



LWD MEMORY LOG

Gamma Ray

Scale:

1:240

True Vertical Depth

Company: Noble Energy

Well: Gutteresen State D23-741

Field: Wattenberg

County: Weld Country: United States

Depth Reference:

Driller's Depth

State: Colorado

Status:

Final Print

Surface Location:

Latitude:

Longitude:

040° 12' 20.484" N
104° 30' 52.452" W

Other Services:

API No: 05-123-48624-00

Job ID: 109870240

SEC:

23

TWN:

3N

RGE:

64W

Permanent Datum (P.D.): Mean Sea Level

Elevation:

0.00 ft

Log Measured From:

Rig Floor

Above P.D.:

4840.00 ft

Elev. KB:
Elev. DF:
Elev. GL:

N/A
4840.00 ft
4810.00 ft

Dates

Interval

Magnetic Field Reference

From: 2019-06-18

To: 2019-06-21

Spud: 2019-06-17

Drilled (ft)

1968.00

Top: 1968.00

Bottom: 17637.00

Logged (ft)

Top: 1968.00

Bottom: 17624.00

Azi Reference North:

Total Magnetic Field Strength: (nT)

Mag to Reference North Correction: (deg)

Grid Dip Angle: (deg)

66.65

52084

7.44

Borehole Record

Casing Record

Hole Size (in)

From (ft)

To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

13.500

30.00

1968.00

9.625

36.00

30.00

1958.00

8.500

1968.00

17673.00

Mud Record

Deviation Record

Type

From (ft)

To (ft)

Hole Size (in)

Interval (ft)

Inc | Az (Start)

Inc | Az (End)

Oil Based Mud

1968.00

17637.00

8.500

15669.00

0.09 | 330.30

89.97 | 3.40

Acquisition System

Software Version

Other

Cadence

RT 5.2

Plot Studio

5.2.8472.1

Rig:

H&P 517

Contractor:

Helmerich & Payne Drilling Co

District:

RMA

Unit:

D&E

(C) 2018 Baker Hughes, a GE company, LLC - All rights reserved. Baker Hughes, a GE company, LLC and its affiliates ("BHGE") provides this information on an "as is" basis for general information purposes and believes it to be accurate as of the date of publication. BHGE does not make any representation as to the accuracy or completeness of the information and makes no warranties of any kind, specific, implied or oral, to the fullest extent permissible by law, including those of merchantability and fitness for a particular purpose or use. BHGE hereby disclaims any and all liability for any direct, indirect, consequential or special damages, claims for lost profits, or third party claims arising from the use of the information, whether a claim is asserted in contract, tort, or otherwise. The BHGE logo is a trademark of Baker Hughes, a GE company, LLC. GE and the GE monogram are trademarks of General Electric Company used under trademark license.

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 (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	3.00	AutoTrak Curve	1968.00	3168.00	1968.00	3181.00	2019-06-18 07:50	2019-06-18 12:39	4.64
2	1	8.500	PDC	3.00	AutoTrak Curve	3168.00	11936.00	3181.00	11949.00	2019-06-18 18:31	2019-06-21 09:33	34.17
3	3	8.500	PDC	3.00	AutoTrak Curve	11936.00	17624.00	11949.00	17637.00	2019-06-20 22:14	2019-06-21 21:02	22.93

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Andrew Hays	2019-06-17	2019-06-22						

Mud Properties Record

Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2019-06-18 15:00	1	3178.00	Oil Based Mud	9.2	13	N/A	N/A	73/16.5	Active Pit	24781	0.00
2019-06-18 16:46	2	3181.00	Oil Based Mud	9.2	13	N/A	N/A	73/16.5	Active Pit	24781	0.00
2019-06-19 04:00	2	5383.00	Oil Based Mud	9.0	11	N/A	N/A	73/18	Active Pit	27211	0.00
2019-06-20 17:26	3	11949.00	Oil Based Mud	9.4	9	N/A	N/A	72/16	Active Pit	24295	0.00
2019-06-21 04:00	3	13522.00	Oil Based Mud	9.4	10	N/A	N/A	72/16	Active Pit	21380	0.00
2019-06-22 04:00	3	17637.00	Oil Based Mud	9.5	12	N/A	N/A	71/17	Active Pit	24295	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	AutoTrak Curve Steering Unit	14262247	Near Bit Inclination	5.93	6.73	7.000	4.330
1	AutoTrak Curve Steering Unit	14262247	Near Bit VSS	5.93	6.73	7.000	4.330
1	AutoTrak Curve MWD	12805613	Gamma (single)	2.75	12.90	7.000	3.250
1	AutoTrak Curve MWD	12805613	Directional (mag)	12.27	22.42	7.000	3.250
2	AutoTrak Curve Steering Unit	14645504	Near Bit VSS	5.93	6.73	7.000	4.330
2	AutoTrak Curve Steering Unit	14645504	Near Bit Inclination	5.93	6.73	7.000	4.330
2	AutoTrak Curve MWD	14263426	Gamma (single)	2.75	12.90	7.000	3.250
2	AutoTrak Curve MWD	14263426	Directional (mag)	12.27	22.42	7.000	3.250
3	AutoTrak Curve Steering Unit	14645504	Near Bit VSS	5.93	6.73	7.000	4.330
3	AutoTrak Curve Steering Unit	14645504	Near Bit Inclination	5.93	6.73	7.000	4.330
3	AutoTrak Curve MWD	14263426	Gamma (single)	2.75	12.90	7.000	3.250
3	AutoTrak Curve MWD	14263426	Directional (mag)	12.27	22.42	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM

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, depth calibrations and measurements could not be independently verified.
2	Baker Hughes LWD runs 1 through 3 utilized a 6.75 inch NaviGamma service (Directional and Gamma Ray) behind a 8.5 inch bit and rotary steerable assembly from 1968 to 17637 feet MD (1968 to 6826 feet TVD).
3	The Gamma Ray Apparent (GRAM) data is presented 0 to 300 API, per the customer's request.

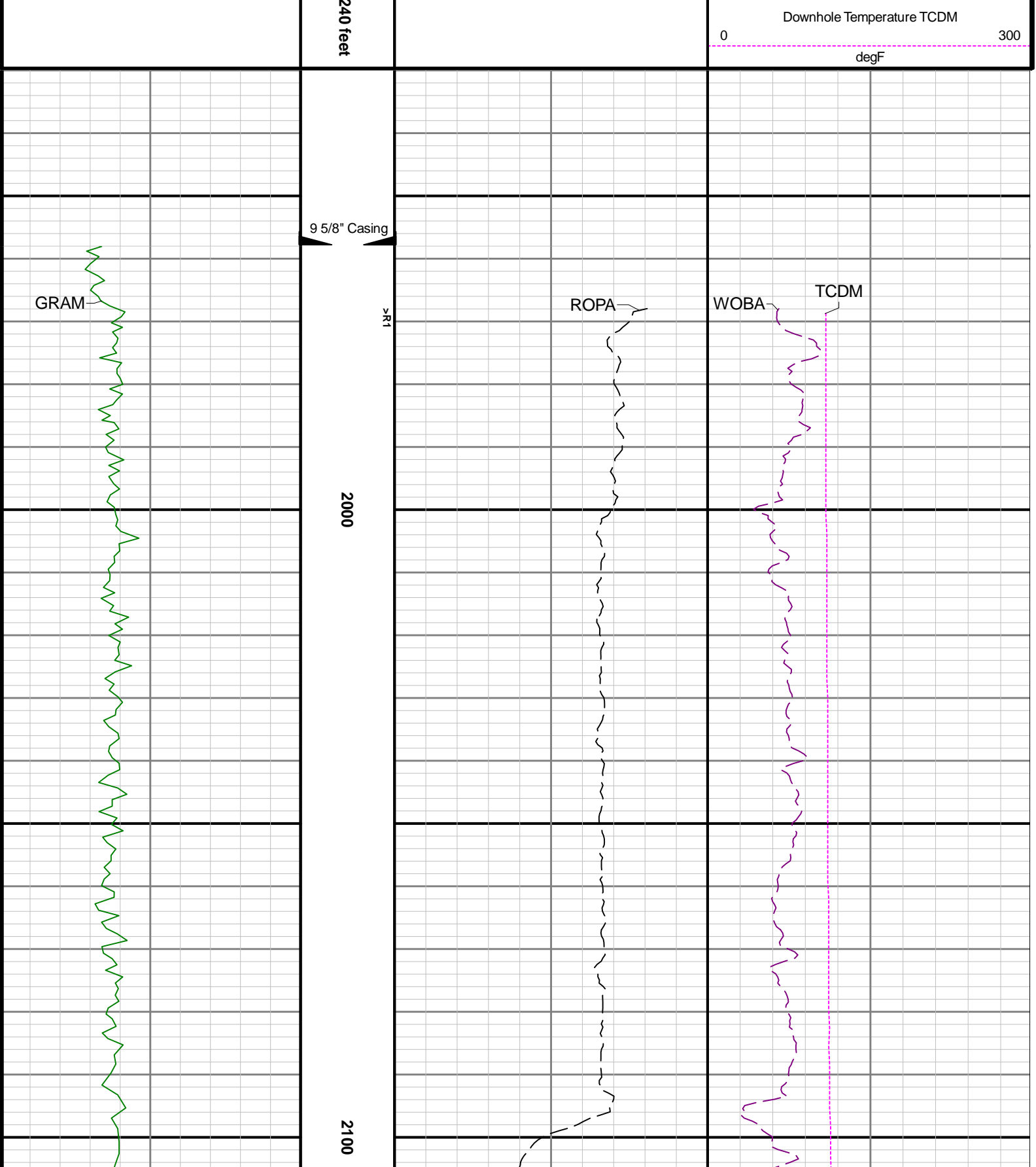
Remarks

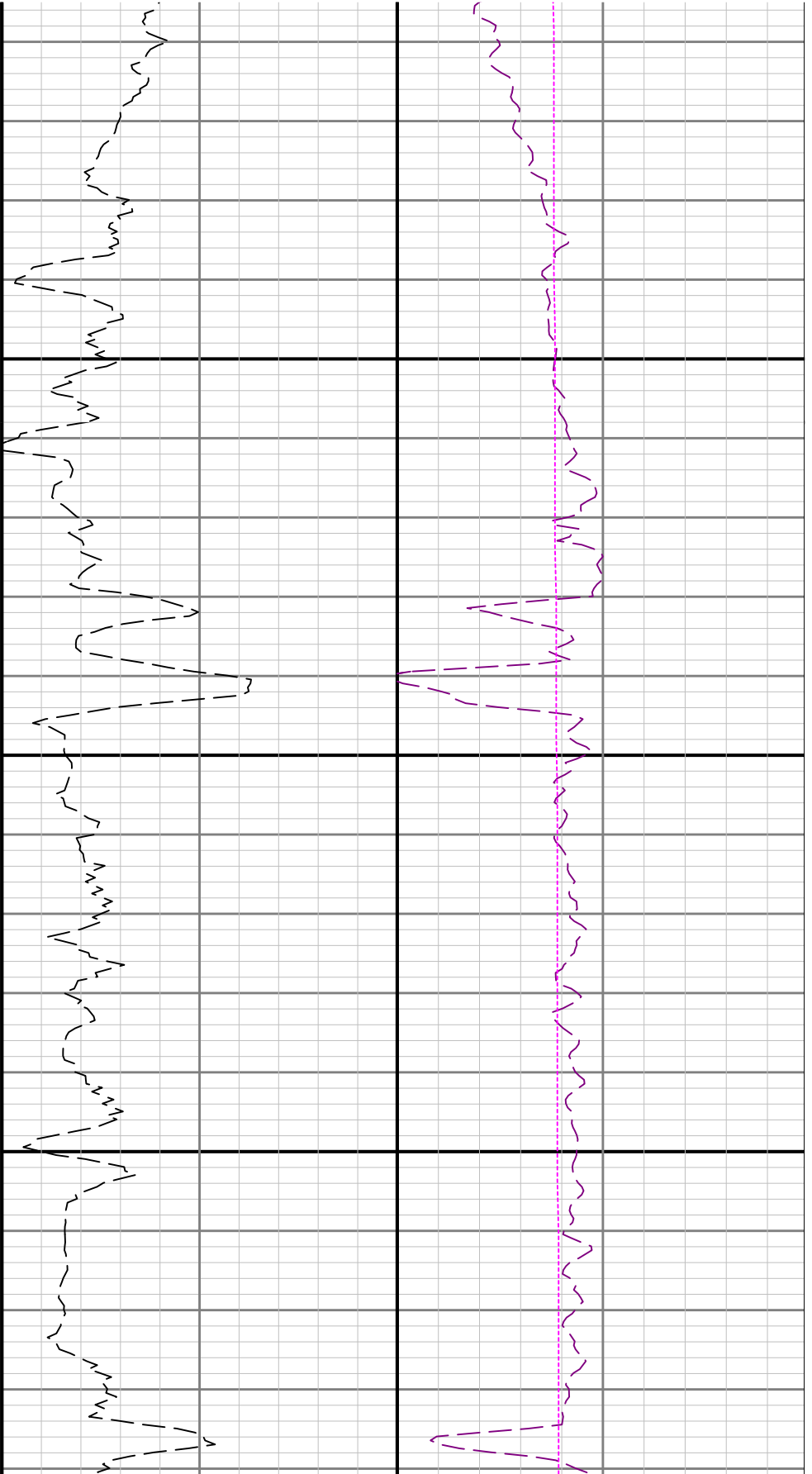
Number	Depth (ft)	Hole Section (in)	Run No.	Remark

Curve Mnemonics

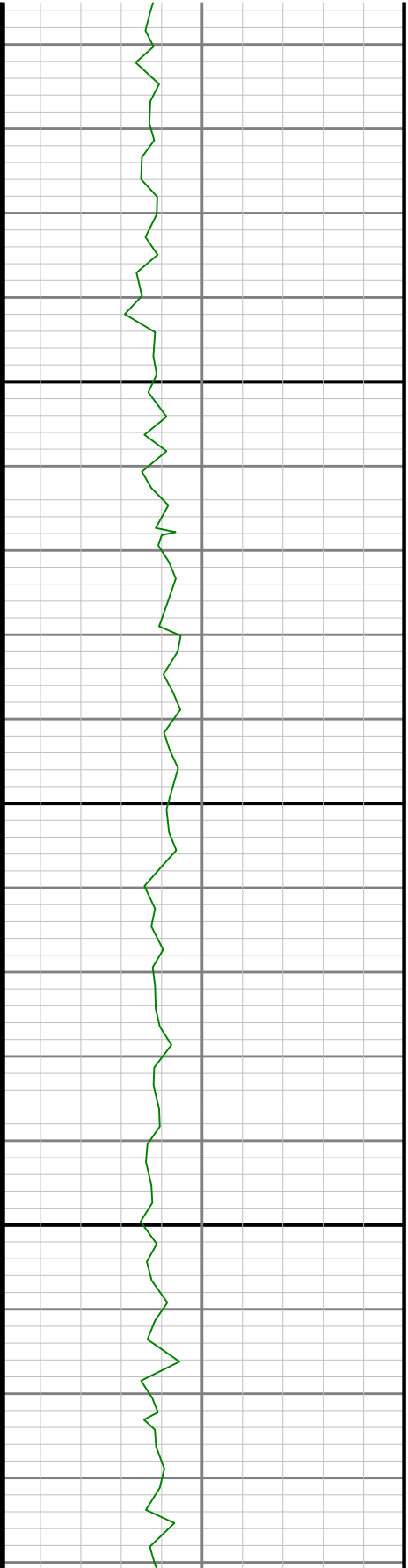
Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAM	Gamma Ray - Apparent - Memory 0.5 ft Average	API
TCDM	Directional Real-Time Survey Temperature	degF

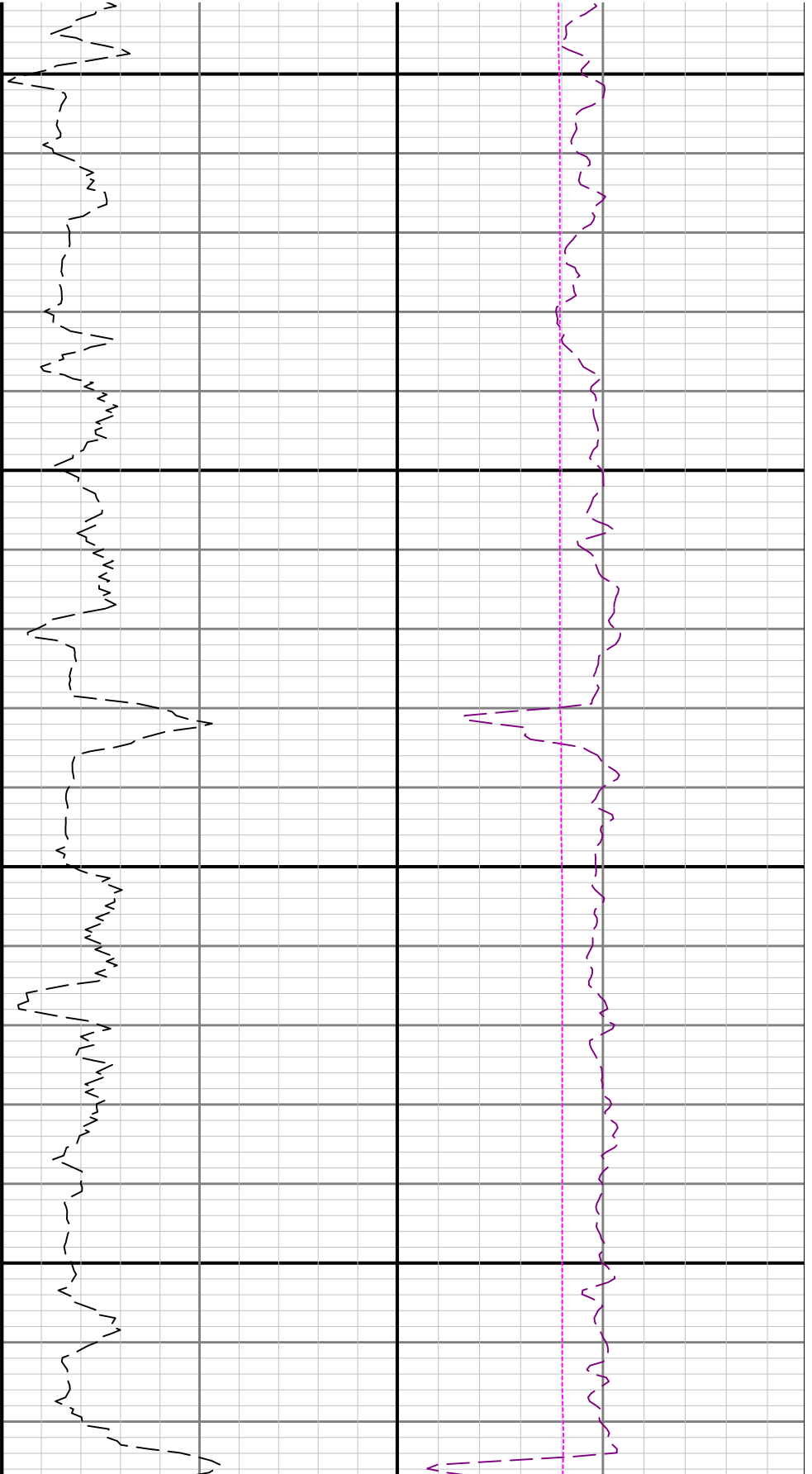
Gamma Ray - Apparent 0.5 ft Average GRAM	TVD 11:00	Depth Averaged ROP 3 ft Average ROPA	Weight On Bit, Average 1 ft Average WOBA
0 300		1000 0	0 50
API		ft/h	klb





