


<div> <div> <div>BAKER HUGHES</div> <div>a GE company</div> </div> <div>  </div> </div>		LWD REALTIME LOG	
<div> <div>Scale:</div> <div>1:240</div> <div>Measured Depth</div> </div>		<div> <div>Company: Crestone Peak Resources Operating LLC</div> <div>Well: Echeverria 2D-2H-D267</div> <div>Field: Weld County</div> <div>County: Weld County</div> <div>Country: United States</div> </div>	
<div> <div>Depth Reference:</div> <div>Driller's Depth</div> </div>		<div> <div>State: Colorado</div> </div>	
<div> <div>Status:</div> <div>Final Print</div> </div>		<div> <div>Surface Location:</div> <div>Latitude: 040° 10' 19.312" N</div> <div>Longitude: 104° 51' 53.510" W</div> <div>Other Services:</div> </div>	
<div> <div>API No: 05-123-48748-0000</div> <div>Job ID: 109763981</div> </div>		<div> <div>SEC: 2</div> <div>TWN: 2N</div> <div>RGE: 67W</div> <div>Elev. KB: 4882.00 ft</div> <div>Elev. DF: 4910.00 ft</div> <div>Elev. GL: 4882.00 ft</div> </div>	
<div> <div>Permanent Datum (P.D.): Ground Level</div> <div>Log Measured From: Rig Floor</div> </div>		<div> <div>Elevation: 4882.00 ft</div> <div>Above P.D.: 28.00 ft</div> </div>	
<div> <div>Dates</div> <div> <div>From: 2019-05-01</div> <div>To: 2019-05-05</div> <div>Spud: 2019-01-17</div> </div> </div>		<div> <div>Interval</div> <div> <div>Drilled (ft)</div> <div>Top: 2339.00</div> <div>Bottom: 12175.00</div> </div> </div>	
<div> <div>Borehole Record</div> <div> <div>Hole Size (in)</div> <div>13.500</div> <div>8.500</div> </div> </div>		<div> <div>Magnetic Field Reference</div> <div> <div>Logged (ft)</div> <div>Top: 2336.00</div> <div>Bottom: 12162.00</div> </div> </div>	
<div> <div>Casing Record</div> <div> <div>From (ft)</div> <div>To (ft)</div> <div>Size (in)</div> <div>Weight (lb/ft)</div> <div>From (ft)</div> <div>To (ft)</div> </div> </div>		<div> <div> <div>Azi Reference North: True</div> <div>Dip Angle: (deg)</div> </div> <div> <div>Total Magnetic Field Strength: (mT)</div> <div>Mag to Reference North Correction: (deg)</div> </div> </div>	
<div> <div>Mud Record</div> <div> <div>Type</div> <div>Synthetic Based Mud</div> </div> </div>		<div> <div>Deviation Record</div> <div> <div>Hole Size (in)</div> <div>Interval (ft)</div> <div>Inc Az (Start)</div> <div>Inc Az (End)</div> </div> </div>	
<div> <div>Acquisition System</div> <div>Baker Hughes Cadence</div> <div>Plot Studio</div> </div>		<div> <div>Software Version</div> <div>RT 5.1</div> <div>5.1.8355.1</div> </div>	
<div> <div>Other</div> <div>Rig: Ensign 142</div> <div>Contractor: Ensign Drilling</div> <div>District: RMD</div> <div>Unit: D&E</div> </div>			

© 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 (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	3.00	AutoTrak Curve	2336.00	12162.00	2339.00	12175.00	2019-05-02 04:42	2019-05-04 18:00	54.92

Crew									
Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name	
A. Spring		2019-05-01	2019-05-05						

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+ (%)
2019-05-01 19:00		1	2339.00	Synthetic Based Mud	9.7	12	0	0.0	68/18	Flow Line	22352	0.00
2019-05-02 15:55		1	4670.00	Synthetic Based Mud	9.6	16	0	0.0	67.2/19.2	Flow Line	31853	0.00
2019-05-03 15:50		1	7878.00	Synthetic Based Mud	10.0	14	0	0.0	67.4/17.8	Flow Line	28958	0.00
2019-05-04 16:10		1	11872.00	Synthetic Based Mud	10.4	20	0	0.0	65/18.8	Flow Line	28958	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	AutoTrak Curve Steering Unit	14381512	Near Bit Inclination	5.93	6.93	7.000	4.330
1	AutoTrak Curve Steering Unit	14381512	Near Bit VSS	5.93	6.93	7.000	4.330
1	AutoTrak Curve MWD	12577852	Gamma (single)	2.20	12.55	7.000	3.250
1	AutoTrak Curve MWD	12577852	Directional (mag)	12.27	22.62	7.000	3.250

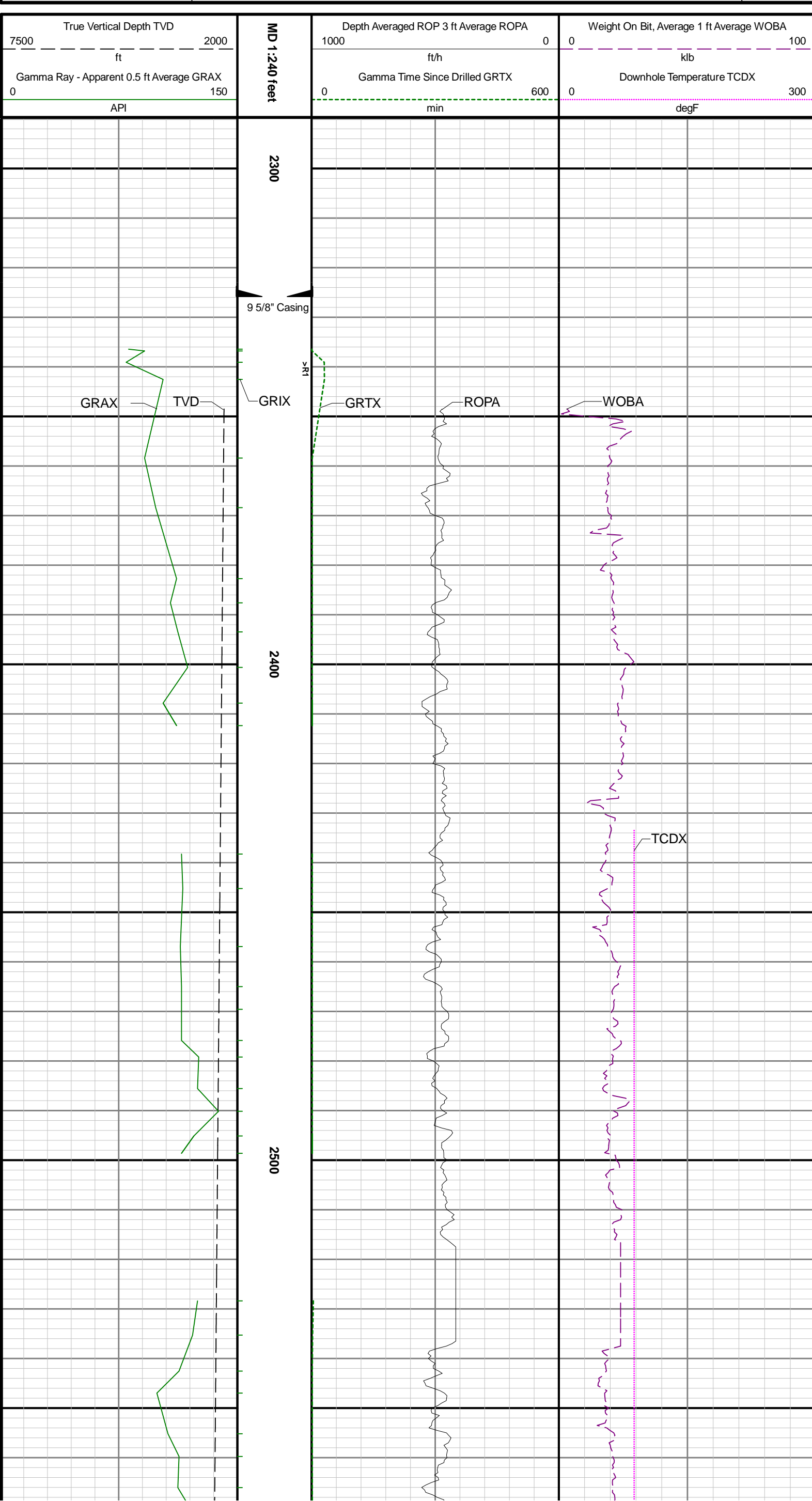
Service and Tool Mnemonics		
Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM

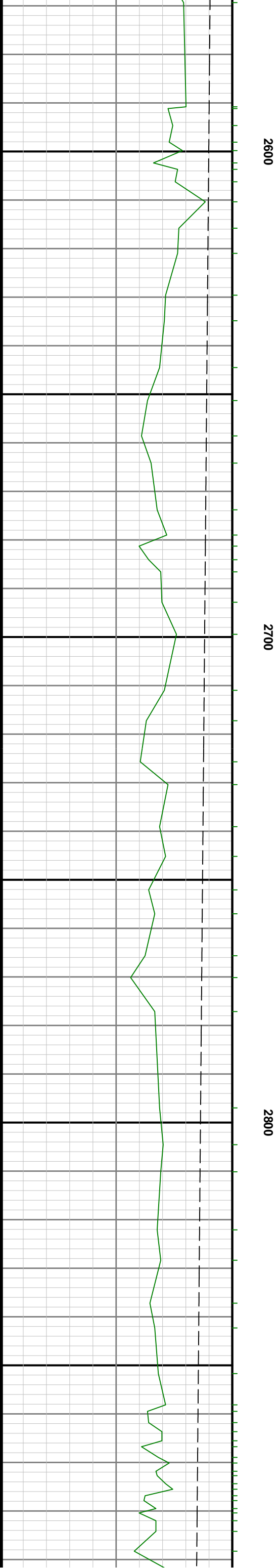
Comments	
1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	Baker Hughes Run 1 utilized a 6.75 inch AutoTrak Curve Rotary Steerable assembly tool behind a 8.50 inch bit from 2339 to 12175 feet MD (2300 to 7217 feet TVD).
3	There are numerous gaps throughout the log due to surveying while on bottom drilling ahead and due to tool power cycling off during downlinking and not recording drilling data.
4	There are numerous gaps throughout the log due to continuous MD TOTCO depth tracking problems which affect Baker Hughes depth tracking and surface data acquisition.

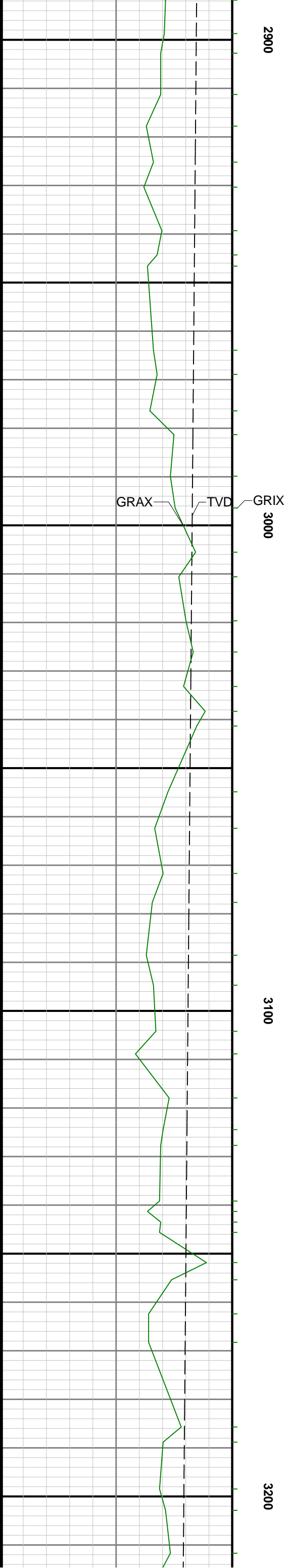
Remarks				
Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	3960.00	8.500	1	The interval from 3955 to 4028 feet MD (3885 to 3956 feet TVD) has no drilling data due to a stalled tool while drilling ahead.
2	12150.00	8.500	1	The interval from 12162 to 12175 feet MD (7217 to 7217 feet TVD) was not logged due to sensor to bit offset at TD.

