



Gamma Ray

LWD MEMORY LOG

Scale:

1:240

True Vertical Depth

Depth Reference:

Driller's Depth

State: Colorado

Country: United States

Status:

Final Print

Surface Location:

Latitude:

Longitude:

40° 27' 42.012" N

104° 35' 04.776" W

Other Services:

API No: 05-123-51329-00

Job ID: 111055150

SEC:

30

TWN:

6N

RGE:

64W

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

Log Measured From: Rig Floor

Elevation:

Above P.D.:

0.00 ft

4728.00 ft

Elev. KB:

Elev. DF:

4728.00 ft

Elev. GL:

4698.00 ft

Dates

From: 2021-10-10
To: 2021-10-13
Spud: 2021-10-03

Drilled (ft)
Top: 1937.00
Bottom: 17078.00

Logged (ft)
Top: 1937.00
Bottom: 17065.00

Azi Reference North:
Total Magnetic Field Strength: (nT)
Mag to Reference North Correction: (deg)

Magnetic Field Reference

Grid Dip Angle: (deg)

66.75

51891

7.01

Borehole Record

Casing Record

Hole Size (in)

From (ft)

To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

13.500

30.00

1937.00

9.625

36.00

30.00

1927.00

8.500

1937.00

17078.00

Company: Noble Energy

Well: Roth A31-720

Field: Wattenberg

County: Weld

State: Colorado

Country: United States

Surface Location:

Latitude:

Longitude:

40° 27' 42.012" N

104° 35' 04.776" W

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SEC:

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TWN:

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Andrea Guidry	2021-10-09	2021-10-13	Chris Campbell	2021-10-09	2021-10-14	Jeremiah Samson	2021-10-09	2021-10-13
Mike Grunsey	2021-10-09	2021-10-13	Tien Bui	2021-10-09	2021-10-13			

Witness

Name	Run
Dave Nielsen	1,2

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+ (%)
2021-10-09 13:37	1	1937.00	Oil Based Mud	9.3	10	N/A	17.0	79.5/20.5	Active Pit	25000	0.00
2021-10-11 07:05	1	8366.00	Oil Based Mud	10.1	16	N/A	16.8	80.2/19.8	Active Pit	31500	0.00
2021-10-11 13:20	2	8729.00	Oil Based Mud	10.1	16	N/A	16.8	80.2/19.8	Active Pit	31500	0.00
2021-10-12 13:55	2	11828.00	Oil Based Mud	10.1	17	N/A	4.0	80.7/19.3	Active Pit	30000	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	14382369	Near Bit VSS	5.93	6.77	7.000	4.330
1	AutoTrak Curve Steering Unit	14382369	Near Bit Inclination	5.93	6.77	7.000	4.330
1	AutoTrak Curve MWD	14452418	Gamma (single)	2.79	12.94	7.000	3.250
1	AutoTrak Curve MWD	14452418	Directional (mag)	12.27	22.42	7.000	3.250
2	AutoTrak Curve Steering Unit	14868420	Near Bit VSS	5.93	6.77	7.000	4.330
2	AutoTrak Curve Steering Unit	14868420	Near Bit Inclination	5.93	6.77	7.000	4.330
2	AutoTrak Curve MWD	14219765	Gamma (single)	2.73	12.94	7.000	3.250
2	AutoTrak Curve MWD	14219765	Directional (mag)	12.27	22.48	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

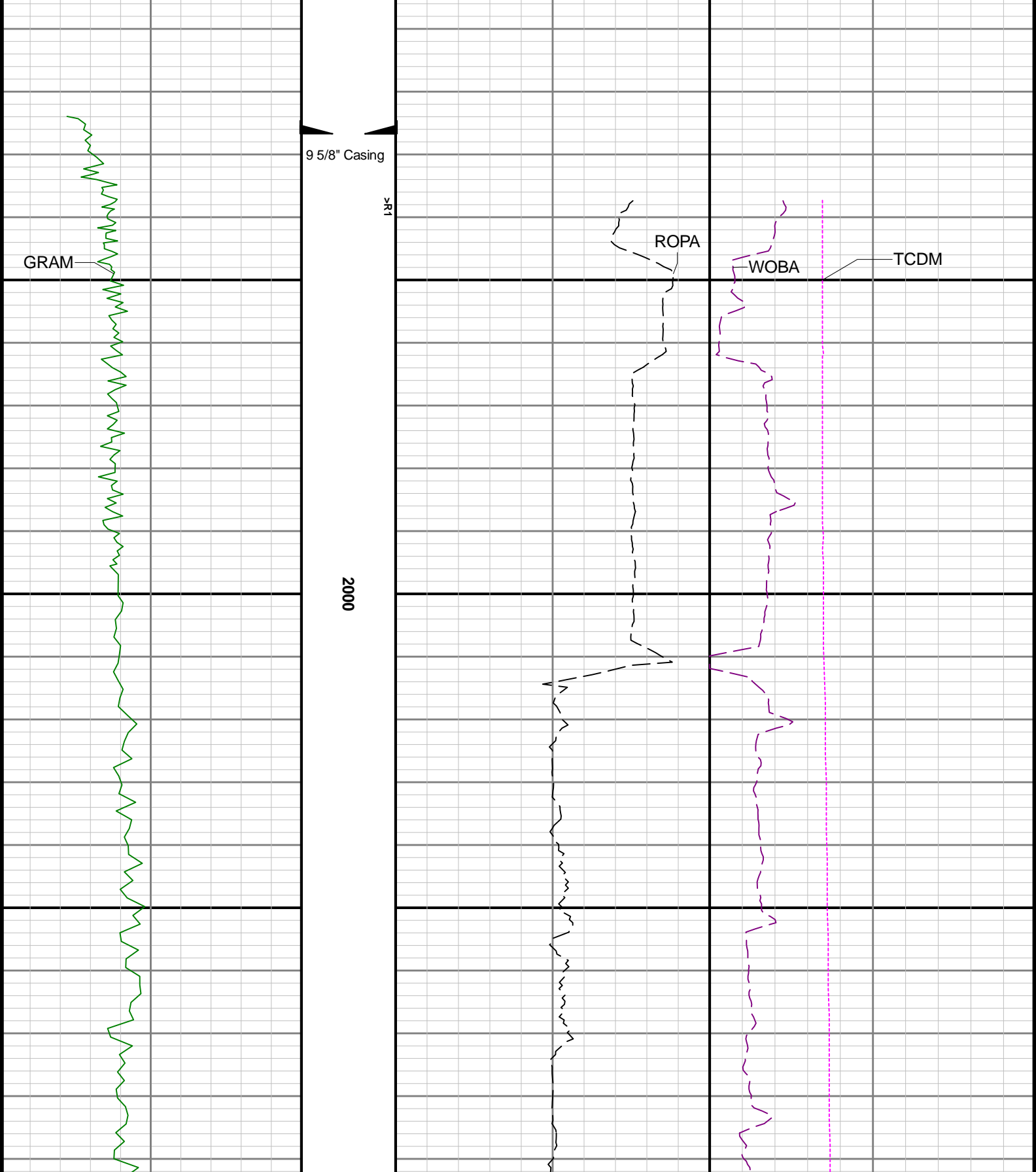
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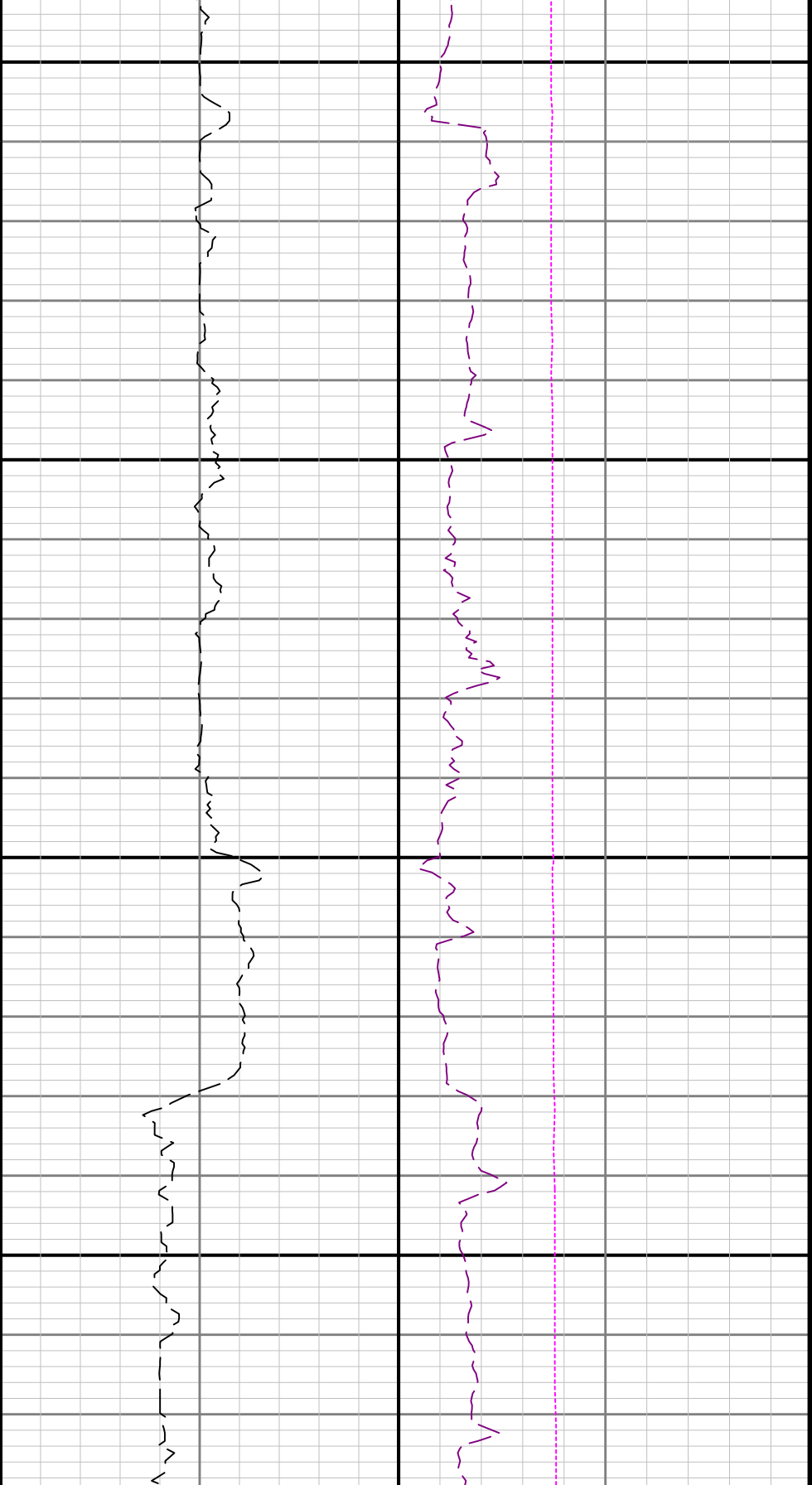
1	Baker Hughes Company runs 1 and 2 utilized 6 ¾ inch NaviGamma services (Gamma Ray and Directional) behind an 8 ½ inch PDC bit and rotary steerable assembly from 1937 to 17078 feet MD (1936 to 6845 feet TVD).
2	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes Company. Due to a lack of control by Baker Hughes Company logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes Company are being used to present logging data.
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
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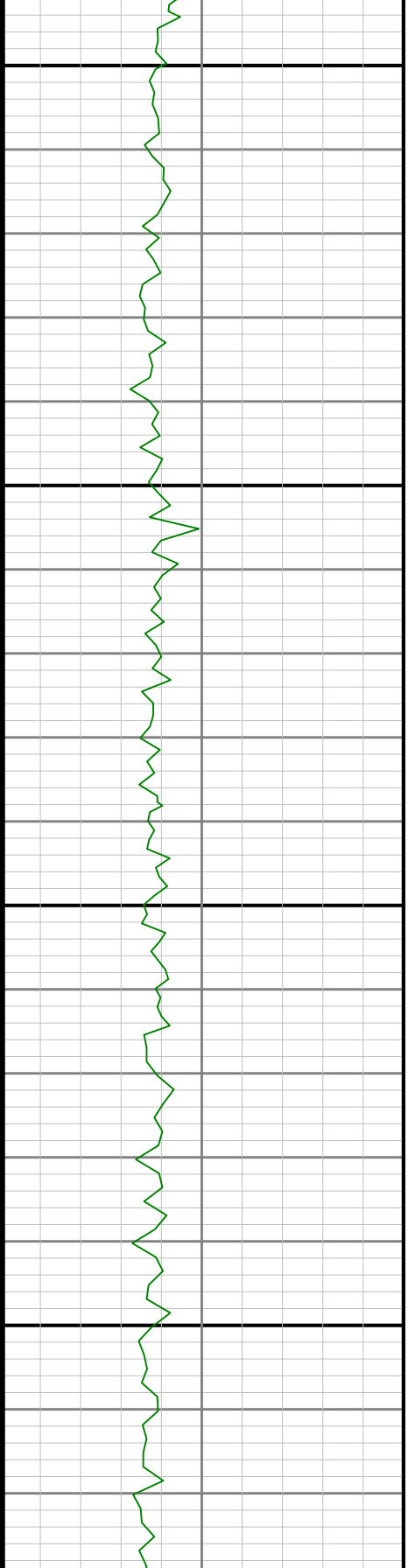
Gamma Ray - Apparent 0.5 ft Average GRAM		TVD 1:240 feet	Depth Averaged ROP 3 ft Average ROPA		Weight On Bit, Average 1 ft Average WOBA			
0 300			1000 0		0 50			
API			ft/h		klb			
					Downhole Temperature TCDM			
		1900			0 300			
					degF			

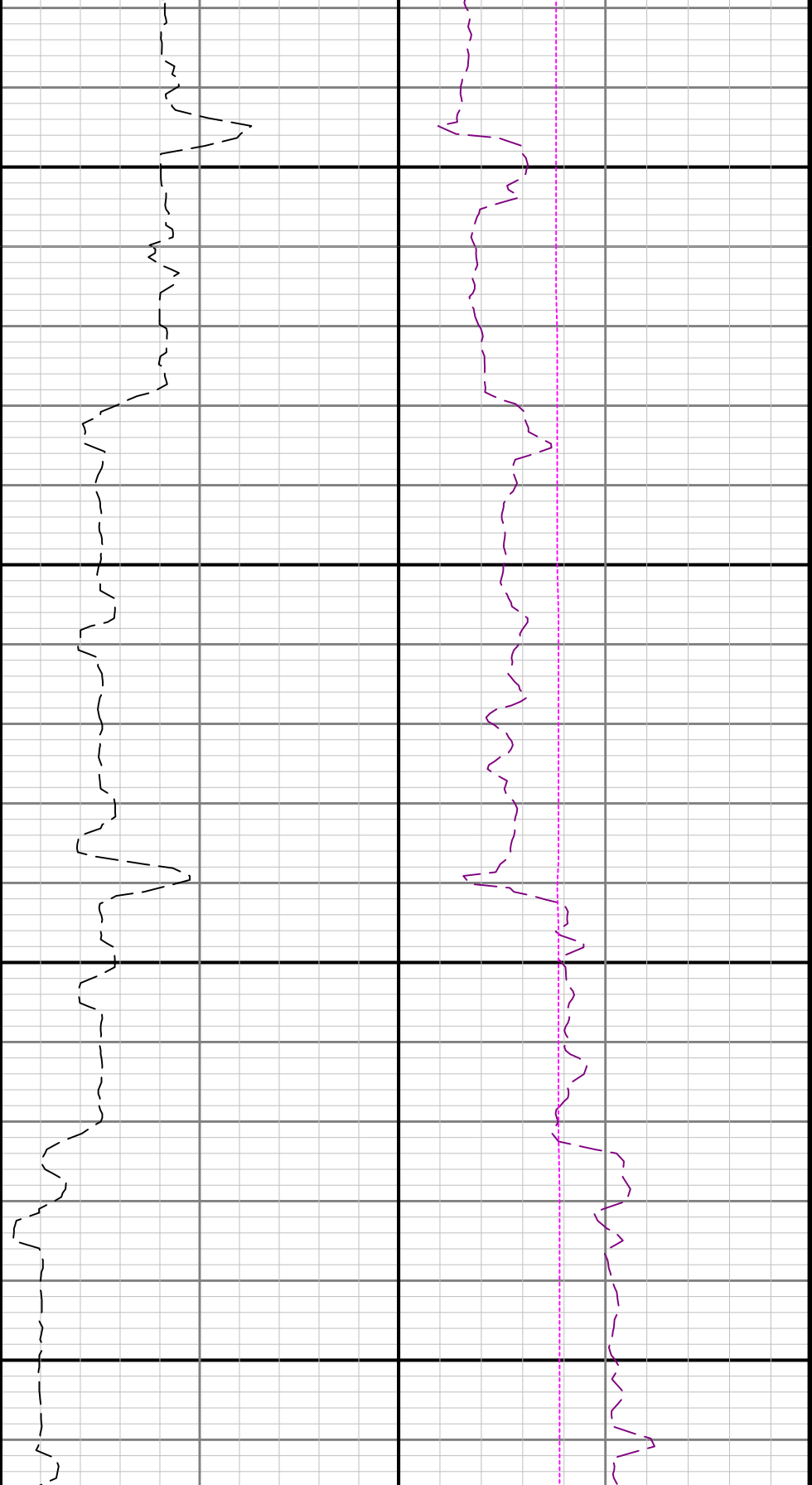




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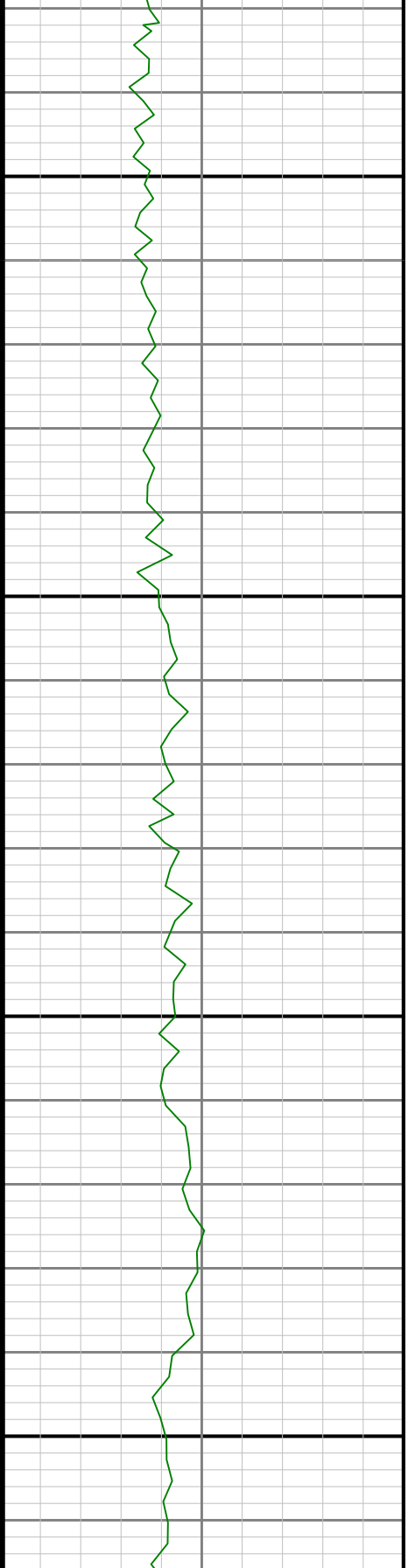
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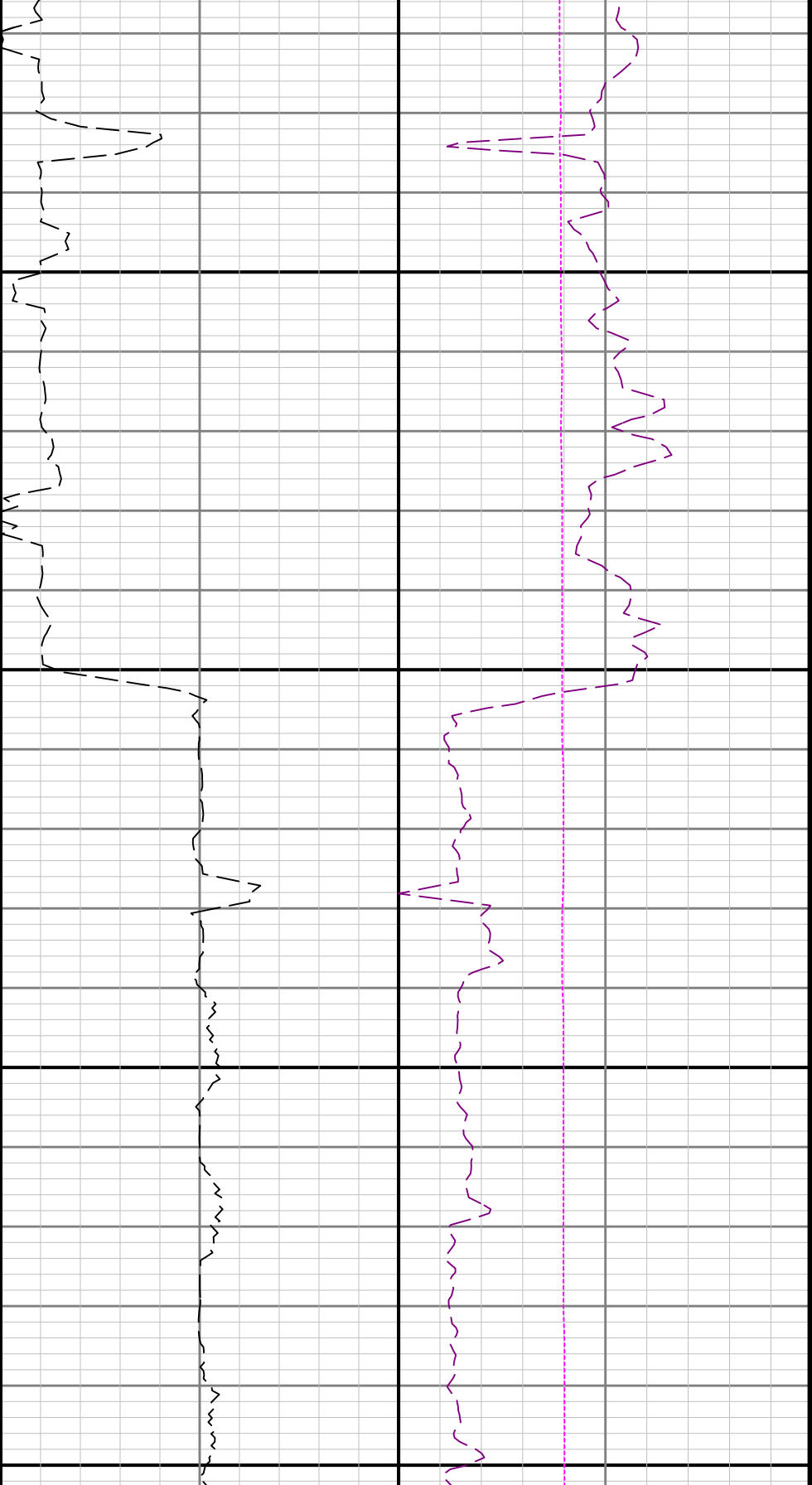




