

| Bit Run Summary | | | | | | | | | | |
|------------------------|-----|-----------|-----------|-----------|--|--|--|--|--|--|
| Run number | | 2 | 3 | 4 | | | | | | |
| Bit size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Bit start depth | m | 843.0 | 1253.0 | 1902.0 | | | | | | |
| Bit end depth | m | 1253.0 | 1902.0 | 2641.0 | | | | | | |
| Top interval logged | m | 836.0 | 1221.2 | 1870.2 | | | | | | |
| Bottom interval logged | m | 1243.8 | 1892.8 | 2631.8 | | | | | | |
| Begin log: time | | 19:21 | 20:56 | 06:30 | | | | | | |
| Begin log: date | | 04-Aug-05 | 06-Aug-05 | 08-Aug-05 | | | | | | |
| End log: time | | 07:49 | 16:49 | 13:05 | | | | | | |
| End log: date | | 06-Aug-05 | 07-Aug-05 | 09-Aug-05 | | | | | | |
| Mud data | | | | | | | | | | |
| Depth | m | 1192.0 | 1809.0 | 2641.0 | | | | | | |

| Type | | KCl/PHPA/Glycol | KCl/PHPA/Glycol | KCl/PHPA/Glycol | | | | | | |
|----------------------------|----------|-----------------|-----------------|-----------------|----------|----------|-----------|--|--|--|
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Solids | % | 4.2 | 5.0 | 6.0 | | | | | | |
| Chlorides | mg/L | 43000 | 45000 | 46000 | | | | | | |
| Rm | ohm.m@°C | 0.10@21.0 | 0.10@21.1 | 0.09@20.8 | | | | | | |
| Rmf | ohm.m@°C | 0.08@20.9 | 0.09@21.0 | 0.08@20.6 | | | | | | |
| Rmc | ohm.m@°C | 0.13@21.0 | 0.13@21.7 | 0.14@21.0 | | | | | | |
| Potassium | % | 8.0 | 8.0 | 8.0 | | | | | | |
| Environmental data | | | | | | | | | | |
| GR | | | | | | | | | | |
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Bit size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Resistivity | | | | | | | | | | |
| Neutron porosity | | | | | | | | | | |
| Hole Size | in. | 8.5 | 8.5 | 8.5 | | | | | | |
| Mud weight | ppg | 9.60 | 9.70 | 9.85 | | | | | | |
| Temperature | °C | 65.0 | 68.0 | 87.0 | | | | | | |
| Mud salinity | ppm | 84775 | 76924 | 83929 | | | | | | |
| Formation salinity | | | | | | | | | | |
| Recording rate 1 | SEC | 5 sec. | 5 sec. | 5 sec. | | | | | | |
| Recording rate 2 | SEC | 5 sec. | 5 sec. | 5 sec. | | | | | | |
| Filtering GR | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Filtering density | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Filtering Neutron | | 3 pt. | 3 pt. | 3 pt. | | | | | | |
| Company representative | | R. Bain | M. Jackson | J. MacKinnon | | | | | | |
| Schlumberger D&M Personnel | | J. Dolan | M. Y. Tan | D. Hastie | T. Auger | C. Soper | B. Hanson | | | |

DISCLAIMER

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 SCHLUMBERGER 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.

| | | | | | |
|--|--|---|--|--|--|
| OTHER SERVICES FOR RUN2 Xceed* RSS D&I Survey | | OTHER SERVICES FOR RUN3 Xceed* RSS D&I Survey | | OTHER SERVICES FOR RUN4 Xceed* RSS D&I Survey | |
| REMARKS: RUN NUMBER 2 8-1/2 in. hole section was drilled from 843.0 m to 1253.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR* resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Neutron porosity data was processed without | | REMARKS: RUN NUMBER 3 8-1/2 in. hole section was drilled from 1253.0 m to 1902.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Resistivity data was processed until the depth | | REMARKS: RUN NUMBER 4 8-1/2 in. hole section was drilled from 1902.0 m to 2641.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. Environmental Corrections: – GR is corrected for mud weight, tool and bit size, but not corrected for Potassium content. GVR* resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for hole size (DCAV), borehole salinity, temperature and mud hydrogen index (derived from mud weight, temperature and pressure at depth). Surface temperature is adjusted to give a correct computed downhole temperature gradient. Resistivity data between the interval of | |

FR11 and FR21.

of 1864.0 m MD.

1864.0 m to 1893.0 m MD was acquired by
reaming down the section.

EQUIPMENT DESCRIPTION

RUN2

RUN3

RUN4

DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C Neutron F 31.81 33.78
 S/N: 0403 Neutron N 31.66
 8-1/4 in. Stabiliser Density S 30.79
 NSR-M A202 Density L 30.69
 GSR-J A1994 UltraSonic 30.31
 Software: V8.3A02 R-O Port 29.55

6-3/4 in. Sonic*6 27.18
 S/N: 34641
 Software: V6.4B10
 Receiver Array 24.12
 R-O Port 23.72
 Transmitter 20.68

6-3/4 in. PowerPulse* 19.89
 MDC Z411
 MEC 212
 MDI 1096
 MVC 282
 Software: V8.0B96
 D&I 15.69

6-3/4 in. GVR* 11.54
 S/N: 191
 Software: V6.2B01
 Shallow 10.04
 Medium 9.92
 Deep 9.74
 Ring Res 9.57
 R-O Port 9.43
 GR 9.21

6-3/4 in. Xceed* RSS 7.89
 S/N: 060

DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C Neutron F 31.79 33.74
 S/N: FE55 Neutron N 31.64
 8-3/16 in. Stabiliser Density S 30.77
 NSR-M A202 Density L 30.67
 GSR-J A1994 UltraSonic 30.29
 Software: V8.3B02 R-O Port 29.53

6-3/4 in. Sonic*6 27.14
 S/N: 34641
 Software: V6.4B10
 Receiver Array 24.08
 R-O Port 23.68
 Transmitter 20.64

6-3/4 in. PowerPulse* 19.85
 MDC Z411
 MEC 212
 MDI 1096
 MVC 282
 Software: V8.0B96
 D&I 15.65

6-3/4 in. GVR* 11.50
 S/N: 191
 Software: V6.2B01
 Shallow 10.00
 Medium 9.88
 Deep 9.70
 Ring Res 9.53
 R-O Port 9.39
 GR 9.17

6-3/4 in. Xceed* RSS 7.85
 S/N: 060

DOWNHOLE EQUIPMENT

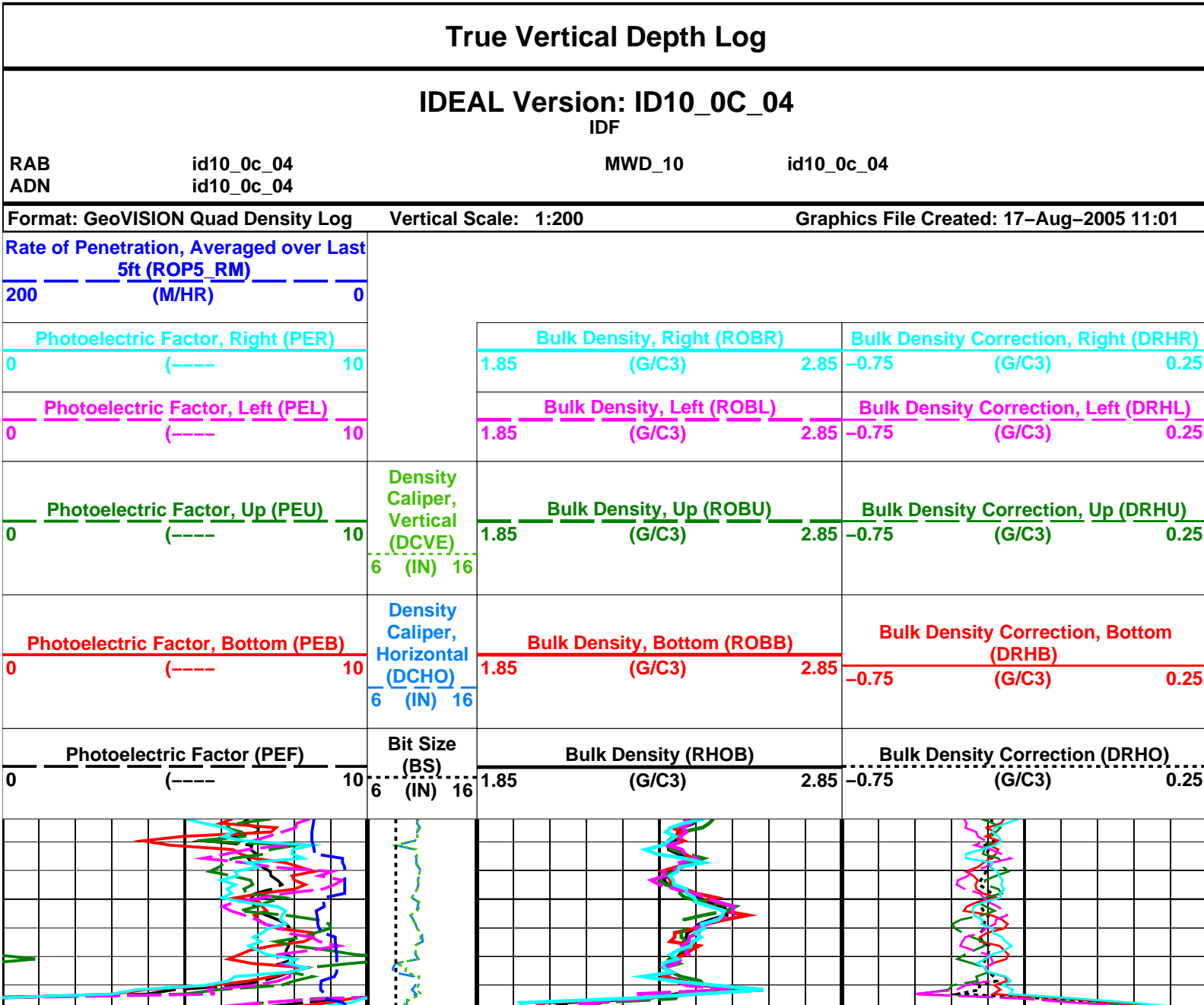
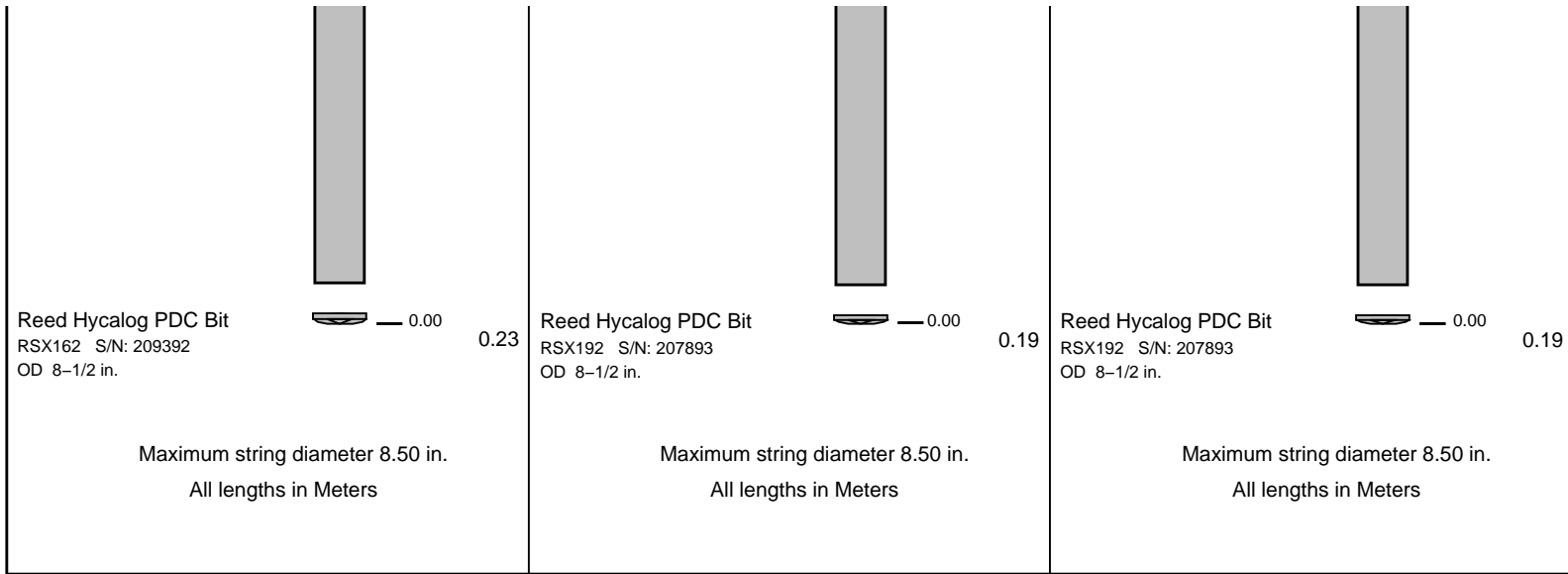
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 GSR-J A1994 UltraSonic 30.25
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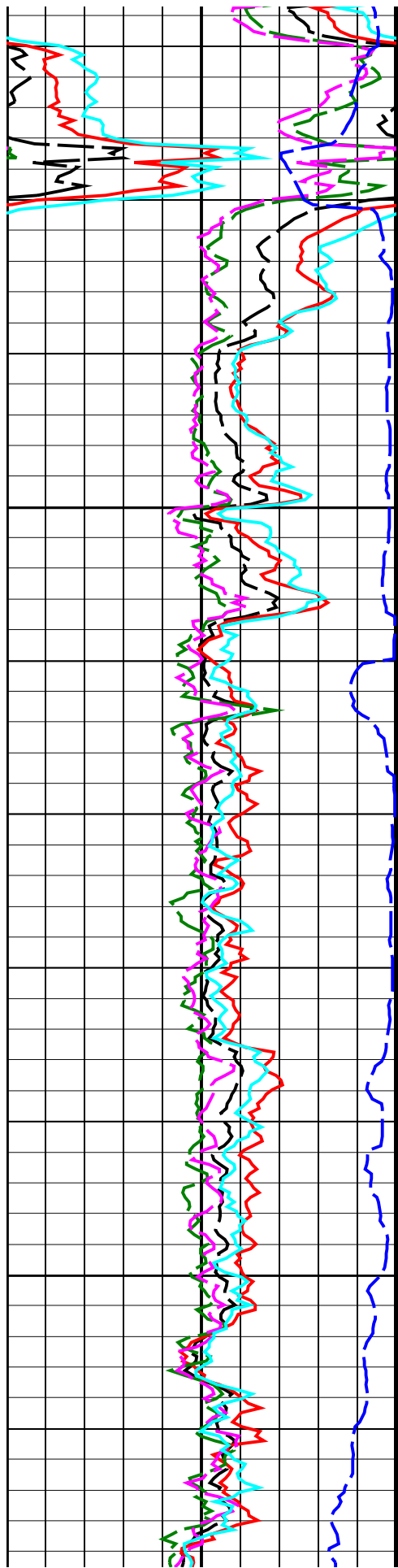
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 Software: V6.2B01
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 Transmitter 20.60

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 MDC Z411
 MEC 212
 MDI 1096
 MVC 282
 Software: V8.0B96
 D&I 15.61

6-3/4 in. GVR* 11.46
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 Medium 9.87
 Deep 9.69
 Ring Res 9.52
 R-O Port 9.38
 GR 9.16

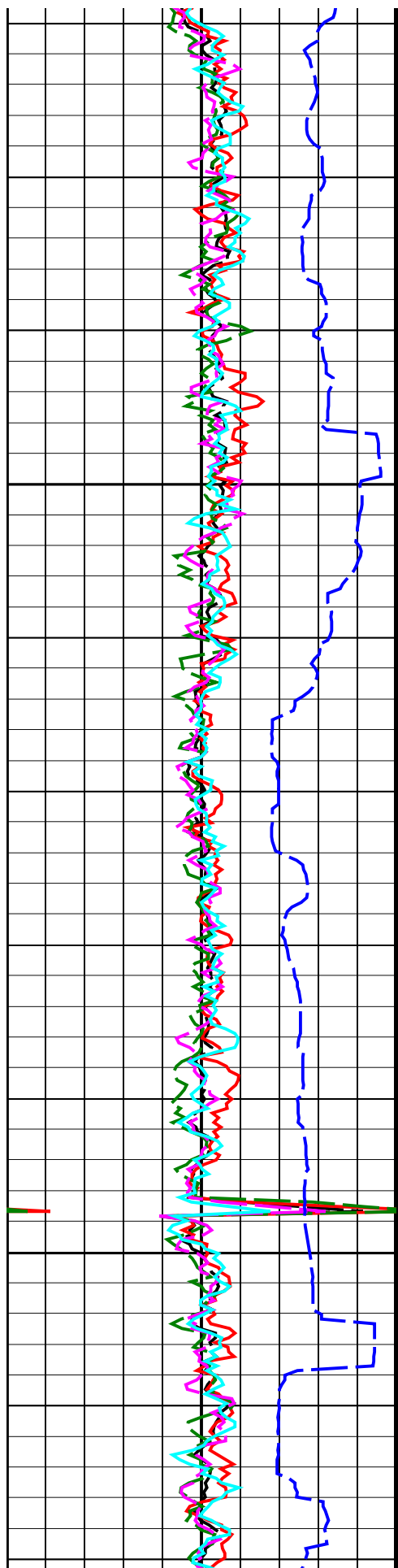
6-3/4 in. Xceed* RSS 7.85
 S/N: 060





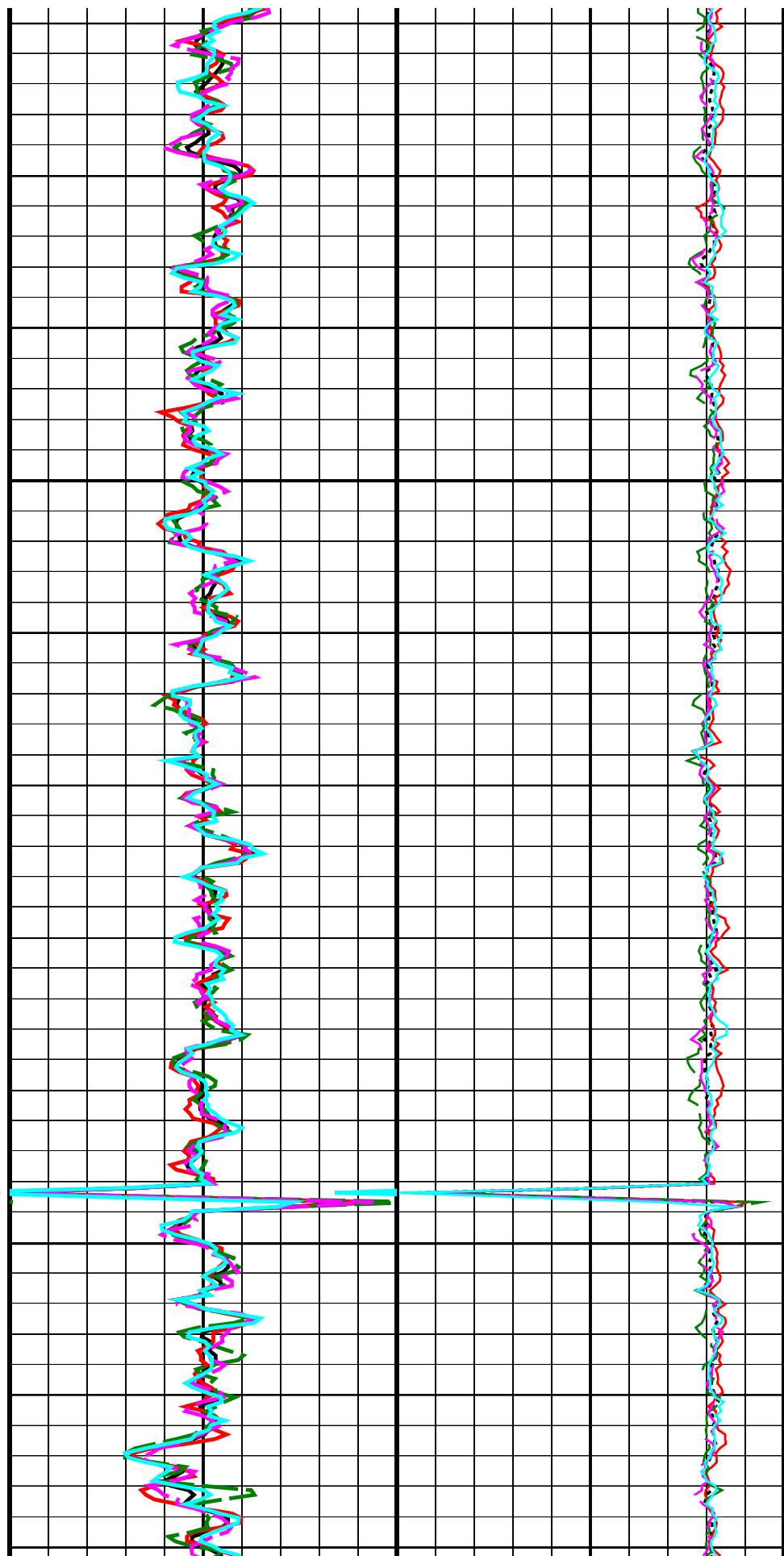
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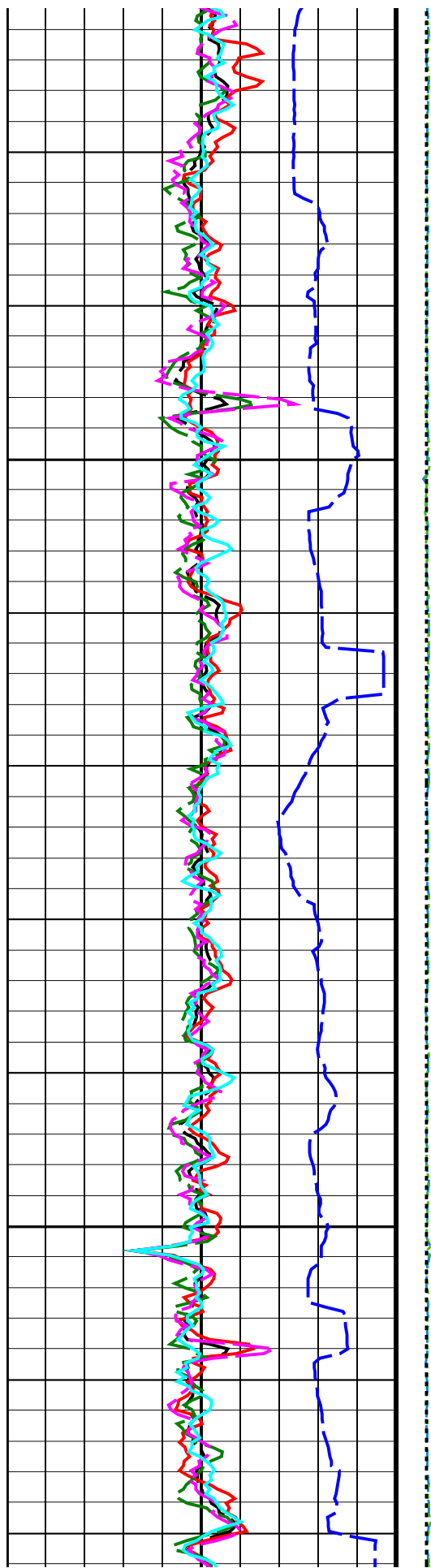
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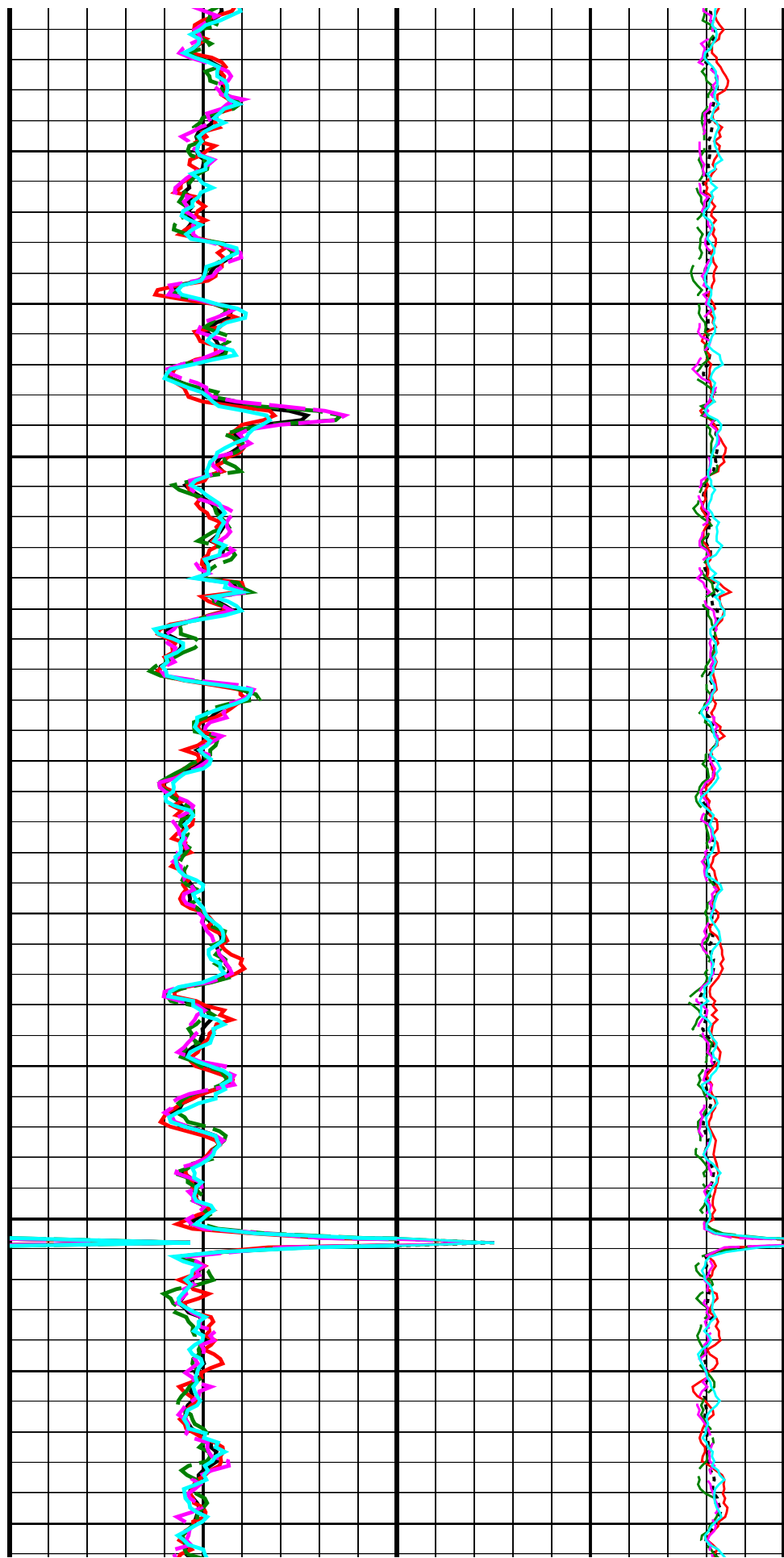
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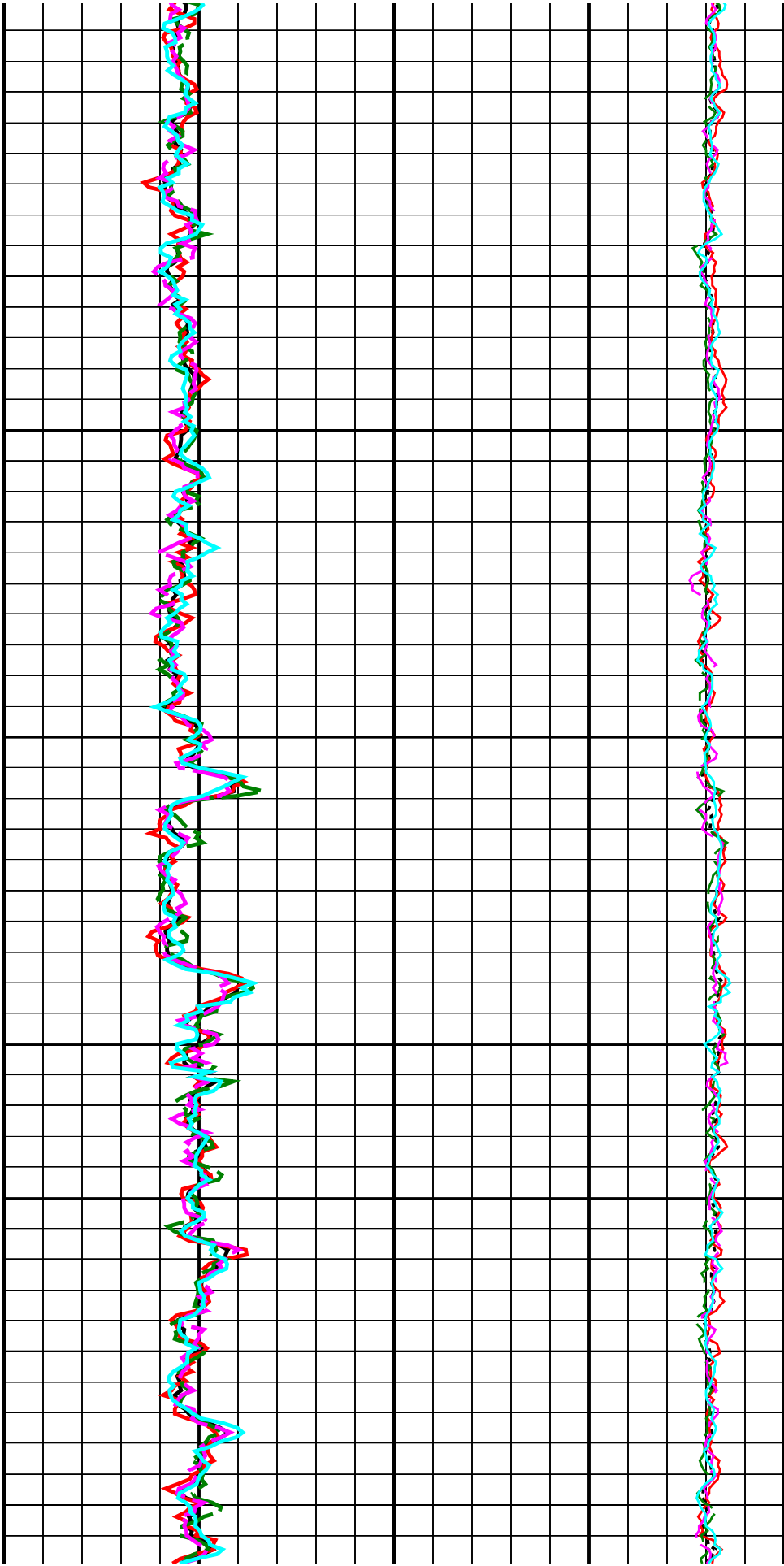
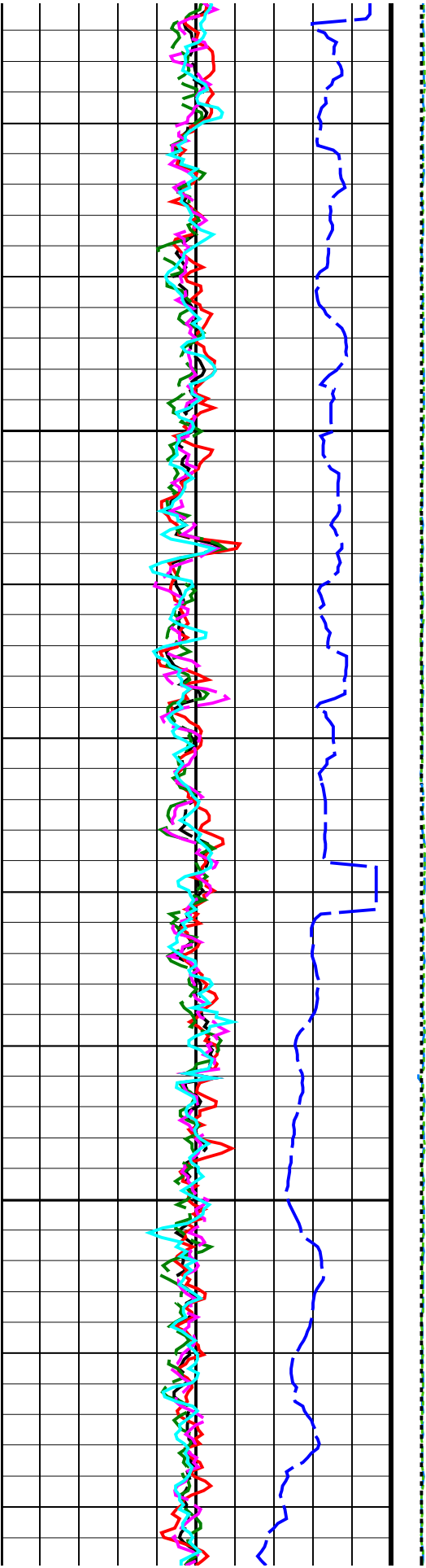


