

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (sg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
02/Apr/2015	18:00	1	1331	Oil Based Mud	9.3	65	N/A	N/A	61 / 39	Active Mud Pit	83000	0.0
03/Apr/2015	18:00	1	7754	Oil Based Mud	9.4	52	N/A	N/A	61 / 38	Active Mud Pit	84000	0.0
04/Apr/2015	19:20	1	12239	Oil Based Mud	9.6	50	N/A	N/A	63 / 36	Active Mud Pit	78500	0.0

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	Unitless
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.	K. lbs.

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12235767	Directional	51.57	6.750	3.125
1	SRIG	12131378	Gamma	48.20	6.750	3.125
2	DIR	12235767	Directional	52.09	6.750	3.125
2	SRIG	12131378	Gamma	48.72	6.750	3.125

Service and Tool Mnemonics

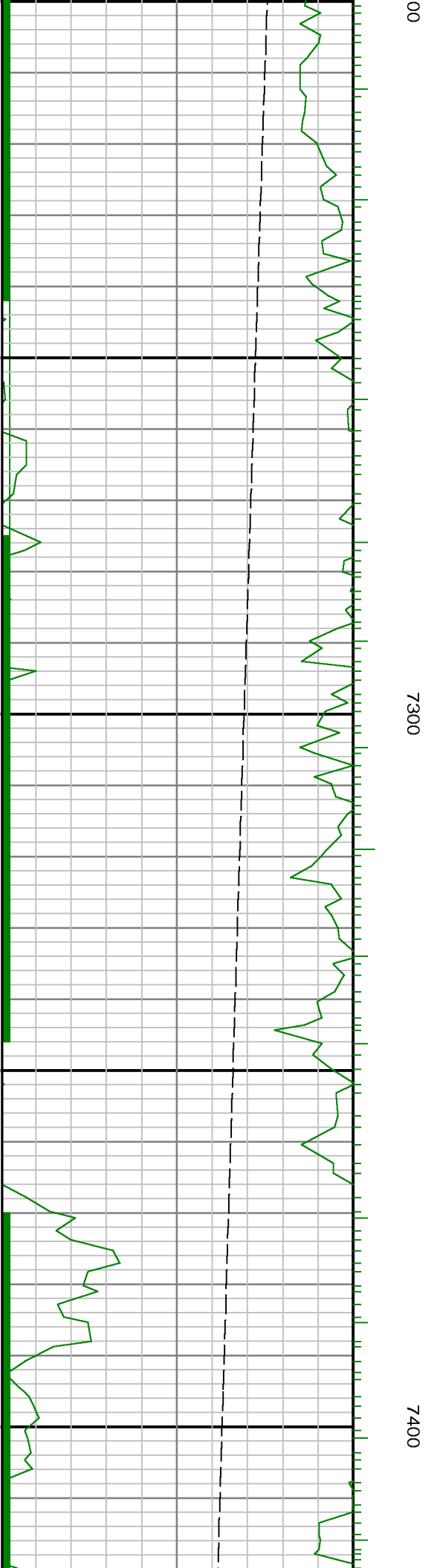
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments

<p>1) Baker Hughes INTEQ runs 1 and 2 utilized a 6.5 inch NaviGamma (Directional and Gamma Ray) tool ran behind an 7 7/8 inch bit with a steerable assembly from 1160 to 13193 feet MD (1159 to 7503 feet TVD).</p> <p>2) A sliding indicator is shown on the left side of track 1 as a heavy line. The indicator has been shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.</p> <p>3) Depth measurements obtained from a depth control system not supplied or operated by Baker Hughes INTEQ. Due to lack of control by Baker Hughes INTEQ logging engineers, depth calibration and measurements could not be independently verified.</p>

Remarks

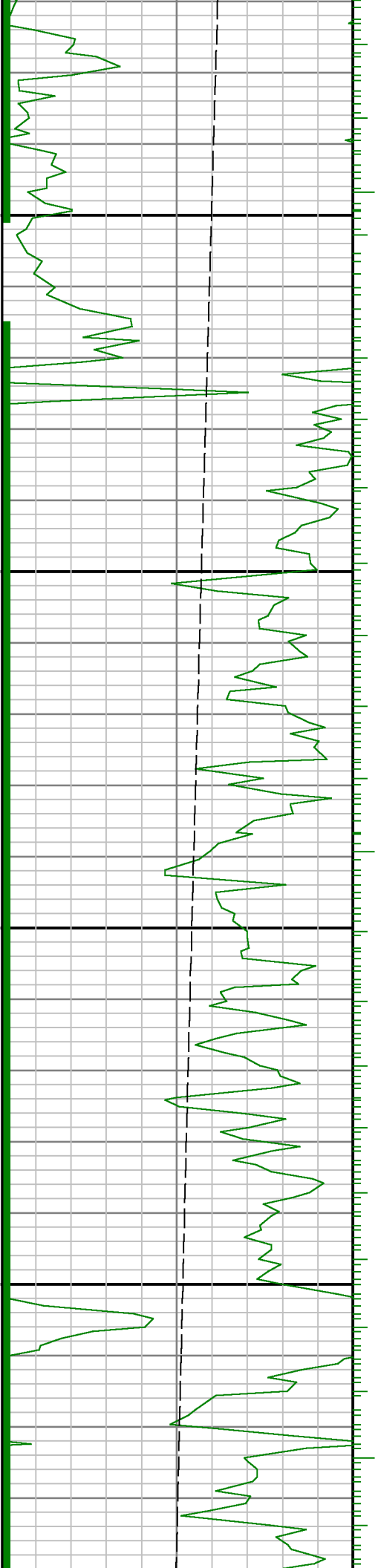
Number	Measured Depth	Hole Section	LWD Run No.	Remark
--------	-------------------	-----------------	----------------	--------

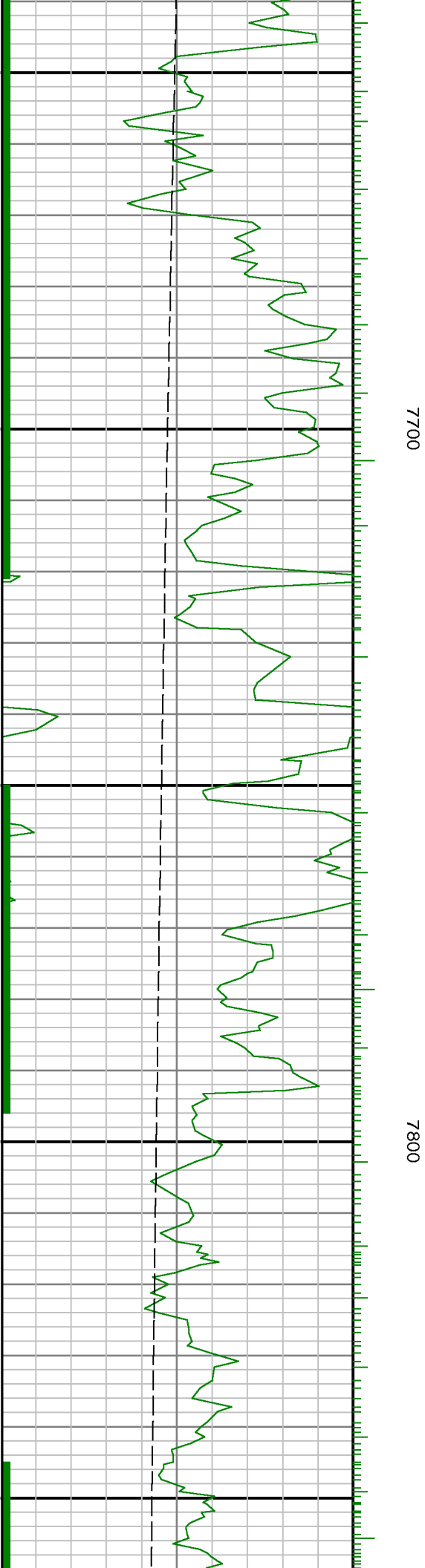


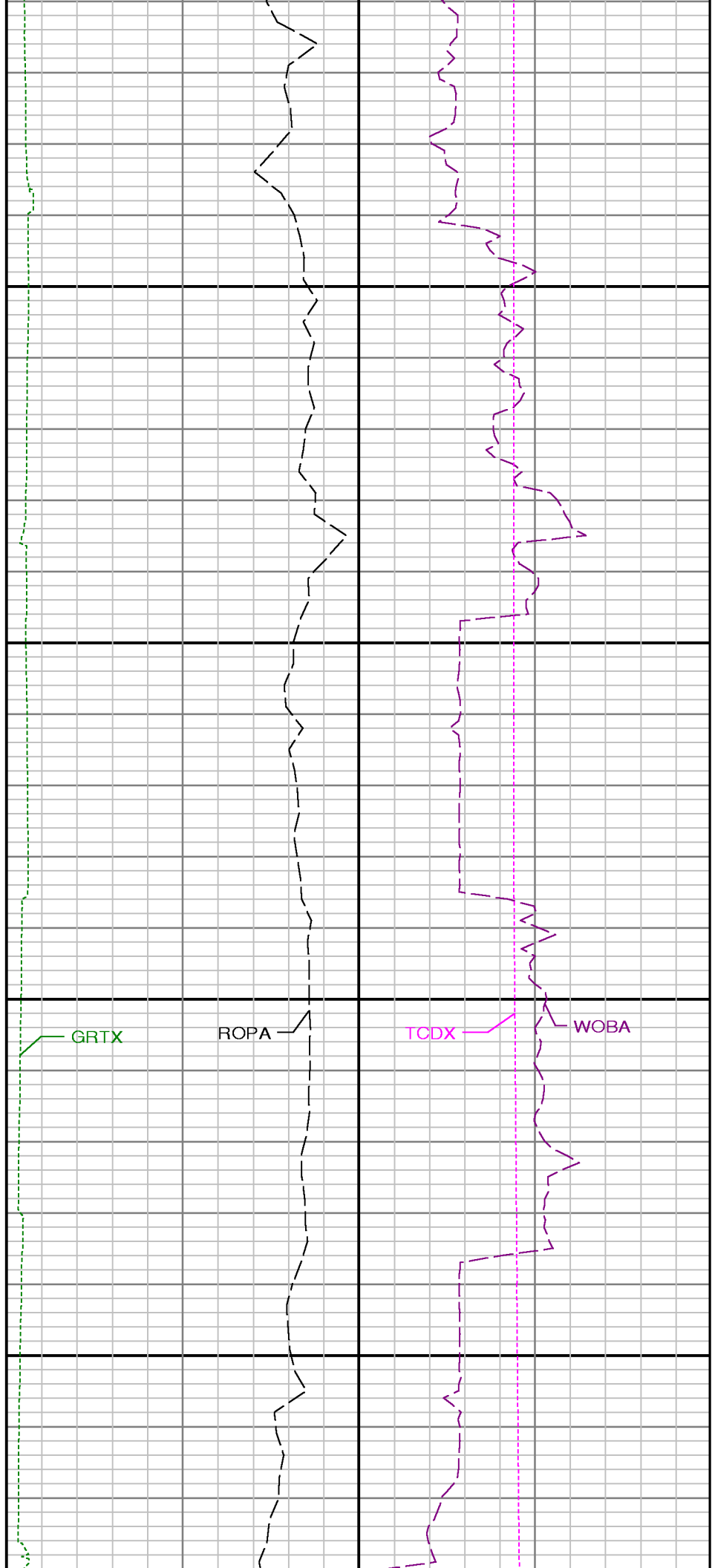
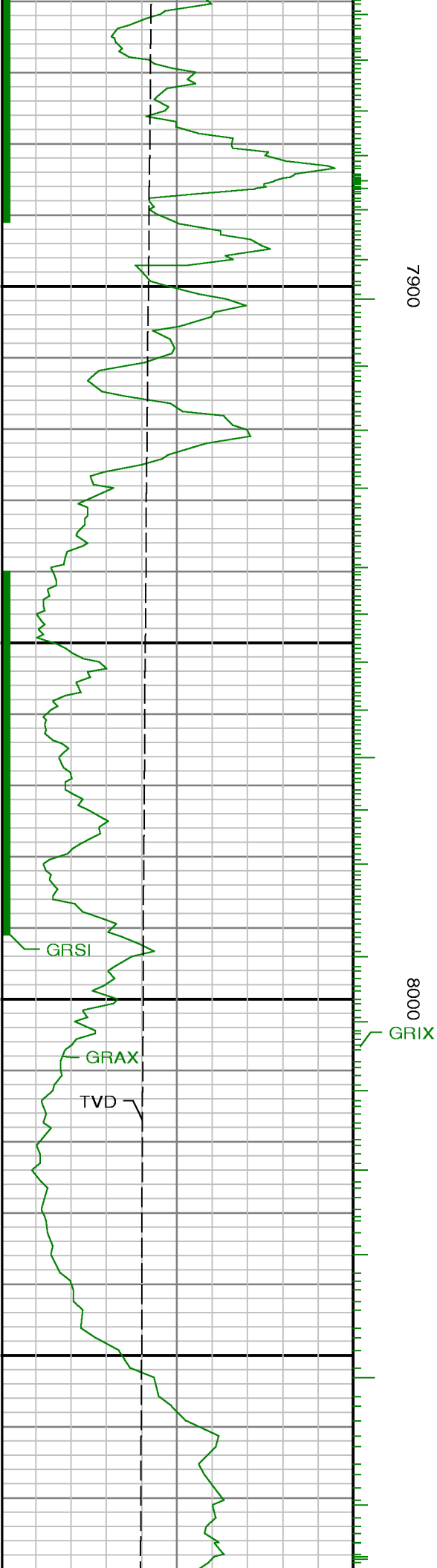


