



# Tucker

ENERGY SERVICES

COMPENSATED NEUTRON

PEL DENSITY LOG

|                                                                                                                                                                                      |                       |                                                                                                                                                                                                                             |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Company</b> COLT ENERGY INC<br><b>Well</b> CLINE #J-5<br><b>Field</b> ALLEN<br><b>County</b> KANSAS<br><b>State</b> USA<br><b>Country</b> USA<br><b>API No.</b> 15-001-30849-0000 |                       | <b>File No</b> : TUL-59176<br><b>Company</b> : COLT ENERGY INC<br><b>Well</b> : CLINE #J-5<br><b>Field</b> :<br><b>County</b> : ALLEN<br><b>State</b> : KANSAS<br><b>Country</b> : USA<br><b>API No</b> : 15-001-30849-0000 |                  |
| <b>Location</b> :<br>1941' FNL & 1407' FEL<br>SE NE SW NE                                                                                                                            |                       | <b>LSD</b> :<br><b>Sect</b> : 16<br><b>Twp</b> : 24S<br><b>Rge</b> : 18E                                                                                                                                                    |                  |
| <b>Permanent Datum:</b>                                                                                                                                                              | GL                    | <b>Elevations:</b>                                                                                                                                                                                                          |                  |
| <b>Drilling Measured From:</b>                                                                                                                                                       | GL                    | <b>KB</b> 0.00                                                                                                                                                                                                              | <b>Services:</b> |
| <b>Log Measured From:</b>                                                                                                                                                            | GL                    | <b>DF</b> 0.00                                                                                                                                                                                                              | <b>CNT</b>       |
| <b>Above Permanent Datum:</b>                                                                                                                                                        | 0.00 Ft               | <b>GL</b> 951.00                                                                                                                                                                                                            | <b>LDT</b>       |
| <b>Date</b>                                                                                                                                                                          | 12-04-2013            |                                                                                                                                                                                                                             | <b>PIT</b>       |
| <b>Run Number</b>                                                                                                                                                                    | 1                     |                                                                                                                                                                                                                             |                  |
| <b>Depth--Driller</b>                                                                                                                                                                | 999.0 Ft              |                                                                                                                                                                                                                             |                  |
| <b>Depth--Logger</b>                                                                                                                                                                 | 999.0 Ft              |                                                                                                                                                                                                                             |                  |
| <b>First Reading</b>                                                                                                                                                                 | 999.0 Ft              |                                                                                                                                                                                                                             |                  |
| <b>Last Reading</b>                                                                                                                                                                  | 20.0 Ft               |                                                                                                                                                                                                                             |                  |
| <b>Casing--Driller</b>                                                                                                                                                               | 20.0 Ft               |                                                                                                                                                                                                                             |                  |
| <b>Casing--Logger</b>                                                                                                                                                                | 20.0 Ft               |                                                                                                                                                                                                                             |                  |
| <b>Bit Size</b>                                                                                                                                                                      | 6.750 In              |                                                                                                                                                                                                                             |                  |
| <b>Casing Size</b>                                                                                                                                                                   | 8.625 In              |                                                                                                                                                                                                                             |                  |
| <b>Hole Fluid Type</b>                                                                                                                                                               | CHEM-GEL              |                                                                                                                                                                                                                             |                  |
| <b>Density</b>                                                                                                                                                                       | 0.0                   |                                                                                                                                                                                                                             |                  |
| <b>Fluid Loss</b>                                                                                                                                                                    | 0.0                   |                                                                                                                                                                                                                             |                  |
| <b>PH/Viscosity</b>                                                                                                                                                                  | 0.0                   |                                                                                                                                                                                                                             |                  |
| <b>Sample Source</b>                                                                                                                                                                 | MEASURED              |                                                                                                                                                                                                                             |                  |
| <b>RMF@Measured Temp.</b>                                                                                                                                                            | 5.000 @ 75 F          |                                                                                                                                                                                                                             |                  |
| <b>RMF@Measured Temp</b>                                                                                                                                                             | 4.000 @ 75 F          |                                                                                                                                                                                                                             |                  |
| <b>RMF@Measured Temp.</b>                                                                                                                                                            | 6.000 @ 75 F          |                                                                                                                                                                                                                             |                  |
| <b>Source RMF/RMC</b>                                                                                                                                                                | CALCULATED/CALCULATED |                                                                                                                                                                                                                             |                  |
| <b>RM@BHT</b>                                                                                                                                                                        | 4.550 @ 83 F          |                                                                                                                                                                                                                             |                  |
| <b>Time Circulation Stopped</b>                                                                                                                                                      | 12-04-2013 9:00 am    |                                                                                                                                                                                                                             |                  |
| <b>Max Recorded Temp.</b>                                                                                                                                                            | 83 F                  |                                                                                                                                                                                                                             |                  |
| <b>Equipment/Base</b>                                                                                                                                                                | 127 TULSA             |                                                                                                                                                                                                                             |                  |
| <b>Recorded By</b>                                                                                                                                                                   | SHELDON TYLER         |                                                                                                                                                                                                                             |                  |
| <b>Witnessed By</b>                                                                                                                                                                  | REX ASHLOCK           |                                                                                                                                                                                                                             |                  |

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. S. does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by T. E. S. personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by T. E. S. for its services. Any user of the log data is warned that said user is not entitled to rely on interpretations, conversions or recommendations as aforesaid.

| Bitsize Intervals |             | Casing Strings |              |             |          |
|-------------------|-------------|----------------|--------------|-------------|----------|
| Size (In)         | Bottom (Ft) | Size (In)      | Weight (Lbs) | Bottom (Ft) | Top (Ft) |
| 6.750             | 999.00      | 8.625          | 32.00        | 20.00       | 0.00     |
|                   |             |                |              |             |          |
|                   |             |                |              |             |          |
|                   |             |                |              |             |          |
|                   |             |                |              |             |          |

|                     |                     |  |
|---------------------|---------------------|--|
| Run Number          | 1                   |  |
| Date                | 12-04-2013          |  |
| Date/Time On Bottom | 12-04-2013 11:00 am |  |
| Depth to Fluid      | 0.0 Ft              |  |
| Salinity            | 0.000               |  |
| RMF@BHT             | 3.640 @ 83 F        |  |
| RMC@BHT             | 5.460 @ 83 F        |  |

Run Number 1

Comments

CUSTOMER REQUEST NO REPEAT

GRT: GRP, GRX  
CNT: PHIN, CLCNIN, PHXN  
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN, PRXL, PECLX, LDENNX, LCORX  
PIT: ILD, ILM, SPU, SFLAEC

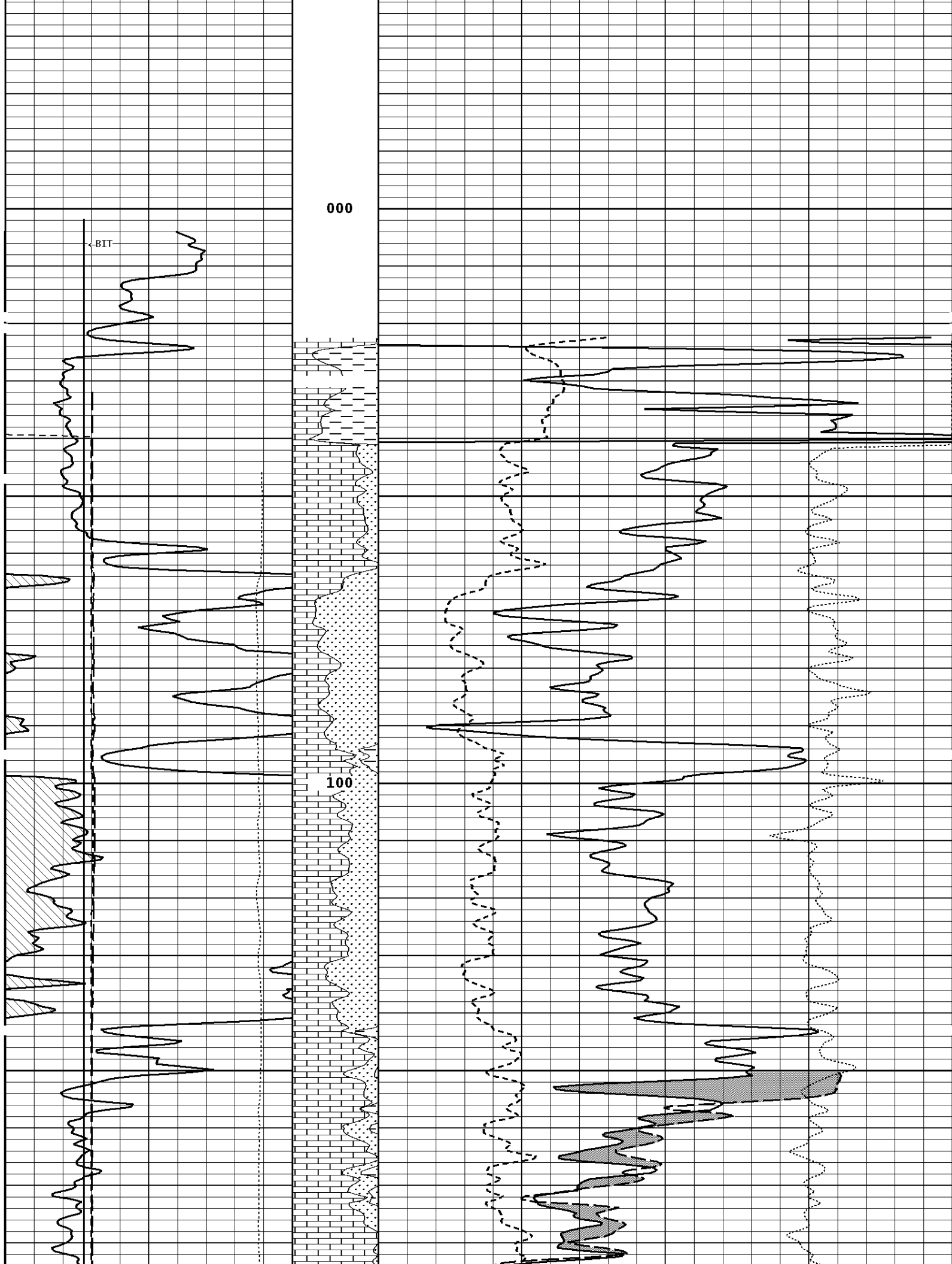
OPERATORS:  
J. JOHNSON  
D. HOPPER

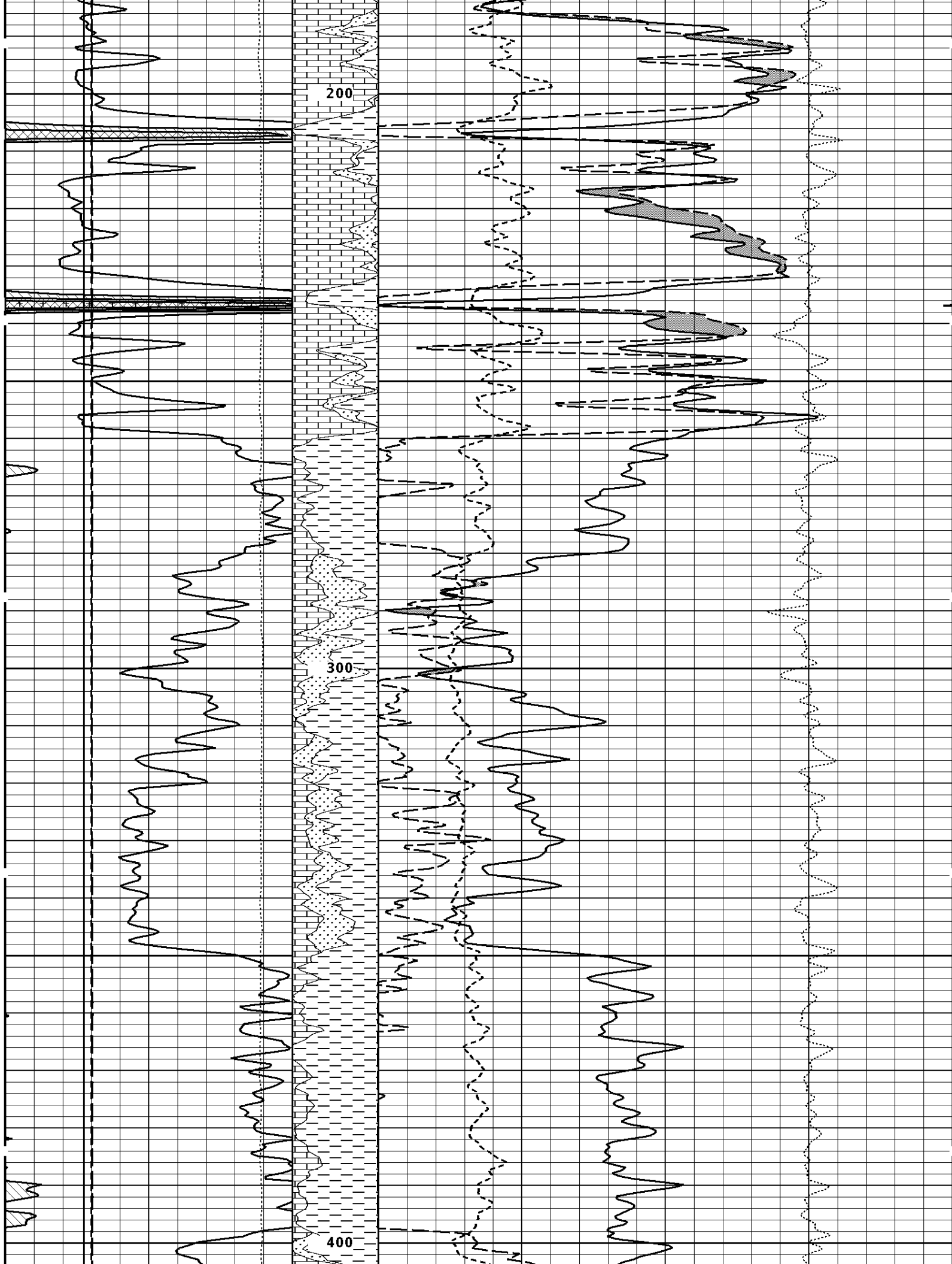
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|--------------------------------------------------|---------------------------------|------------------------|
| <b>Well File:</b> COLT ENERGY CLINE J-5_DEC4_STK | <b>Scale:</b> 1:240             | <b>Format:</b> NLD-240 |
| <b>Segment:</b> V1.D3.S1 FINAL MAIN              | <b>Acquired:</b> Not Available  |                        |
| <b>Reference:</b> 0                              | <b>Processed:</b> Not Available |                        |

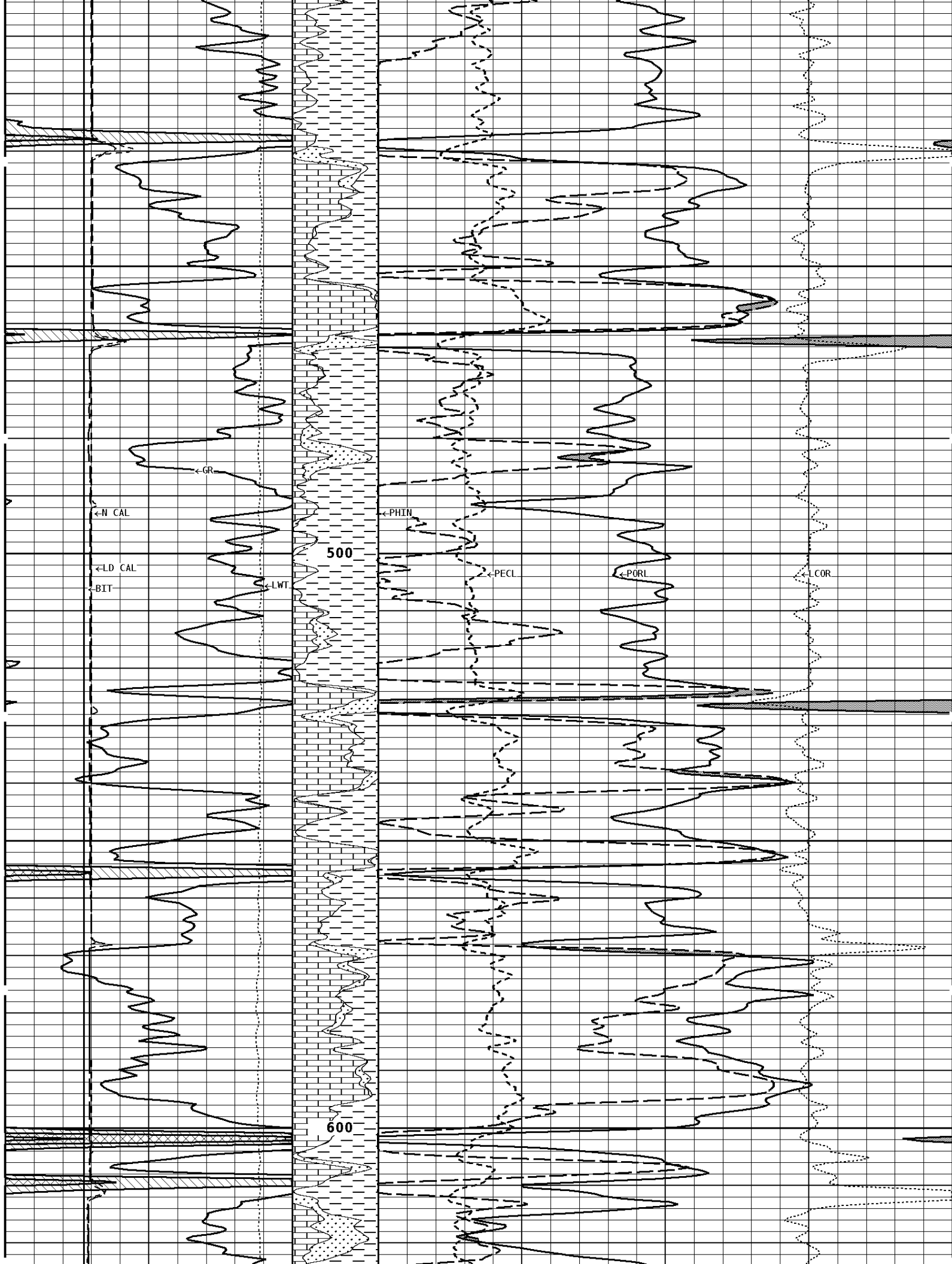
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|--------------------------------------------------|-----|----------------------|-------------------------------------------------------|
| <b>BIT SIZE</b><br><b>INCHES (IN)</b>            |     |                      |                                                       |
| 4                                                | 14  |                      |                                                       |
|                                                  |     |                      |                                                       |
| <b>NEUTRON (Y) CALIPER</b><br><b>INCHES (IN)</b> |     |                      |                                                       |
| 14                                               | 24  |                      |                                                       |
| 4                                                | 14  |                      |                                                       |
|                                                  |     |                      |                                                       |
| <b>DENSITY (X) CALIPER</b><br><b>INCHES (IN)</b> |     | Volume<br>Quartz     | <b>PE CROSS-SECTION</b><br><b>BARNs/ELECTRON</b>      |
| 14                                               | 24  |                      | <b>DENSITY CORRECTION</b><br><b>G/CC</b>              |
| 4                                                | 14  |                      |                                                       |
|                                                  |     |                      |                                                       |
| <b>TENSION</b><br><b>LBS</b>                     |     | Volume<br>Calcite    | <b>DENSITY POROSITY (2.71g/cc)</b><br><b>PERCENT</b>  |
| 10000                                            | 0   |                      |                                                       |
|                                                  |     |                      |                                                       |
|                                                  |     |                      |                                                       |
|                                                  |     |                      |                                                       |
| <b>GAMMA RAY</b><br><b>API UNITS</b>             |     | Volume<br>Dolo/Shale | <b>NEUTRON POROSITY (LIMESTONE)</b><br><b>PERCENT</b> |
| 150                                              | 300 |                      |                                                       |
| 0                                                | 150 |                      |                                                       |
|                                                  |     |                      |                                                       |
|                                                  |     |                      |                                                       |
|                                                  |     |                      |                                                       |

