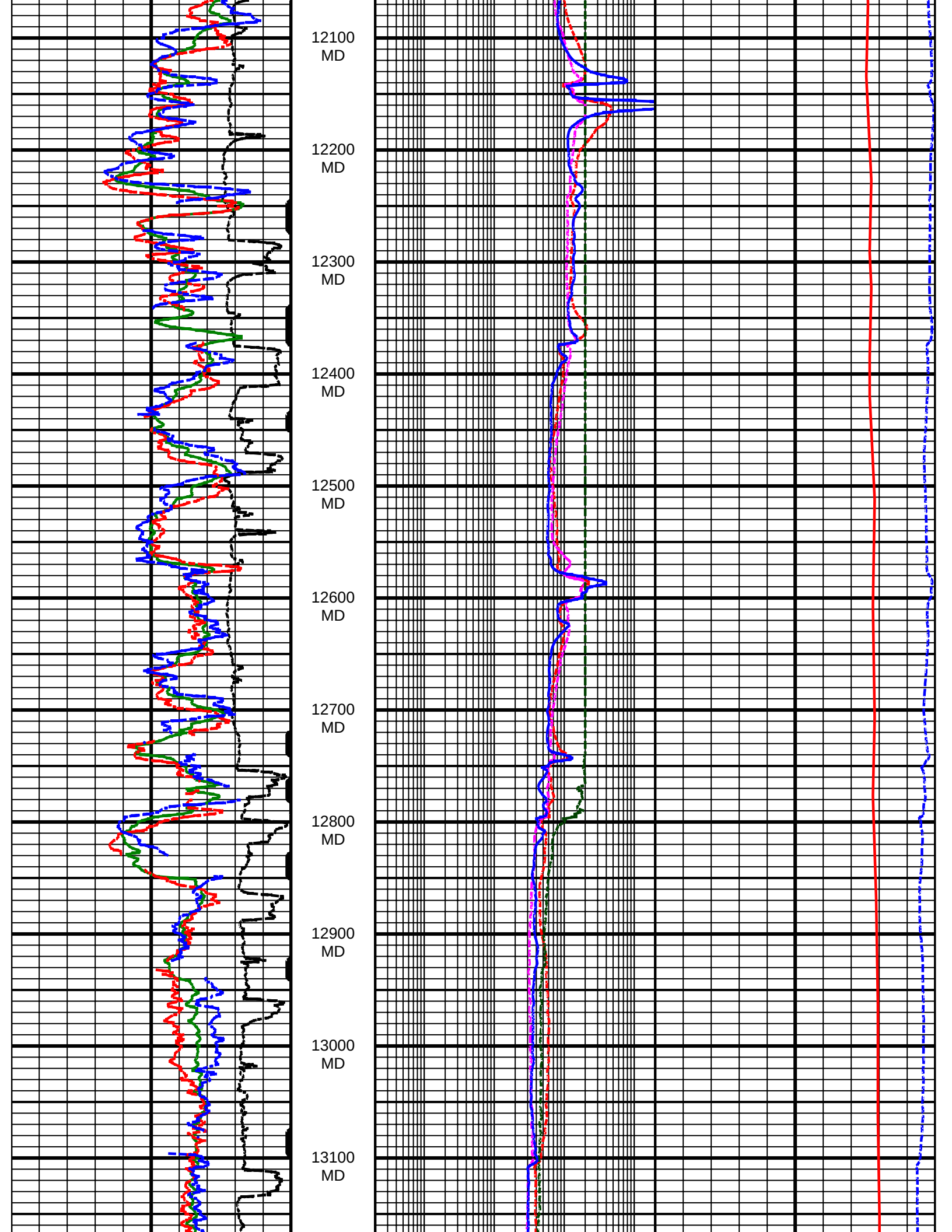
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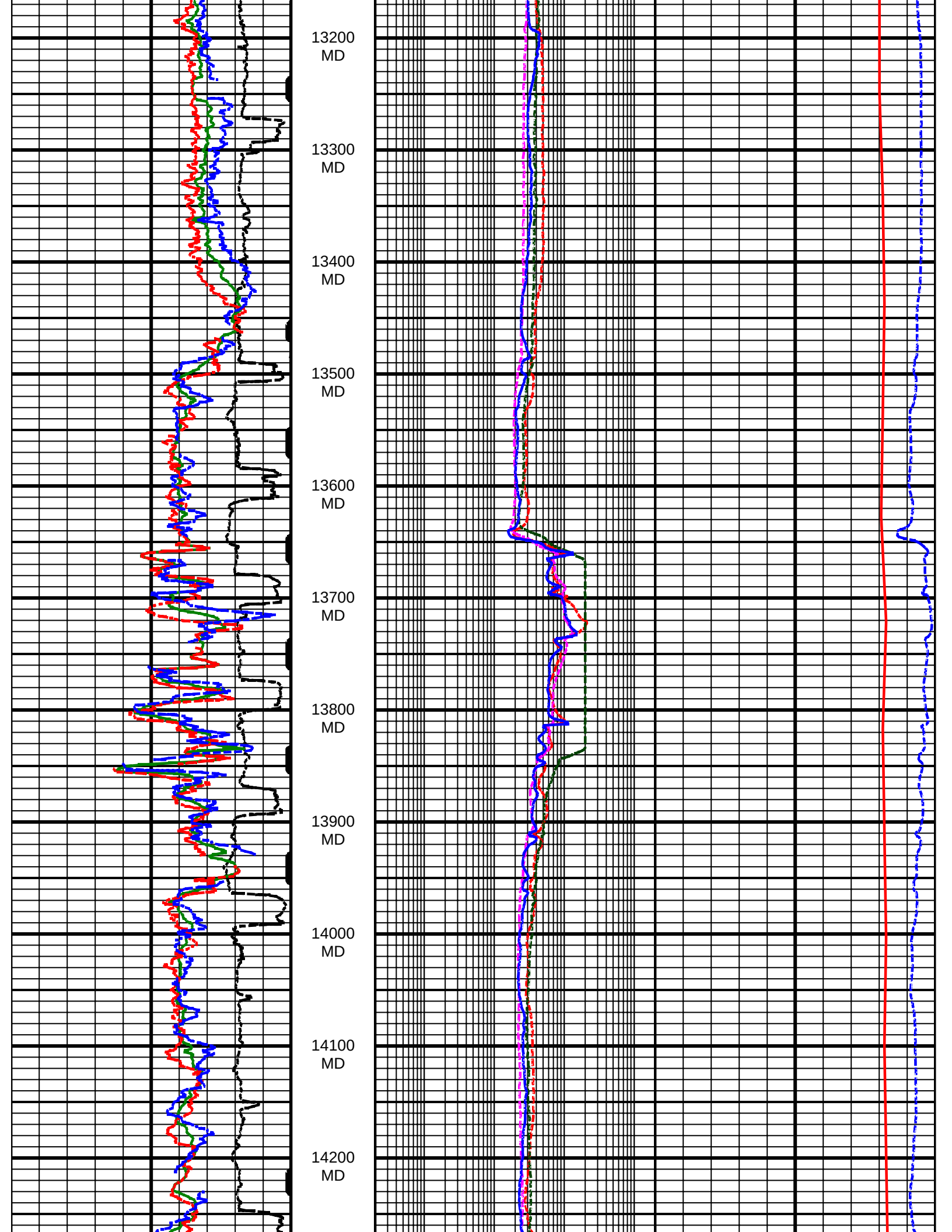
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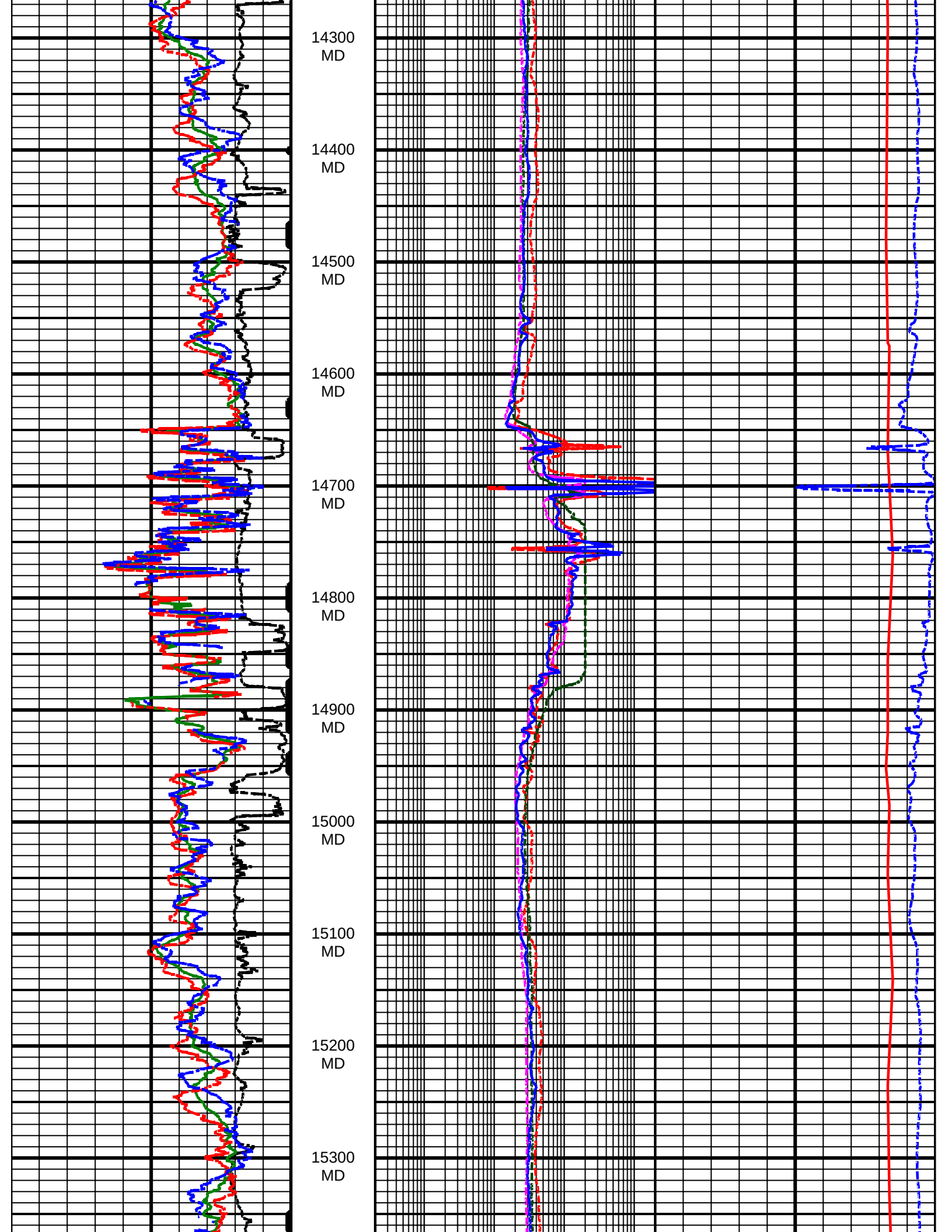
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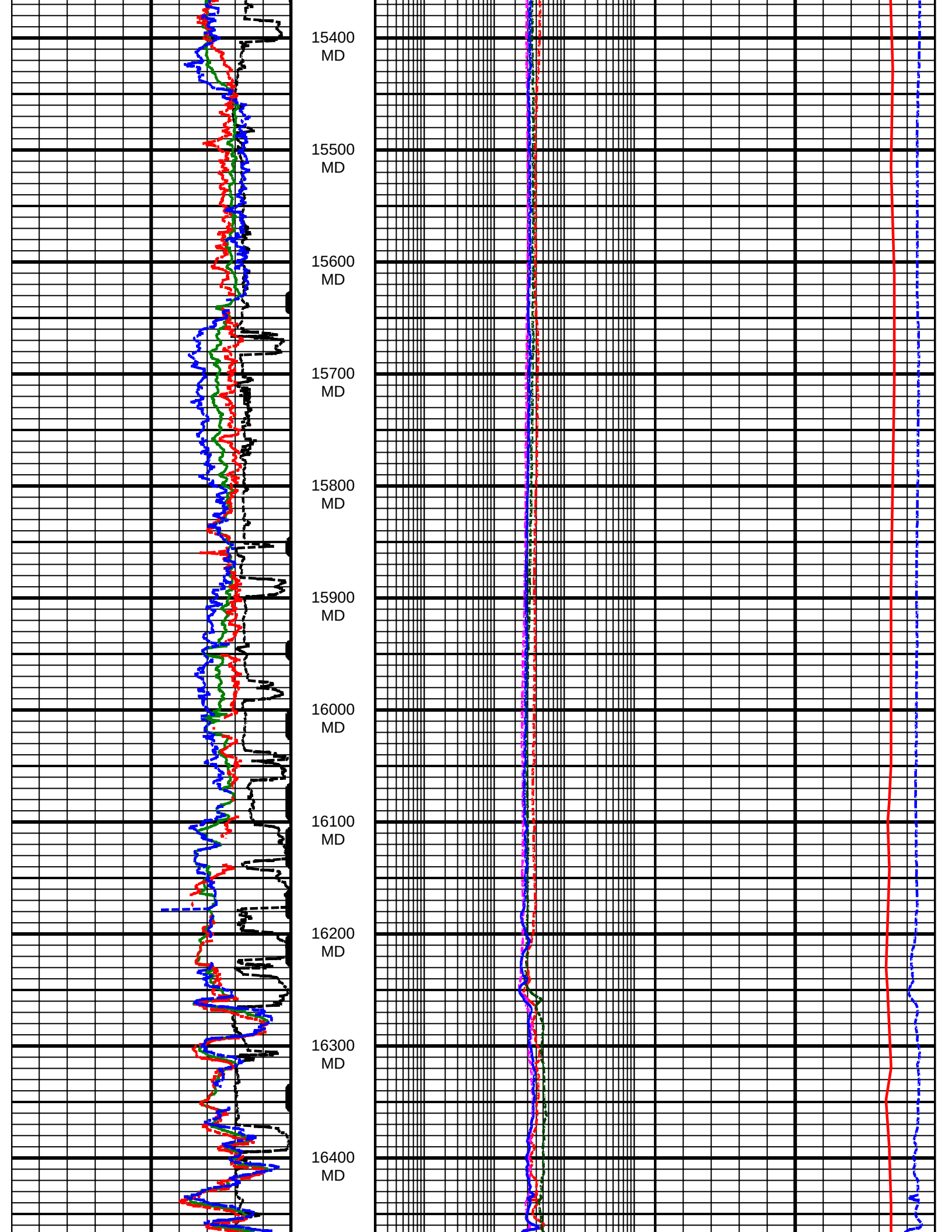
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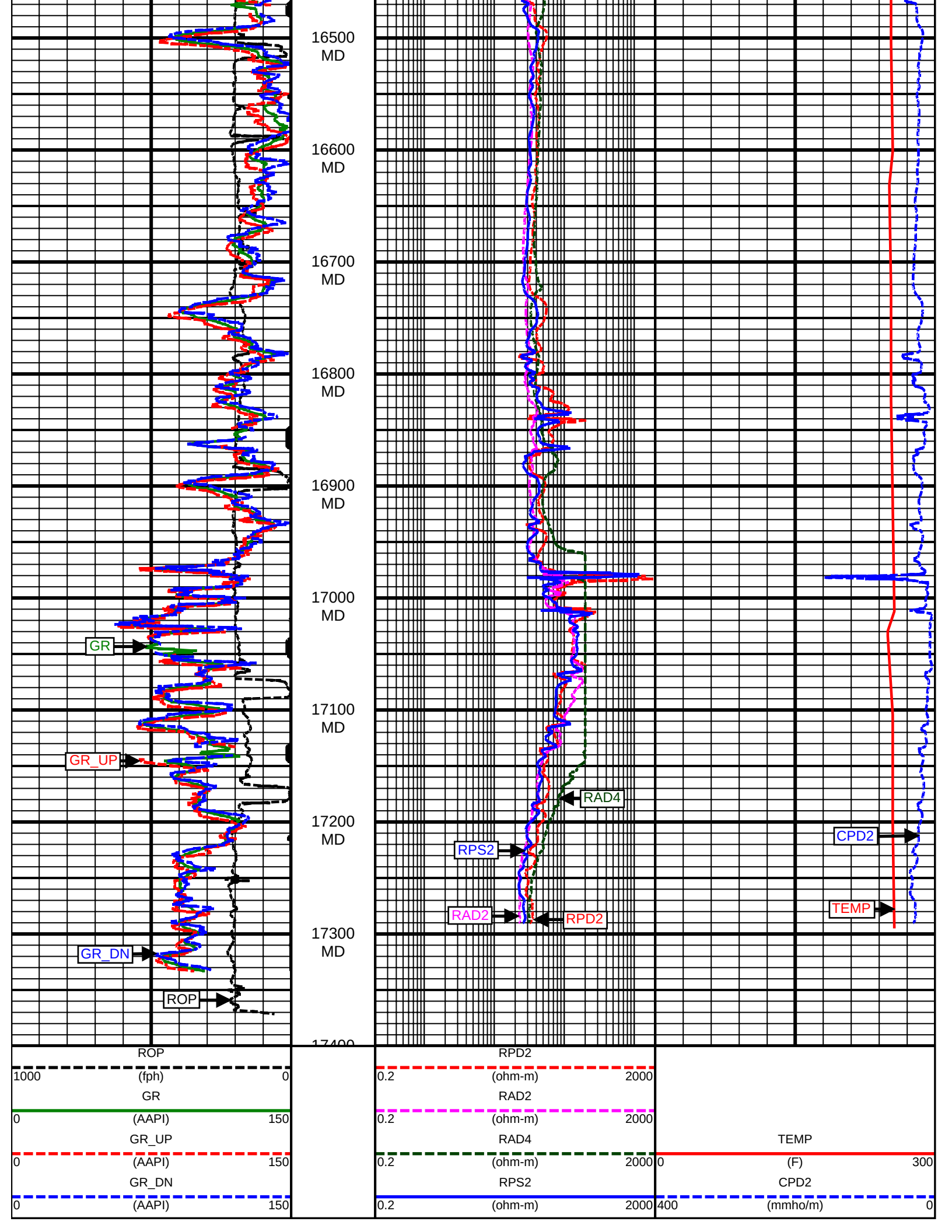
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RAD2
RPD2
CPD2
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0.2 (ohm-m) 2000
RAD4
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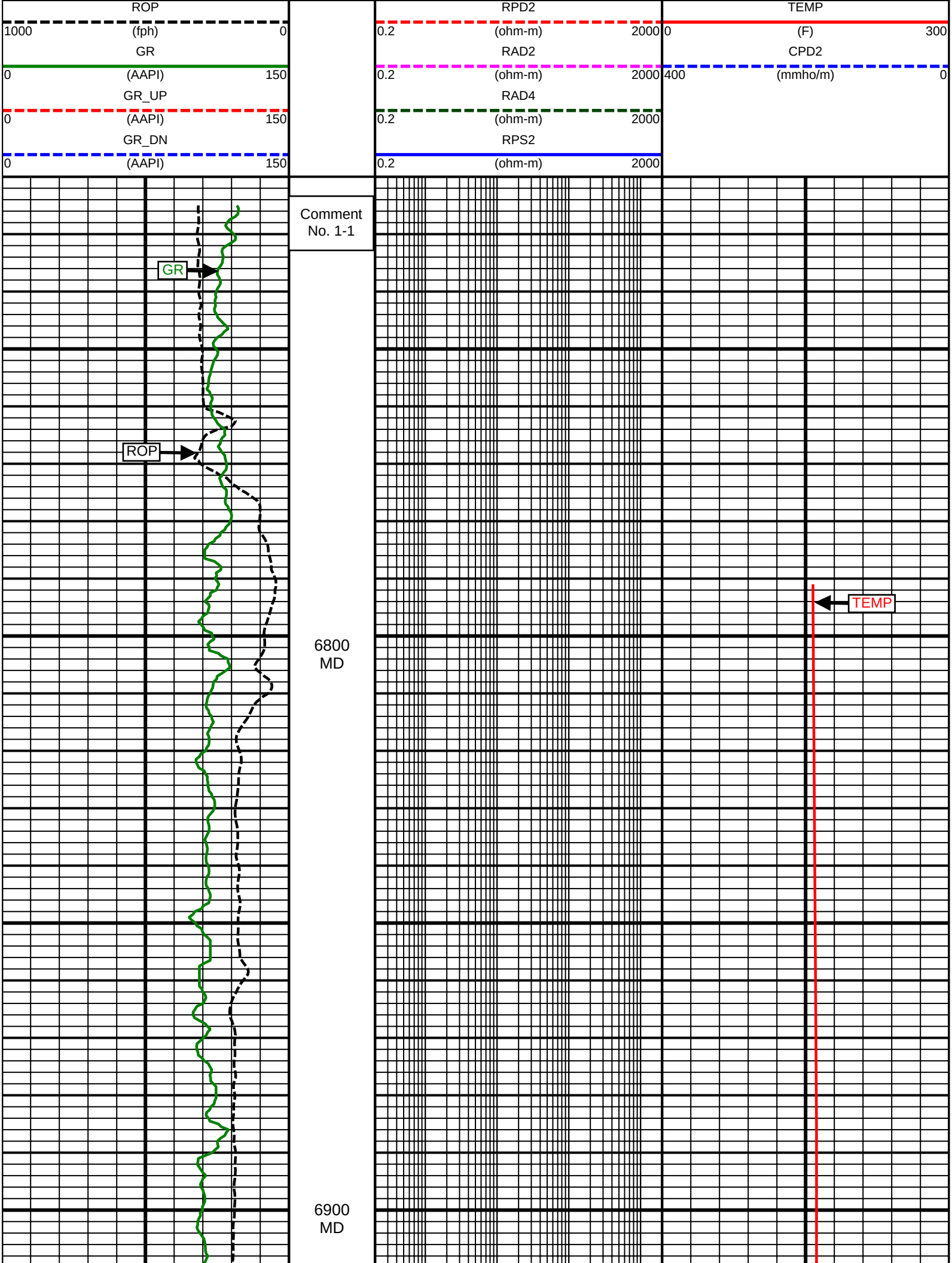
5 Inch - Measured Depth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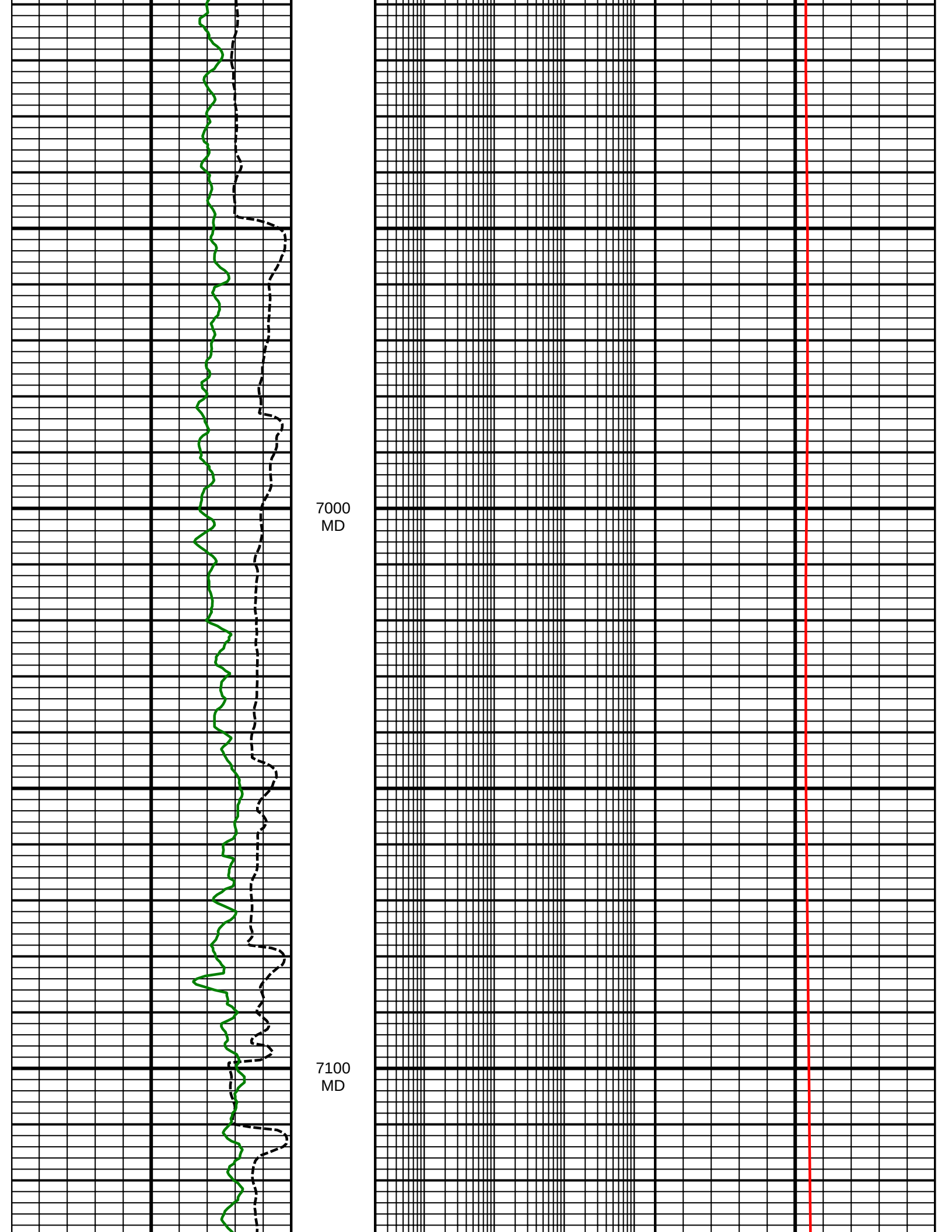
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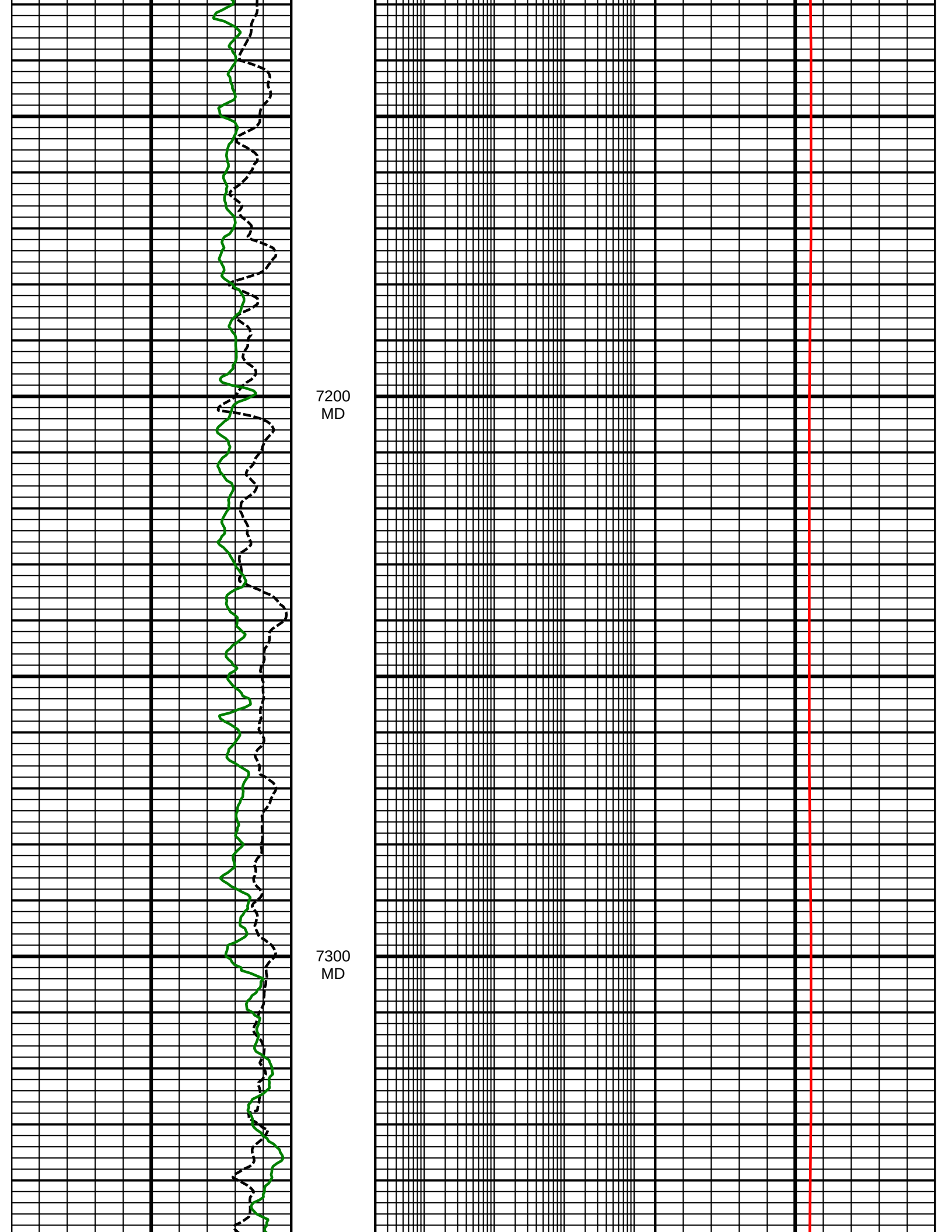
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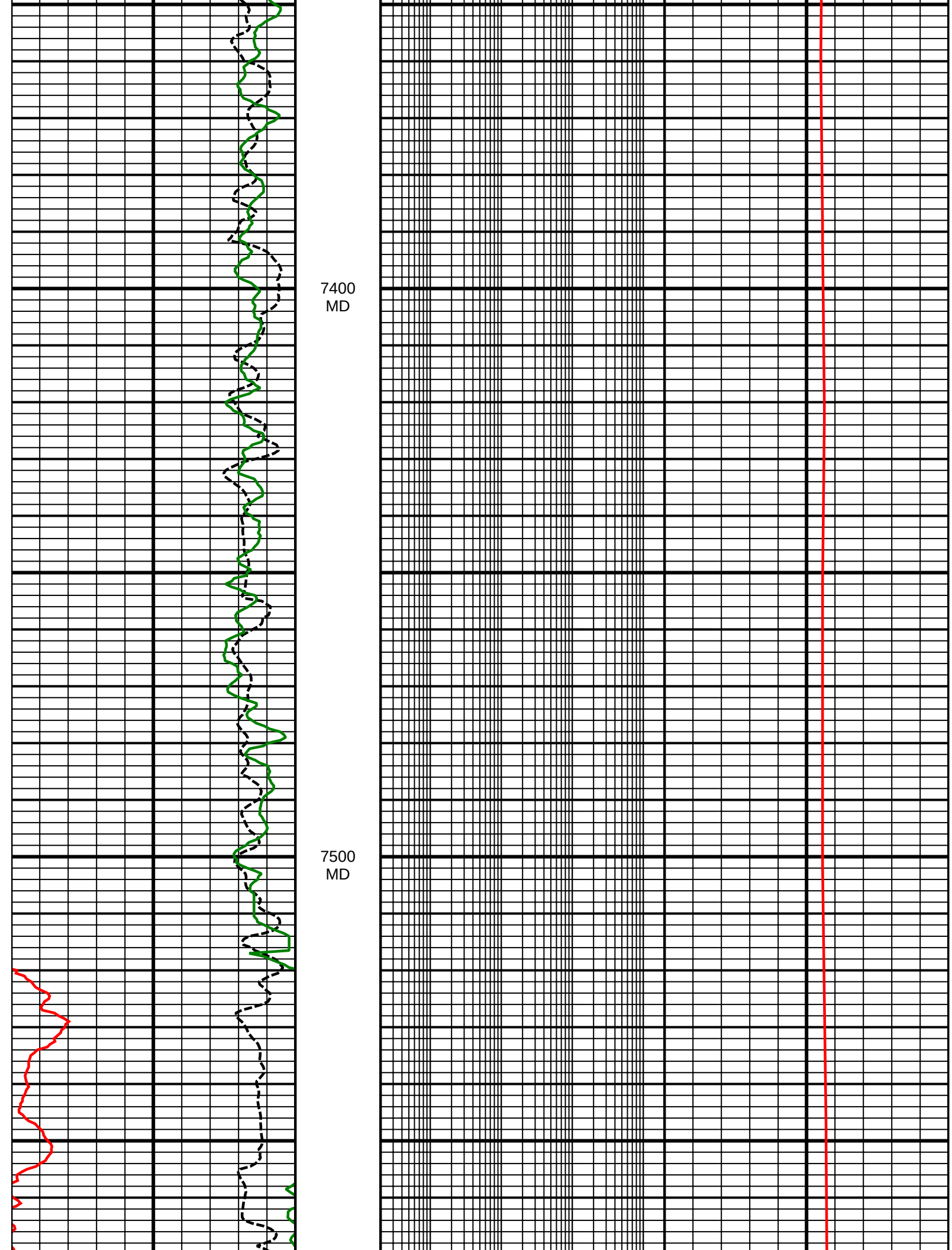
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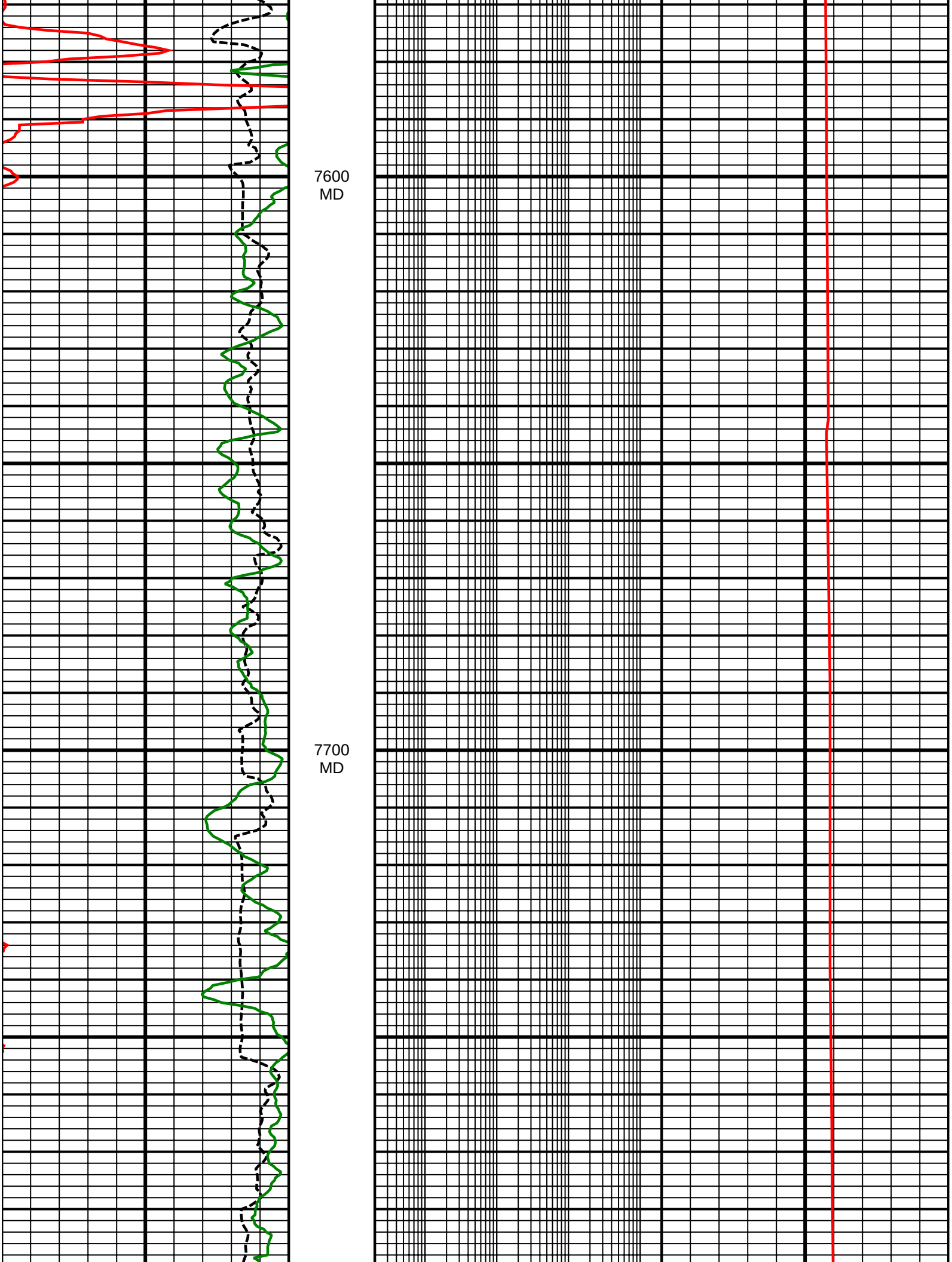
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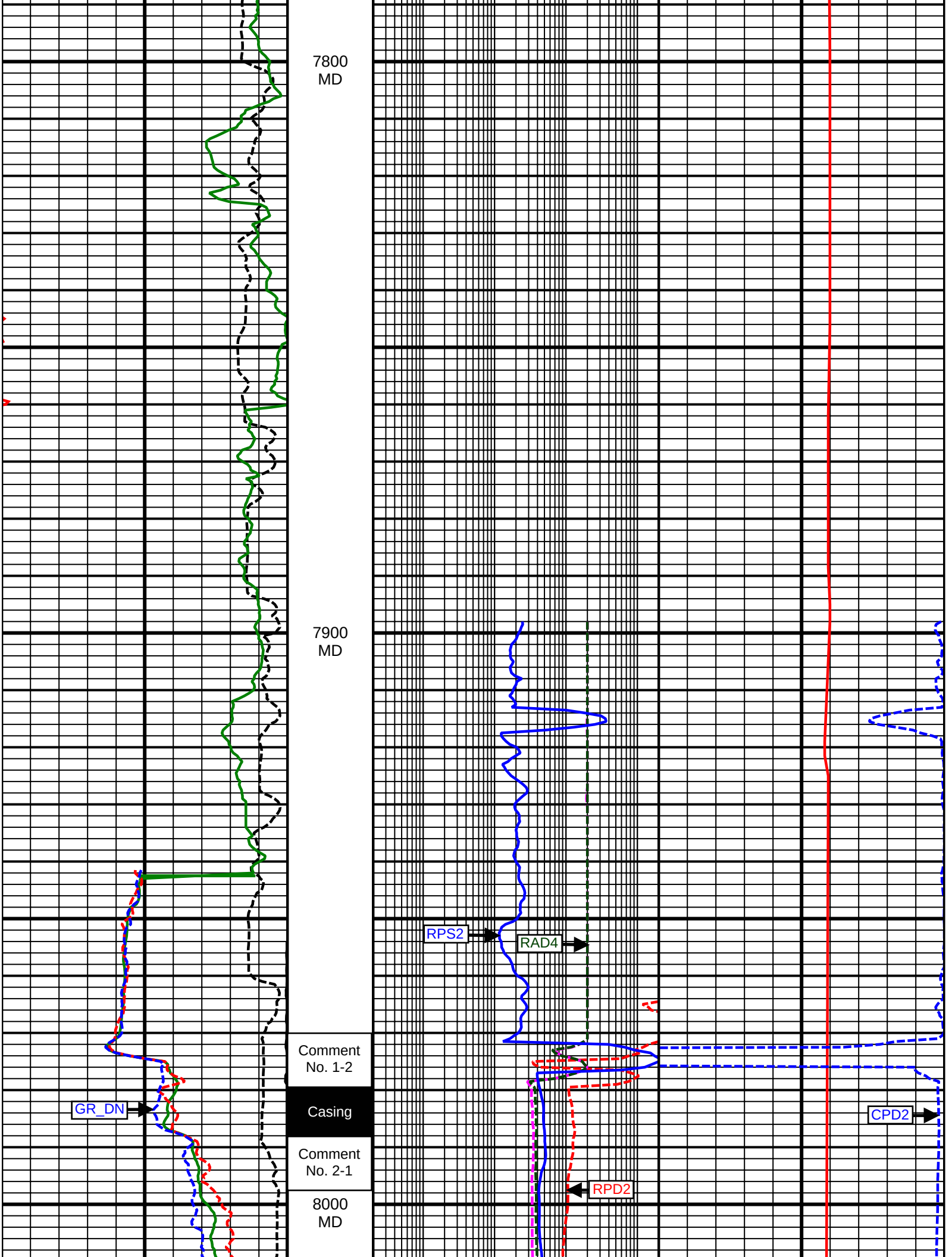
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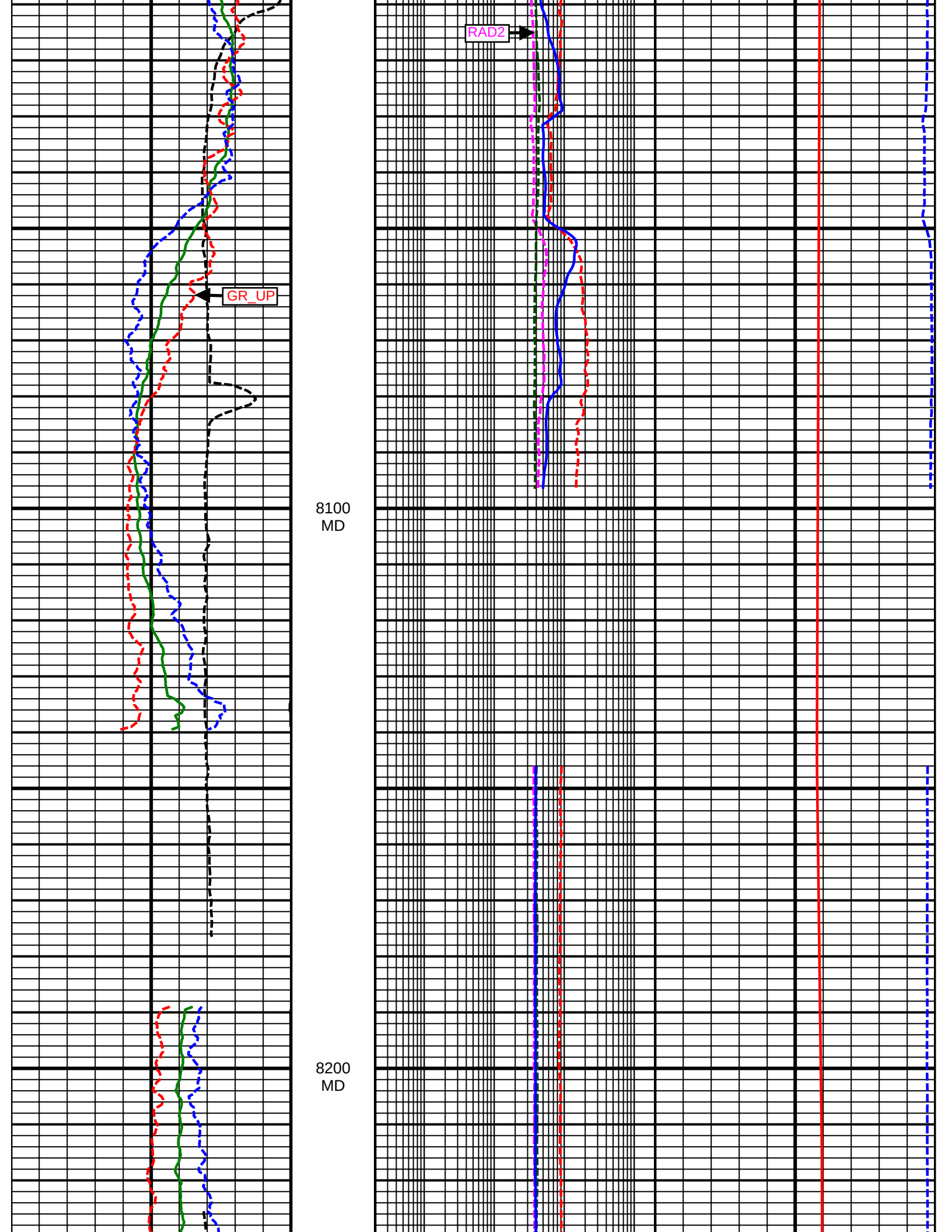
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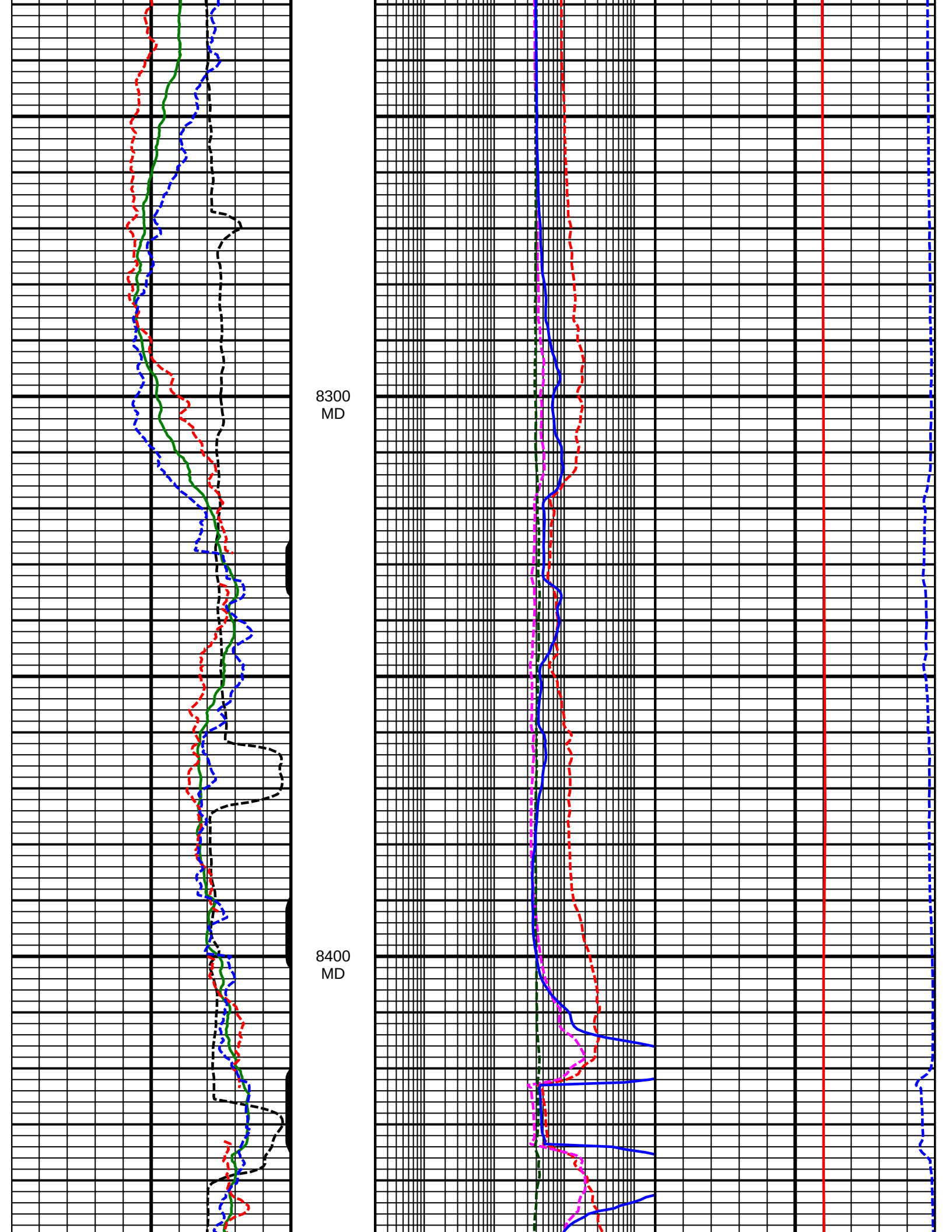
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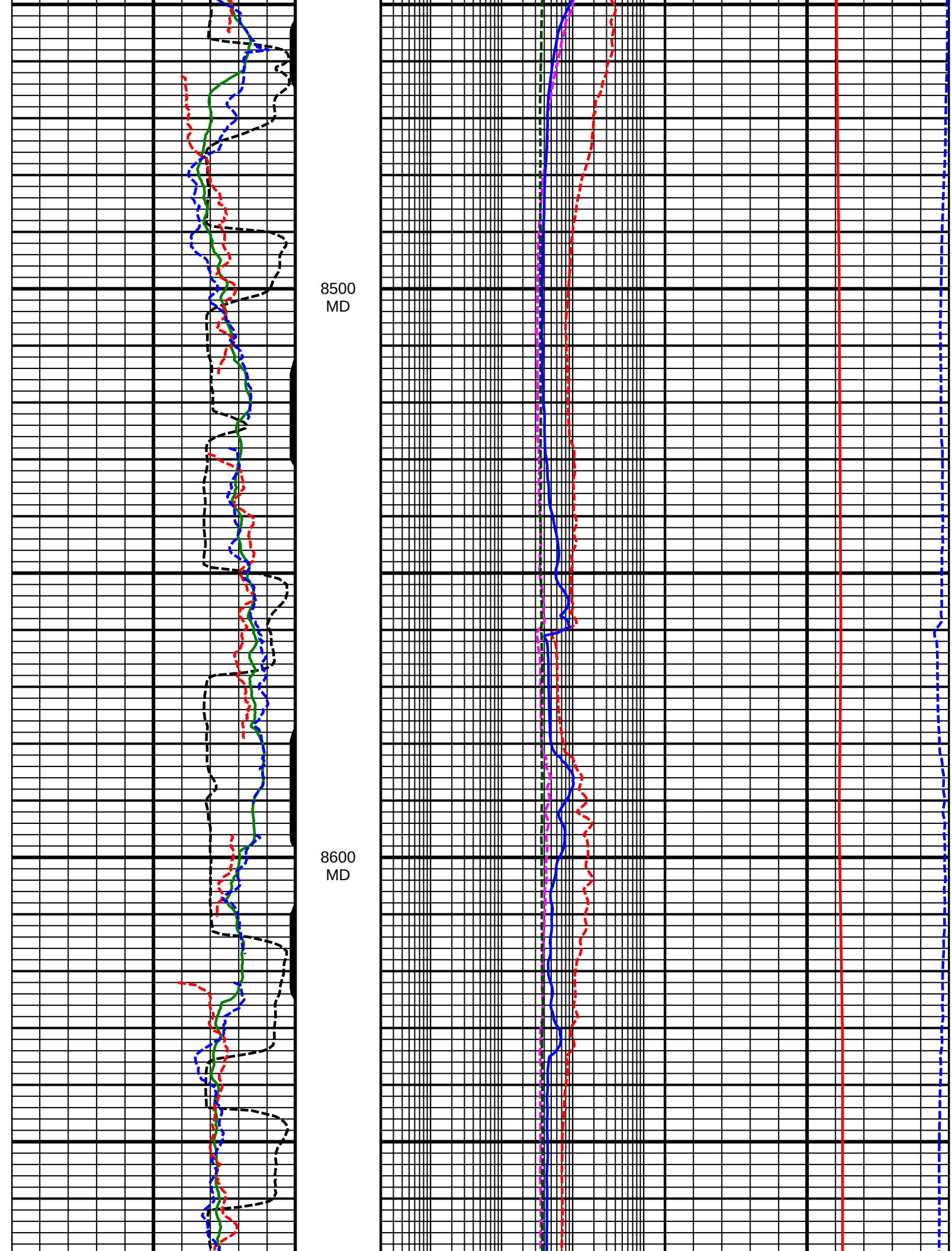
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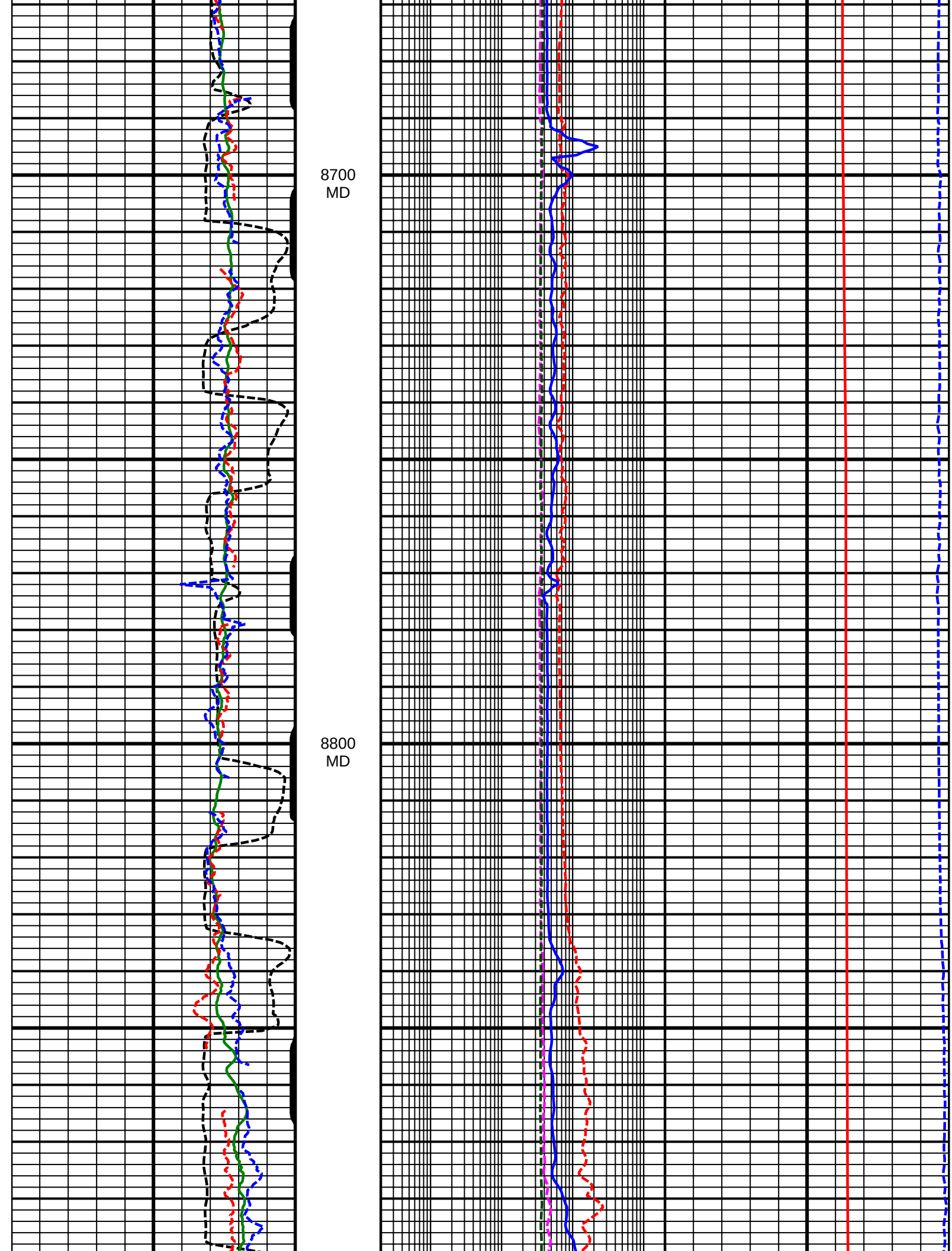
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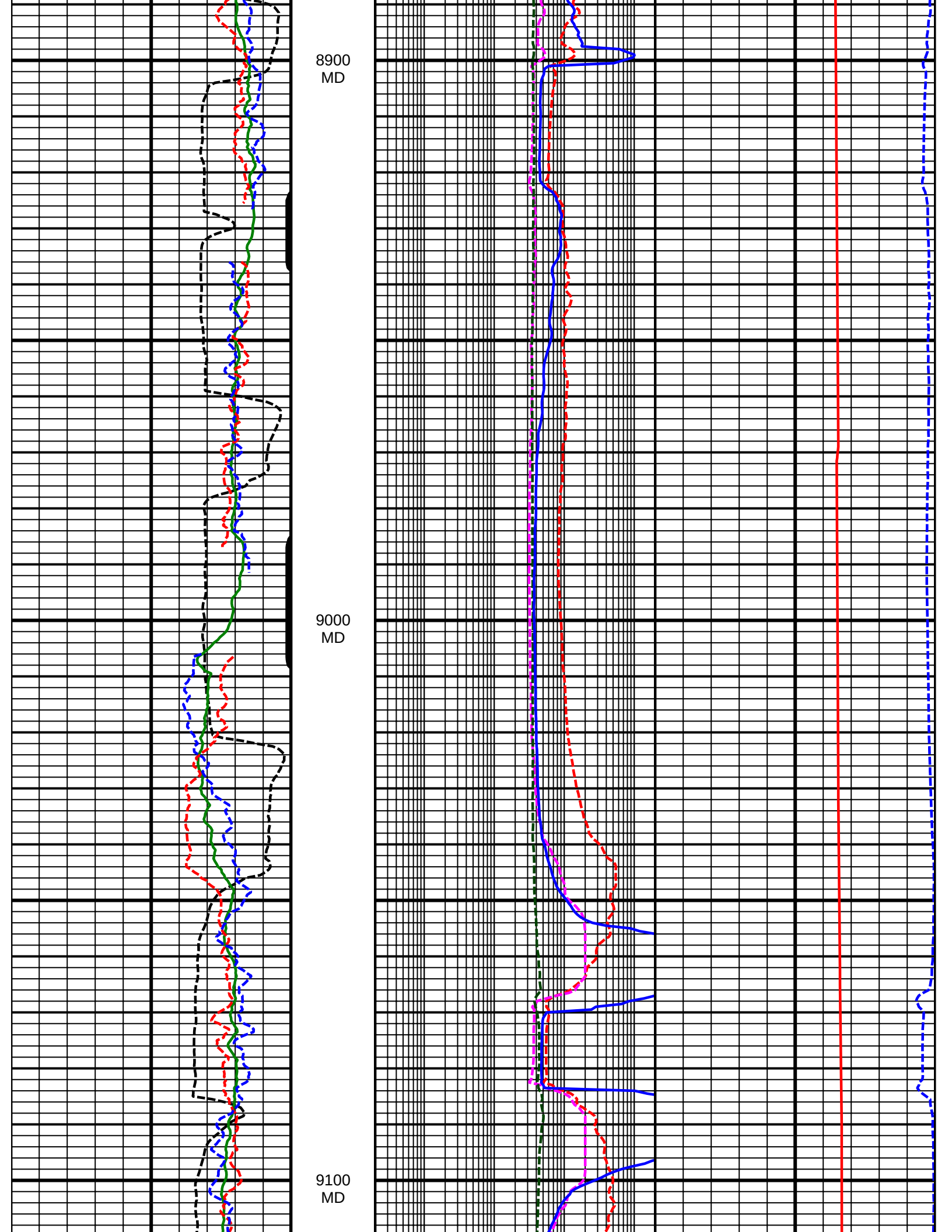
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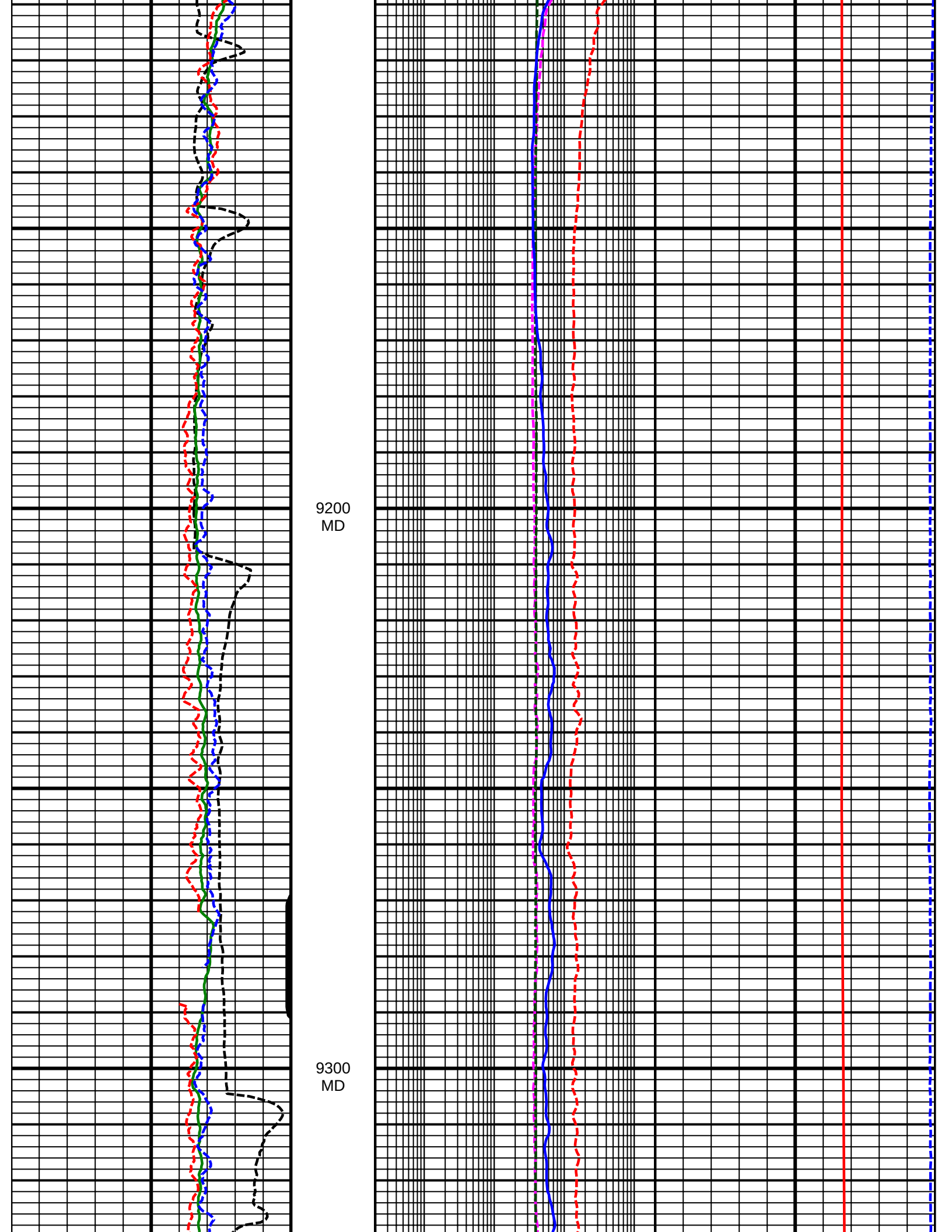
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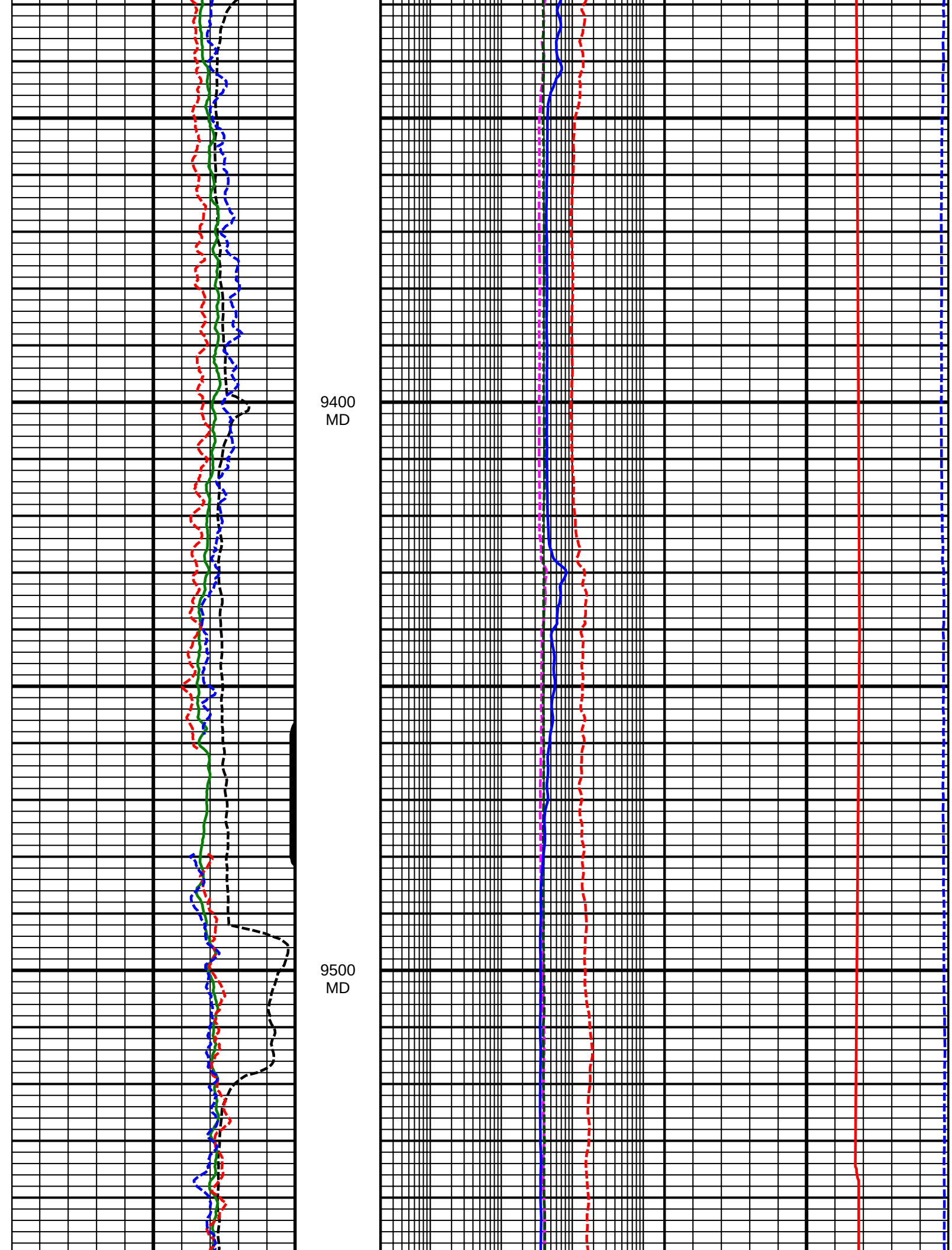
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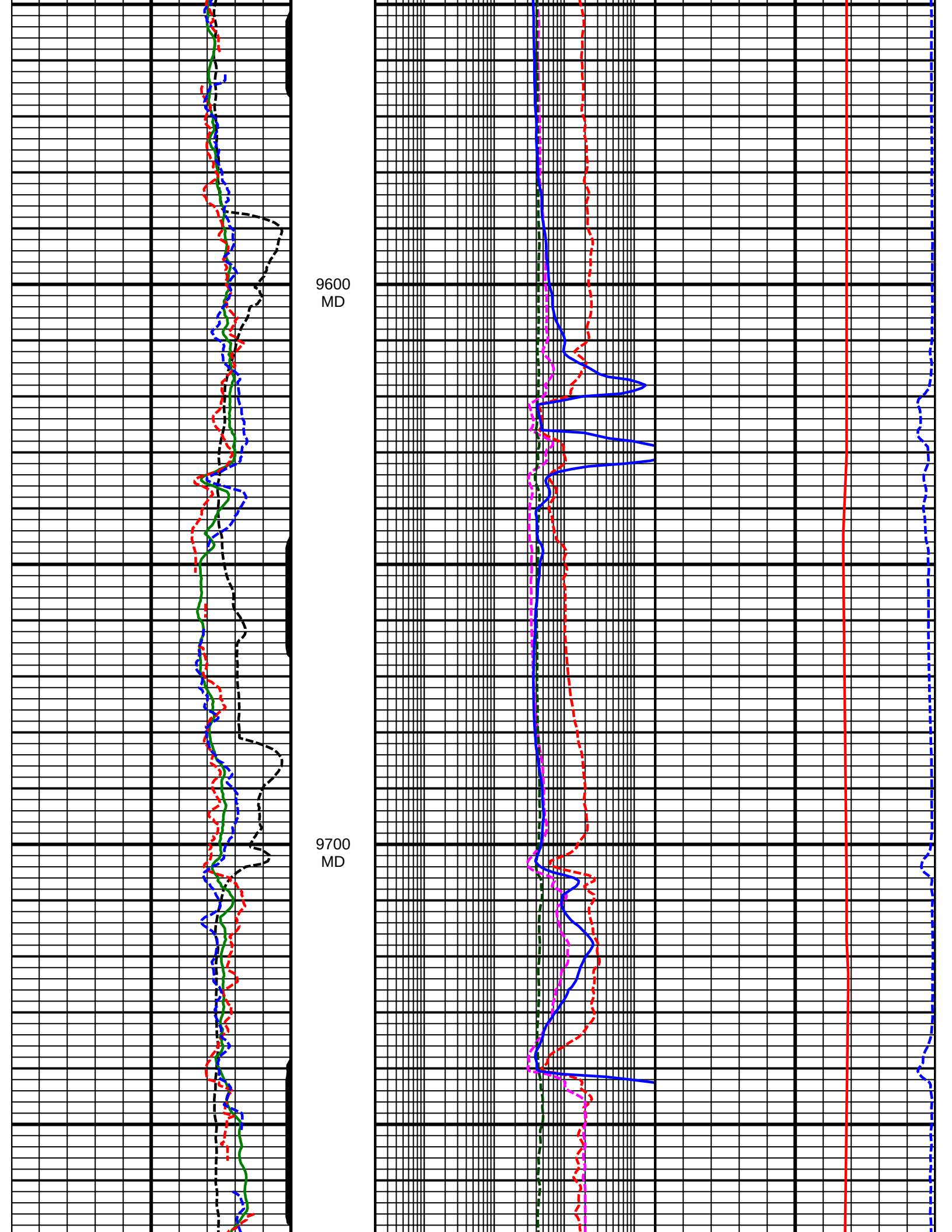
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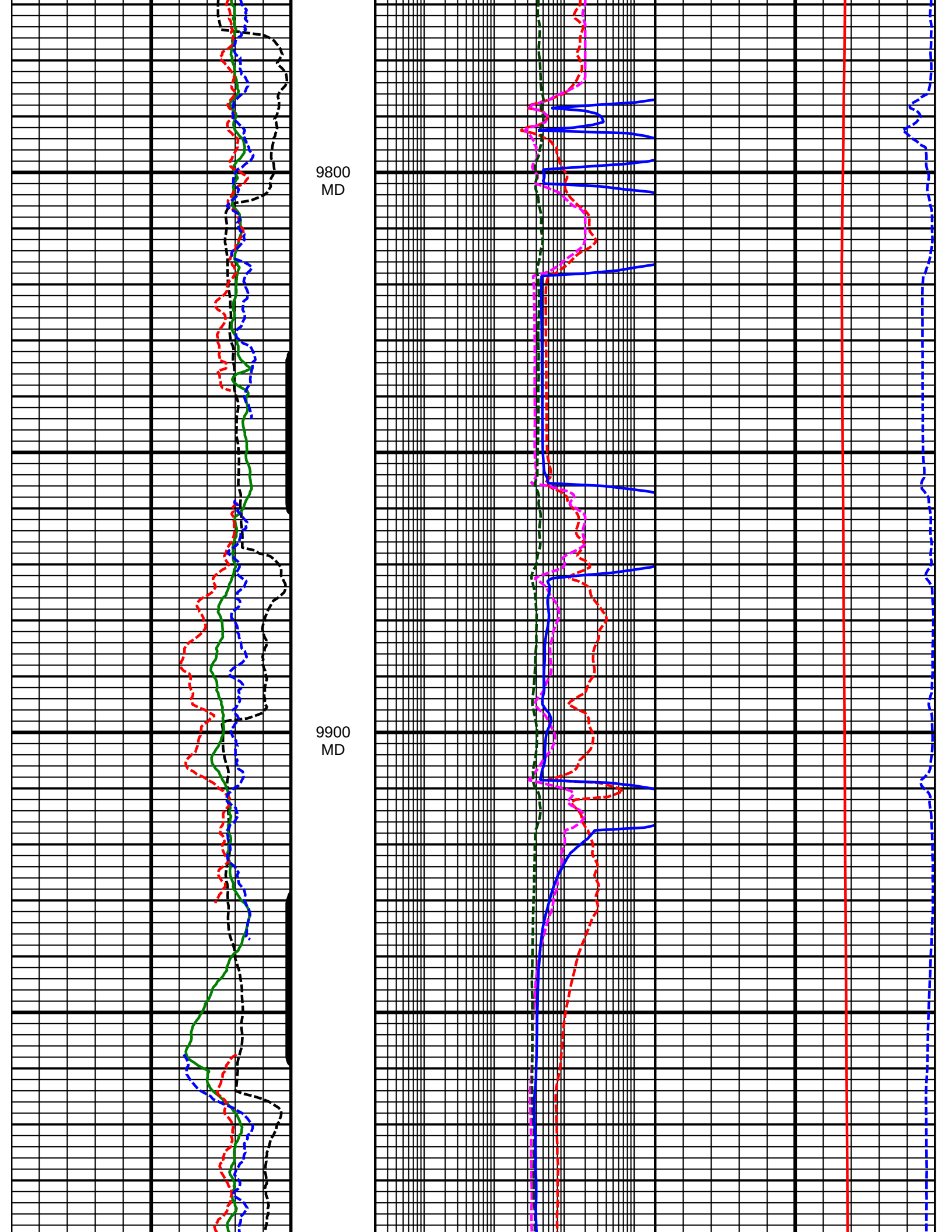
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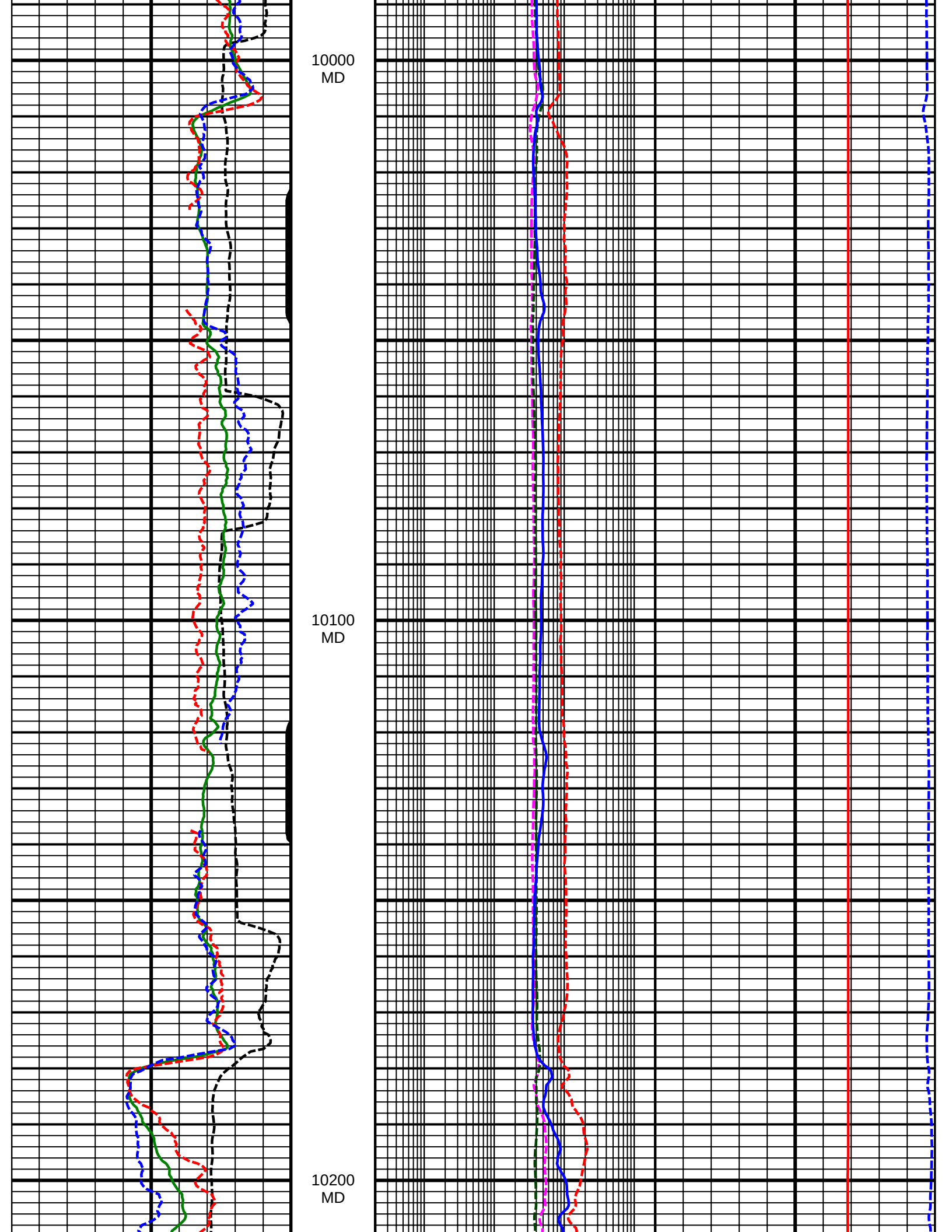
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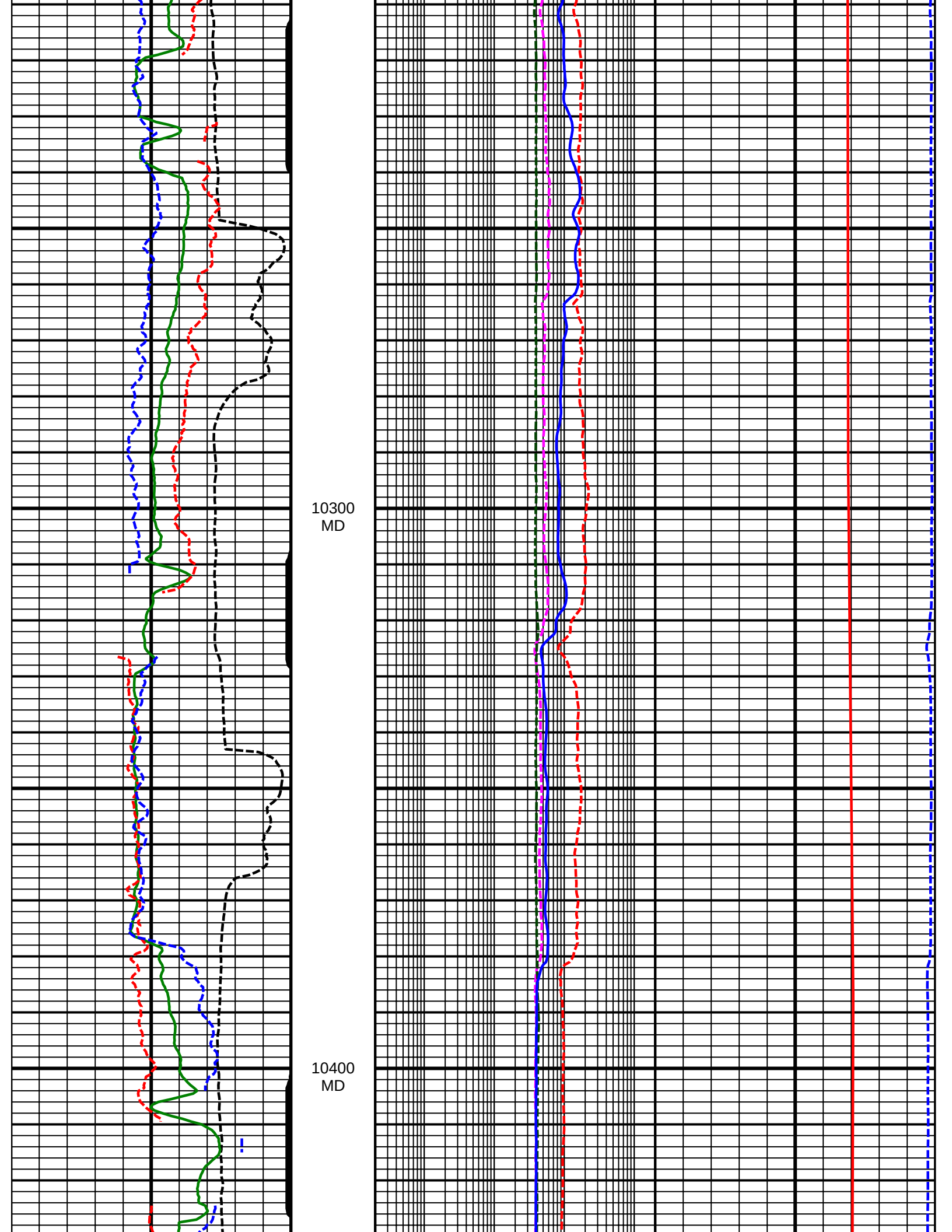
