



**ThruBit**  
A Schlumberger Company

**SPECTRAL DENSITY  
DUAL SPACED NEUTRON  
GAMMA RAY  
MEMORY LOG**

|                              |                                |                |                        |
|------------------------------|--------------------------------|----------------|------------------------|
| Company                      | SANDRIDGE ENERGY, INC.         | Company        | SANDRIDGE ENERGY, INC. |
| Well                         | JENNIFER 3408 2-34H            | Well           | JENNIFER 3408 2-34H    |
| Field                        | HARPER KS / MISS LIME          | Field          | HARPER KS / MISS LIME  |
| County                       | HARPER                         | County         | HARPER                 |
| State                        | KANSAS                         | State          | KANSAS                 |
| Location:                    | API #: 15-077-21881-0100       | Other Services | THRUBIT<br>PORTAL BIT  |
| Permanent Datum              | SEC 34 TWP 34S RGE 8W          | Elevation      |                        |
| Log Measured From            | SURF LOC: 200' FSL & 1980' FEL | K.B. 1278'     |                        |
| Drilling Measured From       | D.F. 15' ABOVE PERM DATUM      | D.F. 1278'     |                        |
|                              |                                | G.L. 1263'     |                        |
| Date                         | 14 NOVEMBER 2012               |                |                        |
| Run Number                   | ONE                            |                |                        |
| Depth Driller                | 9140'                          |                |                        |
| Depth Logger                 | 9115'                          |                |                        |
| Bottom Logged Interval       | 9098'                          |                |                        |
| Top Log Interval             | 2990'                          |                |                        |
| Casing Driller               | 7" @ 5231'                     |                |                        |
| Casing Logger                | 7" @ 5212'                     |                |                        |
| Bit Size                     | 6.125"                         |                |                        |
| Type Fluid in Hole           | WBM                            |                |                        |
| Density / Viscosity          | 8.9 29                         |                |                        |
| pH / Fluid Loss              | 8.5 / 60                       |                |                        |
| Source of Sample             | SUCTION PIT                    |                |                        |
| Rim @ Meas. Temp             | 1.23 OHMS@ 64 DEGF             |                |                        |
| Rinf @ Meas. Temp            | 0.92 OHMS@ 64 DEGF             |                |                        |
| Rmc @ Meas. Temp             | 1.54 OHMS@ 64 DEGF             |                |                        |
| Source of Rinf / Rmc         | CALCULATED                     |                |                        |
| Rim @ BHT                    | 0.6 OHMS@ 140 DEGF             |                |                        |
| Time Circulation Stopped     | 08:00 14NOV2012                |                |                        |
| Time Logger on Bottom        | 09:20 14NOV2012                |                |                        |
| Maximum Recorded Temperature | 140 DEGF                       |                |                        |
| Equipment Number             | T005                           |                |                        |
| Location                     | OKC, OK                        |                |                        |
| Recorded By                  | D. THOMAS                      |                |                        |
| Witnessed By                 | BRENT SEAGREST                 |                |                        |

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The use of and reliance upon this recorded-data by the herein named company (and any of its affiliates, partners, representatives, agents, consultants and employees) is subject to the terms and conditions agreed upon between ThruBit LLC and the company, including: (a) Restrictions on use of the recorded-data; (b) Disclaimers and waivers of warranties and representations regarding company's use of and reliance upon the recorded-data; and (c) Customer's full and sole responsibility for any inference drawn or decision made in connection with the use of this recorded-data.

**Comments**

**SERVICE: LEVEL 4 - HORIZONTAL MEMORY PUMP DOWN - BIT DEPTH: 9054' LOG TO: 3000'**  
**ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST**  
**LIMESTONE MATRIX, 2.71 G/CC, USED TO MEASURE POROSITIES**  
**TOOL STRING RAN WITH S. DECENTRALIZER, SWIVEL, NO STANDOFFS**  
**TBHV = TOTAL BOREHOLE VOLUME, FT3**  
**ABHV = ANNULAR BOREHOLE VOLUME, FT3, CALCULATED FOR 4.50" CSG**  
**RIGMINDER LITE AND PASON USED TO CREATE LOG DEPTH**  
**LOG DEPTH CORRELATED TO MWD GAMMA AT CUSTOMERS REQUEST**

**RIG: UNIT # 310**  
**CREW: D. THOMAS, R. WILSON, R. CRESSWELL**

Service Ticket No. 1573 API No. 15-077-21881-0100 PGM Ver WARRIOR 7.0

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

**EQUIPMENT DATA**

GAMMA RAY

NEUTRON

DENSITY

INDUCTION

|                         |           |            |           |            |                      |            |                      |
|-------------------------|-----------|------------|-----------|------------|----------------------|------------|----------------------|
| Run No.                 | ONE       | Run No.    | ONE       | Run No.    | ONE                  | Run No.    | ONE                  |
| Serial No.              | ENP5T     | Serial No. | PS14N     | Serial No. | PS24D                | Serial No. | PS38R                |
| Model No.               | ENP       | Model No.  | PS        | Model No.  | PS                   | Model No.  | PS                   |
| Diameter                | 2.125"    | Diameter   | 2.125"    | Diameter   | 2.125"               | Diameter   | 2.125"               |
| LOGGING DATA            |           |            |           |            |                      |            |                      |
| General Data            |           |            |           |            |                      |            |                      |
| Pass                    | Depths    |            | Well Head | Speed      | Logging Run Comments |            |                      |
| No.                     | From      | To         | Pressure  | Ft/Min     |                      |            |                      |
| ONE                     | 9115'     | 3000'      |           | 30         |                      |            |                      |
|                         |           |            |           |            |                      |            |                      |
|                         | GAMMA RAY |            | NEUTRON   |            | DENSITY              |            | INDUCTION            |
| Pass                    | Scale     |            | Scale     |            | Scale                |            | Scale                |
| No.                     | L         | R          | L         | R          | L                    | R          | L                    |
| ONE                     | 0 API     | 150 API    | 30 %      | -10 %      | 30 %                 | -10 %      | 0.2 OHM-M 2000 OHM-M |
|                         |           |            |           |            |                      |            |                      |
| DIRECTIONAL INFORMATION |           |            |           |            |                      |            |                      |
| Maximum Deviation       | 93.8      | deg. @     | 8945'     | KOP        | 3881'                |            |                      |
|                         |           |            |           |            |                      |            |                      |
|                         |           |            |           |            |                      |            |                      |



**ThruBit**

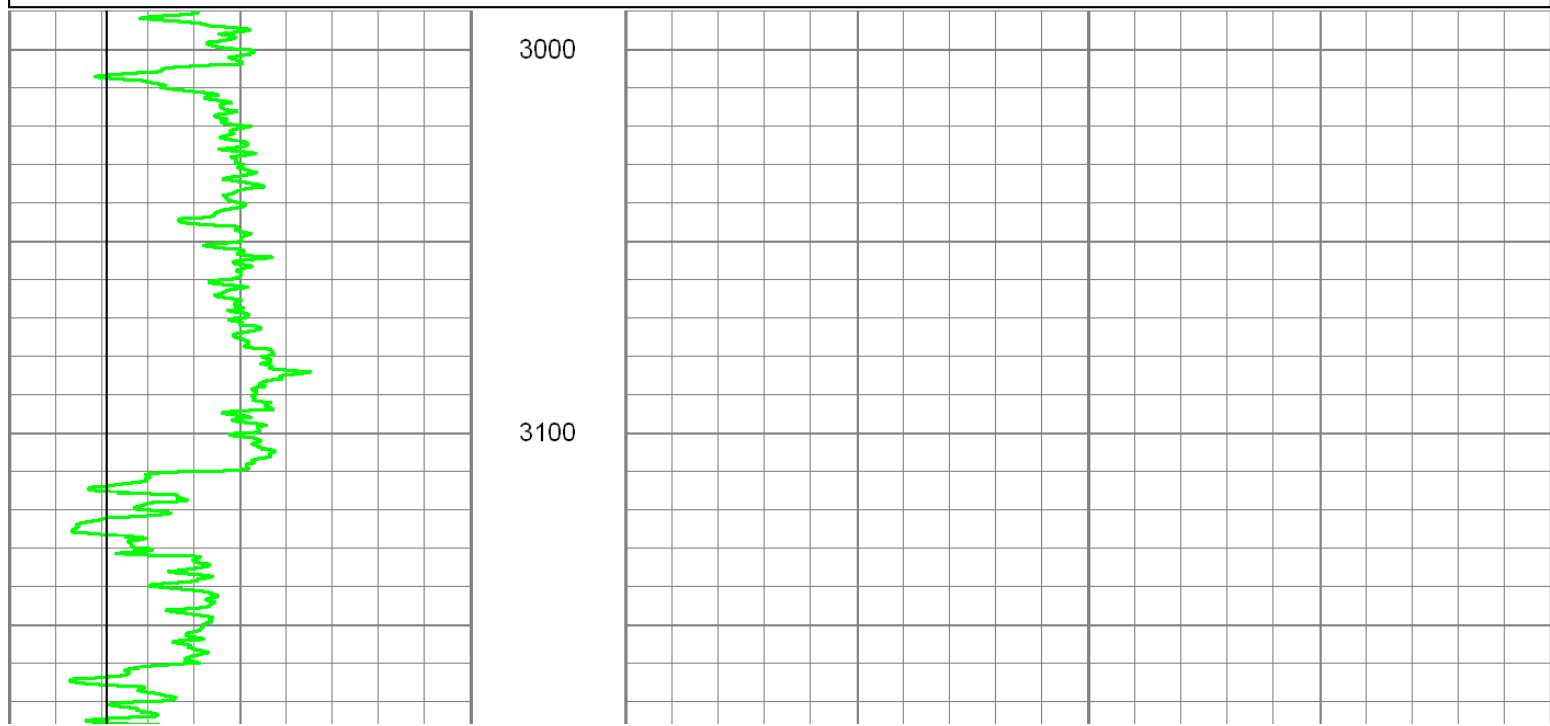
A Schlumberger Company

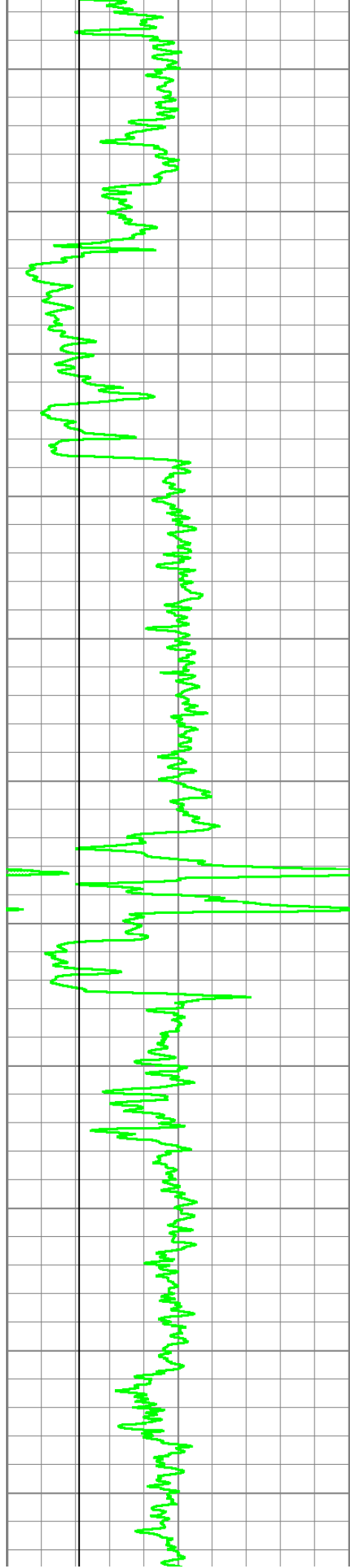
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Presentation Format: 6\_2n\_chk  
Dataset Creation: Wed Nov 14 17:59:38 2012  
Charted by: Depth in Feet scaled 1:600

|    |             |     |
|----|-------------|-----|
| 0  | GR (GAPI)   | 150 |
| 4  | DCAL (in)   | 14  |
| 4  | BOREID (in) | 14  |
| -5 | ACCY        | 5   |

|   |             |    |      |             |     |
|---|-------------|----|------|-------------|-----|
| 0 | PEF (barn)  | 10 | -0.5 | DRHO (g/cc) | 0.5 |
| 2 | RHOB (g/cc) |    |      |             | 3   |