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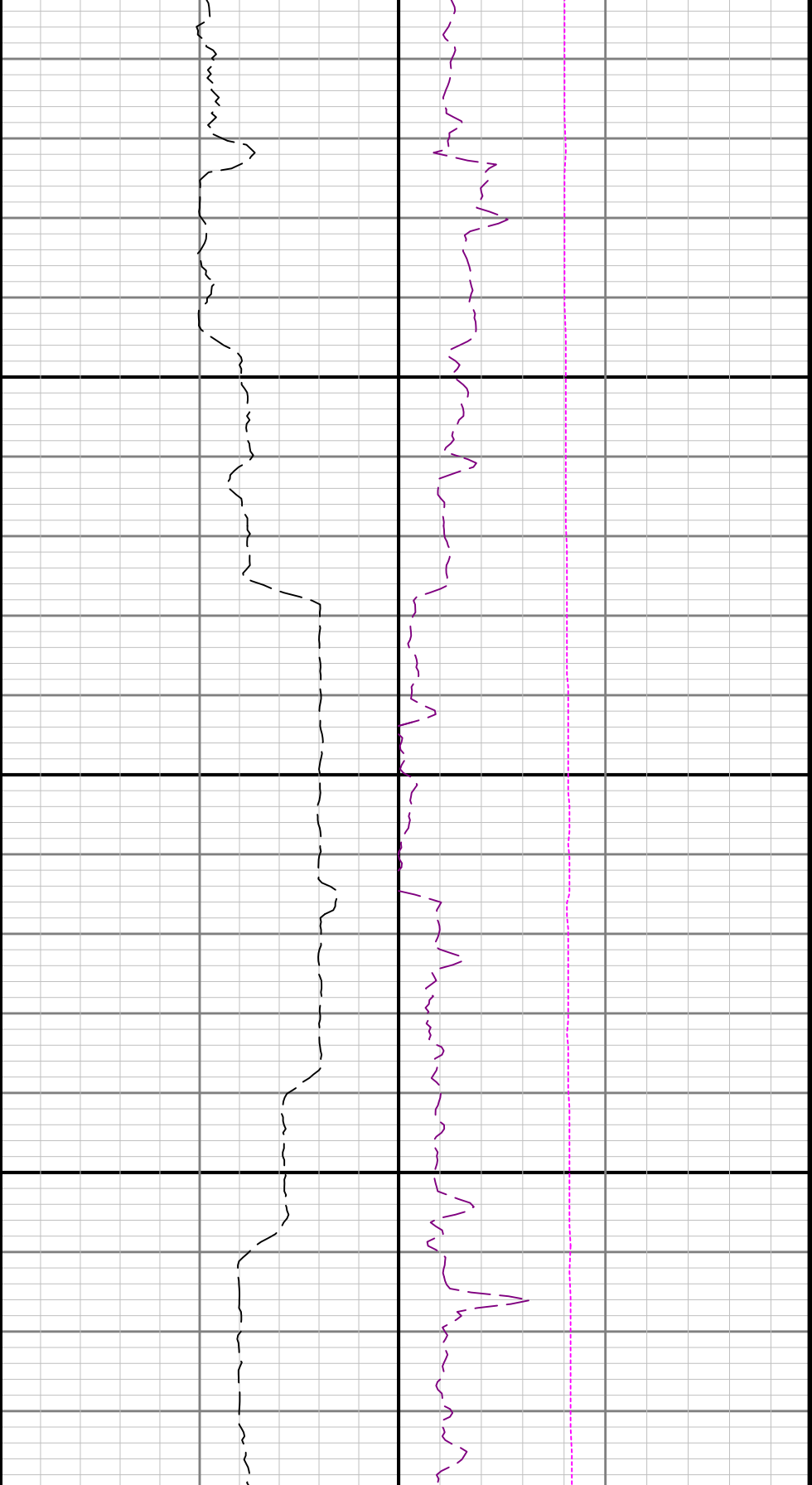
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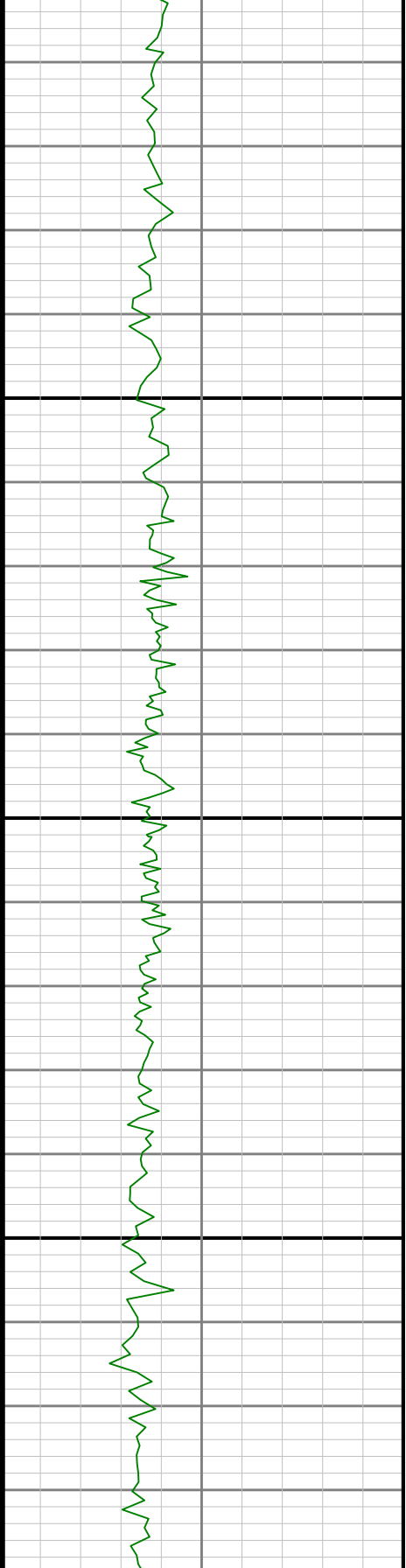
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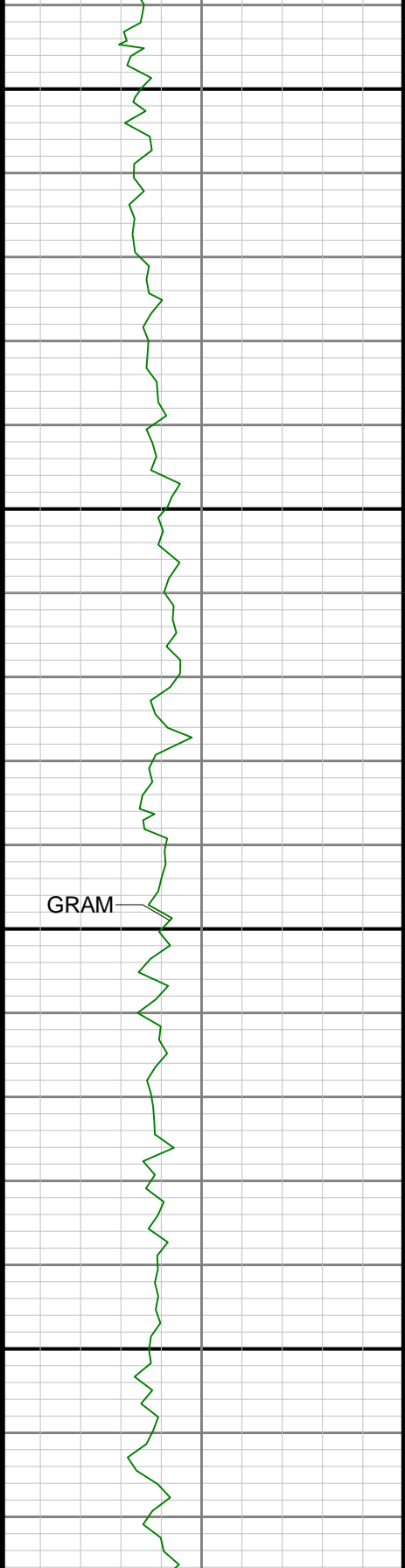
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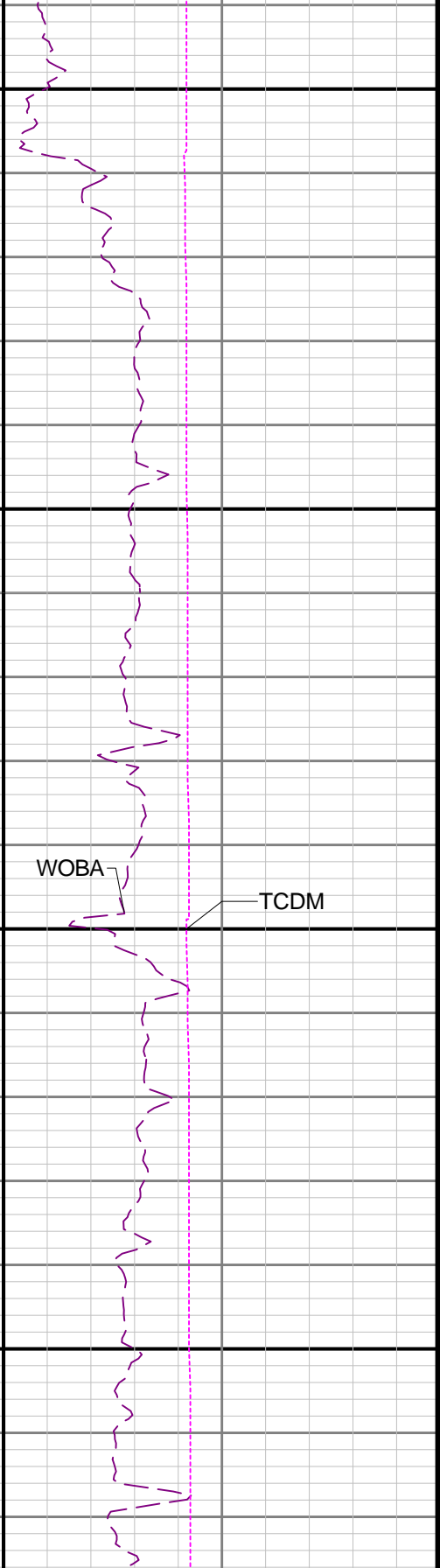
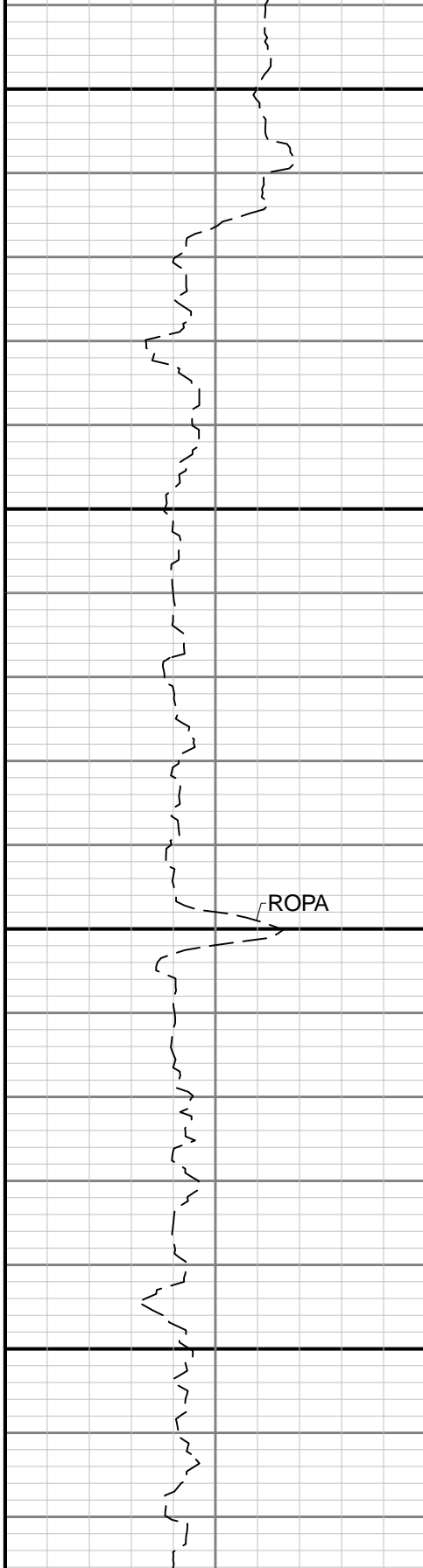
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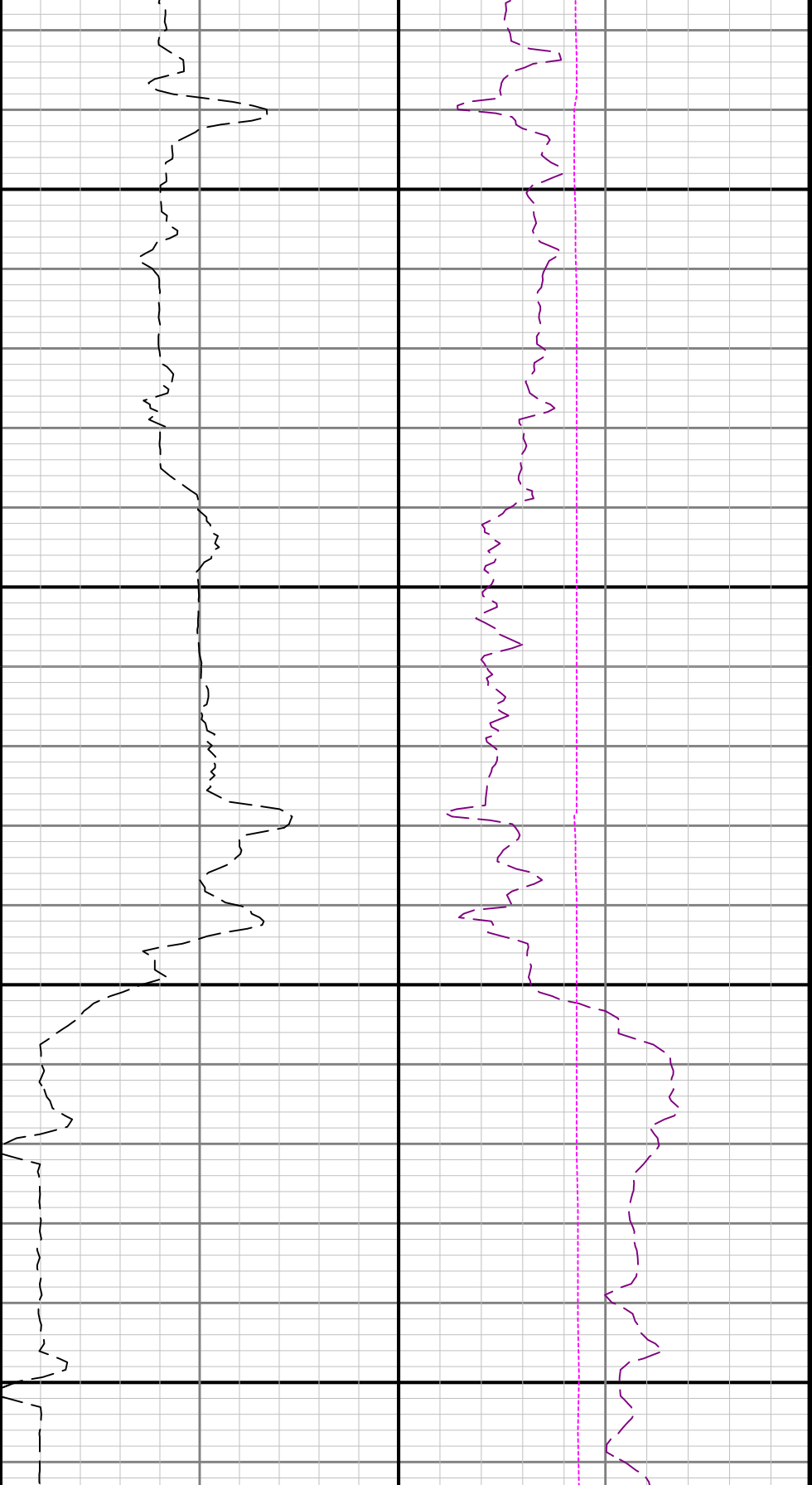




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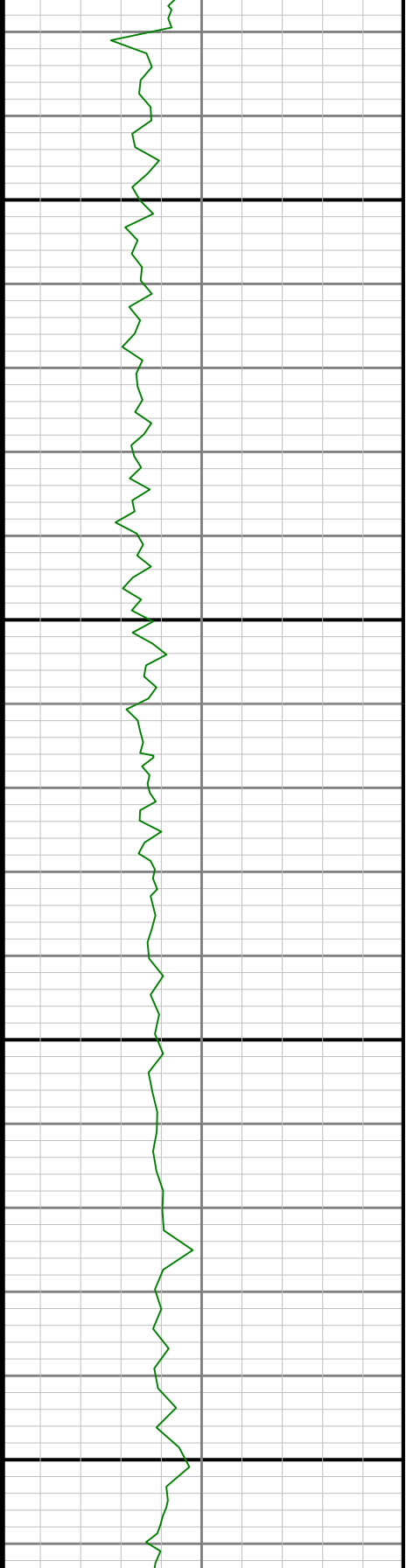
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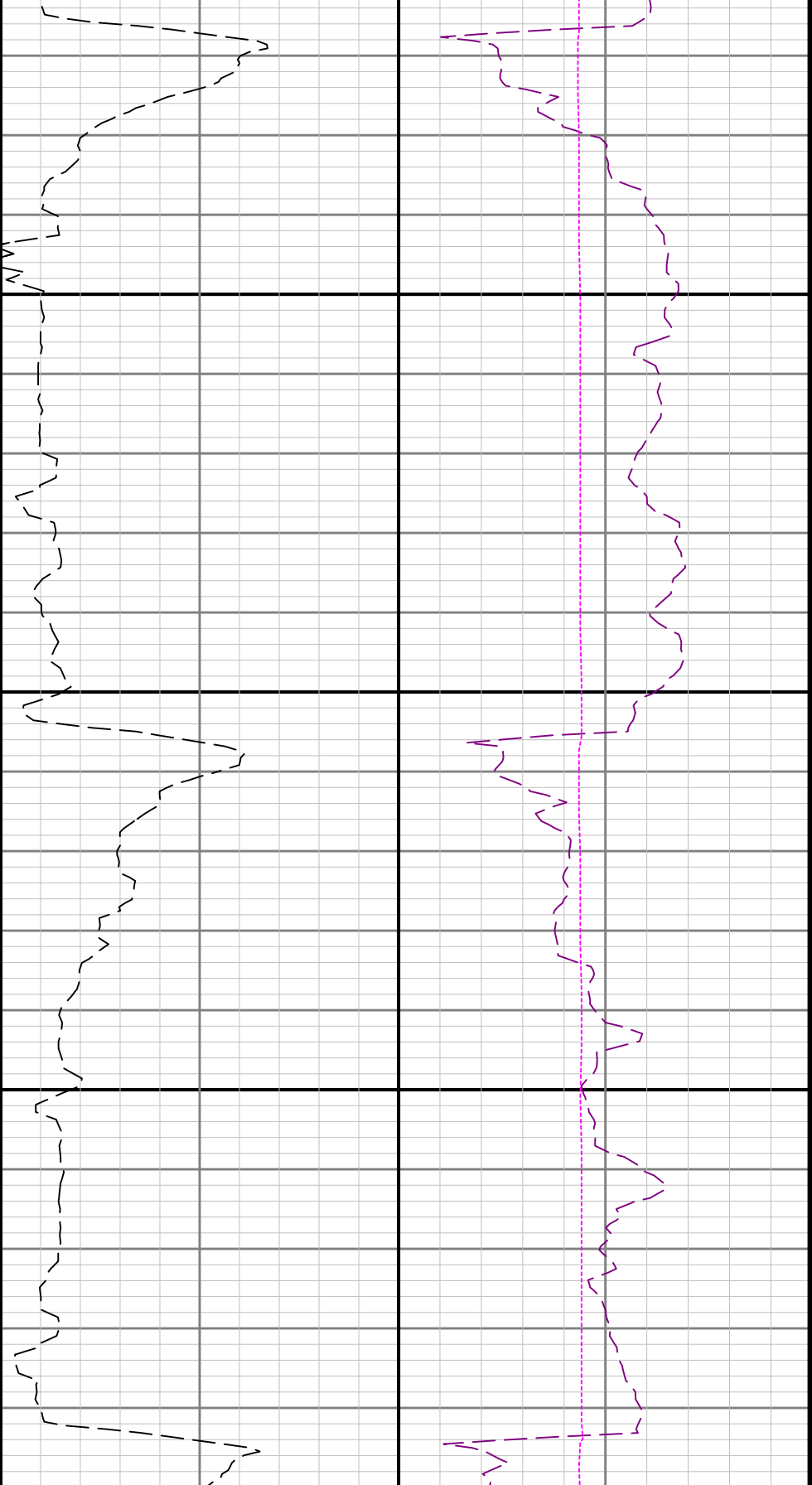




