
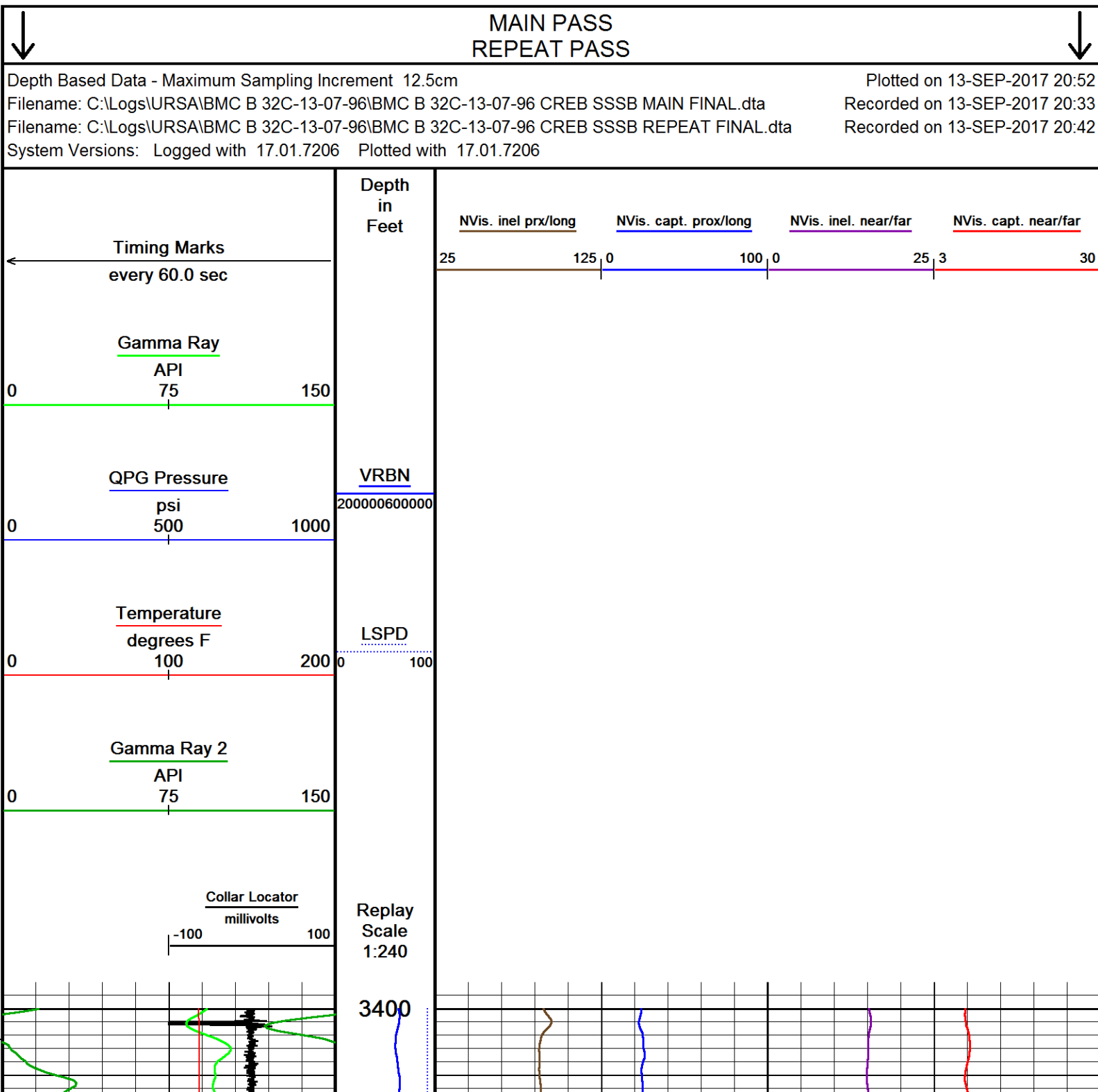


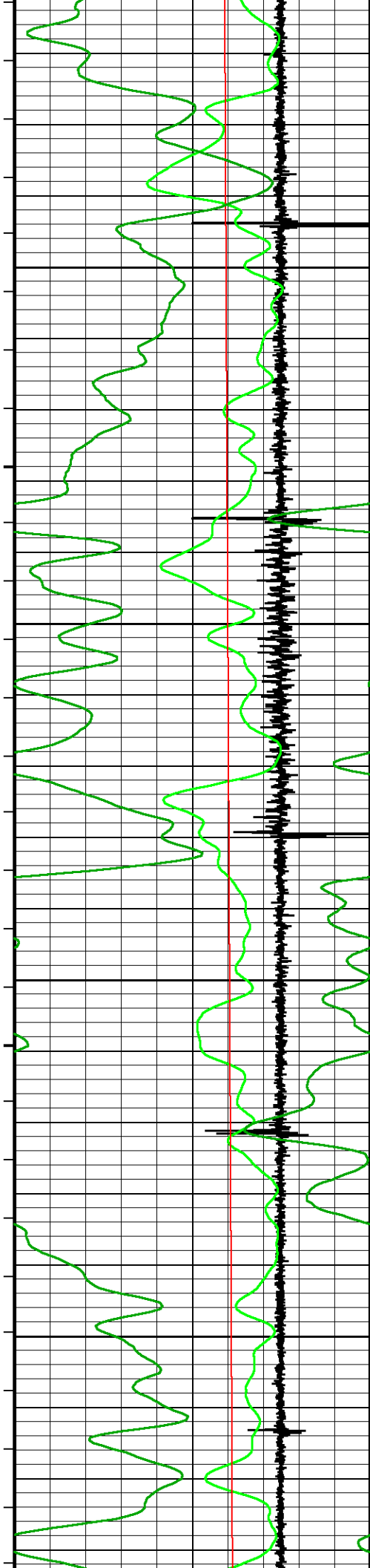
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|--|---------------|--------------------|------------------------|------------------------|----------|---------|--|
|  | | | | RAPTOR NVISION LOG | | | |
| COMPANY | | | | URSA OPERATING COMPANY | | | |
| WELL | | | | BMC B 32C-13-07-96 | | | |
| FIELD | | | | WILDCAT | | | |
| PROVINCE/COUNTY | | | | GARFIELD | | | |
| COUNTRY/STATE | | | | USA / COLORADO | | | |
| LOCATION | | | | 2238' FNL & 0607' FWL | | | |
| SEC 18 | TWP 7S | RGE 95W | Other Services | | | | |
| Latitude | | SSSB | | | | | |
| Longitude | | | | | | | |
| API Number | | 05-045-23485 | | | | | |
| Permanent Datum GROUND LEVEL, Elevation 5100 feet | | | | Elevations: | | feet | |
| Log Measured From KB, 17.00 feet above Permanent Datum | | | | KB | | 5117.00 | |
| Drilling Measured From KB | | | | DF | | 5117.00 | |
| | | | | GL | | 5100.00 | |
| Date | 13-SEP-2017 | PERFORATION RECORD | | | | | |
| Run Number | ONE | Shot | Number | Depth From | Depth To | | |
| Service Order | | Density | of Shots | feet | feet | | |
| Type Log | CREB | | | | | | |
| Depth Driller | 7243.00 | feet | | | | | |
| Depth Logger | 6734.00 | feet | | | | | |
| Top Log Interval | 3400.00 | feet | | | | | |
| Bottom Log Interval | 6734.00 | feet | | | | | |
| Hole Fluid Type | WATER | | | | | | |
| Hole Fluid Level | 0.00 | feet | | | | | |
| Restriction ID | 3.875 | inches | Gun Type | | | | |
| Max Recorded Temp | 191.00 | deg F | Gun Size | | | | |
| Well Head Pressure | 0.00 | psi | CASING / TUBING RECORD | | | | |
| Well Head Equipment | N/A | Size | Weight | Depth From | Depth To | | |
| Time Well Ready | ROA | inches | pounds/ft | feet | feet | | |
| Time Logger Bottom | SEE LOG | 8.625 | 32.00 | 0.00 | 1700.00 | | |
| Unit | 14115 | 4.500 | 11.60 | 0.00 | 7243.00 | | |
| Equipment Name | WSS-E | | | | | | |
| Base | CASPER | | | | | | |
| Recorded By | P. MAZUR | | | | | | |
| Witnessed By | NOT WITNESSED | | | | | | |

| CASING / TUBING RECORD | | | | | | |
|------------------------|-------|-----------|----------------|--------------------|--------------------|---------------------|
| Type | Grade | TypeJoint | Size inches | Depth From feet | Shoe Depth feet | Weight pounds/ft |
| SURFACE | | | 8.625 | 0.00 | 1700.00 | 32.00 |
| PRODUCTION | | | 4.500 | 0.00 | 7243.00 | 11.60 |

| REMARKS |
|---|
| SOFTWARE VERSION 17.01.7206 - COMMERCIAL VERSION |
| ALL DEPTH CONTROL PROCEDURES FOR SUBSEQUENT RUN IN HOLE WERE FOLLOWED. LOG RUN FROM 17' K.B. |
| SURFACE SYSTEM USED: WCM-D 160 |
| TOOLS RUN: WCCC, UGRK, QPGE, CR3B, TMPN, CRPB, CRMB, CR3B, UGRK, SUEC, SSSB, STEB, CENA WERE RAN IN COMBINATION |
| GAMMA RAY COUNTS ON SUBSEQUENT PASSES ARE AFFECTED BY RESIDUAL NEUTRON ACTIVATION CAUSED BY THE PREVIOUS PASS |
| PREDICTED 3' AMPLITUDE FOR 4.5" WITH 11.6 LB/FT CASING: 81 mv |
| FREE PIPE CALIBRATION DONE AT 175 FT |
| UNKNOWNEN CEMENT CLASS DUE MISSING DATA FROM CLIENT |
| UNKNOWNEN CEMENT JOB ENDED TIME DUE TO MISSING DATA FROM CLIENT |
| BOTTOM HOLE TEMPERATURE WAS DEG. 194F |

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.



