



**EWR Electromagnetic Wave Resistivity**  
**DGR Dual Gamma Ray**

Country : Australia				Company : Bass Strait Oil Company Ltd	
Field : Exploration				Rig : Ocean Patriot	
Location : Lat: 38° 34' 31.64" South Long: 147° 59' 16.27" East				Well : ZaneGrey-1	
Well : ZaneGrey-1				Company : Bass Strait Oil Company Ltd	
Company : Bass Strait Oil Company Ltd				Rig : Ocean Patriot	
Rig : Ocean Patriot				LOCATION	
				Latitude : 38° 34' 31.64" South Longitude : 147° 59' 16.27" East	
				UTM Easting = 586,049.89 m UTM Northing = 5,729,856.42 m	
				Other Services Directional Drilling Surface Data Logging	
Permanent Datum : Mean Sea Level		Elevation : 0.00 m		Elev. KB	
Log Measured From : Drill Floor		21.50 m Above Permanent Datum		DF 21.50 m GL WD 73.00 m	
Drilling Measured From : Drill Floor		MD LOG			
Depth Logged : 129.50 m To 2,772.50 m		Unit No. : 175		Job No. : AU-FE-0003415248	
Date Logged : 29-Jan-05 To 20-Feb-05		Plot Type : Final			
Total Depth MD : 2,772.50 m TVD: 2,420.73 m		Plot Date : 03-May-05			
Spud Date : 29-Jan-05					
Run No.		Borehole Record (MD)		Run No.	
Size		From		To	
2		406,000 mm		1,095.00 m	
4		311,000 mm		2,103.00 m	
5		311,000 mm		2,702.00 m	
6		311,000 mm		2,772.50 m	
		Size		Casing Record (MD)	
		Weight		From	
		762,000 mm		458.00 kgpm	
		340,000 mm		101.00 kgpm	
		244,000 mm		70.00 kgpm	
				72.50 m	
				127.75 m	
				1,090.60 m	
				2,770.00 m	

### WELL INFORMATION

MWD Run Number	200	400	500	600	
Date run completed	01-Feb-05	07-Feb-05	09-Feb-05	12-Feb-05	
Rig Bit Number	2	4	5	6	
Bit Size (mm)	406	311	311	311	
Tool Nominal OD (mm)	203	203	203	203	
Log Start Depth (MD, m)	129.50	1,095.00	2,103.00	2,702.00	
Log End Depth (MD, m)	1,095.00	2,103.00	2,702.00	2,772.50	
Drill or Wipe	Drilling	Drilling	Drilling	Drilling	
Drill/Wipe Start Date and Time	30-Jan-05 13:00	04-Feb-05 10:30	07-Feb-05 16:29	10-Feb-05 11:10	
Drill/Wipe End Date and Time	01-Feb-05 01:35	06-Feb-05 13:17	09-Feb-05 00:30	11-Feb-05 08:50	
Min Inc (deg) @ Depth (MD, m)	0.31 @ 322.80	33.41 @ 2,041.58	32.39 @ 2,183.17	34.94 @ 2,758.61	
Max Inc (deg) @ Depth (MD, m)	34.99 @ 1,080.74	34.67 @ 1,294.54	35.92 @ 2,643.79	35.56 @ 2,730.26	
Bit TFA(in2) / Bit Type	1.24 / Smith GX1	1.16 / Security FSX563	1.16 / Security FSX563	0.92 / Security XL12	
Flow Rate (gpm)	1,030	935	860	888	
Max AV (mpm) / CV (mpm) @ MWD	34.8 / 9.6	78.0 / 130.2	78.0 / 130.2	76.8 / 91.8	
Fluid Type	Seawater	KCl/Idecap	KCl/Idecap	KCl/Idecap	
Density (sg) / Viscosity (spl)	1.04 / N/A	1.1 / 57	1.2 / 65	1.2 / 66	
Filtrate CL (ppm)	N/A	30,000	37,000	29,250	
pH / Fluid Loss (cptm)	N/A / N/A	8.50 / 4.2	9.00 / 4.2	9.00 / 4.4	
PV (cp) / YP (pa)	N/A / N/A	15 / 32.00	23 / 42.00	21 / 17.20	
% Solids / % Sand	N/A / N/A	9 / 1	10.5 / 0.75	9 / 0.65	
% Oil / Oil:Water Ratio	N/A / N/A	N/A / 0.91	N/A / N/A:89.5	N/A / N/A:91	
Rm @ Measured Temp (degC)	N/A @ N/A	0.18 @ 20.00	0.12 @ 26.00	0.12 @ 21.00	
Rmf @ Measured Temp (degC)	N/A @ N/A	0.15 @ 20.00	0.09 @ 26.00	0.10 @ 20.00	
Rmc @ Measured Temp (degC)	N/A @ N/A	0.58 @ 20.00	0.25 @ 26.00	0.32 @ 20.00	
Max Tool Temp (degC) / Source	33.00 / EWR-P4	65.00 / EWR-P4	77.00 / EWR-P4	76.00 / EWR-P4	
Rm @ Max Tool Temp (degC)	N/A @ N/A	0.09 @ 65.00	0.04 @ 77.00	0.05 @ 76.00	
Lead MWD Engineer	S.Allan	T.Oborne	T. Oborne	T.Oborne	
Customer Representative	C.Wilson	C.Wilson	C. Wilson	P.Dane	

### SENSOR INFORMATION

## Downhole Processor Information

Tool Type	HCIM	HCIM	HCIM	HCIM	
Software Version	67.88	66.37	66.37	66.37	
Sub Serial Number	091820	189273	189273	189273	
Insert Serial Number	074608	093281	093281	093281	
Logging String Serial Number	DM90066343XH1GR	DM9005691H1GR	DM9005691H1GR	DM9005691H1GR	
Date and Time Initialized	30-Jan-05 10:47	04-Feb-05 12:57	07-Feb-05 06:05	09-Feb-05 11:46	
Date and Time Read	01-Feb-05 07:05	07-Feb-05 04:08	09-Feb-05 10:59	12-Feb-05 02:54	

## Directional Sensor Information

Tool Type	DM	DM	DM	DM	
Distance From Bit (m)	13.34	15.23	15.23	10.15	
Software Version	3.15	3.15	3.15	3.15	
Sub Serial Number	10603356	10603356	10603356	10603356	
Sonde Serial Number	10581139	581139	581139	581139	
Sensor ID Number	N/A	N/A	N/A	N/A	
Survey String Serial Number	DM90067106F8	DM90067106F8	DM90067106F8	DM90067106F8	
Toolface Offset (deg)	311.60	274.00	263.10	N/A	

## Gamma Ray Sensor Information

Tool Type	DGR	DGR	DGR	DGR	
Distance From Bit (m)	19.00	21.64	21.64	16.57	
Recorded Sample Period (sec)	12	12	12	12	
Software Version	N/A	N/A	N/A	N/A	
Sub Serial Number	102971	136439	136439	136439	
Insert/Sonde Serial Number	10505500	104921	104921	104921	

## Resistivity Sensor Information

Tool Type	EWR-P4	EWR-P4	EWR-P4	EWR-P4	
Distance From Bit (m)	16.76	18.63	18.63	13.56	
Recorded Sample Period (sec)	12	14	14	14	
Software Version	1.38	1.38	1.38	1.38	
Sub Serial Number	131421	129428	129428	129428	
Receiver Insert Serial Number	69384	121609	121609	121609	
Transmitter Insert Serial Number	140034	106183	106183	106183	
Receiver Orientation	Down	Down	Down	Down	

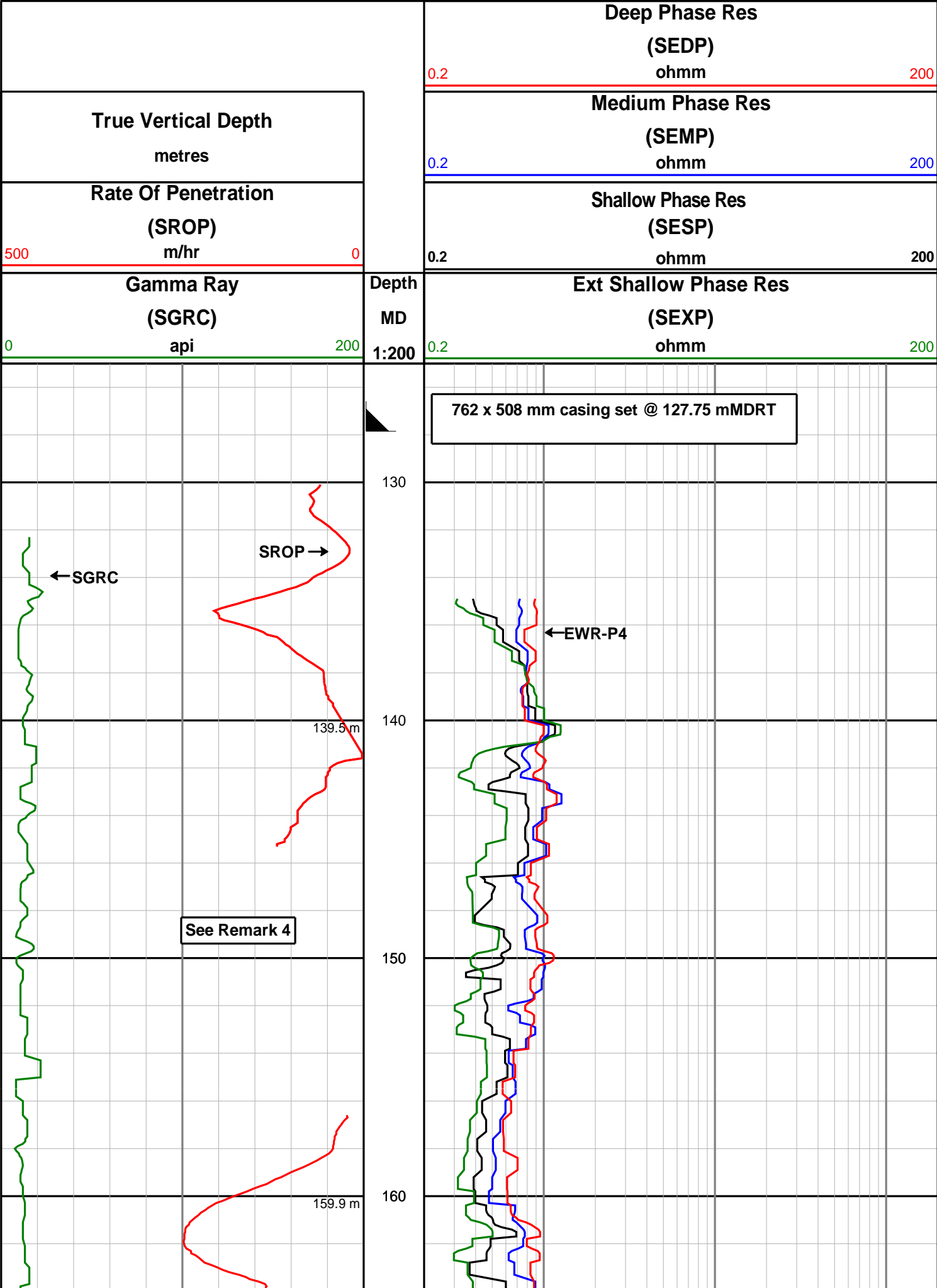
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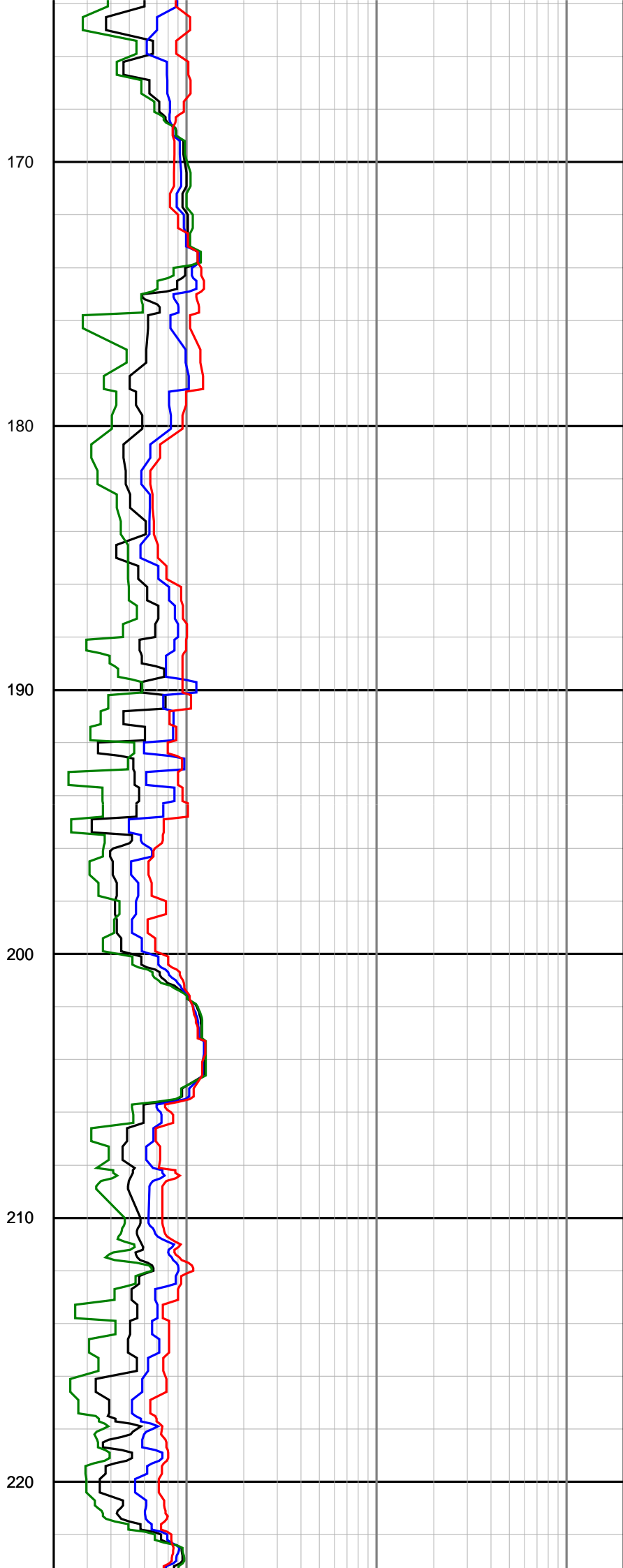
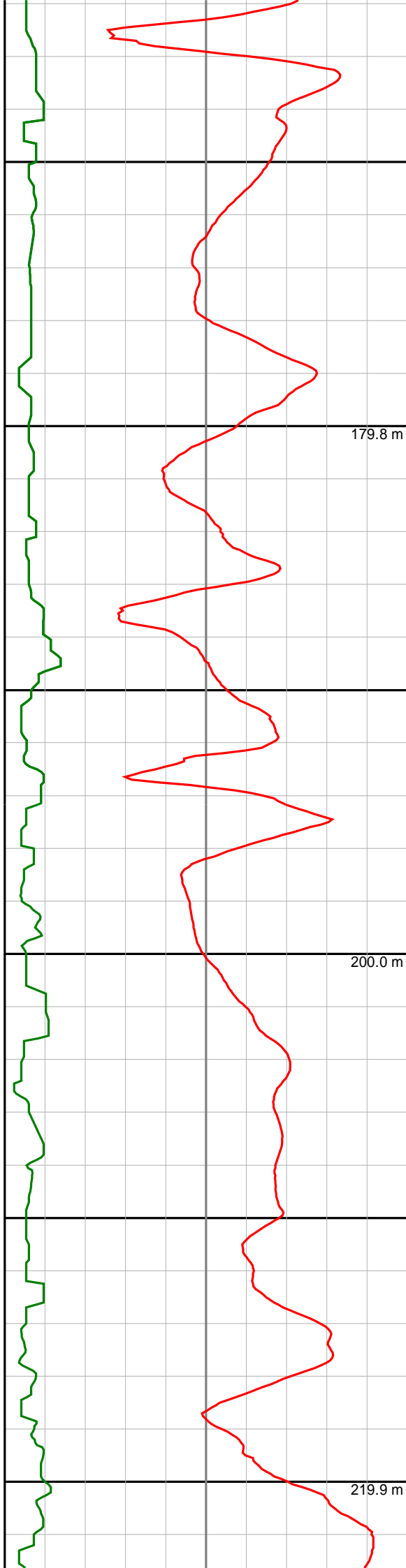
- All depths are bit depths and referenced to the drillers pipe tally.
- AV/CV is calculated at the MWD collar using the Powers Law for water based muds and the Bingham's Plastic Law for oil based muds.
- Curve mnemonics are:  
 SGRC - Smoothed Gamma Ray Combined, api  
 SROP - Smoothed Rate of Penetration, m/hr  
 SEXP - Smoothed Extra Shallow Phase Resistivity, ohm-m  
 SESP - Smoothed Shallow Phase Resistivity, ohm-m  
 SEMP - Smoothed Medium Phase Resistivity, ohm-m  
 SEDP - Smoothed Deep Phase Resistivity, ohm-m  
 RUN\_SPD - Running Speed, m/hr
- Gap in ROP data over the interval 145.4 - 156.5 mMDRT due to break in depth measuring system.
- Data presented from 2696.9 to 2702.0 mMDRT was gathered while reaming to bottom on run 600, due to change in BHA lengths.

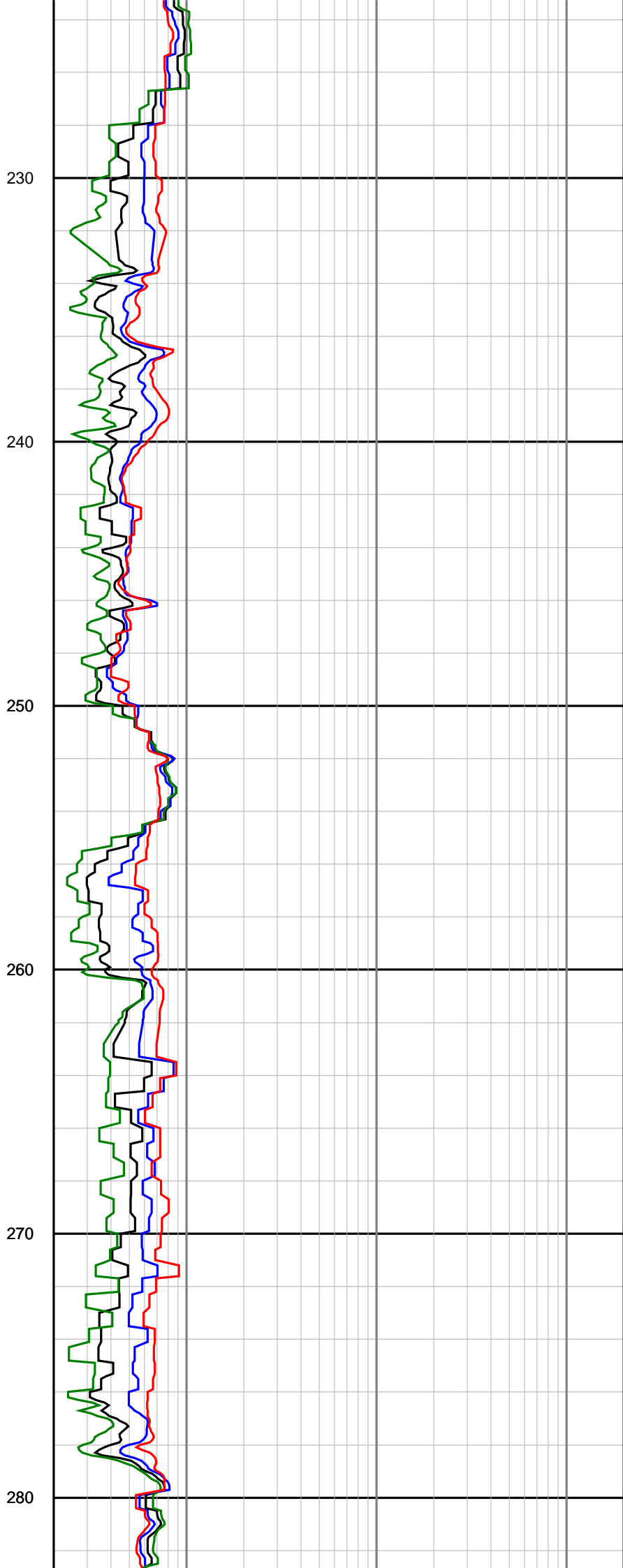
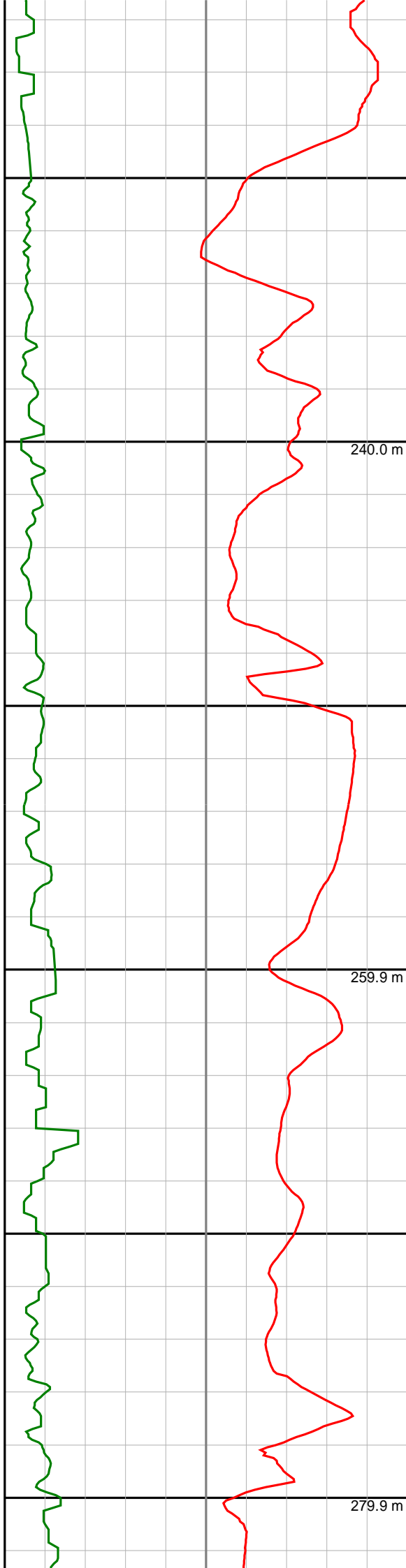
## WARRANTY

