

LWD MEMORY LOG



Gamma Ray

Scale: Company: Noble Energy

1:240 TVD Well: Wells Ranch AF07-651

Depth Reference: Field: Weld County(Noble NAD 83 GRID)

Driller's Depth County: Weld County State: Colorado

Status: Surface Location: 040° 24' 54.252" N Other Services:

Final Print Latitude: 104° 20' 18.096" W Directional

API No: 05-123-44248-00 Longitude: N/A

Job ID: 8645437 UTM: N/A

SEC: 8 TWN: 5N RGE: 62W

Permanent Datum (P.D.): Ground Level Elevation: 4704.00 ft KB: N/A

Log Measured From: Rig Floor Above P.D. 30.00 ft DF: 4734.00 ft

Dates Interval Logged Magnetic Field Reference

Date From: 2017-07-12 Top: (ft) 1948.00 Azi Reference North: Grid Dip Angle: (deg) 67.14

Date To: 2017-07-14 Bottom: (ft) 6476.00 Total Magnetic Field Strength: (nT) 52288

Spud Date: 2017-07-12 Mag to Reference North Correction: (deg) 7.13E

Borehole Record Casing Record

| Hole Size (in) | From (ft) | To (ft) | Size (in) | Weight (lb/ft) | From (ft) | To (ft) |
|----------------|-----------|---------|-----------|----------------|-----------|---------|
|----------------|-----------|---------|-----------|----------------|-----------|---------|

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|--------|-------|---------|-------|-------|-------|---------|
| 13.500 | 30.00 | 1948.00 | 9.625 | 36.00 | 30.00 | 1938.00 |
|--------|-------|---------|-------|-------|-------|---------|

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| 8.500 | 1948.00 | 15940.00 | | | | |
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Mud Record Deviation Record

| Type | From (ft) | To (ft) | Hole Size (in) | Interval (ft) | Inc Az (Start) | Inc Az (End) |
|------|-----------|---------|----------------|---------------|------------------|----------------|
|------|-----------|---------|----------------|---------------|------------------|----------------|

| | | | | | | |
|---------------|---------|----------|-------|----------|---------------|----------------|
| Oil Based Mud | 1948.00 | 15940.00 | 8.500 | 13992.00 | 0.86 261.35 | 90.22 267.73 |
|---------------|---------|----------|-------|----------|---------------|----------------|

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Acquisition System Software Version Other

Baker Hughes Cadence RT4.1 R14.1 H&P 517

Plot Studio 4.1.7763.3 Contractor: Helmerich & Payne Drilling Co

District: RMA Unit: D&E

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Log Run Summary

| Run No | Bit Run No. | Bit Size (in) | Bit Type | Bit Gauge Length (in) | Assembly Type | Logged Interval | | Bit Depth Interval | | Date / Time | | Circ. Hours (h) |
|--------|-------------|---------------|----------|-----------------------|------------------|-----------------|----------|--------------------|----------|------------------|------------------|-----------------|
| | | | | | | Top | Bottom | From | To | Start Logging | End Logging | |
| | | | | | | (ft) | (ft) | (ft) | (ft) | | | |
| 1 | 1 | 8.500 | PDC | 3.00 | Rotary Steerable | 1948.00 | 15927.00 | 1948.00 | 15940.00 | 2017-07-12 22:25 | 2017-07-15 04:08 | 47.30 |

Crew

| Name | | Arrive Wellsite | Depart Wellsite | Name | | Arrive Wellsite | Depart Wellsite | Name | | Arrive Wellsite | Depart Wellsite |
|------------------------|--|-----------------|-----------------|------------|--|-----------------|-----------------|--------------|--|-----------------|-----------------|
| Alberto Cova Hernandez | | 2017-07-12 | 2017-07-15 | Emi Iyalla | | 2017-07-12 | 2017-07-13 | Adam Schlenz | | 2017-07-14 | 2017-07-15 |

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+ (%) |
|------------------|---------|---------------------|---------------|---------------|----------------|-----|------------------|-------------|------------|-----------------------|--------|
| 2017-07-13 04:00 | 1 | 3740.00 | Oil Based Mud | 9.1 | 13 | N/A | 17.0 | 74/16 | Active Pit | 20000 | 0.00 |
| 2017-07-13 14:30 | 1 | 6540.00 | Oil Based Mud | 9.0 | 10 | N/A | 17.0 | 75/15.5 | Active Pit | 21500 | 0.00 |
| 2017-07-14 04:00 | 1 | 9753.00 | Oil Based Mud | 9.2 | 11 | N/A | 18.0 | 74/15.5 | Active Pit | 21000 | 0.00 |
| 2017-07-14 14:30 | 1 | 12438.00 | Oil Based Mud | 9.3 | 12 | N/A | 17.0 | 74.5/14.5 | Active Pit | 23000 | 0.00 |
| 2017-07-15 04:00 | 1 | 15878.00 | Oil Based Mud | 9.4 | 11 | N/A | 18.0 | 75/13.3 | Active Pit | 23000 | 0.00 |

Equipment and Service Data

| Run No. | Tool | Serial Number | Measurement | Sensor Offset (ft) | Bit Offset (ft) | Max O.D. (in) | Min I.D. (in) |
|---------|---------|---------------|----------------------|--------------------|-----------------|---------------|---------------|
| 1 | ATC_SU | 12536524 | Near Bit Inclination | 5.93 | 6.73 | 7.000 | 2.250 |
| 1 | ATC_SU | 12536524 | Near Bit VSS | 5.93 | 6.73 | 7.000 | 2.250 |
| 1 | ATC_MWD | 13067101 | Gamma (single) | 2.75 | 12.90 | 7.000 | 2.250 |
| 1 | ATC_MWD | 13067101 | Directional (mag) | 12.27 | 22.42 | 7.000 | 2.250 |

Service and Tool Mnemonics

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

Comments


- 1
- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes, depth calibrations and measurements could not be independently verified.
- 2
- Baker Hughes LWD run 1 utilized a 6.75 inch NaviGamma (Directional and Gamma Ray) services behind a 8.5 inch bit and rotary steerable assembly from 1948 to 15940 feet MD (1948 to 6475 feet TVD).
- 3
- To fulfill the customer's request, Gamma Ray Apparent (GRAM) data is presented 0 to 300 API.

Remarks

| Number | Measured Depth (ft) | Hole Section (in) | Run No. | Remark |
|--------|---------------------------|-------------------------|------------|---|
| 1 | 2104.00 | 8.500 | 1 | The interval from 2104 to 2384 feet MD (2104 to 2384 feet TVD) has a gap in gamma ray data due to, the surface gear not tracking depth correctly. |

Curve Mnemonics

| Presented Curves | Description | Units |
|------------------|---|-------|
| ROPA | Depth Averaged ROP 3 ft Average | ft/h |
| WOBA | Weight On Bit, Average 1 ft Average | klb |
| GRAM | OnTrak - Gamma Ray - Apparent - Memory 0.5 ft Average | API |
| TCDM | Downhole Temperature | degF |



Company

Well

Interval

Created

Noble Energy

Wells Ranch AF07-651

Date From: 2017-07-12 16:25:59

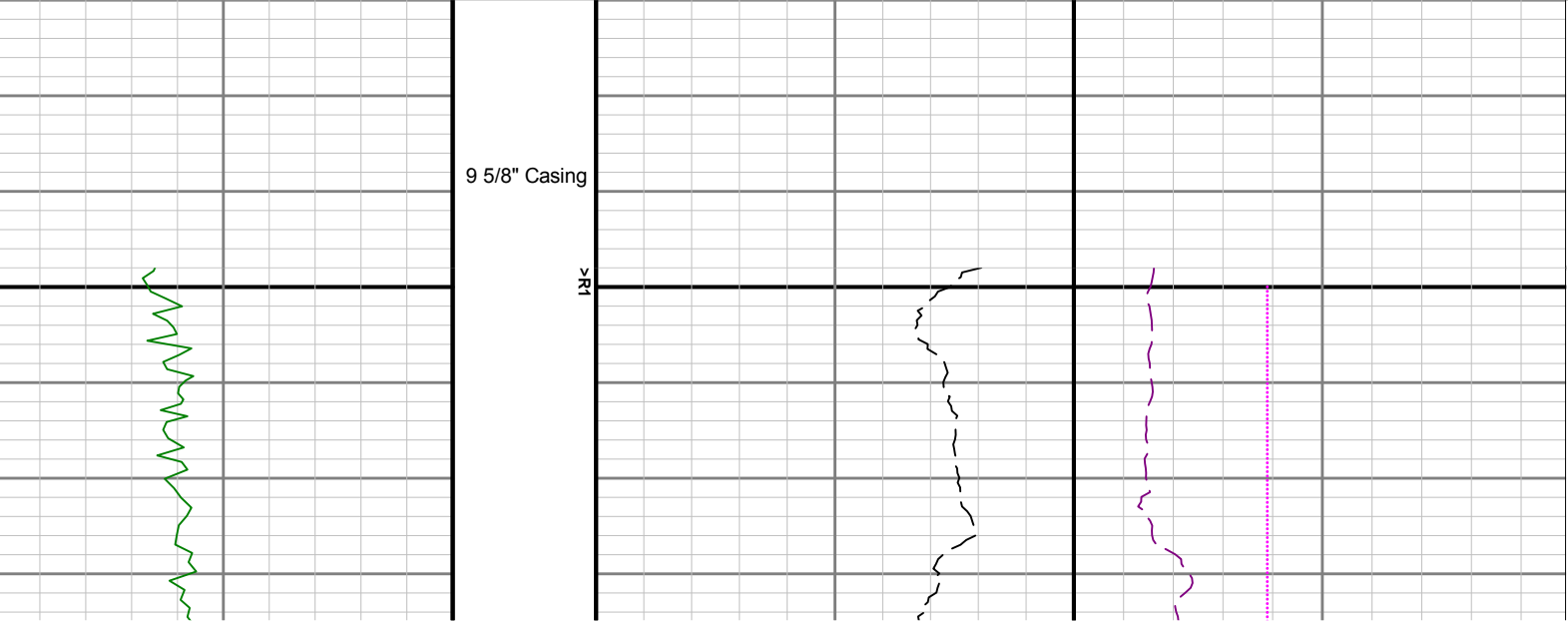
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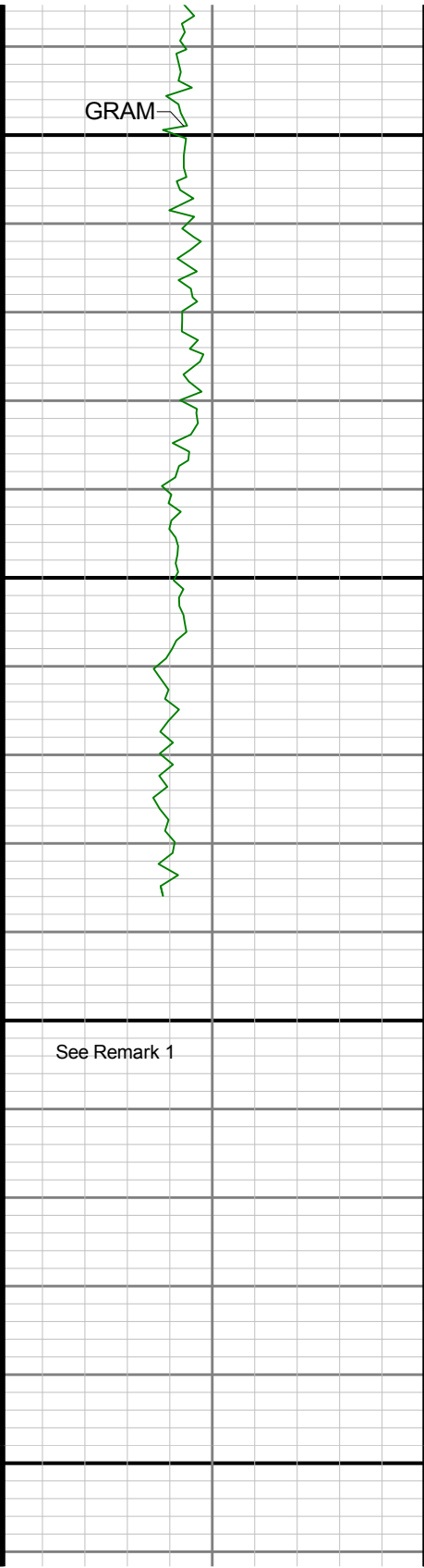
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Top: 1948.00

Bottom: 6476.00

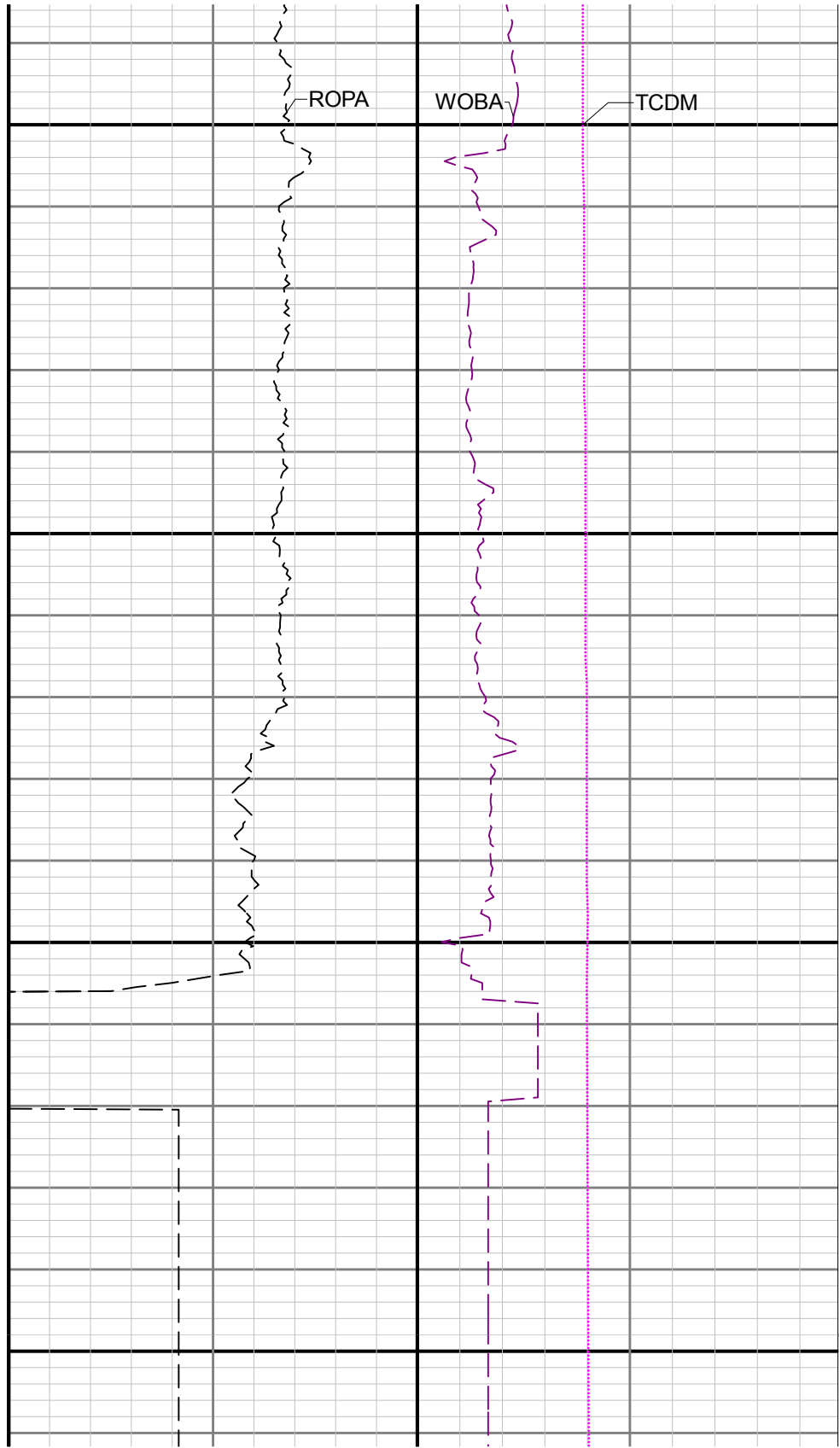
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|---|----------------|--|---|
| Gamma Ray - Apparent 0.5 ft Average GRAM 0 300 | TVD 1:240 feet | Depth Averaged ROP 3 ft Average ROPA 1000 0 | Weight On Bit, Average 1 ft Average WOBA 0 50 |
| API | | ft/h | klb Downhole Temperature TCDM 0 300 degF |

