



Realtime Logs

Natural Fomation Evaluation
Gamma Ray

Scale:

Company: Anadarko

Well: Butterball 30C-10HZ

Field: Weld County (Kerr McGee)

County Weld County State Colorado

1:240

MEASURED DEPTH

Status: Surface Location: Latitude: 40° 8' 48.235" N Longitude: 104° 53' 2.936" W Other Services:

Final Print

API Number: 05-123-3786700

Section: 10 TWN: 2N Range 67W

Directional

Permanent Datum (P.D.): Ground Level Elevation: 5013ft.

Elevations: 17.00 ft.

Log Measured From: Kelly Bushing 17.00 ft. Above P.D.

KB: 17.00 ft. DF: 5013.00 ft. GL: 4996.00 ft.

Depth Reference: Driller's Depth

Interval Logged

Dates

Magnetic Field Reference

Top: 6900ft. Date From: 14/Oct/13 Dip Angle: 66.86° Azi Reference North: True

Bottom: 11987 ft. Date To: 17/Oct/13 Total Mag to Reference

Spud Date: 11/Oct/13 Field Strength: 52822.0 nT North Correction: 8.68°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	918 ft.	9.625 in.	36.00 lb/ft	Surface	1064 ft.
8.750 in.	918 ft.	8028 ft.	7.000 in.	26.00 lb/ft	Surface	8017 ft.
6.125 in.	8028 ft.	12042 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based Mud	Surface	12042 ft.	13.500 in.	Surface	0.0° / 0.0°	0.3° / 236.2°
			8.500 in.	Vertical/Curve	0.3° / 236.2°	87.3° / 357.5°
			6.125 in.	Lateral	87.3° / 357.5°	89.5° / 358.4°
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig / Contractor:	Xtreme 8	/ Xtreme Coil Drilling
PATS	6.4.1.34	Job No:	5828774	
		District / Unit:	Rocky Mountains	/ D&E

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	Bottom	From	To	Start		End		
							(m.)	(m.)	(m.)	(m.)					
1	1	2	8.750	PDC	N/A	Mud Motor	6900	7973	6955	8028	13/Oct/2013	12:27	14/Oct/2013	10:19	42.38
2	2	3	8.750	PDC	N/A	Mud Motor	7973	11987	8028	12042	16/Oct/2013	10:41	17/Oct/2013	14:30	30.35

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Kevin Sheridan	09/Oct/2013	18/Oct/2013	Shirley Arimah	09/Oct/2013	18/Oct/2013			

Mud Properties Record

Date / Time		LWD	Measured	Mud	Density	Viscosity	pH	Fluid	Oil /	Source	Total	K+
		Run No.	Depth (m.)	Type	(sg)	(cp)		Loss (cc)	Water		Chlorides (ppm)	(%)
14/Oct/2013	20:00	1	7314	Water Based Mud	10.0	46	9.0	N/A	2/89	Flowline	1900	N/A
17/Oct/2013	20:07	2	9036	Water Based Mud	9.3	41	9.0	N/A	5/89	Flowline	1900	N/A

Mnemonics		
Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg	API
TCDX	Downhole Temperature	degF
ROP_AVG	Rate of Penetration, 3.0 ft. Avg	ft/hr
WOB_AVG	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.				(m.)	(in.)	(in.)
1	DIR	12373463	Directional	46.92	6.750	2.750
1	SRIG	12376064	Gamma	43.50	6.750	2.750
2	DIR	12497607	Directional	52.25	4.750	2.750
2	SRIG	12606959	Gamma	55.63	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	
(1) Baker Hughes INTEQ run 1 utilized 6 1/2 inch NaviTrak services (Directional) behind an 8 3/4 inch bit and steerable assembly from1064 to 8028 feet MD (1064 to 7576 feet TVD)	
(2) Baker Hughes INTEQ run 2 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 8028 to 12042 feet MD (7576 to7571 feet TVD)	

Remarks				
Number	Measured	Hole	LWD	Remark
	Depth (m.)	Section (in.)	Run No.	
1	6900	8.750	1	The interval from Surface to 6900 feet MD (6857 feet TVD) was logged not logged due to Baker Hughes logging services began at the top of the curve section.
2	8028	8.750	2	The interval from 7973 to 8028 feet MD (7575 to 7576 feet TVD) was logged up to 20 hours after being drilled due to a trip out of the hole to pick up curve BHA assembly.
3	12042	6.125	2	The interval from 11987 to 12042 feet MD (7570 to 7571 feet TVD) was not logged due to sensor offsets to bit at TD.

