



LWD REALTIME LOG

Gamma Ray

[illegible]

© 2018 Baker Hughes, a GE company, LLC – All rights reserved. Baker Hughes, a GE company, LLC and its affiliates (“BHGE”) provides this information on an “as is” basis for general information purposes and believes it to be accurate as of the date of publication. BHGE 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. BHGE 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 BHGE logo is a trademark of Baker Hughes, a GE company, LLC. GE and the GE monogram are trademarks of General Electric Company used under trademark license.

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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	4.00	Steerable	2339.00	12094.00	2339.00	12146.00	2019-04-26 15:43	2019-04-28 21:25	46.55

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Andreas Spring	2019-04-26	2019-04-29	Bryan Severson	2019-04-26	2019-04-29	Steven Johnson	2019-04-26	2019-04-28

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+ (%)
2019-04-26 13:00	1	2347.00	Synthetic Based Mud	9.8	15	0	0.0	66.5/19	Flow Line	23324	0.00
2019-04-27 16:00	1	7515.00	Synthetic Based Mud	9.9	17	0	0.0	65.8/19.5	Flow Line	26239	0.00
2019-04-28 15:40	1	11169.00	Synthetic Based Mud	10.1	19	0	0.0	65/19.4	Active Pit	25267	0.00

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	EvoOne	14765383	Gamma (single)	8.76	52.08	6.500	2.500
1	EvoOne	14765383	Directional (mag)	9.95	53.27	6.500	2.500

Service and Tool Mnemonics

Mnemonic	Name	Description
MWD	EvoOne - Dir Gamma	EvoOne

Comments

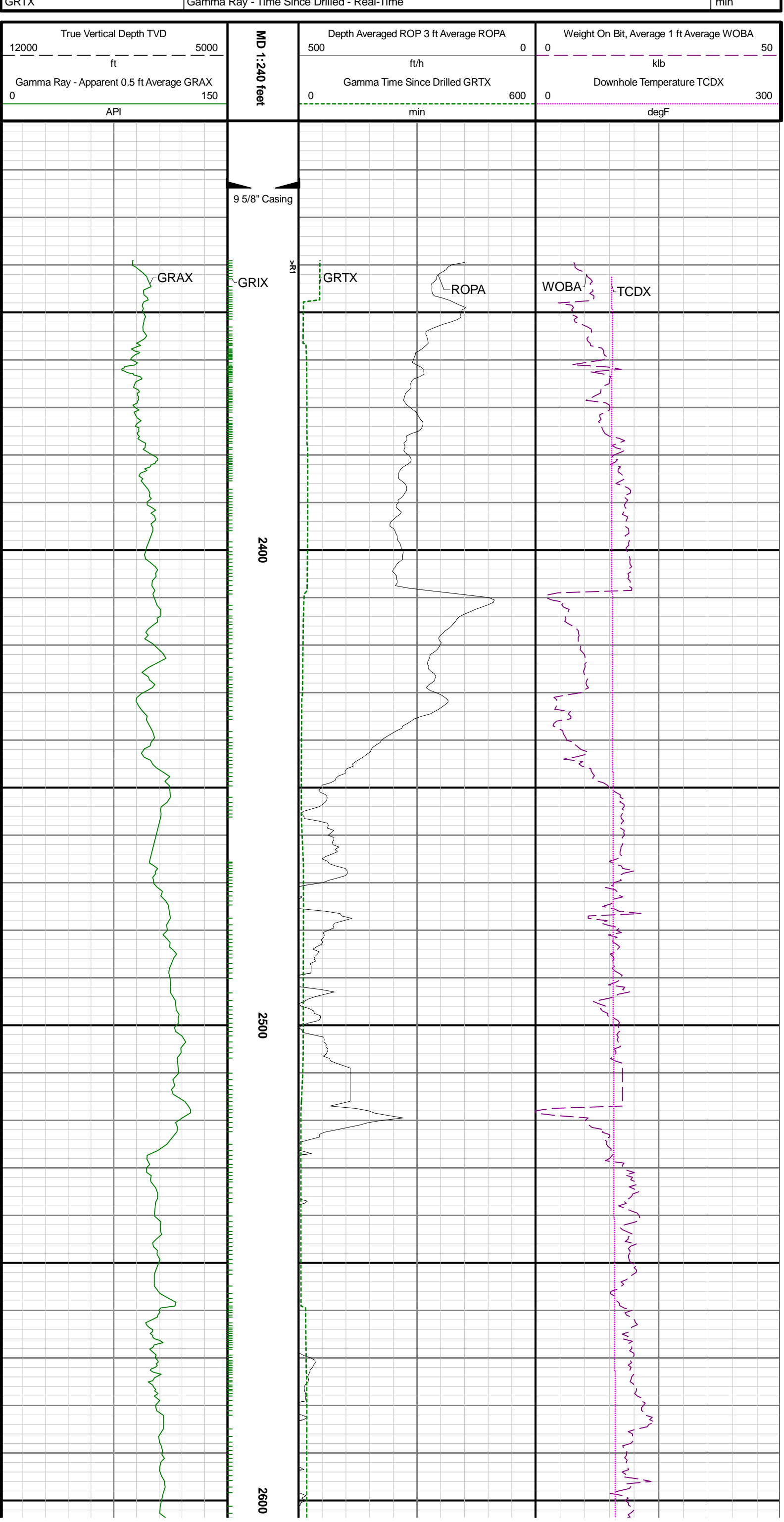
- 1 Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
- 2 Baker Hughes run 1 utilized 6 1/2 inch NaviTrak UT services (Gamma Ray and Directional) behind a 8 1/2 inch bit and steerable assembly from 2339 to 12146 feet MD (2307 to 7273 feet TVD).
- 3 A sliding indicator is shown to the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.

Remarks

Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	12100.00	8.500	1	The interval from 12094 to 12146 feet MD (7272 to 7273 feet TVD) was not logged due to sensor to bit offset at TD.

Curve Mnemonics

Presented Curves	Description	Units
TCDX	Downhole Temperature	degF
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAX	Gamma Ray - Apparent - Real-Time 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator - Real-Time	unitless
GRFX	Gamma Ray - Data Point Indicator - Real-Time	unitless