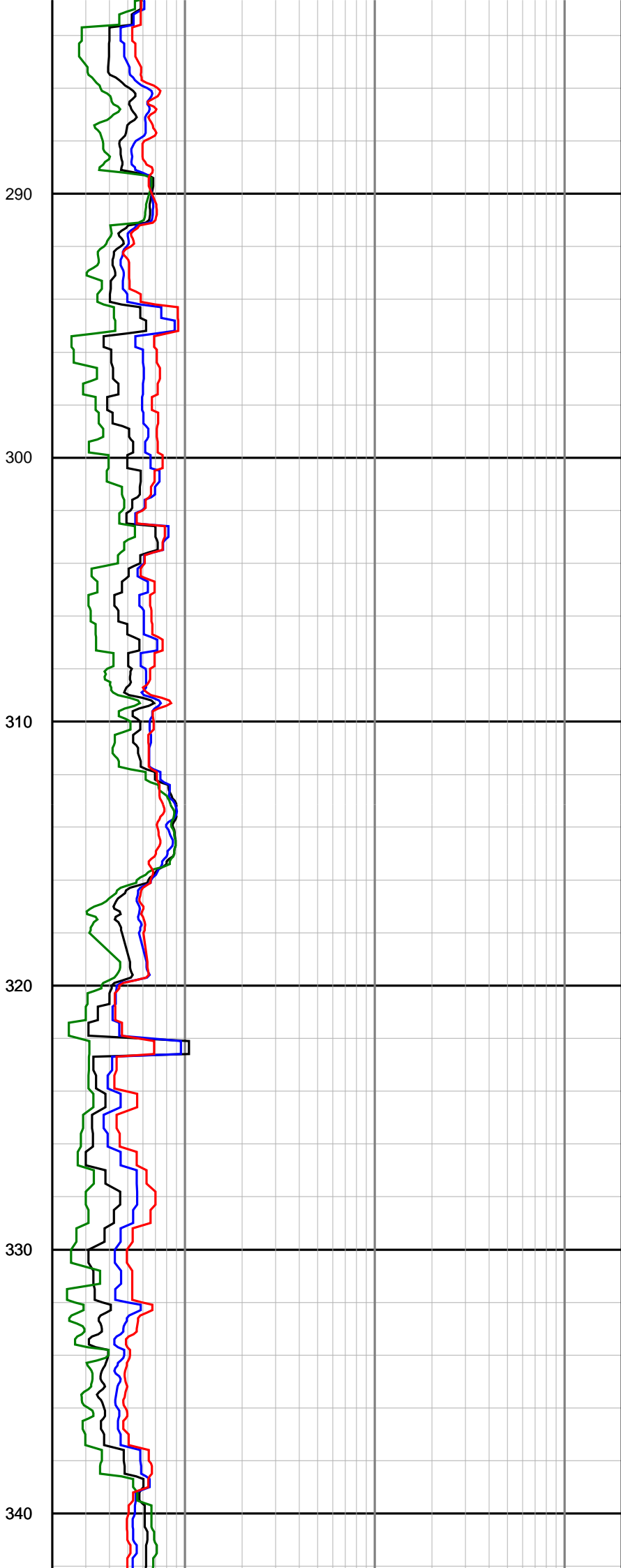
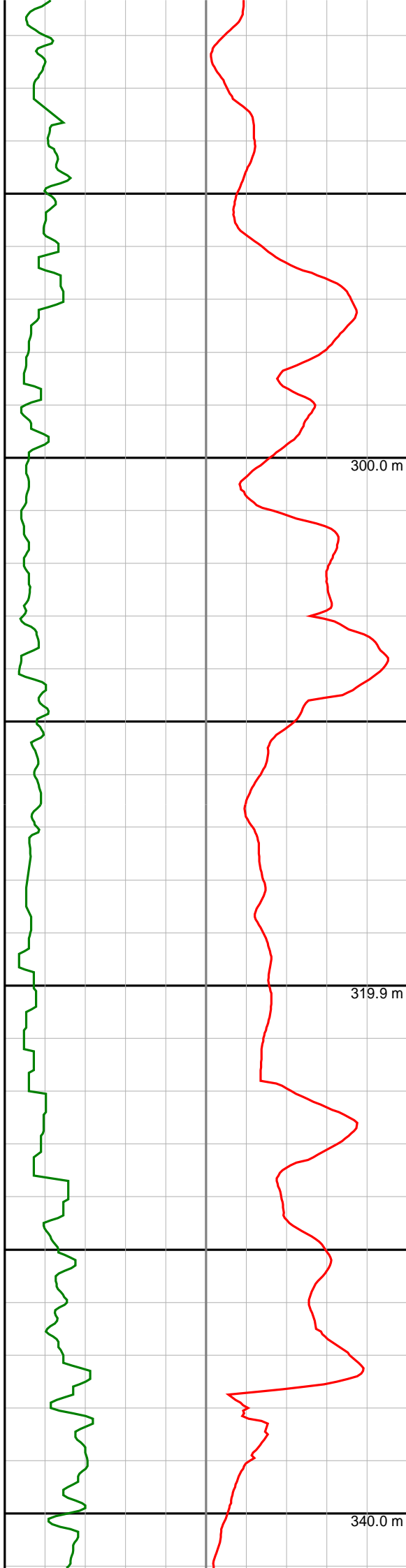
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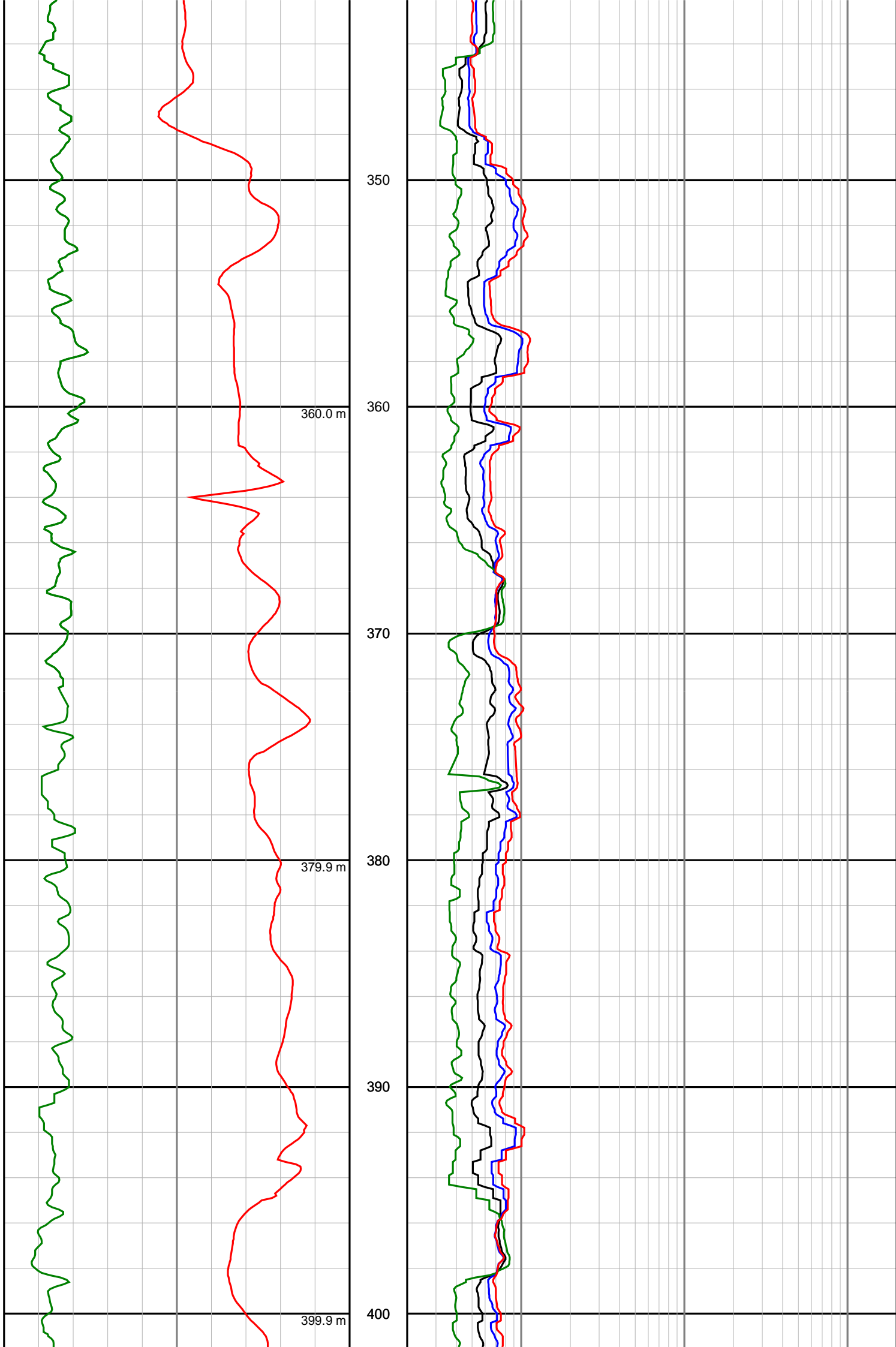
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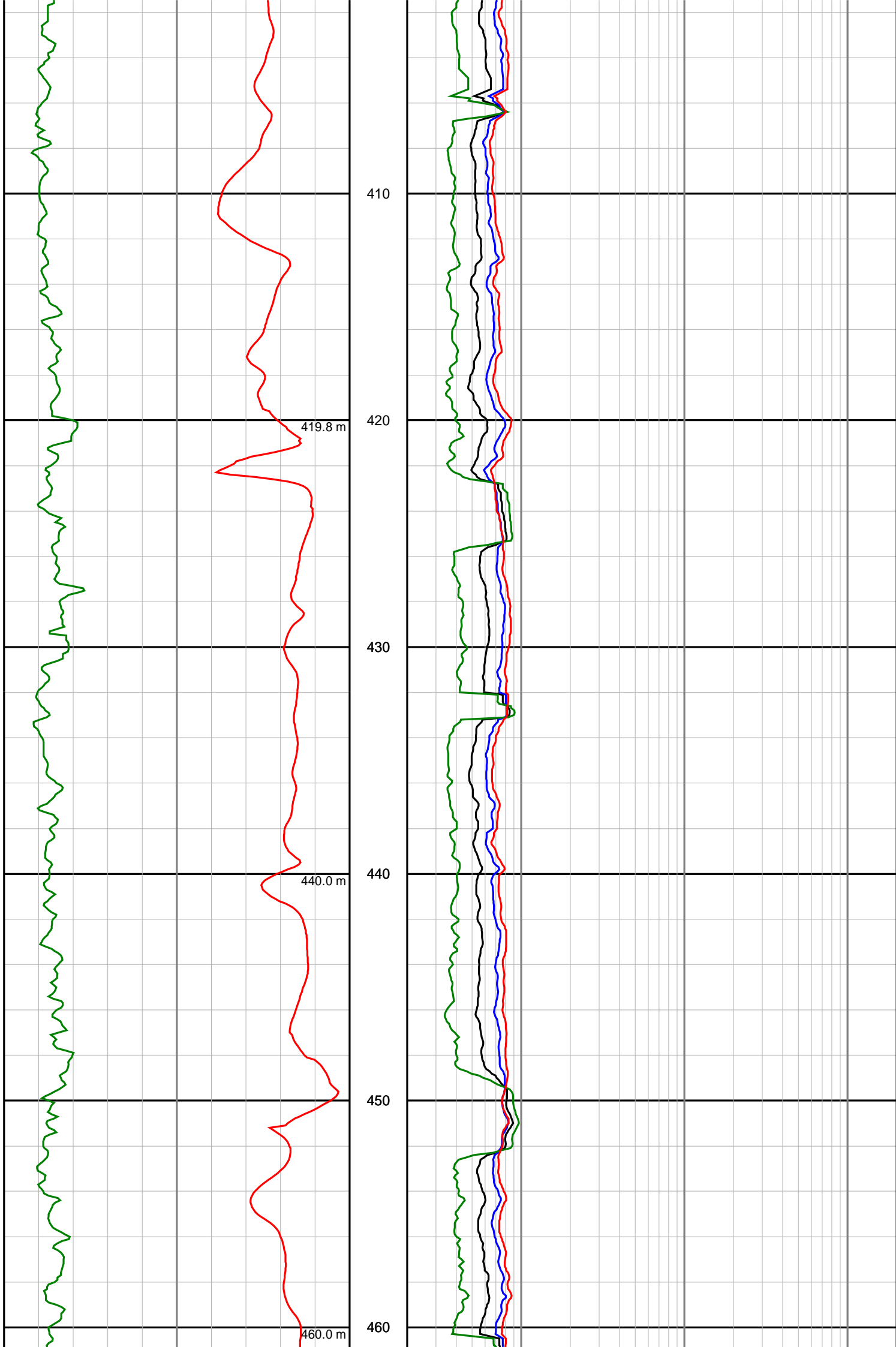




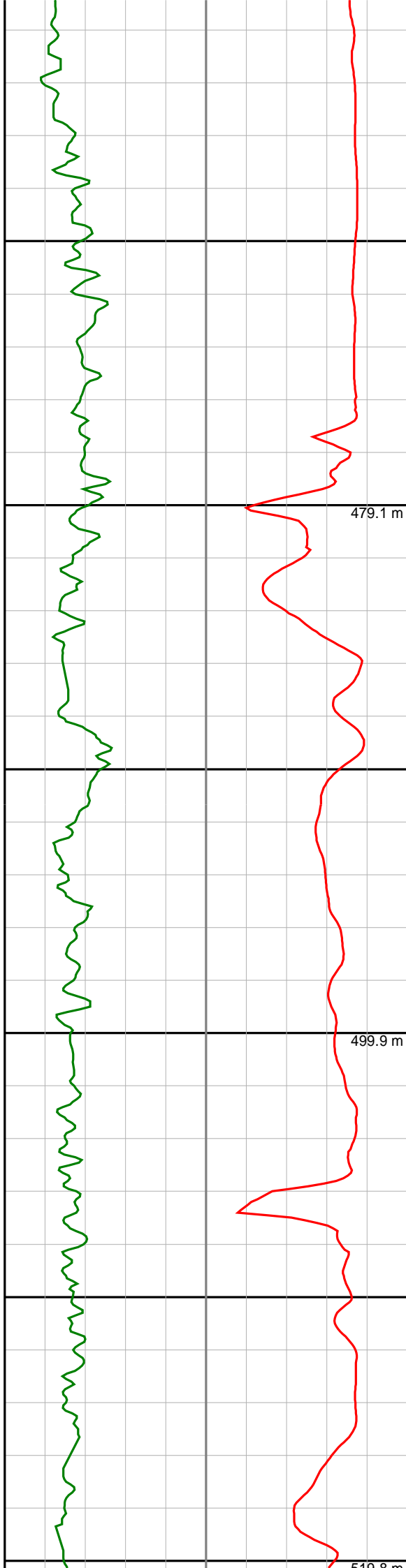




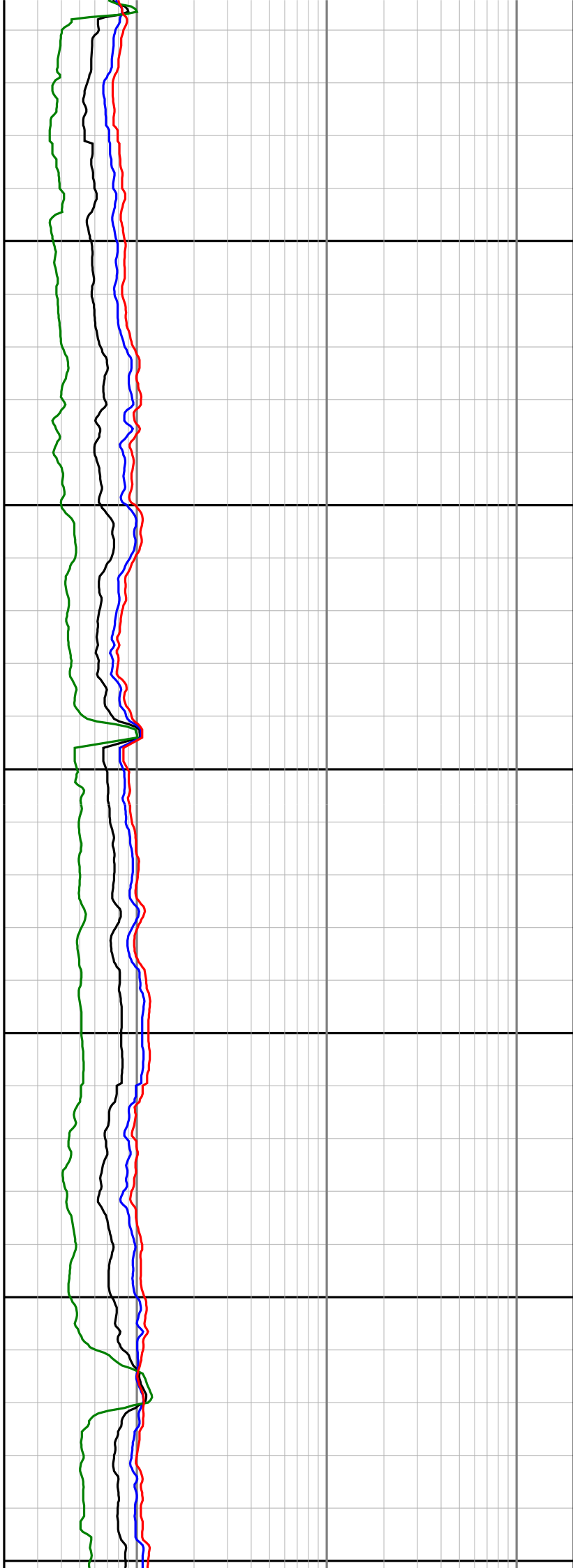


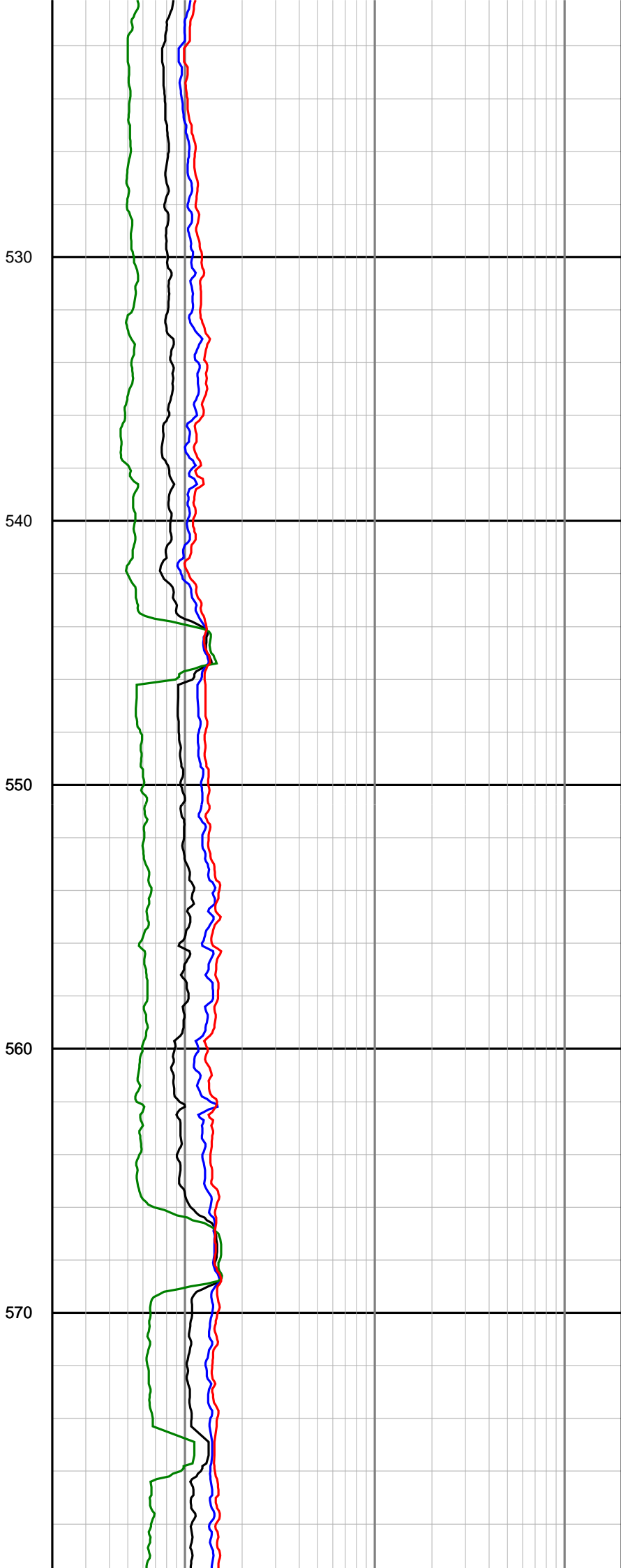
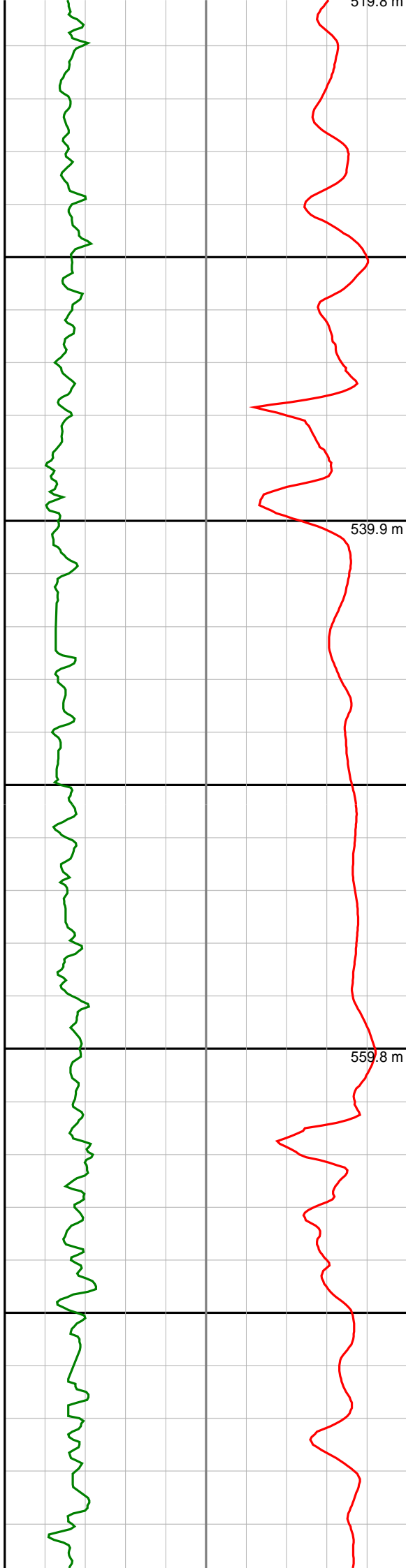