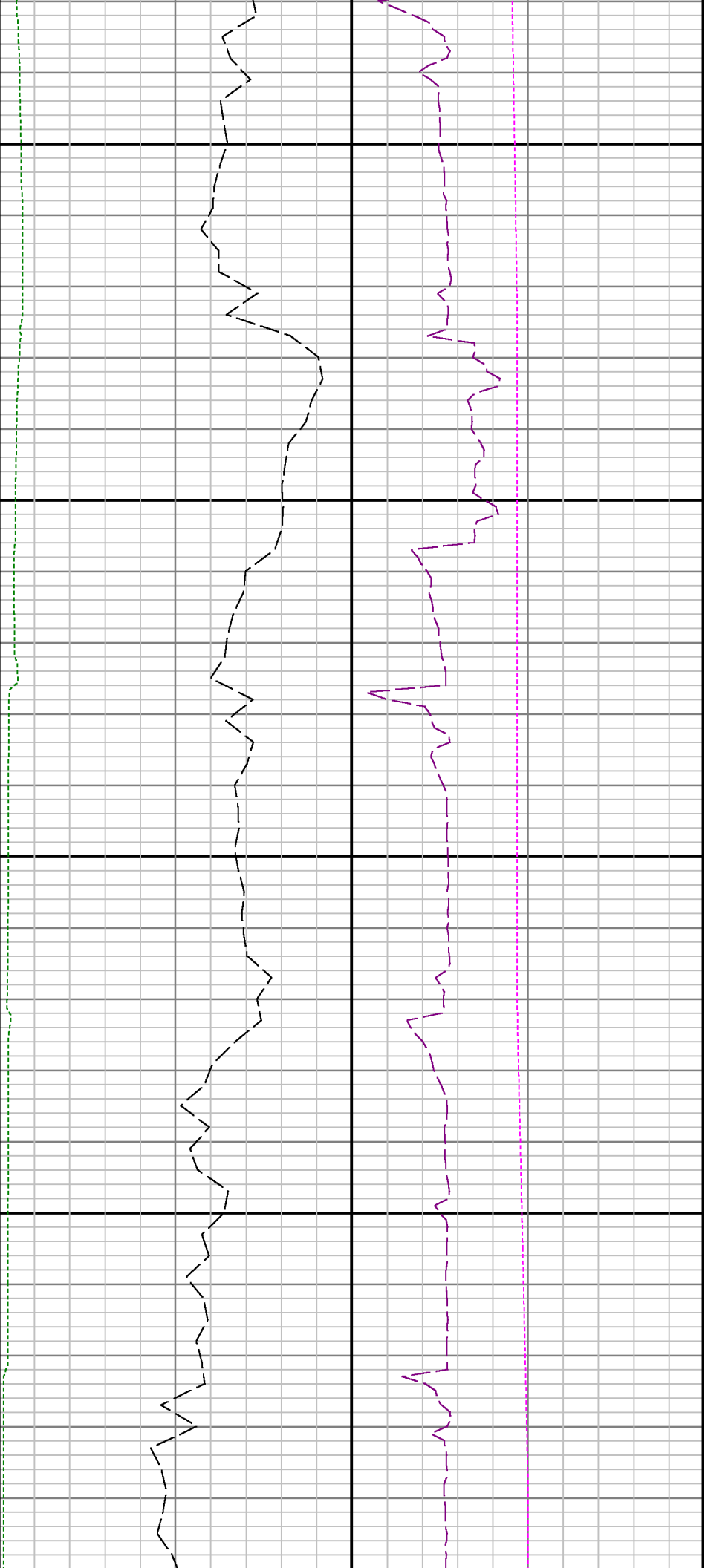
7500

7600





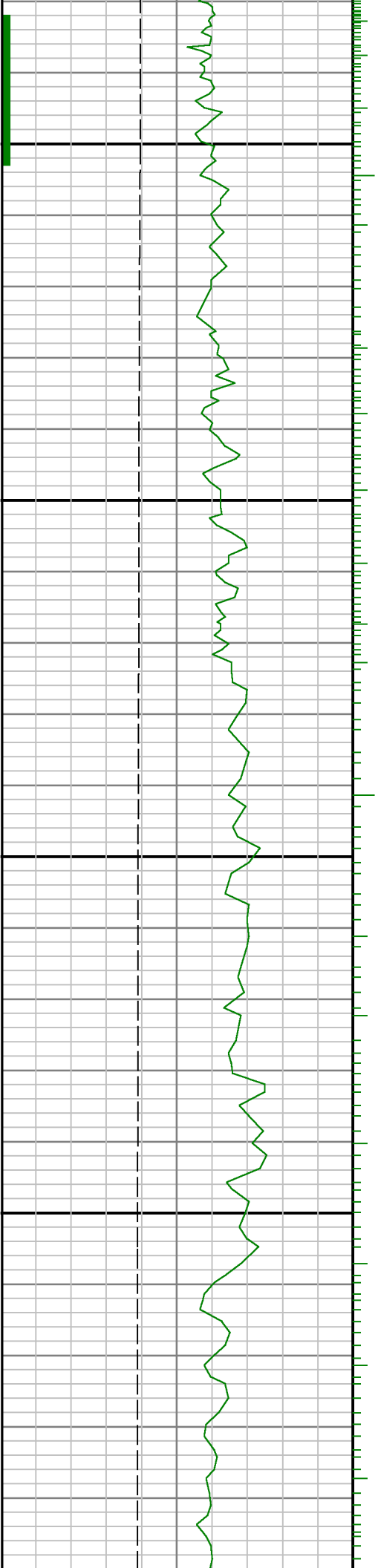


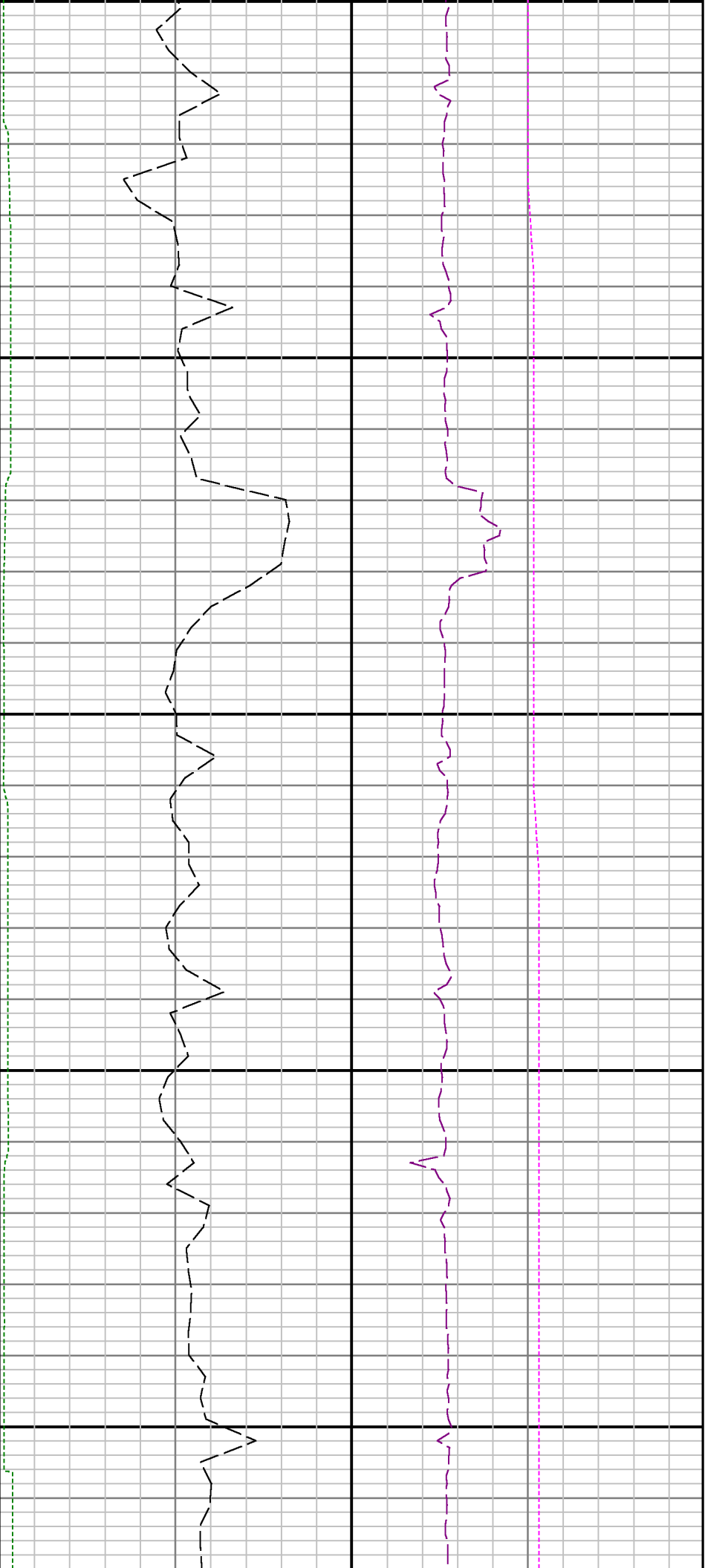


8100

8200

83

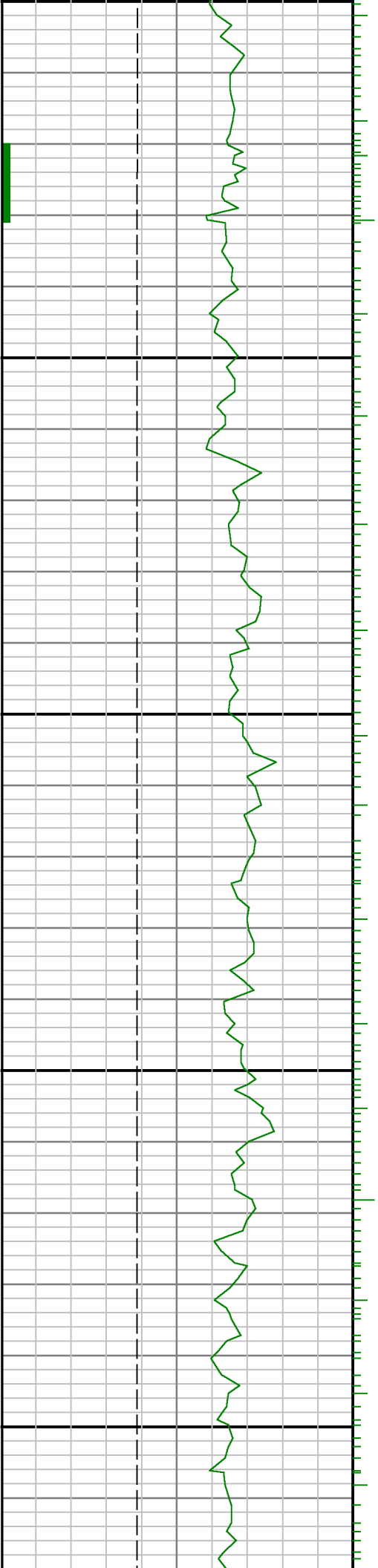


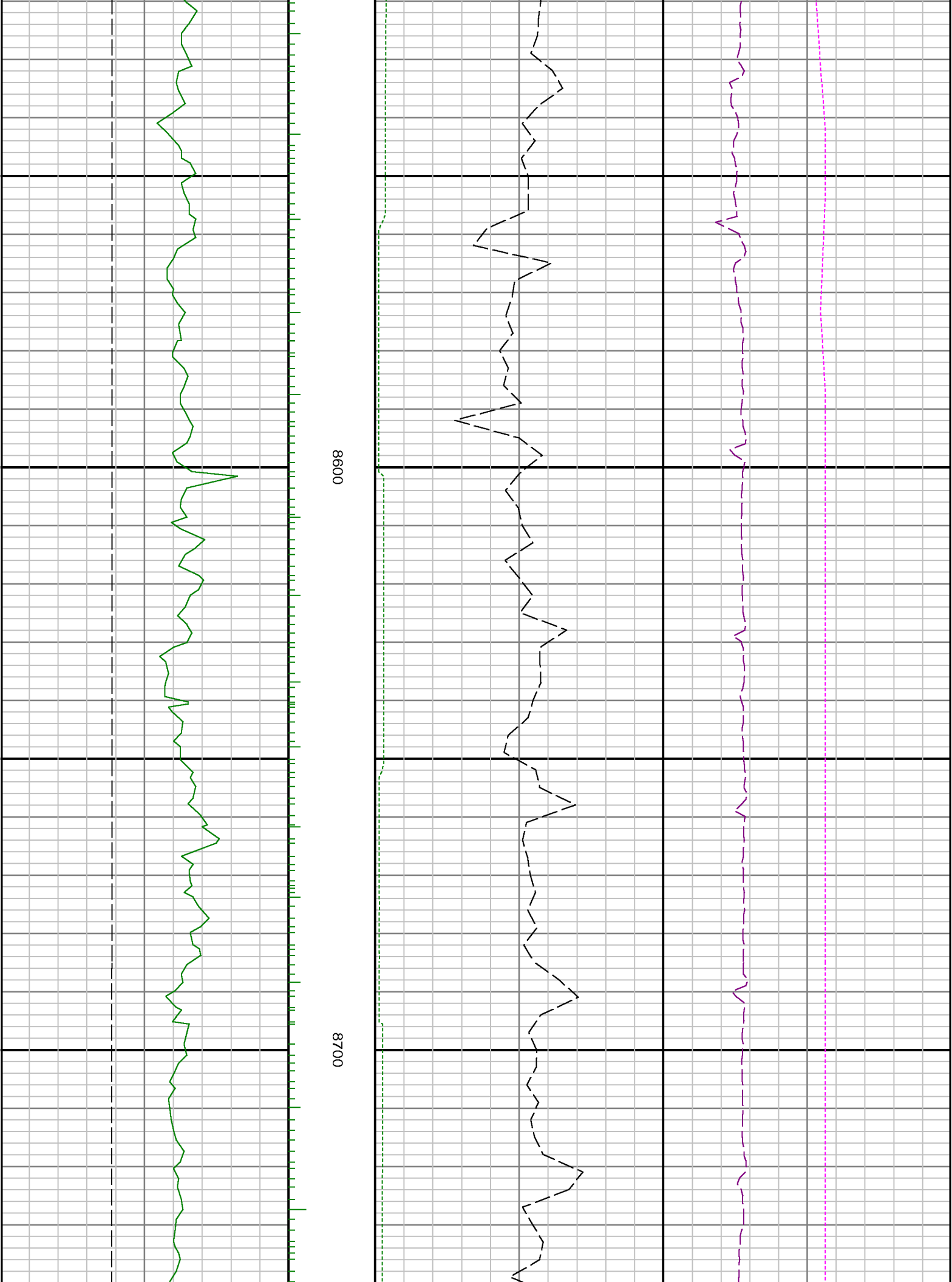