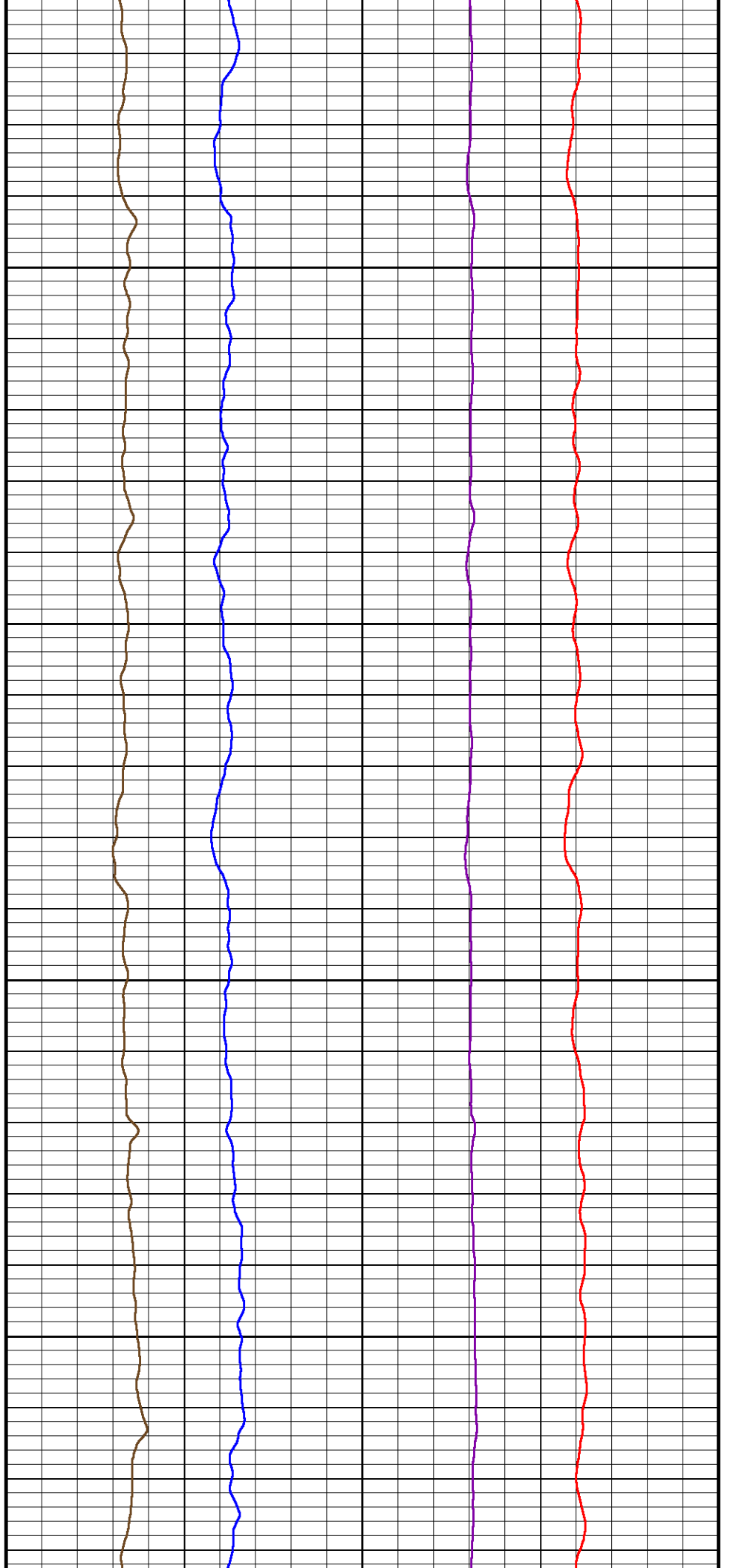


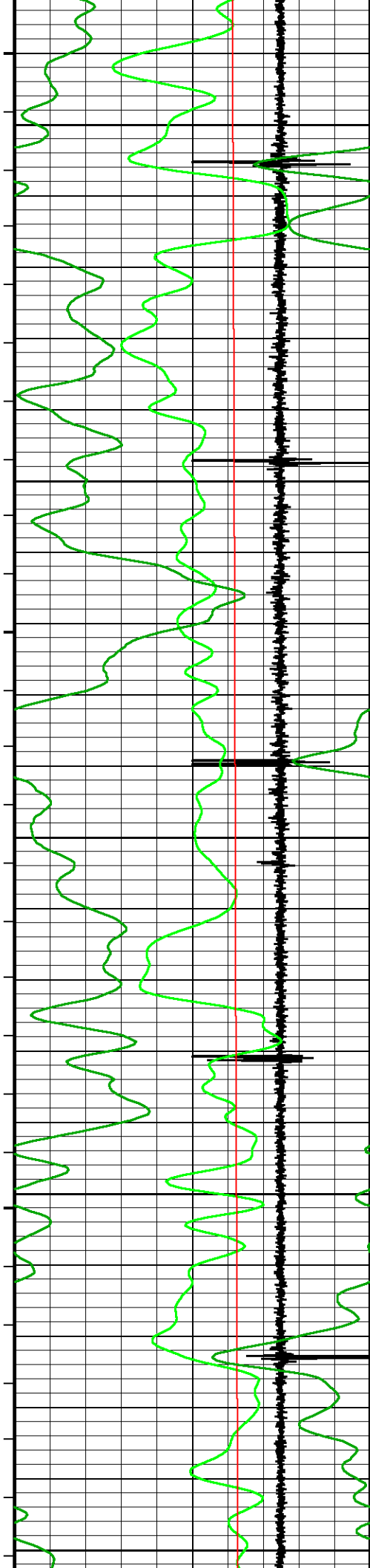
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3500

