

Log Run Summary															
LWD	BHA	Bit	Bit	Bit	Bit	Assembly	Logged Interval		Bit Depth Interval		Date / Time				Circ.
Run	Run	Run	Size	Type	Gauge	Type	Top	Bottom	From	To	Start		End		Time
No.	No.	No.	(in.)		(in.)		(ft)	(ft)	(ft)	(ft)					(hrs.)
1	1	1	8.750	PDC	2.000	Steerable	6400.0	7511.0	1158.0	7571.0	29 Aug 14	06:25	31 Aug 14	10:41	37.9
2	2	2	8.750	PDC	4.000	Steerable	7511.0	7511.0	7571.0	7571.0	02 Sept 14	08:05	03 Sept 14	19:20	18.4
3	3	3	6.125	PDC	4.000	Steerable	7511.0	12643.0	7571.0	12708.0	04 Sept 14	22:05	07 Sept 14	16:46	54.3

Crew								
Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Greg Dore	02 Sept 14	08 Sept 14	Bryan Severson	28/Aug/2014	02 Sept 14	Emily Cazzell	28 Aug 14	08 Sept 14

Mud Properties Record											
Date / Time	LWD	Measured	Mud	Density	Viscosity	pH	Fluid	Oil /	Source	Total	K+
	Run No.	Depth (ft)	Type	(ppg)	(cp)		Loss (bbls)	Water		Chlorides (ppm)	(%)
29 Aug 14 10:00	1	2570.0	Water Based	8.4	28	8.4	N/A	0/99.5	Active Mud Pit	2300	N/A
30 Aug 14 22:00	1	6850.0	Water Based	9.8	43	9.5	N/A	0.4/96.4	Active Mud Pit	2500	N/A
31 Aug 14 22:00	1	7571.0	Water Based	10.3	51	9.5	N/A	2.8/87.2	Active Mud Pit	2800	N/A
04 Sept 14 00:04	2	7571.0	Water Based	10.1	50	9.4	N/A	3/87.8	Active Mud Pit	2800	N/A
05 Sept 14 23:30	3	8737.0	Water Based	9.8	56	9.5	N/A	2/90	Active Mud Pit	2700	N/A
06 Sept 14 23:45	3	11217.0	Water Based	10.1	52	9.3	N/A	2/88.8	Active Mud Pit	2700	N/A

Mnemonics		
Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRIX	Gamma Ray Data Density	Points
GRSI	Gamma Ray Sliding Indicator	Pointless
GRTX	Gamma Ray Time Since Drilled	min
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 Run No.	Tool	Serial Number	Measurement	Bit Offset (ft)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12456778	Directional	62.79	6.750	3.250
1	SRIG	12376056	Gamma	58.49	6.750	3.250
2	DIR	11852218	Directional	66.69	6.750	3.250
2	SRIG	12376061	Gamma	63.32	6.750	3.250
3	DIR	12546339	Directional	67.60	4.750	2.750
3	SRIG	12578109	Gamma	64.22	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.) 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 LWD logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to present logging data.
- 2.) Baker Hughes LWD runs 1-2 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1158 to 7571 ft MD (1158 to 7176 ft TVD).
- 3.) Baker Hughes LWD run 3 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 7571 to 12708 ft MD (7176 to 7170 ft TVD).
- 4.) The solid line on the far left track is the sliding indicator.

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	6400	8.750	1	Gamma ray logging operations began at 6400 ft MD (6374 ft TVD).
2	7511	8.750	3	The range from 7511 to 7571 ft MD (7173 to 7176 ft TVD) was logged 24 hours after being drilled due to casing operations.
3	12643	6.125	3	There is no gamma ray data from 12643 to 12708 ft MD (7167 to 7170 ft TVD) due to sensor offset.



