

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
3 Sep 14	21:00	1	7202.0	Water Based Mud	10.1	13	9.4	N/A	0/91	Active Pits	2200	N/A
7 Sep 14		3	9744.0	Water Based Mud	10.8	12	9.5	N/A	1/92	Active Pits	1800	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg	API
GRIX	Gamma Ray Data Density	points
GRSI	Gamma Ray Sliding Indicator	unitless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration, 3.0 ft. Avg	ft/hr
TCDX	Downhole Temperature	degF
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 (ft)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12011873	Directional	46.64	6.750	3.000
1	SRIG	12131409	Gamma	43.27	6.750	3.250
2	DIR	12093879	Directional	40.32	6.750	3.250
2	SRIG	12622667	Gamma	36.95	6.750	3.250
2	DIR	12047098	Directional	40.32	6.750	3.250
2	SRIG	10595781	Gamma	36.95	6.750	3.250

Service and Tool Mnemonics

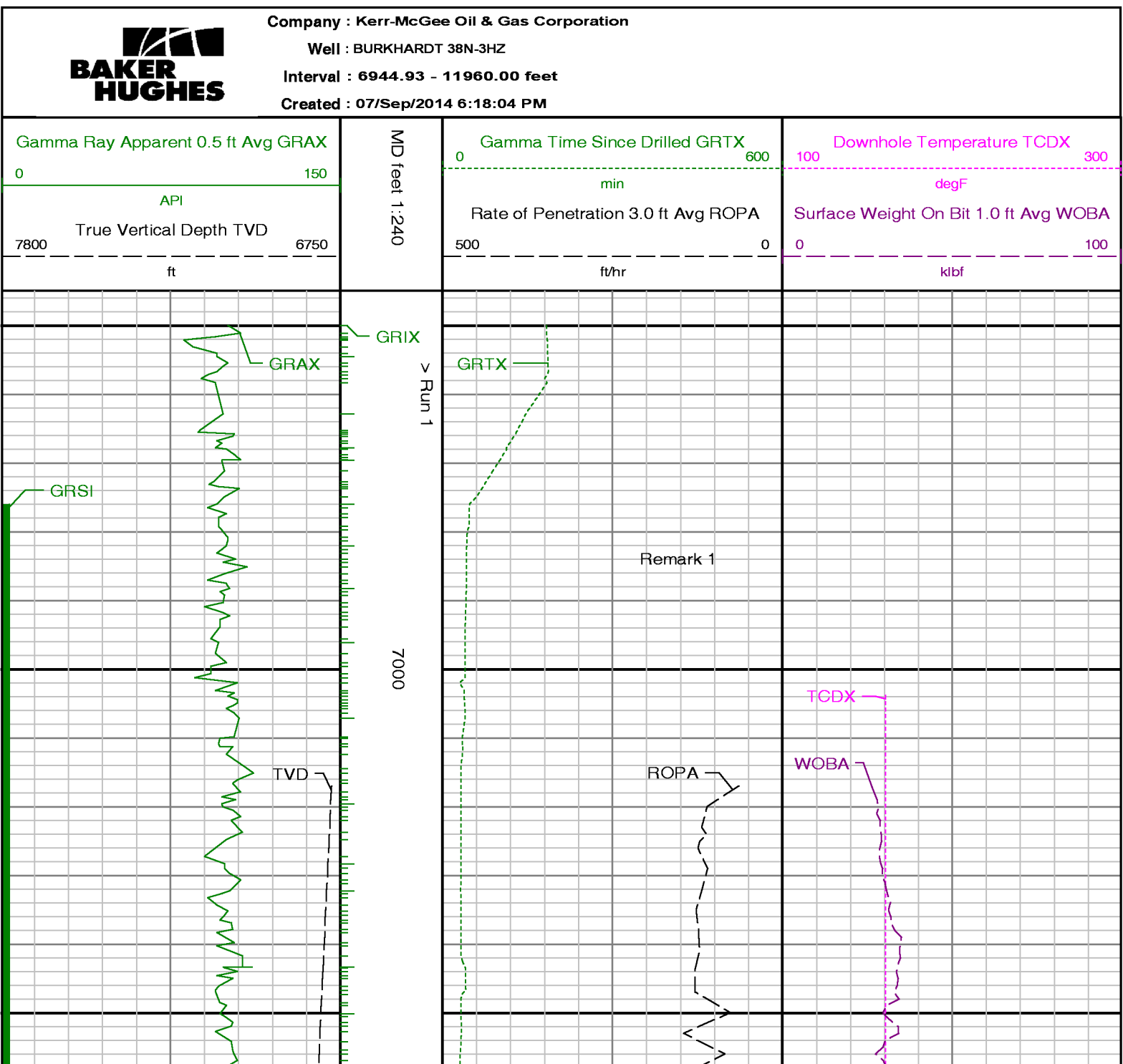
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

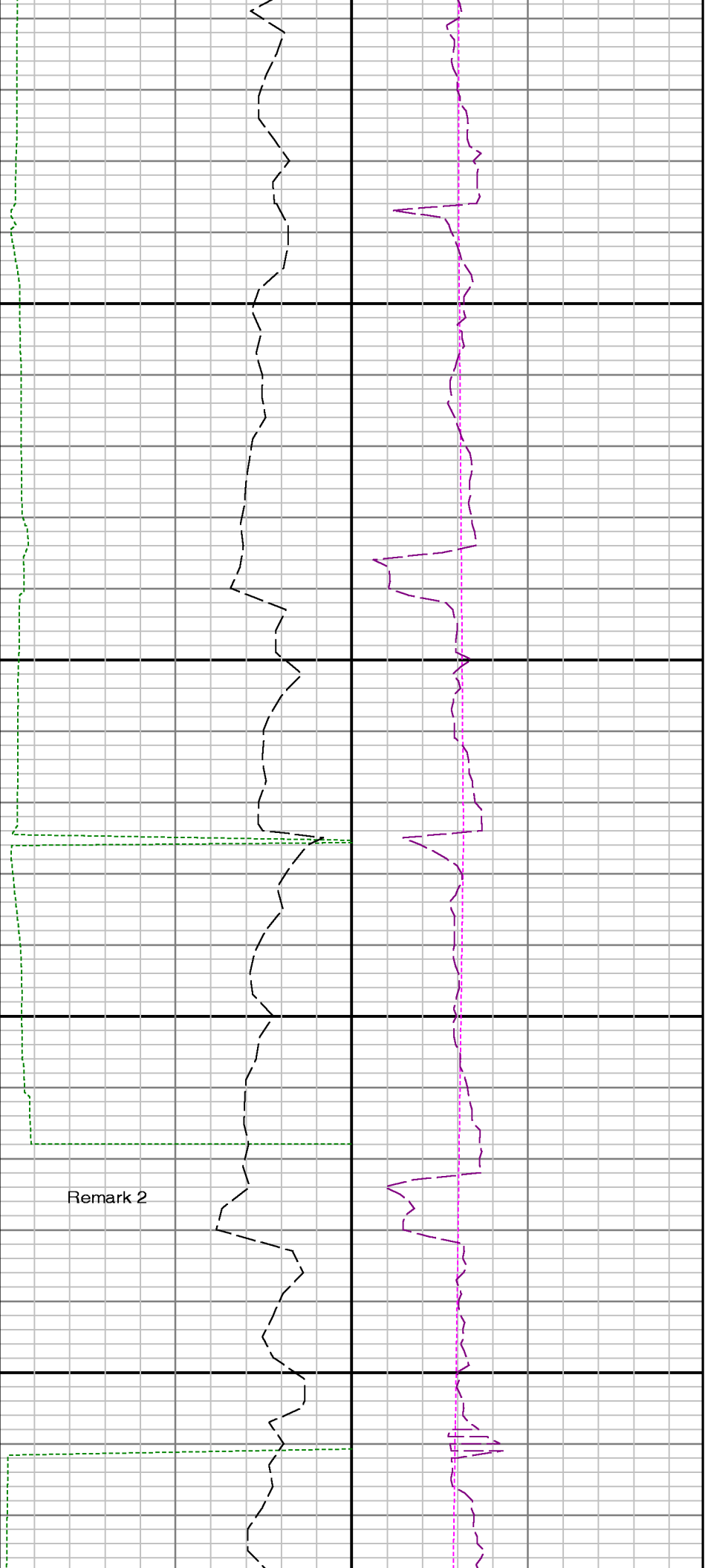
Comments

1.) Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.
2.) Baker Hughes Runs 1 and 2 utilized a 6 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind an 8 3/4 inch bit and steerable assembly from 6997 to 7923 feet MD (6757.35 to 7329.43 feet TVD).
3.) Baker Hughes Run 3 utilized a 4 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind a 6 1/8 inch bit and steerable assembly from 7923 to 11950 feet MD (7329.43 to 7329.38 feet TVD).
4.) A sliding indicator is shown on the left side of track 1 as a heavy line. This indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.

Remarks

Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	6997	8.750	1	Logging services began at 6997. No logging data prior ro 6997 ft MD(6757.35 ft TVD) per Anadarko request
2	7262	8.750	1	The interval from 7217 to 7264 ft. MD(6970.95 to 7011.78 ft TVD) were logged up to 13 hours after being drilled due to tripping out of hole for MWD falure
3	7923	8.750	2	The interval from 7886 to 7923 ft. MD(7326.69 to 7329.43 ft TVD) were logged up to 36 hours after being drilled due to casing and cemen job
4	xxx	6.125	3	The interval from 11905 to 11950 ft. MD(7329.71 t 7329.38 ft TVD) was not logged due to offset to bit at TD.



