



Realtime Log

Natural Formation Evaluation
Gamma Ray

Scale:

Company: Anadarko

Well: Cream 15C-28HZ

Field: Weld County

Region: Continental US Country: United States

1:240

Measured Depth

Status: Surface Location: Latitude: 40° 12' 9.970" N Longitude: 104° 39' 51.250" W

Final Print

API Number: 051 23409590000

Section: 28 TWN: 3N Range 65W

Other Services:

Directional VSS

Permanent Datum (P.D.): Ground Level Elevation: 4824.00 ft.

Log Measured From: Rig Floor 20.00 ft. Above P.D.

Depth Reference: Drillers Depth Elevations: KB: N/A DF: 4844.00 ft. GL: 4824.00 ft.

Interval Logged Dates Magnetic Field Reference

Top: 6500.0 ft. Date From: 28/Apr/15 Dip Angle: 66.88 ° Azi Reference North: True

Bottom: 12800.0 ft. Date To: 04/May/15 Total Mag to Reference

Spud Date: 28/Apr/15 Field Strength: 52531.0 nT North Correction: 8.47 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
8.750 in.	1212.0 ft.	7675.0 ft.	9.600 in.	36.00 lb/ft	Surface	1025.0 ft.
6.125 in.	7675.0 ft.	12800.0 ft.	7.000 in.	26.00 lb/ft	Surface	7645.0 ft.

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	12800.0 ft.	8.750 in.	7675.0 ft.	12.6 ° / 354.3 °	83.4 ° / 178.8 °
			6.125 in.	12800.0 ft.	89.8 ° / 179.4 °	88.4 ° / 182.4 °
					/	/
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig / Contractor: Precision 462	/ Precision Drilling
PATS	6.4.1.34	Job No: 7200196	/ D & E
		District / Unit: RMD	

INTEQ does not guarantee the accuracy or correctness of interpretations provided in or from this log. Since all interpretations are opinions based on measurements, INTEQ shall under no circumstances be responsible for consequential damages or any other loss, costs, damages or expenses incurred or sustained in connection with the use of any such interpretations. INTEQ disclaims all expressed and implied warranties related to this service. INTEQ's liabilities and obligations shall be governed by INTEQ's Standard Terms and Conditions.

Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Time (hrs.)
							Top (ft.)	Bottom (ft.)	From (ft.)	To (ft.)	Start	End	
1	1	1	8.750	PDC	3.500	Mud Motor	6500.0	7635.0	1212.0	7675.0	28/Apr/2015 02:15	30/Apr/2015 05:00	26.1
2	2	2	6.125	PDC	6.500	Mud Motor	7635.0	12747.0	7675.0	12800.0	01/May/2015 05:00	04/May/2015 01:00	33.1

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Andy King	28/Apr/2015	01/May/2015	Donald Delay	01/May/2015	04/May/2015	Mike Gurnsey	01/May/2015	04/May/2015
Jake Miller	28/Apr/2015	04/May/2015	Ed Beatty	28/Apr/2015	01/May/2015	Bill Herbers	28/Apr/2015	04/May/2015

Mud Properties Record

Date / Time	LWD	Measured	Mud	Density	Viscosity	pH	Fluid	Oil /	Source	Total	K+
	Run No.	Depth	Type	(lb/gal)	(s/qt)		Loss	Water		Chlorides	
		(ft.)					(cc)			(mg/L)	(%)
28/Apr/2015 00:00	1	5342.0	Water Based	9.6	58	9.0	5.2	1/91	Suction	400	N/A
29/Apr/2015 18:00	1	7264.0	Water Based	10.0	61	9.1	5.0	2/89	Suction	200	N/A
01/May/2015 23:30	2	7709.0	Water Based	9.6	61	9.0	5.0	1/92	Suction	200	N/A
02/May/2015 06:00	2	10093.0	Water Based	9.7	71	9.3	4.0	2/90	Suction	200	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRTX	Gamma Ray Time Since Drilled	min.
GRIX	Gamma Ray Data Density	points
GRSI	Gamma Ray Slide Indicator	unitless
ROPA	Rate of Penetration, 3.0 ft. Avg.	ft/hr
TCDX	Downhole Temperature	Deg. F
TVD	True Vertical Depth	Ft.
WOBA	Surface Weight on Bit, 1.0 ft. Avg.	klbs.

Equipment and Service Data

LWD	Tool	Serial	Measurement	Bit	Max	Min
Run		Number		Offset	O.D.	I.D.
No.				(ft.)	(in.)	(in.)
1	DIR	12042365	Directional	45.18	6.750	3.250
1	SRIG	12822065	Gamma	41.81	6.750	3.250
2	DIR	12373461	Directional	51.86	4.750	2.750
2	SRIG	12131409	Gamma	48.44	4.750	2.750

Service and Tool Mnemonics

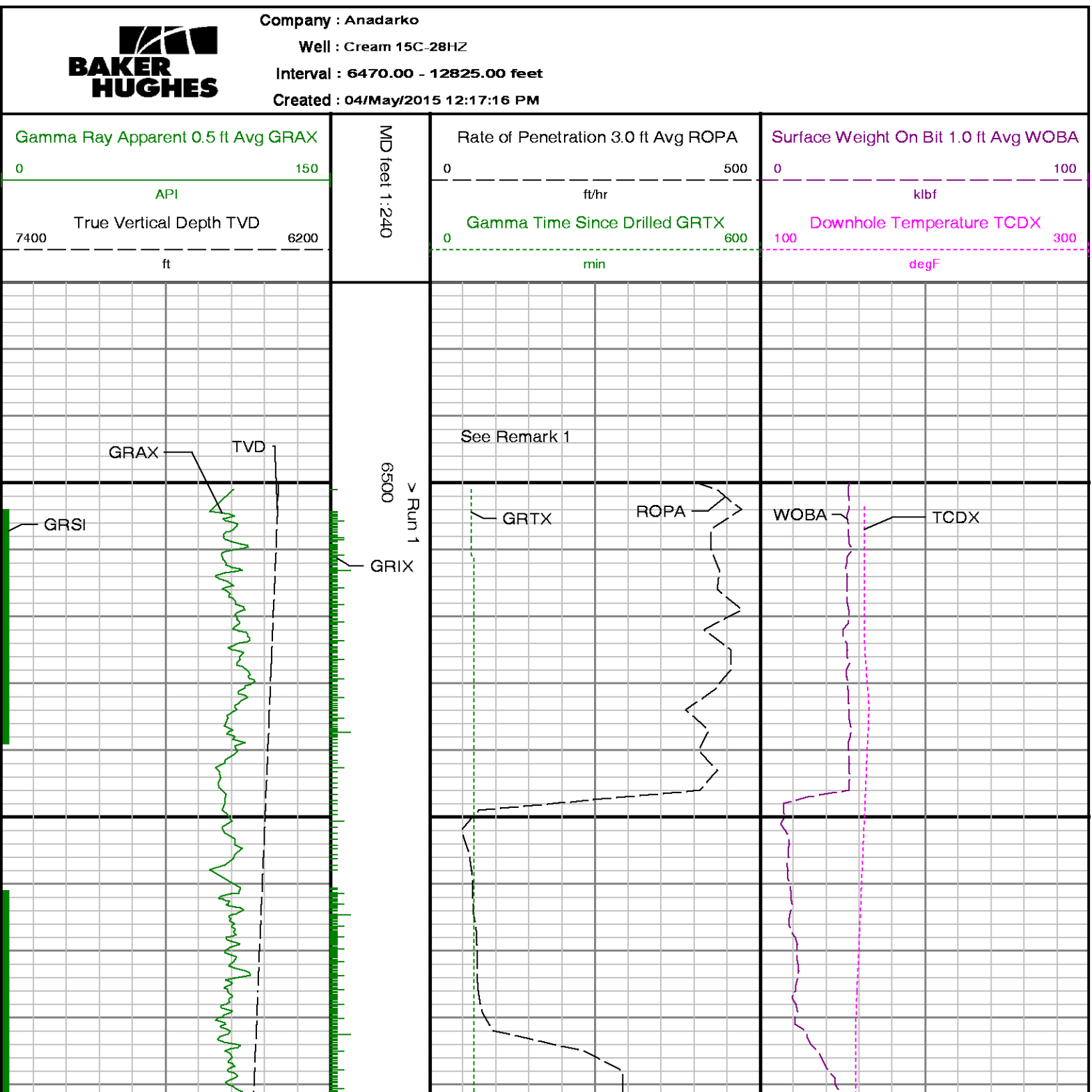
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

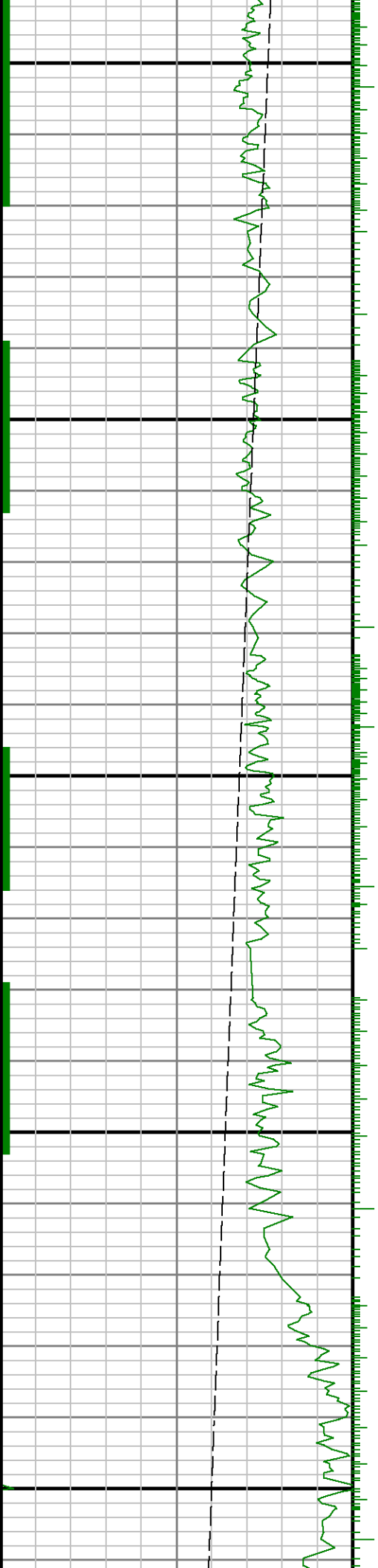
Comments

<p>1.) Baker Hughes Run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1212 to 7675 feet MD (1203.71 to 7138.39 feet TVD).</p> <p>2.) Baker Hughes Run 2 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerabe assembly from 7675 to 12800 feet MD (7138.39 to 7169.87 feet TVD).</p> <p>3.) Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.</p> <p>4.) A sliding indicator is shown on the left edge of track 1 as a heavy line. This indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.</p>

Remarks

Number	Measured	Hole	LWD	Remark
	Depth (ft.)	Section (in.)	Run No.	
1	6500	8.750	1	Began logging Gamma above Build Section at 6500 feet MD (6388.60 feet TVD)
2	7655	8.750	1	The interval from 7630 to 7675 feet MD (7134.79 to 7138.39 feet TVD) was logged up to 30 hours after being drilled due to casing operations.
3	12790	6.125	2	The interval from 12747 to 12800 feet MD (7168.72 to 7169.87 feet TVD) contains no logging data due to sensor to bit offset.

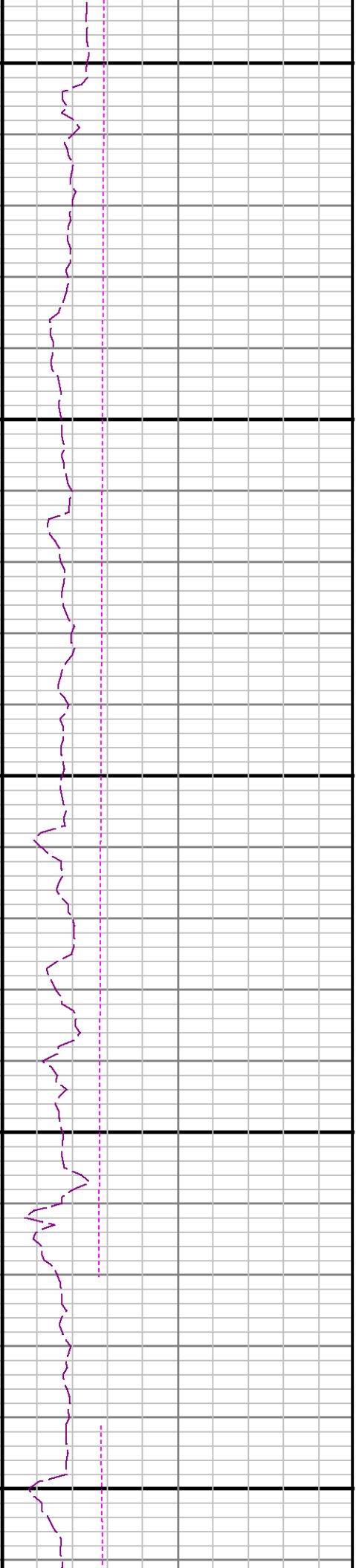
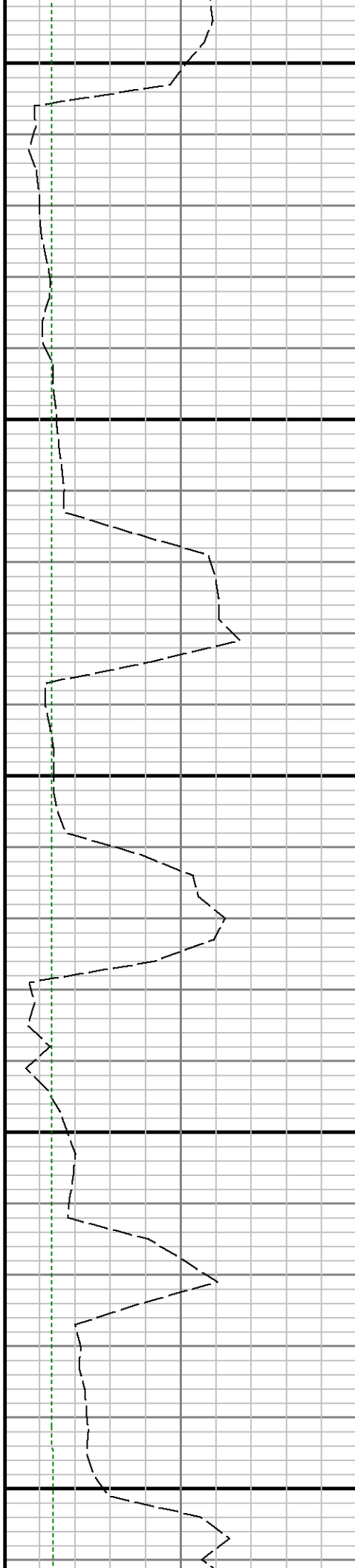