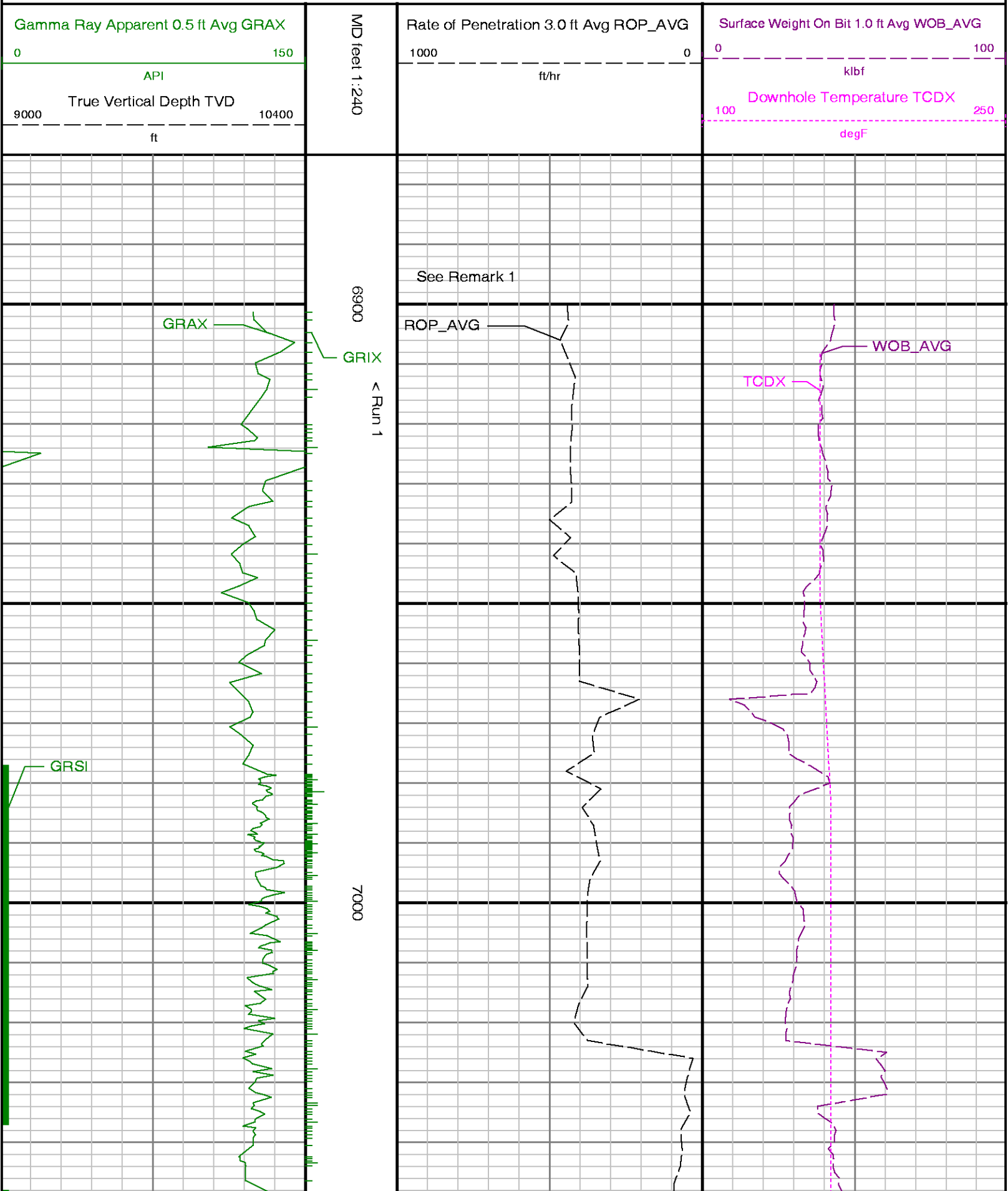


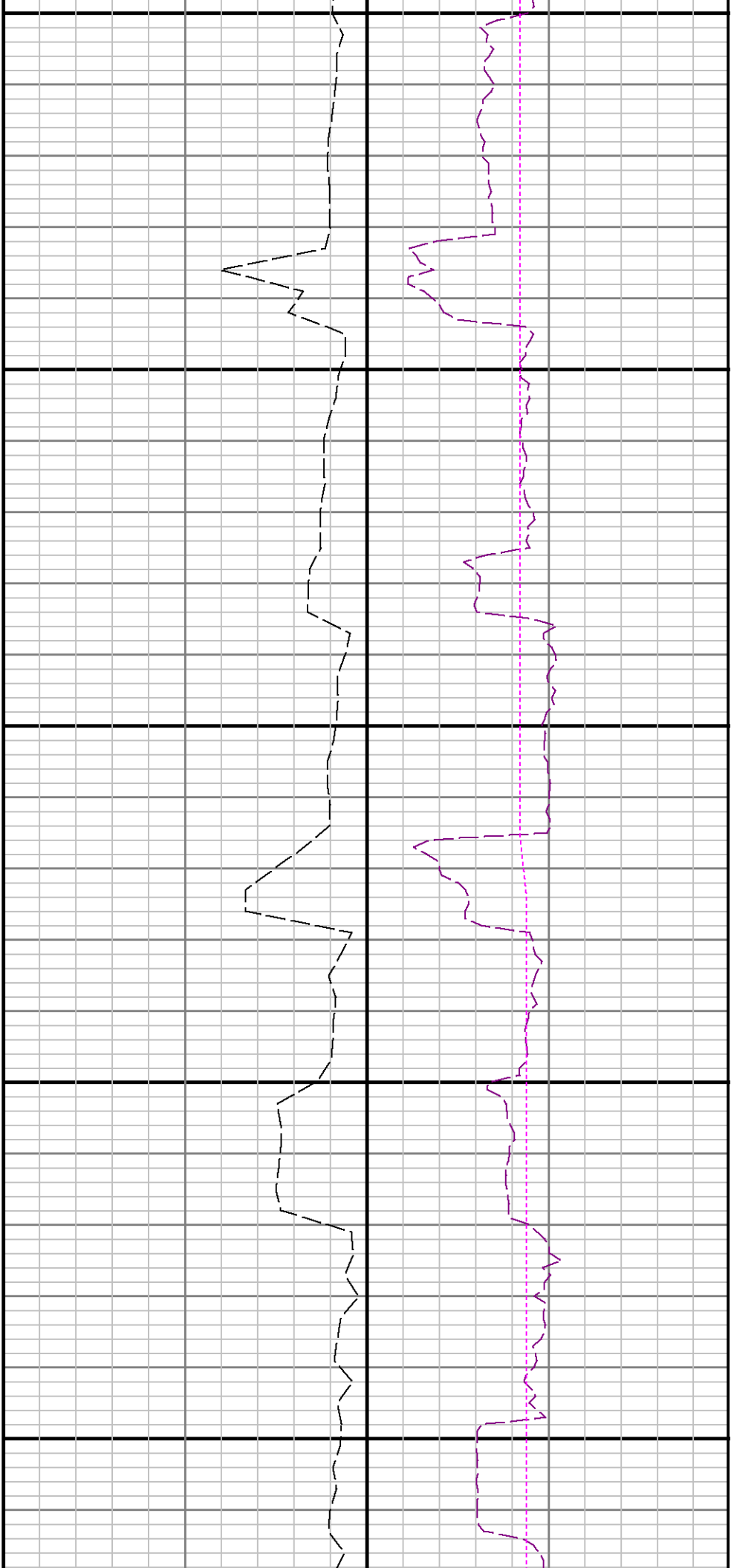
Company : Anadarko

Well : Butterball 30C-10HZ

Interval : 6875.00 - 12075.00 feet

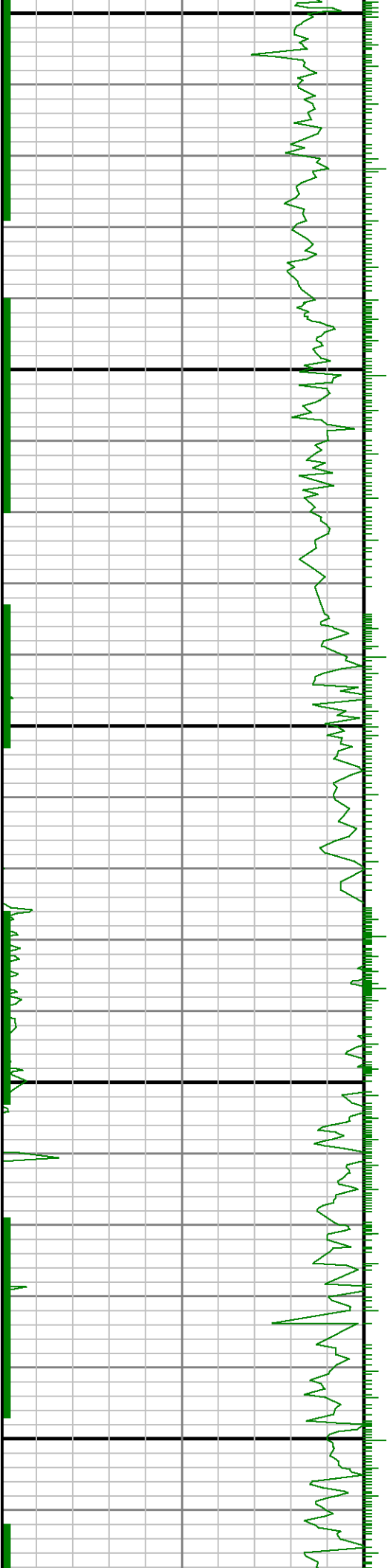
Created : 18/Oct/2013 3:34:44 AM

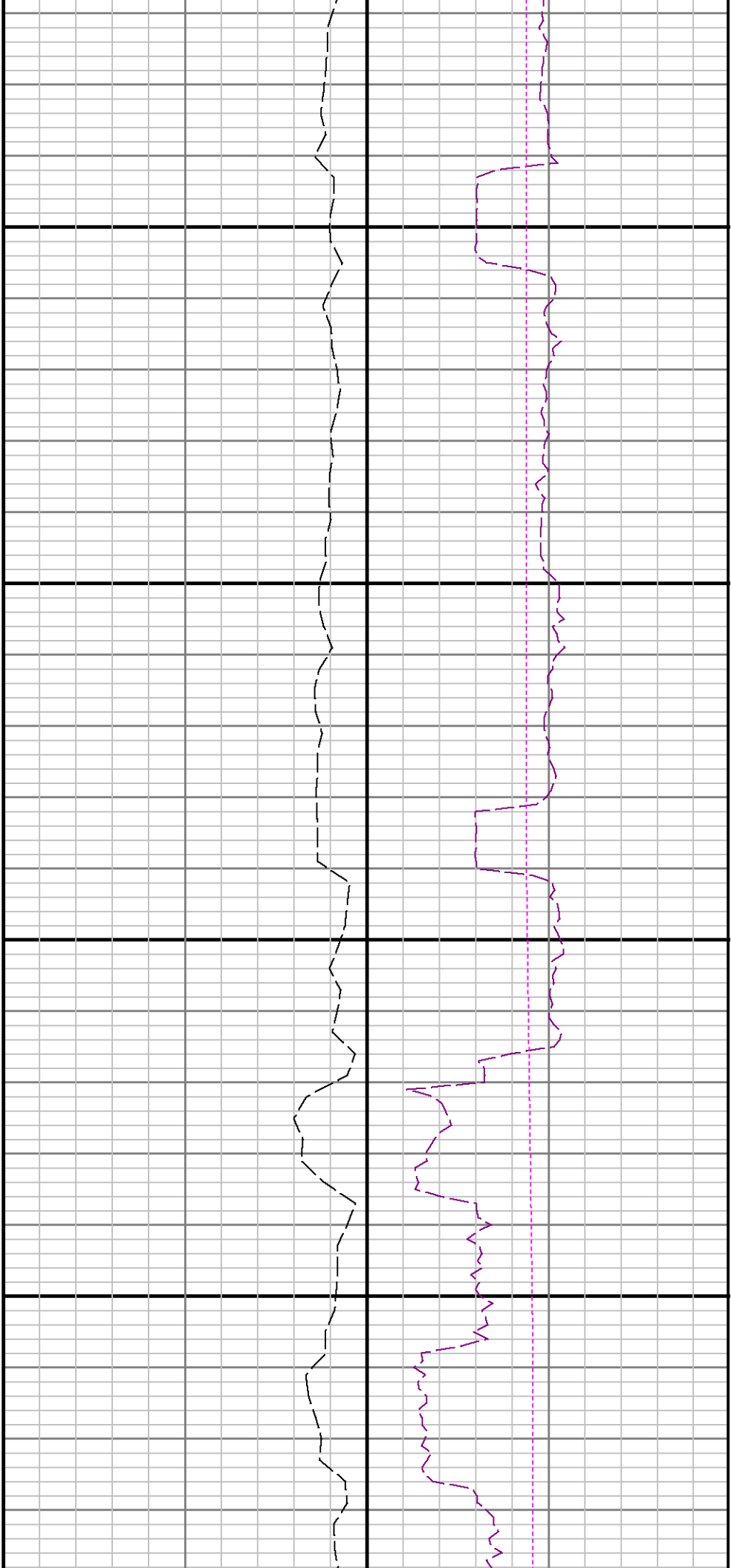




7100

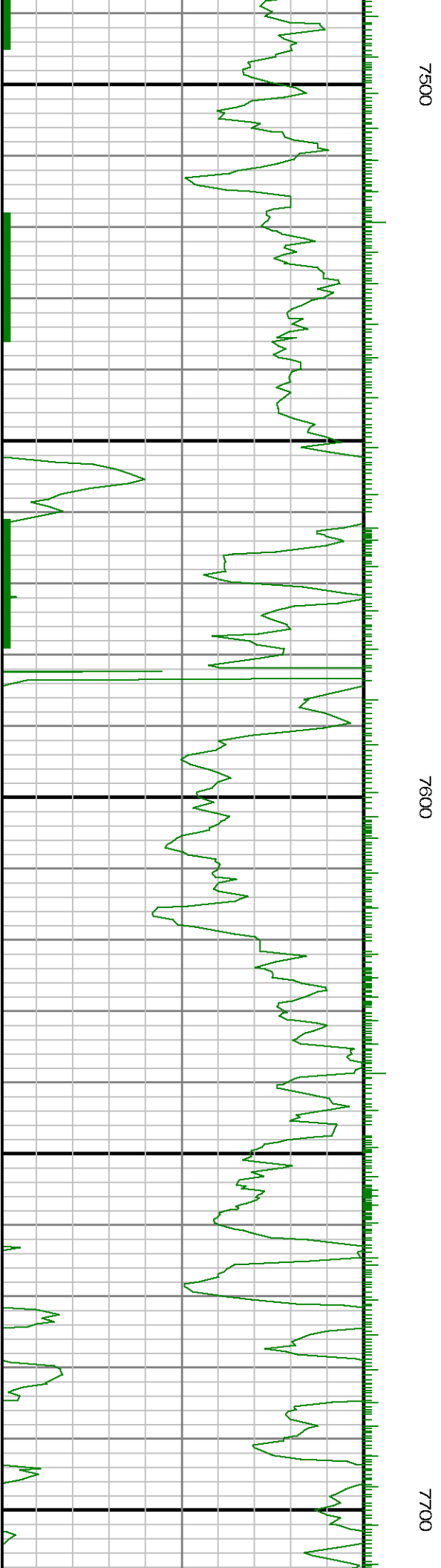
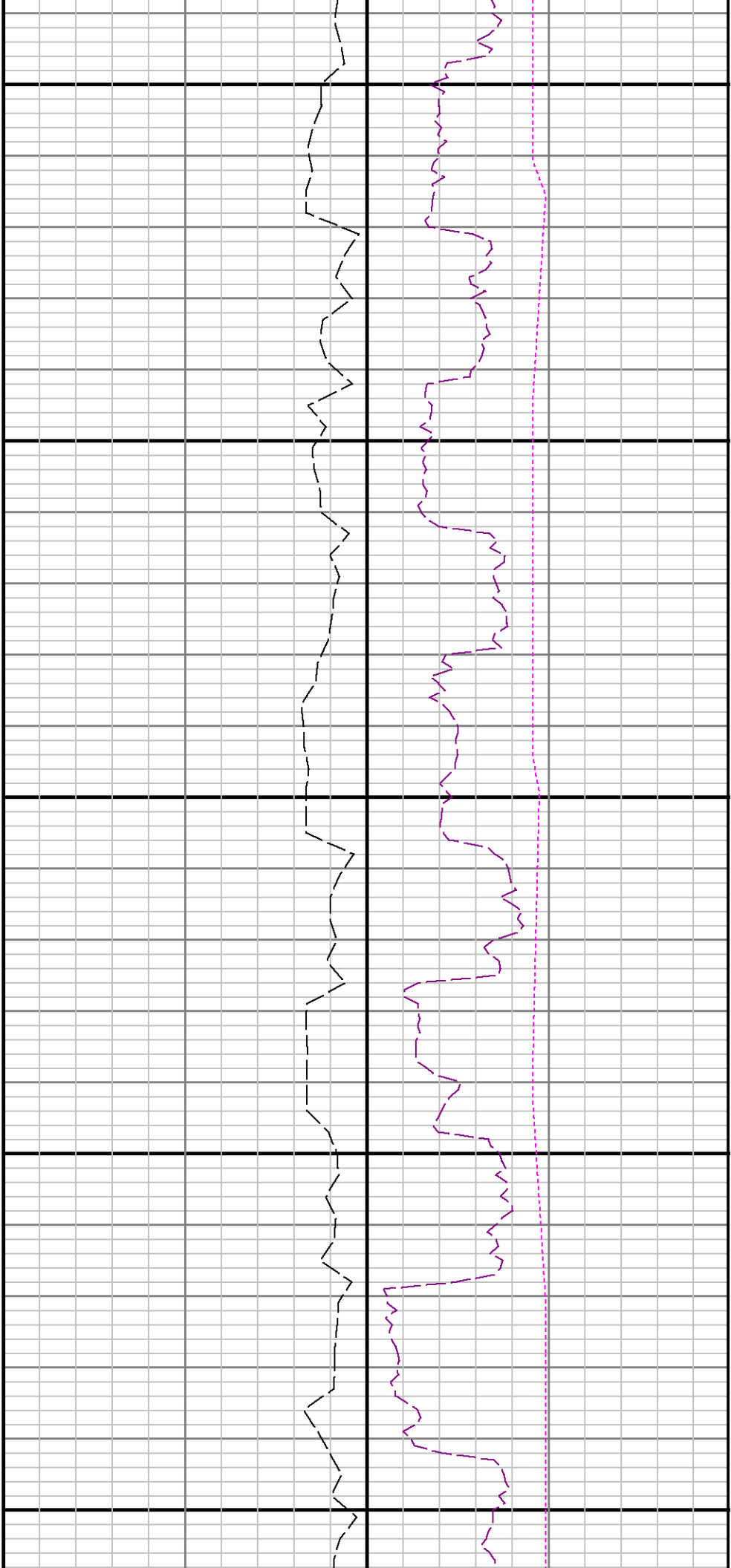
7200