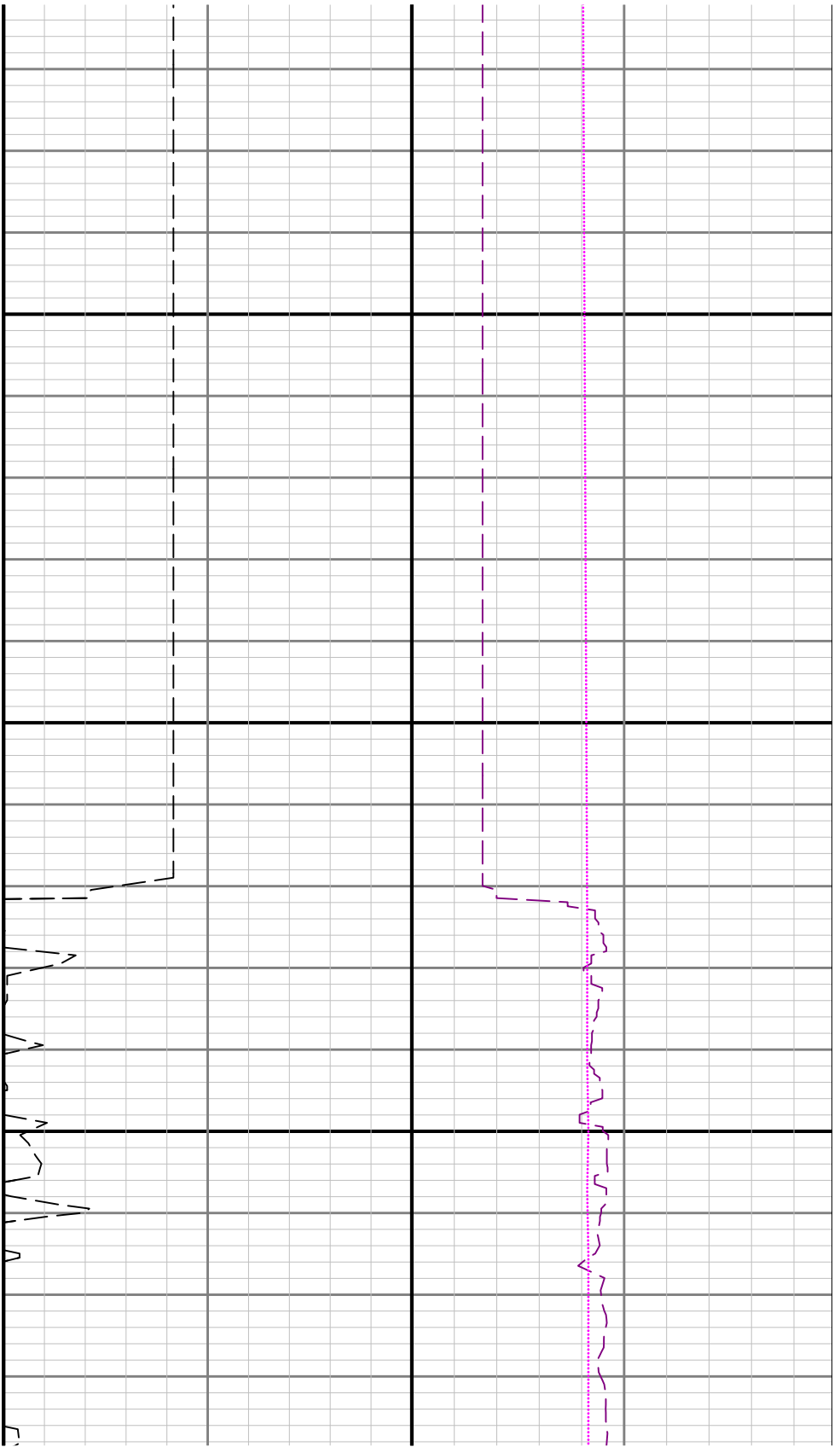




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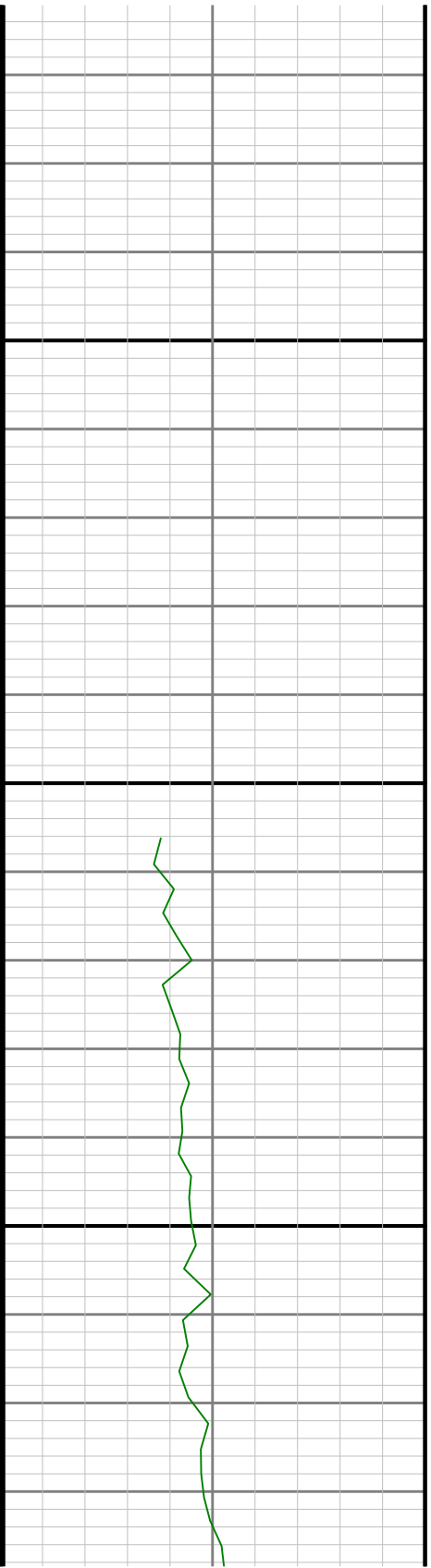
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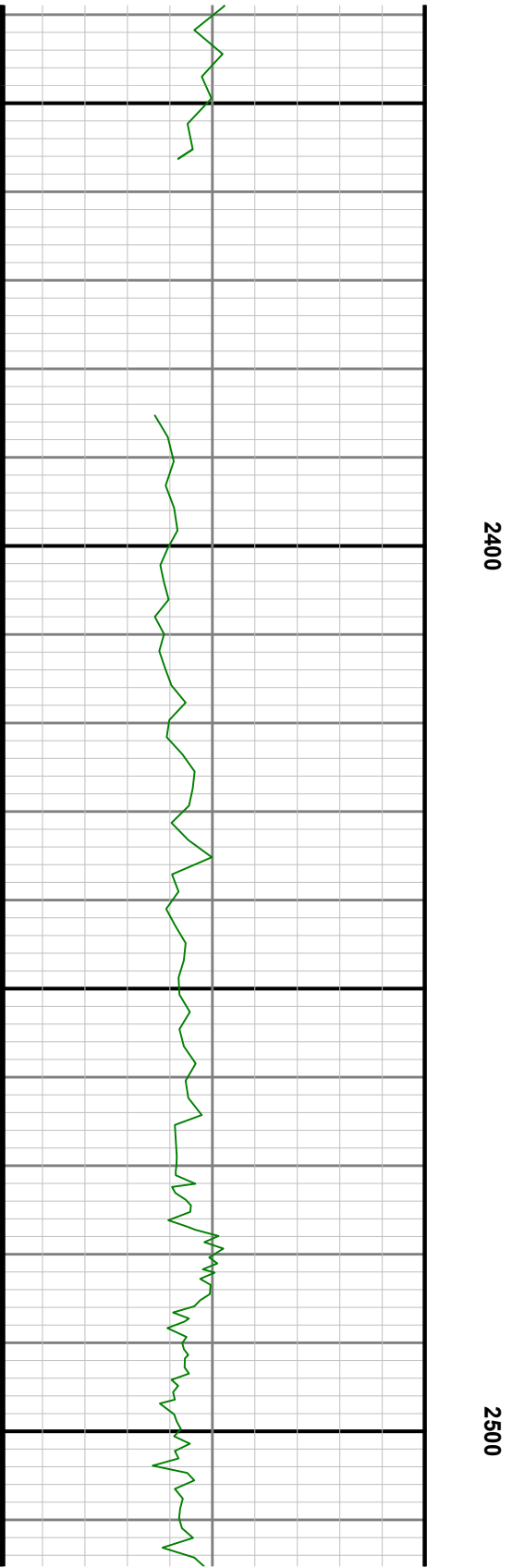
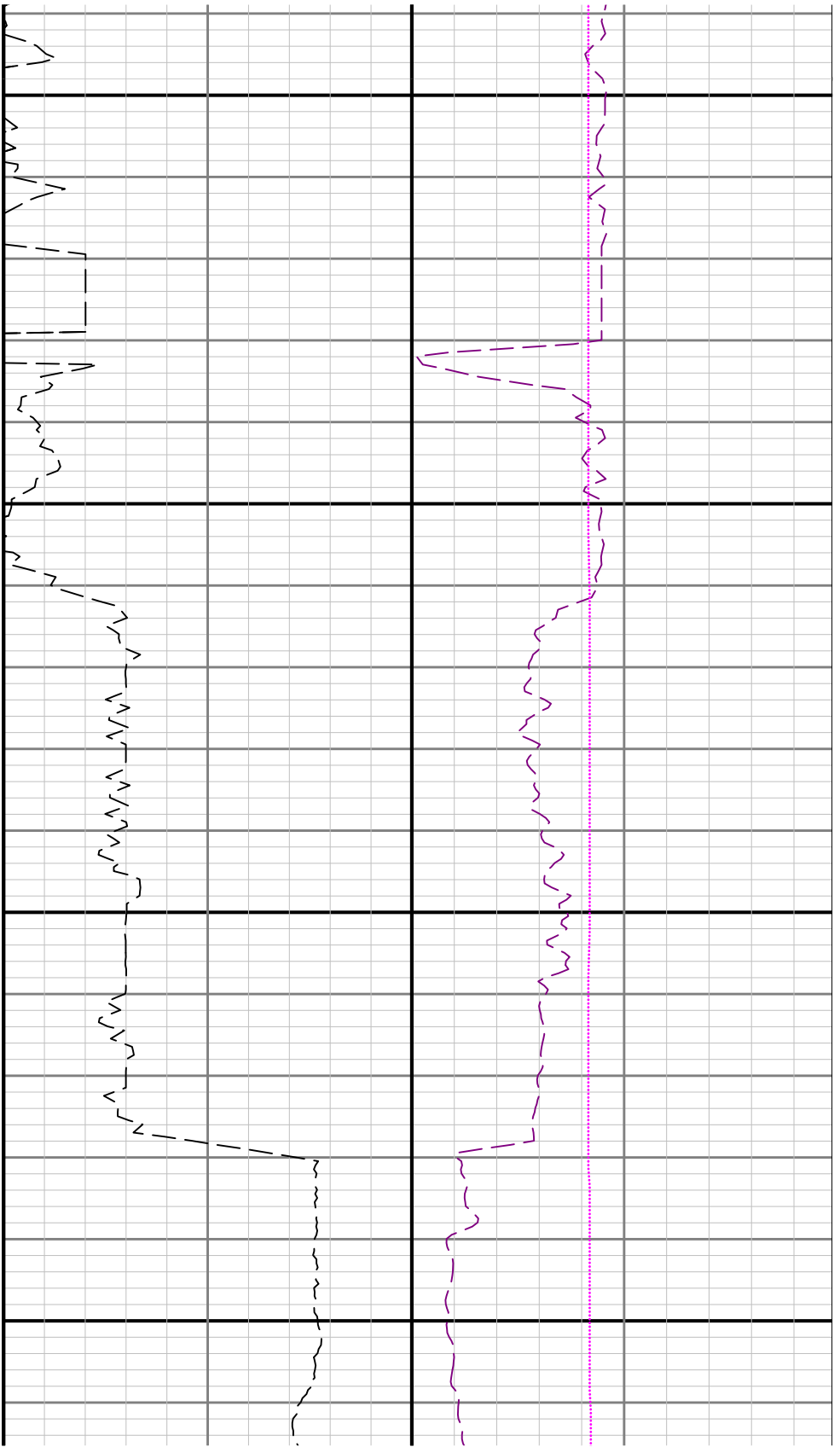




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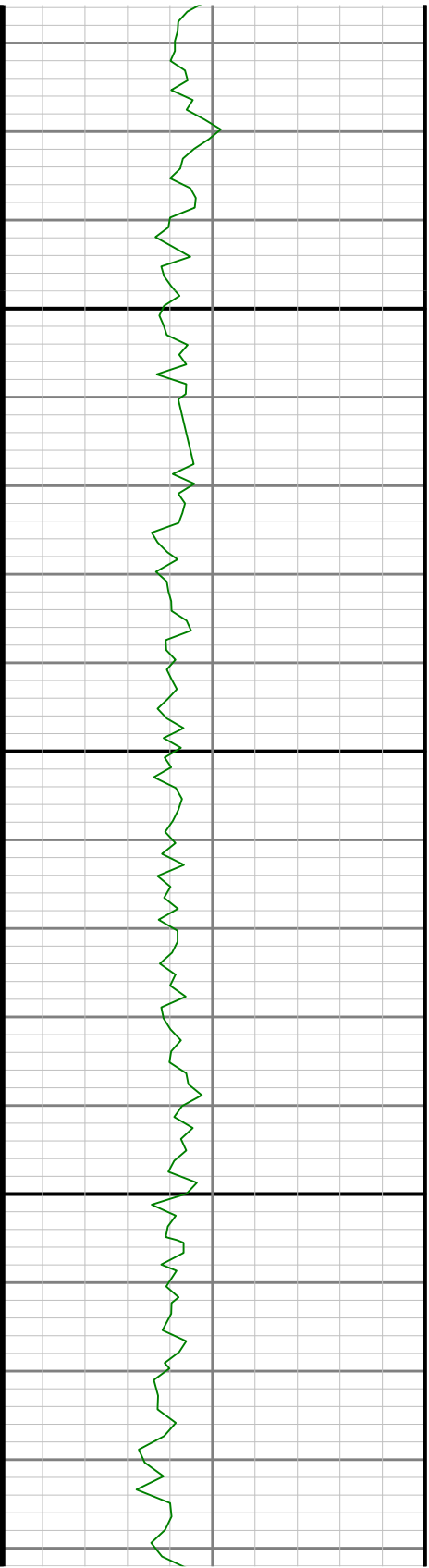
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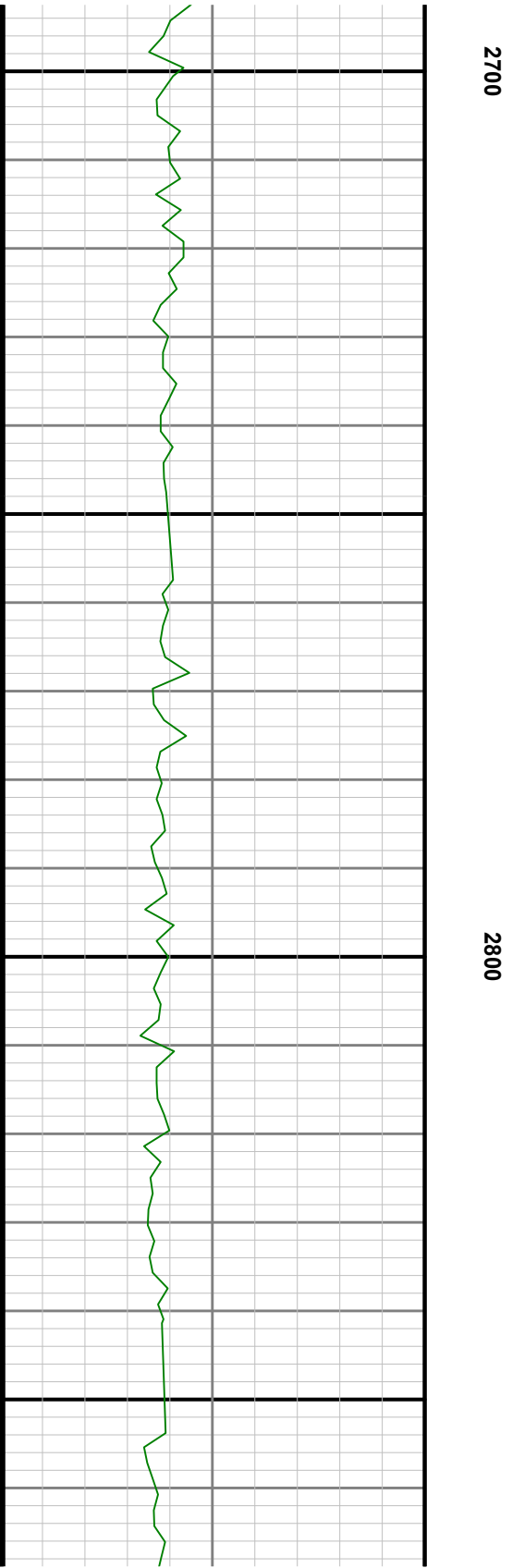
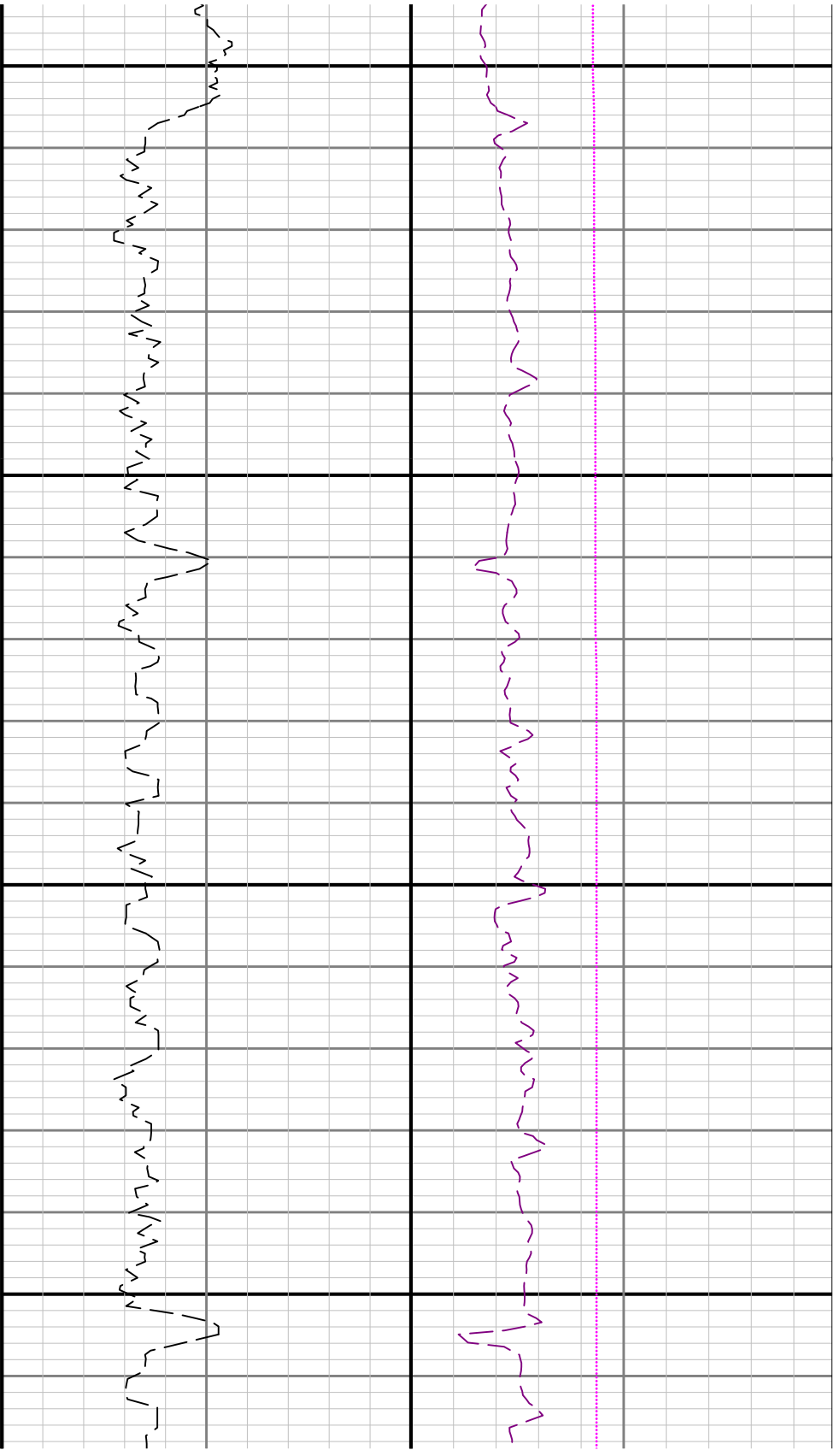


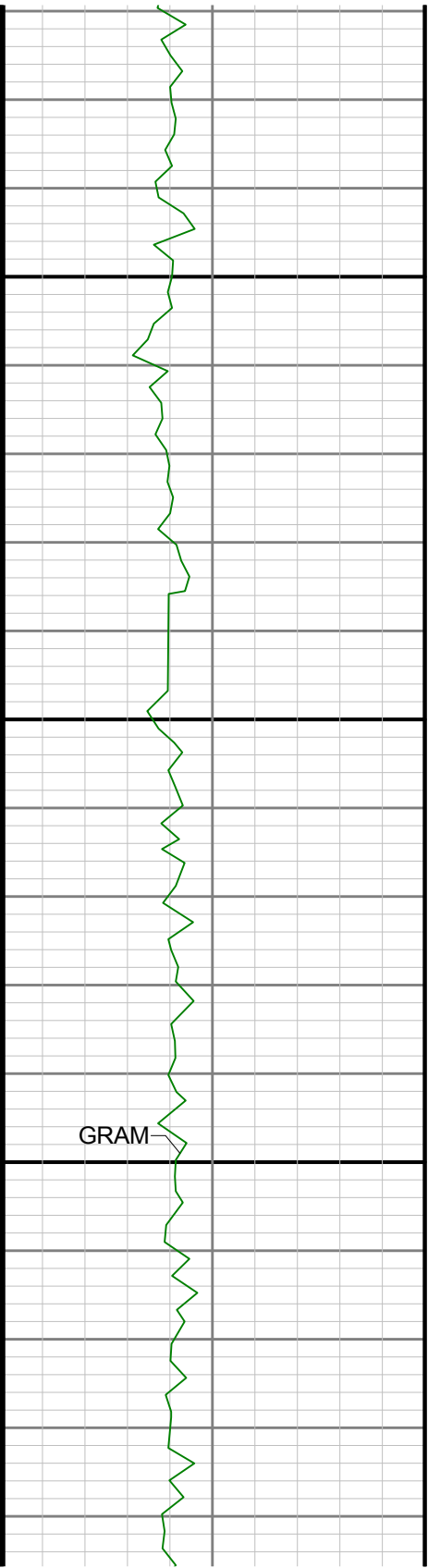




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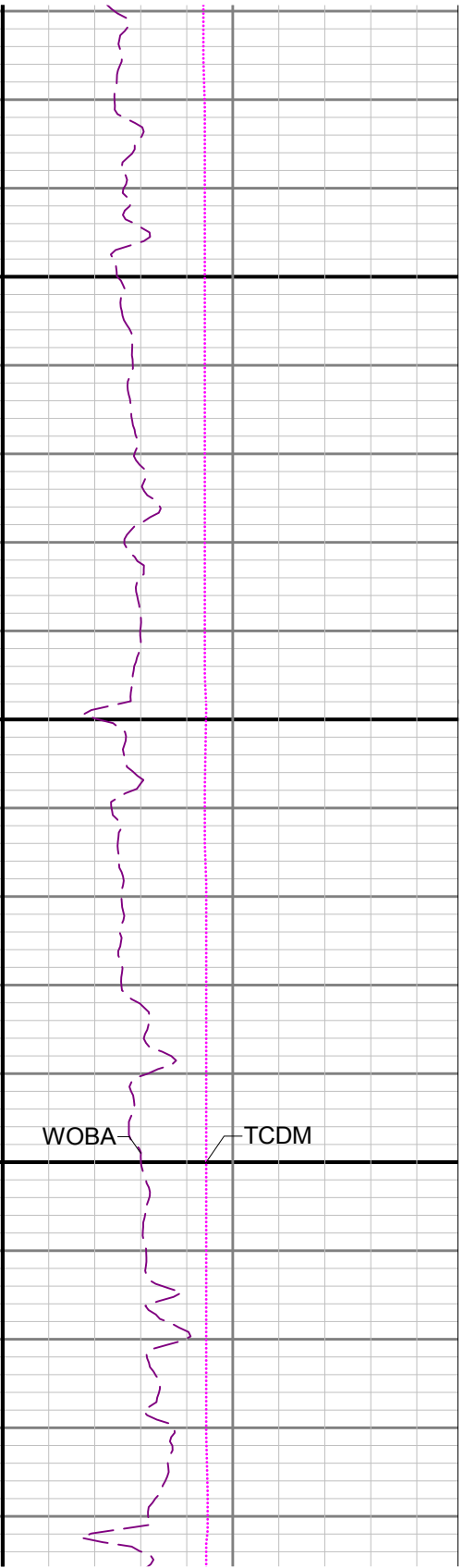
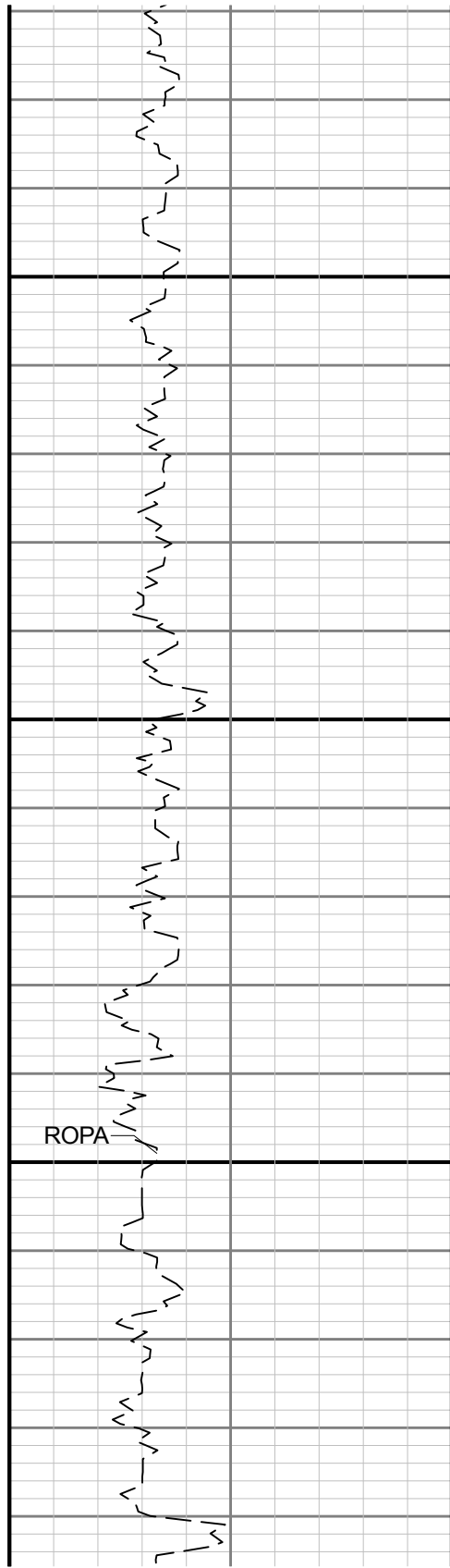


