



LWD REALTIME / MEMORY COMPOSITE LOG

Gamma Ray

Scale:

1:240 TVD

Company: Noble Energy

Well: Kona A19-685

Field: Weld County(Noble NAD 83 Grid)

County: Weld State: Colorado

Driller's Depth

Status: Surface Location:

Final Print

Latitude: 040° 28' 14.484" N

Longitude: 104° 33' 38.268" W

UTM: N/A

SEC: 21

TWN: 6N

RGE: 64W

Permanent Datum (P.D.): Ground Level

Elevation: 4743.00 ft

KB: N/A

Log Measured From: Rig Floor

Above P.D.

DF: 4773.00 ft

GL: 4743.00 ft

Dates Interval Logged

Magnetic Field Reference

Date From: 2017-06-15

Top: (ft) 1968.00

Azi Reference North:

Grid

Dip Angle: (deg)

67.02

Date To: 2017-06-19

Bottom: (ft) 6910.00

Total Magnetic Field Strength: (nT)

52362

Spud Date: 2017-06-14

Mag to Reference North Correction: (deg)

7.36 E

Borehole Record

Casing Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
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13.500	30.00	1968.00	9.625	36.00	30.00	1968.00
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8.500	1968.00	19292.00				
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Mud Record

Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
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Oil Based Mud	1968.00	19292.00	8.500	17324.00	0.95 328.60	89.88 272.33
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Acquisition System Software Version

Other

Baker Hughes Cadence

RT4.1

Plot Studio

4.1.7763.3

Rig: H&P 517

Contractor: Helmerich & Payne Drilling Co

District: RMA

Unit: D&E

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Log Run Summary

Run No	Bit Run No.	Bit Size	Bit Type	Bit Gauge Length	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours
						Top	Bottom	From	To	Start Logging	End Logging	

		(in)		(in)		(ft)	(ft)	(ft)	(ft)			(h)
1	1	8.500	PDC	3.00	Rotary Steerable	1968.00	10310.00	1968.00	10323.00	2017-06-15 10:17	2017-06-17 06:52	39.09
2	2	8.500	PDC	3.00	Rotary Steerable	10310.00	17005.00	10323.00	17018.00	2017-06-17 18:06	2017-06-19 02:36	29.18
3	3	8.500	PDC	3.00	Rotary Steerable	17005.00	19279.00	17018.00	19292.00	2017-06-19 19:38	2017-06-20 04:26	10.29

Crew

Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
Adam Schlenz		2017-06-14	2017-06-20	Emi Iyalla		2017-06-14	2017-06-20				

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+ (%)
2017-06-15 04:00	1	1968.00	Oil Based Mud	9.1	9	N/A	0.0	84/16	Active Pit	17000	0.00
2017-06-15 14:30	1	2579.00	Oil Based Mud	9.0	13	N/A	201.4	82/18	Active Pit	19000	0.00
2017-06-16 04:00	1	5225.00	Oil Based Mud	9.1	12	N/A	59.2	81/19	Active Pit	21000	0.00
2017-06-16 14:30	1	7182.00	Oil Based Mud	9.2	12	N/A	64.4	81/19	Active Pit	25000	0.00
2017-06-17 04:00	1	9451.00	Oil Based Mud	9.3	12	N/A	114.3	81/19	Active Pit	24000	0.00
2017-06-18 04:00	2	12685.00	Oil Based Mud	9.2	10	N/A	144.7	83/17	Active Pit	21000	0.00
2017-06-18 14:30	2	15206.00	Oil Based Mud	9.3	11	N/A	87.0	84/16	Active Pit	22500	0.00
2017-06-19 04:00	2	17018.00	Oil Based Mud	9.3	10	N/A	125.5	84/16	Active Pit	22500	0.00
2017-06-19 14:30	3	17018.00	Oil Based Mud	9.3	10	N/A	70.4	84/16	Active Pit	21000	0.00
2017-06-20 03:30	3	19019.00	Oil Based Mud	9.3	10	N/A	53.5	84/16	Active Pit	20500	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	ATC_SU	12099238	Near Bit VSS	5.93	6.73	7.000	4.330
1	ATC_SU	12099238	Near Bit Inclination	5.93	6.73	7.000	4.330
1	ATC_MWD	12118937	Gamma (single)	2.75	12.90	7.000	3.250
1	ATC_MWD	12118937	Directional (mag)	12.27	22.42	7.000	3.250
2	ATC_SU	14192927	Near Bit Inclination	5.93	6.73	7.000	4.330
2	ATC_SU	14192927	Near Bit VSS	5.93	6.73	7.000	4.330
2	ATC_MWD	12178891	Gamma (single)	2.65	12.90	7.000	3.250
2	ATC_MWD	12178891	Directional (mag)	12.17	22.42	7.000	3.250
3	ATC_SU	12124244	Near Bit VSS	5.93	6.73	7.000	4.330
3	ATC_SU	12124244	Near Bit Inclination	5.93	6.73	7.000	4.330
3	ATC_MWD	12118955	Gamma (single)	2.76	12.90	7.000	3.250
3	ATC_MWD	12118955	Directional (mag)	12.28	22.42	7.000	3.250

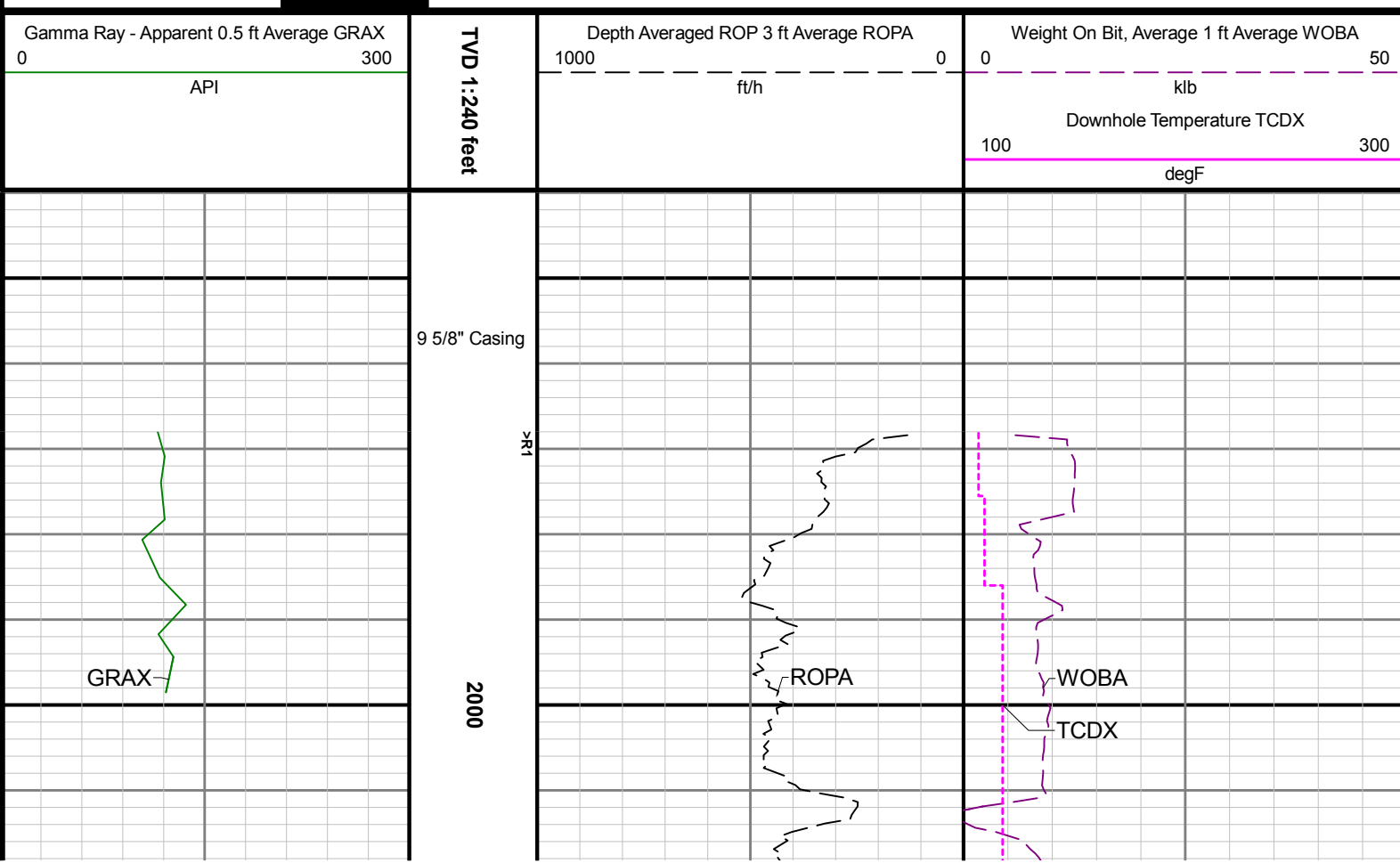
Service and Tool Mnemonics

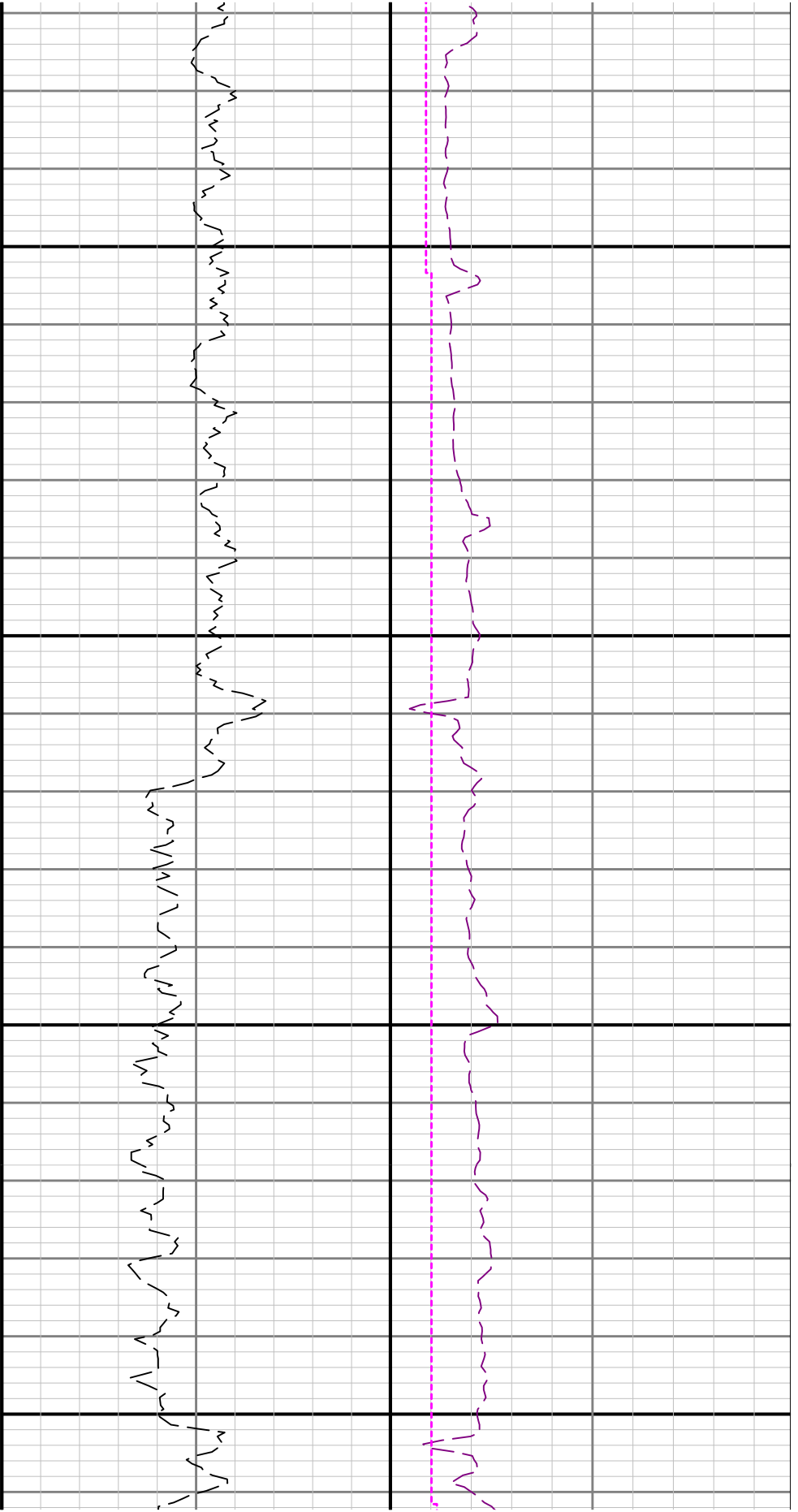
Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments

Presented Curves	Description	Units
TCDX	Downhole Temperature	degF
ROPA	Depth Averaged ROP 3 ft Average	ft/h
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAX	OnTrak - Gamma Ray - Apparent - Real-Time 0.5 ft Average	API

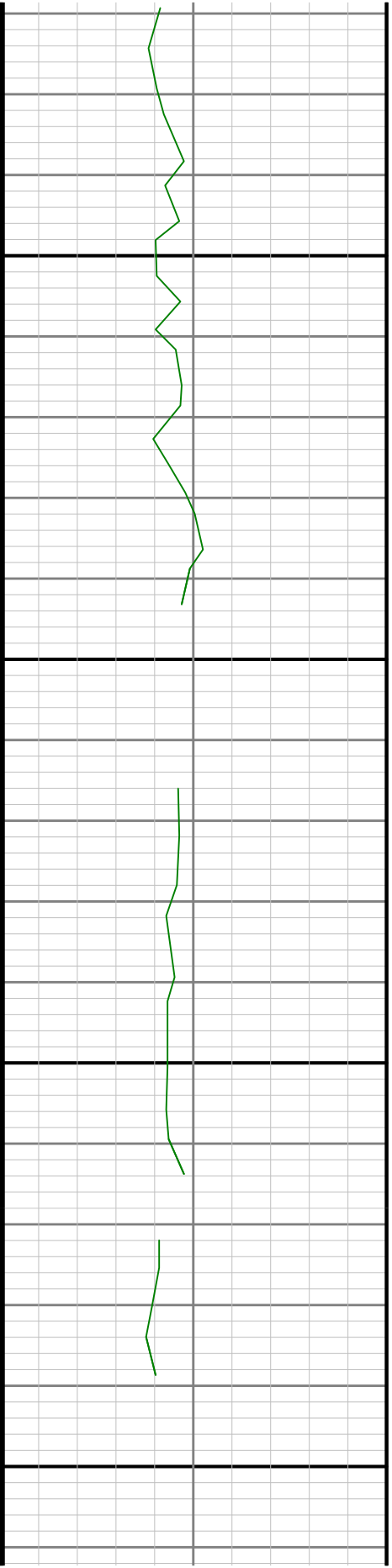
	Company	Noble Energy		
	Well	Kona A19-685		
	Interval	Date From:	2017-06-15 04:17:16	Top: 1968.00
		Date To:	2017-06-19 14:20:52	Bottom: 6910.00
	Created	2017-06-20 07:55:29		





2100

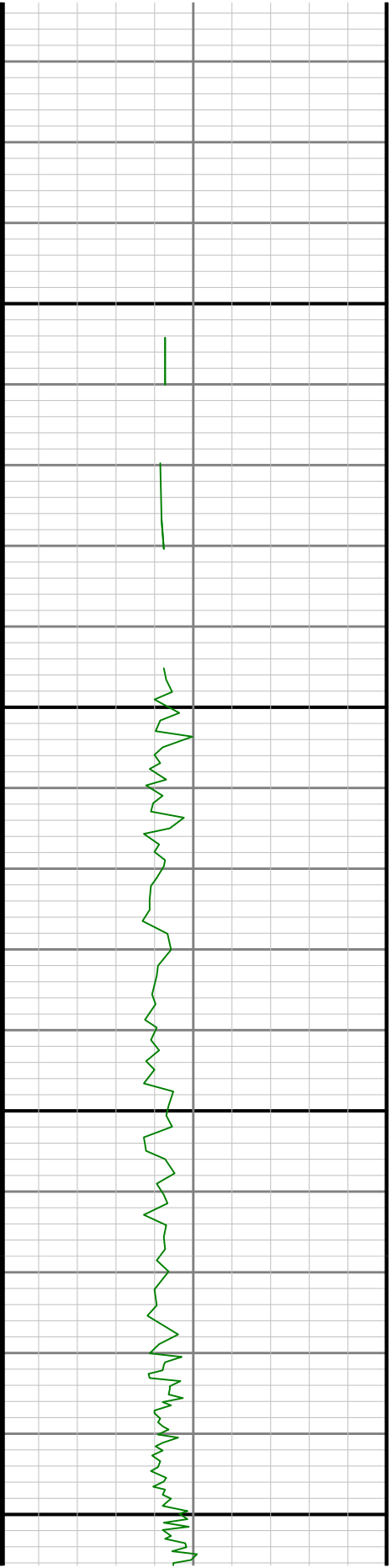
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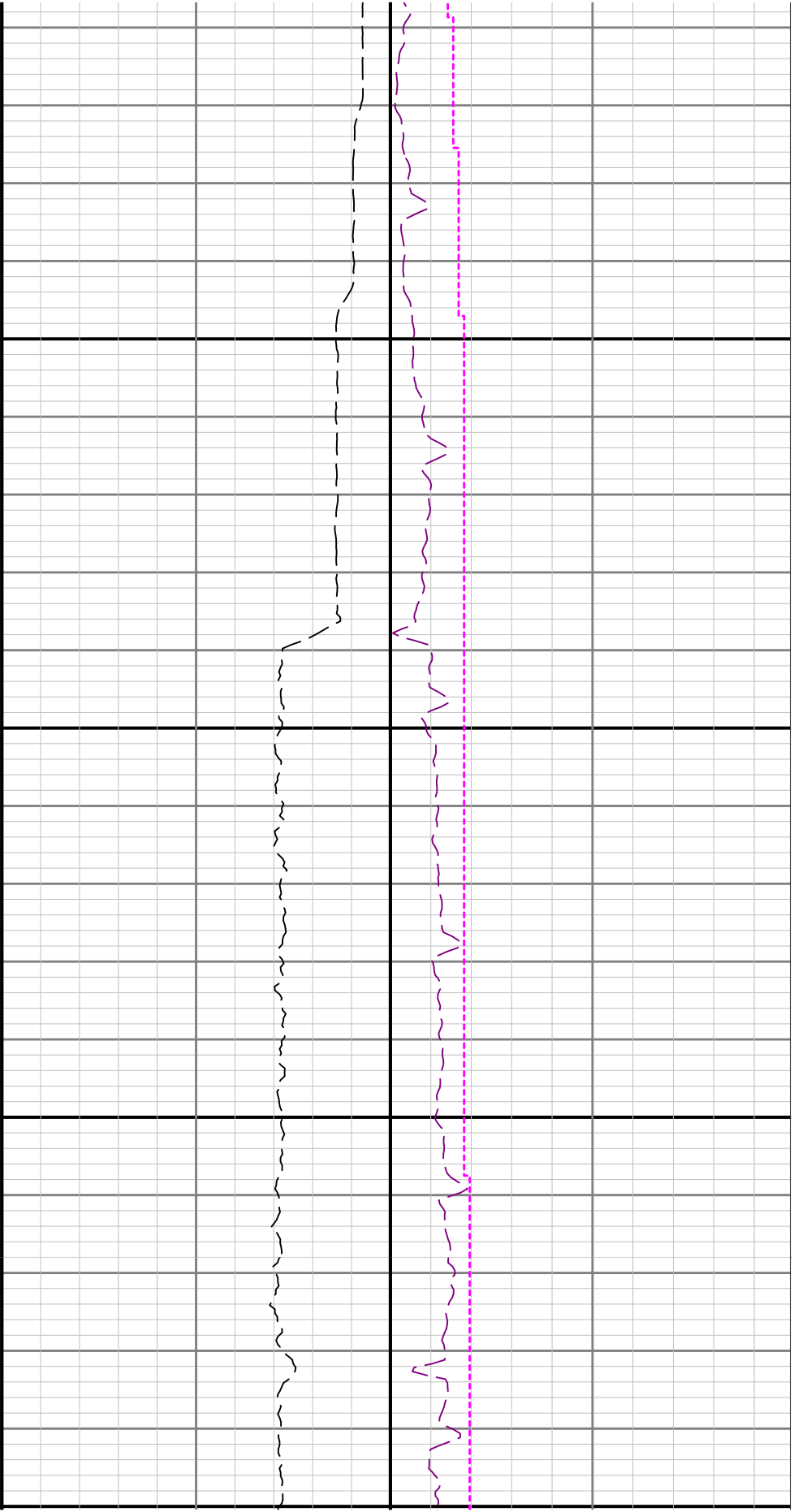




