



Realtime Log

Natural Formation Evaluation  
Gamma Ray

1-240  
Measure Depth

Scale: Company: Anadarko

Well: Russian Fiddler 15N-18HZ

Field: Weld County (Kerr McGee)

Region: Continental US Country: United States

Status: Surface Location:

Final Print

Latitude: 40° 7' 3.619" N

Longitude: 104° 42' 21.942" W

Other Services:

API Number:

05-123-36229

Section 19

TWN: 2N Range 65W

Directional  
VSS

Permanent Datum (P.D.): Ground Level Elevation: 4988.00 ft.

Log Measured From: Rig Floor 17.00 ft. Above P.D.

Depth Reference: Driller's Depth

Elevations: N/A

KB: 5005.00 ft.

DF: 4988.00 ft.

CL:

Interval Logged

Dates

Magnetic Field Reference

Top: 6575.0 ft. Date From: 03/Apr/13 Dip Angle: 66.90° Azi Reference North: True

Bottom: 12713.0 ft. Date To: 12/Apr/14 Total Mag to Reference

Spud Date: 03/Apr/13 Field Strength: 52927.0 nT North Correction: 8.45°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	1023.0 ft.	9.625 in.	36.00 lb/ft	Surface	1013.0 ft.
8.750 in.	1023.0 ft.	7678.0 ft.	7.000 in.	26.00 lb/ft	Surface	7658.0 ft.
6.125 in.	7678.0 ft.	12713.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	12713.0 ft.	13.500 in.	1023.0 ft.	0.0° / 0.0°	0.3° / 151.7°
			8.750 in.	6655.0 ft.	0.3° / 151.7°	84.4° / 3.2°
			6.125 in.	4017.5 ft.	84.4° / 3.2°	91.2° / 357.8°
					/	/
					/	/
					/	/
					/	/

Acquisition System

Software Version

Other

Advantage	2.20U4	Rig / Contractor:	Xtreme 6	/ Xtreme Coil Drilling
PATS	6.4.1.34	Job No:	5325395	
		District / Unit:	RMD	/ D & E

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Time (hrs.)
							Top (m.)	Bottom (m.)	From (m.)	To (m.)	Start	End	
1	1	1	8.750	PDC	1.000	Steerable	6575.0	7678.0	1023.0	7678.0	03/Apr/2013 14:38	05/Apr/2013 07:34	56.7
2	2	2	6.125	PDC	0.500	Steerable	7678.0	12713.0	7678.0	12713.0	08/Apr/2013 02:19	10/Apr/2013 07:48	66.1

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Matthew Delmore	04/02/2013	04/12/2013	Gregory Wheeler Jr.	04/02/2013	04/12/2013			

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent 0.5 ft avg	API
GRIX	Gamma Ray Data Density	Points
GRSI	Gamma Ray Slide Indicator	unitless
GRTX	Gamma Ray Time Since Drilled	min.
ROPA	Rate of Penetration 3.0 ft avg	ft/hr
TCDX	Downhole Temperature	Deg. F
TVD	True Vertical Depth	ft
WOBA	Surface Weight On Bit 1.0 ft avg	klbs

### Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (m.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12479879	Directional	47.27	6.750	3.250
1	SRIG	10103440	Gamma	43.90	6.750	3.250
2	DIR	10441989	Directional	54.12	4.750	2.813
2	SRIG	12376059	Gamma	50.74	4.750	2.813

### Service and Tool Mnemonics

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

### Comments

<p>1.Baker Hughes INTEQ run 1 utilized 6 3/4 inch NaviGamma Services (VSS, Gamma Ray, Directional) behind an 8 3/4 inch bit and steerable assembly from 1023 to 7678 ft MD (1023.99 to 7238.33 ft TVD).</p> <p>2.Baker Hughes INTEQ run 2 utilized 4 3/4 inch NaviGamma Services (VSS, Gamma Ray, Directional) behind an 6 1/8 inch bit and steerable assembly from 7678 to 12713 ft MD (7238.33 to 7233.63 ft TVD).</p> <p>3. A sliding indicator is shown on the left edge of track 1 as a heavy green line. This indicator has been depth shifted to the Gamma Ray sensor offset to correspond with gamma ray data acquired while sliding.</p> <p>4. Depth measurements were obtained from a depth tracking system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes LWD logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to present logging data.</p>
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### Remarks

Number	Measured Depth (m.)	Hole Section (in.)	LWD Run No.	Remark
1	7540	6.125	1	The interval from 7636 to 7678 ft MD (7236.15 to 7239.76 ft TVD) was logged up to 44 hours after being drilled due to casing operations.
2	11551	6.125	2	The interval from 12663 to 12713 ft MD (7234.58 to 7233.63 ft TVD) contains no logging data due to sensor to bit offset at the end of the run.

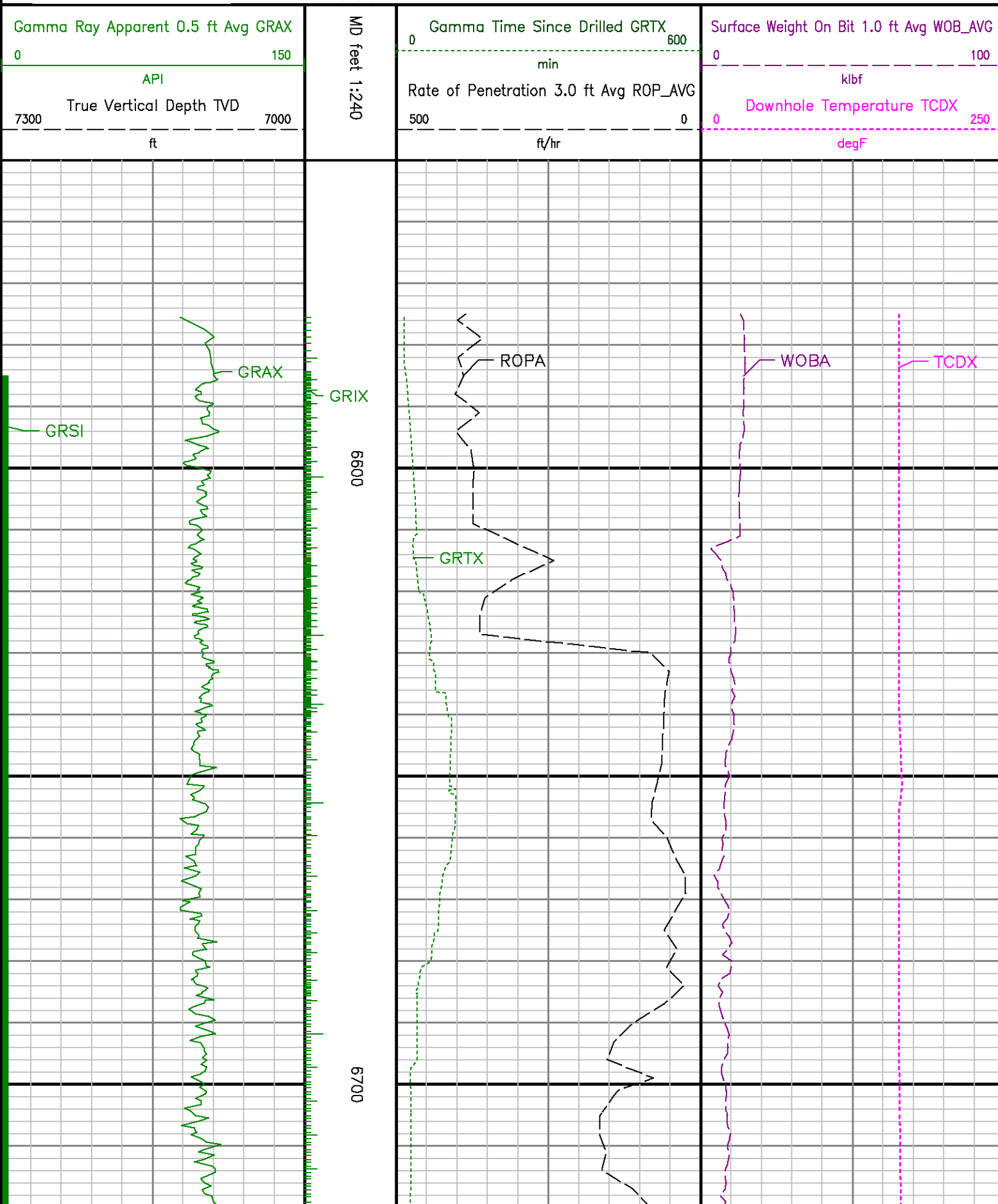


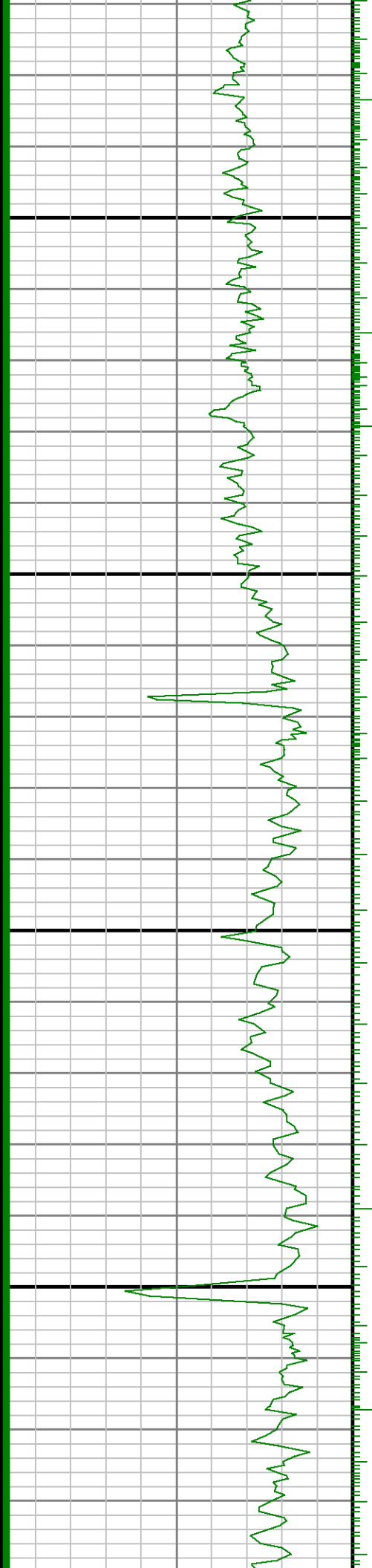
Company : Anadarko

Well : Russian Fiddler 15N-18HZ

Interval : 6550.00 - 12730.00 feet

Created : 09/Apr/2013 4:28:30 PM





0069

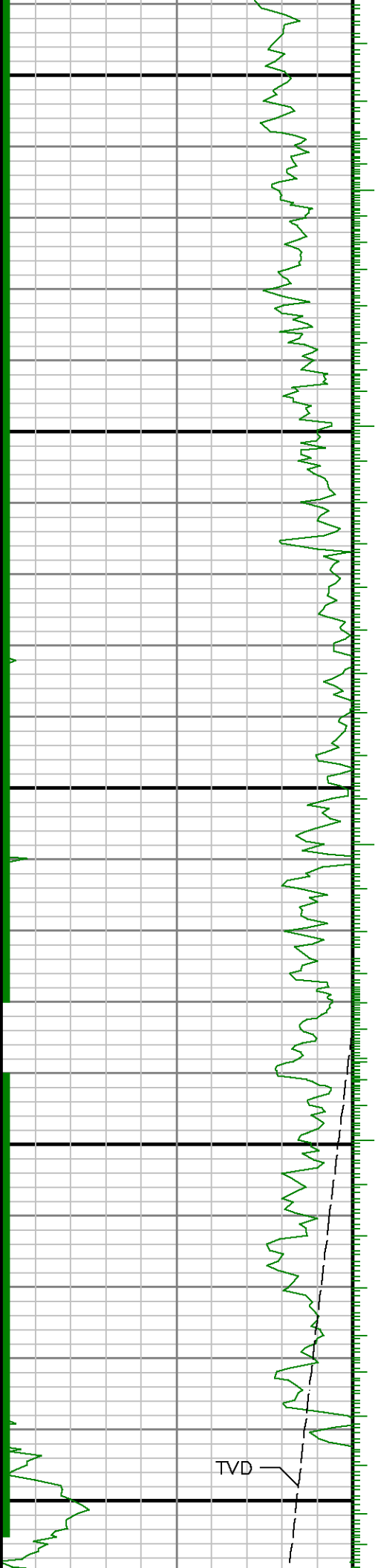
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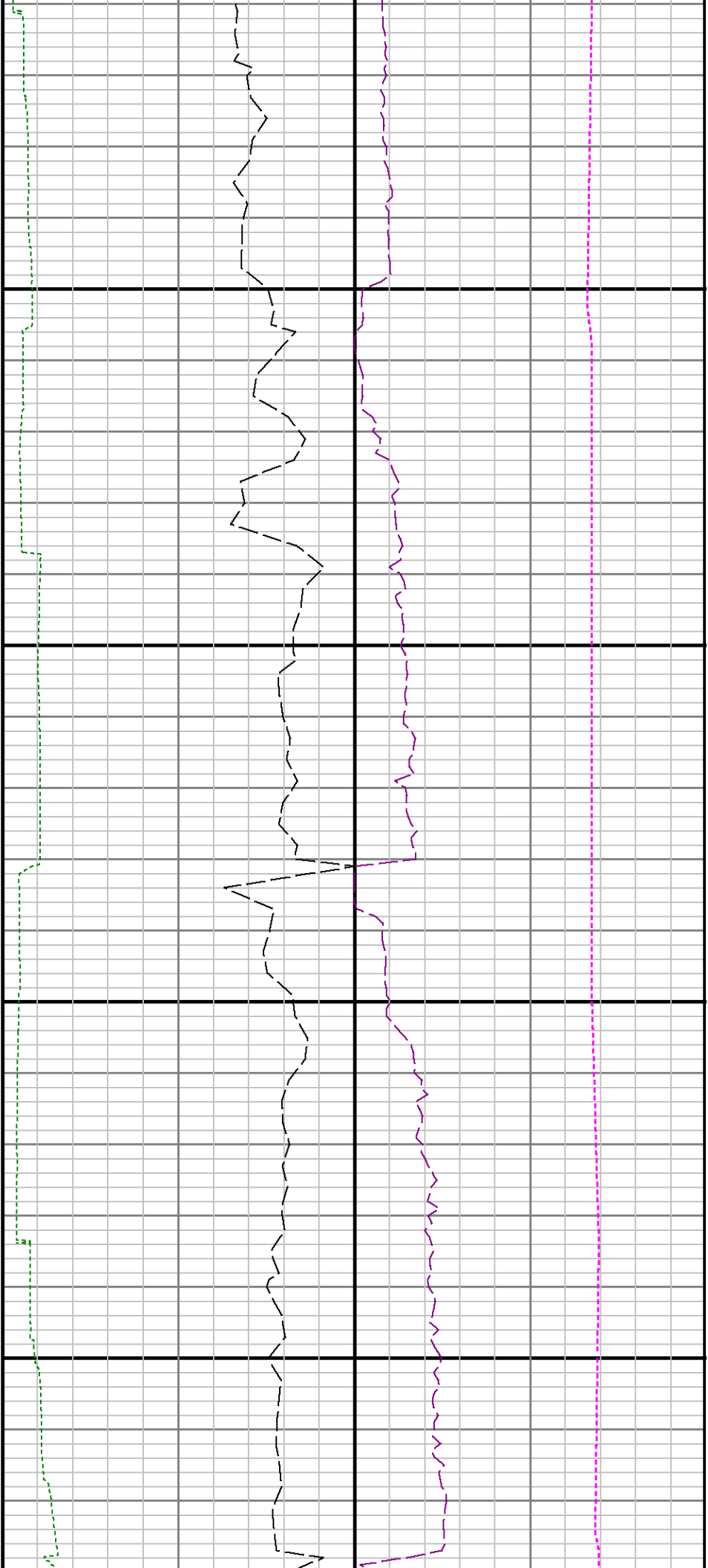


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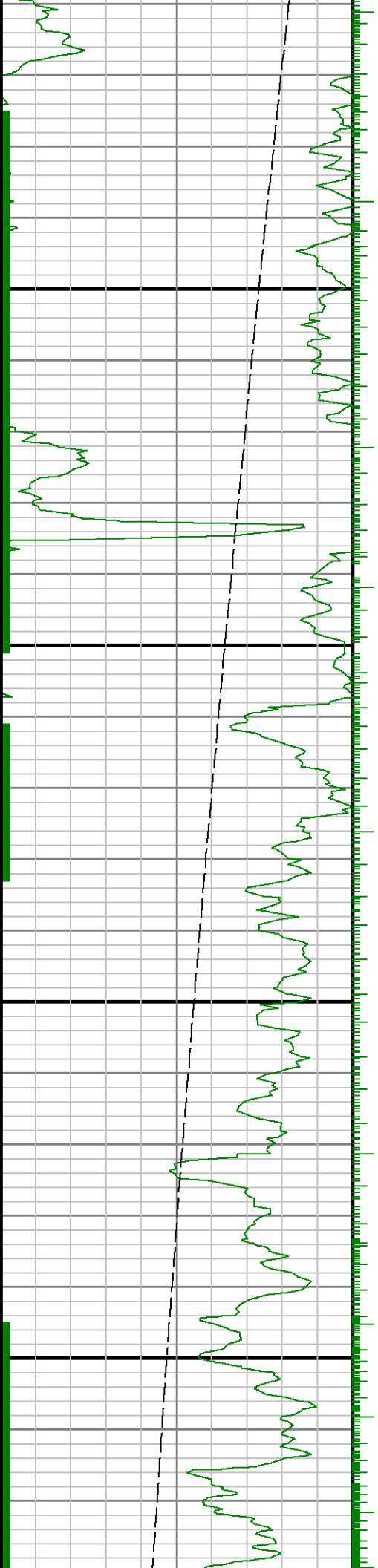