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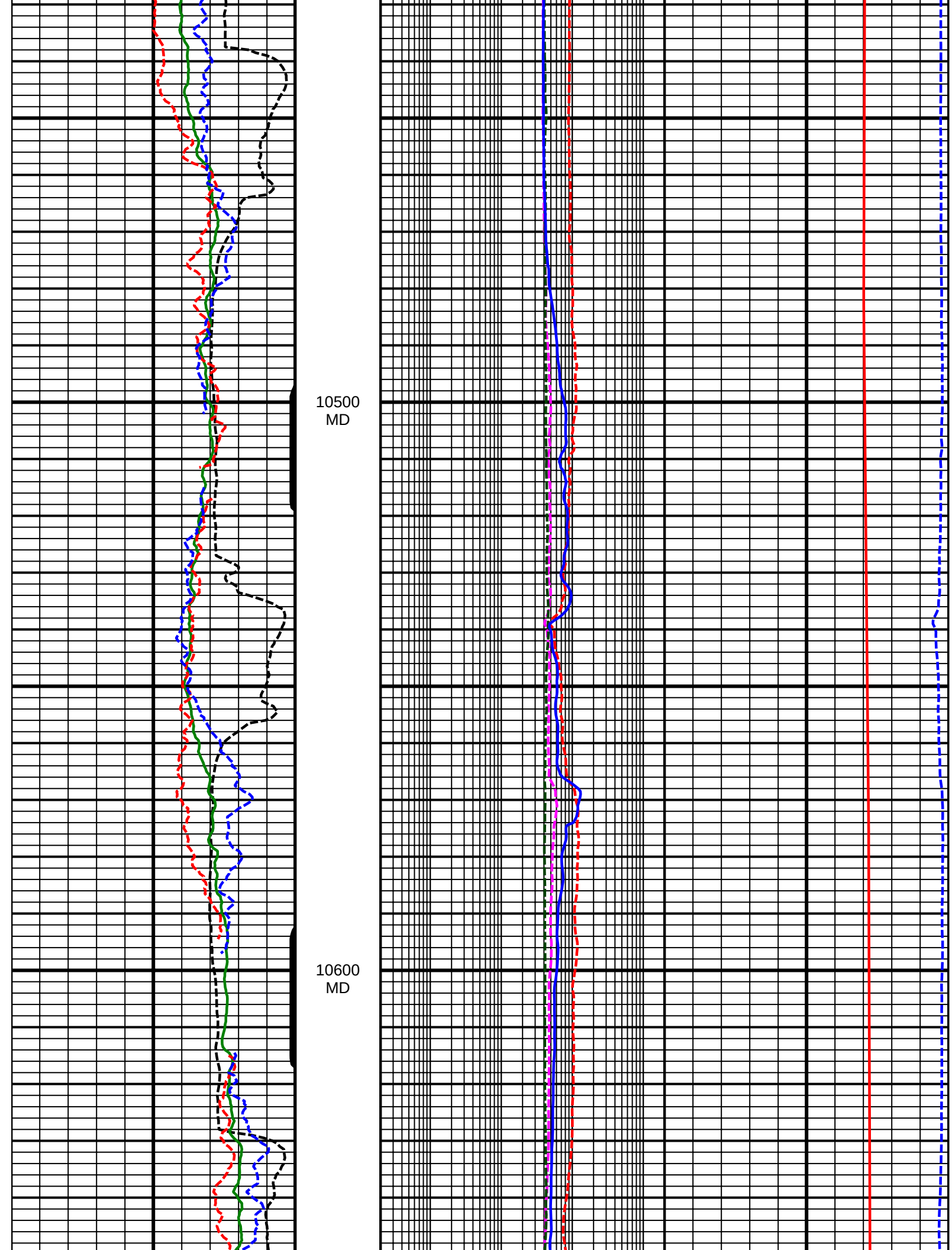
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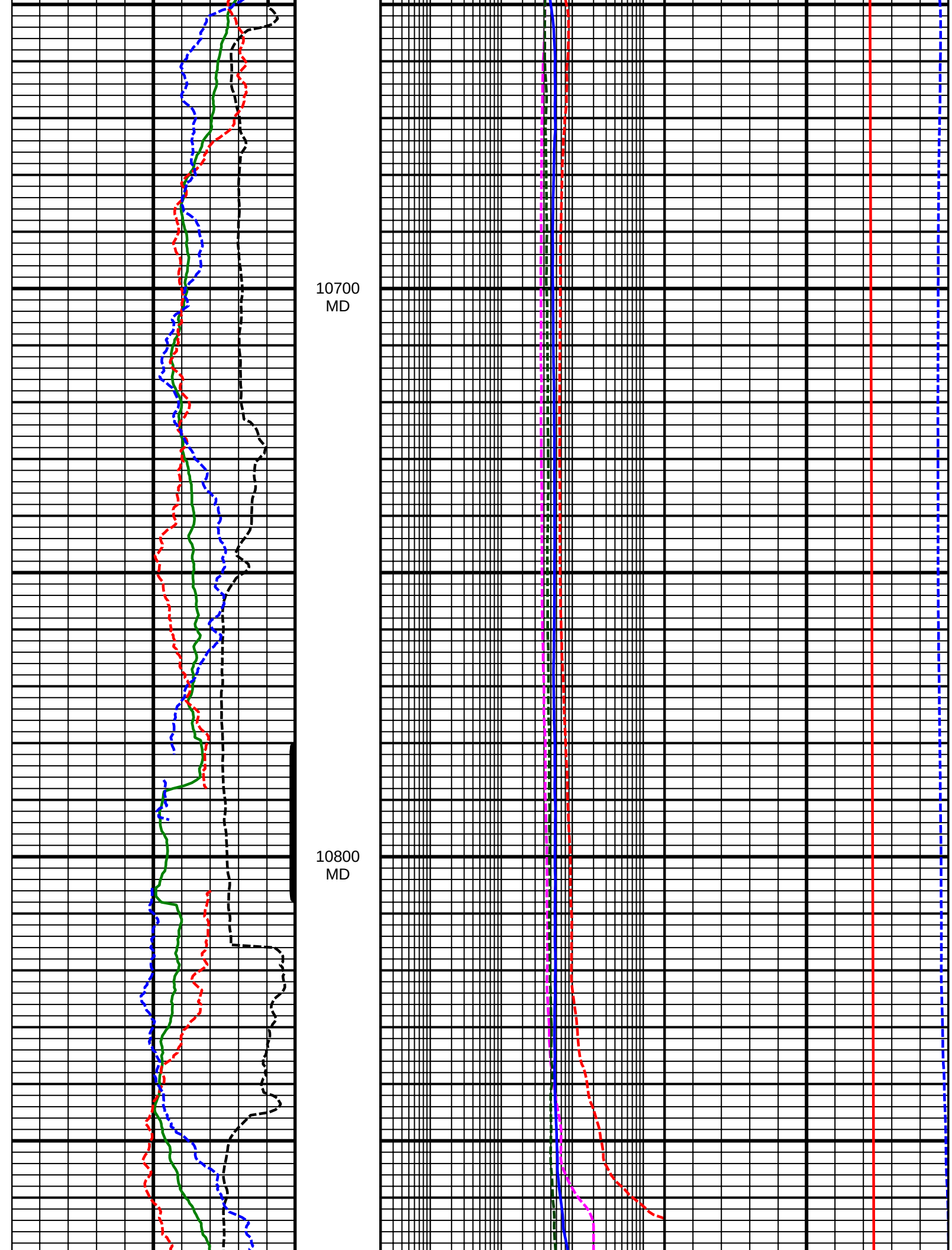
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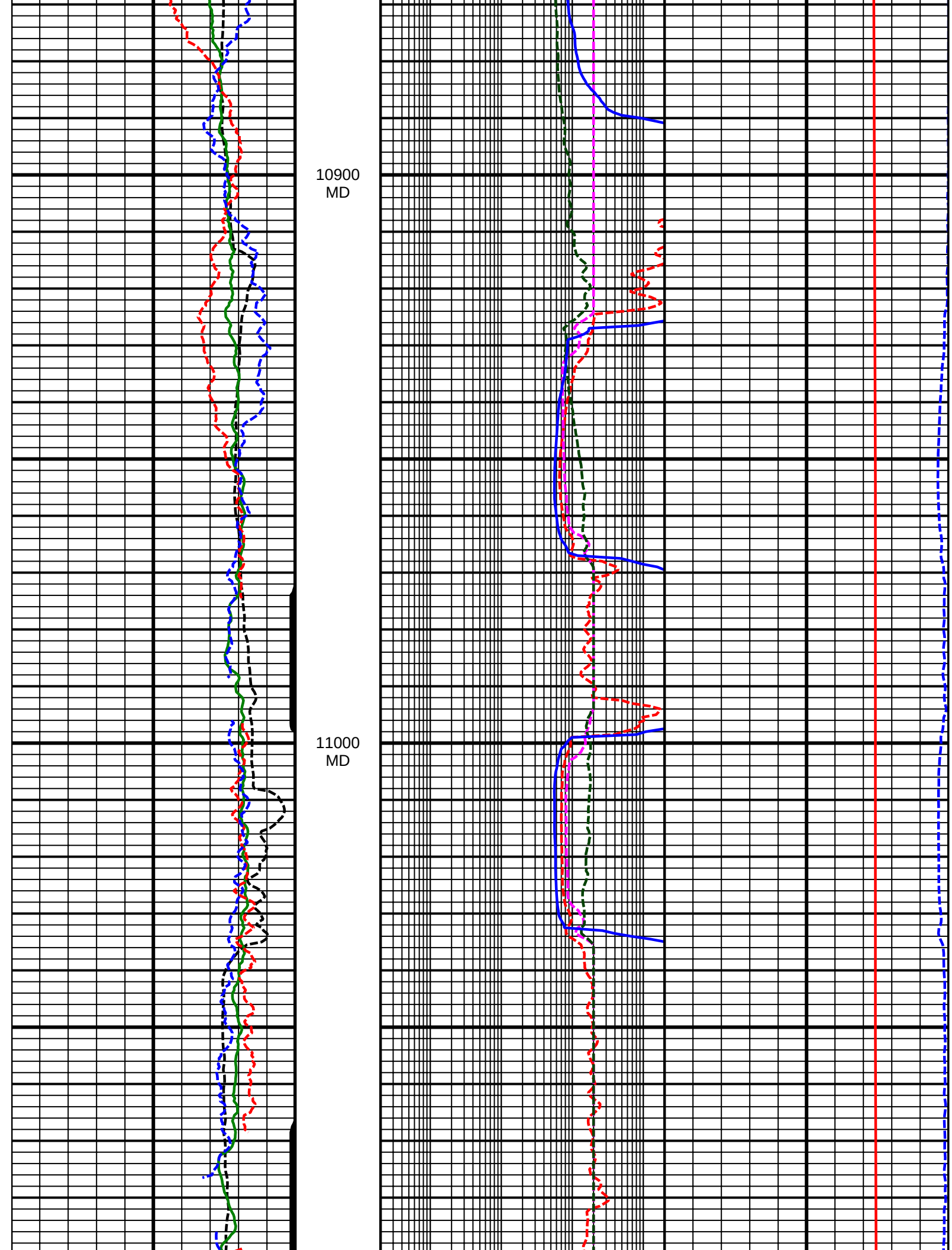
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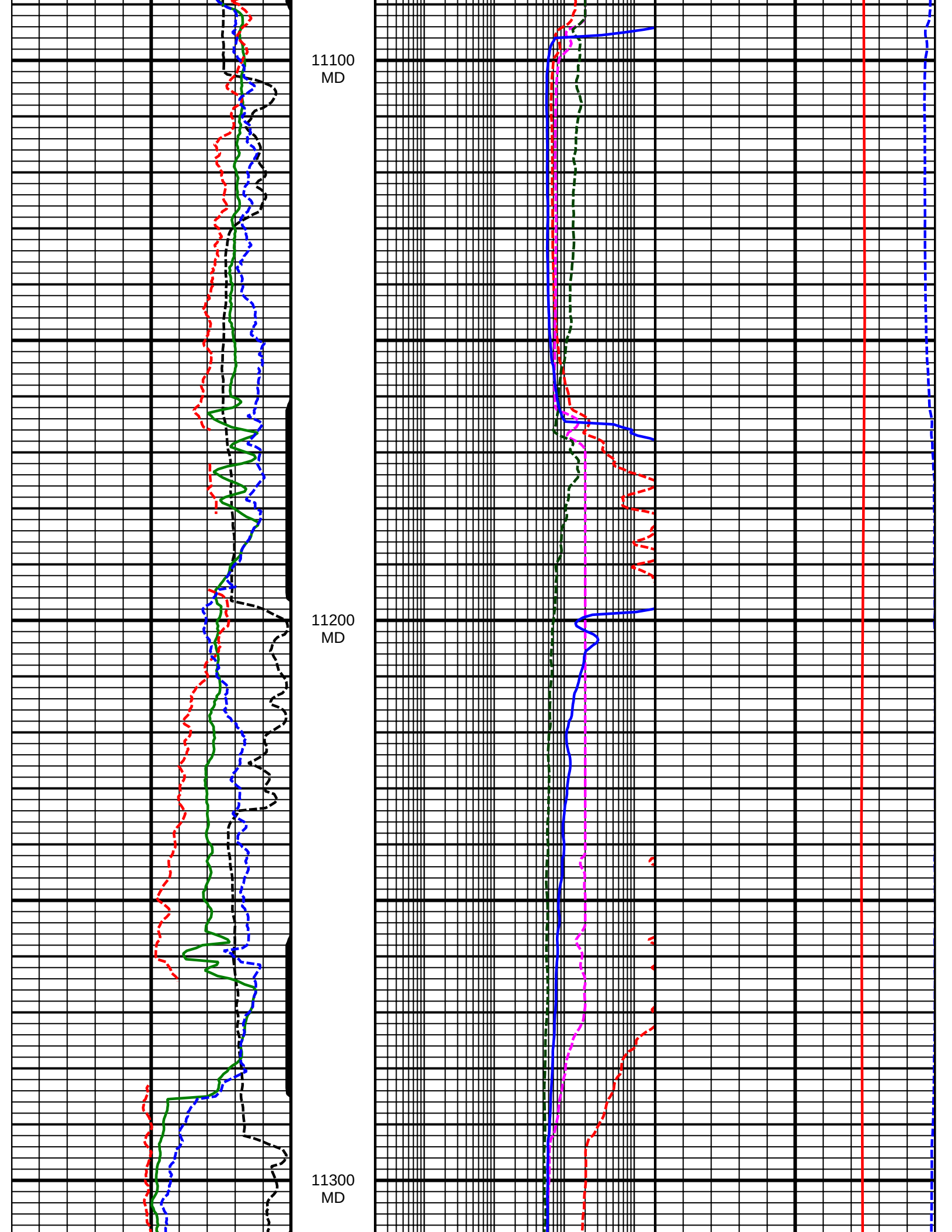
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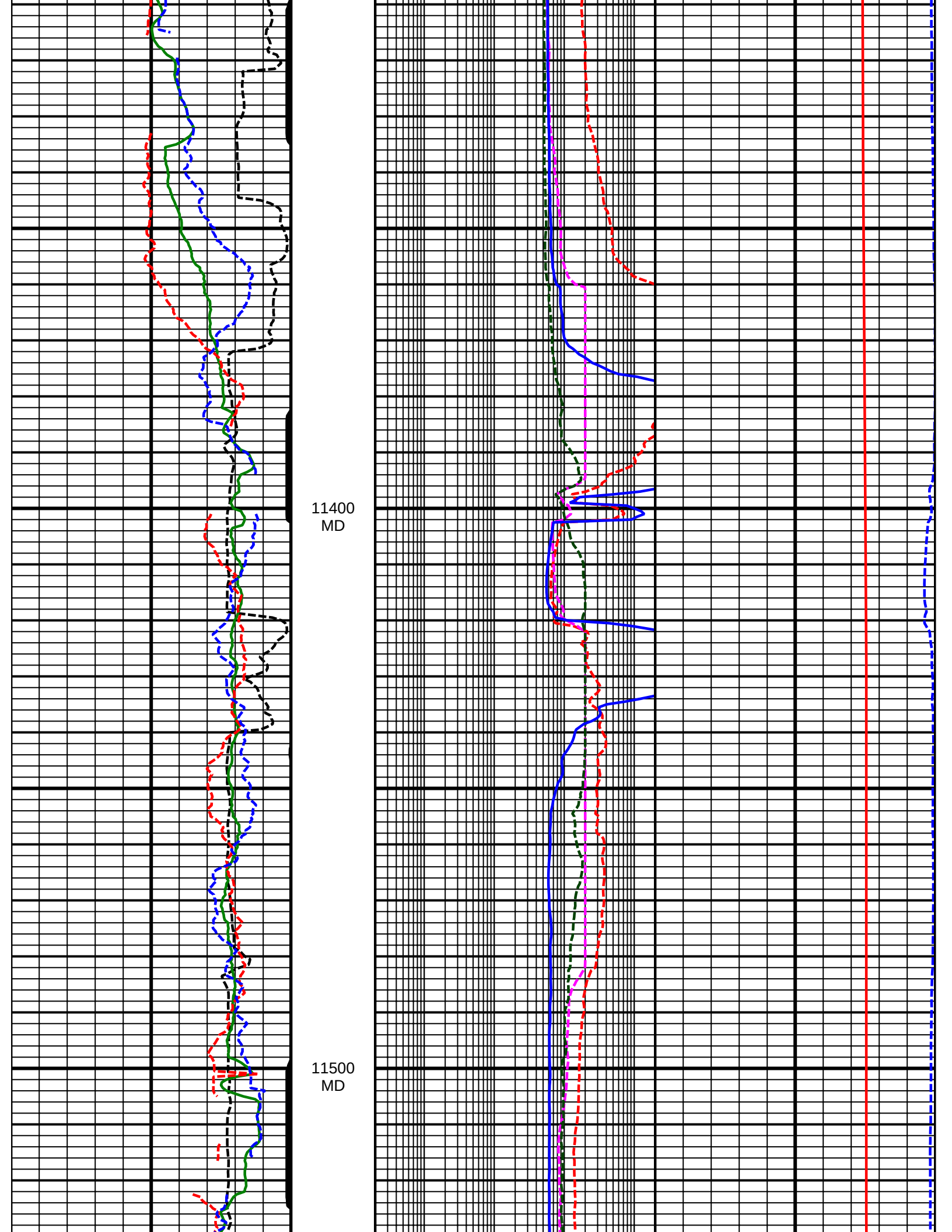
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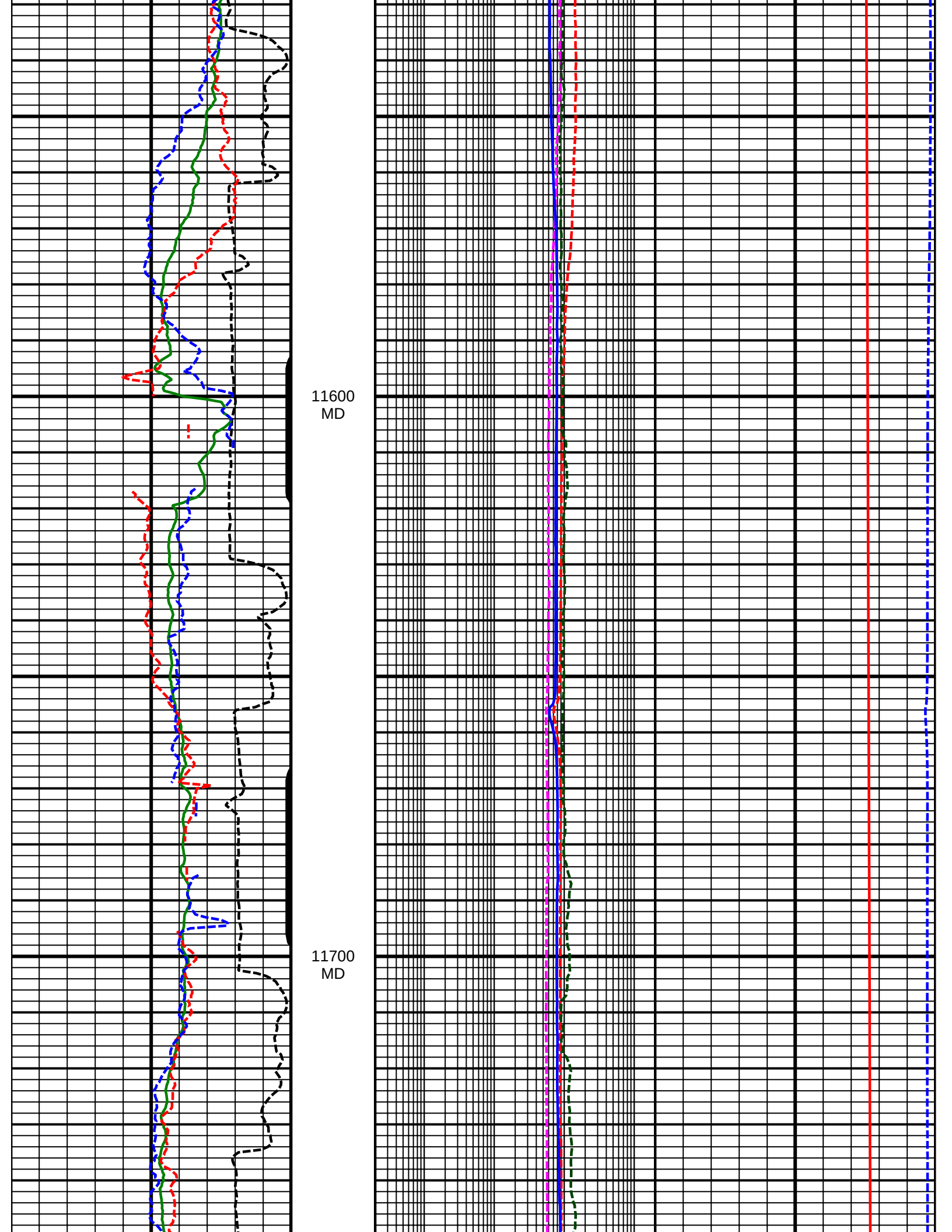
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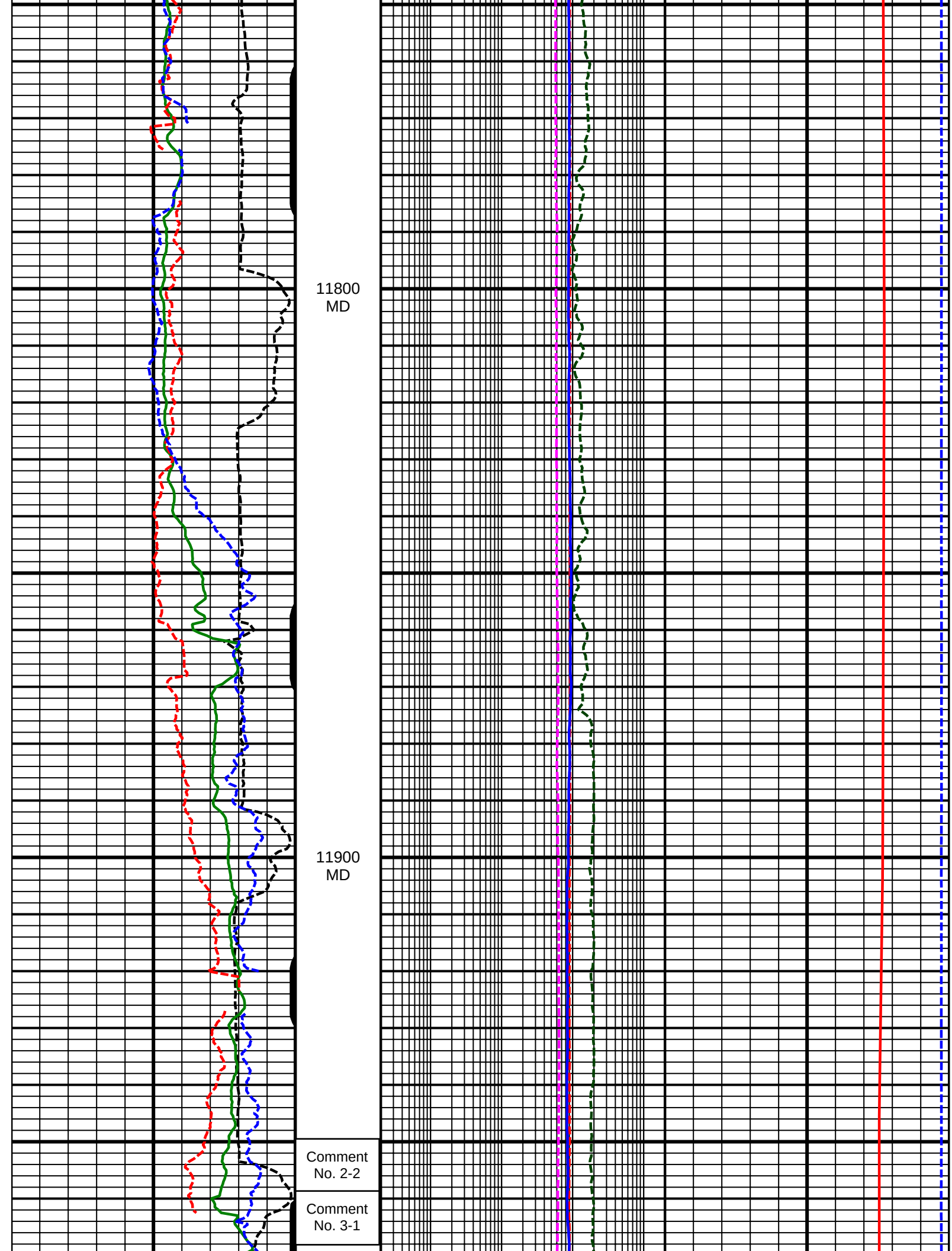
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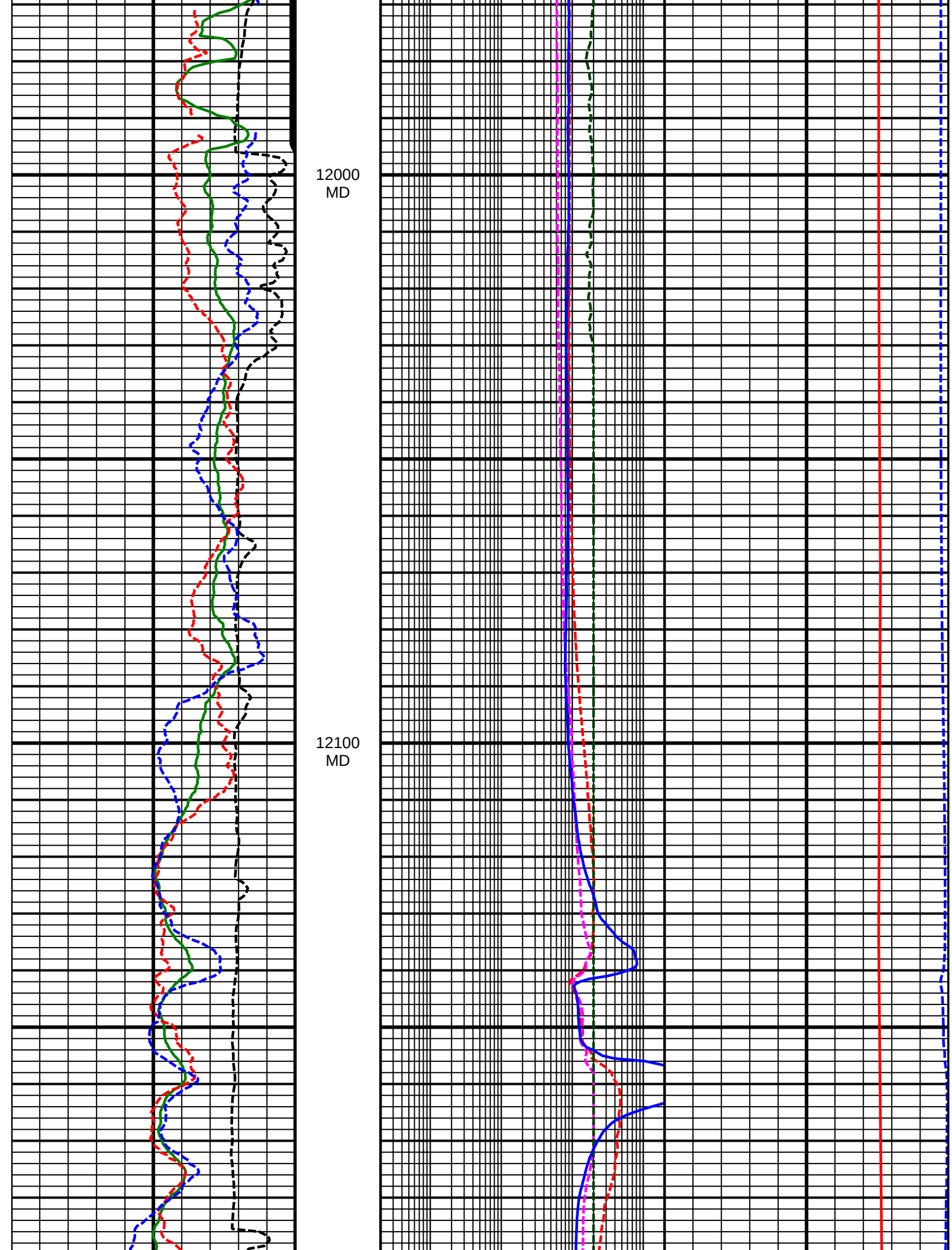
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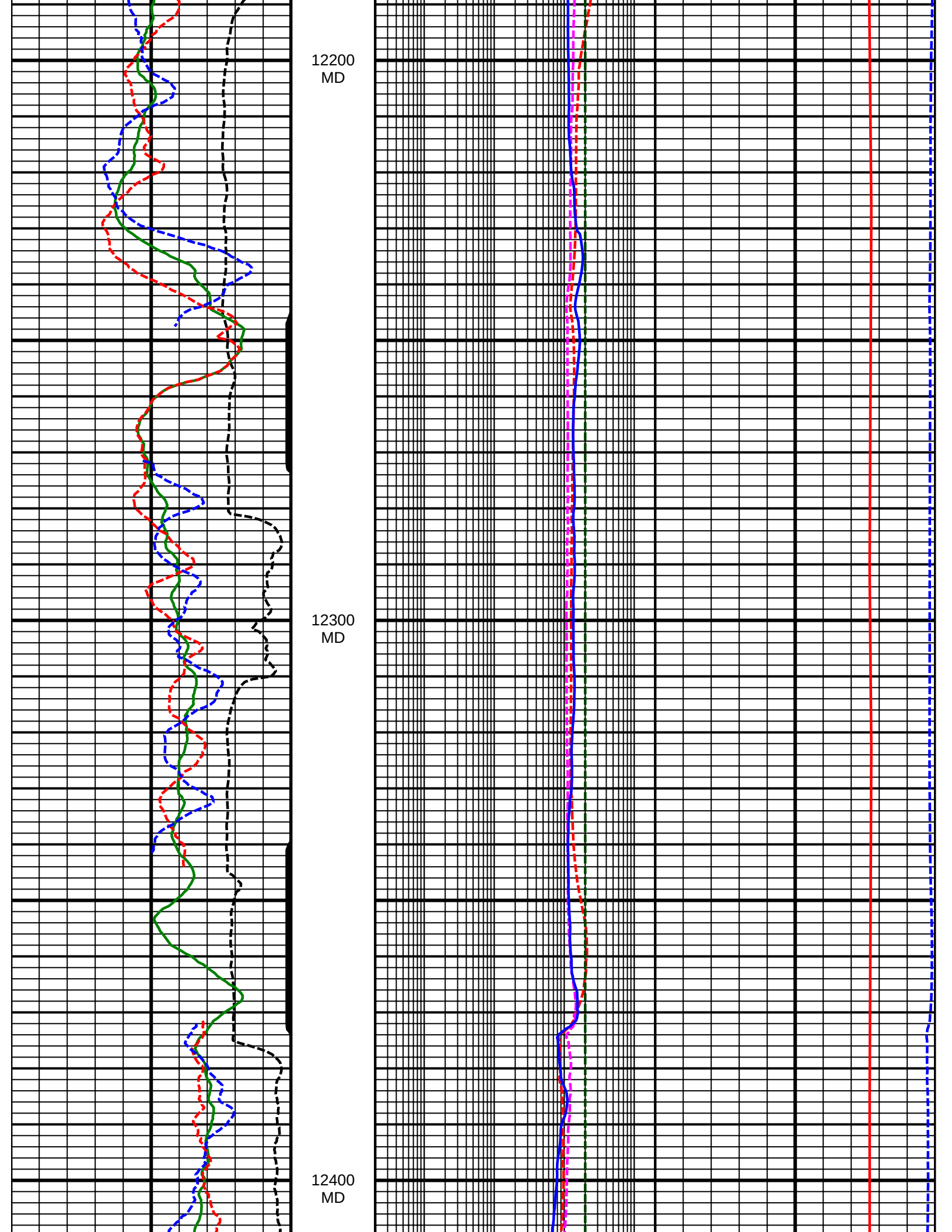
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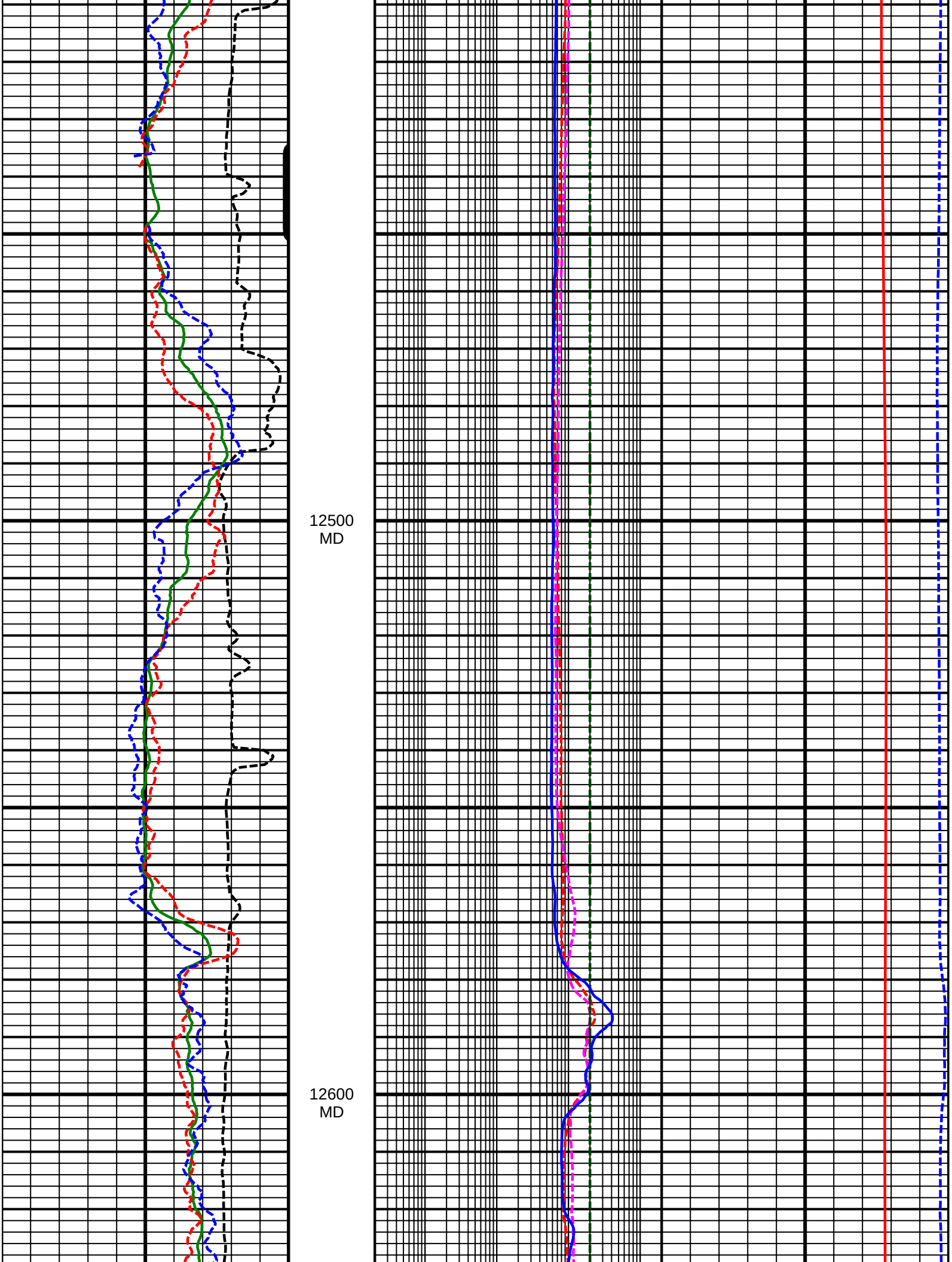
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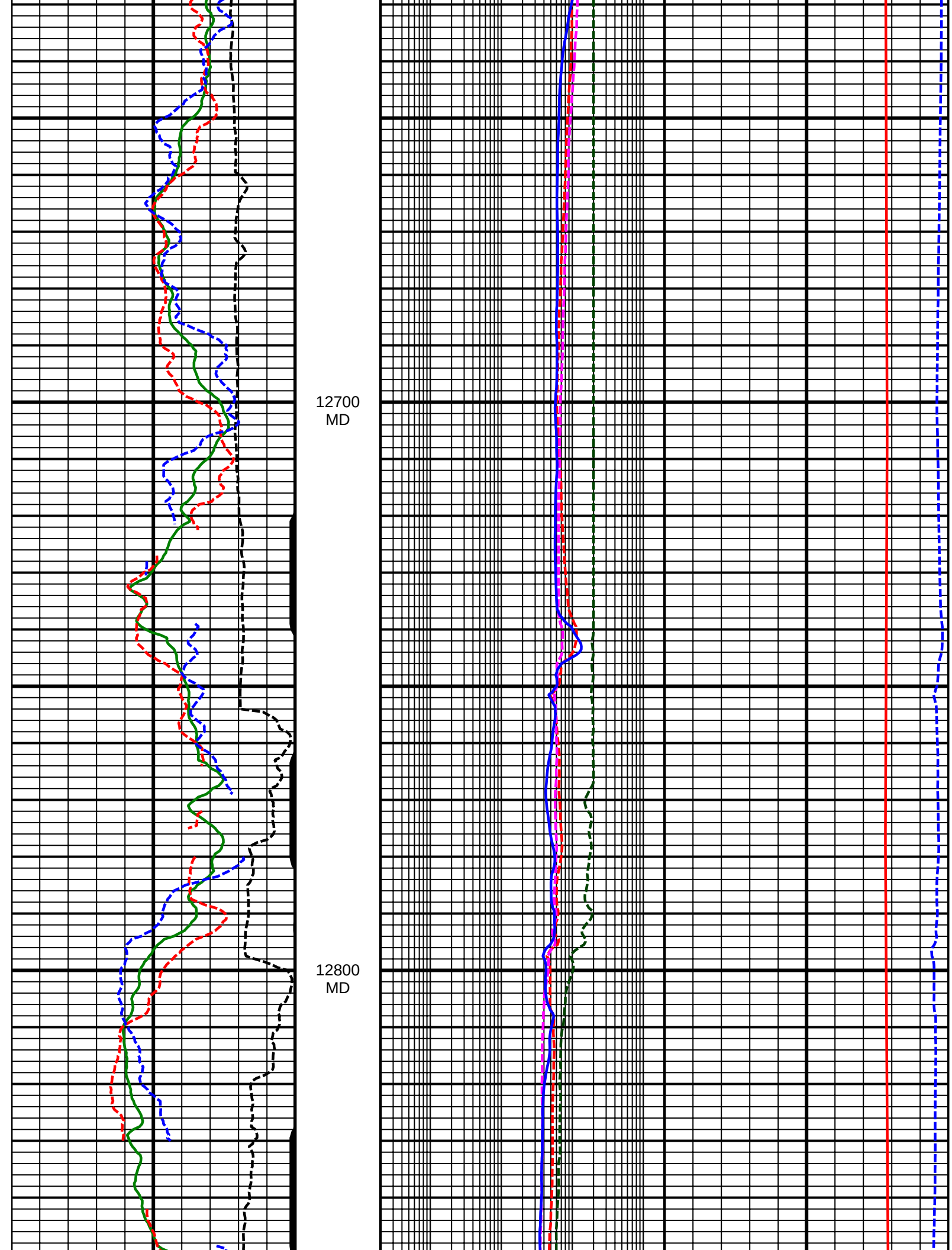
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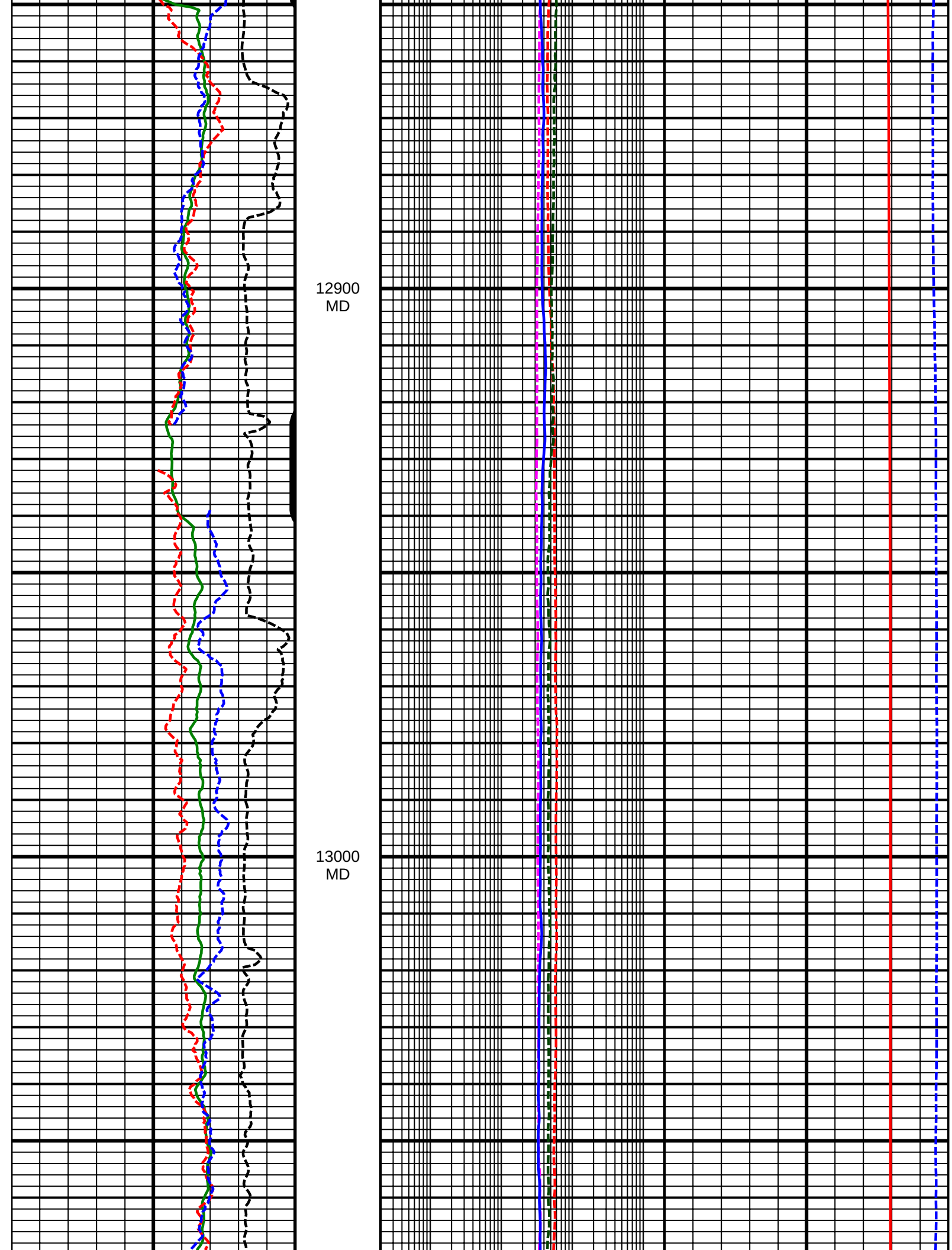
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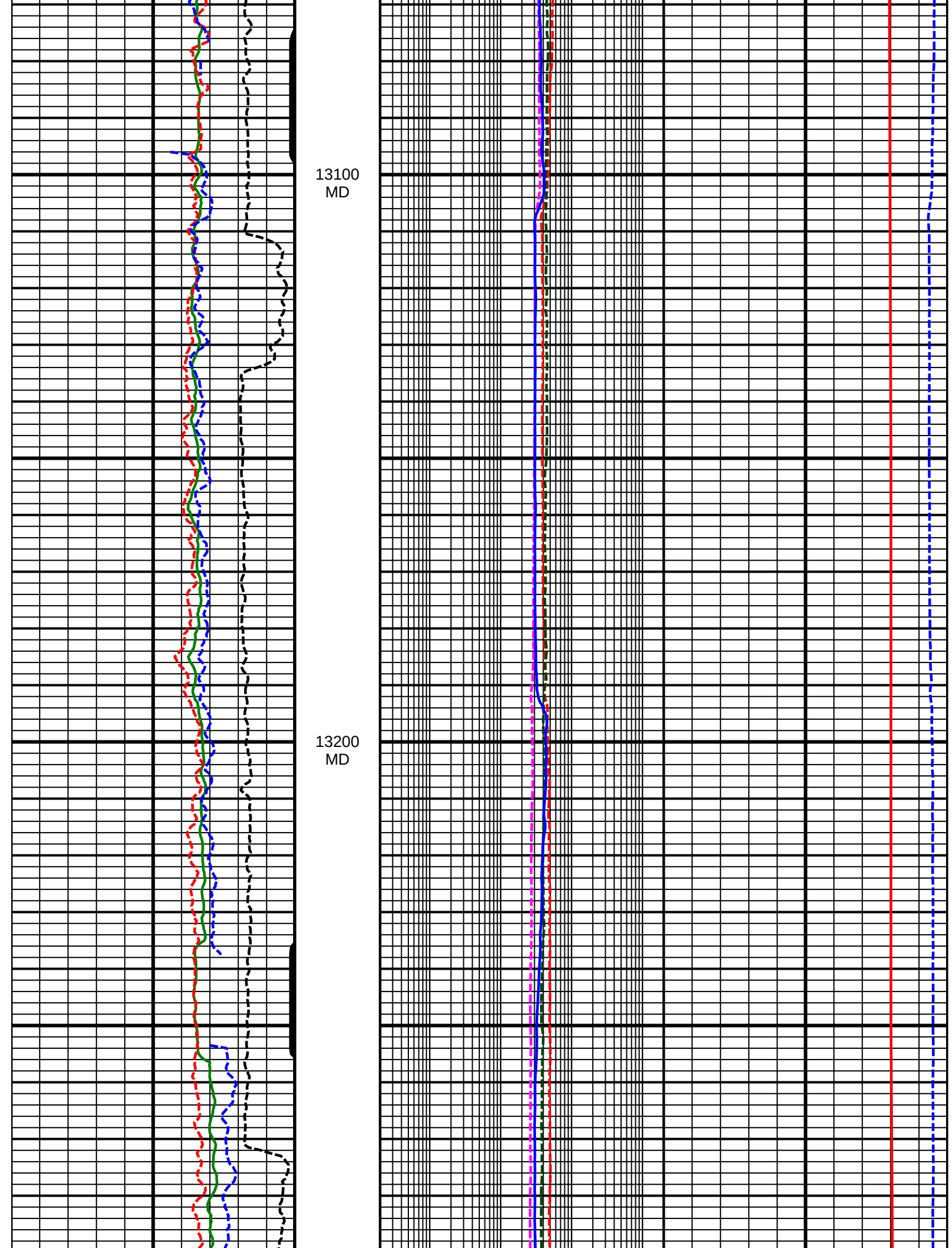
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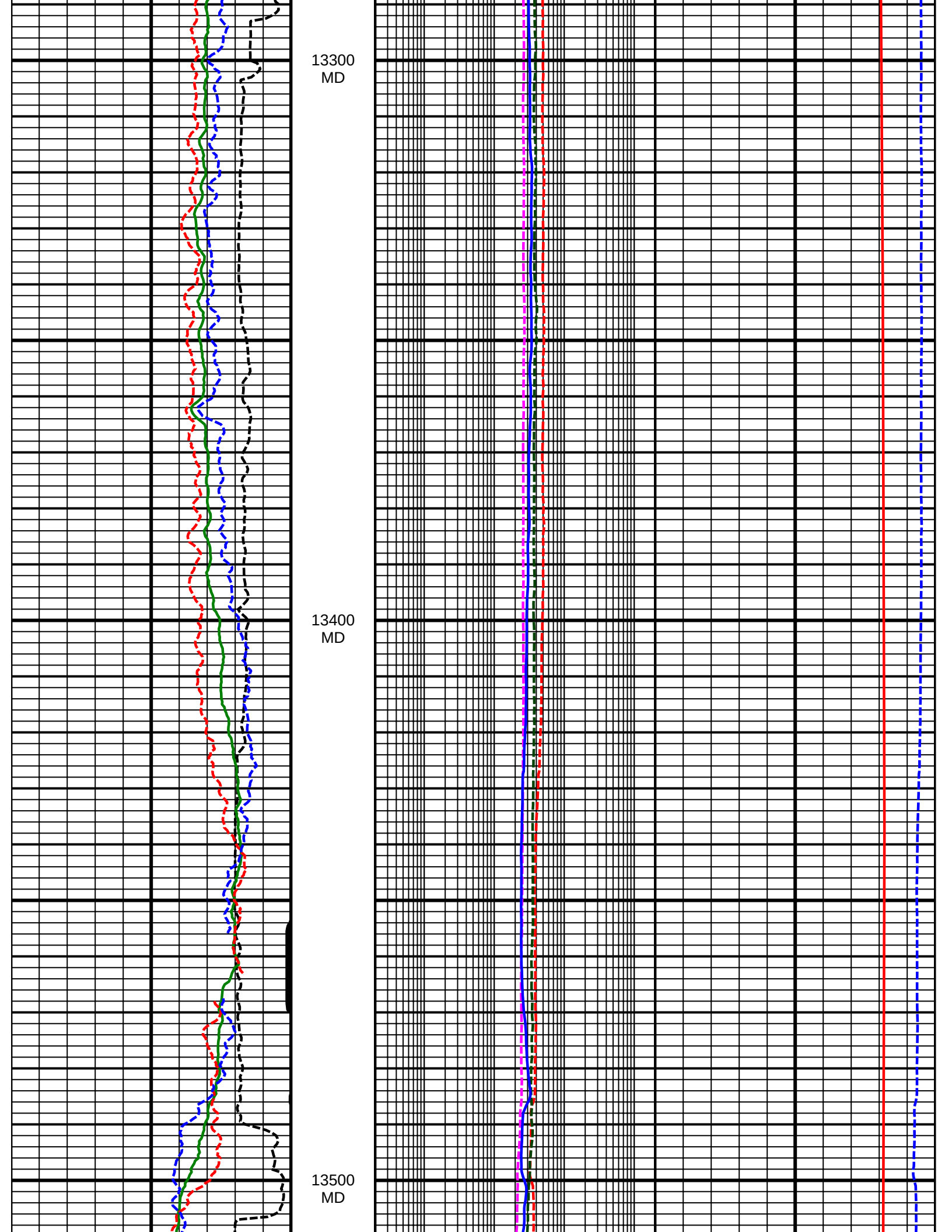
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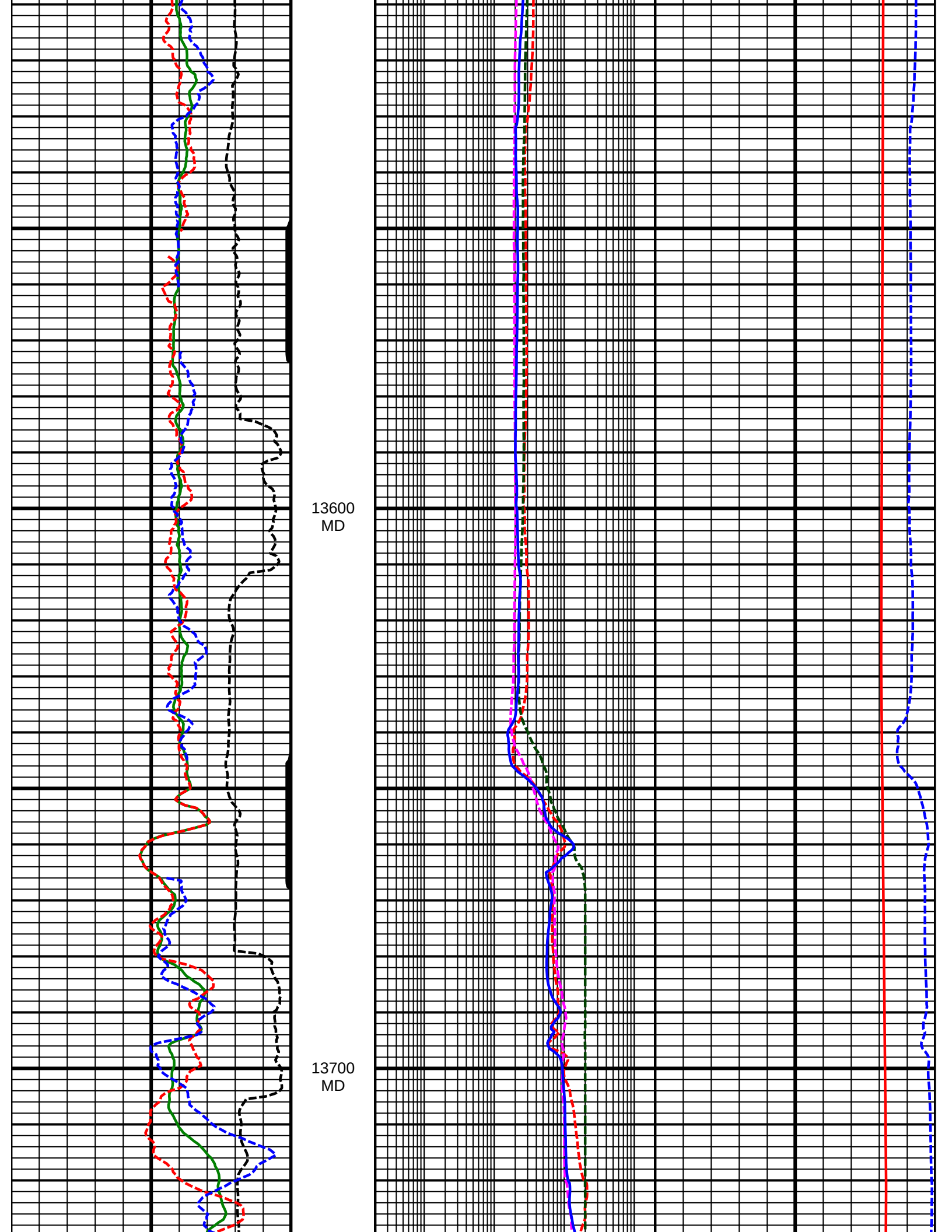
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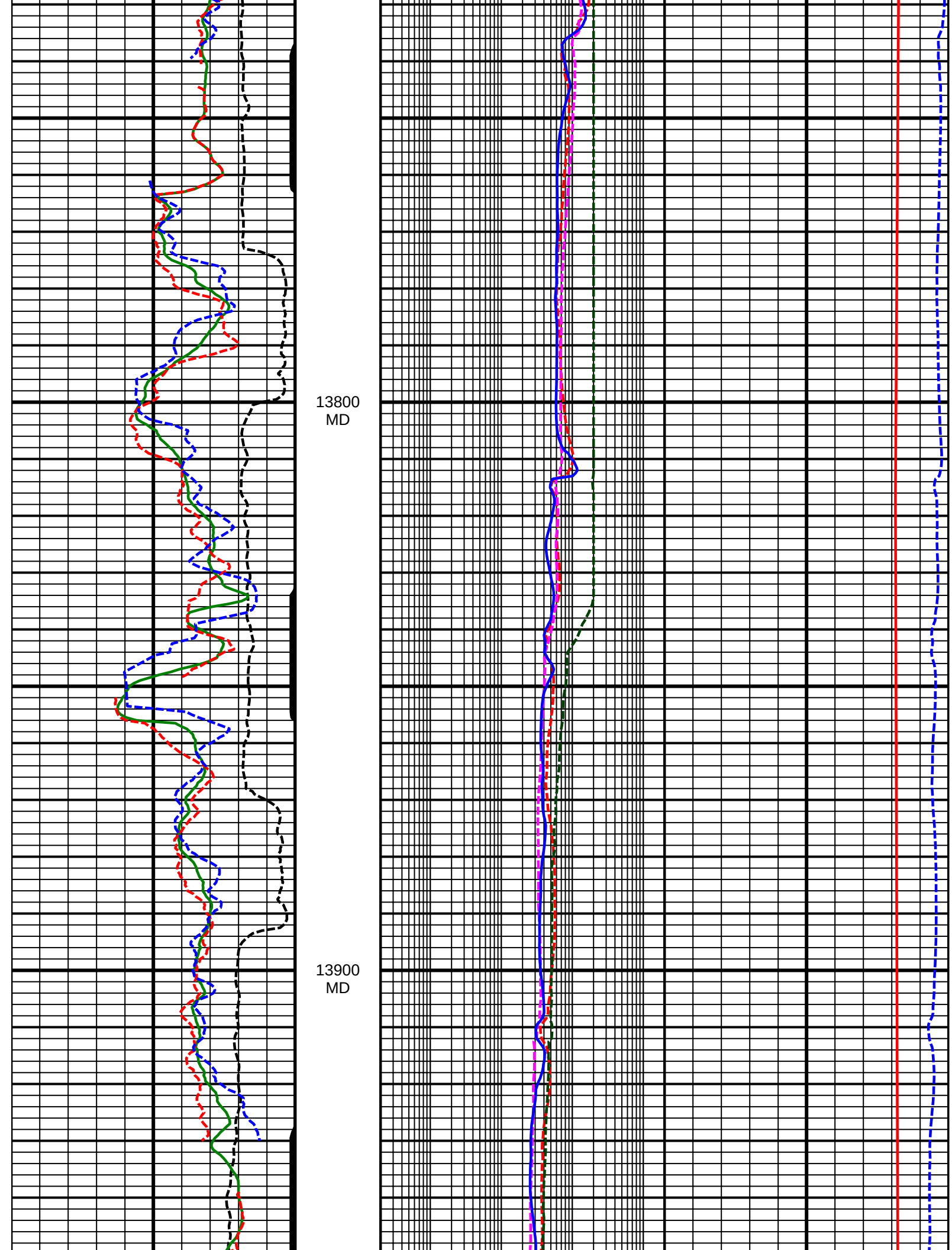
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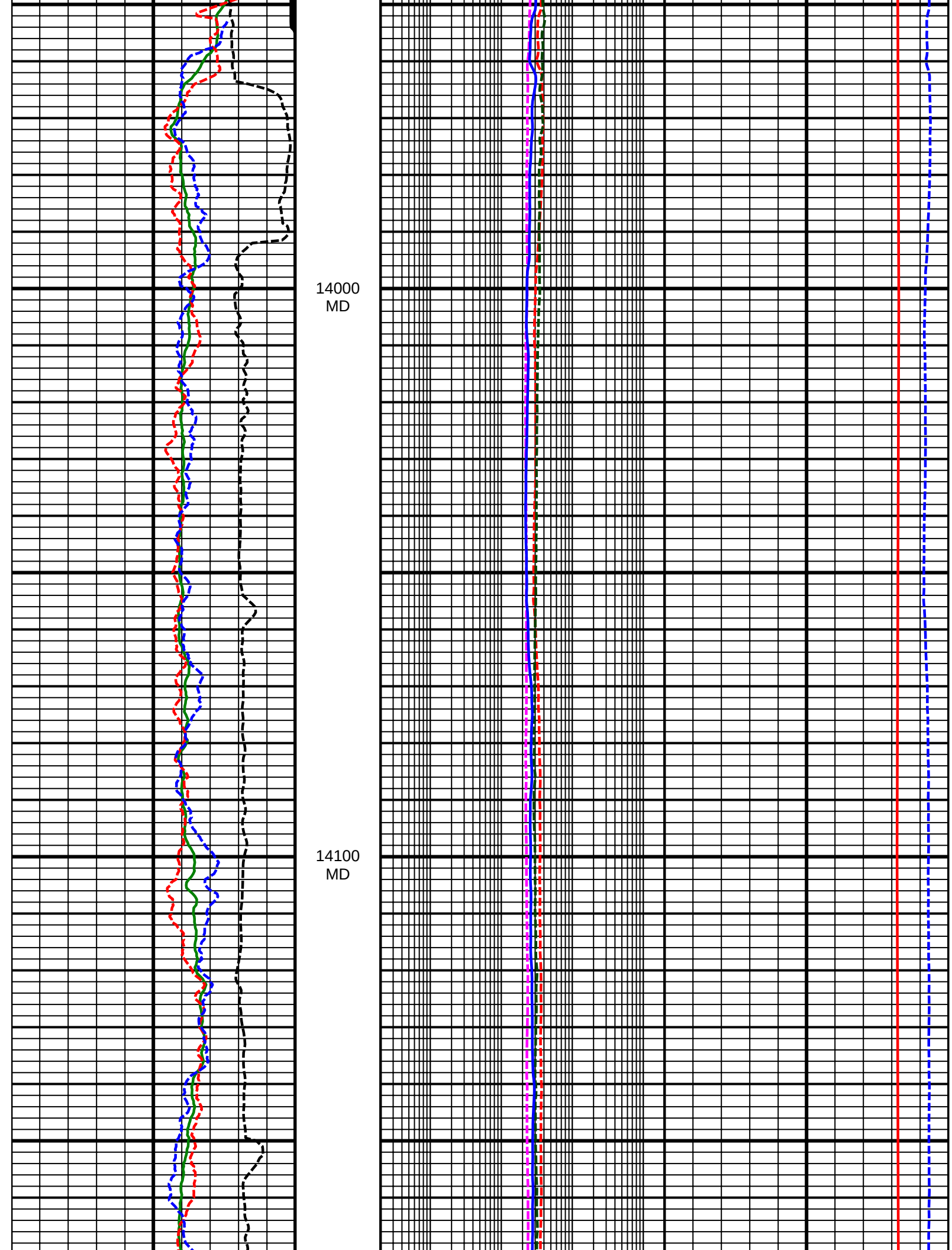
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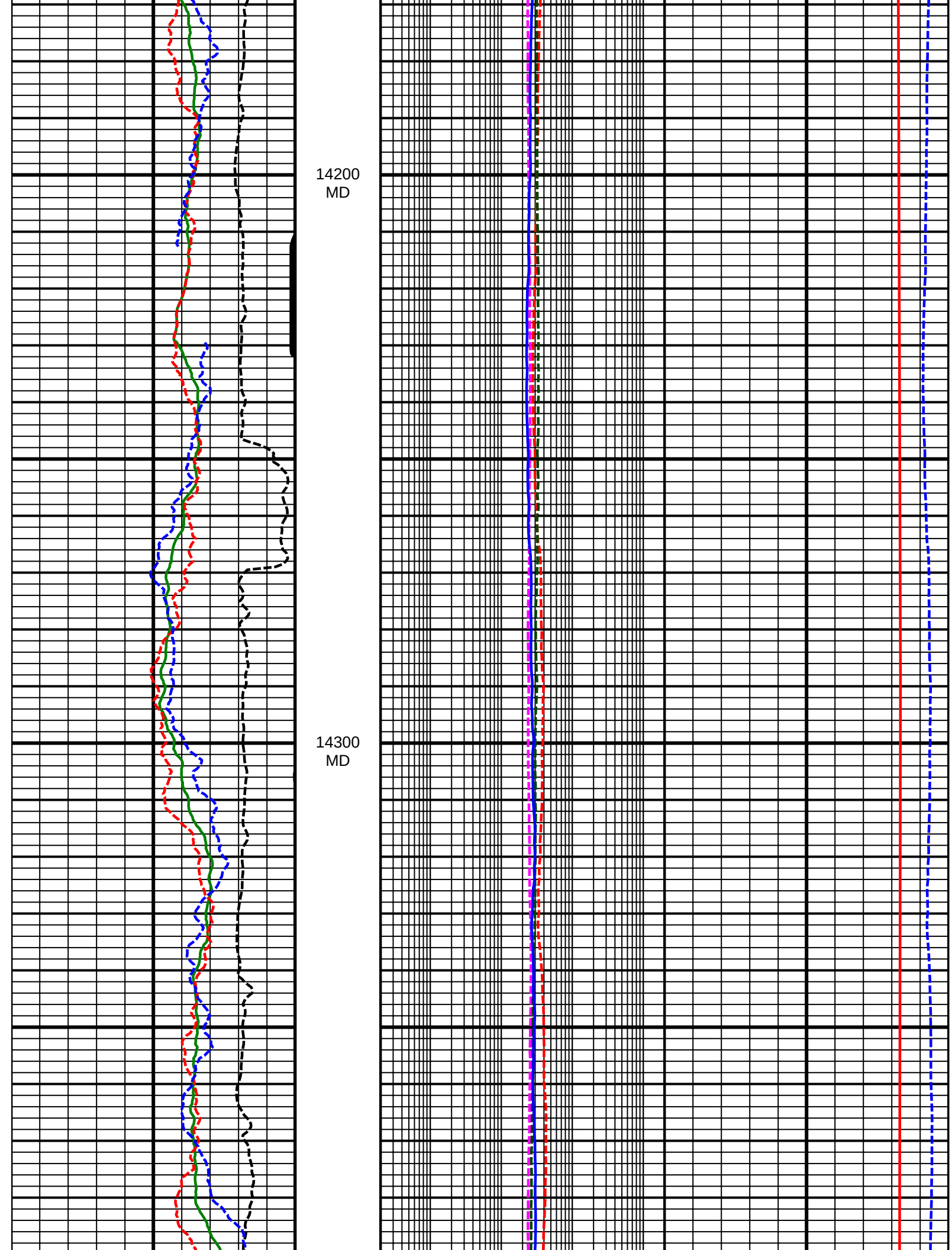
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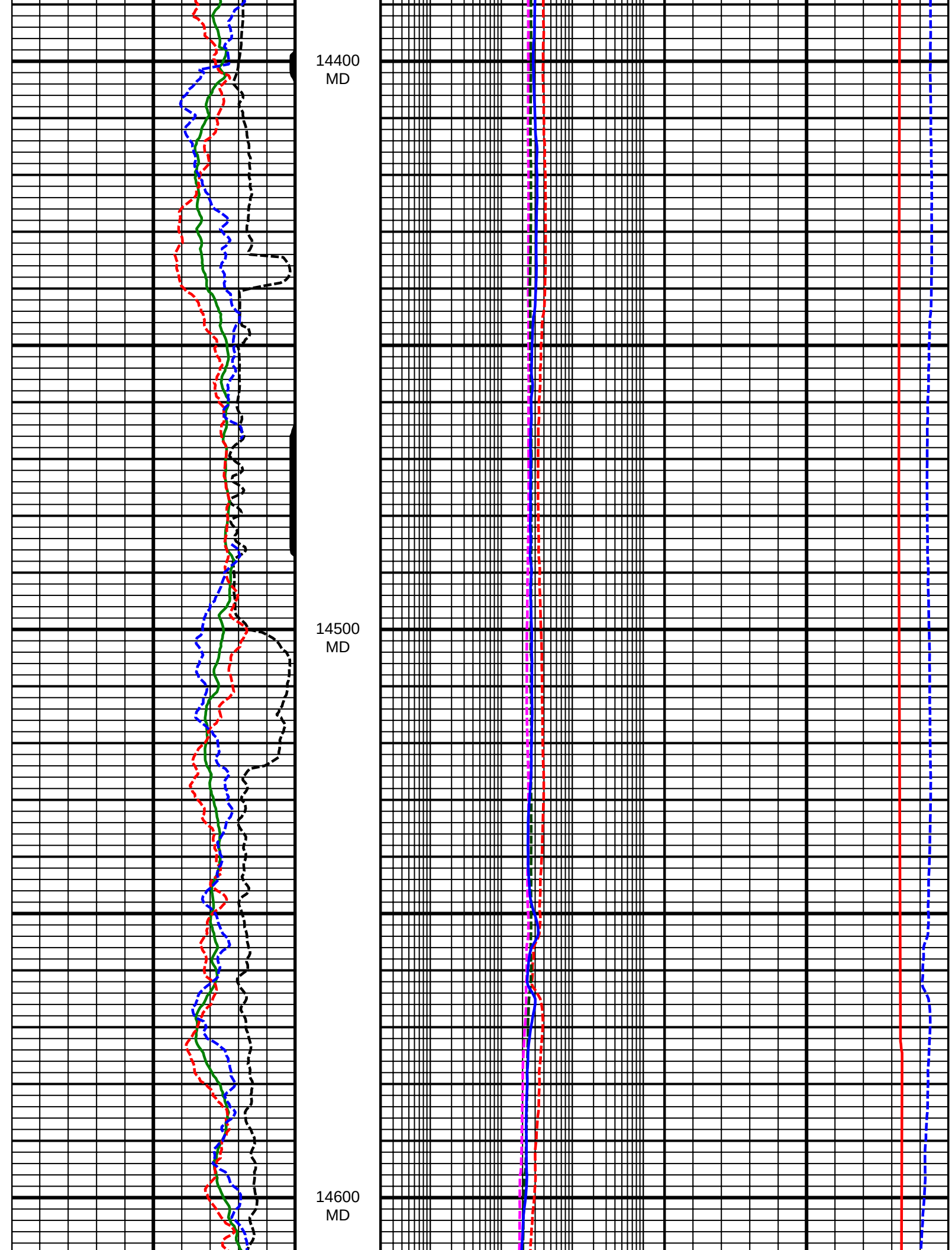
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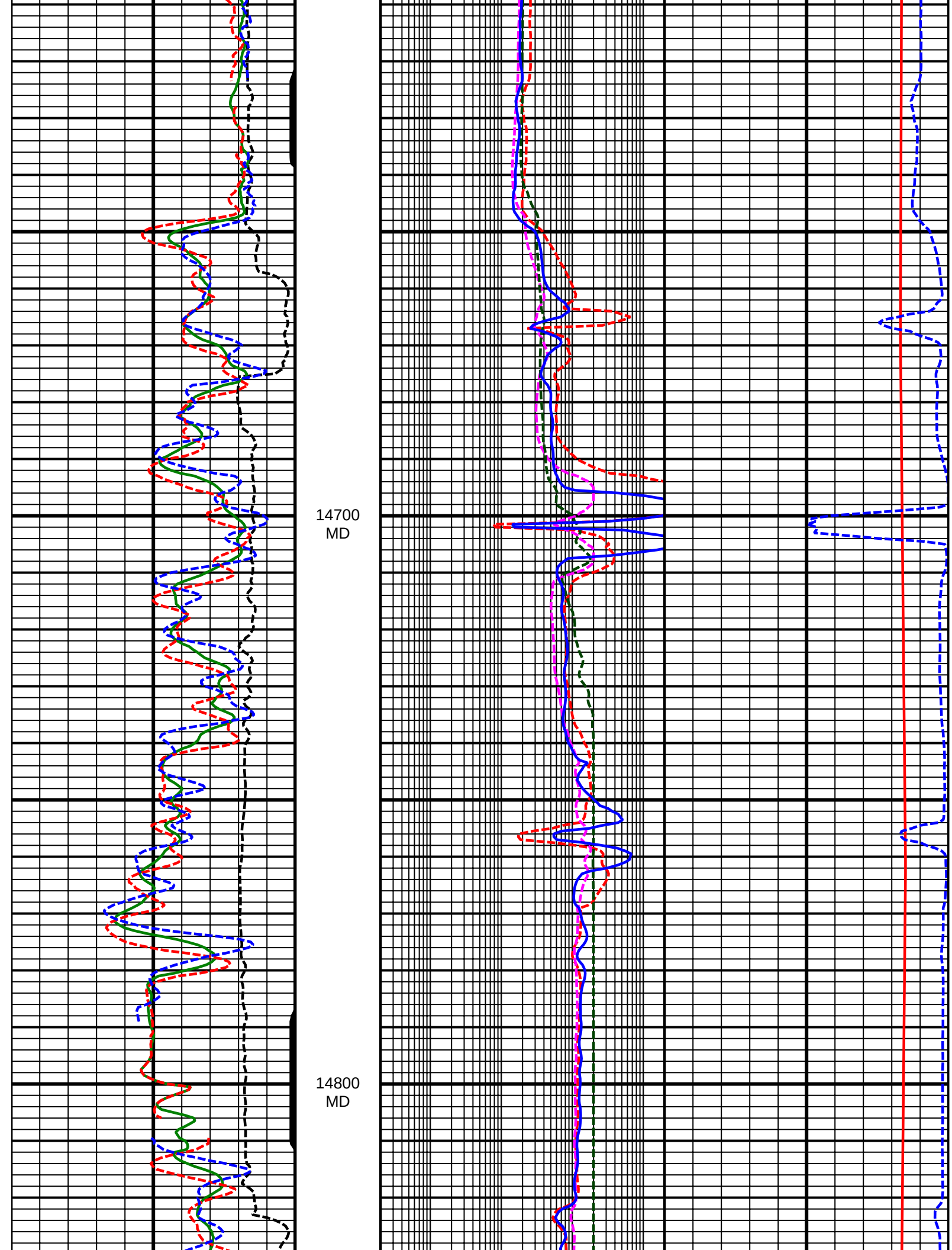
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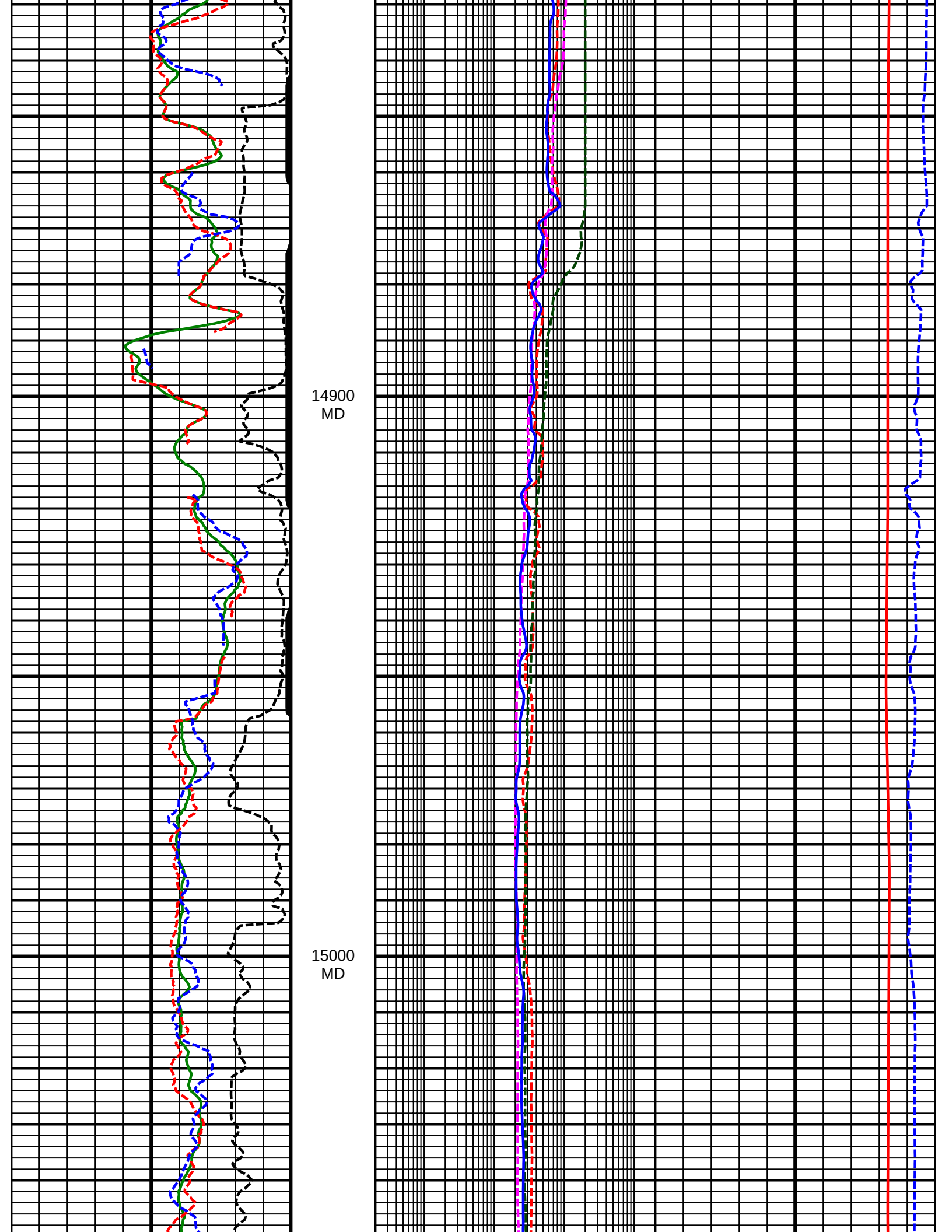
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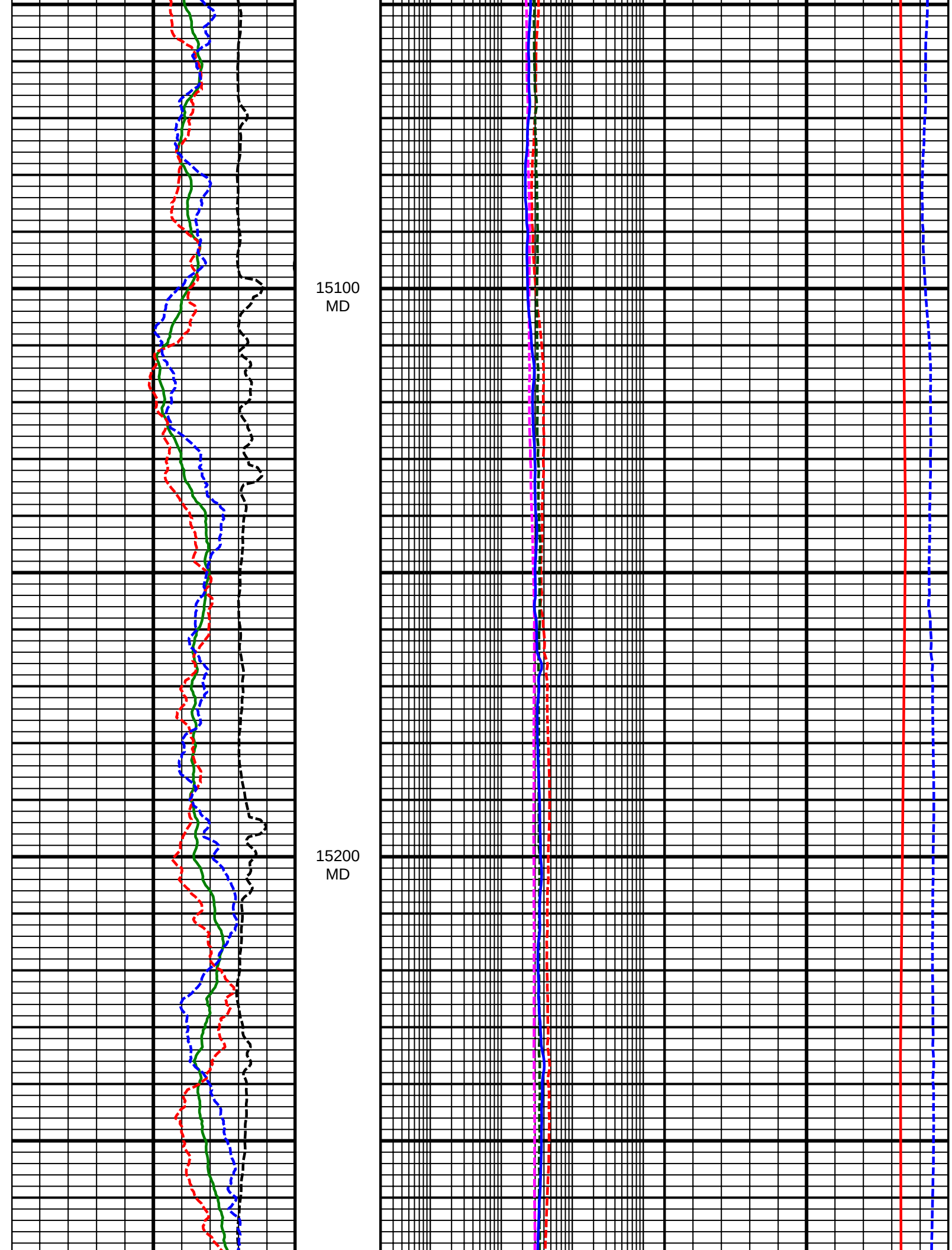
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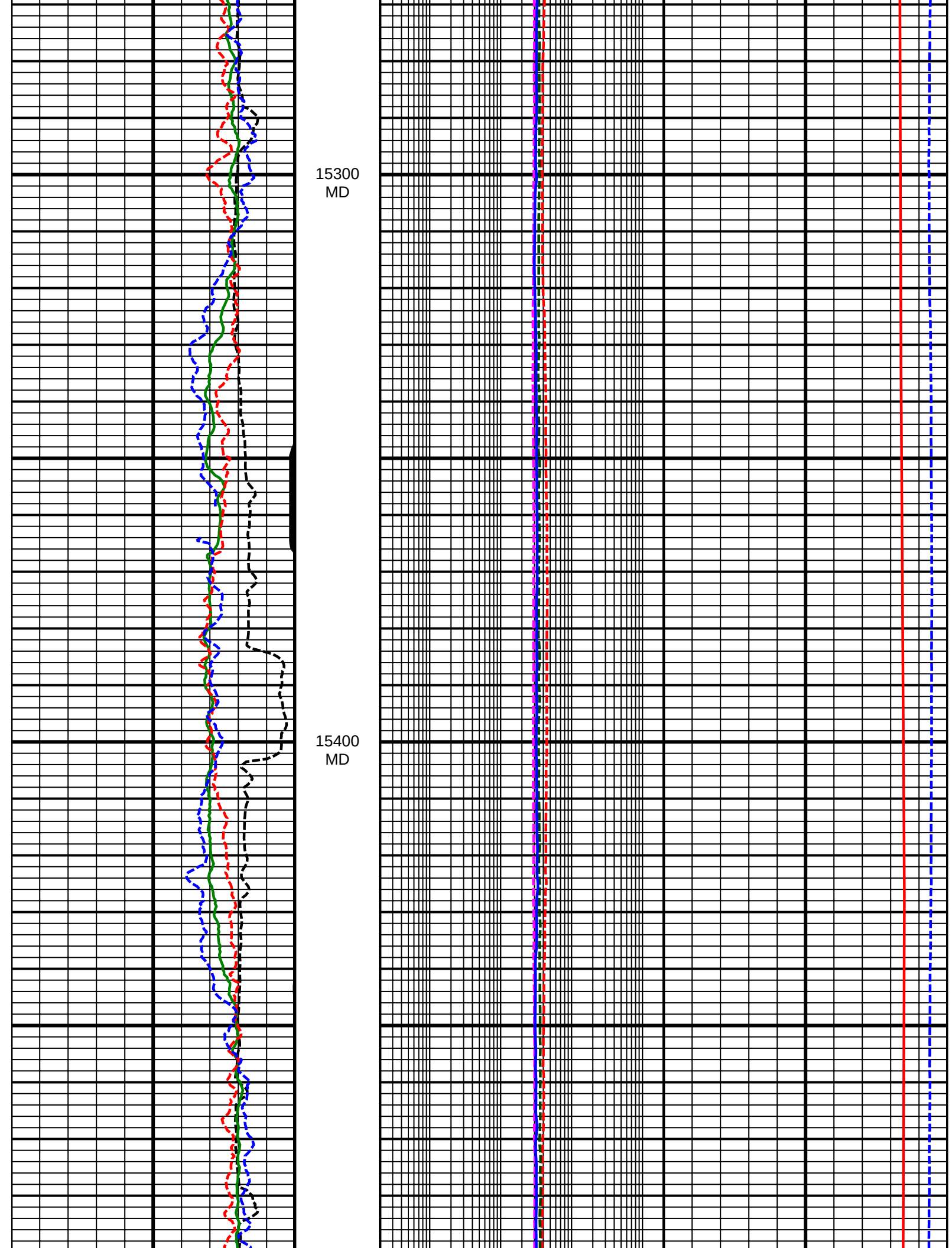