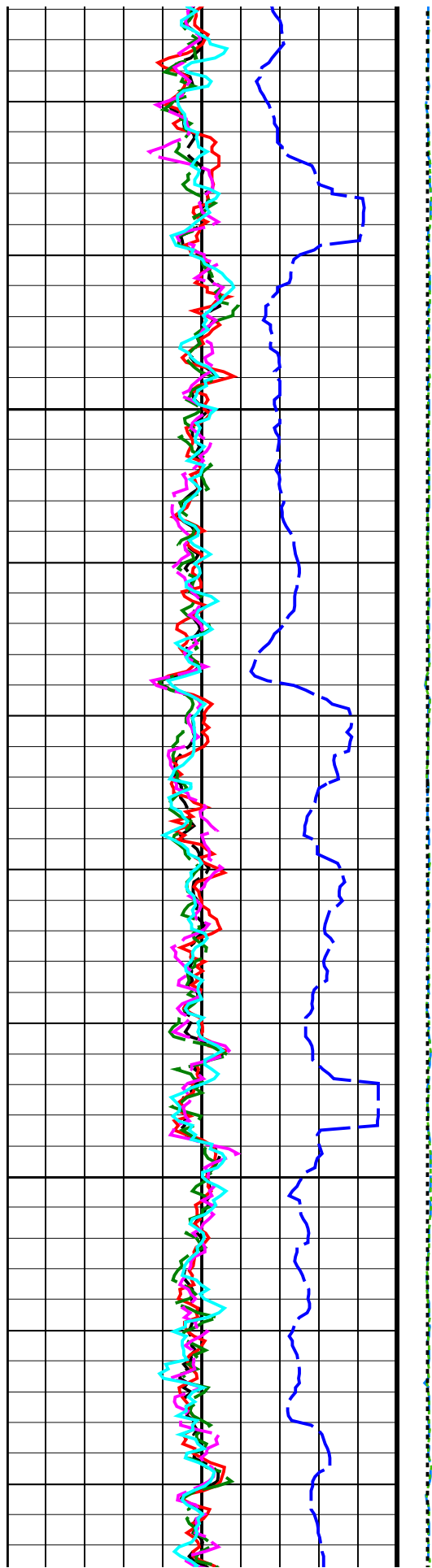


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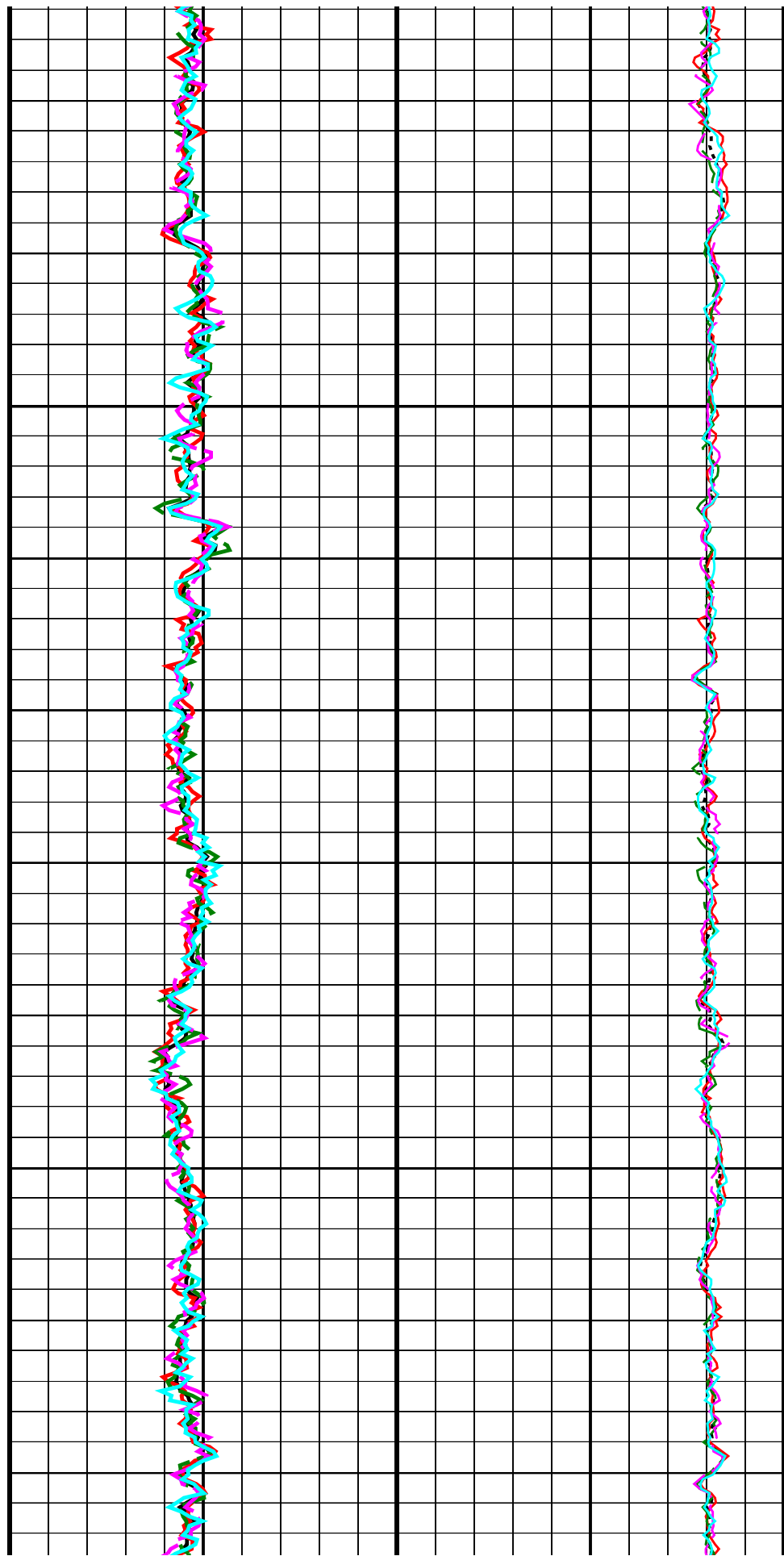


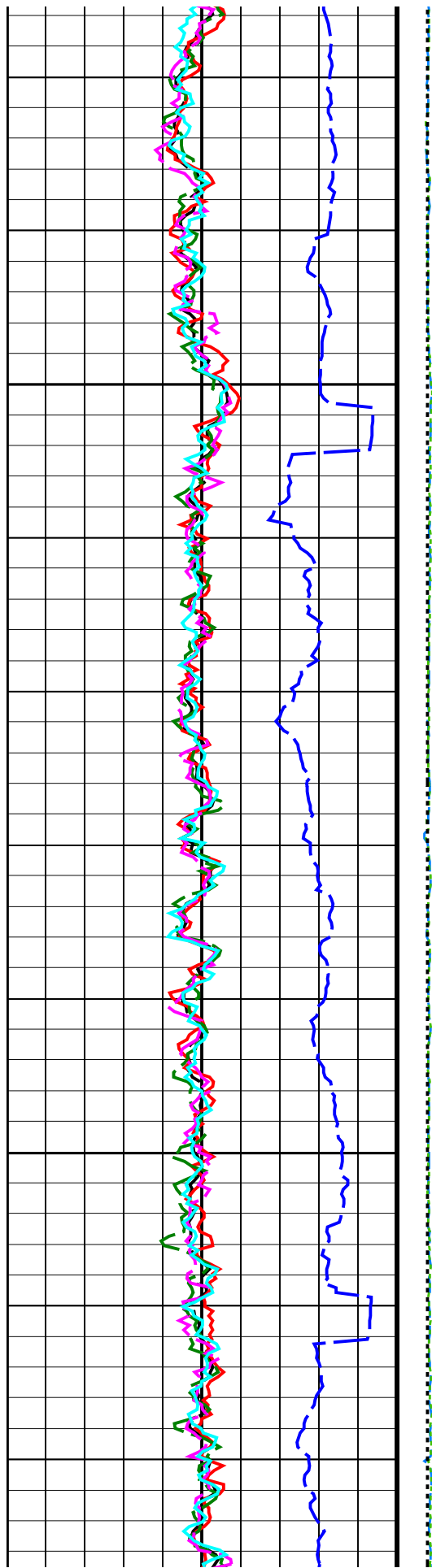




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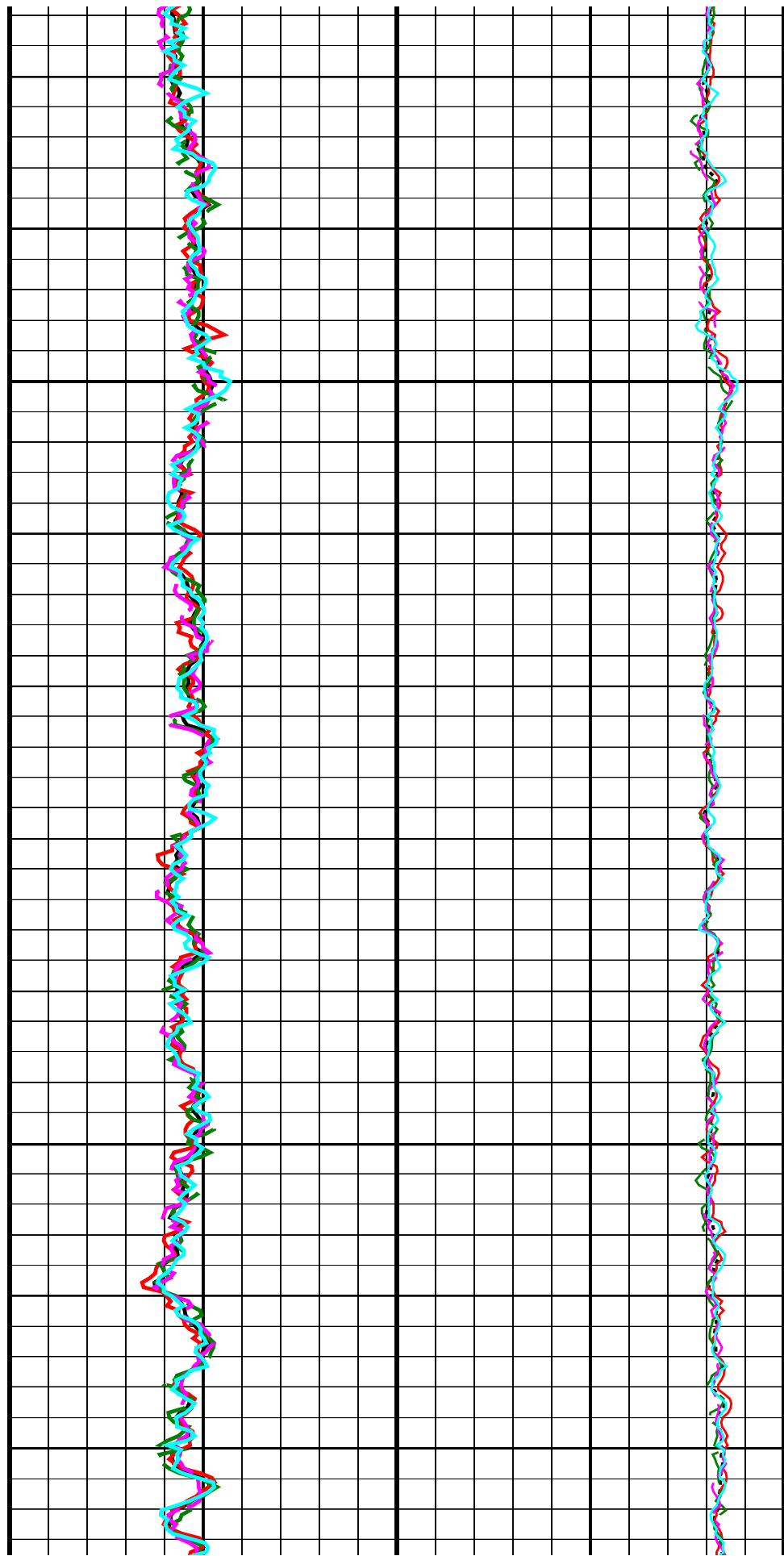
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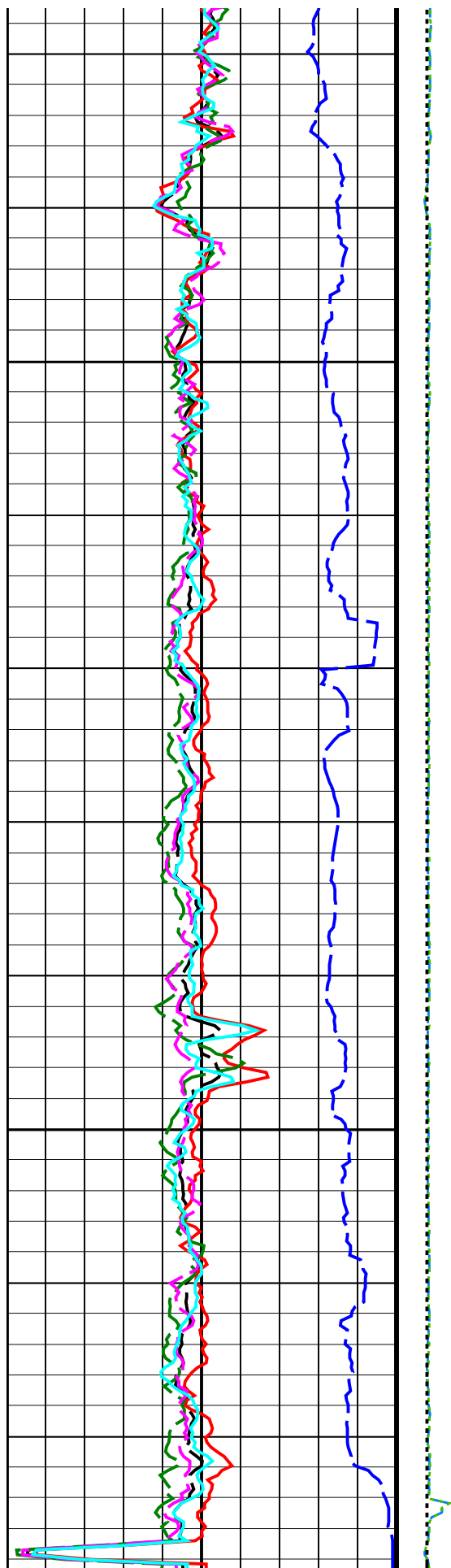




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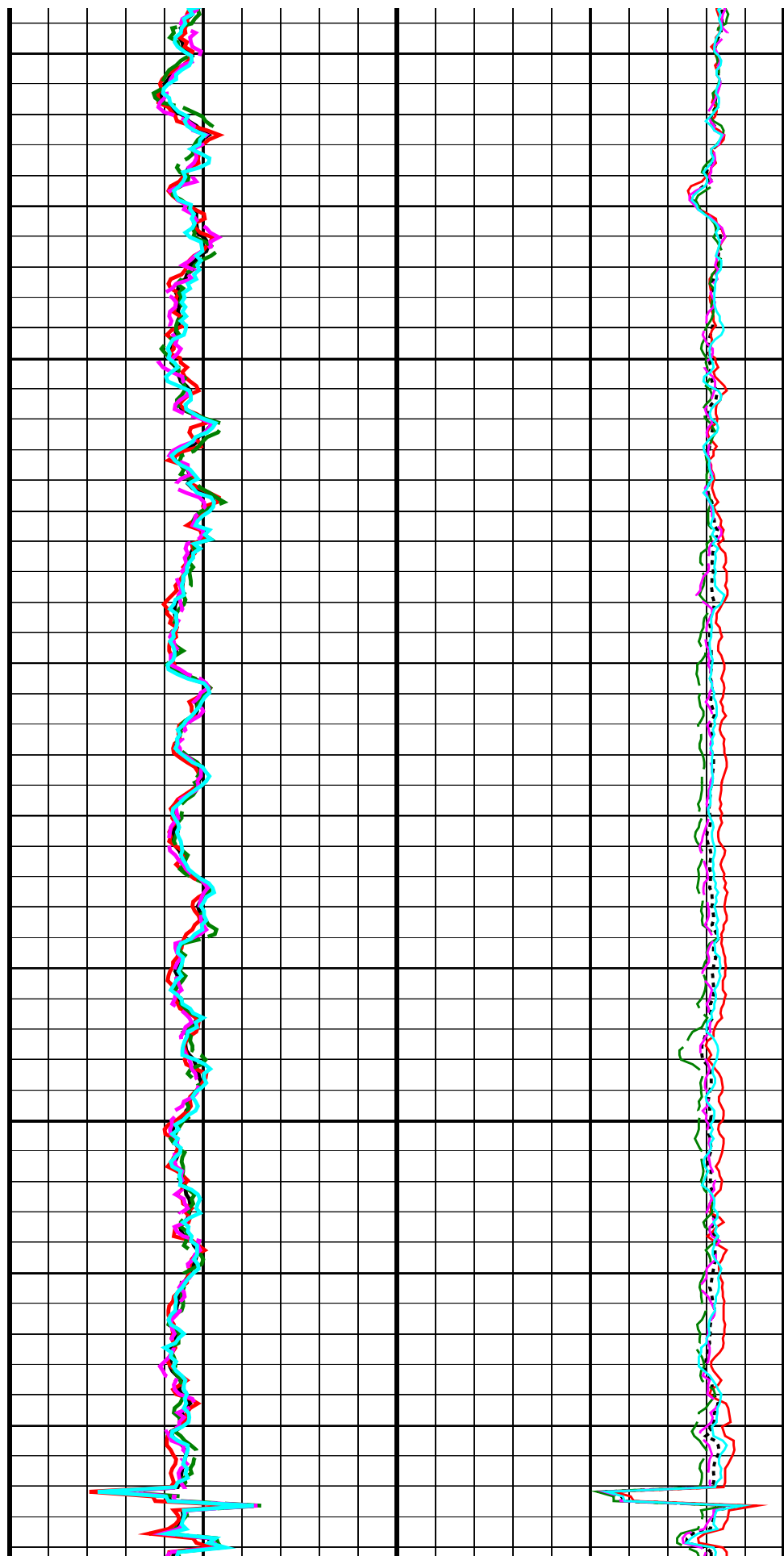
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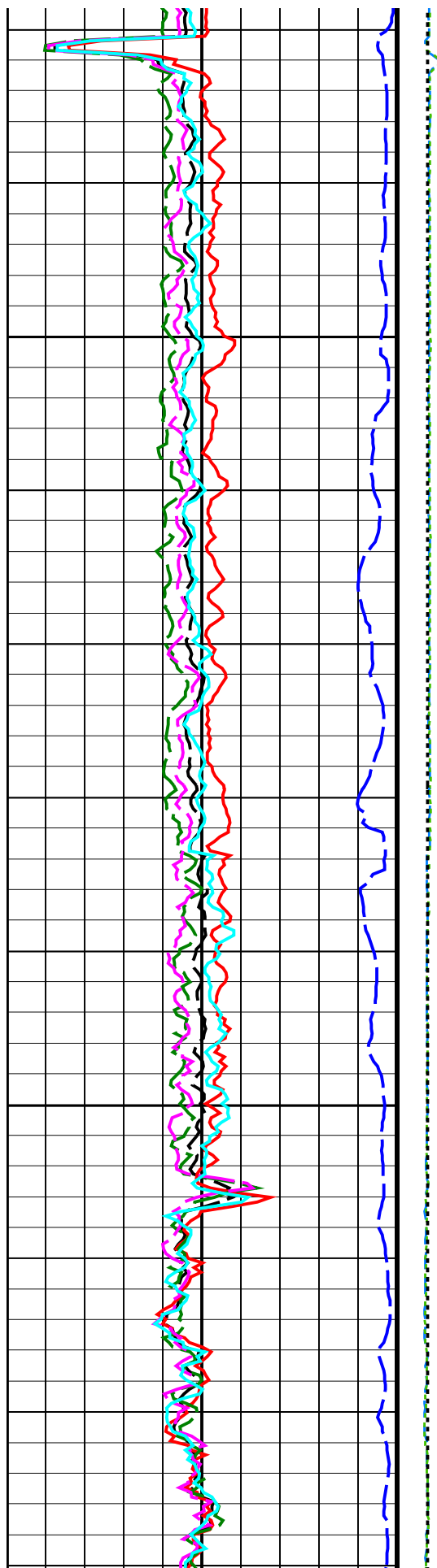