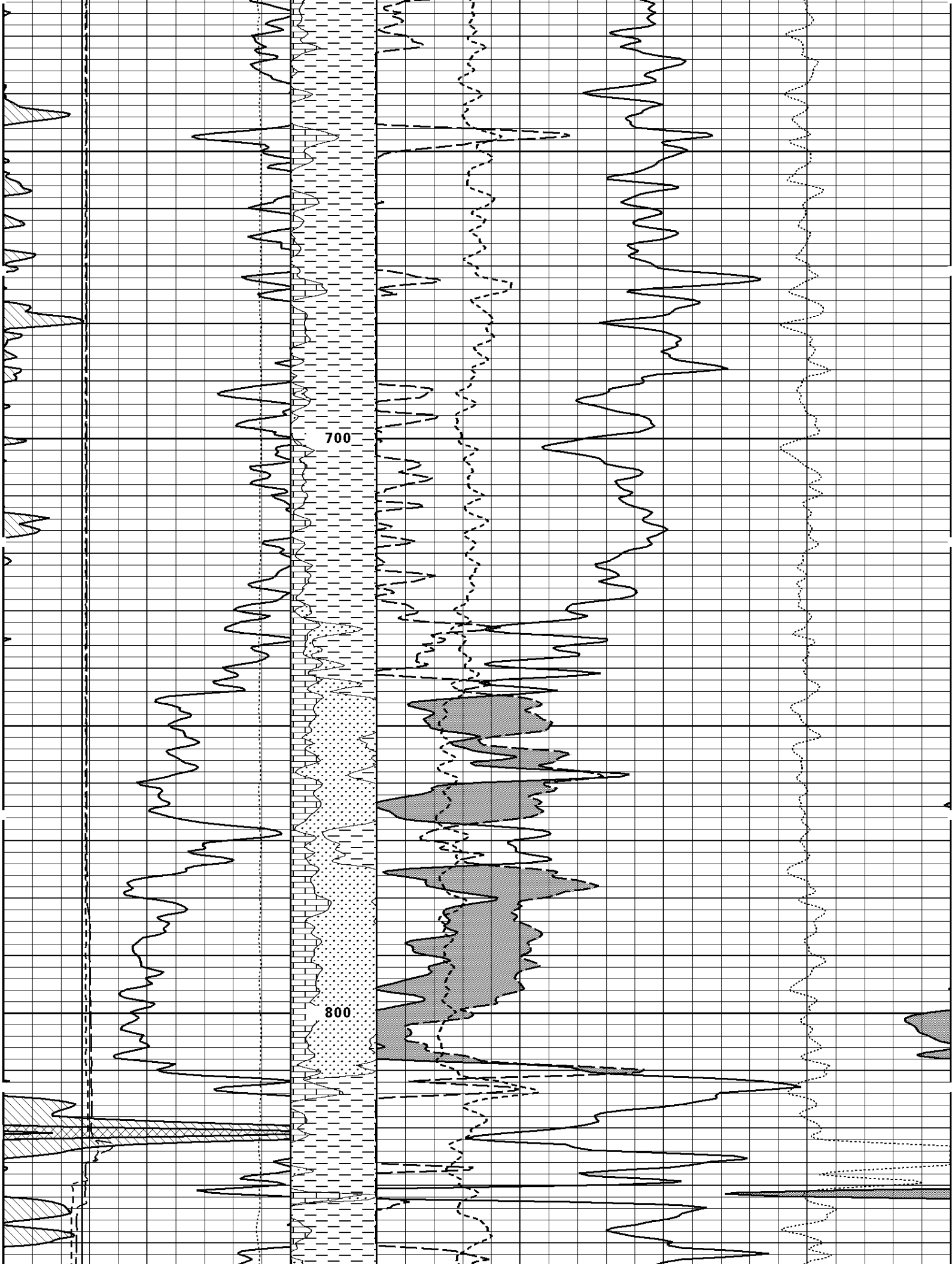
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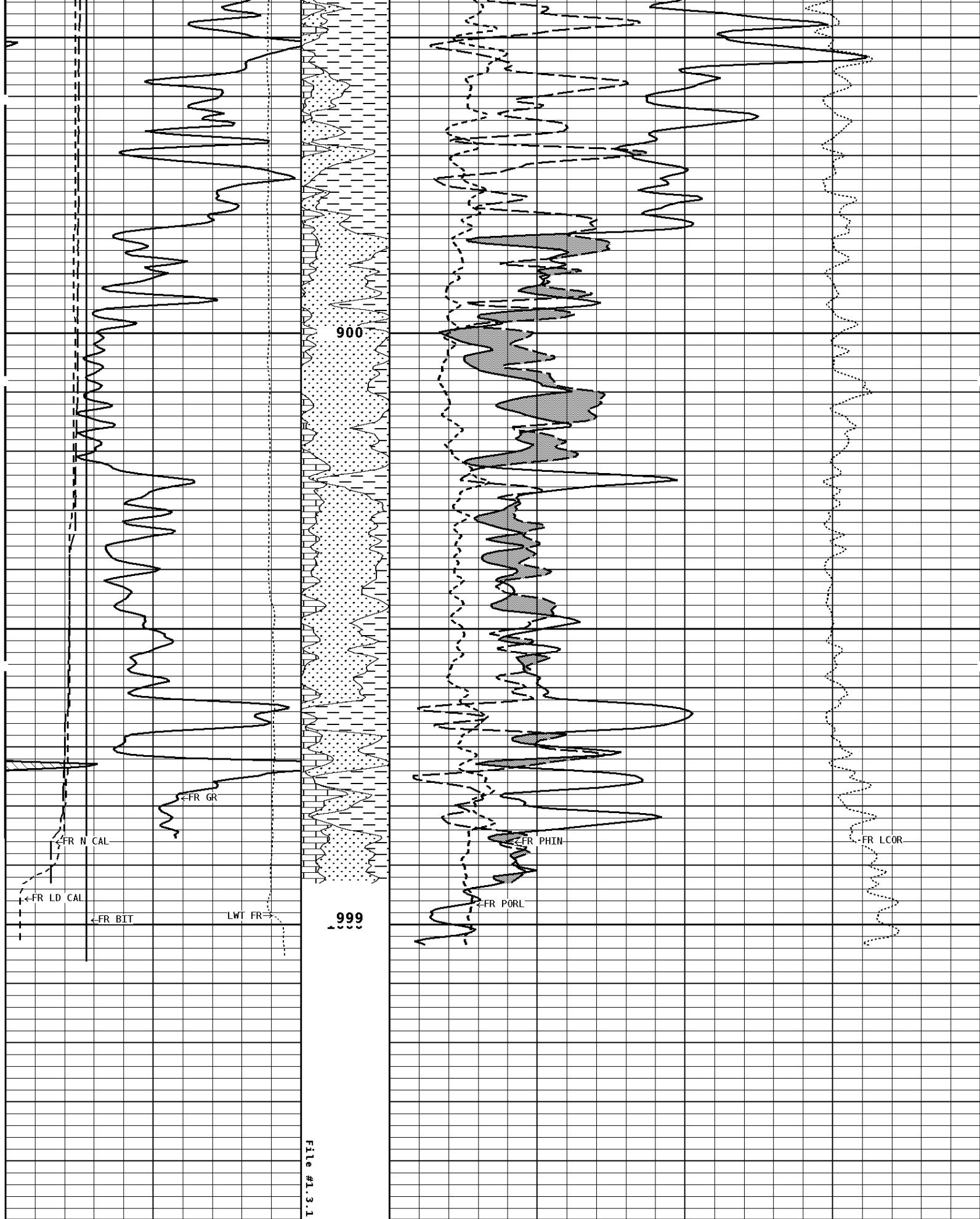
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1:240 MAIN SECTION

|                                    |                        |                      |                                         |                            |
|------------------------------------|------------------------|----------------------|-----------------------------------------|----------------------------|
| GAMMA RAY<br>API UNITS             |                        | Volume<br>Dolo/Shale | NEUTRON POROSITY (LIMESTONE)<br>PERCENT |                            |
| 150                                | <div><div></div></div> | 300                  | 30                                      |                            |
| 0                                  |                        | 150                  | -10                                     |                            |
| TENSION<br>LBS                     |                        | Volume<br>Calcite    | DENSITY POROSITY (2.71g/cc)<br>PERCENT  |                            |
| 10000                              | 0                      | 70                   | 30                                      |                            |
|                                    |                        | 30                   | -10                                     |                            |
|                                    |                        | -10                  | -50                                     |                            |
| DENSITY (X) CALIPER<br>INCHES (IN) |                        | Volume<br>Quartz     | PE CROSS-SECTION<br>BARNS/ELECTRON      | DENSITY CORRECTION<br>G/CC |
| 14                                 | 24                     | 0                    | 10                                      | -0.25                      |
| 4                                  | 14                     |                      |                                         | 0.25                       |
| NEUTRON (Y) CALIPER<br>INCHES (IN) |                        |                      |                                         |                            |
| 14                                 | 24                     |                      |                                         |                            |
| 4                                  | 14                     |                      |                                         |                            |
| BIT SIZE<br>INCHES (IN)            |                        |                      |                                         |                            |
| 4                                  | 14                     |                      |                                         |                            |

\* Borehole Zone Factors \*

|                           |         |           |      |      |
|---------------------------|---------|-----------|------|------|
| Zone 1                    | 99999.0 | to        | 0.0  | Feet |
| Drill Bit Size            |         | 6.750     | in   |      |
| Casing Diameter           |         | 4.500     | in   |      |
| Casing Correction (PHI N) |         | Disable   |      |      |
| Casing Thickness          |         | 0.250     | in   |      |
| Fluid Density             |         | 1.00      | g/cc |      |
| Matrix Density            |         | 2.71      | g/cc |      |
| Formation Matrix          |         | Limestone |      |      |

|                                           |                          |                |
|-------------------------------------------|--------------------------|----------------|
| Well File: COLT ENERGY CLINE J-5_DEC4_STK | Scale: 1:48              | Format: NLD-48 |
| Segment: V1.D3.S1 FINAL MAIN              | Acquired: Not Available  |                |
| Reference: 0                              | Processed: Not Available |                |

|                                    |       |     |                                         |                            |
|------------------------------------|-------|-----|-----------------------------------------|----------------------------|
| BIT SIZE<br>INCHES (IN)            | 4     | 14  |                                         |                            |
| NEUTRON (Y) CALIPER<br>INCHES (IN) | 14    | 24  |                                         |                            |
|                                    | 4     | 14  |                                         |                            |
| DENSITY (X) CALIPER<br>INCHES (IN) | 14    | 24  |                                         |                            |
|                                    | 4     | 14  |                                         |                            |
| TENSION<br>LBS                     | 10000 | 0   |                                         |                            |
| GAMMA RAY<br>API UNITS             | 150   | 300 |                                         |                            |
|                                    | 0     | 150 |                                         |                            |
|                                    |       |     | PE CROSS-SECTION<br>BARNS/ELECTRON      | DENSITY CORRECTION<br>G/CC |
|                                    |       |     | 0                                       | 10                         |
|                                    |       |     | -0.25                                   | 0.25                       |
|                                    |       |     | COMPENSATED BULK DENSITY<br>G/CC        |                            |
|                                    |       |     | 3.0                                     | 4.0                        |
|                                    |       |     | 2.0                                     | 3.0                        |
|                                    |       |     | 1.0                                     | 2.0                        |
|                                    |       |     | NEUTRON POROSITY (LIMESTONE)<br>PERCENT |                            |
|                                    |       |     | 30                                      | -10                        |
|                                    |       |     | DENSITY POROSITY (2.71g/cc)<br>PERCENT  |                            |
|                                    |       |     | 70                                      | 30                         |
|                                    |       |     | 30                                      | -10                        |
|                                    |       |     | -10                                     | -50                        |

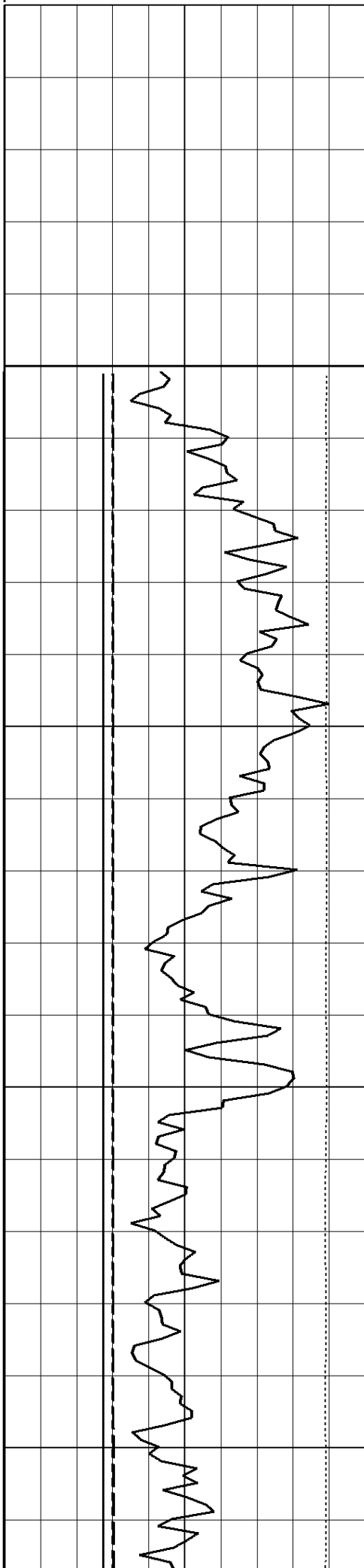
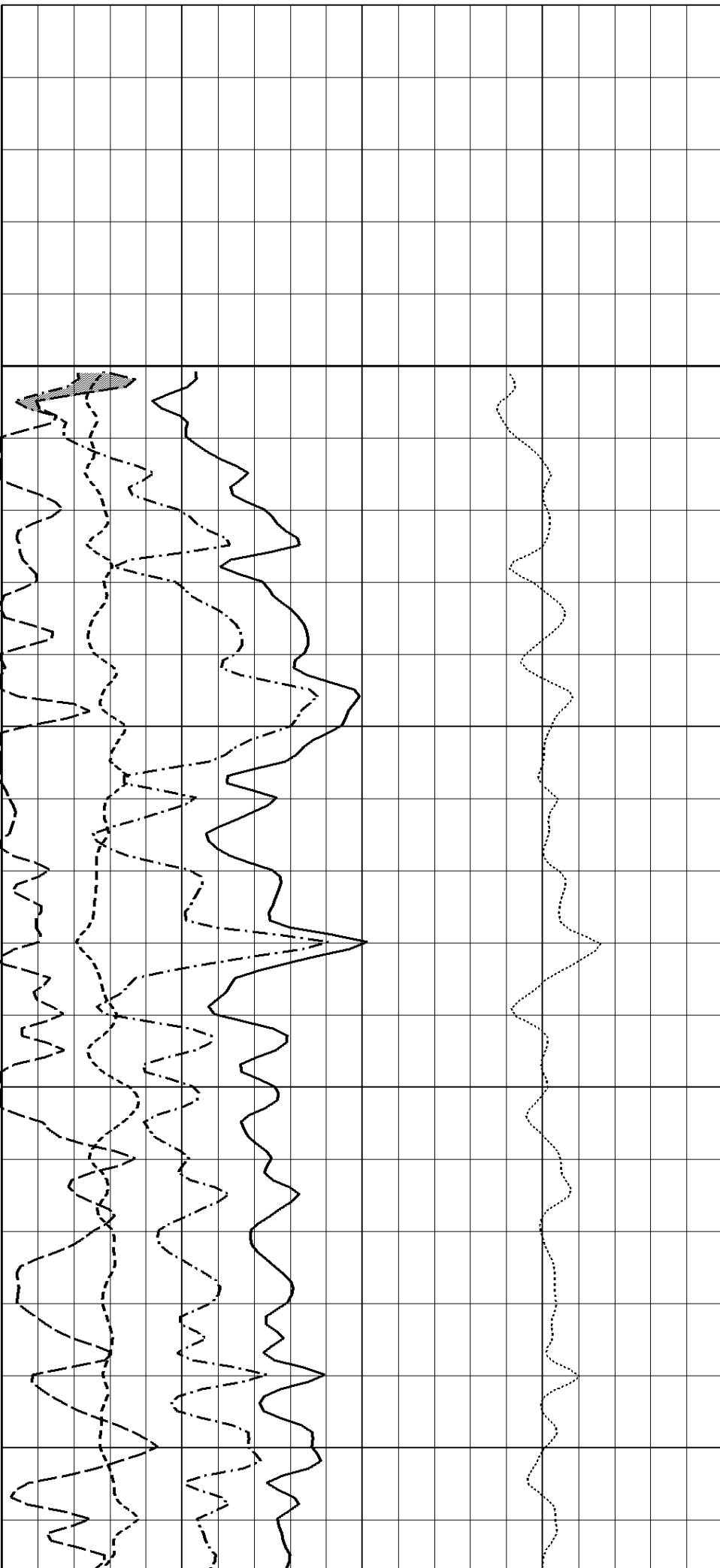
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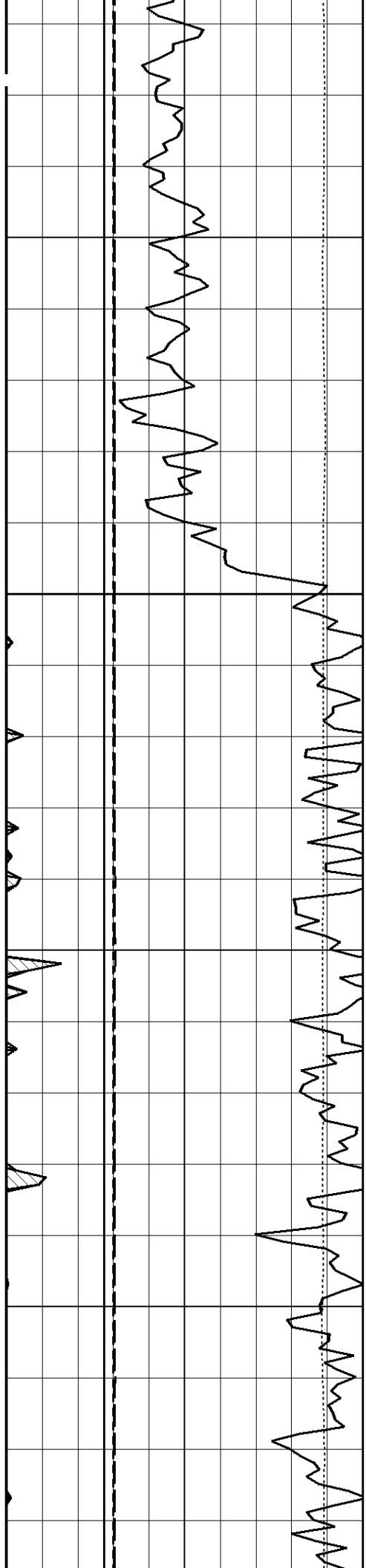
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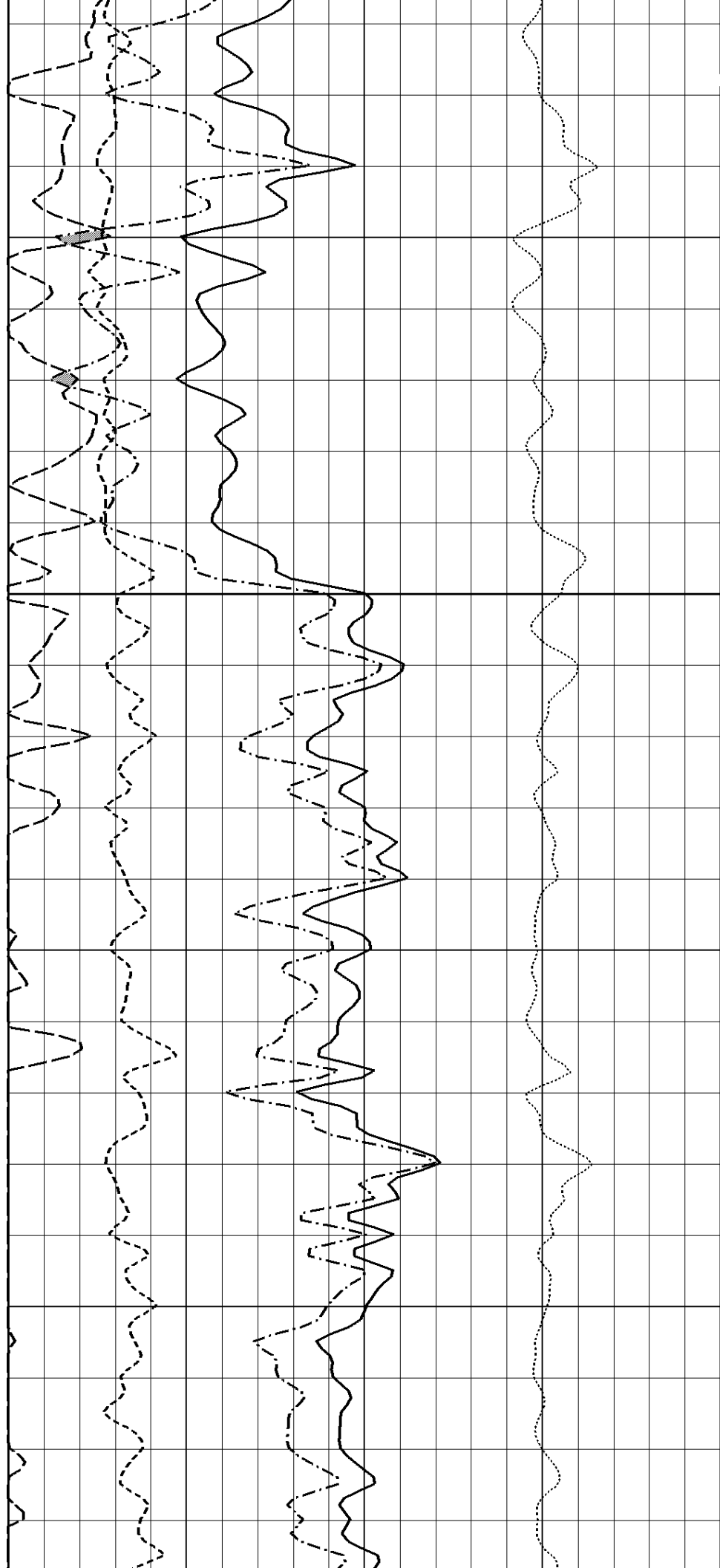