3550

3600





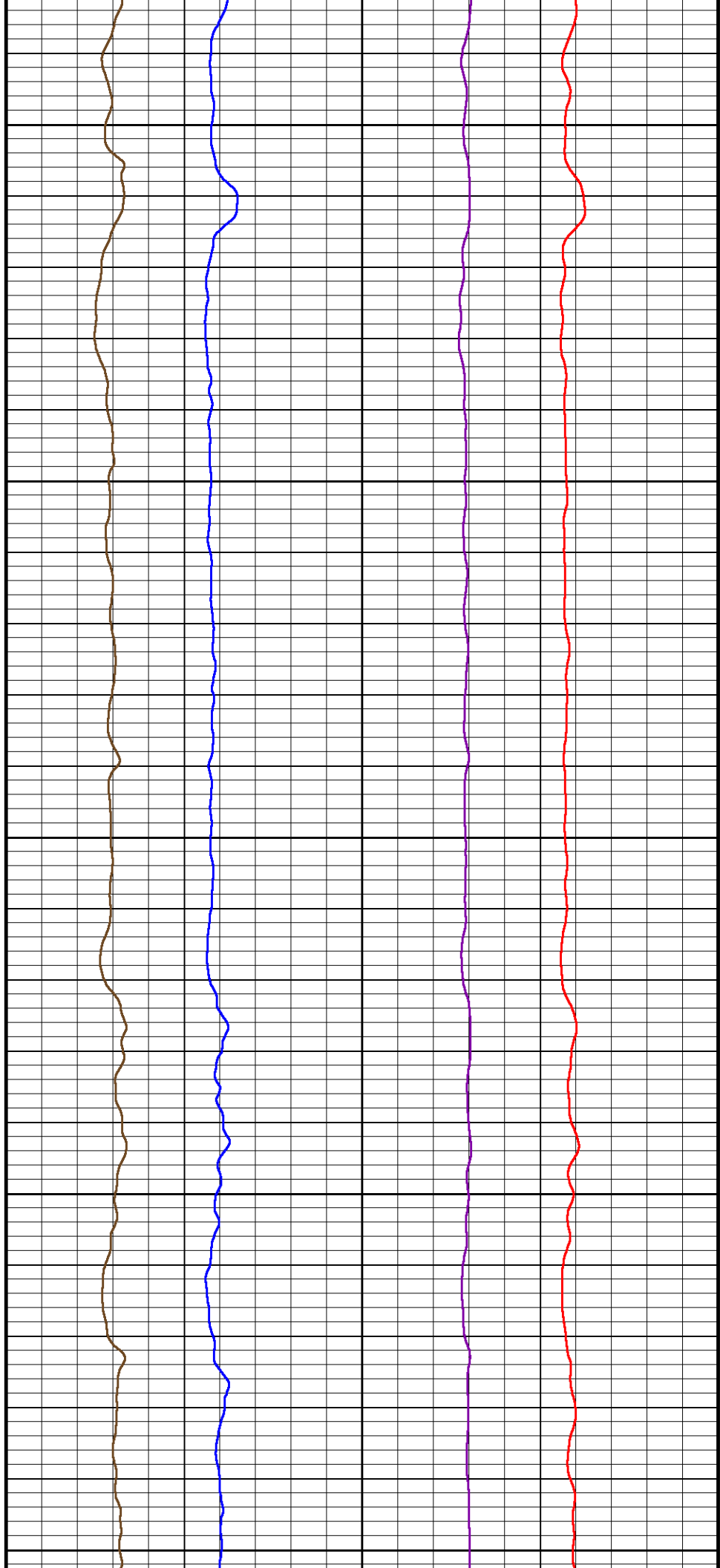
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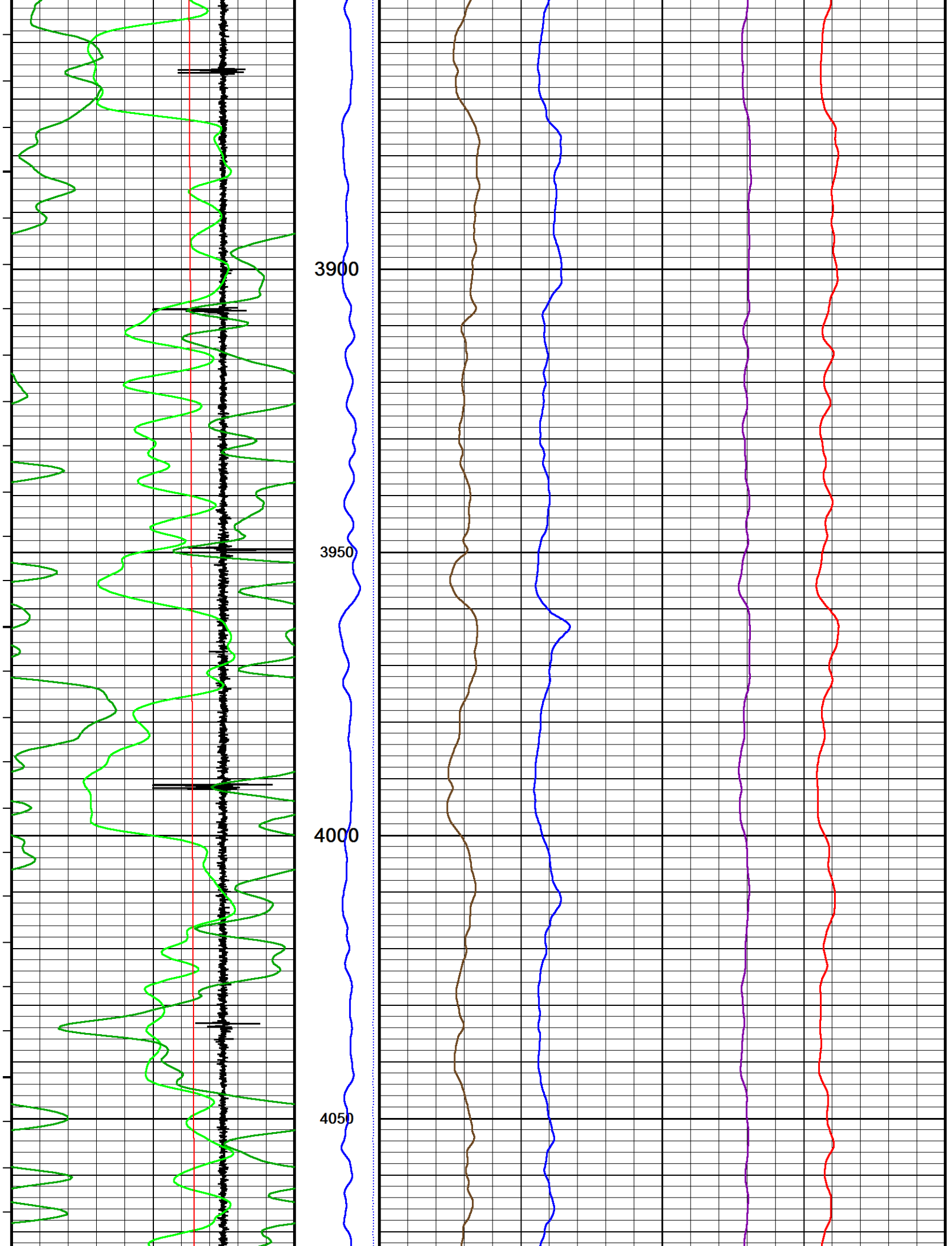
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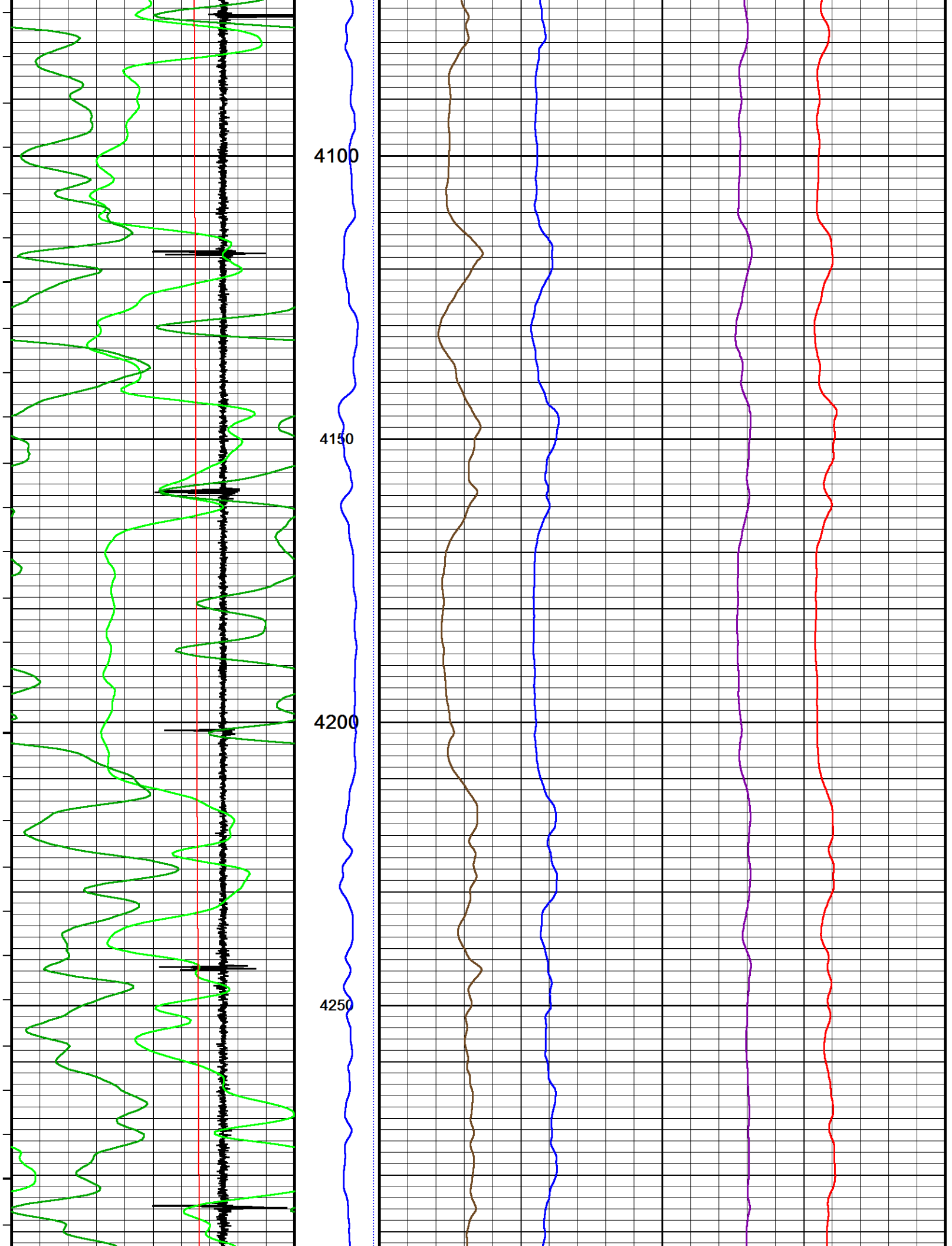
