



**LWD Memory Logs**  
**Multiple Propagation Resistivity**

Scale: **Company: Confluence Resources**

**1:240**  
**Well: Willow 22-5-4L**

**True Vertical Depth**  
**Field: Wattenberg**

**Driller's Depth**  
**Country: United States**

**State: Colorado**

**Final Print**

Status: **Surface Location:** 40° 01' 48.612" N  
Latitude: 104° 39' 19.476" W  
Longitude: N/A  
Other Services:

API No: 05123509420000  
Job ID: 110892255  
SEC: 22 TOWN: 1N RGE: 65W  
Permanent Datum (P.D.): Mean Sea Level  
Elevation: 0.00 ft  
Elev. KB: N/A  
Log Measured From: Rig Floor  
Above P.D.: 5118.00 ft  
Elev. DF: 5118.00 ft  
Elev. GL: 5095.00 ft

**Dates** **Interval** **Magnetic Field Reference**

From: 2021-05-20	Drilled (ft)	Logged (ft)	Azi Reference North:	True	Dip Angle: (deg)	66.28
To: 2021-06-21	Top: 105.00	Top: -11536.88	Total Magnetic Field Strength: (nT)			51760
Spud: 2021-05-20	Bottom: 20206.00	Bottom: 7098.16	Mag to Reference North Correction: (deg)			7.96

**Borehole Record**

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
26.000	23.00	103.00	16.000	36.00	23.00	103.00
13.500	103.00	1574.00	9.625	36.00	23.00	1564.00

**Casing Record**

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc   Az (Start)	Inc   Az (End)
Water Based Mud	103.00	1574.18	13.500	1471.18	0.51   157.56	3.10   211.84
Oil Based Mud	1574.00	20205.00	8.500	18631.00	3.10   211.84	90.74   0.22

**Mud Record**

**Deviation Record**

Acquisition System	Software Version	Other
Cadence Plot Studio	RT 5.9 5.9.9111.3	Rig: Ensign 161 Contractor: Ensign Drilling District: RMA Unit: D&E

(C) 2020 Baker Hughes Company - All rights reserved. Baker Hughes and its affiliates provides this information on an "as is" basis for general information purposes and believes it to be accurate as of the date of publication. Baker Hughes does not make any representation as to the accuracy or completeness of the information and makes no warranties of any kind, specific, implied or oral, to the fullest extent permissible by law, including those of merchantability and fitness for a particular purpose or use. Baker Hughes hereby disclaims any and all liability for any direct, indirect, consequential or special damages, claims for lost profits, or third party claims arising from the use of the information, whether a claim is asserted in contract, tort, or otherwise. The Baker Hughes logo is a trademark of Baker Hughes Company.

**Log Run Summary**

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1RR	13.500	PDC	3.00	Steerable	105.00	1574.00	105.00	1574.00	2021-05-20 16:56	2021-05-20 23:38	9.21
2	2	8.500	PDC	3.00	AutoTrak Curve	1562.00	20193.00	1575.00	20206.00	2021-06-16 12:04	2021-06-21 09:25	106.40

**Crew**

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Adam Schlenz	2021-05-20	2021-05-21	David Browning	2021-06-16	2021-06-22			

**Mud Properties Record**

Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2021-05-21 02:00	1	1574.00	Water Based Mud	9.2	N/A	7.5	N/A	99/1	Active Pit	695	0.00
2021-06-16 06:22	2	1564.00	Oil Based Mud	9.8	24	N/A	9.0	68.5/18.5	Active Pit	35000	0.00
2021-06-16 14:00	2	1905.00	Oil Based Mud	9.7	21	N/A	N/A	67/18	Active Pit	33000	0.00
2021-06-17 04:00	2	5929.00	Oil Based Mud	9.7	21	N/A	N/A	65/20	Active Pit	37000	0.00
2021-06-17 15:00	2	7450.00	Oil Based Mud	9.7	25	N/A	N/A	67/18.5	Active Pit	35000	0.00

2021-06-18 02:30	2	8685.00	Oil Based Mud	9.7	23	N/A	N/A	68/17.5	Active Pit	35000	0.00
2021-06-19 02:00	2	13092.00	Oil Based Mud	10.0	22	N/A	N/A	68/15.5	Active Pit	36000	0.00
2021-06-19 14:00	2	14632.00	Oil Based Mud	10.0	23	N/A	N/A	67/16	Active Pit	33000	0.00
2021-06-20 02:30	2	16453.00	Oil Based Mud	10.1	21	N/A	N/A	68/15.5	Active Pit	35000	0.00
2021-06-20 15:00	2	18405.00	Oil Based Mud	10.1	23	N/A	N/A	67/16	Active Pit	34000	0.00

**Mud Resistivity Record**

Date / Time	Run No.	Depth (ft)	Surface Temp (degF)	Surface			BHCT (degF)	Downhole		
				Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)		Rm @ BHCT (ohm.m)	Rmf @ BHCT (ohm.m)	Rmc @ BHCT (ohm.m)
2021-06-17 14:16	2	5000.00	150.0	100.000	N/A	N/A	250.0	600.666	N/A	N/A

**Equipment and Service Data**

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	NaviTrak	DHP 815	VSS	16.12	52.25	8.000	3.125
1	NaviTrak	DHP 815	Directional (mag)	16.12	52.25	8.000	3.125
2	OnTrak	13080165	Pressure	3.51	13106.95	6.750	0.000
2	OnTrak	13080165	Gamma (double)	4.40	13107.84	6.750	0.000
2	OnTrak	13080165	Resistivity (4tx)	8.44	13111.88	6.750	0.000
2	OnTrak	13080165	Directional (mag)	14.23	13117.67	6.750	0.000

**Service and Tool Mnemonics**

Mnemonic	Name	Description
NTK	NaviTrak	Probe Based Directional Module, NaviTrak Platform
OTK	OnTrak	Sensor Sub (Inc, Azi, Temp, Azimuthal GR, Res, AP, VSS), OnTrak Platform
BCPM	BCPM	Bi-Directional Communication and Power Module, OnTrak Platform

**Comments**

- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes Company. Due to a lack of control by Baker Hughes Company logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes Company are being used to present logging data.
- Baker Hughes Company run 2 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 1/2 inch PDC bit and steerable assembly from 1574 to 20205 feet MD (1571 to 7435 feet TVD).

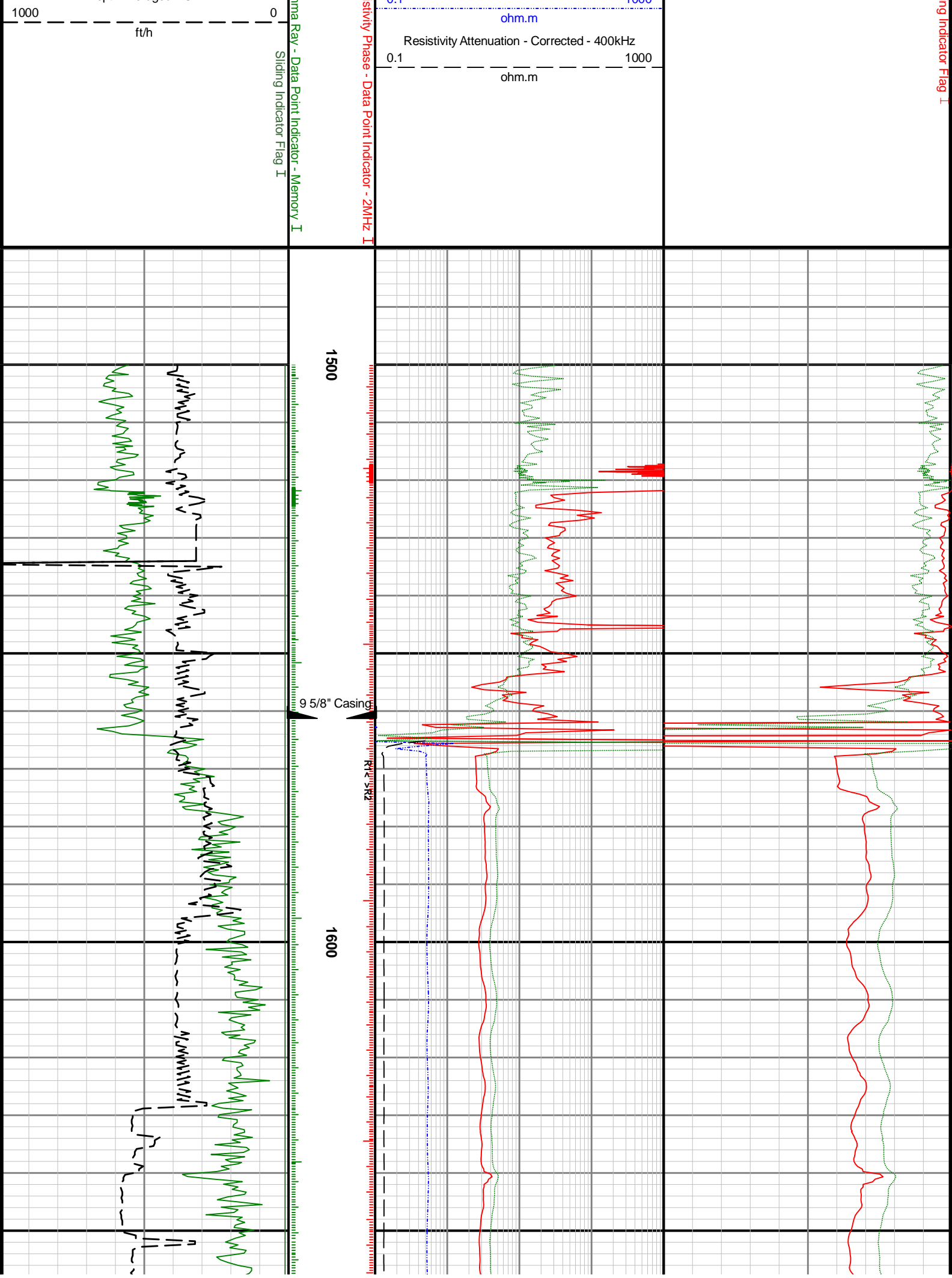
**Remarks**

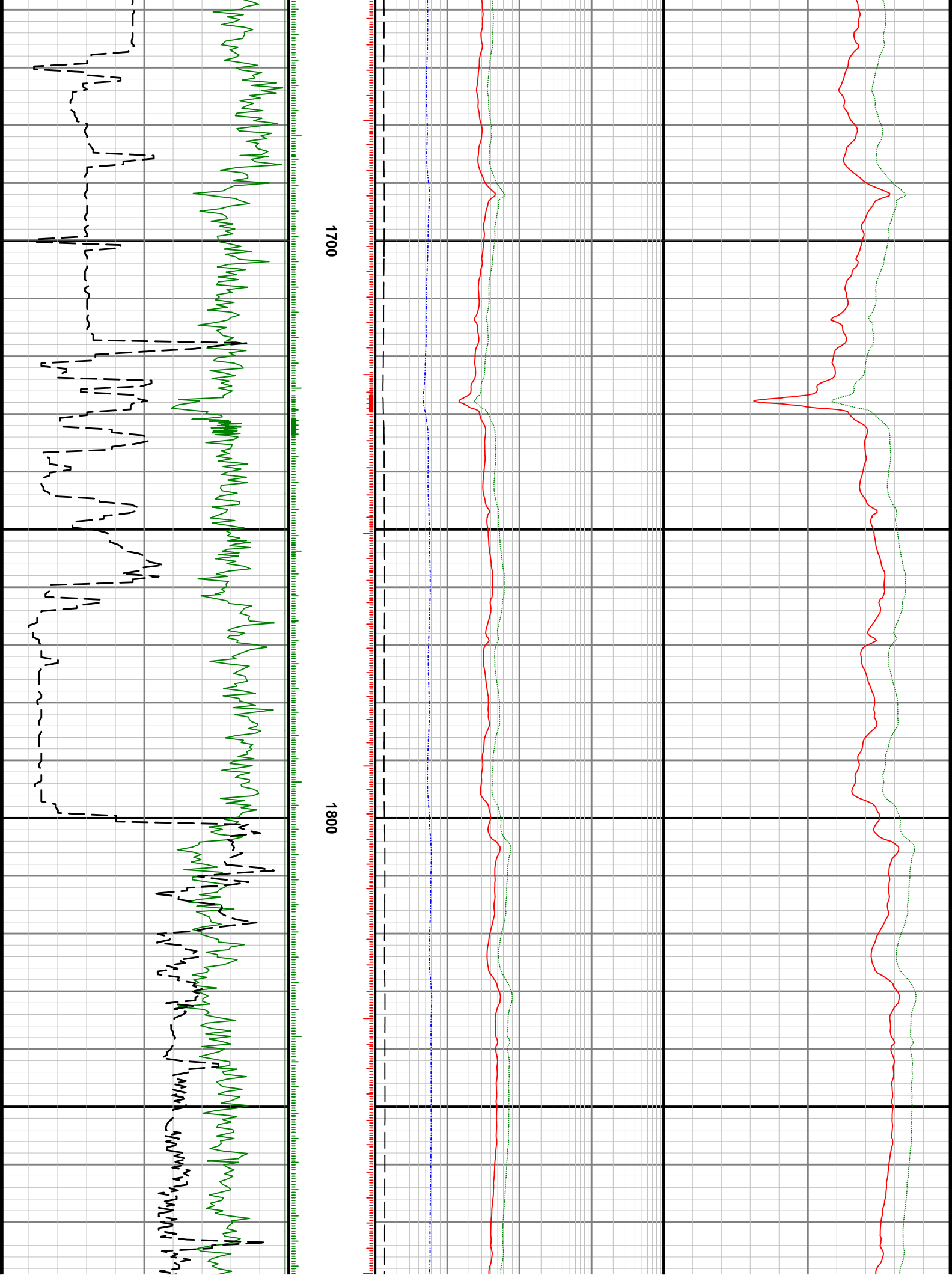
Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	5700.00	8.500	2	The gap in gamma ray data from 5690 to 5738 feet MD (5681 to 5729 feet TVD) is due to the AutoTrak Curve tool turning off during a downlink and not turning back on until pumps were recycled at the connection.
2	20205.00	8.500	2	The interval from 20193to 20205 feet MD 7436 feet TVD) was not logged due to sensor to bit offset at well TD.

**Curve Mnemonics**

Presented Curves	Description	Units
CPCHM	Conductivity Phase - Corrected - 2MHz	mmho/m
CPCLM	Conductivity Phase - Corrected - 400kHz	mmho/m
RACHM	Resistivity Attenuation - Corrected - 2MHz	ohm.m
RACLM	Resistivity Attenuation - Corrected - 400kHz	ohm.m
RPCHM	Resistivity Phase - Corrected - 2MHz	ohm.m
RPCLM	Resistivity Phase - Corrected - 400kHz	ohm.m
RPHIM	Resistivity Phase - Data Point Indicator - 2MHz	unitless
RPTHM	Resistivity Time Since Drilled	min
SIFG	Sliding Indicator Flag	unitless
DAVG_ROP	Depth Averaged ROP	ft/h
GR1CM	Gamma Ray - Detector 1 - Hole Size - Mud Weight - Corrected - Memory	API
GRIM	Gamma Ray - Data Point Indicator - Memory	unitless
SIFG	Sliding Indicator Flag	unitless
TCDM	Directional Real-Time Survey Temperature	degF

<p>Gamma Ray - Detector 1 - Hole Size - Mud Weight - Corrected - Memory</p> <p>0 150</p> <p>API</p> <p>Directional Real-Time Survey Temperature</p> <p>100 200</p> <p>degF</p> <p>Depth Averaged ROP</p>	<p>TVD 1:240 feet</p>	<p>Resistivity Phase - Corrected - 2MHz</p> <p>0.1 1000</p> <p>ohm.m</p> <p>Resistivity Phase - Corrected - 400kHz</p> <p>0.1 1000</p> <p>ohm.m</p> <p>Resistivity Attenuation - Corrected - 2MHz</p> <p>0.1 1000</p>	<p>Conductivity Phase - Corrected - 2MHz</p> <p>1000 0</p> <p>mmho/m</p> <p>Conductivity Phase - Corrected - 400kHz</p> <p>1000 0</p> <p>mmho/m</p>
--	-----------------------	---	---