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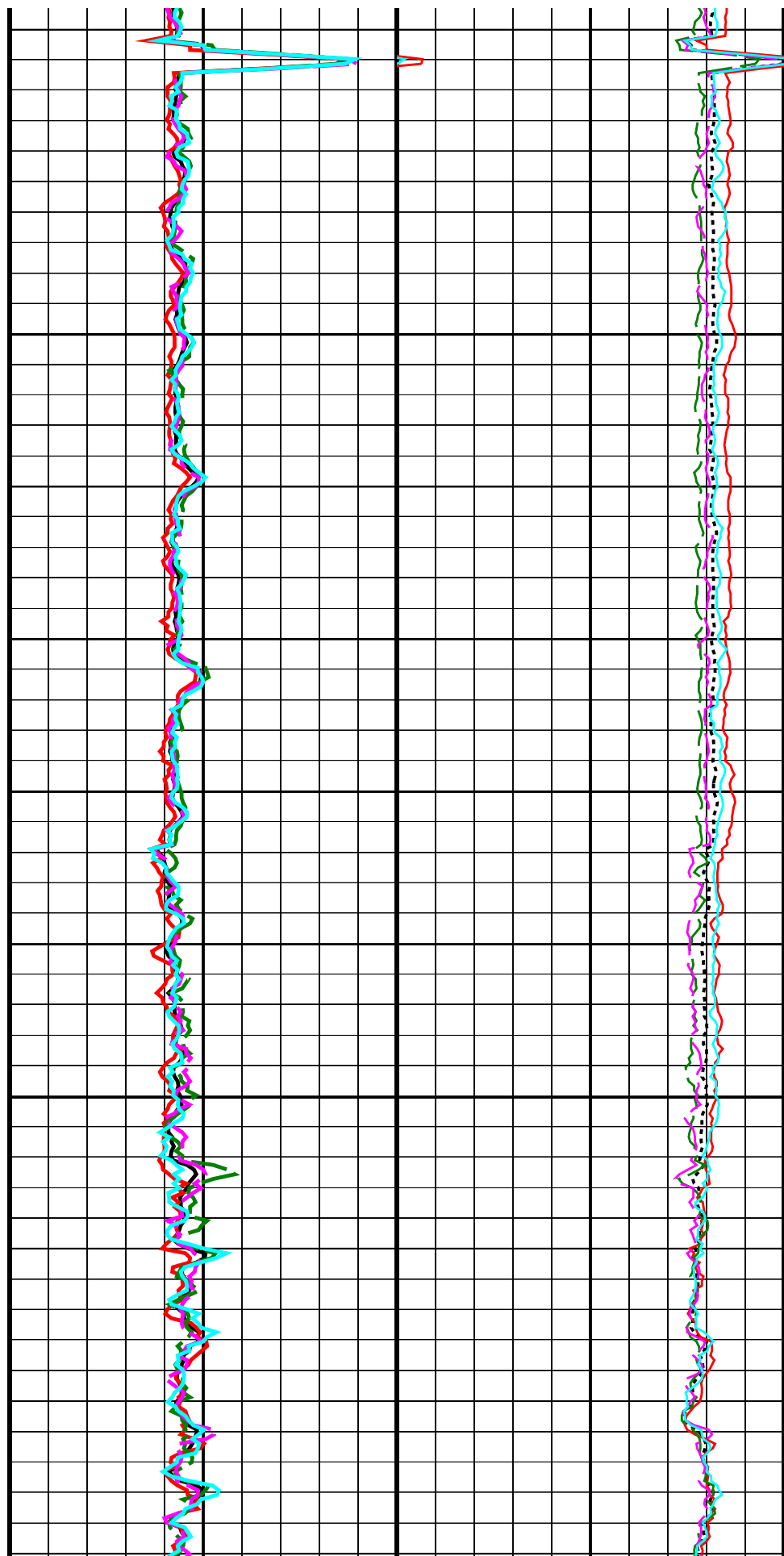
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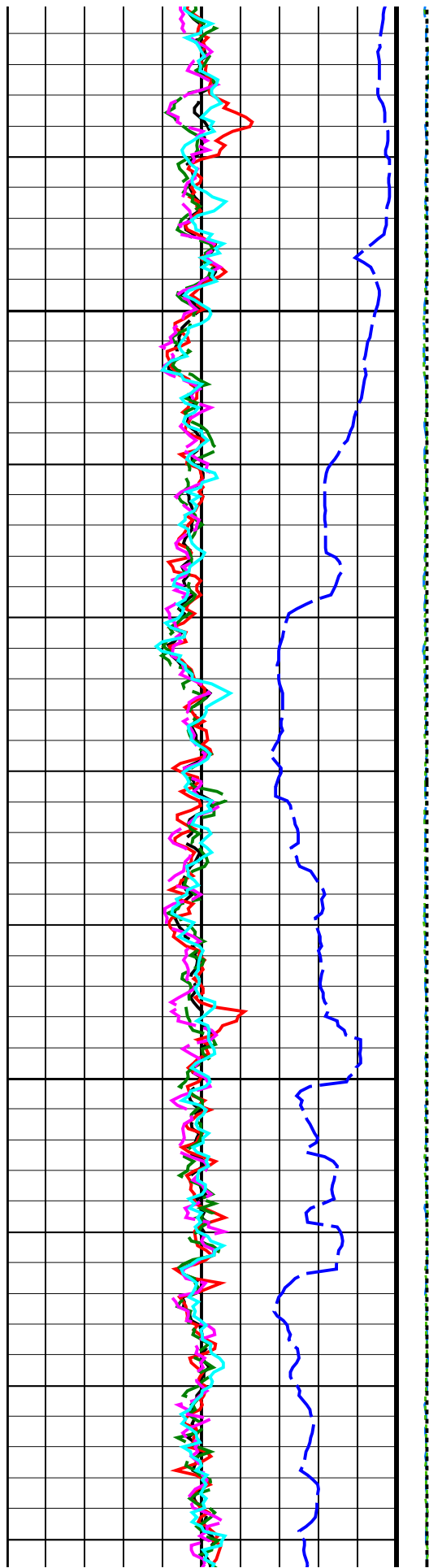




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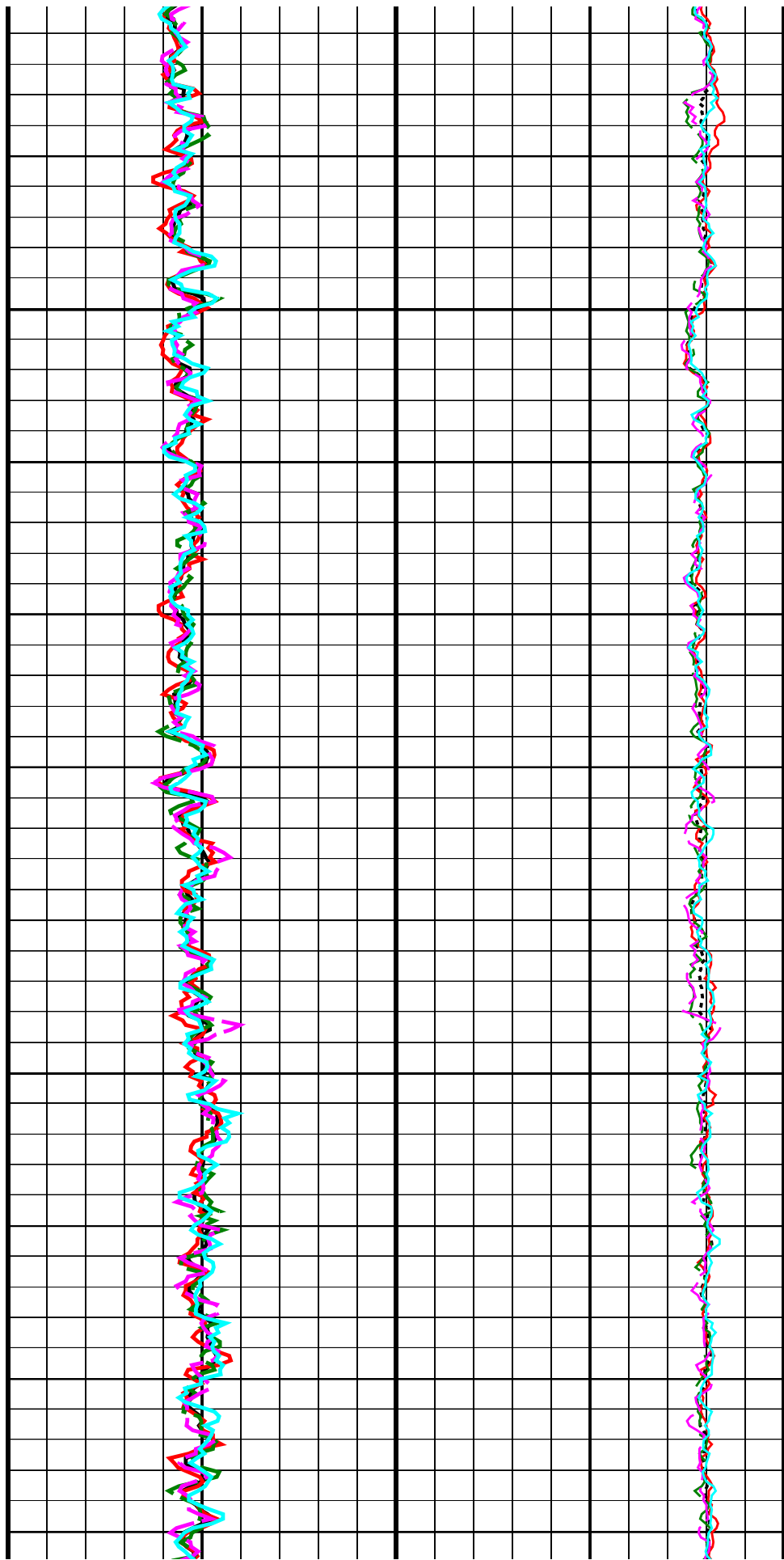
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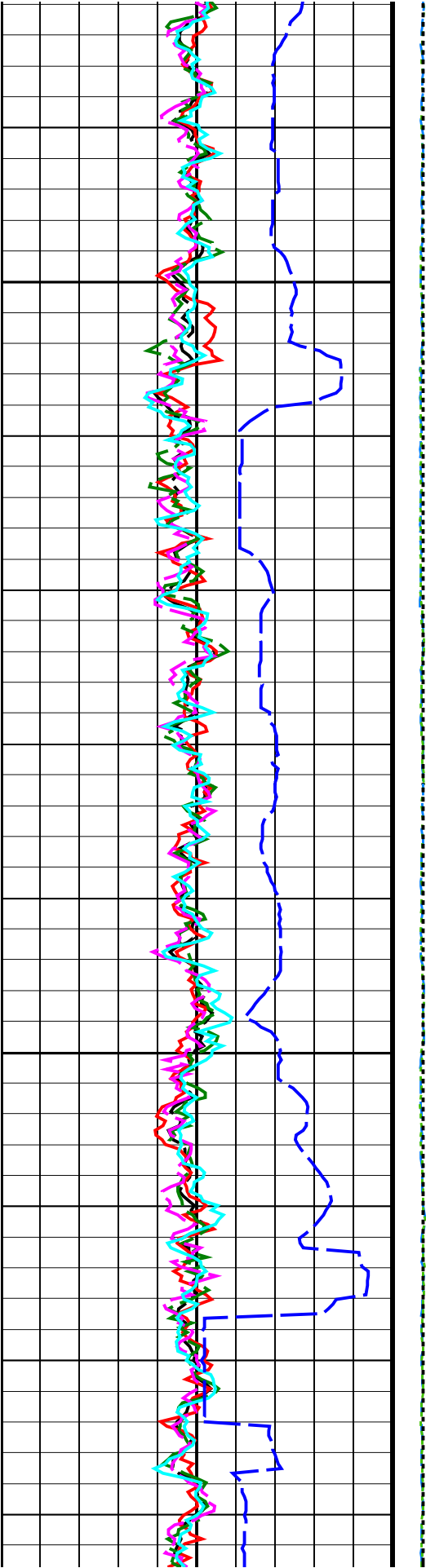




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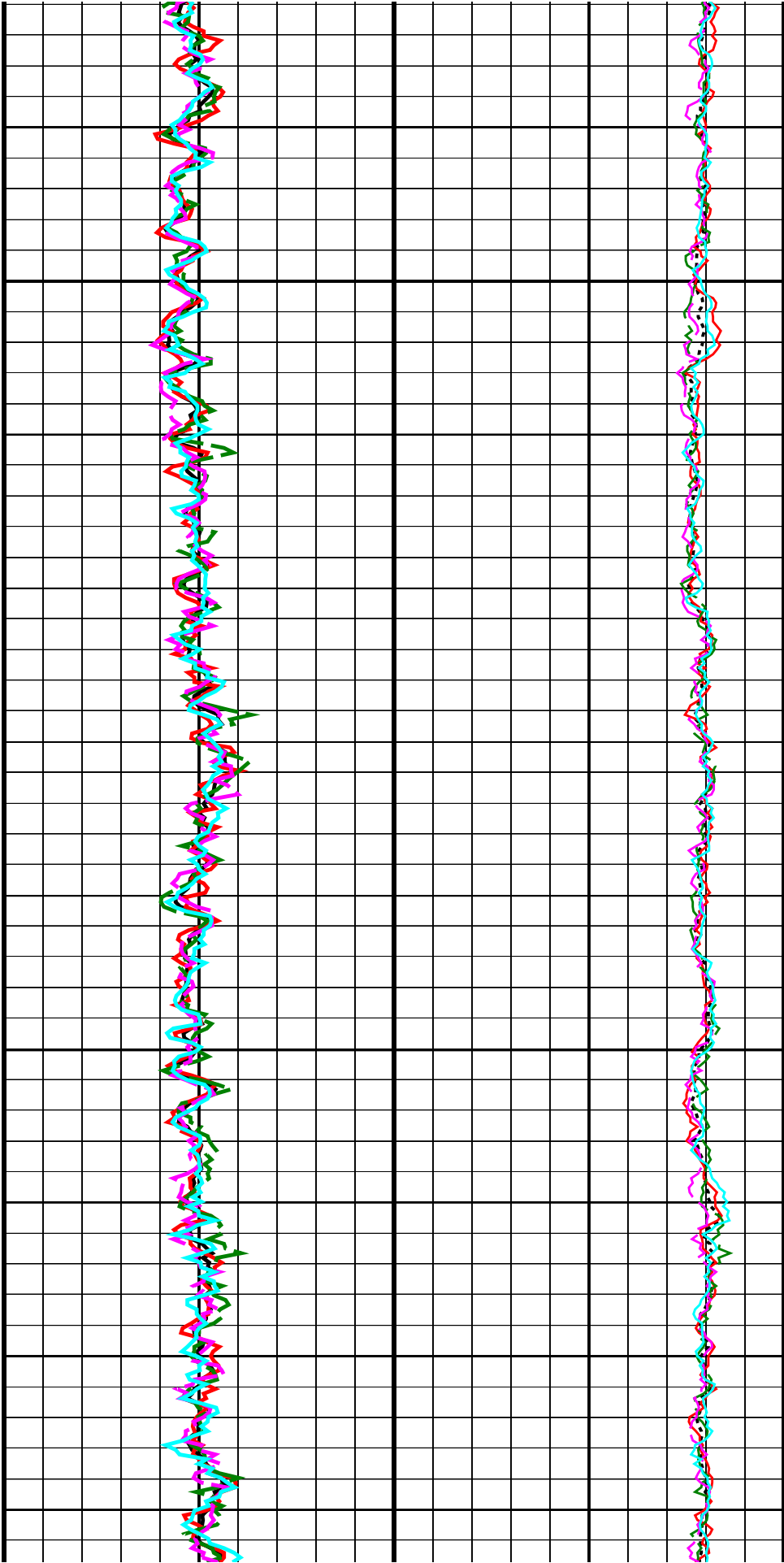
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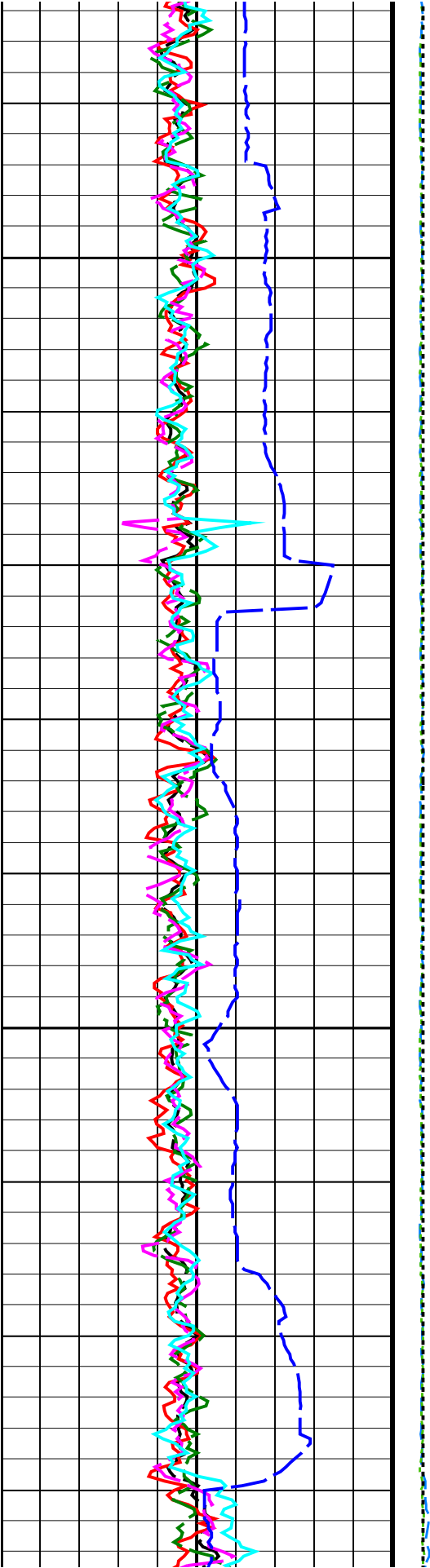




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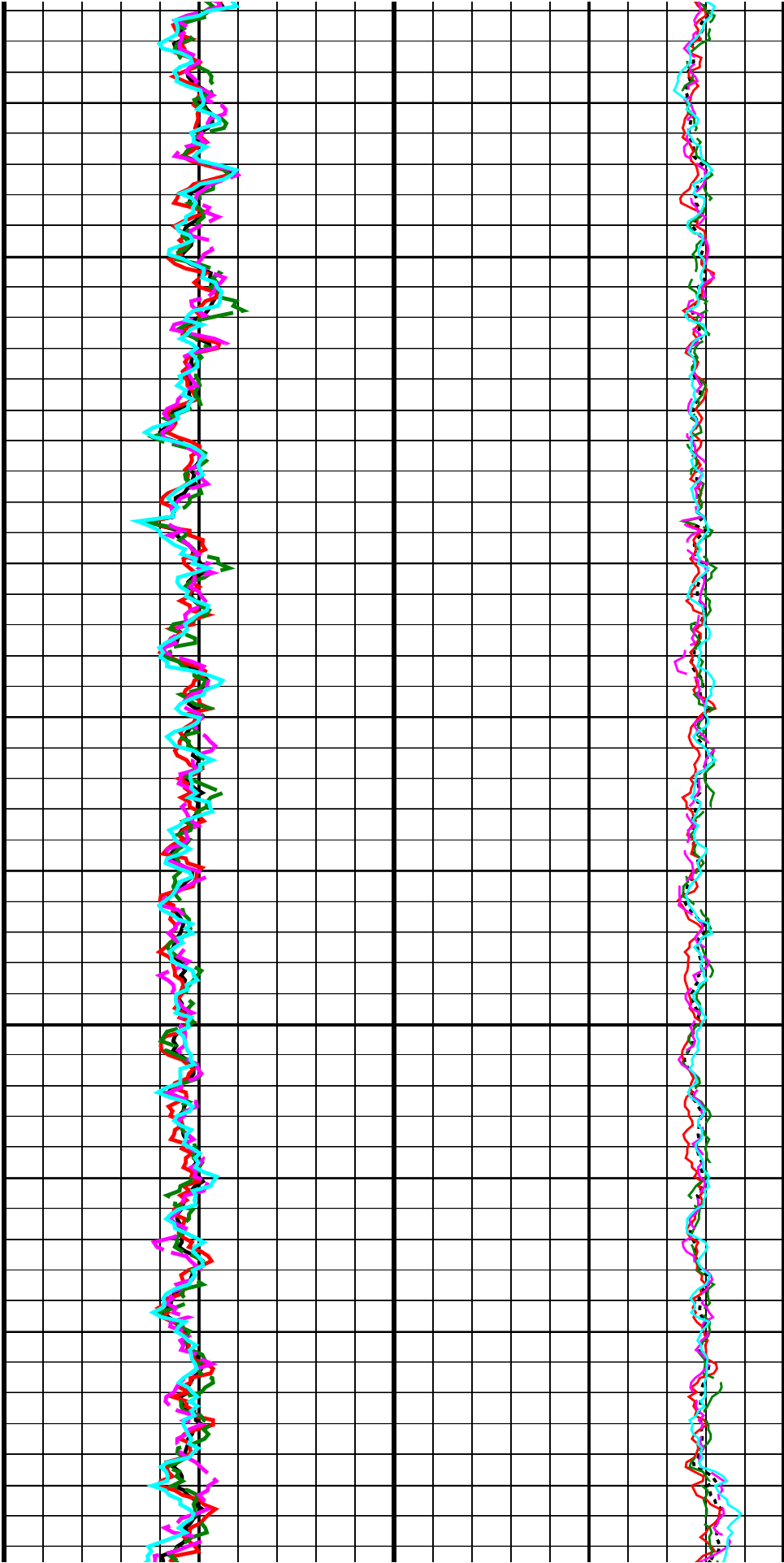
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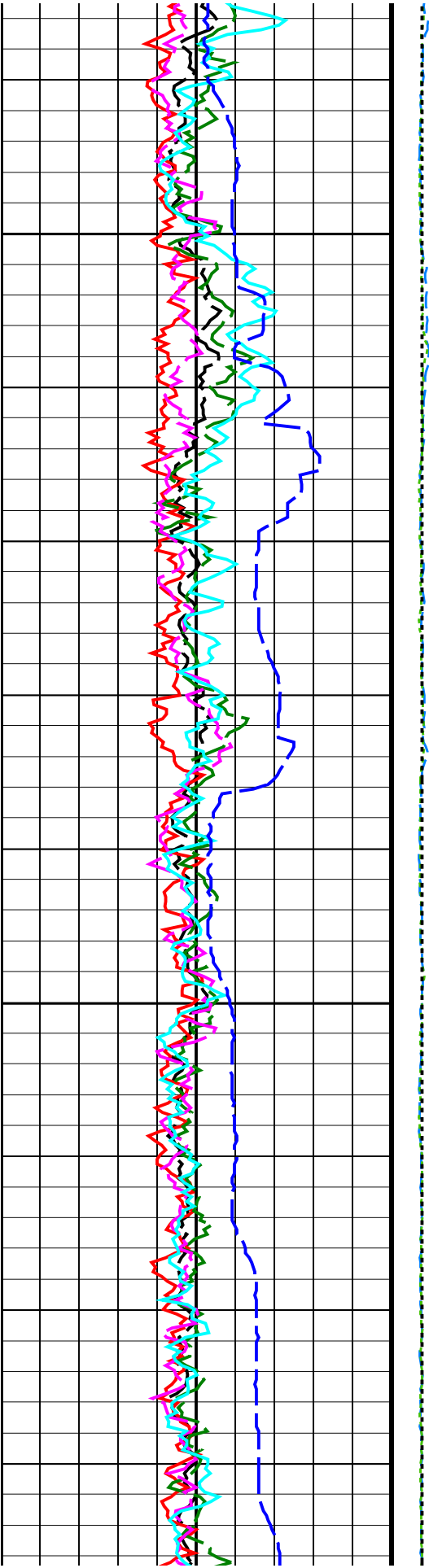




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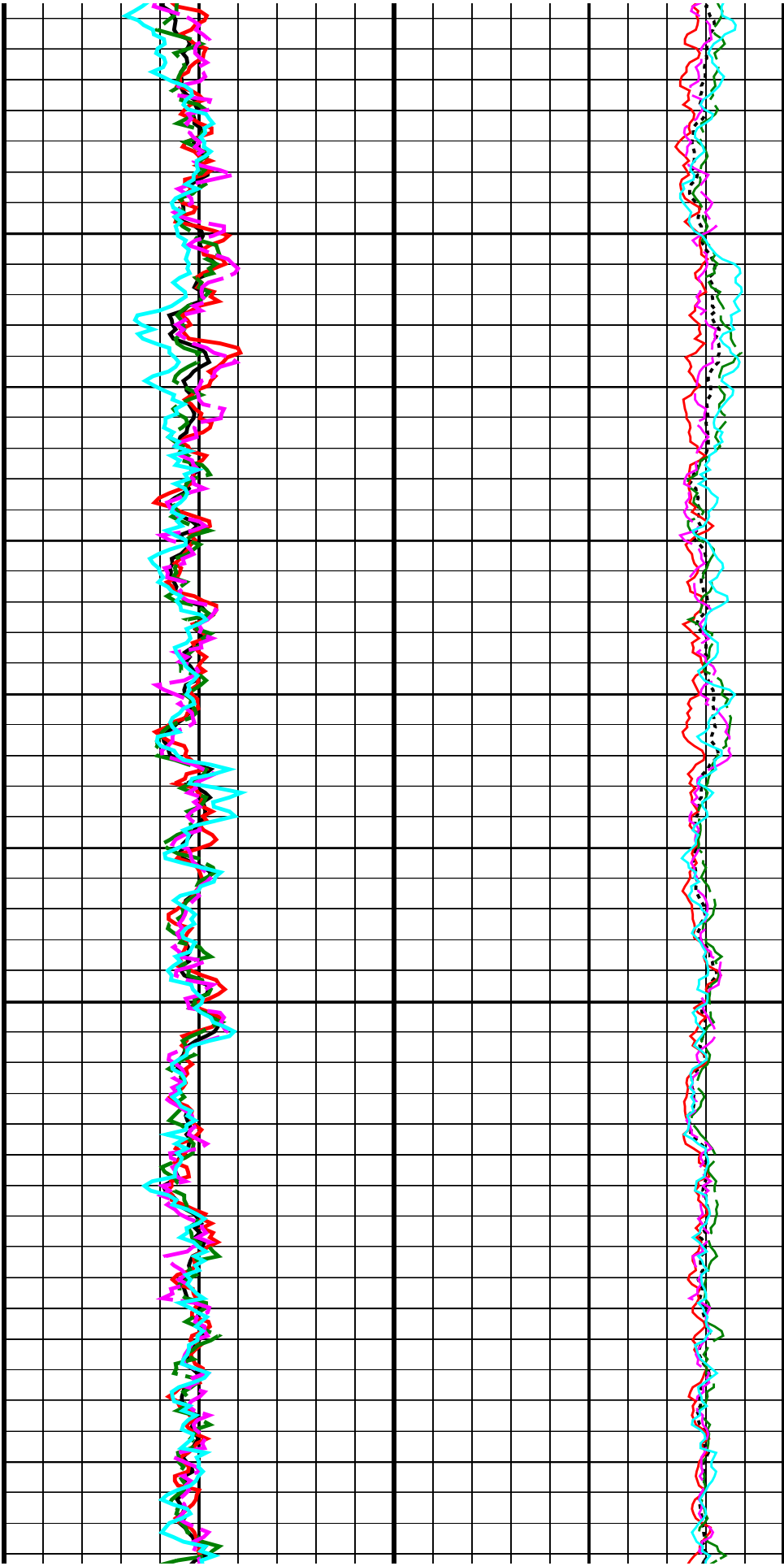
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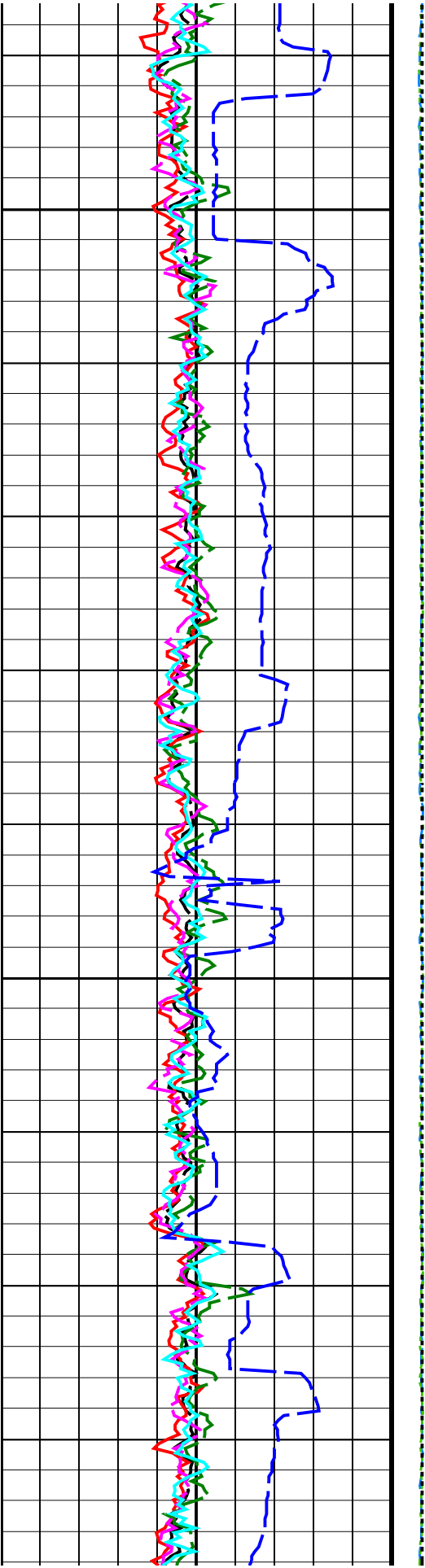