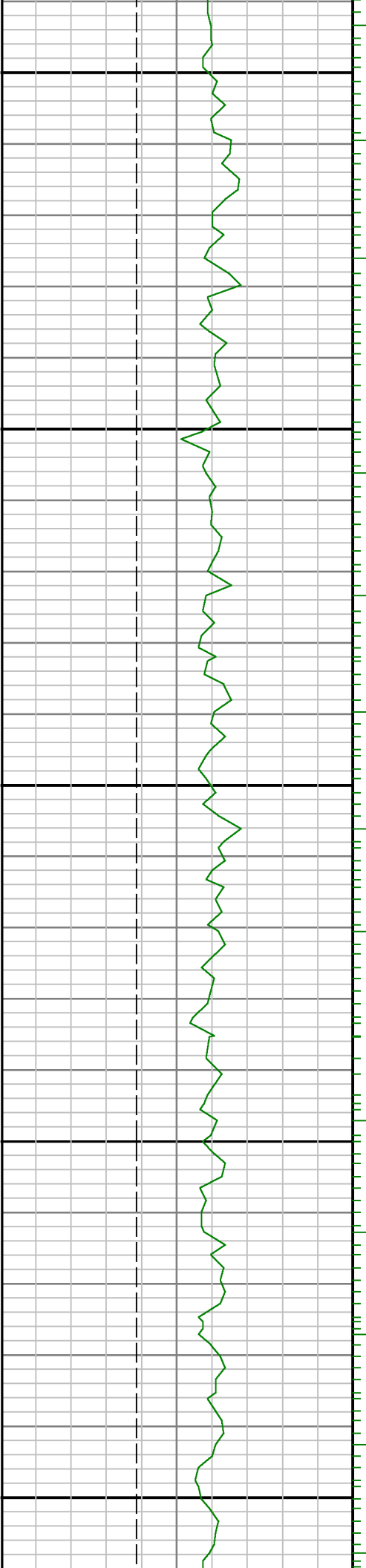
00

8400

8500

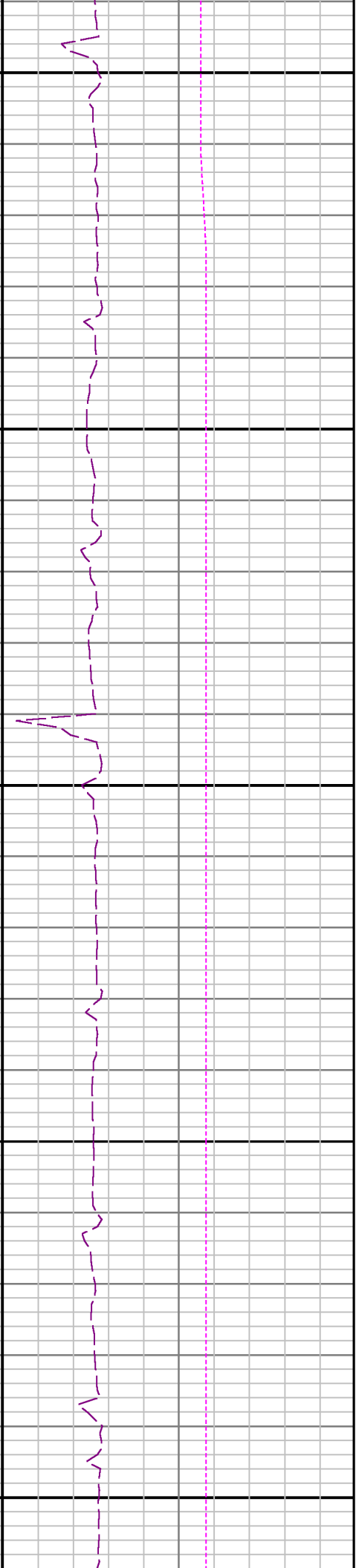


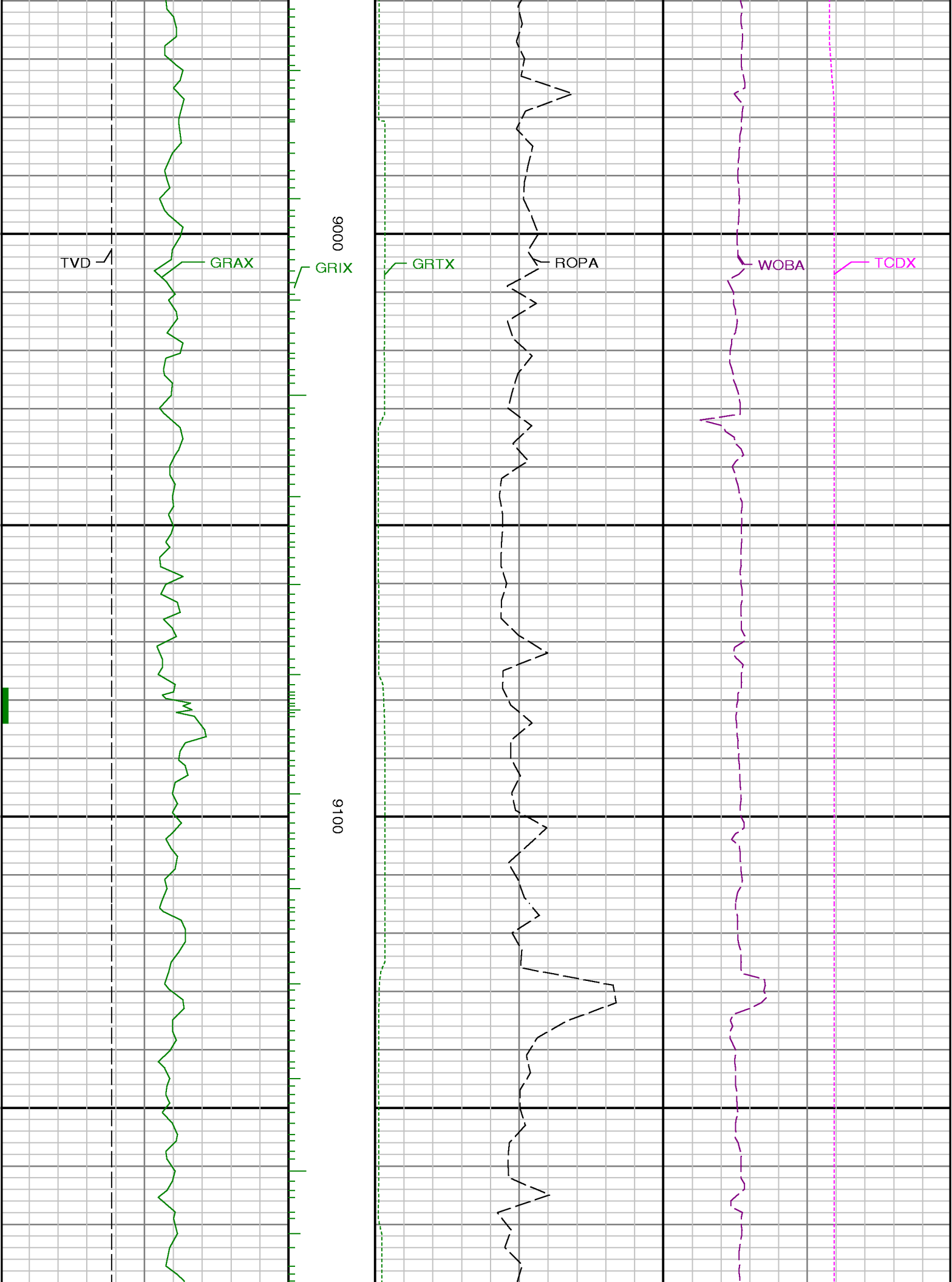


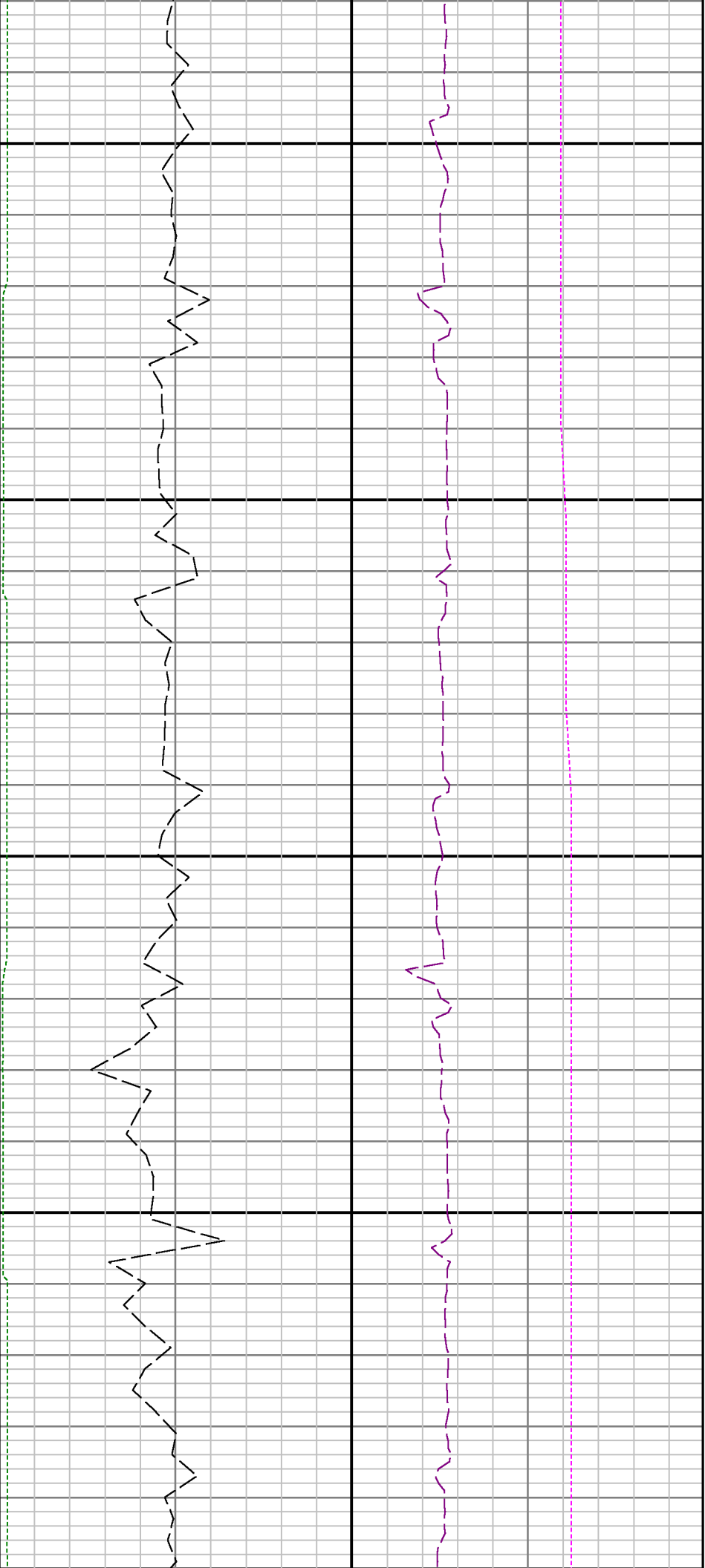


0068

0088



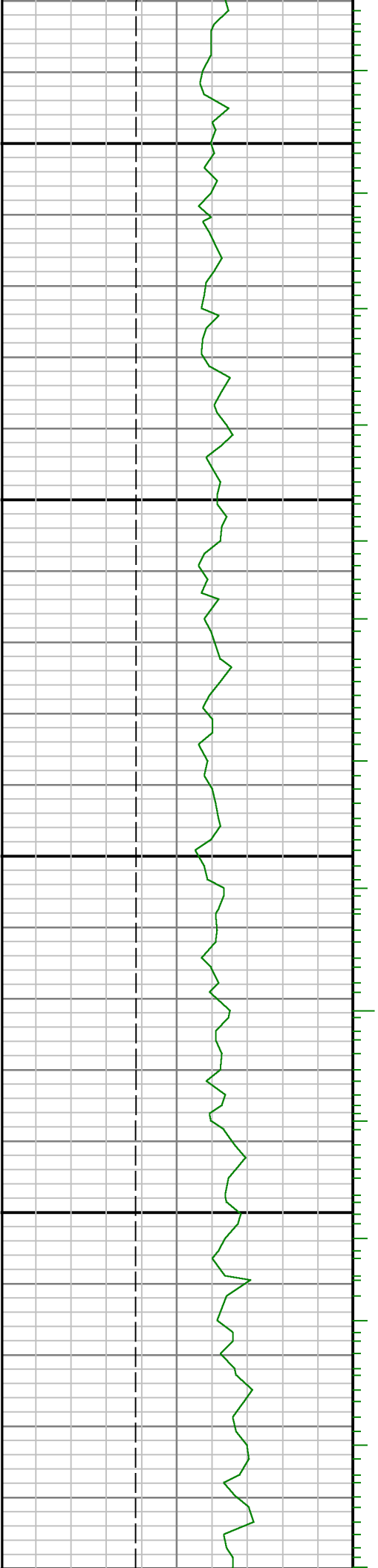