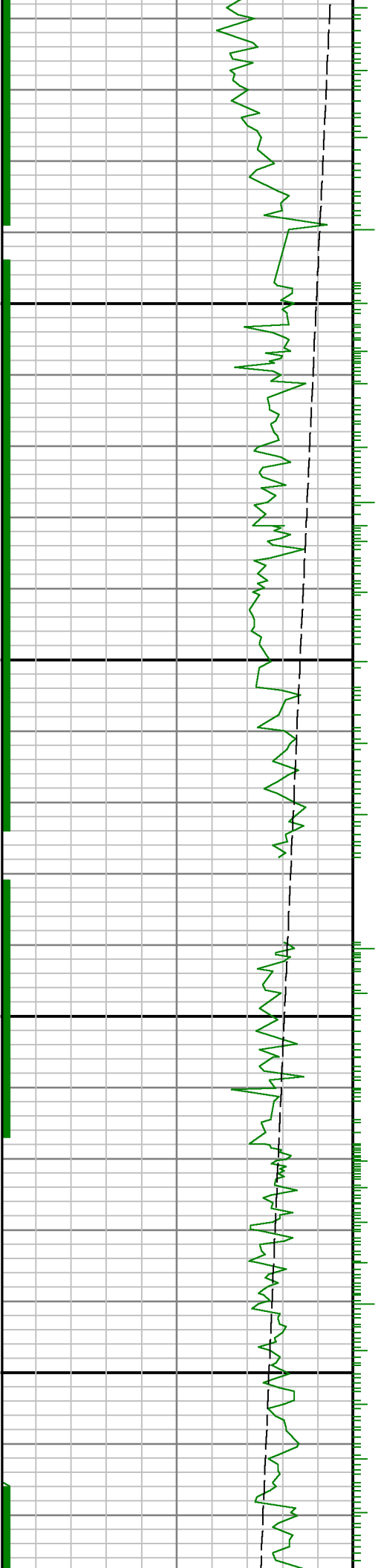


Remark 2

7100

7200

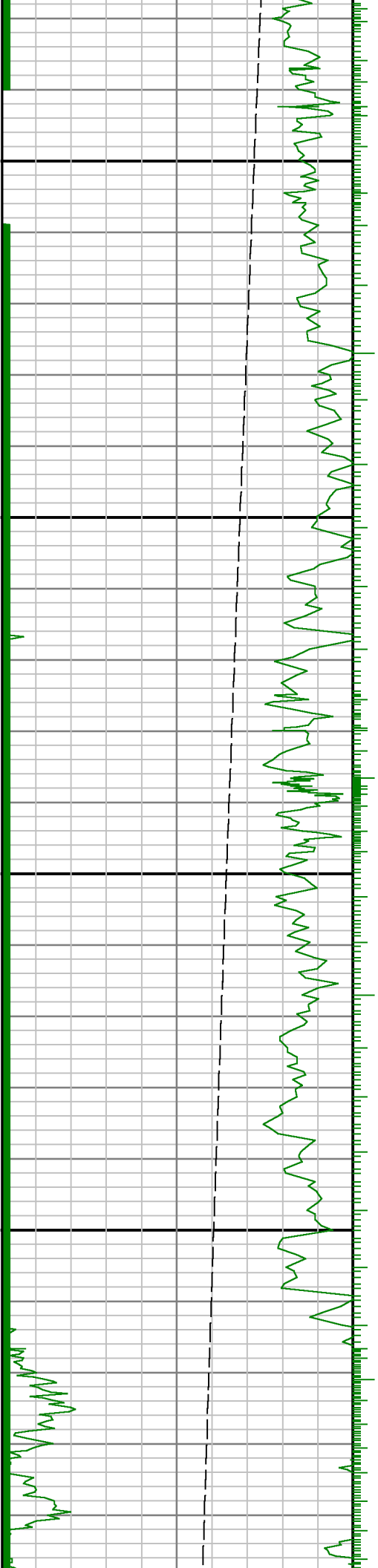
Run 1 ⇔ Run 2

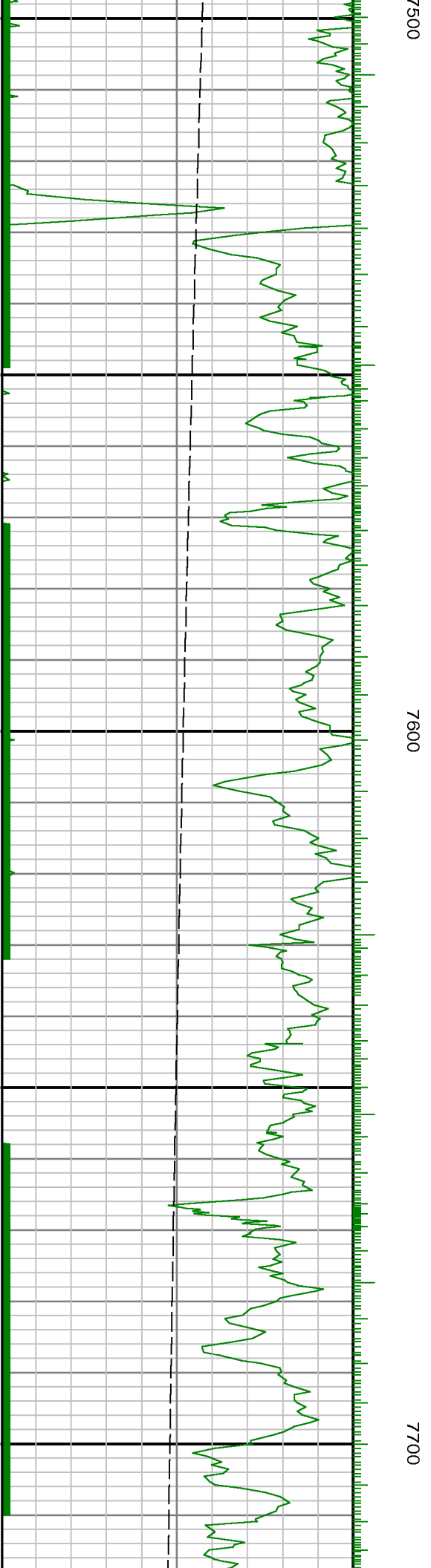
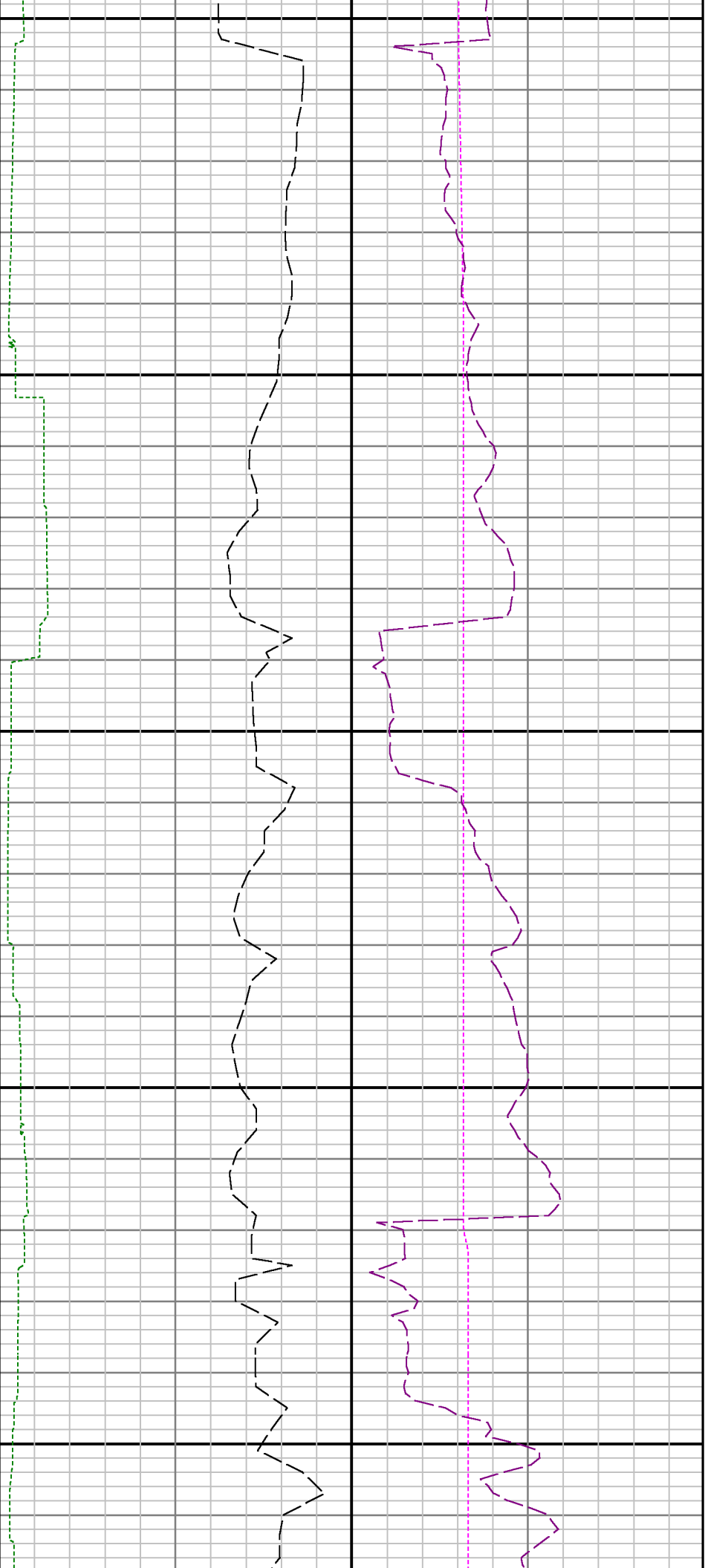