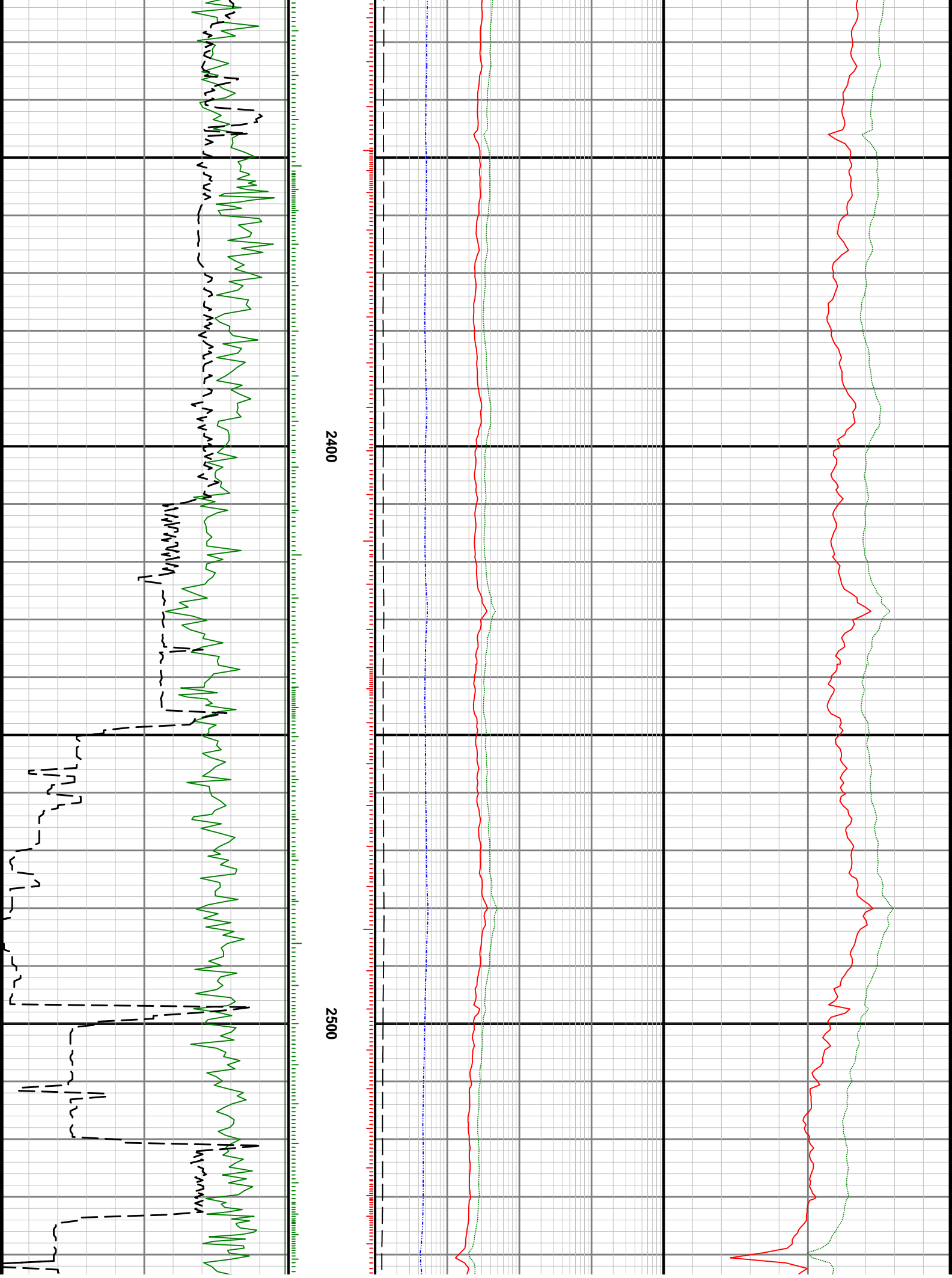


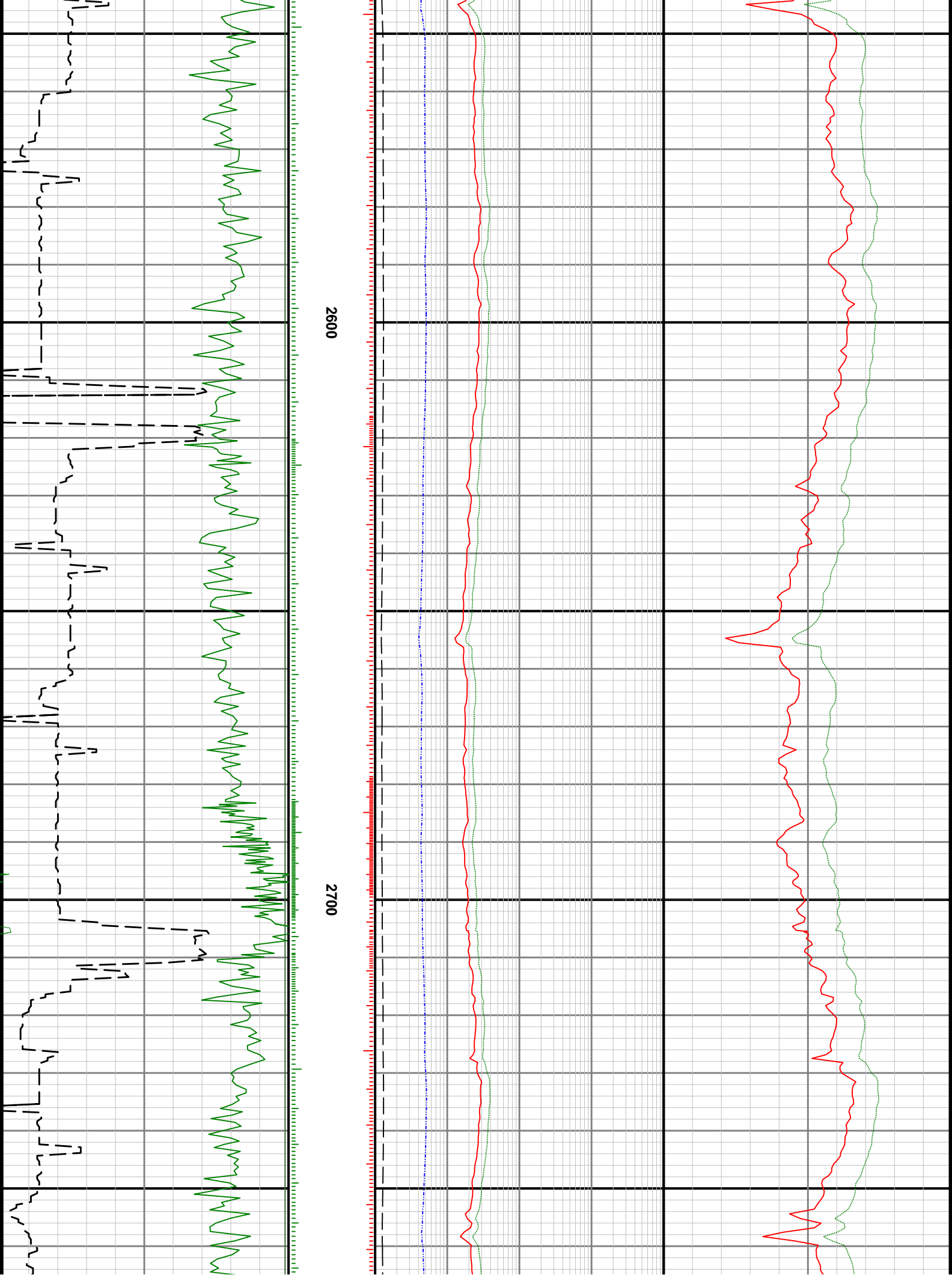
1700

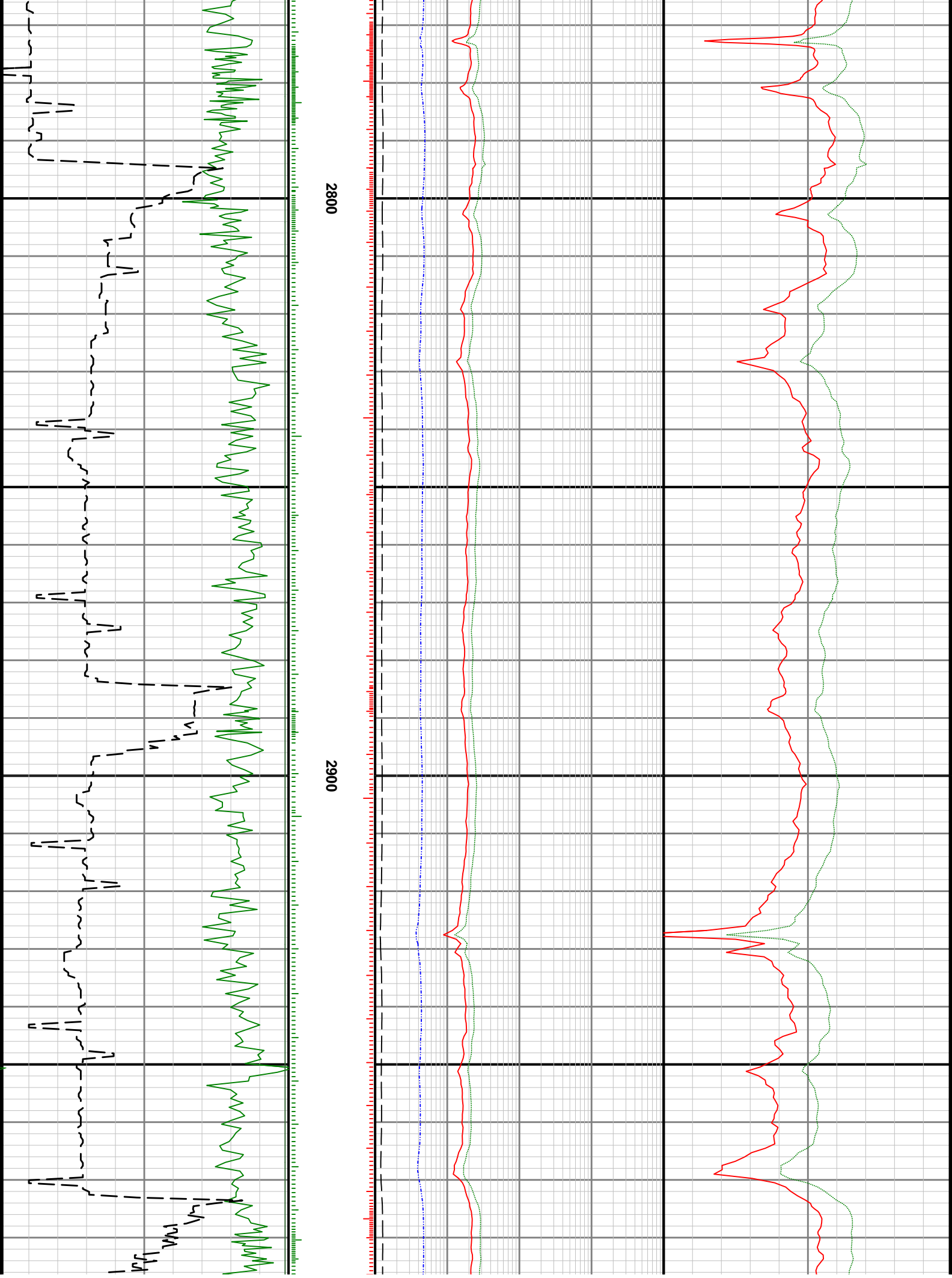
1800

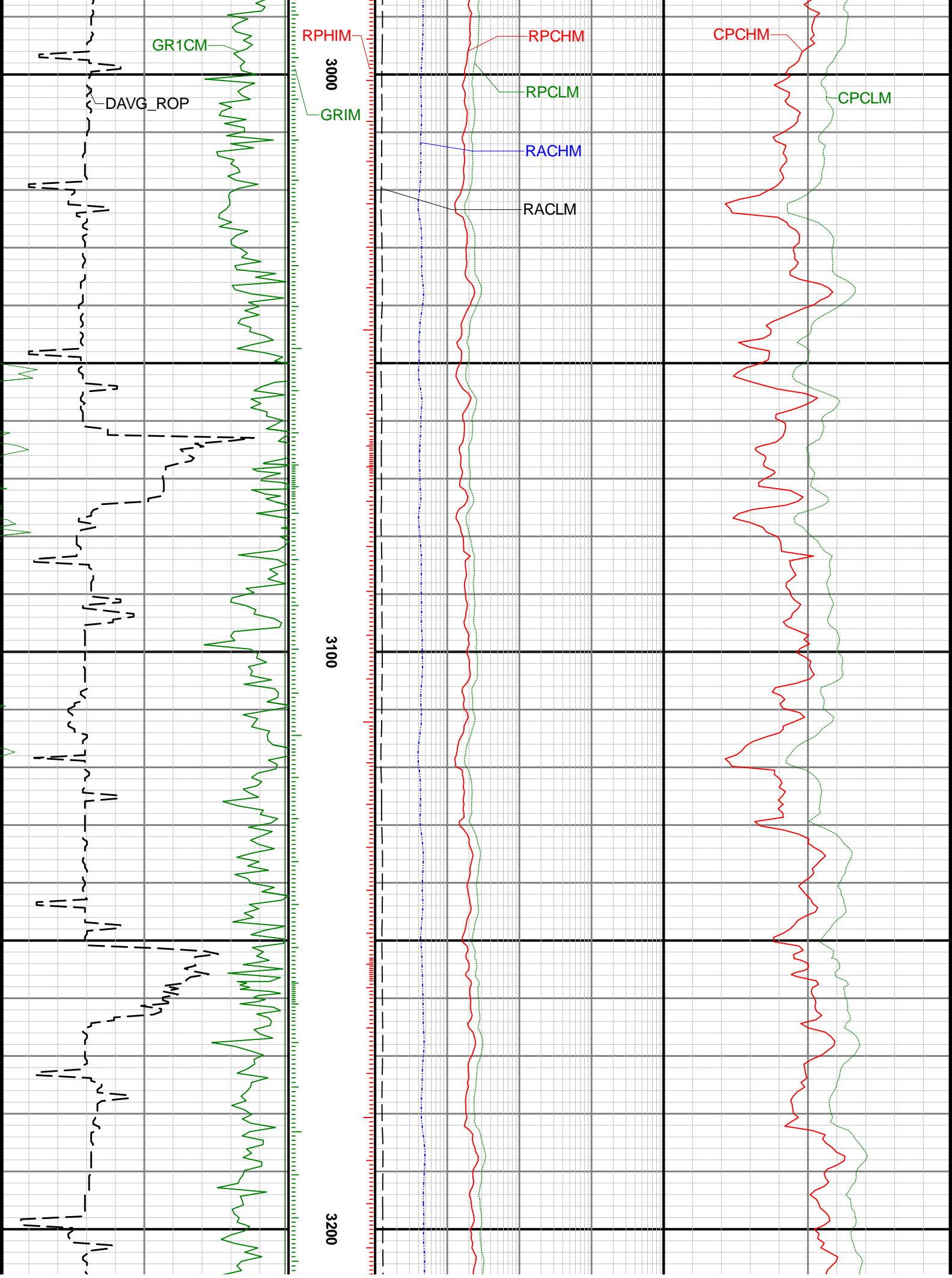


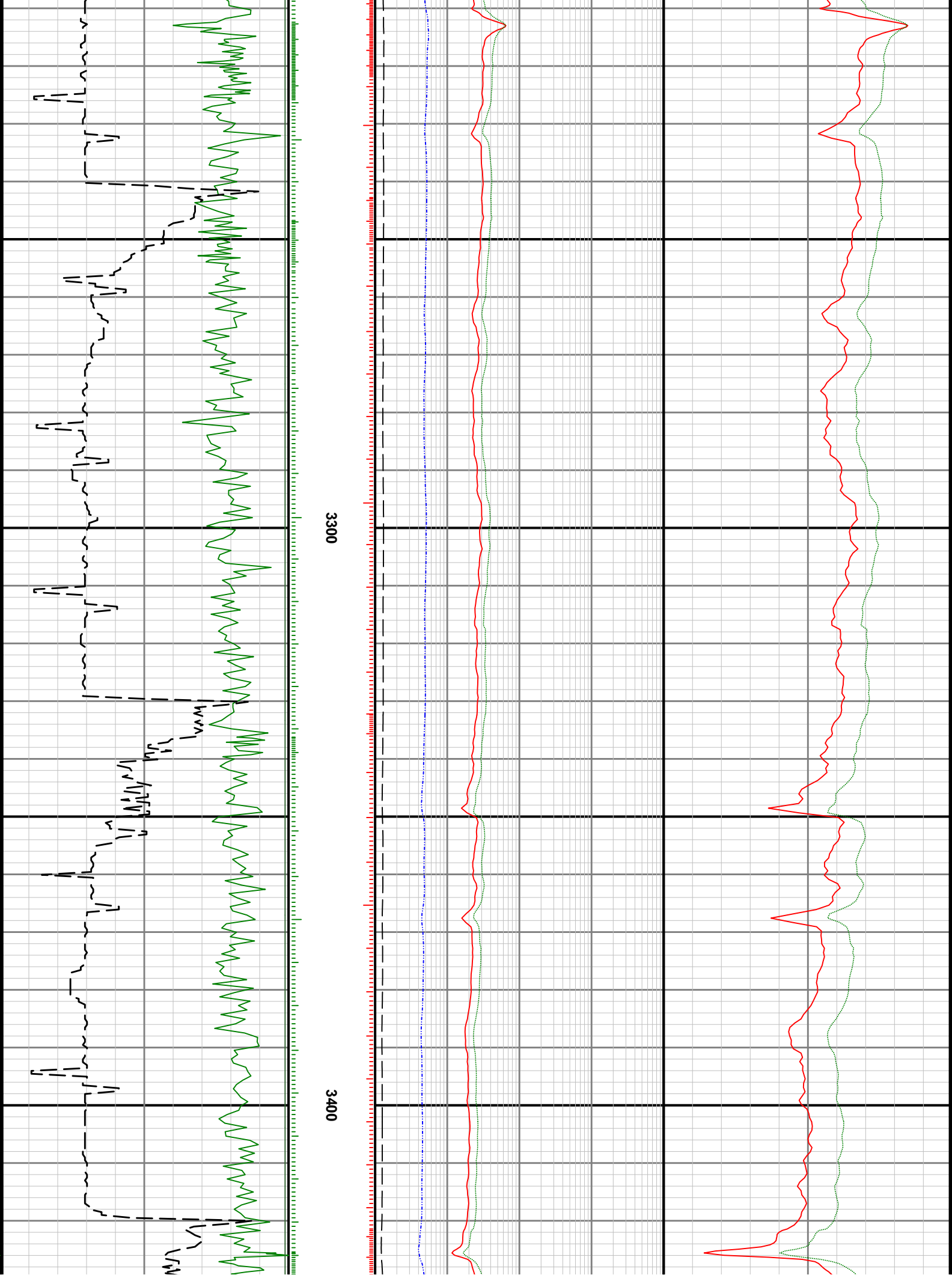


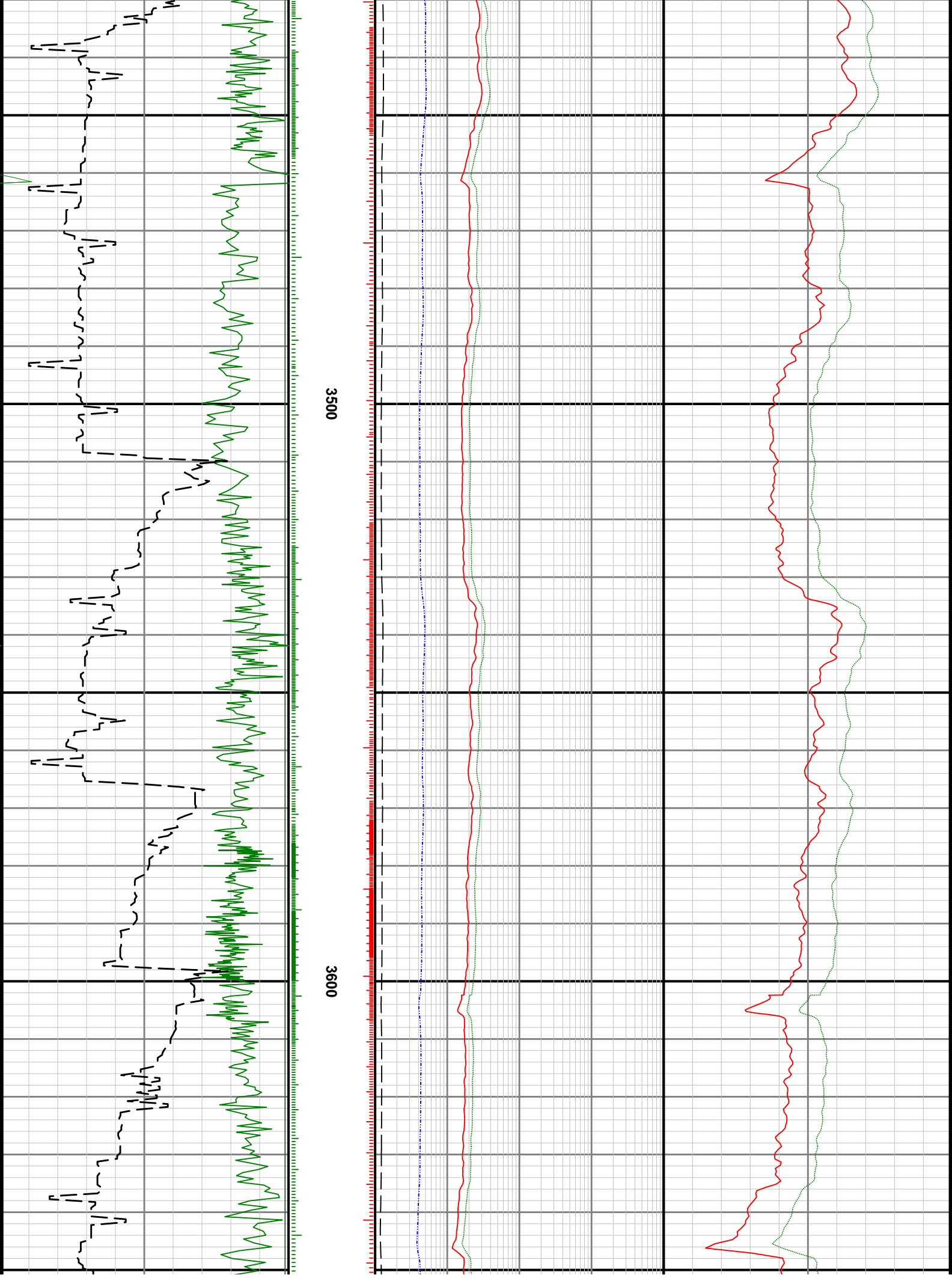


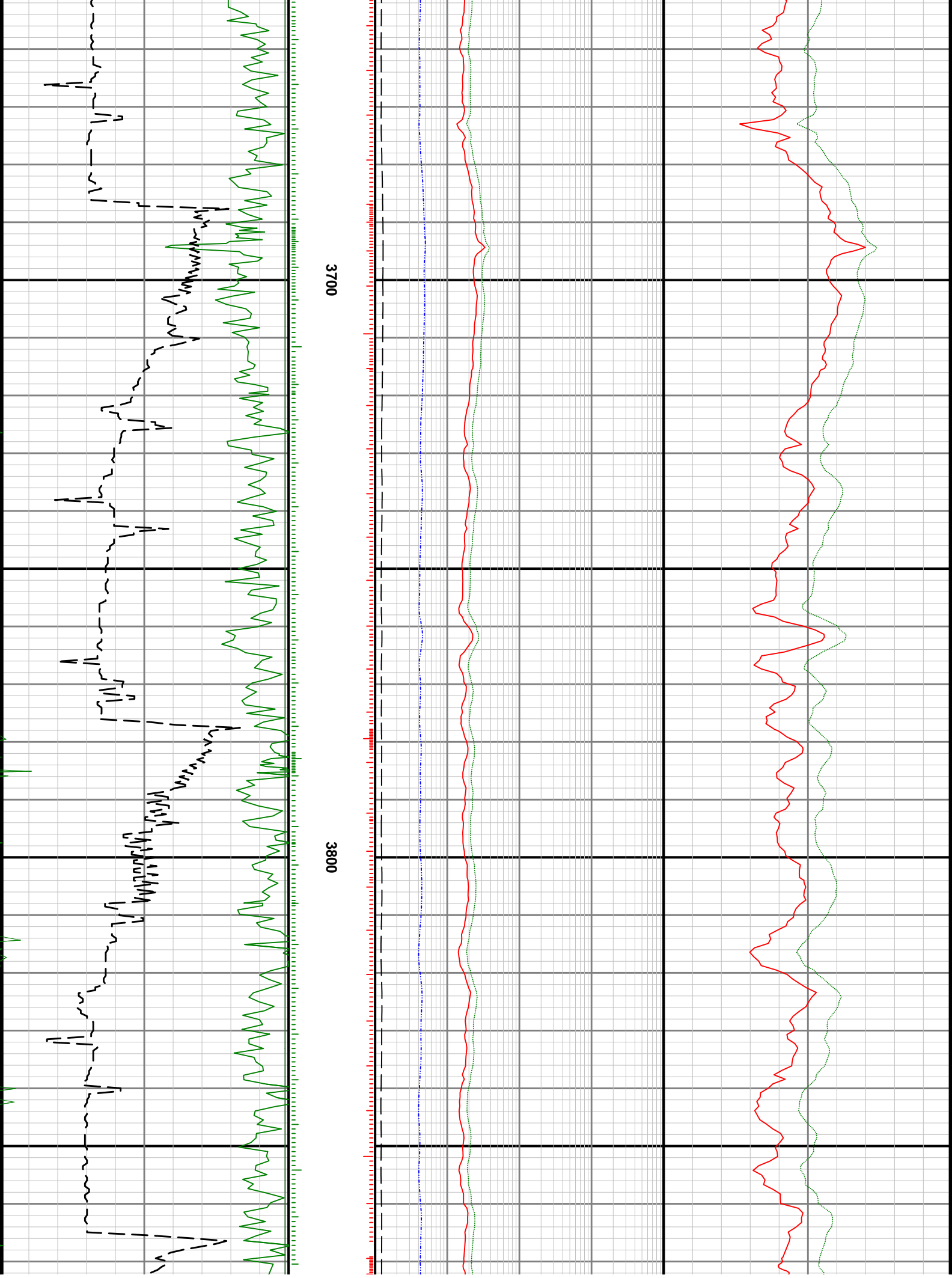


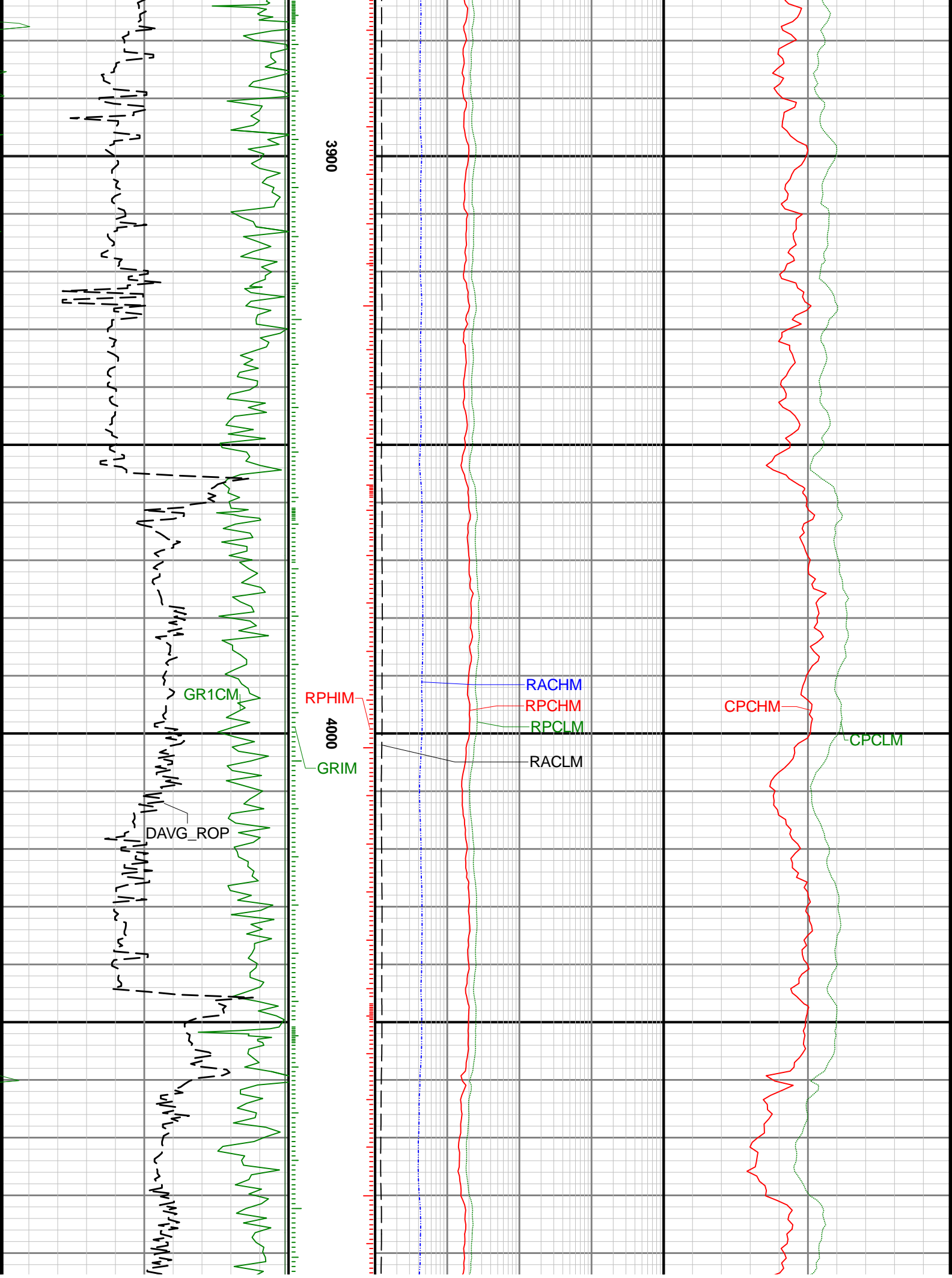


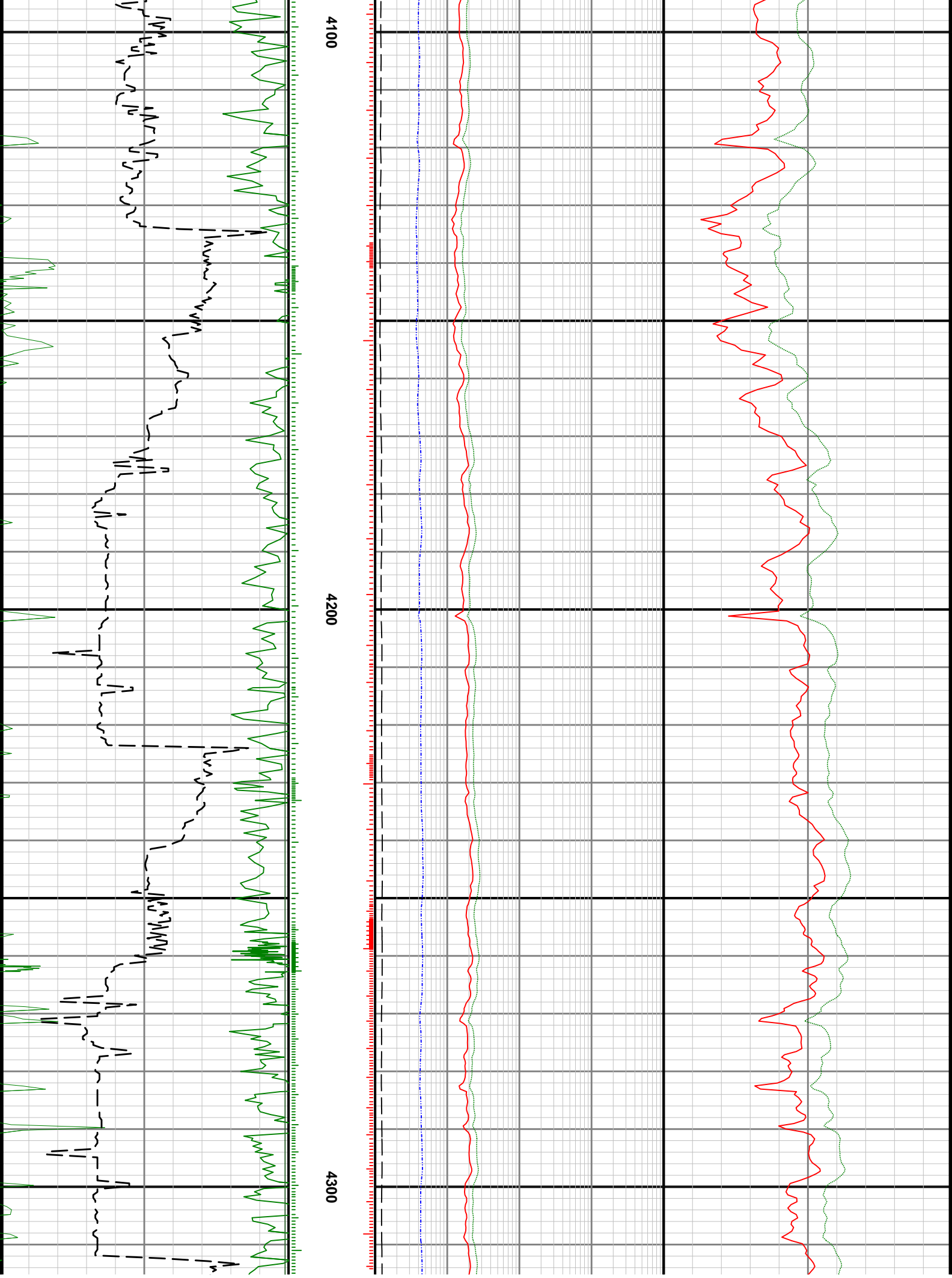


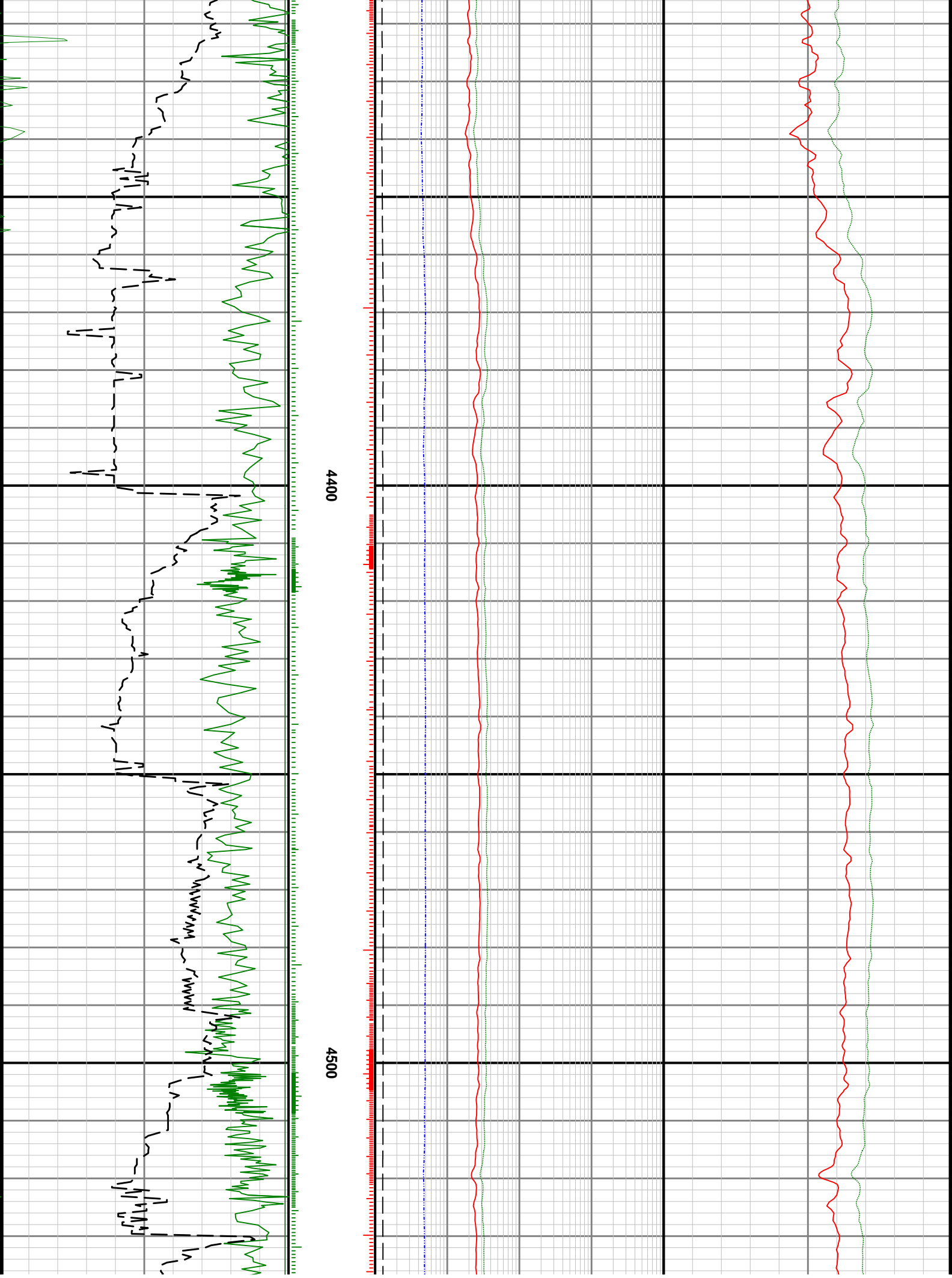


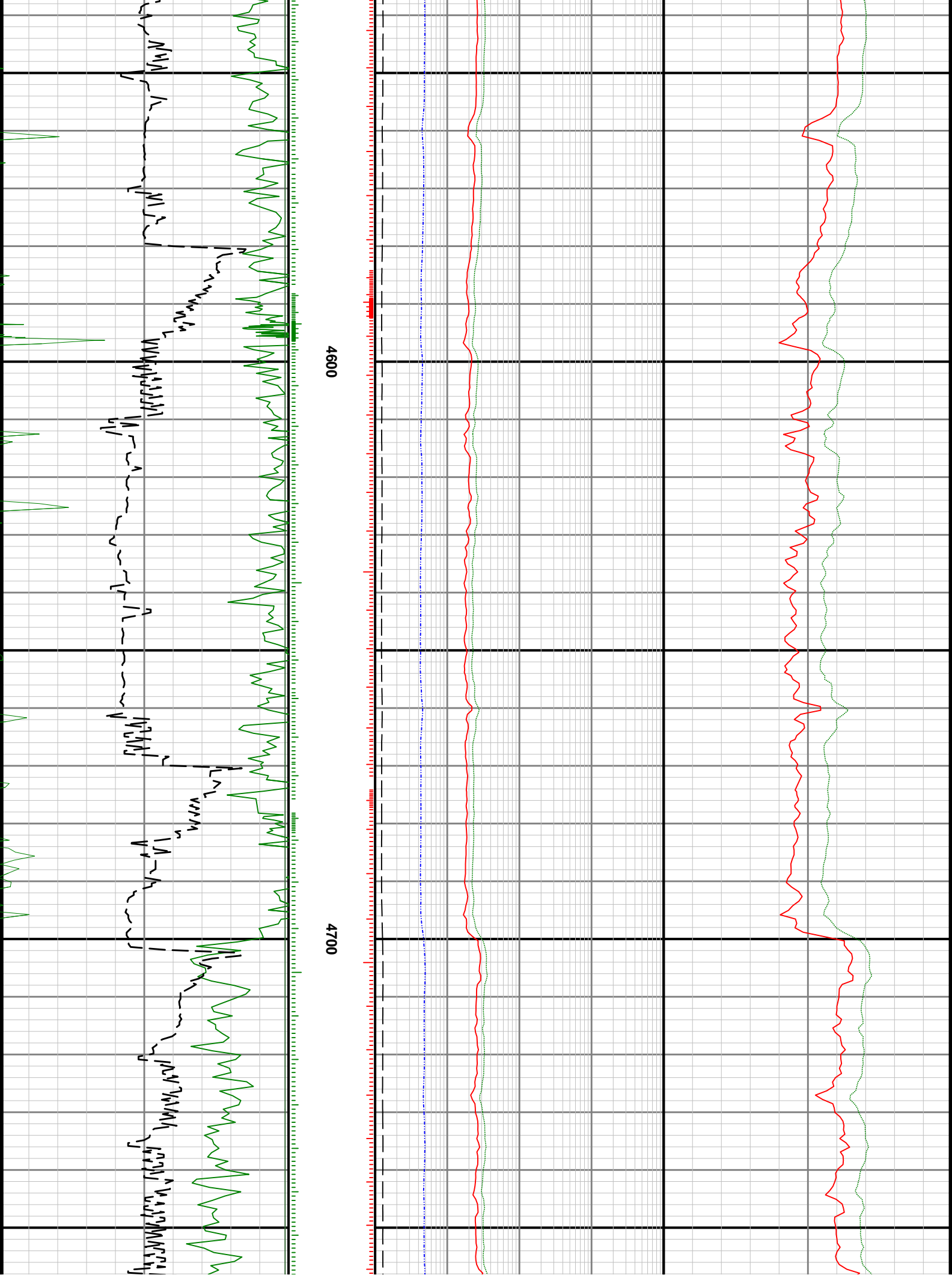


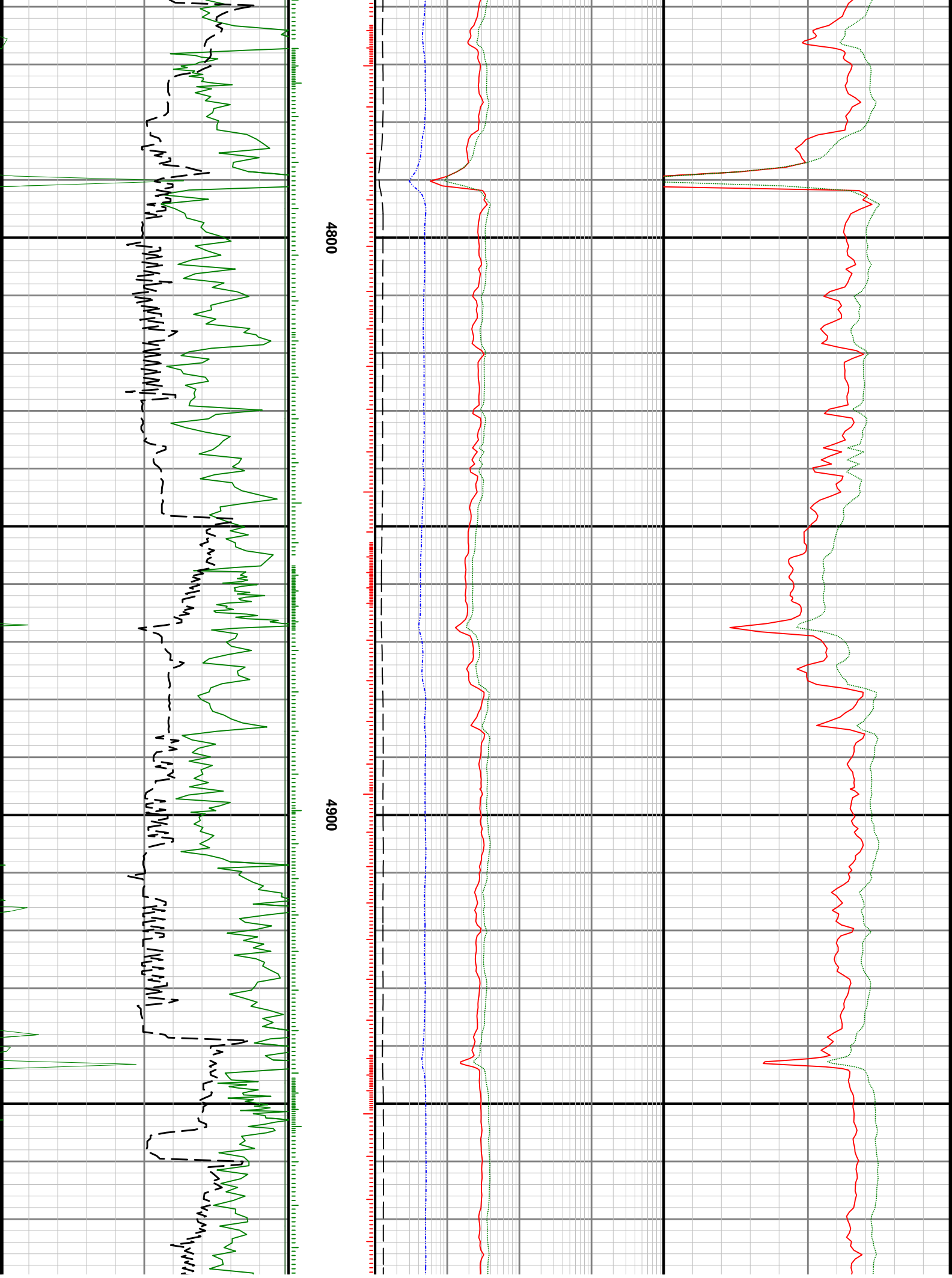