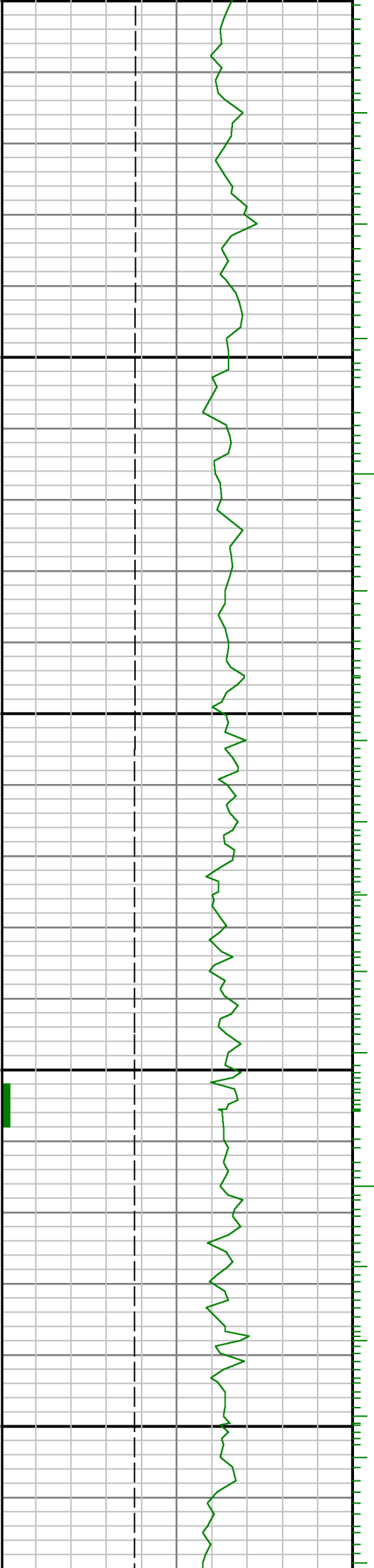


9200

9300

94

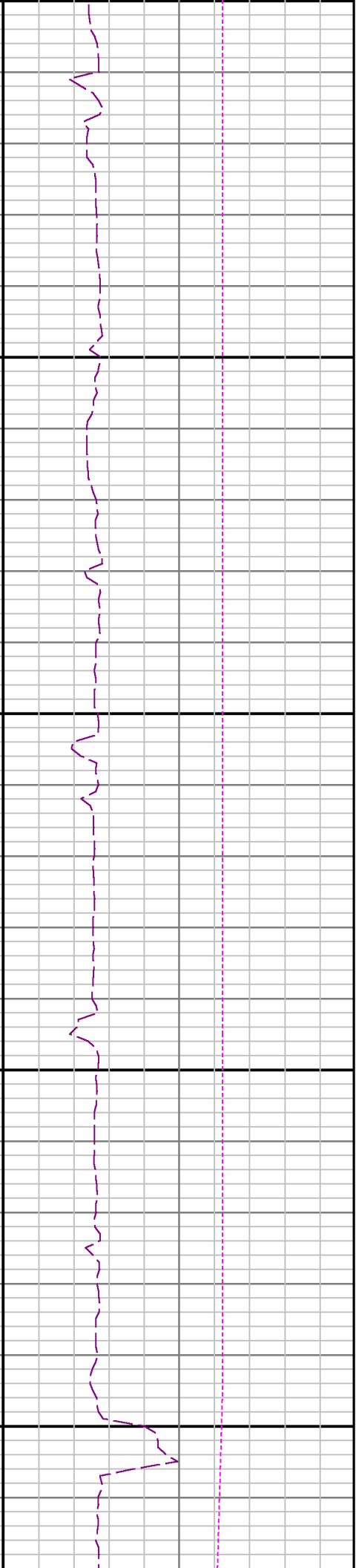
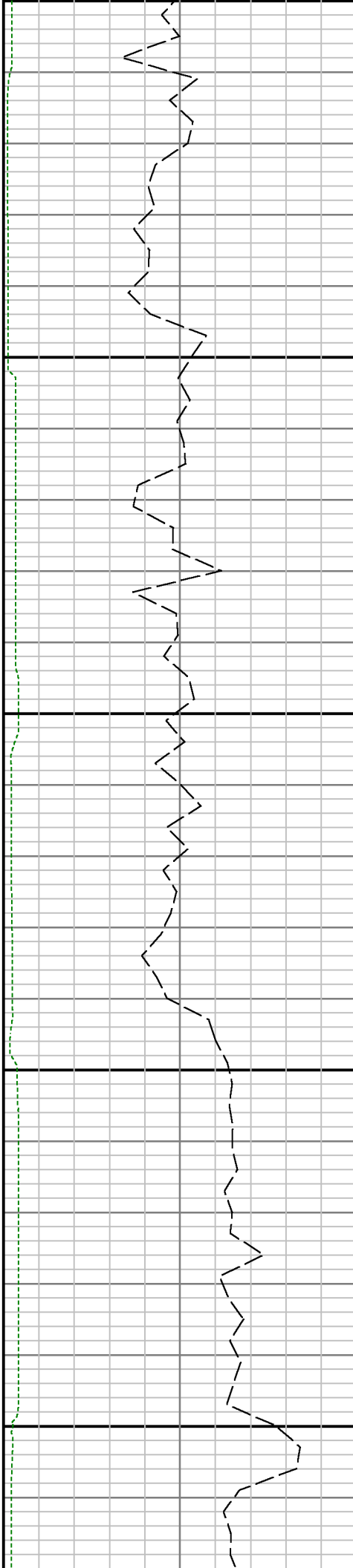


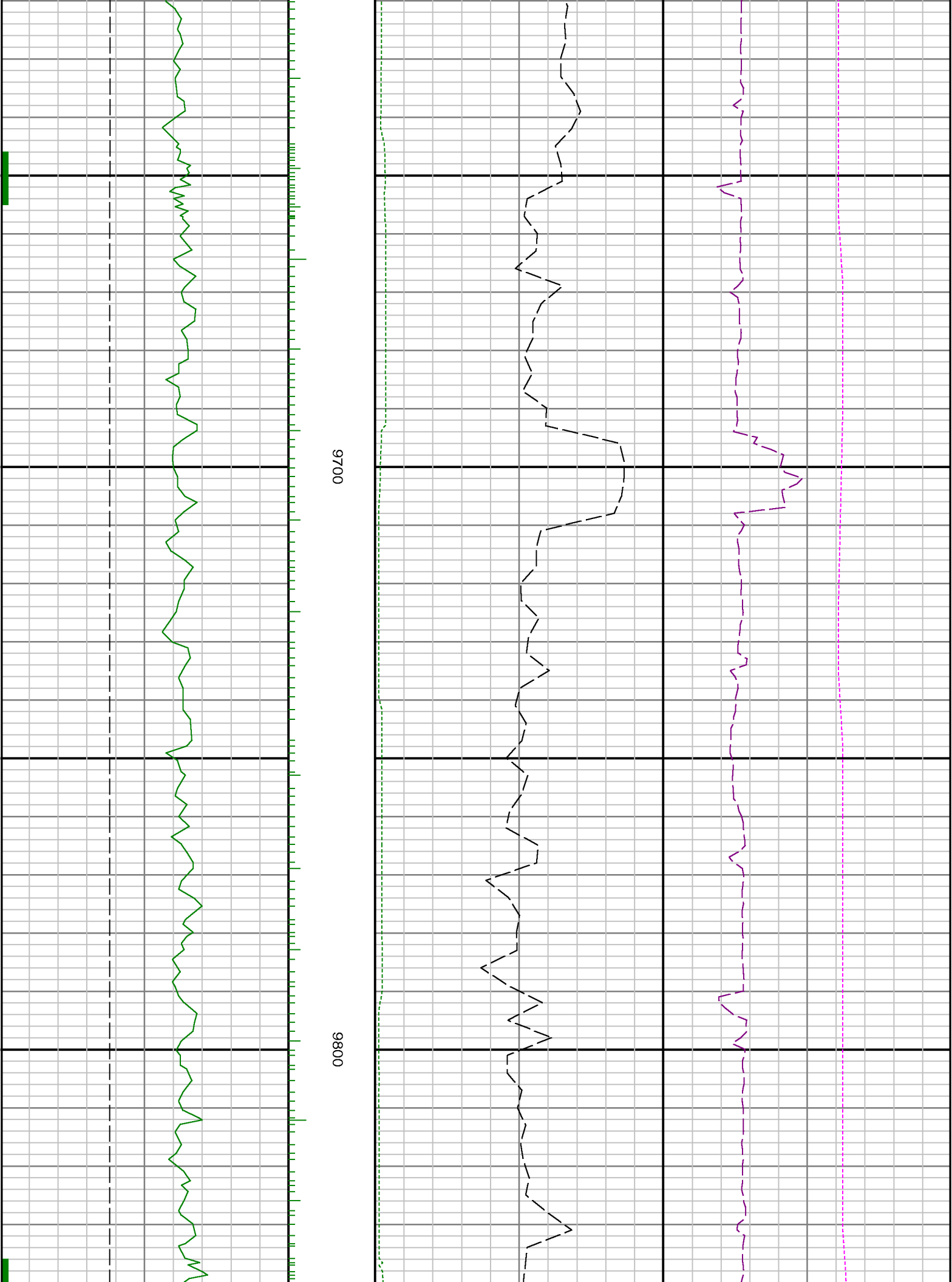


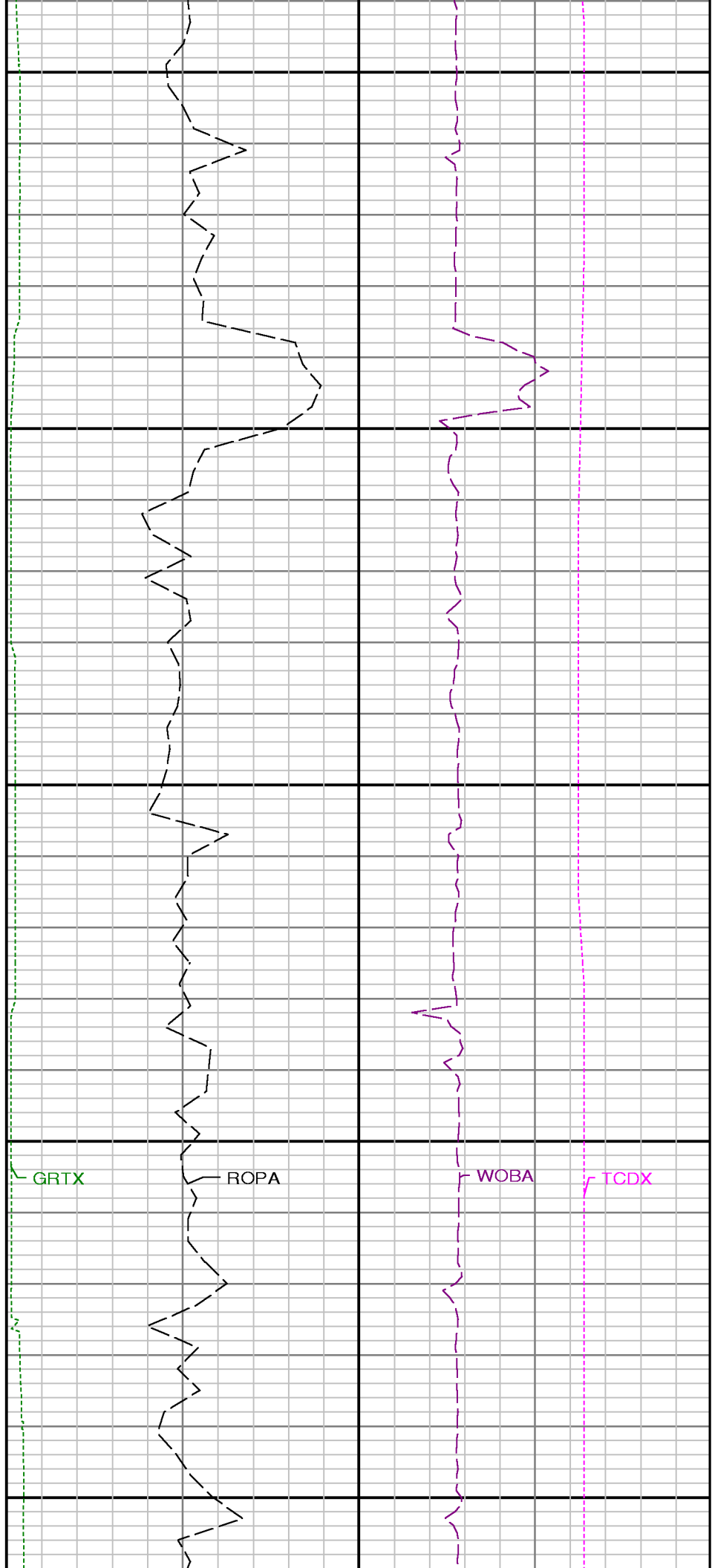
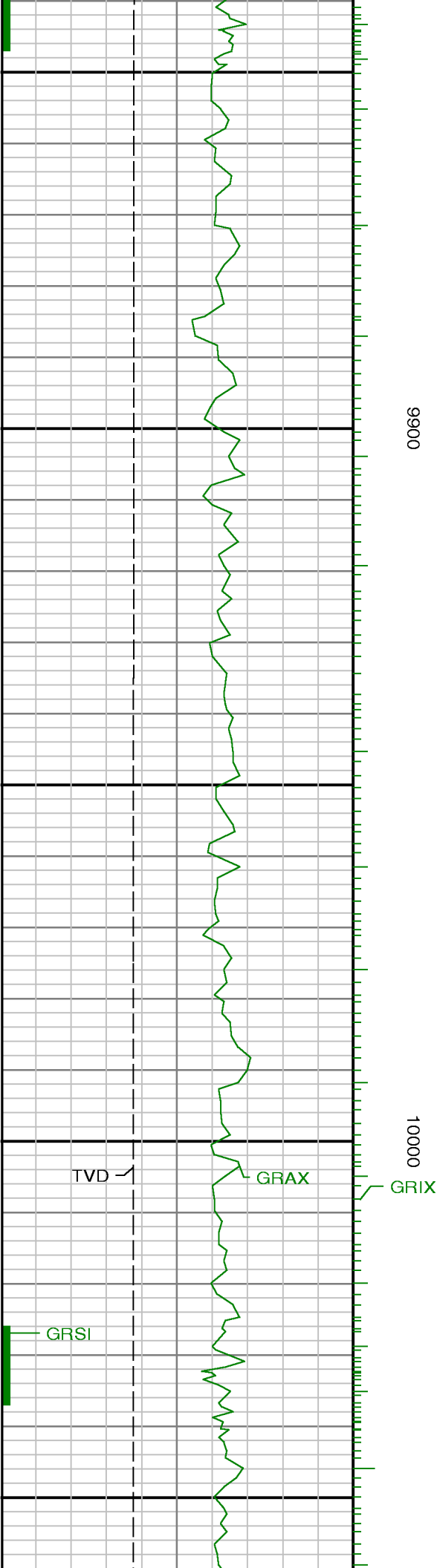
00