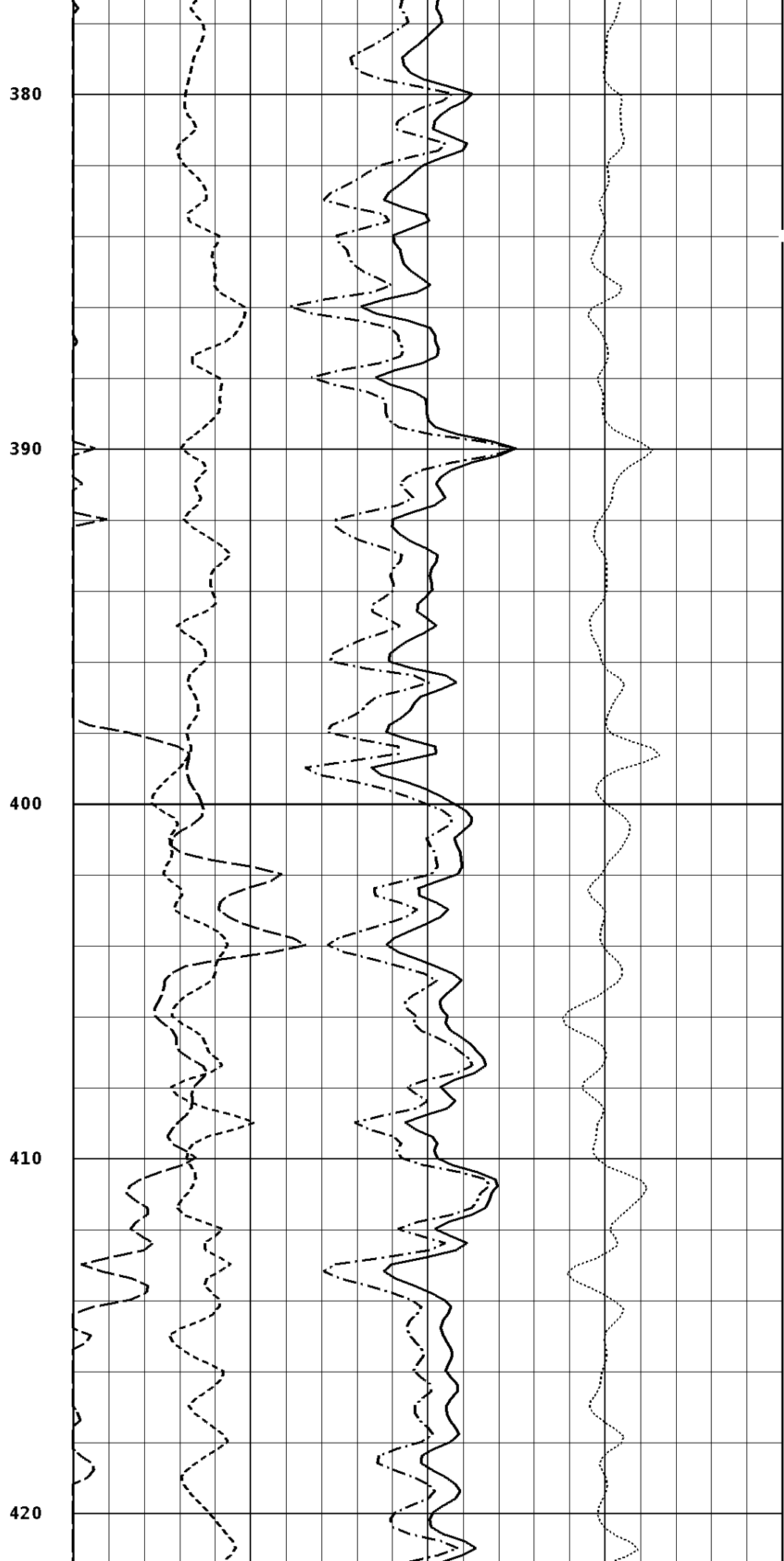
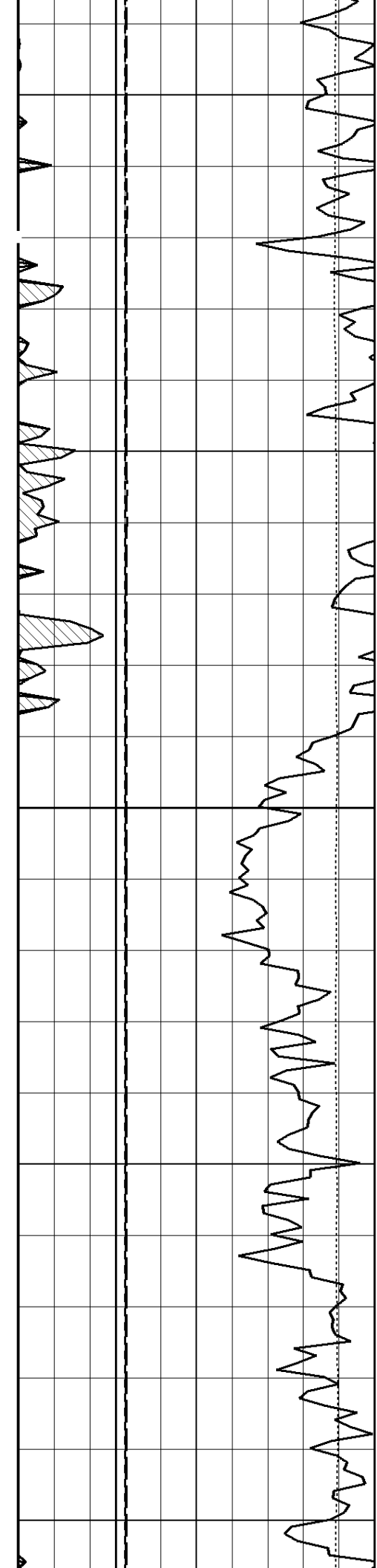
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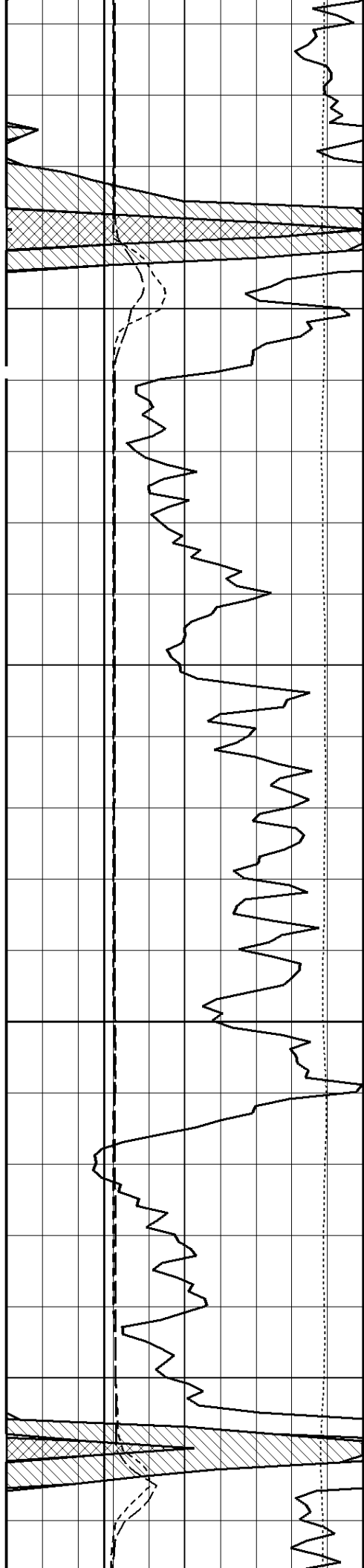
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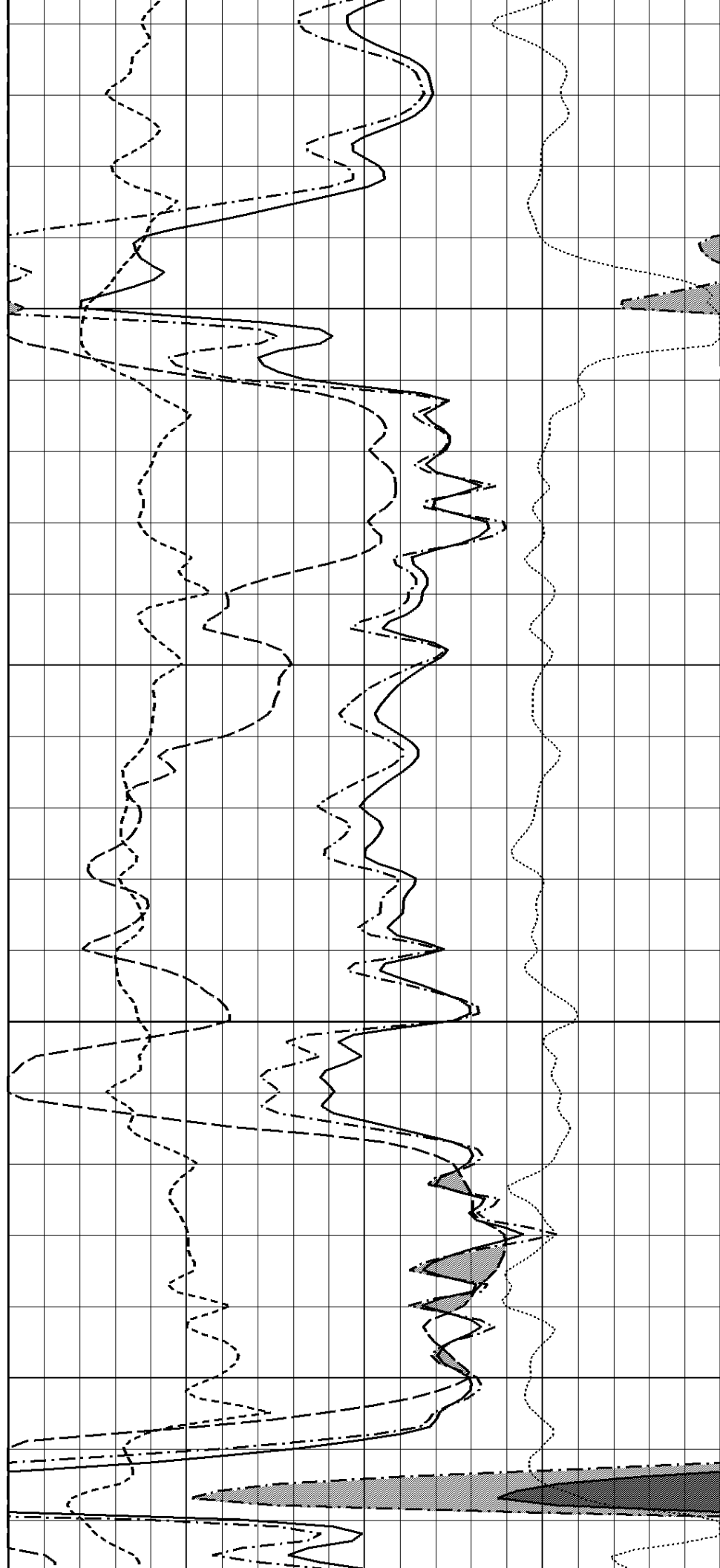


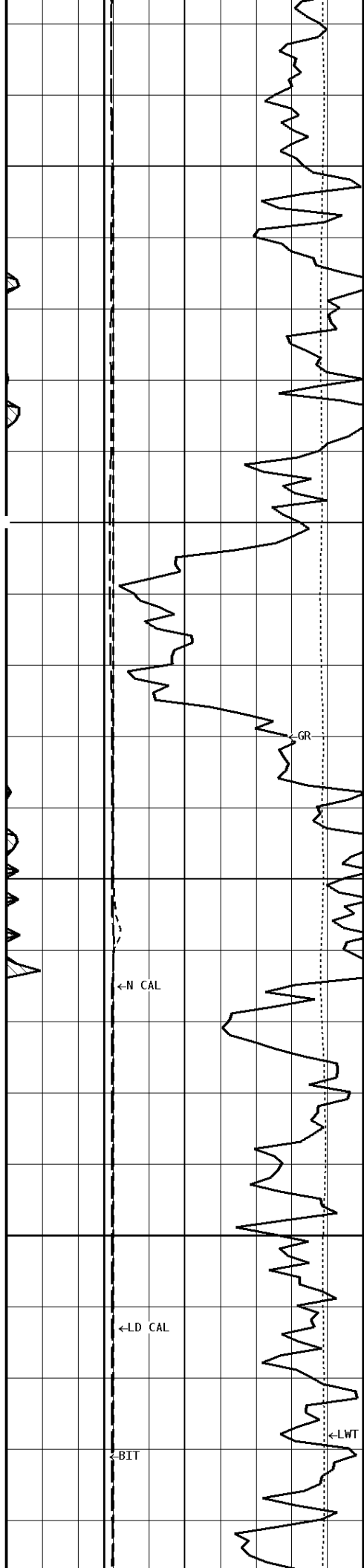
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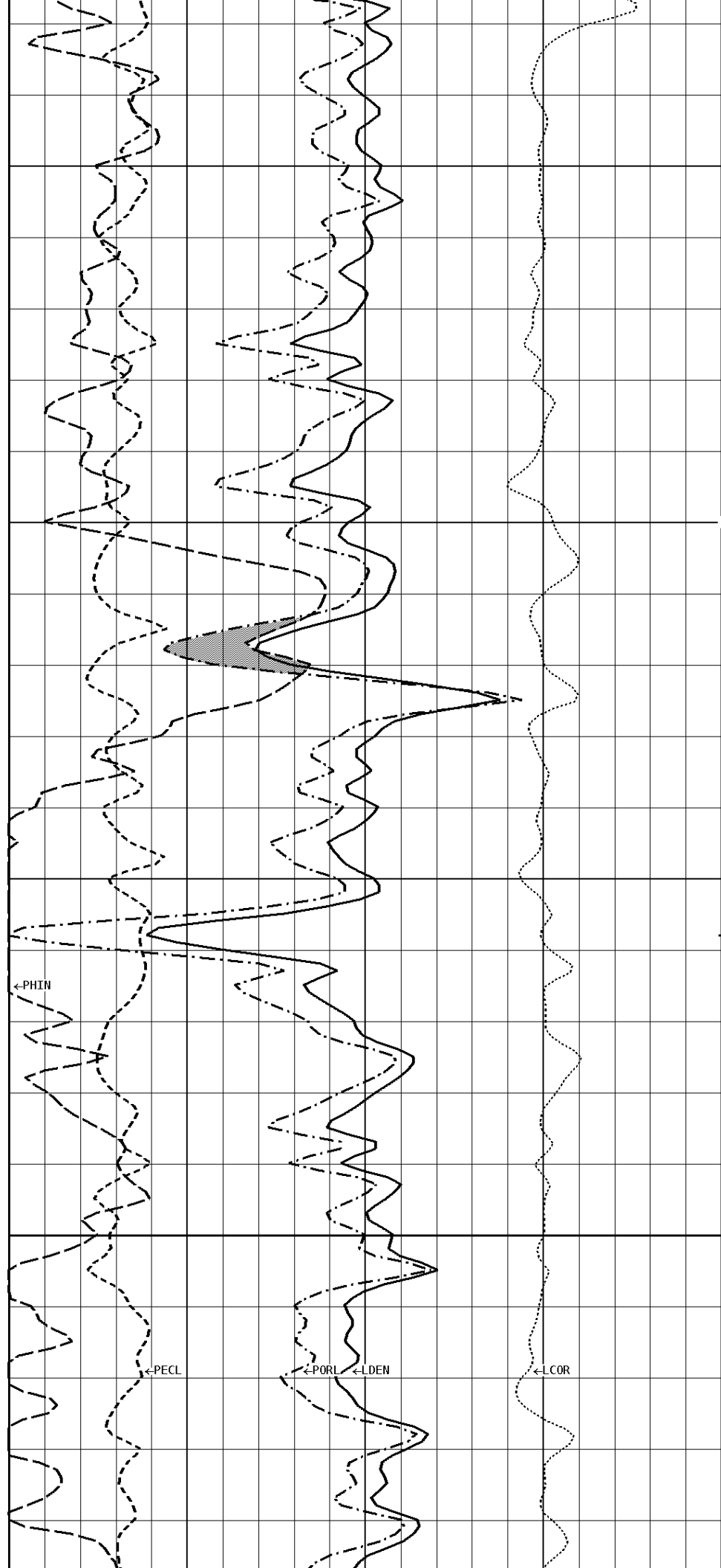