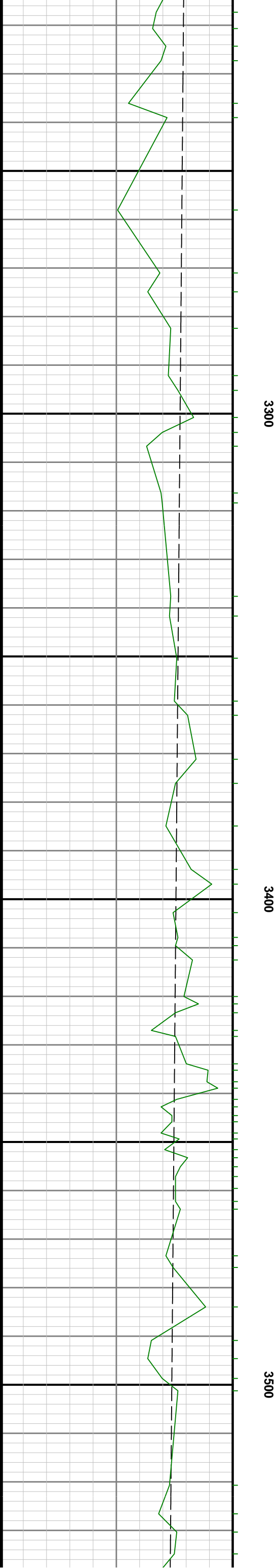
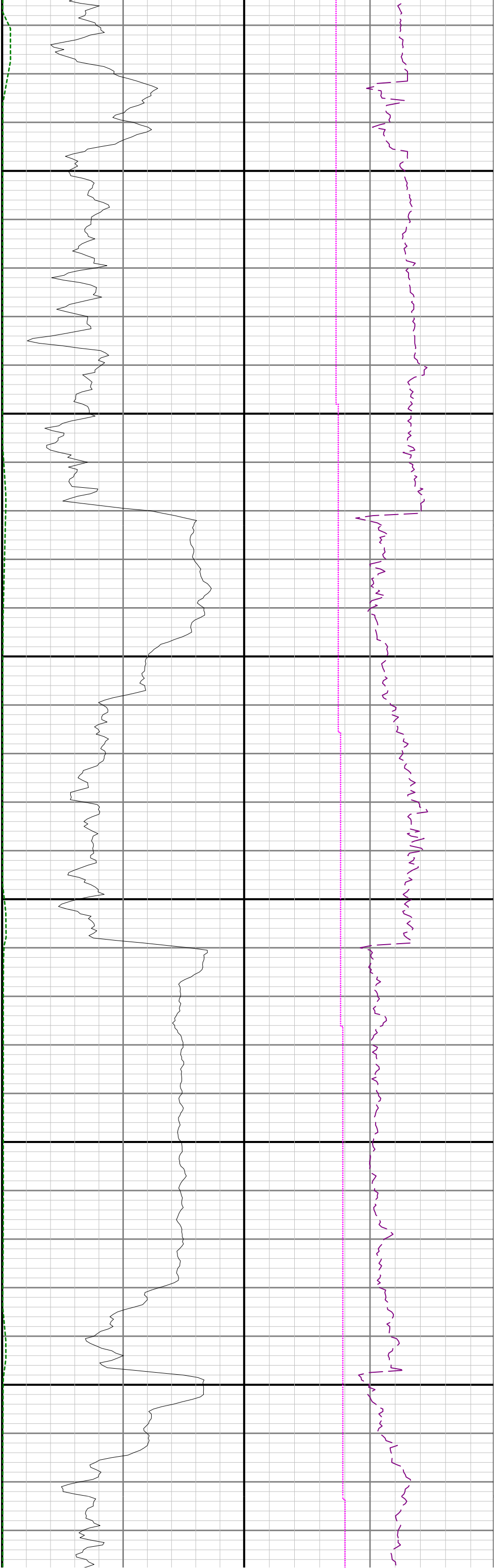
Curve Mnemonics			
Presented Curves		Description	Units

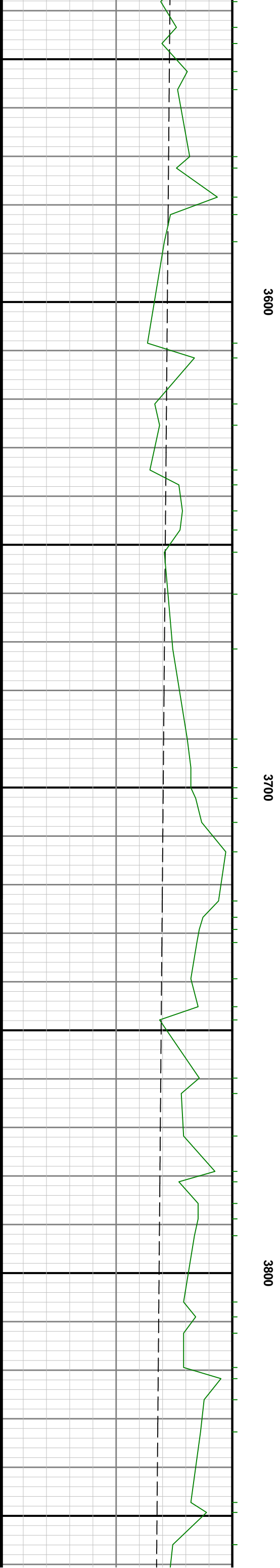
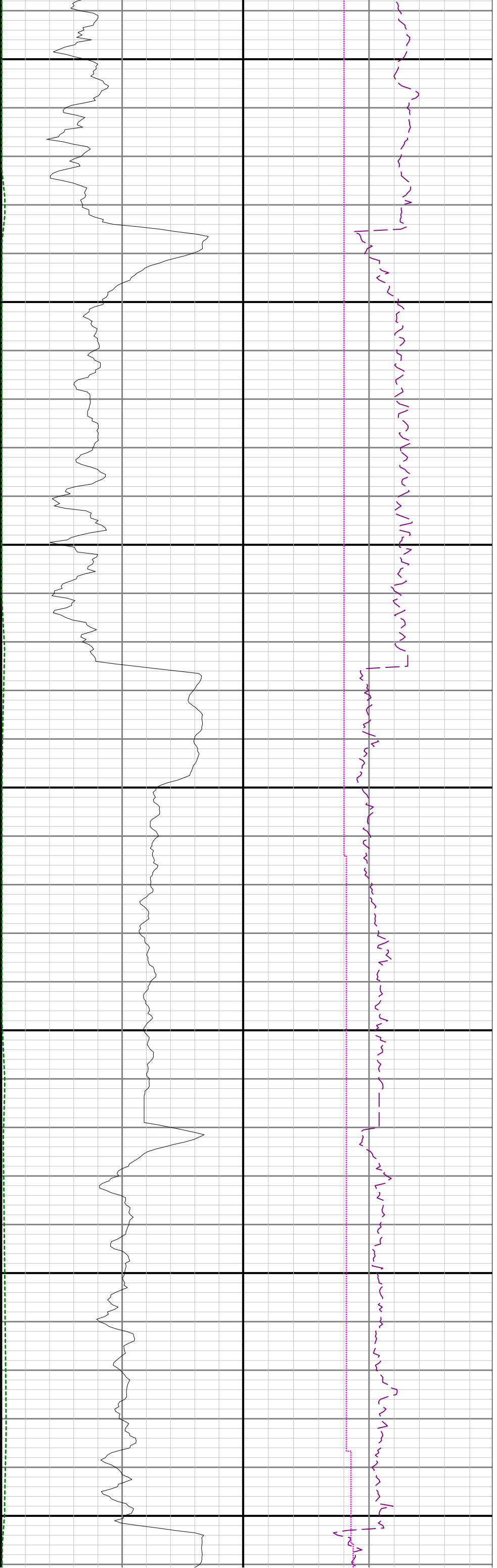
TCDX	Downhole Temperature	degF
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAX	Gamma Ray - Apparent - Real-Time 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator - Real-Time	unitless
GRTX	Gamma Ray - Time Since Drilled - Real-Time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

