



**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+ (%) |
|------------------|---------|---------------------|---------------|---------------|----------------|-----|------------------|-------------|------------|-----------------------|--------|
| 2017-01-14 17:03 | 2       | 2086.00             | Oil Based Mud | 9.8           | 66             | N/A | N/A              | 77/23       | Active Pit | 21000                 | 0.00   |
| 2017-01-16 03:25 | 2       | 6920.00             | Oil Based Mud | 9.8           | 65             | N/A | N/A              | 75/25       | Active Pit | 21000                 | 0.00   |
| 2017-01-16 15:32 | 2       | 8704.00             | Oil Based Mud | 9.9           | 67             | N/A | N/A              | 76/24       | Active Pit | 21000                 | 0.00   |
| 2017-01-17 04:36 | 2       | 12000.00            | Oil Based Mud | 9.9           | 67             | N/A | N/A              | 77/23       | Active Pit | 20000                 | 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) |
|---------|---------|---------------|----------------------|--------------------|-----------------|---------------|---------------|
| 2       | ATC_SU  | 12682276      | Near Bit Inclination | 5.93               | 6.73            | 7.000         | 4.330         |
| 2       | ATC_SU  | 12682276      | Near Bit VSS         | 5.93               | 6.73            | 7.000         | 4.330         |
| 2       | ATC_MWD | 13067101      | Gamma (single)       | 2.75               | 12.90           | 7.000         | 3.250         |
| 2       | ATC_MWD | 13067101      | Directional (mag)    | 12.27              | 22.42           | 7.000         | 3.250         |

**Comments**


- 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.
- Corrosion monitoring system (CAMS) was installed at 1556 feet MD (1556 to 7013 feet TVD).
- Numerous gaps in Real Time Gamma Ray data are present throughout the log due to downlinking while drilling.

**Remarks**

| Number | Measured Depth (ft) | Hole Section (in) | Run No. | Remark  |
|--------|---------------------|-------------------|---------|---|
| 1      | 1550.00             | 8.500             | 2       | Baker Hughes logging services began at 1556 feet MD (1556 feet TVD).  |
| 2      | 15190.00            | 8.500             | 2       | The interval from 15188 to 15200 feet MD (7013 feet TVD) was not logged due to sensor to bit offset at well TD. |

**Curve Mnemonics**

| Presented Curves | Description                         | Units    |
|------------------|-------------------------------------|----------|
| ROPA             | Depth Averaged ROP 3 ft Average     | ft/h     |
| GRAX             | Gamma Ray - Apparent 0.5 ft Average | API      |
| GRIX             | Gamma Ray - Data Point Indicator    | unitless |
| GRTX             | Gamma Time Since Drilled            | min      |
| TCDX             | Downhole Temperature                | degF     |
| TVD              | True Vertical Depth                 | ft       |
| WOBA             | Weight On Bit, Average 1 ft Average | klb      |

|  |                 |                                       |                         |
|--|-----------------|---------------------------------------|-------------------------|
|  | <b>Company</b>  | Great Western Operating CO LLC        |                         |
|  | <b>Well</b>     | Kodak North FD 28-002HN               |                         |
|  | <b>Interval</b> | <b>Date From:</b> 2017-01-15 08:12:07 | <b>Top:</b> 1556.00     |
|  | <b>Created</b>  | <b>Date To:</b> 2017-01-17 20:17:12   | <b>Bottom:</b> 15200.00 |
|  |                 | <b>2017-01-17 21:41</b>               |                         |

|  |               |                                       |   |
|--|---------------|---------------------------------------|---|
| Gamma Ray Apparent 0.5 ft Average GRAX | MD 1:240 feet | Rate of Penetration 3 ft Average ROPA | Surface Weight On Bit 1 ft Average WOBA |
| 0 150                                  |               | 1000 0                                | 0 100                                   |
| API                                    |               | ft/h                                  | klb                                     |
| True Vertical Depth TVD                |               | Gamma Ray Time Since Drilled GRTX     | Downhole Temperature TCDX               |
| 8000 1000                              |               | 0 600                                 | 0 300                                   |

ft

ft

min

degF

9 5/8" Casing

See Remark 1

GRAX

TVD

GRIX

>R2

GRTX

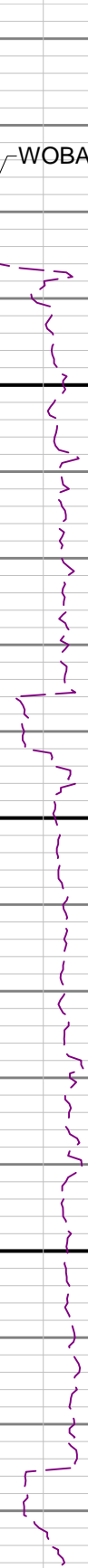
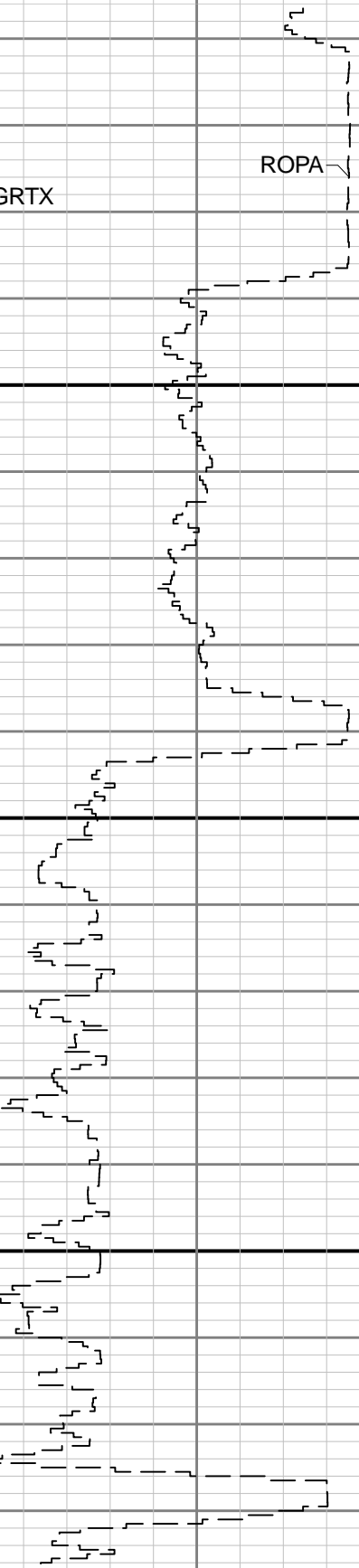
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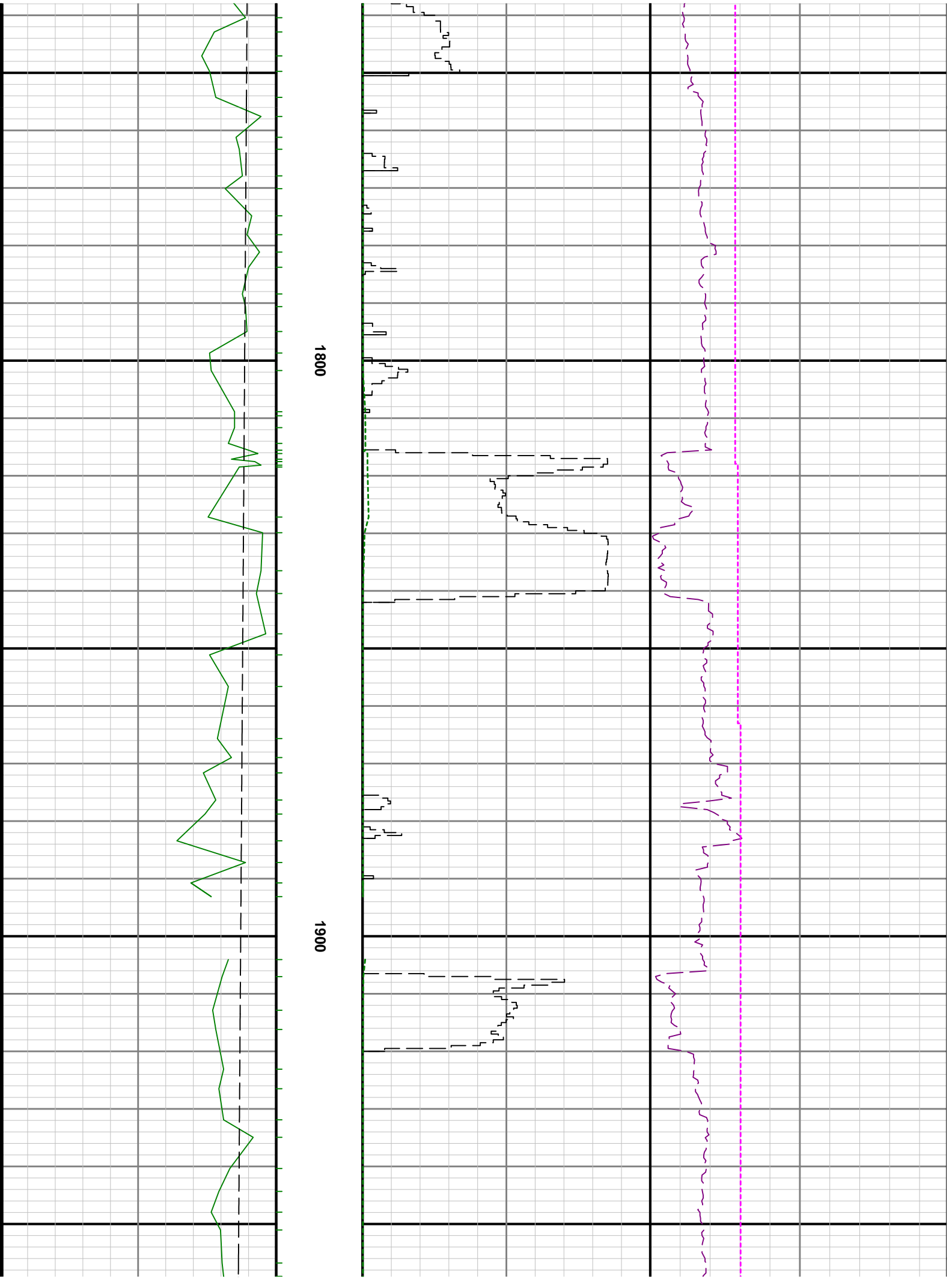
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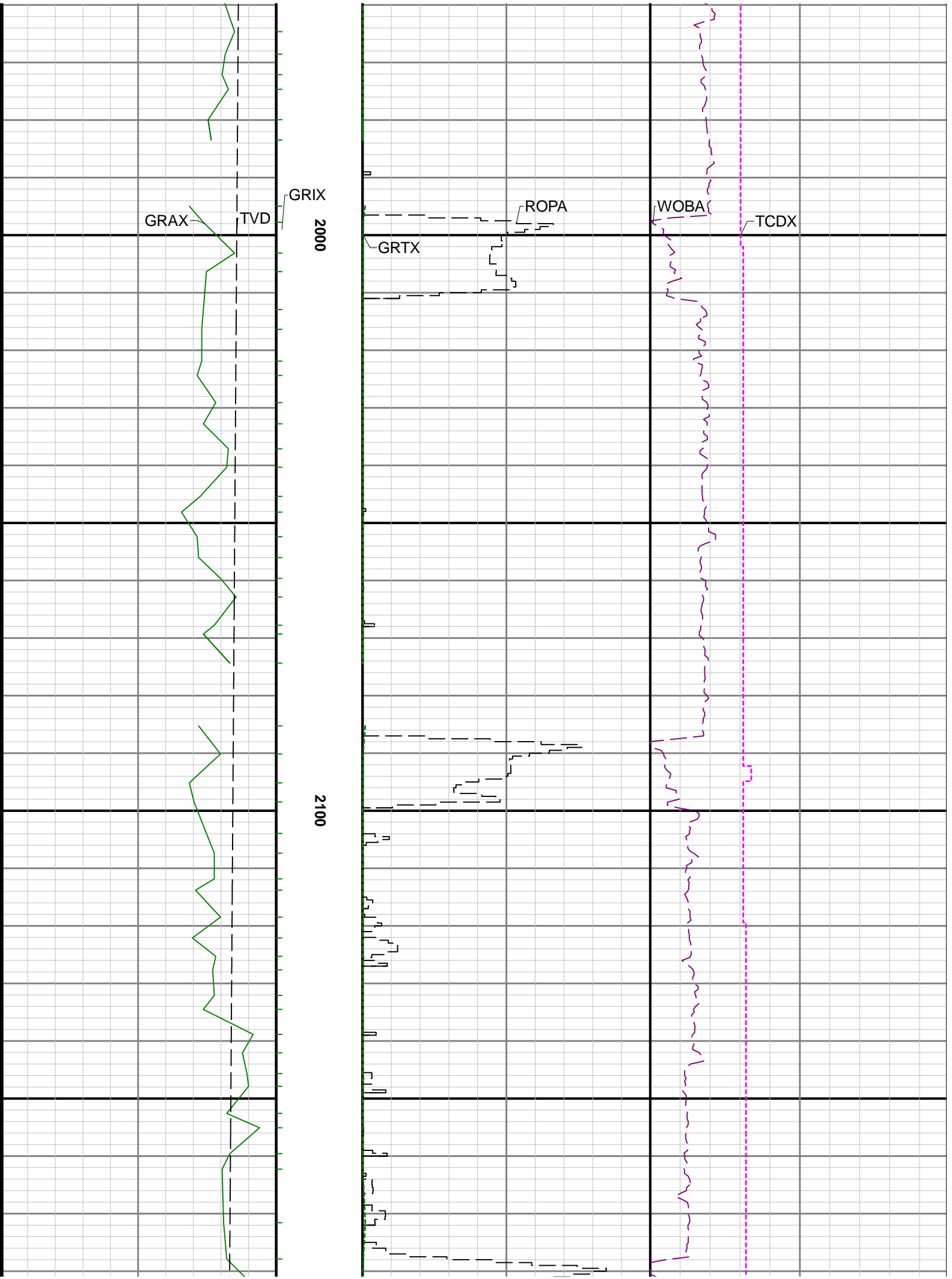
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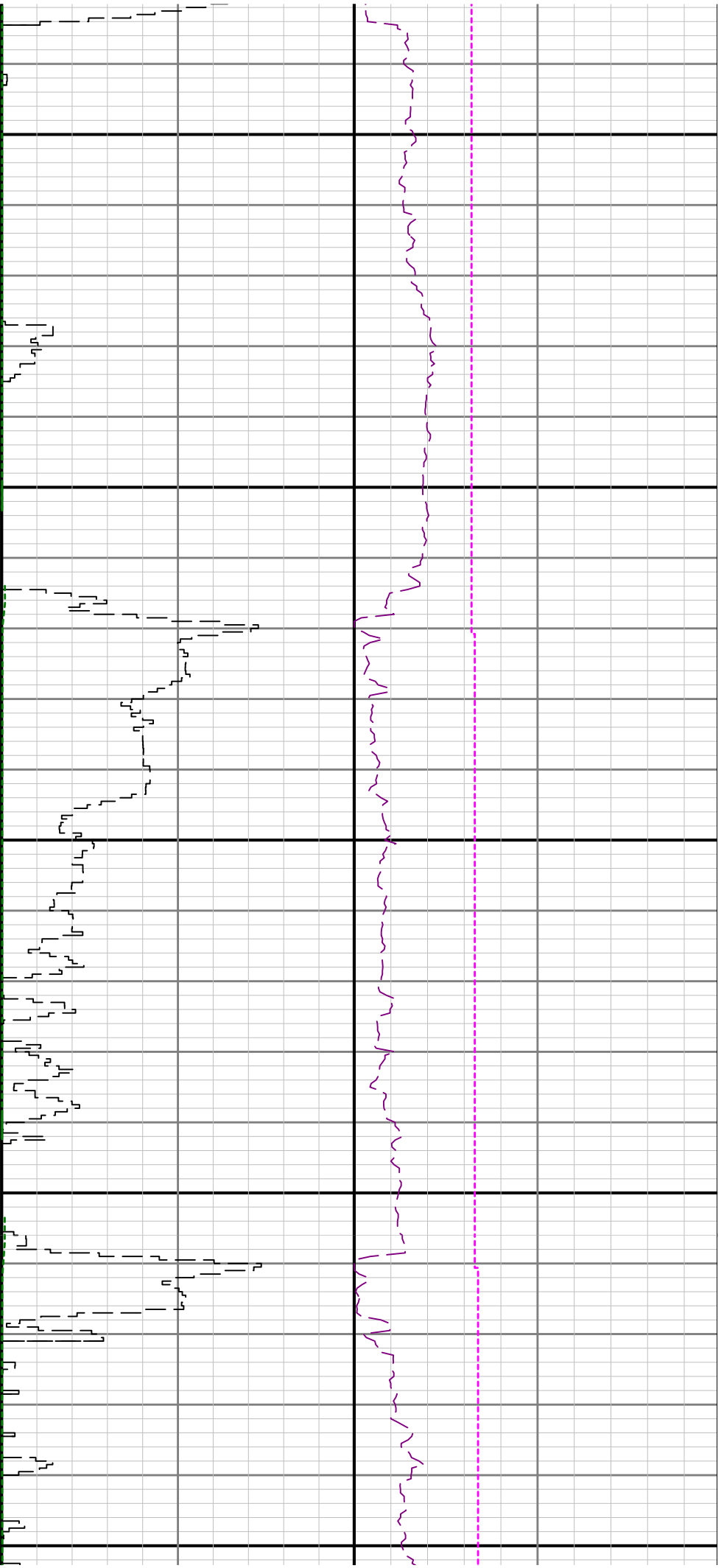
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1700





