ROCKY MOUNTAIN WIRELINE SERVICE

# SECTOR CEMENT BOND LOG
# GAMMA RAY / CCL
# TEMPERATURE

| | | | |
|---|---|---|---|
| Company | AXIA ENERGY | | |
| Well | BULLDOG 22-41V-890 | | |
| Field | | | |
| County | MONFFAT | State | COLORADO |

Location: API # : 05-081-07784-00

SHL: LAT: 40.644322 LONG: -107.467275

SEC 23 TWP 8N RGE 90W

Other Services

| | | | |
|---|---|---|---|
| Permanent Datum | G.L. | Elevation | 6384' |
| Log Measured From | K.B. | Ft Above PD | 24' |
| Drilling Measured From | K.B. | | |

Elevation
K.B. 6408'
D.F. 6407'
G.L. 6384'

| | | | |
|---|---|---|---|
| Date | 11-04-2013 | | |
| Run Number | ONE | | |
| Depth Driller | 12753' | | |
| Present Depth Driller | 8842' | | |
| Depth Logger | 8842' | | |
| Bottom Logged Interval | 8842' | | |
| Top Log Interval | SURFACE | | |
| Fluid Level | SURFACE | | |
| Type Fluid | WATER | | |
| Max. Recorded Temp. | 213.6°F | | |
| Estimated Cement Top | 7800' | | |
| Equipment Number | 205 | | |
| Location | GRAND JUNCTION | | |
| Recorded By | HARRIS | | |
| Witnessed By | | | |

| Borehole Record | | | | Casing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| | | | | 9.625" | | SURFACE | 1510' |
| | | | | 7.625" | 26.4# | SURFACE | 8842' |
| | | | | | | | |

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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.

WARRIOR 7.0 SOFTWARE - Comments

**NOTE: THIS LOG HAD NO LOG TO DEPTH CORRELATE**
**MAIN PASS 5" = 100'**
**TEMP PASS 2" = 100'**
**TEMP = 213.6°F**
**CSG PSI = STATIC**

## Calibration Report

Database File: 110413_axia_bulldog_22-41v-890.db
Dataset Pathname: MAIN/pass2
Dataset Creation: Mon Nov 04 13:44:51 2013 by Calc SCH 120430

## Temperature Calibration Report

Serial Number: 10006811
Tool Model: 016
Performed: Mon Apr 30 16:22:18 2012

| Point # | Reading | | Reference | |
|---|---|---|---|---|
| 1 | 11649.00 | cps | 65.14 | degF |
| 2 | 18183.00 | cps | 105.26 | degF |
| 3 | 29168.00 | cps | 174.16 | degF |
| 4 | 40750.00 | cps | 246.15 | degF |
| 5 | 51960.00 | cps | 317.35 | degF |
| 6 | 57688.00 | cps | 353.34 | degF |
| 7 | | cps | | degF |
| 8 | | cps | | degF |
| 9 | | cps | | degF |
| 10 | | cps | | degF |

## Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 10007620 | |
| Tool Model: | 020 | |
| Performed: | Sun Jun 13 13:33:21 1993 | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0000 | GAPI/cps |

## Segmented Cement Bond Log Calibration Report

| | | |
|---|---|---|
| Serial Number: | 10012363 | |
| Tool Model: | 004 | |
| Calibration Casing Diameter: | 5.500 | in |
| Calibration Depth: | 606.829 | ft |

Master Calibration, performed Mon Nov 04 13:44:42 2013:

| | Raw (v) | | Calibrated (mv) | | Results | |
|---|---|---|---|---|---|---|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3FT | 0.000 | 0.693 | 0.000 | 71.921 | 103.749 | -0.003 |
| 5FT | -0.011 | 0.805 | 0.000 | 71.921 | 88.123 | 0.974 |
| S1 | -0.023 | 0.706 | 0.000 | 100.000 | 137.231 | 3.125 |
| S2 | 0.000 | 0.688 | 0.000 | 100.000 | 145.434 | -0.006 |
| S3 | 0.000 | 0.683 | 0.000 | 100.000 | 146.420 | -0.007 |
| S4 | 0.000 | 0.740 | 0.000 | 100.000 | 135.226 | -0.007 |
| S5 | 0.000 | 0.753 | 0.000 | 100.000 | 132.858 | -0.007 |
| S6 | 0.000 | 0.782 | 0.000 | 100.000 | 127.940 | -0.007 |
| S7 | 0.000 | 0.769 | 0.000 | 100.000 | 130.068 | -0.007 |
| S8 | 0.000 | 0.752 | 0.000 | 100.000 | 132.949 | -0.007 |

## Calibration Report

Serial Number: 10012363
Tool Model: 004
Performed:

| | Reference (degF) | Reading () |
|---|---|---|
| Low: | 0.000 | 0.000 |
| High: | 1.000 | 1.000 |
| | Gain = 1.000 | Offset= 0.000 |

