



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Civitas
Well ANTELOPE 31-31
Field Wattenberg
County Weld
State Colorado

Company Civitas
Well ANTELOPE 31-31
Field Wattenberg
County Weld State Colorado

Location: API #: 05-123-32888
Permanent Datum SEC 31 TWP 5N RGE 62W
Log Measured From Elevation 4606'
Drilling Measured From
Other Services NONE
Elevation K.B. 4616 FT
D.F. ---
G.L. 4606 FT

| | | |
|------------------------|-------------|--------------|
| Date | 19-JAN-23 | |
| Run Number | ONE | |
| Depth Driller | 6855 FT | |
| Depth Logger | 2700 FT | |
| Bottom Logged Interval | 2705 FT | |
| Top Log Interval | Surface | |
| Open Hole Size | 7.875" | |
| Type Fluid | Water | |
| Density / Viscosity | --- | |
| Max. Recorded Temp. | 112 F | |
| Estimated Cement Top | See Log | |
| Time Well Ready | ROA | |
| Time Logger on Bottom | 10:35 | |
| Equipment Number | 2-001 | |
| Location | Platteville | |
| Recorded By | W.Dolph | |
| Witnessed By | Pete Burns | |
| Borehole Record | | |
| Run Number | Bit | From |
| | To | Size |
| | Weight | From |
| | To | |
| Tubing Record | | |
| Casing Record | Size (in) | Wgt (lbs/ft) |
| Surface Casing | 8-5/8" | 24 |
| Intermediate #1 | 4-1/2" | 11.6 |
| Intermediate #2 | | |
| Liner | | |
| | Grade | Top |
| | | Bottom |
| | | 432 FT |
| | | 6840 FT |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log ran as per customer request
Well information from JW log ran 12-JULY-2011
Depth referenced to Kelly Bushing at 10 FT
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of any debris upon completion of operations