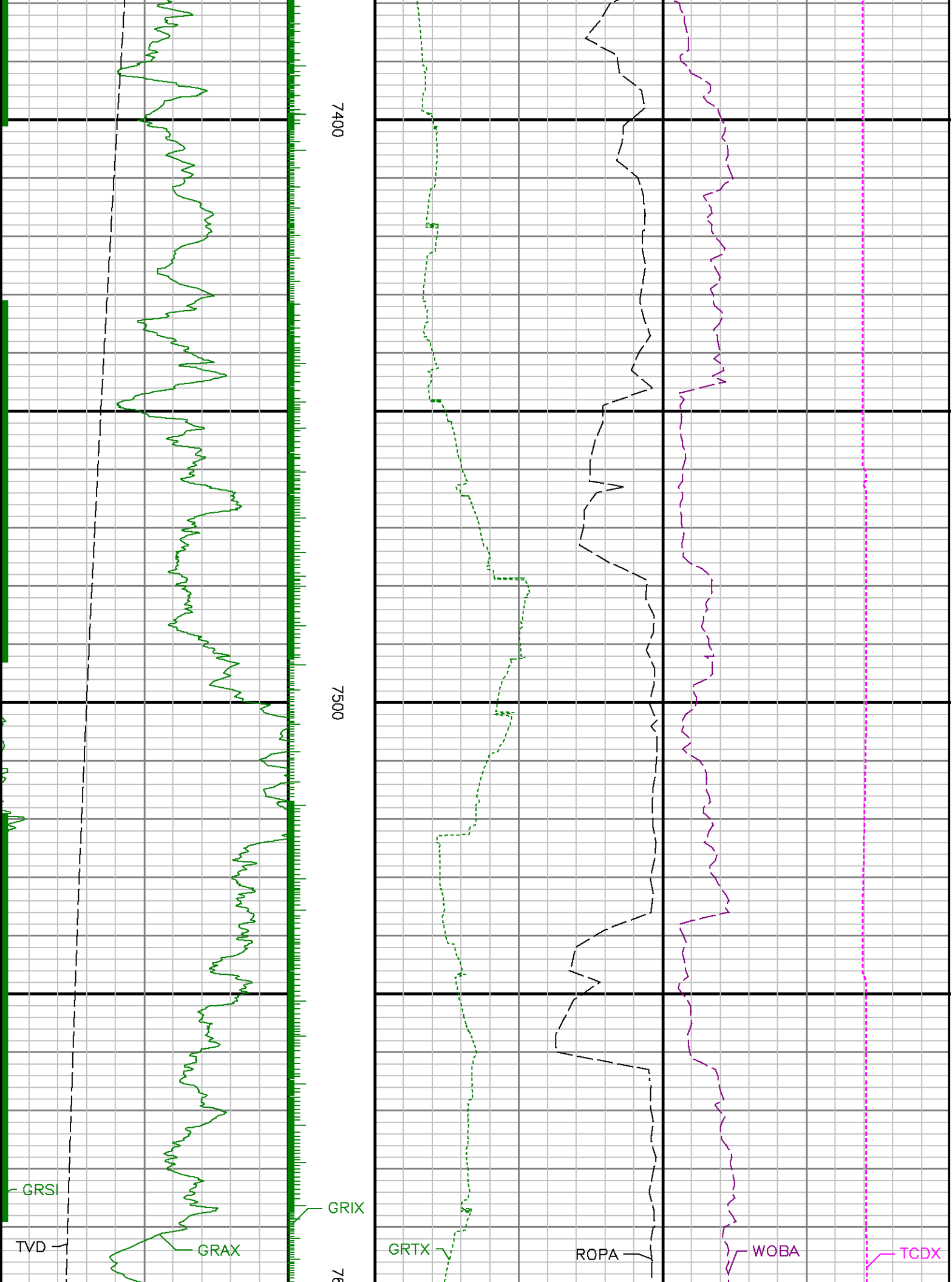
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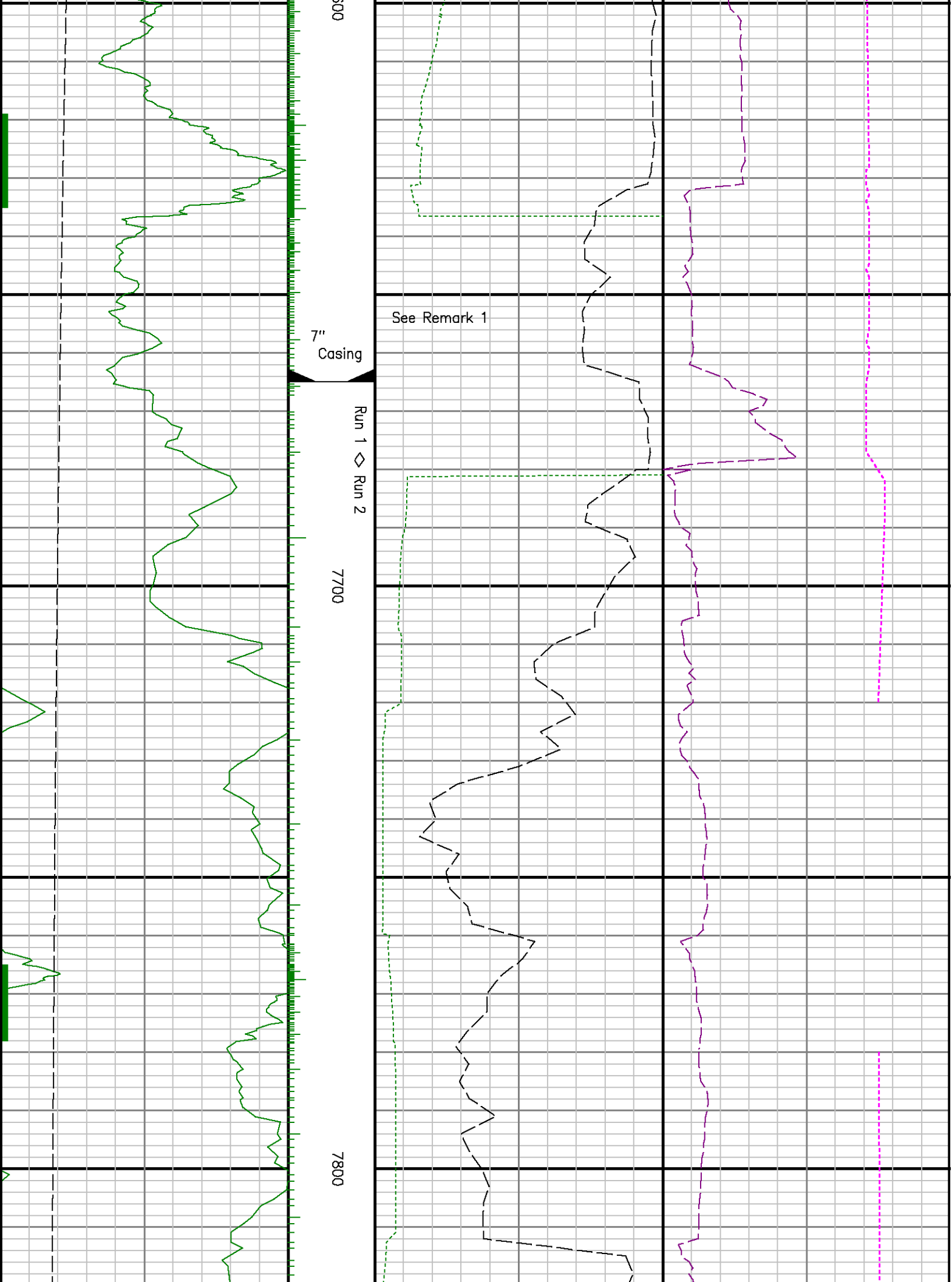


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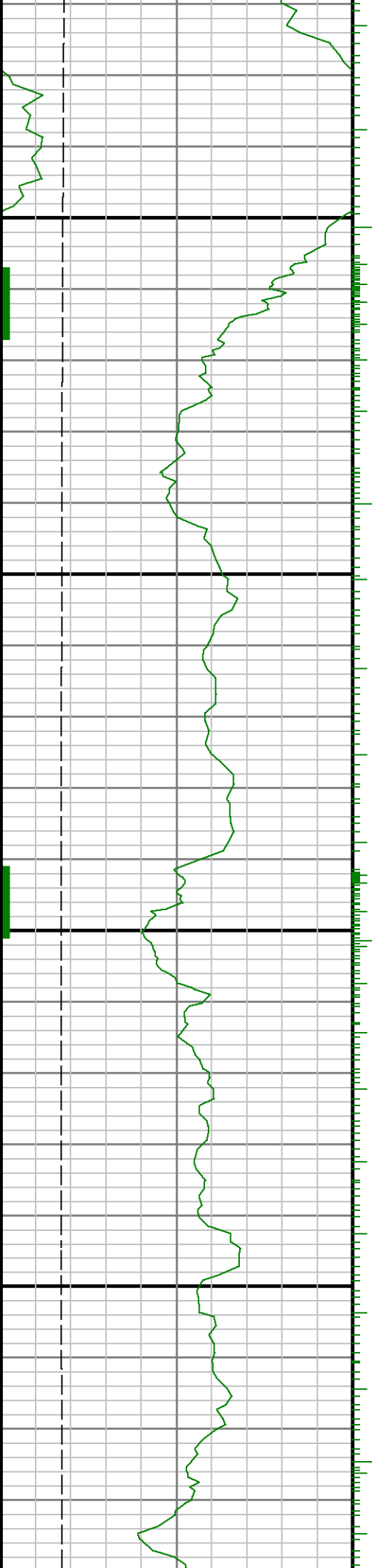
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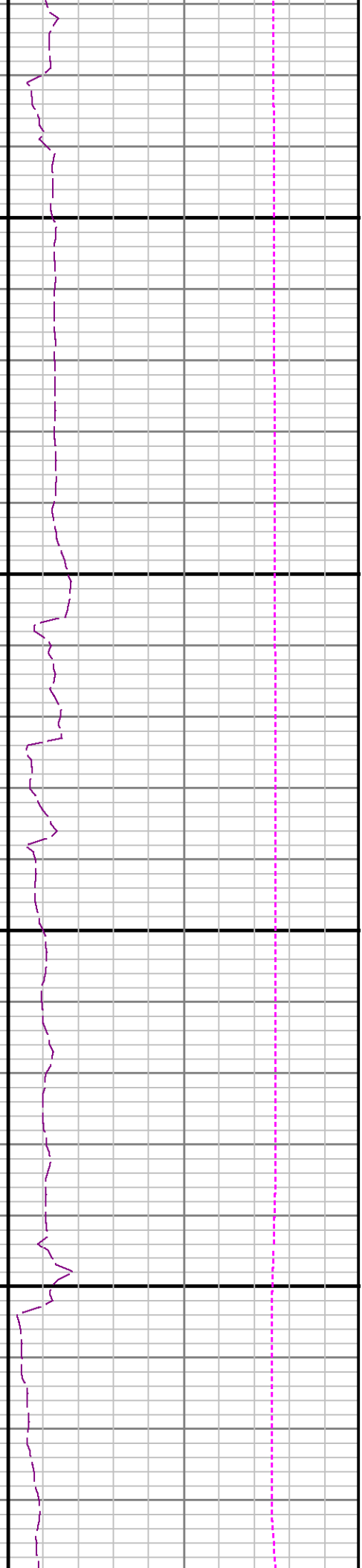
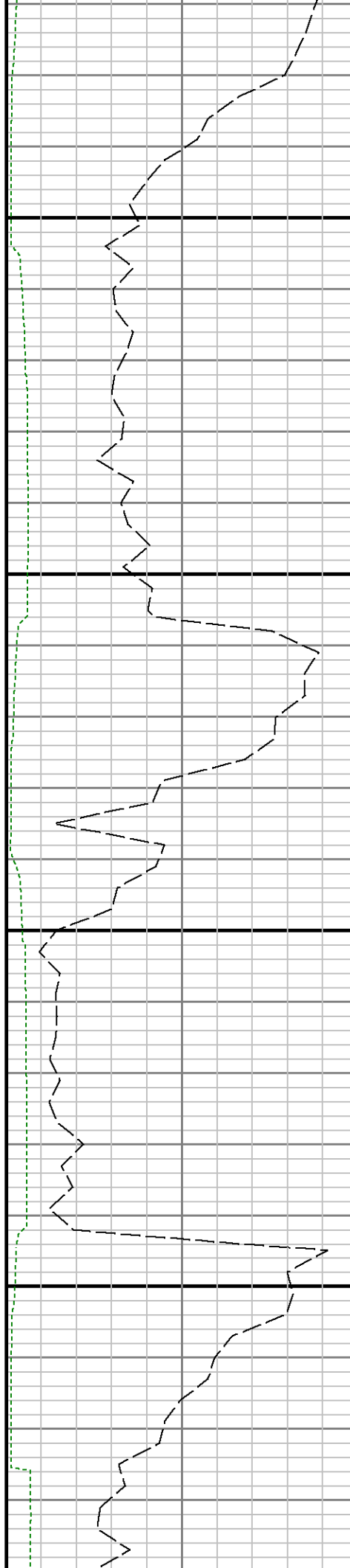