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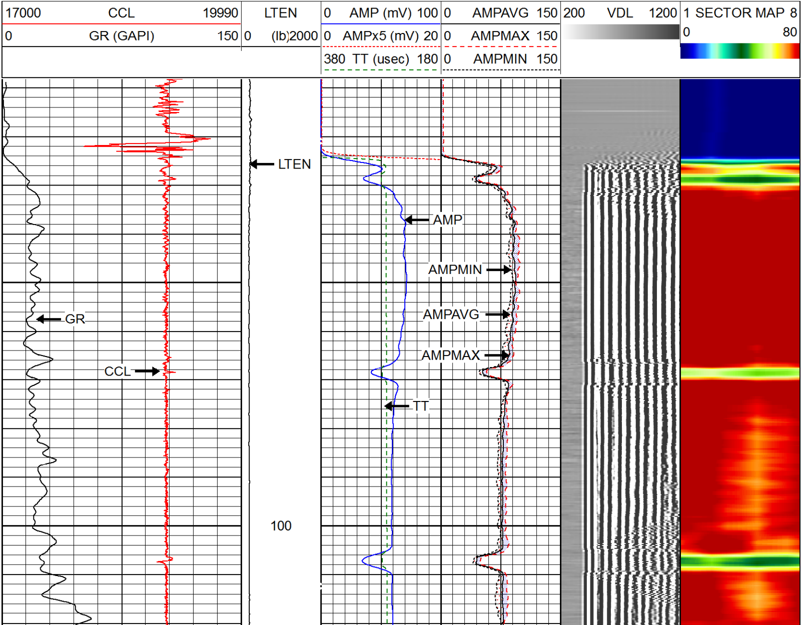
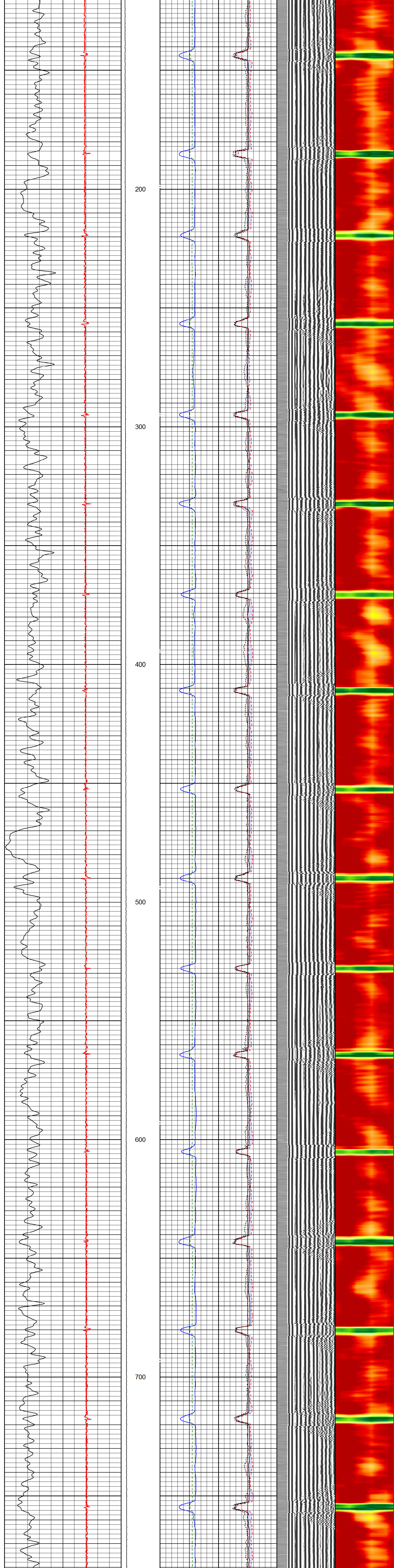
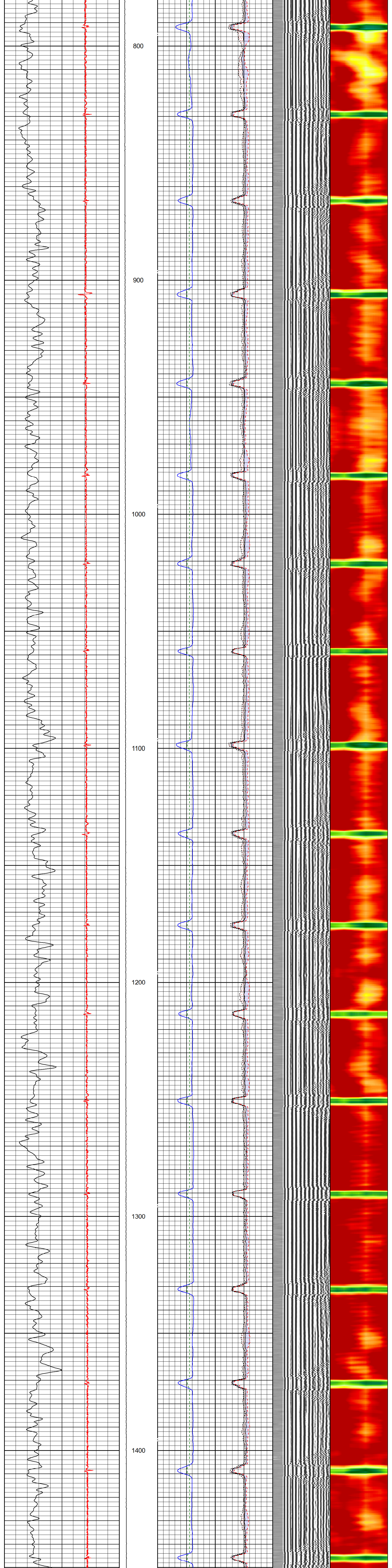
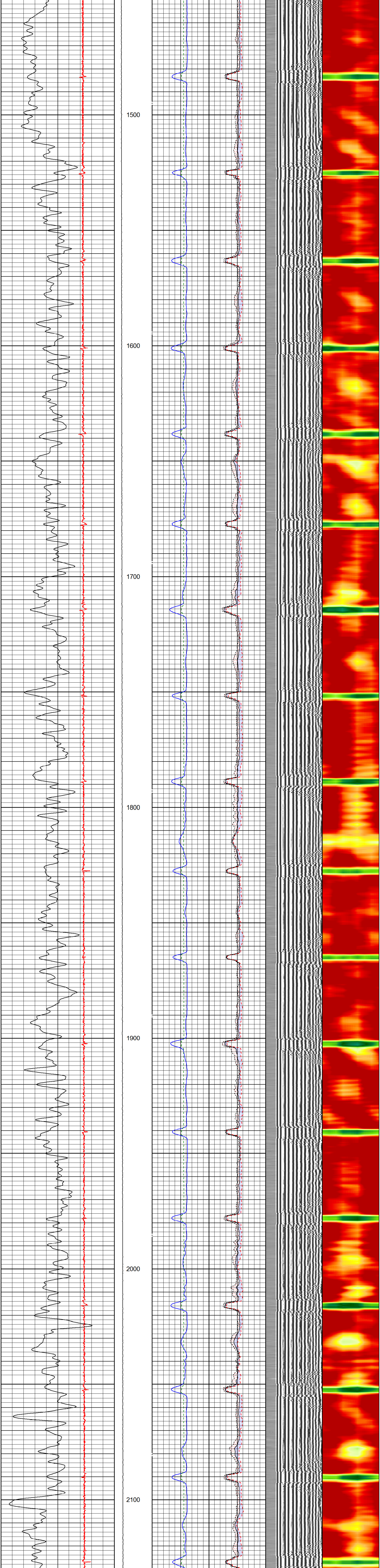
# MAIN PASS

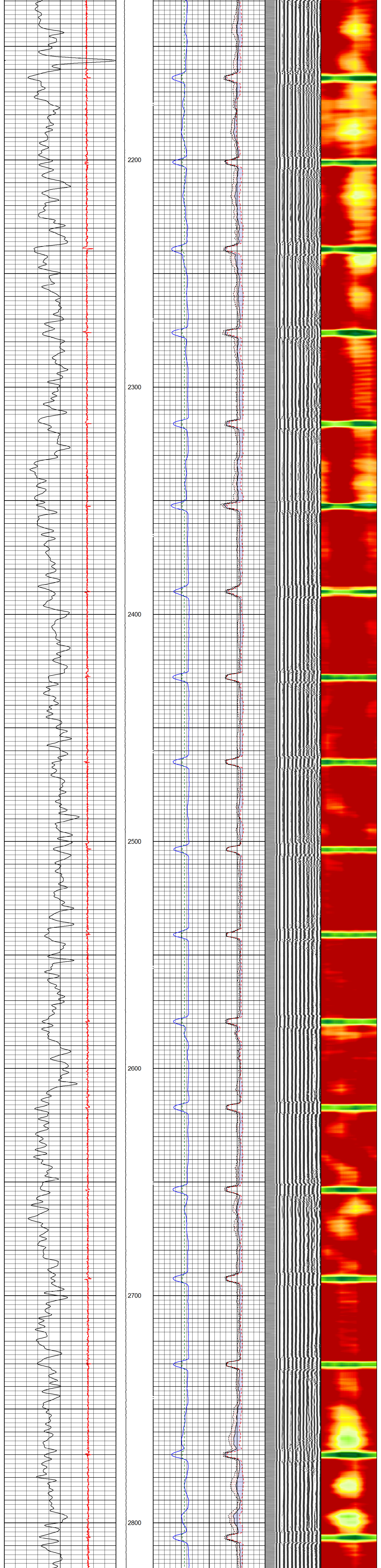
Database File: 110413_axia_bulldog_22-41v-890.db
Dataset Pathname: MAIN/pass2
Presentation Format: rmwsrbt
Dataset Creation: Mon Nov 04 13:44:51 2013 by Calc SCH 120430
Charted by: Depth in Feet scaled 1:240