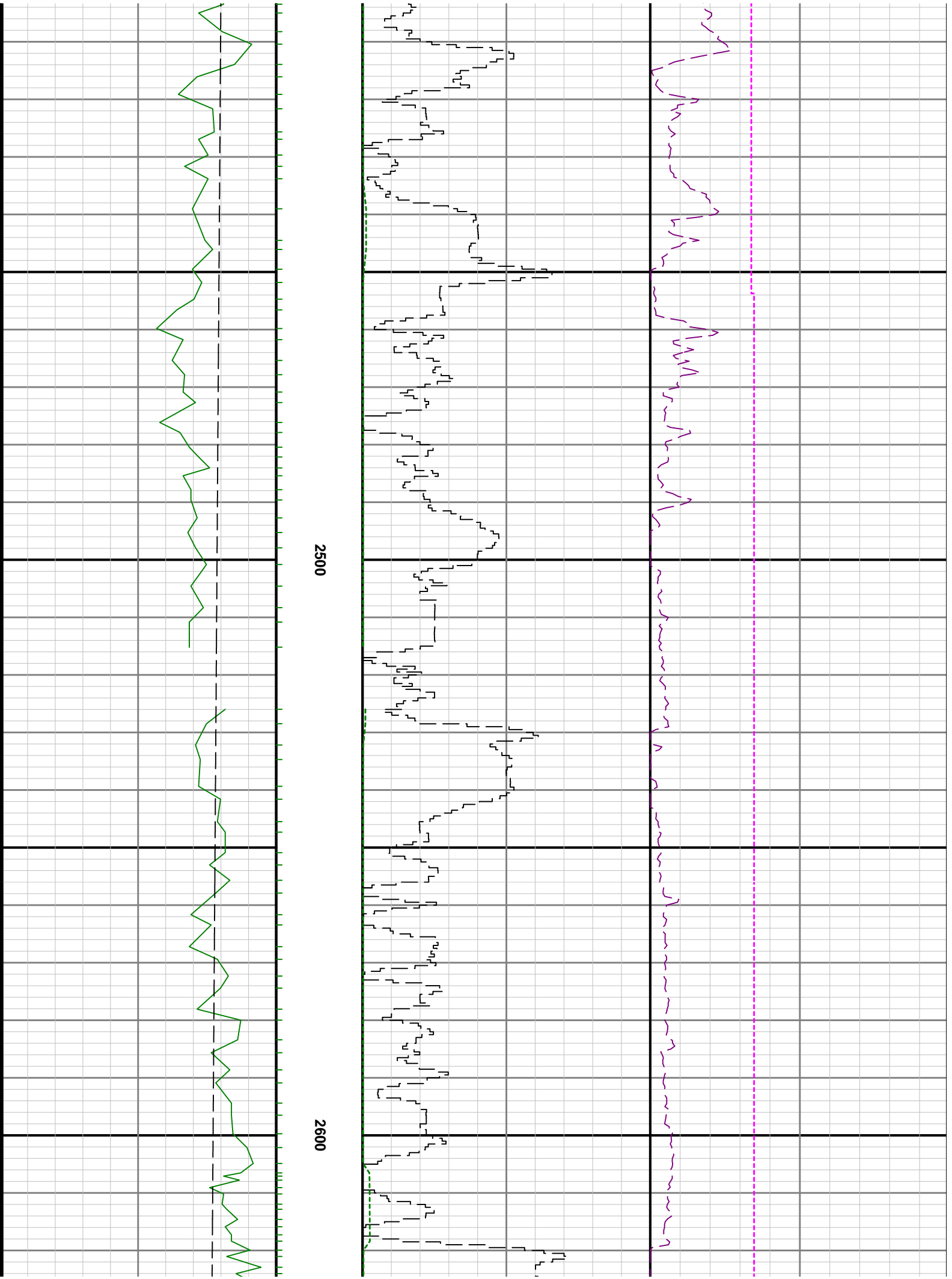


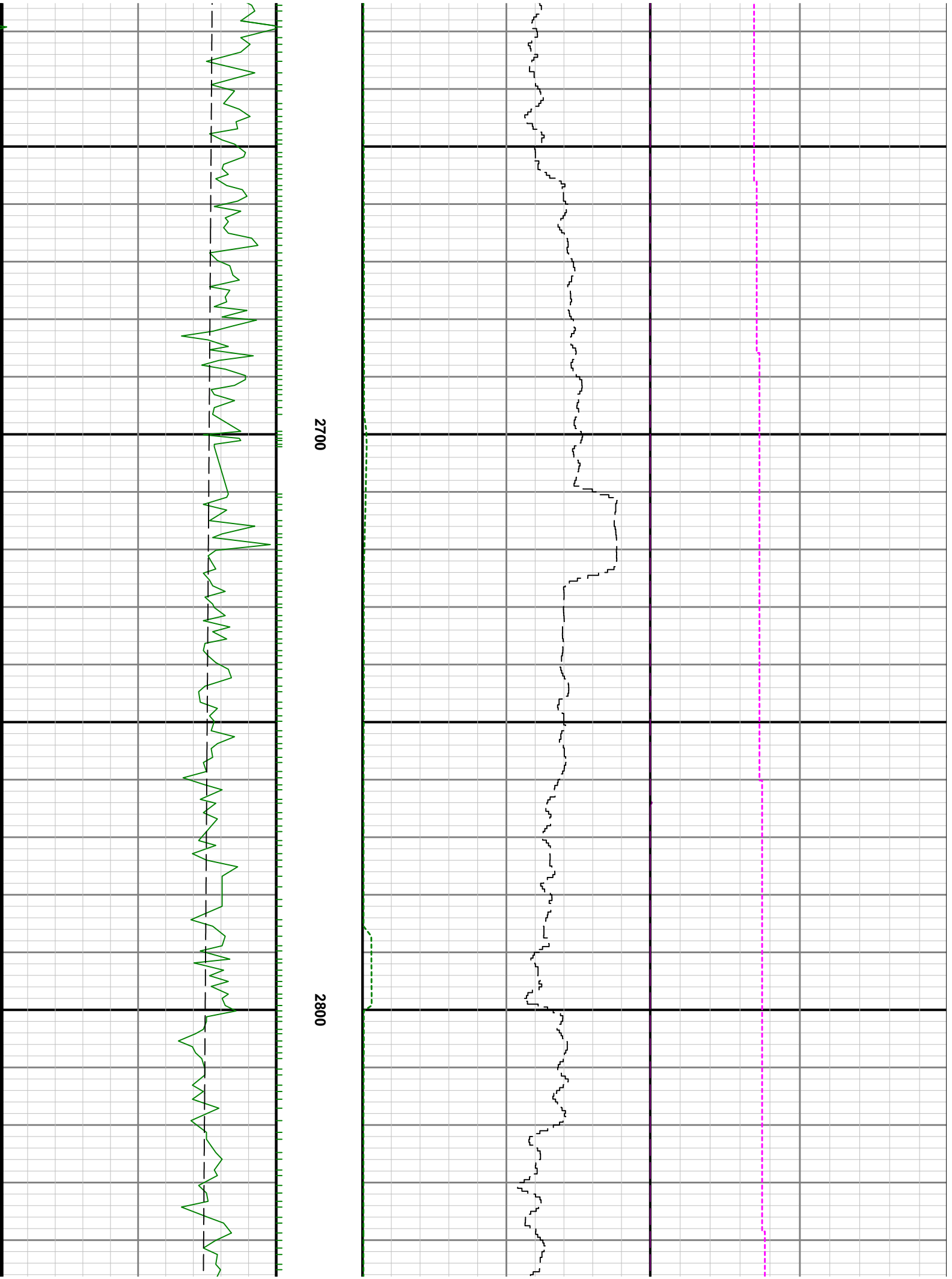


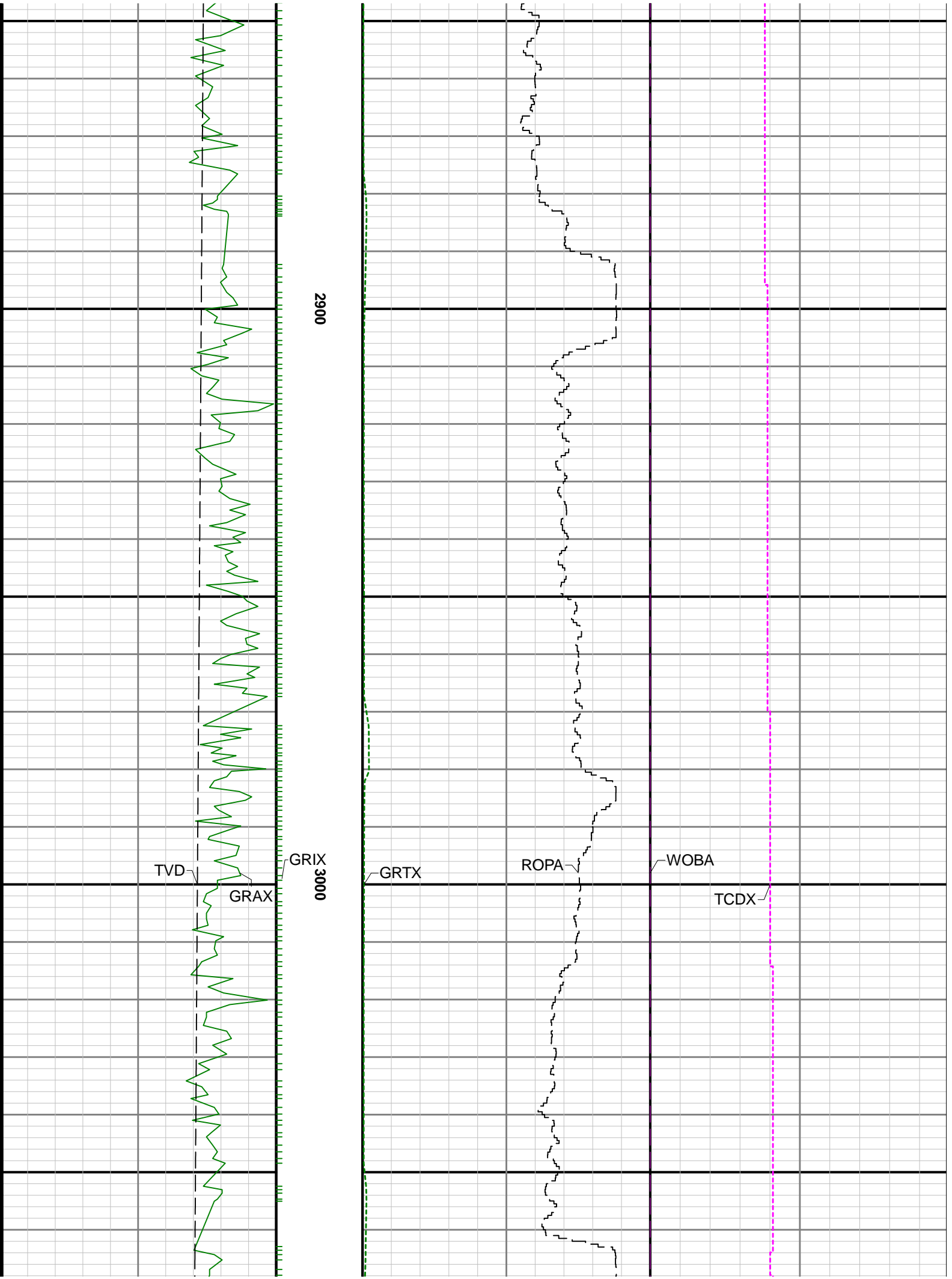
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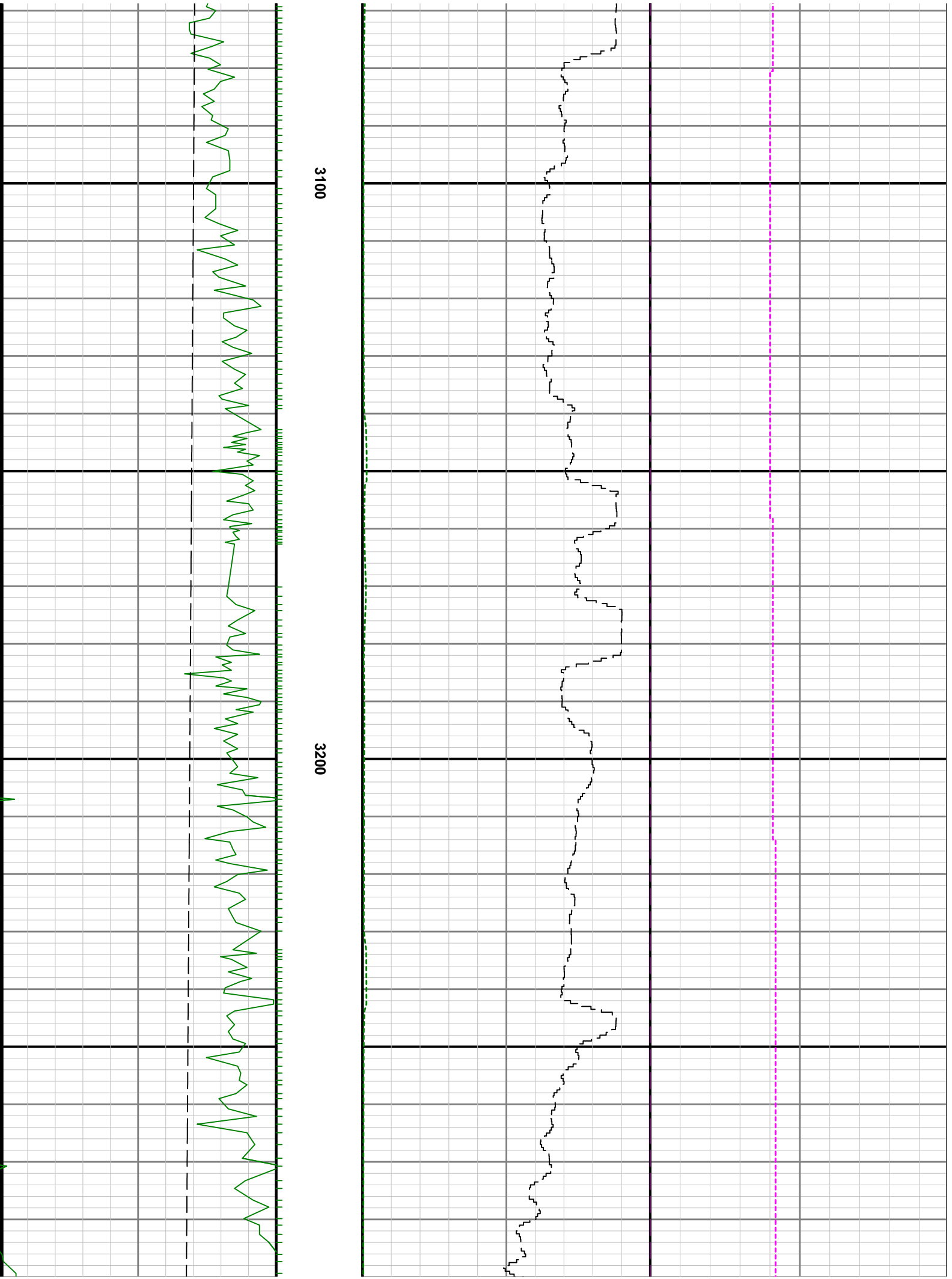
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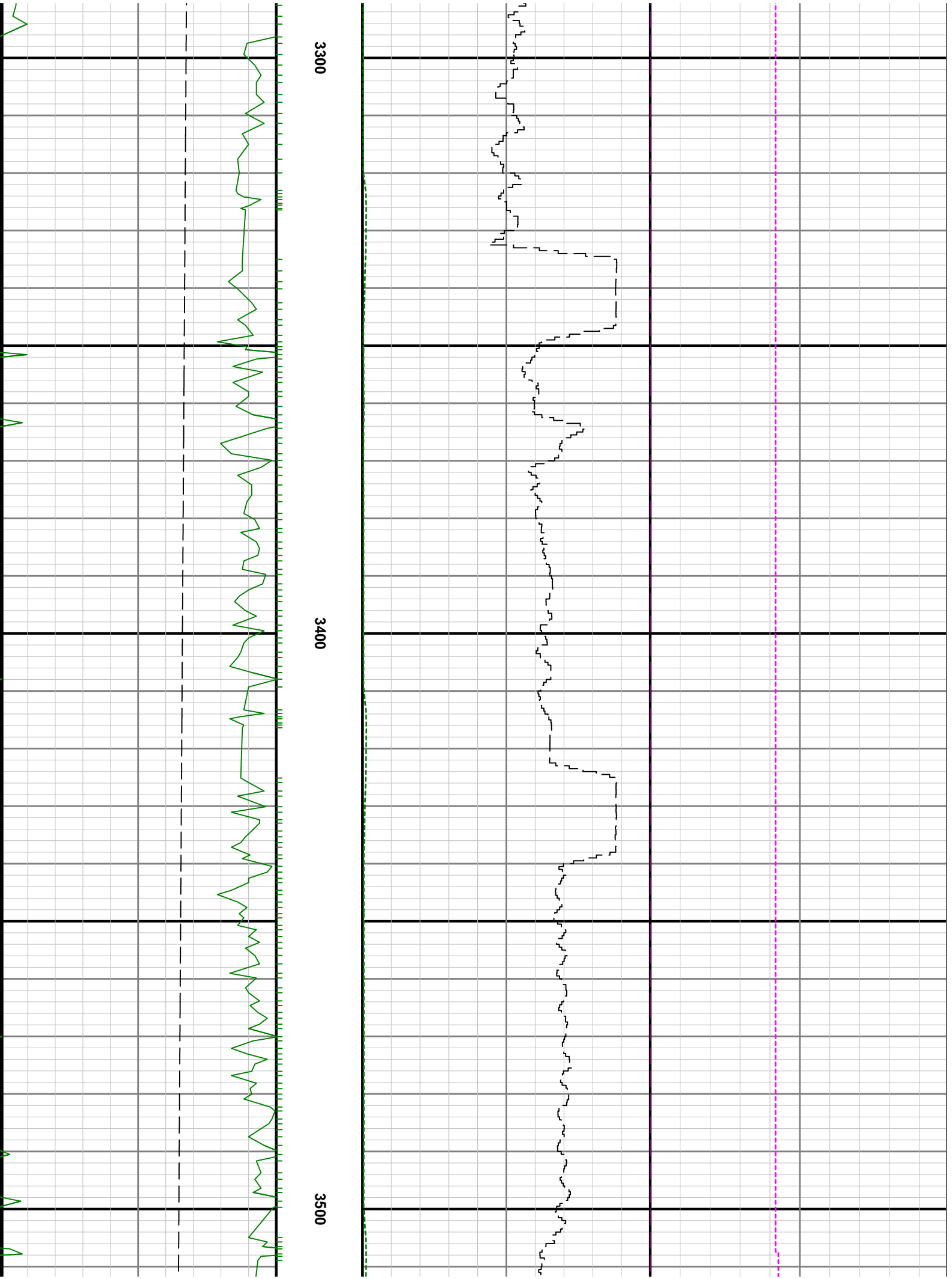
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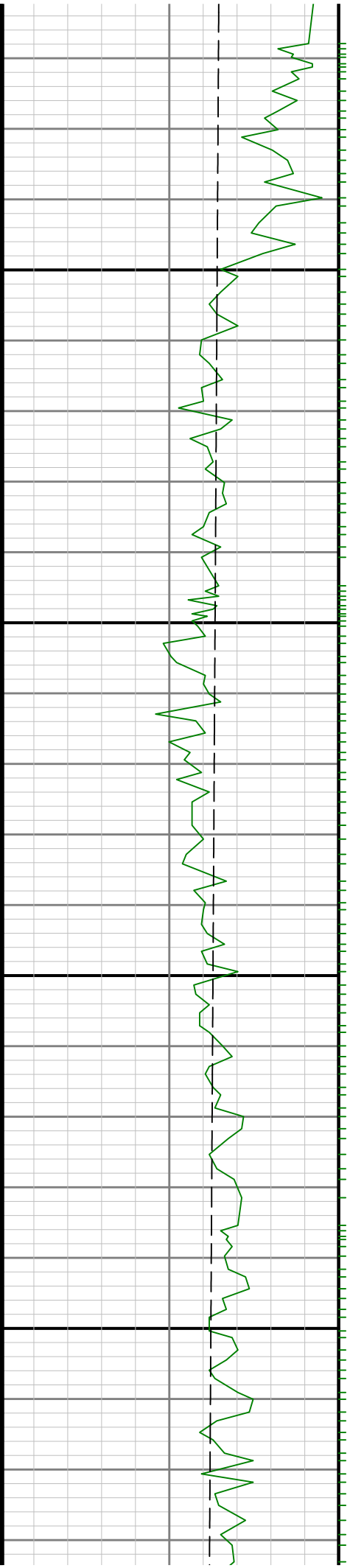






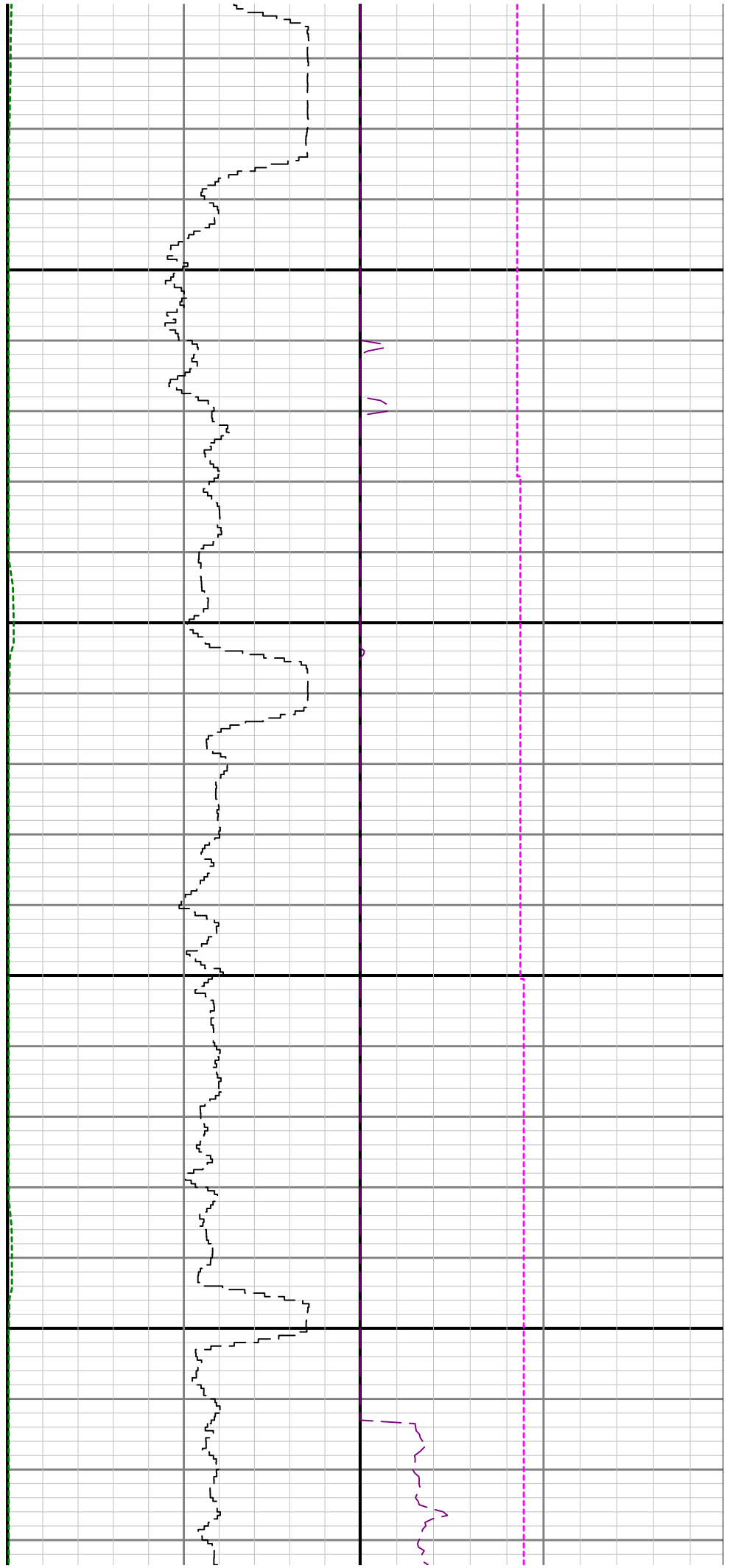


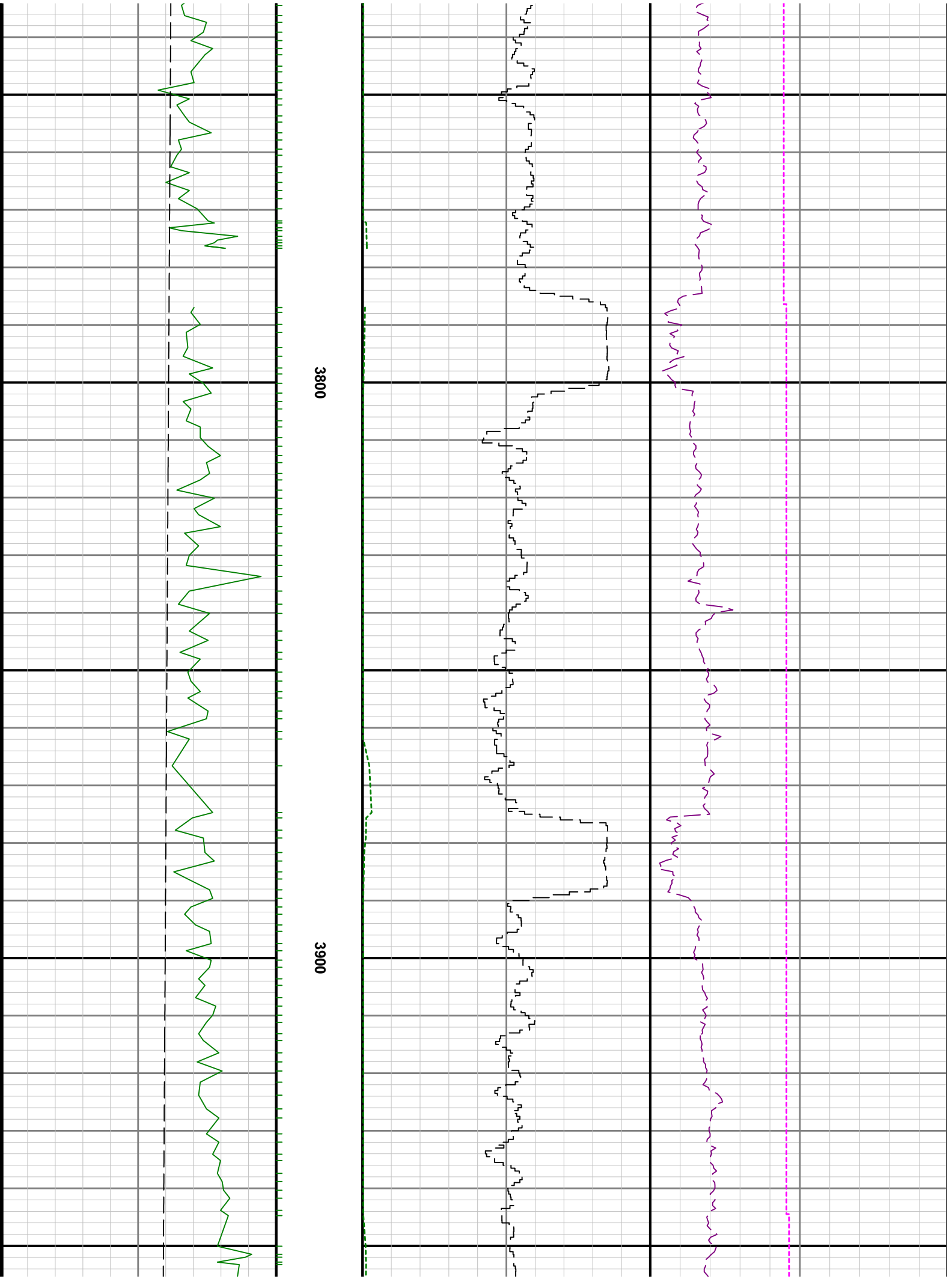




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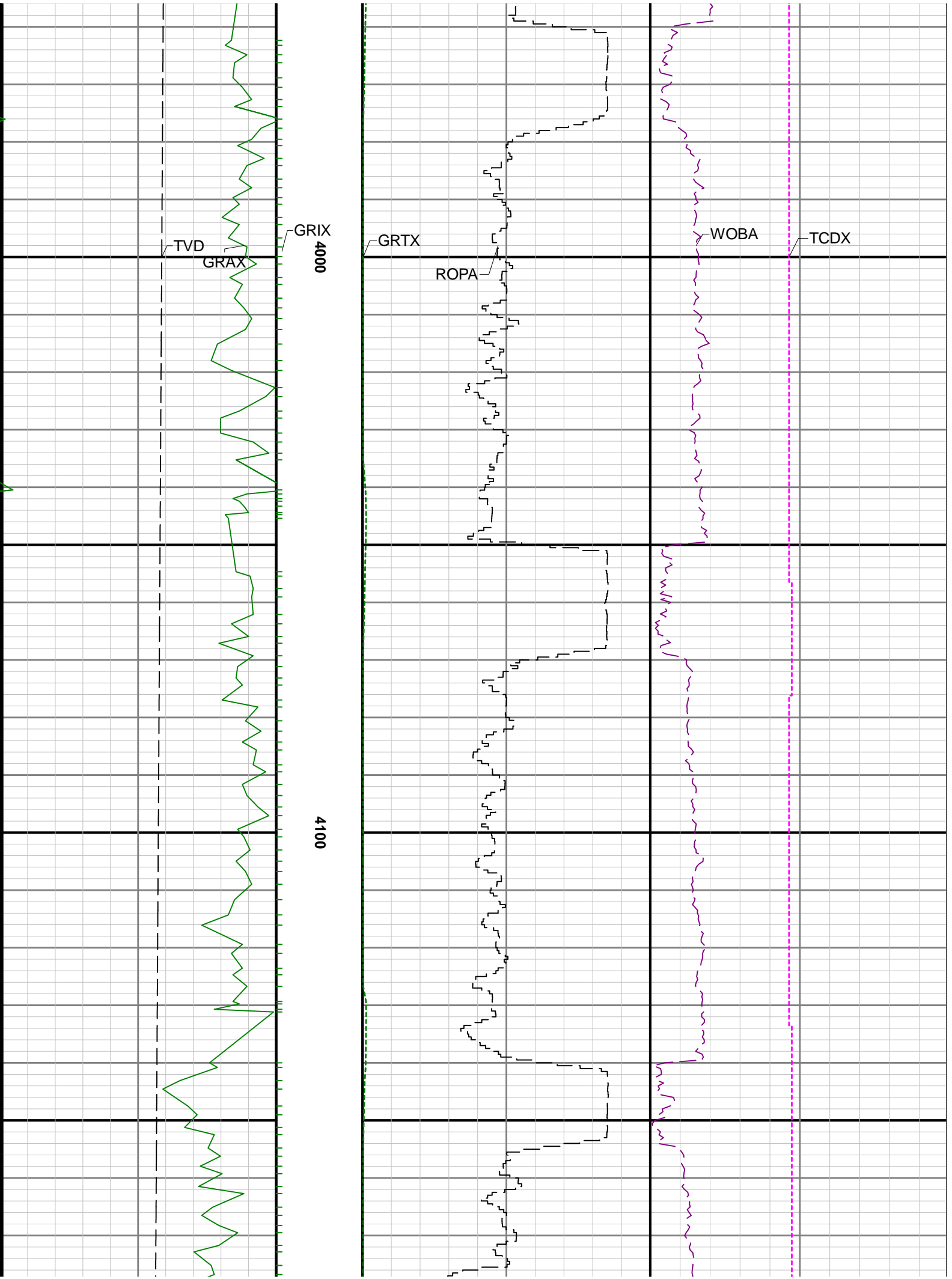
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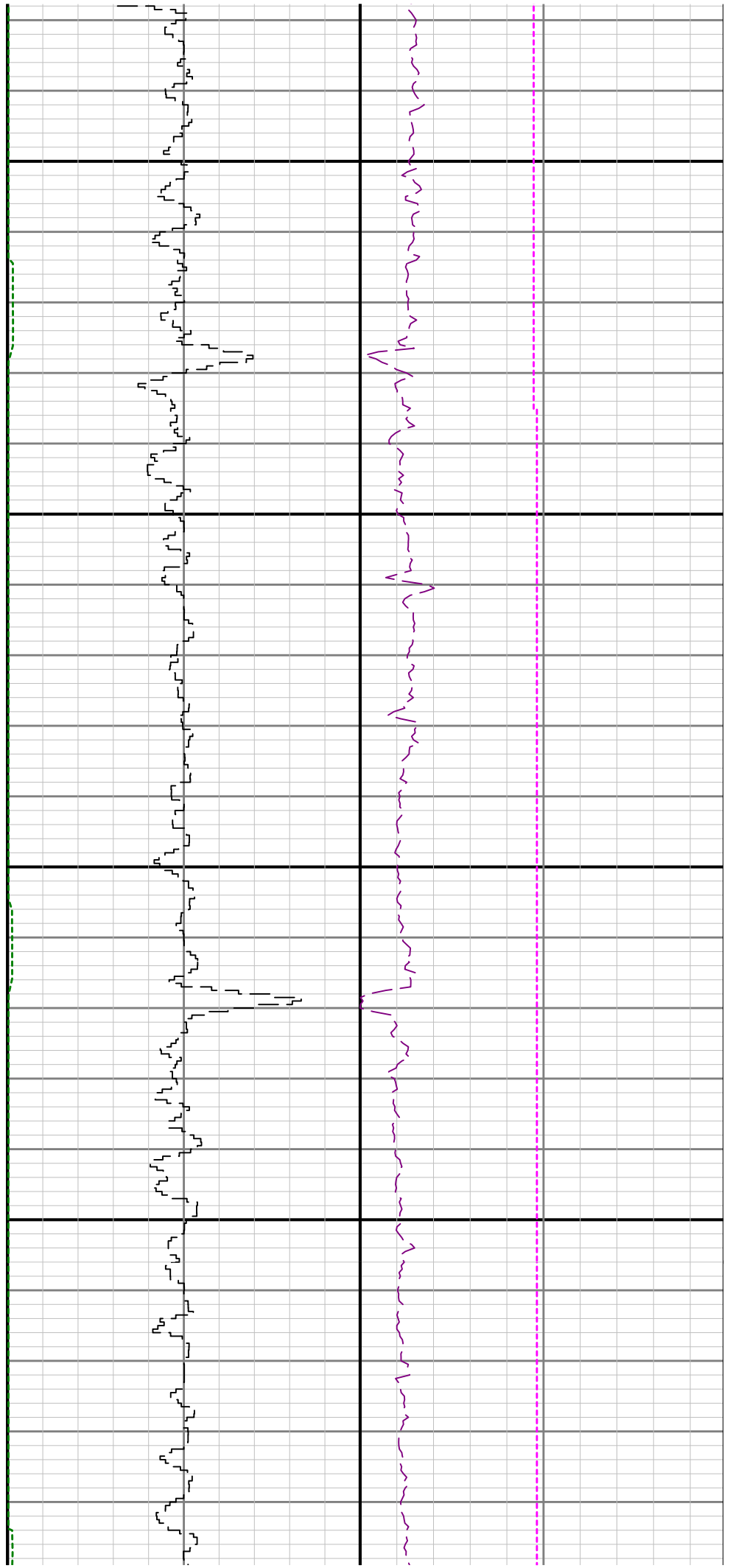




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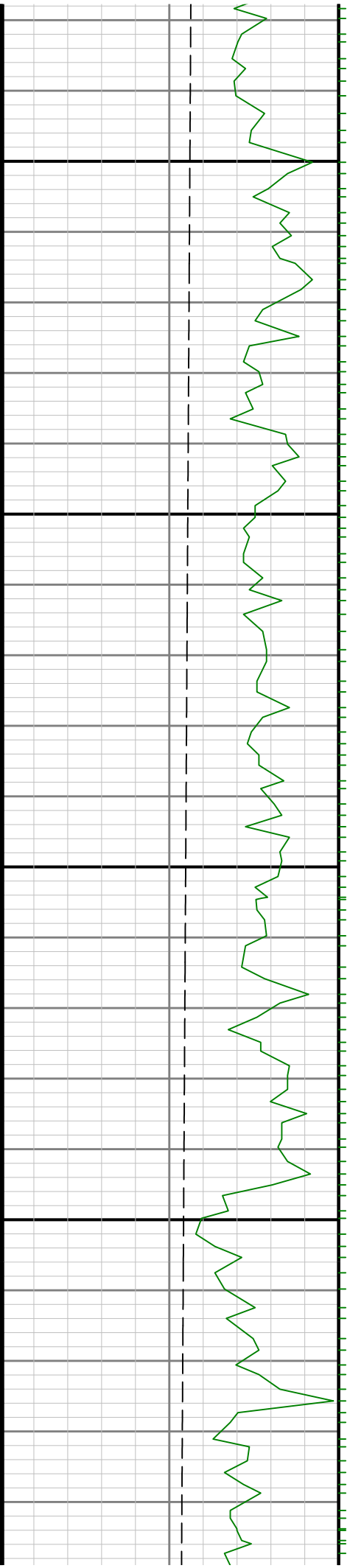


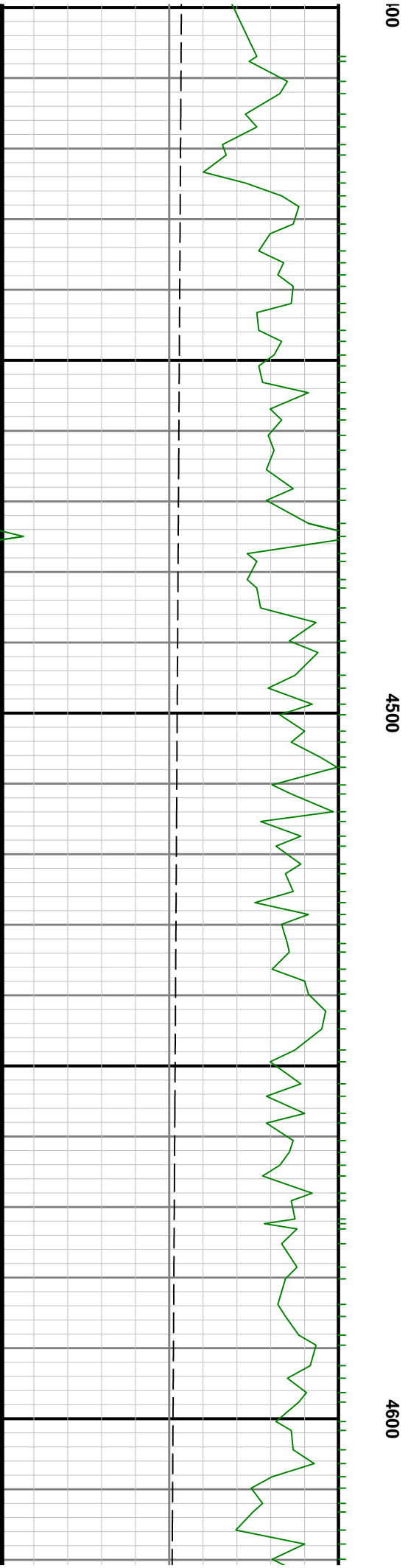
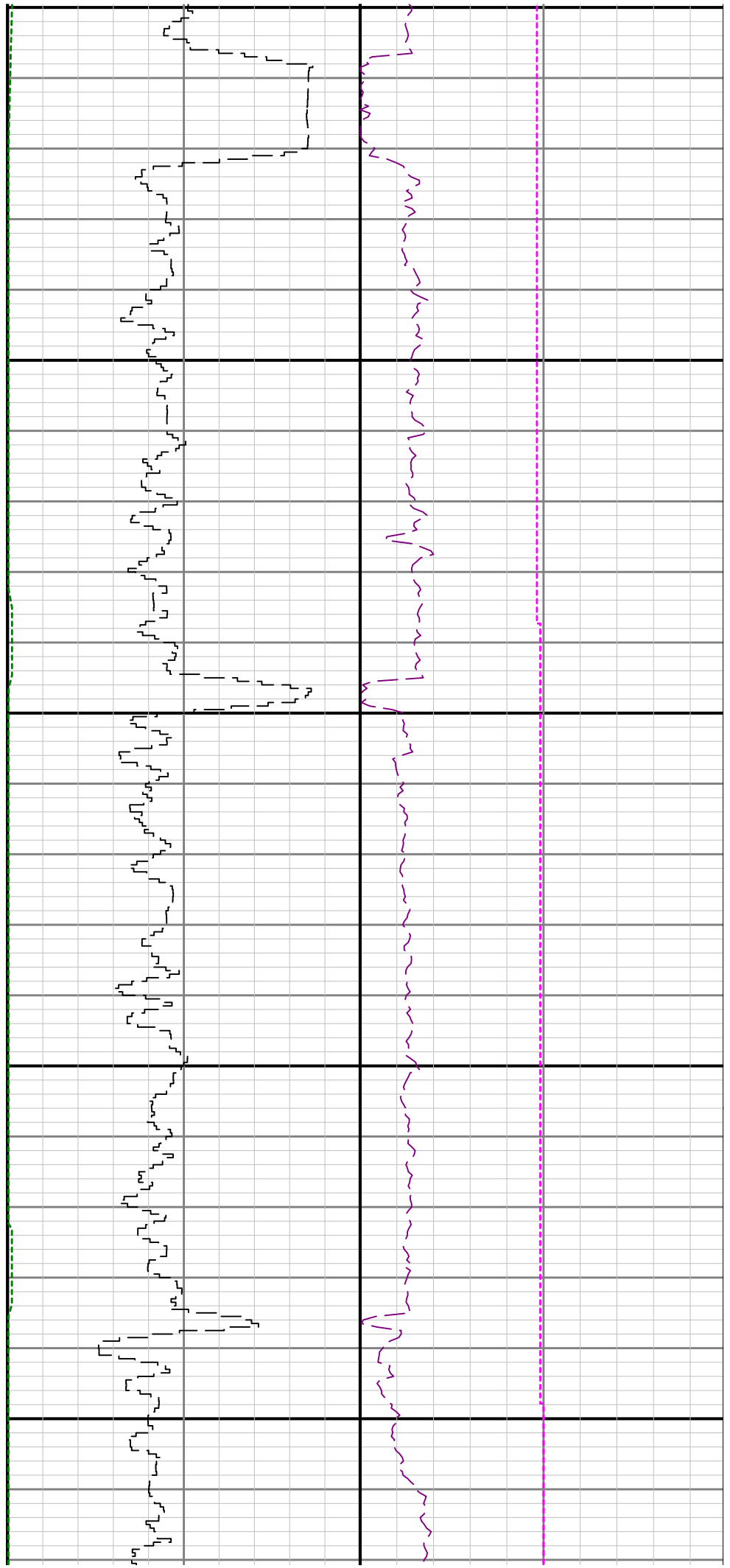