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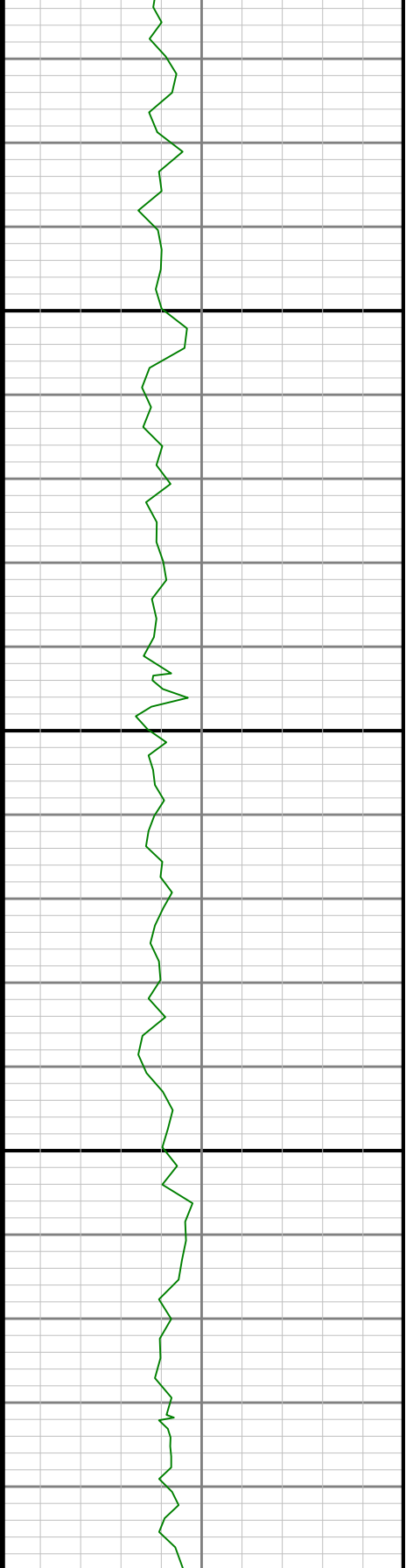
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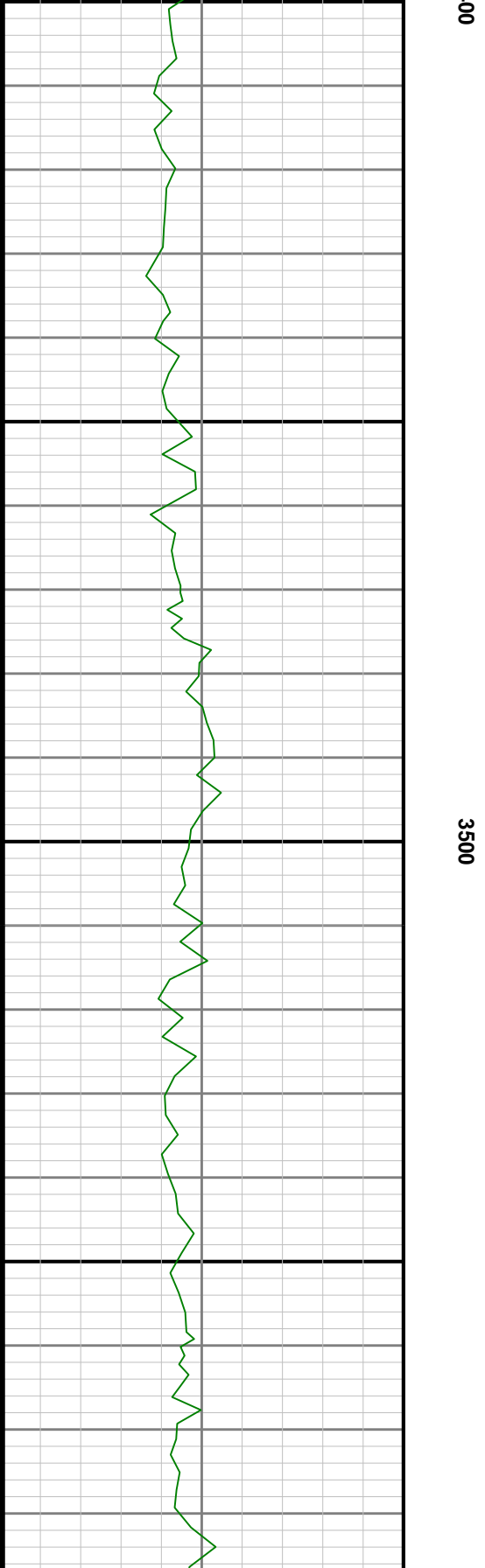
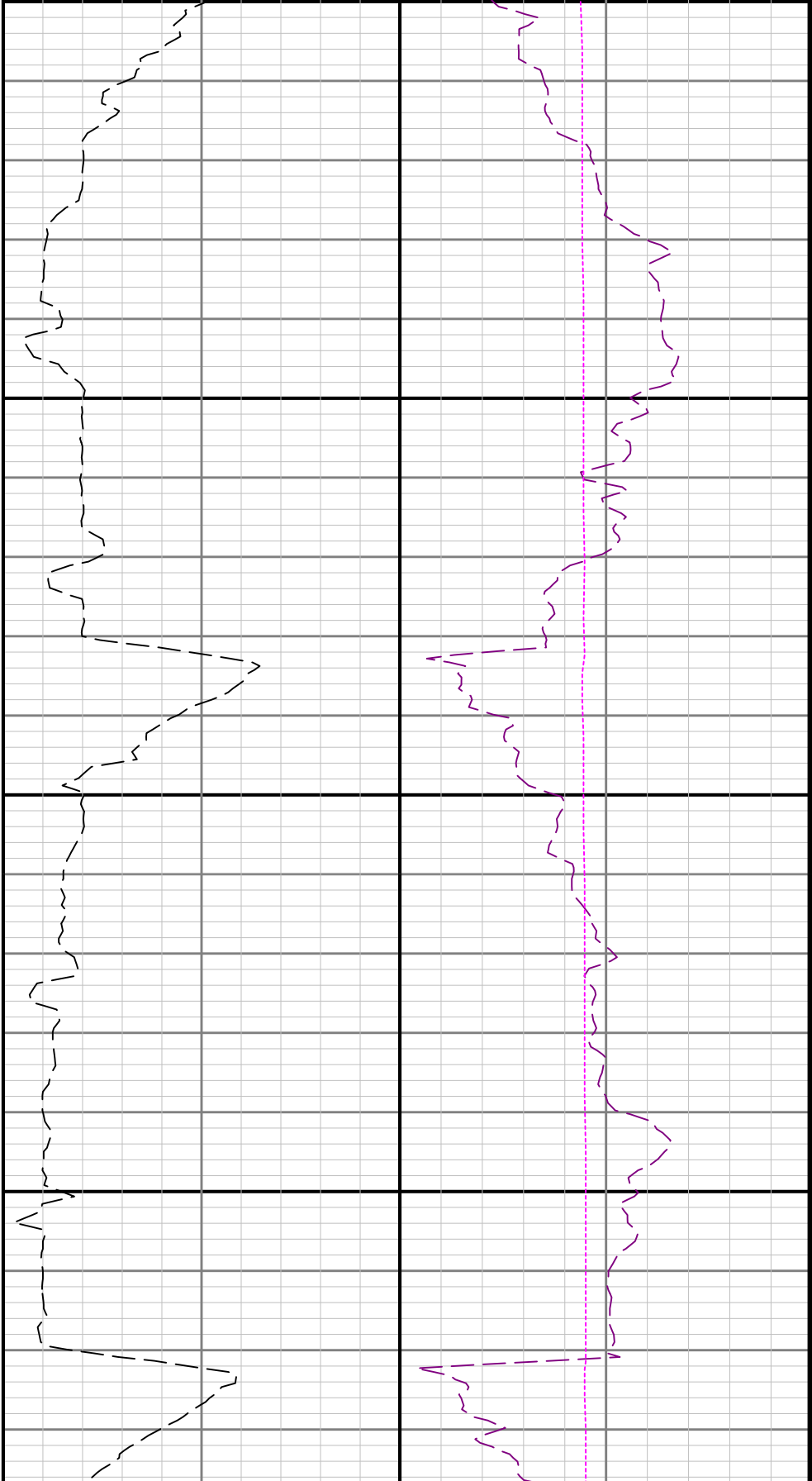


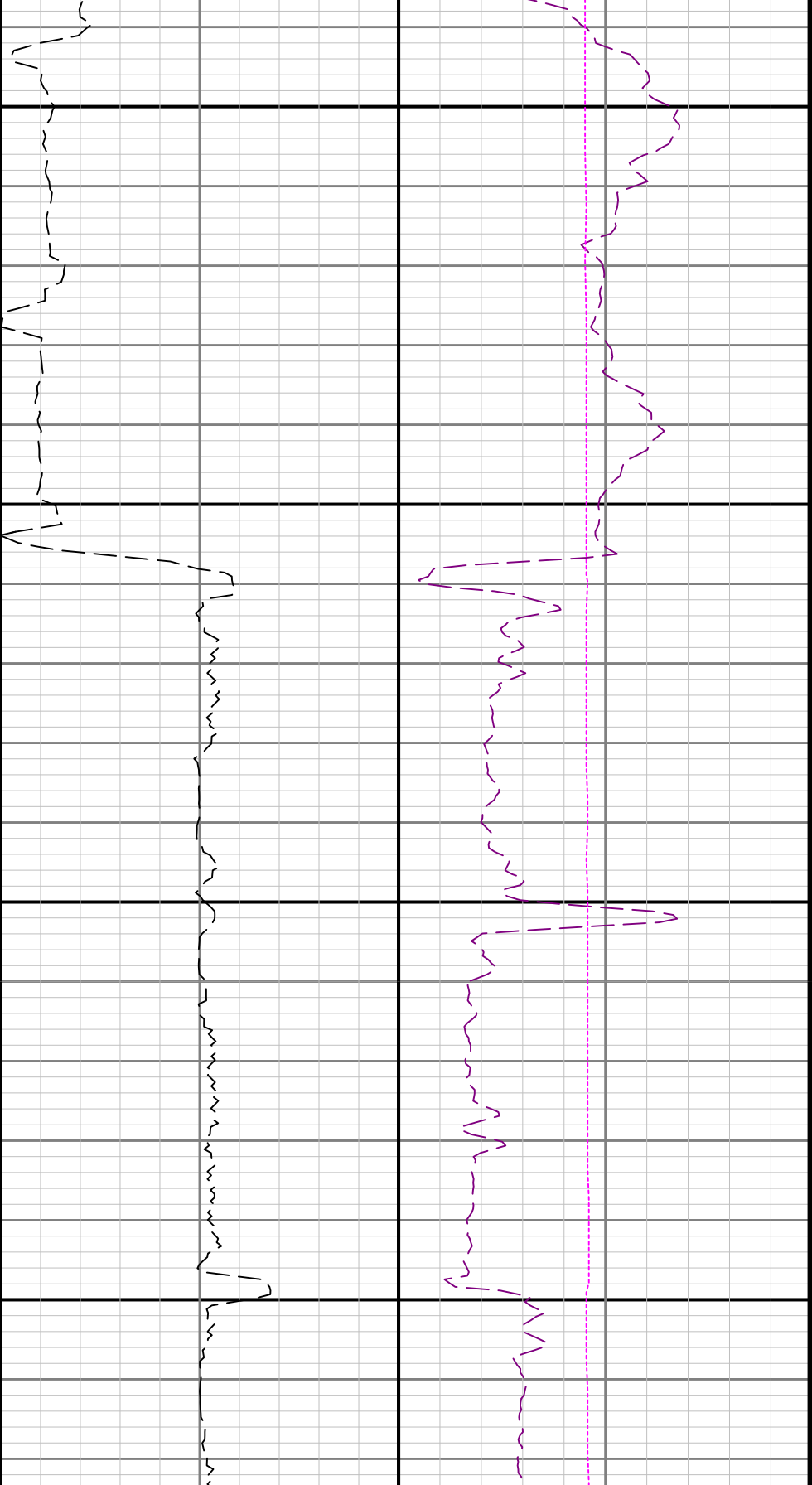


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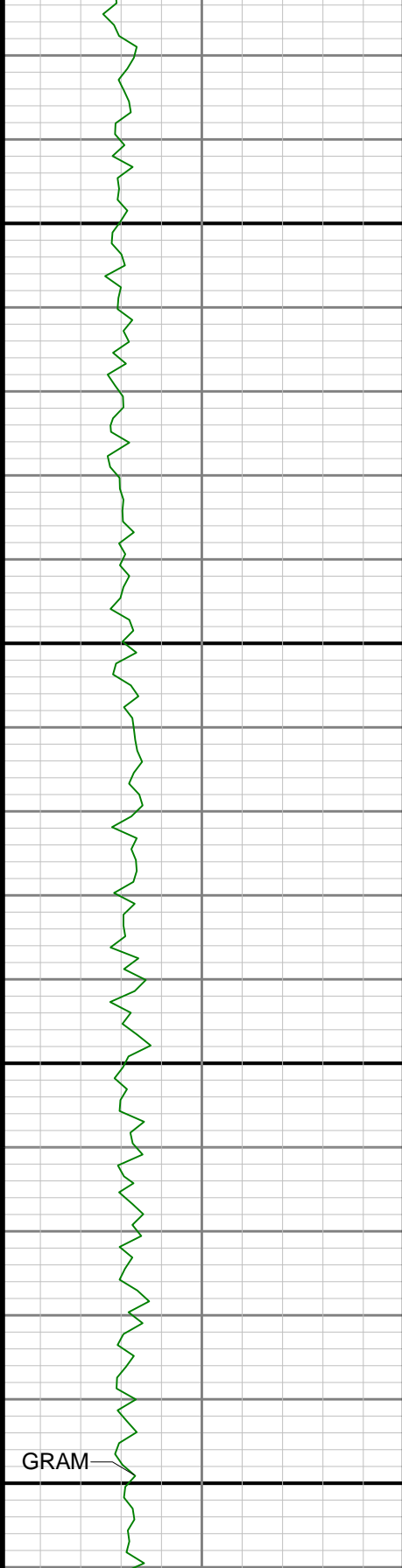