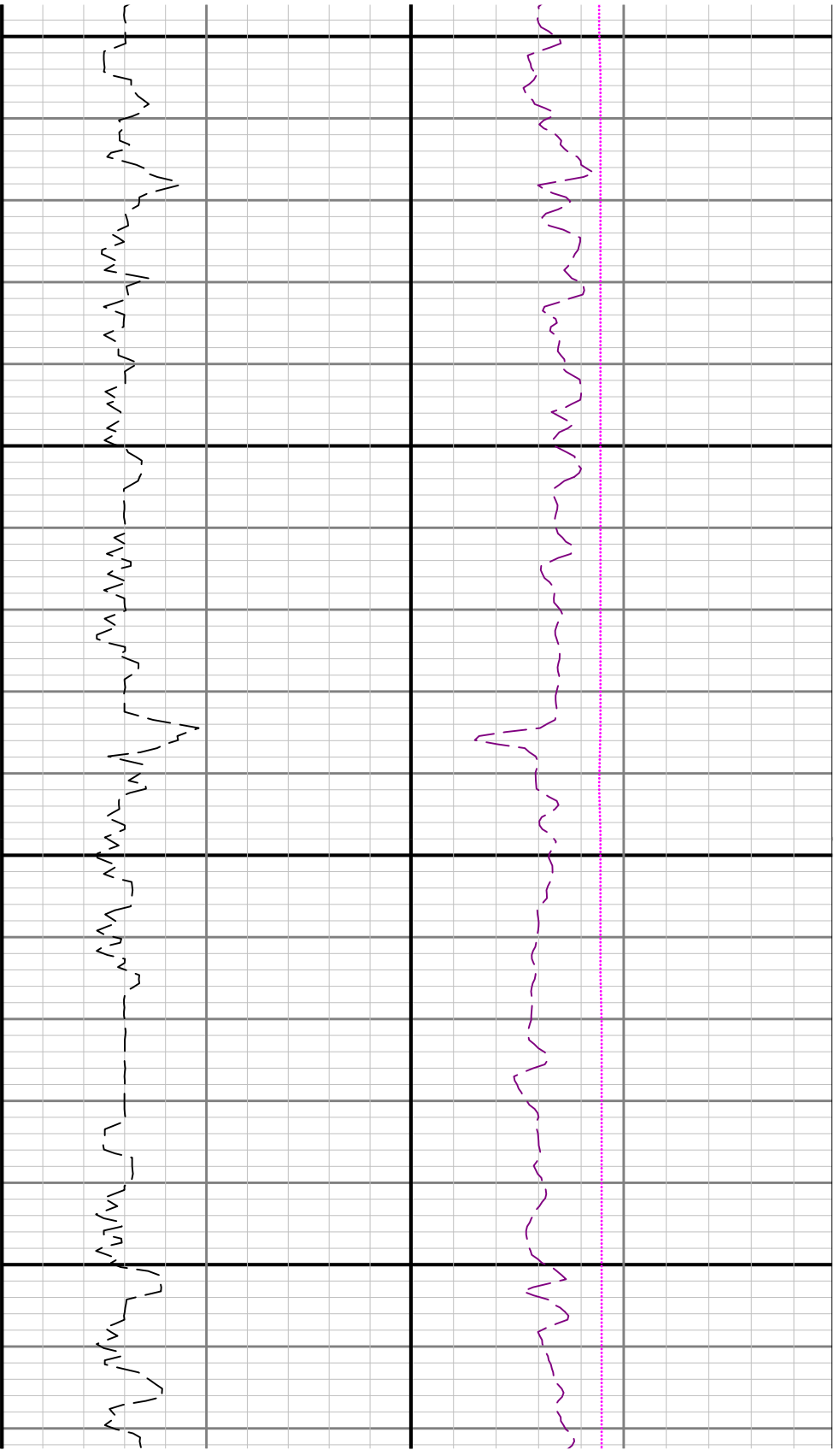




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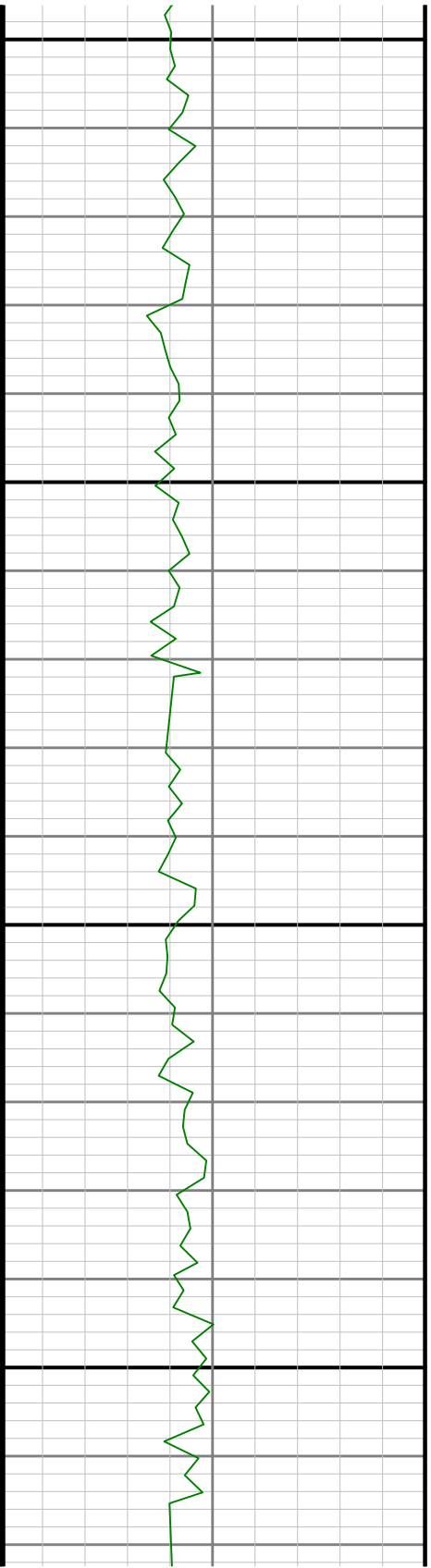
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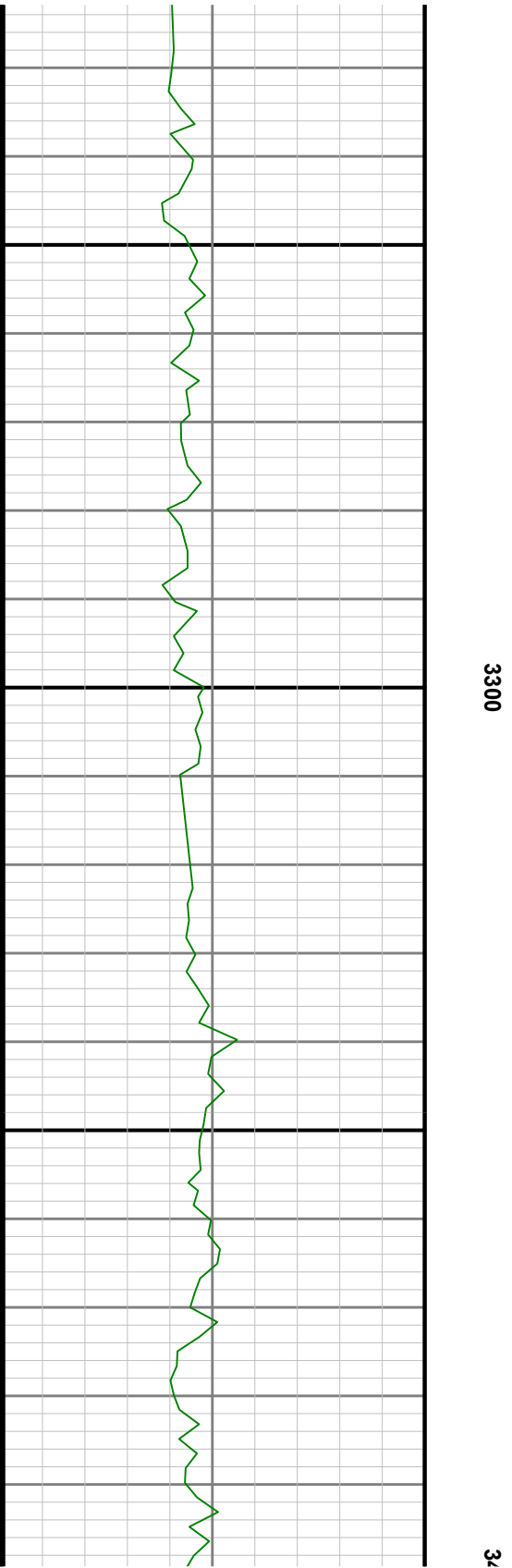
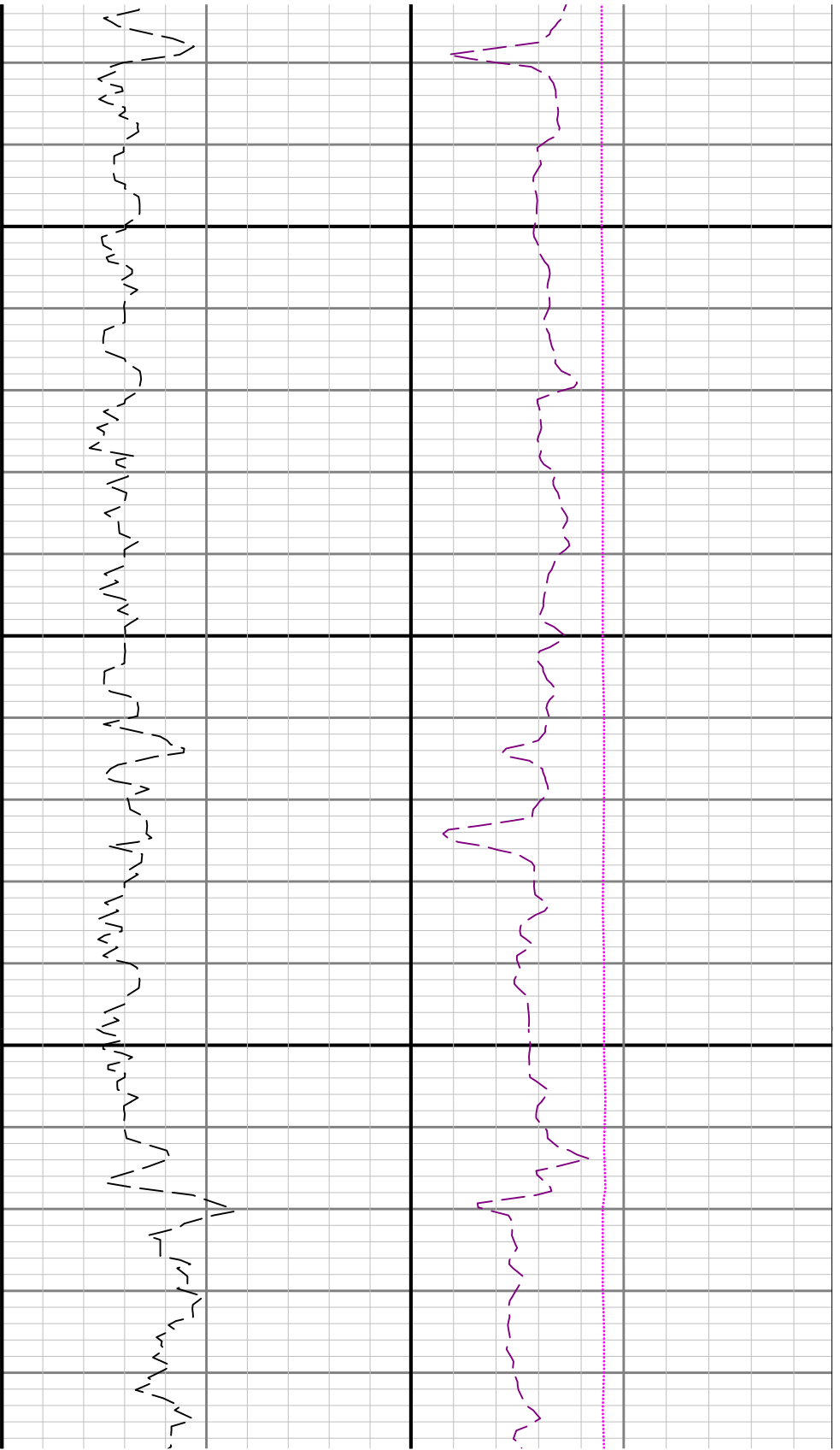


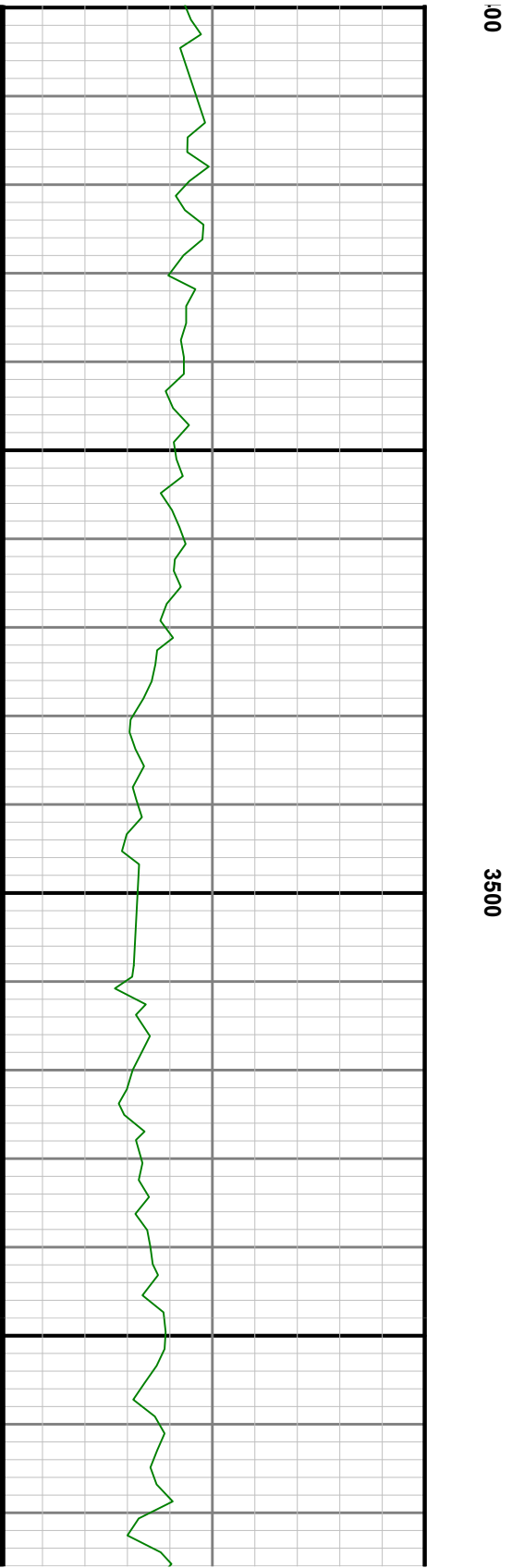
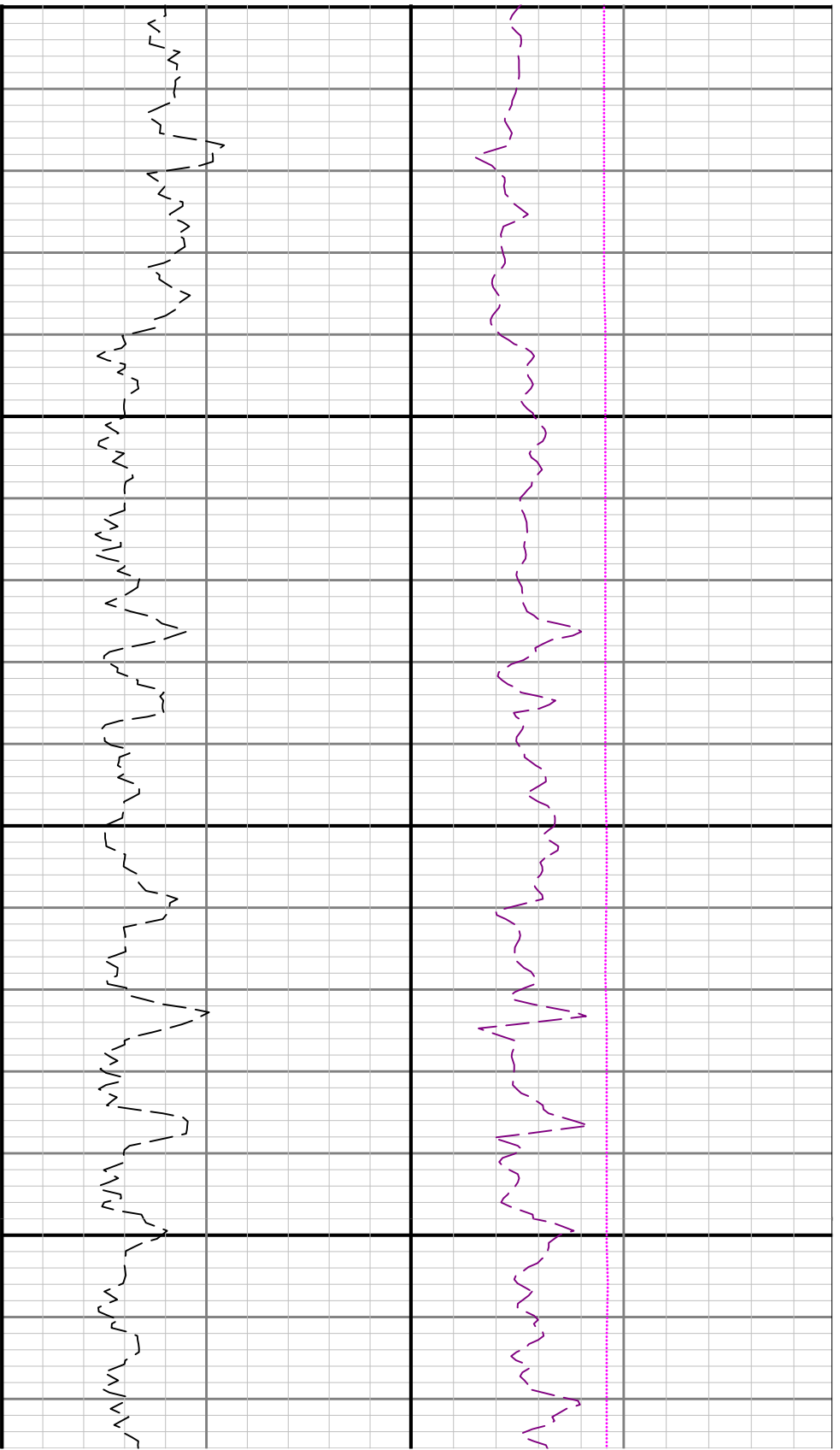


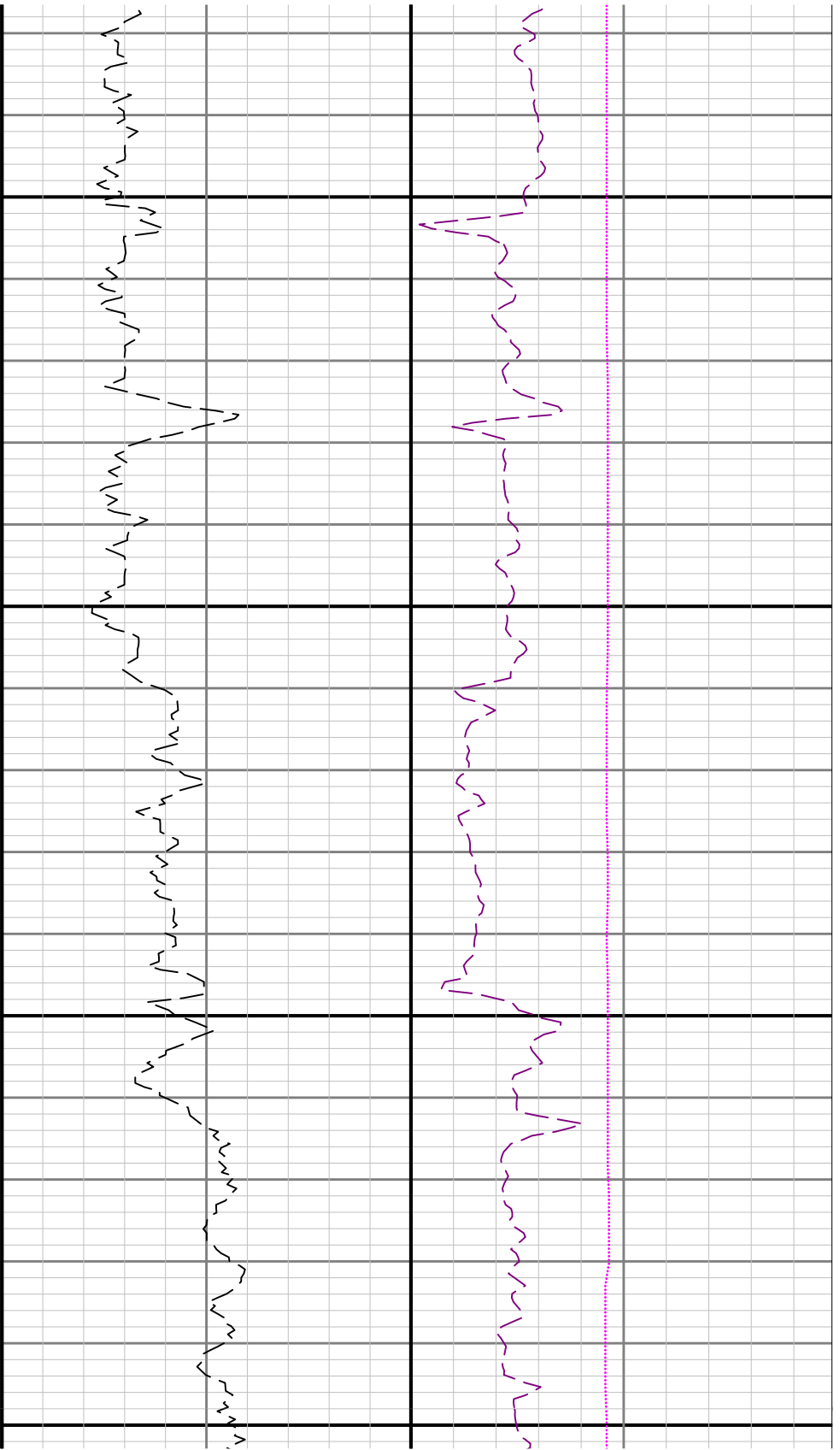
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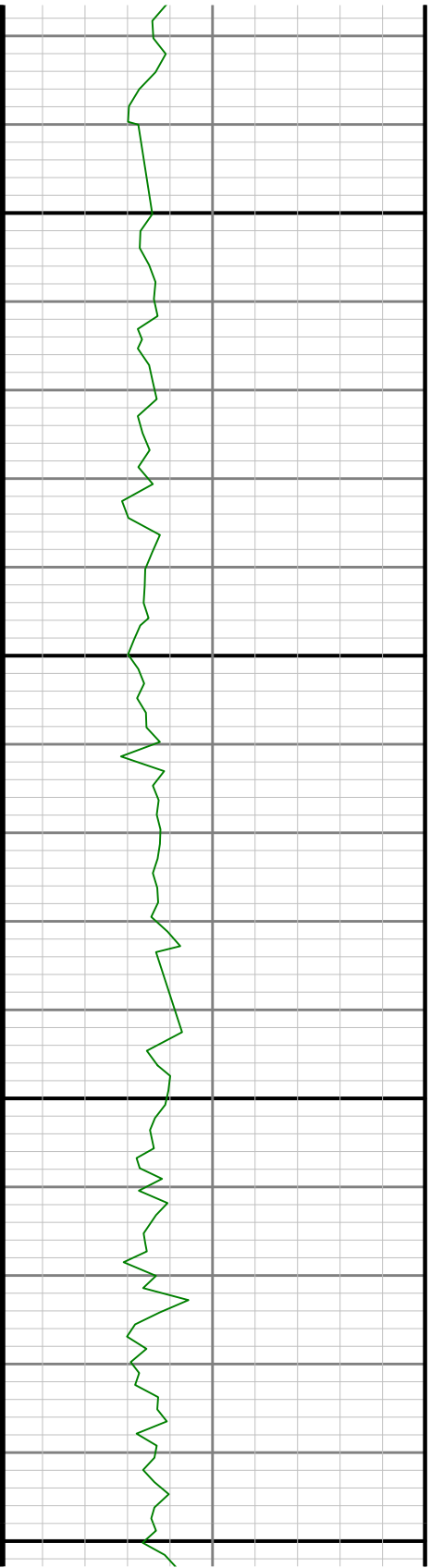