4800

4900

DAVG\_ROP

GR1CM

GRIM

5000

RPHIM

5100

520

RACHM

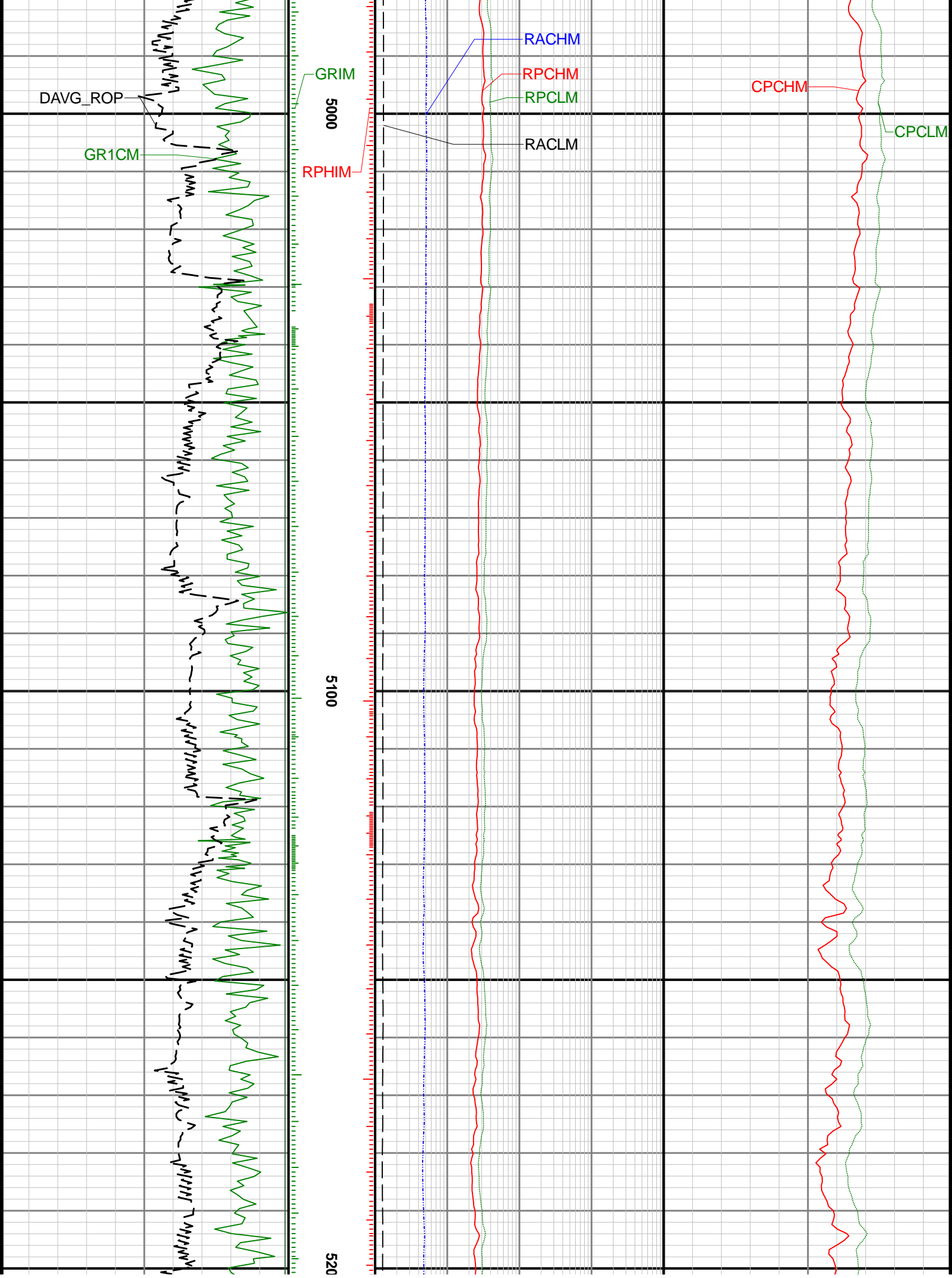
RPCHM

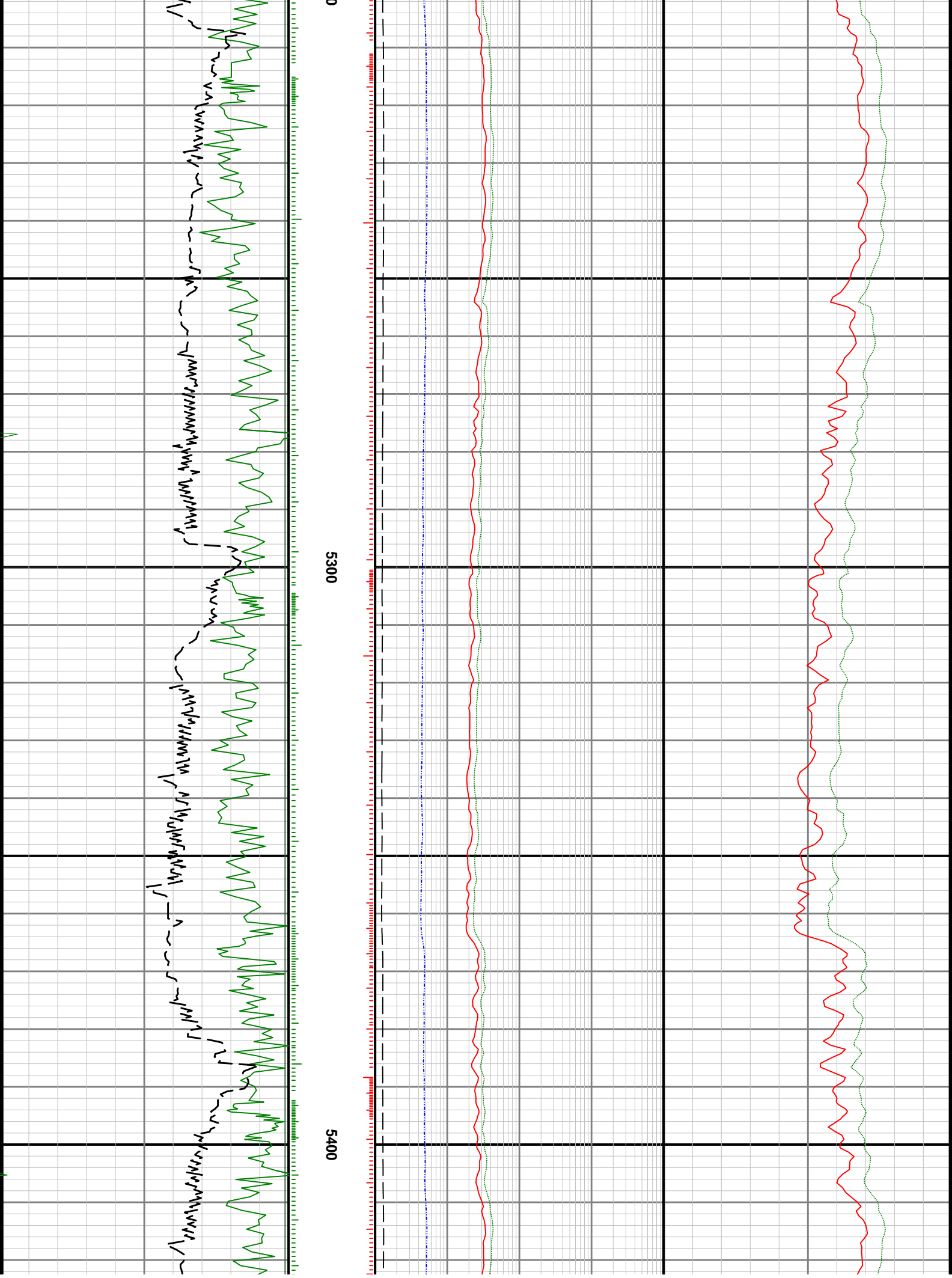
RPCLM

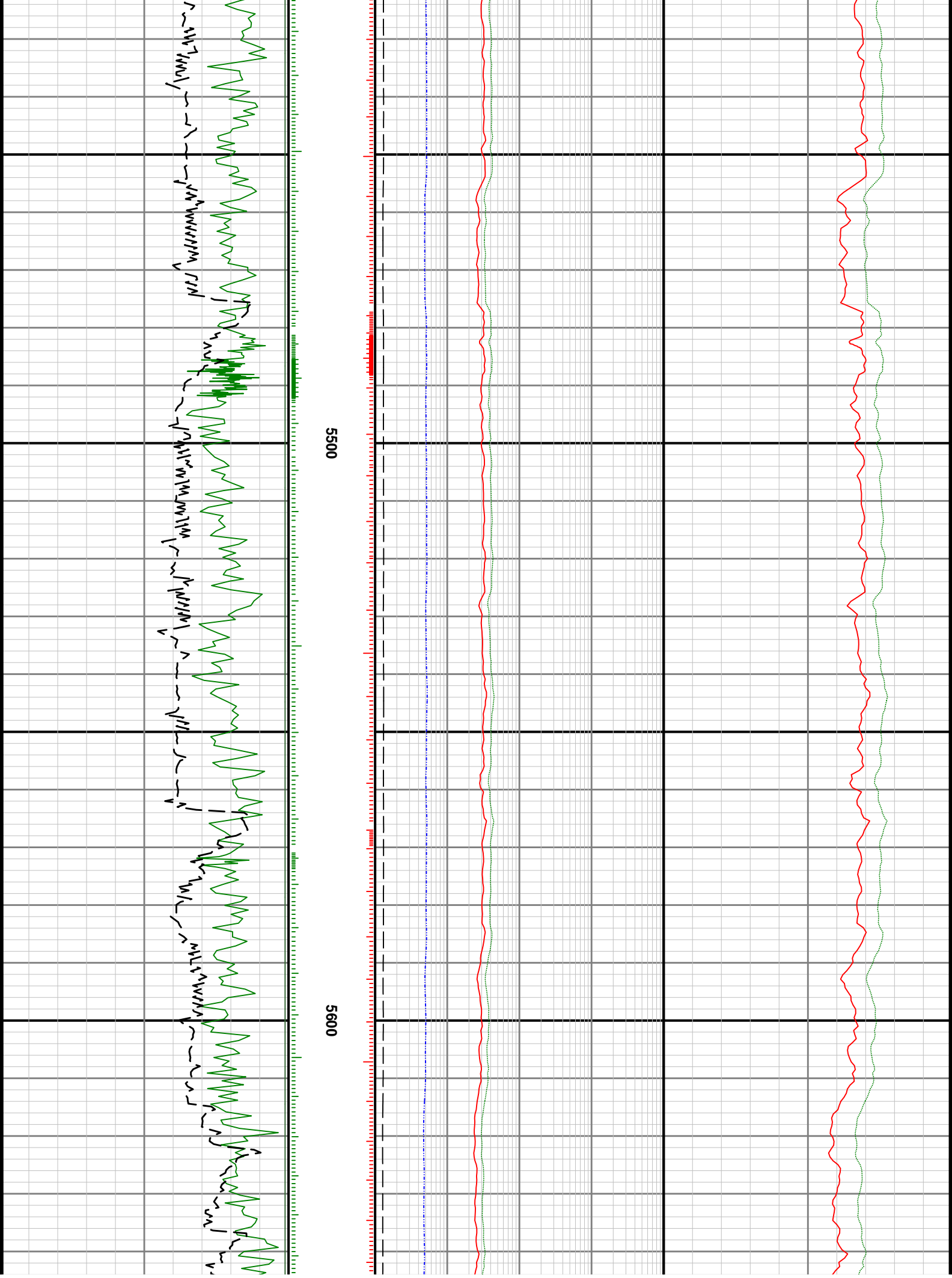
RACLM

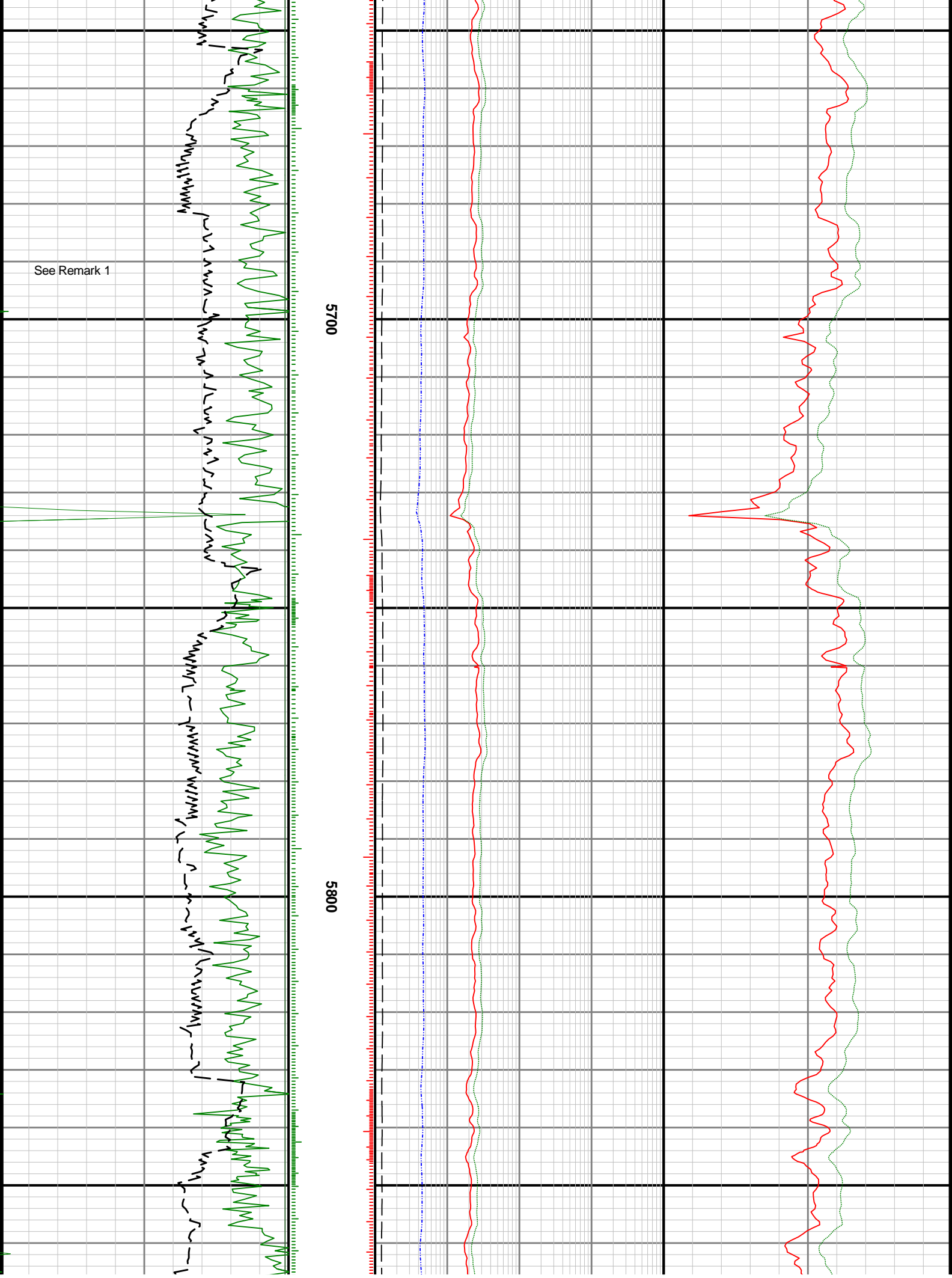
CPCHM

CPCLM





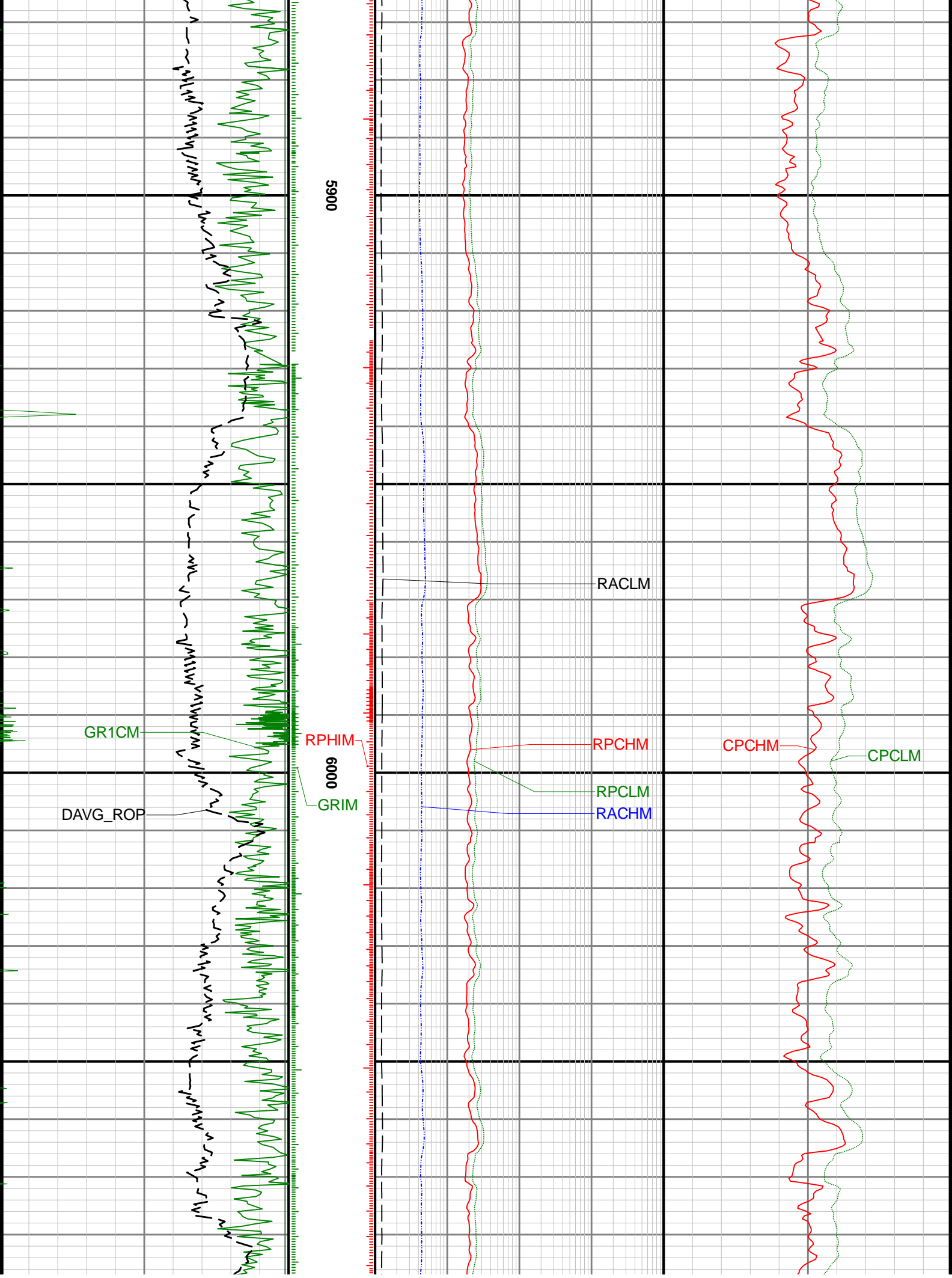


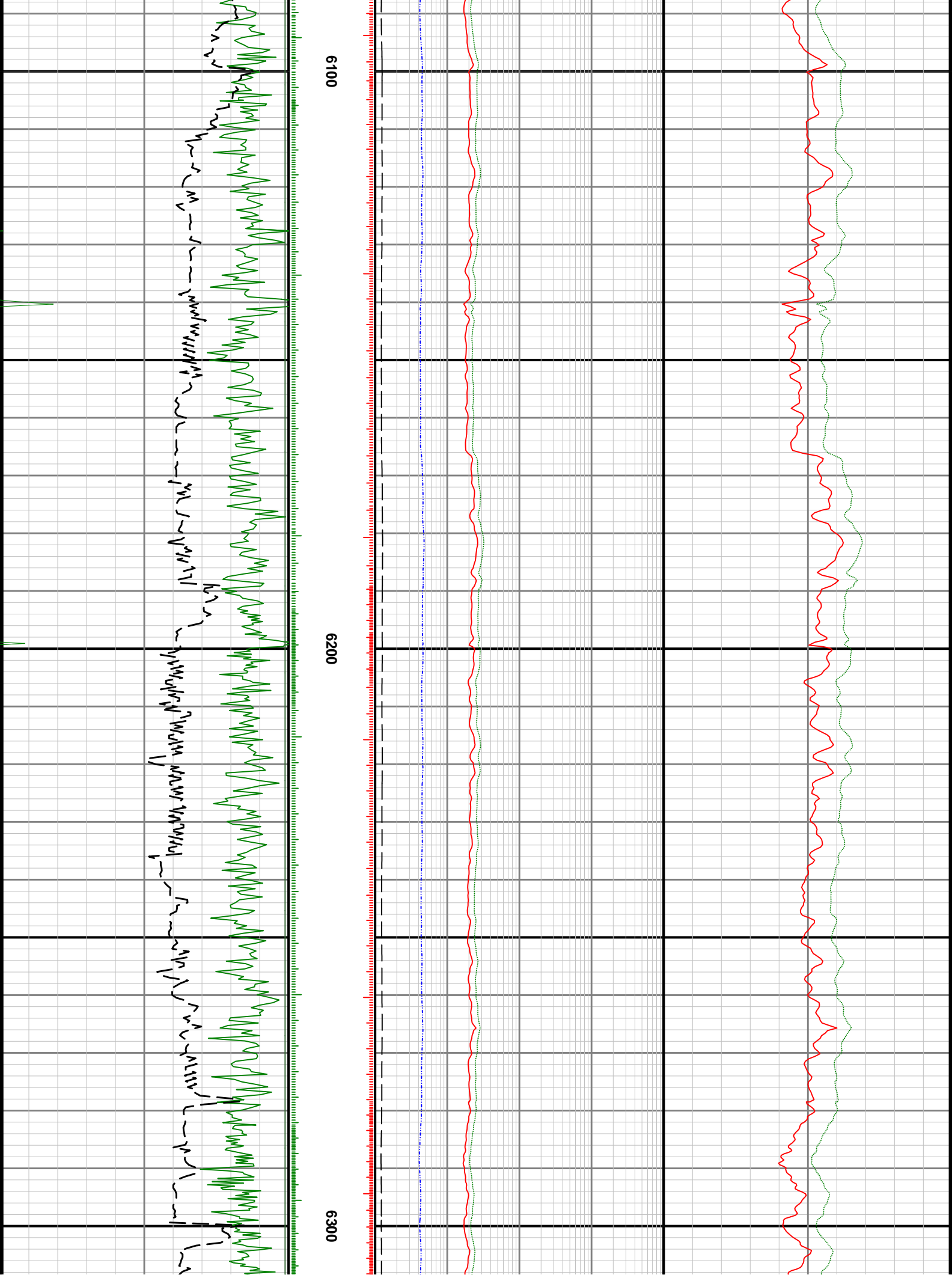


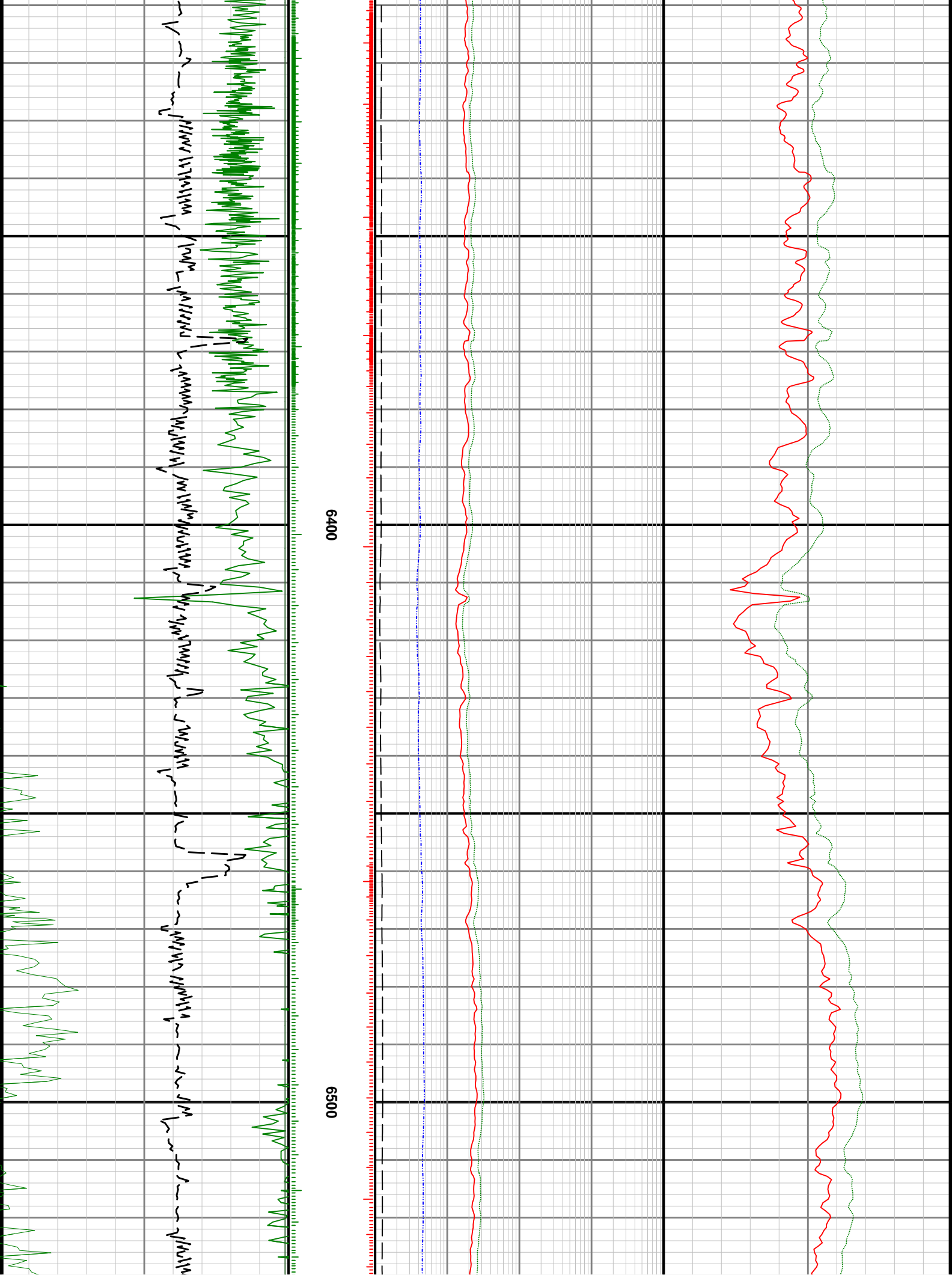
See Remark 1

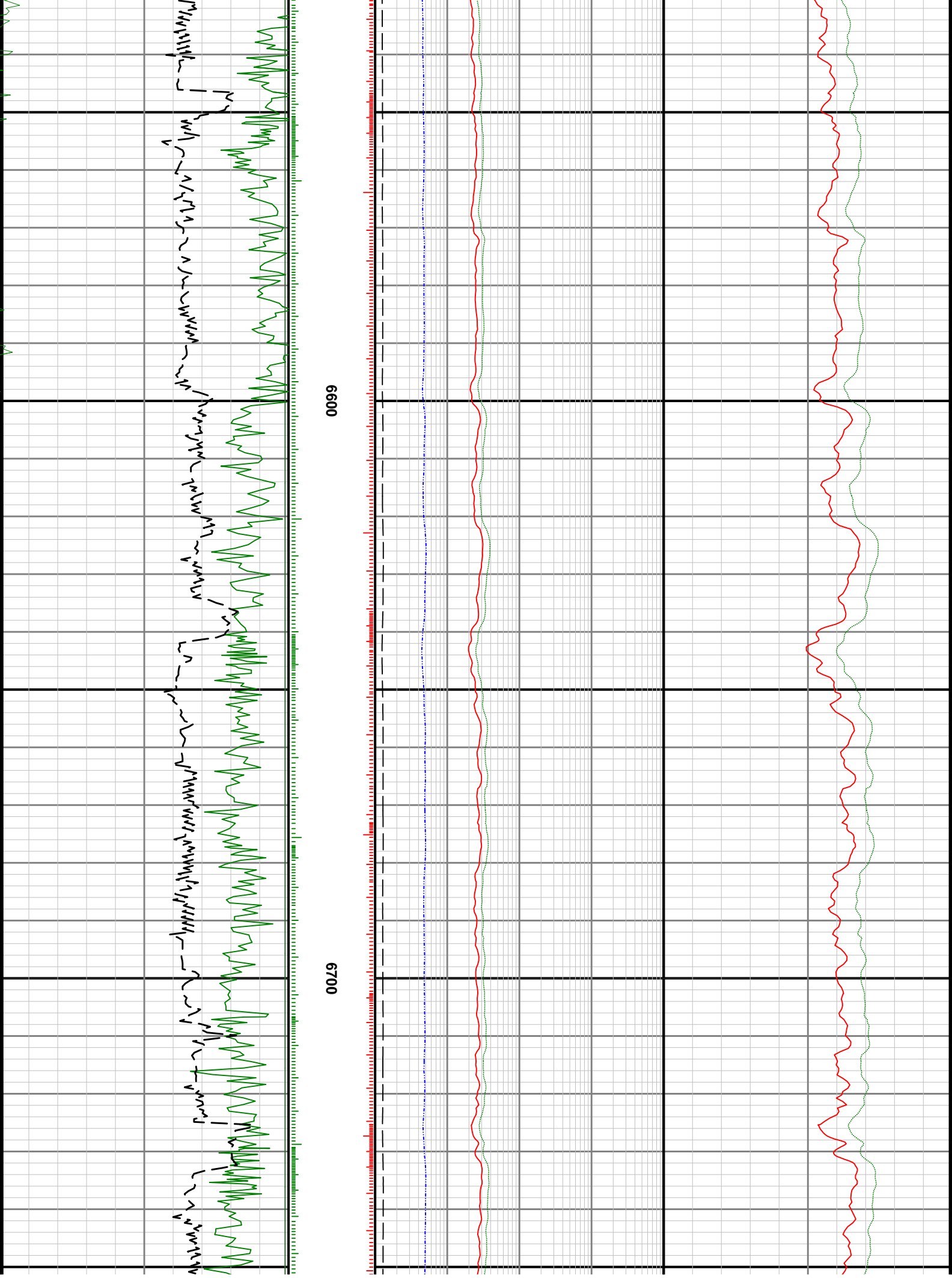
5700

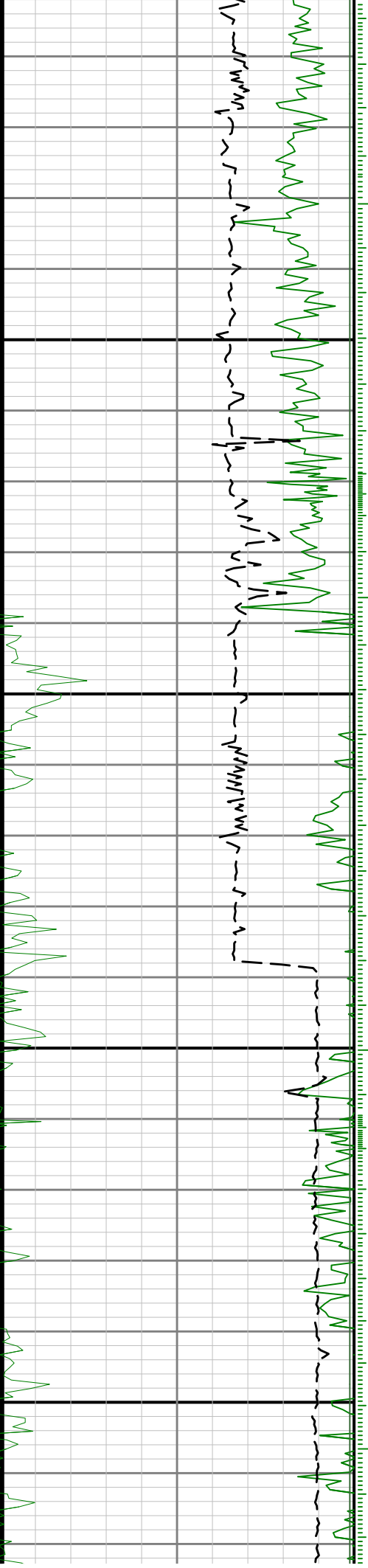
5800