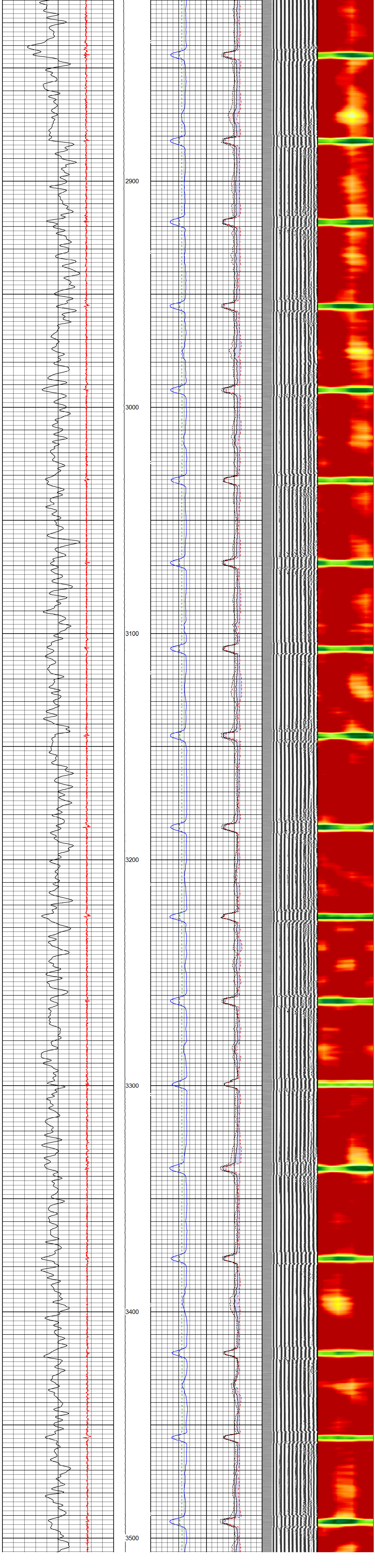


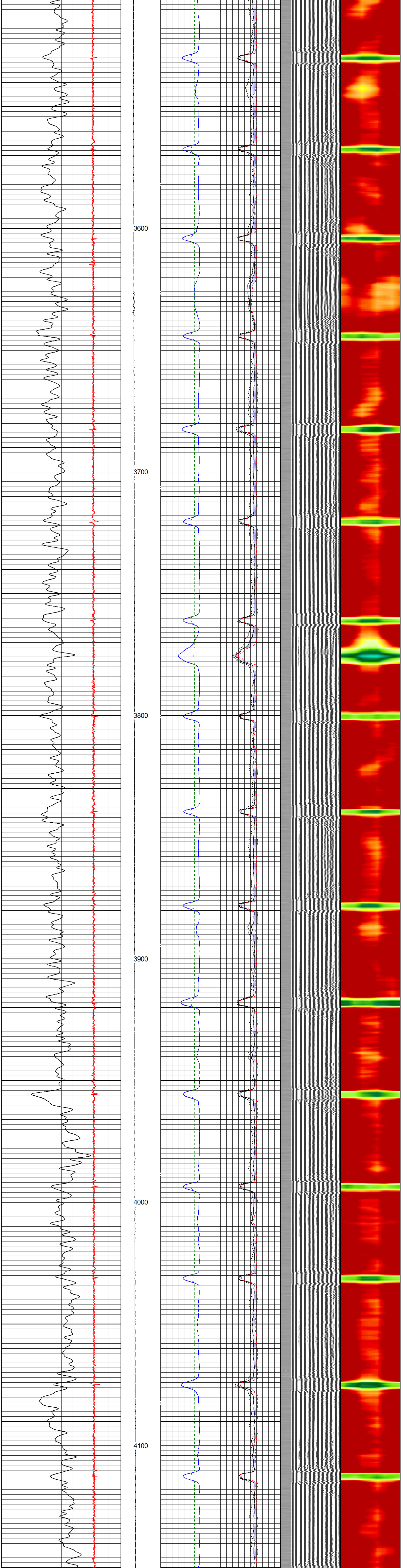








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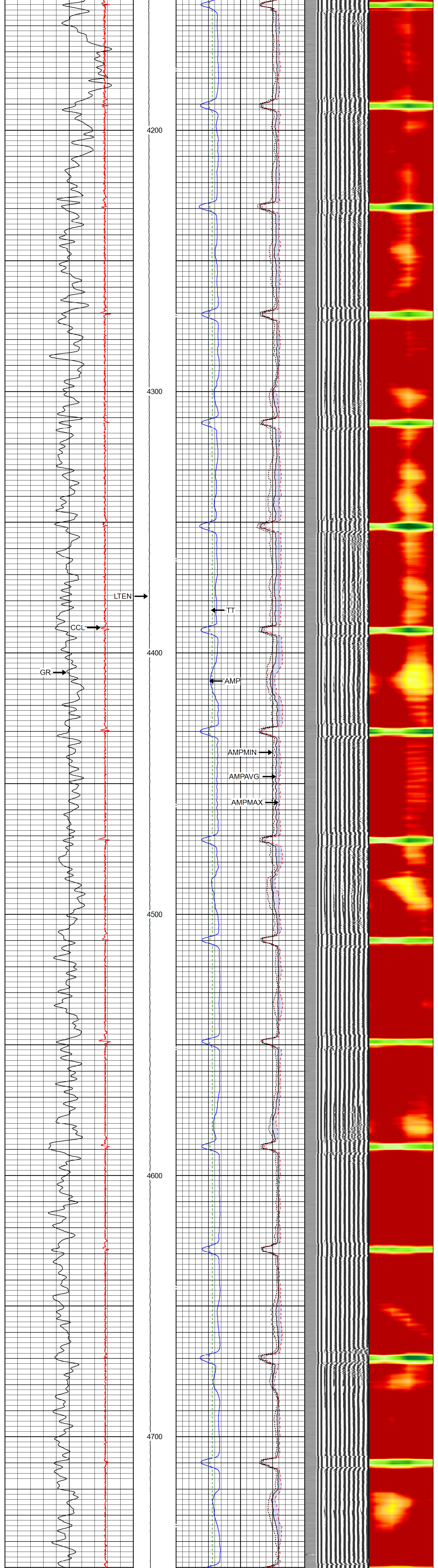
3700
3800
3900
4000
4100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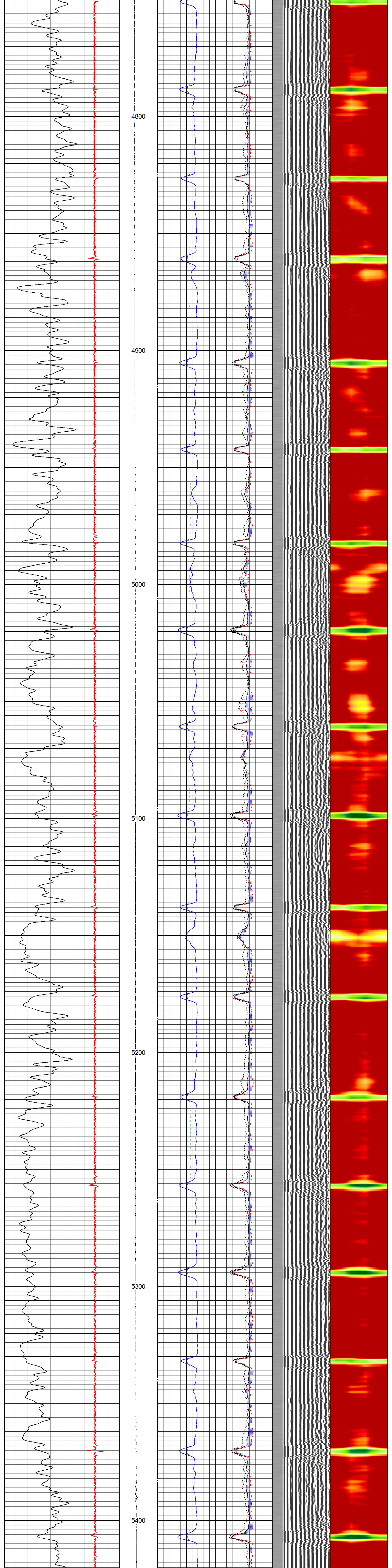
4300
LTEN
TT
CCL
4400
GR
AMP
AMPMIN
AMPAVG
AMPMAX
4500
4600
4700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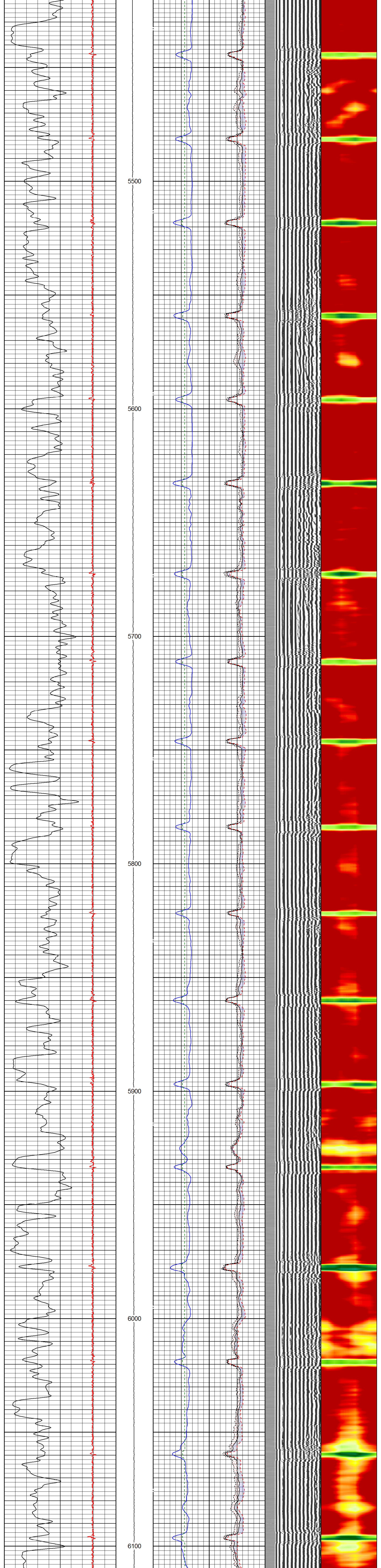
5400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5800