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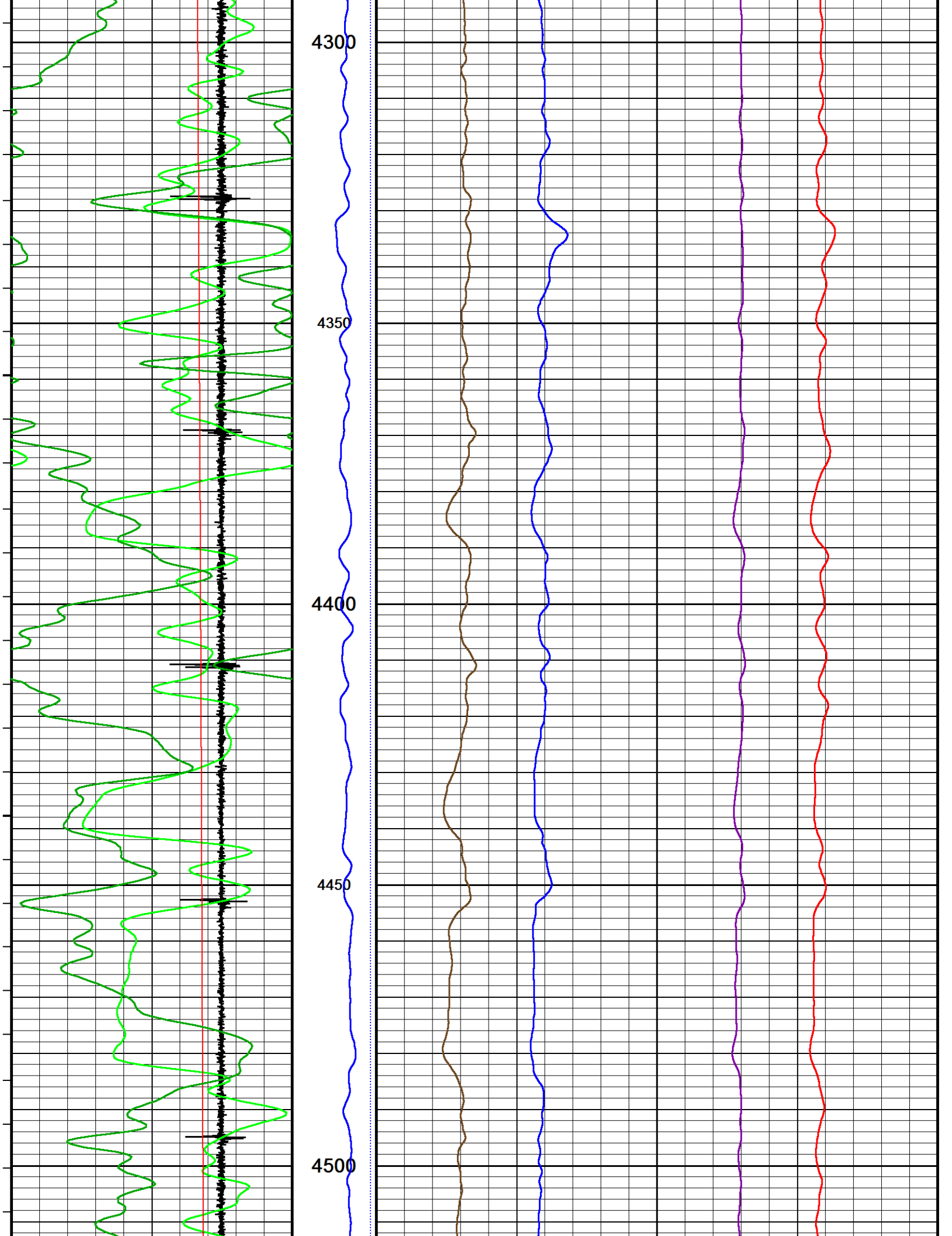
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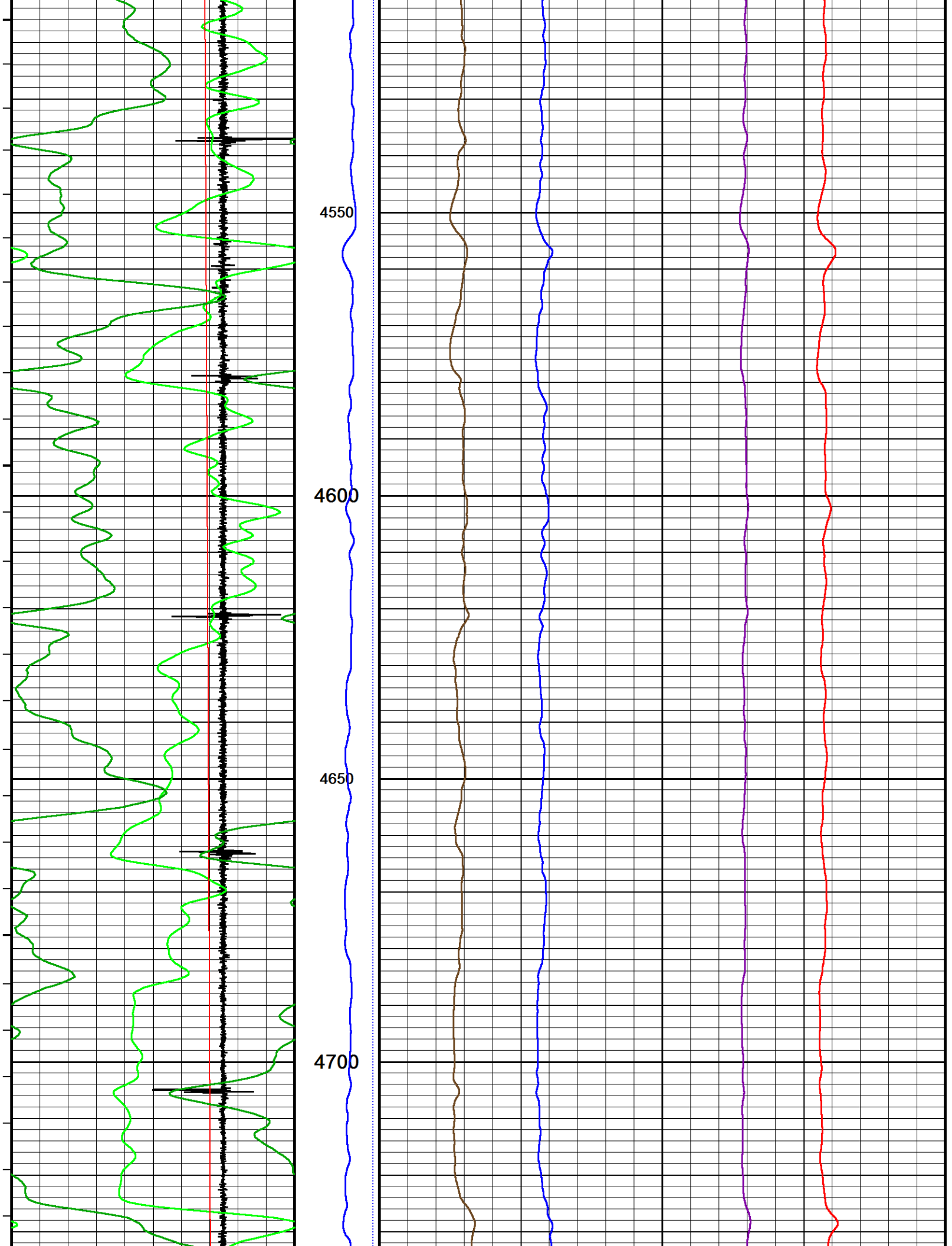
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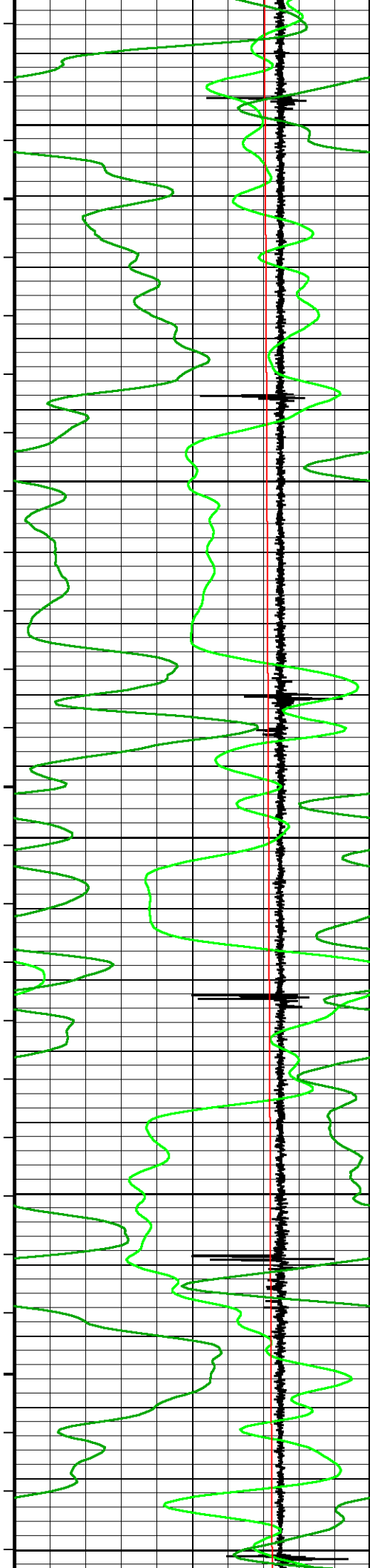