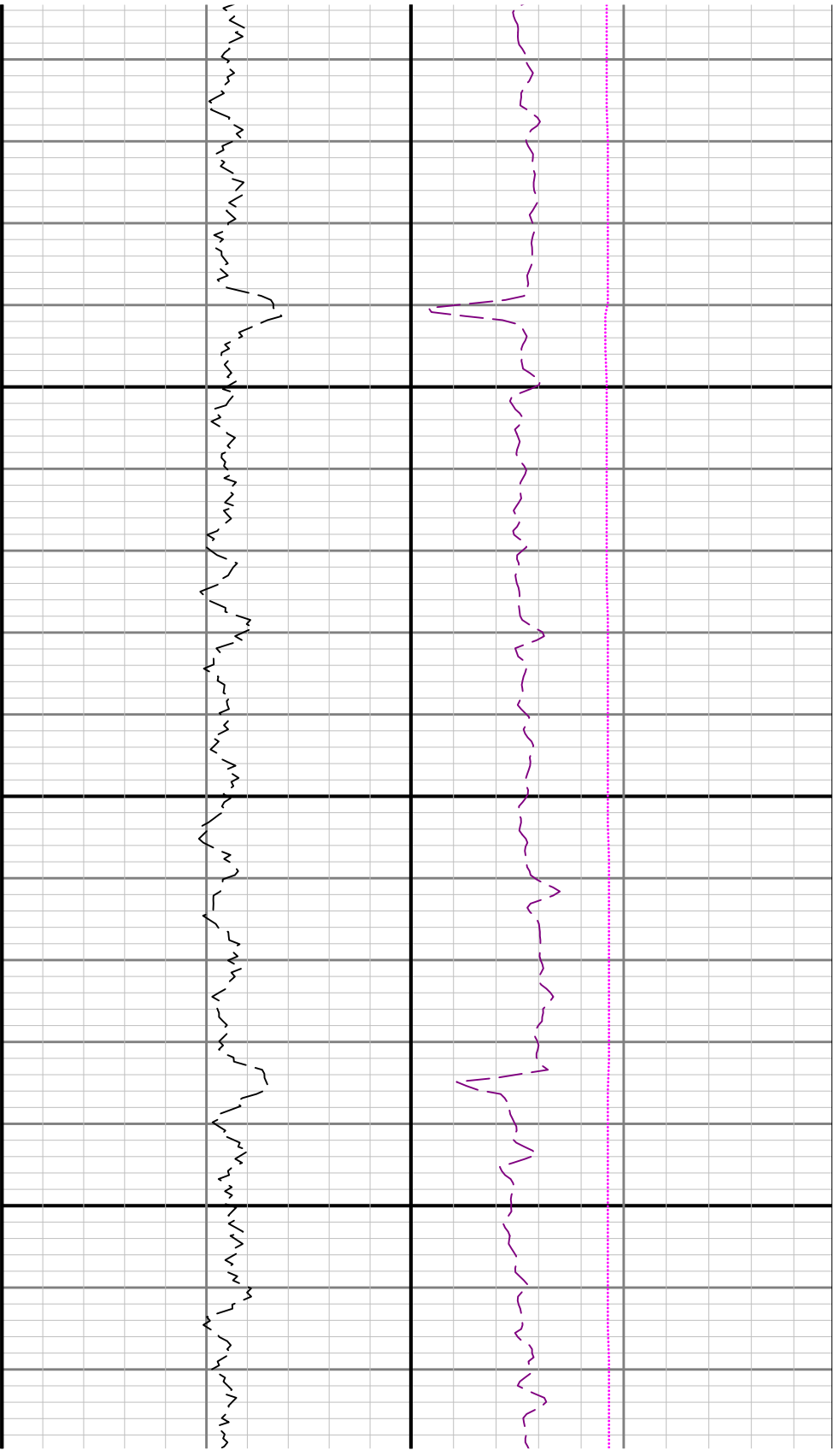




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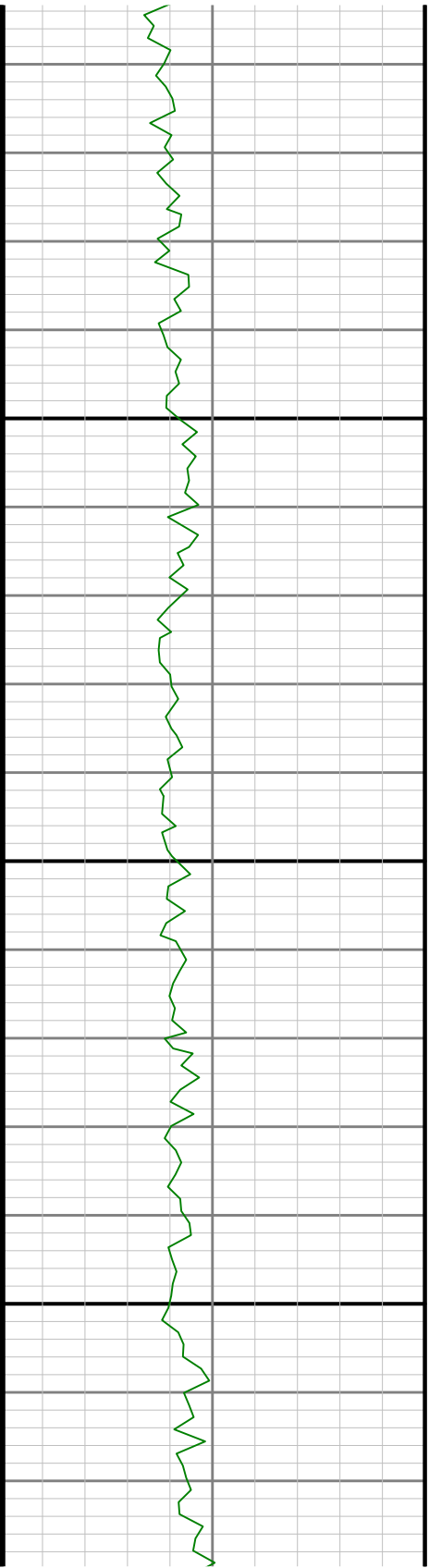
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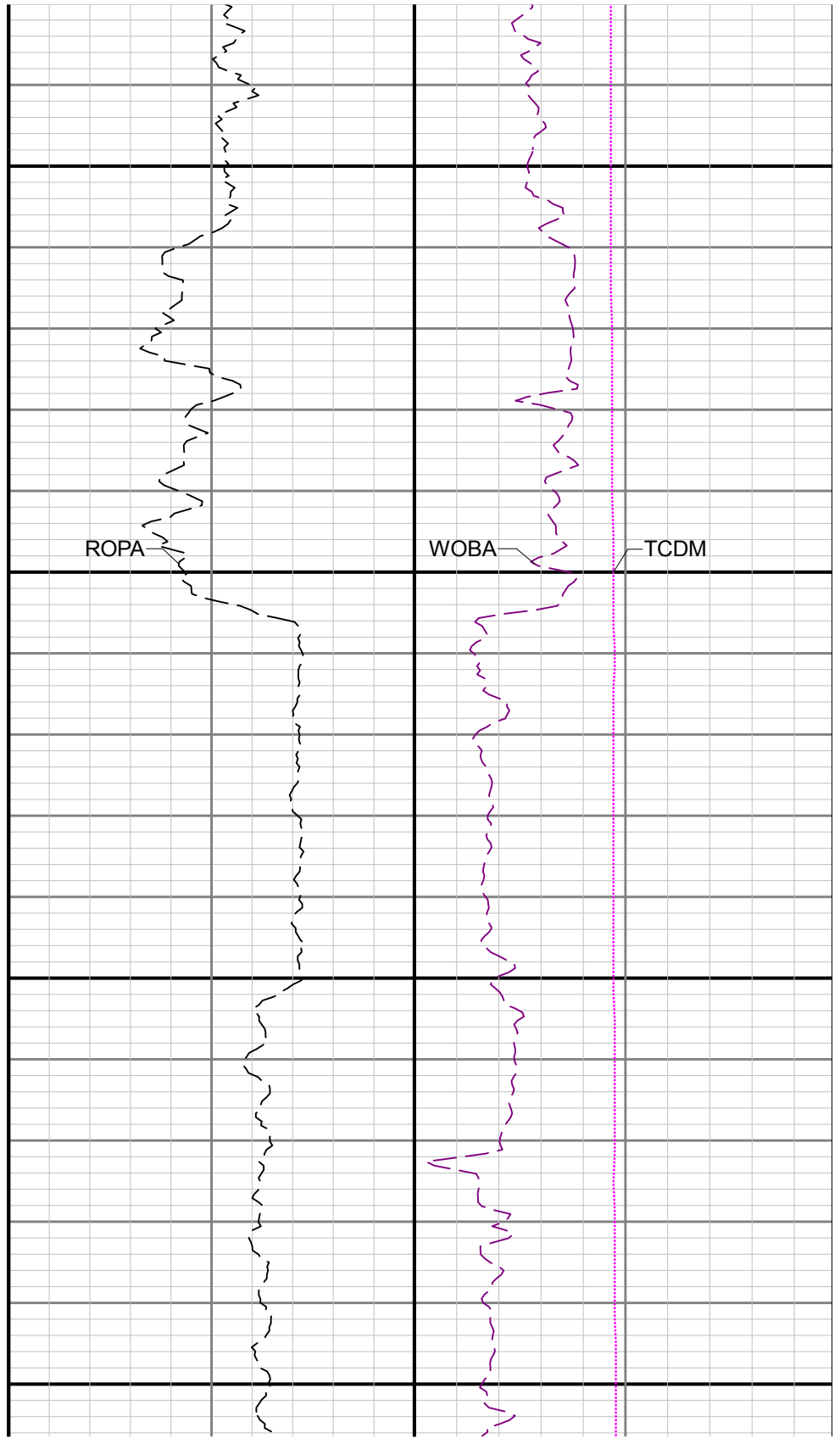
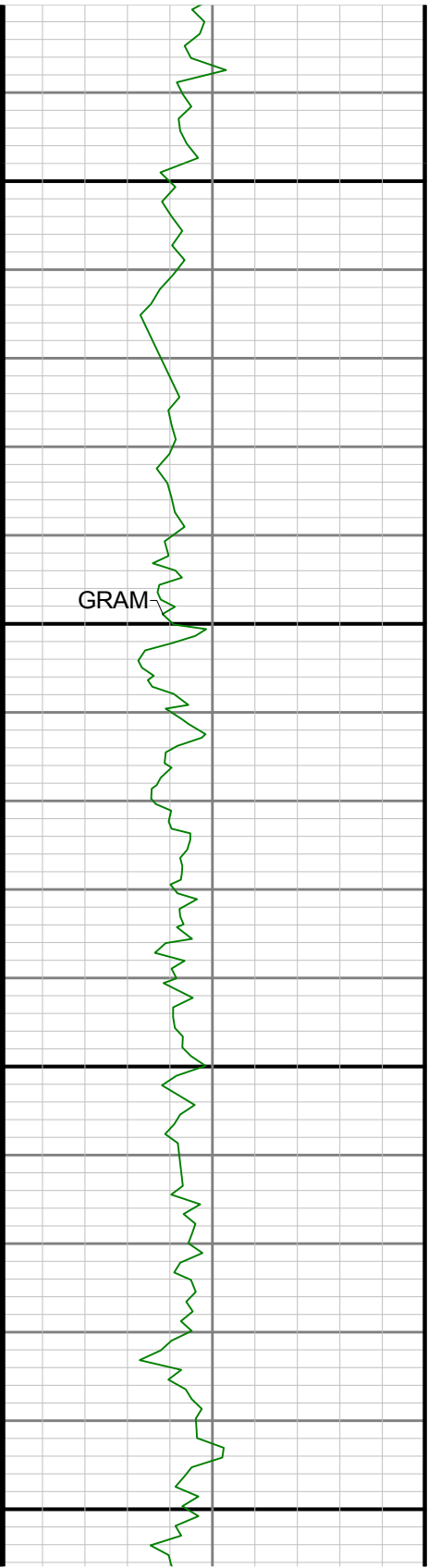


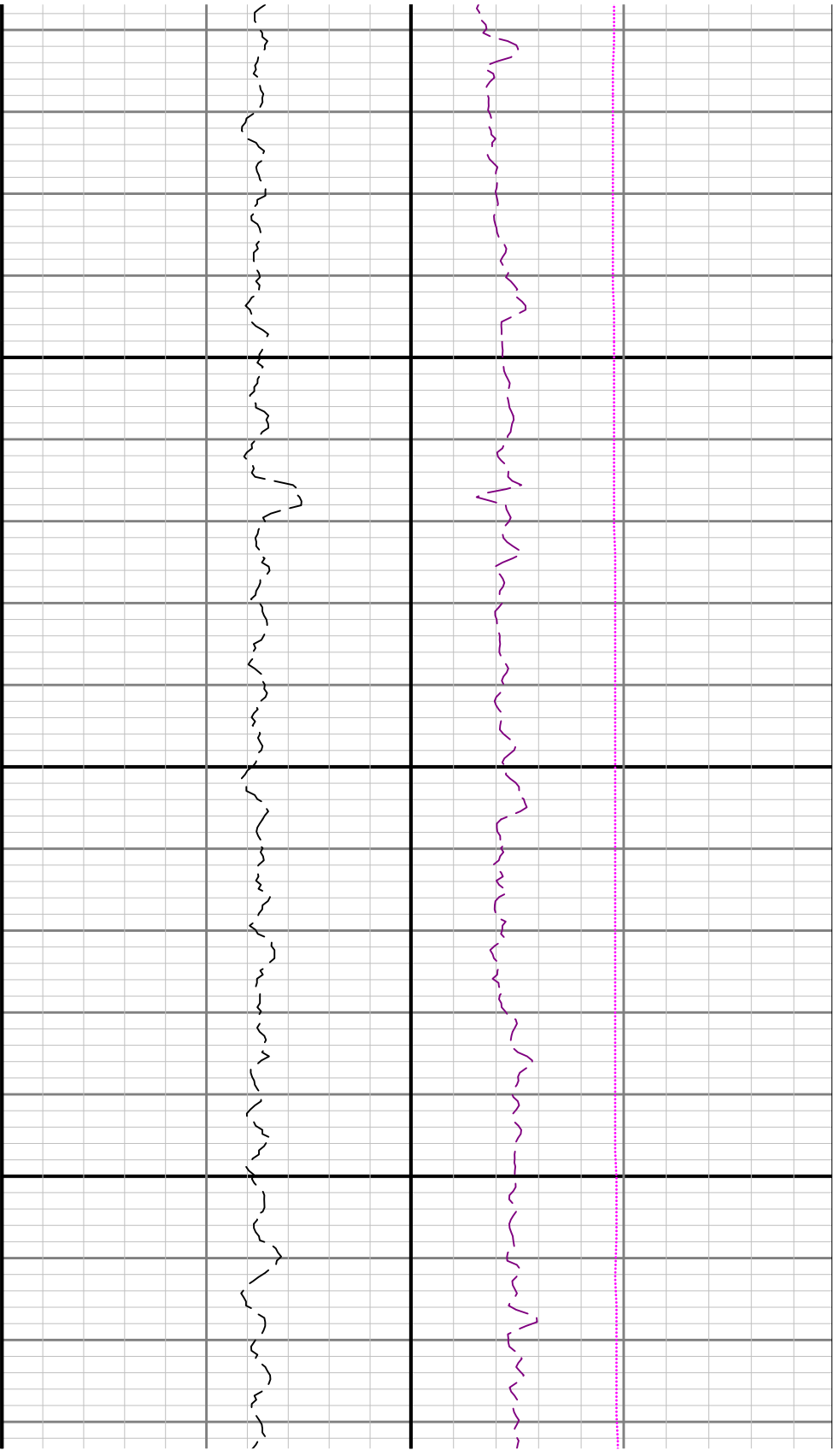


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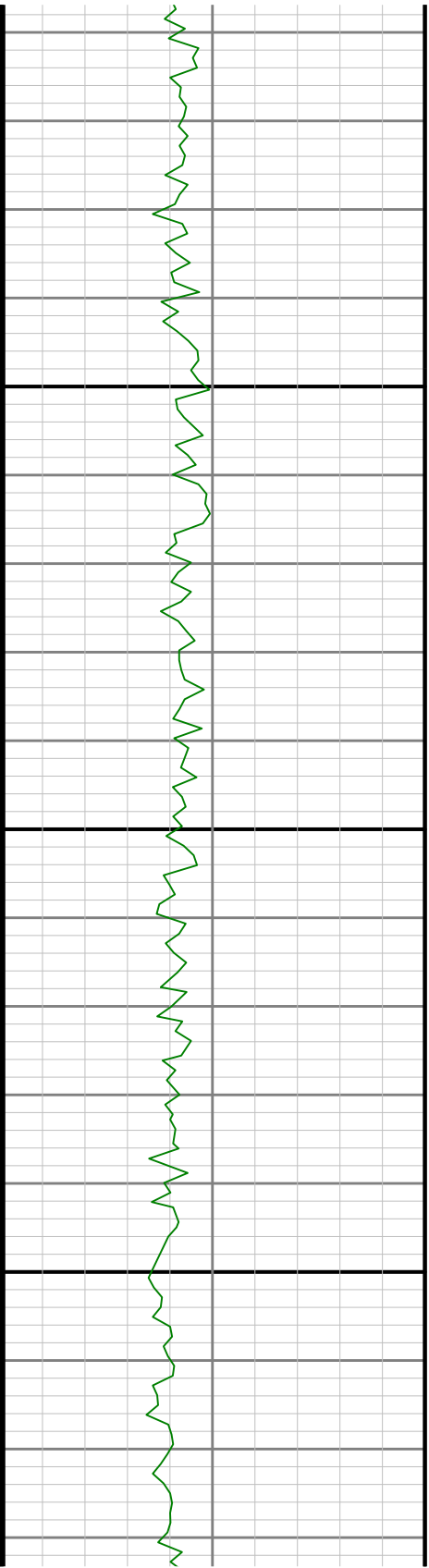
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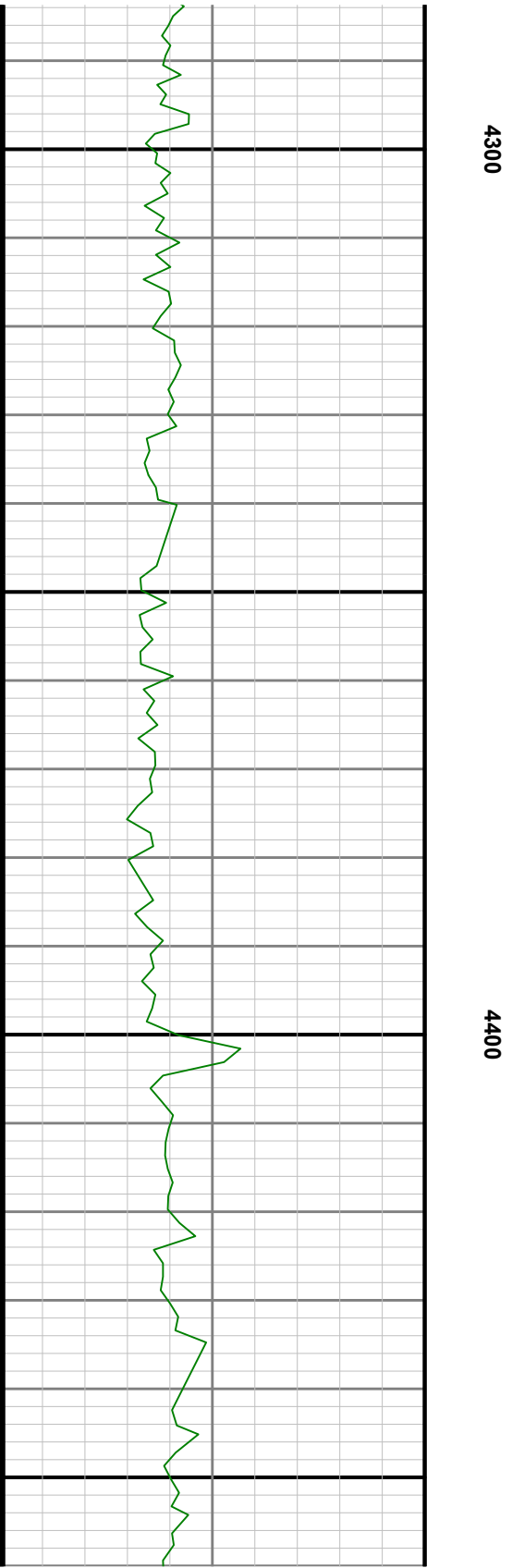
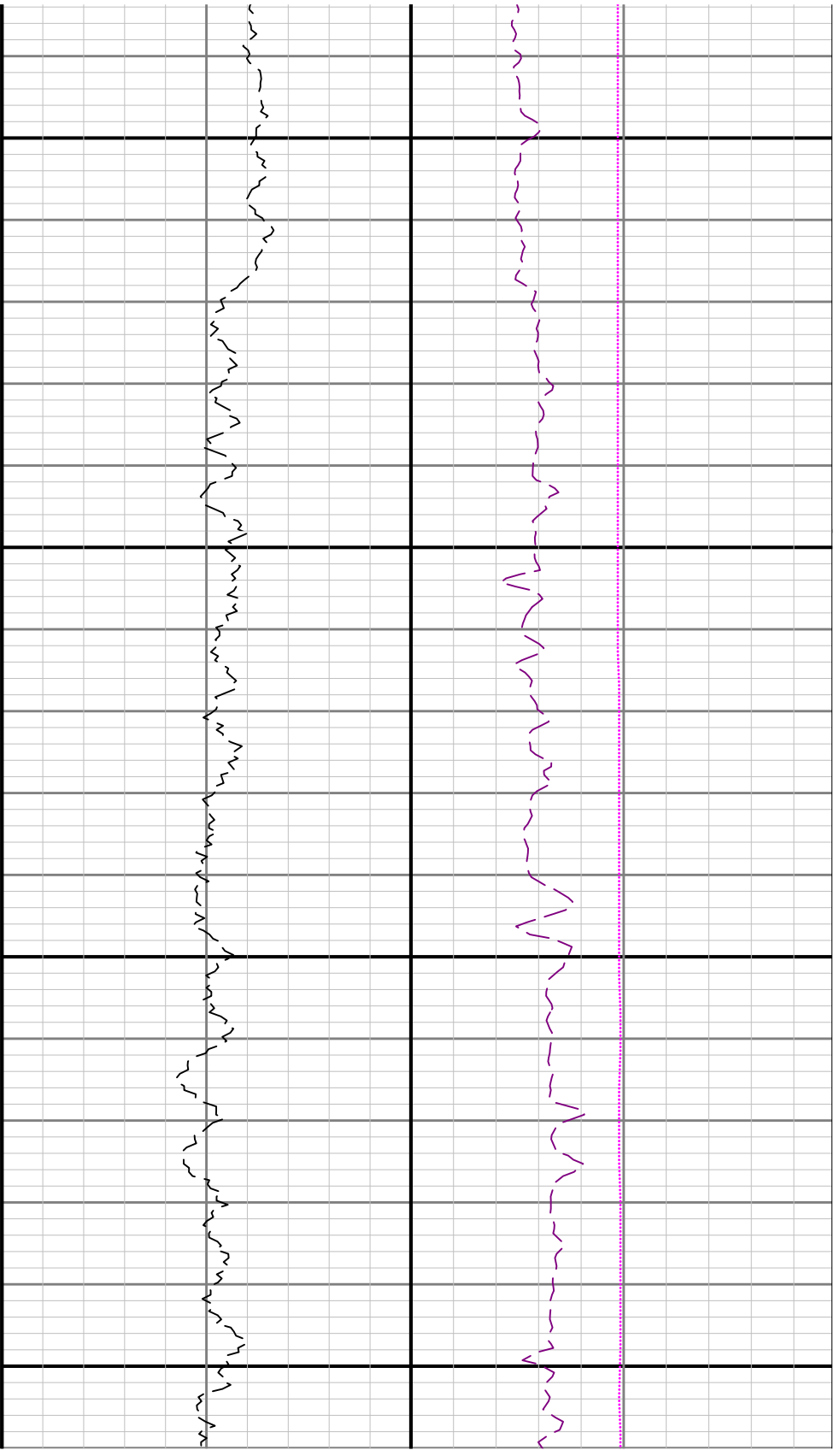