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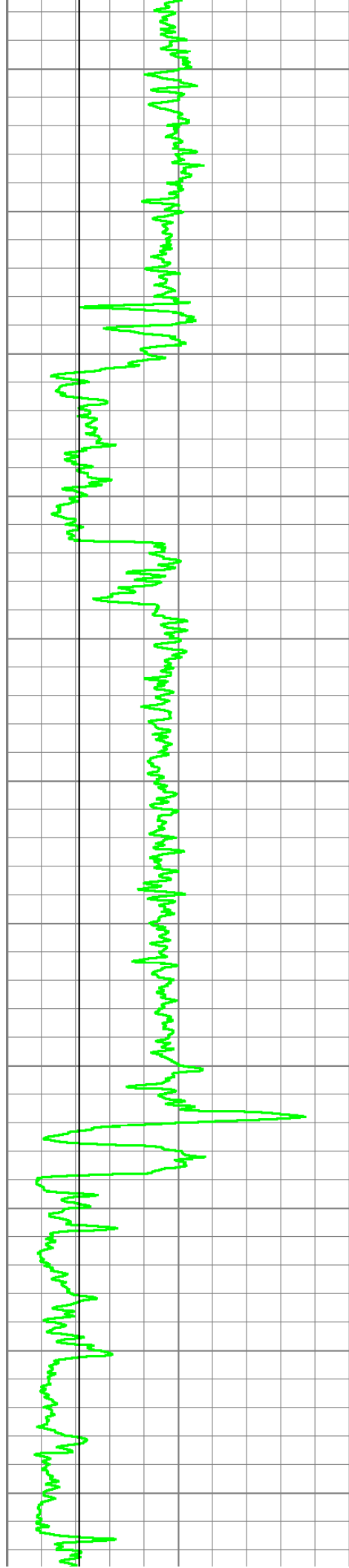
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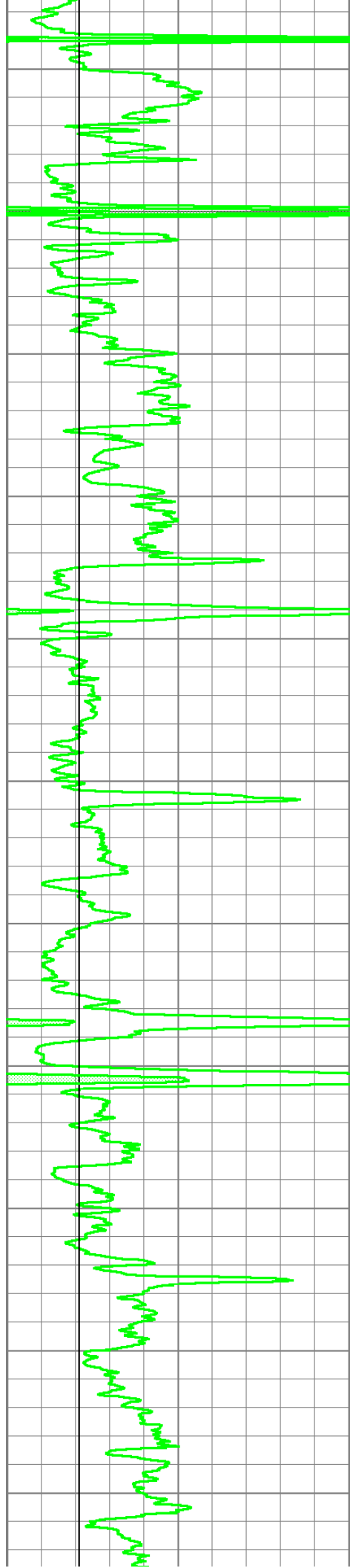
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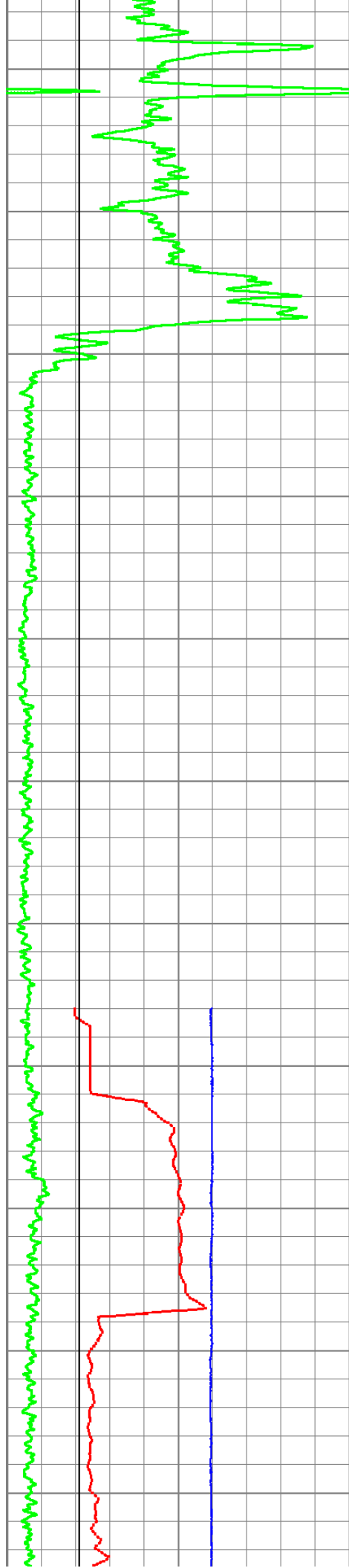
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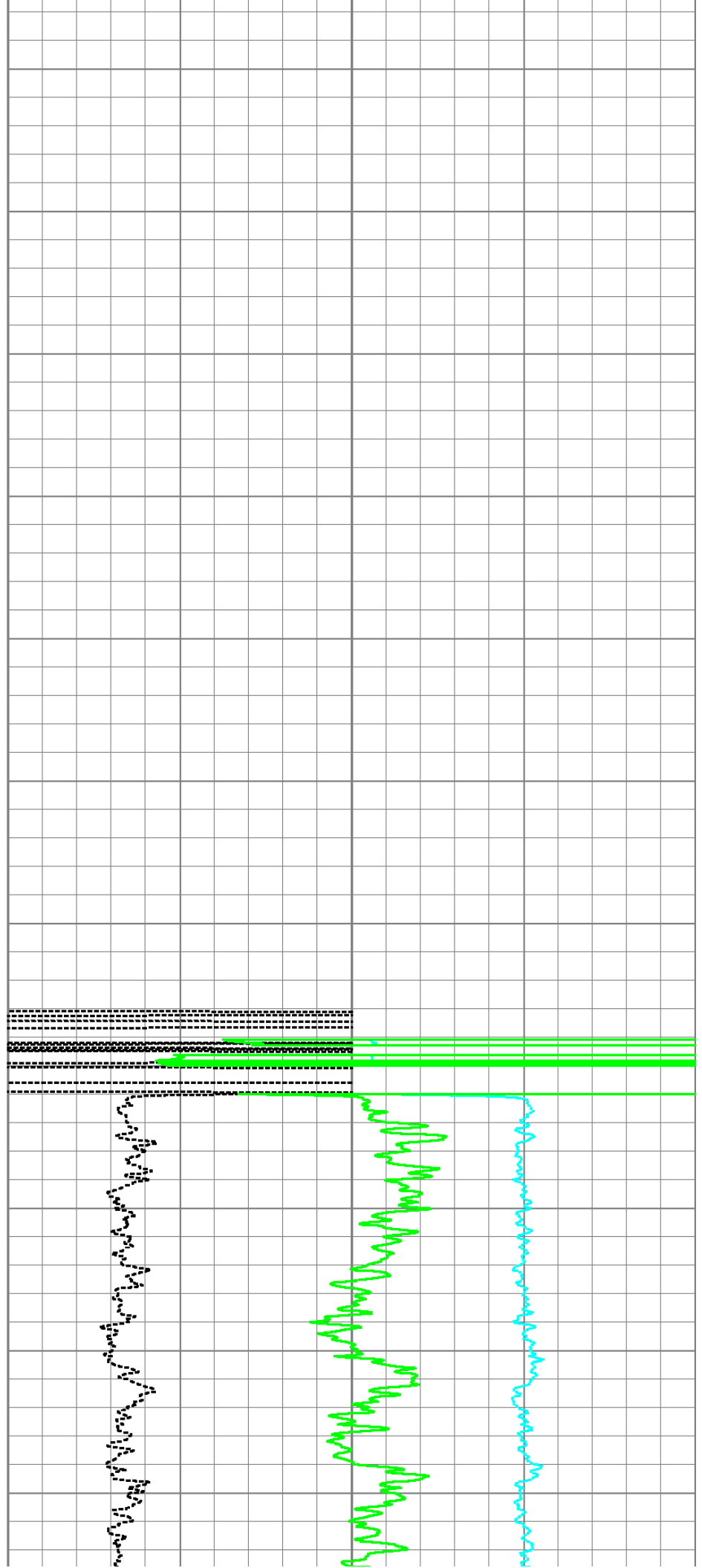
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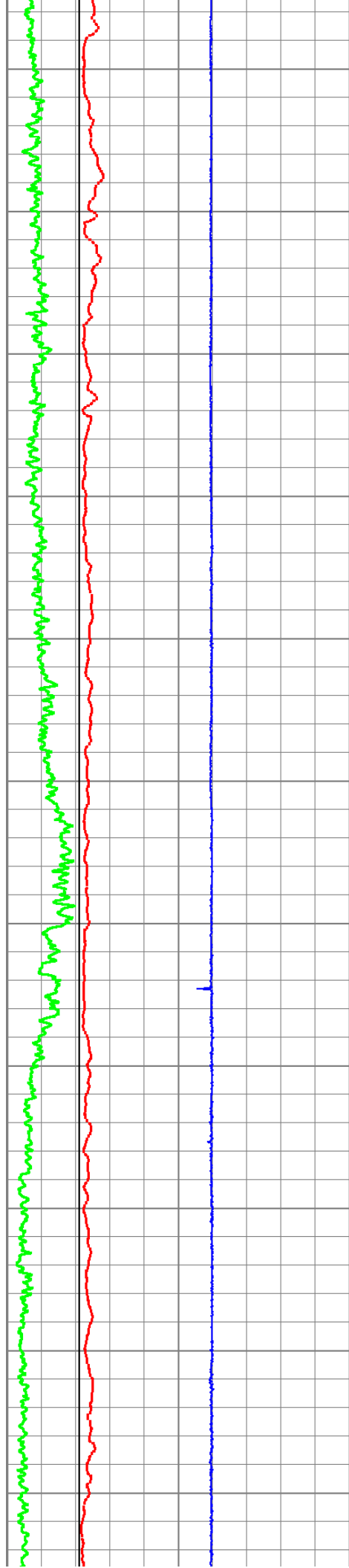
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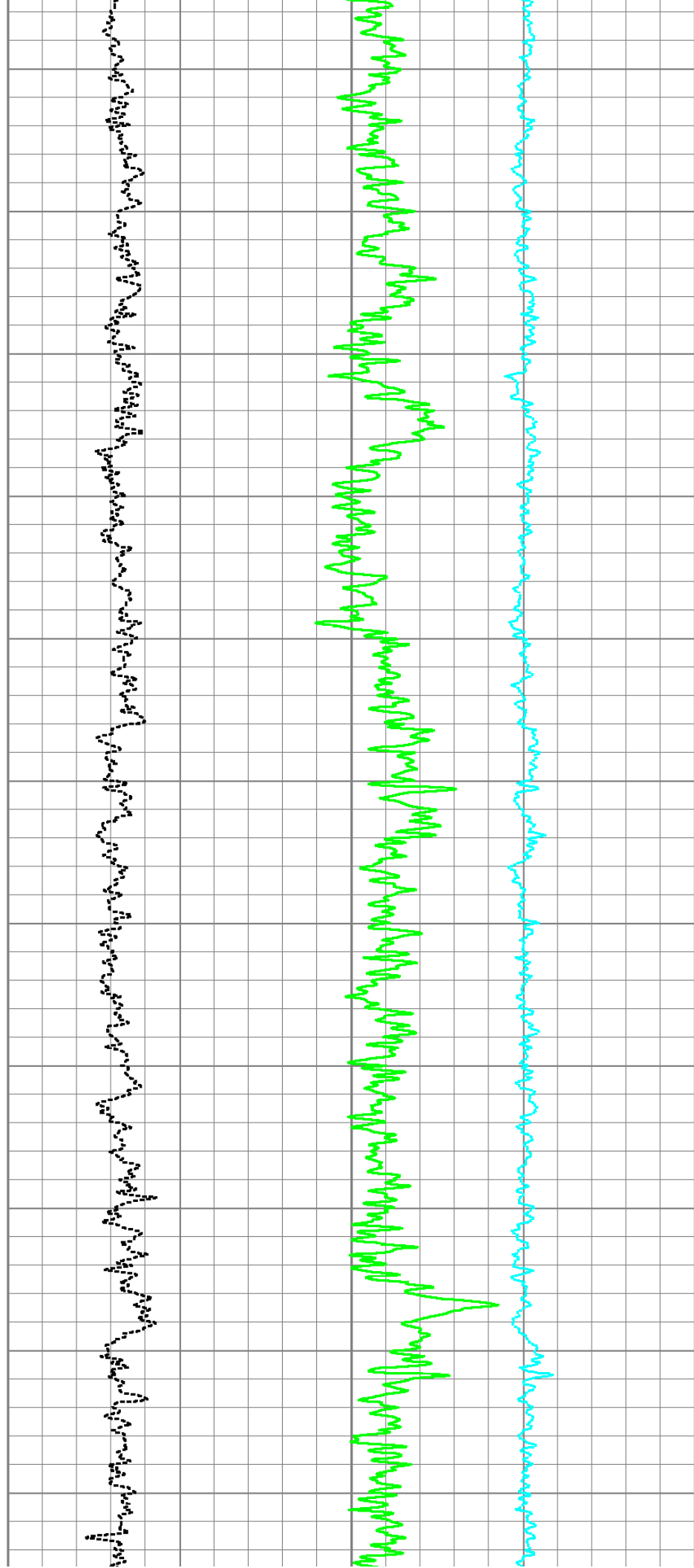
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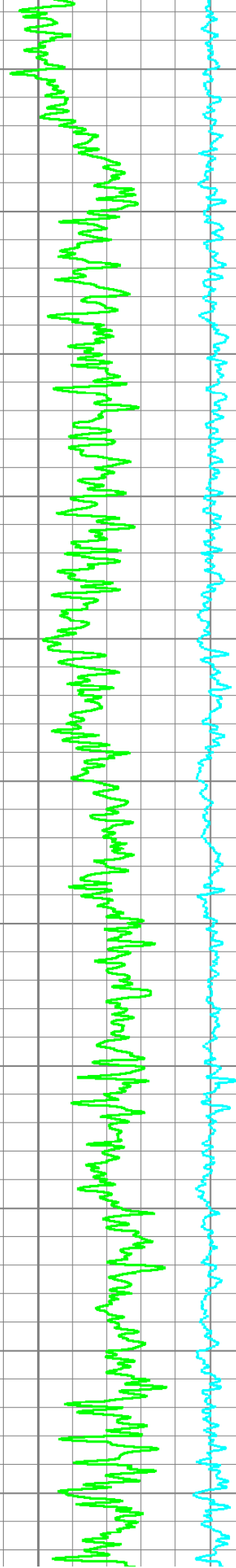
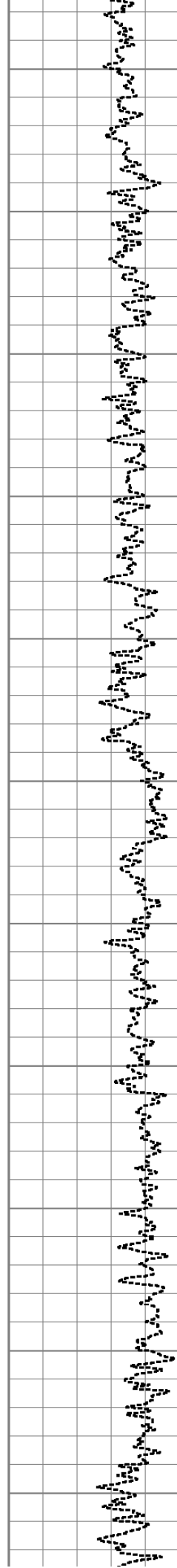
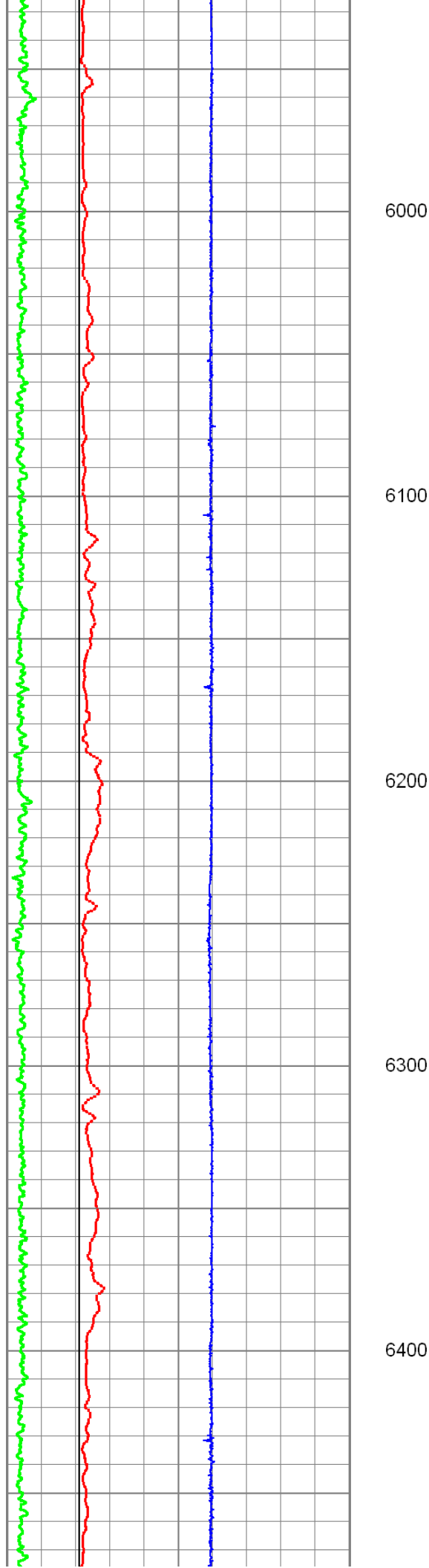
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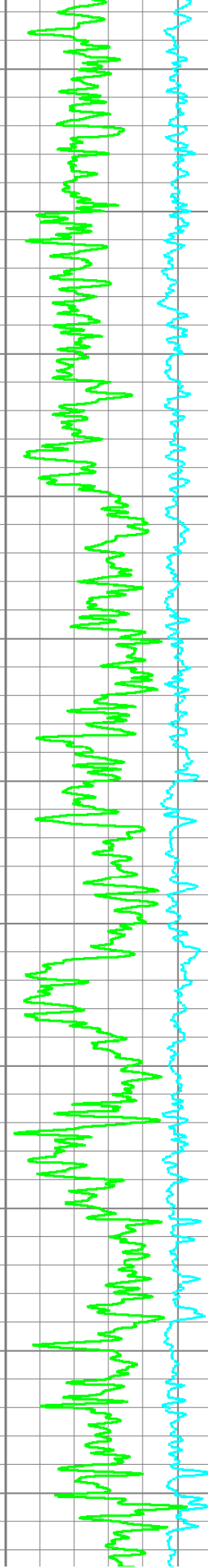
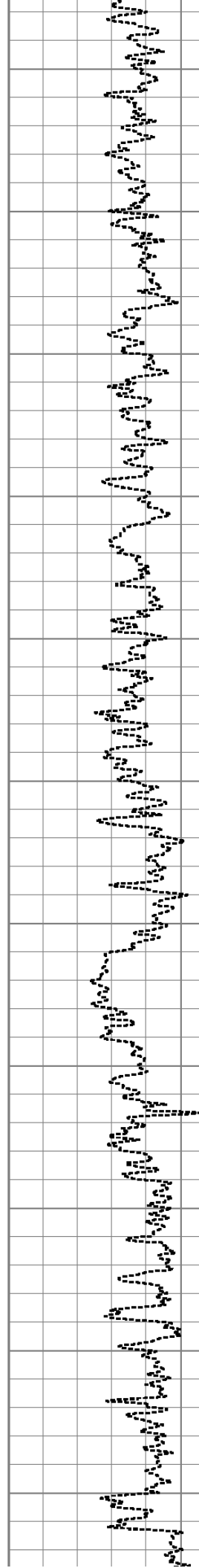
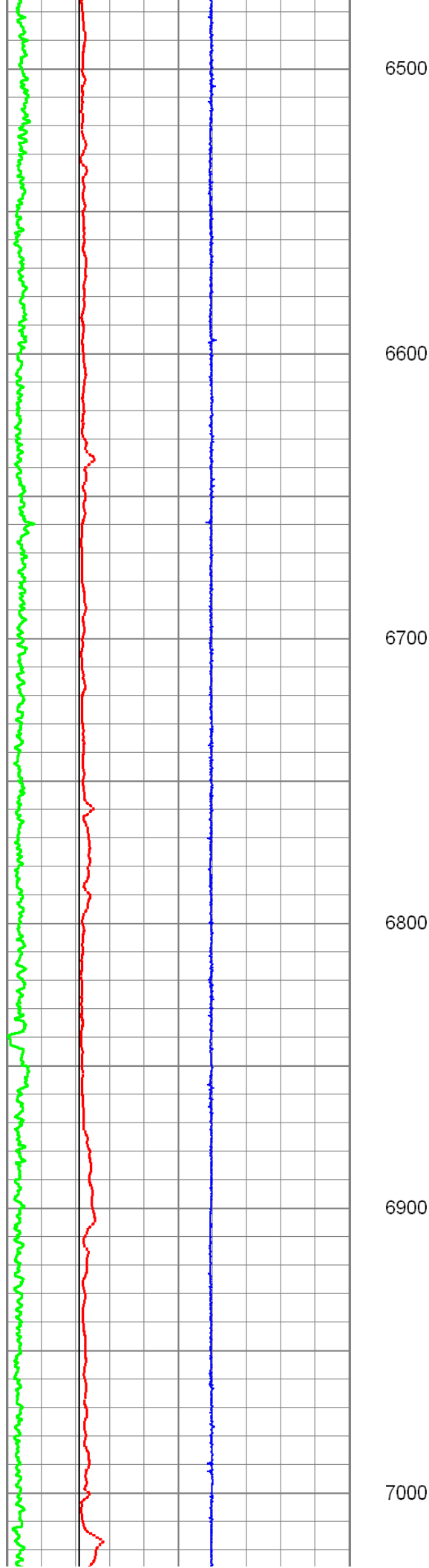
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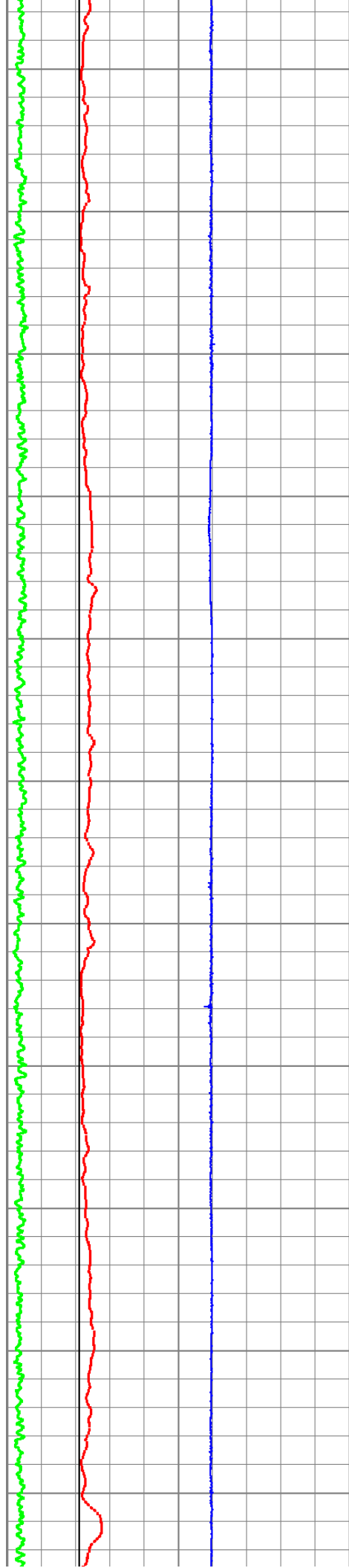
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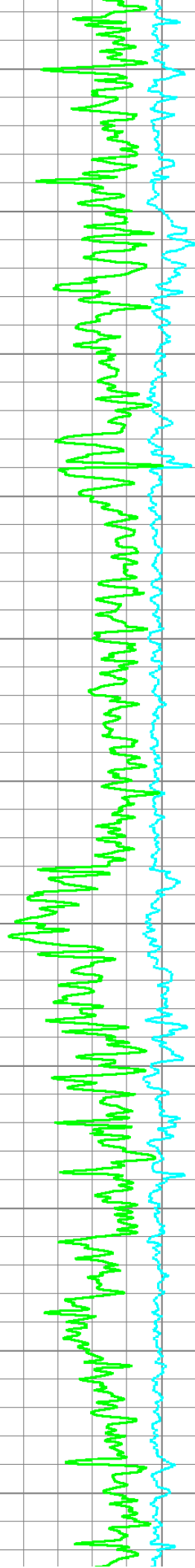
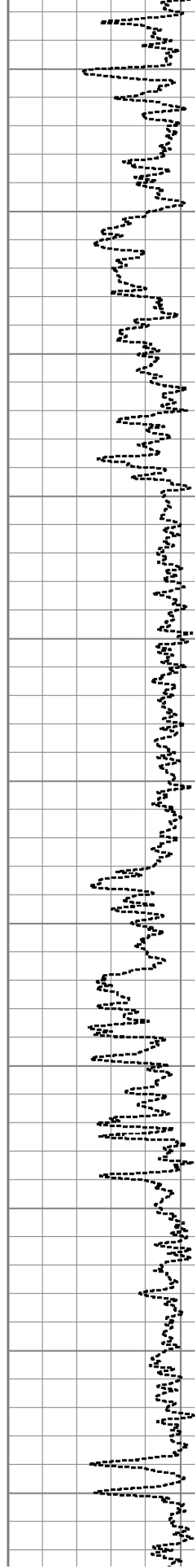
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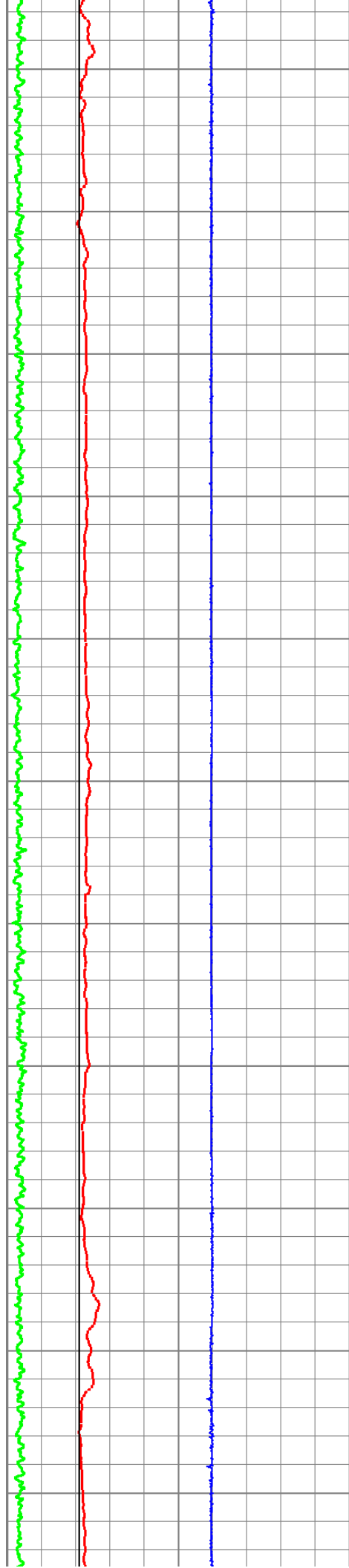
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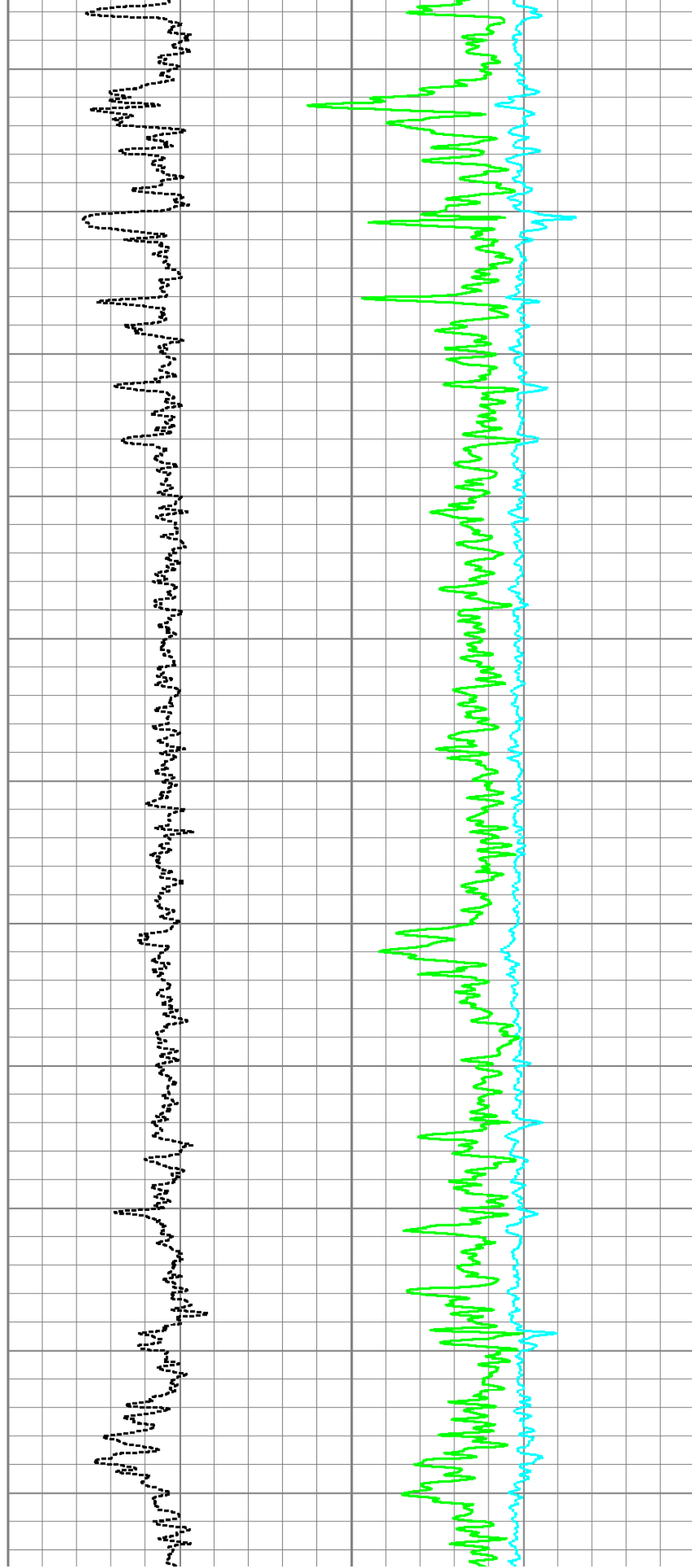
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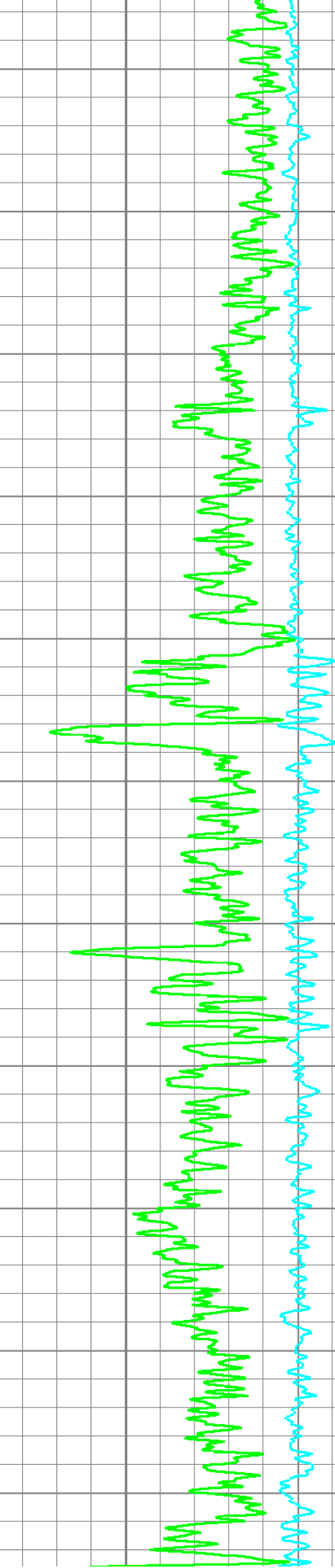
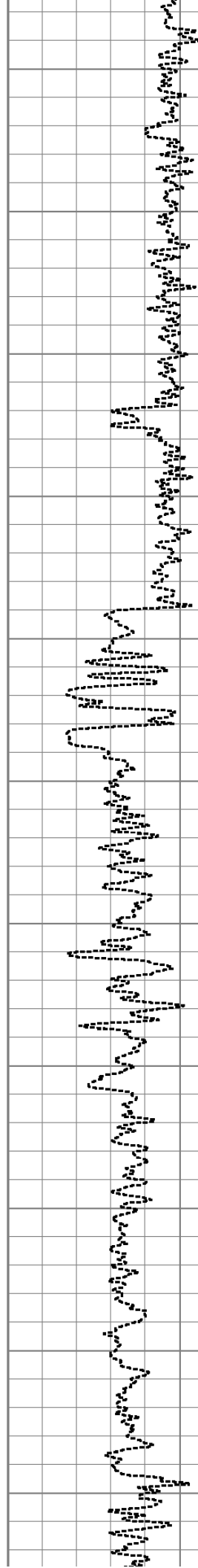
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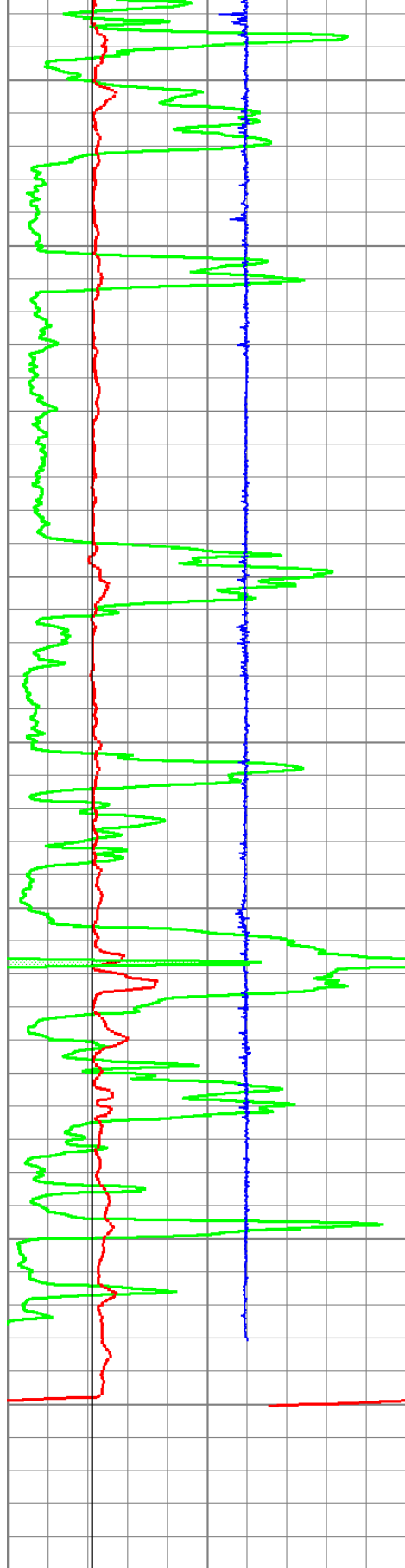
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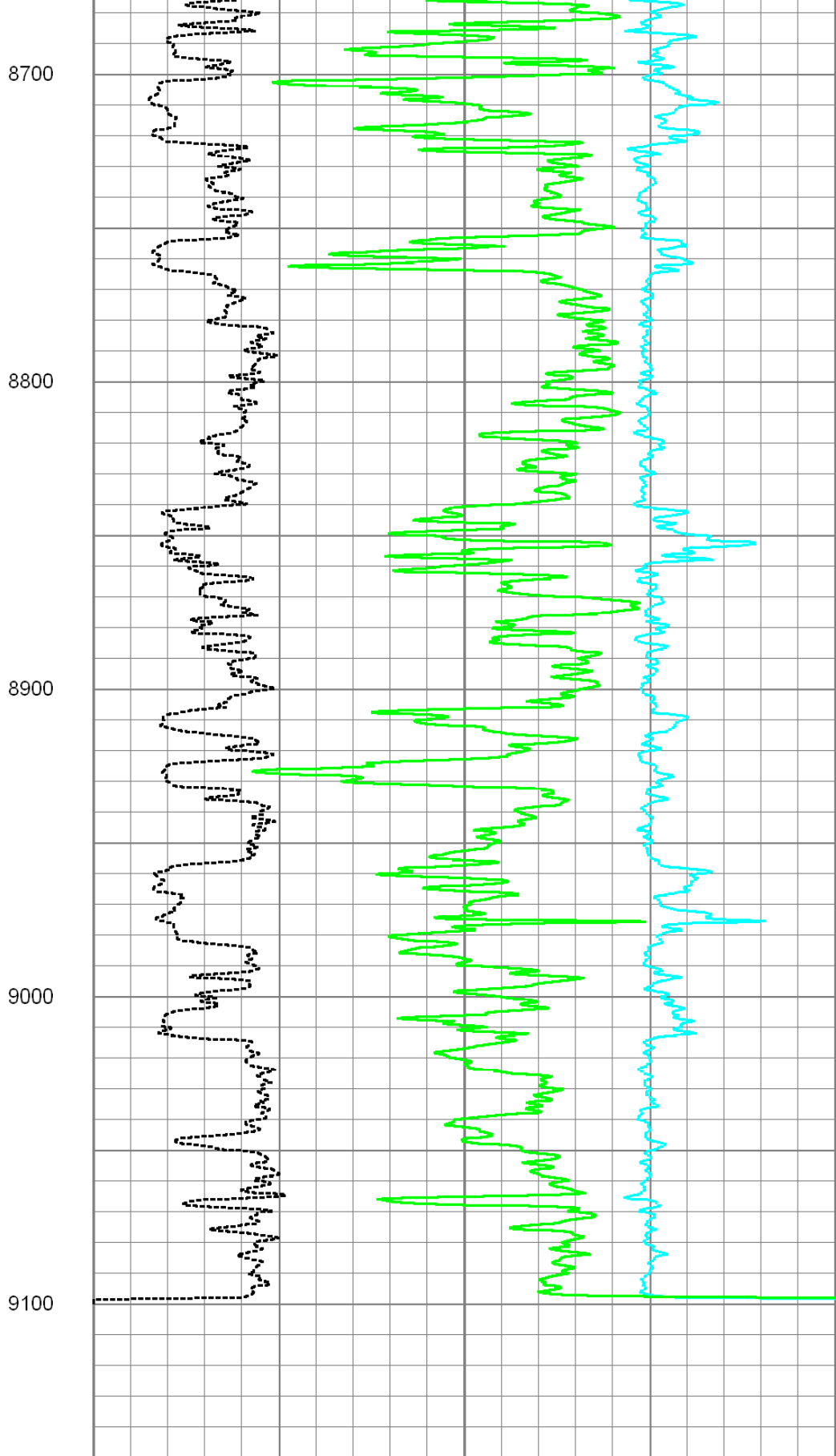
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|    |             |     |
|----|-------------|-----|
| 0  | GR (GAPI)   | 150 |
| 4  | DCAL (in)   | 14  |
| 4  | BOREID (in) | 14  |
| -5 | ACCY        | 5   |