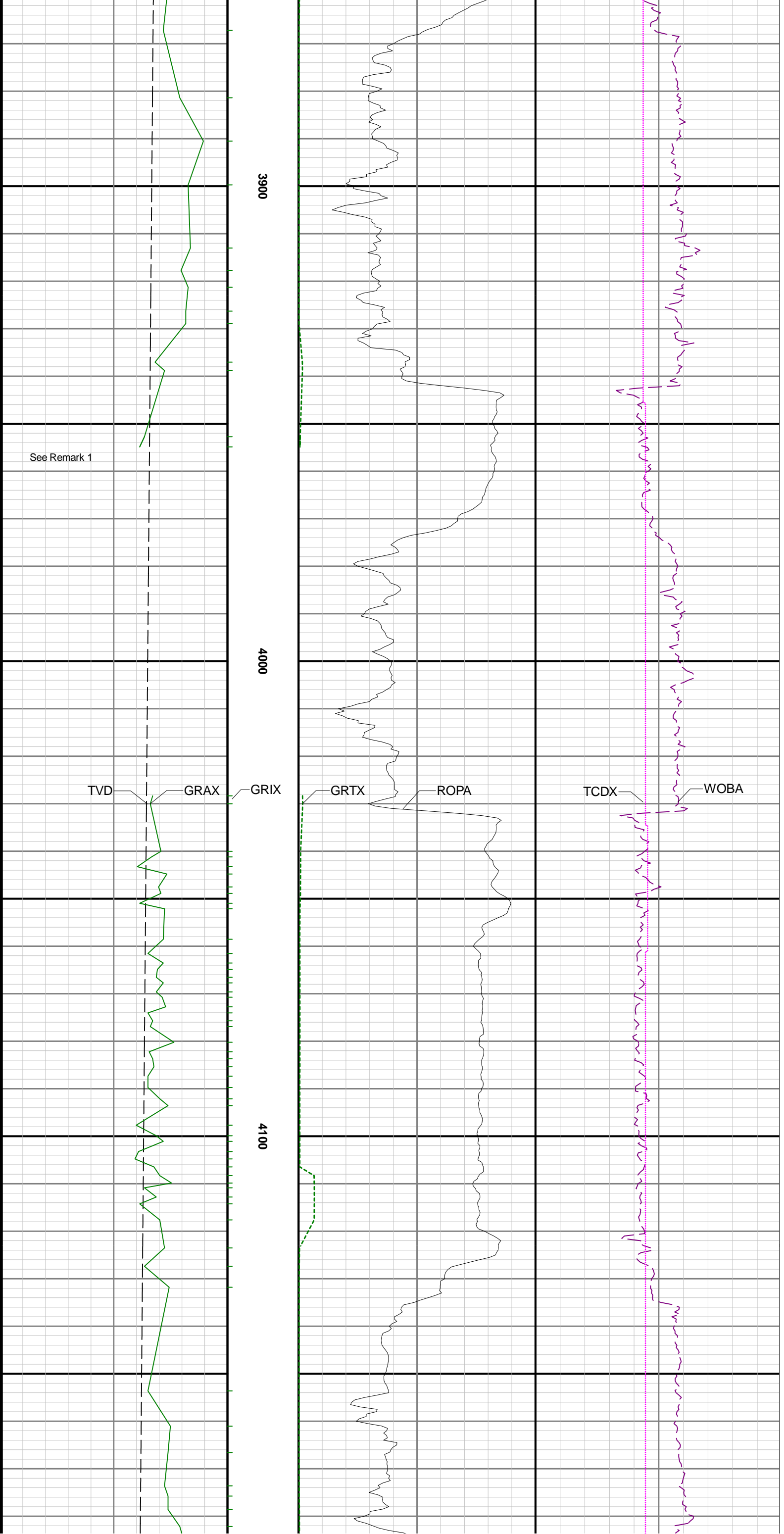












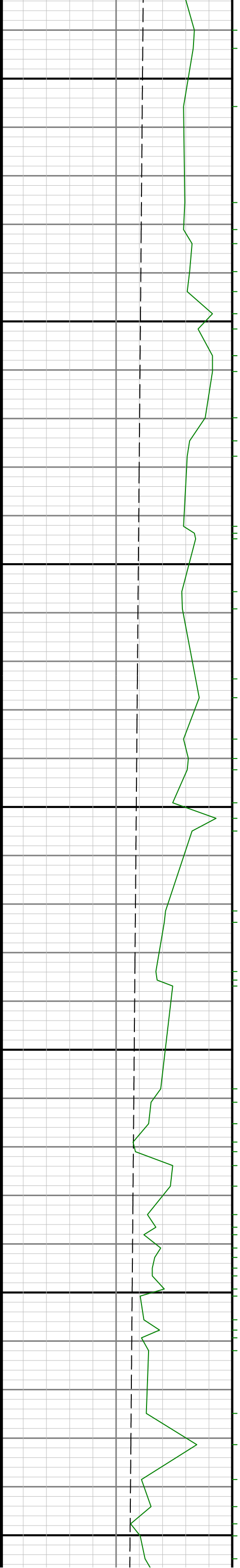


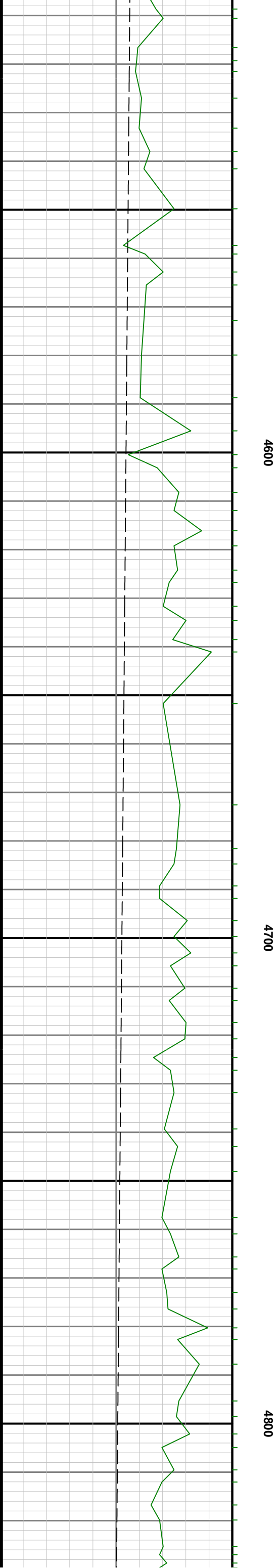
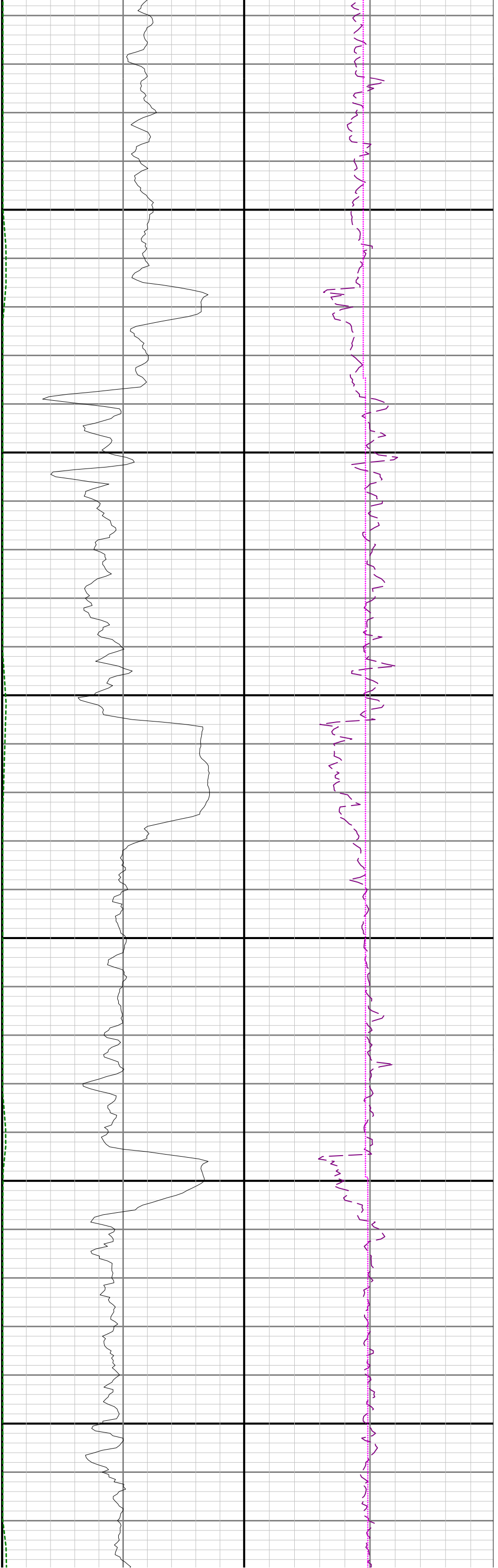
4200