Company : Anadarko

Well : VOGL 34N-35HZ

Interval : 6380.00 - 12730.00 feet

Created : 31/Aug/2014 11:41:04 AM

Gamma Ray Apparent 0.5 ft Avg GRAX

0 200

API

True Vertical Depth TVD

7200 6400

ft

MD feet 1:240

Rate of Penetration 3.0 ft Avg ROPA

1000 0

ft/hr

Gamma Time Since Drilled GRTX

0 600

min

Surface Weight On Bit 1.0 ft Avg WOBA 100

klbf

Downhole Temperature TCDX

100 230

degF

See Remark 1

GRAX

GRIX

GRTX

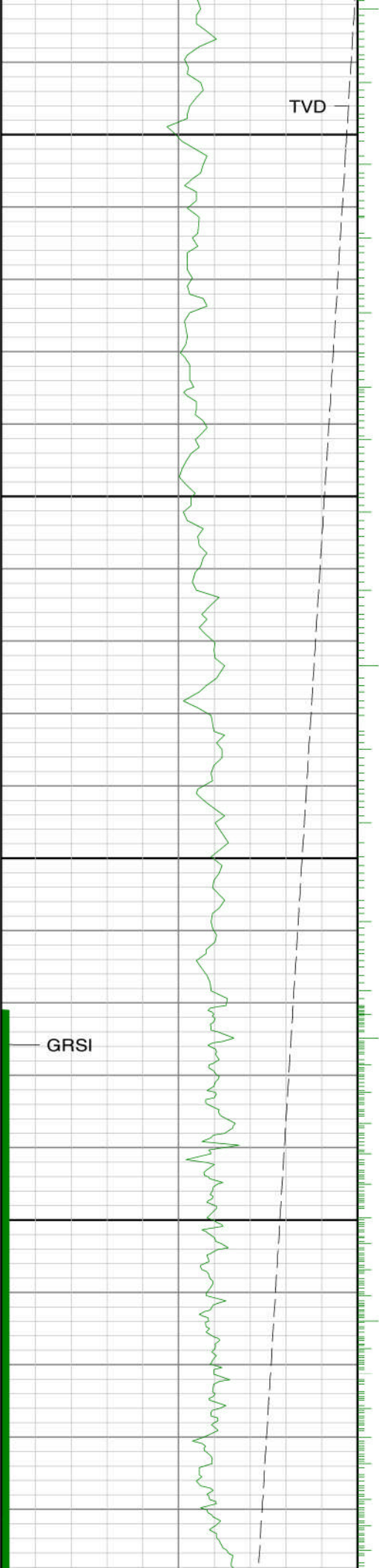
ROPA

WOBA

TCDX

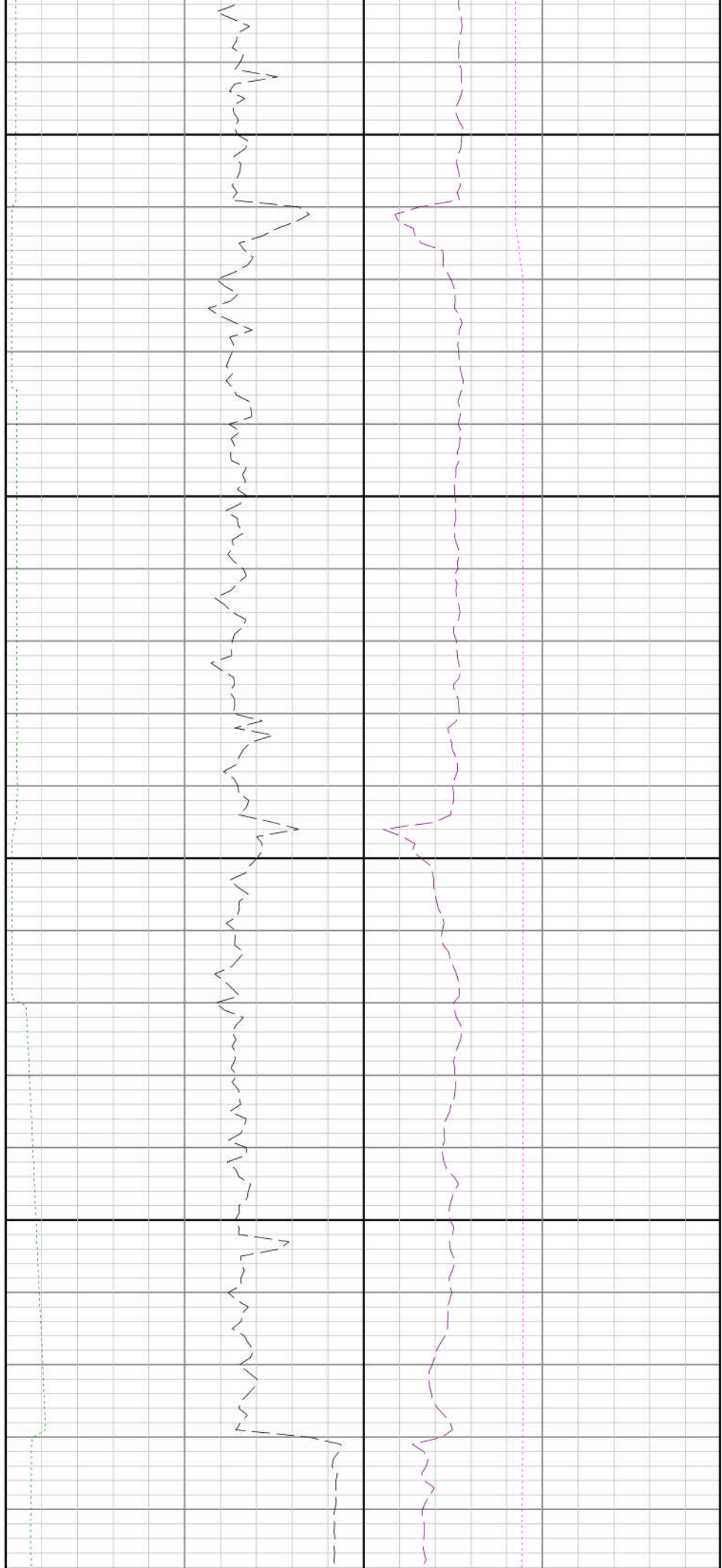
6400

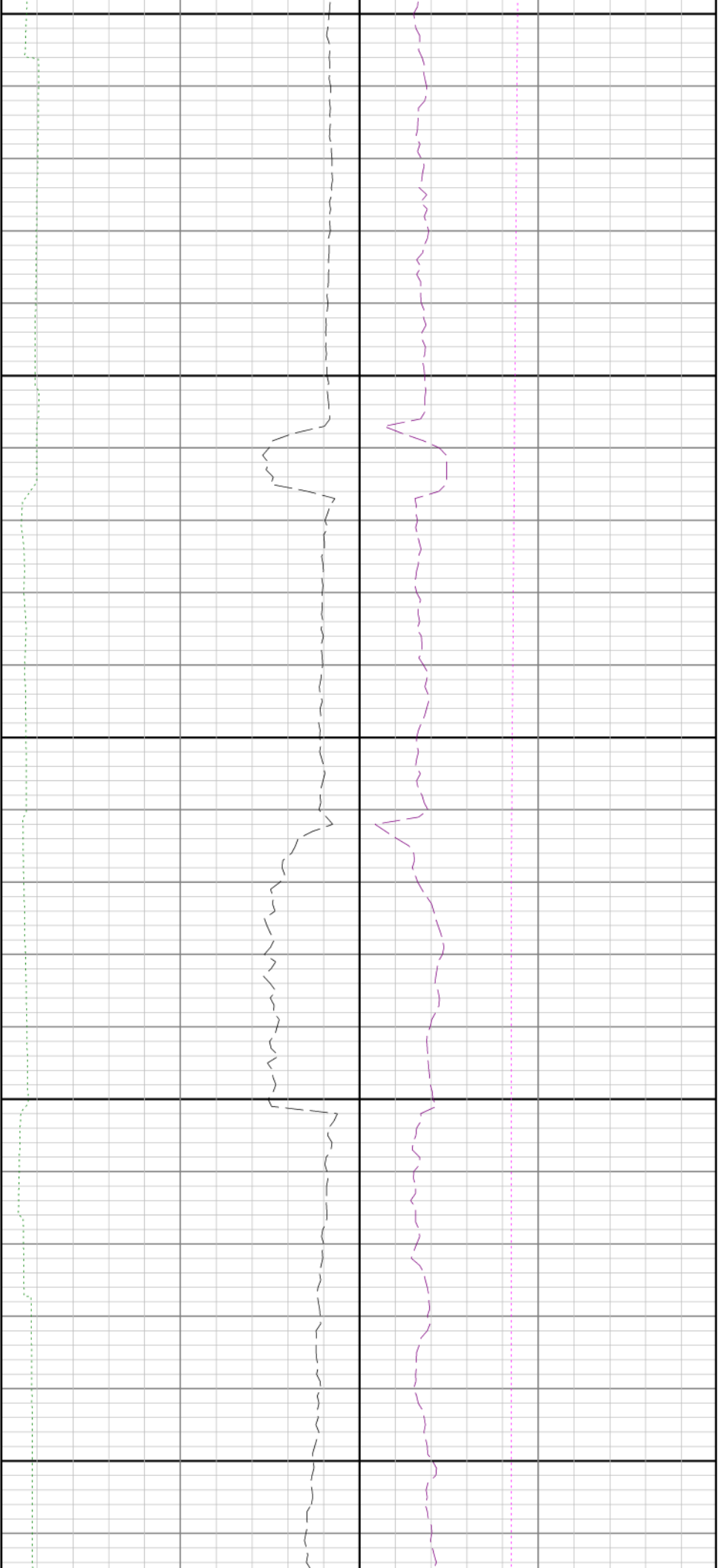
> Run 1



6500

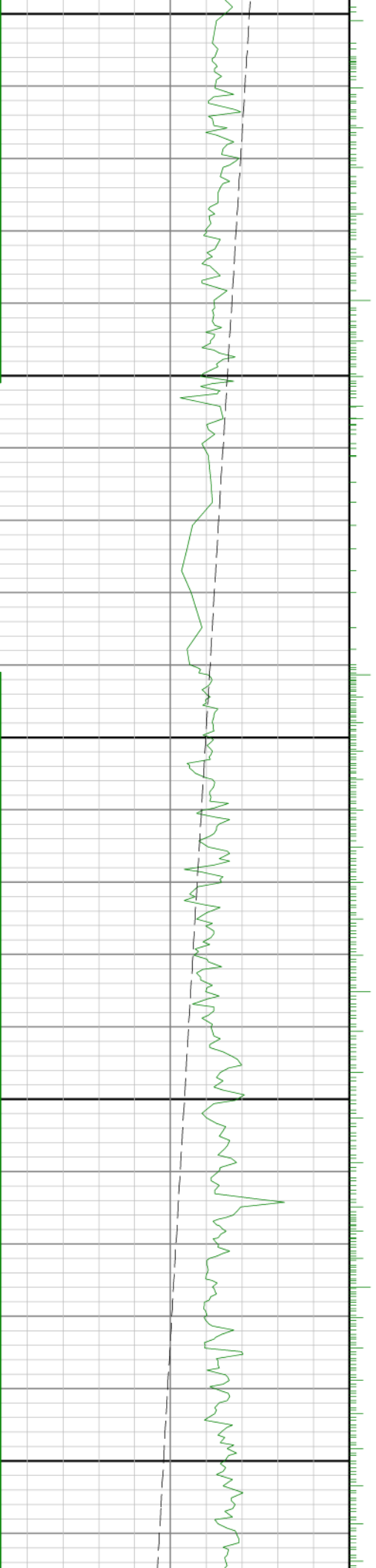
6600

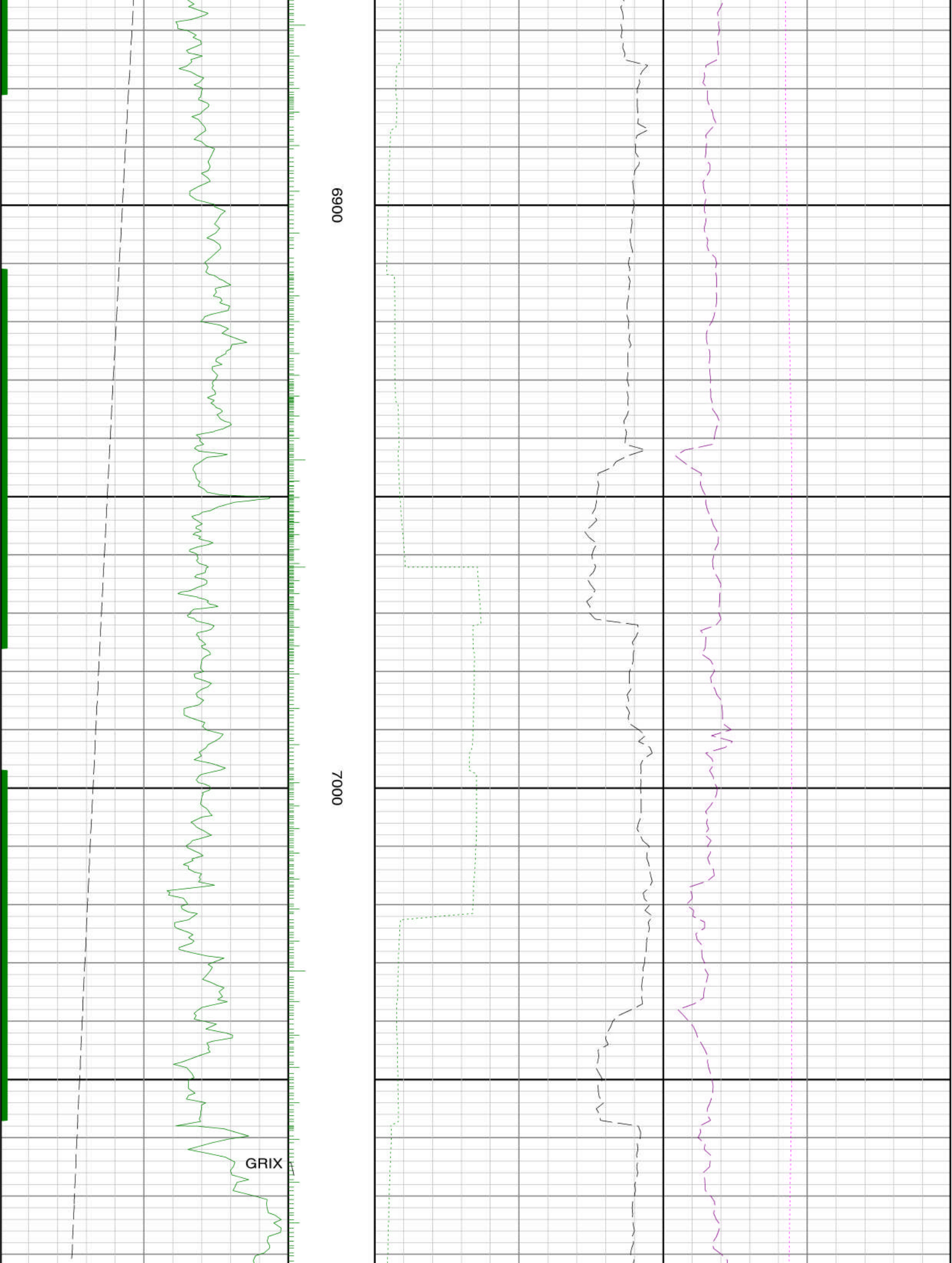




6700

6800



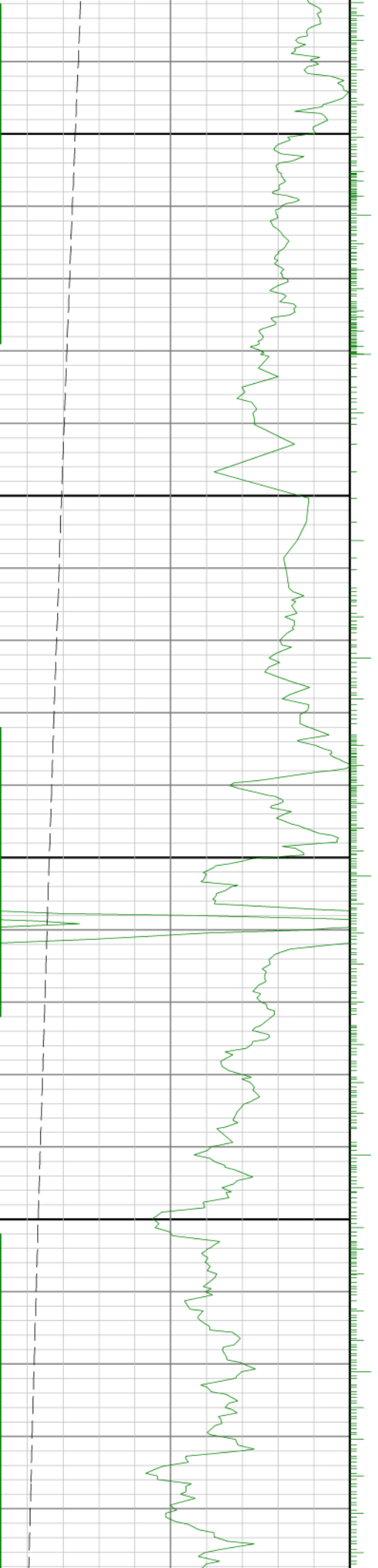


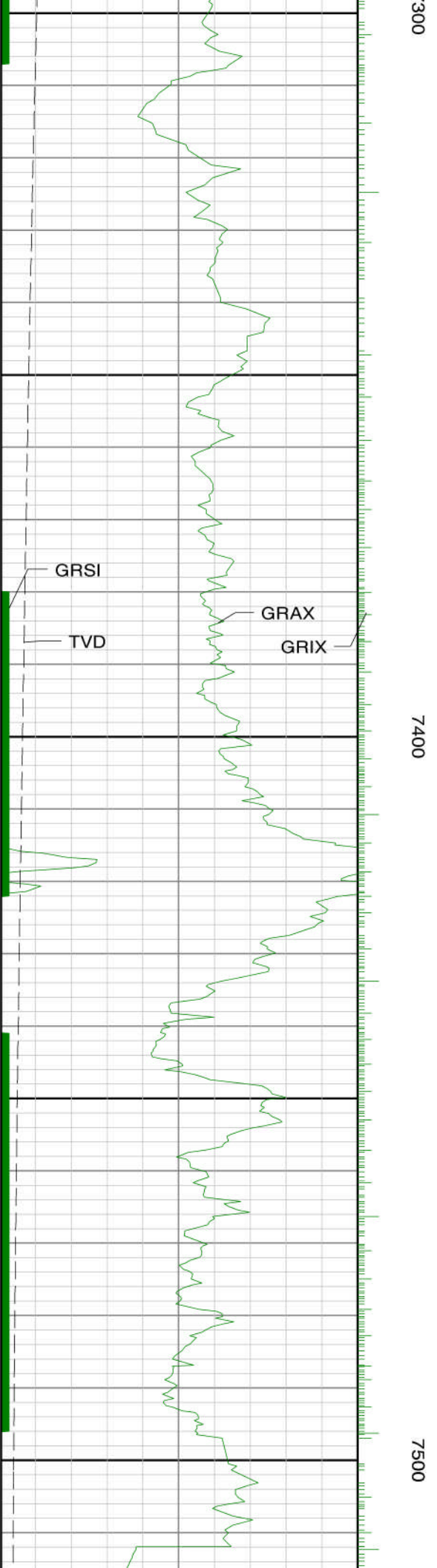
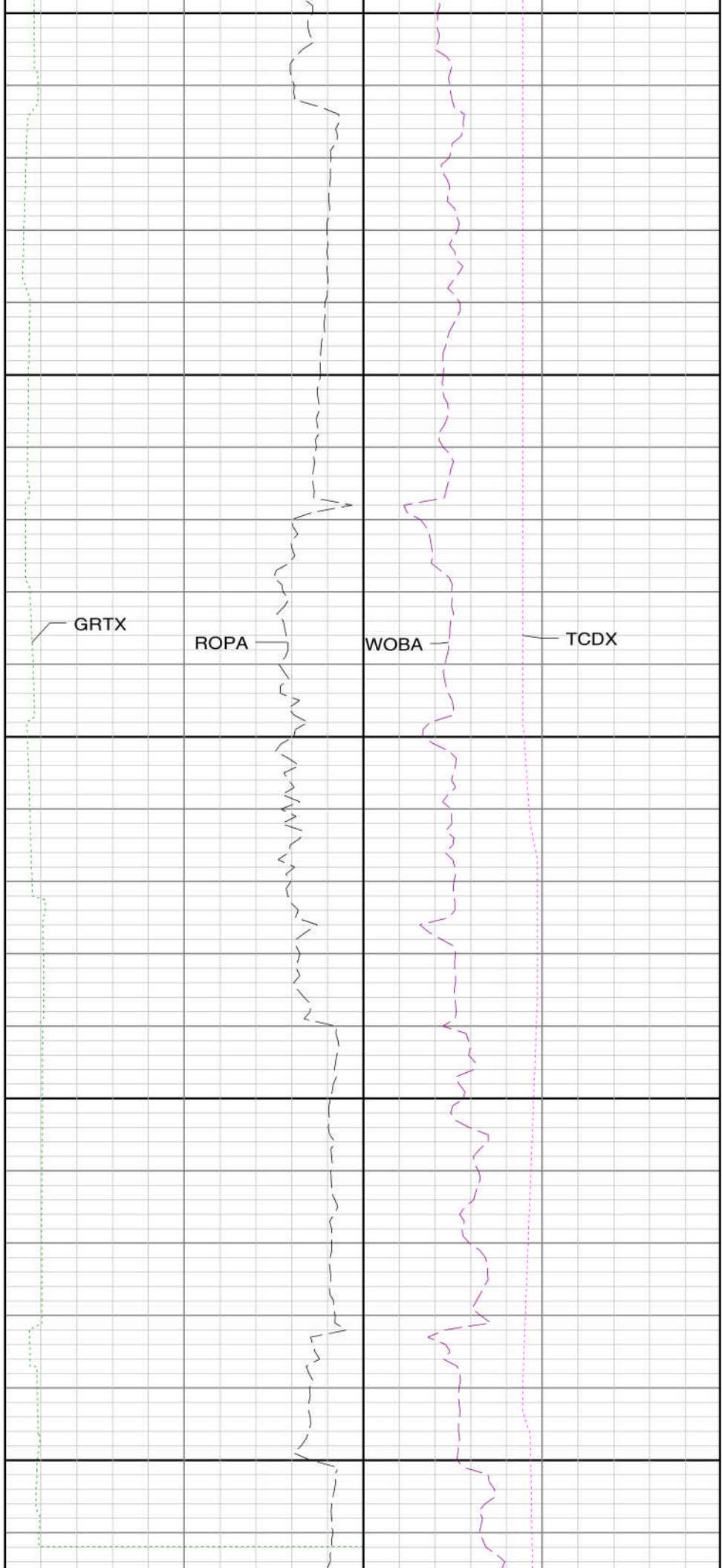