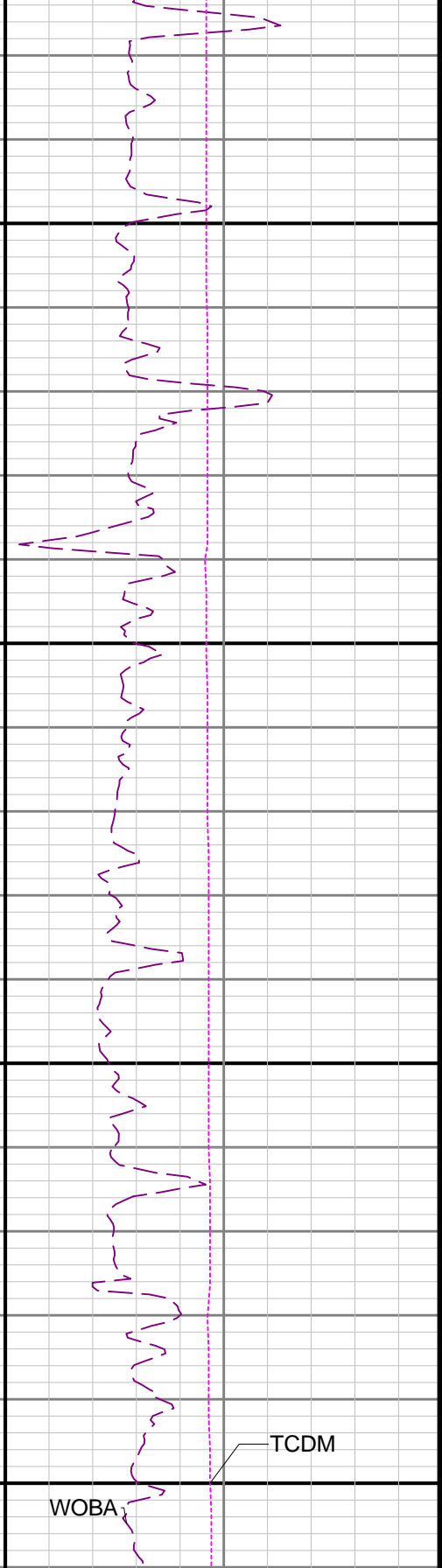
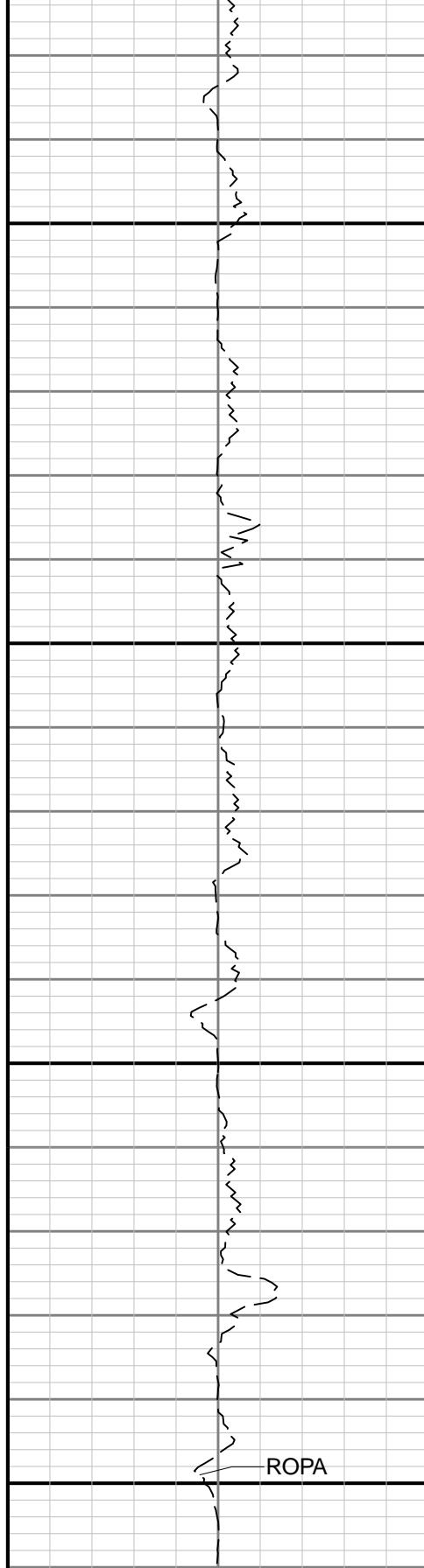
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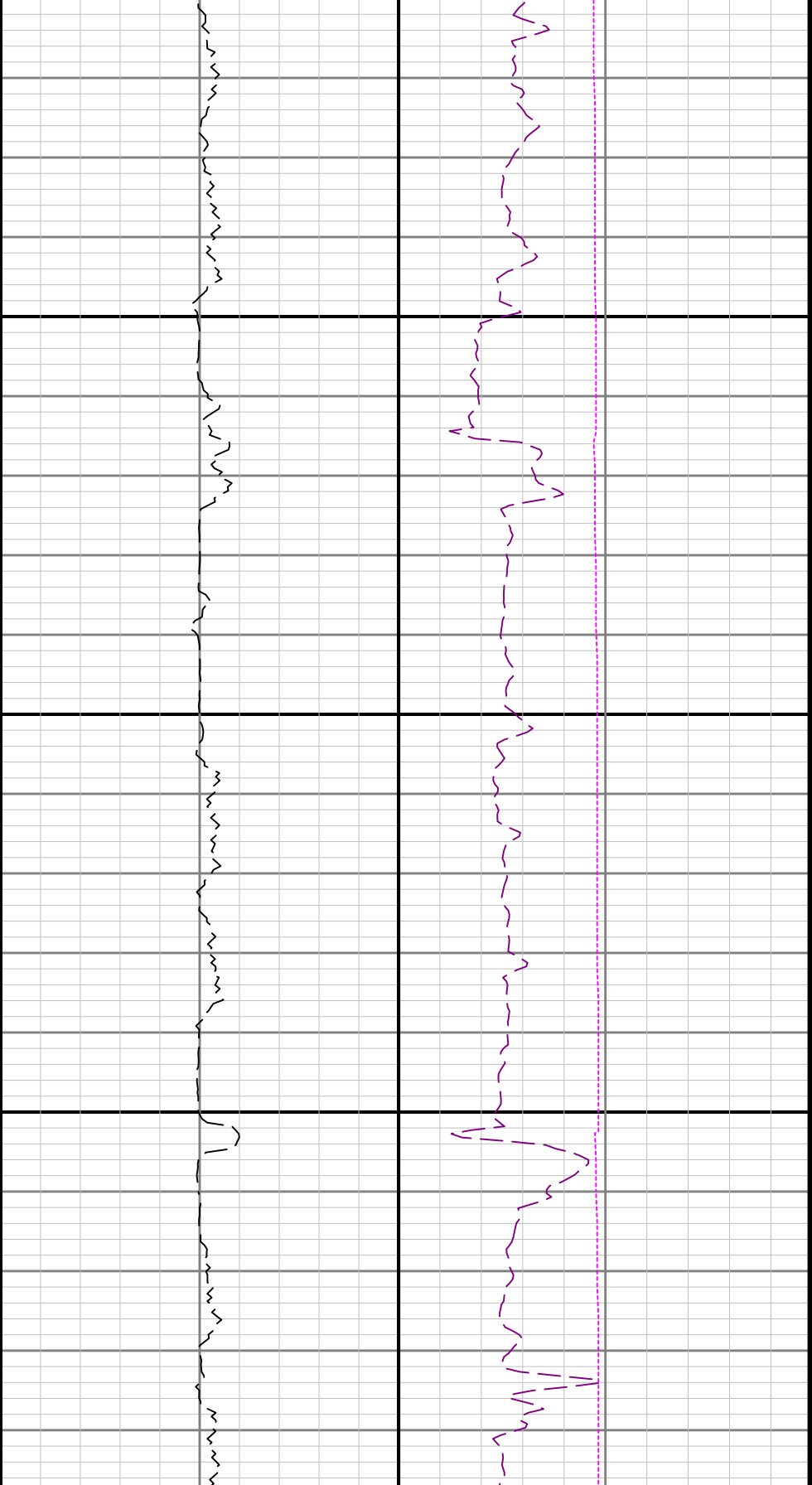
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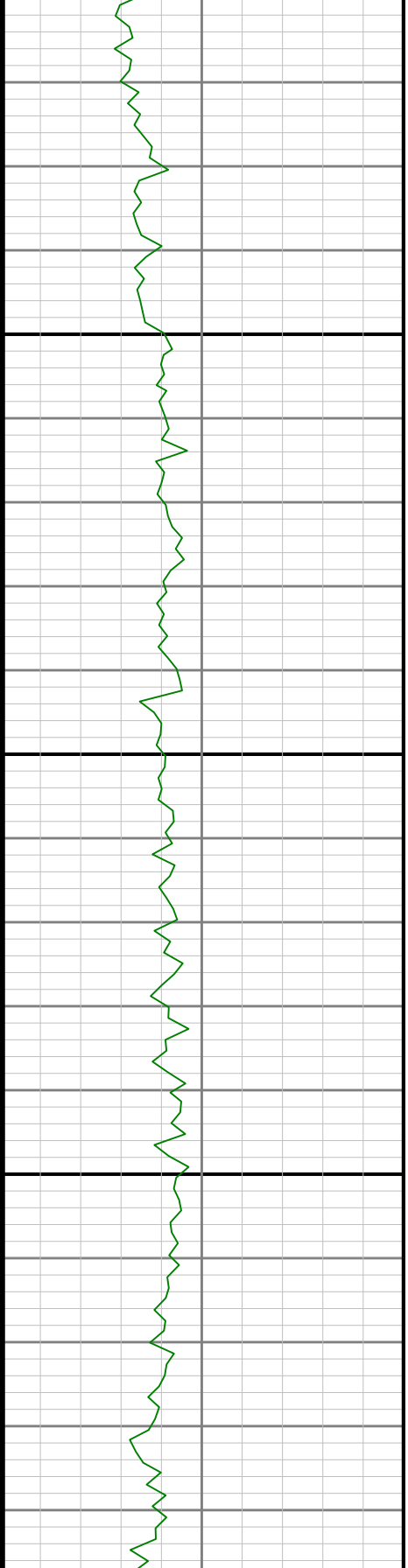
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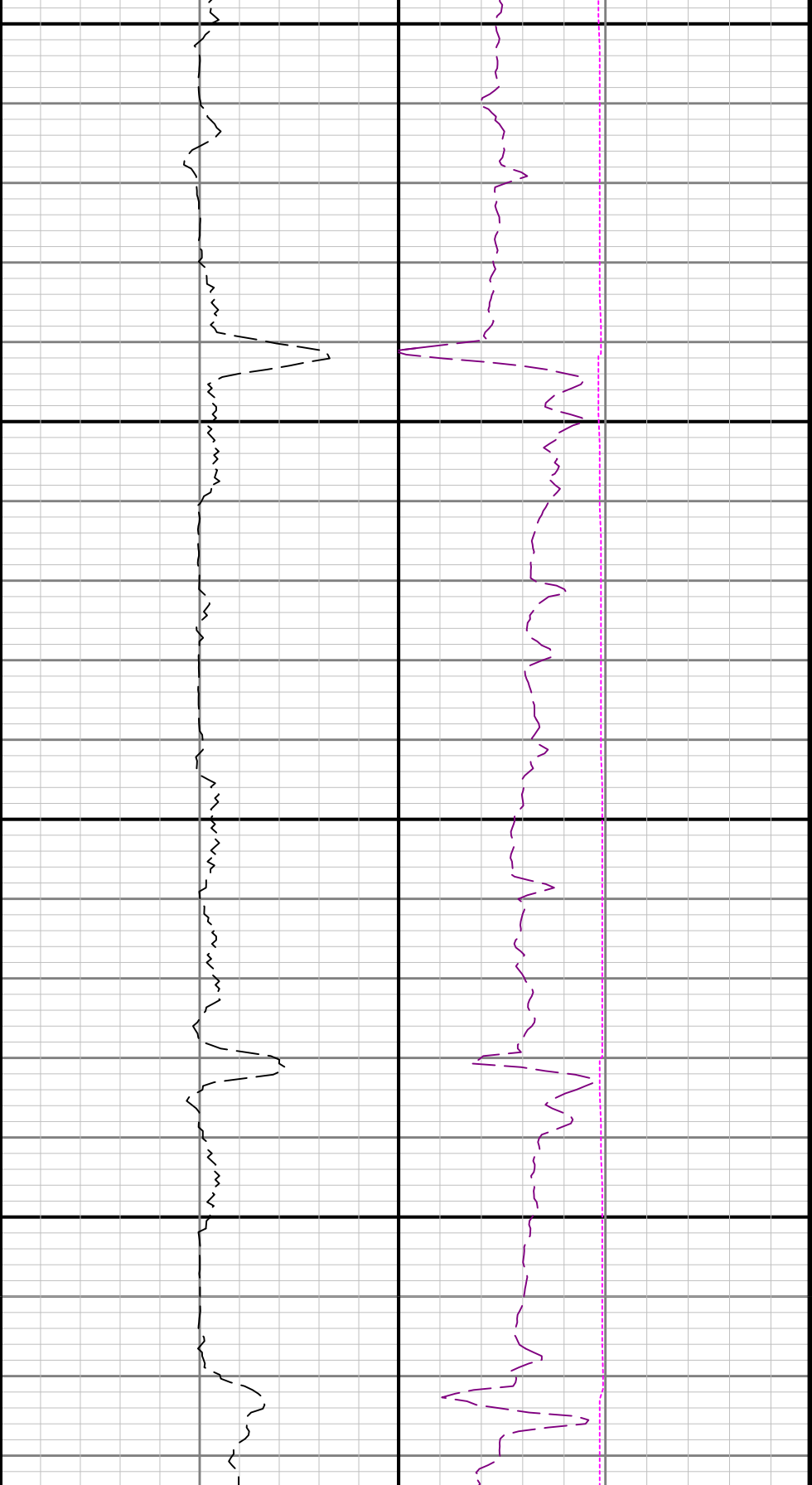




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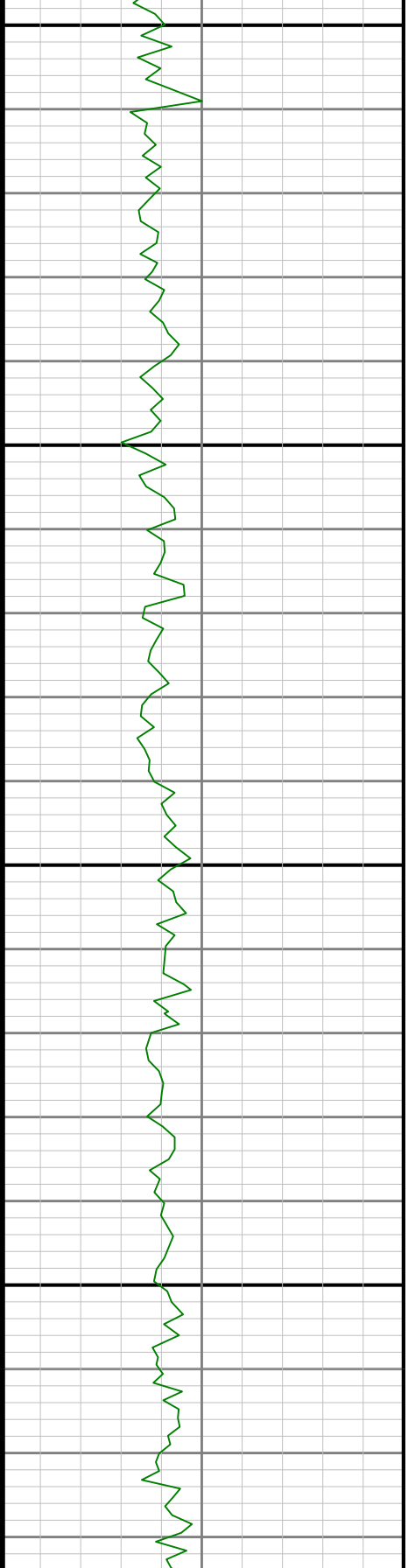
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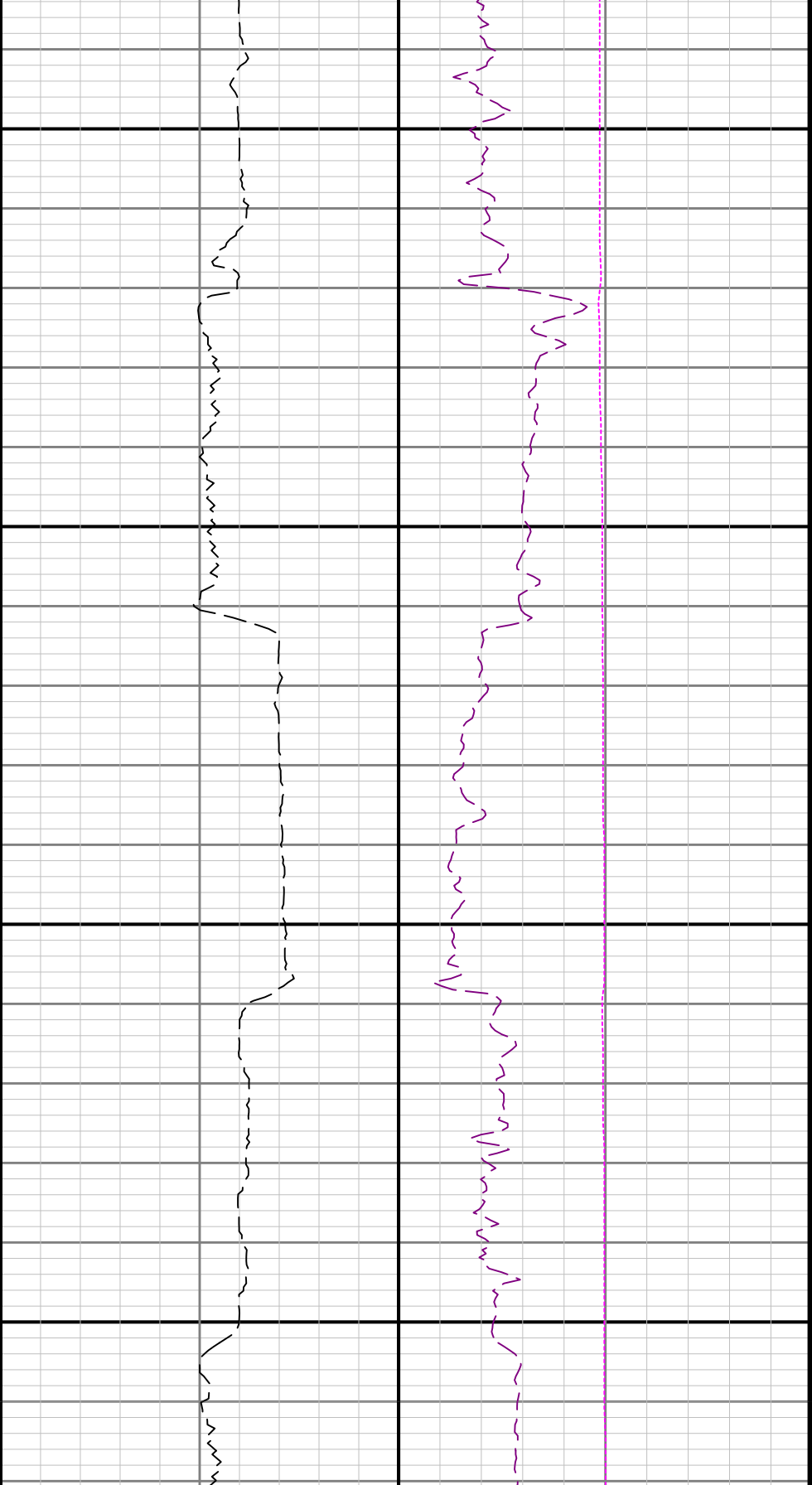




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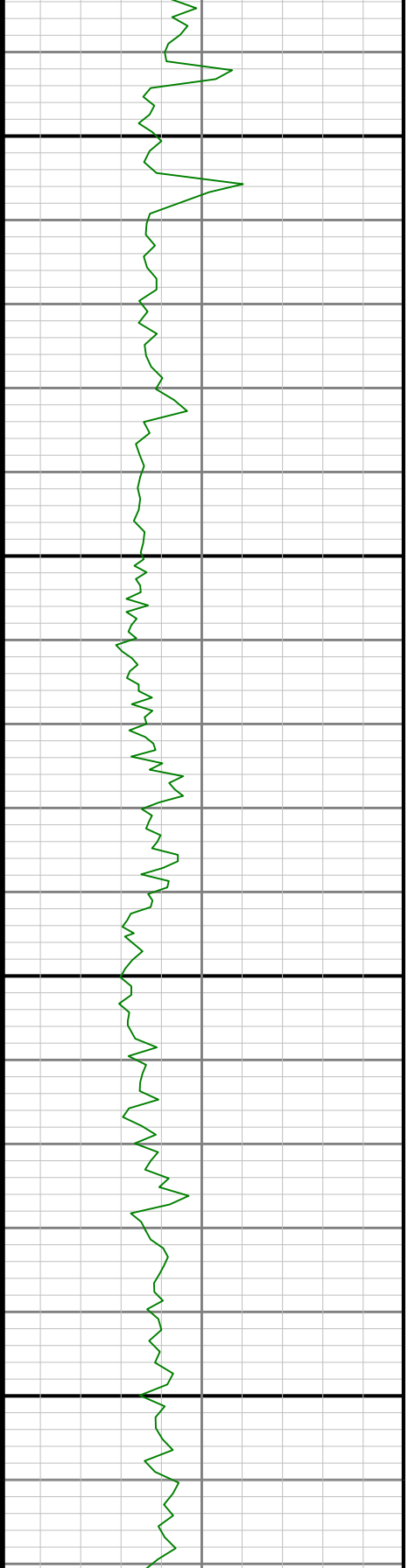
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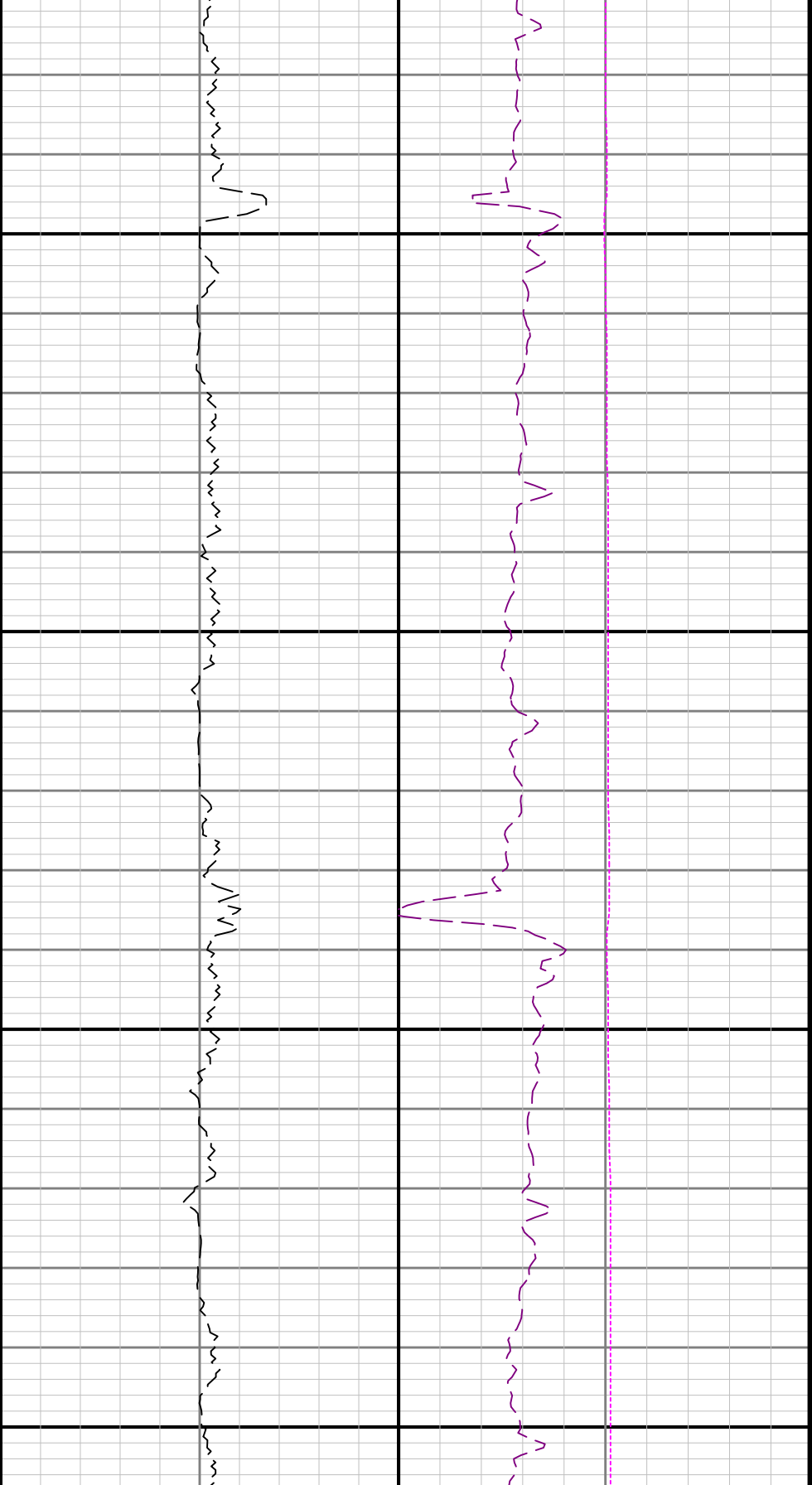