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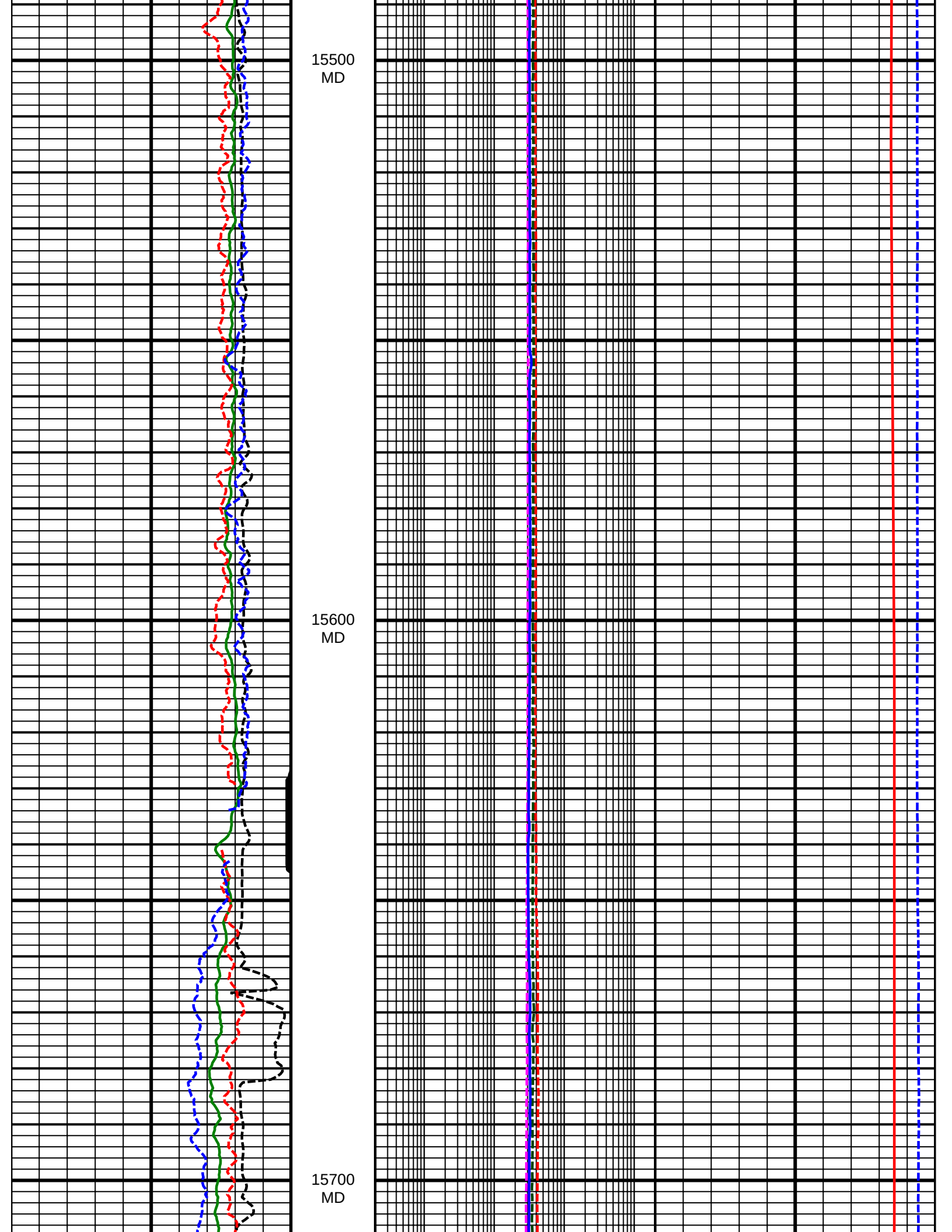
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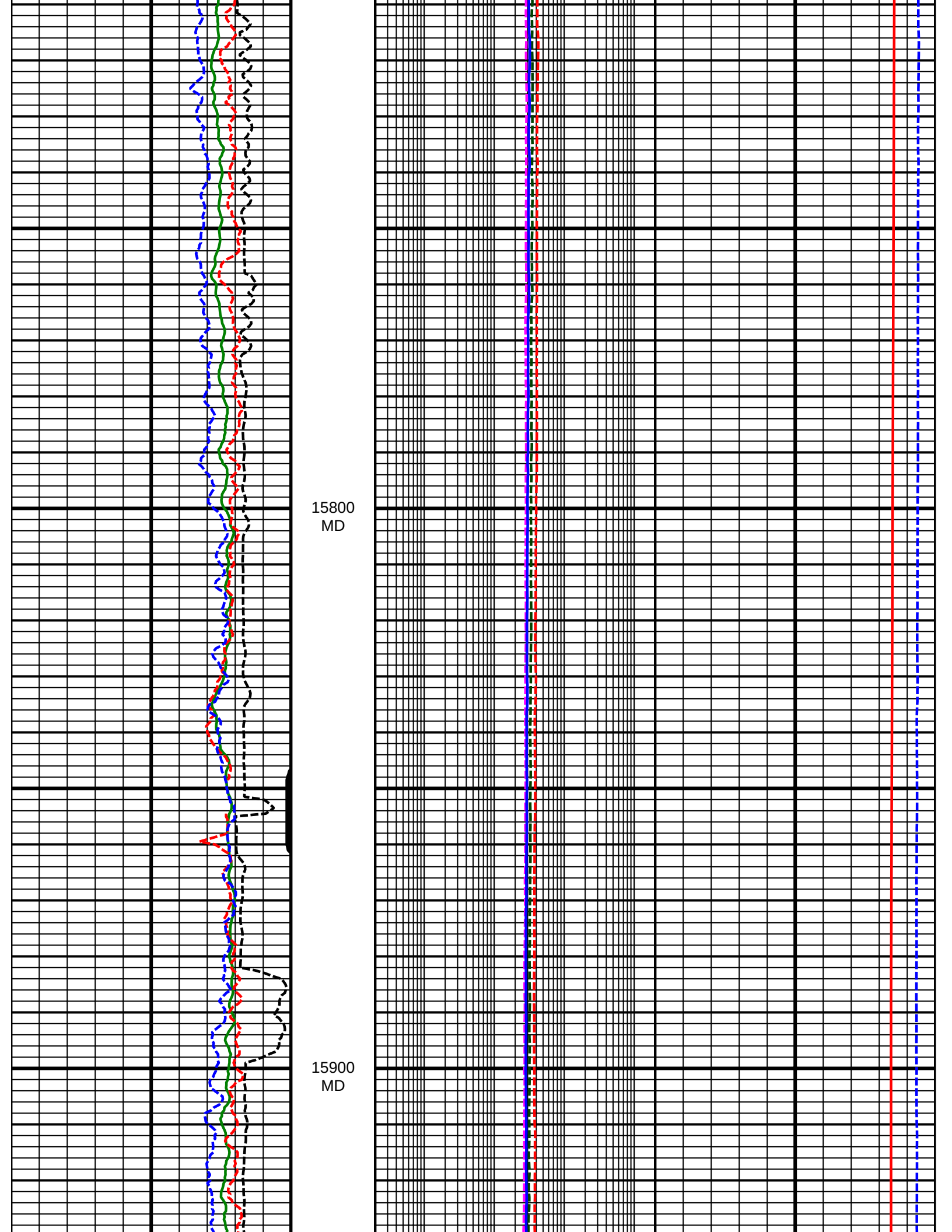
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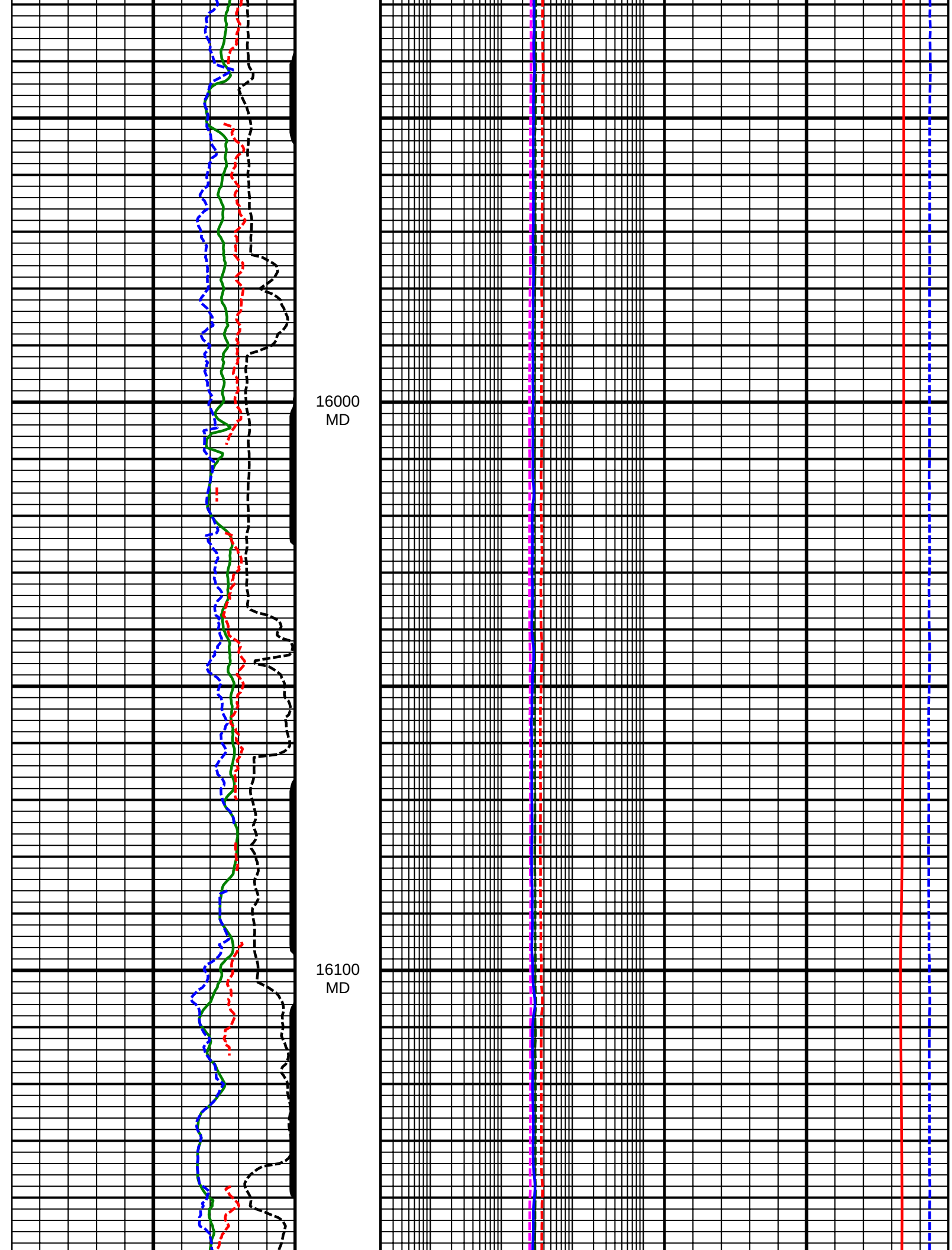
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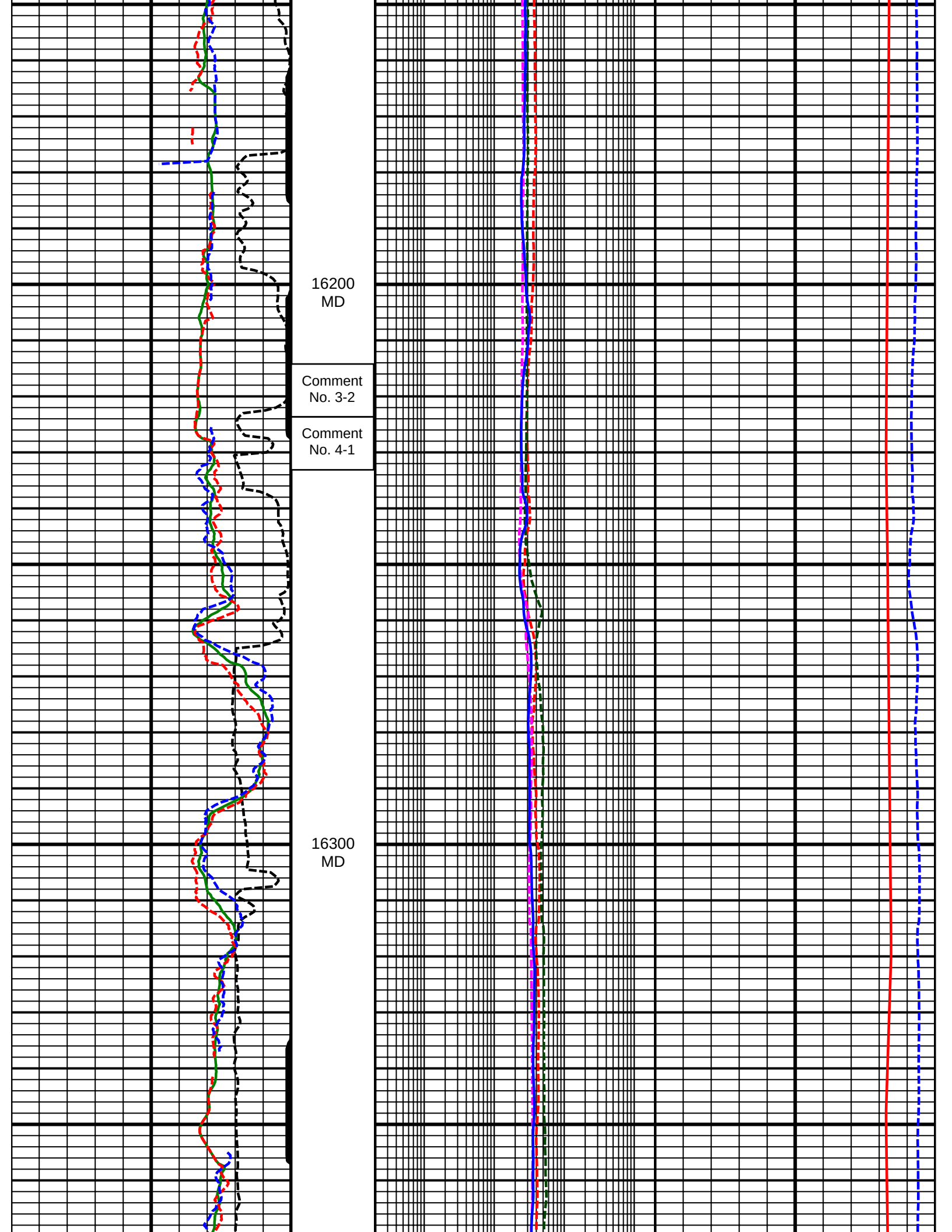
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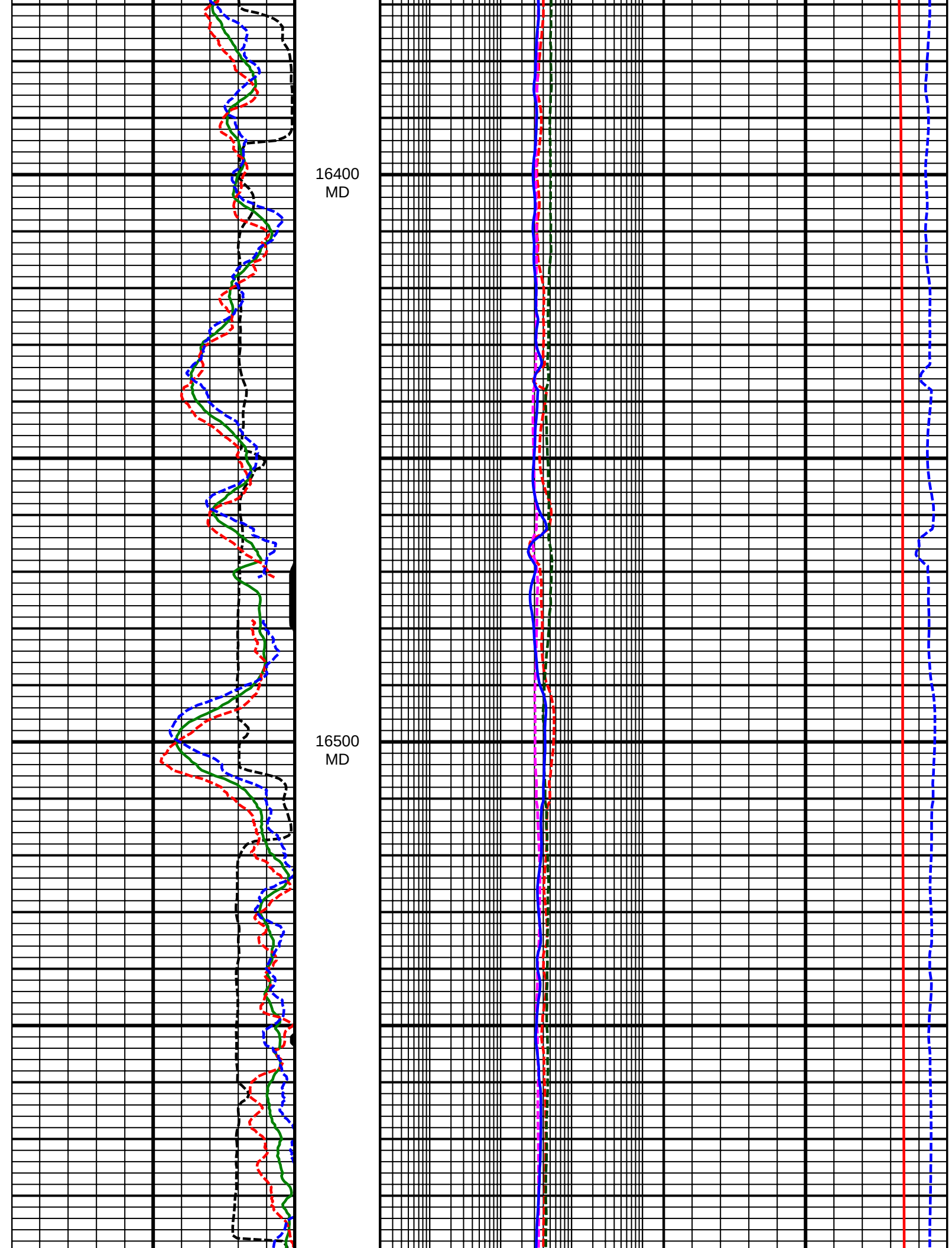
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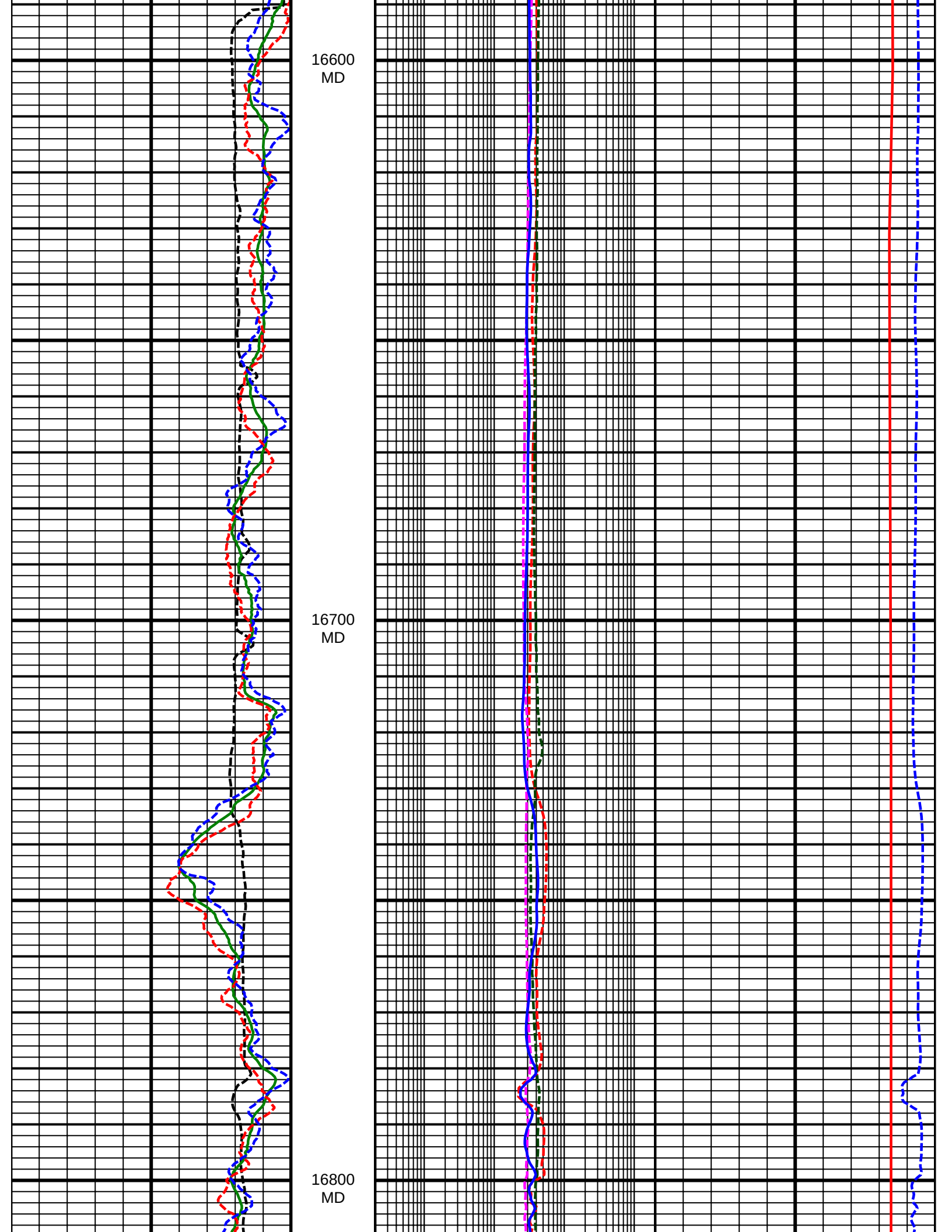
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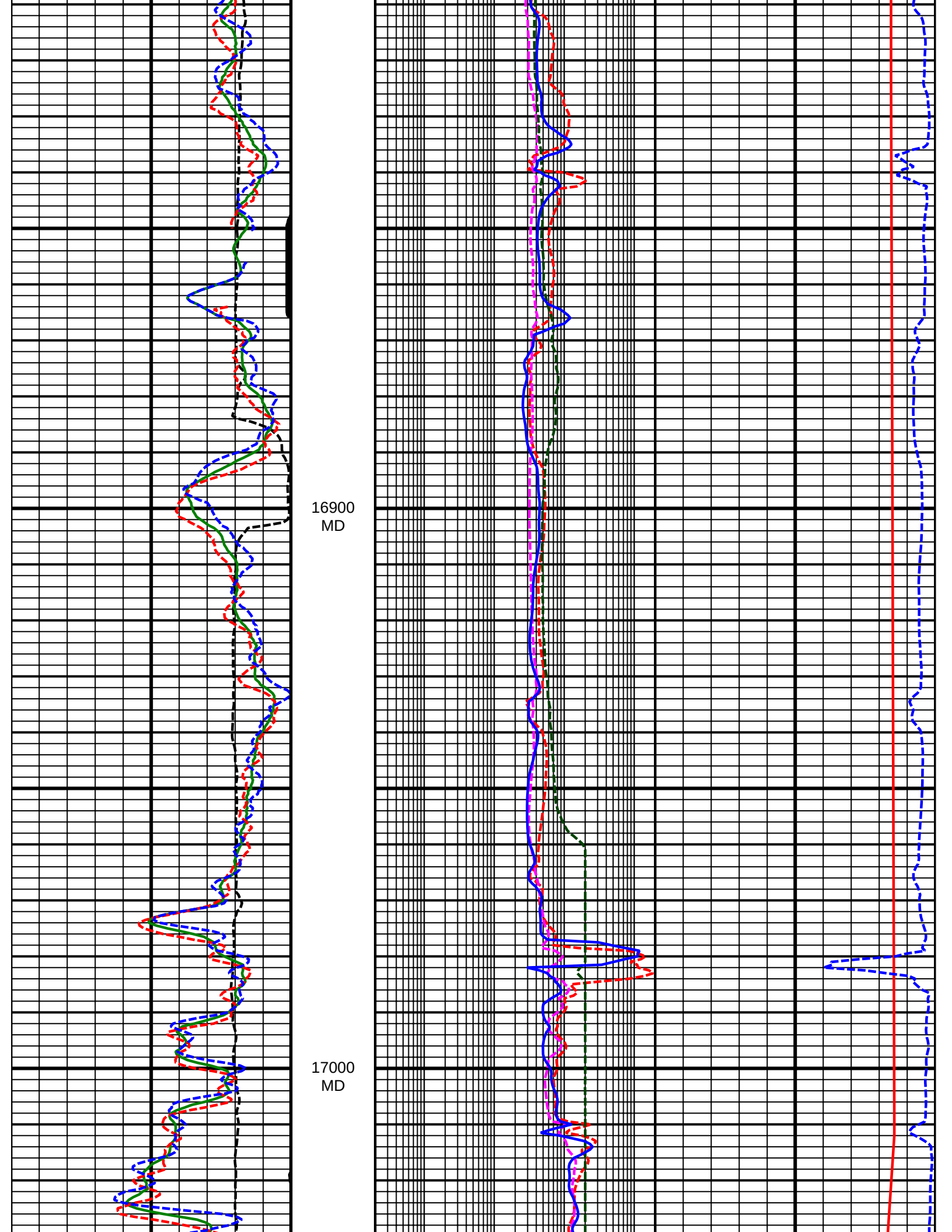
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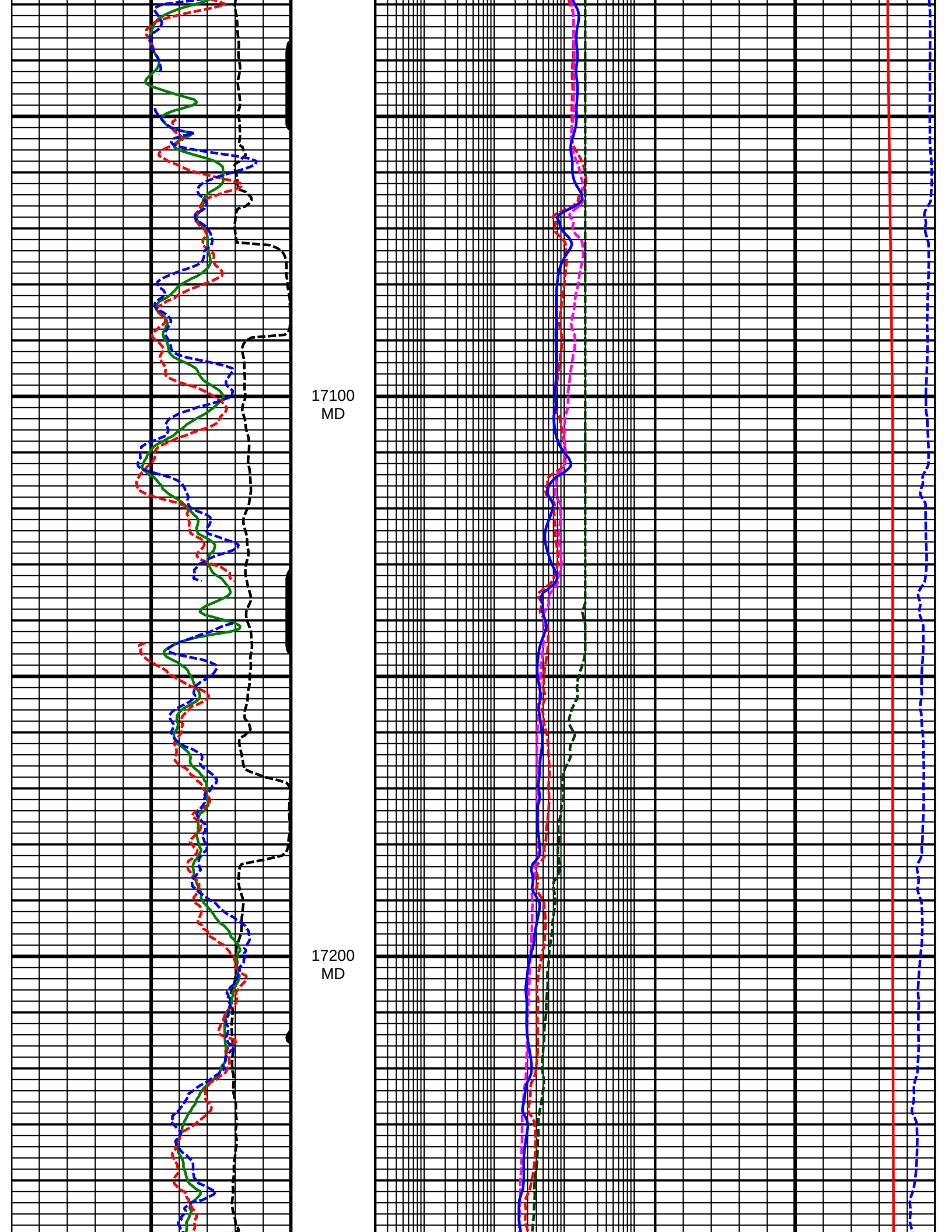
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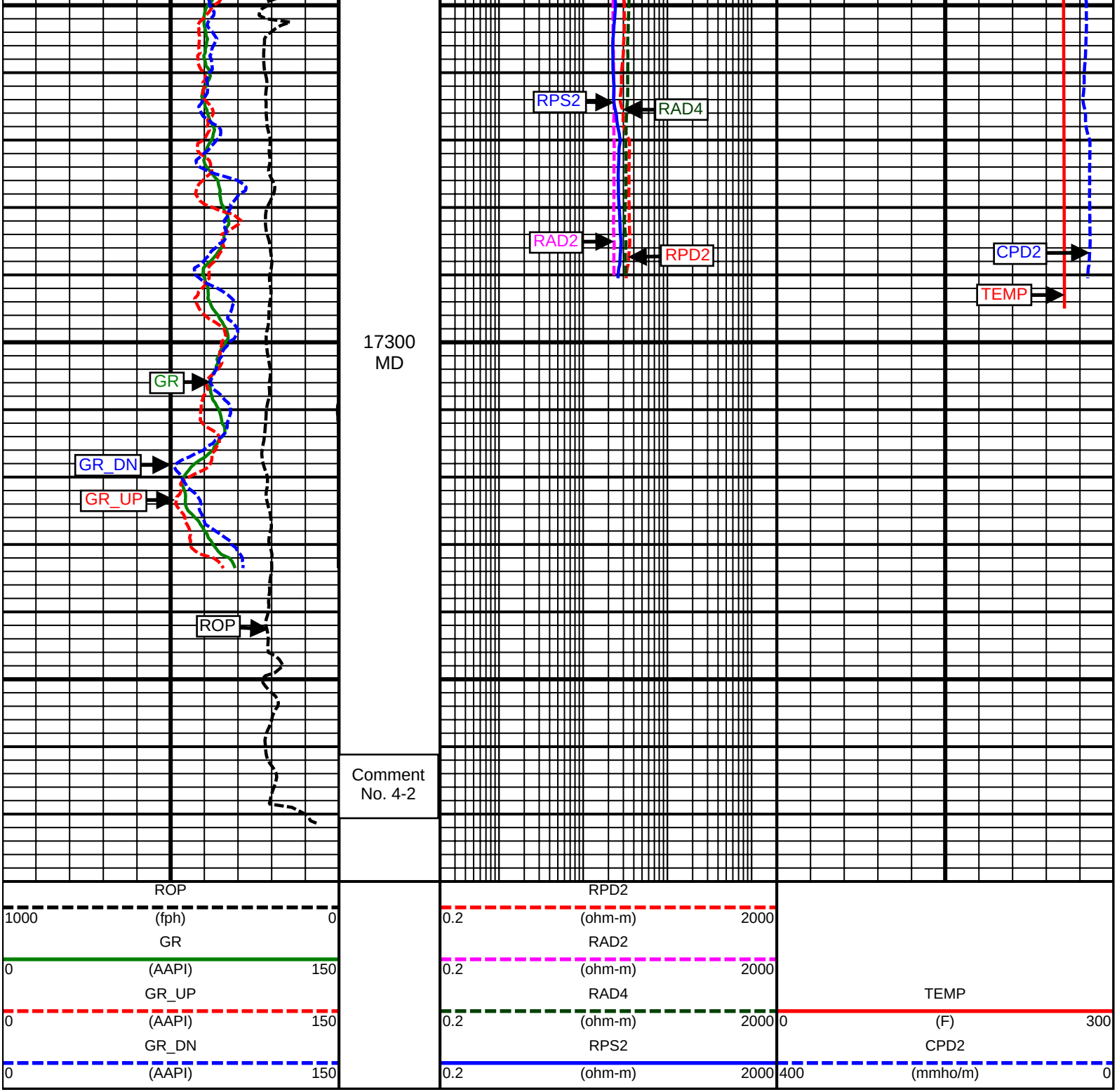
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RAD4
RAD2
RPD2
CPD2
TEMP
GR
GR_DN
GR_UP
ROP
17300
MD
Comment
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ROP
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GR
0 (AAPI) 150
GR_UP
0 (AAPI) 150
GR_DN
0 (AAPI) 150
RPD2
0.2 (ohm-m) 2000
RAD2
0.2 (ohm-m) 2000
RAD4
0.2 (ohm-m) 2000
RPS2
0.2 (ohm-m) 2000
TEMP
0 (F) 300
CPD2
400 (mmho/m) 0

SURVEY

Survey Calculation Method: **Minimum Curvature**

Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
True North	**180.17 deg**	**52903 nT**	**66.48 deg**	**8.56 deg**	**0.00 deg**	**8.56 deg**

	Depth	INC	AZ	TVD	NS	EW
Survey Tie-On	**1037.00 ft**	**0.09 deg**	**27.03 deg**	**1036.97 ft**	**6.72 ft**	**-2.89 ft**

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head NS (ft)	Well Head EW (ft)	VSect (ft)	Dogleg (deg/100ft)
1144.00	0.30	71.85	1143.97	6.88	-2.59	-6.87	0.23
1235.00	1.94	76.91	1234.95	7.31	-0.86	-7.30	1.80
1327.00	1.69	73.55	1326.90	8.04	1.96	-8.05	0.30
1419.00	3.19	75.74	1418.82	9.06	5.74	-9.07	1.63
1511.00	4.87	66.61	1510.59	11.24	11.81	-11.27	1.95
1602.00	6.95	61.35	1601.10	15.41	20.18	-15.47	2.36
1694.00	7.63	67.64	1692.36	20.40	30.72	-20.49	1.14
1786.00	9.36	63.61	1783.34	26.05	43.07	-26.18	1.99
1878.00	10.35	61.90	1873.99	33.27	57.06	-33.44	1.12