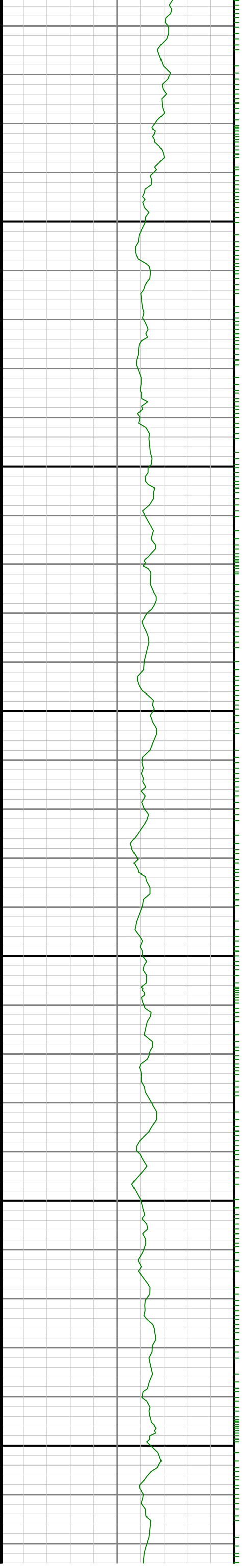


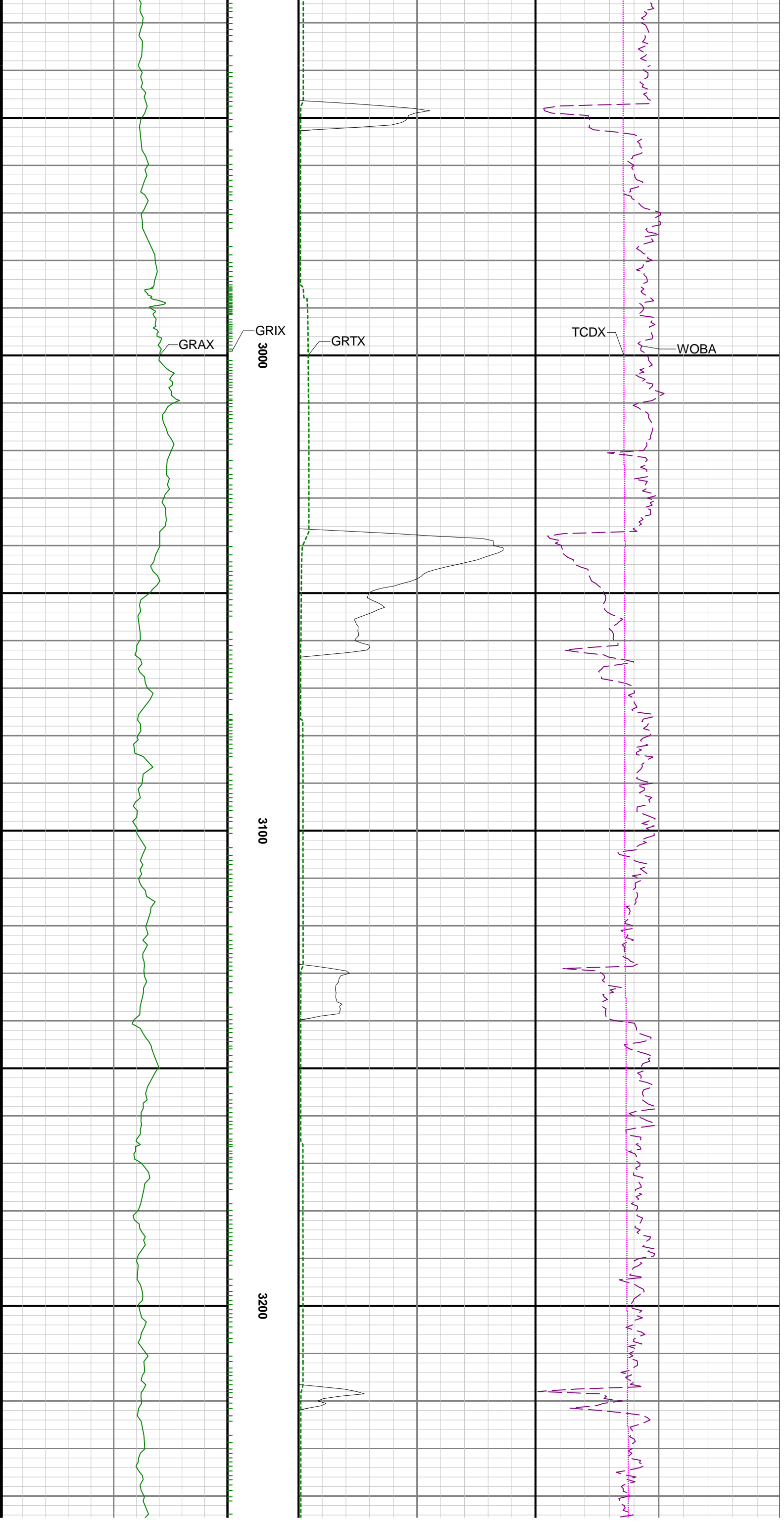


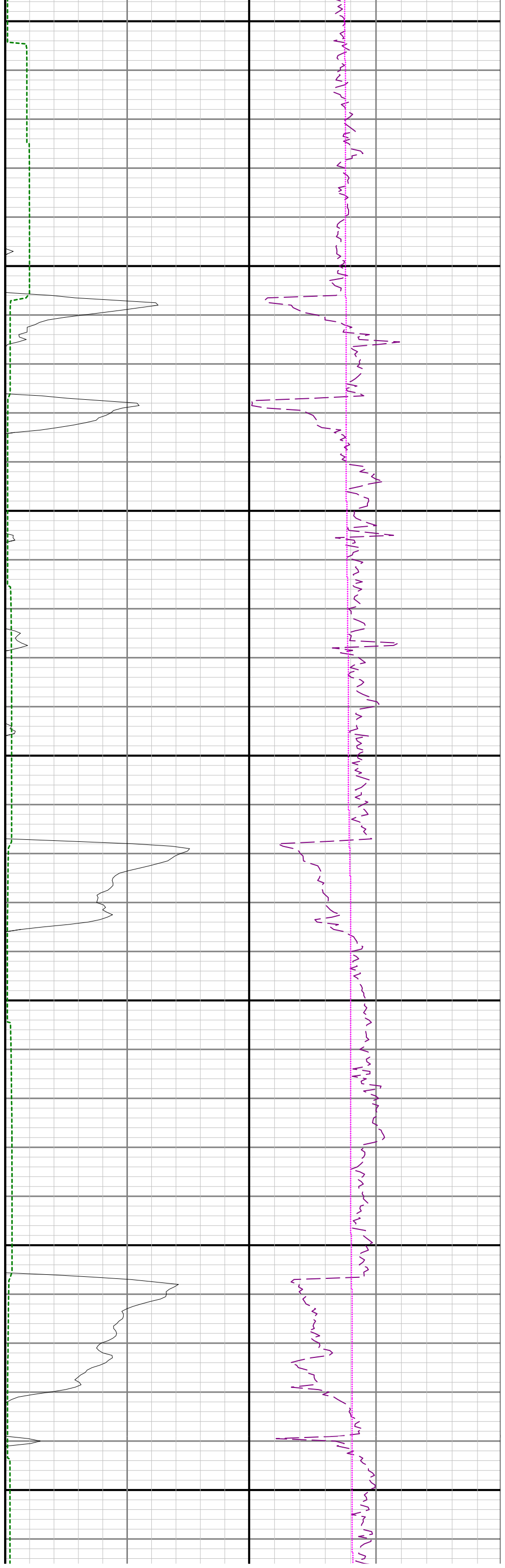
2700

2800

2900



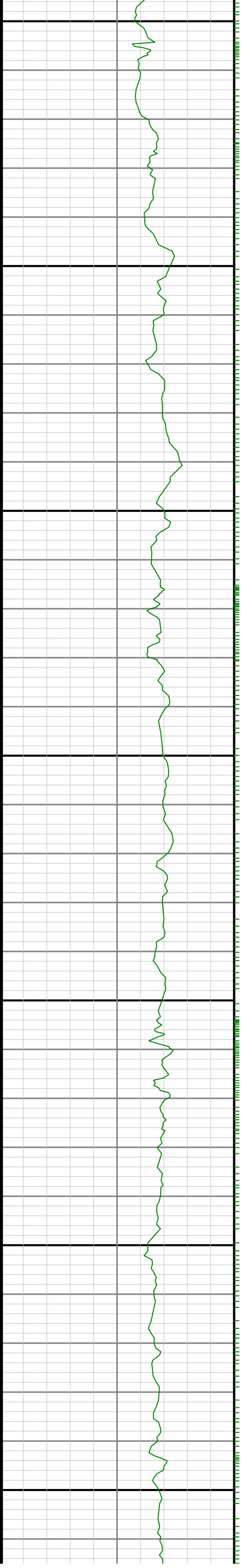


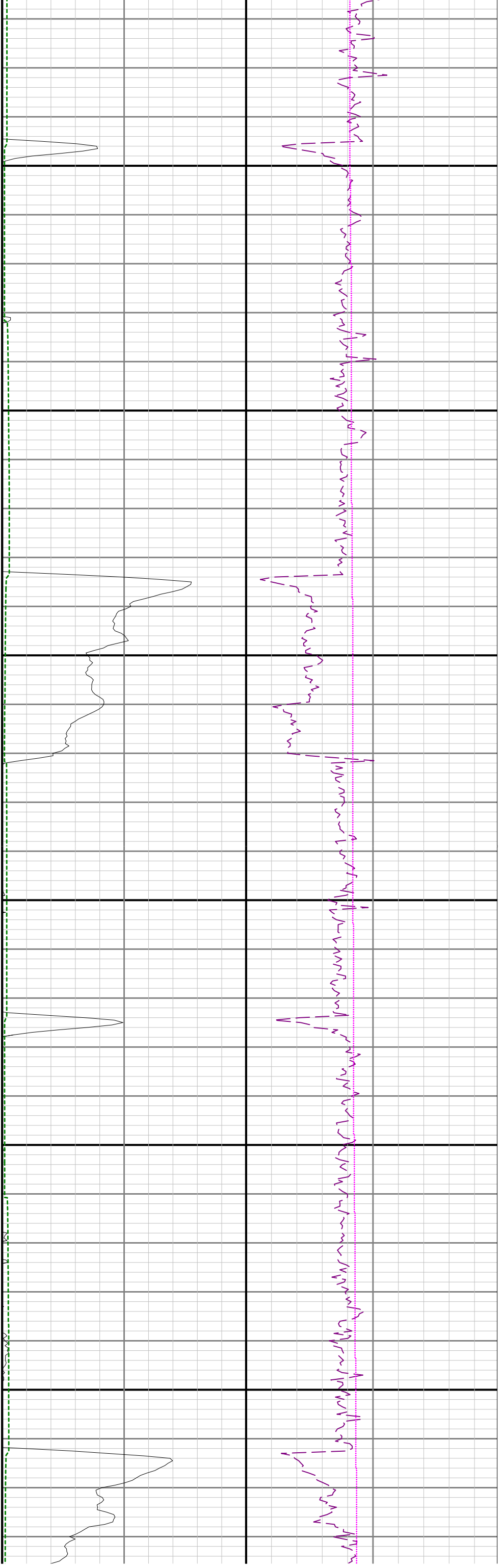


3300

3400

3500

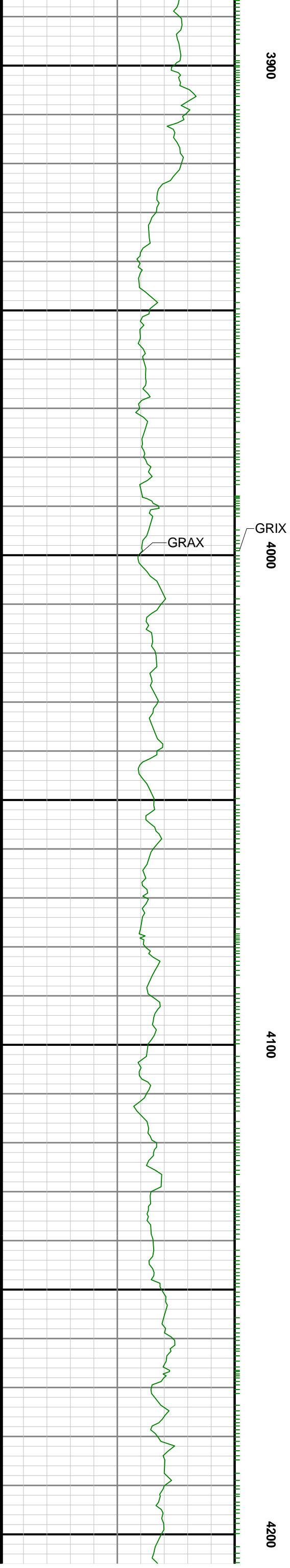
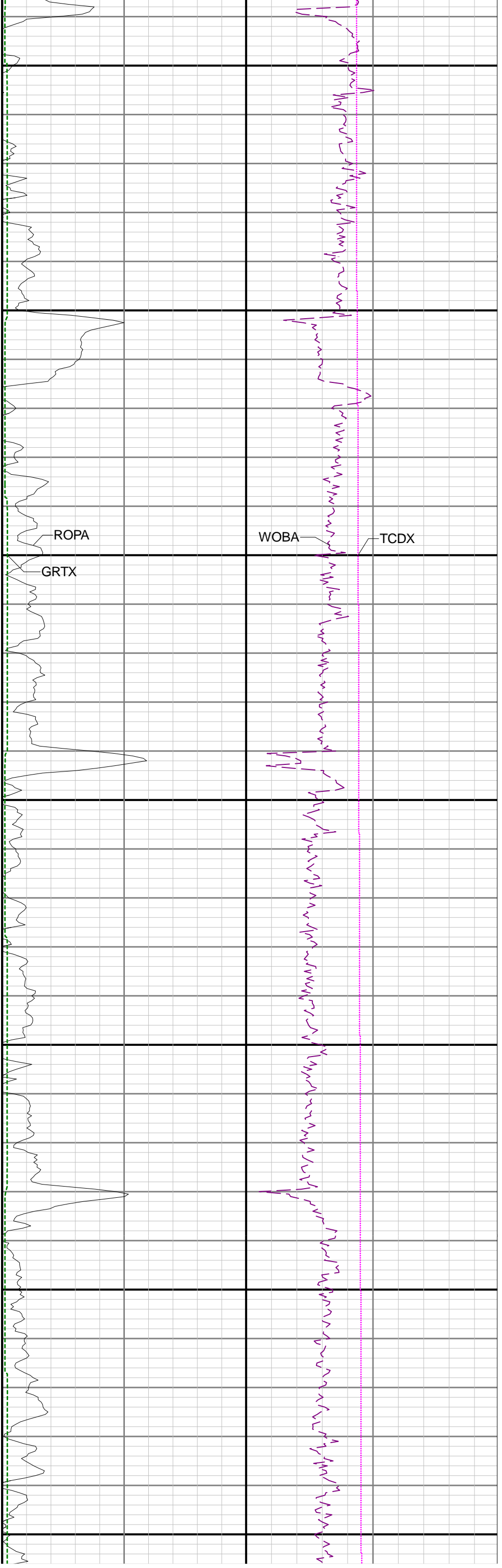


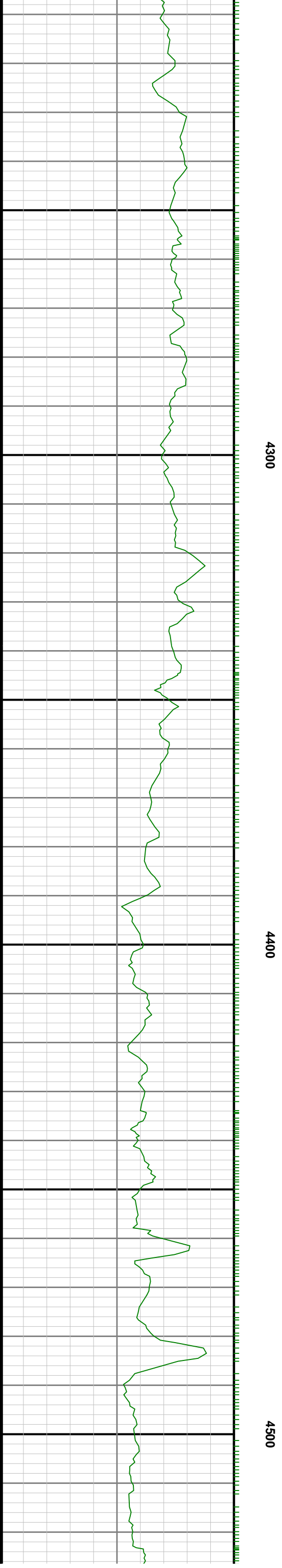
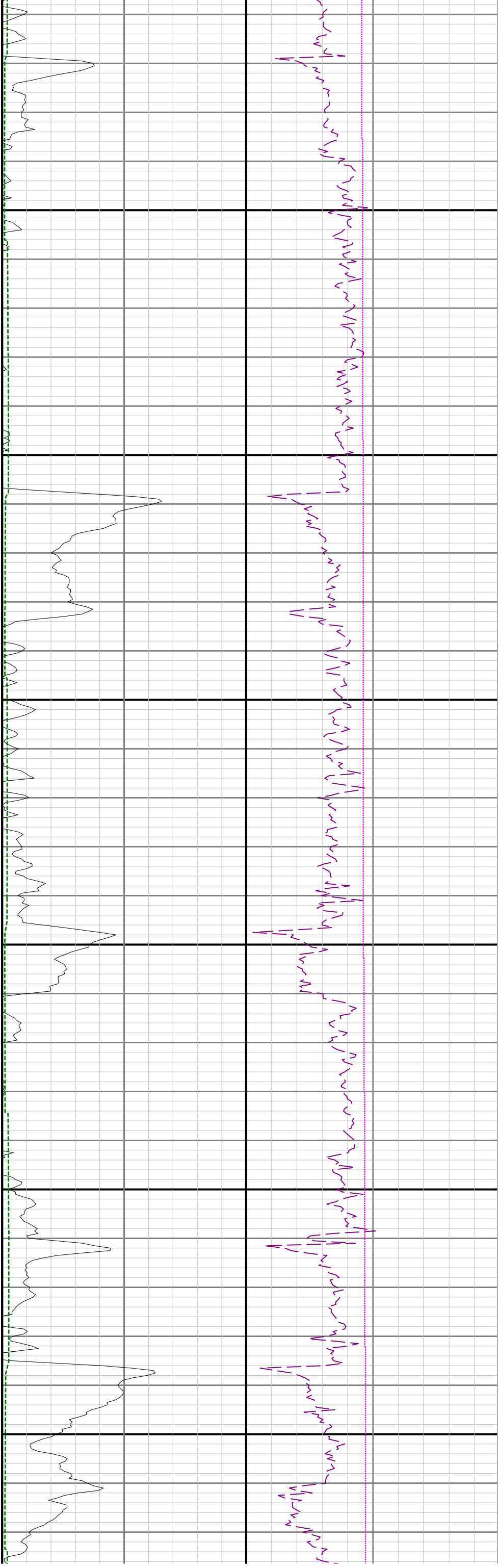