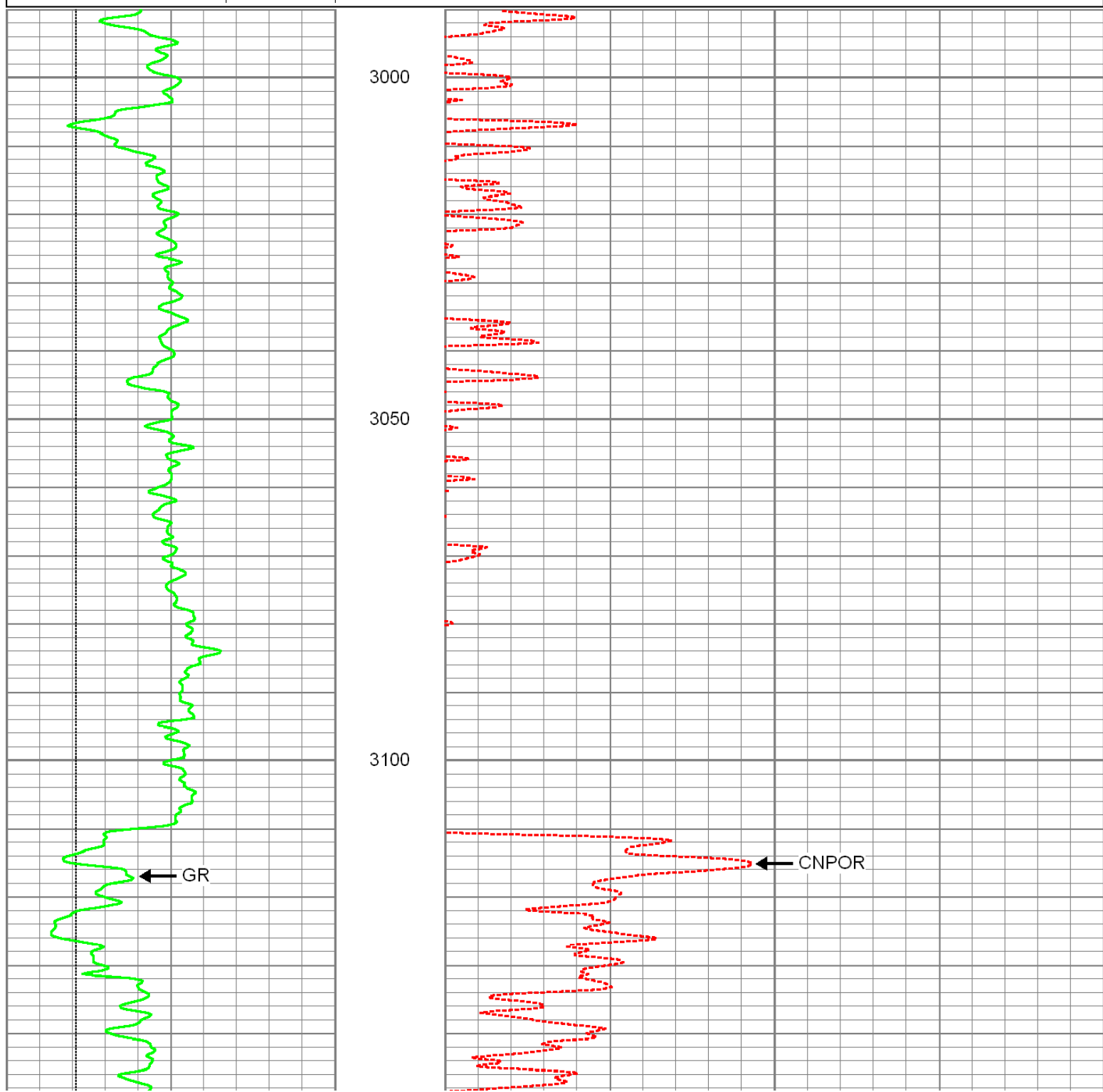


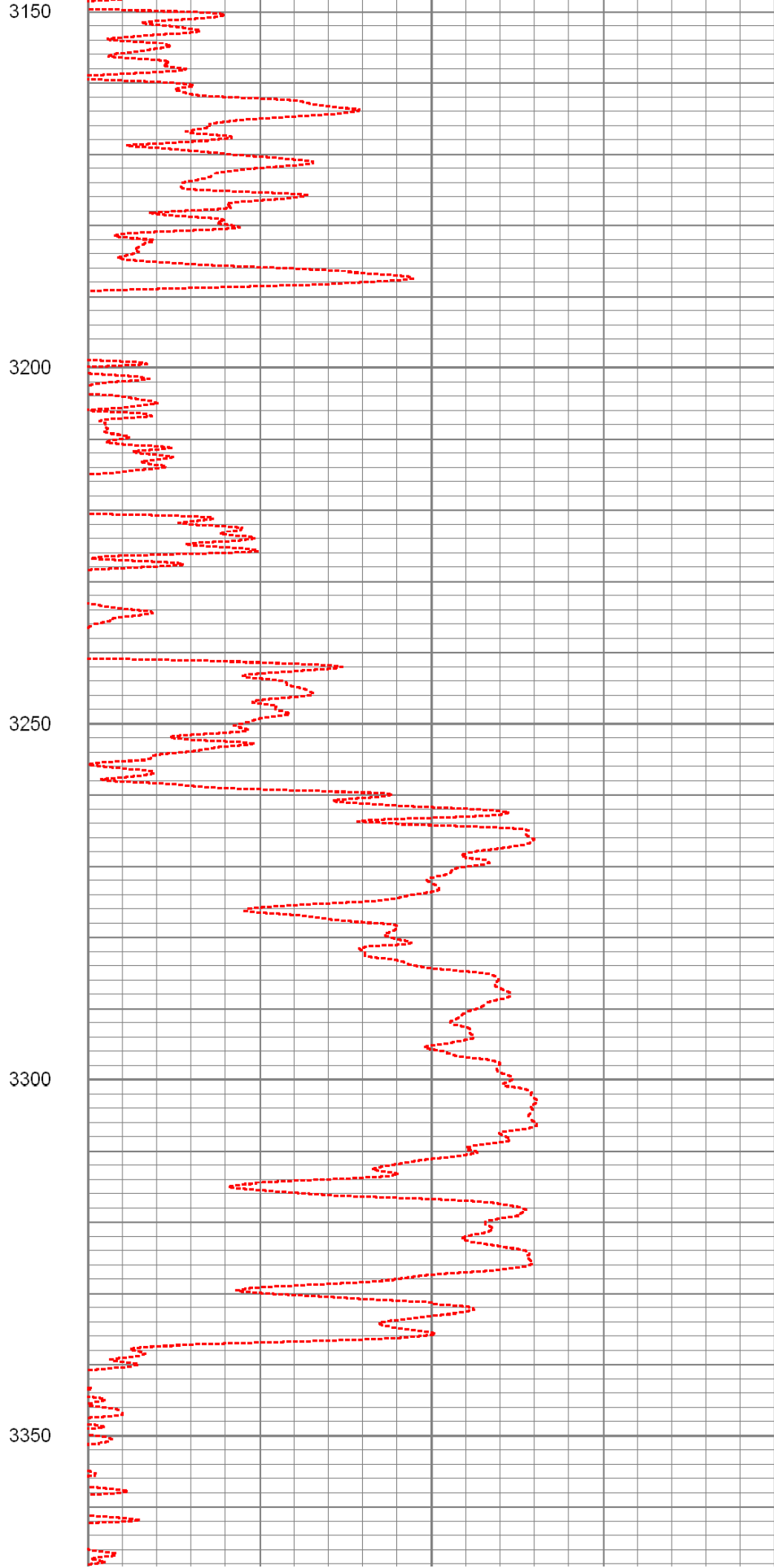
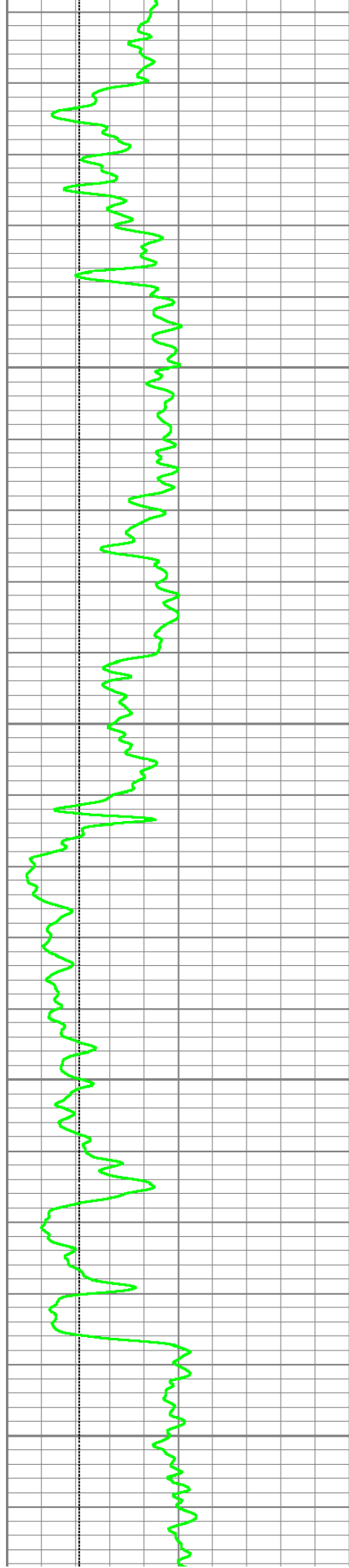
|   |             |    |      |             |     |
|---|-------------|----|------|-------------|-----|
| 0 | PEF (barn)  | 10 | -0.5 | DRHO (g/cc) | 0.5 |
| 2 | RHOB (g/cc) |    |      |             | 3   |

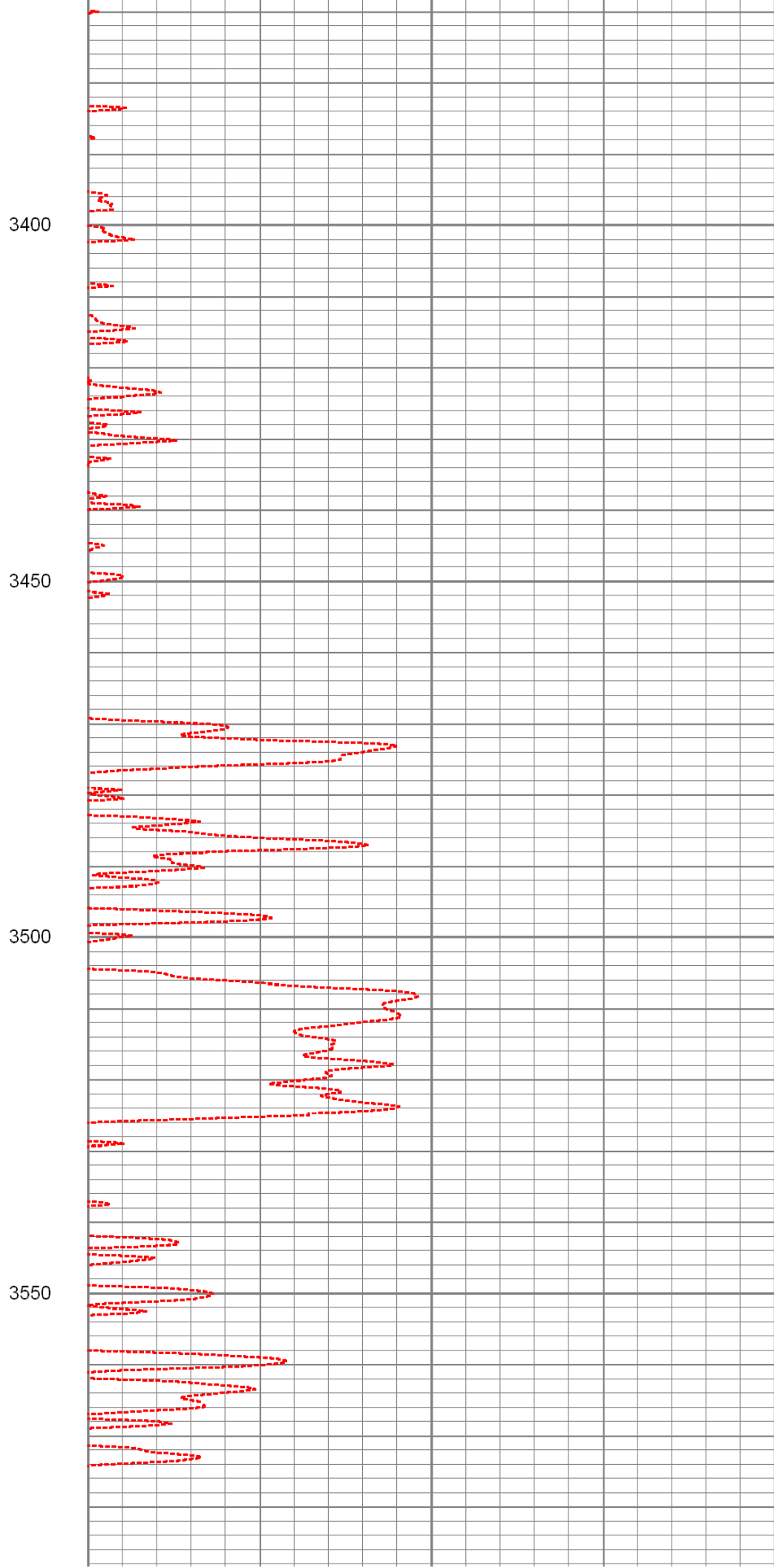
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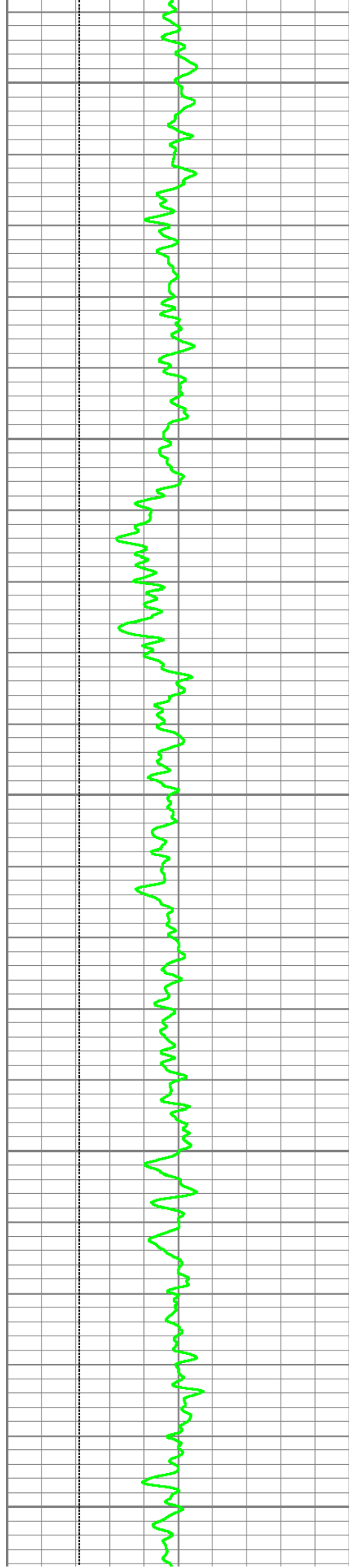
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 Presentation Format: 6\_5n\_chk  
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 Charted by: Depth in Feet scaled 1:240

|    |             |     |            |             |     |
|----|-------------|-----|------------|-------------|-----|
| 4  | DCAL (in)   | 14  | 30         | CNPOR (pu)  | -10 |
| 4  | BOREID (in) | 14  | 30         | DPHI (pu)   | -10 |
| 0  | GR (GAPI)   | 150 | 0          | PEF (barn)  | 10  |
| -5 | ACCY        | 5   | -0.5       | DRHO (g/cc) | 0.5 |
|    | TBHV (ft3)  |     | ABHV (ft3) |             |     |









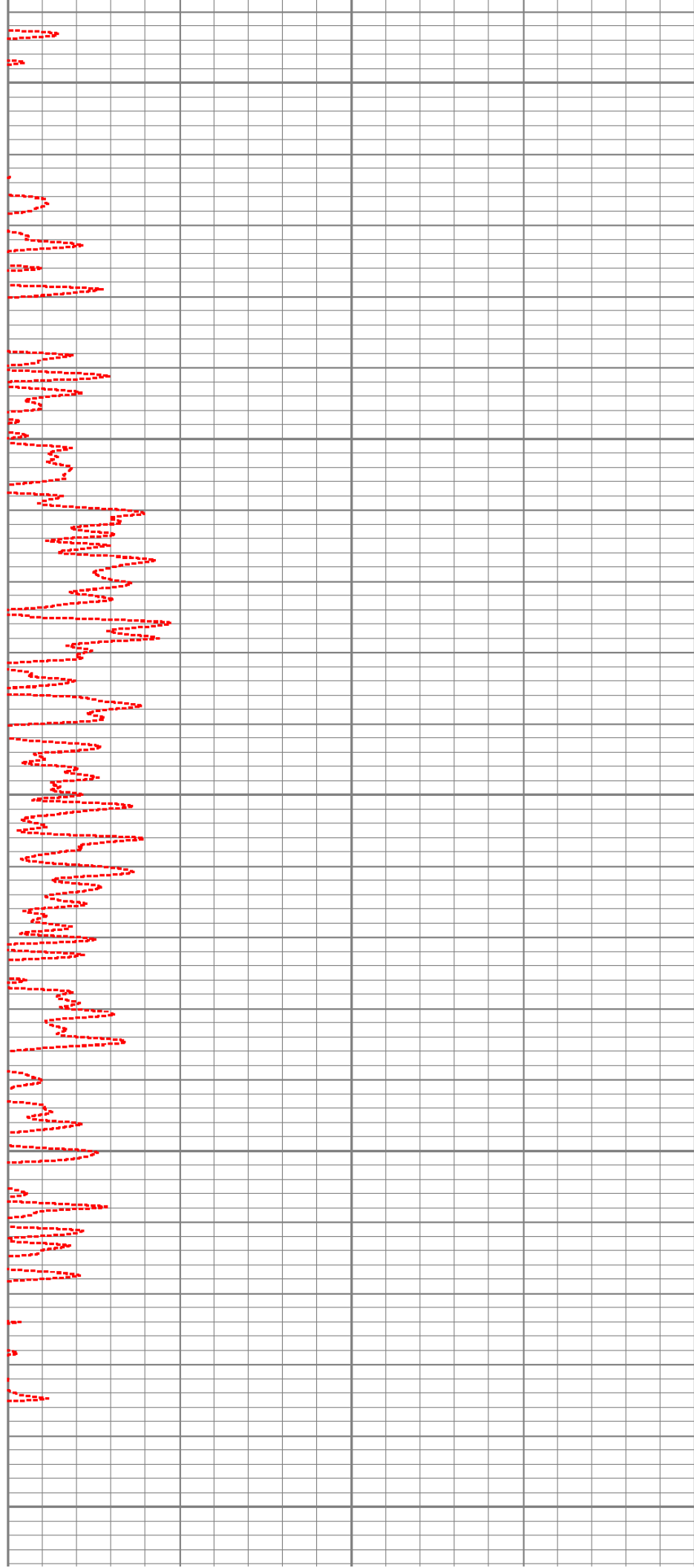
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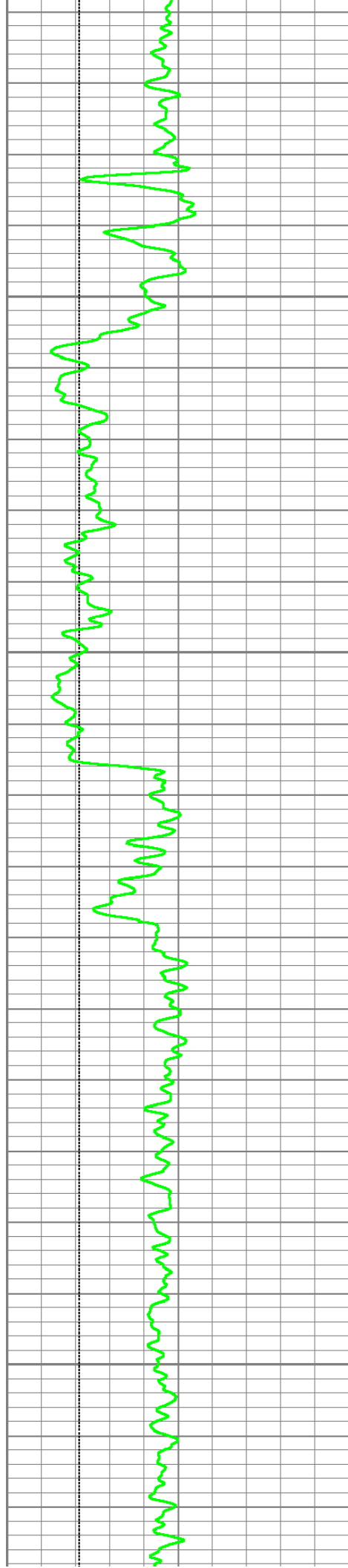
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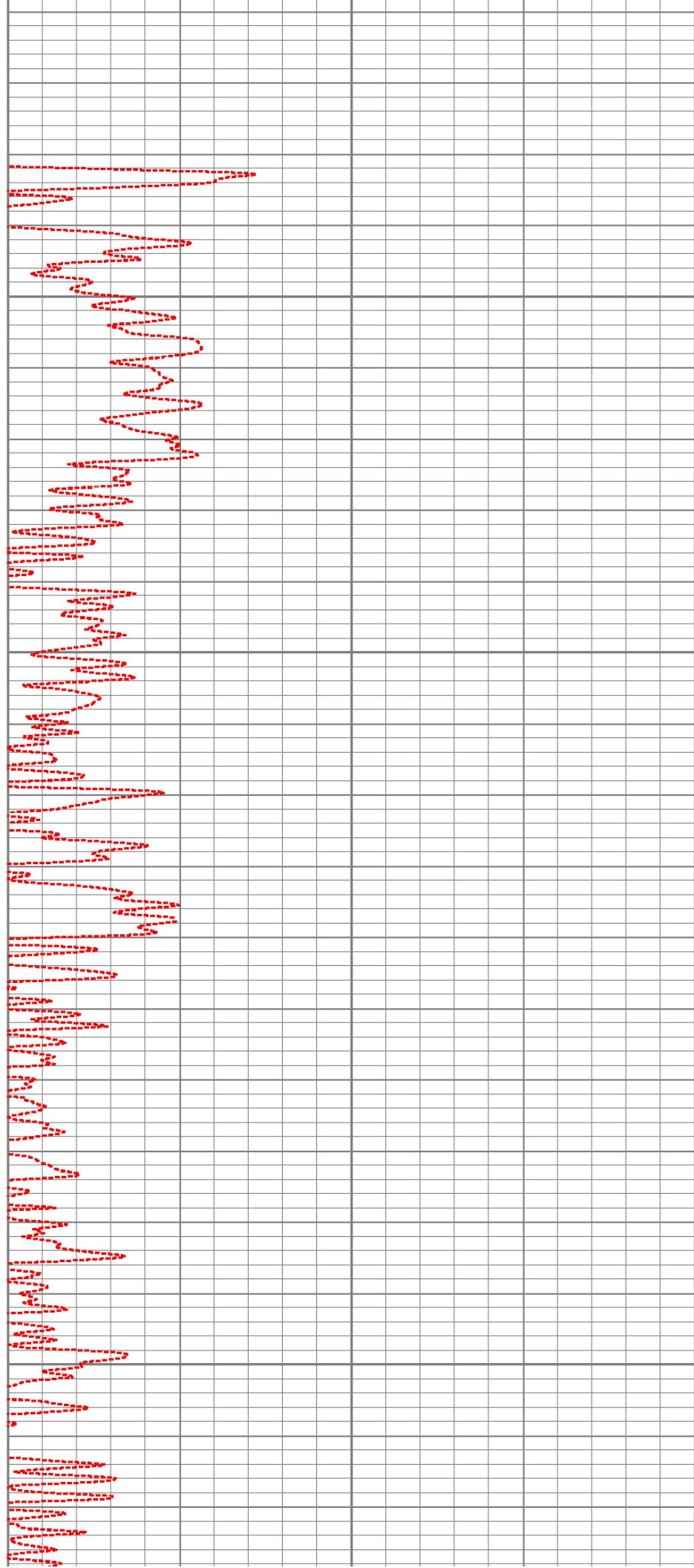