7100

7200

7





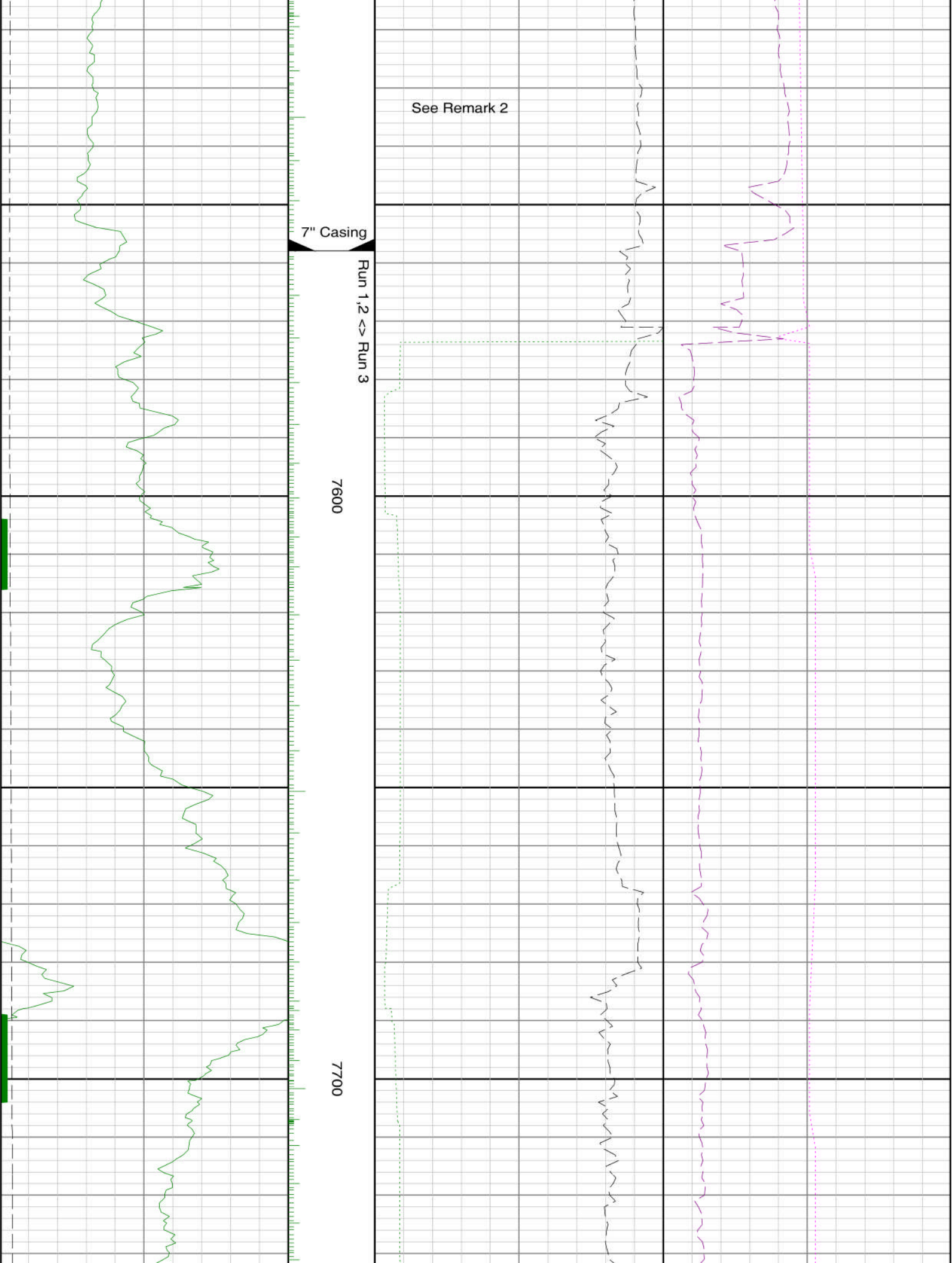
See Remark 2

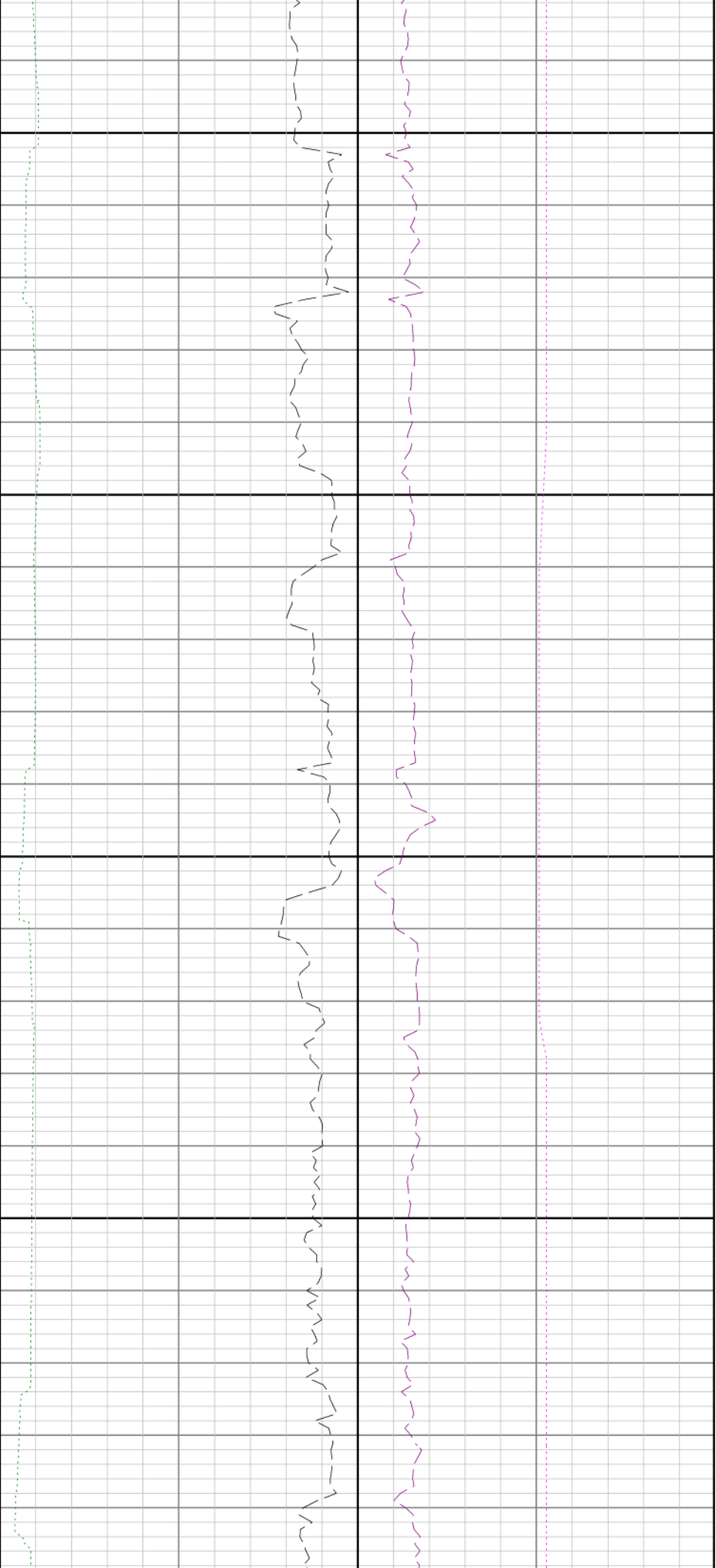
7" Casing

Run 1,2 <> Run 3

7600

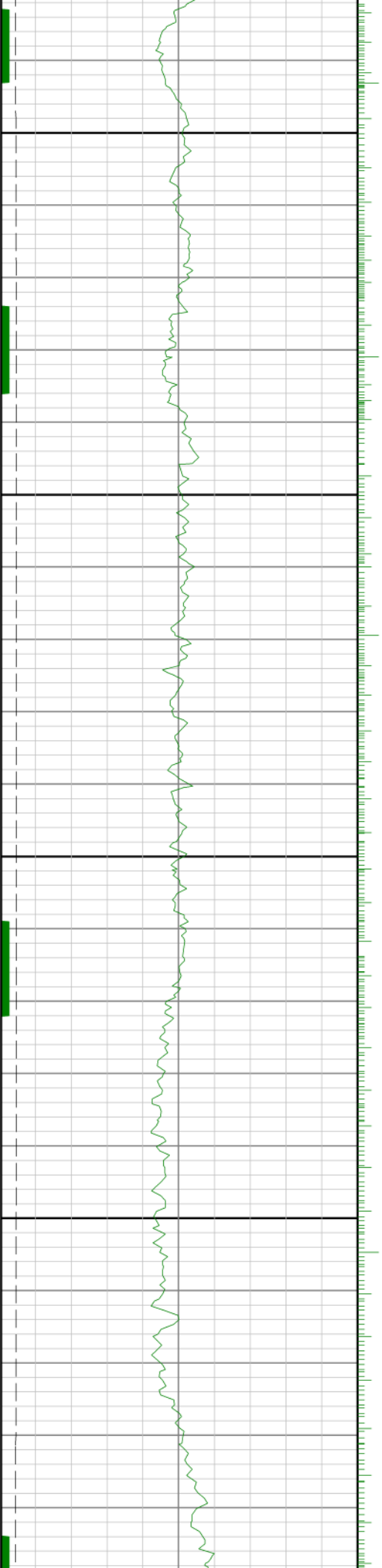
7700

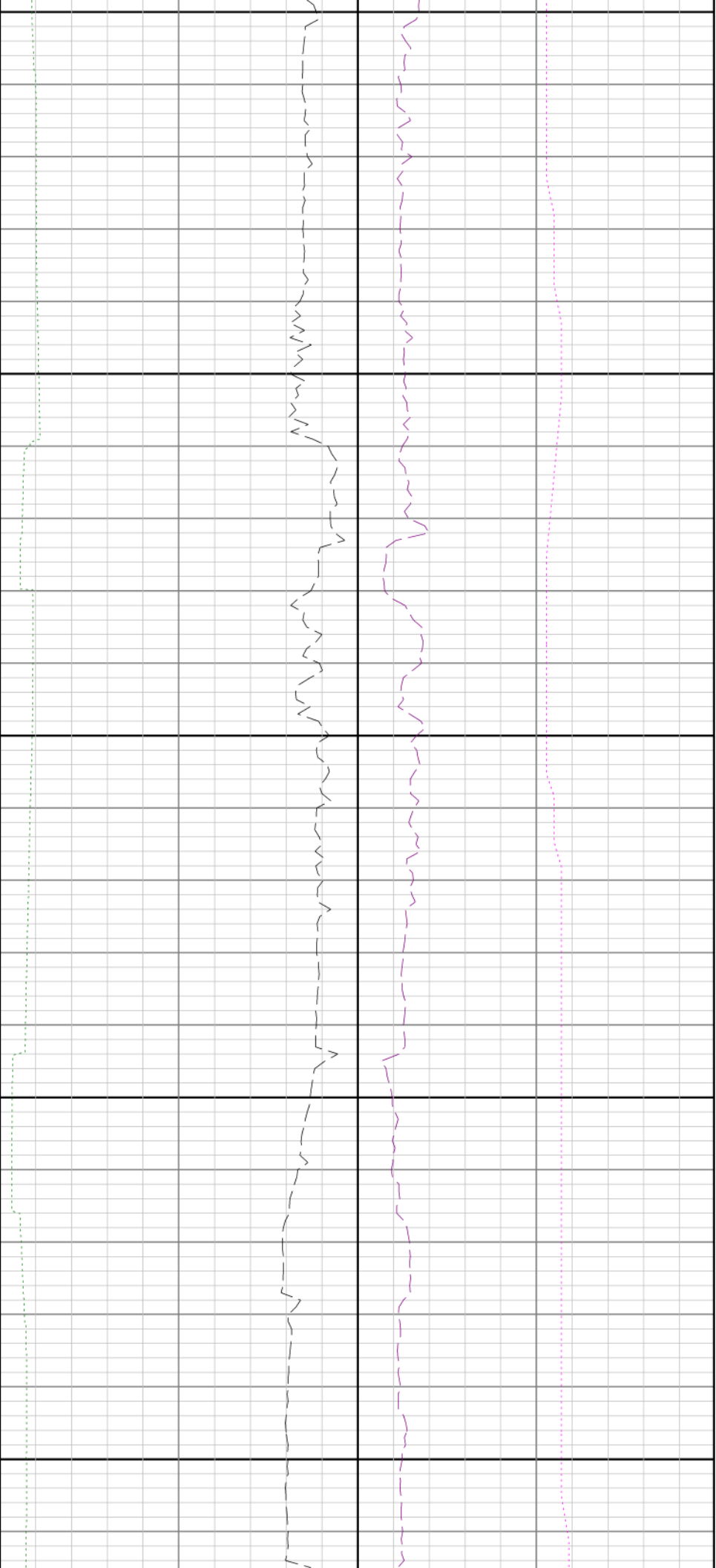




7800

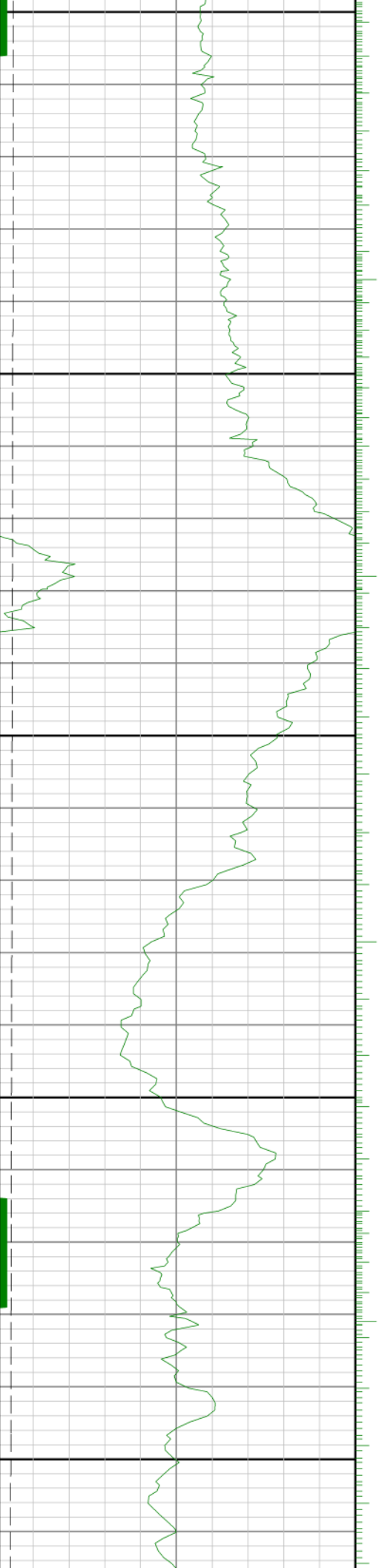
7900

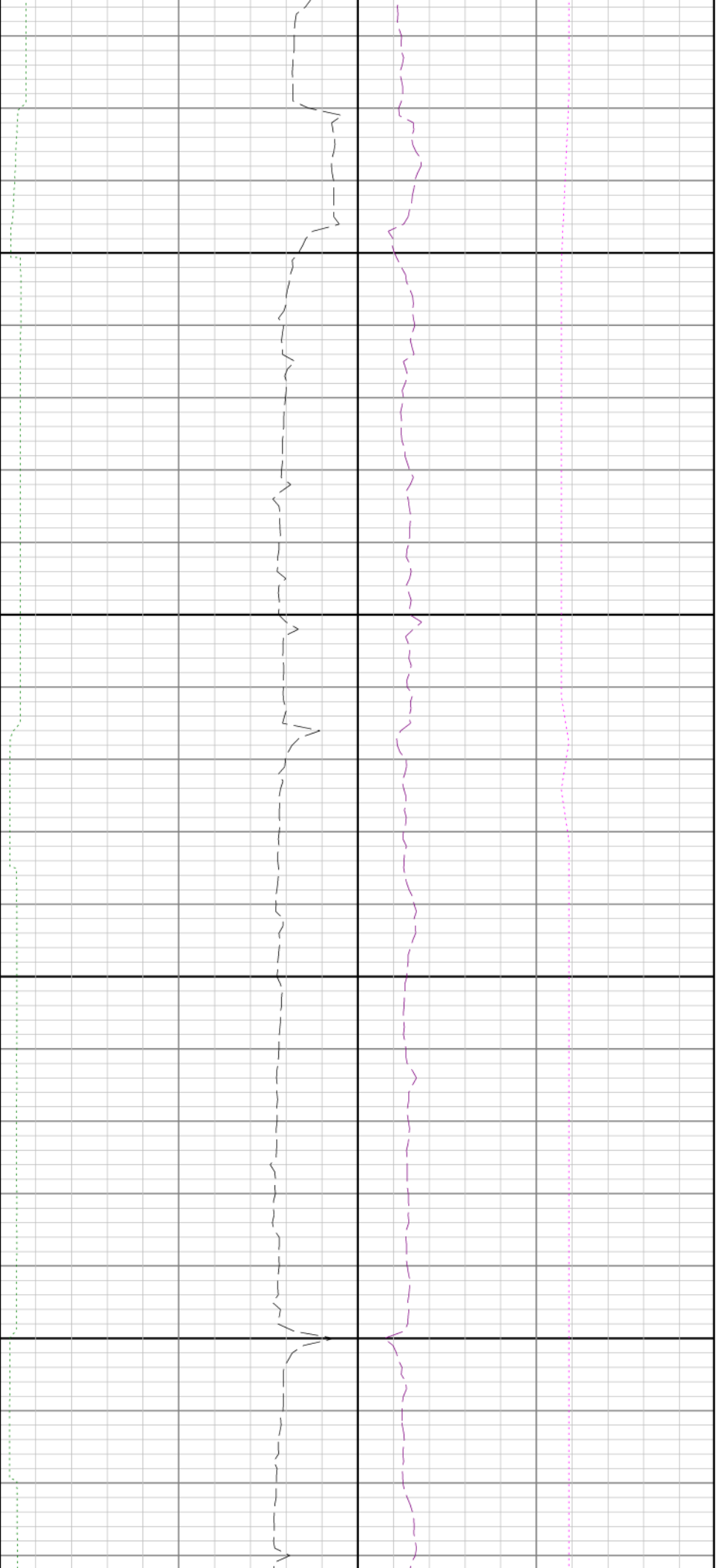




8000

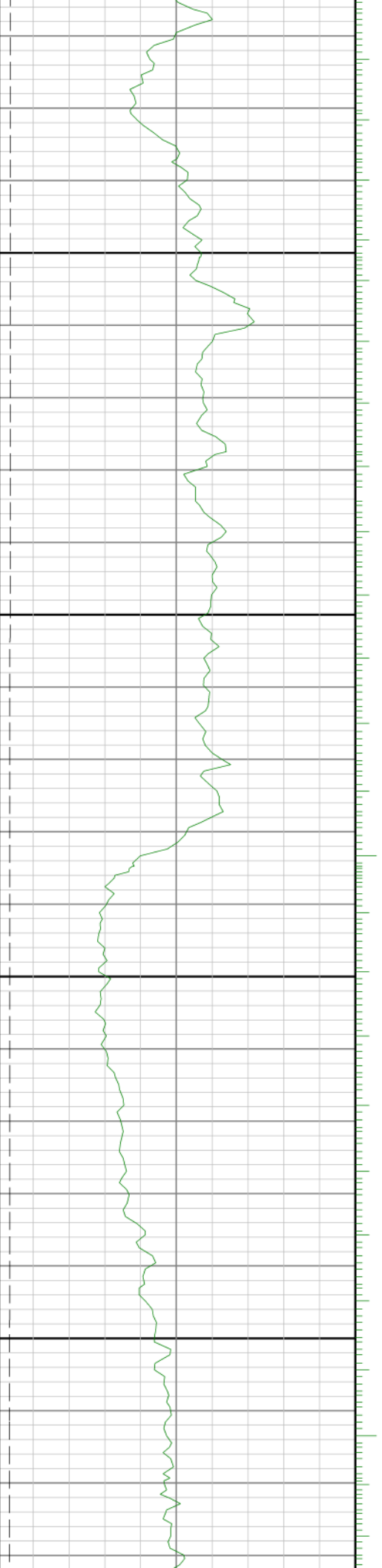
8100

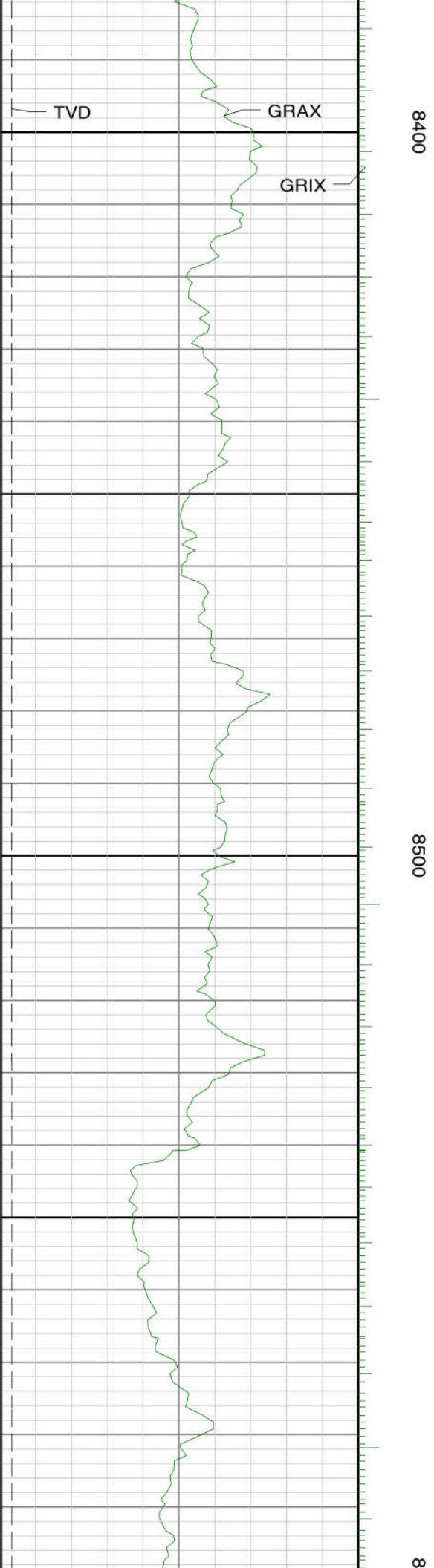
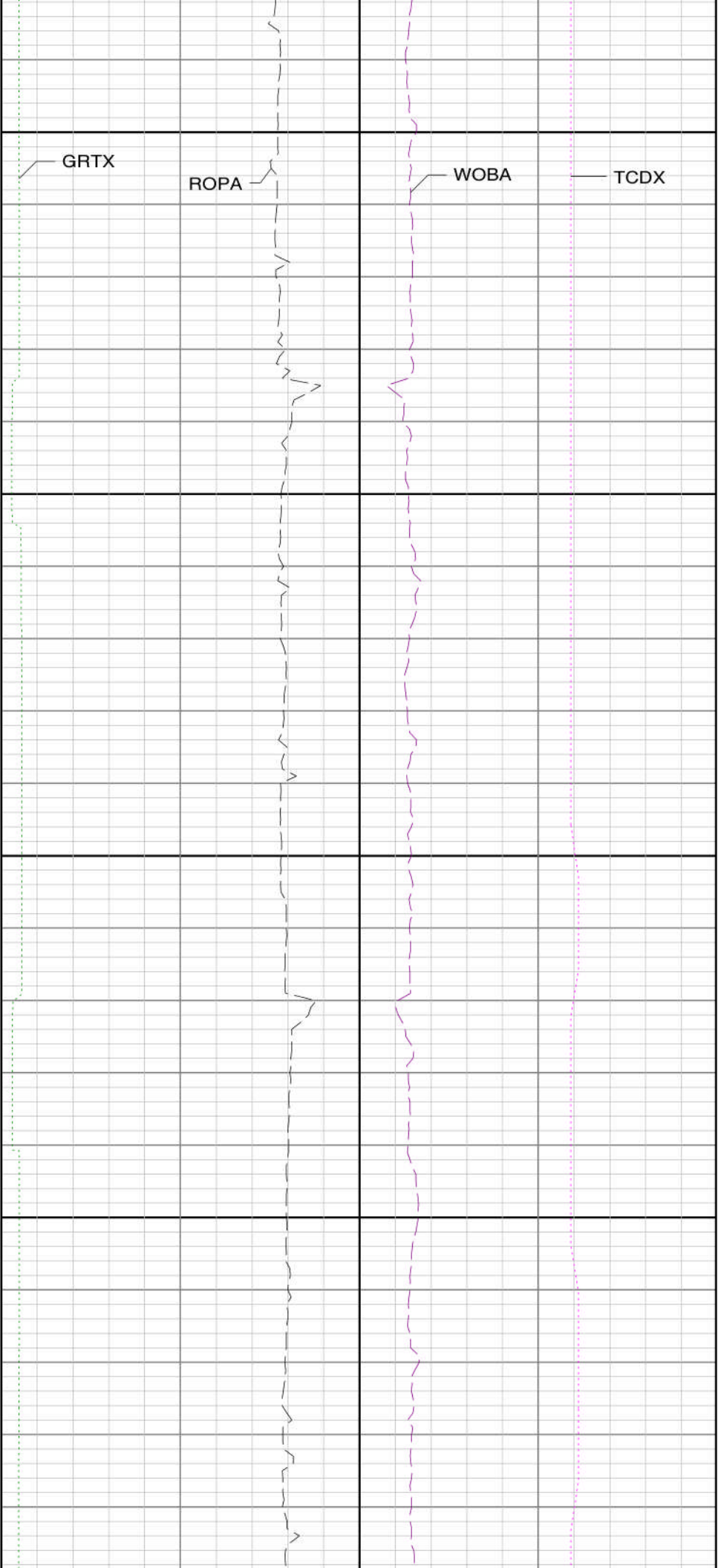


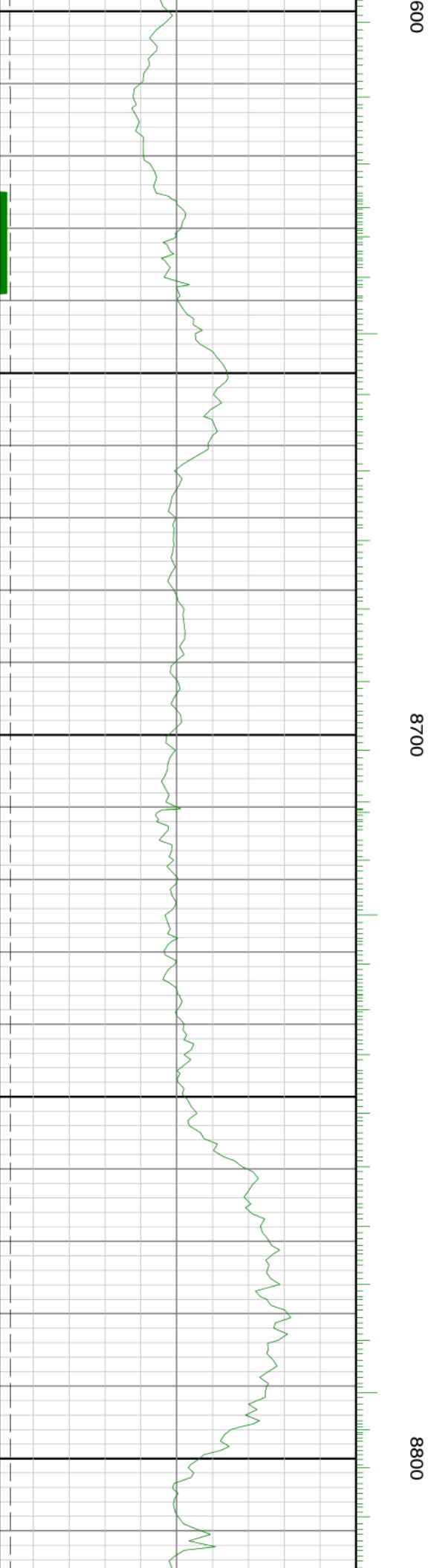
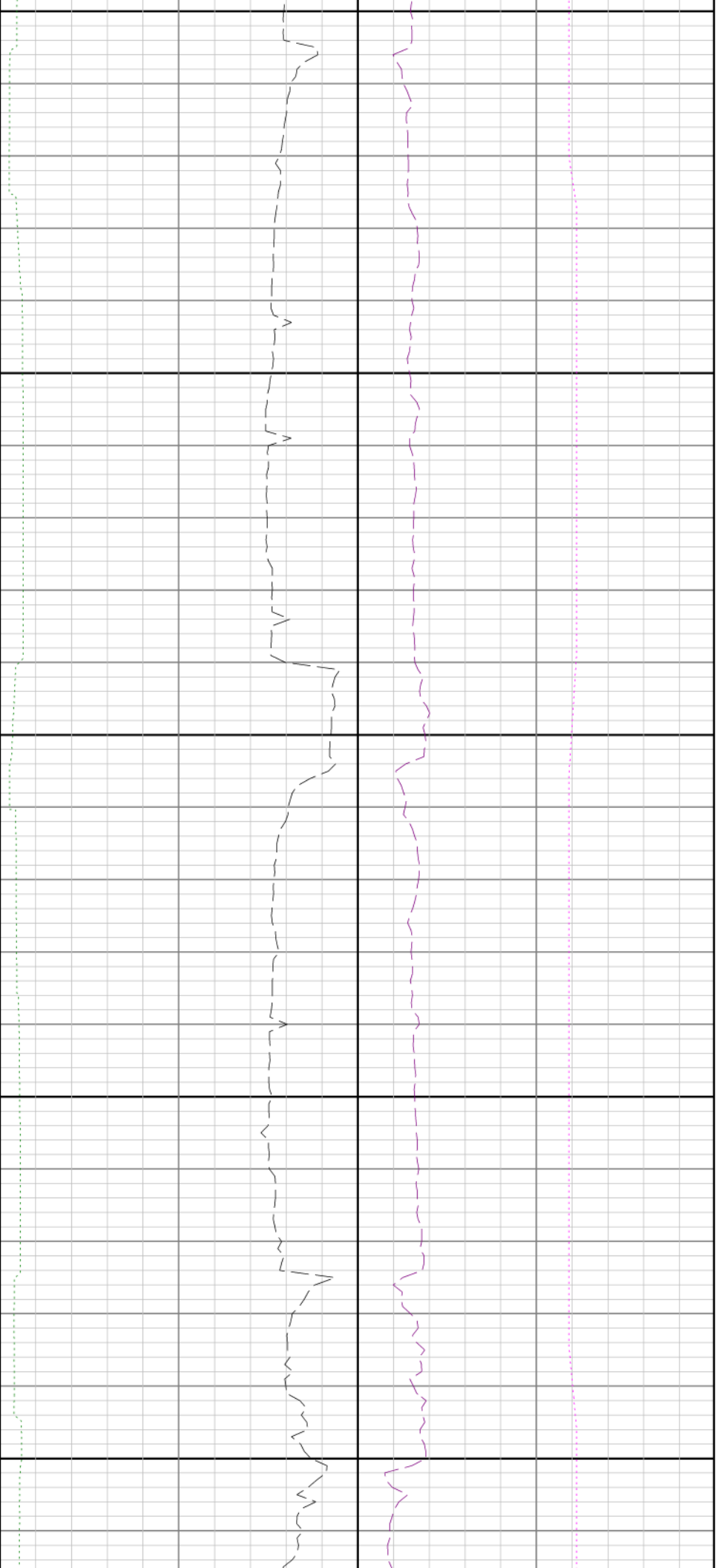