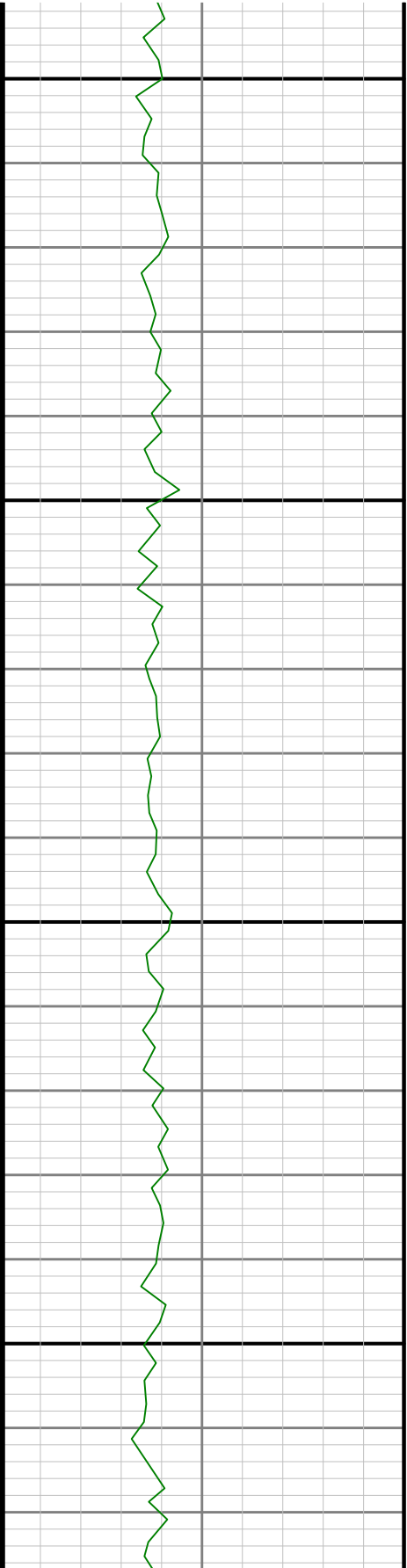
2200

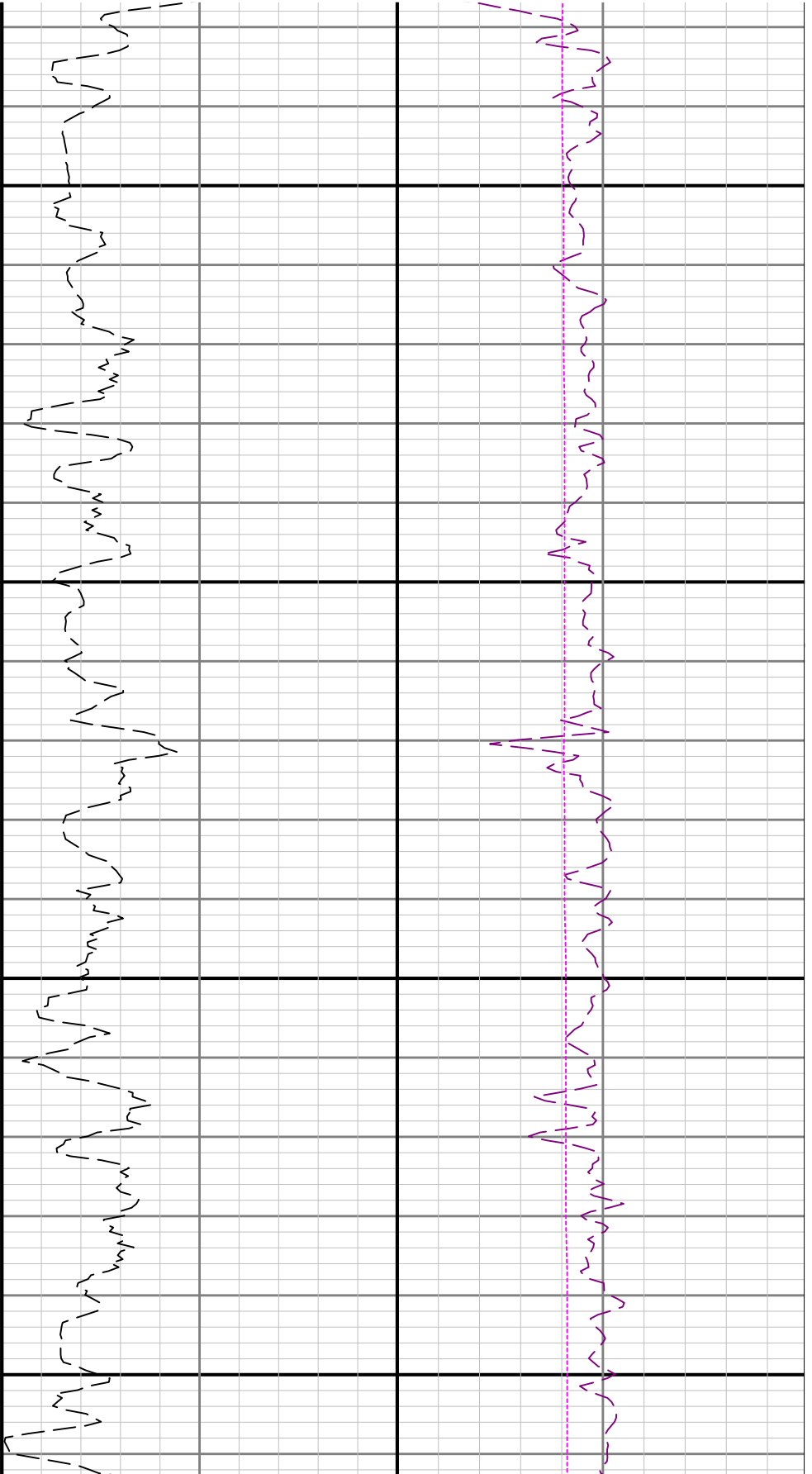




2300

2400

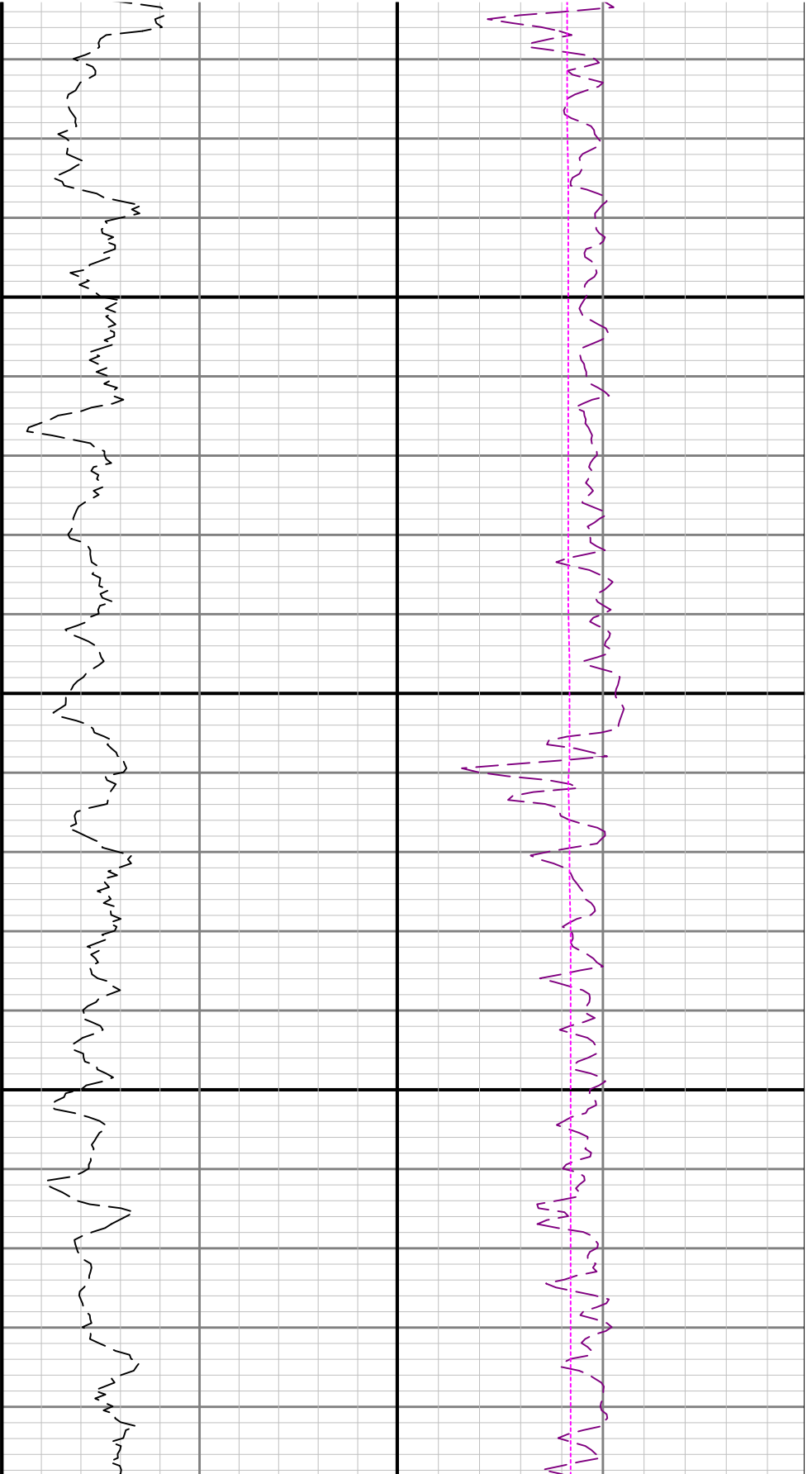




2500

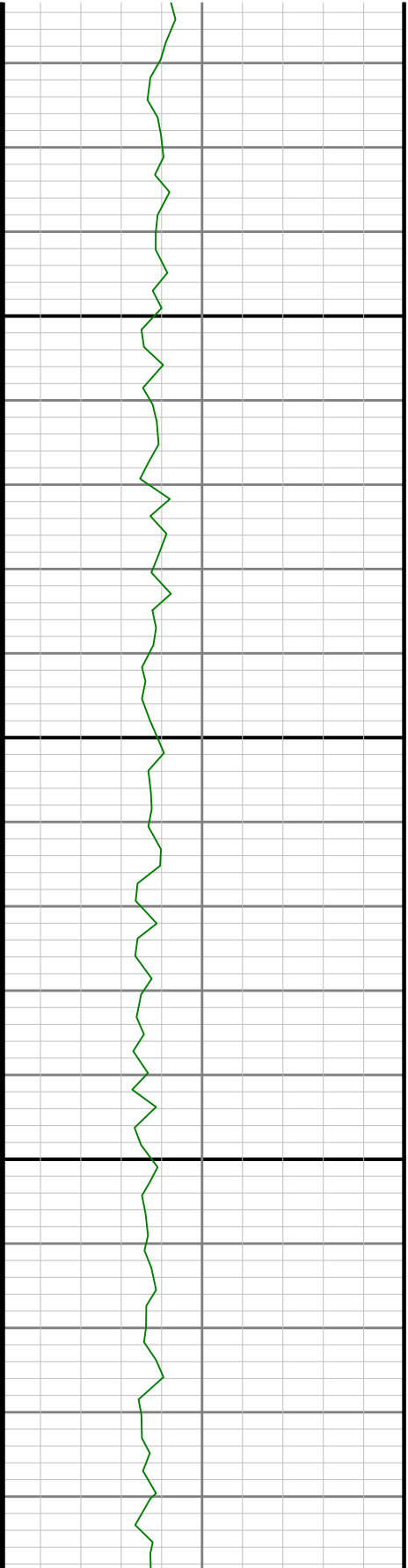
2600

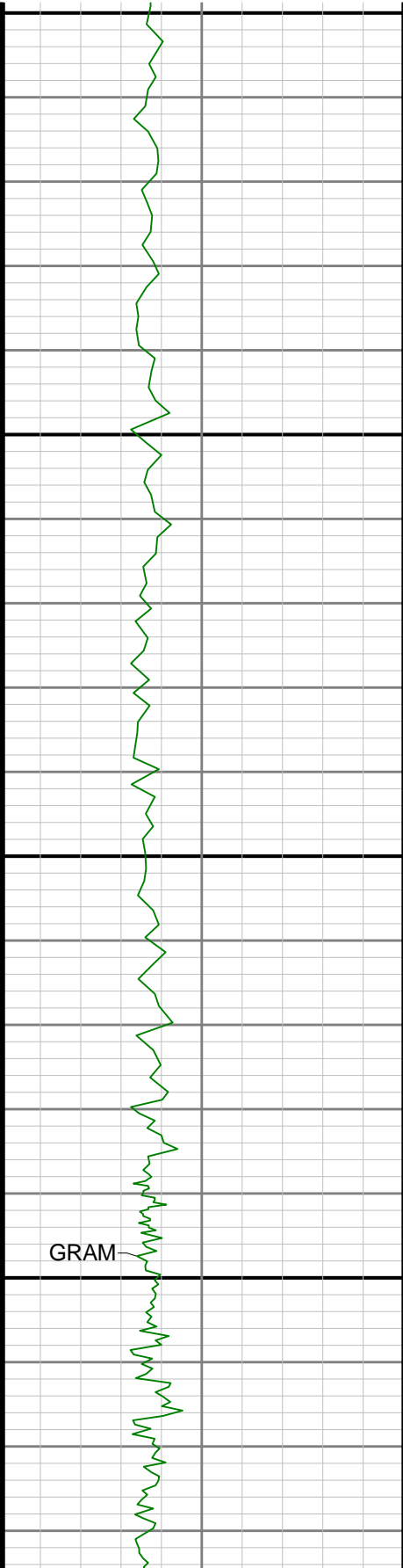




2700

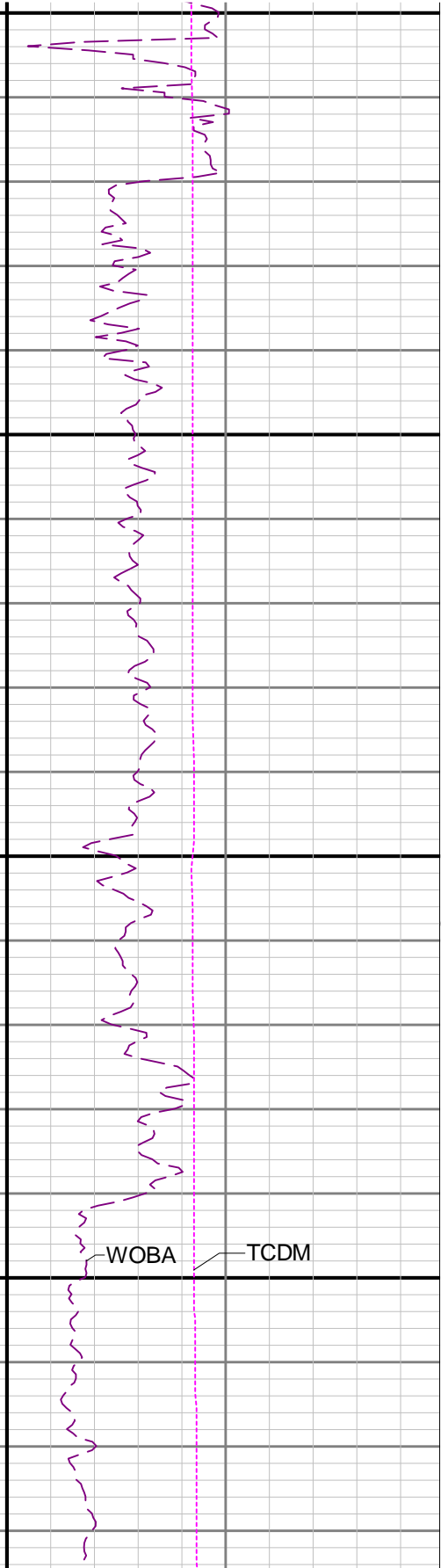
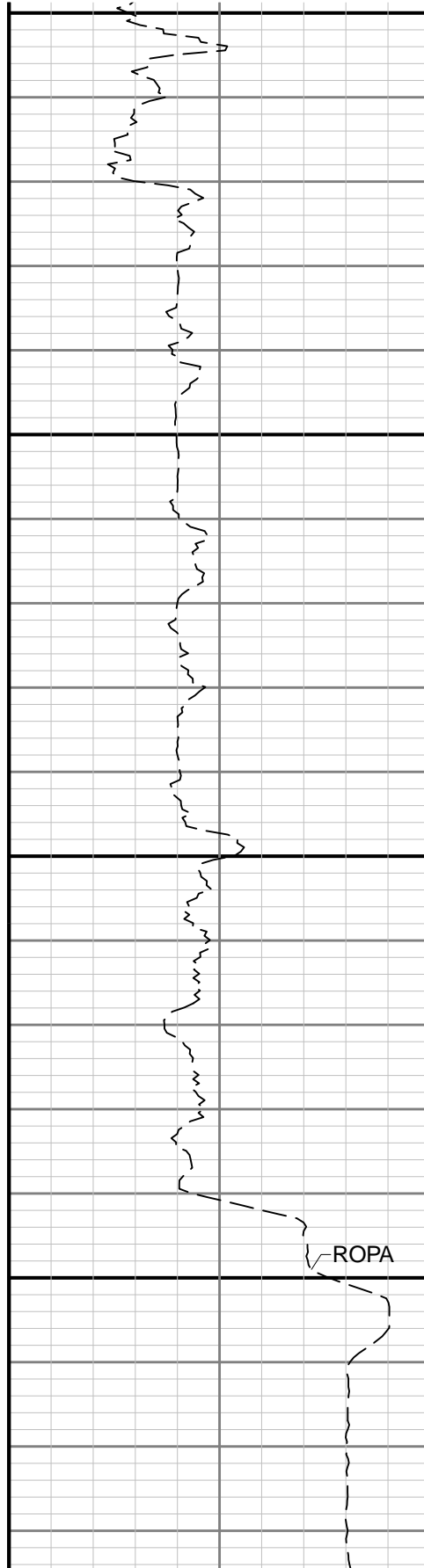
2800

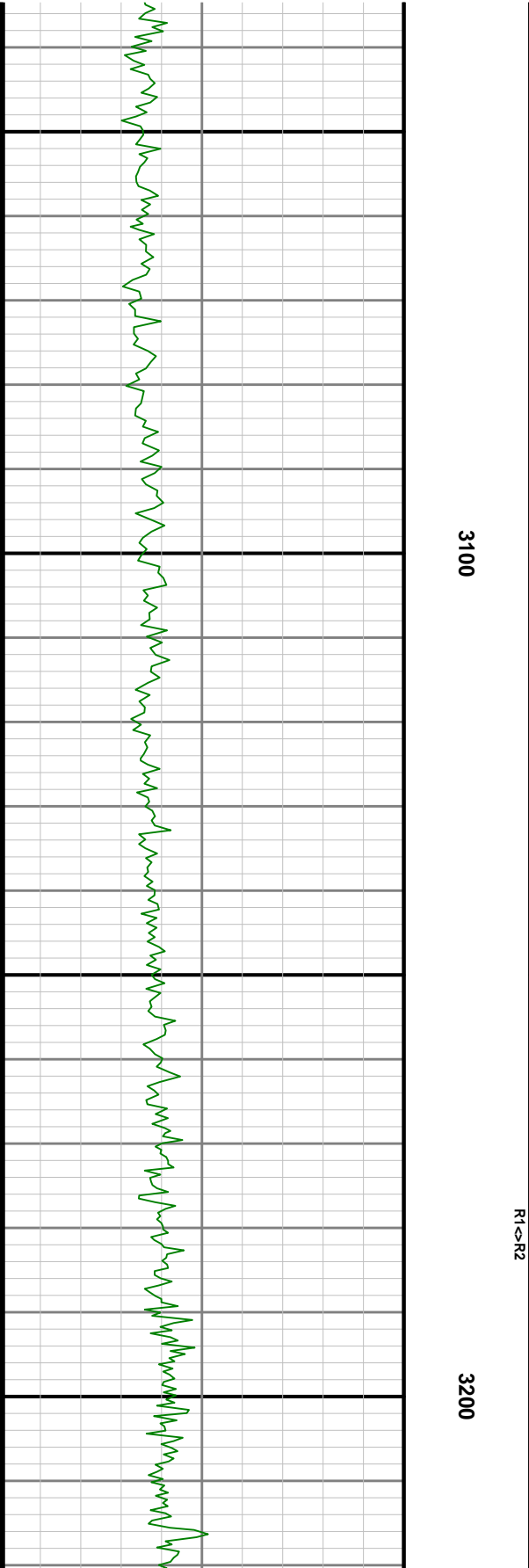
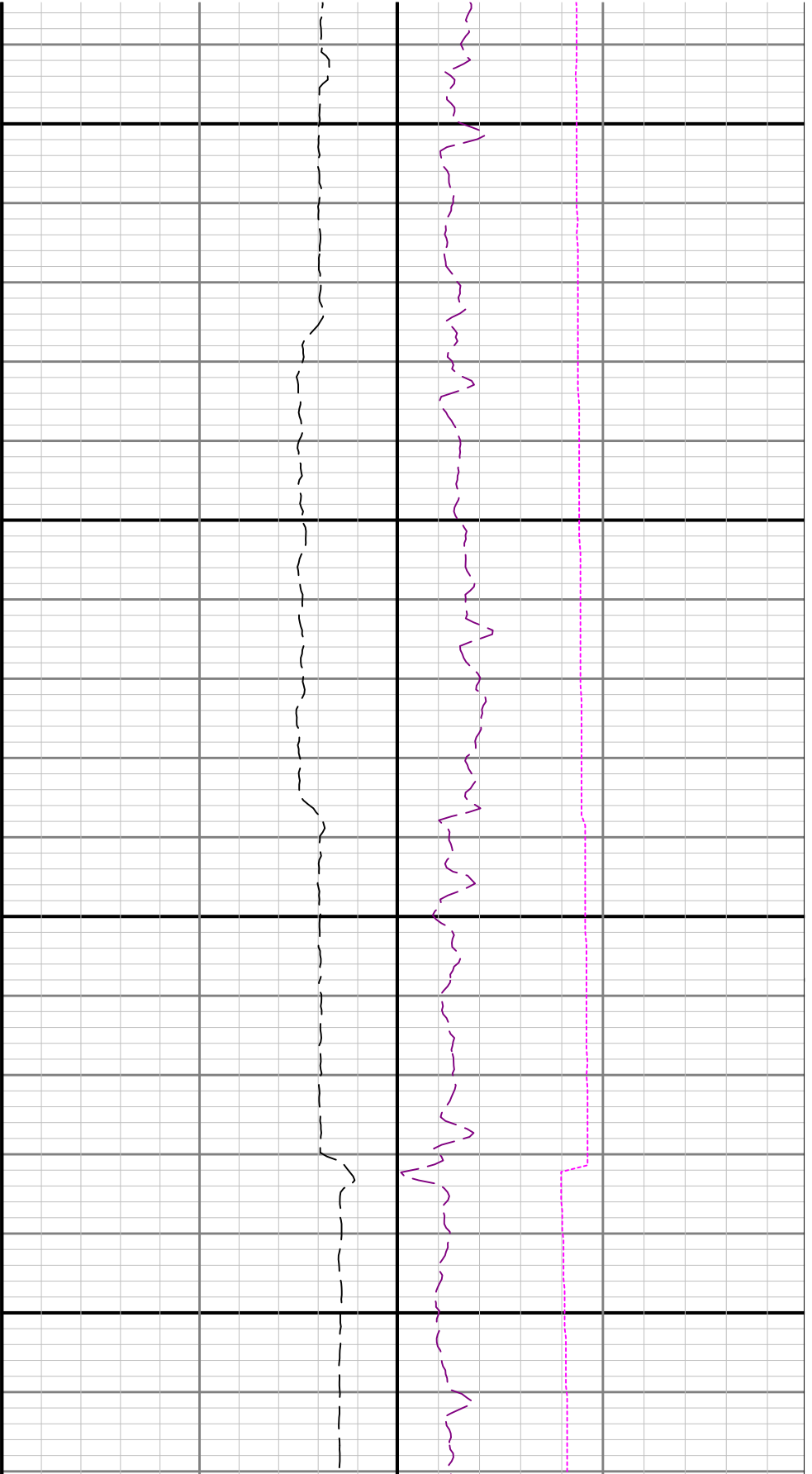