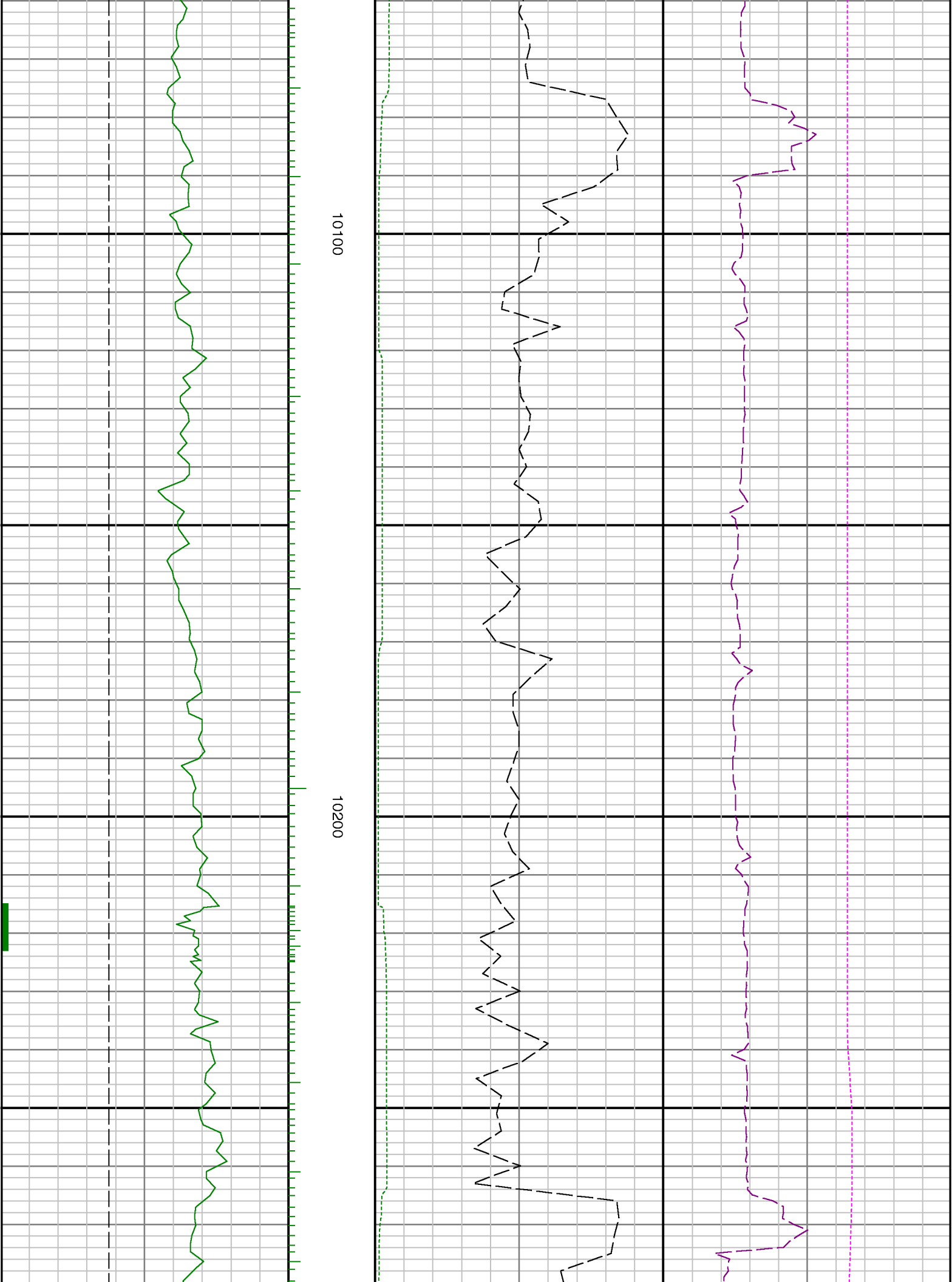
9500

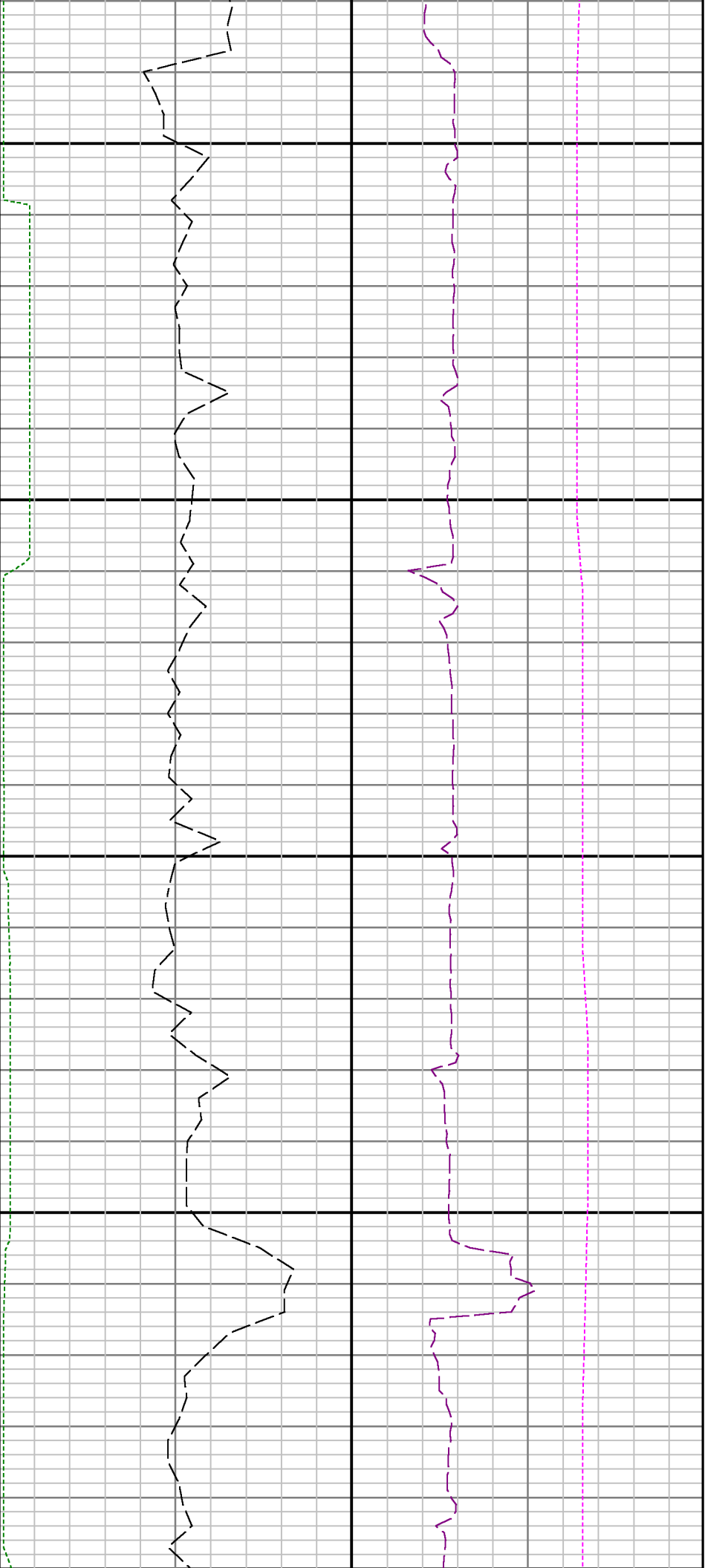
9600







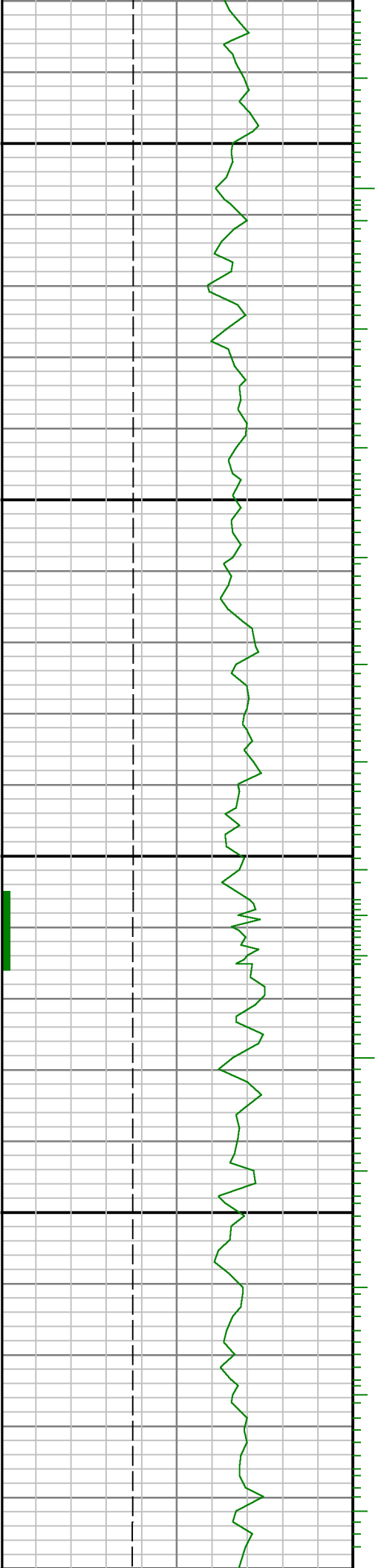


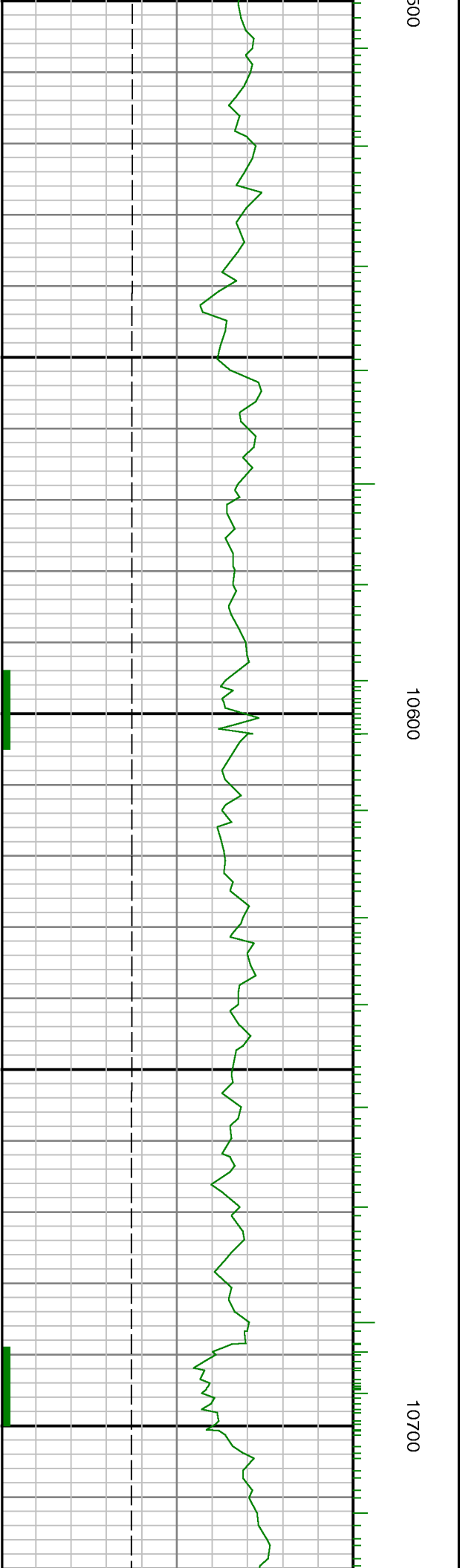
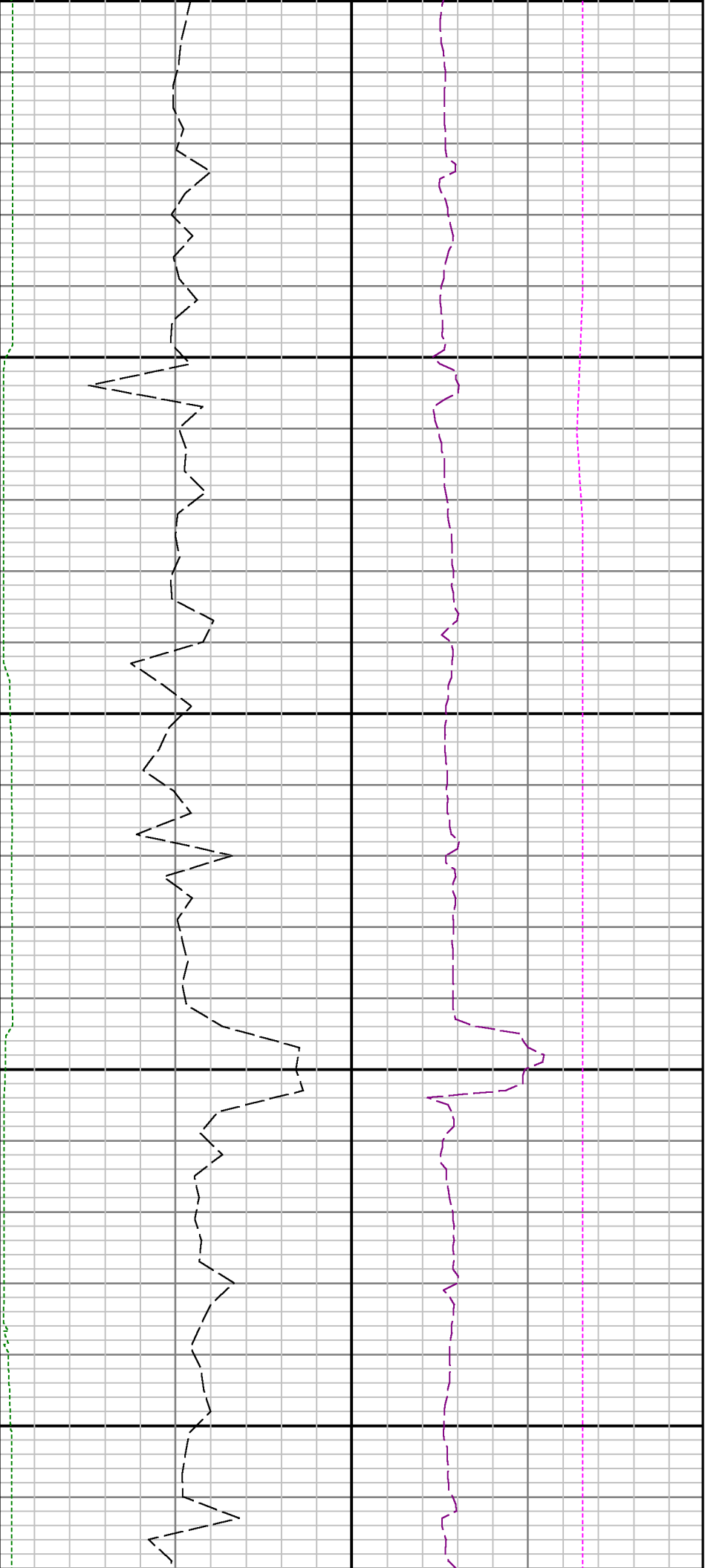