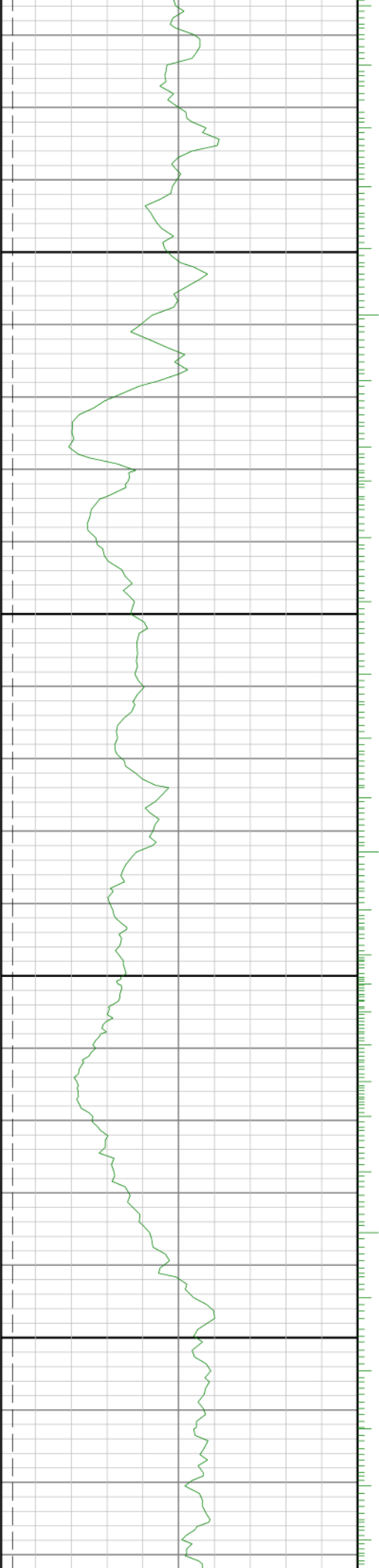
8200

8300



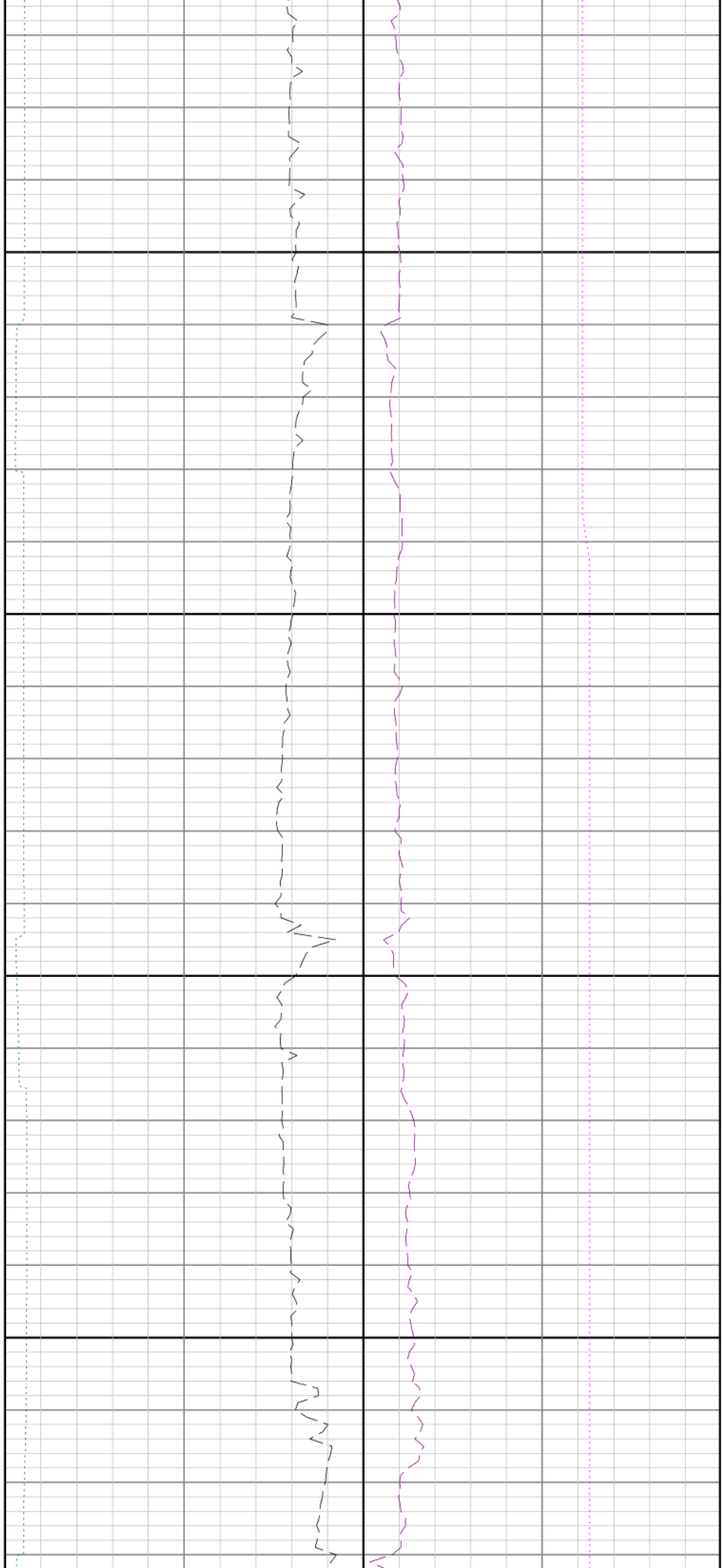


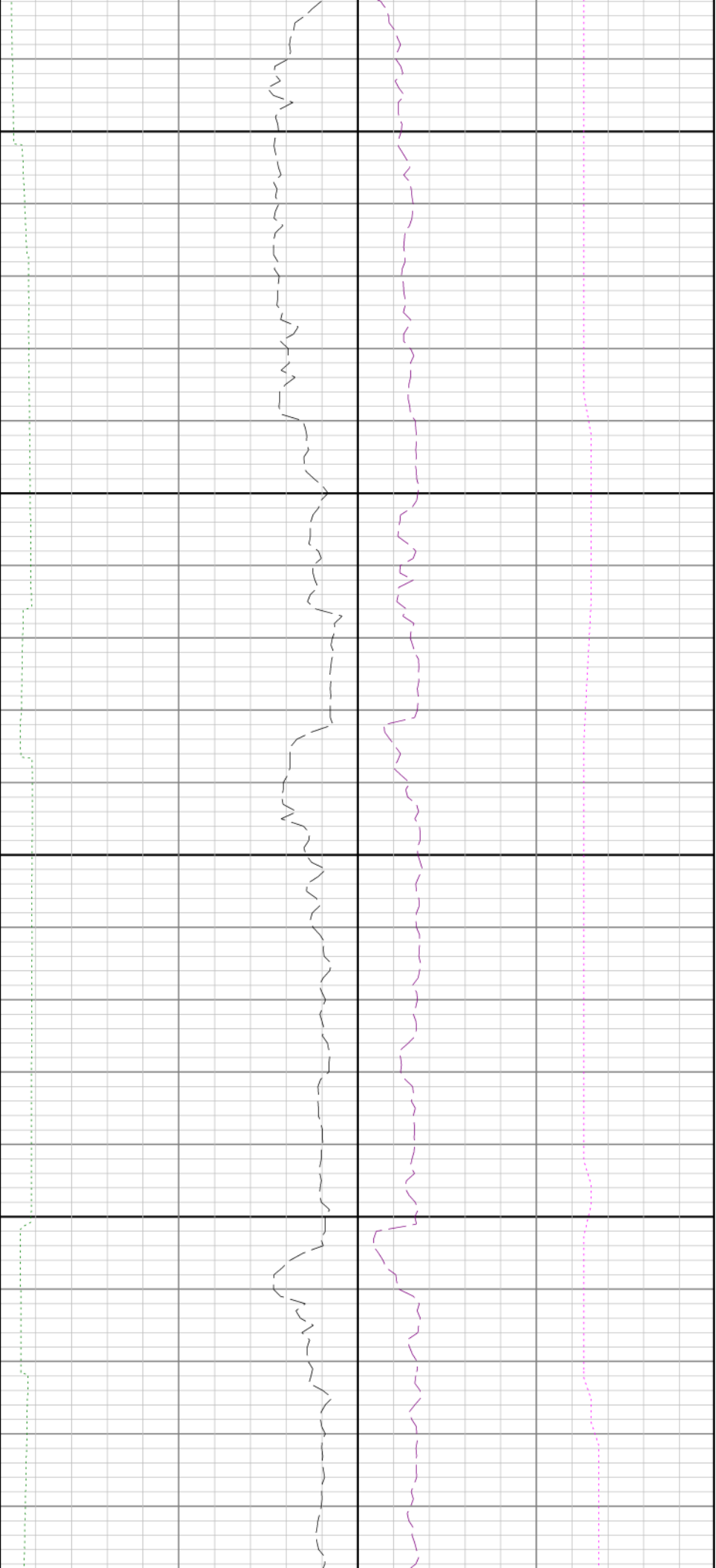




0006

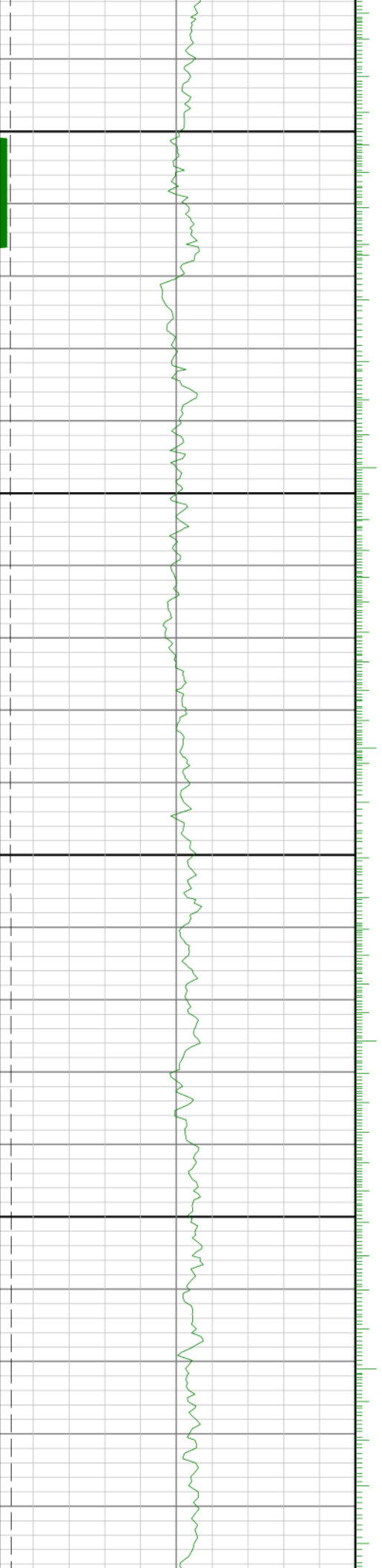
0068

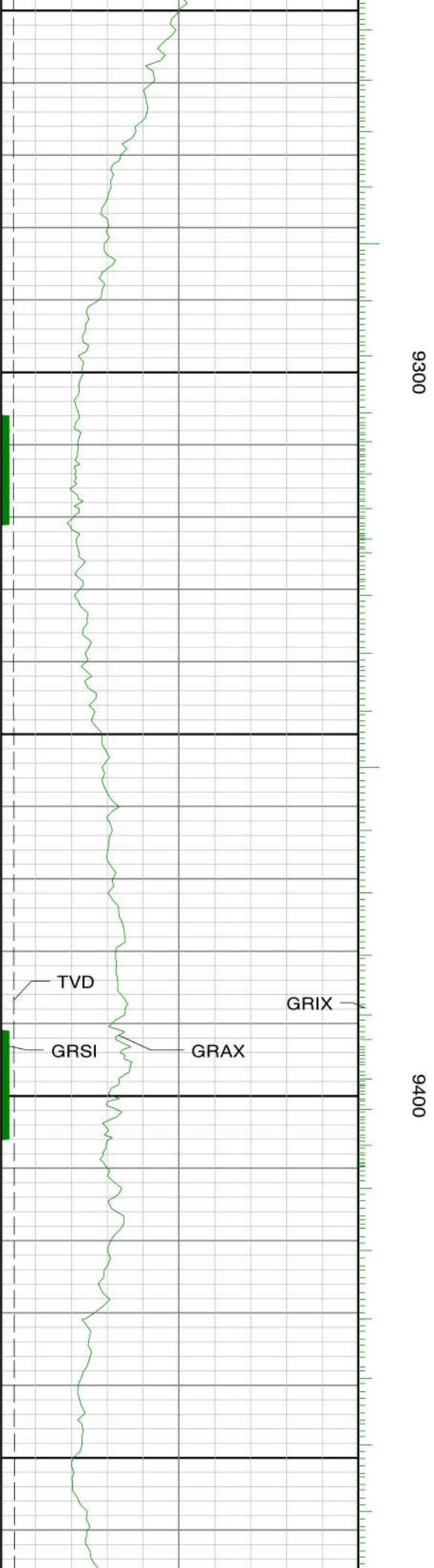
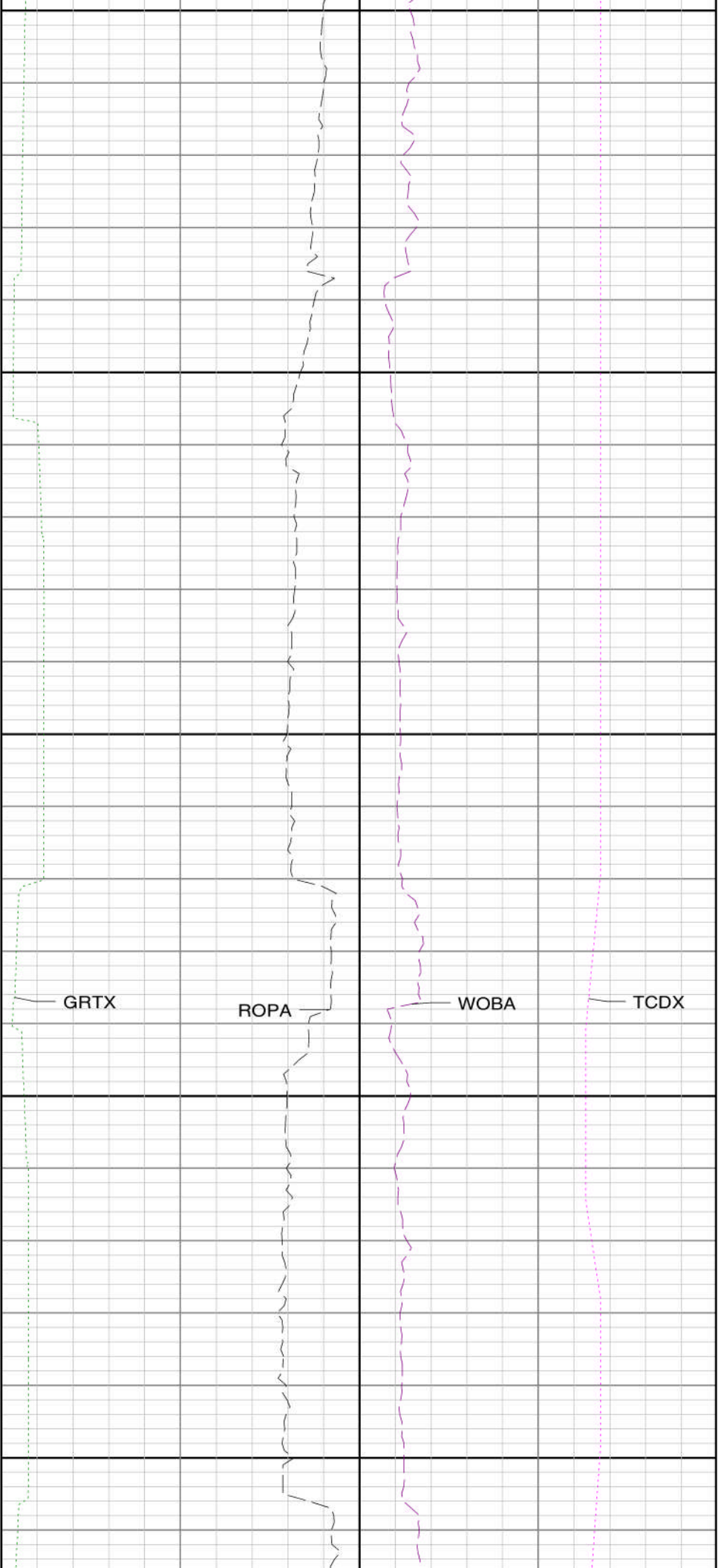