1970.00	11.52	59.10	1964.31	41.88	72.24	-42.10	1.40
2062.00	12.71	56.91	2054.26	52.13	88.60	-52.39	1.39
2154.00	13.11	51.34	2143.94	64.17	105.23	-64.48	1.42
2249.00	11.24	46.34	2236.80	77.29	120.34	-77.65	2.26
2344.00	10.73	49.79	2330.06	89.40	133.79	-89.79	0.88
2438.00	11.08	53.87	2422.37	100.37	147.77	-100.81	0.90
2533.00	11.75	56.56	2515.49	111.08	163.21	-111.57	0.90
2628.00	12.33	57.56	2608.40	121.85	179.85	-122.39	0.65
2722.00	10.12	54.56	2700.60	132.03	195.05	-132.61	2.43
2818.00	10.28	58.65	2795.08	141.38	209.23	-142.00	0.77
2913.00	10.34	60.15	2888.55	150.03	223.87	-150.69	0.29
3008.00	11.42	60.31	2981.84	158.93	239.43	-159.64	1.14
3103.00	12.45	57.80	3074.78	169.05	256.27	-169.81	1.21
3197.00	9.51	52.10	3167.05	179.22	270.97	-180.02	3.33
3292.00	9.92	56.21	3260.69	188.59	283.97	-189.43	0.85
3387.00	10.10	55.68	3354.25	197.84	297.65	-198.72	0.21
3481.00	11.90	49.70	3446.52	208.76	311.85	-209.68	2.26
3576.00	11.72	46.09	3539.51	221.78	326.27	-222.75	0.80
3670.00	10.79	48.45	3631.70	234.24	339.73	-235.25	1.10
3765.00	10.63	54.48	3725.05	245.23	353.52	-246.28	1.19
3859.00	11.06	53.38	3817.37	255.64	367.81	-256.73	0.51
3954.00	11.10	50.98	3910.60	266.84	382.23	-267.97	0.49
4049.00	12.45	50.45	4003.60	279.12	397.23	-280.29	1.43
4143.00	12.67	48.27	4095.35	292.43	412.74	-293.65	0.56
4238.00	12.64	50.20	4188.04	306.02	428.50	-307.29	0.45
4332.00	12.30	50.40	4279.82	318.98	444.12	-320.30	0.36
4427.00	13.28	50.94	4372.47	332.31	460.39	-333.67	1.04
4522.00	12.62	52.07	4465.05	345.56	477.05	-346.98	0.74
4616.00	11.13	51.54	4557.03	357.52	492.25	-358.98	1.59
4711.00	9.51	53.82	4650.50	367.86	505.77	-369.36	1.76
4806.00	10.51	50.71	4744.05	377.98	518.81	-379.51	1.20
4900.00	12.23	53.77	4836.20	389.29	533.47	-390.87	1.94
4995.00	10.58	50.55	4929.32	400.78	548.33	-402.41	1.86

5089.00	8.62	48.22	5022.00	410.96	560.24	-412.62	2.13
5184.00	6.97	53.65	5116.12	419.12	570.20	-420.81	1.90
5279.00	5.62	50.02	5210.55	425.52	578.40	-427.24	1.48
5373.00	4.87	47.31	5304.15	431.19	584.86	-432.92	0.84
5468.00	3.20	51.10	5398.92	435.59	589.89	-437.34	1.78
5563.00	2.24	47.68	5493.81	438.50	593.33	-440.26	1.02