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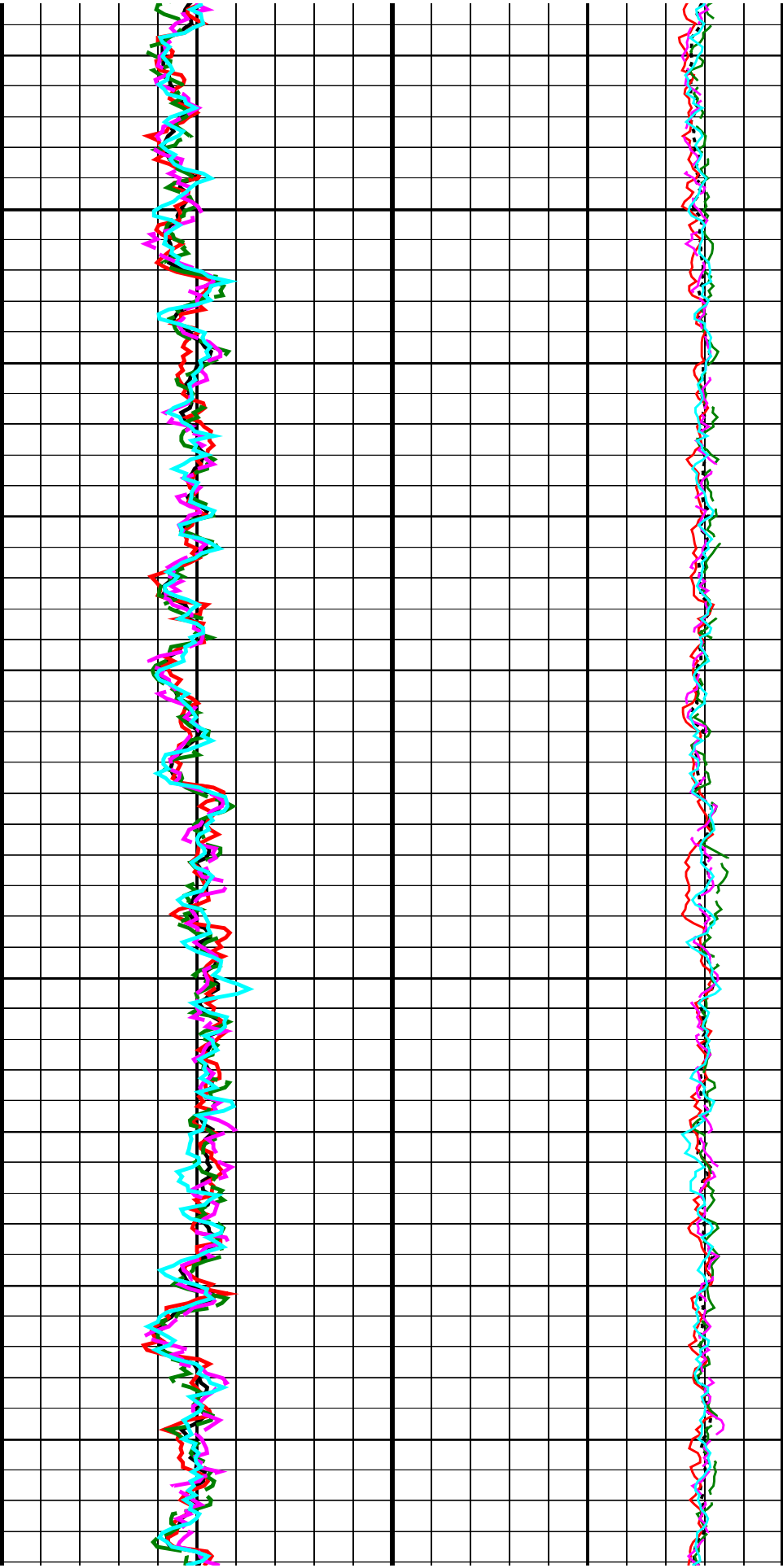
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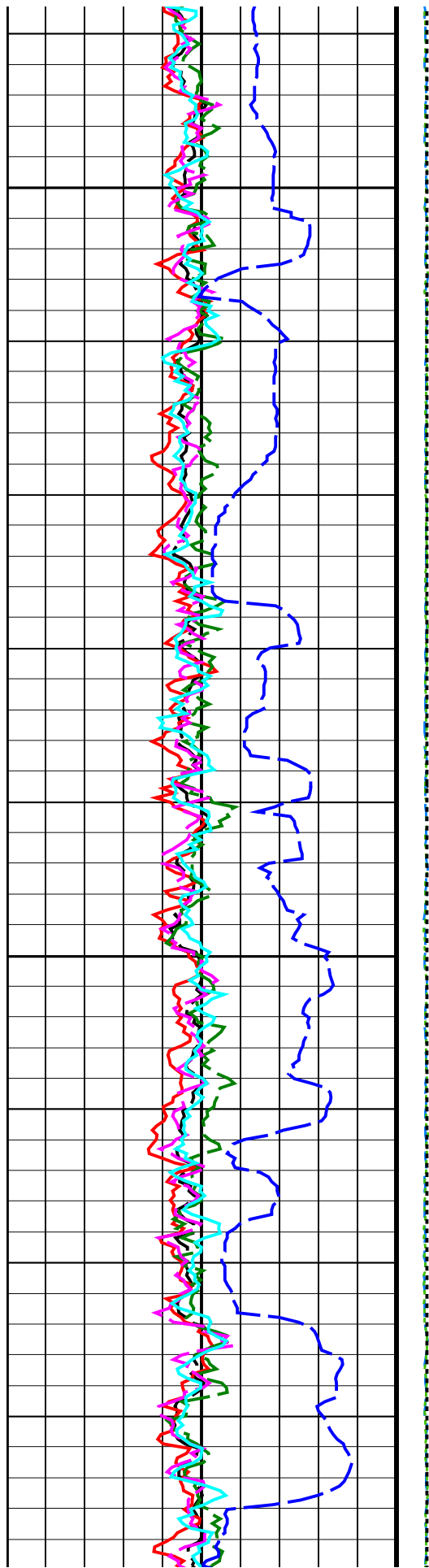




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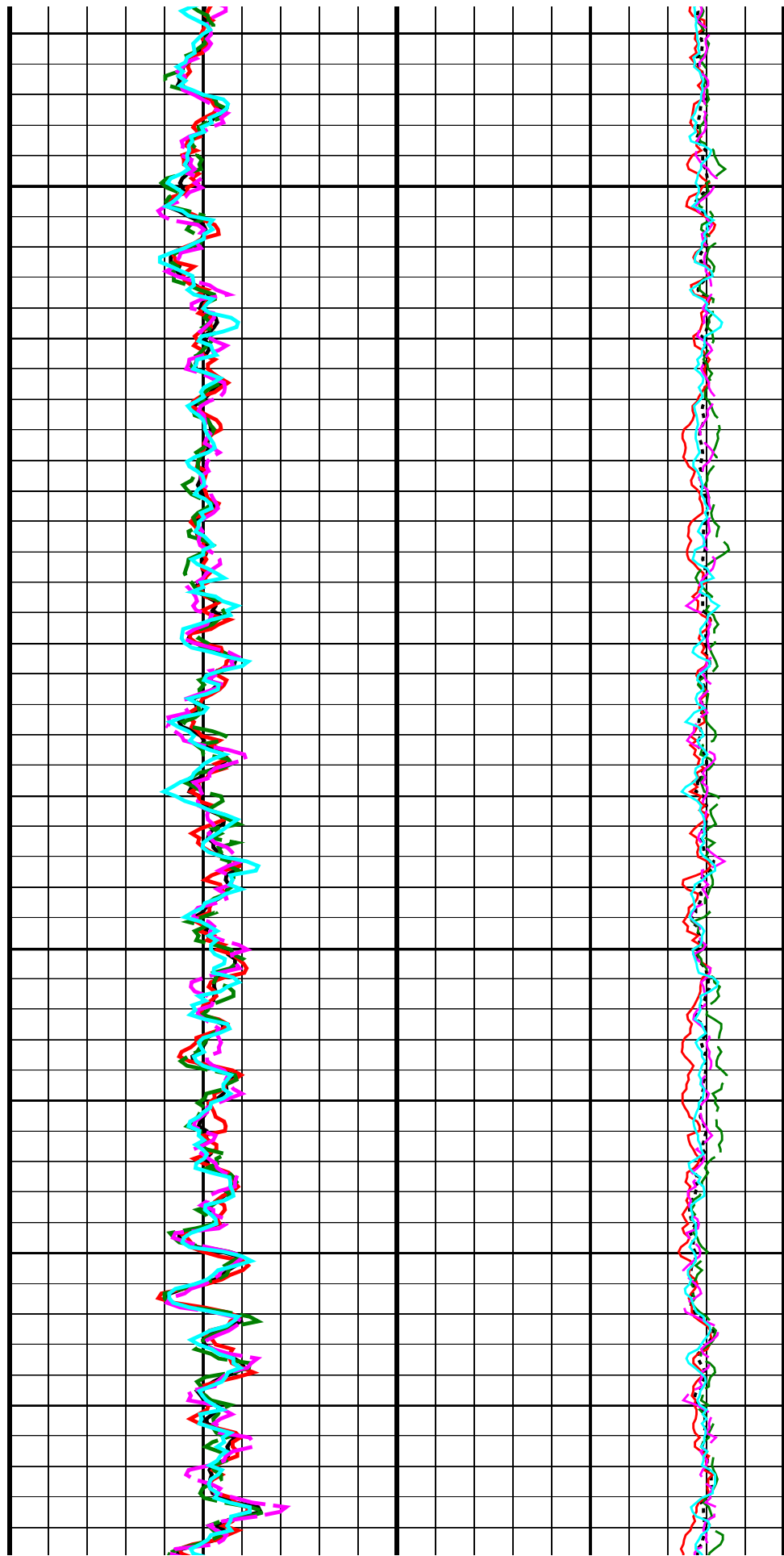
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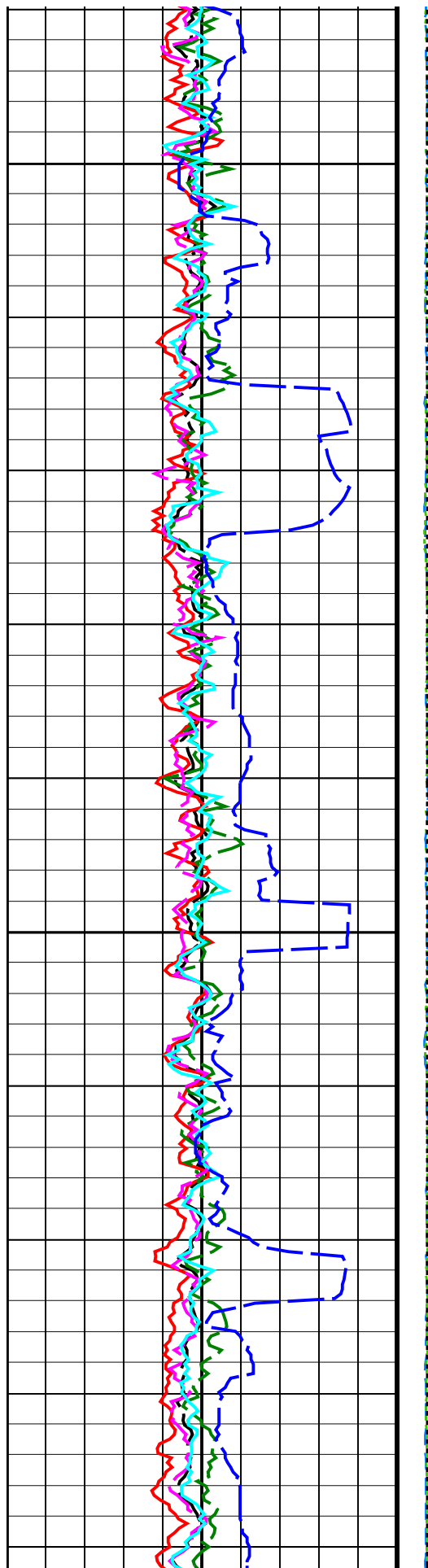




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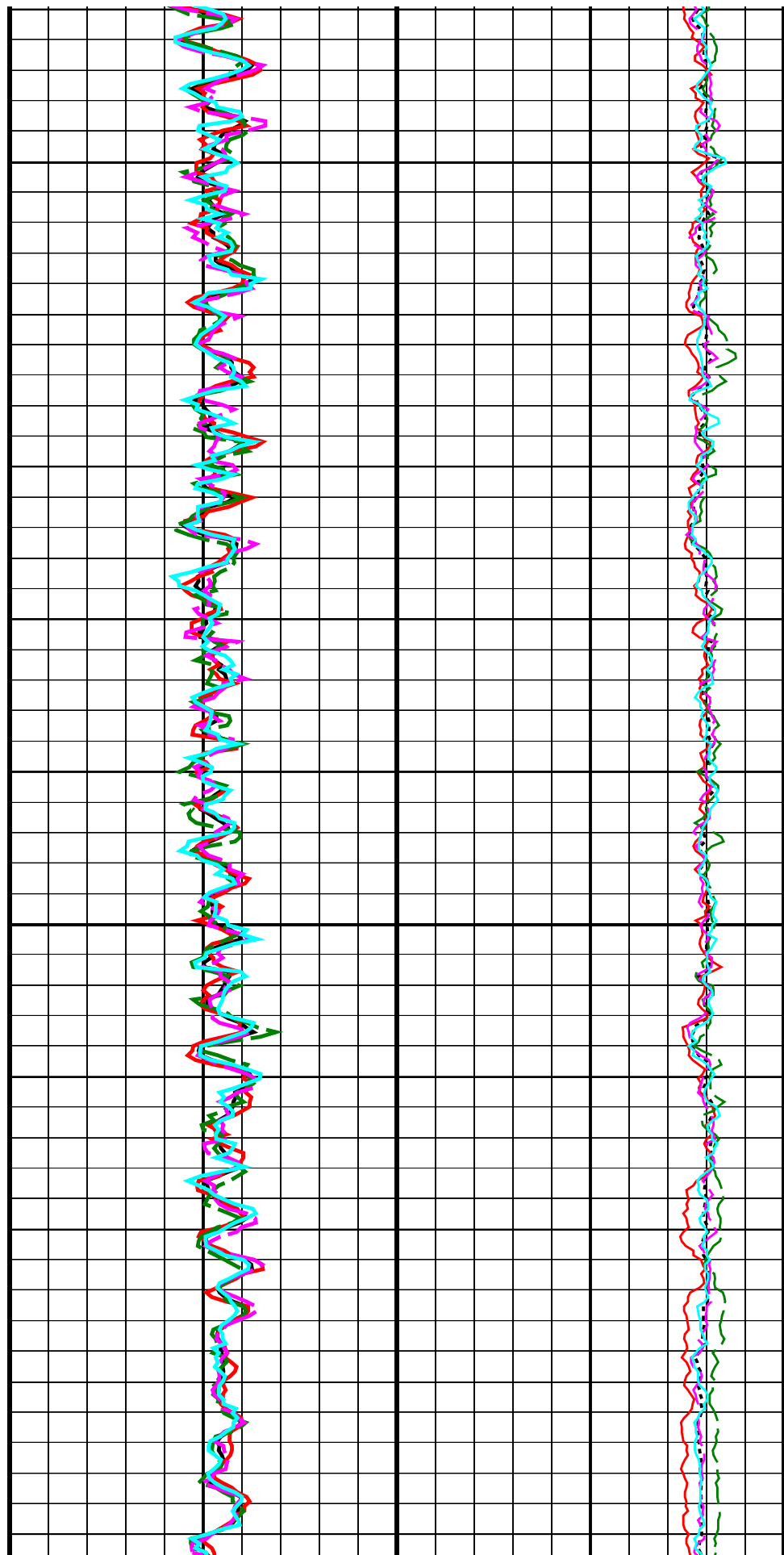
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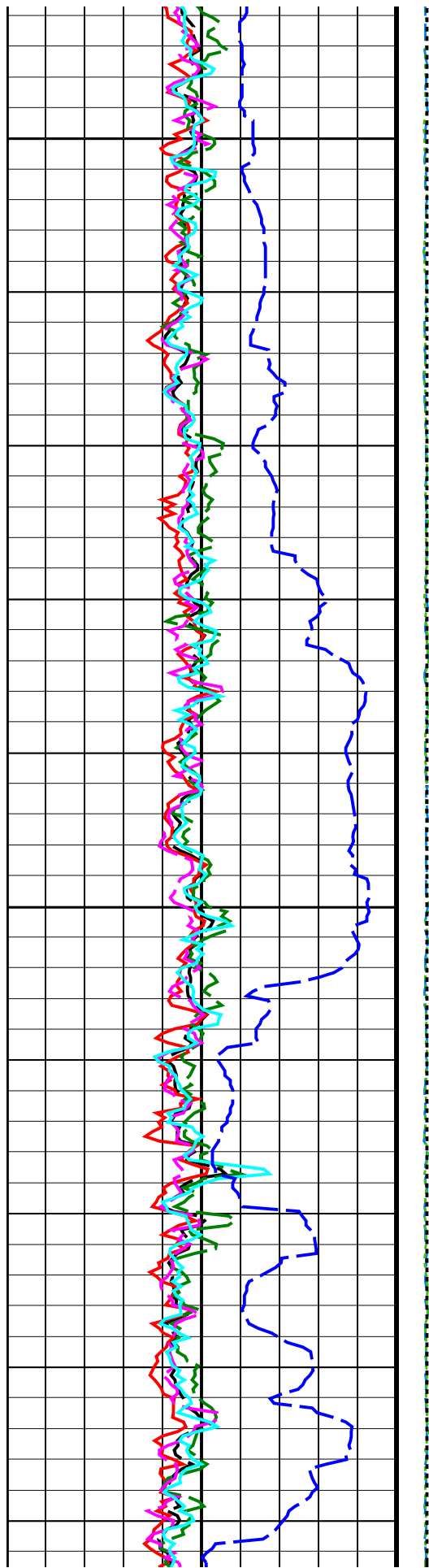




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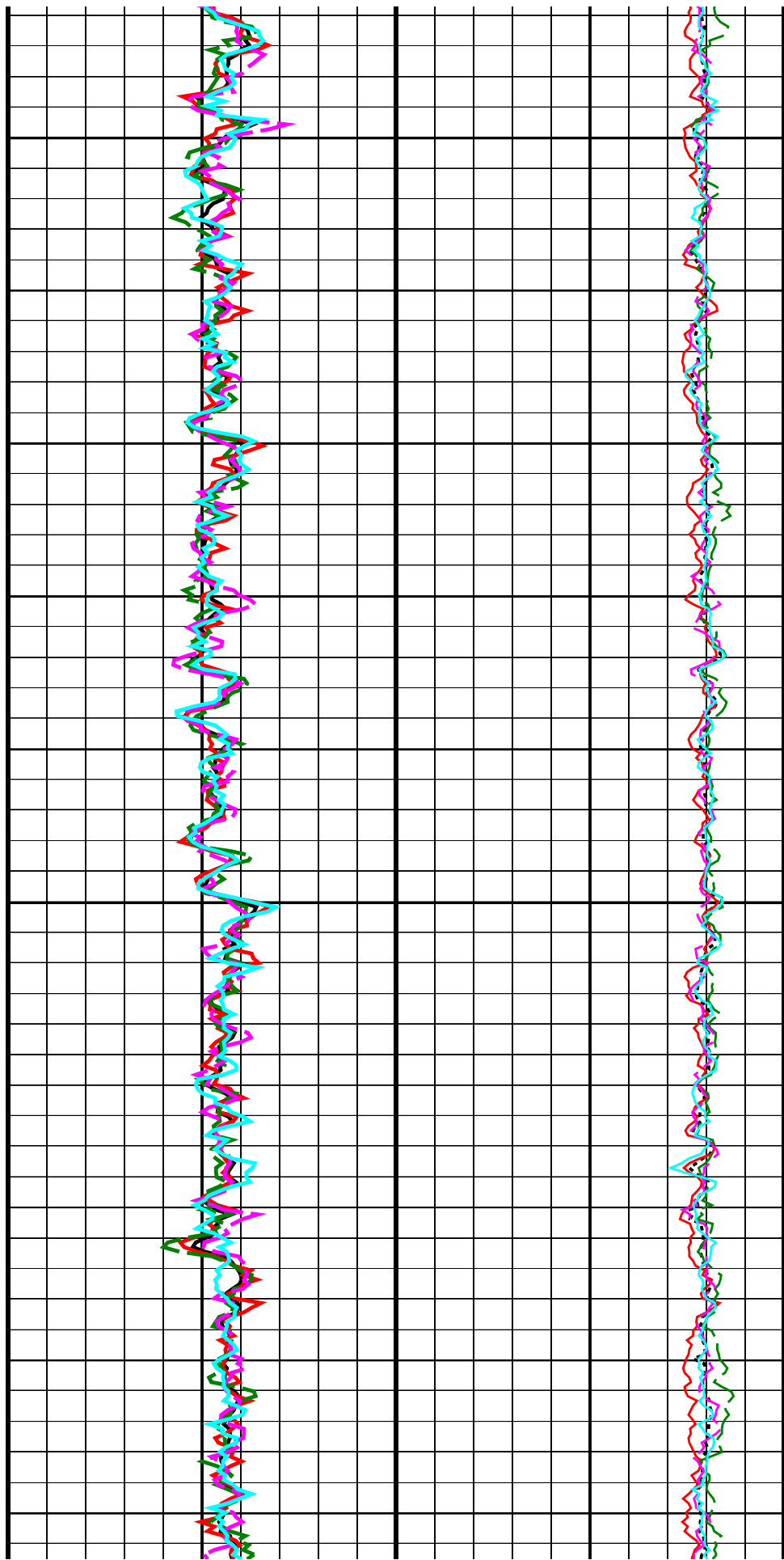
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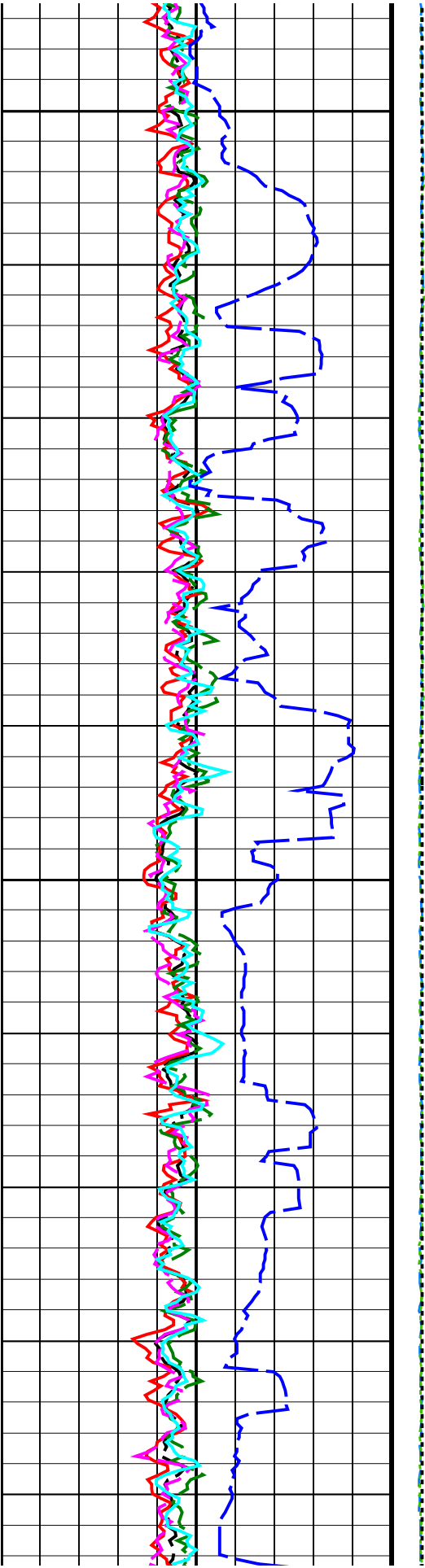




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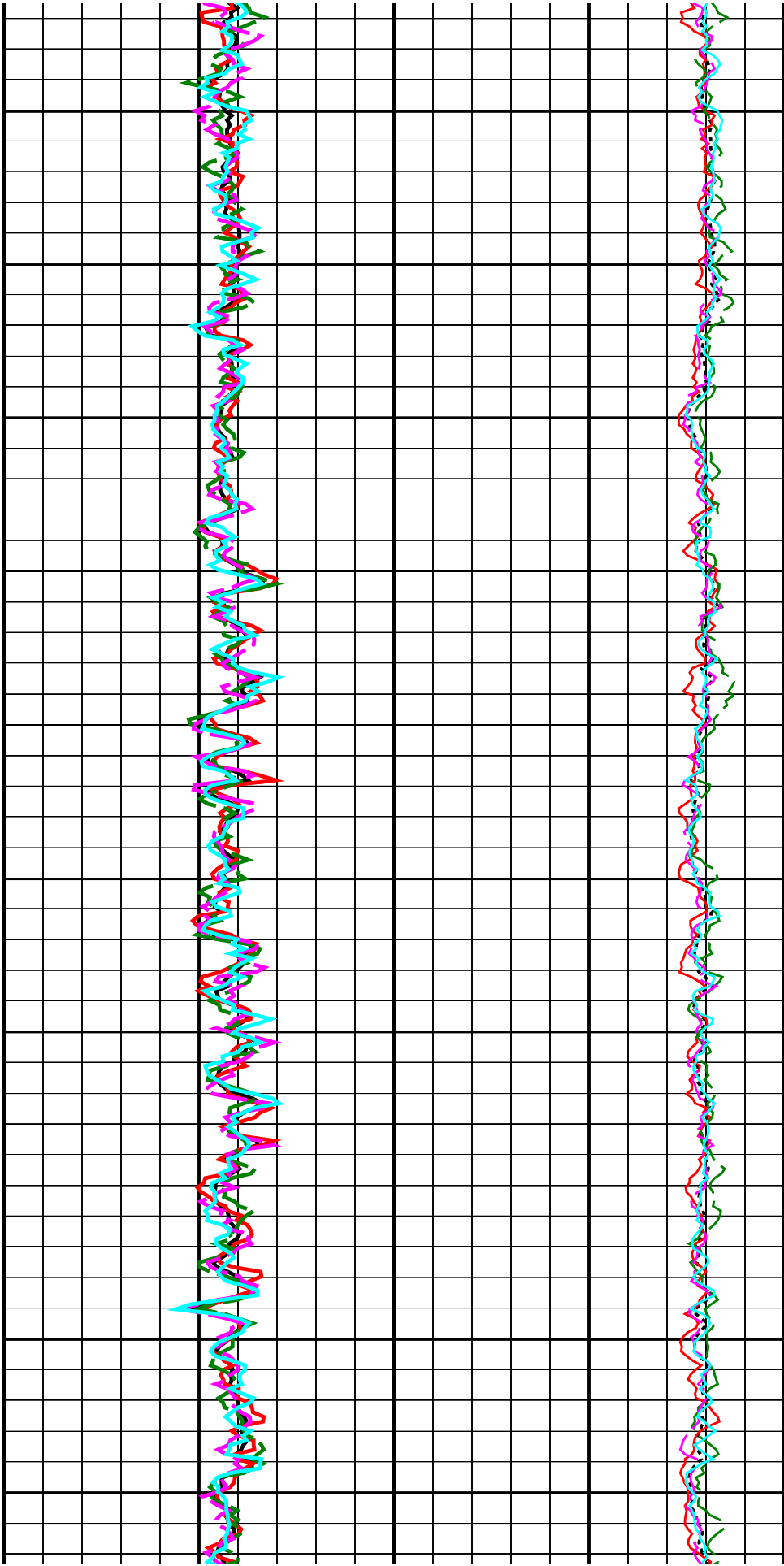
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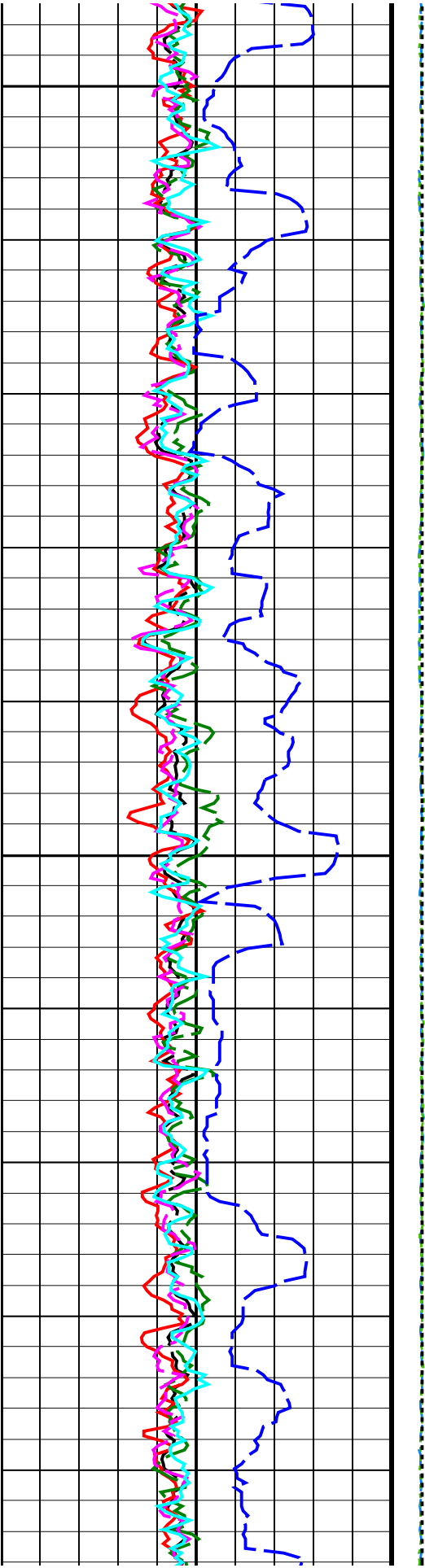