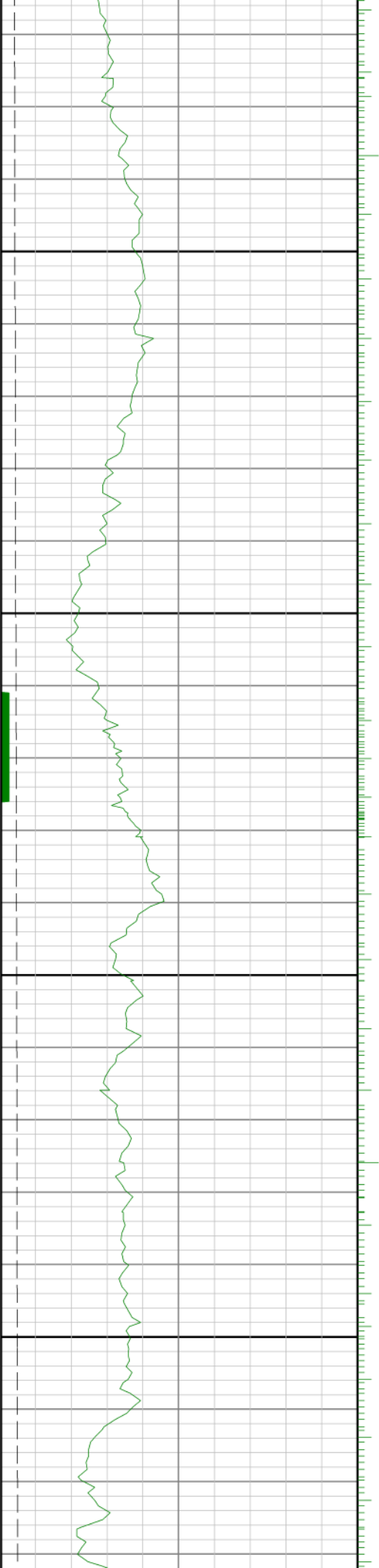


9100

9200

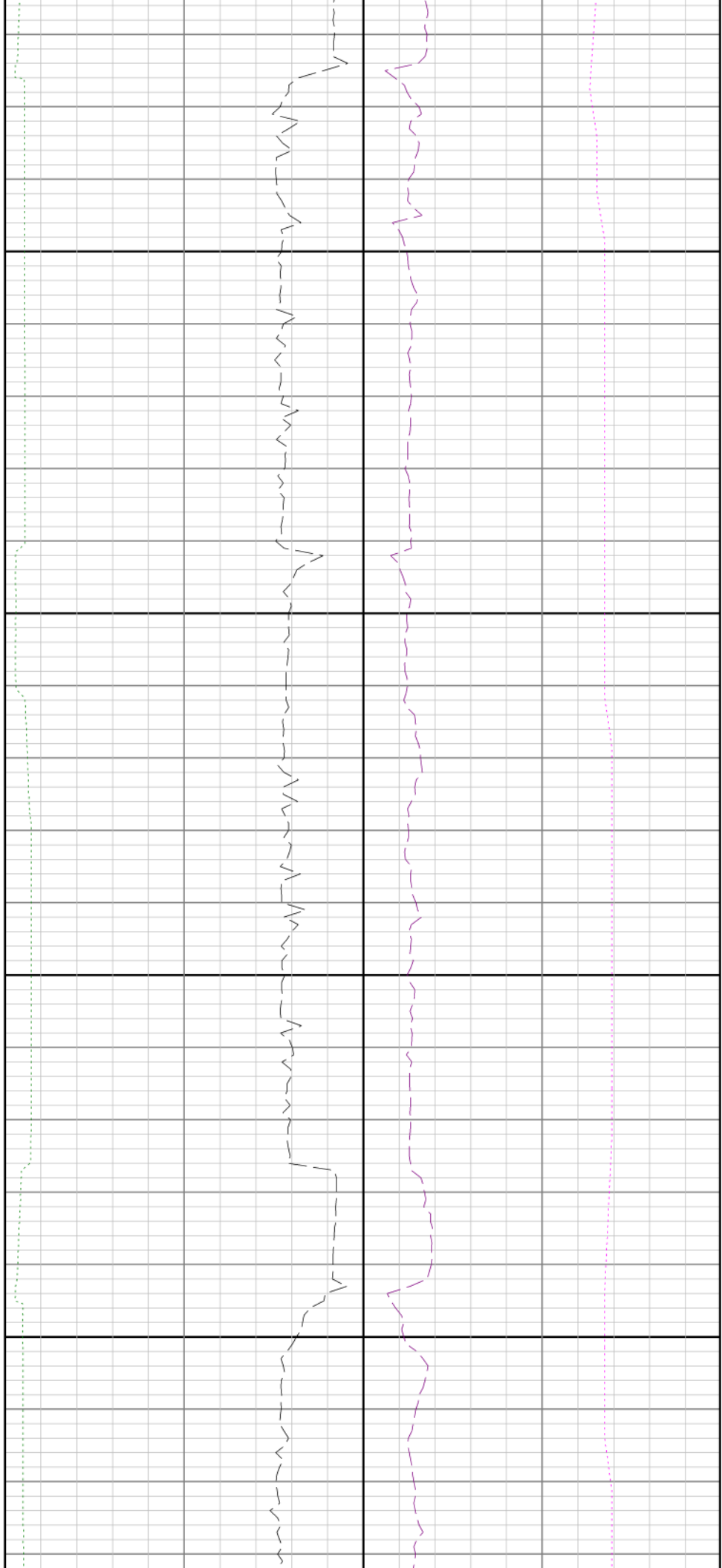


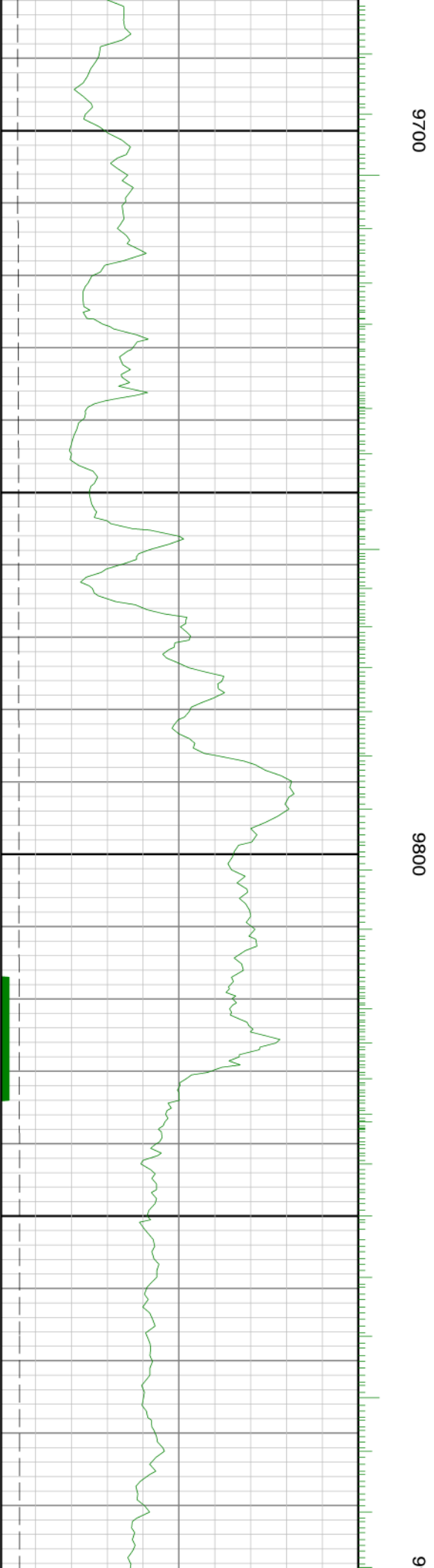
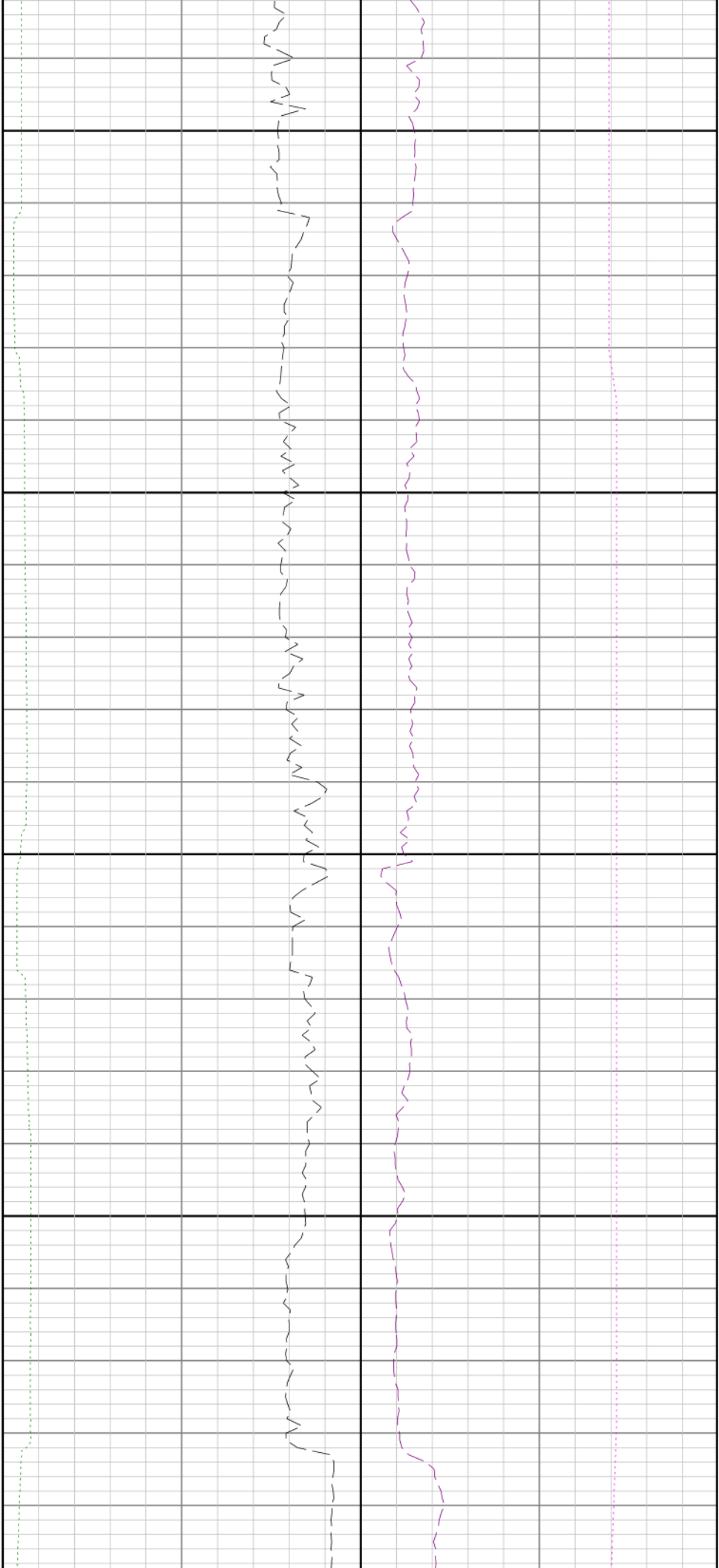


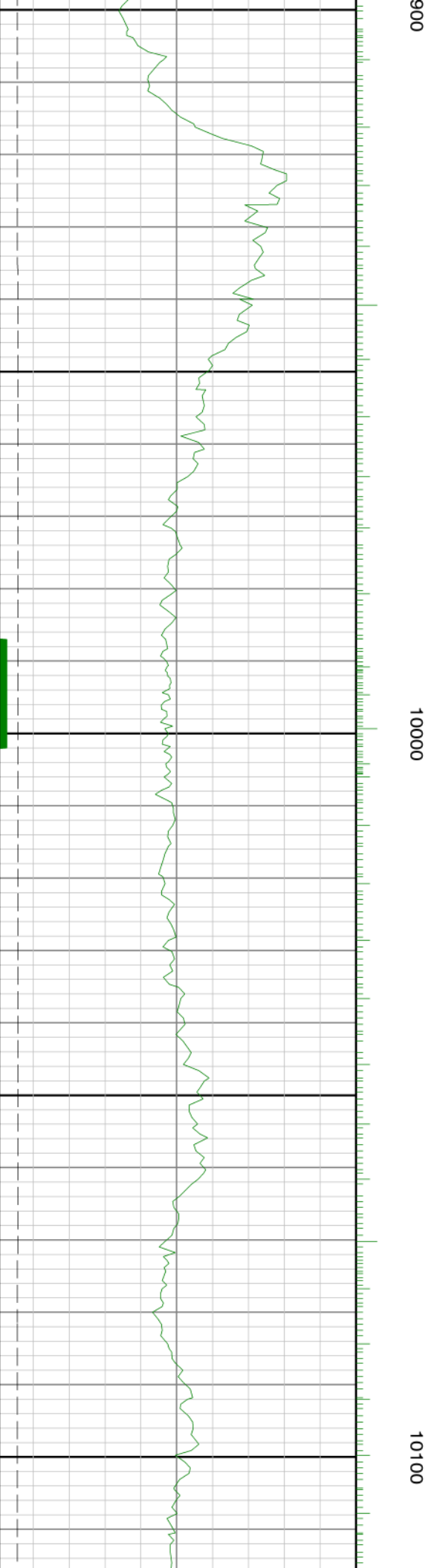
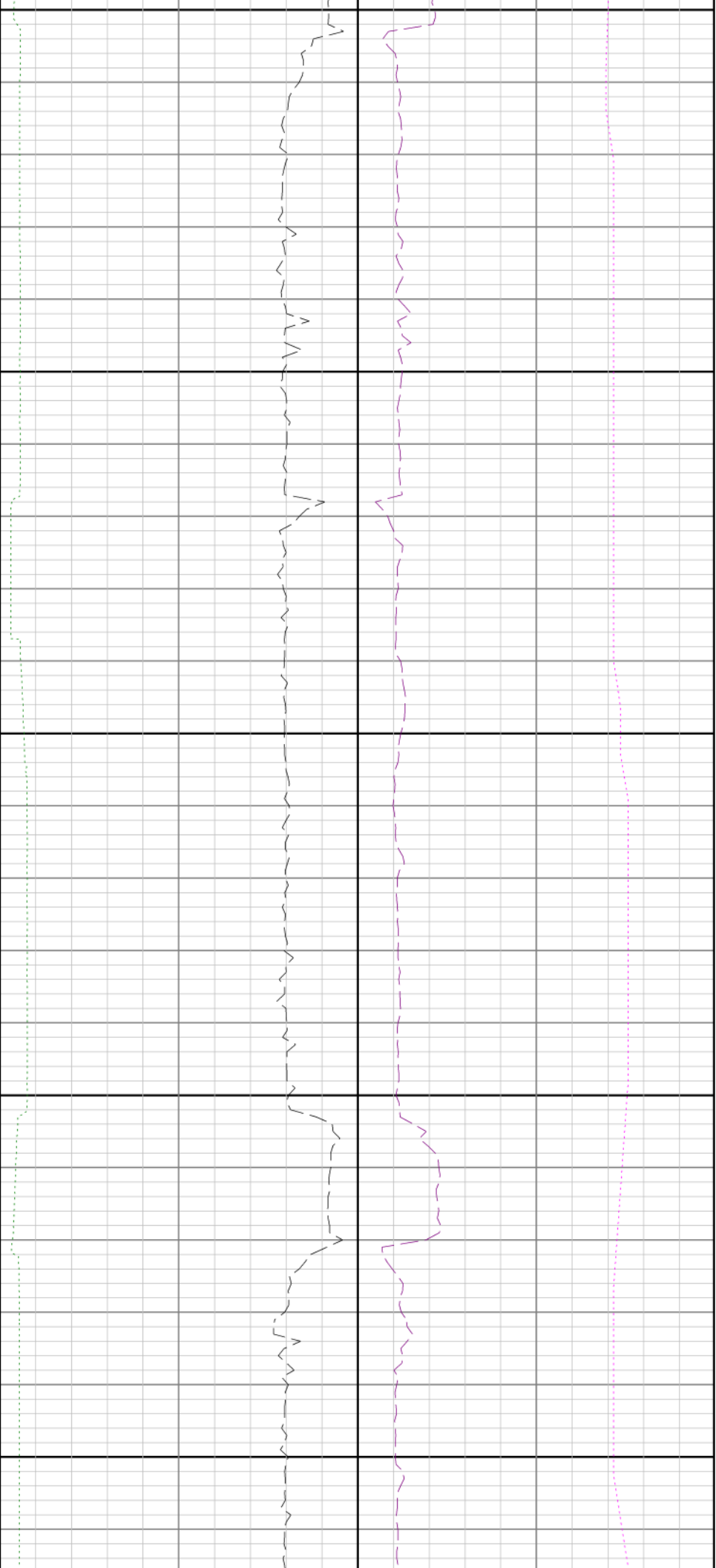