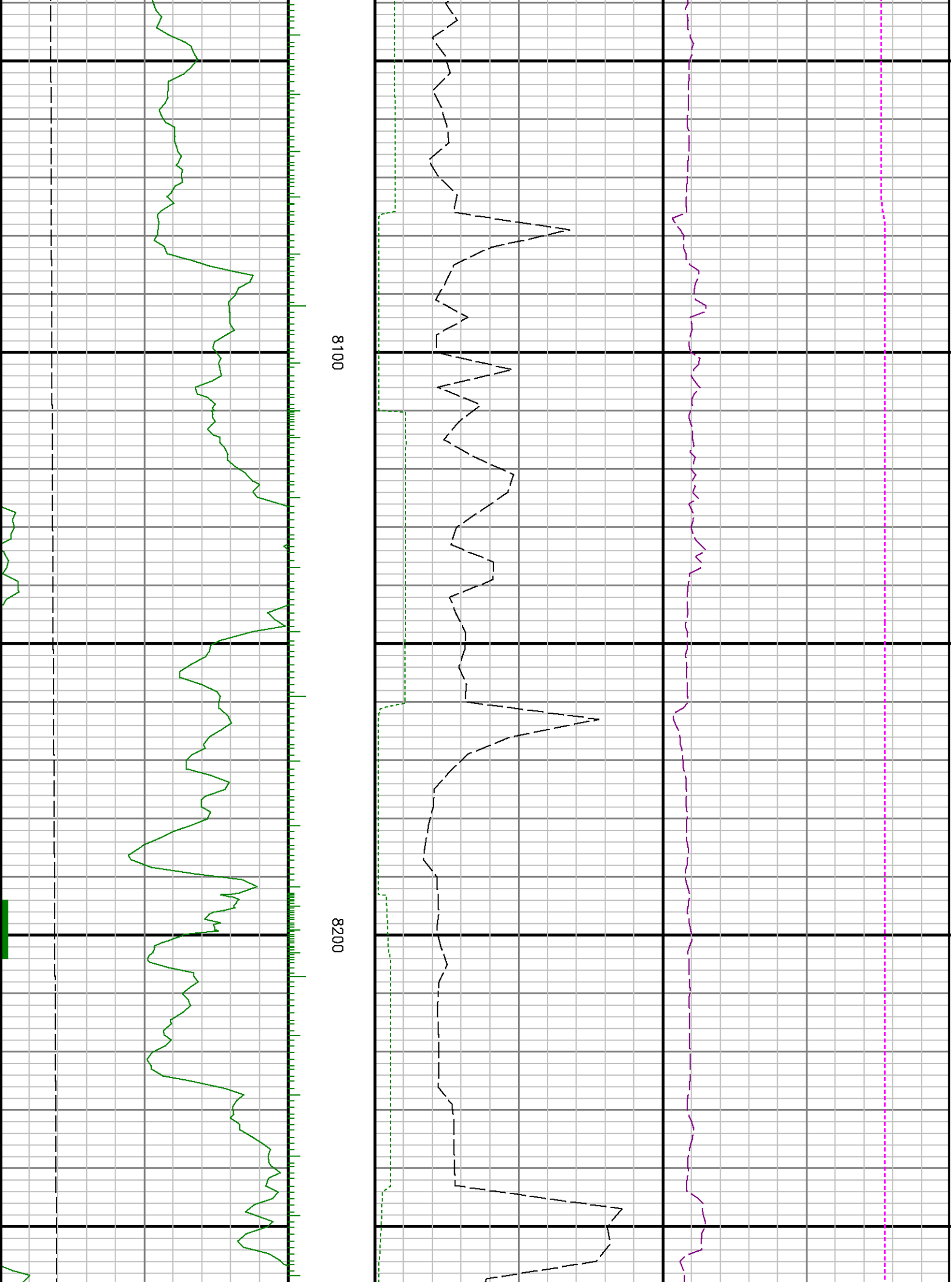


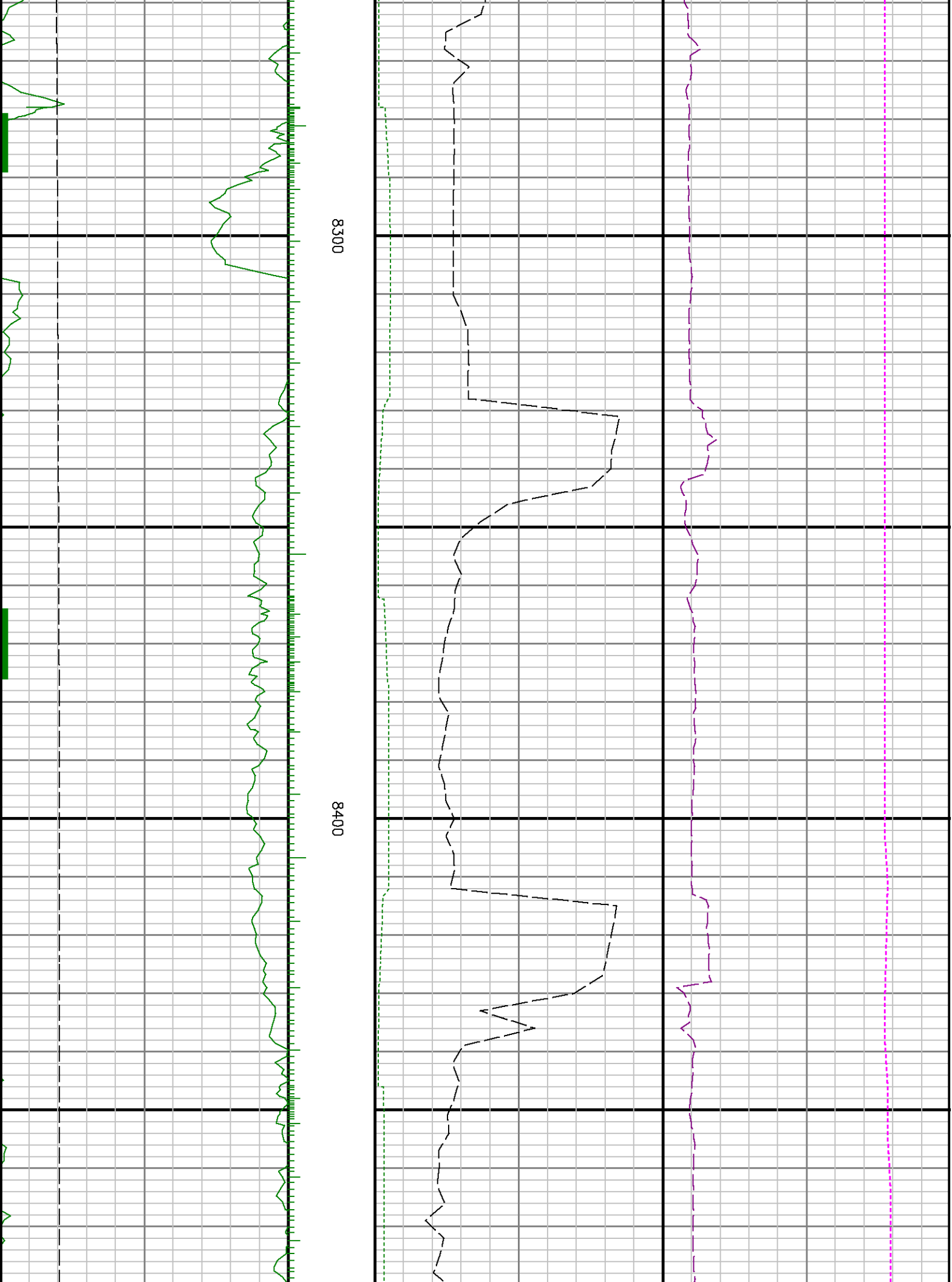


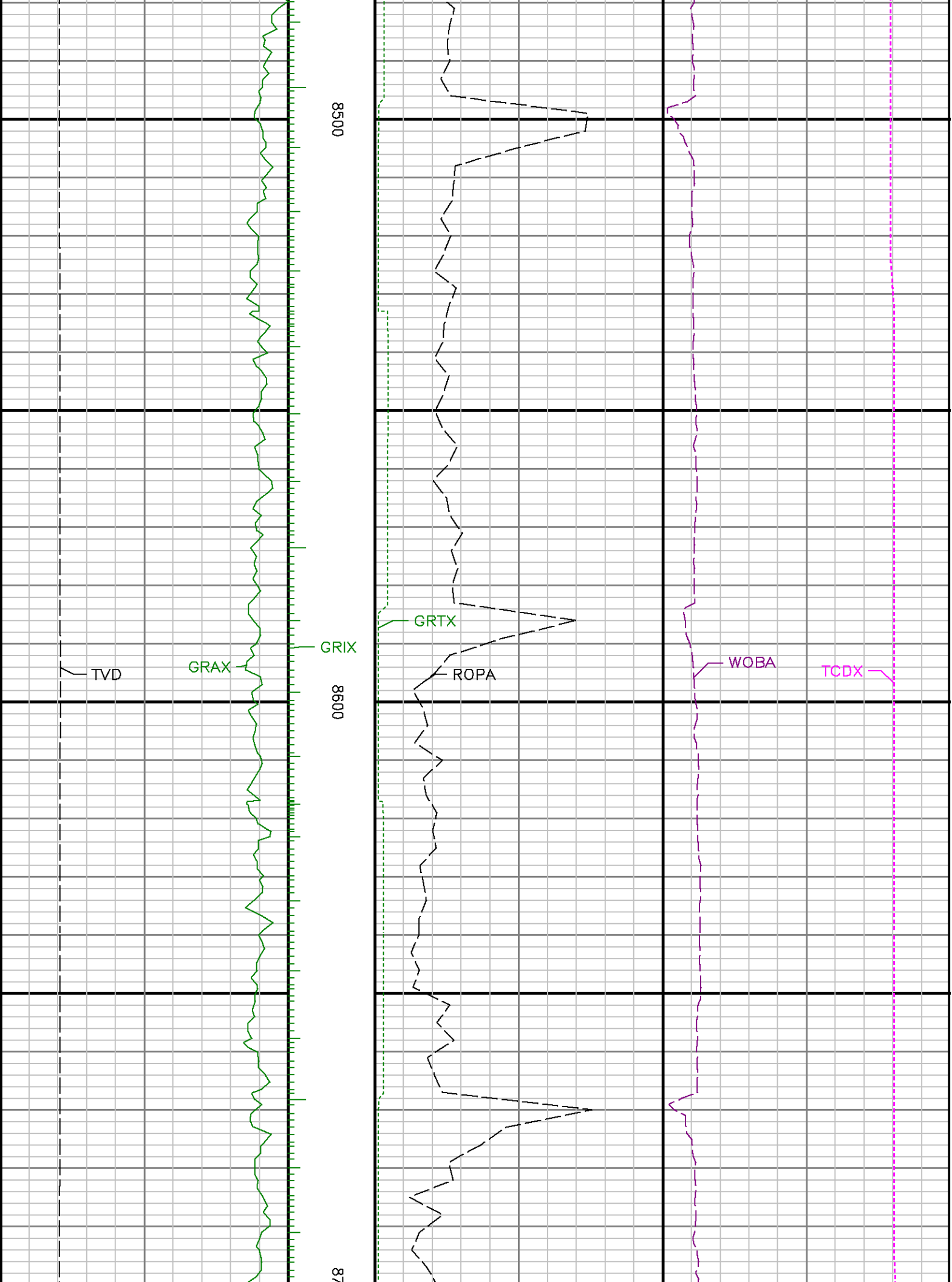
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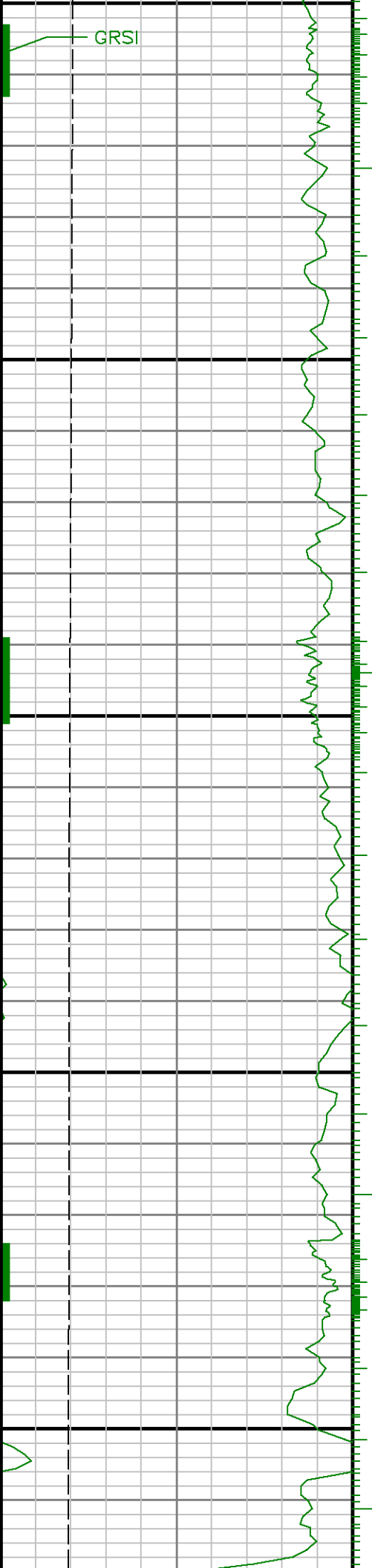
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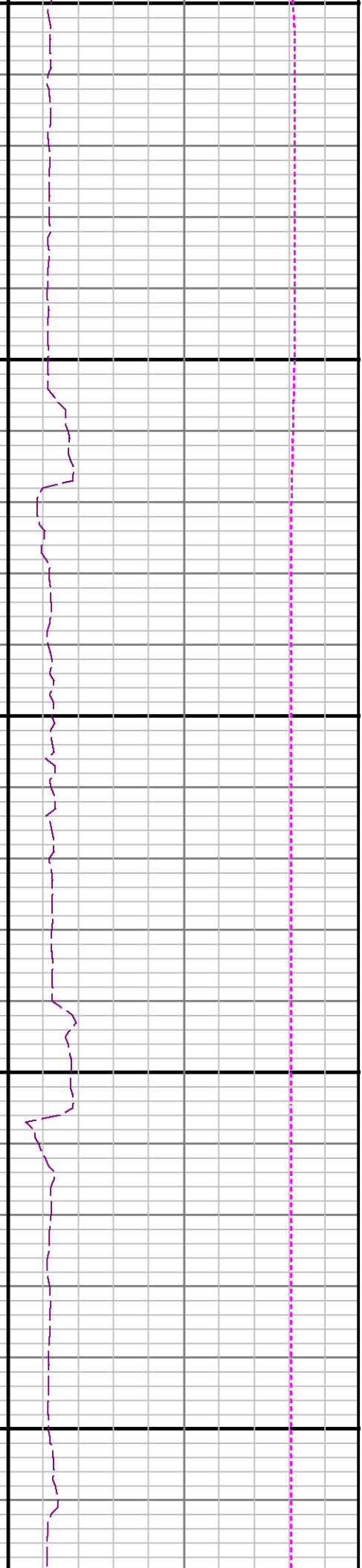
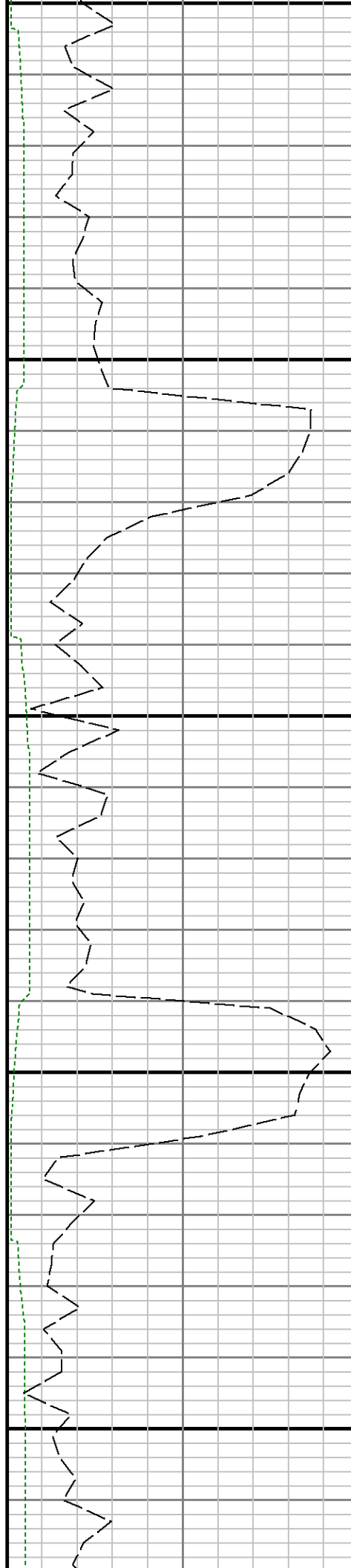


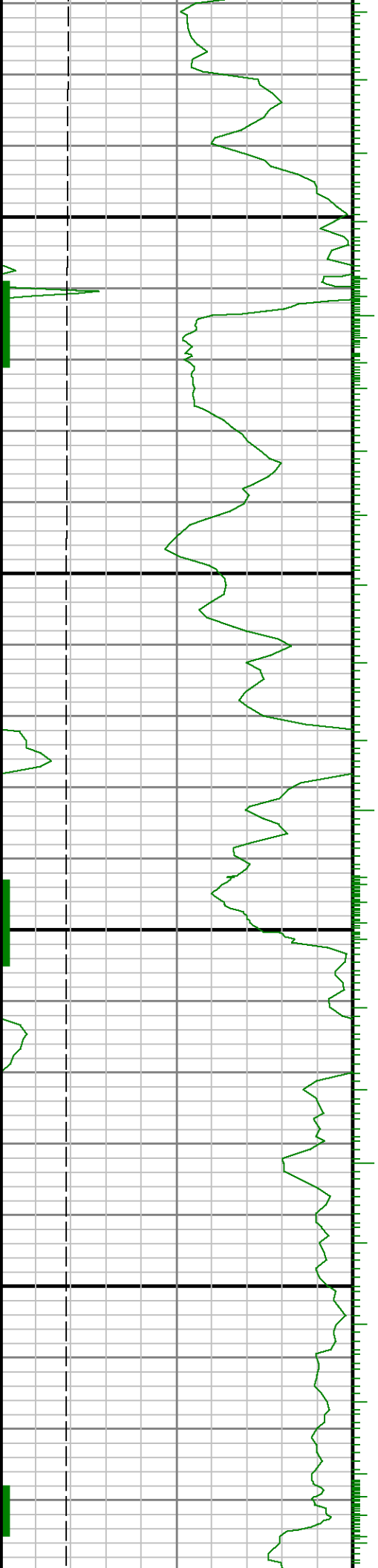


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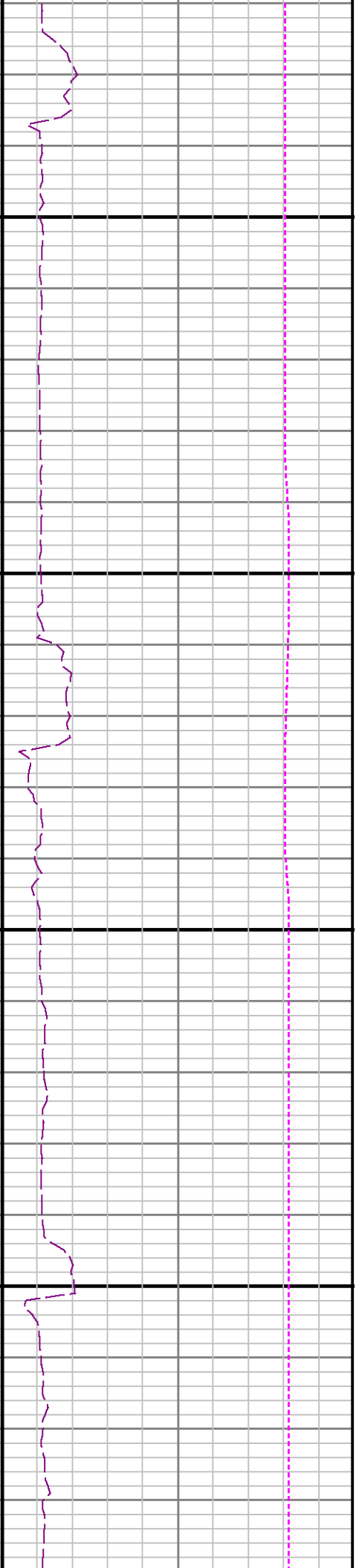
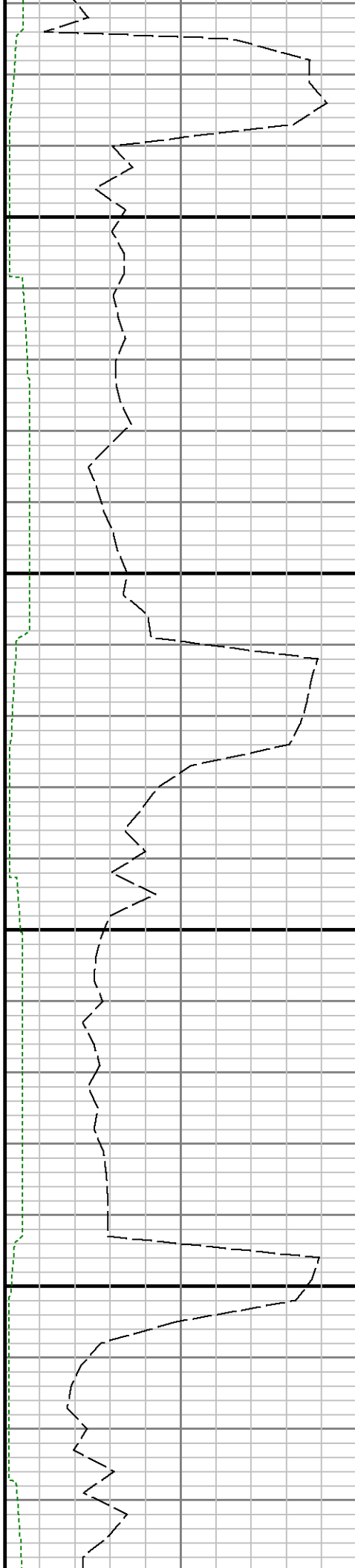
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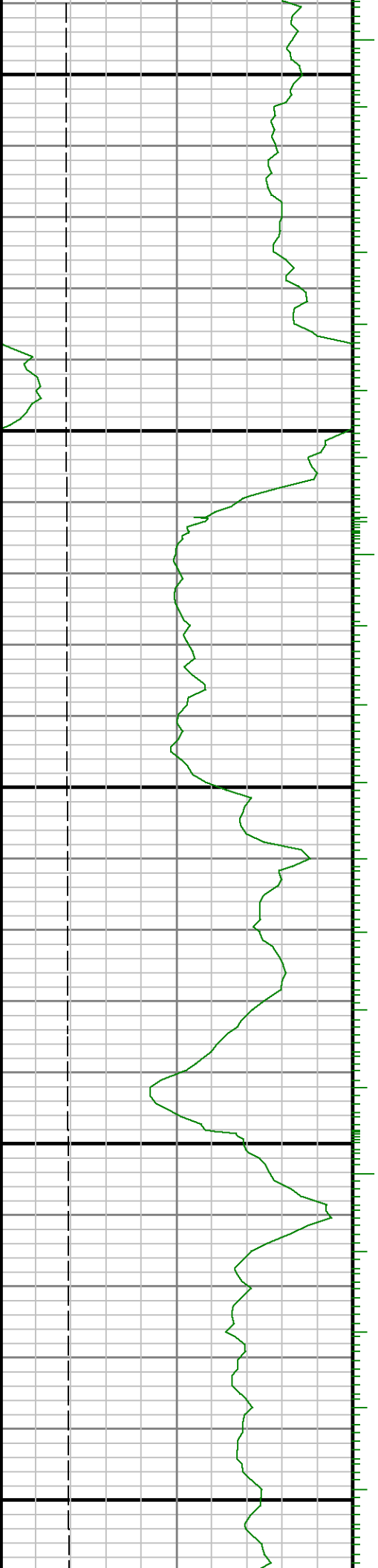