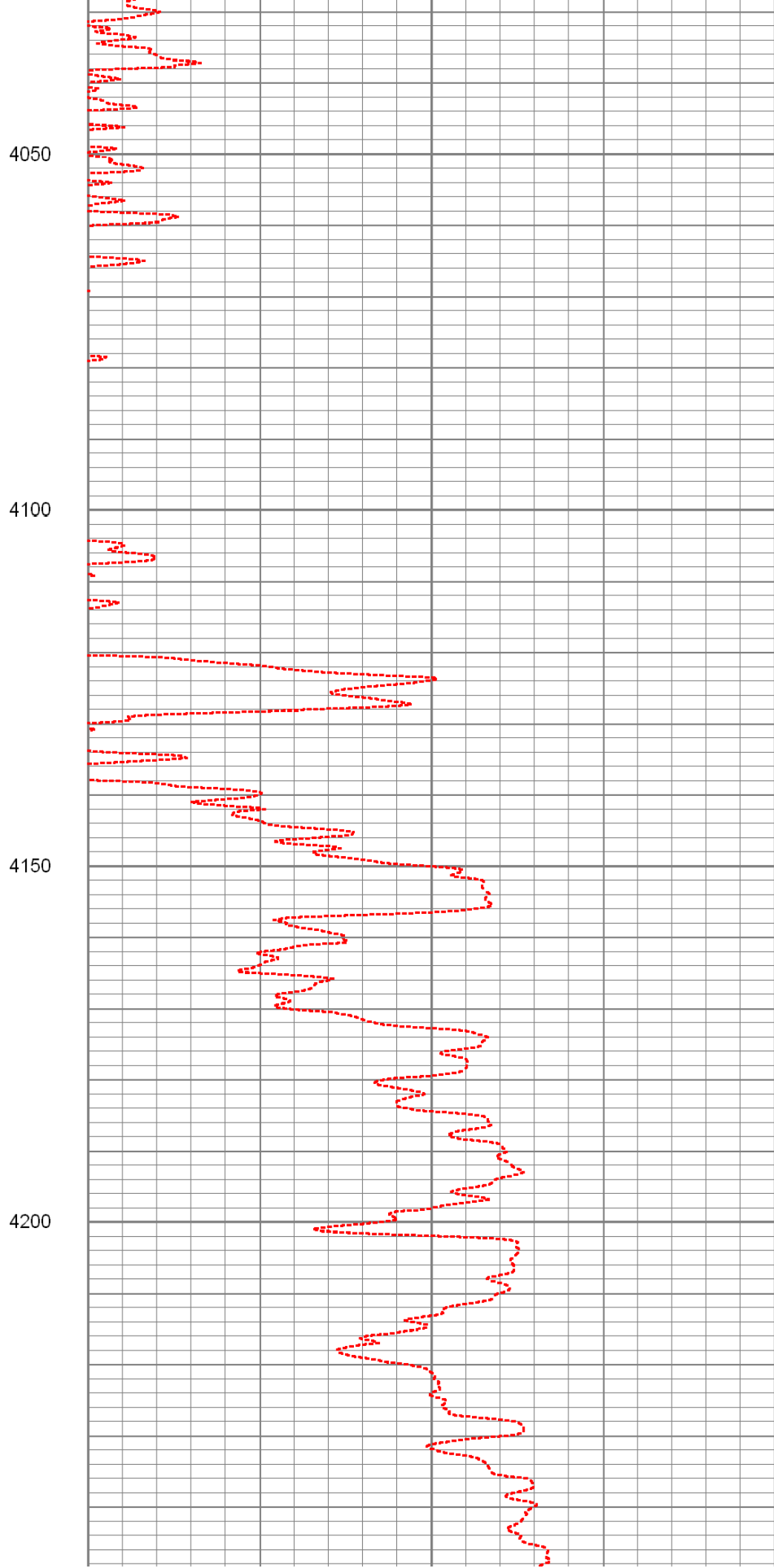
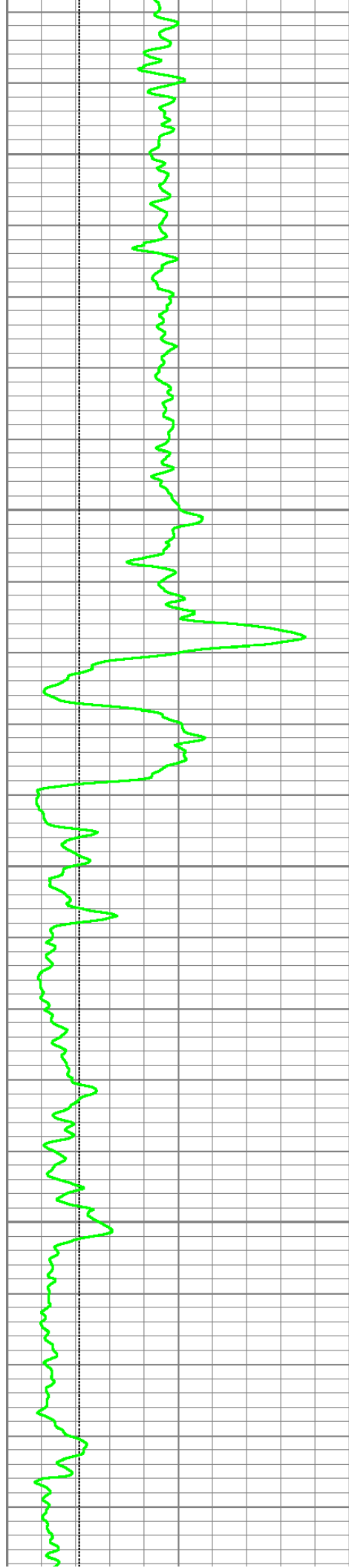
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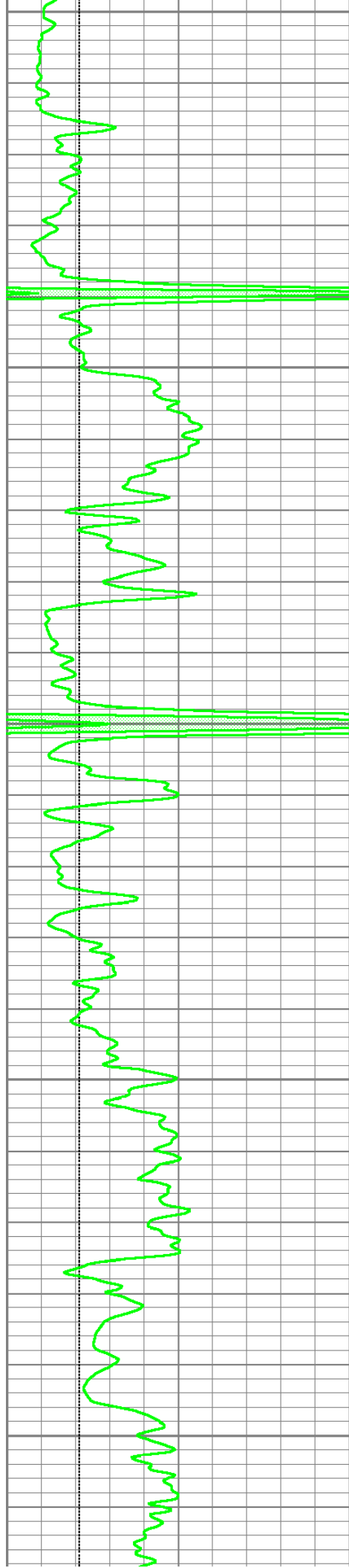
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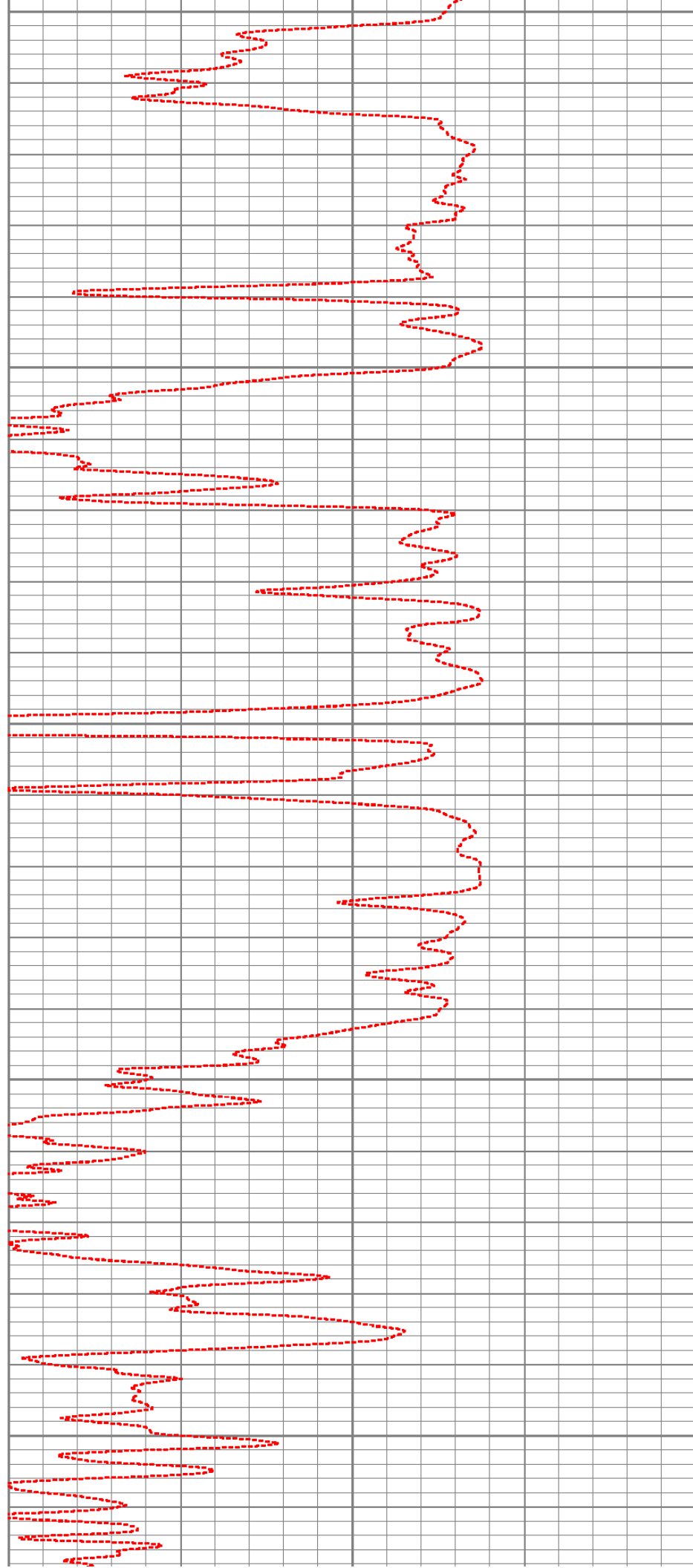
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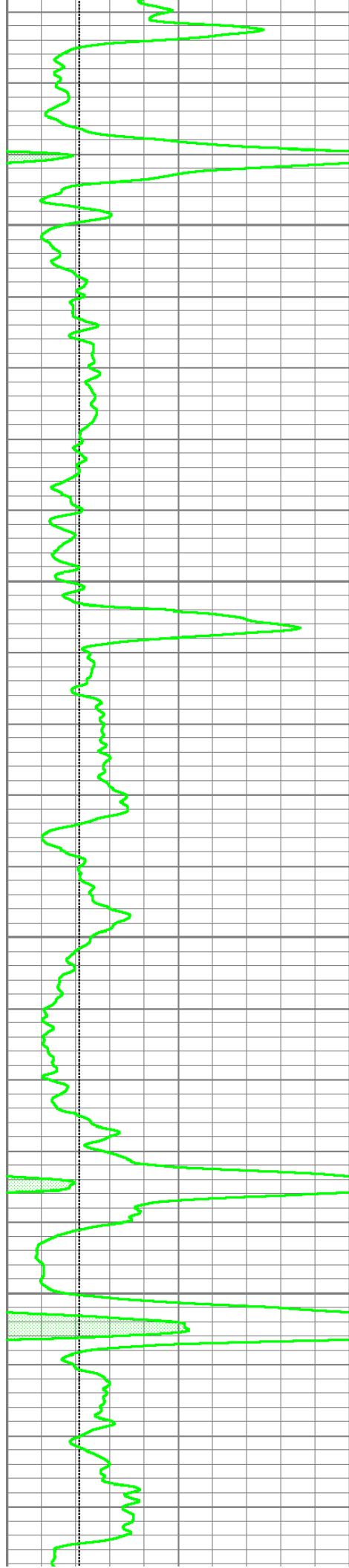
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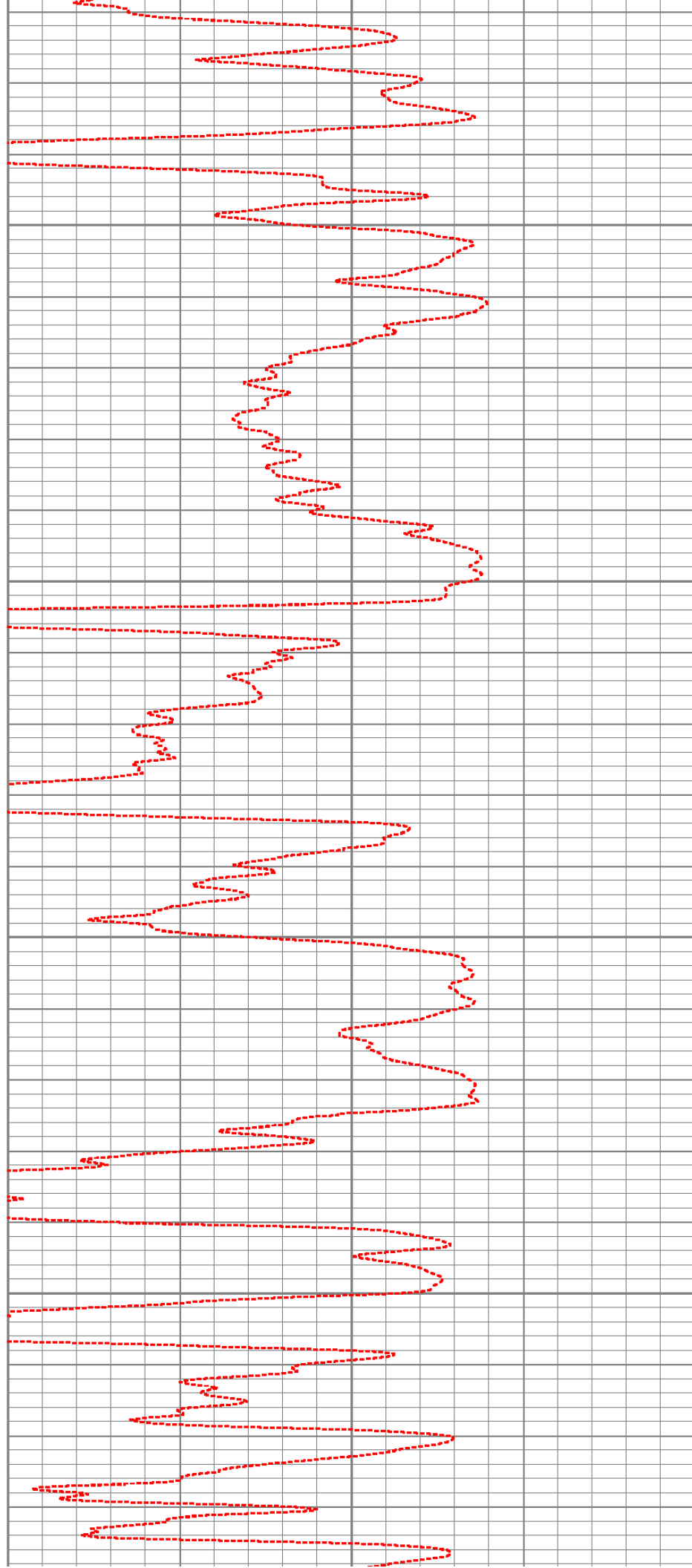


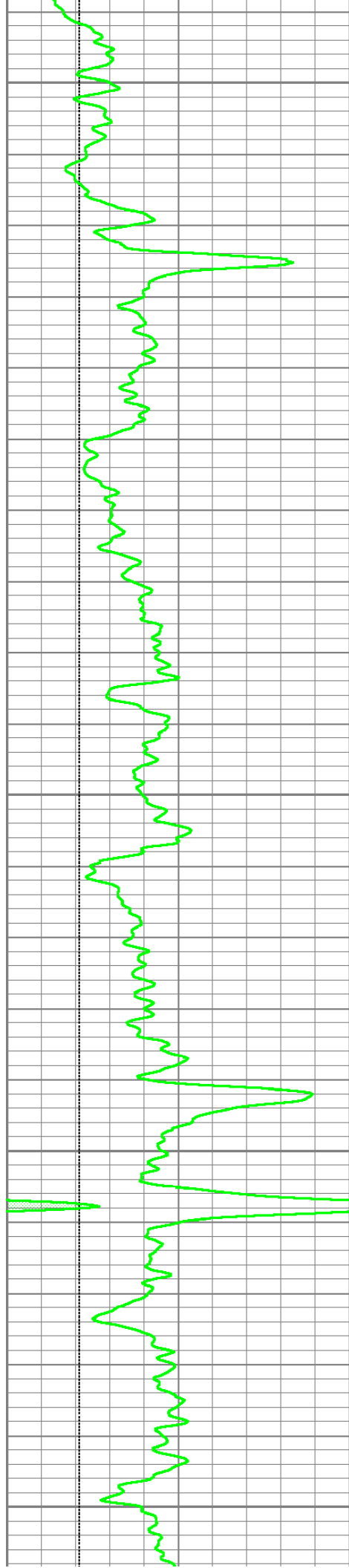
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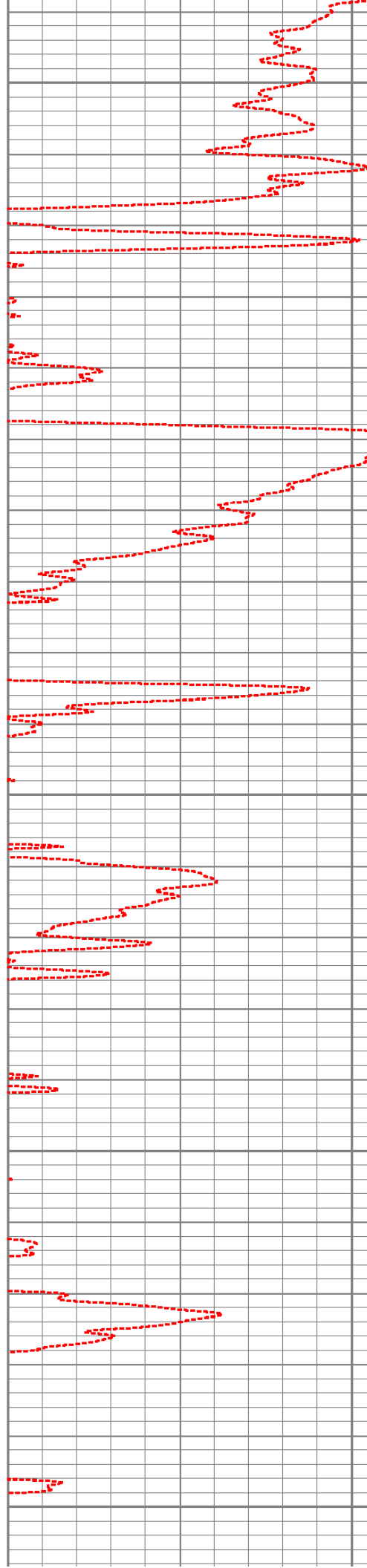
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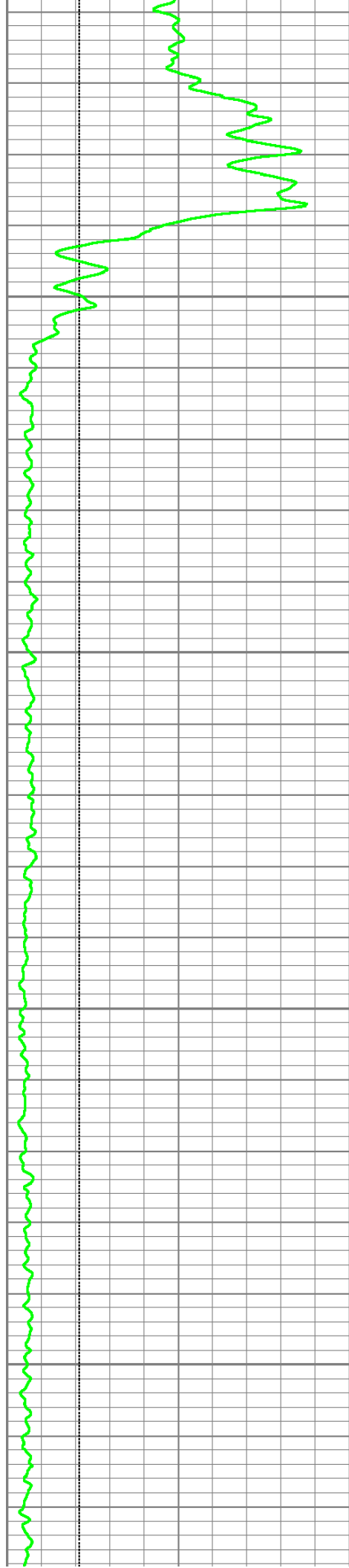
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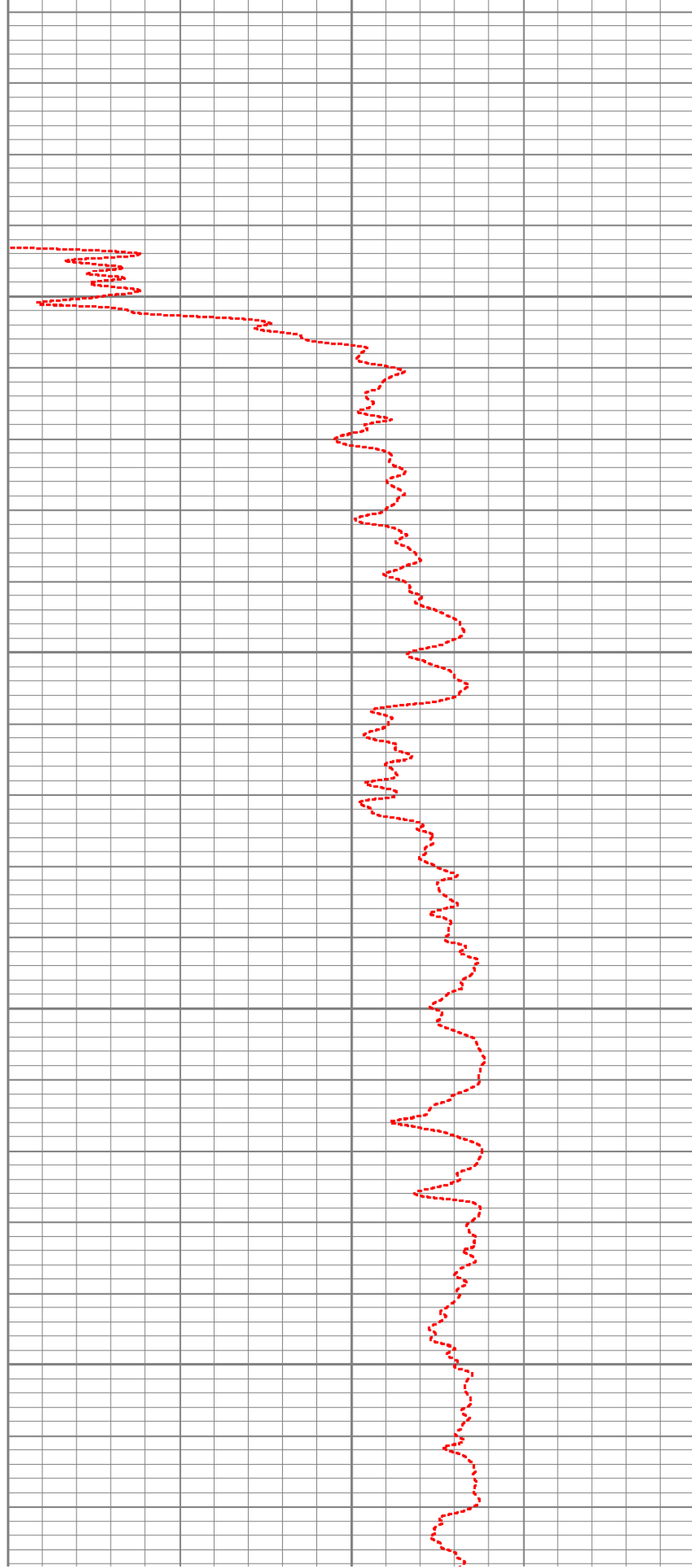


