



Drilling Dynamics
Gamma Ray

Scale:

1:240 MD

Company: Anadarko

Well: Carter 14N-33HZ

Depth Reference:

Field: Weld County

Driller's Depth

County: Weld

State: United States

Status:

Final Print

Surface Location:

Latitude: 40°46'41.83"N

Longitude:

Longitude: 106°41'06.61"W

Other Services:

API No: 05-123-41552-00

Job ID: 7446913

SEC: 33

TWN: 2N

RGE: 66W

Permanent Datum (P.D.): Ground Level

Elevation: 4975.00 ft

KB: 0.00 ft

Log Measured From: Rig Floor

Above P.D.

DF: 4991.00 ft
GL: 4975.00 ft

Dates Interval Logged

Date From: 2015-09-03 Top: (ft) 6845.00

Date To: 2015-09-04 Bottom: (ft) 12709.00

Spud Date: 2015-09-03

Magnetic Field Reference

Azi Reference North: True Dip Angle: (deg) 66.71

Total Magnetic Field Strength: (nT) 52765

Borehole Record

Casing Record

Hole Size (in) From (ft) To (ft)

7.875 1861.00 12709.00

Size (in) Weight (lb/ft) From (ft) To (ft)

9.625 36.00 16.00 1851.00

Mud Record

Deviation Record

Type From (ft) To (ft)

Oil Based Mud 1861.00 12709.00

Hole Size (in) Interval (ft) Inc | Az (Start) Inc | Az (End)

7.875 10847.07 16.64 | 29.30 91.94 | 184.21

Acquisition System

Software Version

Other

Baker Hughes Cadence

Prior Studio

2.0.7102.1
2.0.7102.1

Rig: Xtreme 23

Contractor: Xtreme Coil Drilling Corp

District: RMD

Unit: D&E

"These interpretations and analyses ("Interpretations") are opinions provided by Baker Hughes Oilfield Operations, Inc ("Baker Hughes"), based upon industry practice, empirical relationships, assumptions and measurements, (many of which may be provided by the customer). The Interpretations are not infallible and may be subject to different opinions. Vjwu."Dcmgt"Jwijgu"fqgu"pqv"ycttcpv"vjgkt"ceewtce{."eqttgevpguu."qt"eqorngvgpguu."qt"vjcv"vjg"ewuvqogtøu"cpflqt"cp{"vjktf"rctv{øu"tgnkcpeg"qp"uwej"Kpvgtrtgv cvkqpu"yknn"cee qornkuj"cp{"rctvkewnct"tguwnvu0"Vjg"ewuvqogt"cuuwogu"hwnn" responsibility for the use of the Interpretations and for decisions based thereon and the customer agrees to release, defend and indemnify Baker Hughes, its parent, subsidiaries and affiliated or related entities, and subcontractors, together with its and their officers, directors, employees, agents and invitees against, any and all claims, losses, damages, or expenses sustained by the customer or any third party arising out of reliance upon or use of the Interpretations, without regard to the cause(s) thereof, including without limitation any form of negligence on the

part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and

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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	2	7.875	PDC	3.50	Steerable	6845.00	12663.27	6890.00	12709.00	2015-09-04 01:44	2015-09-05 08:09	40.38

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Hans Cary	2015-09-02	2015-09-05	Matthew Delmore	2015-09-02	2015-09-05	Sumanth Belawadi	2015-09-02	2015-09-05
Will Drake	2015-09-03	2015-09-05						

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2015-09-04 06:51	1	7549.51	Oil Based Mud	9.5	51	0.0	6.0	59.3/29.5	Active Pit	66000	0.00
2015-09-05 06:51	1	12475.76	Oil Based Mud	9.2	48	0.0	5.0	61.0/29.3	Active Pit	63000	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	NaviGamma	11912316	Gamma (single)	13.82	44.80	6.770	3.250
1	NaviGamma	11912316	Directional (mag)	17.24	48.22	6.770	3.250
1	NaviGamma	11912316	VSS	17.24	48.22	6.770	3.250

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 and the unverified depths as supplied to Baker Hughes are being used to represent logging data.
- 2 Baker Hughes Run 1 utilized a 6 1/2 inch Navitrac (Directional) tool behind an 7 7/8 inch bit and steerable assembly from 1861 to 6845 feet MD (1828.74 to 6695.89 feet TVD) and a Navigamma (Directional and Gamma) tool from 6845 feet to 12709 feet (6695.89 feet to 7329.58 feet TVD).
- 3 A sliding indicator is shown on the left side of the track 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.

Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	12708.00	7.875	1	The interval between 12659 to 12709 feet (7331.27 to 7329.58 feet TVD) has no GRAX, GRIX, GRTX values due to Gamma sensor offset to bit after TD.