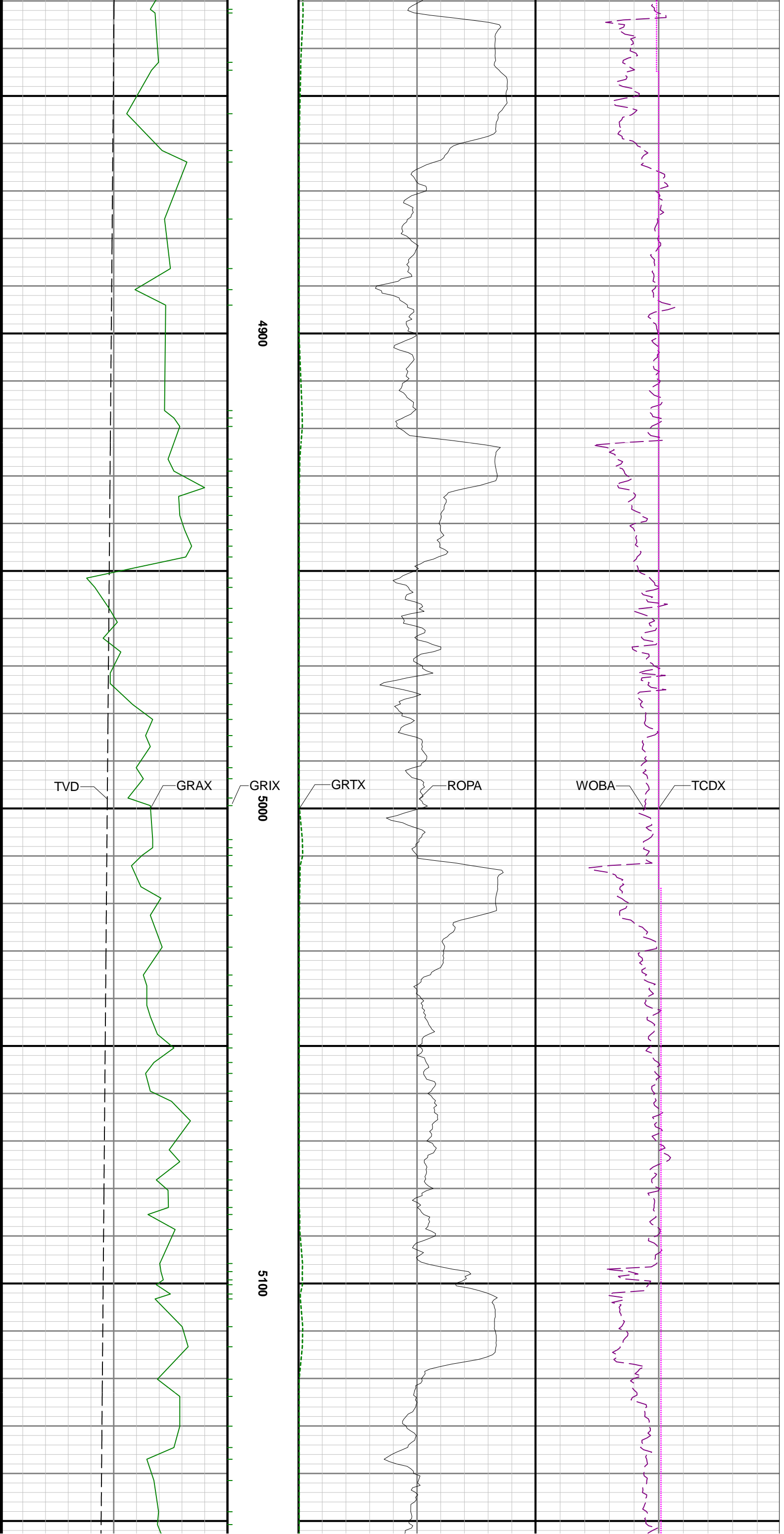
4300

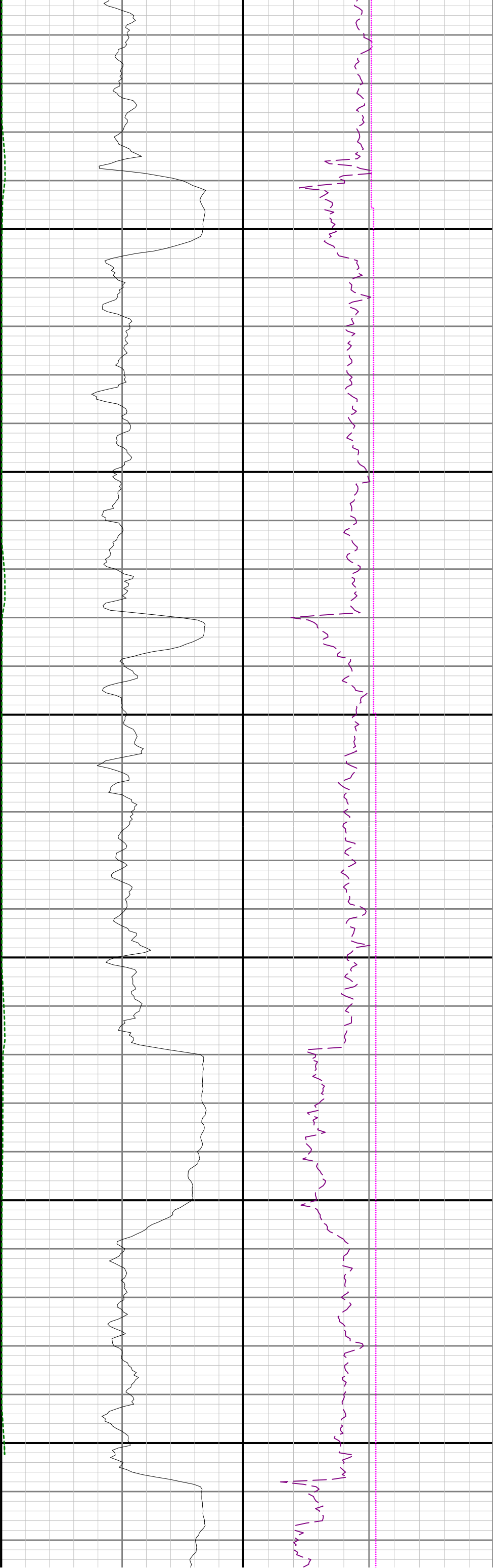
4400

4500





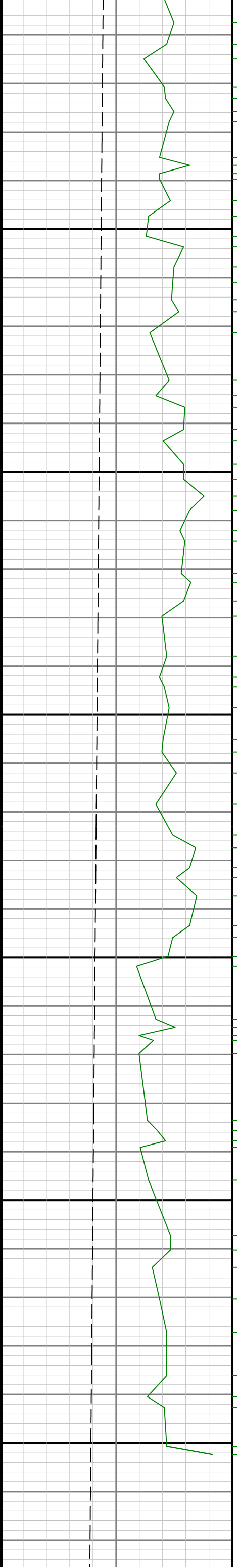


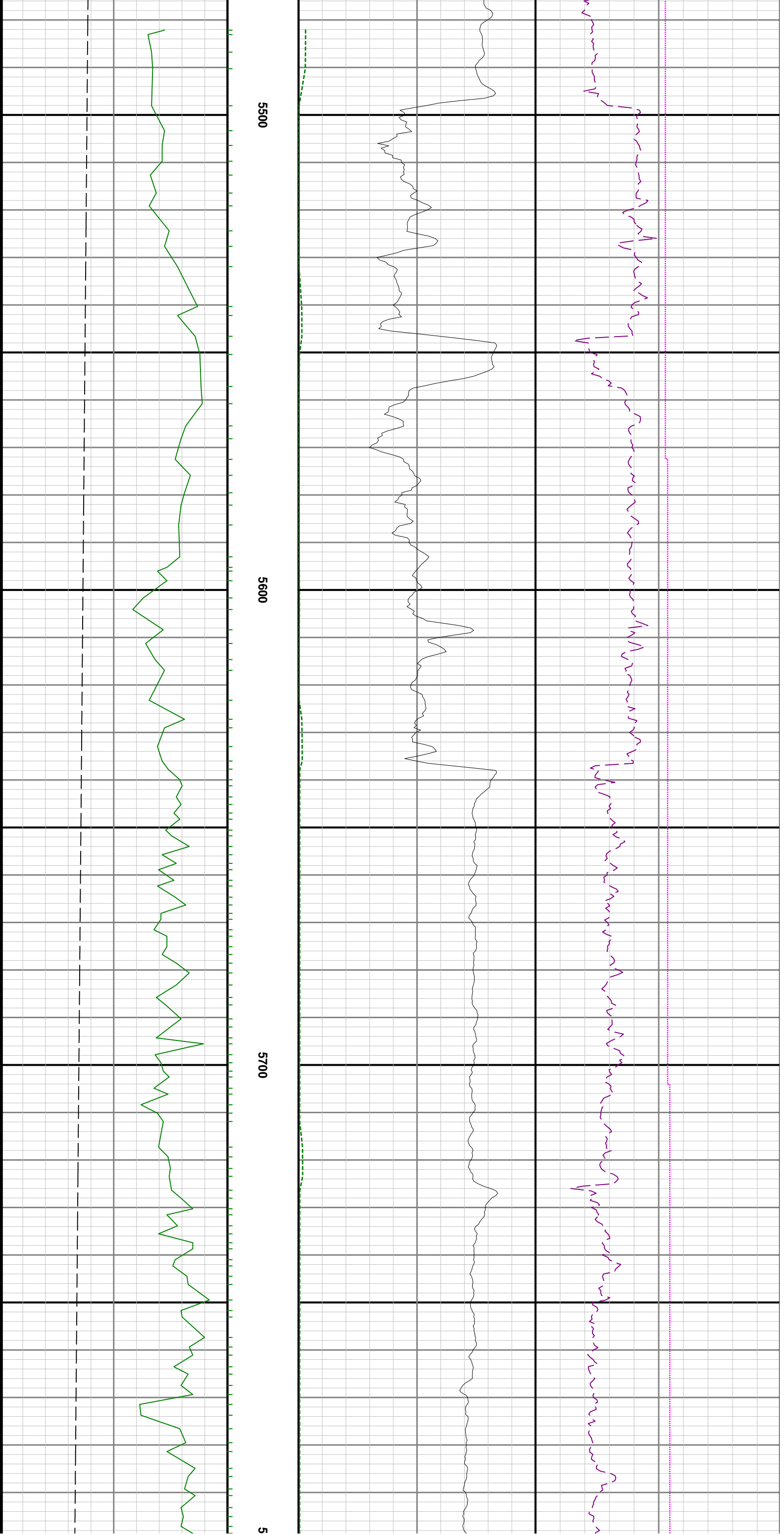


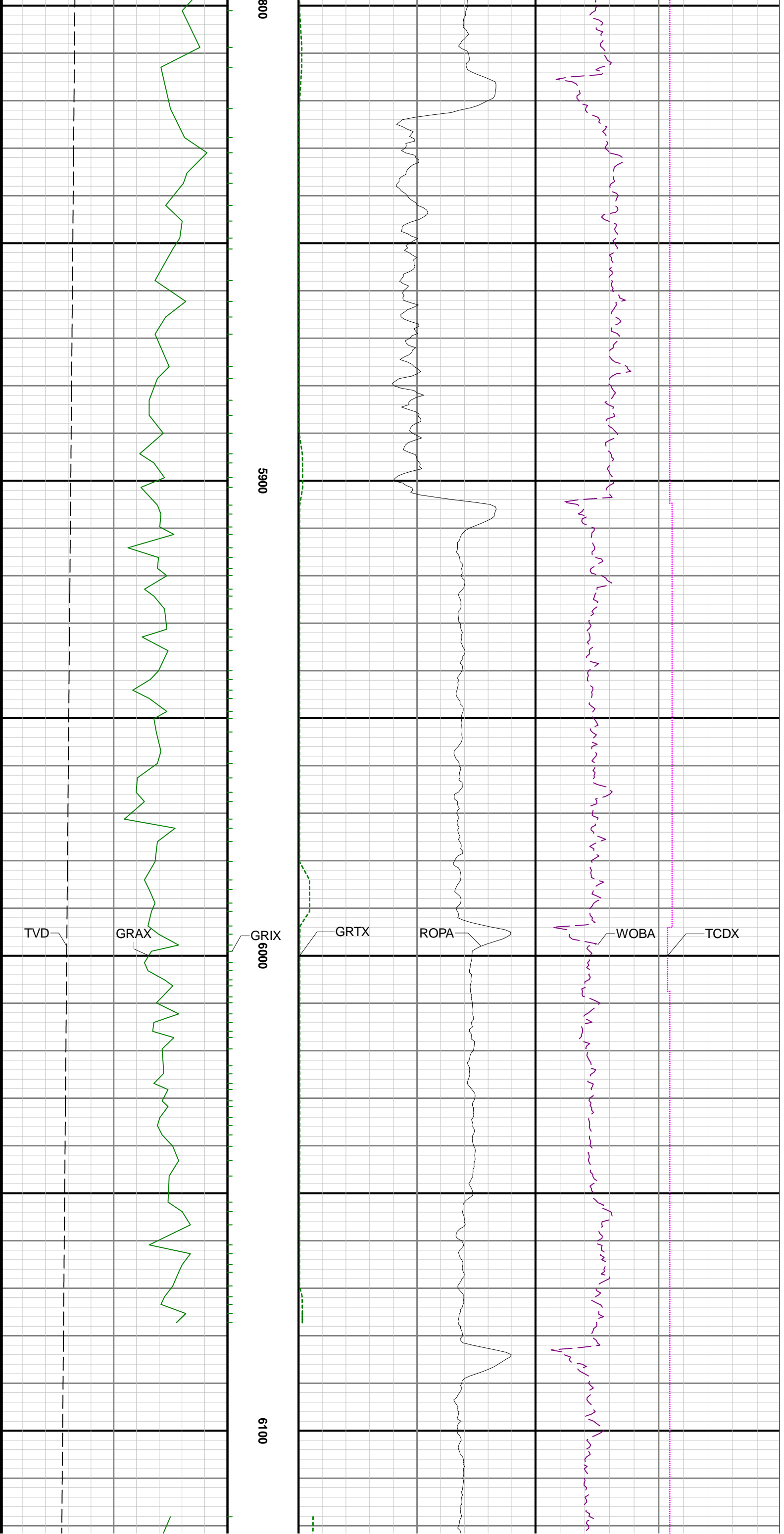
5200

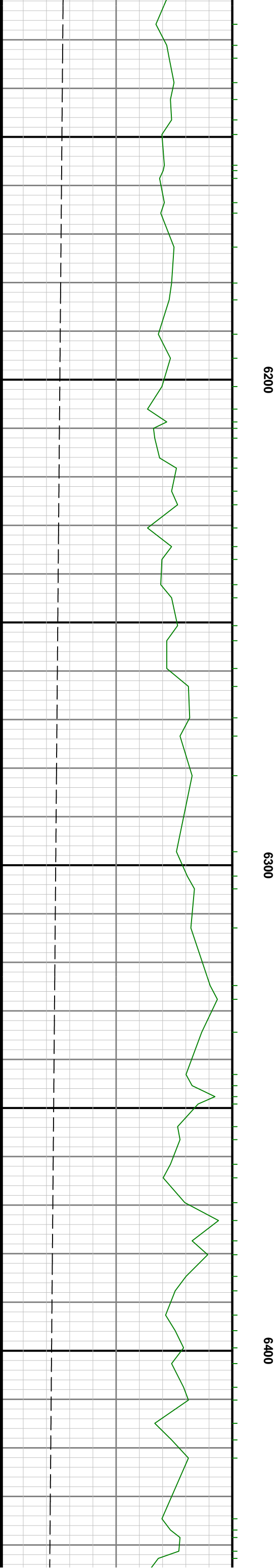
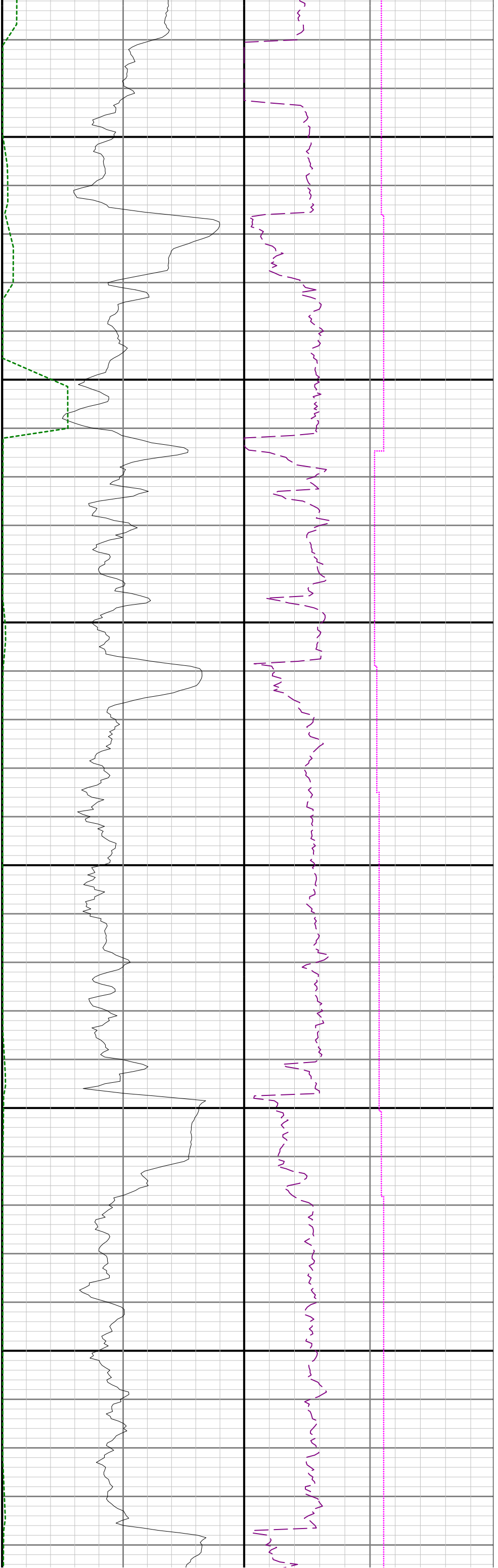
5300