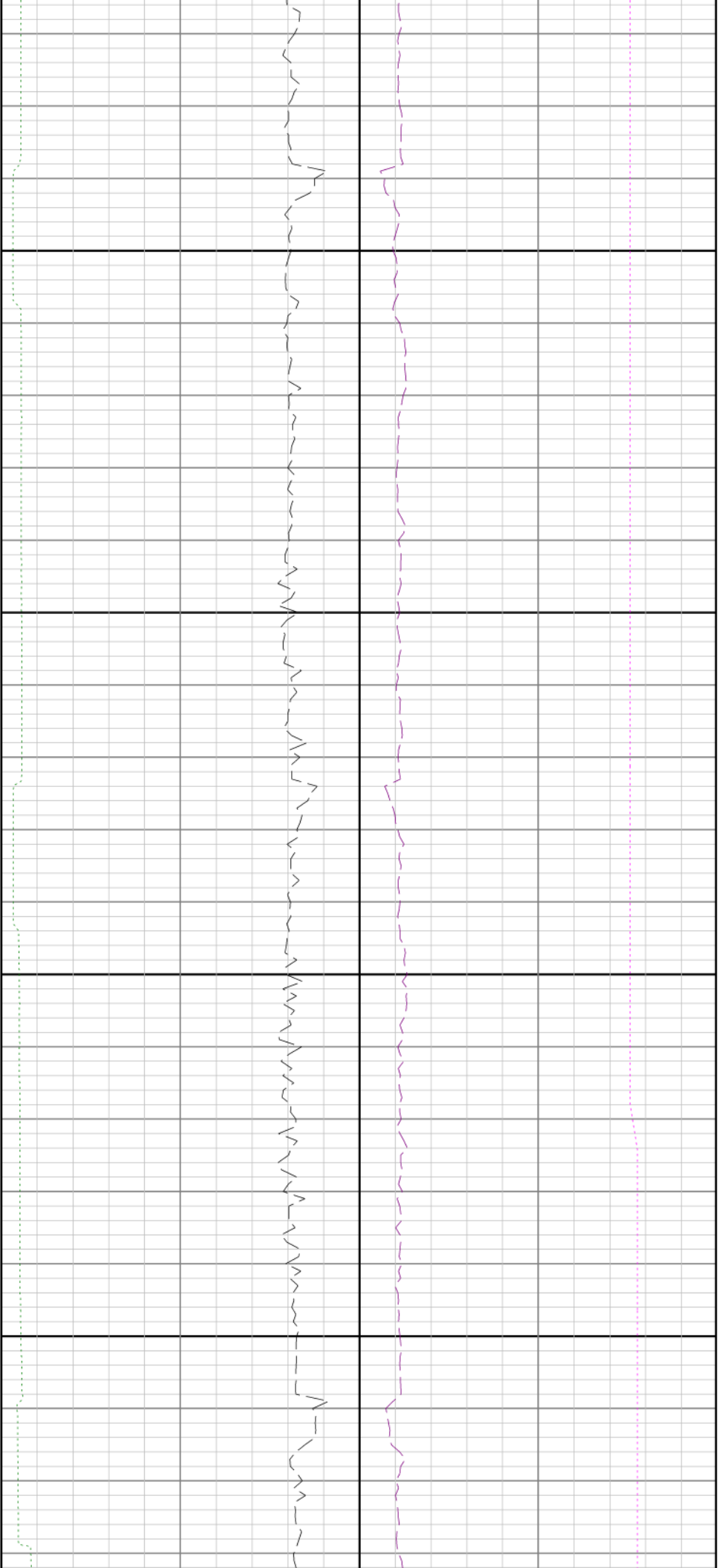
9500

0096



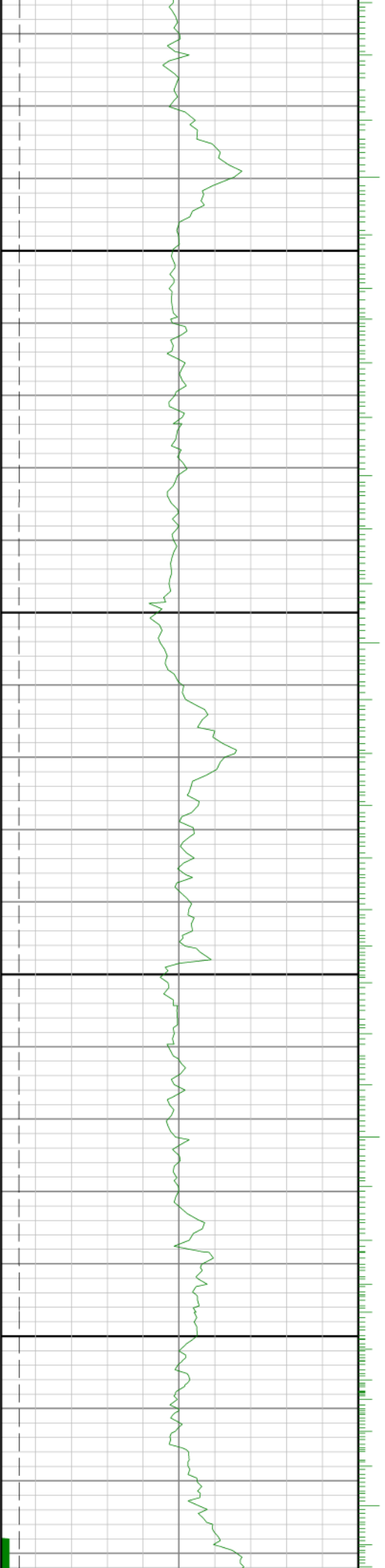


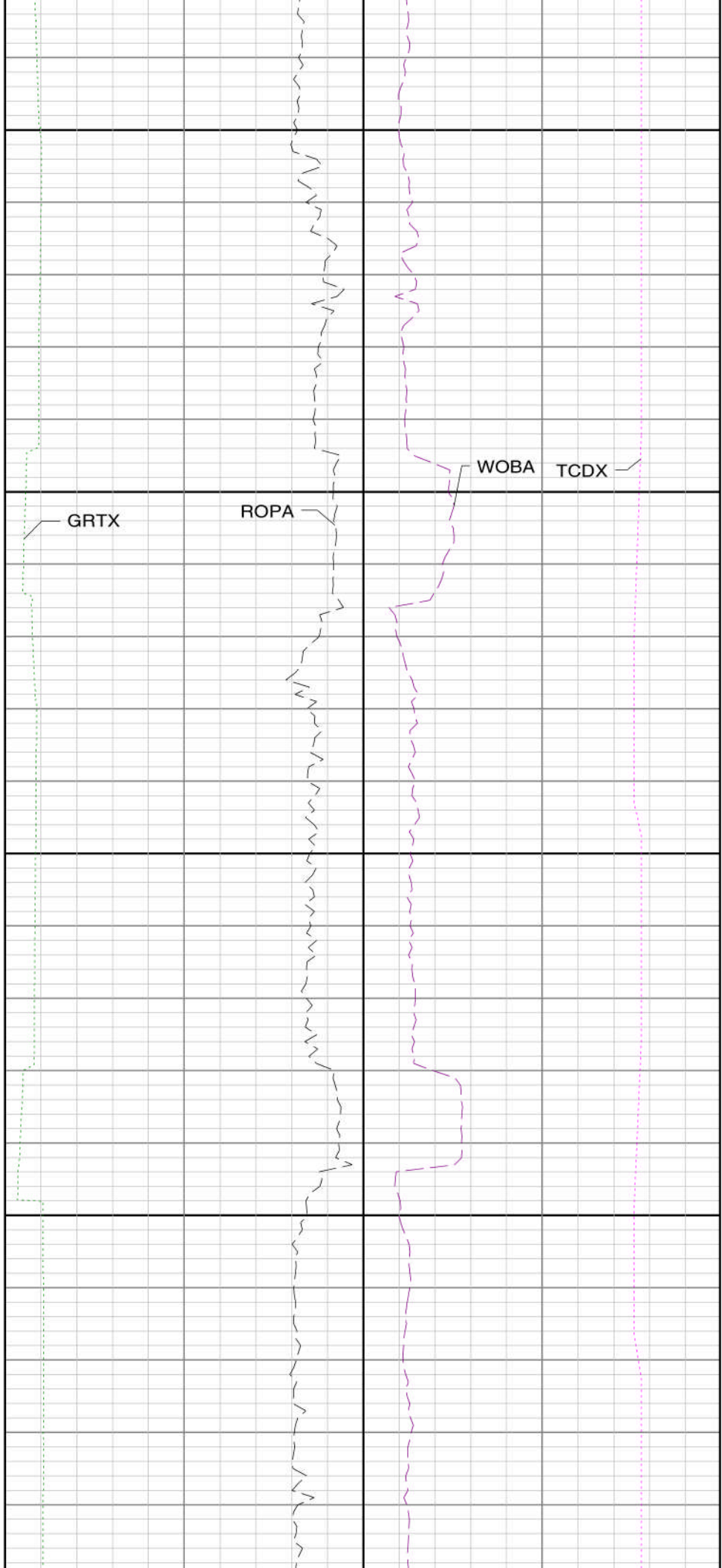


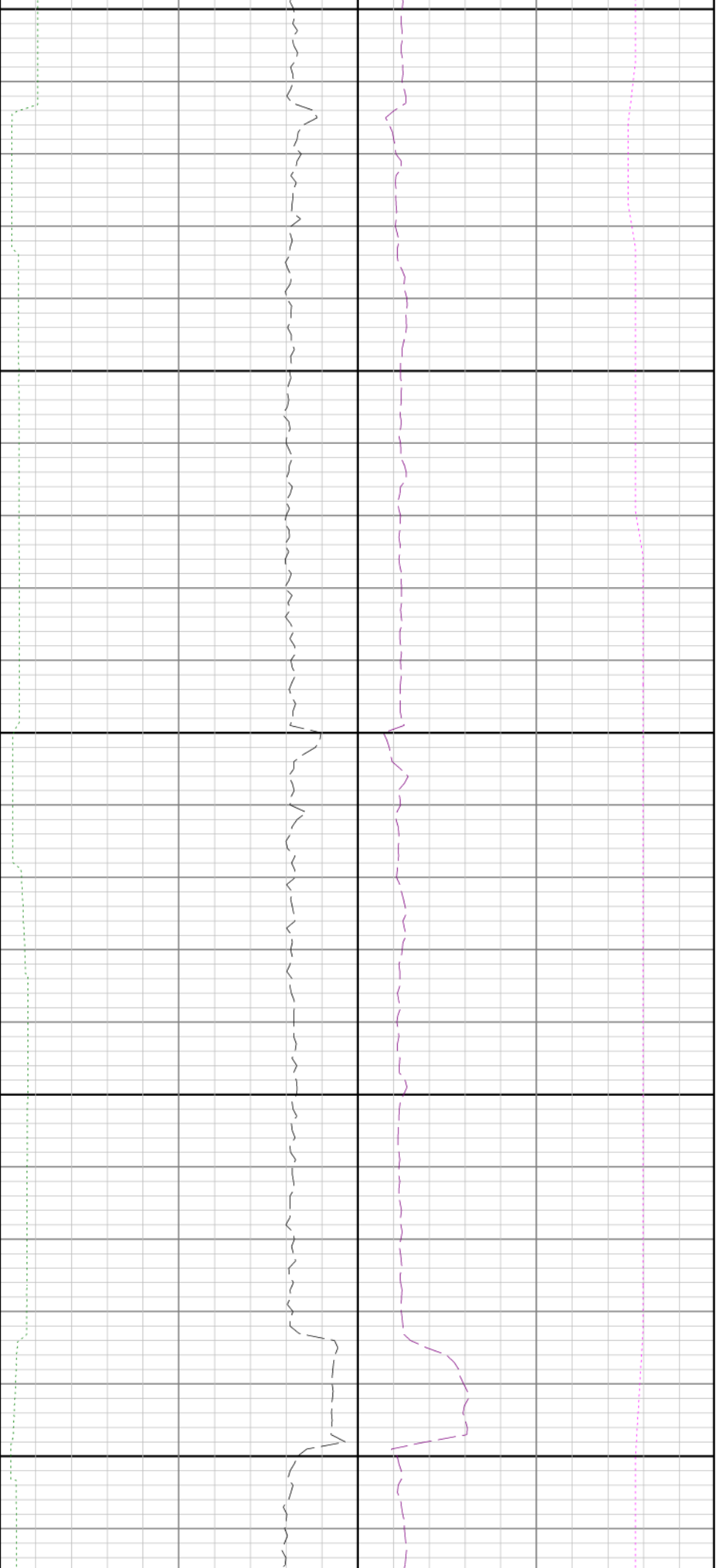


10200

10300

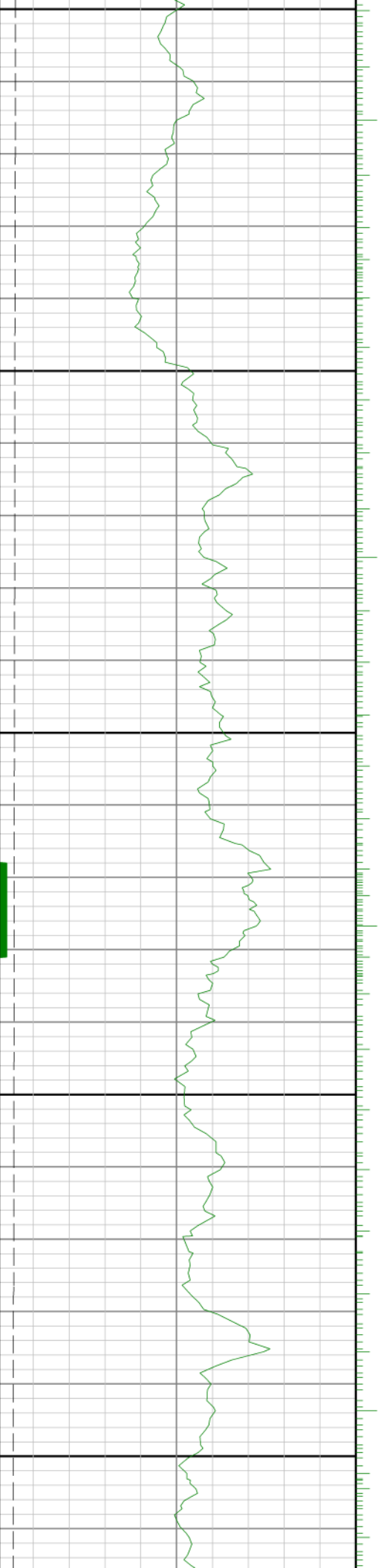


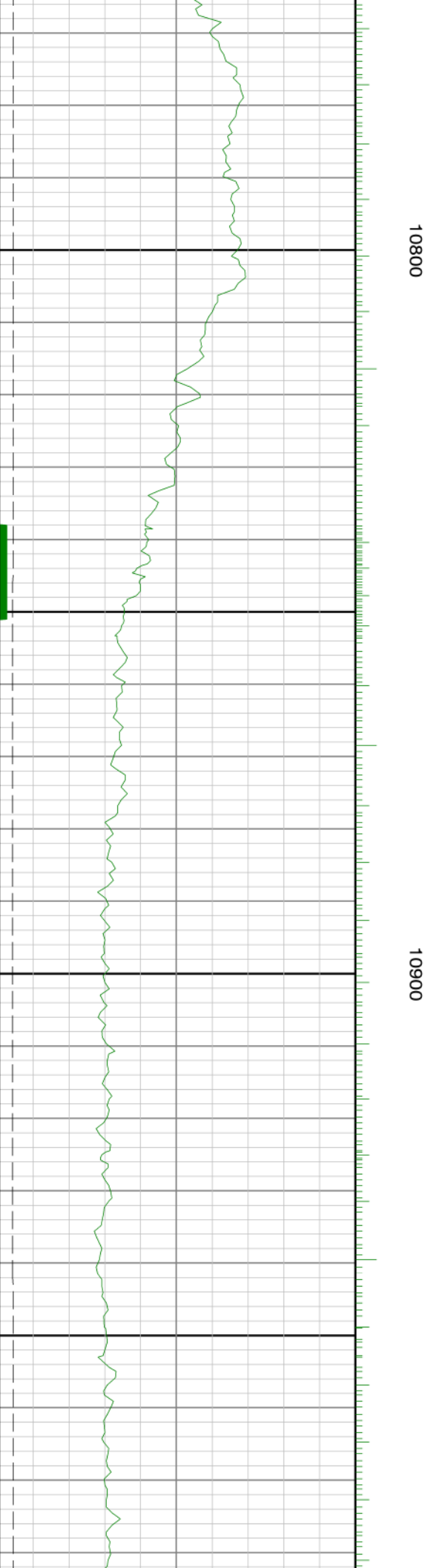
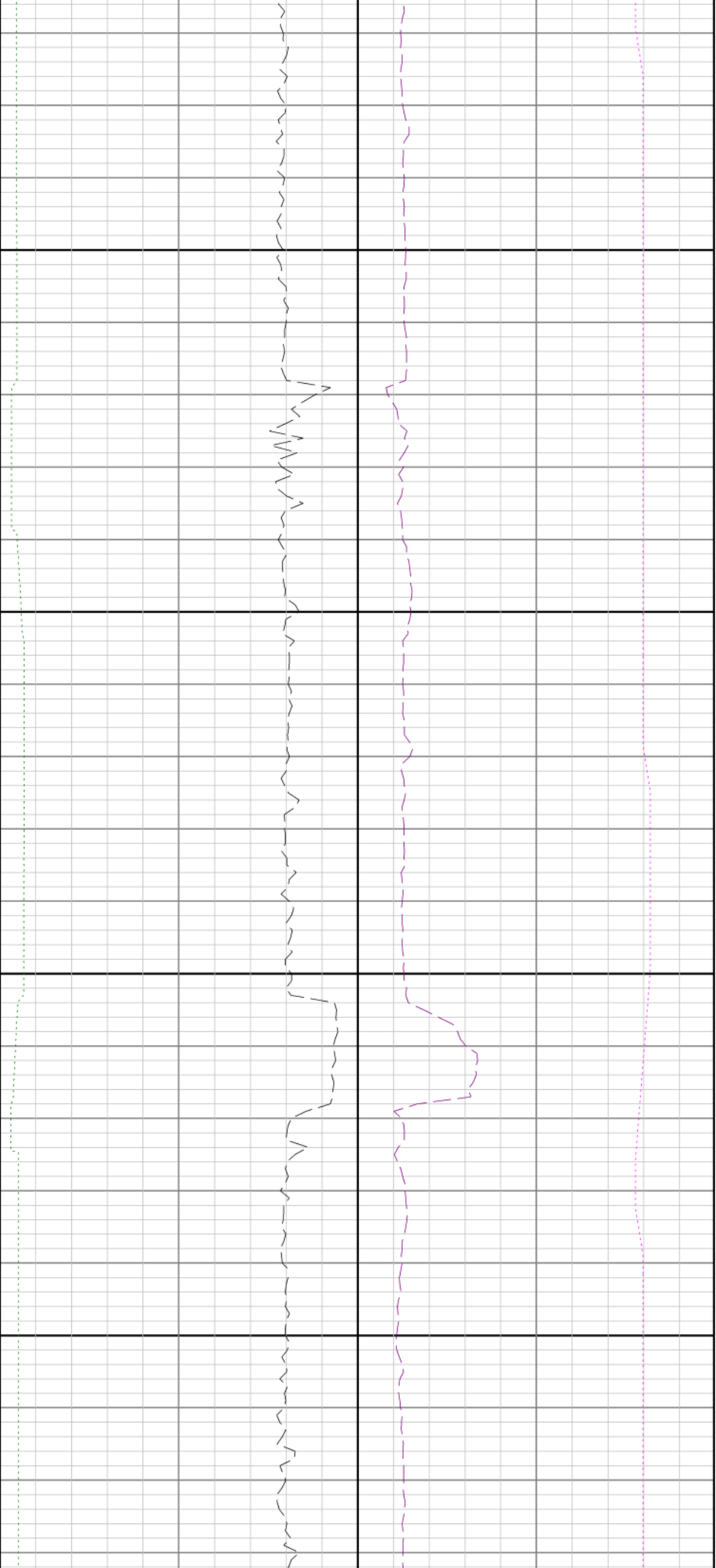