Curve Mnemonics

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



Company

Well

Interval

Created

Anadarko

Carter 14N-33HZ

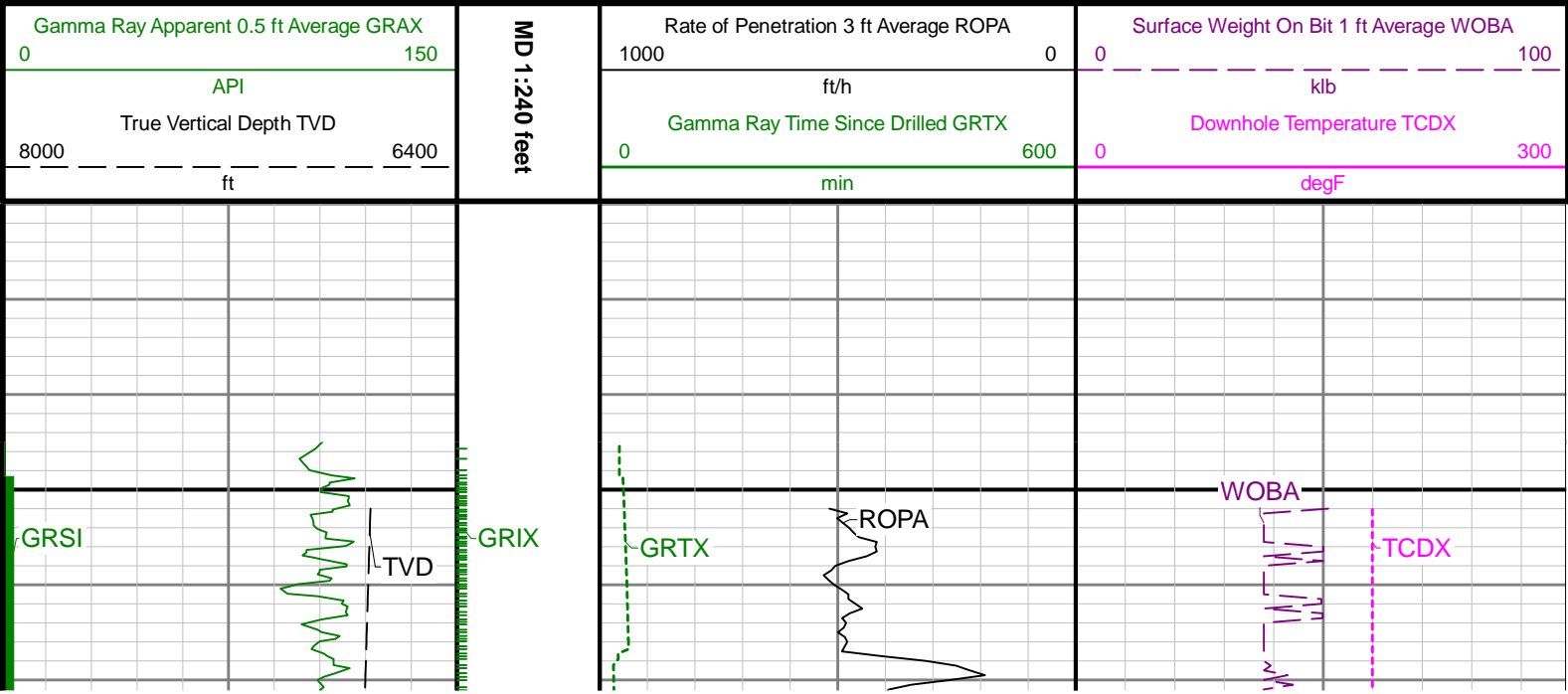
Date From: 2015-09-03 18:00

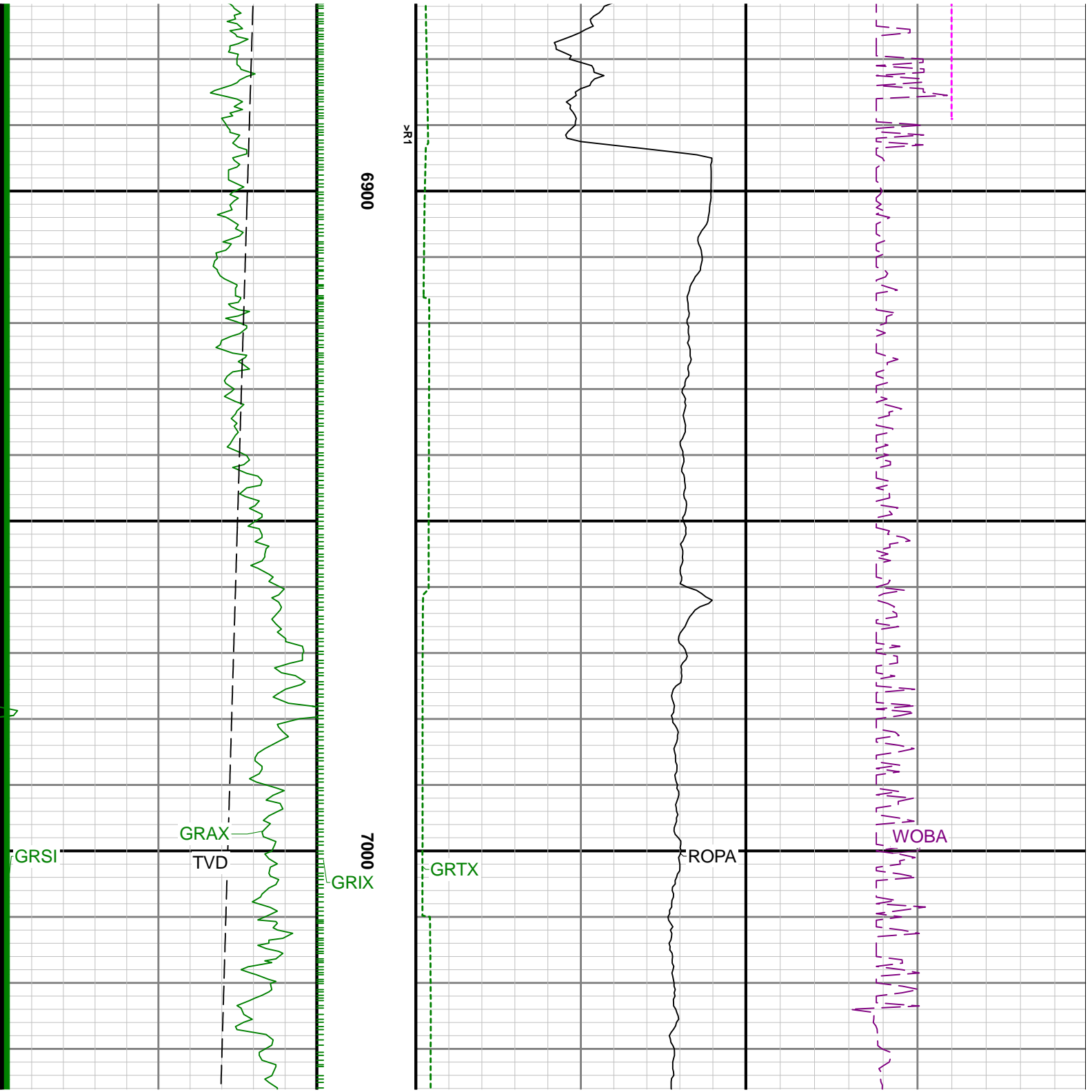
Date To: 2015-09-04 21:55

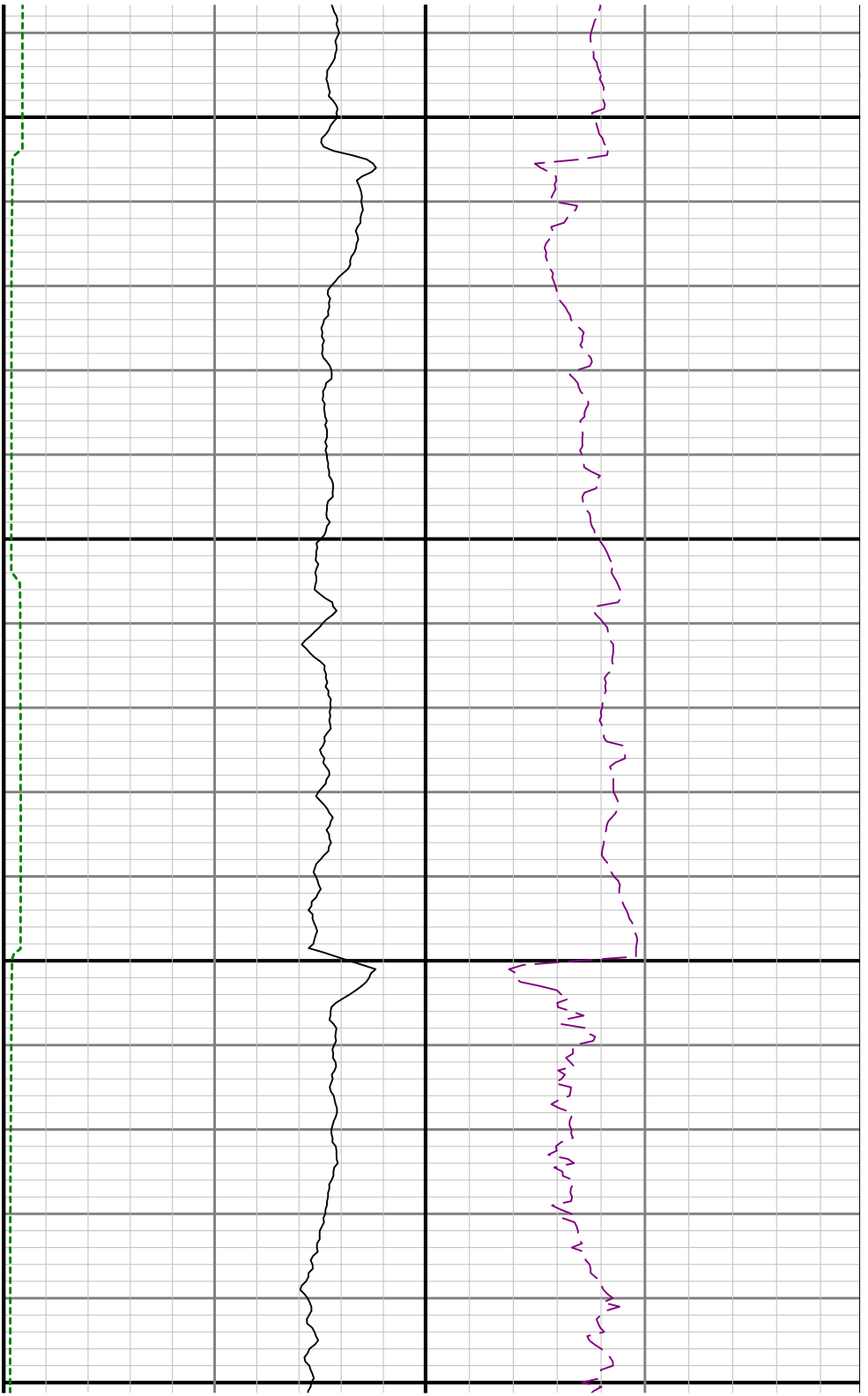
2015-09-05 08:52

Top: 6845.00

Bottom: 12709.00

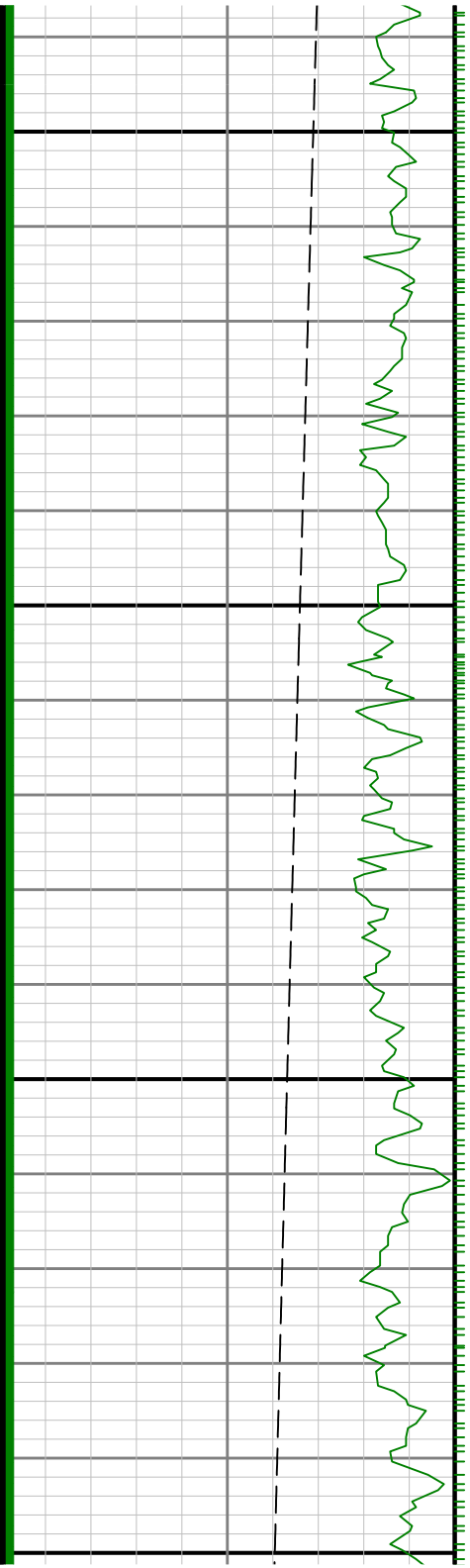


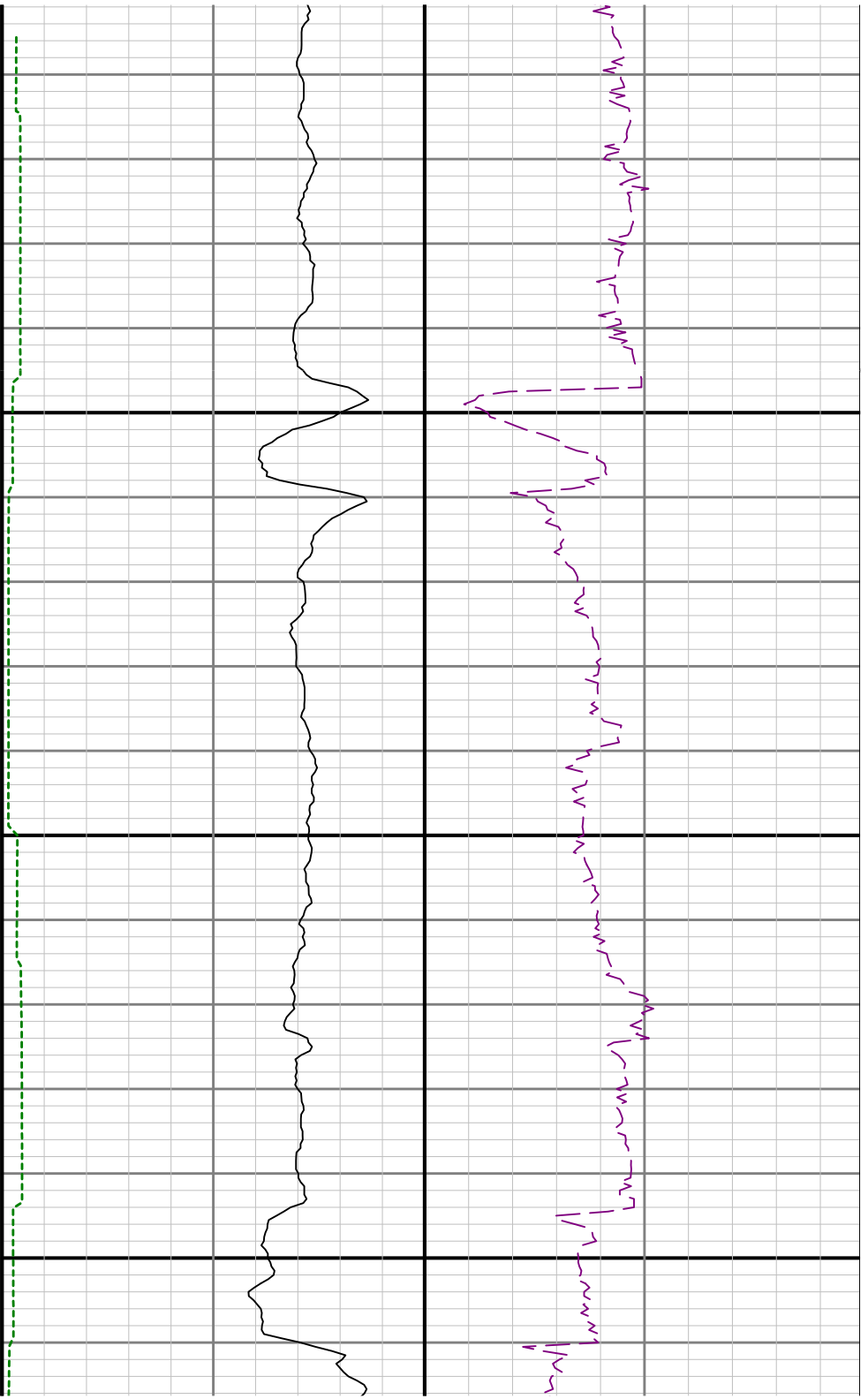




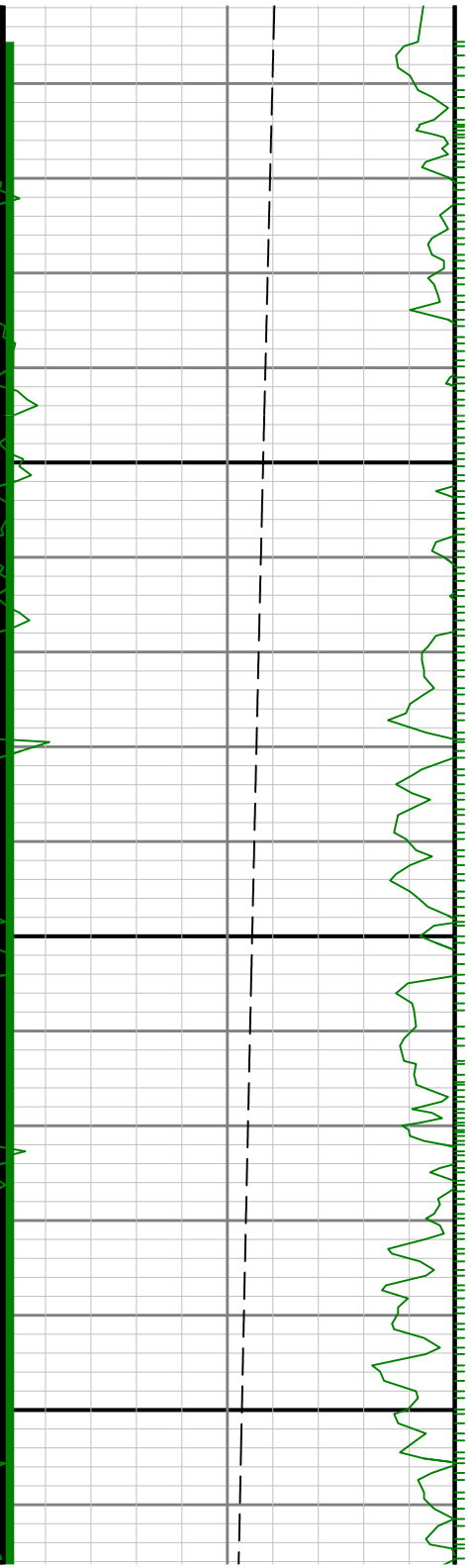
7100

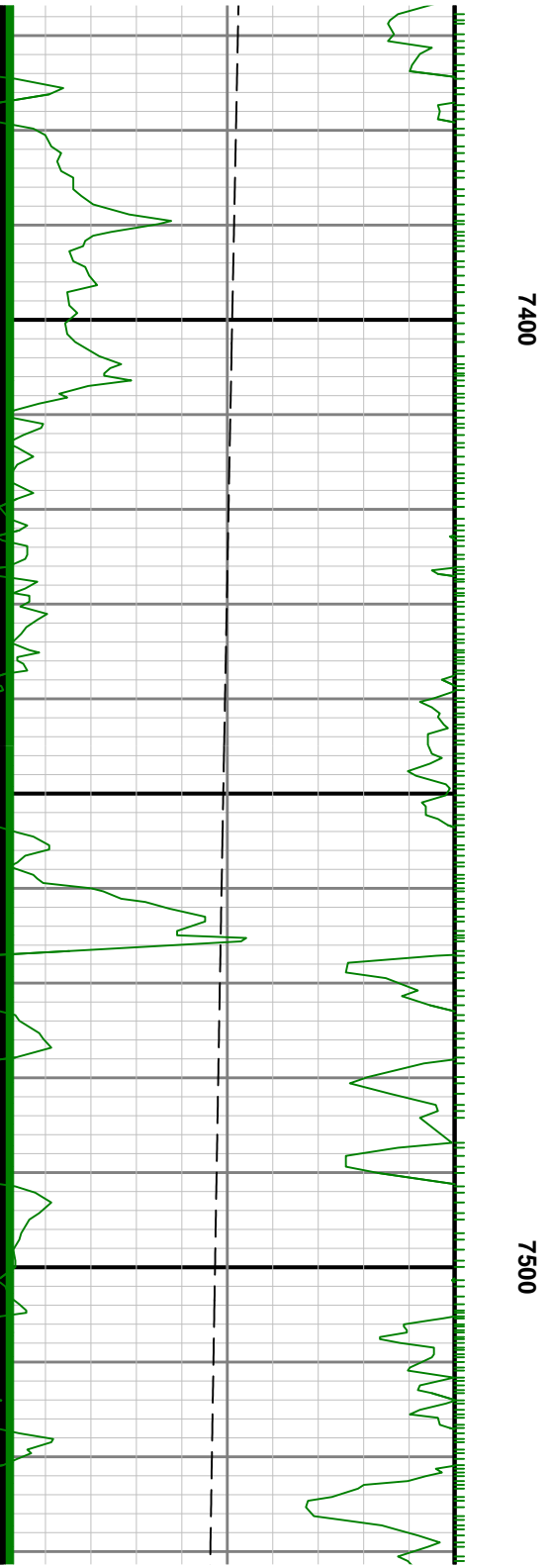
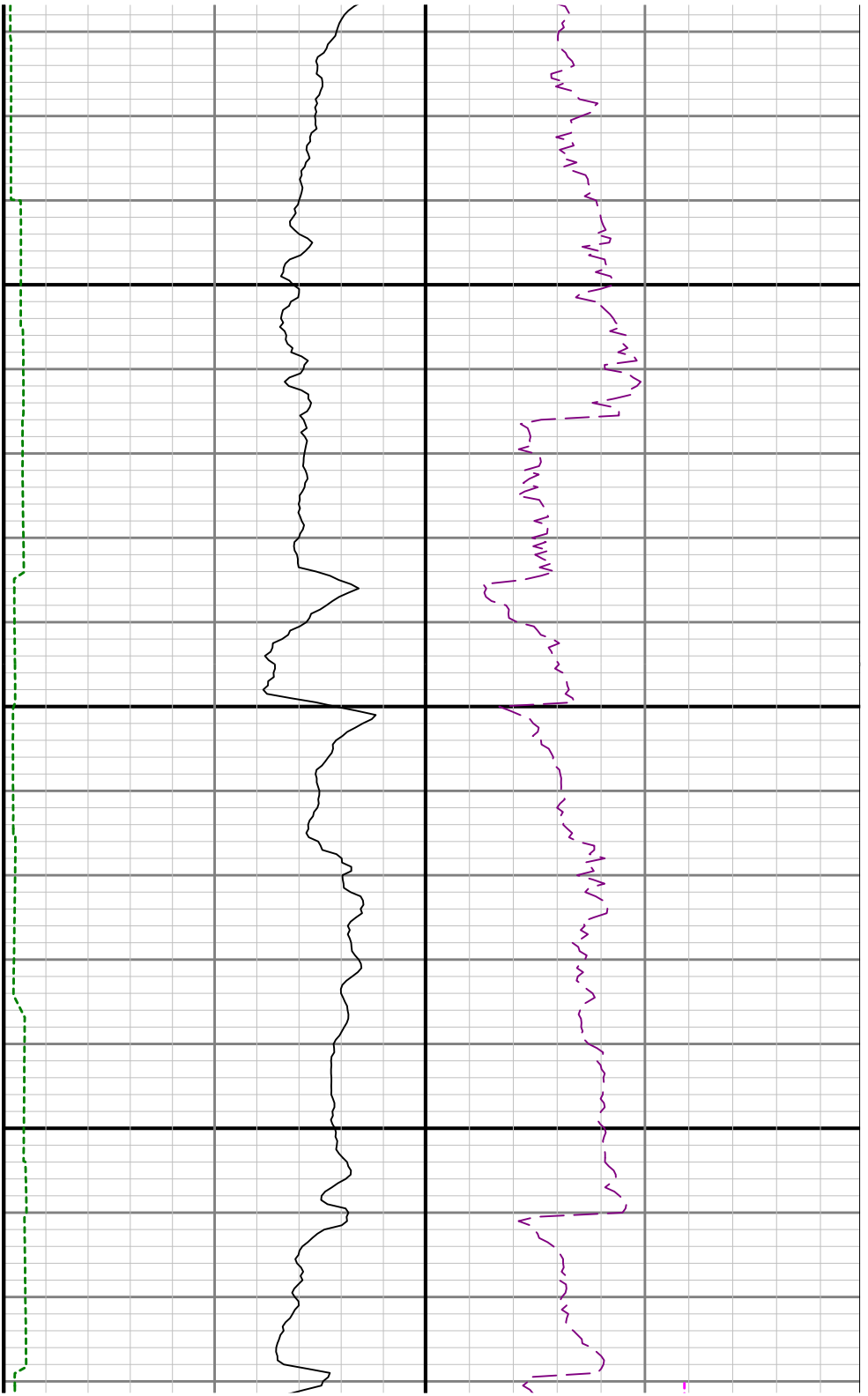
720

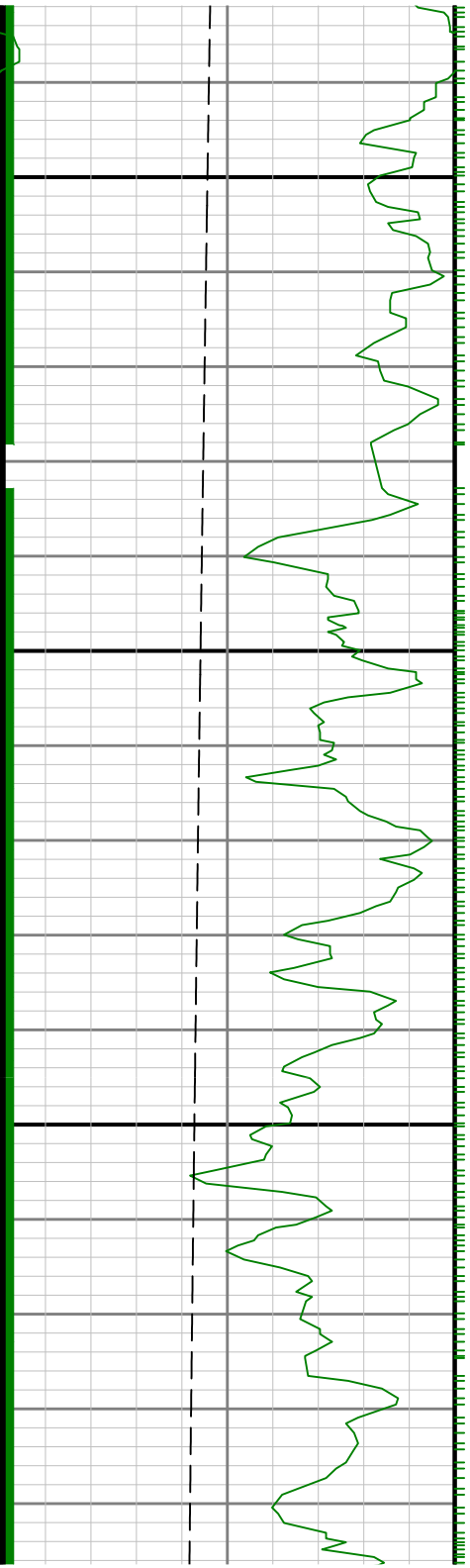




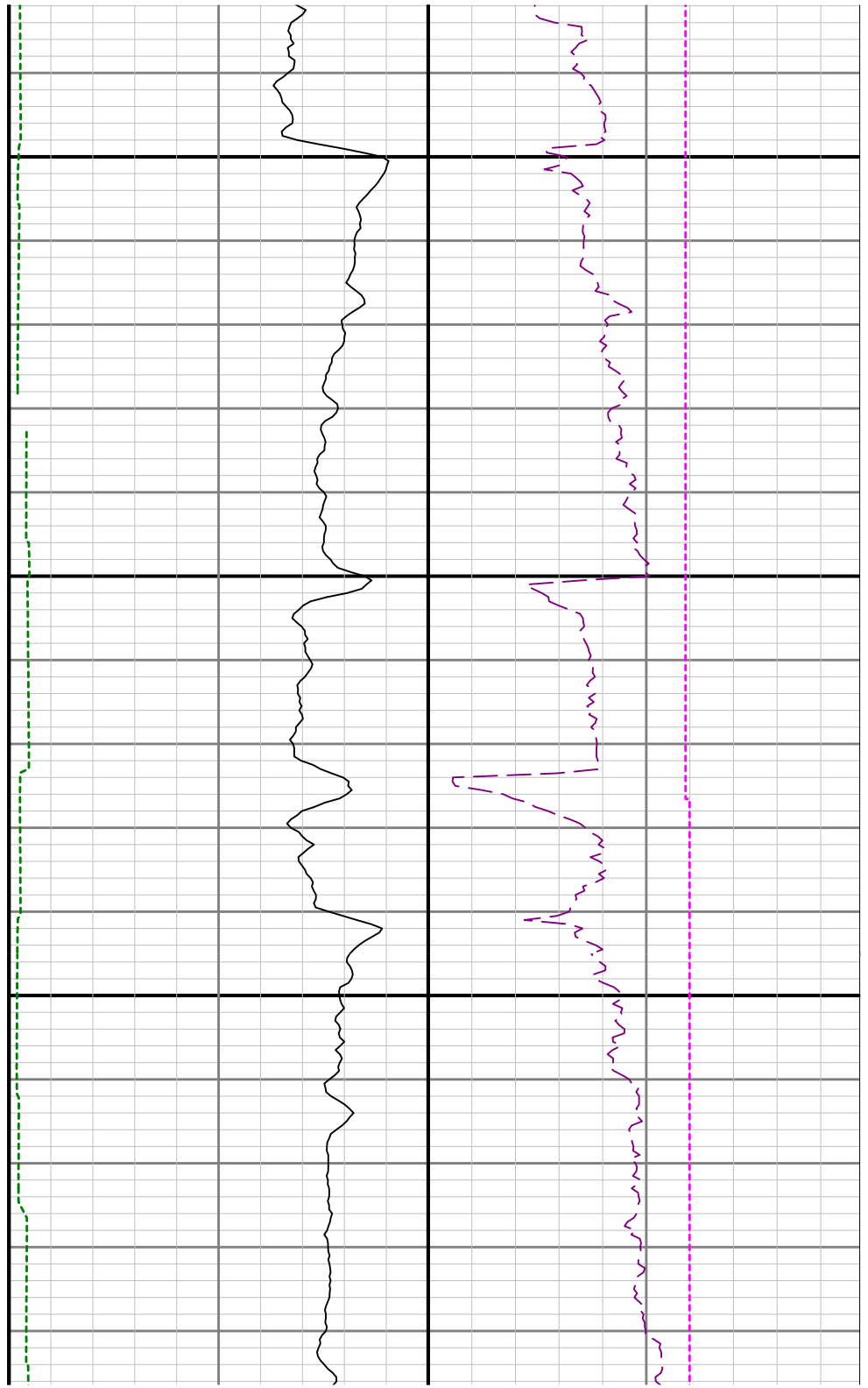
0 7300

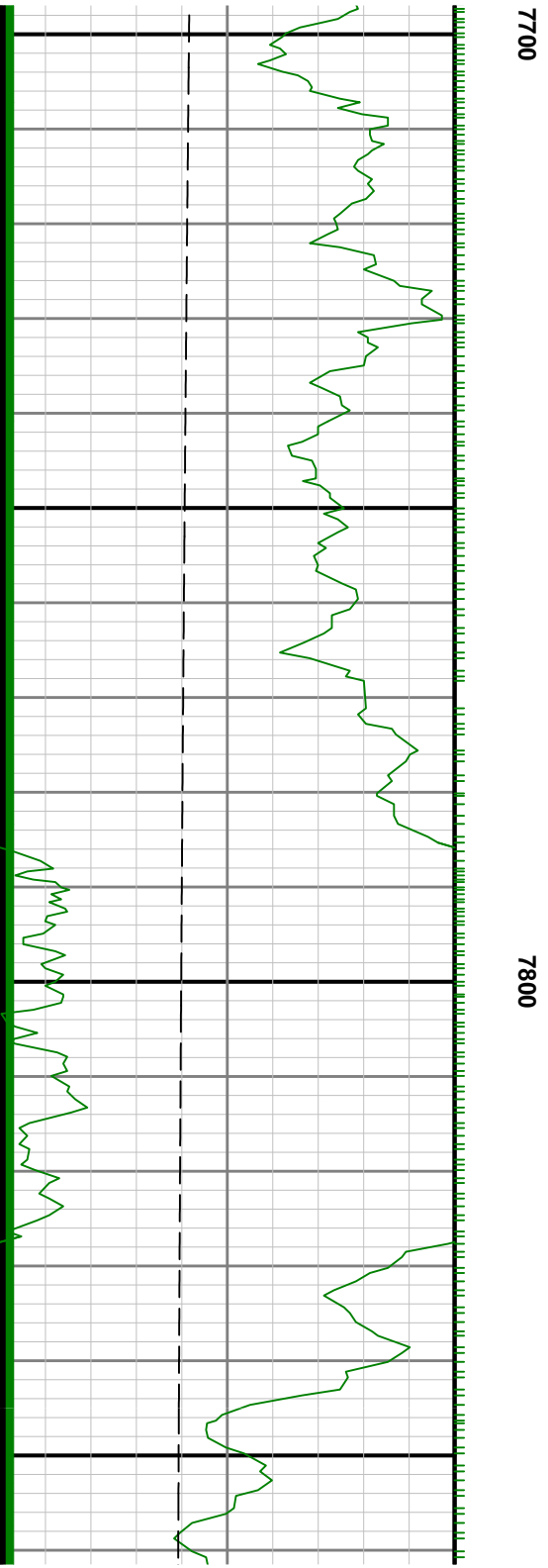
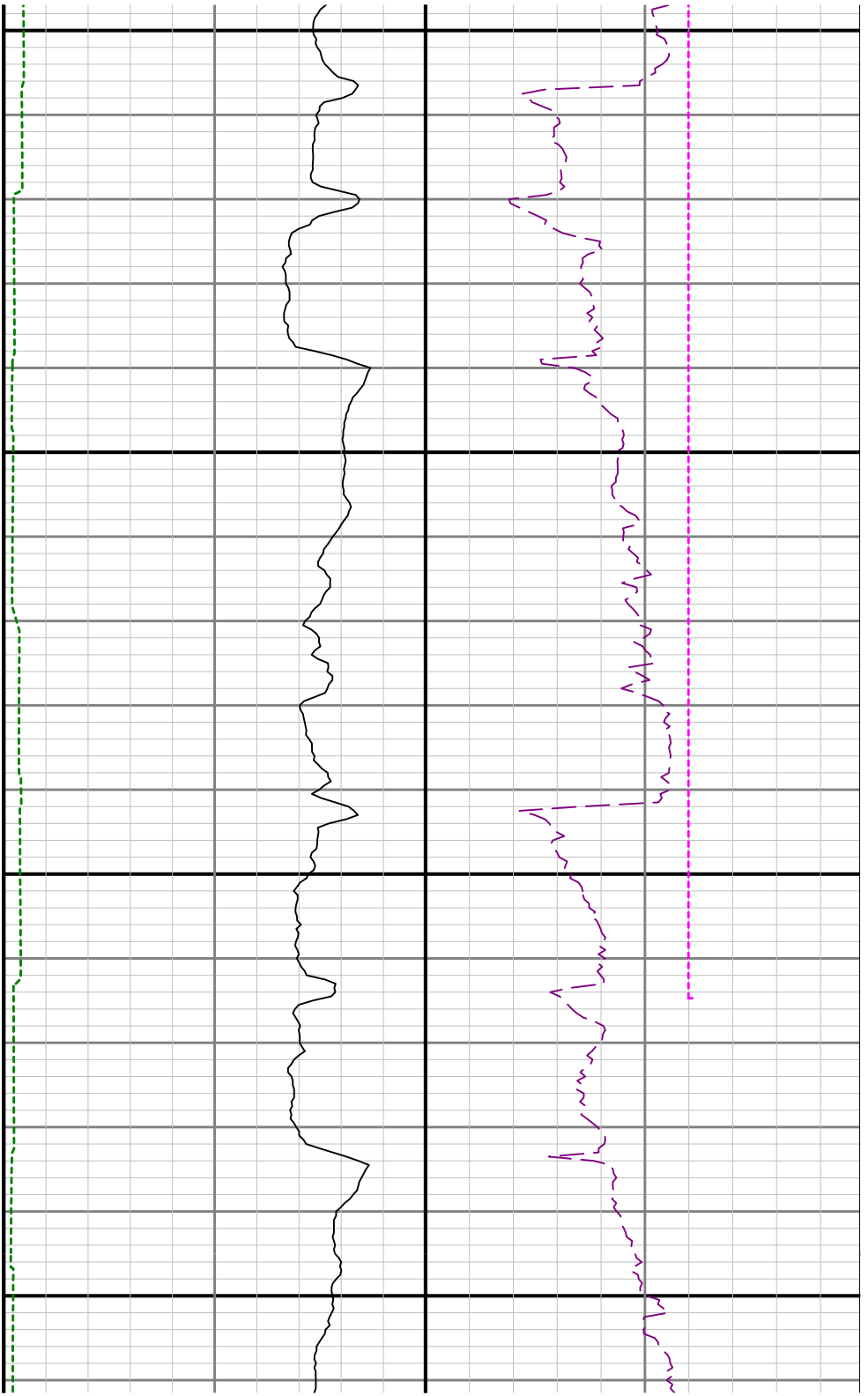


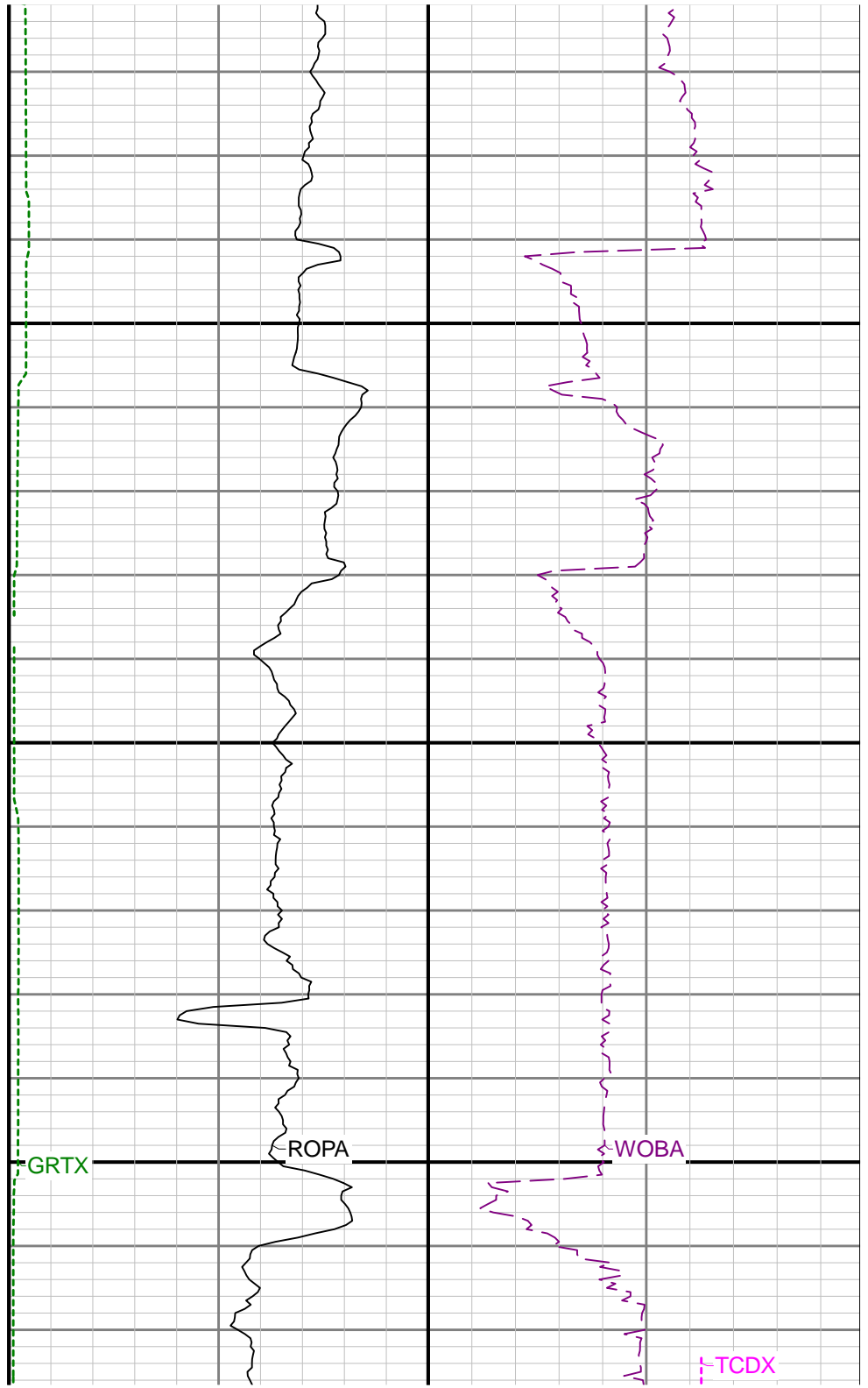
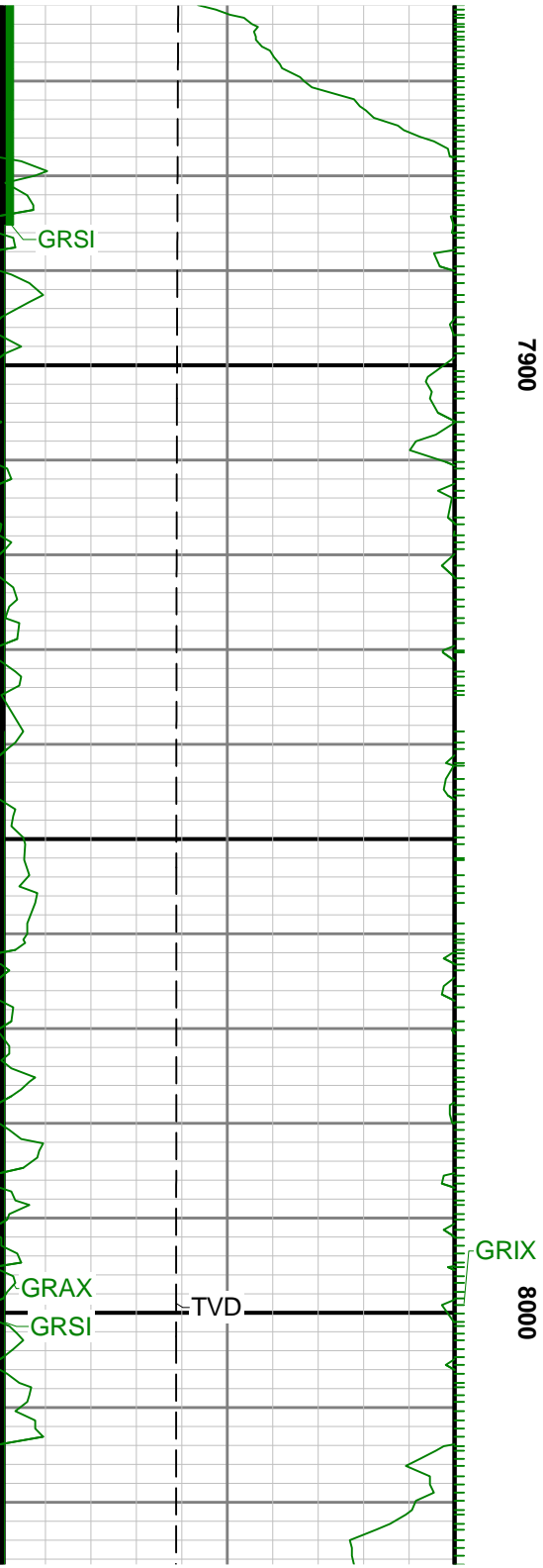