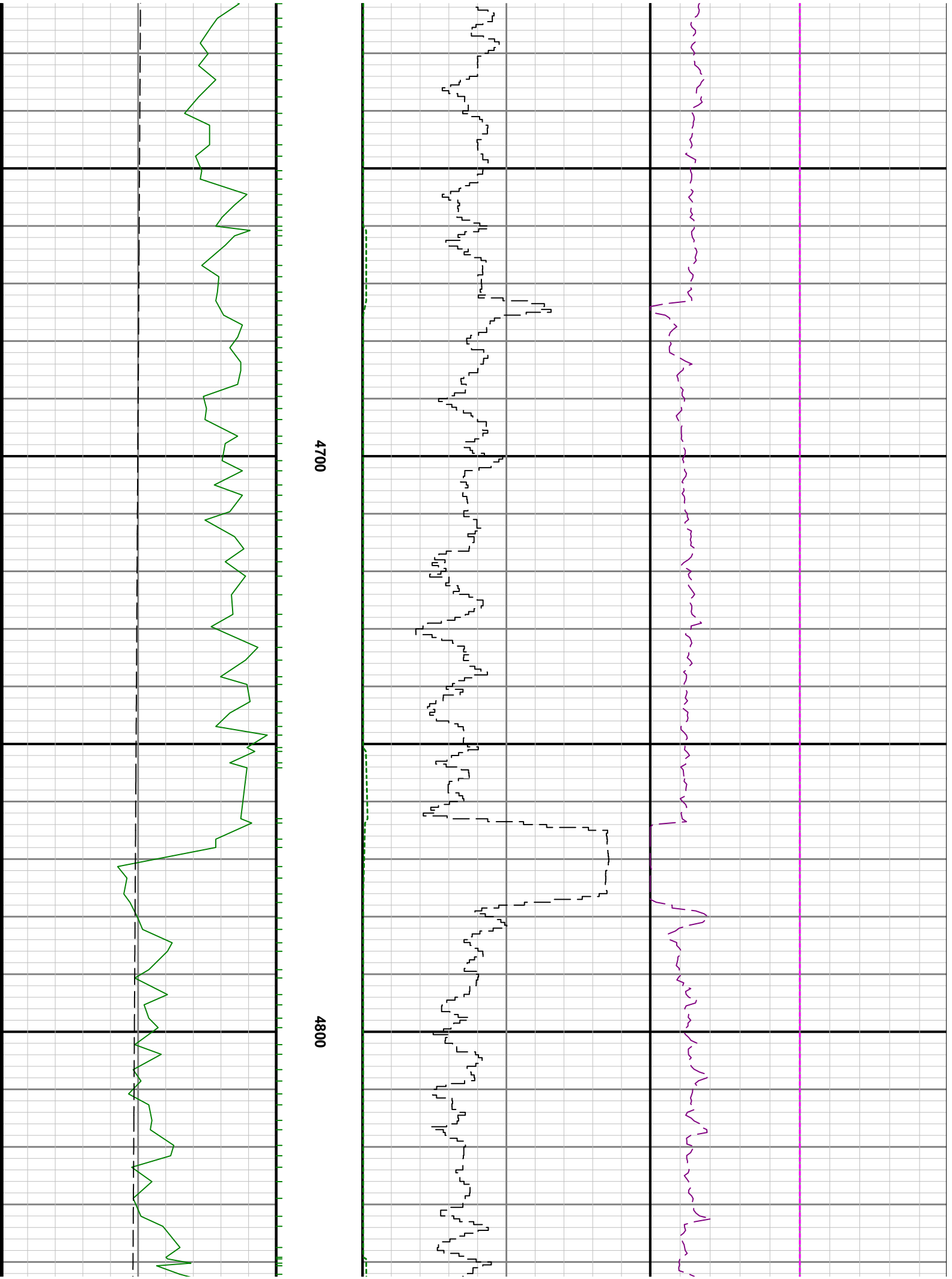
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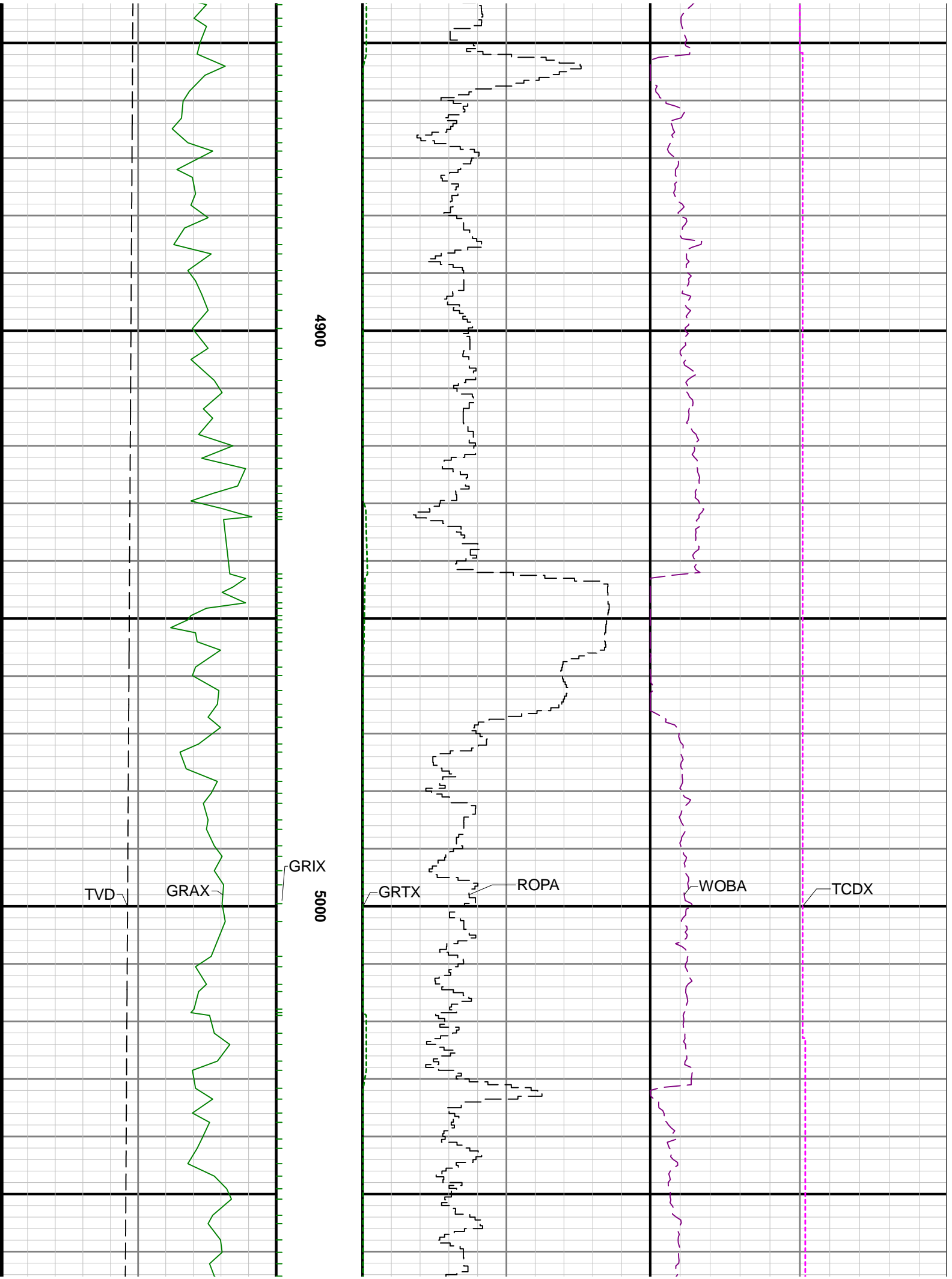


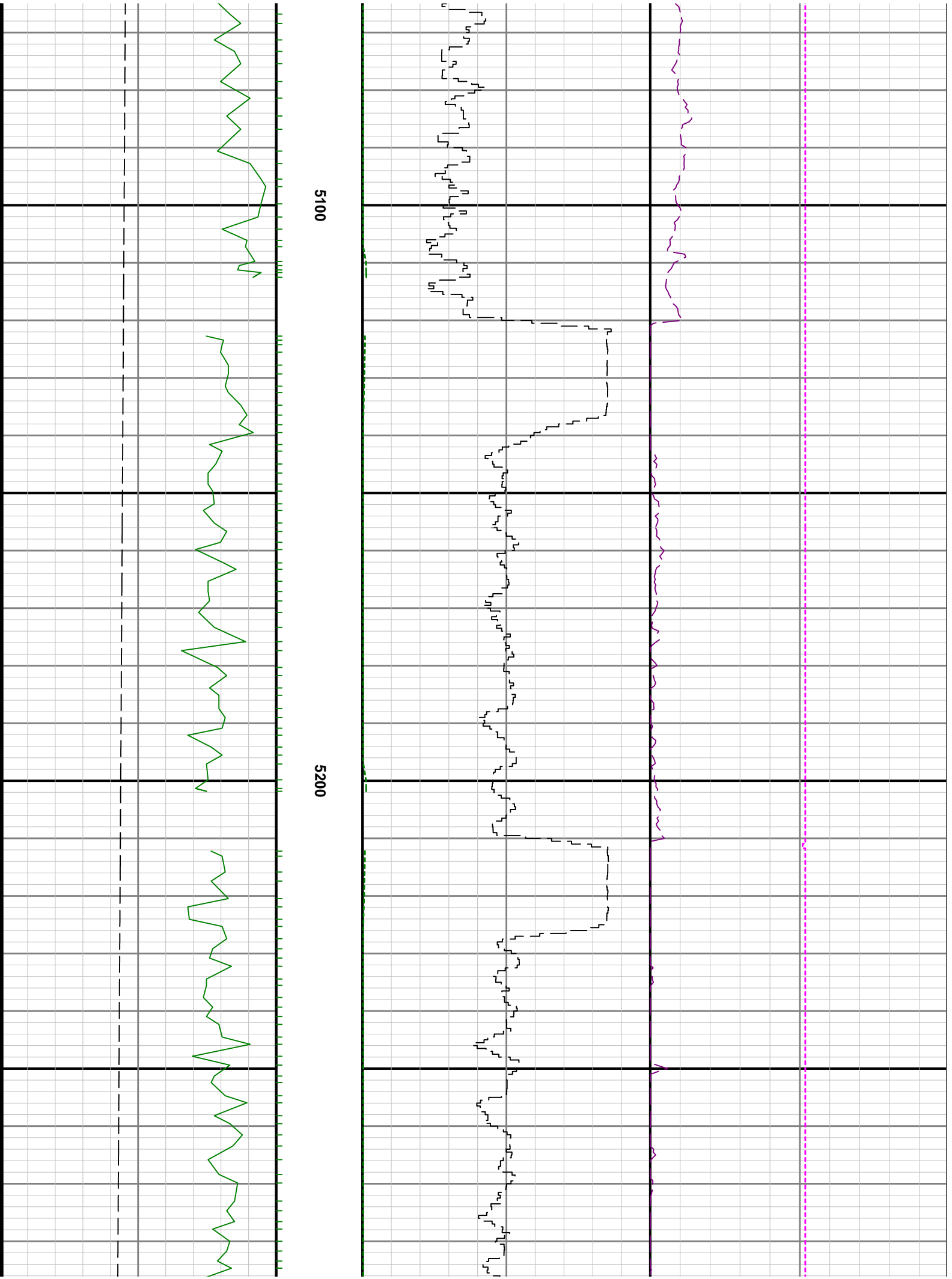


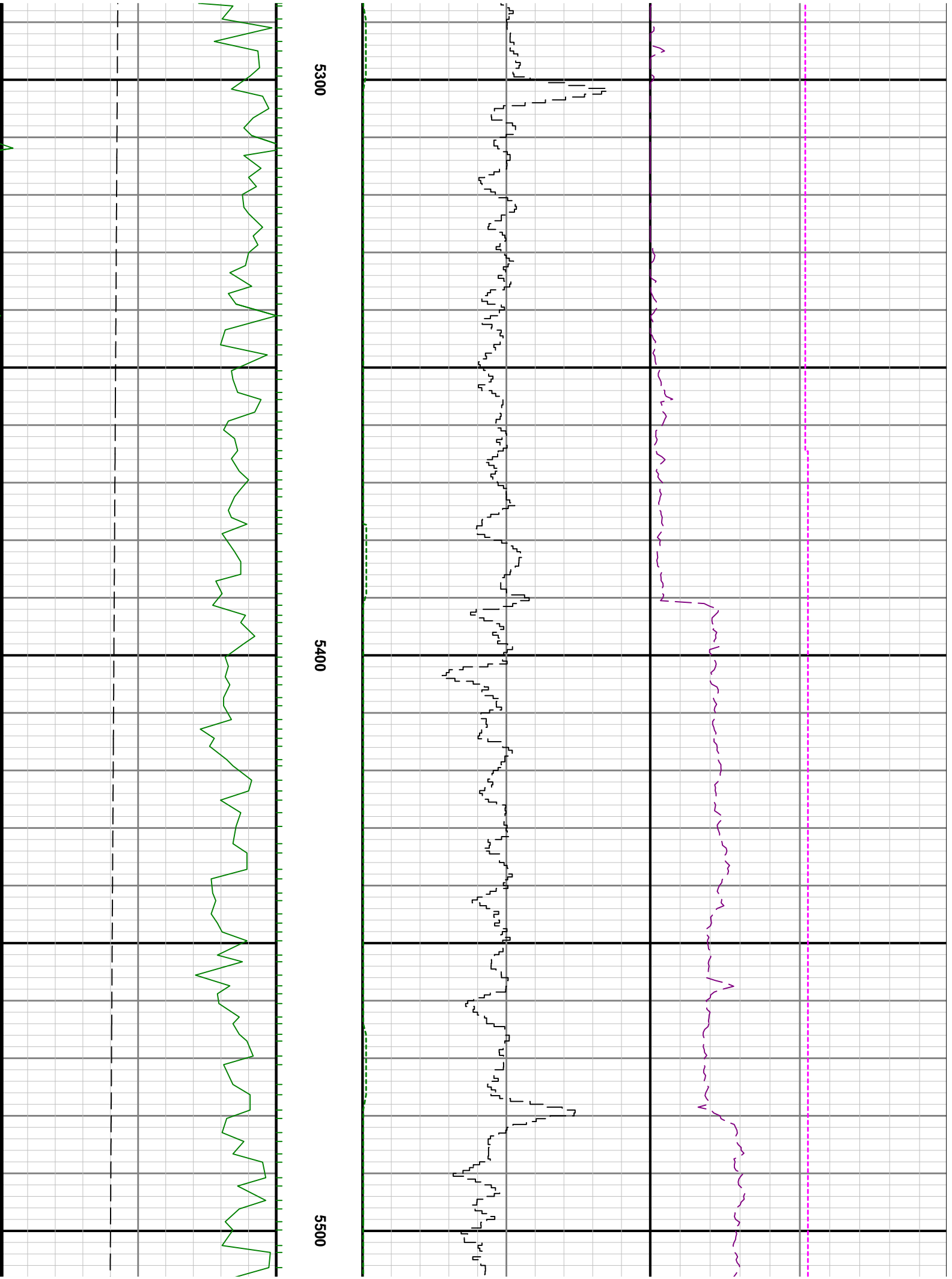


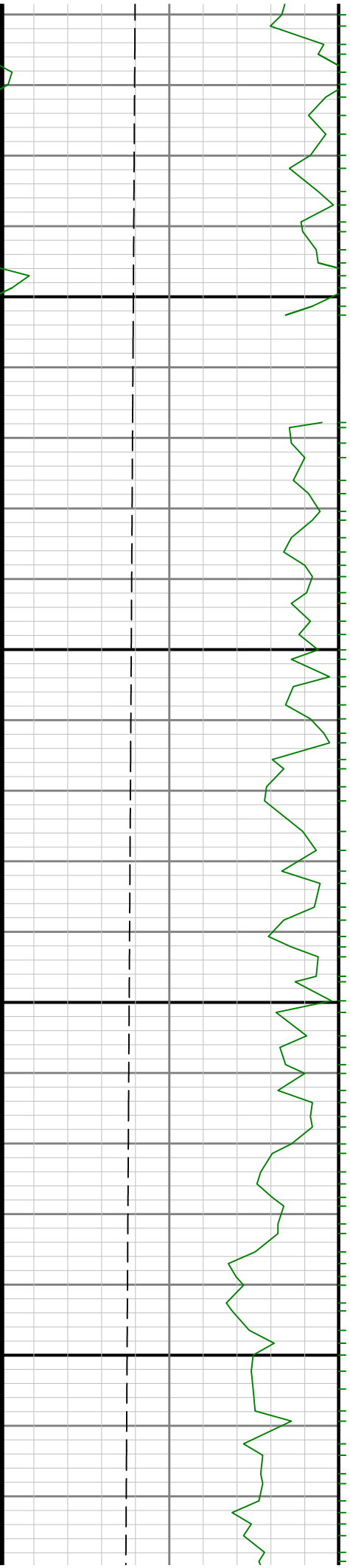
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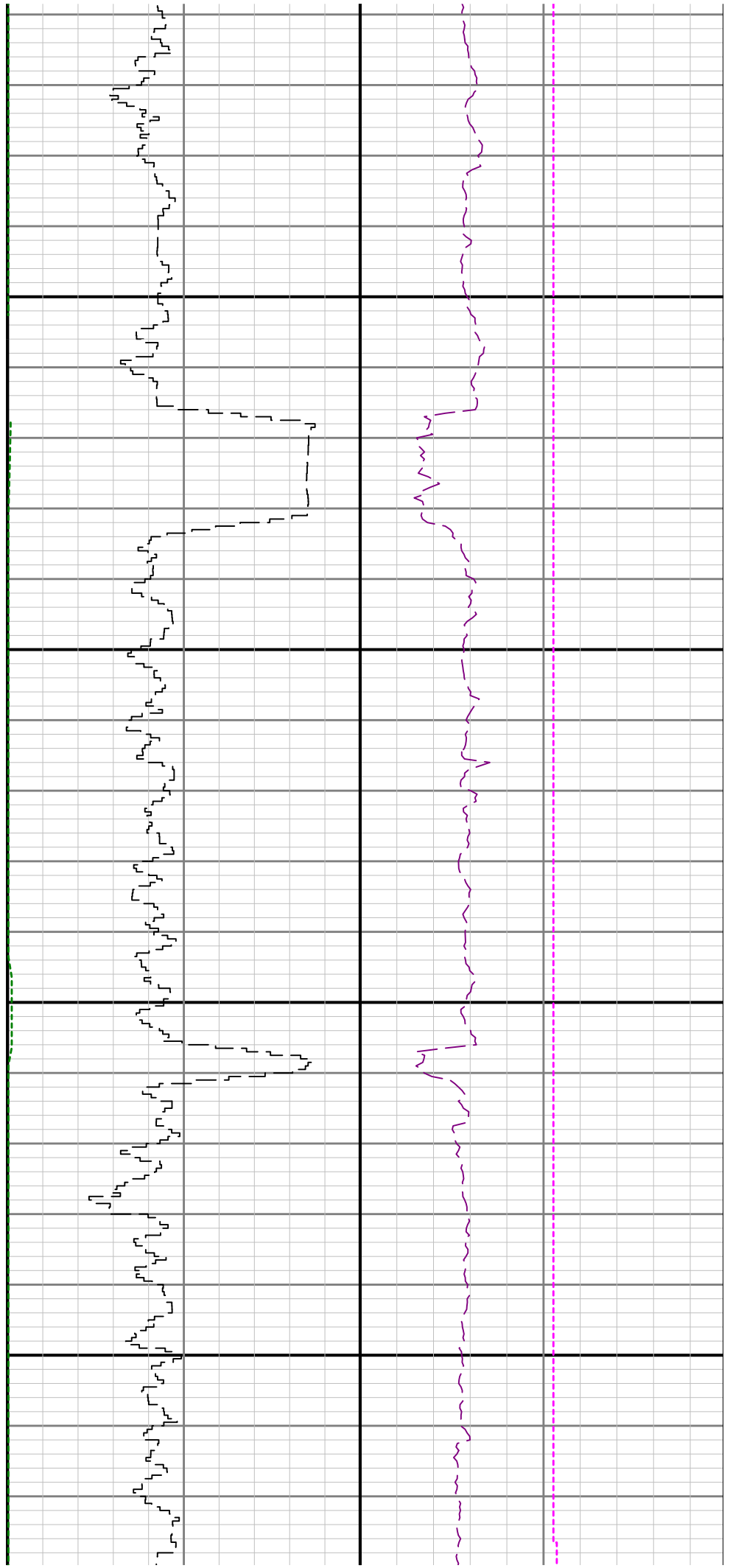


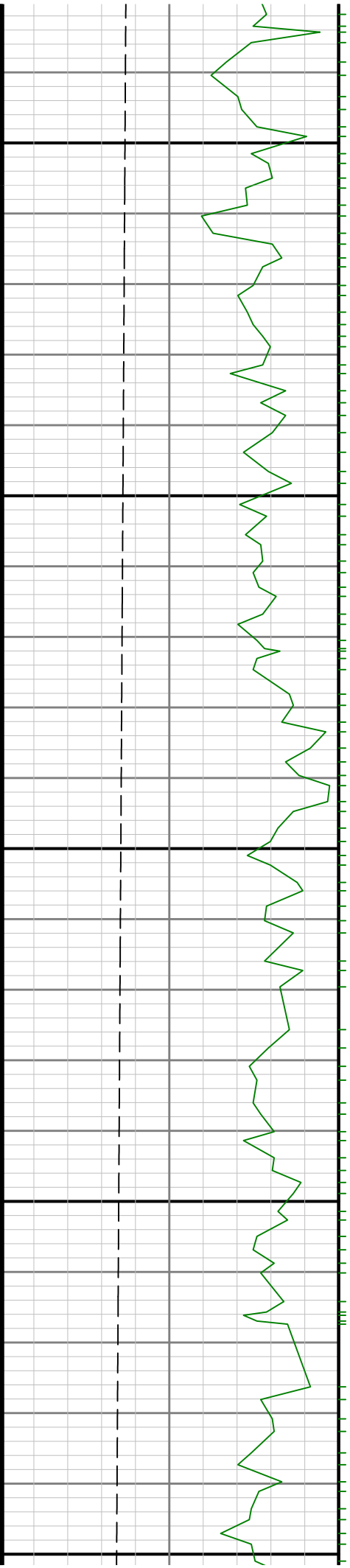




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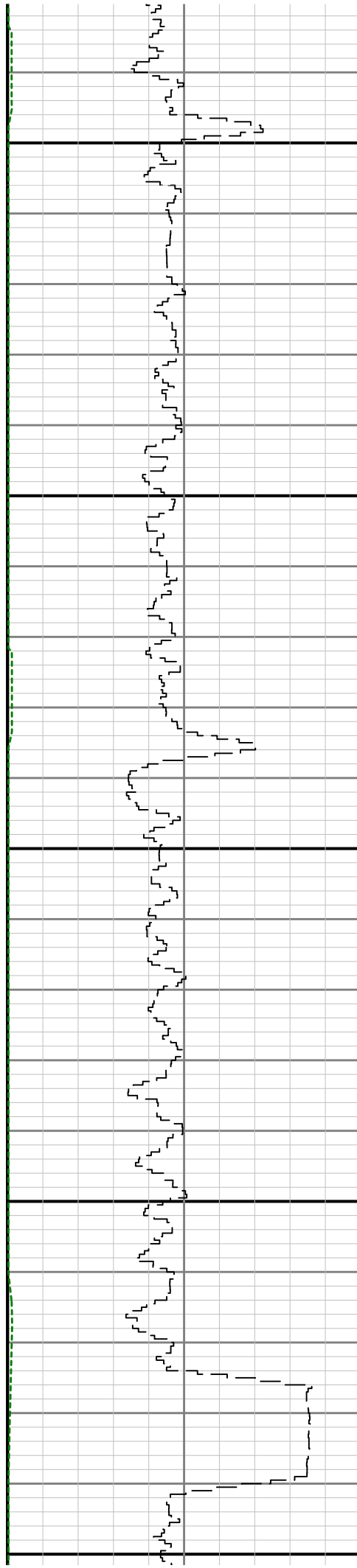
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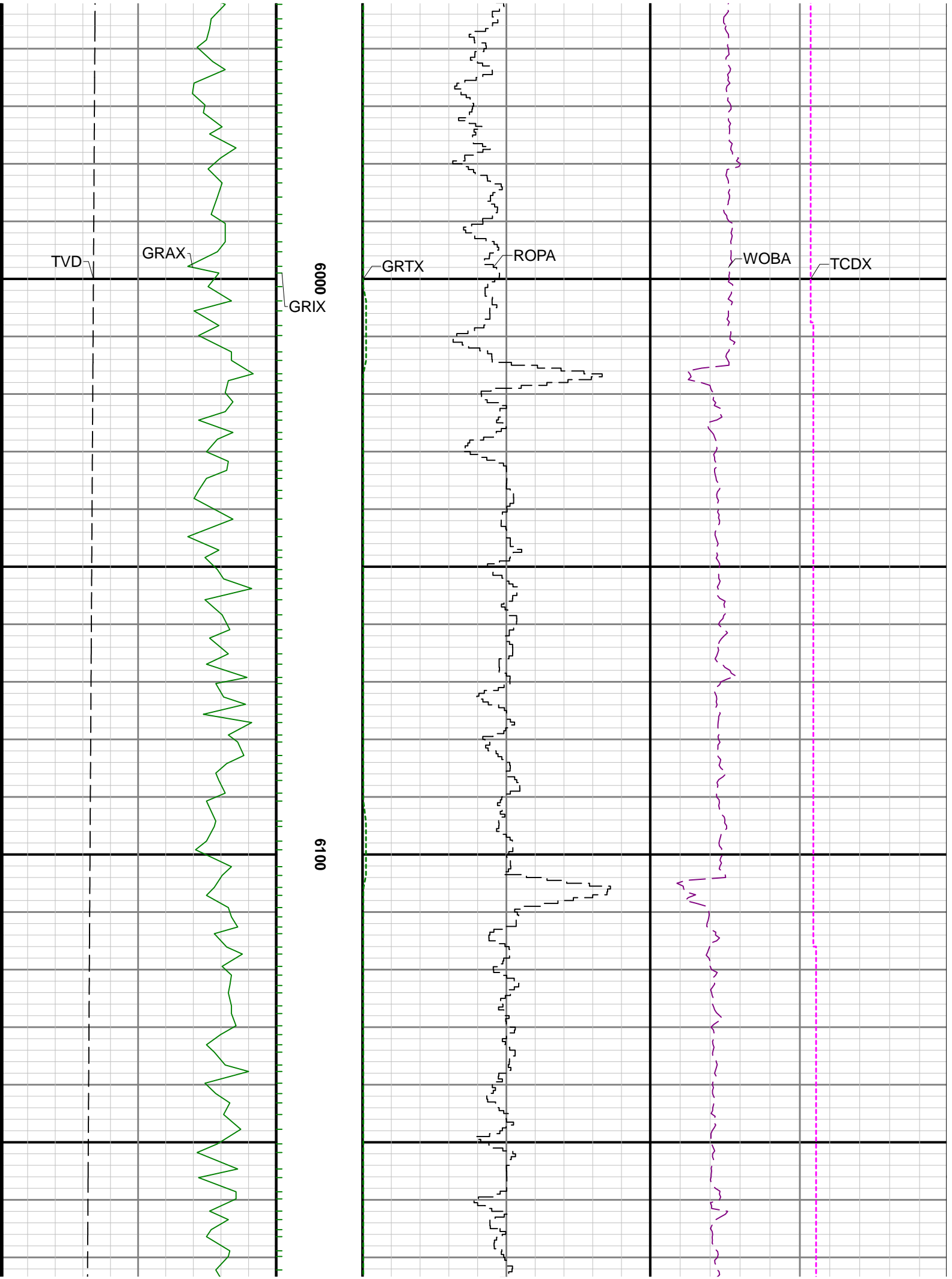




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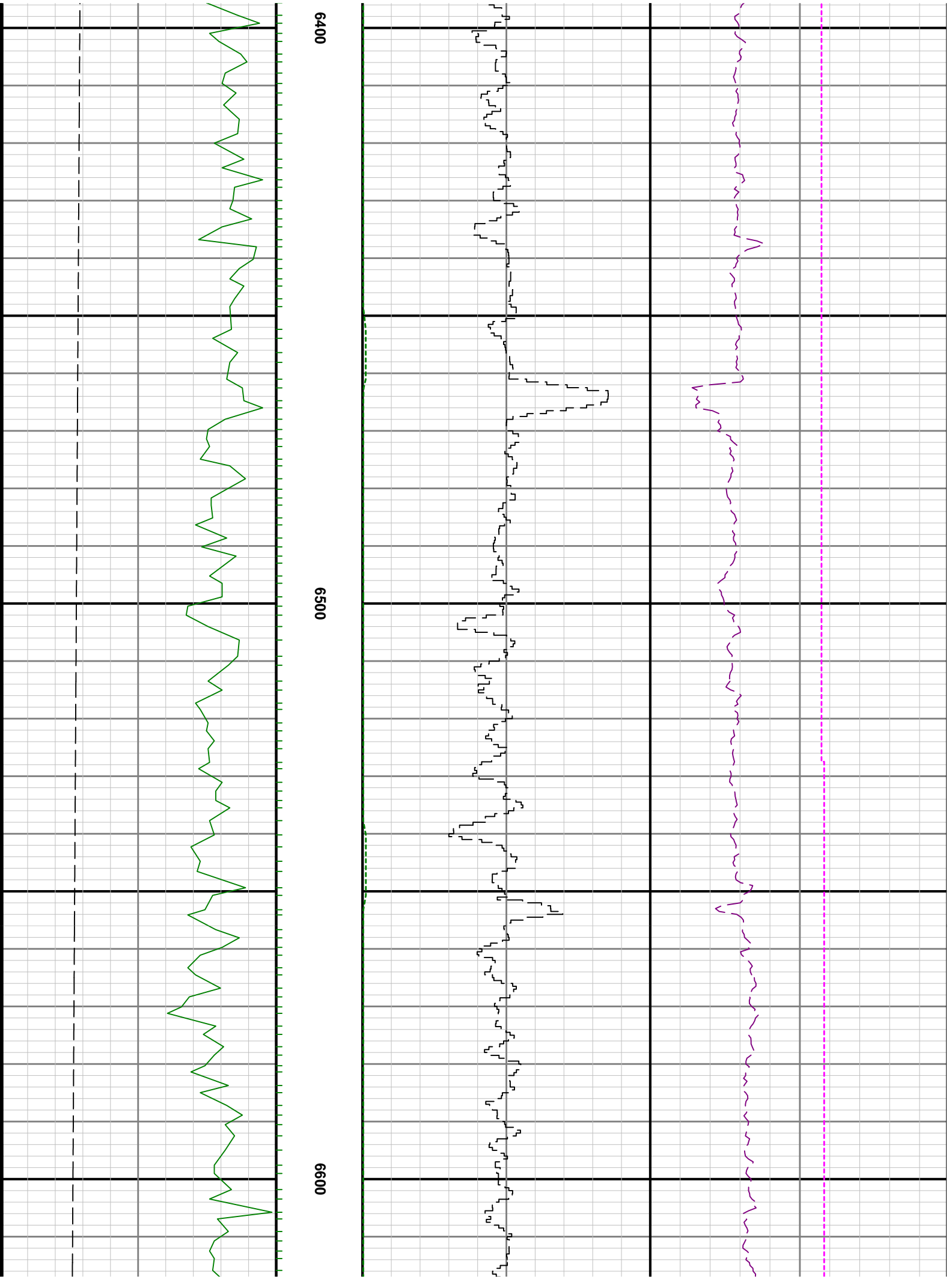