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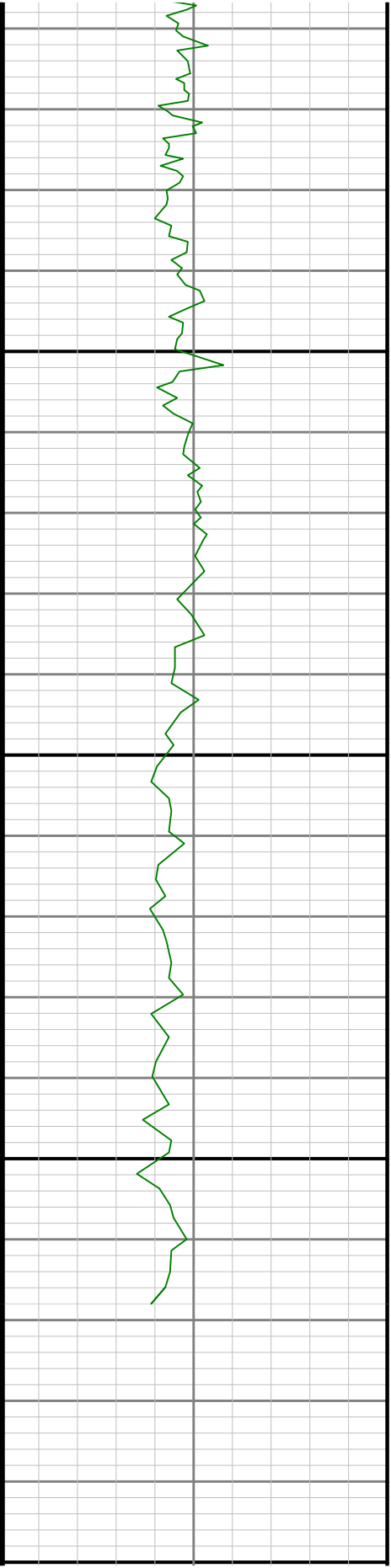
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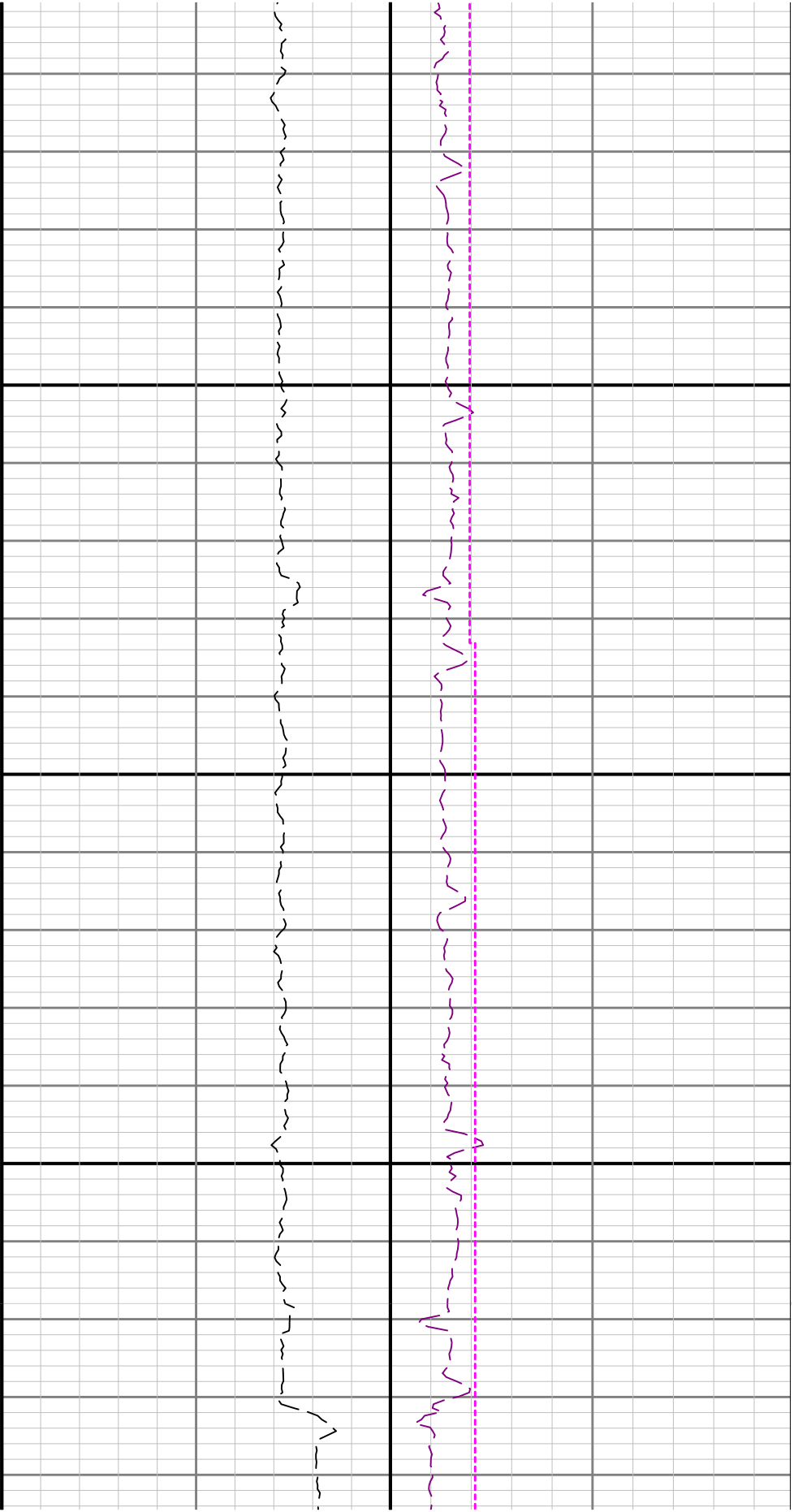




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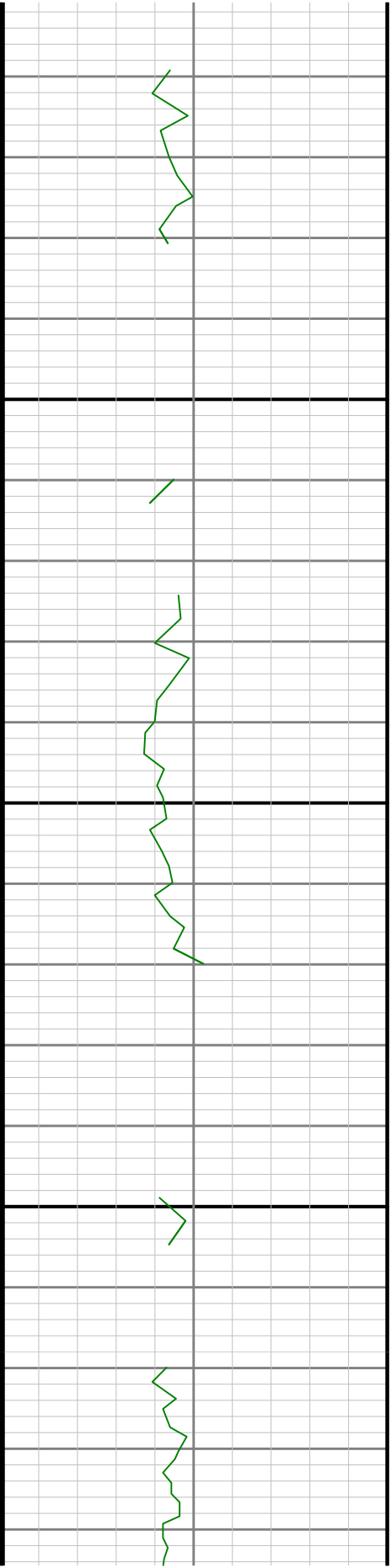
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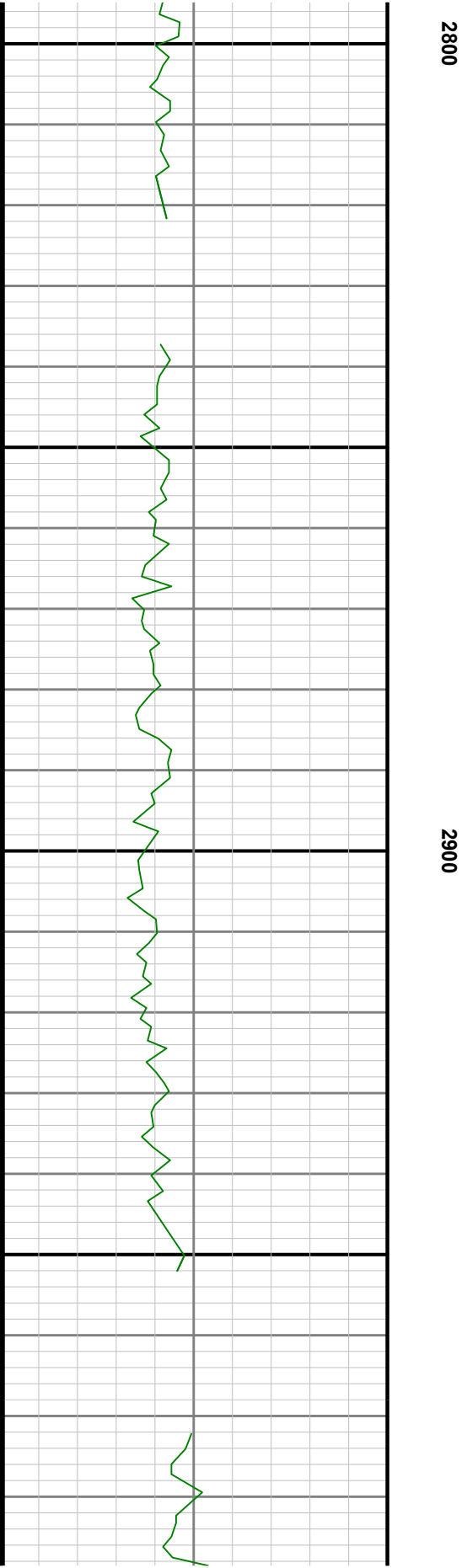
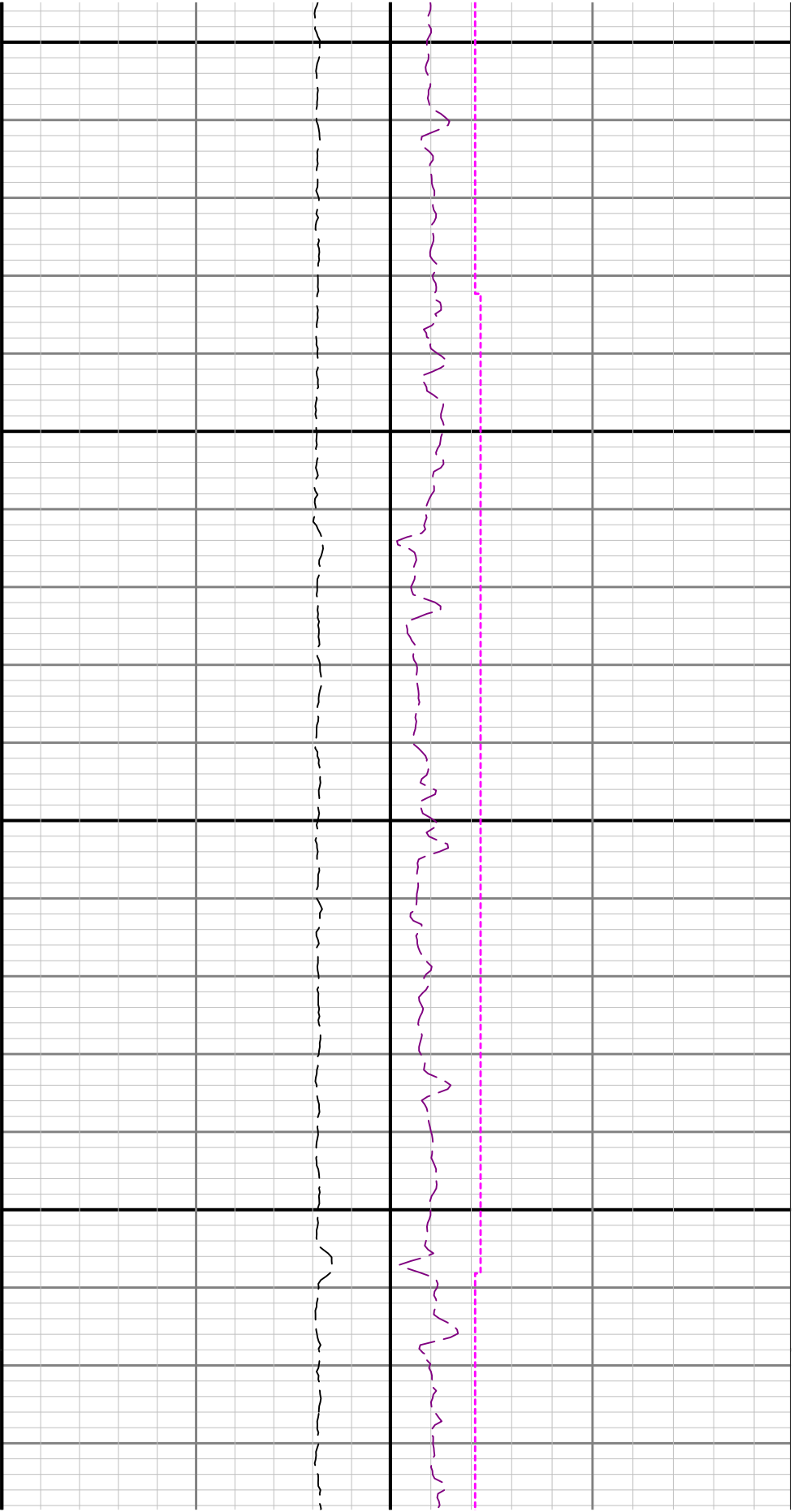


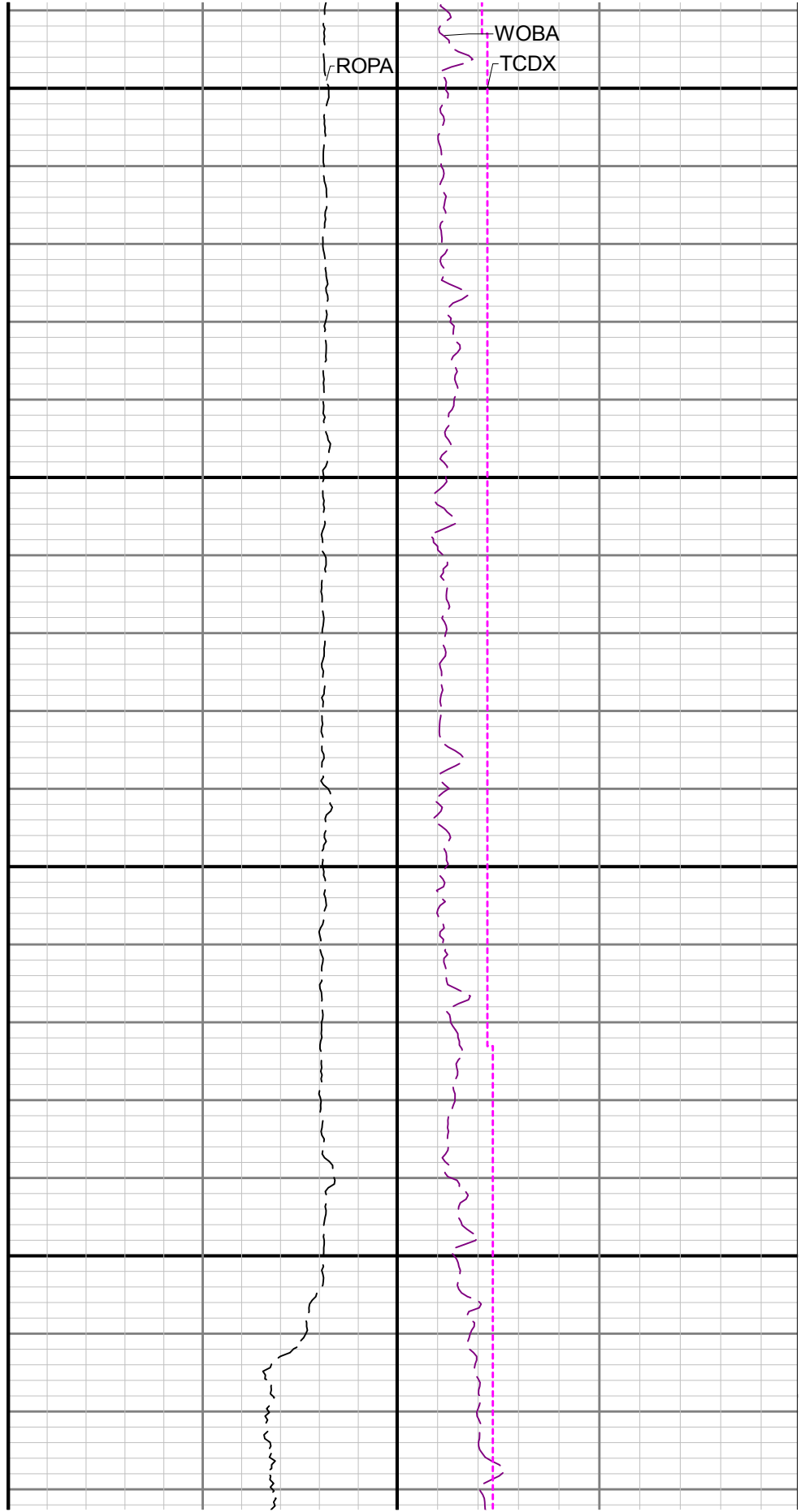
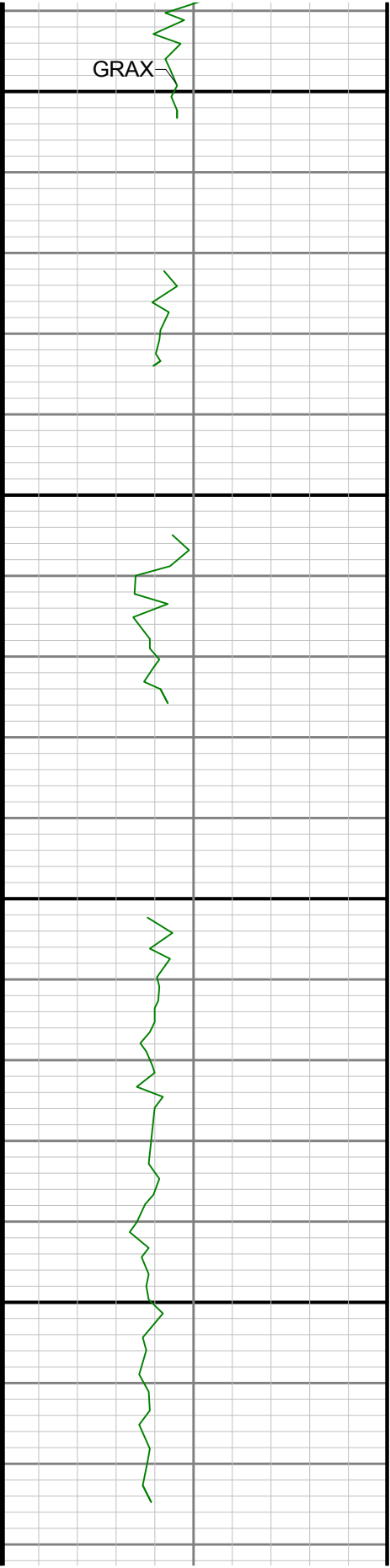