5900
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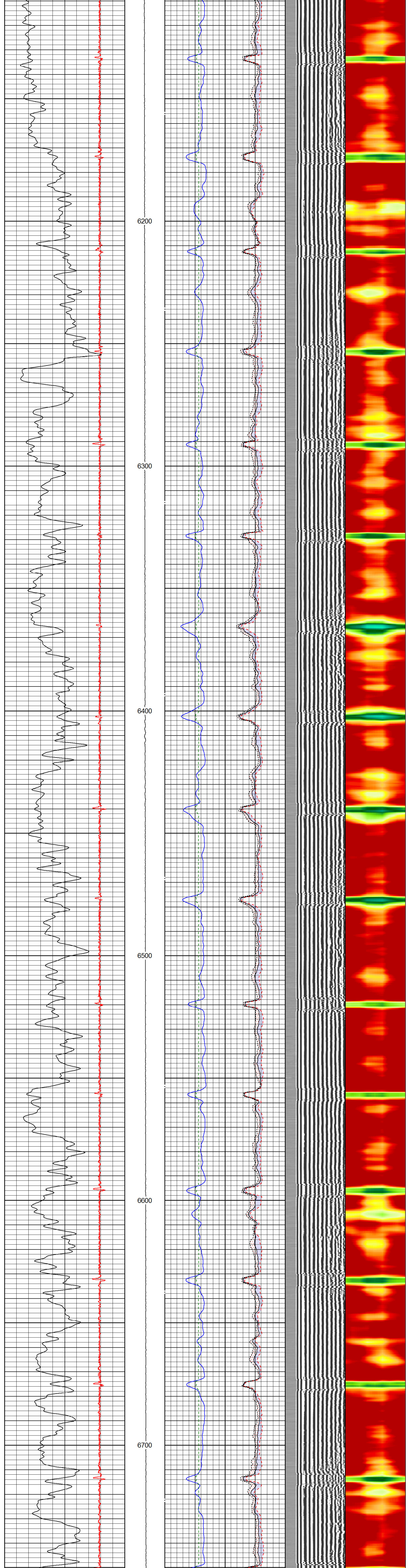
6100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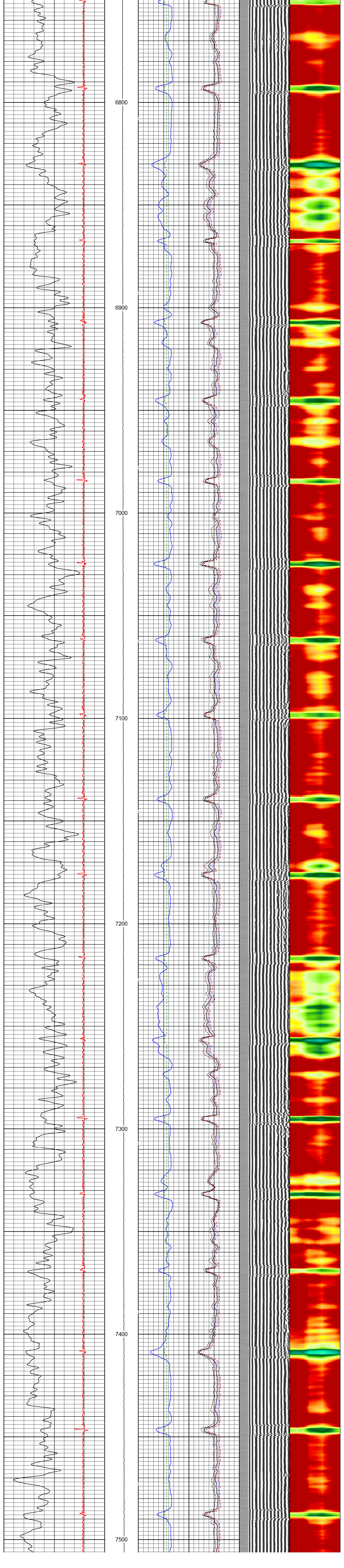
6600
6700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6900
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7100
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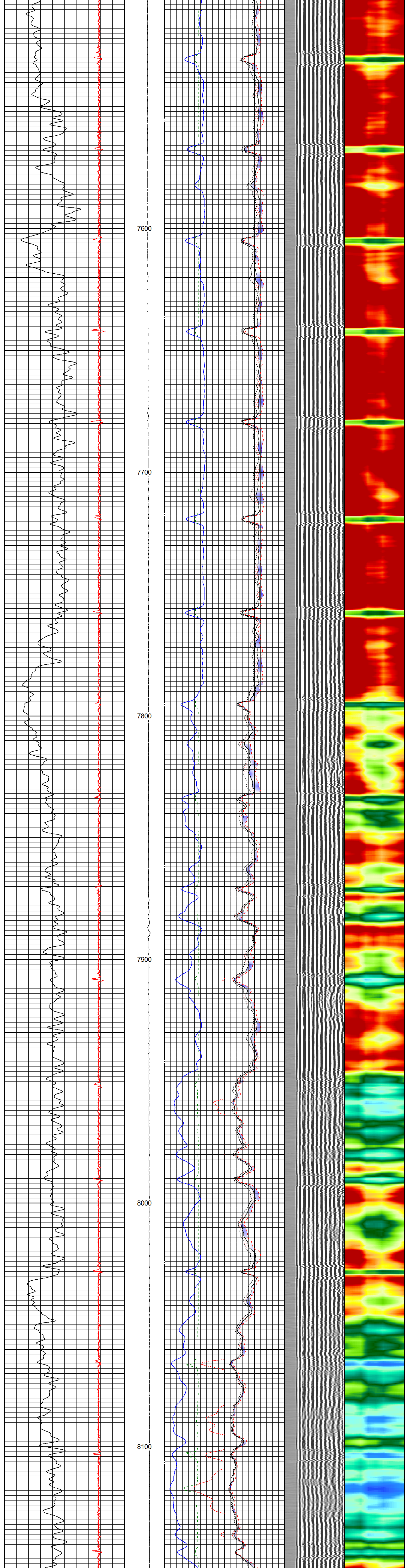
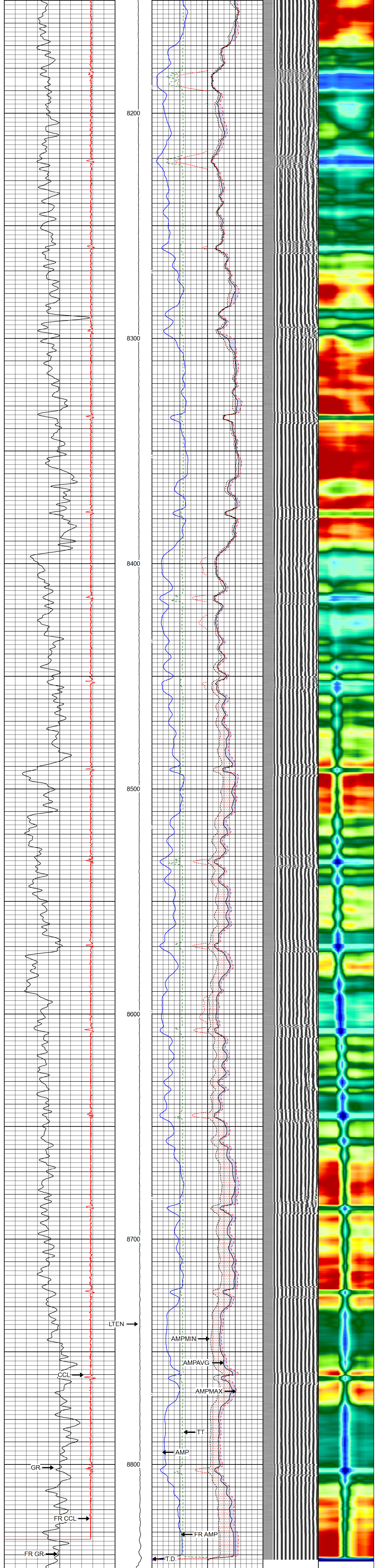
7300
7400
7500