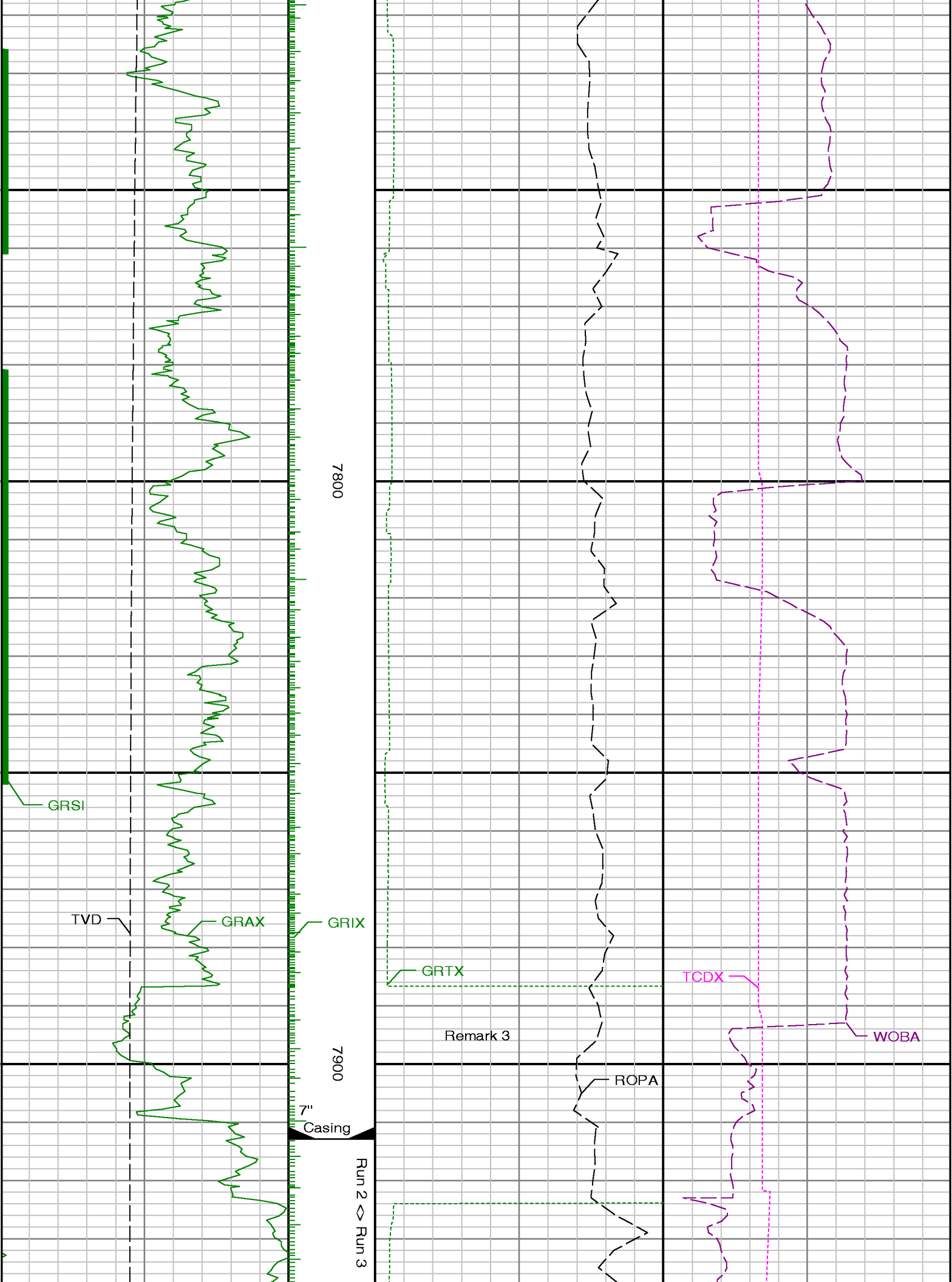


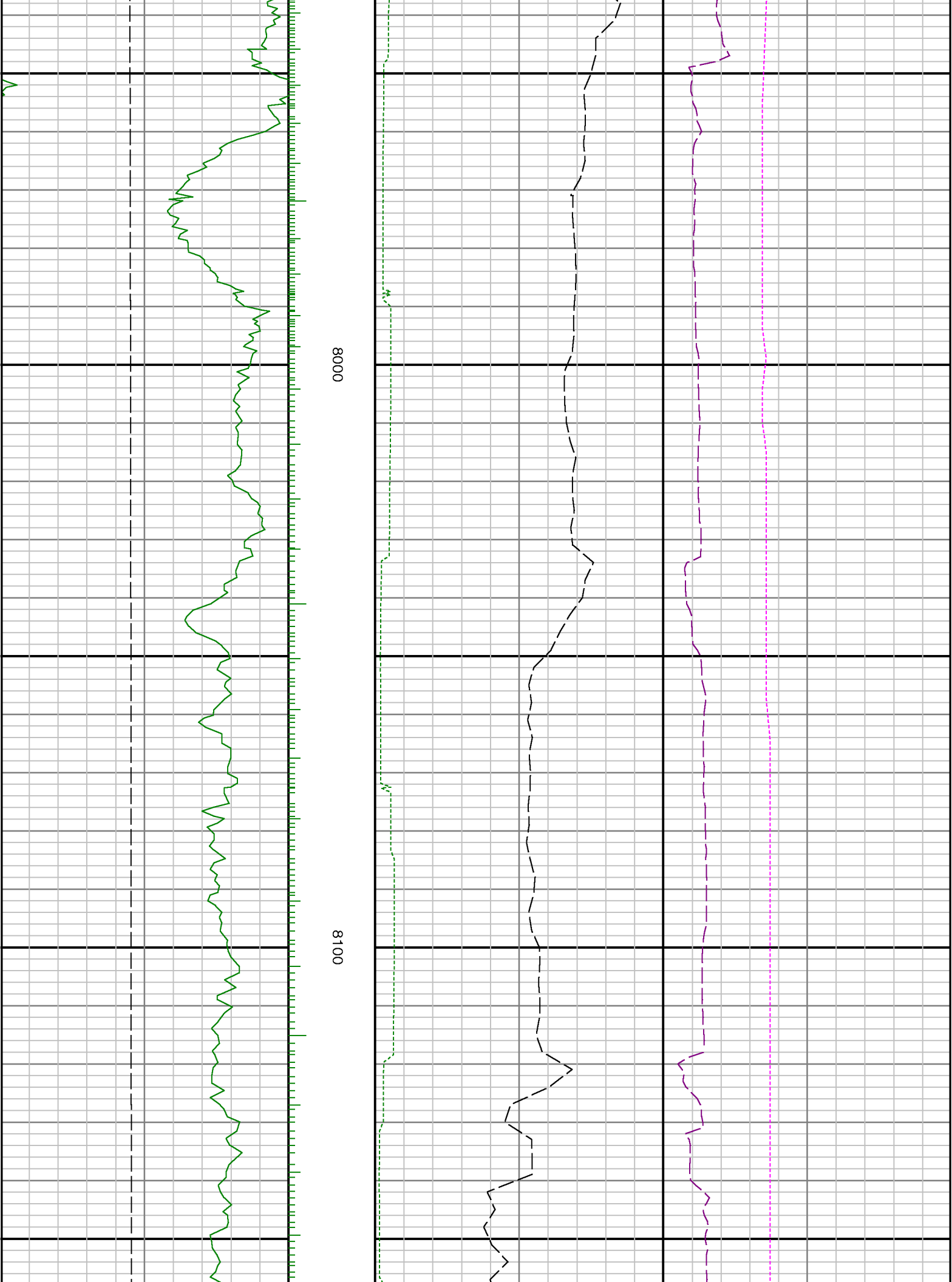
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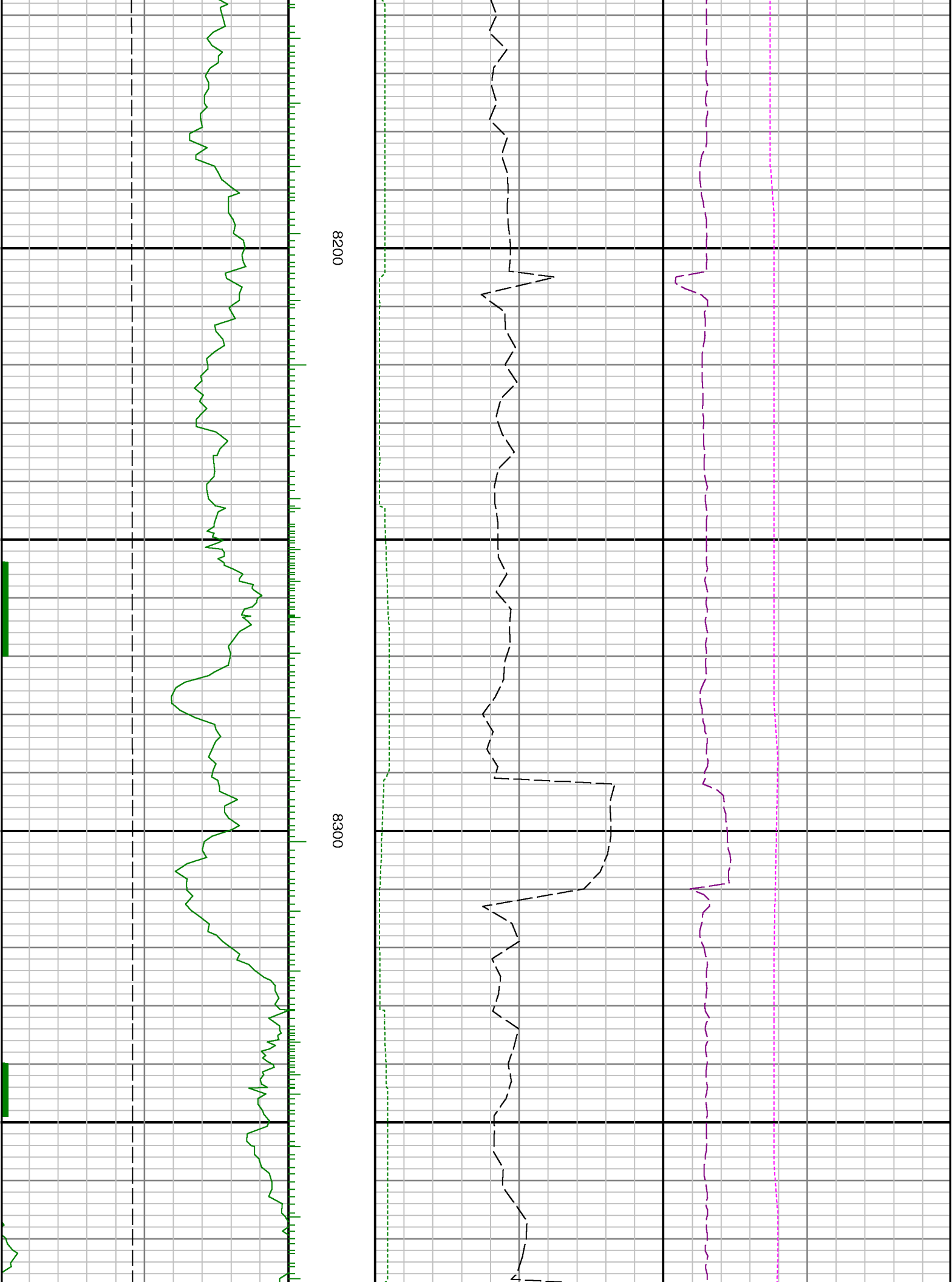
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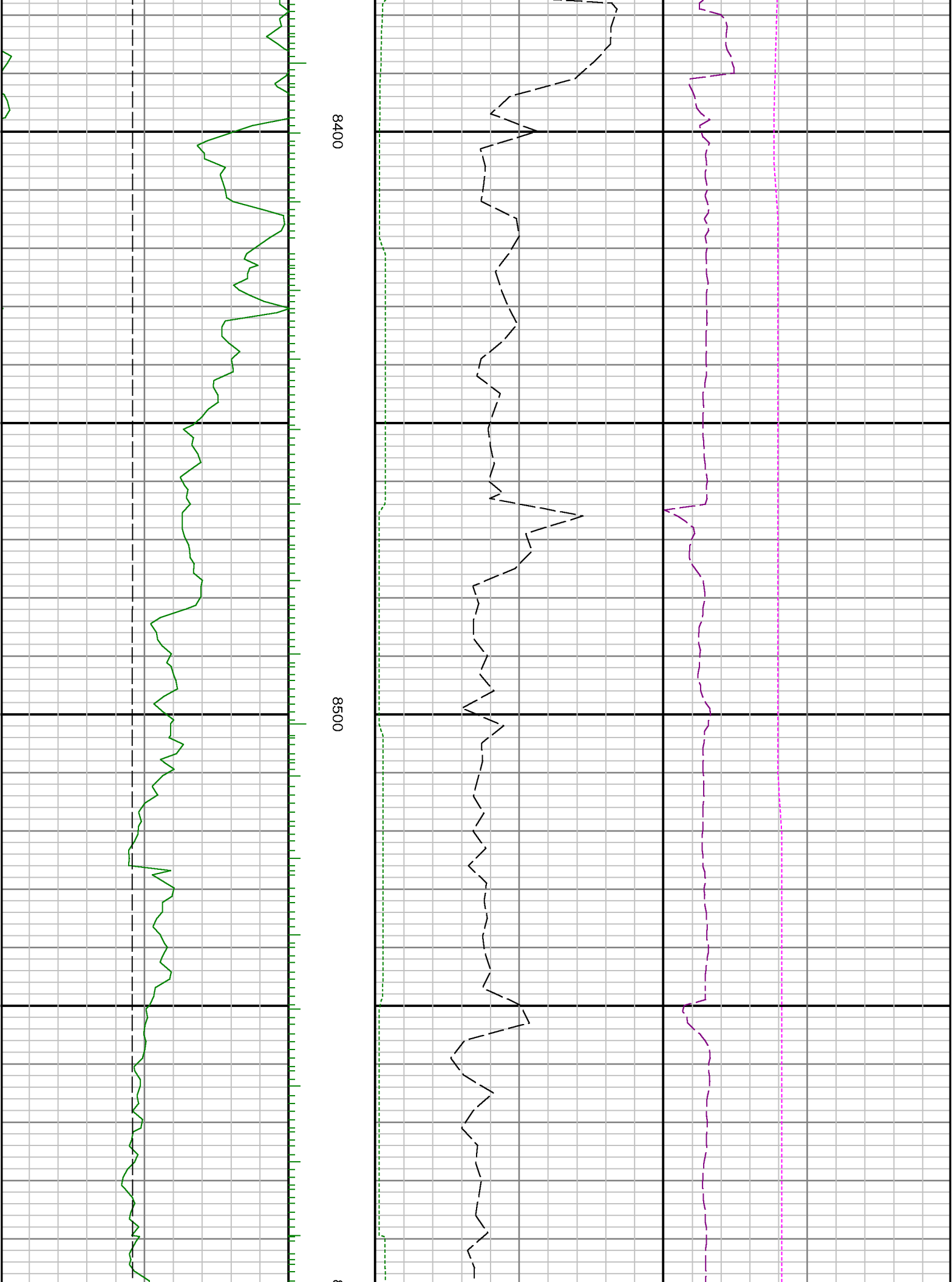