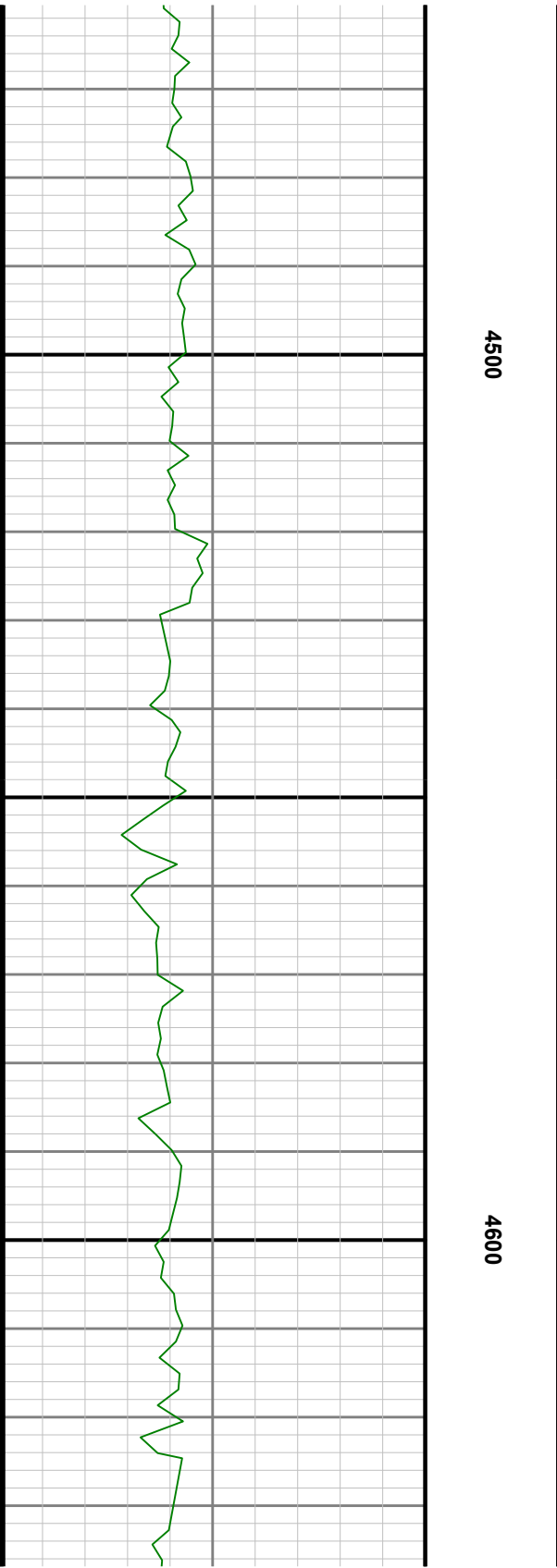
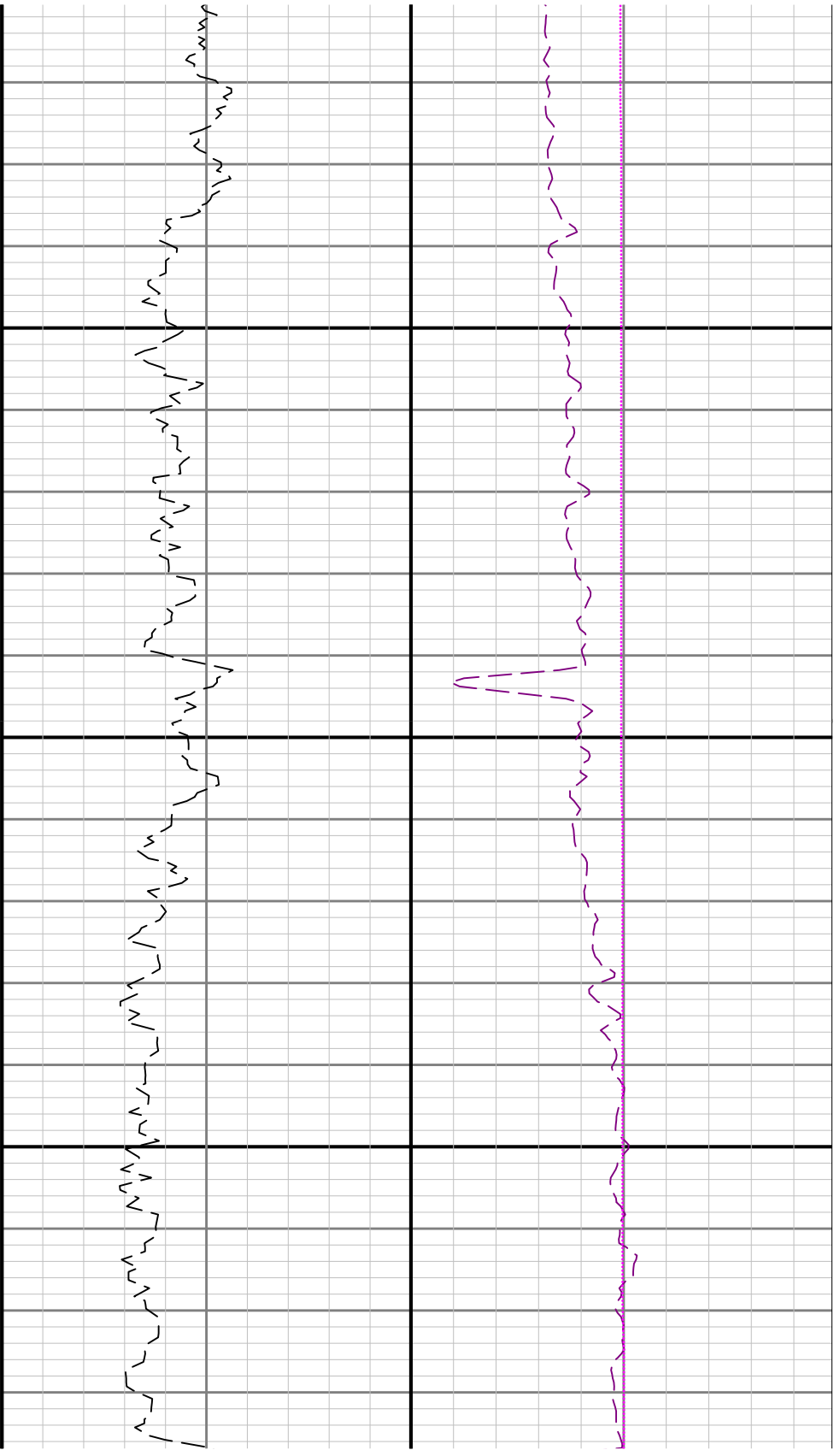


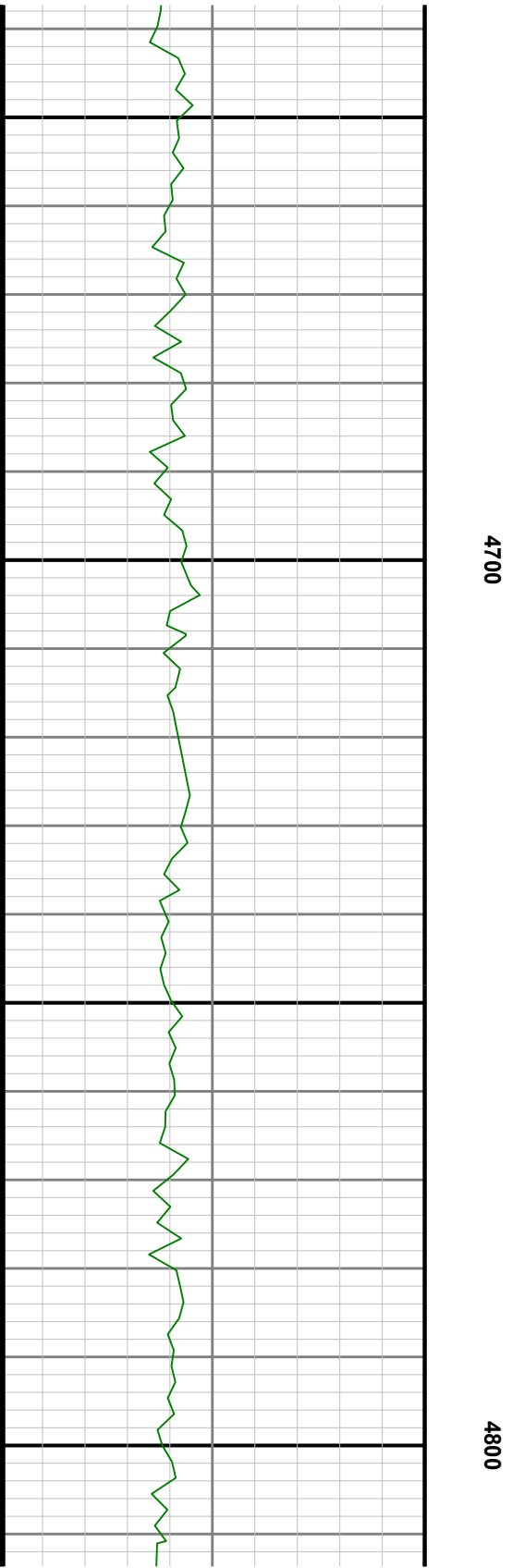
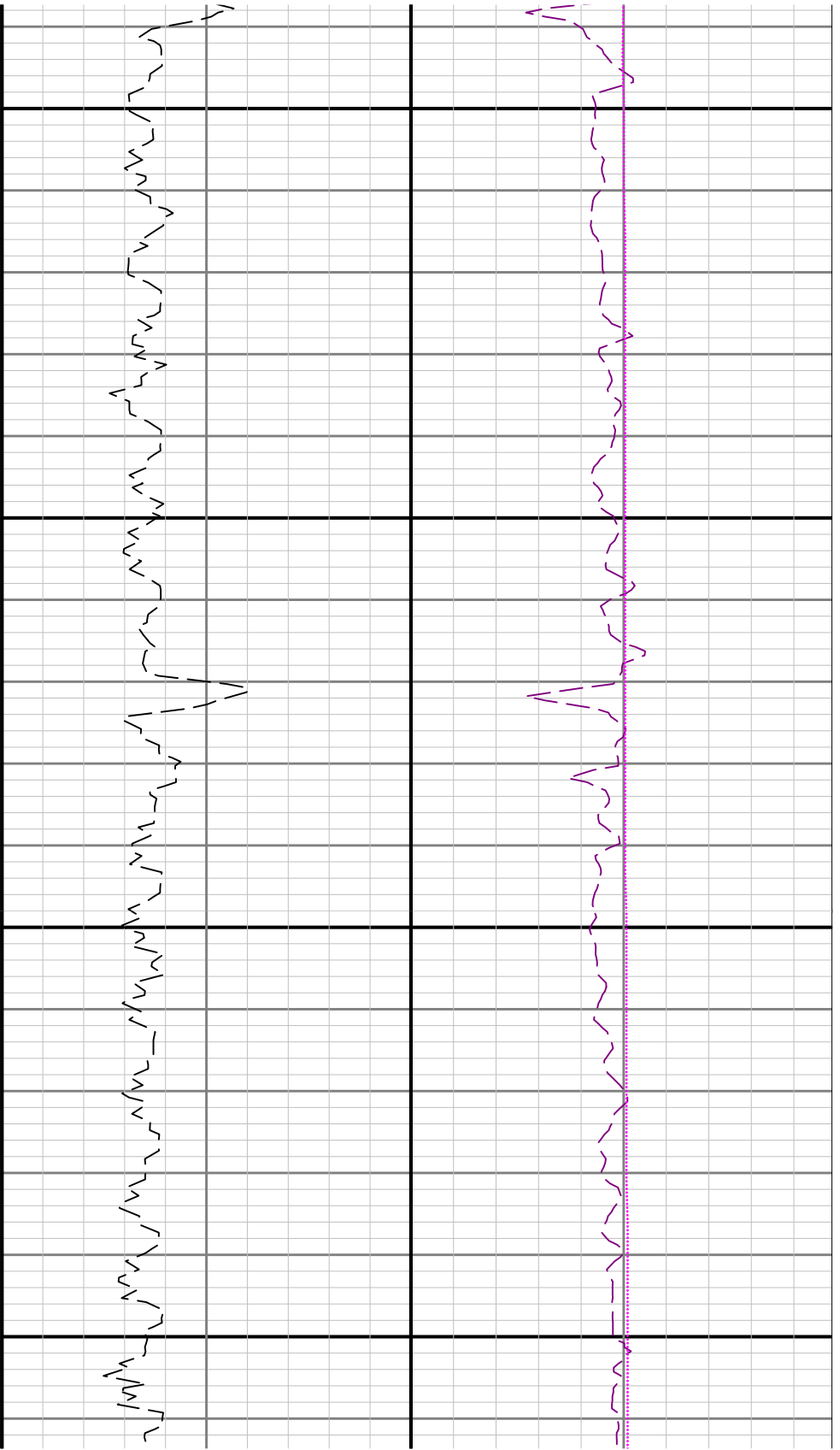


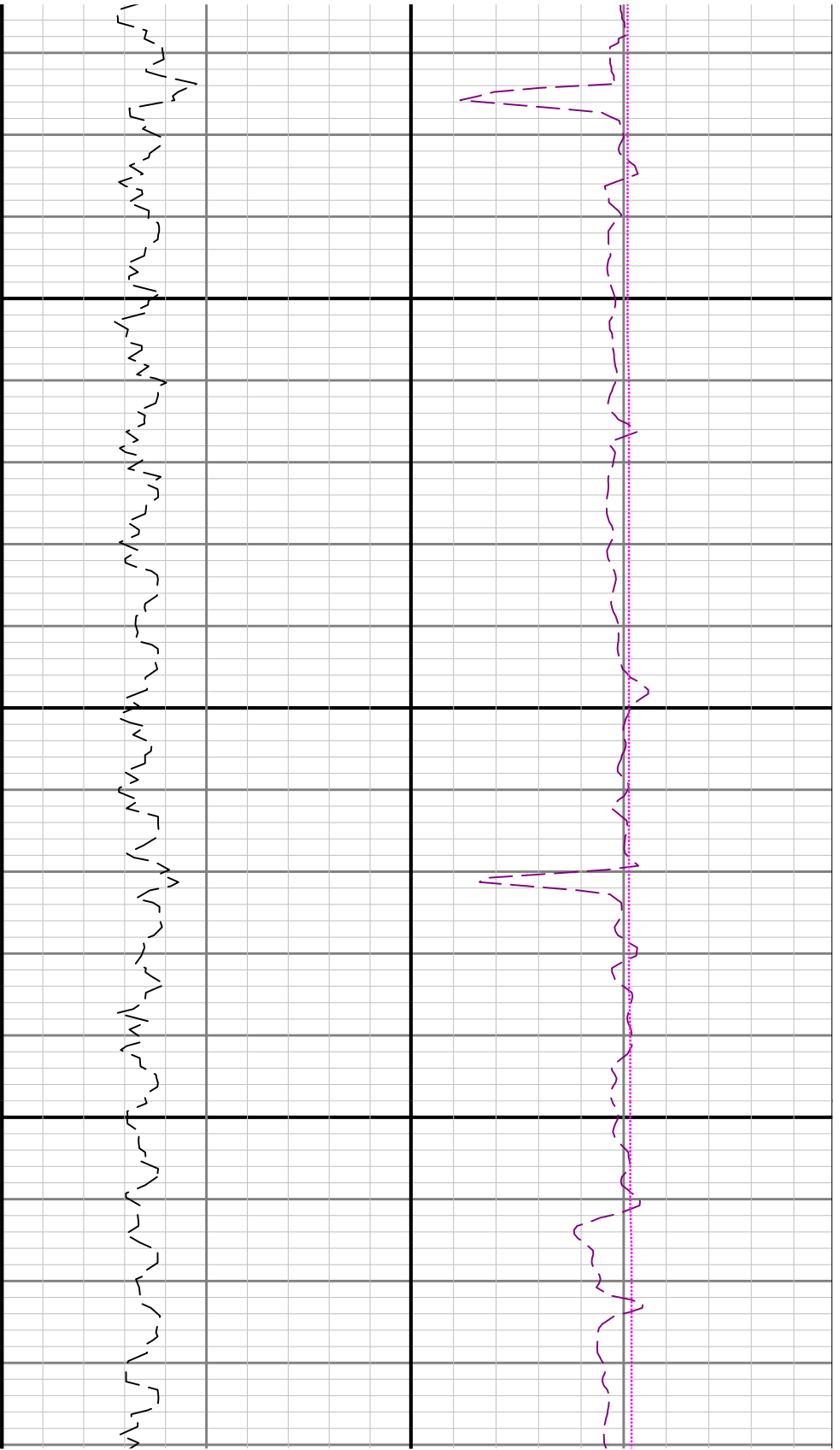
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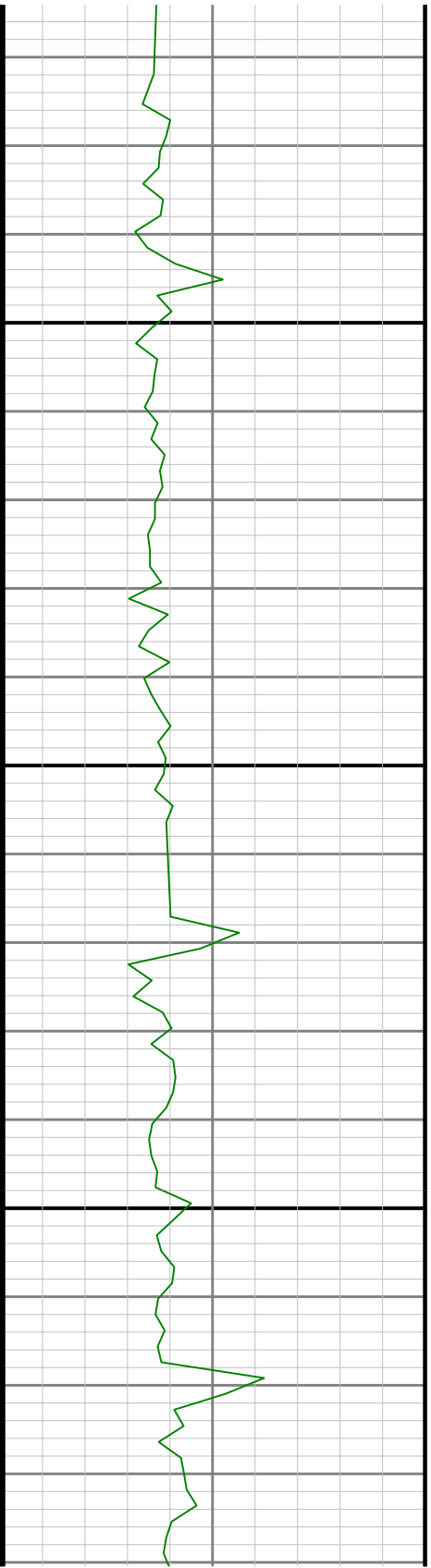


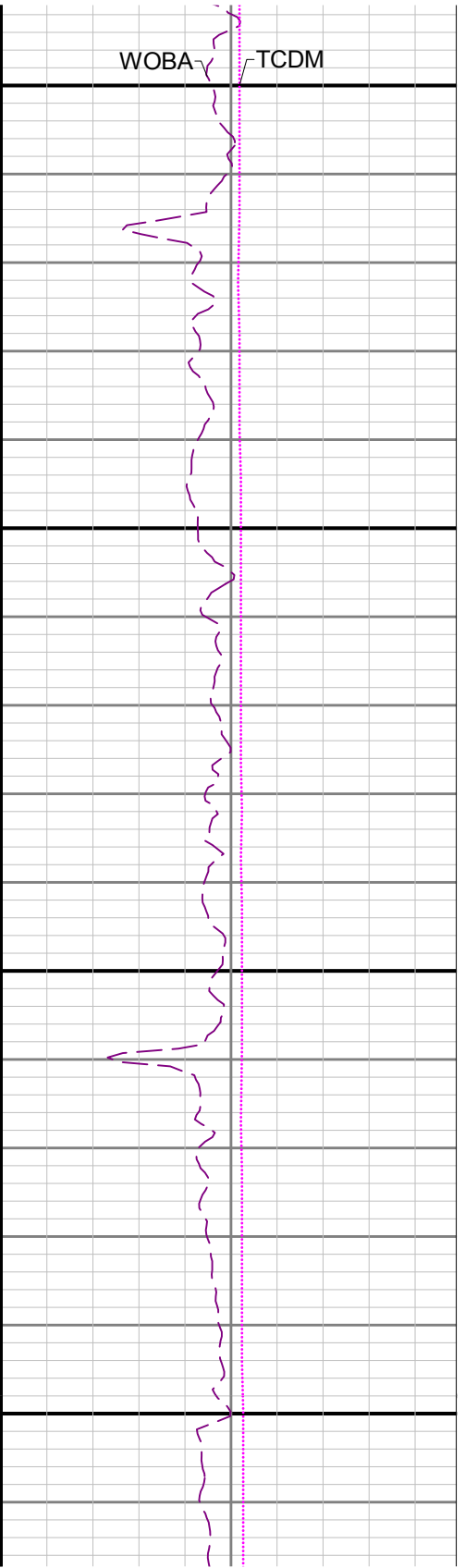
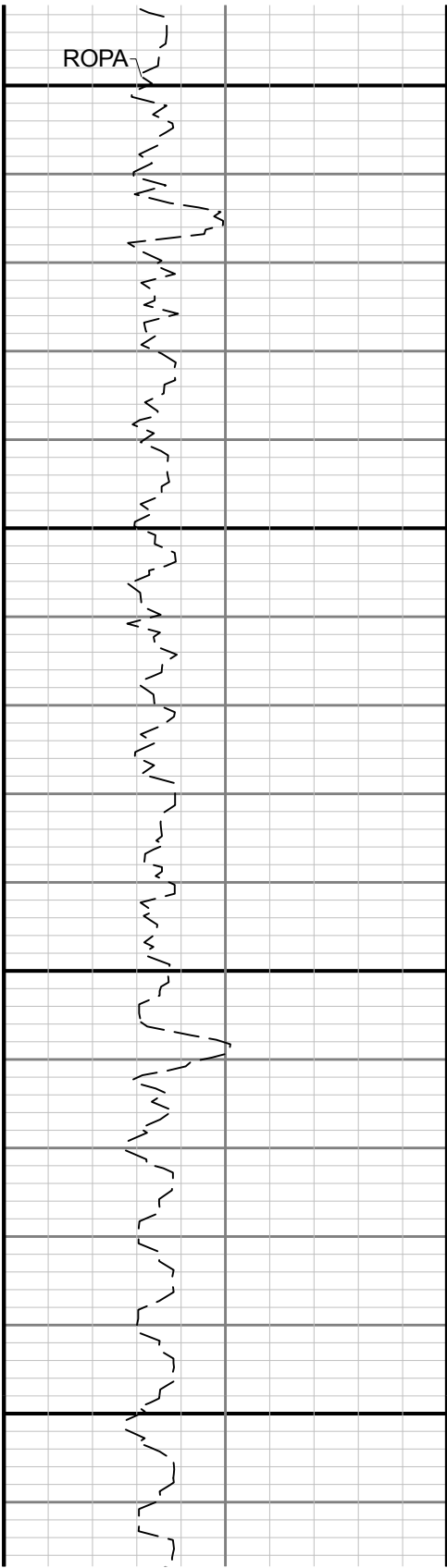
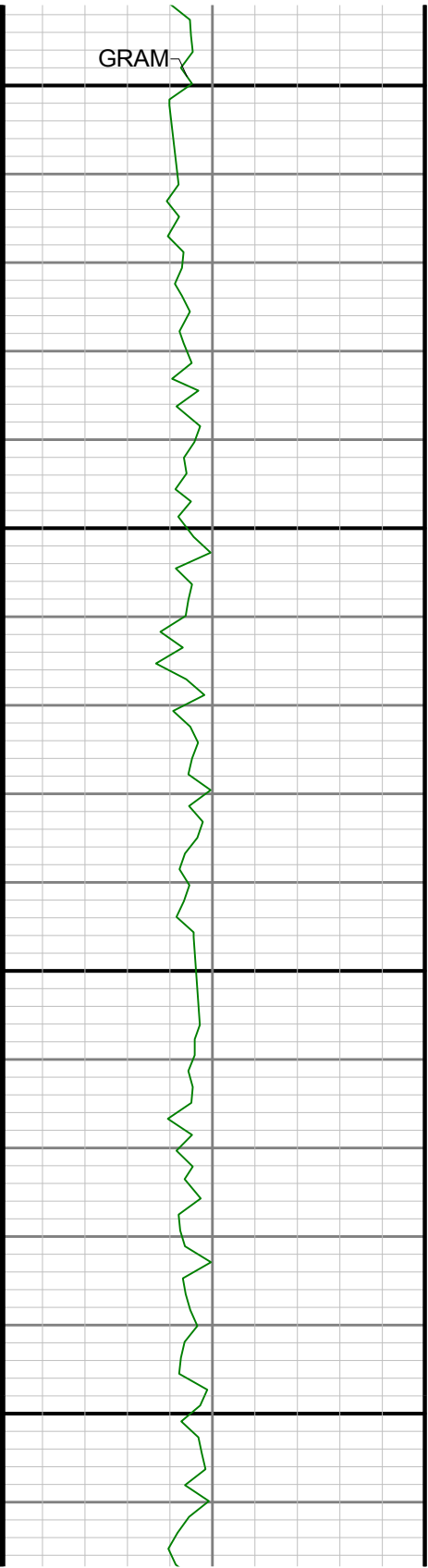