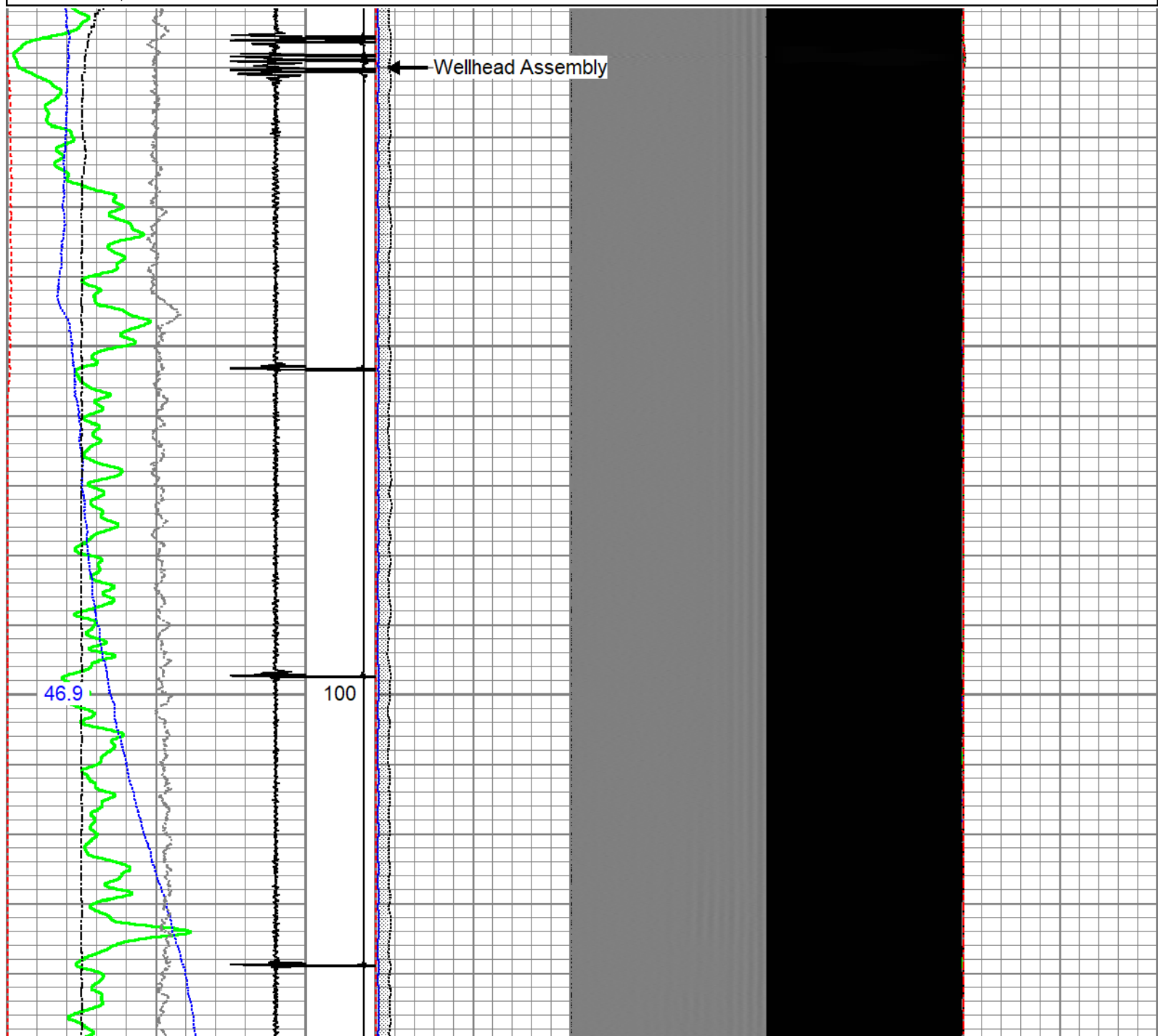
main pass

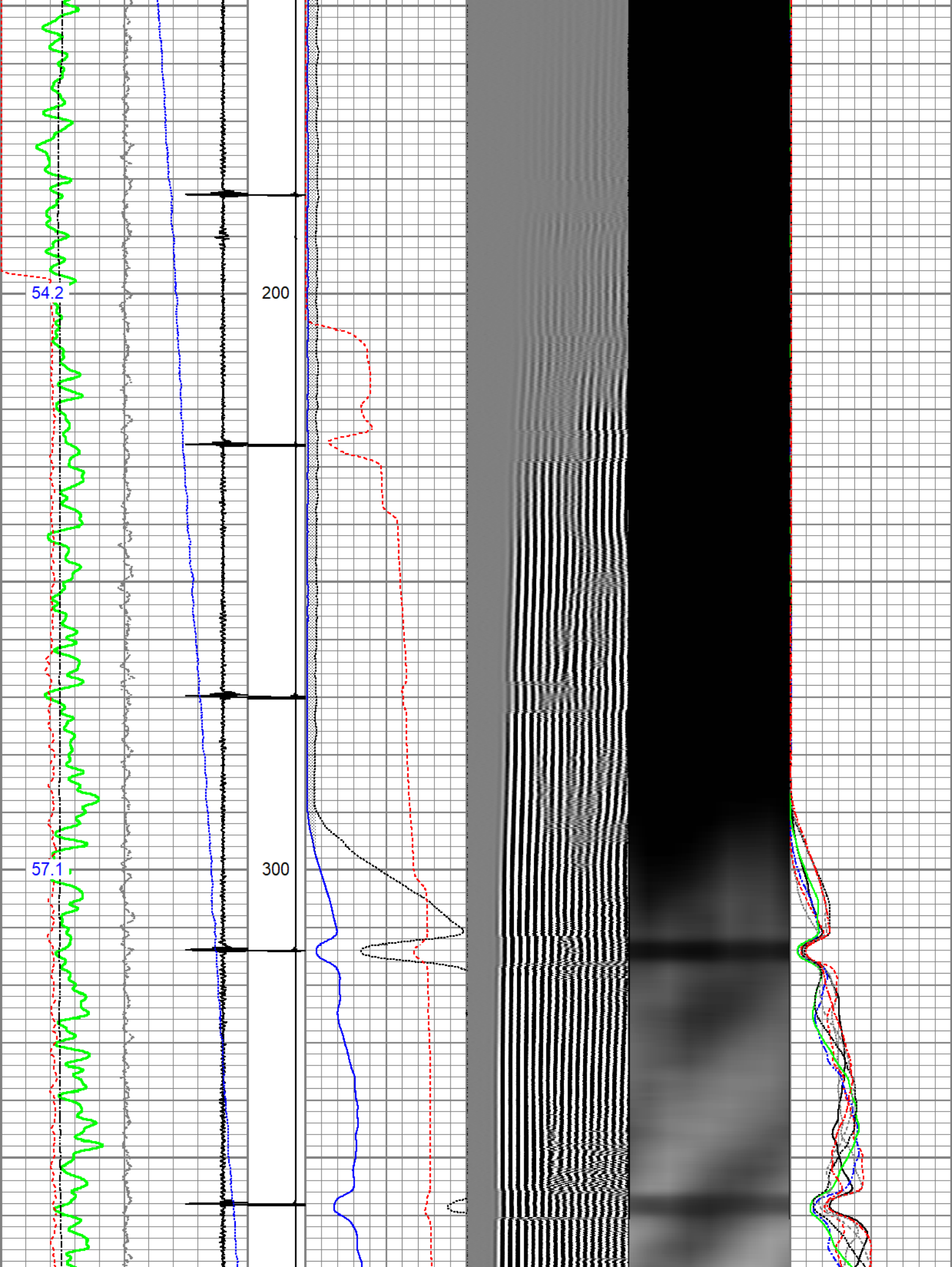


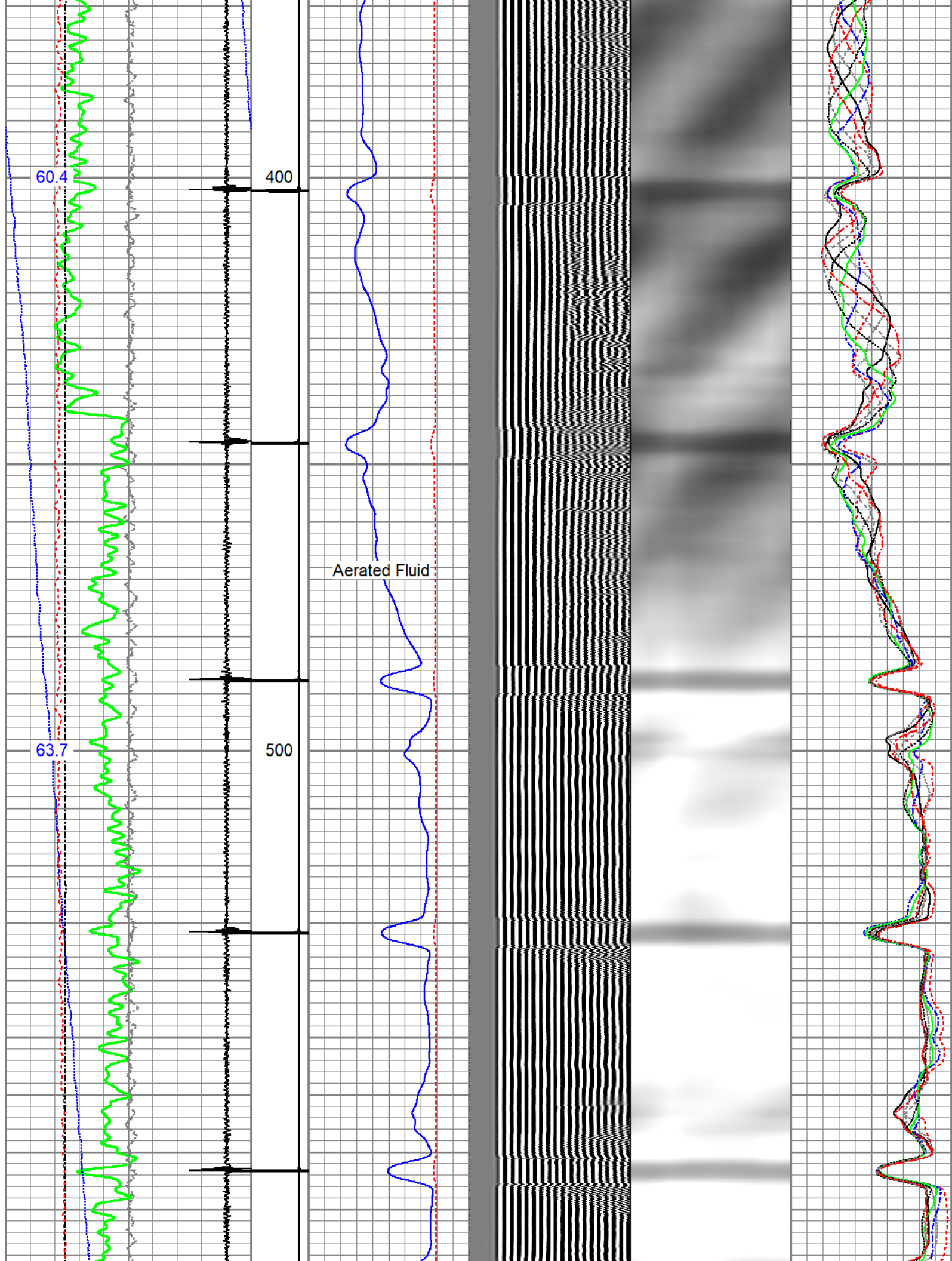
no pressure induced on surface

Database File civitas_antelope_31-31.db
 Dataset Pathname CBL/MAIN_PASS1.1
 Presentation Format edge_rbl_noble
 Dataset Creation Thu Jan 19 11:17:02 2023
 Charted by Depth in Feet scaled 1:240

| | | | | | | | | | |
|------|--------------------------|------|--------|------------------|---------------------|------------|---|--------|-----|
| 0 | Gamma Ray (GAPI) | 120 | CCL\$2 | 3' Amplitude | 5' Variable Density | Sector Map | 0 | AMP S1 | 100 |
| 9 | Casing Collar Locator | -1 | 9 -1 | (mV) 100 | 200 (usec) 1200 | | 0 | AMP S2 | 100 |
| 0 | Temperature (degF) | 20 | | 3' Amplitude x 5 | | | 0 | AMP S3 | 100 |
| -150 | Line Speed (ft/min) | 150 | | (mV) 20 | | | 0 | AMP S4 | 100 |
| 0 | Line Tension (lb) | 2000 | | 3' Travel Time | | | 0 | AMP S5 | 100 |
| | Differential Temperature | | | 650 (usec) 150 | | | 0 | AMP S6 | 100 |
| -2 | (degF) | 2 | | | | | 0 | AMP S7 | 100 |
| | Temperature | | | | | | 0 | AMP S8 | 100 |
| | (degF) | | | | | | | | |