5657.00	0.22	9.51	5587.78	439.92	594.72	-441.68	2.20
5752.00	0.21	327.17	5682.78	440.24	594.65	-442.01	0.16
5846.00	0.29	290.93	5776.78	440.47	594.34	-442.23	0.18
5941.00	0.49	286.82	5871.78	440.68	593.72	-442.44	0.21
6035.00	0.51	277.35	5965.77	440.85	592.92	-442.60	0.09
6130.00	0.47	272.62	6060.77	440.92	592.11	-442.67	0.06
6225.00	0.44	264.84	6155.77	440.90	591.36	-442.66	0.07
6319.00	0.56	294.39	6249.76	441.06	590.58	-442.81	0.30
6414.00	0.63	305.58	6344.76	441.56	589.74	-443.30	0.14
6509.00	0.47	269.32	6439.75	441.86	588.92	-443.60	0.39
6603.00	0.38	141.92	6533.75	441.61	588.73	-443.35	0.81
6698.00	0.49	110.07	6628.75	441.22	589.31	-442.96	0.27
6792.00	0.41	69.41	6722.75	441.20	590.00	-442.95	0.34
6887.00	0.69	93.06	6817.74	441.29	590.89	-443.04	0.37
6919.00	0.51	100.58	6849.74	441.25	591.22	-443.00	0.61
6950.00	2.20	144.13	6880.73	440.74	591.70	-442.50	6.01
6982.00	5.75	155.29	6912.65	438.79	592.73	-440.55	11.30
7013.00	9.95	160.91	6943.35	434.85	594.26	-436.61	13.76
7045.00	13.42	161.59	6974.69	428.71	596.34	-430.47	10.85
7076.00	16.29	162.97	7004.65	421.14	598.75	-422.91	9.33
7108.00	18.27	164.64	7035.20	412.01	601.39	-413.79	6.38
7139.00	19.88	169.44	7064.50	402.14	603.64	-403.93	7.25
7171.00	22.41	169.62	7094.34	390.79	605.74	-392.58	7.91
7203.00	24.73	171.94	7123.67	378.16	607.78	-379.96	7.81
7234.00	27.03	174.86	7151.56	364.72	609.32	-366.53	8.48
7266.00	29.87	177.55	7179.70	349.51	610.31	-351.32	9.73
7297.00	32.58	180.99	7206.20	333.45	610.50	-335.26	10.46
7328.00	35.09	183.65	7231.95	316.21	609.79	-318.02	9.40
7360.00	37.41	184.60	7257.76	297.34	608.42	-299.14	7.46
7391.00	40.43	184.06	7281.87	277.92	606.95	-279.72	9.80
7423.00	43.64	184.10	7305.64	256.55	605.43	-258.35	10.03
7454.00	47.19	184.17	7327.40	234.53	603.84	-236.33	11.45
7501.00	52.94	183.38	7357.55	198.59	601.47	-200.37	12.30
7548.00	57.29	181.07	7384.43	160.08	600.00	-161.86	10.09
7595.00	61.09	179.76	7408.50	119.72	599.72	-121.50	8.43
7643.00	66.48	179.28	7429.70	76.67	600.08	-78.45	11.26
7690.00	71.42	180.17	7446.57	32.83	600.29	-34.61	10.66
7737.00	72.54	179.71	7461.11	-11.87	600.33	10.09	2.56
7768.00	75.37	179.18	7469.68	-41.66	600.62	39.87	9.28