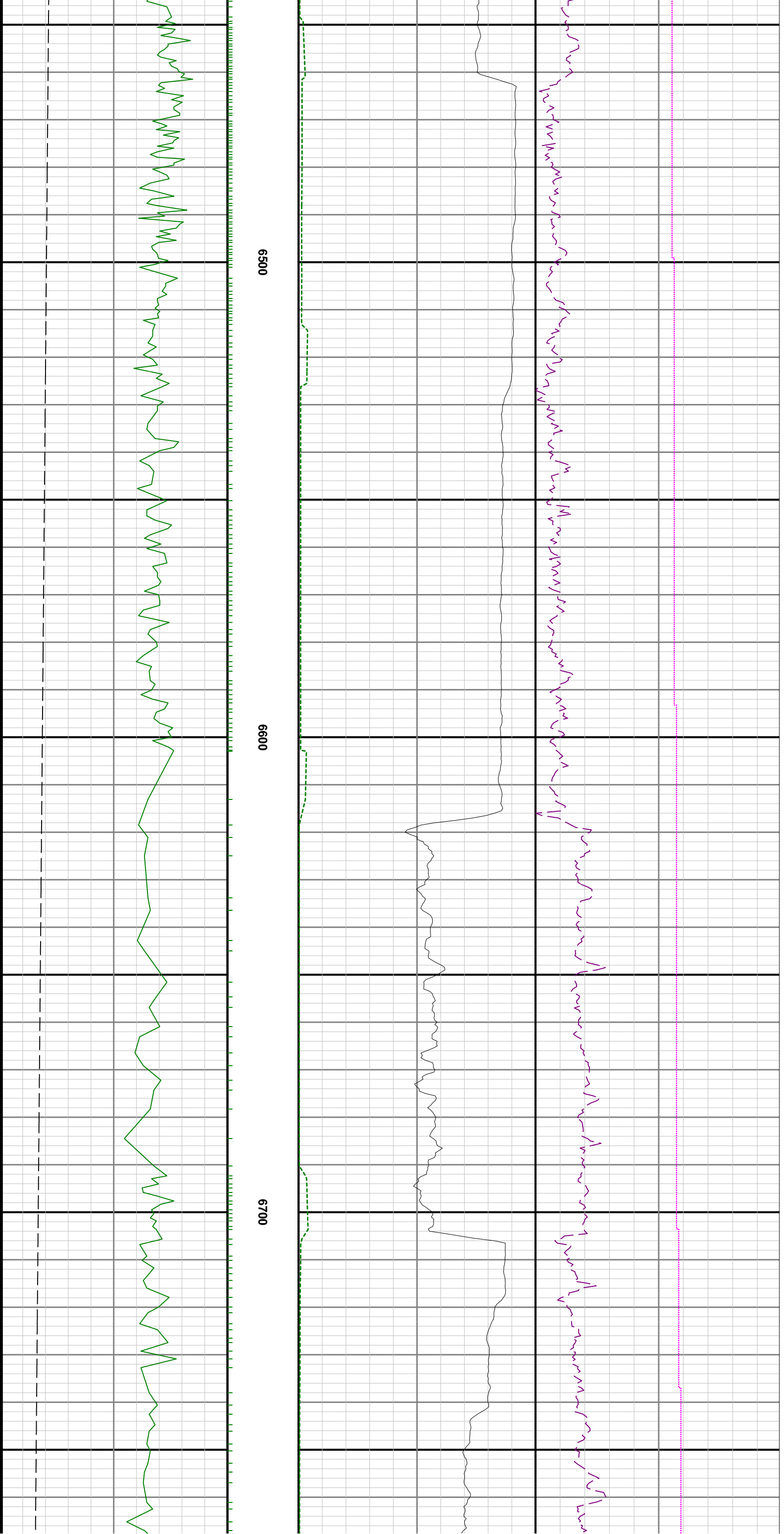
5400

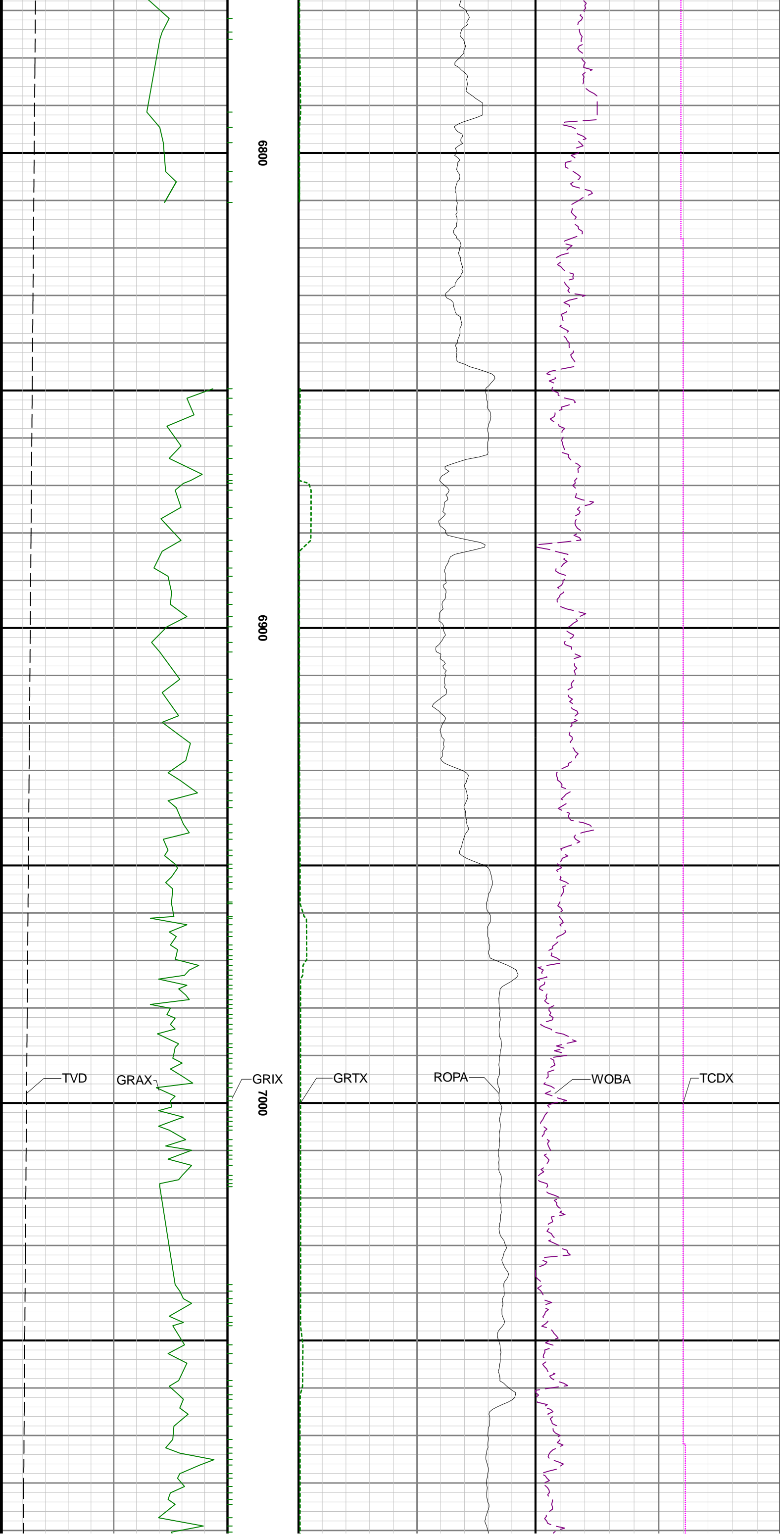


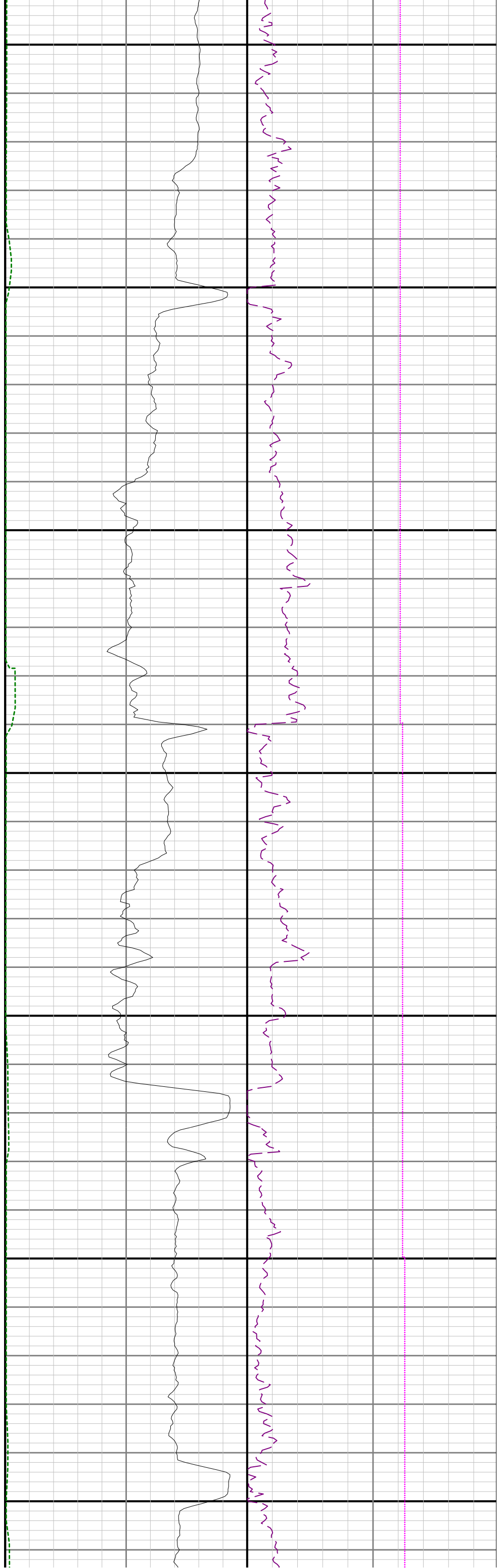










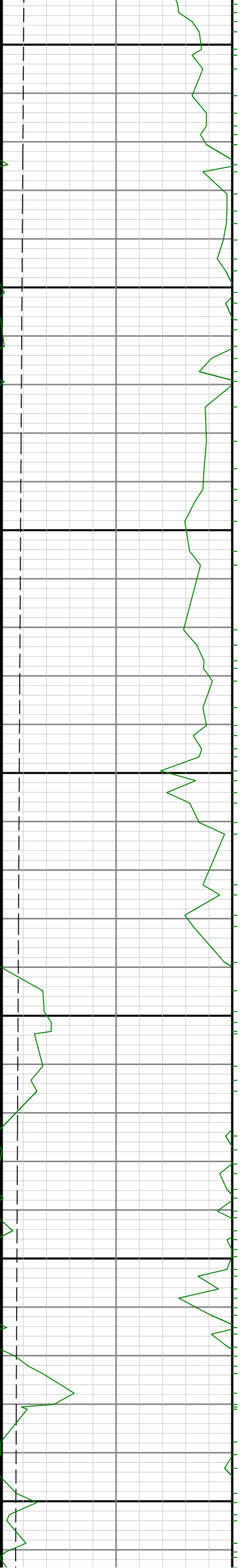


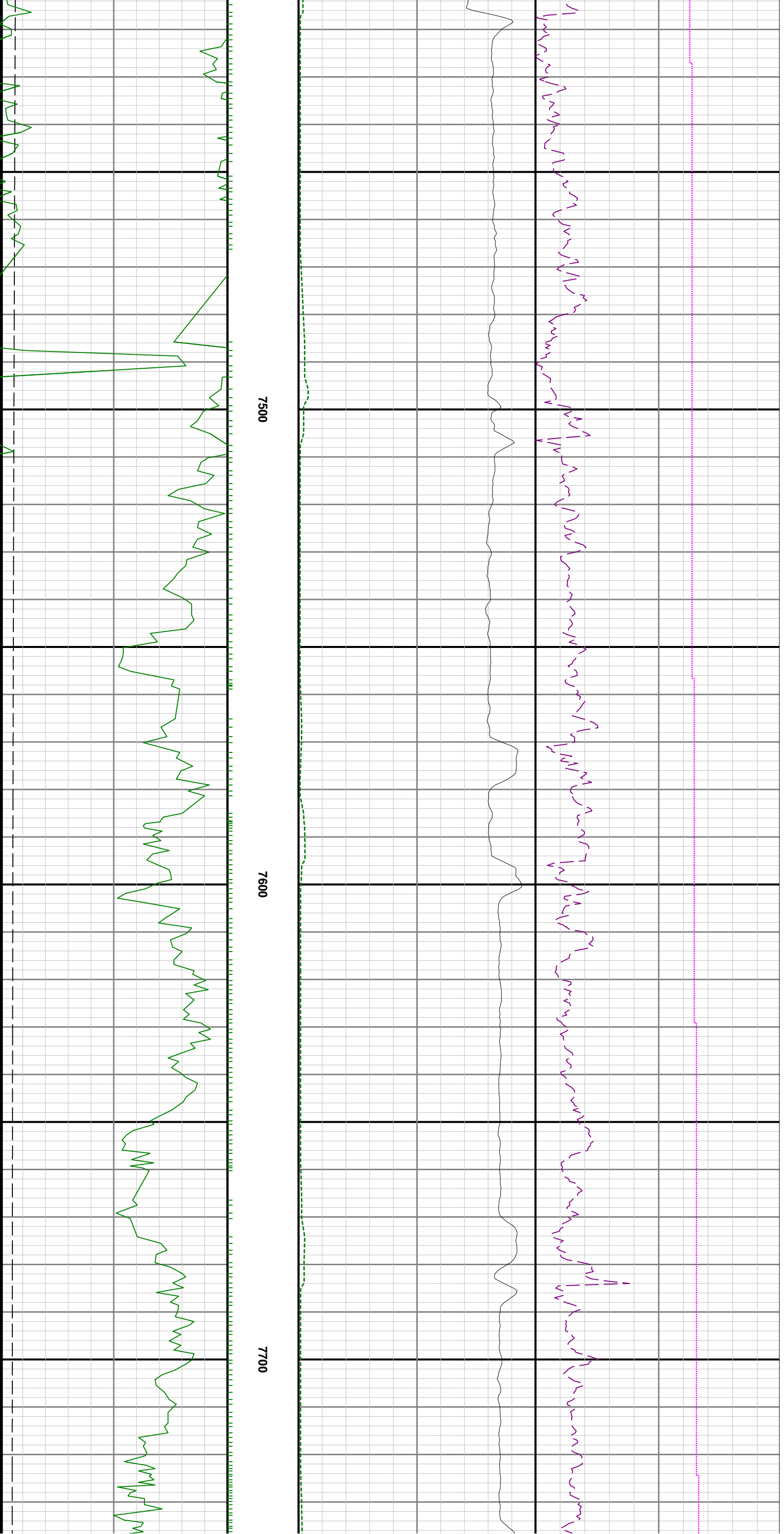