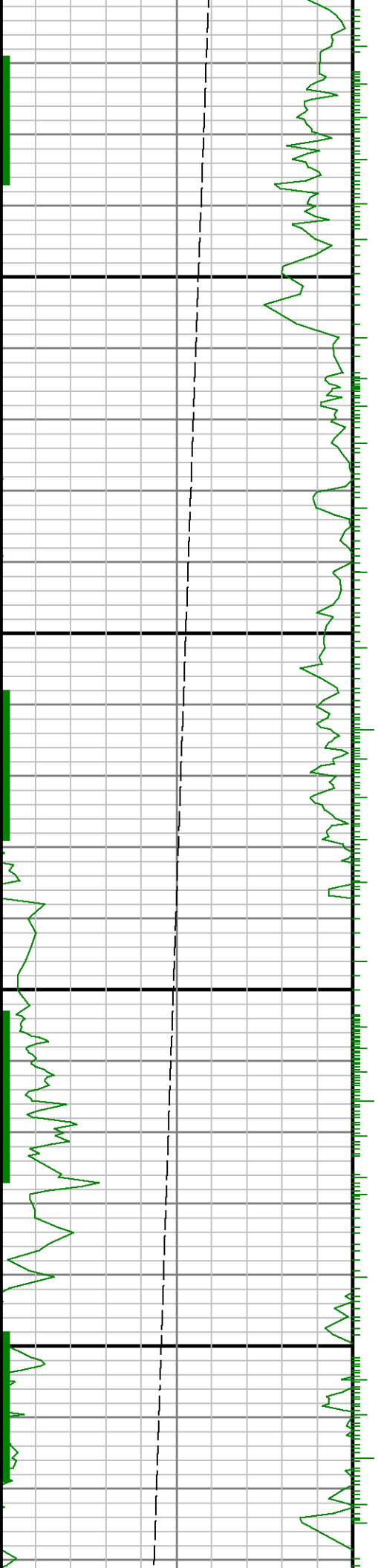


0099

6700

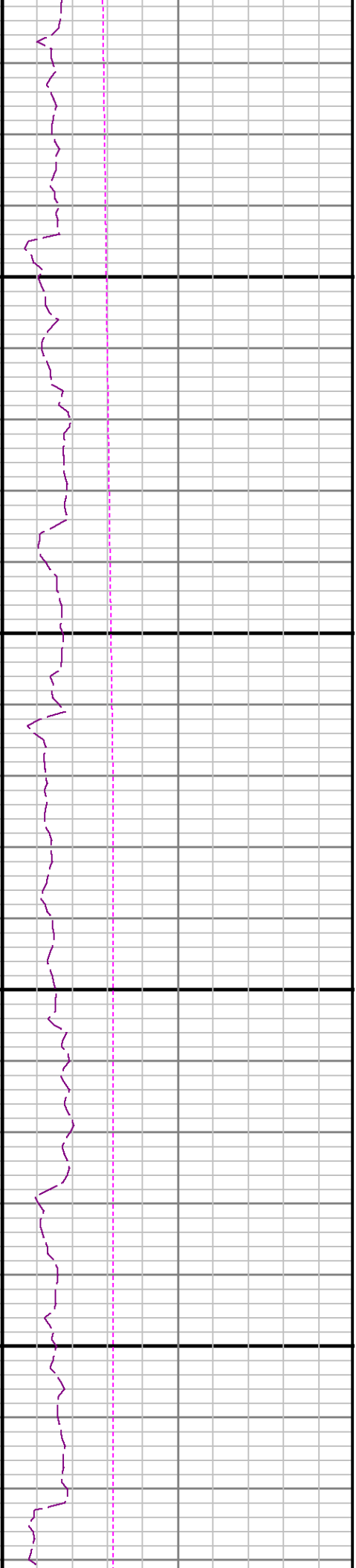
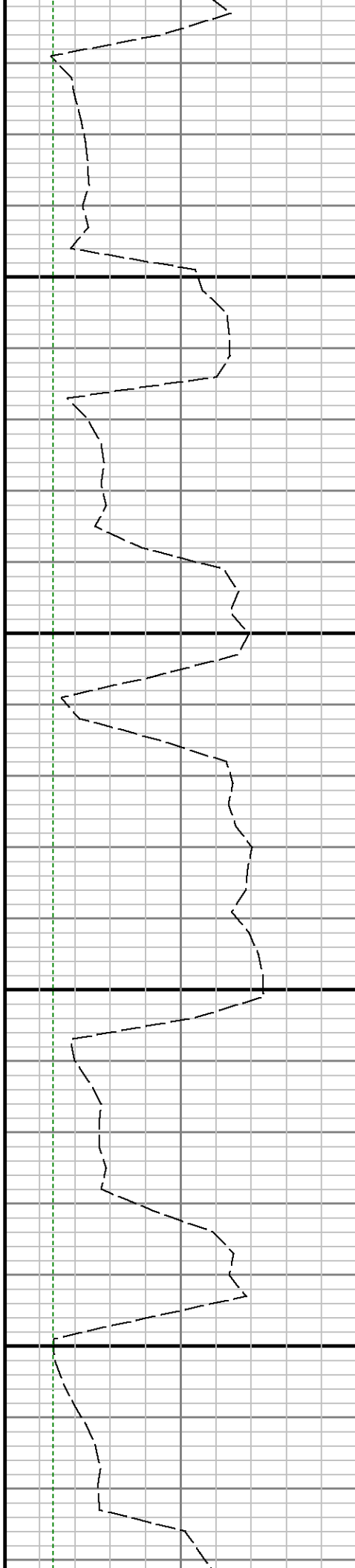
0089

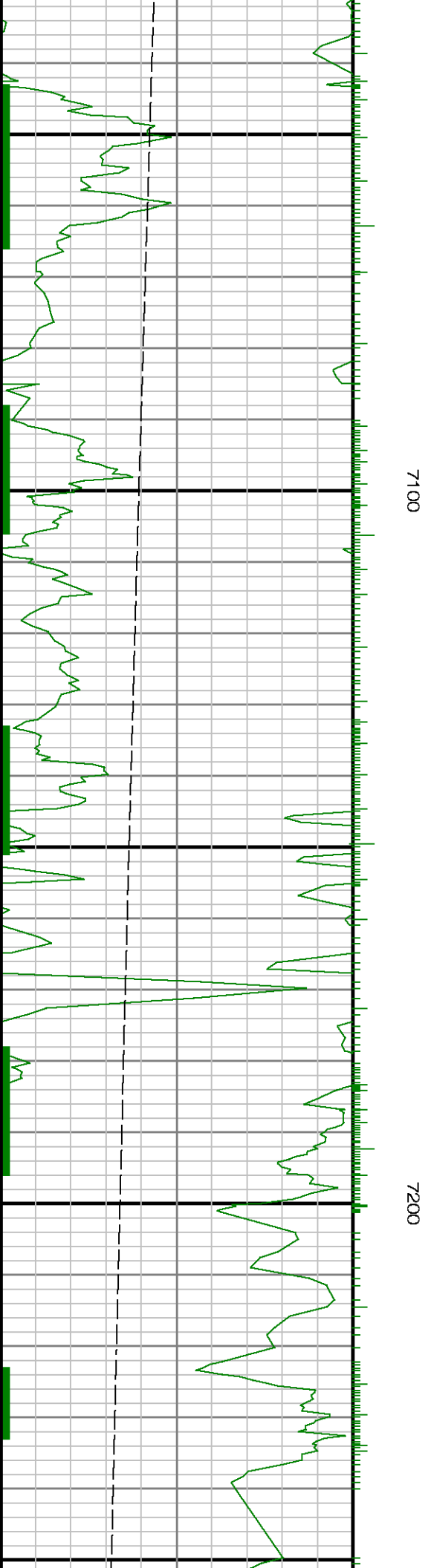
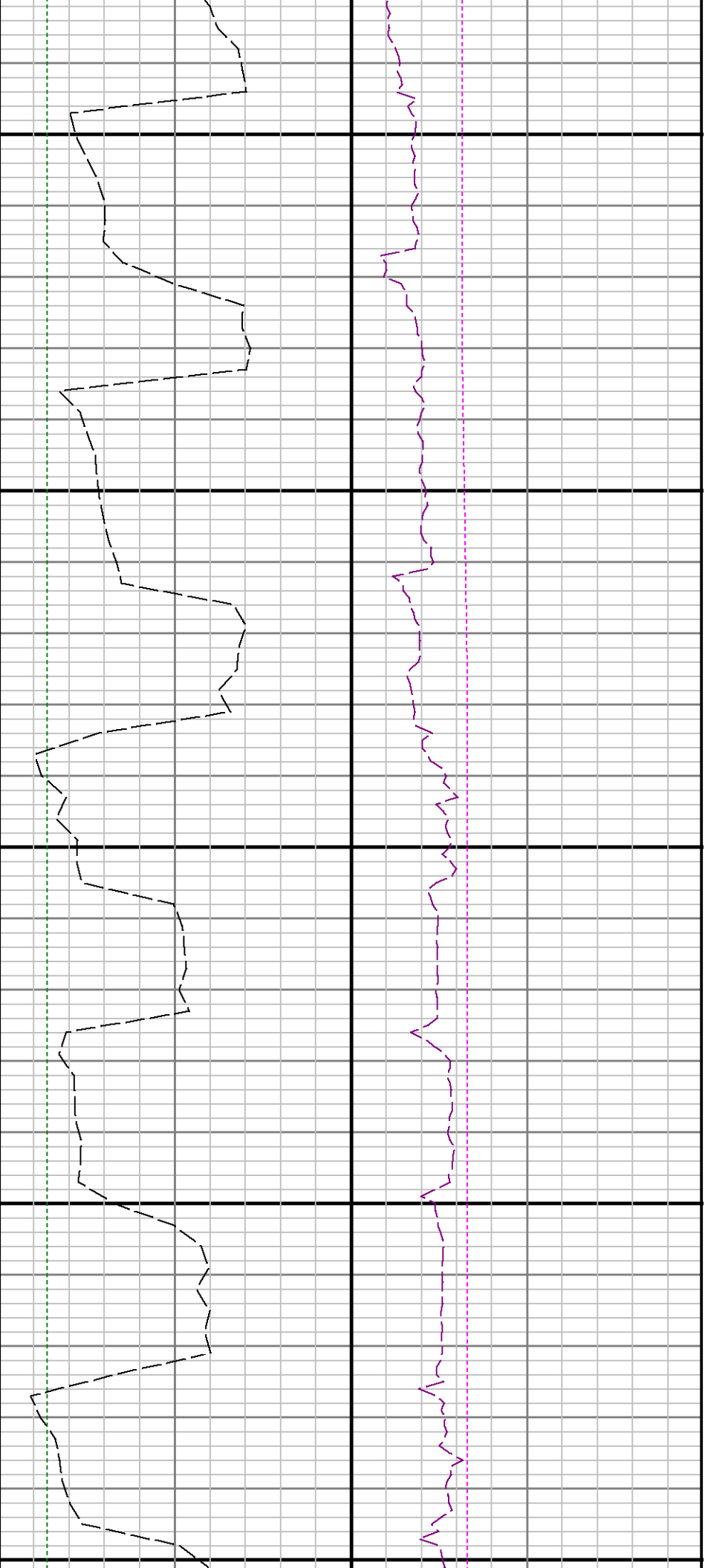