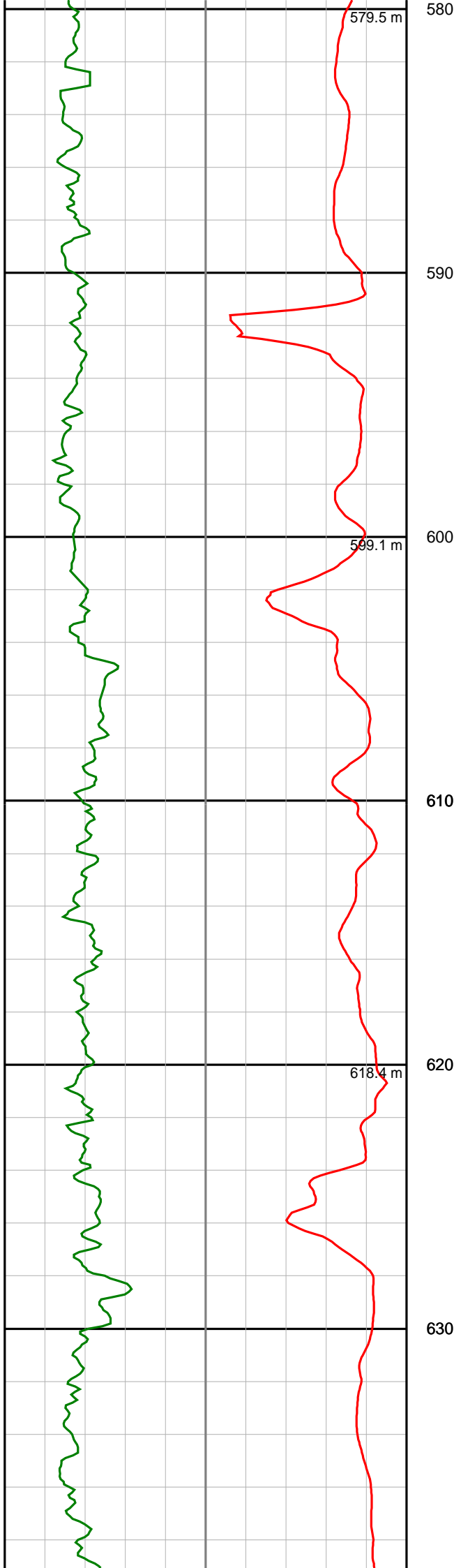


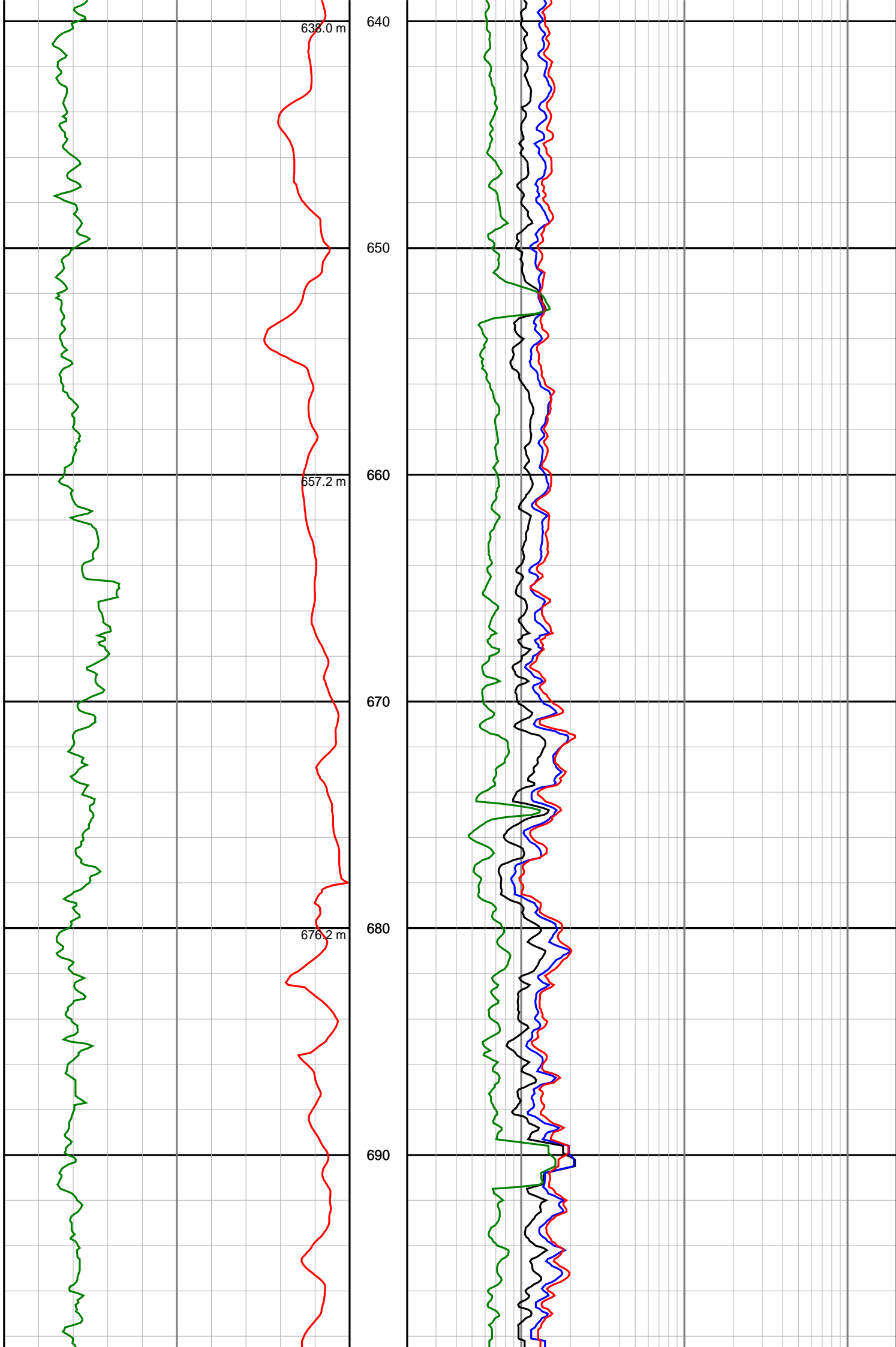


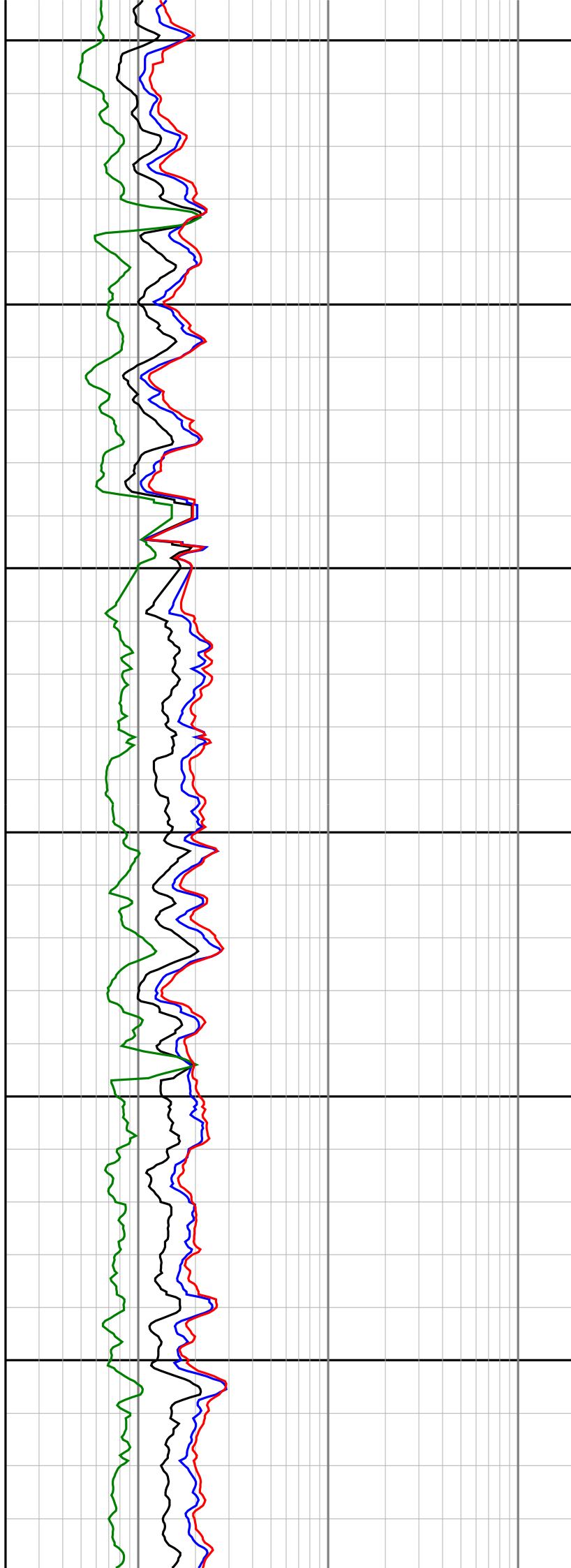
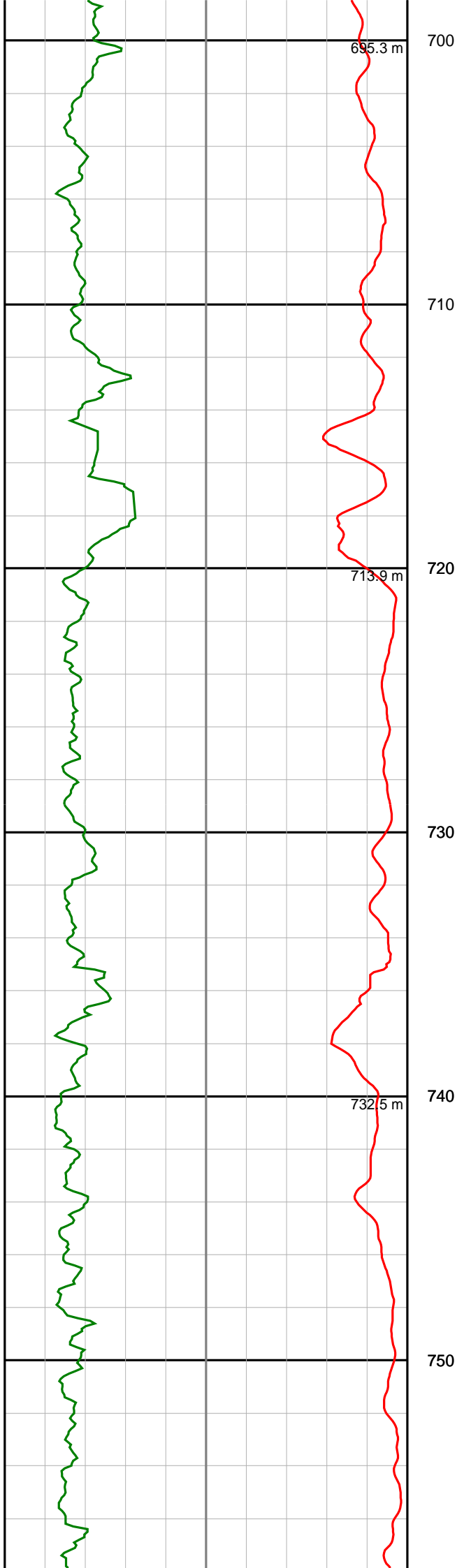
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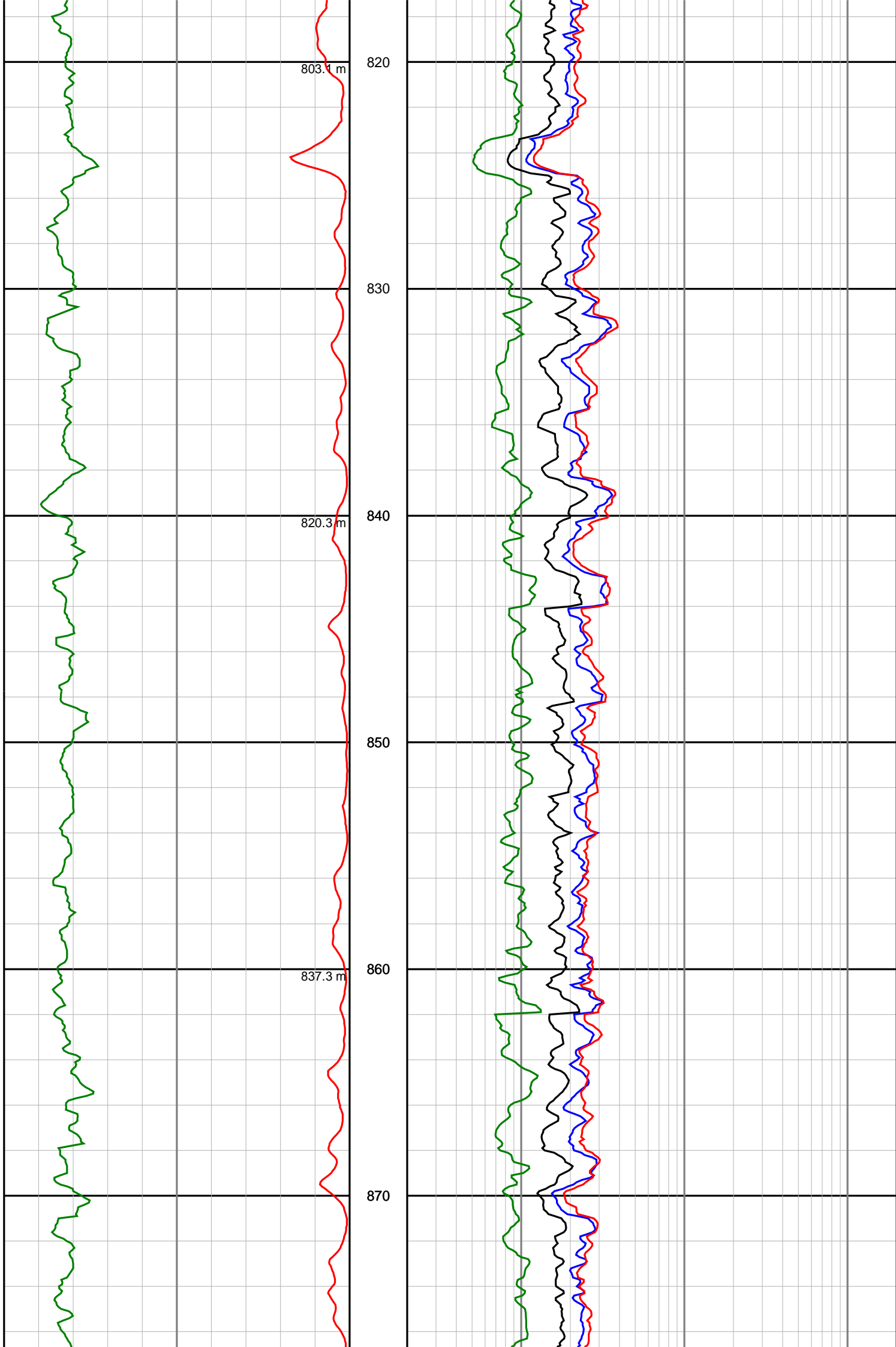


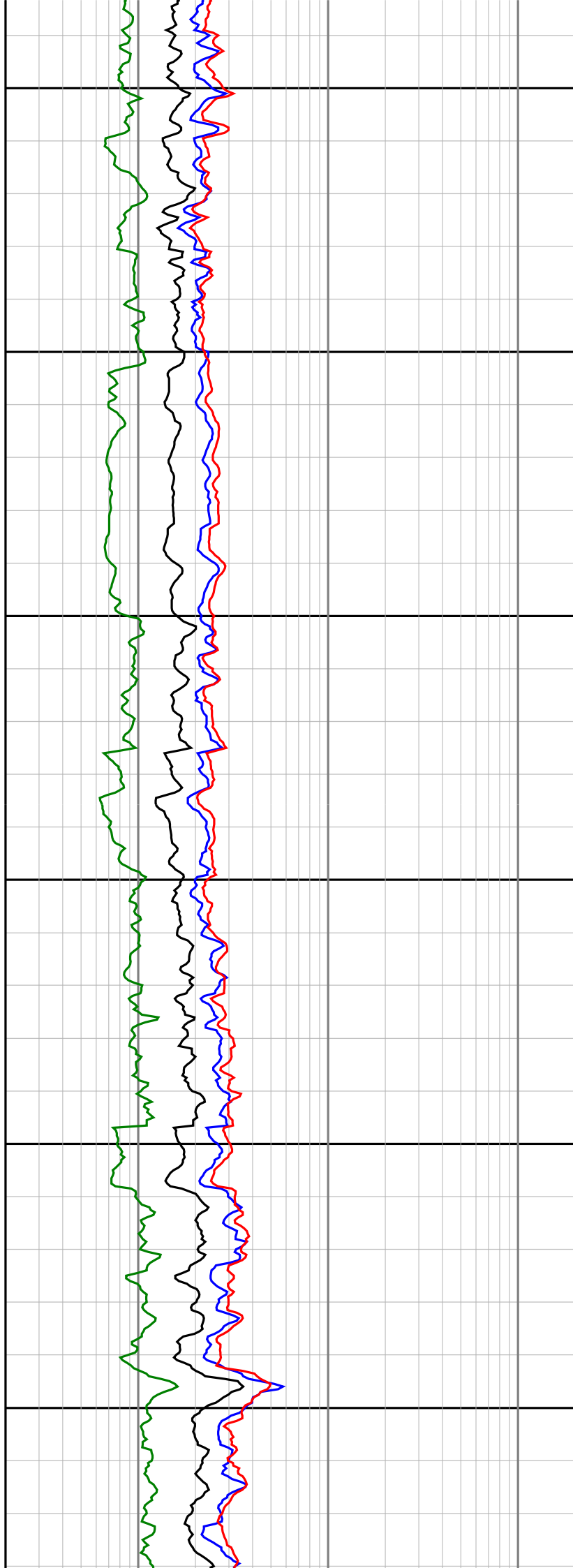
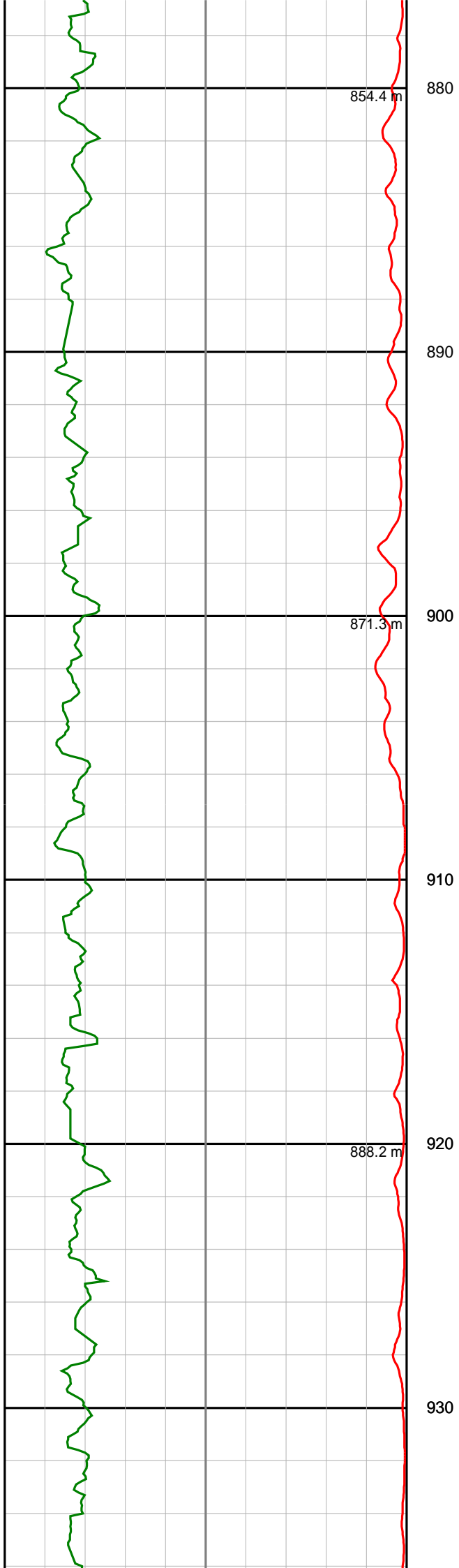