| | | | | | |
|---|---|---|---|---|---|
| 17000 CCL 19990 | LTEN | 0 AMP (mV) 100 | 0 AMPAVG 150 | 200 VDL 1200 | 1 SECTOR MAP 8 |
| 0 GR (GAPI) 150 | 0 (lb) 2000 | 0 AMPx5 (mV) 20 | 0 AMPMAX 150 | | 0 80 |
| | | 380 TT (usec) 180 | 0 AMPMIN 150 | | |

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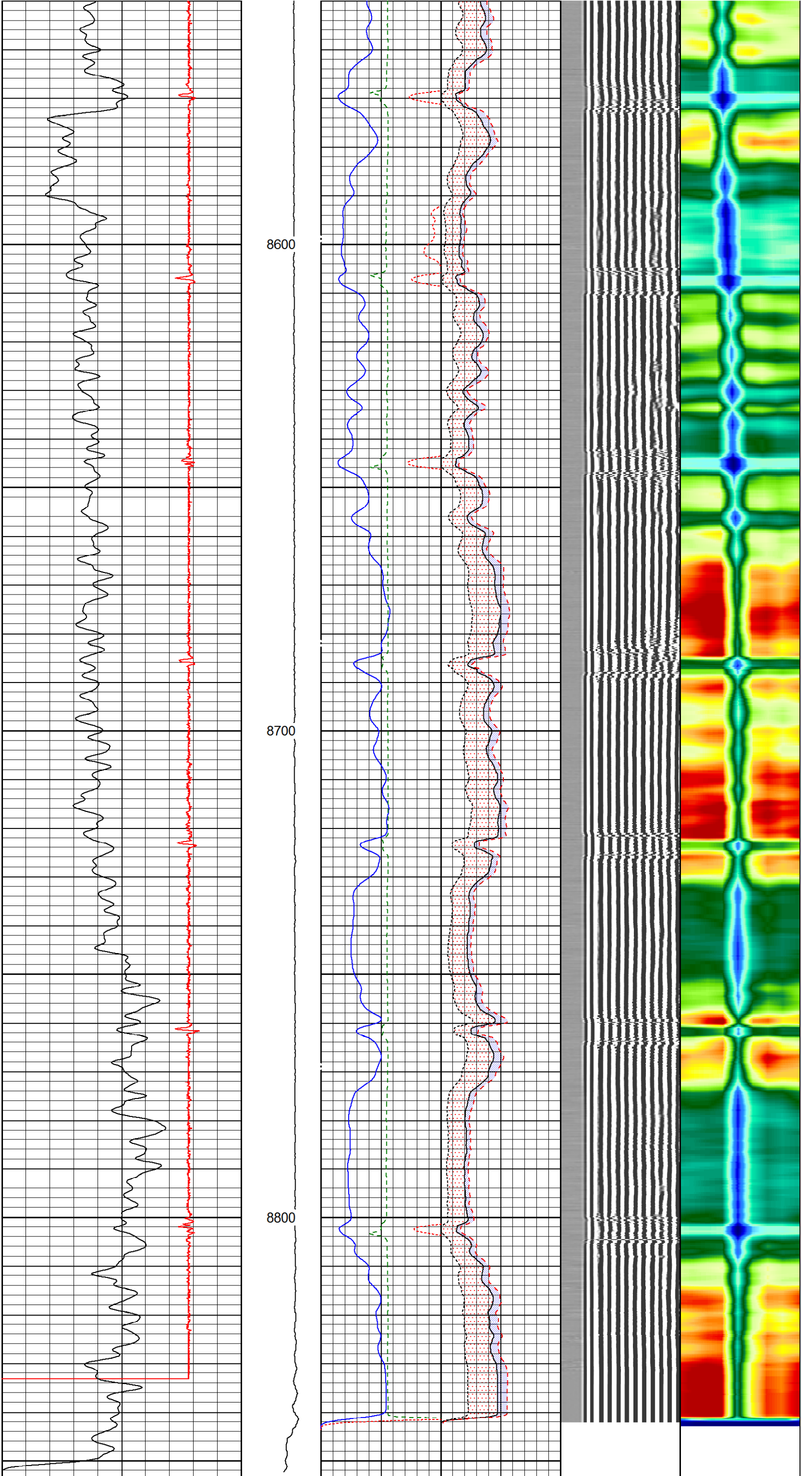
# REPEAT PASS