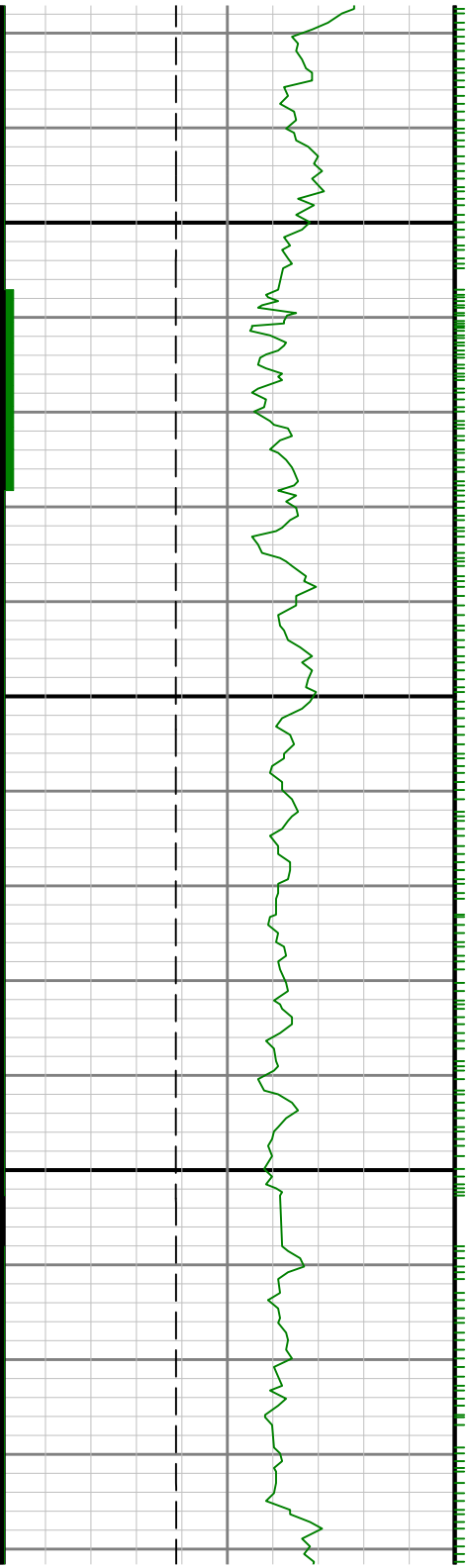


7600

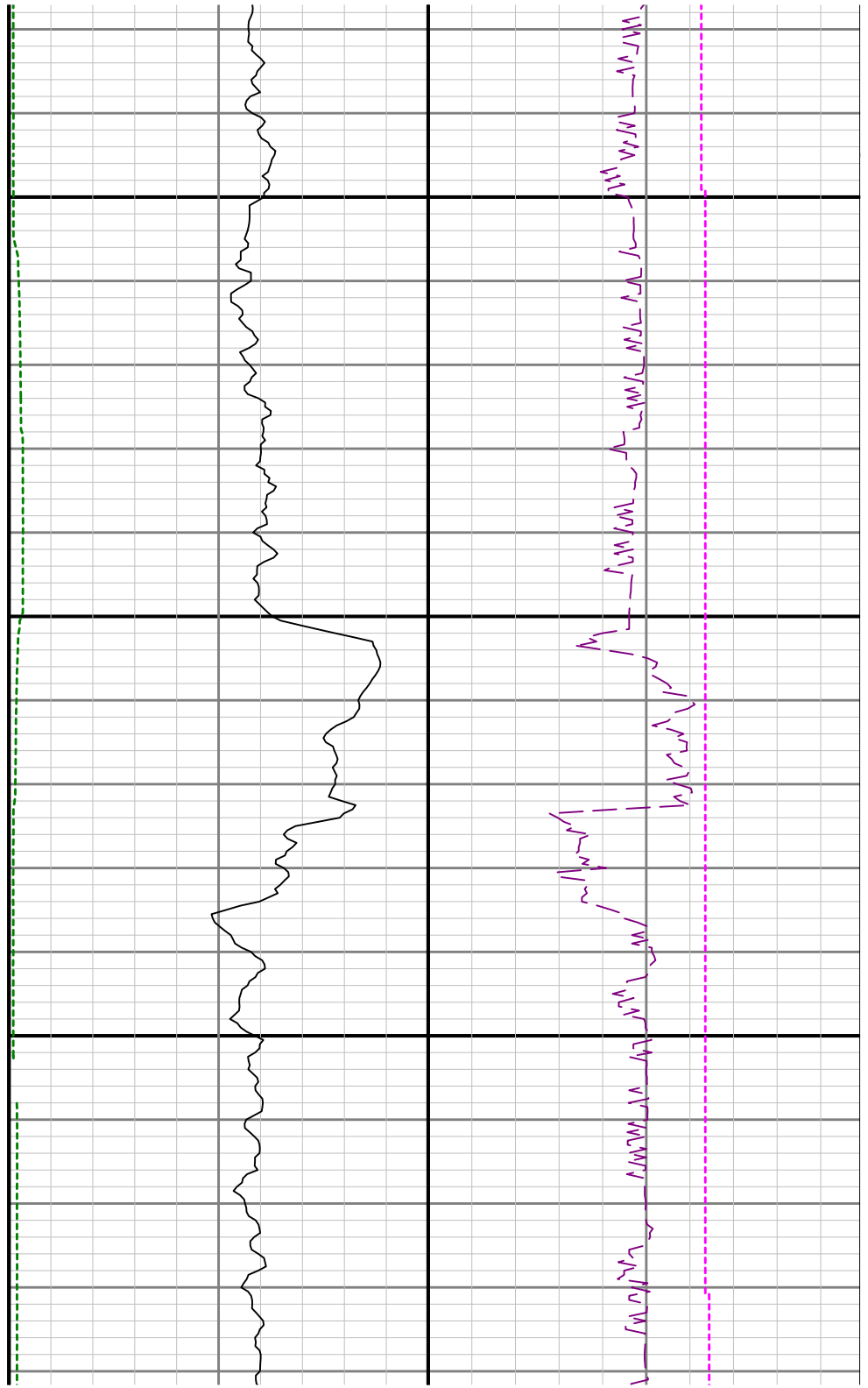








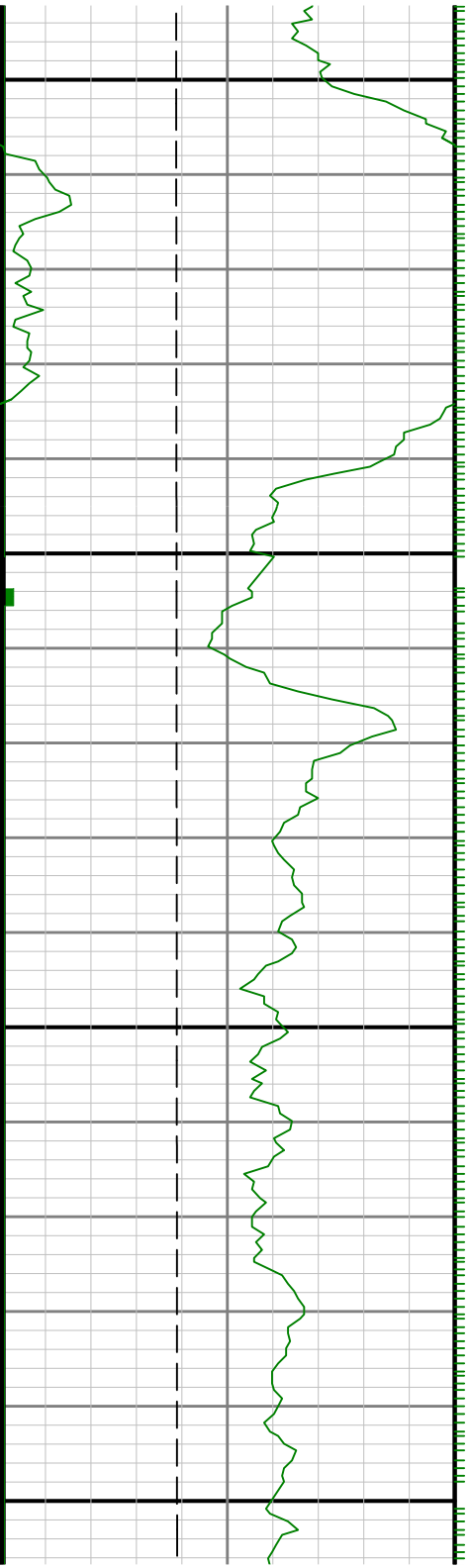
8100

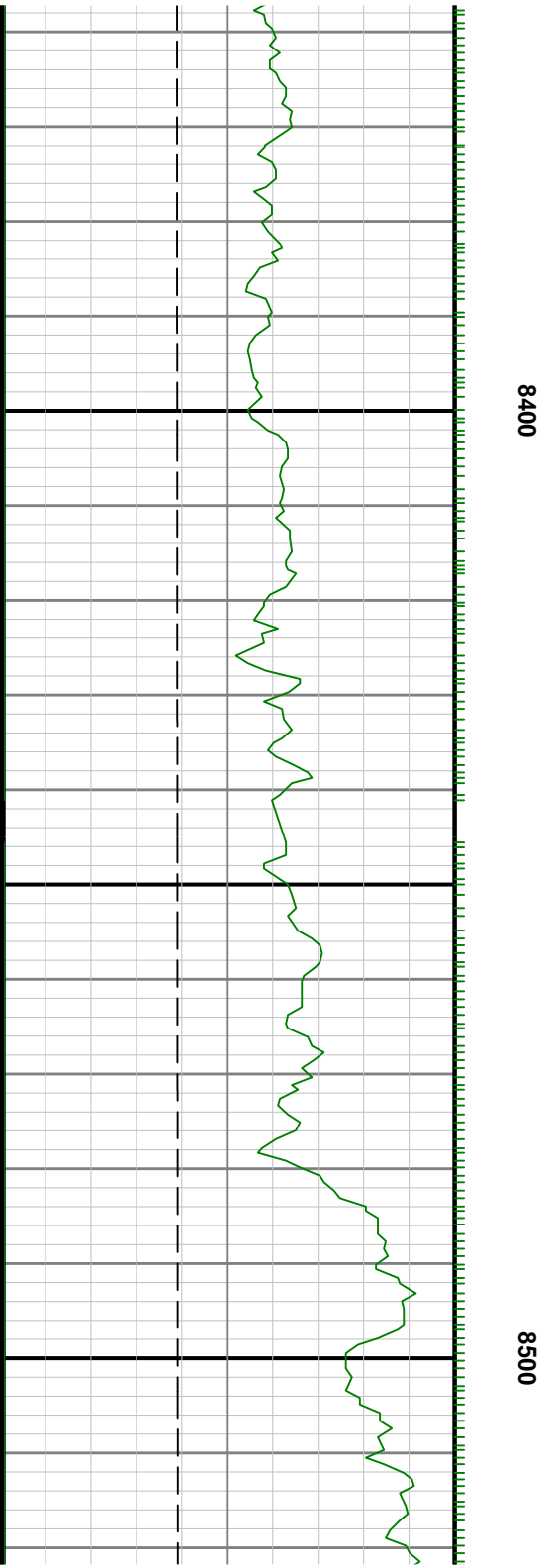
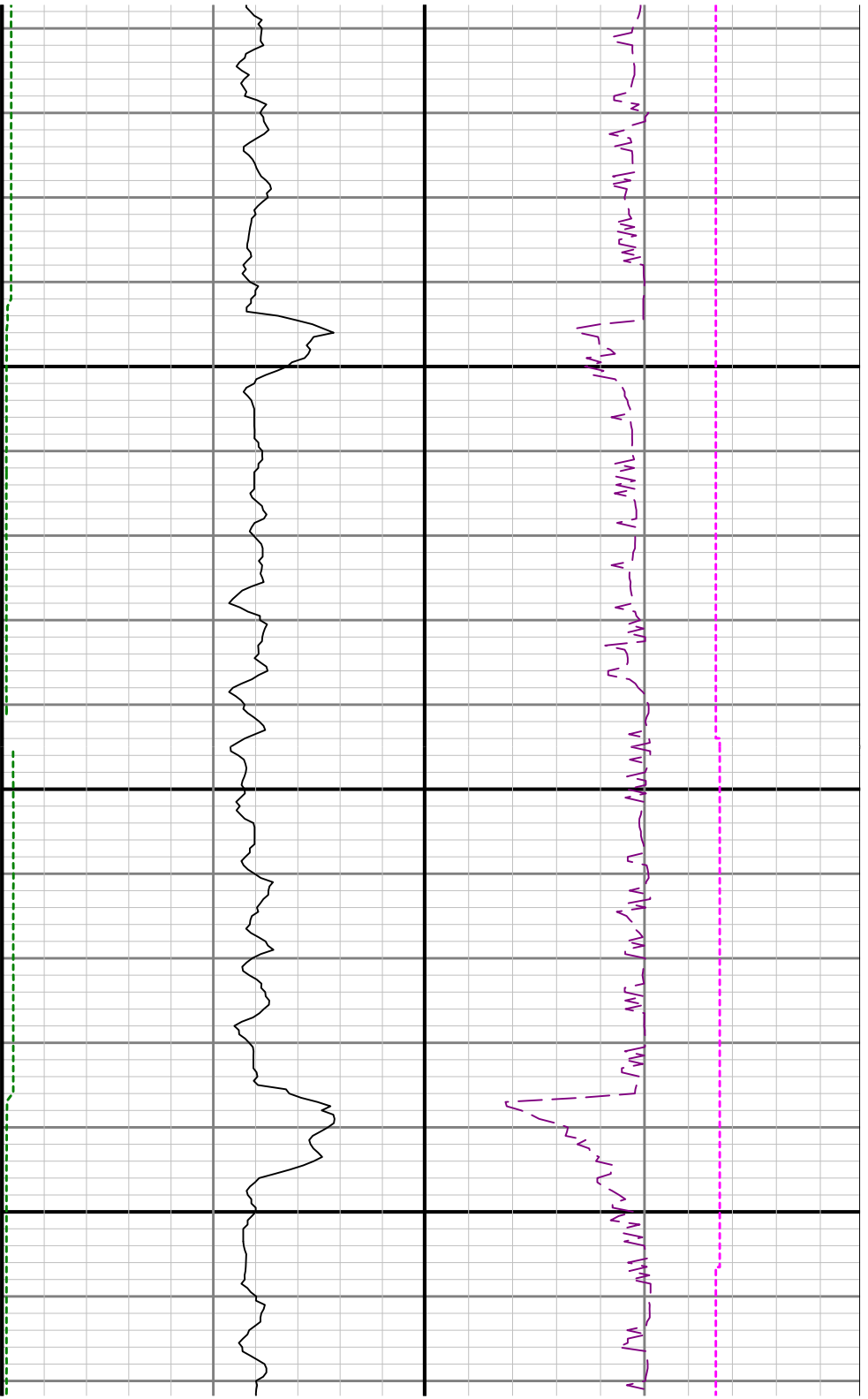