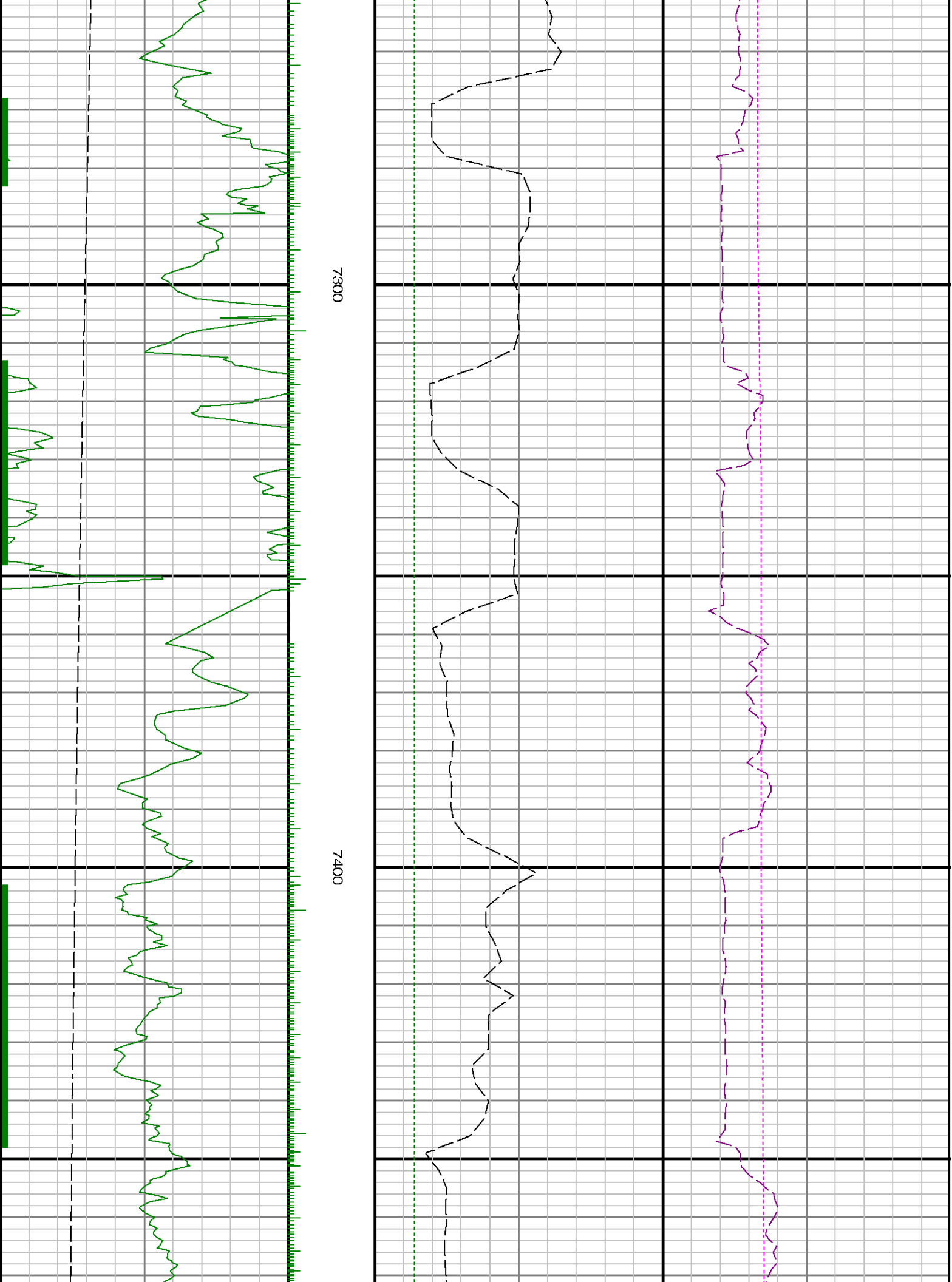


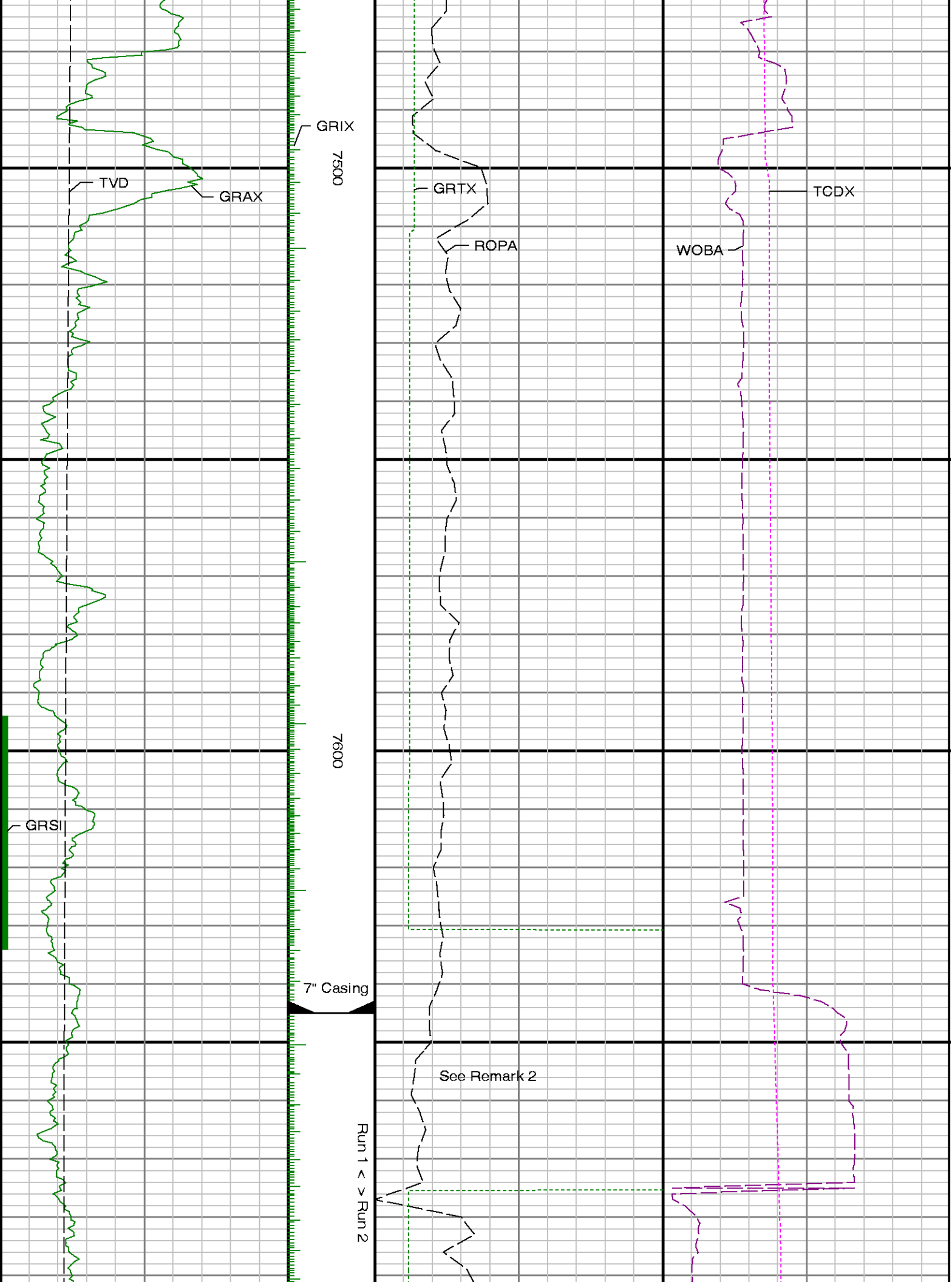
0069

7000







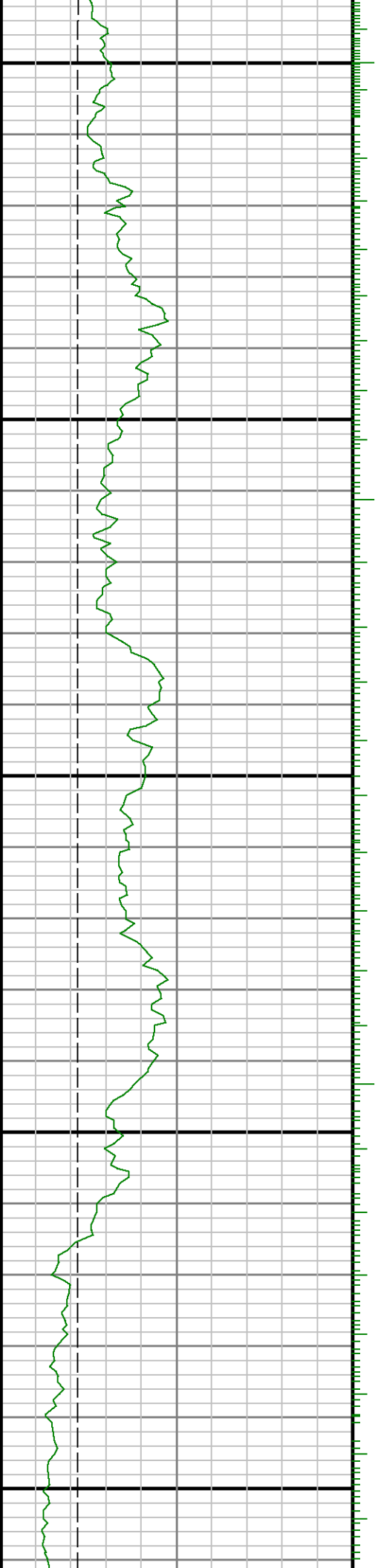


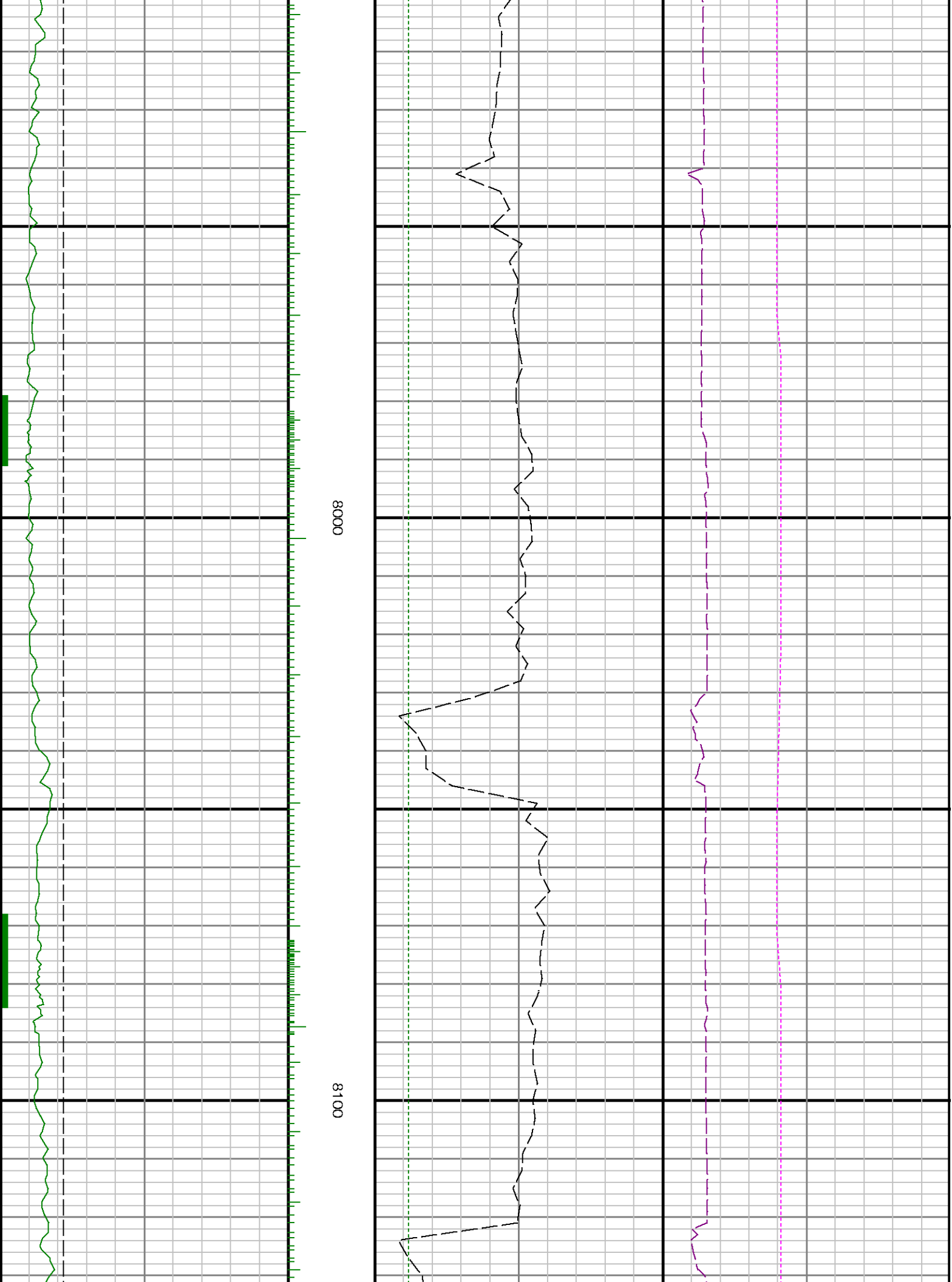


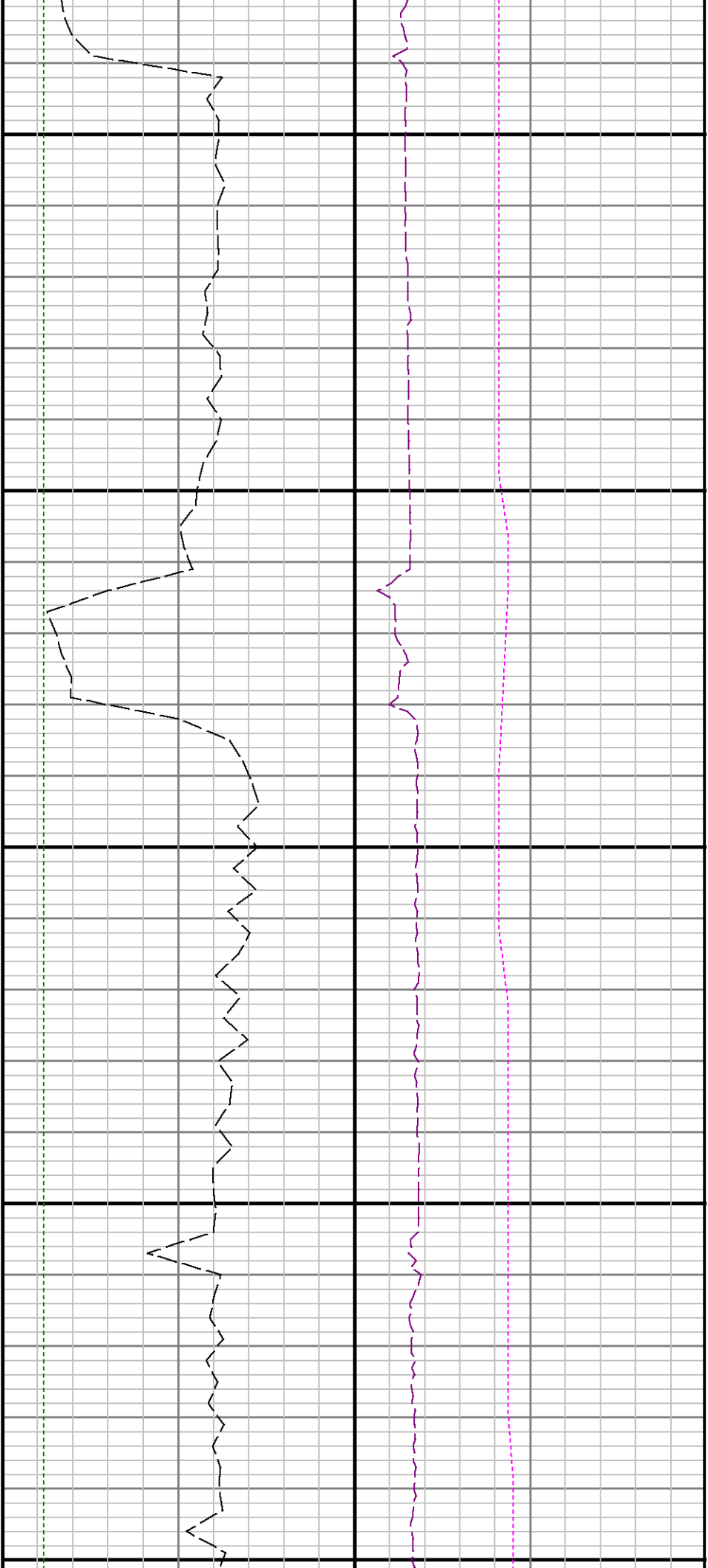
7700

7800

7900

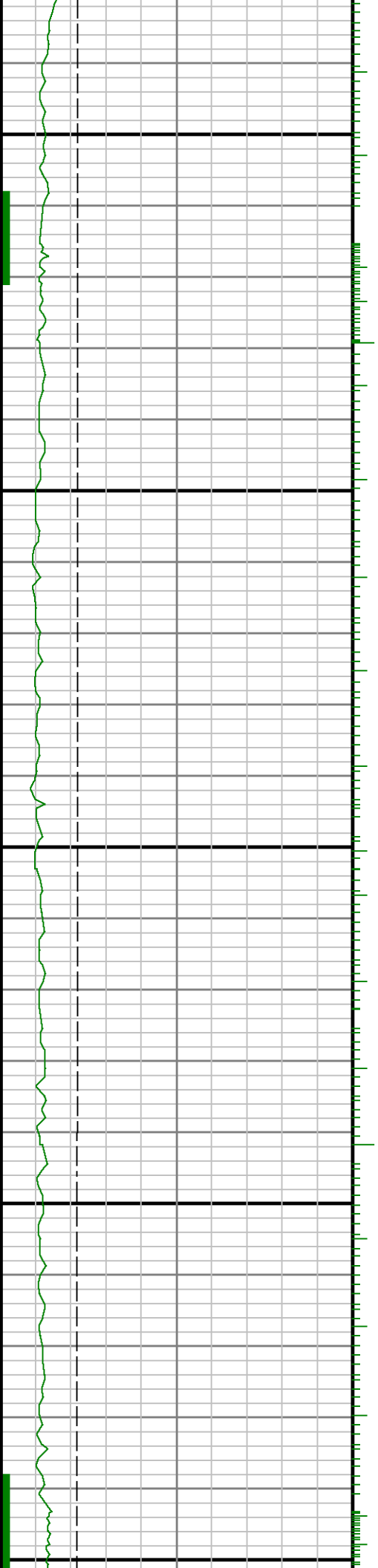


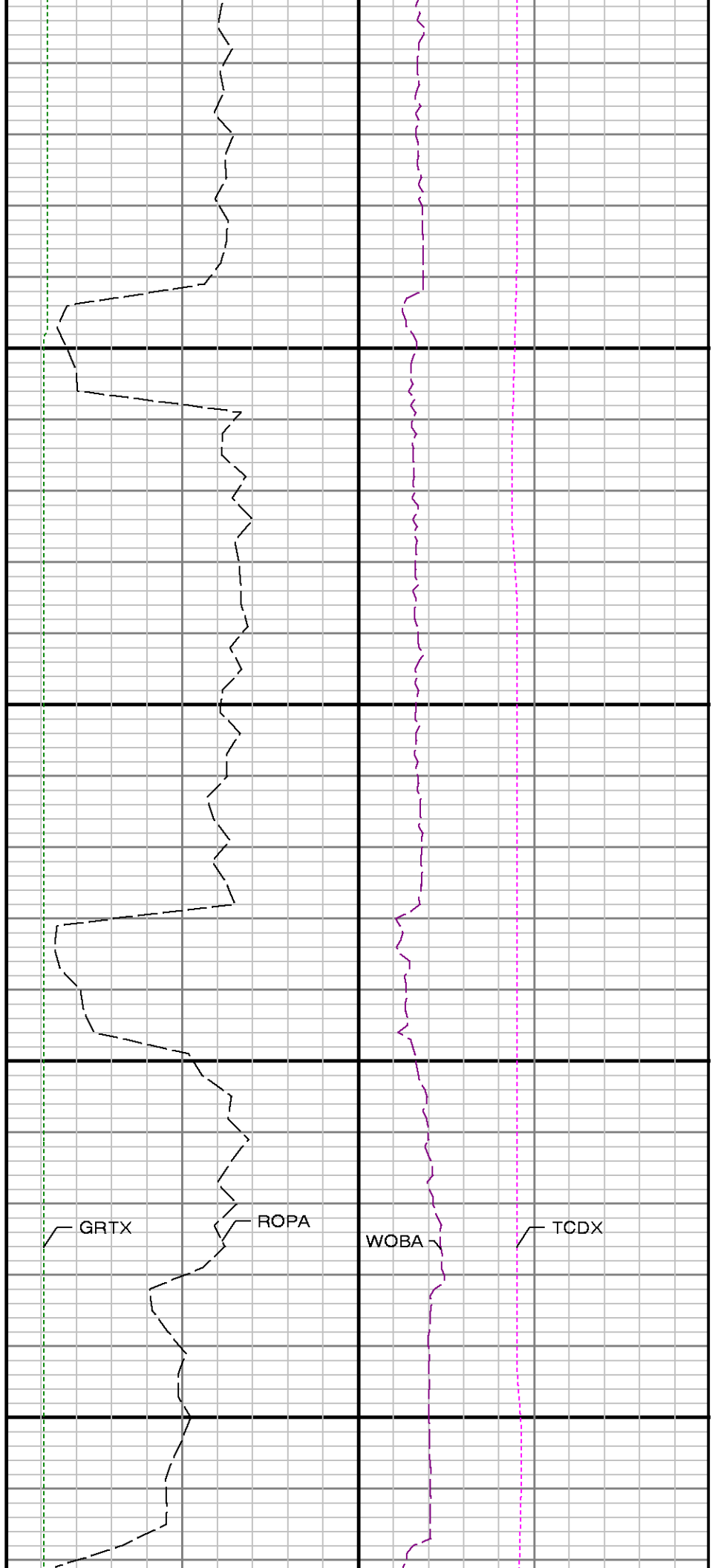
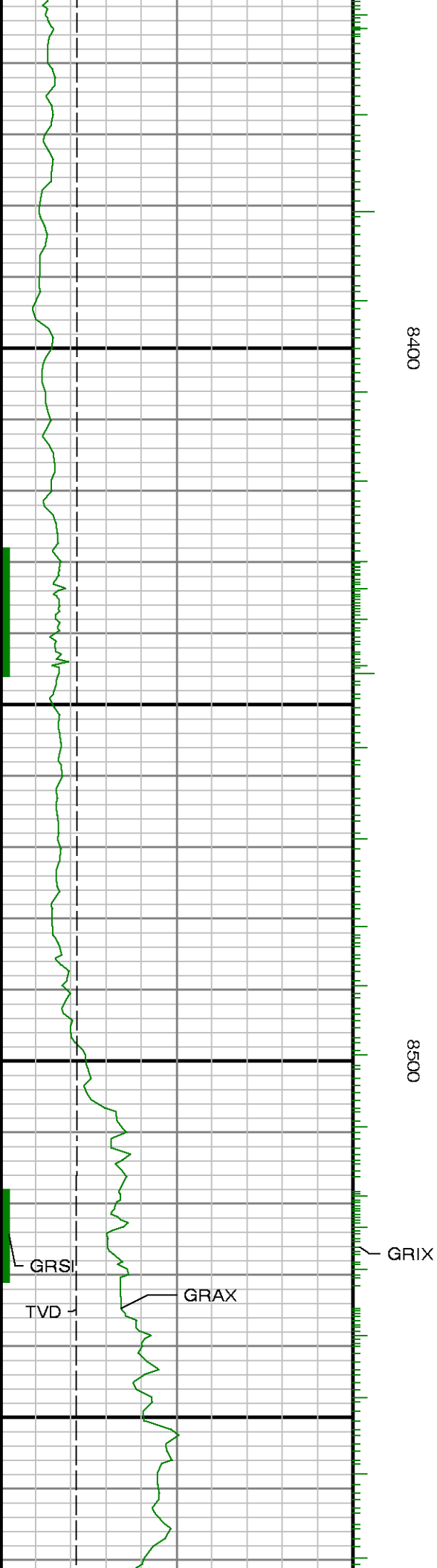


