



	No.	(in)		Length (in)		(ft)	(ft)	(ft)	(ft)			(h)
1	1	13.500	PDC	5.00	Steerable	0.00	0.00	23.00	1557.00	2018-02-15 03:05	2018-02-16 00:09	13.65
2	2	8.500	PDC	3.00	Rotary Steerable	1557.00	1585.00	1557.00	1601.00	2018-02-18 00:30	2018-02-18 04:17	2.48
3	3	8.500	PDC	3.00	Rotary Steerable	1585.00	12273.00	1601.00	12286.00	2018-02-18 08:37	2018-02-24 01:13	97.53

Crew

Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
John Moisan		2018-02-13	2018-02-24								

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2018-02-14 16:00	1	52.00	Water Based Mud	8.5	2	7.8	N/A	0/100	Active Pit	900	0.00
2018-02-15 17:00	1	924.00	Water Based Mud	8.4	2	8.4	0.0	0/100	Active Pit	1000	0.00
2018-02-16 16:00	1	1557.00	Water Based Mud	8.4	2	7.84	0.0	0/100	Active Pit	900	0.00
2018-02-17 16:00	1	1557.00	Water Based Mud	8.4	2	7.87	0.0	0/100	Active Pit	900	0.00
2018-02-18 05:00	2	1634.00	Water Based Mud	8.4	2	7.84	0.0	0/100	Active Pit	900	0.00
2018-02-19 04:00	3	4781.00	Water Based Mud	8.8	5	9.5	0.0	0/100	Active Pit	1000	0.00
2018-02-19 15:30	3	5561.00	Water Based Mud	8.8	12	8.4	0.0	0/100	Active Pit	1000	0.00
2018-02-20 04:00	3	6894.00	Water Based Mud	8.8	19	8.6	0.0	0/100	Active Pit	1100	0.00
2018-02-20 16:00	3	7436.00	Water Based Mud	8.8	18	9.1	0.0	0/100	Active Pit	1100	0.00
2018-02-21 08:00	3	8336.00	Water Based Mud	10.6	27	11.5	0.0	0/100	Active Pit	1100	0.00
2018-02-21 15:30	3	8336.00	Water Based Mud	10.8	23	8	0.0	0/100	Active Pit	1100	0.00
2018-02-22 04:00	3	8691.00	Water Based Mud	11.2	24	8.1	0.0	0/100	Active Pit	1100	0.00
2018-02-22 16:00	3	9505.00	Water Based Mud	11.2	21	8.6	0.0	0/100	Active Pit	1100	0.00
2018-02-23 04:00	3	11708.00	Water Based Mud	11.2	21	8	0.0	0/100	Active Pit	1200	0.00
2018-02-23 16:00	3	12286.00	Water Based Mud	11.4	24	9.2	0.0	0/100	Active Pit	1200	0.00

Mud Resistivity Record

				Surface				Downhole		
Date / Time	Run No.	Measured Depth (ft)	Surface Temp (degF)	Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)	BHCT (degF)	Rm @ BHCT (ohm.m)	Rmf @ BHCT (ohm.m)	Rmc @ BHCT (ohm.m)
2018-02-19 20:30	3	5820.00	78.9	1.250	N/A	N/A	120.3	0.834	N/A	N/A
2018-02-20 08:00	3	7162.00	92.8	1.420	N/A	N/A	141.9	0.942	N/A	N/A
2018-02-20 19:00	3	7601.00	99.0	1.570	N/A	N/A	144.6	1.088	N/A	N/A
2018-02-21 06:00	3	8334.00	98.6	1.730	N/A	N/A	163.5	1.058	N/A	N/A
2018-02-21 17:00	3	8427.00	98.2	1.960	N/A	N/A	144.6	1.346	N/A	N/A
2018-02-22 07:00	3	8691.00	103.1	1.980	N/A	N/A	168.9	1.224	N/A	N/A
2018-02-22 20:00	3	10221.00	105.3	1.990	N/A	N/A	190.6	1.115	N/A	N/A
2018-02-23 07:00	3	12096.00	107.4	2.120	N/A	N/A	204.1	1.132	N/A	N/A

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset	Bit Offset	Max O.D.	Min I.D.
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				(ft)	(ft)	(in)	(in)
1	NaviTrak	10350731	VSS	16.60	56.85	6.750	0.000
1	NaviTrak	10350731	Directional (mag)	16.60	56.85	6.750	0.000
2	ATC_SU	14381510	Near Bit Inclination	5.93	6.93	7.000	4.330
2	ATC_SU	14381510	Near Bit VSS	5.93	6.93	7.000	4.330
2	ATC_MWD	12304801	Gamma (single)	2.76	13.10	7.000	3.250
2	ATC_MWD	12304801	Directional (mag)	12.28	22.62	7.000	3.250
3	ATC_SU	14367828	Near Bit Inclination	5.93	6.93	7.000	4.330
3	ATC_SU	14367828	Near Bit VSS	5.93	6.93	7.000	4.330
3	ATC_MWD	14322684	Gamma (single)	2.79	13.10	7.000	3.250
3	ATC_MWD	14322684	Directional (mag)	12.31	22.62	7.000	3.250
3	OnTrak	12382038	Pressure	2.30	5419.35	6.750	0.000
3	OnTrak	12382038	Gamma (double)	3.19	5420.24	6.750	0.000
3	OnTrak	12382038	Resistivity (4tx)	7.23	5424.28	6.750	0.000
3	OnTrak	12382038	Directional (mag)	13.02	5430.07	6.750	0.000

## Service and Tool Mnemonics

Mnemonic	Name	Description
NTK	NaviTrak	Probe Based Directional Module, NaviTrak Platform
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM
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

- 1 Depths and depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified. These unverified depths are being used to represent logging data.
- 2 OGS/AP\* @SY ÖÄÜ` } ÁÁ dā āĀ ĀD Å & Qē æā V: æ Ā Ŀī cæ ĀÖĀ^&q̄ } æU | Dē @ āā Ā½ Å & Qē æā āĀ cē Āē • Ŀ ē Ā Ĵ { ÄŮ : æĀ Å Ĥ Ĩ Ĩ Ā Ĥ ŌĀ (Surface to 1557 feet TVD). No logging data was acquired during this run.
- 3 OGS/AP\* @SY ÖÄÜ` } • Gē āĀ Ā dā āĀ Ā½ Å & Qē æā Dē { æĀ Ŀī cæ ĀÖĀ^ & q̄ { æÜ æā āĀ āÖĀ^&q̄ } æDē @ āĀ Ā½ Å & Qē æā āĀ cē Ā cē Āē Āē • Ŀ ē Ā Ĵ { Ā 1557 to 12286 feet MD (1557 to 7062 feet TVD).
- 4 OGS/AP\* @SY ÖÄÜ` } ÁÁ dā āĀ Ā½ Å & Qē V: æ Ā Ŀī cæ ĀÖĀ^ Ĵ ~ Ĵ Ĵ Ĵ [ ] æ æ U | ÄŮ • ā cæ Dē @ āĀ Ā½ Å & Qē æā āĀ cē Ā cē Āē Āē • Ŀ ē Ā Ĵ Ā Ĵ Ĵ : Ĵ Ĵ ŌĀ (Measurement After Drilling) pass from 1557 to 6862 feet MD (1557 to 6745 feet TVD).
- 5 Gamma Ray Apparent (GRAM) is presented 0 to 300 API per customer request.