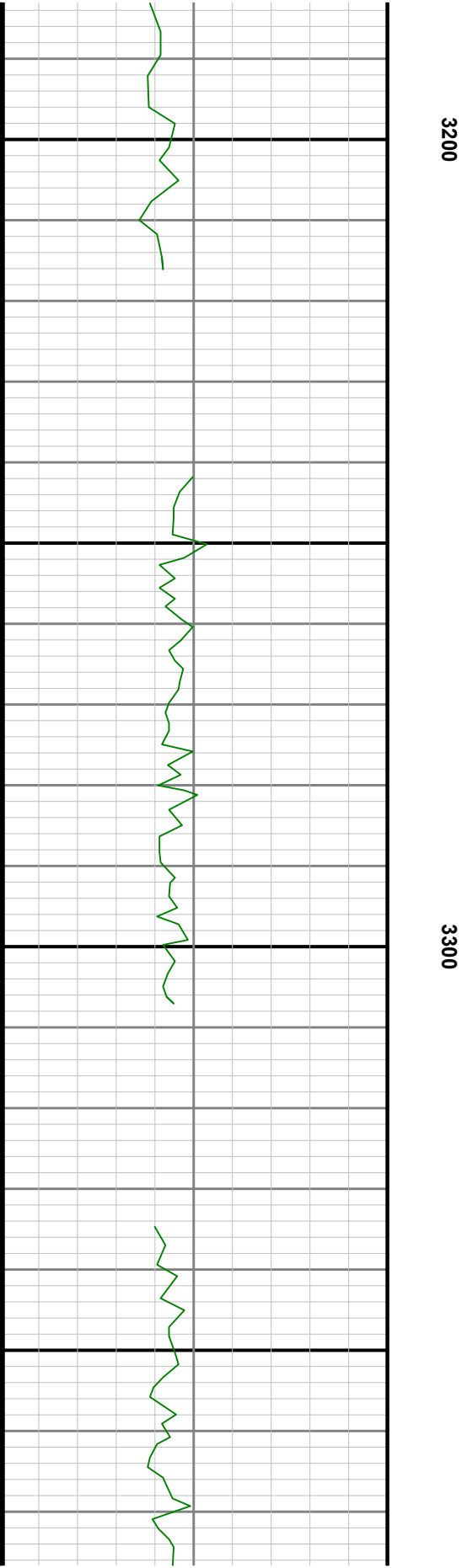
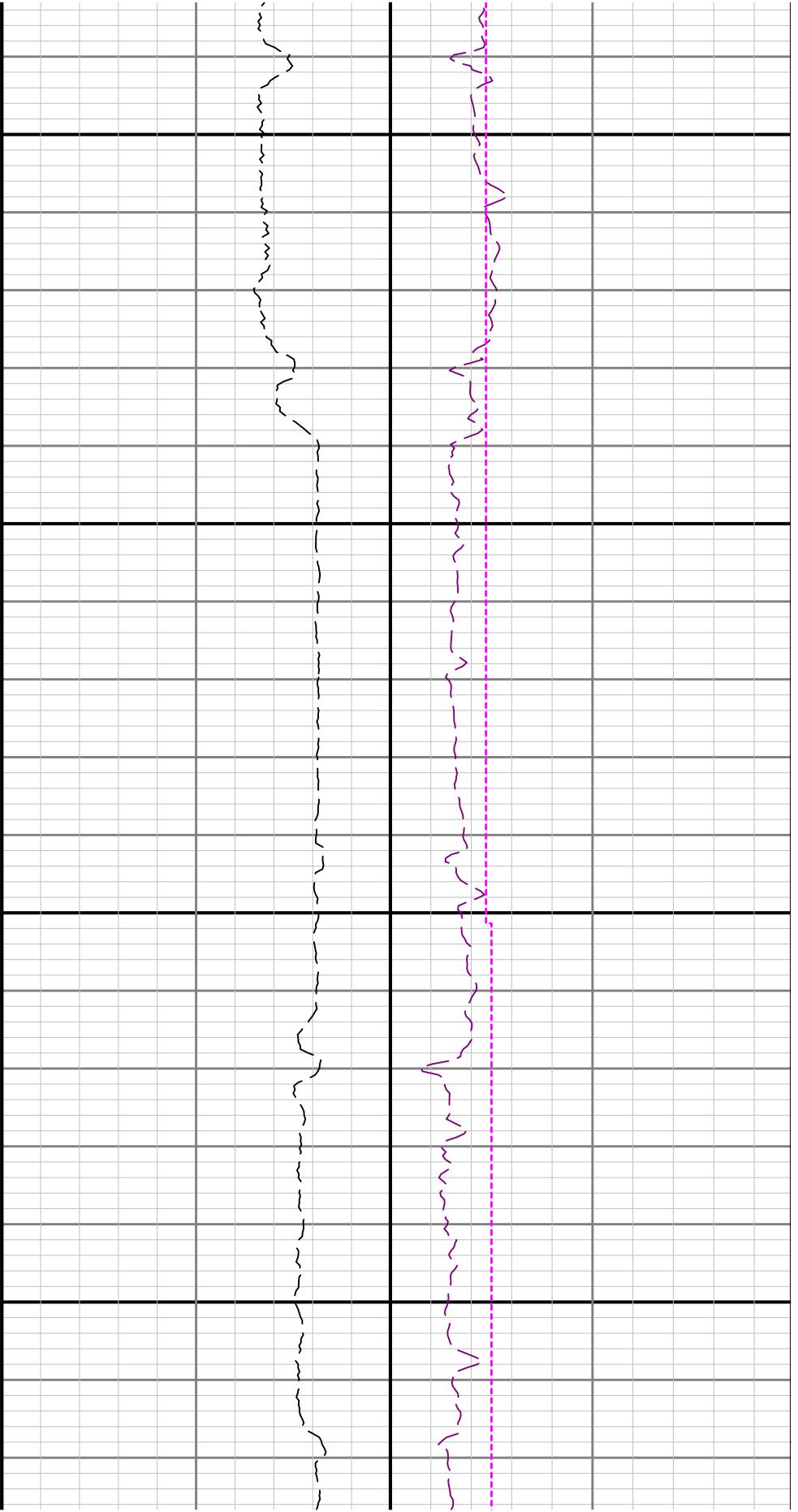
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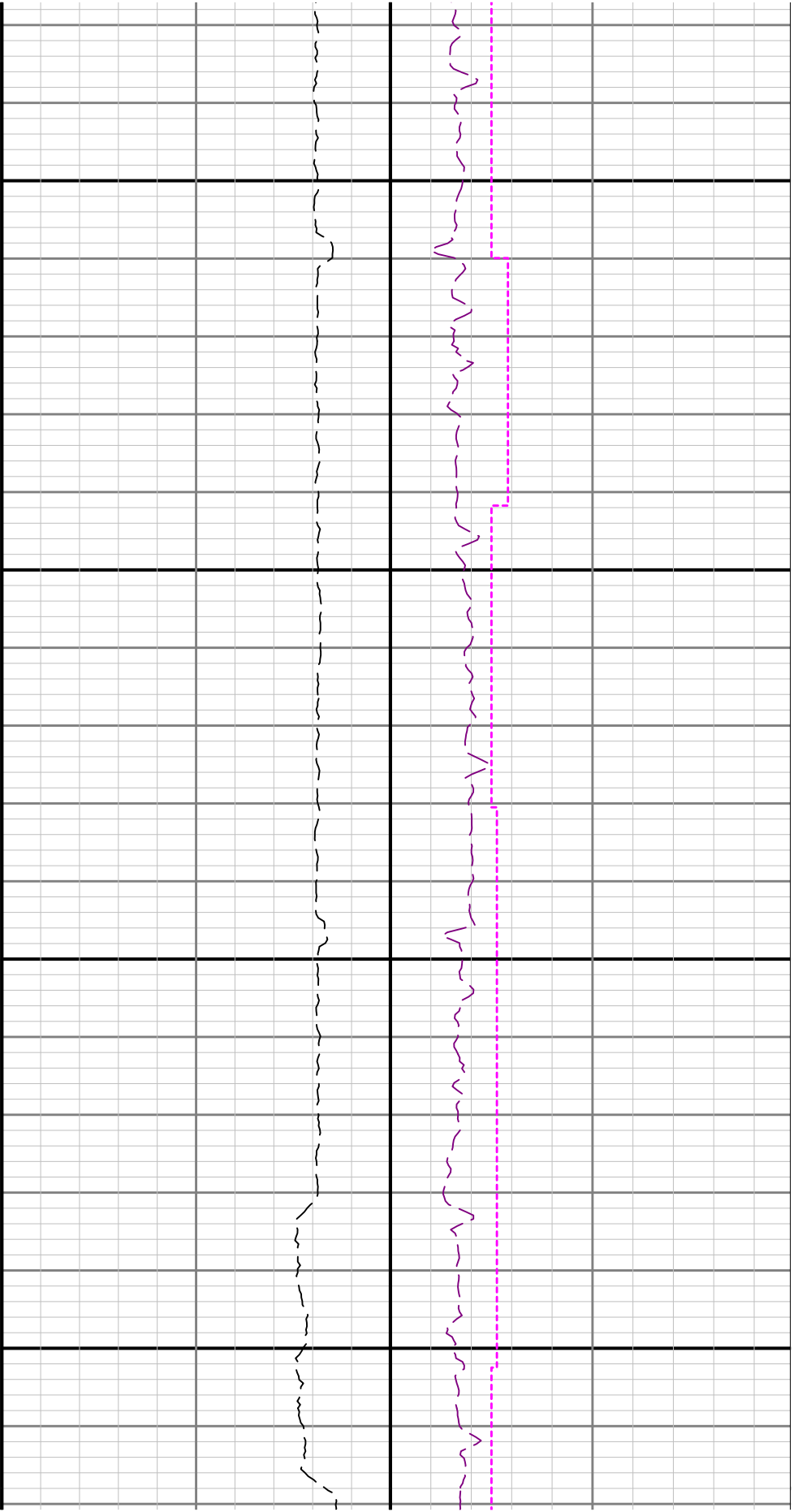
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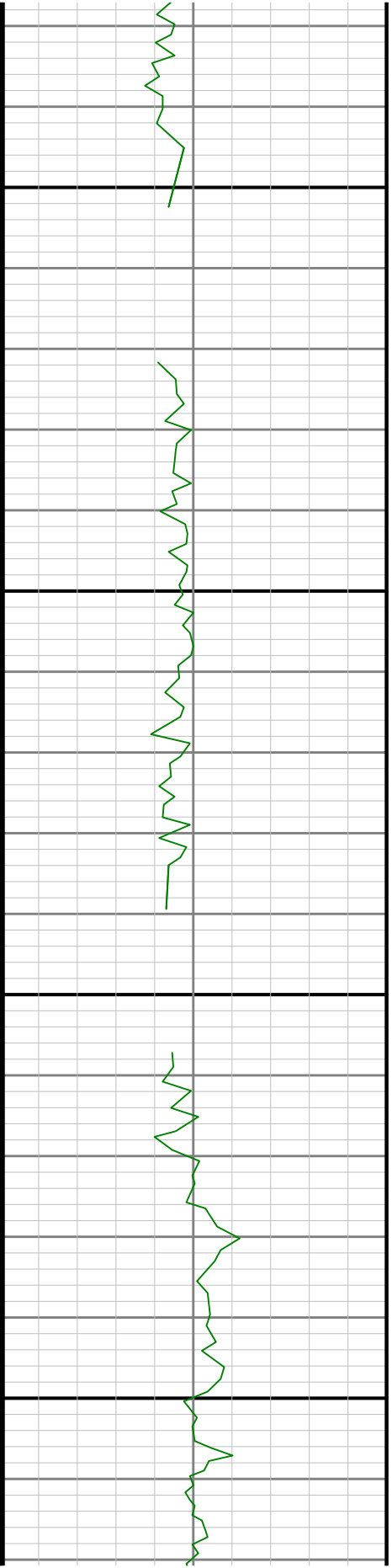


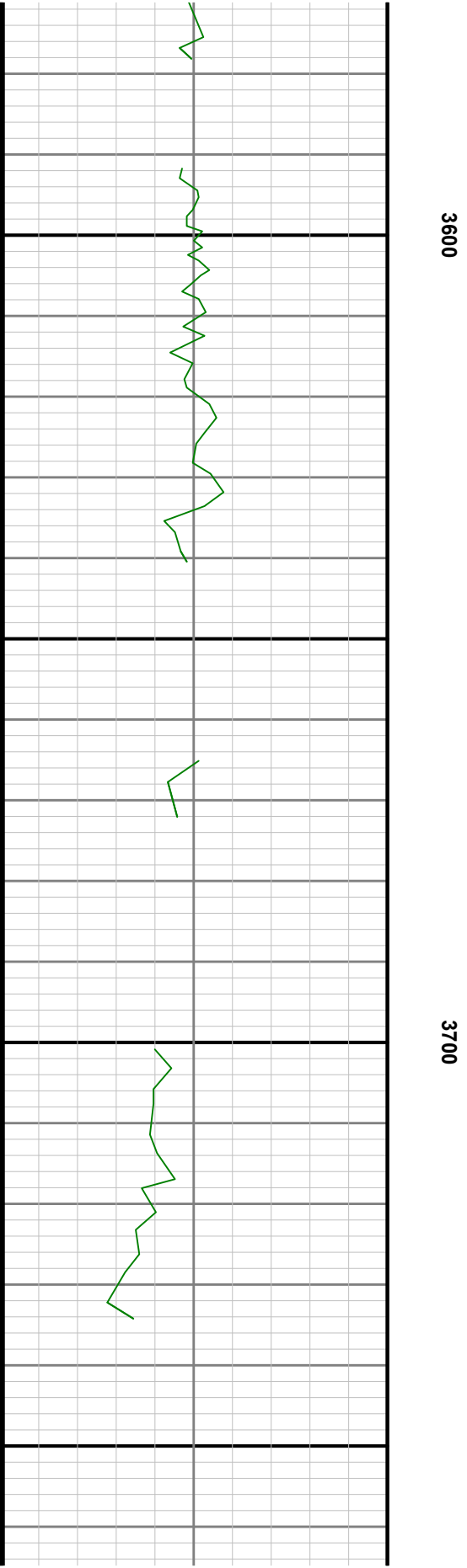
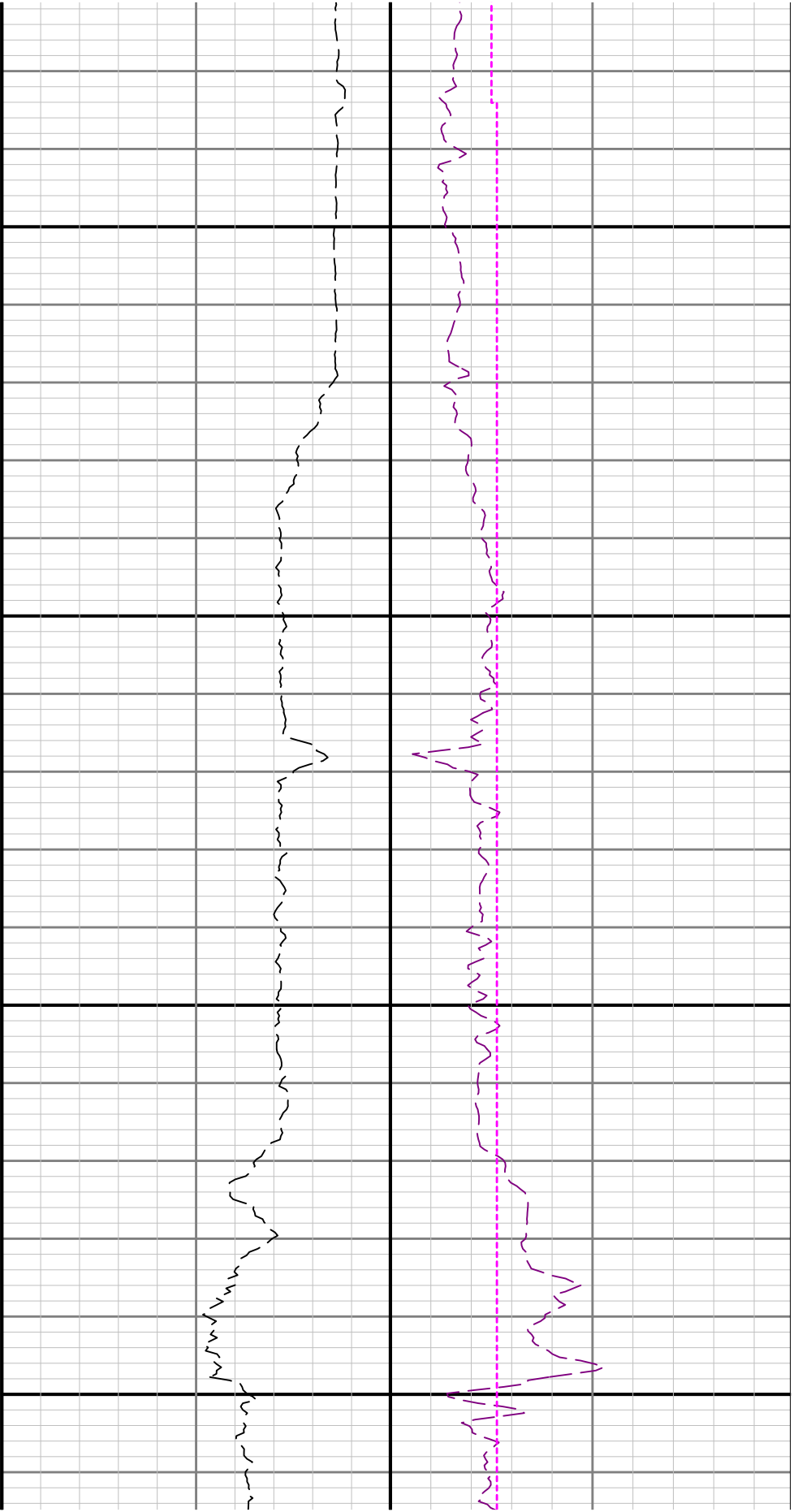


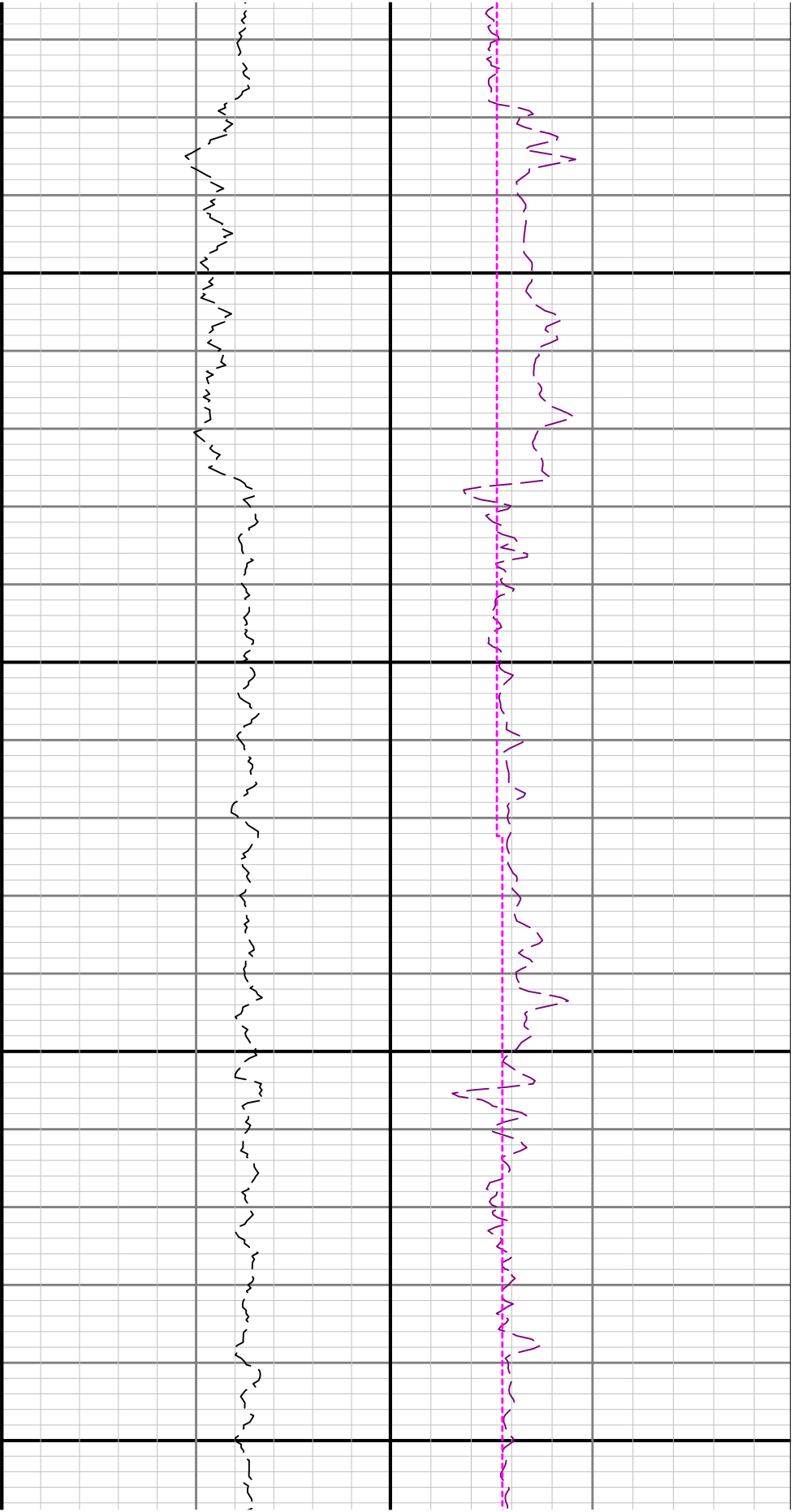


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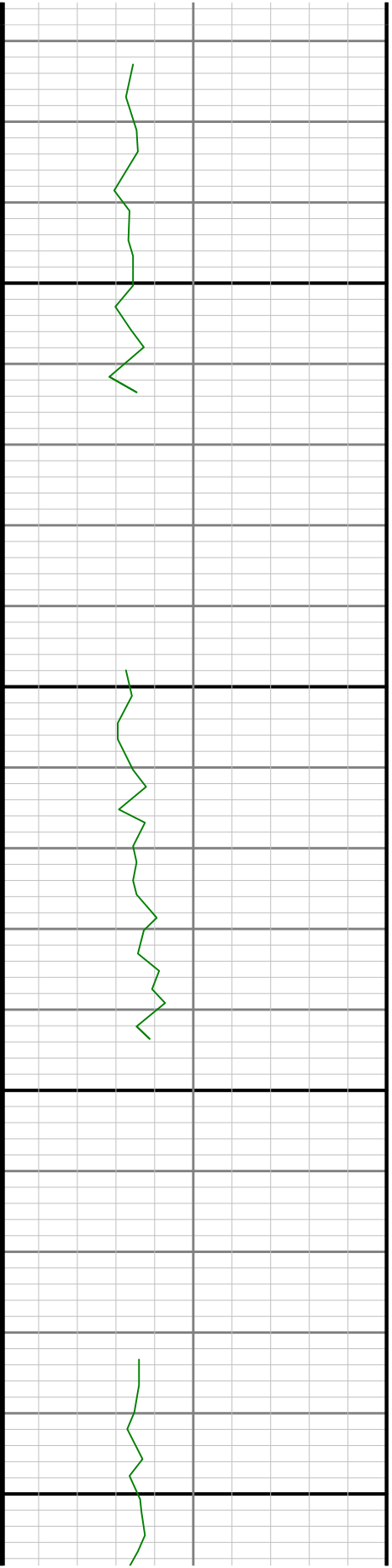


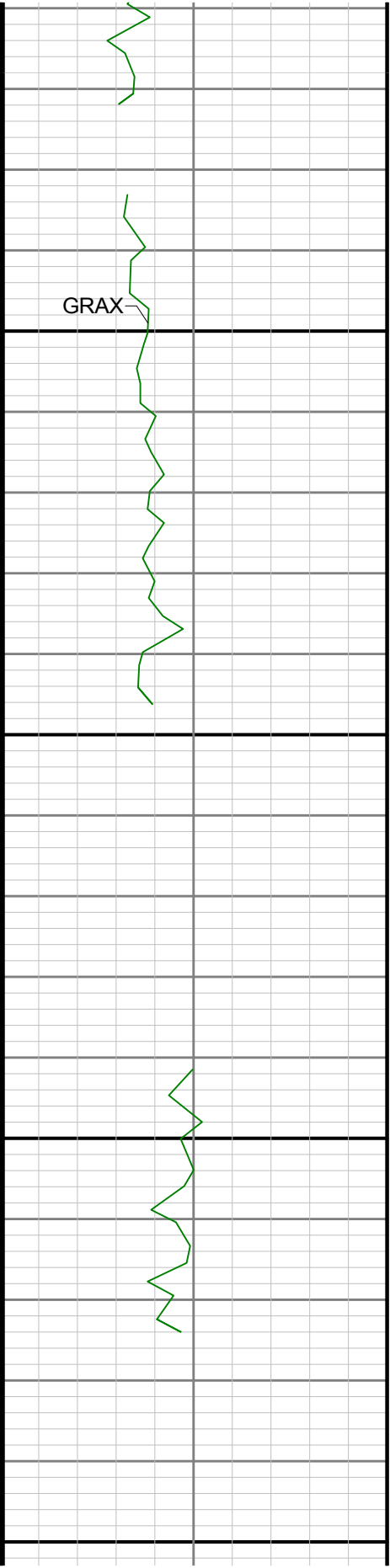




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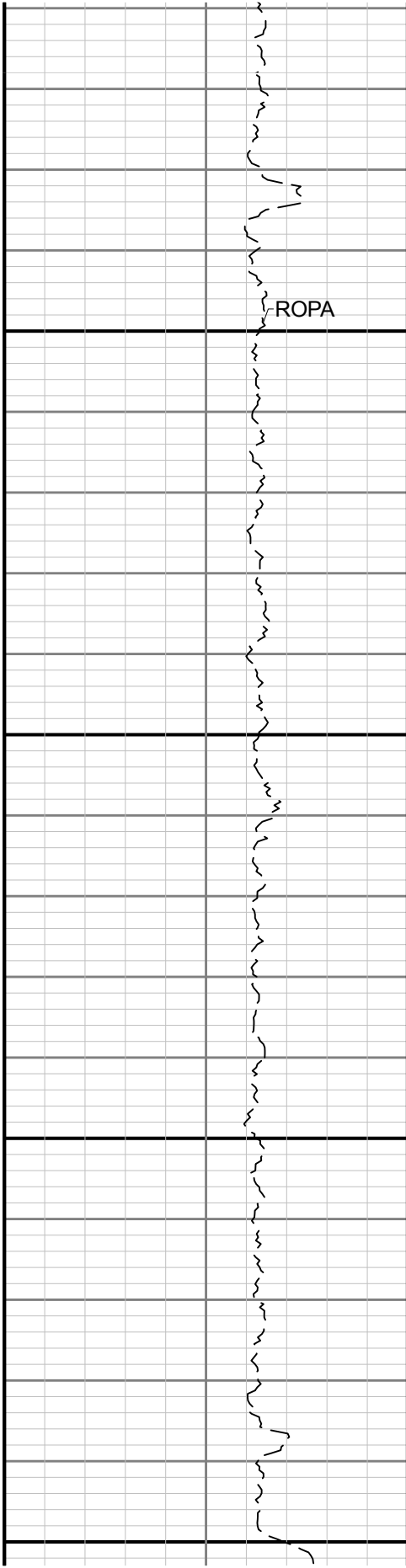
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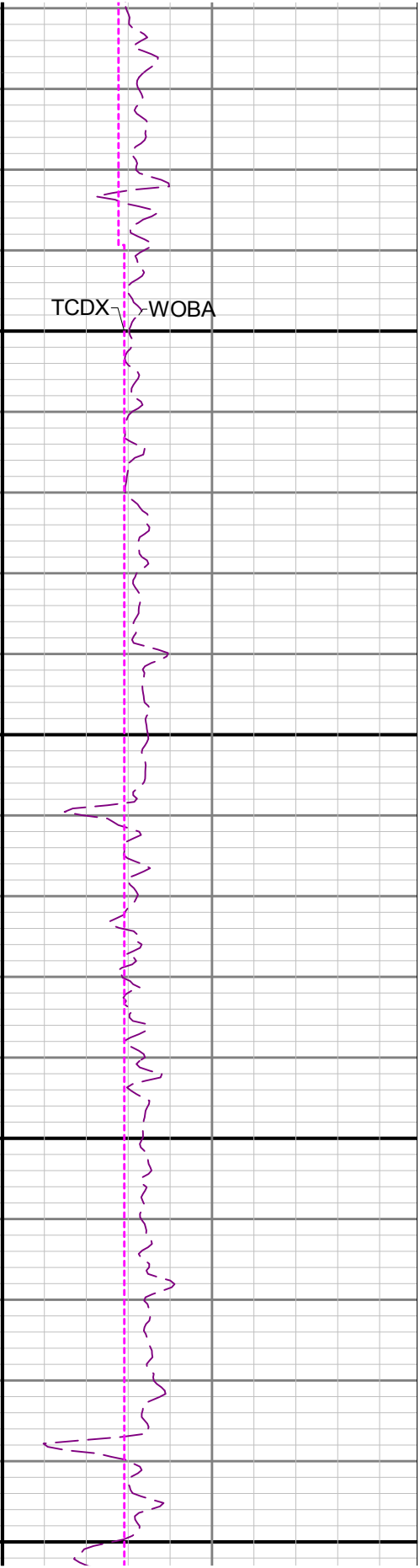