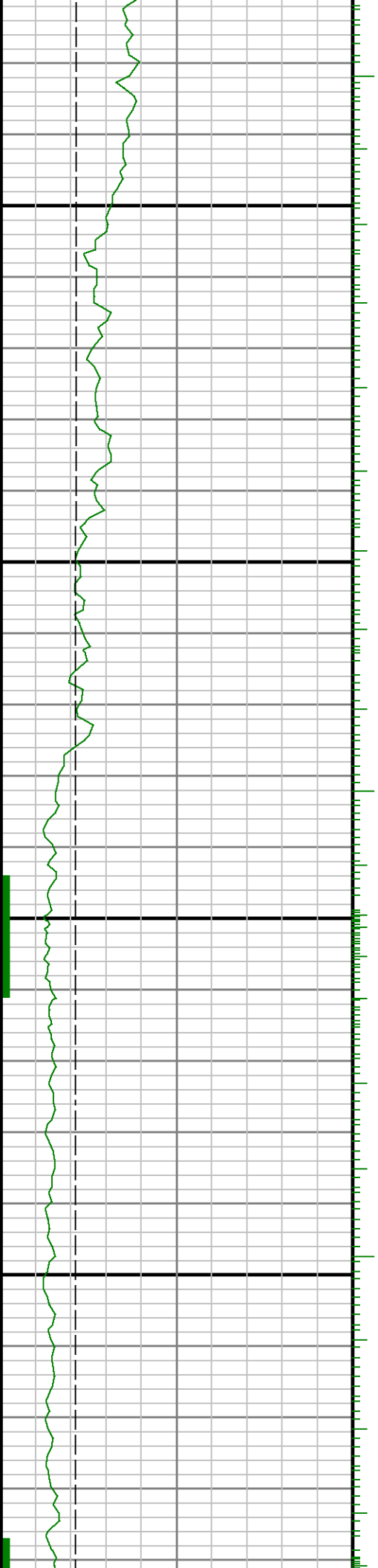


8200

8300



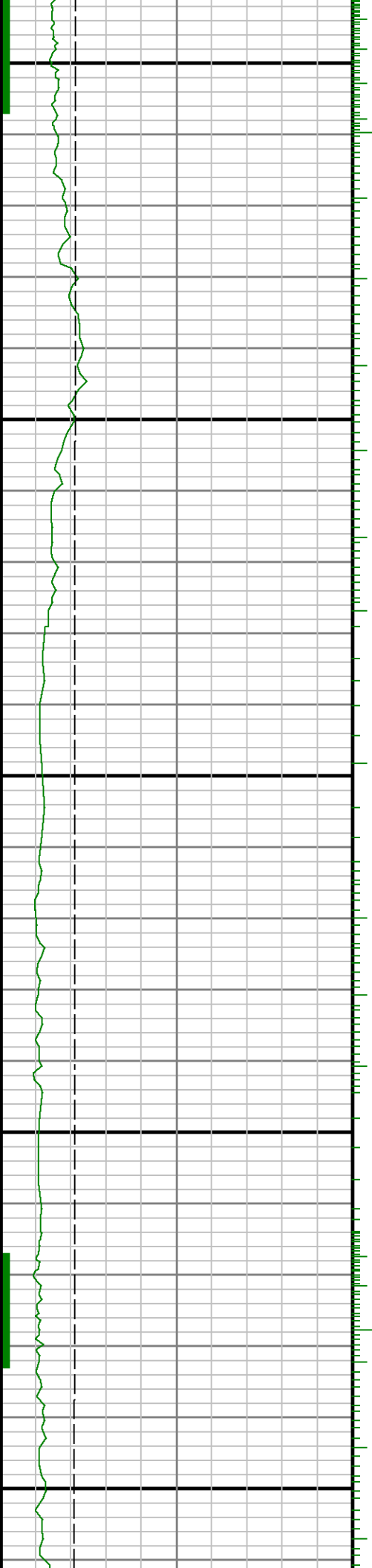




0098

8700

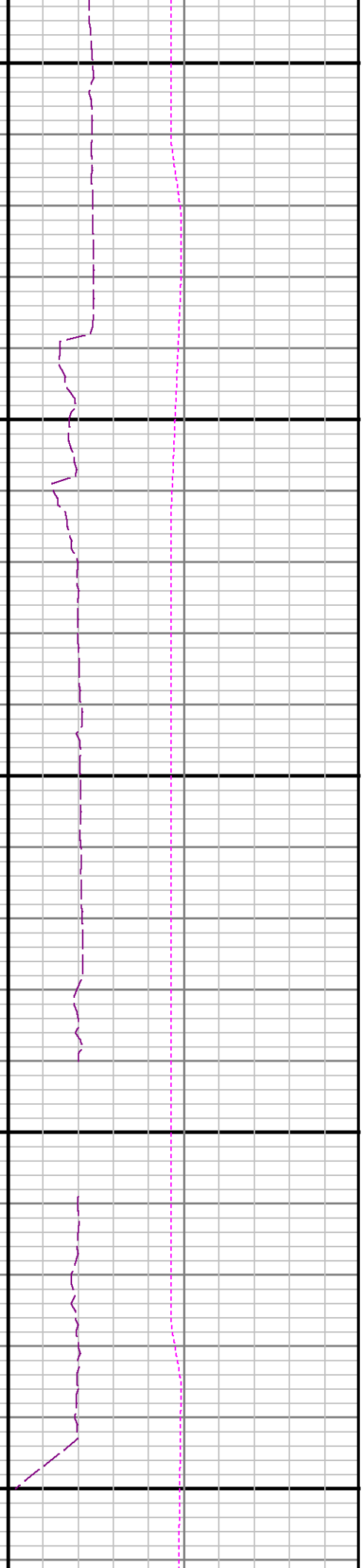


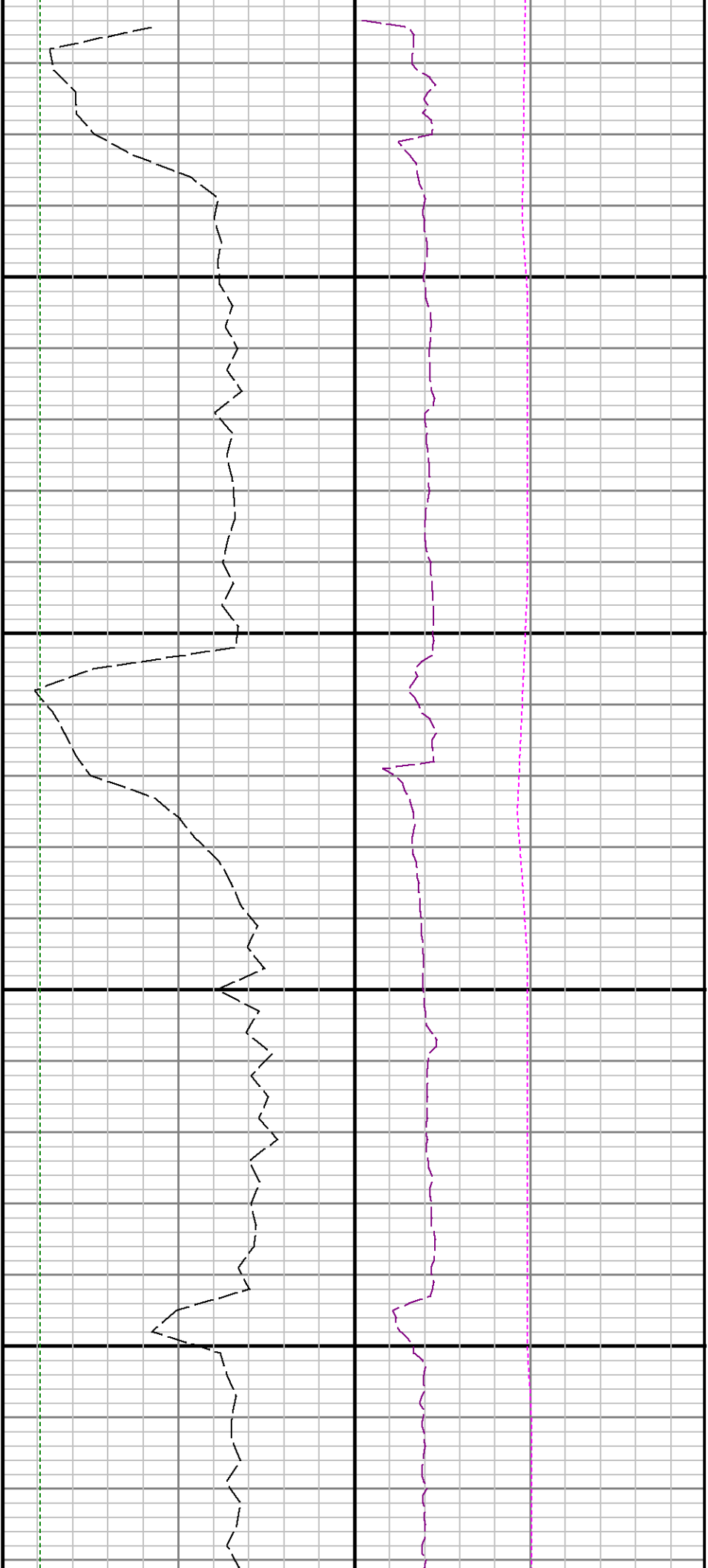


0006

0068

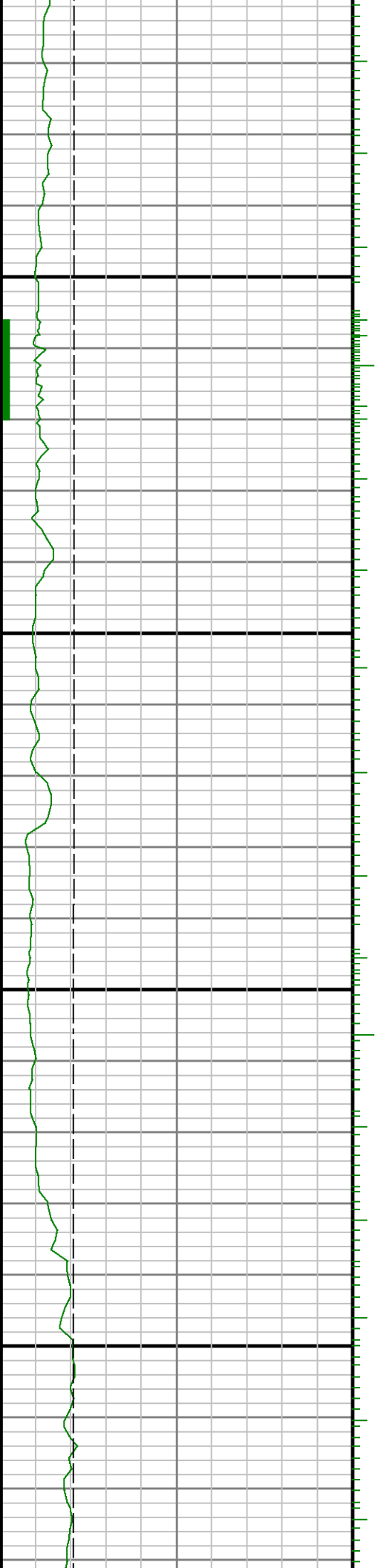
0088

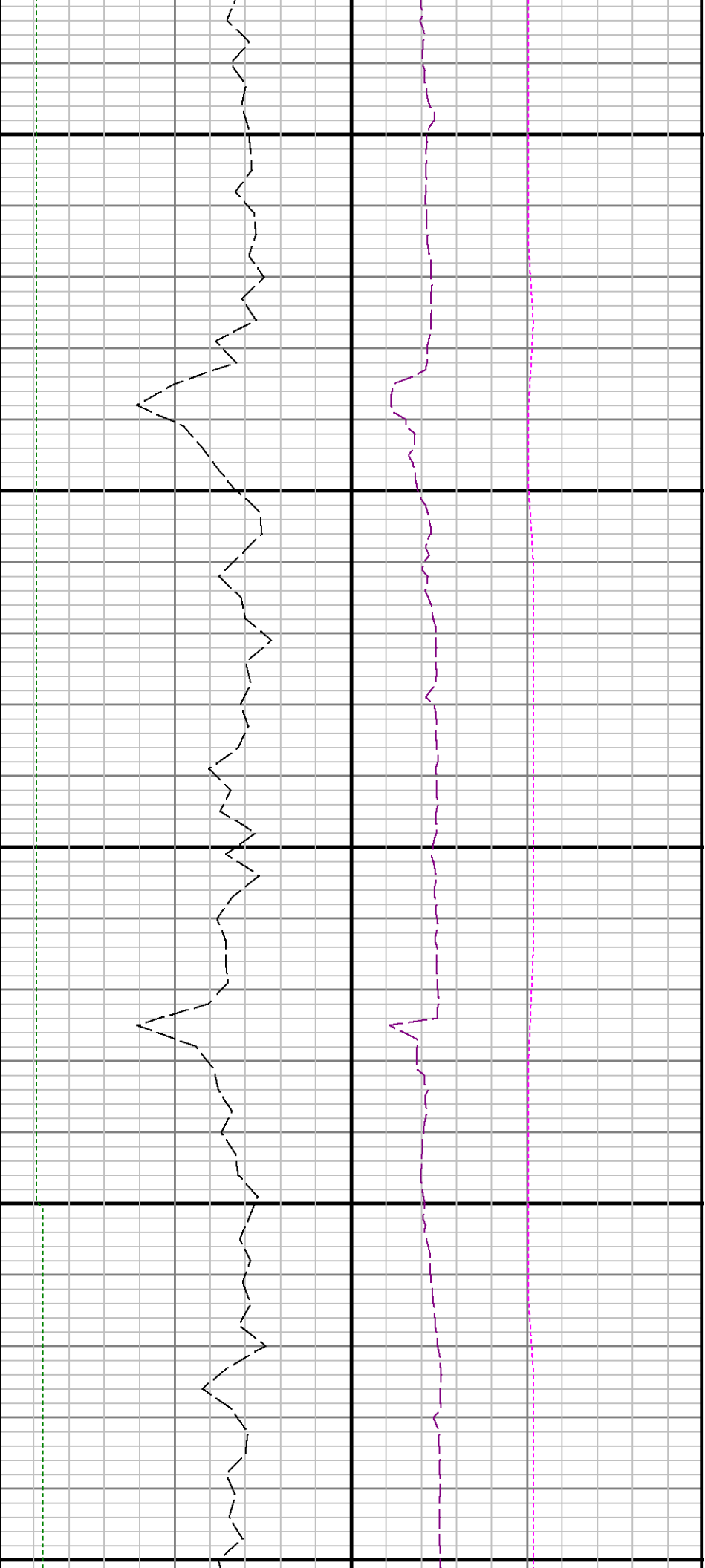




9100

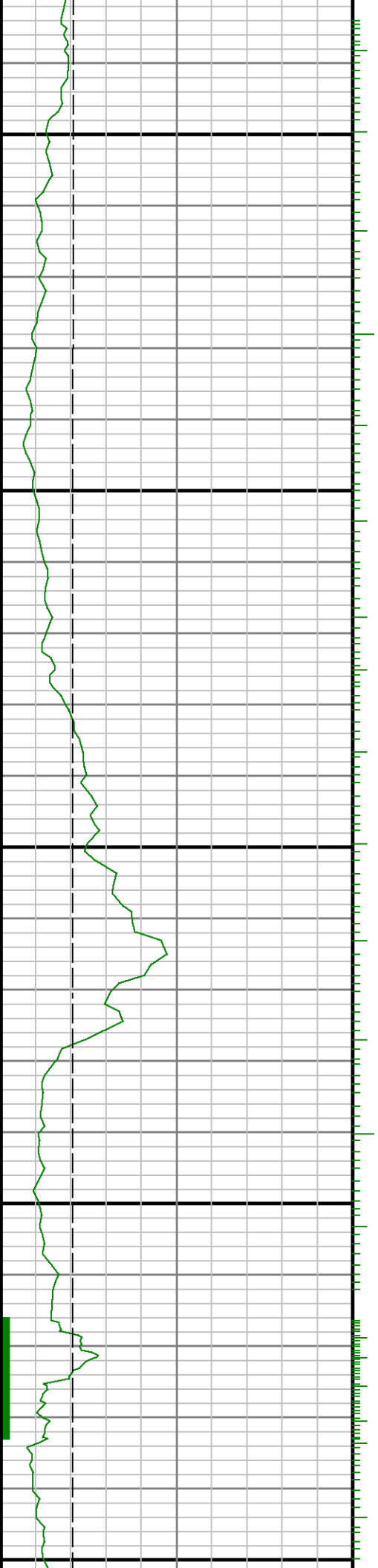
9200

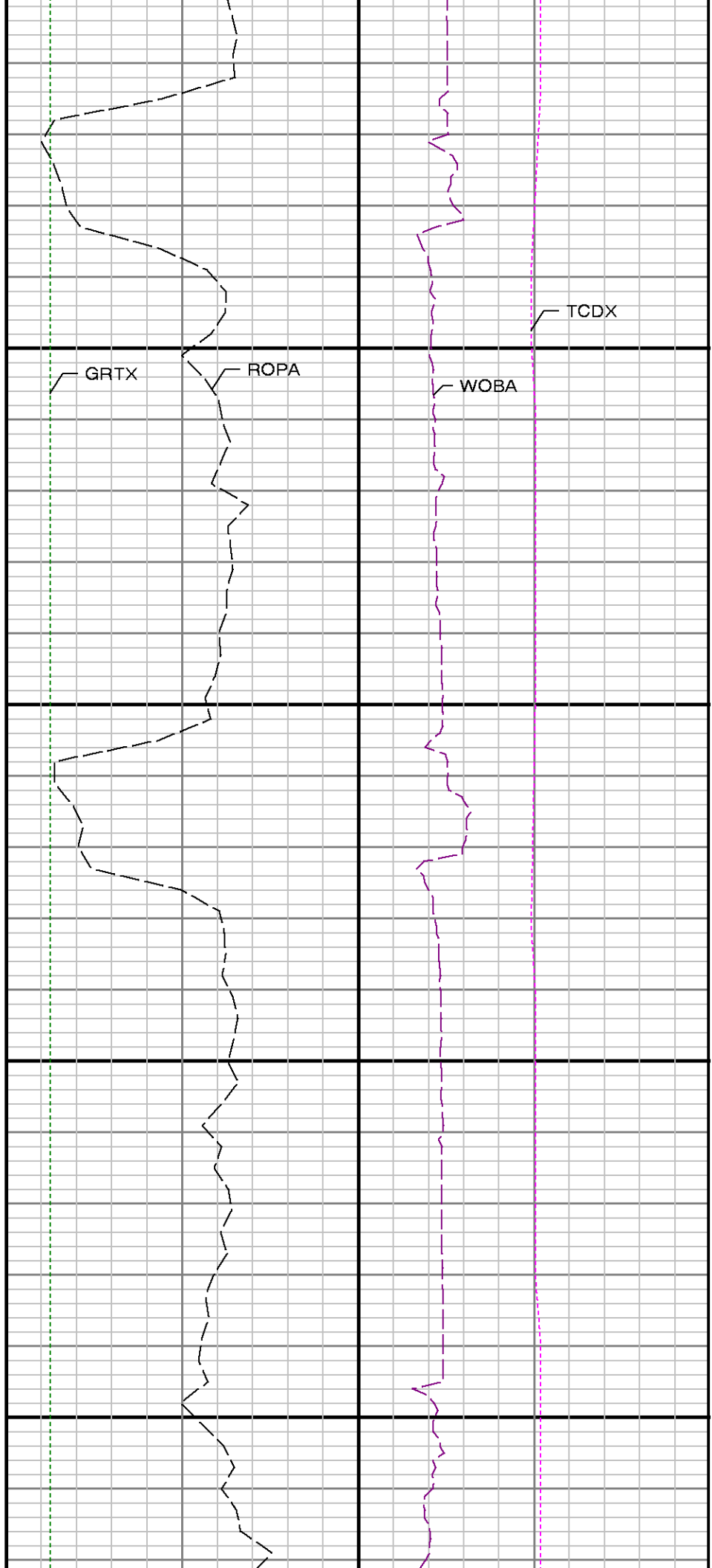
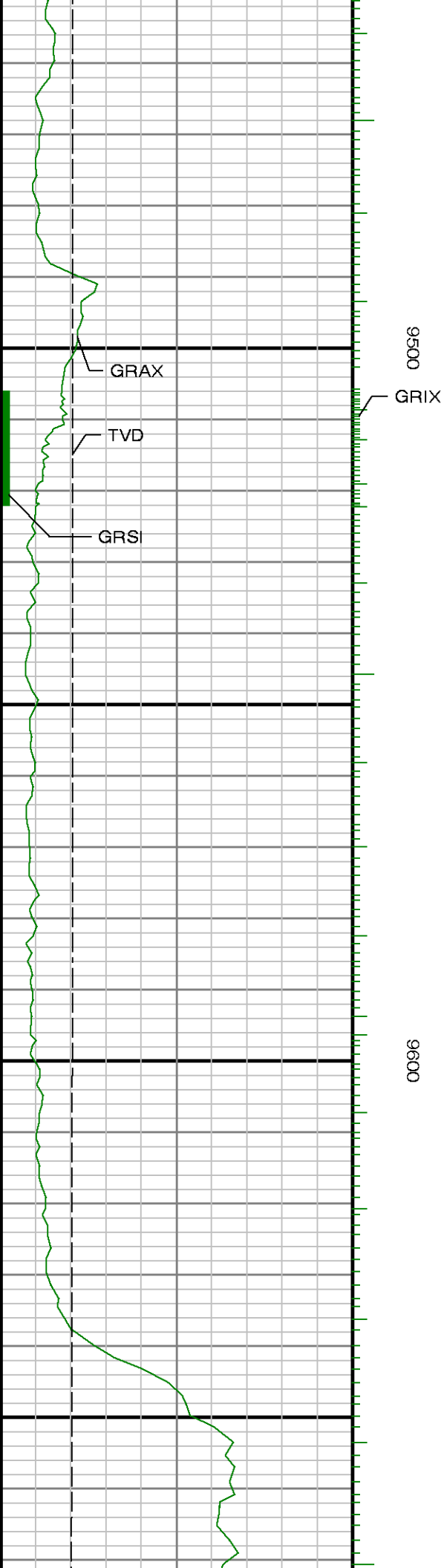