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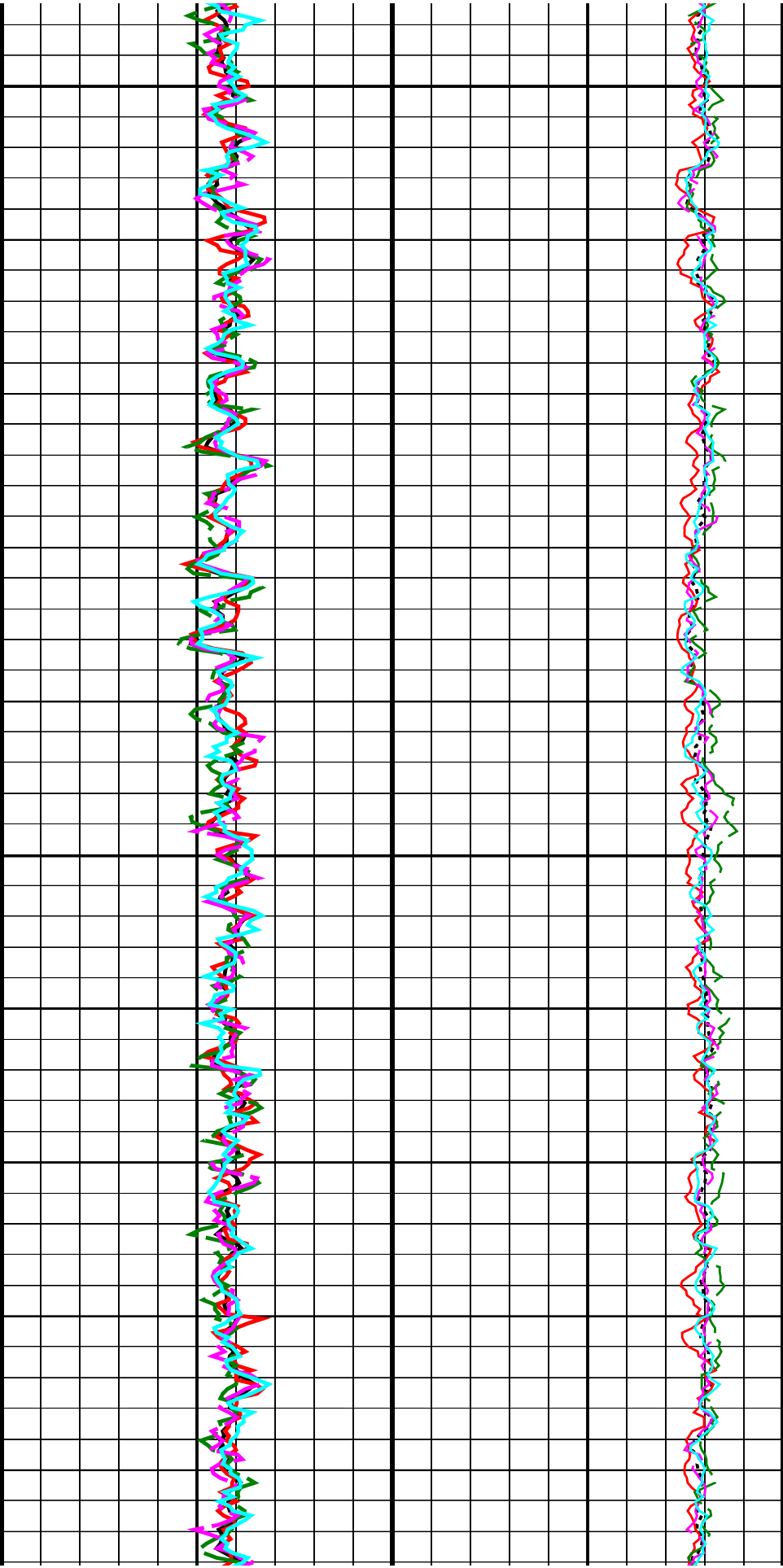
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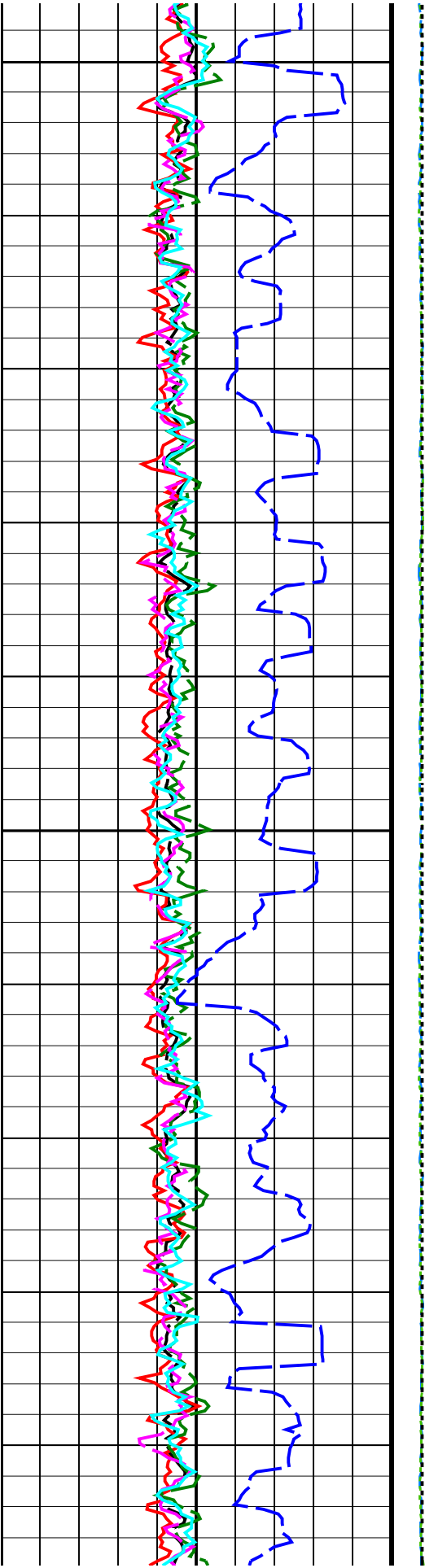




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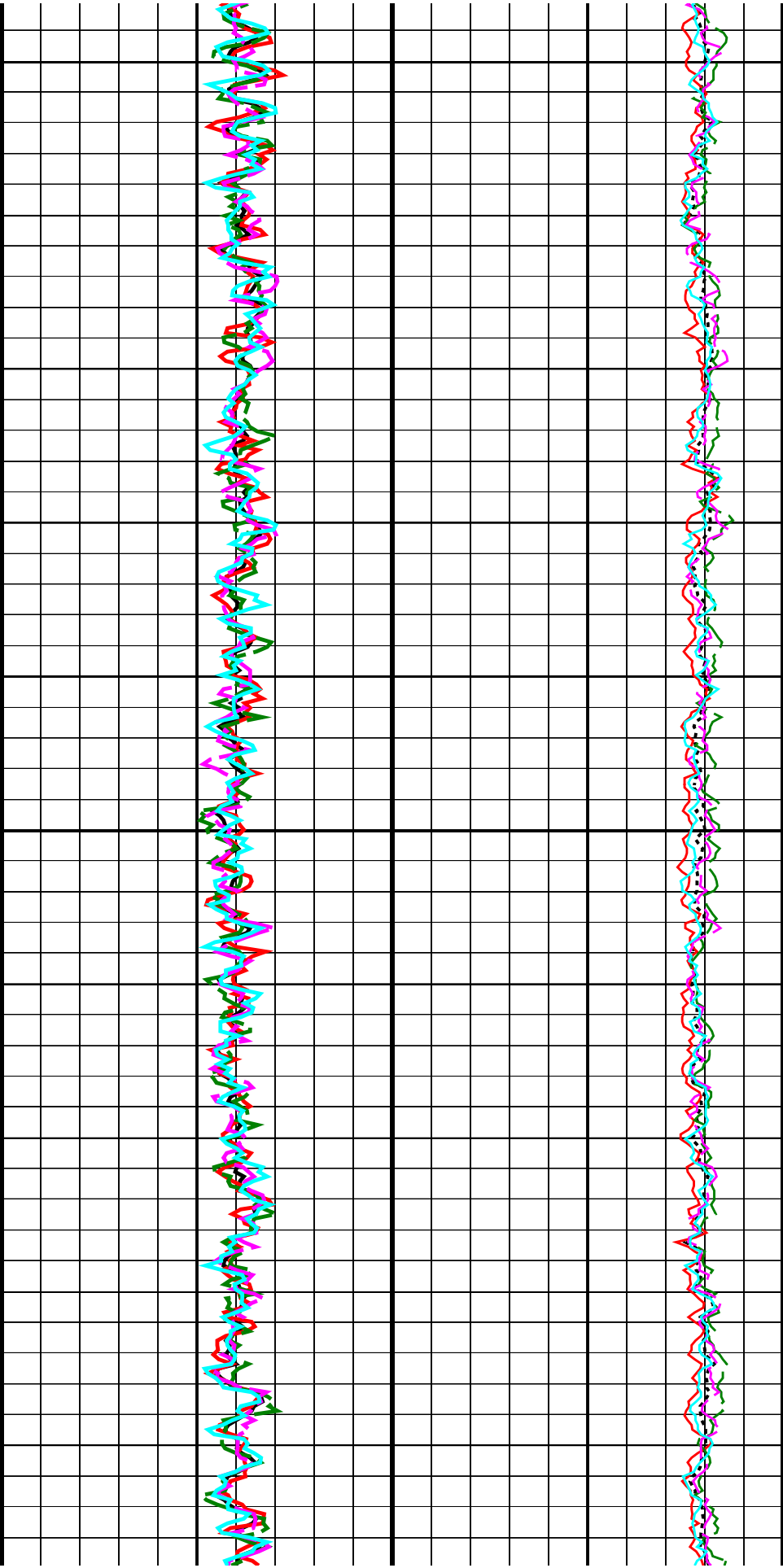
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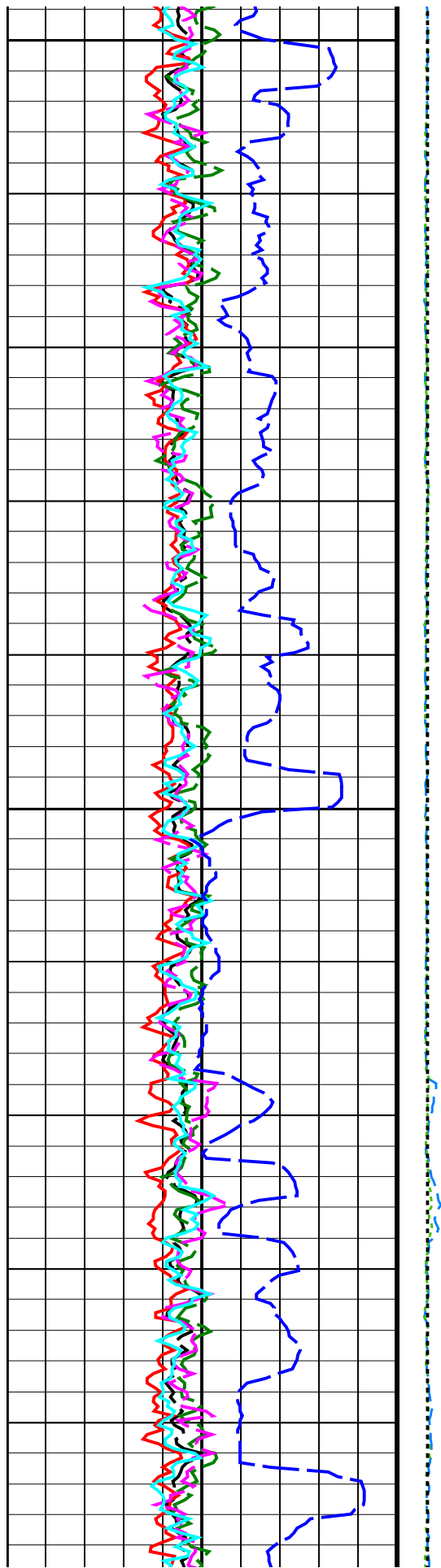




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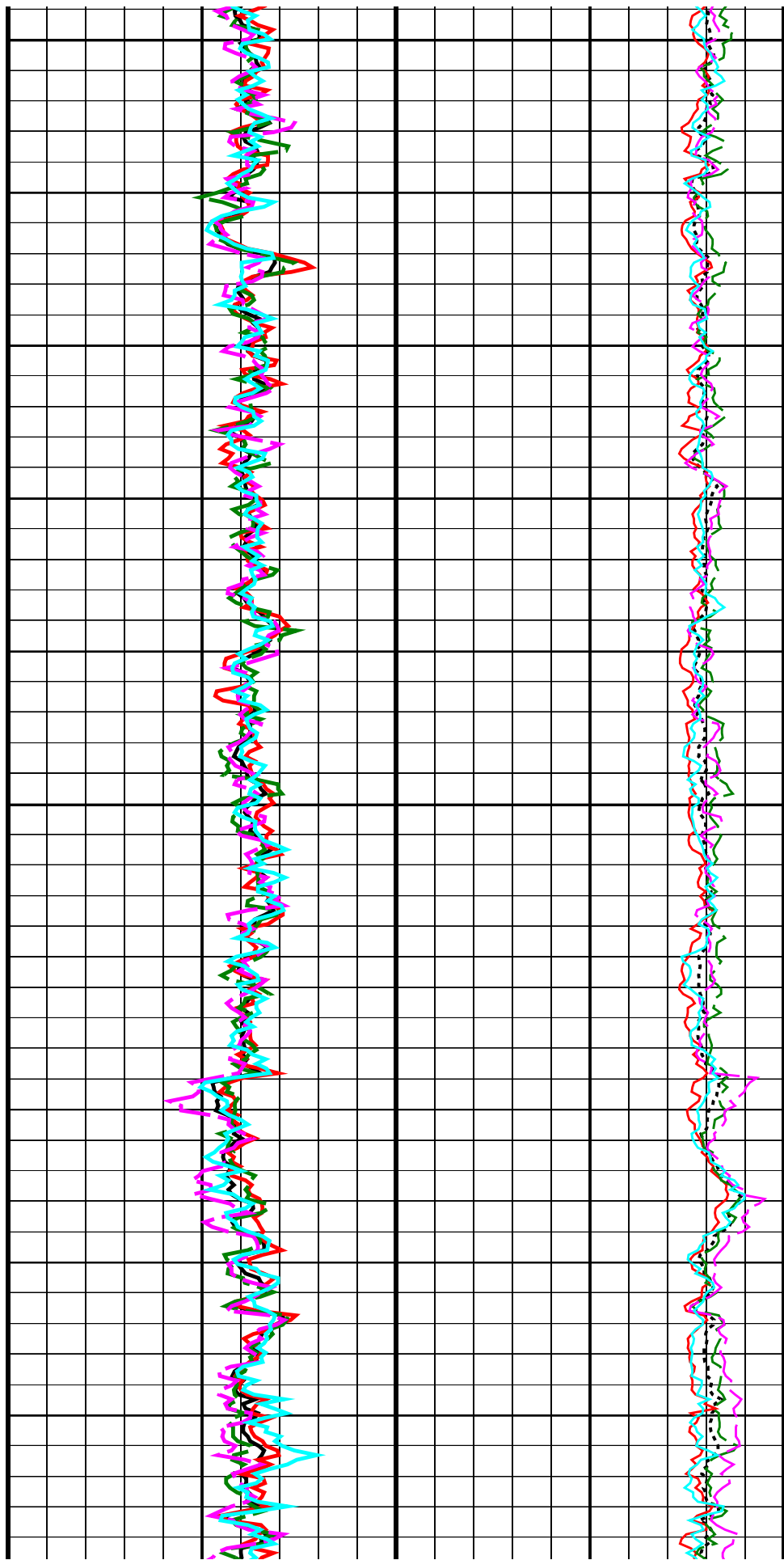
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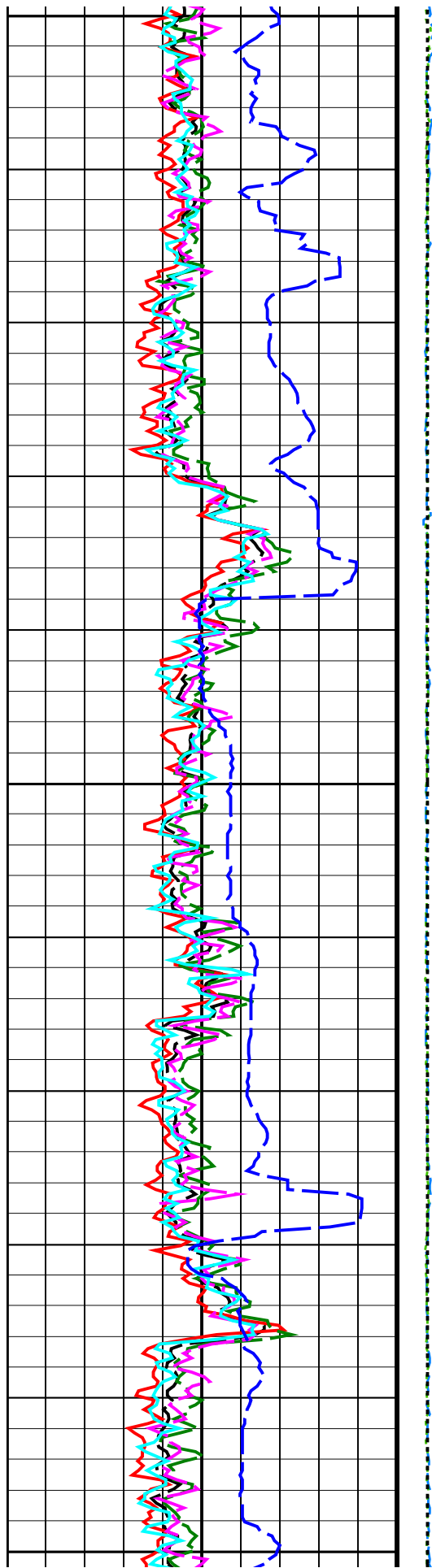




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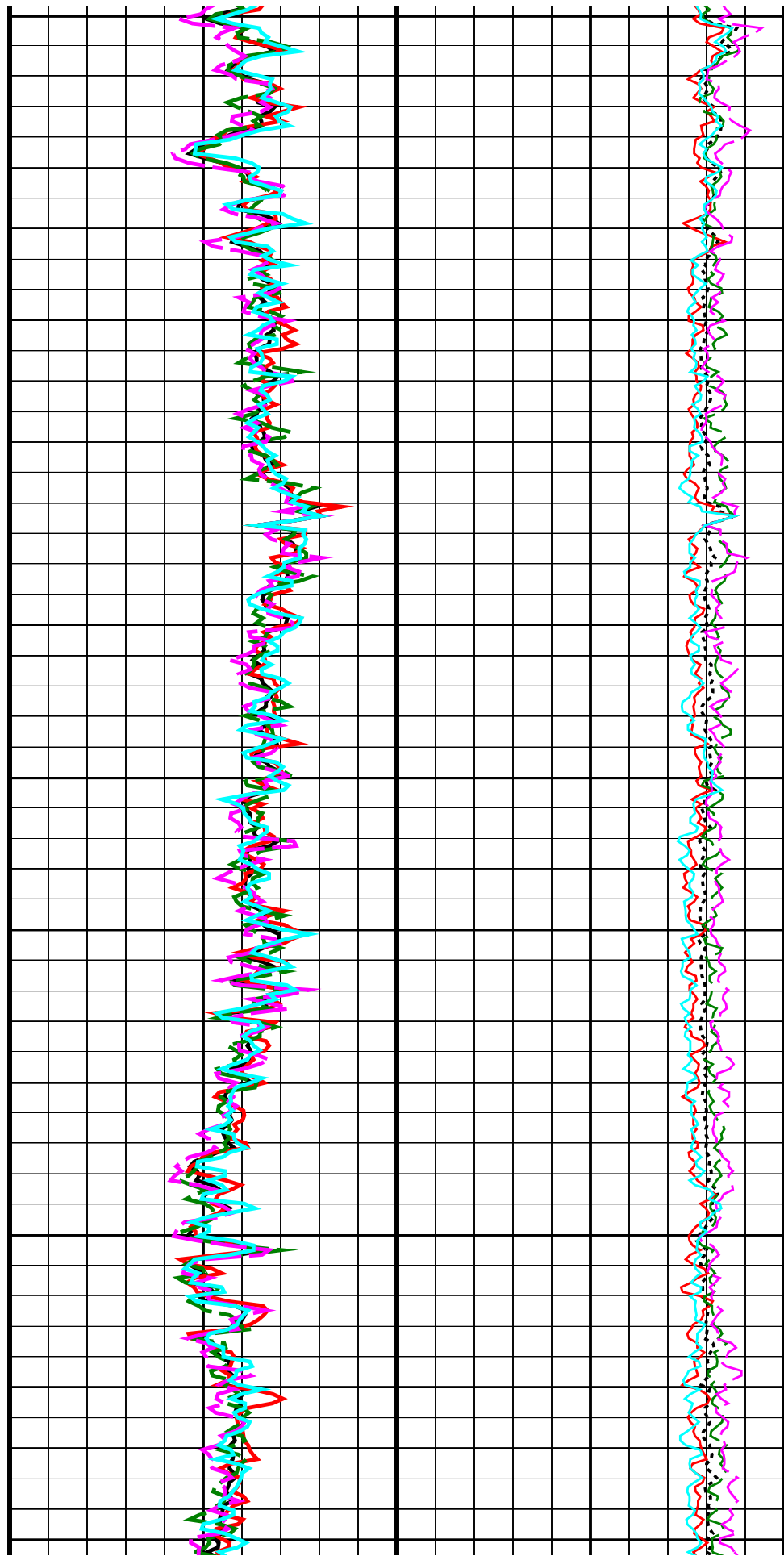
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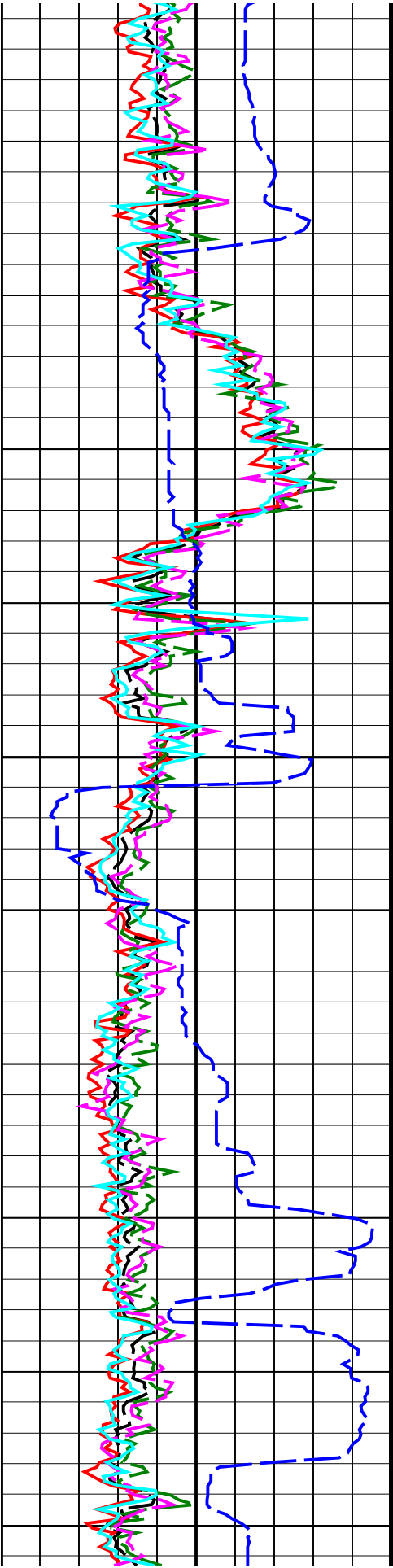




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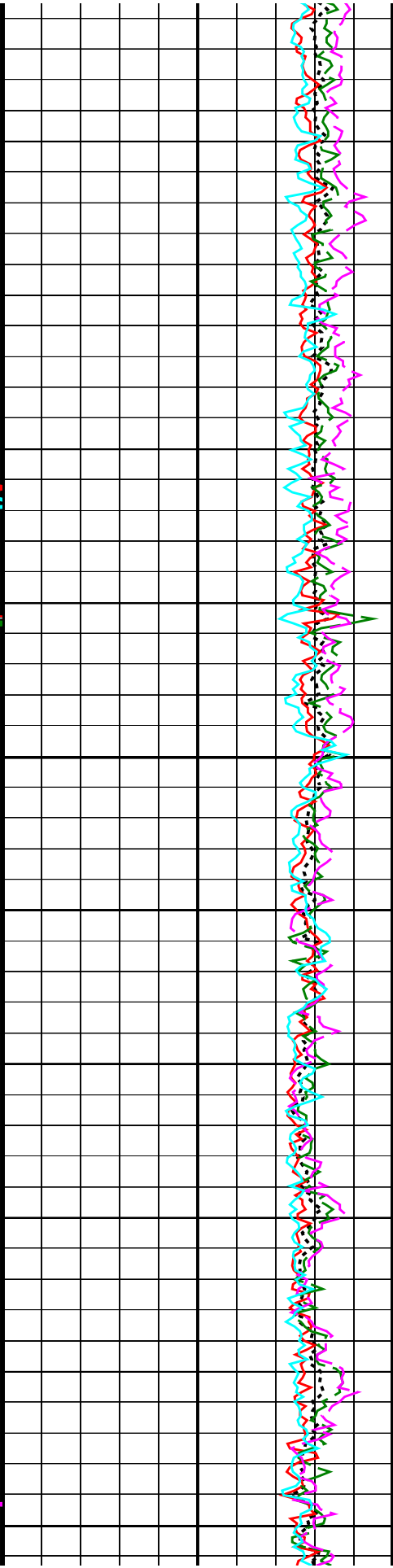
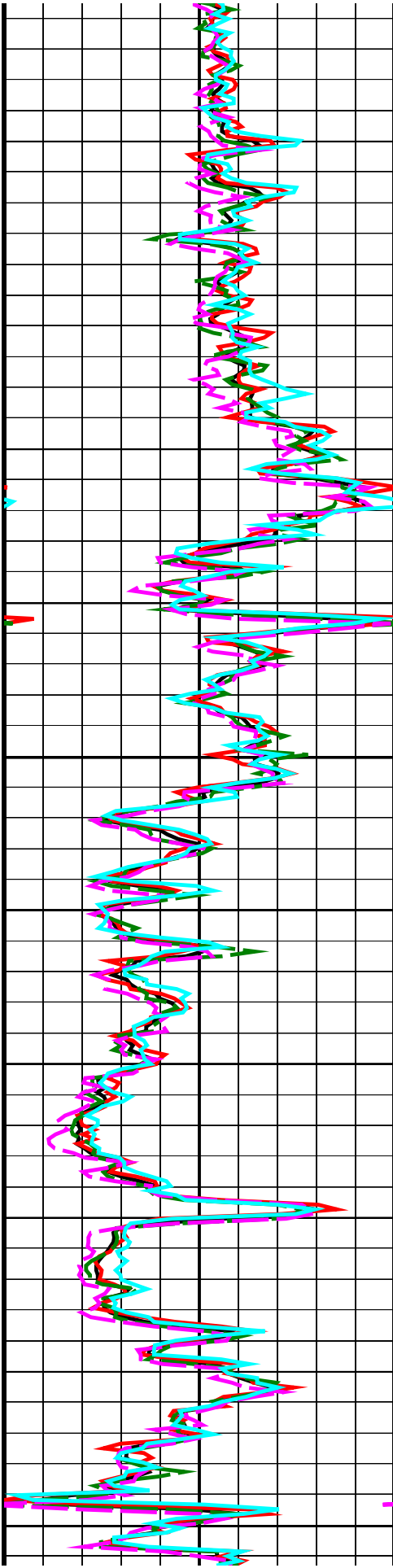