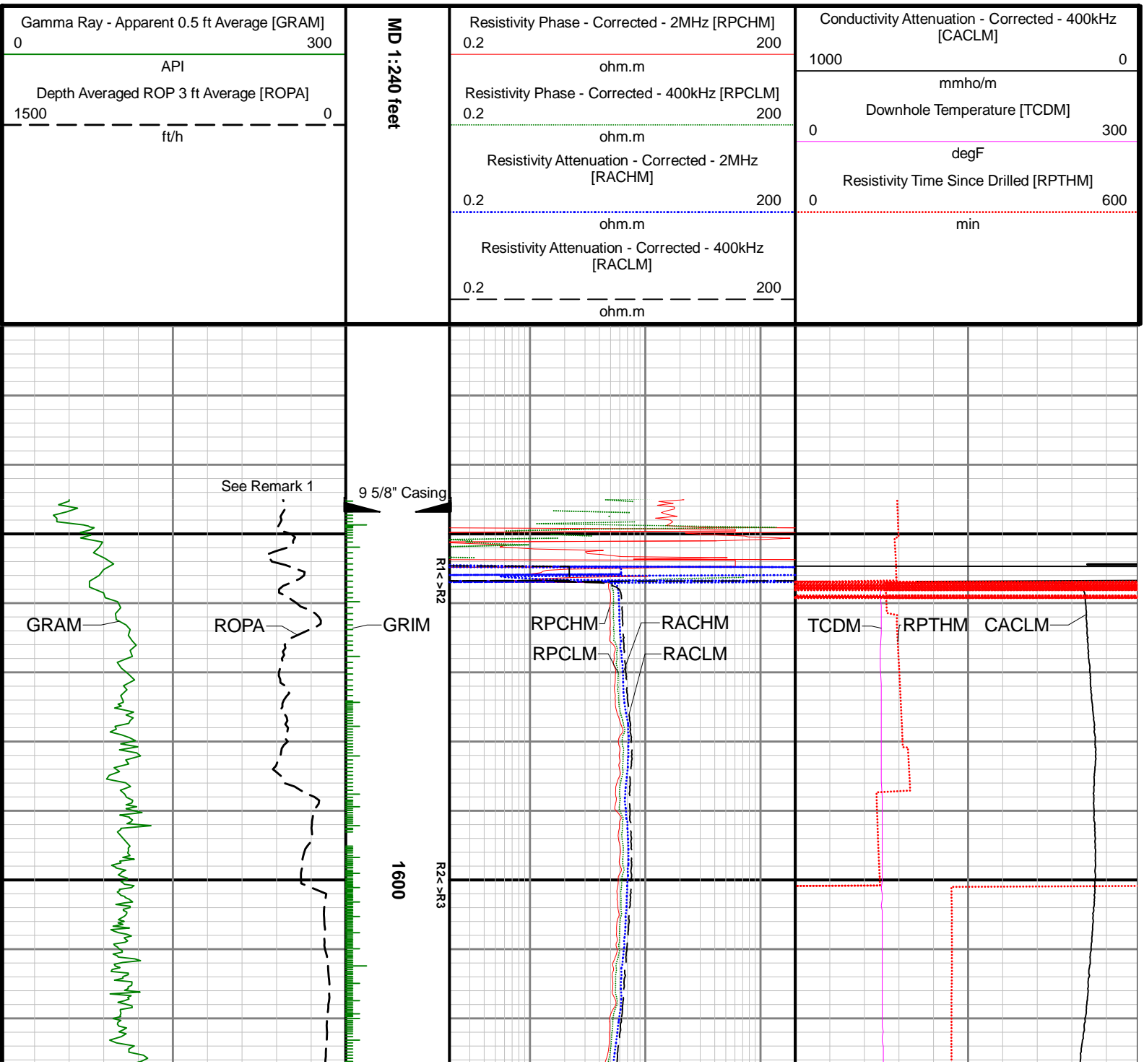
## Remarks

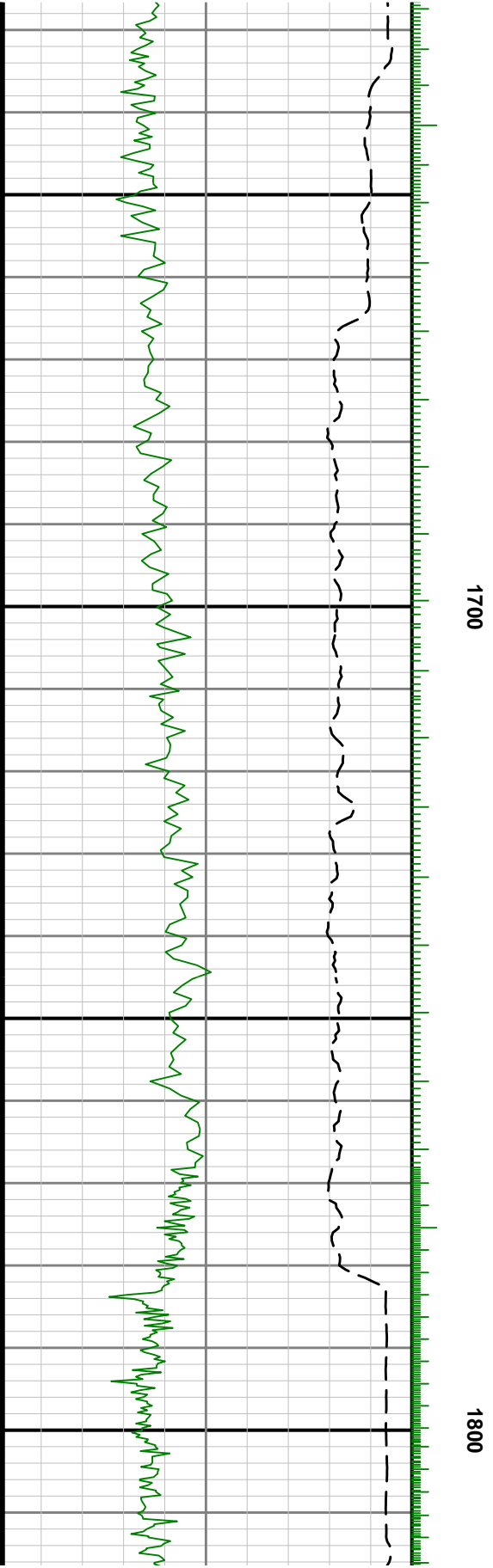
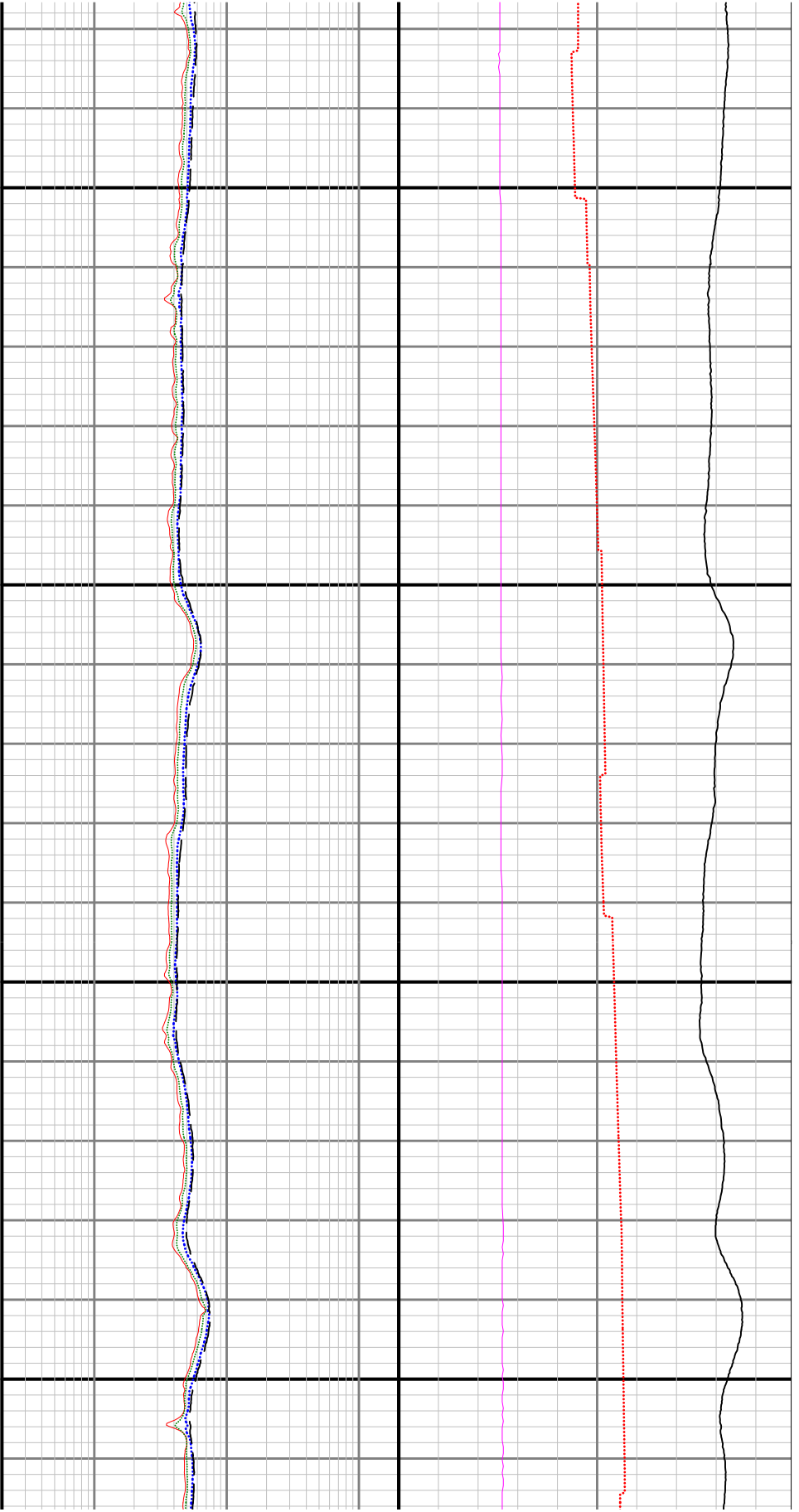
Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1557.00	8.500	2	Baker Hughes logging services began at 1557 feet MD (1557 feet TVD) per customer request.
2	6860.00	8.500	3	The interval from 6862 to 12286 feet MD (6745 to 7062 feet TVD) was not logged due to sensor to bit offset at well TD.

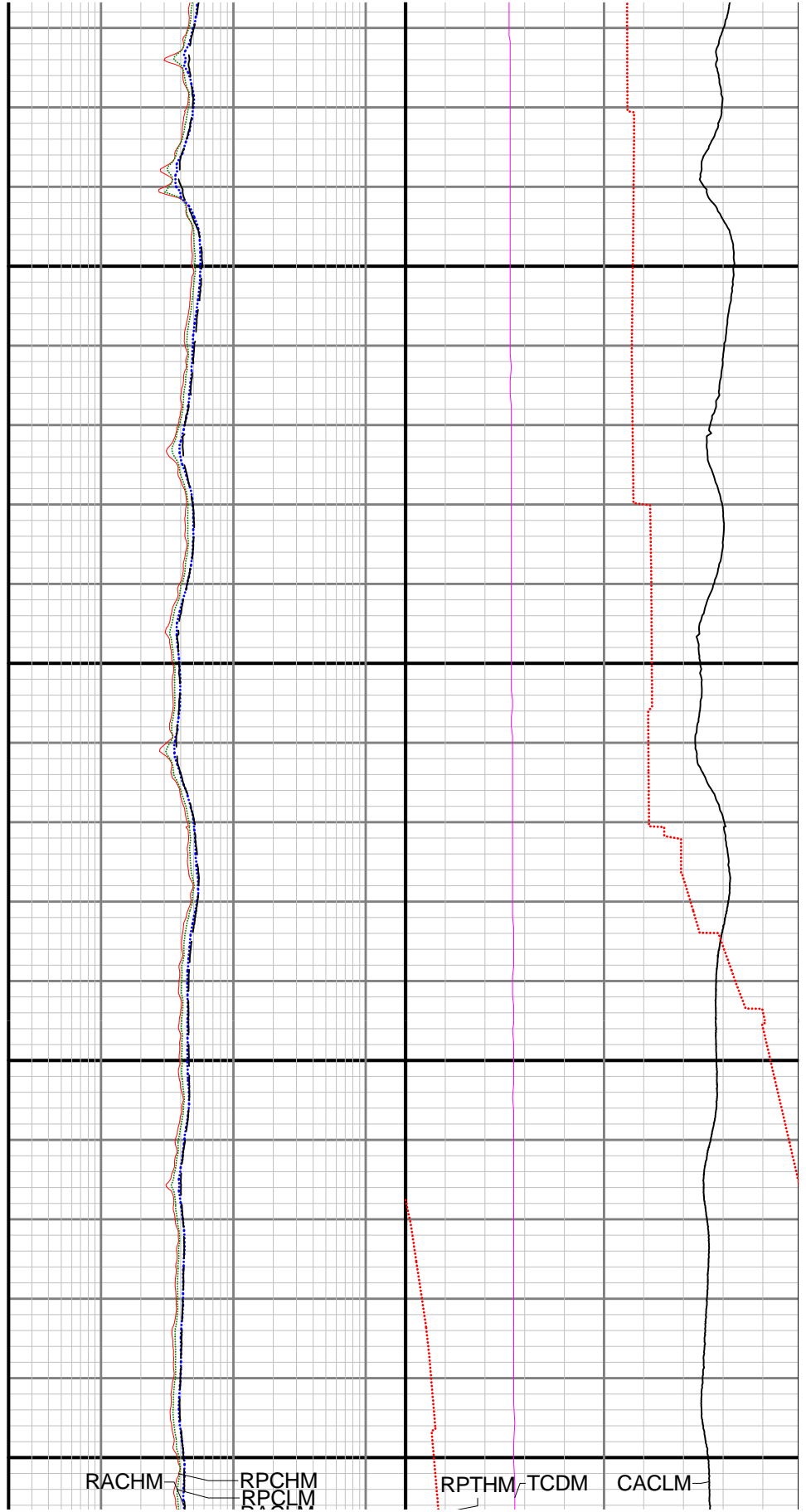
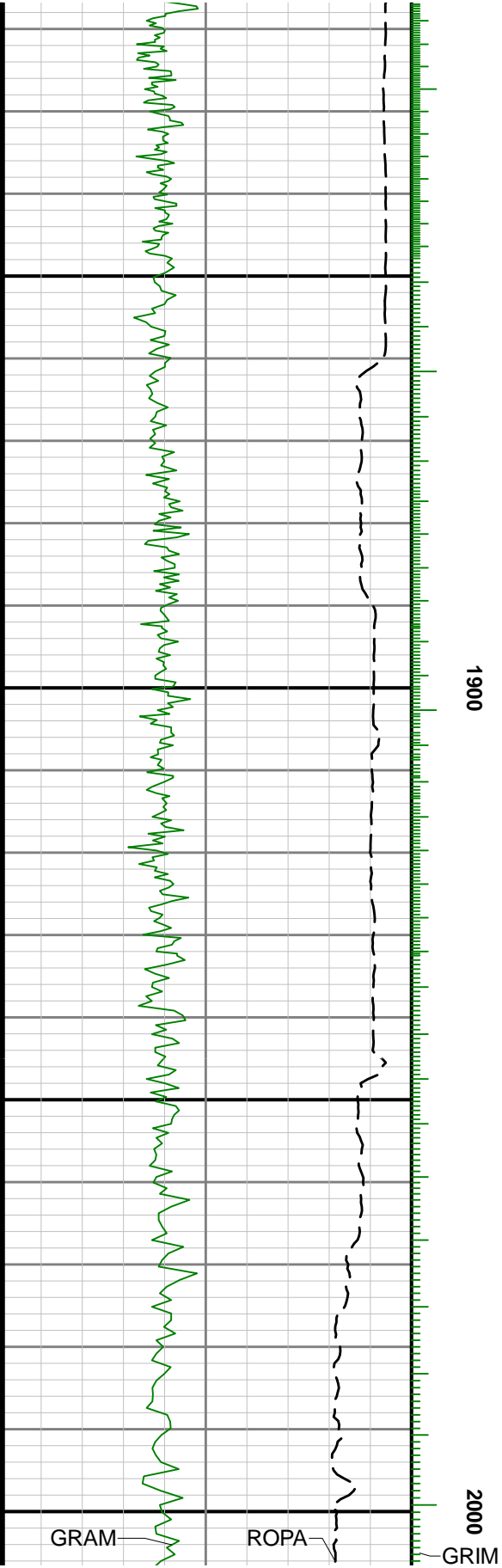
## Curve Mnemonics