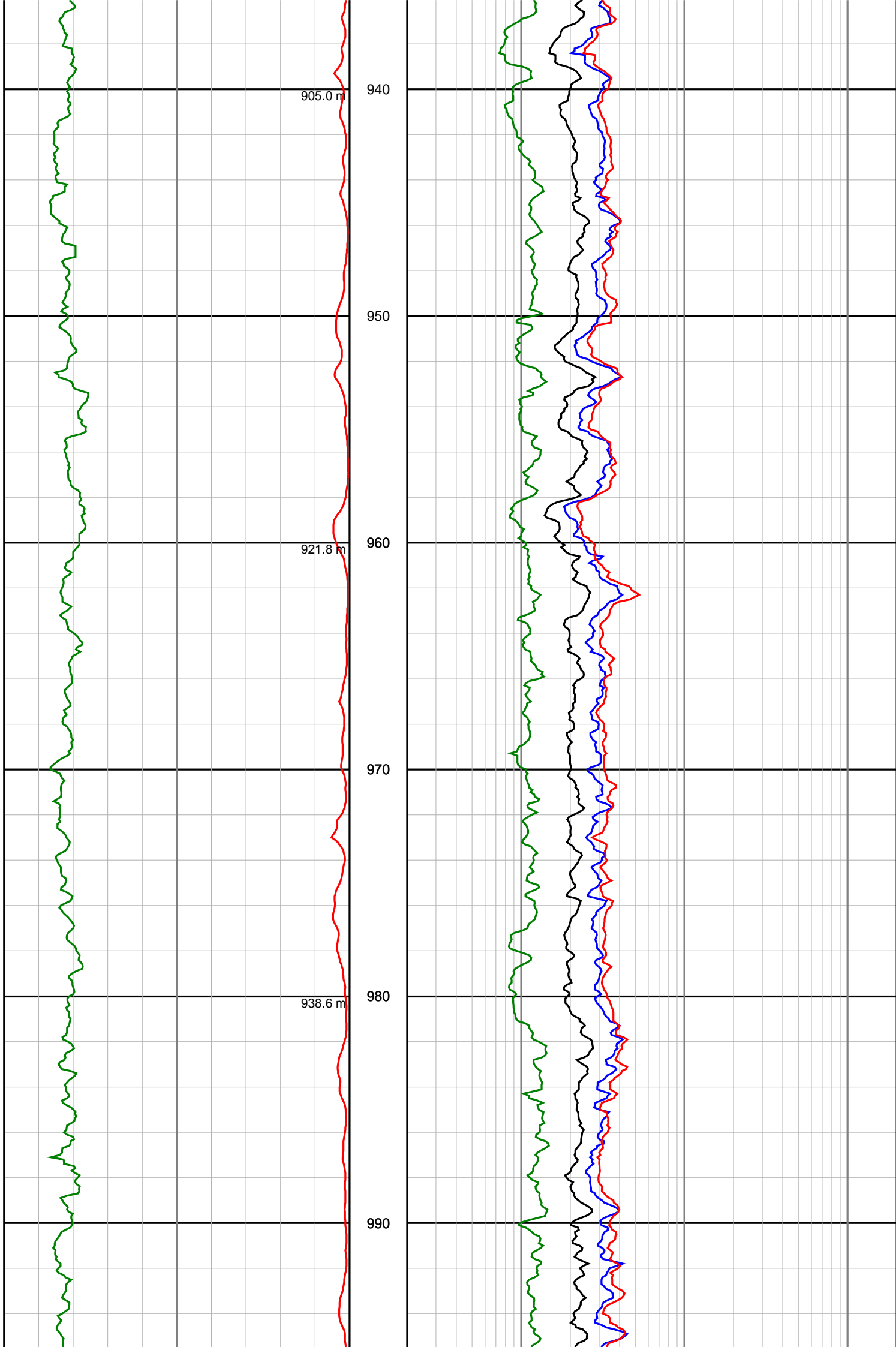


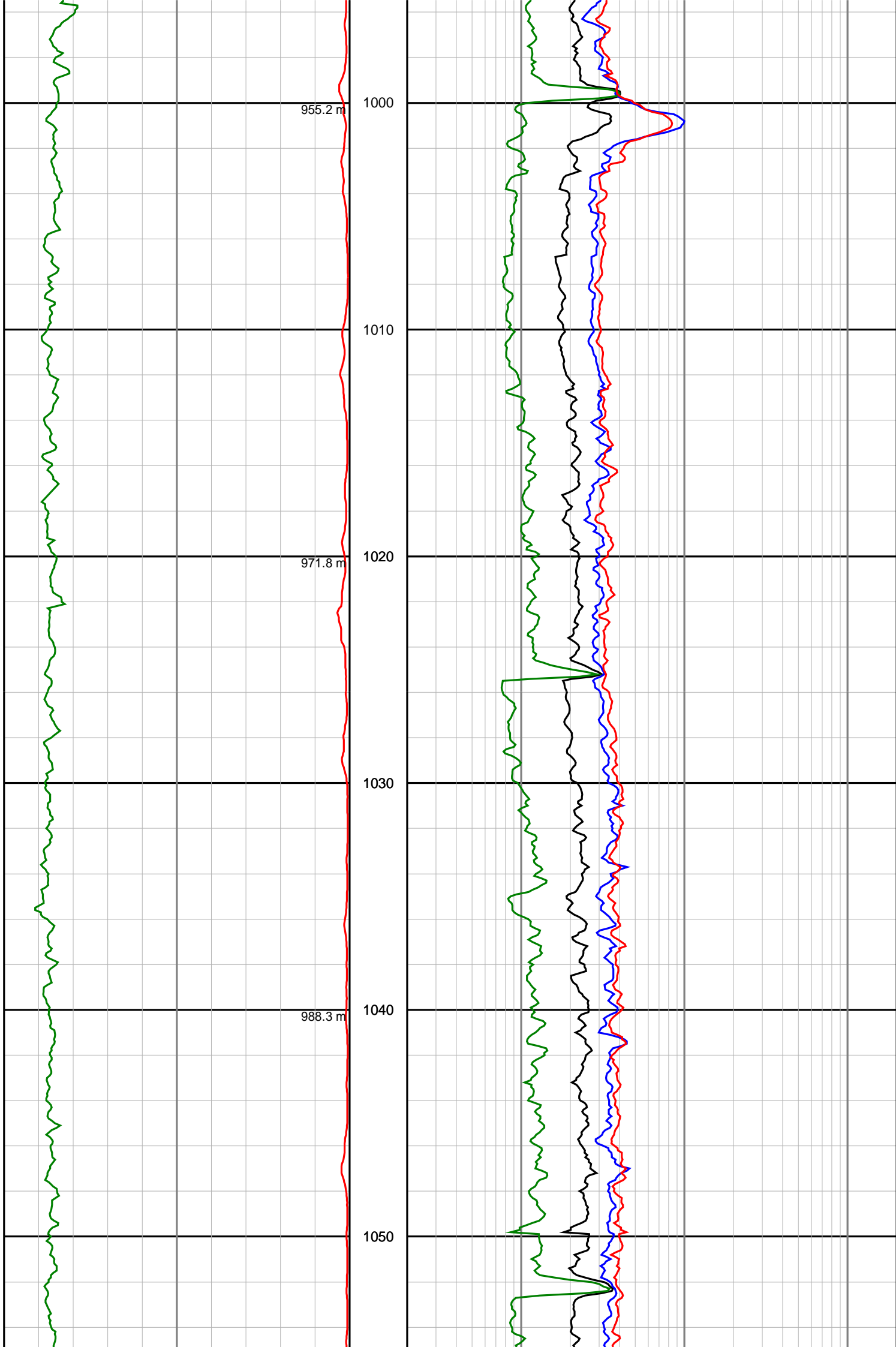


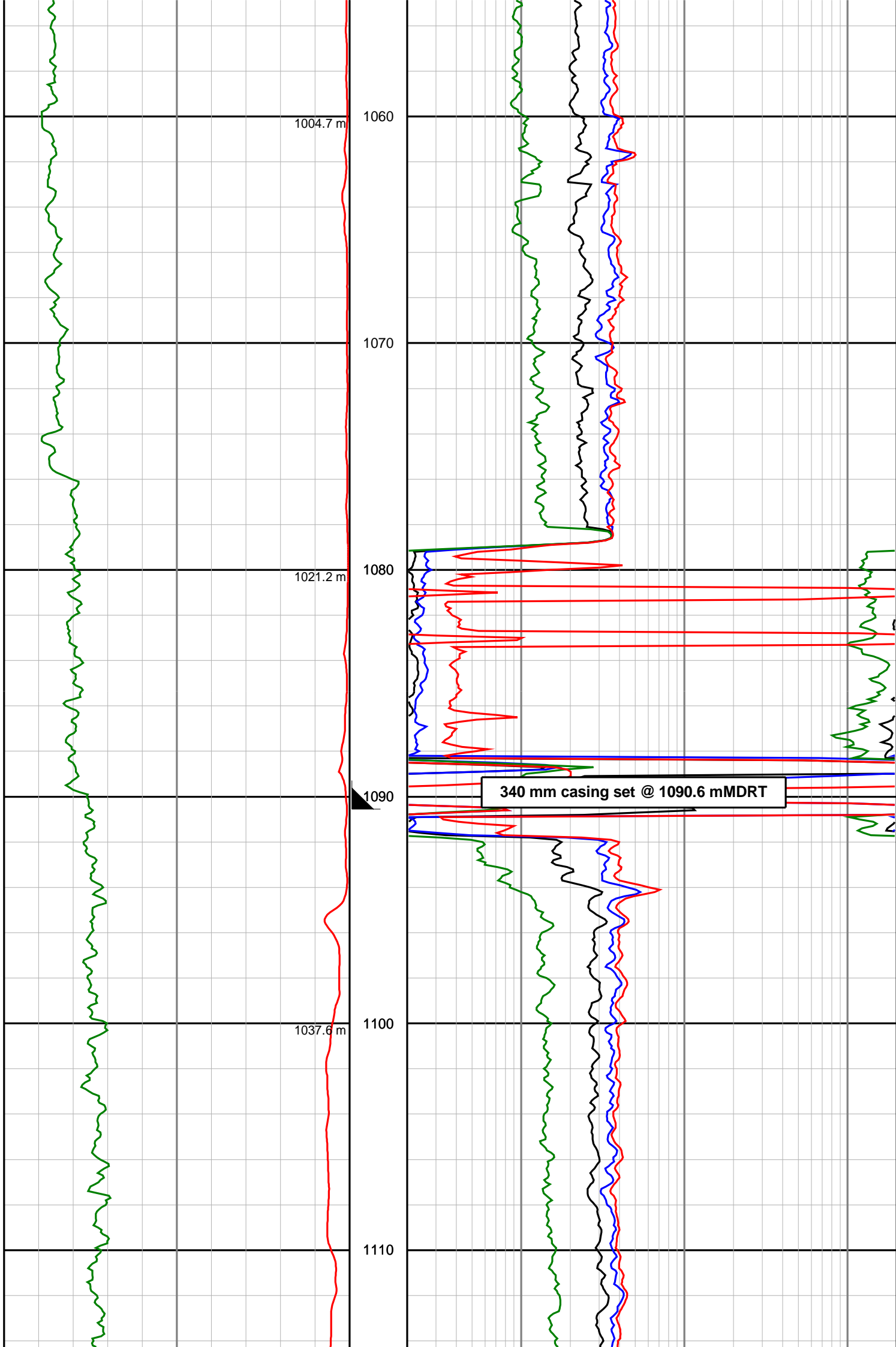


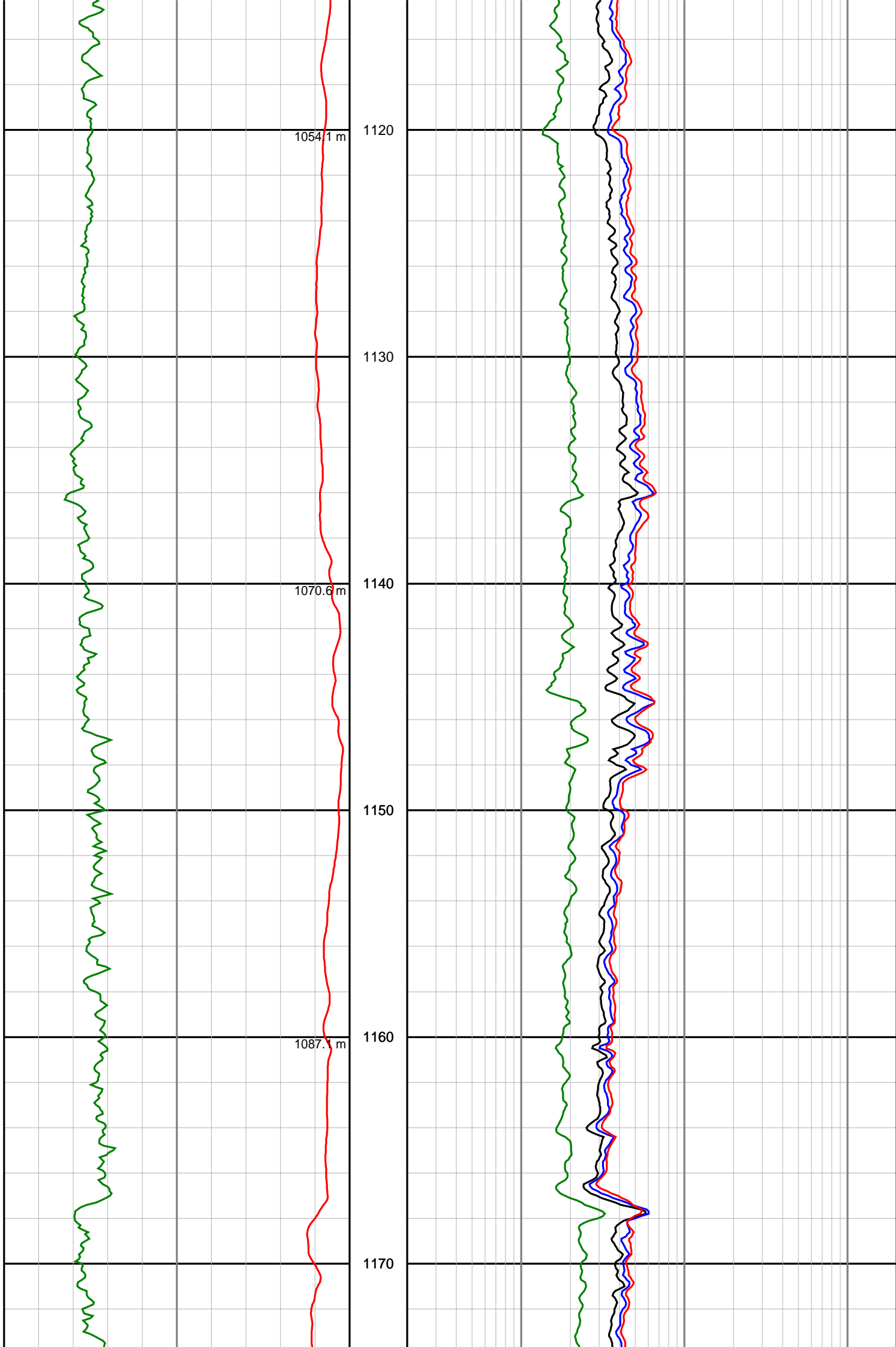


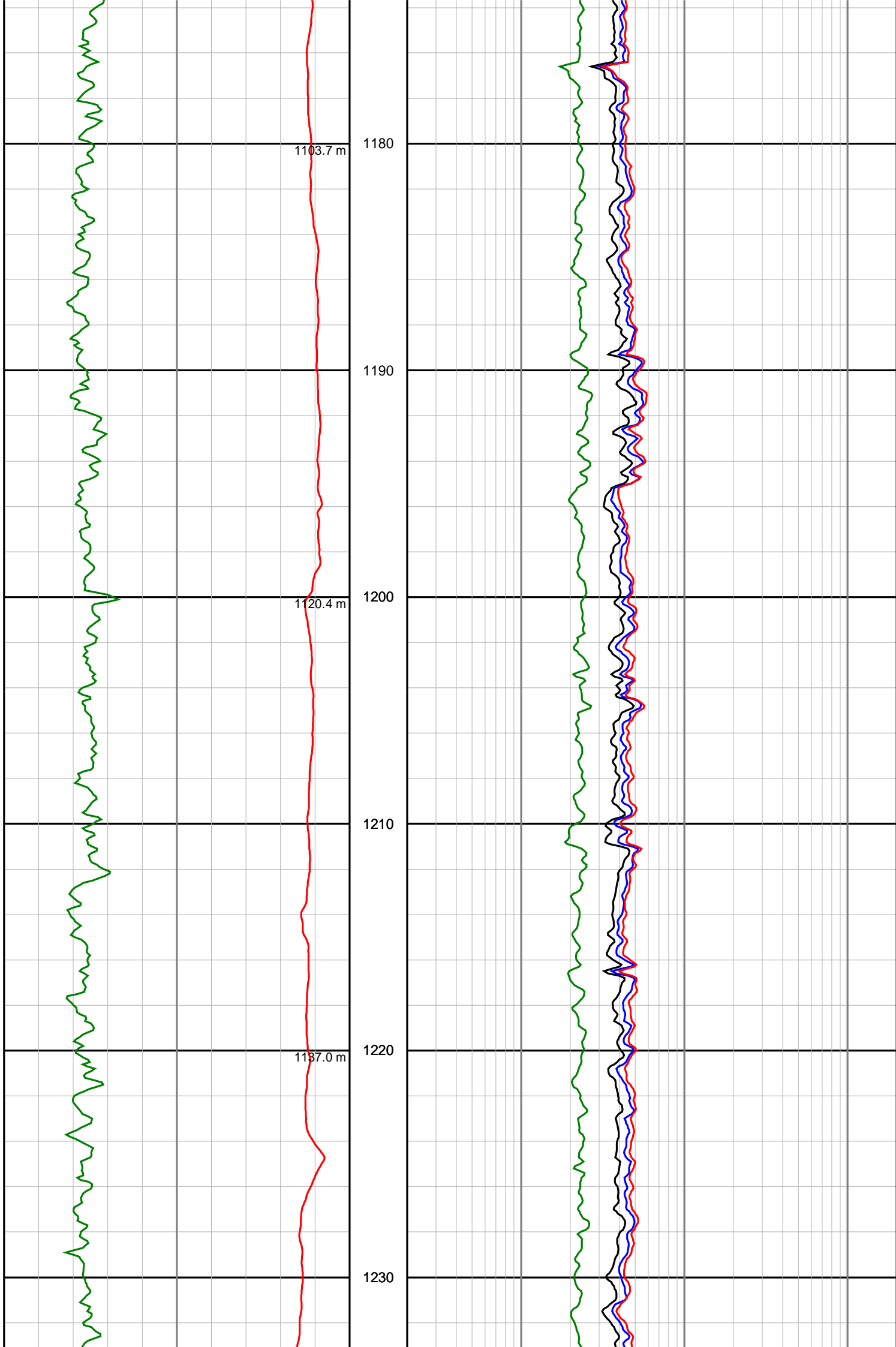


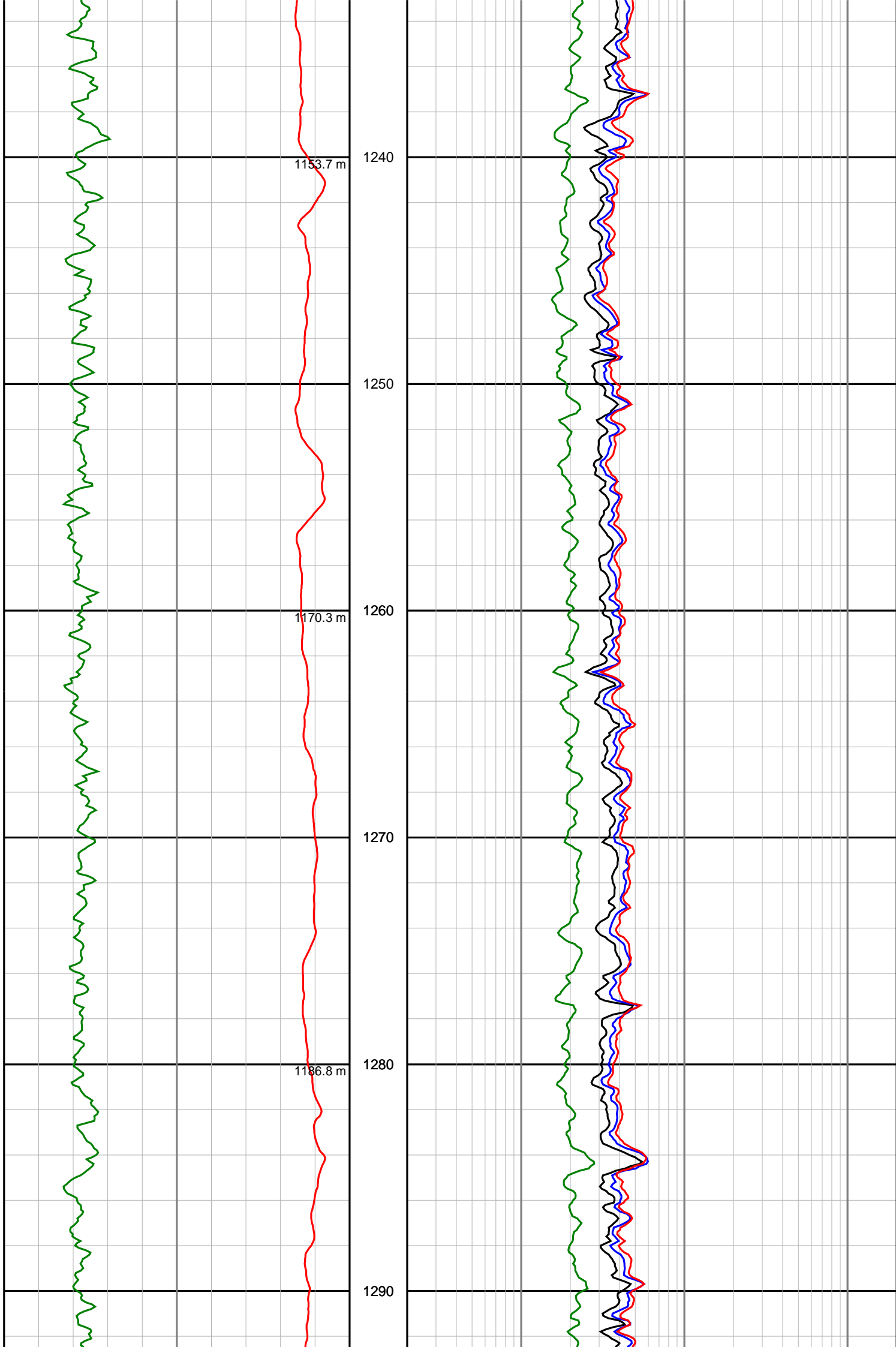


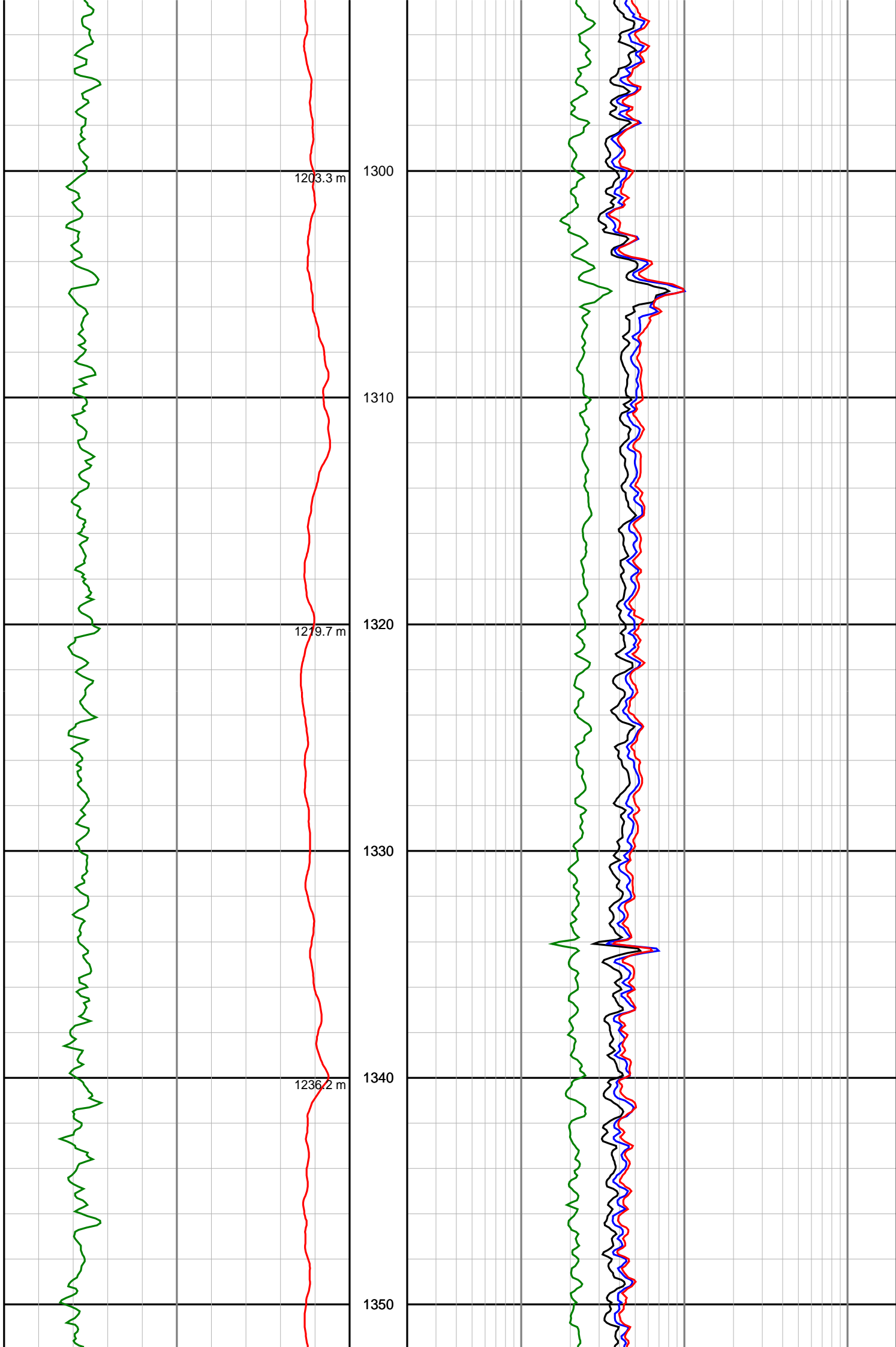


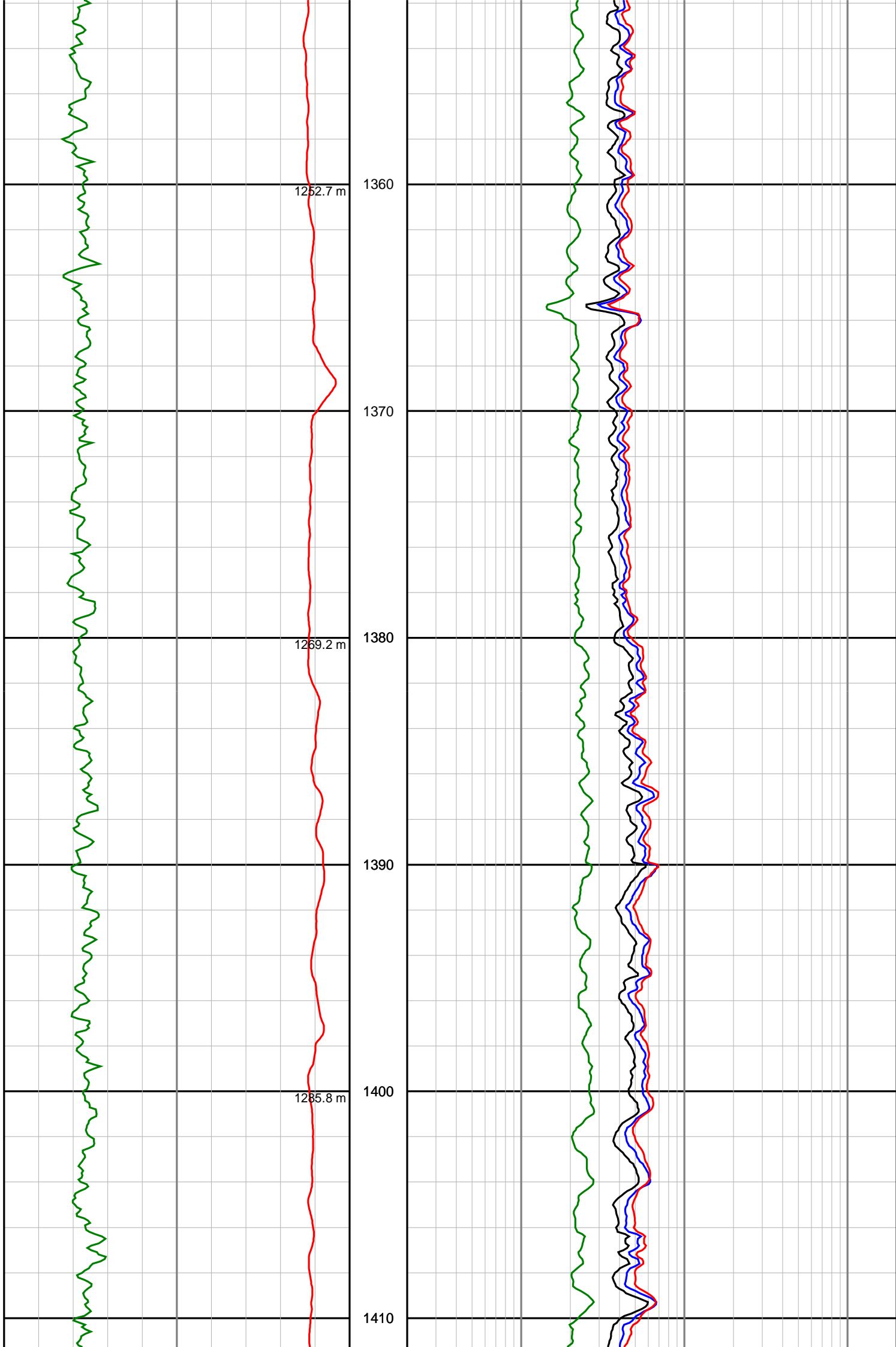




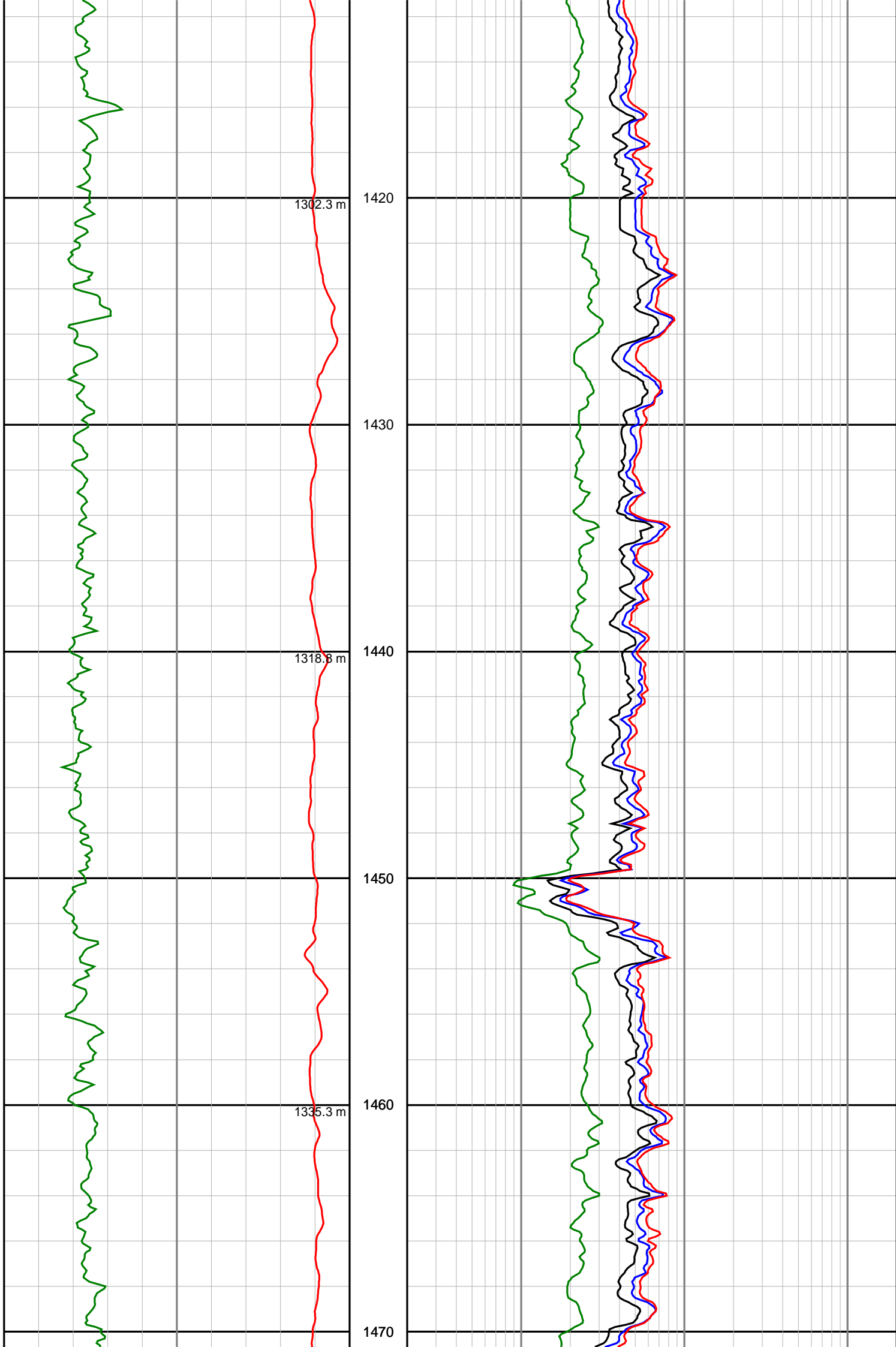


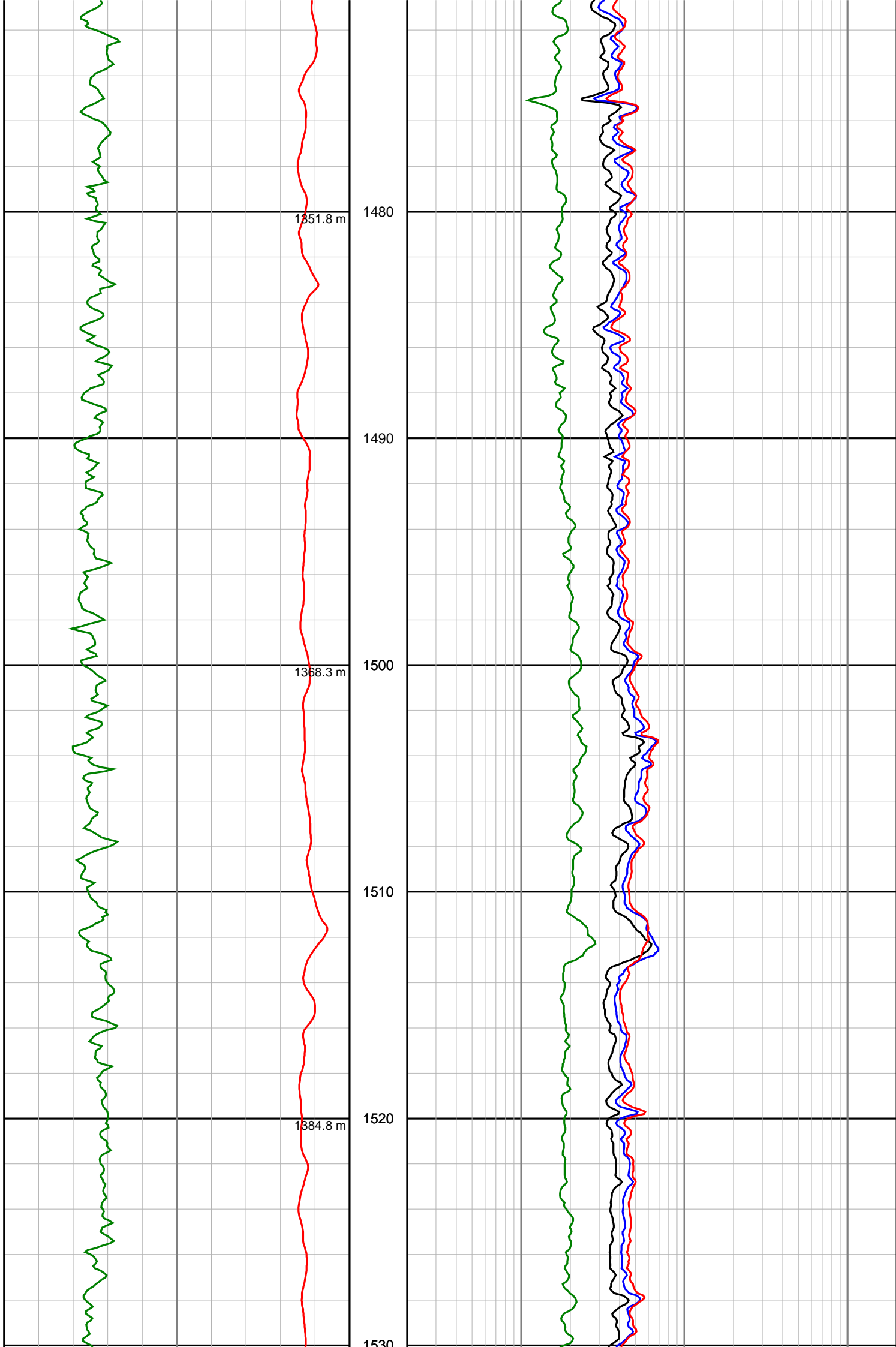


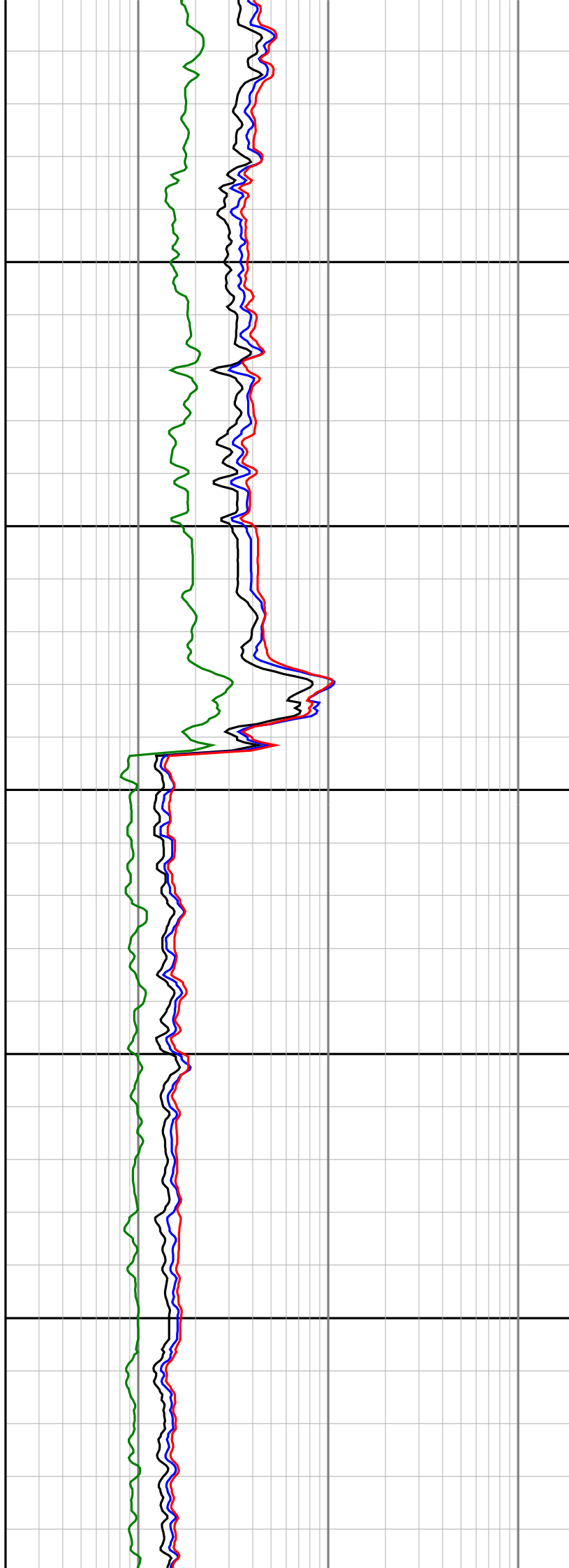
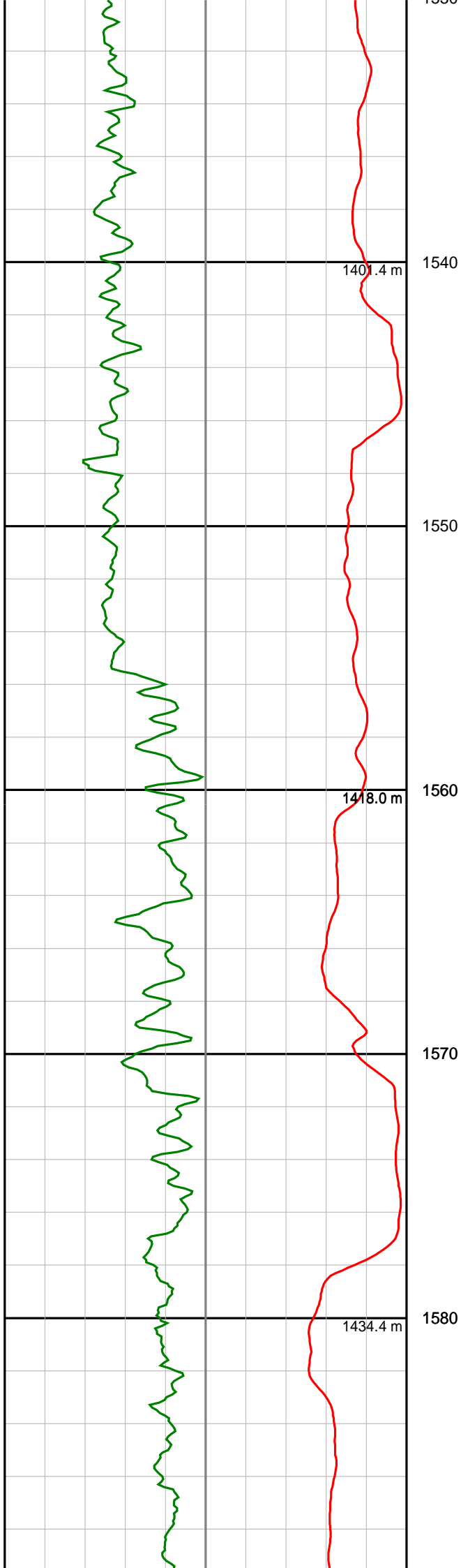