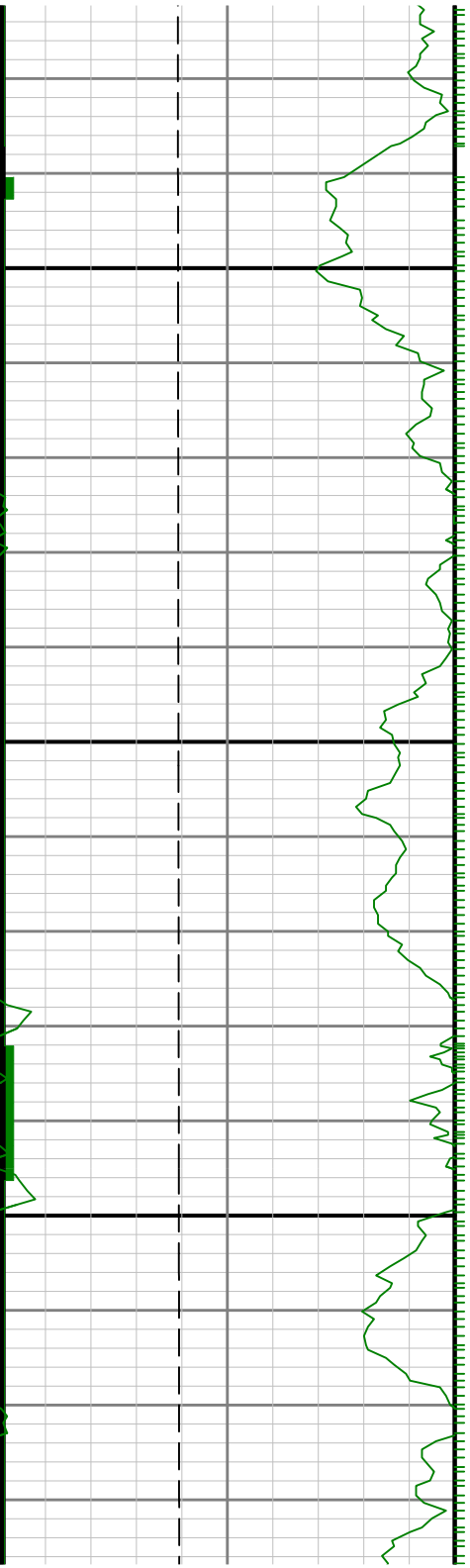


8200

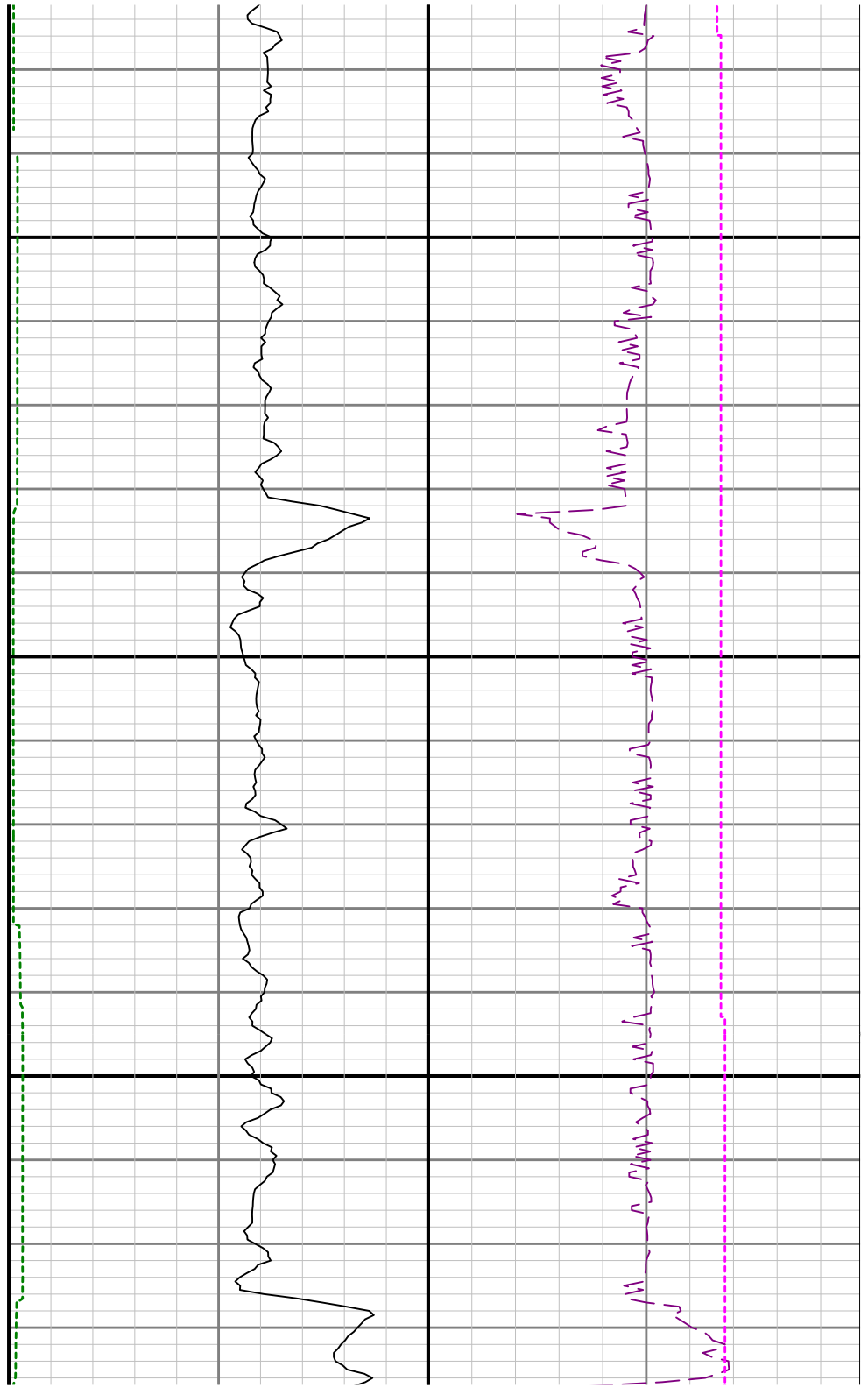
8300

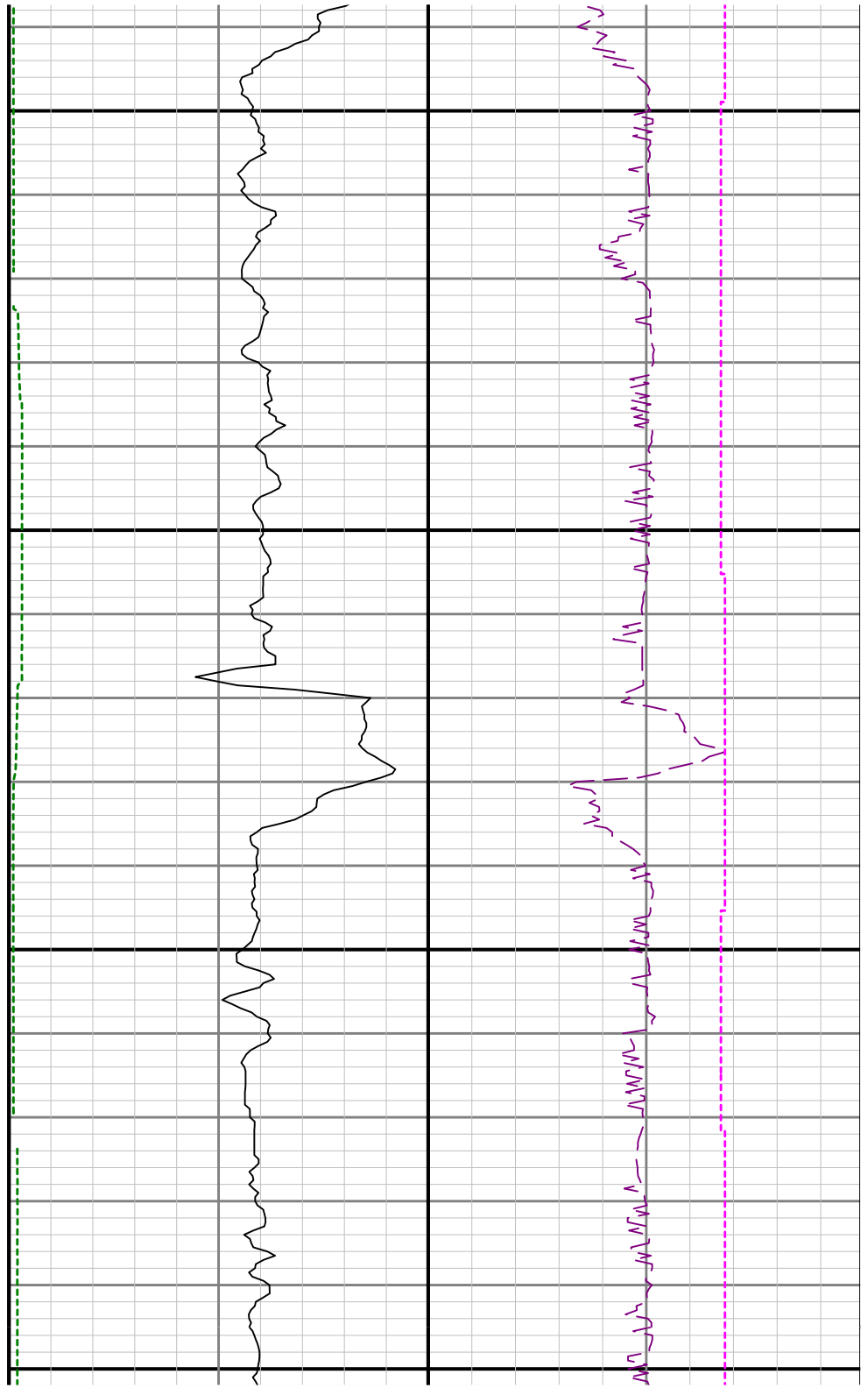
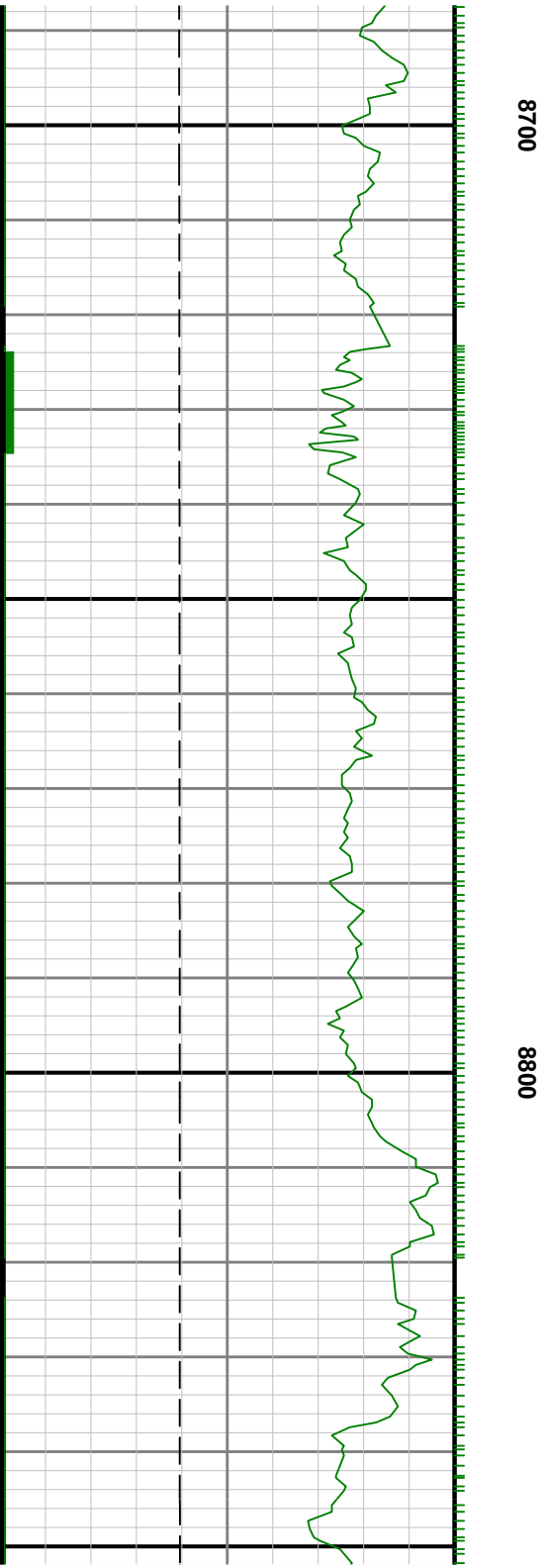


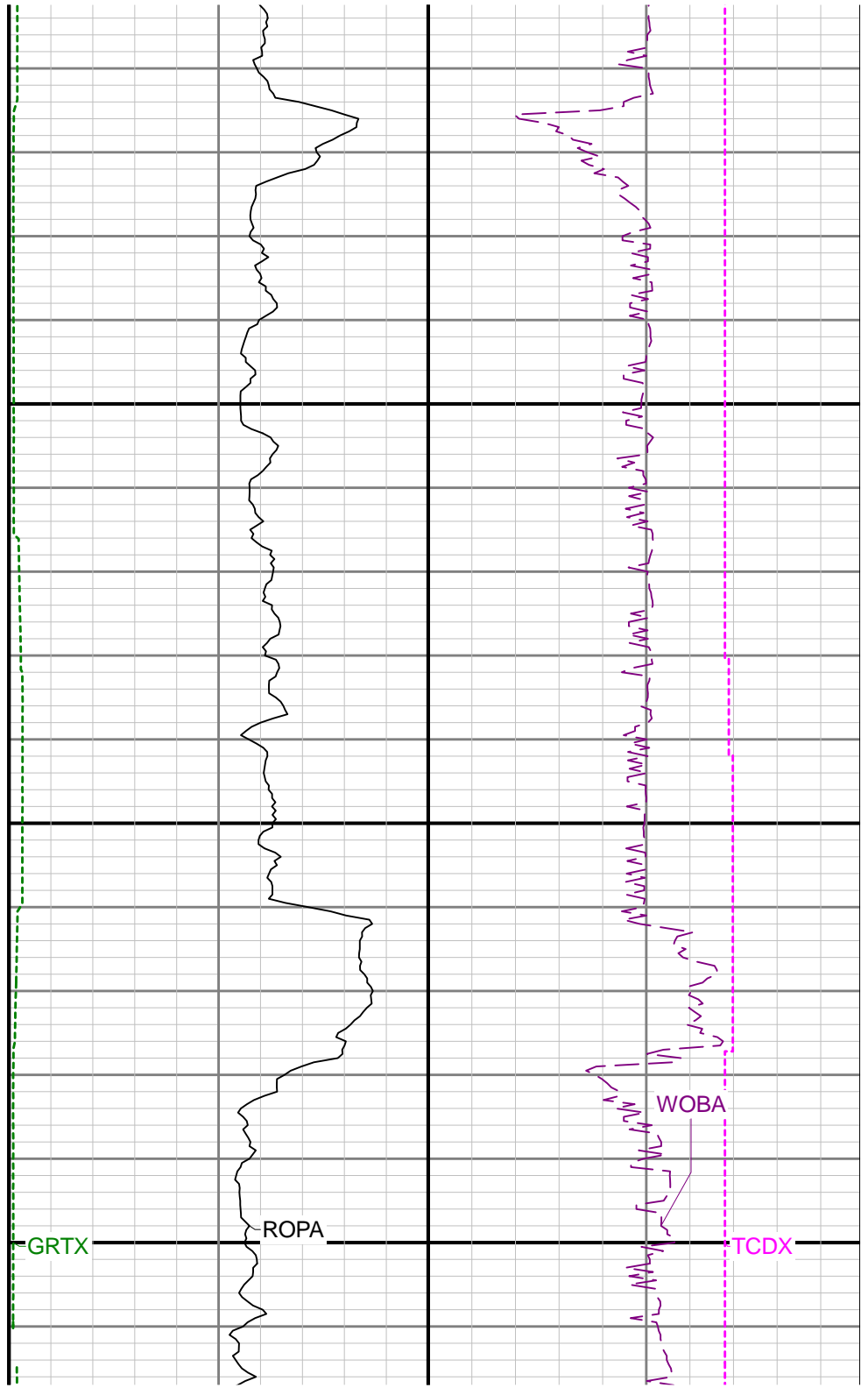
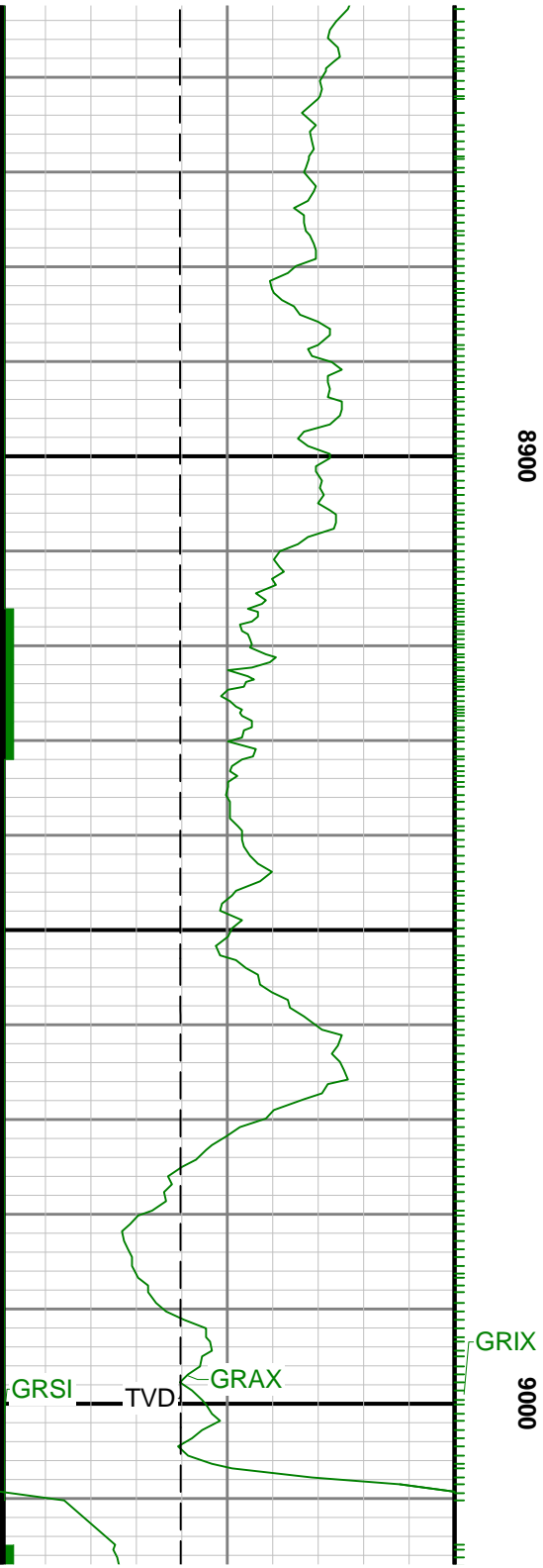