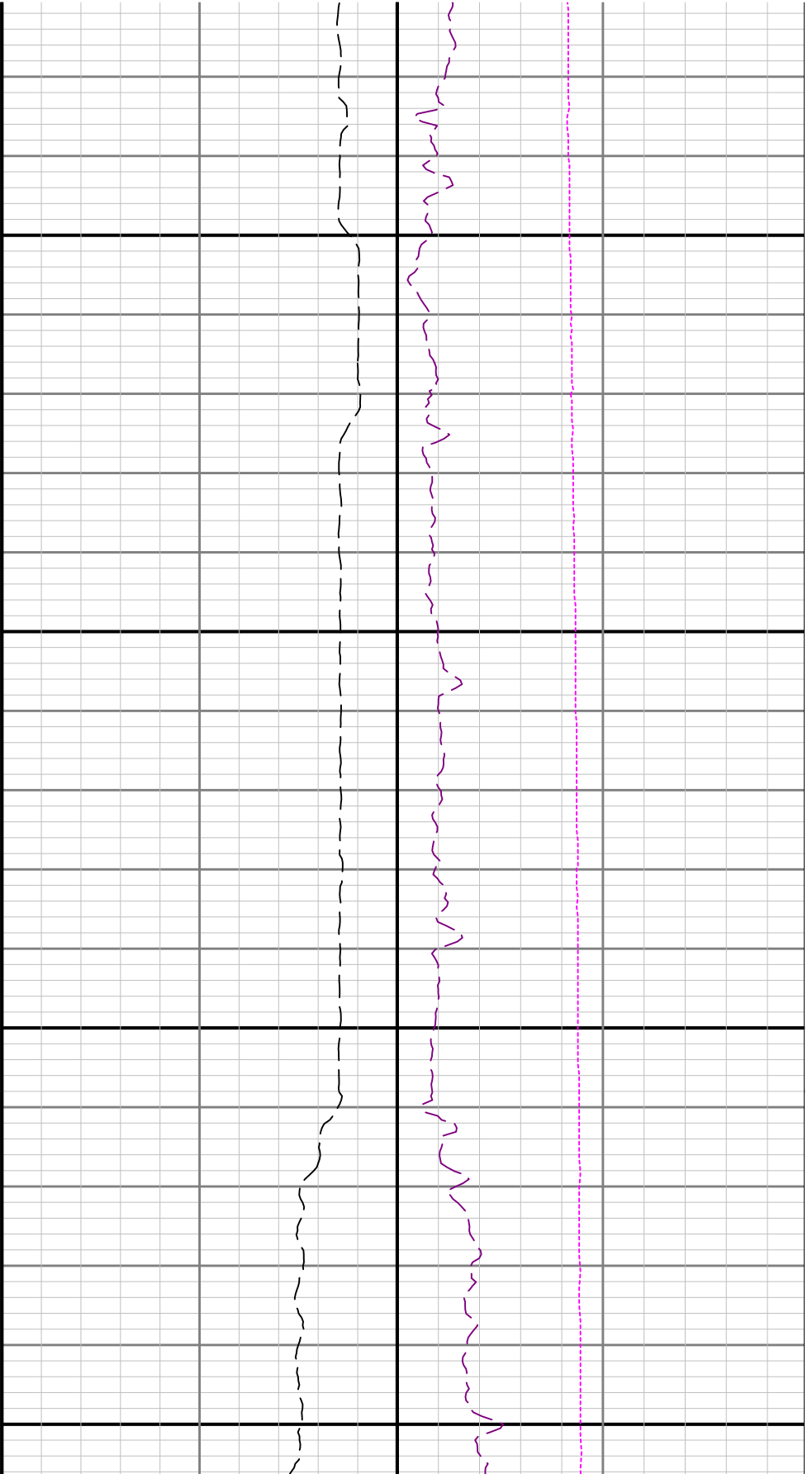


2900

3000

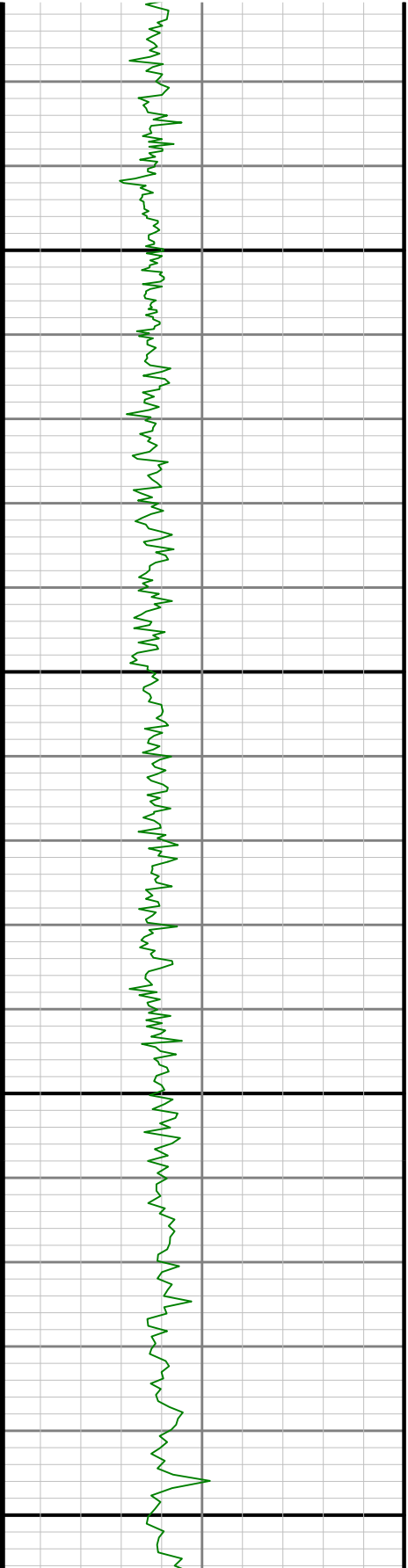


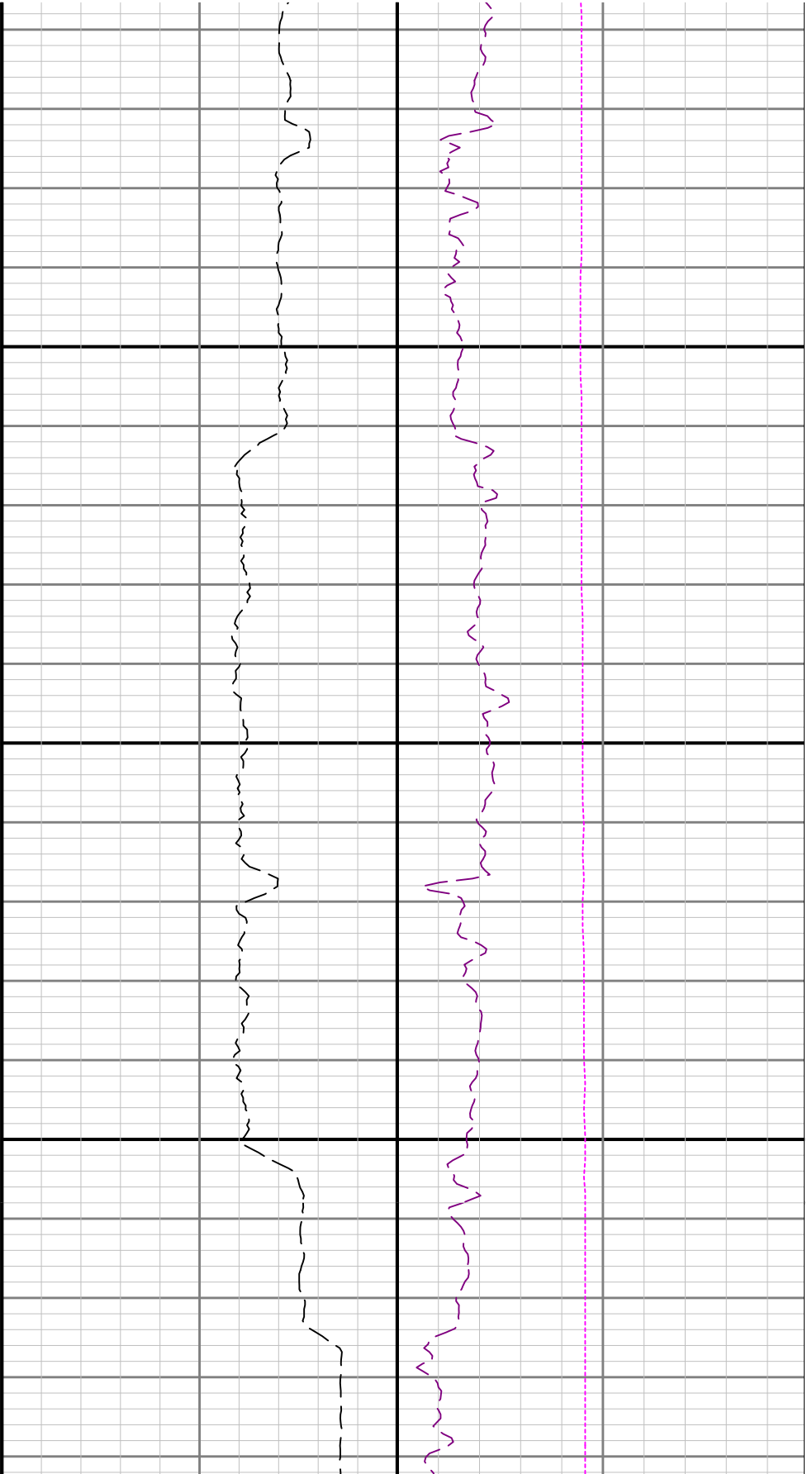




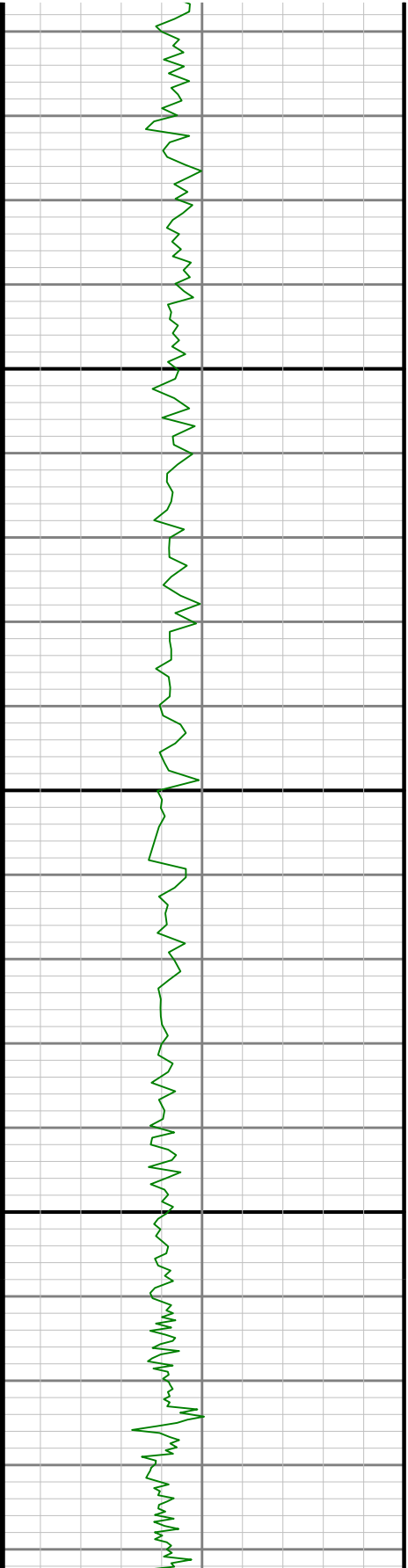
3300

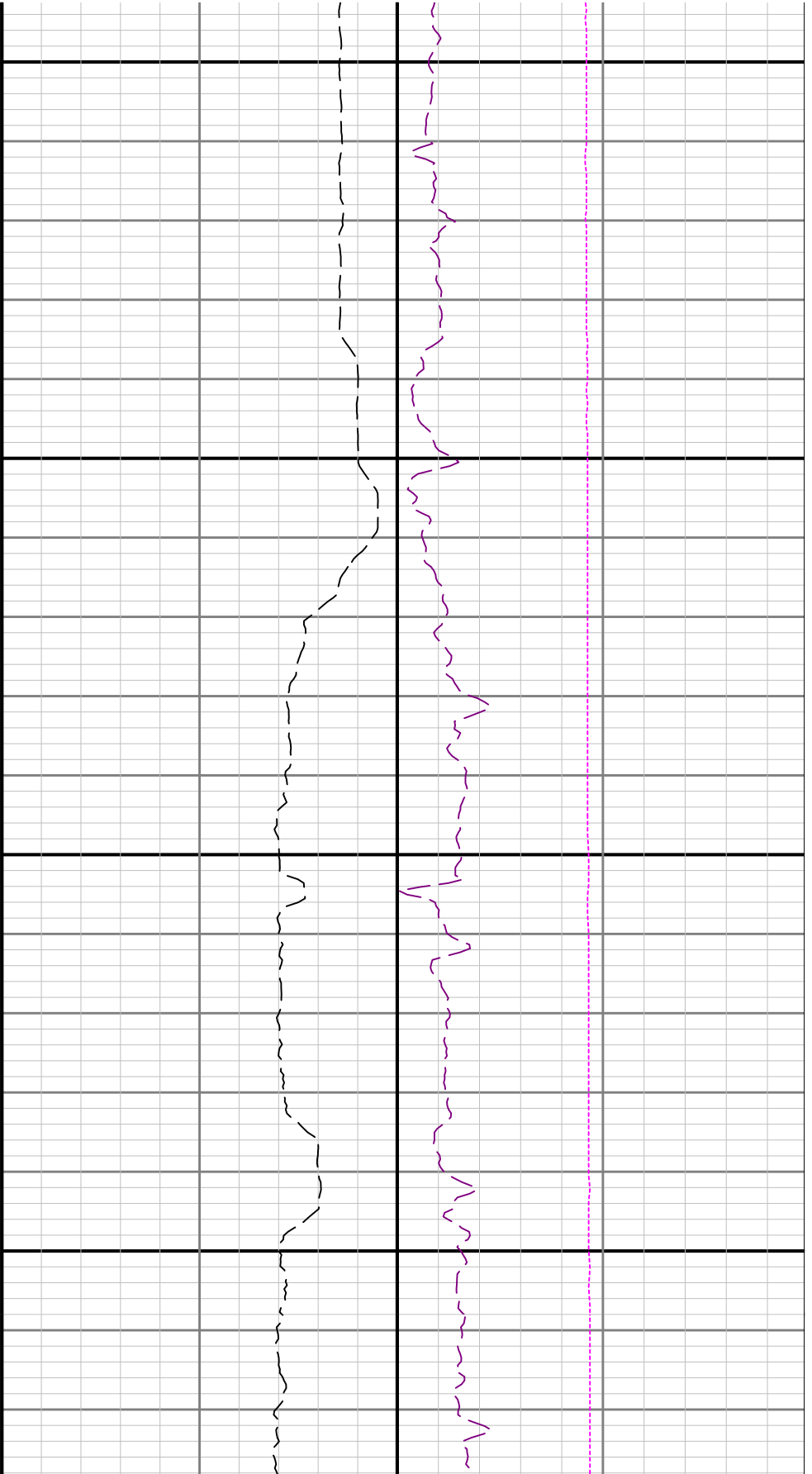
3400





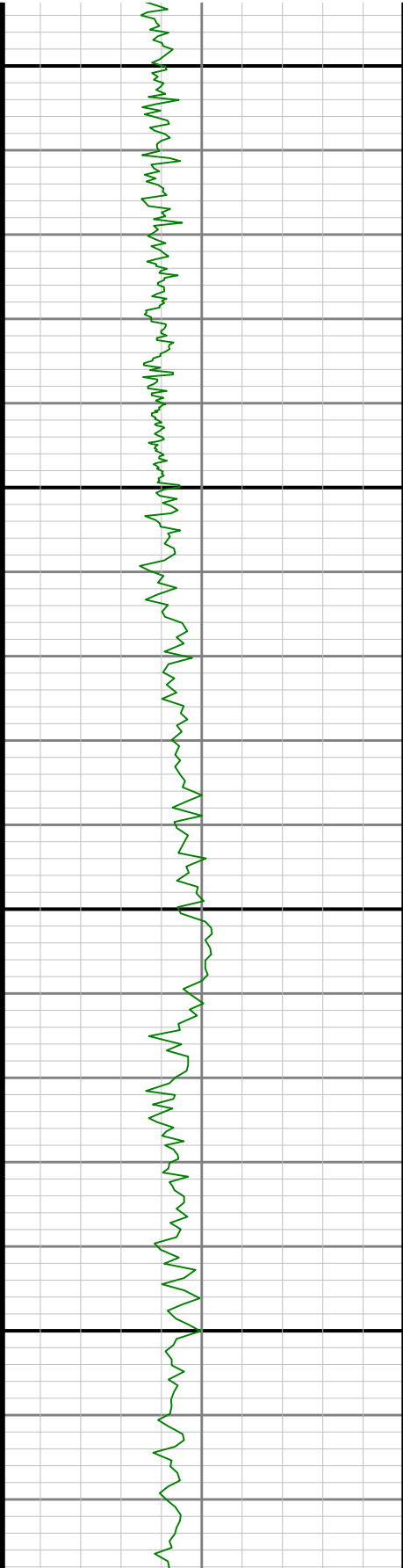
3500

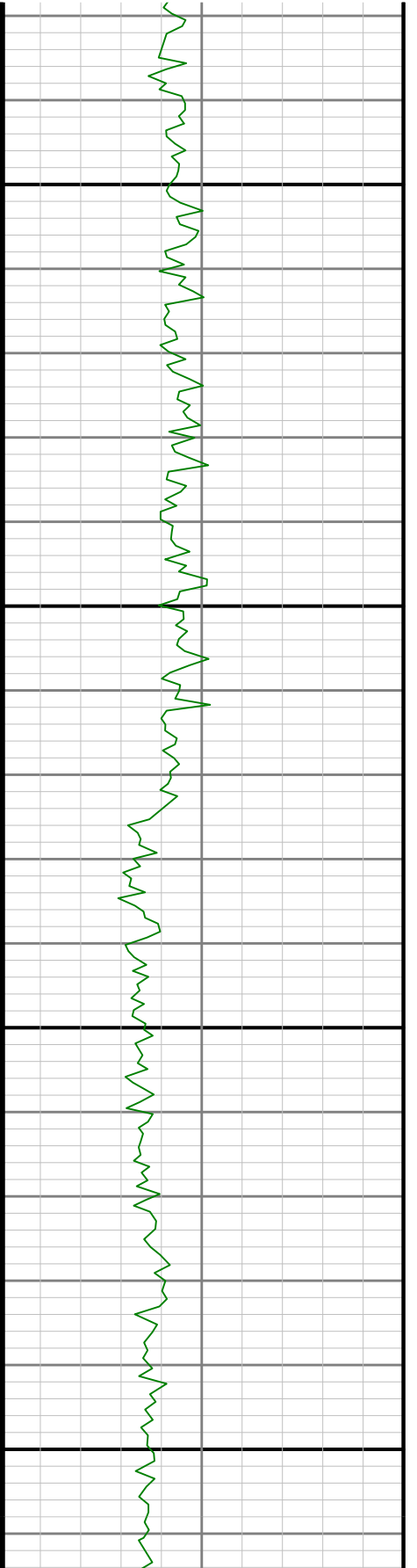
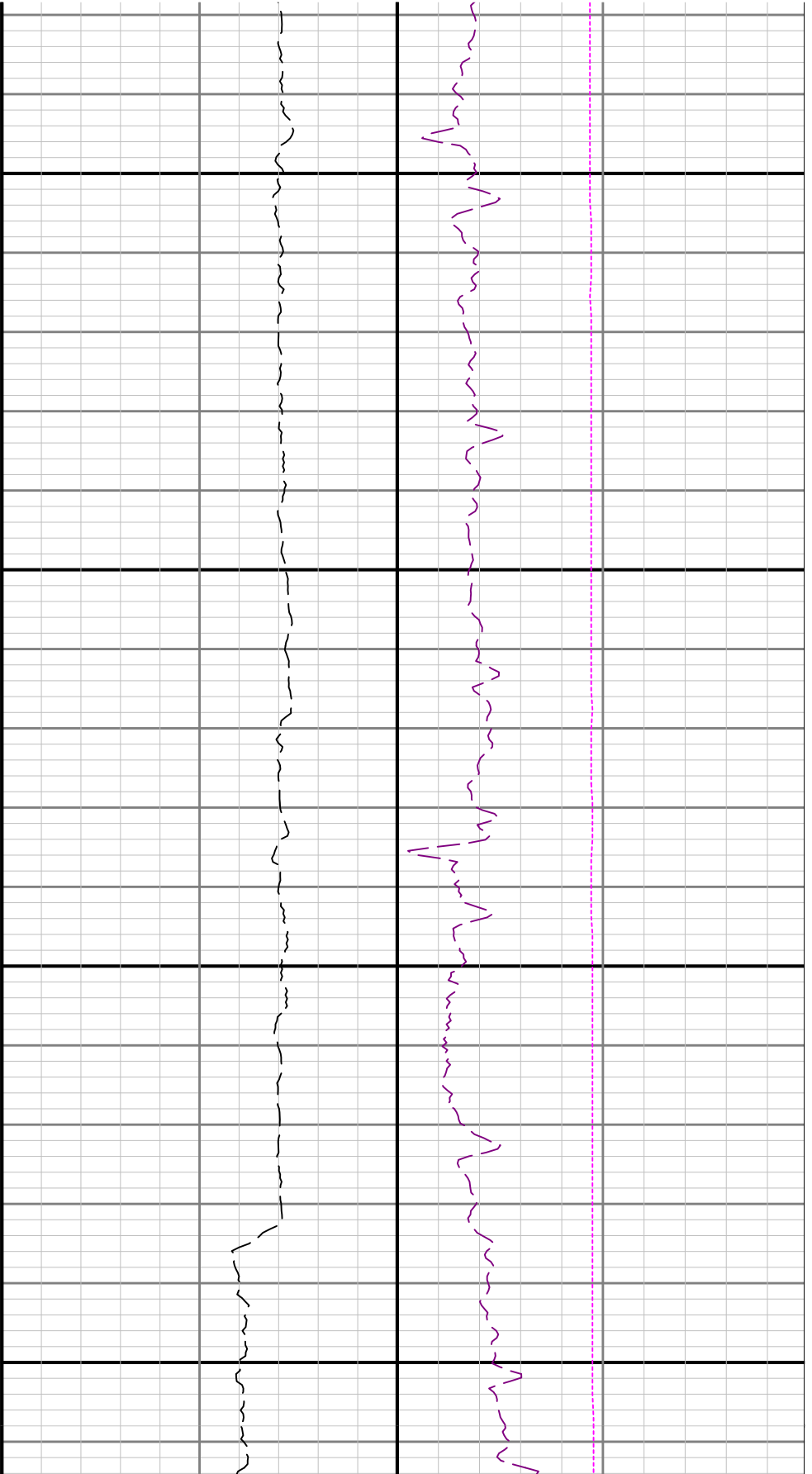