7800.00	77.60	179.45	7477.16	-72.77	600.99	70.98	7.02
7831.00	79.81	179.29	7483.23	-103.16	601.33	101.38	7.15
7863.00	80.59	180.08	7488.68	-134.69	601.50	132.91	3.44
7894.00	82.07	180.16	7493.35	-165.34	601.44	163.55	4.78
7926.00	84.26	180.45	7497.16	-197.11	601.27	195.32	6.90
8121.00	89.01	180.60	7508.60	-391.71	599.48	389.93	2.44
8215.00	90.31	180.82	7509.16	-485.70	598.32	483.92	1.40
8309.00	91.61	180.59	7507.58	-579.67	597.16	577.90	1.40
8404.00	92.59	180.58	7504.10	-674.61	596.19	672.83	1.03
8498.00	91.48	179.42	7500.76	-768.54	596.19	766.77	1.71
8592.00	91.73	179.41	7498.13	-862.50	597.15	860.73	0.27
8686.00	90.43	178.23	7496.36	-956.46	599.09	954.68	1.87
8780.00	89.81	179.08	7496.16	-1050.43	601.30	1048.64	1.12
8874.00	88.77	178.70	7497.33	-1144.41	603.12	1142.61	1.18
8969.00	88.52	178.64	7499.57	-1239.35	605.32	1237.55	0.27
9063.00	87.90	179.13	7502.51	-1333.29	607.15	1331.48	0.84

9157.00	88.77	179.49	7505.24	-1427.24	608.28	1425.43	1.00
9252.00	89.63	179.28	7506.57	-1522.23	609.30	1520.41	0.93
9346.00	89.14	179.40	7507.58	-1616.21	610.38	1614.40	0.54
9440.00	90.25	179.73	7508.08	-1710.21	611.10	1708.39	1.23
9534.00	89.69	180.15	7508.13	-1804.21	611.19	1802.39	0.74
9629.00	90.00	180.26	7508.38	-1899.21	610.85	1897.39	0.35
9723.00	90.25	180.79	7508.18	-1993.20	609.99	1991.38	0.62
9818.00	89.88	180.14	7508.07	-2088.20	609.22	2086.38	0.79
9912.00	89.63	179.31	7508.47	-2182.20	609.67	2180.38	0.92
10007.00	88.83	179.42	7509.75	-2277.18	610.73	2275.36	0.85
10102.00	88.34	179.13	7512.09	-2372.14	611.93	2370.32	0.60
10197.00	88.58	179.74	7514.65	-2467.10	612.86	2465.28	0.69
10291.00	89.14	179.68	7516.52	-2561.08	613.34	2559.25	0.60
10386.00	89.26	179.90	7517.84	-2656.07	613.69	2654.24	0.26
10482.00	88.83	180.64	7519.44	-2752.06	613.24	2750.23	0.89
10577.00	89.01	181.03	7521.23	-2847.03	611.85	2845.20	0.45
10671.00	88.52	181.26	7523.26	-2940.99	609.97	2939.17	0.58
10766.00	89.20	181.23	7525.15	-3035.95	607.91	3034.13	0.72
10861.00	88.64	181.49	7526.94	-3130.91	605.66	3129.09	0.65
10955.00	89.38	181.34	7528.56	-3224.86	603.34	3223.06	0.80
11050.00	89.57	181.64	7529.44	-3319.83	600.86	3318.03	0.37
11144.00	90.25	181.62	7529.58	-3413.79	598.19	3412.00	0.72