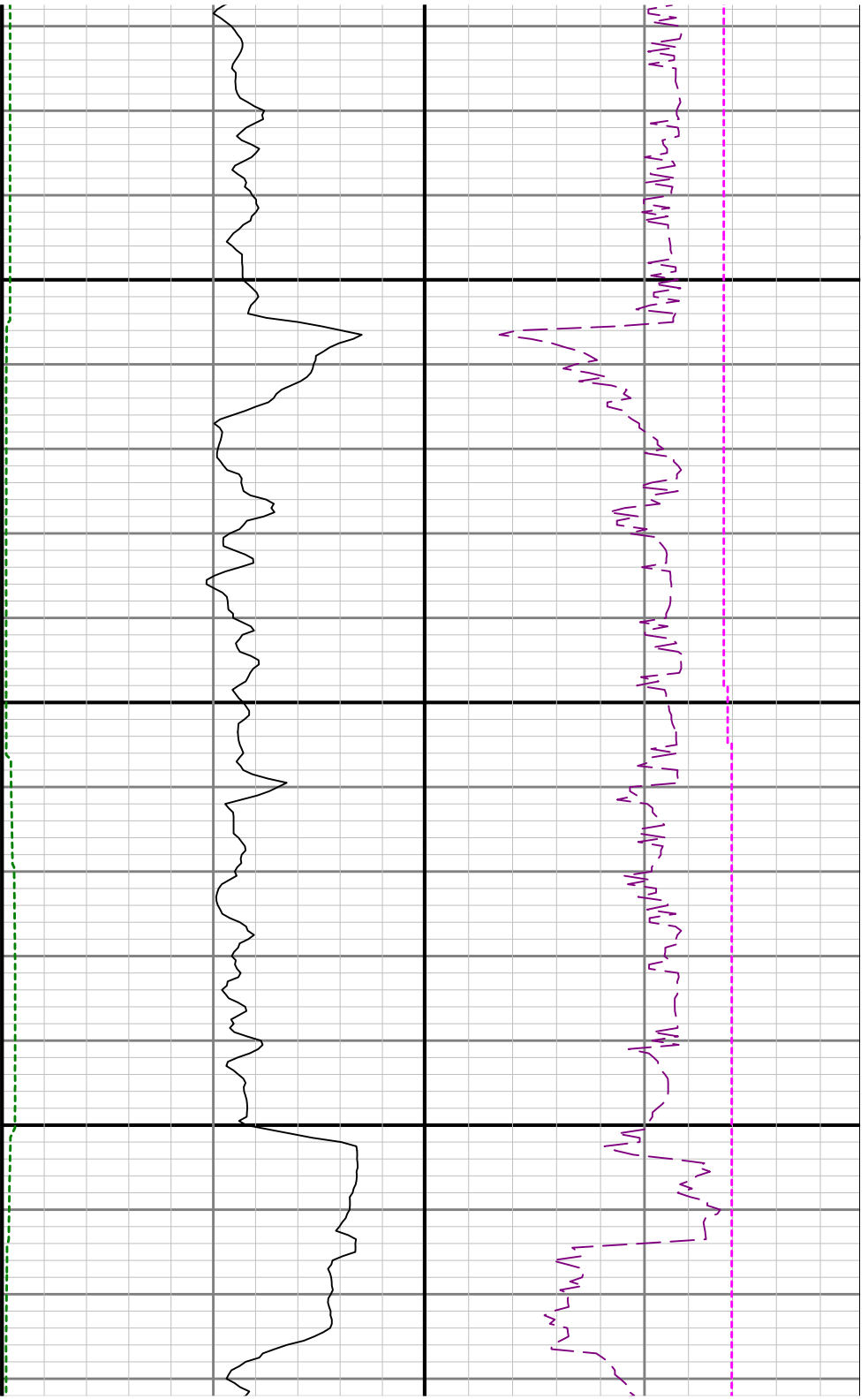


0098

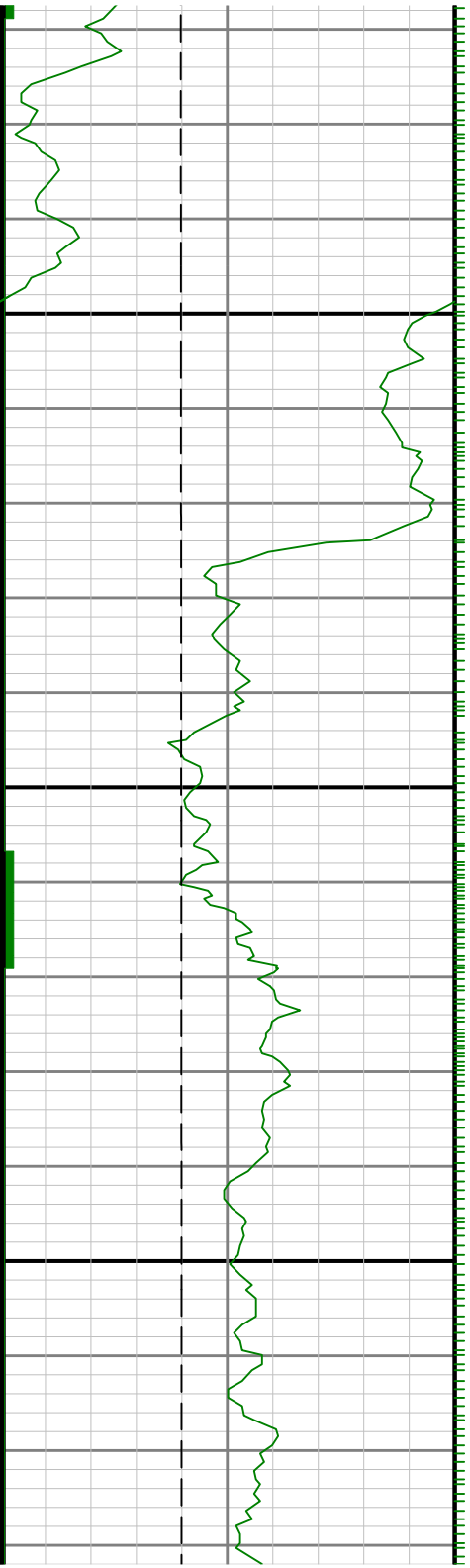


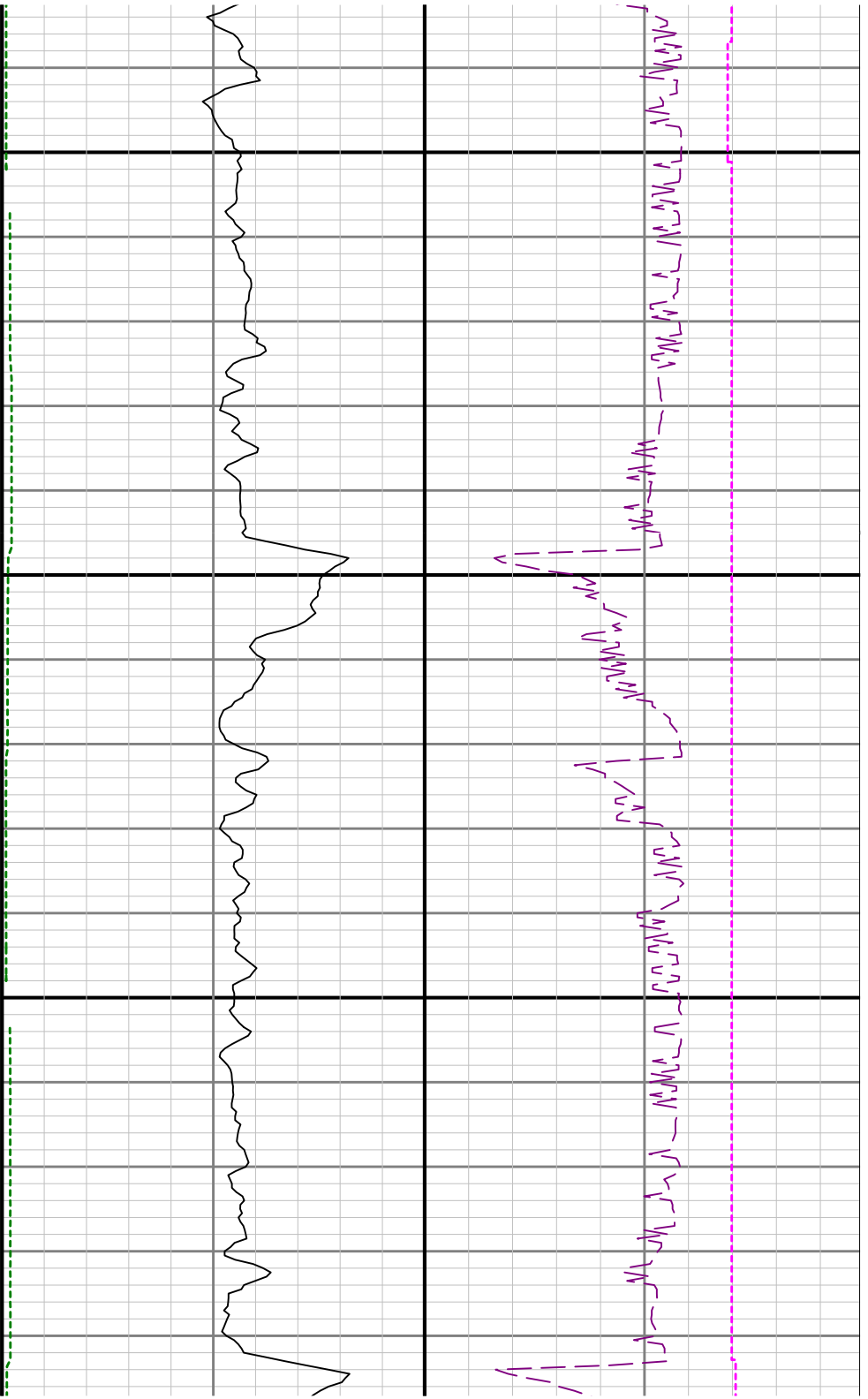






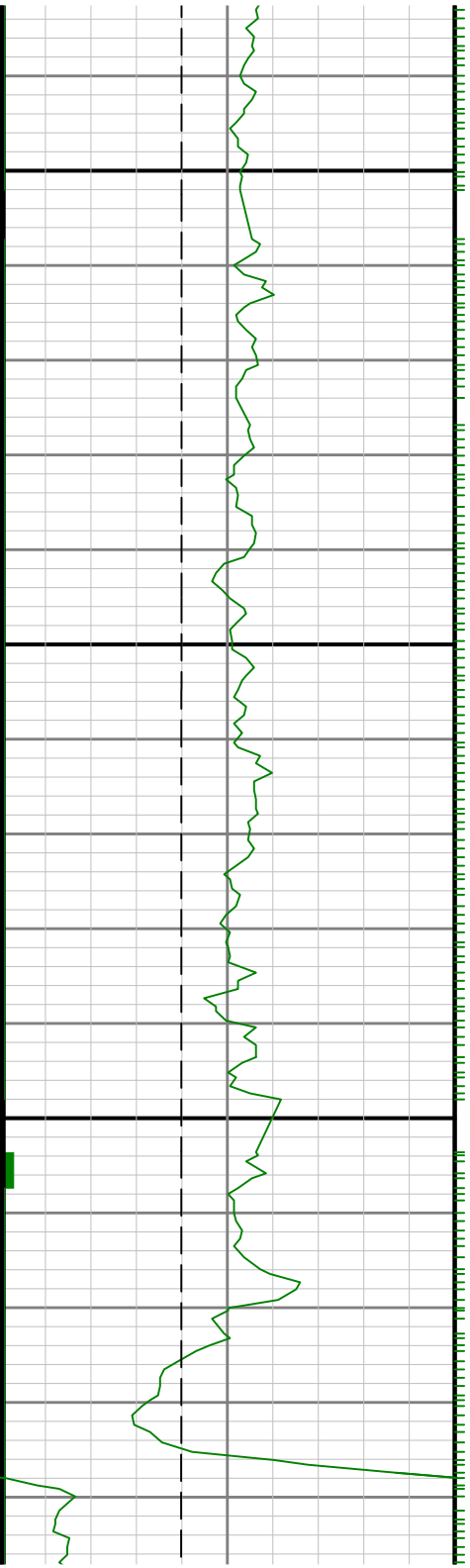
9100

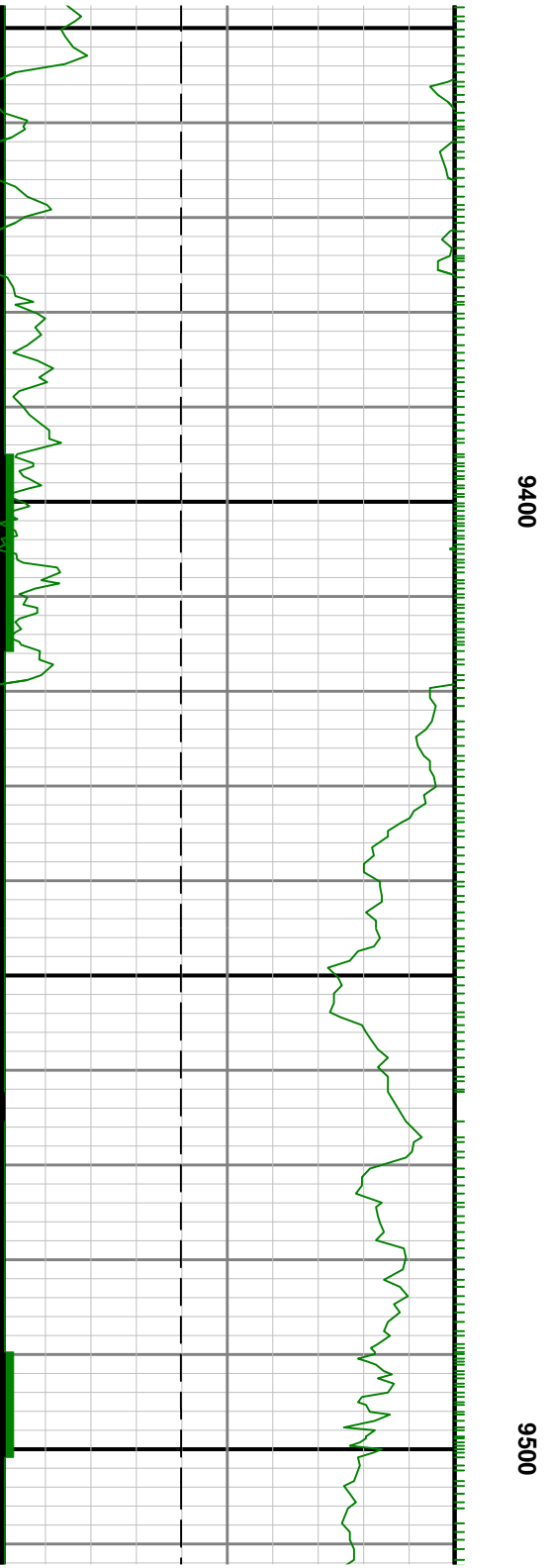
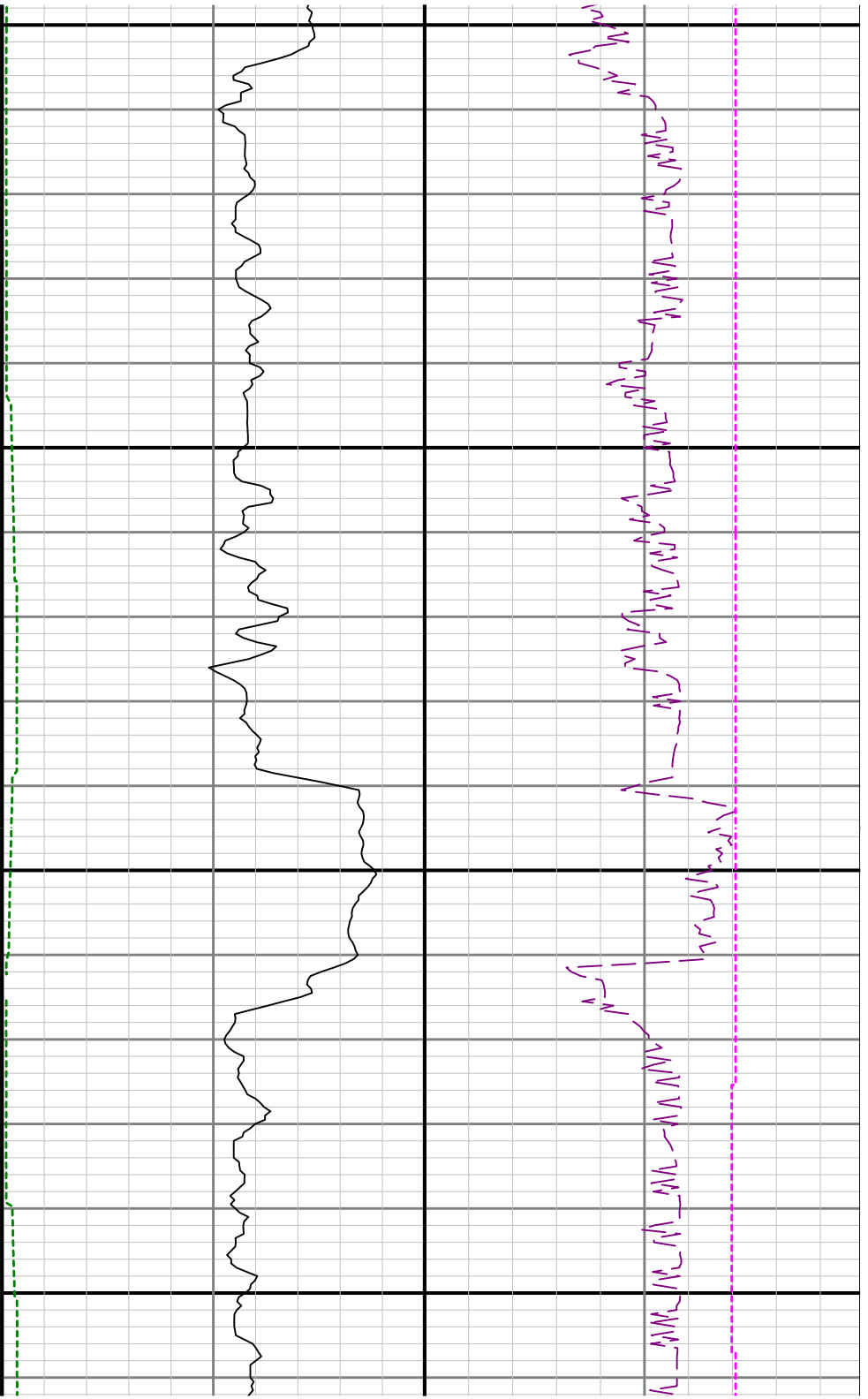


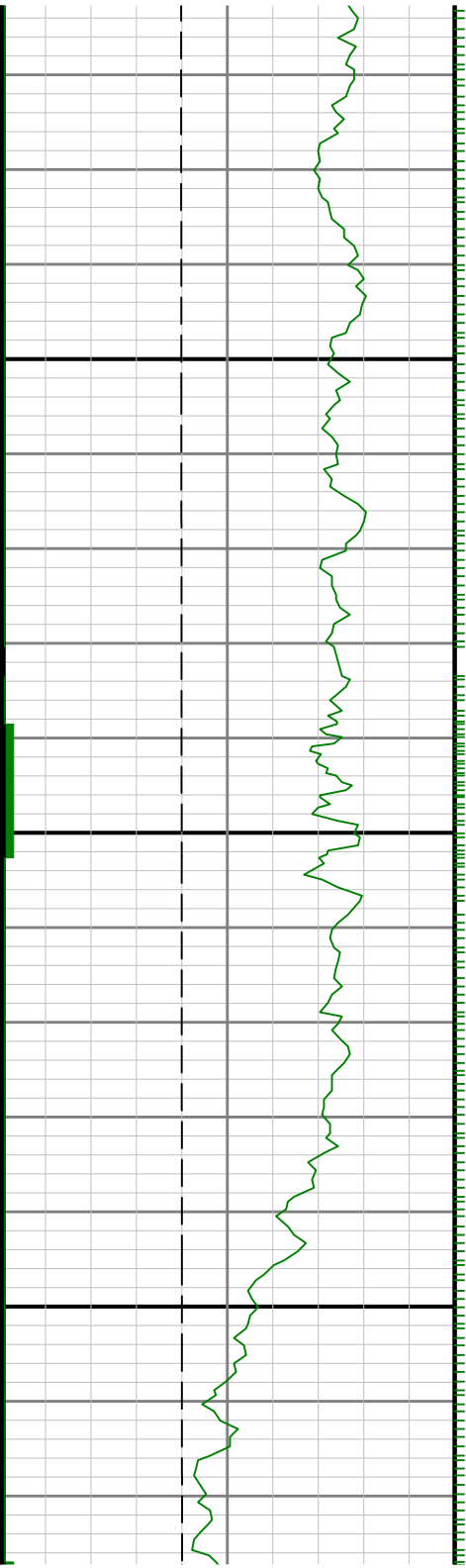


9200

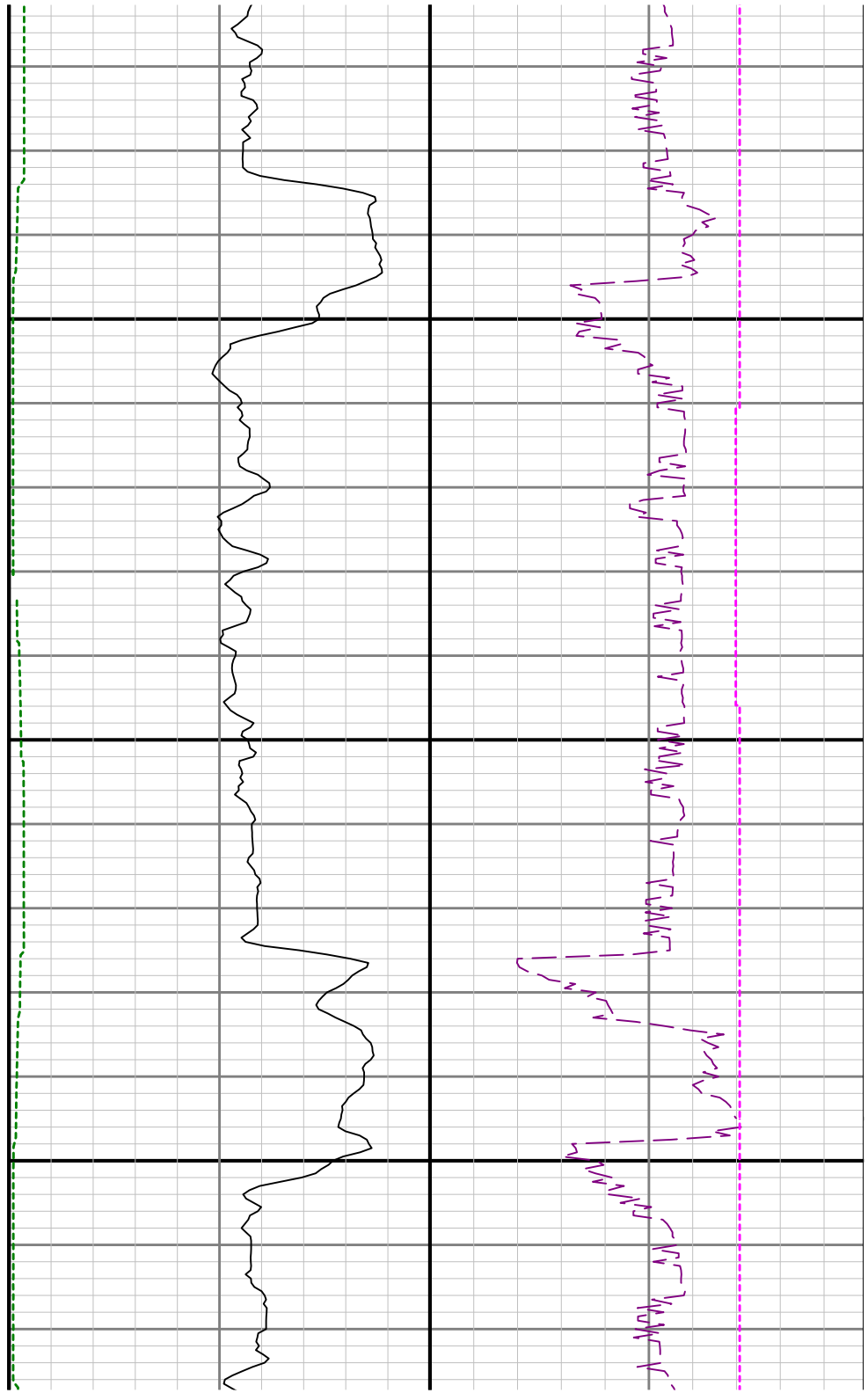
9300







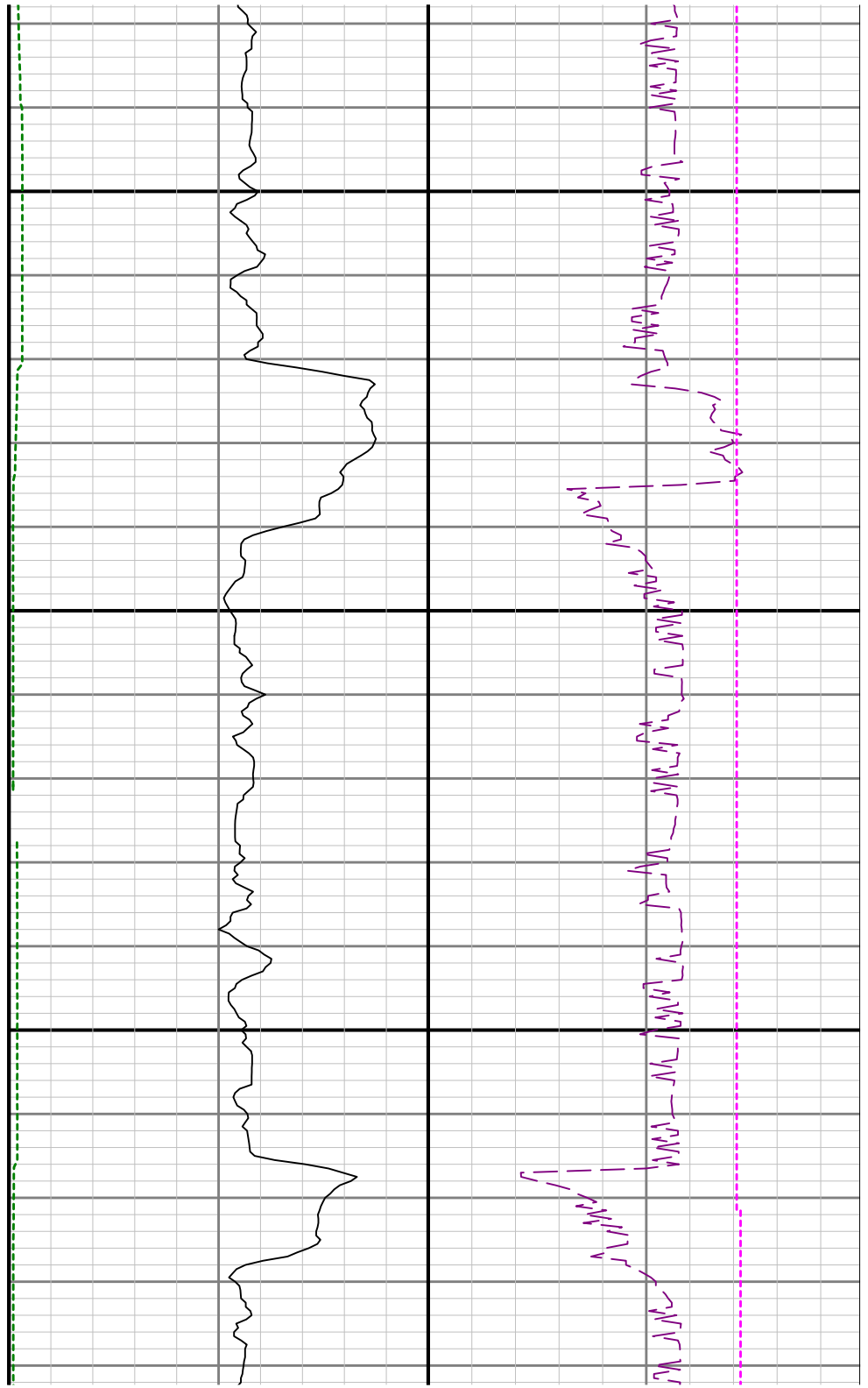
0096

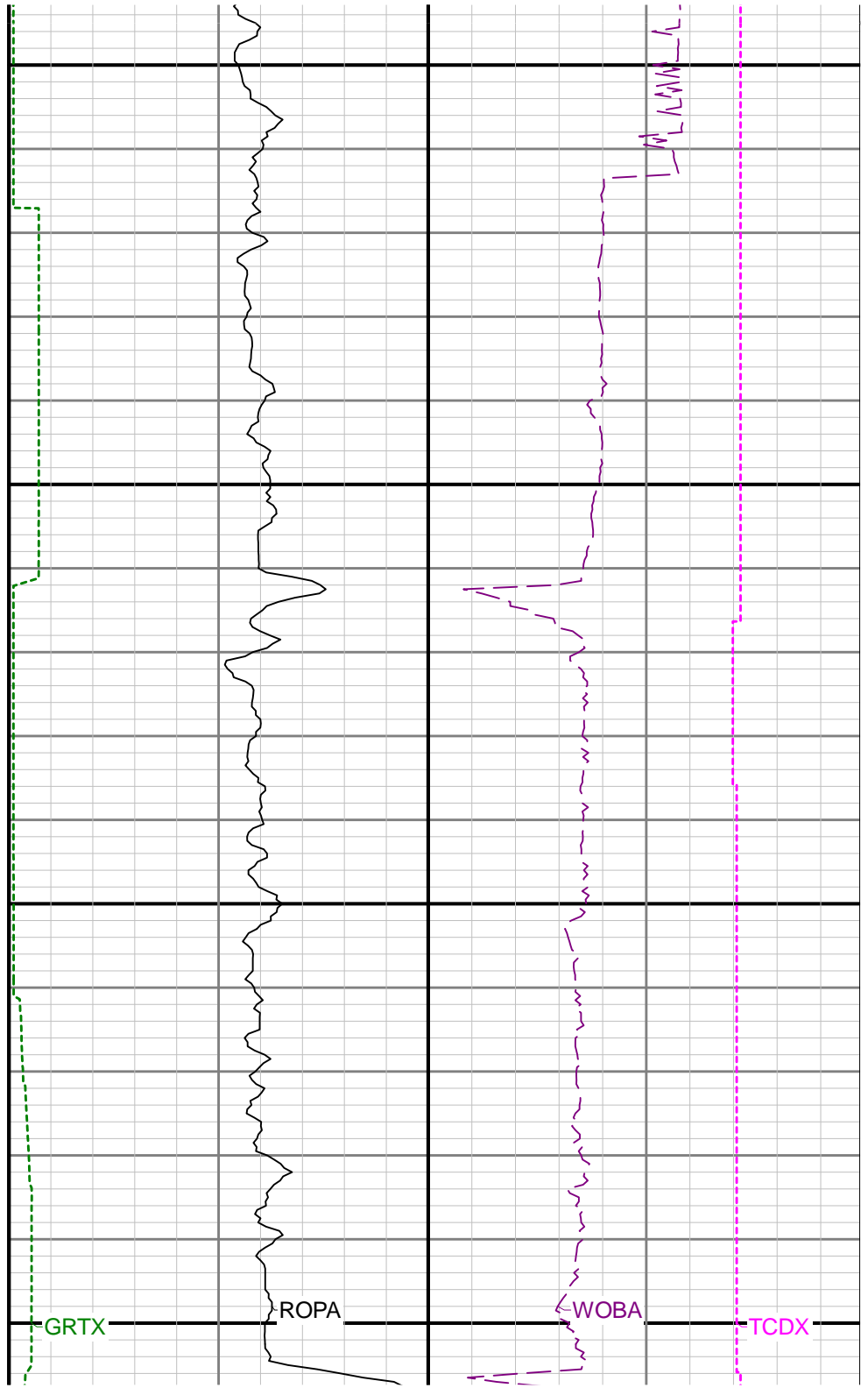
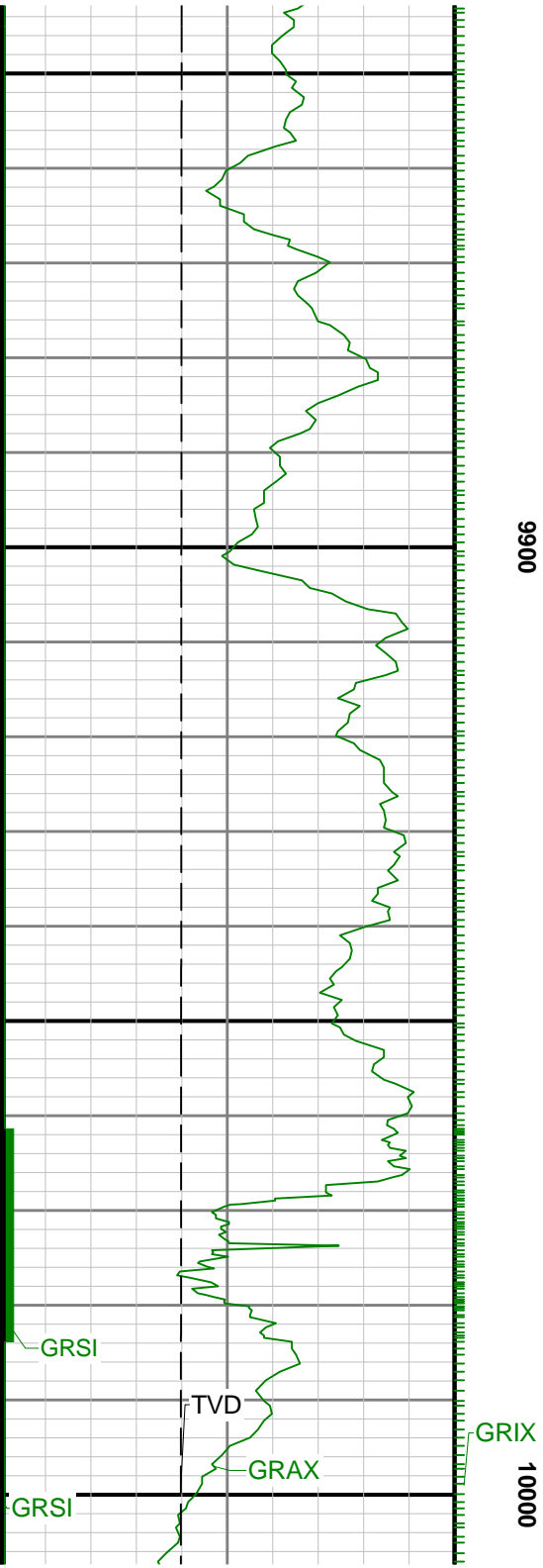