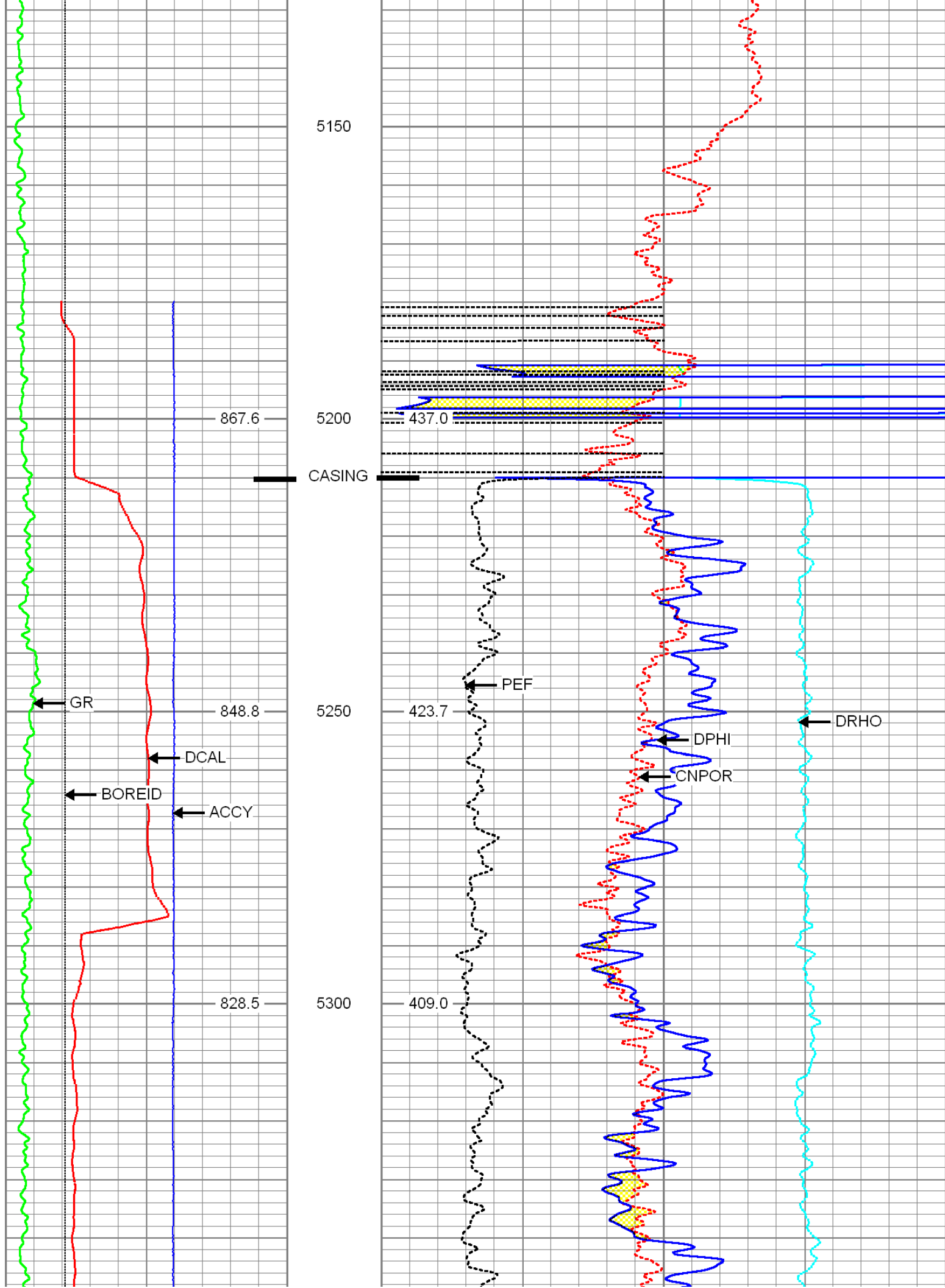
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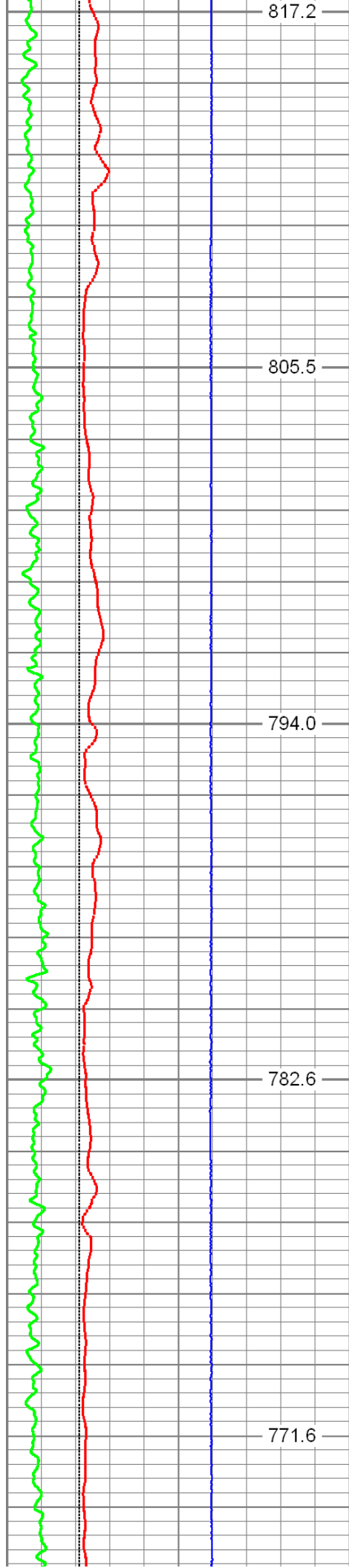
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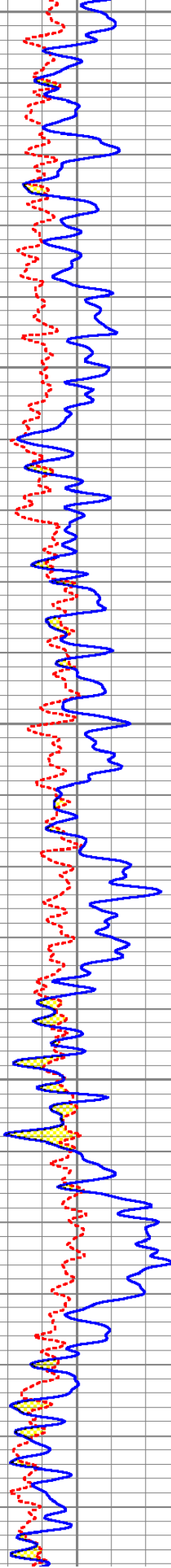
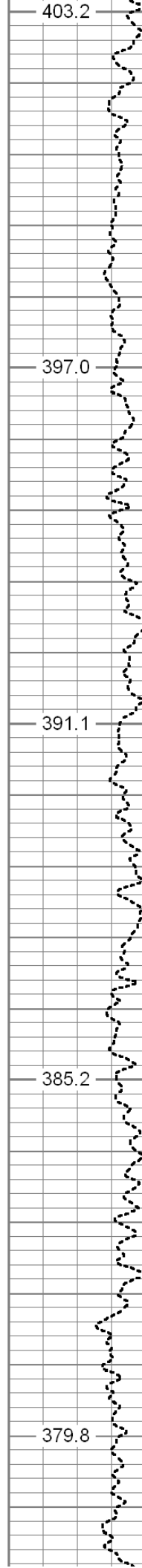
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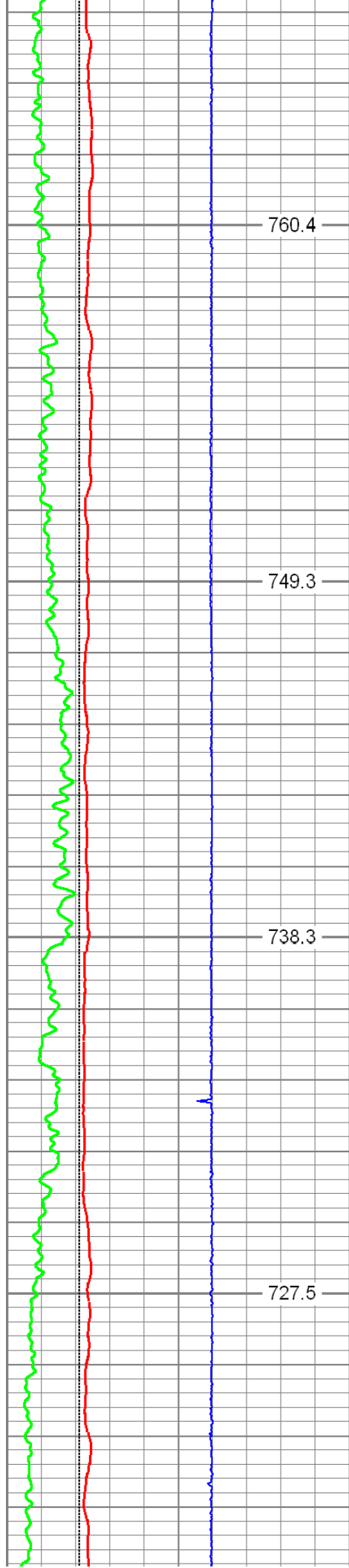






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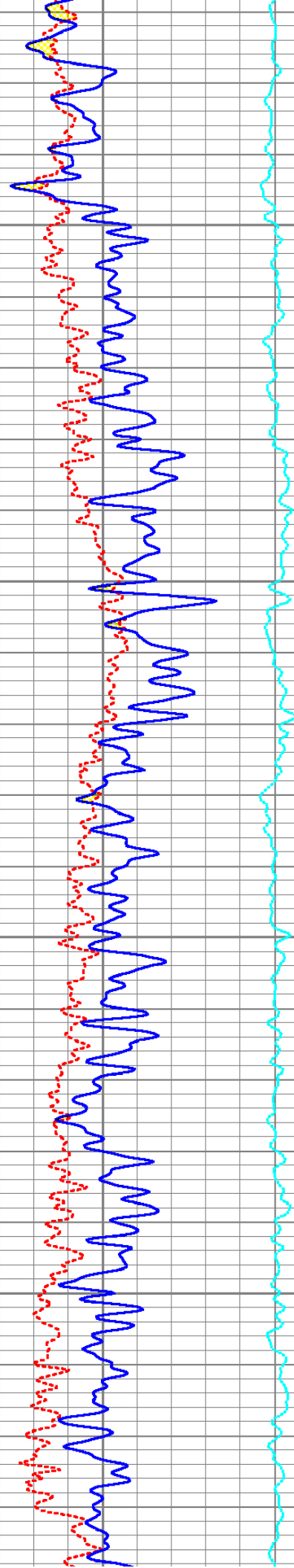
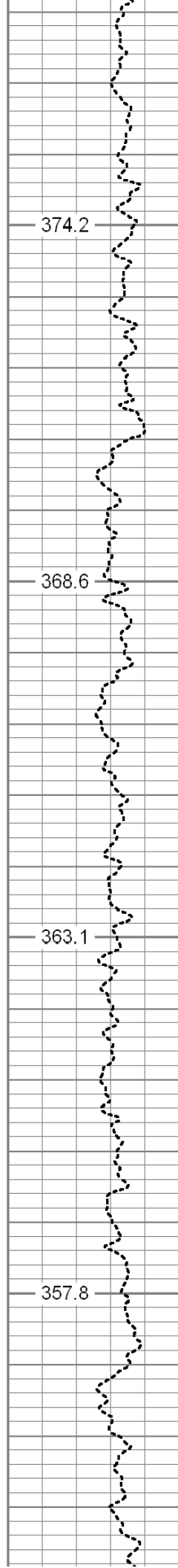


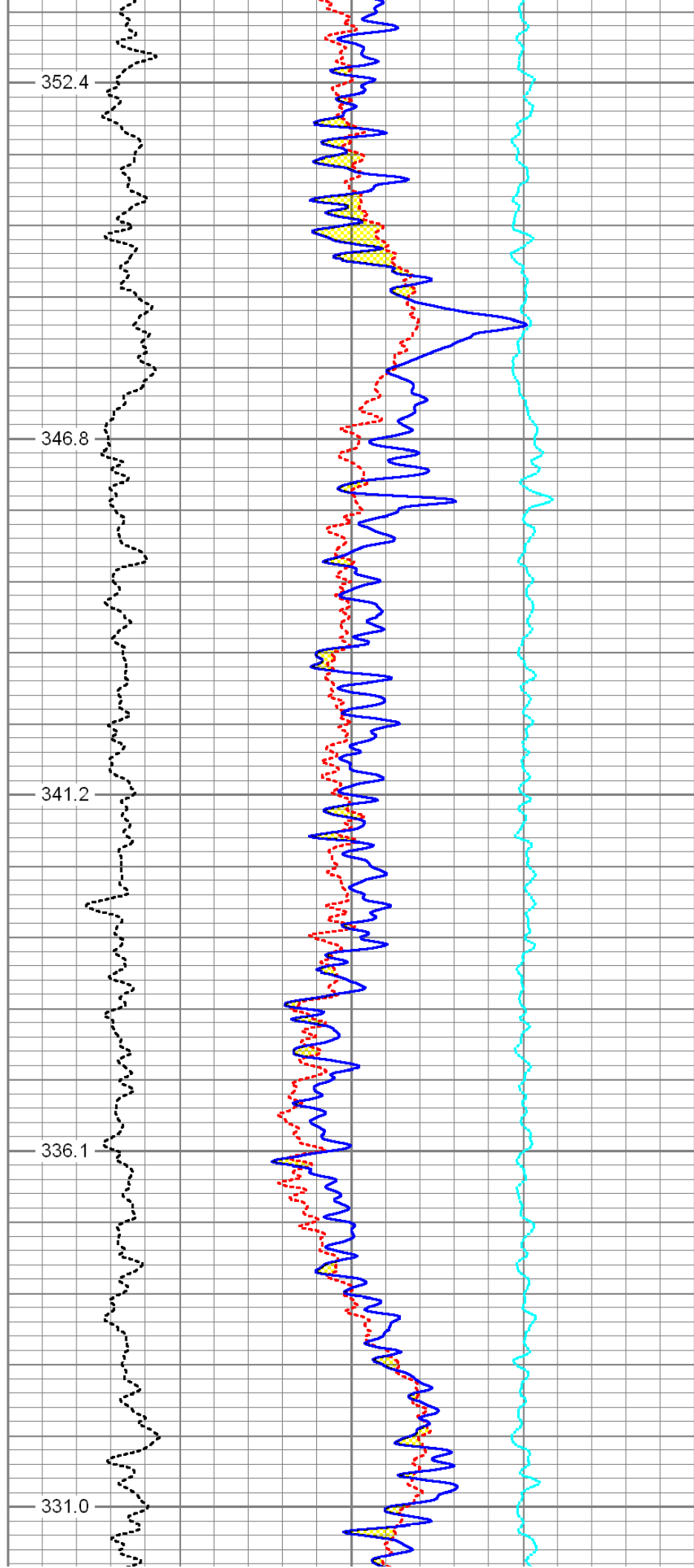
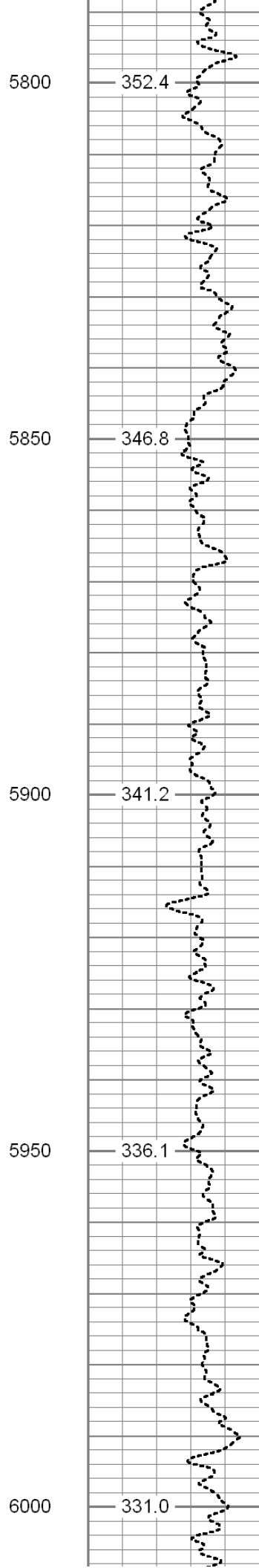
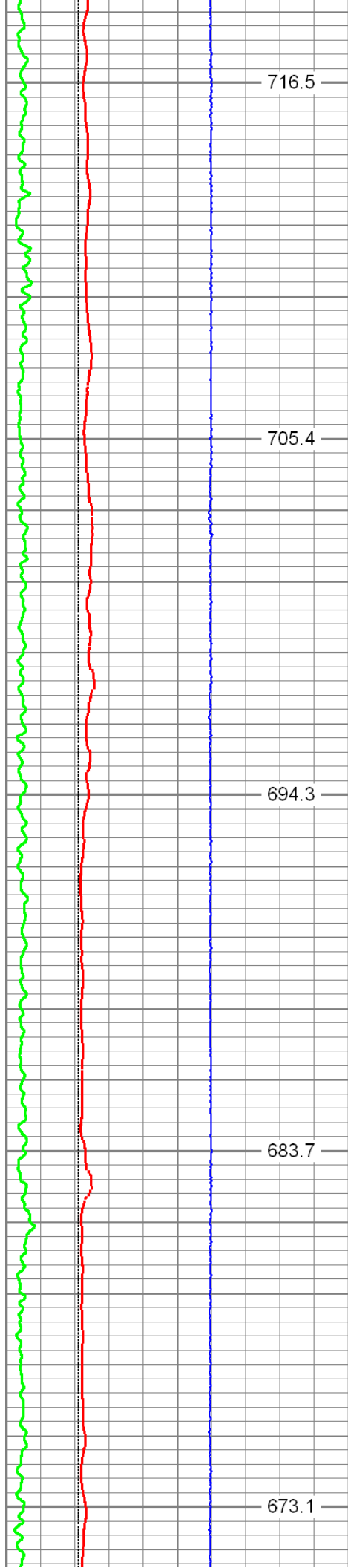
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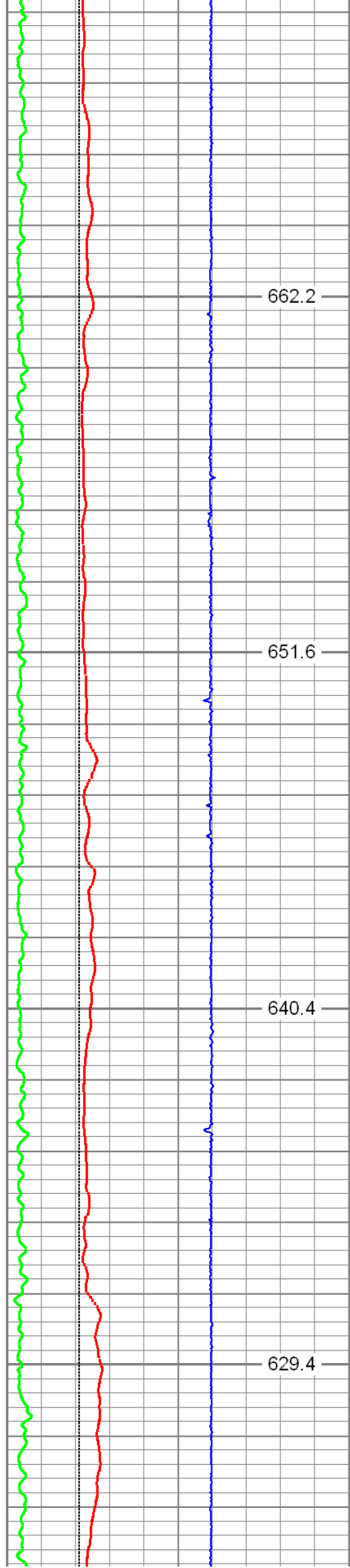
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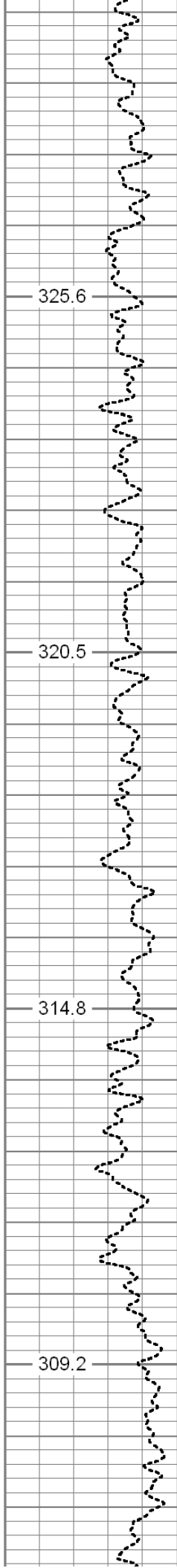
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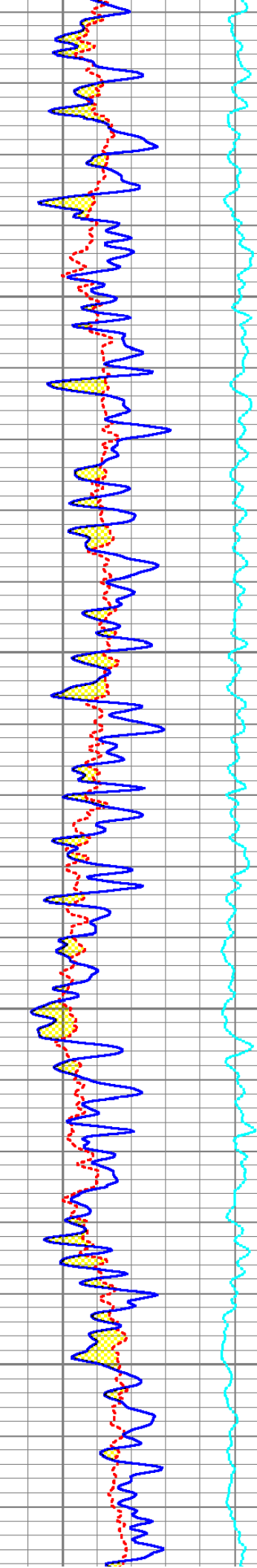