67.2

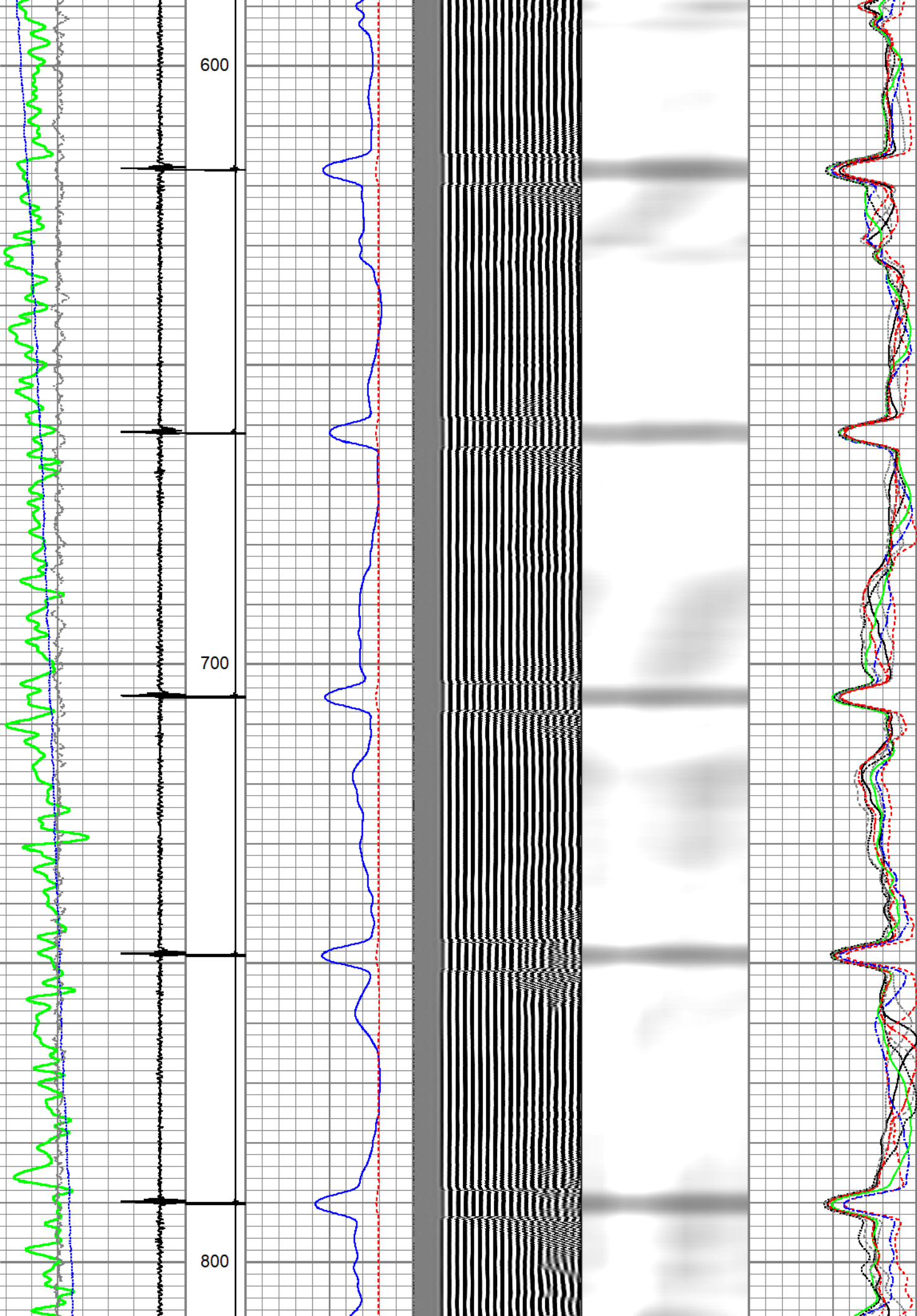
600

69.4

700

71.1

800

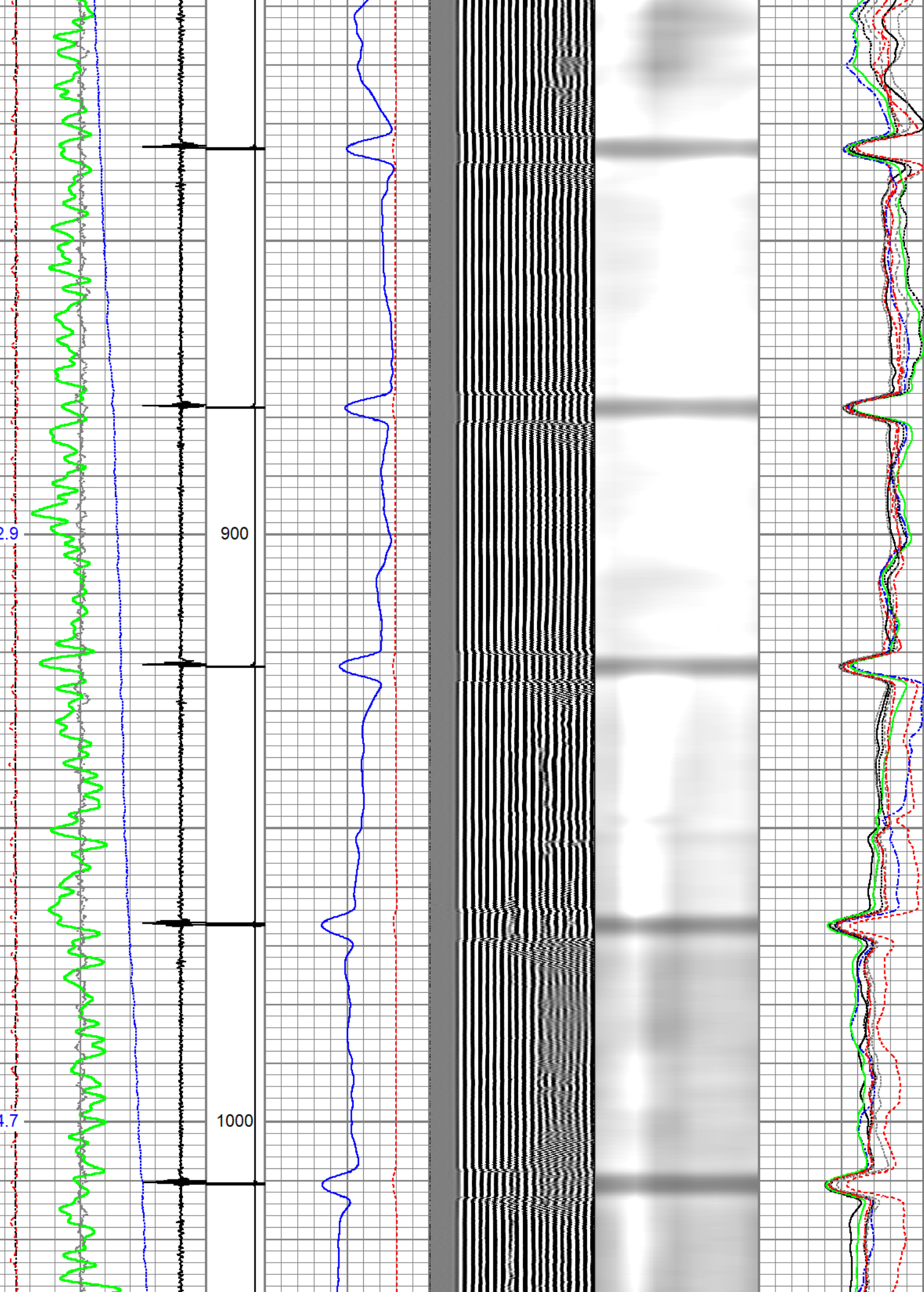


72.9

900

74.7

1000

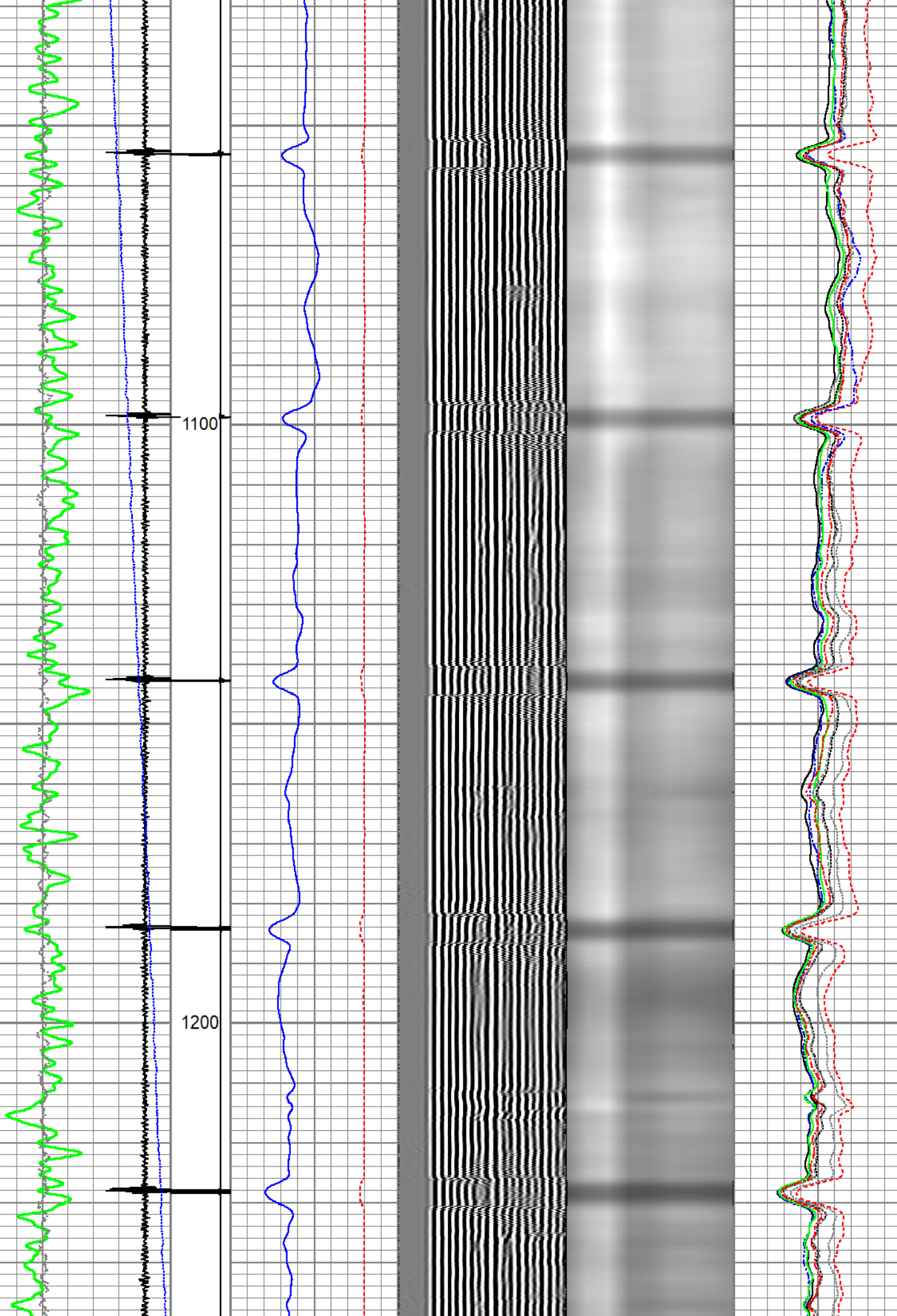


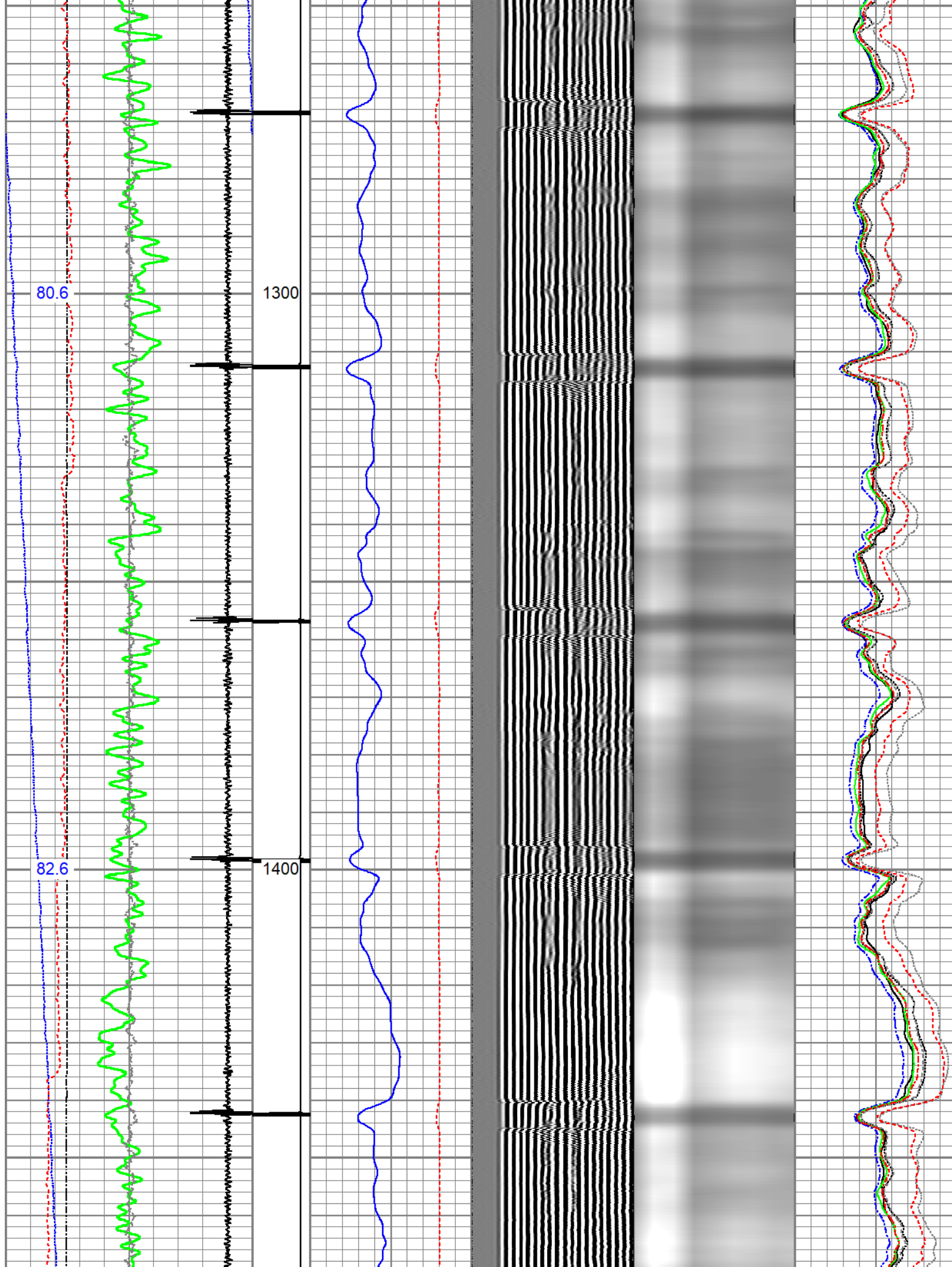
76.7

78.7

1100

1200



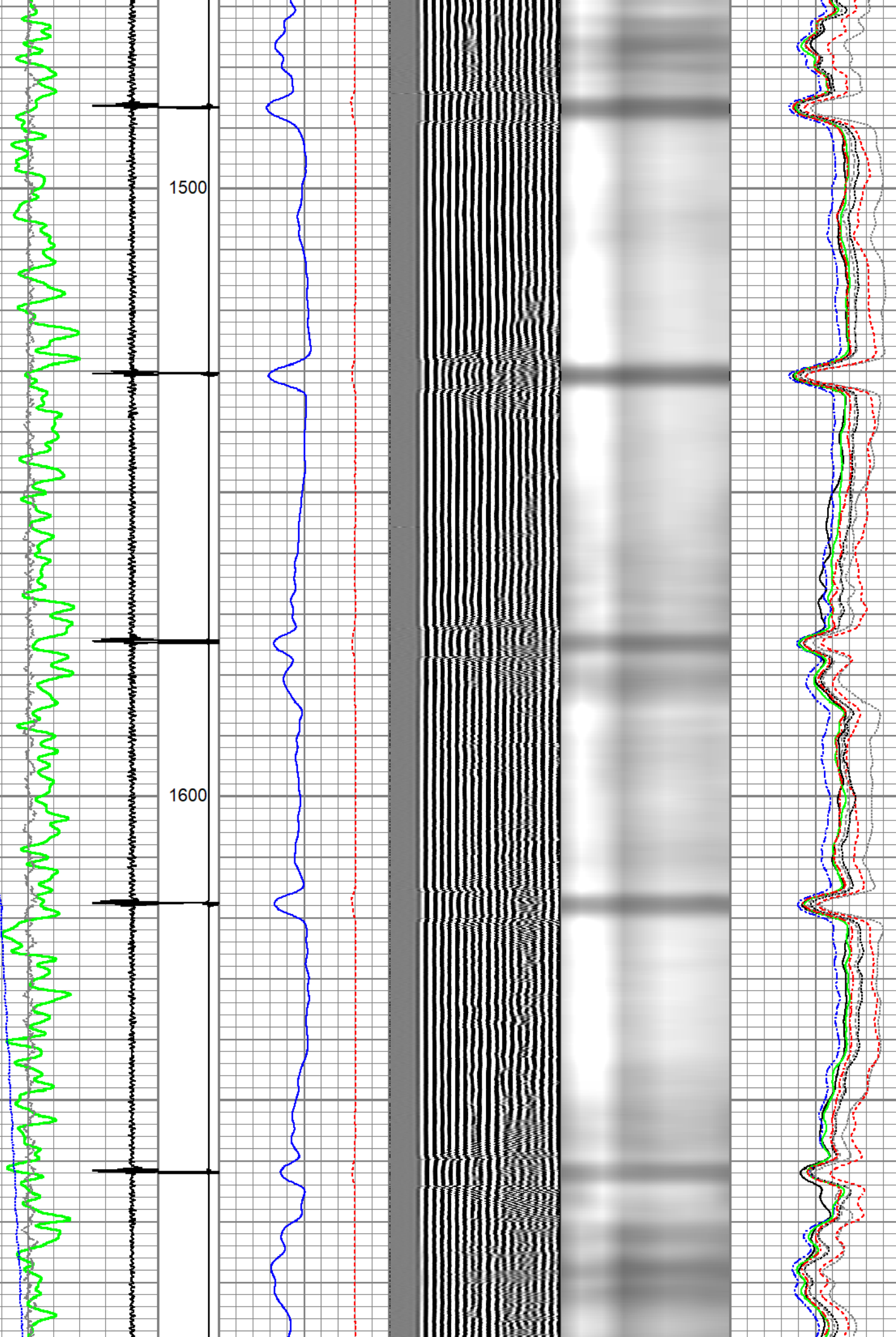


84.8

87.3

1500

1600



89.8