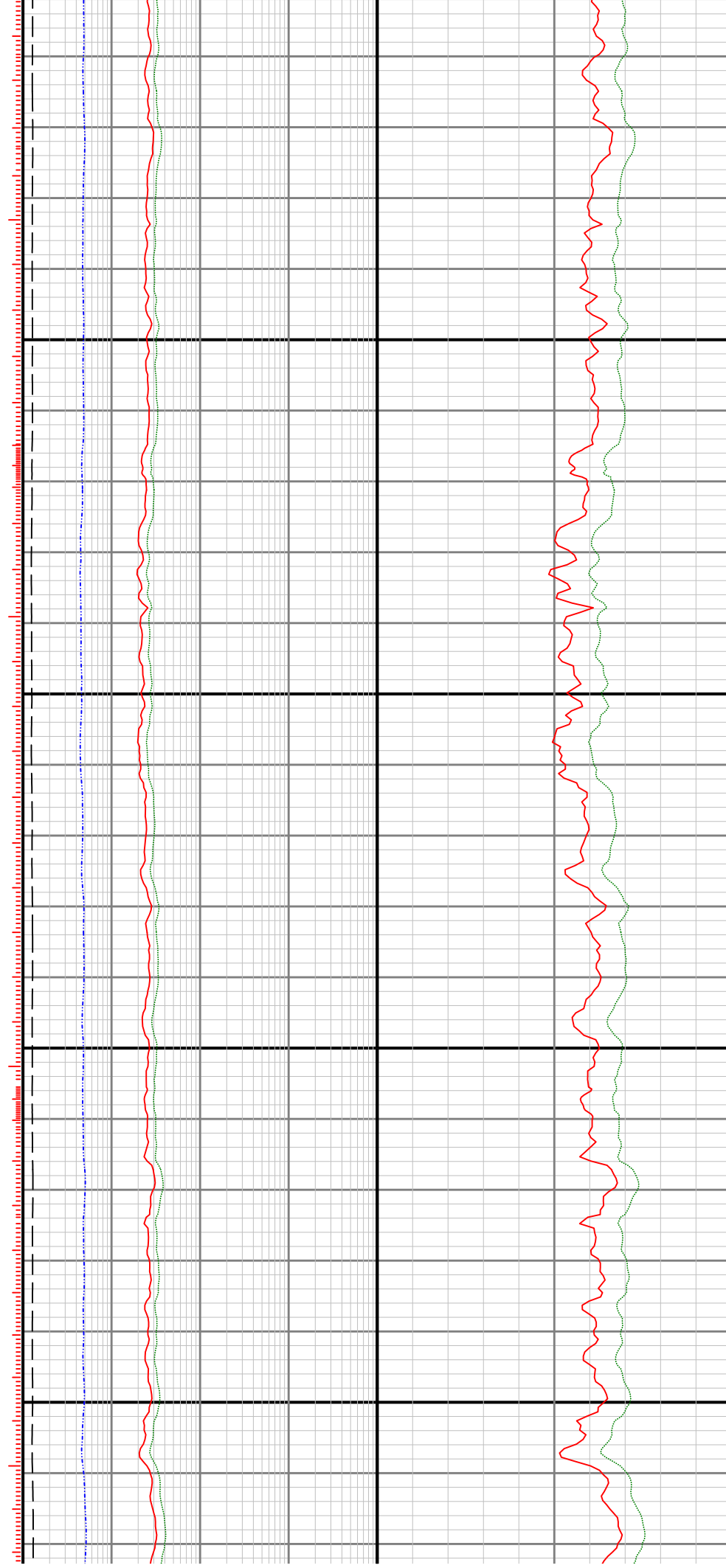


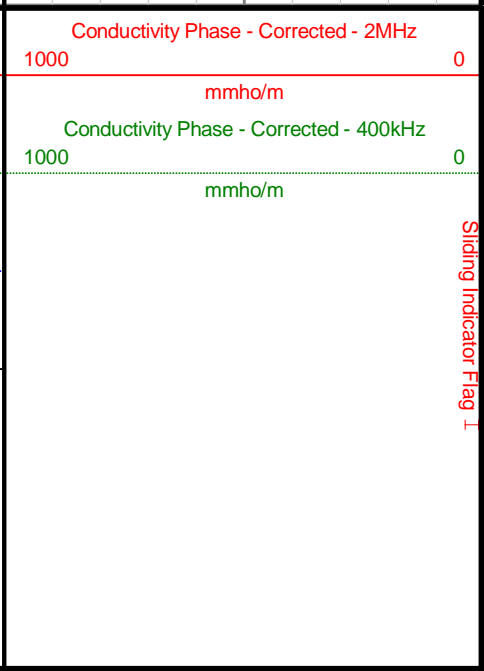
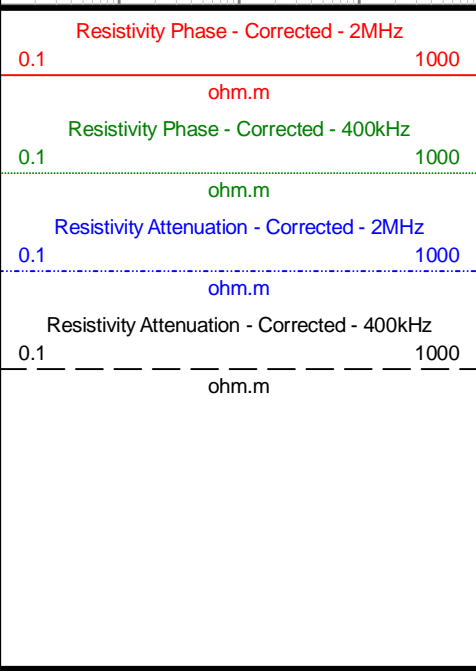
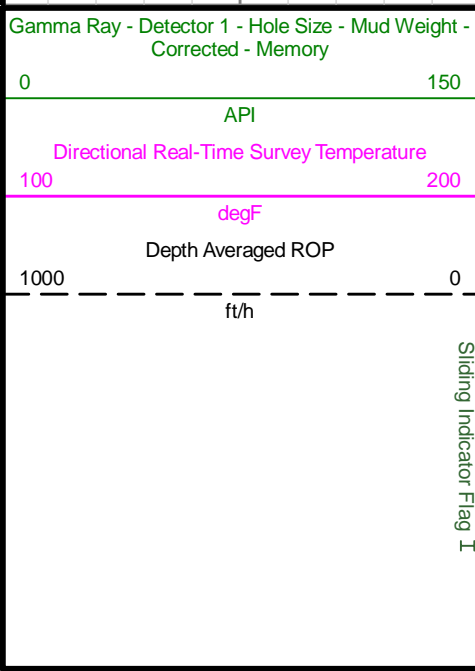
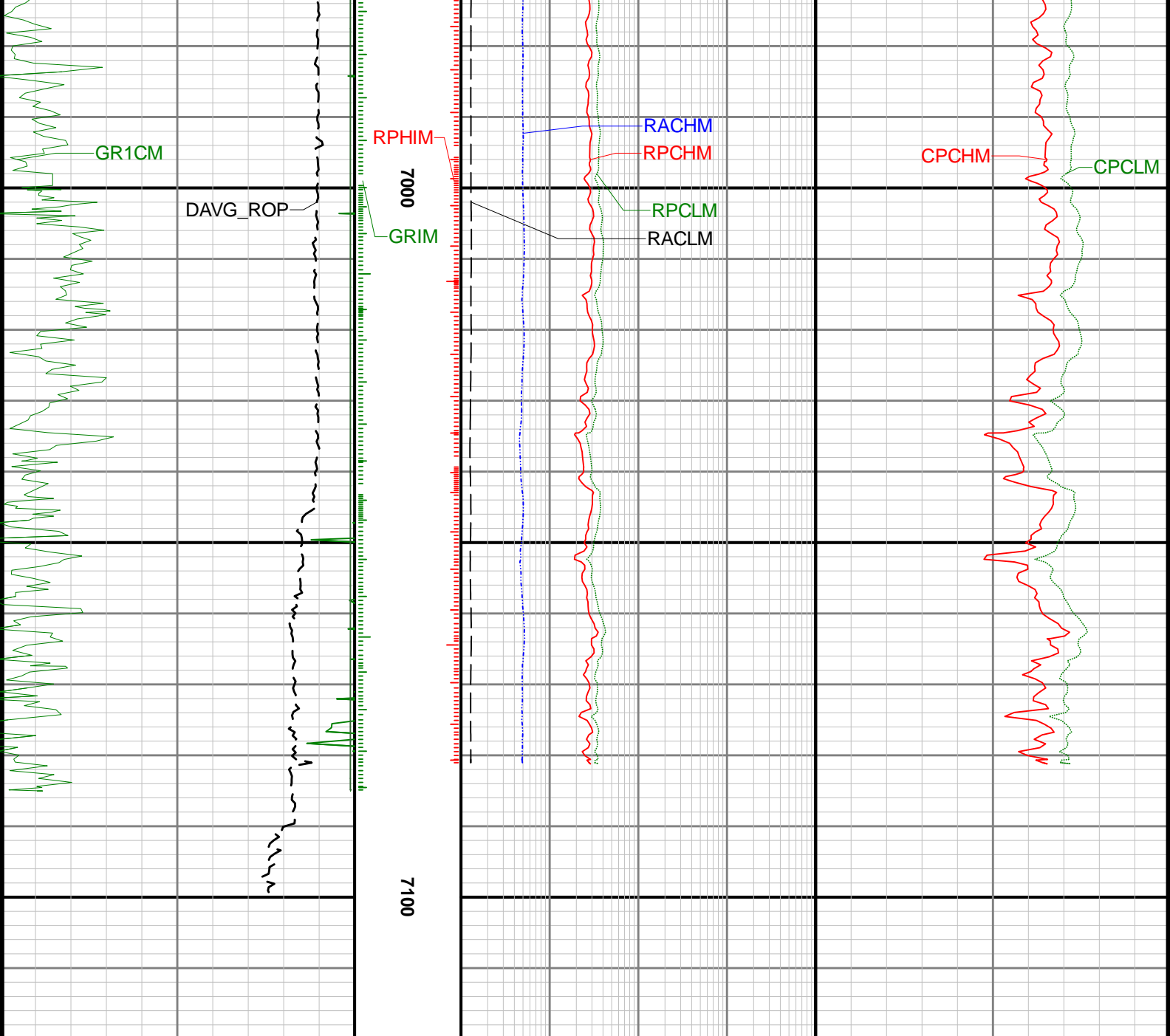




0069

0089





Tool Size:	6.750	Tool Type:	OnTrak	Asset No:	13080165	Build No:	N/A
------------	-------	------------	--------	-----------	----------	-----------	-----

Post-run	Pre-run	Date/Time	Sensor #1		Sensor #2			
			Background	Standard	Background	Standard		
			(cps)	Deviation	(cps)	Deviation		
				0.1	10		0.1	10