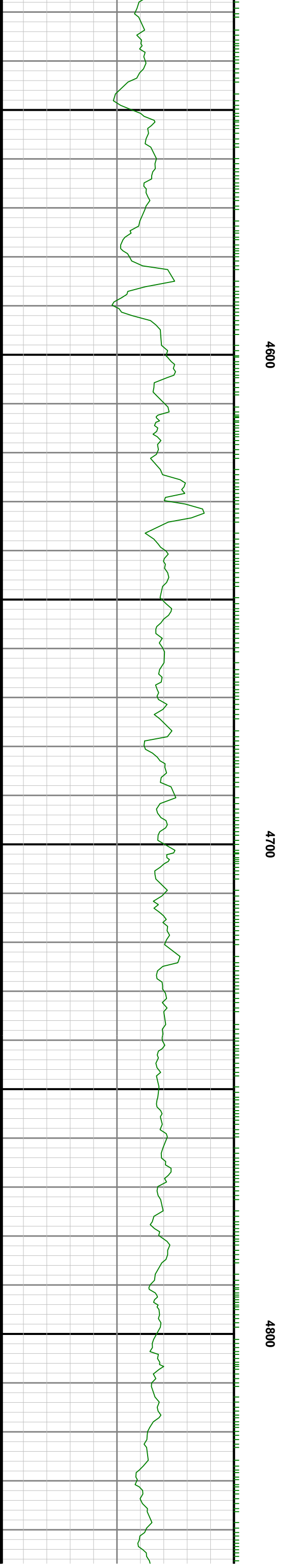
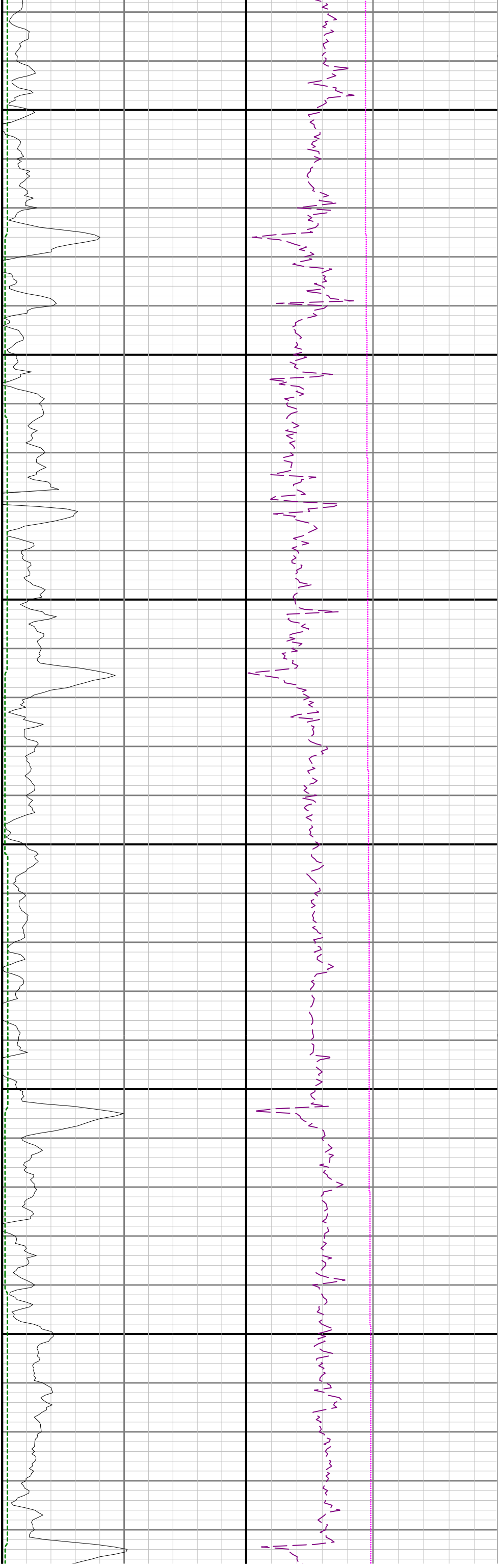
3600

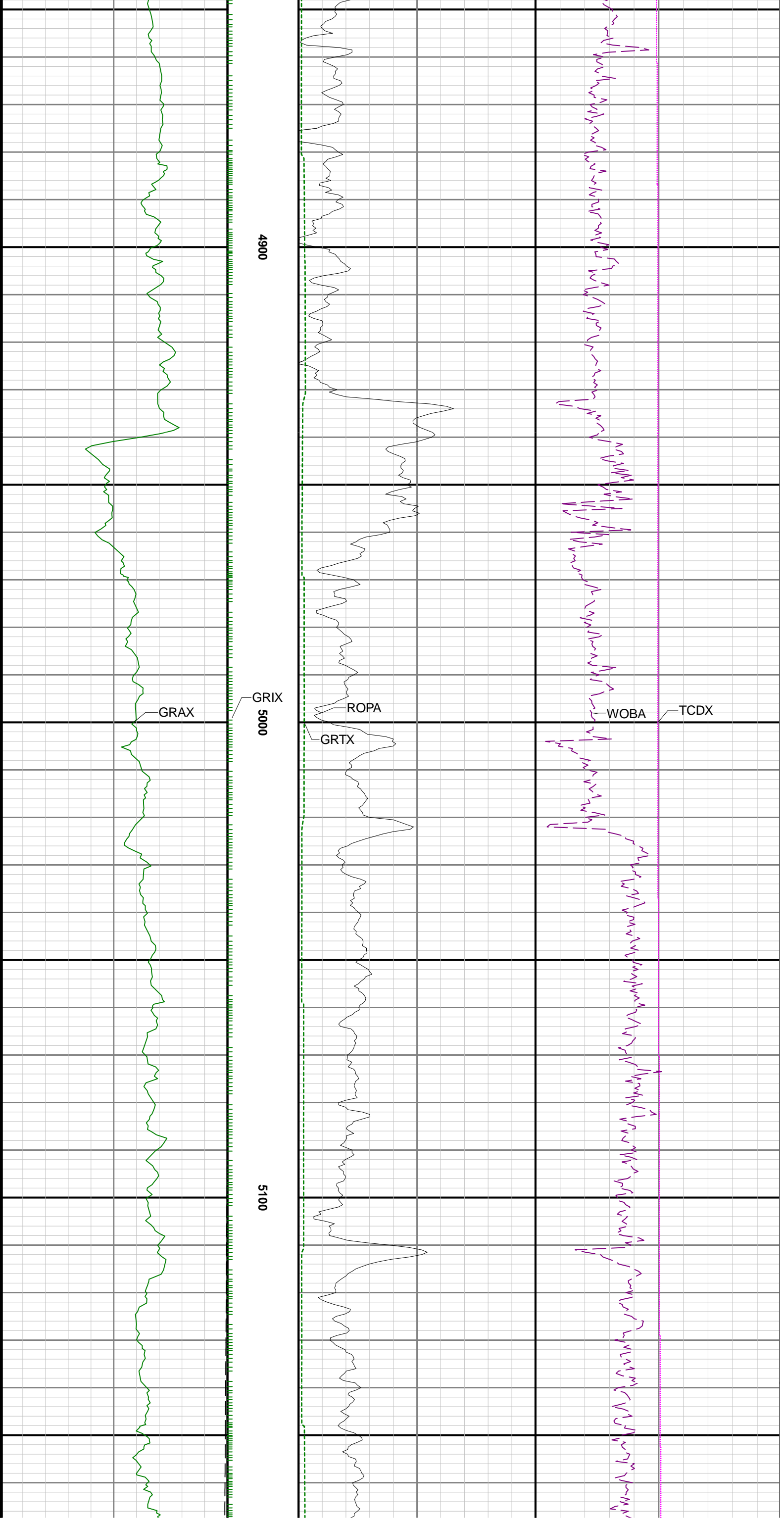
3700

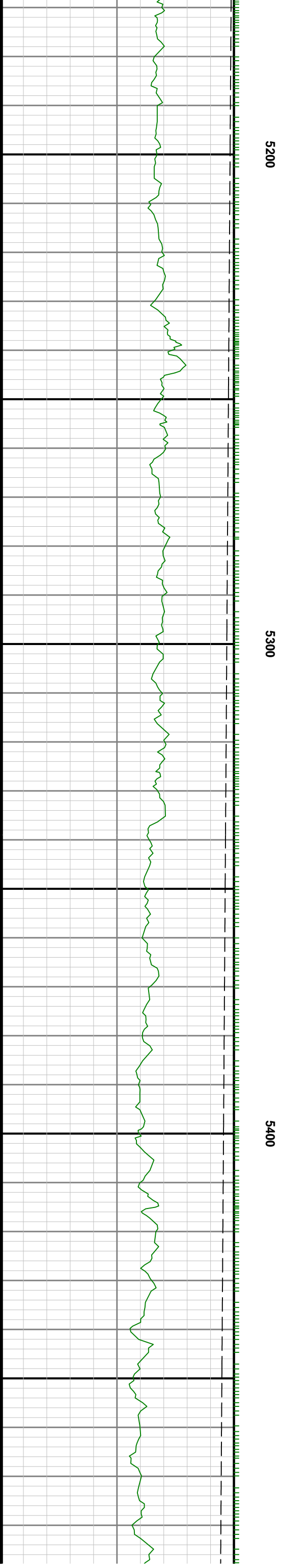
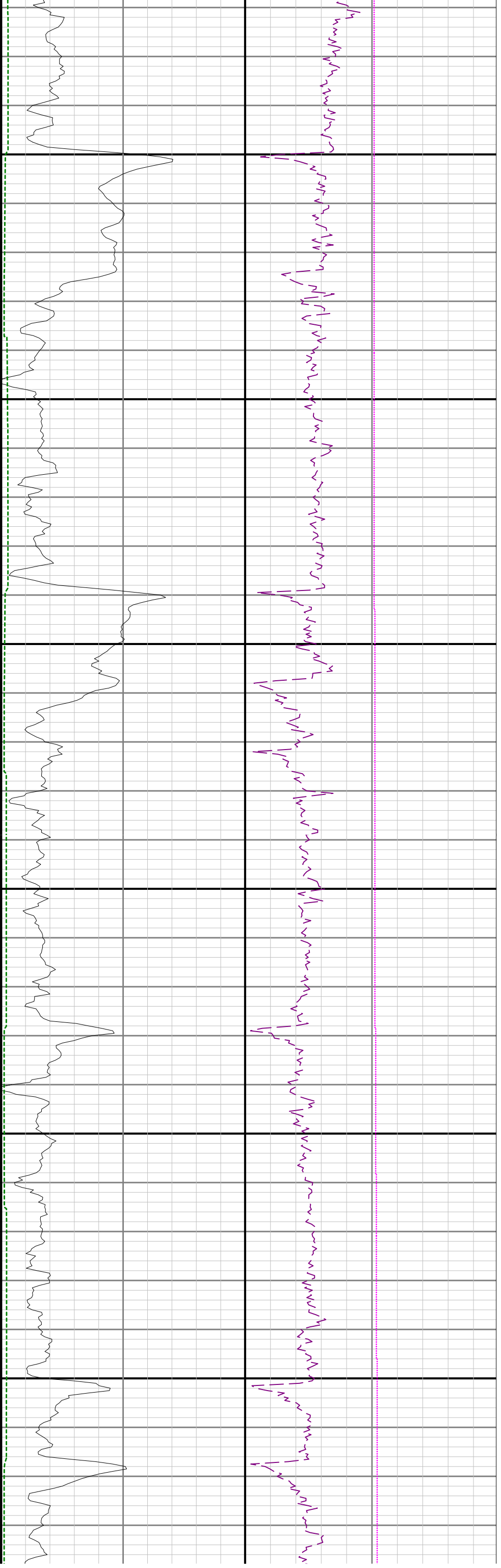
3800