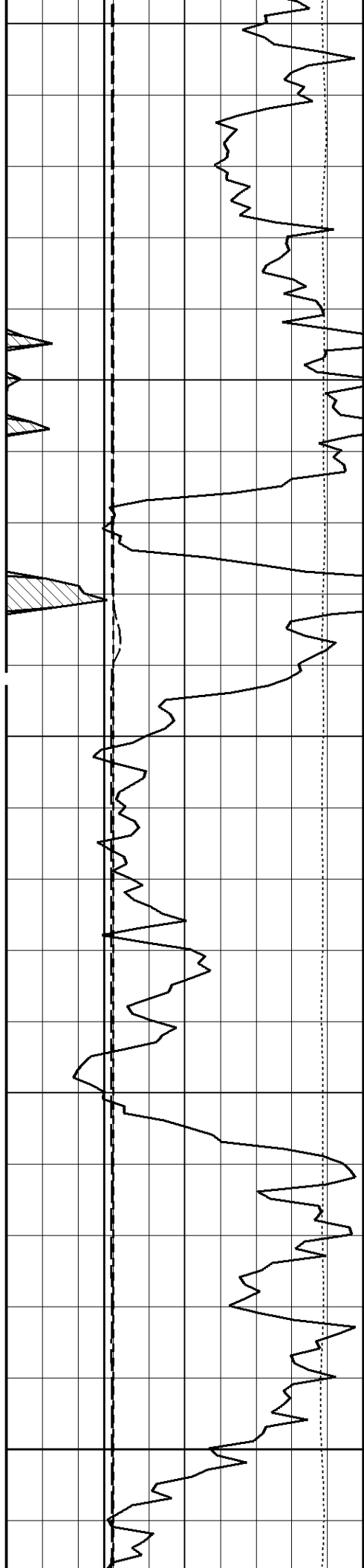
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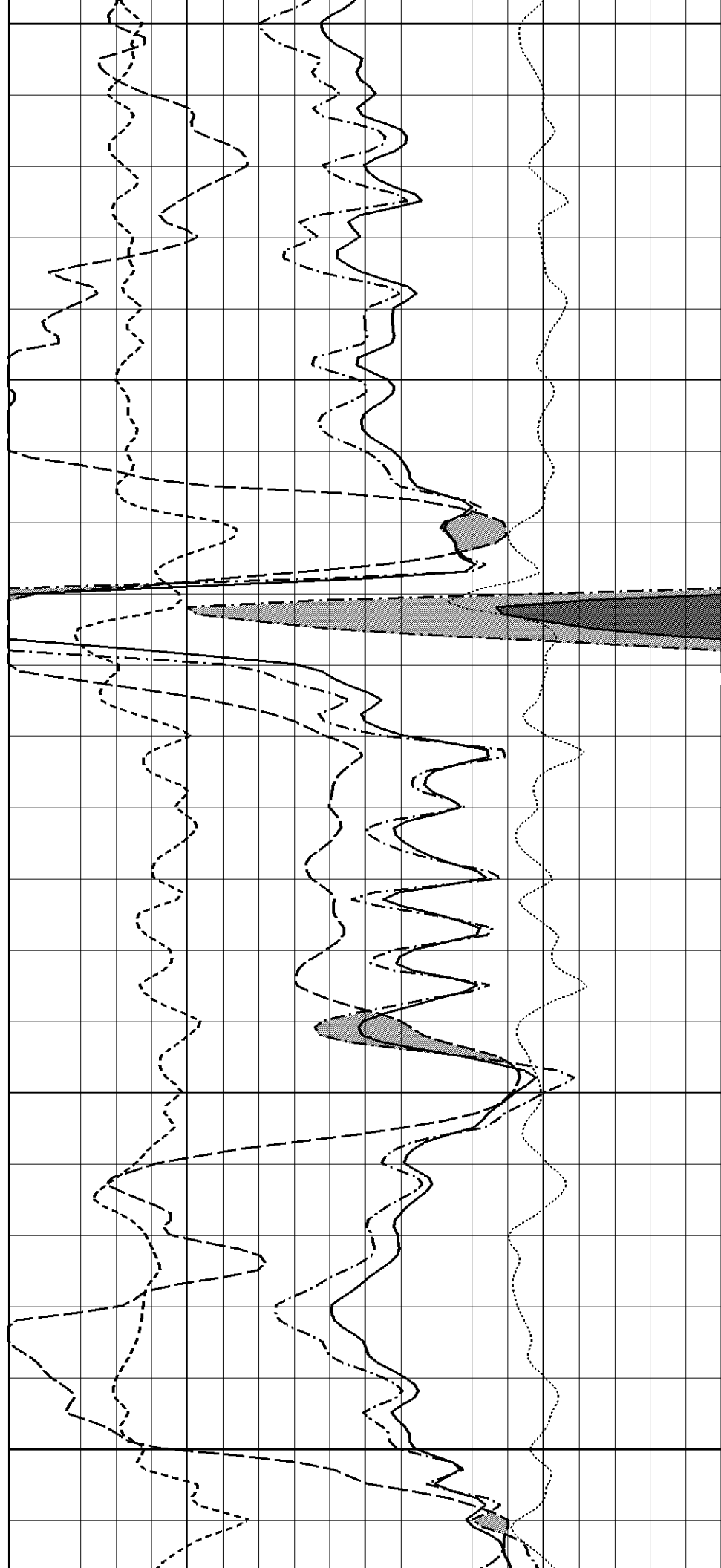
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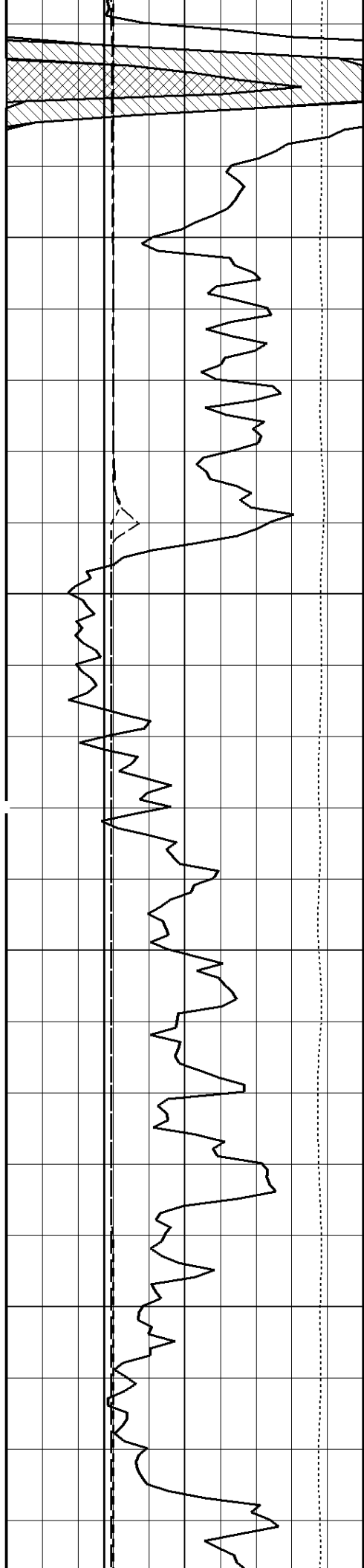
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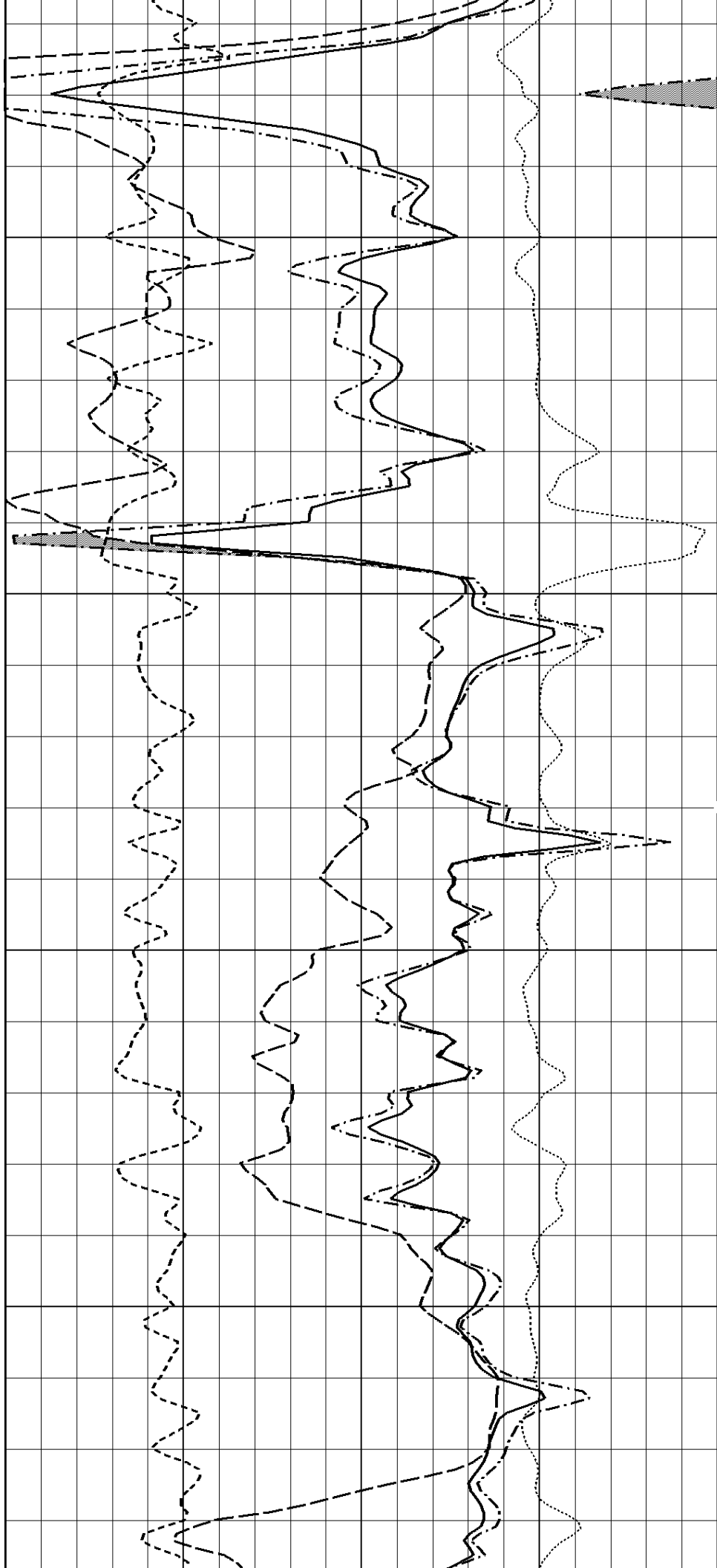


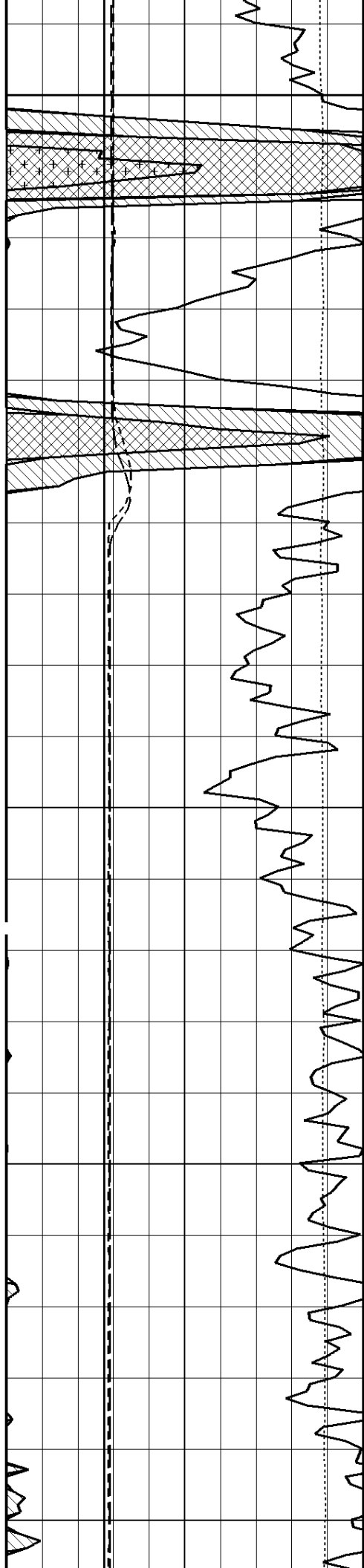
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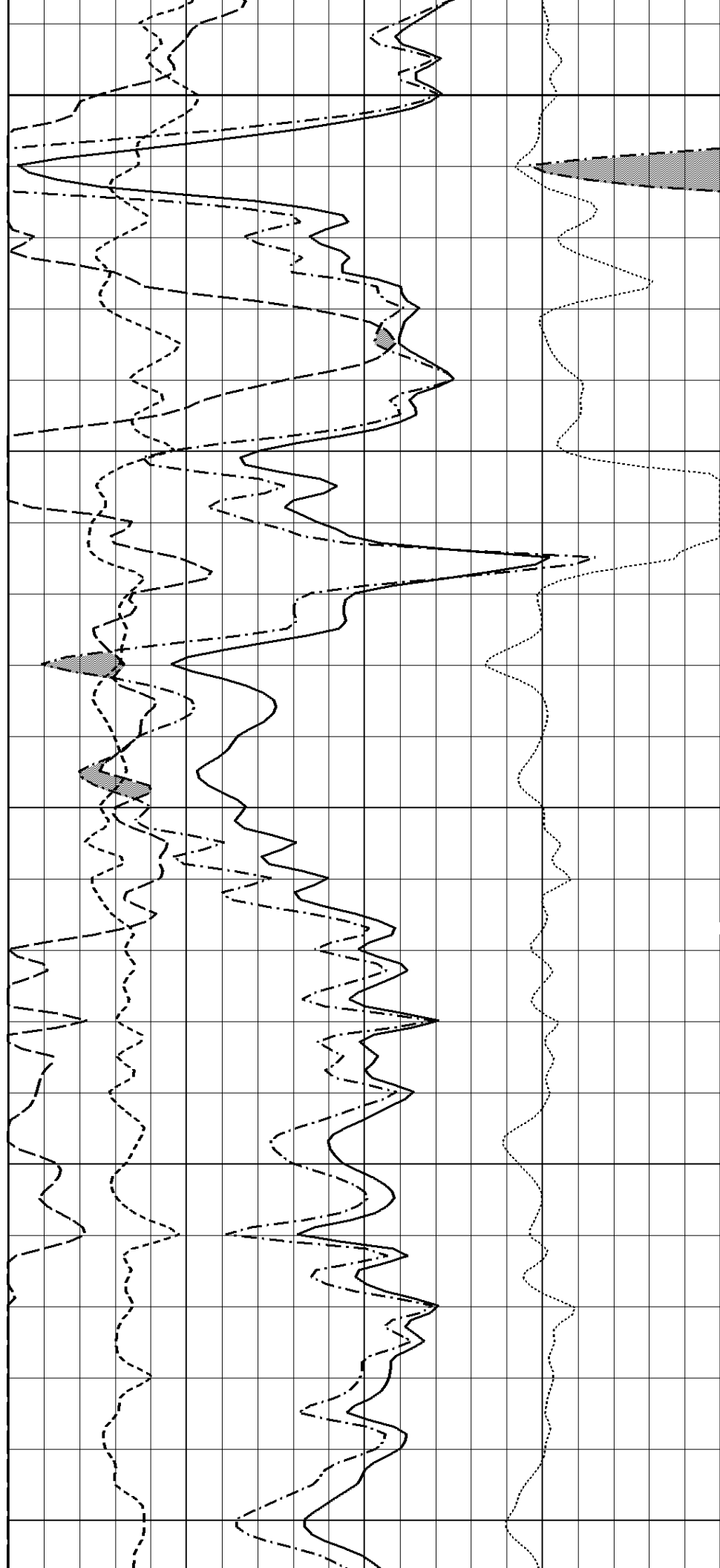
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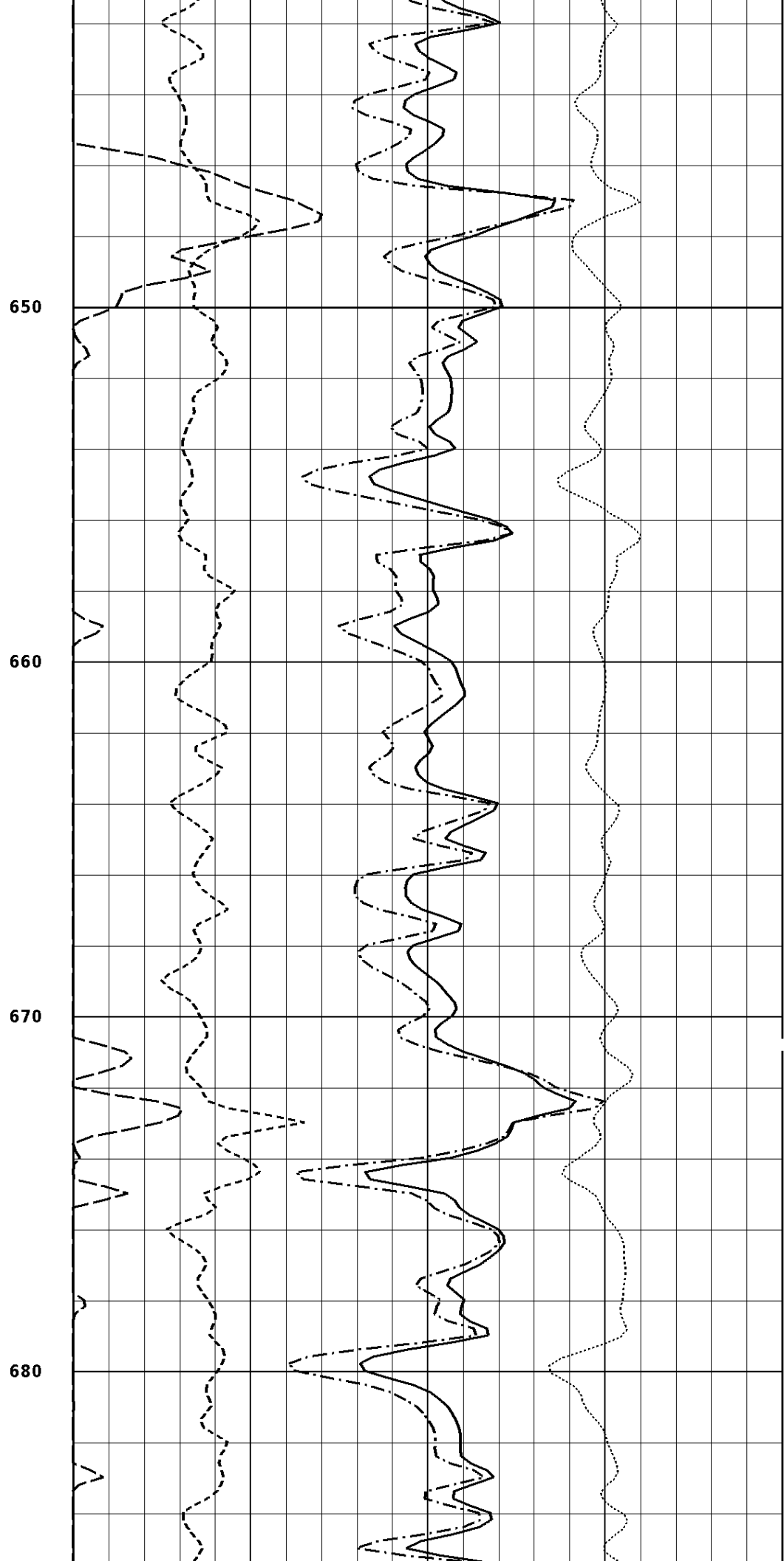
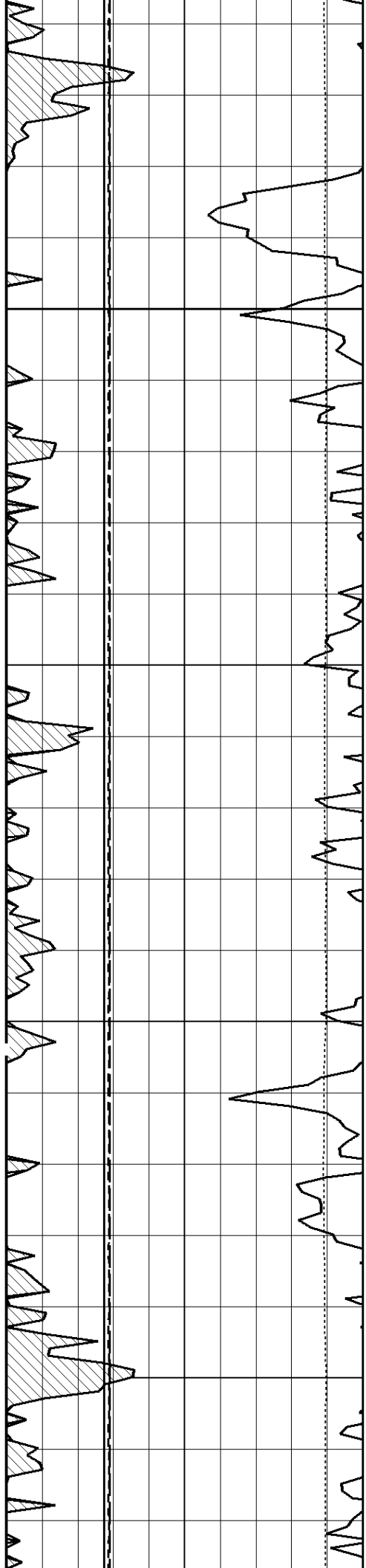
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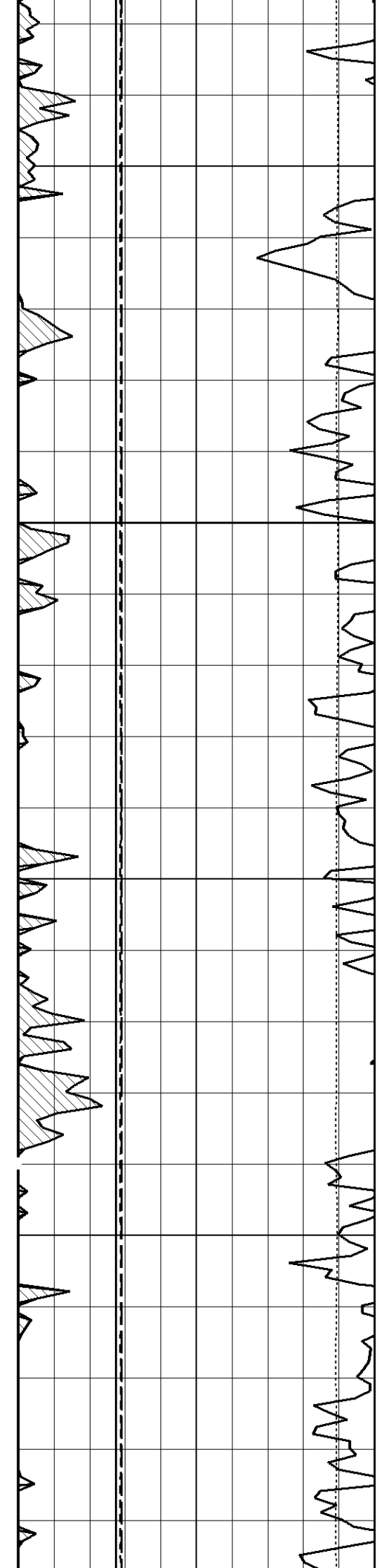
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640