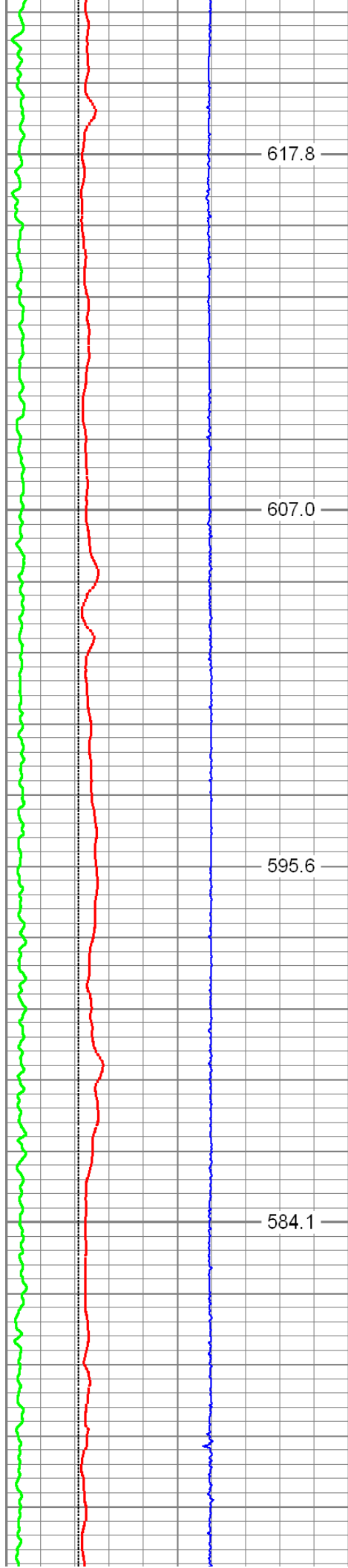


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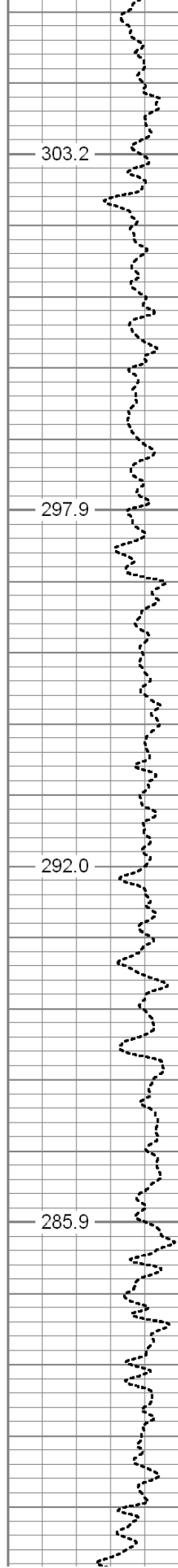


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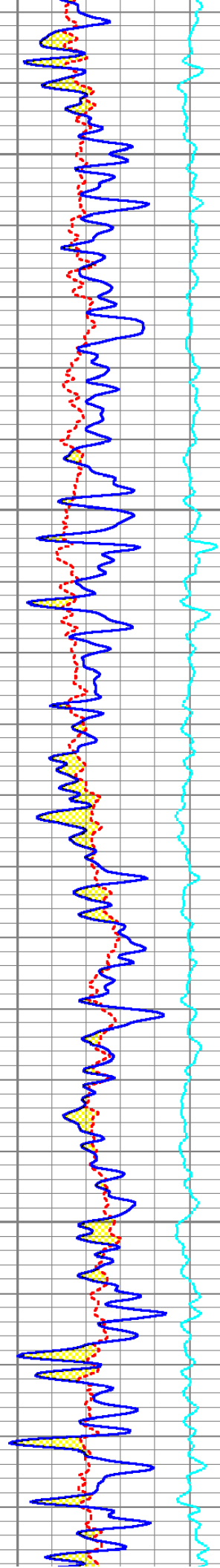


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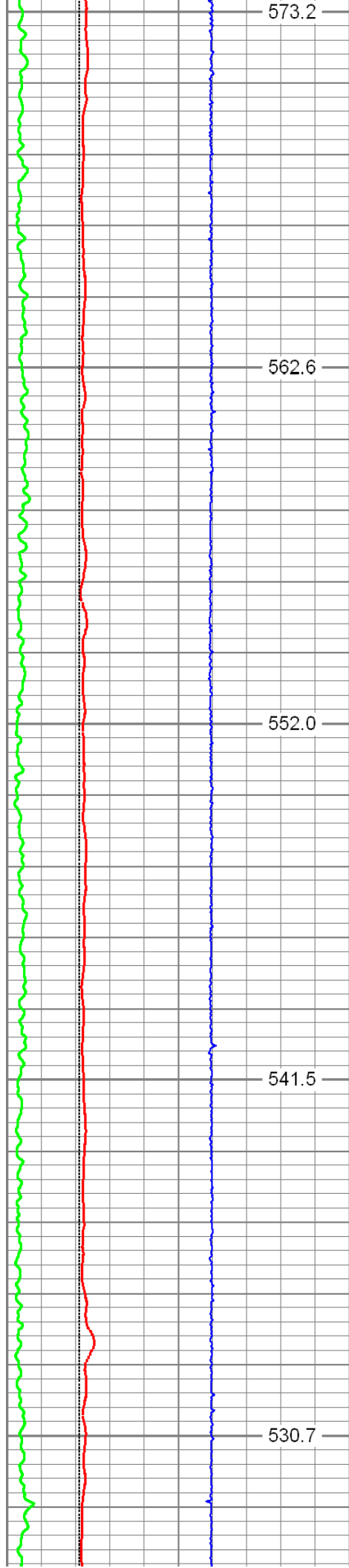


303.2

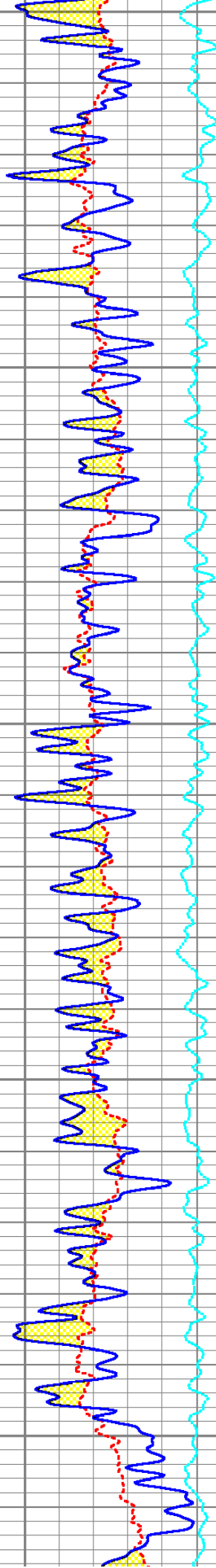
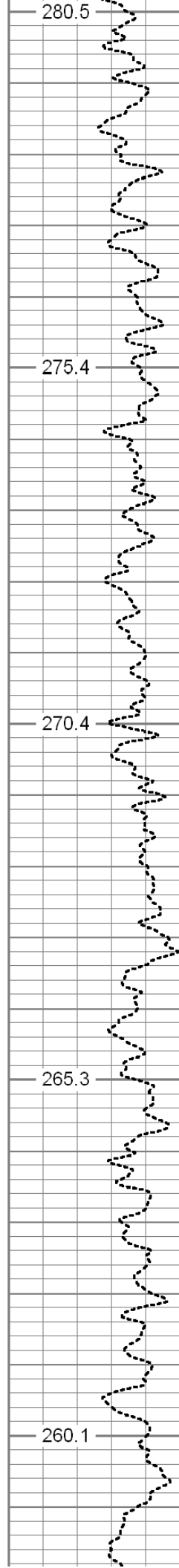
297.9

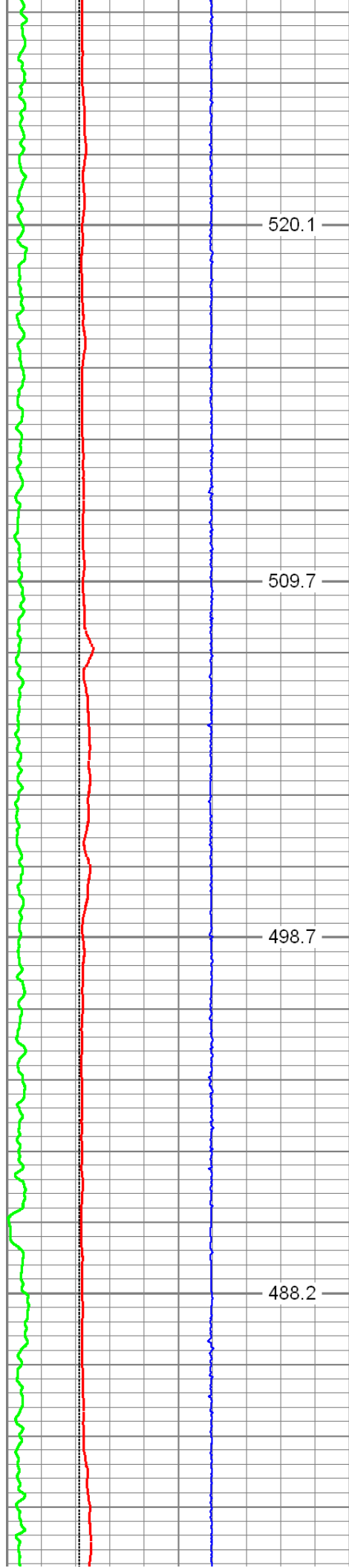
292.0

285.9



6450  
6500  
6550  
6600  
6650



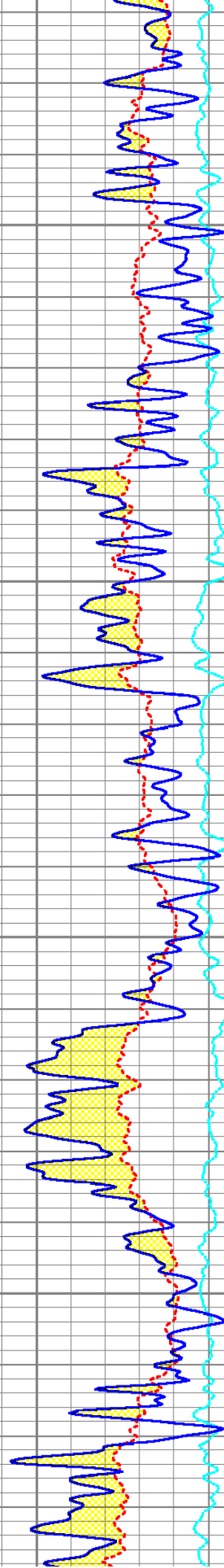
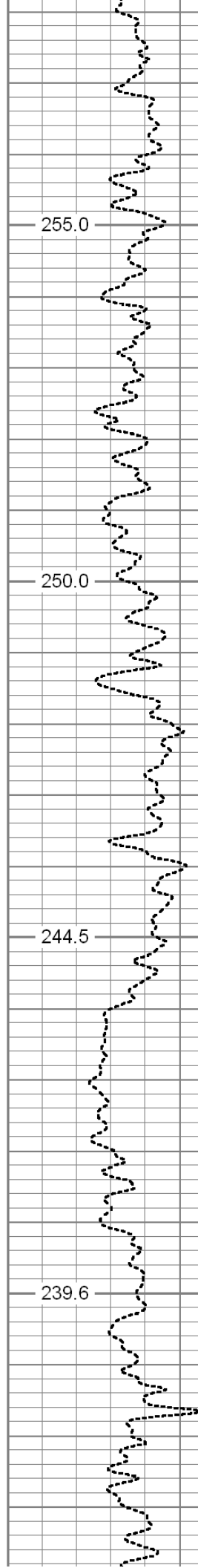


6700

6750

6800

6850





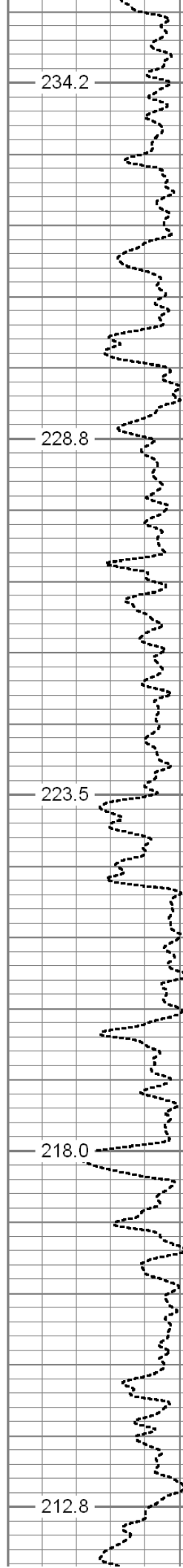
6900

6950

7000

7050

7100



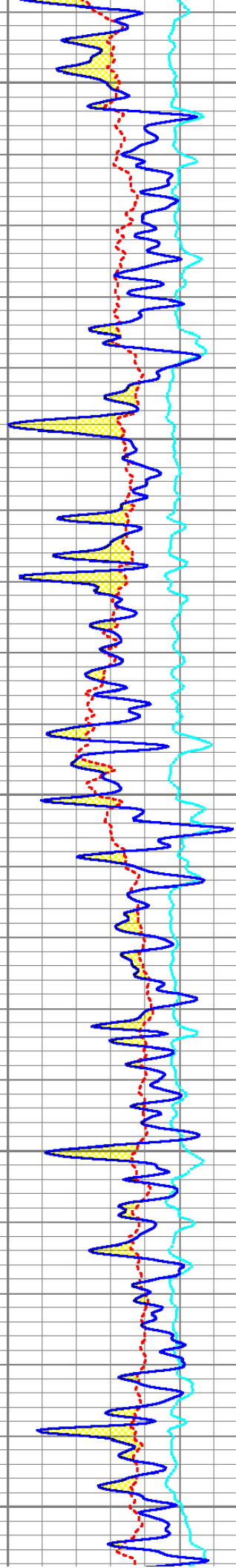
234.2

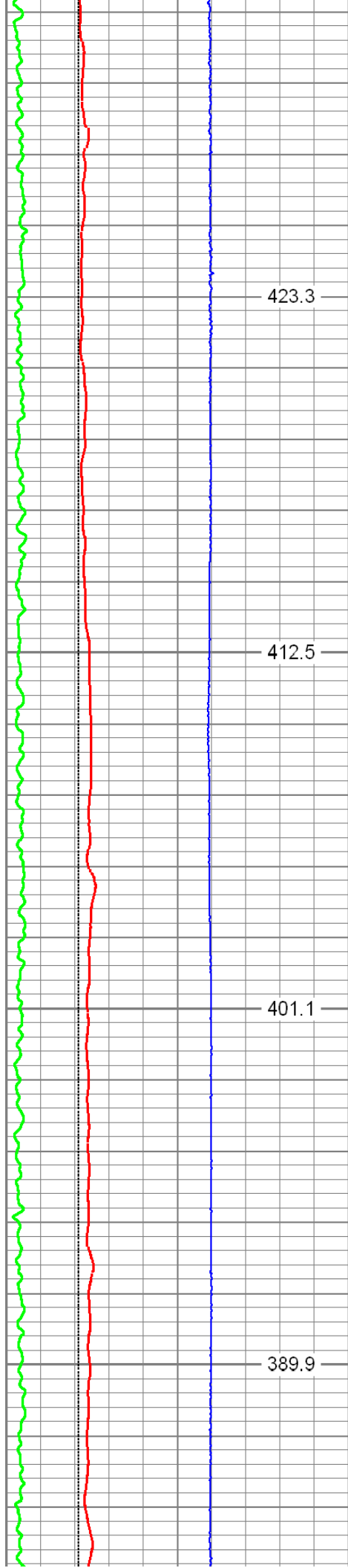
228.8

223.5

218.0

212.8





423.3

412.5

401.1

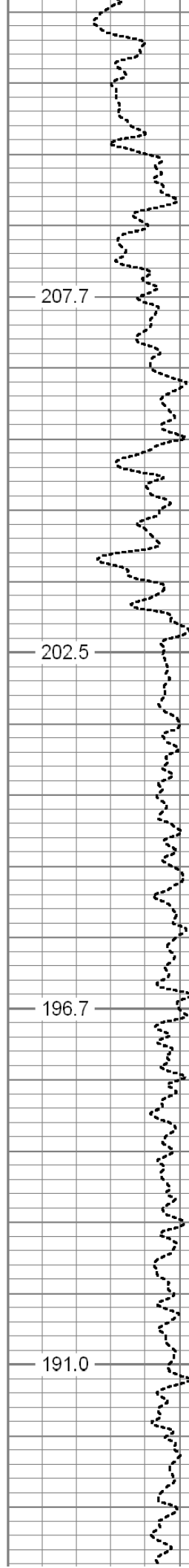
389.9

7150

7200

7250

7300

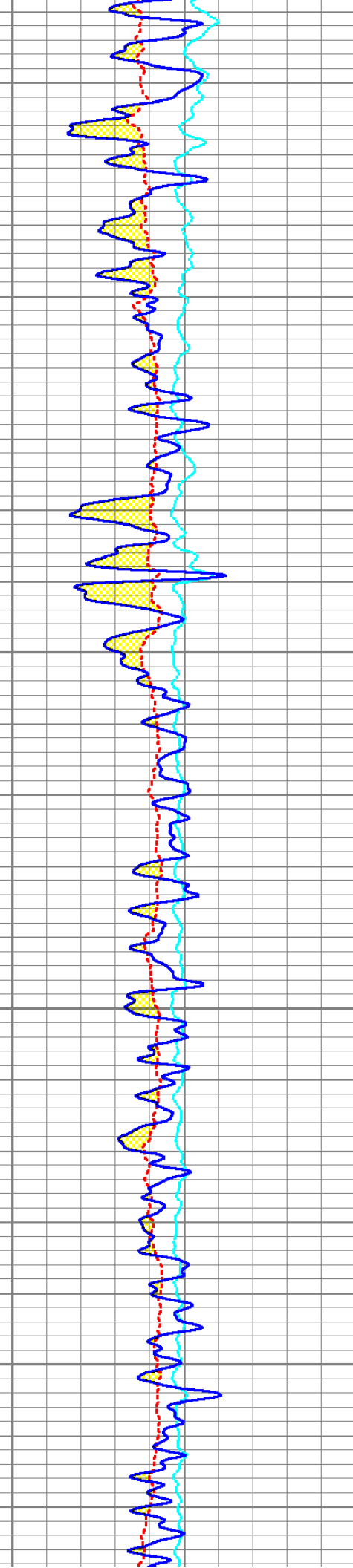


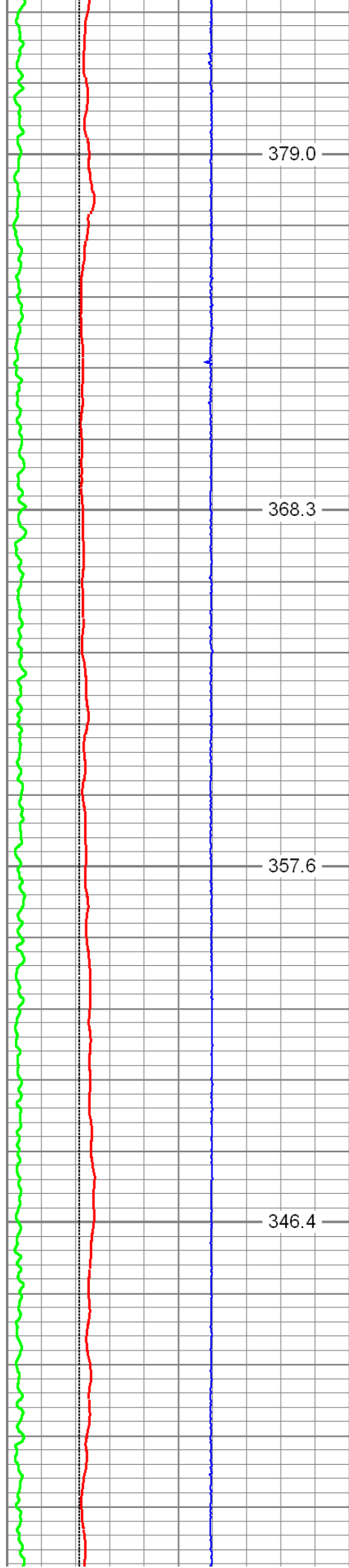
207.7

202.5

196.7

191.0



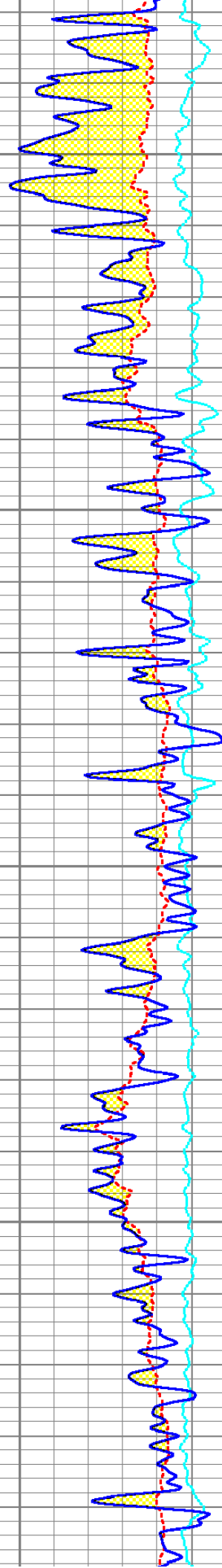
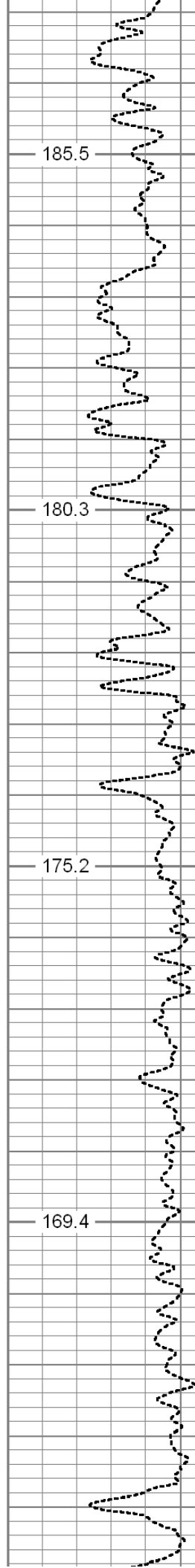


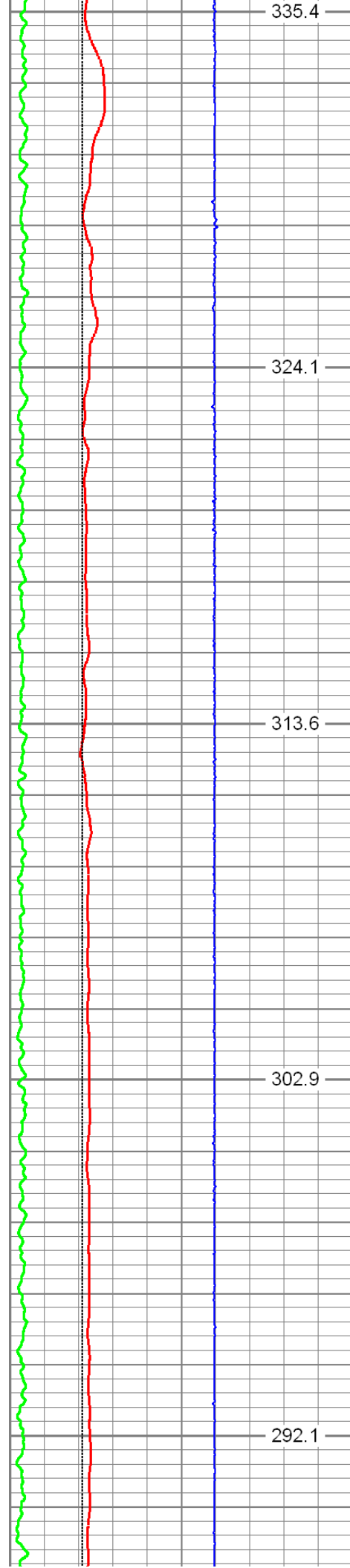
7350

7400

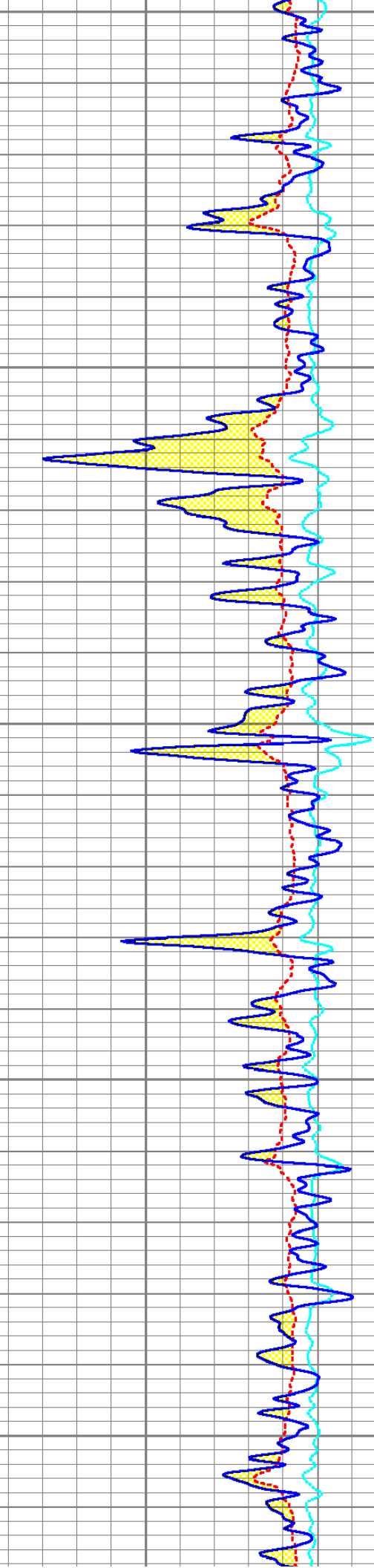
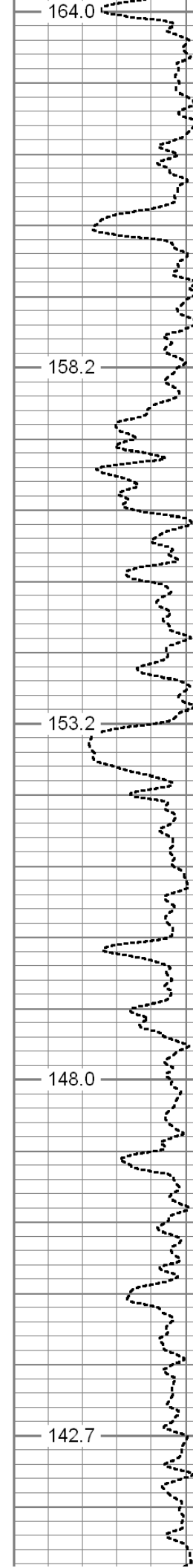
7450