### Propagation Resistivity Primary Calibration Summary

Tool Size:	6.750	Tool Type:	OnTrak	Asset No:	13080165	Build No:	N/A	Date/Time:	2021-06-18 14:00
Firmware:	N/A	Location:	Ensign	Temp:	95.0	Unit:	Shop	Software:	N/A

#### 2 MHz Air Offsets

Transmitter 1		Transmitter 2		Transmitter 3		Transmitter 4	
Phase R1 (deg)	-171.883730	Phase R1 (deg)	-176.930010	Phase R1 (deg)	-167.848820	Phase R1 (deg)	-174.993060
Phase R2 (deg)	-167.075580	Phase R2 (deg)	-174.069460	Phase R2 (deg)	-163.016160	Phase R2 (deg)	-170.119920
Attn. R1 (dB)	-0.542750	Attn. R1 (dB)	-1.058180	Attn. R1 (dB)	-0.636770	Attn. R1 (dB)	9.600020
Attn. R2 (dB)	2.193540	Attn. R2 (dB)	-1.164630	Attn. R2 (dB)	3.275290	Attn. R2 (dB)	3.124160
P. Diff T1 (deg)	-4.808150	P. Diff T2 (deg)	2.860550	P. Diff T3 (deg)	-4.832660	P. Diff T4 (deg)	4.873140
Attn. T1 (dB)	2.736290	Attn. T2 (dB)	0.106450	Attn. T3 (dB)	3.912060	Attn. T4 (dB)	6.475860
CP T1T2 (deg)	-0.973800	CA T1T2 (dB)	1.421370	CP T3T4 (deg)	0.020240	CA T3T4 (dB)	5.193960
	-0.25    0.25		5.30    5.70		0.10    0.60		8.30    8.70