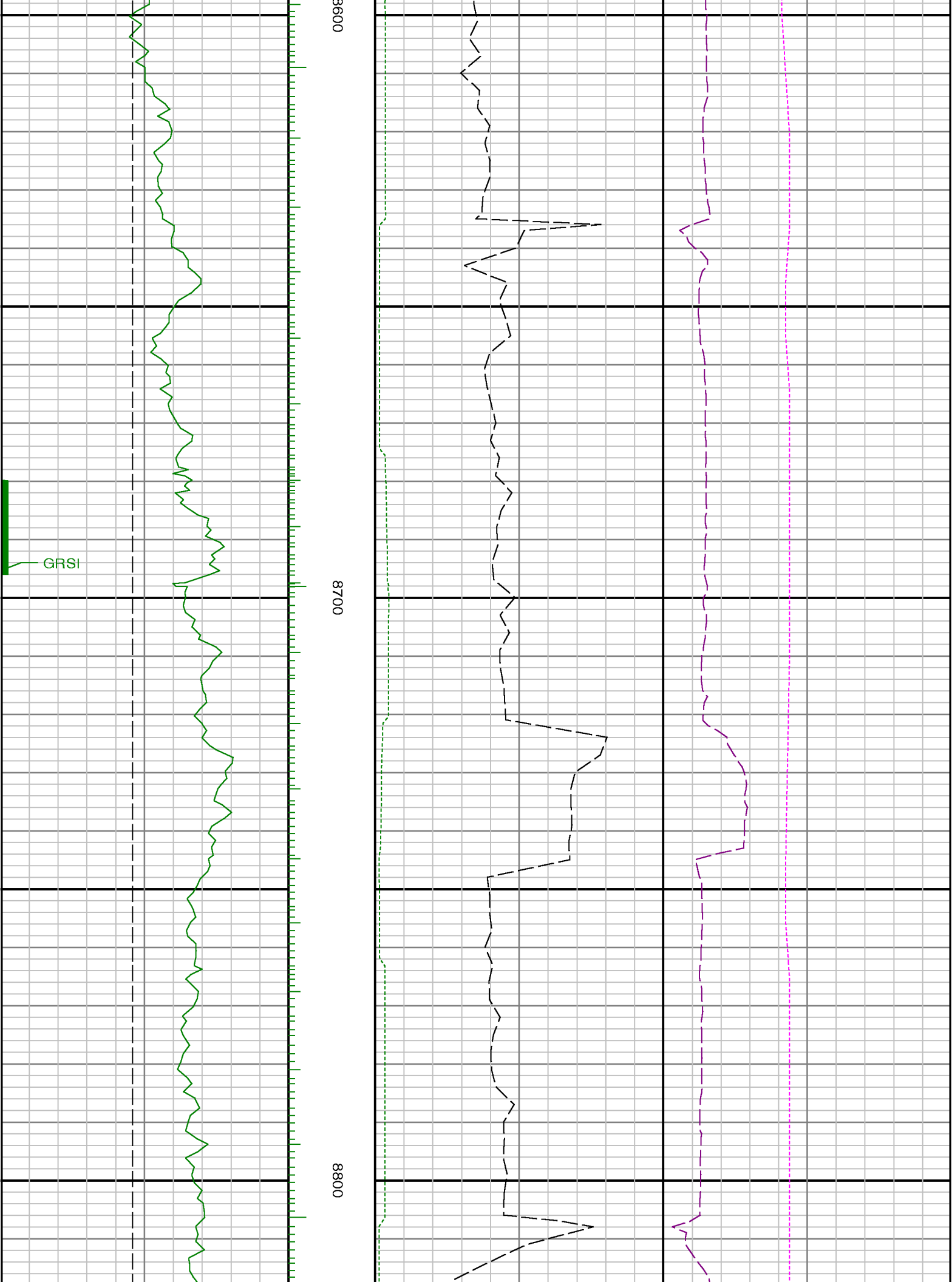


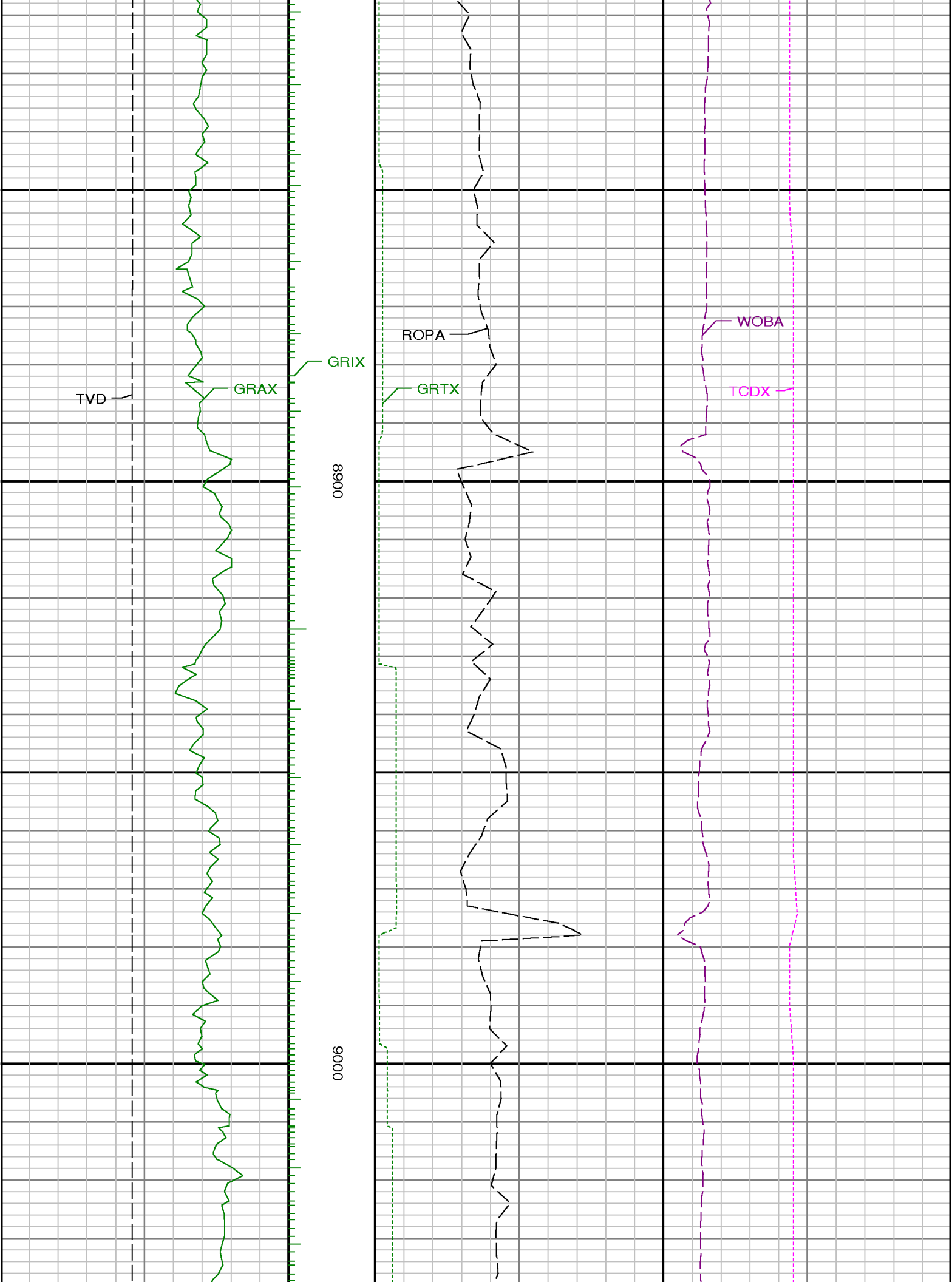


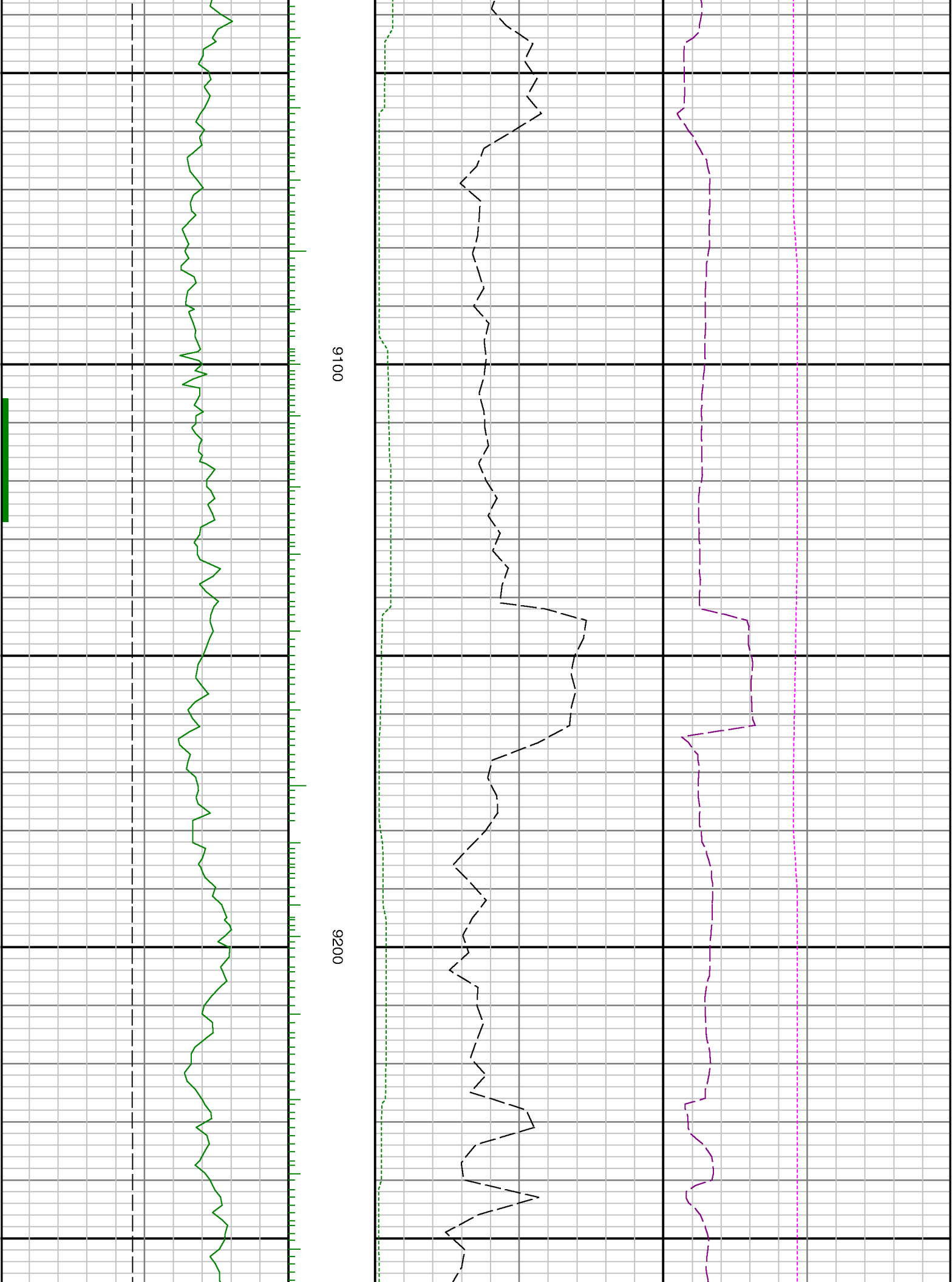


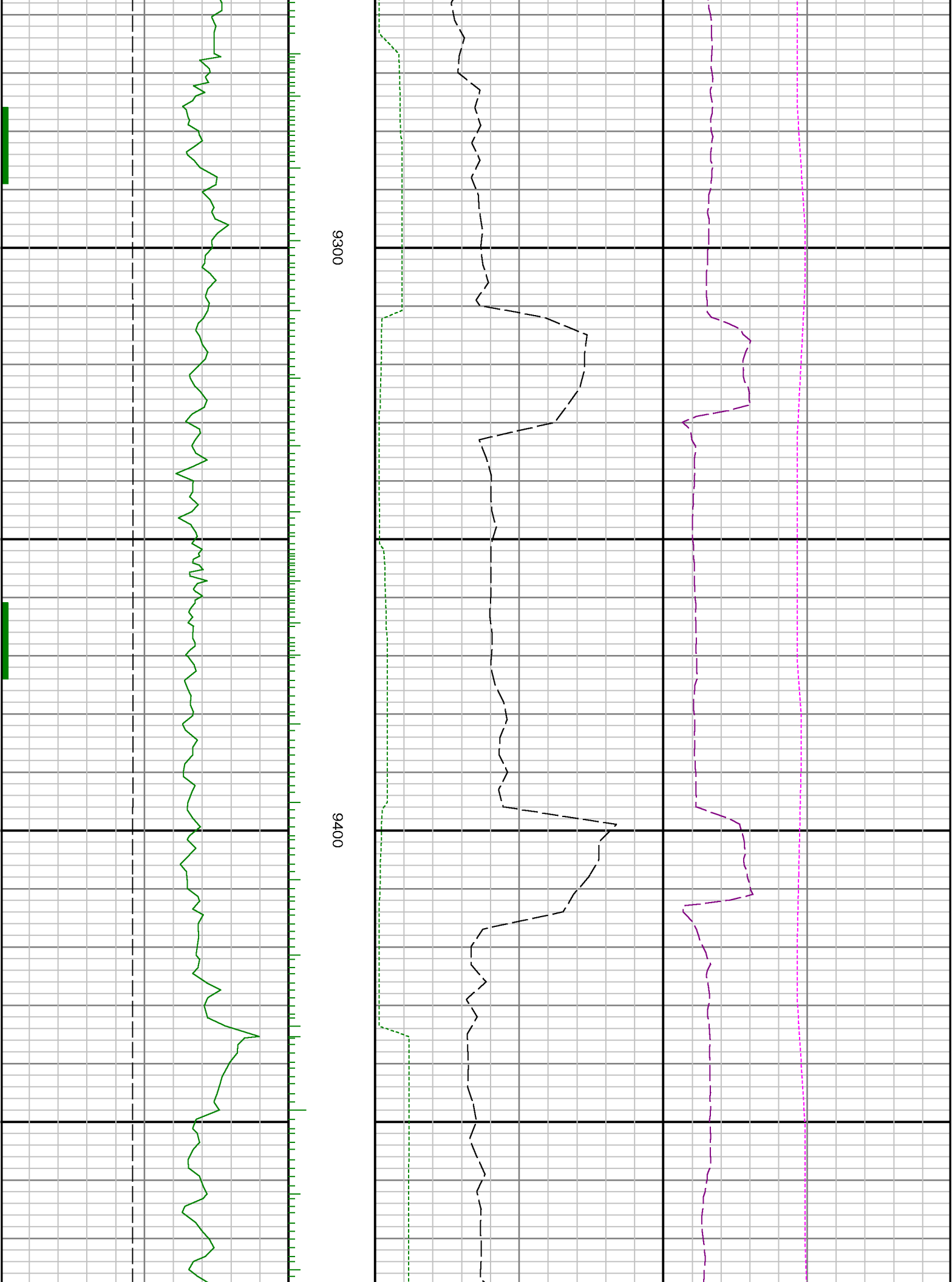