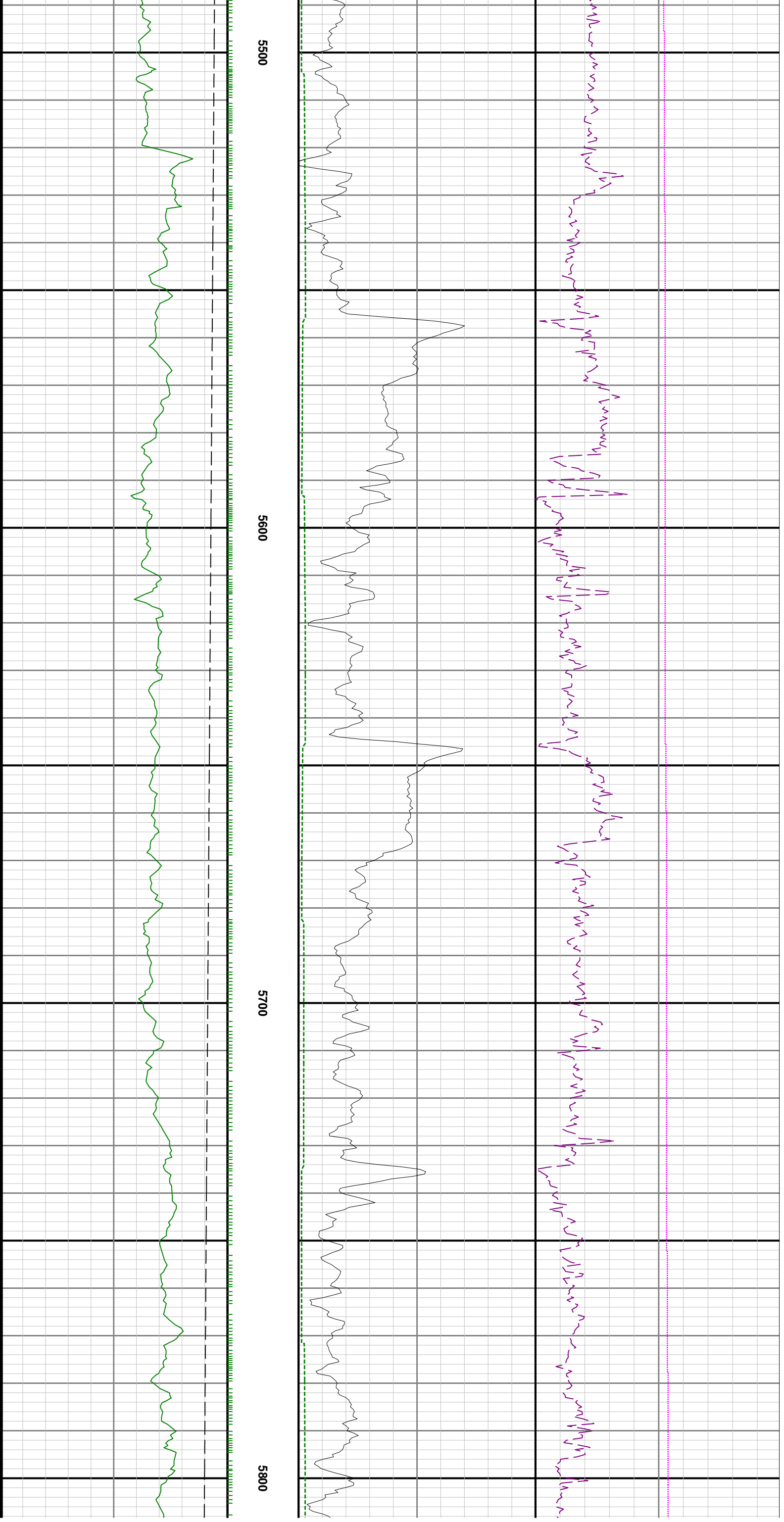


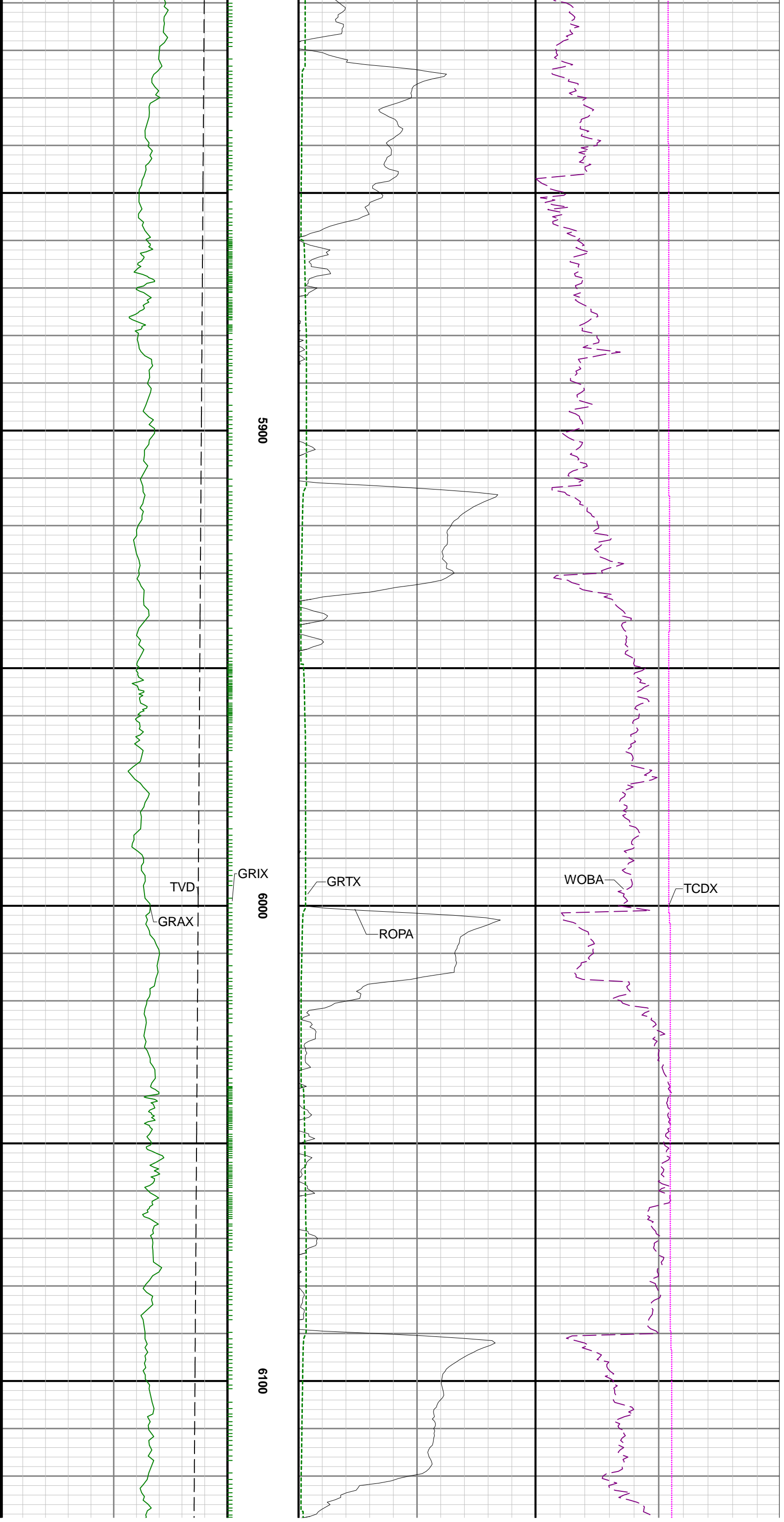


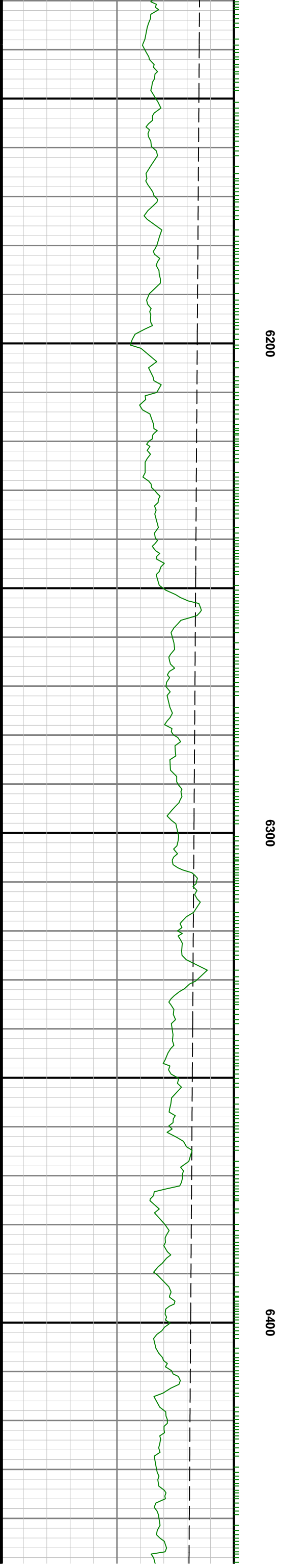
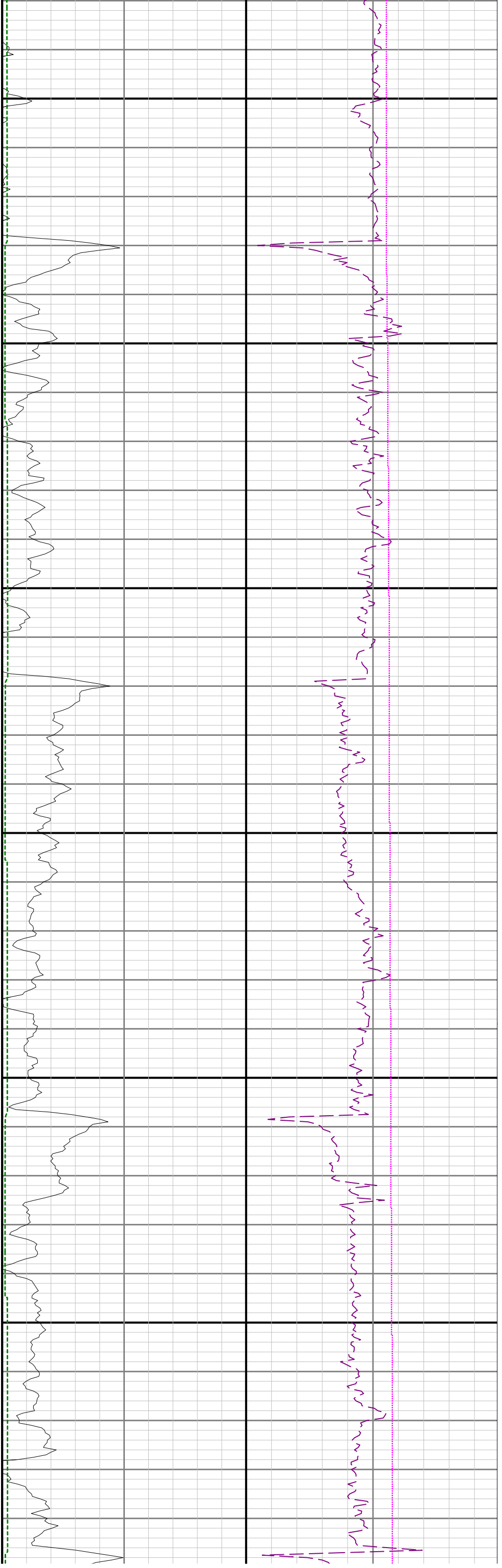