#### 400 kHz Air Offsets

Transmitter 1		Transmitter 2		Transmitter 3		Transmitter 4	
Phase R1 (deg)	166.063540	Phase R1 (deg)	168.519270	Phase R1 (deg)	-176.565870	Phase R1 (deg)	-176.584050
Phase R2 (deg)	166.370010	Phase R2 (deg)	169.596080	Phase R2 (deg)	-175.684830	Phase R2 (deg)	-176.024260
Attn. R1 (dB)	-0.553100	Attn. R1 (dB)	-1.101350	Attn. R1 (dB)	-0.666900	Attn. R1 (dB)	9.254720
Attn. R2 (dB)	1.922440	Attn. R2 (dB)	-1.174450	Attn. R2 (dB)	2.985360	Attn. R2 (dB)	2.700930
P. Diff T1 (deg)	-0.306470	P. Diff T2 (deg)	1.076810	P. Diff T3 (deg)	-0.881040	P. Diff T4 (deg)	0.559790
Attn. T1 (dB)	2.475540	Attn. T2 (dB)	0.073100	Attn. T3 (dB)	3.652260	Attn. T4 (dB)	6.553790
CP T1T2 (deg)	0.385170	CA T1T2 (dB)	1.274320	CP T3T4 (deg)	-0.160625	CA T3T4 (dB)	5.103025
	-0.25    0.25		5.30    5.70		-0.25    0.25		8.30    8.70

### Directional Survey Summary

Latitude:	40° 01' 48.612" N	Longitude:	104° 39' 19.476" W
North Reference:	True	Drill Depth Zero:	Rig Floor
Vertical Datum is:	Mean Sea Level	Vertical Datum to DDZ: (ft)	5118.00
Vertical Section North: (ft)	0.00	Vertical Section East: (ft)	0.00
Vertical Section Azimuth: (deg)	359.11	Magnetic Declination: (deg)	7.96
Grid Convergence: (deg)	N/A	TVD Calculation Method:	Minimum Curvature
Total Correction: (deg)	7.96	Local Magnetic Field: (nT)	51760
Magnetic Correction:	Off	Local Gravity Field: (m/s2)	9.801
Local Magnetic Dip Angle: (deg)	66.28		

Tie-In / Projection	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	North (ft)	East (ft)	True Vertical Depth (ft)	TVD Subsea (ft)	Vertical Section (ft)	Course Length (ft)	Dog Leg Severity (deg/100ft)	Build Rate (deg/100ft)	Turn Rate (deg/100ft)
Tie-In	0.00	0.00	0.00	N/A	0.00	0.00	0.00	-5118.00	0.00	0.00	0.00	0.00	0.00
	23.00	0.00	157.56	N/A	0.00	0.00	23.00	-5095.00	0.00	23.00	0.00	0.00	685.04
	137.00	0.51	157.56	98.7	-0.47	0.19	137.00	-4981.00	-0.47	114.00	0.45	0.45	-0.00
	227.00	0.74	154.34	98.7	-1.36	0.60	226.99	-4891.01	-1.37	90.00	0.26	0.26	-3.58
	318.00	0.74	167.47	271.7	-2.47	0.98	317.99	-4800.01	-2.48	91.00	0.19	0.00	14.43
	407.00	0.50	127.79	98.7	-3.27	1.41	406.98	-4711.02	-3.29	89.00	0.54	-0.27	-44.58
	497.00	1.42	208.77	104.1	-4.48	1.19	496.97	-4621.03	-4.50	90.00	1.59	1.02	89.98
	587.00	3.21	218.07	104.1	-7.45	-0.91	586.89	-4531.11	-7.43	90.00	2.03	1.99	10.33
	676.00	4.61	215.74	104.1	-12.31	-4.53	675.68	-4442.32	-12.24	89.00	1.58	1.57	-2.62
	765.00	4.44	217.32	104.1	-17.95	-8.71	764.41	-4353.59	-17.82	89.00	0.24	-0.19	1.78
	855.00	4.01	213.76	106.8	-23.34	-12.57	854.16	-4263.84	-23.14	90.00	0.56	-0.48	-3.96
	944.00	4.61	210.80	52.7	-29.00	-16.13	942.91	-4175.09	-28.74	89.00	0.72	0.67	-3.33
	1034.00	4.72	211.49	106.8	-35.26	-19.92	1032.61	-4085.39	-34.95	90.00	0.14	0.12	0.77
	1124.00	4.52	213.11	109.5	-41.39	-23.79	1122.32	-3995.68	-41.02	90.00	0.27	-0.22	1.80

	1214.00	3.85	212.60	109.5	-46.91	-27.35	1212.08	-3905.92	-46.48	90.00	0.75	-0.74	-0.57
	1303.00	3.54	210.74	109.5	-51.79	-30.37	1300.89	-3817.11	-51.31	89.00	0.37	-0.35	-2.09
	1393.00	3.25	214.55	109.5	-56.28	-33.23	1390.74	-3727.26	-55.75	90.00	0.41	-0.32	4.23
	1483.00	3.28	214.04	166.2	-60.51	-36.12	1480.59	-3637.41	-59.94	90.00	0.05	0.03	-0.57
	1520.00	3.47	216.55	109.5	-62.29	-37.38	1517.53	-3600.47	-61.70	37.00	0.65	0.51	6.78
	1611.00	3.10	211.84	98.7	-66.59	-40.32	1608.38	-3509.62	-65.96	91.00	0.50	-0.41	-5.18
	1701.00	3.10	208.79	101.4	-70.79	-42.78	1698.24	-3419.76	-70.12	90.00	0.18	-0.00	-3.39
	1790.00	3.05	211.72	104.1	-74.91	-45.18	1787.12	-3330.88	-74.20	89.00	0.19	-0.06	3.29
	1880.00	3.07	210.60	106.8	-79.02	-47.67	1876.99	-3241.01	-78.27	90.00	0.07	0.02	-1.24
	1970.00	3.06	210.85	109.5	-83.16	-50.12	1966.86	-3151.14	-82.37	90.00	0.02	-0.01	0.28
	2060.00	3.07	214.79	109.5	-87.20	-52.73	2056.73	-3061.27	-86.37	90.00	0.23	0.01	4.38
	2149.00	3.03	215.20	112.2	-91.08	-55.45	2145.60	-2972.40	-90.21	89.00	0.05	-0.04	0.46
	2239.00	3.04	215.63	114.9	-94.96	-58.21	2235.48	-2882.52	-94.05	90.00	0.03	0.01	0.48
	2328.00	2.93	214.38	117.6	-98.76	-60.87	2324.36	-2793.64	-97.80	89.00	0.14	-0.12	-1.40
	2418.00	2.85	214.16	117.6	-102.51	-63.42	2414.24	-2703.76	-101.51	90.00	0.09	-0.09	-0.24
	2508.00	2.71	217.03	123.0	-106.06	-65.96	2504.14	-2613.86	-105.02	90.00	0.22	-0.16	3.19
	2598.00	2.73	215.97	123.0	-109.49	-68.50	2594.04	-2523.96	-108.42	90.00	0.06	0.02	-1.18
	2688.00	2.92	214.47	128.4	-113.12	-71.06	2683.93	-2434.07	-112.00	90.00	0.23	0.21	-1.67
	2777.00	2.84	215.82	128.4	-116.77	-73.63	2772.81	-2345.19	-115.62	89.00	0.12	-0.09	1.52
	2867.00	2.92	218.22	128.4	-120.38	-76.35	2862.70	-2255.30	-119.18	90.00	0.16	0.09	2.67
	2957.00	2.91	215.47	131.1	-124.04	-79.10	2952.58	-2165.42	-122.80	90.00	0.16	-0.01	-3.06
	3046.00	2.80	216.97	82.4	-127.62	-81.72	3041.47	-2076.53	-126.34	89.00	0.15	-0.12	1.69
	3135.00	2.81	216.38	55.4	-131.11	-84.32	3130.37	-1987.63	-129.79	89.00	0.03	0.01	-0.66
	3225.00	2.86	215.12	136.5	-134.73	-86.92	3220.26	-1897.74	-133.36	90.00	0.09	0.06	-1.40
	3314.00	2.94	216.52	136.5	-138.38	-89.55	3309.14	-1808.86	-136.97	89.00	0.12	0.09	1.57
	3404.00	2.78	216.29	136.5	-141.99	-92.22	3399.03	-1718.97	-140.54	90.00	0.18	-0.18	-0.26
	3493.00	2.93	216.23	139.2	-145.57	-94.84	3487.92	-1630.08	-144.08	89.00	0.17	0.17	-0.07
	3583.00	2.84	217.96	141.9	-149.18	-97.57	3577.81	-1540.19	-147.65	90.00	0.14	-0.10	1.92
	3672.00	2.92	216.88	144.6	-152.73	-100.29	3666.69	-1451.31	-151.16	89.00	0.11	0.09	-1.21
	3761.00	2.79	214.17	144.6	-156.34	-102.86	3755.58	-1362.42	-154.72	89.00	0.21	-0.15	-3.04
	3851.00	2.90	222.44	144.6	-159.83	-105.63	3845.47	-1272.53	-158.17	90.00	0.47	0.12	9.19
	3941.00	2.69	216.88	147.3	-163.20	-108.43	3935.37	-1182.63	-161.49	90.00	0.38	-0.23	-6.18
	4030.00	2.82	217.49	147.3	-166.61	-111.02	4024.26	-1093.74	-164.86	89.00	0.15	0.15	0.69
	4120.00	2.89	217.27	147.3	-170.17	-113.74	4114.15	-1003.85	-168.38	90.00	0.08	0.08	-0.24
	4209.00	2.90	215.62	150.0	-173.78	-116.41	4203.04	-914.96	-171.96	89.00	0.09	0.01	-1.85
	4298.00	3.17	217.34	150.0	-177.57	-119.22	4291.91	-826.09	-175.70	89.00	0.32	0.30	1.93
	4388.00	2.94	217.26	150.0	-181.39	-122.12	4381.78	-736.22	-179.47	90.00	0.26	-0.26	-0.09
	4477.00	2.90	213.97	147.3	-185.07	-124.76	4470.67	-647.33	-183.11	89.00	0.19	-0.04	-3.70
	4566.00	2.90	215.06	147.3	-188.78	-127.31	4559.55	-558.45	-186.78	89.00	0.06	0.00	1.22
	4656.00	2.88	215.17	147.3	-192.49	-129.92	4649.44	-468.56	-190.45	90.00	0.02	-0.02	0.12
	4746.00	2.86	213.42	150.0	-196.21	-132.46	4739.33	-378.67	-194.13	90.00	0.10	-0.02	-1.94
	4836.00	2.99	214.74	150.0	-200.02	-135.04	4829.21	-288.79	-197.90	90.00	0.16	0.14	1.47
	4925.00	3.14	215.76	152.7	-203.90	-137.78	4918.08	-199.92	-201.74	89.00	0.18	0.17	1.15
	5015.00	3.07	215.12	152.7	-207.87	-140.61	5007.95	-110.05	-205.66	90.00	0.09	-0.08	-0.71
	5105.00	3.03	214.30	158.1	-211.81	-143.34	5097.82	-20.18	-209.56	90.00	0.07	-0.04	-0.91
	5194.00	3.38	216.14	160.8	-215.87	-146.21	5186.68	68.68	-213.57	89.00	0.41	0.39	2.07
	5284.00	3.67	214.03	160.8	-220.40	-149.39	5276.51	158.51	-218.05	90.00	0.35	0.32	-2.34
	5373.00	3.33	214.95	163.5	-224.88	-152.46	5365.35	247.35	-222.49	89.00	0.39	-0.38	1.03
	5463.00	3.33	217.12	166.2	-229.11	-155.54	5455.20	337.20	-226.66	90.00	0.14	-0.00	2.41
	5552.00	3.68	204.60	168.9	-233.77	-158.29	5544.03	426.03	-231.28	89.00	0.94	0.39	-14.07
	5641.00	3.15	213.22	166.2	-238.41	-160.81	5632.87	514.87	-235.88	89.00	0.83	-0.60	9.69
	5730.00	2.56	220.60	168.9	-241.96	-163.45	5721.76	603.76	-239.40	89.00	0.78	-0.66	8.29
	5819.00	2.98	214.51	171.6	-245.38	-166.05	5810.66	692.66	-242.77	89.00	0.58	0.47	-6.84
	5909.00	3.12	214.70	168.9	-249.32	-168.77	5900.53	782.53	-246.67	90.00	0.16	0.16	0.21
	5998.00	3.35	218.92	174.3	-253.33	-171.78	5989.39	871.39	-250.64	89.00	0.37	0.26	4.74
	6088.00	3.44	217.31	174.3	-257.53	-175.07	6079.23	961.23	-254.78	90.00	0.15	0.10	-1.79
	6177.00	2.98	216.25	177.0	-261.52	-178.06	6168.09	1050.09	-258.72	89.00	0.52	-0.52	-1.19
	6266.00	3.32	215.69	179.7	-265.48	-180.93	6256.96	1138.96	-262.63	89.00	0.38	0.38	-0.63
	6356.00	2.98	216.22	174.3	-269.48	-183.83	6346.82	1228.82	-266.59	90.00	0.38	-0.38	0.59
	6445.00	2.80	207.56	179.7	-273.27	-186.21	6435.71	1317.71	-270.35	89.00	0.53	-0.20	-9.73
	6535.00	2.69	212.69	185.2	-277.00	-188.36	6525.60	1407.60	-274.04	90.00	0.30	-0.12	5.70
	6624.00	2.77	207.81	185.2	-280.66	-190.50	6614.50	1496.50	-277.67	89.00	0.28	0.09	-5.48
	6713.00	2.78	202.71	187.9	-284.55	-192.33	6703.40	1585.40	-281.53	89.00	0.28	0.01	-5.73
	6803.00	2.69	207.41	187.9	-288.44	-194.15	6793.30	1675.30	-285.39	90.00	0.27	-0.10	5.22
	6892.00	2.76	210.65	185.2	-292.14	-196.20	6882.20	1764.20	-289.06	89.00	0.19	0.08	3.64
	6982.00	5.19	351.54	185.2	-289.97	-197.91	6972.09	1854.09	-286.86	90.00	8.37	2.70	156.54
	7071.00	15.74	357.97	187.9	-273.88	-198.93	7059.49	1941.49	-270.76	89.00	11.91	11.85	7.22
	7160.00	23.16	1.58	193.3	-244.28	-198.87	7143.35	2025.35	-241.16	89.00	8.44	8.34	4.06
	7250.00	30.71	12.04	190.6	-204.03	-193.58	7223.58	2105.58	-201.00	90.00	9.88	8.39	11.62
	7339.00	40.37	7.38	185.2	-153.09	-185.12	7295.92	2177.92	-150.20	89.00	11.27	10.85	-5.24
	7428.00	50.94	359.10	190.6	-89.72	-181.95	7358.10	2240.10	-86.88	89.00	13.59	11.88	-9.30
	7518.00	58.78	358.02	190.6	-16.21	-183.83	7409.86	2291.86	-13.35	90.00	8.77	8.71	-1.20
	7608.00	67.32	358.59	190.6	63.91	-186.18	7450.61	2332.61	66.79	90.00	9.51	9.49	0.63
	7697.00	75.95	358.93	193.3	148.28	-188.00	7478.63	2360.63	151.18	89.00	9.70	9.70	0.38