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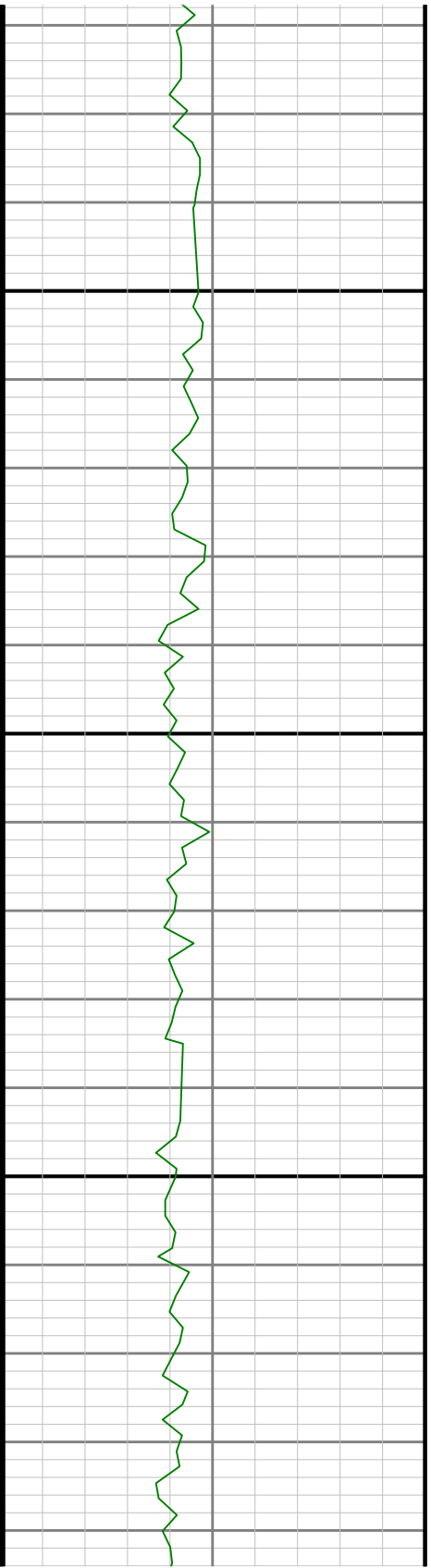


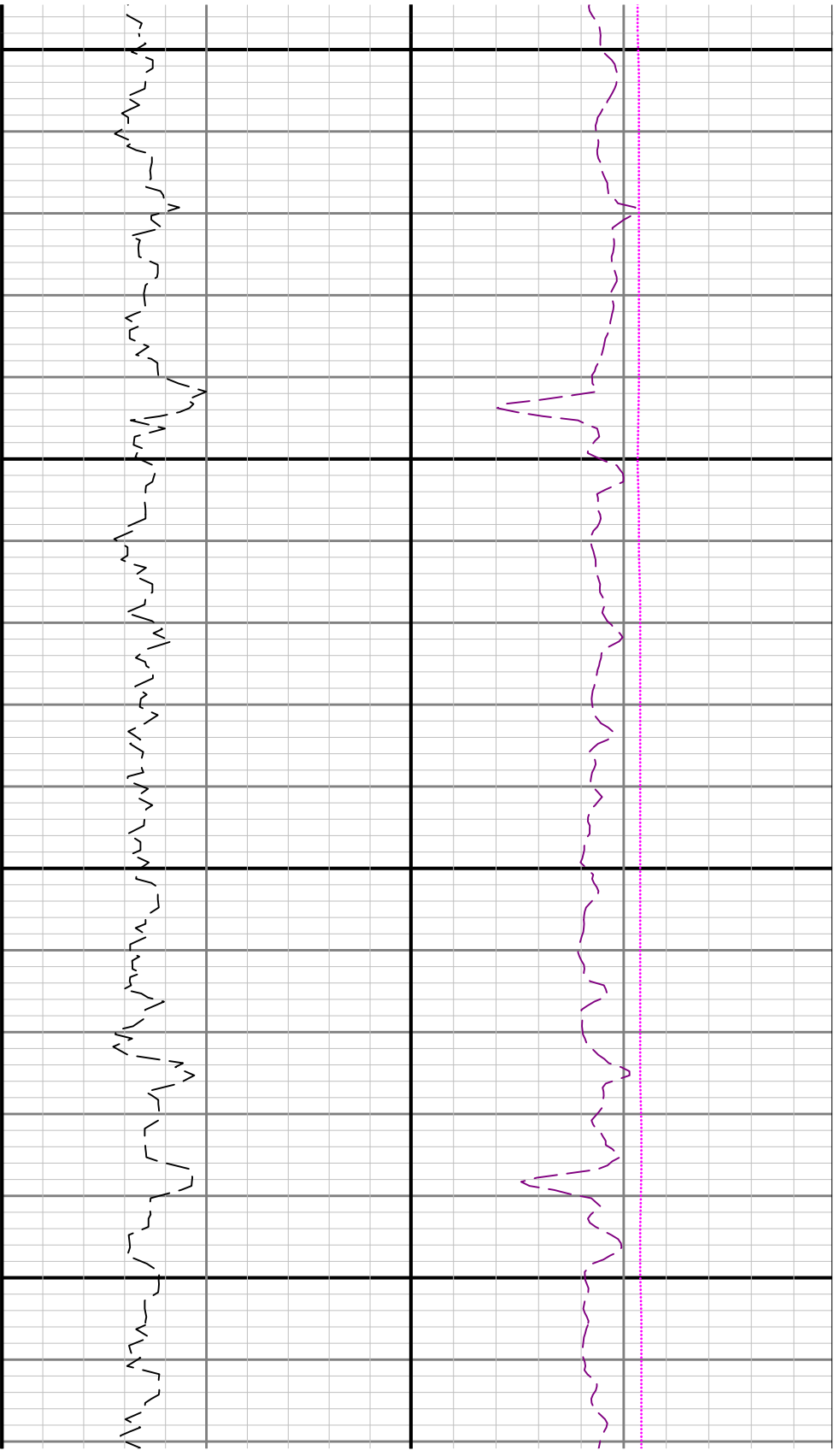


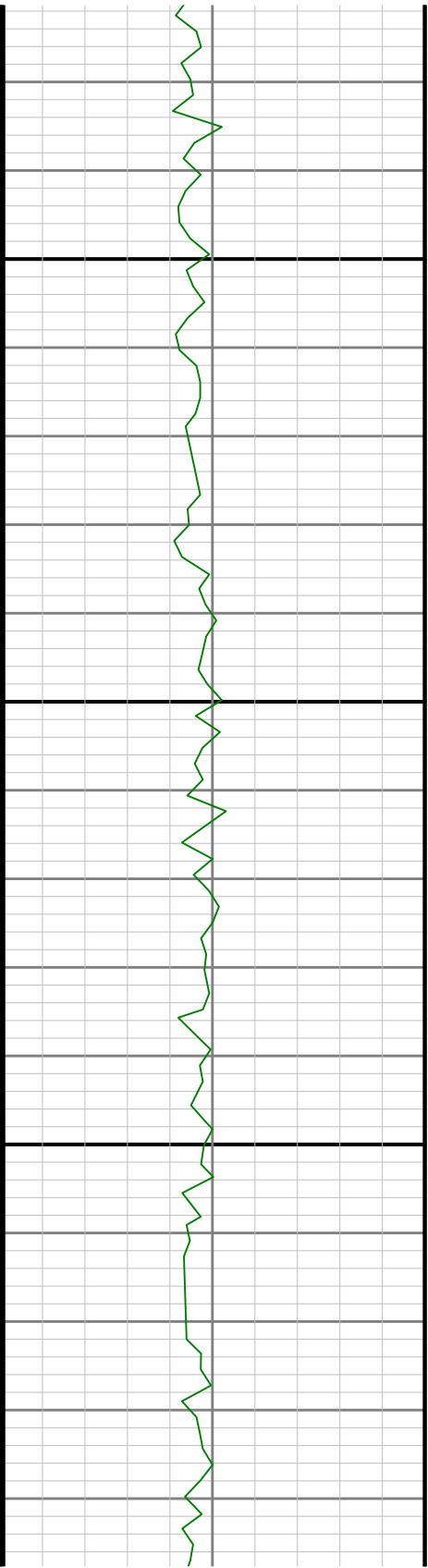


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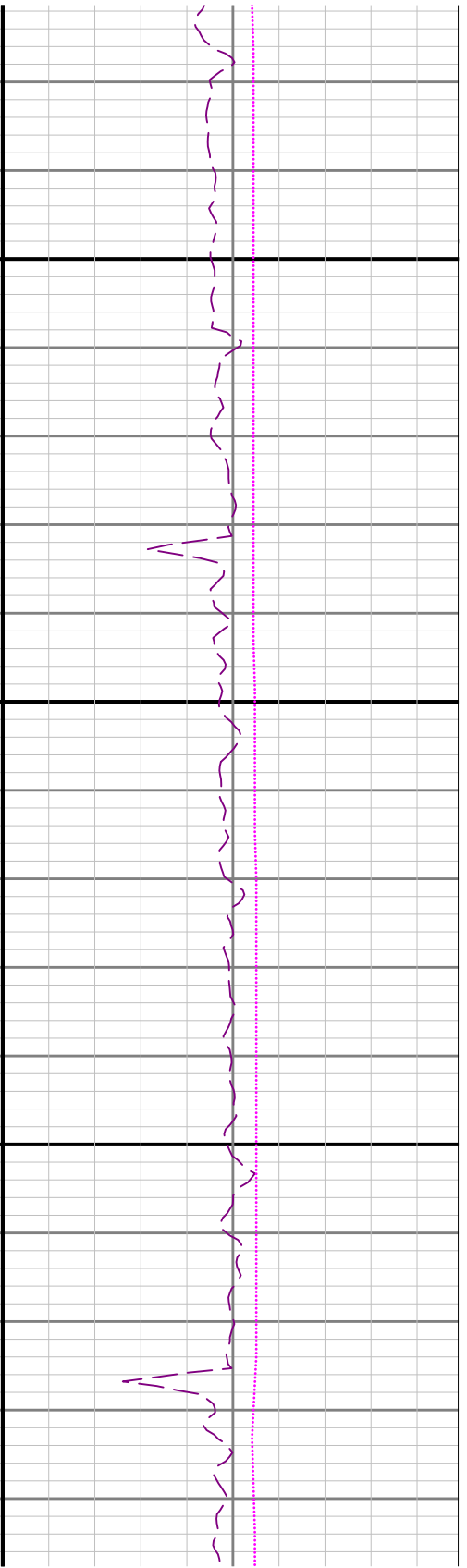
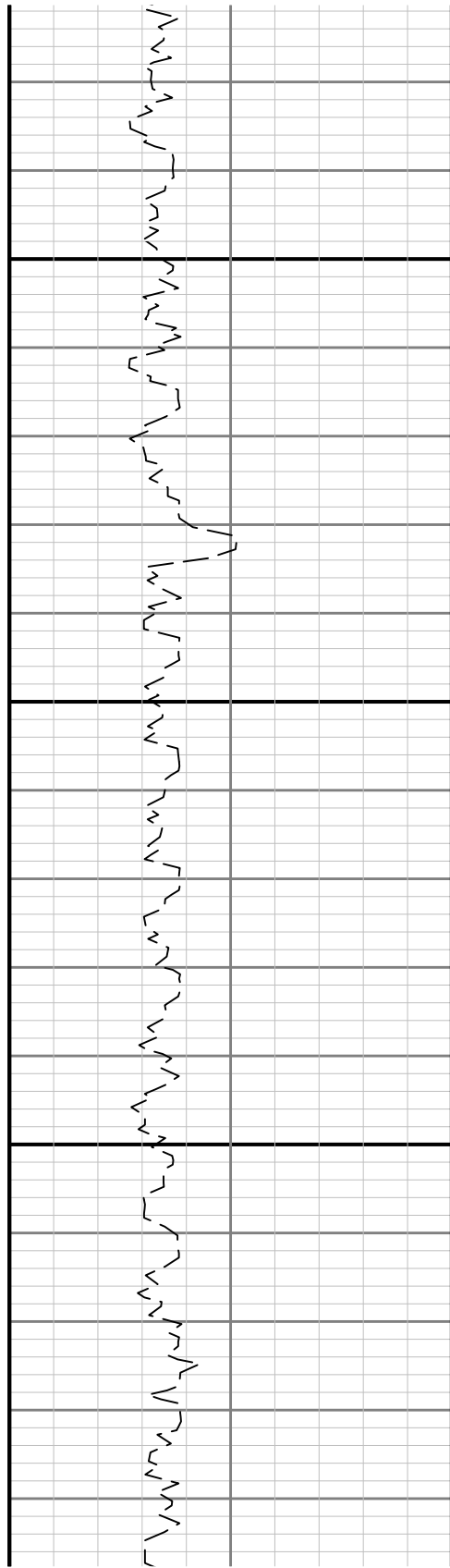
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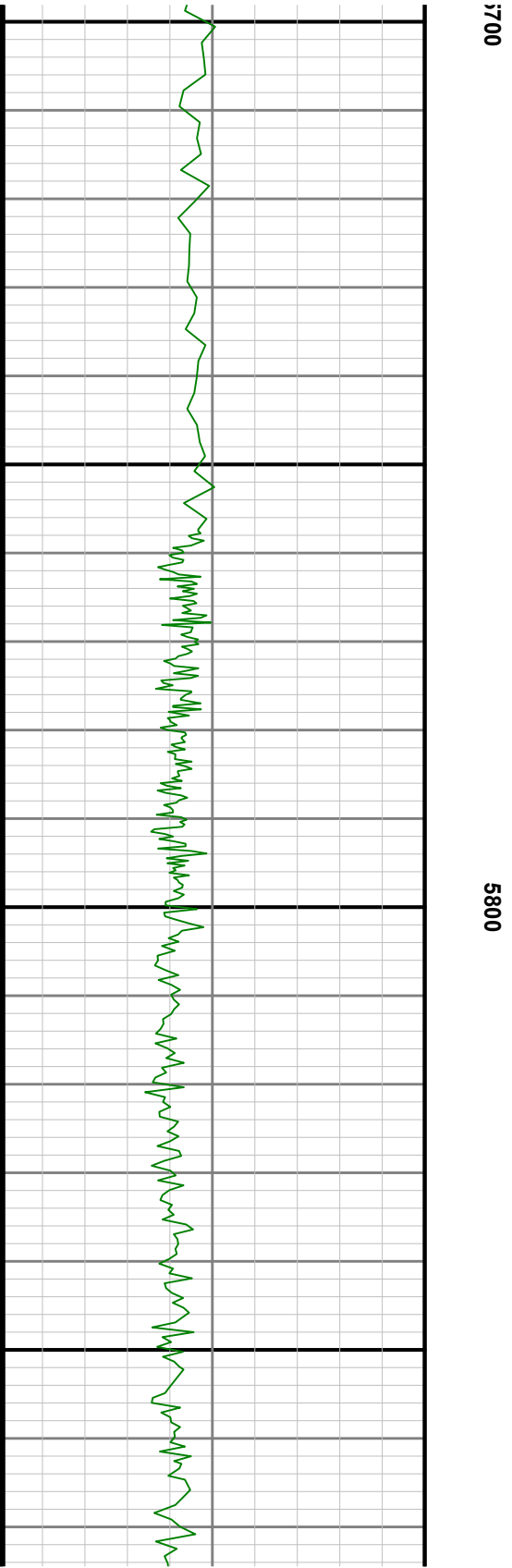


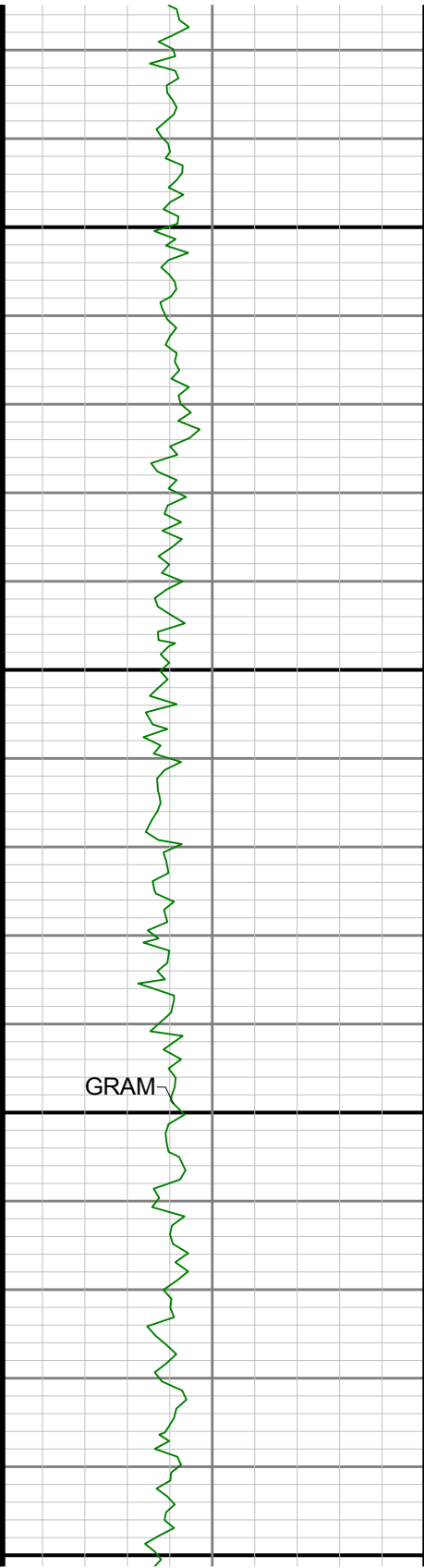




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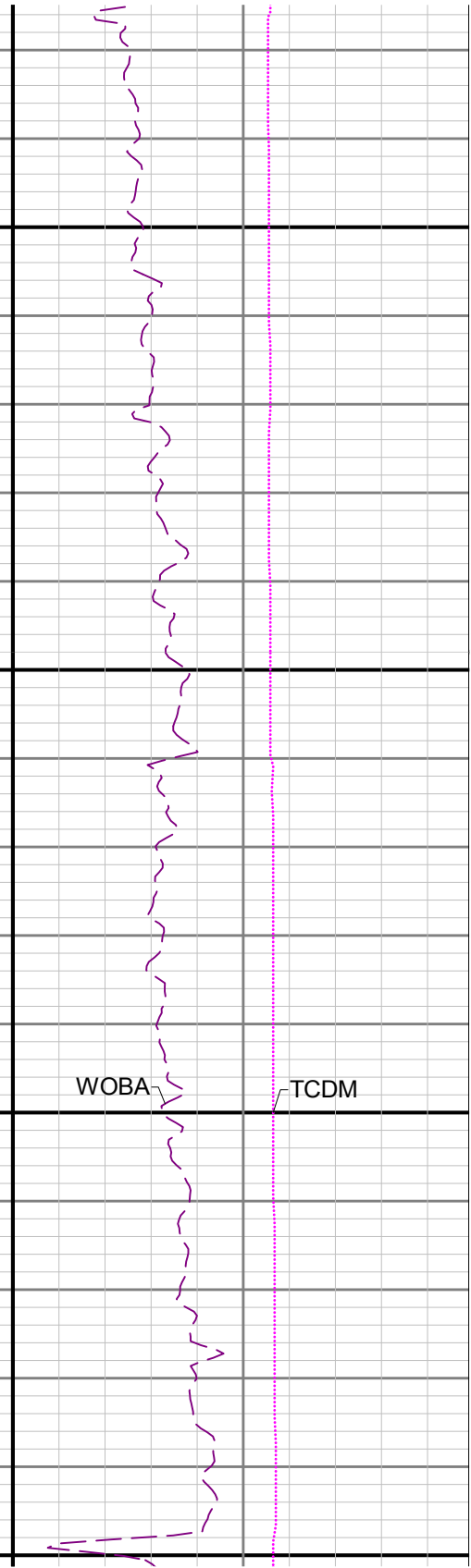
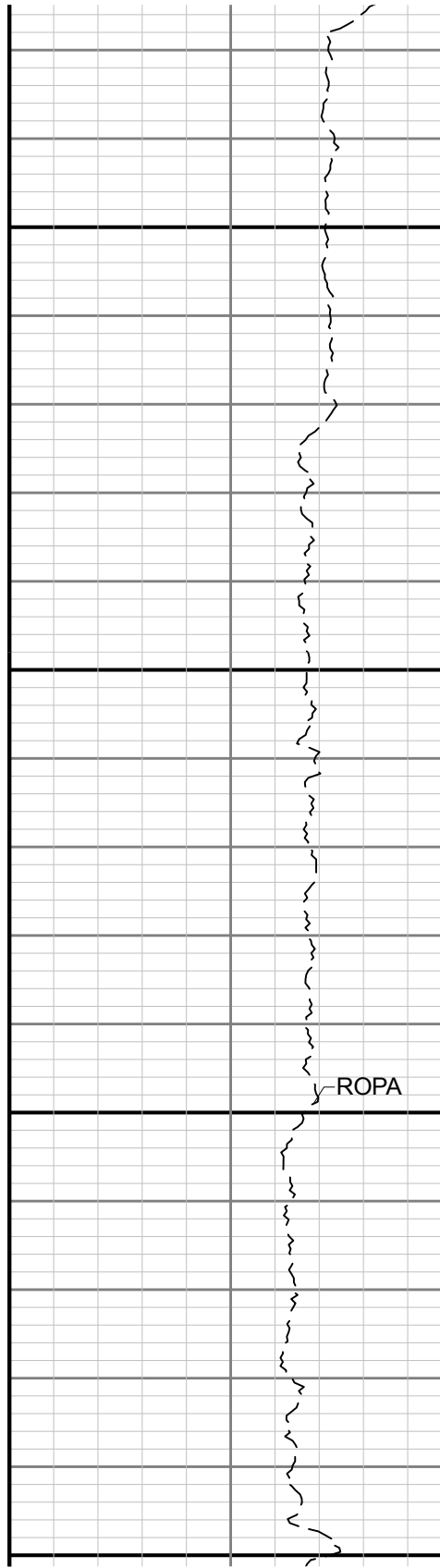