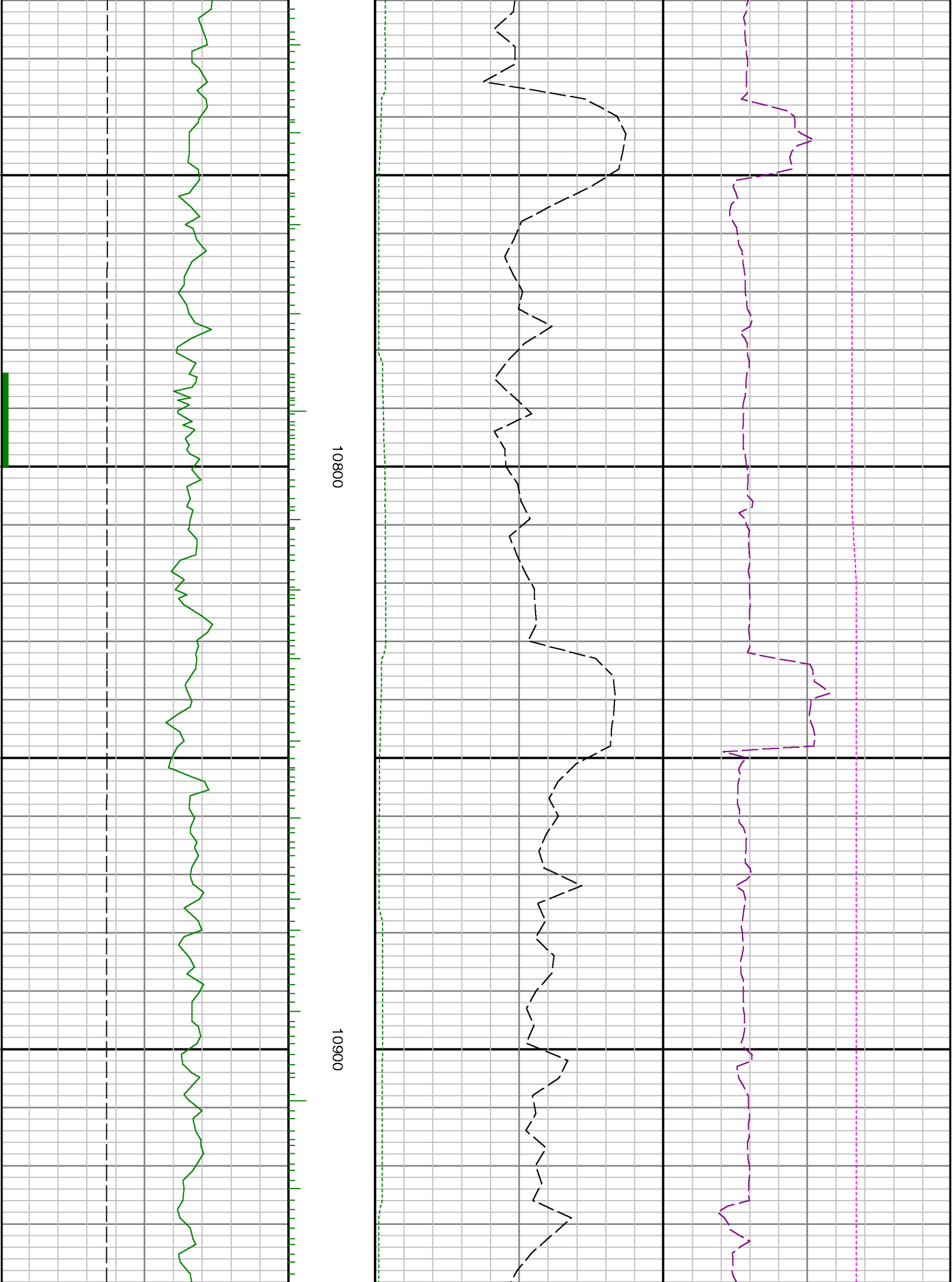
10300

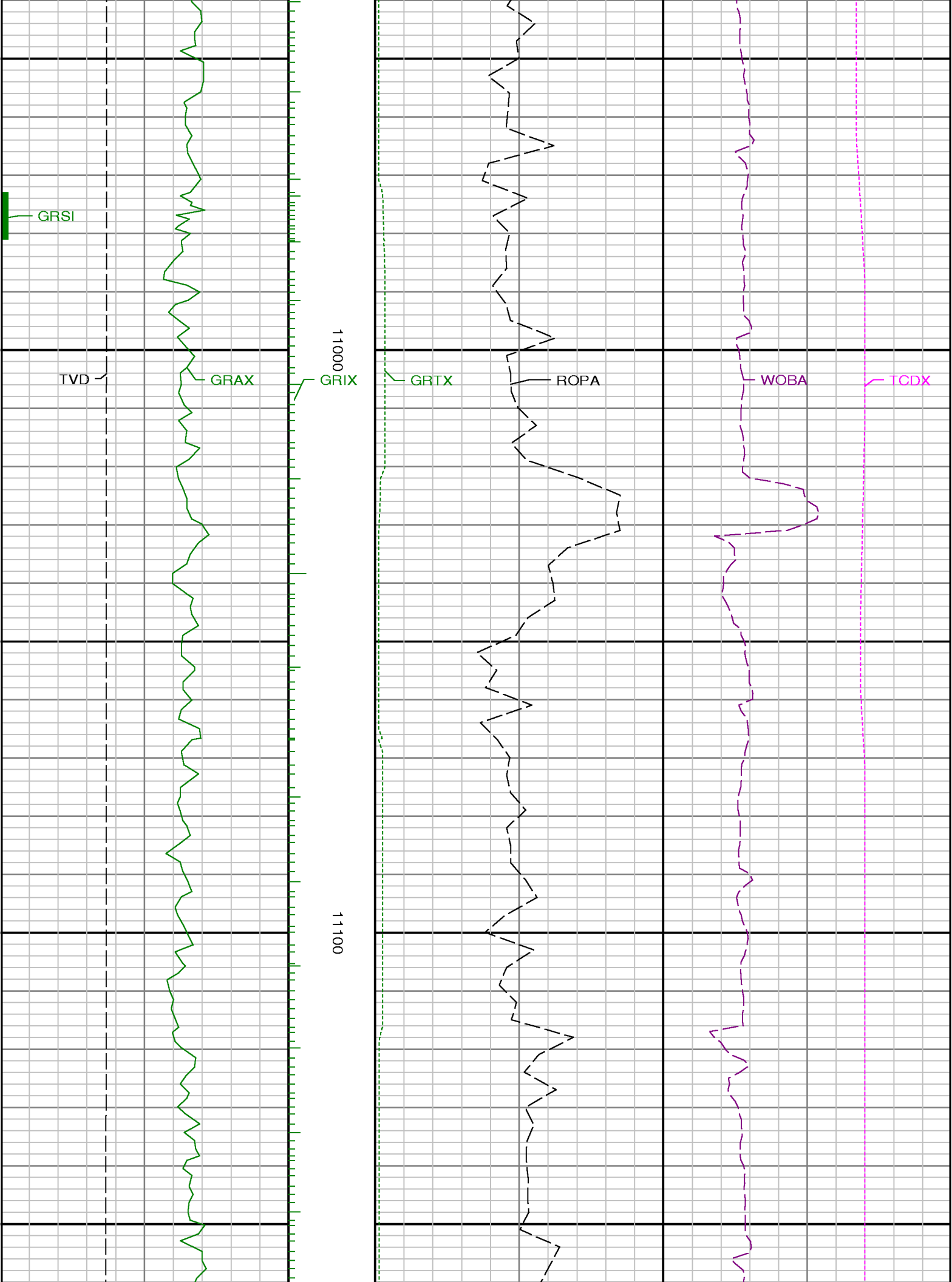
10400

10500





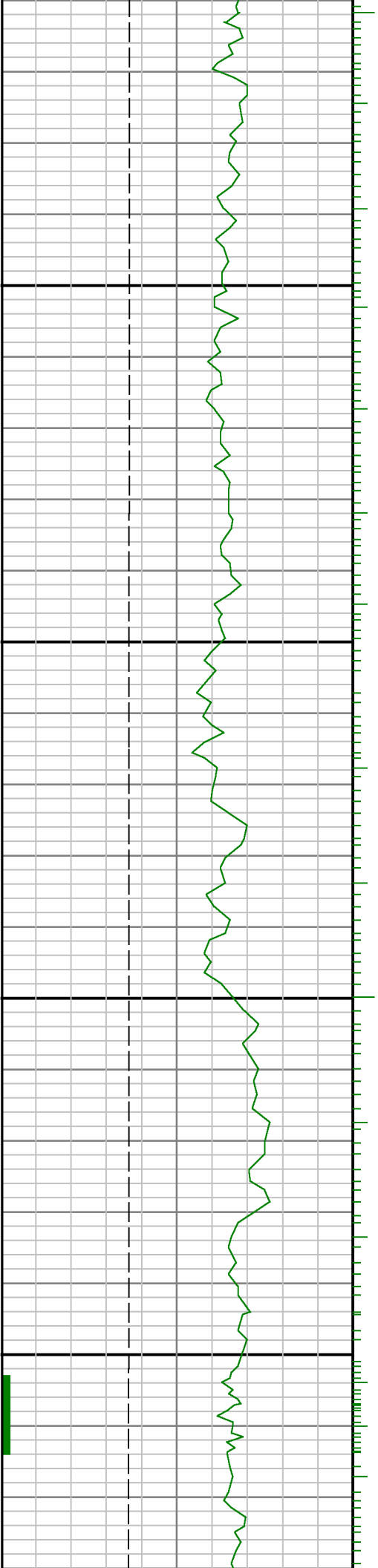


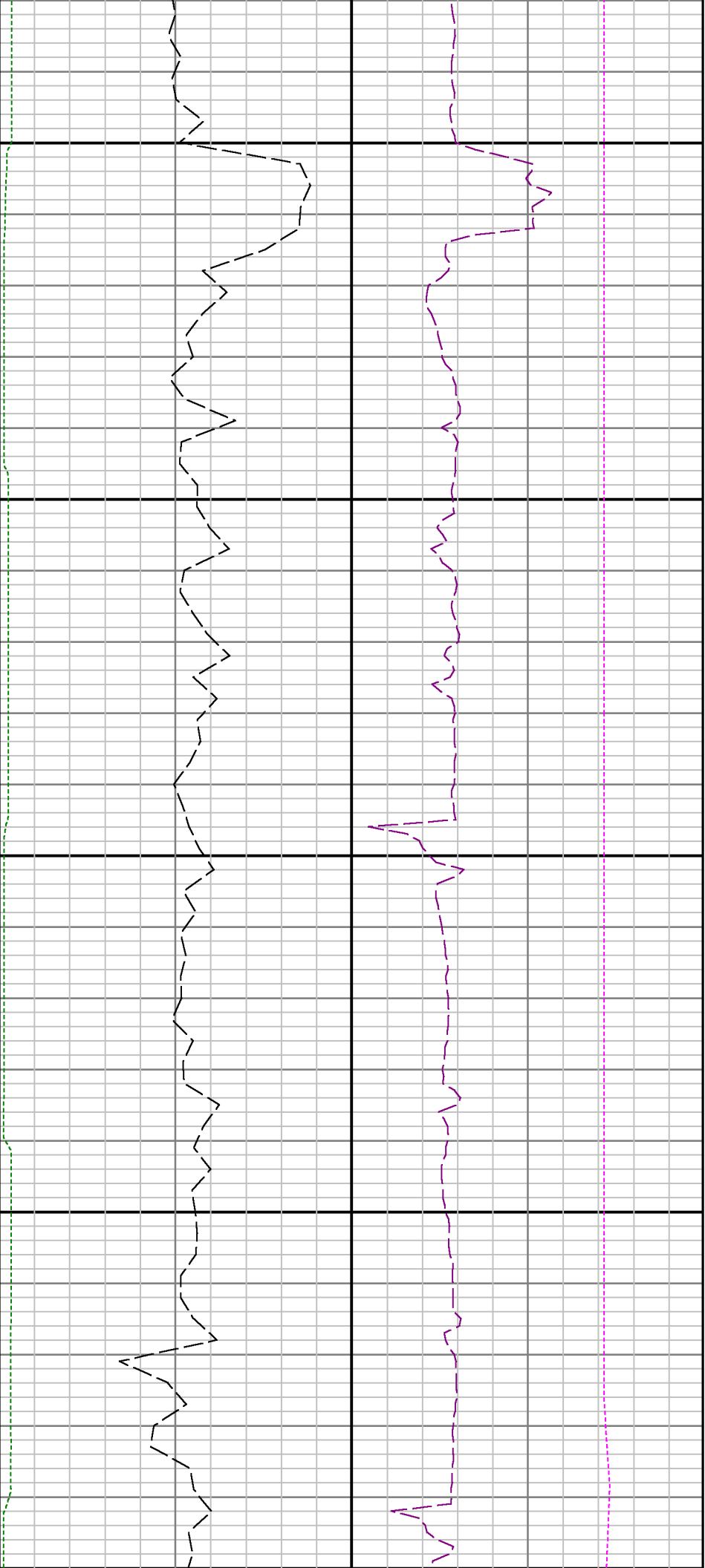




11200

11300

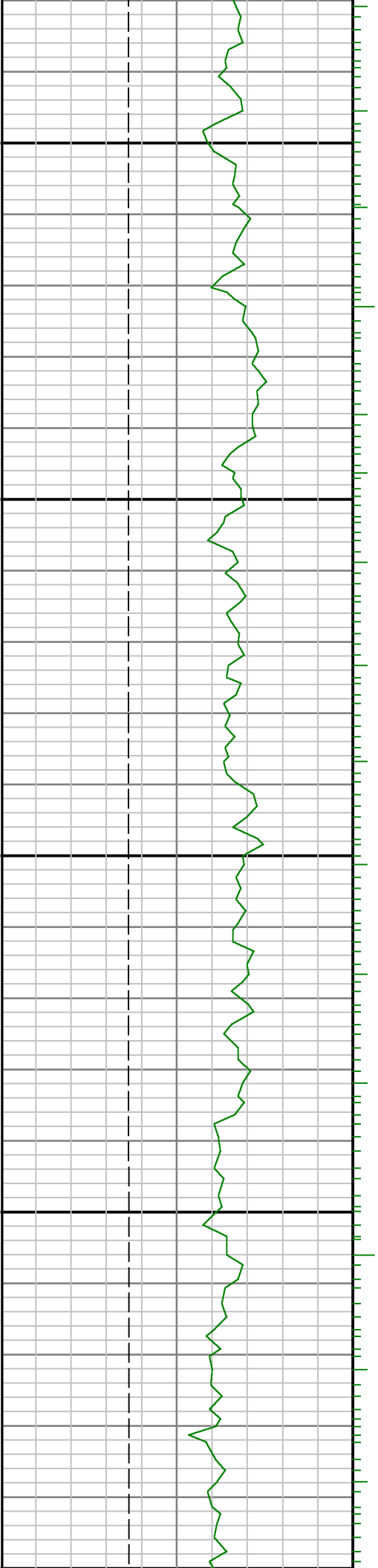