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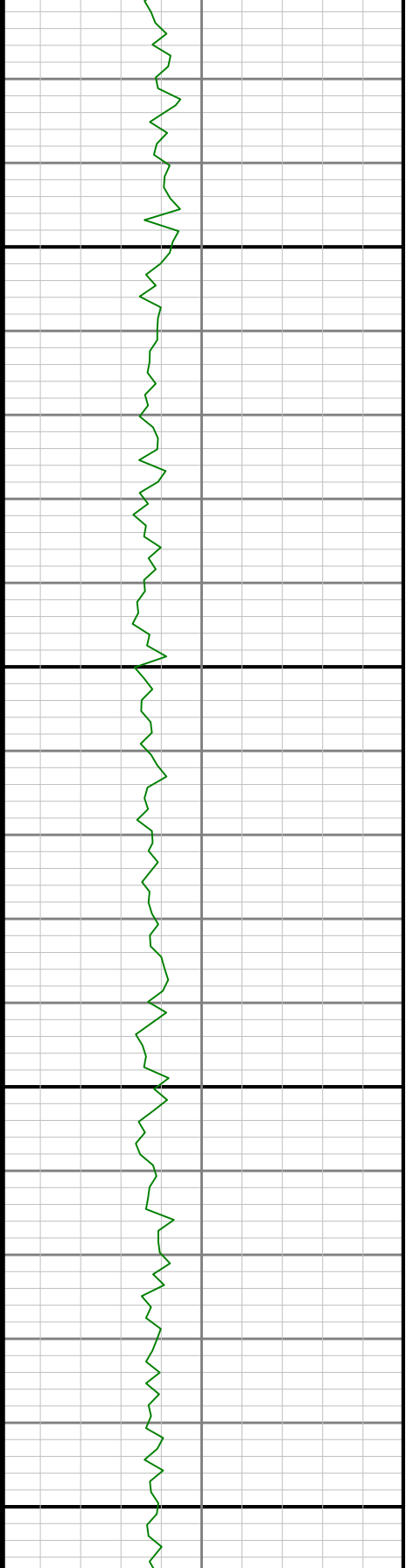
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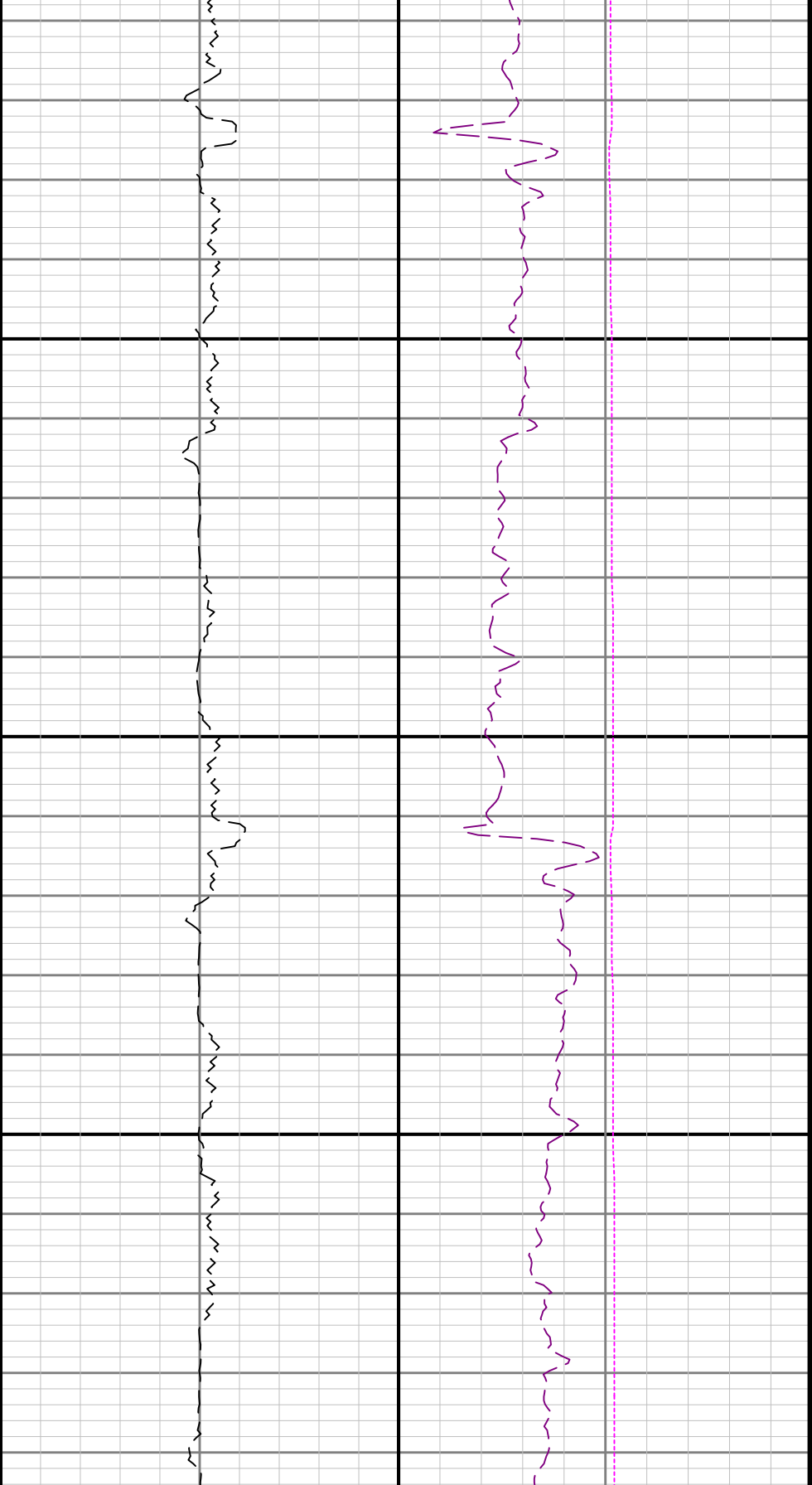




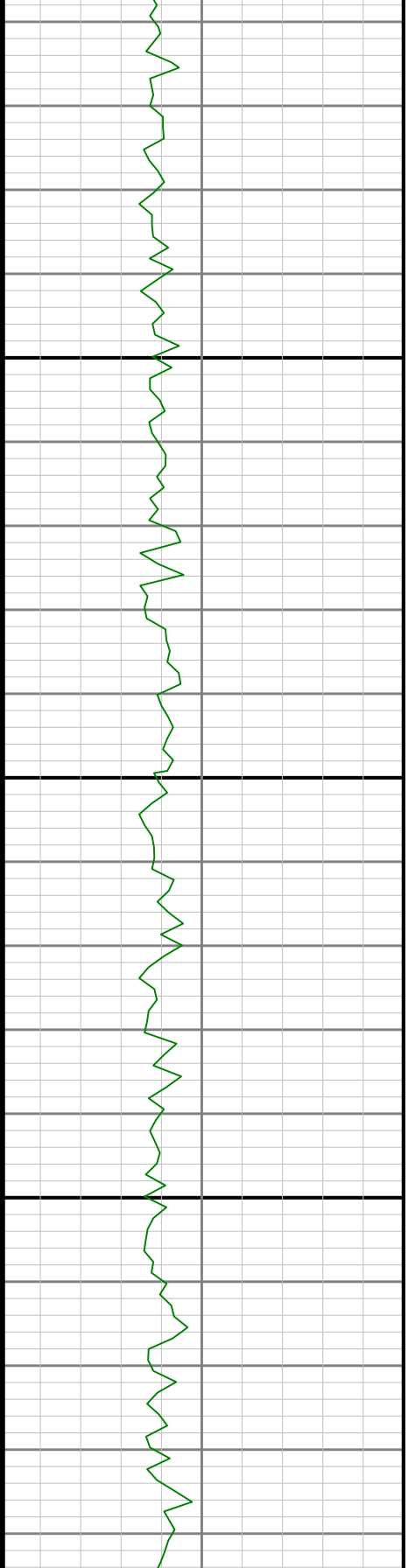
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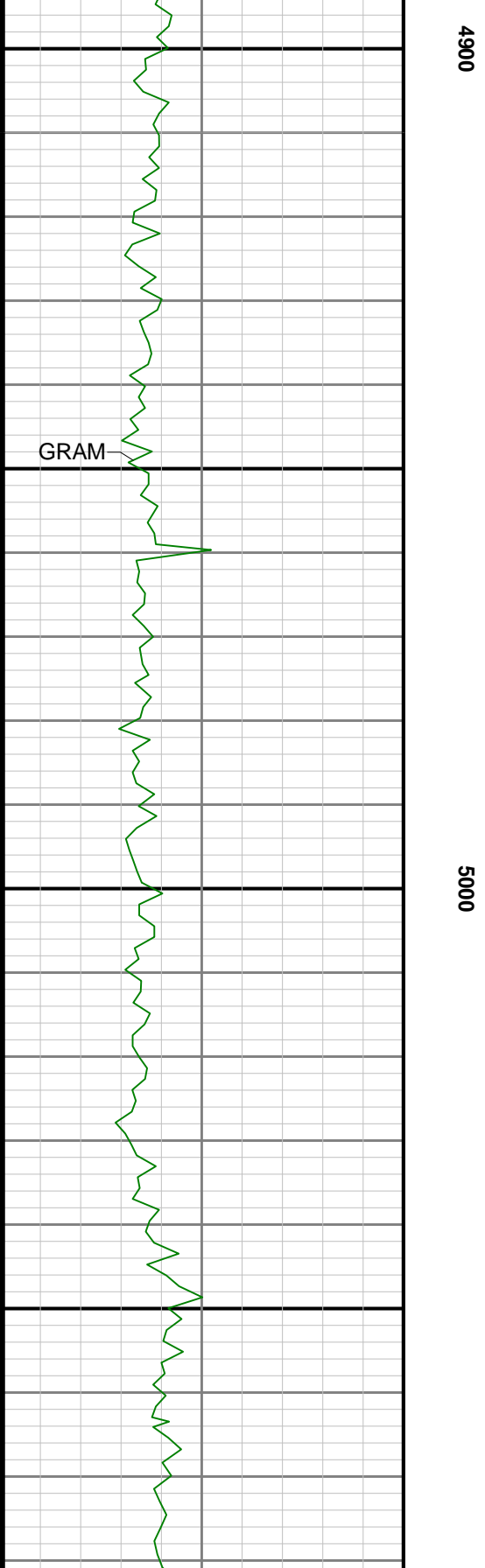
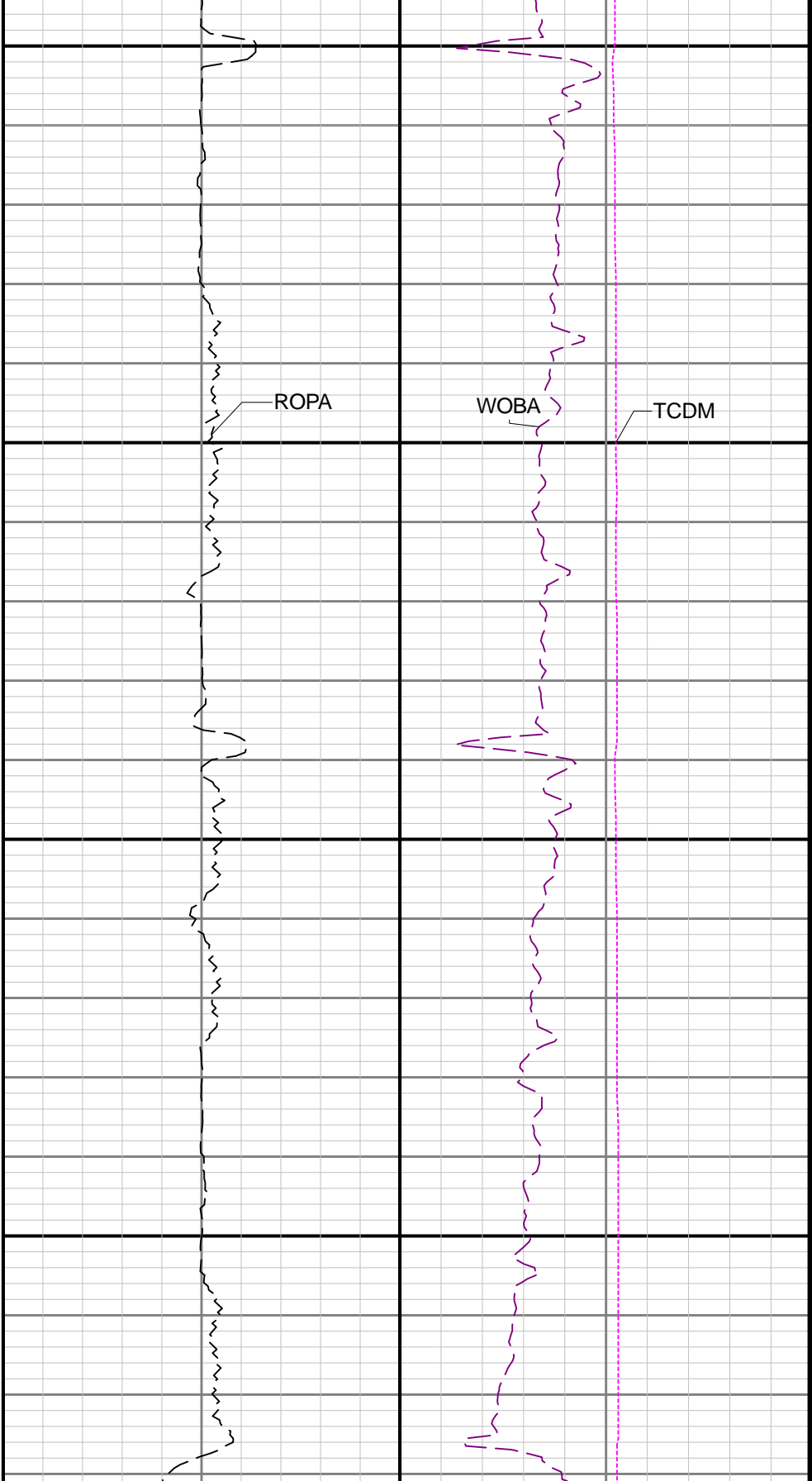
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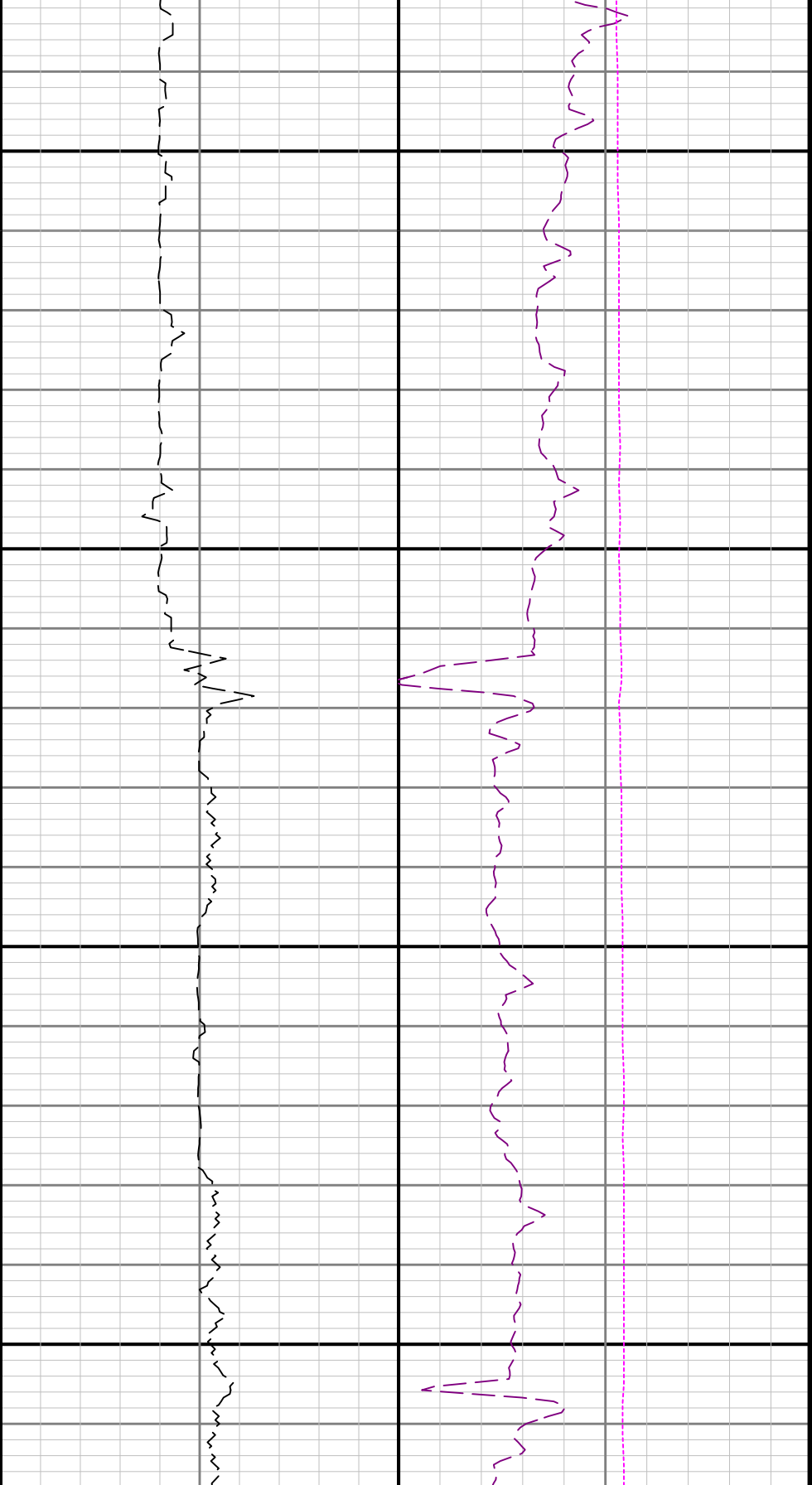




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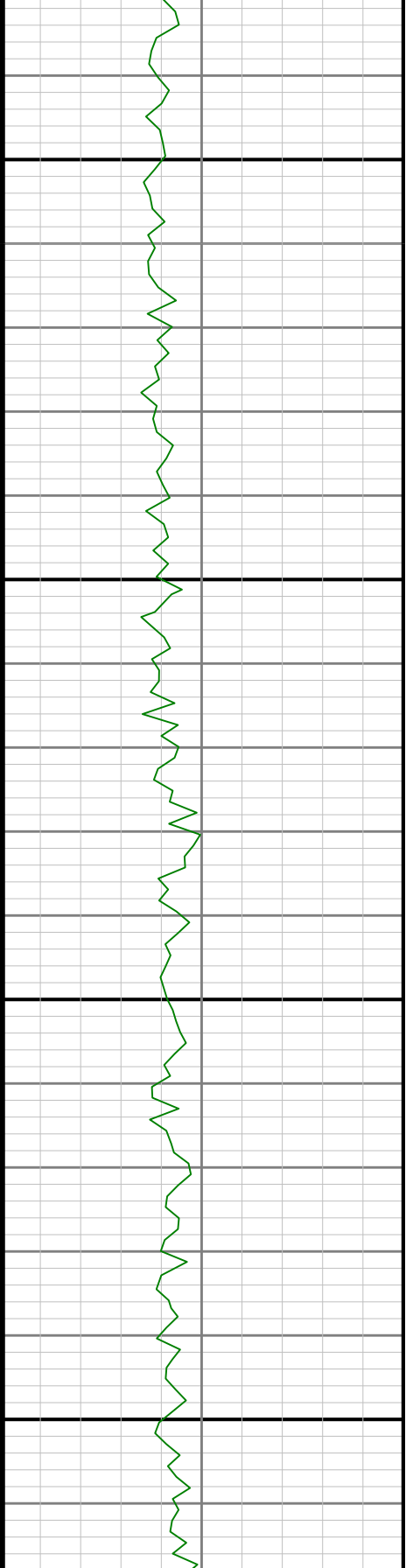