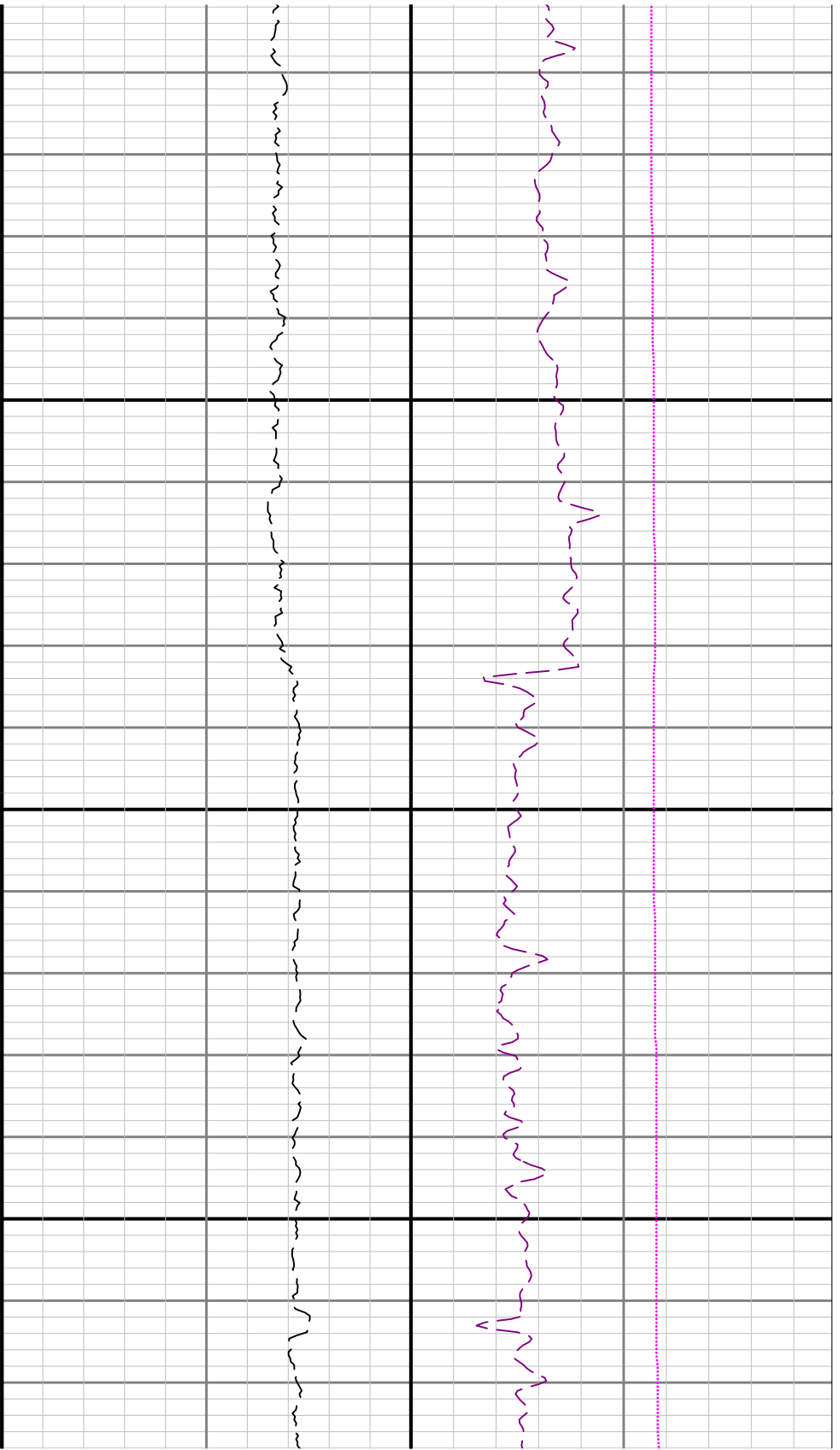




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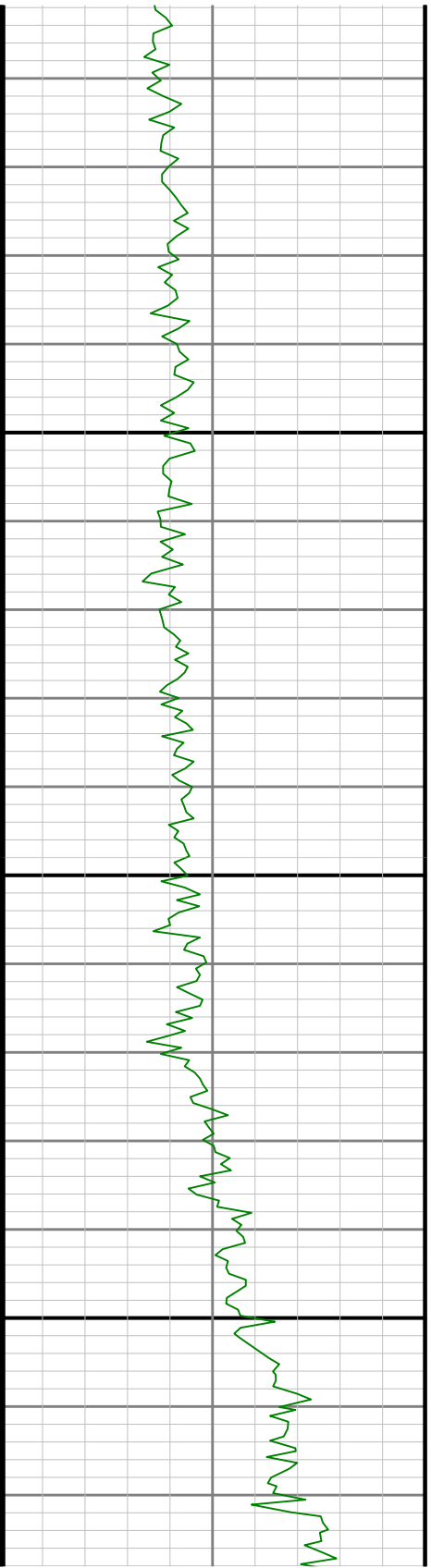
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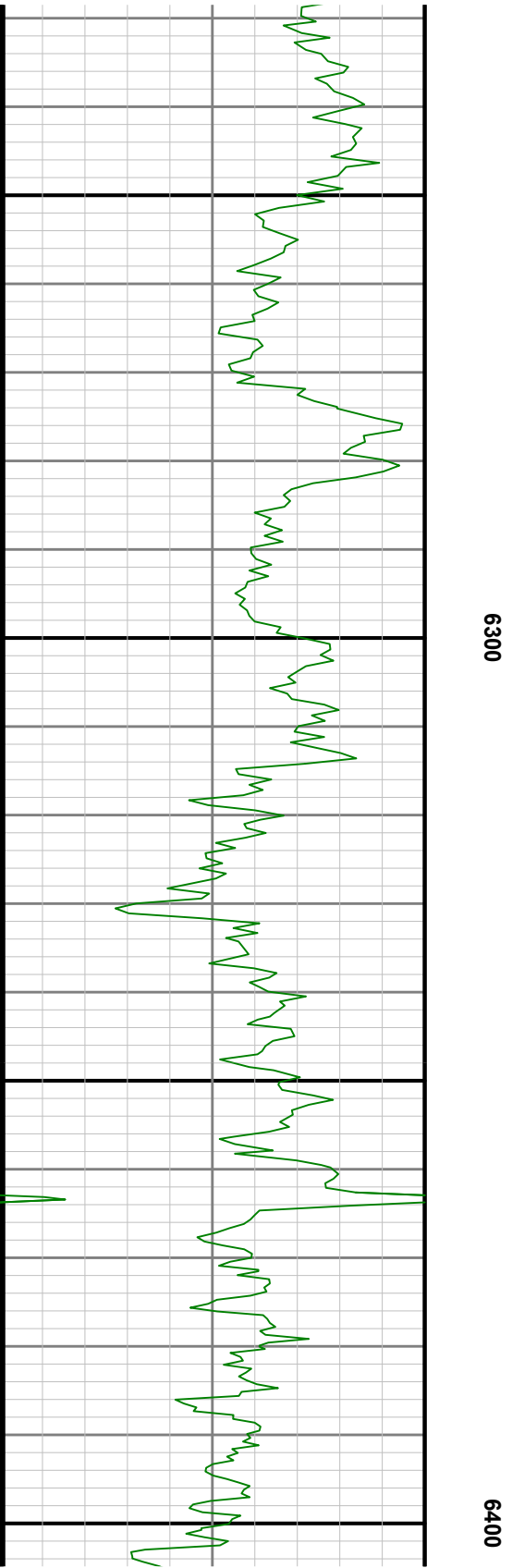
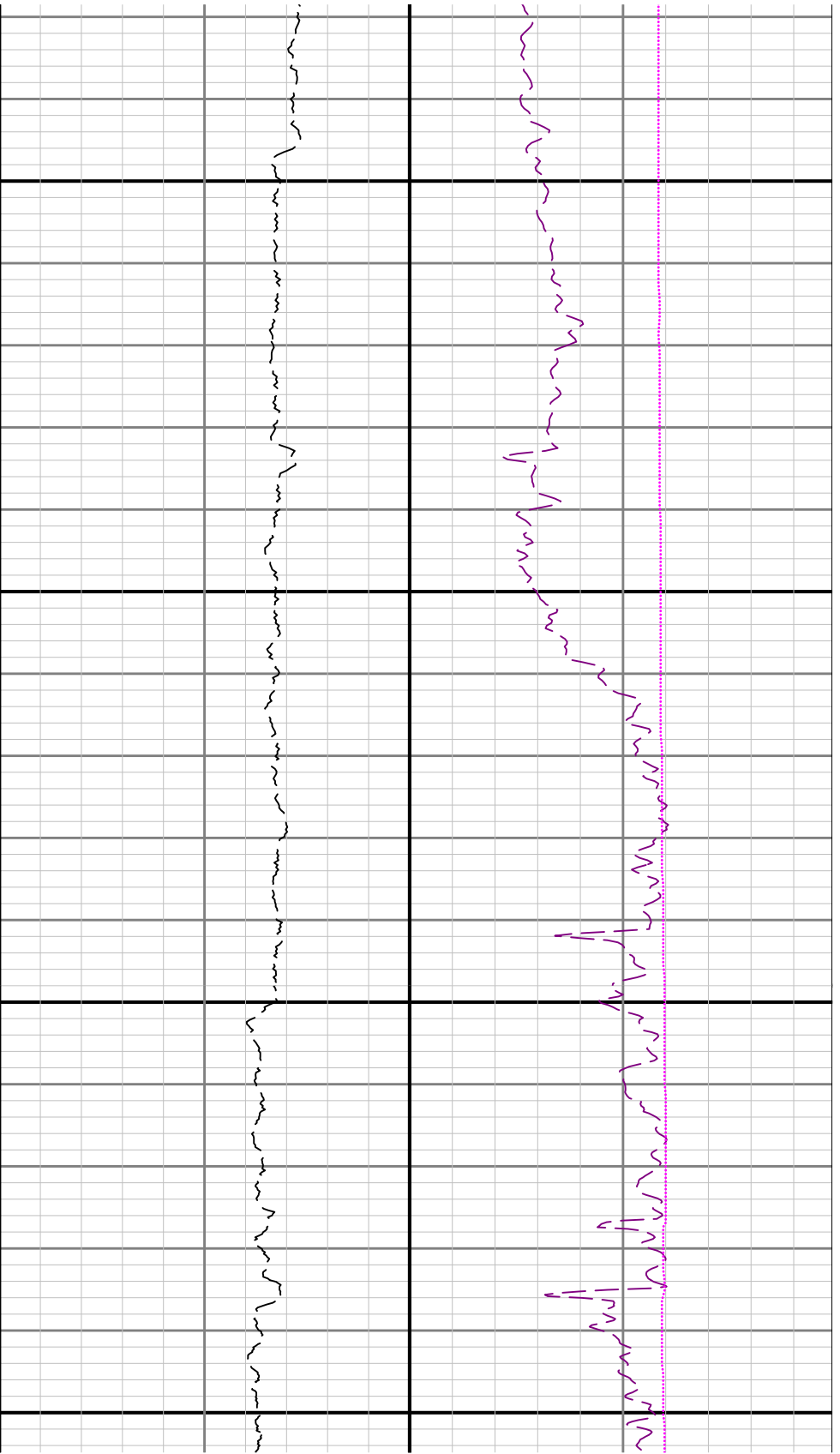


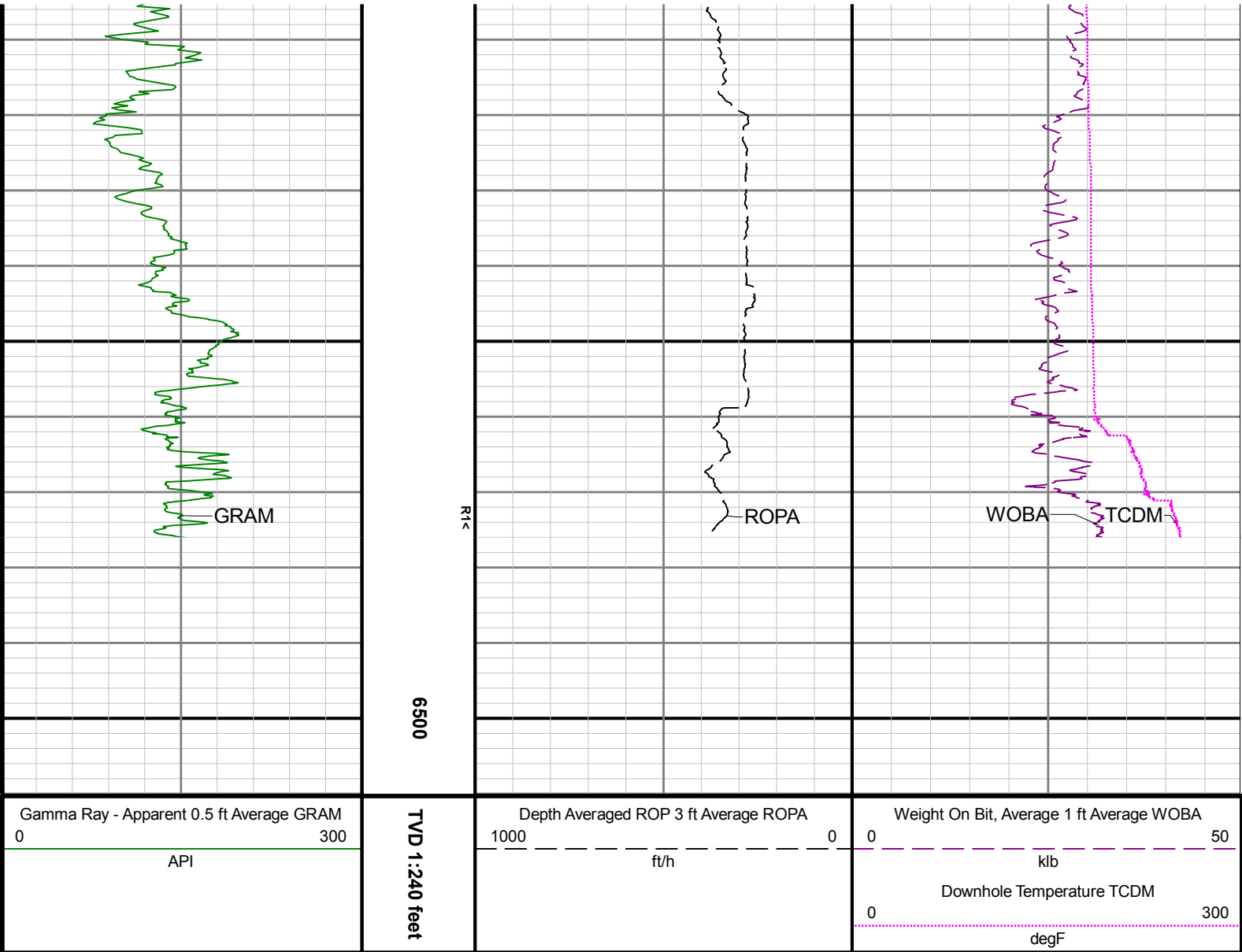


6100

6200







Directional Survey Summary

| | | | |
|---------------------------------|--------------------|-----------------------------|--------------------|
| Latitude: | 040° 24' 54.252" N | Longitude: | 104° 20' 18.096" W |
| North Reference: | Grid | Drill Depth Zero: | Rig Floor |
| Vertical Datum is: | Ground Level | Vertical Datum to DDZ: (ft) | 30.00 |
| Vertical Section North: (m) | 0.00 | Vertical Section East: (m) | 0.00 |
| Vertical Section Azimuth: (deg) | 267.31 | | |
| Grid Convergence: (deg) | -0.75 | Magnetic Declination: (deg) | 7.88 |
| Total Correction: (deg) | 7.13 | TVD Calculation Method: | Minimum Curvature |
| Magnetic Correction: | Off | Local Magnetic Field: (nT) | 52288 |
| Local Magnetic Dip Angle: (deg) | 67.14 | Local Gravity Field: (m/s2) | 9.800 |

| Tie-In / Projection | Measured Depth (ft) | Inclination (deg) | Azimuth (deg) | Temperature (degF) | North (ft) | East (ft) | True Vertical Depth (ft) | Vertical Section (ft) | Course Length (ft) | Dog Leg Severity (deg/100ft) | Build Rate (deg/100ft) | Turn Rate (deg/100ft) |
|---------------------|---------------------|-------------------|---------------|--------------------|------------|-----------|--------------------------|-----------------------|--------------------|------------------------------|------------------------|-----------------------|
| Tie-In | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 82.00 | 0.25 | 103.70 | N/A | -0.04 | 0.17 | 82.00 | -0.17 | 82.00 | 0.30 | 0.30 | 126.46 |

| | | | | | | | | | | | | | |
|--------|--|---------|------|--------|-----|---------|--------|---------|-------|-------|------|-------|---------|
| | | 177.00 | 0.07 | 267.47 | N/A | -0.09 | 0.32 | 177.00 | -0.31 | 95.00 | 0.33 | -0.19 | 172.39 |
| | | 272.00 | 0.64 | 150.08 | N/A | -0.56 | 0.52 | 272.00 | -0.50 | 95.00 | 0.71 | 0.60 | -123.57 |
| | | 366.00 | 0.12 | 178.97 | N/A | -1.11 | 0.79 | 366.00 | -0.73 | 94.00 | 0.57 | -0.55 | 30.73 |
| | | 461.00 | 0.26 | 47.99 | N/A | -1.07 | 0.95 | 460.99 | -0.90 | 95.00 | 0.37 | 0.15 | -137.87 |
| | | 556.00 | 0.11 | 264.38 | N/A | -0.93 | 1.02 | 555.99 | -0.97 | 95.00 | 0.37 | -0.16 | -151.17 |
| | | 650.00 | 0.52 | 273.49 | N/A | -0.91 | 0.50 | 649.99 | -0.46 | 94.00 | 0.44 | 0.44 | 9.69 |
| | | 745.00 | 0.31 | 10.03 | N/A | -0.63 | 0.12 | 744.99 | -0.09 | 95.00 | 0.67 | -0.22 | 101.62 |
| | | 839.00 | 0.38 | 323.39 | N/A | -0.13 | -0.02 | 838.99 | 0.03 | 94.00 | 0.30 | 0.07 | -49.62 |
| | | 934.00 | 0.43 | 298.49 | N/A | 0.29 | -0.53 | 933.99 | 0.51 | 95.00 | 0.19 | 0.05 | -26.21 |
| | | 1029.00 | 0.51 | 336.80 | N/A | 0.85 | -1.00 | 1028.98 | 0.96 | 95.00 | 0.33 | 0.08 | 40.33 |
| | | 1123.00 | 0.17 | 346.99 | N/A | 1.37 | -1.20 | 1122.98 | 1.14 | 94.00 | 0.37 | -0.36 | 10.84 |
| | | 1218.00 | 0.06 | 295.82 | N/A | 1.53 | -1.28 | 1217.98 | 1.20 | 95.00 | 0.15 | -0.12 | -53.86 |
| | | 1312.00 | 0.25 | 25.44 | N/A | 1.73 | -1.23 | 1311.98 | 1.15 | 94.00 | 0.27 | 0.20 | 95.34 |
| | | 1407.00 | 0.10 | 356.23 | N/A | 2.00 | -1.15 | 1406.98 | 1.05 | 95.00 | 0.18 | -0.16 | -30.75 |
| | | 1501.00 | 0.22 | 359.21 | N/A | 2.27 | -1.16 | 1500.98 | 1.05 | 94.00 | 0.13 | 0.13 | 3.17 |
| | | 1596.00 | 0.34 | 11.55 | N/A | 2.73 | -1.10 | 1595.98 | 0.98 | 95.00 | 0.14 | 0.13 | 12.99 |
| | | 1690.00 | 0.38 | 29.85 | N/A | 3.27 | -0.89 | 1689.98 | 0.74 | 94.00 | 0.13 | 0.04 | 19.47 |
| | | 1785.00 | 0.21 | 195.06 | N/A | 3.37 | -0.78 | 1784.98 | 0.62 | 95.00 | 0.62 | -0.18 | 173.91 |
| | | 1879.00 | 0.53 | 218.96 | N/A | 2.87 | -1.10 | 1878.98 | 0.96 | 94.00 | 0.37 | 0.34 | 25.43 |
| Tie-In | | 1932.00 | 0.78 | 252.61 | N/A | 2.57 | -1.60 | 1931.97 | 1.48 | 53.00 | 0.85 | 0.47 | 63.49 |
| | | 1981.00 | 0.86 | 261.35 | N/A | 2.42 | -2.28 | 1980.97 | 2.16 | 49.00 | 0.30 | 0.16 | 17.84 |
| | | 2076.00 | 0.00 | 7.13 | N/A | 2.31 | -2.98 | 2075.96 | 2.87 | 95.00 | 0.91 | -0.91 | 111.35 |
| | | 2171.00 | 0.03 | 99.56 | N/A | 2.31 | -2.96 | 2170.96 | 2.85 | 95.00 | 0.03 | 0.03 | 97.29 |
| | | 2265.00 | 0.00 | 7.13 | N/A | 2.30 | -2.94 | 2264.96 | 2.82 | 94.00 | 0.03 | -0.03 | -98.33 |
| | | 2360.00 | 0.03 | 348.77 | N/A | 2.33 | -2.94 | 2359.96 | 2.83 | 95.00 | 0.03 | 0.03 | -19.33 |
| | | 2454.00 | 0.09 | 219.41 | N/A | 2.29 | -2.99 | 2453.96 | 2.88 | 94.00 | 0.12 | 0.06 | -137.62 |
| | | 2549.00 | 3.09 | 214.60 | N/A | 0.13 | -4.49 | 2548.92 | 4.48 | 95.00 | 3.16 | 3.16 | -5.06 |
| | | 2643.00 | 6.99 | 218.07 | N/A | -6.46 | -9.46 | 2642.54 | 9.75 | 94.00 | 4.16 | 4.15 | 3.69 |
| | | 2738.00 | 8.32 | 207.16 | N/A | -17.13 | -16.16 | 2736.69 | 16.95 | 95.00 | 2.07 | 1.40 | -11.48 |
| | | 2833.00 | 8.41 | 193.57 | N/A | -30.00 | -20.93 | 2830.69 | 22.32 | 95.00 | 2.08 | 0.09 | -14.31 |
| | | 2927.00 | 8.25 | 194.61 | N/A | -43.21 | -24.25 | 2923.70 | 26.25 | 94.00 | 0.23 | -0.17 | 1.11 |
| | | 3022.00 | 8.41 | 199.92 | N/A | -56.34 | -28.33 | 3017.70 | 30.95 | 95.00 | 0.83 | 0.17 | 5.59 |
| | | 3117.00 | 8.28 | 202.62 | N/A | -69.18 | -33.33 | 3111.69 | 36.54 | 95.00 | 0.43 | -0.14 | 2.84 |
| | | 3211.00 | 7.98 | 206.08 | N/A | -81.29 | -38.80 | 3204.75 | 42.57 | 94.00 | 0.61 | -0.32 | 3.68 |
| | | 3306.00 | 7.42 | 215.17 | N/A | -92.23 | -45.24 | 3298.89 | 49.51 | 95.00 | 1.41 | -0.59 | 9.57 |
| | | 3400.00 | 7.42 | 212.17 | N/A | -102.33 | -51.96 | 3392.11 | 56.71 | 94.00 | 0.41 | 0.00 | -3.19 |
| | | 3495.00 | 8.56 | 200.39 | N/A | -114.15 | -57.69 | 3486.19 | 62.99 | 95.00 | 2.09 | 1.20 | -12.40 |
| | | 3589.00 | 8.85 | 174.20 | N/A | -127.91 | -59.40 | 3579.14 | 65.34 | 94.00 | 4.19 | 0.31 | -27.86 |
| | | 3684.00 | 8.25 | 162.18 | N/A | -141.67 | -56.58 | 3673.10 | 63.16 | 95.00 | 1.98 | -0.63 | -12.65 |
| | | 3778.00 | 8.32 | 173.64 | N/A | -154.85 | -53.76 | 3766.12 | 60.97 | 94.00 | 1.76 | 0.07 | 12.19 |
| | | 3873.00 | 8.32 | 191.84 | N/A | -168.41 | -54.41 | 3860.14 | 62.25 | 95.00 | 2.76 | 0.00 | 19.16 |
| | | 3967.00 | 8.27 | 208.54 | N/A | -181.00 | -59.03 | 3953.17 | 67.46 | 94.00 | 2.55 | -0.05 | 17.77 |
| | | 4062.00 | 7.22 | 215.42 | N/A | -191.87 | -65.76 | 4047.30 | 74.69 | 95.00 | 1.47 | -1.11 | 7.24 |
| | | 4157.00 | 5.80 | 222.56 | N/A | -200.27 | -72.46 | 4141.69 | 81.78 | 95.00 | 1.72 | -1.49 | 7.52 |
| | | 4251.00 | 3.78 | 228.09 | N/A | -205.84 | -77.98 | 4235.36 | 87.56 | 94.00 | 2.20 | -2.15 | 5.88 |
| | | 4346.00 | 0.44 | 195.59 | N/A | -208.29 | -80.41 | 4330.28 | 90.10 | 95.00 | 3.60 | -3.52 | -34.21 |
| | | 4440.00 | 0.09 | 39.87 | N/A | -208.58 | -80.46 | 4424.28 | 90.16 | 94.00 | 0.56 | -0.37 | -165.66 |
| | | 4534.00 | 0.10 | 169.65 | N/A | -208.60 | -80.40 | 4518.28 | 90.10 | 94.00 | 0.18 | 0.01 | 138.06 |
| | | 4629.00 | 0.03 | 94.62 | N/A | -208.68 | -80.36 | 4613.28 | 90.07 | 95.00 | 0.10 | -0.07 | -78.98 |
| | | 4723.00 | 0.18 | 111.40 | N/A | -208.74 | -80.20 | 4707.28 | 89.91 | 94.00 | 0.16 | 0.16 | 17.85 |
| | | 4818.00 | 0.00 | 7.12 | N/A | -208.79 | -80.06 | 4802.28 | 89.77 | 95.00 | 0.19 | -0.19 | -109.77 |
| | | 4912.00 | 0.06 | 118.30 | N/A | -208.82 | -80.02 | 4896.28 | 89.73 | 94.00 | 0.06 | 0.06 | 118.28 |
| | | 5007.00 | 0.03 | 128.04 | N/A | -208.86 | -79.95 | 4991.28 | 89.67 | 95.00 | 0.03 | -0.03 | 10.25 |
| | | 5101.00 | 0.07 | 175.57 | N/A | -208.93 | -79.93 | 5085.28 | 89.65 | 94.00 | 0.06 | 0.04 | 50.56 |
| | | 5196.00 | 0.04 | 110.37 | N/A | -209.00 | -79.89 | 5180.28 | 89.61 | 95.00 | 0.07 | -0.03 | -68.63 |
| | | 5290.00 | 0.07 | 168.93 | N/A | -209.07 | -79.85 | 5274.28 | 89.58 | 94.00 | 0.06 | 0.03 | 62.30 |
| | | 5385.00 | 0.06 | 120.60 | N/A | -209.15 | -79.80 | 5369.28 | 89.53 | 95.00 | 0.06 | -0.01 | -50.87 |
| | | 5480.00 | 0.14 | 48.17 | N/A | -209.10 | -79.67 | 5464.28 | 89.39 | 95.00 | 0.14 | 0.08 | -76.24 |
| | | 5574.00 | 0.04 | 26.24 | N/A | -208.99 | -79.57 | 5558.28 | 89.29 | 94.00 | 0.11 | -0.11 | -23.33 |