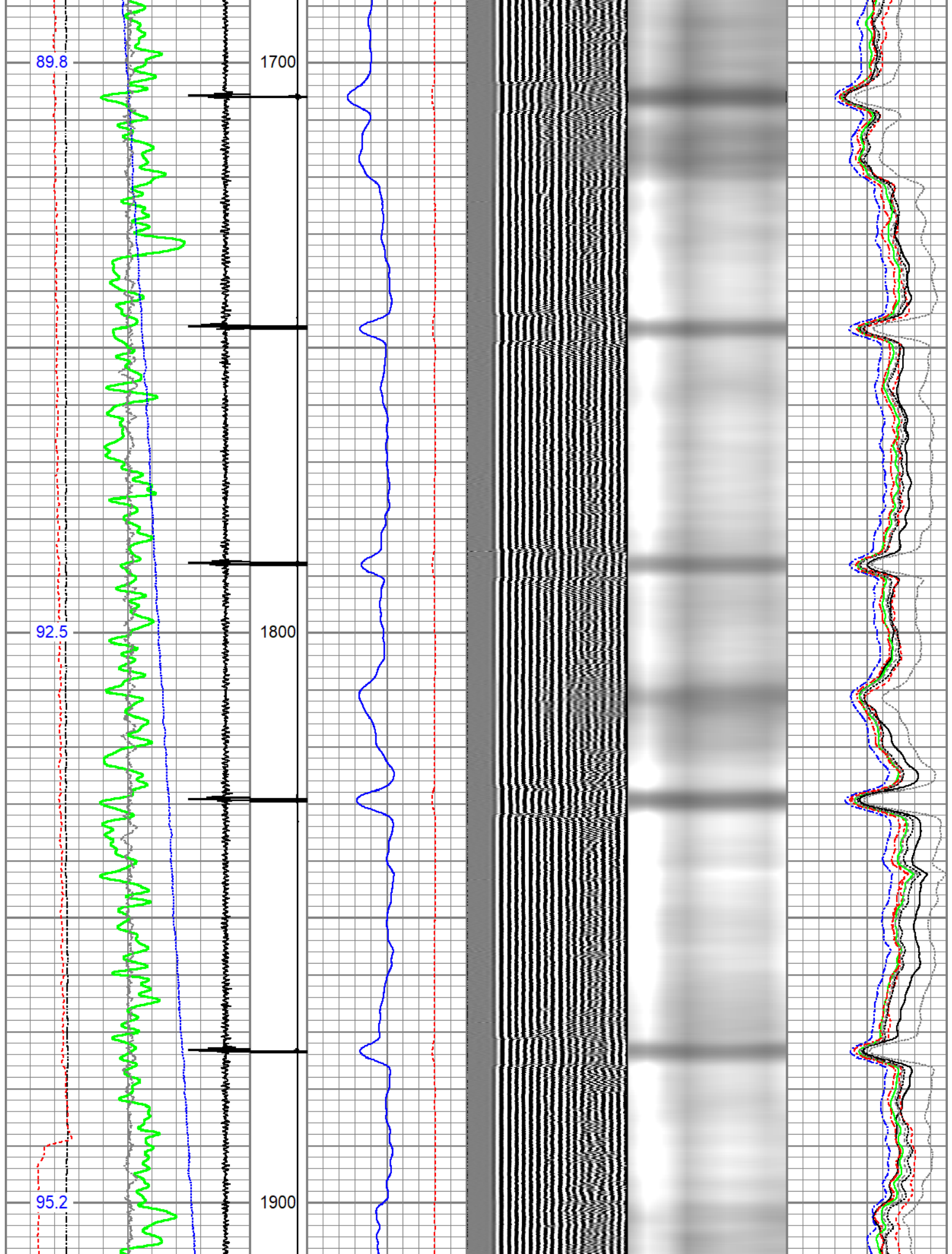
1700

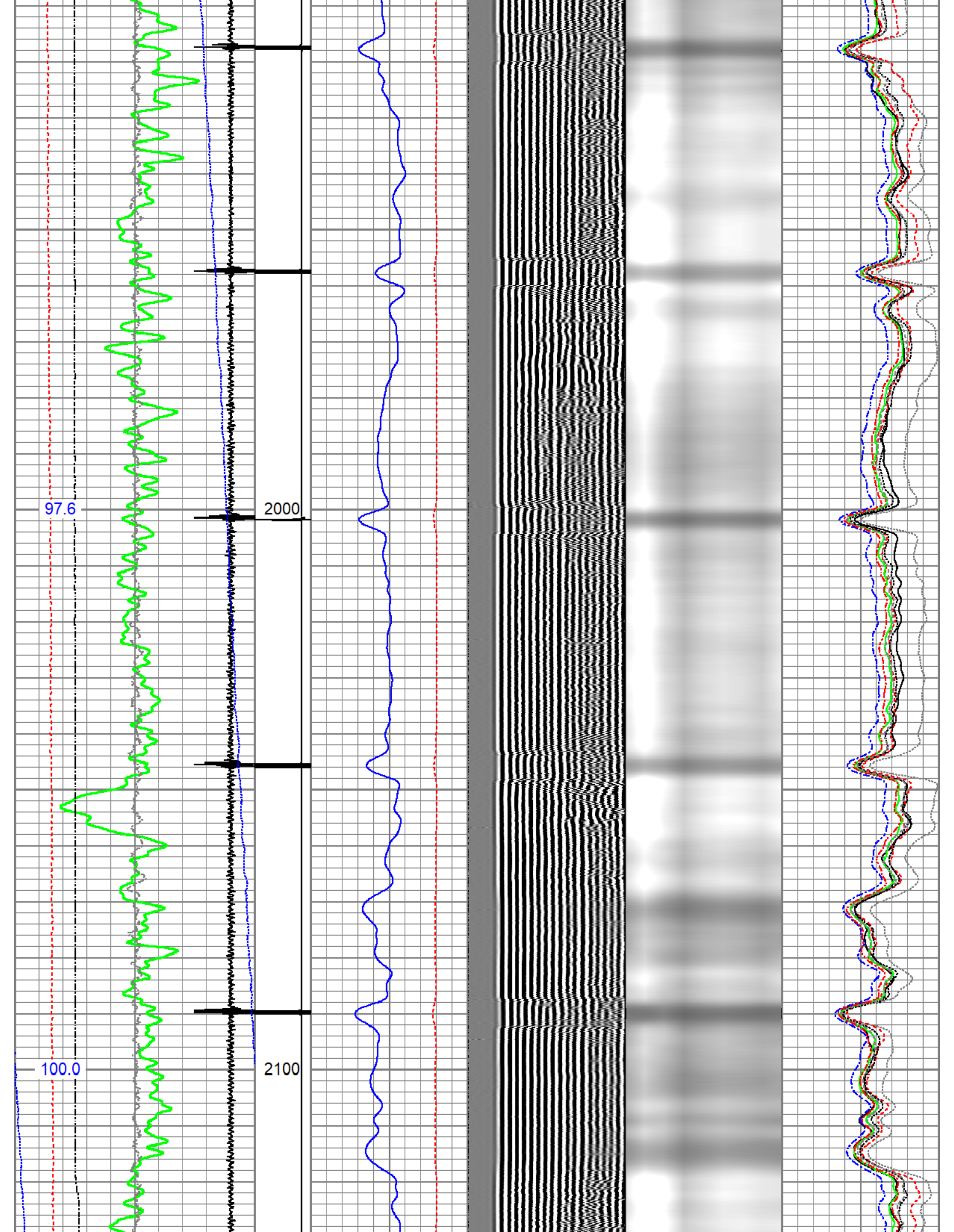
92.5

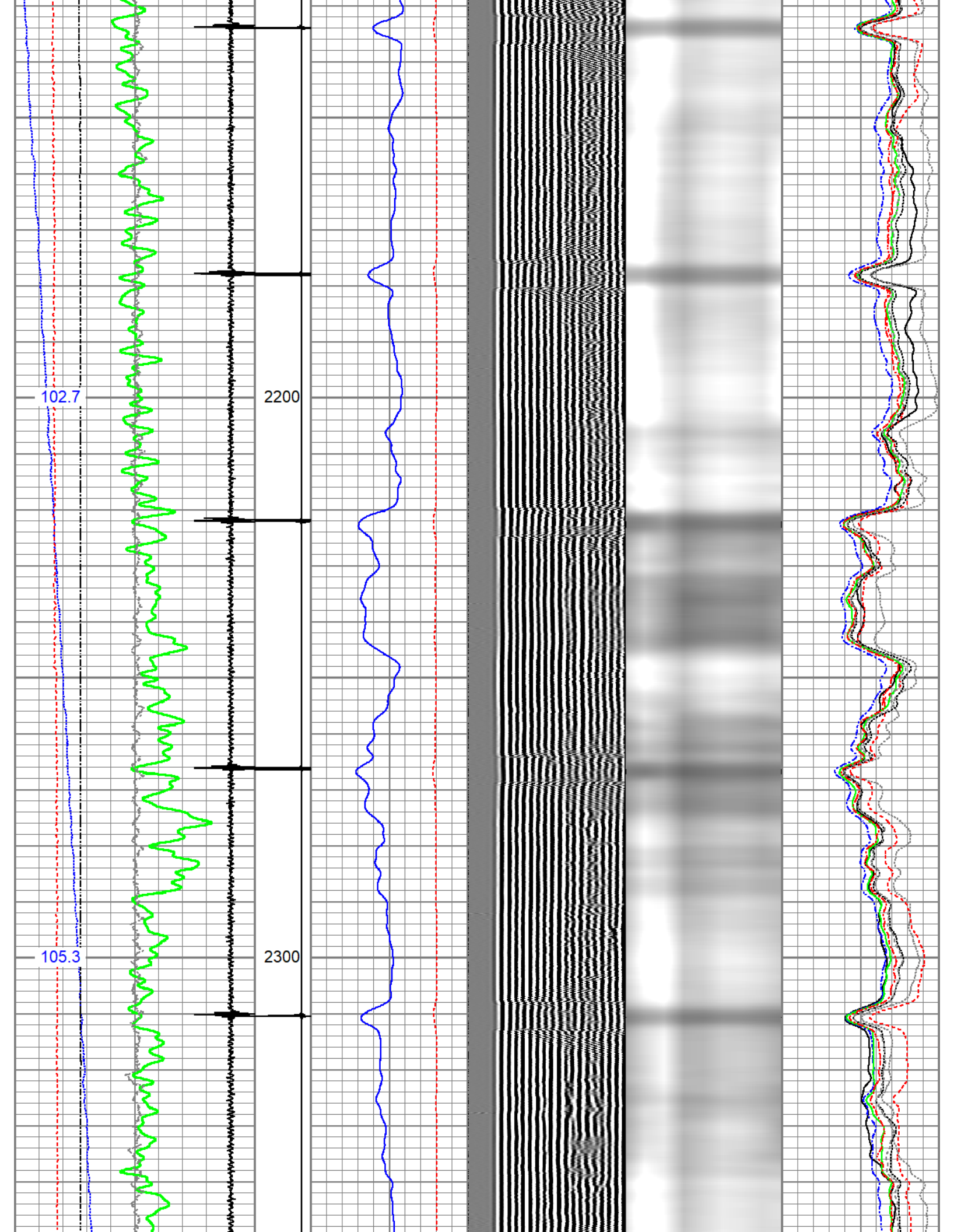
1800

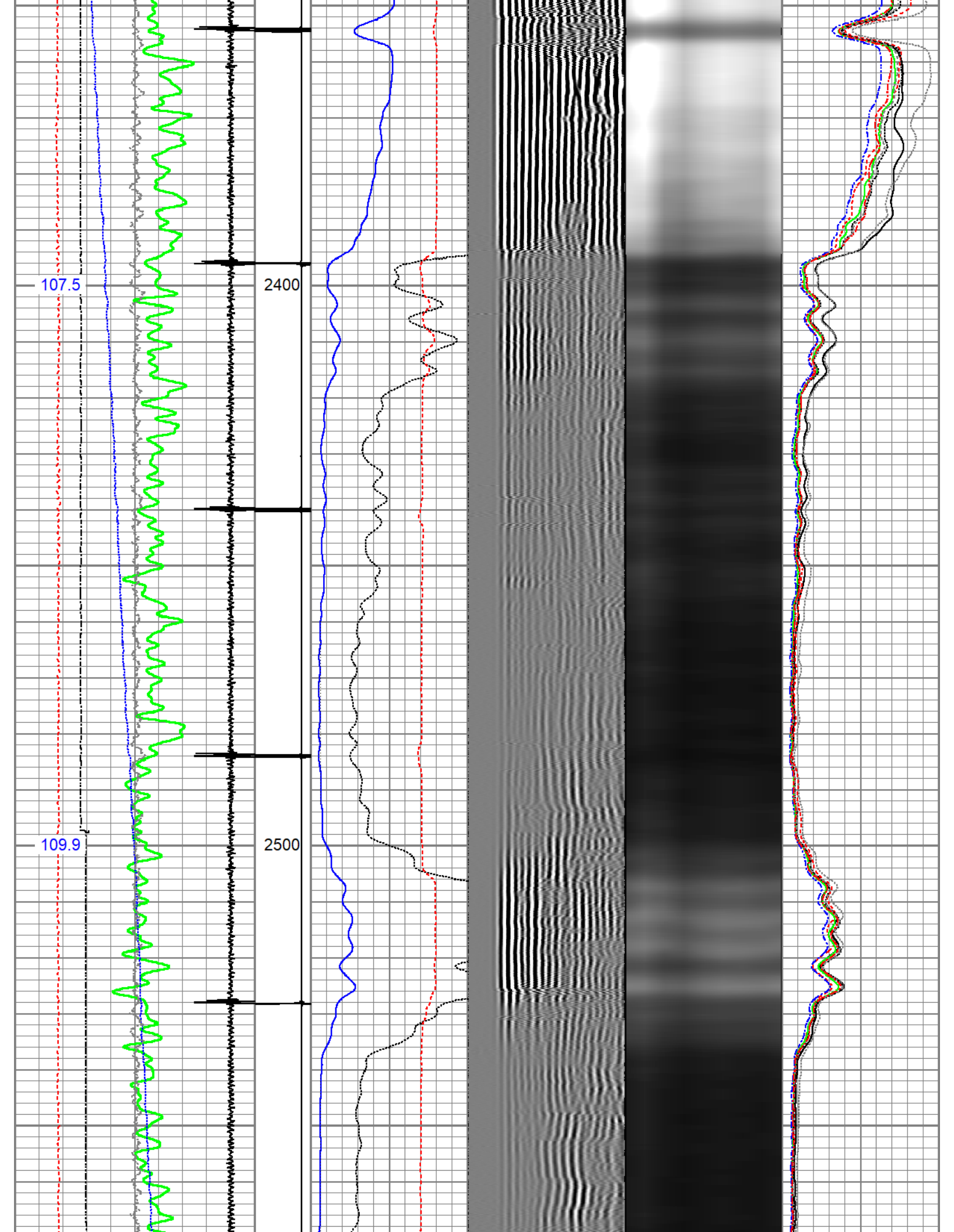
95.2

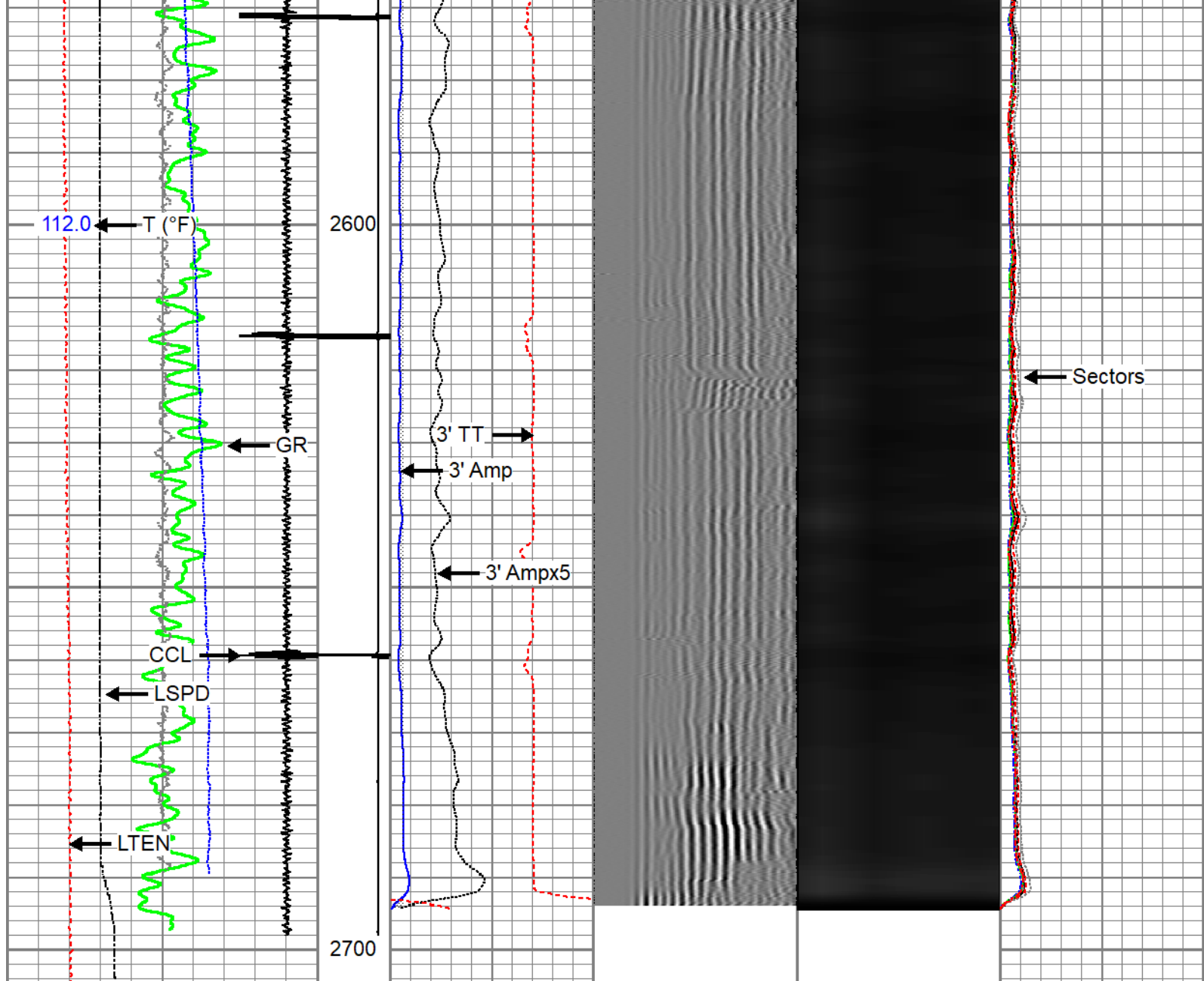
1900











| | | | | | | | | | |
|------|--------------------------|------|--------|------------------|---------------------|------------|---|--------|-----|
| 0 | Gamma Ray (GAPI) | 120 | CCL\$2 | 3' Amplitude | 5' Variable Density | Sector Map | 0 | AMP S1 | 100 |
| 9 | Casing Collar Locator | -1 | 9 -1 | (mV) | 200 (usec) | | 0 | AMP S2 | 100 |
| 0 | Temperature (degF) | 20 | | 3' Amplitude x 5 | | | 0 | AMP S3 | 100 |
| -150 | Line Speed (ft/min) | 150 | | (mV) | | | 0 | AMP S4 | 100 |
| 0 | Line Tension (lb) | 2000 | | 3' Travel Time | | | 0 | AMP S5 | 100 |
| | Differential Temperature | | | 650 (usec) | | | 0 | AMP S6 | 100 |
| -2 | (degF) | 2 | | | | | 0 | AMP S7 | 100 |
| | Temperature (degF) | | | | | | 0 | AMP S8 | 100 |