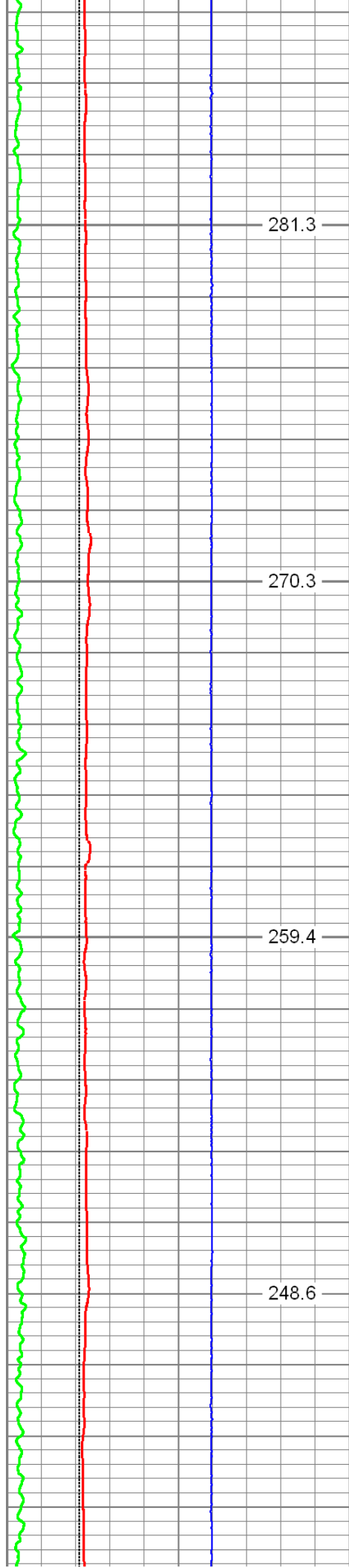
7500





7550  
7600  
7650  
7700  
7750



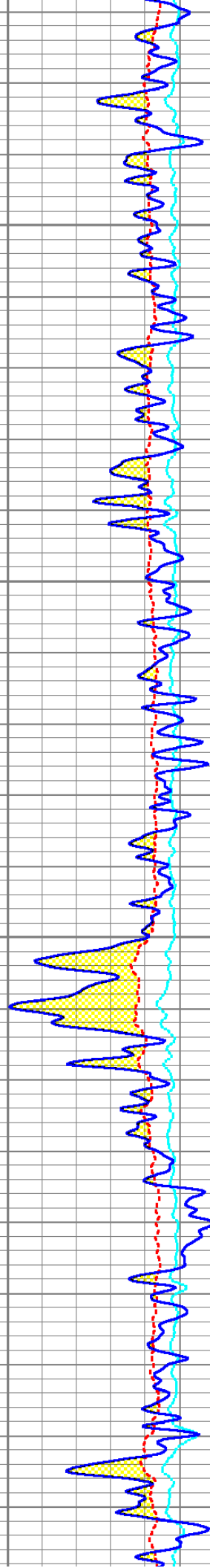
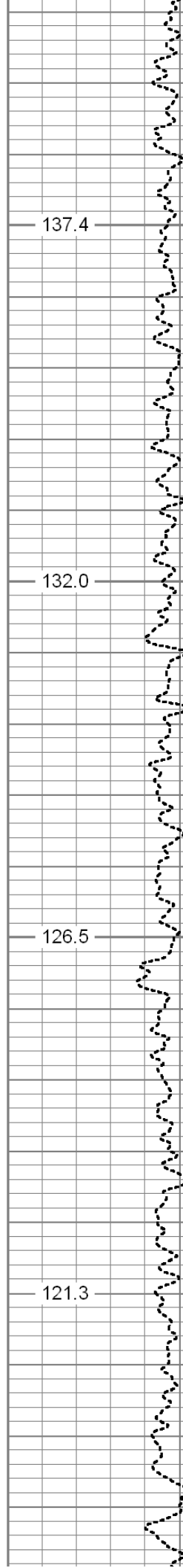


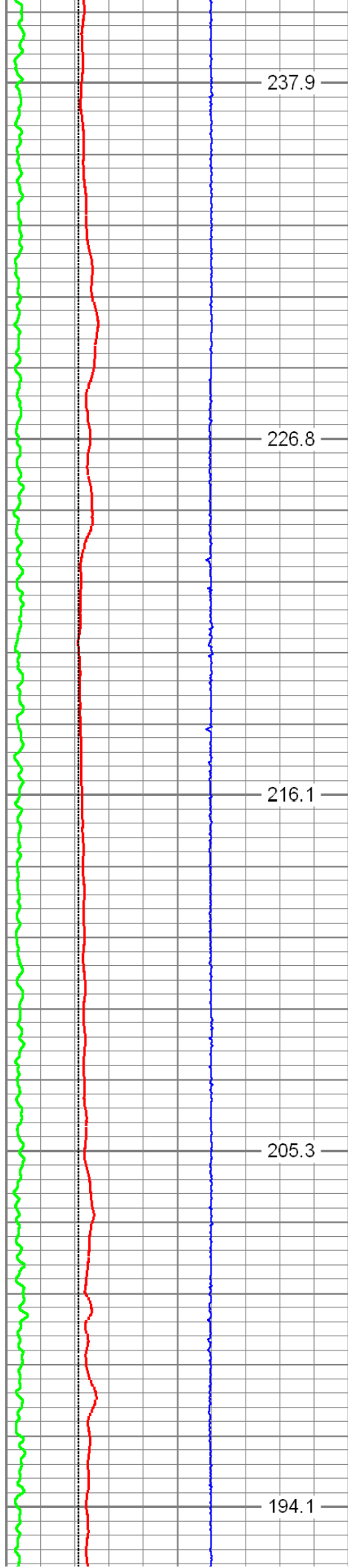
7800

7850

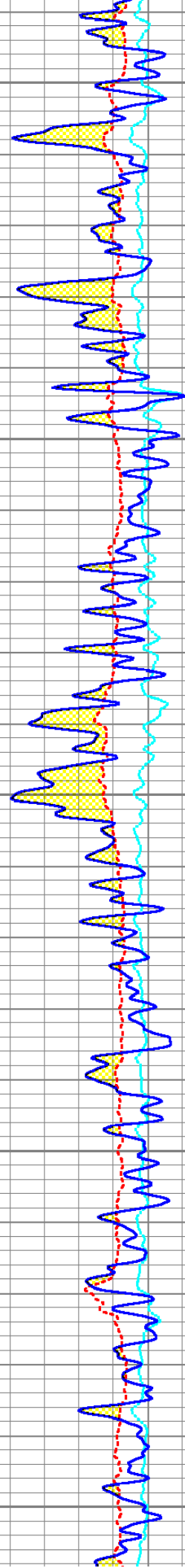
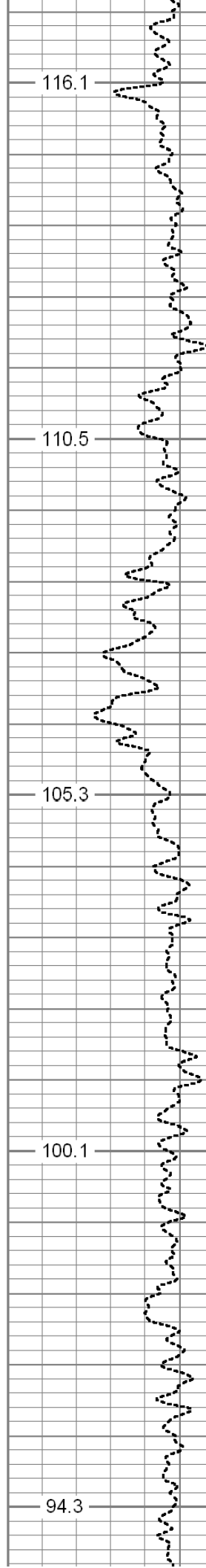
7900

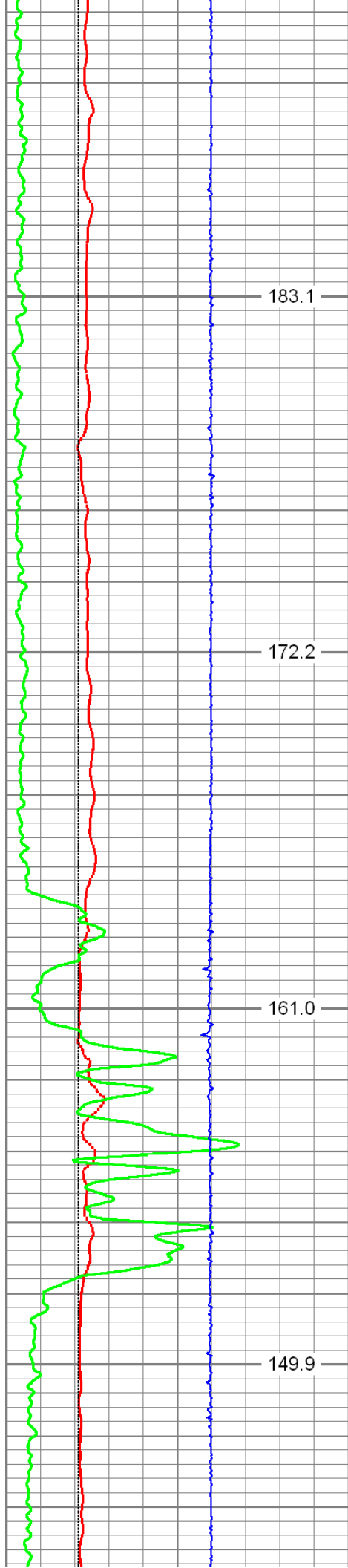
7950



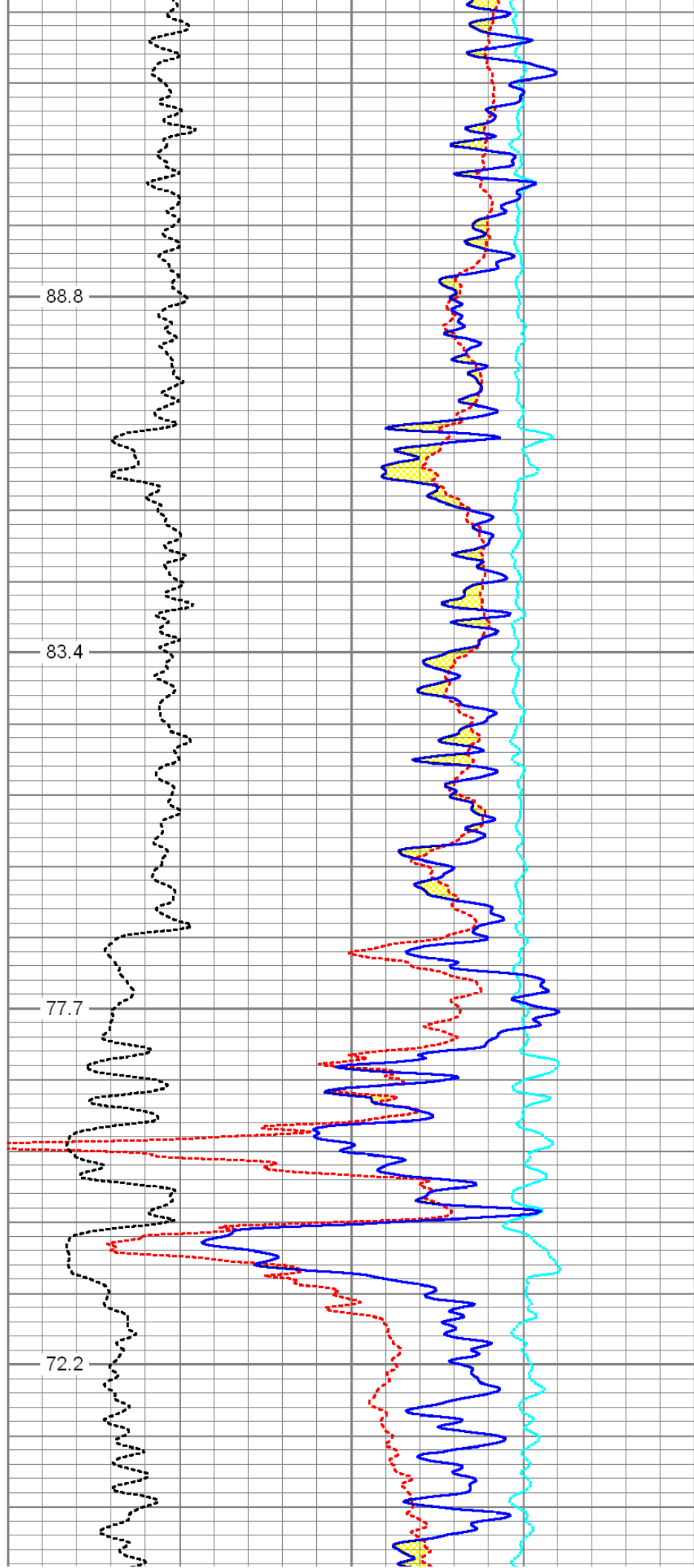


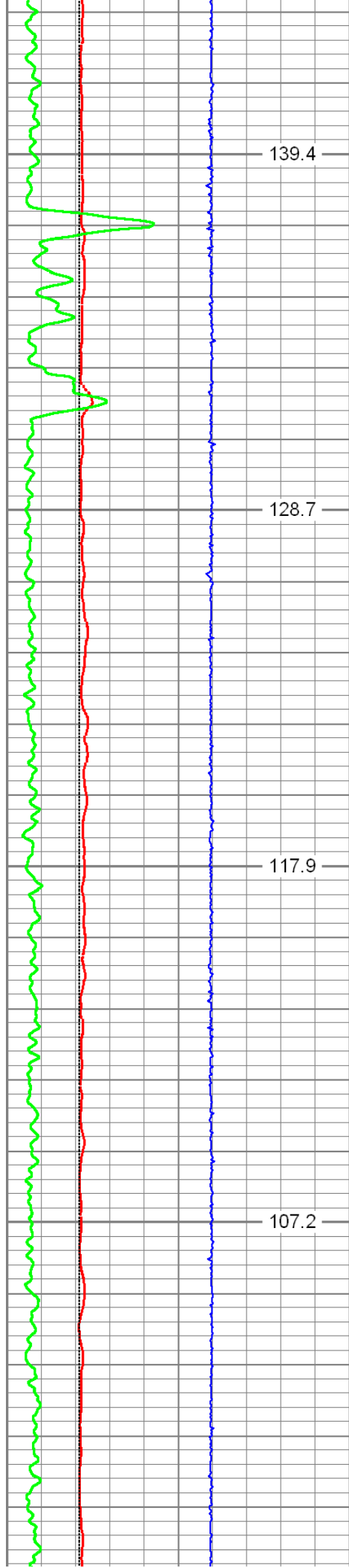
8000  
8050  
8100  
8150  
8200





8250 8300 8350 8400



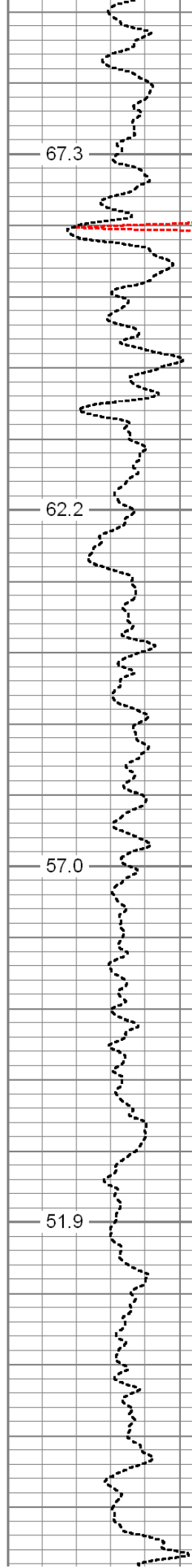


8450

8500

8550

8600

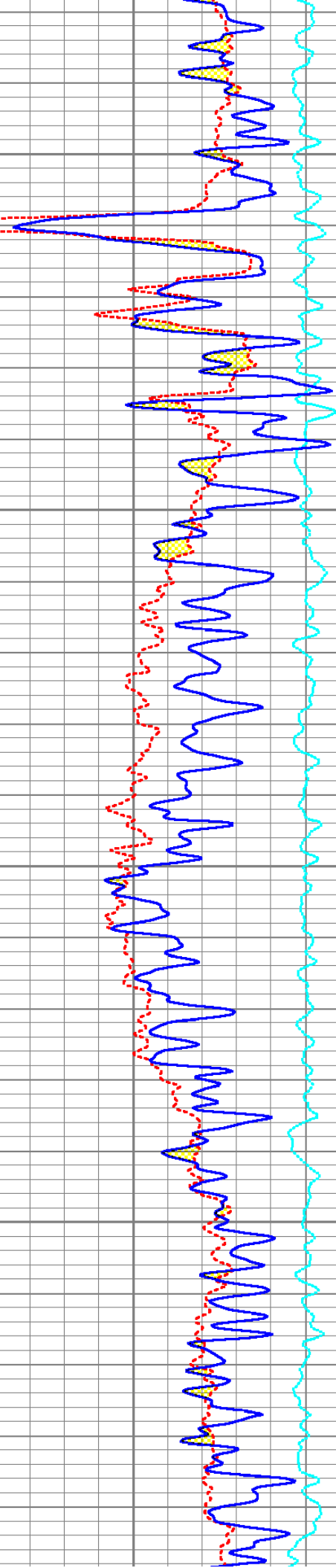


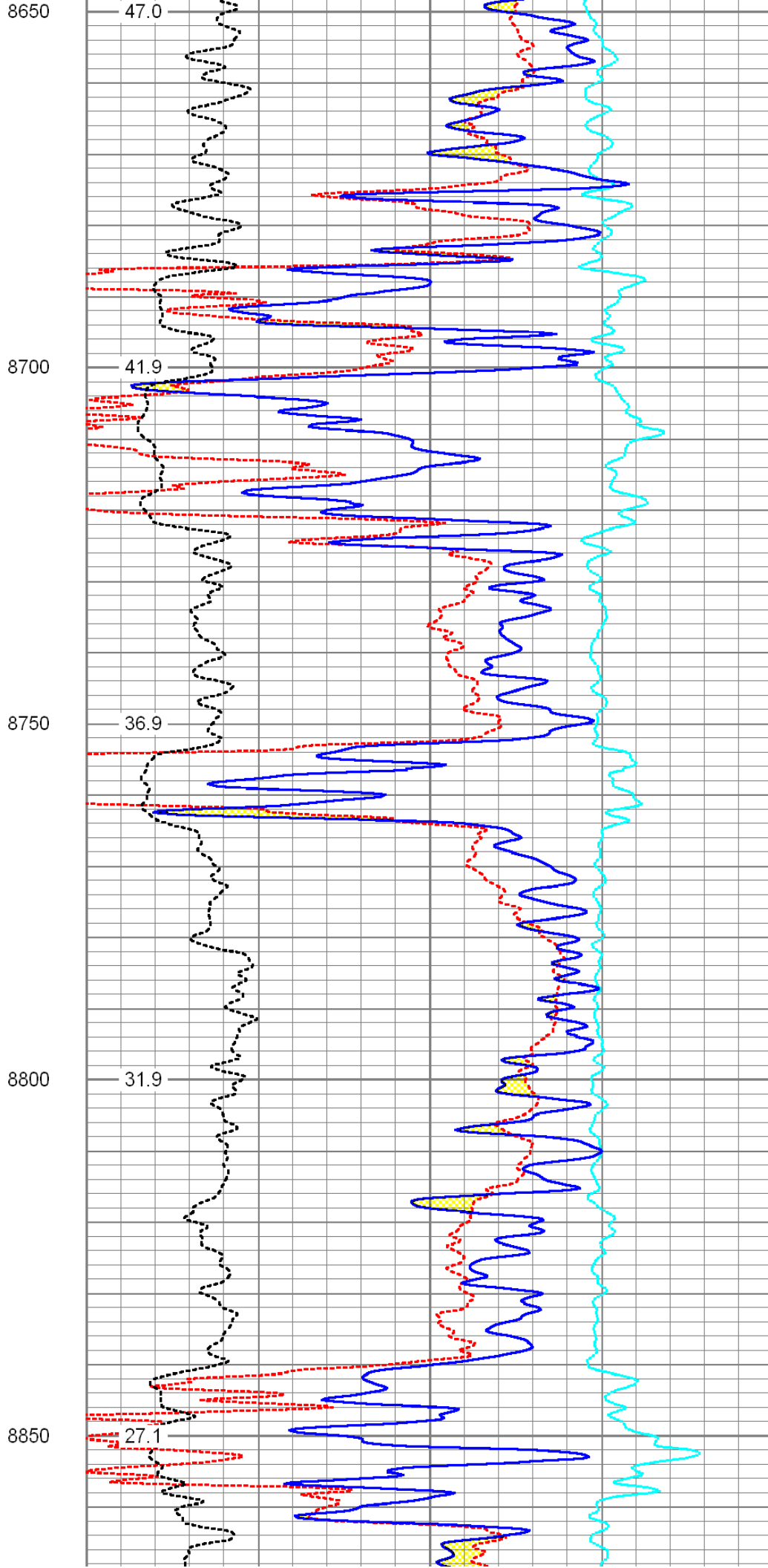
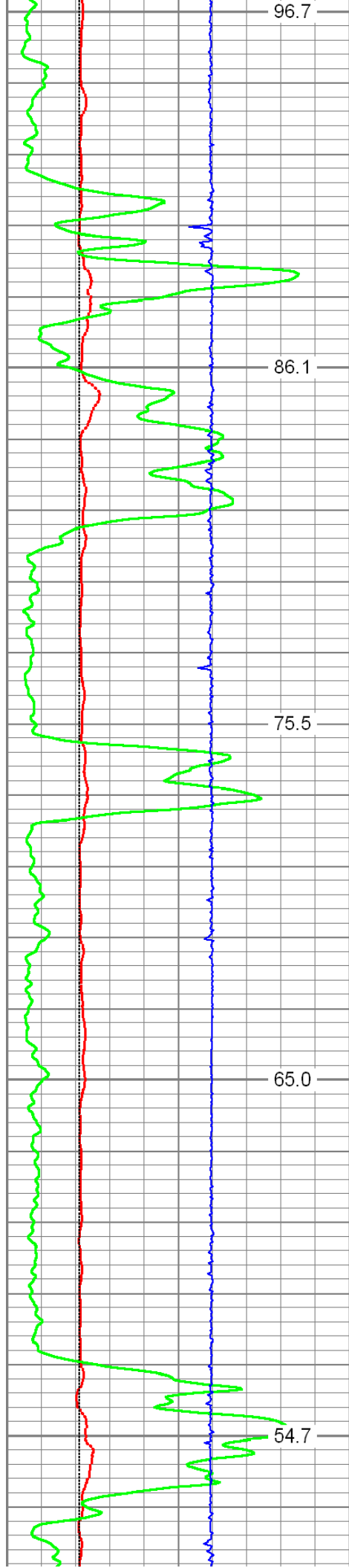
67.3