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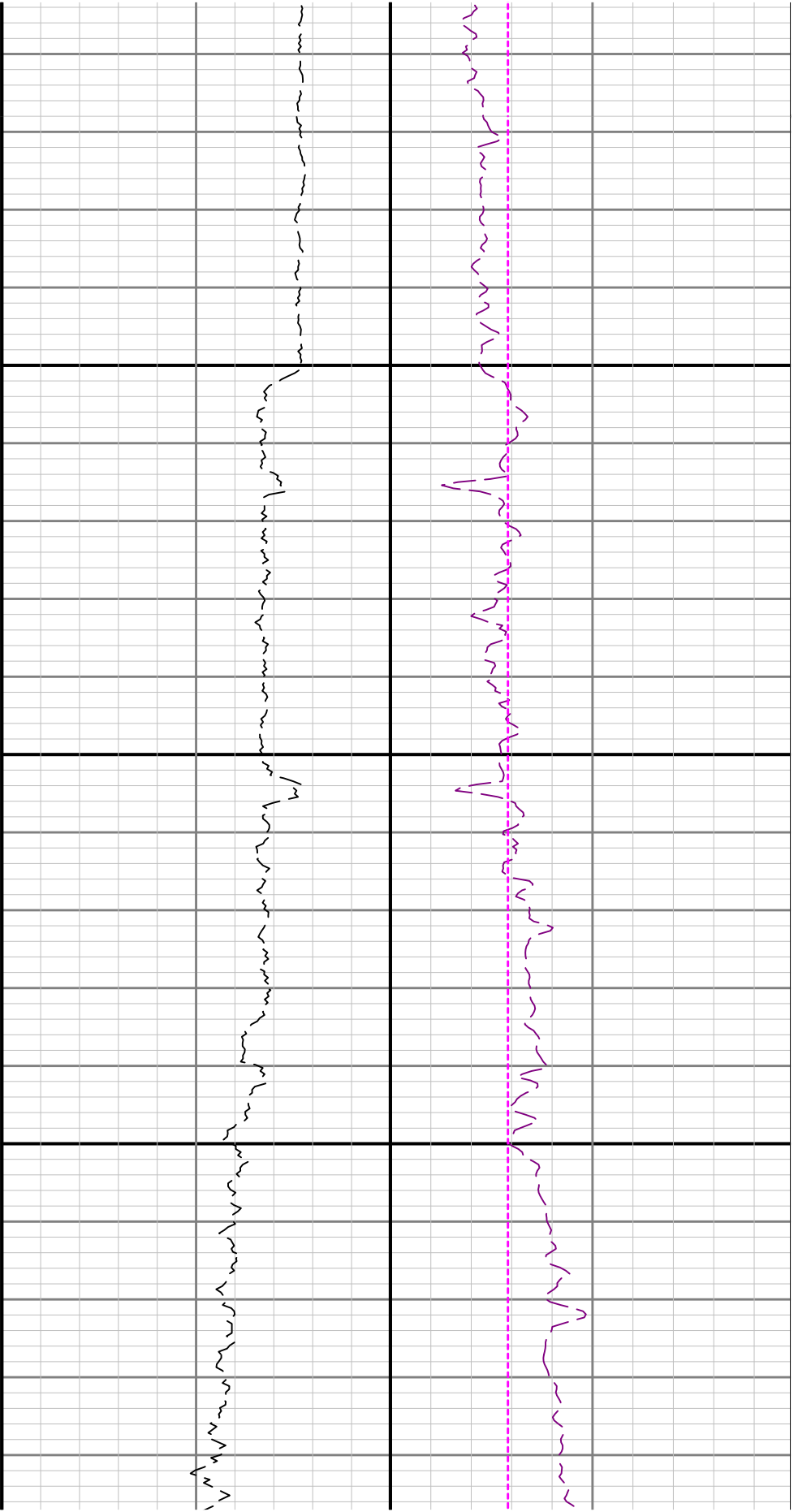


ROPA



TCDX

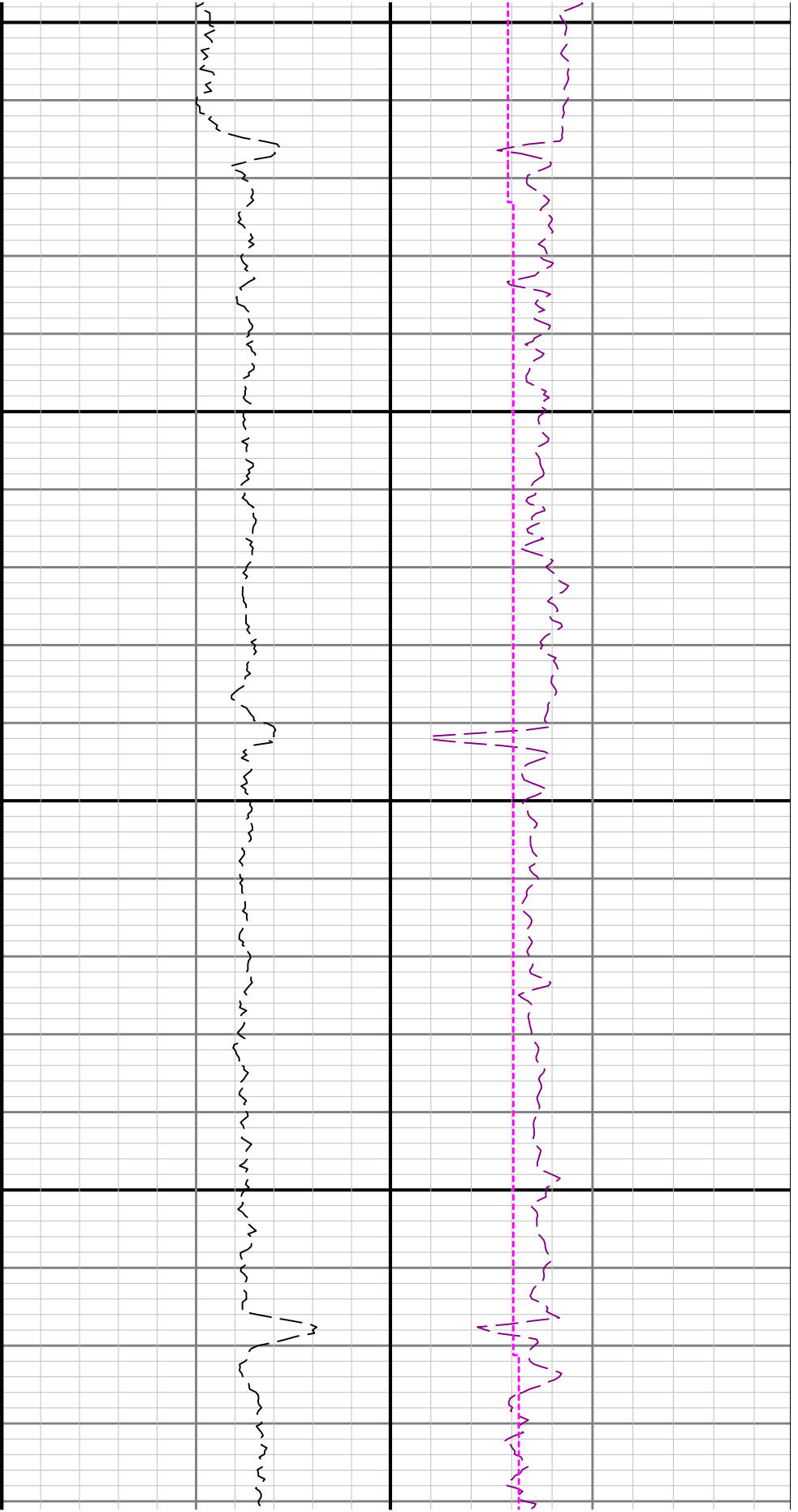
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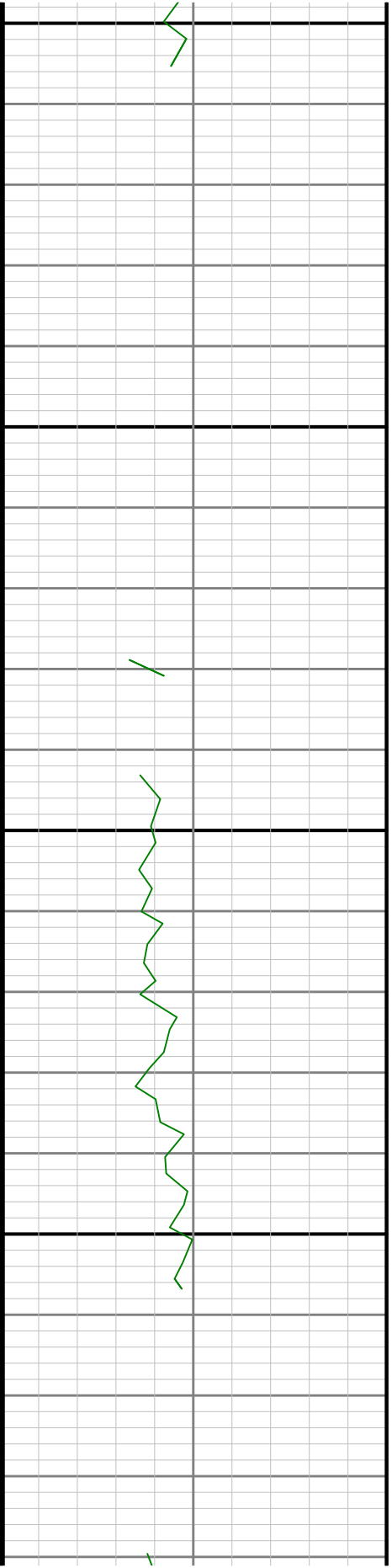
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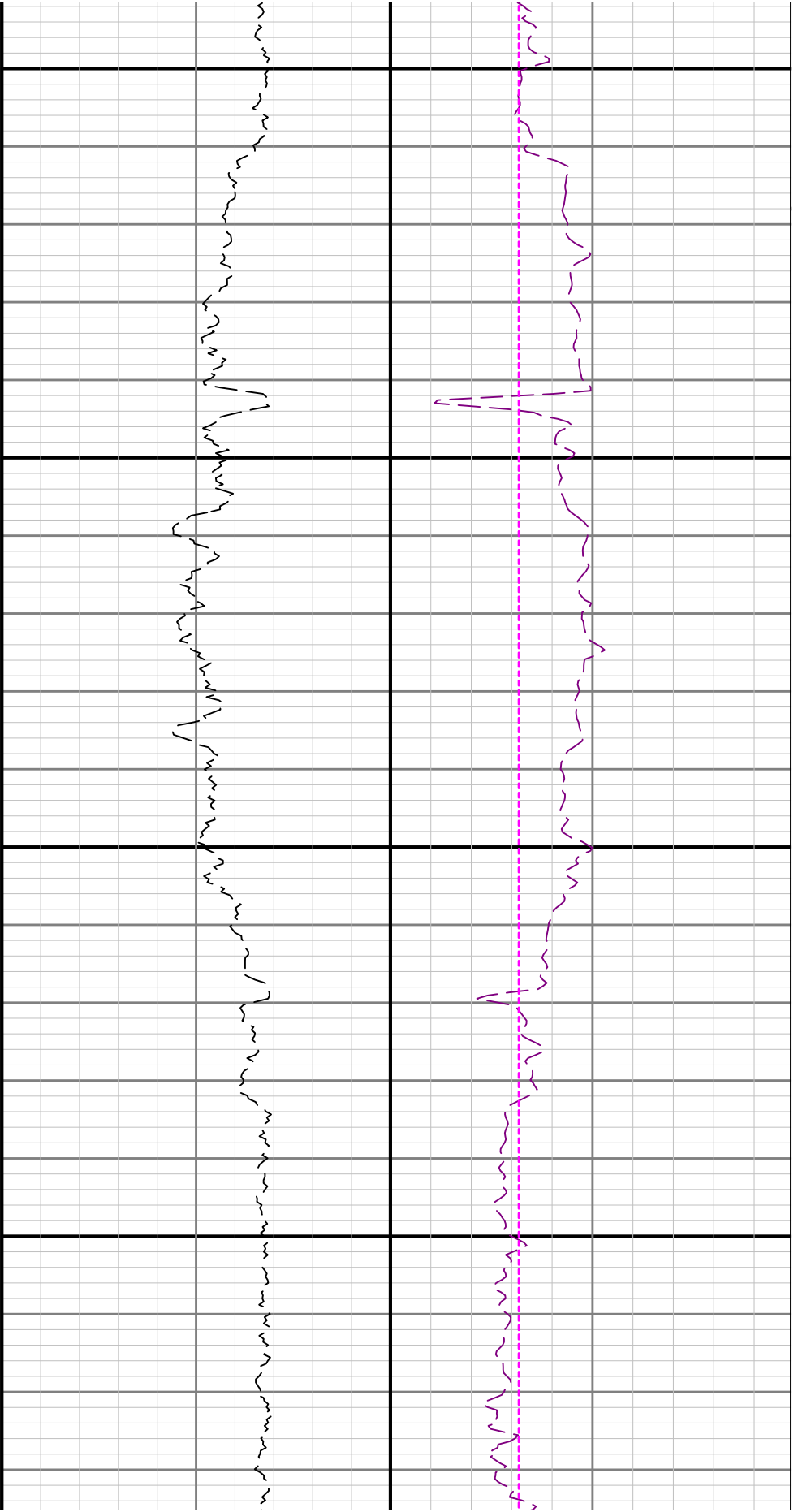




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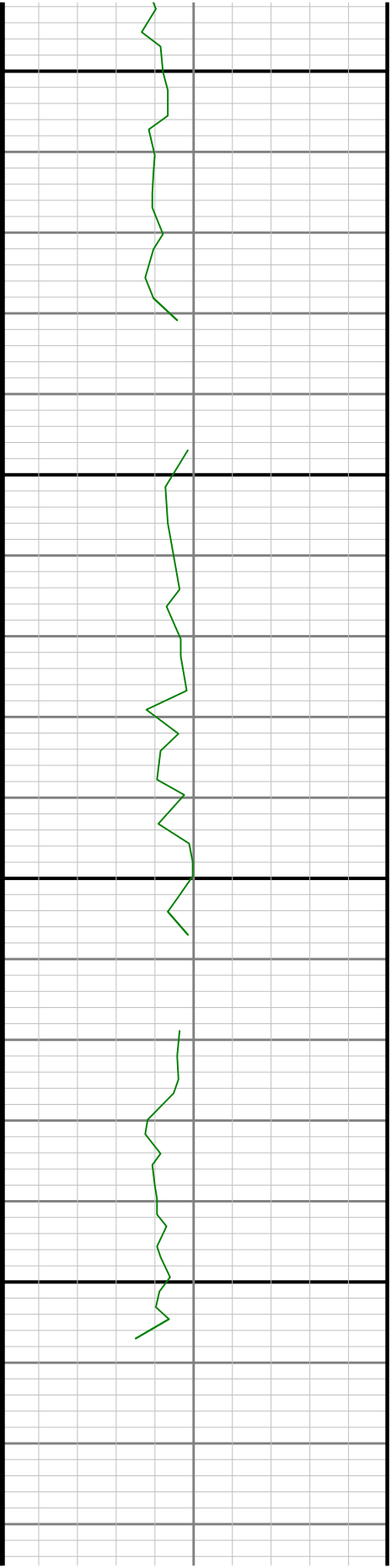
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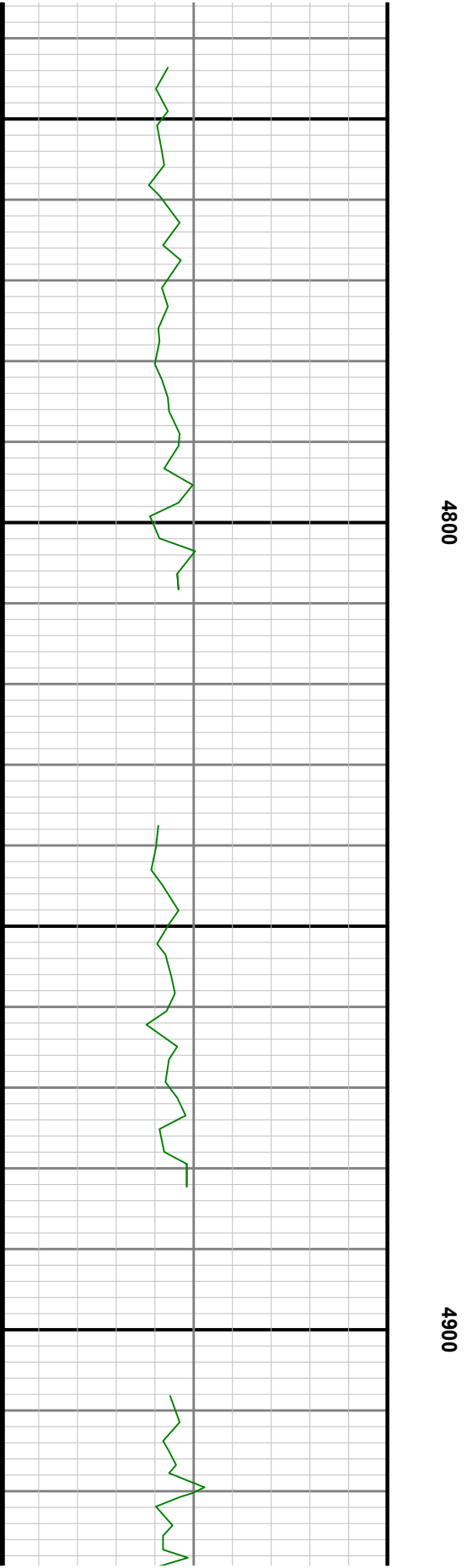
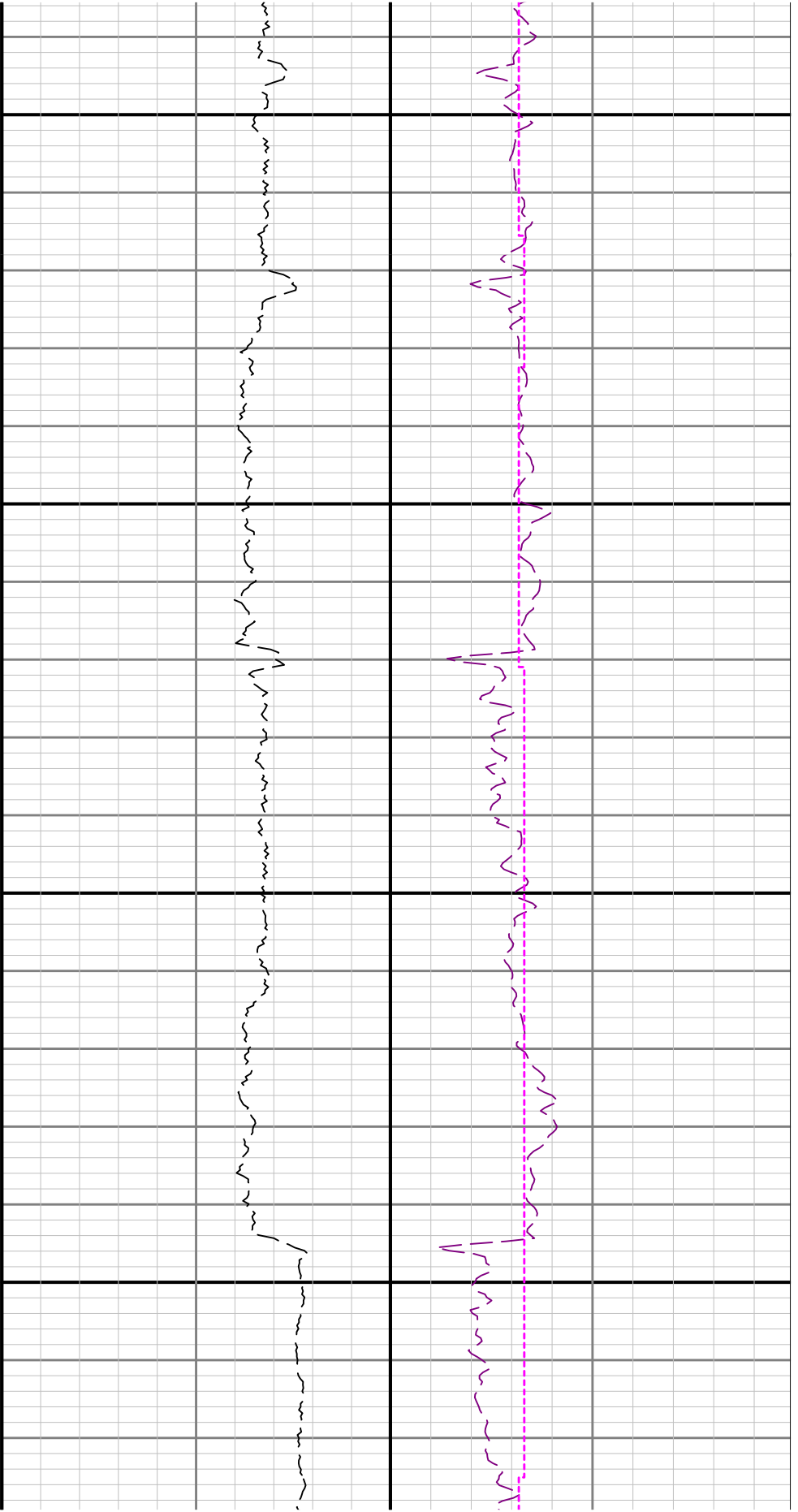