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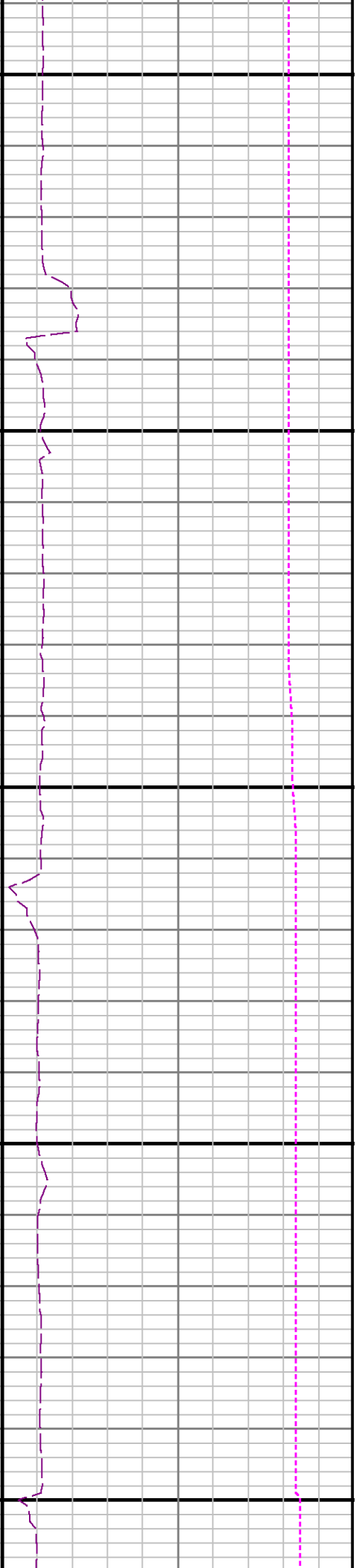
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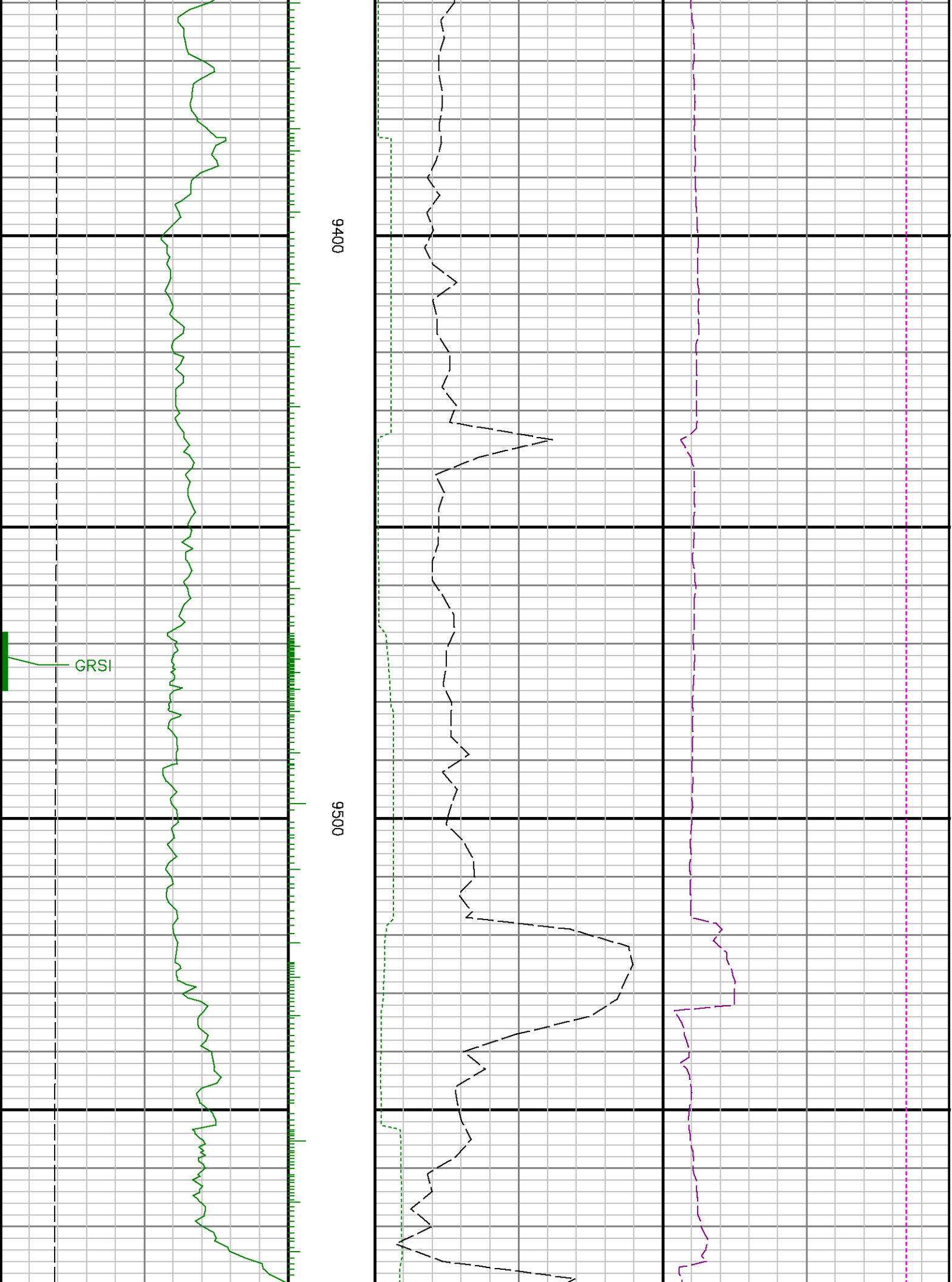




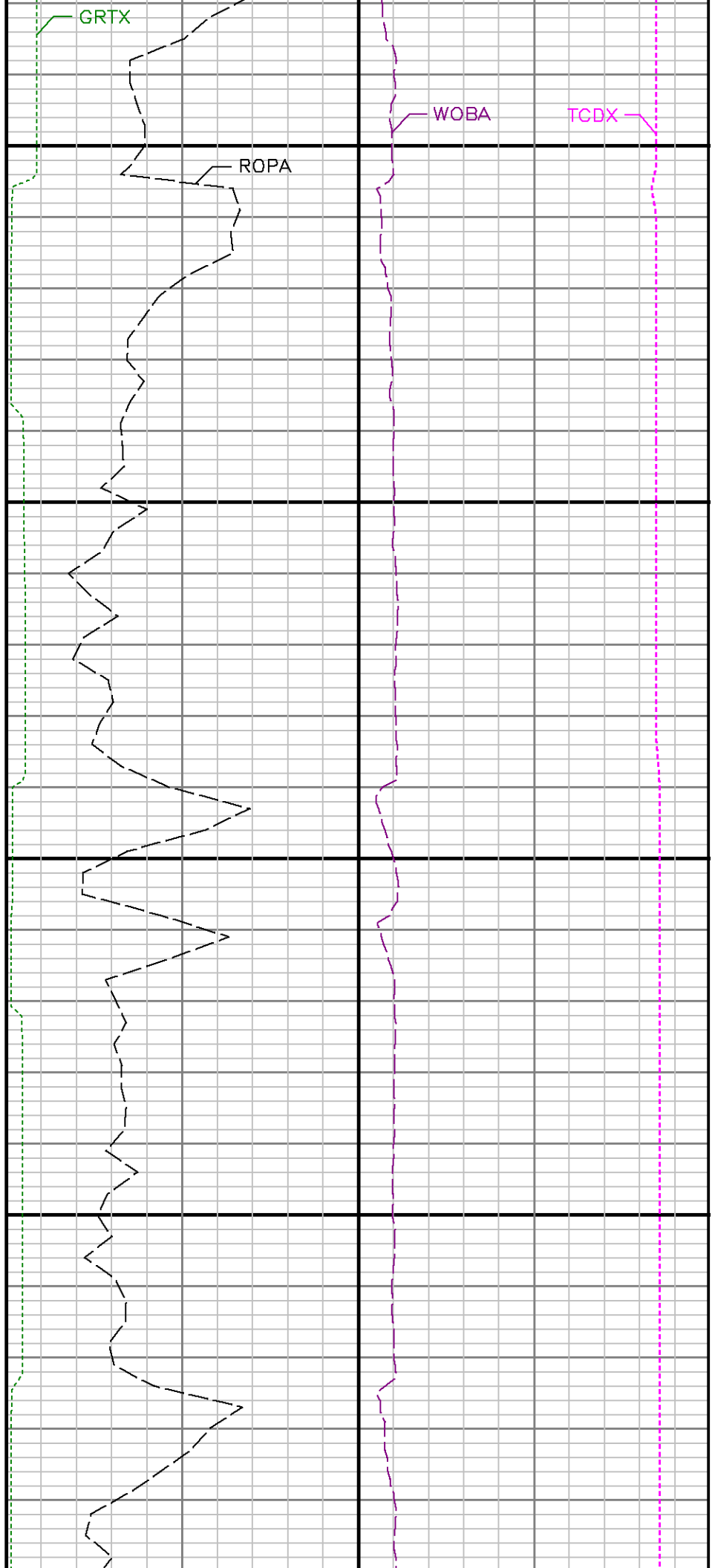
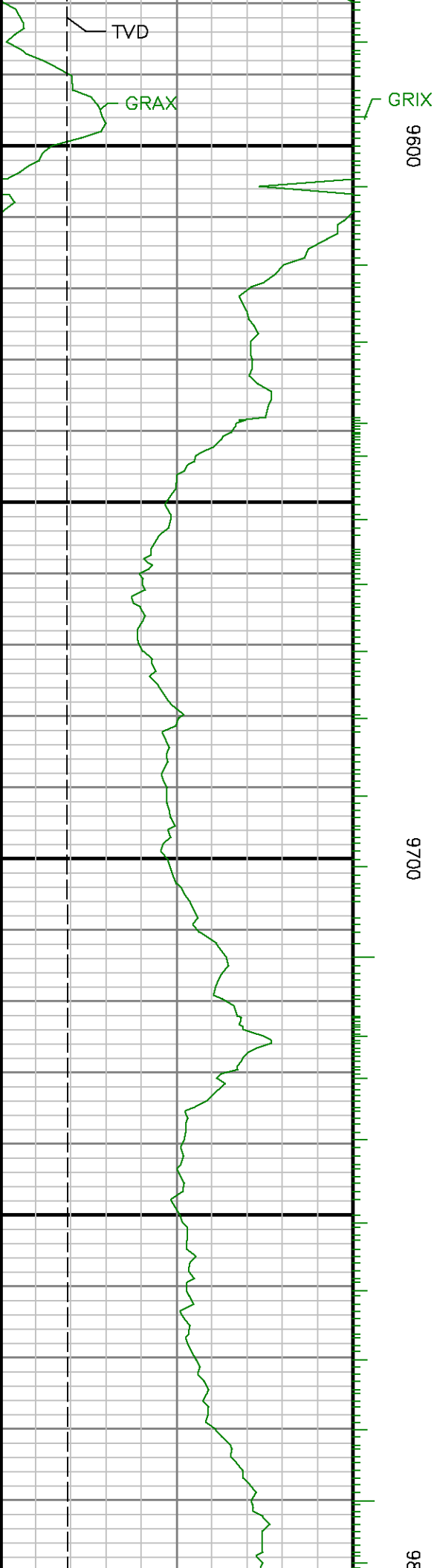
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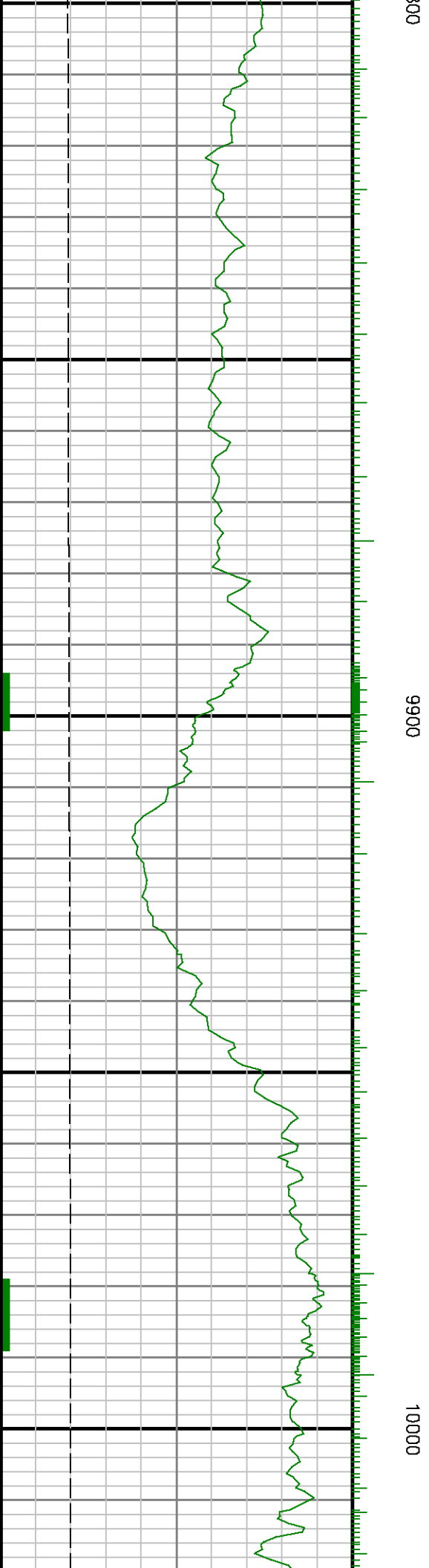
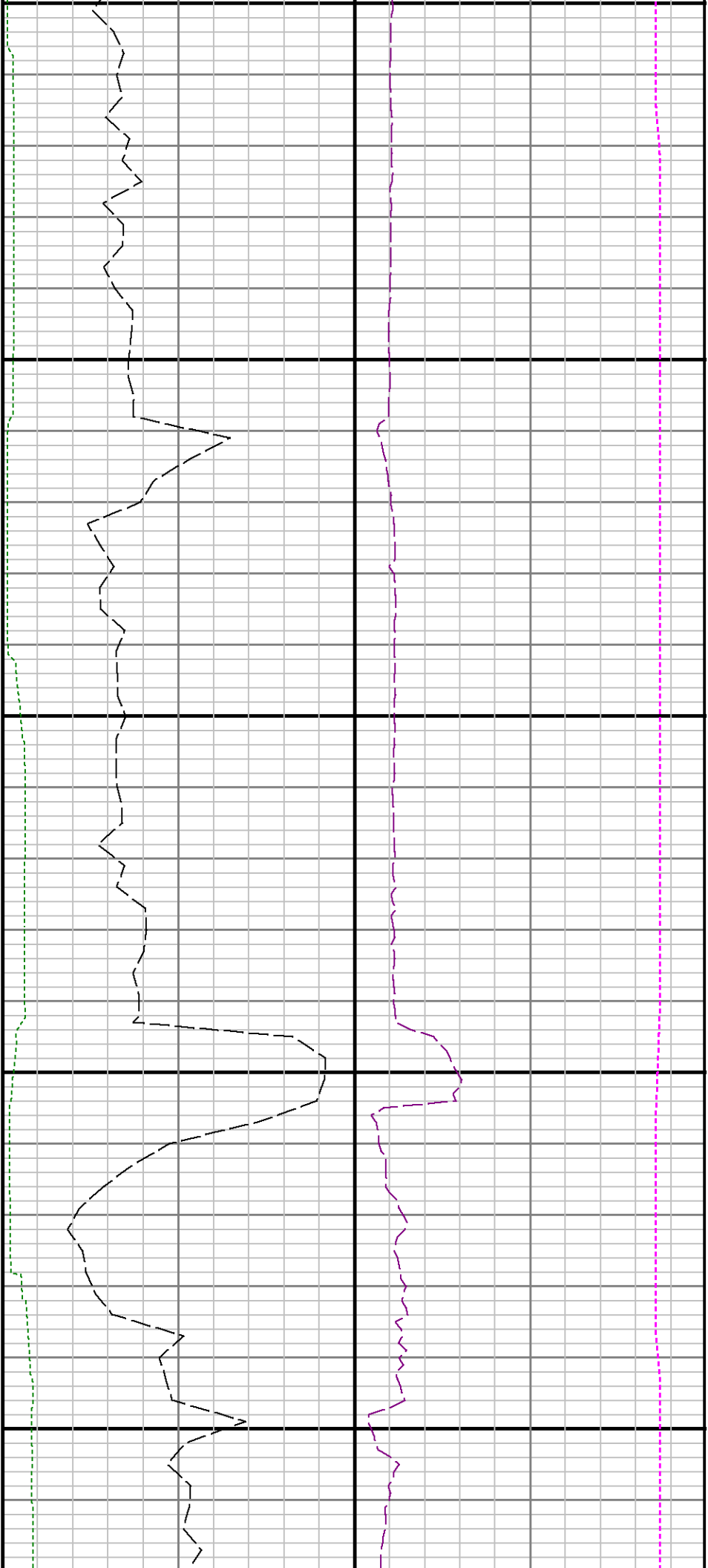
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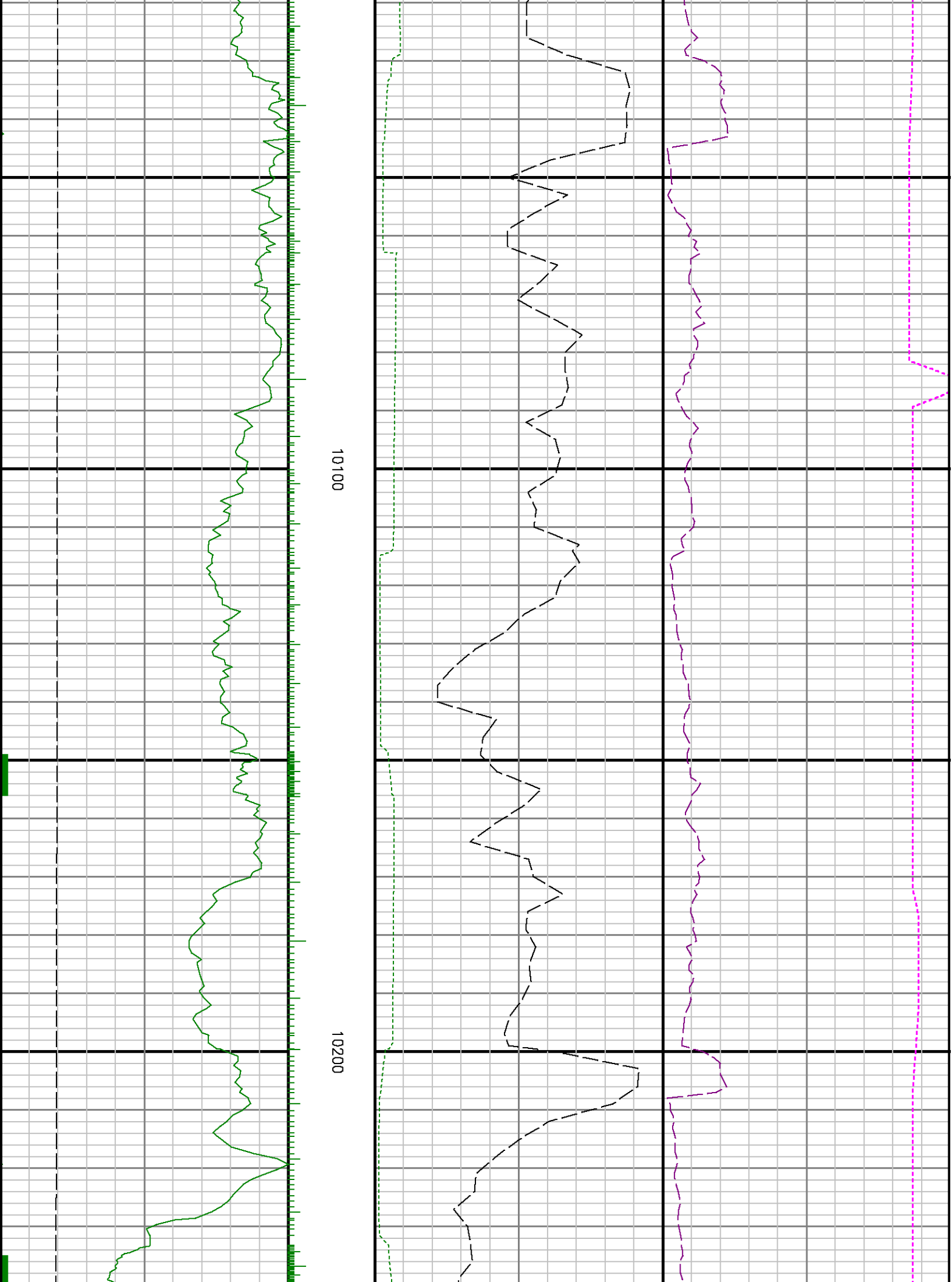