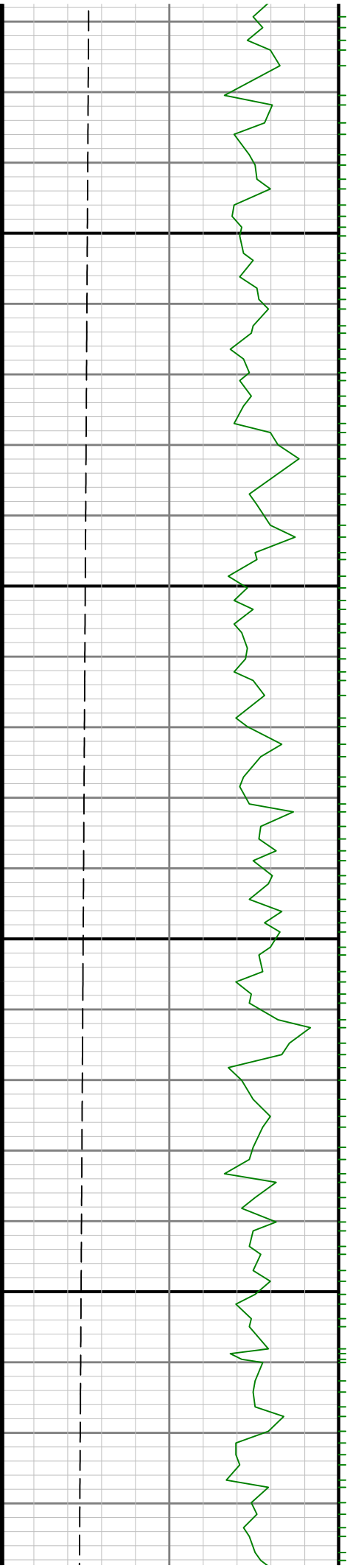




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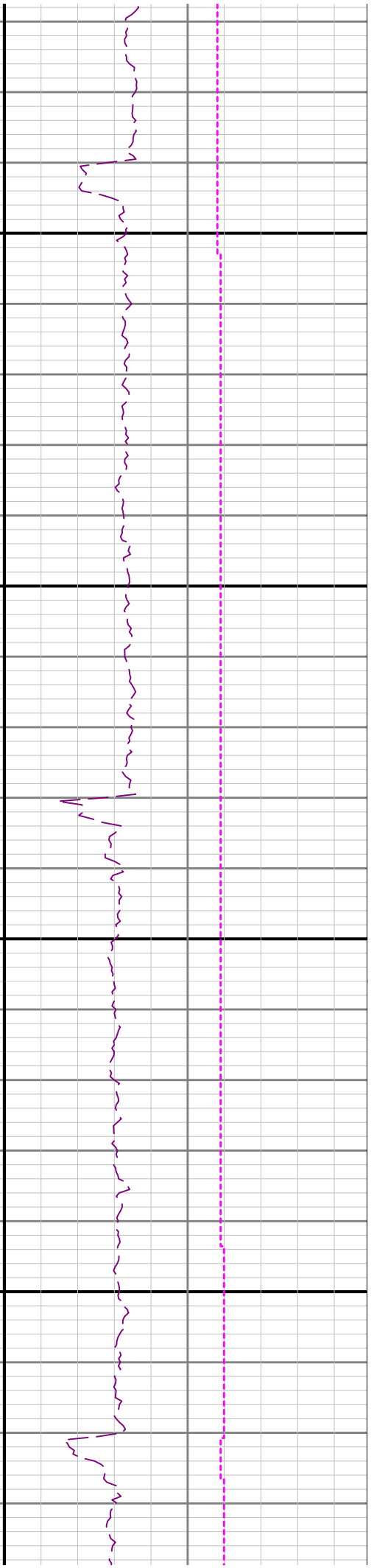
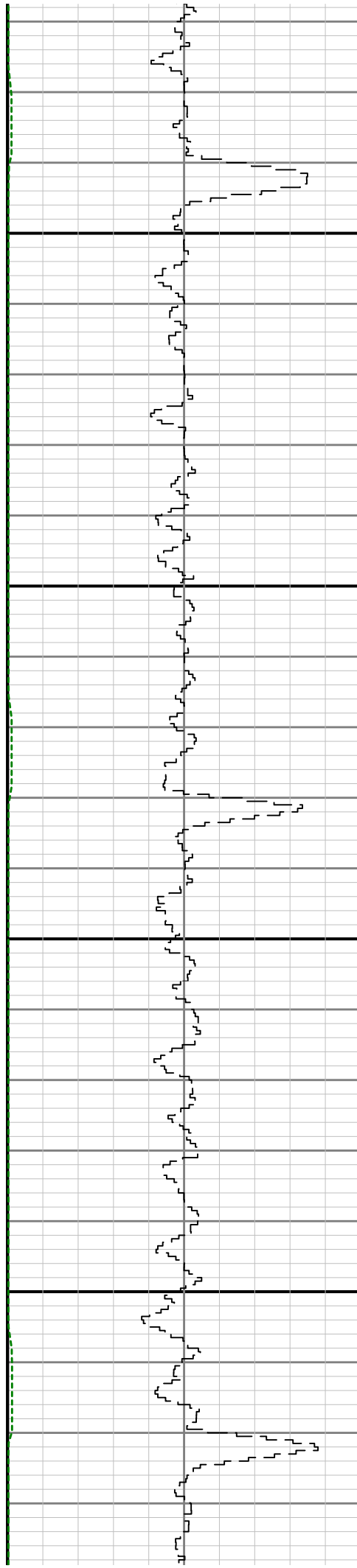
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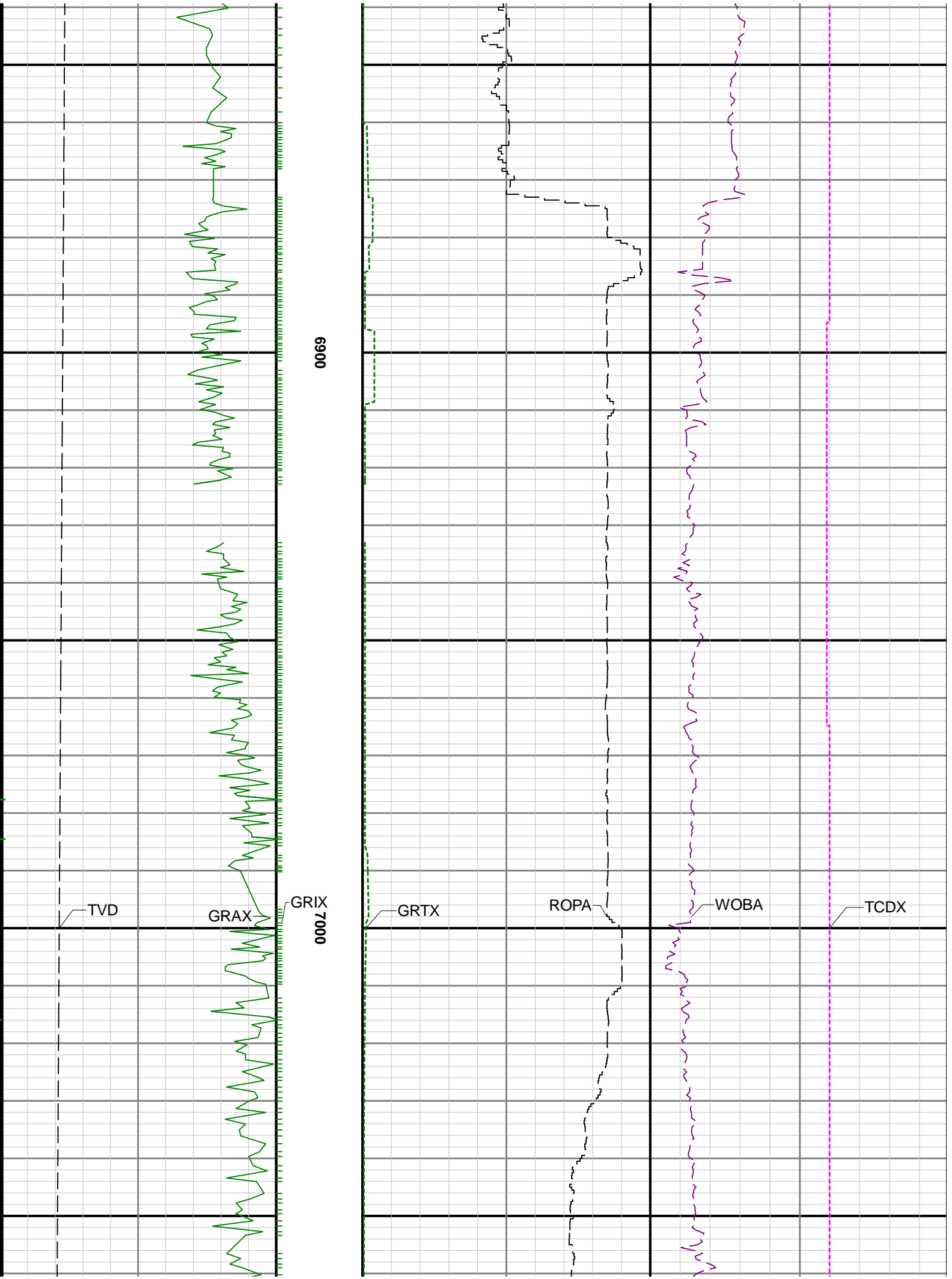


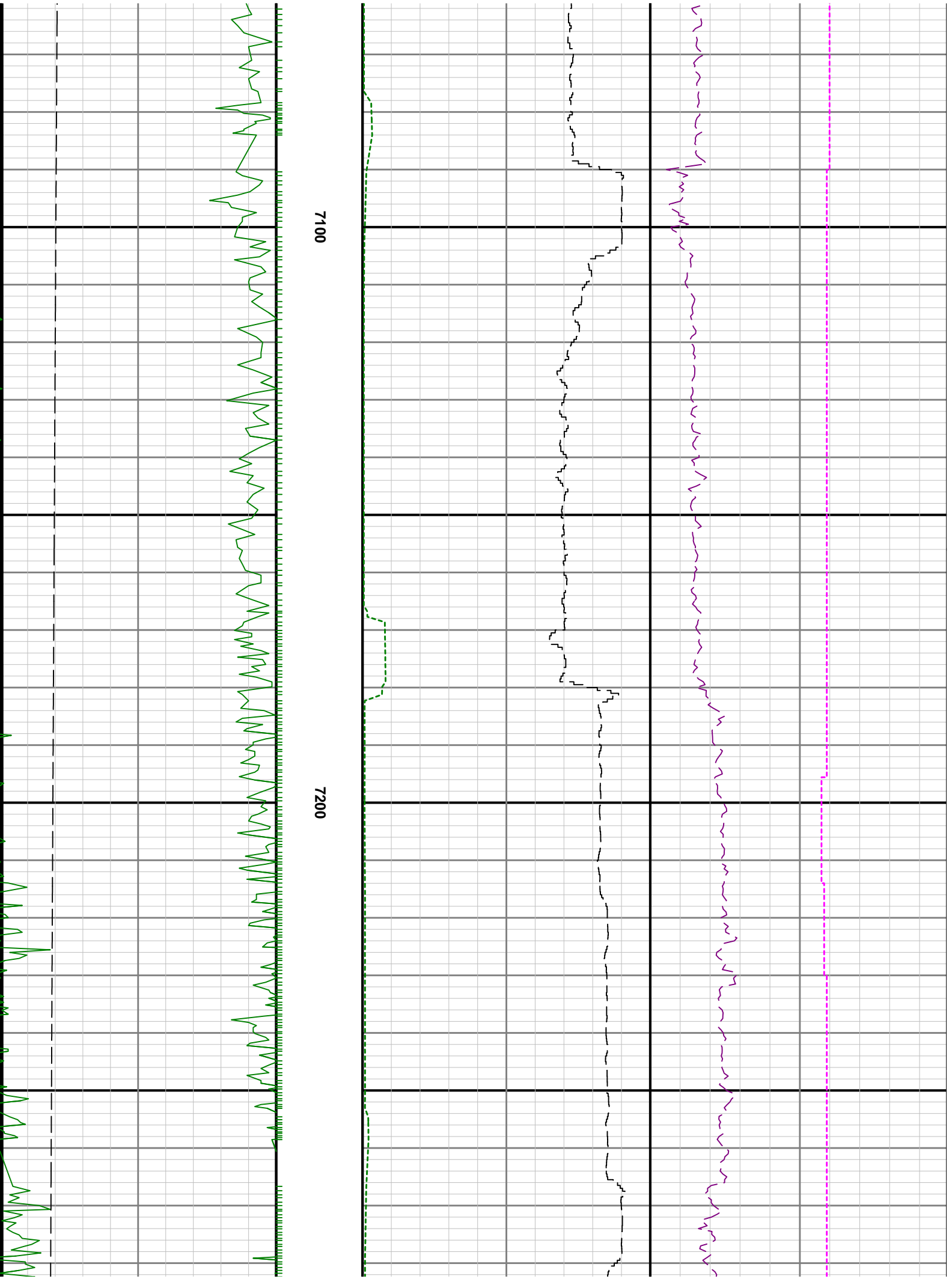


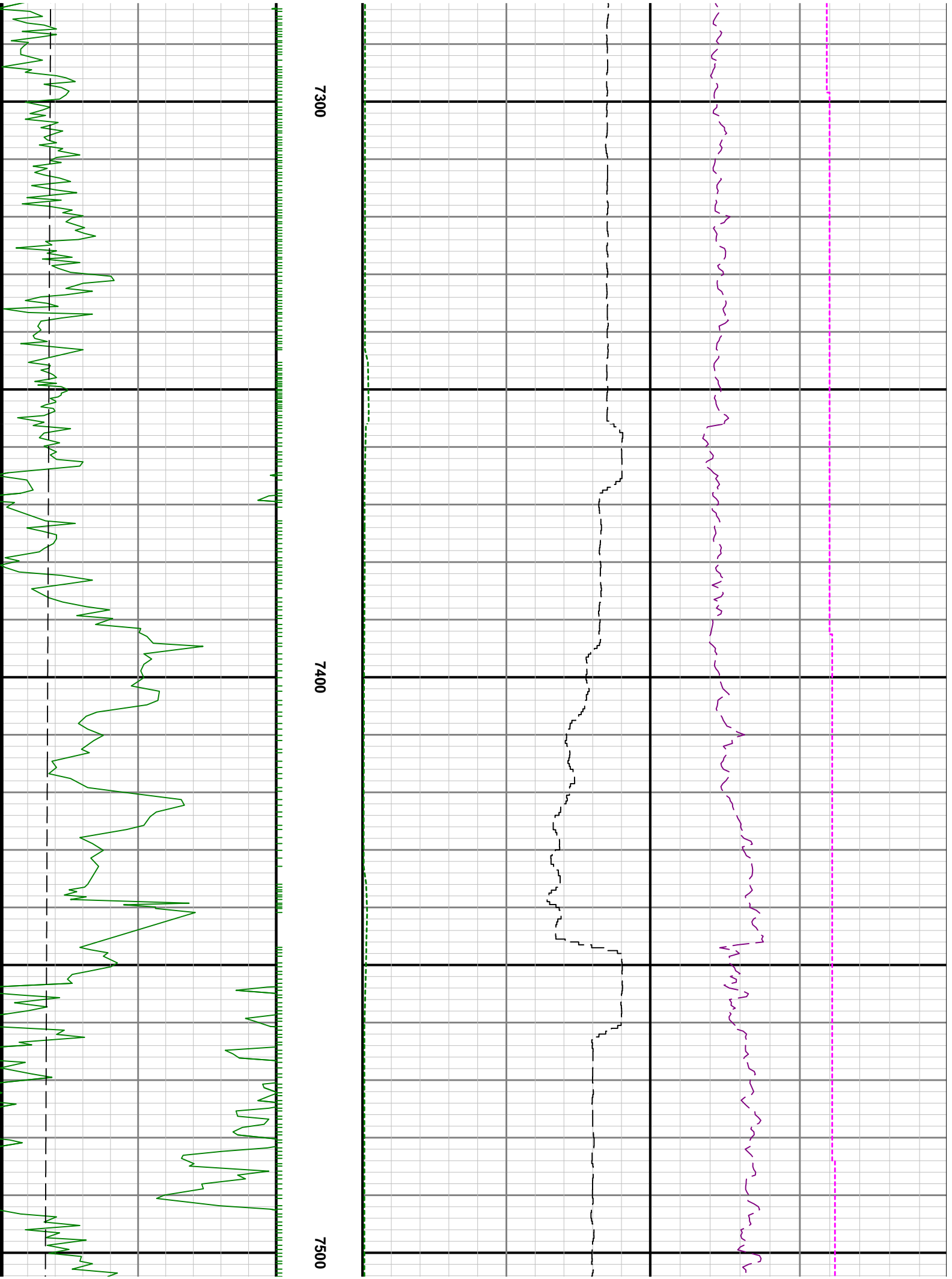
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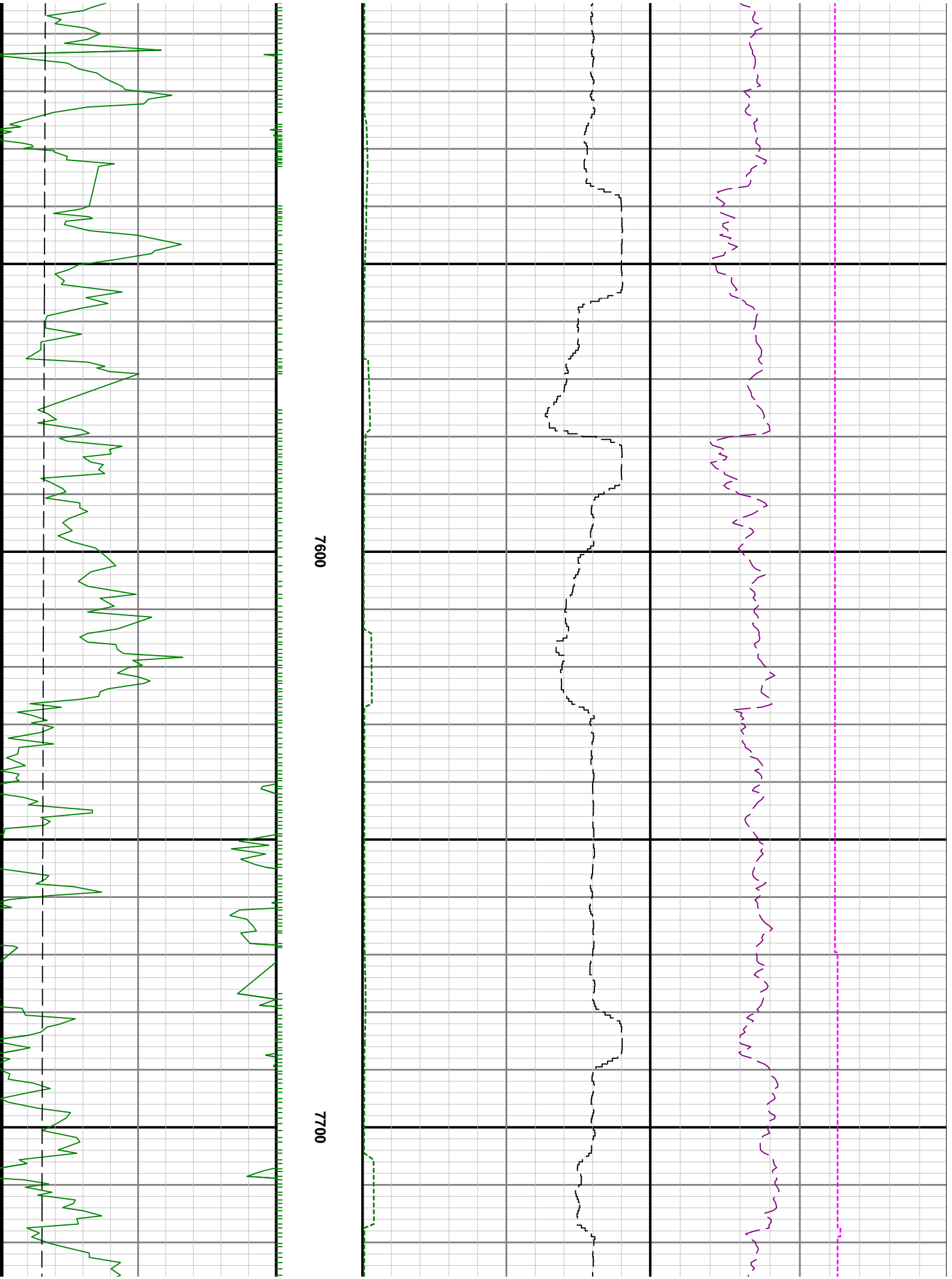
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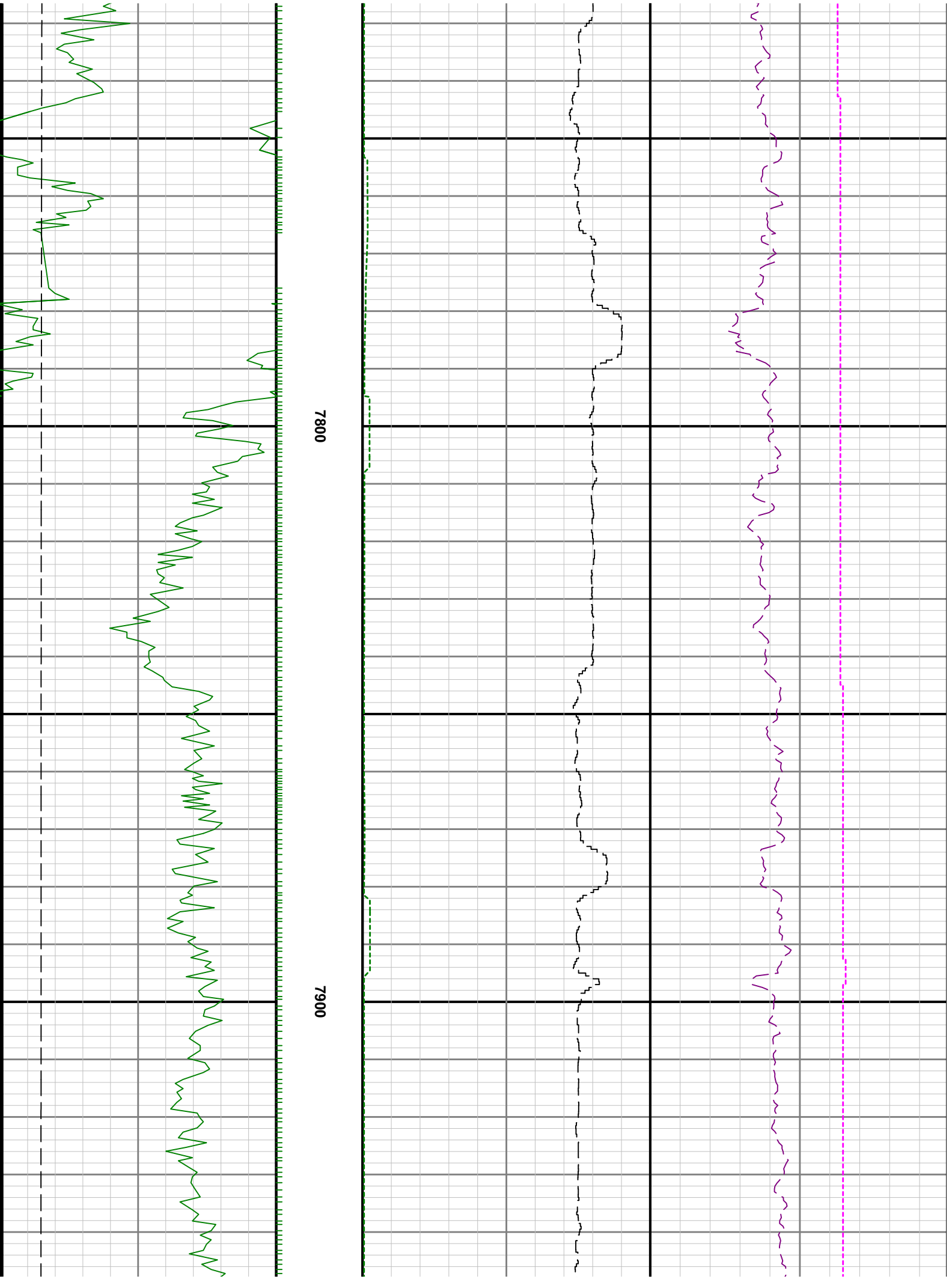


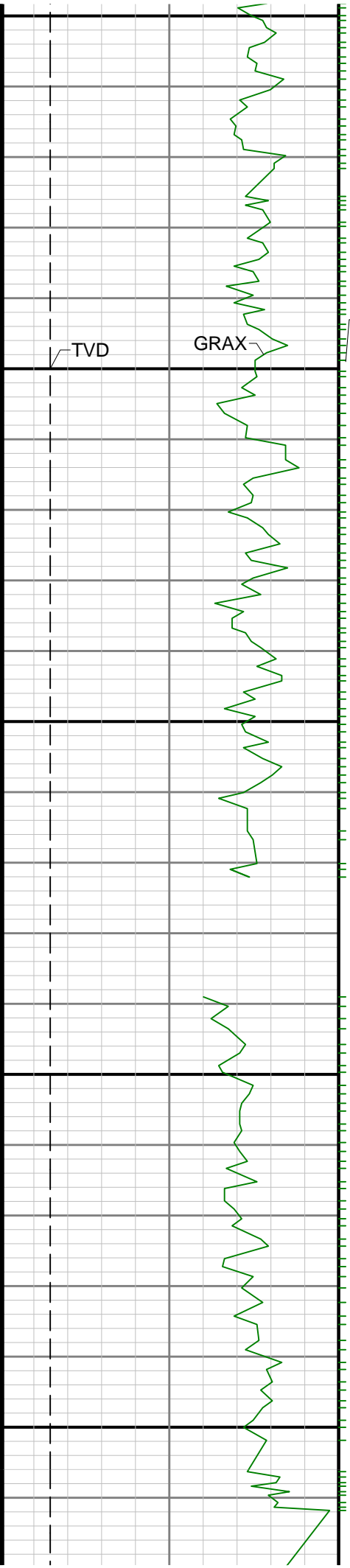






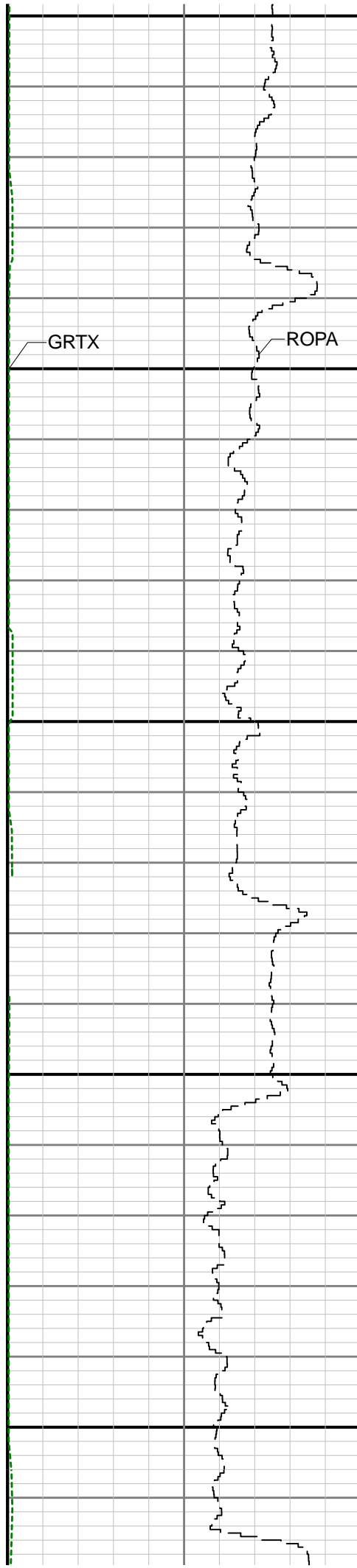






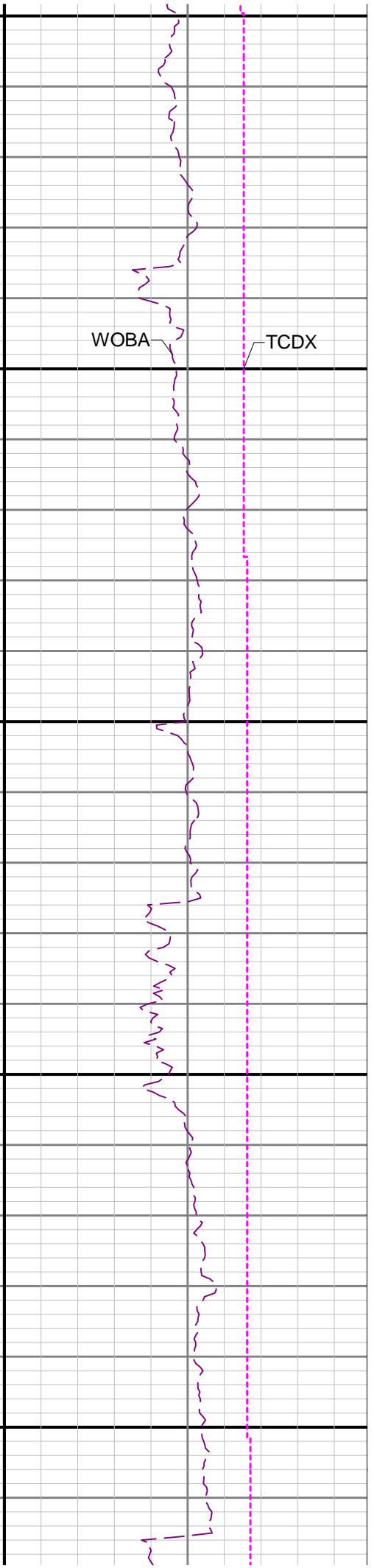
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8100