9700

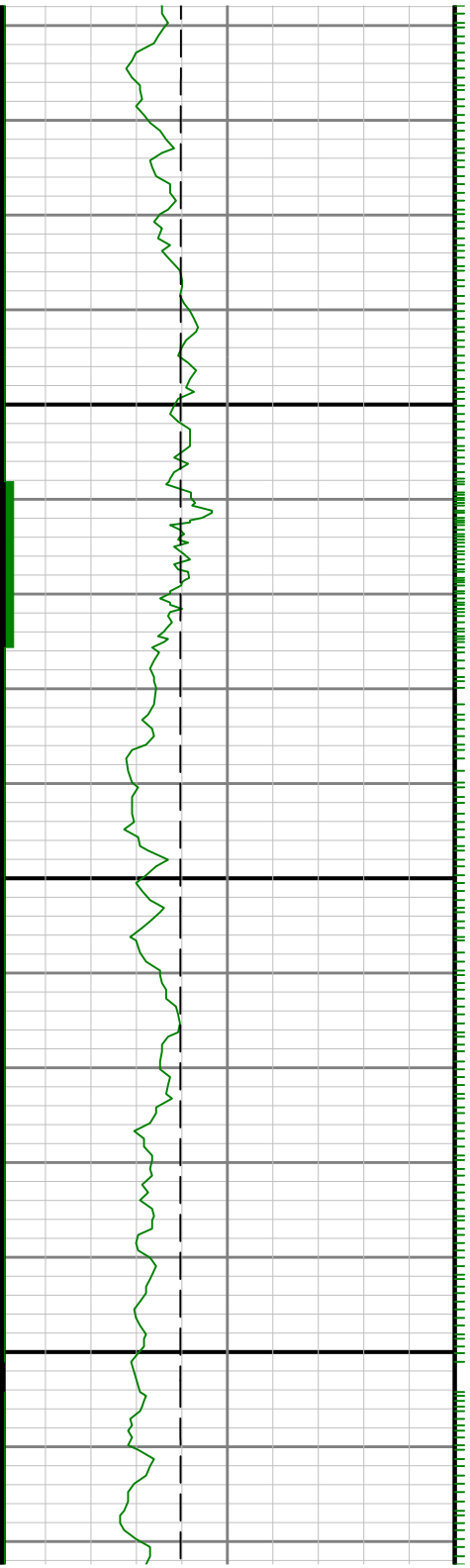
0086

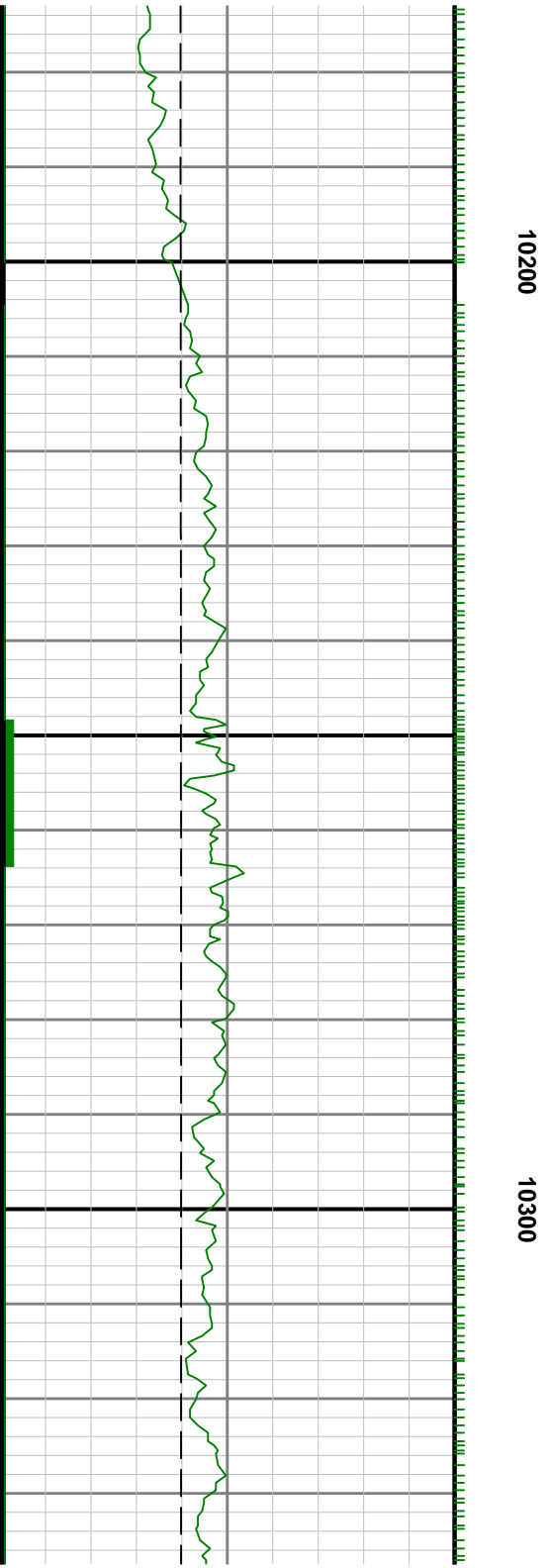


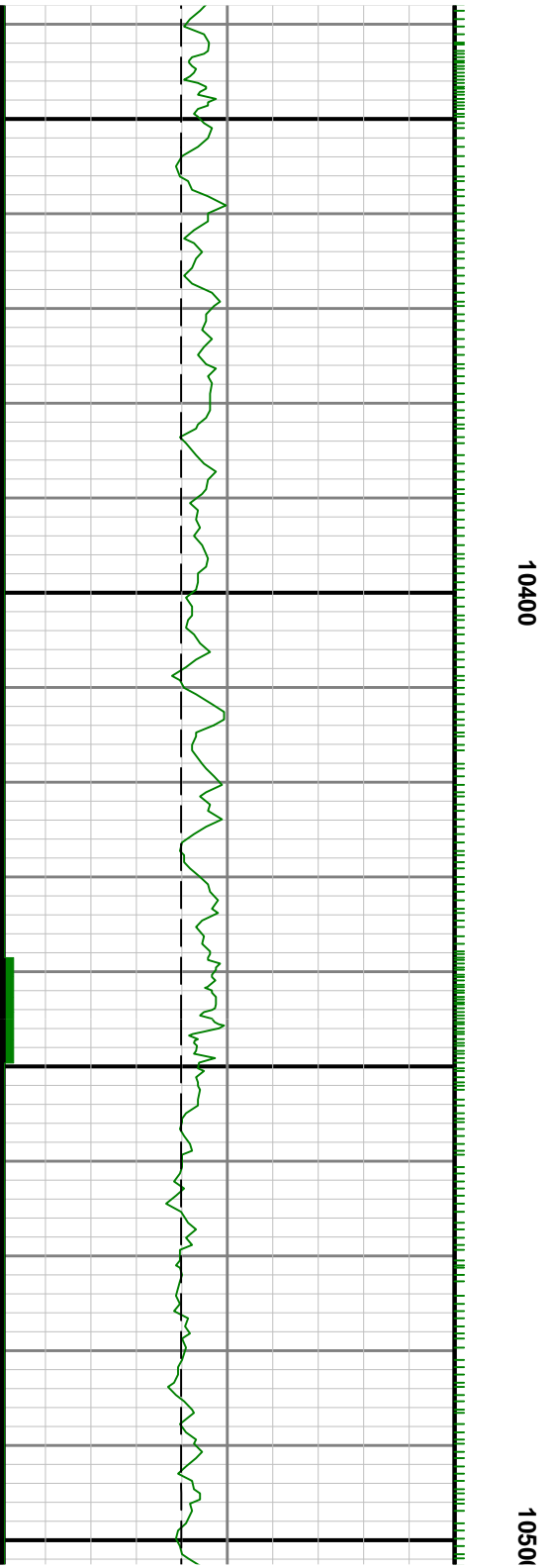
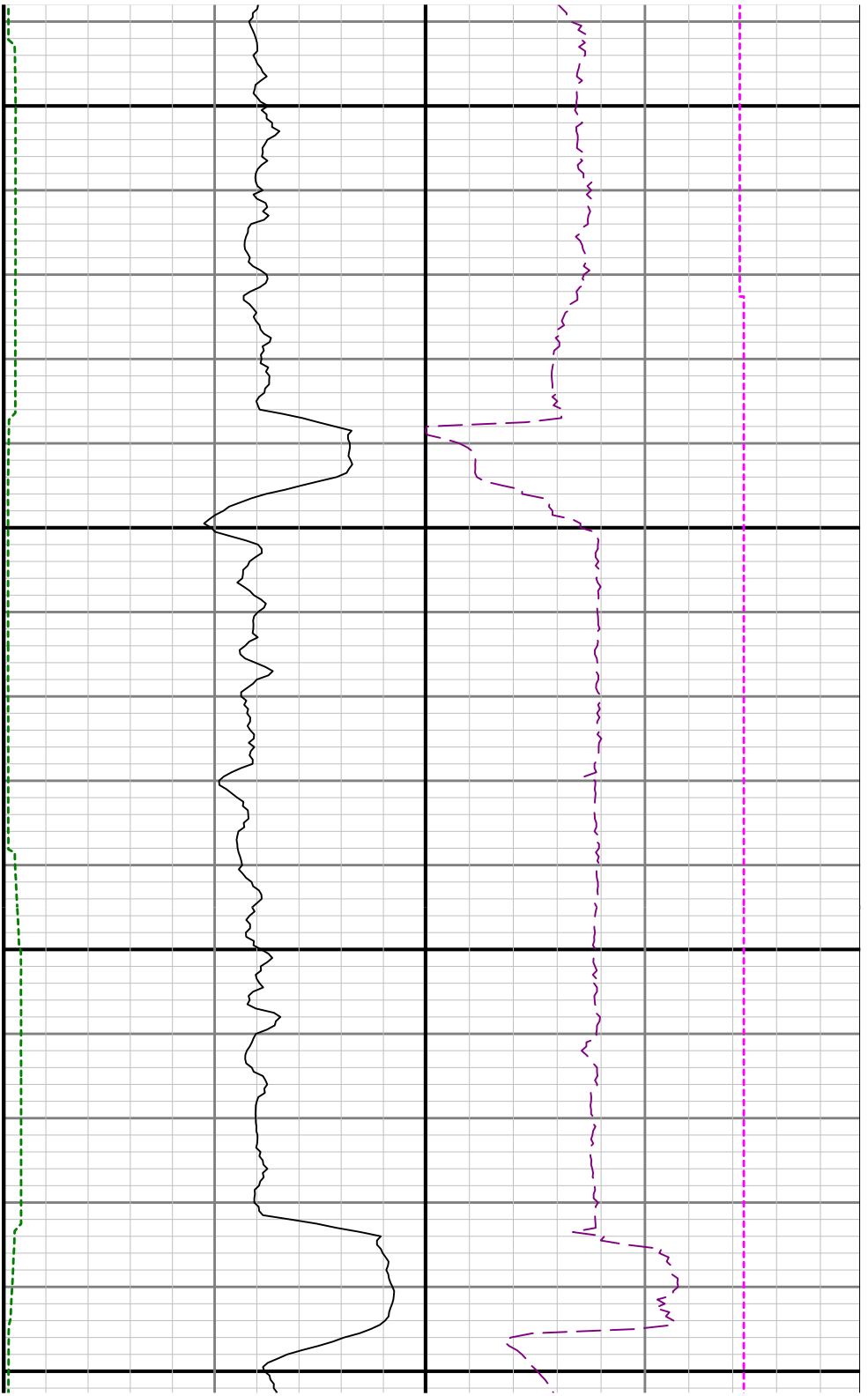




10100

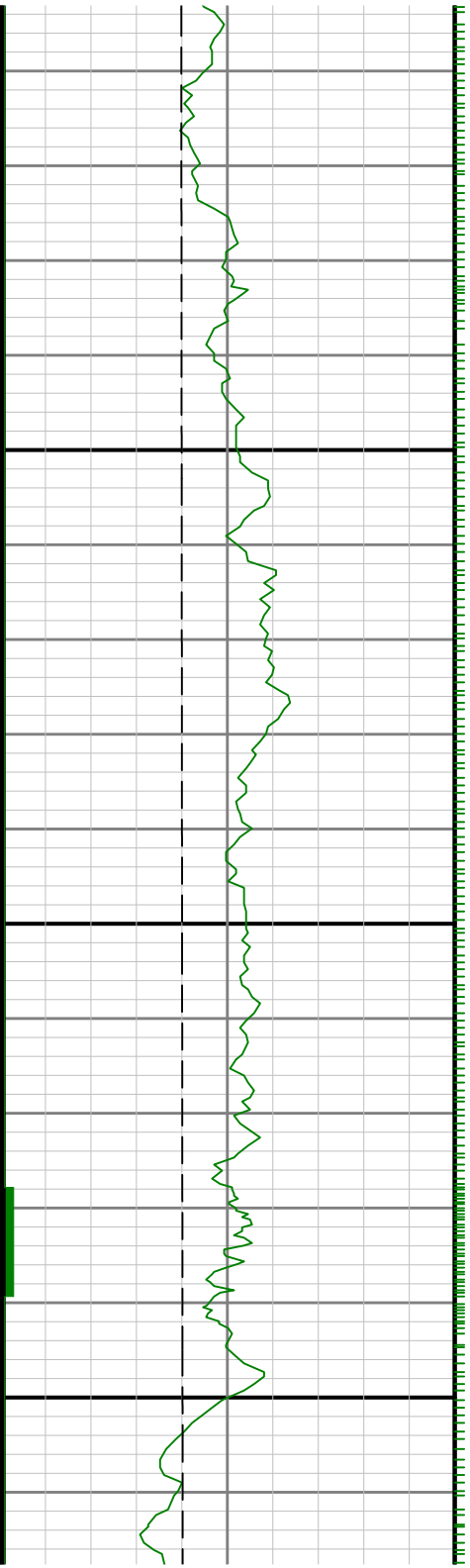


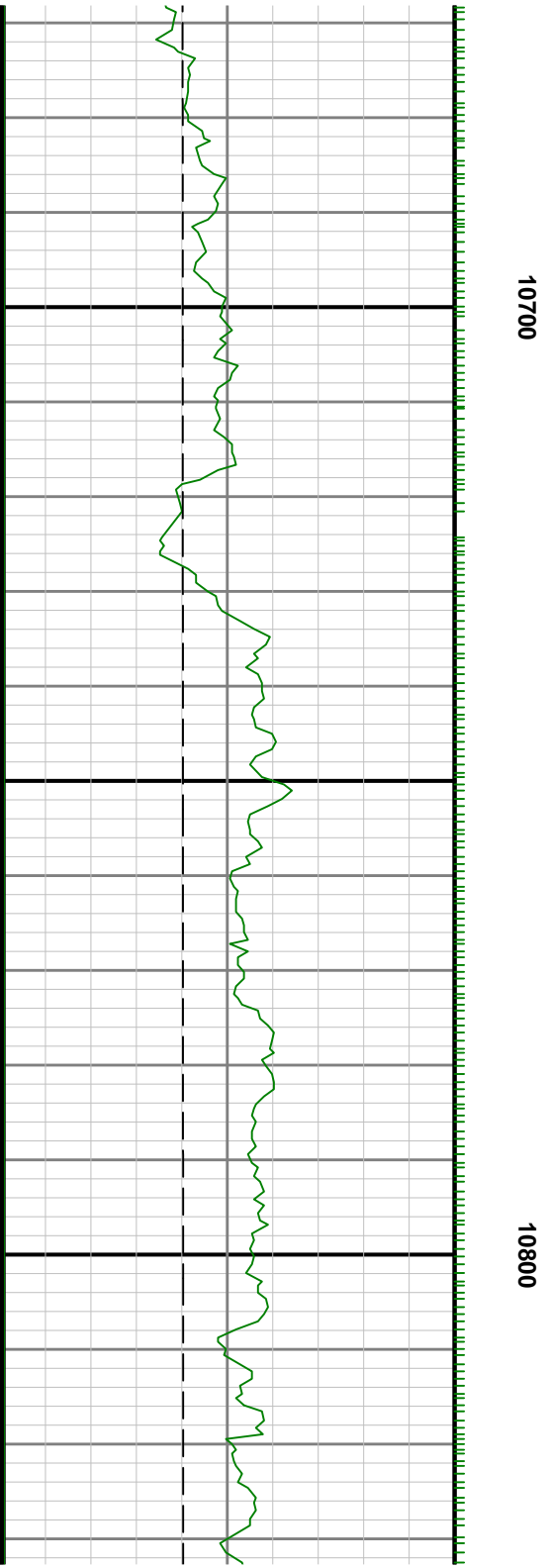
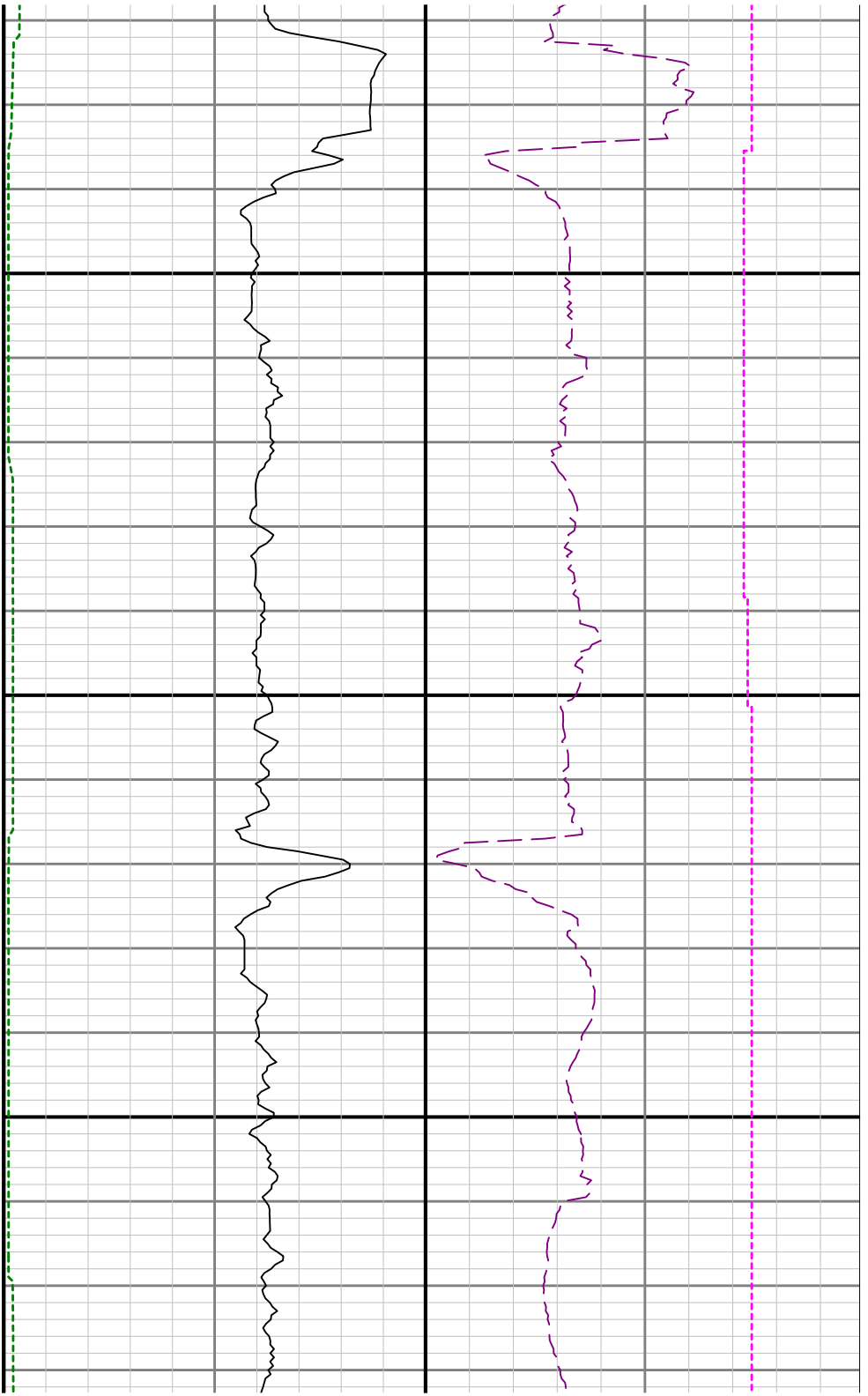