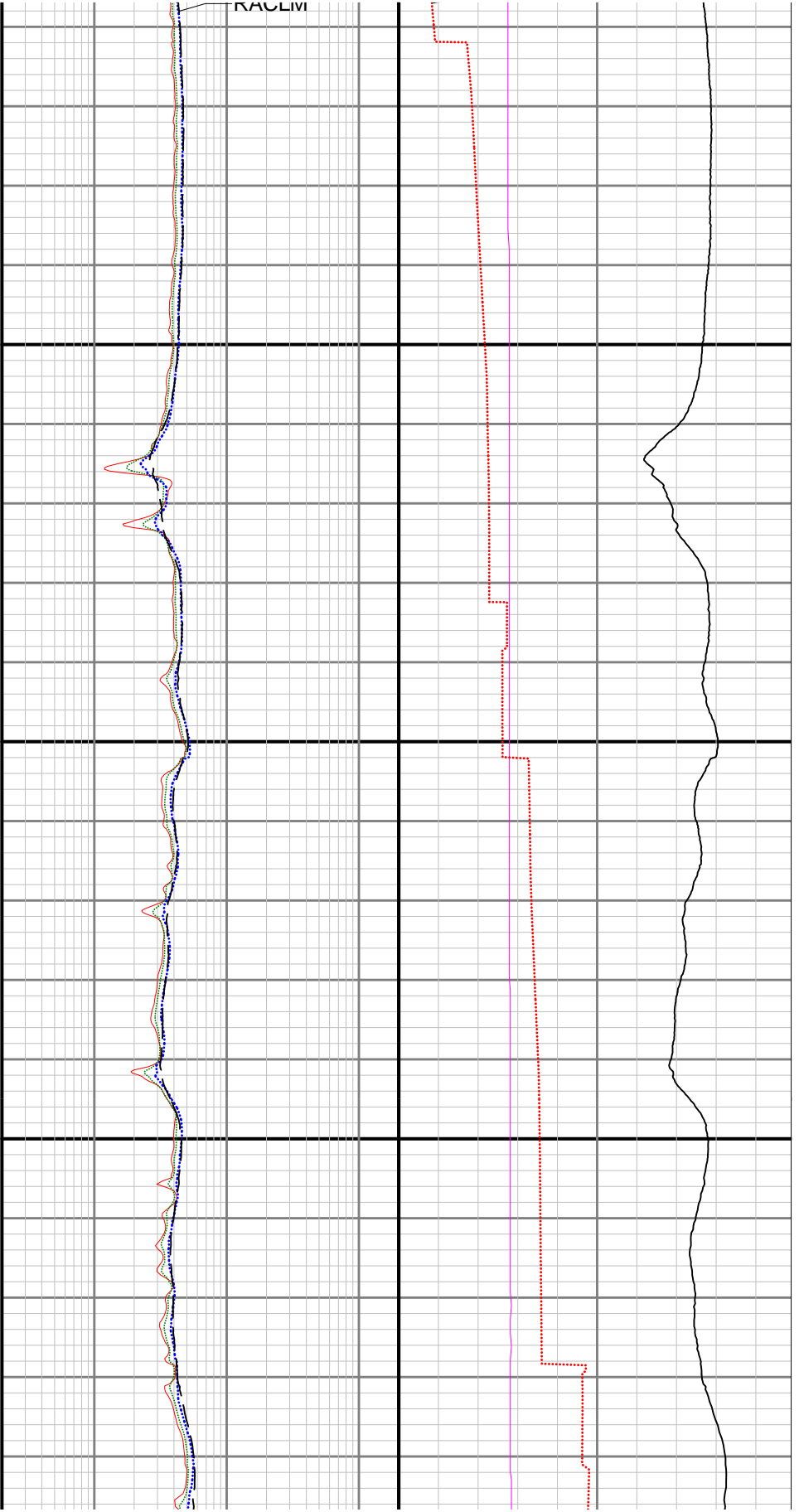
Presented Curves	Description	Units
CACLM	Conductivity Attenuation - Corrected - 400kHz	mmho/m
RACHM	Resistivity Attenuation - Corrected - 2MHz	ohm.m
RACLM	Resistivity Attenuation - Corrected - 400kHz	ohm.m

RPCHM	Resistivity Phase - Corrected - 2MHz	ohm.m
RPCLM	Resistivity Phase - Corrected - 400kHz	ohm.m
RPTHM	Resistivity Time Since Drilled	min
ROPA	Depth Averaged ROP 3 ft Average	ft/h
GRAM	Gamma Ray - Apparent - Memory 0.5 ft Average	API
GRIM	Gamma Ray - Data Point Indicator - Memory	unitless
TCDM	Downhole Temperature	degF