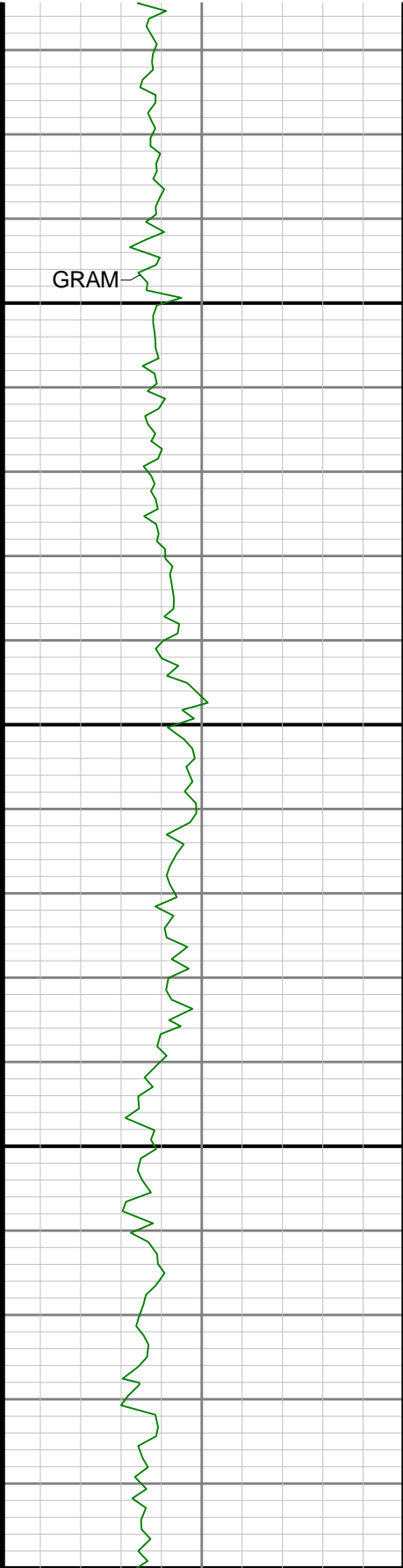


3600

3700

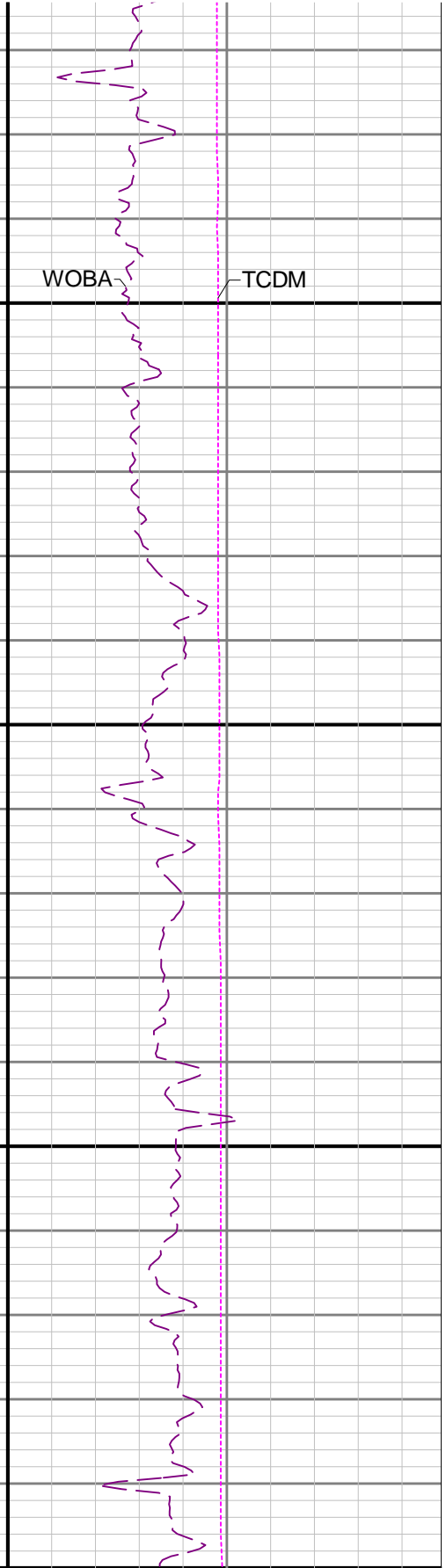
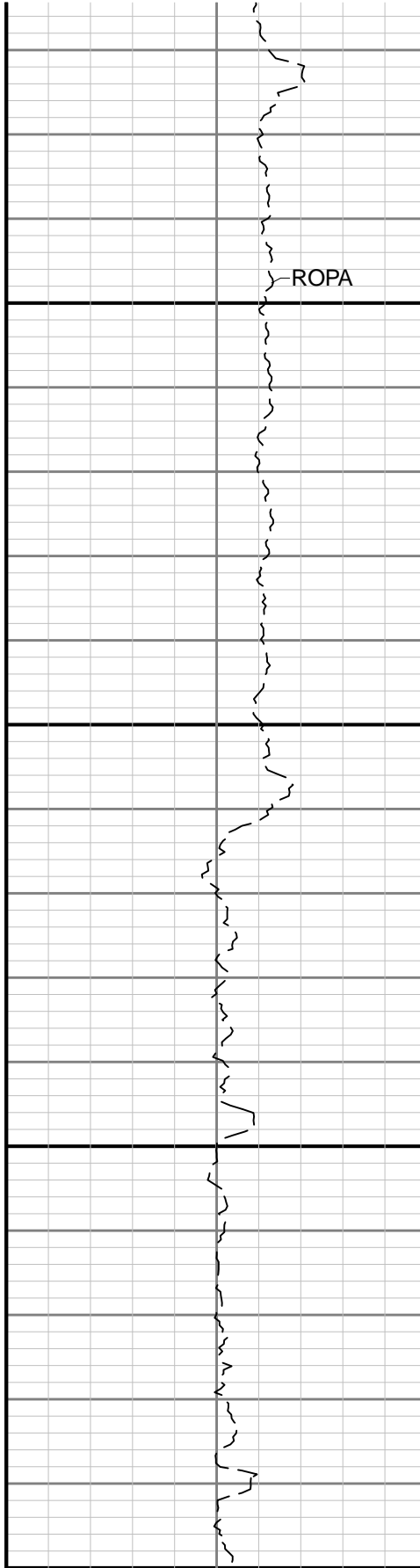