11239.00	90.25	180.91	7529.17	-3508.76	596.09	3506.98	0.75
11334.00	89.57	180.07	7529.32	-3603.76	595.28	3601.98	1.14
11428.00	88.46	179.44	7530.93	-3697.74	595.68	3695.96	1.36
11523.00	89.57	179.69	7532.57	-3792.72	596.40	3790.94	1.20
11617.00	89.75	179.28	7533.12	-3886.72	597.25	3884.93	0.48
11712.00	89.07	179.63	7534.10	-3981.71	598.15	3979.91	0.81
11806.00	89.26	179.19	7535.47	-4075.69	599.12	4073.90	0.51
11901.00	90.18	178.69	7535.94	-4170.67	600.88	4168.87	1.10
11946.00	90.53	178.69	7535.66	-4215.66	601.91	4213.86	0.78
12040.00	89.14	180.99	7535.93	-4309.65	602.17	4307.84	2.86
12134.00	88.15	180.72	7538.15	-4403.61	600.77	4401.81	1.09
12229.00	87.22	180.58	7541.99	-4498.53	599.69	4496.73	0.99
12323.00	87.16	182.07	7546.60	-4592.39	597.52	4590.59	1.58
12418.00	88.71	181.52	7550.02	-4687.28	594.55	4685.49	1.73
12512.00	89.26	181.91	7551.69	-4781.22	591.73	4779.44	0.72
12607.00	89.14	181.26	7553.01	-4876.17	589.11	4874.40	0.70
12702.00	87.97	181.40	7555.41	-4971.11	586.90	4969.35	1.24
12775.00	88.02	181.85	7557.96	-5044.04	584.83	5042.28	0.62
12870.00	89.44	181.24	7560.07	-5138.98	582.27	5137.23	1.63
12964.00	90.12	180.18	7560.43	-5232.97	581.11	5231.22	1.34
13059.00	89.38	179.29	7560.84	-5327.97	581.55	5326.22	1.22
13153.00	89.88	177.03	7561.45	-5421.91	584.56	5420.15	2.46
13248.00	89.44	178.25	7562.01	-5516.82	588.48	5515.05	1.37
13343.00	89.94	178.46	7562.53	-5611.78	591.20	5610.01	0.57
13437.00	89.12	176.92	7563.30	-5705.70	594.99	5703.91	1.86
13532.00	89.88	176.95	7564.13	-5800.56	600.07	5798.75	0.80
13626.00	89.51	178.09	7564.63	-5894.47	604.14	5892.65	1.28
13721.00	88.83	179.56	7566.00	-5989.44	606.09	5987.61	1.70
13815.00	88.15	180.70	7568.48	-6083.40	605.87	6081.58	1.41
13910.00	88.70	180.25	7571.09	-6178.36	605.09	6176.54	0.75
14005.00	90.37	180.28	7571.86	-6273.35	604.65	6271.53	1.76
14099.00	90.25	179.78	7571.36	-6367.35	604.60	6365.53	0.55
14194.00	89.91	179.22	7571.22	-6462.35	605.43	6460.52	0.69
14289.00	90.53	180.45	7570.86	-6557.34	605.70	6555.52	1.45
14383.00	90.12	179.68	7570.32	-6651.34	605.59	6649.52	0.93
14478.00	89.69	179.20	7570.48	-6746.34	606.52	6744.51	0.68