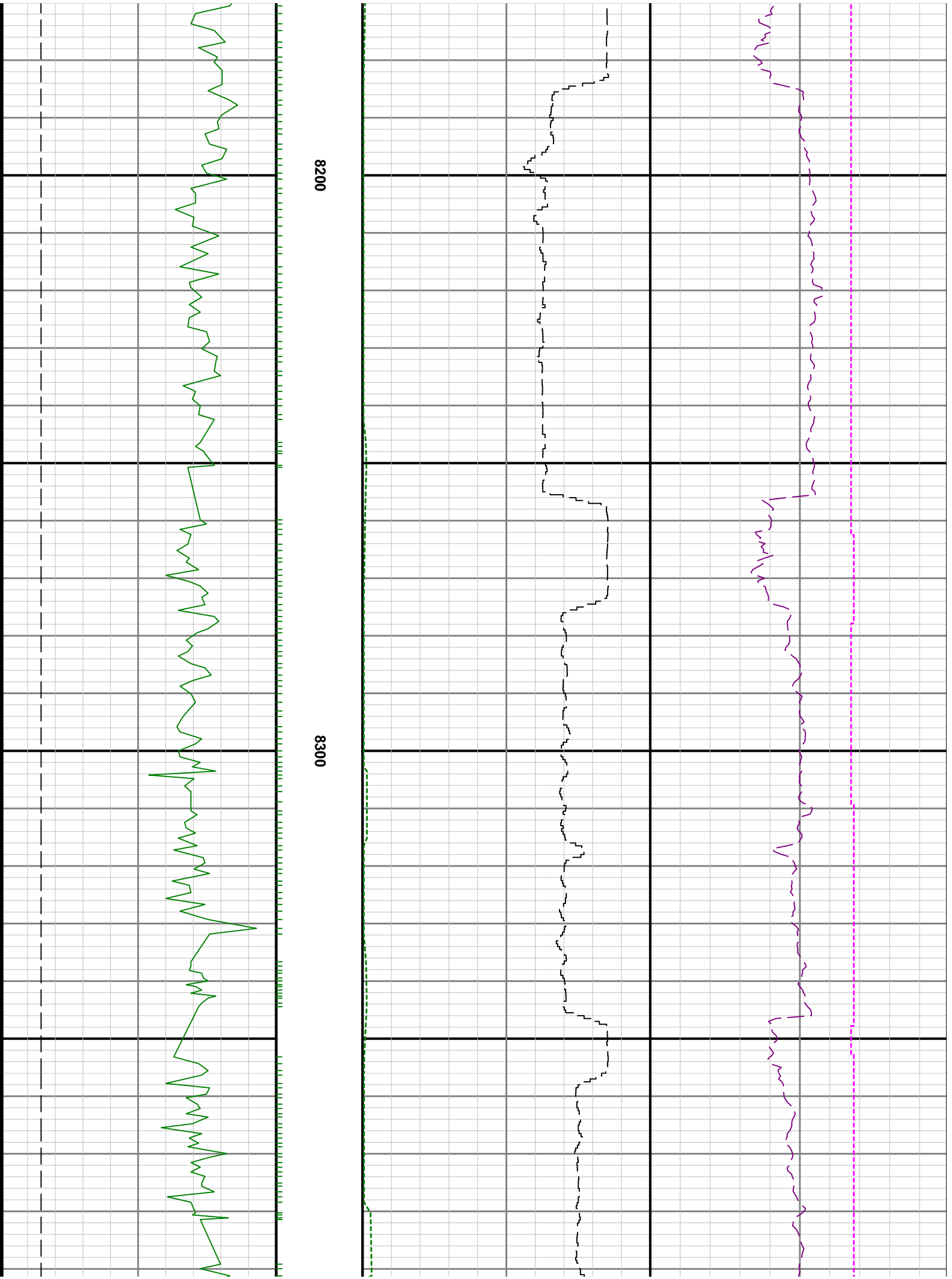
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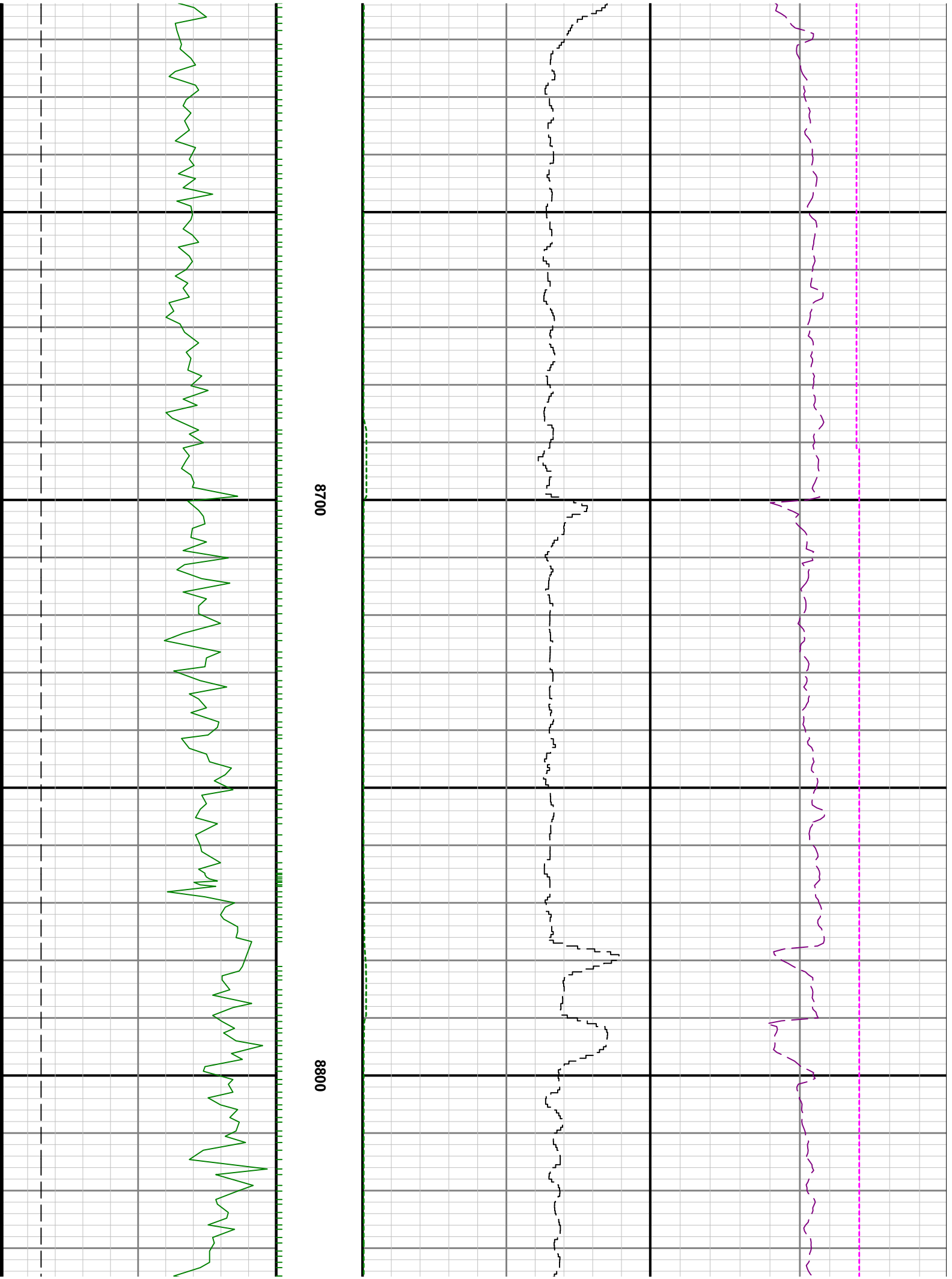


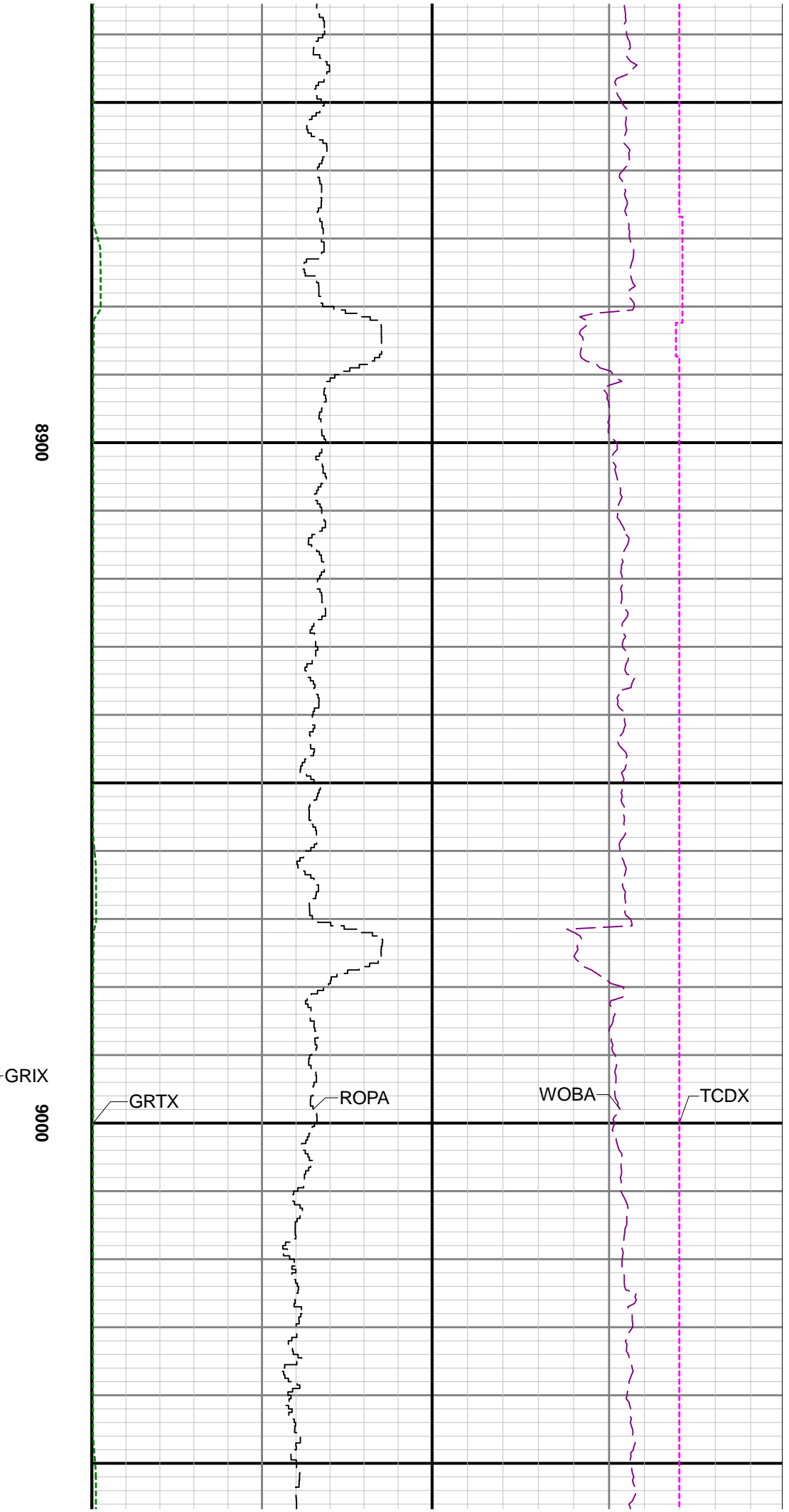
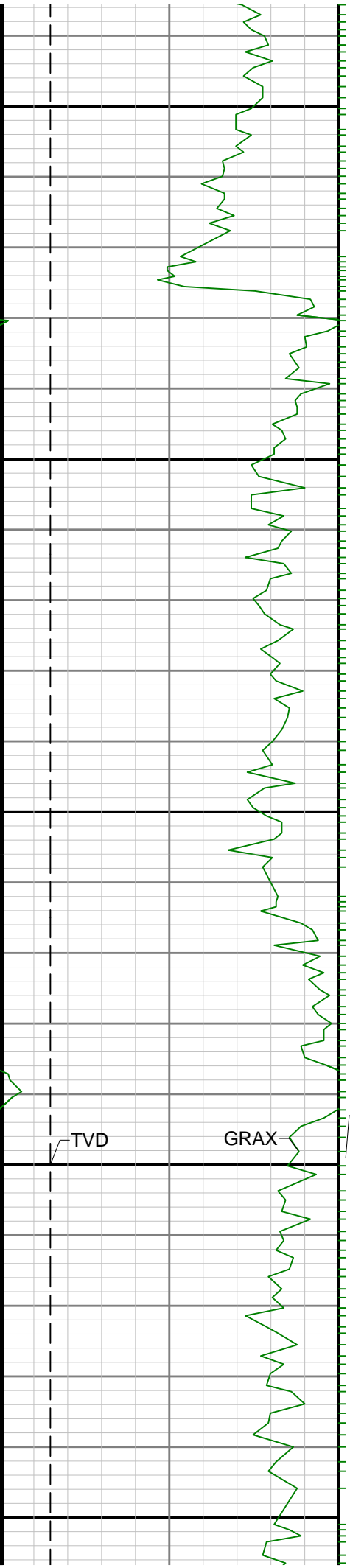
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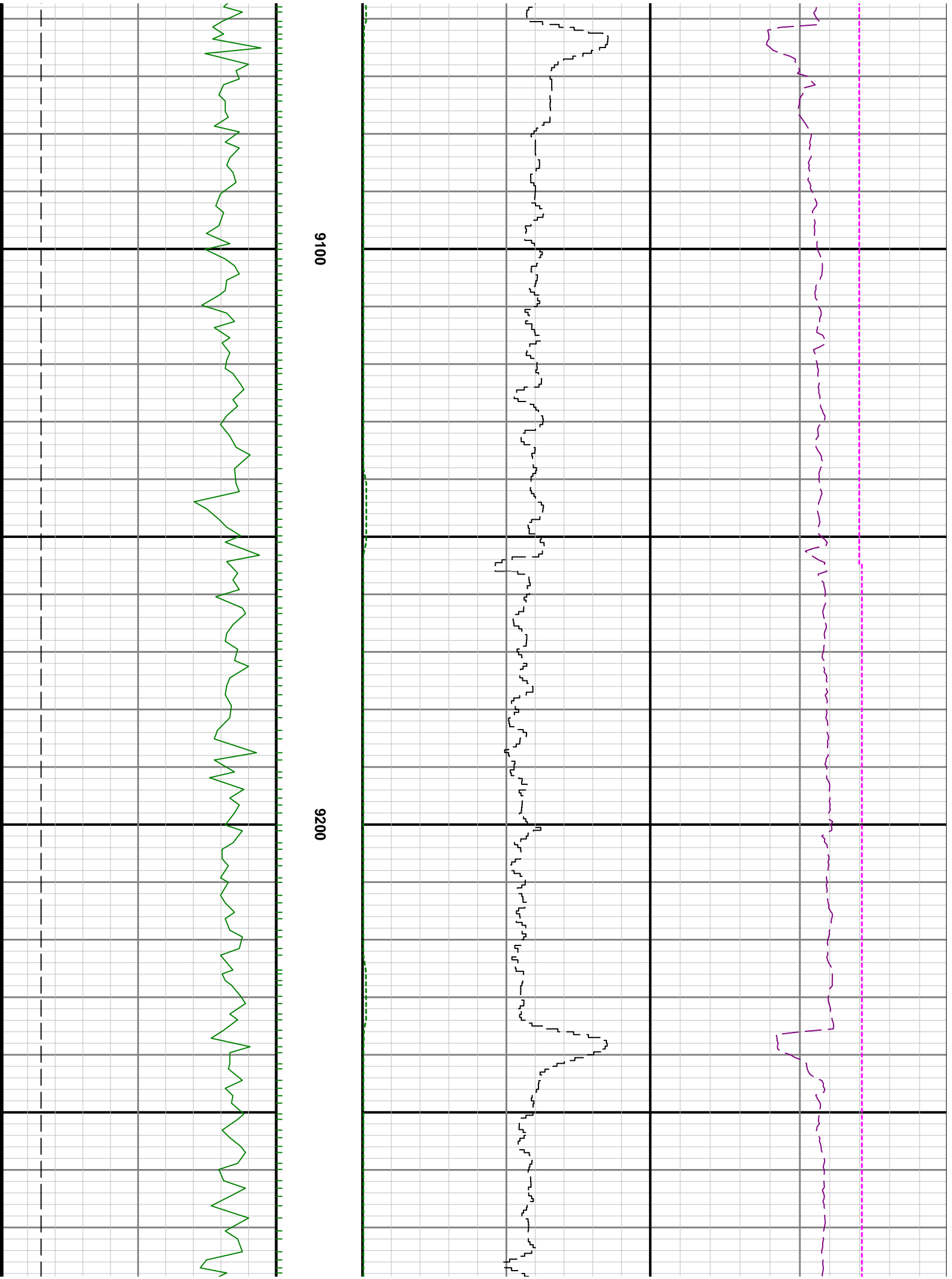
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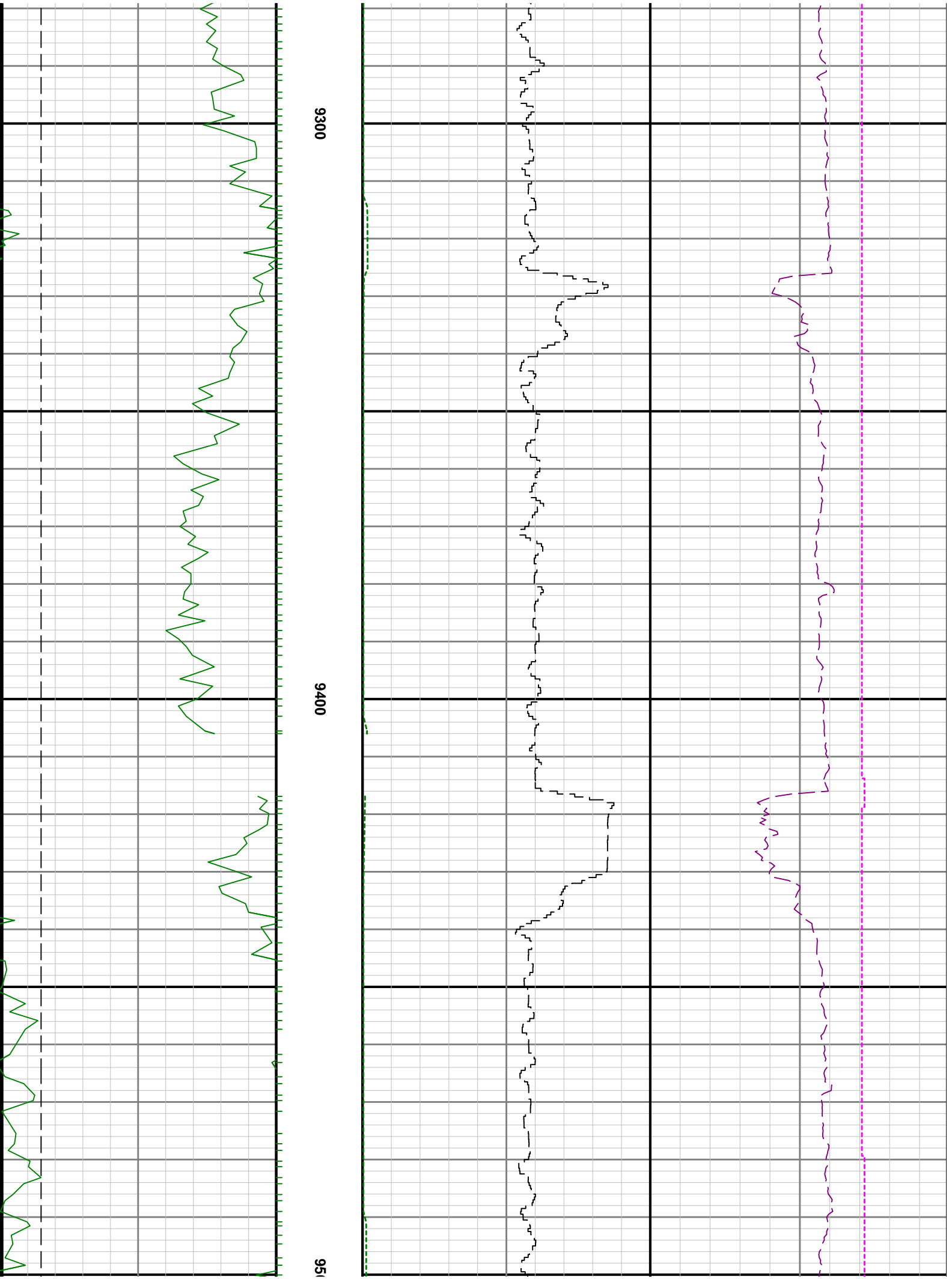


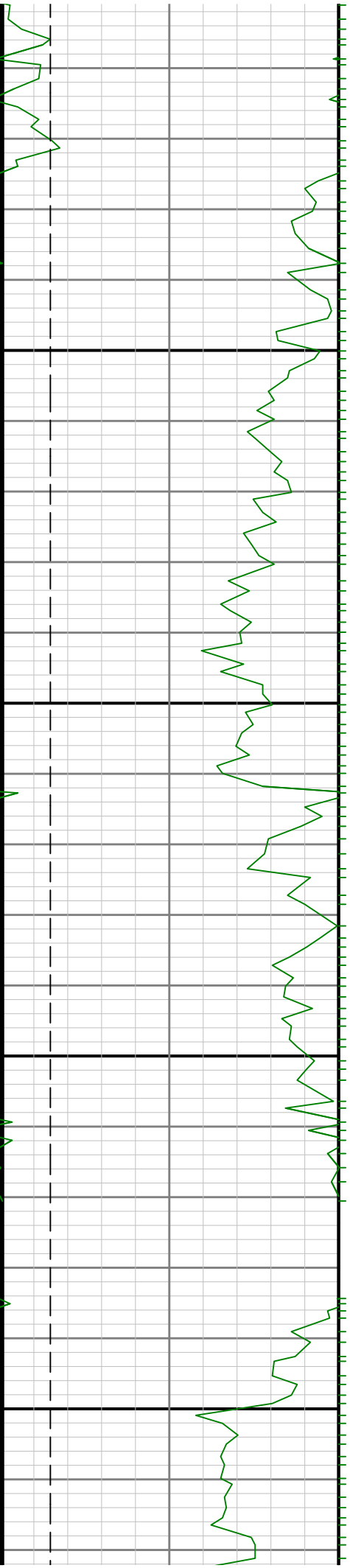








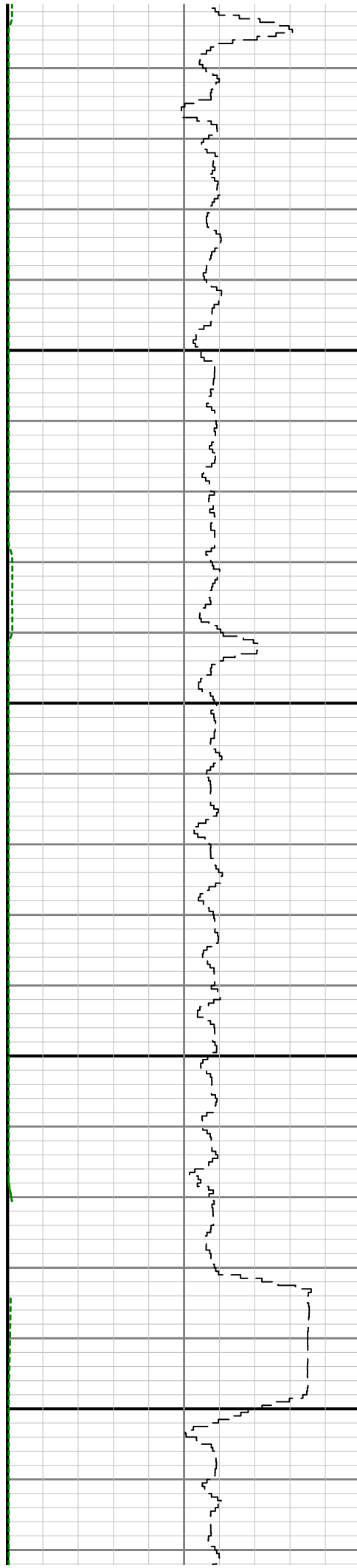


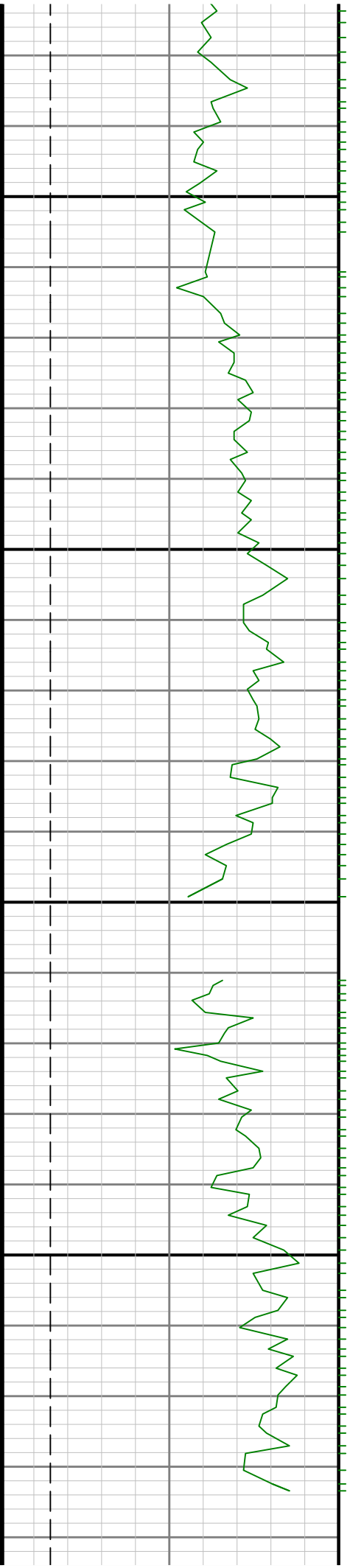


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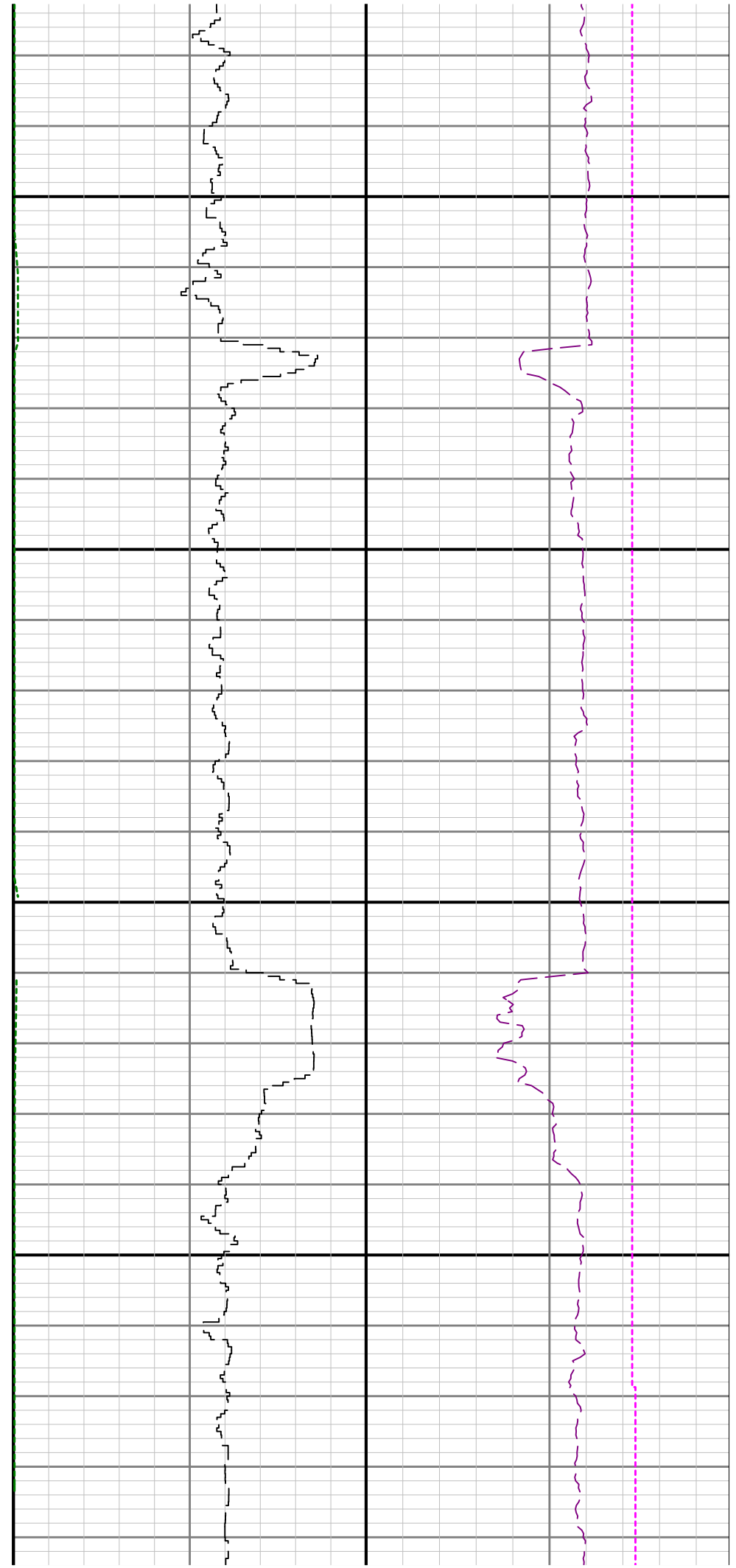
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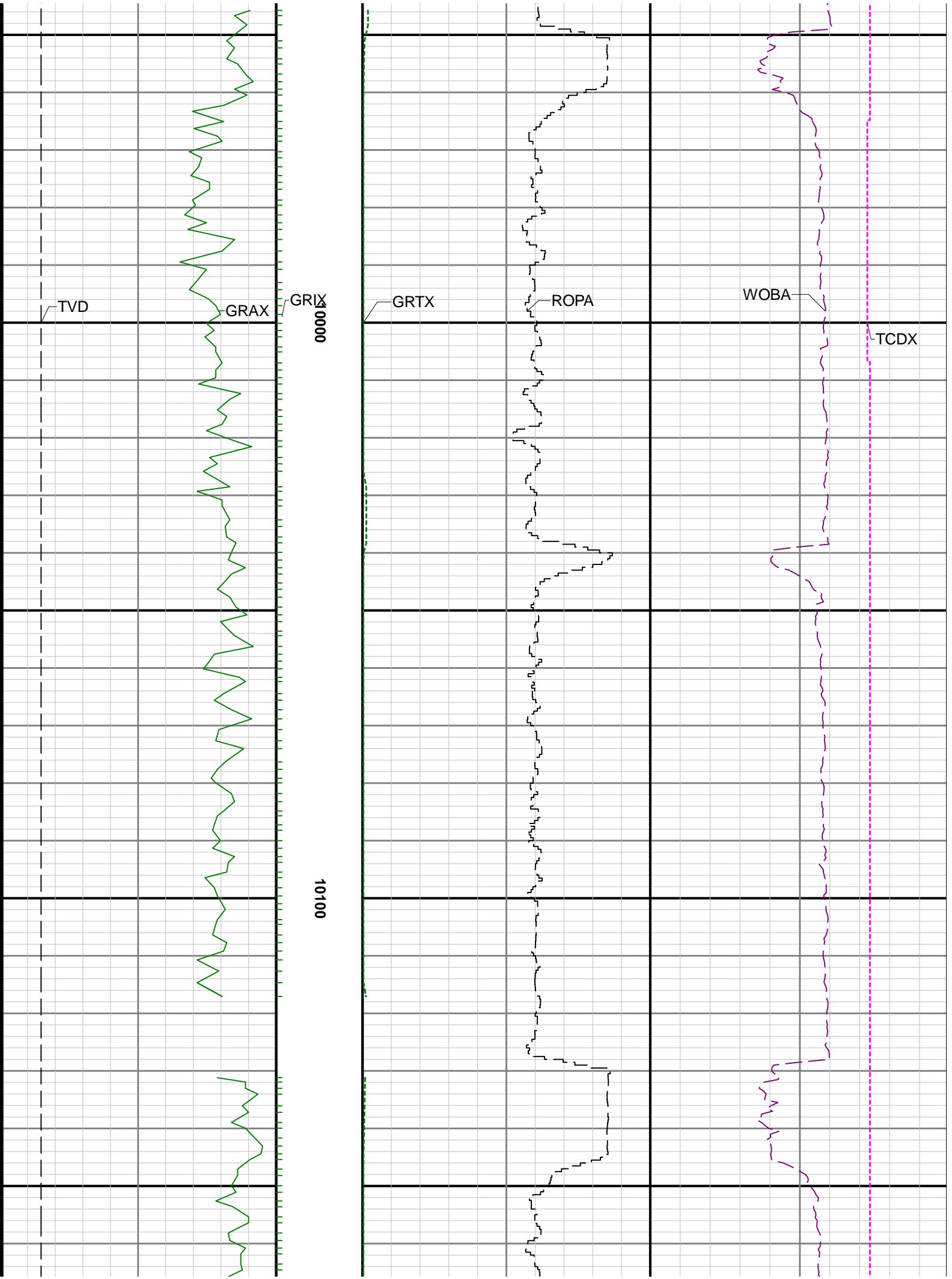