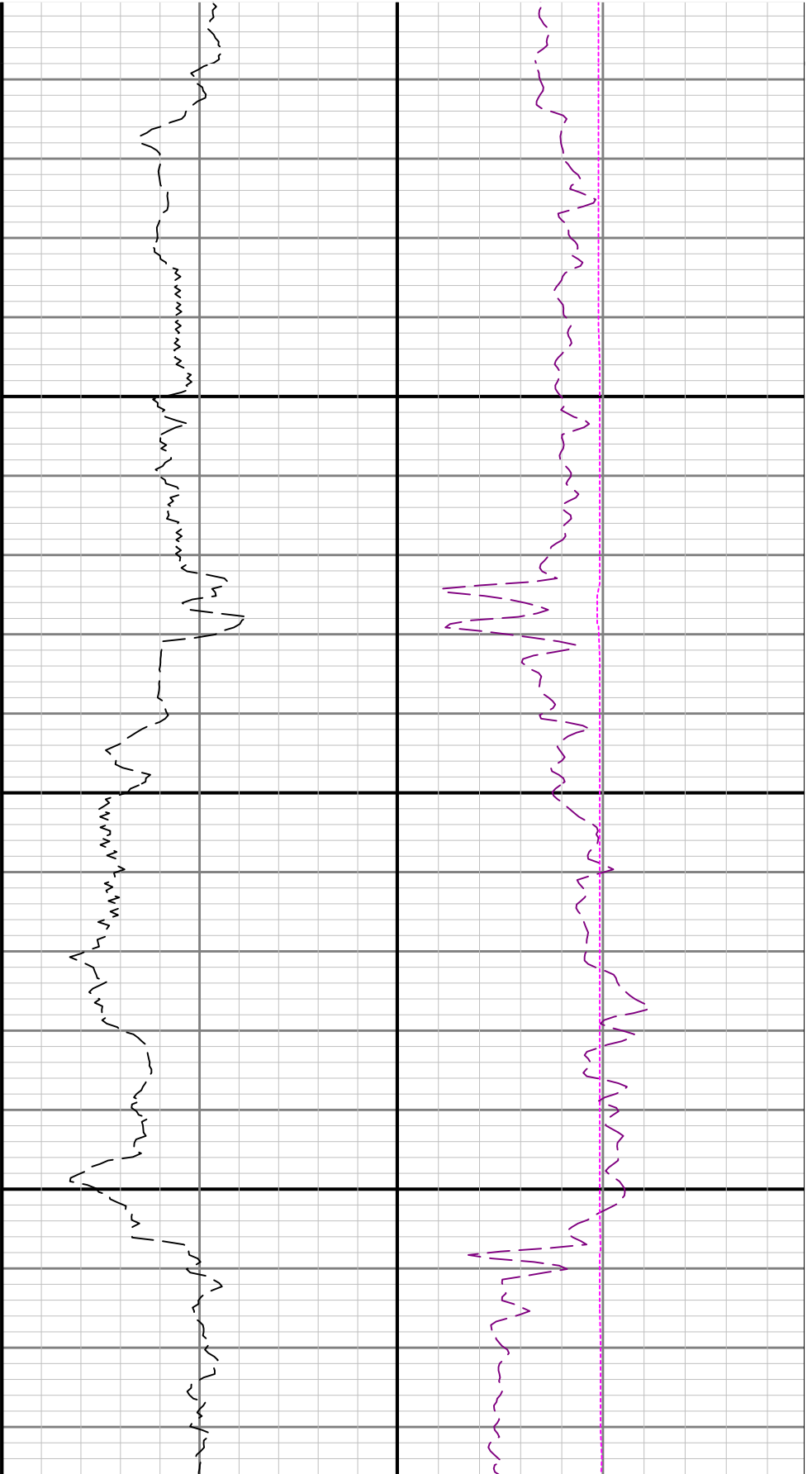




4000

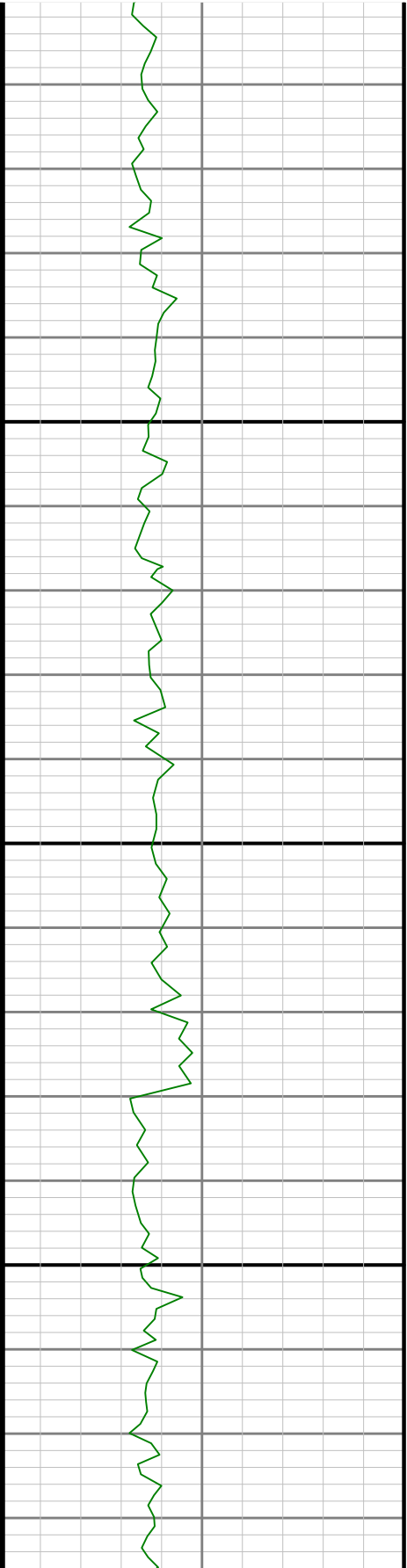
4100

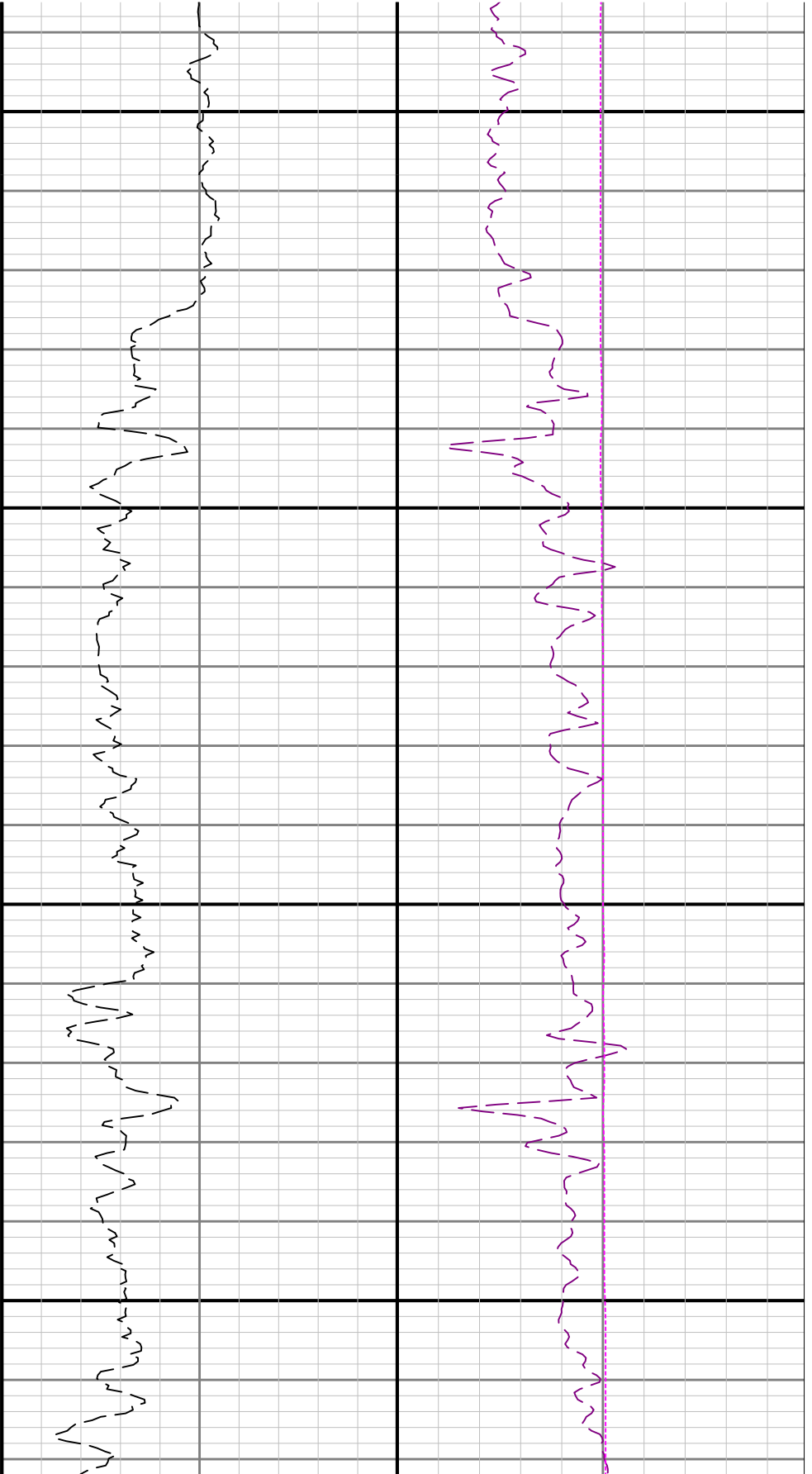




4200

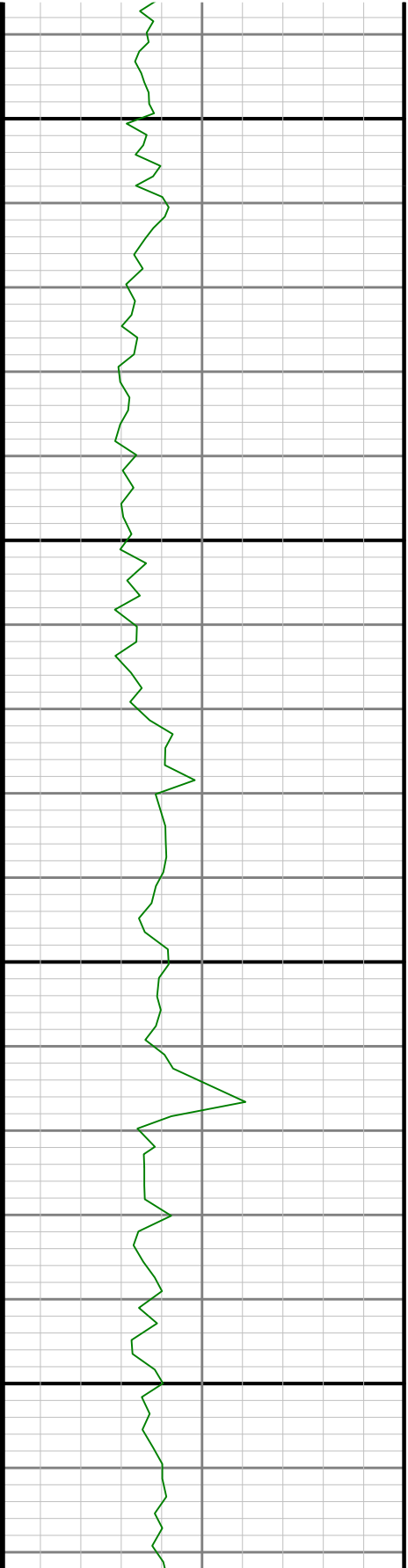
4300

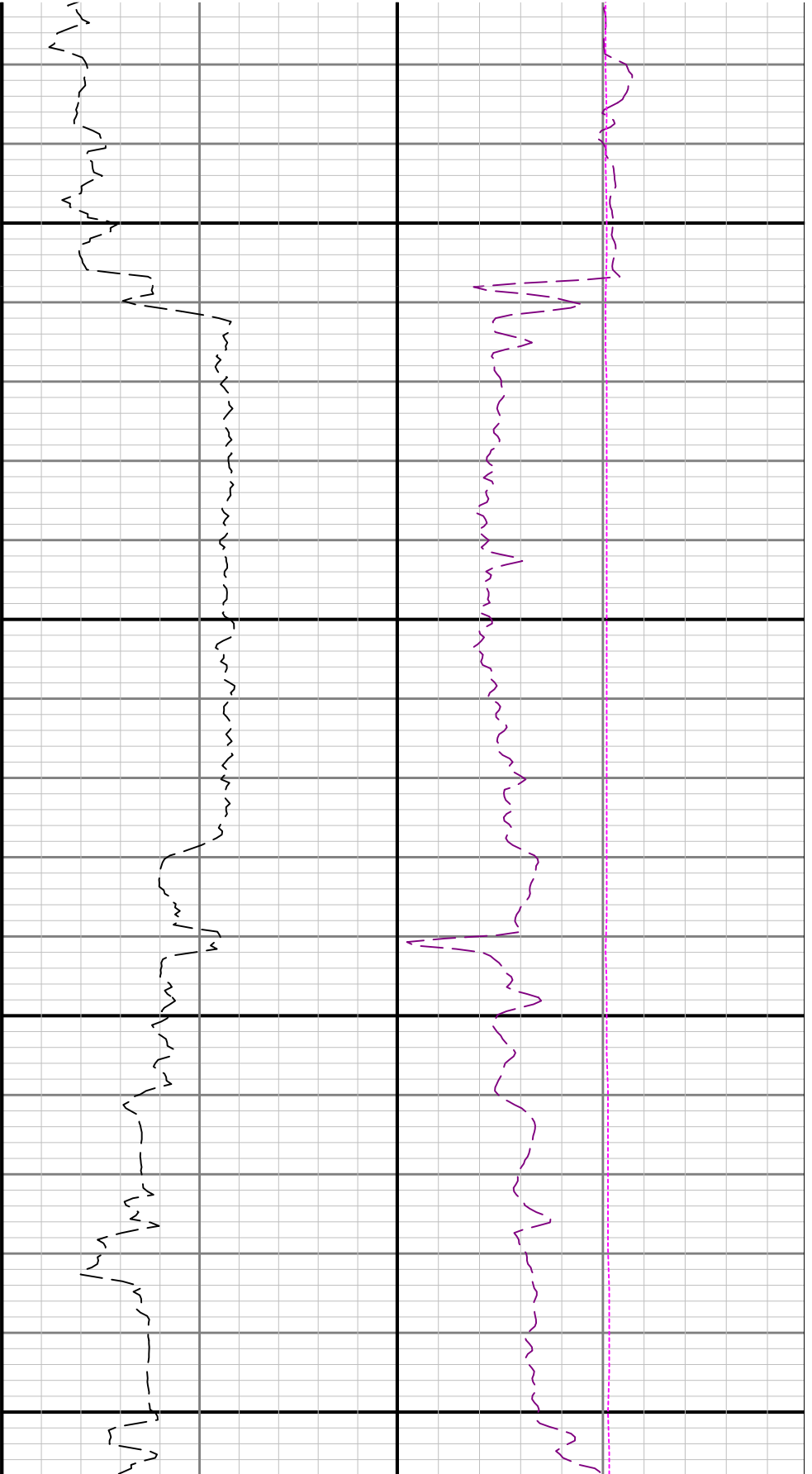




4400

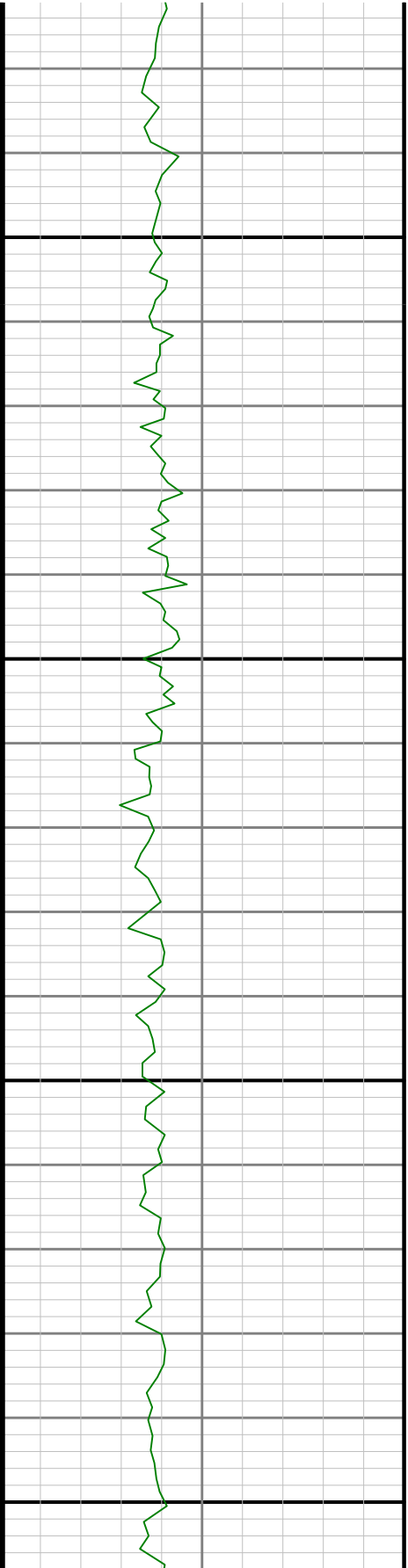
4500

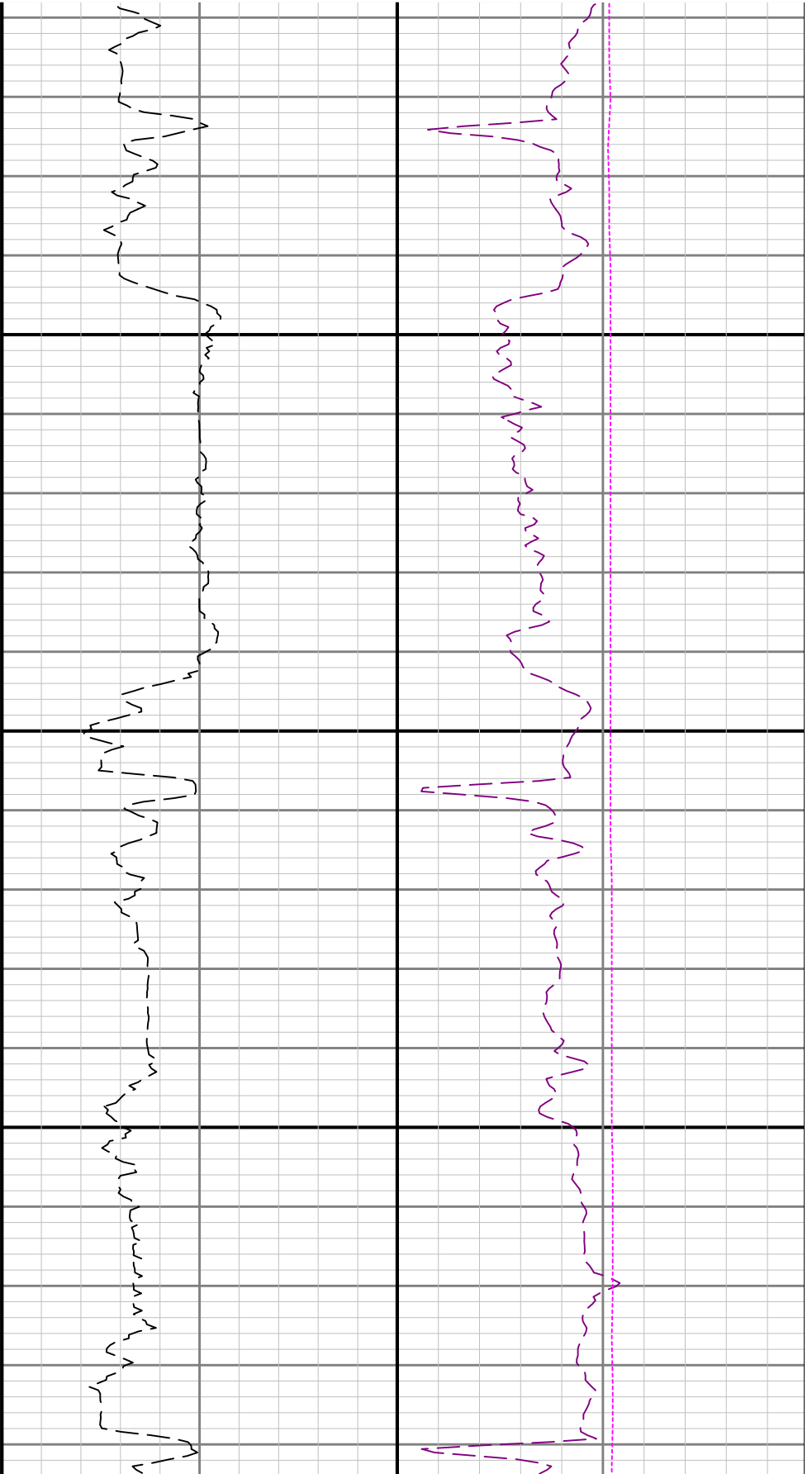




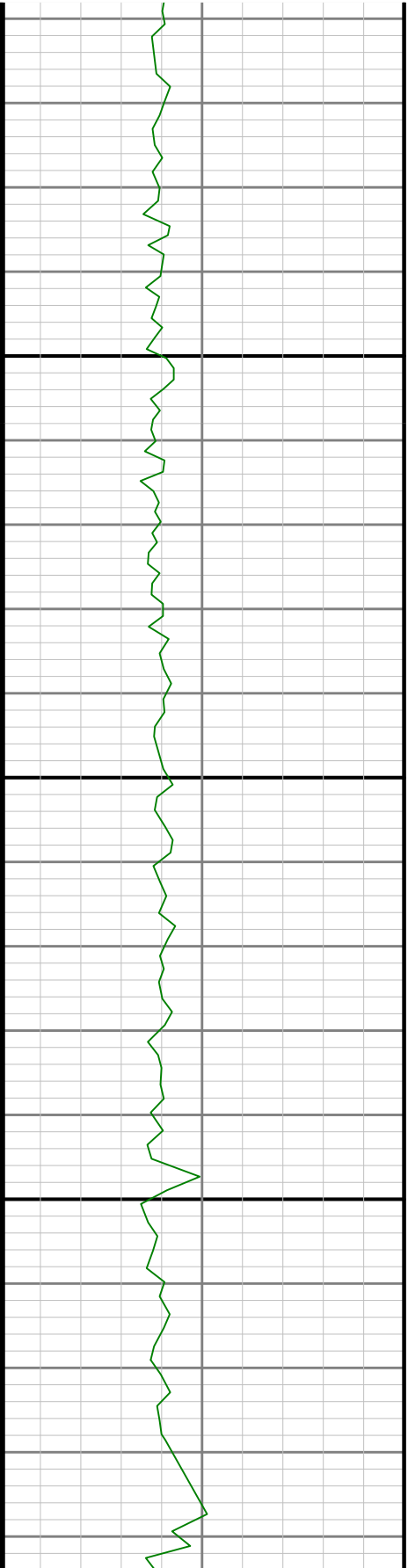
4600

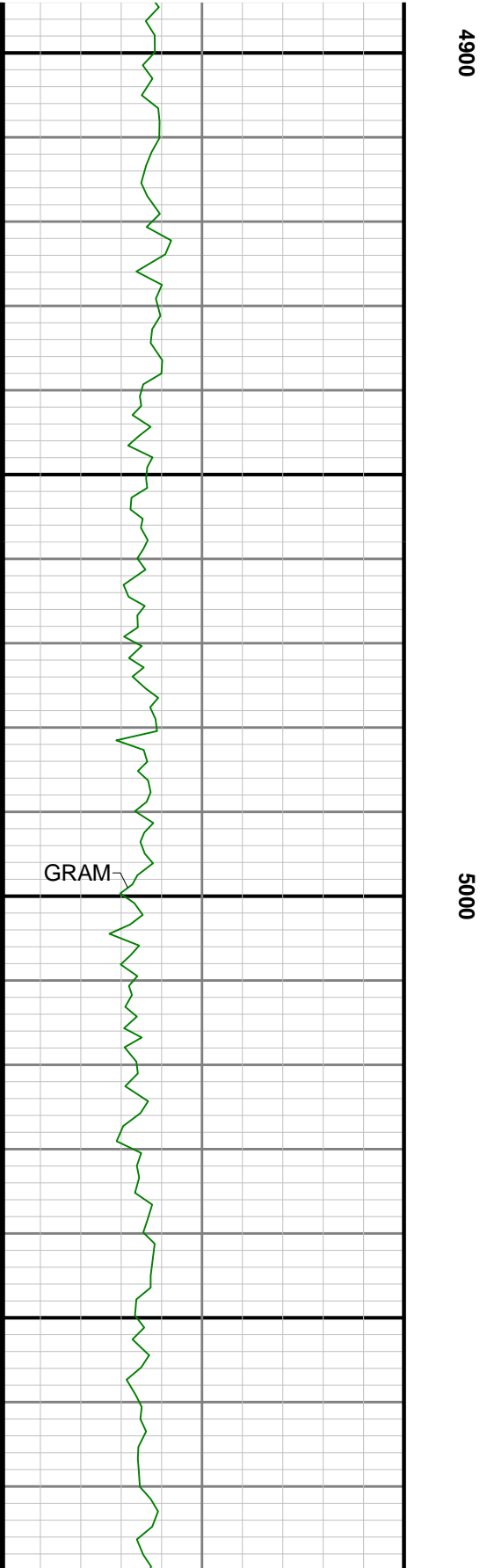
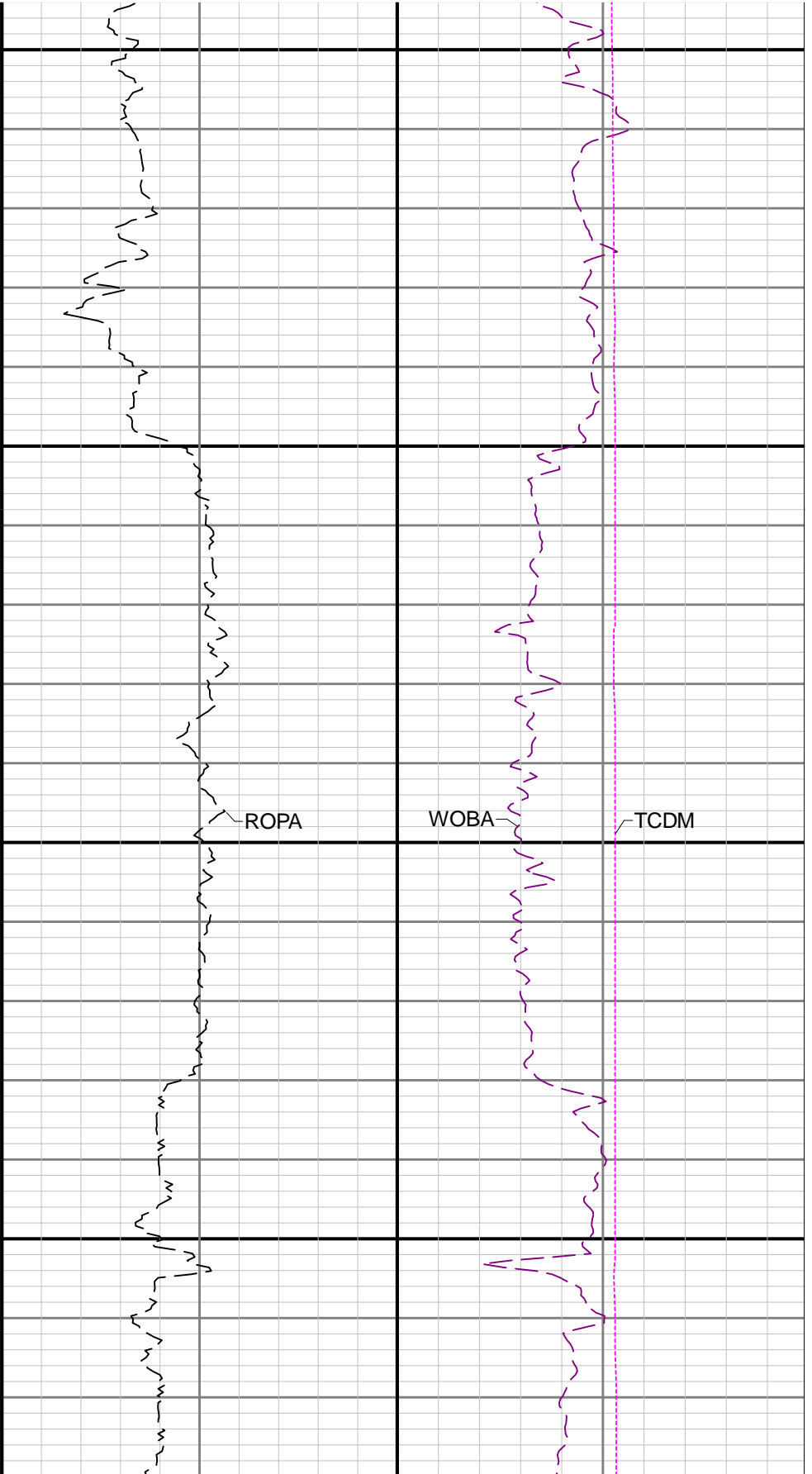
4700