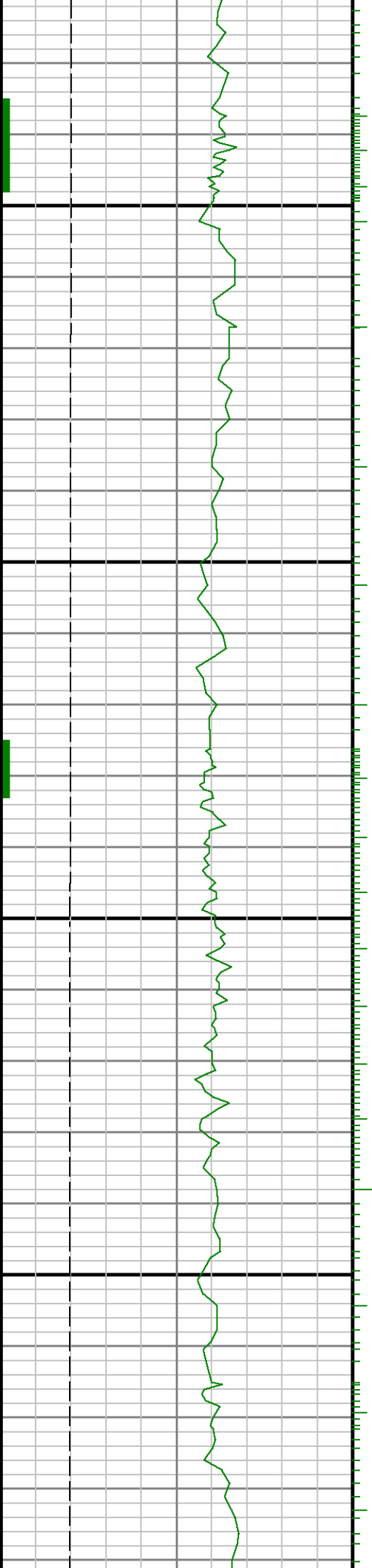


9300

9400

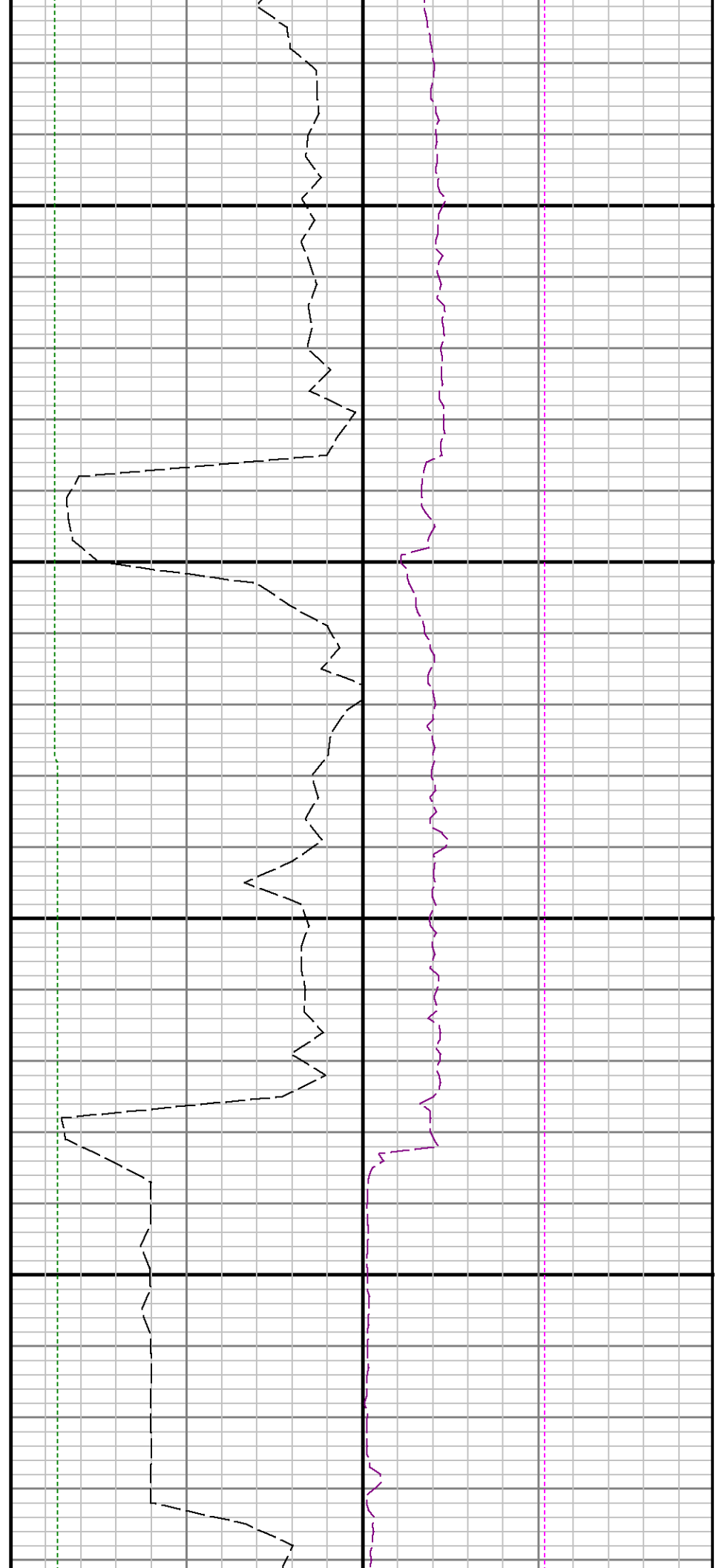


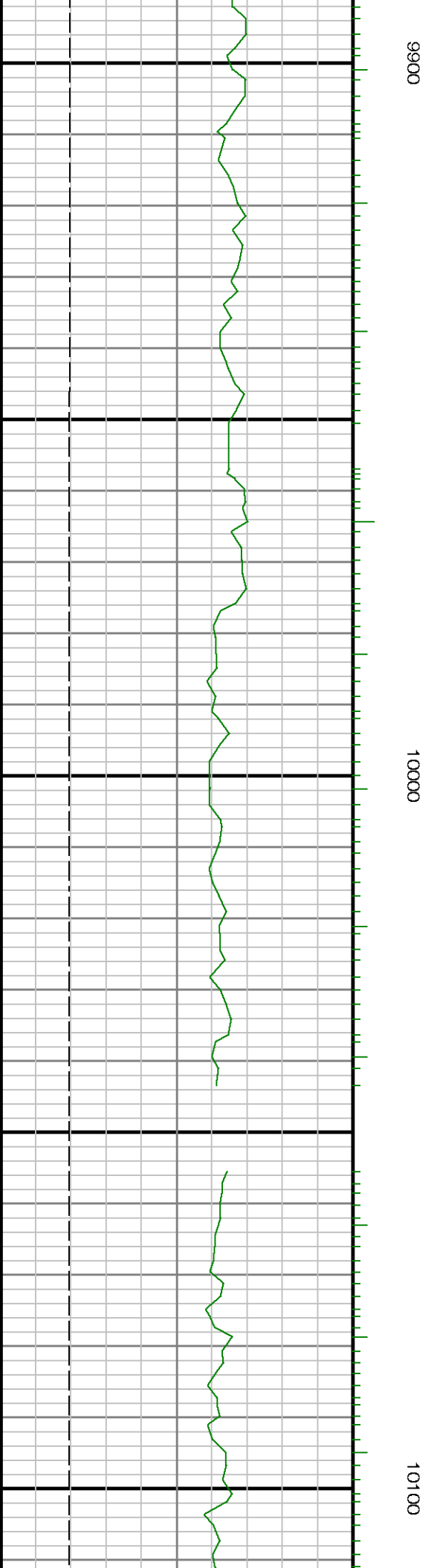
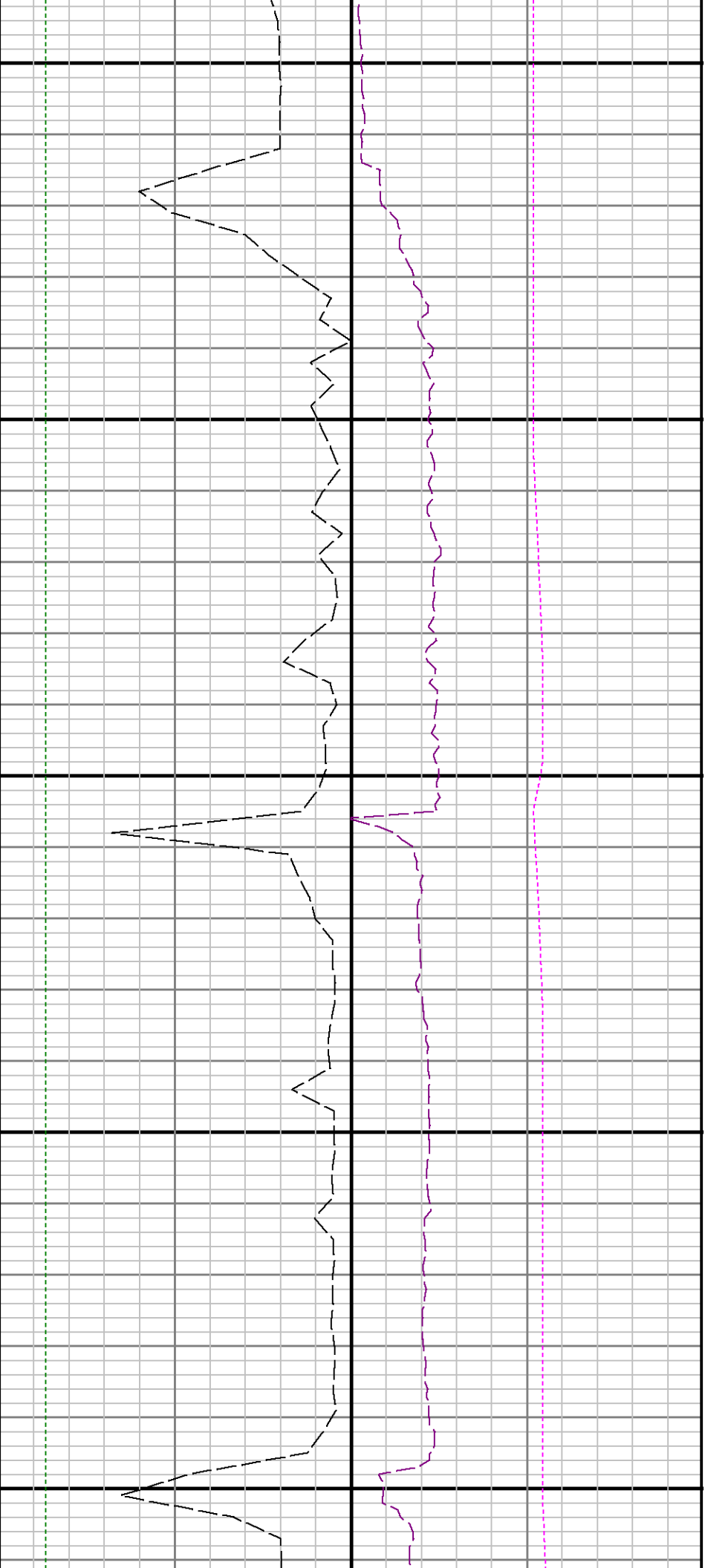