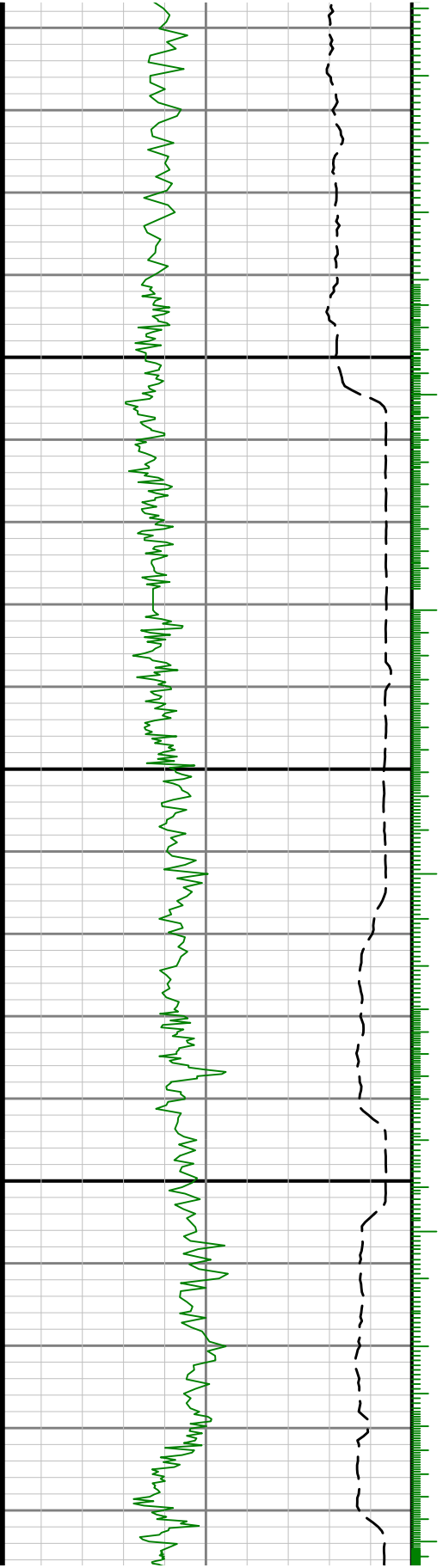


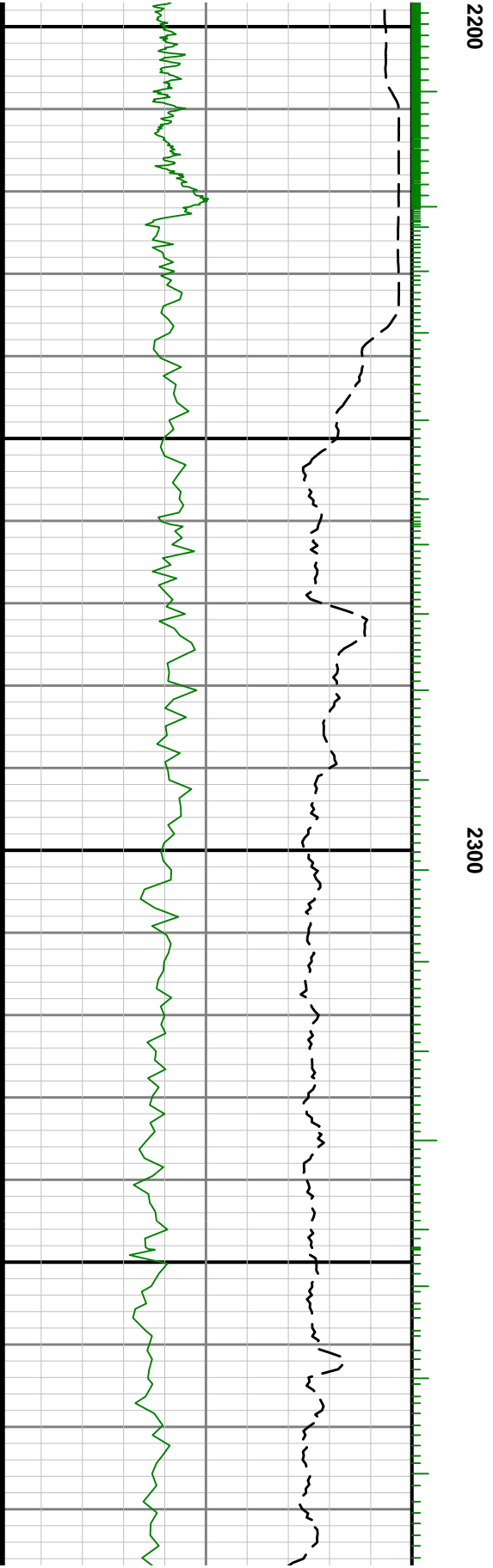




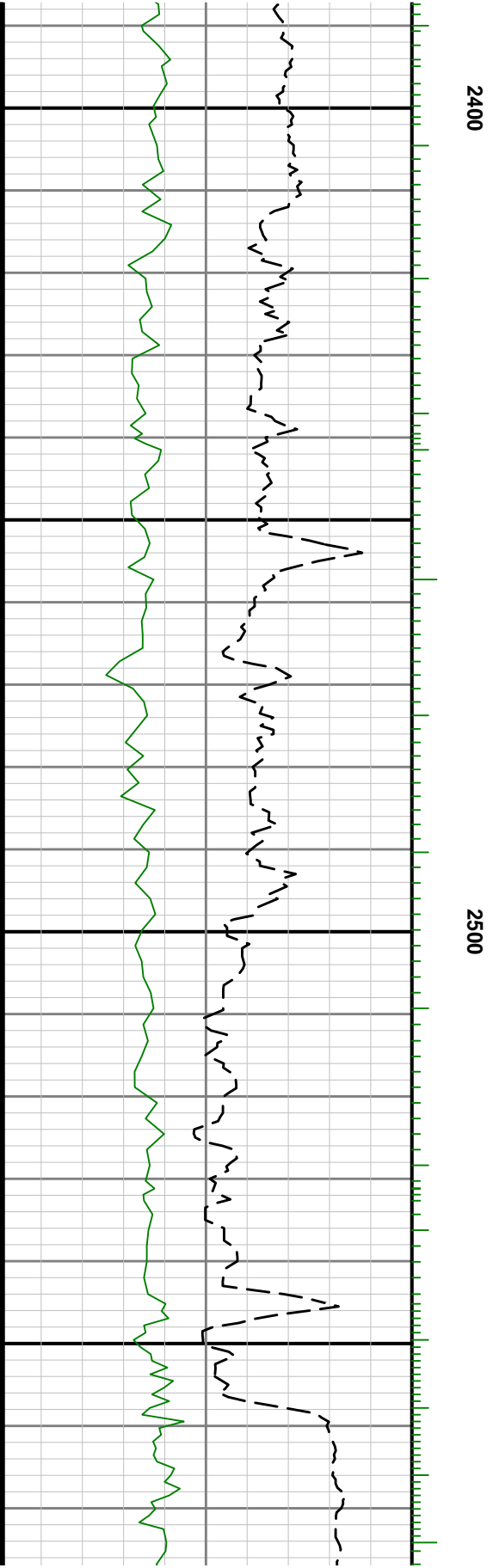
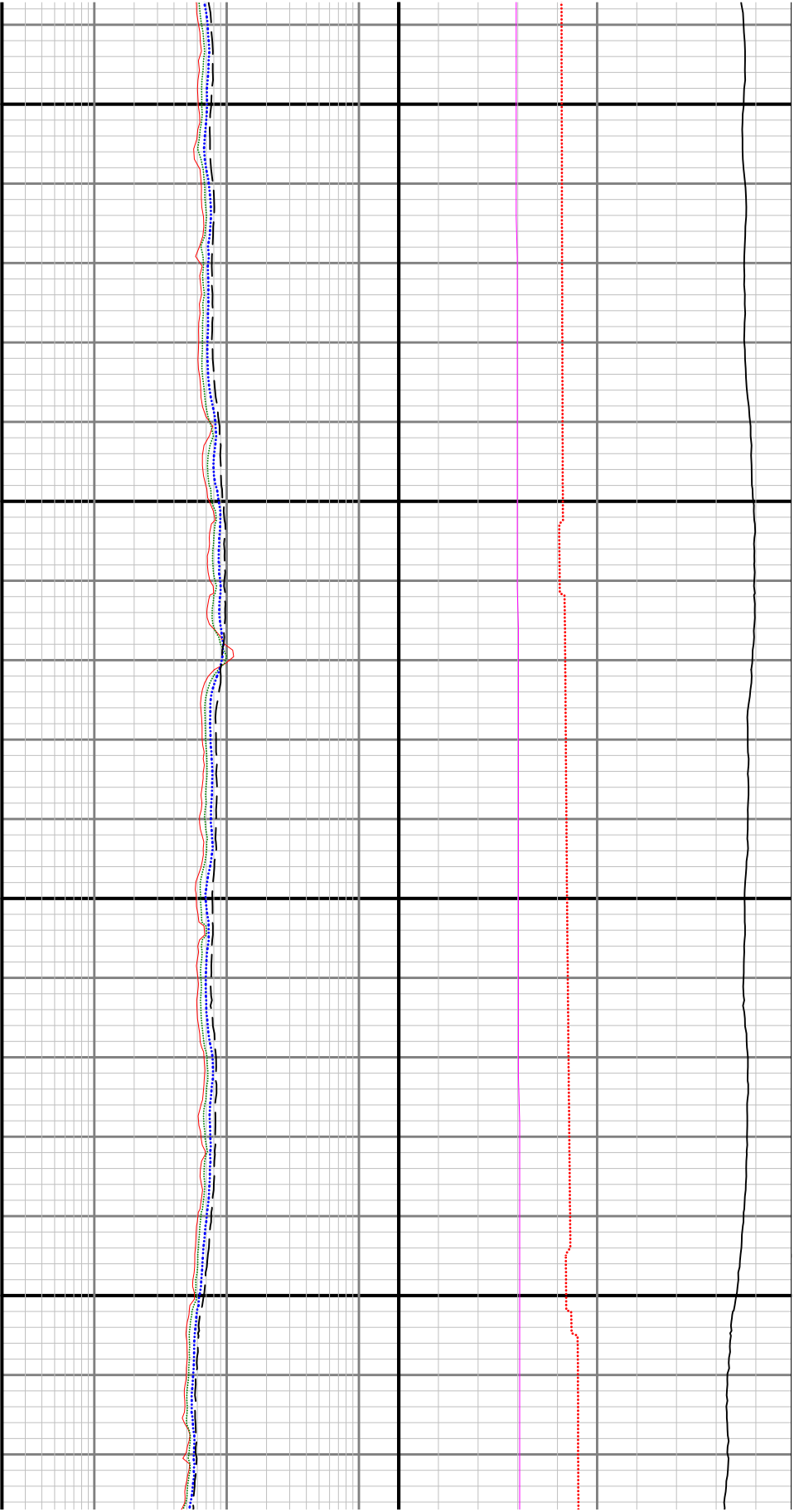


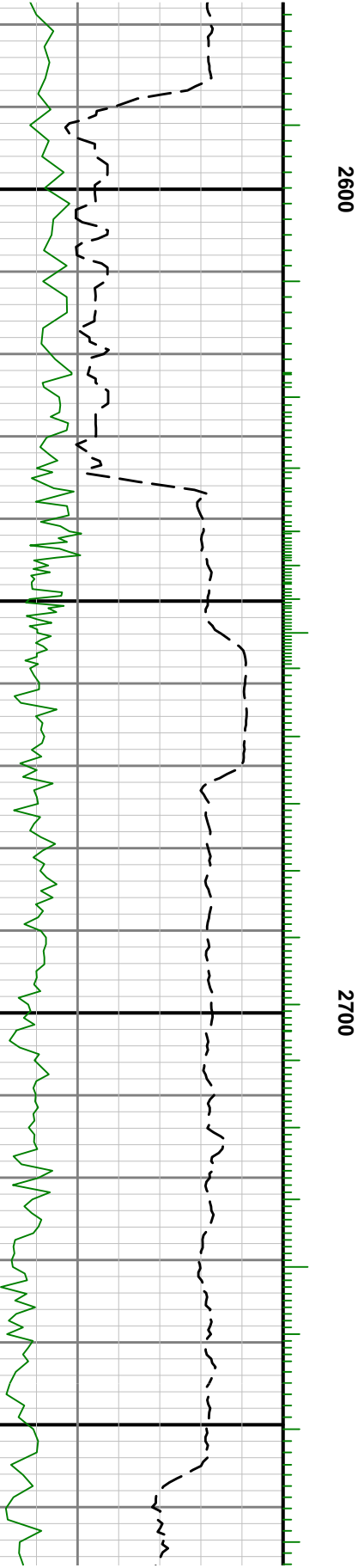
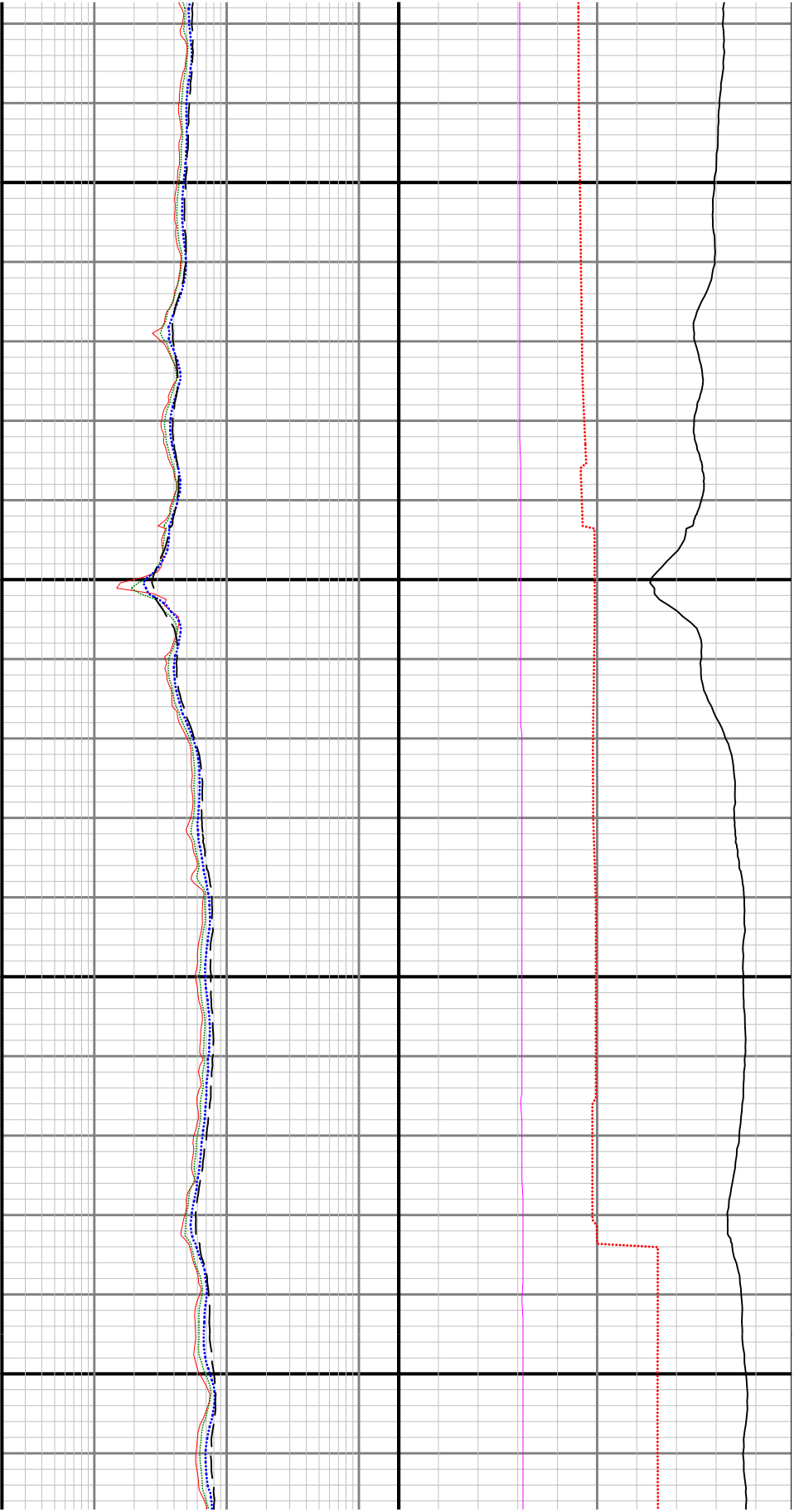
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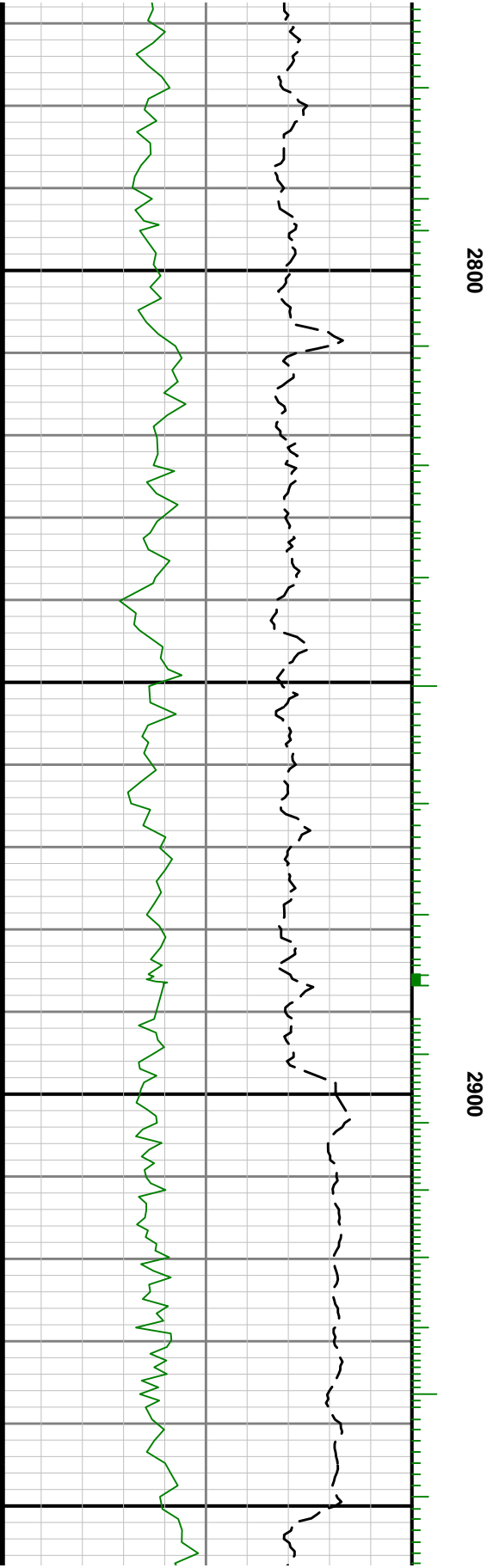