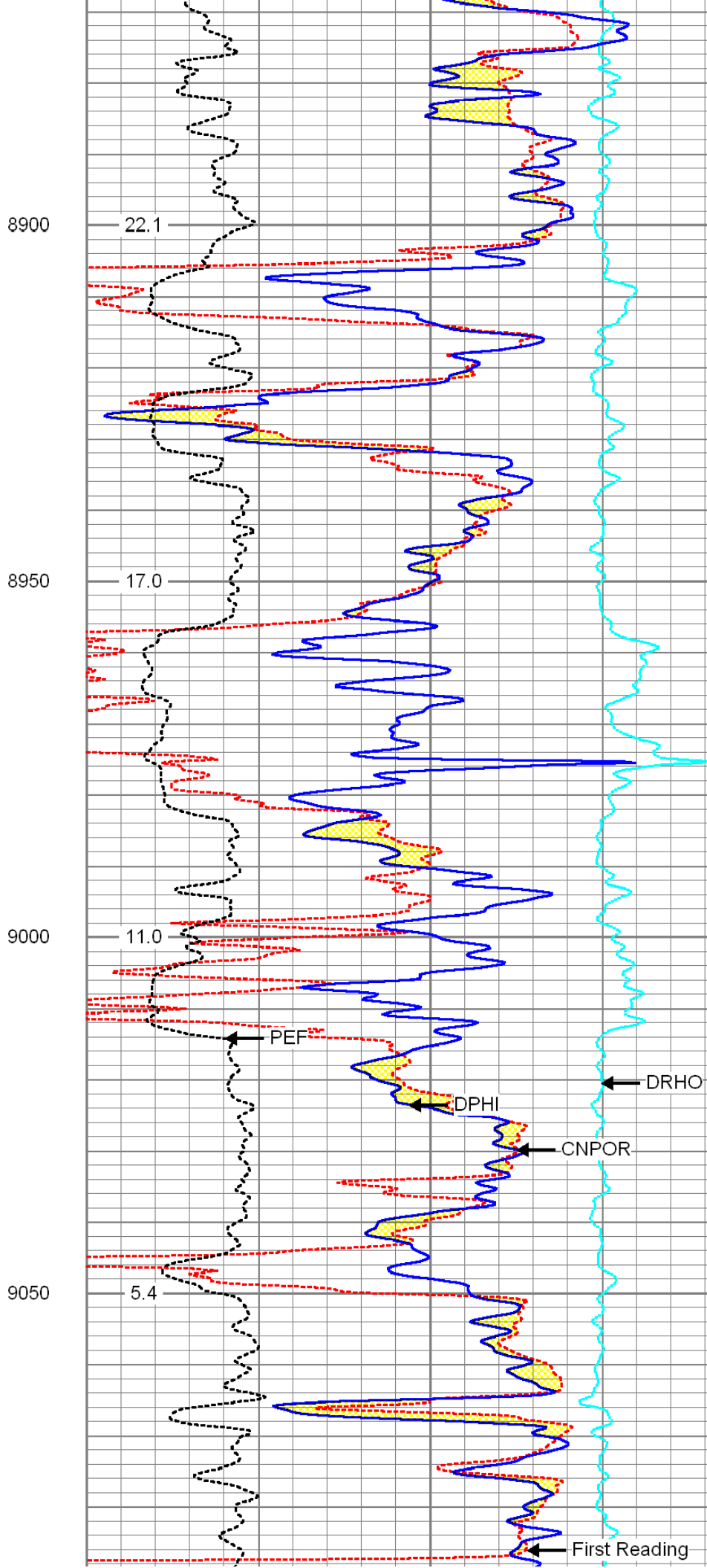
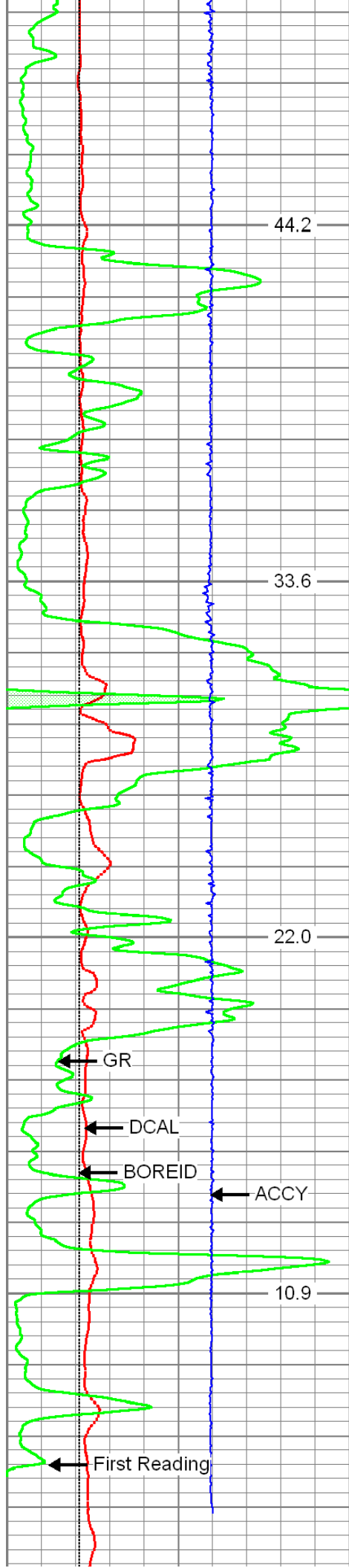
62.2

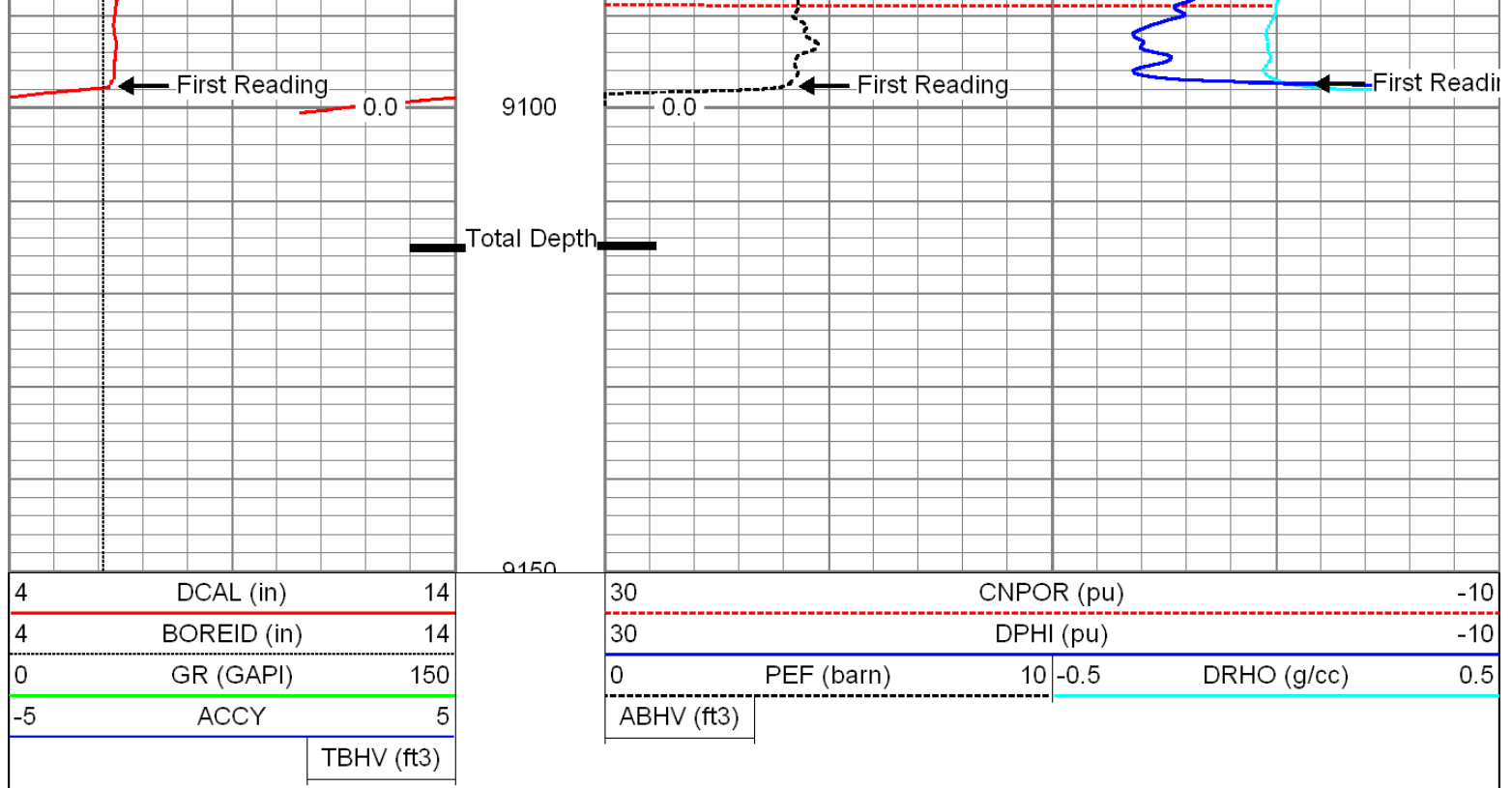
57.0

51.9









## Log Variables

Database: C:\Warrior\Data\jennifer\_mem.db  
Dataset: field/well/proc3/pass1.3

### Top - Bottom

|                       |                     |                          |                         |                         |                       |                        |
|-----------------------|---------------------|--------------------------|-------------------------|-------------------------|-----------------------|------------------------|
| BHCOR<br>On           | BHFL_TYPE<br>WBM    | BHFLRES<br>Ohm-m<br>1    | BHFLRESSRC<br>MUDCELL   | BHIDSRC<br>CURVE        | BOREID<br>in<br>6.125 | BOTTEMP<br>degF<br>140 |
| CASED?<br>No          | CASEOD<br>in<br>4.5 | CASETHCK<br>in<br>0      | CEMWATERSA<br>kppm<br>0 | CMNTTHCK<br>in<br>0     | DPORSEL<br>RHOB       | FLUIDDEN<br>g/cc<br>1  |
| FRMSALIN<br>kppm<br>0 | LATNOR<br>Off       | MATRXDEN<br>g/cc<br>2.71 | MUDSALIN<br>kppm<br>0.6 | MudWgt<br>lb/gal<br>8.9 | NPORSEL<br>Limestone  | PERFS<br>0             |
| RESTMPSRC<br>INTERNAL | SO<br>in<br>0.5     | SRFTEMP<br>degF<br>65    | SZCOR<br>On             | TDEPTH<br>ft<br>9140    | TMPCOR<br>On          | TOOLPOS<br>Ec-centered |
| XXXX<br>0             |                     |                          |                         |                         |                       |                        |

### Calibration Report

Database File: jennifer\_mem.db  
Dataset Pathname: proc3/pass1.3  
Dataset Creation: Wed Nov 14 17:59:38 2012

### ThruBit Induction Calibration Report

Tool Model-Serial Number: PS-PS38R  
Shop Calibration Performed: Wed Sep 19 09:28:12 2012

# BASELINE

|        | R         | Expected           | X         | Expected          |
|--------|-----------|--------------------|-----------|-------------------|
| Freq 1 |           |                    |           |                   |
| A1     | -478.6470 | [-500.00, -400.00] | 173.0000  | [-500.00, 500.00] |
| A2     | -136.1660 | [-180.00, -100.00] | 298.4330  | [-500.00, 500.00] |
| A3     | -26.9944  | [-50.00, -10.00]   | -68.1870  | [-500.00, 500.00] |
| A4     | -16.5753  | [-30.00, -10.00]   | 252.8430  | [-500.00, 500.00] |
| A5     | -14.5693  | [-30.00, -10.00]   | 150.3510  | [-500.00, 500.00] |
| Freq 2 |           |                    |           |                   |
| A1     | -252.6960 | [-280.00, -180.00] | 84.1946   | [-500.00, 500.00] |
| A2     | -87.5233  | [-130.00, -50.00]  | 165.5460  | [-500.00, 500.00] |
| A3     | -19.5990  | [-50.00, -10.00]   | -97.2460  | [-500.00, 500.00] |
| A4     | -19.8898  | [-30.00, -10.00]   | 75.3812   | [-500.00, 500.00] |
| A5     | -19.5554  | [-30.00, -10.00]   | -0.3546   | [-500.00, 500.00] |
| Freq 3 |           |                    |           |                   |
| A1     | -163.6960 | [-180.00, -80.00]  | -7.9103   | [-500.00, 500.00] |
| A2     | -67.0263  | [-130.00, -30.00]  | 78.9750   | [-500.00, 500.00] |
| A3     | -16.3076  | [-50.00, -10.00]   | -130.2510 | [-500.00, 500.00] |
| A4     | -21.4341  | [-30.00, -10.00]   | -42.9782  | [-500.00, 500.00] |
| A5     | -22.0719  | [-30.00, -10.00]   | -109.4460 | [-500.00, 500.00] |
| Freq 4 |           |                    |           |                   |
| A1     | -91.5984  | [-120.00, -40.00]  | -163.9400 | [-500.00, 500.00] |
| A2     | -48.3989  | [-110.00, -10.00]  | -37.1792  | [-500.00, 500.00] |
| A3     | -13.2104  | [-50.00, -10.00]   | -195.2460 | [-500.00, 500.00] |
| A4     | -24.0555  | [-30.00, -10.00]   | -219.8520 | [-500.00, 500.00] |
| A5     | -26.9658  | [-30.00, -10.00]   | -291.9350 | [-500.00, 500.00] |

## CALIBRATION COEFFICIENTS

|        | R      | Expected     | X       | Expected      |
|--------|--------|--------------|---------|---------------|
| Freq 1 |        |              |         |               |
| A1     | 0.9932 | [0.95, 1.05] | -0.0014 | [-0.05, 0.05] |
| A2     | 0.9912 | [0.95, 1.05] | 0.0015  | [-0.05, 0.05] |
| A3     | 1.0012 | [0.95, 1.05] | -0.0059 | [-0.05, 0.05] |
| A4     | 0.9886 | [0.95, 1.05] | 0.0041  | [-0.05, 0.05] |
| A5     | 0.9941 | [0.95, 1.05] | 0.0005  | [-0.05, 0.05] |
| Freq 2 |        |              |         |               |
| A1     | 0.9875 | [0.95, 1.05] | -0.0069 | [-0.05, 0.05] |
| A2     | 0.9856 | [0.95, 1.05] | -0.0048 | [-0.05, 0.05] |
| A3     | 0.9898 | [0.95, 1.05] | -0.0048 | [-0.05, 0.05] |
| A4     | 0.9843 | [0.95, 1.05] | -0.0026 | [-0.05, 0.05] |
| A5     | 0.9899 | [0.95, 1.05] | -0.0066 | [-0.05, 0.05] |
| Freq 3 |        |              |         |               |
| A1     | 0.9906 | [0.95, 1.05] | -0.0084 | [-0.05, 0.05] |
| A2     | 0.9890 | [0.95, 1.05] | -0.0064 | [-0.05, 0.05] |
| A3     | 0.9929 | [0.95, 1.05] | -0.0065 | [-0.05, 0.05] |
| A4     | 0.9861 | [0.95, 1.05] | -0.0043 | [-0.05, 0.05] |
| A5     | 0.9936 | [0.95, 1.05] | -0.0085 | [-0.05, 0.05] |
| Freq 4 |        |              |         |               |
| A1     | 0.9898 | [0.95, 1.05] | -0.0038 | [-0.05, 0.05] |
| A2     | 0.9878 | [0.95, 1.05] | -0.0023 | [-0.05, 0.05] |
| A3     | 0.9935 | [0.95, 1.05] | -0.0043 | [-0.05, 0.05] |
| A4     | 0.9844 | [0.95, 1.05] | 0.0001  | [-0.05, 0.05] |
| A5     | 0.9985 | [0.95, 1.05] | -0.0062 | [-0.05, 0.05] |

Temperature 26.7102 degC

Tool Model-Serial Number:

PS-PS24D

Source Number:

Shop Calibration Performed:

Fri Oct 26 15:03:57 2012

## REFERENCE

Density

Units

Aluminium  
Magnesium2.607  
1.752g/cc  
g/cc

## READINGS

Outputs

Counts

Units

Expected

SS1 Background  
LS1 Background  
LS4 Background159.95  
144.85  
31.39cps  
cps  
cps[130.00, 170.00]  
[130.00, 170.00]  
[27.00, 35.00]SS1 Aluminium  
LS1 Aluminium  
LS4 Aluminium4547.56  
921.54  
995.25cps  
cps  
cps[4500.00, 5500.00]  
[750.00, 950.00]  
[843.00, 1068.00]SS1 Magnesium  
LS1 Magnesium7450.89  
6012.51cps  
cps[7000.00, 9000.00]  
[5250.00, 6250.00]LS1 Al + Fe  
LS4 Al + Fe798.33  
452.78cps  
cps[650.00, 800.00]  
[382.00, 471.00]

## RESULTS

SS Slope  
LS Slope  
PEF K Factor  
PEF B Factor1.68  
0.42  
4.823  
-0.513[1.52, 1.77]  
[0.38, 0.45]  
[3.510, 6.170]  
[-0.700, -0.410]

Caliper Shop Calibration performed:

Fri Oct 26 15:03:57 2012

## RESULTS

Reference

Reading

Units

12.00  
9.00  
6.001904.83  
2057.59  
2220.09in  
in  
in

DENSITY PRE-SURVEY CHECK Performed:

Tue Nov 13 13:44:41 2012

Outputs

Counts

Units

Expected

SS1 Background  
LS1 Background  
LS4 Background161.54  
146.74  
30.22cps  
cps  
cps[155.15, 164.74]  
[140.51, 149.20]  
[29.50, 33.27]

DENSITY POST-SURVEY CHECK Performed:

Wed Dec 31 18:00:00 1969

Outputs

Counts

Units

Expected

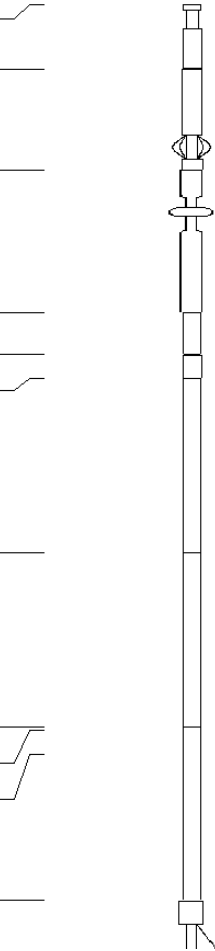
SS1 Background  
LS1 Background  
LS4 Background0.00  
0.00  
0.00cps  
cps  
cps[155.15, 164.74]  
[140.51, 149.20]  
[29.50, 33.27]

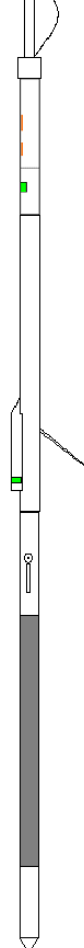
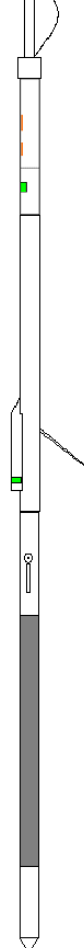
CALIPER PRE-SURVEY CHECK Performed:

Tue Nov 13 13:45:16 2012

|                                                              |          |                                       |               |
|--------------------------------------------------------------|----------|---------------------------------------|---------------|
| Reference                                                    | Readings | Units                                 | Expected      |
| 9.00                                                         | 8.91     | in                                    | [8.80, 9.20]  |
| CALIPER POST-SURVEY CHECK Performed:                         |          | Wed Dec 31 18:00:00 1969              |               |
| Reference                                                    | Readings | Units                                 | Expected      |
| 0.00                                                         | 0.00     | in                                    | [-0.20, 0.20] |
|                                                              |          |                                       |               |
| Compensated Neutron Calibration Report                       |          |                                       |               |
| Tool Model-Serial Number:<br>Source Number:                  |          | PS-PS14N                              |               |
| Calibration Tank Temperature:<br>Shop Calibration Performed: |          | 75.8 degF<br>Mon Oct 22 09:52:31 2012 |               |
| BACKGROUND MEASUREMENT                                       |          |                                       |               |
| Outputs                                                      | Measured | Units                                 | Expected      |
| SS Counts                                                    | 0.1      | cps                                   | <10           |
| LS Counts                                                    | 0.1      | cps                                   | <4            |
| WATER TANK REFERENCE                                         |          |                                       |               |
| Outputs                                                      | Measured | Units                                 | Expected      |
| SS Counts                                                    | 893.1    | cps                                   |               |
| LS Counts                                                    | 29.0     | cps                                   |               |
| Tank Ratio Ref                                               | 30.9580  | SS/LS                                 |               |
| Tank Ratio                                                   | 30.7863  | SS/LS                                 |               |
| Tank Ratio Gain                                              | 1.0056   |                                       | [0.85, 1.15]  |
| ALUMINUM SLEEVE REFERENCE                                    |          |                                       |               |
| Outputs                                                      | Measured | Units                                 | Expected      |
| SS Counts                                                    | 9979.5   | cps                                   |               |
| LS Counts                                                    | 935.9    | cps                                   |               |
| Al Ratio Ref                                                 | 10.797   | SS/LS                                 |               |
| Al Ratio                                                     | 10.722   | SS/LS                                 |               |
| Al Ratio Gain                                                | 1.01     |                                       | [0.90, 1.10]  |
| Sleeve Porosity                                              | 14.46    | pu                                    |               |
|                                                              |          |                                       |               |
| PRE-SURVEY BACKGROUND CHECK Performed:                       |          | Tue Nov 13 13:41:14 2012              |               |
| Outputs                                                      | Measured | Units                                 | Expected      |
| SS Counts                                                    | 0.0      | cps                                   | <10           |
| LS Counts                                                    | 0.1      | cps                                   | <4            |
| POST-SURVEY BACKGROUND CHECK Performed:                      |          |                                       |               |

|                                 |                          |            |                    |
|---------------------------------|--------------------------|------------|--------------------|
| Outputs                         | Measured                 | Units      | Expected           |
| SS Counts                       | 0.0                      | cps        | <10                |
| LS Counts                       | 0.0                      | cps        | <4                 |
| Gamma Ray Calibration Report    |                          |            |                    |
| Tool Model-Serial Number:       | ENP-ENP5T                |            |                    |
| Performed:                      | Mon Oct 29 14:53:10 2012 |            |                    |
| Calibrator Value:               | 165.0                    | GAPI       |                    |
| Background Reading:             | 83.7                     | cps        |                    |
| Calibrator Reading:             | 478.7                    | cps        |                    |
| Sensitivity:                    | 0.3750                   | GAPI/cps   |                    |
| Inclinometer Calibration Report |                          |            |                    |
| Performed:                      | Sun Jun 13 14:33:21 1993 |            |                    |
|                                 | Low Read.                | High Read. | Low Ref. High Ref. |
| X Accelerometer                 | 0.00                     | 1.00       | 0.00 1.00 gee      |
| Y Accelerometer                 | 0.00                     | 1.00       | 0.00 1.00 gee      |
| Z Accelerometer                 | 0.00                     | 1.00       | 0.00 1.00 gee      |

| Sensor  | Offset (ft) | Schematic                                                                           | Description                                    | Len (ft) | OD (in) | Wt (lb) |
|---------|-------------|-------------------------------------------------------------------------------------|------------------------------------------------|----------|---------|---------|
| ThruBit | 66.60       |  | Cablehead-S<br>Solid Weakpoint                 | 2.31     | 2.13    | 5.00    |
| ThruBit | 64.29       |                                                                                     | BDOT                                           | 3.54     | 2.25    | 35.00   |
| ThruBit | 60.75       |                                                                                     | HangOff_Tool                                   | 5.00     | 2.38    | 60.00   |
| ThruBit | 55.75       |                                                                                     | Universal Joint                                | 1.46     | 2.06    | 15.00   |
| ThruBit | 54.29       |                                                                                     | 10-1                                           | 0.88     | 2.13    | 3.95    |
| TBBAT2  | 53.41       |                                                                                     | TBBAT2-A (PS33B)<br>ThruBit Battery            | 6.13     | 2.13    | 40.00   |
| TBBAT   | 47.29       |                                                                                     | TBBAT-A (PS34B)<br>ThruBit Battery             | 6.13     | 2.13    | 38.20   |
| TMG     | 41.16       |                                                                                     | TMG-ENP (ENP5T)<br>ThruBit Telemetry Gamma Ray | 6.13     | 2.13    | 45.00   |
| GR      | 41.04       |                                                                                     |                                                |          |         |         |
| GRTEMP  | 40.20       |                                                                                     |                                                |          |         |         |
| ThruBit | 35.04       |                                                                                     |                                                |          |         |         |

|               |       |                                                                                 |                                           |       |      |       |
|---------------|-------|---------------------------------------------------------------------------------|-------------------------------------------|-------|------|-------|
| CNLSC         | 28.60 |  | Decentralizer<br>Decentralizer (Small)    | 4.50  | 2.13 | 70.00 |
|               |       |                                                                                 | TBN-PS (PS14N)<br>ThruBit Neutron         | 4.77  | 2.13 | 63.00 |
|               |       |                                                                                 | TBD-PS (PS24D)<br>ThruBit Density         | 10.48 | 2.13 | 91.00 |
| LSW1          | 18.04 |  | TBI-PS (PS38R)<br>ThruBit Induction       | 15.29 | 2.13 | 94.00 |
| DCAL          | 17.13 |                                                                                 |                                           |       |      |       |
| A1_P          | 10.60 |                                                                                 |                                           |       |      |       |
| A2_P          | 10.10 |                                                                                 |                                           |       |      |       |
| A3_P          | 9.35  |                                                                                 |                                           |       |      |       |
| A4_P          | 8.35  |                                                                                 |                                           |       |      |       |
| A5_P          | 6.60  |                                                                                 |                                           |       |      |       |
| Dataset:      |       |                                                                                 | jennifer_mem.db: field/well/proc3/pass1.3 |       |      |       |
| Total Length: |       |                                                                                 | 66.60 ft                                  |       |      |       |
| Total Weight: |       |                                                                                 | 560.15 lb                                 |       |      |       |
| O.D.          |       |                                                                                 | 2.38 in                                   |       |      |       |



**ThruBit**  
A Schlumberger Company

Company SANDRIDGE ENERGY, INC.  
Well JENNIFER 3408 2-34H  
Field HARPER KS / MISS LIME  
County HARPER  
State KANSAS