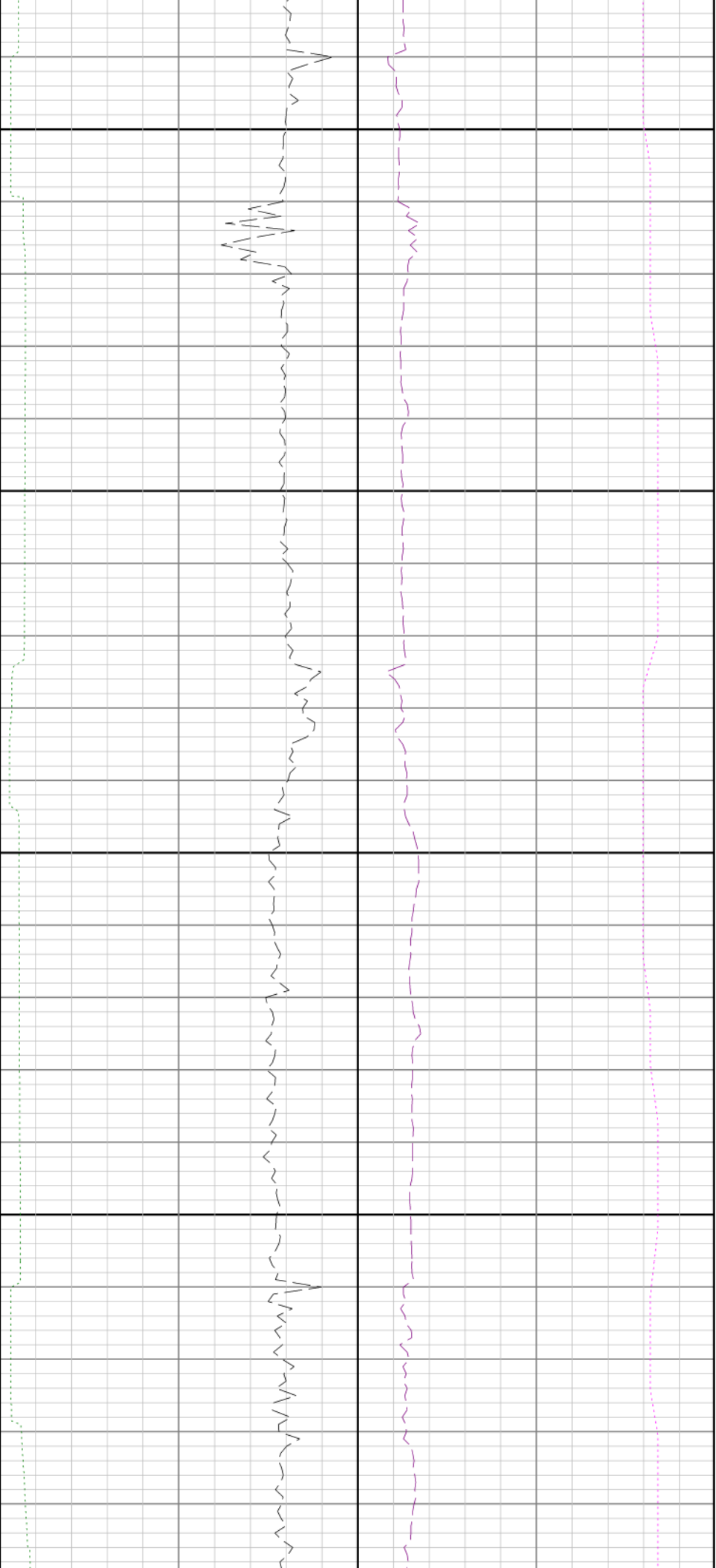


10600

10700



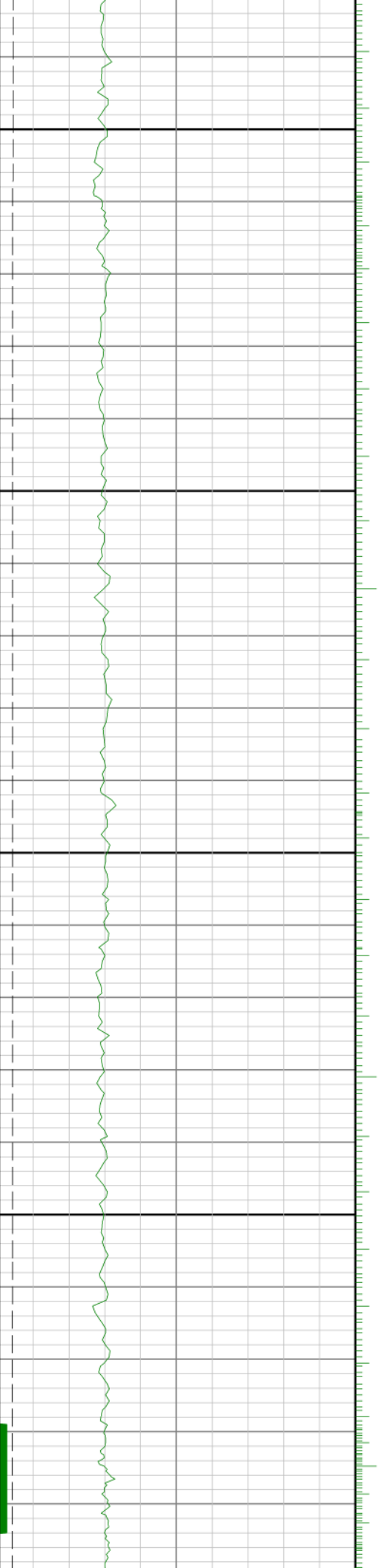


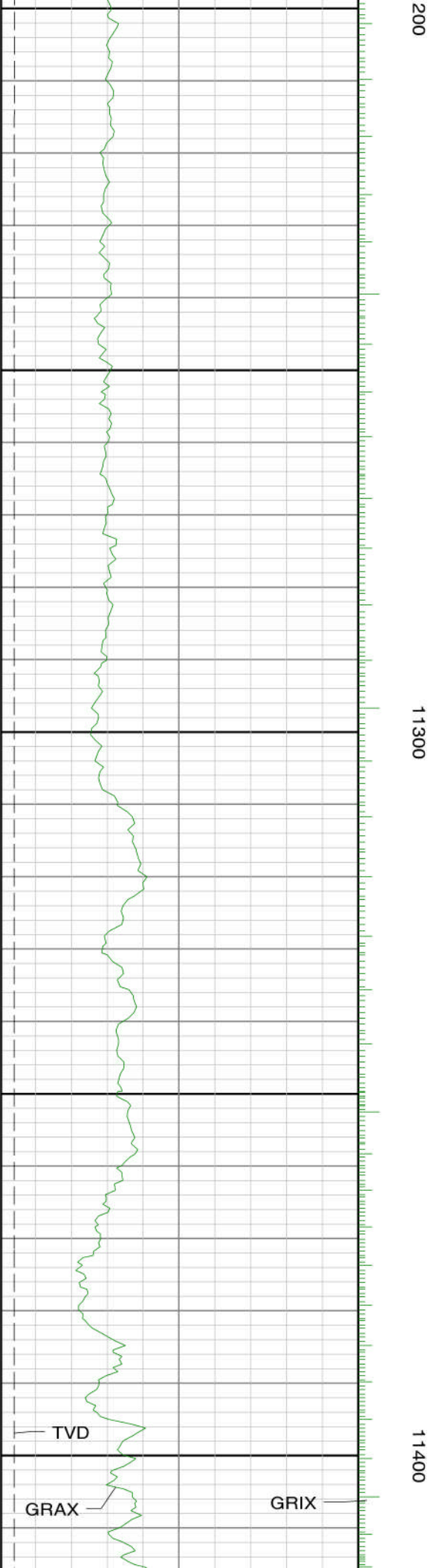
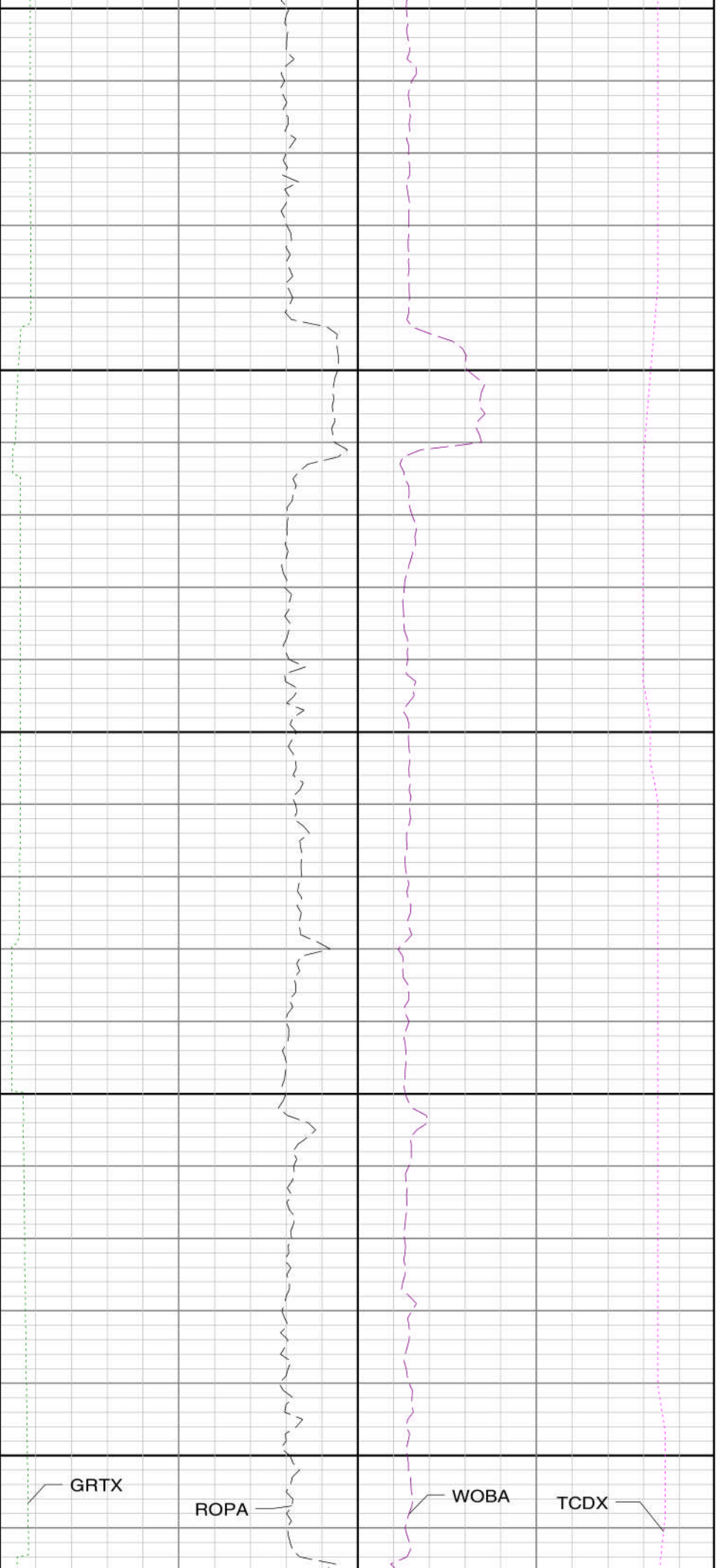