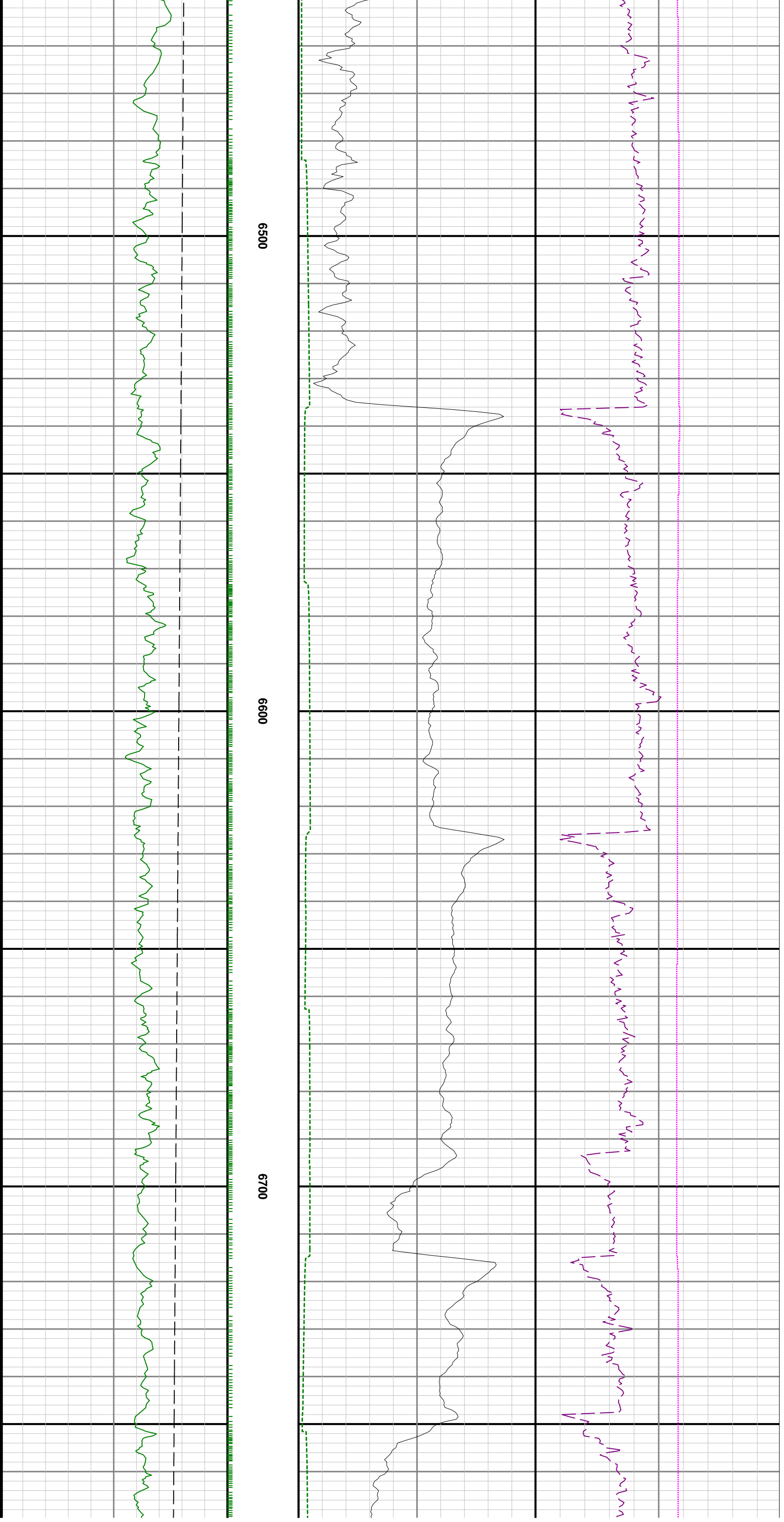


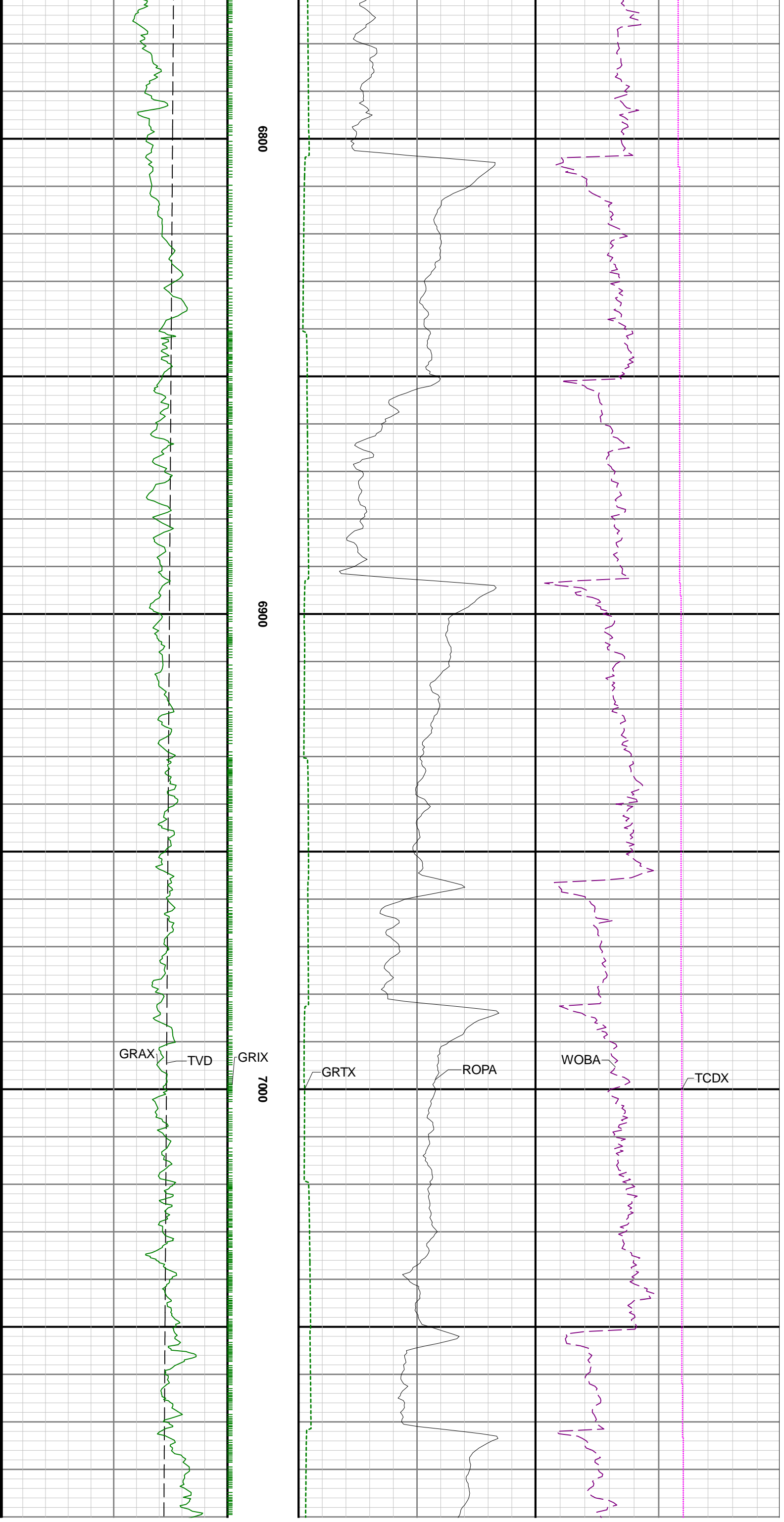


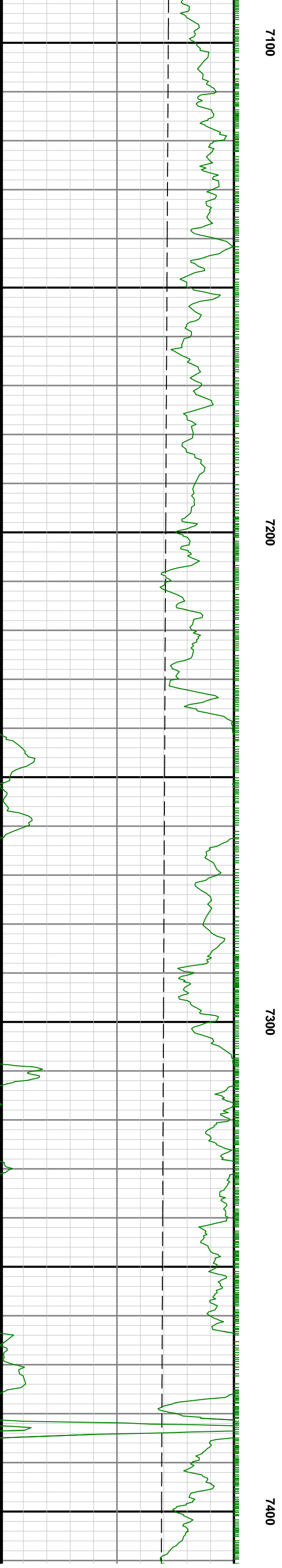
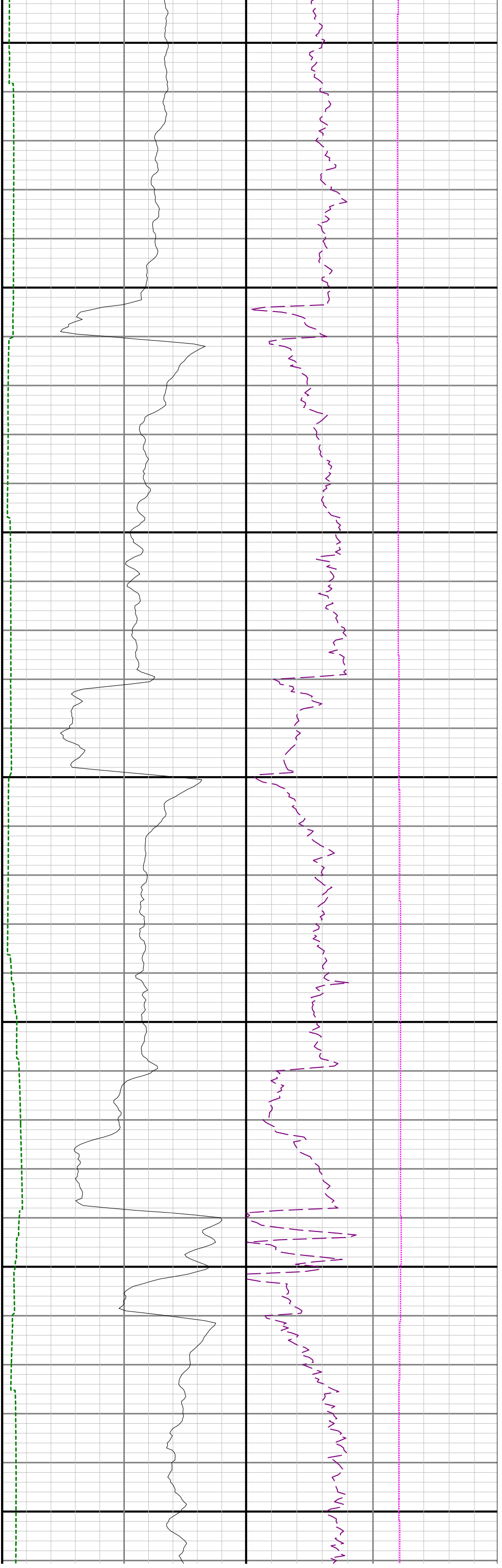