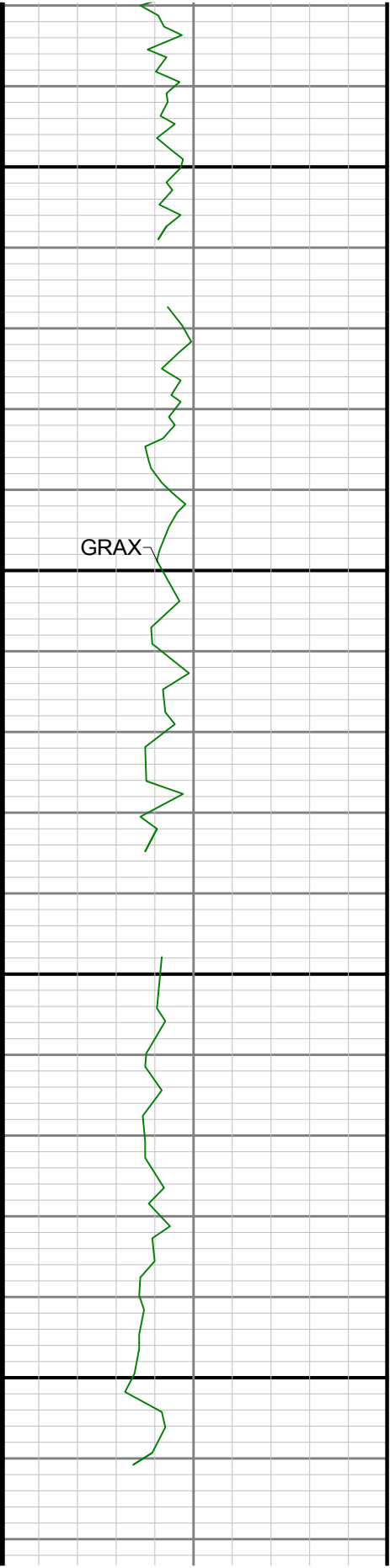


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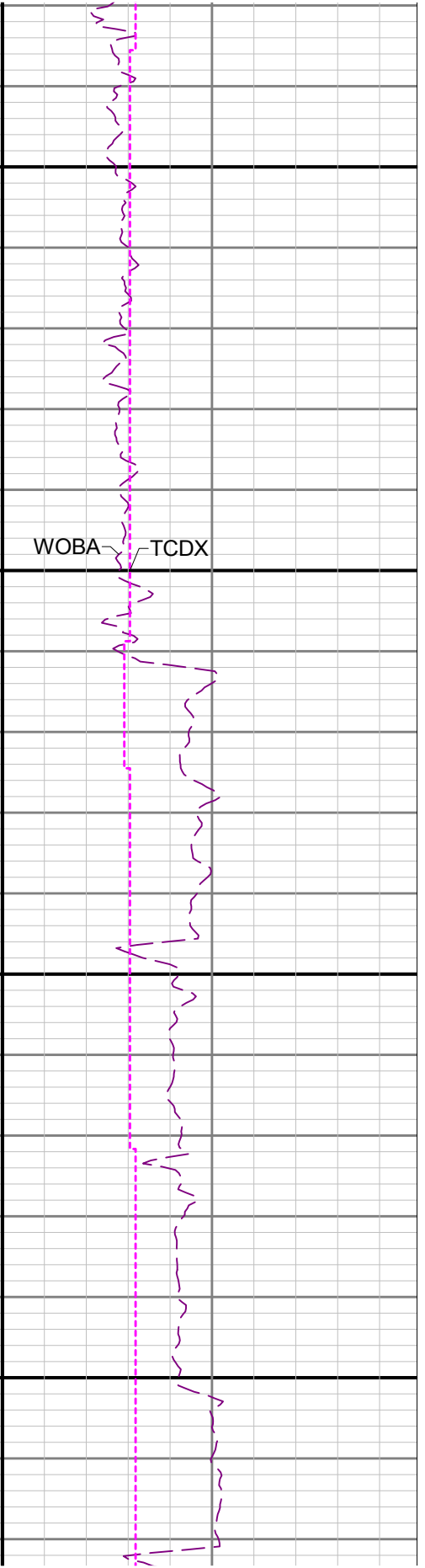
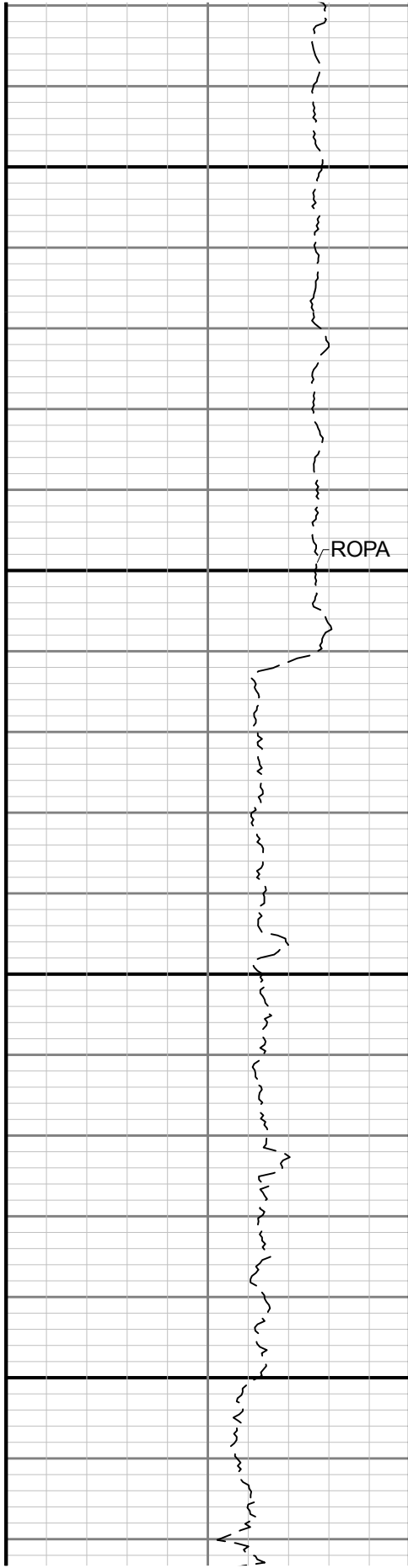


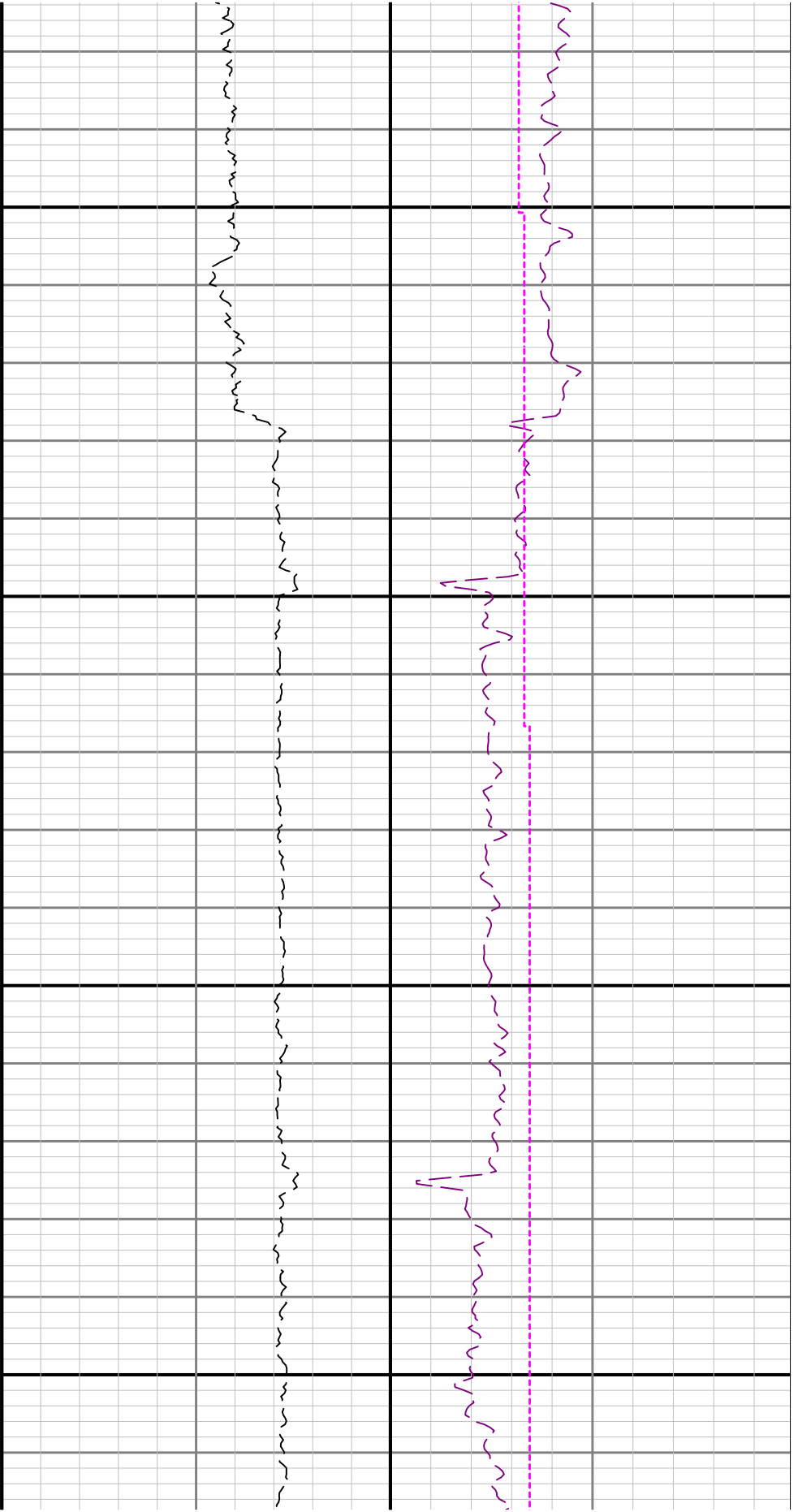




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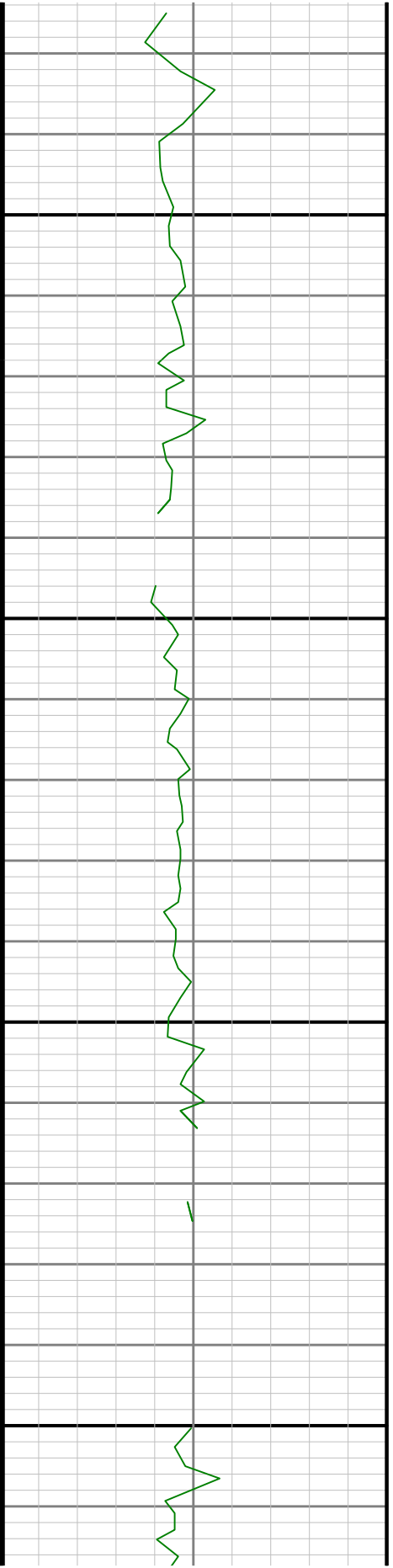
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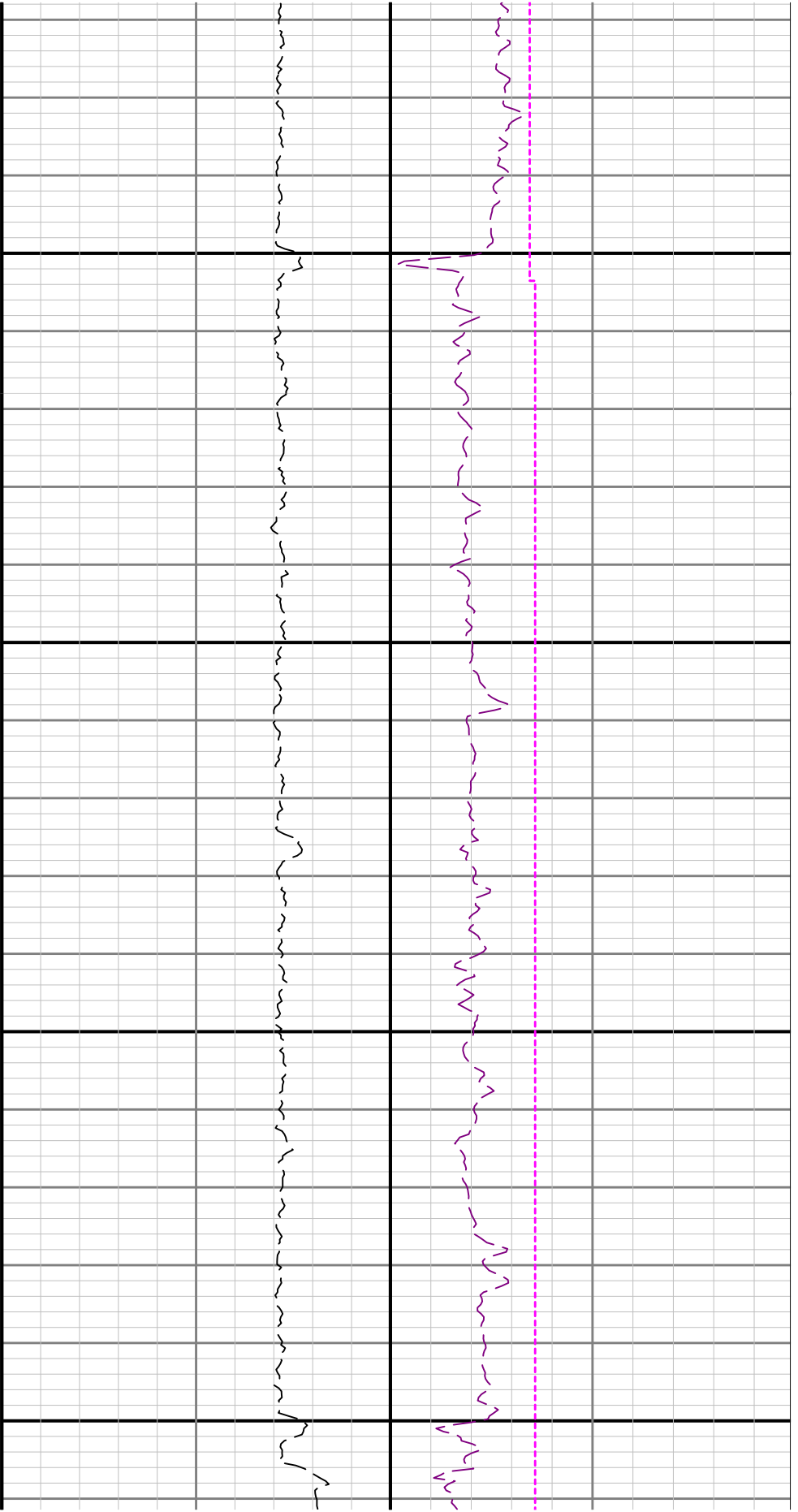




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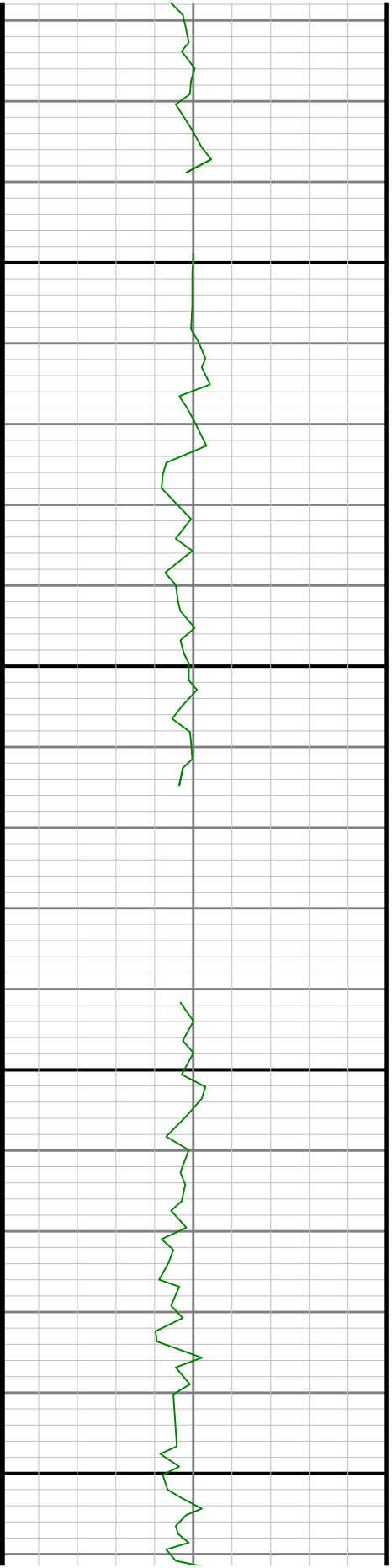
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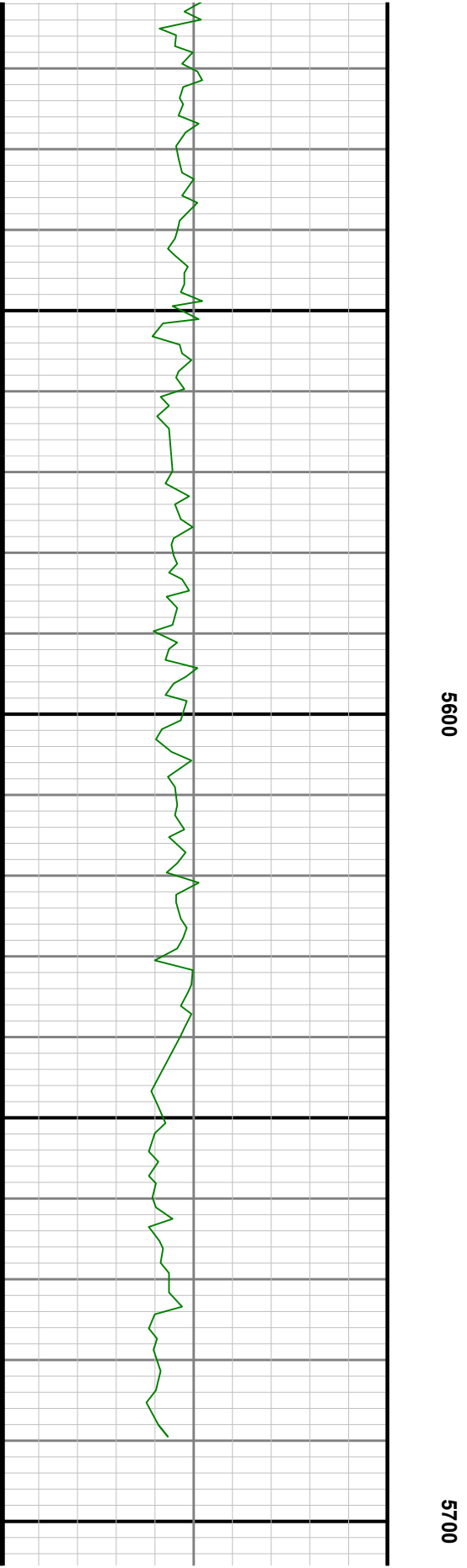
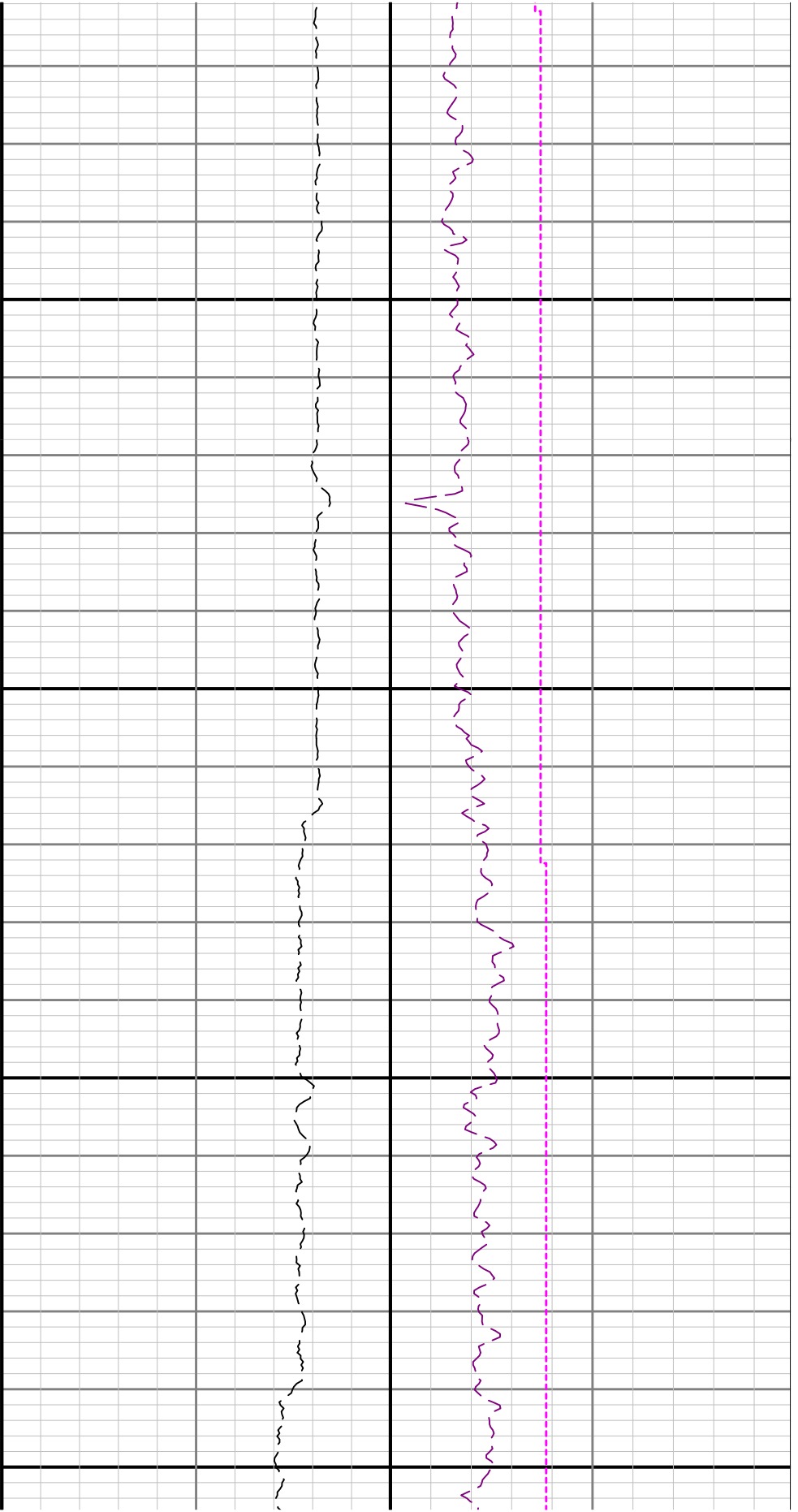