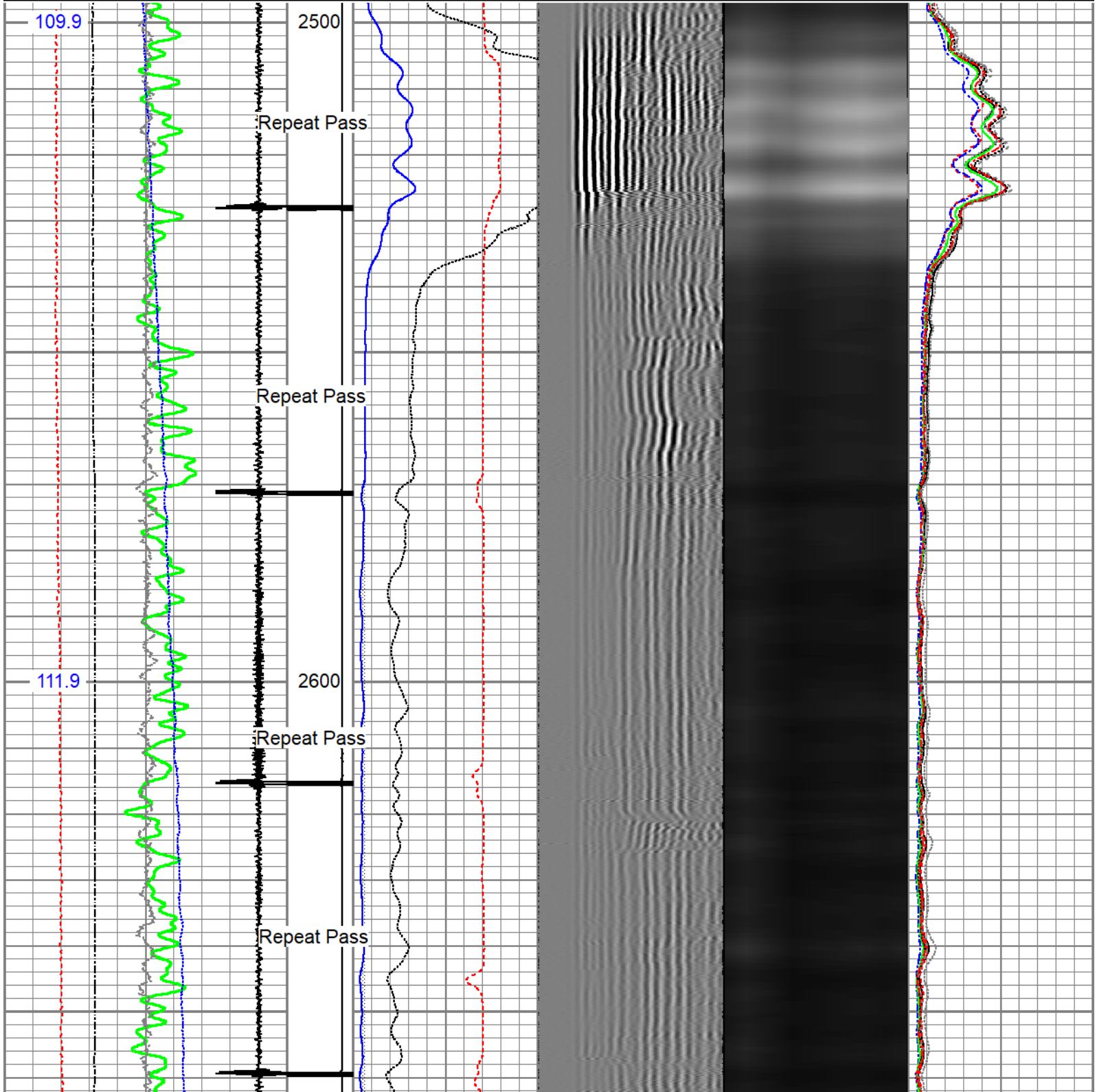


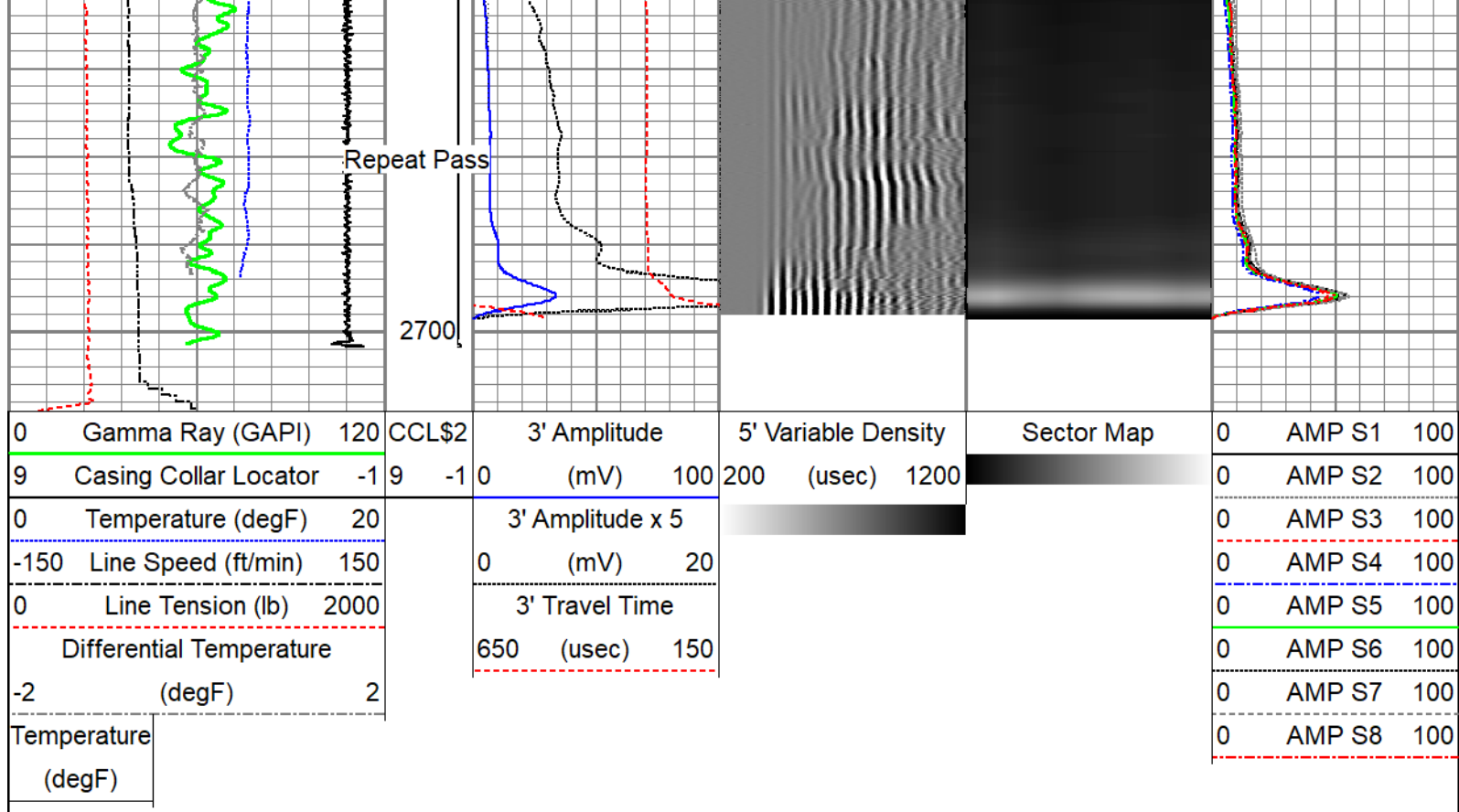
REPEAT PASS

NO PRESSURE INDUCED ON SURFACE


Database File civitas_antelope_31-31.db
 Dataset Pathname CBL/pass5
 Presentation Format edge_rbl_noble

| | | | | | | | | | |
|------|--------------------------|------|--------|------------------|---------------------|------------|---|--------|-----|
| 0 | Gamma Ray (GAPI) | 120 | CCL\$2 | 3' Amplitude | 5' Variable Density | Sector Map | 0 | AMP S1 | 100 |
| 9 | Casing Collar Locator | -1 | 9 -1 0 | (mV) 100 | 200 (usec) 1200 | | 0 | AMP S2 | 100 |
| 0 | Temperature (degF) | 20 | | 3' Amplitude x 5 | | | 0 | AMP S3 | 100 |
| -150 | Line Speed (ft/min) | 150 | | (mV) 20 | | | 0 | AMP S4 | 100 |
| 0 | Line Tension (lb) | 2000 | | 3' Travel Time | | | 0 | AMP S5 | 100 |
| | Differential Temperature | | | 650 (usec) 150 | | | 0 | AMP S6 | 100 |
| -2 | (degF) | 2 | | | | | 0 | AMP S7 | 100 |
| | Temperature (degF) | | | | | | 0 | AMP S8 | 100 |





| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|----------|-------------|-----------|--|-------------|-----------|-------------|
| ErrCt | 18.10 | | Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck | 1.03 | 1.69 | 5.40 |
| RBT_HV | 17.07 | | SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer | 1.33 | 3.25 | 10.00 |
| TEMP | 14.16 | | Probe Radii ACC-2750 RBTa (FW1302-002) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer | 9.39 | 2.75 | 105.00 |
| RBT_ACCZ | 11.93 | | | | | |
| RBT_ACCY | 11.93 | | | | | |
| RBT_ACCX | 11.93 | | | | | |
| WVFSYNC | 11.93 | | | | | |
| WVFS8 | 11.93 | | | | | |
| WVFS7 | 11.93 | | | | | |
| WVFS6 | 11.93 | | | | | |
| WVFS5 | 11.93 | | | | | |
| WVFS4 | 11.93 | | | | | |
| WVFS3 | 11.93 | | | | | |
| WVFS2 | 11.93 | | | | | |
| WVFS1 | 11.93 | | | | | |
| WVFCAL | 11.93 | | | | | |
| WV3FT | 11.93 | | | | | |

| | | | | | | |
|--------|-------|---|---|------|------|-------|
| WVF5FT | 10.93 |  | Probe GR-CCL-2750 6PB (FW1810-001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT | 4.80 | 2.75 | 55.00 |
| CCL\$2 | 6.80 | | | | | |
| CCL\$1 | 6.80 | | | | | |
| GR | 5.46 | | | | | |
| | | | Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer | 2.88 | 2.75 | 20.00 |
| LOCTIM | 0.00 | | | | | |
| UTCTIM | 0.00 | | | | | |

Dataset: civitas_antelope_31-31.db: field/well/CBL/MAIN_PASS1.1
Total length: 18.10 ft
Total weight: 195.40 lb
O.D.: 3.25 in

Calibration Report

Database File civitas_antelope_31-31.db
Dataset Pathname CBL/MAIN_PASS1.1
Dataset Creation Thu Jan 19 11:17:02 2023

Gamma Ray Calibration Report

Serial Number: FW1810-001
Tool Model: 2750 6PB
Performed: Mon Oct 19 14:19:51 2020

Calibrator Value: 637.0 GAPI