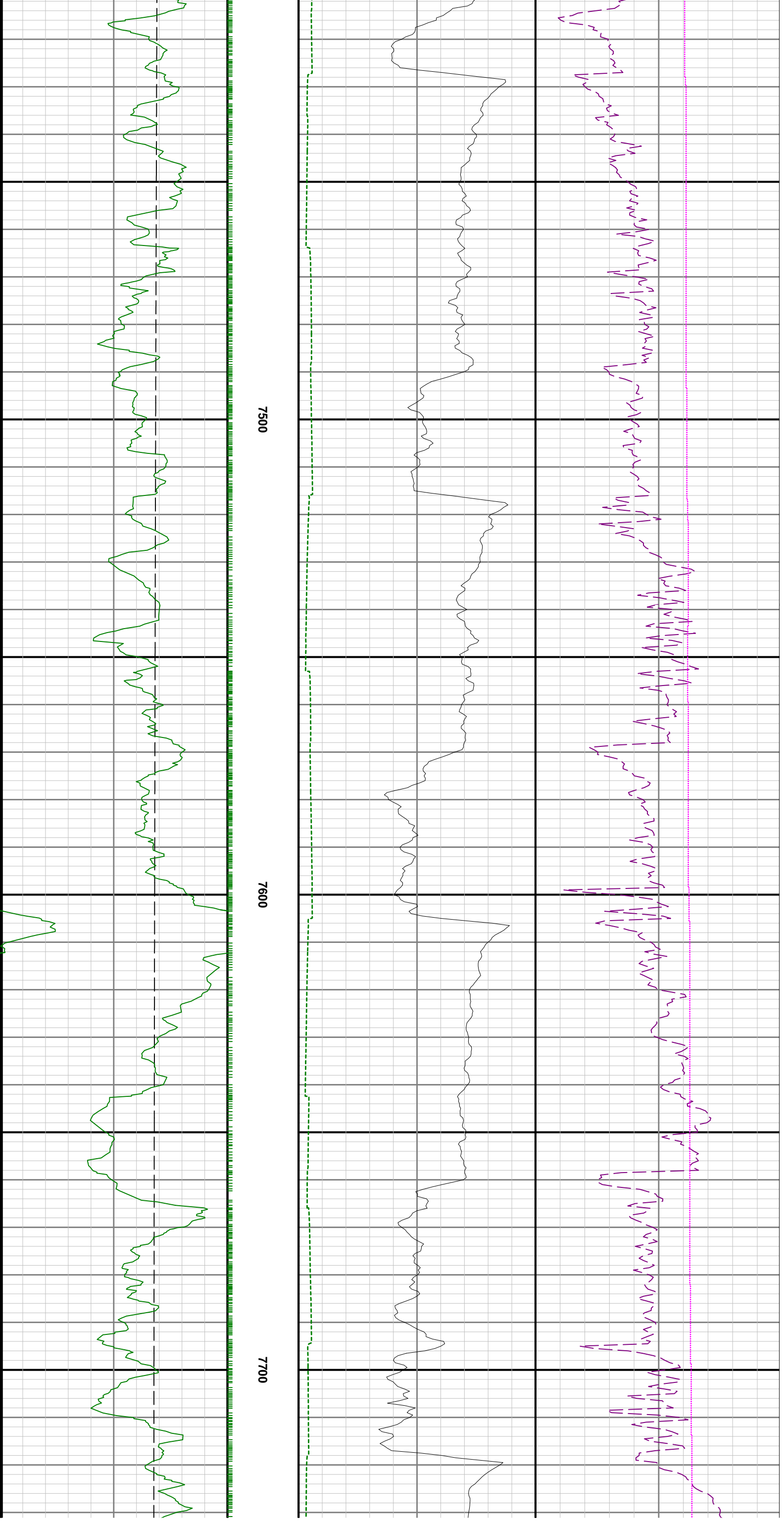


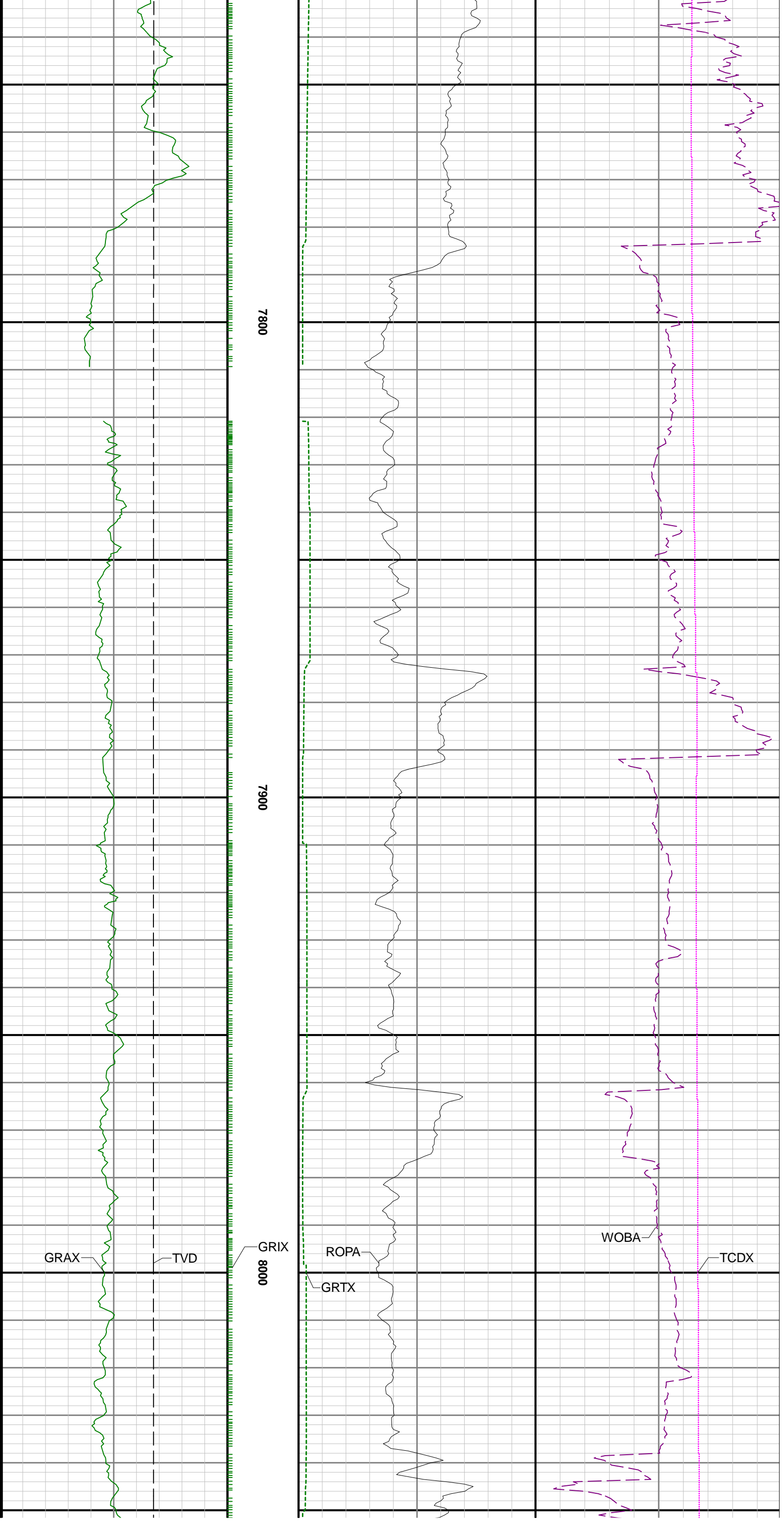


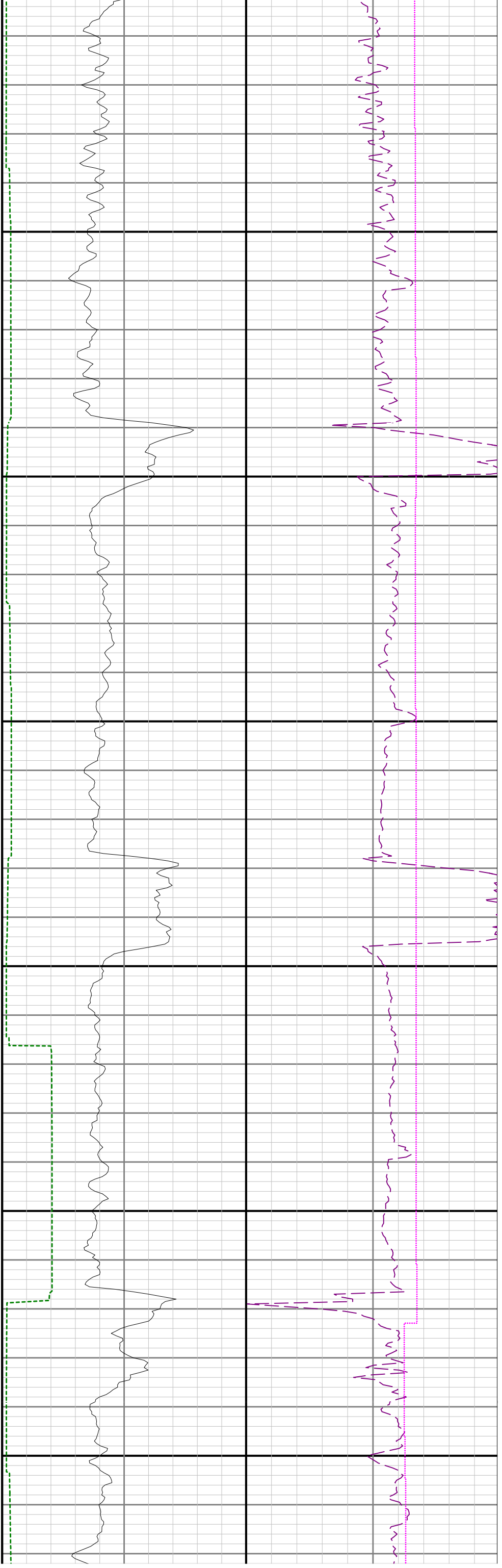








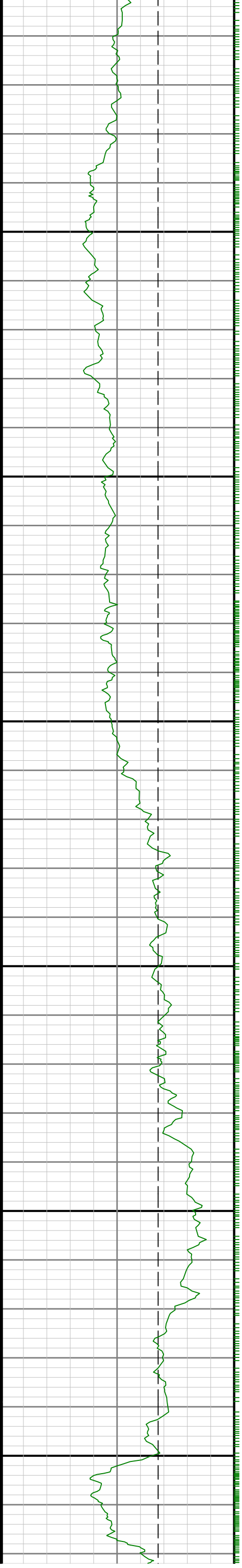


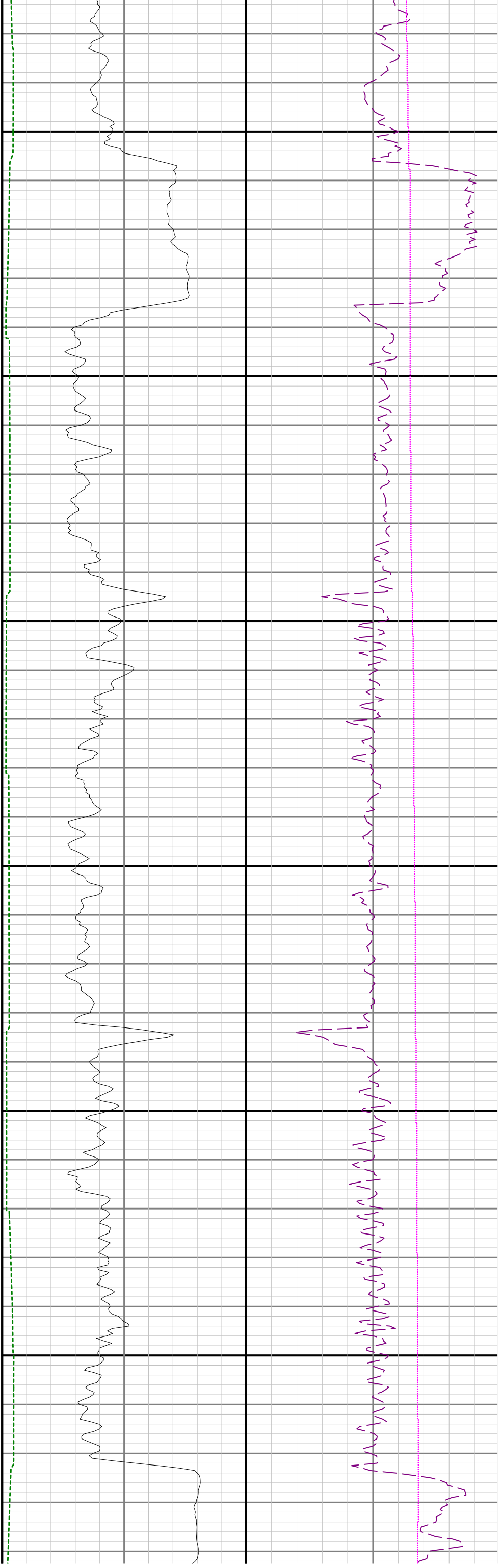


8100

8200

8300