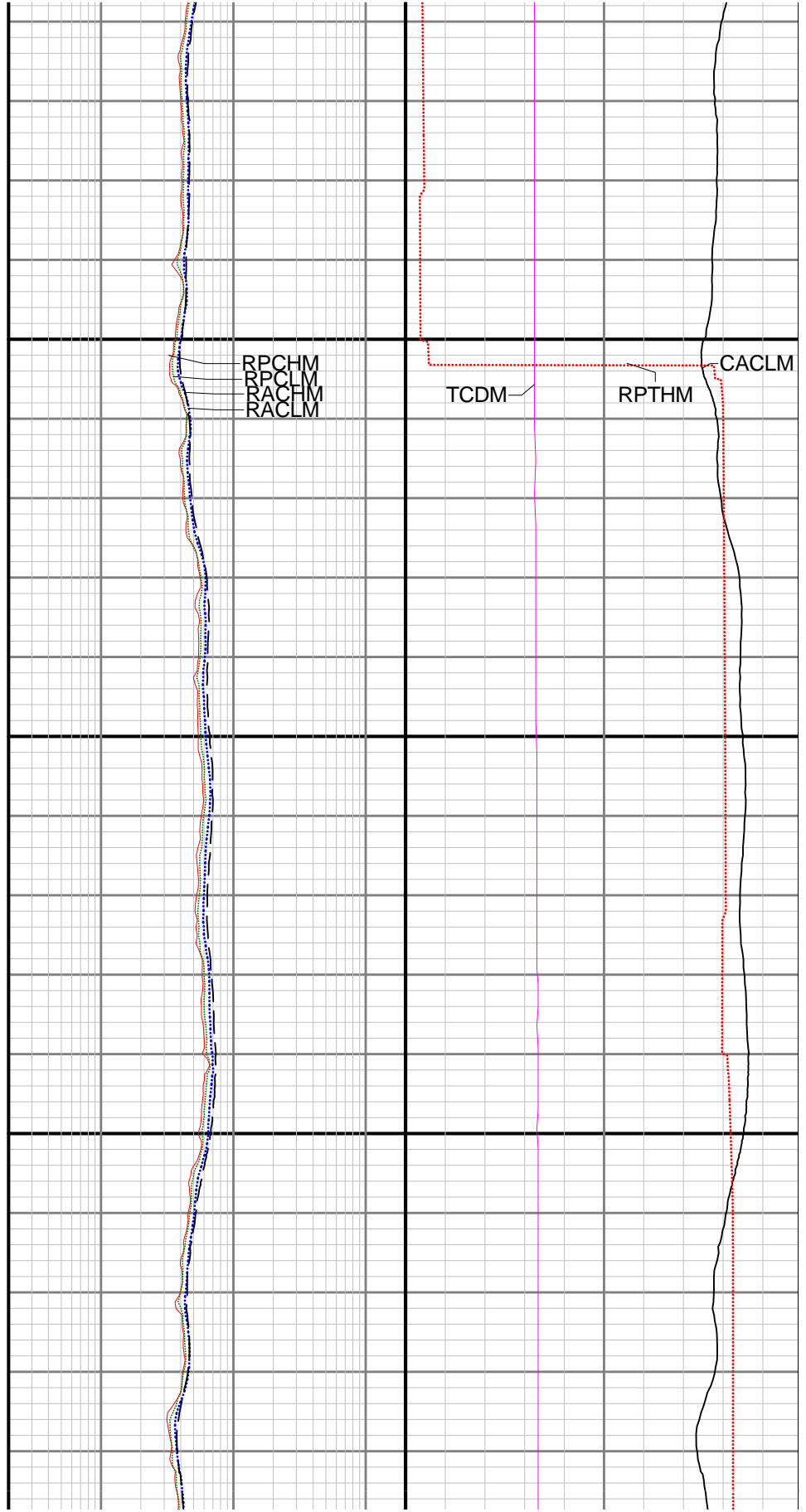
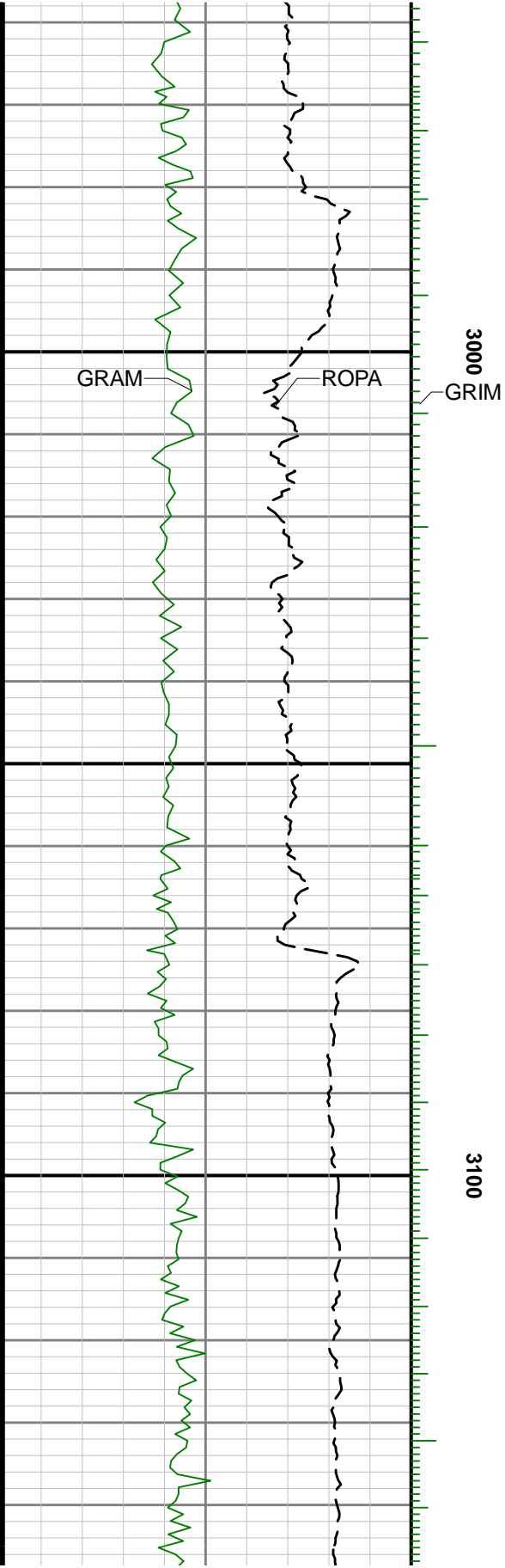


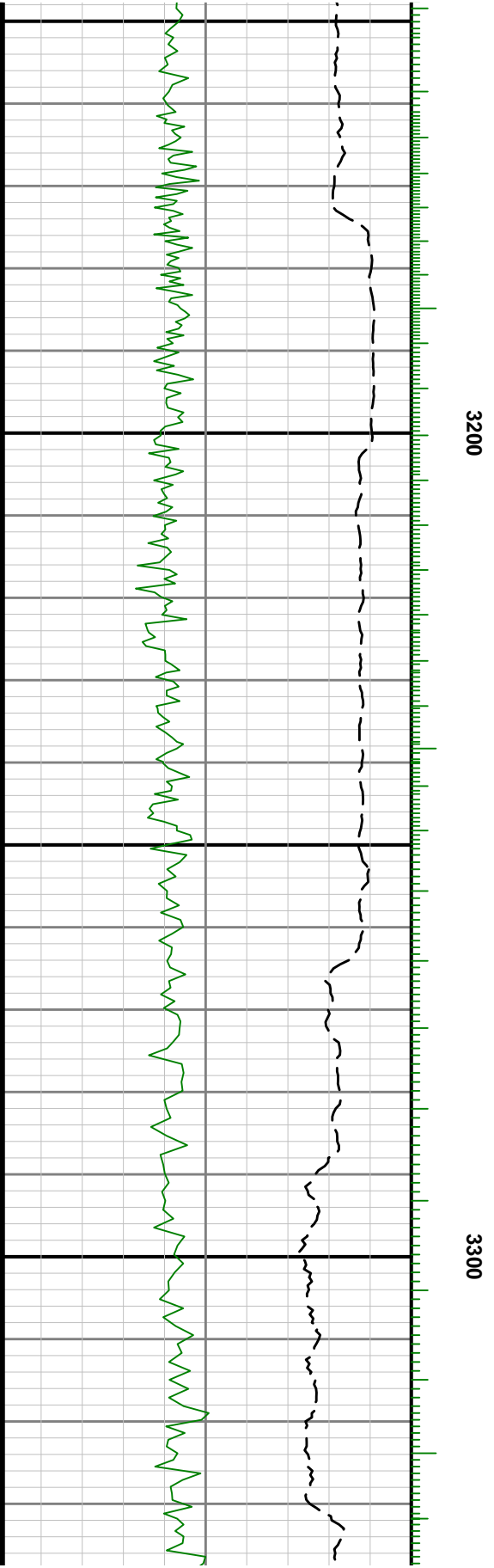
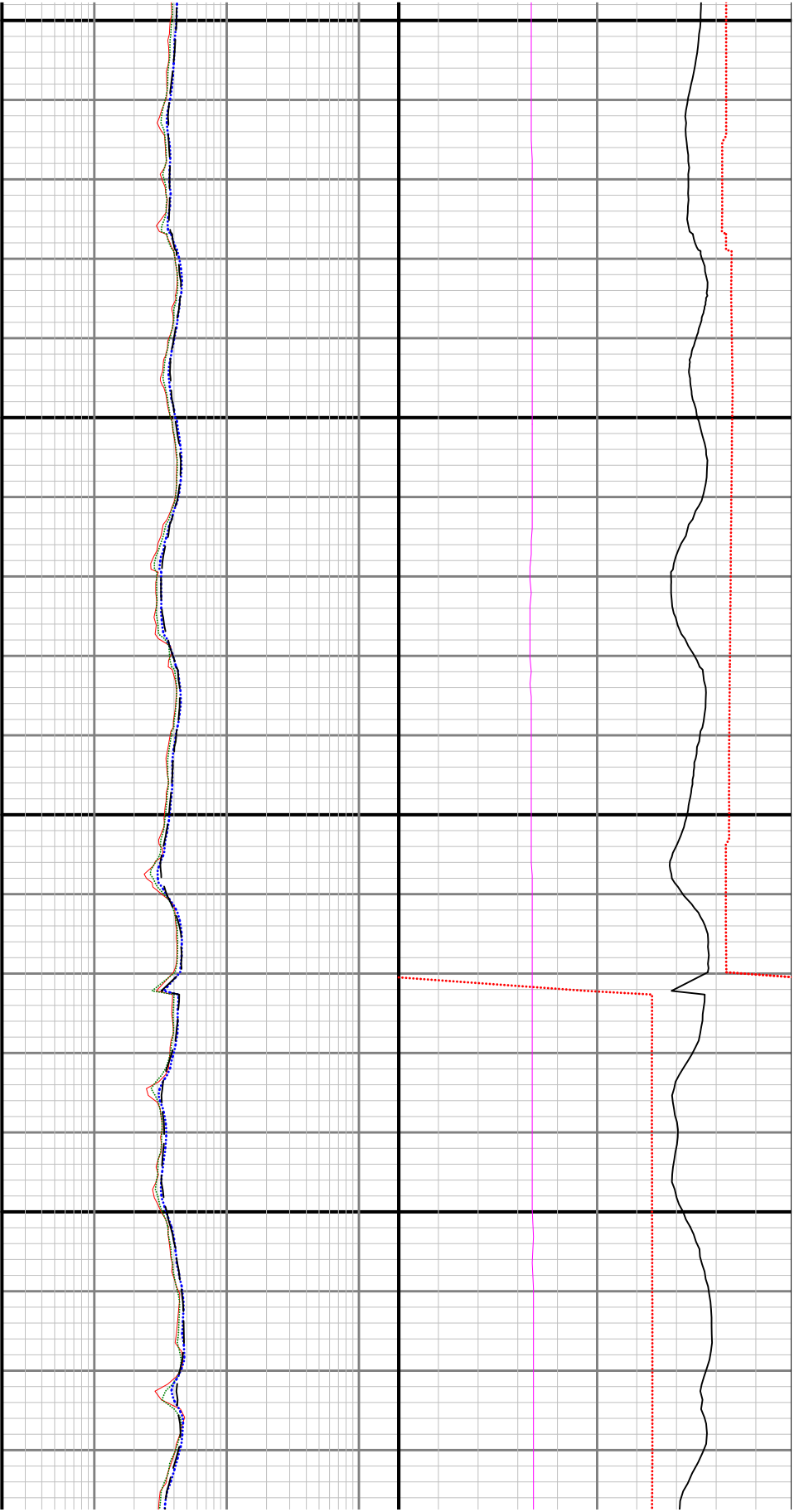