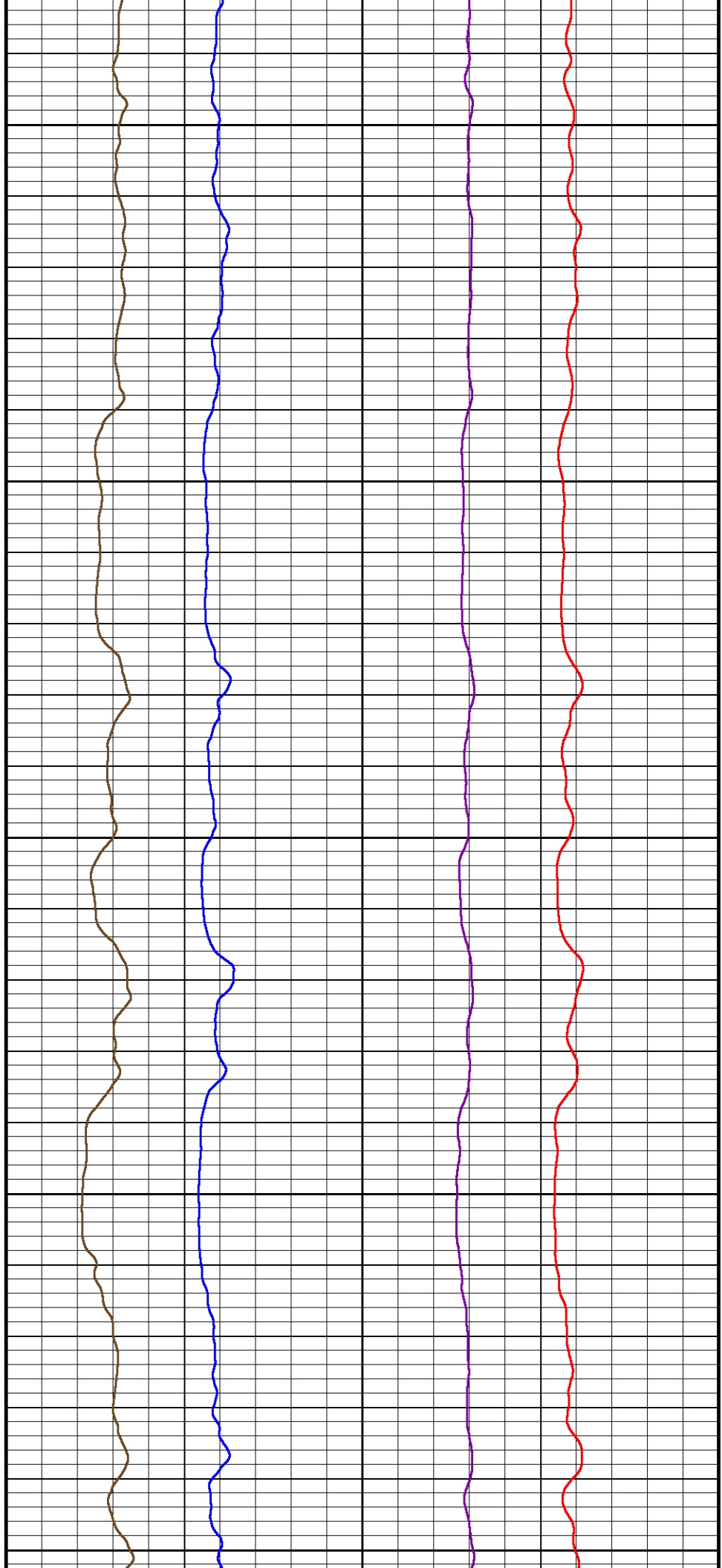
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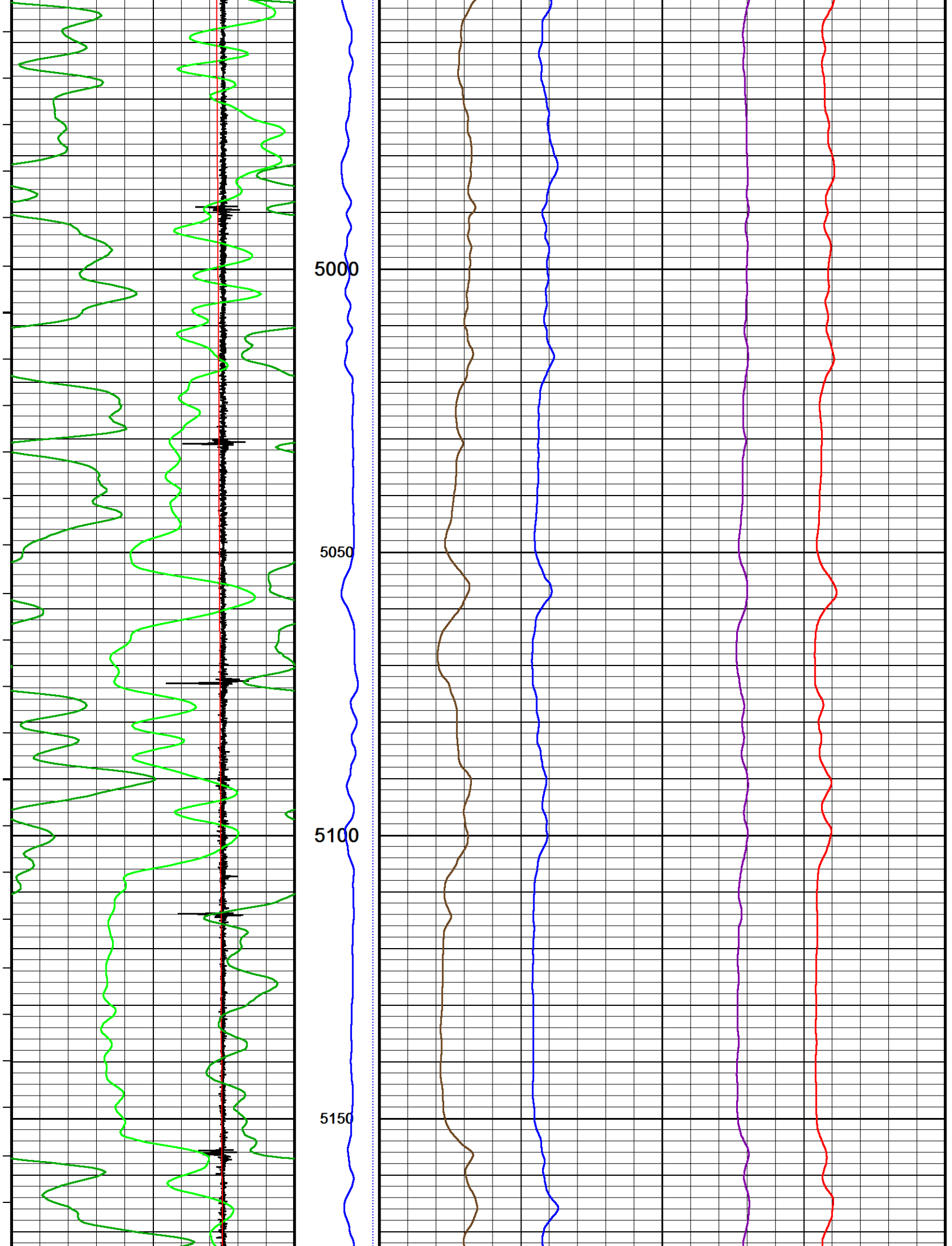
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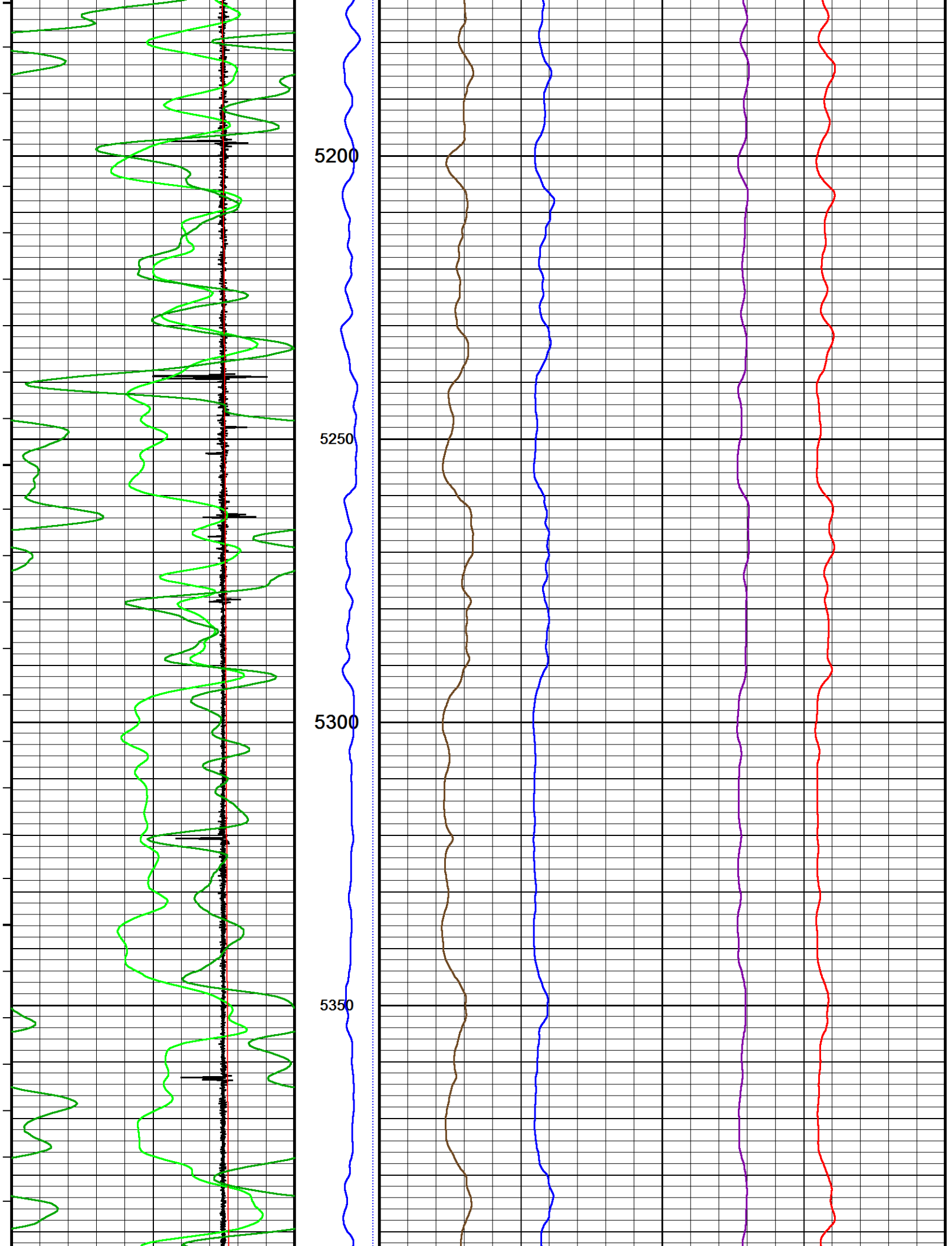
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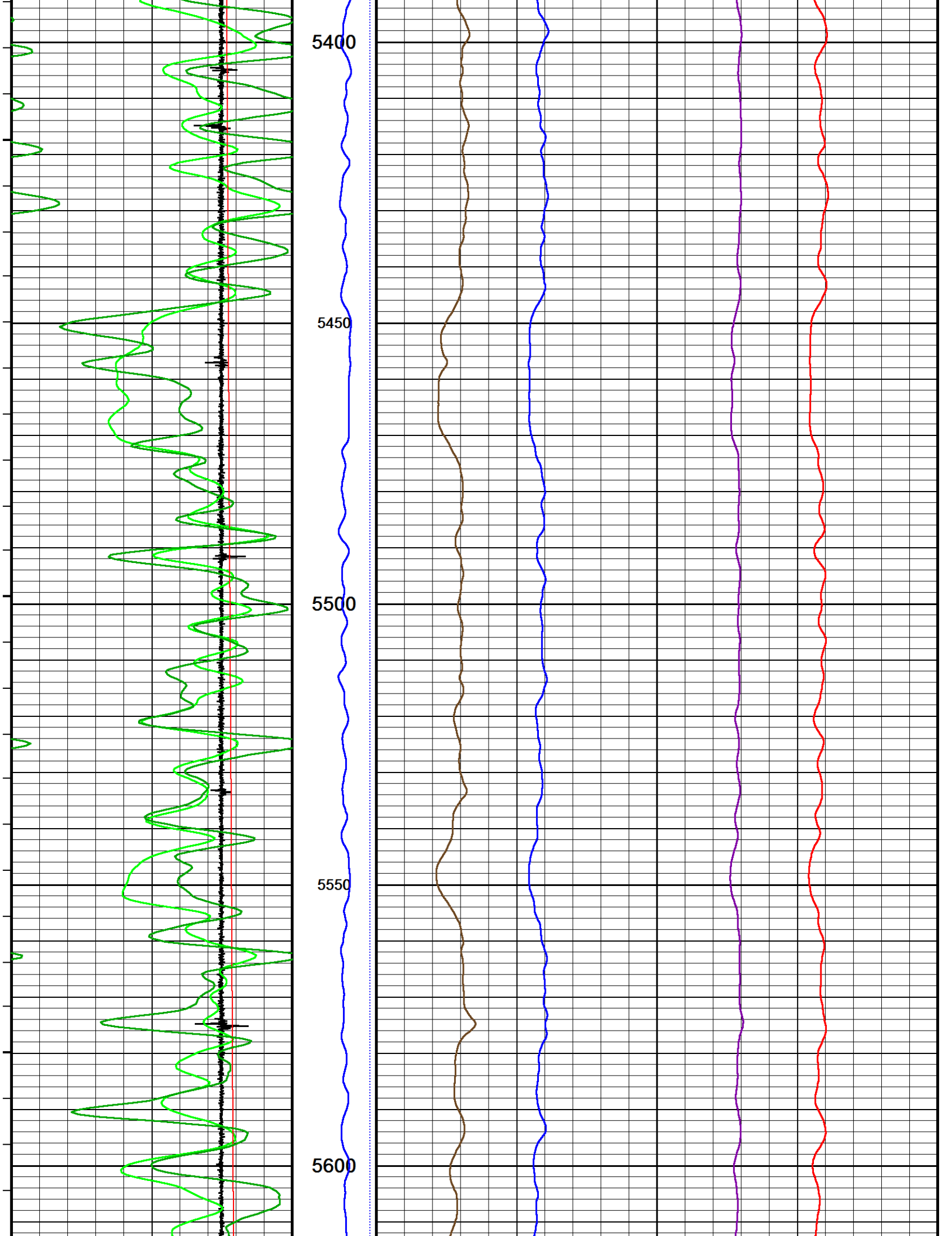
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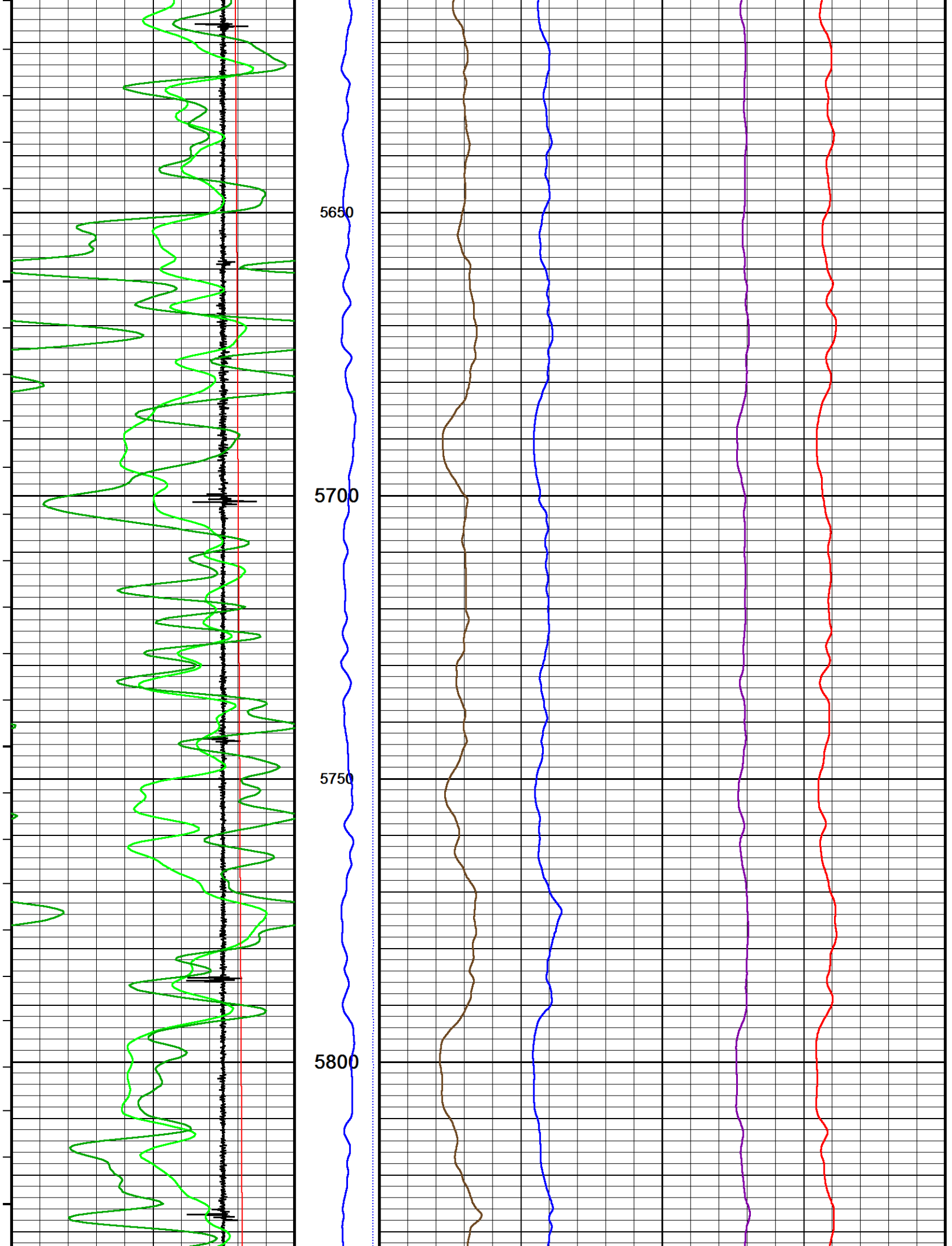
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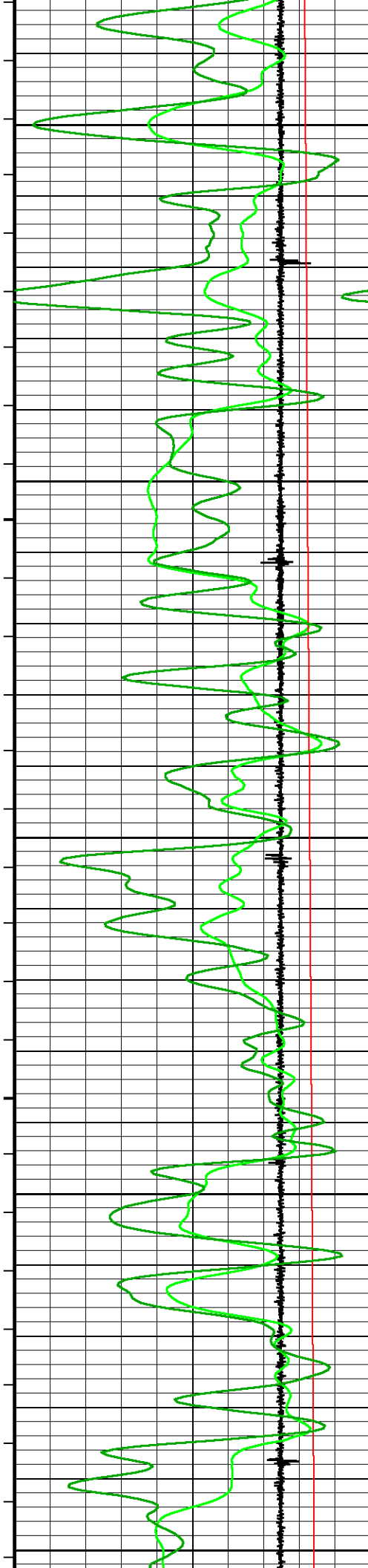