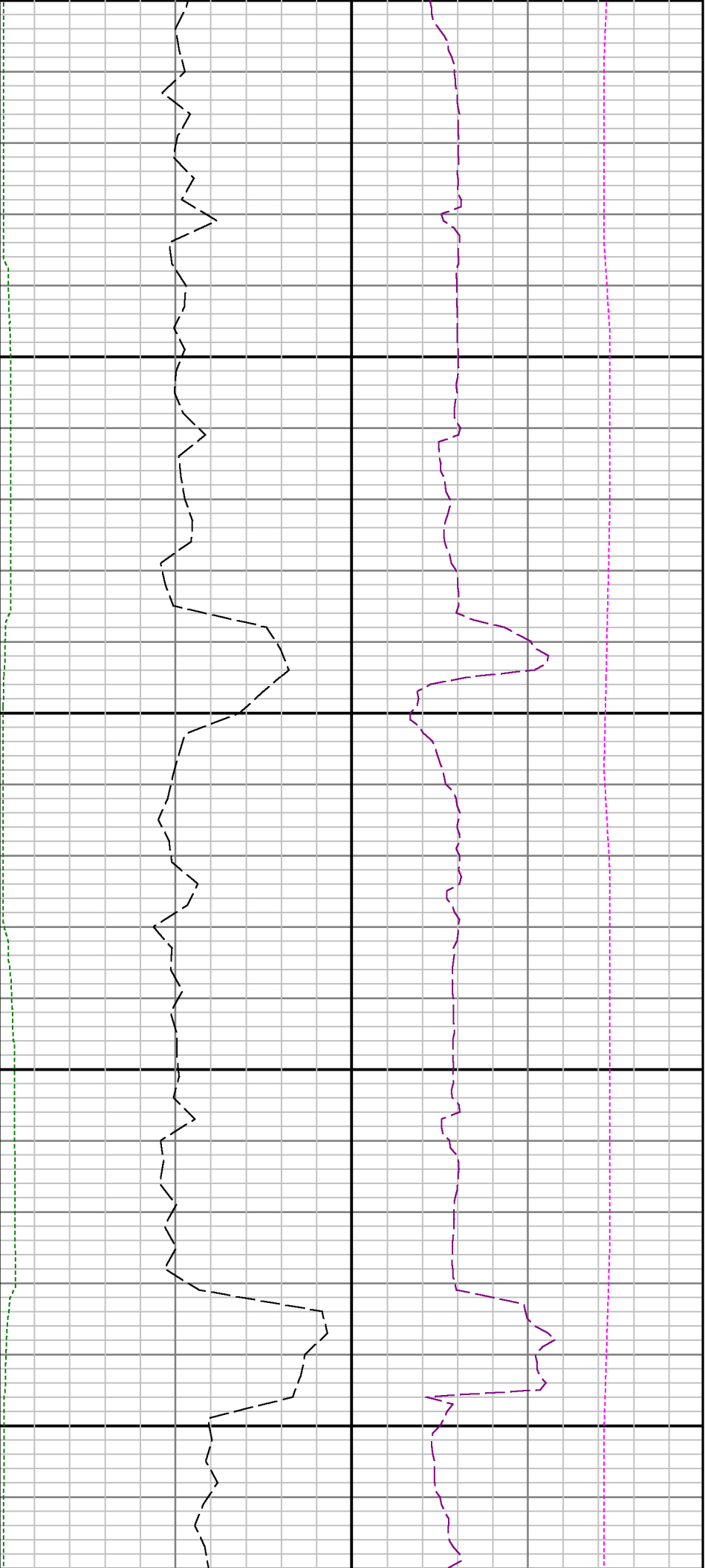


11400

11500

11600

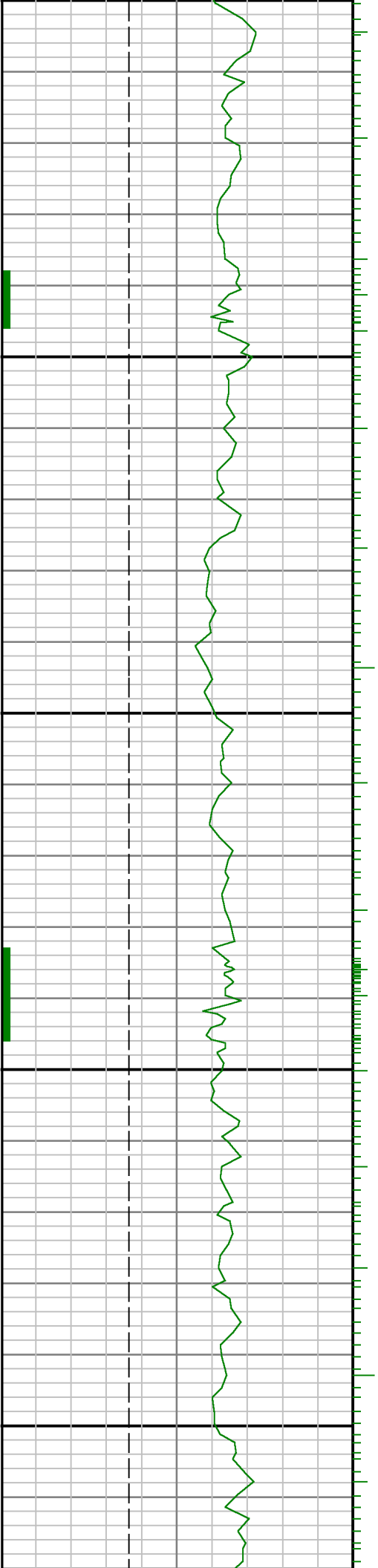


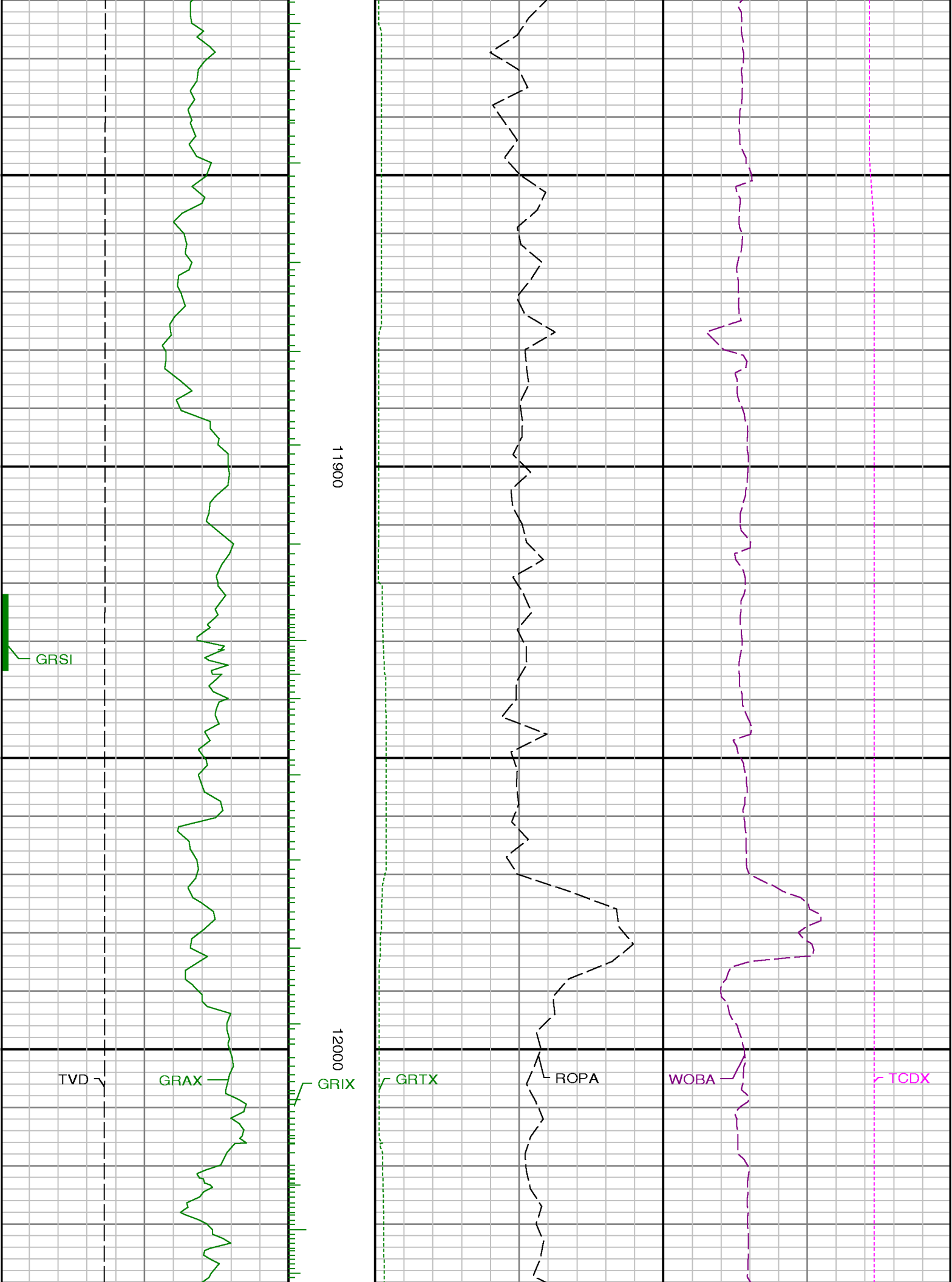


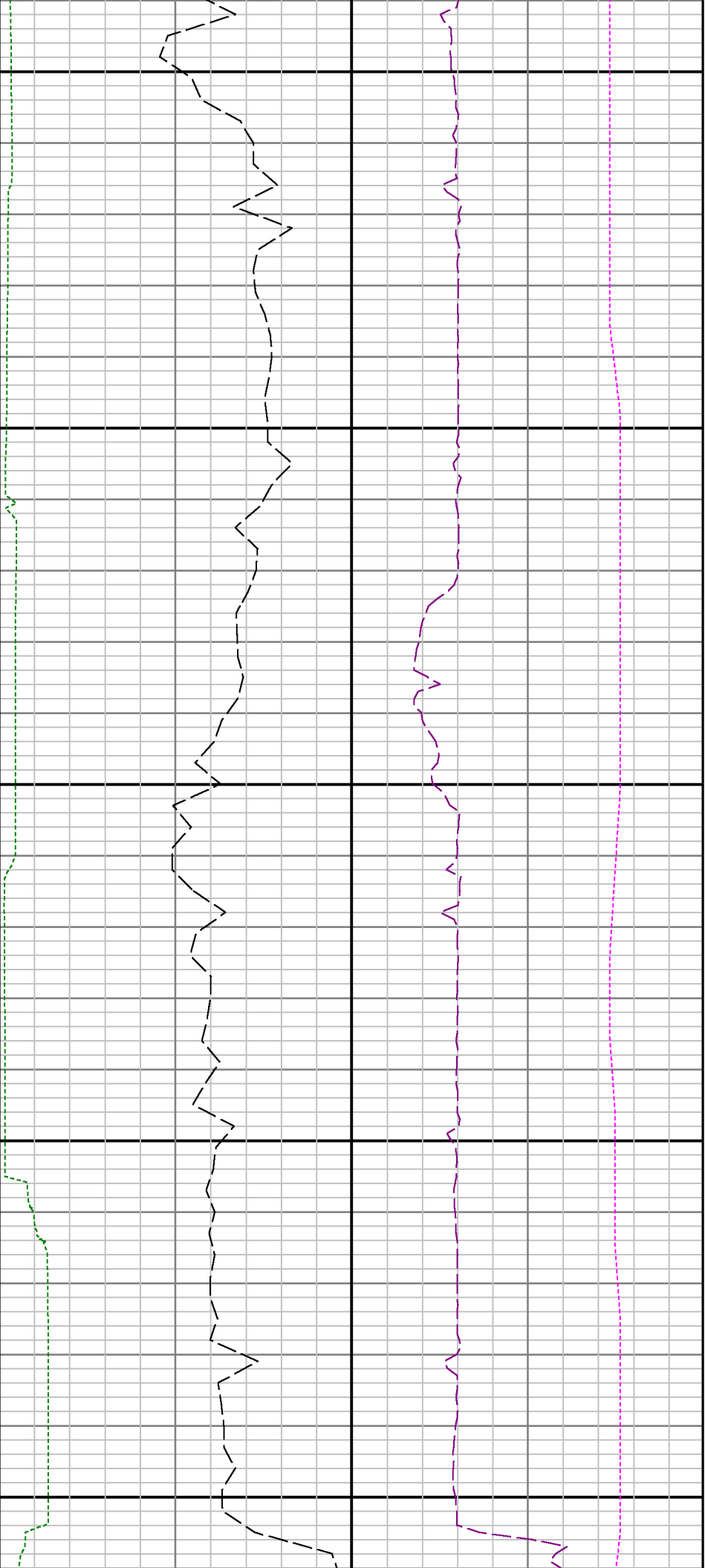
11600

11700

11800

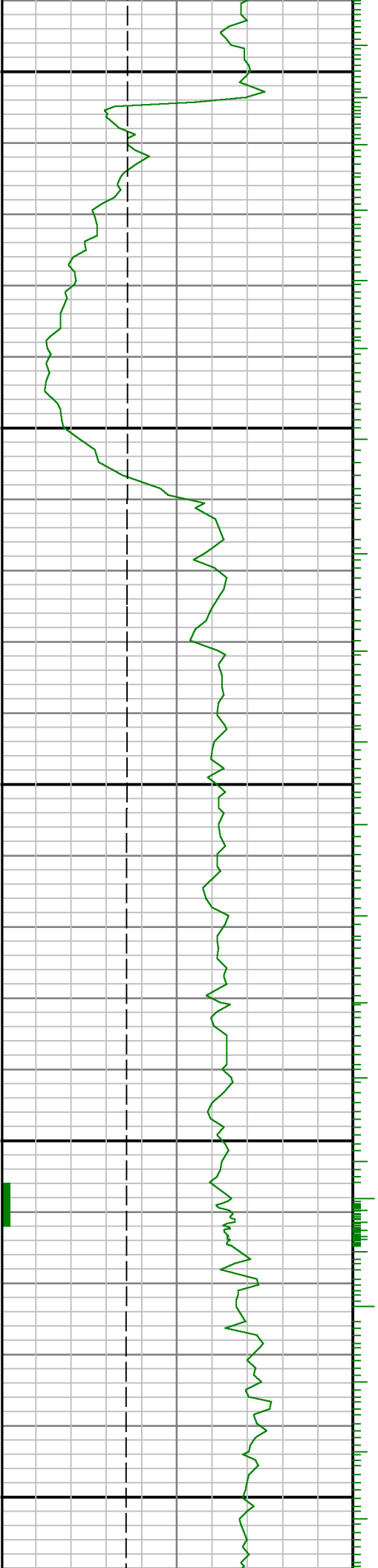