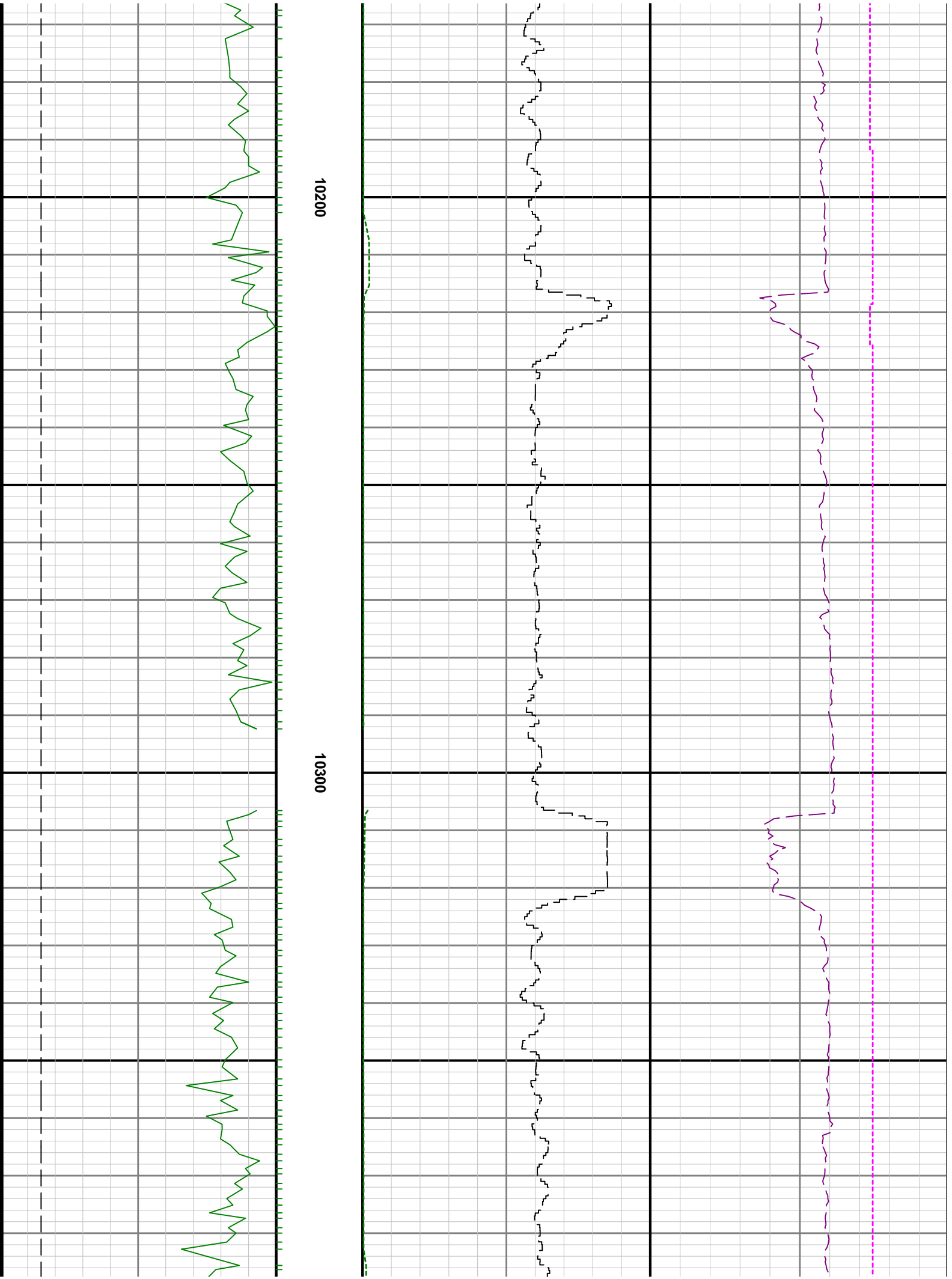


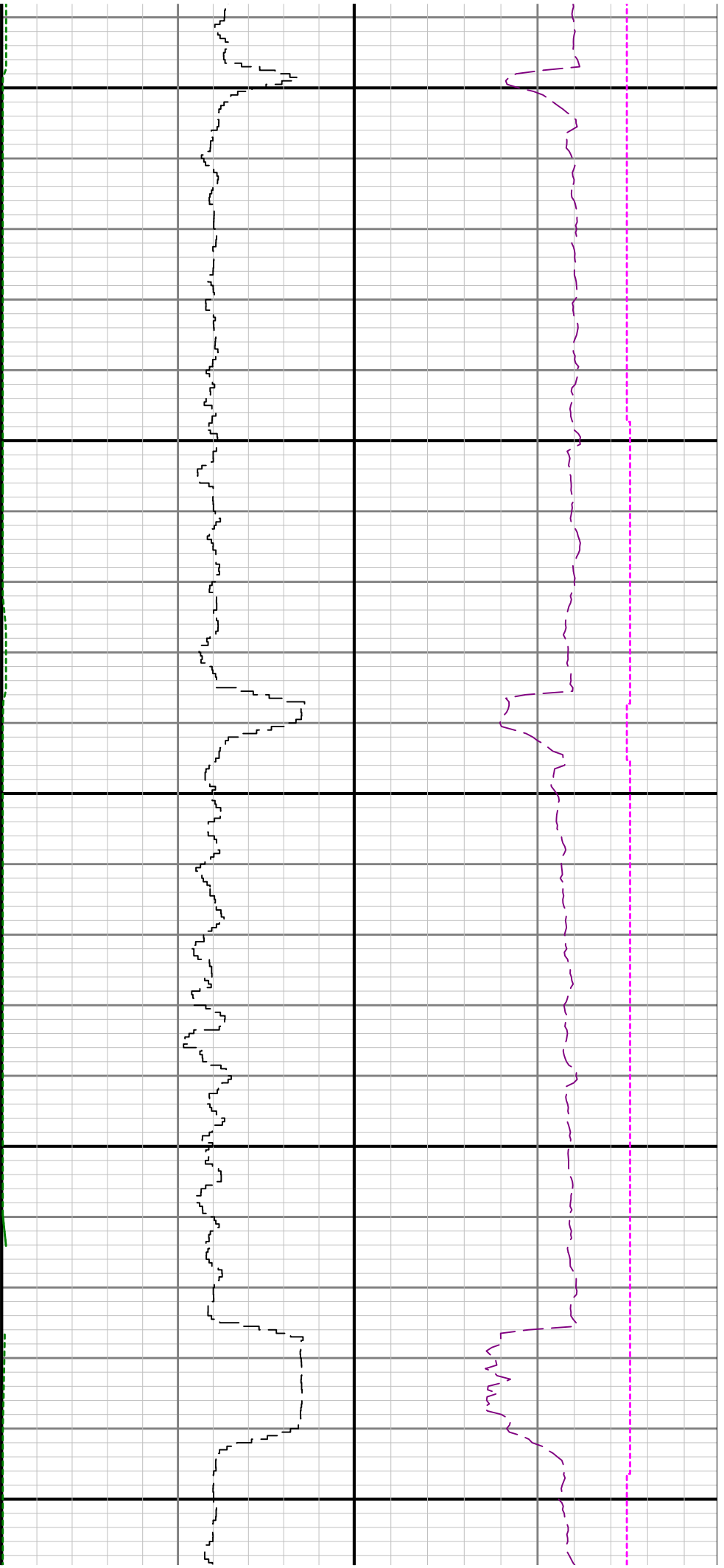
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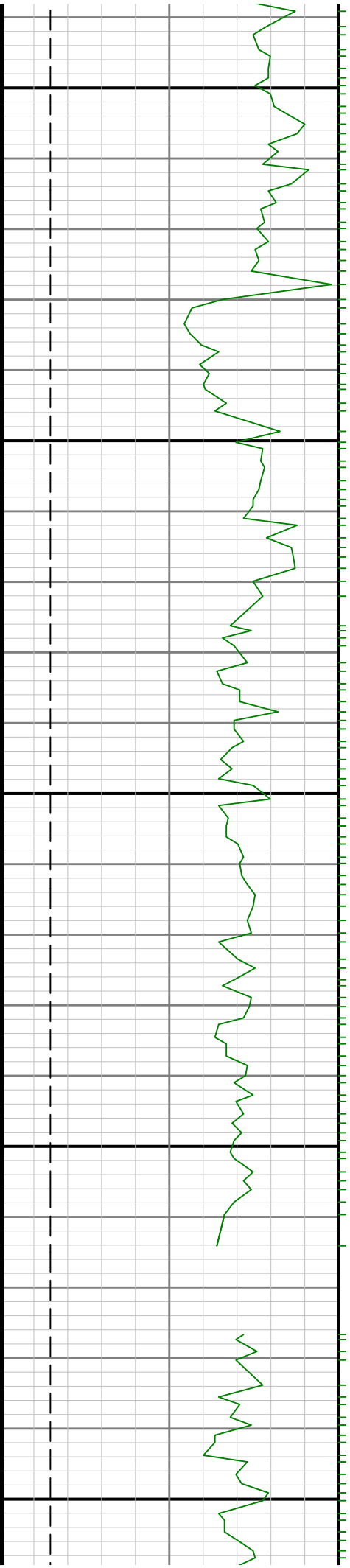


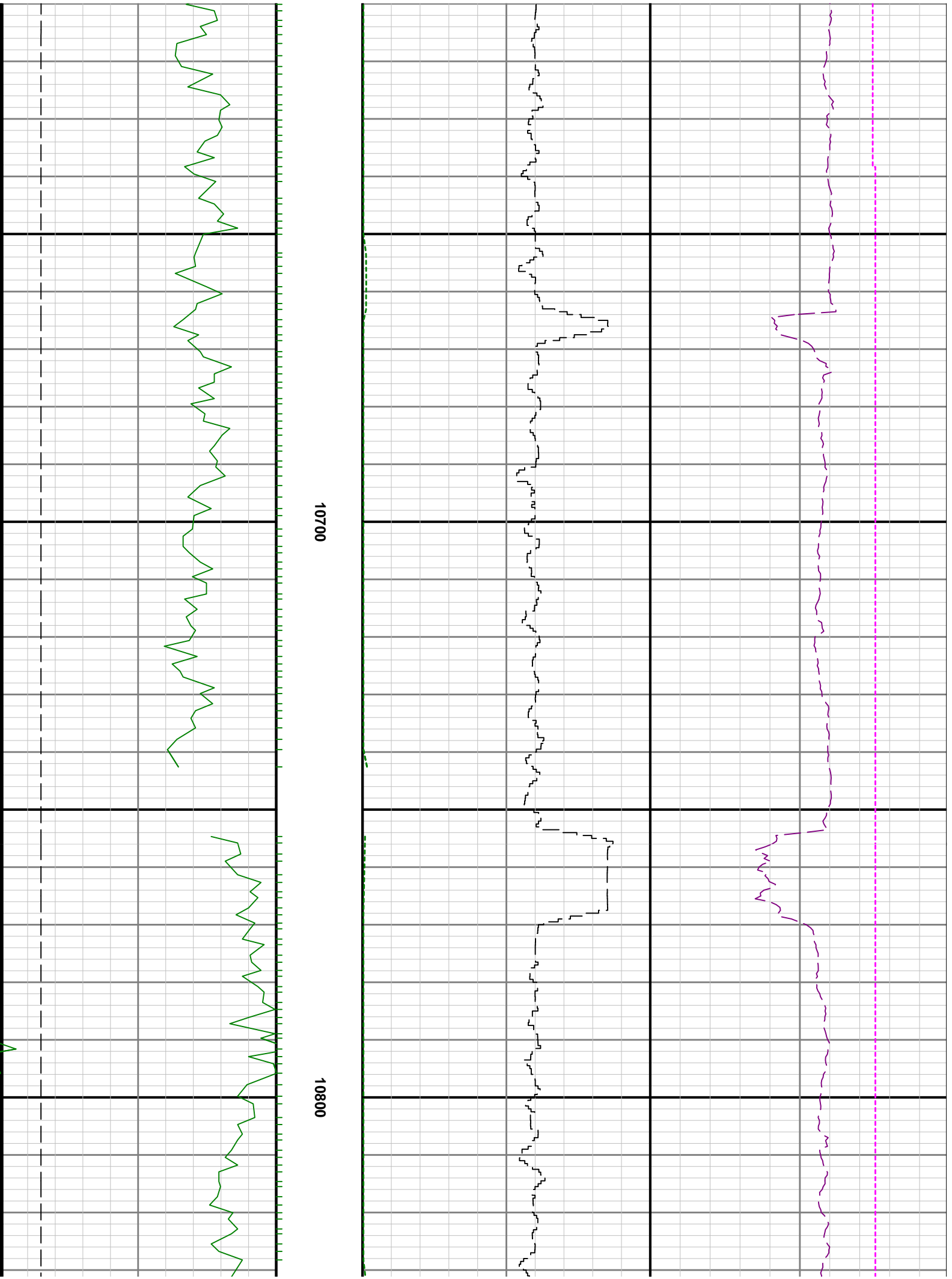


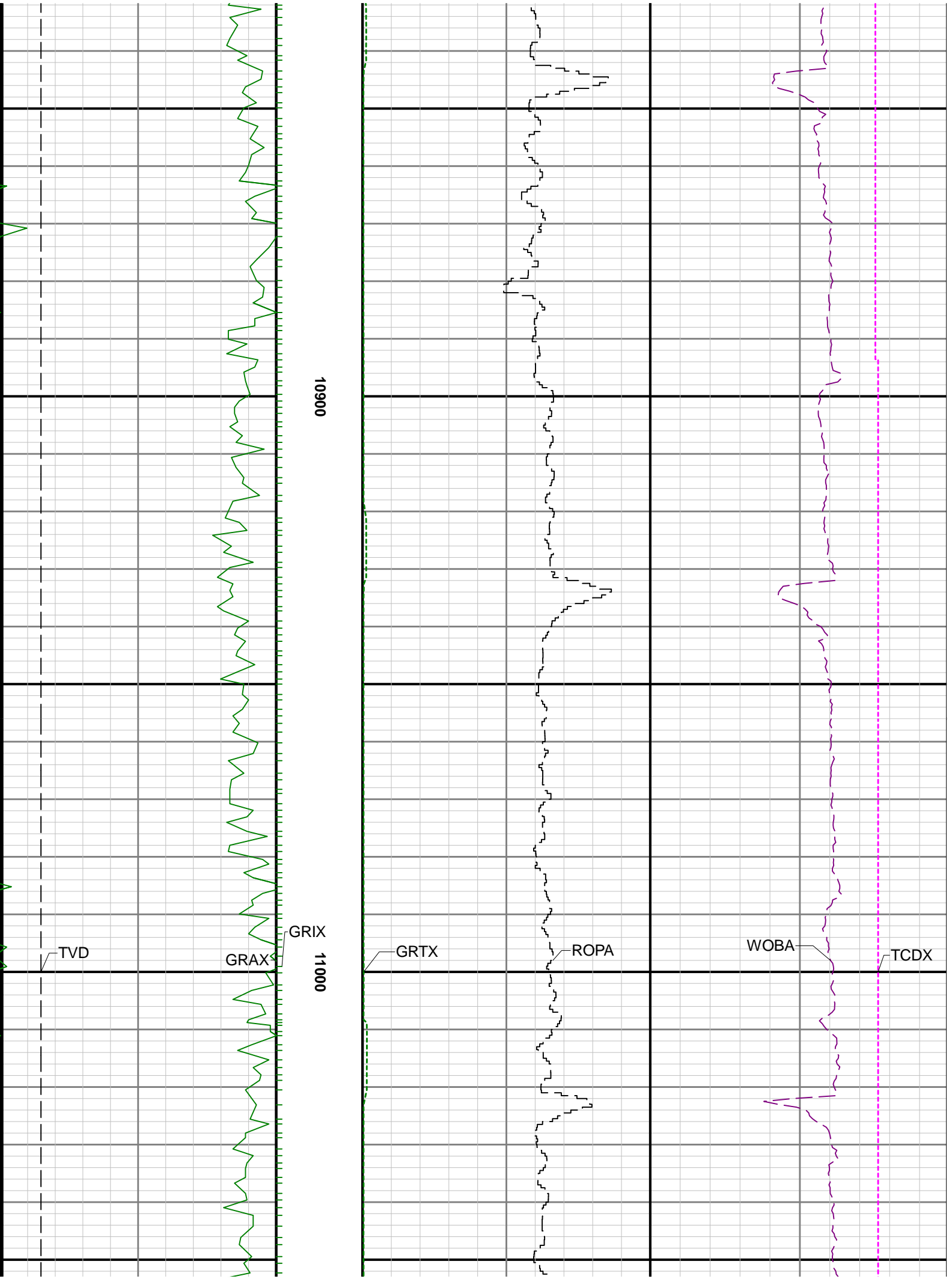
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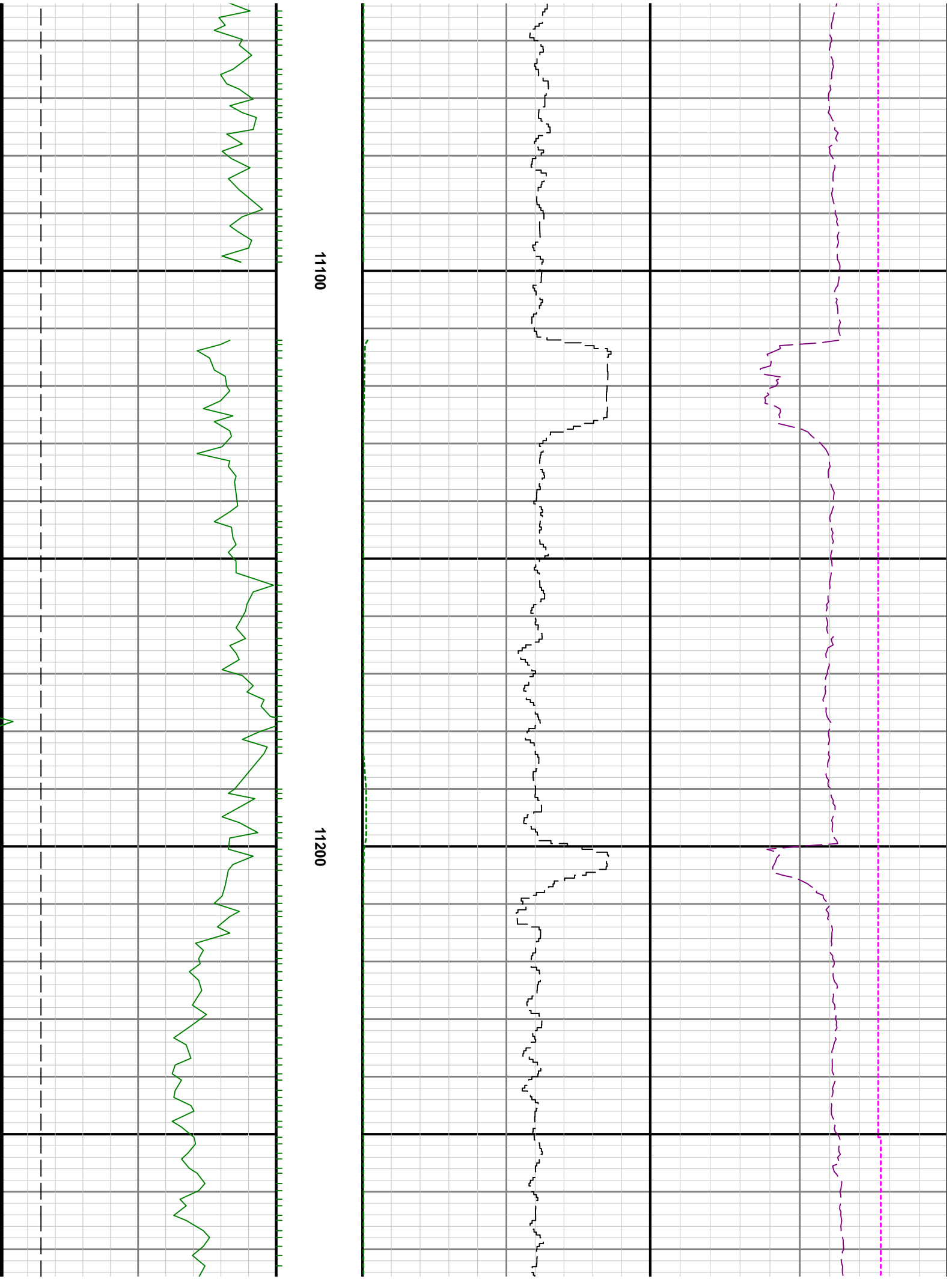
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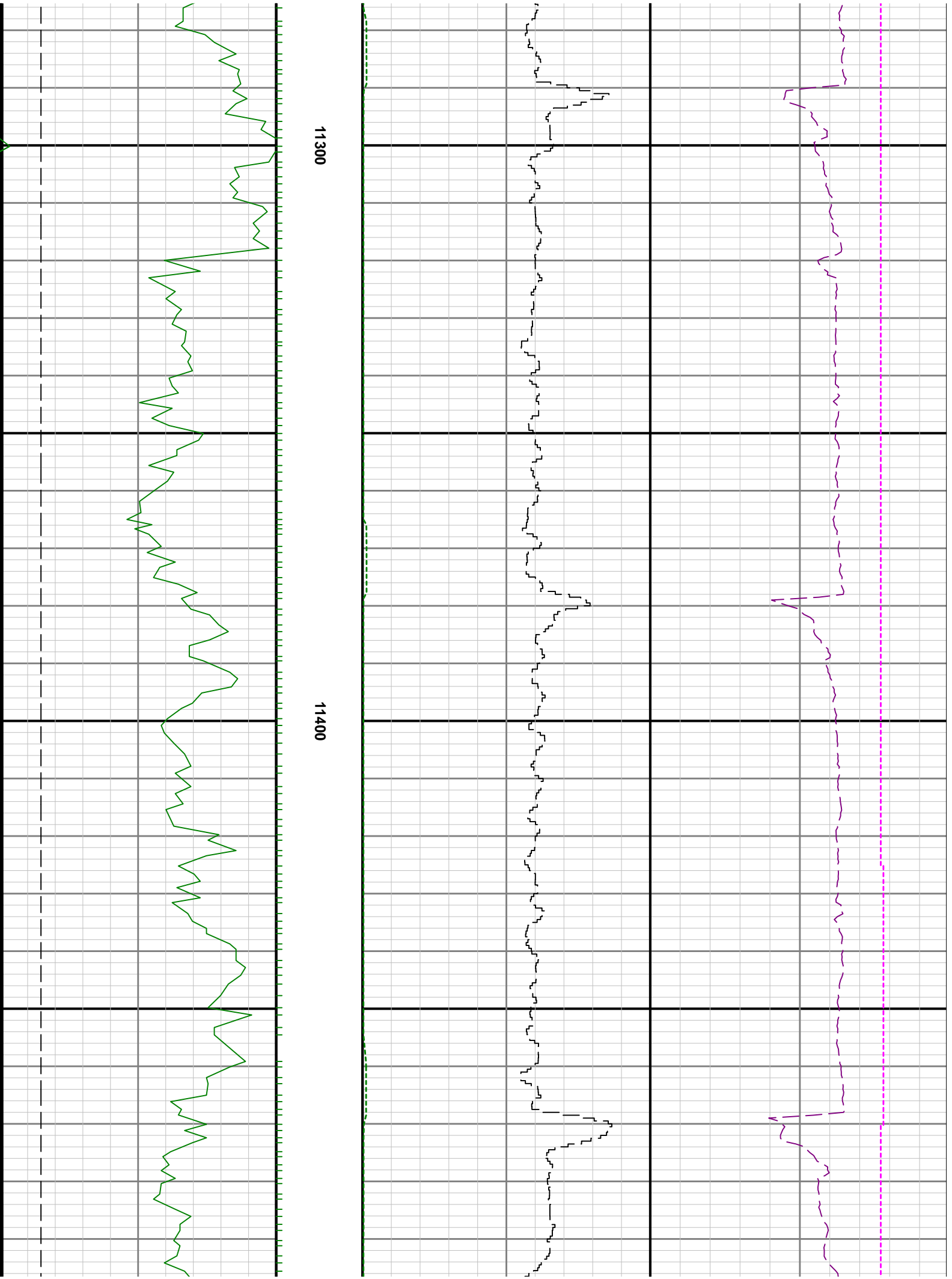
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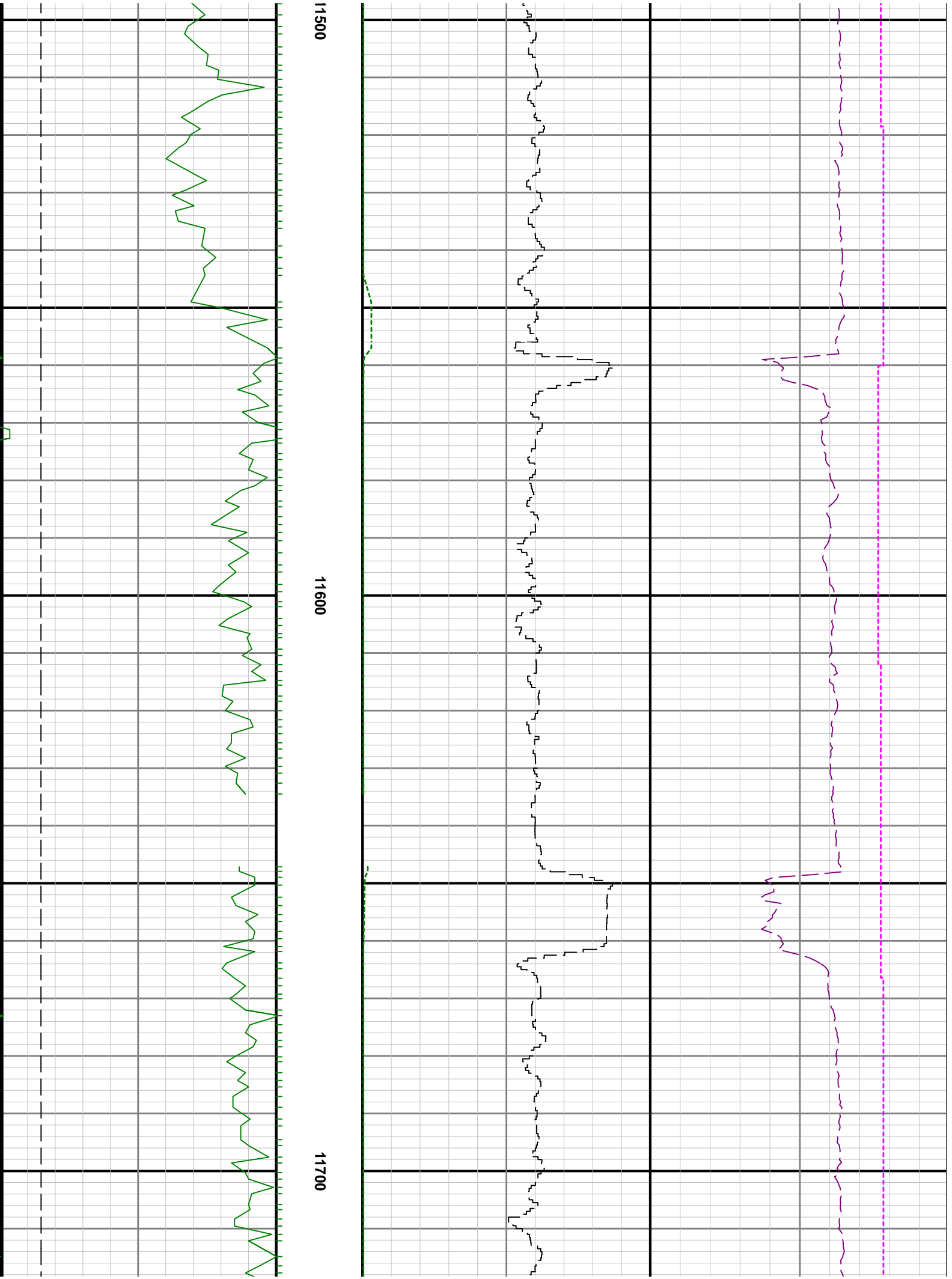