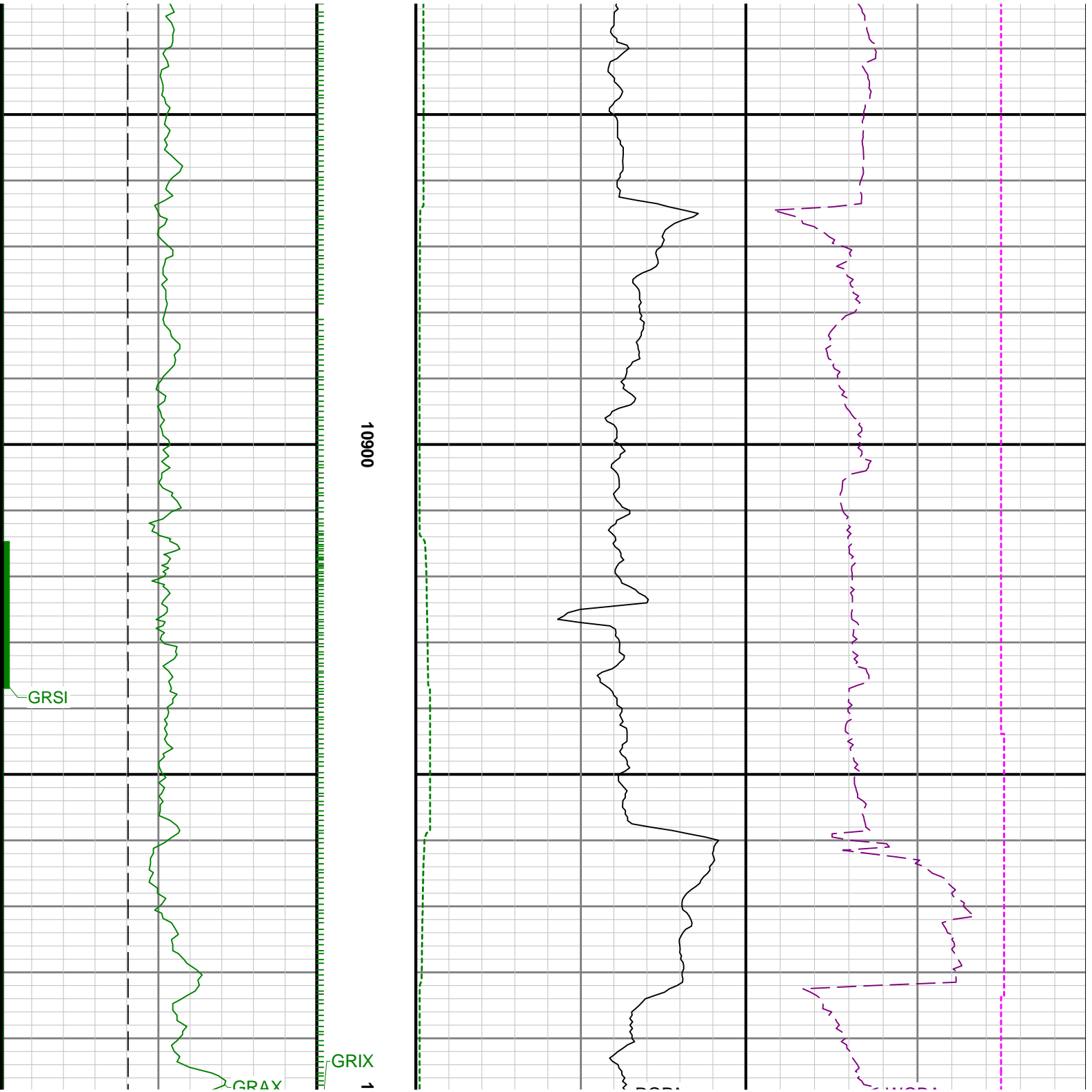


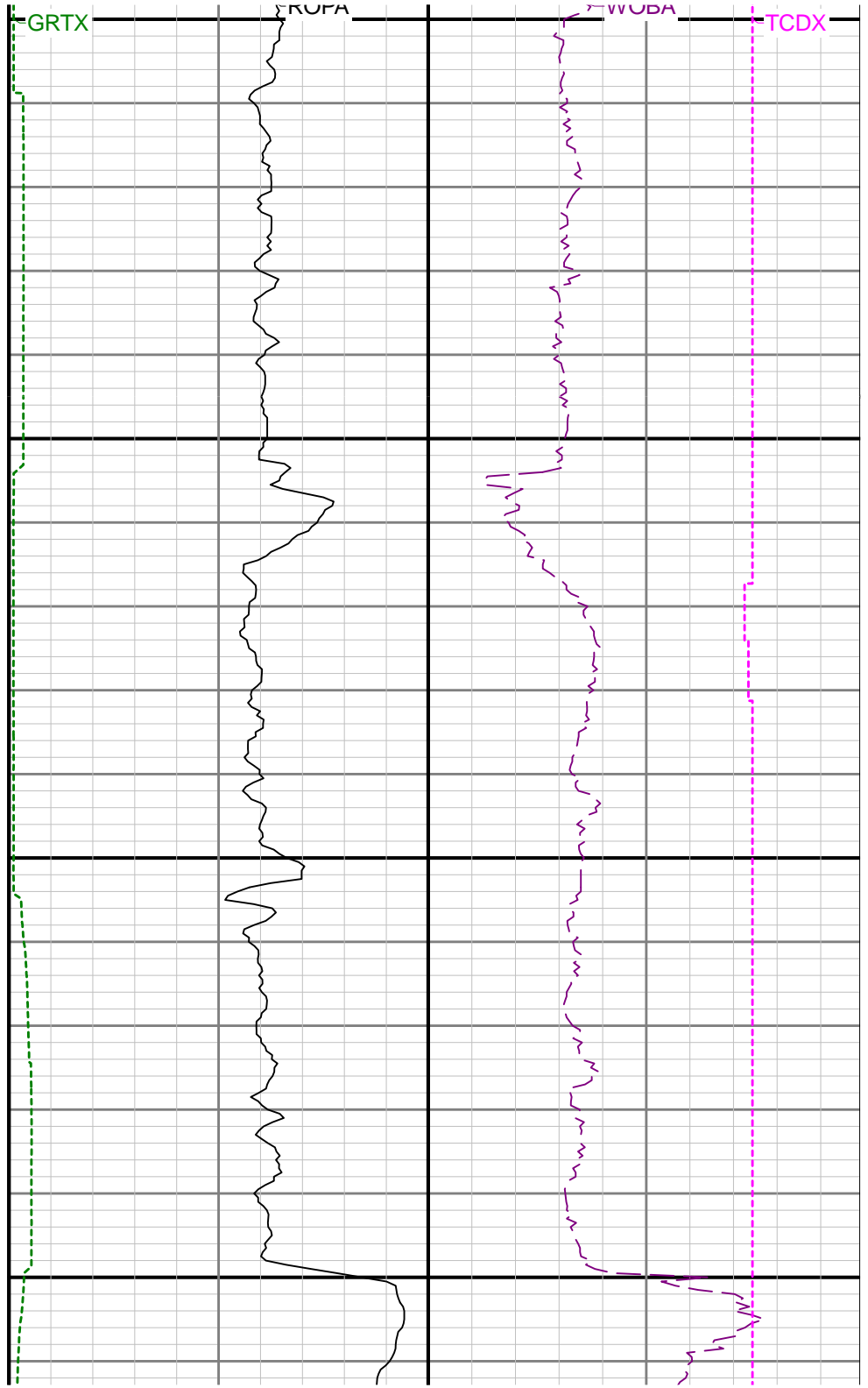
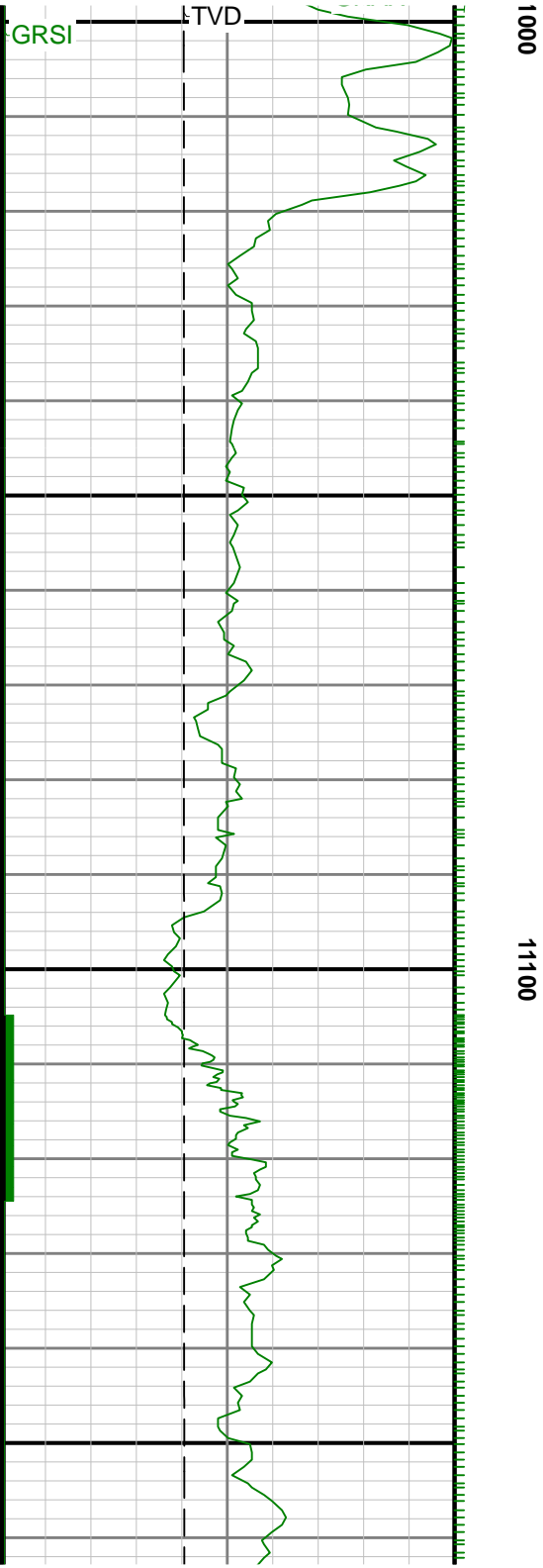