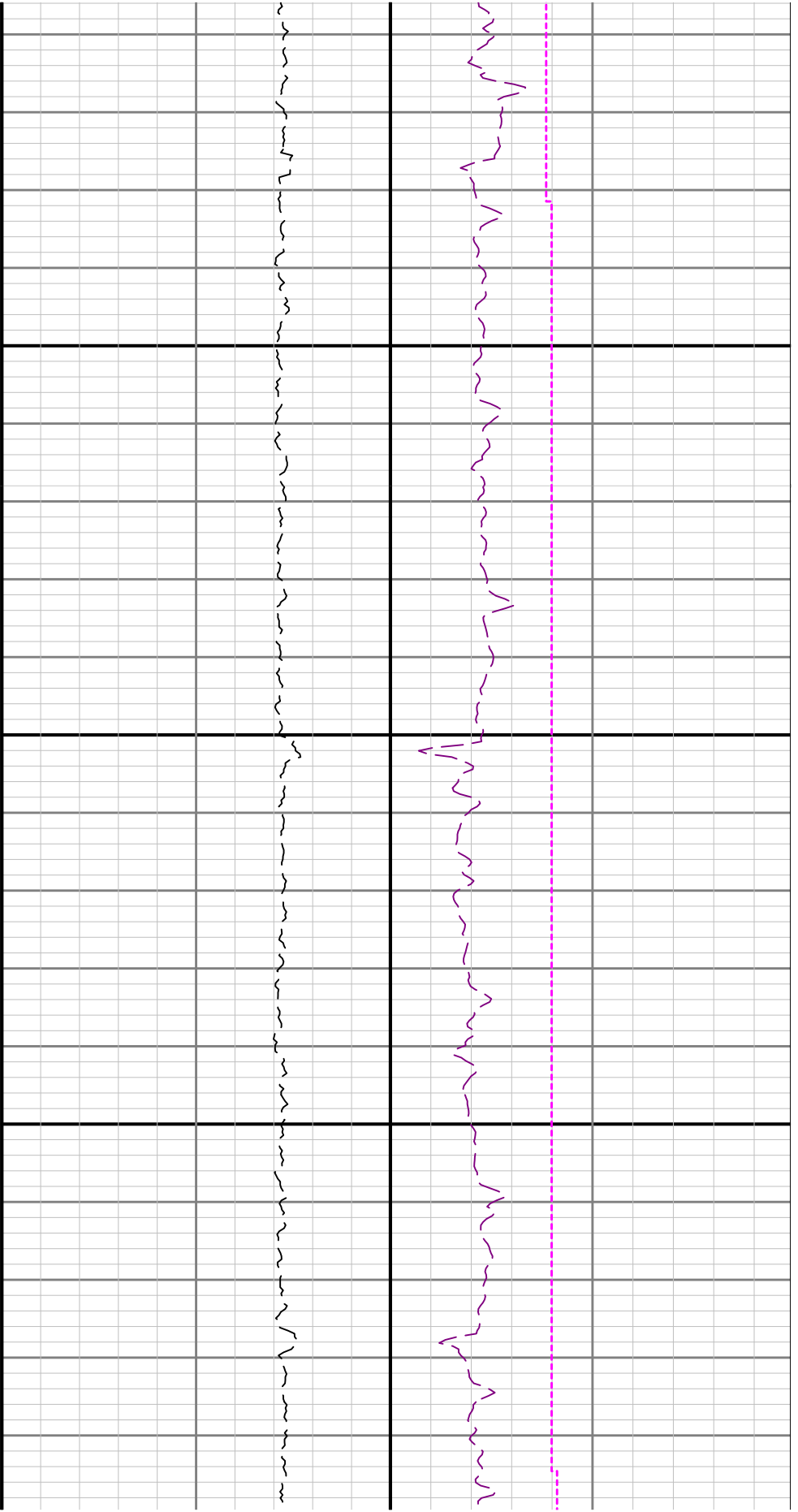


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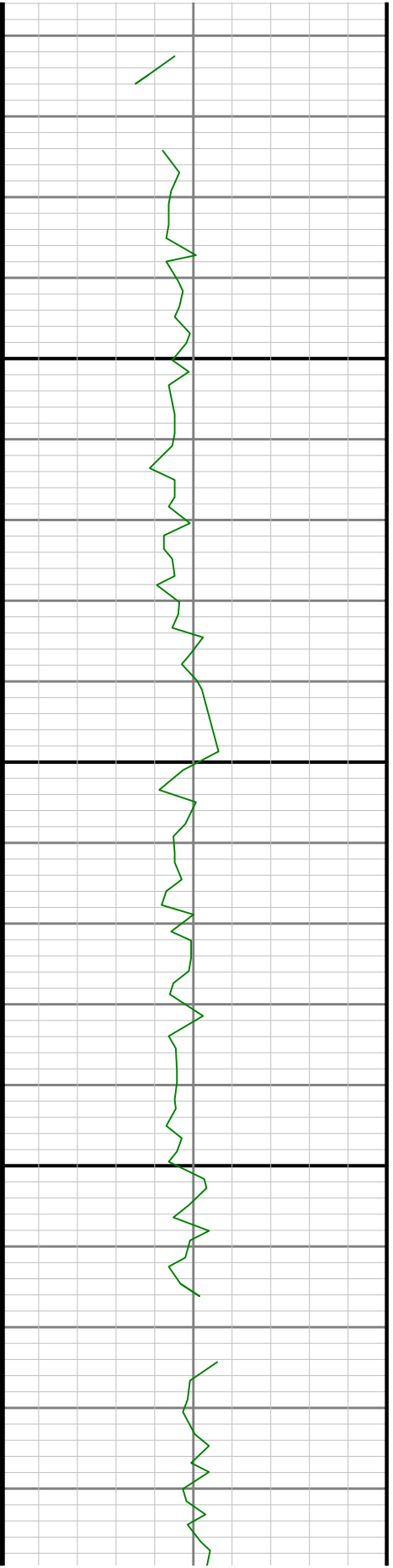


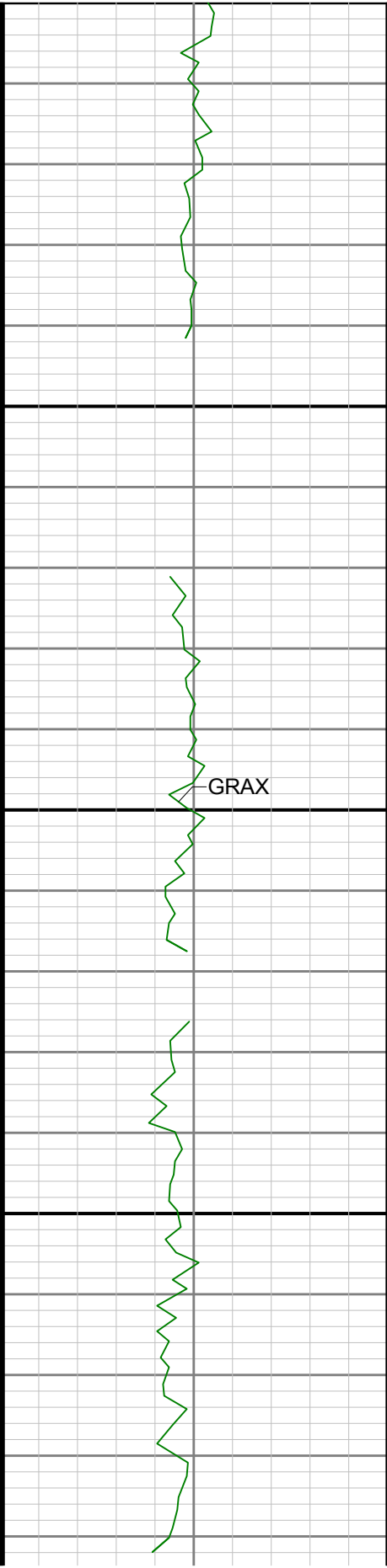




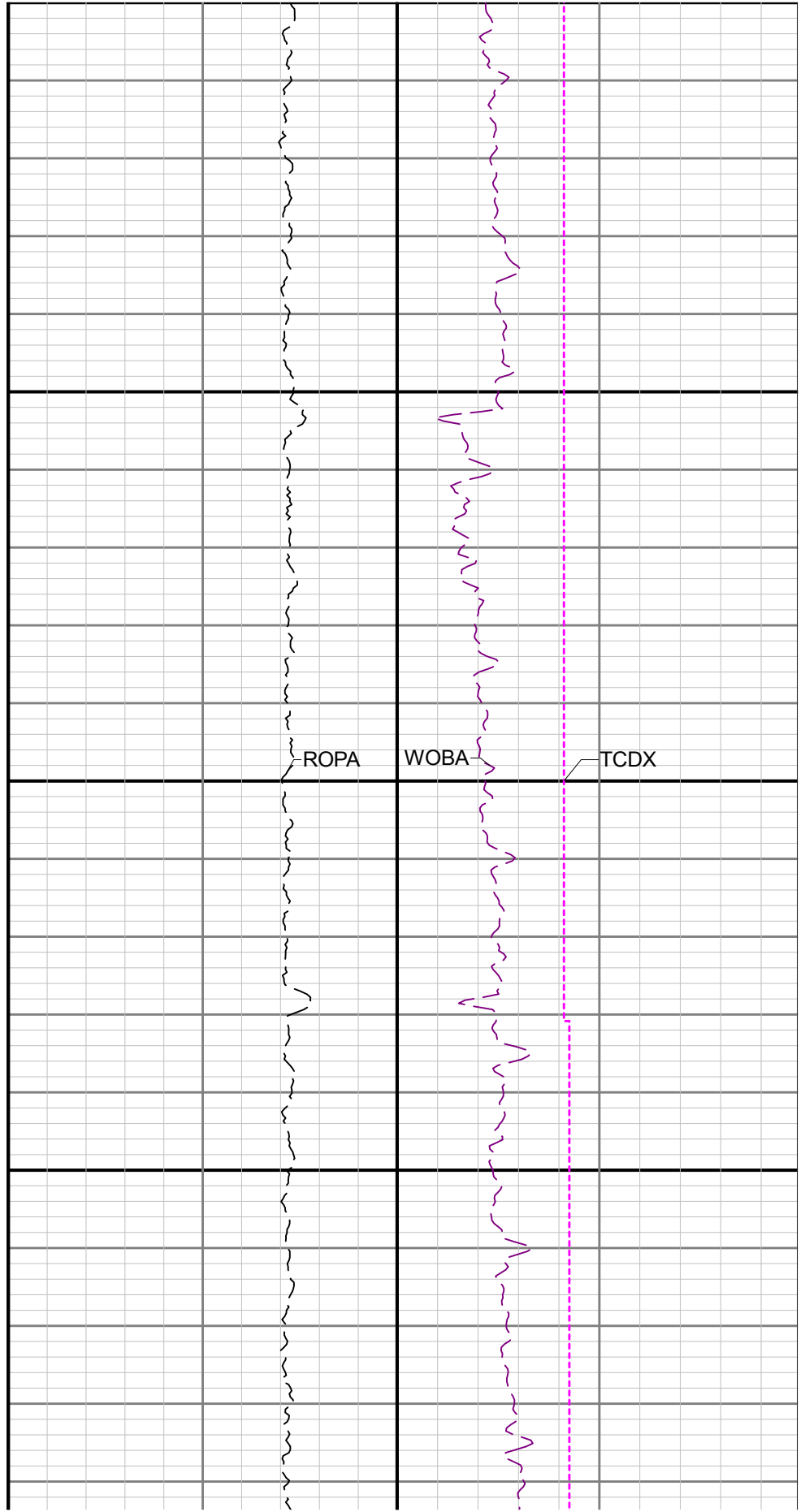
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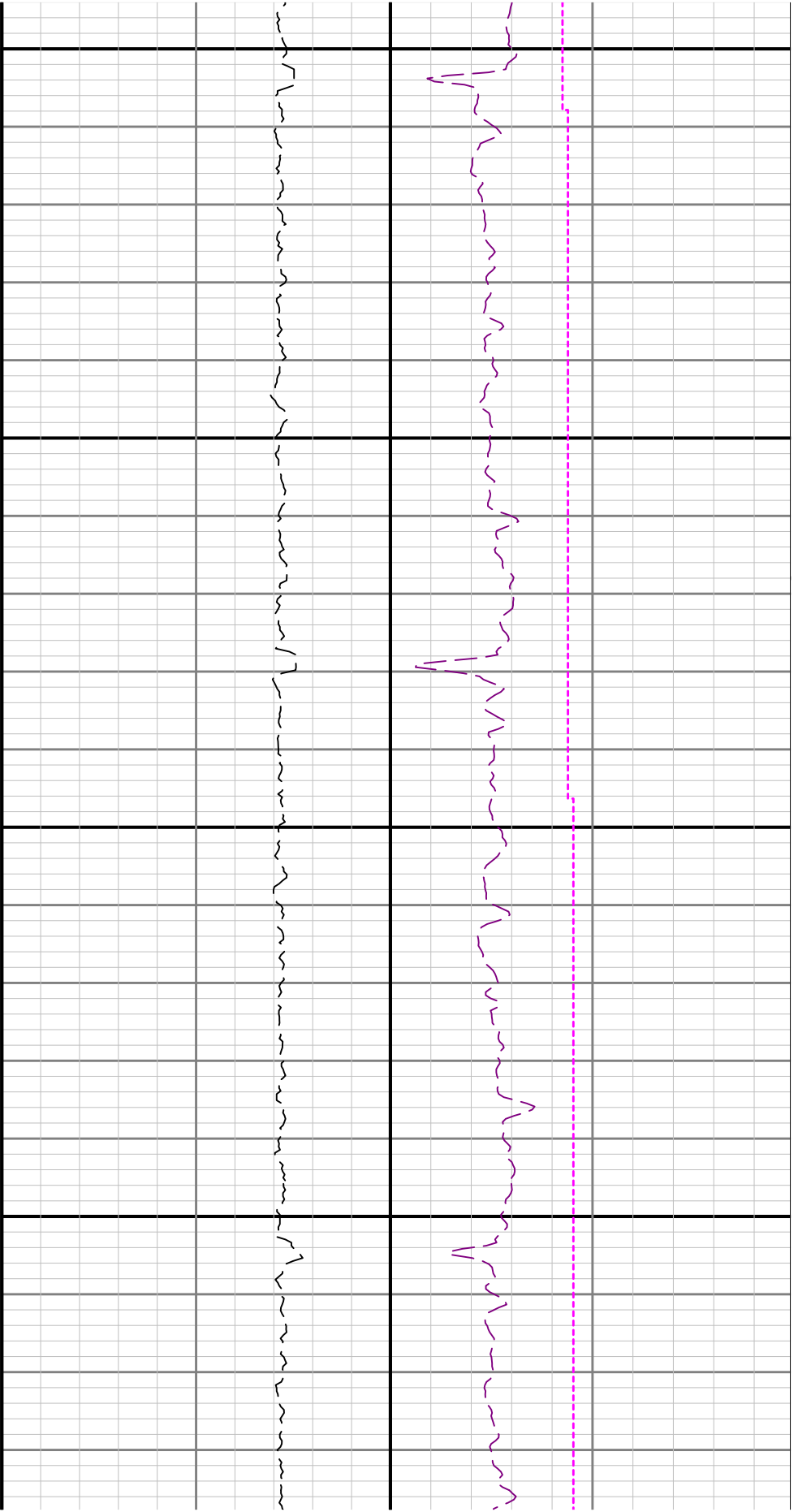
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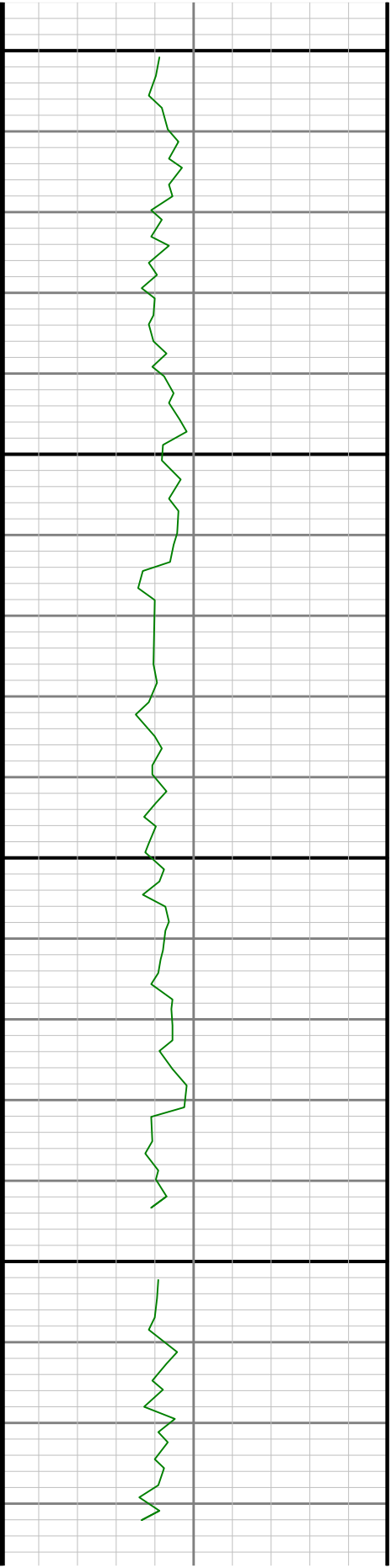
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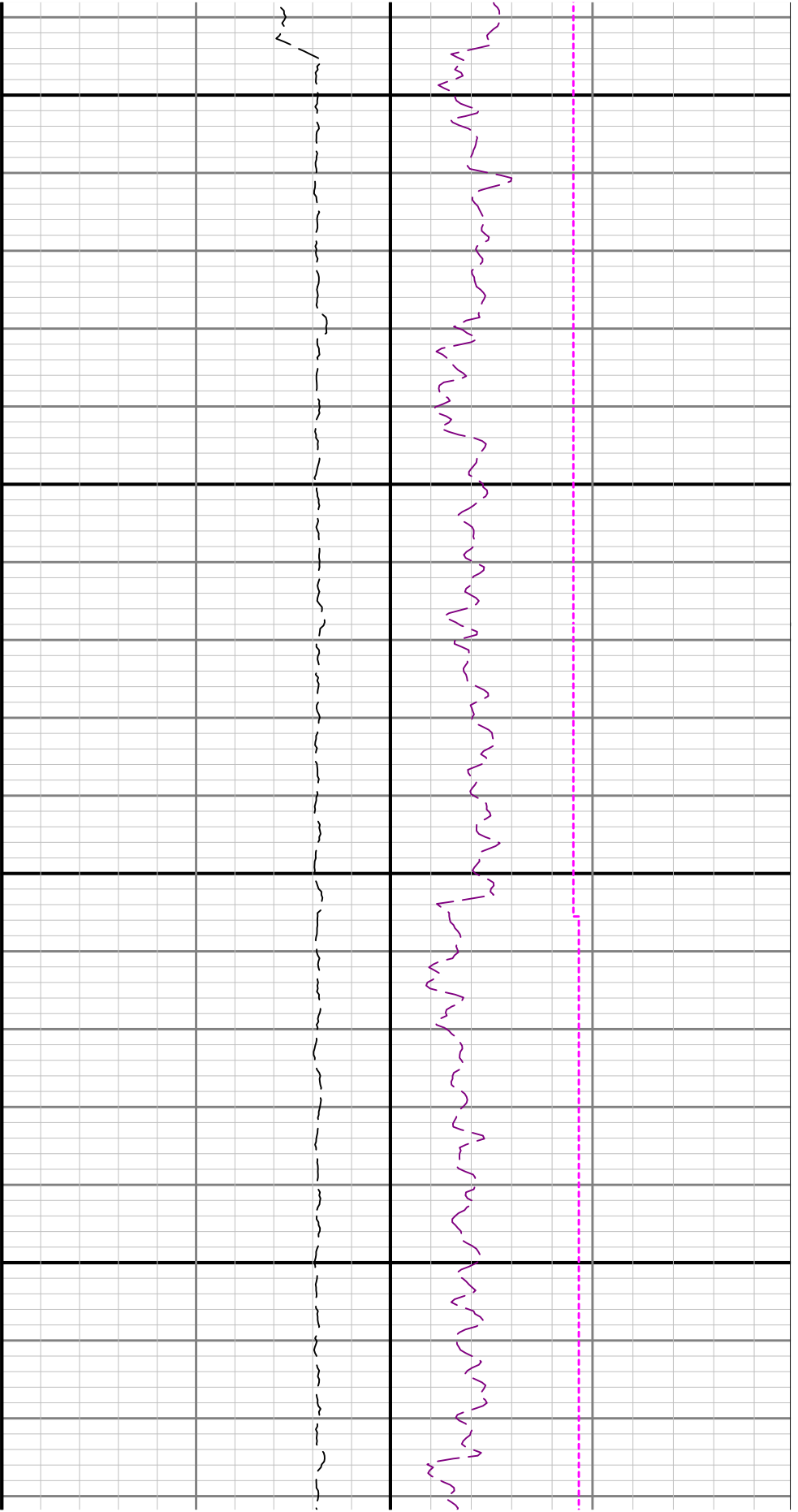