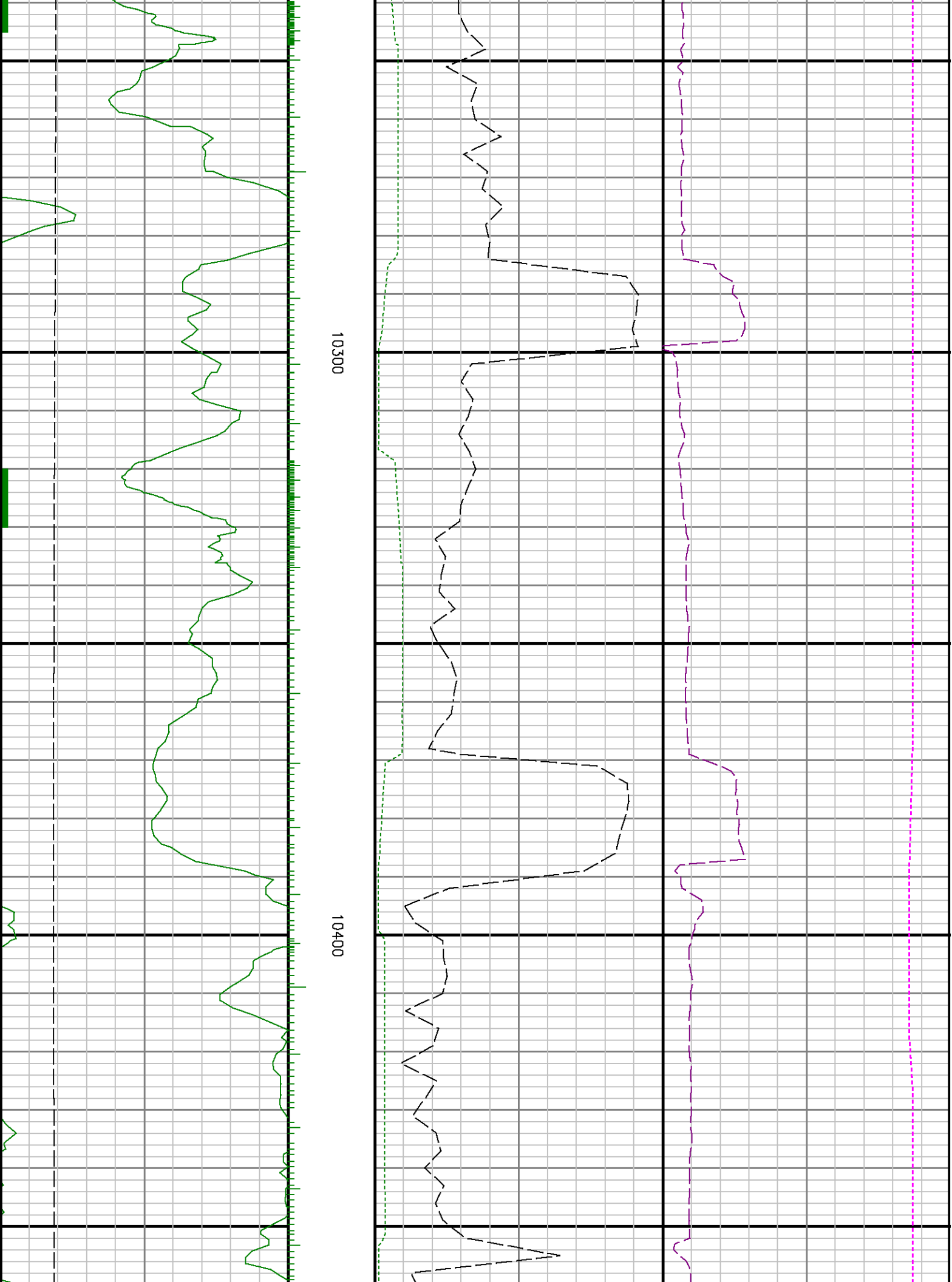


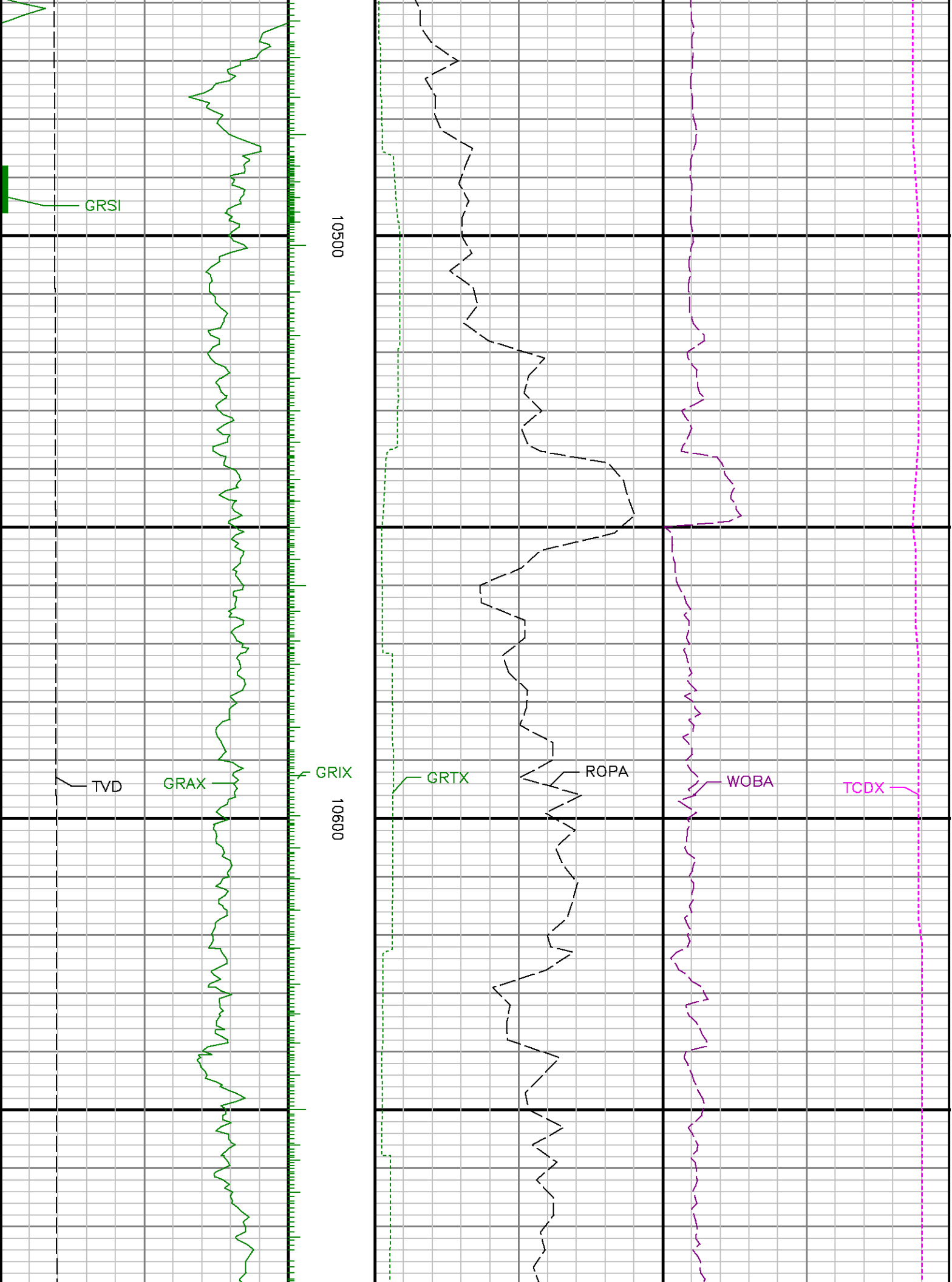










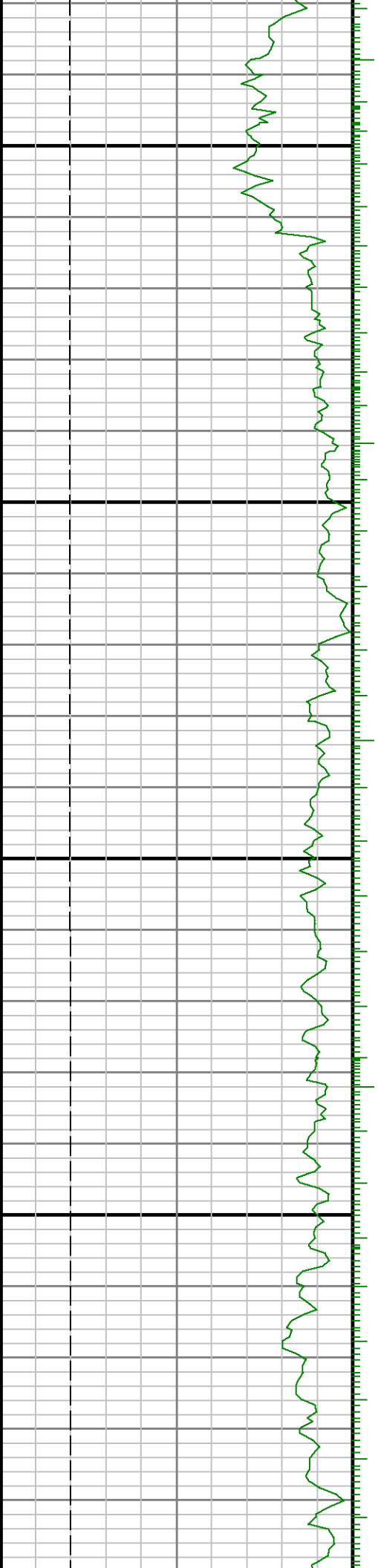


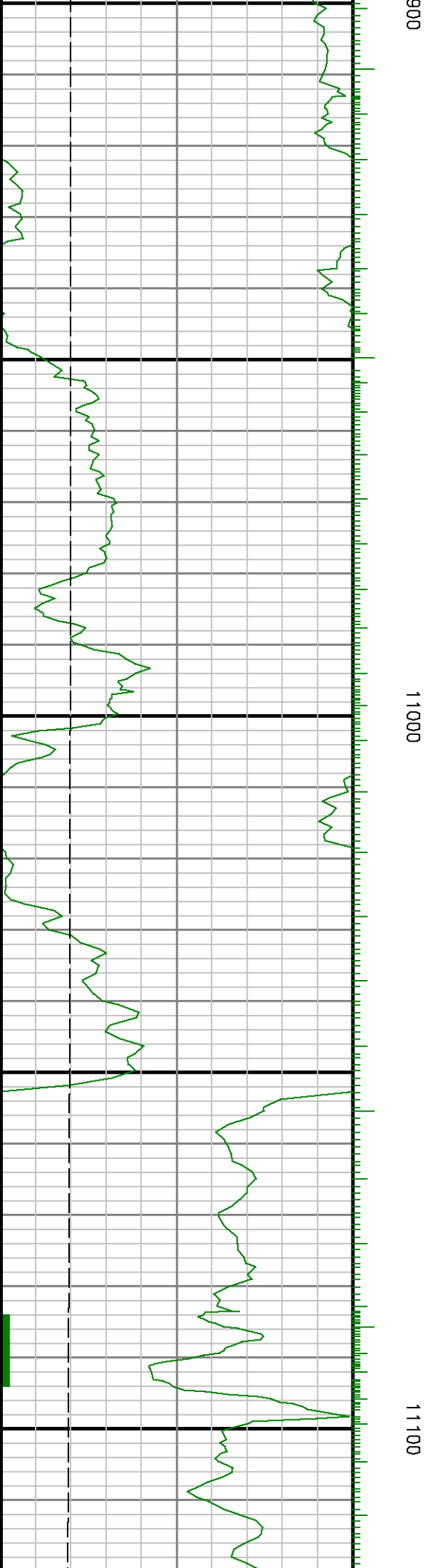
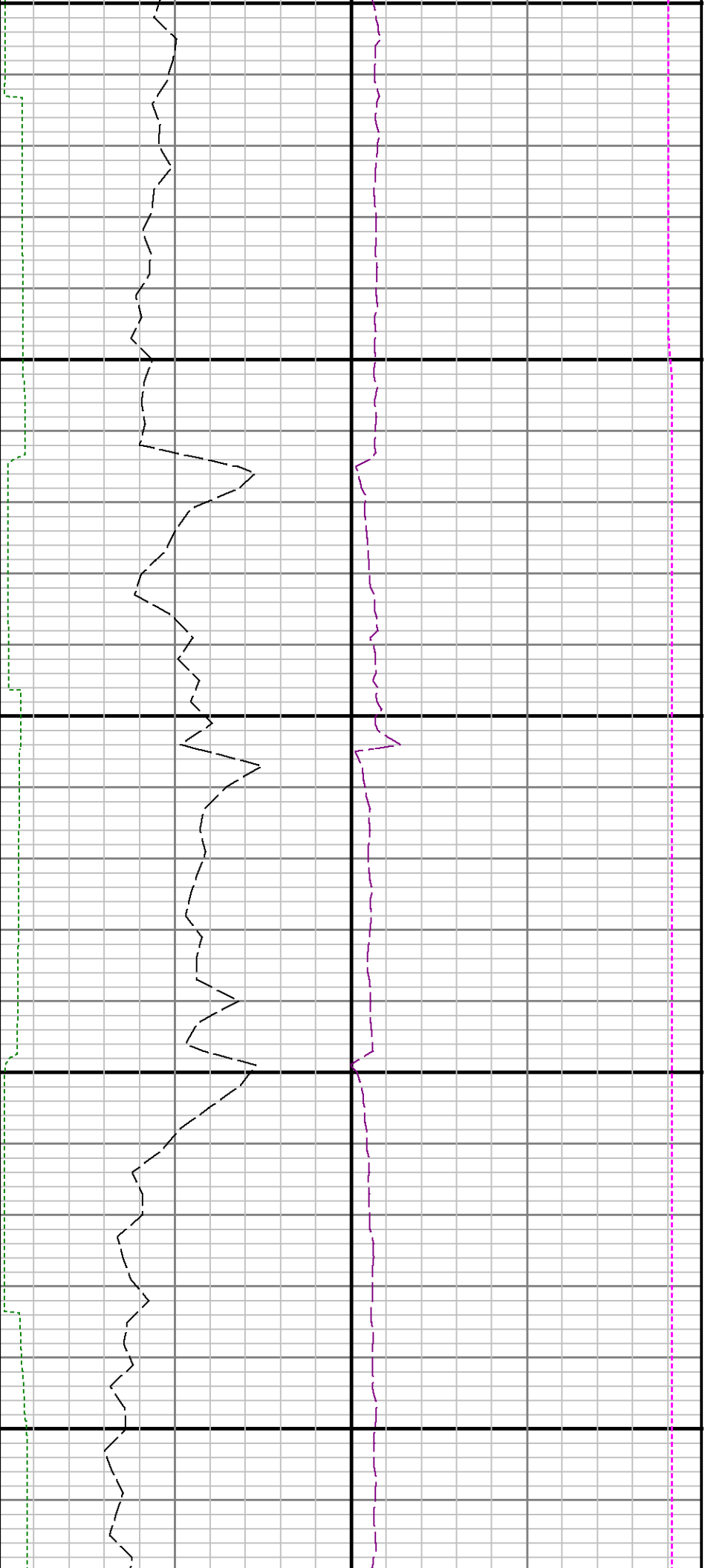