7100

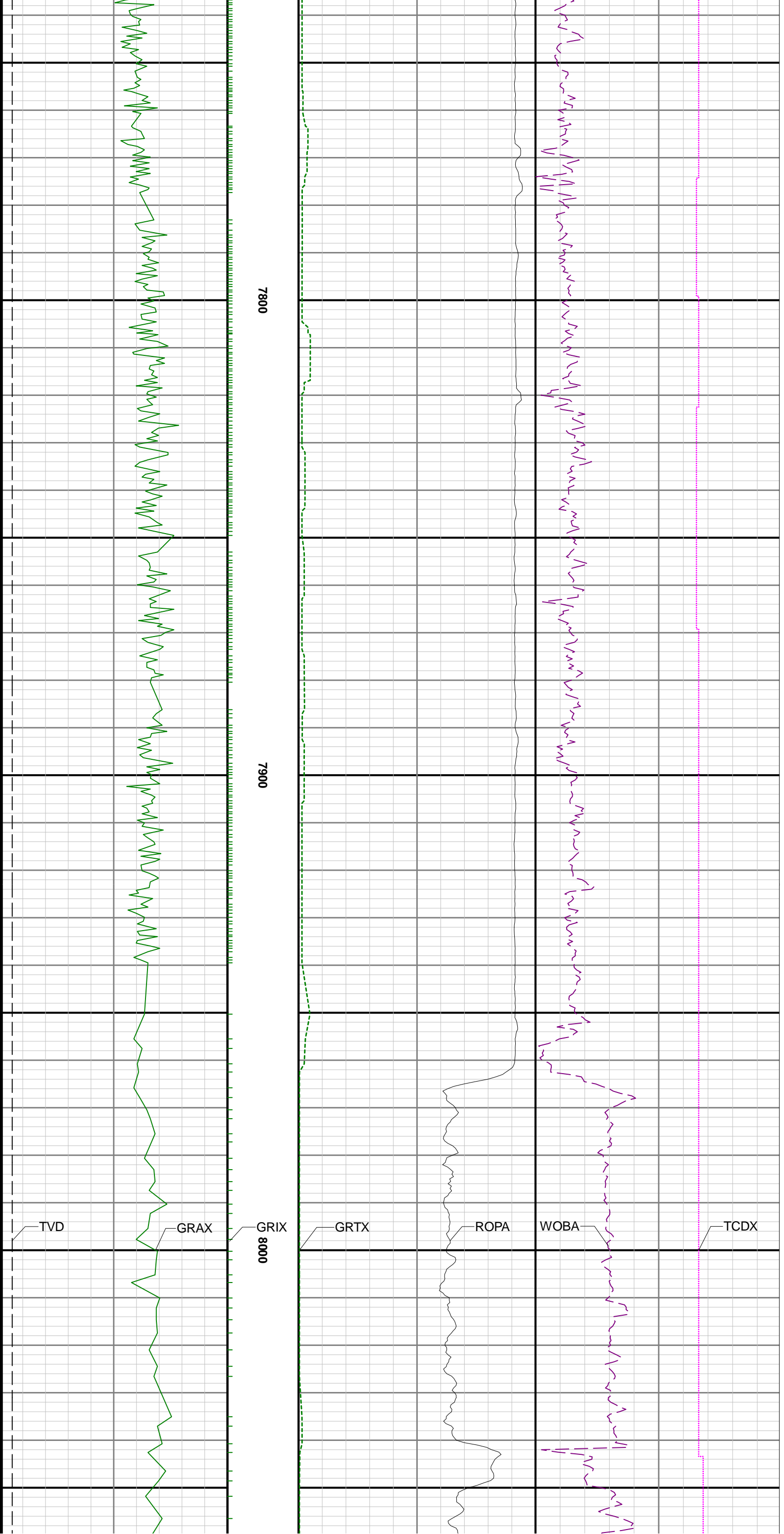
7200

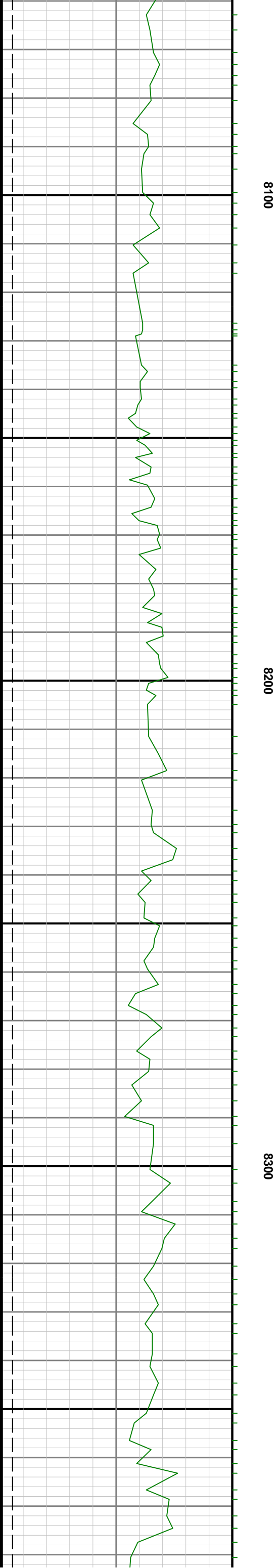
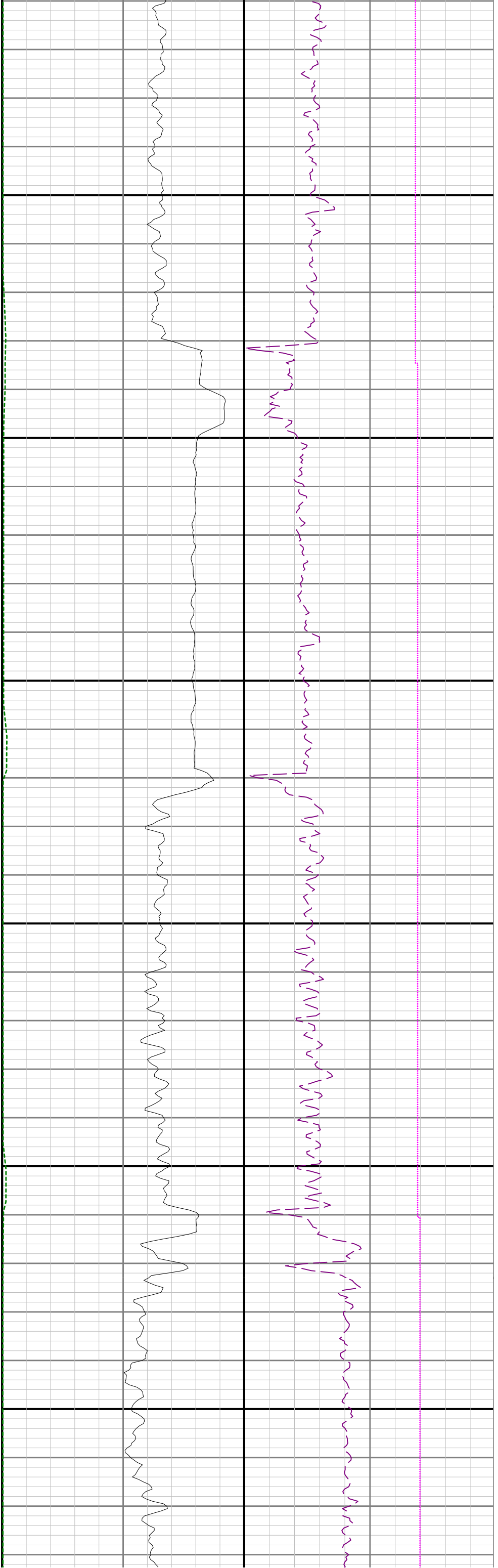
7300

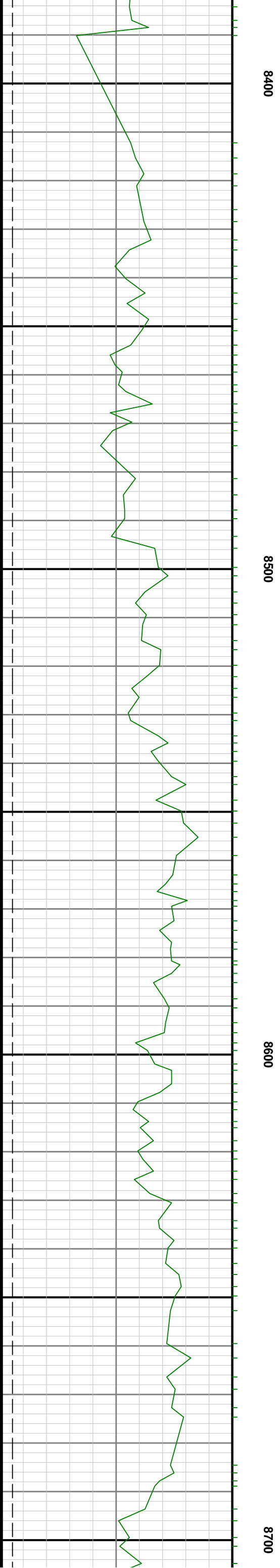
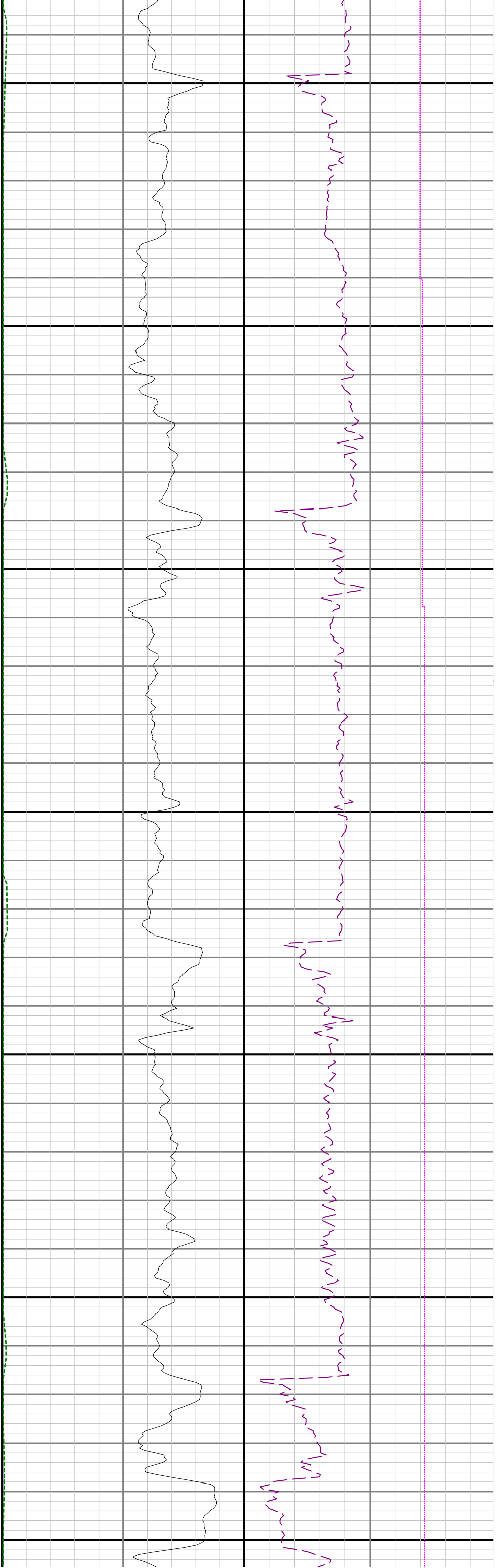
7400