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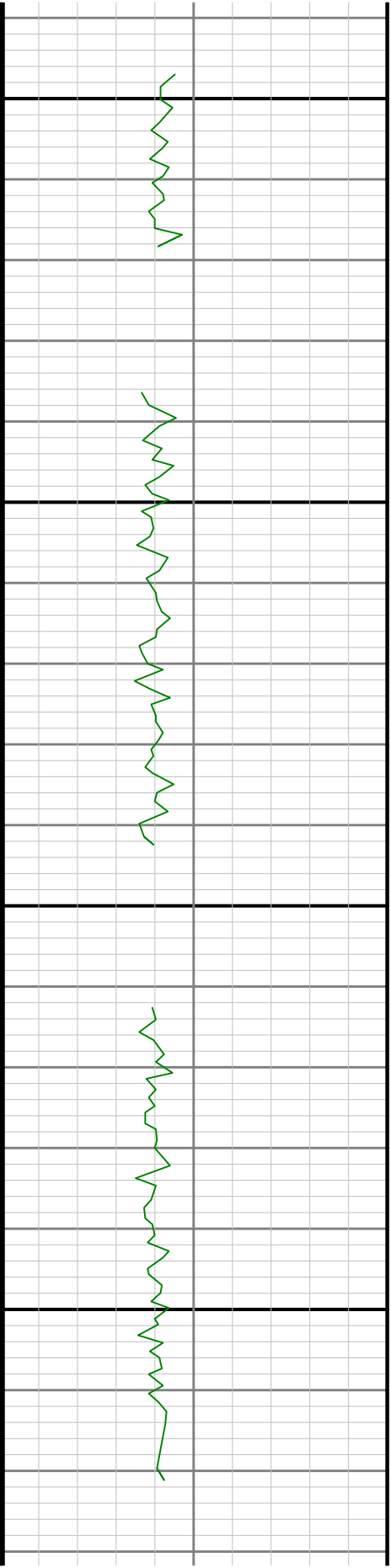
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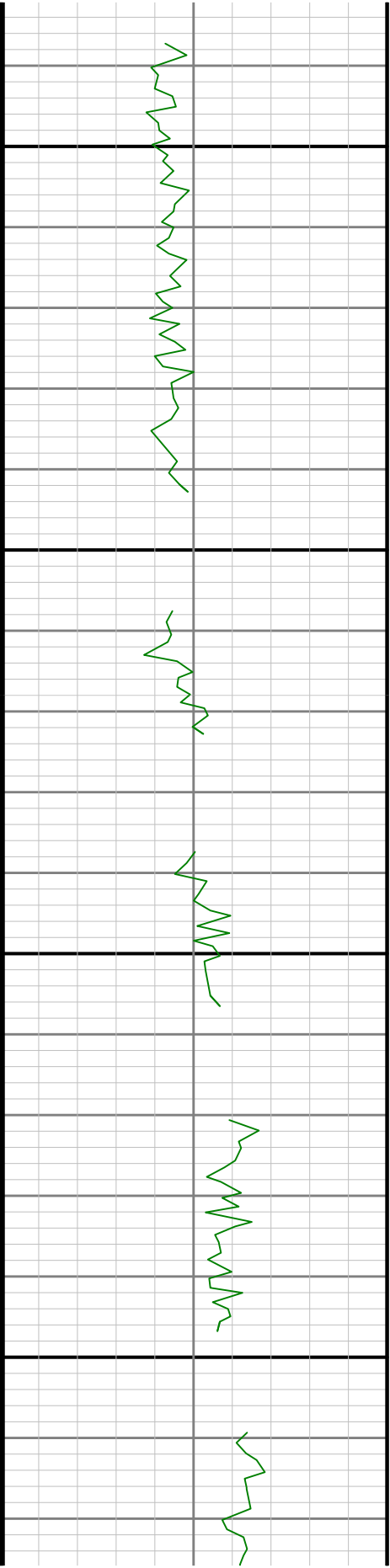




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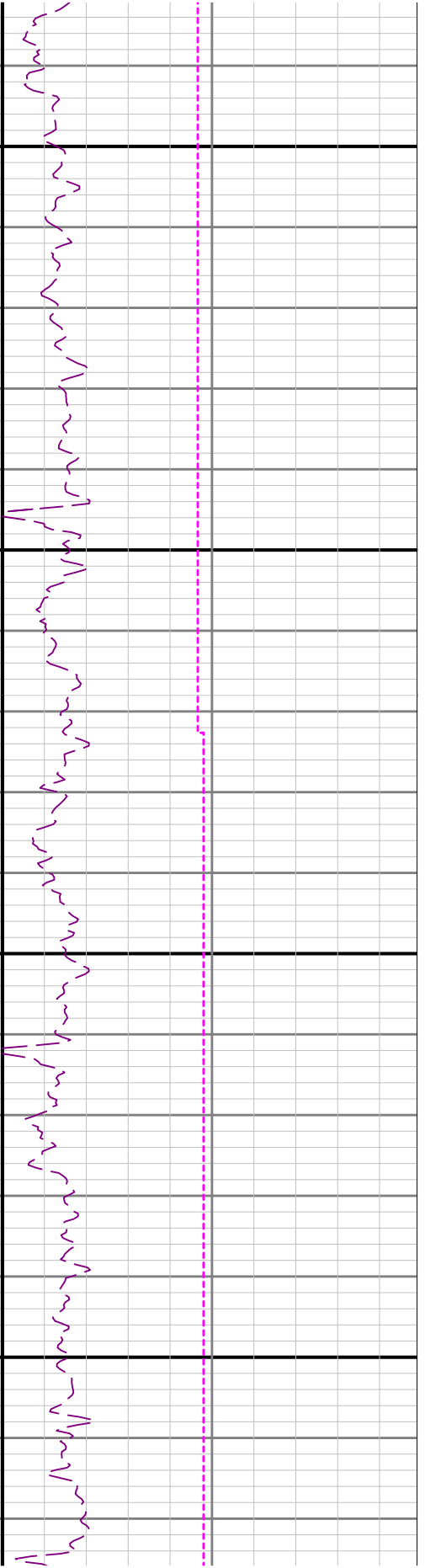
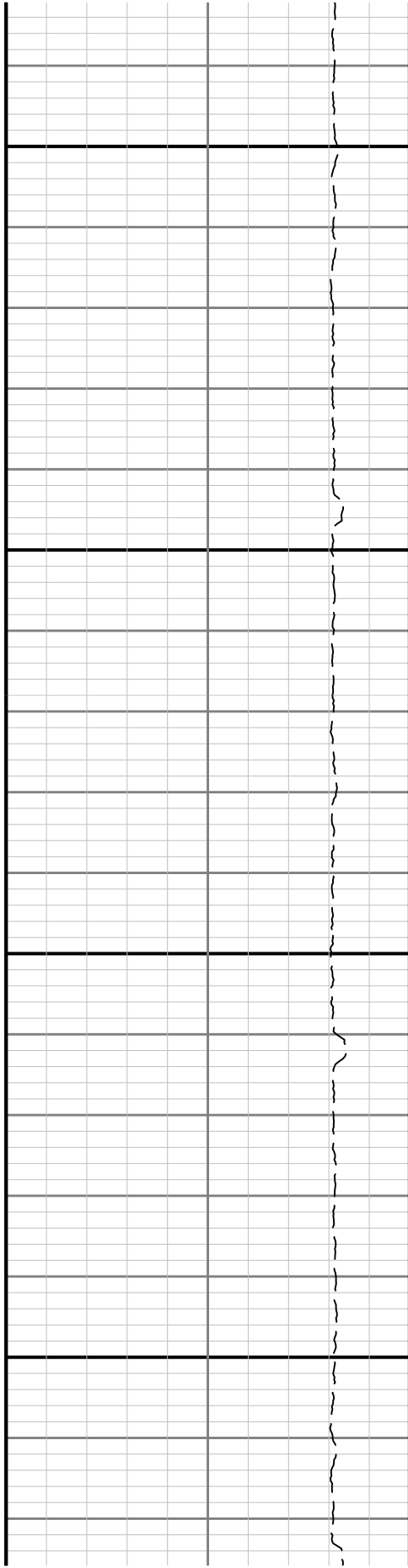
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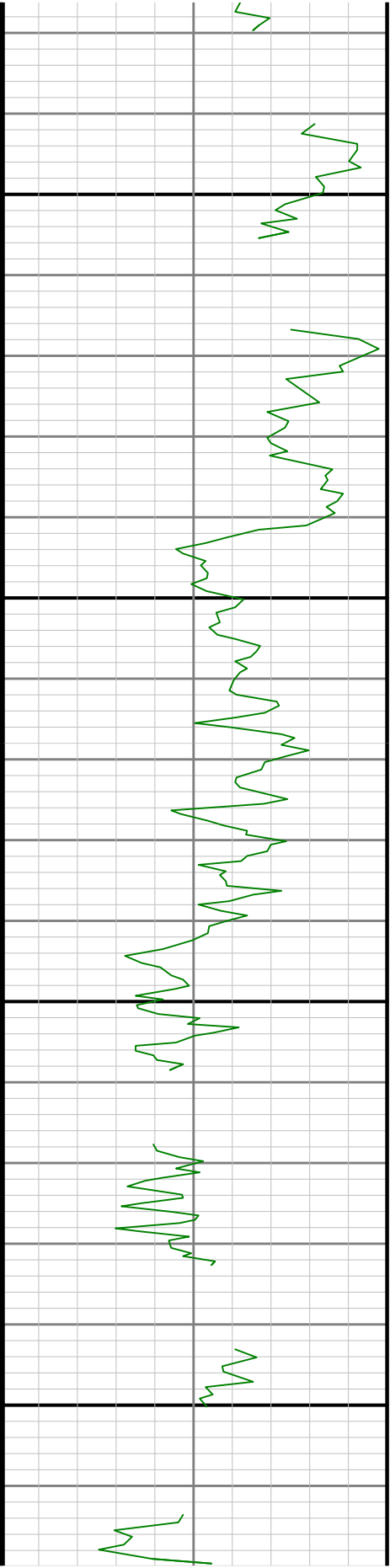




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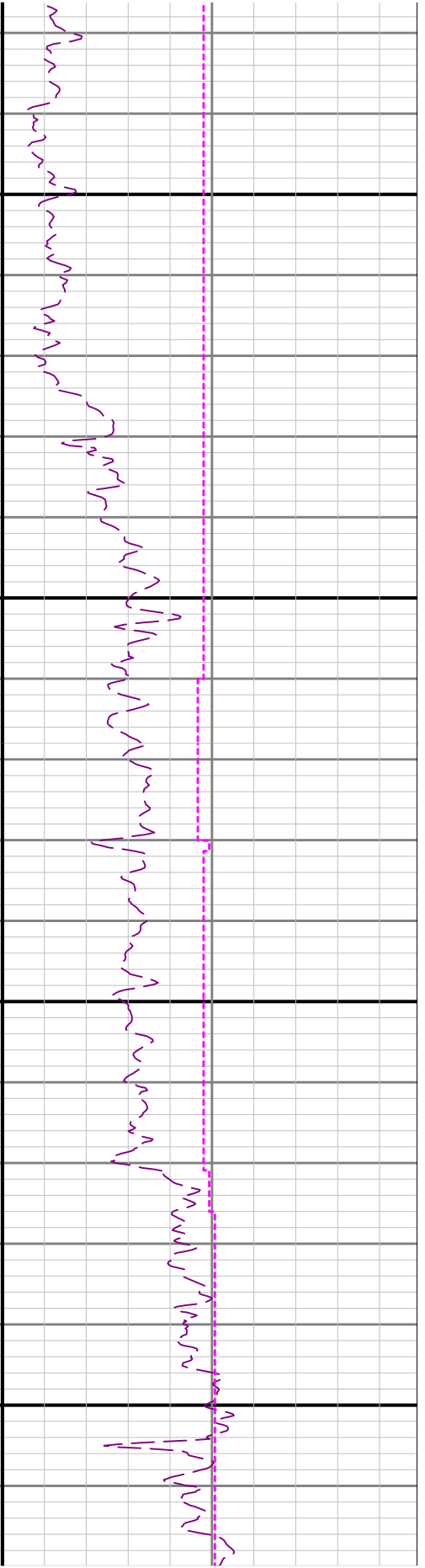
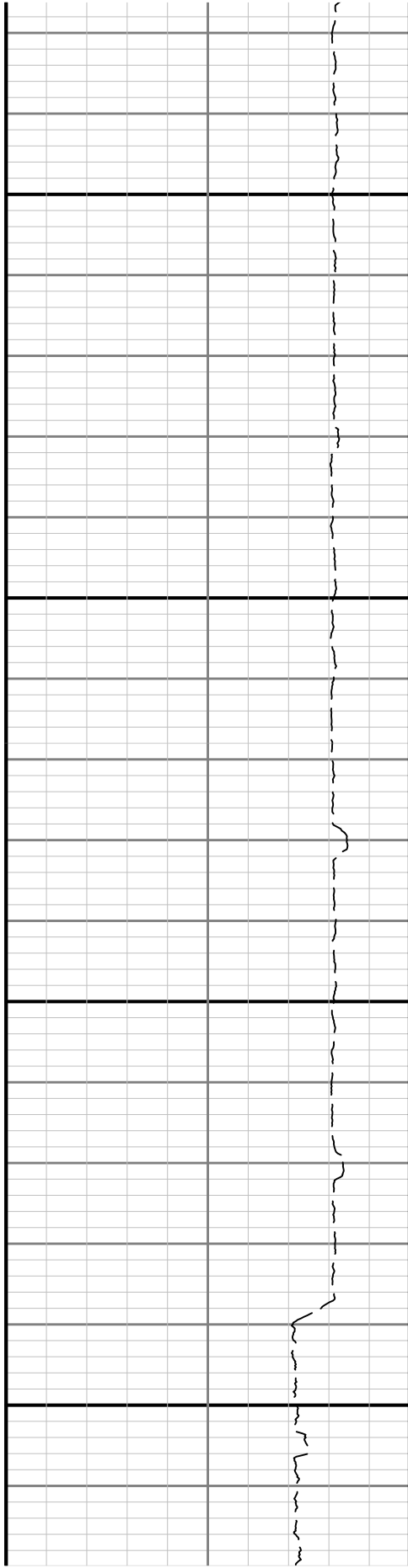
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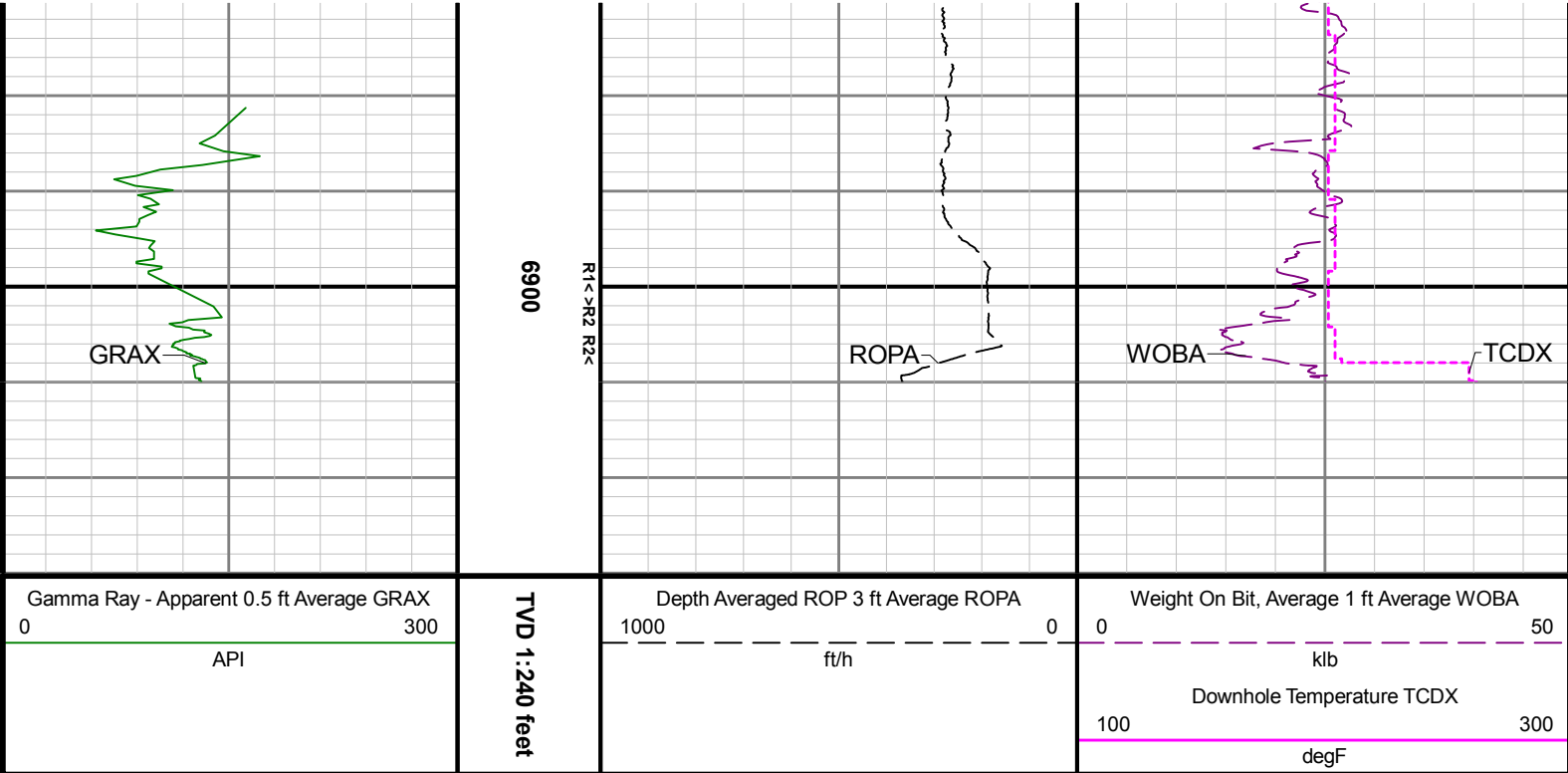




0089

00700





Directional Survey Summary

Latitude:	040° 28' 14.484" N	Longitude:	104° 33' 38.268" W
North Reference:	Grid	Drill Depth Zero:	Rig Floor
Vertical Datum is:	Ground Level	Vertical Datum to DDZ: (ft)	30.00
Vertical Section North: (m)	0.00	Vertical Section East: (m)	0.00
Vertical Section Azimuth: (deg)	282.53		
Grid Convergence: (deg)	-0.61	Magnetic Declination: (deg)	7.97
Total Correction: (deg)	7.36	TVD Calculation Method:	Minimum Curvature
Magnetic Correction:	Off	Local Magnetic Field: (nT)	52362
Local Magnetic Dip Angle: (deg)	67.02	Local Gravity Field: (m/s2)	9.800

Tie-In / Projection	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	North (ft)	East (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Course Length (ft)	Dog Leg Severity (deg/100ft)	Build Rate (deg/100ft)	Turn Rate (deg/100ft)
Tie-In	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	82.00	0.95	328.60	N/A	0.58	-0.35	82.00	0.47	82.00	1.16	1.16	-38.29
	178.00	0.73	326.41	N/A	1.77	-1.11	177.99	1.46	96.00	0.23	-0.23	-2.28
	269.00	0.38	359.56	N/A	2.55	-1.43	268.98	1.95	91.00	0.51	-0.38	36.43
	364.00	0.17	335.84	N/A	3.00	-1.49	363.98	2.11	95.00	0.25	-0.22	-24.97
	458.00	0.30	345.57	N/A	3.36	-1.61	457.98	2.30	94.00	0.14	0.14	10.35
	553.00	0.28	264.92	N/A	3.58	-1.90	552.98	2.63	95.00	0.40	-0.02	-84.89
	647.00	0.19	248.38	N/A	3.51	-2.28	646.98	2.98	94.00	0.12	-0.10	-17.60
	742.00	0.33	232.56	N/A	3.28	-2.64	741.98	3.29	95.00	0.16	0.15	-16.65
	836.00	0.49	285.62	N/A	3.22	-3.24	835.97	3.86	94.00	0.42	0.17	56.45
	931.00	0.25	226.65	N/A	3.19	-3.78	930.97	4.39	95.00	0.44	-0.25	-62.07
	1025.00	0.28	221.67	N/A	2.88	-4.09	1024.97	4.61	94.00	0.04	0.03	-5.30
	1120.00	0.55	165.89	N/A	2.26	-4.13	1119.97	4.52	95.00	0.48	0.28	-58.72
	1215.00	0.30	162.46	N/A	1.58	-3.94	1214.97	4.19	95.00	0.26	-0.26	-3.61
	1309.00	0.42	217.82	N/A	1.08	-4.08	1308.97	4.22	94.00	0.37	0.13	58.89
	1403.00	0.16	100.35	N/A	0.78	-4.16	1402.96	4.23	94.00	0.55	-0.28	-124.97
	1498.00	0.69	203.07	N/A	0.23	-4.25	1497.96	4.20	95.00	0.78	0.56	108.13
	1593.00	0.30	170.89	N/A	-0.54	-4.44	1592.96	4.22	95.00	0.49	-0.41	-33.87
	1687.00	0.69	172.46	N/A	-1.34	-4.33	1686.96	3.93	94.00	0.42	0.41	1.67
	1782.00	0.98	159.05	N/A	-2.67	-3.96	1781.95	3.29	95.00	0.37	0.31	-14.12
	1876.00	1.58	153.35	N/A	-4.58	-3.09	1875.92	2.03	94.00	0.65	0.64	-6.06
Tie-In	1952.00	1.43	151.02	N/A	-6.34	-2.16	1951.90	0.73	76.00	0.21	-0.20	-3.07
	1991.00	0.59	132.38	N/A	-6.91	-1.78	1990.89	0.24	39.00	2.28	-2.15	-47.79