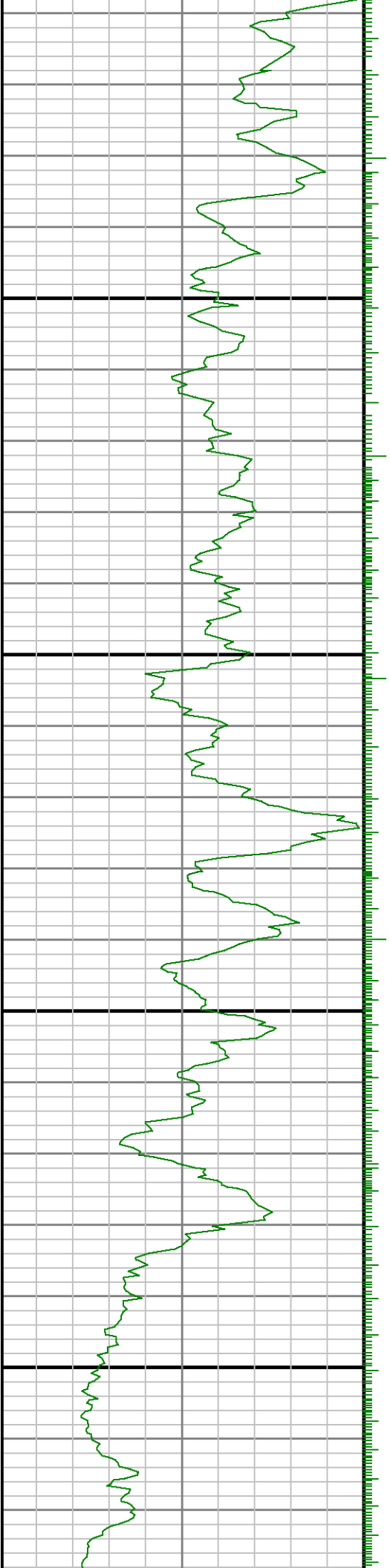




7300

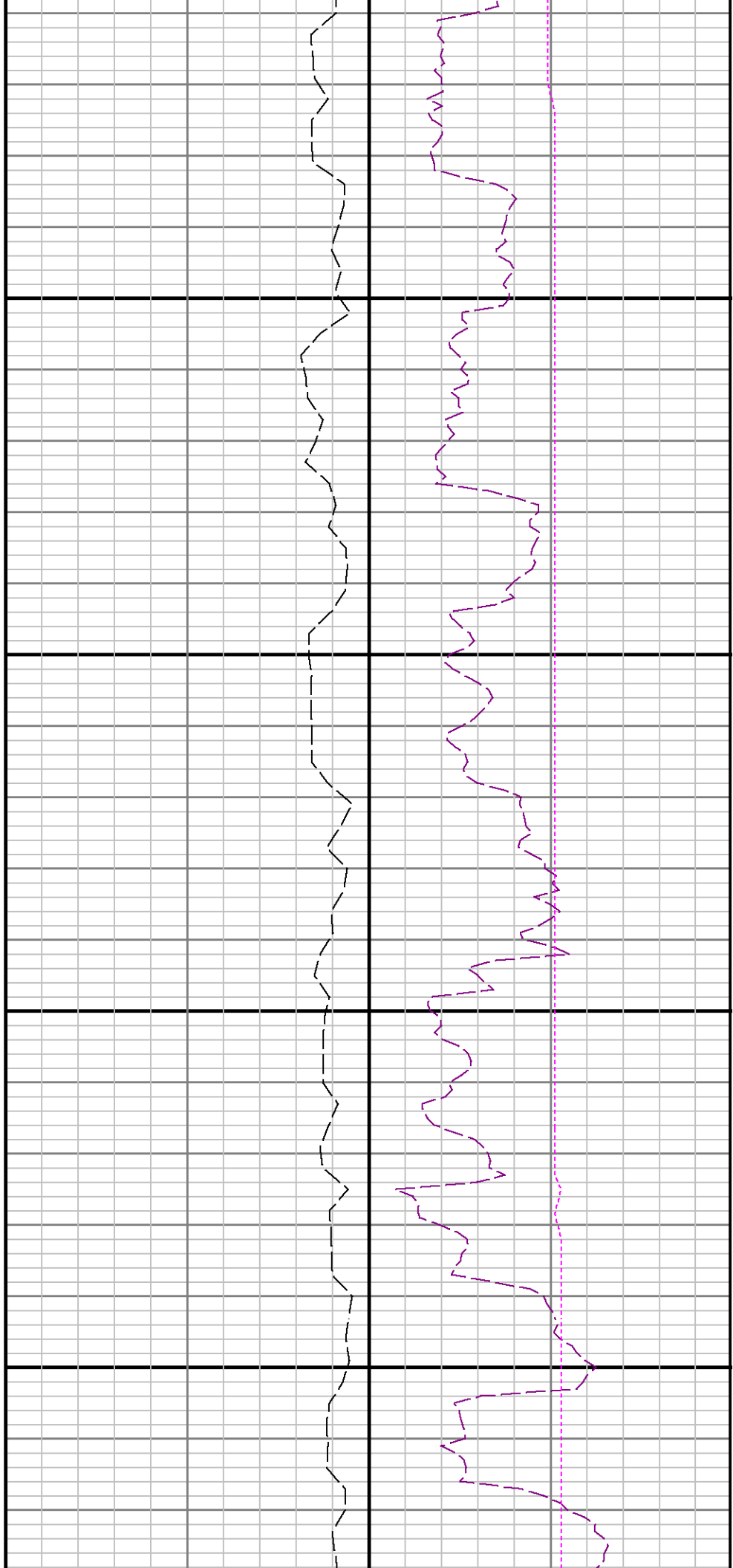
7400

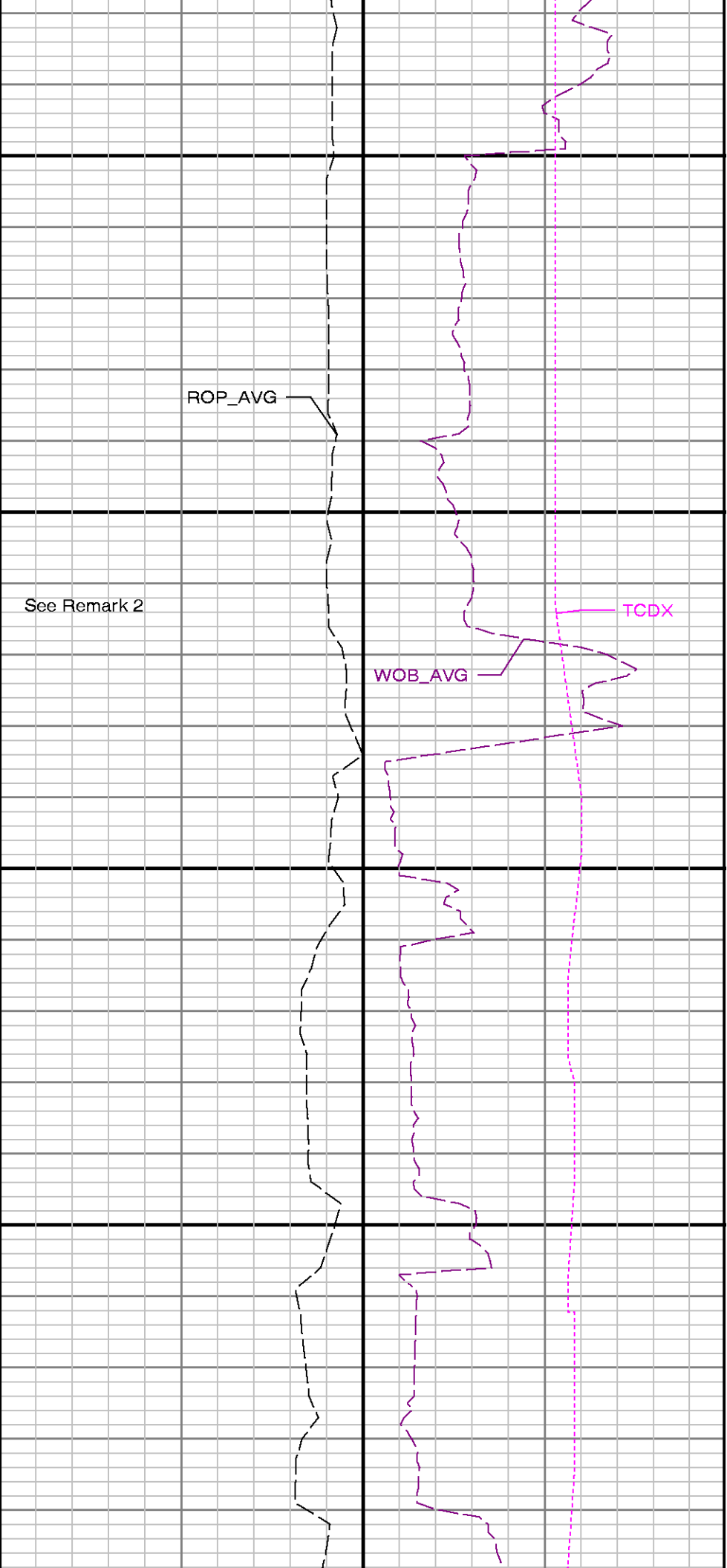
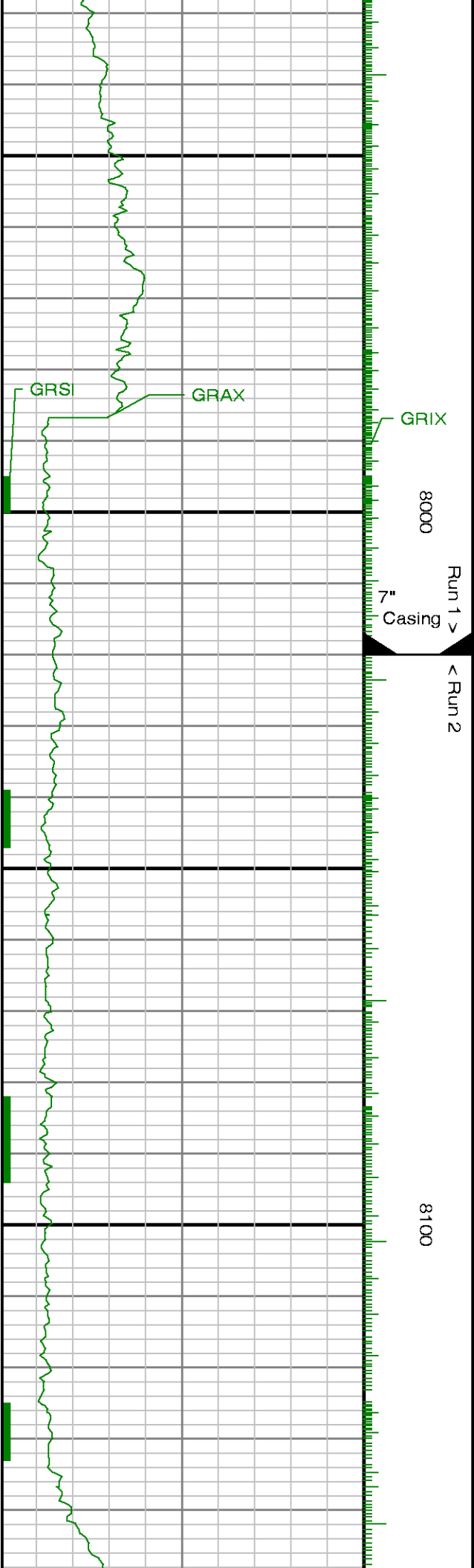


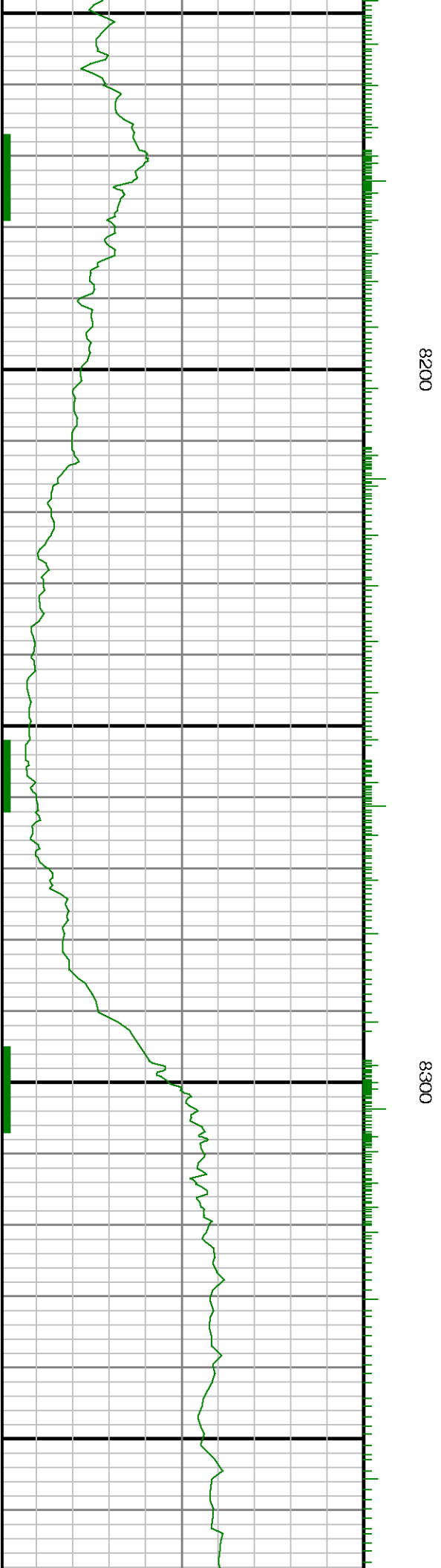
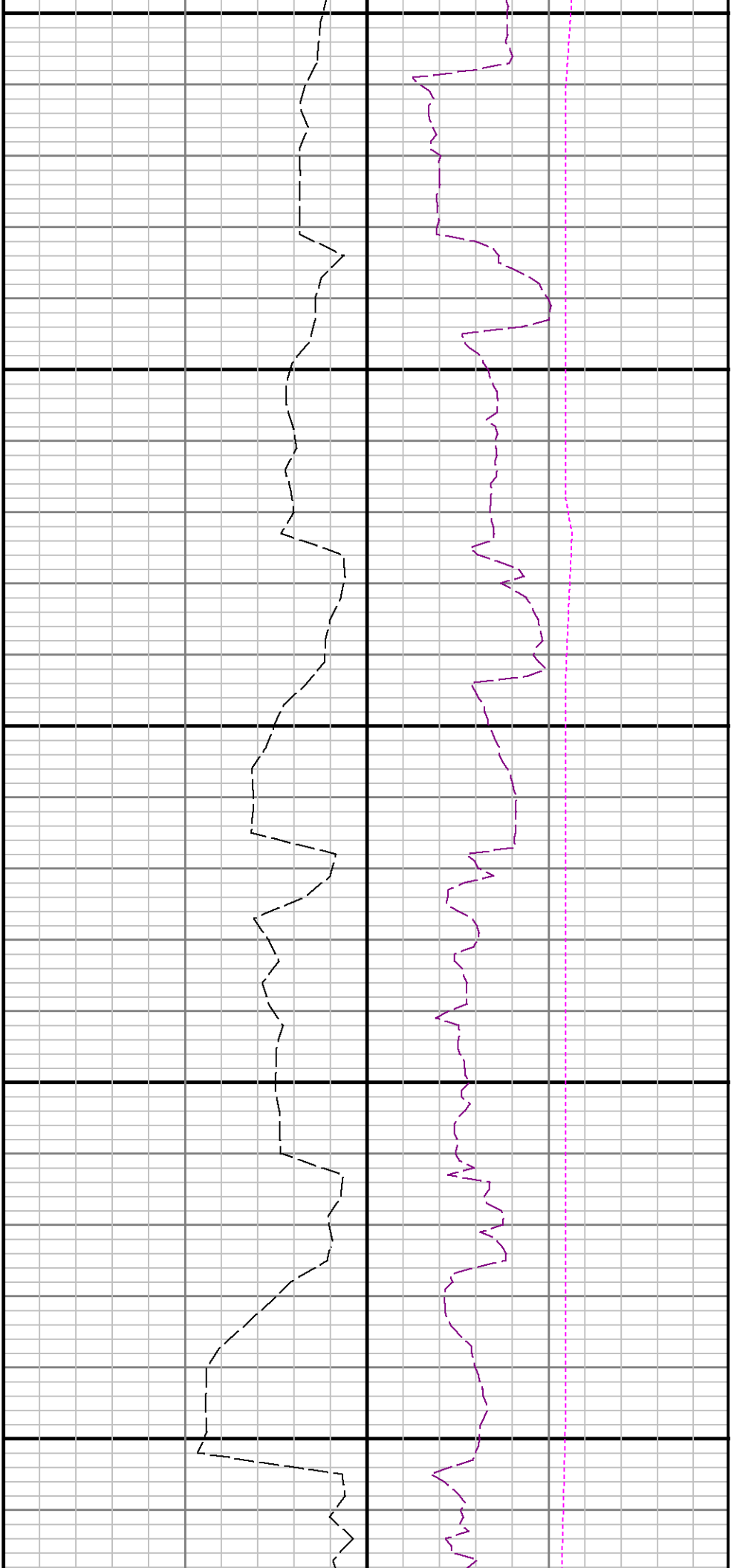