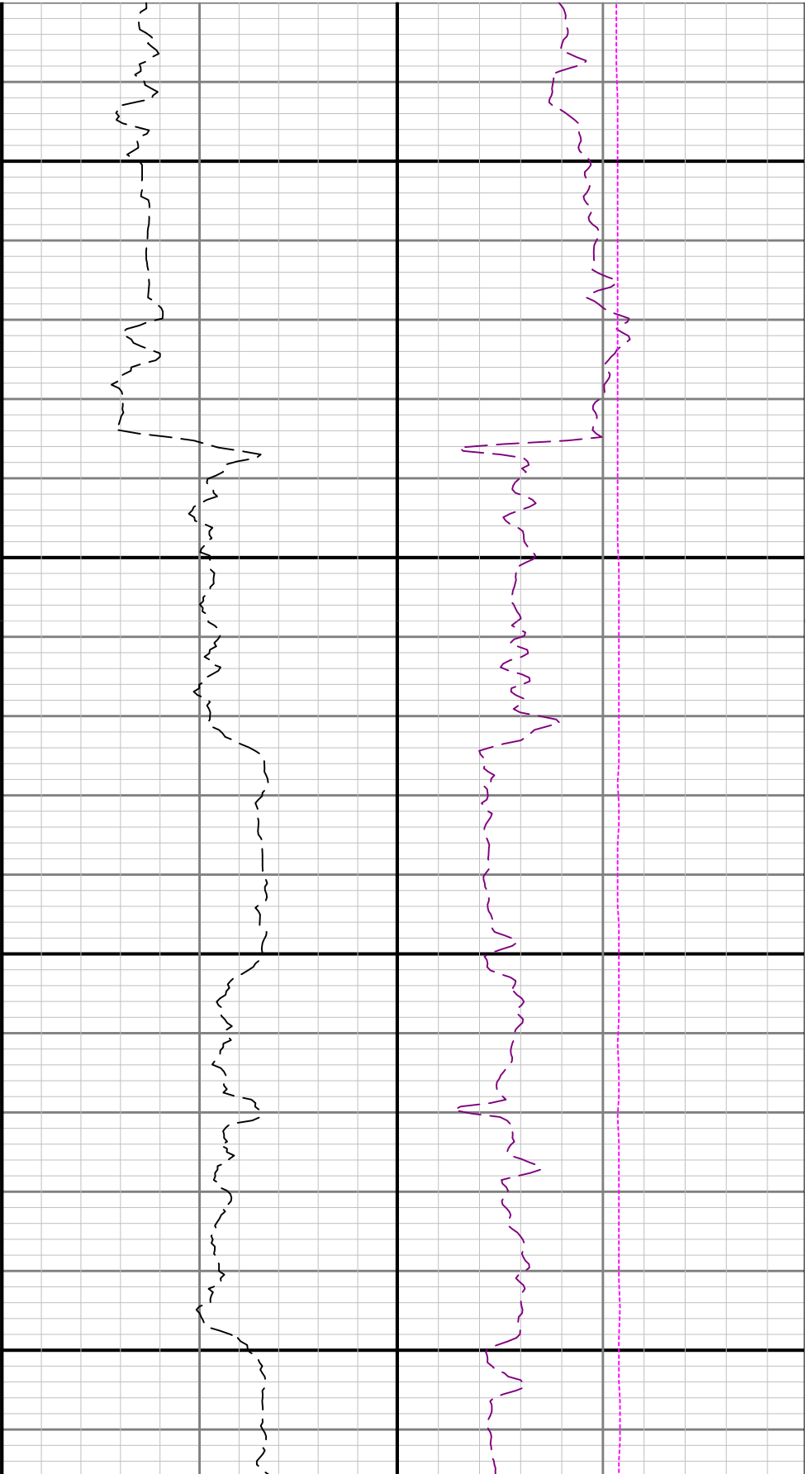




4800

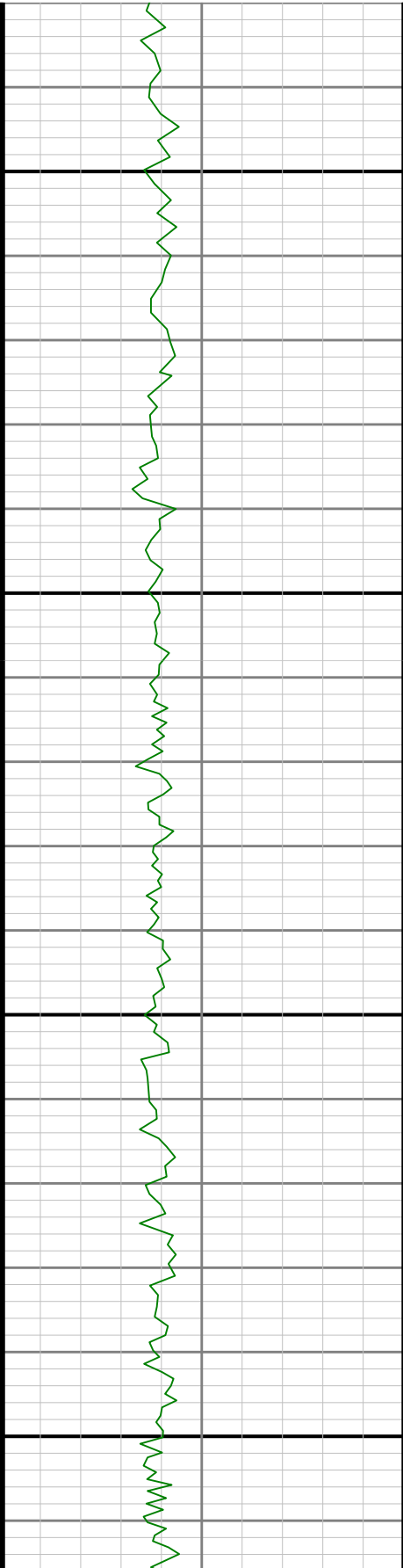


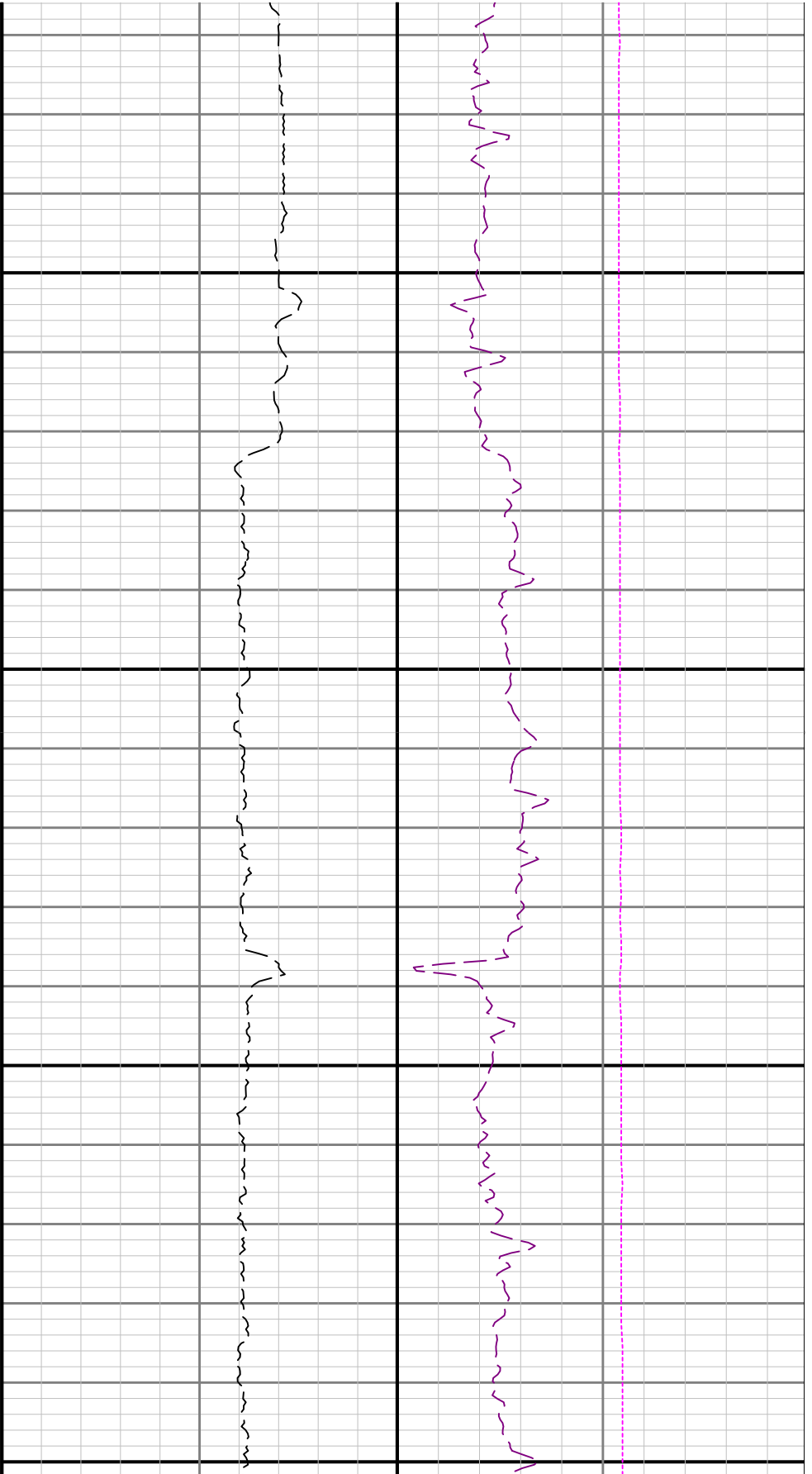




5100

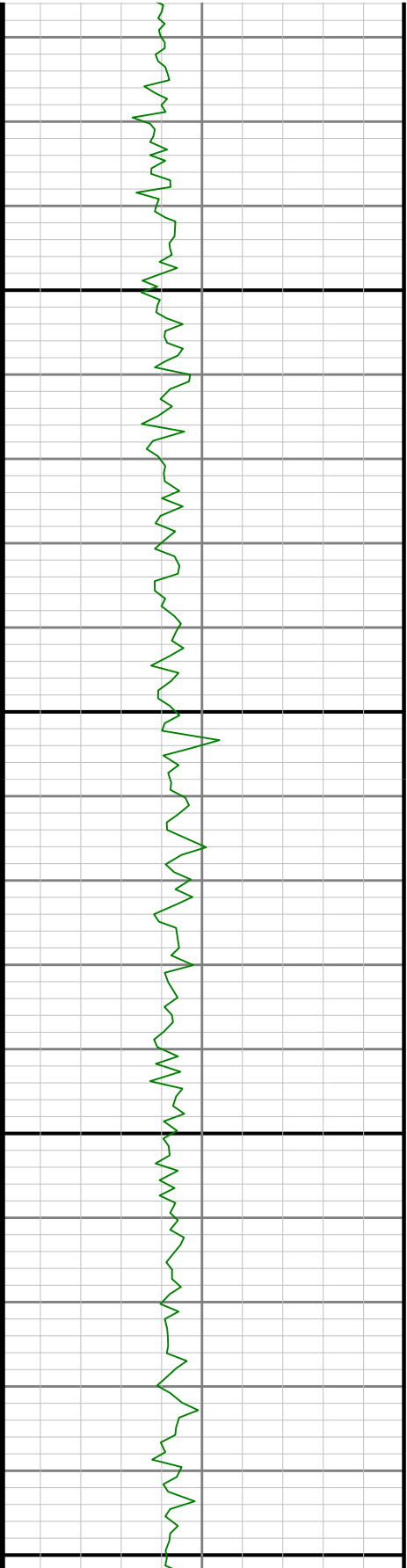
5200

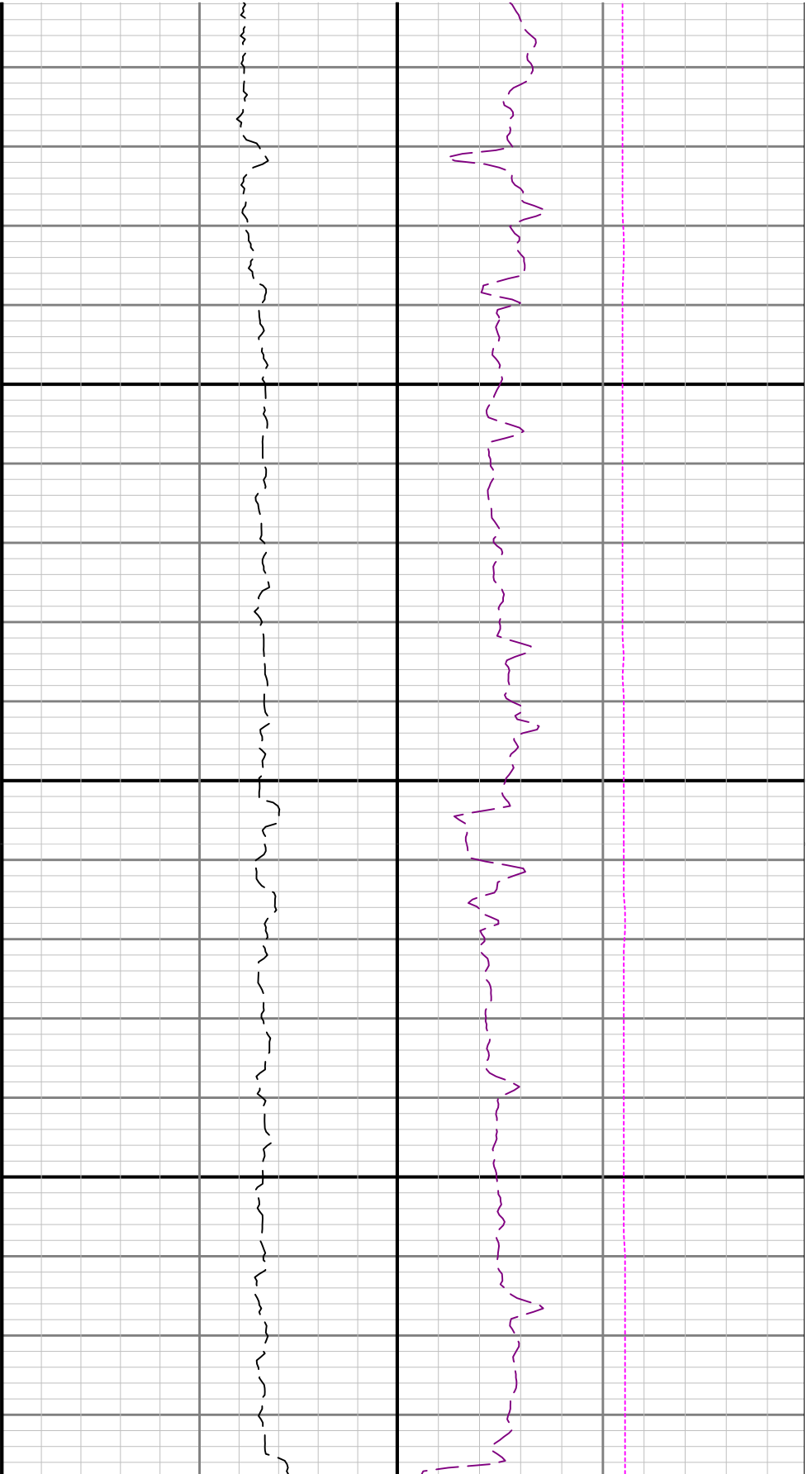




5300

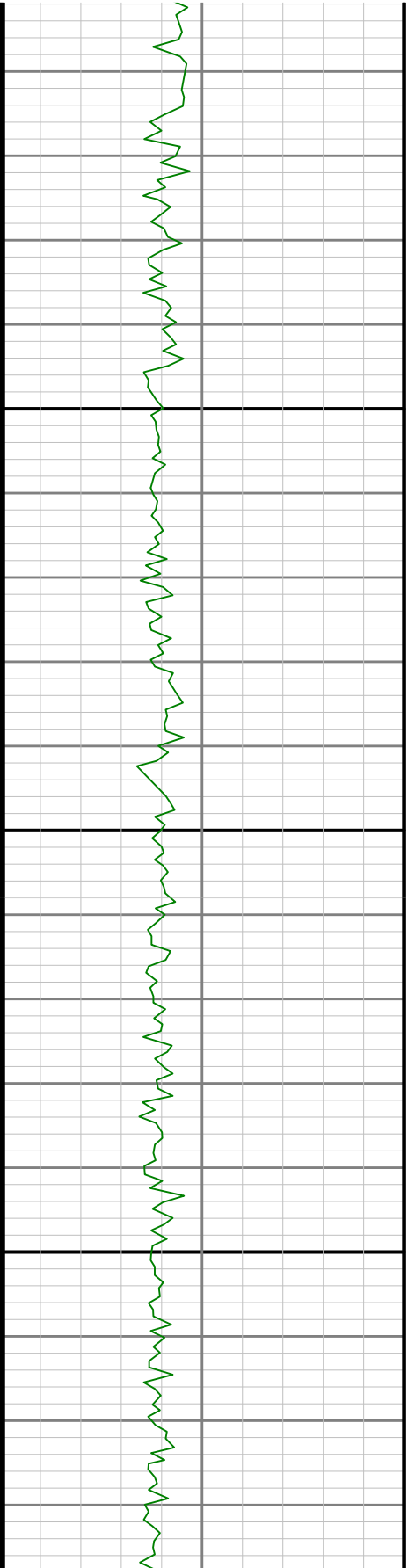
5400

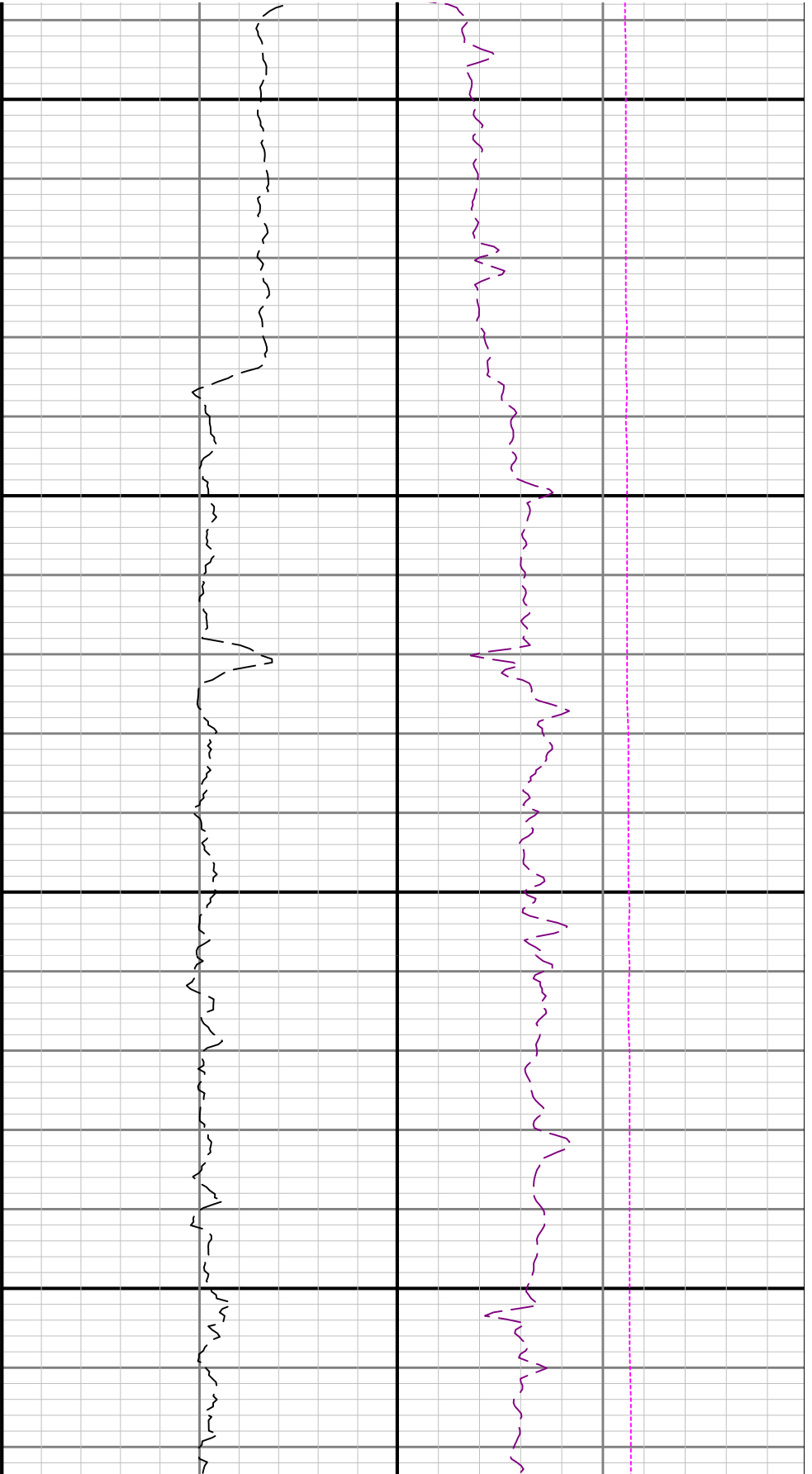




5500

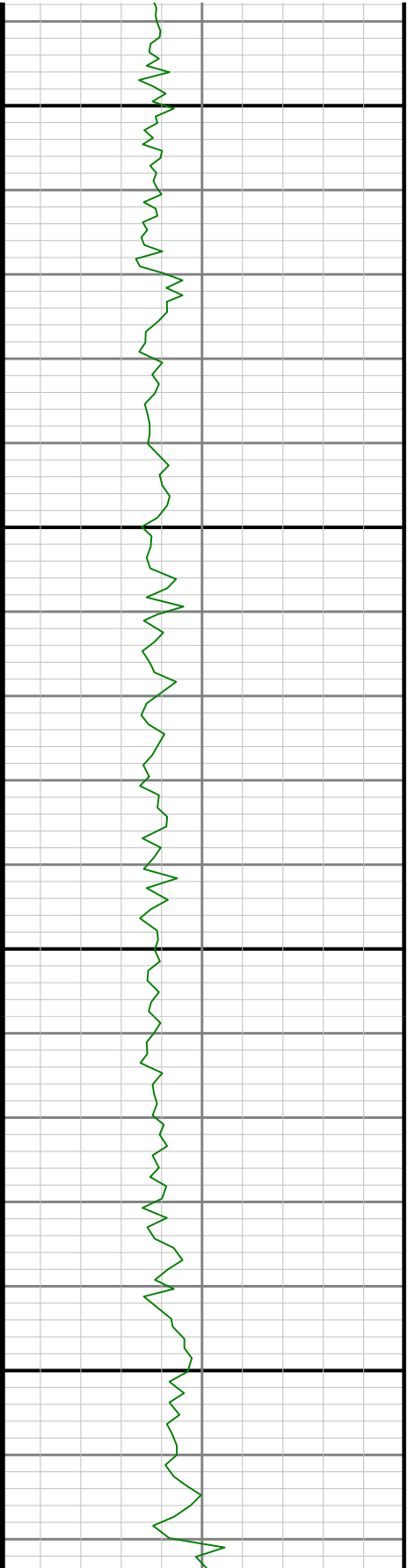
5600

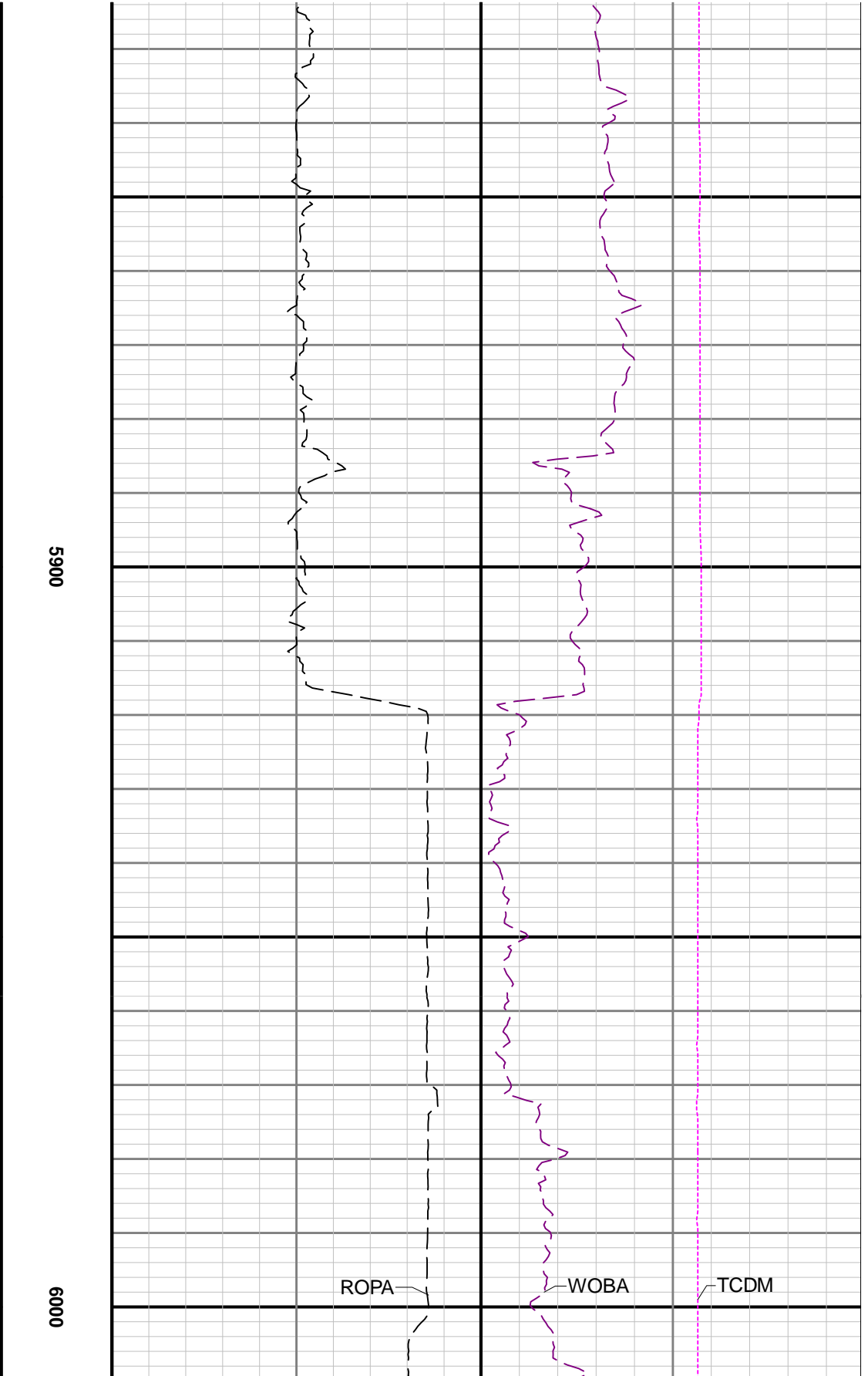
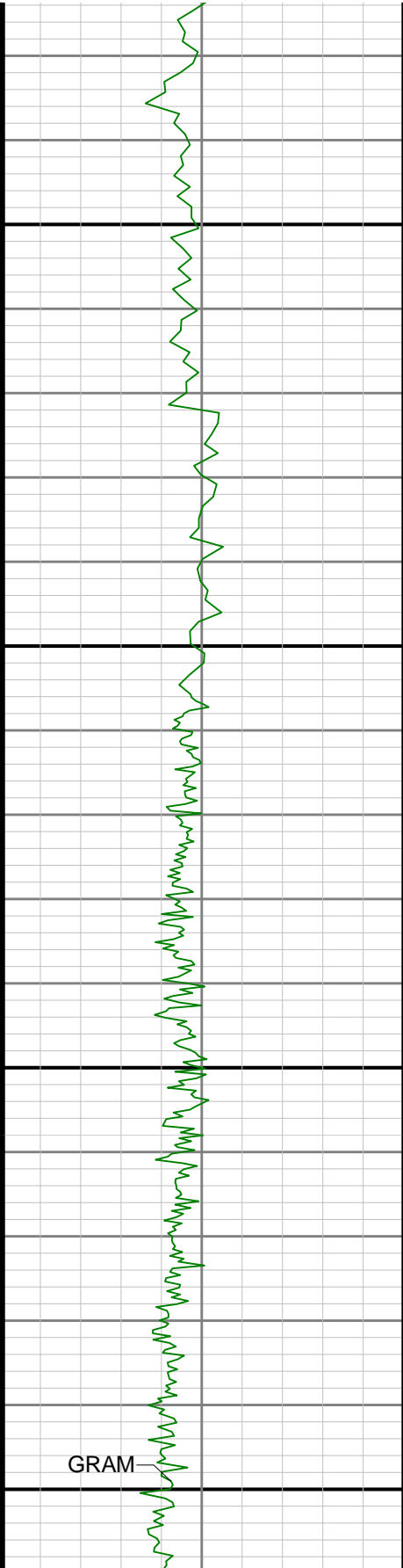