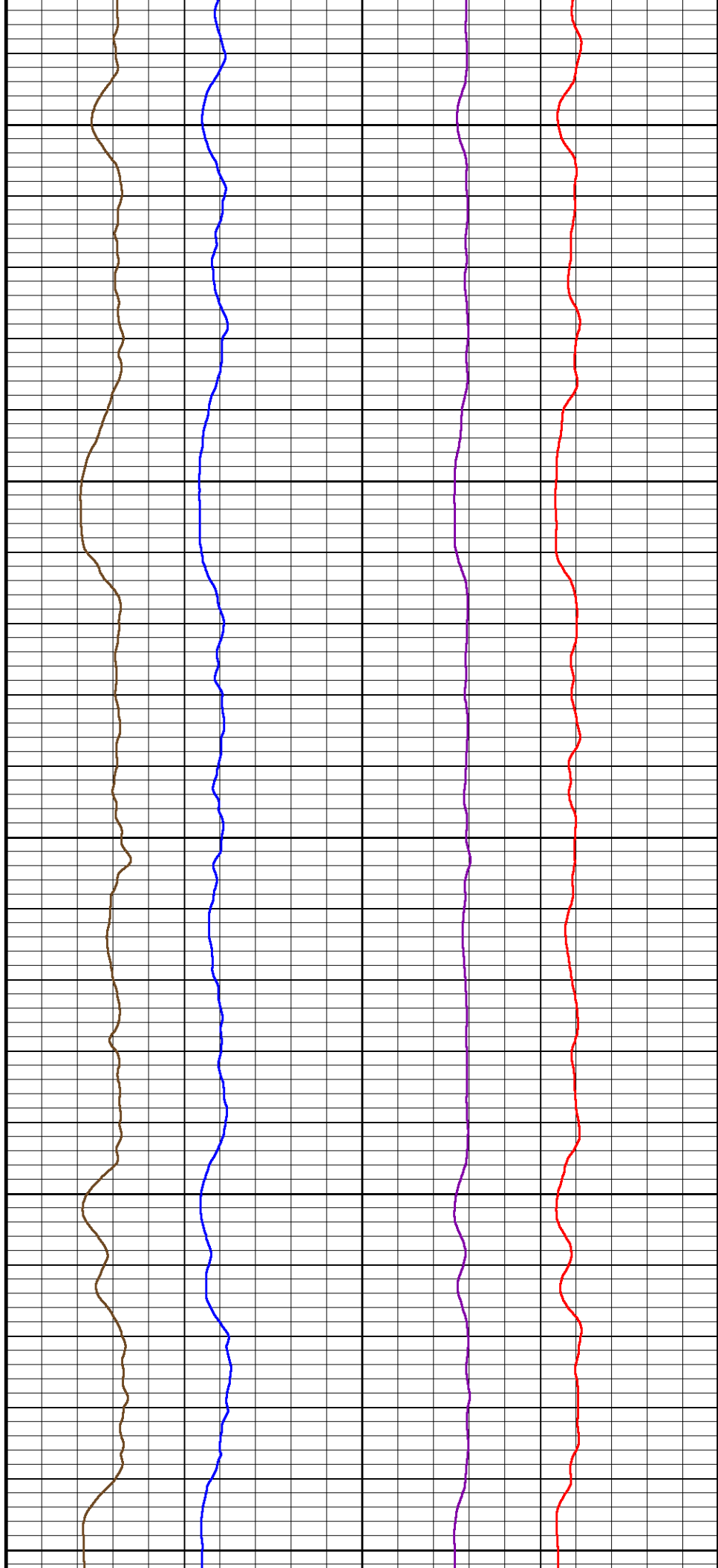
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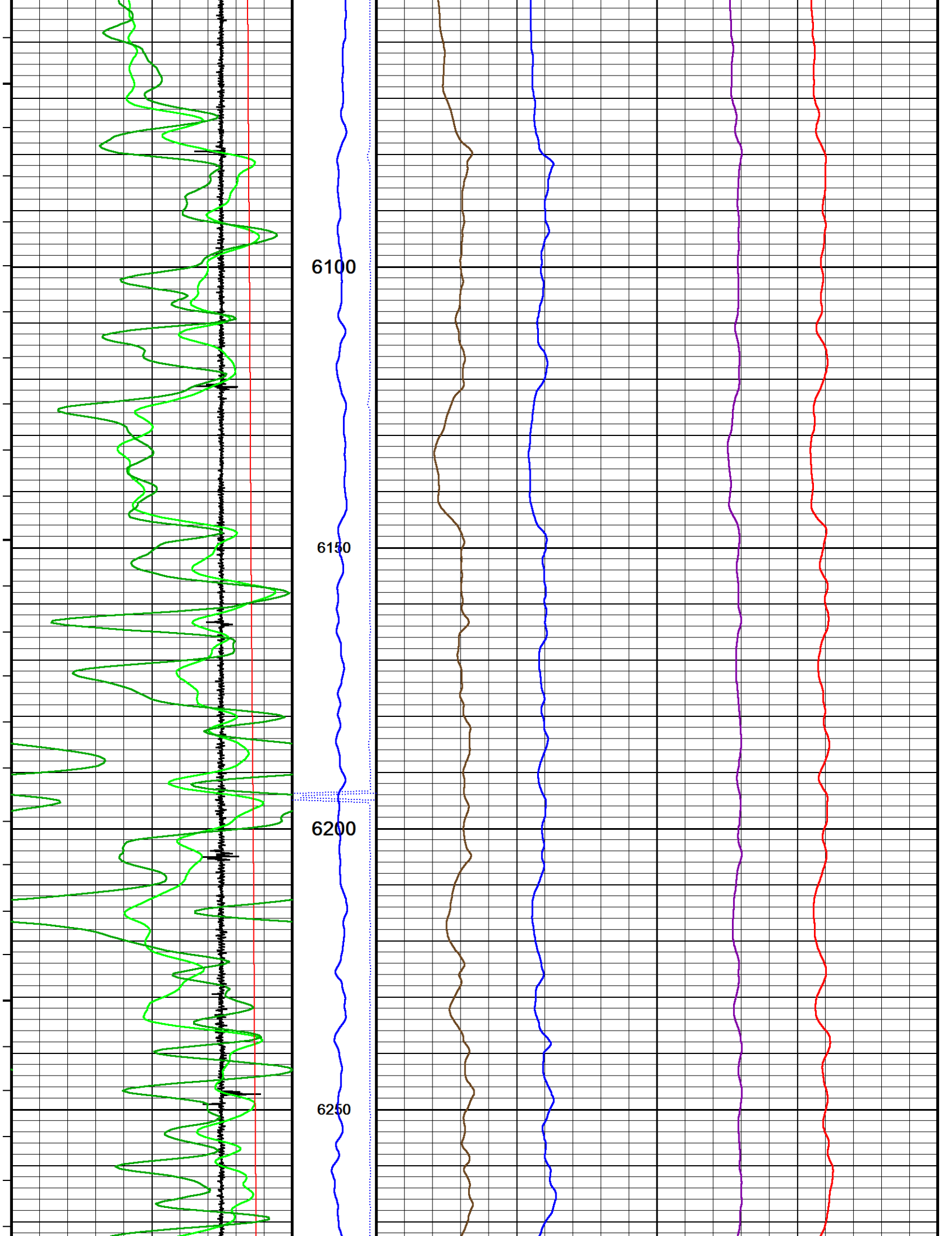
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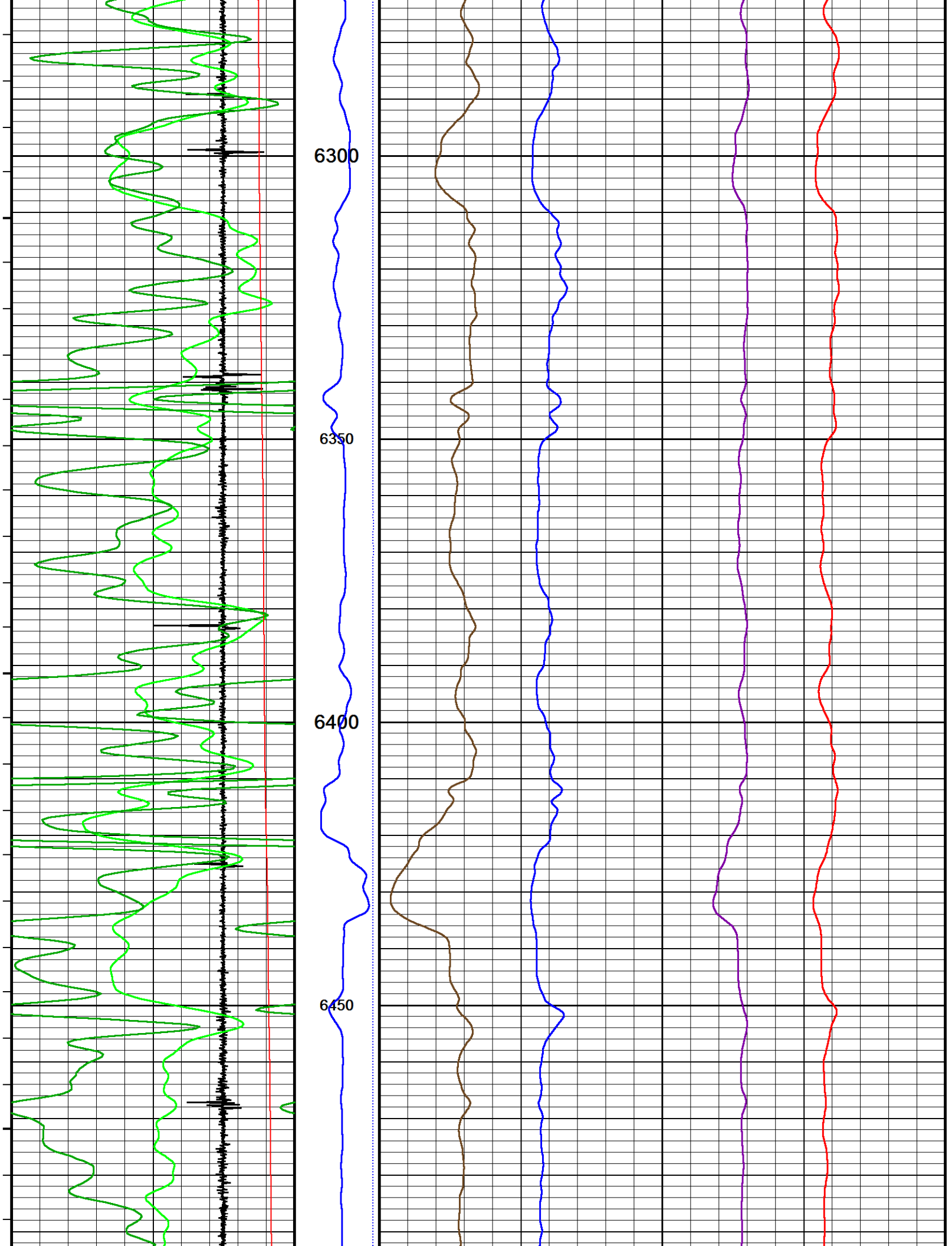
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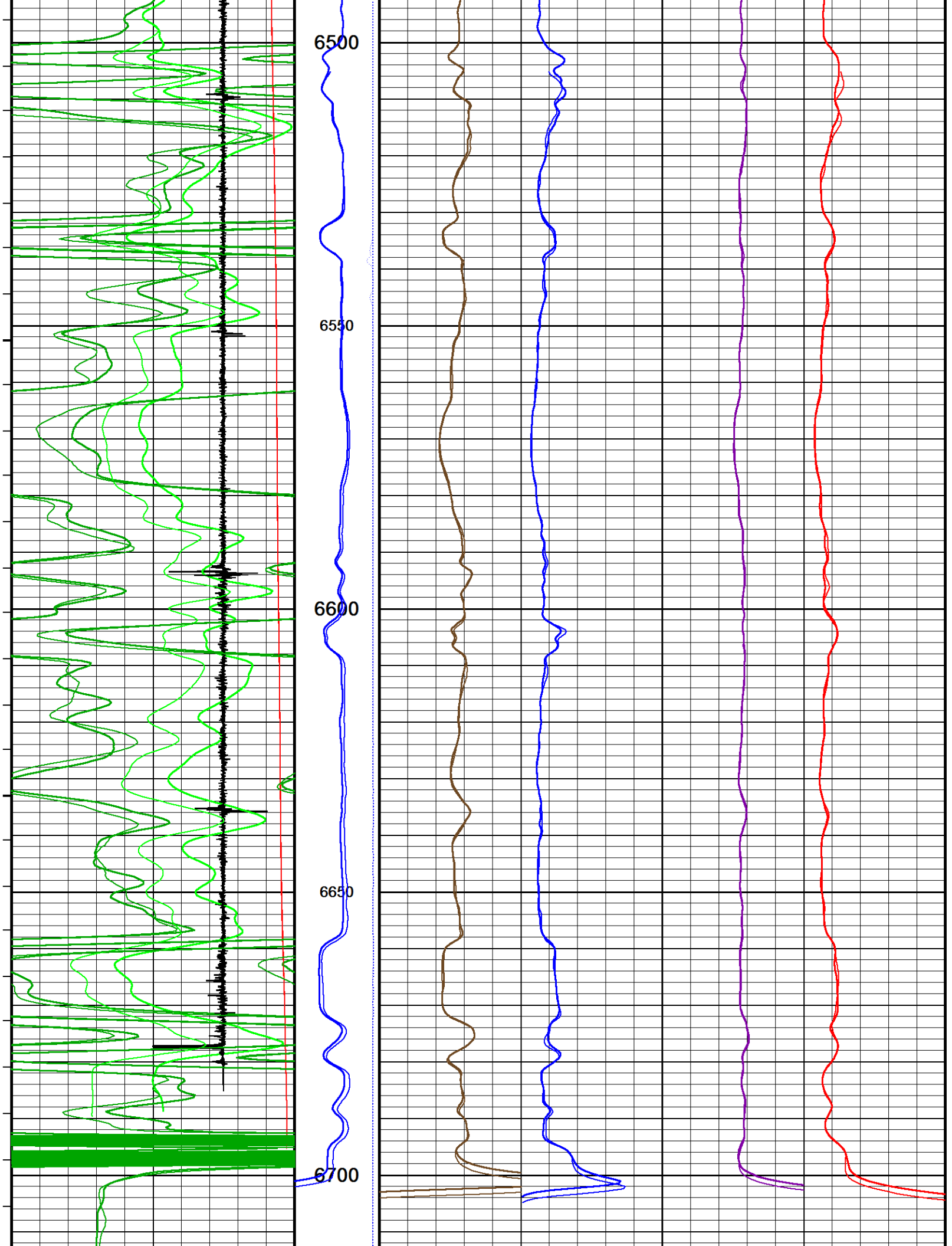
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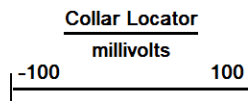
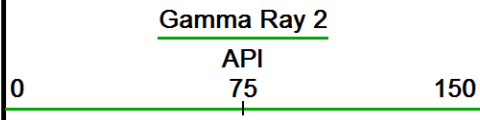
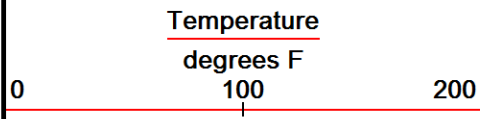
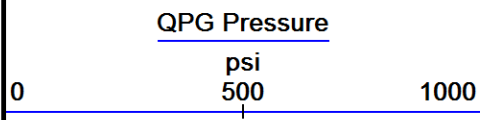
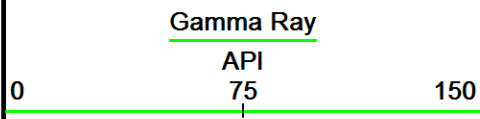
6050