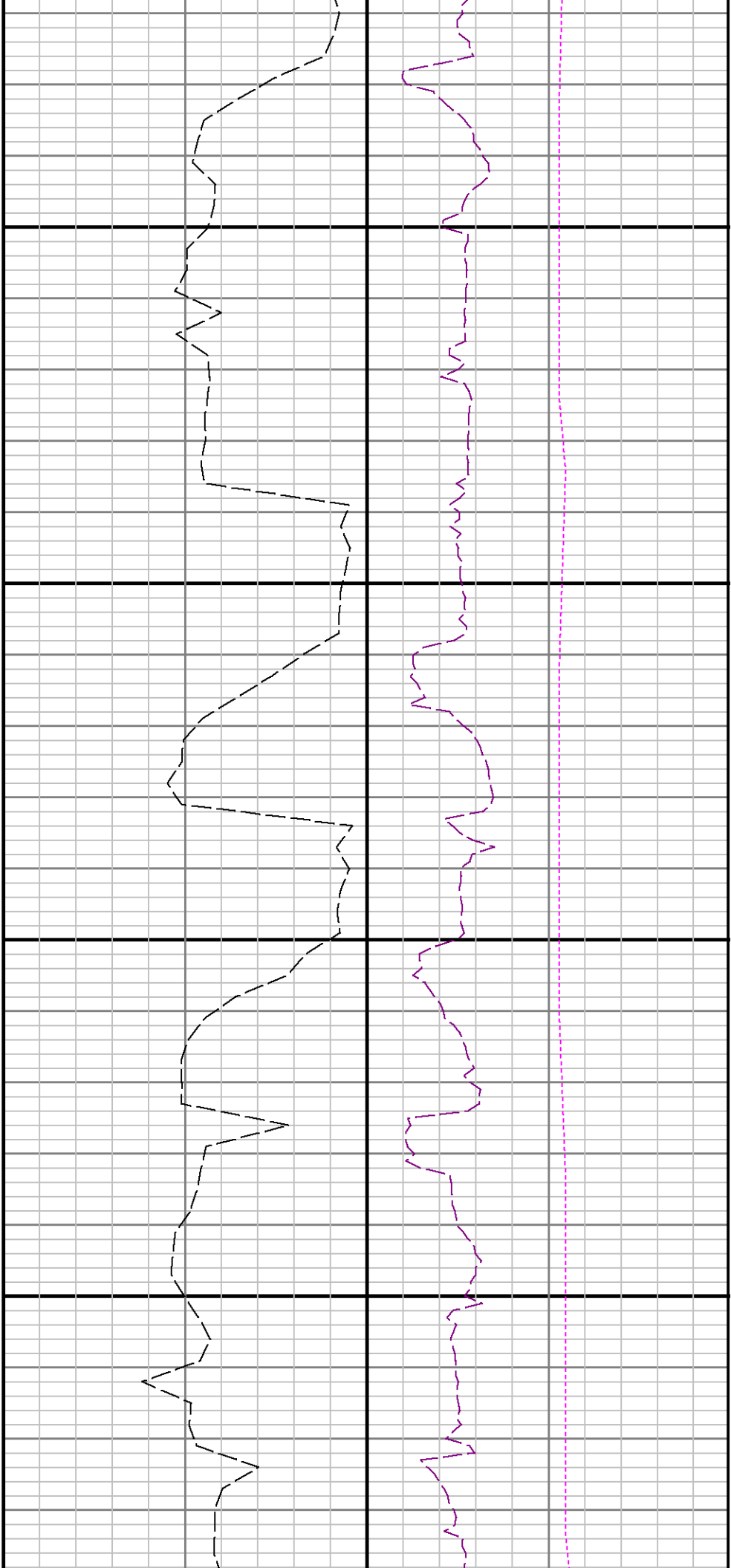
7800

7900



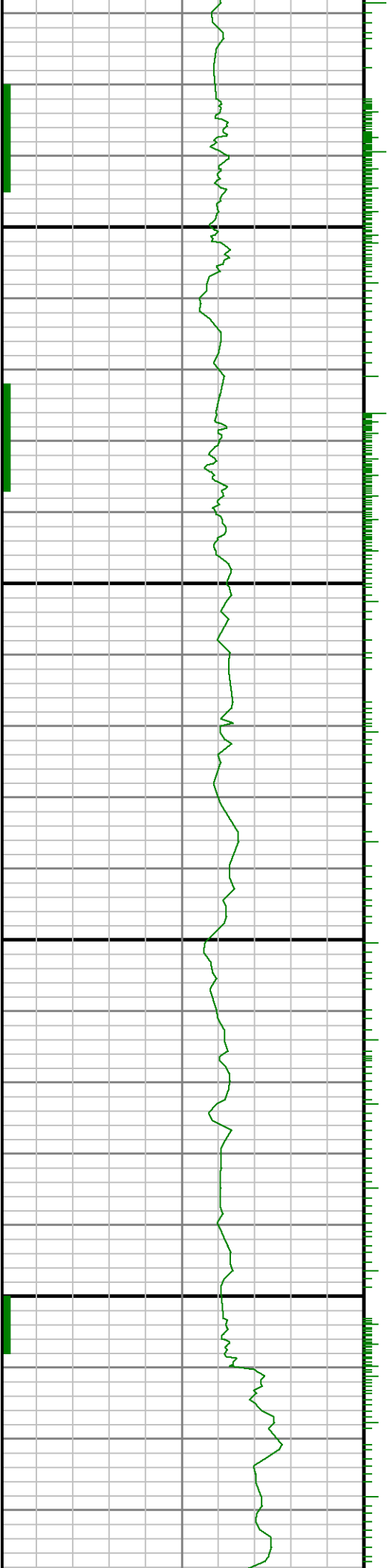


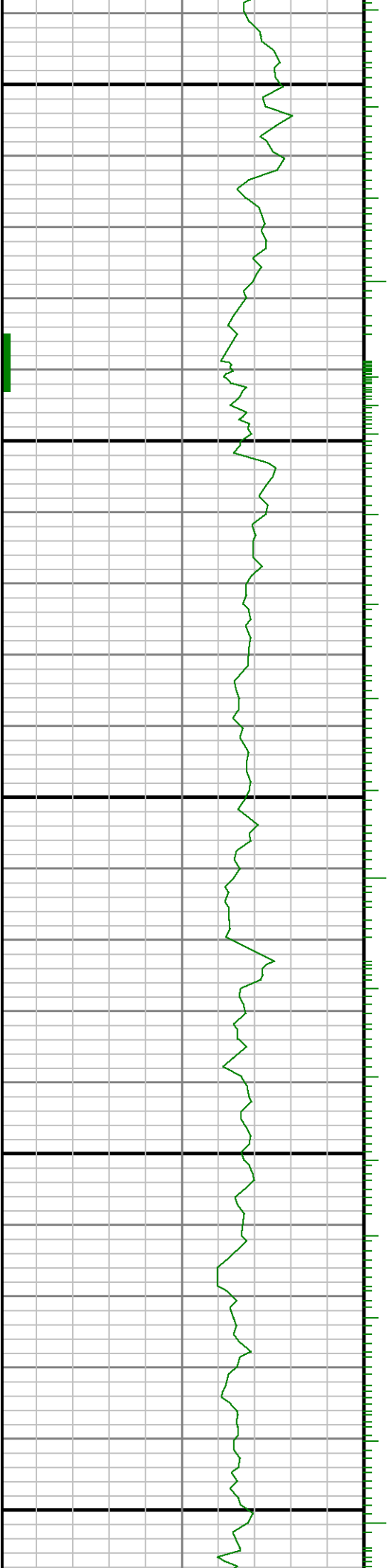




8400

8500

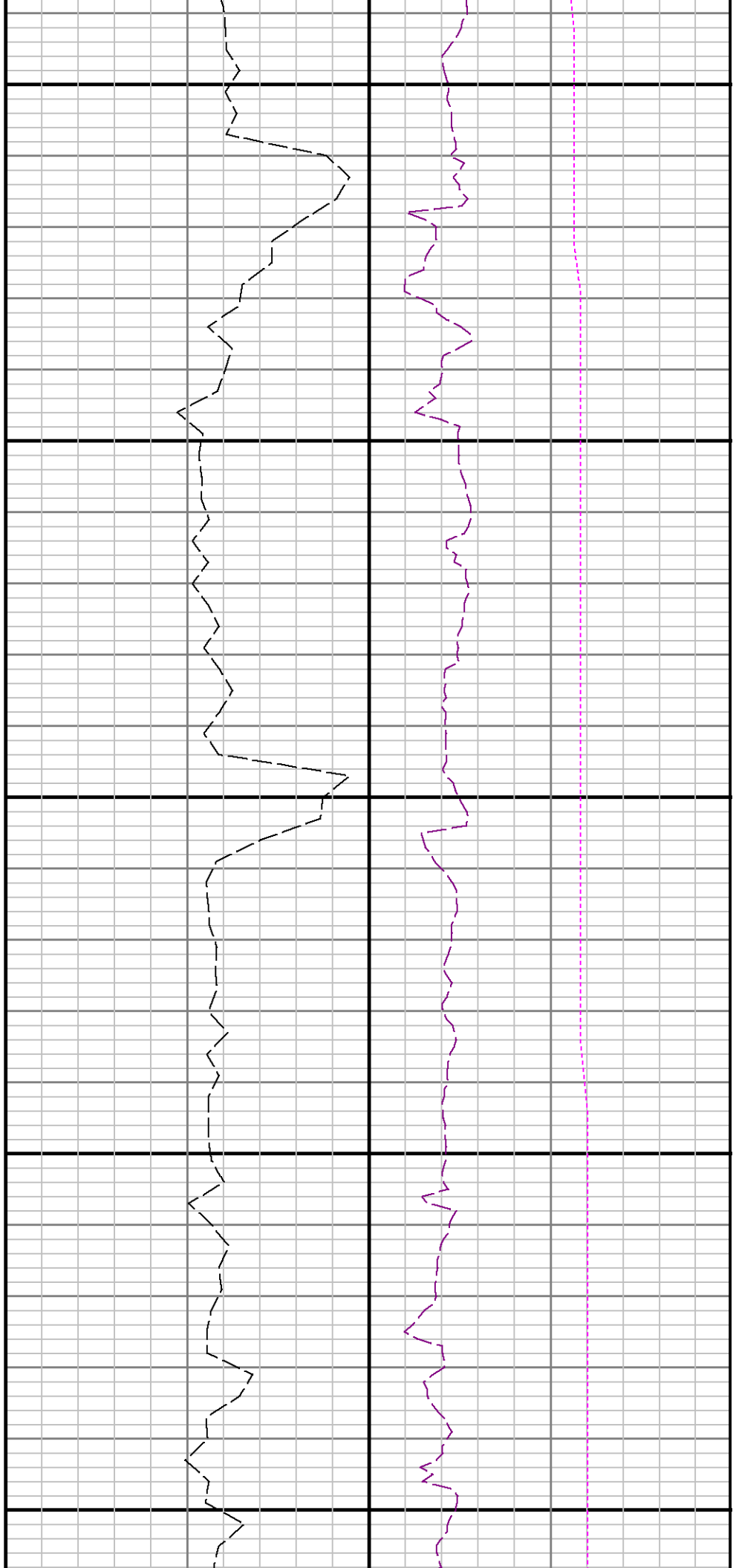


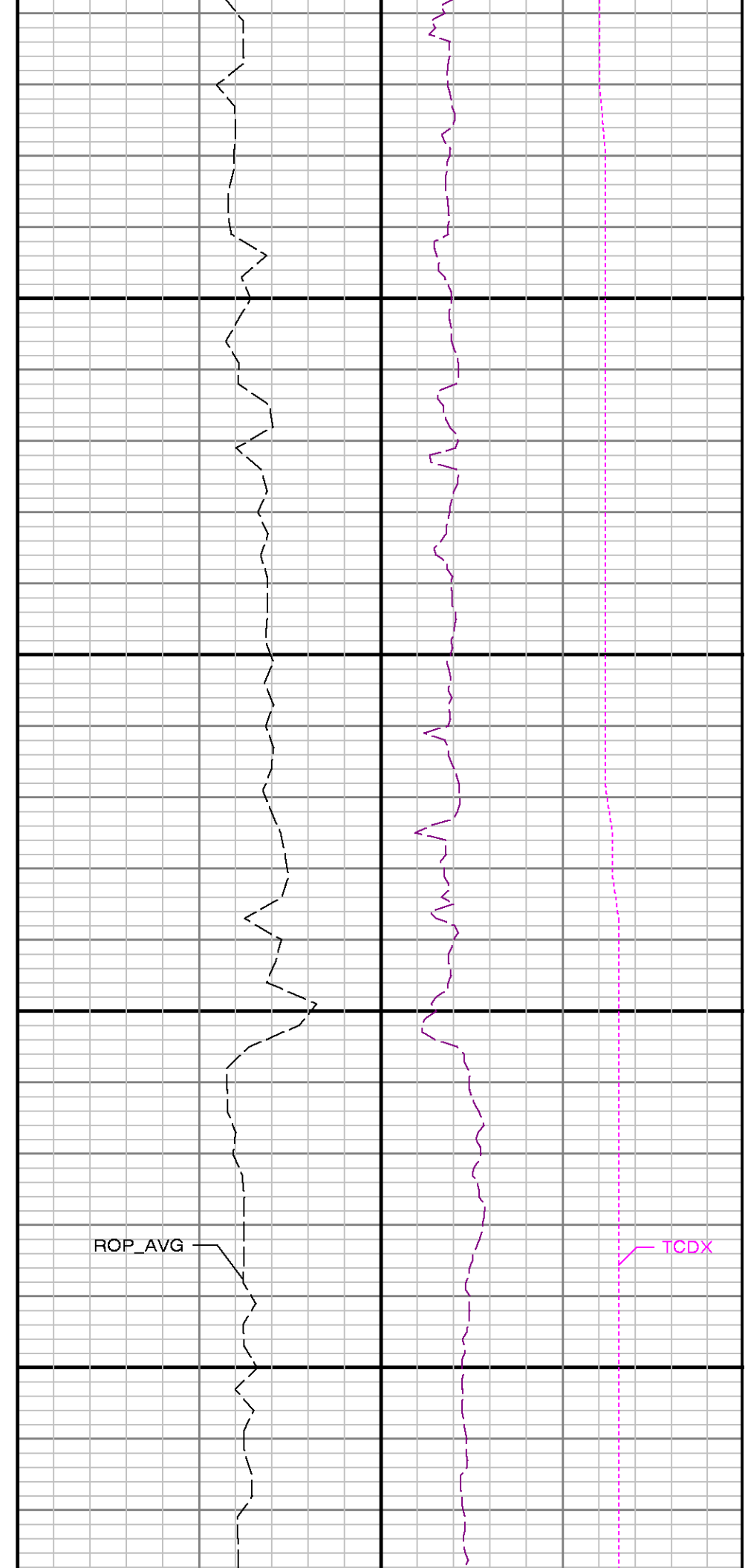
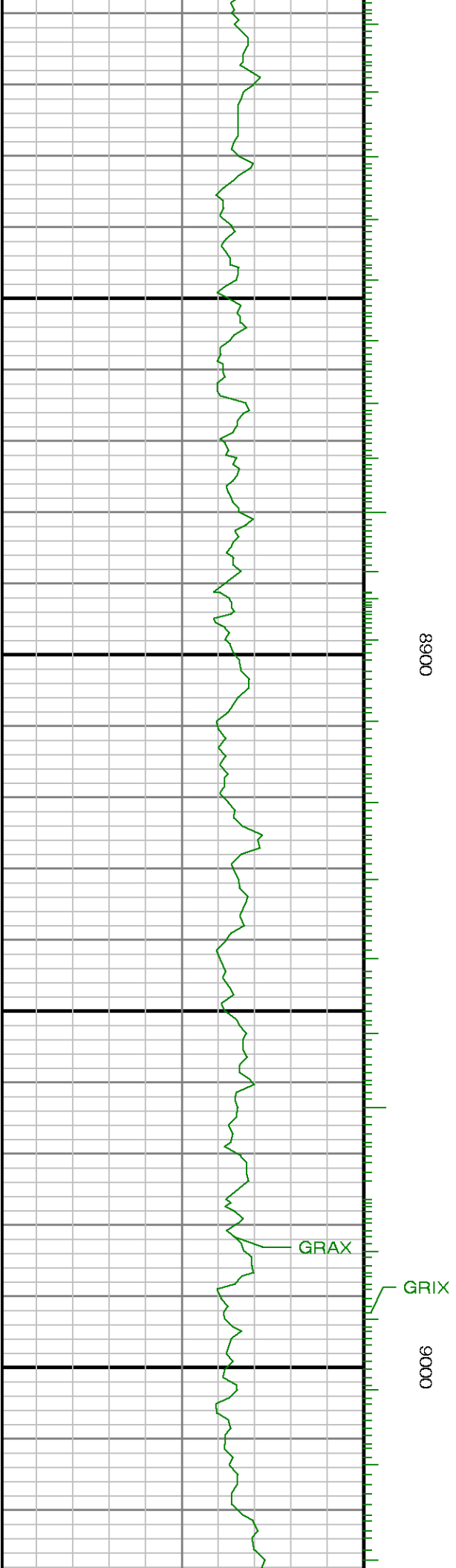


