



Pioneer Energy Services

Sonic Cement
Bond Log

15-065-23964-00-00

Company **Spiral Energy Corp.**
Well **Pfeifer A No. 1**
Field **Emor N**
County **Graham** State **Kansas**

Location

1800' FSL & 1400' FWL

Other Services

Sec: **21** Twp: **9 S** Rge: **25 W**

Elevation

Permanent Datum **Ground Level** Elevation **2566**
Log Measured From **Kelly Bushing** **7** Ft. Above Perm. Datum
Drilling Measured From **Kelly Bushing**

K.B. **2573**
D.F. **2566**
G.L. **2566**

| | | |
|---------------------------|---------------|------|
| Run Number | One | |
| Date Survey | 08-26-13 | |
| Date Cementing | 08-20-13 | |
| Type Cementing Operation | Primary | |
| Depth Driller | 4112 | |
| Depth Logger | 4064 | |
| Logged Interval | 4062 to 3250 | to |
| Casing Driller | 5.5 @ TD | @ |
| Float Collar -- D.V. Tool | //// | 2259 |
| Squeeze Depth | //// | |
| Amount & Type Cement | //// | |
| Amount & Type Admix | //// | |
| Type Fluid In Hole | Water | |
| Fluid Level | 448 | |
| Salinity PPM CL | //// | |
| Weight lb/gal -- Vis. | //// | //// |
| Approx. Logged Cement Top | 3409 | |
| Calculated Cement Top | | |
| Max. Hole Temperature | 119 | |
| Tool No. | D2 | |
| Spacing Recorded | 3-5 | |
| Equipment -- Location | 71 | Hays |
| Recorded By | Scott Clemons | |
| Witnessed By | Tom Berens | |

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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

Thank you for using Pioneer Energy Services
(785) 625-3858

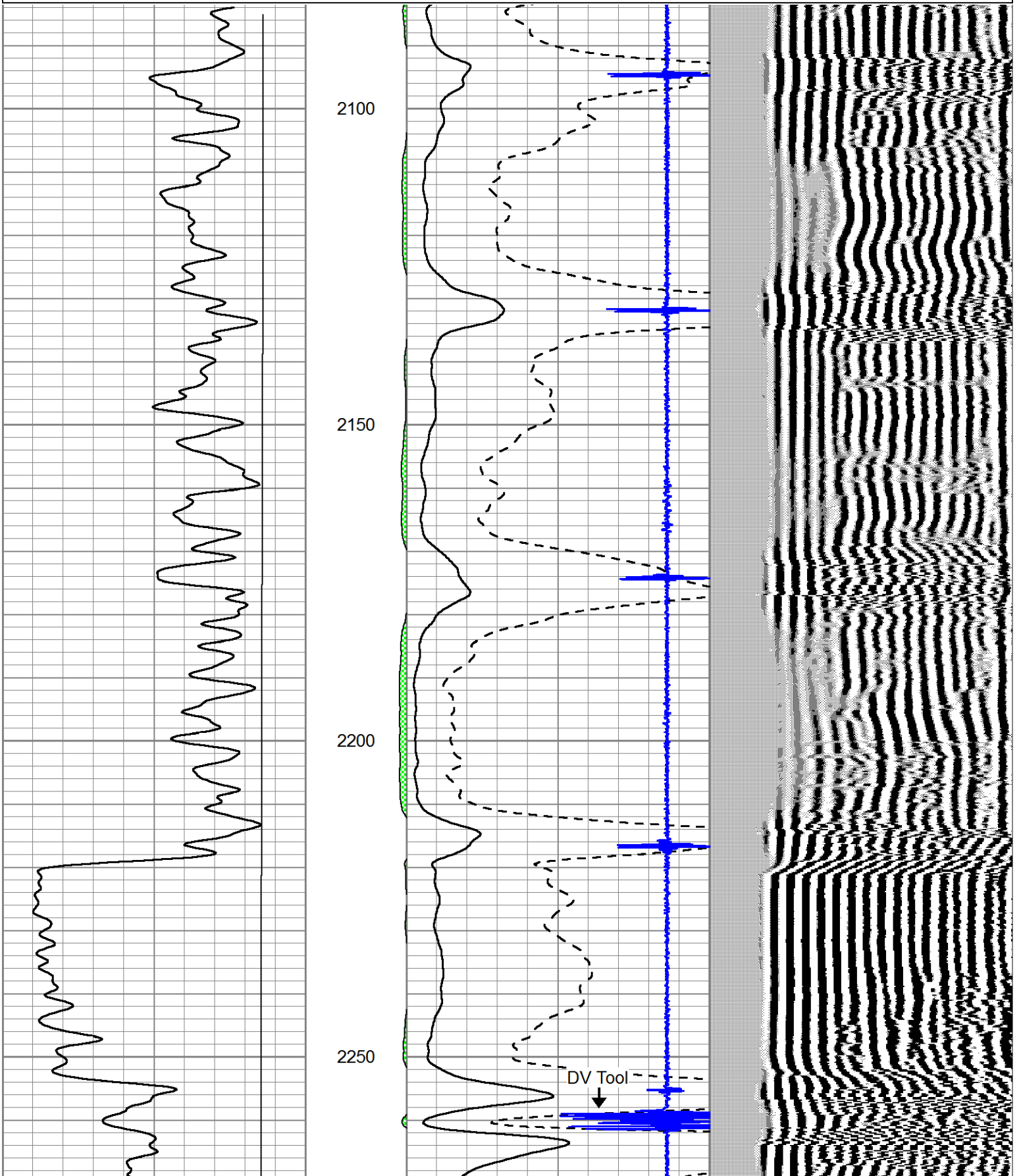
Wakeeney Ks, North to H Rd.,
West to 120th, 1 1/4 North
East Into