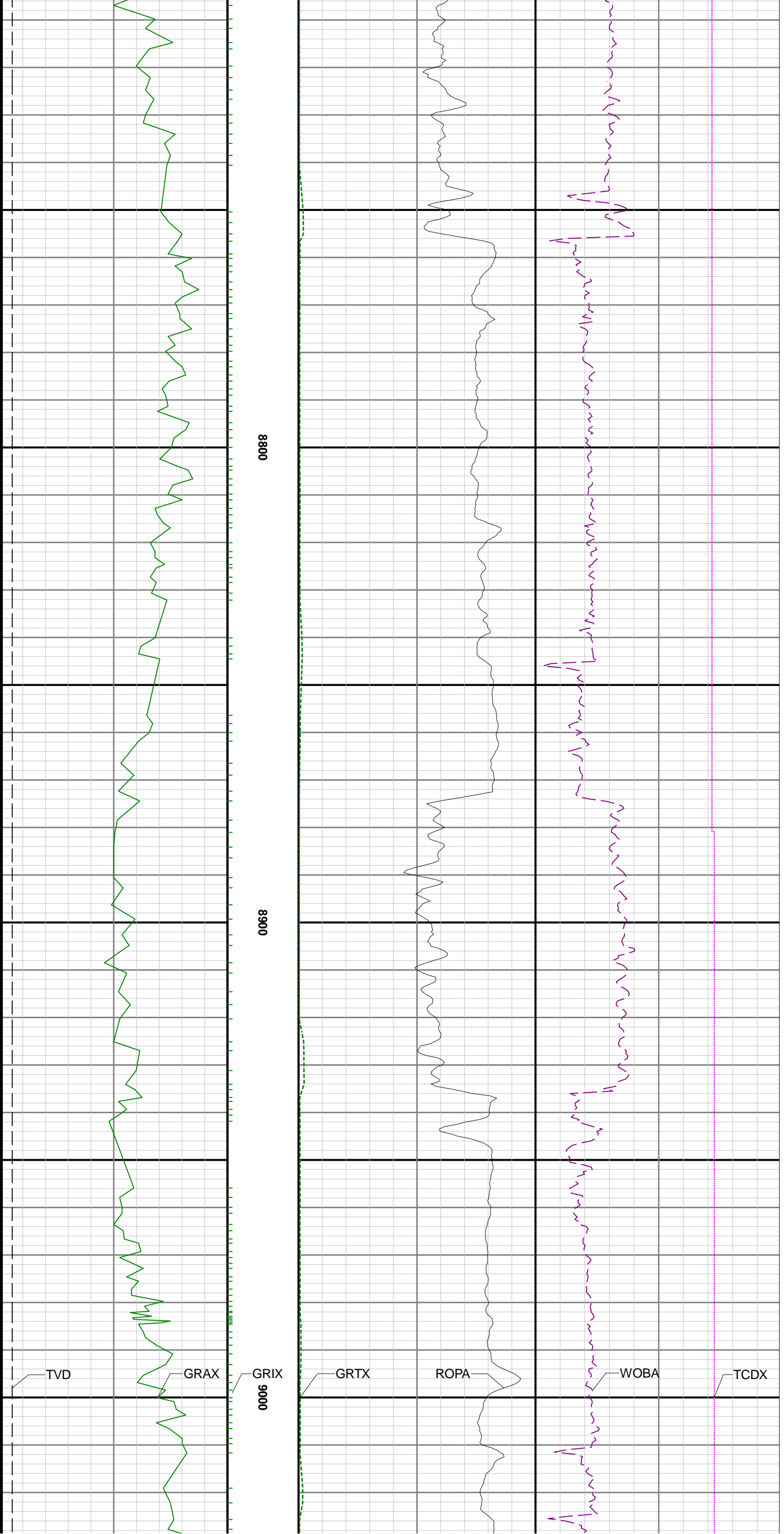


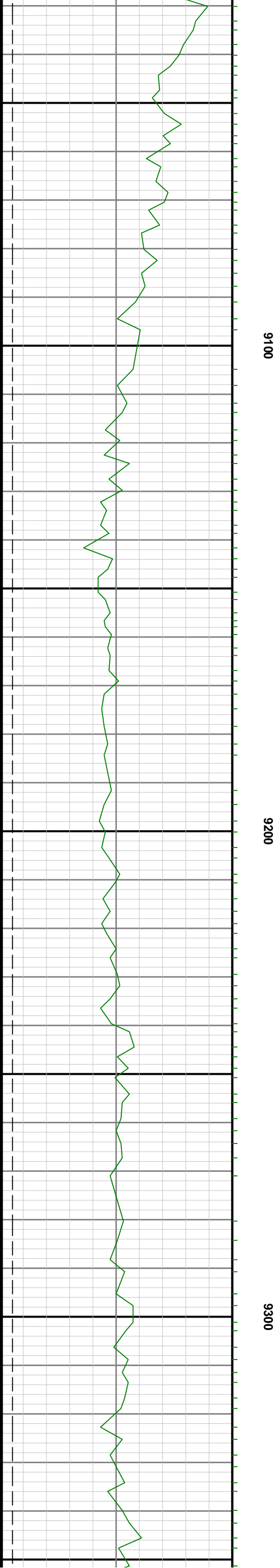
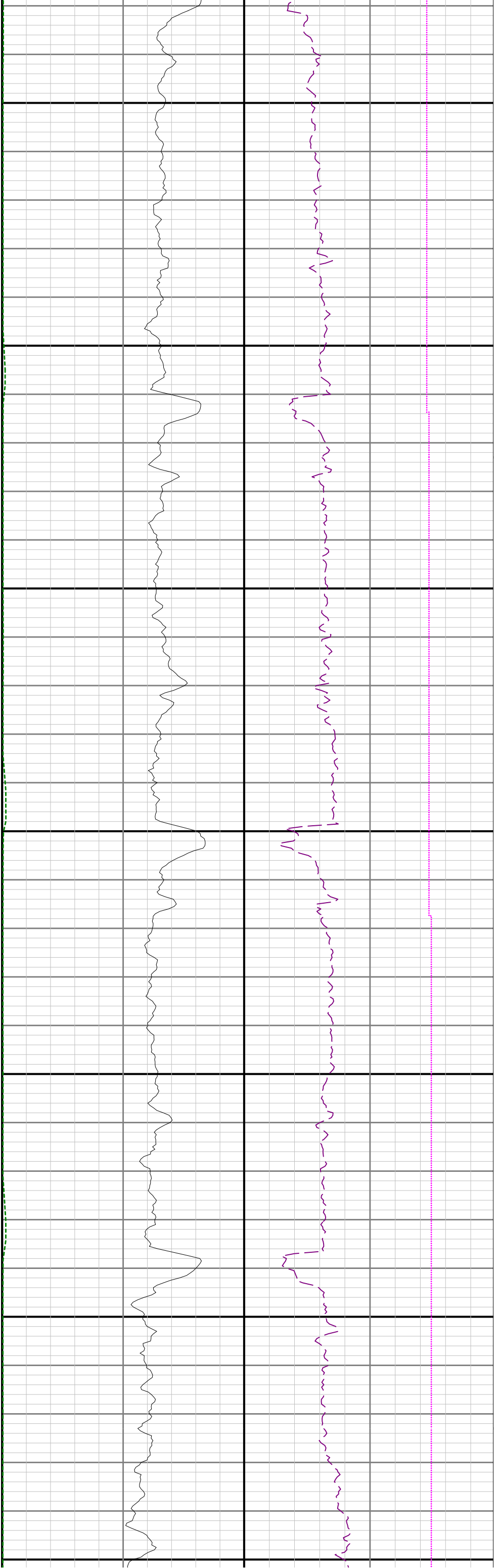


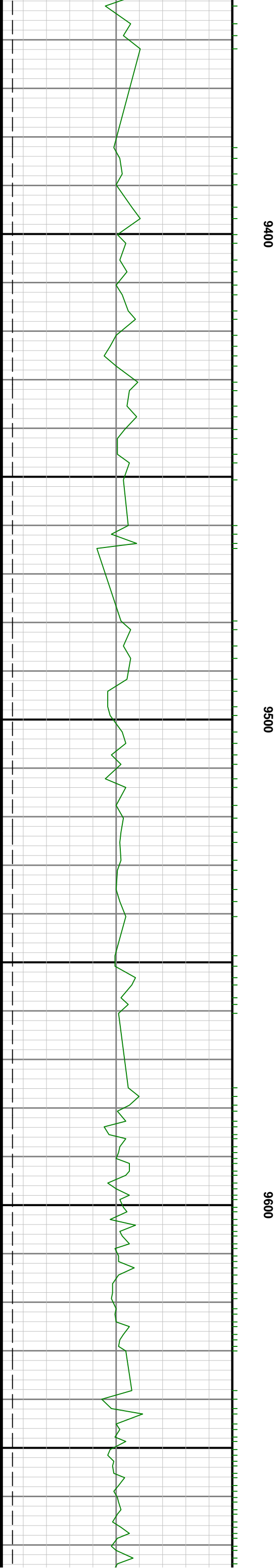
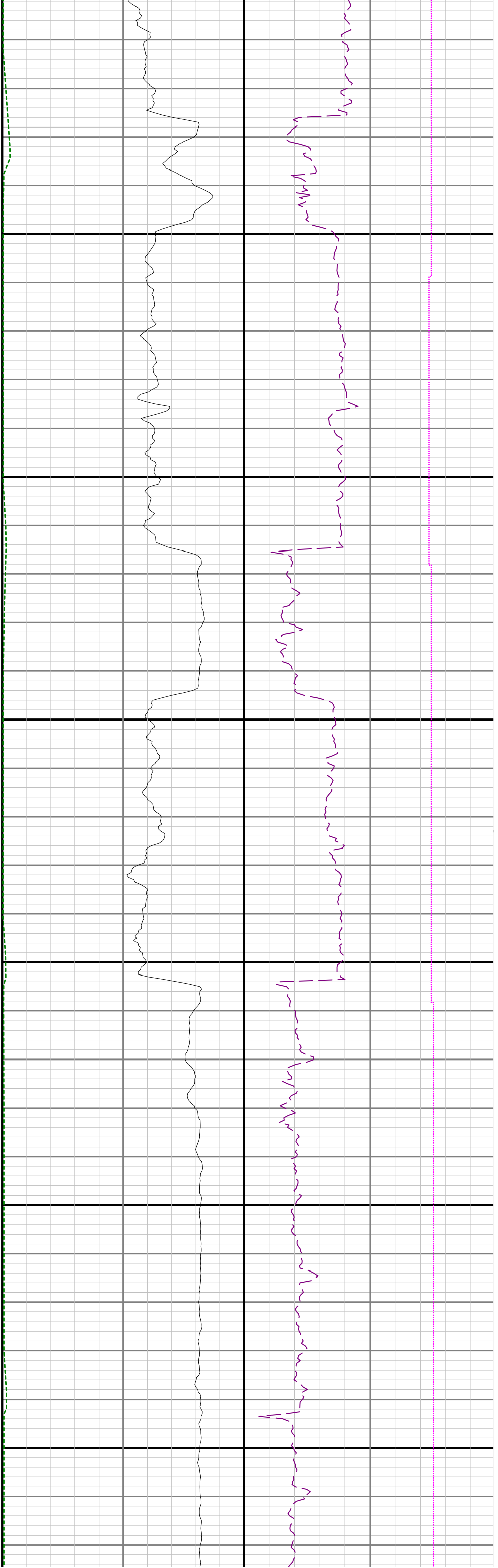