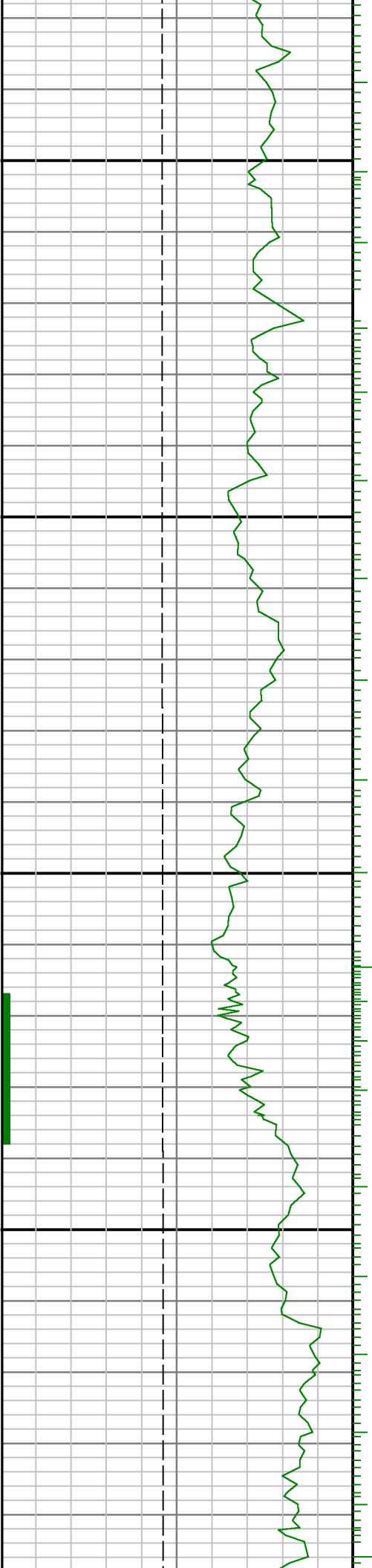








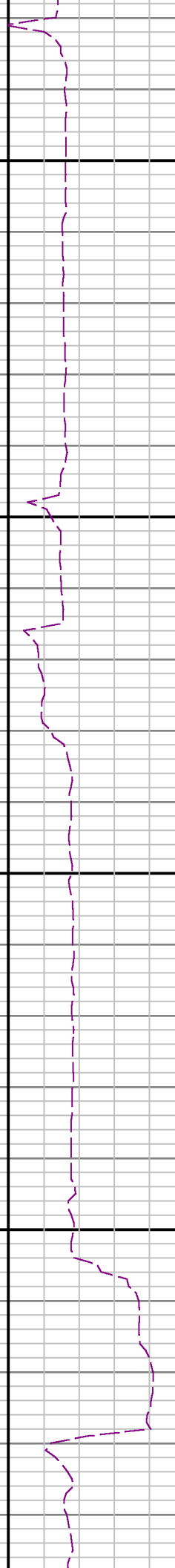
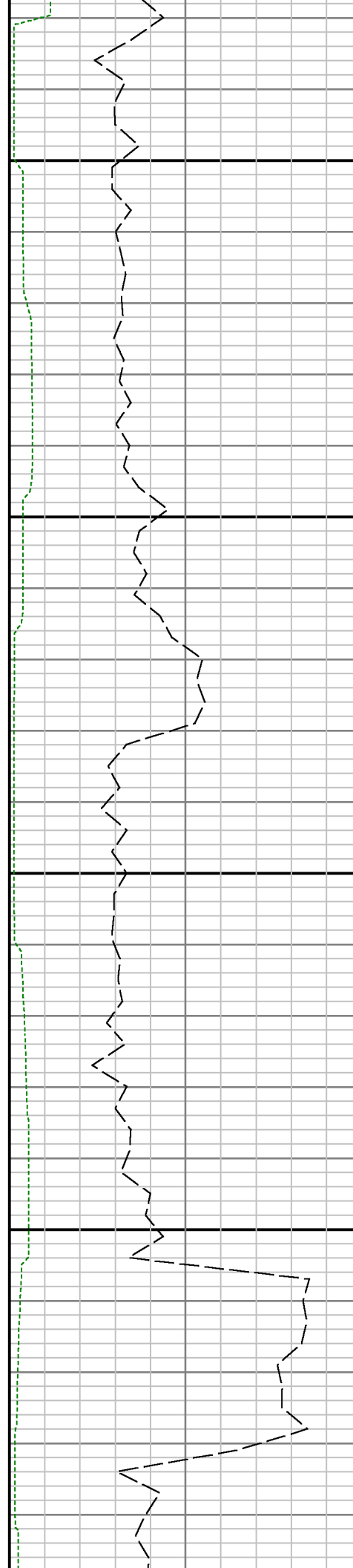