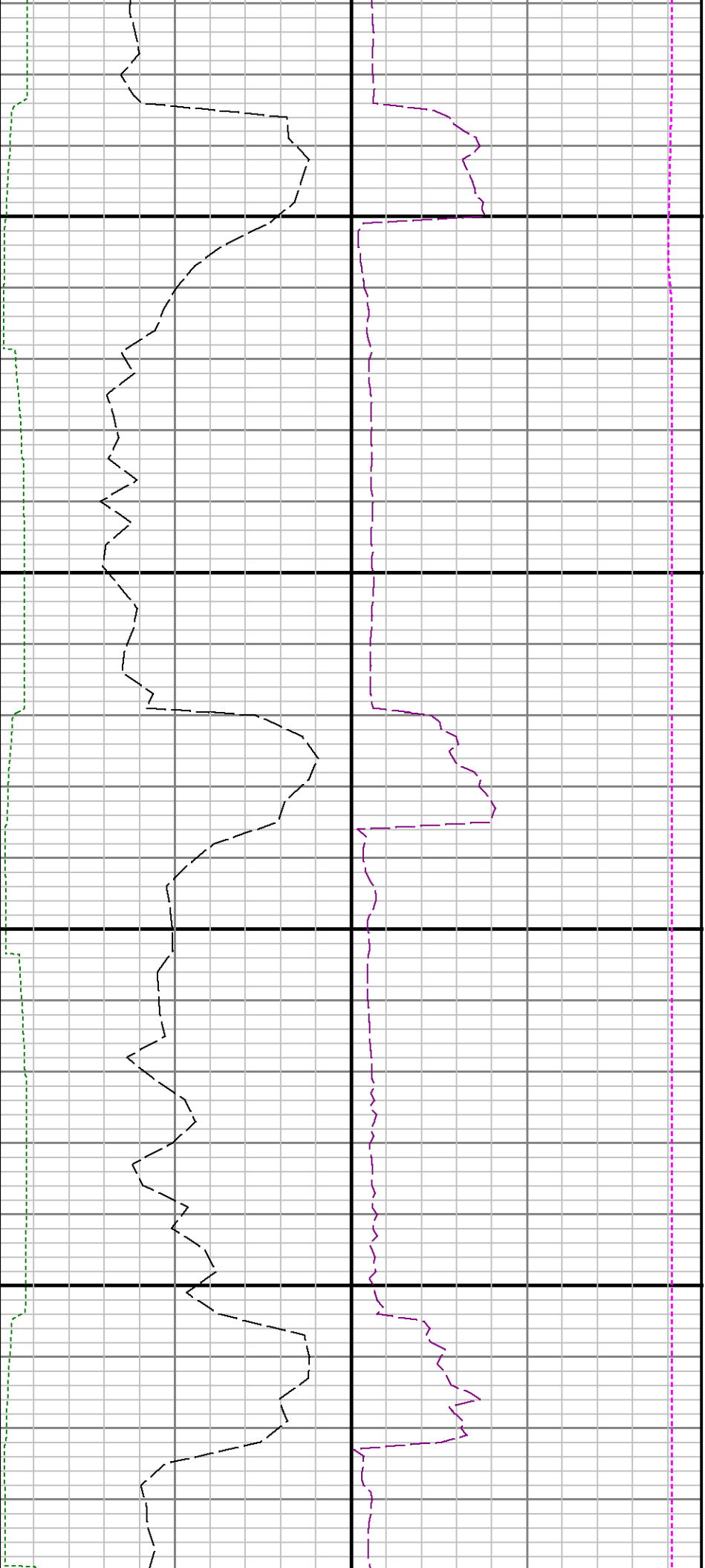
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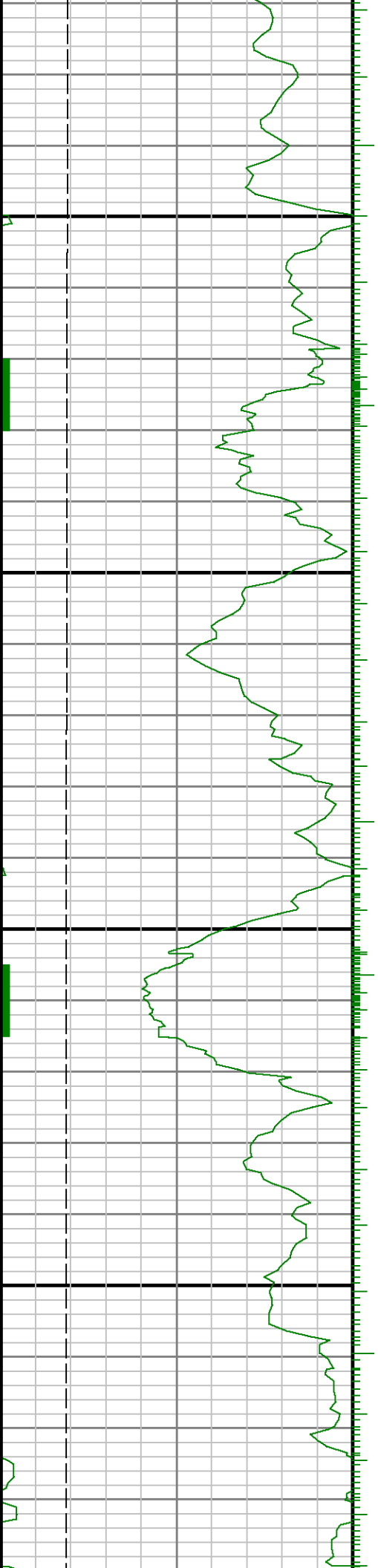






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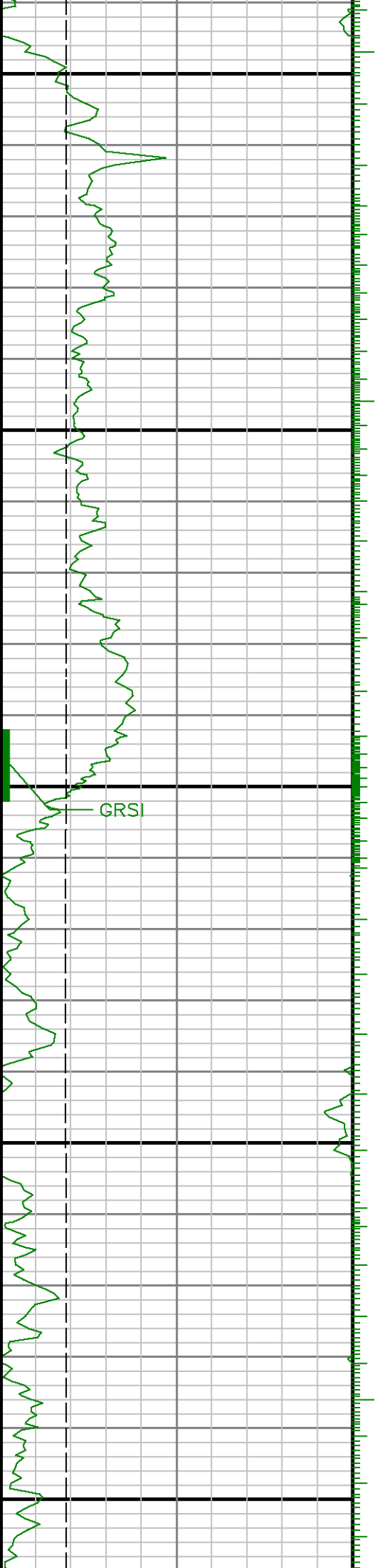


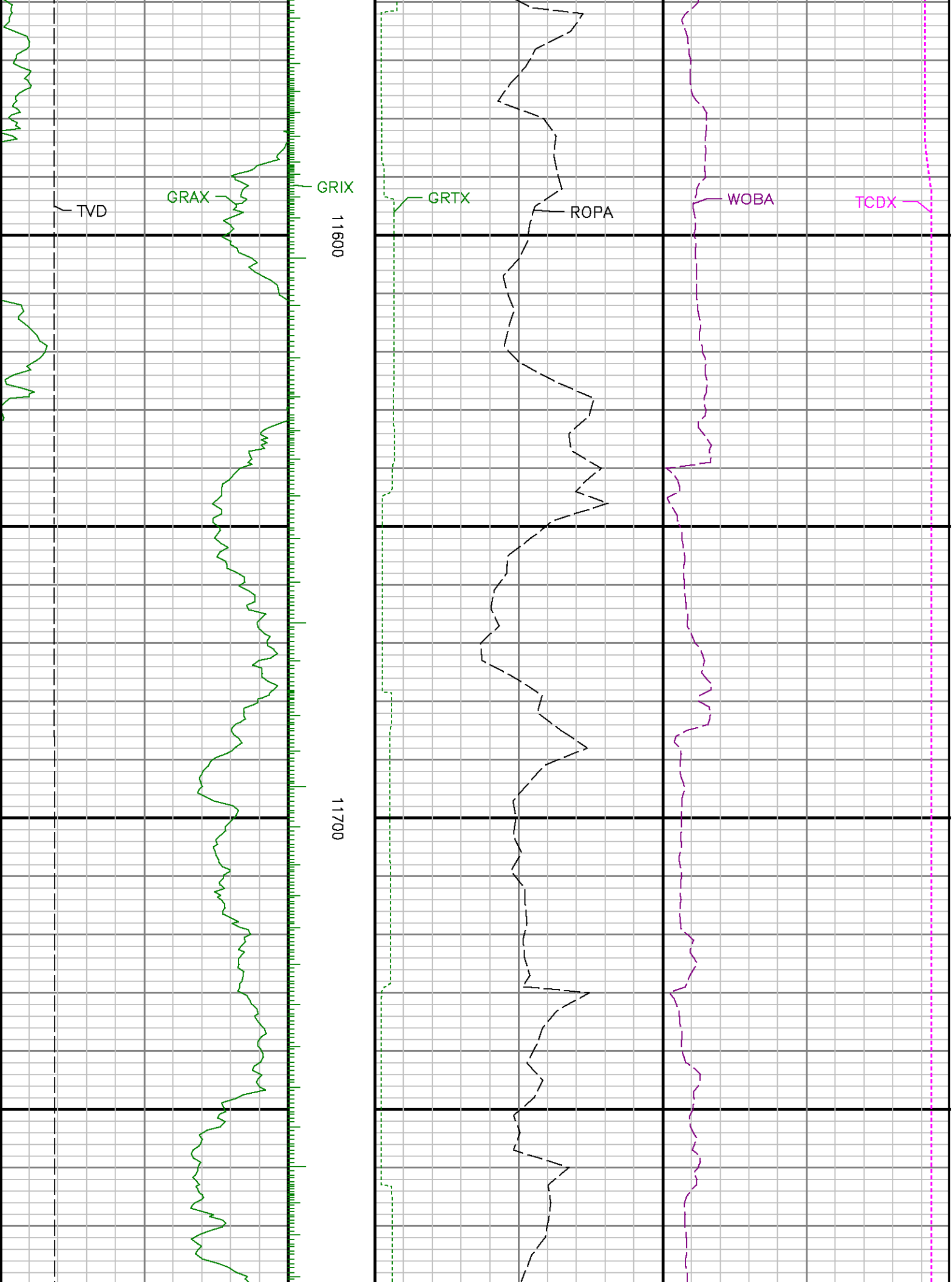


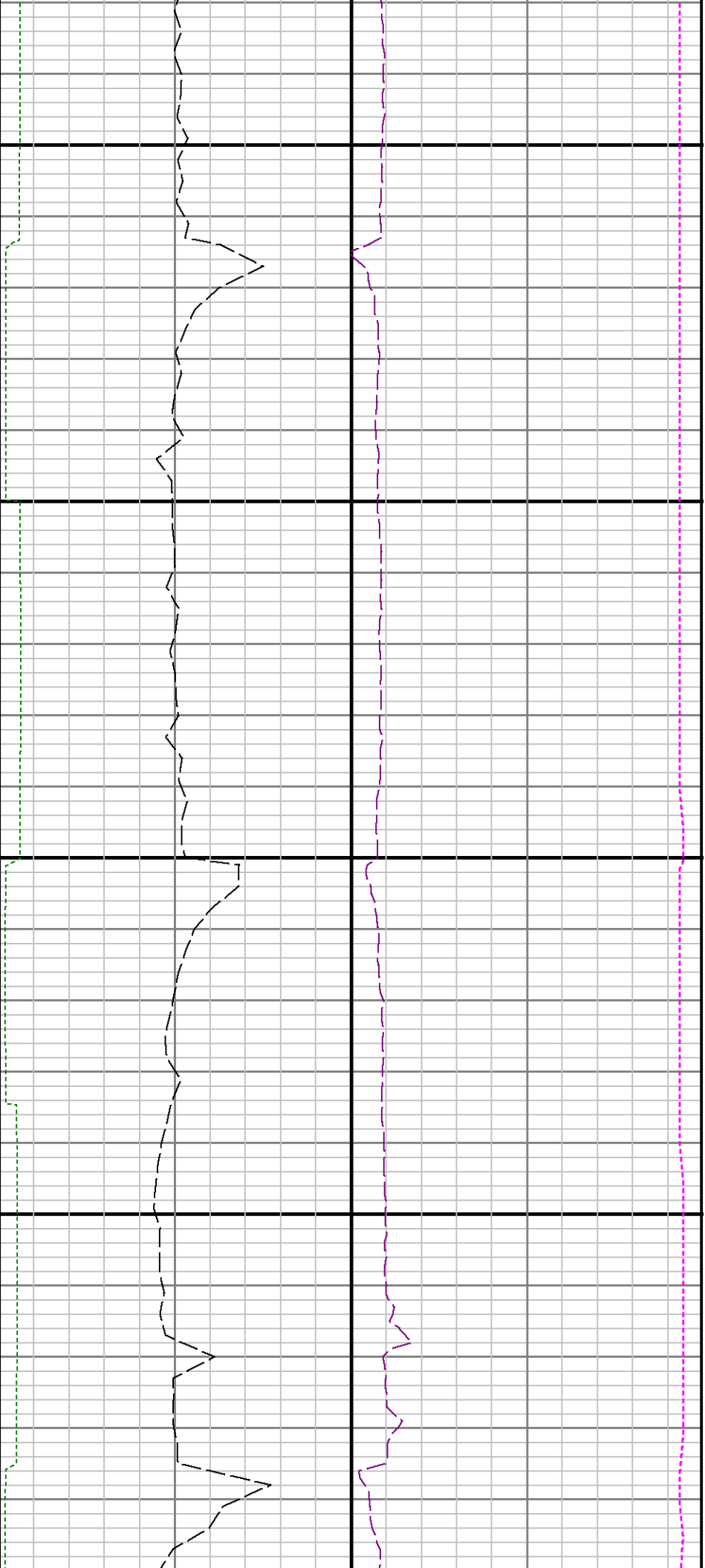


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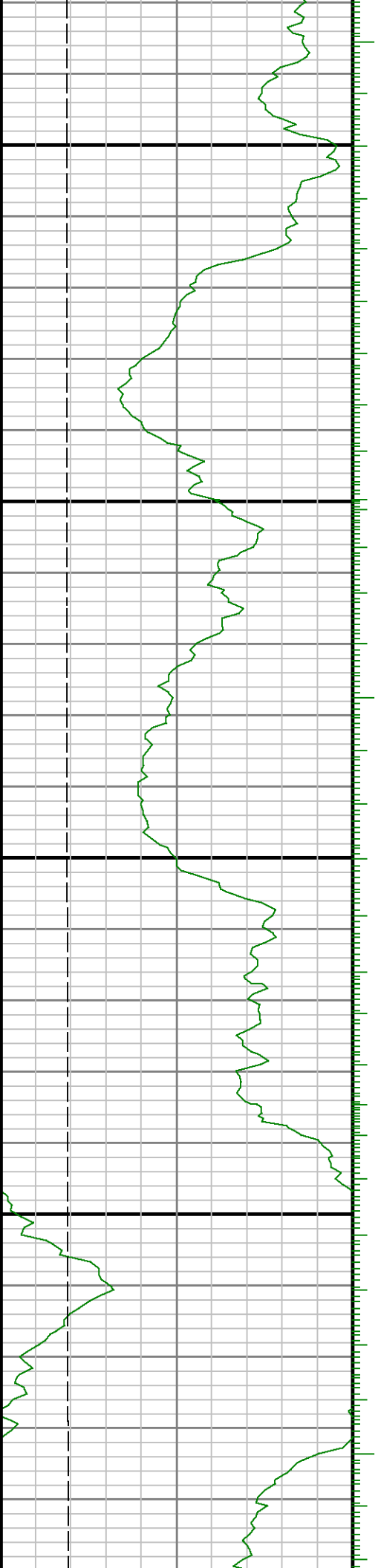


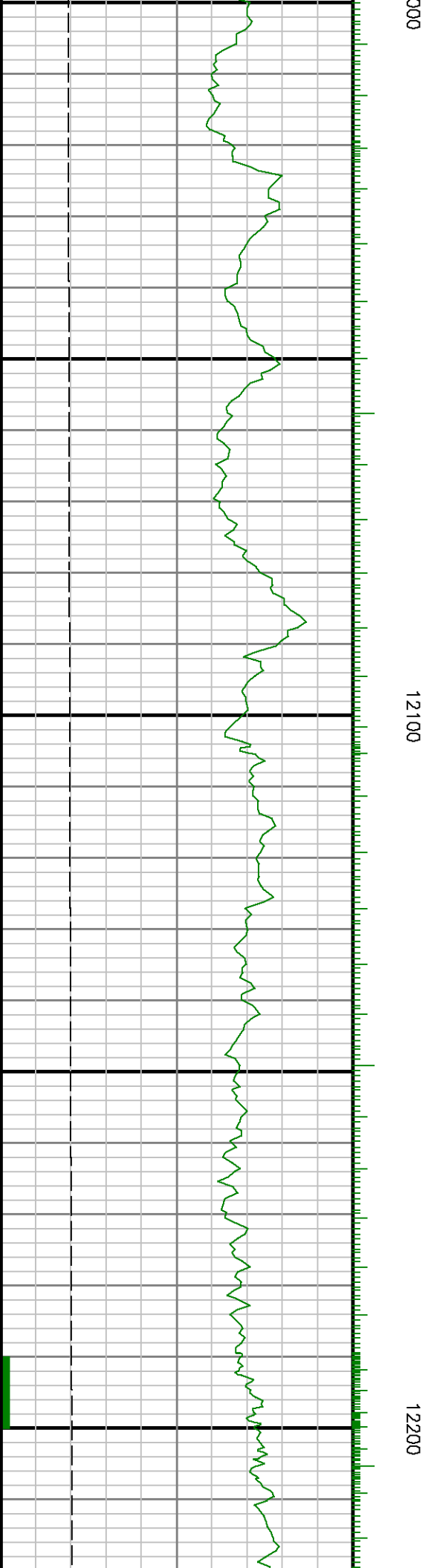
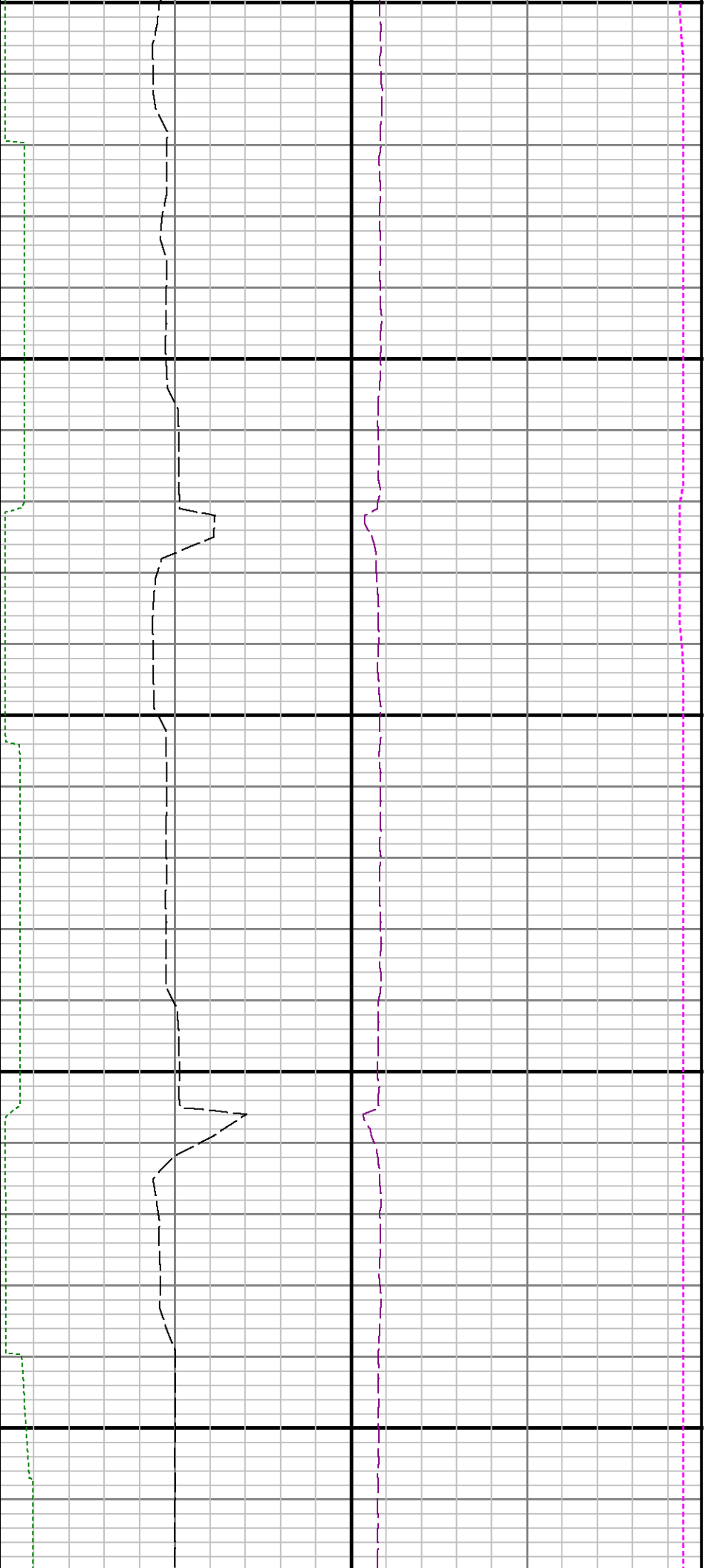