| | |
|---|---|
| Database File: | 110413_axia_bulldog_22-41v-890.db |
| Dataset Pathname: | REPEAT/pass2 |
| Presentation Format: | rmwsrbt |
| Dataset Creation: | Mon Nov 04 13:47:00 2013 |
| Charted by: | Depth in Feet scaled 1:240 |

| | | | | | |
|---|---|---|---|---|---|
| 17000 CCL 19990 | LTEN | 0 AMP (mV) 100 | 0 AMPAVG 150 | 200 VDL 1200 | 1 SECTOR MAP 8 |
| 0 GR (GAPI) 150 | 0 (lb) 2000 | 0 AMPx5 (mV) 20 | 0 AMPMAX 150 | | 0 80 |
| | | 380 TT (usec) 180 | 0 AMPMIN 150 | | |



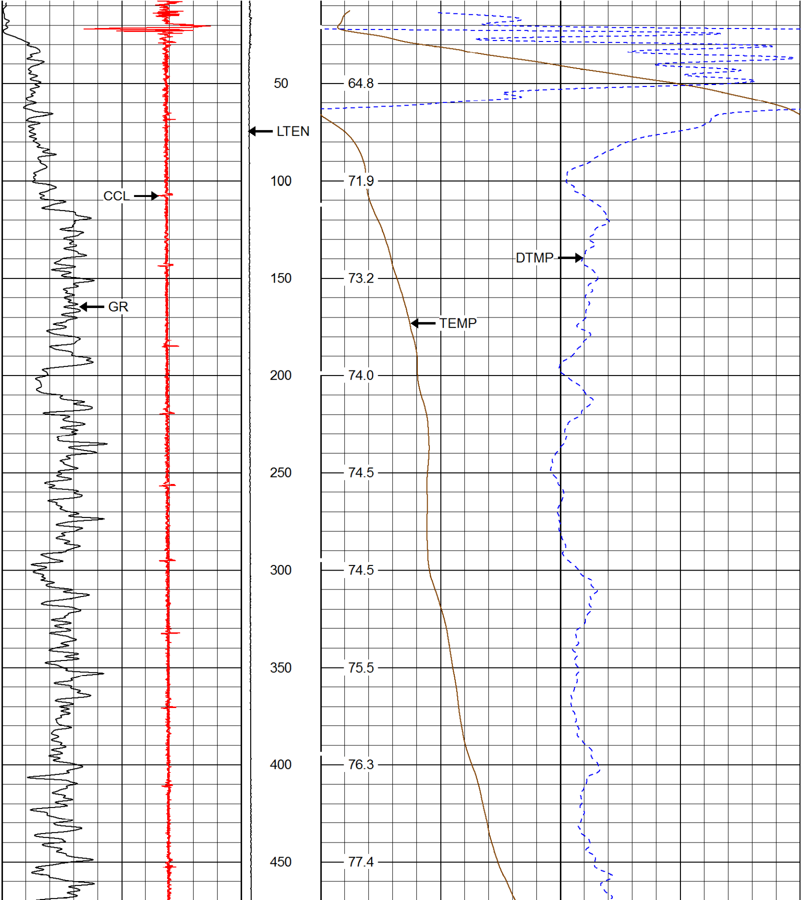
| | | | | | |
|---|---|---|---|---|---|
| 17000 CCL 19990 | LTEN | 0 AMP (mV) 100 | 0 AMPAVG 150 | 200 VDL 1200 | 1 SECTOR MAP 8 |
| 0 GR (GAPI) 150 | 0 (lb) 2000 | 0 AMPx5 (mV) 20 | 0 AMPMAX 150 | | 0 80 |
| | | 380 TT (usec) 180 | 0 AMPMIN 150 | | |