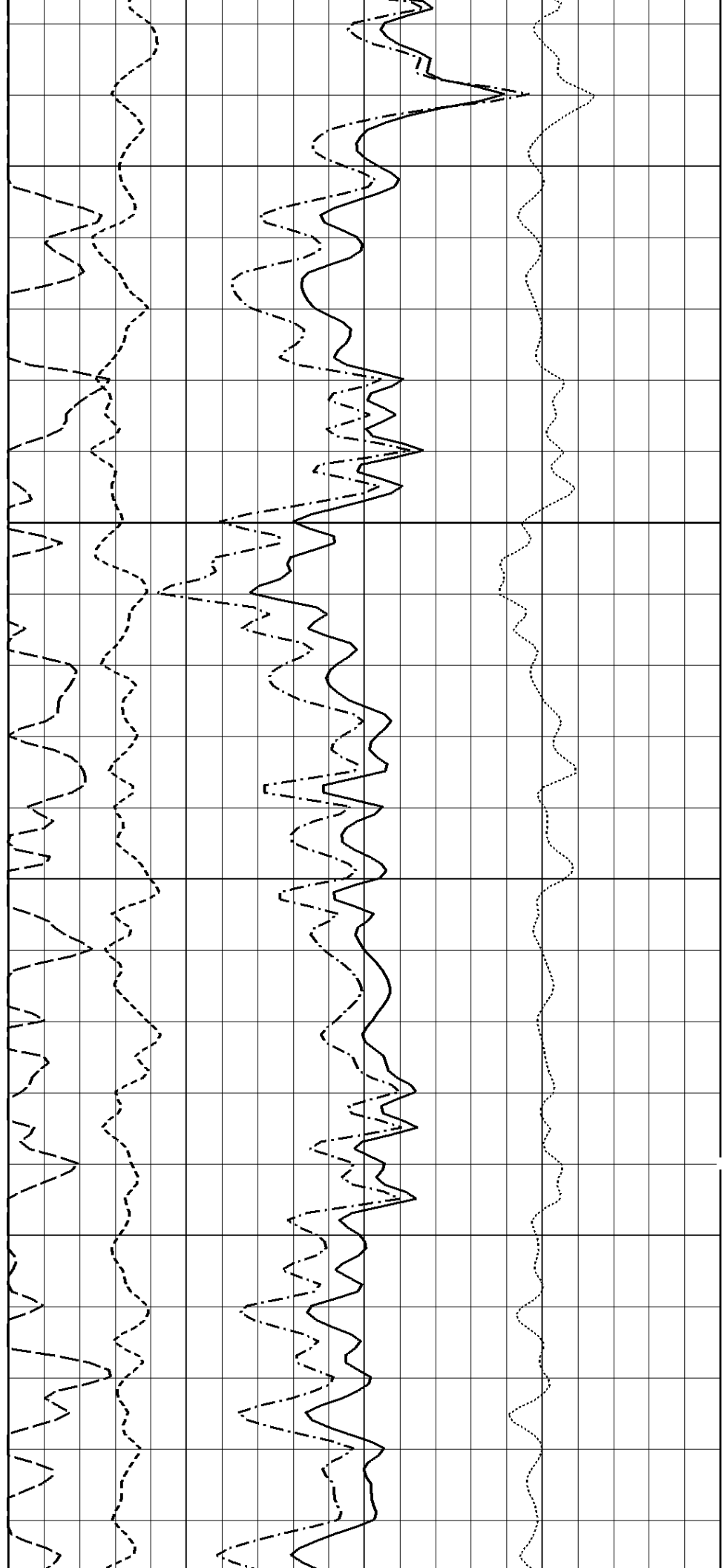


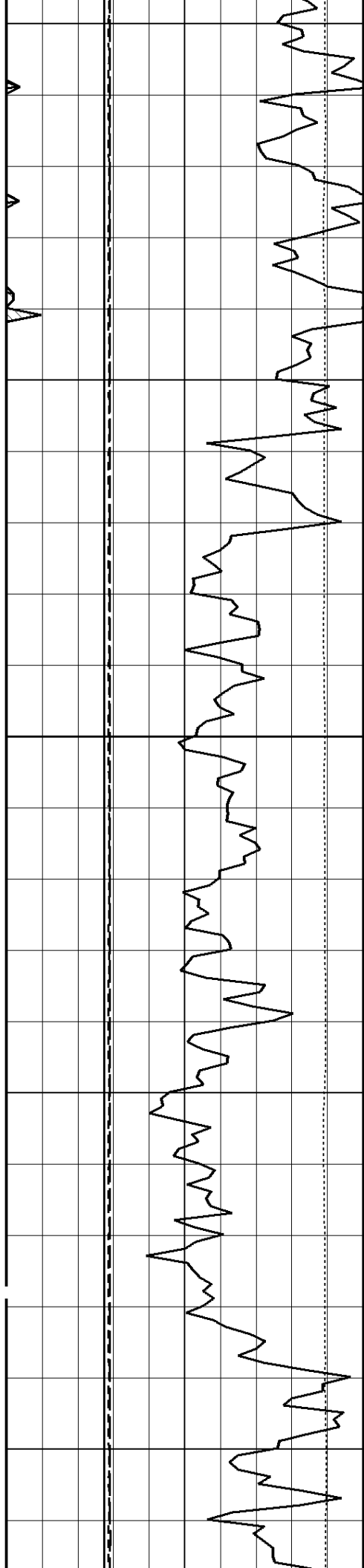
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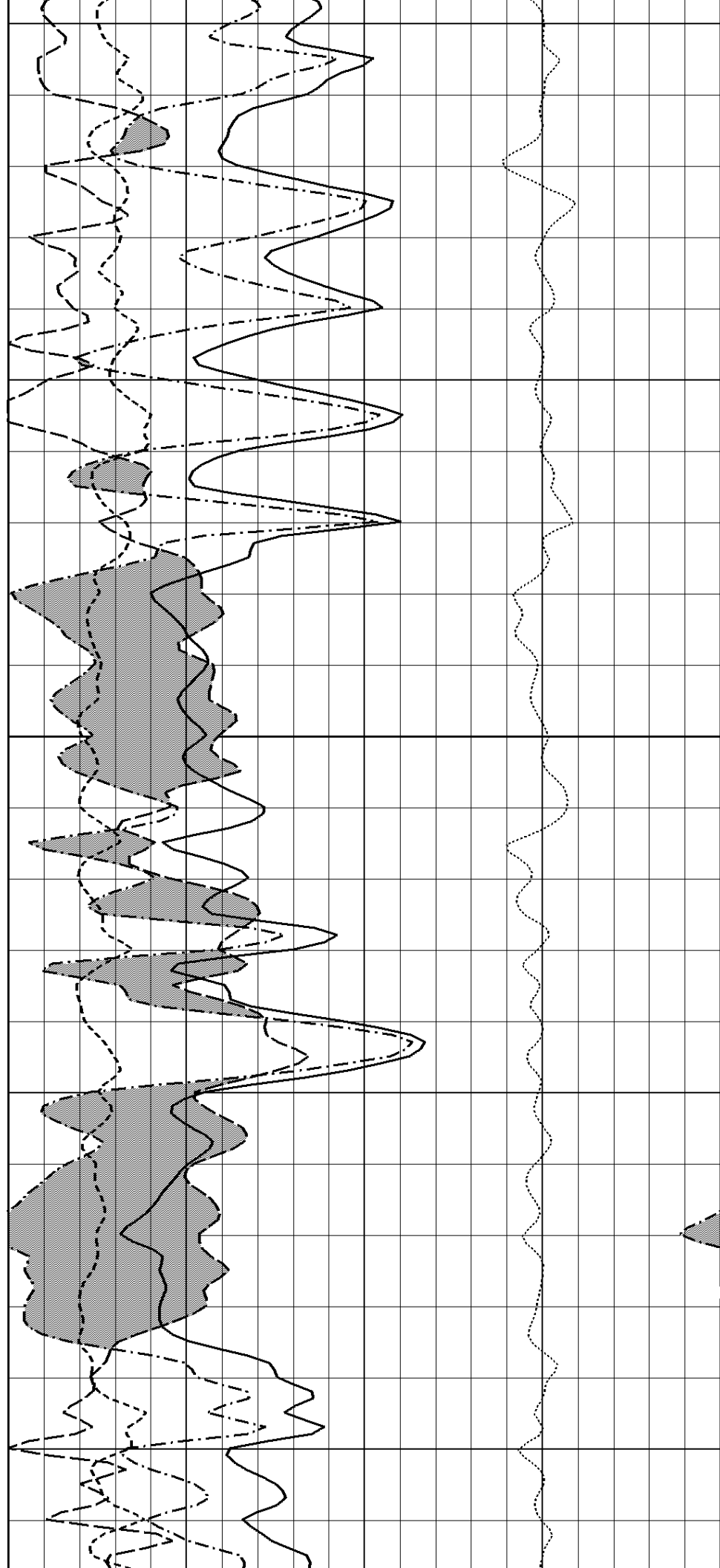
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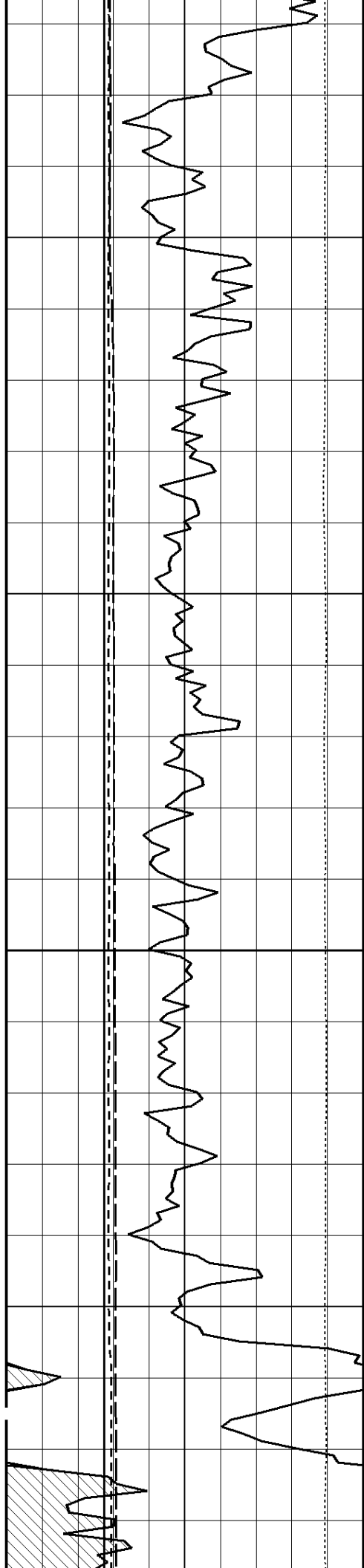
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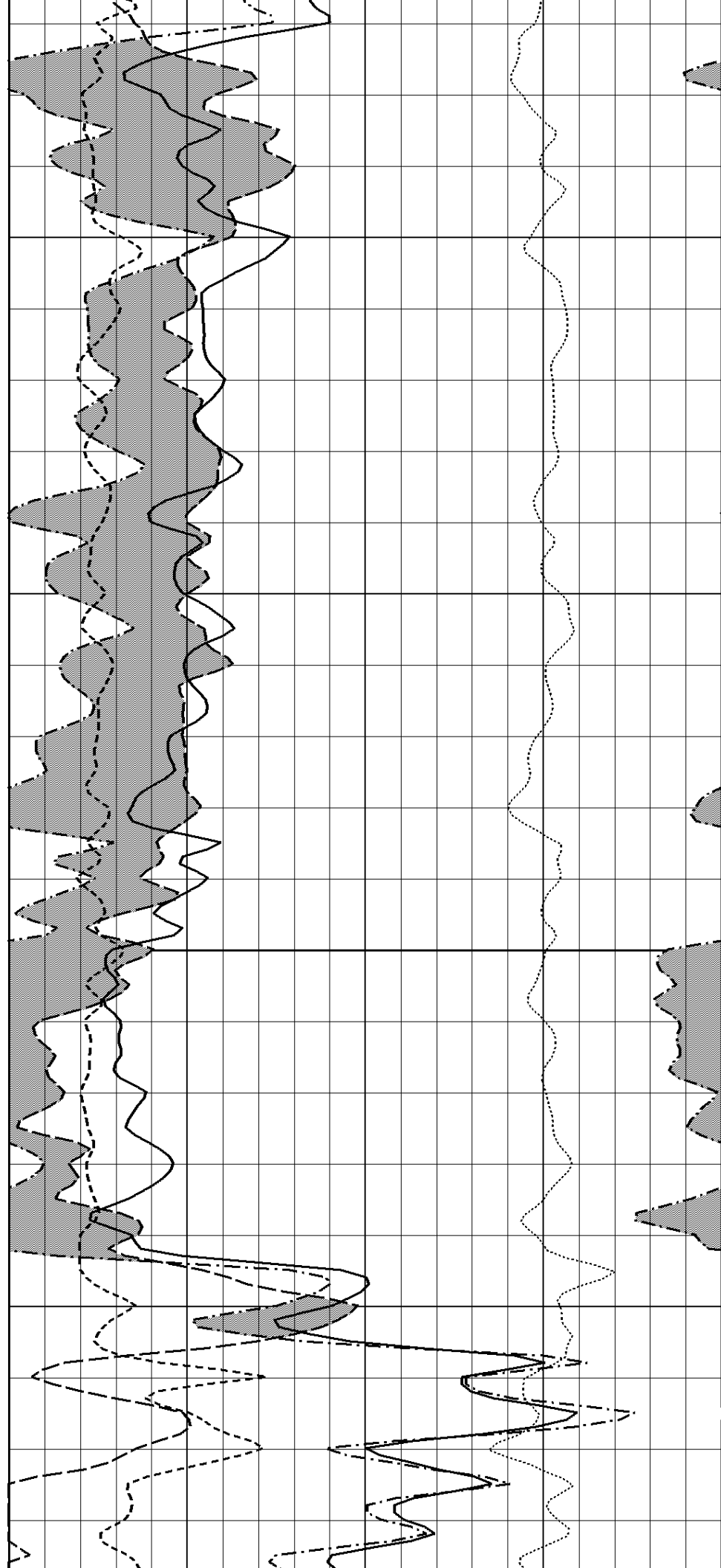