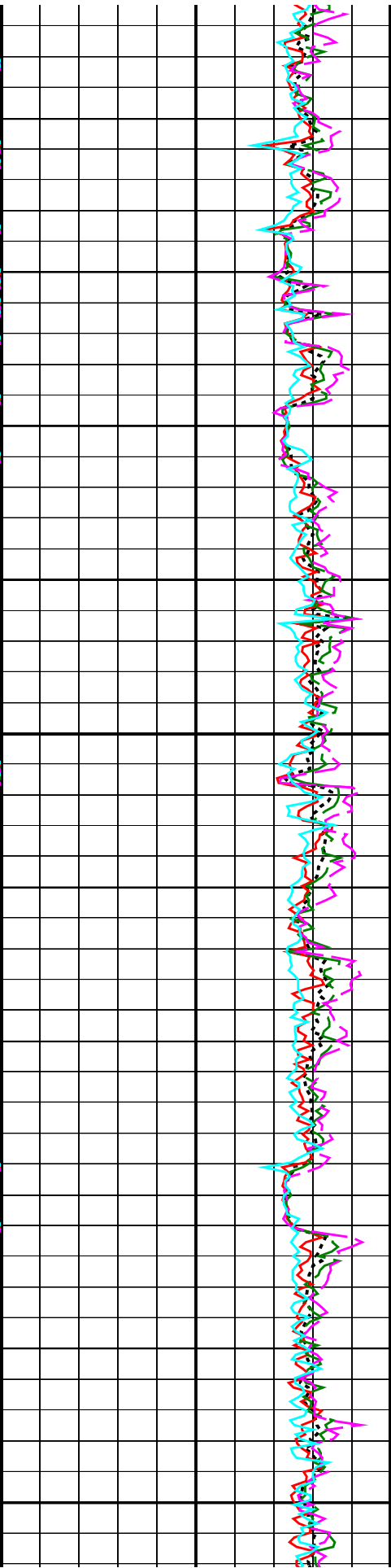
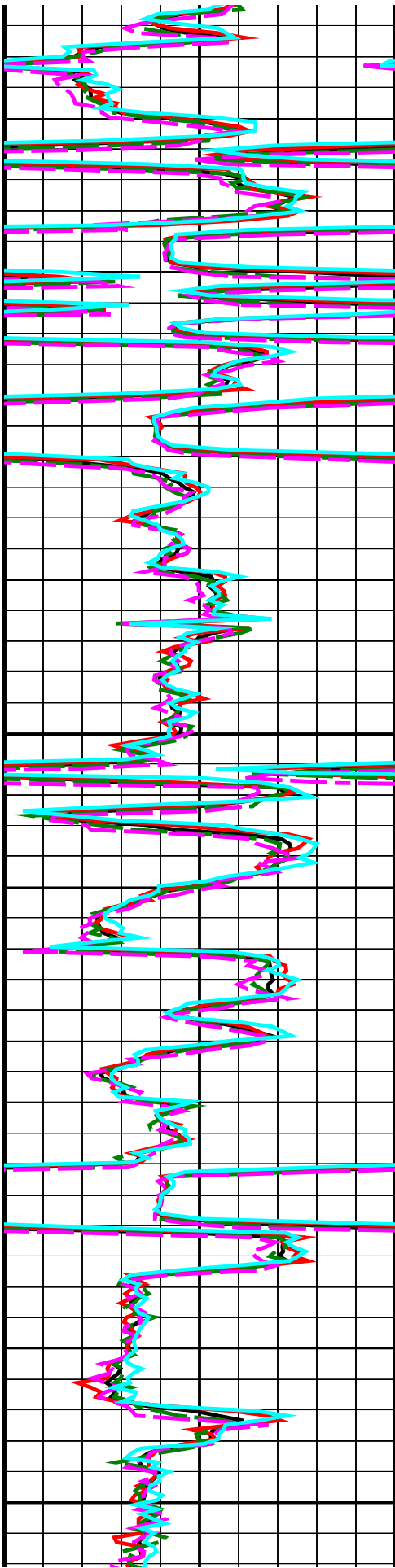
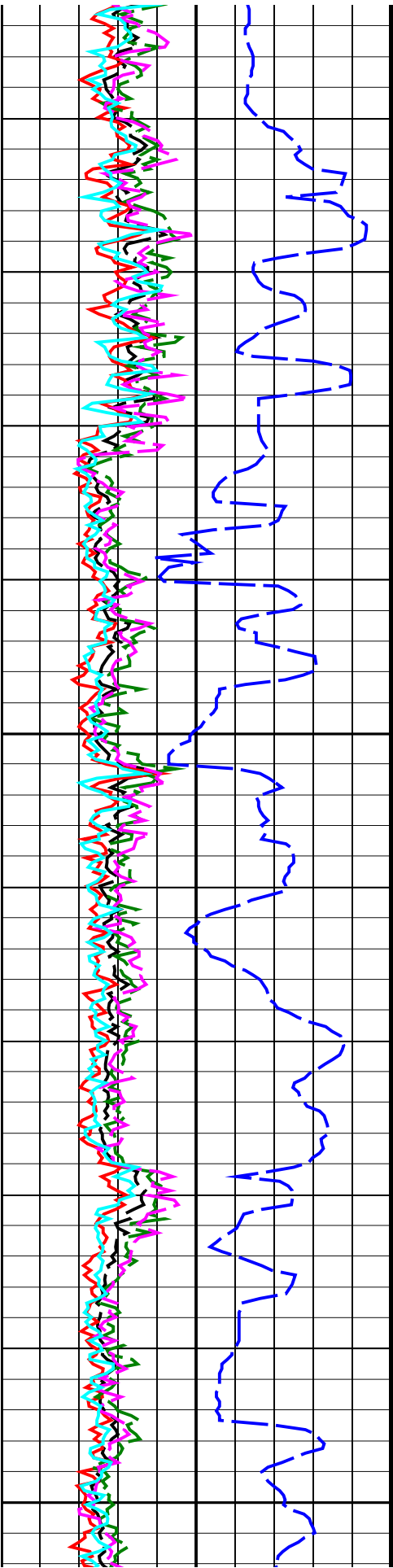


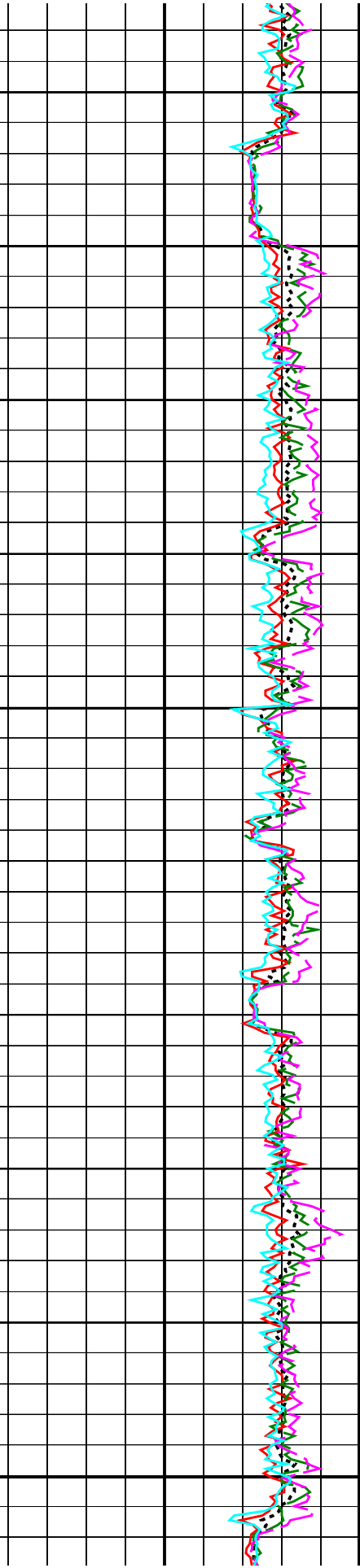
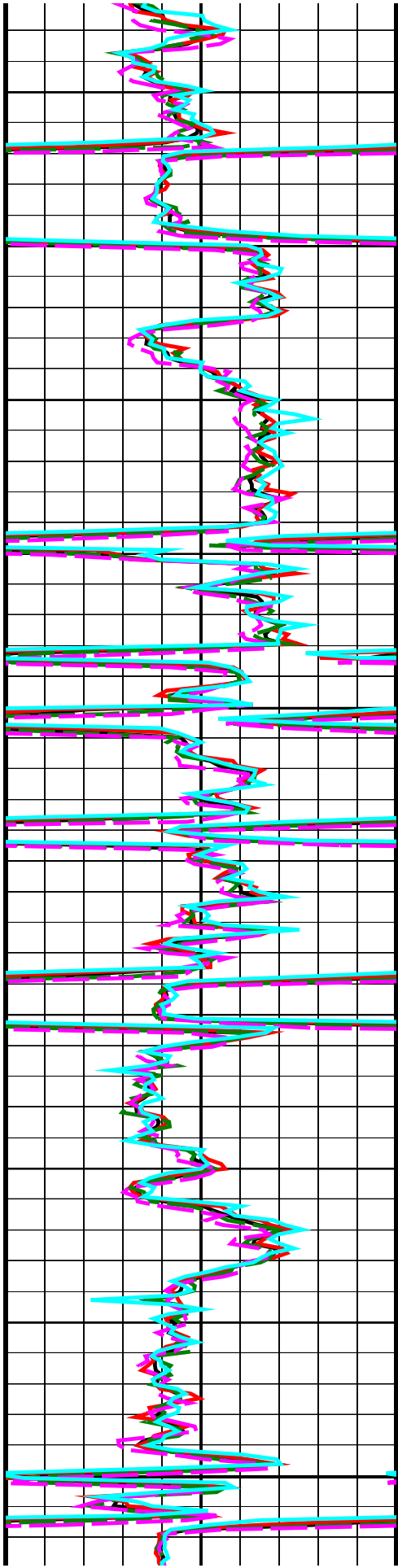
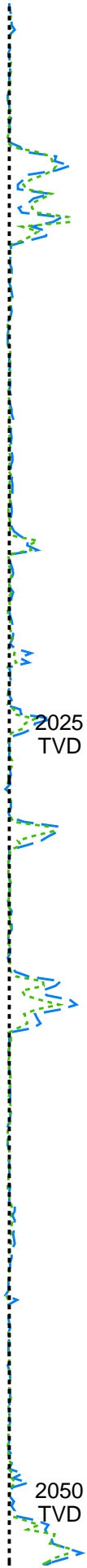
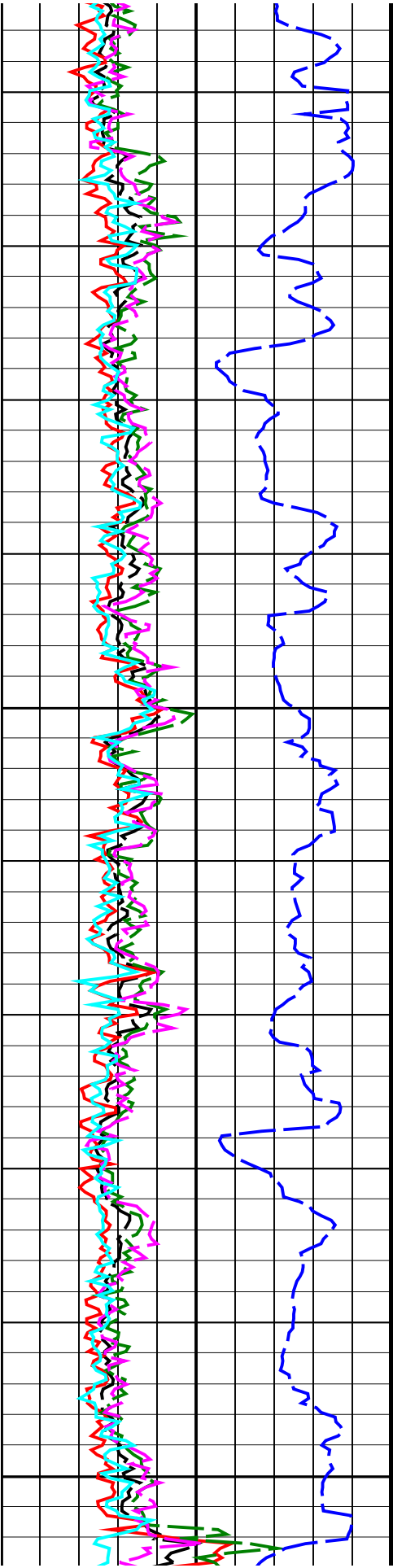
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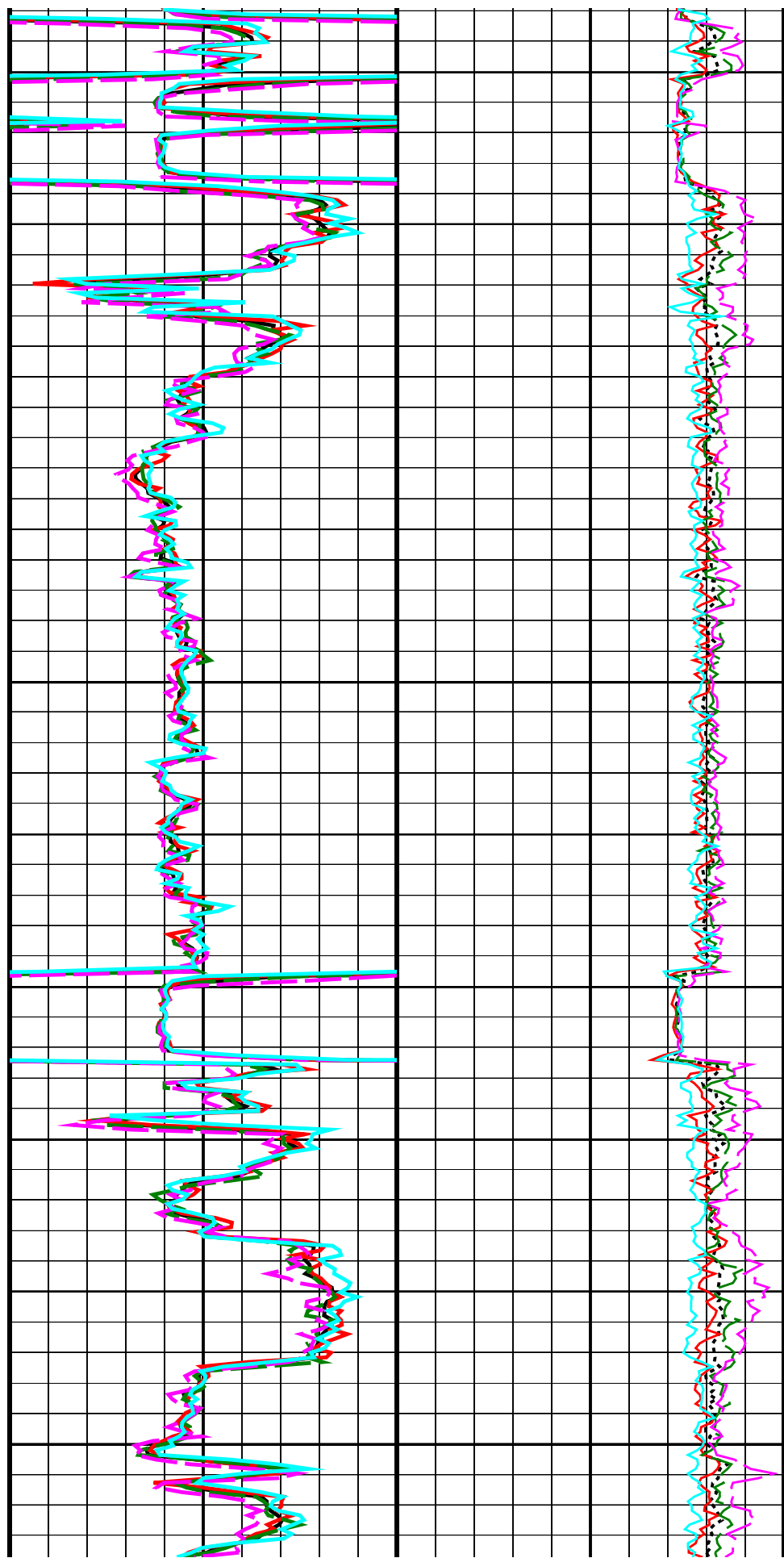
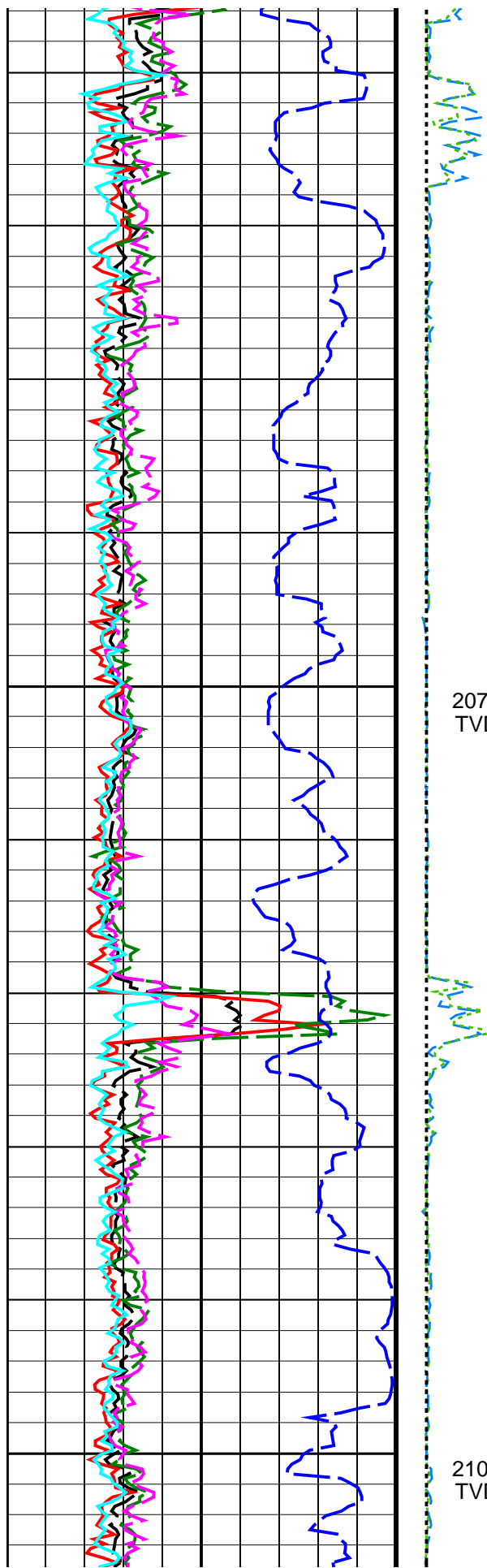
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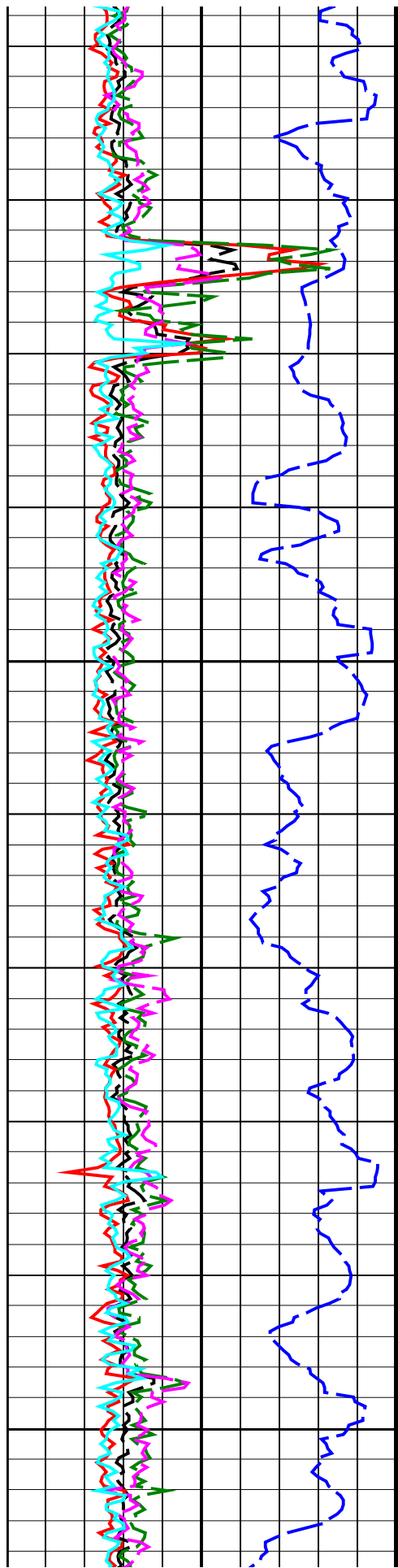
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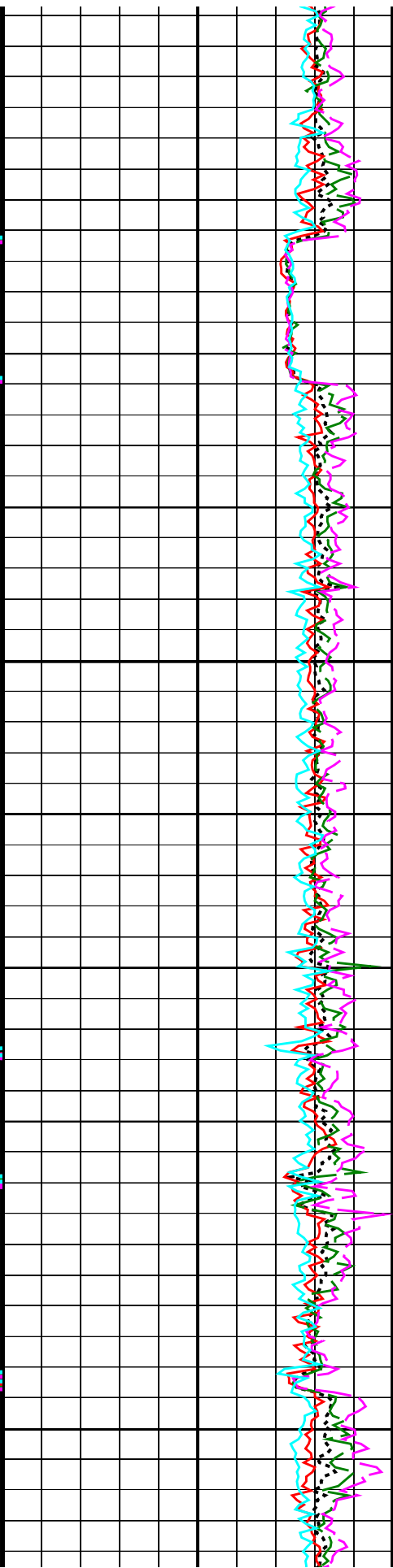
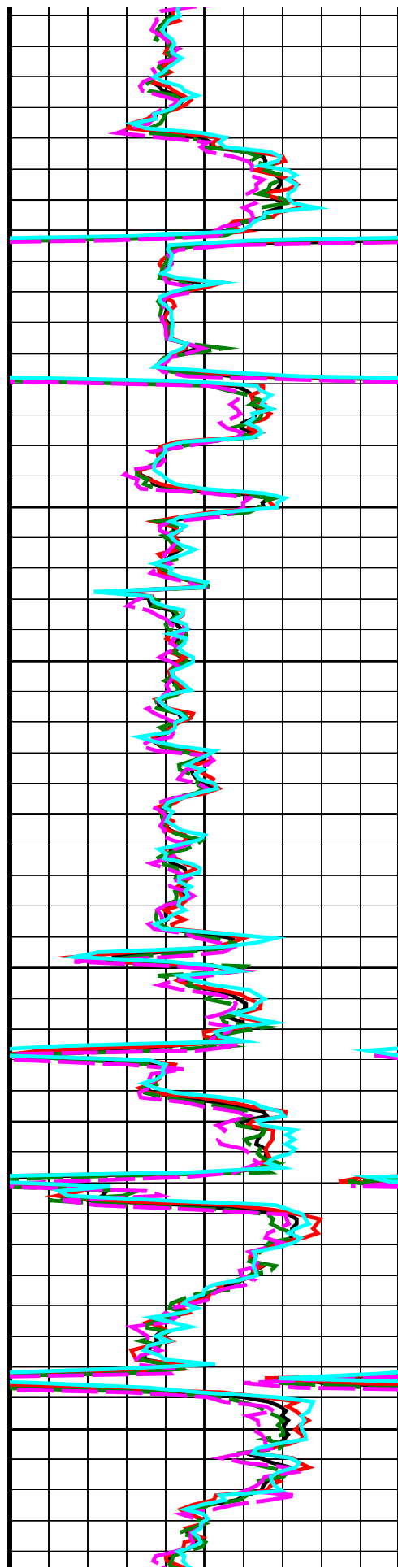