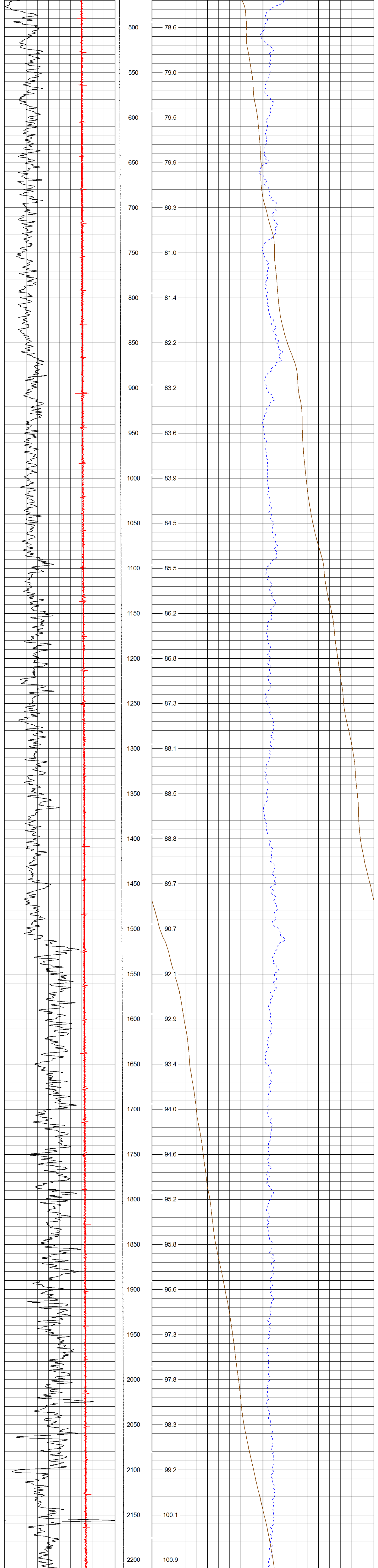
ROCKY MOUNTAIN WIRELINE SERVICE

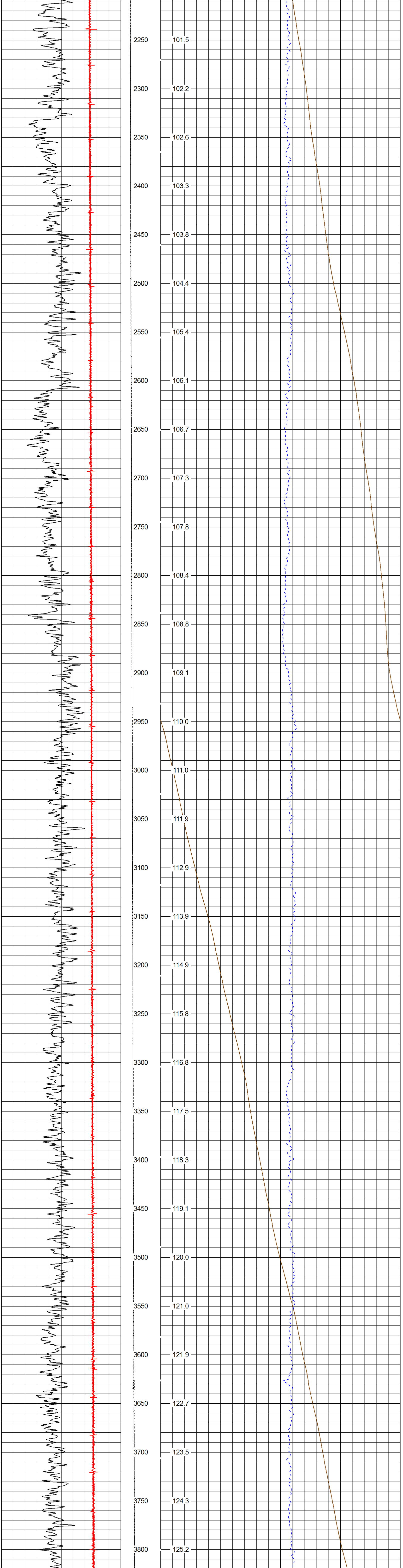
# TEMP PASS

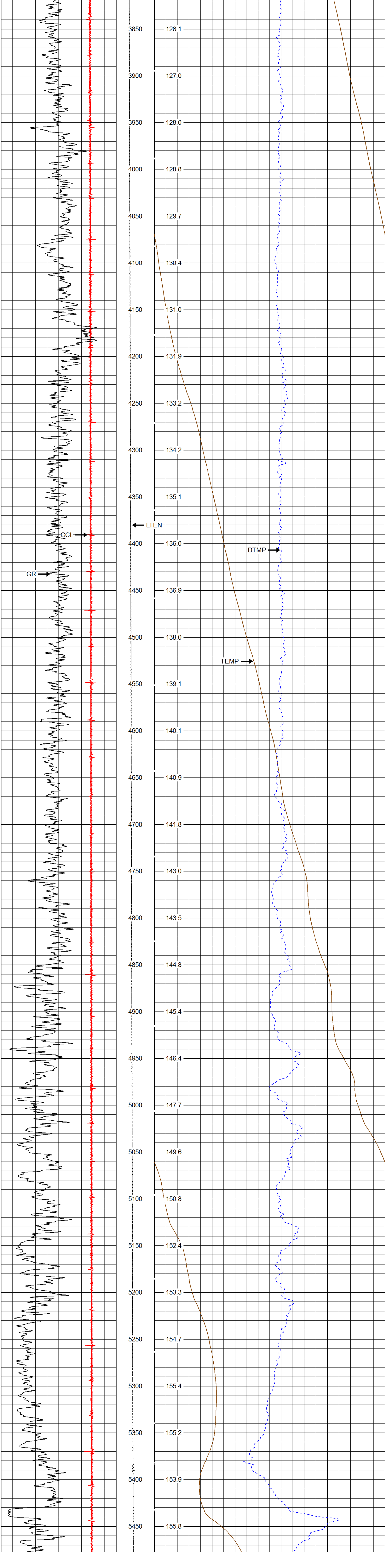
| | |
|---|---|
| Database File: | 110413_axia_bulldog_22-41v-890.db |
| Dataset Pathname: | MAIN/pass1 |
| Presentation Format: | rmws_temp |
| Dataset Creation: | Mon Nov 04 11:55:04 2013 by Log SCH 120430 |
| Charted by: | Depth in Feet scaled 1:600 |

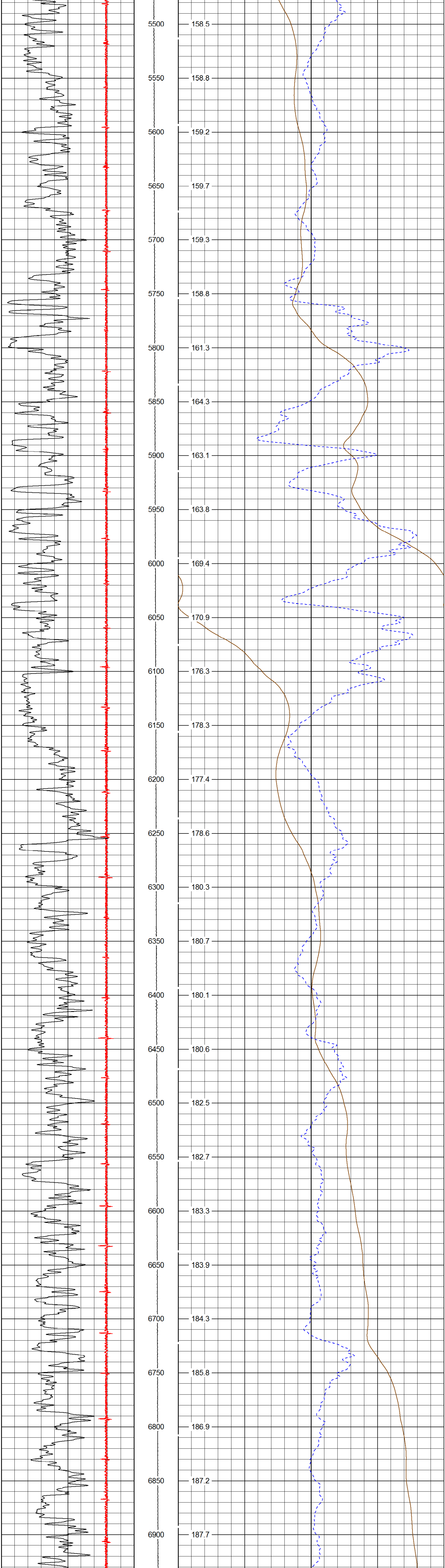
| | | |
|---|---|---|
| 17000 CCL 19990 | LTEN | 70 TEMP (degF) 90 |
| 0 GR (GAPI) 150 | 0 (lb) 2000 | -0.2 DTMP (degF) 0.2 |
| | | TEMP (degF) |