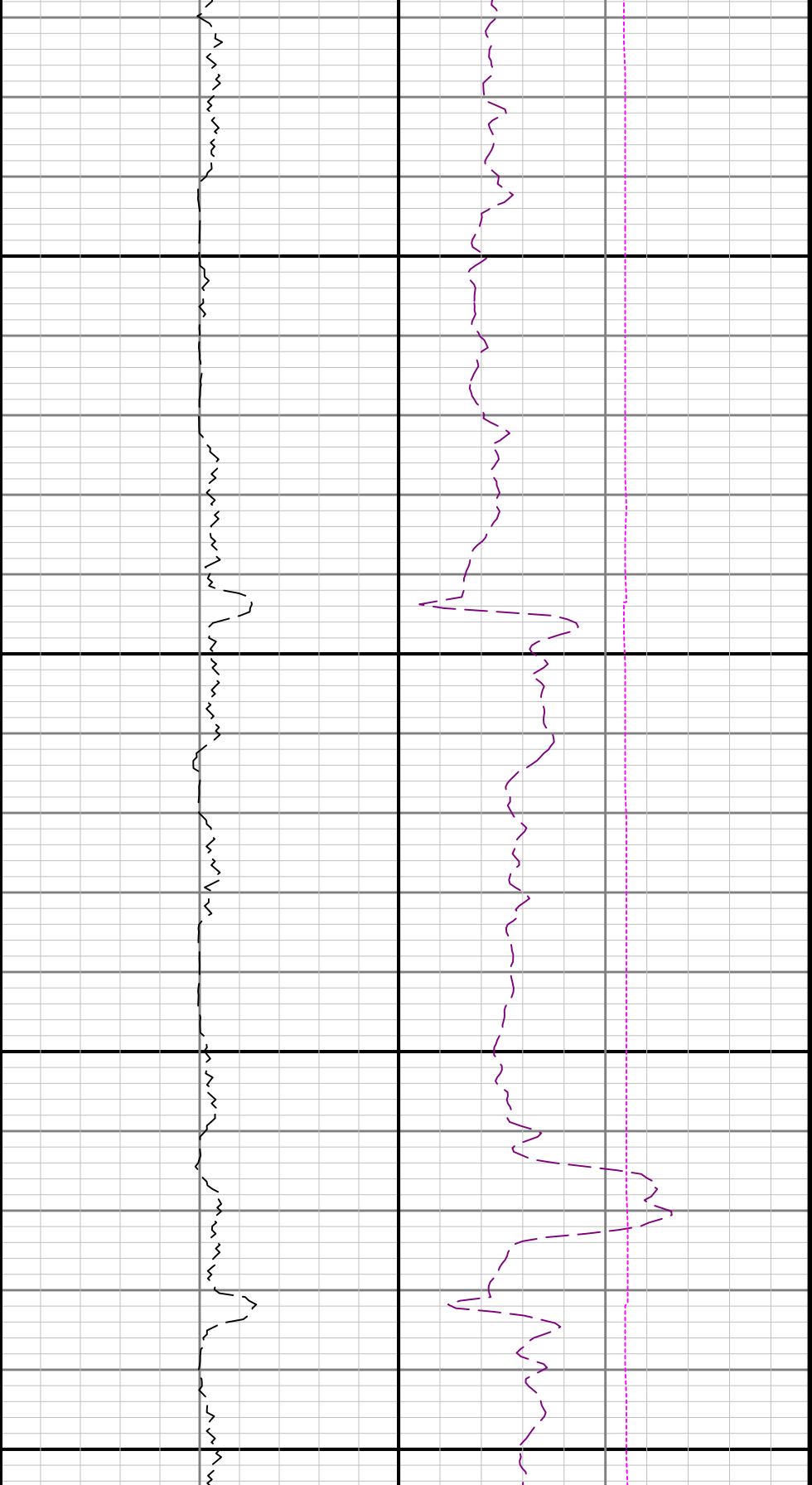




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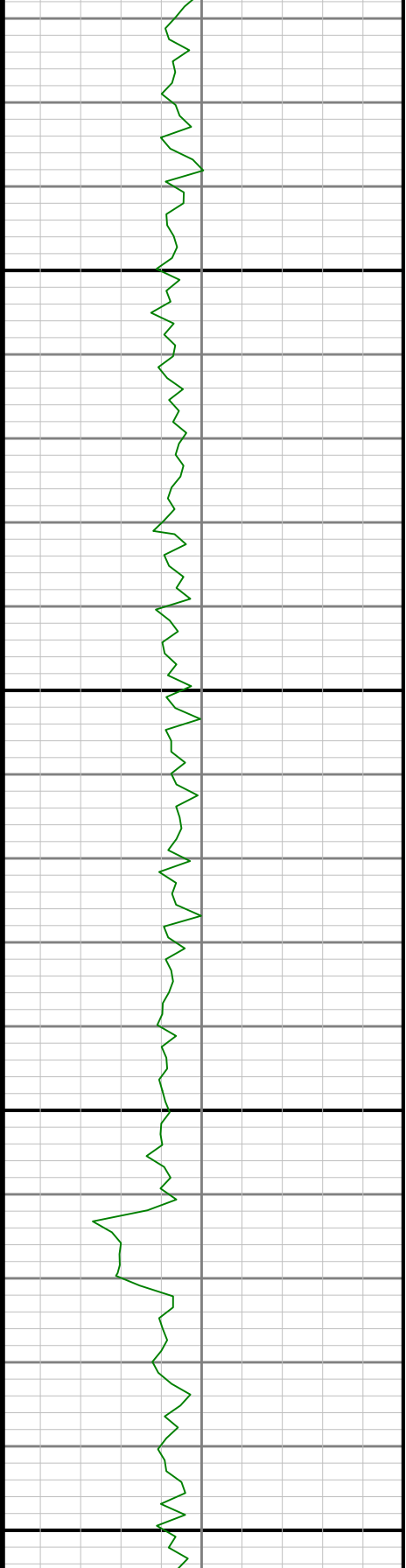
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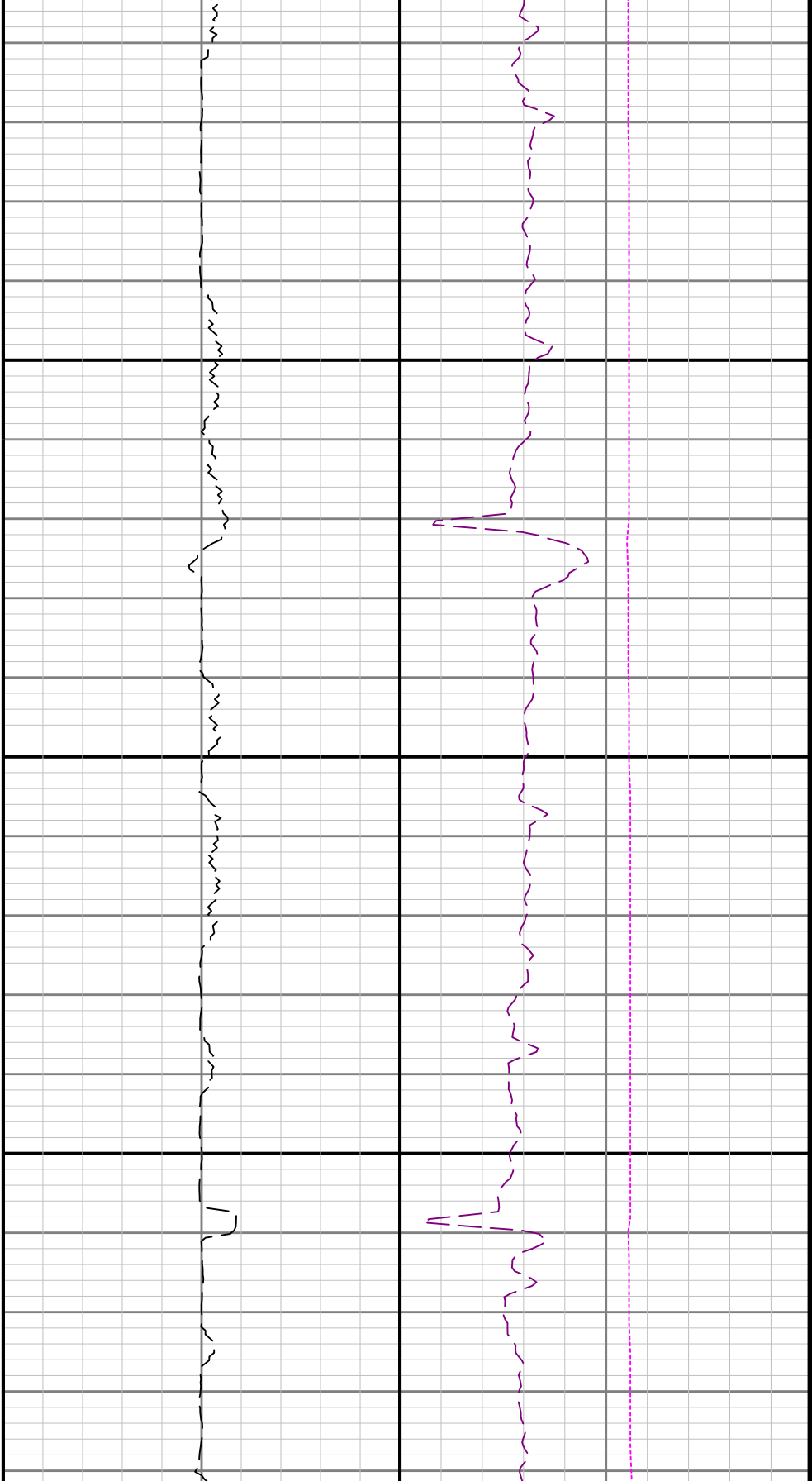




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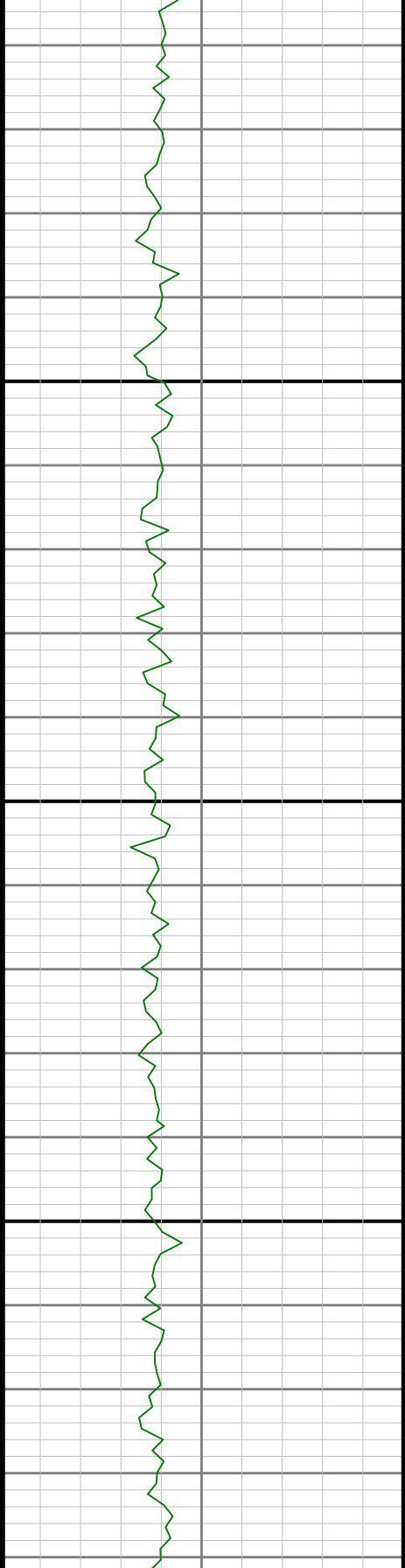
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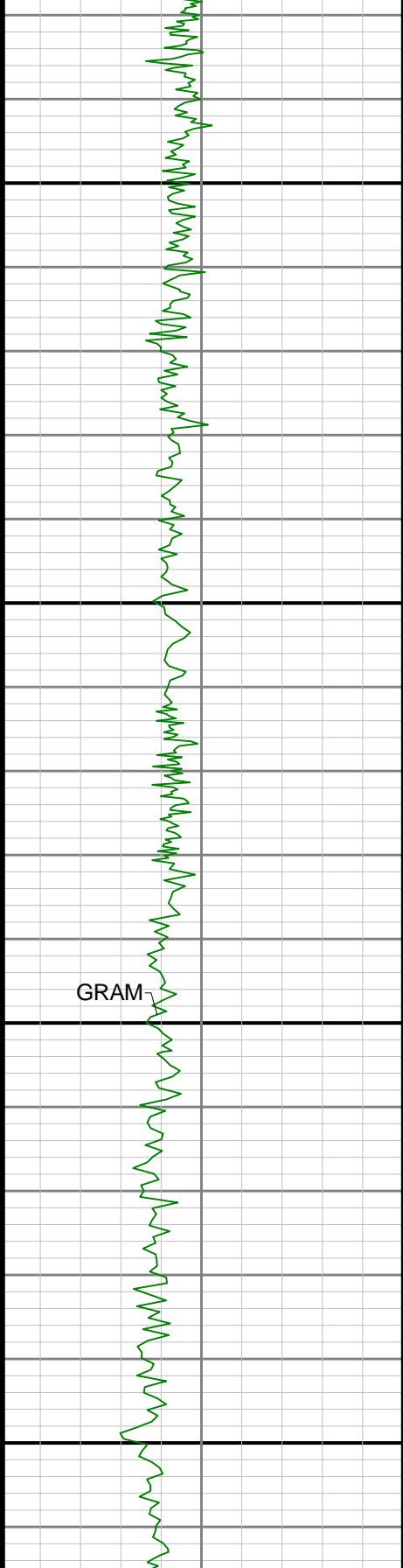




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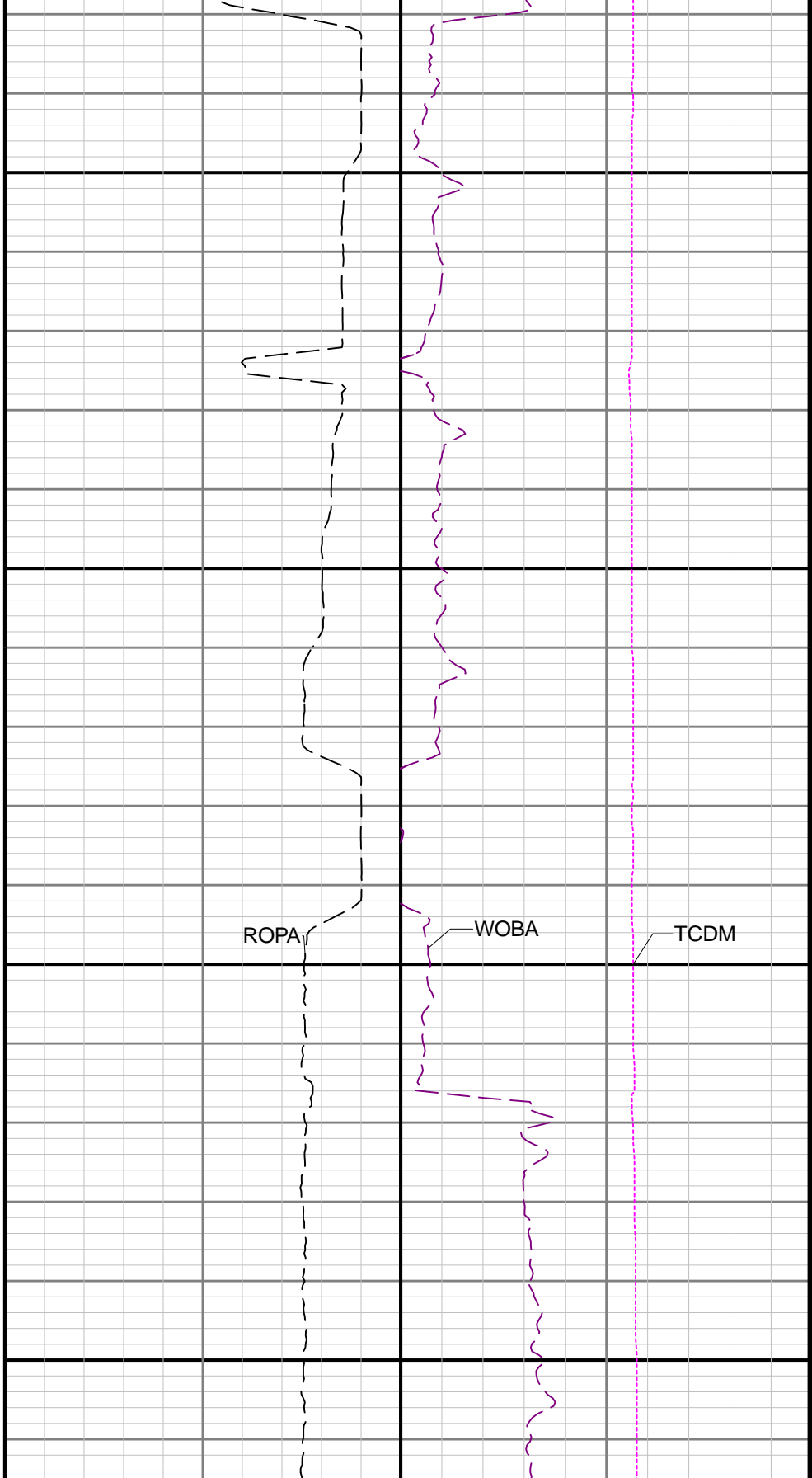
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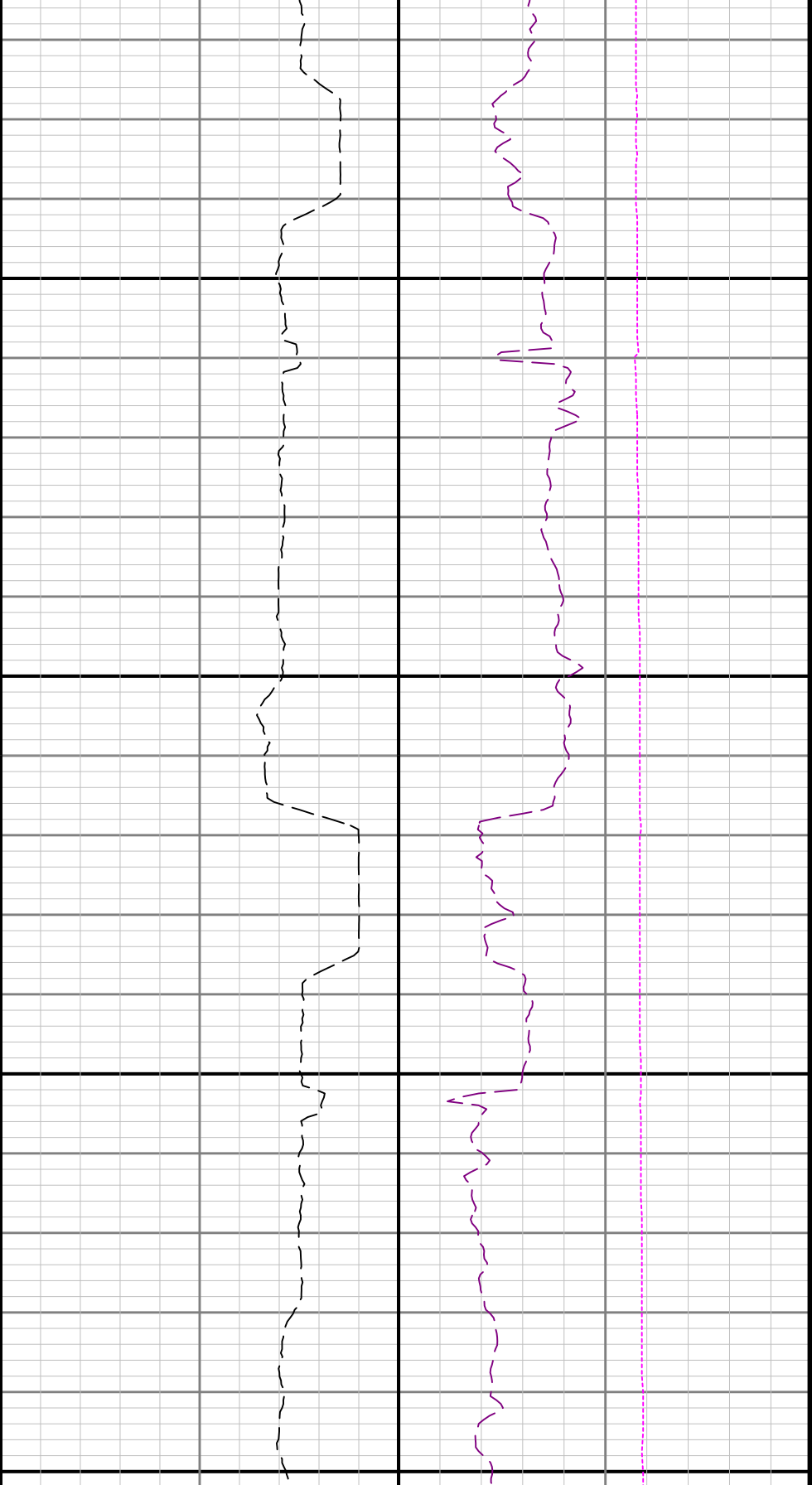




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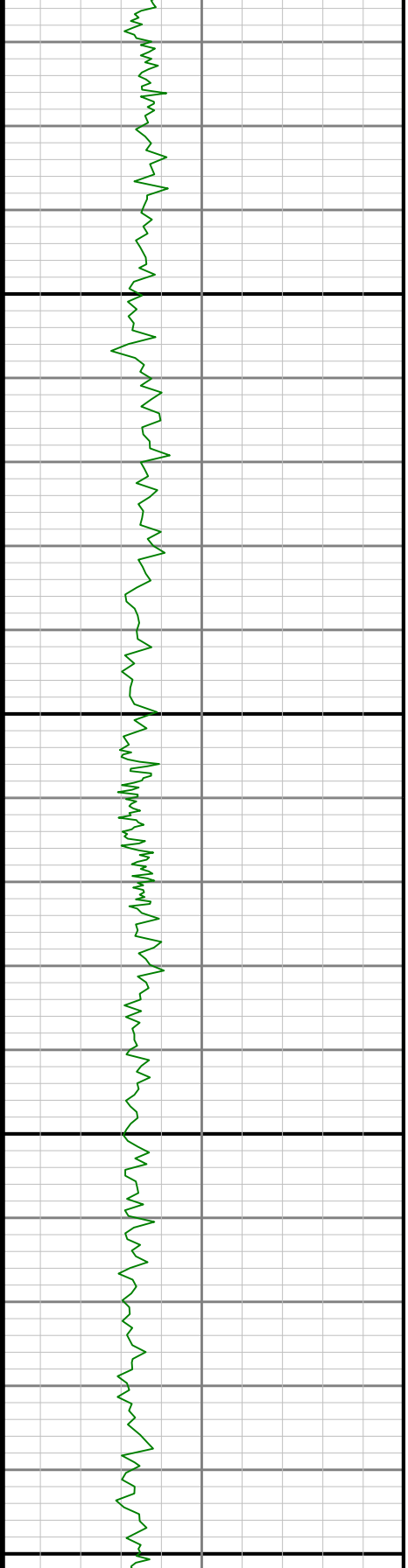
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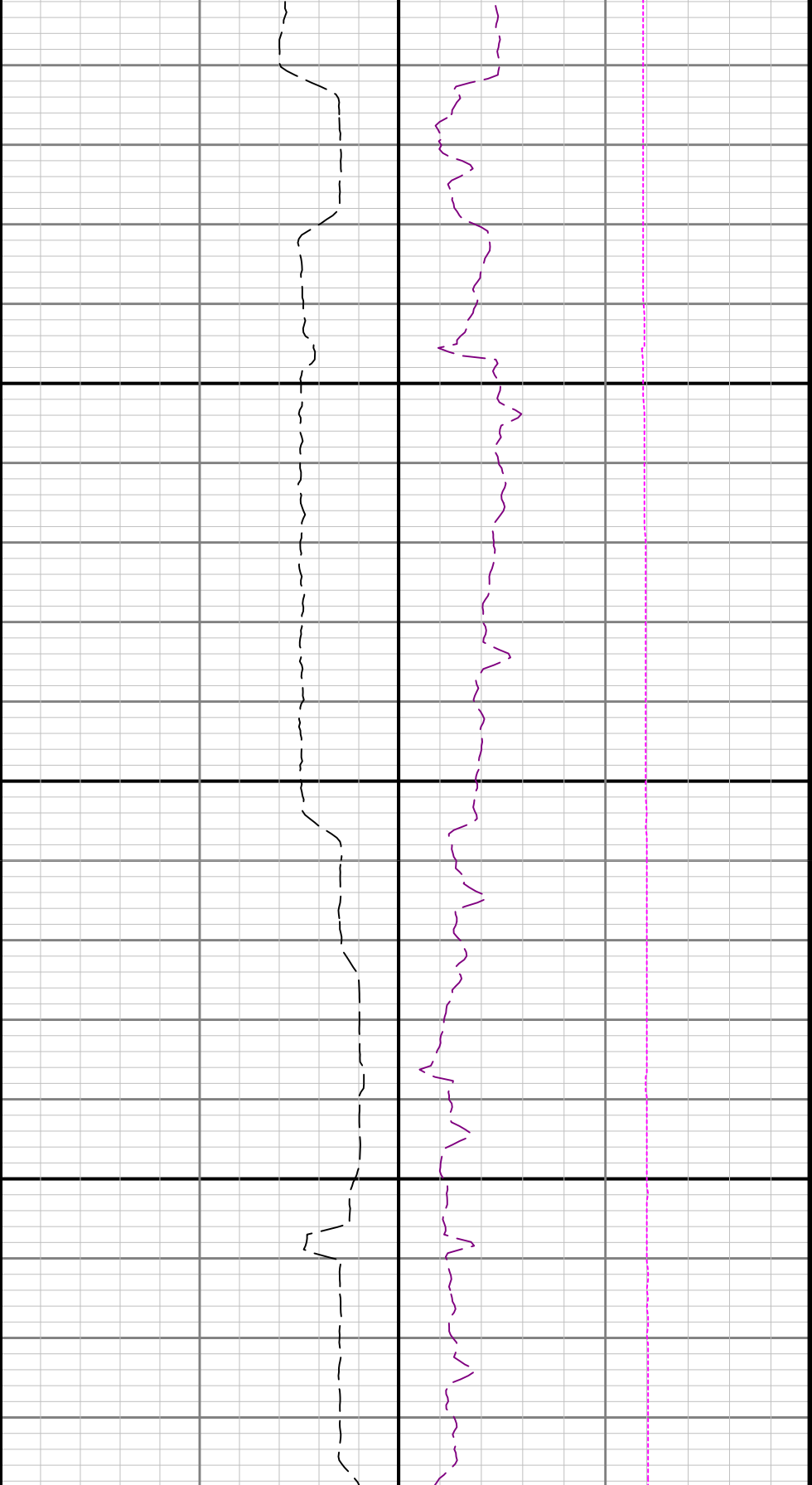