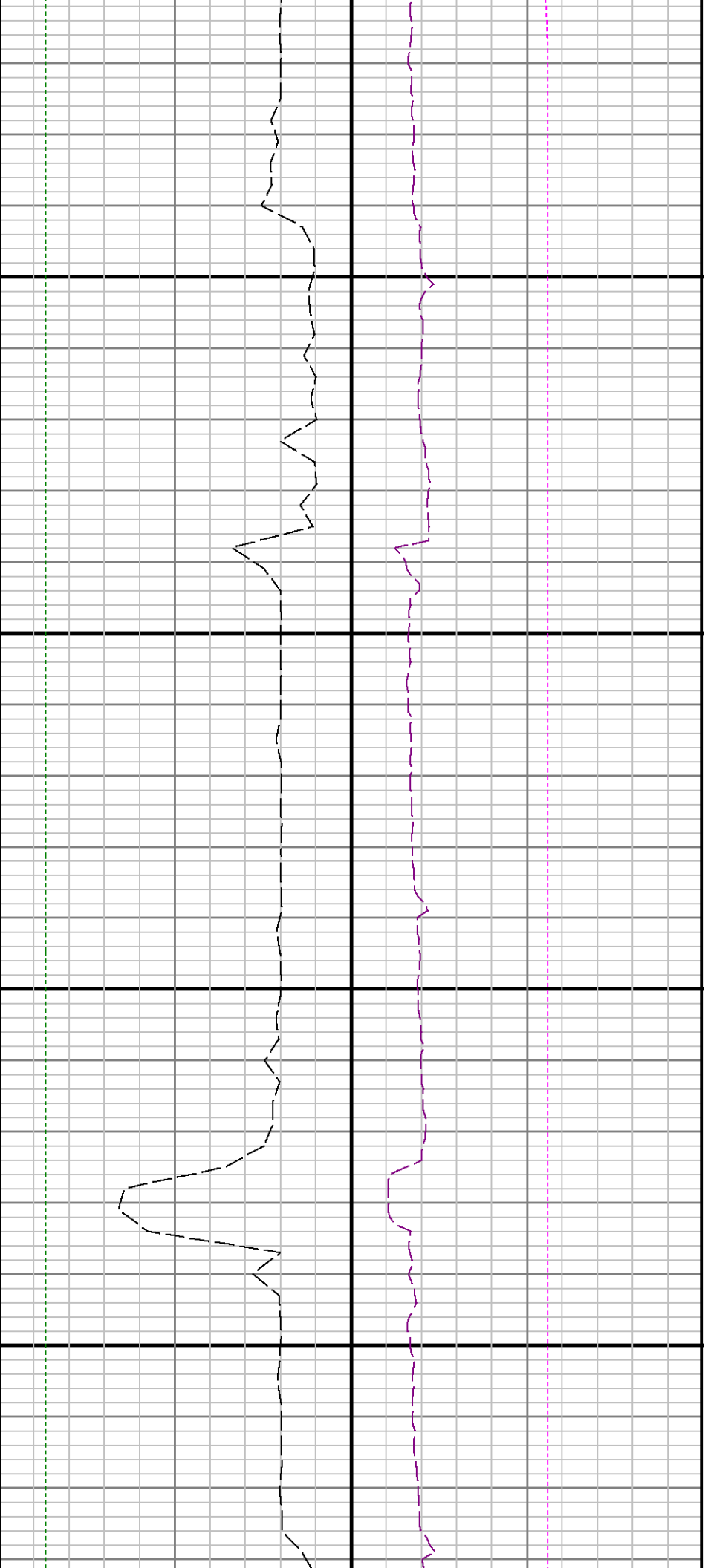


9700

0086

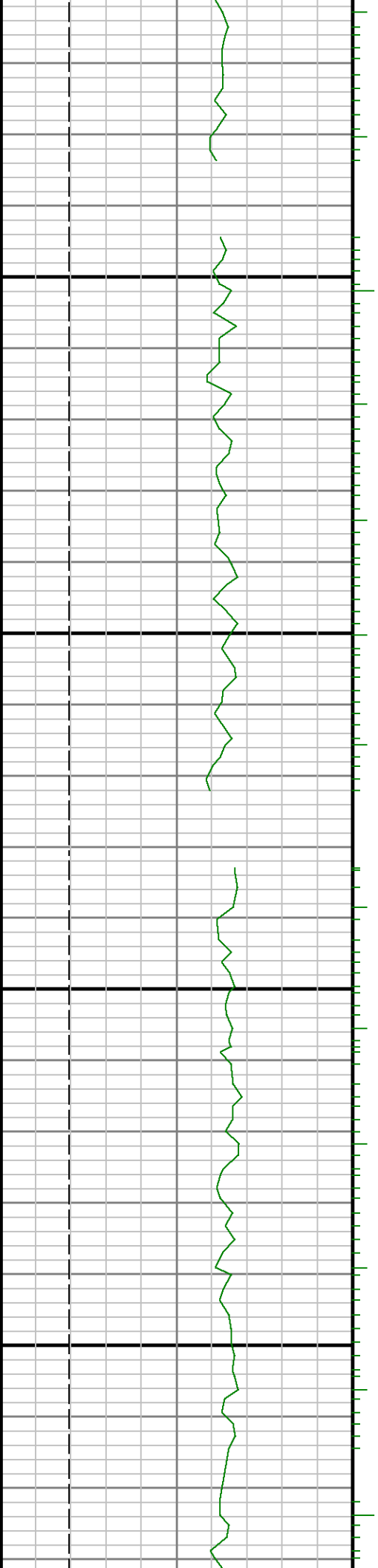


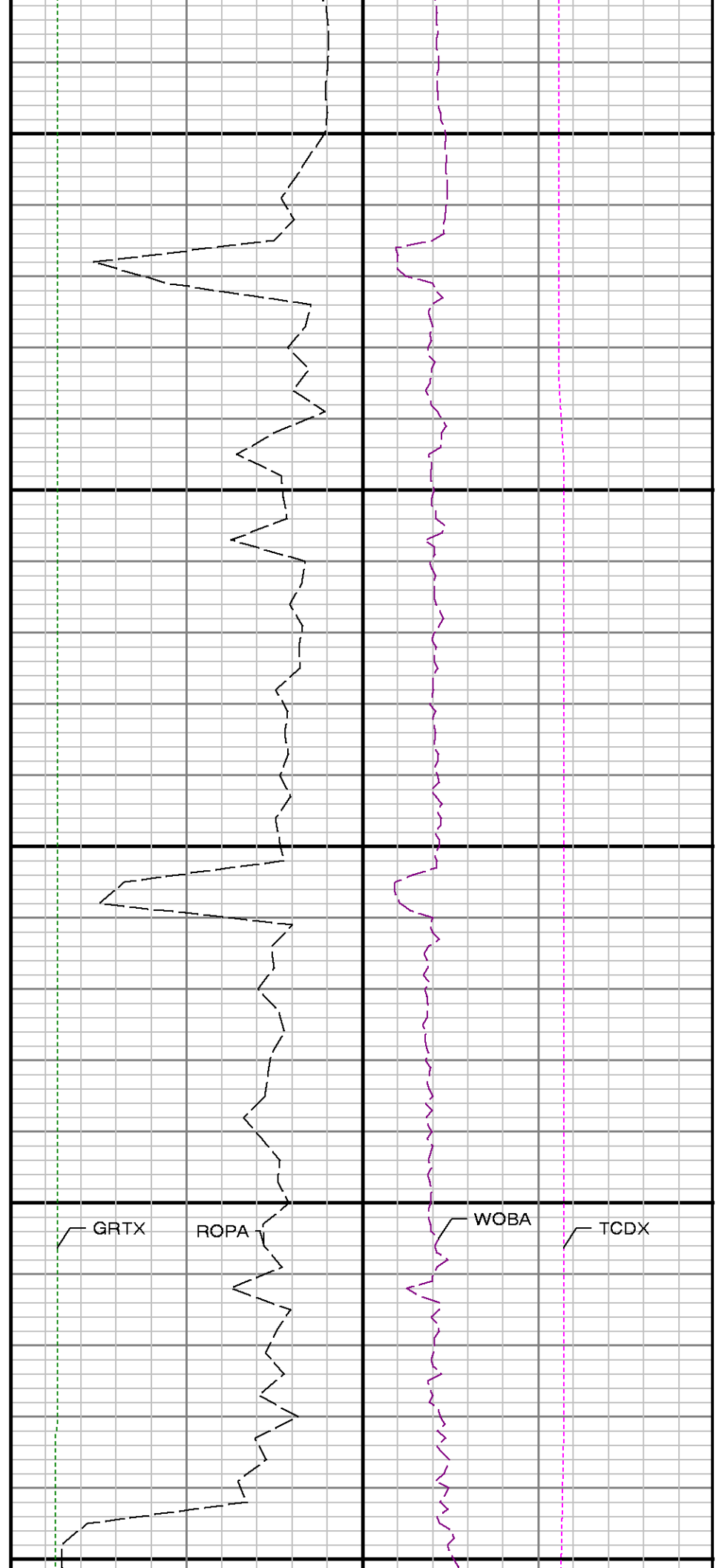
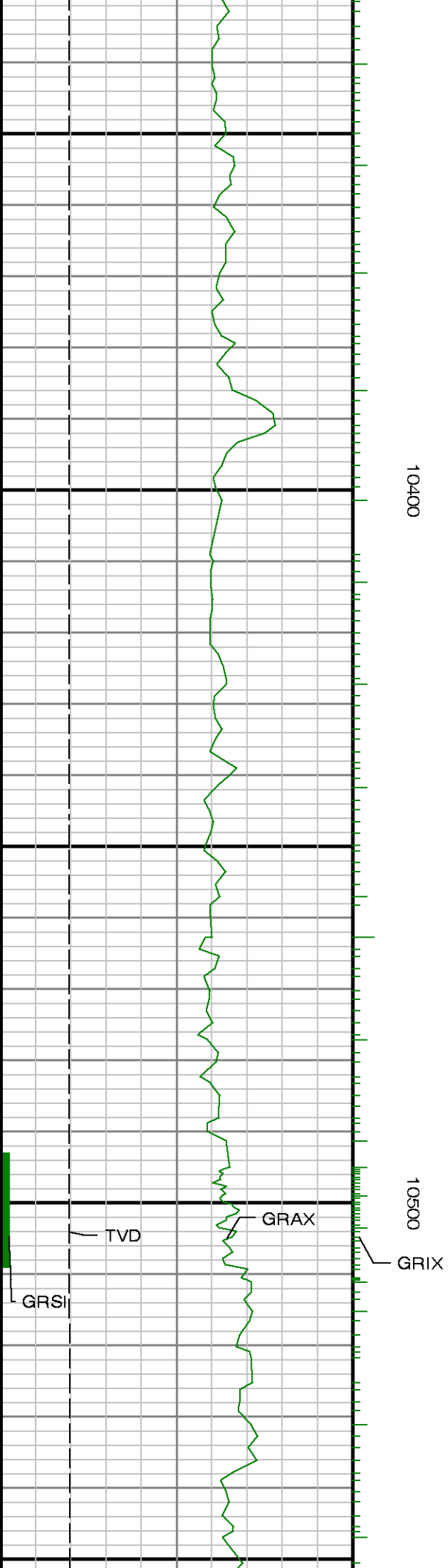