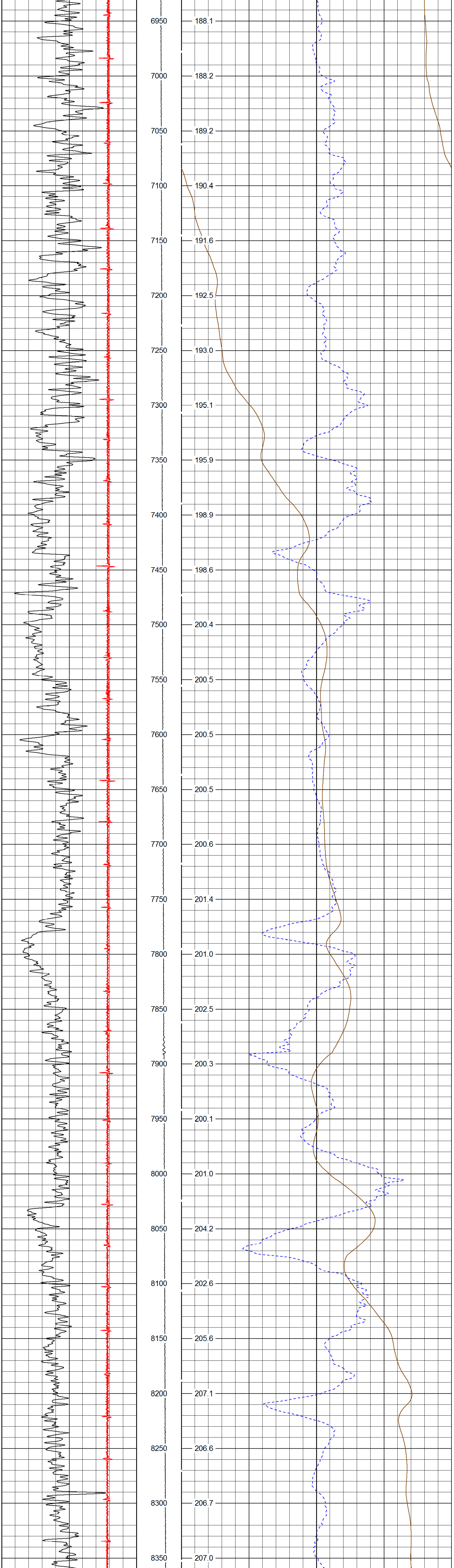


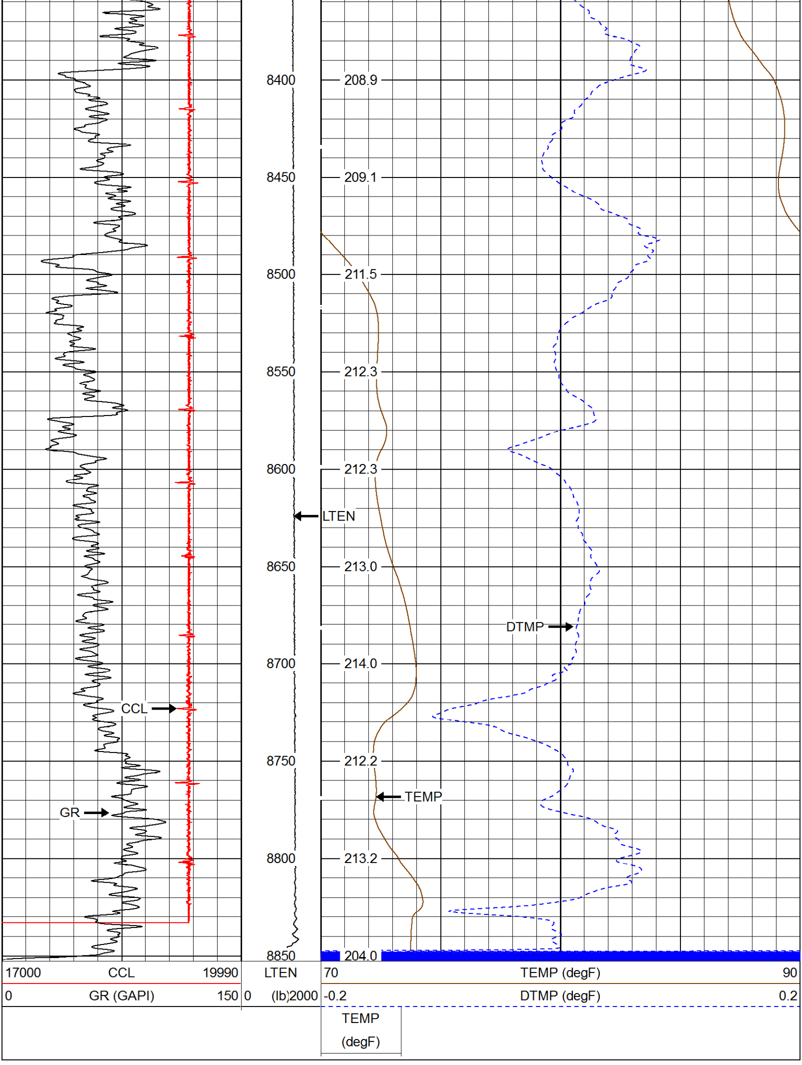


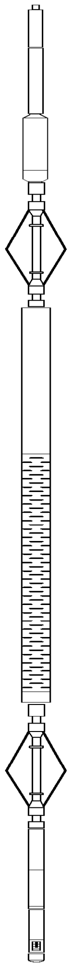










| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|---|---|---|---|---|---|---|
| | |  | CHD-AES (000001)<br>Cable Head | 1.04 | 1.69 | 2.00 |
| | | | XTU-002 (10006455)<br>Crossover Ultrawire Toolbus To Ultralink | 1.58 | 1.69 | 6.50 |
| CCL | 19.17 | | CCL-028 (1036)<br>CCL UW 3 1/8" SONDEX | 1.61 | 3.13 | 36.00 |
| | | | PRC-022 (215770)<br>( 6 ARM 2 3/8" ROLLER CENTRALIZER SONDEX ) | 3.00 | 2.38 | 21.40 |
| WVF3FT<br>WVFS1<br>WVFS2<br>WVFS3<br>WVFS4<br>WVFS5<br>WVFS6<br>WVFS7<br>WVFS8<br>CBLTEMP<br>CBLROT<br>WVF5FT | 11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>10.32 | | RBT-004 (10012363)<br>Radial Bond Tool (UW 3 1/8) | 9.47 | 3.13 | 140.00 |
| | | | PRC-022 (215771)<br>( 6 ARM 2 3/8" ROLLER CENTRALIZER SONDEX ) | 3.00 | 2.38 | 21.40 |
| GR | 1.76 | | PGR-020 (10007620)<br>Production Gamma Ray | 1.93 | 1.69 | 9.50 |
| TEMP<br>TSTAMP | 0.37<br>0.00 | | PRT-016 (10006811)<br>Platinum Resistance Thermometer | 1.04 | 1.69 | 6.00 |
| ITEMPX<br>HVOLTX | 0.00<br>0.00 | | BUL-006 (212965)<br>Bullnose Terminator | 0.22 | 1.69 | 1.20 |

Dataset: 110413_axia_bulldog_22-41v-890.db: field/well/MAIN/pass2
Total Length: 22.90 ft
Total Weight: 244.00 lb
O.D. 3.13 in

RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

| | |
|---|---|
| Company | AXIA ENERGY |
| Well | BULLDOG 22-41V-890 |
| Field | |
| County | MONFFAT |
| State | COLORADO |