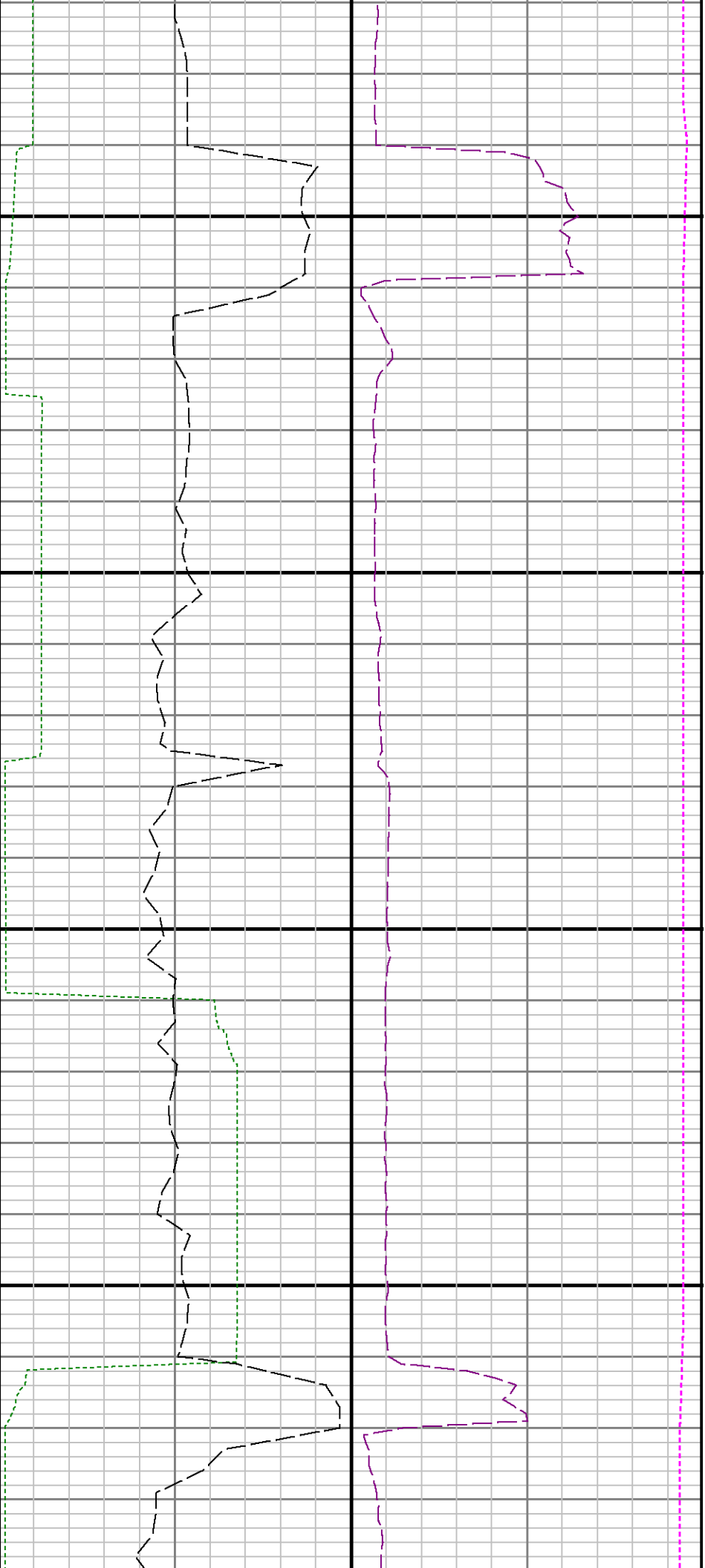
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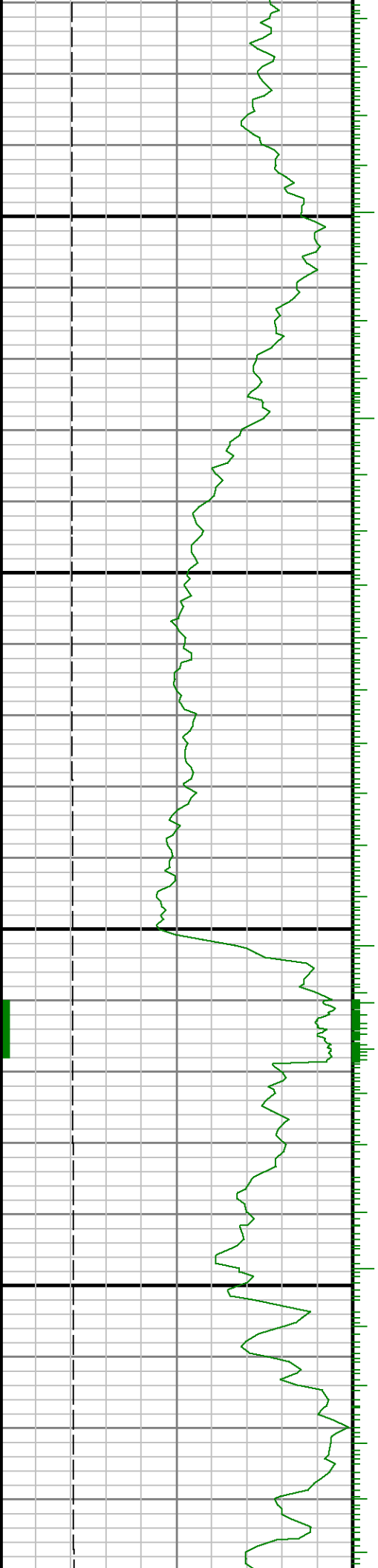


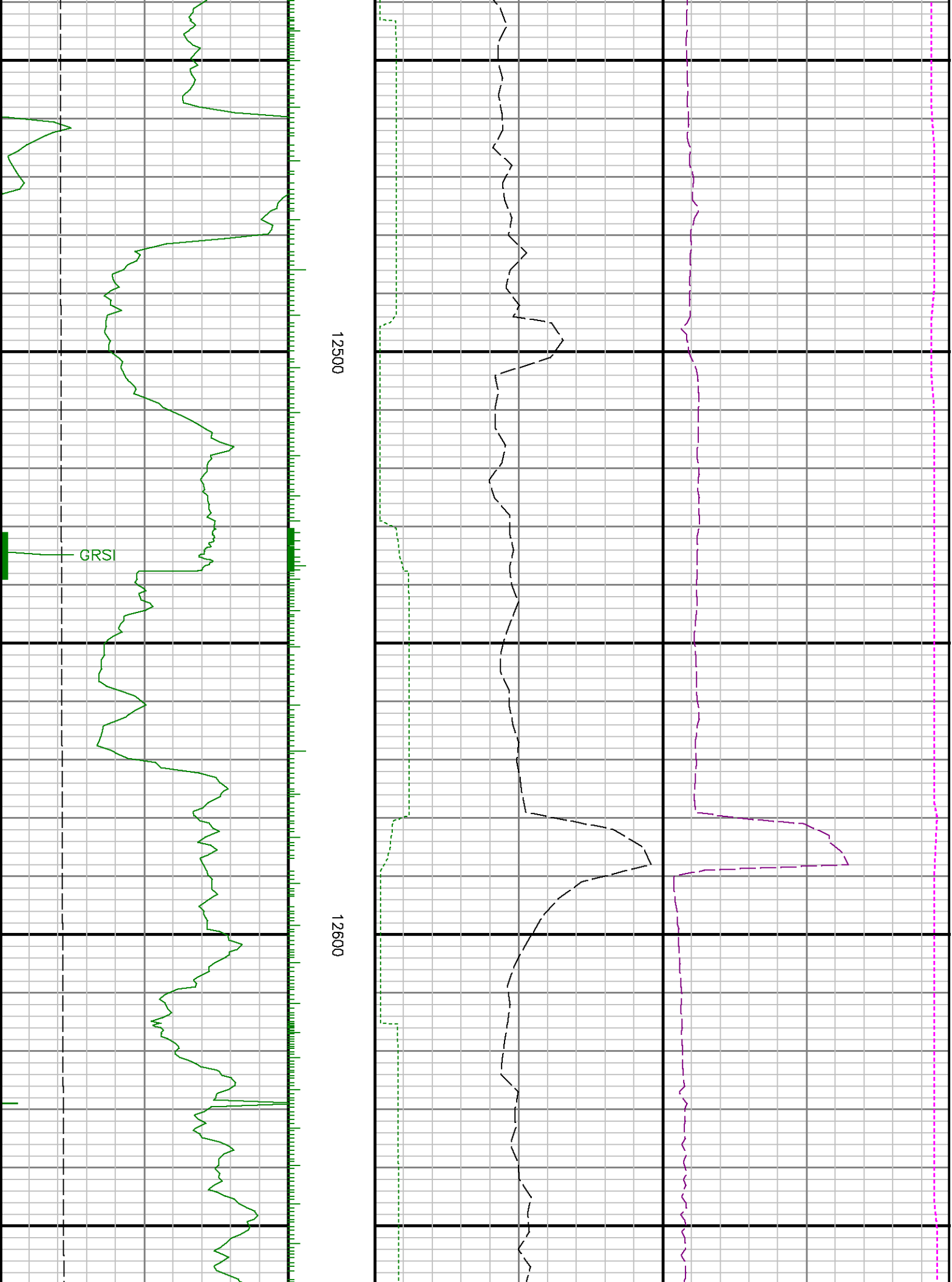


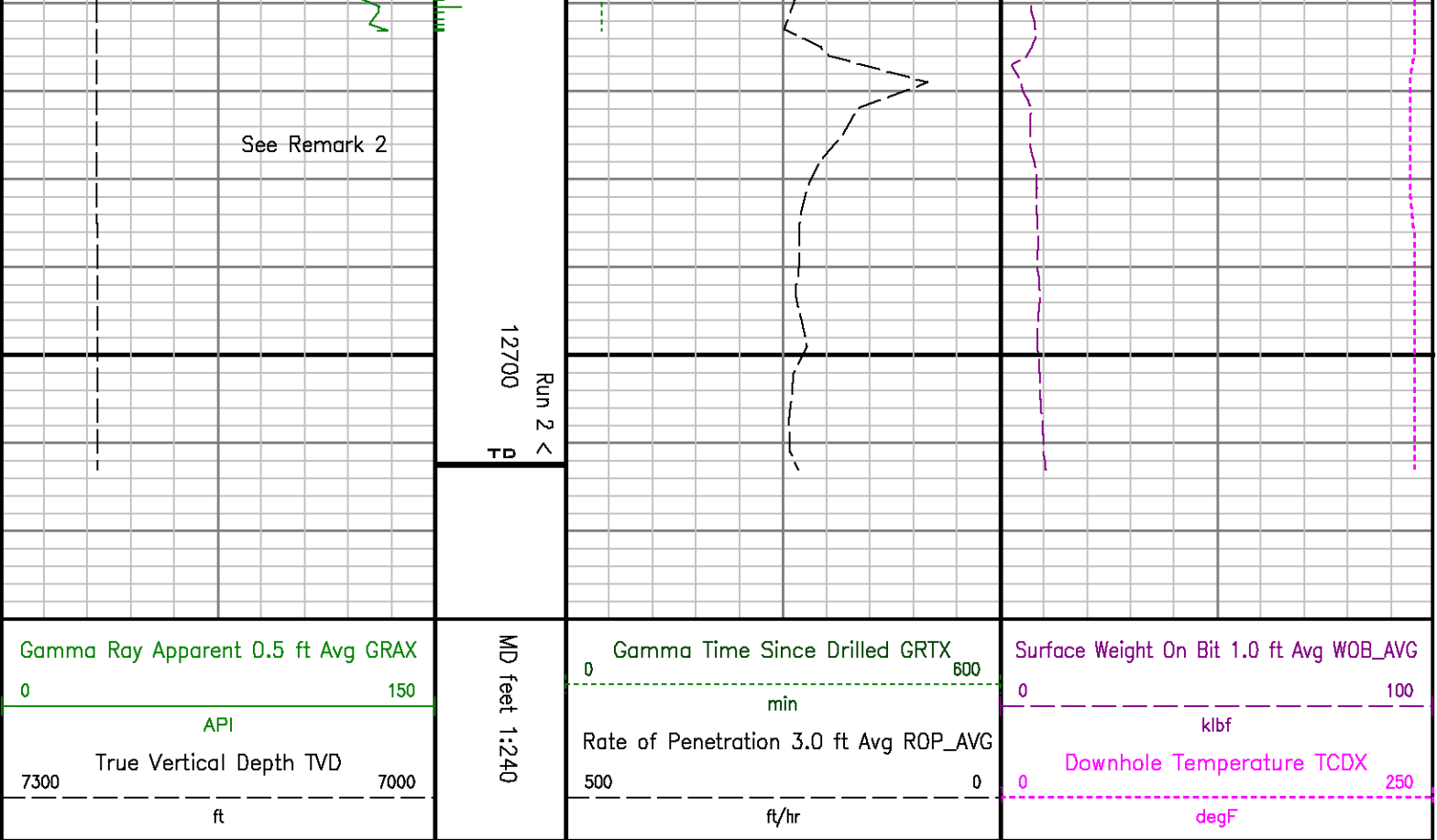


12300

12400







ADVANTAGE    Final Survey Listing												
Operator   :Anadarko				Field       : Weld County (Kerr McGee)				API No     : 05-123-36229				
Well        :Russian Fiddler 15N-18HZ				Rig         : Xtreme 6				Job         :5325395				
Wellbore   :Russian Fiddler 15N-18HZ Orig Hole												
Well Origin												
Latitude		40.1177 deg				Longitude		-104.7061 deg				
North Reference		True				Drill Depth Zero		NULL				
Vertical Datum is		Ground Level				Vertical Datum to DDZ		17.00 ft				
Vertical Section North		0.00 ft				Vertical Section East		0.00 ft				
Vertical Section Azimuth		359.5300 deg				Vertical Section Depth		0.00ft				
Grid Convergence		0.0000 deg				Magnetic Declination		8.4500 deg				
Total Correction		8.4500 deg				TVD Calculation Method		Minimal Curvature				
D-Raw Calculation		Magcorr1				Local Magnetic Field		52927 nT				
Local Magnetic Dip Angle		66.9000 deg				Local Gravity Field		9.798 m/s^2				
Tie	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Incr VS ft	Crs Len ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
U	0.00	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00				
	916.00	0.2800	151.7000	0.16	0.17	915.99	0.15	-1.98	916.00	0.03	0.03	16.56
	1092.00	0.3400	17.1500	0.28	0.53	1091.99	0.28	-1.60	176.00	0.33	0.03	-76.45
	1154.00	0.7900	163.7900	0.05	0.70	1153.99	0.04	-1.31	62.00	1.76	0.73	236.52
	1245.00	2.2200	134.8700	-1.80	2.13	1244.95	-1.82	1.02	91.00	1.73	1.57	-31.78
	1337.00	2.4300	144.0500	-4.64	4.53	1336.88	-4.67	4.74	92.00	0.46	0.23	9.98
	1427.00	3.3200	148.7100	-8.41	7.01	1426.76	-8.47	9.25	90.00	1.02	0.99	5.18
	1520.00	4.2800	150.6100	-13.73	10.11	1519.56	-13.82	15.42	93.00	1.04	1.03	2.04
	1612.00	5.1500	135.9000	-19.89	14.67	1611.25	-19.81	22.92	92.00	1.61	0.95	-15.99
	1703.00	7.0600	125.4600	-25.87	22.07	1701.73	-26.05	32.55	91.00	2.42	2.10	-11.47
1797.00	8.3300	128.0900	-33.42	32.13	1794.88	-33.66	45.14	94.00	1.40	1.35	2.60	
1889.00	9.2200	125.0800	-41.77	43.41	1885.81	-42.12	59.17	92.00	1.09	0.97	-3.27	