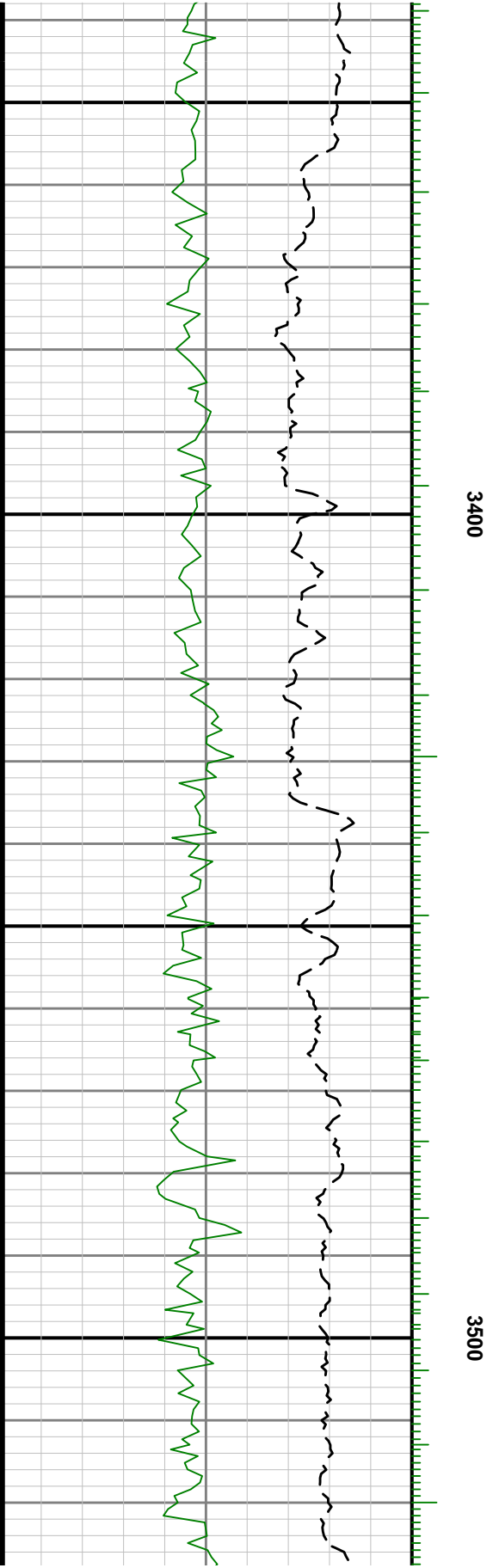
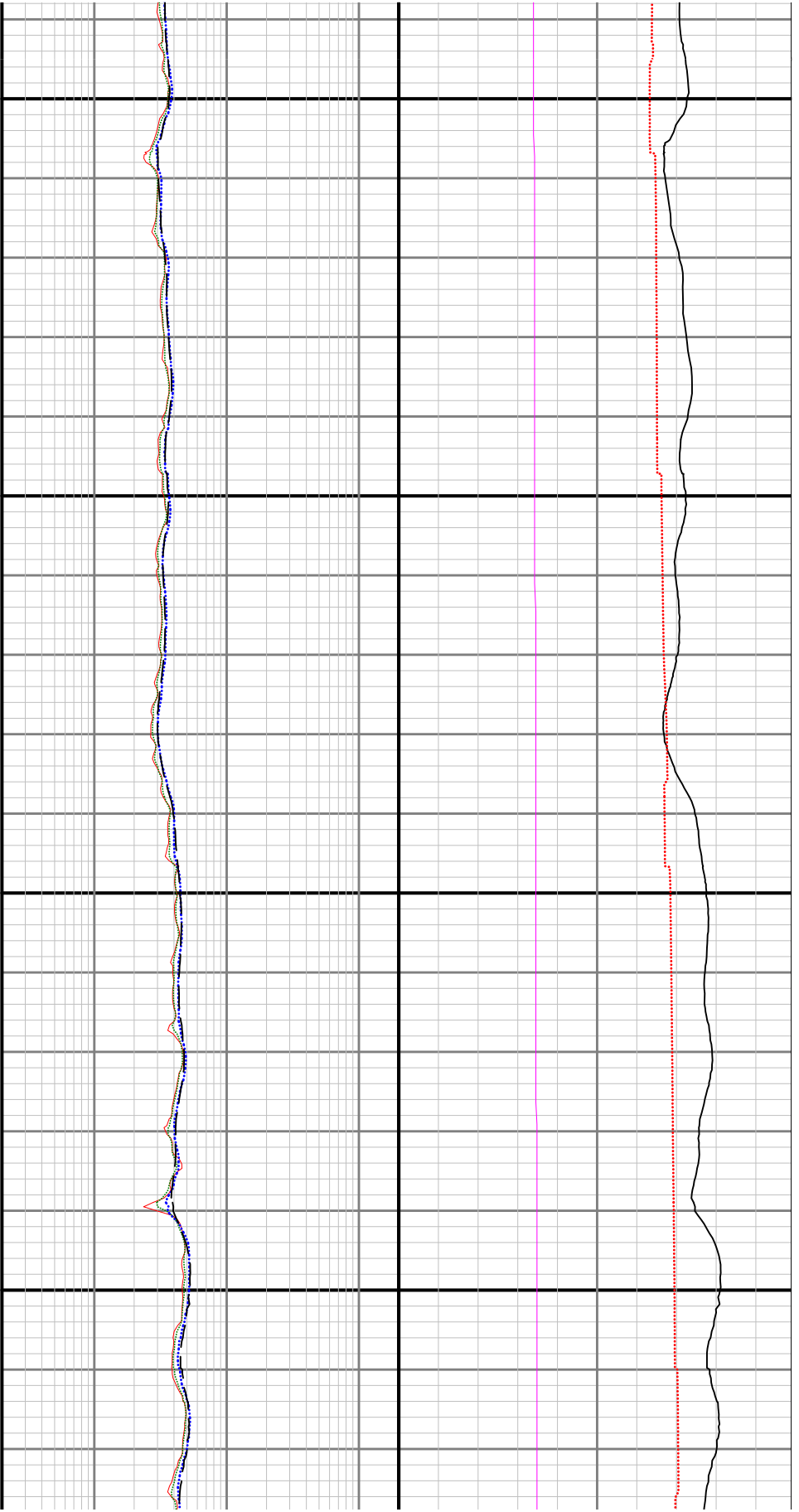


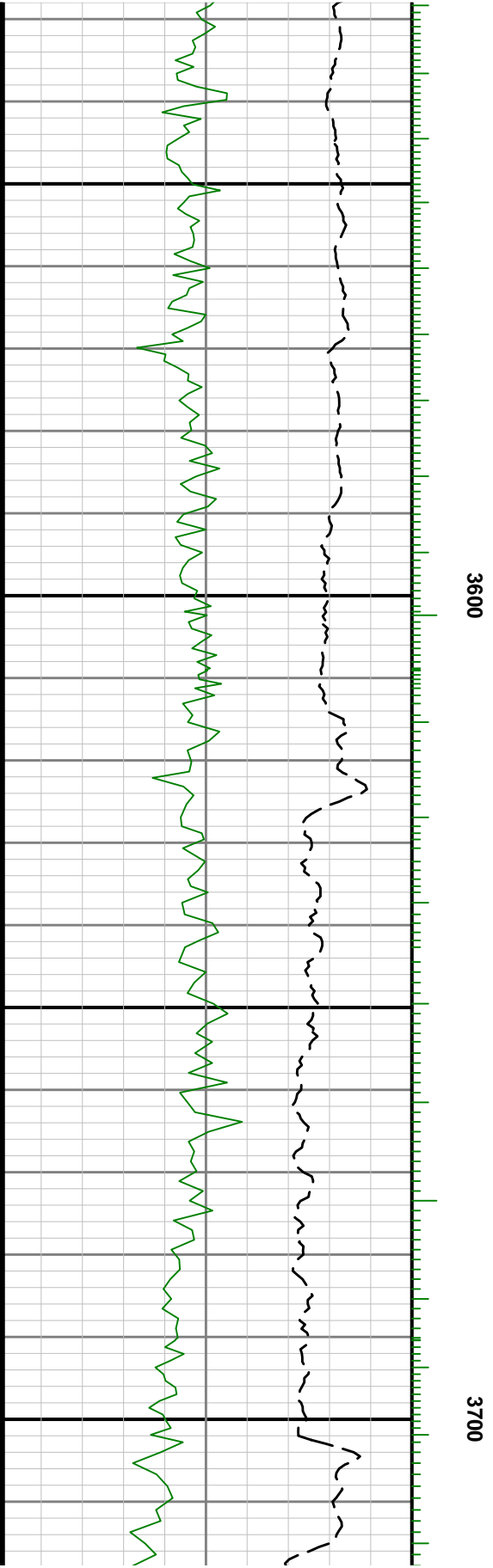
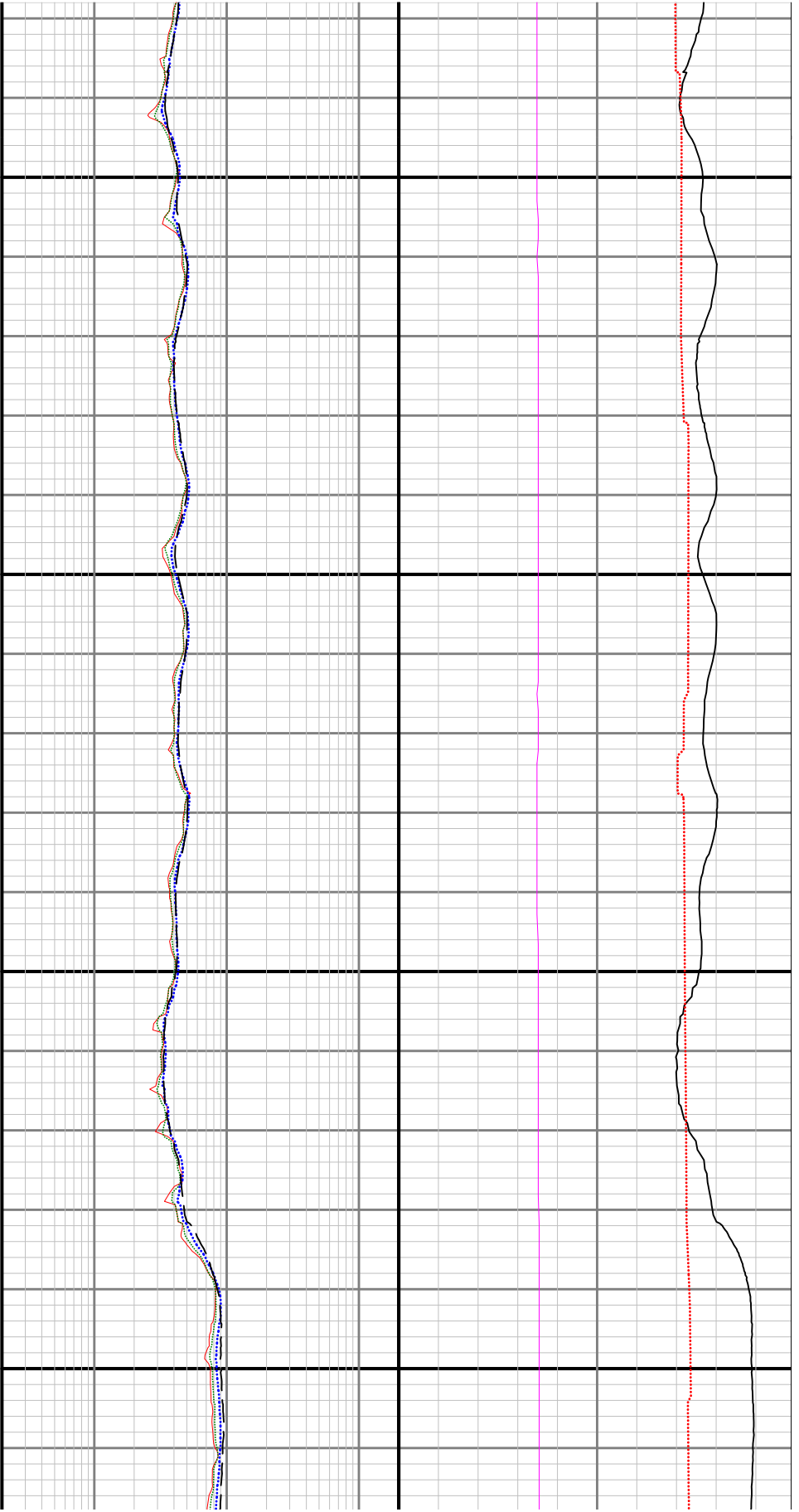