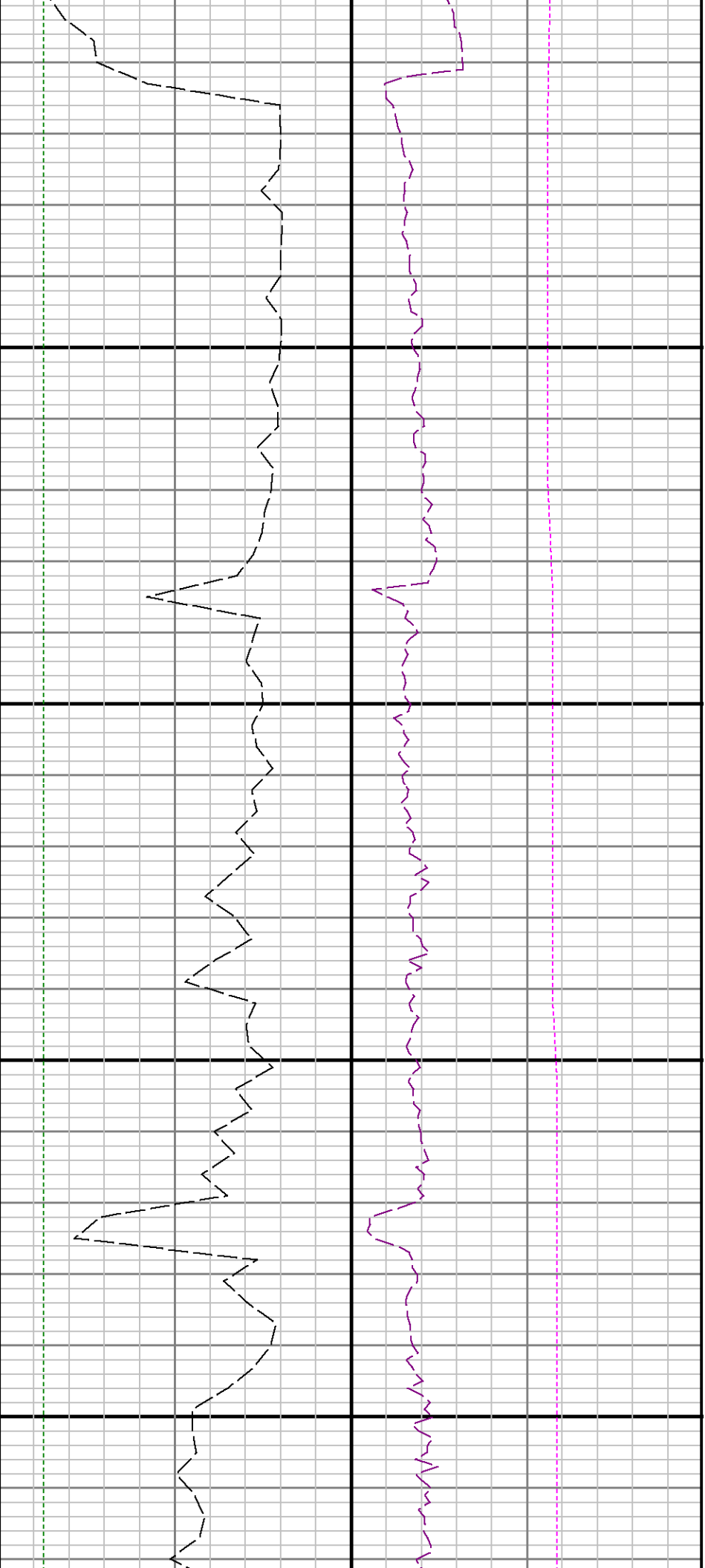


10200

10300

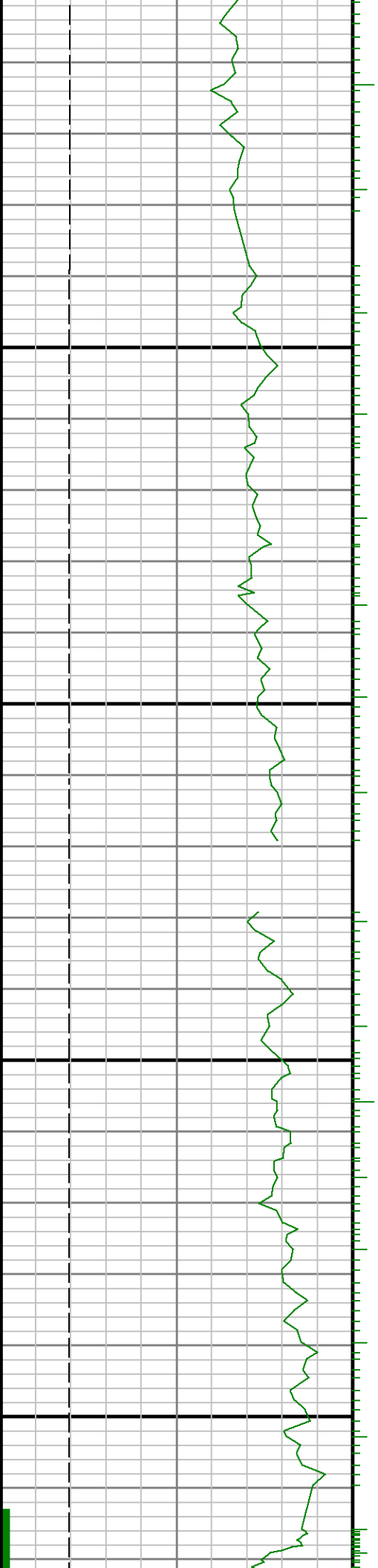


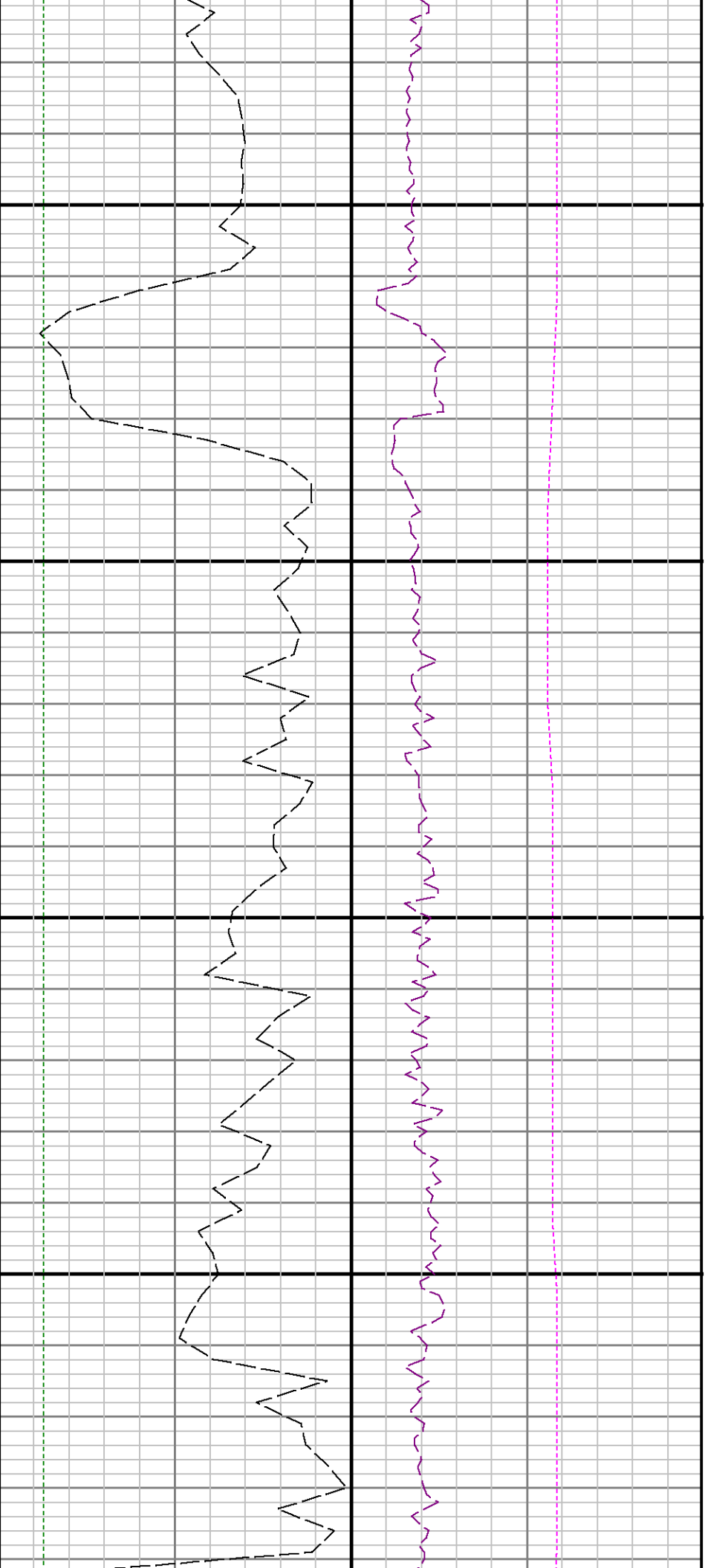




10600

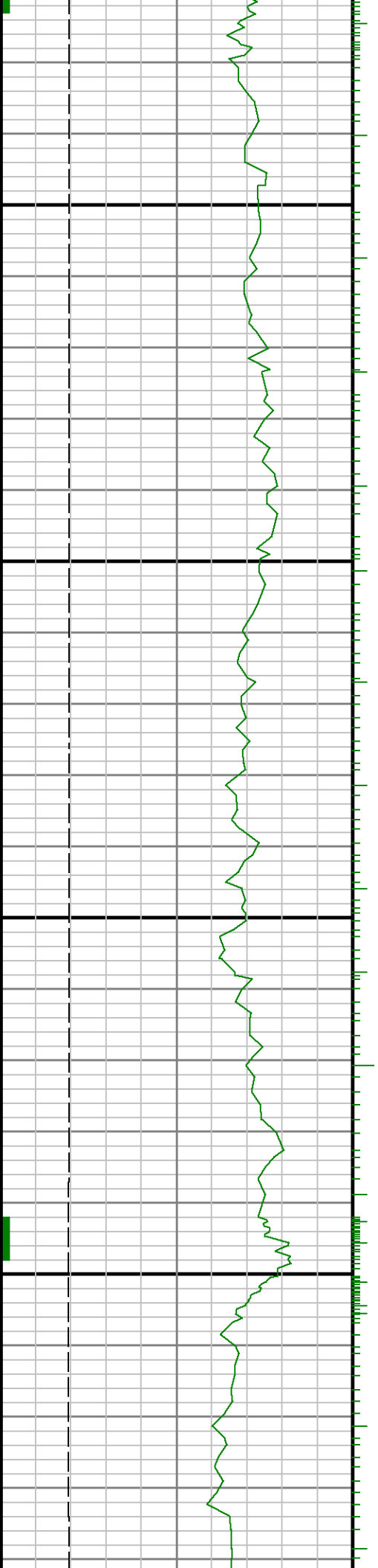
10700

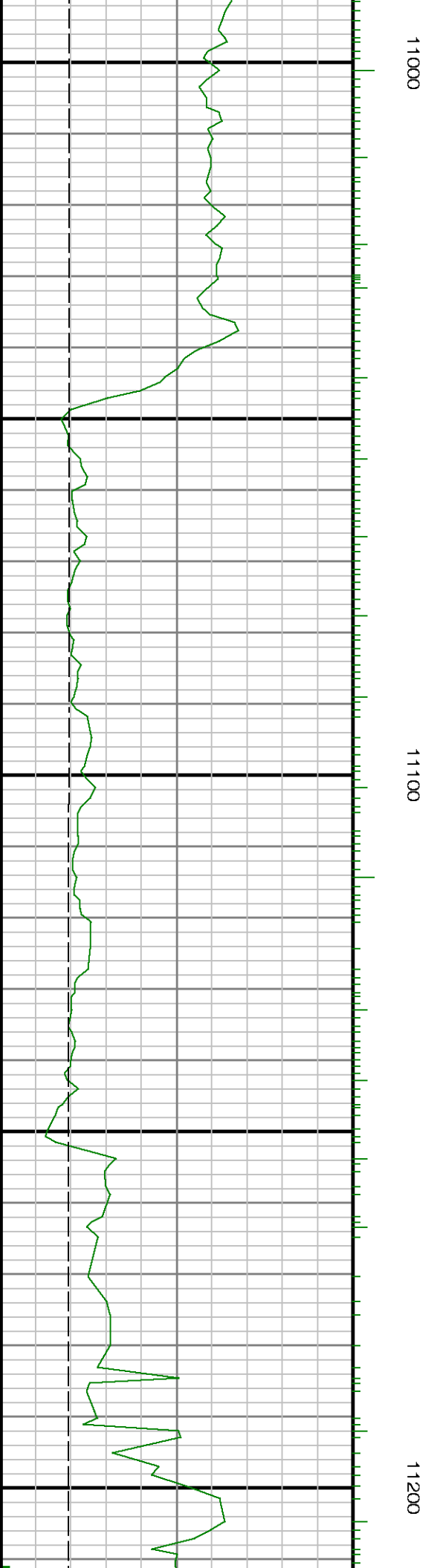




10800

10900