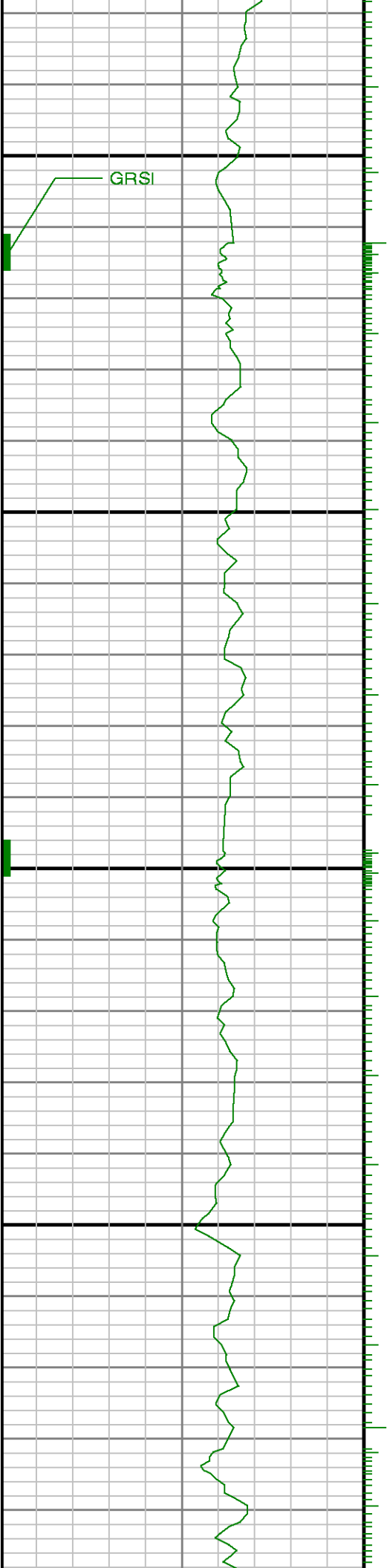
0098

8700

8800



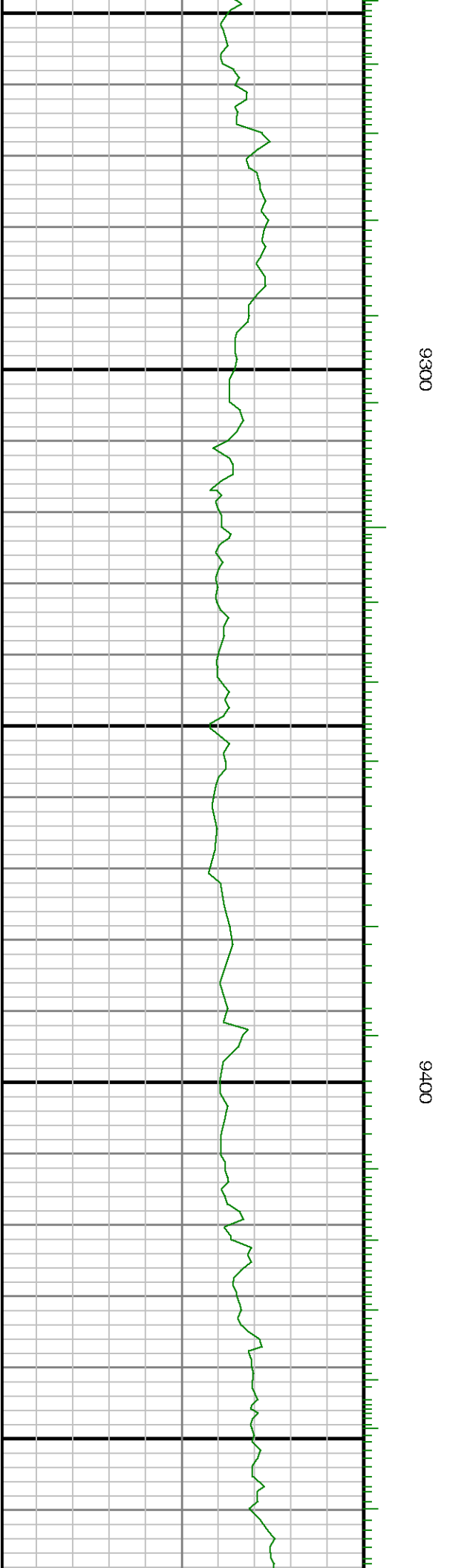
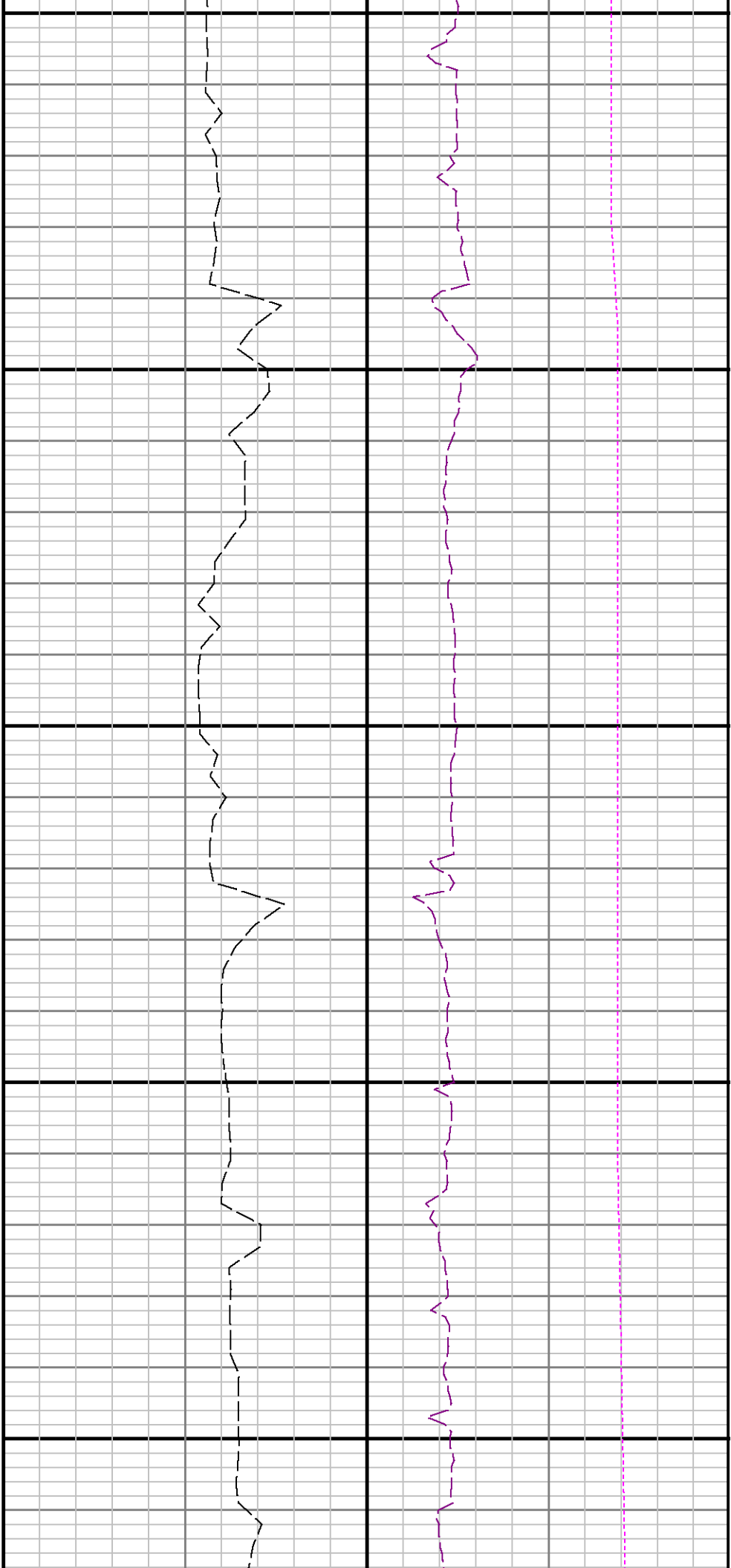