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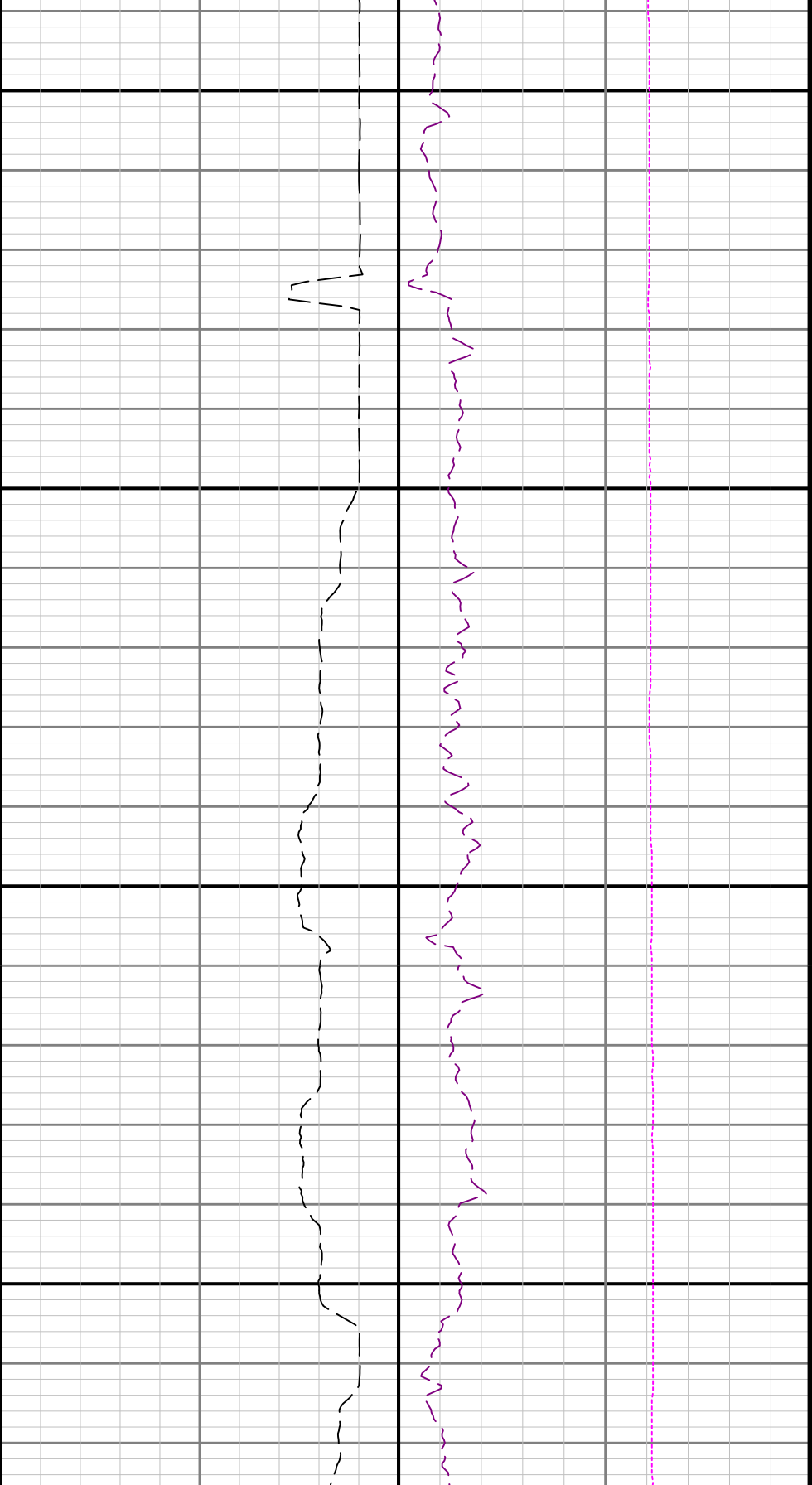




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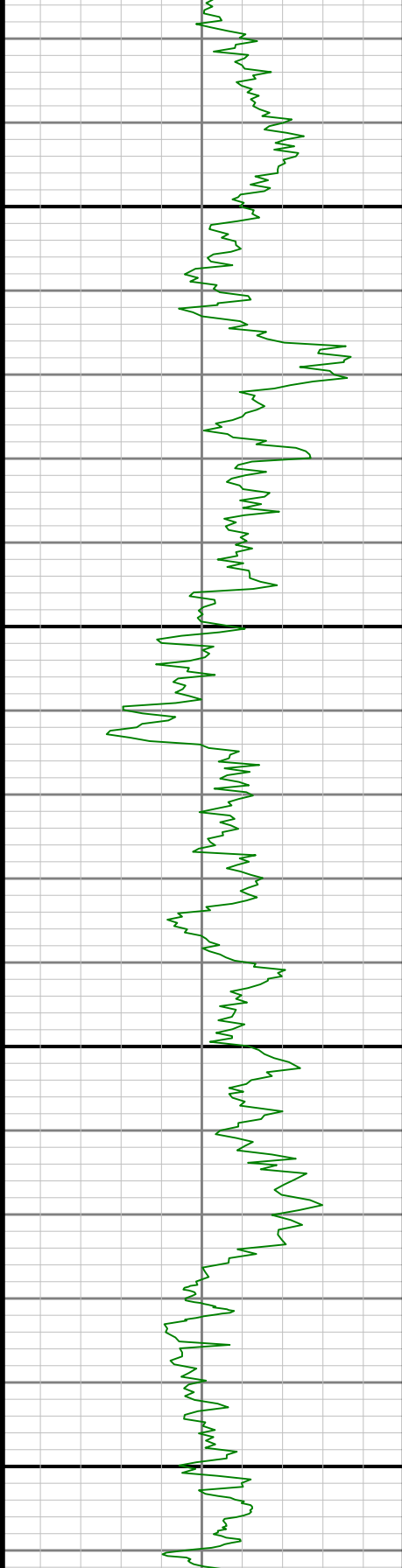




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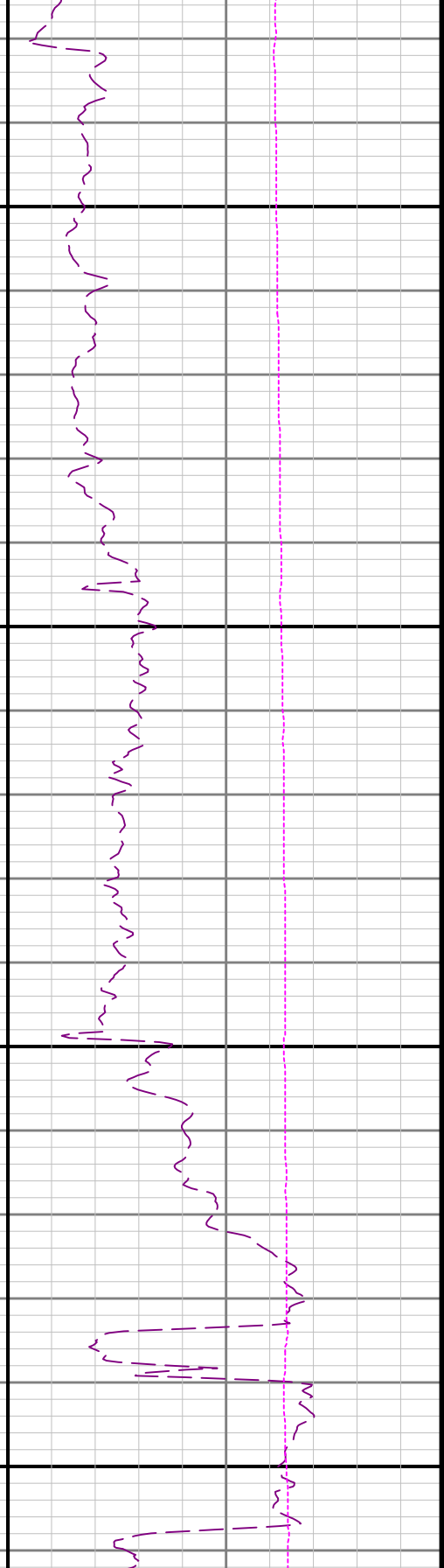
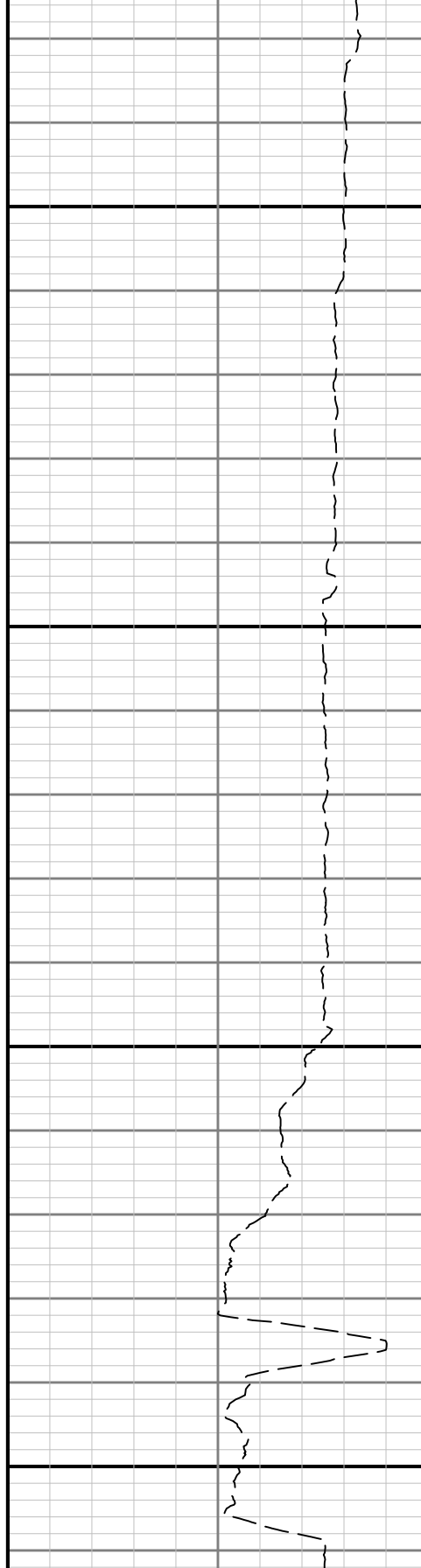
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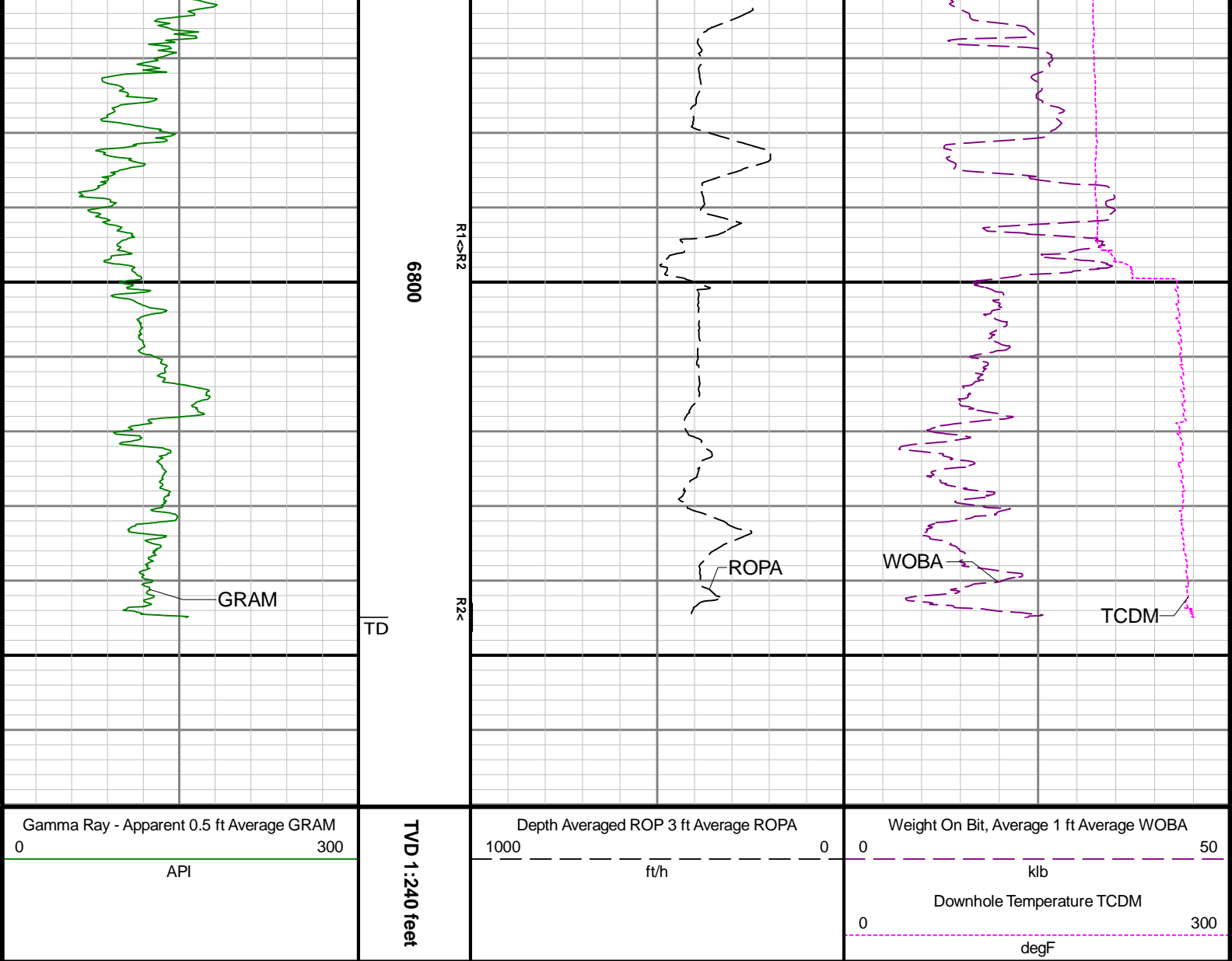




6700

0099





Directional Survey Summary													
Latitude:		40° 27' 42.012" N				Longitude:		104° 35' 04.776" W					
North Reference:		Grid				Drill Depth Zero:		Rig Floor					
Vertical Datum is:		Mean Sea Level				Vertical Datum to DDZ: (ft)		4728.00					
Vertical Section North: (ft)		0.00				Vertical Section East: (ft)		0.00					
Vertical Section Azimuth: (deg)		181.40				Magnetic Declination: (deg)		7.60					
Grid Convergence: (deg)		-0.59				TVD Calculation Method:		Minimum Curvature					
Total Correction: (deg)		7.01				Local Magnetic Field: (nT)		51891					
Magnetic Correction:		Off				Local Gravity Field: (m/s2)		9.800					
Local Magnetic Dip Angle: (deg)		66.75											
Tie-In / Projection	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	North (ft)	East (ft)	True Vertical Depth (ft)	TVD Subsea (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	-4728.00	0.00	0.00	0.00	0.00	0.00
	79.00	0.06	229.04	N/A	-0.03	-0.03	79.00	-4649.00	0.03	79.00	0.08	0.08	-165.77
	173.00	0.06	39.77	N/A	-0.02	-0.04	173.00	-4555.00	0.02	94.00	0.13	0.00	181.63
	264.00	0.23	89.06	N/A	0.02	0.18	264.00	-4464.00	-0.02	91.00	0.22	0.19	54.16
	325.00	0.23	118.73	N/A	0.25	0.45	325.00	-4184.00	0.24	83.00	0.22	0.11	10.10