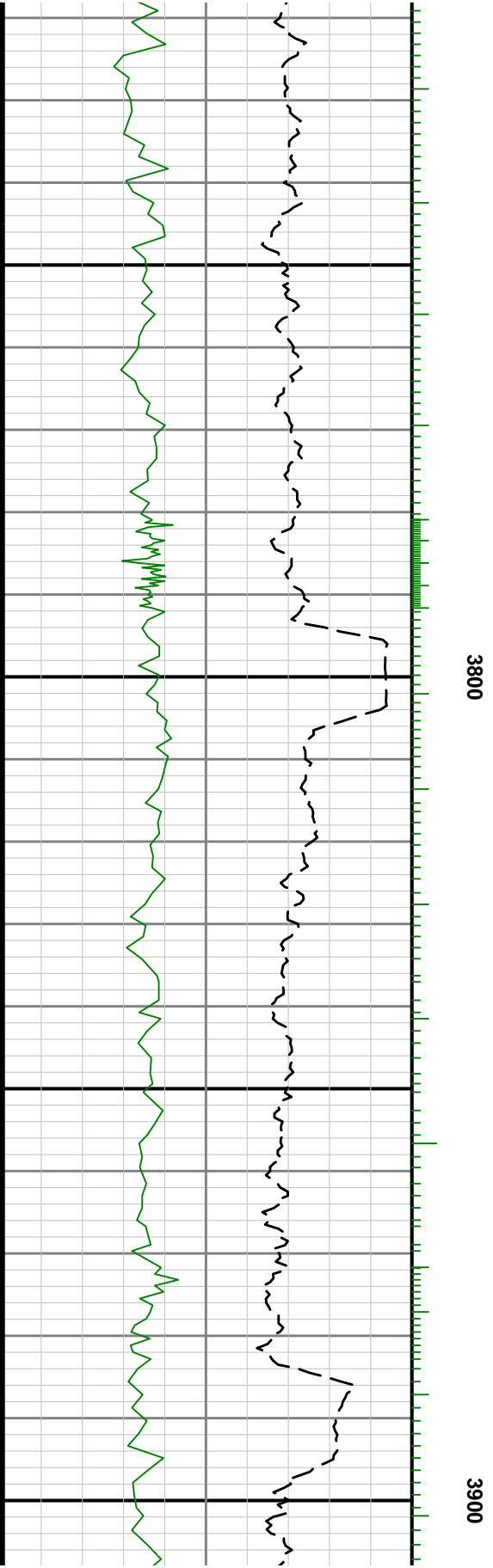
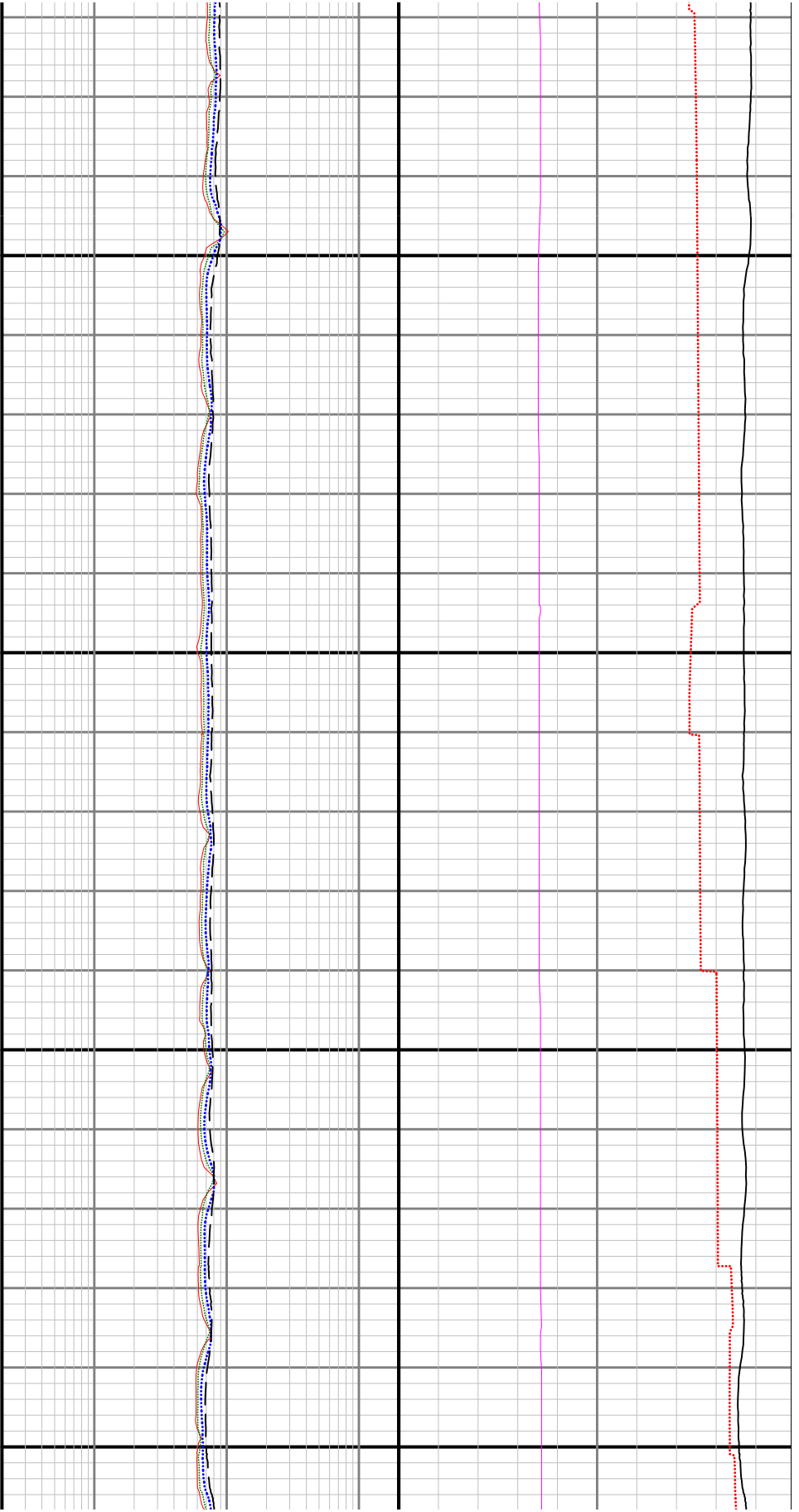




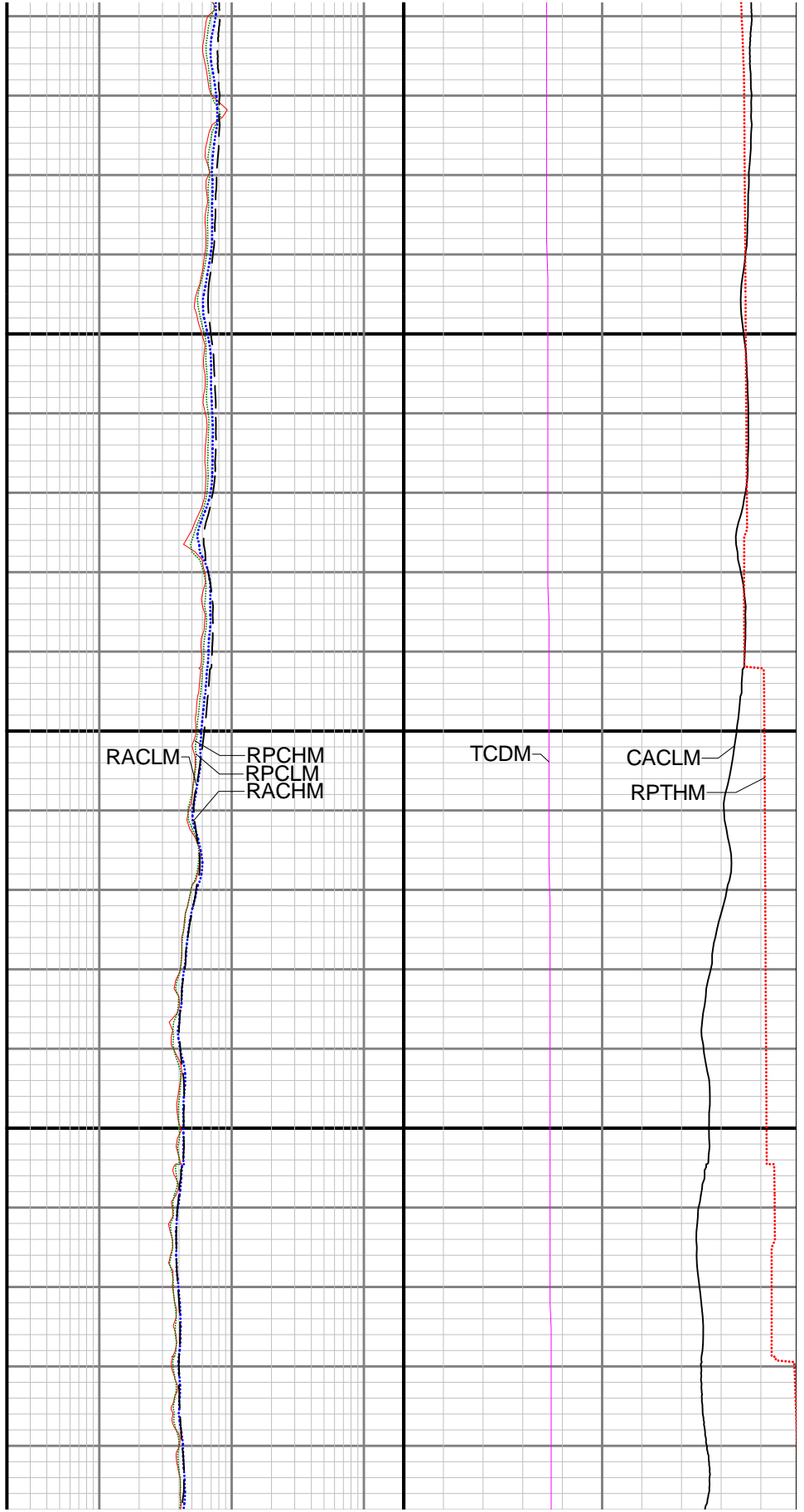
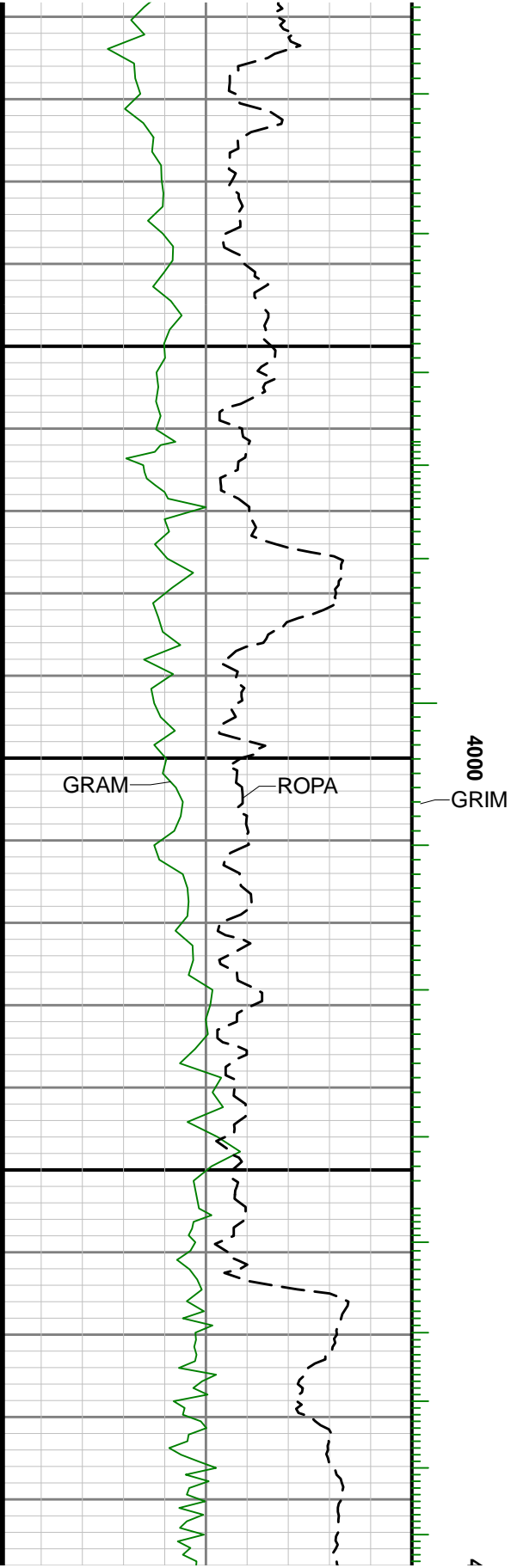