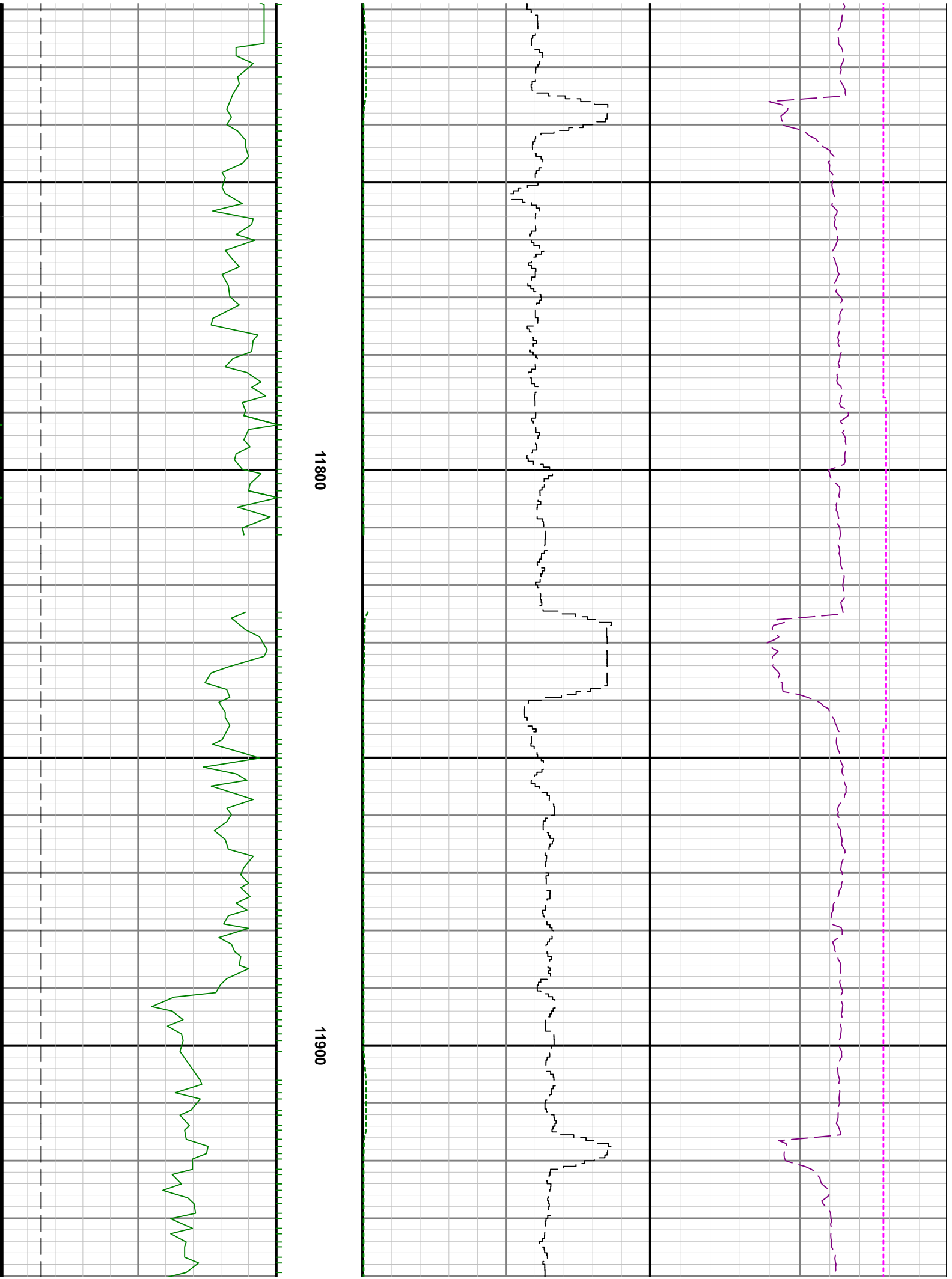


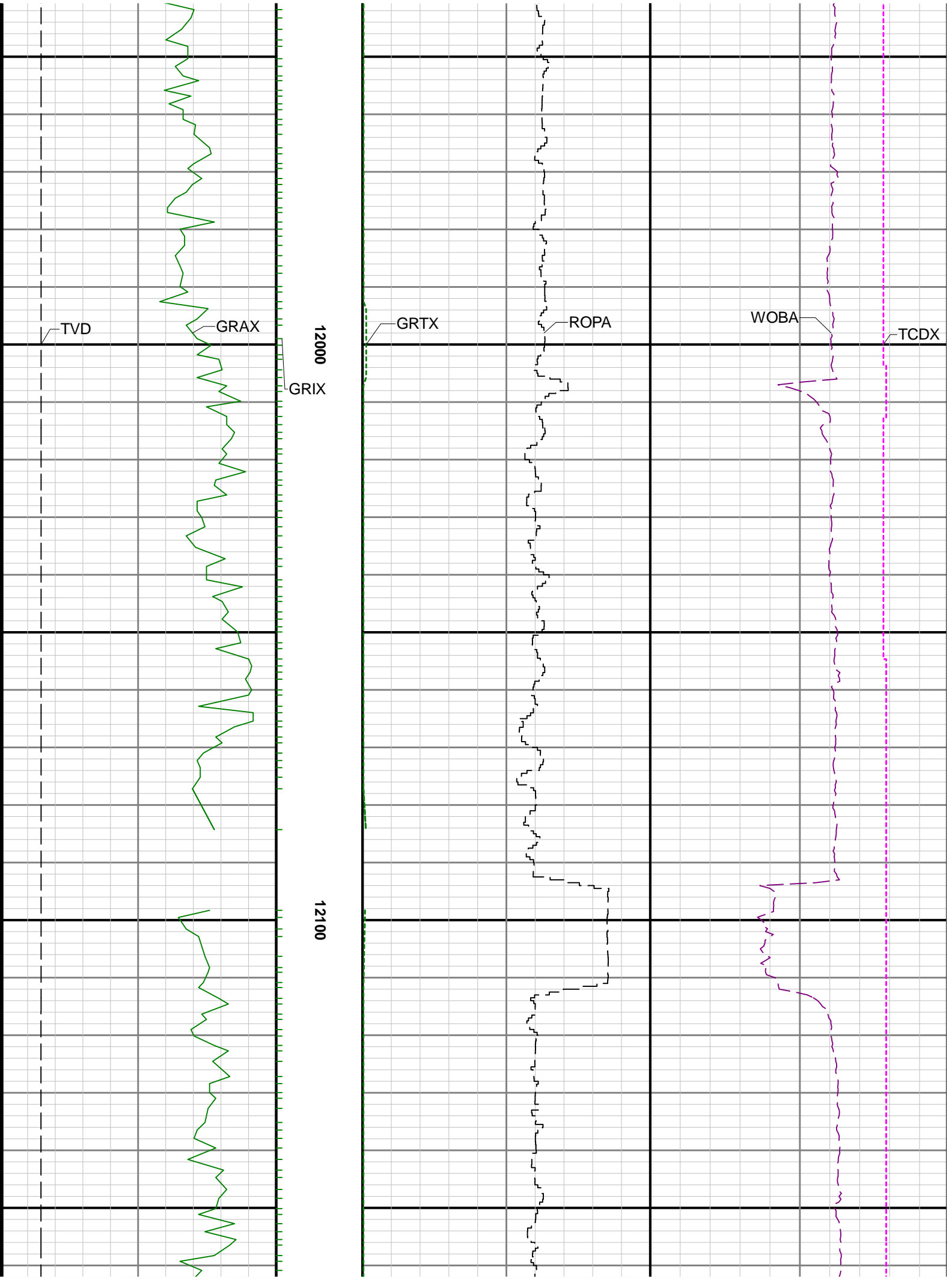


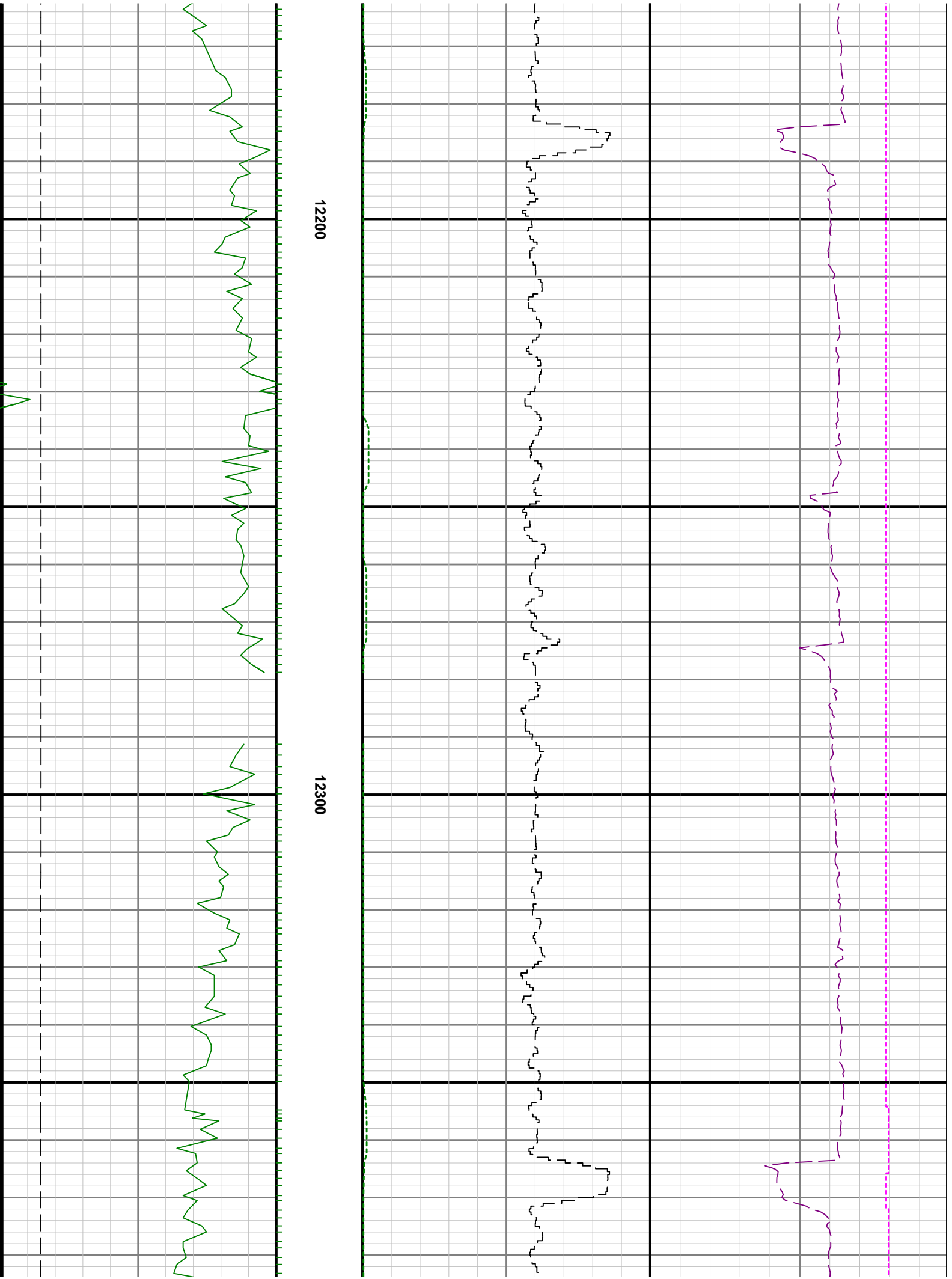


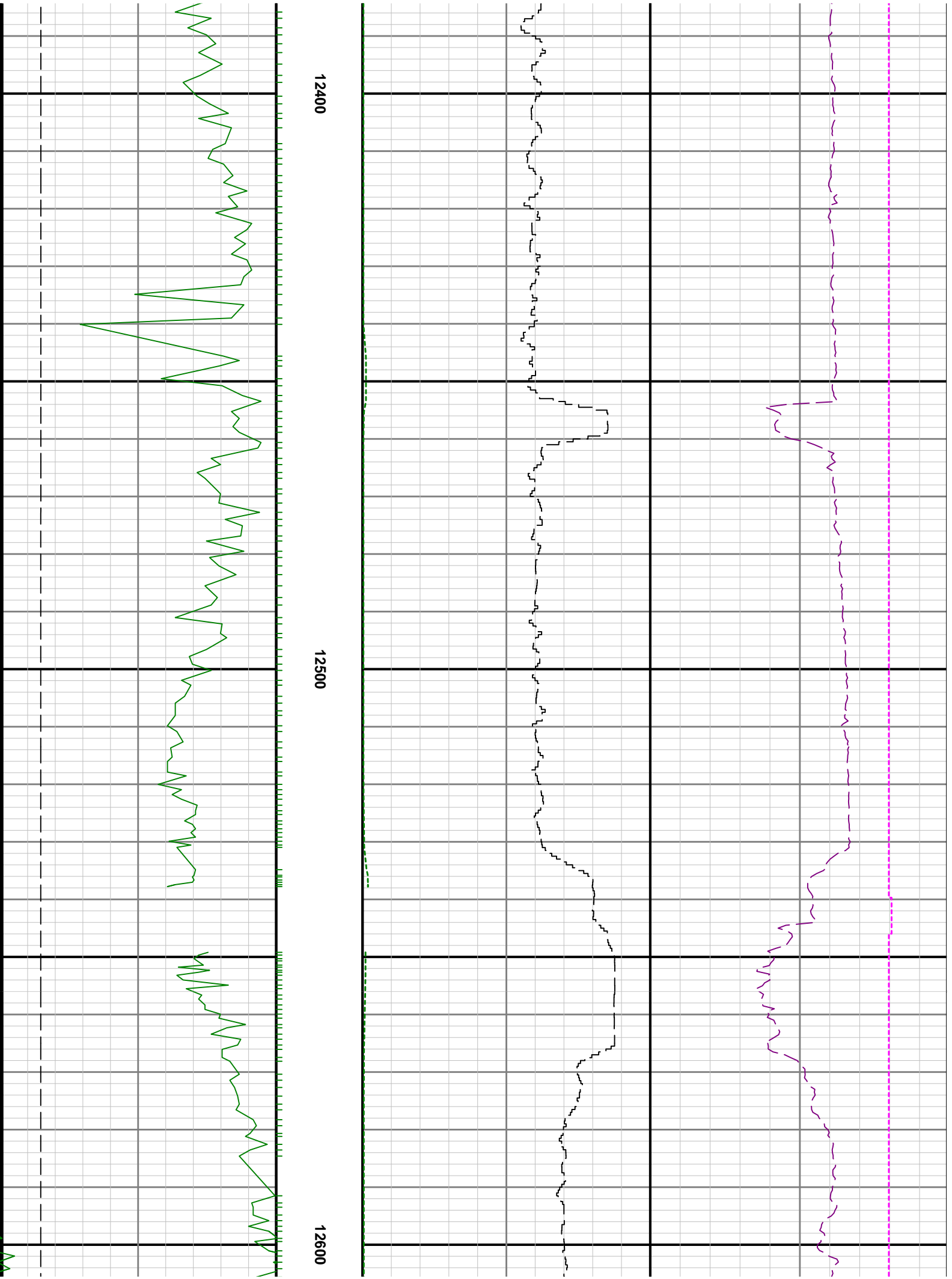


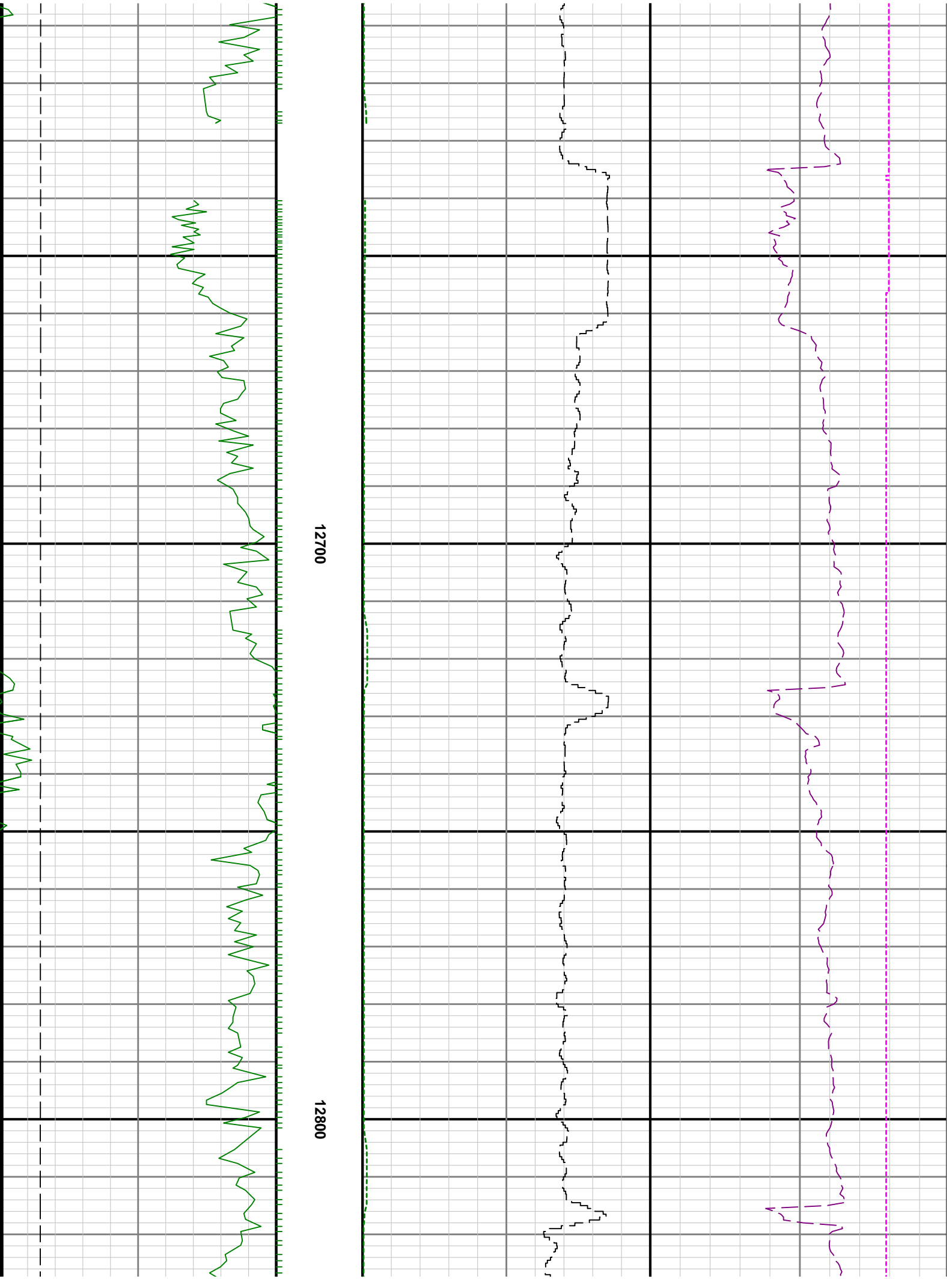


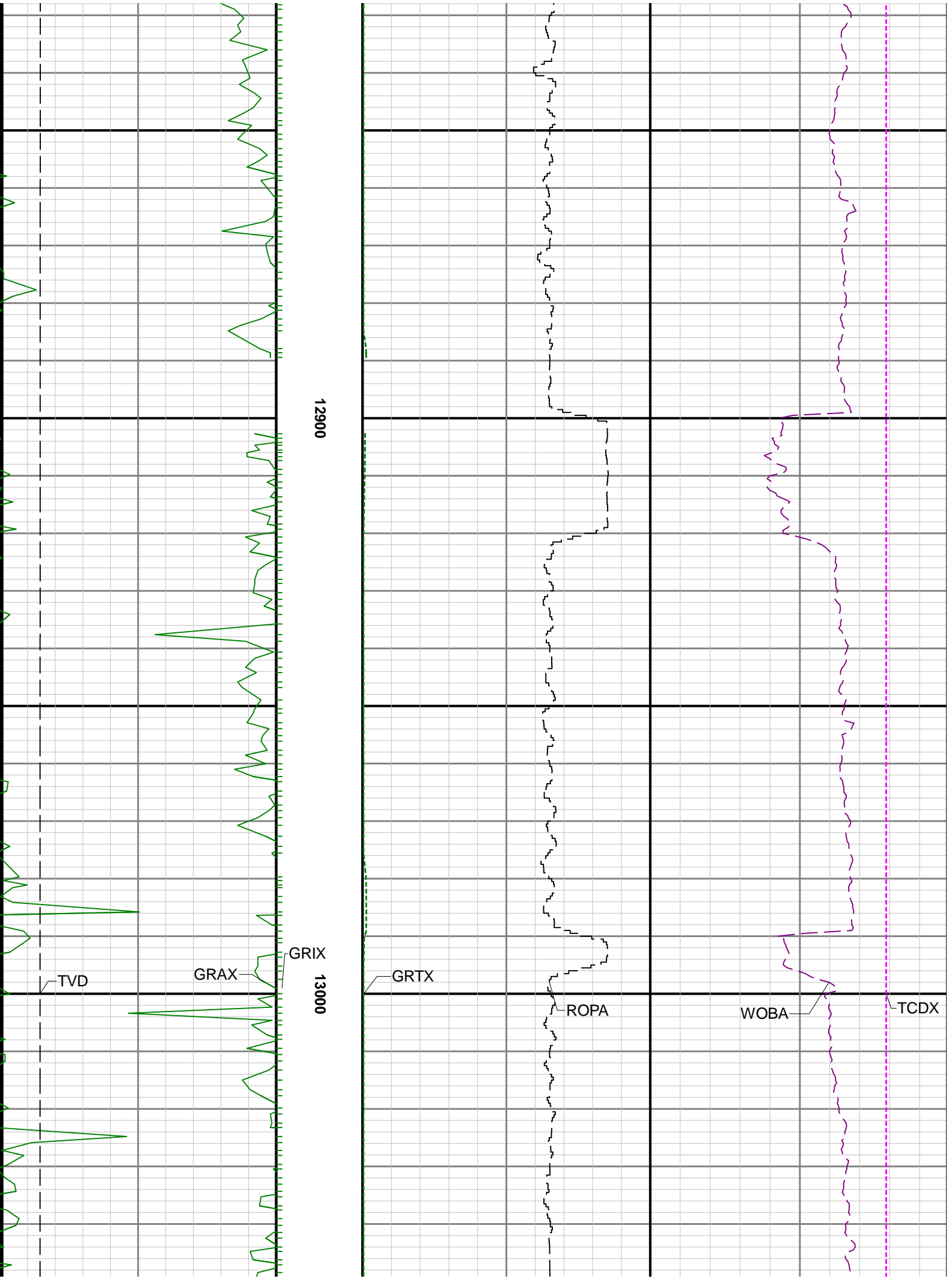


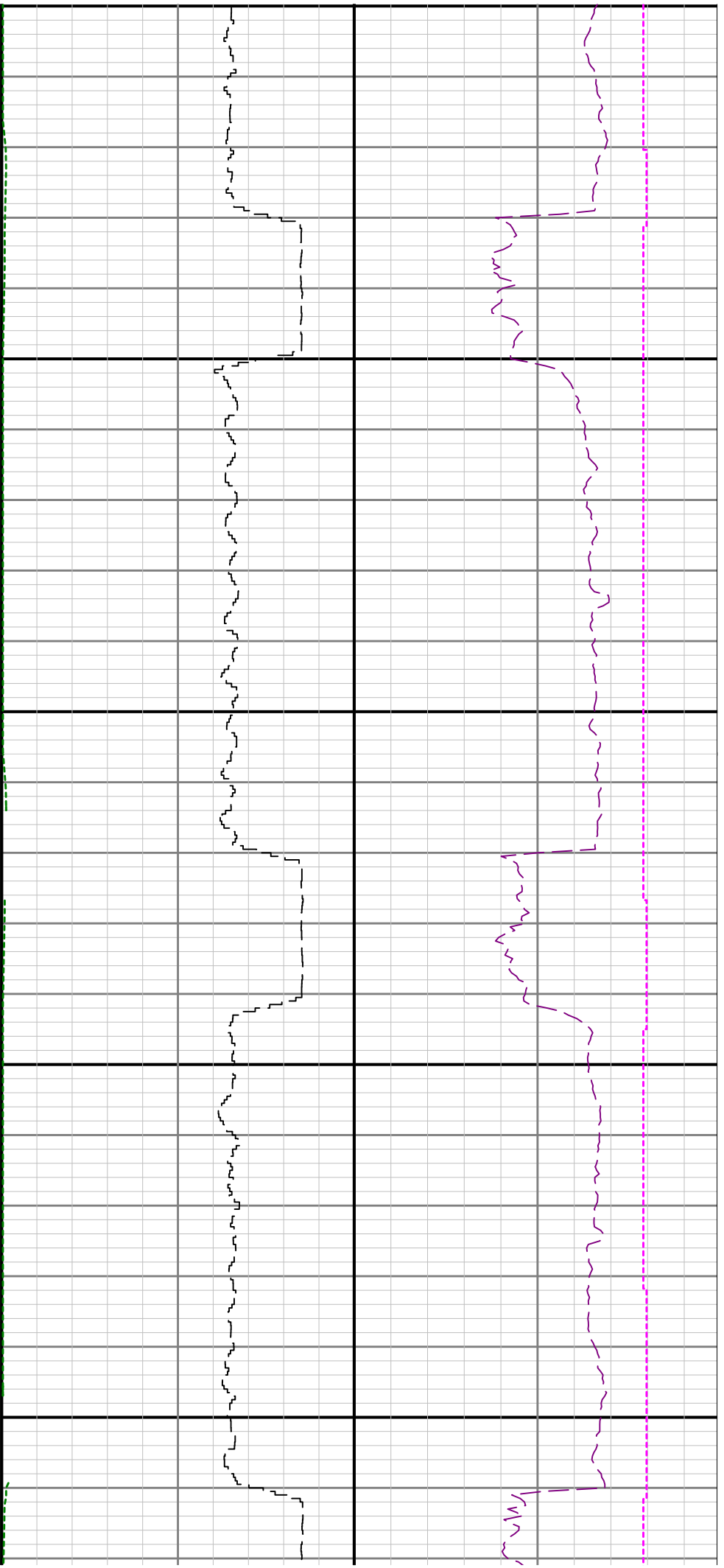






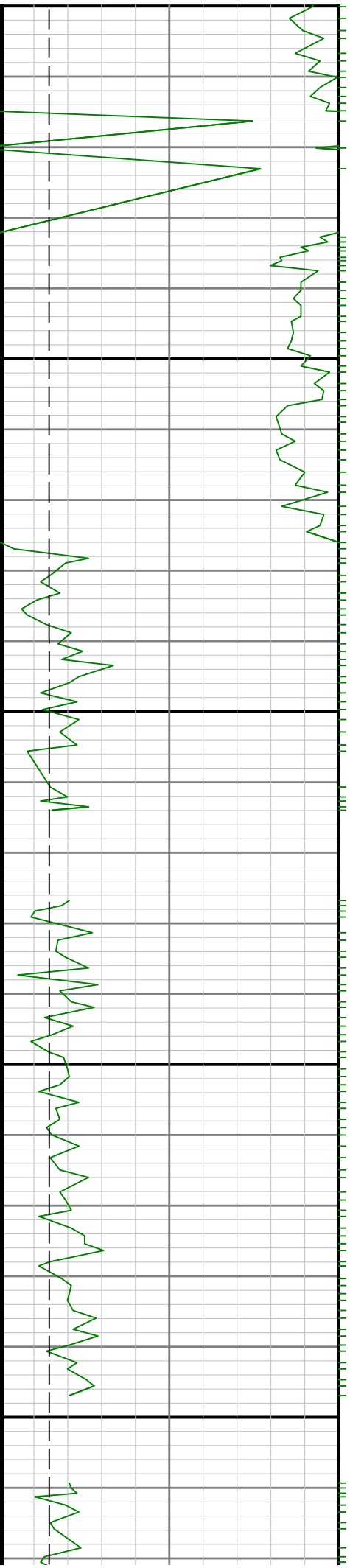


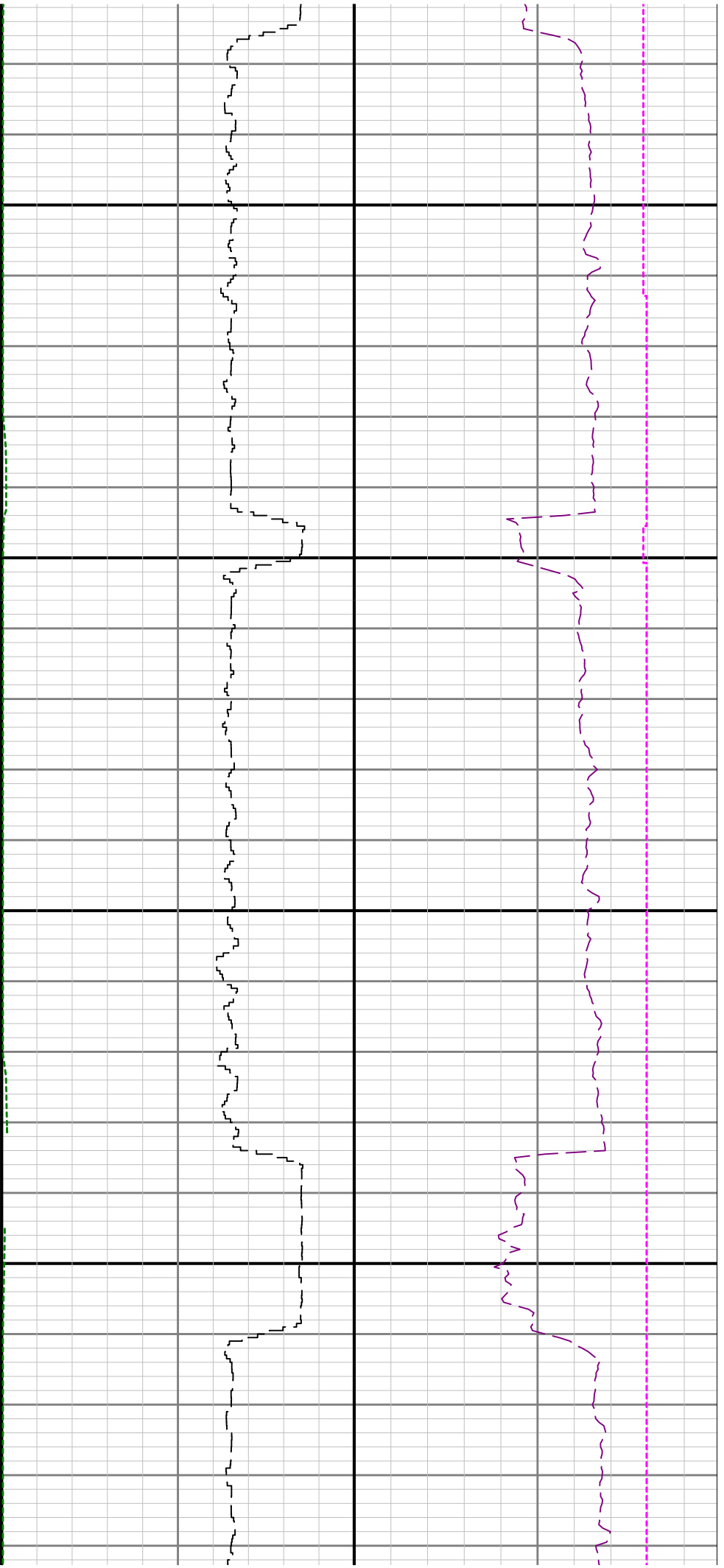




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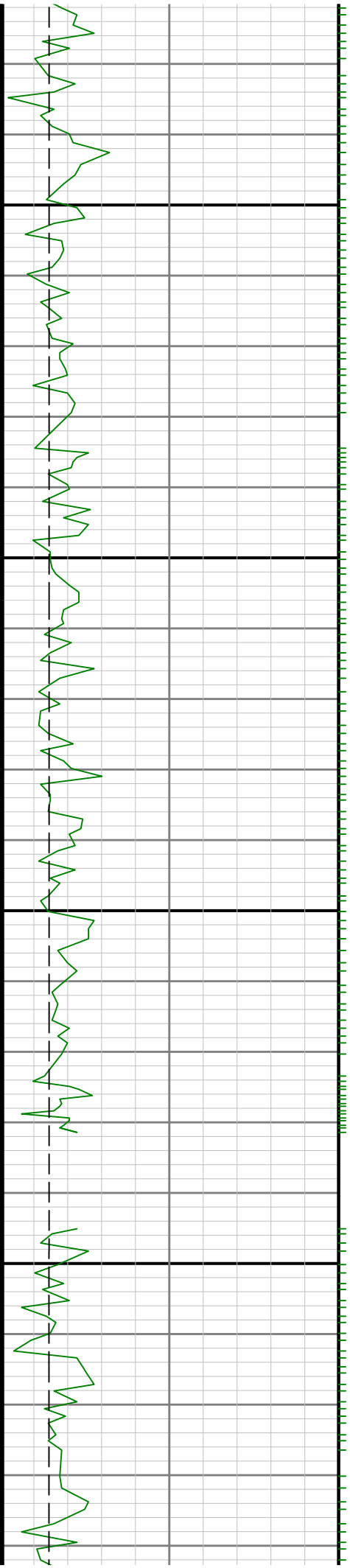
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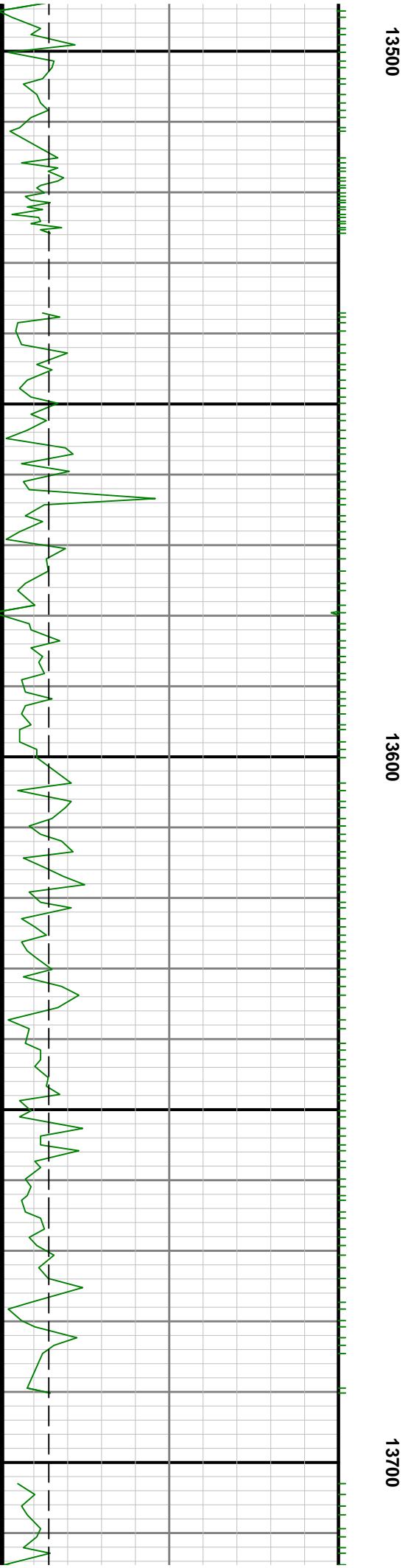