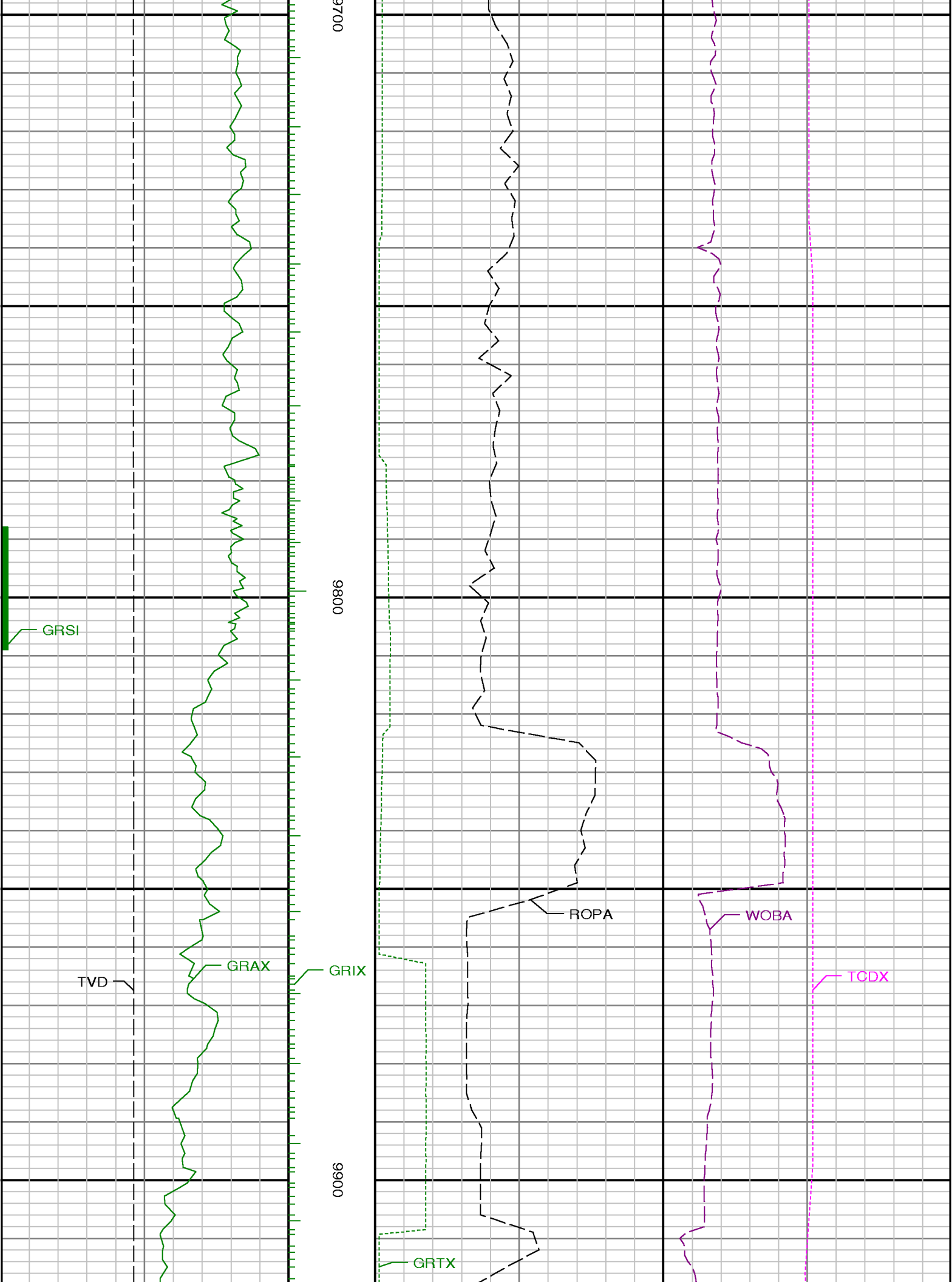


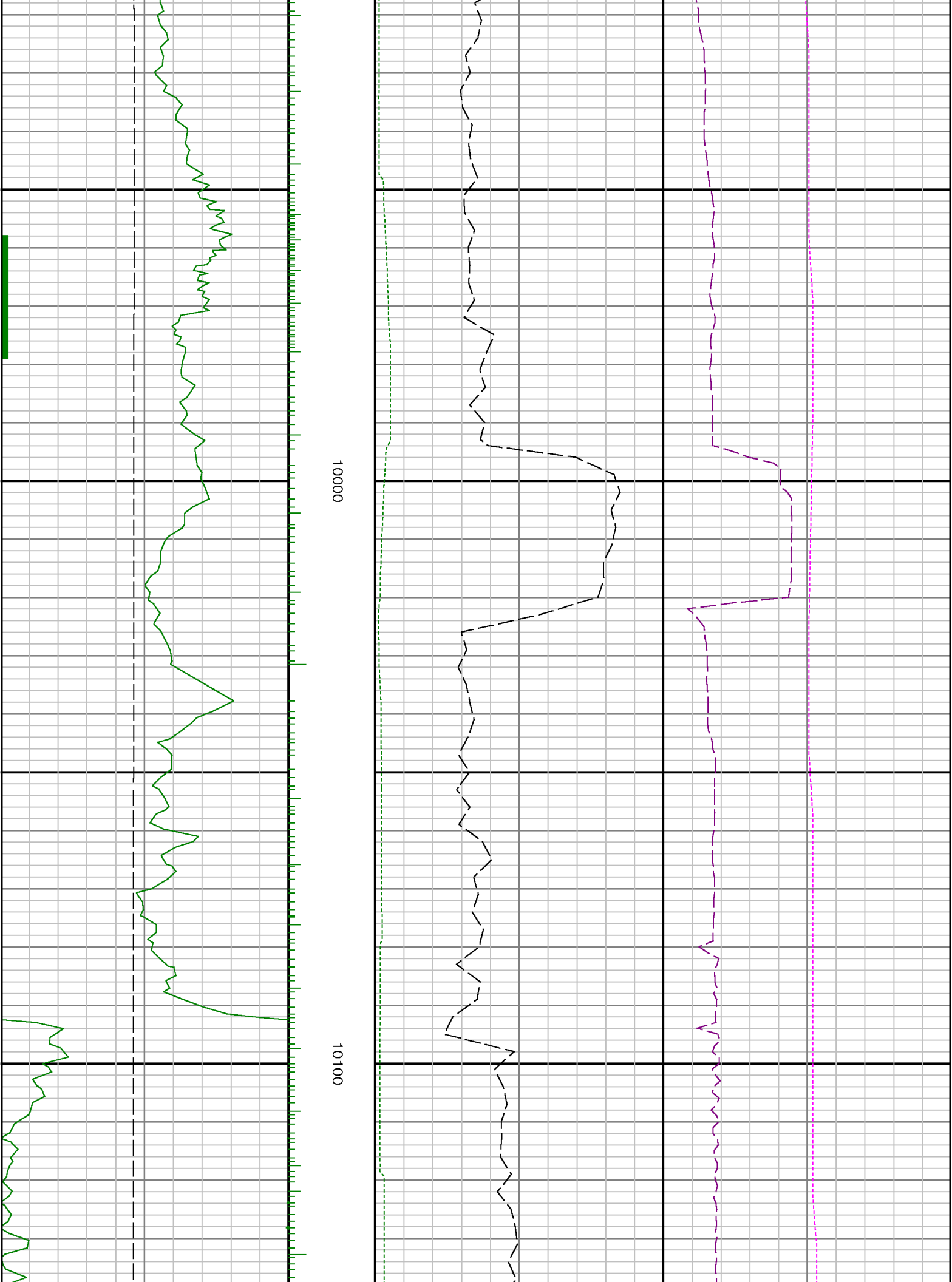
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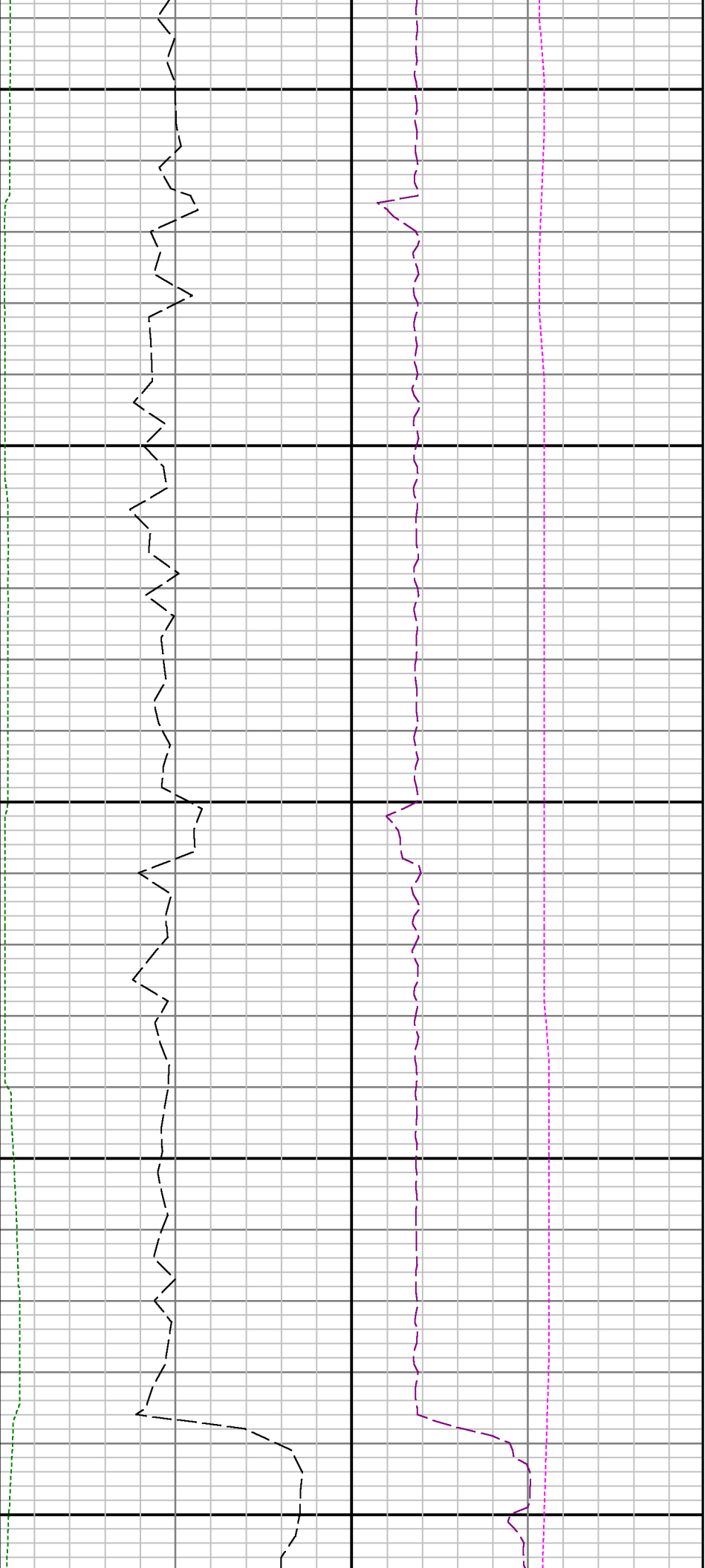
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9