14572.00	89.47	180.63	7571.17	-6840.33	606.66	6838.50	1.54
14667.00	89.51	180.64	7572.02	-6935.32	605.61	6933.50	0.04
14762.00	87.59	180.72	7574.42	-7030.28	604.48	7028.46	2.02

14856.00	85.99	180.98	7579.68	-7124.12	603.09	7122.30	1.72
14951.00	88.83	182.07	7583.98	-7218.98	600.56	7217.16	3.20
15045.00	89.82	181.41	7585.08	-7312.93	597.71	7311.12	1.27
15140.00	90.00	180.81	7585.23	-7407.91	595.87	7406.11	0.66
15234.00	89.75	180.68	7585.44	-7501.90	594.65	7500.10	0.30
15329.00	89.51	180.61	7586.05	-7596.89	593.58	7595.10	0.26
15423.00	90.26	182.04	7586.24	-7690.86	591.40	7689.07	1.72
15517.00	89.69	181.64	7586.28	-7784.81	588.39	7783.03	0.74
15612.00	89.32	181.04	7587.10	-7879.78	586.16	7878.01	0.74
15705.00	90.12	181.91	7587.56	-7972.75	583.77	7970.98	1.27
15800.00	90.55	184.07	7587.00	-8067.61	578.82	8065.86	2.32
15891.00	90.43	184.88	7586.22	-8158.33	571.72	8156.60	0.90
15985.00	90.62	186.34	7585.36	-8251.88	562.53	8250.17	1.57
16080.00	90.19	186.88	7584.69	-8346.24	551.59	8344.57	0.73
16175.00	90.19	185.62	7584.37	-8440.67	541.25	8439.03	1.33
16254.00	90.37	182.47	7583.99	-8519.47	535.68	8517.84	3.99
16349.00	89.69	181.67	7583.94	-8614.40	532.25	8612.79	1.11
16443.00	88.58	179.39	7585.36	-8708.38	531.38	8706.77	2.70
16538.00	88.64	178.49	7587.66	-8803.34	533.13	8801.71	0.95
16632.00	88.64	177.36	7589.89	-8897.25	536.54	8895.61	1.20
16727.00	88.89	176.92	7591.94	-8992.11	541.28	8990.46	0.53
16822.00	89.26	175.90	7593.48	-9086.90	547.22	9085.24	1.14
16916.00	88.58	176.63	7595.25	-9180.69	553.35	9179.01	1.06
17011.00	87.84	175.87	7598.21	-9275.44	559.56	9273.74	1.12
17105.00	86.73	175.76	7602.67	-9369.08	566.41	9367.36	1.19
17200.00	86.61	176.19	7608.19	-9463.68	573.06	9461.94	0.47
17294.00	86.92	175.80	7613.49	-9557.31	579.62	9555.54	0.53
17317.00	87.04	175.62	7614.70	-9580.21	581.34	9578.44	0.94
17370.00	87.04	175.62	7617.44	-9632.98	585.38	9631.20	0.00

Weatherford Surveys from 1144 ft MD to 17317 ft MD.
Well TD at 17370 ft MD.
The total correction is 8.56 deg relative to True North.

Final Print

COMPANY	**Anadarko**		
WELL	**Griffiths 35N-20HZ**		
FIELD	**Wattenberg**		
RIG	**H&P 307**		
LOC.	**Colorado**	COUNTY	**Weld**