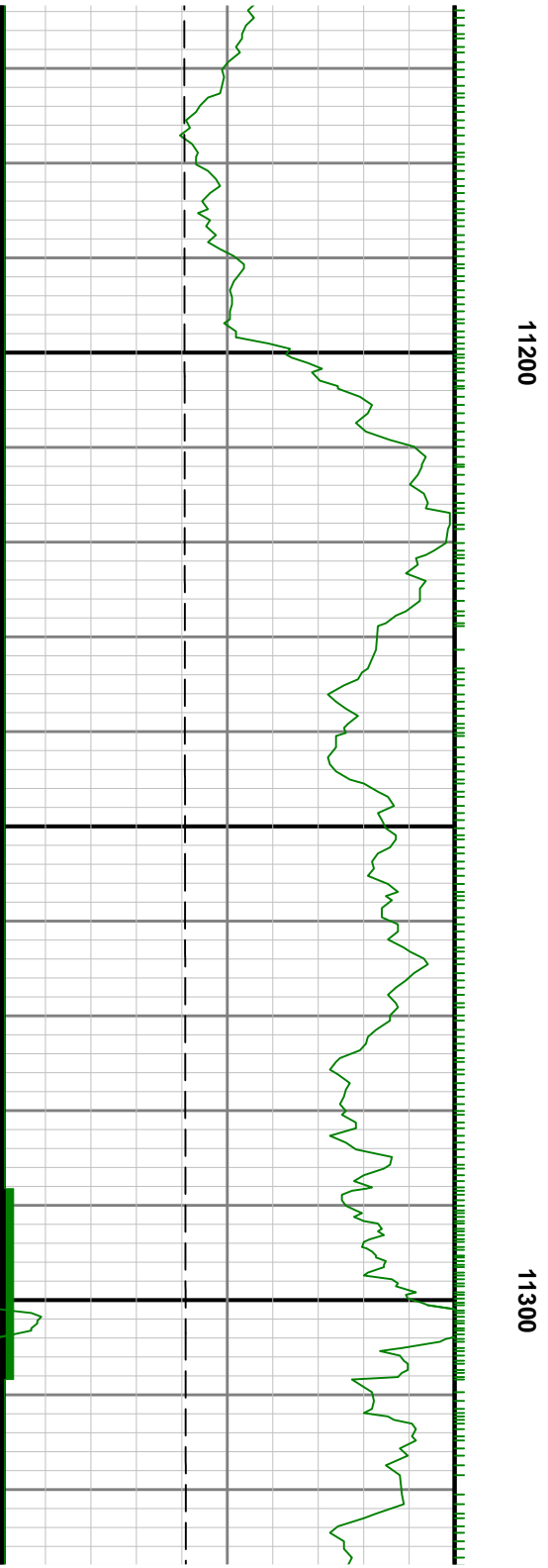
10600





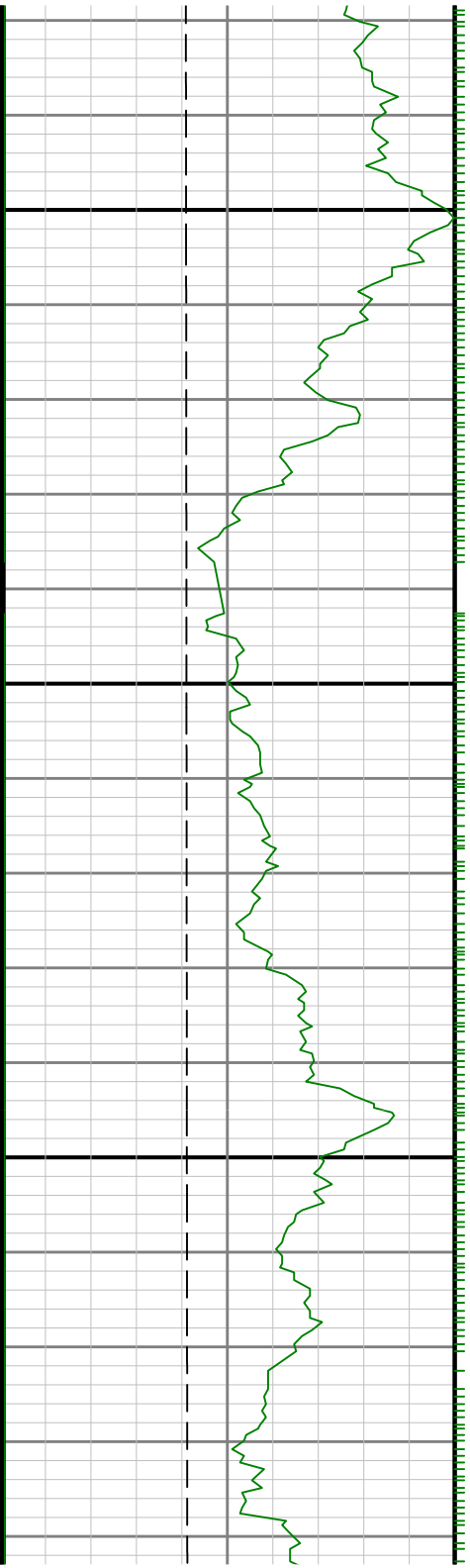


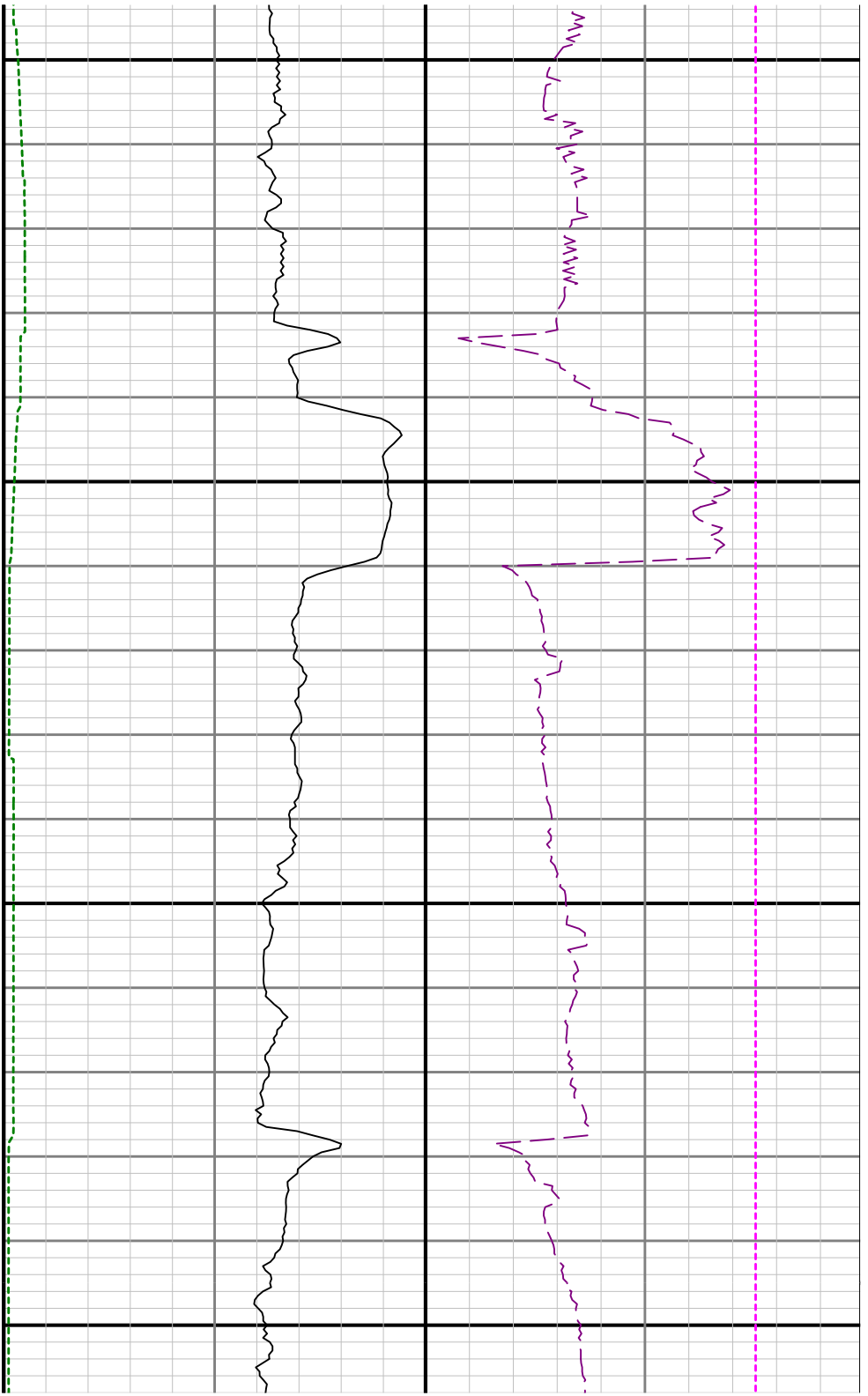






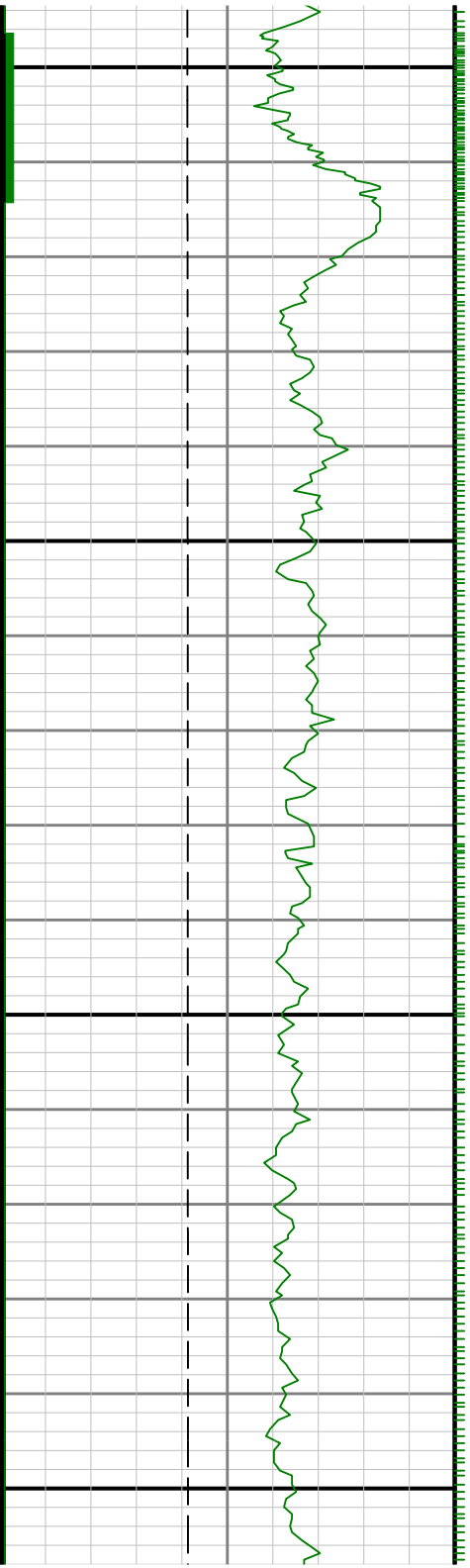
11400

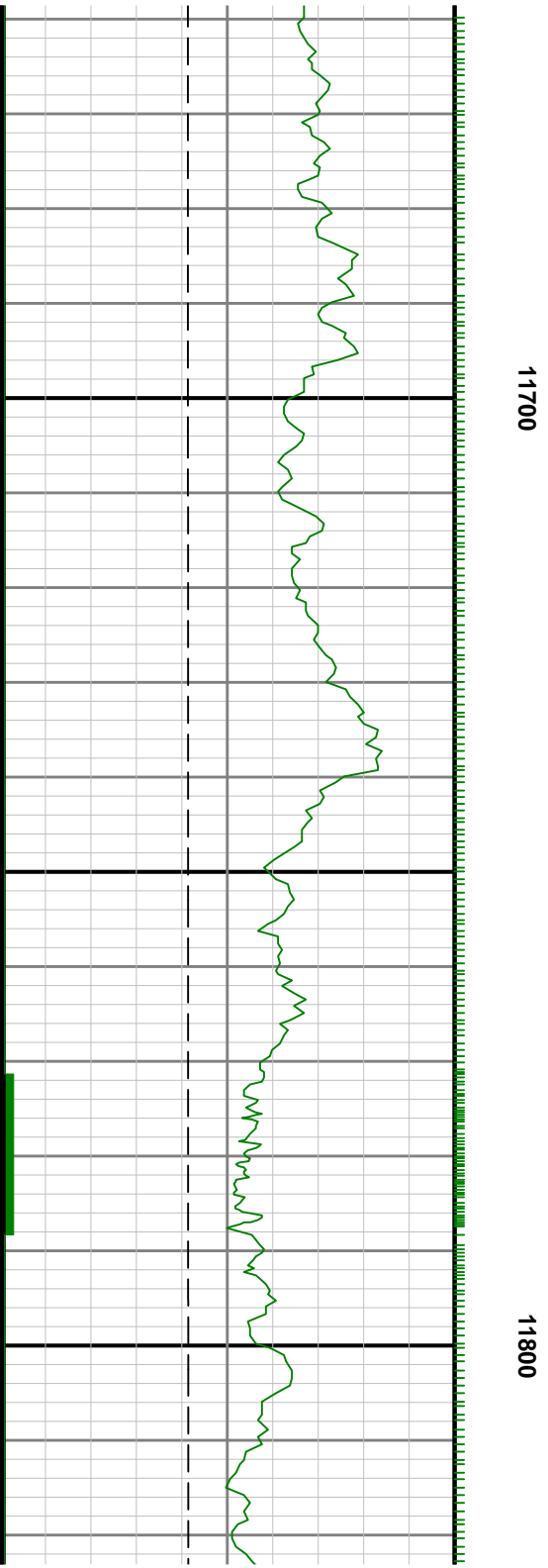


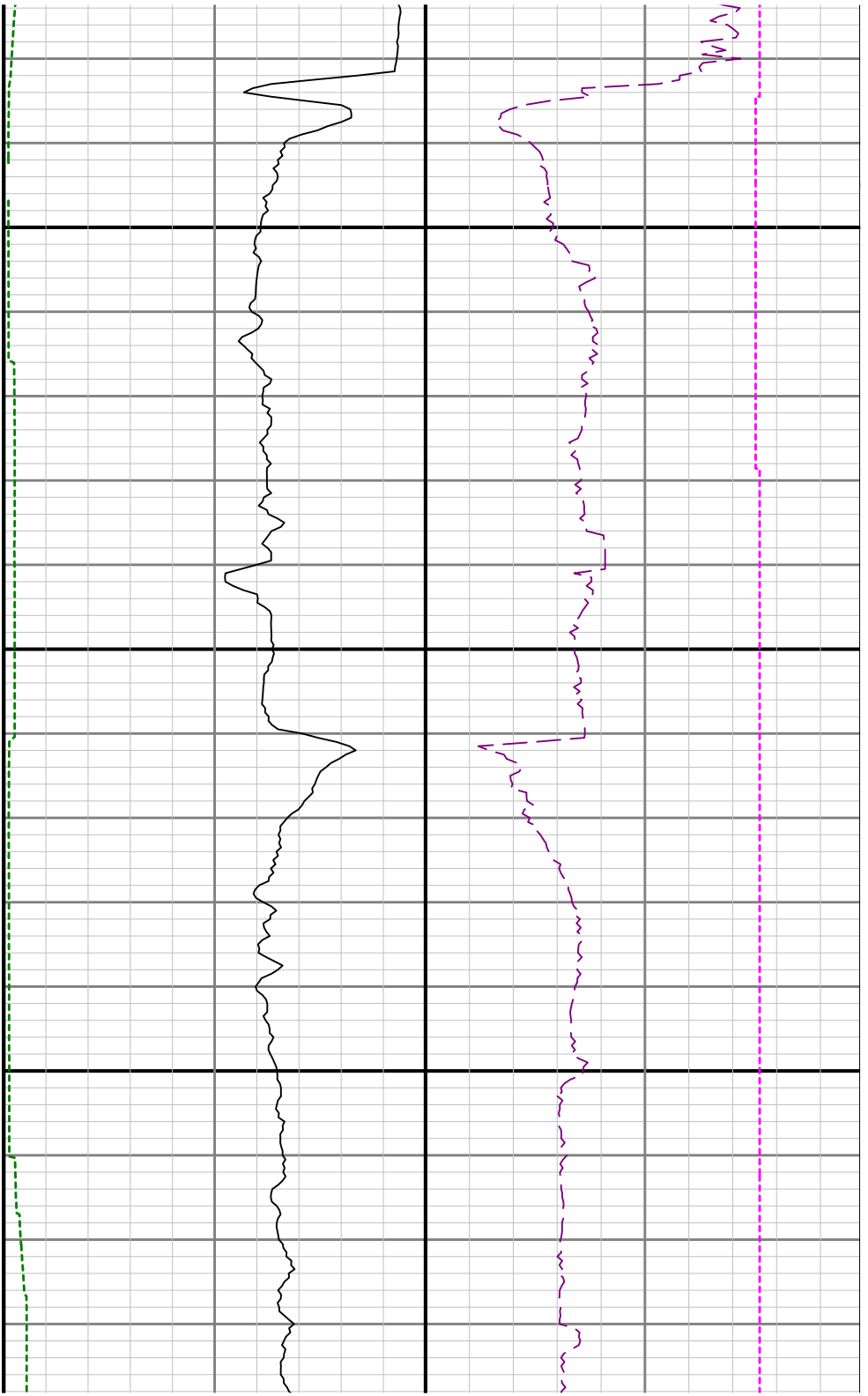


11500

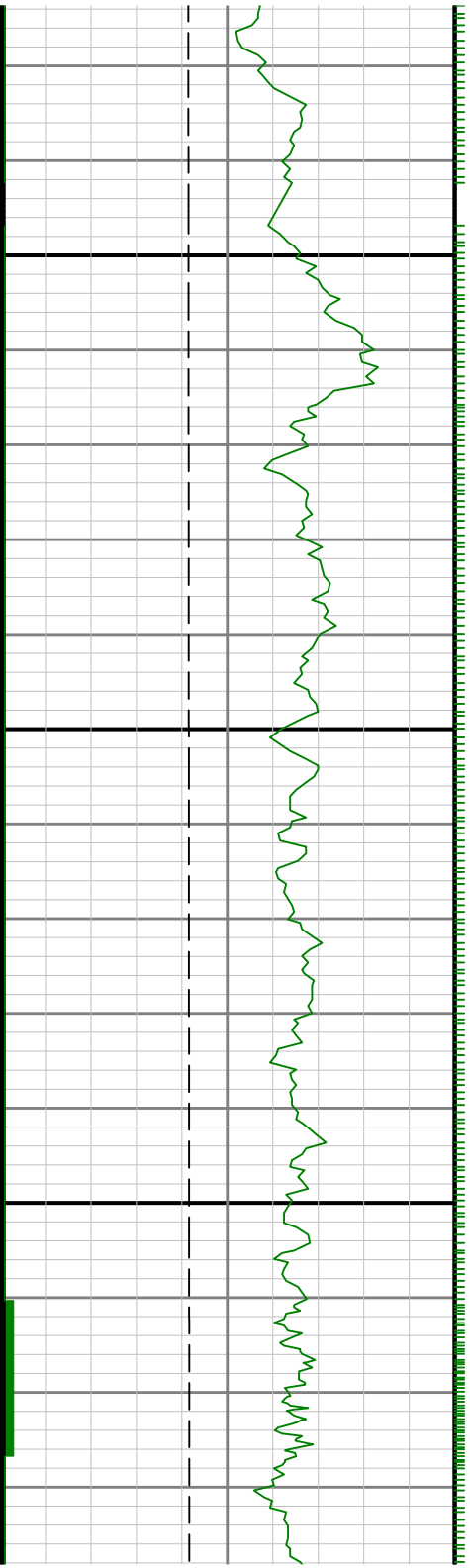
11600

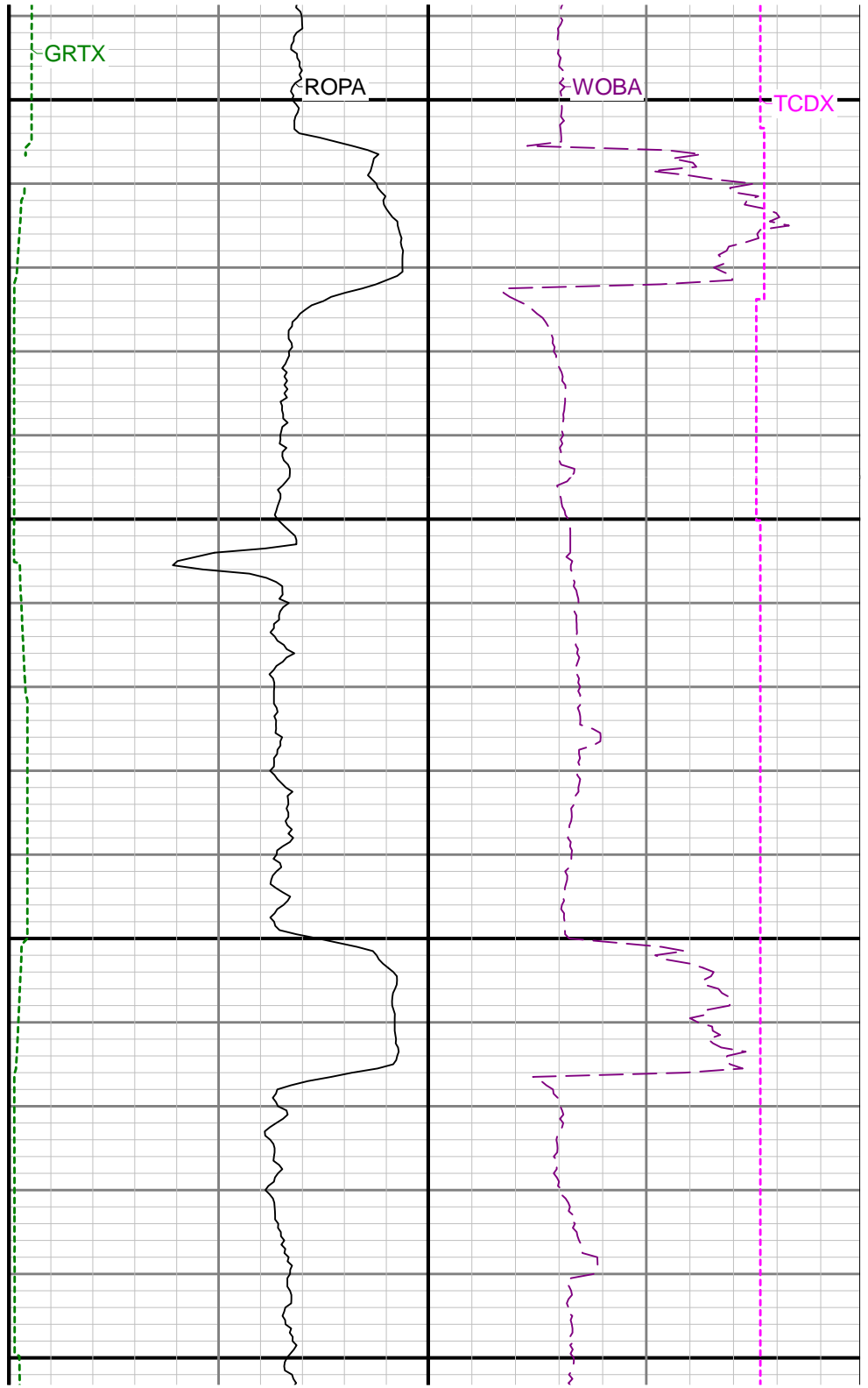
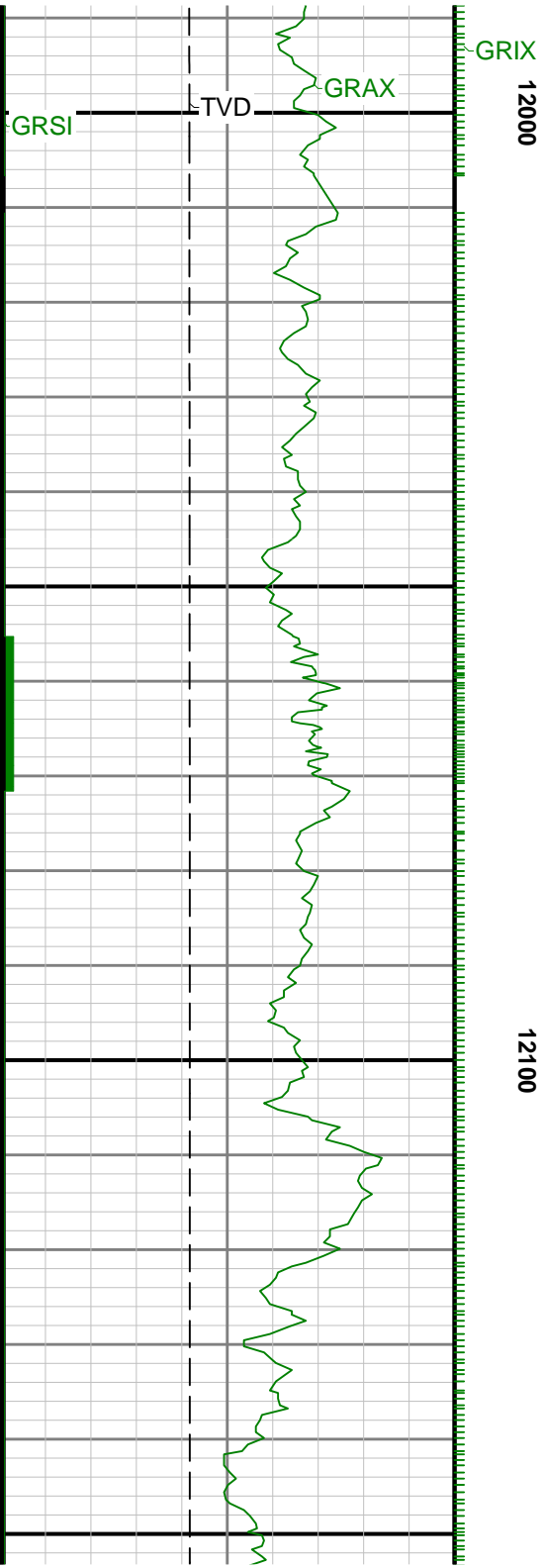


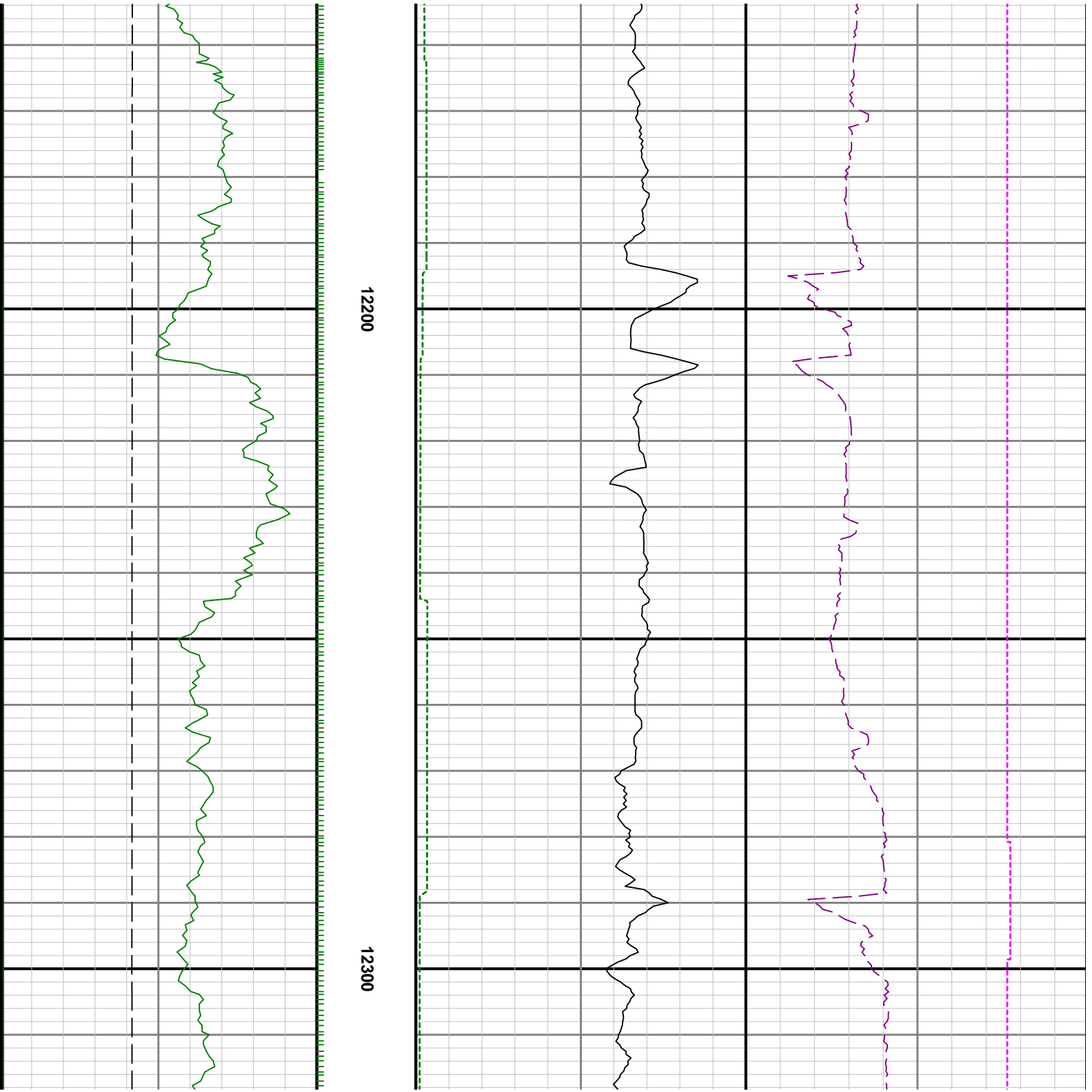


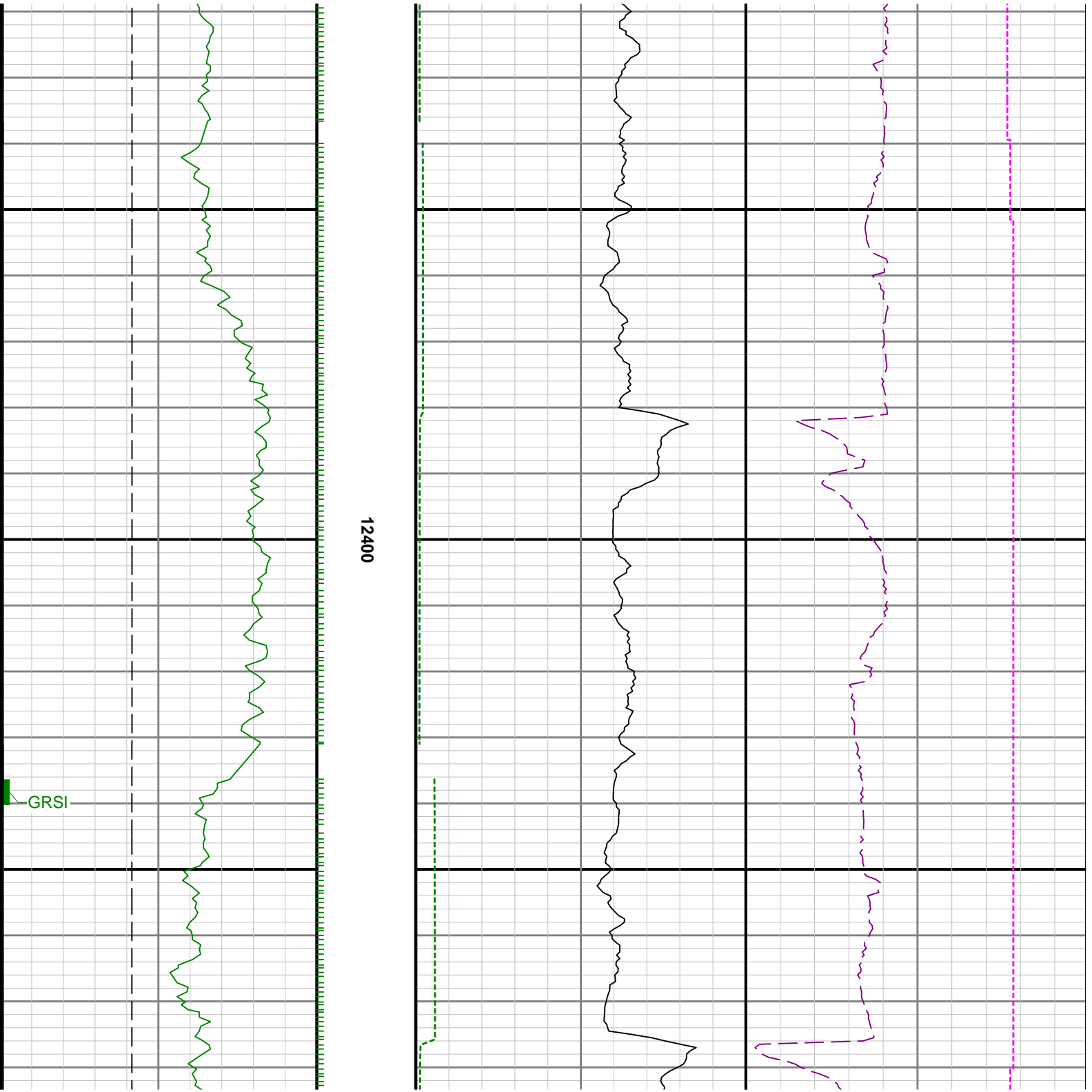


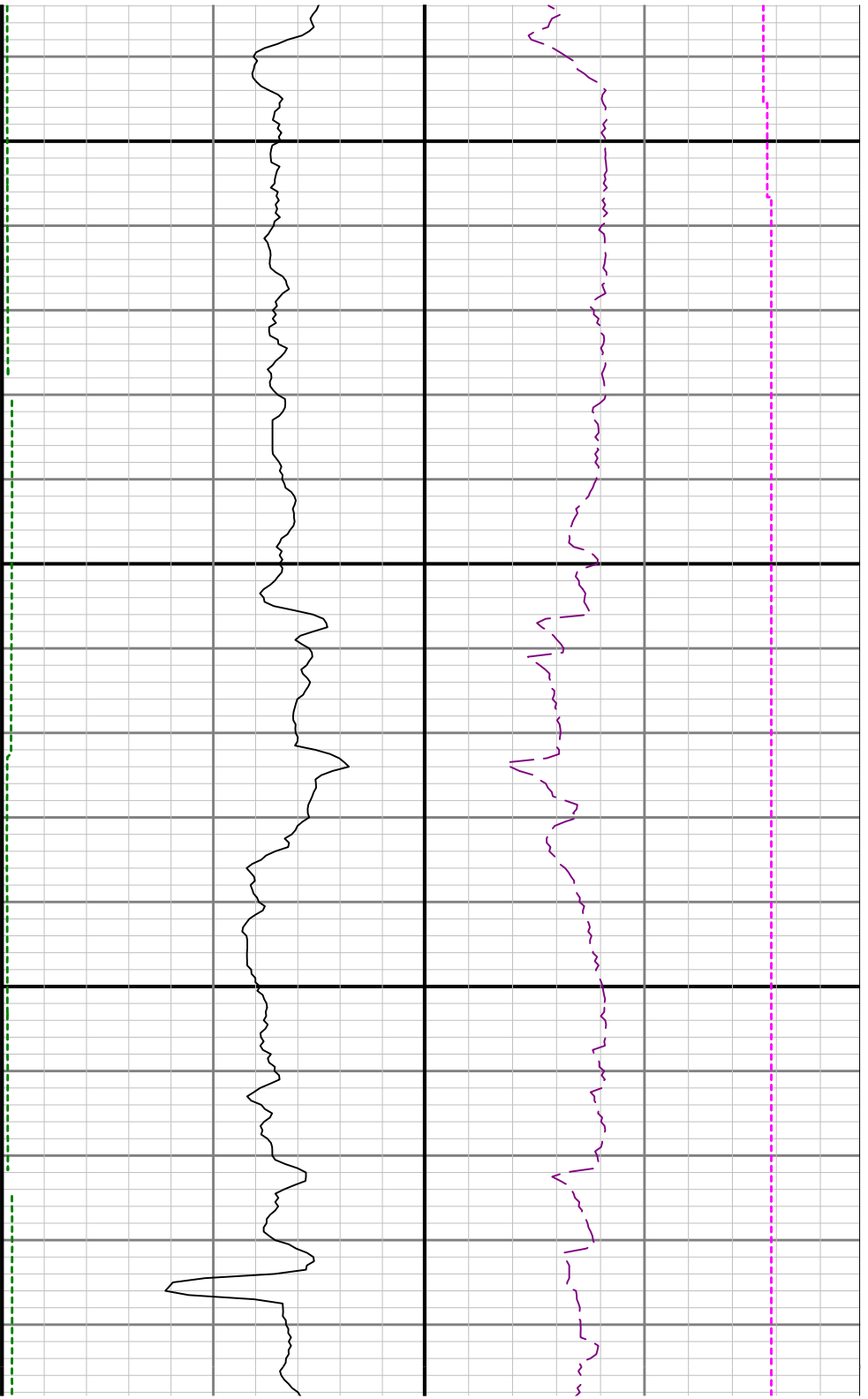
11900











12500

12600