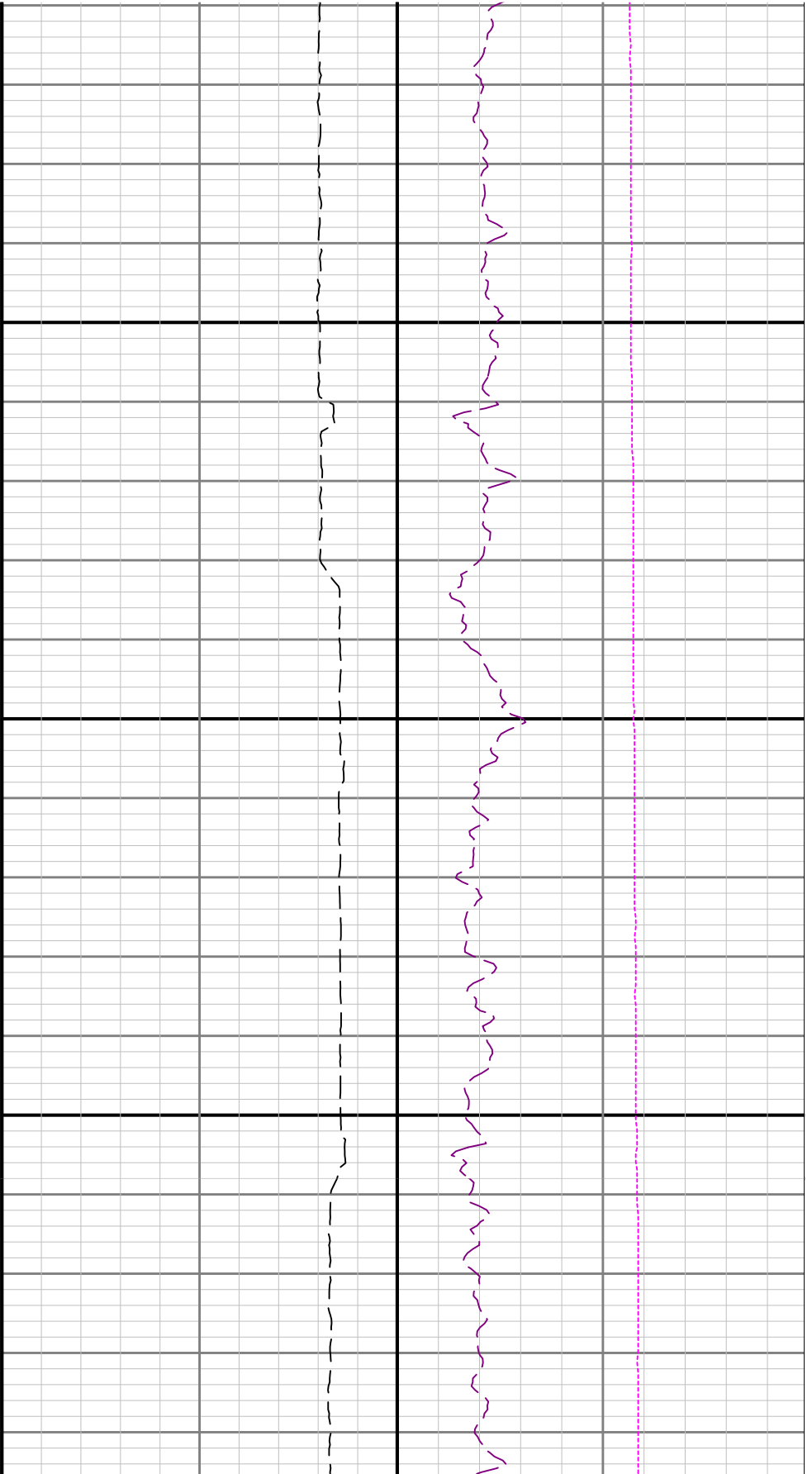


5700

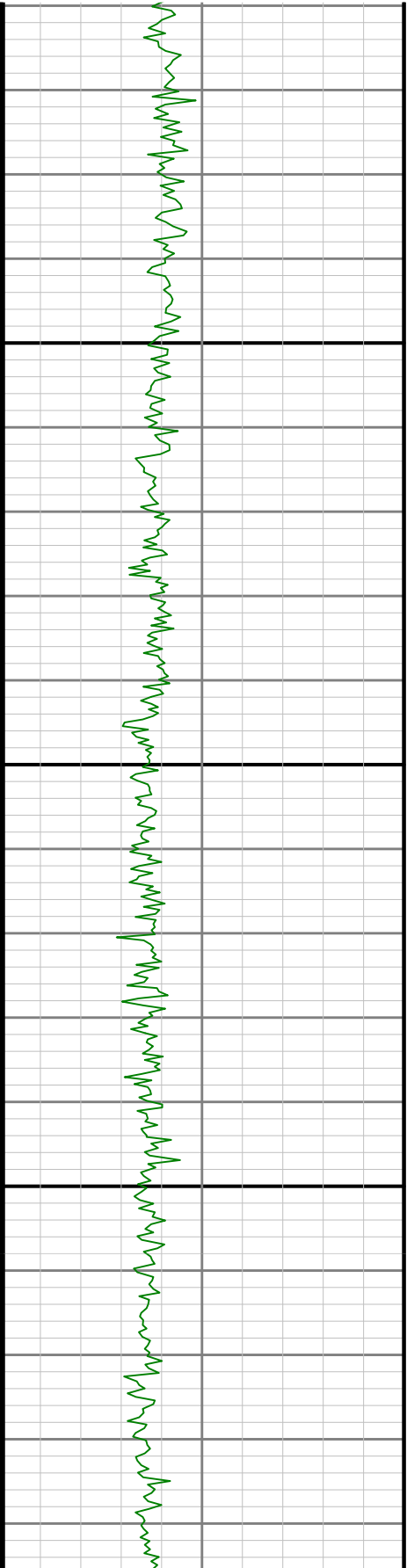
5800

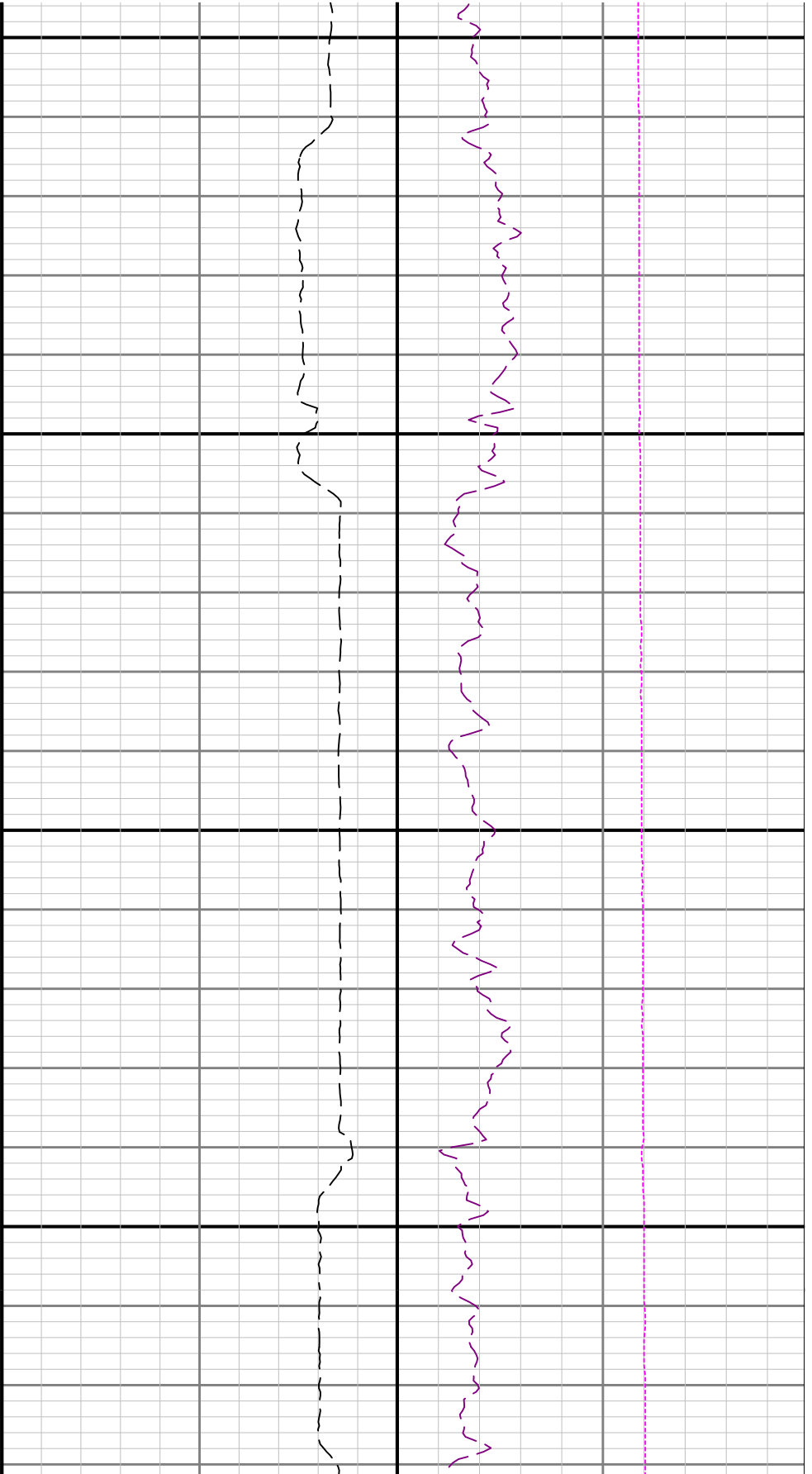






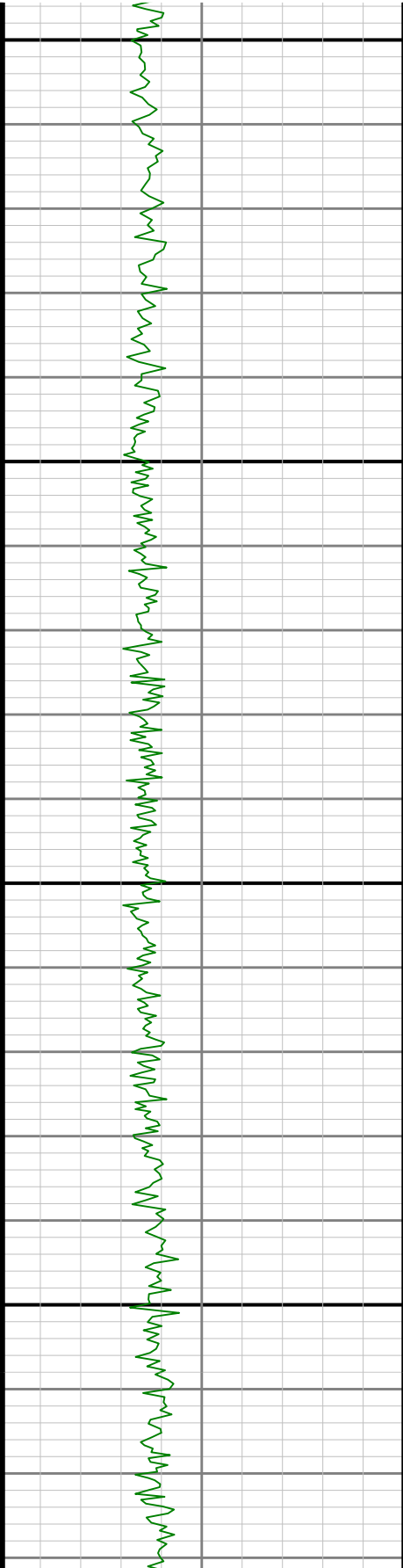
6100

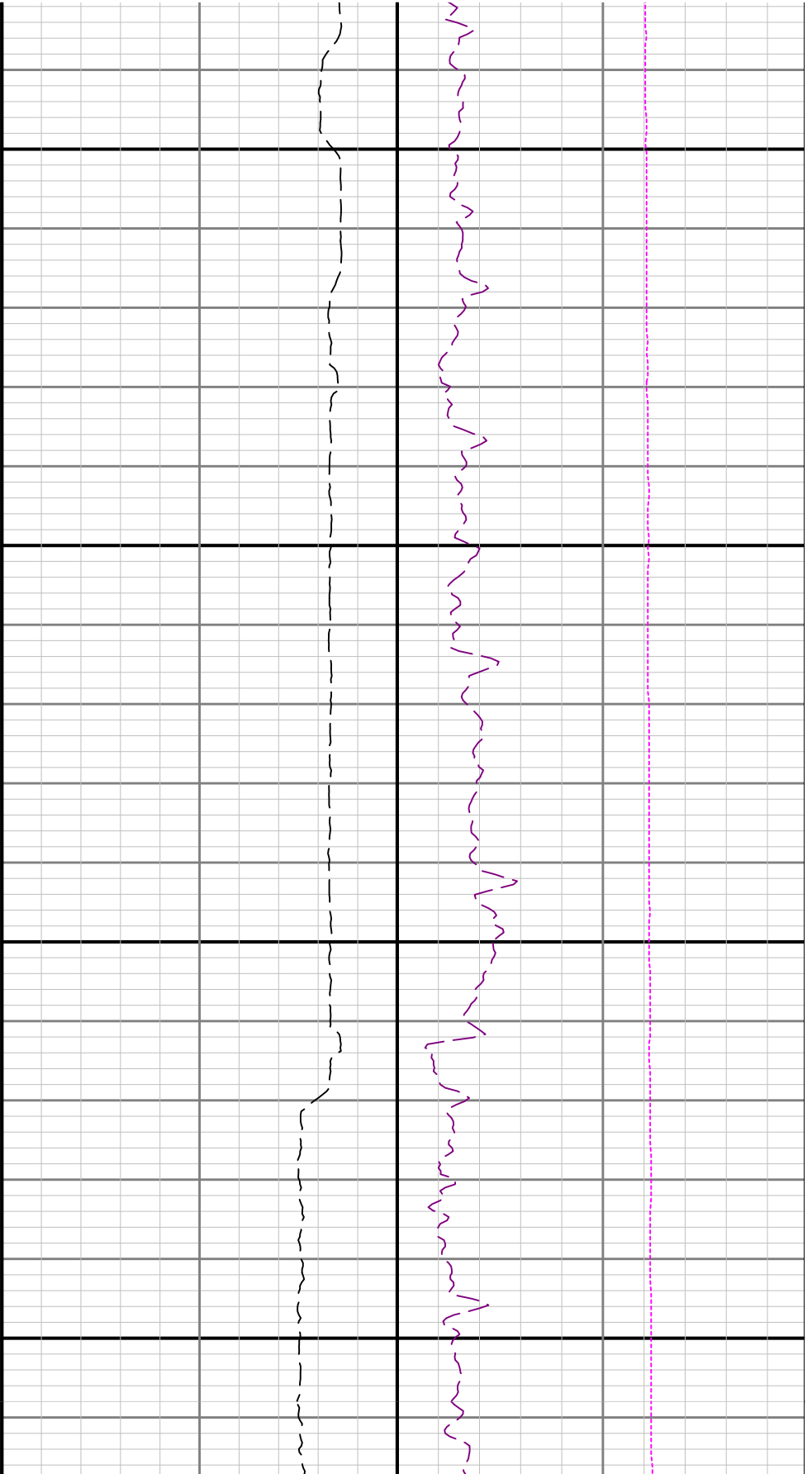




6200

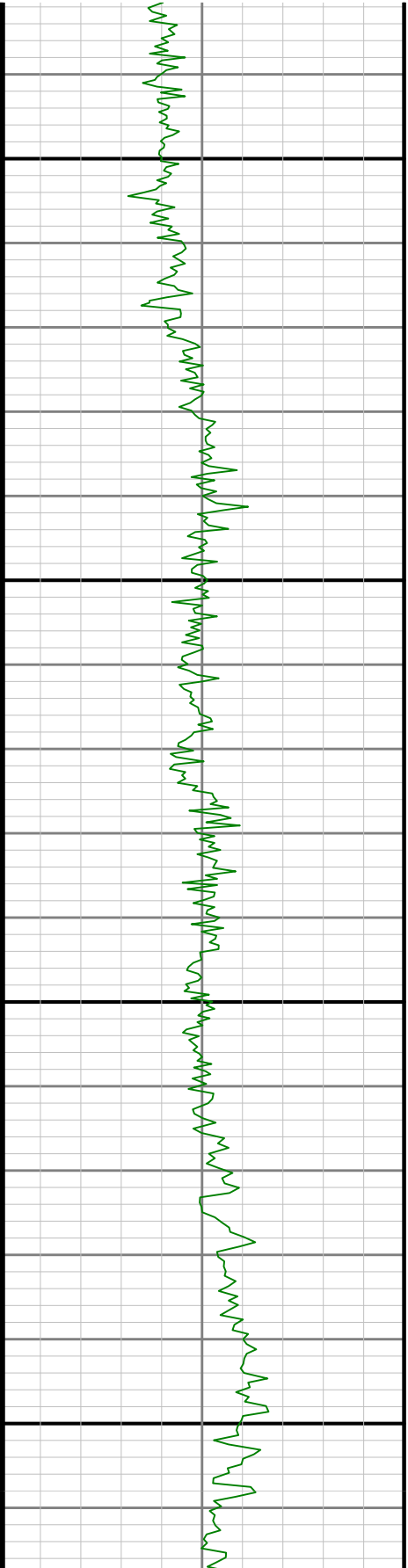
6300

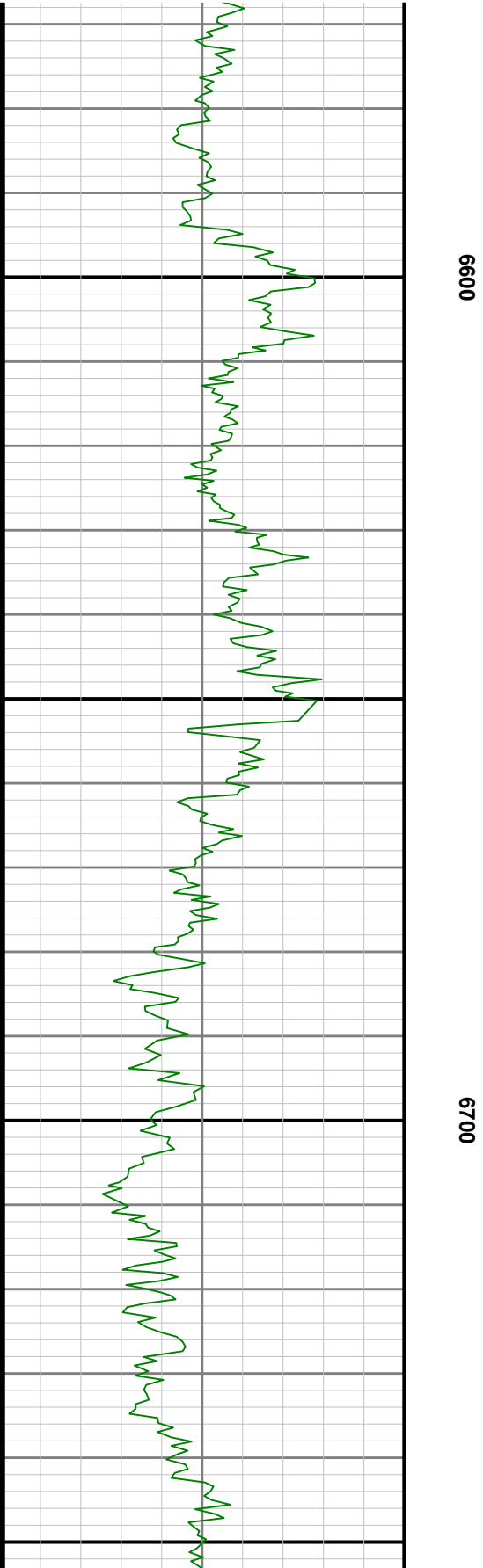
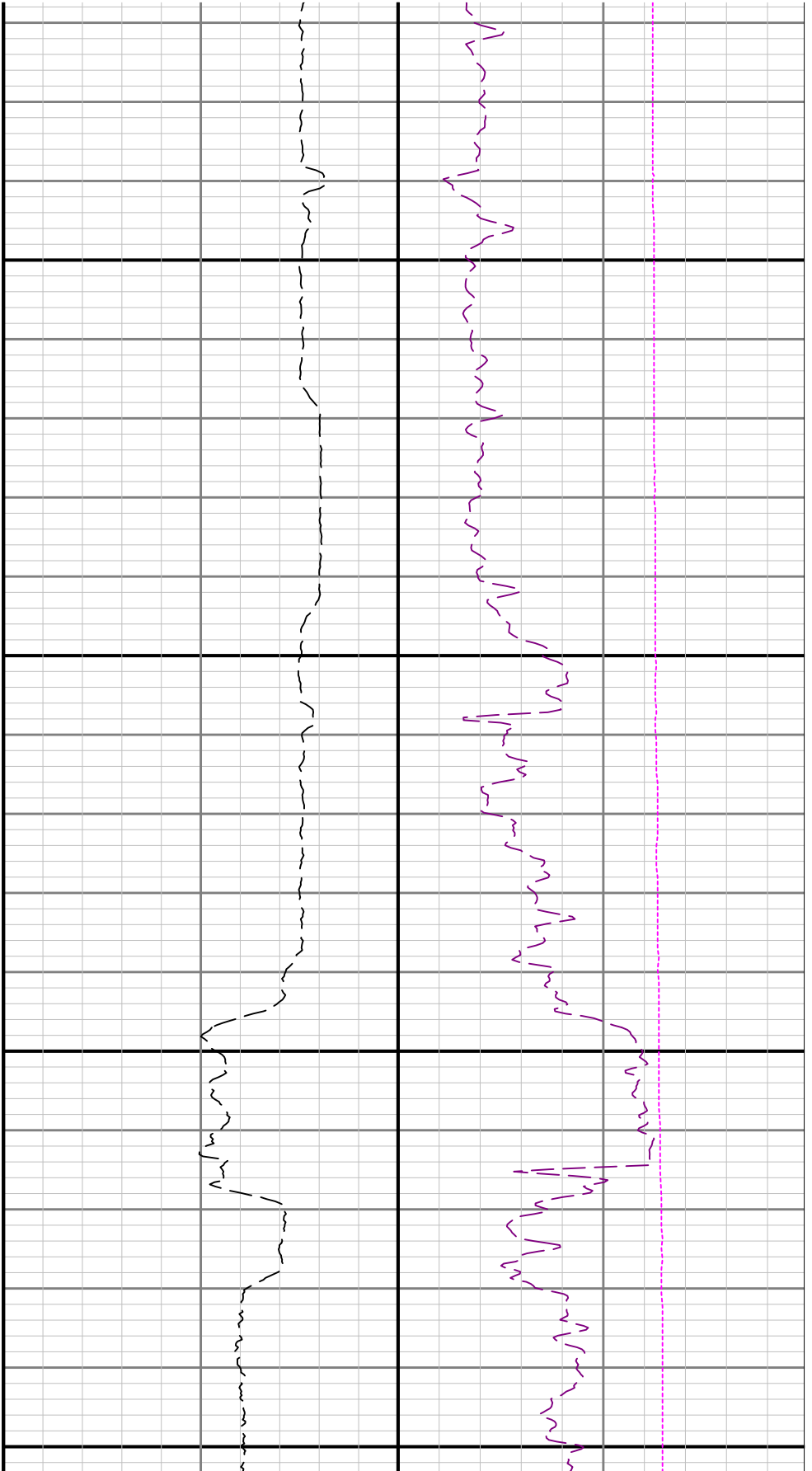