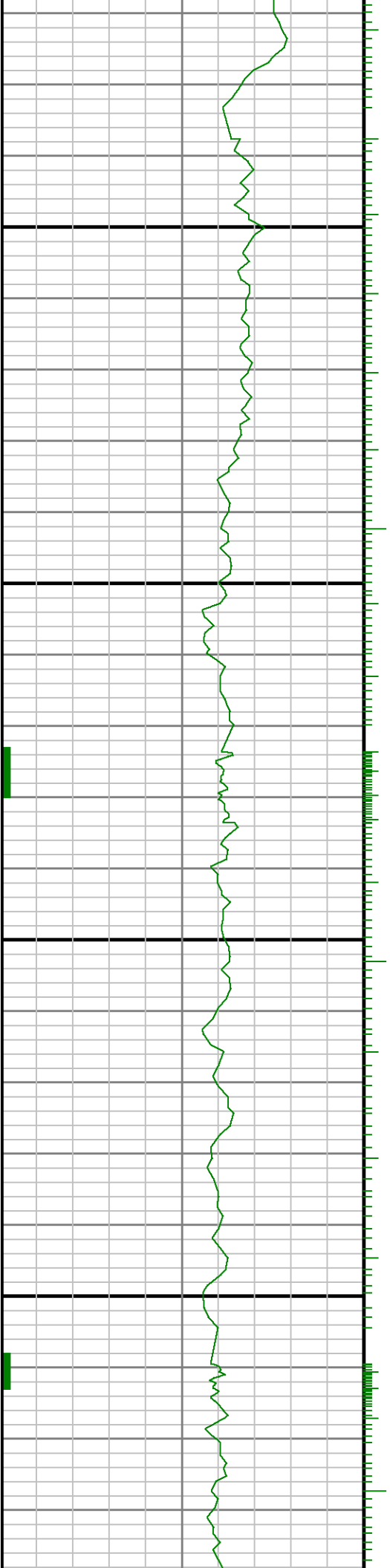


9100

9200

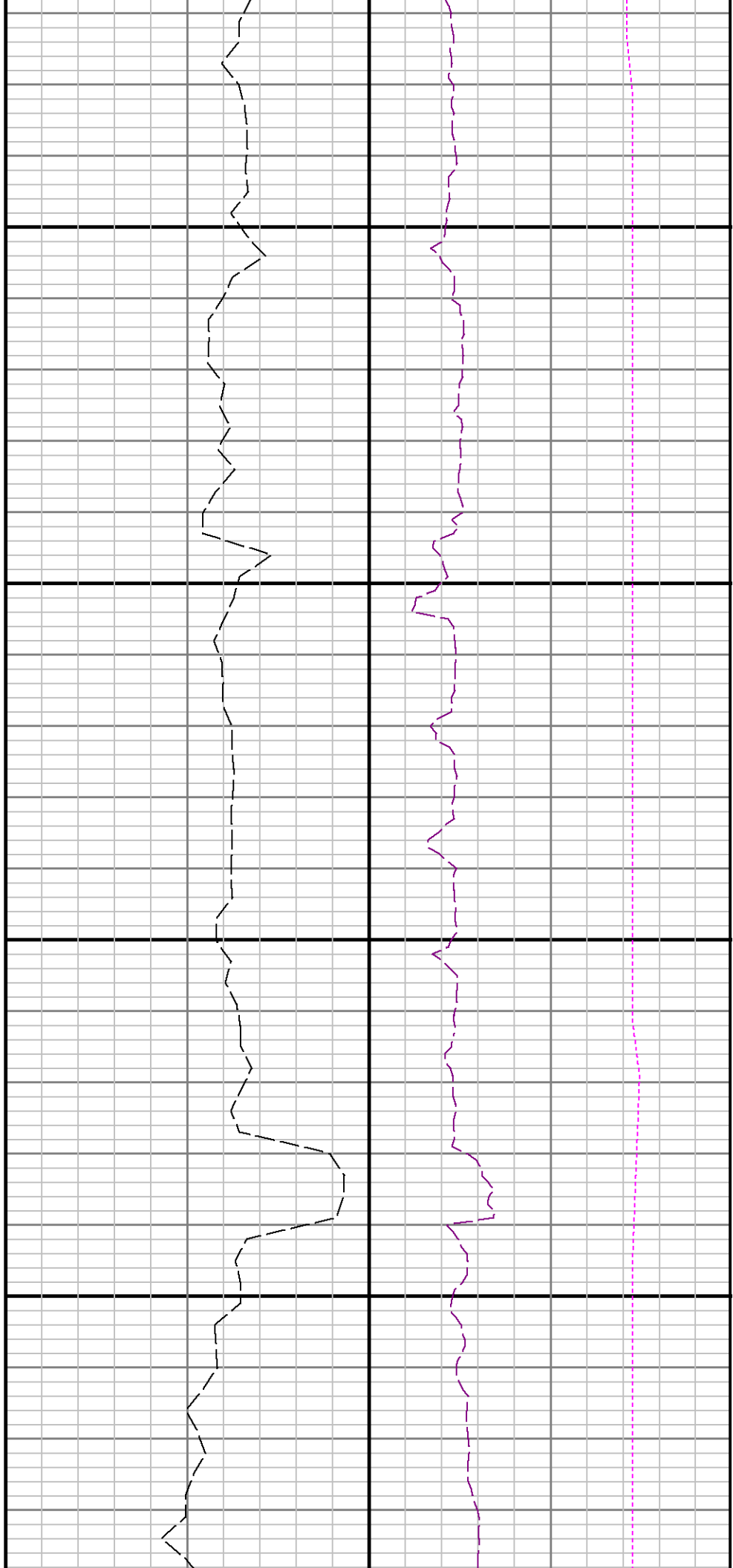


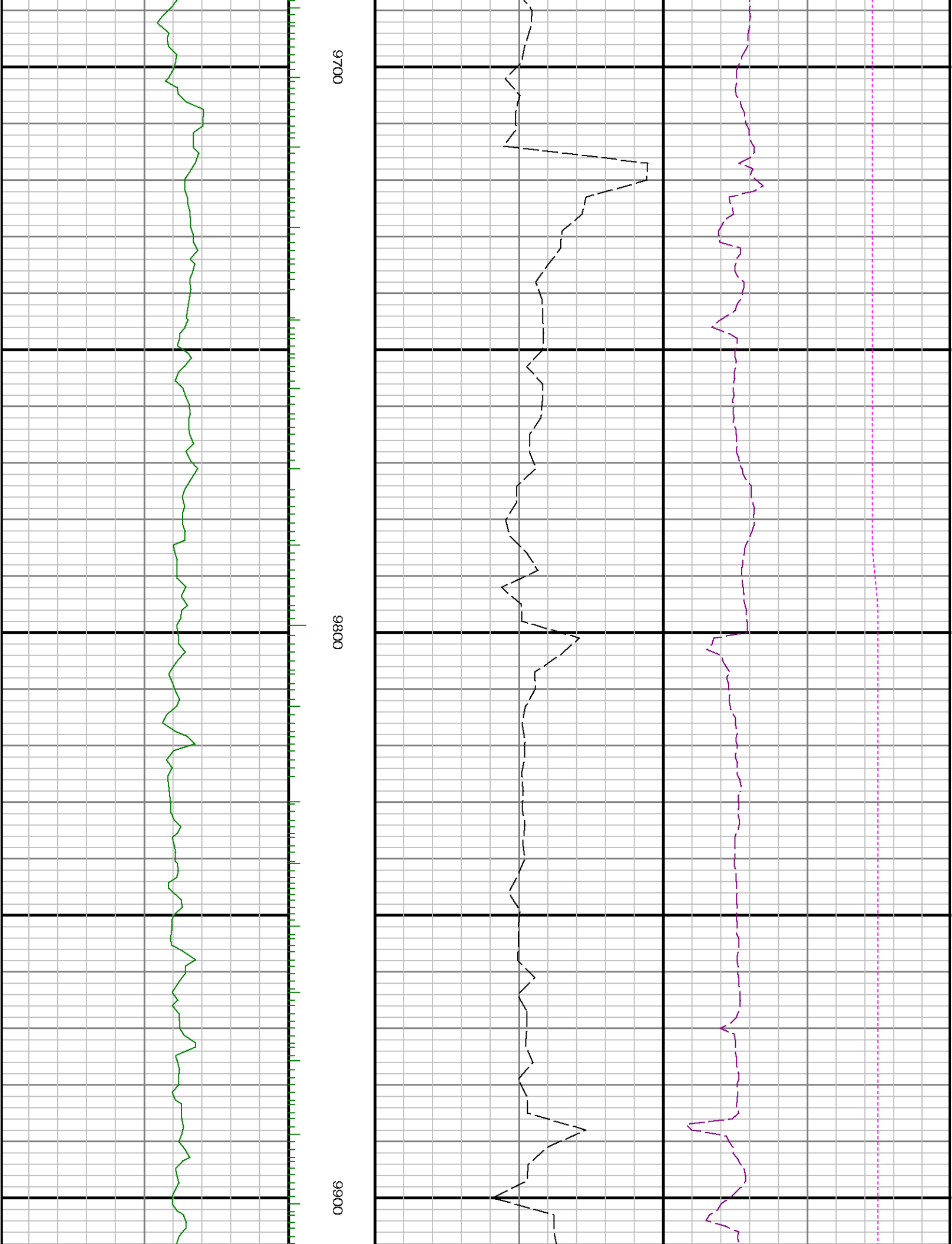


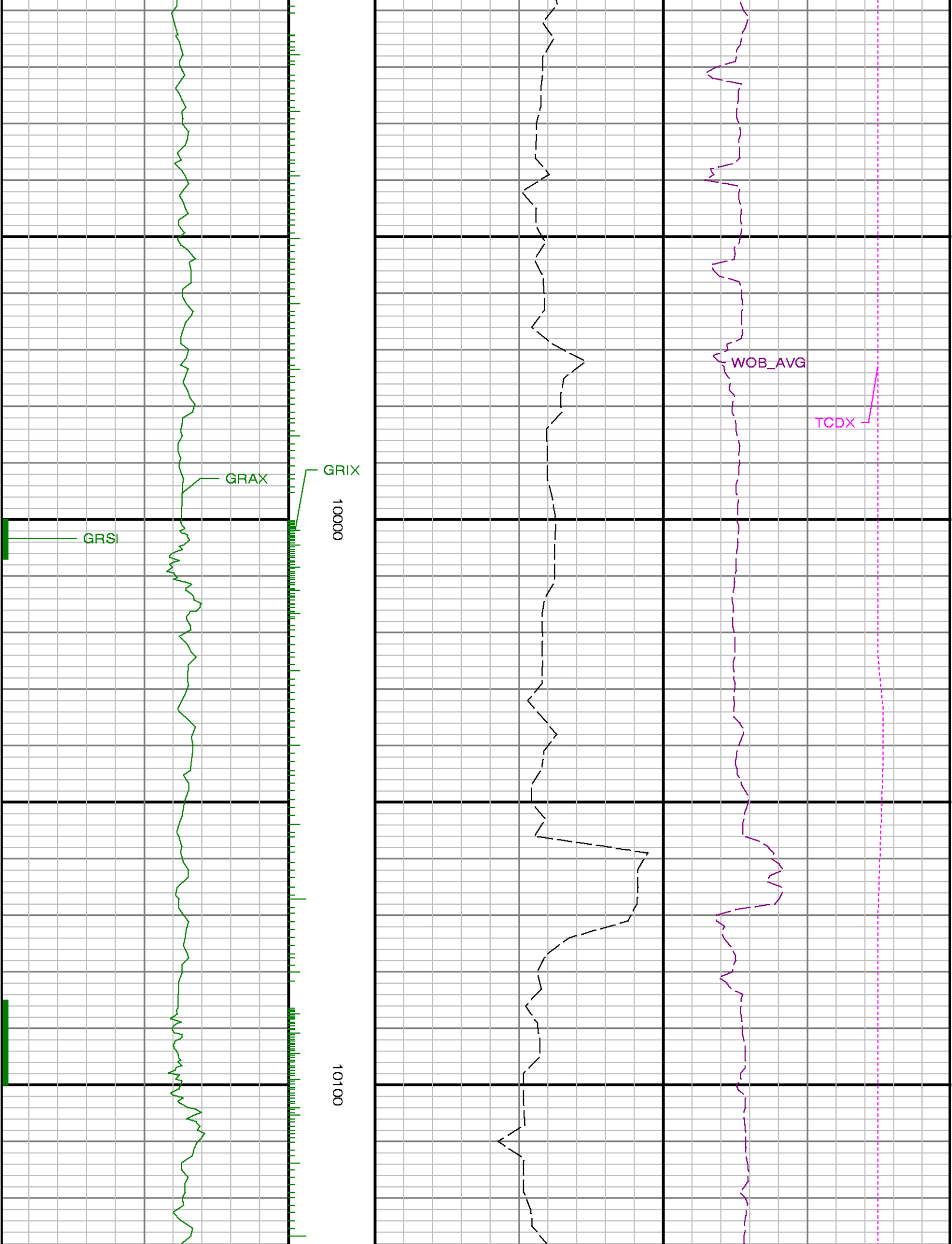


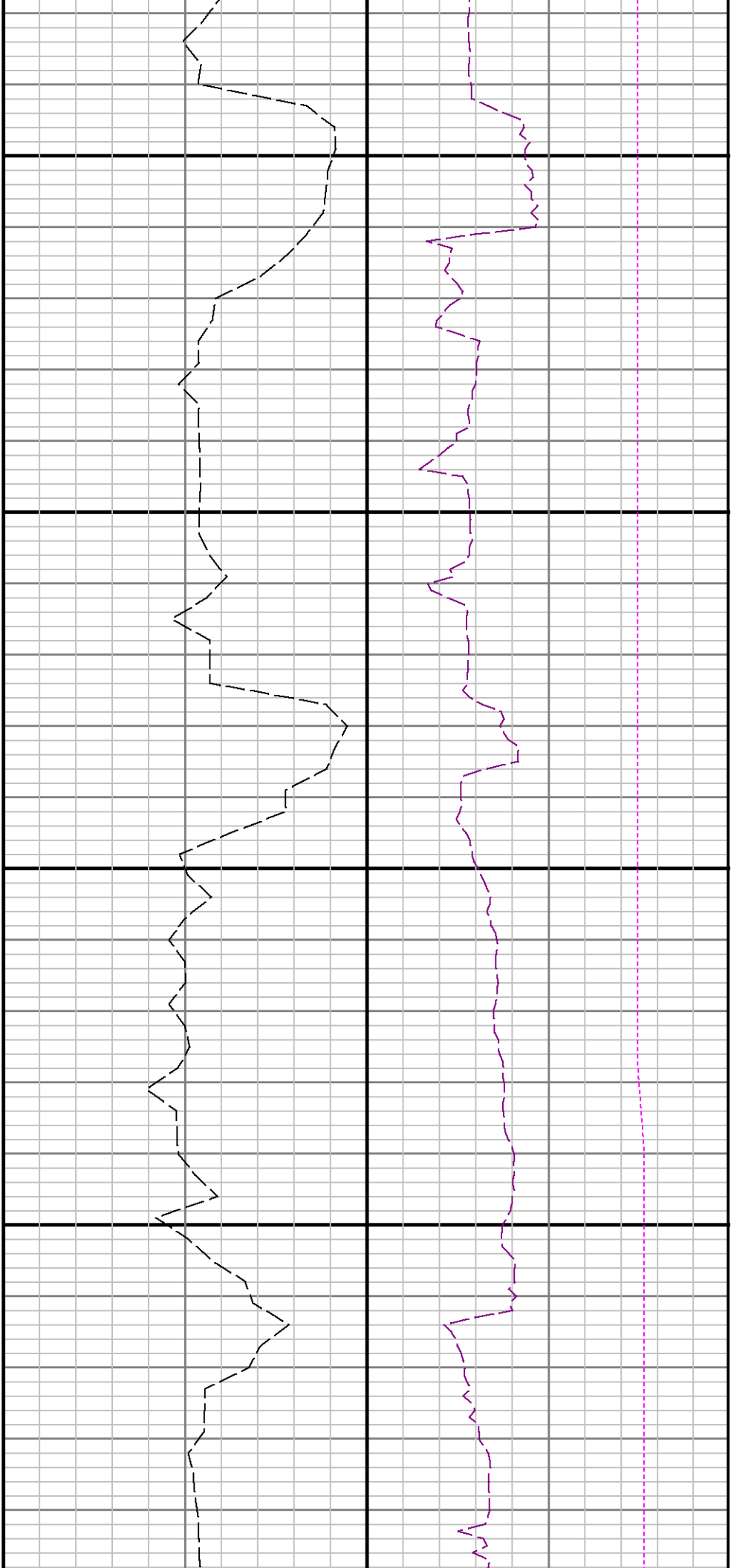
9500

9600



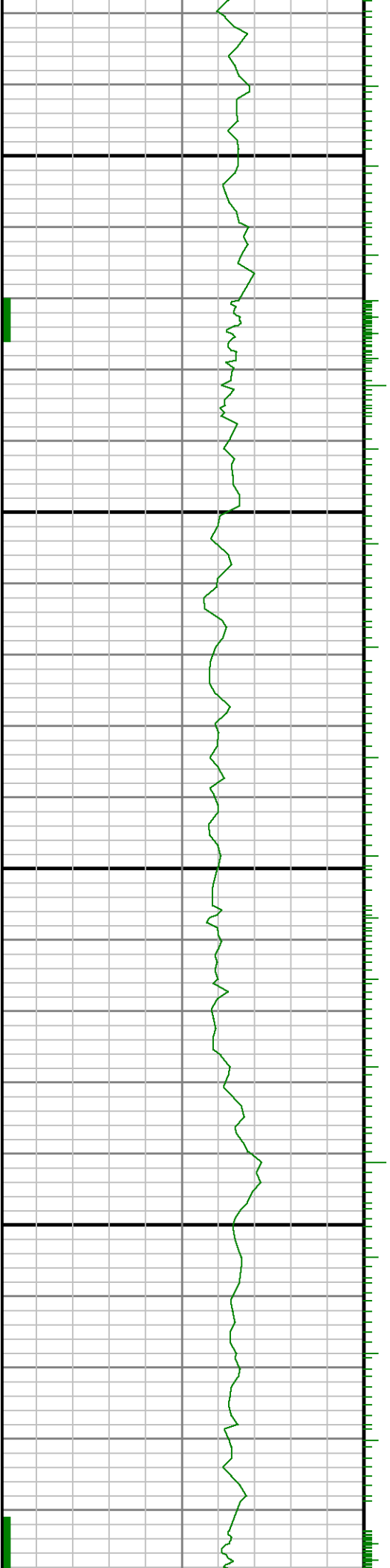


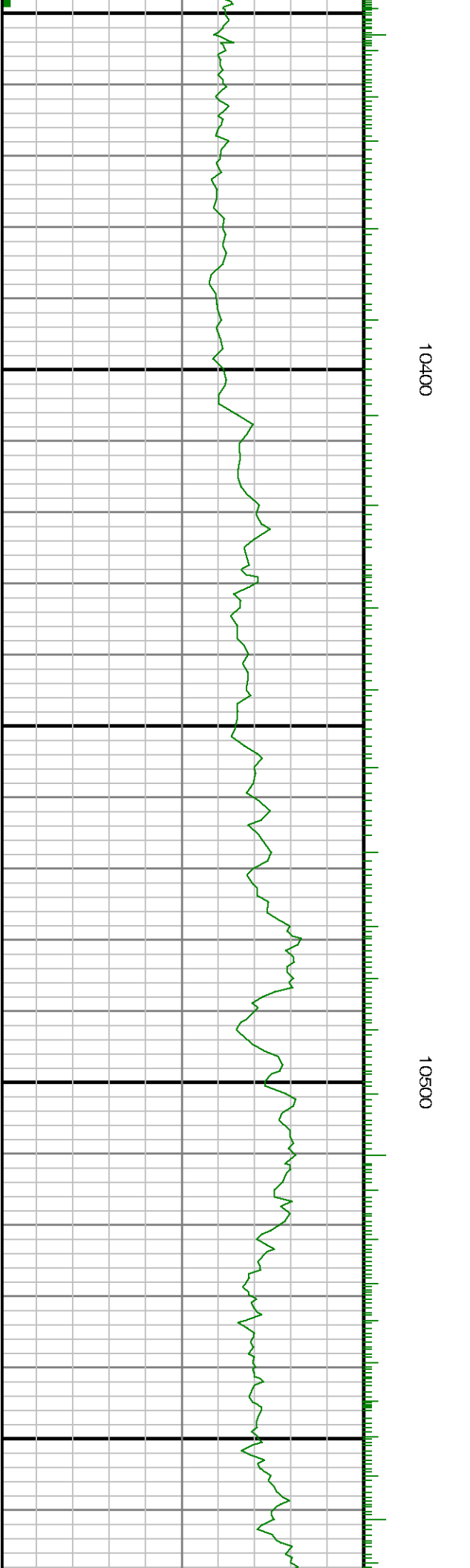
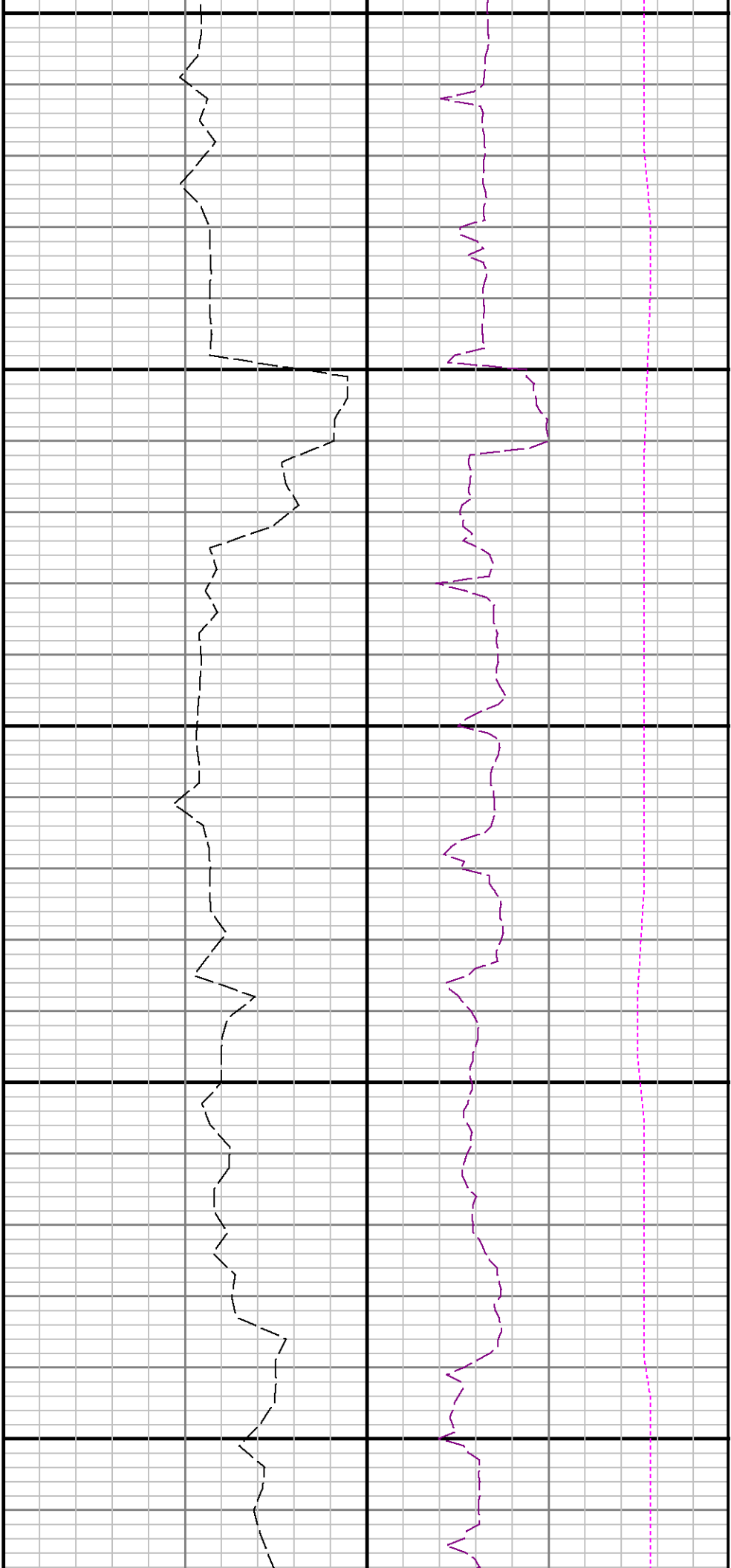