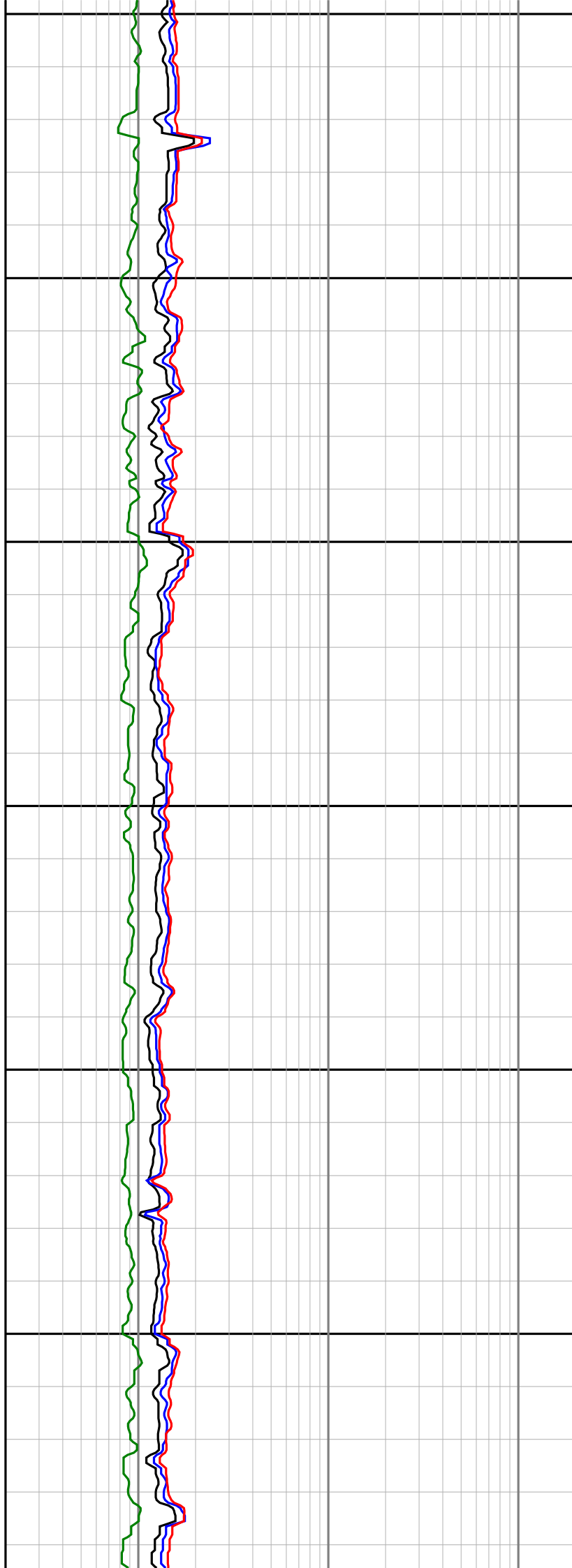
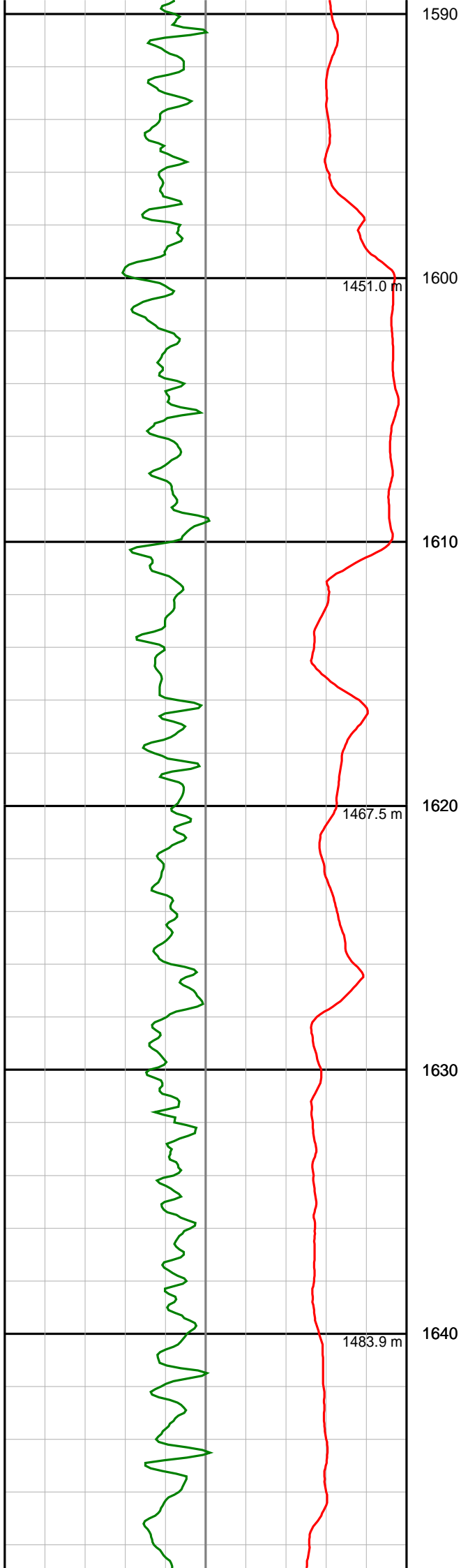