| | | | | | | | | | | | | |
|--|----------|-------|--------|-----|---------|----------|---------|---------|--------|-------|-------|--------|
| | 5669.00 | 0.04 | 117.12 | N/A | -208.98 | -79.52 | 5653.28 | 89.24 | 95.00 | 0.06 | 0.00 | 95.66 |
| | 5763.00 | 0.06 | 67.32 | N/A | -208.97 | -79.45 | 5747.28 | 89.17 | 94.00 | 0.05 | 0.02 | -52.98 |
| | 5858.00 | 3.50 | 237.84 | N/A | -210.50 | -81.86 | 5842.22 | 91.65 | 95.00 | 3.75 | 3.62 | 179.49 |
| | 5952.00 | 11.43 | 265.79 | N/A | -212.71 | -93.60 | 5935.37 | 103.48 | 94.00 | 9.04 | 8.44 | 29.73 |
| | 6046.00 | 20.01 | 282.26 | N/A | -209.97 | -118.66 | 6025.81 | 128.39 | 94.00 | 10.20 | 9.13 | 17.52 |
| | 6141.00 | 27.37 | 283.56 | N/A | -201.39 | -155.83 | 6112.75 | 165.11 | 95.00 | 7.77 | 7.75 | 1.37 |
| | 6236.00 | 34.33 | 272.00 | N/A | -195.32 | -203.93 | 6194.33 | 212.87 | 95.00 | 9.59 | 7.33 | -12.17 |
| | 6330.00 | 44.16 | 266.79 | N/A | -196.23 | -263.27 | 6267.06 | 272.19 | 94.00 | 11.02 | 10.46 | -5.54 |
| | 6425.00 | 54.36 | 266.09 | N/A | -200.73 | -335.01 | 6328.97 | 344.07 | 95.00 | 10.75 | 10.74 | -0.74 |
| | 6519.00 | 65.80 | 267.55 | N/A | -205.18 | -416.22 | 6375.78 | 425.40 | 94.00 | 12.24 | 12.17 | 1.55 |
| | 6614.00 | 69.55 | 268.17 | N/A | -208.46 | -504.03 | 6411.87 | 513.25 | 95.00 | 3.99 | 3.95 | 0.65 |
| | 6708.00 | 76.86 | 269.69 | N/A | -210.11 | -593.94 | 6439.01 | 603.14 | 94.00 | 7.93 | 7.78 | 1.62 |
| | 6803.00 | 83.95 | 271.58 | N/A | -209.06 | -687.54 | 6454.84 | 696.59 | 95.00 | 7.72 | 7.46 | 1.99 |
| | 6898.00 | 89.69 | 272.60 | N/A | -205.60 | -782.29 | 6460.10 | 791.08 | 95.00 | 6.14 | 6.04 | 1.07 |
| | 6992.00 | 90.03 | 270.89 | N/A | -202.74 | -876.24 | 6460.33 | 884.79 | 94.00 | 1.85 | 0.36 | -1.82 |
| | 7087.00 | 89.66 | 268.21 | N/A | -203.48 | -971.23 | 6460.59 | 979.71 | 95.00 | 2.85 | -0.39 | -2.82 |
| | 7181.00 | 89.66 | 267.26 | N/A | -207.20 | -1065.15 | 6461.15 | 1073.70 | 94.00 | 1.01 | 0.00 | -1.01 |
| | 7276.00 | 89.66 | 267.09 | N/A | -211.88 | -1160.04 | 6461.71 | 1168.70 | 95.00 | 0.18 | 0.00 | -0.18 |
| | 7371.00 | 89.66 | 263.92 | N/A | -219.33 | -1254.73 | 6462.28 | 1263.64 | 95.00 | 3.34 | 0.00 | -3.34 |
| | 7465.00 | 90.12 | 263.72 | N/A | -229.44 | -1348.18 | 6462.46 | 1357.47 | 94.00 | 0.53 | 0.49 | -0.21 |
| | 7560.00 | 90.18 | 266.15 | N/A | -237.83 | -1442.80 | 6462.21 | 1452.38 | 95.00 | 2.56 | 0.06 | 2.56 |
| | 7654.00 | 90.06 | 268.29 | N/A | -242.39 | -1536.69 | 6462.01 | 1546.37 | 94.00 | 2.28 | -0.13 | 2.28 |
| | 7749.00 | 90.68 | 270.09 | N/A | -243.73 | -1631.67 | 6461.40 | 1641.31 | 95.00 | 2.00 | 0.65 | 1.89 |
| | 7843.00 | 89.97 | 270.52 | N/A | -243.23 | -1725.67 | 6460.86 | 1735.18 | 94.00 | 0.88 | -0.76 | 0.46 |
| | 7938.00 | 89.82 | 270.79 | N/A | -242.15 | -1820.66 | 6461.04 | 1830.02 | 95.00 | 0.33 | -0.16 | 0.28 |
| | 8032.00 | 89.97 | 268.49 | N/A | -242.74 | -1914.65 | 6461.21 | 1923.94 | 94.00 | 2.45 | 0.16 | -2.45 |
| | 8127.00 | 89.91 | 269.64 | N/A | -244.29 | -2009.64 | 6461.31 | 2018.89 | 95.00 | 1.21 | -0.06 | 1.21 |
| | 8221.00 | 89.97 | 271.25 | N/A | -243.56 | -2103.63 | 6461.41 | 2112.75 | 94.00 | 1.71 | 0.06 | 1.71 |
| | 8315.00 | 89.75 | 271.71 | N/A | -241.13 | -2197.60 | 6461.64 | 2206.50 | 94.00 | 0.54 | -0.23 | 0.49 |
| | 8410.00 | 89.78 | 270.33 | N/A | -239.44 | -2292.58 | 6462.03 | 2301.29 | 95.00 | 1.45 | 0.03 | -1.45 |
| | 8504.00 | 89.66 | 269.24 | N/A | -239.79 | -2386.58 | 6462.49 | 2395.20 | 94.00 | 1.17 | -0.13 | -1.16 |
| | 8599.00 | 89.78 | 267.99 | N/A | -242.09 | -2481.55 | 6462.95 | 2490.18 | 95.00 | 1.32 | 0.13 | -1.32 |
| | 8693.00 | 90.00 | 271.74 | N/A | -242.31 | -2575.53 | 6463.13 | 2584.07 | 94.00 | 4.00 | 0.23 | 3.99 |
| | 8788.00 | 89.94 | 275.55 | N/A | -236.27 | -2670.32 | 6463.18 | 2678.47 | 95.00 | 4.01 | -0.06 | 4.01 |
| | 8882.00 | 89.85 | 275.74 | N/A | -227.02 | -2763.87 | 6463.35 | 2771.48 | 94.00 | 0.22 | -0.10 | 0.20 |
| | 8976.00 | 89.72 | 271.24 | N/A | -221.30 | -2857.67 | 6463.71 | 2864.90 | 94.00 | 4.79 | -0.14 | -4.79 |
| | 9071.00 | 89.82 | 266.66 | N/A | -223.04 | -2952.63 | 6464.09 | 2959.84 | 95.00 | 4.82 | 0.11 | -4.82 |
| | 9166.00 | 89.88 | 268.60 | N/A | -226.97 | -3047.54 | 6464.34 | 3054.83 | 95.00 | 2.04 | 0.06 | 2.04 |
| | 9260.00 | 89.82 | 264.22 | N/A | -232.86 | -3141.33 | 6464.58 | 3148.80 | 94.00 | 4.66 | -0.06 | -4.66 |
| | 9354.00 | 89.69 | 264.01 | N/A | -242.49 | -3234.84 | 6464.98 | 3242.65 | 94.00 | 0.26 | -0.14 | -0.22 |
| | 9449.00 | 89.85 | 262.20 | N/A | -253.90 | -3329.14 | 6465.37 | 3337.39 | 95.00 | 1.91 | 0.17 | -1.91 |
| | 9543.00 | 89.75 | 263.22 | N/A | -265.83 | -3422.38 | 6465.69 | 3431.09 | 94.00 | 1.09 | -0.11 | 1.09 |
| | 9637.00 | 89.75 | 263.82 | N/A | -276.43 | -3515.78 | 6466.10 | 3524.88 | 94.00 | 0.64 | 0.00 | 0.64 |
| | 9732.00 | 89.75 | 263.57 | N/A | -286.87 | -3610.20 | 6466.52 | 3619.69 | 95.00 | 0.26 | 0.00 | -0.26 |
| | 9826.00 | 89.75 | 265.70 | N/A | -295.66 | -3703.79 | 6466.93 | 3713.58 | 94.00 | 2.27 | 0.00 | 2.27 |
| | 9921.00 | 89.72 | 267.93 | N/A | -300.93 | -3798.63 | 6467.37 | 3808.57 | 95.00 | 2.35 | -0.03 | 2.35 |
| | 10016.00 | 89.63 | 268.09 | N/A | -304.23 | -3893.57 | 6467.91 | 3903.56 | 95.00 | 0.19 | -0.09 | 0.17 |
| | 10110.00 | 89.85 | 267.25 | N/A | -308.05 | -3987.49 | 6468.33 | 3997.56 | 94.00 | 0.92 | 0.23 | -0.89 |
| | 10205.00 | 89.78 | 264.64 | N/A | -314.77 | -4082.25 | 6468.64 | 4092.52 | 95.00 | 2.75 | -0.07 | -2.75 |
| | 10299.00 | 89.54 | 269.43 | N/A | -319.63 | -4176.09 | 6469.20 | 4186.49 | 94.00 | 5.10 | -0.26 | 5.10 |
| | 10394.00 | 89.88 | 272.35 | N/A | -318.16 | -4271.07 | 6469.68 | 4281.29 | 95.00 | 3.09 | 0.36 | 3.07 |
| | 10488.00 | 89.97 | 268.69 | N/A | -317.30 | -4365.05 | 6469.80 | 4375.13 | 94.00 | 3.89 | 0.10 | -3.89 |
| | 10583.00 | 89.94 | 268.29 | N/A | -319.81 | -4460.02 | 6469.88 | 4470.11 | 95.00 | 0.42 | -0.03 | -0.42 |
| | 10678.00 | 89.88 | 268.80 | N/A | -322.22 | -4554.99 | 6470.03 | 4565.09 | 95.00 | 0.54 | -0.06 | 0.54 |
| | 10867.00 | 89.85 | 268.46 | N/A | -326.74 | -4743.93 | 6470.47 | 4754.04 | 189.00 | 0.18 | -0.02 | -0.18 |
| | 10961.00 | 89.88 | 268.06 | N/A | -329.59 | -4837.89 | 6470.69 | 4848.02 | 94.00 | 0.43 | 0.03 | -0.43 |
| | 11056.00 | 90.00 | 267.45 | N/A | -333.31 | -4932.81 | 6470.79 | 4943.02 | 95.00 | 0.65 | 0.13 | -0.64 |
| | 11150.00 | 90.03 | 267.46 | N/A | -337.49 | -5026.72 | 6470.77 | 5037.02 | 94.00 | 0.03 | 0.03 | 0.01 |
| | 11245.00 | 89.91 | 267.74 | N/A | -341.47 | -5121.64 | 6470.82 | 5132.02 | 95.00 | 0.32 | -0.13 | 0.29 |

| | | | | | | | | | | | | |
|------------|----------|-------|--------|-----|---------|----------|---------|---------|-------|------|-------|-------|
| | 11340.00 | 89.91 | 267.65 | N/A | -345.29 | -5216.56 | 6470.97 | 5227.02 | 95.00 | 0.09 | 0.00 | -0.09 |
| | 11434.00 | 89.94 | 269.83 | N/A | -347.35 | -5310.53 | 6471.09 | 5320.98 | 94.00 | 2.32 | 0.03 | 2.32 |
| | 11529.00 | 90.06 | 267.28 | N/A | -349.75 | -5405.49 | 6471.09 | 5415.95 | 95.00 | 2.69 | 0.13 | -2.68 |
| | 11623.00 | 90.06 | 263.27 | N/A | -357.49 | -5499.15 | 6470.99 | 5509.87 | 94.00 | 4.27 | 0.00 | -4.27 |
| | 11718.00 | 89.88 | 263.14 | N/A | -368.73 | -5593.49 | 6471.04 | 5604.63 | 95.00 | 0.23 | -0.19 | -0.14 |
| | 11812.00 | 90.06 | 263.52 | N/A | -379.65 | -5686.85 | 6471.09 | 5698.40 | 94.00 | 0.45 | 0.19 | 0.40 |
| | 11907.00 | 90.09 | 265.89 | N/A | -388.41 | -5781.44 | 6470.97 | 5793.30 | 95.00 | 2.49 | 0.03 | 2.49 |
| | 12001.00 | 89.91 | 267.75 | N/A | -393.63 | -5875.29 | 6470.97 | 5887.29 | 94.00 | 1.99 | -0.19 | 1.98 |
| | 12096.00 | 90.28 | 269.20 | N/A | -396.16 | -5970.25 | 6470.81 | 5982.27 | 95.00 | 1.58 | 0.39 | 1.53 |
| | 12190.00 | 90.03 | 268.94 | N/A | -397.68 | -6064.24 | 6470.55 | 6076.22 | 94.00 | 0.38 | -0.27 | -0.28 |
| | 12285.00 | 90.18 | 268.89 | N/A | -399.48 | -6159.22 | 6470.38 | 6171.18 | 95.00 | 0.17 | 0.16 | -0.05 |
| | 12379.00 | 89.97 | 268.23 | N/A | -401.84 | -6253.19 | 6470.26 | 6265.16 | 94.00 | 0.74 | -0.22 | -0.70 |
| | 12474.00 | 89.97 | 268.96 | N/A | -404.17 | -6348.16 | 6470.31 | 6360.14 | 95.00 | 0.77 | 0.00 | 0.77 |
| | 12568.00 | 89.88 | 270.68 | N/A | -404.47 | -6442.16 | 6470.43 | 6454.04 | 94.00 | 1.83 | -0.10 | 1.83 |
| | 12663.00 | 90.15 | 271.67 | N/A | -402.52 | -6537.14 | 6470.41 | 6548.83 | 95.00 | 1.08 | 0.28 | 1.04 |
| | 12757.00 | 90.09 | 271.77 | N/A | -399.70 | -6631.10 | 6470.21 | 6642.55 | 94.00 | 0.12 | -0.06 | 0.11 |
| | 12852.00 | 89.94 | 271.16 | N/A | -397.27 | -6726.06 | 6470.18 | 6737.30 | 95.00 | 0.66 | -0.16 | -0.64 |
| | 12946.00 | 90.06 | 270.48 | N/A | -395.92 | -6820.05 | 6470.18 | 6831.12 | 94.00 | 0.73 | 0.13 | -0.72 |
| | 13041.00 | 89.72 | 269.83 | N/A | -395.67 | -6915.05 | 6470.37 | 6926.00 | 95.00 | 0.77 | -0.36 | -0.68 |
| | 13136.00 | 89.85 | 270.78 | N/A | -395.16 | -7010.05 | 6470.72 | 7020.87 | 95.00 | 1.01 | 0.14 | 1.00 |
| | 13230.00 | 89.72 | 267.73 | N/A | -396.38 | -7104.03 | 6471.08 | 7114.81 | 94.00 | 3.25 | -0.14 | -3.24 |
| | 13325.00 | 89.75 | 265.09 | N/A | -402.33 | -7198.83 | 6471.52 | 7209.78 | 95.00 | 2.78 | 0.03 | -2.78 |
| | 13419.00 | 89.88 | 266.31 | N/A | -409.38 | -7292.57 | 6471.82 | 7303.74 | 94.00 | 1.31 | 0.14 | 1.30 |
| | 13514.00 | 89.75 | 273.55 | N/A | -409.50 | -7387.50 | 6472.13 | 7398.58 | 95.00 | 7.62 | -0.14 | 7.62 |
| | 13608.00 | 89.85 | 274.82 | N/A | -402.64 | -7481.25 | 6472.45 | 7491.90 | 94.00 | 1.36 | 0.11 | 1.35 |
| | 13703.00 | 89.72 | 270.57 | N/A | -398.17 | -7576.12 | 6472.81 | 7586.46 | 95.00 | 4.48 | -0.14 | -4.47 |
| | 13797.00 | 89.78 | 268.28 | N/A | -399.11 | -7670.11 | 6473.22 | 7680.39 | 94.00 | 2.44 | 0.06 | -2.44 |
| | 13892.00 | 89.78 | 269.41 | N/A | -401.03 | -7765.09 | 6473.59 | 7775.35 | 95.00 | 1.19 | 0.00 | 1.19 |
| | 13986.00 | 89.82 | 268.84 | N/A | -402.46 | -7859.08 | 6473.91 | 7869.31 | 94.00 | 0.61 | 0.04 | -0.61 |
| | 14081.00 | 89.69 | 268.22 | N/A | -404.90 | -7954.05 | 6474.32 | 7964.28 | 95.00 | 0.67 | -0.14 | -0.65 |
| | 14175.00 | 89.78 | 268.20 | N/A | -407.84 | -8048.00 | 6474.75 | 8058.27 | 94.00 | 0.10 | 0.10 | -0.02 |
| | 14270.00 | 89.78 | 269.67 | N/A | -409.60 | -8142.98 | 6475.12 | 8153.23 | 95.00 | 1.55 | 0.00 | 1.55 |
| | 14364.00 | 89.75 | 270.16 | N/A | -409.74 | -8236.98 | 6475.51 | 8247.13 | 94.00 | 0.52 | -0.03 | 0.52 |
| | 14459.00 | 89.91 | 268.74 | N/A | -410.65 | -8331.97 | 6475.79 | 8342.06 | 95.00 | 1.50 | 0.17 | -1.49 |
| | 14554.00 | 89.82 | 268.03 | N/A | -413.33 | -8426.93 | 6476.01 | 8437.04 | 95.00 | 0.75 | -0.09 | -0.75 |
| | 14648.00 | 89.88 | 268.74 | N/A | -415.98 | -8520.89 | 6476.26 | 8531.03 | 94.00 | 0.76 | 0.06 | 0.76 |
| | 14742.00 | 89.97 | 263.65 | N/A | -422.22 | -8614.66 | 6476.38 | 8624.98 | 94.00 | 5.42 | 0.10 | -5.41 |
| | 14837.00 | 89.97 | 266.21 | N/A | -430.61 | -8709.28 | 6476.43 | 8719.89 | 95.00 | 2.69 | 0.00 | 2.69 |
| | 14932.00 | 90.03 | 267.52 | N/A | -435.81 | -8804.13 | 6476.43 | 8814.88 | 95.00 | 1.38 | 0.06 | 1.38 |
| | 15026.00 | 90.00 | 269.78 | N/A | -438.02 | -8898.10 | 6476.41 | 8908.85 | 94.00 | 2.40 | -0.03 | 2.40 |
| | 15121.00 | 90.03 | 268.88 | N/A | -439.13 | -8993.09 | 6476.38 | 9003.79 | 95.00 | 0.95 | 0.03 | -0.95 |
| | 15215.00 | 90.00 | 268.81 | N/A | -441.03 | -9087.07 | 6476.36 | 9097.76 | 94.00 | 0.08 | -0.03 | -0.07 |
| | 15310.00 | 90.06 | 268.96 | N/A | -442.88 | -9182.05 | 6476.31 | 9192.72 | 95.00 | 0.17 | 0.06 | 0.16 |
| | 15404.00 | 90.03 | 271.68 | N/A | -442.35 | -9276.04 | 6476.23 | 9286.58 | 94.00 | 2.89 | -0.03 | 2.89 |
| | 15499.00 | 89.97 | 272.07 | N/A | -439.24 | -9370.99 | 6476.23 | 9381.28 | 95.00 | 0.42 | -0.06 | 0.41 |
| | 15593.00 | 90.09 | 270.34 | N/A | -437.27 | -9464.97 | 6476.18 | 9475.06 | 94.00 | 1.84 | 0.13 | -1.84 |
| | 15687.00 | 90.15 | 269.60 | N/A | -437.32 | -9558.97 | 6475.99 | 9568.96 | 94.00 | 0.79 | 0.06 | -0.79 |
| | 15782.00 | 90.03 | 268.82 | N/A | -438.62 | -9653.96 | 6475.84 | 9663.91 | 95.00 | 0.83 | -0.13 | -0.82 |
| | 15876.00 | 90.22 | 267.73 | N/A | -441.45 | -9747.91 | 6475.63 | 9757.89 | 94.00 | 1.18 | 0.20 | -1.16 |
| Projection | 15940.00 | 90.22 | 267.73 | N/A | -443.99 | -9811.86 | 6475.39 | 9821.89 | 64.00 | 0.00 | 0.00 | 0.00 |