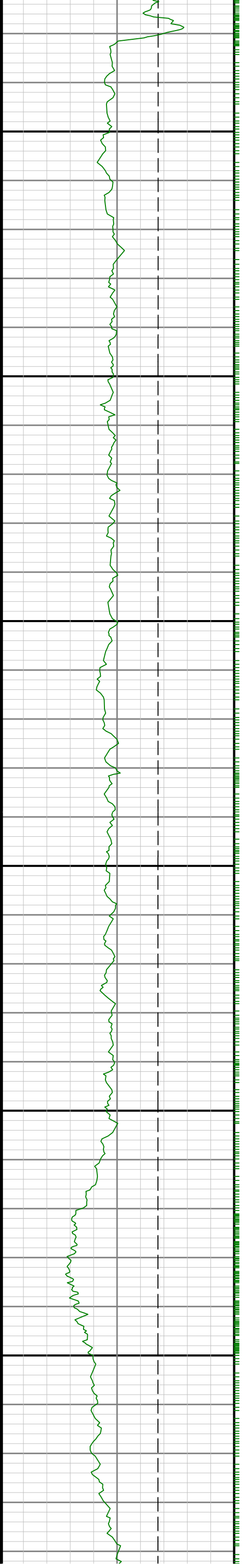


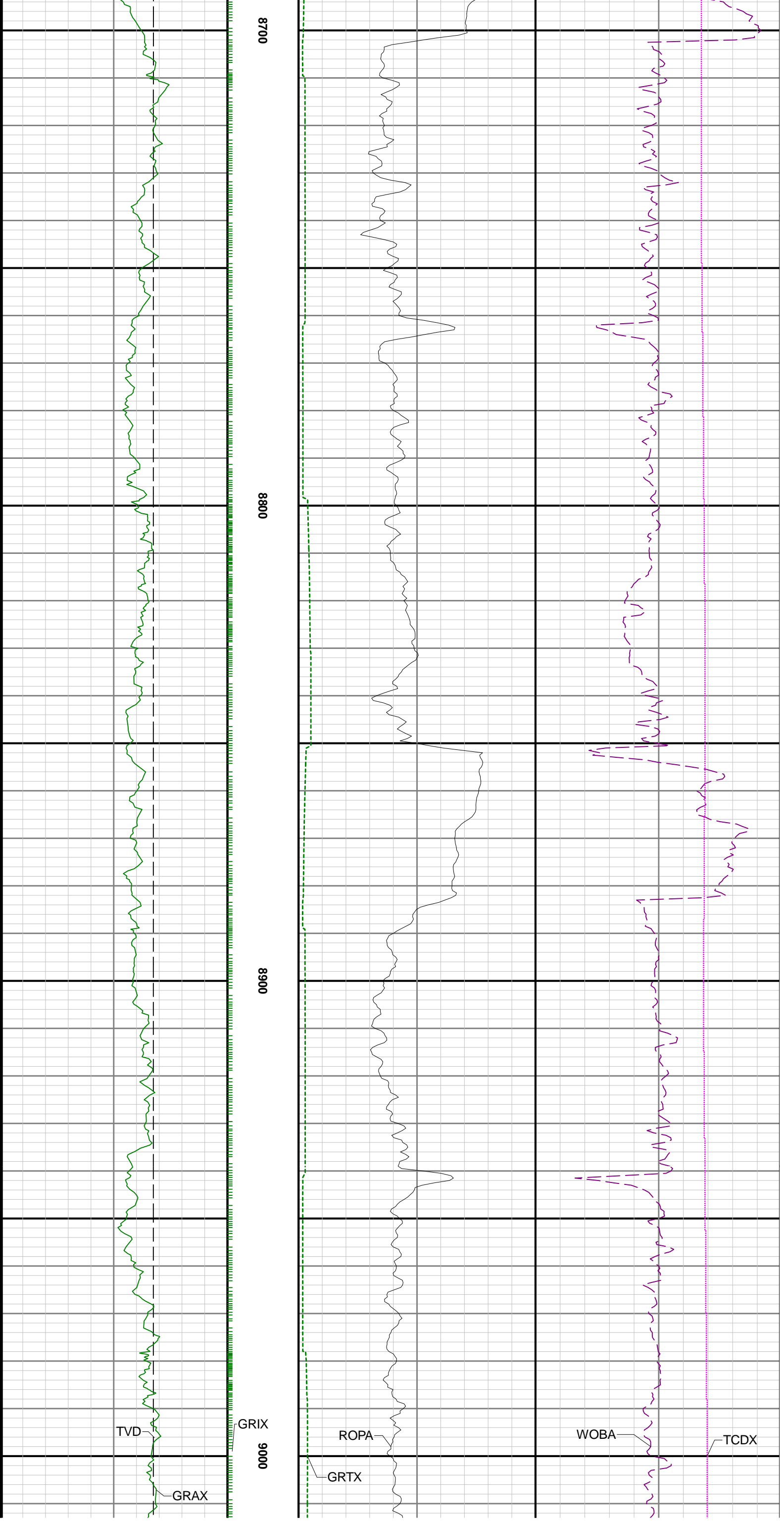


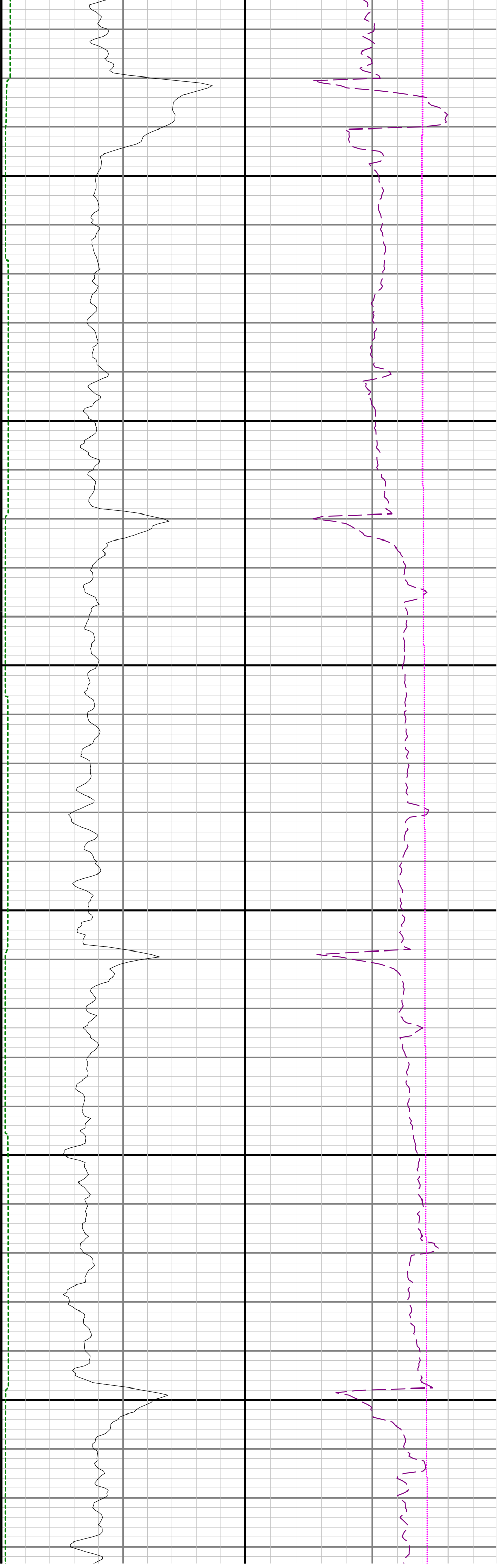
8400

8500

8600



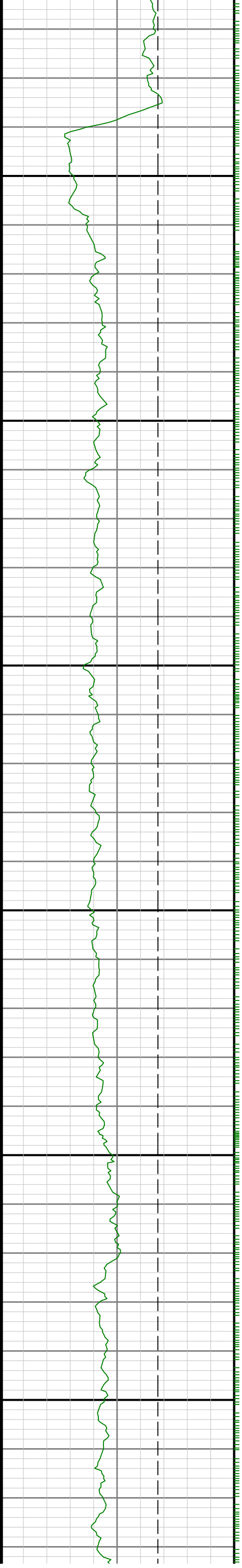


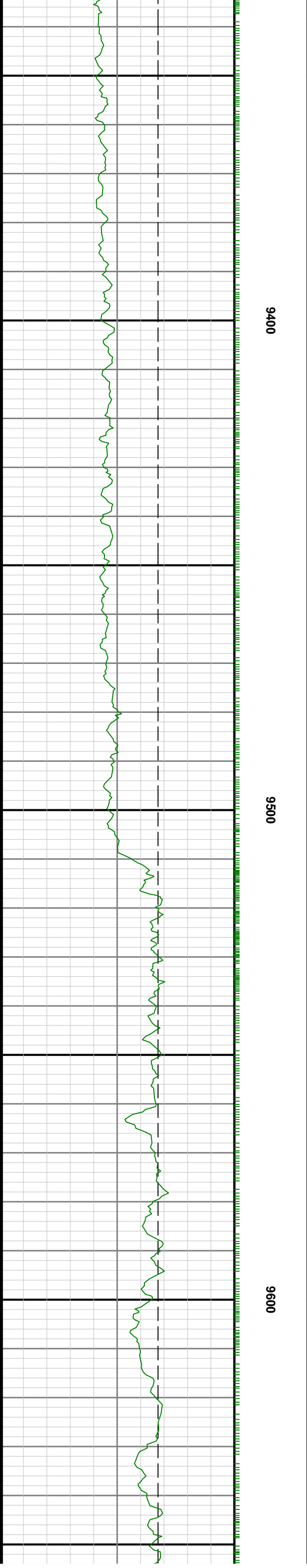
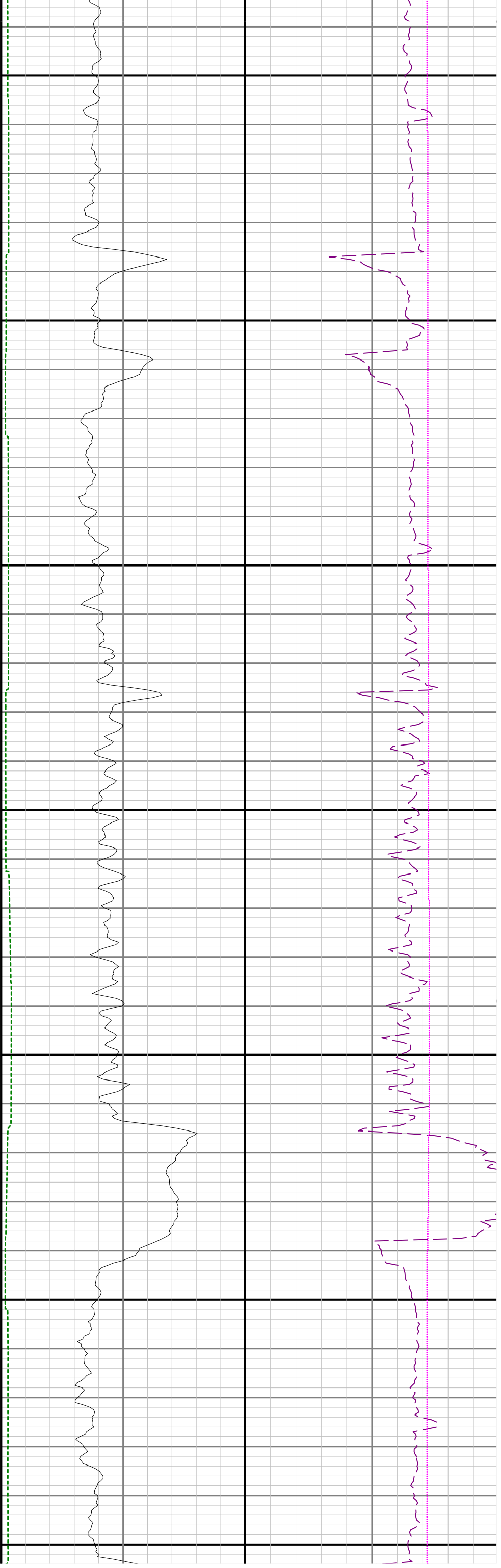