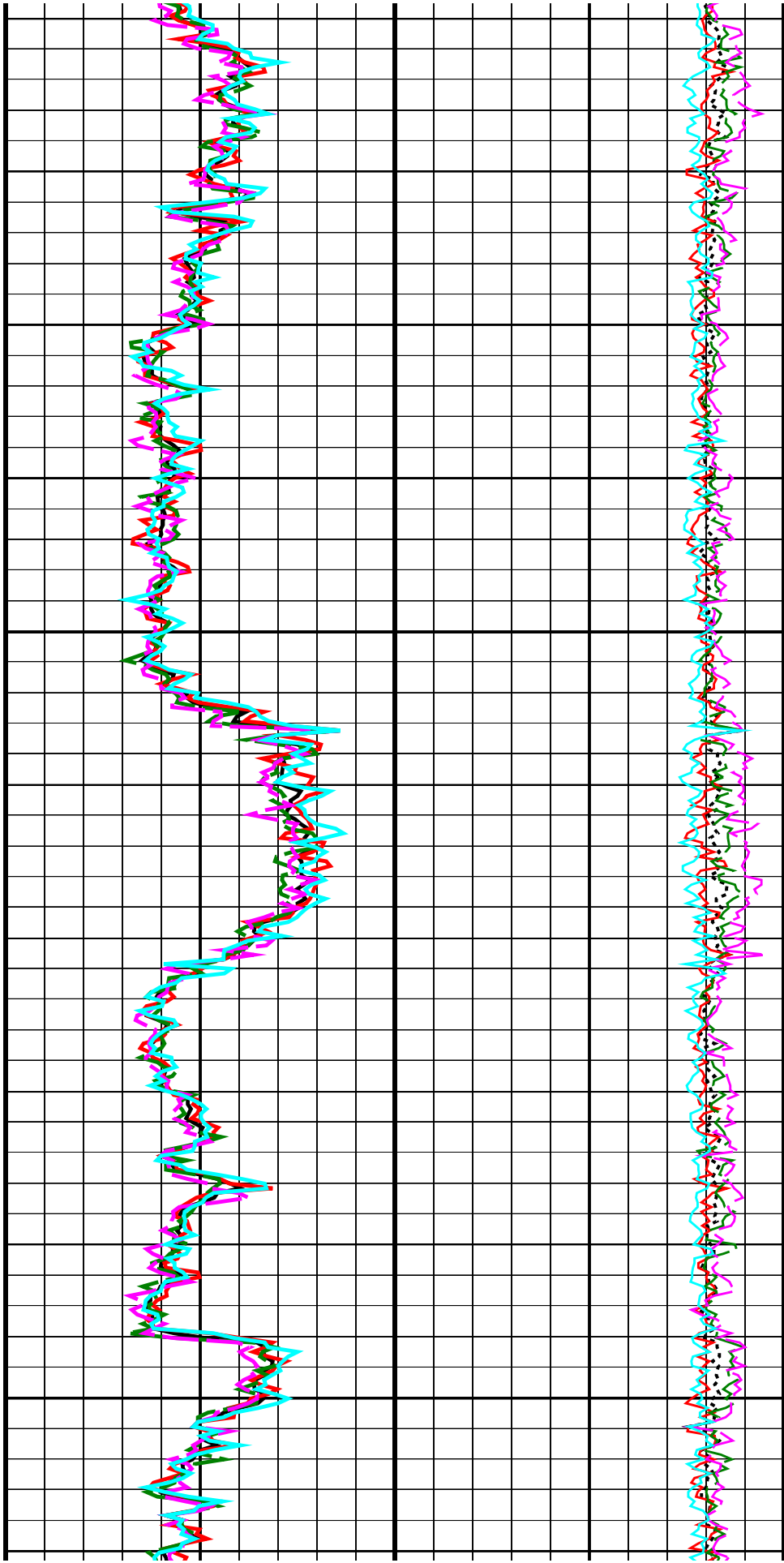
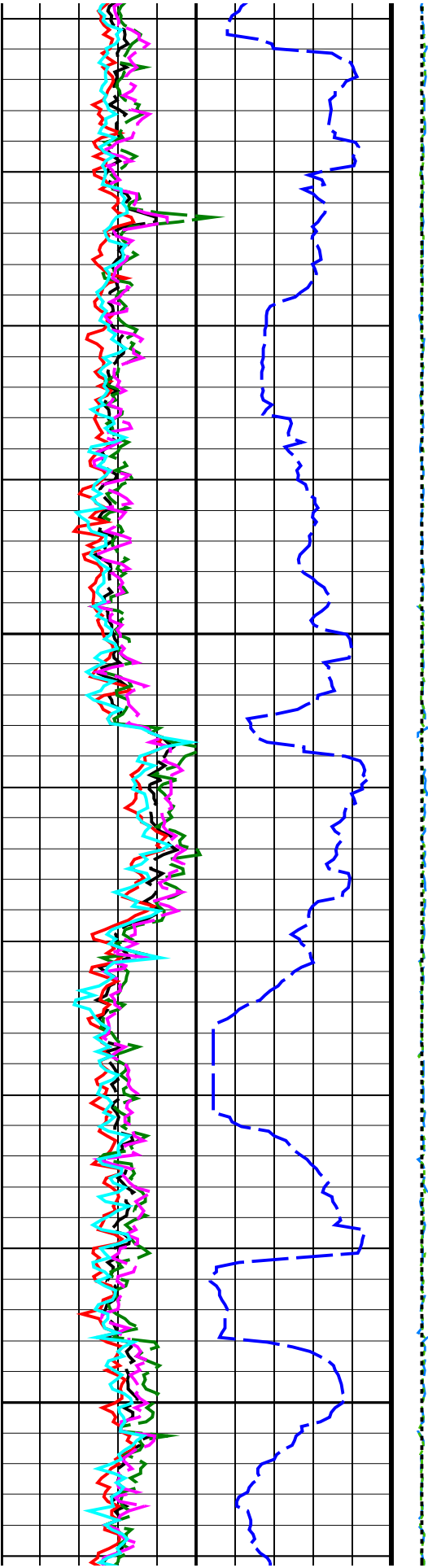


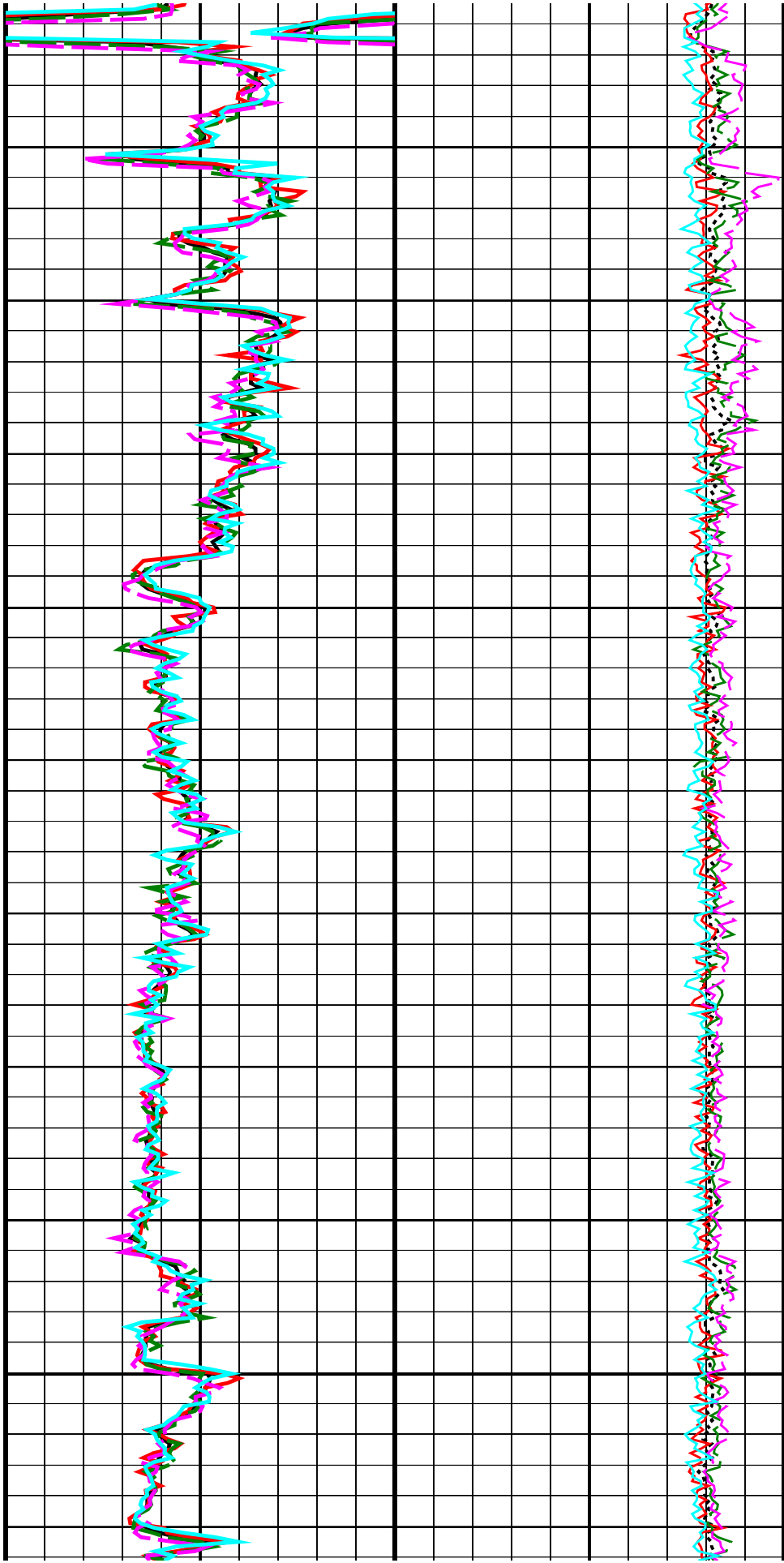
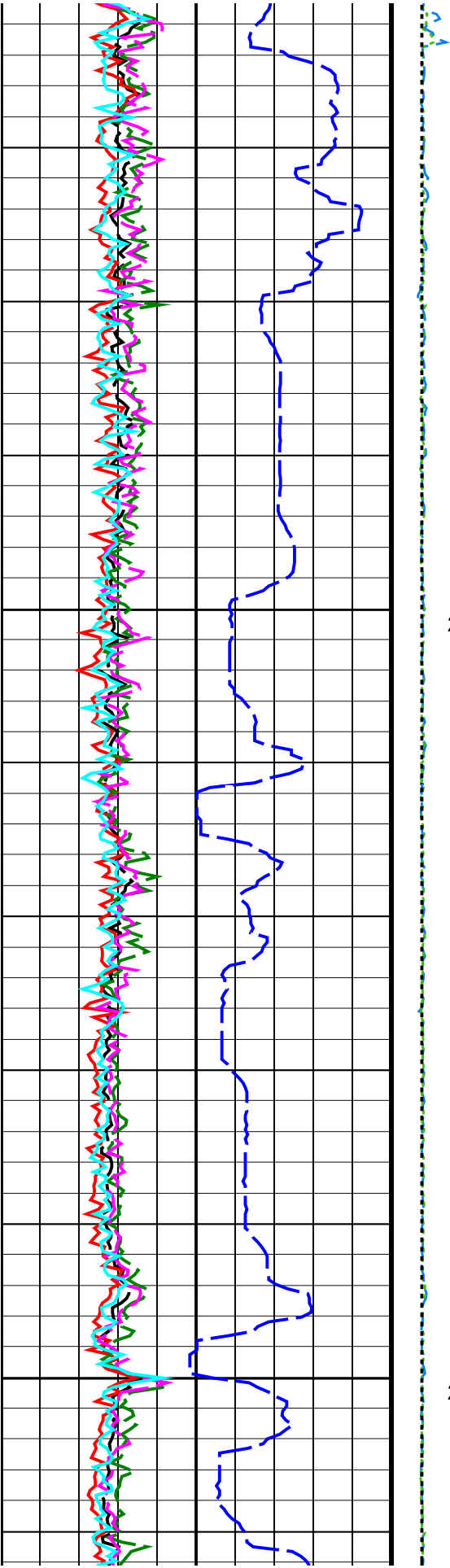


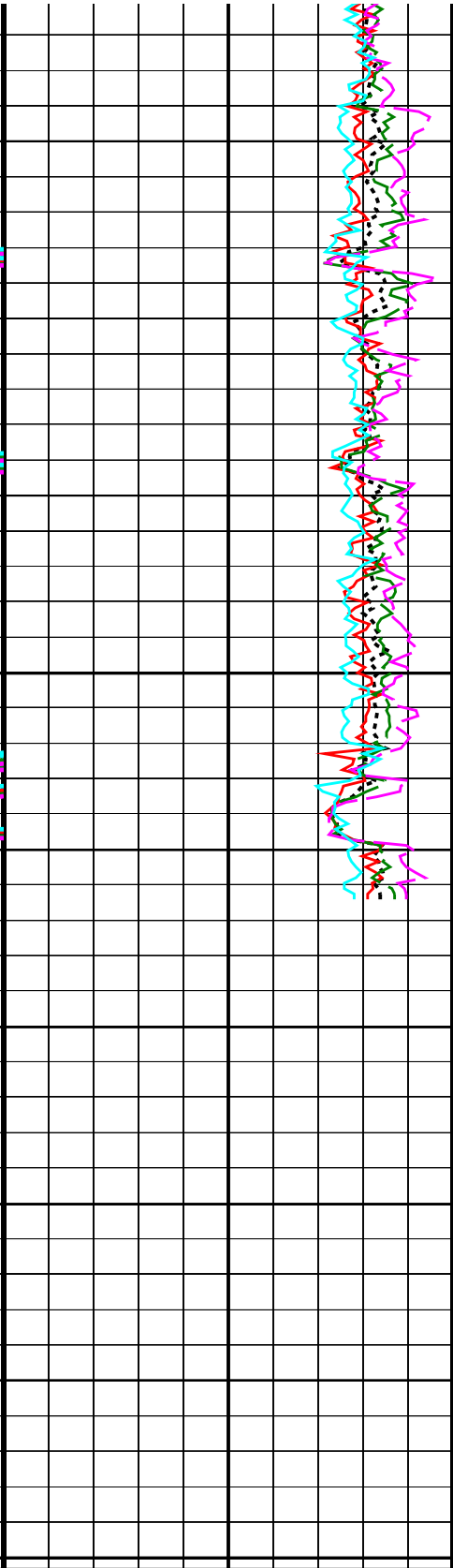
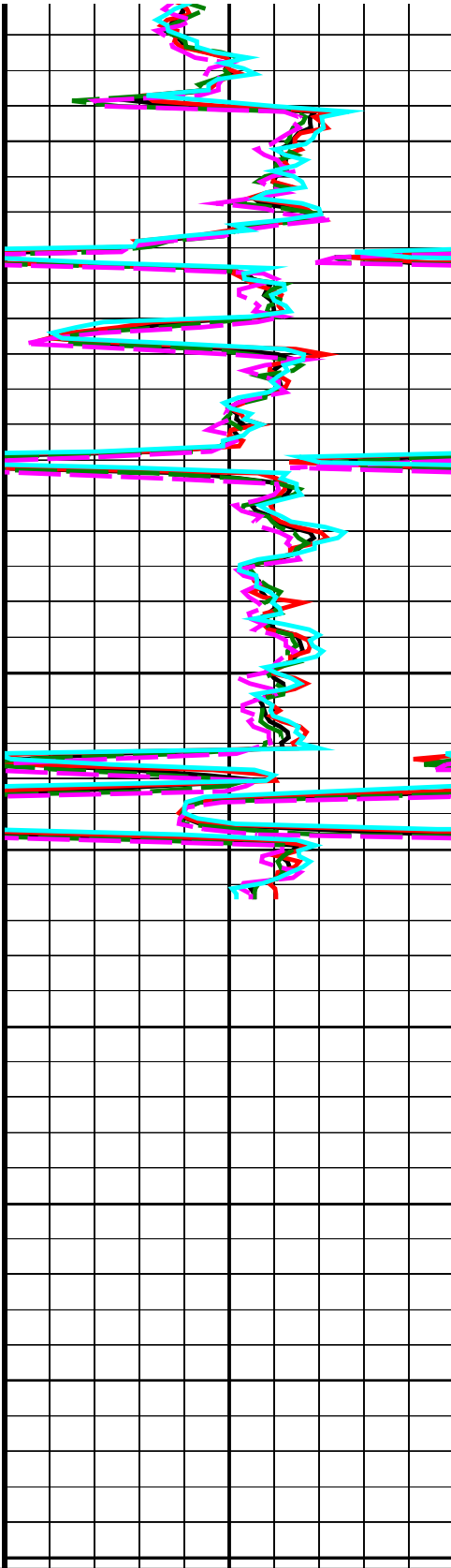
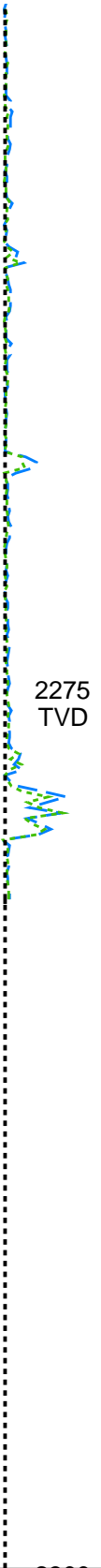
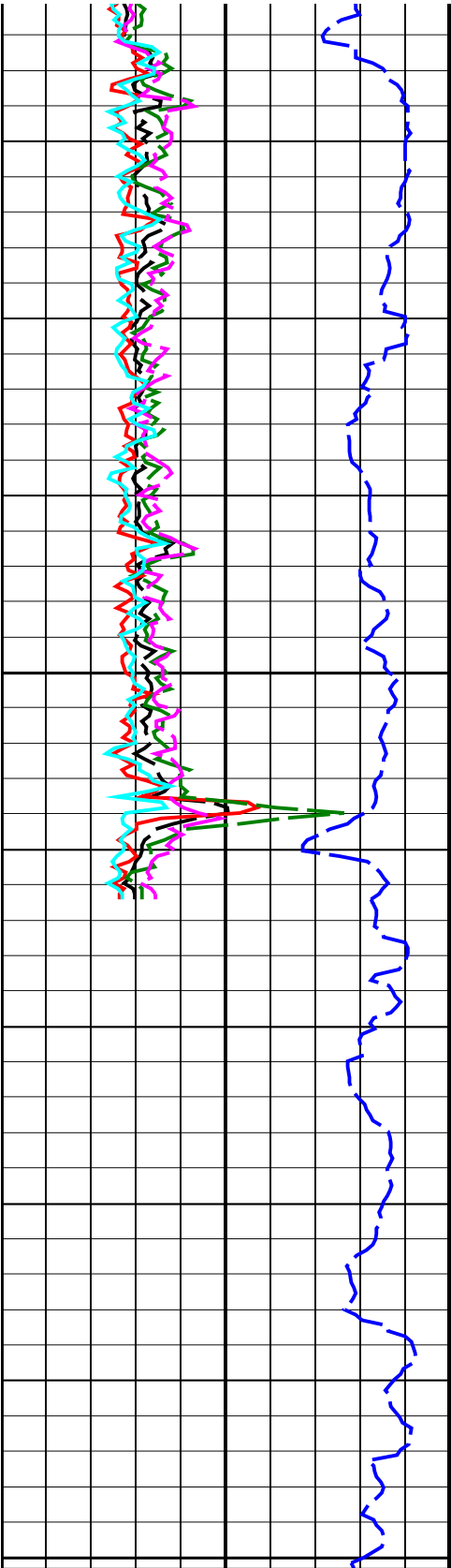
2125
TVD



2150
TVD







Photoelectric Factor (PEF)
0 (----) 10

Bit Size (BS)
6 (IN) 16

Bulk Density (RHOB)
1.85 (G/C3) 2.85

Bulk Density Correction (DRHO)
-0.75 (G/C3) 0.25

Photoelectric Factor, Bottom (PEB)
0 (----) 10

Density Caliper, Horizontal (DCHO)

Bulk Density, Bottom (ROBB)
1.85 (G/C3) 2.85

Bulk Density Correction, Bottom (DRHB)
-0.75 (G/C3) 0.25

| | | | | | | |
|---|-----------|--|----------------------------|-------------|---------------------------------------|-------------|
| | | 6 (IN) 16 | | | | |
| Photoelectric Factor, Up (PEU) | | Density Caliper, Vertical (DCVE) 6 (IN) 16 | Bulk Density, Up (ROBU) | | Bulk Density Correction, Up (DRHU) | |
| 0 | (----) 10 | | 1.85 | (G/C3) 2.85 | -0.75 | (G/C3) 0.25 |
| Photoelectric Factor, Left (PEL) | | | Bulk Density, Left (ROBL) | | Bulk Density Correction, Left (DRHL) | |
| 0 | (----) 10 | | 1.85 | (G/C3) 2.85 | -0.75 | (G/C3) 0.25 |
| Photoelectric Factor, Right (PER) | | | Bulk Density, Right (ROBR) | | Bulk Density Correction, Right (DRHR) | |
| 0 | (----) 10 | | 1.85 | (G/C3) 2.85 | -0.75 | (G/C3) 0.25 |
| Rate of Penetration, Averaged over Last 5ft (ROP5_RM) | | | | | | |
| 200 | (M/HR) 0 | | | | | |

IDEAL Version: ID10_0C_04
IDF

RAB id10_0c_04 MWD_10 id10_0c_04
ADN id10_0c_04

True Vertical Depth Log

6.75-in. Azimuthal Density Neutron / Equipment Identification




Primary Equipment:
Tool Name and Serial Number
Collar Type and Serial Number
Chassis Type and Serial Number
Stabilizer Type and Serial Number
Neutron Logging Source
Density Logging Source
Stabilizer Size
Calibration Status

ADN6 - CA 0403
ADDC - AA 0403
ADSE - EA 18
Clamp-On 699198
NSR - M 202
GSR - J/Z 1994
8.25 - in.
Valid

Master: 21-Jun-2005 11:22

6.75-in. Azimuthal Density Neutron Calibration




Density: Magnesium Block

| Phase | LS window 3 - Mg CPS | Value | Phase | SS window 1 - Mg CPS | Value | Phase | SS window 3 - Mg CPS | Value |
|--------|---|-------|--------|---|-------|--------|---|-------|
| Master |  | 1052 | Master |  | 2361 | Master |  | 6156 |
| | 250.0 (Minimum) 4125 (Nominal) 8000 (Maximum) | | | 700.0 (Minimum) 9350 (Nominal) 18000 (Maximum) | | | 2500 (Minimum) 23750 (Nominal) 45000 (Maximum) | |

Master: 21-Jun-2005 11:22

6.75-in. Azimuthal Density Neutron Calibration

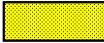
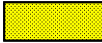

Density: Aluminum Block

| Phase | LS window 3 - Al CPS | Value | Phase | SS window 1 - Al CPS | Value | Phase | SS window 3 - Al CPS | Value |
|--------|---|-------|--------|---|-------|--------|---|-------|
| Master |  | 163.3 | Master |  | 1238 | Master |  | 3922 |
| | 50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum) | | | 500.0 (Minimum) 4250 (Nominal) 8000 (Maximum) | | | 1500 (Minimum) 15750 (Nominal) 30000 (Maximum) | |

Master: 21-Jun-2005 11:22



6.75-in. Azimuthal Density Neutron Calibration

Density: Background

| Phase | LS window 3 - Background CPS | Value | Phase | SS window 1 - Background CPS | Value | Phase | SS window 3 - Background CPS | Value |
|--------|---|-------|--------|---|-------|--------|---|-------|
| Master |  | 33.84 | Master |  | 106.5 | Master |  | 474.2 |
| | 15.00 (Minimum) 82.50 (Nominal) 150.0 (Maximum) | | | 40.00 (Minimum) 220.0 (Nominal) 400.0 (Maximum) | | | 150.0 (Minimum) 825.0 (Nominal) 1500 (Maximum) | |















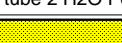


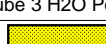






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6.75-in. Azimuthal Density Neutron Calibration

| Density: Water Block Check | | | | | | | | | | | | | |
|----------------------------|---|--|--|--------------------|--------------------|---|--|--|--------------------|--|--------------------|--------------------|--|
| Phase | Long spacing water density G/C3 | | | Value | Phase | Short spacing water density G/C3 | | | Value | | | | |
| Master |  | | | 1.030 | Master |  | | | 1.120 | | | | |
| 1.024 (Minimum) | | | | 1.039 (Nominal) | 1.054 (Maximum) | | | | 1.096 (Minimum) | | 1.126 (Nominal) | 1.156 (Maximum) | |


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6.75-in. Azimuthal Density Neutron Calibration

| Neutron: 3-Point Calibration | | | | | | | | | | | | | |
|------------------------------|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|--------------------|--|--|
| Phase | Far 1 tube 1 Air Point Measure | CPS | Value | Phase | Far 1 tube 1 Rod Point Measure | CPS | Value | Phase | Far 1 tube 1 H2O Point Measure | CPS | Value | | |
| Master |  | | 17.01 | Master |  | | 4.142 | Master |  | | 2.060 | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | |
| Phase | Far 1 tube 2 Air Point Measure | CPS | Value | Phase | Far 1 tube 2 Rod Point Measure | CPS | Value | Phase | Far 1 tube 2 H2O Point Measure | CPS | Value | | |
| Master |  | | 18.12 | Master |  | | 4.335 | Master |  | | 2.137 | | |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | | |
| Phase | Far 1 tube 3 Air Point Measure | CPS | Value | Phase | Far 1 tube 3 Rod Point Measure | CPS | Value | Phase | Far 1 tube 3 H2O Point Measure | CPS | Value | | |
| Master |  | | 17.15 | Master |  | | 4.188 | Master |  | | 2.066 | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | |
| Phase | Far 2 tube 1 Air Point Measure | CPS | Value | Phase | Far 2 tube 1 Rod Point Measure | CPS | Value | Phase | Far 2 tube 1 H2O Point Measure | CPS | Value | | |
| Master |  | | 17.52 | Master |  | | 4.365 | Master |  | | 2.173 | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | |
| Phase | Far 2 tube 2 Air Point Measure | CPS | Value | Phase | Far 2 tube 2 Rod Point Measure | CPS | Value | Phase | Far 2 tube 2 H2O Point Measure | CPS | Value | | |
| Master |  | | 18.07 | Master |  | | 4.211 | Master |  | | 1.982 | | |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | | |
| Phase | Far 2 tube 3 Air Point Measure | CPS | Value | Phase | Far 2 tube 3 Rod Point Measure | CPS | Value | Phase | Far 2 tube 3 H2O Point Measure | CPS | Value | | |
| Master |  | | 17.03 | Master |  | | 4.348 | Master |  | | 2.060 | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | |
| Phase | Near 1 tube 1 Air Point Measure | CPS | Value | Phase | Near 1 tube 1 Rod Point Measure | CPS | Value | Phase | Near 1 tube 1 H2O Point Measure | CPS | Value | | |
| Master |  | | 458.8 | Master |  | | 722.7 | Master |  | | 319.9 | | |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | | |
| Phase | Near 2 tube 1 Air Point Measure | CPS | Value | Phase | Near 2 tube 1 Rod Point Measure | CPS | Value | Phase | Near 2 tube 1 H2O Point Measure | CPS | Value | | |
| Master |  | | 454.0 | Master |  | | 727.3 | Master |  | | 320.0 | | |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | | |

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6.75-in. Azimuthal Density Neutron Calibration

| Neutron: Water Block Check | | | |
|----------------------------|---|--------------------|--------------------|
| Phase | Far Neutron water porosity PU | | Value |
| Master |  | | 92.83 |
| | 90.00 (Minimum) | 100.0 (Nominal) | 125.0 (Maximum) |

6.75-in. Resistivity At-the-Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number

RAB6 – CA

191













Calibration Status

Valid

Master: 29-Jul-2005 15:21

6.75-in. Resistivity At-the-Bit Calibration

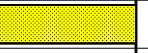
Resistivity: Fixture

| Phase | Ring/T1 factor ---- | Value | Phase | Ring/T2 factor ---- | Value | Phase | M0/T1 factor ---- | Value |
|--------|---|--------|--------|---|--------|--------|---|--------|
| Master |  | 0.9949 | Master |  | 0.9924 | Master |  | 1.006 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | M0/T2 factor ---- | Value | Phase | M2/T1 factor ---- | Value | Phase | M2/T2 factor ---- | Value |
| Master |  | 1.003 | Master |  | 1.007 | Master |  | 1.003 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN shallow/T1 factor ---- | Value | Phase | BTN shallow/T2 factor ---- | Value | Phase | BTN medium/T1 factor ---- | Value |
| Master |  | 1.002 | Master |  | 0.9996 | Master |  | 0.9951 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN medium/T2 factor ---- | Value | Phase | BTN deep/T1 factor ---- | Value | Phase | BTN deep/T2 factor ---- | Value |
| Master |  | 0.9922 | Master |  | 1.012 | Master |  | 1.009 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |

Master: 29-Jul-2005 15:21

6.75-in. Resistivity At-the-Bit Calibration

Gamma Ray: Blanket

| Phase | Gamma ray factor ---- | Value |
|--------|---|--------|
| Master |  | 0.9256 |
| | 0.7500 (Minimum) 1.000 (Nominal) 1.250 (Maximum) | |

6.75-in. Azimuthal Density Neutron / Equipment Identification

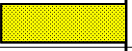
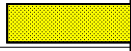
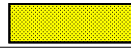
Primary Equipment:
Tool Name and Serial Number
Collar Type and Serial Number
Chassis Type and Serial Number
Stabilizer Type and Serial Number
Neutron Logging Source
Density Logging Source
Stabilizer Size
Calibration Status

ADN6 – CA
ADDC – AA
ADSE – EA
IBS
NSR – M
GSR – J/Z
8-3/16 – in.
Valid
EE55
FE55
380
202
1994

Master: 19-Jun-2005 14:46

6.75-in. Azimuthal Density Neutron Calibration

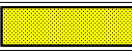
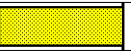
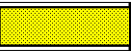
Density: Magnesium Block

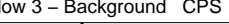
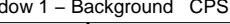
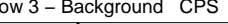
| Phase | LS window 3 – Mg CPS | Value | Phase | SS window 1 – Mg CPS | Value | Phase | SS window 3 – Mg CPS | Value |
|--------|---|-------|--------|---|-------|--------|---|-------|
| Master |  | 1069 | Master |  | 2586 | Master |  | 6392 |
| | 250.0 (Minimum) 4125 (Nominal) 8000 (Maximum) | | | 700.0 (Minimum) 9350 (Nominal) 18000 (Maximum) | | | 2500 (Minimum) 23750 (Nominal) 45000 (Maximum) | |