	2085.00	0.92	45.31	N/A	-6.70	-0.88	2084.88	-0.59	94.00	1.14	0.35	-92.63
	2180.00	1.24	11.38	N/A	-5.16	-0.14	2179.87	-0.98	95.00	0.74	0.34	-35.72
	2275.00	1.82	318.18	N/A	-3.03	-0.94	2274.84	0.26	95.00	1.54	0.61	-56.00
	2369.00	0.11	74.82	N/A	-1.89	-1.85	2368.82	1.40	94.00	1.99	-1.82	124.09
	2464.00	2.14	43.50	N/A	-0.58	-0.54	2463.80	0.40	95.00	2.15	2.14	-32.97
	2558.00	3.27	51.04	N/A	2.38	2.75	2557.69	-2.17	94.00	1.26	1.20	8.02
	2653.00	3.78	55.19	N/A	5.87	7.43	2652.51	-5.98	95.00	0.60	0.54	4.37
	2747.00	6.23	71.22	N/A	9.28	14.80	2746.15	-12.44	94.00	2.98	2.61	17.05
	2842.00	8.55	71.44	N/A	13.19	26.38	2840.36	-22.89	95.00	2.44	2.44	0.23
	2936.00	10.78	62.83	N/A	19.43	40.83	2933.02	-35.64	94.00	2.82	2.37	-9.16
	3030.00	12.14	50.39	N/A	29.75	56.27	3025.16	-48.47	94.00	2.99	1.45	-13.23
	3125.00	14.55	43.36	N/A	44.80	72.16	3117.59	-60.72	95.00	3.05	2.54	-7.40
	3219.00	17.54	47.94	N/A	62.87	90.79	3207.92	-74.98	94.00	3.45	3.18	4.87
	3314.00	18.91	47.21	N/A	82.92	112.71	3298.16	-92.04	95.00	1.46	1.44	-0.77
	3408.00	20.82	42.49	N/A	105.59	135.18	3386.56	-109.05	94.00	2.65	2.03	-5.02
	3503.00	22.56	32.28	N/A	133.46	156.32	3474.87	-123.65	95.00	4.37	1.83	-10.75
	3597.00	23.49	25.69	N/A	165.59	174.08	3561.39	-134.01	94.00	2.91	0.99	-7.01
	3691.00	26.85	25.20	N/A	201.69	191.24	3646.45	-142.93	94.00	3.58	3.57	-0.52
	3786.00	31.98	24.80	N/A	243.97	210.94	3729.18	-152.99	95.00	5.40	5.40	-0.42
	3880.00	34.70	18.54	N/A	291.96	229.90	3807.73	-161.08	94.00	4.66	2.89	-6.66
	3974.00	34.99	11.36	N/A	343.77	243.72	3884.90	-163.34	94.00	4.37	0.31	-7.64
	4069.00	34.86	7.35	N/A	397.41	252.56	3962.81	-160.33	95.00	2.42	-0.14	-4.22
	4164.00	35.00	8.39	N/A	451.29	260.01	4040.69	-155.91	95.00	0.64	0.15	1.09
	4258.00	34.26	13.25	N/A	503.72	270.01	4118.05	-154.30	94.00	3.04	-0.79	5.17
	4353.00	36.81	20.60	N/A	556.43	286.16	4195.39	-158.63	95.00	5.23	2.68	7.74
	4448.00	36.82	22.09	N/A	609.45	306.88	4271.45	-167.35	95.00	0.94	0.01	1.57
	4542.00	36.66	23.66	N/A	661.25	328.74	4346.78	-177.45	94.00	1.01	-0.17	1.67
	4637.00	36.29	28.42	N/A	711.96	353.50	4423.18	-190.62	95.00	3.00	-0.39	5.01
	4731.00	37.22	29.27	N/A	761.23	380.64	4498.50	-206.43	94.00	1.13	0.99	0.90
	4826.00	37.09	28.36	N/A	811.50	408.30	4574.21	-222.52	95.00	0.59	-0.14	-0.96
	4920.00	36.05	30.39	N/A	860.30	435.76	4649.71	-238.73	94.00	1.70	-1.11	2.16
	5015.00	37.20	33.55	N/A	908.36	465.77	4725.96	-257.61	95.00	2.32	1.21	3.33
	5109.00	37.28	32.24	N/A	956.12	496.66	4800.79	-277.40	94.00	0.85	0.09	-1.39
	5204.00	37.27	30.12	N/A	1005.34	526.45	4876.39	-295.80	95.00	1.35	-0.01	-2.23
	5298.00	35.63	26.46	N/A	1054.48	552.94	4952.01	-311.00	94.00	2.90	-1.74	-3.89
	5392.00	37.21	20.28	N/A	1105.67	575.00	5027.67	-321.43	94.00	4.25	1.68	-6.57
	5487.00	37.19	18.07	N/A	1159.91	593.86	5103.34	-328.07	95.00	1.41	-0.02	-2.33
	5582.00	35.91	18.70	N/A	1213.60	611.70	5179.66	-333.84	95.00	1.40	-1.35	0.66
	5677.00	36.10	23.37	N/A	1265.69	631.74	5256.53	-342.10	95.00	2.90	0.20	4.92
	5771.00	37.26	28.12	N/A	1316.22	656.14	5331.93	-354.96	94.00	3.26	1.23	5.05
	5865.00	37.32	28.08	N/A	1366.46	682.96	5406.71	-370.24	94.00	0.07	0.06	-0.04
	5960.00	37.29	27.22	N/A	1417.45	709.68	5482.28	-385.26	95.00	0.55	-0.03	-0.91
	6055.00	37.28	23.02	N/A	1469.53	734.10	5557.87	-397.80	95.00	2.68	-0.01	-4.42
	6149.00	37.23	17.02	N/A	1522.94	753.56	5632.72	-405.21	94.00	3.86	-0.05	-6.38
	6244.00	37.14	10.72	N/A	1578.62	767.31	5708.43	-406.55	95.00	4.01	-0.09	-6.63
	6338.00	37.24	7.44	N/A	1634.71	776.27	5783.32	-403.13	94.00	2.11	0.11	-3.49
	6433.00	37.15	7.08	N/A	1691.68	783.53	5859.00	-397.86	95.00	0.25	-0.09	-0.38
	6528.00	37.30	4.88	N/A	1748.83	789.52	5934.65	-391.30	95.00	1.41	0.16	-2.32
	6622.00	37.23	3.68	N/A	1805.59	793.76	6009.46	-383.14	94.00	0.78	-0.07	-1.28
	6717.00	37.23	3.18	N/A	1862.96	797.20	6085.10	-374.05	95.00	0.32	0.00	-0.53
	6811.00	37.25	2.36	N/A	1919.78	799.95	6159.93	-364.40	94.00	0.53	0.02	-0.87
	6906.00	37.40	1.54	N/A	1977.35	801.91	6235.48	-353.83	95.00	0.55	0.16	-0.86
	7000.00	37.17	359.53	N/A	2034.28	802.45	6310.27	-342.00	94.00	1.32	-0.24	-2.14
	7095.00	38.17	351.96	N/A	2092.08	798.10	6385.51	-325.22	95.00	4.98	1.05	-7.97
	7189.00	40.69	340.96	N/A	2149.88	784.02	6458.20	-298.93	94.00	7.89	2.68	-11.70
	7284.00	43.53	331.06	N/A	2207.86	758.06	6528.74	-261.00	95.00	7.59	2.99	-10.42
	7379.00	46.91	322.21	N/A	2263.98	720.92	6595.72	-212.58	95.00	7.50	3.56	-9.32
	7473.00	48.93	313.70	N/A	2315.64	674.22	6658.78	-155.78	94.00	7.05	2.15	-9.05
	7568.00	53.82	305.99	N/A	2362.98	617.22	6718.11	-89.87	95.00	8.16	5.15	-8.12
	7662.00	61.20	296.77	N/A	2403.95	549.56	6768.65	-14.93	94.00	11.39	7.85	-9.81
	7757.00	65.97	285.89	N/A	2434.67	470.43	6811.00	68.98	95.00	11.41	5.02	-11.45
	7852.00	69.66	275.41	N/A	2450.79	384.13	6846.95	156.72	95.00	10.92	3.88	-11.03
	7946.00	71.62	269.37	N/A	2454.46	295.58	6878.14	243.96	94.00	6.41	2.09	-6.43
	8041.00	80.79	267.87	N/A	2452.21	203.44	6900.77	333.41	95.00	9.77	9.65	-1.58
	8135.00	90.68	267.64	N/A	2448.54	109.89	6907.75	423.04	94.00	10.52	10.52	0.24

		8135.00	90.66	267.04	N/A	2448.54	109.89	6907.75	423.94	94.00	10.32	10.32	-0.24
		8230.00	90.71	266.85	N/A	2443.98	15.01	6906.60	515.57	95.00	0.83	0.03	-0.83
		8325.00	90.12	265.27	N/A	2437.45	-79.76	6905.91	606.67	95.00	1.78	-0.62	-1.66
		8419.00	90.00	269.51	N/A	2433.17	-173.64	6905.81	697.38	94.00	4.51	-0.13	4.51
		8514.00	90.09	270.61	N/A	2433.27	-268.64	6905.74	790.14	95.00	1.16	0.09	1.16
		8609.00	89.88	268.16	N/A	2432.25	-363.63	6905.76	882.64	95.00	2.59	-0.22	-2.58
		8703.00	90.00	267.10	N/A	2428.36	-457.54	6905.86	973.48	94.00	1.13	0.13	-1.13
		8798.00	89.85	267.29	N/A	2423.71	-552.43	6905.98	1065.10	95.00	0.25	-0.16	0.20
		8892.00	89.72	268.21	N/A	2420.02	-646.36	6906.34	1155.99	94.00	0.99	-0.14	0.98
		8987.00	90.09	270.62	N/A	2419.05	-741.34	6906.49	1248.50	95.00	2.57	0.39	2.54
		9081.00	89.88	273.15	N/A	2422.15	-835.28	6906.52	1340.88	94.00	2.70	-0.22	2.69
		9176.00	89.94	274.26	N/A	2428.28	-930.08	6906.67	1434.75	95.00	1.17	0.06	1.17
		9270.00	90.12	270.86	N/A	2432.48	-1023.98	6906.62	1527.32	94.00	3.62	0.19	-3.62
		9365.00	90.12	270.37	N/A	2433.50	-1118.97	6906.42	1620.27	95.00	0.52	0.00	-0.52
		9459.00	90.15	271.33	N/A	2434.90	-1212.96	6906.20	1712.32	94.00	1.02	0.03	1.02
		9554.00	89.97	271.46	N/A	2437.21	-1307.93	6906.10	1805.53	95.00	0.23	-0.19	0.14
		9648.00	90.31	272.41	N/A	2440.38	-1401.88	6905.87	1897.93	94.00	1.07	0.36	1.01
		9743.00	90.22	270.68	N/A	2442.94	-1496.84	6905.43	1991.18	95.00	1.82	-0.09	-1.82
		9837.00	90.52	267.47	N/A	2441.43	-1590.81	6904.82	2082.59	94.00	3.43	0.32	-3.41
		9932.00	90.09	267.09	N/A	2436.92	-1685.70	6904.32	2174.24	95.00	0.60	-0.45	-0.40
		10026.00	90.58	273.72	N/A	2437.58	-1779.64	6903.77	2266.09	94.00	7.07	0.52	7.05
		10121.00	90.37	273.13	N/A	2443.26	-1874.47	6902.98	2359.89	95.00	0.66	-0.22	-0.62
		10216.00	91.11	267.56	N/A	2443.83	-1969.42	6901.75	2452.71	95.00	5.91	0.78	-5.86
		10299.00	89.94	263.84	N/A	2437.61	-2052.17	6900.99	2532.13	83.00	4.70	-1.41	-4.48
		10394.00	89.82	264.25	N/A	2427.75	-2146.66	6901.19	2622.23	95.00	0.45	-0.13	0.43
		10488.00	89.75	267.42	N/A	2420.93	-2240.40	6901.54	2712.26	94.00	3.37	-0.07	3.37
		10582.00	89.69	271.09	N/A	2419.70	-2334.37	6902.00	2803.73	94.00	3.90	-0.06	3.90
		10677.00	89.97	274.22	N/A	2424.10	-2429.26	6902.28	2897.31	95.00	3.31	0.29	3.29
		10771.00	90.00	275.98	N/A	2432.46	-2522.88	6902.31	2990.52	94.00	1.87	0.03	1.87
		10866.00	89.69	273.81	N/A	2440.57	-2617.53	6902.56	3084.67	95.00	2.31	-0.33	-2.28
		10960.00	90.12	272.76	N/A	2445.95	-2711.37	6902.72	3177.45	94.00	1.21	0.46	-1.12
		11055.00	90.03	273.58	N/A	2451.21	-2806.23	6902.60	3271.18	95.00	0.87	-0.09	0.86
		11150.00	89.88	272.58	N/A	2456.31	-2901.09	6902.67	3364.89	95.00	1.06	-0.16	-1.05
		11244.00	89.75	271.02	N/A	2459.26	-2995.04	6902.97	3457.24	94.00	1.67	-0.14	-1.66
		11339.00	90.09	269.10	N/A	2459.36	-3090.03	6903.11	3550.00	95.00	2.05	0.36	-2.02
		11433.00	90.12	269.09	N/A	2457.88	-3184.02	6902.93	3641.42	94.00	0.03	0.03	-0.01
		11528.00	89.88	270.28	N/A	2457.36	-3279.02	6902.93	3734.05	95.00	1.28	-0.25	1.25
		11623.00	89.97	267.45	N/A	2455.47	-3373.99	6903.06	3826.35	95.00	2.98	0.09	-2.98
		11717.00	89.82	267.97	N/A	2451.72	-3467.91	6903.23	3917.22	94.00	0.58	-0.16	0.55
		11812.00	89.78	269.27	N/A	2449.43	-3562.88	6903.56	4009.43	95.00	1.37	-0.04	1.37
		11906.00	89.78	270.33	N/A	2449.10	-3656.88	6903.92	4101.12	94.00	1.13	0.00	1.13
		12001.00	90.06	269.46	N/A	2448.93	-3751.88	6904.06	4193.82	95.00	0.96	0.29	-0.92
		12095.00	89.72	269.94	N/A	2448.44	-3845.88	6904.24	4285.47	94.00	0.63	-0.36	0.51
		12190.00	89.82	271.05	N/A	2449.26	-3940.87	6904.62	4378.38	95.00	1.17	0.11	1.17
		12285.00	89.97	271.10	N/A	2451.04	-4035.86	6904.79	4471.49	95.00	0.17	0.16	0.05
		12379.00	90.06	272.27	N/A	2453.80	-4129.81	6904.77	4563.81	94.00	1.25	0.10	1.24
		12474.00	89.91	268.78	N/A	2454.67	-4224.79	6904.79	4656.71	95.00	3.68	-0.16	-3.67
		12568.00	89.97	270.46	N/A	2454.05	-4318.79	6904.89	4748.33	94.00	1.79	0.06	1.79
		12663.00	90.06	272.37	N/A	2456.40	-4413.76	6904.87	4841.55	95.00	2.01	0.09	2.01
		12758.00	90.09	272.19	N/A	2460.17	-4508.68	6904.74	4935.03	95.00	0.19	0.03	-0.19
		12852.00	90.22	268.01	N/A	2460.34	-4602.66	6904.49	5026.81	94.00	4.45	0.14	-4.45
		12946.00	89.94	263.93	N/A	2453.73	-4696.41	6904.36	5116.89	94.00	4.35	-0.30	-4.34
		13041.00	89.94	264.51	N/A	2444.17	-4790.92	6904.46	5207.08	95.00	0.61	0.00	0.61
		13135.00	90.09	265.66	N/A	2436.11	-4884.58	6904.43	5296.75	94.00	1.23	0.16	1.22
		13230.00	89.88	266.97	N/A	2430.01	-4979.38	6904.46	5387.97	95.00	1.40	-0.22	1.38
		13325.00	89.97	270.40	N/A	2427.83	-5074.34	6904.58	5480.20	95.00	3.61	0.09	3.61
		13420.00	90.12	272.86	N/A	2430.53	-5169.29	6904.51	5573.48	95.00	2.59	0.16	2.59
		13514.00	90.12	273.83	N/A	2436.01	-5263.13	6904.31	5666.27	94.00	1.03	0.00	1.03
		13609.00	90.09	270.71	N/A	2439.78	-5358.04	6904.13	5759.74	95.00	3.28	-0.03	-3.28
		13703.00	89.85	270.29	N/A	2440.60	-5452.04	6904.18	5851.68	94.00	0.51	-0.26	-0.45
		13798.00	90.18	272.85	N/A	2443.20	-5547.00	6904.16	5944.94	95.00	2.72	0.35	2.69
		13893.00	89.88	270.04	N/A	2445.59	-5641.96	6904.11	6038.15	95.00	2.97	-0.32	-2.96
		13987.00	89.78	263.05	N/A	2439.93	-5735.73	6904.39	6128.46	94.00	7.44	-0.11	-7.44
		14082.00	90.06	264.67	N/A	2429.77	-5830.18	6904.52	6218.46	95.00	1.73	0.29	1.71
		14176.00	89.45	270.15	N/A	2425.53	-5924.05	6904.92	6309.17	94.00	5.87	-0.65	5.83

	14271.00	90.00	271.55	N/A	2426.94	-6019.03	6905.38	6402.20	95.00	1.58	0.58	1.47
	14365.00	89.94	271.64	N/A	2429.55	-6113.00	6905.43	6494.49	94.00	0.12	-0.06	0.10
	14459.00	90.06	273.06	N/A	2433.41	-6206.91	6905.43	6587.01	94.00	1.52	0.13	1.51
	14554.00	89.63	275.00	N/A	2440.08	-6301.67	6905.69	6680.96	95.00	2.09	-0.45	2.04
	14649.00	89.88	275.66	N/A	2448.91	-6396.26	6906.09	6775.21	95.00	0.74	0.26	0.69
	14743.00	90.15	274.72	N/A	2457.41	-6489.88	6906.07	6868.44	94.00	1.04	0.29	-1.00
	14838.00	90.06	272.67	N/A	2463.53	-6584.67	6905.89	6962.31	95.00	2.16	-0.09	-2.16
	14932.00	90.03	271.78	N/A	2467.18	-6678.60	6905.82	7054.79	94.00	0.95	-0.03	-0.95
	15027.00	90.03	270.26	N/A	2468.87	-6773.58	6905.77	7147.88	95.00	1.60	0.00	-1.60
	15122.00	90.09	269.37	N/A	2468.57	-6868.58	6905.67	7240.55	95.00	0.94	0.06	-0.94
	15216.00	89.82	268.45	N/A	2466.78	-6962.56	6905.74	7331.90	94.00	1.02	-0.29	-0.98
	15311.00	90.52	267.88	N/A	2463.74	-7057.51	6905.46	7423.93	95.00	0.95	0.74	-0.60
	15405.00	89.72	270.98	N/A	2462.80	-7151.50	6905.26	7515.47	94.00	3.41	-0.85	3.30
	15500.00	90.15	272.57	N/A	2465.74	-7246.45	6905.37	7608.80	95.00	1.73	0.45	1.67
	15594.00	89.82	271.53	N/A	2469.11	-7340.39	6905.40	7701.23	94.00	1.16	-0.35	-1.11
	15689.00	90.00	271.32	N/A	2471.47	-7435.36	6905.55	7794.45	95.00	0.29	0.19	-0.22
	15783.00	90.31	274.54	N/A	2476.27	-7529.22	6905.29	7887.12	94.00	3.44	0.33	3.43
	15878.00	90.25	274.71	N/A	2483.93	-7623.91	6904.83	7981.22	95.00	0.19	-0.06	0.18
	15972.00	90.40	270.37	N/A	2488.10	-7717.79	6904.29	8073.77	94.00	4.62	0.16	-4.62
	16067.00	90.00	271.10	N/A	2489.32	-7812.78	6903.96	8166.76	95.00	0.88	-0.42	0.77
	16161.00	89.91	269.27	N/A	2489.62	-7906.78	6904.04	8258.59	94.00	1.95	-0.10	-1.95
	16256.00	89.94	266.53	N/A	2486.14	-8001.71	6904.16	8350.50	95.00	2.88	0.03	-2.88
	16351.00	90.37	265.87	N/A	2479.84	-8096.50	6903.90	8441.66	95.00	0.83	0.45	-0.69
	16445.00	89.85	266.63	N/A	2473.69	-8190.29	6903.72	8531.89	94.00	0.98	-0.55	0.81
	16540.00	89.91	268.57	N/A	2469.72	-8285.21	6903.92	8623.68	95.00	2.04	0.06	2.04
	16634.00	89.91	270.09	N/A	2468.62	-8379.20	6904.07	8715.19	94.00	1.62	0.00	1.62
	16729.00	90.12	270.19	N/A	2468.85	-8474.20	6904.05	8807.98	95.00	0.24	0.22	0.11
	16824.00	90.12	270.43	N/A	2469.36	-8569.19	6903.85	8900.83	95.00	0.25	0.00	0.25
	16918.00	89.75	270.44	N/A	2470.08	-8663.19	6903.95	8992.74	94.00	0.39	-0.39	0.01
	17013.00	87.38	264.09	N/A	2465.55	-8758.00	6906.33	9084.31	95.00	7.13	-2.49	-6.68
	17107.00	88.83	262.85	N/A	2454.87	-8851.33	6909.44	9173.10	94.00	2.03	1.54	-1.32
	17202.00	90.83	264.90	N/A	2444.73	-8945.78	6909.72	9263.10	95.00	3.01	2.11	2.16
	17296.00	90.77	268.12	N/A	2439.01	-9039.59	6908.41	9353.43	94.00	3.43	-0.06	3.43
	17391.00	90.86	270.98	N/A	2438.27	-9134.56	6907.06	9445.98	95.00	3.01	0.09	3.01
	17485.00	90.15	271.50	N/A	2440.30	-9228.54	6906.23	9538.16	94.00	0.94	-0.76	0.55
	17580.00	90.18	271.71	N/A	2442.96	-9323.50	6905.96	9631.44	95.00	0.22	0.03	0.22
	17675.00	90.22	271.41	N/A	2445.55	-9418.46	6905.63	9724.70	95.00	0.32	0.04	-0.32
	17770.00	90.06	271.78	N/A	2448.19	-9513.43	6905.39	9817.98	95.00	0.42	-0.17	0.39
	17864.00	90.18	273.21	N/A	2452.28	-9607.33	6905.20	9910.54	94.00	1.53	0.13	1.52
	17959.00	90.18	274.81	N/A	2458.93	-9702.10	6904.90	10004.48	95.00	1.68	0.00	1.68
	18053.00	90.00	271.12	N/A	2463.79	-9795.96	6904.75	10097.16	94.00	3.93	-0.19	-3.93
	18148.00	90.25	271.44	N/A	2465.91	-9890.93	6904.54	10190.34	95.00	0.43	0.26	0.34
	18242.00	90.15	272.99	N/A	2469.54	-9984.86	6904.22	10282.81	94.00	1.65	-0.11	1.65
	18336.00	90.06	271.84	N/A	2473.50	-10078.77	6904.04	10375.35	94.00	1.23	-0.10	-1.22
	18431.00	90.00	271.92	N/A	2476.62	-10173.72	6903.99	10468.71	95.00	0.11	-0.06	0.08
	18526.00	89.88	271.72	N/A	2479.64	-10268.67	6904.09	10562.06	95.00	0.25	-0.13	-0.21
	18620.00	90.12	270.59	N/A	2481.53	-10362.65	6904.09	10654.21	94.00	1.23	0.26	-1.20
	18714.00	90.03	268.89	N/A	2481.10	-10456.65	6903.97	10745.87	94.00	1.81	-0.10	-1.81
	18809.00	90.06	266.55	N/A	2477.33	-10551.57	6903.90	10837.71	95.00	2.46	0.03	-2.46
	18903.00	90.15	266.27	N/A	2471.44	-10645.38	6903.72	10928.02	94.00	0.31	0.10	-0.30
	18998.00	89.97	264.84	N/A	2464.08	-10740.09	6903.62	11018.87	95.00	1.52	-0.19	-1.51
	19092.00	90.03	264.47	N/A	2455.32	-10833.68	6903.62	11108.34	94.00	0.40	0.06	-0.39
	19187.00	89.91	267.05	N/A	2448.30	-10928.42	6903.67	11199.29	95.00	2.72	-0.13	2.72
	19268.00	89.88	272.33	N/A	2447.86	-11009.39	6903.82	11278.24	81.00	6.52	-0.04	6.52
Projection	19292.00	89.88	272.33	N/A	2448.84	-11033.37	6903.87	11301.86	24.00	0.00	0.00	0.00