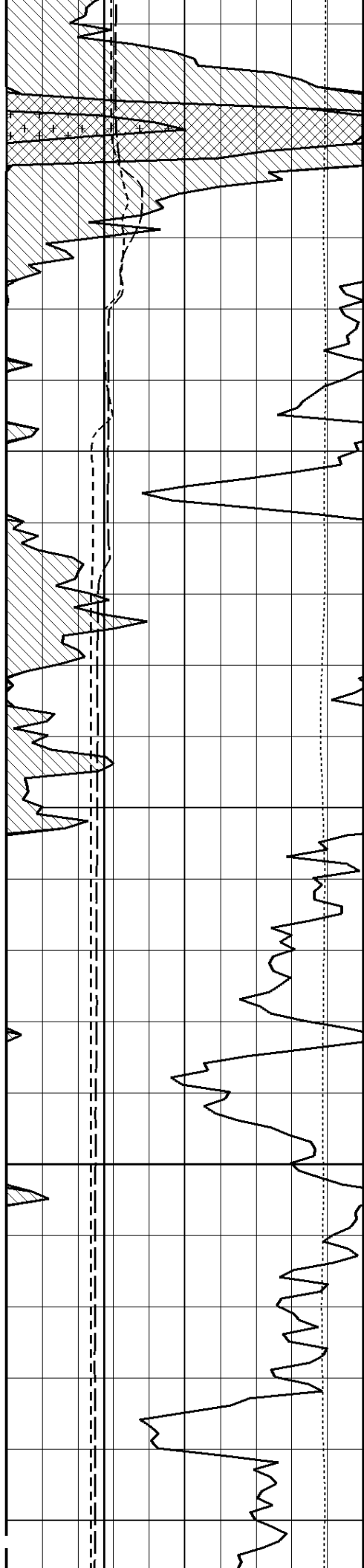
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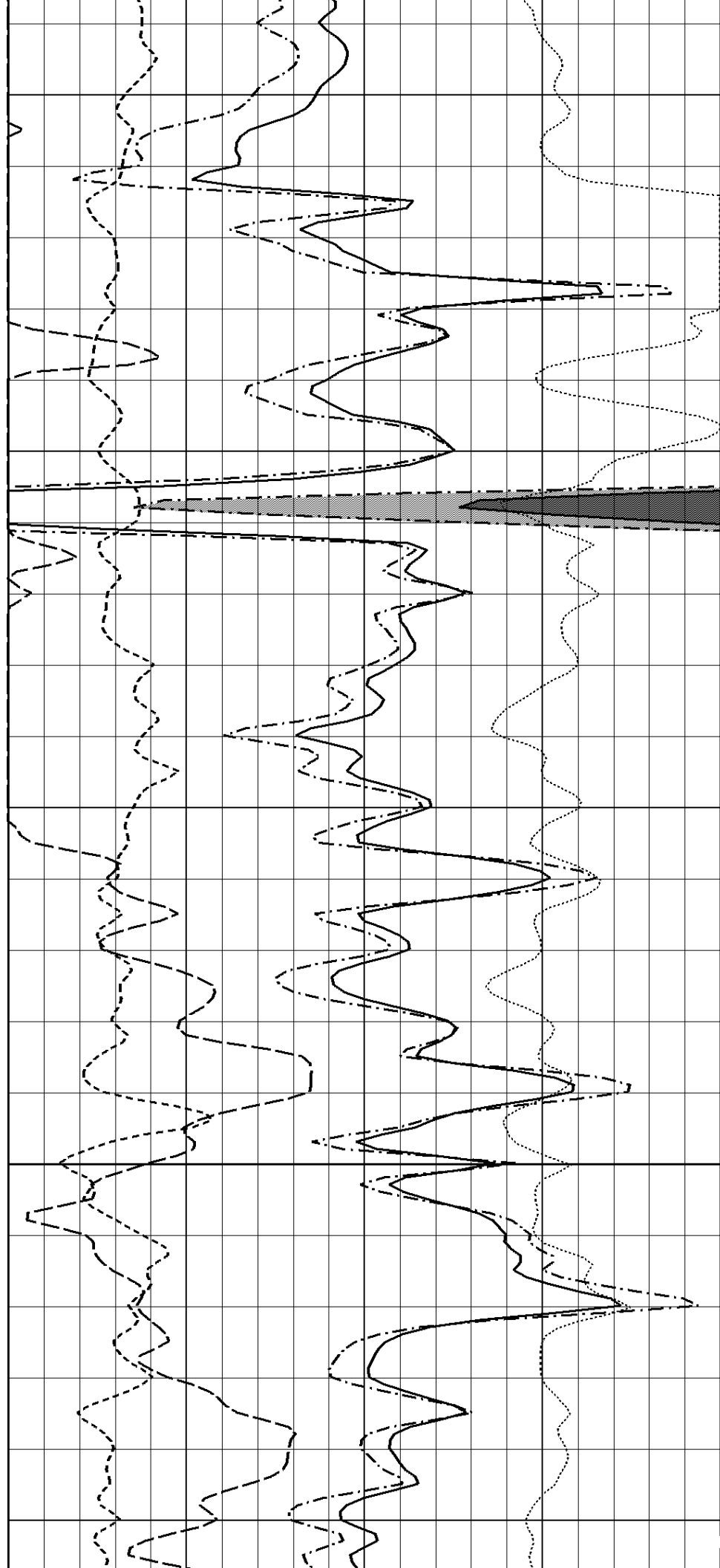
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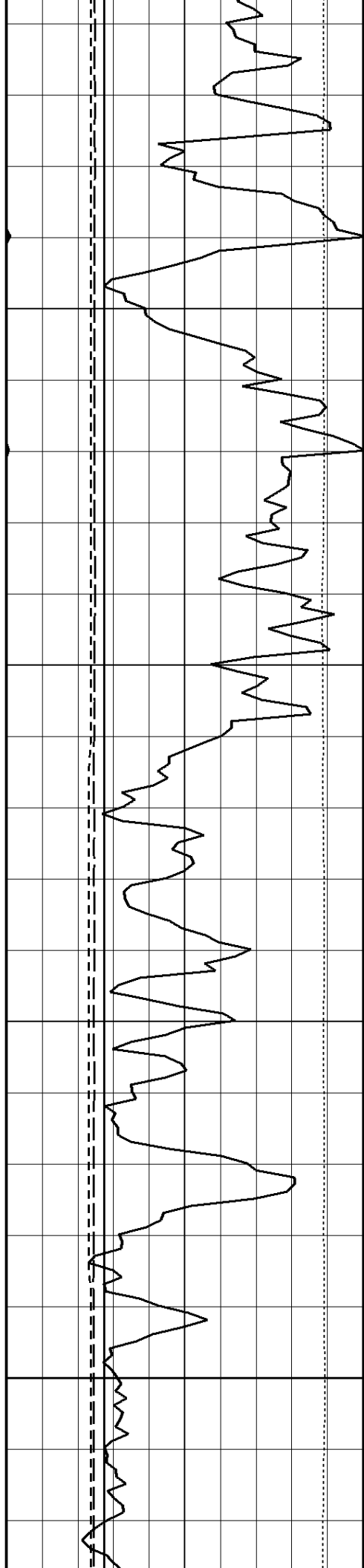
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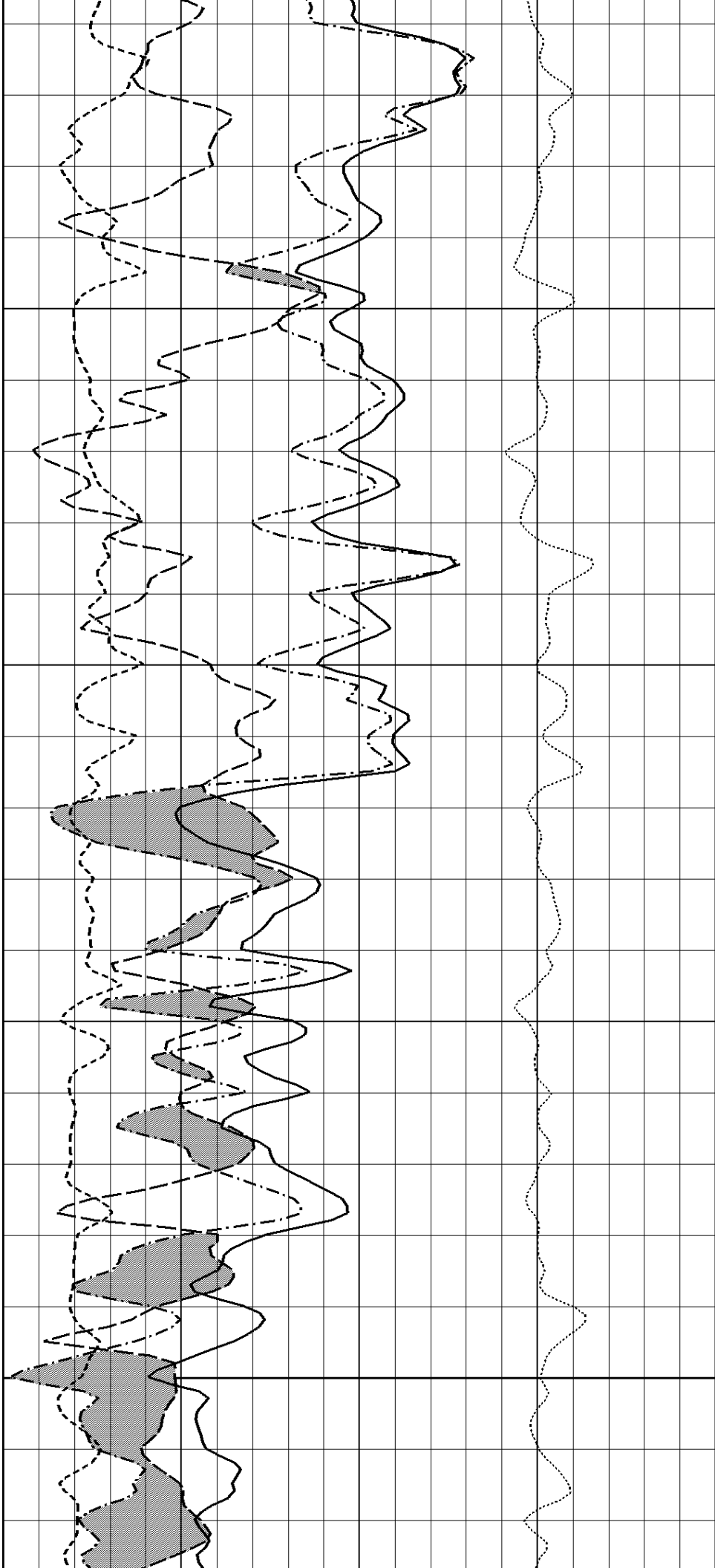


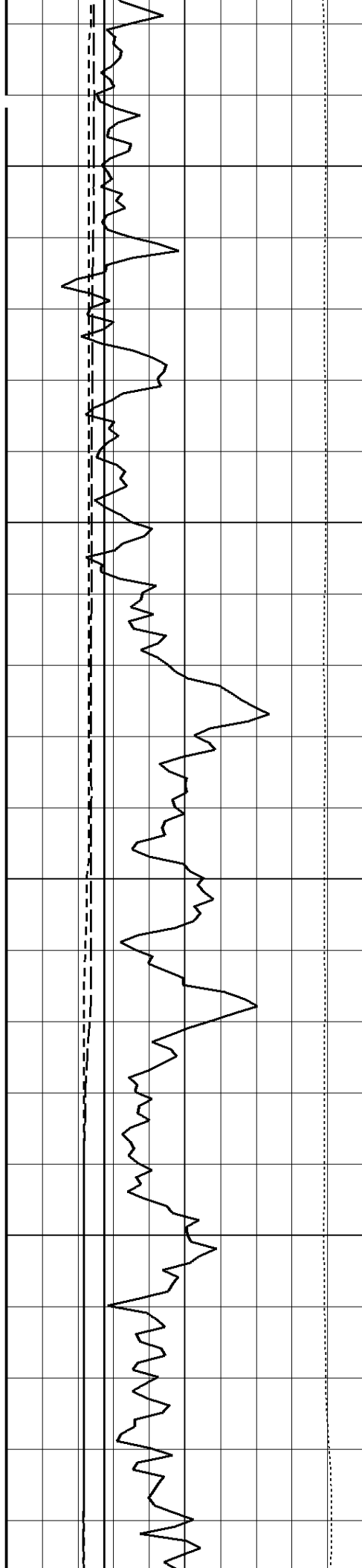
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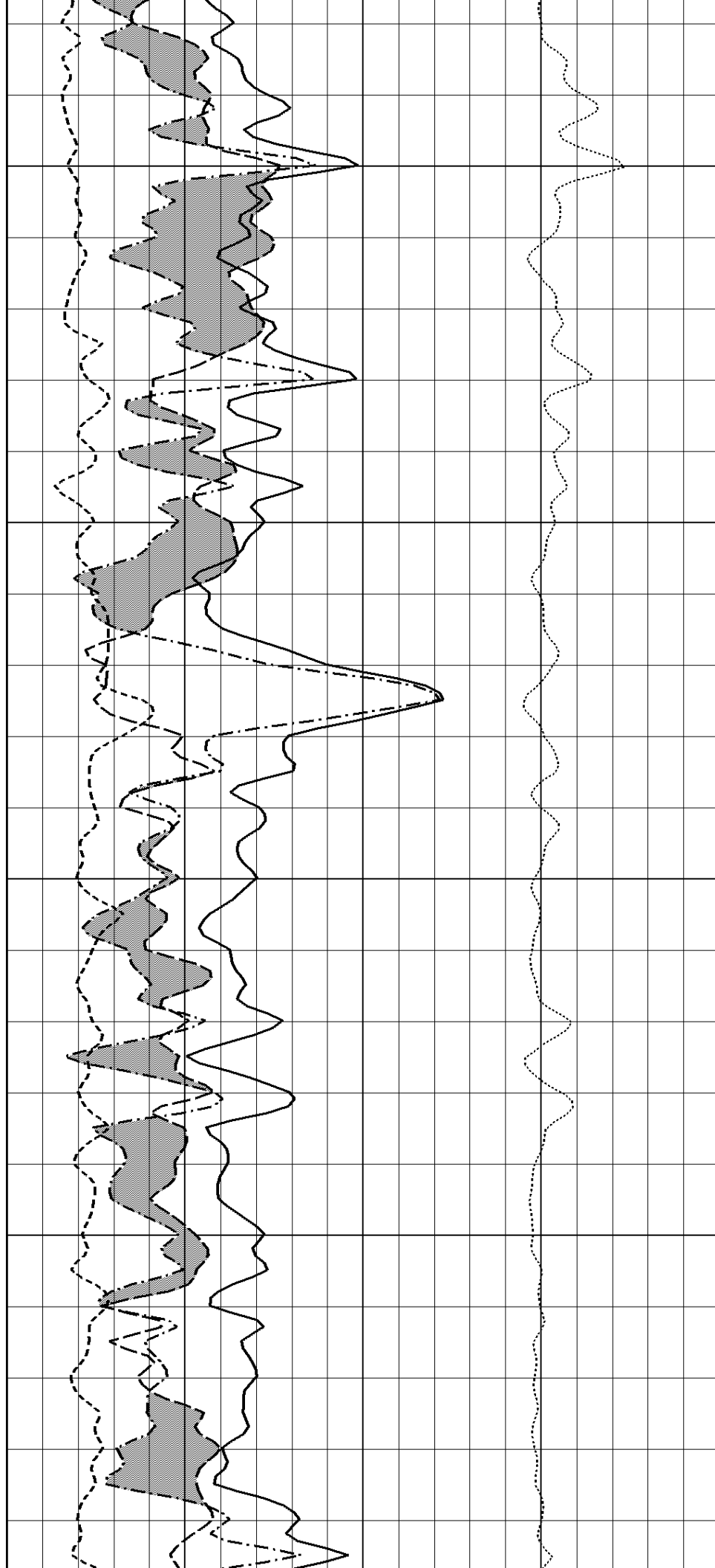


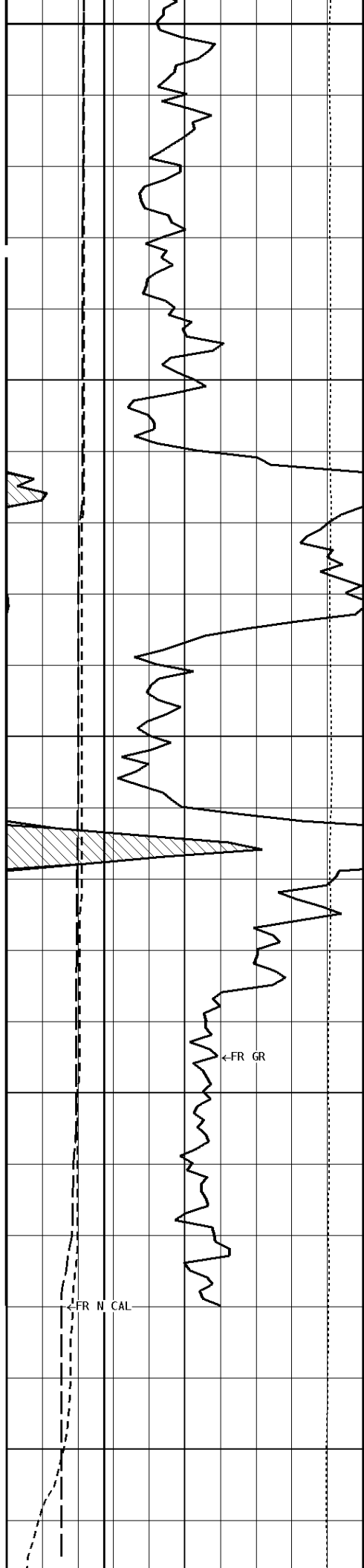
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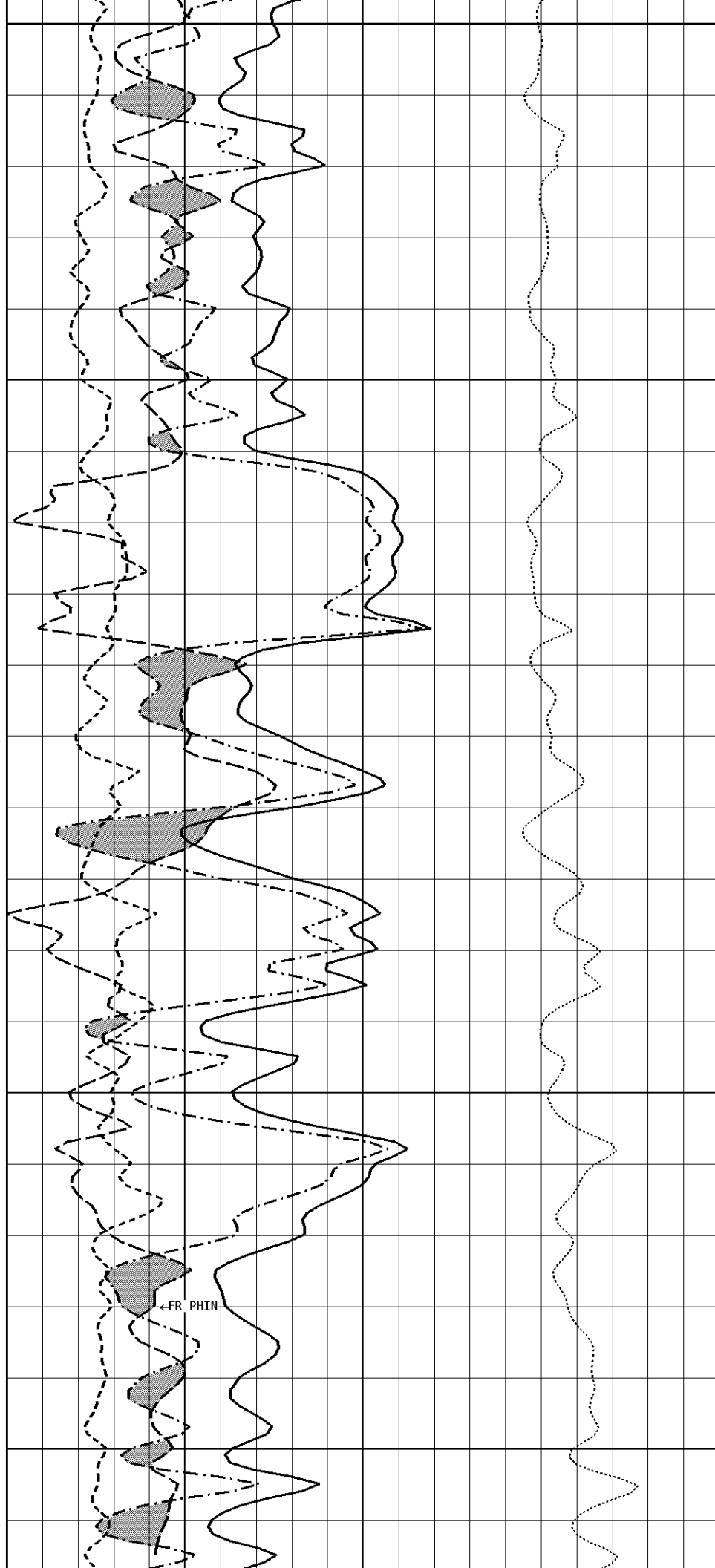
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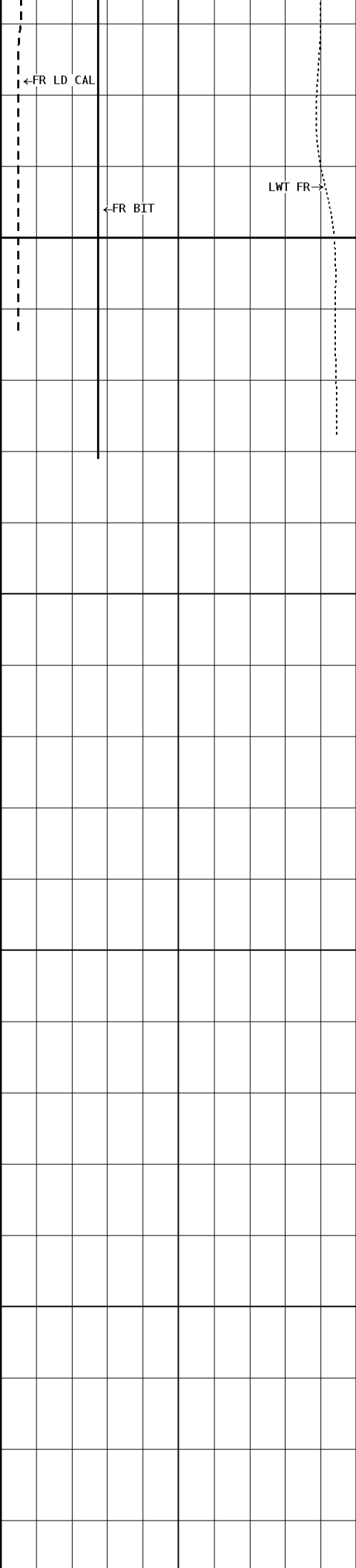
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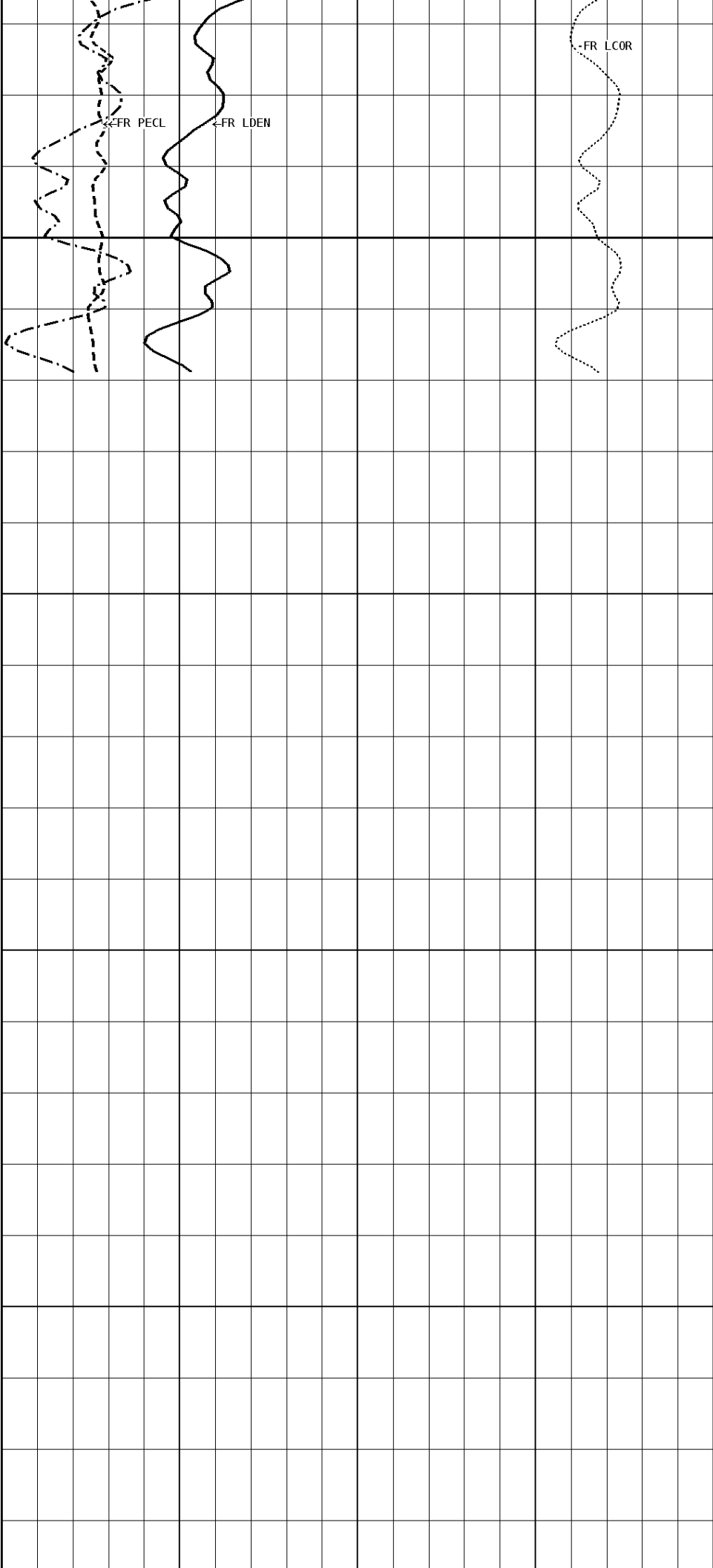
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1:48 HIGH RESOLUTION