		327.00	0.30	116.70	N/A	-0.05	0.45	327.00	-4401.00	0.04	63.00	0.23	0.11	43.87
		421.00	0.29	106.16	N/A	-0.23	0.90	421.00	-4307.00	0.21	94.00	0.06	-0.01	-11.21
		516.00	0.29	92.31	N/A	-0.31	1.37	516.00	-4212.00	0.27	95.00	0.07	0.00	-14.58
		610.00	0.10	260.17	N/A	-0.33	1.53	610.00	-4118.00	0.29	94.00	0.41	-0.20	178.57
		705.00	0.52	163.46	N/A	-0.76	1.57	704.99	-4023.01	0.72	95.00	0.57	0.44	-101.80
		800.00	0.56	186.61	N/A	-1.63	1.64	799.99	-3928.01	1.59	95.00	0.23	0.04	24.37
		894.00	0.49	164.80	N/A	-2.48	1.69	893.99	-3834.01	2.43	94.00	0.22	-0.07	-23.20
		989.00	0.56	170.11	N/A	-3.33	1.88	988.98	-3739.02	3.28	95.00	0.09	0.07	5.59
		1083.00	0.50	173.69	N/A	-4.19	2.00	1082.98	-3645.02	4.14	94.00	0.07	-0.06	3.81
		1178.00	0.69	207.12	N/A	-5.11	1.78	1177.97	-3550.03	5.06	95.00	0.41	0.20	35.19
		1272.00	0.54	227.58	N/A	-5.91	1.20	1271.97	-3456.03	5.88	94.00	0.28	-0.16	21.77
		1367.00	0.57	267.51	N/A	-6.23	0.40	1366.96	-3361.04	6.22	95.00	0.40	0.03	42.03
		1462.00	0.87	282.29	N/A	-6.10	-0.78	1461.96	-3266.04	6.12	95.00	0.37	0.32	15.56
		1556.00	0.97	282.37	N/A	-5.78	-2.25	1555.94	-3172.06	5.83	94.00	0.11	0.11	0.09
		1651.00	0.88	304.87	N/A	-5.19	-3.64	1650.93	-3077.07	5.28	95.00	0.39	-0.09	23.68
		1745.00	1.23	327.72	N/A	-3.92	-4.77	1744.92	-2983.08	4.04	94.00	0.58	0.37	24.31
		1840.00	1.11	343.09	N/A	-2.18	-5.58	1839.90	-2888.10	2.32	95.00	0.35	-0.13	16.18
		1916.00	0.77	1.49	N/A	-0.97	-5.78	1915.89	-2812.11	1.11	76.00	0.59	-0.45	24.21
		1988.00	0.07	33.88	106.8	-0.44	-5.75	1987.89	-2740.11	0.59	72.00	0.99	-0.97	44.99
		2083.00	0.07	96.93	109.5	-0.40	-5.66	2082.89	-2645.11	0.54	95.00	0.08	0.00	66.37
		2178.00	0.00	97.01	109.5	-0.41	-5.60	2177.89	-2550.11	0.55	95.00	0.07	-0.07	0.08
		2272.00	2.19	350.62	114.9	1.36	-5.89	2271.86	-2456.14	-1.22	94.00	2.33	2.33	-113.18
		2367.00	4.38	348.24	114.9	6.70	-6.93	2366.70	-2361.30	-6.53	95.00	2.31	2.31	-2.51
		2461.00	5.71	344.83	117.6	14.73	-8.88	2460.33	-2267.67	-14.51	94.00	1.45	1.41	-3.63
		2556.00	6.45	345.30	117.6	24.45	-11.47	2554.80	-2173.20	-24.17	95.00	0.78	0.78	0.49
		2650.00	8.08	345.16	120.3	35.95	-14.50	2648.04	-2079.96	-35.58	94.00	1.73	1.73	-0.15
		2745.00	9.58	344.99	123.0	50.04	-18.26	2741.91	-1986.09	-49.58	95.00	1.58	1.58	-0.18
		2840.00	12.76	345.10	125.7	67.82	-23.01	2835.10	-1892.90	-67.23	95.00	3.35	3.35	0.12
		2934.00	14.62	344.34	125.7	89.27	-28.88	2926.43	-1801.57	-88.54	94.00	1.99	1.98	-0.81
		3029.00	16.47	344.37	128.4	113.79	-35.75	3017.95	-1710.05	-112.88	95.00	1.95	1.95	0.03
		3123.00	19.93	344.89	128.4	142.10	-43.51	3107.23	-1620.77	-140.99	94.00	3.68	3.68	0.55
		3217.00	19.99	346.19	131.1	173.17	-51.53	3195.59	-1532.41	-171.86	94.00	0.48	0.06	1.38
		3312.00	20.23	345.60	131.1	204.84	-59.49	3284.79	-1443.21	-203.33	95.00	0.33	0.25	-0.62
		3406.00	20.31	343.17	131.1	236.20	-68.25	3372.97	-1355.03	-234.46	94.00	0.90	0.09	-2.59
		3501.00	20.04	346.24	133.8	267.79	-76.90	3462.15	-1265.85	-265.83	95.00	1.15	-0.28	3.23
		3595.00	19.48	345.42	133.8	298.61	-84.67	3550.61	-1177.39	-296.45	94.00	0.66	-0.60	-0.87
		3690.00	20.58	343.09	136.5	329.91	-93.52	3639.87	-1088.13	-327.53	95.00	1.43	1.16	-2.45
		3784.00	20.78	343.95	136.5	361.74	-102.93	3727.81	-1000.19	-359.12	94.00	0.39	0.21	0.91
		3878.00	20.58	343.08	139.2	393.58	-112.35	3815.75	-912.25	-390.71	94.00	0.39	-0.21	-0.93
		3973.00	20.81	345.71	139.2	425.90	-121.38	3904.63	-823.37	-422.81	95.00	1.01	0.24	2.77
		4068.00	20.95	343.66	141.9	458.55	-130.32	3993.39	-734.61	-455.23	95.00	0.78	0.15	-2.16
		4162.00	20.75	344.82	144.6	490.75	-139.41	4081.23	-646.77	-487.20	94.00	0.49	-0.21	1.23
		4257.00	20.76	344.61	144.6	523.23	-148.28	4170.07	-557.93	-519.45	95.00	0.08	0.01	-0.22
		4351.00	20.16	344.01	144.6	554.86	-157.17	4258.14	-469.86	-550.85	94.00	0.68	-0.64	-0.64
		4446.00	18.57	350.89	144.6	585.54	-164.07	4347.77	-380.23	-581.36	95.00	2.92	-1.67	7.24
		4540.00	20.88	343.02	147.3	616.35	-171.34	4436.27	-291.73	-611.98	94.00	3.74	2.46	-8.37
		4635.00	20.78	345.33	150.0	648.84	-180.55	4525.06	-202.94	-644.24	95.00	0.87	-0.11	2.43
		4730.00	20.85	345.11	150.0	681.49	-189.16	4613.86	-114.14	-676.66	95.00	0.11	0.07	-0.23
		4824.00	20.98	344.90	152.7	713.90	-197.84	4701.66	-26.34	-708.85	94.00	0.16	0.14	-0.22
		4919.00	20.81	344.07	152.7	746.55	-206.91	4790.42	62.42	-741.27	95.00	0.36	-0.18	-0.87
		5013.00	20.72	344.52	155.4	778.63	-215.93	4878.31	150.31	-773.12	94.00	0.19	-0.10	0.48
		5108.00	20.99	342.87	155.4	811.08	-225.42	4967.09	239.09	-805.33	95.00	0.68	0.28	-1.74
		5202.00	20.69	345.13	158.1	843.22	-234.64	5054.94	326.94	-837.24	94.00	0.91	-0.32	2.40
		5297.00	19.83	344.95	160.8	875.00	-243.14	5144.06	416.06	-868.80	95.00	0.91	-0.91	-0.19
		5392.00	20.37	344.85	163.5	906.52	-251.64	5233.27	505.27	-900.11	95.00	0.57	0.57	-0.11
		5486.00	20.62	344.77	163.5	938.29	-260.26	5321.32	593.32	-931.65	94.00	0.27	0.27	-0.09
		5581.00	20.56	344.70	163.5	970.52	-269.06	5410.26	682.26	-963.65	95.00	0.07	-0.06	-0.07
		5675.00	20.57	344.80	166.2	1002.37	-277.75	5498.27	770.27	-995.29	94.00	0.04	0.01	0.11
		5769.00	20.57	344.11	166.2	1034.19	-286.60	5586.27	858.27	-1026.88	94.00	0.26	0.00	-0.73
		5864.00	20.44	344.28	168.9	1066.21	-295.66	5675.25	947.25	-1058.67	95.00	0.15	-0.14	0.18
		5958.00	20.54	344.53	166.2	1097.90	-304.51	5763.31	1035.31	-1090.14	94.00	0.14	0.11	0.27
		6053.00	20.47	341.81	166.2	1129.75	-314.14	5852.29	1124.29	-1121.74	95.00	1.01	-0.07	-2.86
		6147.00	12.37	329.95	168.9	1154.13	-324.33	5942.40	1214.40	-1145.86	94.00	9.28	-8.62	-12.69

	6242.00	7.92	294.65	171.6	1165.68	-335.39	6035.98	1307.98	-1157.14	95.00	7.84	-4.68	-37.16
	6337.00	7.85	245.79	174.3	1165.75	-347.27	6130.18	1402.18	-1156.92	95.00	6.85	-0.07	-51.43
	6431.00	10.97	205.34	177.0	1155.02	-356.96	6223.00	1495.00	-1145.95	94.00	7.57	3.32	-43.03
	6526.00	16.62	186.04	179.7	1133.31	-362.27	6315.27	1587.27	-1124.12	95.00	7.59	5.95	-20.32
	6621.00	24.50	186.05	179.7	1100.16	-365.78	6404.15	1676.15	-1090.90	95.00	8.29	8.29	0.01
	6715.00	32.93	185.05	182.5	1055.25	-370.09	6486.52	1758.52	-1045.89	94.00	8.98	8.97	-1.06
	6810.00	40.22	181.06	182.5	998.77	-372.93	6562.77	1834.77	-989.36	95.00	8.07	7.67	-4.20
	6905.00	49.23	180.61	187.9	932.00	-373.89	6630.20	1902.20	-922.59	95.00	9.49	9.48	-0.47
	6999.00	57.21	180.98	190.6	856.78	-374.94	6686.43	1958.43	-847.36	94.00	8.50	8.49	0.39
	7094.00	67.44	180.47	187.9	772.77	-375.99	6730.50	2002.50	-763.35	95.00	10.78	10.77	-0.54
	7188.00	74.03	180.05	193.3	684.08	-376.39	6761.50	2033.50	-674.68	94.00	7.02	7.01	-0.45
	7282.00	80.04	180.06	193.3	592.52	-376.47	6782.58	2054.58	-583.14	94.00	6.39	6.39	0.01
	7377.00	87.35	180.75	193.3	498.16	-377.14	6793.00	2065.00	-488.80	95.00	7.73	7.69	0.73
	7472.00	89.69	180.59	201.4	403.20	-378.25	6795.46	2067.46	-393.84	95.00	2.47	2.46	-0.17
	7566.00	89.97	180.85	198.7	309.21	-379.44	6795.73	2067.73	-299.85	94.00	0.41	0.30	0.28
	7661.00	90.06	180.39	204.1	214.22	-380.46	6795.71	2067.71	-204.86	95.00	0.49	0.09	-0.48
	7755.00	90.00	179.50	206.8	120.22	-380.37	6795.66	2067.66	-110.89	94.00	0.95	-0.06	-0.95
	7850.00	89.88	180.28	206.8	25.22	-380.19	6795.76	2067.76	-15.92	95.00	0.83	-0.13	0.82
	7944.00	90.22	180.97	206.8	-68.77	-381.22	6795.68	2067.68	78.07	94.00	0.82	0.36	0.73
	8039.00	90.06	180.51	209.5	-163.77	-382.44	6795.45	2067.45	173.06	95.00	0.51	-0.17	-0.48
	8134.00	89.91	179.51	209.5	-258.76	-382.46	6795.47	2067.47	268.03	95.00	1.06	-0.16	-1.05
	8229.00	89.91	179.10	212.2	-353.76	-381.31	6795.62	2067.62	362.97	95.00	0.43	-0.00	-0.43
	8418.00	90.19	179.23	206.8	-542.74	-378.55	6795.45	2067.45	551.82	189.00	0.16	0.15	0.07
	8513.00	90.06	179.53	206.8	-637.73	-377.53	6795.25	2067.25	646.76	95.00	0.34	-0.14	0.32
	8702.00	89.97	178.62	209.5	-826.70	-374.47	6795.20	2067.20	835.61	189.00	0.48	-0.05	-0.48
	8796.00	89.88	181.25	201.4	-920.70	-374.37	6795.32	2067.32	929.57	94.00	2.80	-0.10	2.80
	8890.00	89.66	181.11	204.1	-1014.67	-376.30	6795.70	2067.70	1023.57	94.00	0.28	-0.23	-0.15
	8985.00	89.88	181.36	206.8	-1109.65	-378.35	6796.08	2068.08	1118.56	95.00	0.35	0.23	0.26
	9080.00	89.17	181.48	209.5	-1204.62	-380.70	6796.87	2068.87	1213.56	95.00	0.76	-0.75	0.13
	9174.00	90.37	181.63	212.2	-1298.58	-383.26	6797.24	2069.24	1307.56	94.00	1.29	1.28	0.16
	9269.00	90.03	180.97	212.2	-1393.56	-385.41	6796.91	2068.91	1402.56	95.00	0.78	-0.36	-0.69
	9363.00	90.18	179.21	214.9	-1487.55	-385.56	6796.74	2068.74	1496.53	94.00	1.88	0.16	-1.87
	9457.00	89.85	179.56	214.9	-1581.55	-384.55	6796.72	2068.72	1590.47	94.00	0.51	-0.35	0.37
	9552.00	89.60	179.56	214.9	-1676.54	-383.82	6797.17	2069.17	1685.42	95.00	0.26	-0.26	0.00
	9646.00	89.85	179.37	217.6	-1770.54	-382.94	6797.62	2069.62	1779.36	94.00	0.33	0.27	-0.20
	9741.00	89.75	179.64	220.3	-1865.53	-382.12	6797.96	2069.96	1874.31	95.00	0.30	-0.11	0.28
	9835.00	89.63	179.50	220.3	-1959.53	-381.42	6798.46	2070.46	1968.26	94.00	0.20	-0.13	-0.15
	9930.00	89.54	179.35	223.0	-2054.52	-380.46	6799.15	2071.15	2063.20	95.00	0.18	-0.09	-0.16
	10024.00	90.00	179.69	223.0	-2148.52	-379.68	6799.53	2071.53	2157.15	94.00	0.61	0.49	0.36
	10119.00	90.49	179.81	225.7	-2243.51	-379.26	6799.12	2071.12	2252.11	95.00	0.53	0.52	0.13
	10214.00	90.43	179.64	225.7	-2338.51	-378.80	6798.36	2070.36	2347.07	95.00	0.19	-0.06	-0.18
	10308.00	90.18	178.52	228.4	-2432.50	-377.30	6797.86	2069.86	2440.99	94.00	1.22	-0.27	-1.19
	10403.00	89.91	178.31	228.4	-2527.46	-374.67	6797.79	2069.79	2535.86	95.00	0.36	-0.28	-0.22
	10498.00	90.43	176.67	228.4	-2622.36	-370.51	6797.50	2069.50	2630.63	95.00	1.81	0.55	-1.73
	10592.00	90.25	176.85	231.1	-2716.21	-365.20	6796.95	2068.95	2724.32	94.00	0.27	-0.19	0.19
	10687.00	90.25	176.47	231.1	-2811.05	-359.66	6796.53	2068.53	2819.00	95.00	0.40	0.00	-0.40
	10781.00	90.46	176.59	233.8	-2904.88	-353.97	6795.95	2067.95	2912.66	94.00	0.26	0.22	0.13
	10876.00	90.25	176.60	233.8	-2999.71	-348.33	6795.36	2067.36	3007.32	95.00	0.22	-0.22	0.01
	10971.00	89.75	177.45	236.5	-3094.58	-343.40	6795.36	2067.36	3102.04	95.00	1.04	-0.53	0.89
	11065.00	90.12	176.66	236.5	-3188.45	-338.57	6795.47	2067.47	3195.77	94.00	0.93	0.39	-0.84
	11160.00	90.03	176.79	236.5	-3283.30	-333.14	6795.34	2067.34	3290.46	95.00	0.17	-0.09	0.14
	11254.00	89.91	176.58	233.8	-3377.14	-327.71	6795.39	2067.39	3384.14	94.00	0.26	-0.13	-0.22
	11349.00	89.85	175.66	233.8	-3471.92	-321.28	6795.59	2067.59	3478.73	95.00	0.97	-0.06	-0.97
	11444.00	89.63	175.38	236.5	-3566.63	-313.86	6796.02	2068.02	3573.23	95.00	0.37	-0.23	-0.29
	11538.00	89.66	175.67	233.8	-3660.34	-306.52	6796.60	2068.60	3666.74	94.00	0.31	0.03	0.31
	11633.00	89.69	178.01	236.5	-3755.19	-301.29	6797.14	2069.14	3761.43	95.00	2.46	0.03	2.46
	11727.00	89.91	177.85	236.5	-3849.13	-297.89	6797.47	2069.47	3855.25	94.00	0.29	0.23	-0.17
	11822.00	89.82	177.70	239.2	-3944.05	-294.20	6797.69	2069.69	3950.06	95.00	0.18	-0.09	-0.16
	11916.00	90.22	177.63	239.2	-4037.98	-290.37	6797.66	2069.66	4043.86	94.00	0.43	0.43	-0.07
	12011.00	90.09	178.18	241.9	-4132.91	-286.90	6797.40	2069.40	4138.69	95.00	0.59	-0.14	0.58
	12105.00	90.43	178.11	241.9	-4226.86	-283.86	6796.98	2068.98	4232.53	94.00	0.37	0.36	-0.07
	12199.00	89.97	177.75	244.6	-4320.80	-280.46	6796.65	2068.65	4326.36	94.00	0.62	-0.49	-0.38

	12294.00	90.49	178.30	244.6	-4415.74	-277.19	6796.27	2068.27	4421.19	95.00	0.80	0.55	0.58
	12389.00	89.72	177.79	247.3	-4510.68	-273.95	6796.09	2068.09	4516.03	95.00	0.97	-0.81	-0.54
	12483.00	89.75	177.55	244.6	-4604.61	-270.13	6796.53	2068.53	4609.83	94.00	0.26	0.03	-0.26
	12577.00	90.49	178.31	247.3	-4698.54	-266.73	6796.33	2068.33	4703.66	94.00	1.13	0.79	0.81
	12672.00	90.28	178.00	247.3	-4793.49	-263.67	6795.69	2067.69	4798.50	95.00	0.39	-0.22	-0.33
	12766.00	90.09	177.68	247.3	-4887.42	-260.13	6795.39	2067.39	4892.32	94.00	0.40	-0.20	-0.34
	12861.00	90.25	178.60	247.3	-4982.37	-257.05	6795.11	2067.11	4987.16	95.00	0.98	0.17	0.97
	12956.00	90.15	179.92	250.0	-5077.36	-255.82	6794.78	2066.78	5082.10	95.00	1.39	-0.11	1.39
	13050.00	90.18	179.79	250.0	-5171.36	-255.58	6794.51	2066.51	5176.06	94.00	0.14	0.03	-0.14
	13144.00	89.88	180.00	252.7	-5265.36	-255.41	6794.46	2066.46	5270.03	94.00	0.39	-0.32	0.22
	13239.00	91.42	180.31	252.7	-5360.35	-255.67	6793.38	2065.38	5365.00	95.00	1.65	1.62	0.33
	13333.00	89.82	179.80	252.7	-5454.34	-255.76	6792.36	2064.36	5458.96	94.00	1.79	-1.70	-0.54
	13427.00	90.25	179.77	252.7	-5548.34	-255.40	6792.31	2064.31	5552.92	94.00	0.46	0.46	-0.03
	13522.00	88.86	179.89	250.0	-5643.34	-255.12	6793.04	2065.04	5647.88	95.00	1.47	-1.46	0.13
	13616.00	88.80	179.93	252.7	-5737.32	-254.97	6794.96	2066.96	5741.83	94.00	0.08	-0.06	0.04
	13711.00	88.95	179.75	255.4	-5832.30	-254.71	6796.83	2068.83	5836.78	95.00	0.25	0.16	-0.19
	13805.00	88.92	179.66	255.4	-5926.28	-254.22	6798.57	2070.57	5930.72	94.00	0.10	-0.03	-0.10
	13900.00	88.92	179.61	255.4	-6021.26	-253.62	6800.37	2072.37	6025.66	95.00	0.05	-0.00	-0.05
	13994.00	88.65	179.56	255.4	-6115.24	-252.94	6802.36	2074.36	6119.59	94.00	0.29	-0.29	-0.05
	14089.00	88.92	179.77	255.4	-6210.21	-252.38	6804.37	2076.37	6214.53	95.00	0.36	0.28	0.22
	14184.00	88.98	179.06	258.1	-6305.19	-251.41	6806.11	2078.11	6309.45	95.00	0.75	0.06	-0.75
	14278.00	89.11	179.60	260.8	-6399.17	-250.32	6807.68	2079.68	6403.38	94.00	0.59	0.14	0.57
	14373.00	89.01	179.20	258.1	-6494.15	-249.32	6809.24	2081.24	6498.31	95.00	0.43	-0.11	-0.42
	14468.00	89.17	179.45	258.1	-6589.14	-248.20	6810.75	2082.75	6593.23	95.00	0.31	0.17	0.26
	14562.00	89.05	179.10	260.8	-6683.12	-247.01	6812.21	2084.21	6687.16	94.00	0.39	-0.13	-0.37
	14657.00	88.86	179.03	260.8	-6778.09	-245.46	6813.94	2085.94	6782.06	95.00	0.21	-0.20	-0.07
	14751.00	88.98	178.89	260.8	-6872.06	-243.76	6815.71	2087.71	6875.96	94.00	0.20	0.13	-0.15
	14846.00	89.26	179.21	260.8	-6967.03	-242.18	6817.17	2089.17	6970.87	95.00	0.45	0.29	0.34
	14940.00	89.14	179.04	255.4	-7061.01	-240.75	6818.48	2090.48	7064.79	94.00	0.22	-0.13	-0.18
	15035.00	89.14	179.46	258.1	-7155.99	-239.50	6819.91	2091.91	7159.71	95.00	0.44	0.00	0.44
	15130.00	88.95	179.17	260.8	-7250.97	-238.37	6821.49	2093.49	7254.63	95.00	0.36	-0.20	-0.31
	15224.00	88.46	178.77	258.1	-7344.93	-236.68	6823.62	2095.62	7348.52	94.00	0.67	-0.52	-0.43
	15318.00	88.71	178.49	260.8	-7438.88	-234.43	6825.94	2097.94	7442.38	94.00	0.40	0.27	-0.30
	15413.00	89.14	179.06	260.8	-7533.84	-232.40	6827.72	2099.72	7537.27	95.00	0.75	0.45	0.60
	15508.00	88.18	176.76	258.1	-7628.74	-228.94	6829.94	2101.94	7632.06	95.00	2.62	-1.01	-2.42
	15602.00	89.72	181.06	260.8	-7722.68	-227.15	6831.67	2103.67	7725.93	94.00	4.86	1.64	4.57
	15697.00	88.74	178.90	260.8	-7817.67	-227.12	6832.94	2104.94	7820.88	95.00	2.50	-1.03	-2.27
	15791.00	88.71	179.03	260.8	-7911.63	-225.42	6835.03	2107.03	7914.77	94.00	0.14	-0.03	0.14
	15886.00	88.09	178.71	263.5	-8006.57	-223.55	6837.69	2109.69	8009.64	95.00	0.73	-0.65	-0.34
	15980.00	88.77	178.62	263.5	-8100.51	-221.36	6840.26	2112.26	8103.50	94.00	0.73	0.72	-0.10
	16075.00	88.71	178.73	263.5	-8195.46	-219.16	6842.35	2114.35	8198.37	95.00	0.13	-0.06	0.12
	16169.00	89.78	179.13	263.5	-8289.44	-217.41	6843.59	2115.59	8292.27	94.00	1.22	1.14	0.43
	16264.00	90.15	178.96	263.5	-8384.42	-215.82	6843.65	2115.65	8387.19	95.00	0.43	0.39	-0.18
	16358.00	89.88	178.76	266.2	-8478.41	-213.95	6843.62	2115.62	8481.10	94.00	0.36	-0.29	-0.21
	16453.00	89.94	178.63	266.2	-8573.38	-211.79	6843.77	2115.77	8576.00	95.00	0.15	0.06	-0.14
	16548.00	89.78	178.67	266.2	-8668.35	-209.55	6844.00	2116.00	8670.89	95.00	0.17	-0.17	0.04
	16643.00	90.00	178.82	269.0	-8763.33	-207.47	6844.19	2116.19	8765.78	95.00	0.28	0.23	0.16
	16737.00	89.88	178.47	269.0	-8857.30	-205.25	6844.29	2116.29	8859.67	94.00	0.39	-0.13	-0.37
	16831.00	89.60	178.52	269.0	-8951.27	-202.78	6844.71	2116.71	8953.55	94.00	0.30	-0.30	0.05
	16926.00	90.09	178.50	269.0	-9046.24	-200.31	6844.97	2116.97	9048.43	95.00	0.52	0.52	-0.02
	17020.00	89.78	177.94	269.0	-9140.19	-197.39	6845.08	2117.08	9142.29	94.00	0.68	-0.33	-0.60
Projection	17078.00	89.78	177.94	N/A	-9198.15	-195.30	6845.30	2117.30	9200.18	58.00	0.00	-0.01	-0.00