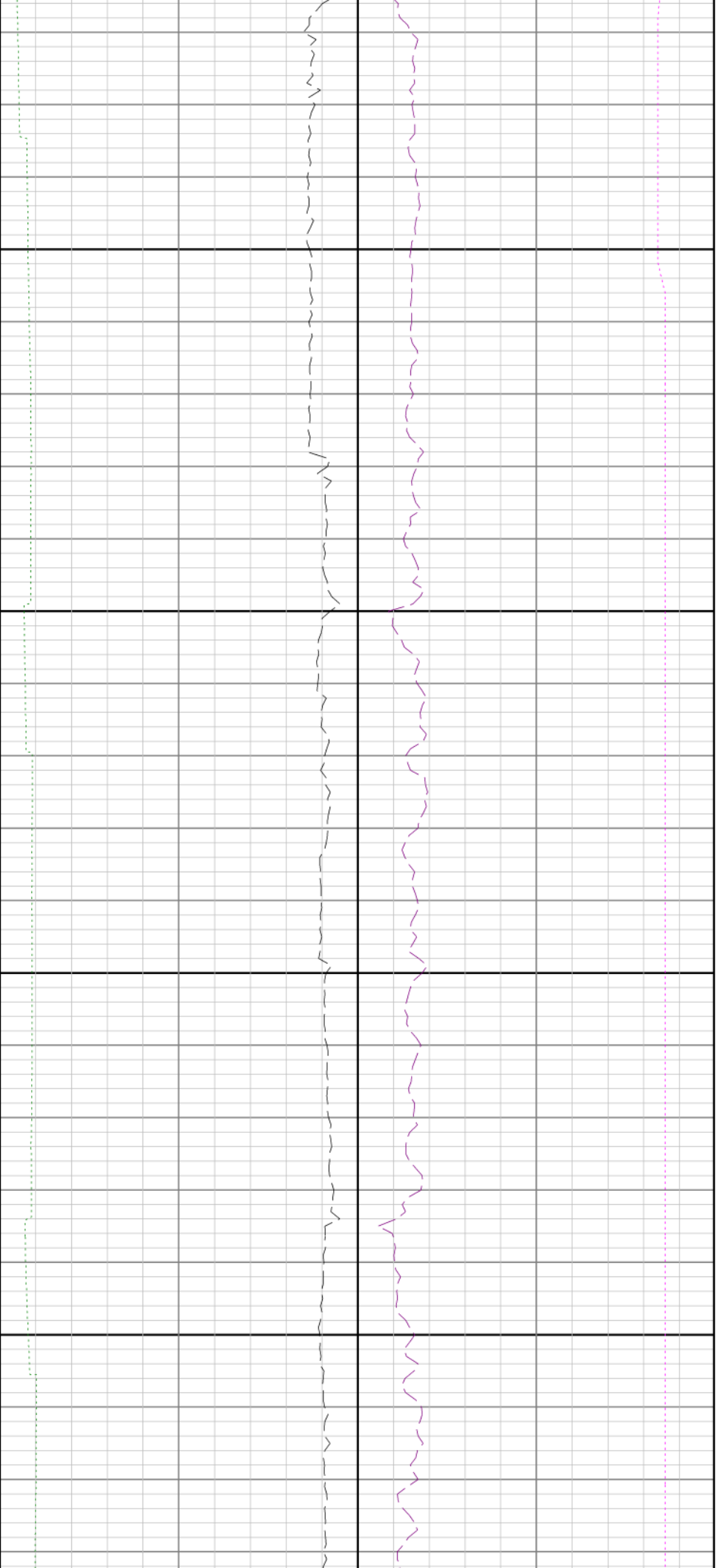
11000

11100

11

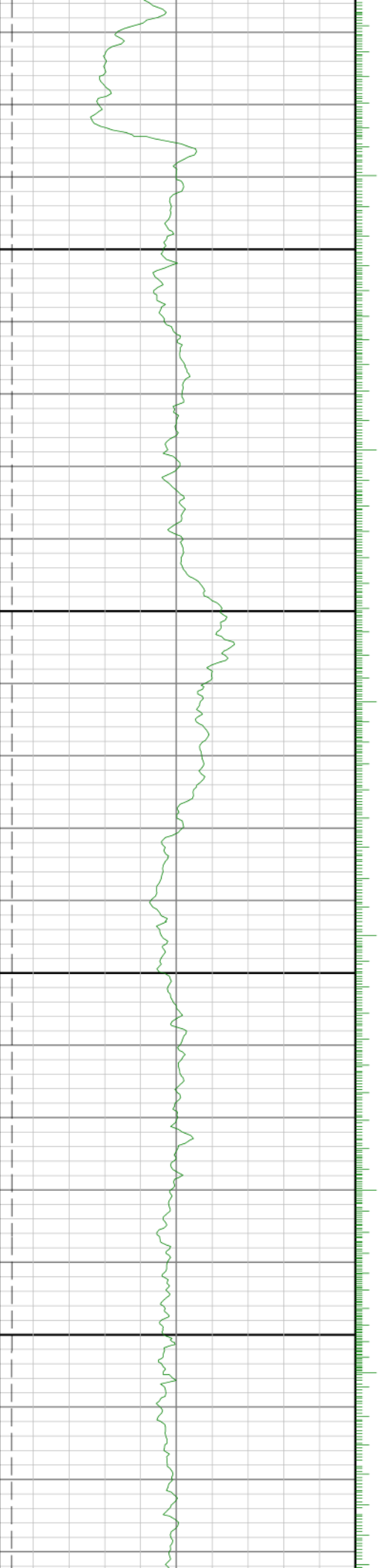


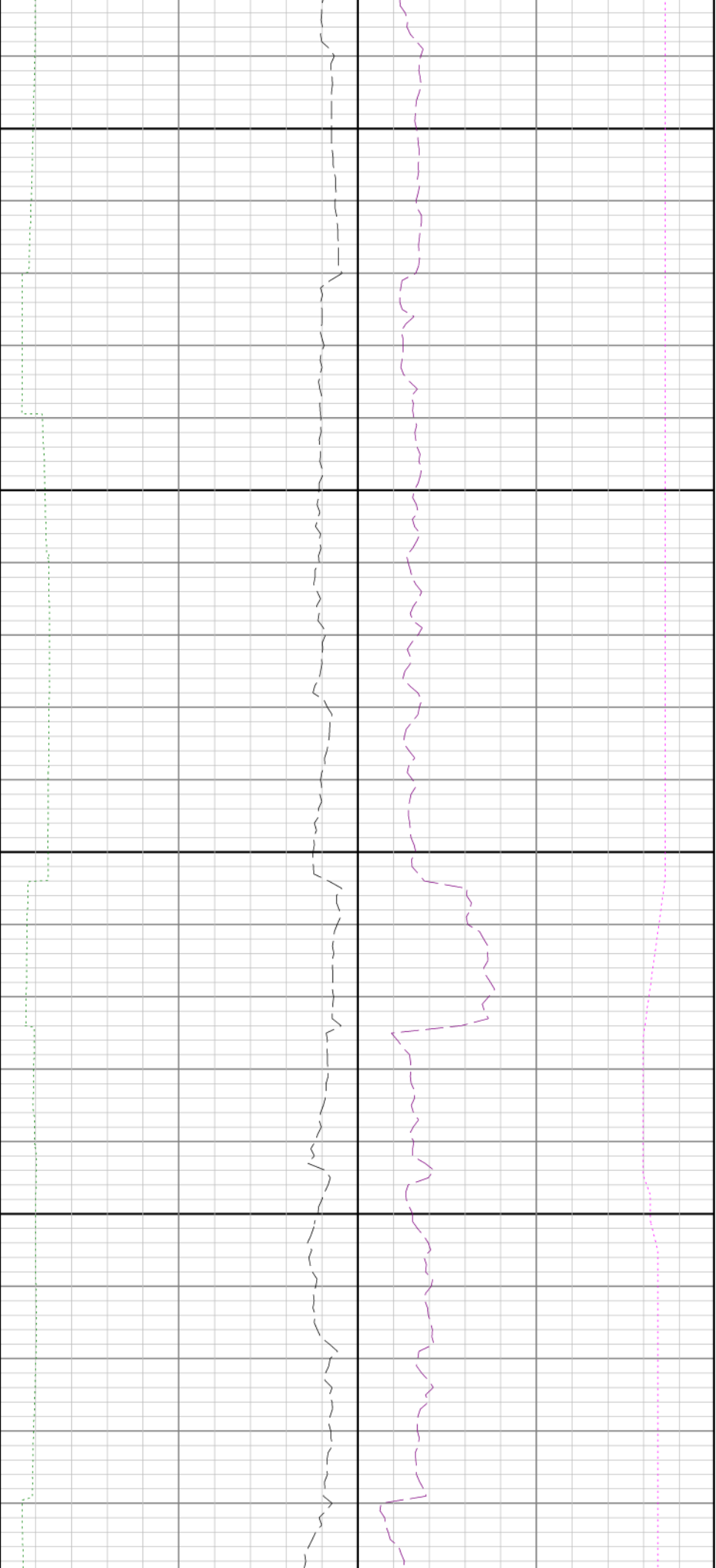




11500

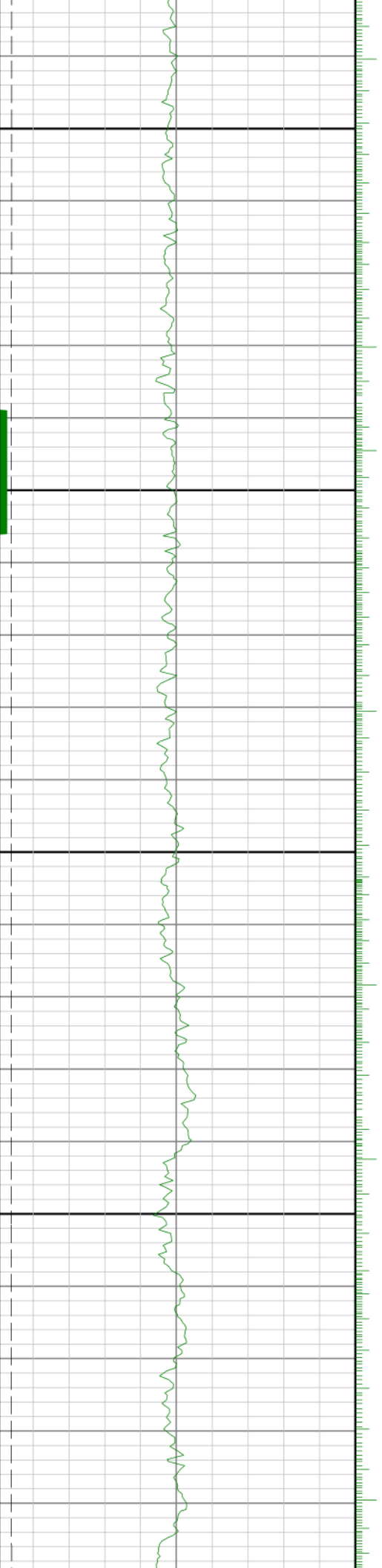
11600

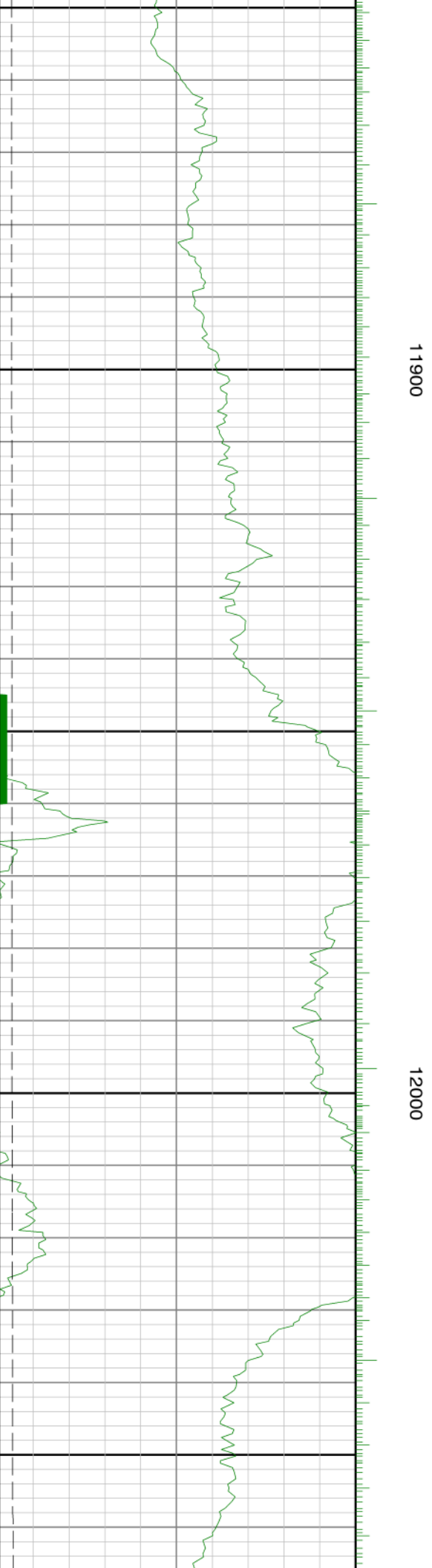
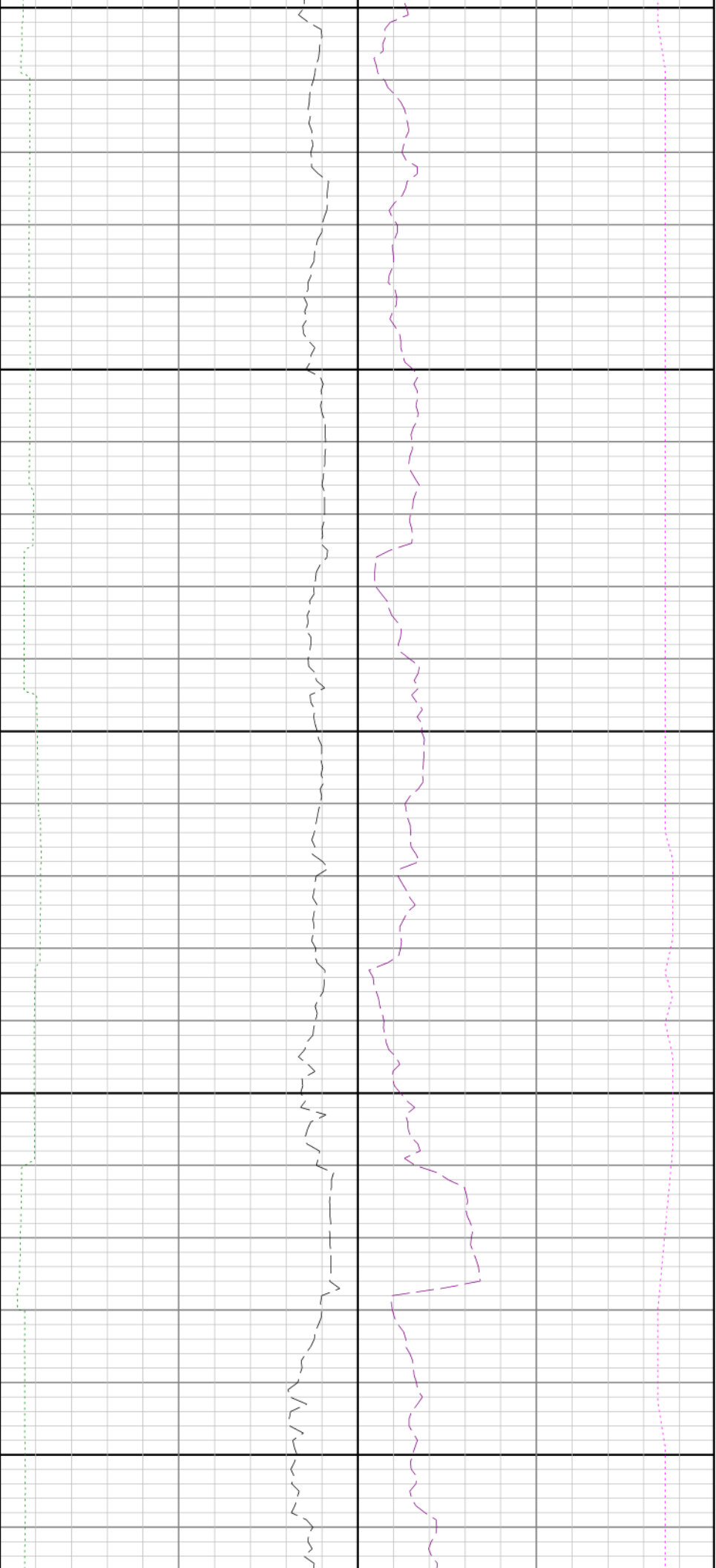


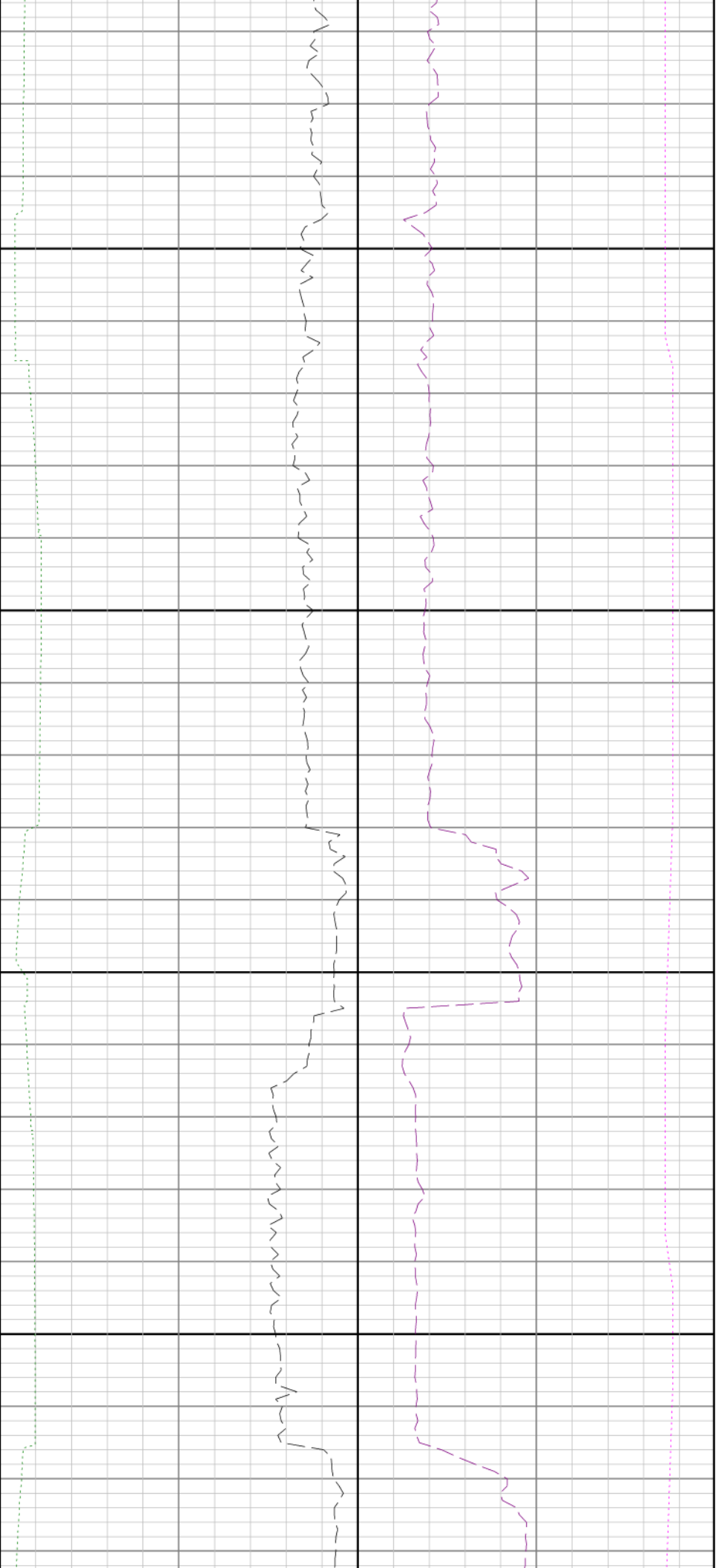


11700

11800

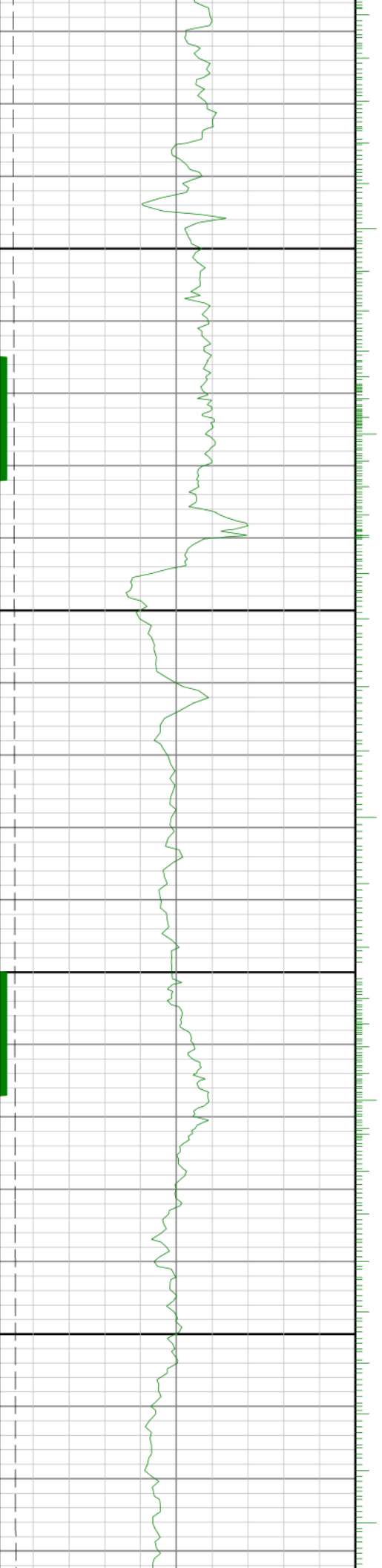


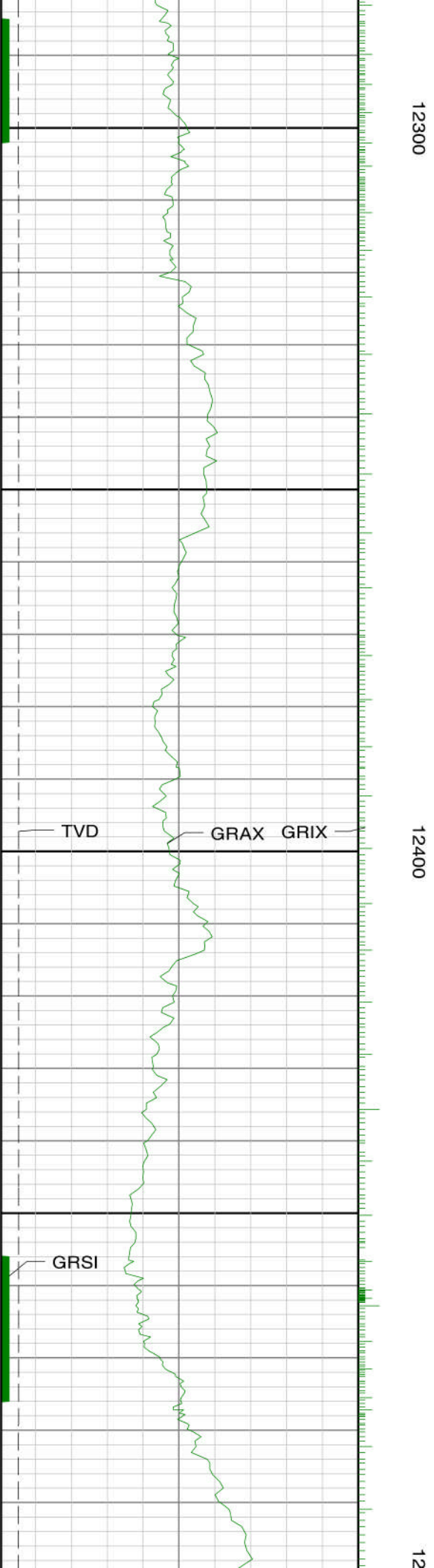
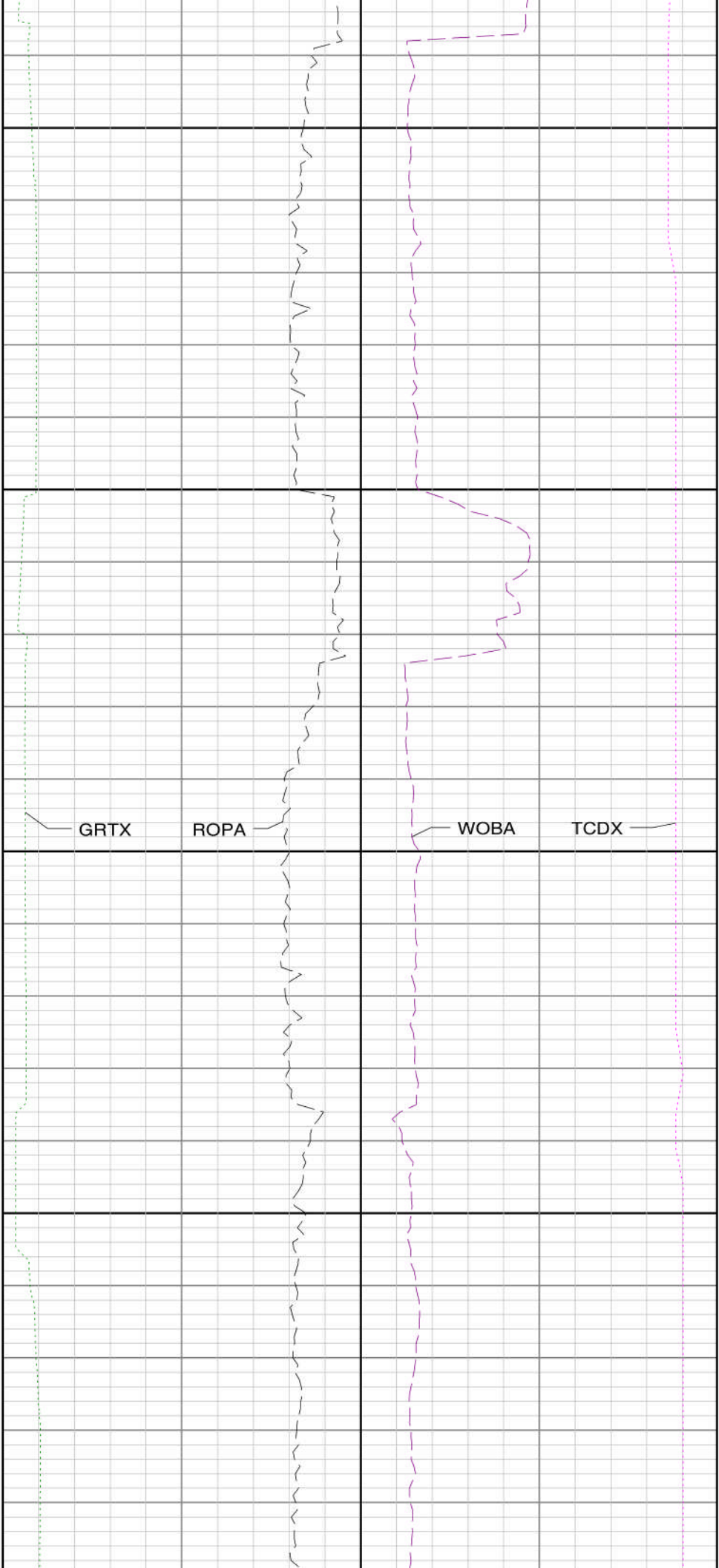


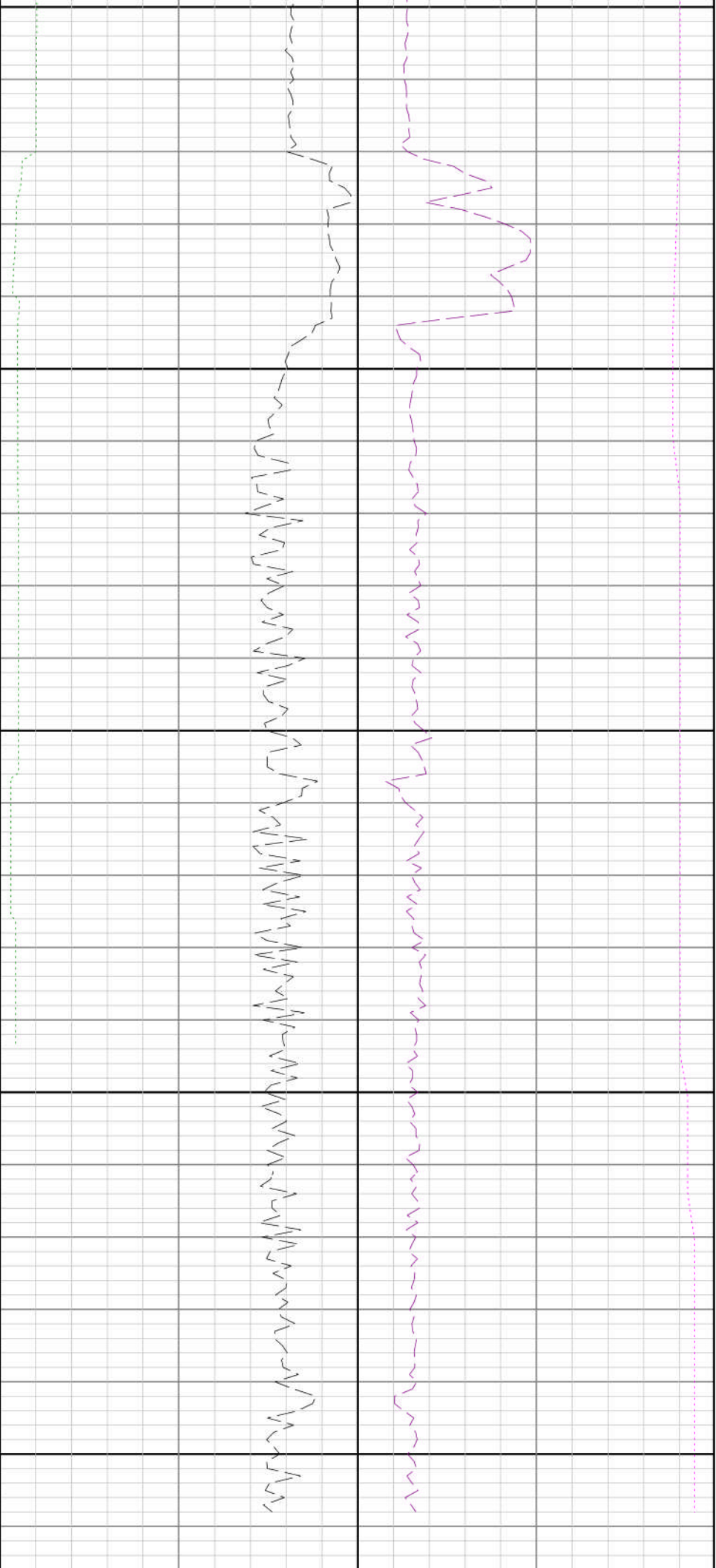


12100

12200







500

12600

Run 3 <
12700

See Remark 3

Gamma Ray Apparent 0.5 ft Avg GRAX	MD feet 1:240	Rate of Penetration 3.0 ft Avg ROPA	Surface Weight On Bit 1.0 ft Avg WOBA
0 200		1000 0	0 100
less API		ft/hr	klbf
True Vertical Depth TVD		Gamma Time Since Drilled GRTX	Downhole Temperature TCDX
7200 6400		0 600	100 230
ft		min	degF