Master: 19-Jun-2005 14:46

























6.75-in. Azimuthal Density Neutron Calibration


Density: Aluminum Block

| Phase | LS window 3 – Al CPS | Value | Phase | SS window 1 – Al CPS | Value | Phase | SS window 3 – Al CPS | Value |
|--------|---|-------|--------|---|-------|--------|---|-------|
| Master |  | 160.3 | Master |  | 1306 | Master |  | 4004 |
| | 50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum) | | | 500.0 (Minimum) 4250 (Nominal) 8000 (Maximum) | | | 1500 (Minimum) 15750 (Nominal) 30000 (Maximum) | |

| | | | | | | | | | | | | | | |
|--|---|--------------------|--------------------|-------|--------|---|--------------------|--------------------|-------|--------|---|--------------------|-------------------|-------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | |
| Density: Background | | | | | | | | | | | | | | |
| Phase | LS window 3 – Background | | CPS | Value | Phase | SS window 1 – Background | | CPS | Value | Phase | SS window 3 – Background | | CPS | Value |
| Master |  | | | 50.02 | Master |  | | | 127.9 | Master |  | | | 555.3 |
| | 15.00 (Minimum) | 82.50 (Nominal) | 150.0 (Maximum) | | | 40.00 (Minimum) | 220.0 (Nominal) | 400.0 (Maximum) | | | 150.0 (Minimum) | 825.0 (Nominal) | 1500 (Maximum) | |

| | | | | | | | | | | | |
|--|---|--|--------------------|--------------------|--------|---|--|--------------------|--------------------|--|--|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | |
| Density: Water Block Check | | | | | | | | | | | |
| Phase | Long spacing water density G/C3 | | | Value | Phase | Short spacing water density G/C3 | | | Value | | |
| Master |  | | | 1.031 | Master |  | | | 1.130 | | |
| | 1.024 (Minimum) | | 1.039 (Nominal) | 1.054 (Maximum) | | 1.096 (Minimum) | | 1.126 (Nominal) | 1.156 (Maximum) | | |

| | | | | | | | | | | | | | | | | |
|--|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|--------------------|--|--|--|--|--|
| Master: 19-Jun-2005 14:46 | | | | | | | | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | | | | | | | | |
| Neutron: 3-Point Calibration | | | | | | | | | | | | | | | | |
| Phase | Far 1 tube 1 Air Point Measure | CPS | Value | Phase | Far 1 tube 1 Rod Point Measure | CPS | Value | Phase | Far 1 tube 1 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 17.72 | Master |  | | 4.474 | Master |  | | 2.147 | | | | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | | | | |
| Phase | Far 1 tube 2 Air Point Measure | CPS | Value | Phase | Far 1 tube 2 Rod Point Measure | CPS | Value | Phase | Far 1 tube 2 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 18.93 | Master |  | | 4.707 | Master |  | | 2.299 | | | | | |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | | | | | |
| Phase | Far 1 tube 3 Air Point Measure | CPS | Value | Phase | Far 1 tube 3 Rod Point Measure | CPS | Value | Phase | Far 1 tube 3 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 18.55 | Master |  | | 4.486 | Master |  | | 2.279 | | | | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | | | | |
| Phase | Far 2 tube 1 Air Point Measure | CPS | Value | Phase | Far 2 tube 1 Rod Point Measure | CPS | Value | Phase | Far 2 tube 1 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 17.65 | Master |  | | 4.416 | Master |  | | 2.151 | | | | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | | | | |
| Phase | Far 2 tube 2 Air Point Measure | CPS | Value | Phase | Far 2 tube 2 Rod Point Measure | CPS | Value | Phase | Far 2 tube 2 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 18.97 | Master |  | | 4.543 | Master |  | | 2.222 | | | | | |
| | 16.00 (Minimum) | 19.05 (Nominal) | 22.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.800 (Maximum) | | | | | |
| Phase | Far 2 tube 3 Air Point Measure | CPS | Value | Phase | Far 2 tube 3 Rod Point Measure | CPS | Value | Phase | Far 2 tube 3 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 18.19 | Master |  | | 4.596 | Master |  | | 2.253 | | | | | |
| | 15.00 (Minimum) | 19.05 (Nominal) | 21.00 (Maximum) | | 4.000 (Minimum) | 4.857 (Nominal) | 5.500 (Maximum) | | 1.900 (Minimum) | 2.363 (Nominal) | 2.700 (Maximum) | | | | | |
| Phase | Near 1 tube 1 Air Point Measure | CPS | Value | Phase | Near 1 tube 1 Rod Point Measure | CPS | Value | Phase | Near 1 tube 1 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 455.2 | Master |  | | 728.7 | Master |  | | 326.1 | | | | | |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | | | | | |
| Phase | Near 2 tube 1 Air Point Measure | CPS | Value | Phase | Near 2 tube 1 Rod Point Measure | CPS | Value | Phase | Near 2 tube 1 H2O Point Measure | CPS | Value | | | | | |
| Master |  | | 474.0 | Master |  | | 746.7 | Master |  | | 342.4 | | | | | |
| | 400.0 (Minimum) | 487.5 (Nominal) | 540.0 (Maximum) | | 610.0 (Minimum) | 768.8 (Nominal) | 850.0 (Maximum) | | 270.0 (Minimum) | 343.7 (Nominal) | 390.0 (Maximum) | | | | | |

| | | | | | | | | | |
|--|---|--|--|--|--|--------------------|--|--|--------------------|
| Master: 19-Jun-2005 14:46 | | | | | | | | | |
| 6.75-in. Azimuthal Density Neutron Calibration | | | | | | | | | |
| Neutron: Water Block Check | | | | | | | | | |
| Phase | Far Neutron water porosity PU | | | | | | | | Value |
| Master |  | | | | | | | | 94.31 |
| | 90.00 (Minimum) | | | | | 100.0 (Nominal) | | | 125.0 (Maximum) |

6.75-in. Resistivity At-the-Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number

RAB6 - CA

147













Calibration Status

Valid

Master: 29-Jul-2005 17:20

6.75-in. Resistivity At-the-Bit Calibration


Resistivity: Fixture

| Phase | Ring/T1 factor ---- | Value | Phase | Ring/T2 factor ---- | Value | Phase | M0/T1 factor ---- | Value |
|--------|---|-------|--------|---|--------|--------|---|--------|
| Master |  | 1.012 | Master |  | 1.011 | Master |  | 1.002 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | M0/T2 factor ---- | Value | Phase | M2/T1 factor ---- | Value | Phase | M2/T2 factor ---- | Value |
| Master |  | 1.002 | Master |  | 0.9986 | Master |  | 0.9982 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN shallow/T1 factor ---- | Value | Phase | BTN shallow/T2 factor ---- | Value | Phase | BTN medium/T1 factor ---- | Value |
| Master |  | 1.009 | Master |  | 1.009 | Master |  | 1.002 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |
| Phase | BTN medium/T2 factor ---- | Value | Phase | BTN deep/T1 factor ---- | Value | Phase | BTN deep/T2 factor ---- | Value |
| Master |  | 1.001 | Master |  | 1.001 | Master |  | 0.9999 |
| | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | | | 0.9750 (Minimum) 1.000 (Nominal) 1.025 (Maximum) | |

Master: 29-Jul-2005 17:20

6.75-in. Resistivity At-the-Bit Calibration

Gamma Ray: Blanket

| Phase | Gamma ray factor ---- | Value |
|--------|---|--------|
| Master |  | 0.9611 |
| | 0.7500 (Minimum) 1.000 (Nominal) 1.250 (Maximum) | |

SCHLUMBERGER

Survey report

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Client.....: ESSO Australia Pty. Ltd.
Field.....: Bream B
Well.....: BMB-B16
API number.....:
Engineer.....: J.Dolan, M.Y.Tan, D.Hastie
RIG:.....: ENSCO 102
STATE:.....: Victoria

Spud date.....: 05-Jul-2005
Last survey date.....: 09-Aug-05
Total accepted surveys...: 92
MD of first survey.....: 0.00 m
MD of last survey.....: 2641.00 m

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor
----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent: -61.00 m

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2005
Magnetic date.....: 29-Jul-2005
Magnetic field strength...: 1203.00 HCONT
Magnetic dec (+E/W-).....: 13.10 degrees
Magnetic dip.....: -69.05 degrees

----- MWD survey Reference Criteria -----

KB above permanent..... 71.00 m
Top Drive
DF above permanent..... 47.17 m

----- Vertical section origin-----
Latitude (+N/S-)..... -7.80 m
Departure (+E/W-)..... -0.30 m

----- Platform reference point-----
Latitude (+N/S-).....
Departure (+E/W-).....

Azimuth from Vsect Origin to target: 119.19 degrees

----- Survey Reference Criteria -----
Reference G..... 1000.05 mGal
Reference H..... 1203.00 HCNT
Reference Dip..... -69.05 degrees
Tolerance of G..... (+/-) 2.50 mGal
Tolerance of H..... (+/-) 6.00 HCNT
Tolerance of Dip..... (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-)..... 13.10 degrees
Grid convergence (+E/W-).. -0.52 degrees
Total az corr (+E/W-)..... 13.62 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

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SCHLUMBERGER Survey Report

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -7.80 | -0.30 | 7.81 | 182.20 | 0.00 | TIP | None |
| 2 | 107.50 | 0.00 | 0.00 | 107.50 | 107.50 | 0.00 | -7.80 | -0.30 | 7.81 | 182.20 | 0.00 | GYR | None |
| 3 | 110.30 | 0.15 | 158.53 | 2.80 | 110.30 | 0.00 | -7.80 | -0.30 | 7.81 | 182.19 | 1.63 | GYR | None |
| 4 | 138.80 | 0.18 | 157.67 | 28.50 | 138.80 | 0.07 | -7.88 | -0.27 | 7.88 | 181.95 | 0.03 | GYR | None |
| 5 | 157.60 | 0.16 | 154.47 | 18.80 | 157.60 | 0.11 | -7.93 | -0.25 | 7.93 | 181.77 | 0.04 | GYR | None |
| 6 | 174.50 | 0.11 | 156.53 | 16.90 | 174.50 | 0.14 | -7.97 | -0.23 | 7.97 | 181.65 | 0.09 | GYR | None |
| 7 | 183.49 | 0.57 | 272.31 | 8.99 | 183.49 | 0.11 | -7.97 | -0.27 | 7.98 | 181.94 | 2.12 | GYR | None |
| 8 | 214.10 | 2.13 | 263.97 | 30.61 | 214.09 | -0.49 | -8.03 | -0.99 | 8.09 | 187.02 | 1.56 | GYR | None |
| 9 | 244.30 | 4.13 | 267.49 | 30.20 | 244.24 | -1.87 | -8.13 | -2.63 | 8.55 | 197.94 | 2.03 | GYR | None |
| 10 | 273.44 | 6.20 | 258.68 | 29.14 | 273.26 | -3.96 | -8.49 | -5.22 | 9.97 | 211.61 | 2.31 | GYR | None |
| 11 | 302.32 | 6.79 | 248.99 | 28.88 | 301.96 | -6.24 | -9.41 | -8.35 | 12.58 | 221.59 | 1.31 | GYR | None |
| 12 | 320.98 | 6.50 | 238.20 | 18.66 | 320.49 | -7.46 | -10.36 | -10.27 | 14.59 | 224.77 | 2.09 | MWD | None |
| 13 | 360.36 | 6.56 | 225.35 | 39.38 | 359.62 | -9.17 | -13.11 | -13.77 | 19.02 | 226.40 | 1.13 | GYR | None |
| 14 | 389.61 | 6.38 | 219.35 | 29.25 | 388.69 | -9.92 | -15.54 | -15.99 | 22.30 | 225.81 | 0.73 | GYR | None |
| 15 | 418.79 | 6.26 | 225.03 | 29.18 | 417.69 | -10.64 | -17.92 | -18.14 | 25.50 | 225.35 | 0.66 | GYR | None |
| 16 | 447.48 | 6.24 | 222.63 | 28.69 | 446.21 | -11.43 | -20.18 | -20.30 | 28.62 | 225.18 | 0.28 | GYR | None |
| 17 | 476.58 | 6.16 | 224.05 | 29.10 | 475.14 | -12.20 | -22.46 | -22.46 | 31.77 | 225.00 | 0.18 | GYR | None |
| 18 | 505.66 | 6.06 | 219.91 | 29.08 | 504.05 | -12.88 | -24.76 | -24.53 | 34.85 | 224.73 | 0.47 | GYR | None |
| 19 | 534.65 | 6.06 | 217.45 | 28.99 | 532.88 | -13.39 | -27.15 | -26.44 | 37.90 | 224.25 | 0.27 | GYR | None |
| 20 | 563.70 | 6.02 | 217.76 | 29.05 | 561.77 | -13.83 | -29.57 | -28.31 | 40.94 | 223.75 | 0.05 | GYR | None |
| 21 | 592.73 | 5.72 | 226.27 | 29.03 | 590.65 | -14.49 | -31.77 | -30.29 | 43.90 | 223.63 | 0.97 | GYR | None |
| 22 | 621.85 | 5.72 | 231.95 | 29.12 | 619.62 | -15.47 | -33.67 | -32.48 | 46.78 | 223.97 | 0.59 | GYR | None |
| 23 | 650.71 | 5.56 | 228.28 | 28.86 | 648.34 | -16.49 | -35.49 | -34.65 | 49.60 | 224.32 | 0.42 | GYR | None |
| 24 | 680.04 | 5.51 | 231.33 | 29.33 | 677.54 | -17.48 | -37.31 | -36.81 | 52.41 | 224.61 | 0.31 | GYR | None |
| 25 | 697.53 | 5.50 | 228.98 | 17.49 | 694.95 | -18.08 | -38.39 | -38.10 | 54.08 | 224.78 | 0.39 | MWD | None |
| 26 | 726.22 | 5.50 | 228.97 | 28.69 | 723.50 | -19.01 | -40.19 | -40.17 | 56.82 | 224.99 | 0.00 | MWD | None |
| 27 | 755.02 | 5.47 | 224.63 | 28.80 | 752.17 | -19.84 | -42.07 | -42.18 | 59.57 | 225.07 | 0.44 | MWD | None |
| 28 | 784.05 | 5.45 | 220.42 | 29.03 | 781.07 | -20.48 | -44.11 | -44.04 | 62.33 | 224.96 | 0.42 | MWD | None |
| 29 | 812.94 | 5.55 | 224.13 | 28.89 | 809.83 | -21.11 | -46.15 | -45.91 | 65.10 | 224.85 | 0.39 | MWD | None |
| 30 | 856.11 | 5.52 | 225.75 | 43.17 | 852.80 | -22.24 | -49.10 | -48.85 | 69.26 | 224.85 | 0.11 | MWD | None |

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 100f) | Srvy tool type | Tool Corr (deg) |
|----------|--------------------------|------------------------|---------------------------|-------------------------|---------------------|----------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|----------------------|-----------------------|
| 31 | 885.50 | 5.60 | 224.98 | 29.39 | 882.05 | -23.03 | -51.10 | -50.87 | 72.11 | 224.87 | 0.11 | MWD | None |
| 32 | 914.67 | 5.60 | 223.80 | 29.17 | 911.08 | -23.78 | -53.14 | -52.86 | 74.95 | 224.85 | 0.12 | MWD | None |
| 33 | 943.84 | 5.47 | 223.94 | 29.17 | 940.11 | -24.49 | -55.16 | -54.81 | 77.77 | 224.82 | 0.14 | MWD | None |
| 34 | 972.77 | 5.37 | 223.05 | 28.93 | 968.91 | -25.17 | -57.15 | -56.69 | 80.50 | 224.77 | 0.14 | MWD | None |
| 35 | 1001.99 | 5.46 | 223.36 | 29.22 | 998.00 | -25.83 | -59.16 | -58.58 | 83.26 | 224.72 | 0.10 | MWD | None |
| 36 | 1030.57 | 5.41 | 224.95 | 28.58 | 1026.46 | -26.53 | -61.10 | -60.47 | 85.96 | 224.70 | 0.17 | MWD | None |
| 37 | 1059.72 | 5.32 | 225.10 | 29.15 | 1055.48 | -27.28 | -63.03 | -62.40 | 88.69 | 224.71 | 0.10 | MWD | None |
| 38 | 1088.71 | 5.11 | 226.63 | 28.99 | 1084.35 | -28.03 | -64.86 | -64.29 | 91.32 | 224.75 | 0.26 | MWD | None |
| 39 | 1117.66 | 5.03 | 225.28 | 28.95 | 1113.18 | -28.77 | -66.64 | -66.13 | 93.88 | 224.78 | 0.15 | MWD | None |
| 40 | 1146.60 | 5.09 | 226.31 | 28.94 | 1142.01 | -29.50 | -68.42 | -67.96 | 96.43 | 224.81 | 0.11 | MWD | None |
| 41 | 1175.41 | 5.01 | 225.26 | 28.81 | 1170.71 | -30.22 | -70.19 | -69.77 | 98.97 | 224.83 | 0.13 | MWD | None |
| 42 | 1204.65 | 4.90 | 227.98 | 29.24 | 1199.84 | -30.98 | -71.92 | -71.61 | 101.49 | 224.87 | 0.27 | MWD | None |
| 43 | 1233.79 | 4.85 | 227.90 | 29.14 | 1228.87 | -31.78 | -73.58 | -73.45 | 103.96 | 224.95 | 0.05 | MWD | None |
| 44 | 1262.27 | 5.07 | 228.33 | 28.48 | 1257.25 | -32.57 | -75.22 | -75.28 | 106.42 | 225.02 | 0.24 | MWD | None |
| 45 | 1291.51 | 5.31 | 229.22 | 29.24 | 1286.37 | -33.46 | -76.97 | -77.27 | 109.06 | 225.11 | 0.26 | MWD | None |
| 46 | 1320.64 | 5.99 | 219.17 | 29.13 | 1315.36 | -34.19 | -79.03 | -79.25 | 111.92 | 225.08 | 1.25 | MWD | None |
| 47 | 1349.52 | 7.66 | 193.37 | 28.88 | 1344.04 | -33.92 | -82.07 | -80.65 | 115.06 | 224.50 | 3.64 | MWD | None |
| 48 | 1378.46 | 10.94 | 165.80 | 28.94 | 1372.61 | -31.51 | -86.61 | -80.42 | 118.19 | 222.88 | 5.73 | MWD | None |
| 49 | 1407.52 | 13.12 | 139.65 | 29.06 | 1401.05 | -26.52 | -91.80 | -77.61 | 120.21 | 220.21 | 6.09 | MWD | None |
| 50 | 1436.56 | 14.26 | 126.97 | 29.04 | 1429.27 | -19.89 | -96.46 | -72.61 | 120.74 | 216.97 | 2.26 | MWD | None |

| | | | | | | | | | | | | | |
|----|---------|-------|--------|-------|---------|--------|---------|--------|--------|--------|------|-----|------|
| 50 | 1450.33 | 14.22 | 127.37 | 28.77 | 1457.16 | -12.88 | -100.74 | -66.97 | 120.97 | 213.62 | 0.11 | MWD | None |
| 51 | 1465.33 | 14.22 | 127.37 | 28.77 | 1457.16 | -12.88 | -100.74 | -66.97 | 120.97 | 213.62 | 0.11 | MWD | None |
| 52 | 1494.32 | 13.91 | 123.06 | 28.99 | 1485.28 | -5.88 | -104.80 | -61.22 | 121.37 | 210.29 | 1.15 | MWD | None |
| 53 | 1523.35 | 13.91 | 114.26 | 29.03 | 1513.46 | 1.08 | -108.14 | -55.12 | 121.38 | 207.01 | 2.22 | MWD | None |
| 54 | 1552.33 | 13.77 | 107.16 | 28.98 | 1541.60 | 7.93 | -110.59 | -48.64 | 120.82 | 203.74 | 1.79 | MWD | None |
| 55 | 1581.19 | 13.47 | 106.93 | 28.86 | 1569.65 | 14.57 | -112.58 | -42.15 | 120.21 | 200.52 | 0.32 | MWD | None |
| 56 | 1610.23 | 13.22 | 106.90 | 29.04 | 1597.90 | 21.12 | -114.53 | -35.73 | 119.98 | 197.33 | 0.26 | MWD | None |
| 57 | 1639.24 | 12.97 | 106.76 | 29.01 | 1626.16 | 27.54 | -116.43 | -29.44 | 120.10 | 194.19 | 0.26 | MWD | None |
| 58 | 1668.40 | 14.75 | 106.71 | 29.16 | 1654.47 | 34.36 | -118.45 | -22.75 | 120.61 | 190.87 | 1.86 | MWD | None |
| 59 | 1697.46 | 18.56 | 110.49 | 29.06 | 1682.31 | 42.55 | -121.13 | -14.88 | 122.04 | 187.00 | 4.15 | MWD | None |
| 60 | 1726.01 | 22.22 | 113.20 | 28.55 | 1709.06 | 52.41 | -124.85 | -5.65 | 124.98 | 182.59 | 4.03 | MWD | None |

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/100f) | Srvy tool type | Tool Corr (deg) |
|-------|--------------------|------------------|---------------------|-------------------|---------------|----------------------|-----------------|-----------------|-----------------|---------------|----------------|----------------|-----------------|
| 61 | 1755.12 | 25.46 | 114.56 | 29.11 | 1735.69 | 64.12 | -129.62 | 5.10 | 129.72 | 177.75 | 3.44 | MWD | None |
| 62 | 1784.08 | 28.71 | 115.07 | 28.96 | 1761.47 | 77.27 | -135.15 | 17.06 | 136.23 | 172.80 | 3.43 | MWD | None |
| 63 | 1813.12 | 32.21 | 113.25 | 29.04 | 1786.50 | 91.93 | -141.17 | 30.50 | 144.42 | 167.81 | 3.80 | MWD | None |
| 64 | 1842.22 | 35.30 | 112.90 | 29.10 | 1810.69 | 108.01 | -147.50 | 45.37 | 154.32 | 162.90 | 3.24 | MWD | None |
| 65 | 1871.31 | 38.11 | 113.30 | 29.09 | 1834.01 | 125.29 | -154.32 | 61.36 | 166.08 | 158.32 | 2.95 | MWD | None |
| 66 | 1899.95 | 41.20 | 113.37 | 28.64 | 1856.05 | 143.47 | -161.56 | 78.14 | 179.47 | 154.19 | 3.29 | MWD | None |
| 67 | 1929.05 | 45.21 | 113.03 | 29.10 | 1877.26 | 163.28 | -169.41 | 96.45 | 194.94 | 150.35 | 4.21 | MWD | None |
| 68 | 1958.45 | 49.07 | 111.54 | 29.40 | 1897.26 | 184.67 | -177.57 | 116.39 | 212.32 | 146.76 | 4.16 | MWD | None |
| 69 | 1987.31 | 52.44 | 109.37 | 28.86 | 1915.51 | 206.75 | -185.37 | 137.33 | 230.70 | 143.47 | 3.98 | MWD | None |
| 70 | 2016.22 | 56.23 | 108.21 | 28.91 | 1932.37 | 229.85 | -192.93 | 159.56 | 250.36 | 140.41 | 4.12 | MWD | None |
| 71 | 2044.75 | 58.13 | 107.85 | 28.53 | 1947.83 | 253.37 | -200.35 | 182.36 | 270.91 | 137.69 | 2.06 | MWD | None |
| 72 | 2073.75 | 56.68 | 107.89 | 29.00 | 1963.45 | 277.33 | -207.84 | 205.61 | 292.36 | 135.31 | 1.52 | MWD | None |
| 73 | 2102.65 | 56.17 | 107.47 | 28.90 | 1979.43 | 300.92 | -215.16 | 228.55 | 313.89 | 133.27 | 0.65 | MWD | None |
| 74 | 2131.41 | 55.69 | 106.87 | 28.76 | 1995.54 | 324.22 | -222.19 | 251.32 | 335.45 | 131.48 | 0.73 | MWD | None |
| 75 | 2160.35 | 55.85 | 106.48 | 28.94 | 2011.82 | 347.58 | -229.06 | 274.24 | 357.31 | 129.87 | 0.38 | MWD | None |
| 76 | 2189.30 | 54.86 | 106.25 | 28.95 | 2028.28 | 370.80 | -235.77 | 297.09 | 379.27 | 128.44 | 1.06 | MWD | None |
| 77 | 2218.83 | 53.99 | 105.47 | 29.53 | 2045.46 | 394.17 | -242.33 | 320.19 | 401.56 | 127.12 | 1.11 | MWD | None |
| 78 | 2247.97 | 53.59 | 105.31 | 29.14 | 2062.68 | 417.01 | -248.57 | 342.86 | 423.49 | 125.94 | 0.44 | MWD | None |
| 79 | 2277.03 | 54.85 | 105.22 | 29.06 | 2079.67 | 439.89 | -254.78 | 365.60 | 445.62 | 124.87 | 1.32 | MWD | None |
| 80 | 2306.49 | 53.74 | 104.80 | 29.46 | 2096.86 | 463.08 | -260.97 | 388.71 | 468.19 | 123.88 | 1.20 | MWD | None |
| 81 | 2335.48 | 53.21 | 104.61 | 28.99 | 2114.11 | 485.64 | -266.89 | 411.24 | 490.25 | 122.98 | 0.58 | MWD | None |
| 82 | 2364.40 | 53.21 | 104.10 | 28.92 | 2131.43 | 508.03 | -272.63 | 433.68 | 512.25 | 122.16 | 0.43 | MWD | None |
| 83 | 2393.21 | 51.92 | 103.86 | 28.81 | 2148.94 | 530.10 | -278.16 | 455.88 | 534.04 | 121.39 | 1.38 | MWD | None |
| 84 | 2422.27 | 52.23 | 104.37 | 29.06 | 2166.81 | 552.23 | -283.75 | 478.11 | 555.97 | 120.69 | 0.53 | MWD | None |
| 85 | 2451.33 | 52.61 | 104.69 | 29.06 | 2184.53 | 574.52 | -289.53 | 500.40 | 578.12 | 120.05 | 0.48 | MWD | None |
| 86 | 2480.33 | 52.86 | 105.28 | 29.00 | 2202.09 | 596.89 | -295.49 | 522.70 | 600.44 | 119.48 | 0.56 | MWD | None |
| 87 | 2509.25 | 51.86 | 105.68 | 28.92 | 2219.75 | 619.14 | -301.60 | 544.77 | 622.68 | 118.97 | 1.11 | MWD | None |
| 88 | 2538.42 | 52.71 | 106.56 | 29.17 | 2237.59 | 641.61 | -308.01 | 566.93 | 645.20 | 118.52 | 1.15 | MWD | None |
| 89 | 2567.49 | 53.16 | 106.46 | 29.07 | 2255.11 | 664.24 | -314.60 | 589.17 | 667.91 | 118.10 | 0.48 | MWD | None |
| 90 | 2596.48 | 52.44 | 107.42 | 28.99 | 2272.64 | 686.81 | -321.33 | 611.26 | 690.58 | 117.73 | 1.10 | MWD | None |

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SCHLUMBERGER Survey Report

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| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/100f) | Srvy tool type | Tool Corr (deg) |
|-------|--------------------|------------------|---------------------|-------------------|---------------|----------------------|-----------------|-----------------|-----------------|---------------|----------------|------------------|-----------------|
| 91 | 2623.96 | 51.70 | 107.50 | 27.48 | 2289.53 | 708.03 | -327.83 | 631.94 | 711.91 | 117.42 | 0.82 | MWD | None |
| 92 | 2641.00 | 51.70 | 107.50 | 17.04 | 2300.10 | 721.13 | -331.86 | 644.69 | 725.09 | 117.24 | 0.00 | Projection to TD | |

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Company: **ESSO Australia Pty. Ltd.**

Schlumberger

Well: **BMB-B16**

Field: **Bream B**

Rig: **ENSCO 102**

8.5 in. Section

State: **Victoria**

GeoVISION Quadrant Density

GEOVISION Quadrant Density
1:200 True Vertical Depth
Recorded Mode Log