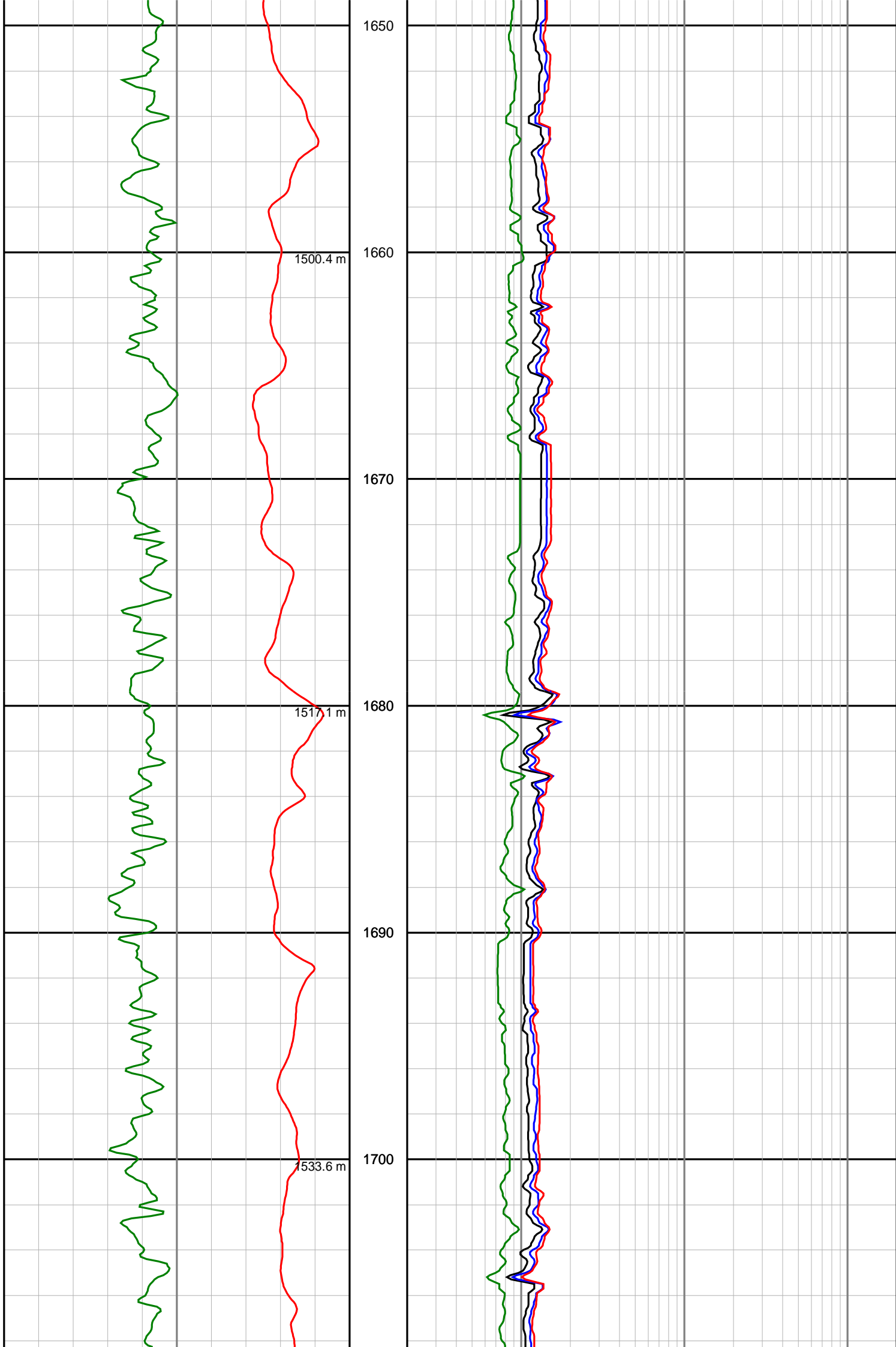


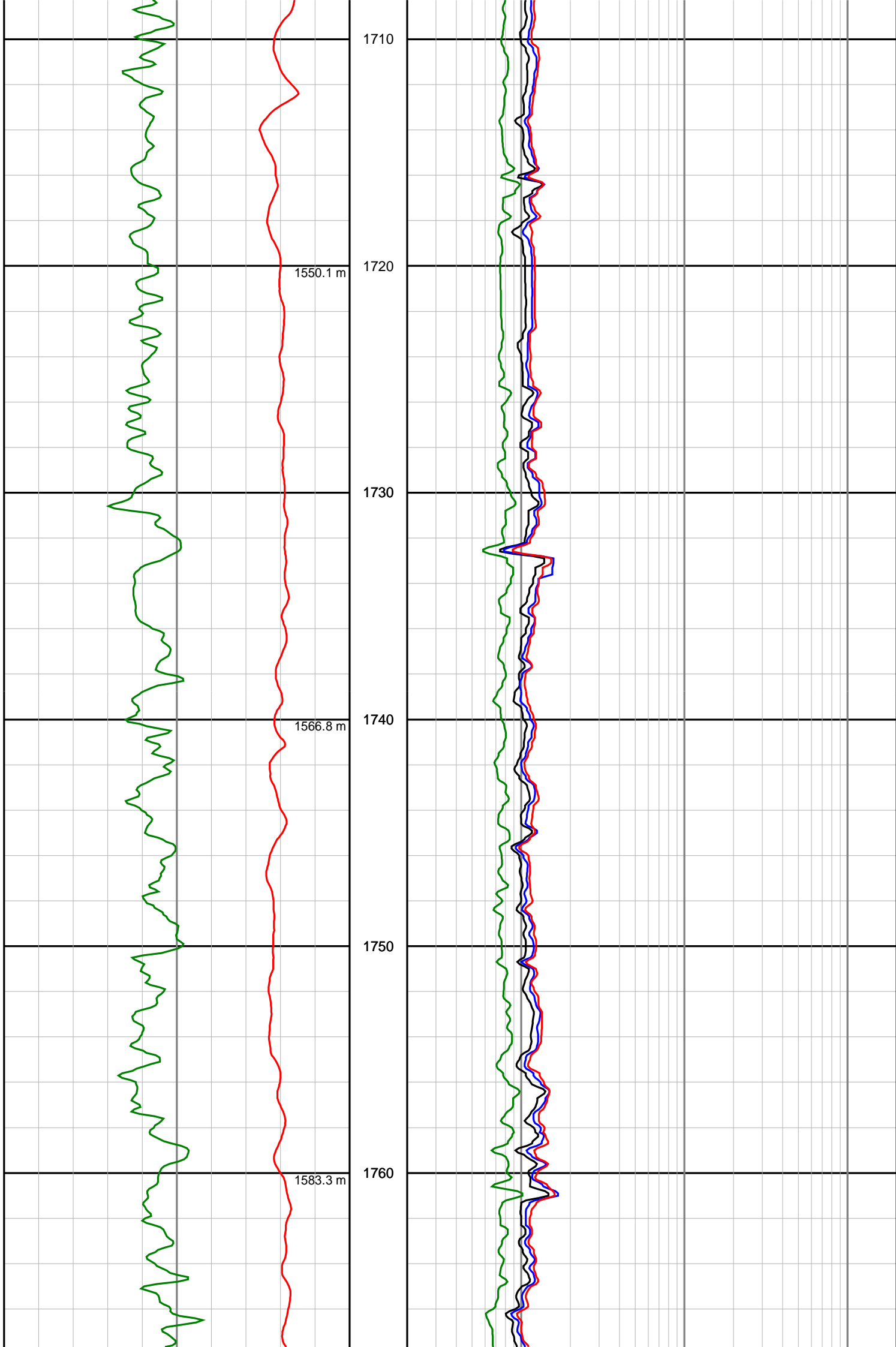


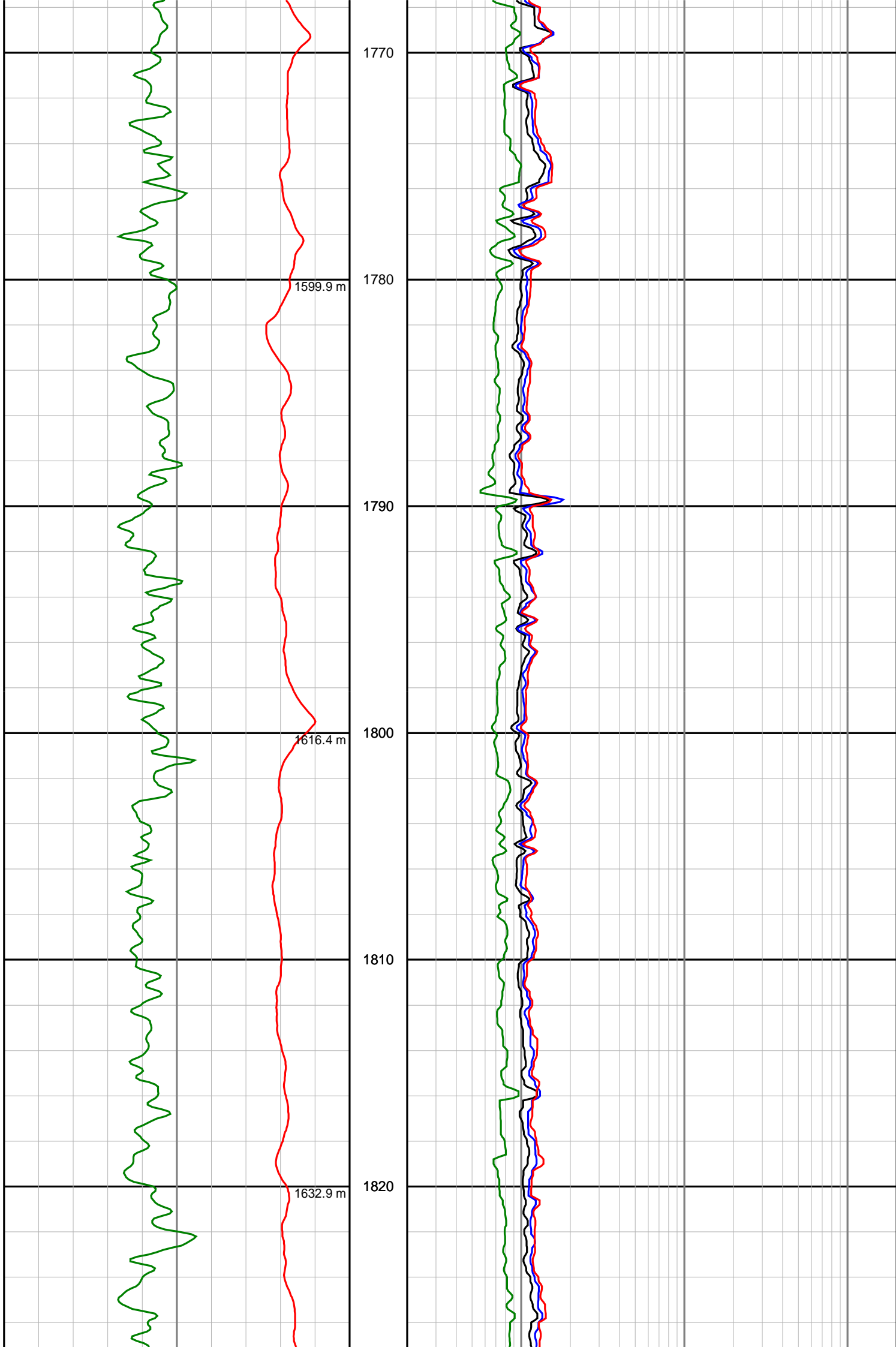


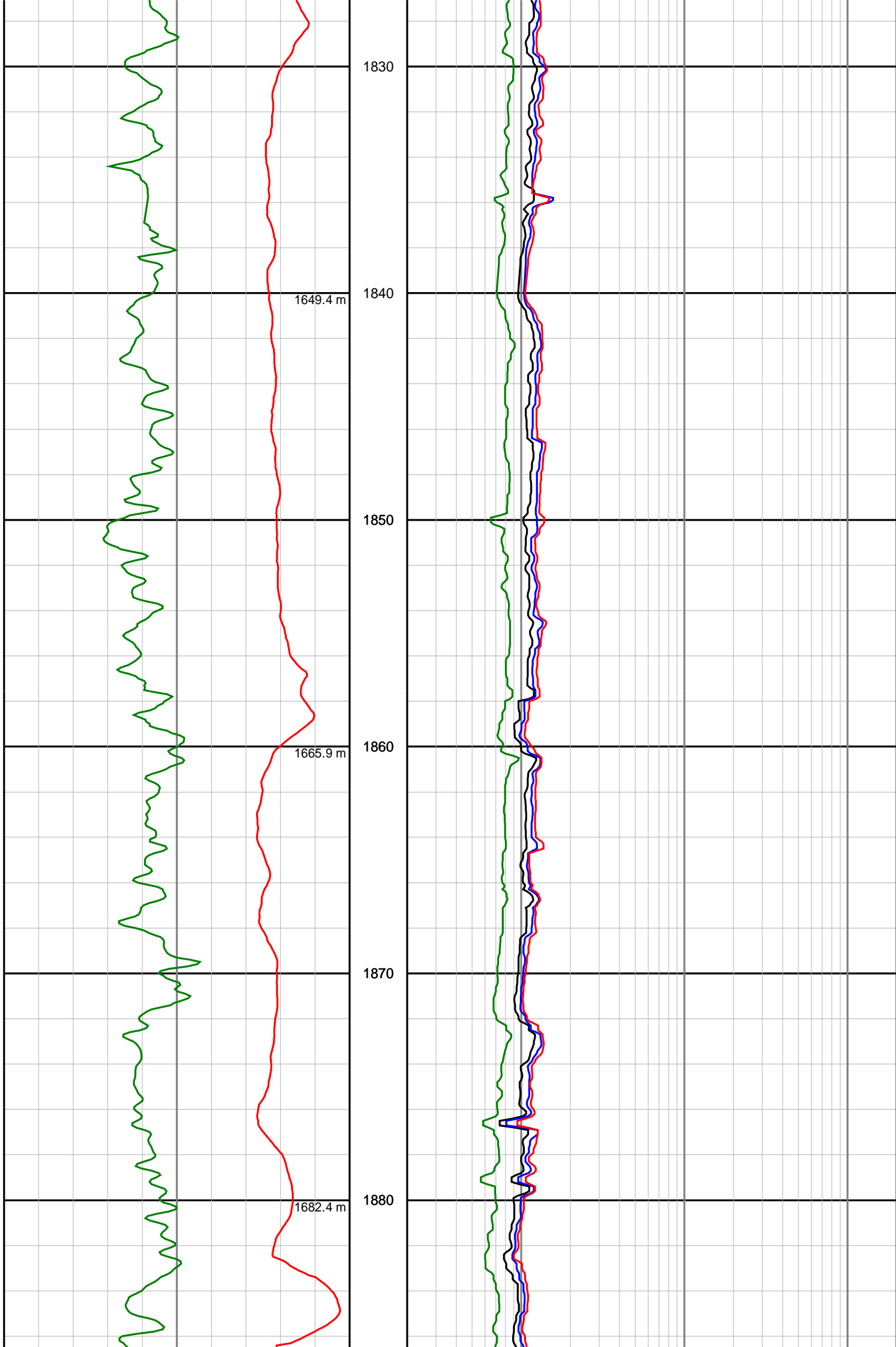




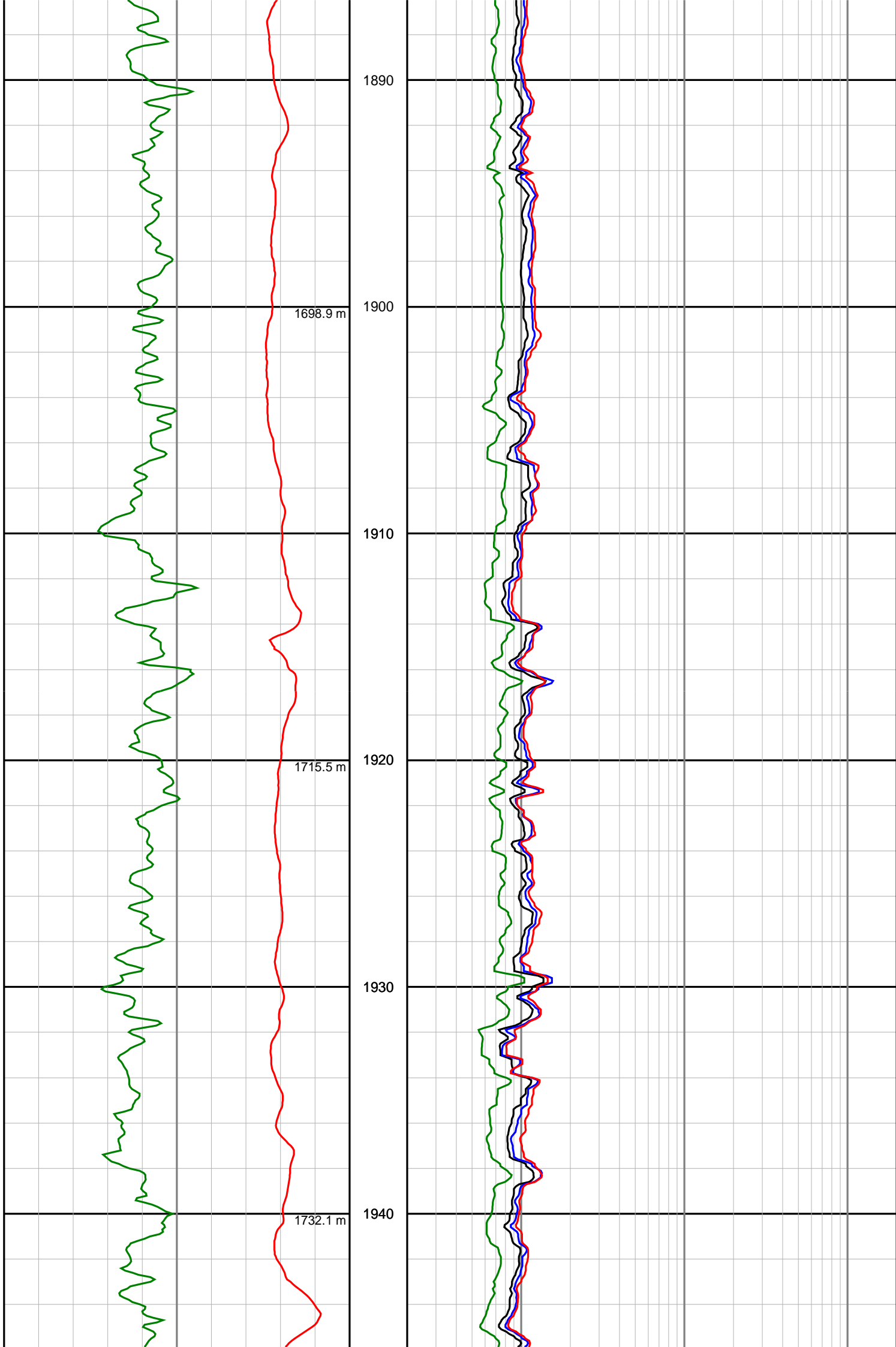


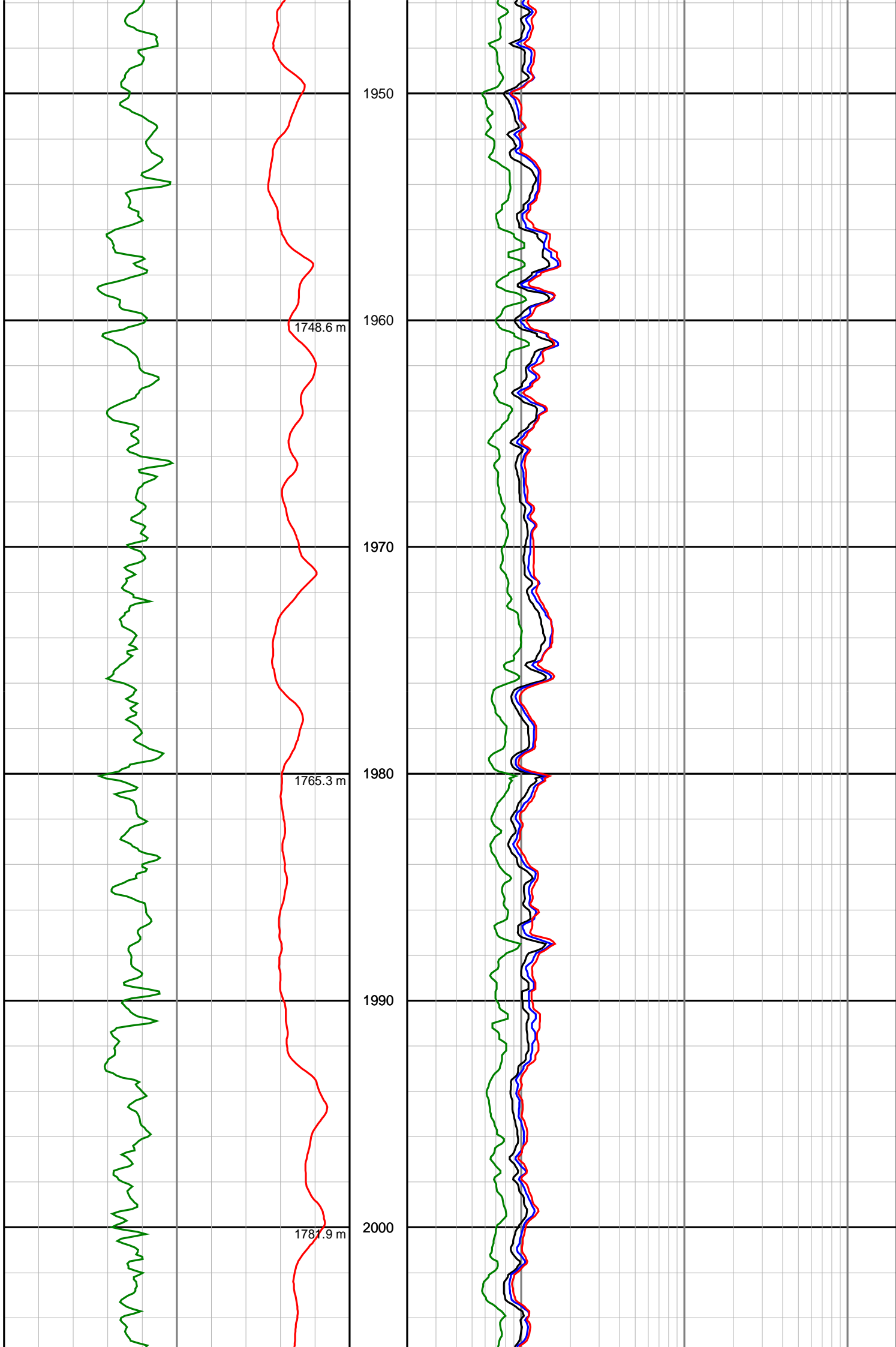


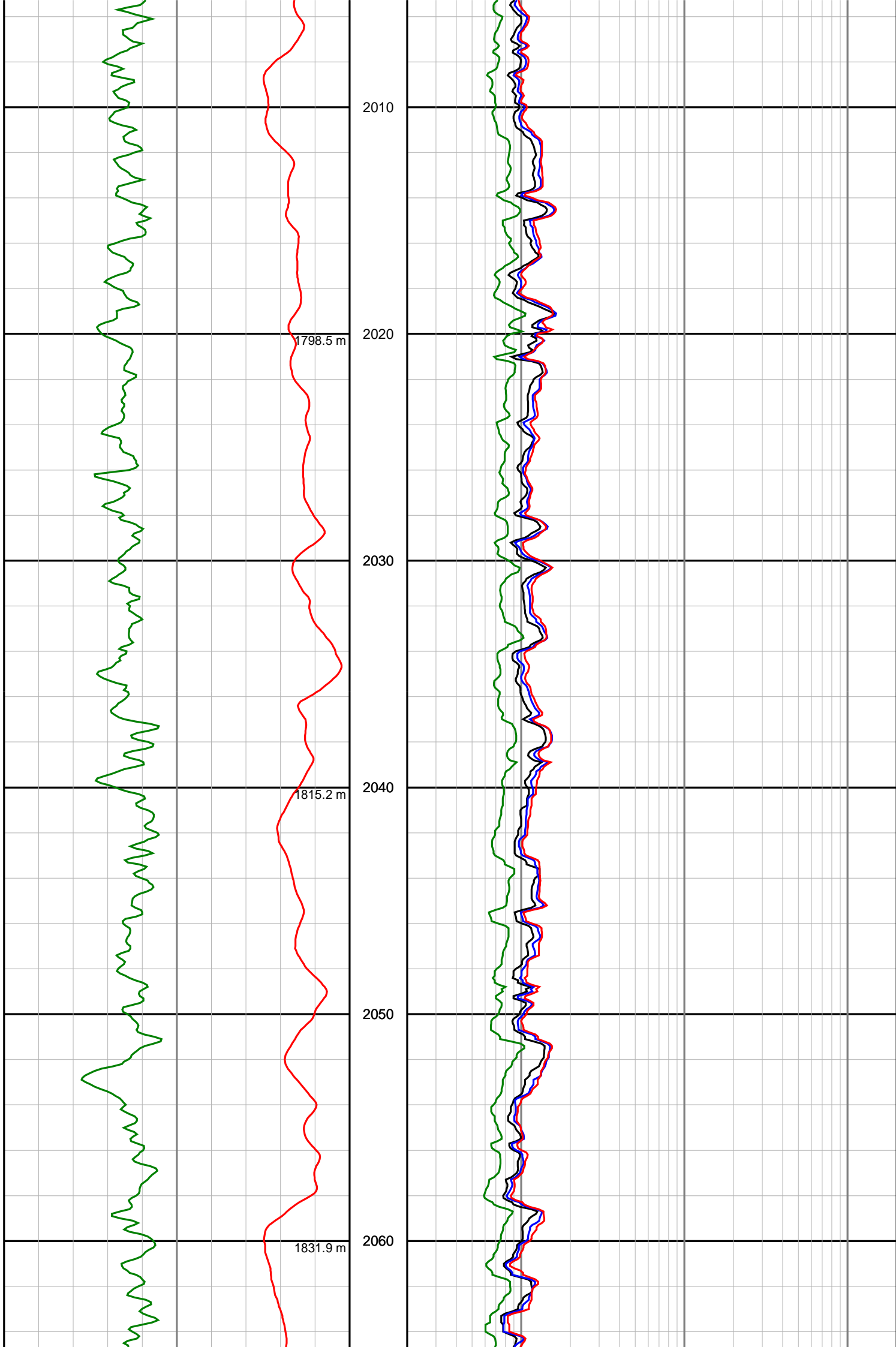


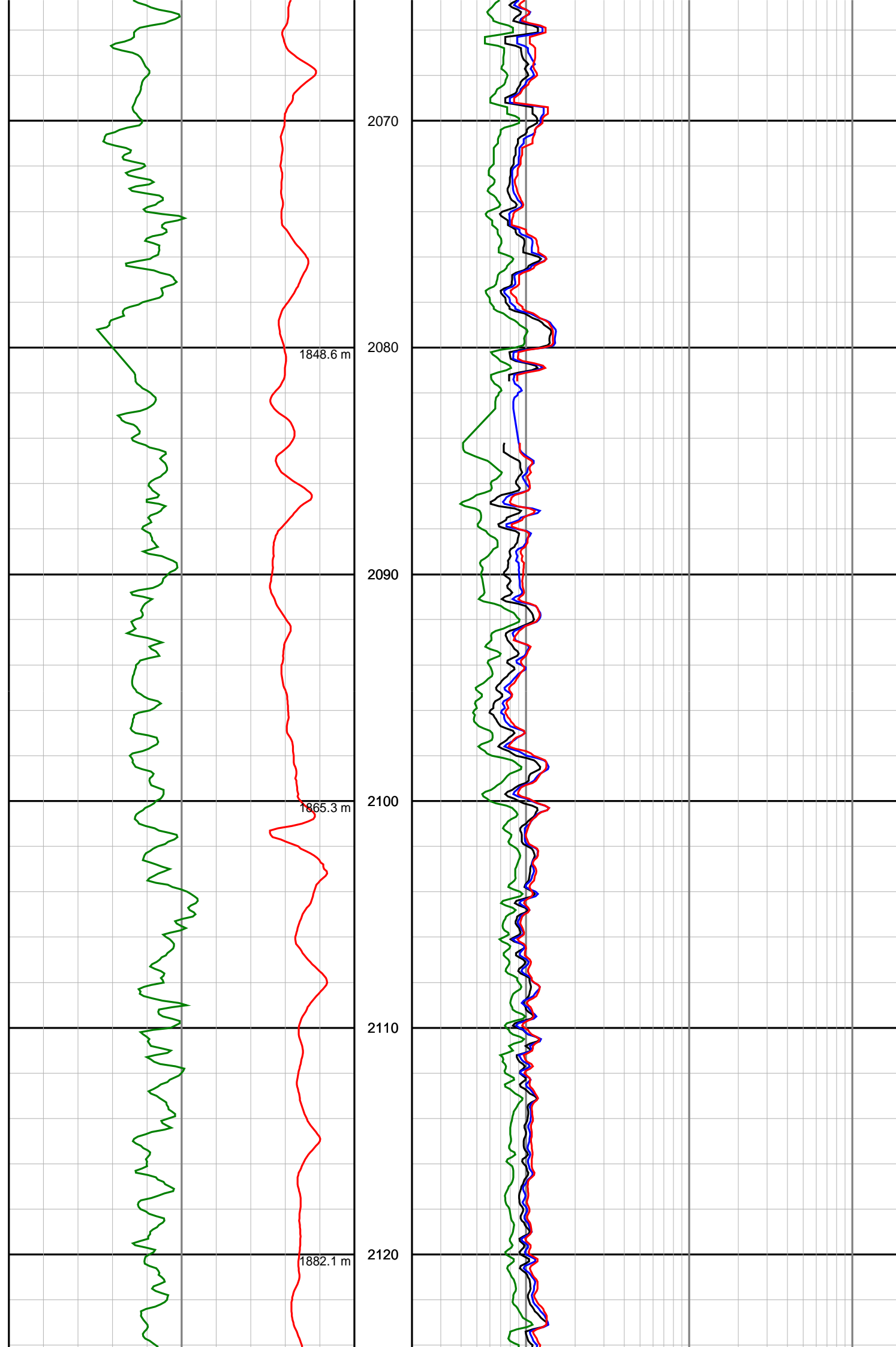


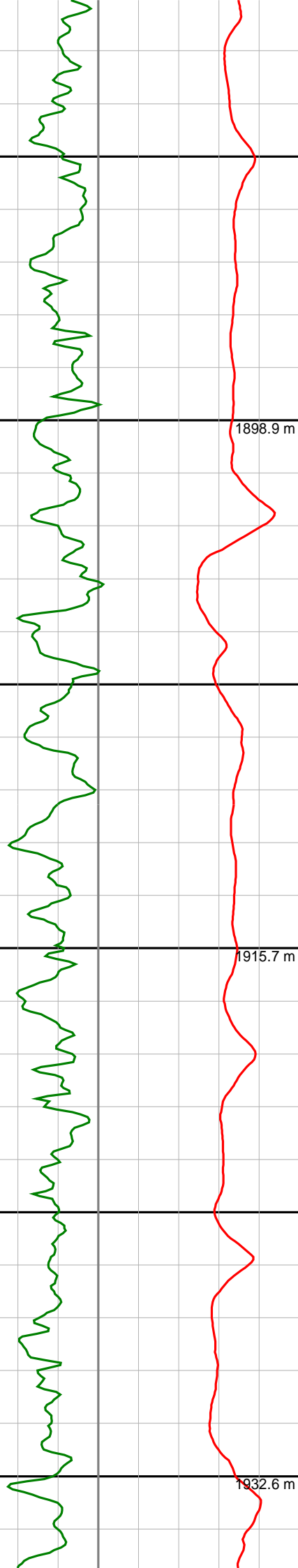












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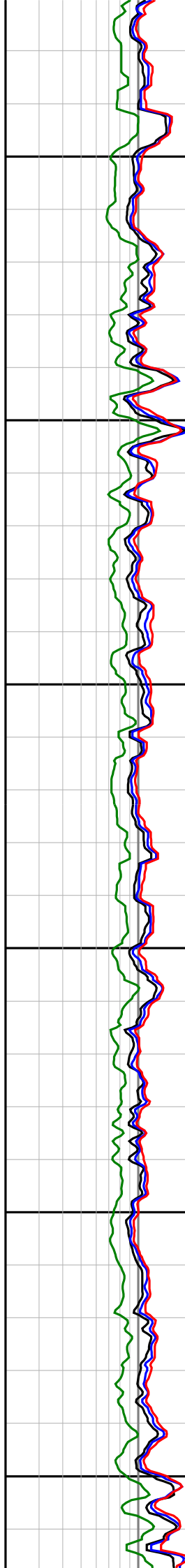
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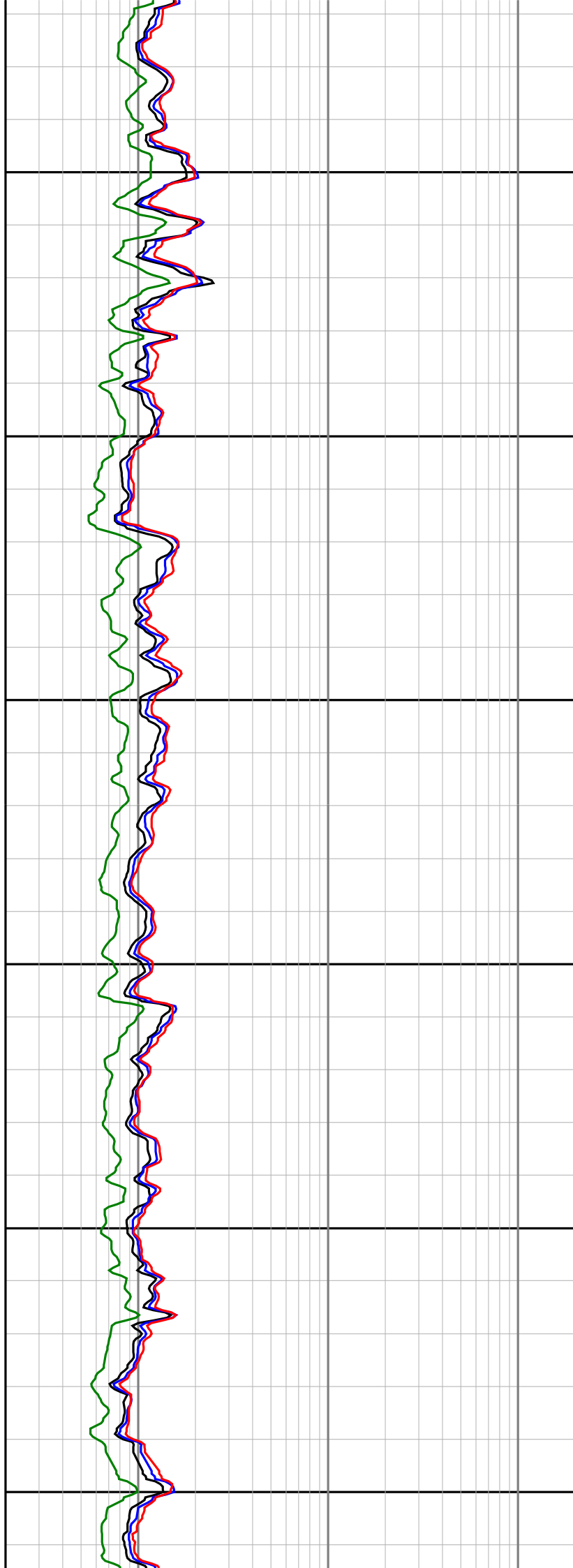
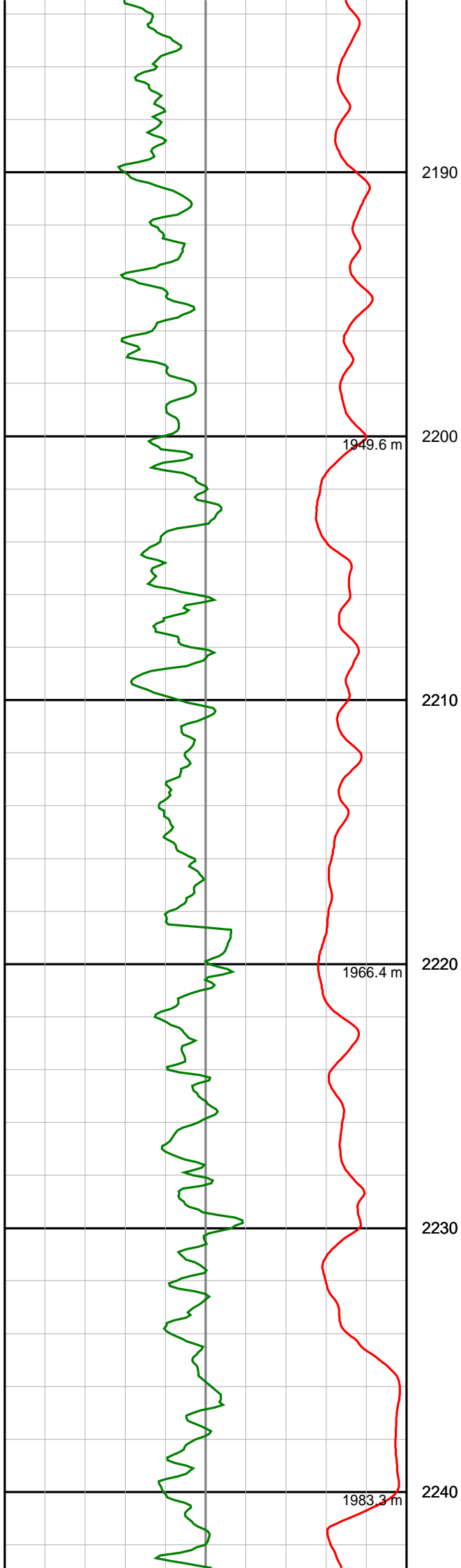
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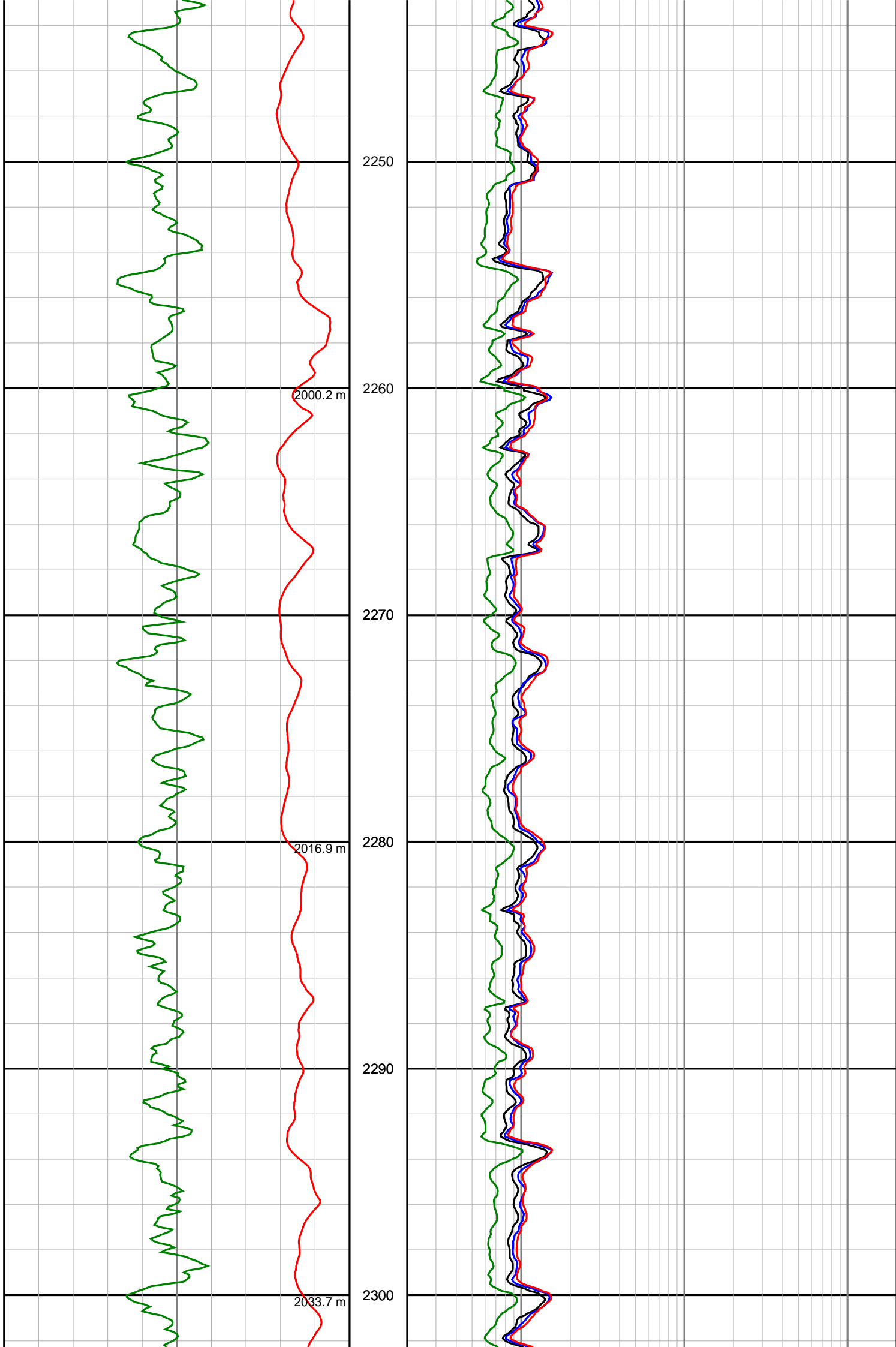
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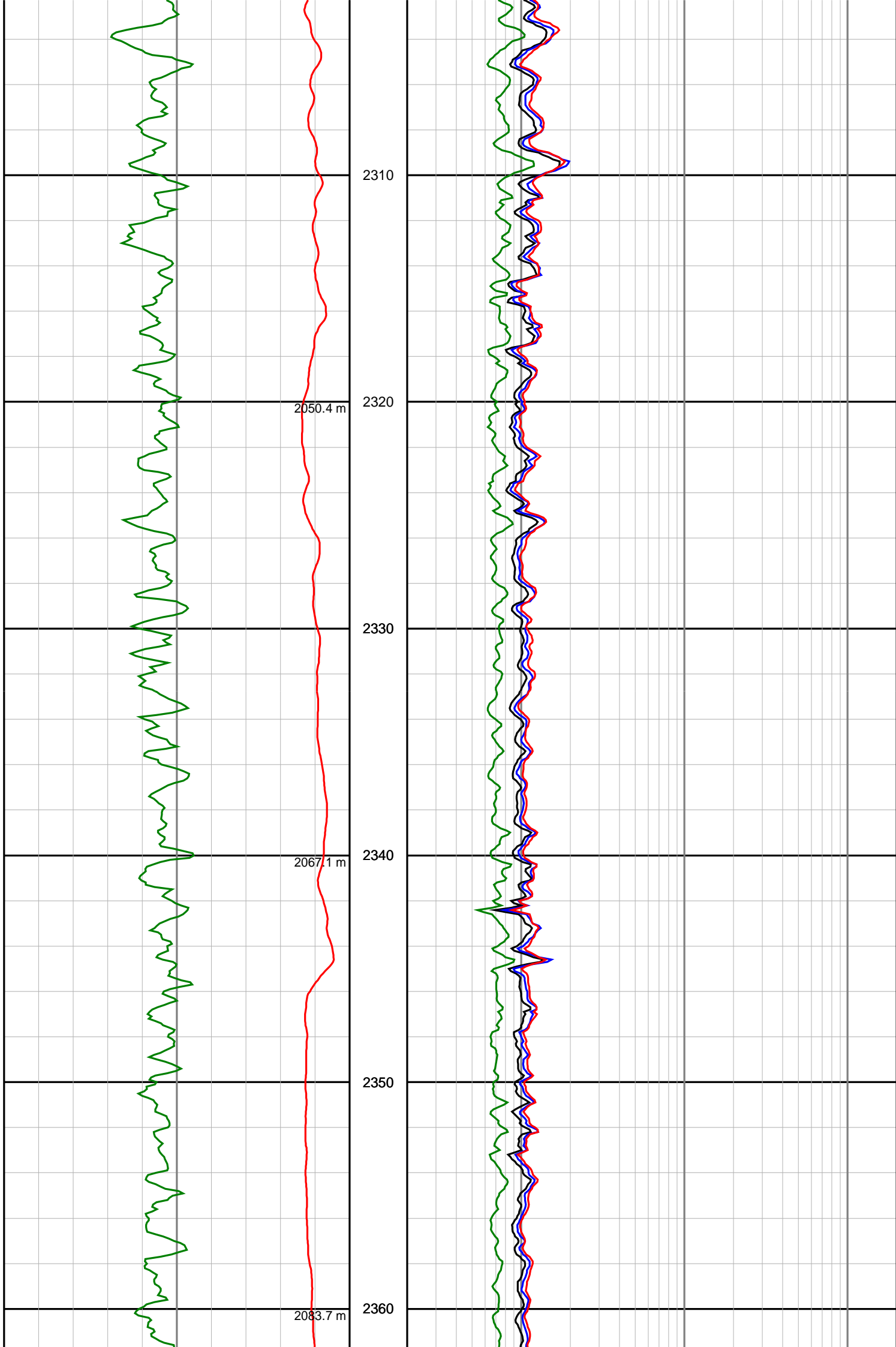
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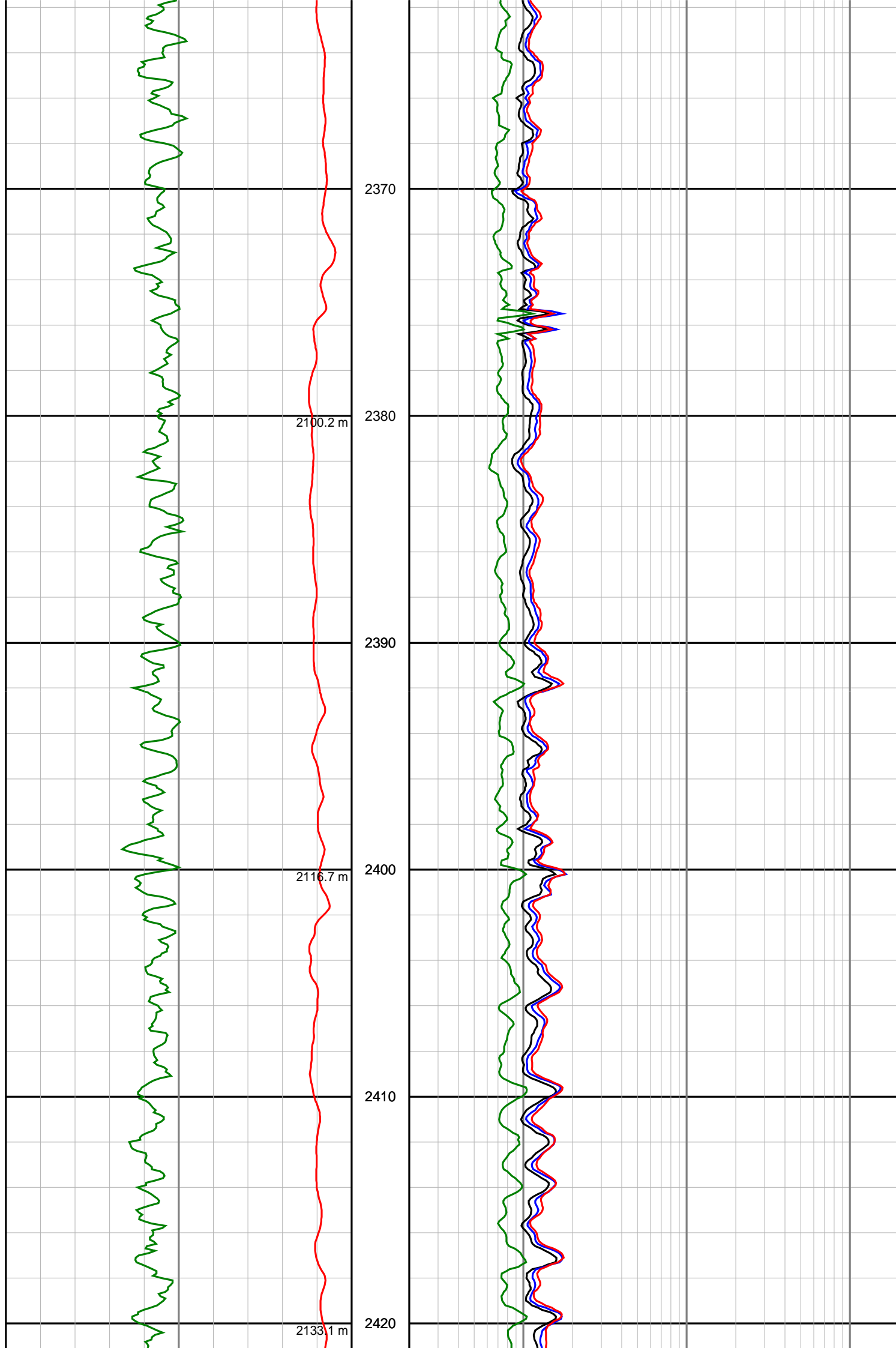