Background Reading: 100.1 cps
Calibrator Reading: 1264.5 cps

Sensitivity: 0.5471 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-002
Tool Model: 2750 RBTa

Calibration Casing Diameter: 4.500 in
Calibration Depth: 550.660 ft

Master Calibration, performed (Derived):

| | Raw (v) | | Calibrated (mv) | | Results | |
|-----|---------|-------|-----------------|--------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | 0.000 | 0.673 | 0.800 | 81.196 | 119.453 | 0.776 |
| CAL | 0.806 | 0.808 | | | | |

| | | | | | | |
|-----|--------|-------|-------|---------|---------|--------|
| CAL | 0.896 | 0.698 | 0.800 | 81.196 | 116.367 | 0.784 |
| 5' | 0.000 | 0.691 | 0.800 | 81.196 | 116.367 | 0.784 |
| SUM | | | | | | |
| S1 | 0.000 | 0.715 | 0.000 | 100.000 | 139.853 | -0.000 |
| S2 | -0.000 | 0.793 | 0.000 | 100.000 | 126.001 | 0.020 |
| S3 | 0.000 | 0.829 | 0.000 | 100.000 | 120.685 | -0.035 |
| S4 | 0.000 | 0.834 | 0.000 | 100.000 | 119.880 | -0.028 |
| S5 | 0.000 | 0.788 | 0.000 | 100.000 | 126.935 | -0.029 |
| S6 | 0.000 | 0.755 | 0.000 | 100.000 | 132.532 | -0.031 |
| S7 | 0.000 | 0.729 | 0.000 | 100.000 | 137.305 | -0.032 |
| S8 | 0.000 | 0.698 | 0.000 | 100.000 | 143.303 | -0.032 |

Air Zero Calibration, performed Thu Jan 19 10:13:55 2023:

| | Raw (v) | Calibrated (v) | Results |
|-----|---------|----------------|---------|
| | Zero | Zero | Offset |
| 3' | 0.000 | 0.000 | 0.000 |
| 5' | 0.000 | 0.000 | 0.000 |
| SUM | | | |
| S1 | 0.000 | 0.000 | 0.000 |
| S2 | 0.000 | 0.000 | 0.000 |
| S3 | 0.000 | 0.000 | 0.000 |
| S4 | 0.000 | 0.000 | 0.000 |
| S5 | 0.000 | 0.000 | 0.000 |
| S6 | 0.000 | 0.000 | 0.000 |
| S7 | 0.000 | 0.000 | 0.000 |
| S8 | 0.000 | 0.000 | 0.000 |

Inclinometer Calibration Report

| | | | | | |
|-----------------|--------------------------|------------|----------|-----------|-----|
| Performed: | Mon Oct 19 14:19:51 2020 | | | | |
| | Low Read. | High Read. | Low Ref. | High Ref. | |
| X Accelerometer | -891.00 | 891.00 | -1.00 | 1.00 | gee |
| Y Accelerometer | -899.00 | 877.00 | -1.00 | 1.00 | gee |
| Z Accelerometer | -7.47 | 873.36 | 0.00 | 1.00 | gee |

Temperature Calibration Report

| | | |
|-----------------|--------------------------|-------------|
| Serial Number: | FW1302-002 | |
| Tool Model: | 2750 RBTa | |
| Performed: | Mon Oct 19 14:19:51 2020 | |
| | Reference | Reading |
| Low Reference: | 100.00 degF | 110.72 degF |
| High Reference: | 350.00 degF | 409.18 degF |
| Gain: | 0.84 | |
| Offset: | 7.26 | |
| Delta Spacing | 1 | |



Company Civitas
Well ANTELOPE 31-31



| | |
|--------|----------------|
| Well | ANTHONY EST 51 |
| Field | Wattenberg |
| County | Weld |
| State | Colorado |