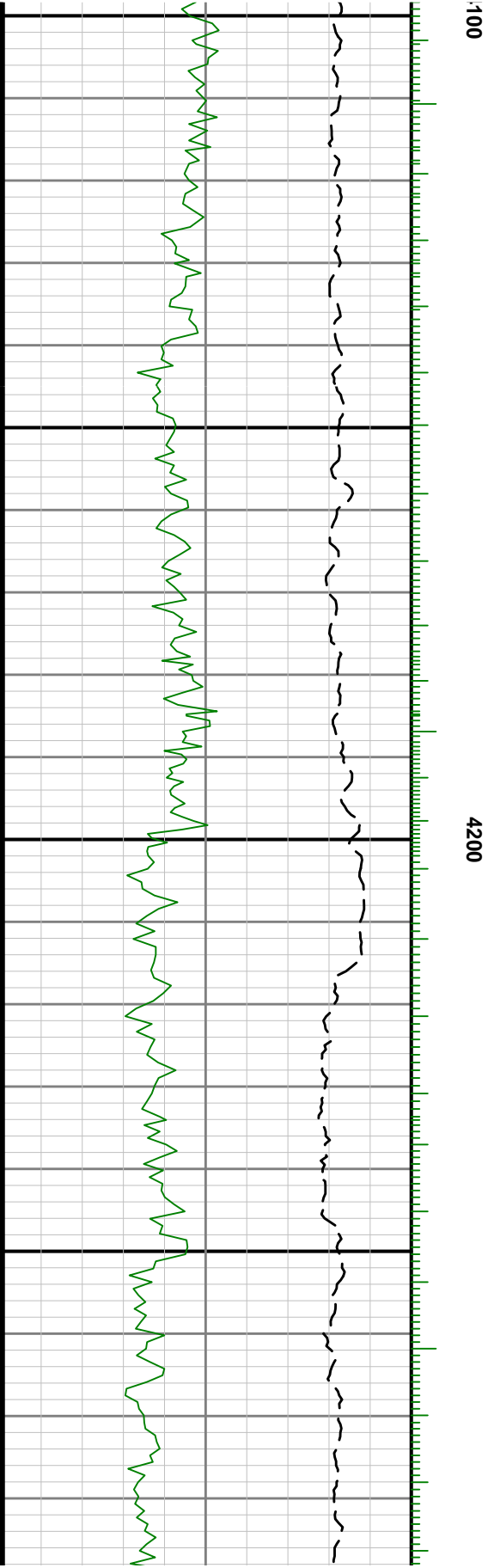
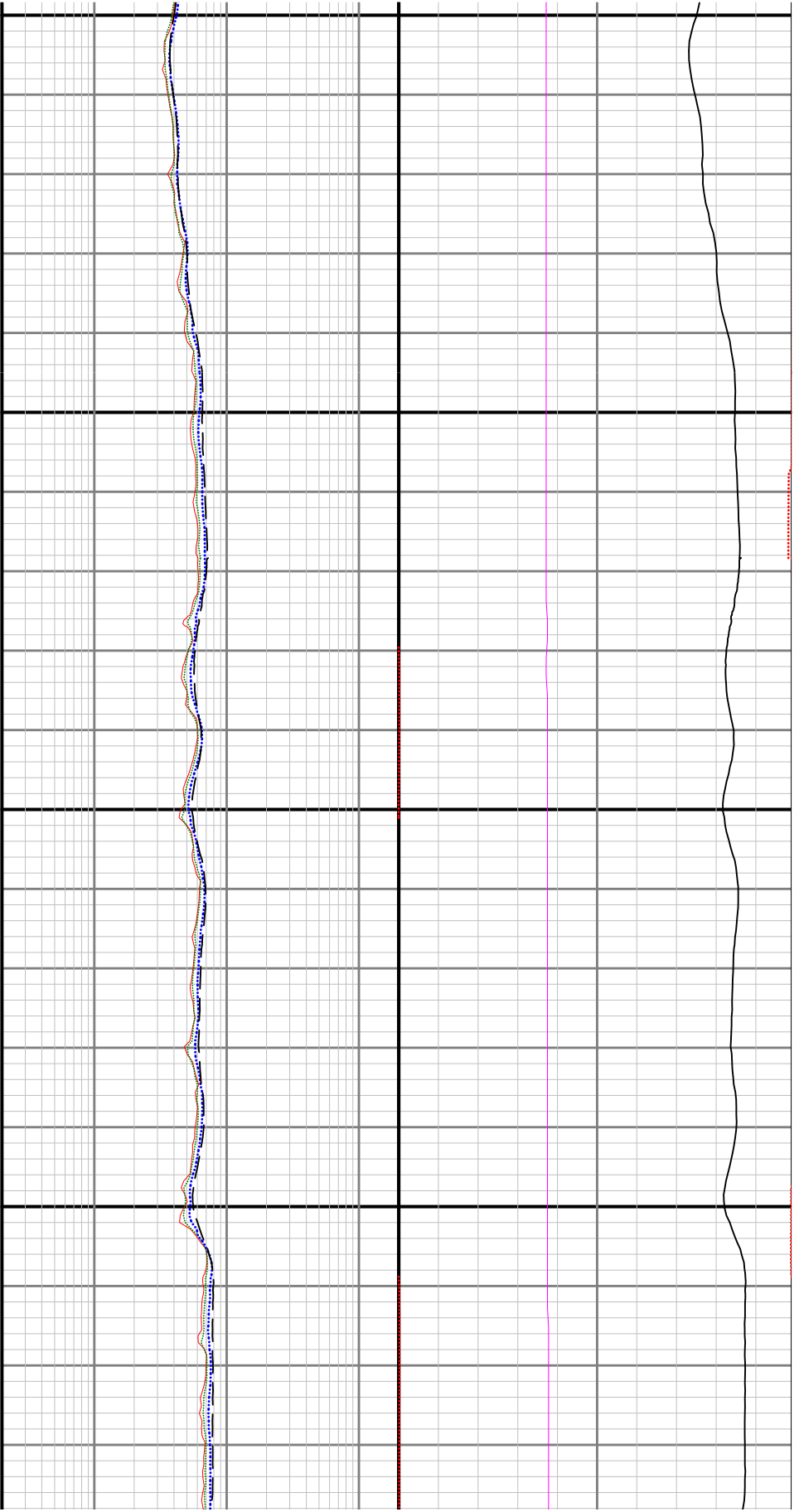


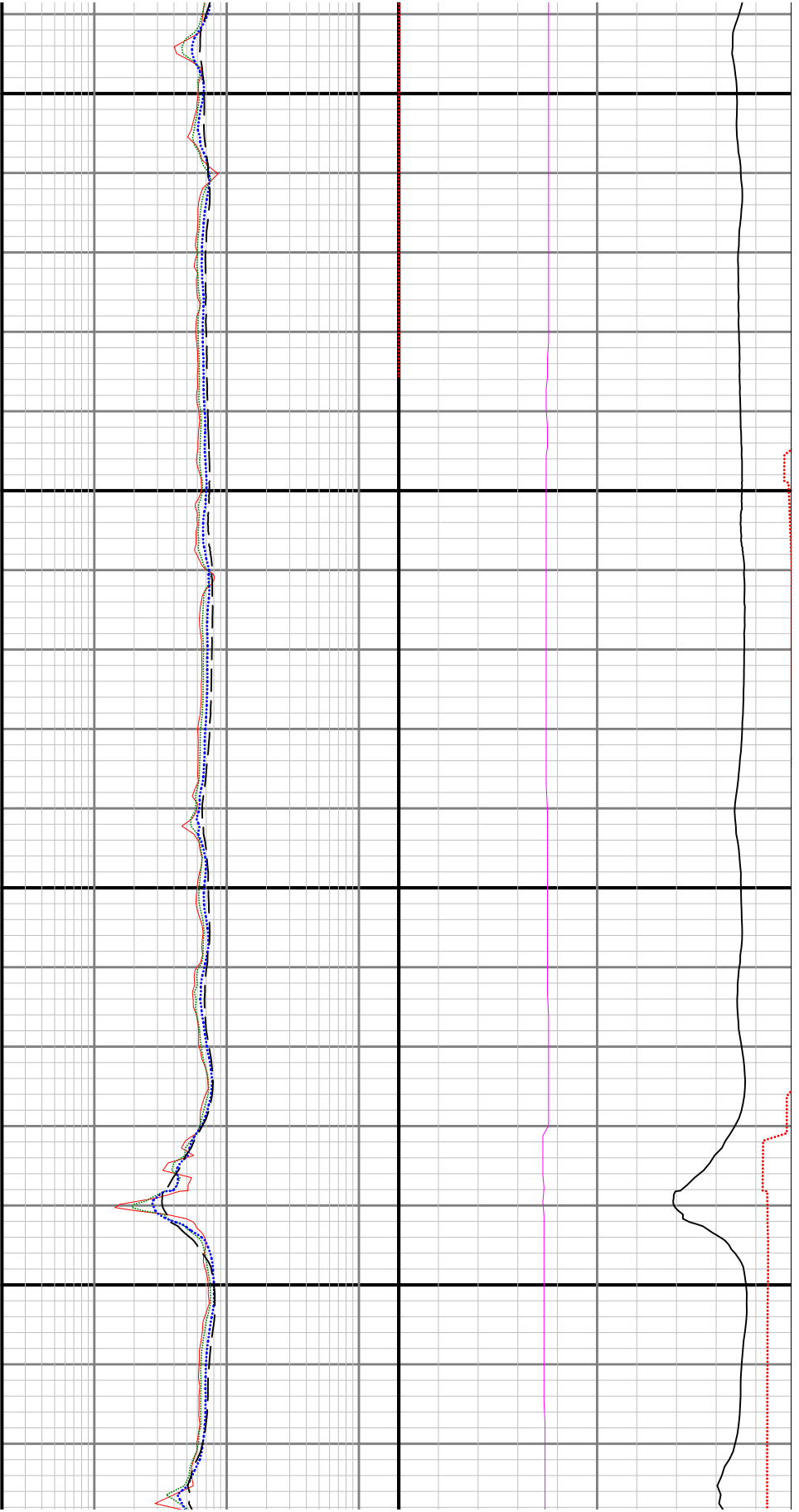












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