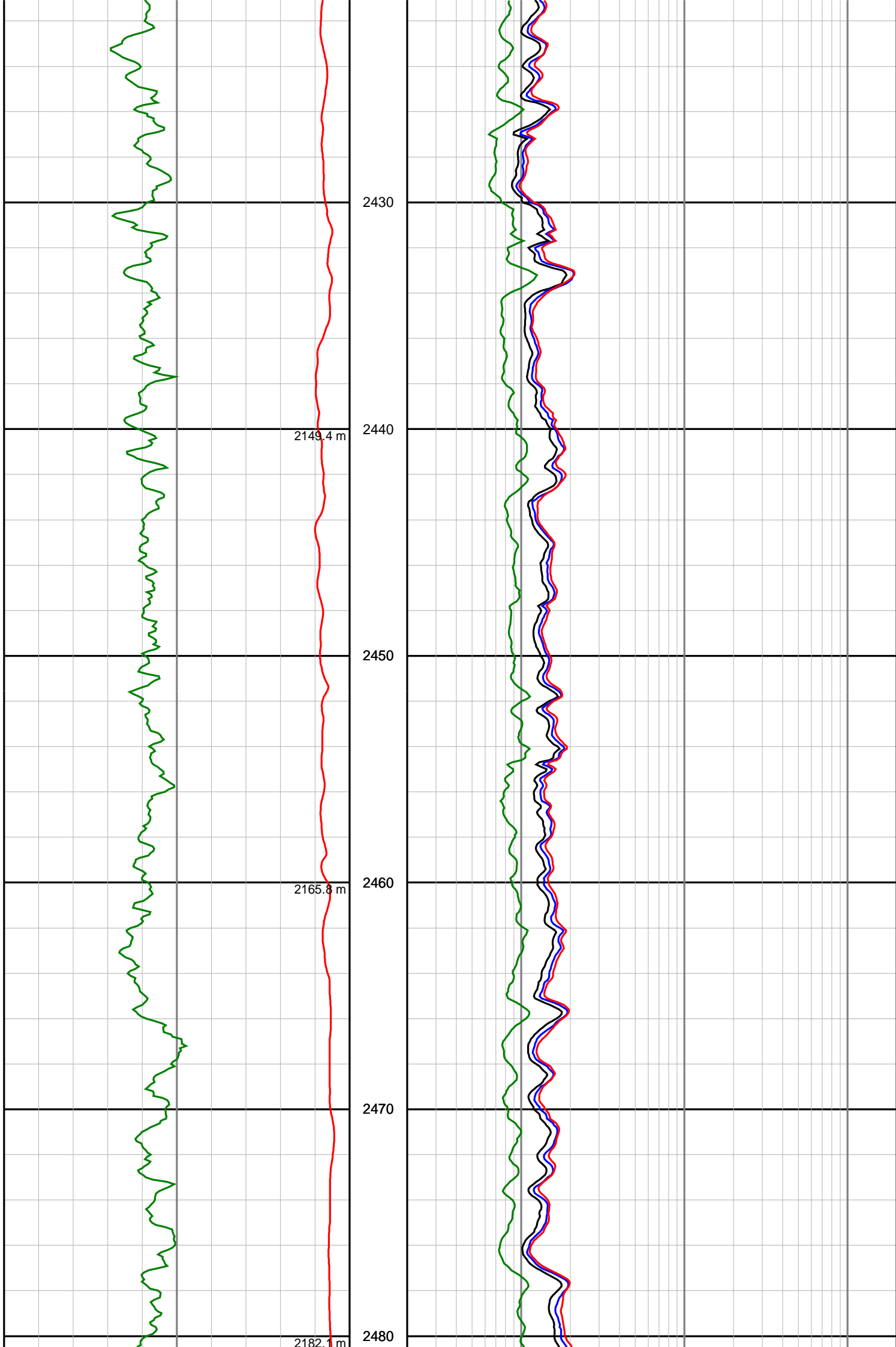


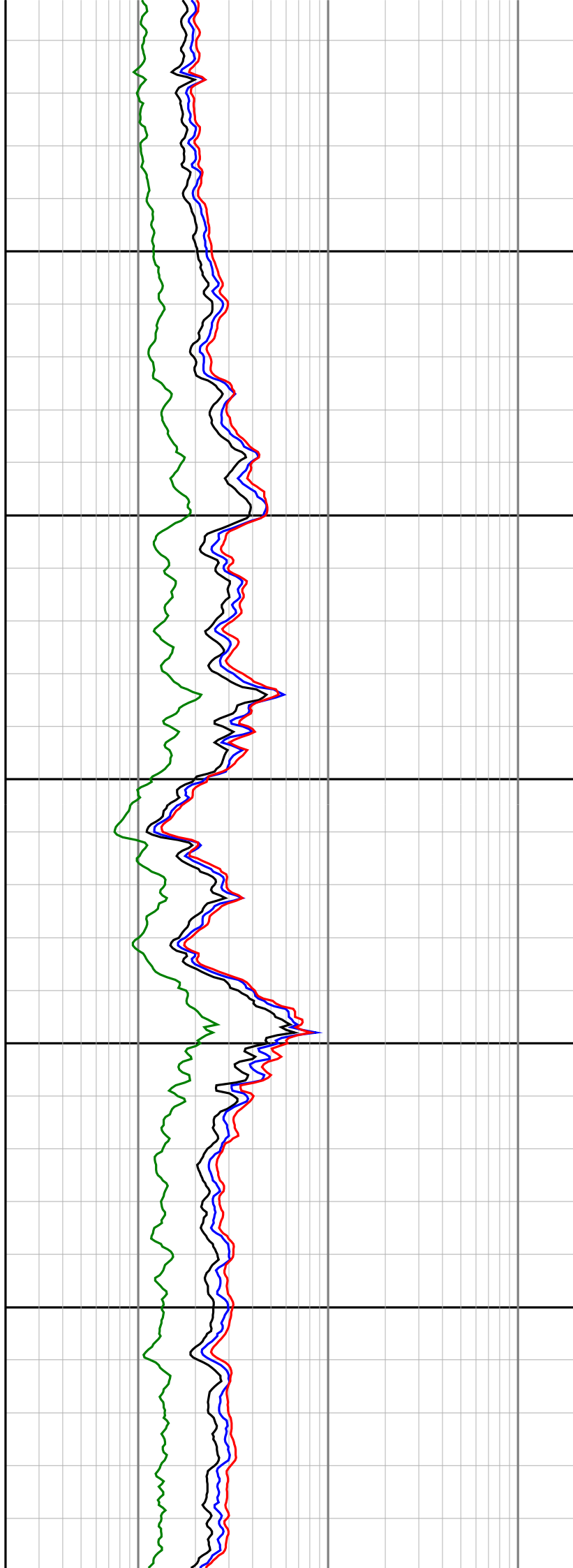
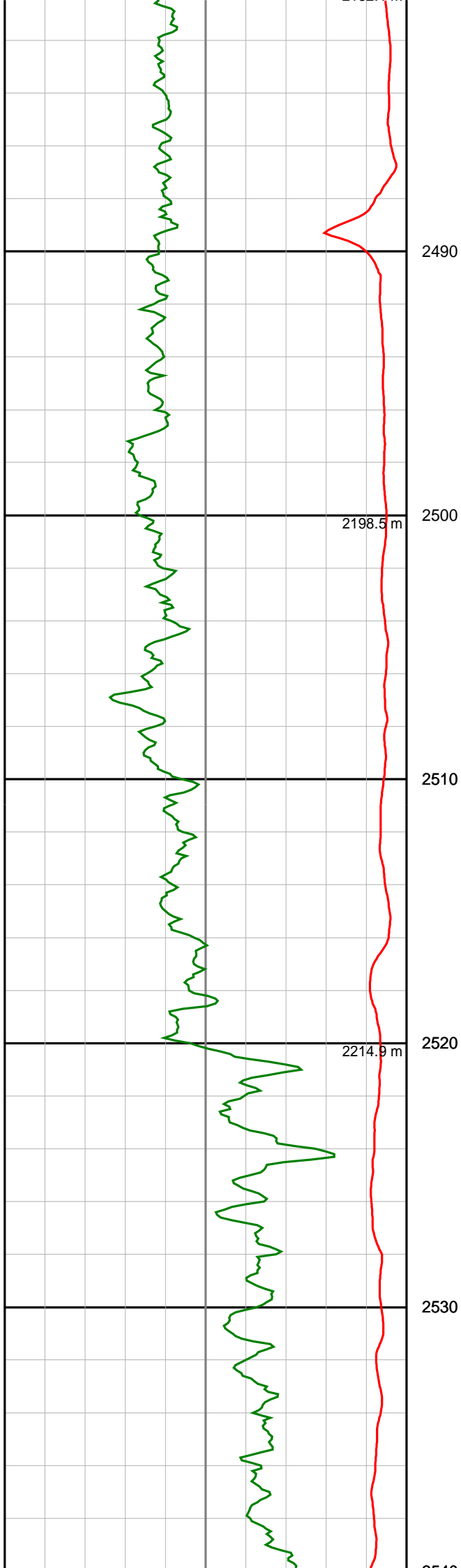


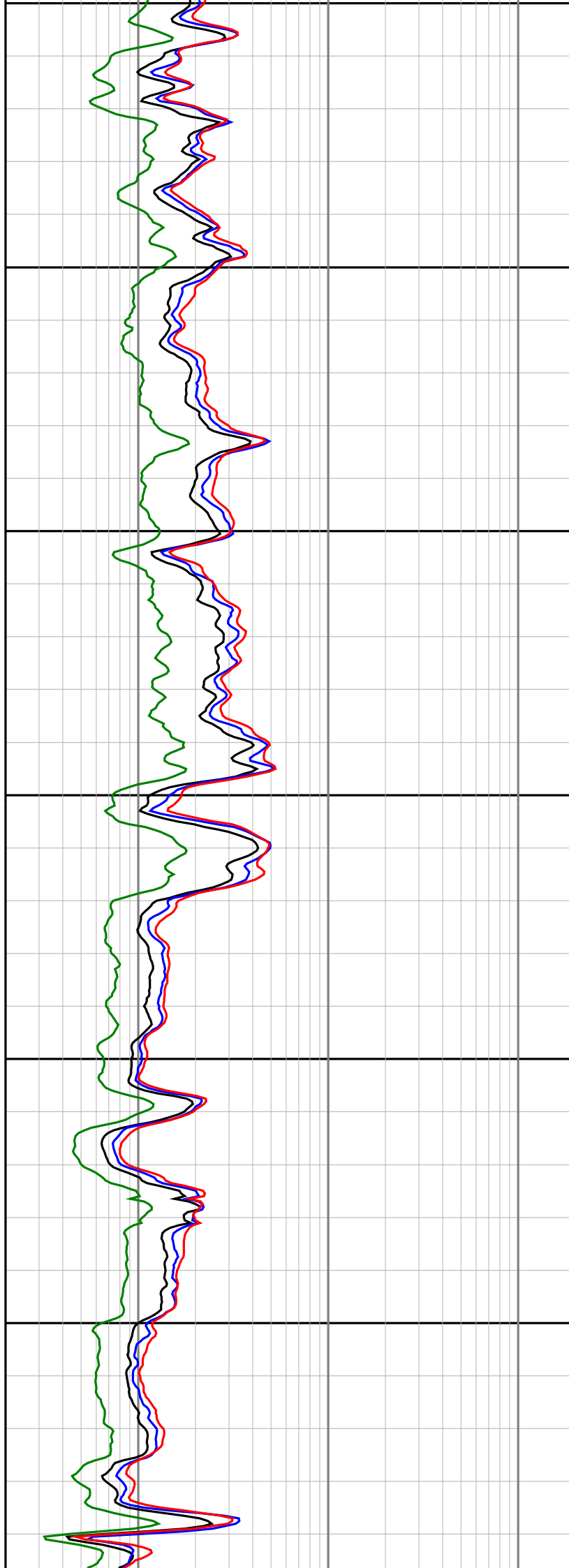
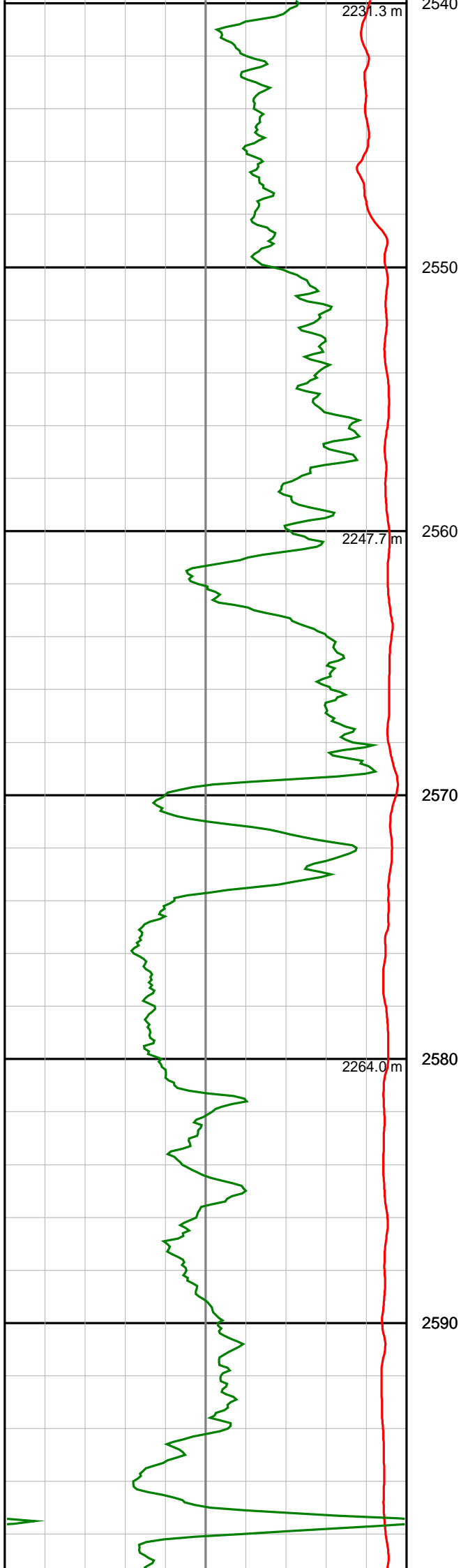


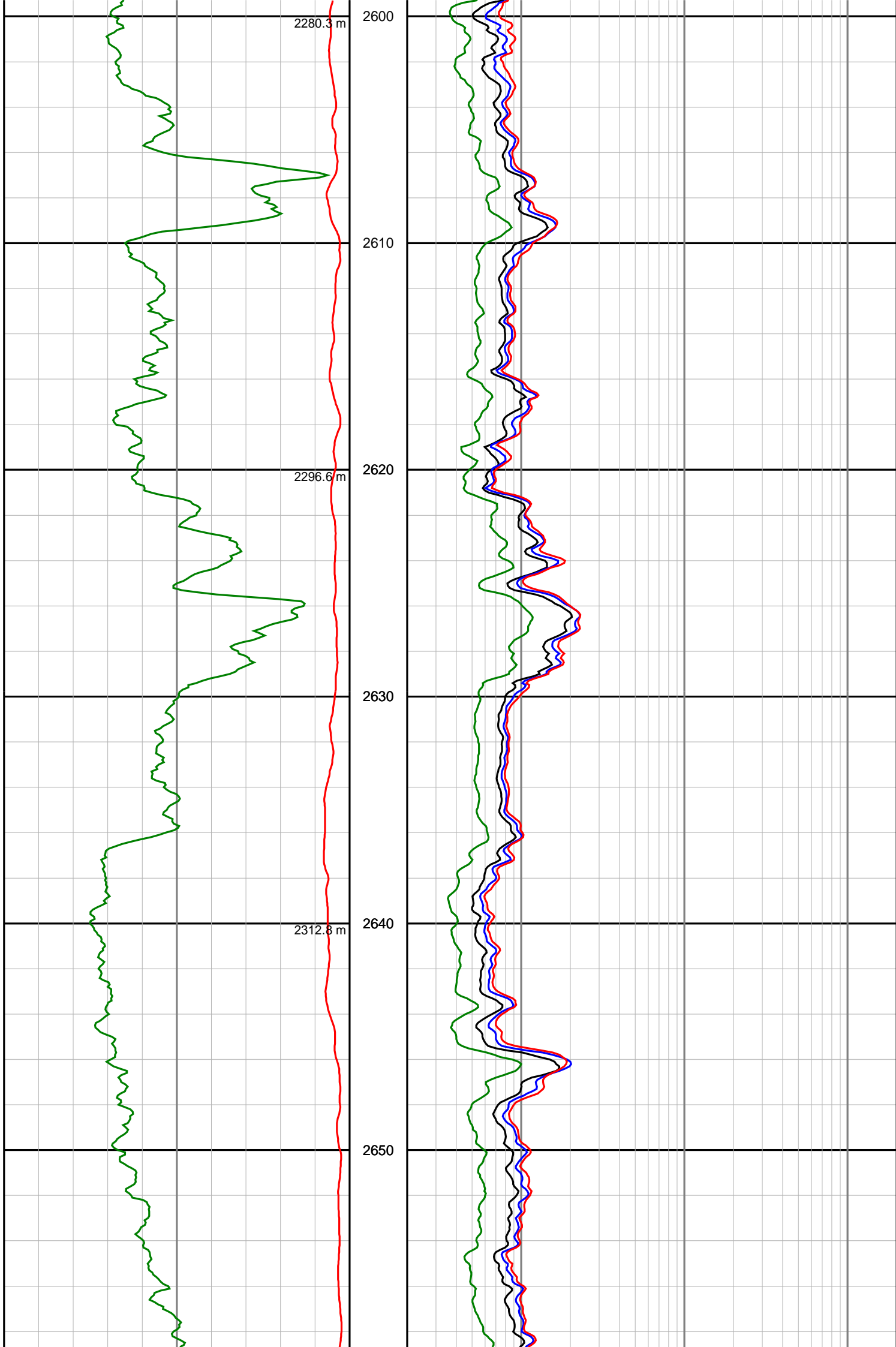


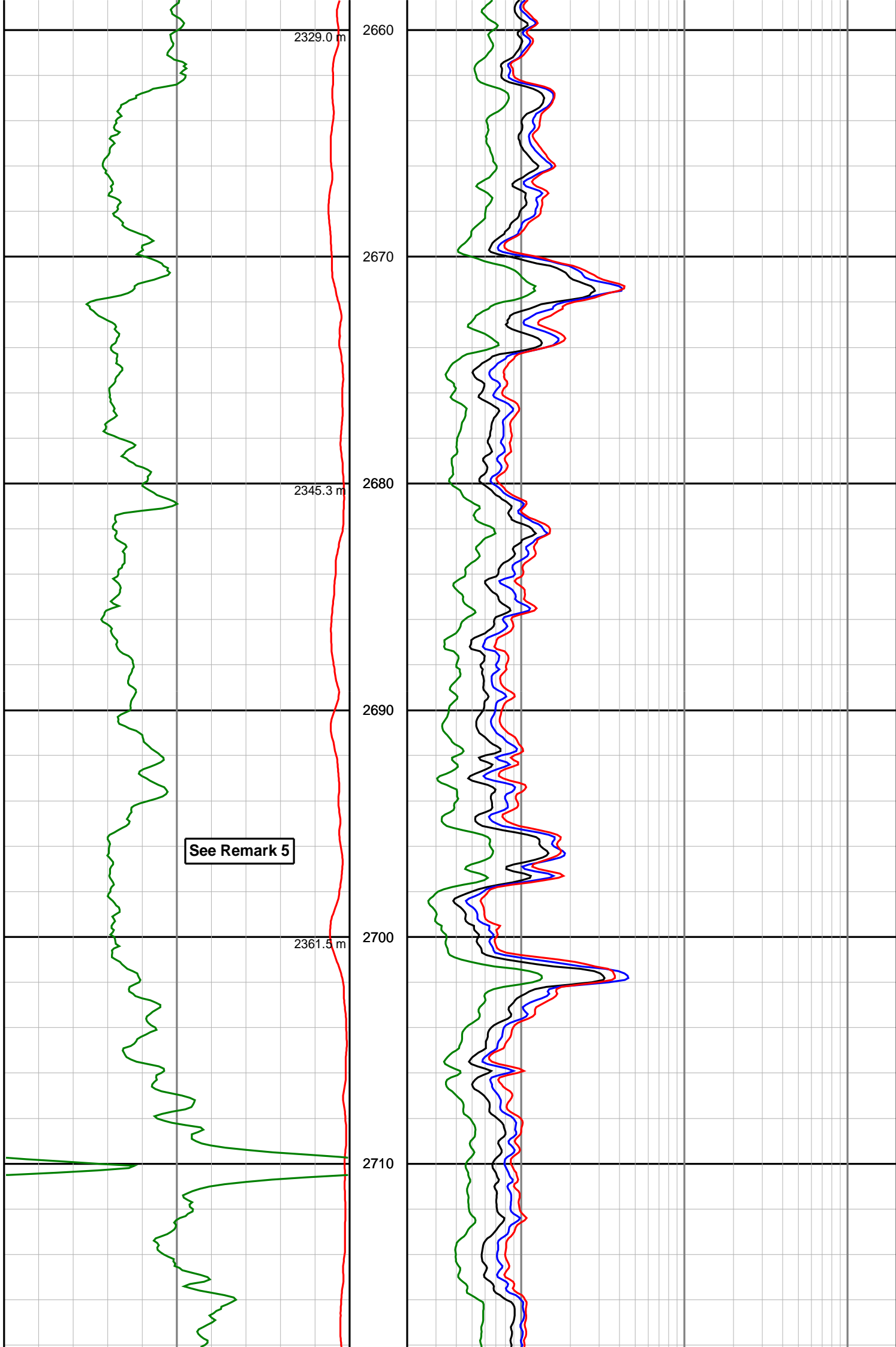


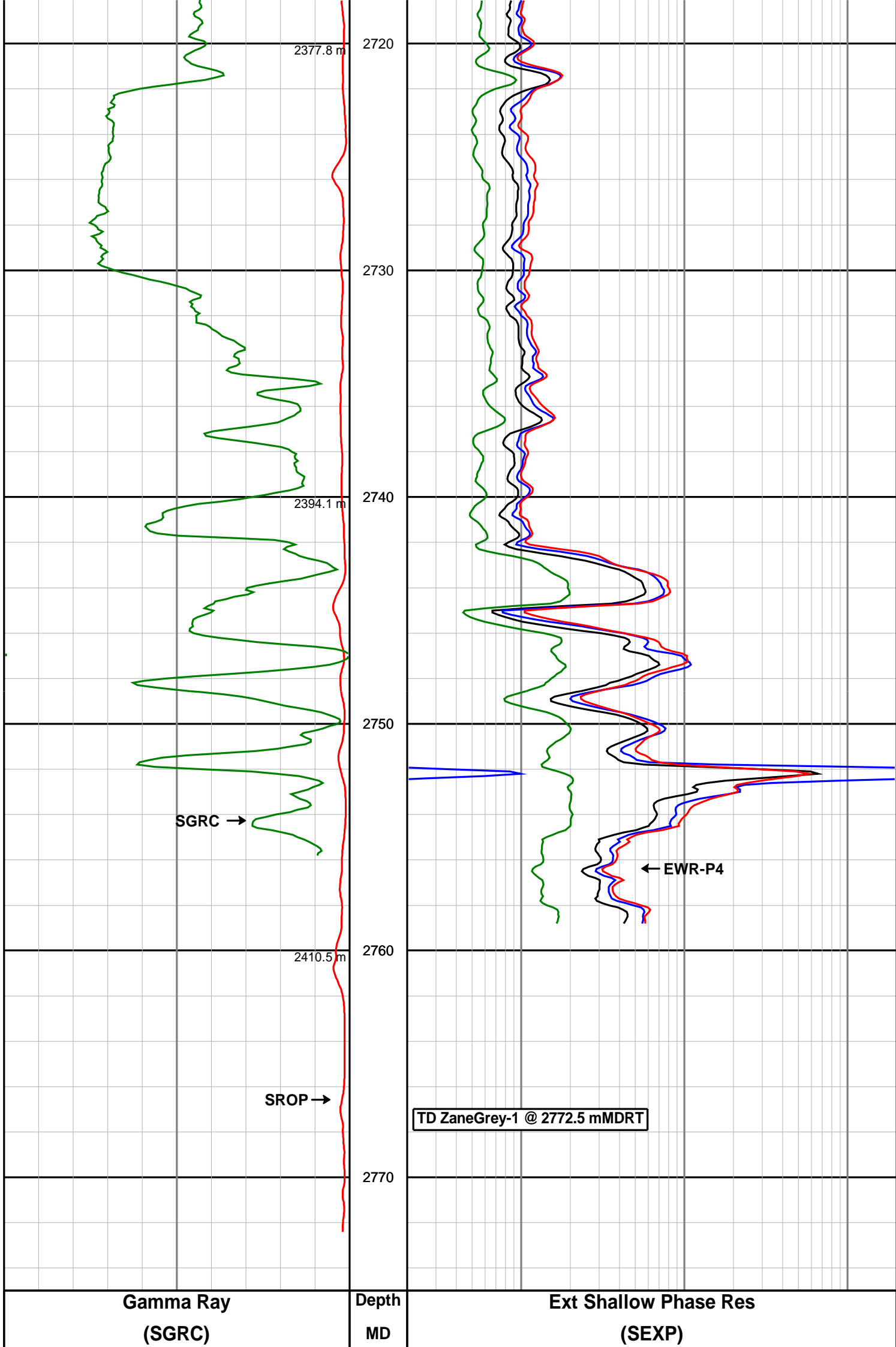












0	api	200	1:200	0.2	ohmm	200
Rate Of Penetration (SROP) m/hr				Shallow Phase Res (SESP) ohmm		
500		0		0.2		200
True Vertical Depth metres				Medium Phase Res (SEMP) ohmm		
				0.2		200
				Deep Phase Res (SEDP) ohmm		
				0.2		200