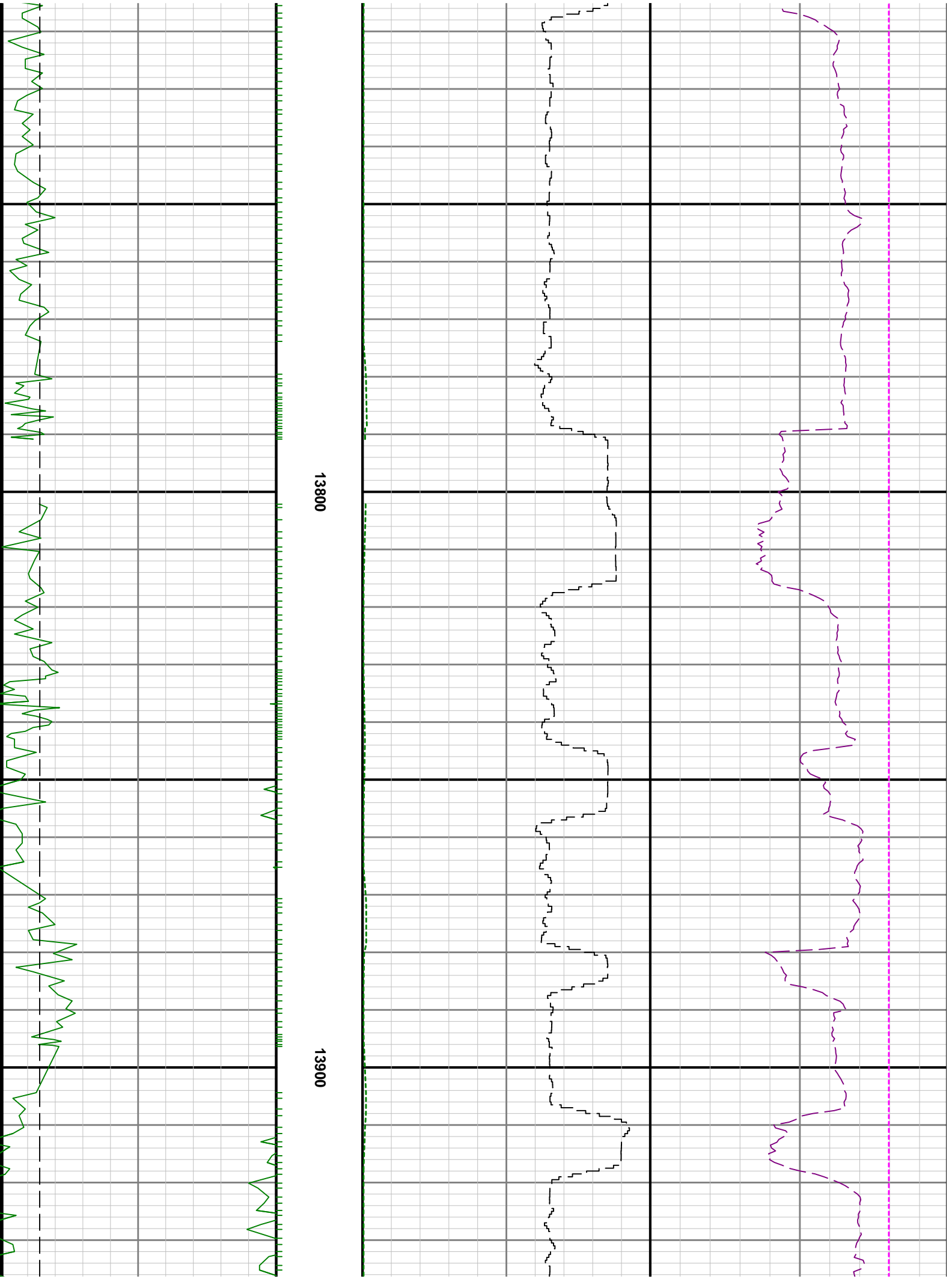


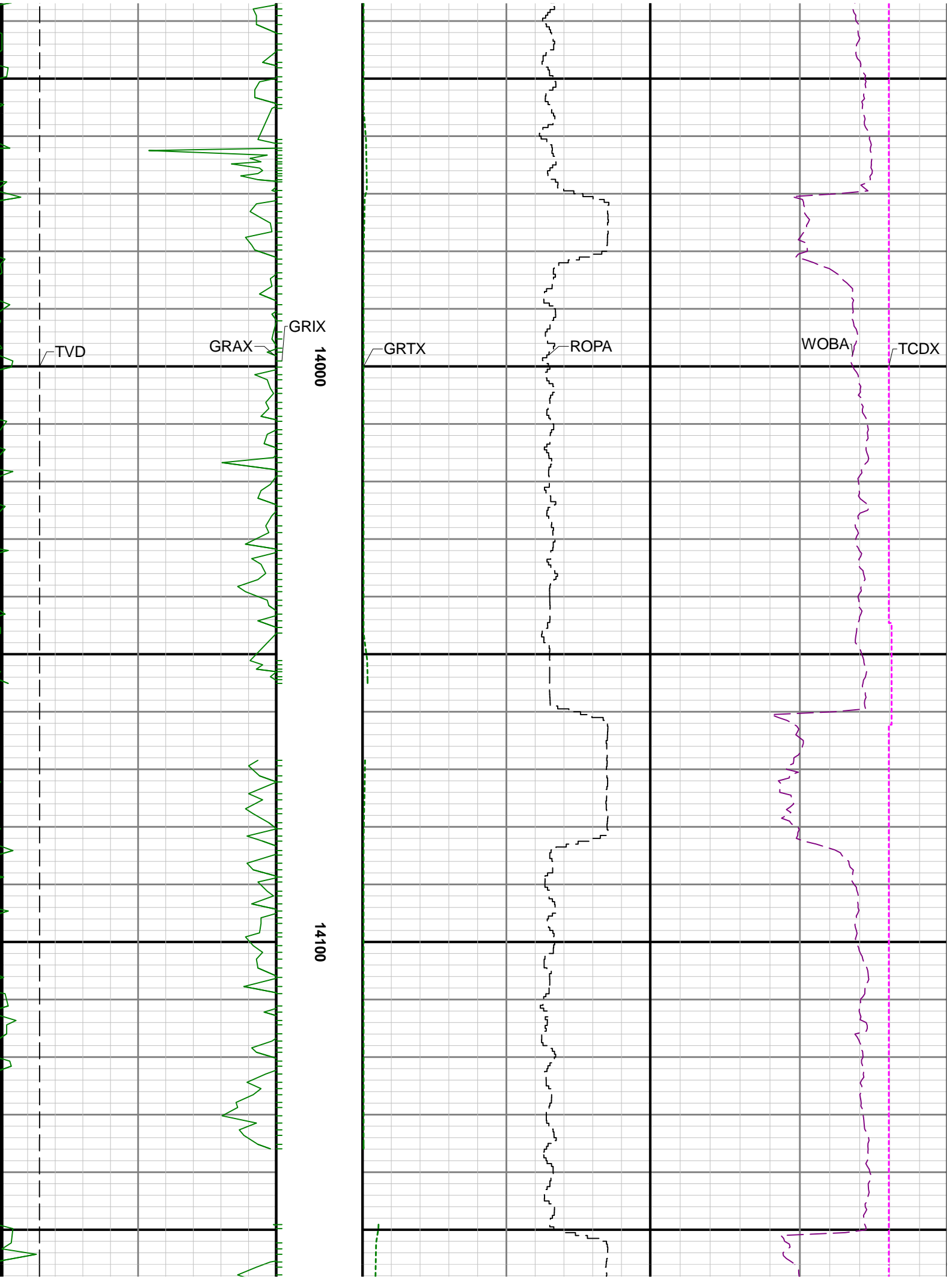
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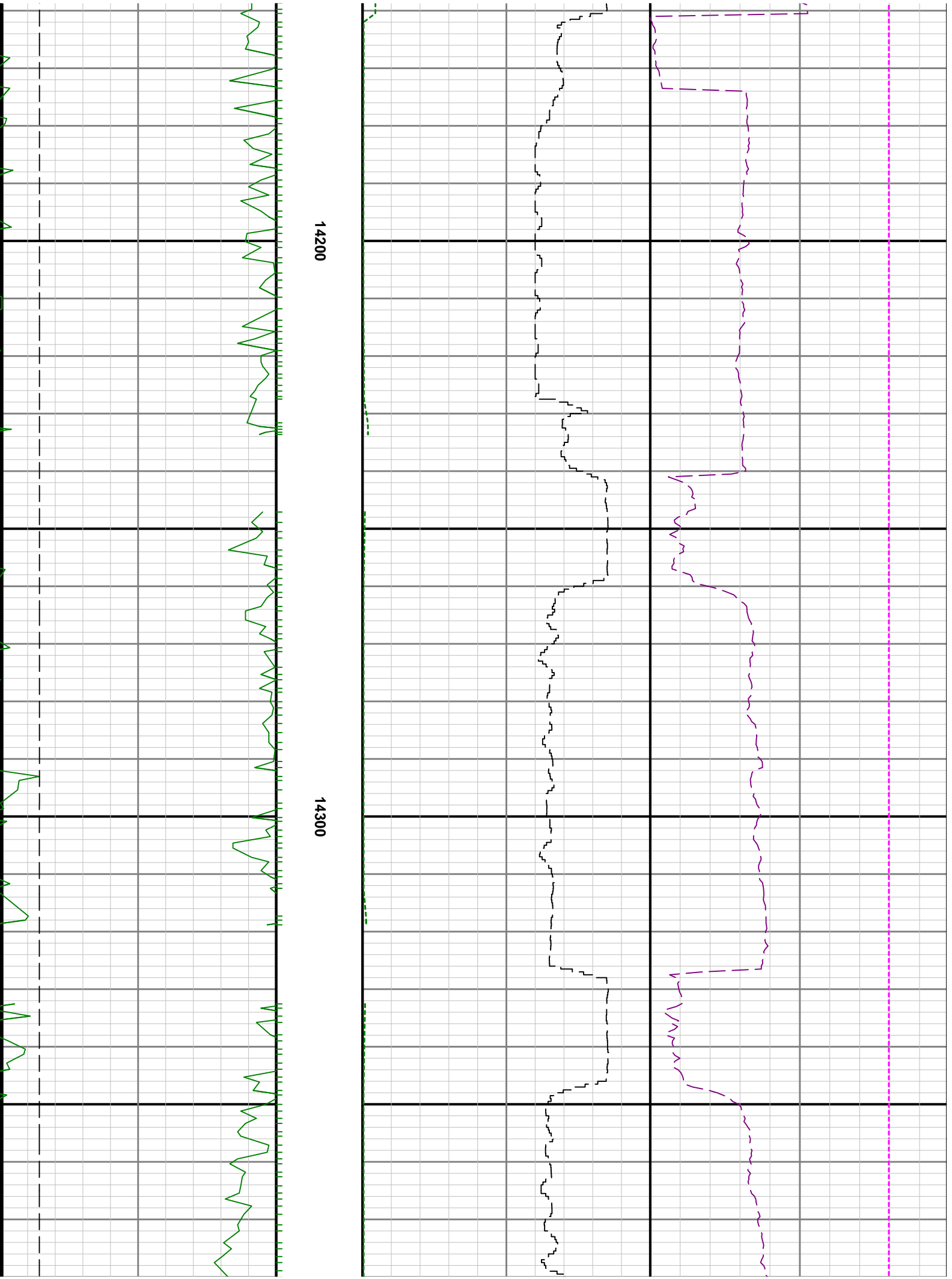
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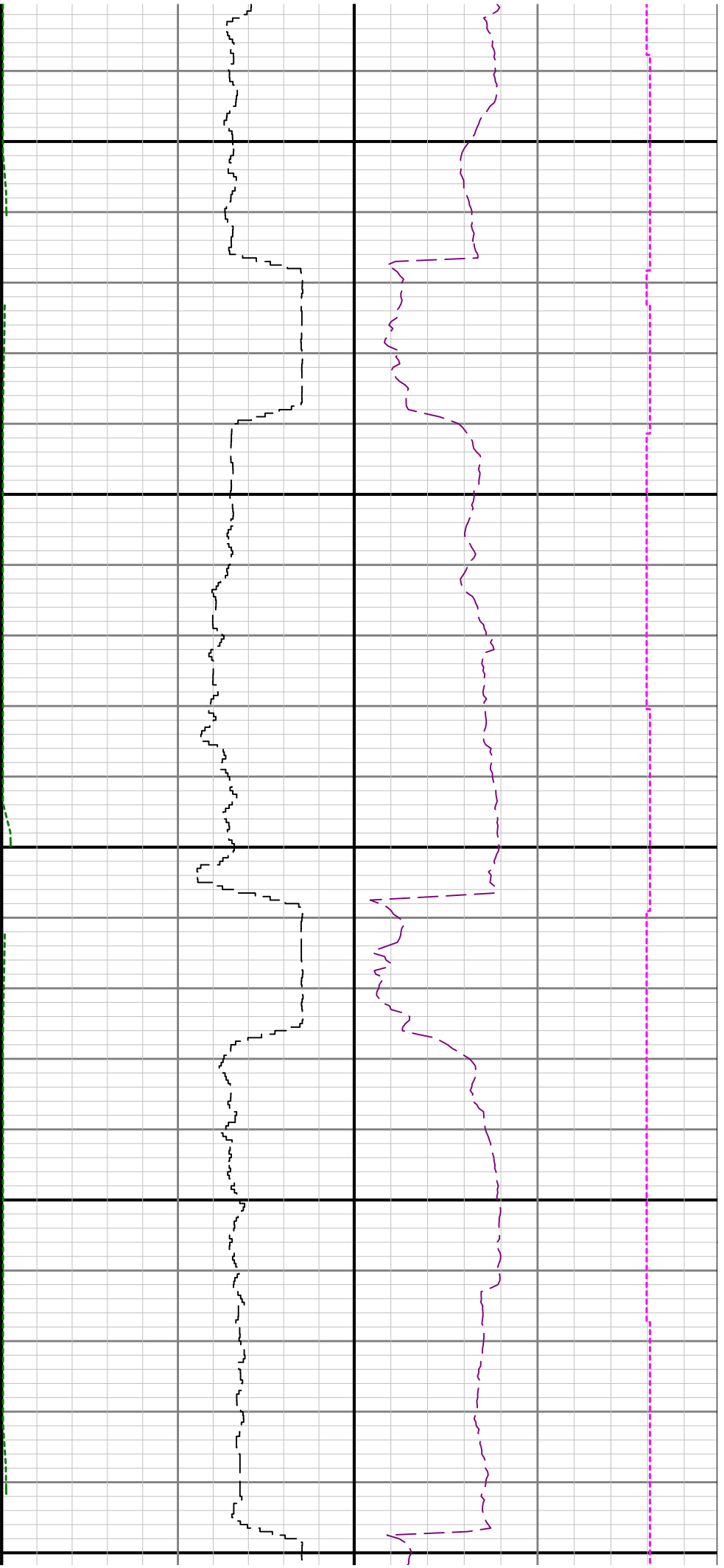








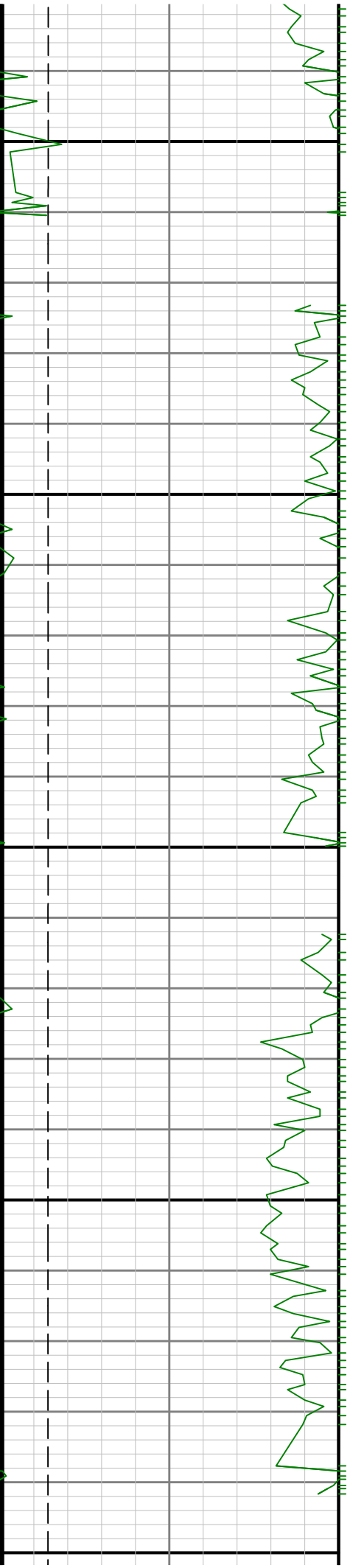


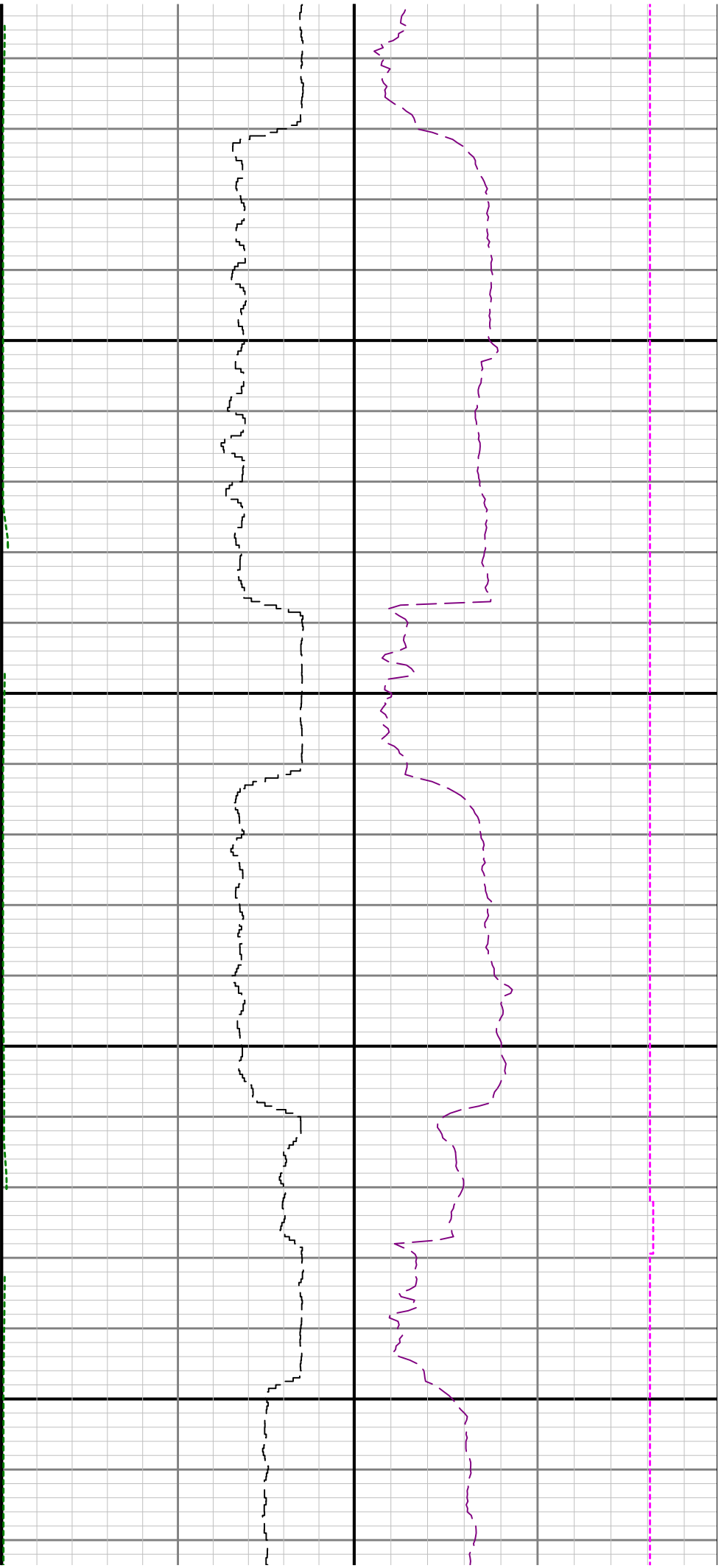


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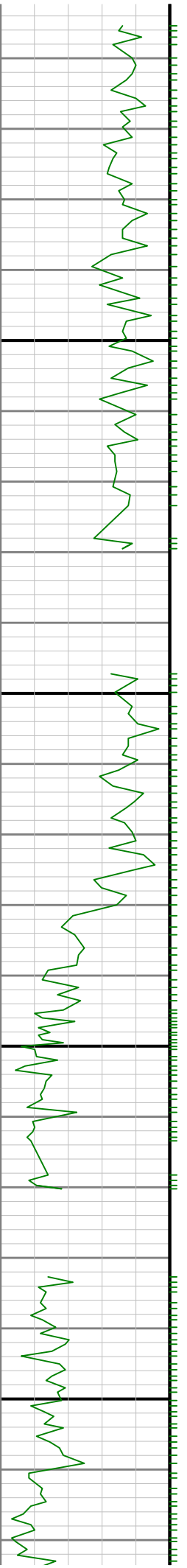


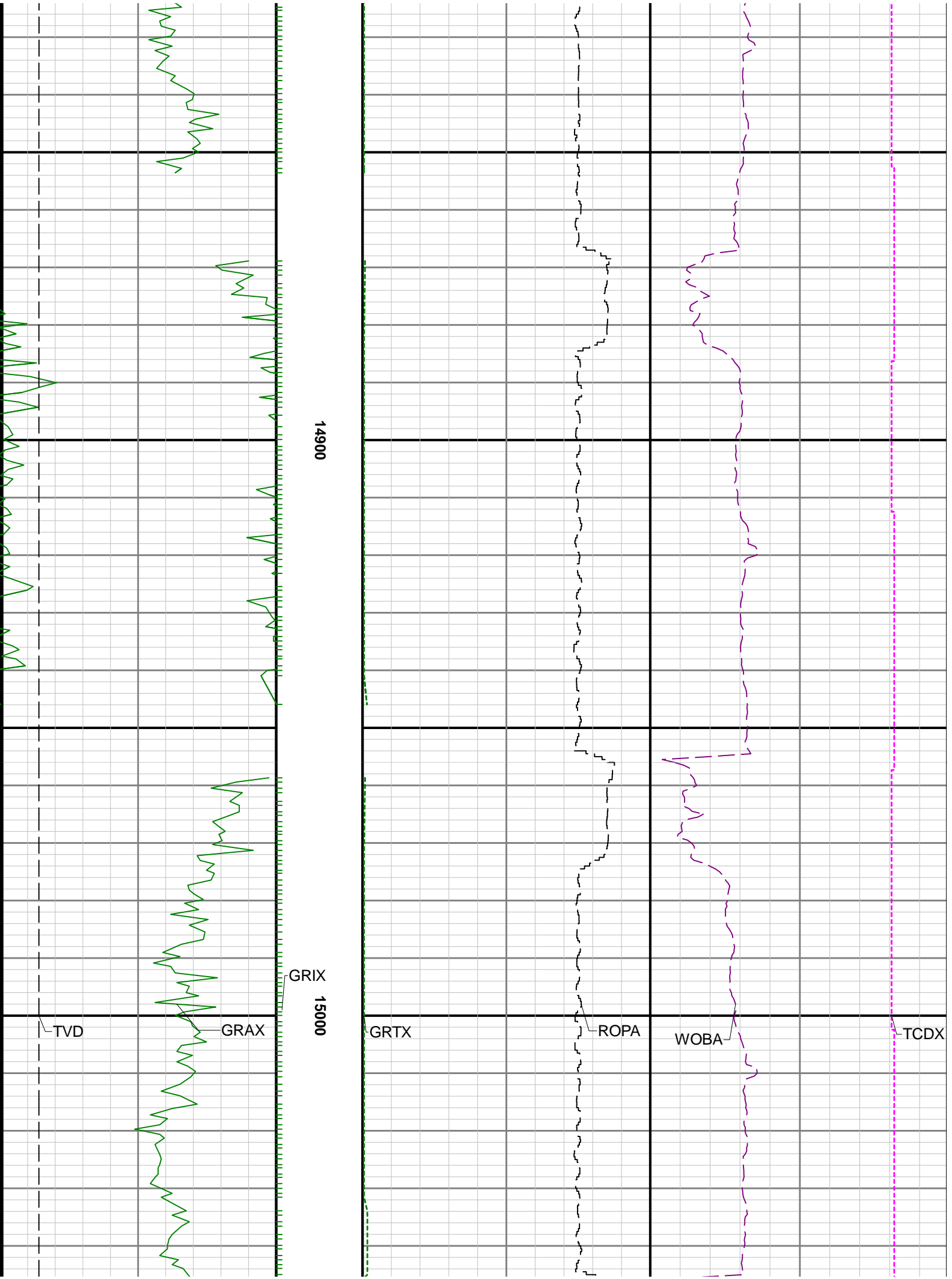


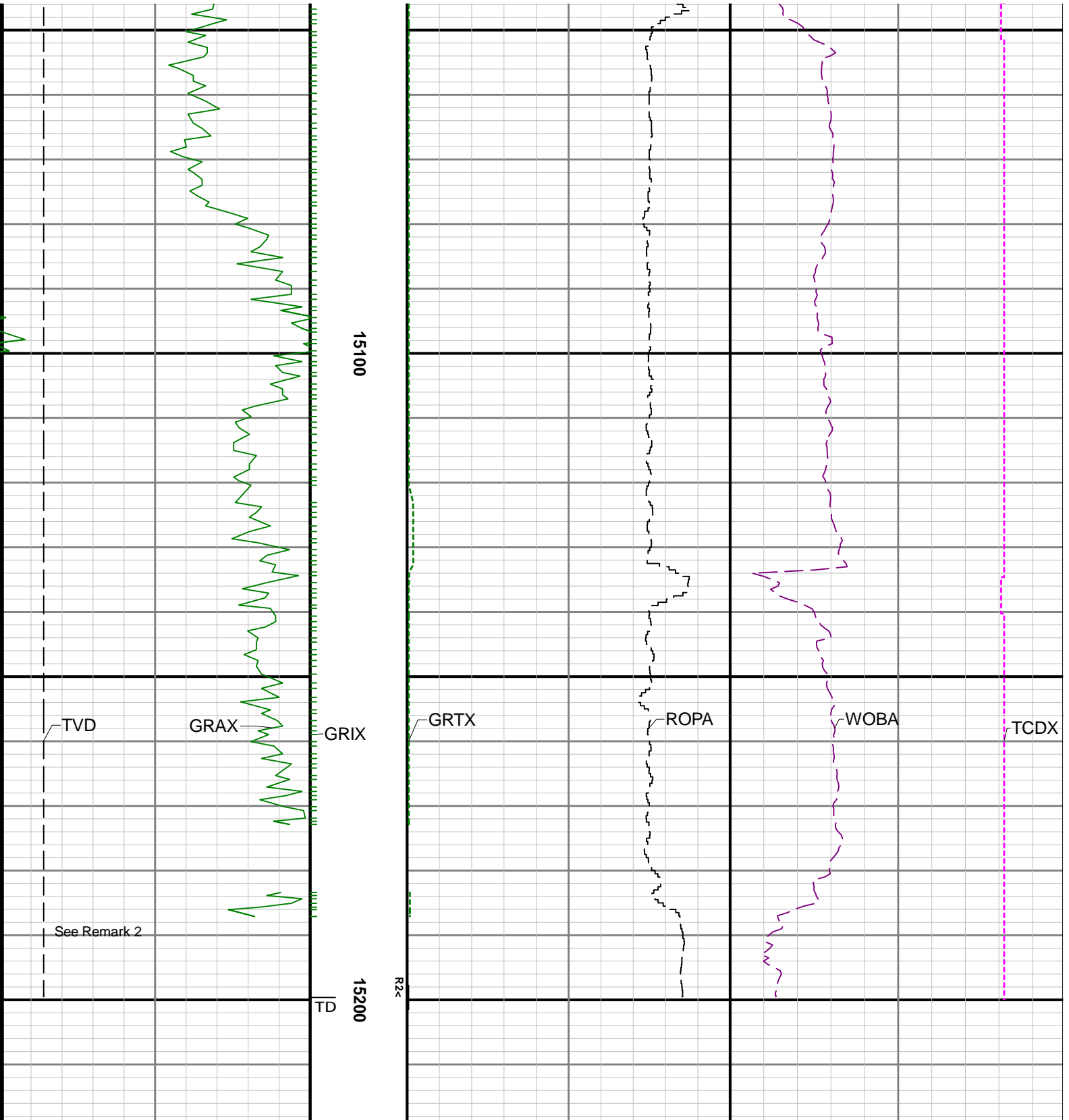
0

14700

14800







15100

15200

TVD

GRAX

GRIX

GRTX

ROPA

WOBA

TCDX

See Remark 2

TD

MD 1:240 feet