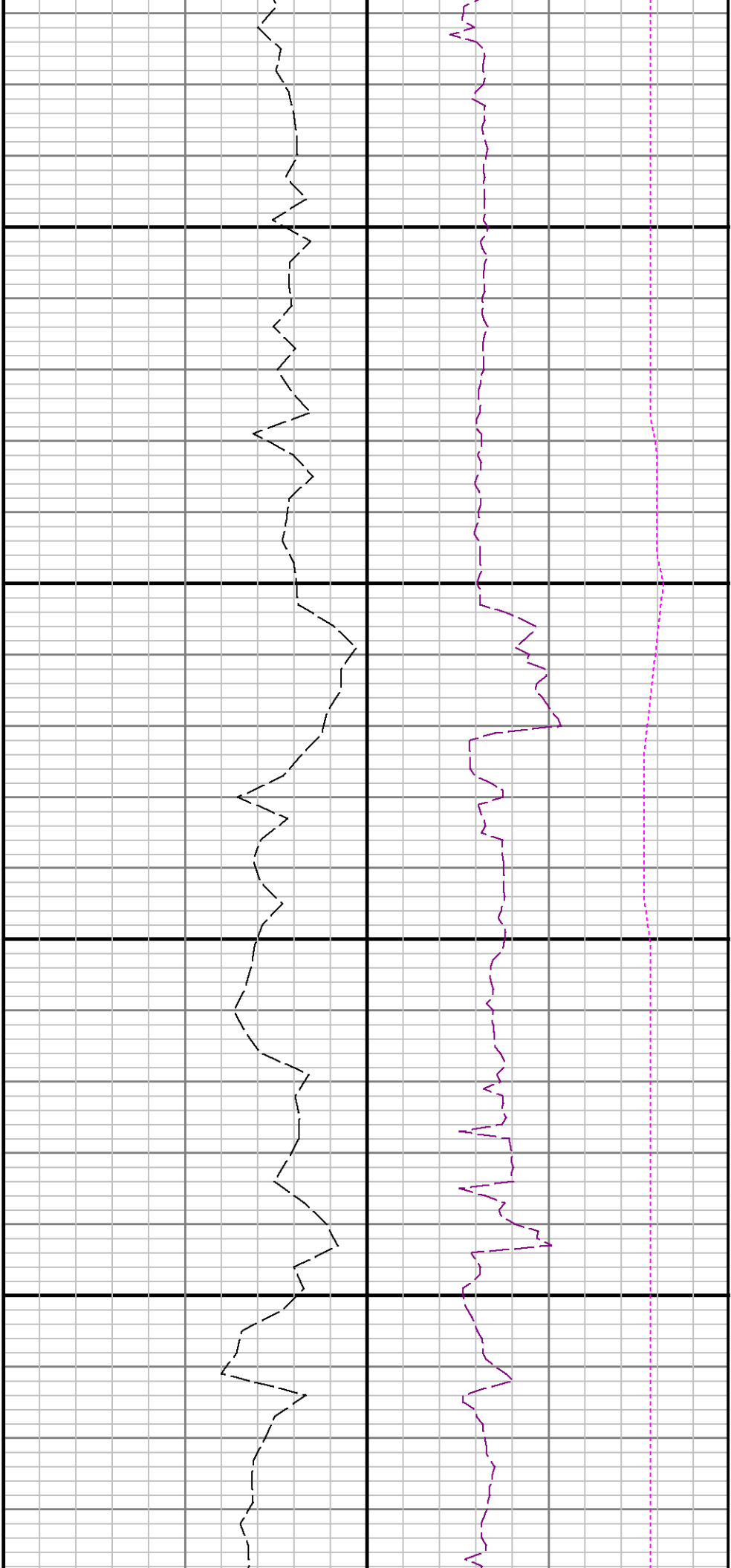


10200

10300

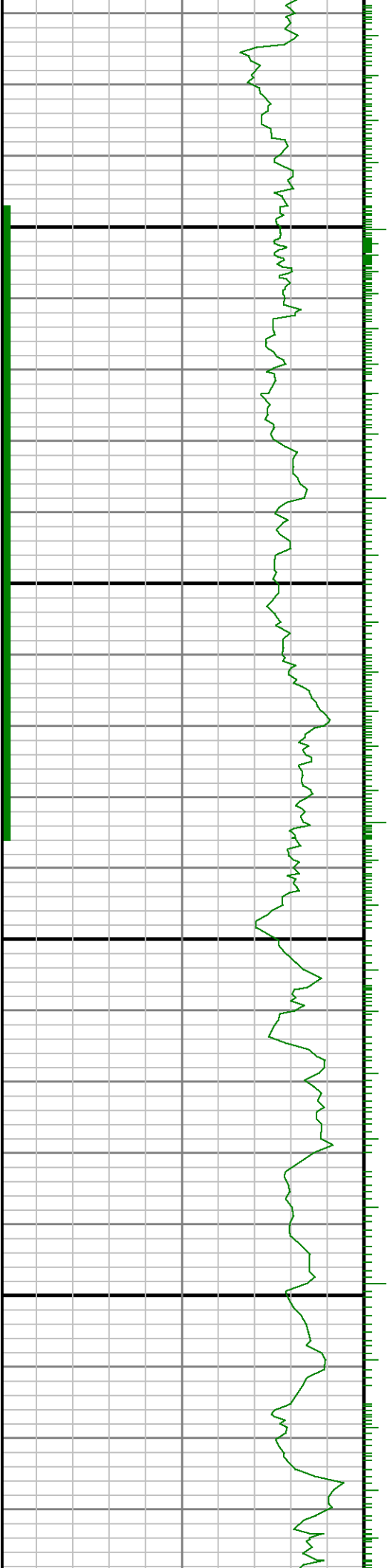


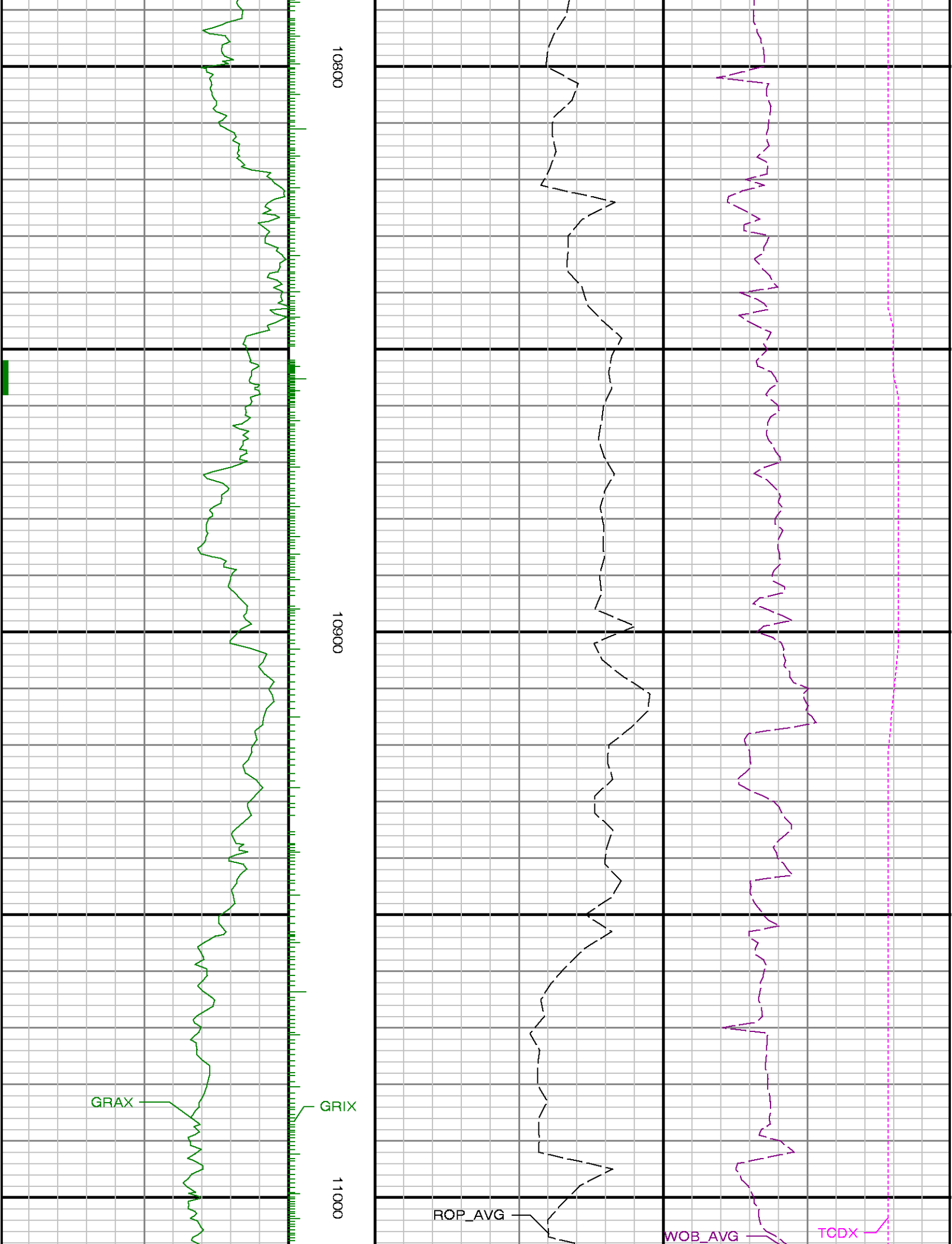


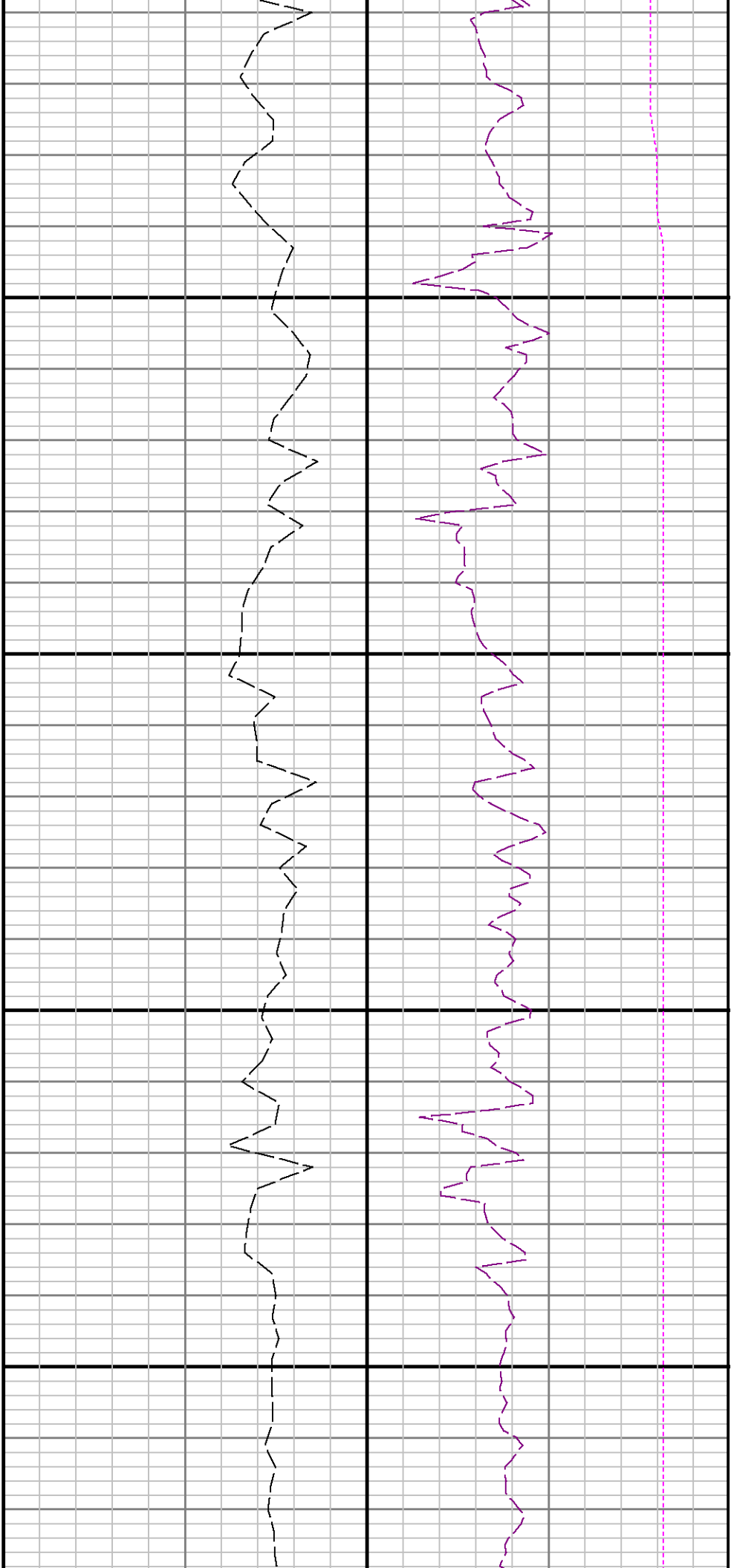


10600

10700

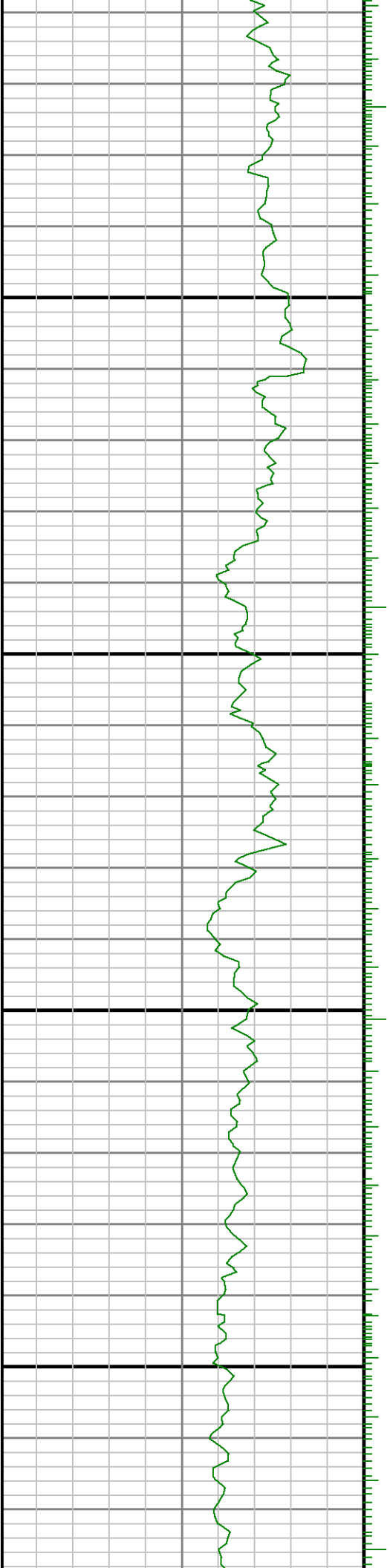