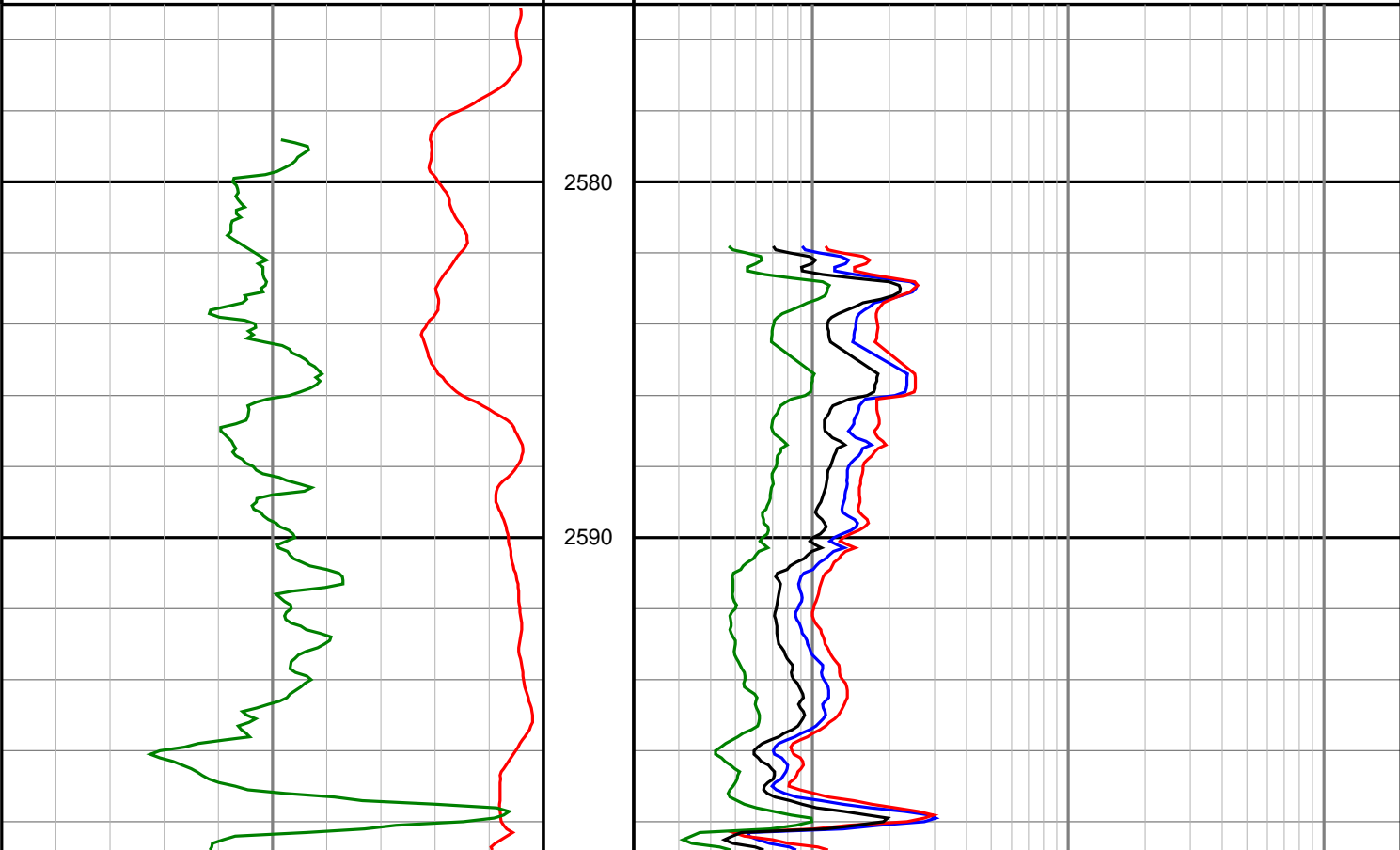
Bass Strait Oil Company

ZaneGrey-1

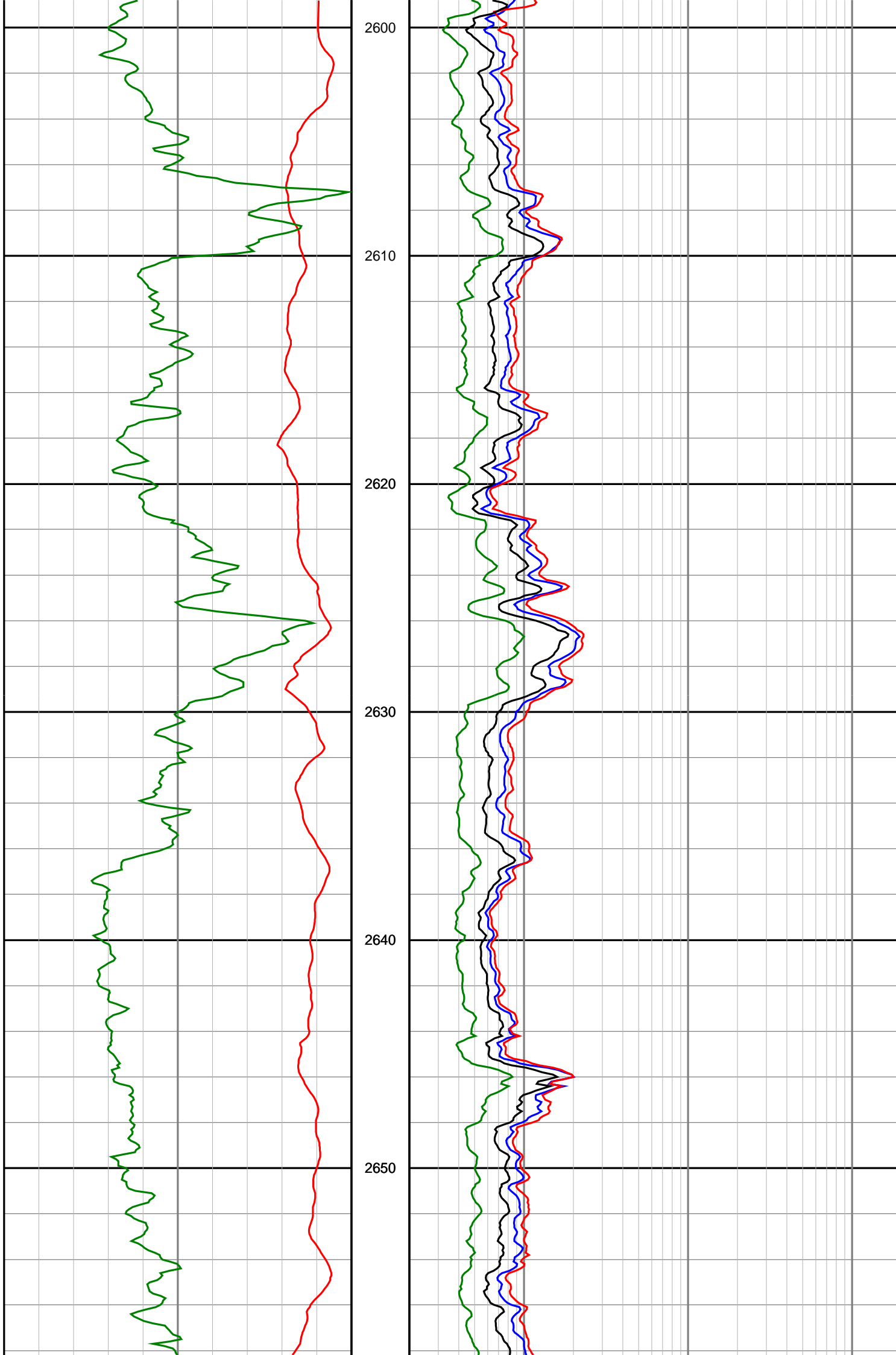
Repeat Section 1 was logged from 2579.5 to 2685.4 mMDRTwhile RIH prior to Run 600, pumping and rotating at 07:07 to 11:11

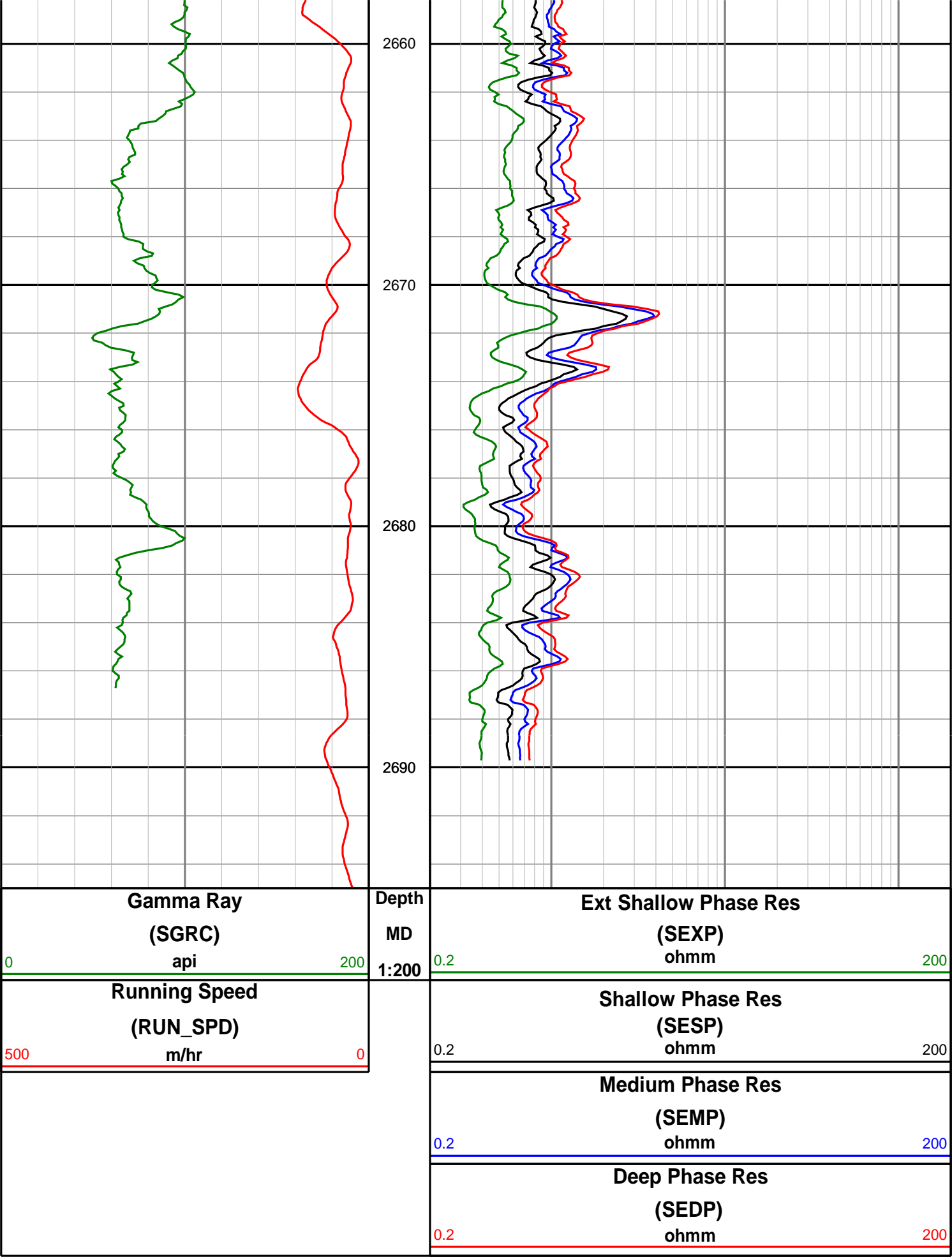
	Deep Phase Res (SEDP) ohmm	
	0.2	200
	Medium Phase Res (SEMP) ohmm	
	0.2	200
Running Speed (RUN_SPD) m/hr	Shallow Phase Res (SESP) ohmm	
500	0.2	200

Gamma Ray (SGRC) api			Depth MD 1:200	Ext Shallow Phase Res (SEXP) ohmm		
0		200		0.2		200











## DIRECTIONAL SURVEY REPORT

Bass Strait Oil Company Ltd  
ZaneGrey-1  
Exploration  
Victoria  
Australia

AU-FE-0003415248

RT-MSL=21.5m. Final Survey is projected to TD.

<i>Measured Depth (metres)</i>	<i>Inclination (degrees)</i>	<i>Direction (degrees)</i>	<i>Vertical Depth (metres)</i>	<i>Latitude (metres)</i>	<i>Departure (metres)</i>	<i>Vertical Section (metres)</i>	<i>Dogleg (deg/30m)</i>
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
152.200	0.41	162.66	152.199	0.526 S	0.164 E	-0.466	0.08
180.100	0.41	187.76	180.098	0.722 S	0.181 E	-0.651	0.19
208.300	0.52	134.85	208.297	0.914 S	0.258 E	-0.817	0.46
236.300	0.50	145.41	236.296	1.105 S	0.418 E	-0.960	0.10
265.100	0.48	133.55	265.095	1.292 S	0.577 E	-1.100	0.11
291.200	0.53	112.32	291.194	1.414 S	0.769 E	-1.168	0.22
322.800	0.31	122.92	322.793	1.515 S	0.976 E	-1.213	0.22
351.100	0.61	108.04	351.092	1.603 S	1.183 E	-1.245	0.34
379.500	0.62	106.95	379.491	1.695 S	1.473 E	-1.258	0.02
408.300	0.57	109.17	408.289	1.787 S	1.757 E	-1.275	0.06
436.400	0.50	108.39	436.388	1.872 S	2.005 E	-1.292	0.07
463.050	0.56	101.29	463.037	1.934 S	2.243 E	-1.291	0.10
493.810	1.55	39.19	493.792	1.641 S	2.653 E	-0.903	1.35
521.530	3.74	26.59	521.481	0.541 S	3.294 E	0.325	2.44
550.660	6.40	18.10	550.495	1.851 N	4.224 E	2.876	2.84
578.940	9.49	11.85	578.500	5.632 N	5.192 E	6.778	3.40
605.390	12.27	11.47	604.472	10.521 N	6.199 E	11.762	3.15
637.300	15.11	10.93	635.473	17.927 N	7.662 E	19.295	2.67
663.370	17.26	12.12	660.509	25.044 N	9.119 E	26.547	2.50
693.680	19.03	13.97	689.311	34.237 N	11.256 E	35.980	1.85
722.250	21.58	14.47	716.103	43.846 N	13.694 E	45.894	2.68
750.290	24.88	14.62	741.866	54.550 N	16.473 E	56.952	3.53
778.240	28.18	15.54	766.869	66.602 N	19.726 E	69.435	3.57
806.450	30.29	16.23	791.485	79.851 N	23.500 E	83.209	2.27
836.210	31.18	15.90	817.064	94.466 N	27.707 E	98.415	0.92
864.470	31.47	15.91	841.205	108.596 N	31.734 E	113.105	0.31
892.940	32.20	16.13	865.393	123.029 N	35.878 E	128.118	0.78
921.510	32.69	14.67	889.504	137.805 N	39.947 E	143.444	0.98
950.020	32.88	14.70	913.471	152.740 N	43.861 E	158.883	0.20
979.030	33.35	14.25	937.769	168.086 N	47.823 E	174.731	0.55
1009.220	34.05	15.10	962.886	184.289 N	52.067 E	191.482	0.84
1037.200	34.42	14.39	986.018	199.512 N	56.073 E	207.222	0.58
1065.760	34.72	14.47	1009.536	215.205 N	60.111 E	223.426	0.32
1080.740	34.99	14.71	1021.829	223.489 N	62.268 E	231.986	0.61
1123.520	34.54	14.36	1056.973	247.101 N	68.390 E	256.378	0.34
1150.740	34.23	14.27	1079.437	261.996 N	72.191 E	271.750	0.34
1178.170	33.67	14.48	1102.191	276.835 N	75.995 E	287.068	0.63
1208.000	33.51	14.74	1127.040	292.805 N	80.158 E	303.571	0.22
1237.020	33.62	14.39	1151.220	308.335 N	84.193 E	319.617	0.23
1265.610	34.21	14.57	1174.945	323.781 N	88.183 E	335.570	0.62
1294.540	34.67	13.93	1198.804	339.640 N	92.210 E	351.930	0.61
1323.500	34.51	14.39	1222.643	355.582 N	96.232 E	368.371	0.32
1353.040	34.37	13.93	1247.004	371.782 N	100.319 E	385.077	0.30
1380.920	34.26	13.78	1270.031	387.043 N	104.083 E	400.793	0.15
1409.670	34.18	13.29	1293.804	402.763 N	107.867 E	416.957	0.30
1438.120	34.52	13.61	1317.292	418.376 N	111.601 E	433.005	0.40
1466.410	34.41	12.82	1340.617	433.961 N	115.261 E	449.007	0.49
1494.650	34.39	12.29	1363.919	449.533 N	118.729 E	464.946	0.32
1523.370	34.16	12.03	1387.652	465.342 N	122.136 E	481.100	0.28
1551.880	34.03	12.09	1411.263	480.970 N	125.476 E	497.061	0.14
1580.920	34.34	13.28	1435.286	496.886 N	129.061 E	513.364	0.76
1609.620	34.68	16.07	1458.938	512.610 N	133.181 E	529.618	1.69
1638.560	34.32	16.67	1482.788	528.337 N	137.800 E	546.005	0.50
1667.520	34.04	16.13	1506.746	543.945 N	142.394 E	562.269	0.43

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
1696.000	34.16	16.42	1530.330	559.271 N	146.869 E	578.231	0.22
1724.700	33.80	16.03	1554.128	574.674 N	151.352 E	594.268	0.44
1752.980	34.20	16.92	1577.573	589.838 N	155.838 E	610.076	0.67
1782.830	34.14	16.52	1602.270	605.894 N	160.661 E	626.833	0.23
1811.250	34.44	17.46	1625.750	621.207 N	165.339 E	642.834	0.64
1840.080	34.47	17.39	1649.522	636.771 N	170.223 E	659.130	0.05
1868.470	34.23	17.07	1672.961	652.071 N	174.968 E	675.136	0.32
1897.130	34.16	16.74	1696.667	667.482 N	179.652 E	691.233	0.20
1926.100	34.12	16.89	1720.644	683.045 N	184.355 E	707.482	0.09
1954.430	34.05	17.19	1744.107	698.225 N	189.008 E	723.348	0.19
1983.370	33.95	17.51	1768.100	713.671 N	193.834 E	739.517	0.21
2012.160	33.49	17.02	1792.046	728.933 N	198.578 E	755.485	0.56
2041.580	33.41	17.63	1816.594	744.412 N	203.408 E	771.686	0.35
2070.370	33.42	17.42	1840.627	759.529 N	208.181 E	787.522	0.12
2095.750	33.16	17.24	1861.843	772.826 N	212.330 E	801.439	0.32
2126.370	32.90	16.85	1887.515	788.782 N	217.222 E	818.117	0.33
2154.800	32.52	16.76	1911.437	803.488 N	221.663 E	833.470	0.40
2183.170	32.39	16.46	1935.377	818.076 N	226.015 E	848.687	0.22
2211.780	32.45	17.62	1959.528	832.740 N	230.510 E	864.014	0.66
2240.335	32.59	16.80	1983.605	847.404 N	235.052 E	879.353	0.48
2270.200	32.81	17.81	2008.736	862.808 N	239.853 E	895.474	0.59
2299.480	33.11	17.19	2033.302	878.003 N	244.644 E	911.389	0.46
2328.250	33.62	17.37	2057.330	893.111 N	249.345 E	927.199	0.53
2356.670	33.96	17.39	2080.951	908.193 N	254.067 E	942.988	0.36
2385.200	34.38	17.88	2104.555	923.464 N	258.922 E	958.994	0.53
2413.790	35.02	17.69	2128.060	938.963 N	263.893 E	975.250	0.68
2441.910	35.26	17.86	2151.055	954.375 N	268.833 E	991.415	0.28
2470.300	35.23	17.62	2174.242	969.979 N	273.825 E	1007.778	0.15
2499.570	35.12	18.26	2198.167	986.020 N	279.019 E	1024.615	0.39
2528.660	34.89	17.69	2221.995	1001.892 N	284.169 E	1041.277	0.41
2558.300	35.04	18.16	2246.286	1018.052 N	289.397 E	1058.239	0.31
2587.390	35.34	18.00	2270.060	1033.989 N	294.599 E	1074.978	0.33
2615.660	35.78	18.12	2293.058	1049.619 N	299.695 E	1091.393	0.47
2643.790	35.92	18.69	2315.860	1065.250 N	304.896 E	1107.836	0.39
2670.240	35.63	18.92	2337.320	1079.886 N	309.881 E	1123.263	0.36
2703.110	35.35	18.34	2364.083	1097.969 N	315.979 E	1142.306	0.40
2730.260	35.56	18.41	2386.197	1112.916 N	320.944 E	1158.027	0.24
2758.610	34.94	18.82	2409.348	1128.423 N	326.168 E	1174.356	0.70
2772.500	34.94	18.82	2420.734	1135.953 N	328.734 E	1182.293	0.01

## CALCULATION BASED ON MINIMUM CURVATURE METHOD



SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT  
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT







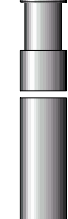

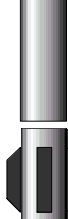











VERTICAL SECTION RELATIVE TO WELL HEAD  
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 14.91 DEGREES (GRID)  
A TOTAL CORRECTION OF 13.83 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.  
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2772.500 METRES  
IS 1182.563 METRES ALONG 16.14 DEGREES (GRID)

## MWD RUN 200 - BHA
































## MWD RUN 200 - MWD





MWD RUN 200 - BHA		MWD RUN 200 - MWD	
	Cumulative Length (m) 251.70		Sensor Measure Point Distance To Bit (m)


























Sub		84.92			
Drill Collar		83.83	TM		
Jar		65.68	Hang-off Sub		
Drill Collar		56.00	HCIM		
Stabilizer		28.56	DGR		19.784
MWD		26.74			
Stabilizer		13.76	EWR-P4		16.765
Sub		10.43			
Motor		9.40	PM		
Bit		0.35			

MWD RUN 400 - BHA	MWD RUN 400 - MWD
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	Cumulative Length (m)		Sensor Measure Point Distance To Bit (m)
Drill Pipe	251.73		
	242.33	Positive Pulser	
















































HWDP					
Sub		84.95	TM		
		83.86			
Drill Collar			Hang-off Sub		
		65.71	HCIM		
Jar					
		56.03			
Drill Collar			DGR		
Stabilizer		28.59			21.640
		26.77			
MWD			EWR-P4		18.630
Stabilizer		13.76			
Sub		10.43			
		9.40			
Motor			PM		
Bit		0.35			

MWD RUN 500 - BHA			MWD RUN 500 - MWD		
		Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
Drill Pipe		251.77			
		242.37	Positive Pulser		

HWDP					
Sub		84.99	TM		
		83.90			
Drill Collar			Hang-off Sub		
		65.75	HCIM		
Jar					
		56.07			
Drill Collar			DGR		
Stabilizer		28.63			21.640
		26.81			
MWD			EWR-P4		
Stabilizer		13.76			18.630
Sub		10.43			
		9.40			
Motor			PM		
Bit		0.35			

MWD RUN 600 - BHA	MWD RUN 600 - MWD
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		Cumulative Length (m)			Sensor Measure Point Distance To Bit (m)
Drill Pipe		246.67			
		237.27	Positive Pulser		
HWDP					

					
Sub		79.89	TM		
					
		78.80			
Drill Collar			Hang-off Sub		
					
					
Jar		60.65	HCIM		
					
					
					
Drill Collar		50.97			
					
					
			DGR		
Stabilizer		23.53			16.574
					
		21.71			
MWD					
					
			EWR-P4		13.565
Stabilizer		8.66			
					
					
					
		6.71			
Drill Collar					
					
Sub		2.12	PM		
Bit		0.34		