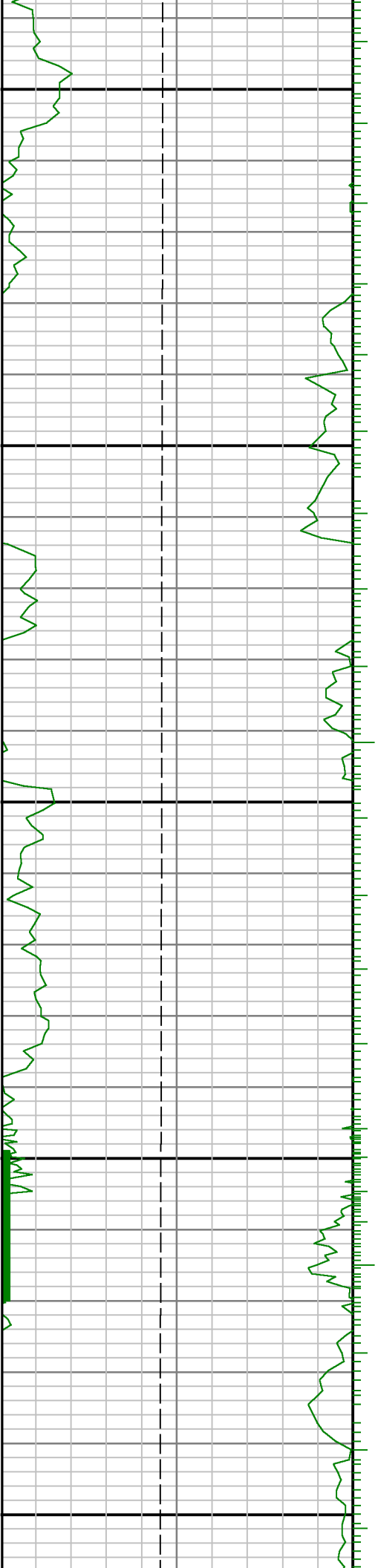




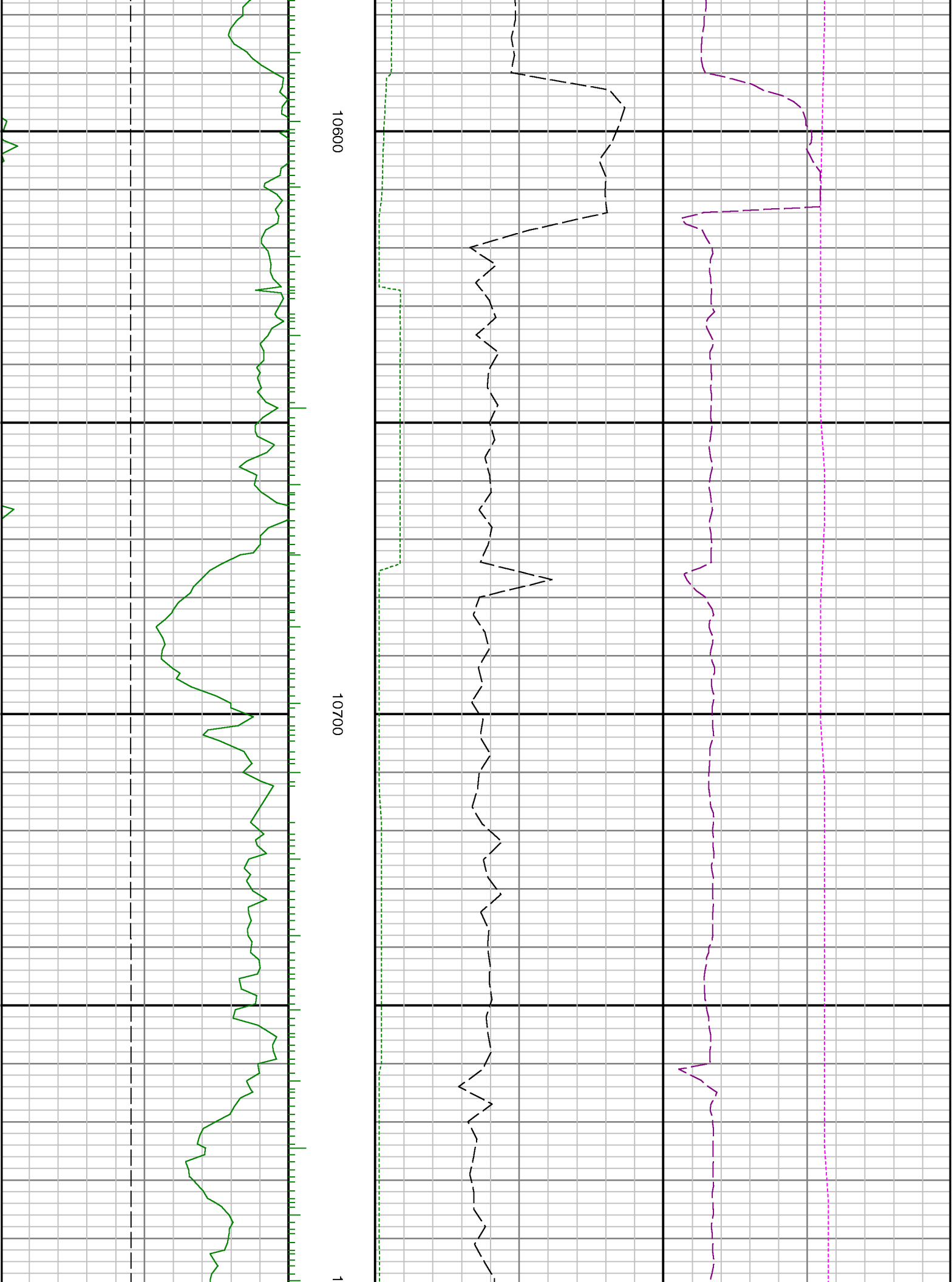


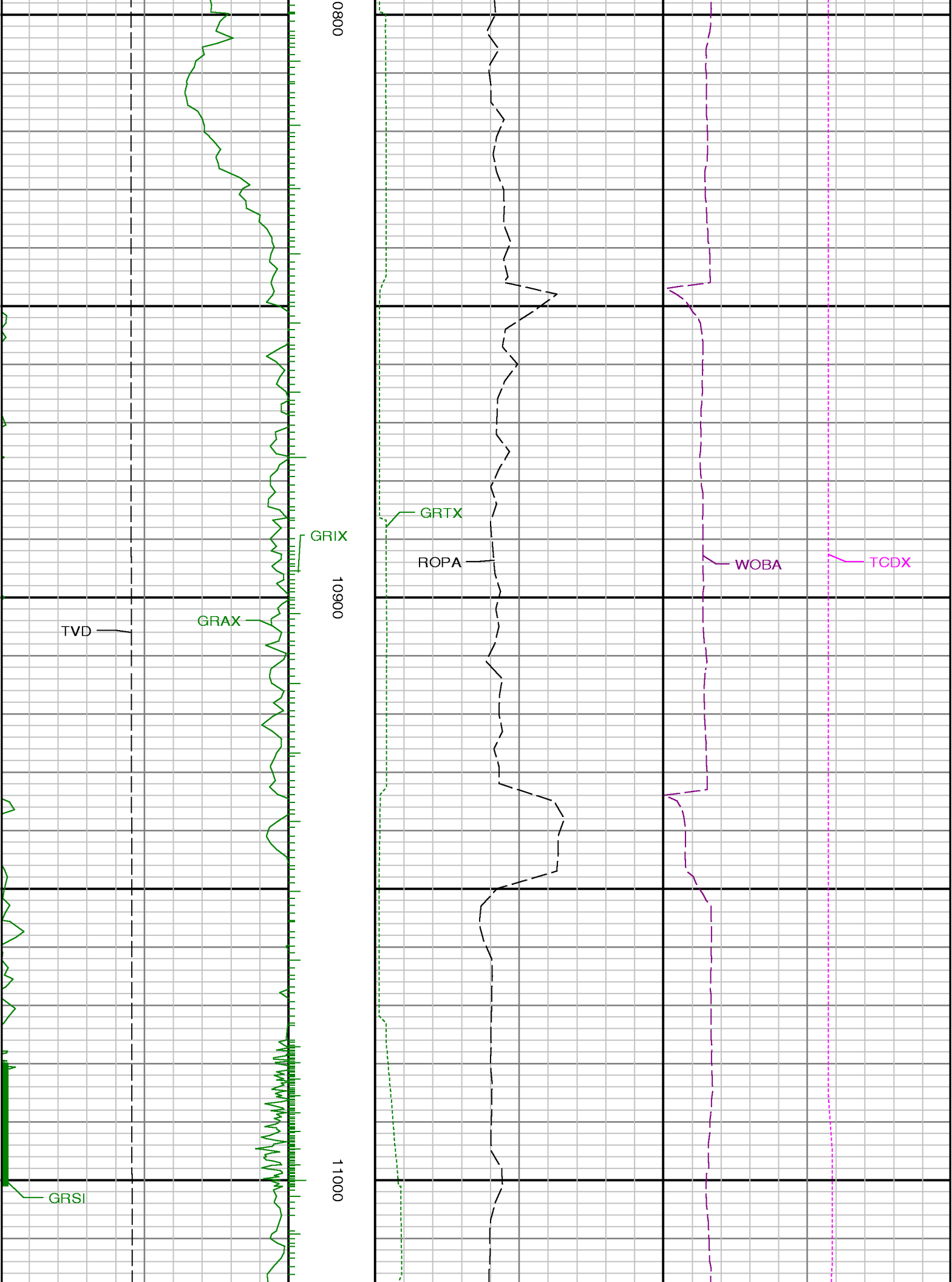
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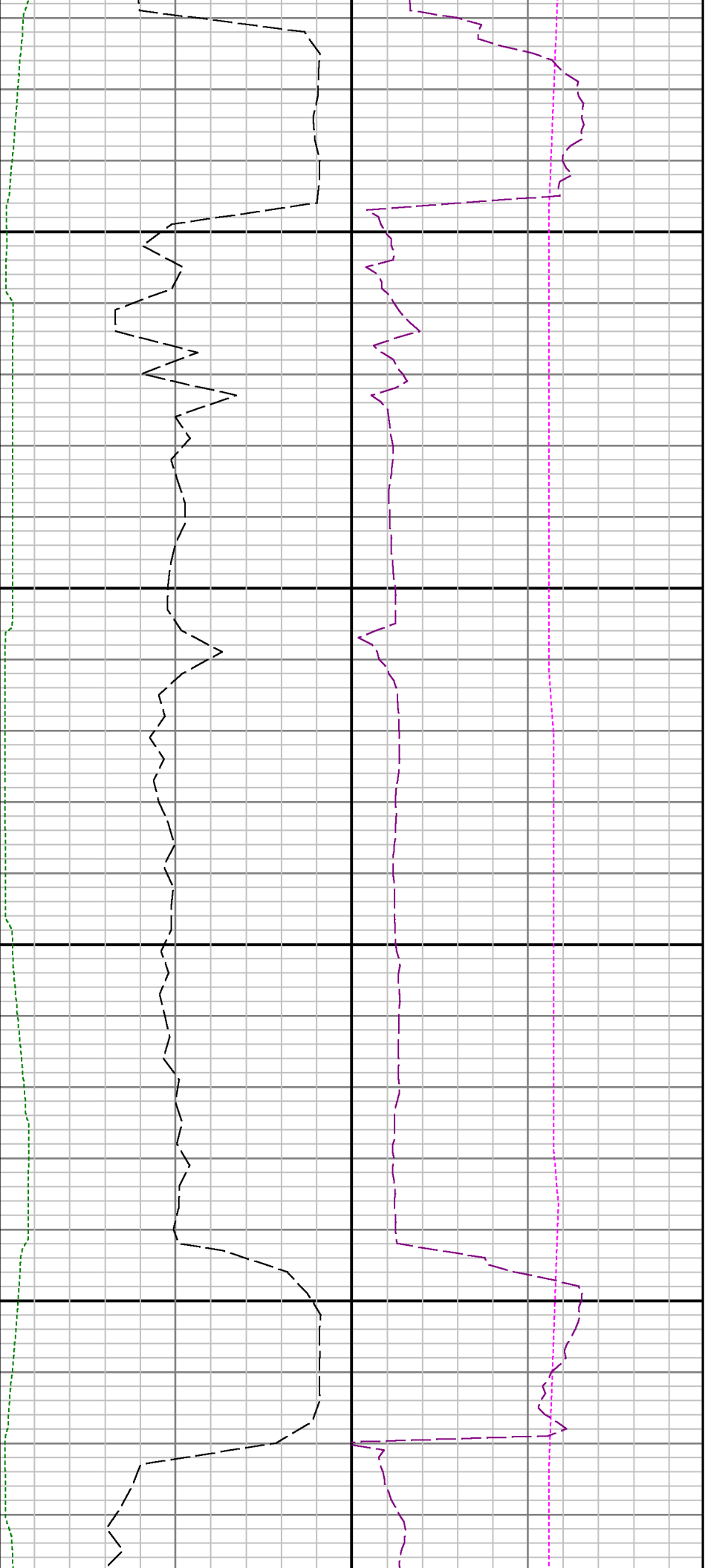
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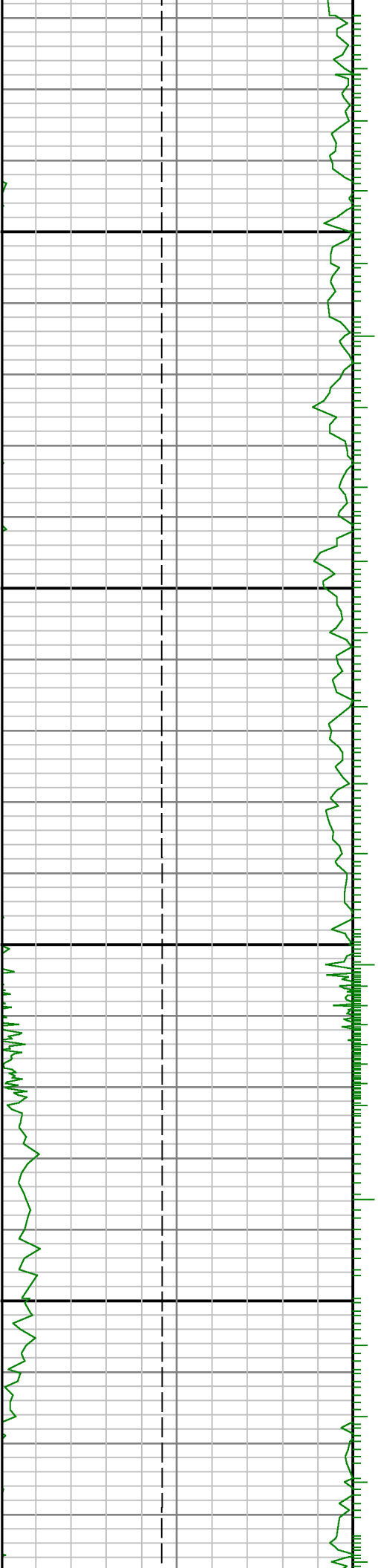