VRBN

200000600000

LSPD

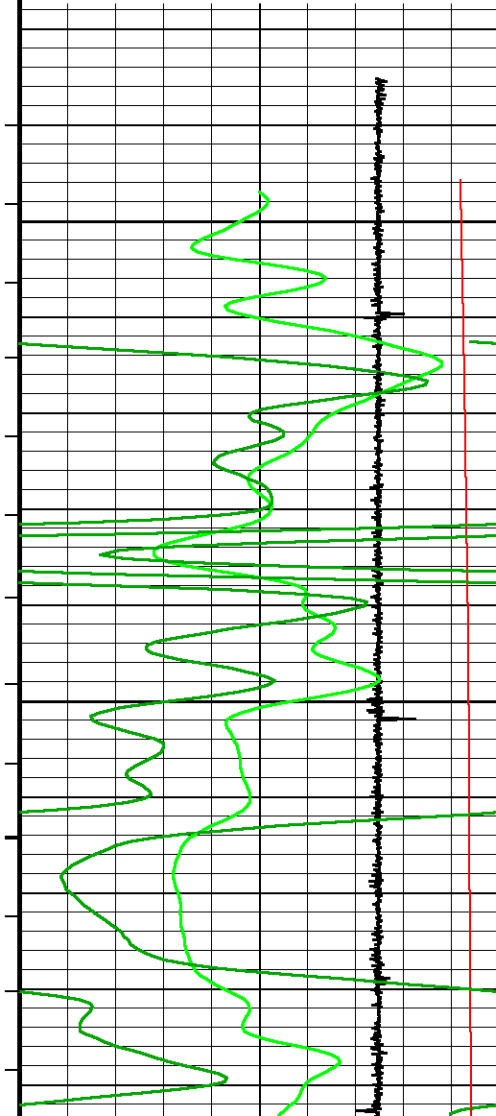
0 100

Replay
Scale
1:240

6480

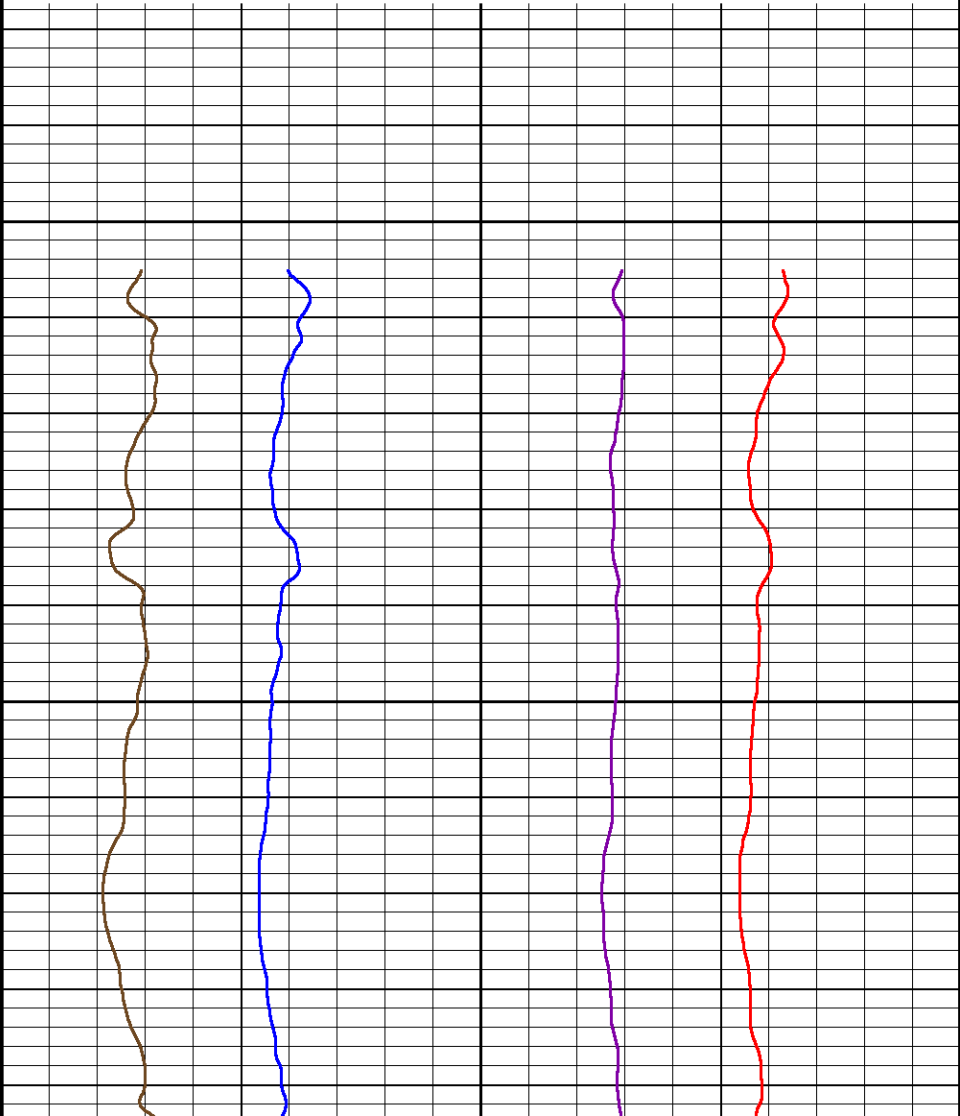
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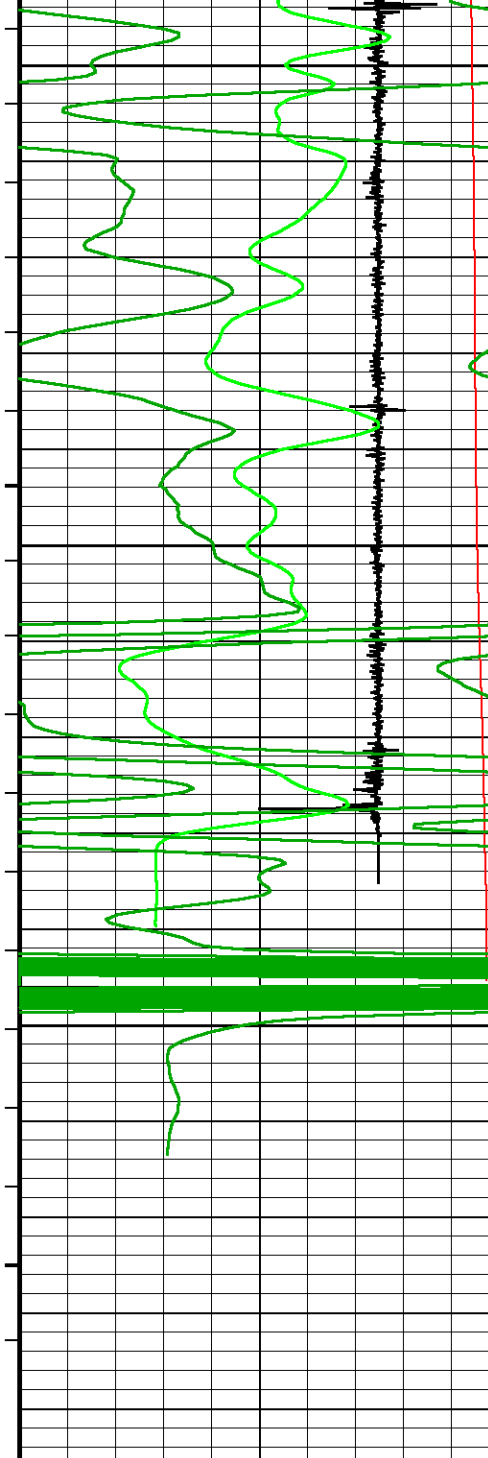
6550



6500

6550





6600

6650

6700

6744
Depth
in
Feet

Timing Marks
every 60.0 sec

Gamma Ray

API

75

QPG Pressure

psi

500

Temperature

VRBN

200000600000

NVis. incl prx/long

NVis. capt. prox/long

NVis. incl. near/far

NVis. capt. near/far

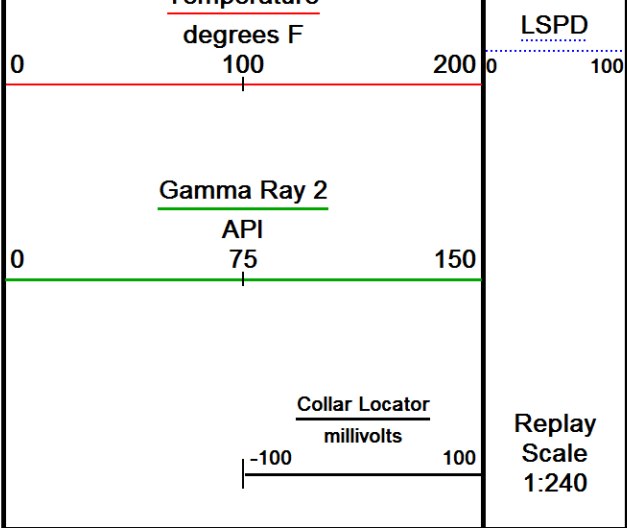
25

125 0

100 0

25 3

30



LSPD
0 100

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 12.5cm
Plotted on 13-SEP-2017 20:52
Filename: C:\Logs\URSA\BMC B 32C-13-07-96\BMC B 32C-13-07-96 CREB SSSB REPEAT FINAL.dta
Recorded on 13-SEP-2017 20:42
System Versions: Logged with 17.01.7206 Plotted with 17.01.7206