12100

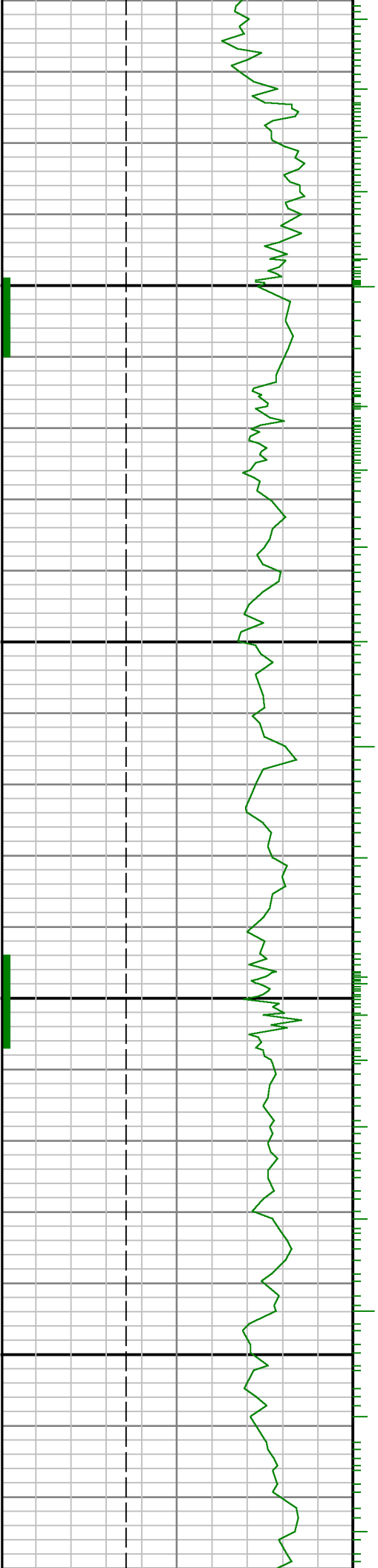
12200

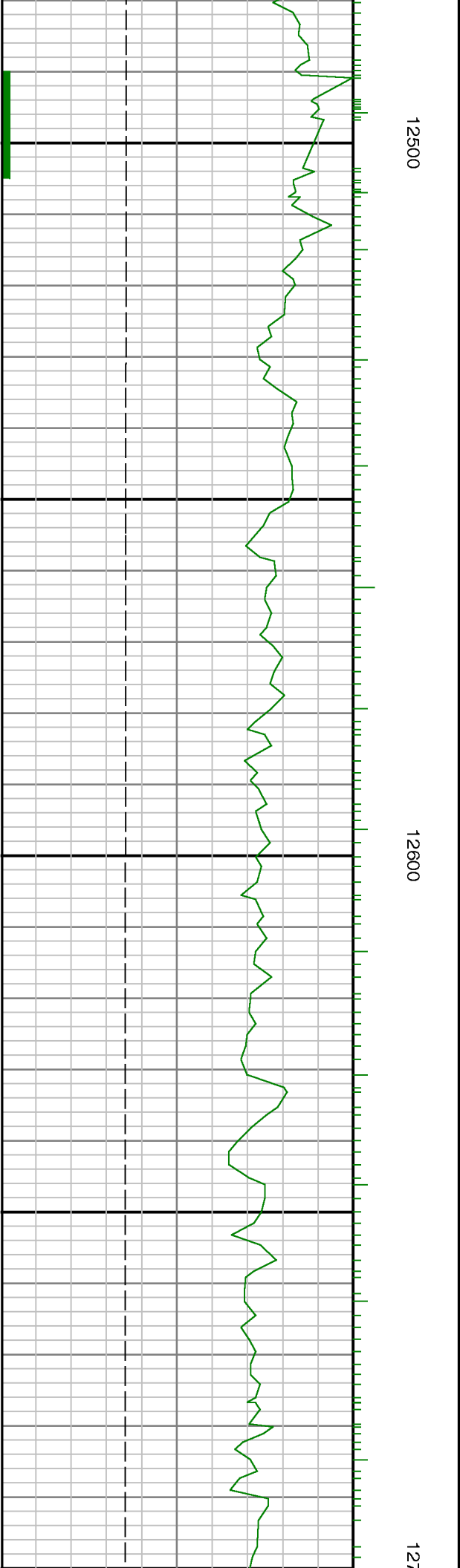
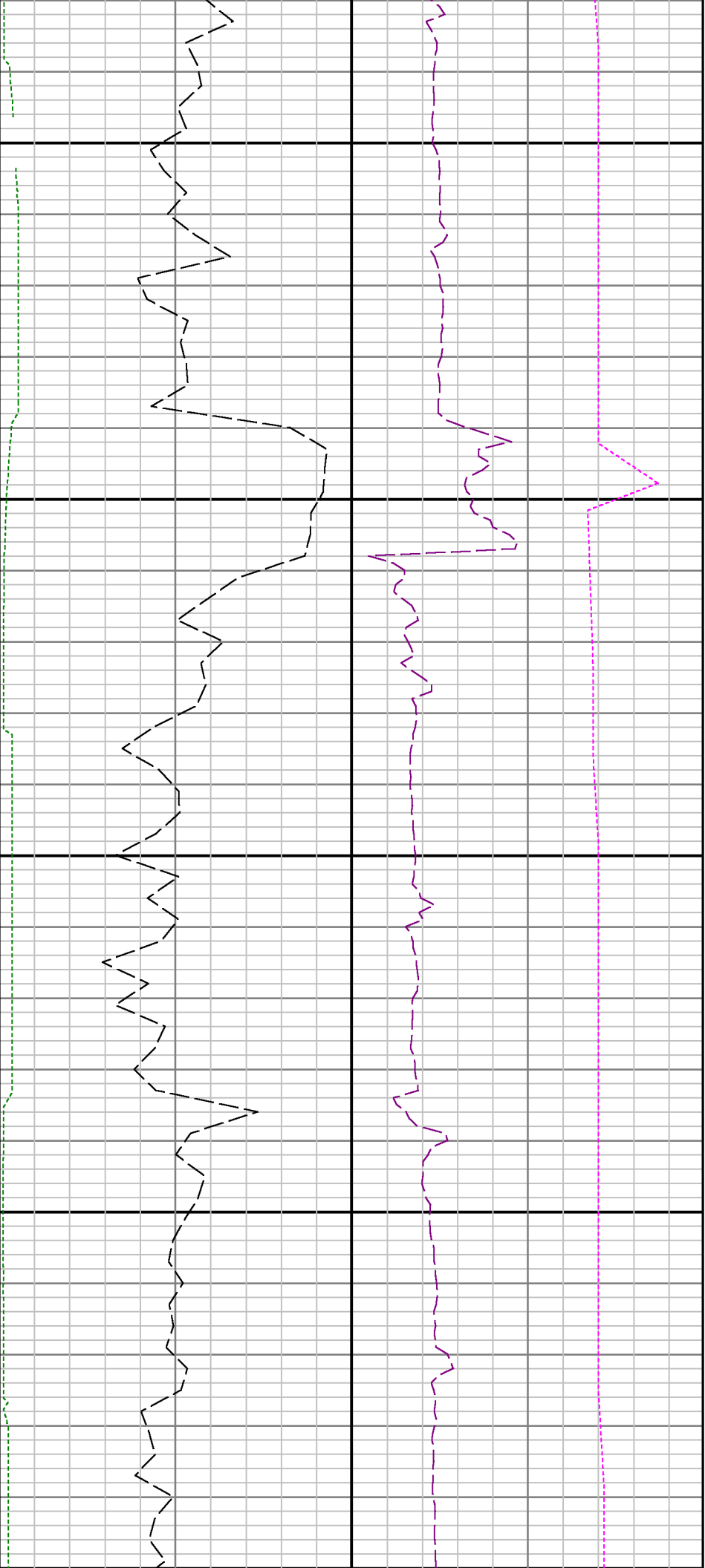


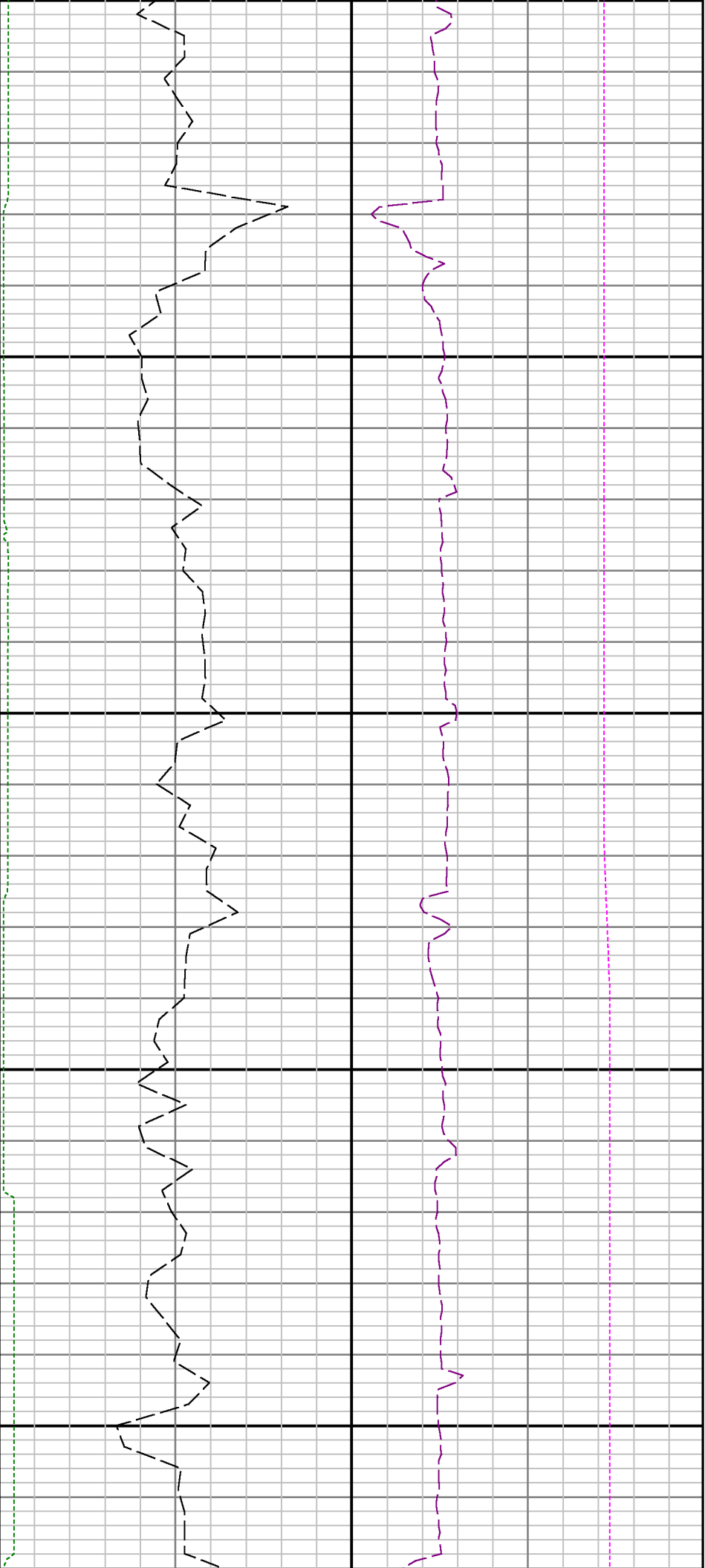


Run 1 < > Run 2
12300

12400







700

12800

12900