|                                    |            |
|------------------------------------|------------|
| GAMMA RAY<br>API UNITS             |            |
| 150<br>0                           | 300<br>150 |
| TENSION<br>LBS                     |            |
| 10000                              | 0          |
| DENSITY (X) CALIPER<br>INCHES (IN) |            |
| 14<br>4                            | 24<br>14   |
| NEUTRON (Y) CALIPER<br>INCHES (IN) |            |
| 14<br>4                            | 24<br>14   |
| BIT SIZE<br>INCHES (IN)            |            |
| 4                                  | 14         |

|                                         |                   |
|-----------------------------------------|-------------------|
| DENSITY POROSITY (2.71g/cc)<br>PERCENT  |                   |
| 70<br>30<br>-10                         | 30<br>-10<br>-50  |
| NEUTRON POROSITY (LIMESTONE)<br>PERCENT |                   |
| 30                                      | -10               |
| COMPENSATED BULK DENSITY<br>G/CC        |                   |
| 3.0<br>2.0<br>1.0                       | 4.0<br>3.0<br>2.0 |
| PE CROSS-SECTION<br>BARNs/ELECTRON      |                   |
| 0                                       | 10                |
| DENSITY CORRECTION<br>G/CC              |                   |
| -0.25                                   | 0.25              |

\* Borehole Zone Factors \*

|                            |           |
|----------------------------|-----------|
| Zone 1 99999.0 to 0.0 Feet |           |
| Drill Bit Size             | 6.750 in  |
| Casing Diameter            | 4.500 in  |
| Casing Correction (PHI N)  | Disable   |
| Casing Thickness           | 0.250 in  |
| Fluid Density              | 1.00 g/cc |
| Matrix Density             | 2.71 g/cc |
| Formation Matrix           | Limestone |

|                                           |                          |                 |
|-------------------------------------------|--------------------------|-----------------|
| Well File: COLT ENERGY CLINE J-5 DEC4_STK | Scale: 1:240             | Format: LDT-240 |
| Segment: V1.D3.S1 FINAL MAIN              | Acquired: Not Available  |                 |
| Reference: 0                              | Processed: Not Available |                 |

|                         |    |
|-------------------------|----|
| BIT SIZE<br>INCHES (IN) |    |
| 4                       | 14 |

NEUTRON (Y) CALIPER  
INCHES (IN)

14 24  
4 14

DENSITY (X) CALIPER  
INCHES (IN)

14 24  
4 14

TENSION  
LBS

10000 0

GAMMA RAY  
API UNITS

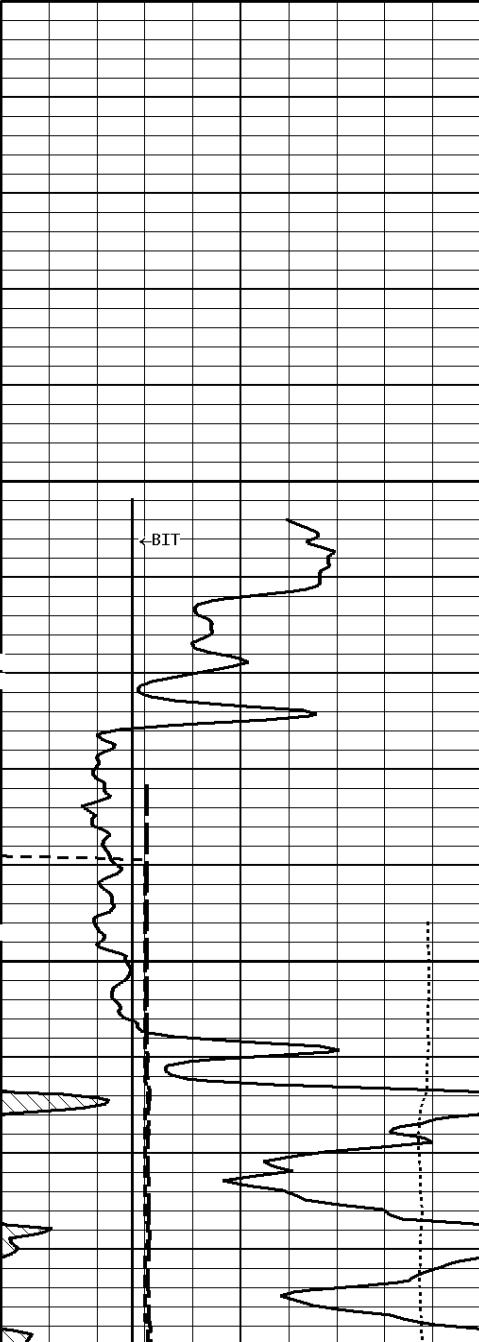
150 300  
0 150

| PE CROSS-SECTION<br>BARNs/ELECTRON | DENSITY CORRECTION<br>G/CC |
|------------------------------------|----------------------------|
| 0 10                               | -0.25 0.25                 |

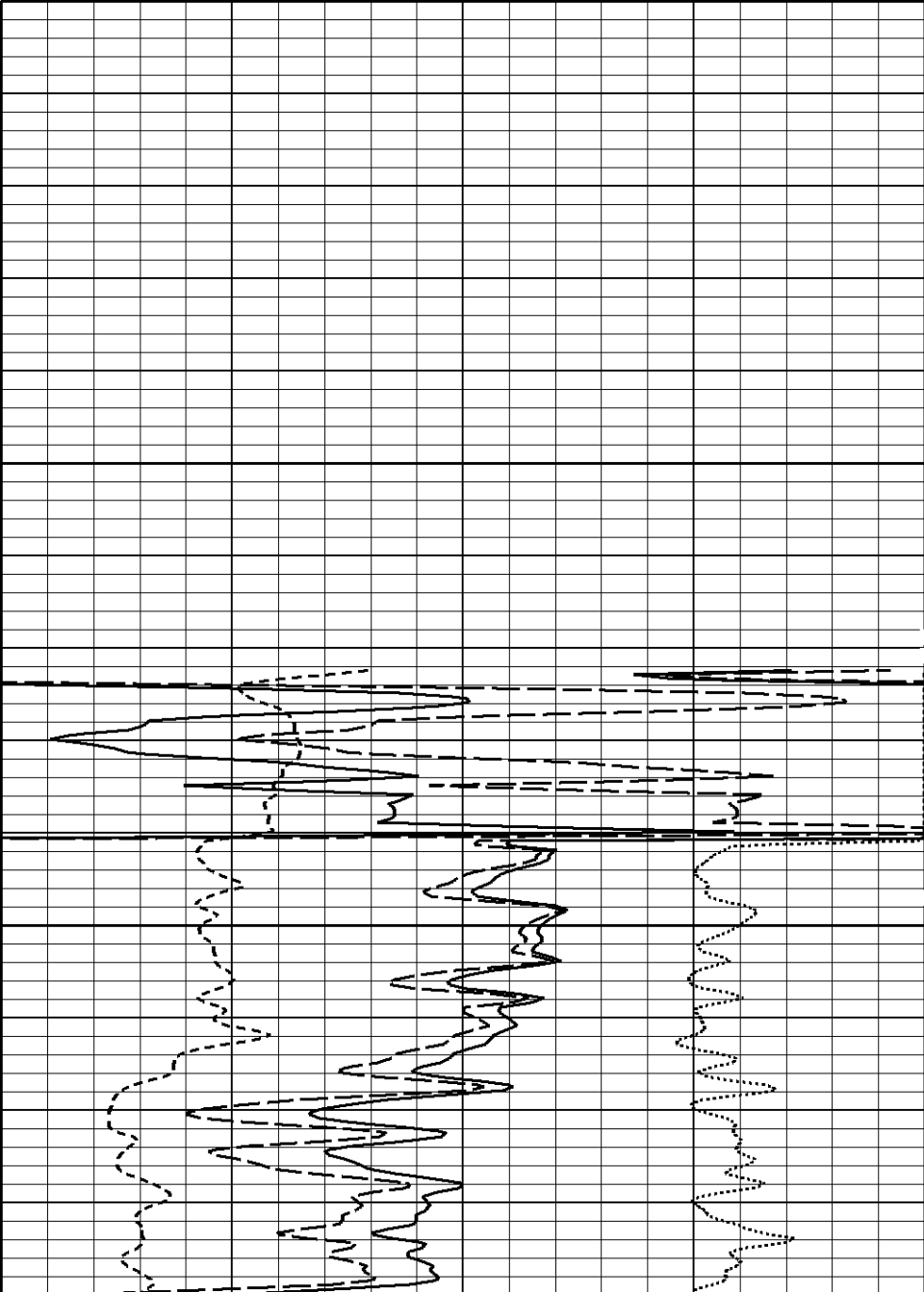
| COMPENSATED BULK DENSITY<br>G/CC |  |
|----------------------------------|--|
| 3.0 4.0                          |  |
| 2.0 3.0                          |  |
| 1.0 2.0                          |  |

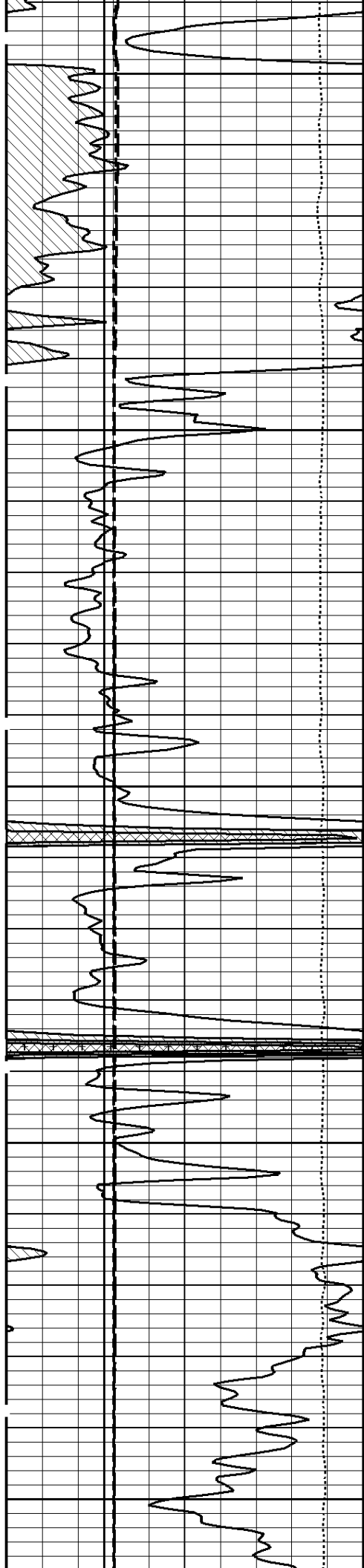
| DENSITY POROSITY (2.71g/cc)<br>PERCENT |  |
|----------------------------------------|--|
| 70 30                                  |  |
| 30 -10                                 |  |
| -10 -50                                |  |