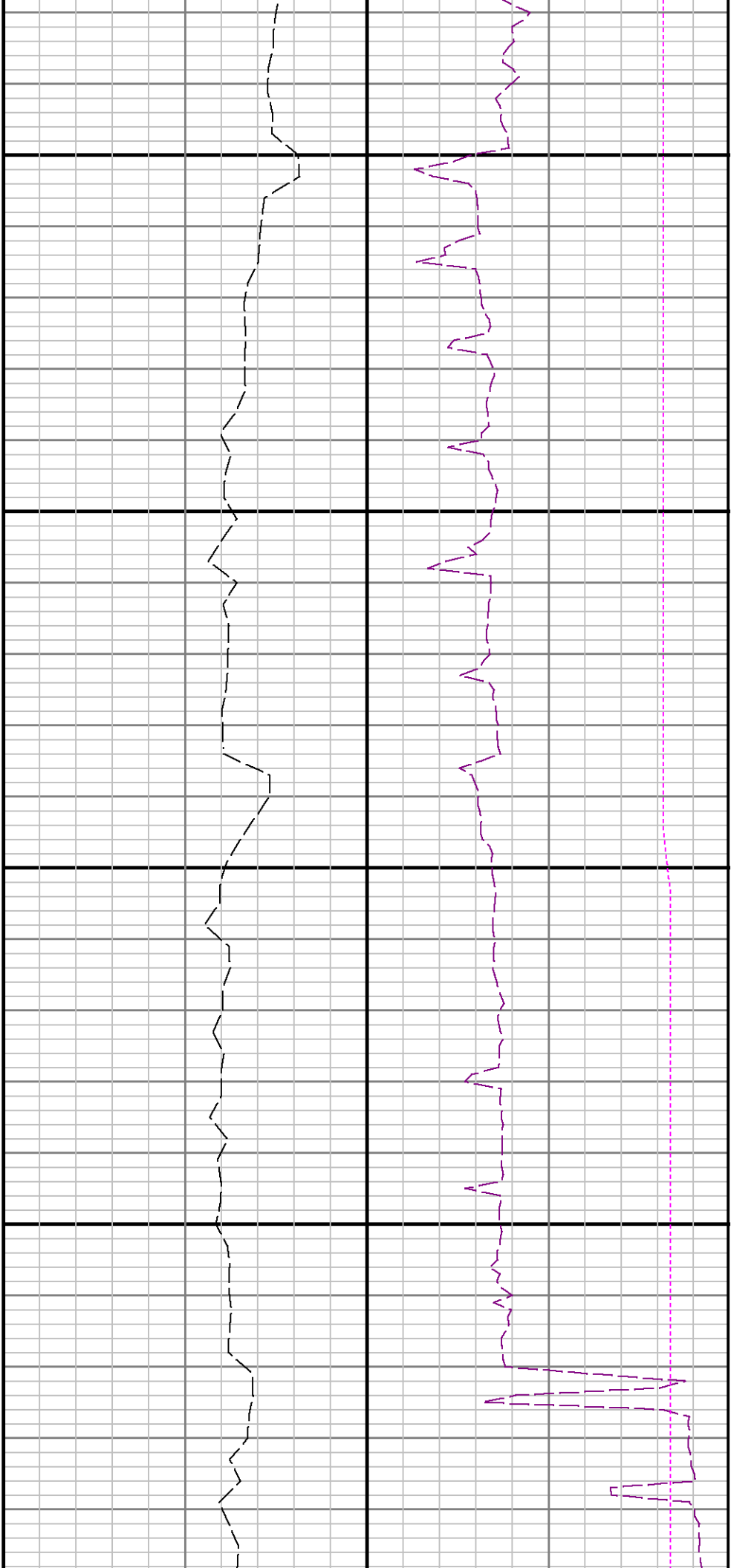




1100

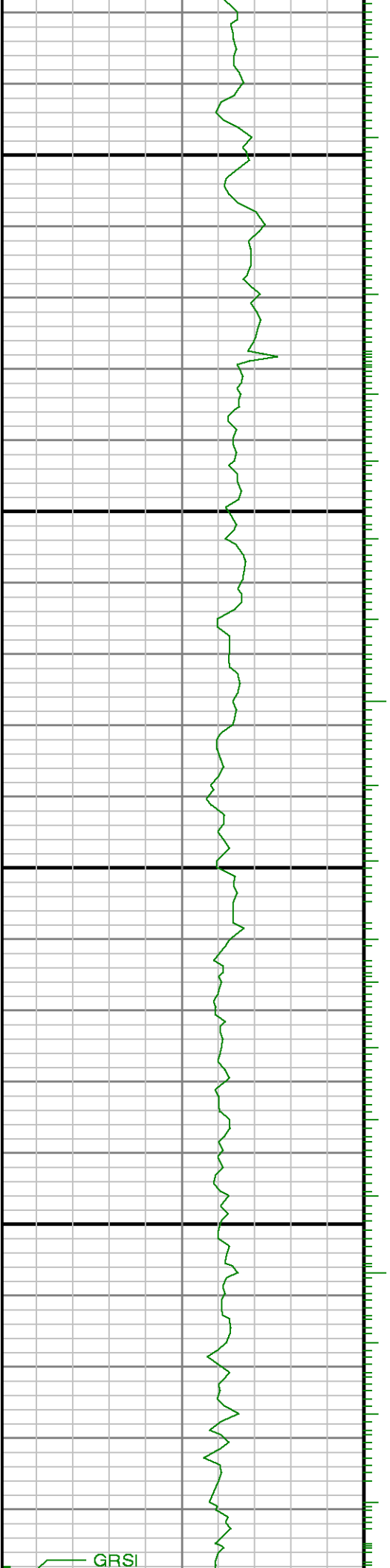
1200



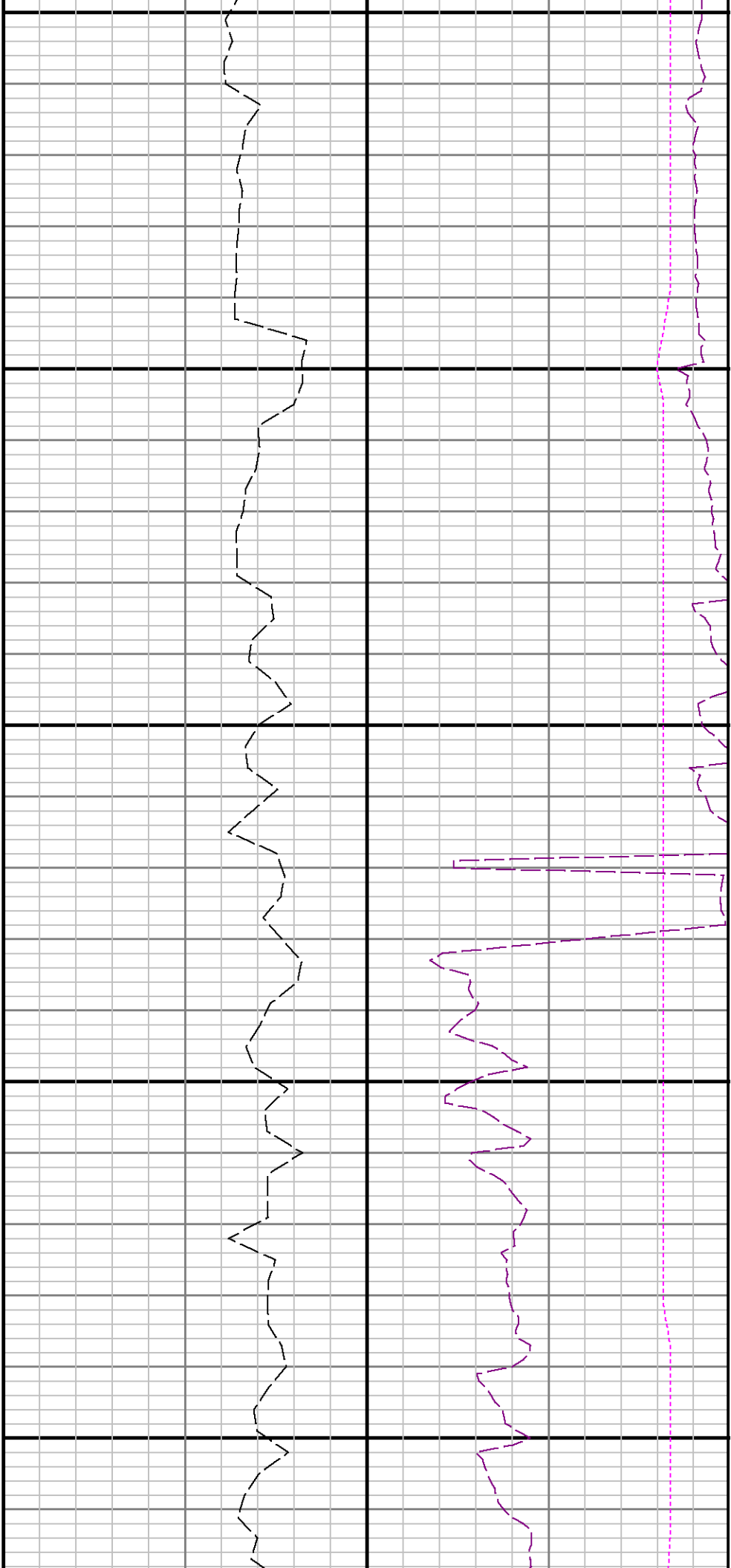


11300

11400

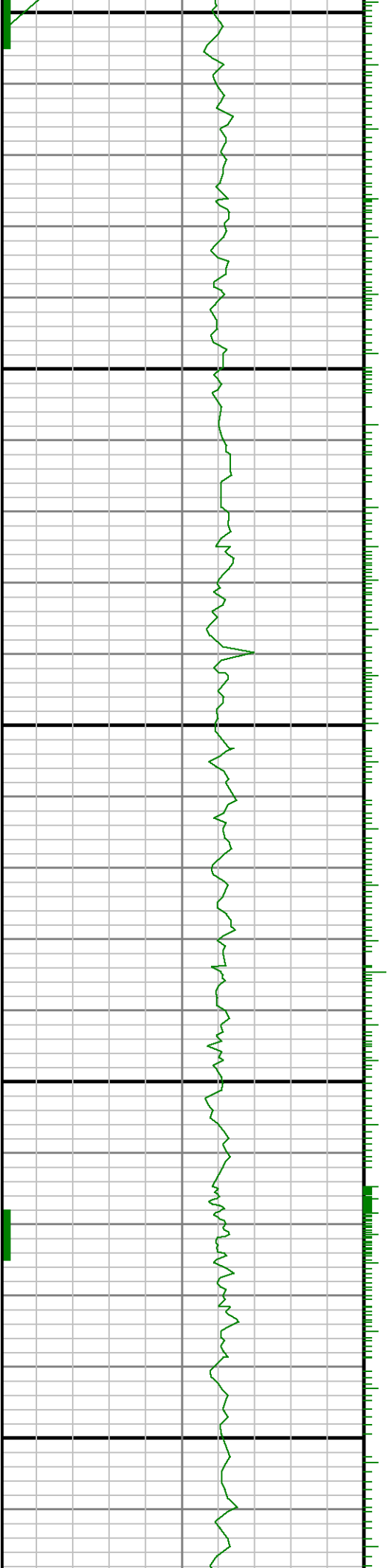


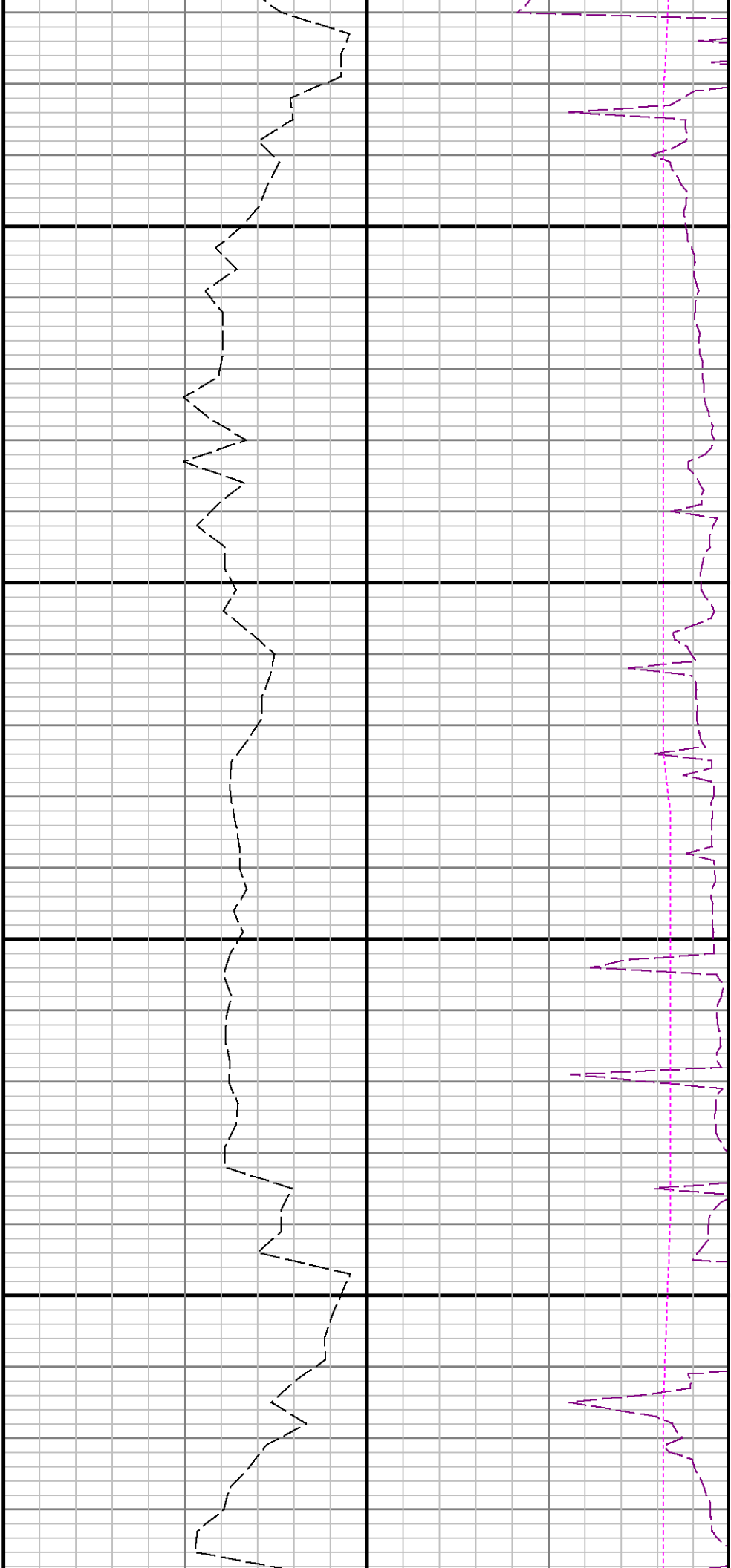
GRSI



11500

11600





11700

11800