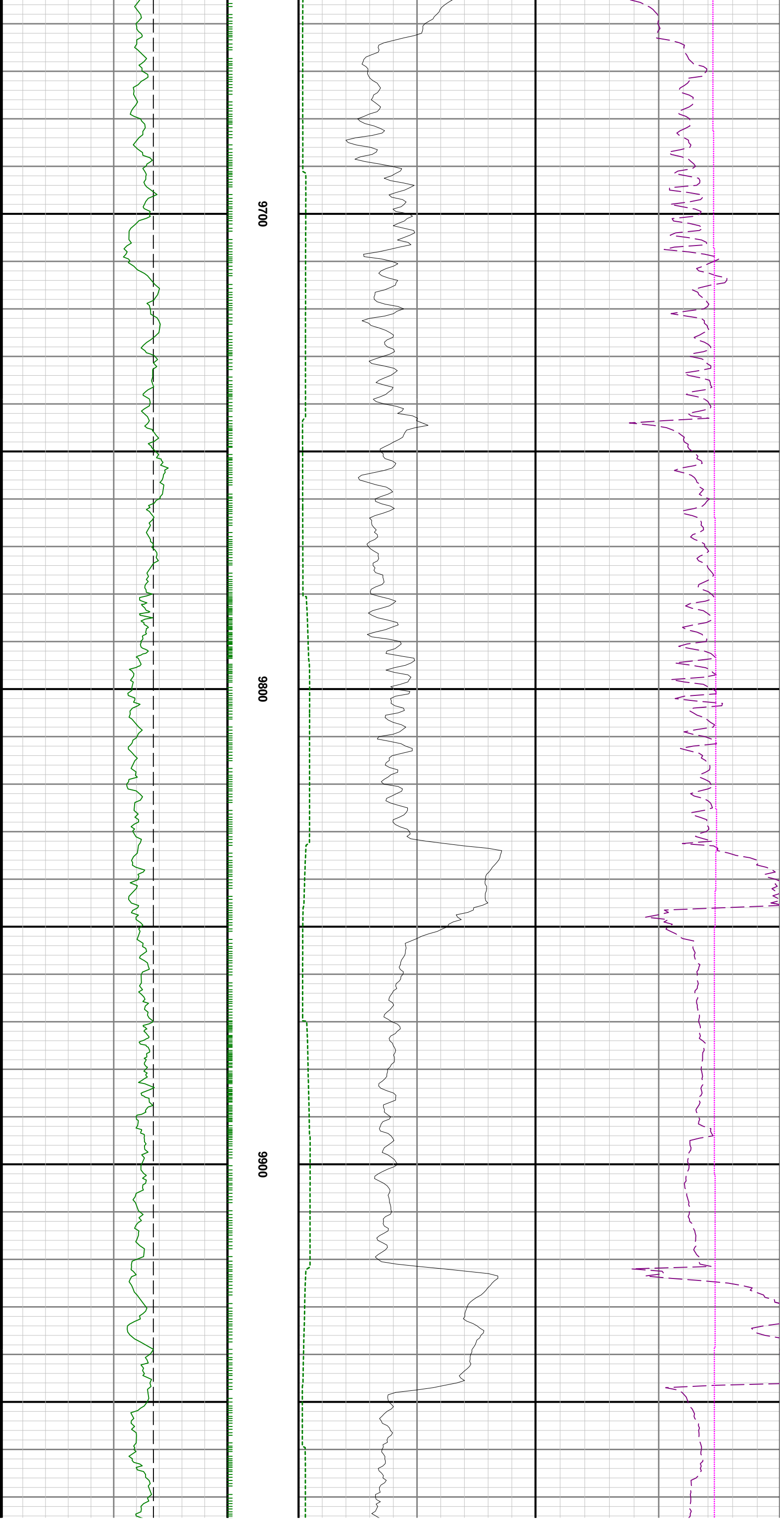
9100

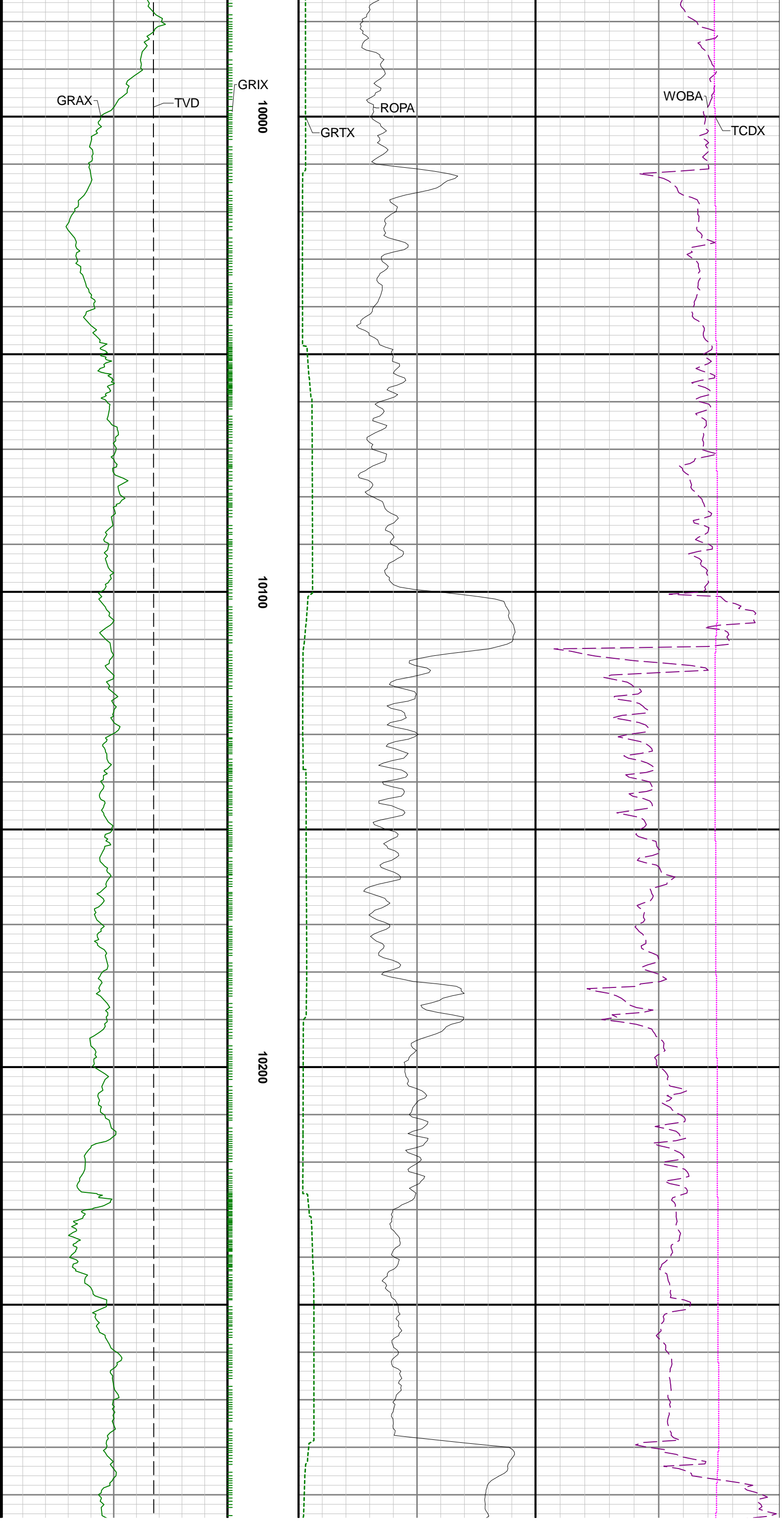
9200

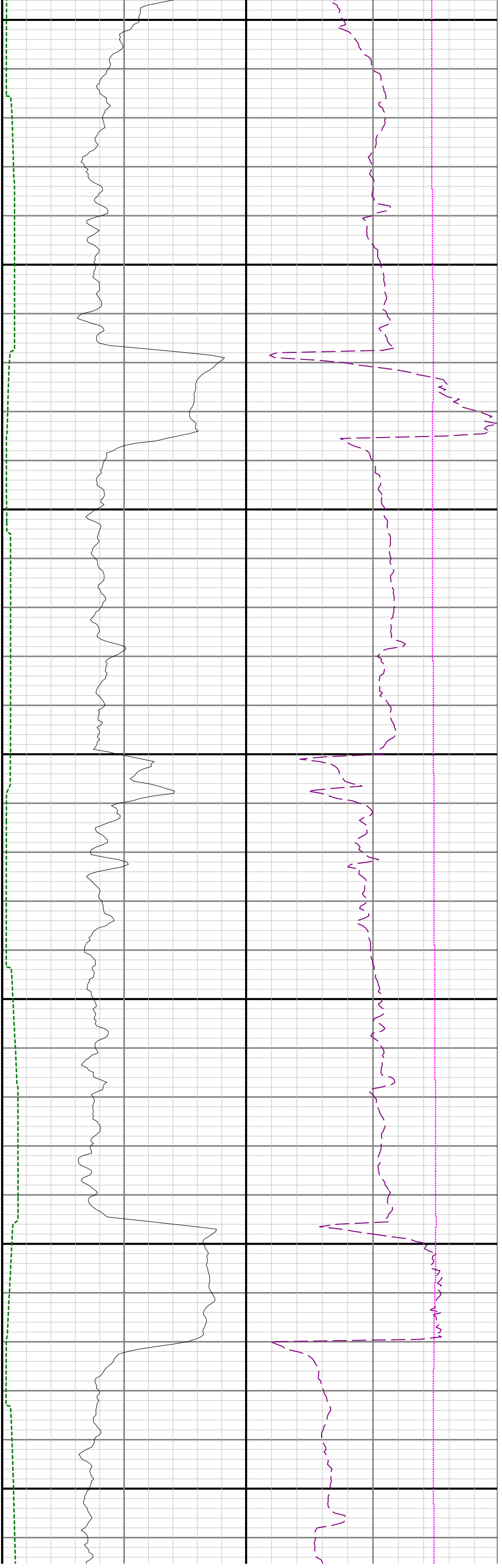
9300









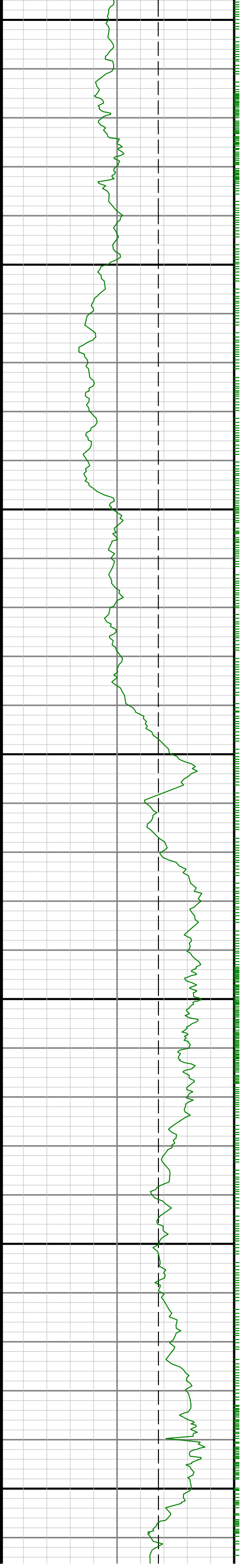


10300

10400

10500

10600

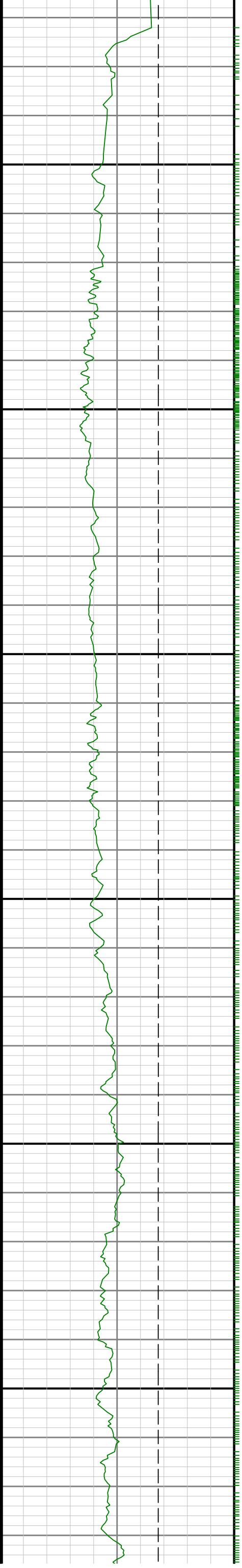


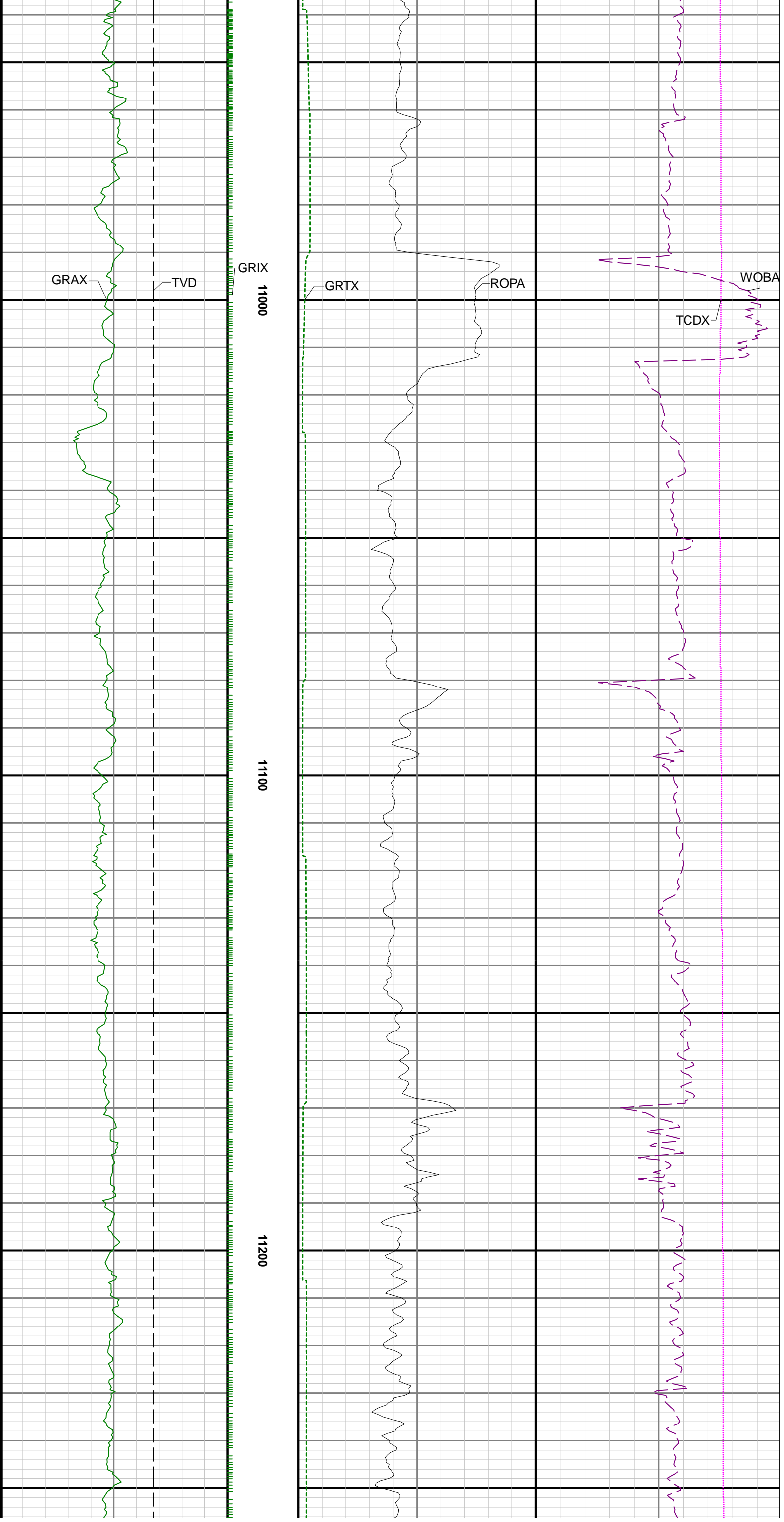


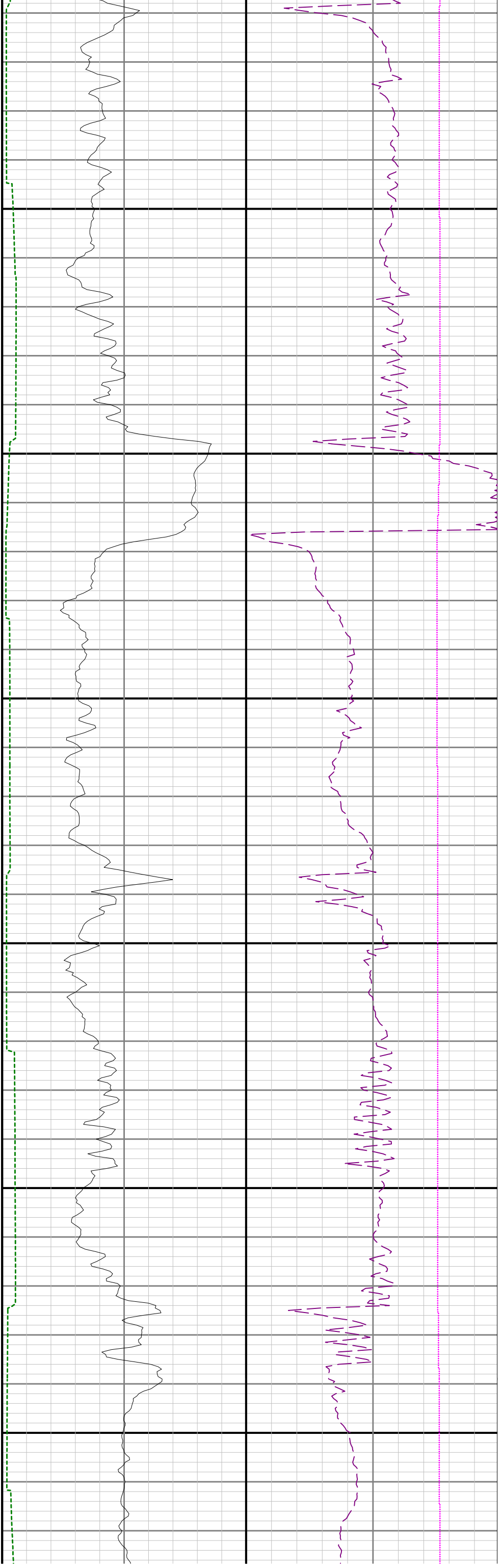
10700

10800

10900



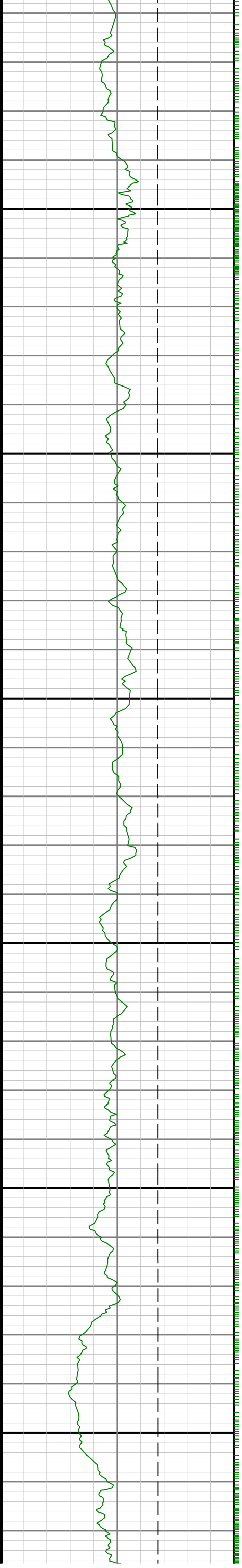


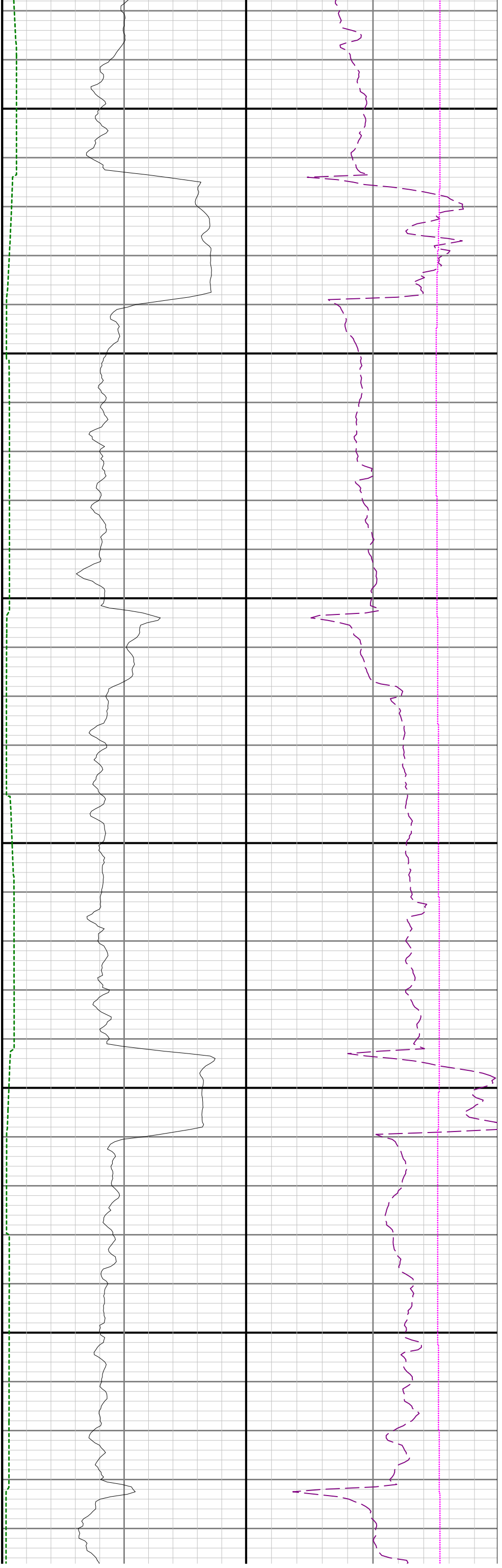


11300

11400

11500





11600

11700

11800