1:240 MAIN SECTION  
BULK DENSITY



000





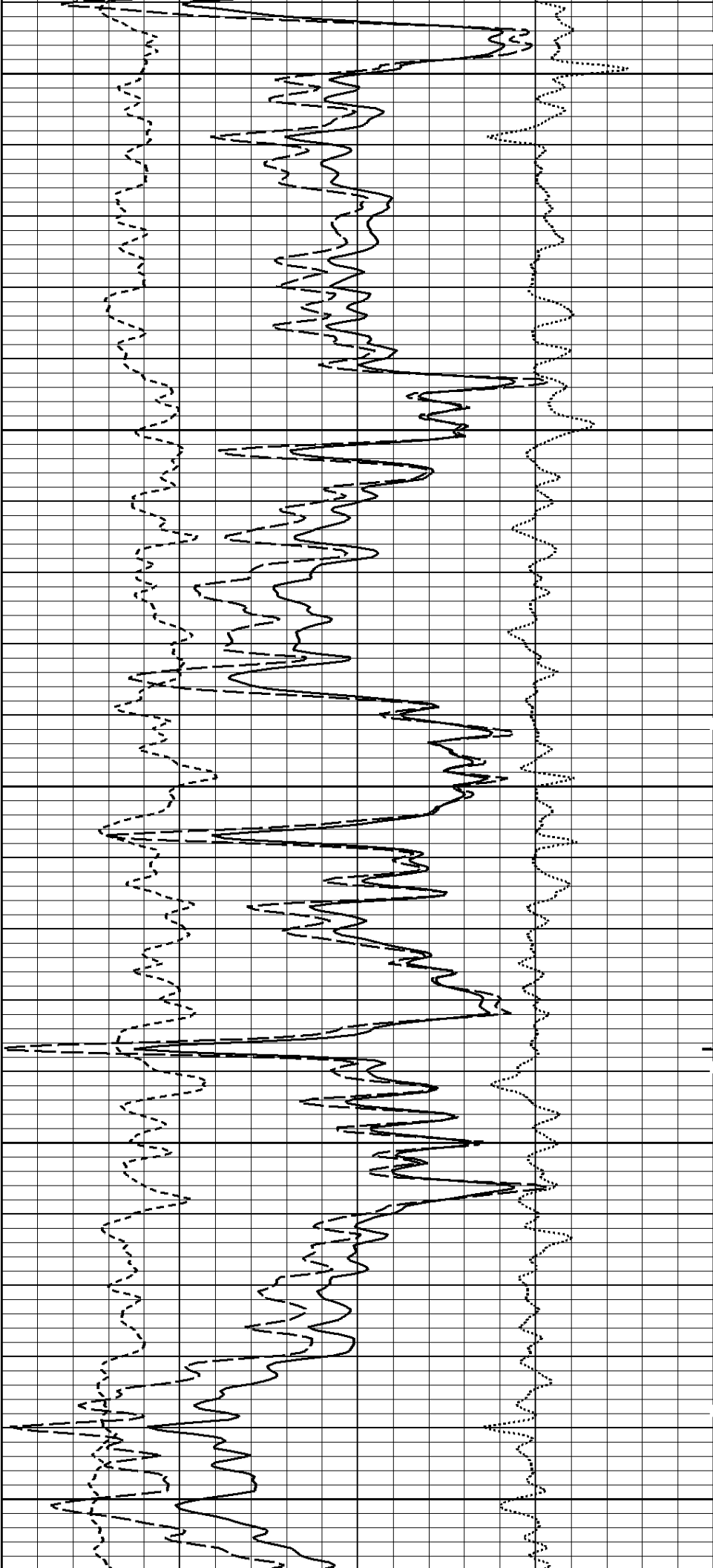
100

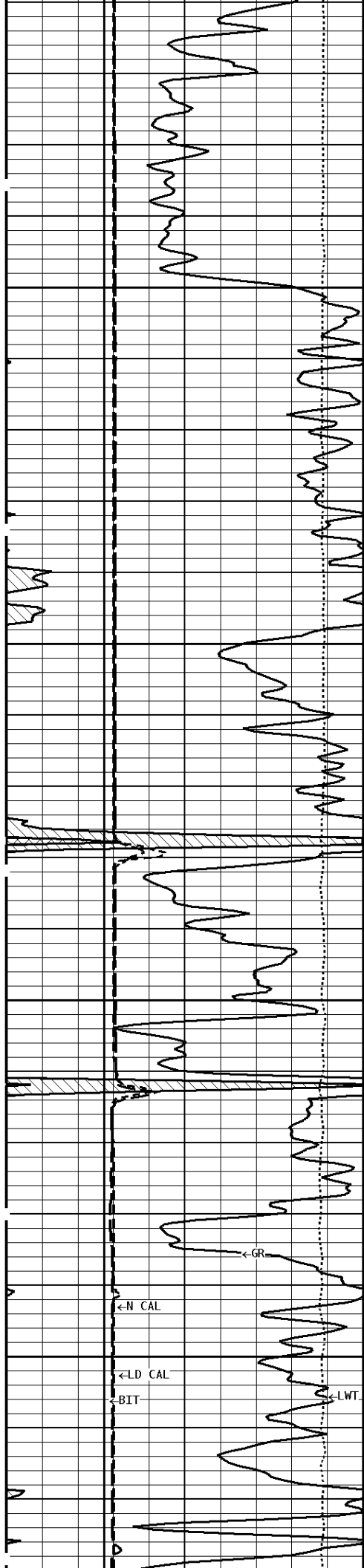
--200Cu.Ft

200

100Cu.Ft--

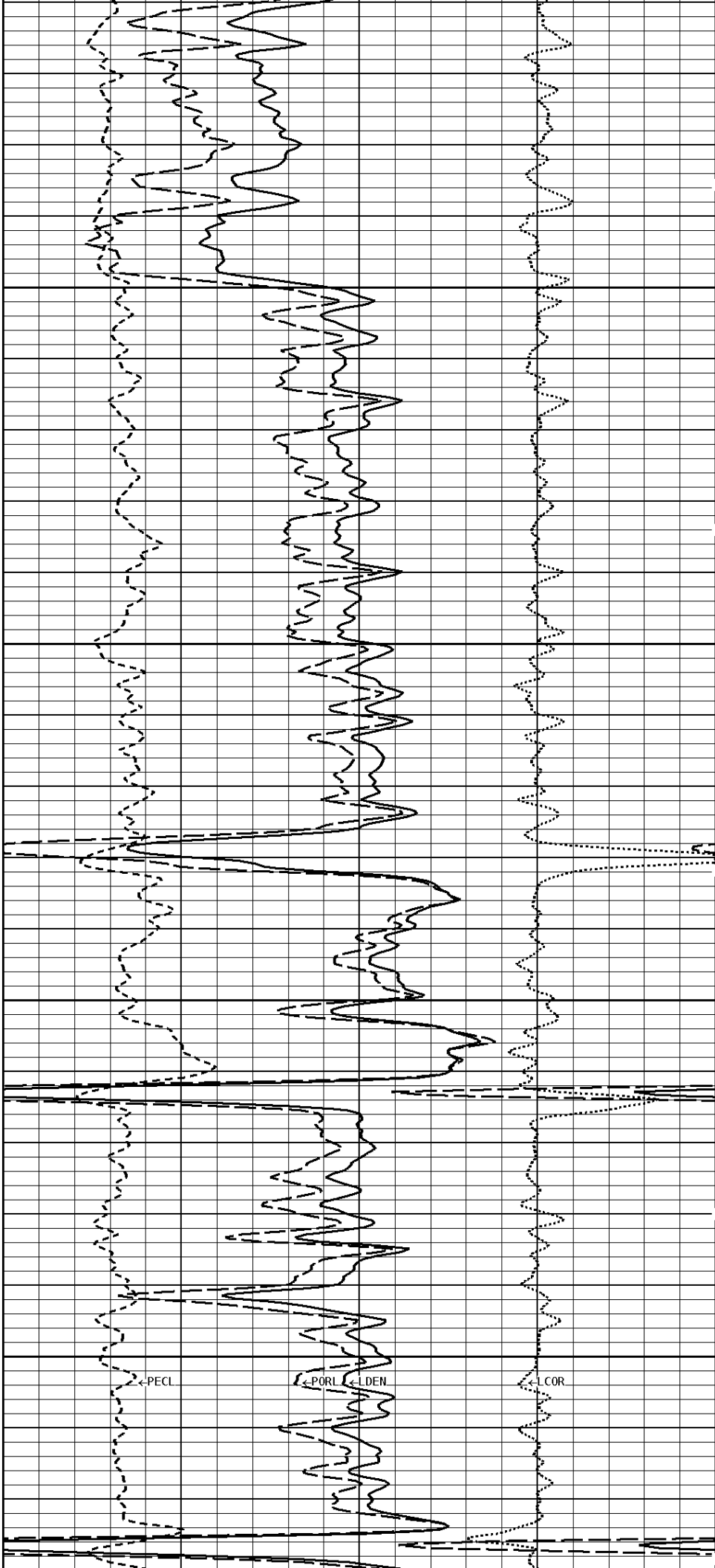
300





400

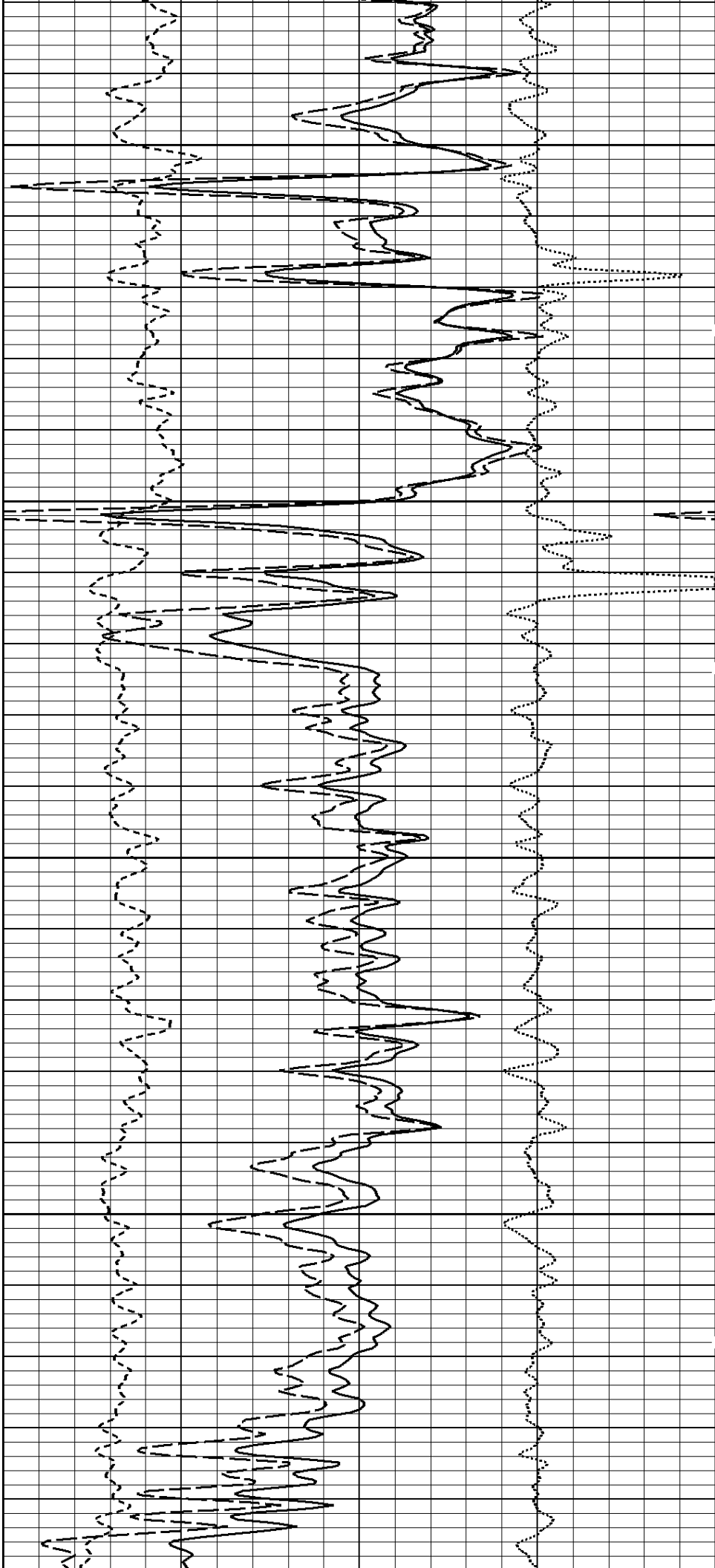
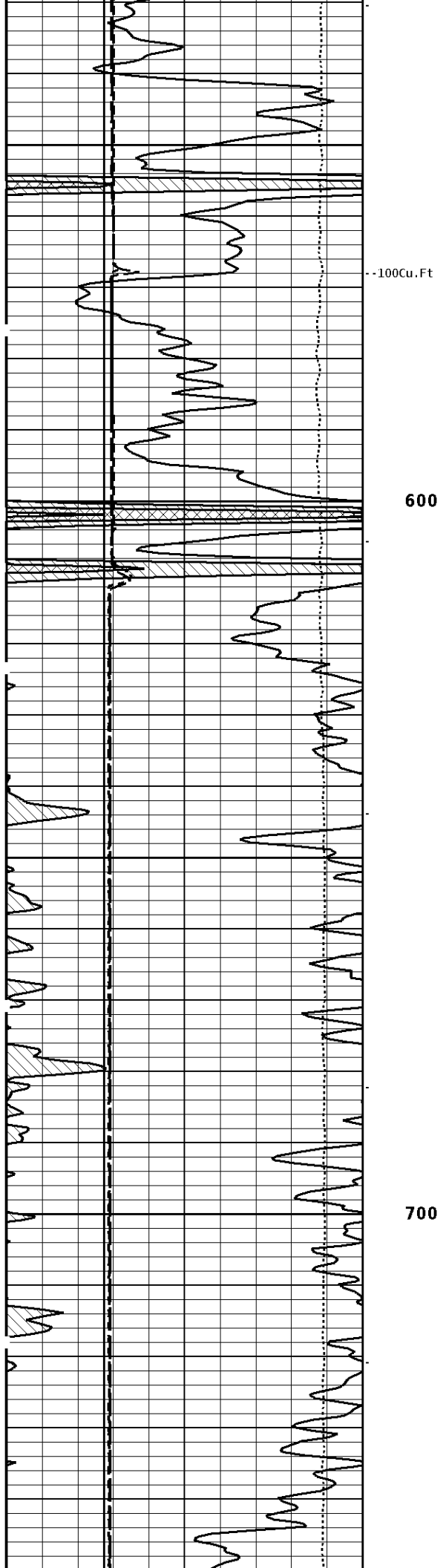
500

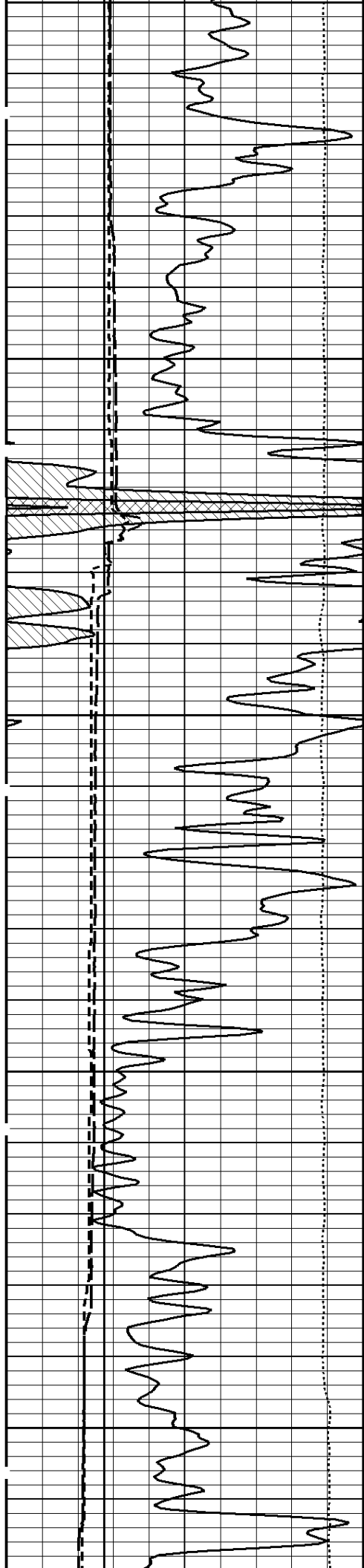


←PECL

←PORL LDEN

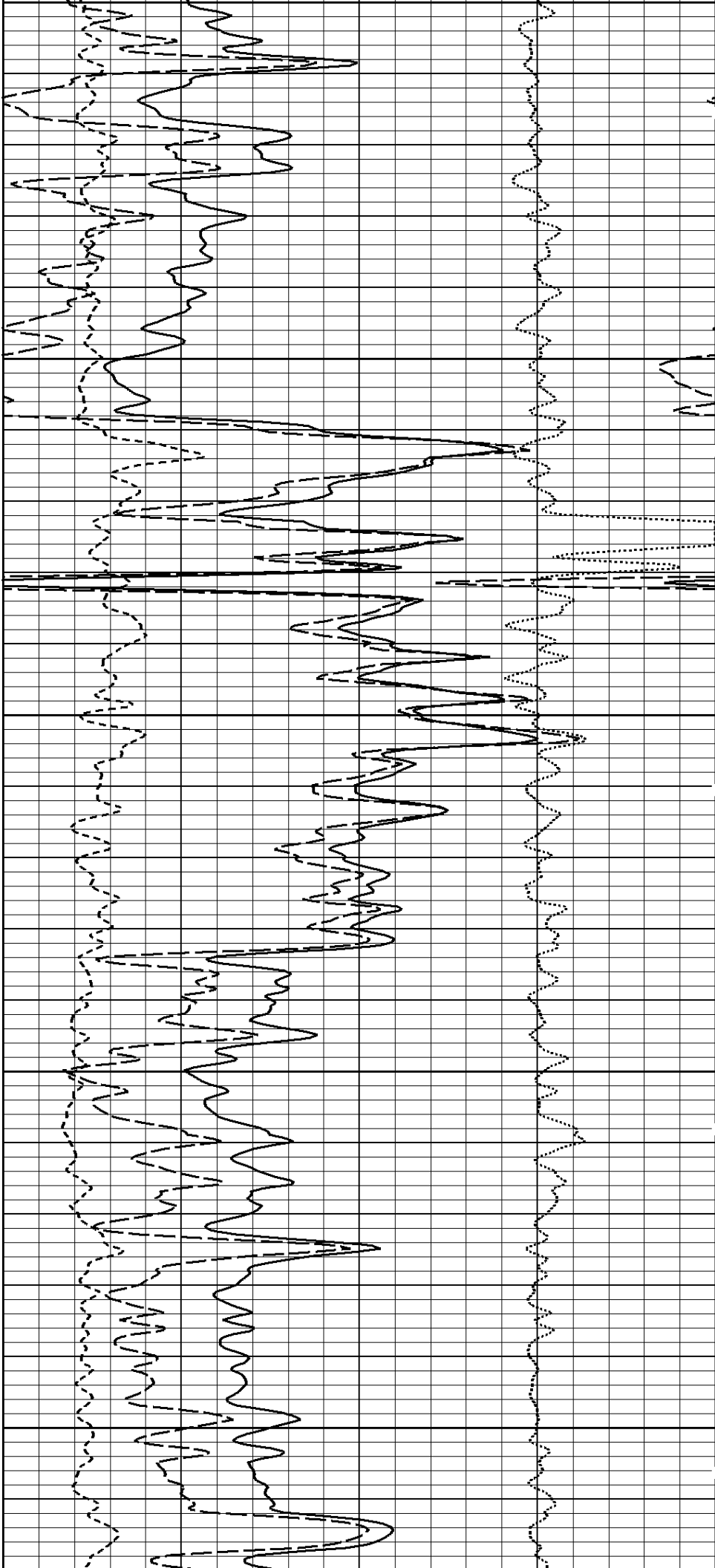
←COR

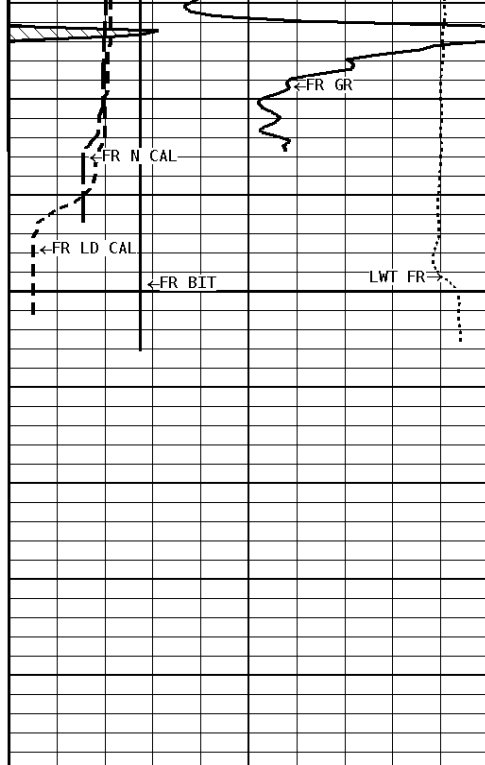




800

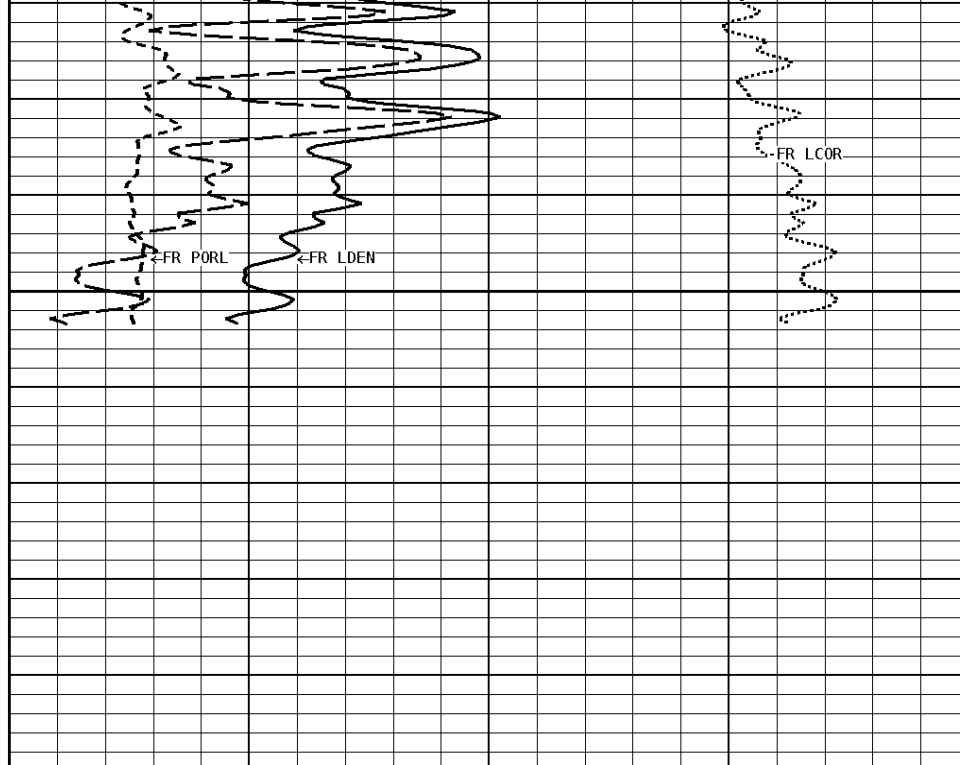
900





File #1.3.1

999



# 1:240 MAIN SECTION BULK DENSITY

|                                    |                                   |                       |                                        |                            |
|------------------------------------|-----------------------------------|-----------------------|----------------------------------------|----------------------------|
| GAMMA RAY<br>API UNITS             |                                   | - BHV AHV -<br>CU. FT | DENSITY POROSITY (2.71g/cc)<br>PERCENT |                            |
| 150<br>0                           | <div><div></div></div> 300<br>150 |                       | 70<br>30                               | 30<br>-10                  |
|                                    |                                   |                       | -10                                    | -50                        |
| TENSION<br>LBS                     |                                   |                       | COMPENSATED BULK DENSITY<br>G/CC       |                            |
| 10000                              | 0                                 |                       | 3.0<br>2.0                             | 4.0<br>3.0                 |
|                                    |                                   |                       | 1.0                                    | 2.0                        |
| DENSITY (X) CALIPER<br>INCHES (IN) |                                   |                       | PE CROSS-SECTION<br>BARN/ ELECTRON     | DENSITY CORRECTION<br>G/CC |
| 14<br>4                            | 24<br>14                          |                       | 010                                    | -0.250.25                  |
|                                    |                                   |                       |                                        |                            |
| NEUTRON (Y) CALIPER<br>INCHES (IN) |                                   |                       |                                        |                            |
| 14<br>4                            | 24<br>14                          |                       |                                        |                            |
|                                    |                                   |                       |                                        |                            |
| BIT SIZE<br>INCHES (IN)            |                                   |                       |                                        |                            |
| 4                                  | 14                                |                       |                                        |                            |
|                                    |                                   |                       |                                        |                            |

## \* Borehole Zone Factors \*

|                                   |           |
|-----------------------------------|-----------|
| <b>Zone 1 99999.0 to 0.0 Feet</b> |           |
| Drill Bit Size                    | 6.750 in  |
| Casing Diameter                   | 4.500 in  |
| Casing Correction (PHI N)         | Disable   |
| Fluid Density                     | 1.00 g/cc |
| Matrix Density                    | 2.71 g/cc |
| Formation Matrix                  | Limestone |



Company: COLT ENERGY INC  
Well: CLINE #J-5  
Location: 1941' FNL & 1407' FEL