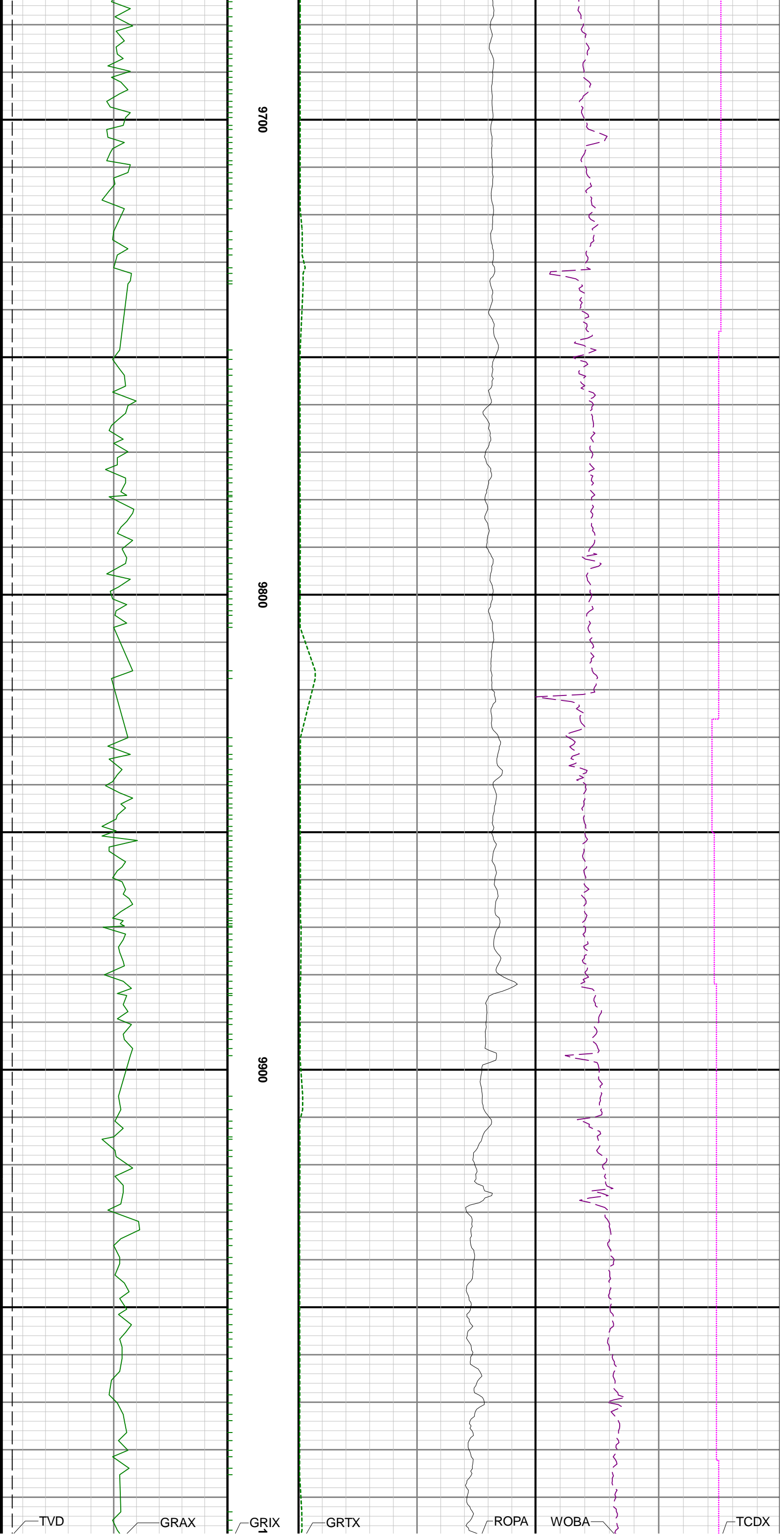


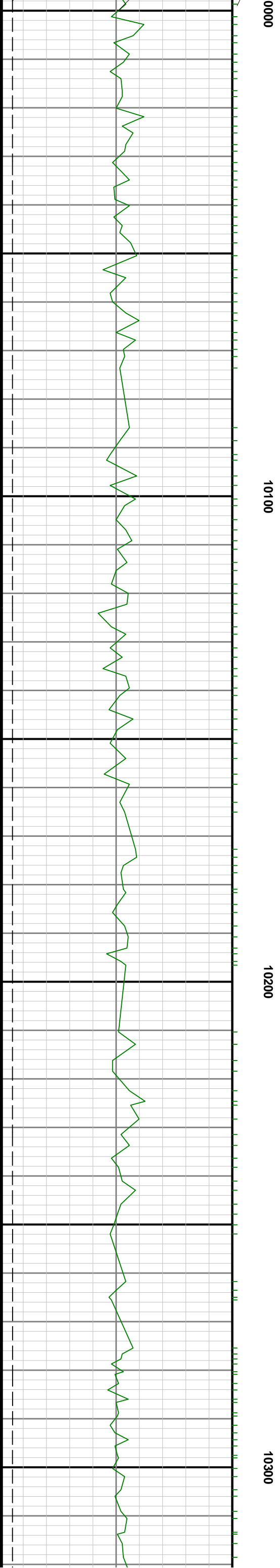


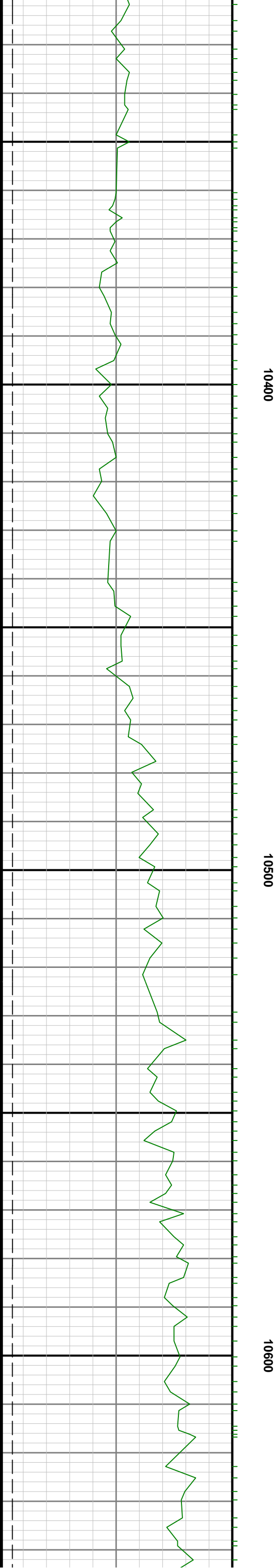


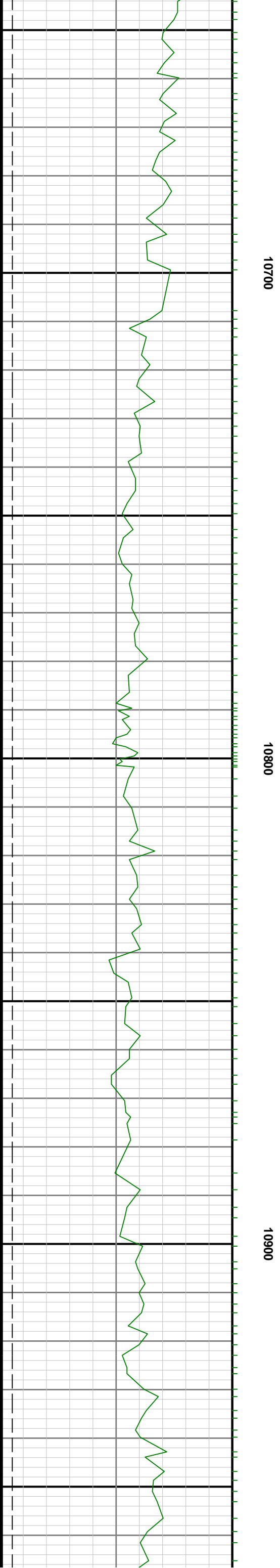
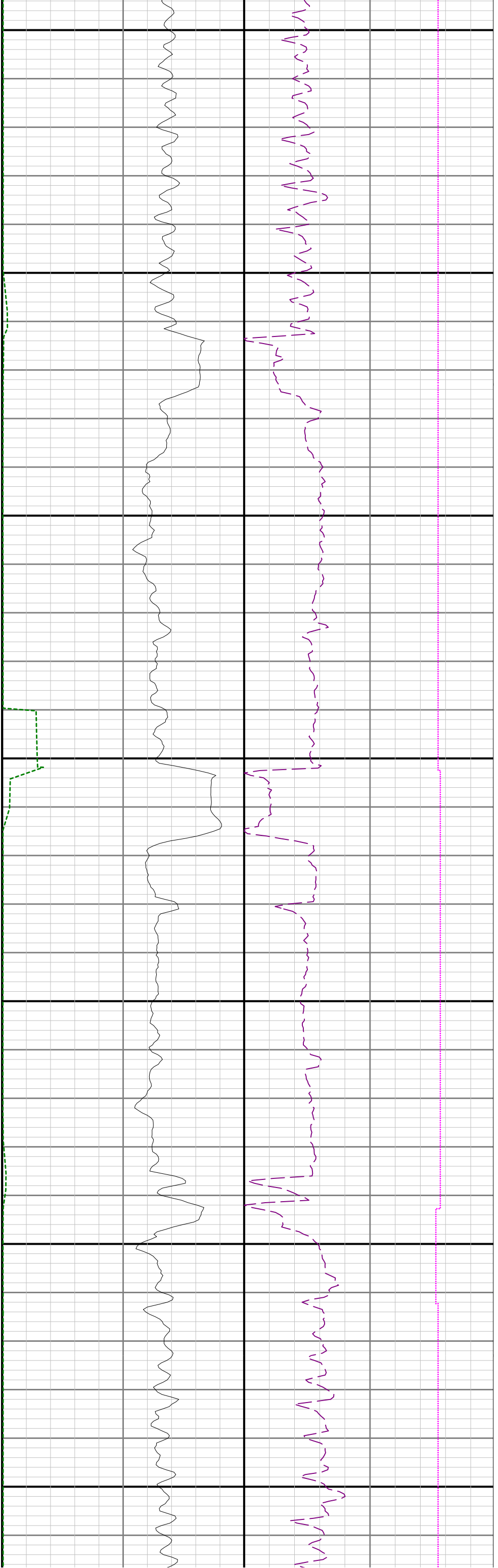


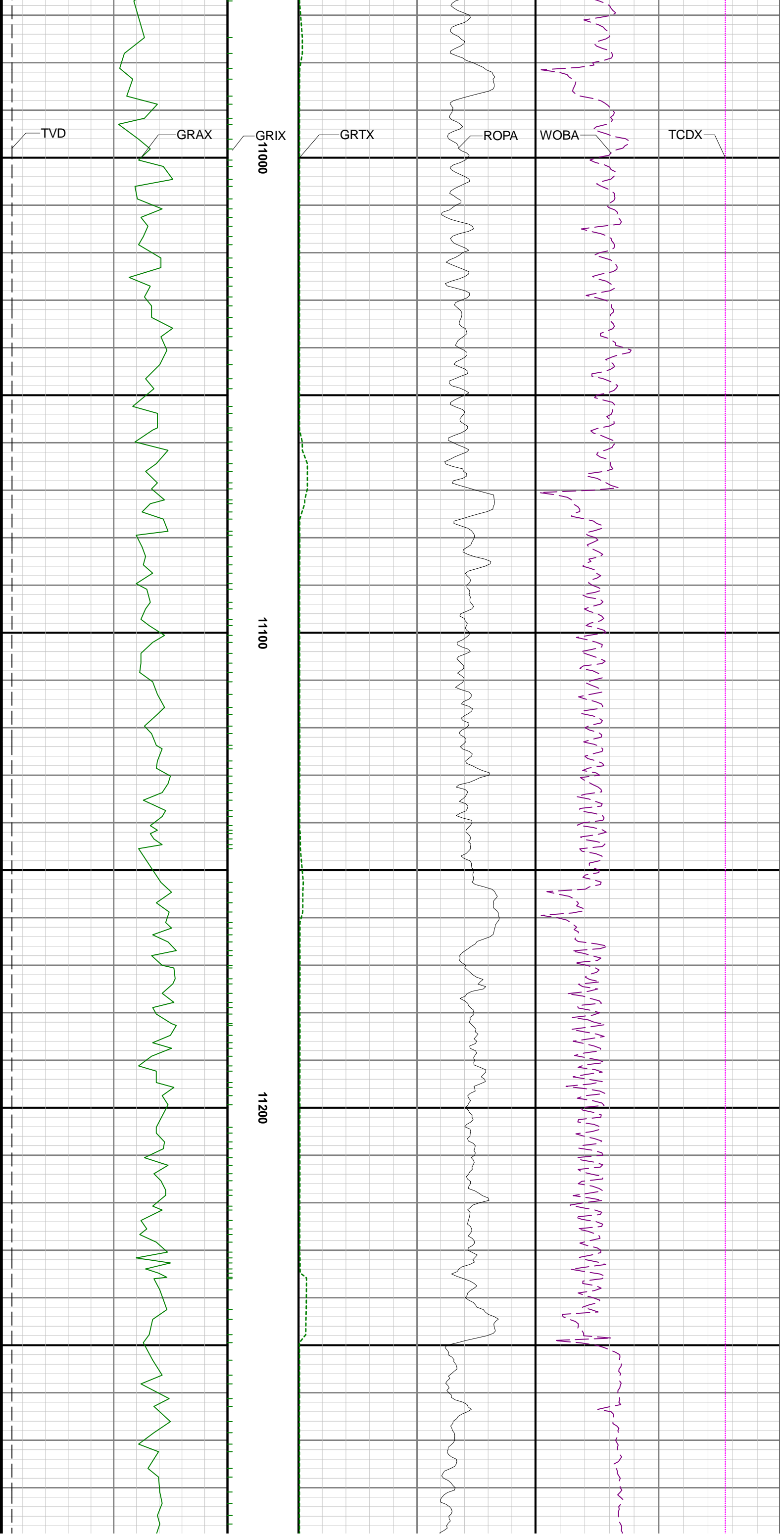


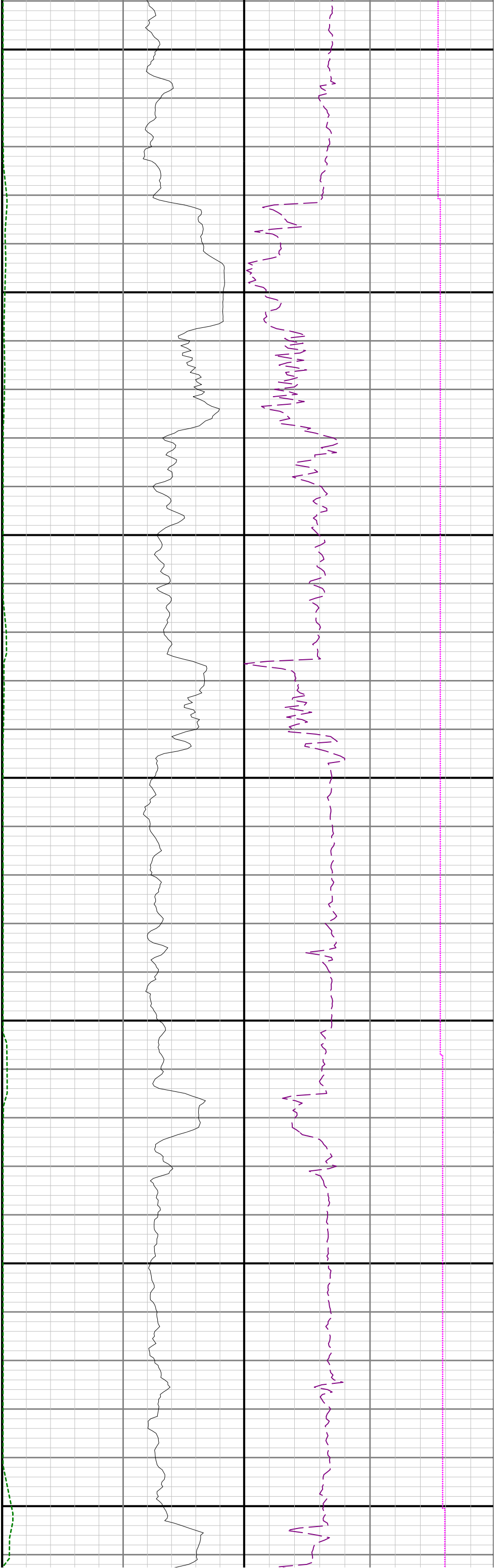












11300

11400

11500

11600