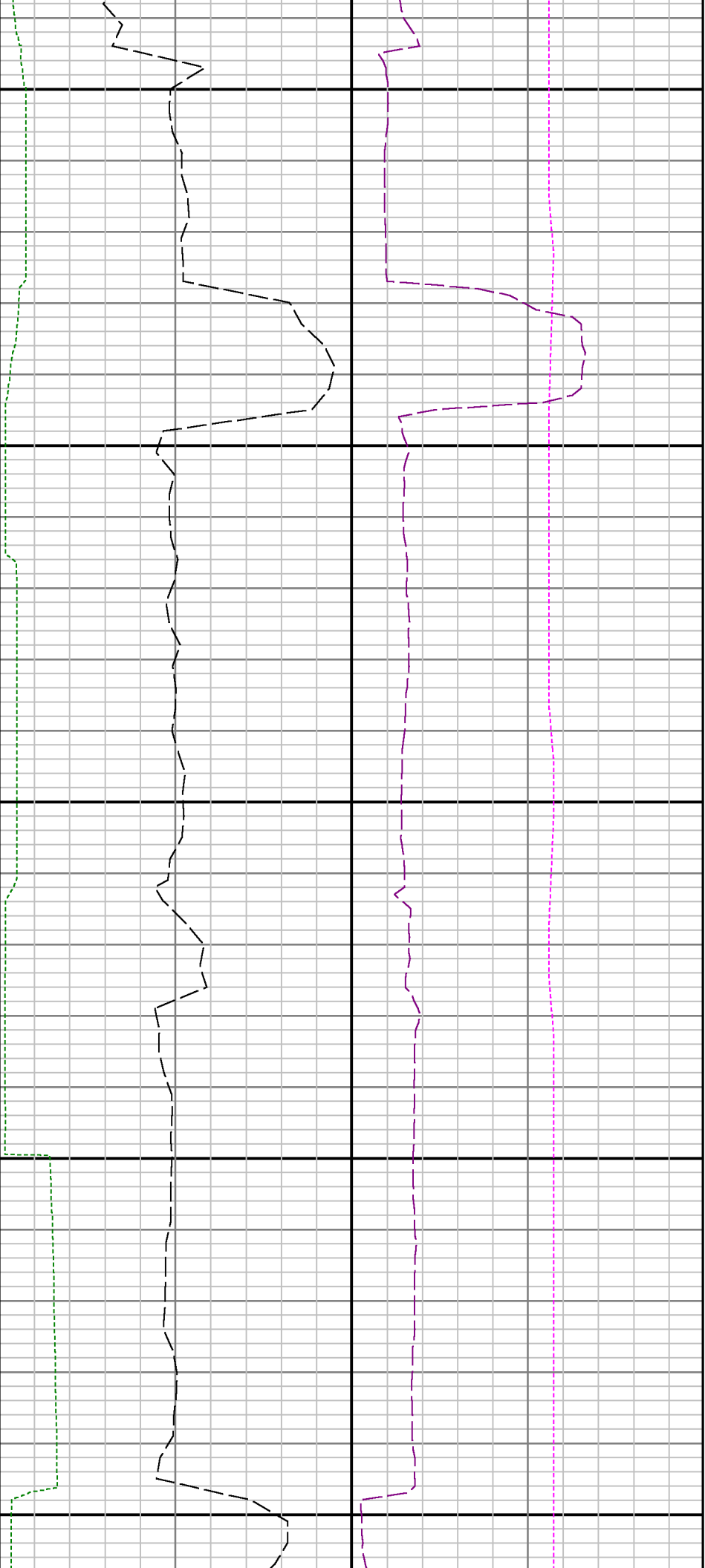




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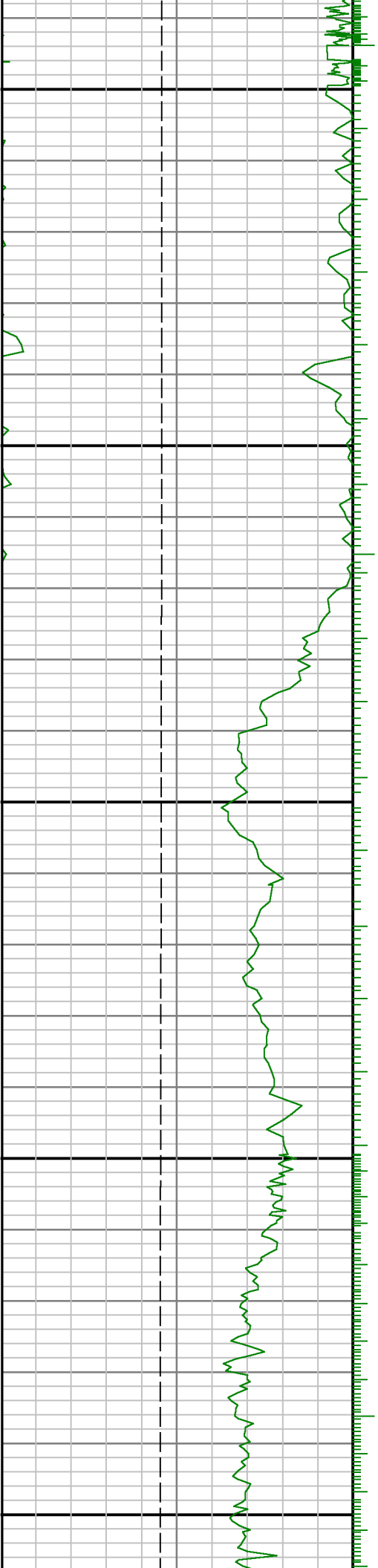
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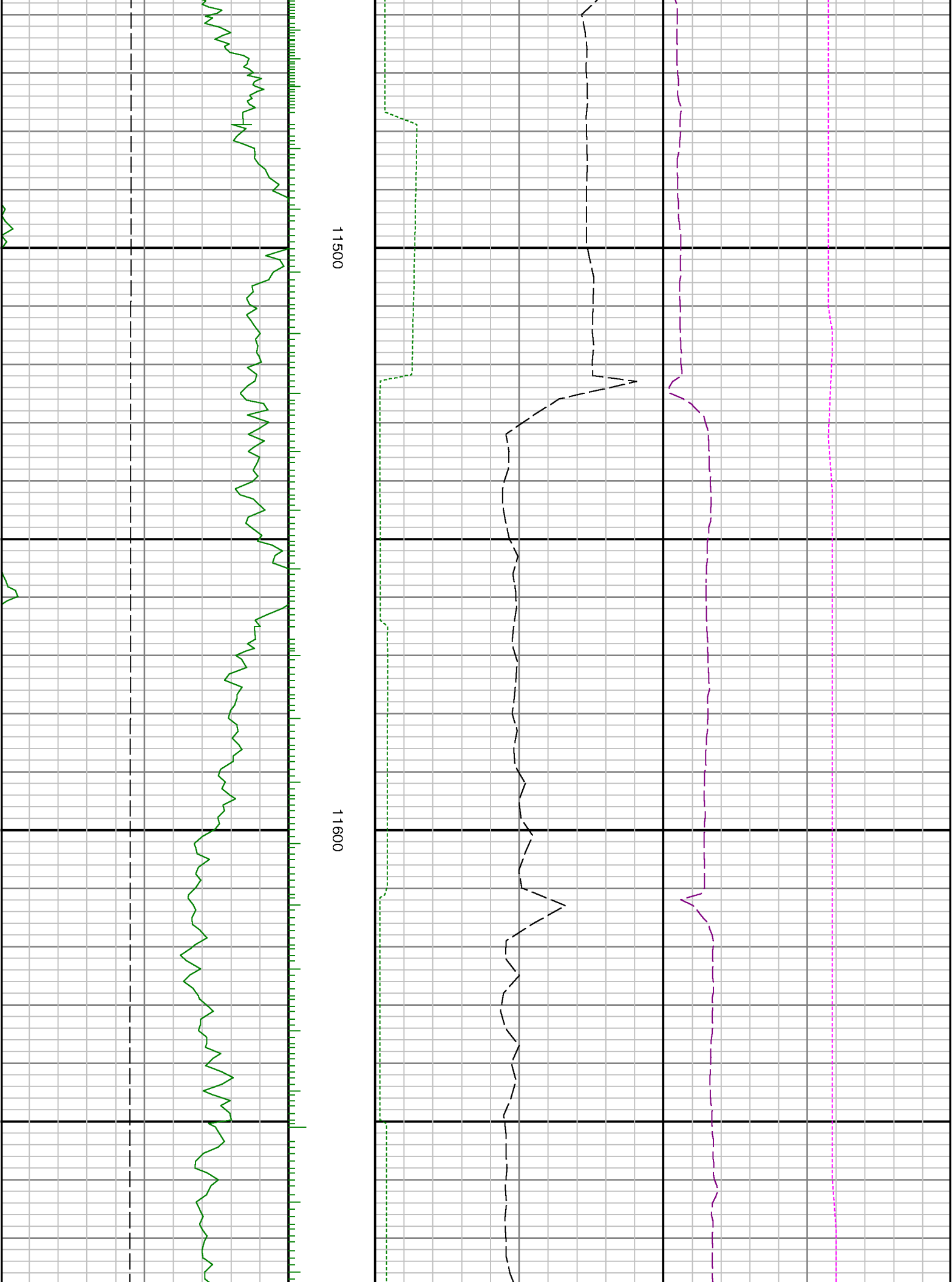


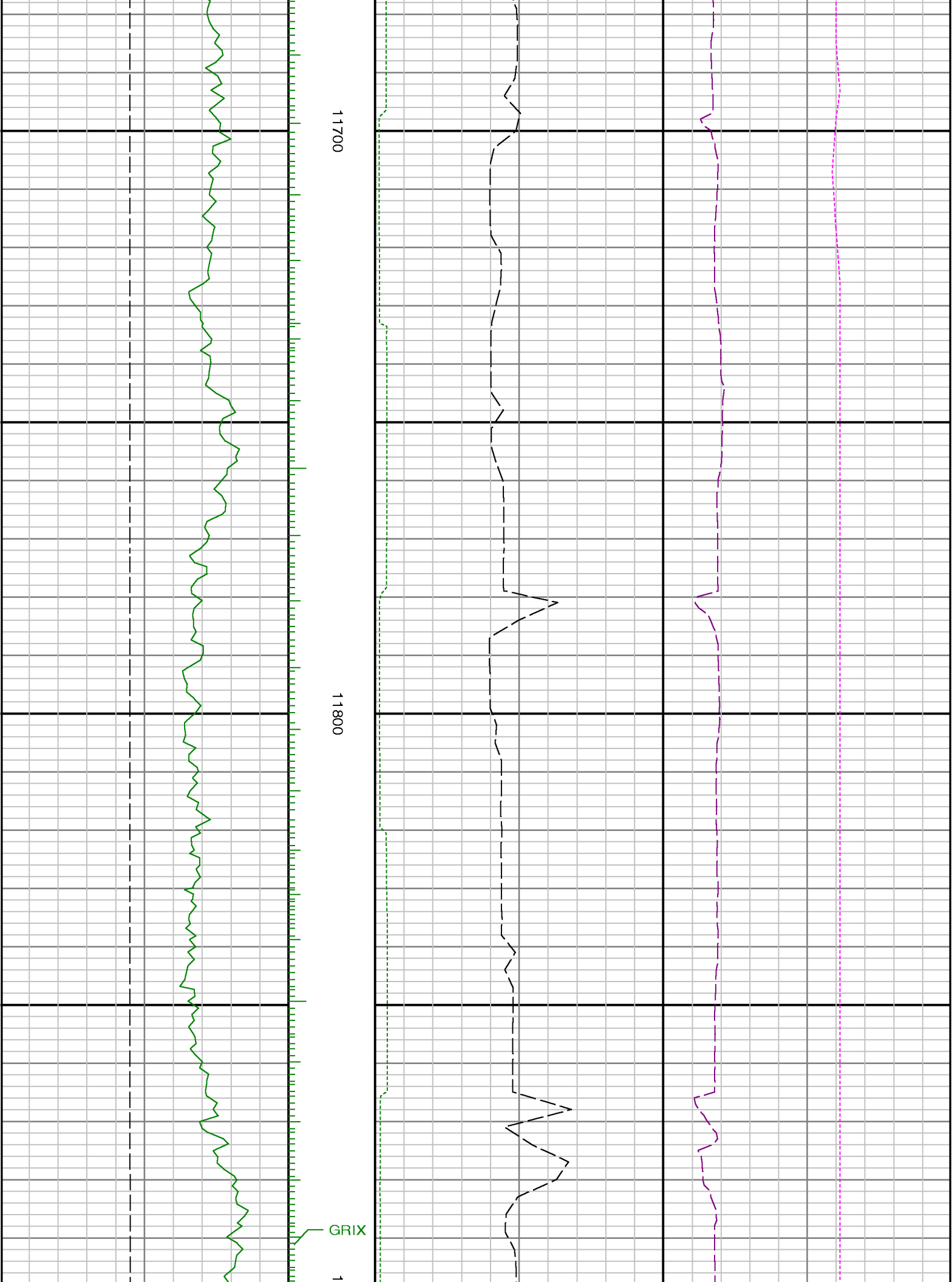


11300

11400







<div>GRAX</div> <div>Remark 4</div> <div>TVD</div>	<div>1900</div> <div>Run 3 <</div> <div>TD</div>	<div></div> <div>ROPA</div>	<div></div> <div>WOBA</div> <div>TCDX</div>
<div>Gamma Ray Apparent 0.5 ft Avg GRAX</div> <div>0150</div> <div>API</div> <div>True Vertical Depth TVD</div> <div>78006750</div> <div>ft</div>	<div>MD feet 1:240</div>	<div>Gamma Time Since Drilled GRTX</div> <div>0600</div> <div>min</div> <div>Rate of Penetration 3.0 ft Avg ROPA</div> <div>5000</div> <div>ft/hr</div>	<div>Downhole Temperature TCDX</div> <div>100300</div> <div>degF</div> <div>Surface Weight On Bit 1.0 ft Avg WOBA</div> <div>0100</div> <div>klbf</div>