6400

6500





		82.00	0.09	242.83	N/A	-0.03	-0.06	82.00	-4758.00	-0.03	82.00	0.11	0.11	-142.89
		176.00	0.24	54.10	N/A	0.05	0.04	176.00	-4664.00	0.05	94.00	0.35	0.16	182.20
		267.00	0.15	263.20	N/A	0.15	0.07	267.00	-4573.00	0.15	91.00	0.42	-0.10	-165.82
		362.00	0.57	211.14	N/A	-0.27	-0.30	362.00	-4478.00	-0.25	95.00	0.52	0.44	-54.80
		456.00	0.54	281.24	N/A	-0.58	-0.97	455.99	-4384.01	-0.53	94.00	0.68	-0.03	74.57
		551.00	0.45	291.19	N/A	-0.36	-1.76	550.99	-4289.01	-0.26	95.00	0.13	-0.09	10.47
		646.00	0.45	307.04	N/A	-0.00	-2.40	645.99	-4194.01	0.13	95.00	0.13	0.00	16.68
		741.00	0.40	314.24	N/A	0.45	-2.94	740.99	-4099.01	0.62	95.00	0.08	-0.05	7.58
		835.00	0.38	316.87	N/A	0.91	-3.39	834.98	-4005.02	1.10	94.00	0.03	-0.02	2.80
		930.00	0.40	338.55	N/A	1.45	-3.72	929.98	-3910.02	1.65	95.00	0.16	0.02	22.82
		1025.00	0.34	2.65	N/A	2.04	-3.83	1024.98	-3815.02	2.25	95.00	0.17	-0.06	25.37
		1119.00	0.28	16.86	N/A	2.54	-3.75	1118.98	-3721.02	2.74	94.00	0.10	-0.06	15.12
		1214.00	0.28	12.06	N/A	2.99	-3.64	1213.98	-3626.02	3.18	95.00	0.02	0.00	-5.05
		1309.00	0.28	355.04	N/A	3.45	-3.61	1308.98	-3531.02	3.64	95.00	0.09	0.00	-17.92
		1404.00	0.28	341.80	N/A	3.90	-3.70	1403.97	-3436.03	4.10	95.00	0.07	0.00	-13.94
		1499.00	0.33	337.91	N/A	4.37	-3.88	1498.97	-3341.03	4.58	95.00	0.06	0.05	-4.09
		1593.00	0.29	330.83	N/A	4.83	-4.09	1592.97	-3247.03	5.05	94.00	0.06	-0.04	-7.53
		1688.00	0.44	339.87	N/A	5.38	-4.34	1687.97	-3152.03	5.61	95.00	0.17	0.16	9.52
		1783.00	0.59	339.85	N/A	6.18	-4.63	1782.97	-3057.03	6.43	95.00	0.16	0.16	-0.02
		1877.00	0.54	330.35	N/A	7.02	-5.02	1876.96	-2963.04	7.29	94.00	0.11	-0.05	-10.11
		1949.00	0.93	330.30	N/A	7.83	-5.47	1948.95	-2891.05	8.12	72.00	0.54	0.54	-0.07
		1980.00	1.19	331.34	109.5	8.33	-5.75	1979.95	-2860.05	8.63	31.00	0.84	0.84	3.35
		2074.00	0.04	290.34	112.2	9.19	-6.25	2073.94	-2766.06	9.53	94.00	1.23	-1.22	-43.62
		2169.00	0.23	322.02	114.9	9.36	-6.40	2168.94	-2671.06	9.70	95.00	0.21	0.20	33.35
		2264.00	0.03	191.73	117.6	9.48	-6.52	2263.94	-2576.06	9.83	95.00	0.26	-0.21	-137.15
		2359.00	0.03	197.24	117.6	9.43	-6.54	2358.94	-2481.06	9.78	95.00	0.00	0.00	5.80
		2453.00	0.06	102.30	120.3	9.40	-6.49	2452.94	-2387.06	9.75	94.00	0.07	0.03	-101.00
		2548.00	0.12	149.36	123.0	9.30	-6.40	2547.94	-2292.06	9.64	95.00	0.10	0.06	49.54
		2643.00	0.03	142.97	123.0	9.20	-6.33	2642.94	-2197.06	9.53	95.00	0.09	-0.09	-6.73
		2737.00	0.06	235.56	125.7	9.15	-6.36	2736.94	-2103.06	9.49	94.00	0.07	0.03	98.50
		2832.00	0.03	285.14	125.7	9.13	-6.42	2831.94	-2008.06	9.47	95.00	0.05	-0.03	52.19
		2927.00	0.04	102.33	128.4	9.13	-6.41	2926.94	-1913.06	9.47	95.00	0.07	0.01	186.52
		3021.00	0.68	95.68	128.4	9.07	-5.83	3020.94	-1819.06	9.38	94.00	0.68	0.68	-7.07
		3116.00	2.96	42.87	131.1	10.81	-3.59	3115.89	-1724.11	10.99	95.00	2.74	2.40	-55.59
		3212.00	3.75	50.67	123.0	14.62	0.52	3211.72	-1628.28	14.56	96.00	0.95	0.82	8.12
		3307.00	1.36	129.44	131.1	15.87	3.79	3306.64	-1533.36	15.63	95.00	3.93	-2.52	82.92
		3401.00	5.01	186.25	133.8	11.08	4.21	3400.50	-1439.50	10.83	94.00	4.70	3.88	60.44
		3496.00	8.35	194.38	133.8	0.27	2.04	3494.84	-1345.16	0.16	95.00	3.65	3.52	8.56
		3591.00	9.84	195.10	136.5	-14.25	-1.78	3588.64	-1251.36	-14.13	95.00	1.57	1.57	0.76
		3685.00	13.16	196.45	139.2	-32.27	-6.91	3680.74	-1159.26	-31.84	94.00	3.54	3.53	1.44
		3780.00	16.43	196.29	141.9	-55.55	-13.74	3772.58	-1067.42	-54.70	95.00	3.44	3.44	-0.17
		3875.00	19.54	195.44	141.9	-83.76	-21.74	3862.93	-977.07	-82.43	95.00	3.29	3.27	-0.89
		3970.00	24.38	194.00	141.9	-118.12	-30.72	3951.01	-888.99	-116.24	95.00	5.13	5.09	-1.52
		4065.00	27.73	193.56	144.6	-158.65	-40.65	4036.34	-803.66	-156.15	95.00	3.53	3.53	-0.46
		4160.00	27.97	196.37	144.6	-201.51	-52.11	4120.34	-719.66	-198.32	95.00	1.40	0.25	2.96
		4254.00	27.71	196.81	147.3	-243.58	-64.64	4203.46	-636.54	-239.63	94.00	0.35	-0.28	0.47
		4349.00	27.81	197.35	147.3	-285.88	-77.64	4287.53	-552.47	-281.14	95.00	0.28	0.11	0.57
		4444.00	28.26	197.54	147.3	-328.47	-91.02	4371.38	-468.62	-322.94	95.00	0.48	0.47	0.20
		4539.00	29.11	197.51	150.0	-371.95	-104.76	4454.72	-385.28	-365.59	95.00	0.89	0.89	-0.03
		4633.00	28.68	195.61	152.7	-415.49	-117.70	4537.02	-302.98	-408.34	94.00	1.08	-0.46	-2.02
		4728.00	29.15	197.01	152.7	-459.57	-130.61	4620.18	-219.82	-451.64	95.00	0.87	0.49	1.47
		4823.00	29.12	200.14	152.7	-503.40	-145.34	4703.16	-136.84	-494.59	95.00	1.60	-0.03	3.29
		4918.00	29.03	201.14	155.4	-546.60	-161.61	4786.19	-53.81	-536.82	95.00	0.52	-0.09	1.05
		5107.00	29.36	198.45	158.1	-633.32	-192.81	4951.19	111.19	-621.69	189.00	0.72	0.17	-1.42
		5201.00	29.38	196.34	158.1	-677.31	-206.59	5033.11	193.11	-664.85	94.00	1.10	0.02	-2.24
		5296.00	28.33	194.79	160.8	-721.47	-218.90	5116.32	276.32	-708.26	95.00	1.36	-1.11	-1.63
		5391.00	28.47	196.58	160.8	-764.97	-231.12	5199.88	359.88	-751.02	95.00	0.91	0.15	1.88
		5486.00	26.89	200.14	160.8	-806.84	-244.98	5284.02	444.02	-792.06	95.00	2.41	-1.66	3.75
		5580.00	28.20	206.14	160.8	-846.75	-262.09	5367.37	527.37	-830.96	94.00	3.26	1.39	6.38
		5675.00	29.00	211.44	163.5	-886.55	-283.99	5450.80	610.80	-869.49	95.00	2.80	0.84	5.58
		5770.00	28.89	207.21	163.5	-926.61	-306.50	5533.94	693.94	-908.25	95.00	2.16	-0.12	-4.45
		5864.00	29.13	203.18	166.2	-967.85	-325.89	5616.15	776.15	-948.34	94.00	2.09	0.26	-4.29

	5959.00	29.05	199.26	166.2	-1010.88	-342.60	5699.18	859.18	-990.39	95.00	2.01	-0.08	-4.13
	6054.00	28.64	198.25	168.9	-1054.28	-357.34	5782.39	942.39	-1032.90	95.00	0.67	-0.43	-1.06
	6148.00	28.18	198.98	171.6	-1096.66	-371.61	5865.07	1025.07	-1074.43	94.00	0.61	-0.49	0.78
	6243.00	23.87	199.21	168.9	-1136.04	-385.24	5950.42	1110.42	-1113.00	95.00	4.54	-4.54	0.24
	6338.00	14.74	204.75	171.6	-1165.23	-396.65	6039.99	1199.99	-1141.51	95.00	9.79	-9.61	5.83
	6432.00	10.21	242.49	174.3	-1179.97	-409.07	6131.89	1291.89	-1155.54	94.00	9.67	-4.82	40.15
	6527.00	10.05	298.23	177.0	-1179.94	-423.87	6225.62	1385.62	-1154.69	95.00	9.93	-0.17	58.67
	6622.00	15.45	331.92	179.7	-1164.82	-437.16	6318.36	1478.36	-1138.87	95.00	9.45	5.68	35.46
	6717.00	22.03	342.01	182.5	-1136.67	-448.64	6408.30	1568.30	-1110.13	95.00	7.70	6.93	10.62
	6811.00	29.93	350.86	185.2	-1096.68	-457.82	6492.77	1652.77	-1069.68	94.00	9.34	8.40	9.41
	6906.00	37.96	353.73	185.2	-1044.14	-464.79	6571.52	1731.52	-1016.84	95.00	8.62	8.45	3.02
	7001.00	46.30	350.25	187.9	-981.14	-473.81	6641.92	1801.92	-953.43	95.00	9.11	8.78	-3.66
	7096.00	55.34	346.67	190.6	-909.11	-488.67	6701.89	1861.89	-880.70	95.00	9.95	9.52	-3.77
	7190.00	62.63	346.93	193.3	-830.73	-507.05	6750.29	1910.29	-801.42	94.00	7.76	7.76	0.28
	7285.00	71.94	349.27	196.0	-745.07	-525.04	6786.94	1946.94	-714.90	95.00	10.06	9.80	2.46
	7380.00	79.10	353.44	198.7	-654.21	-538.80	6810.68	1970.68	-623.41	95.00	8.65	7.54	4.39
	7474.00	89.02	357.72	198.7	-561.13	-545.96	6820.40	1980.40	-530.08	94.00	11.48	10.55	4.55
	7569.00	90.12	359.09	201.4	-466.17	-548.60	6821.12	1981.12	-435.12	95.00	1.85	1.16	1.44
	7664.00	90.00	359.55	204.1	-371.18	-549.73	6821.02	1981.02	-340.21	95.00	0.50	-0.13	0.48
	7759.00	90.06	2.27	204.1	-276.20	-548.22	6820.97	1980.97	-245.46	95.00	2.86	0.06	2.86
	7853.00	90.37	5.10	206.8	-182.40	-542.18	6820.62	1980.62	-152.14	94.00	3.03	0.33	3.01
	7948.00	90.74	6.35	206.8	-87.88	-532.71	6819.69	1979.69	-58.29	95.00	1.37	0.39	1.32
	8043.00	89.78	4.47	209.5	6.69	-523.75	6819.26	1979.26	35.64	95.00	2.22	-1.01	-1.98
	8137.00	90.03	2.76	204.1	100.50	-517.82	6819.42	1979.42	128.98	94.00	1.84	0.27	-1.82
	8232.00	89.60	0.67	204.1	195.45	-514.98	6819.73	1979.73	223.63	95.00	2.25	-0.45	-2.20
	8327.00	89.94	357.11	212.2	290.42	-516.82	6820.11	1980.11	318.55	95.00	3.76	0.36	-3.75
	8421.00	89.75	356.11	212.2	384.25	-522.38	6820.36	1980.36	412.55	94.00	1.08	-0.20	-1.06
	8516.00	89.42	353.43	214.9	478.84	-531.04	6821.05	1981.05	507.48	95.00	2.84	-0.35	-2.82
	8611.00	89.97	352.42	214.9	573.12	-542.74	6821.56	1981.56	602.25	95.00	1.21	0.58	-1.06
	8706.00	89.66	354.55	217.6	667.50	-553.52	6821.86	1981.86	697.08	95.00	2.27	-0.33	2.24
	8800.00	89.66	357.94	217.6	761.28	-559.67	6822.42	1982.42	791.06	94.00	3.61	0.00	3.61
	8895.00	89.97	358.57	217.6	856.24	-562.57	6822.73	1982.73	886.03	95.00	0.74	0.33	0.66
	8990.00	89.88	359.25	220.3	951.22	-564.37	6822.85	1982.85	980.97	95.00	0.72	-0.09	0.72
	9085.00	89.88	359.16	223.0	1046.21	-565.69	6823.05	1983.05	1075.89	95.00	0.09	-0.00	-0.09
	9179.00	90.22	0.95	225.7	1140.20	-565.60	6822.97	1982.97	1169.74	94.00	1.94	0.36	1.90
	9274.00	89.82	3.28	225.7	1235.13	-562.09	6822.94	1982.94	1264.33	95.00	2.49	-0.42	2.45
	9369.00	89.94	5.54	228.4	1329.84	-554.79	6823.13	1983.13	1358.49	95.00	2.38	0.13	2.38
	9464.00	90.25	7.91	228.4	1424.18	-543.67	6822.98	1982.98	1452.07	95.00	2.52	0.33	2.49
	9559.00	90.25	5.66	228.4	1518.51	-532.44	6822.56	1982.56	1545.63	95.00	2.37	0.00	-2.37
	9653.00	90.12	1.77	228.4	1612.30	-526.35	6822.26	1982.26	1638.94	94.00	4.14	-0.14	-4.14
	9748.00	89.82	0.52	231.1	1707.27	-524.46	6822.31	1982.31	1733.66	95.00	1.35	-0.32	-1.32
	9843.00	89.91	359.32	231.1	1802.27	-524.59	6822.53	1982.53	1828.52	95.00	1.27	0.09	-1.26
	9938.00	89.91	357.52	231.1	1897.23	-527.21	6822.68	1982.68	1923.48	95.00	1.89	-0.00	-1.89
	10032.00	89.85	357.23	231.1	1991.13	-531.51	6822.88	1982.88	2017.48	94.00	0.32	-0.06	-0.31
	10127.00	89.38	357.46	233.8	2086.03	-535.91	6823.52	1983.52	2112.47	95.00	0.55	-0.49	0.24
	10222.00	89.41	358.94	233.8	2180.97	-538.90	6824.52	1984.52	2207.44	95.00	1.56	0.03	1.56
	10316.00	89.57	0.20	233.8	2274.97	-539.60	6825.36	1985.36	2301.32	94.00	1.35	0.17	1.34
	10411.00	89.57	1.85	233.8	2369.94	-537.90	6826.07	1986.07	2396.06	95.00	1.74	-0.00	1.74
	10506.00	89.35	2.29	236.5	2464.88	-534.47	6826.97	1986.97	2490.66	95.00	0.52	-0.23	0.46
	10695.00	89.26	3.19	236.5	2653.65	-525.44	6829.26	1989.26	2678.64	189.00	0.48	-0.05	0.48
	10790.00	89.23	3.37	236.5	2748.48	-520.00	6830.51	1990.51	2773.03	95.00	0.19	-0.03	0.19
	10884.00	89.51	0.91	236.5	2842.40	-516.49	6831.54	1991.54	2866.62	94.00	2.63	0.30	-2.62
	10979.00	89.88	0.50	239.2	2937.40	-515.32	6832.05	1992.05	2961.40	95.00	0.58	0.39	-0.43
	11074.00	89.69	358.92	239.2	3032.39	-515.80	6832.41	1992.41	3056.27	95.00	1.68	-0.20	-1.66
	12021.00	89.11	358.67	239.2	3977.31	-500.54	6841.45	2001.45	3998.91	95.00	1.11	0.17	-1.09
	12115.00	89.20	356.86	241.9	4071.23	-504.21	6842.84	2002.84	4092.88	94.00	1.93	0.10	-1.93
	12210.00	89.11	356.40	241.9	4166.05	-509.79	6844.24	2004.24	4187.87	95.00	0.49	-0.09	-0.48
	12304.00	89.05	356.54	244.6	4259.86	-515.58	6845.75	2005.75	4281.85	94.00	0.16	-0.06	0.15
	12399.00	89.11	356.61	247.3	4354.68	-521.25	6847.28	2007.28	4376.84	95.00	0.10	0.06	0.07
	12494.00	90.62	356.45	247.3	4449.50	-527.00	6847.50	2007.50	4471.84	95.00	1.60	1.59	-0.17
	12588.00	90.46	357.31	250.0	4543.36	-532.12	6846.61	2006.61	4565.83	94.00	0.93	-0.17	0.91
	12683.00	90.55	357.92	247.3	4638.27	-536.07	6845.78	2005.78	4660.82	95.00	0.65	0.09	0.64

	12777.00	90.55	358.79	250.0	4732.23	-538.77	6844.87	2004.87	4754.78	94.00	0.93	-0.00	0.93
	12872.00	90.55	358.79	250.0	4827.20	-540.78	6843.96	2003.96	4849.72	95.00	0.00	0.00	0.00
	12966.00	90.65	359.40	252.7	4921.19	-542.26	6842.98	2002.98	4943.64	94.00	0.66	0.11	0.65
	13061.00	90.65	0.58	252.7	5016.18	-542.28	6841.90	2001.90	5038.49	95.00	1.24	-0.00	1.24
	13156.00	90.25	1.63	252.7	5111.16	-540.45	6841.15	2001.15	5133.22	95.00	1.18	-0.42	1.11
	13250.00	90.31	2.12	255.4	5205.10	-537.37	6840.69	2000.69	5226.85	94.00	0.53	0.06	0.52
	13345.00	90.37	2.48	255.4	5300.03	-533.56	6840.13	2000.13	5321.42	95.00	0.38	0.06	0.38
	13440.00	90.37	1.41	255.4	5394.97	-530.33	6839.52	1999.52	5416.04	95.00	1.13	-0.00	-1.13
	13534.00	90.43	2.17	255.4	5488.92	-527.40	6838.86	1998.86	5509.68	94.00	0.81	0.06	0.81
	13629.00	90.28	1.76	258.1	5583.86	-524.14	6838.27	1998.27	5604.30	95.00	0.46	-0.16	-0.43
	13724.00	90.40	1.06	258.1	5678.83	-521.80	6837.71	1997.71	5698.99	95.00	0.75	0.13	-0.74
	13819.00	90.37	1.38	258.1	5773.81	-519.78	6837.07	1997.07	5793.71	95.00	0.34	-0.03	0.34
	13914.00	90.31	1.87	260.8	5868.77	-517.09	6836.51	1996.51	5888.38	95.00	0.52	-0.06	0.52
	14008.00	90.49	0.01	258.1	5962.75	-515.55	6835.85	1995.85	5982.13	94.00	1.99	0.19	-1.98
	14103.00	90.31	359.19	258.1	6057.74	-516.21	6835.19	1995.19	6077.02	95.00	0.88	-0.19	-0.86
	14198.00	90.40	0.34	258.1	6152.74	-516.60	6834.60	1994.60	6171.89	95.00	1.21	0.09	1.21
	14293.00	90.31	359.33	258.1	6247.73	-516.87	6834.01	1994.01	6266.76	95.00	1.07	-0.09	-1.06
	14388.00	90.28	359.29	260.8	6342.72	-518.02	6833.52	1993.52	6361.67	95.00	0.05	-0.03	-0.04
	14482.00	90.22	358.34	263.5	6436.70	-519.96	6833.11	1993.11	6455.61	94.00	1.01	-0.06	-1.01
	14576.00	90.40	357.33	260.8	6530.63	-523.51	6832.60	1992.60	6549.59	94.00	1.09	0.19	-1.07
	14671.00	90.43	357.80	263.5	6625.54	-527.55	6831.91	1991.91	6644.58	95.00	0.50	0.03	0.49
	14766.00	90.40	358.98	263.5	6720.50	-530.22	6831.23	1991.23	6739.54	95.00	1.24	-0.03	1.24
	14860.00	90.18	0.77	263.5	6814.50	-530.42	6830.75	1990.75	6833.40	94.00	1.92	-0.23	1.90
	14955.00	90.37	1.27	263.5	6909.48	-528.73	6830.29	1990.29	6928.15	95.00	0.56	0.20	0.53
	15049.00	90.31	1.26	266.2	7003.46	-526.65	6829.74	1989.74	7021.86	94.00	0.06	-0.06	-0.01
	15144.00	90.28	1.01	266.2	7098.44	-524.77	6829.25	1989.25	7116.59	95.00	0.27	-0.03	-0.26
	15239.00	90.37	1.84	266.2	7193.40	-522.41	6828.71	1988.71	7211.29	95.00	0.88	0.09	0.87
	15334.00	90.25	2.20	269.0	7288.34	-519.06	6828.19	1988.19	7305.90	95.00	0.40	-0.13	0.38
	15428.00	90.37	2.16	266.2	7382.27	-515.49	6827.69	1987.69	7399.48	94.00	0.13	0.13	-0.04
	15523.00	89.94	2.74	266.2	7477.19	-511.42	6827.43	1987.43	7494.03	95.00	0.76	-0.45	0.61
	15618.00	89.91	2.84	266.2	7572.07	-506.80	6827.55	1987.55	7588.51	95.00	0.11	-0.03	0.11
	15712.00	89.97	3.18	266.2	7665.94	-501.86	6827.65	1987.65	7681.97	94.00	0.37	0.06	0.36
	15807.00	89.82	1.05	269.0	7760.87	-498.36	6827.82	1987.82	7776.56	95.00	2.25	-0.16	-2.24
	15901.00	89.88	359.79	269.0	7854.87	-497.67	6828.07	1988.07	7870.37	94.00	1.34	0.06	-1.34
	15996.00	89.94	359.01	269.0	7949.86	-498.66	6828.22	1988.22	7965.27	95.00	0.82	0.06	-0.82
	16091.00	90.03	358.71	269.0	8044.84	-500.55	6828.25	1988.25	8060.21	95.00	0.33	0.09	-0.32
	16185.00	90.09	359.05	271.7	8138.83	-502.39	6828.15	1988.15	8154.15	94.00	0.37	0.06	0.36
	16280.00	90.18	359.72	271.7	8233.82	-503.41	6827.92	1987.92	8249.06	95.00	0.71	0.09	0.71
	16374.00	90.22	359.23	271.7	8327.81	-504.27	6827.59	1987.59	8342.96	94.00	0.52	0.04	-0.52
	16469.00	90.00	357.76	271.7	8422.78	-506.77	6827.41	1987.41	8437.91	95.00	1.56	-0.23	-1.55
	16564.00	90.25	357.30	271.7	8517.69	-510.86	6827.21	1987.21	8532.91	95.00	0.55	0.26	-0.48
	16658.00	90.03	357.85	266.2	8611.61	-514.84	6826.98	1986.98	8626.90	94.00	0.63	-0.23	0.59
	16753.00	90.09	357.79	269.0	8706.54	-518.45	6826.88	1986.88	8721.88	95.00	0.09	0.06	-0.06
	16848.00	90.09	357.81	271.7	8801.47	-522.10	6826.73	1986.73	8816.87	95.00	0.02	-0.00	0.02
	16942.00	90.18	357.78	271.7	8895.40	-525.72	6826.51	1986.51	8910.86	94.00	0.10	0.10	-0.03
	17037.00	89.91	358.41	271.7	8990.34	-528.87	6826.43	1986.43	9005.83	95.00	0.72	-0.28	0.66
	17132.00	90.09	359.25	271.7	9085.32	-530.81	6826.43	1986.43	9100.77	95.00	0.90	0.19	0.88
	17226.00	90.12	0.16	274.4	9179.32	-531.30	6826.26	1986.26	9194.65	94.00	0.97	0.03	0.97
	17321.00	90.03	0.47	274.4	9274.32	-530.78	6826.13	1986.13	9289.48	95.00	0.34	-0.09	0.33
	17415.00	90.12	1.43	277.1	9368.30	-529.22	6826.01	1986.01	9383.24	94.00	1.03	0.10	1.02
	17510.00	90.00	2.95	277.1	9463.23	-525.59	6825.91	1985.91	9477.82	95.00	1.60	-0.13	1.60
	17605.00	89.97	3.40	277.1	9558.09	-520.33	6825.94	1985.94	9572.23	95.00	0.47	-0.03	0.47
Projection	17637.00	89.97	3.40	N/A	9590.03	-518.43	6825.95	1985.95	9604.02	32.00	0.00	0.00	-0.00