	1974.00	10.0500	120.3800	-49.43	55.38	1969.61	-49.88	73.38	85.00	1.34	0.98	-5.53
	2059.00	10.5700	113.5500	-56.30	68.92	2053.24	-56.86	88.57	85.00	1.56	0.81	-8.04
	2144.00	10.6400	113.4300	-62.53	83.27	2136.79	-63.21	104.21	85.00	0.09	0.08	-0.14
	2229.00	10.3800	112.2100	-68.55	97.56	2220.36	-69.35	119.72	85.00	0.40	-0.31	-1.44
	2314.00	10.2500	110.6800	-74.11	111.73	2303.99	-75.03	134.93	85.00	0.36	-0.15	-1.80
	2399.00	10.2400	109.9600	-79.36	125.90	2387.63	-80.39	150.05	85.00	0.15	-0.01	-0.85
	2484.00	9.9800	110.3800	-84.50	139.89	2471.32	-85.65	164.98	85.00	0.34	-0.33	0.49
	2569.00	10.3000	115.3400	-90.31	153.65	2554.99	-91.57	179.89	85.00	1.10	0.40	5.64
	2654.00	10.2400	114.0600	-96.65	167.42	2638.63	-98.02	195.05	85.00	0.28	-0.07	-1.51
	2740.00	10.1500	112.6200	-102.88	181.39	2723.27	-104.18	210.27	88.00	0.31	-0.10	-1.87
	2825.00	9.5900	111.9600	-108.21	194.86	2807.01	-109.80	224.84	85.00	0.67	-0.66	-0.78
	2910.00	10.1800	113.1800	-113.81	208.35	2890.75	-115.51	239.43	85.00	0.74	0.69	1.41
	2995.00	10.4900	114.6200	-119.99	222.29	2974.37	-121.81	254.66	85.00	0.48	0.36	1.72
	3079.00	10.2400	113.8400	-126.19	236.07	3057.00	-128.12	269.79	84.00	0.34	-0.30	-0.93
	3165.00	9.9100	113.8500	-132.27	249.83	3141.68	-134.32	284.83	88.00	0.38	-0.38	0.01
	3250.00	10.2300	115.4100	-138.47	263.34	3225.37	-140.62	299.70	85.00	0.49	0.36	1.64
	3335.00	9.7900	113.5200	-144.59	276.78	3309.07	-146.86	314.47	85.00	0.65	-0.52	-2.22
	3420.00	10.7000	117.8500	-151.16	290.39	3392.72	-153.54	329.56	85.00	1.40	1.07	5.09
	3505.00	10.2800	116.0000	-158.17	304.18	3476.30	-160.66	345.05	85.00	0.63	-0.49	-2.18
	3589.00	9.8100	113.3500	-164.24	317.35	3559.04	-166.83	359.55	84.00	0.97	-0.80	-3.15
	3675.00	8.8100	111.0800	-169.45	330.09	3643.93	-172.15	373.31	86.00	1.02	-0.93	-2.64
	3760.00	9.0700	114.9900	-174.62	342.24	3727.89	-177.42	386.52	85.00	0.78	0.31	4.60
	3845.00	9.7300	118.2300	-180.85	354.64	3811.75	-183.75	400.39	85.00	0.99	0.78	3.81
	3930.00	10.1500	116.6800	-187.61	367.66	3895.48	-190.62	415.06	85.00	0.59	0.49	-1.82
	4015.00	10.5100	117.4300	-194.55	381.23	3979.10	-197.67	430.31	85.00	0.45	0.42	0.88
	4100.00	11.1300	120.2500	-202.25	395.20	4062.59	-205.46	446.26	85.00	0.96	0.73	3.32
	4186.00	10.5800	119.0700	-210.27	409.27	4147.05	-213.62	462.45	88.00	0.69	-0.64	-1.37
	4270.00	10.6200	116.3200	-217.45	422.95	4229.62	-220.91	477.90	84.00	0.60	0.05	-3.27
	4354.00	10.5700	116.7000	-224.34	436.77	4312.18	-227.91	493.34	84.00	0.10	-0.06	0.45
	4439.00	10.2200	116.6500	-231.22	450.47	4395.79	-234.91	508.68	85.00	0.41	-0.41	-0.06
	4523.00	9.9200	115.1400	-237.64	463.66	4478.50	-241.44	523.37	84.00	0.48	-0.36	-1.60
	4608.00	9.8200	119.3100	-244.30	476.63	4562.24	-248.20	537.93	85.00	0.86	-0.12	4.91
	4693.00	9.5700	116.2500	-250.97	489.29	4646.02	-254.98	552.24	85.00	0.67	-0.29	-3.60
	4778.00	9.6100	123.9900	-258.07	501.51	4729.84	-262.17	566.37	85.00	1.52	0.05	9.11
	4863.00	9.6200	123.2000	-265.92	513.34	4813.65	-270.12	580.56	85.00	0.16	0.01	-0.93
	4948.00	8.7600	122.3900	-273.28	524.74	4897.55	-277.57	594.14	85.00	1.02	-1.01	-0.95
	5033.00	7.4800	121.0300	-279.60	534.95	4981.70	-283.98	606.14	85.00	1.52	-1.51	-1.80
	5118.00	6.8200	115.6400	-284.63	544.24	5066.04	-289.09	616.71	85.00	1.11	-0.76	-6.34
Tie	MD	Incl	Azim	North	East	TVD	VS	Incr VS	Crs Len	DLS	Build	Turn
	ft	deg	deg	ft	ft	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft
	5203.00	5.5700	114.6000	-286.53	552.54	5150.54	-293.06	625.88	85.00	1.48	-1.47	-1.22
	5289.00	4.7800	122.6500	-292.20	559.35	5236.19	-296.76	633.62	86.00	1.25	-0.92	9.36
	5374.00	4.2900	120.9000	-296.75	565.06	5320.93	-300.37	640.34	85.00	0.60	-0.58	-2.06
	5459.00	3.6700	123.0400	-298.66	570.07	5405.72	-303.53	646.24	85.00	0.75	-0.73	2.52
	5544.00	2.2400	121.4300	-301.21	573.77	5490.61	-305.91	650.62	85.00	1.69	-1.68	-1.89
	5629.00	1.3000	123.4900	-302.61	575.99	5575.56	-307.33	653.25	85.00	1.11	-1.11	2.42
	5714.00	1.1000	122.1500	-303.58	577.49	5660.54	-308.31	655.03	85.00	0.24	-0.24	-1.58
	5799.00	0.9900	125.7800	-304.44	578.77	5745.53	-309.18	656.58	85.00	0.15	-0.13	4.27
	5884.00	0.6300	136.6400	-305.21	579.69	5830.52	-309.96	657.77	85.00	0.46	-0.42	12.78
	5969.00	0.4300	118.4900	-306.70	580.29	5915.52	-310.45	658.55	85.00	0.30	-0.24	-21.35
	6054.00	0.2700	163.8000	-306.05	580.63	6000.52	-310.80	659.03	85.00	0.36	-0.19	53.31
	6138.00	0.4000	177.6500	-306.53	580.70	6084.52	-311.28	659.52	84.00	0.18	0.15	16.49
	6223.00	0.3900	205.7100	-307.09	580.58	6169.51	-311.84	660.09	85.00	0.23	-0.01	33.01
	6308.00	0.1500	279.6500	-307.33	580.35	6254.51	-312.06	660.42	85.00	0.44	-0.26	86.99
	6393.00	0.0800	331.2100	-307.26	580.21	6339.51	-312.01	660.58	85.00	0.14	-0.08	60.66
	6478.00	0.2000	317.9200	-307.10	580.08	6424.51	-311.84	660.79	85.00	0.15	0.14	-15.64
	6563.00	0.3100	318.0200	-306.62	579.83	6509.51	-311.56	661.16	85.00	0.13	0.13	0.12
	6605.00	0.3300	277.7600	-306.71	579.63	6561.51	-311.46	661.38	42.00	0.53	0.05	-96.86
	6646.00	2.6800	349.1100	-305.71	579.32	6594.49	-310.45	662.44	43.00	6.03	5.47	165.93
	6690.00	5.0900	359.0900	-302.88	579.10	6636.40	-307.62	665.27	42.00	5.94	5.74	23.76
	6733.00	7.5100	4.6900	-298.17	579.30	6679.13	-302.92	669.96	43.00	5.80	5.63	13.02
	6776.00	10.8000	8.2200	-291.38	580.11	6721.58	-296.13	676.82	43.00	7.76	7.65	8.21
	6819.00	13.7600	5.1900	-282.30	581.15	6763.59	-287.06	685.96	43.00	7.04	6.88	-7.05



	6861.00	17.3800	1.6900	-271.05	581.79	6804.04	-275.82	697.23	42.00	8.90	8.82	-8.33
	6904.00	20.7400	357.0800	-257.03	581.58	6844.88	-261.79	711.28	43.00	8.56	7.81	-10.77
	6947.00	25.6700	353.0700	-240.16	580.07	6884.20	-244.92	728.19	43.00	12.03	11.47	-9.28
	6989.00	29.0000	349.3600	-221.12	577.09	6921.50	-225.85	747.46	42.00	8.90	7.93	-8.83
	7032.00	33.3200	348.7500	-199.28	572.86	6958.29	-203.98	769.71	43.00	10.07	10.06	-1.42
	7074.00	38.8000	349.8000	-175.00	568.28	6992.23	-179.66	794.42	42.00	13.13	13.05	2.50
	7117.00	44.2400	351.4300	-146.89	563.65	7024.41	-151.51	822.91	43.00	12.90	12.85	3.79
	7159.00	48.0200	352.9200	-116.90	559.54	7053.52	-121.46	853.18	42.00	9.36	9.00	3.55
	7202.00	52.8400	353.9600	-83.98	555.77	7080.90	-88.53	886.32	43.00	11.36	11.21	2.42
	7245.00	55.5500	354.2700	-49.29	552.19	7106.06	-53.82	921.19	43.00	6.33	6.30	0.72
	7287.00	58.9500	357.1600	-14.07	549.57	7128.78	-18.58	956.50	42.00	9.95	8.10	6.88
	7327.00	62.5200	359.3200	20.80	548.51	7148.33	18.30	991.39	40.00	10.09	8.92	5.40
	7370.00	66.3600	2.6200	59.57	549.19	7166.88	55.06	1030.16	43.00	11.30	8.93	7.67
	7413.00	69.1300	3.1800	99.31	551.20	7183.17	94.78	1069.96	43.00	6.55	6.44	1.30
	7455.00	71.3800	3.7100	138.77	553.58	7197.35	134.22	1109.48	42.00	5.49	5.38	1.26
	7498.00	73.9800	3.6200	179.73	556.20	7210.15	175.16	1150.53	43.00	6.05	6.05	-0.21
	7540.00	76.9400	3.2600	220.30	558.64	7220.70	215.72	1191.18	42.00	7.10	7.05	-0.86
	7583.00	80.0800	3.4600	262.37	561.11	7229.26	257.75	1233.31	43.00	7.32	7.30	0.47
	7629.00	84.3800	3.2300	307.65	563.77	7235.48	303.22	1276.88	46.00	9.36	9.35	-0.50
	7760.00	87.6200	2.8600	438.33	570.71	7244.62	433.64	1409.54	131.00	2.49	2.47	-0.28
	7852.00	88.6000	2.1300	530.19	574.71	7247.65	525.46	1501.49	92.00	1.33	1.07	-0.79
	7935.00	89.6600	1.0400	613.15	577.01	7248.91	608.40	1584.48	83.00	1.83	1.28	-1.31
	8020.00	90.7100	0.2500	698.14	577.96	7248.64	693.38	1669.48	85.00	1.55	1.24	-0.93
	8105.00	91.4800	0.1100	783.13	578.23	7247.01	778.36	1754.46	85.00	0.92	0.91	-0.16
	8188.00	92.0700	0.1000	868.09	578.38	7244.44	861.31	1837.42	83.00	0.71	0.71	-0.01
	8273.00	91.4500	359.8700	951.05	578.36	7241.83	946.27	1922.38	85.00	0.78	-0.73	-0.27
	8358.00	91.2000	0.2500	1036.02	578.45	7239.87	1031.24	2007.36	85.00	0.54	-0.29	0.45
Tie	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Incr VS ft	Crs Len ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
	8443.00	89.8300	358.8300	1121.01	577.77	7239.25	1116.24	2092.35	85.00	2.49	-1.85	-1.67
	8528.00	90.8600	0.4600	1206.01	577.24	7238.89	1201.23	2177.35	85.00	2.40	1.45	1.92
	8613.00	89.8100	0.6400	1291.00	578.05	7238.39	1286.21	2262.34	85.00	1.25	-1.24	0.21
	8698.00	89.1100	1.4900	1375.98	579.63	7239.19	1371.18	2347.34	85.00	1.30	-0.82	1.00
	8783.00	88.2100	0.2200	1460.94	580.90	7241.18	1456.13	2432.31	85.00	1.83	-1.06	-1.49
	8868.00	89.9700	0.3100	1545.93	581.30	7242.53	1541.11	2517.30	85.00	2.07	2.07	0.11
	8953.00	88.4900	359.3100	1630.92	581.01	7243.67	1626.10	2602.29	85.00	2.10	-1.74	-1.18
	9037.00	89.9400	358.8300	1714.90	579.65	7244.82	1710.08	2686.28	84.00	1.82	1.73	-0.57
	9122.00	89.7500	358.9700	1799.88	578.02	7245.05	1795.08	2771.28	85.00	0.28	-0.22	0.16
	9207.00	90.9900	359.4300	1884.87	578.83	7244.50	1880.07	2856.27	85.00	1.56	1.46	0.54
	9293.00	90.8800	358.9300	1970.85	575.60	7243.25	1966.08	2942.26	86.00	0.68	-0.36	-0.58
	9378.00	90.5300	359.4900	2055.84	574.43	7242.35	2051.08	3027.26	85.00	0.68	-0.18	0.66
	9463.00	89.0100	358.5700	2140.82	572.99	7242.69	2136.05	3112.25	85.00	2.09	-1.79	-1.08
	9548.00	89.4700	357.2500	2225.75	569.89	7243.82	2221.00	3197.24	85.00	1.64	0.54	-1.55
	9633.00	90.0900	358.1000	2310.68	568.44	7244.15	2305.96	3282.24	85.00	1.24	0.73	1.00
	9718.00	90.5200	357.6100	2395.62	563.26	7243.69	2390.92	3367.24	85.00	0.77	0.51	-0.58
	9803.00	90.1500	356.5100	2480.51	558.90	7243.20	2475.84	3452.24	85.00	1.37	-0.44	-1.29
	9889.00	90.9200	357.7700	2566.39	554.61	7242.39	2561.76	3538.23	86.00	1.72	0.90	1.47
	9974.00	90.5800	358.8300	2651.35	552.09	7241.28	2646.73	3623.22	85.00	1.31	-0.40	1.25
	10059.00	89.5600	359.5700	2736.34	550.90	7241.18	2731.73	3708.22	85.00	1.48	-1.20	0.87
	10144.00	89.5900	358.6000	2821.32	549.55	7241.81	2816.72	3793.22	85.00	1.14	0.04	-1.14
	10229.00	89.2900	358.9600	2906.30	547.74	7242.64	2901.71	3878.21	85.00	0.55	-0.35	0.42
	10314.00	88.4500	0.4700	2991.28	547.31	7244.32	2986.69	3963.19	85.00	2.03	-0.99	1.78
	10397.00	90.1800	1.0100	3074.26	548.39	7245.31	3069.66	4048.18	83.00	2.18	2.08	0.65
	10482.00	91.1700	1.5700	3159.23	550.30	7244.31	3154.61	4131.18	85.00	1.34	1.18	0.66
	10568.00	90.7000	0.3900	3245.21	551.77	7242.90	3240.57	4217.16	86.00	1.48	-0.55	-1.37
	10653.00	90.3600	359.2000	3330.20	551.47	7242.12	3325.57	4302.16	85.00	1.46	-0.40	-1.40
	10738.00	90.1500	358.8700	3415.19	550.03	7241.74	3410.56	4387.16	85.00	0.46	-0.25	-0.39
	10823.00	90.4600	359.7600	3500.18	549.02	7241.29	3495.56	4472.16	85.00	1.11	0.36	1.05
	10908.00	89.8800	358.7800	3585.17	547.93	7241.03	3580.56	4557.15	85.00	1.34	-0.68	-1.15
	10994.00	89.7200	358.7000	3671.15	546.04	7241.33	3666.55	4643.15	86.00	0.21	-0.19	-0.09
	11079.00	88.7100	359.3500	3756.13	544.60	7242.50	3751.54	4728.14	85.00	1.41	-1.19	0.76
	11164.00	89.4100	358.7600	3841.10	543.20	7243.89	3836.52	4813.13	85.00	1.08	0.82	-0.69
	11249.00	89.3500	359.8800	3926.09	542.19	7244.81	3921.51	4898.13	85.00	1.32	-0.07	1.32

	11334.00	90.4600	0.7600	4011.09	542.66	7244.95	4006.50	4983.12	85.00	1.67	1.31	1.04
	11420.00	89.5700	0.1800	4097.08	543.37	7244.93	4092.49	5069.12	88.00	1.24	-1.03	-0.87
	11505.00	90.1900	0.6200	4182.08	543.96	7245.11	4177.48	5154.12	85.00	0.89	0.73	0.52
	11588.00	90.2500	1.1100	4265.07	545.21	7244.79	4260.48	5237.12	83.00	0.59	0.07	0.59
	11673.00	90.0900	0.3098	4350.06	548.27	7244.54	4345.44	5322.12	85.00	0.96	-0.19	-0.94
	11759.00	90.0900	1.0800	4436.06	547.31	7244.40	4431.42	5408.12	86.00	0.90	0.00	0.90
	11844.00	90.2500	0.9300	4521.04	548.80	7244.15	4516.39	5493.12	85.00	0.26	0.19	-0.18
	11929.00	90.4600	0.6600	4606.03	549.98	7243.62	4601.37	5578.12	85.00	0.40	0.25	-0.32
	12014.00	90.5800	0.4200	4691.03	550.78	7242.85	4686.35	5663.11	85.00	0.32	0.14	-0.28
	12099.00	90.8300	359.8700	4776.02	551.00	7241.81	4771.34	5748.11	85.00	0.71	0.29	-0.65
	12184.00	91.1100	0.0700	4861.01	550.95	7240.37	4856.32	5833.09	85.00	0.40	0.33	0.24
	12269.00	89.7800	359.6600	4946.00	550.75	7239.71	4941.32	5918.09	85.00	1.64	-1.56	-0.46
	12355.00	90.7700	359.8300	5032.00	550.37	7239.29	5027.31	6004.09	86.00	1.17	1.15	0.20
	12440.00	90.5200	358.9200	5116.99	549.44	7238.34	5112.31	6089.08	85.00	1.11	-0.29	-1.07
	12525.00	90.8900	359.0300	5201.97	547.92	7237.29	5197.30	6174.07	85.00	0.45	0.44	0.13
	12610.00	91.2600	358.5400	5286.93	548.12	7235.70	5282.28	6259.06	85.00	0.72	0.44	-0.58
Tie	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Incr VS ft	Crs Len ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
	12657.00	91.1600	357.8400	5333.90	544.63	7234.71	5329.25	6306.05	47.00	1.50	-0.21	-1.49
Projection to TD:												
	12713.00	91.1600	357.8400	5389.85	542.52	7233.57	5385.22	6362.04	56.00	0.00	0.00	0.00