	7788.00	84.45	359.42	193.3	237.86	-189.29	7494.10	2376.10	240.77	91.00	9.36	9.34	0.54
	7877.00	91.63	359.77	196.0	326.74	-189.92	7497.15	2379.15	329.66	89.00	8.08	8.07	0.39
	7967.00	91.35	359.73	198.7	416.71	-190.31	7494.81	2376.81	419.62	90.00	0.31	-0.31	-0.04
	8057.00	91.42	359.69	201.4	506.69	-190.76	7492.63	2374.63	509.59	90.00	0.09	0.08	-0.04
	8146.00	91.32	359.79	201.4	595.66	-191.17	7490.50	2372.50	598.56	89.00	0.16	-0.11	0.11
	8236.00	91.32	359.80	204.1	685.64	-191.49	7488.43	2370.43	688.53	90.00	0.01	-0.00	0.01
	8326.00	91.45	359.88	204.1	775.61	-191.74	7486.25	2368.25	778.49	90.00	0.17	0.14	0.09
	8416.00	90.31	359.34	204.1	865.59	-192.35	7484.87	2366.87	868.48	90.00	1.40	-1.27	-0.60
	8506.00	90.43	359.57	206.8	955.59	-193.21	7484.29	2366.29	958.47	90.00	0.29	0.13	0.26
	8596.00	90.12	359.71	206.8	1045.58	-193.77	7483.86	2365.86	1048.47	90.00	0.38	-0.34	0.16
	8685.00	88.98	359.75	204.1	1134.58	-194.19	7484.56	2366.56	1137.46	89.00	1.28	-1.28	0.04
	8775.00	88.83	359.77	206.8	1224.56	-194.57	7486.28	2368.28	1227.44	90.00	0.17	-0.17	0.02
	8865.00	88.83	359.36	198.7	1314.54	-195.25	7488.11	2370.11	1317.42	90.00	0.46	-0.00	-0.46
	8954.00	90.52	359.87	206.8	1403.53	-195.85	7488.62	2370.62	1406.41	89.00	1.98	1.90	0.57
	9044.00	90.98	359.92	209.5	1493.53	-196.02	7487.44	2369.44	1496.39	90.00	0.51	0.51	0.06
	9134.00	91.02	359.91	212.2	1583.51	-196.15	7485.87	2367.87	1586.37	90.00	0.05	0.04	-0.01
	9223.00	90.86	359.78	214.9	1672.50	-196.39	7484.41	2366.41	1675.35	89.00	0.23	-0.18	-0.15
	9313.00	89.78	359.99	214.9	1762.50	-196.57	7483.91	2365.91	1765.34	90.00	1.22	-1.20	0.23
	9402.00	89.97	359.74	217.6	1851.50	-196.78	7484.10	2366.10	1854.33	89.00	0.35	0.21	-0.28
	9492.00	90.09	359.16	220.3	1941.49	-197.65	7484.06	2366.06	1944.33	90.00	0.66	0.13	-0.64
	9582.00	91.05	359.79	220.3	2031.48	-198.47	7483.16	2365.16	2034.32	90.00	1.28	1.07	0.70
	9671.00	91.17	359.54	223.0	2120.46	-198.99	7481.44	2363.44	2123.30	89.00	0.31	0.13	-0.28
	9761.00	91.17	359.69	225.7	2210.44	-199.60	7479.60	2361.60	2213.28	90.00	0.17	0.00	0.17
	9851.00	91.11	359.69	225.7	2300.42	-200.08	7477.81	2359.81	2303.25	90.00	0.07	-0.07	0.00
	9940.00	90.18	359.65	225.7	2389.42	-200.59	7476.81	2358.81	2392.24	89.00	1.05	-1.04	-0.04
	10030.00	90.00	359.50	225.7	2479.41	-201.26	7476.66	2358.66	2482.24	90.00	0.26	-0.20	-0.17
	10119.00	89.78	359.48	228.4	2568.41	-202.05	7476.84	2358.84	2571.24	89.00	0.25	-0.25	-0.02
	10209.00	89.97	359.97	231.1	2658.41	-202.49	7477.03	2359.03	2661.23	90.00	0.58	0.21	0.54
	10299.00	90.00	359.95	231.1	2748.41	-202.55	7477.05	2359.05	2751.22	90.00	0.04	0.03	-0.02
	10388.00	89.69	359.01	231.1	2837.40	-203.36	7477.30	2359.30	2840.22	89.00	1.11	-0.35	-1.06
	10478.00	90.00	359.53	233.8	2927.39	-204.50	7477.54	2359.54	2930.22	90.00	0.67	0.34	0.58
	10567.00	89.85	359.45	233.8	3016.39	-205.30	7477.66	2359.66	3019.22	89.00	0.19	-0.17	-0.09
	10657.00	90.25	0.00	236.5	3106.39	-205.73	7477.58	2359.58	3109.21	90.00	0.76	0.44	0.61
	10746.00	90.22	359.32	236.5	3195.39	-206.26	7477.21	2359.21	3198.20	89.00	0.76	-0.03	-0.76
	10837.00	90.43	359.92	239.2	3286.38	-206.86	7476.70	2358.70	3289.20	91.00	0.70	0.23	0.66
	10927.00	90.40	359.46	239.2	3376.38	-207.35	7476.04	2358.04	3379.19	90.00	0.51	-0.03	-0.51
	11016.00	90.22	359.69	236.5	3465.37	-208.01	7475.56	2357.56	3468.19	89.00	0.33	-0.20	0.26
	11106.00	90.31	359.42	239.2	3555.37	-208.71	7475.15	2357.15	3558.18	90.00	0.32	0.10	-0.30
	11196.00	90.65	359.91	241.9	3645.37	-209.23	7474.39	2356.39	3648.18	90.00	0.66	0.38	0.54
	11286.00	90.71	359.54	239.2	3735.36	-209.66	7473.32	2355.32	3738.16	90.00	0.42	0.07	-0.41
	11375.00	90.95	359.58	241.9	3824.35	-210.35	7472.03	2354.03	3827.15	89.00	0.27	0.27	0.04
	11465.00	90.99	359.52	241.9	3914.33	-211.05	7470.51	2352.51	3917.14	90.00	0.08	0.04	-0.07
	11554.00	90.92	359.55	239.2	4003.32	-211.78	7469.03	2351.03	4006.12	89.00	0.09	-0.08	0.03
	11643.00	90.77	359.41	239.2	4092.30	-212.58	7467.72	2349.72	4095.11	89.00	0.23	-0.17	-0.16
	11733.00	91.45	0.65	239.2	4182.28	-212.54	7465.97	2347.97	4185.08	90.00	1.57	0.76	1.38
	11823.00	91.35	0.25	241.9	4272.25	-211.83	7463.77	2345.77	4275.03	90.00	0.46	-0.11	-0.44
	11912.00	90.25	0.41	241.9	4361.24	-211.32	7462.53	2344.53	4364.00	89.00	1.25	-1.24	0.18
	12002.00	90.25	0.08	244.6	4451.24	-210.93	7462.14	2344.14	4453.98	90.00	0.37	0.00	-0.37
	12091.00	90.43	0.71	244.6	4540.24	-210.32	7461.61	2343.61	4542.95	89.00	0.74	0.20	0.71
	12181.00	90.28	0.04	247.3	4630.23	-209.73	7461.05	2343.05	4632.93	90.00	0.76	-0.17	-0.74
	12270.00	90.49	0.17	247.3	4719.23	-209.57	7460.45	2342.45	4721.91	89.00	0.28	0.24	0.15
	12360.00	90.46	0.31	247.3	4809.22	-209.19	7459.71	2341.71	4811.89	90.00	0.16	-0.03	0.16
	12449.00	90.37	359.99	250.0	4898.22	-208.96	7459.06	2341.06	4900.88	89.00	0.37	-0.10	-0.36
	12539.00	90.65	0.48	250.0	4988.22	-208.59	7458.26	2340.26	4990.86	90.00	0.63	0.31	0.54
	12629.00	90.22	0.39	250.0	5078.21	-207.90	7457.58	2339.58	5080.83	90.00	0.49	-0.48	-0.10
	12718.00	90.83	0.23	250.0	5167.21	-207.42	7456.76	2338.76	5169.81	89.00	0.71	0.69	-0.18
	12808.00	90.83	0.22	252.7	5257.20	-207.07	7455.46	2337.46	5259.78	90.00	0.01	0.00	-0.01
	12898.00	90.43	0.38	250.0	5347.19	-206.60	7454.47	2336.47	5349.75	90.00	0.48	-0.44	0.18
	12988.00	90.55	0.38	252.7	5437.18	-206.00	7453.70	2335.70	5439.73	90.00	0.13	0.13	0.01
	13077.00	90.68	0.82	255.4	5526.17	-205.07	7452.75	2334.75	5528.69	89.00	0.52	0.15	0.49
	13168.00	90.62	0.62	252.7	5617.16	-203.93	7451.71	2333.71	5619.65	91.00	0.23	-0.07	-0.22
	13205.00	90.34	0.14	255.4	5654.16	-203.68	7451.40	2333.40	5656.64	37.00	1.50	-0.76	-1.30
	13294.00	89.69	0.24	247.3	5743.16	-203.39	7451.38	2333.38	5745.62	89.00	0.74	-0.73	0.11
	13383.00	90.00	0.29	252.7	5832.16	-202.97	7451.62	2333.62	5834.61	89.00	0.35	0.35	0.06
	13472.00	89.88	0.25	252.7	5921.16	-202.55	7451.71	2333.71	5923.59	89.00	0.14	-0.13	-0.04
	13562.00	90.03	1.74	252.7	6011.14	-200.99	7451.78	2333.78	6013.54	90.00	1.66	0.17	1.66
	13651.00	89.82	0.22	255.4	6100.12	-199.47	7451.90	2333.90	6102.49	89.00	1.72	-0.24	-1.71
	13741.00	89.69	0.10	258.1	6190.12	-199.22	7452.29	2334.29	6192.47	90.00	0.20	-0.14	-0.13
	13831.00	87.94	0.68	255.4	6280.10	-198.61	7454.15	2336.15	6282.42	90.00	2.05	-1.94	0.64
	13920.00	88.06	0.66	252.7	6369.04	-197.57	7457.25	2339.25	6371.34	89.00	0.14	0.13	-0.02
	14010.00	90.49	1.96	255.4	6459.00	-195.51	7458.39	2340.39	6461.25	90.00	3.06	2.70	1.44
	14099.00	90.12	359.65	255.4	6547.98	-194.26	7457.92	2339.92	6550.21	89.00	2.63	-0.42	-2.60
	14189.00	90.03	359.44	255.4	6637.98	-194.97	7457.80	2339.80	6640.21	90.00	0.25	-0.10	-0.23
	14278.00	90.03	359.50	255.4	6726.97	-195.80	7457.75	2339.75	6729.20	89.00	0.07	0.00	0.07

	14368.00	90.09	359.66	258.1	6816.97	-196.46	7457.66	2339.66	6819.20	90.00	0.19	0.07	0.18
	14458.00	90.15	359.61	255.4	6906.97	-197.03	7457.47	2339.47	6909.20	90.00	0.09	0.07	-0.06
	14548.00	90.46	359.62	255.4	6996.97	-197.63	7456.99	2338.99	6999.19	90.00	0.34	0.34	0.01
	14637.00	91.05	359.61	255.4	7085.96	-198.23	7455.82	2337.82	7088.18	89.00	0.66	0.66	-0.01
	14726.00	91.51	359.65	255.4	7174.93	-198.81	7453.83	2335.83	7177.15	89.00	0.52	0.52	0.04
	14815.00	91.51	359.97	252.7	7263.90	-199.10	7451.49	2333.49	7266.12	89.00	0.36	0.00	0.36
	14905.00	91.72	359.48	255.4	7353.86	-199.53	7448.95	2330.95	7356.08	90.00	0.59	0.23	-0.54
	14994.00	91.94	359.79	255.4	7442.82	-200.10	7446.11	2328.11	7445.03	89.00	0.43	0.25	0.35
	15084.00	91.85	358.95	258.1	7532.76	-201.09	7443.13	2325.13	7534.98	90.00	0.94	-0.10	-0.93
	15173.00	90.06	359.94	255.4	7621.74	-201.95	7441.65	2323.65	7623.96	89.00	2.30	-2.01	1.11
	15263.00	90.25	359.32	258.1	7711.74	-202.53	7441.40	2323.40	7713.95	90.00	0.72	0.21	-0.69
	15352.00	90.31	359.63	260.8	7800.73	-203.35	7440.97	2322.97	7802.95	89.00	0.35	0.07	0.35
	15442.00	90.37	359.89	260.8	7890.73	-203.72	7440.43	2322.43	7892.94	90.00	0.30	0.07	0.29
	15531.00	90.31	359.88	260.8	7979.73	-203.90	7439.91	2321.91	7981.93	89.00	0.07	-0.07	-0.01
	15620.00	90.25	0.22	260.8	8068.73	-203.83	7439.47	2321.47	8070.92	89.00	0.39	-0.07	0.38
	15709.00	89.91	359.92	263.5	8157.73	-203.72	7439.35	2321.35	8159.91	89.00	0.51	-0.38	-0.34
	15798.00	90.09	0.21	260.8	8246.73	-203.62	7439.35	2321.35	8248.89	89.00	0.38	0.20	0.33
	15889.00	90.68	0.08	263.5	8337.72	-203.39	7438.74	2320.74	8339.88	91.00	0.66	0.65	-0.14
	15978.00	91.02	0.49	263.5	8426.71	-202.94	7437.42	2319.42	8428.85	89.00	0.60	0.38	0.46
	16067.00	90.43	0.02	266.2	8515.70	-202.55	7436.29	2318.29	8517.82	89.00	0.85	-0.66	-0.53
	16157.00	91.08	0.64	266.2	8605.69	-202.03	7435.10	2317.10	8607.79	90.00	1.00	0.72	0.69
	16246.00	90.92	0.42	266.2	8694.68	-201.21	7433.55	2315.55	8696.75	89.00	0.31	-0.18	-0.25
	16336.00	90.58	0.47	266.2	8784.66	-200.51	7432.37	2314.37	8786.72	90.00	0.38	-0.38	0.06
	16426.00	90.25	0.11	266.2	8874.66	-200.05	7431.72	2313.72	8876.70	90.00	0.54	-0.37	-0.40
	16515.00	90.34	0.56	266.2	8963.66	-199.53	7431.26	2313.26	8965.68	89.00	0.52	0.10	0.51
	16604.00	89.14	359.56	266.2	9052.65	-199.44	7431.67	2313.67	9054.66	89.00	1.76	-1.35	-1.12
	16693.00	90.65	1.14	260.8	9141.65	-198.89	7431.83	2313.83	9143.63	89.00	2.46	1.70	1.78
	16783.00	89.88	359.98	266.2	9231.64	-198.01	7431.41	2313.41	9233.60	90.00	1.55	-0.86	-1.29
	16873.00	89.66	0.00	231.1	9321.64	-198.03	7431.77	2313.77	9323.59	90.00	0.25	-0.24	0.02
	16962.00	89.91	1.10	269.0	9410.63	-197.18	7432.11	2314.11	9412.56	89.00	1.27	0.28	1.24
	17052.00	89.42	0.35	271.7	9500.62	-196.04	7432.63	2314.63	9502.52	90.00	1.00	-0.54	-0.83
	17141.00	89.60	0.22	271.7	9589.62	-195.59	7433.40	2315.40	9591.50	89.00	0.25	0.20	-0.15
	17231.00	89.88	0.65	271.7	9679.61	-194.91	7433.80	2315.80	9681.47	90.00	0.57	0.31	0.48
	17320.00	90.00	0.63	271.7	9768.61	-193.92	7433.90	2315.90	9770.44	89.00	0.14	0.13	-0.02
	17410.00	90.74	0.78	358.2	9858.60	-192.81	7433.32	2315.32	9860.41	90.00	0.84	0.82	0.17
	17499.00	90.77	0.70	274.4	9947.58	-191.66	7432.14	2314.14	9949.36	89.00	0.10	0.03	-0.09
	17589.00	87.23	357.79	271.7	10037.54	-192.84	7433.71	2315.71	10039.32	90.00	5.09	-3.93	-3.23
	17678.00	89.14	359.67	271.7	10126.46	-194.81	7436.53	2318.53	10128.27	89.00	3.01	2.15	2.11
	17768.00	90.18	0.17	269.0	10216.46	-194.94	7437.07	2319.07	10218.26	90.00	1.28	1.16	0.56
	17858.00	90.22	359.68	271.7	10306.46	-195.06	7436.75	2318.75	10308.25	90.00	0.55	0.04	-0.54
	17947.00	90.18	359.49	274.4	10395.46	-195.70	7436.44	2318.44	10397.24	89.00	0.22	-0.04	-0.21
	18038.00	89.63	358.65	360.9	10486.44	-197.18	7436.59	2318.59	10488.24	91.00	1.10	-0.60	-0.92
	18127.00	90.06	359.45	271.7	10575.43	-198.66	7436.83	2318.83	10577.24	89.00	1.02	0.48	0.90
	18216.00	90.18	359.76	274.4	10664.43	-199.27	7436.65	2318.65	10666.24	89.00	0.37	0.13	0.35
	18306.00	89.78	359.73	274.4	10754.43	-199.67	7436.68	2318.68	10756.23	90.00	0.45	-0.44	-0.03
	18396.00	90.83	0.94	360.9	10844.42	-199.14	7436.20	2318.20	10846.21	90.00	1.78	1.17	1.34
	18486.00	89.85	358.99	360.9	10934.41	-199.20	7435.67	2317.67	10936.19	90.00	2.42	-1.09	-2.17
	18575.00	90.12	359.17	271.7	11023.40	-200.63	7435.69	2317.69	11025.19	89.00	0.36	0.30	0.20
	18665.00	90.43	359.63	274.4	11113.40	-201.57	7435.26	2317.26	11115.19	90.00	0.62	0.34	0.51
	18754.00	90.65	360.00	274.4	11202.39	-201.86	7434.42	2316.42	11204.18	89.00	0.48	0.25	0.42
	18843.00	90.74	359.87	271.7	11291.39	-201.96	7433.34	2315.34	11293.16	89.00	0.18	0.10	-0.15
	18933.00	89.38	359.55	109.5	11381.38	-202.41	7433.24	2315.24	11383.15	90.00	1.55	-1.51	-0.36
	19022.00	88.74	0.01	274.4	11470.37	-202.76	7434.70	2316.70	11472.13	89.00	0.89	-0.72	0.52
	19112.00	88.86	0.35	269.0	11560.35	-202.47	7436.59	2318.59	11562.10	90.00	0.40	0.13	0.38
	19200.00	88.71	359.92	271.7	11648.33	-202.27	7438.46	2320.46	11650.06	88.00	0.52	-0.17	-0.49
	19289.00	90.40	0.86	274.4	11737.32	-201.66	7439.15	2321.15	11739.04	89.00	2.17	1.90	1.06
	19379.00	88.61	0.20	271.7	11827.31	-200.83	7439.92	2321.92	11829.00	90.00	2.12	-1.99	-0.73
	19469.00	88.62	0.62	271.7	11917.28	-200.18	7442.10	2324.10	11918.95	90.00	0.47	0.01	0.47
	19558.00	90.46	359.83	271.7	12006.27	-199.83	7442.81	2324.81	12007.93	89.00	2.25	2.07	-0.89
	19648.00	90.68	0.06	274.4	12096.27	-199.92	7441.92	2323.92	12097.91	90.00	0.35	0.24	0.26
	19737.00	90.52	0.26	274.4	12185.26	-199.67	7440.99	2322.99	12186.89	89.00	0.29	-0.18	0.22
	19826.00	90.68	0.14	271.7	12274.26	-199.36	7440.05	2322.05	12275.87	89.00	0.22	0.18	-0.13
	19916.00	90.65	0.25	274.4	12364.25	-199.05	7439.01	2321.01	12365.85	90.00	0.13	-0.03	0.12
	20005.00	90.58	0.09	274.4	12453.24	-198.79	7438.05	2320.05	12454.83	89.00	0.20	-0.08	-0.18
	20095.00	90.58	0.30	274.4	12543.24	-198.48	7437.14	2319.14	12544.81	90.00	0.23	-0.00	0.23
	20181.00	90.74	0.22	209.5	12629.23	-198.09	7436.15	2318.15	12630.78	86.00	0.21	0.19	-0.09
Projection	20205.00	90.74	0.22	N/A	12653.23	-198.00	7435.84	2317.84	12654.78	24.00	0.00	0.01	0.00