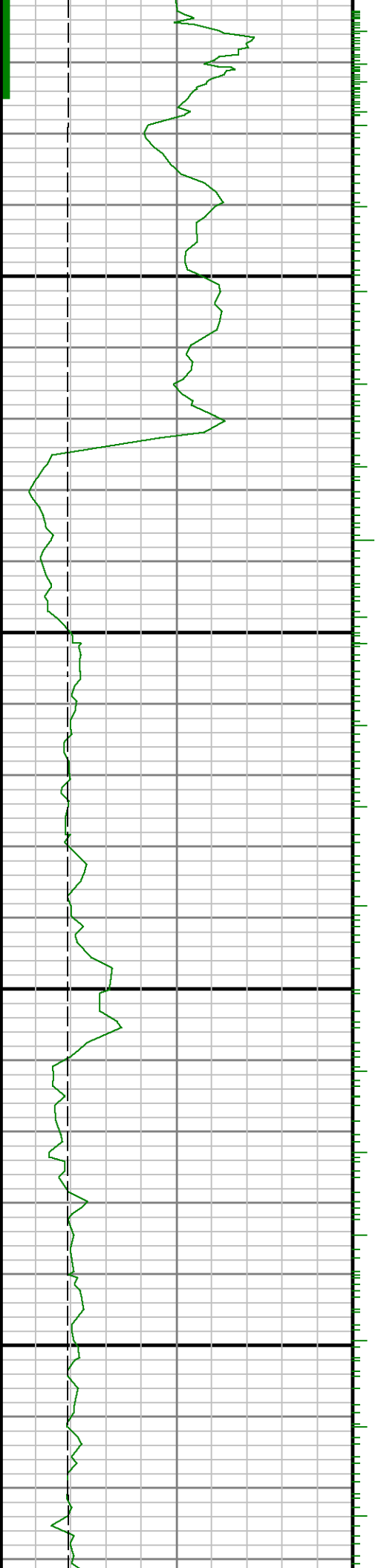


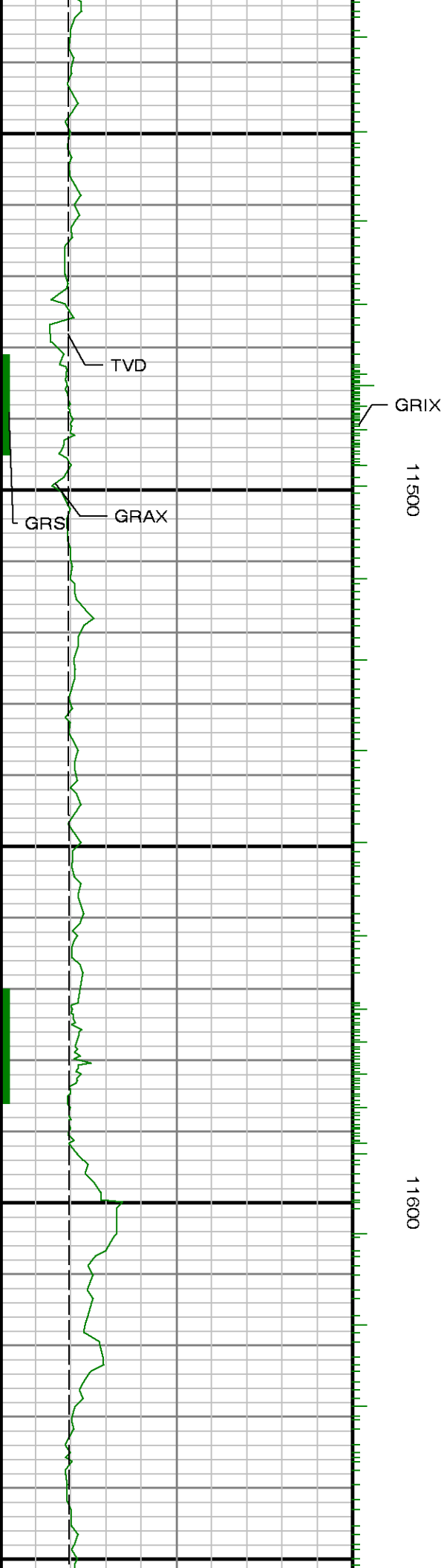


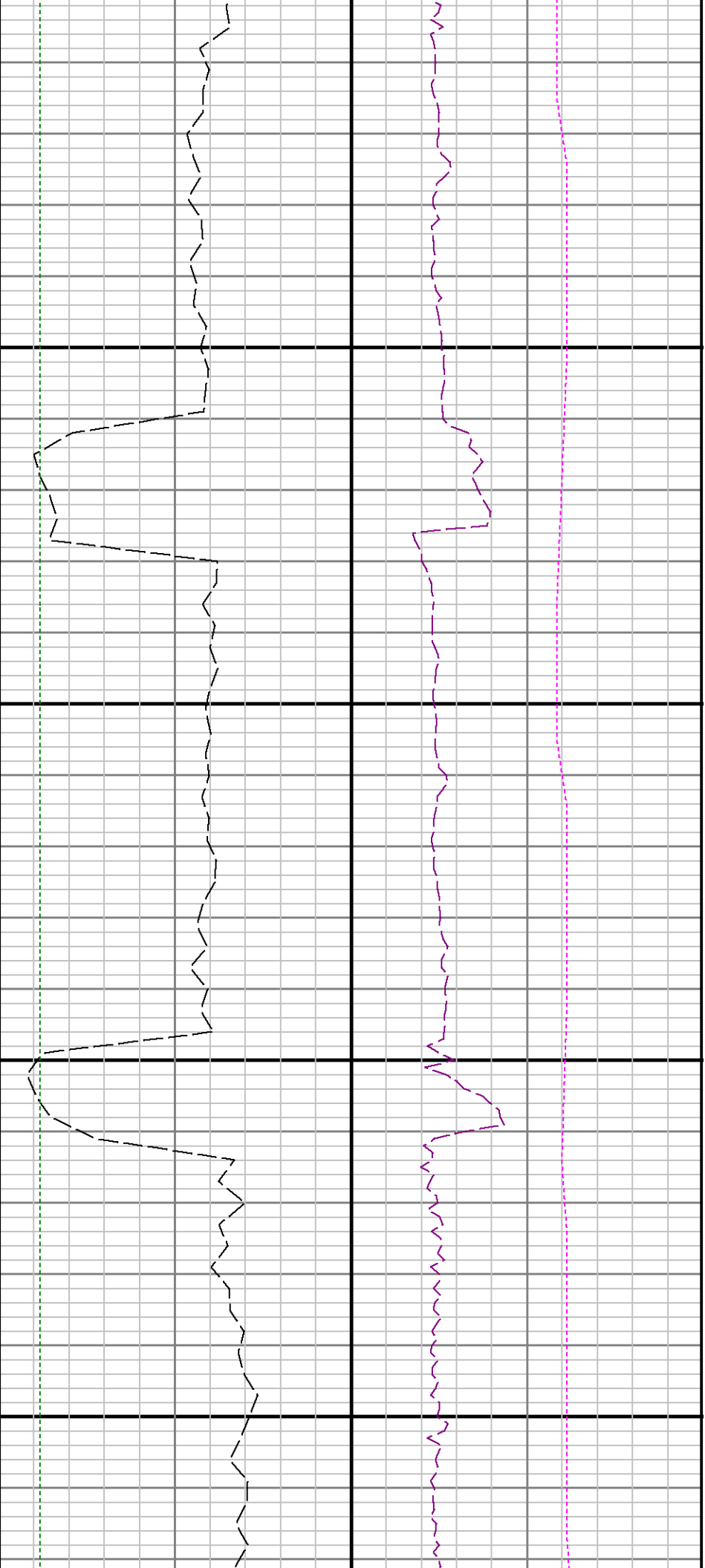


11300

11400

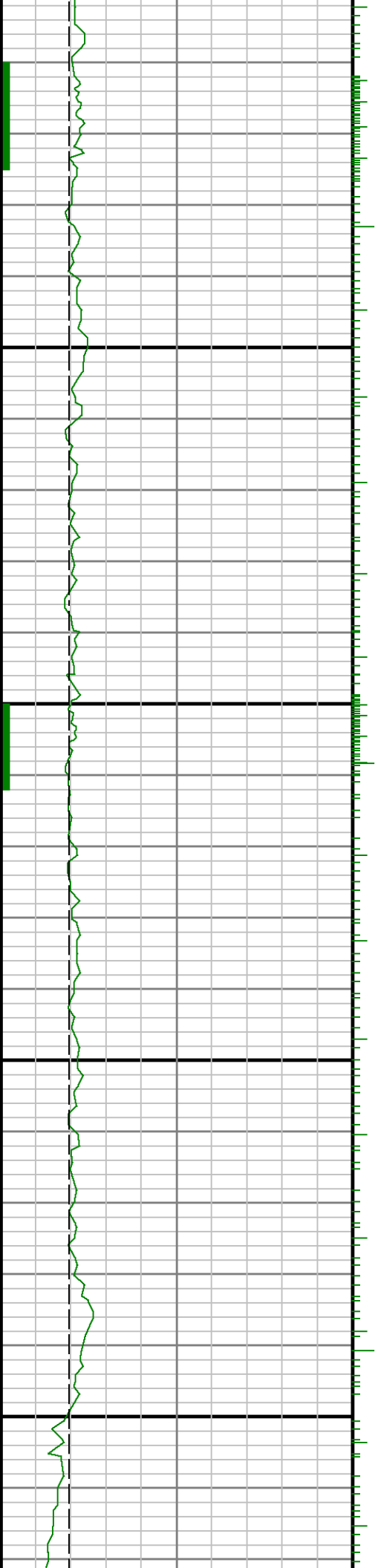


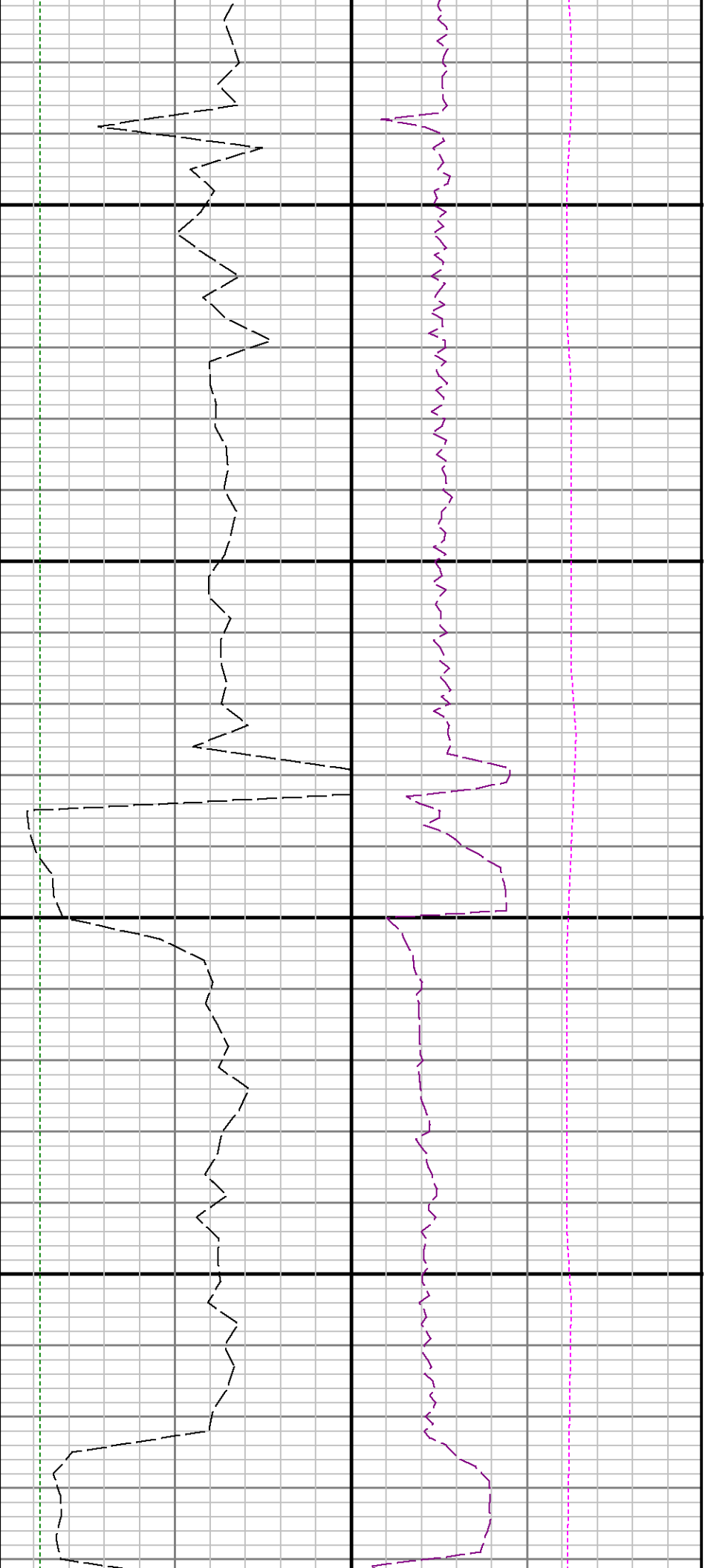




11700

11800





11900

12000