↑ REPEAT PASS ↑

DOWNHOLE EQUIPMENT

C:\Logs\URSA\BMC B 32C-13-07-96\BMC B 32C-13-07-96 CREB SSSB MAIN FINAL.dta

Mono-Cablehead
MCH-AA 0 LG: 1.03 ft WT: 2.2 lb OD: 1.457 in

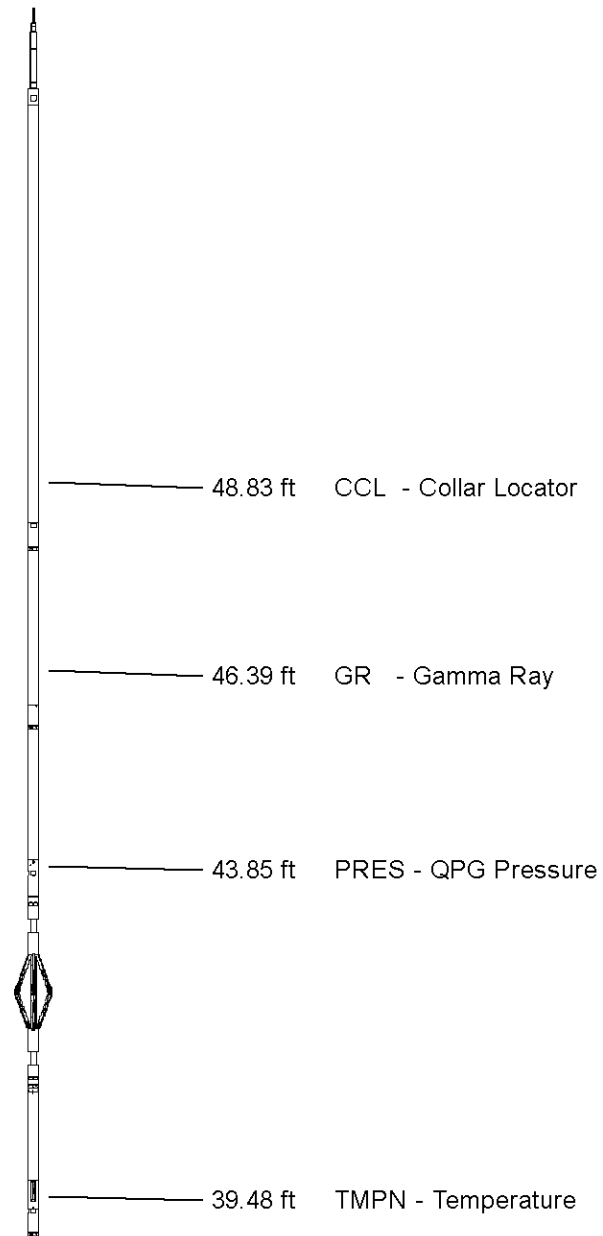
Comm Sub
WCC-CB 107 LG: 5.97 ft WT: 24.3 lb OD: 1.693 in

Gamma Ray K
UGR-KA 108 LG: 2.34 ft WT: 17.6 lb OD: 1.693 in

Quartz Press, Dual ITB, 43mm
QPG-EA 106 LG: 2.23 ft WT: 8.8 lb OD: 1.693 in

Centroller, 43mm, ITB, 3-arm Bi-Direct
CR3-BA 138 LG: 2.51 ft WT: 8.8 lb OD: 1.693 in

Tool Temperature, 43mm, 177C, 10-pin ITB
TMP-NA 138 LG: 1.93 ft WT: 8.8 lb OD: 1.693 in



CRE series II processor section

CRE Series II processor section
CRP-BA 129 LG: 3.31 ft WT: 15.4 lb OD: 1.654 in

Casing Reservoir Evaluation Tool Sonde
CRM-BA 129 LG: 9.19 ft WT: 46.3 lb OD: 1.693 in

- 31.41 ft VC15 - NVis. capt. prox/long
- 31.41 ft VB24 - NVis. incl. near/far
- 31.41 ft VB15 - NVis. incl prx/long
- 31.41 ft VC24 - NVis. capt. near/far
- 31.41 ft VRBN - VRBN

Centroller, 43mm, ITB, 3-arm Bi-Direct
CR3-BA 105 LG: 2.51 ft WT: 8.8 lb OD: 1.693 in

Gamma Ray K
UGR-KA 132 LG: 2.34 ft WT: 17.6 lb OD: 1.693 in

- 22.38 ft GR2 - Gamma Ray 2

SSB Upper Electronics, ITB
SUE-CA 137 LG: 7.64 ft WT: 26.5 lb OD: 1.654 in

SSB Receiver Sonde
SSS-BA 117 LG: 8.76 ft WT: 30.9 lb OD: 1.693 in

SSB Transmitter Section
STE-BA 129 LG: 2.64 ft WT: 17.6 lb OD: 1.654 in

Centralizer, 35mm, ITB, uni-directional
CEN-LA 370 LG: 2.60 ft WT: 8.8 lb OD: 1.380 in

Total Length: 54.99 ft Weight: 242.5 lb



Tool Zero (0.00ft from bottom)

All measurements relative to tool zero.

SHOP AND FIELD CALIBRATIONS

C:\Logs\URSA\BMC B 32C-13-07-96\BMC B 32C-13-07-96 CREB SSSB MAIN FINAL.dta

WCC Shop calibration WCC-CB 107

Calibration on 00-JAN-1988 00:00

Tension Compression Shop Calibration

Tool Type: WCC-CB

Serial No: 107

| | Standard | +1G Measured | Standard | -1G Measured |
|-------|----------|-----------------|----------|-----------------|
| X Acc | 1.000 G | 250000.0 mv | -1.000 G | 0.0 mv |
| Y Acc | 1.000 G | 250000.0 mv | -1.000 G | 0.0 mv |
| Z Acc | 1.000 G | 250000.0 mv | -1.000 G | 0.0 mv |

UGK Before Survey Cal UGR-KA 108

Field Calibration on 15-AUG-2017 11:53

Gamma Ray Before Survey Calibration

Tool Type: UGR-KA
Calibrator No: 101

Serial No: 108

| Background | Calibrator | Standard | Units |
|-----------------------------|------------|-----------------|-------|
| 46.3 | 786.0 | 470.2 | API |
| Delta Counts Per Sec: 739.7 | | CPS/API = 1.573 | |

QPG Master Calibration QPG-EA 106

Gauge

| | | | |
|---------------|---------------|------------------|-------------|
| Serial Number | 220928 | Calibration Date | 15 Sep 2012 |
| Gauge Type | QHB108-16-177 | Base Check Date | |
| Max Pressure | 16000 PSI | Max Temperature | 177 Deg C |
| Min Pressure | 13 PSI | Min Temperature | 25 Deg C |

Pressure

| | | | | | |
|-----------------------------|--------------|---------------|--------------------------------|--------------|----|
| Pressure polynomial order 3 | | | Temperature polynomial order 3 | | |
| | T0 | T1 | T2 | T3 | T4 |
| P0 | 13.6402 | -0.585455 | -0.0197893 | 9.3116e-006 | |
| P1 | 9.3116e-006 | 42.1819 | -0.0208838 | 2.62627e-005 | |
| P2 | 2.62627e-005 | -5.38063e-008 | -0.00199429 | 8.64228e-006 | |
| P3 | 8.64228e-006 | -3.99023e-008 | 3.69856e-011 | 6.96299e-007 | |
| P4 | | | | | |

Temperature

| | | | | |
|--------------------------------|---------|-----------|--------------|---------------|
| Temperature polynomial order 3 | | | | |
| | T0 | T1 | T2 | T3 |
| | 25.2302 | -0.731527 | -0.000858522 | -6.86634e-007 |

Temperature Tool Shop Survey Calibration TMP-NA 138

| | |
|--|----------------|
| Temperature Tool Shop Survey Calibration | |
| Tool Type: TMP-NA | Serial No: 138 |

| | | |
|-------------|----------|----------|
| calibration | | |
| | Standard | Measured |
| 32 | DEGF | 36714 Hz |
| 212 | DEGF | 50849 Hz |

UGK Before Survey Cal UGR-KA 132

| | |
|--|----------------|
| Field Calibration on 15-AUG-2017 12:40 | |
| Gamma Ray Before Survey Calibration | |
| Tool Type: UGR-KA | Serial No: 132 |

Tool Type: OGR-KA
Calibrator No: 101

Serial No: 152

| | | | |
|------------|------------|----------|-------|
| Background | Calibrator | Standard | Units |
| 42.6 | 812.4 | 470.2 | API |

Delta Counts Per Sec: 769.8 CPS/API = 1.637

SSBC Field Calibration SSS-BA 117

Field calibration on 08-SEP-2017 15:24

Slim Sector Bond Field Calibration

| | | | |
|-----------|--------|-----------|-----|
| Tool Type | SSS-BA | Serial No | 117 |
|-----------|--------|-----------|-----|

| Sensor | Description | Standard | Measured |
|--------------|-------------|----------|----------|
| AMP 3FT | 100% Bond | 1.00 | 3.60 |
| | Free Pipe | 81.00 | 3441.40 |
| AMP 5FT | 100% Bond | 0.40 | 0.20 |
| | Free Pipe | 54.00 | 2457.10 |
| 1 SECTOR AMP | 100% Bond | 5.00 | 5.90 |
| | Free Pipe | 95.00 | 1172.00 |
| 2 SECTOR AMP | 100% Bond | 5.00 | 7.30 |
| | Free Pipe | 95.00 | 1175.50 |
| 3 SECTOR AMP | 100% Bond | 5.00 | 0.30 |
| | Free Pipe | 95.00 | 854.90 |
| 4 SECTOR AMP | 100% Bond | 5.00 | 3.70 |
| | Free Pipe | 95.00 | 656.40 |
| 5 SECTOR AMP | 100% Bond | 5.00 | 2.40 |
| | Free Pipe | 95.00 | 654.20 |
| 6 SECTOR AMP | 100% Bond | 5.00 | 0.60 |
| | Free Pipe | 95.00 | 1046.30 |

SSBC Constants SSS-BA 117

Last Edited on 00-JAN-1988 00:00

| | |
|----------------------|------------|
| Min Ampl 100% Bond | 3.63 MV |
| Max Ampl 0% Bond | 81.03 MV |
| Casing Size | 4.50 IN |
| Casing Weight | 11.6 LB/F |
| 3' TT Correction | 0.0 US |
| DT Fluid | 200.0 US/F |
| Fast Formation TT | 38.5 US/F |
| Cement Cmpr Strength | 580 PSI |
| Casing Velocity | 57.00 US/F |
| Maximum Attenuation | 12.00 DB/F |

SMS Constants SMS-A 0

Last Edited on 00-JAN-1988 00:00

Cement Weight
Cement Weight

0.00 LB/G
0.00 LB/G

| | |
|-----------------|------------------------|
| COMPANY | URSA OPERATING COMPANY |
| WELL | BMC B 32C-13-07-96 |
| FIELD | WILDCAT |
| PROVINCE/COUNTY | GARFIELD |
| COUNTRY/STATE | USA / COLORADO |

| | | | | | |
|-------------------------|------|------|---------------------|---------|------|
| Elevation Kelly Bushing | 5117 | feet | Bottom Log Interval | 6734.00 | feet |
| Elevation Drill Floor | 5117 | feet | Depth Driller | 7243.00 | feet |
| Elevation Ground Level | 5100 | feet | Depth Logger | 6734.00 | feet |



RAPTOR NVISION LOG

Weatherford[®]