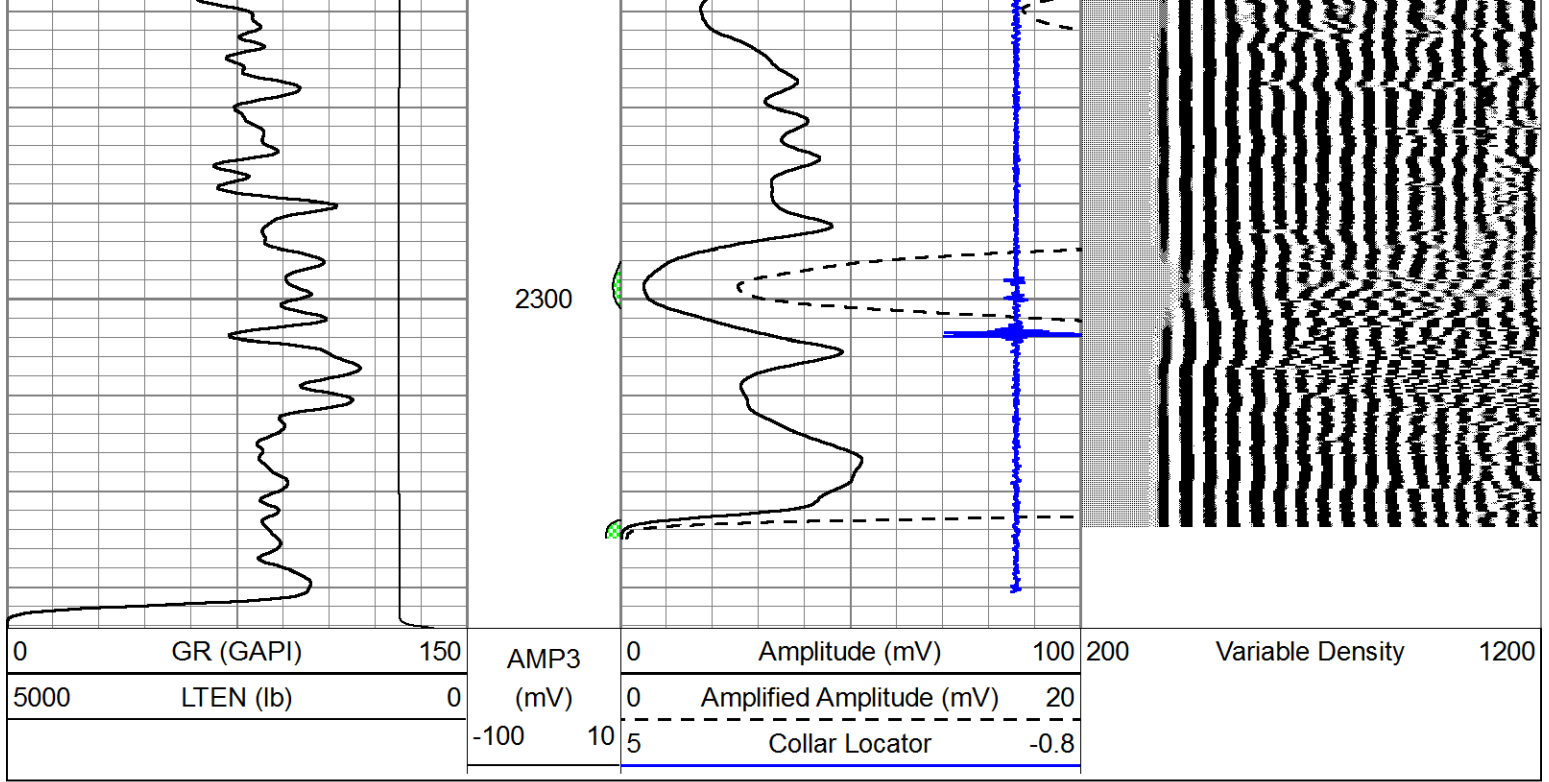


DV Tool @ 2259

Database File: spiral_pfeifer_a#1.db
 Dataset Pathname: grcbl/pass4
 Presentation Format: cbldig
 Dataset Creation: Mon Aug 26 16:17:24 2013 by Log SCH 111116
 Charted by: Depth in Feet scaled 1:240

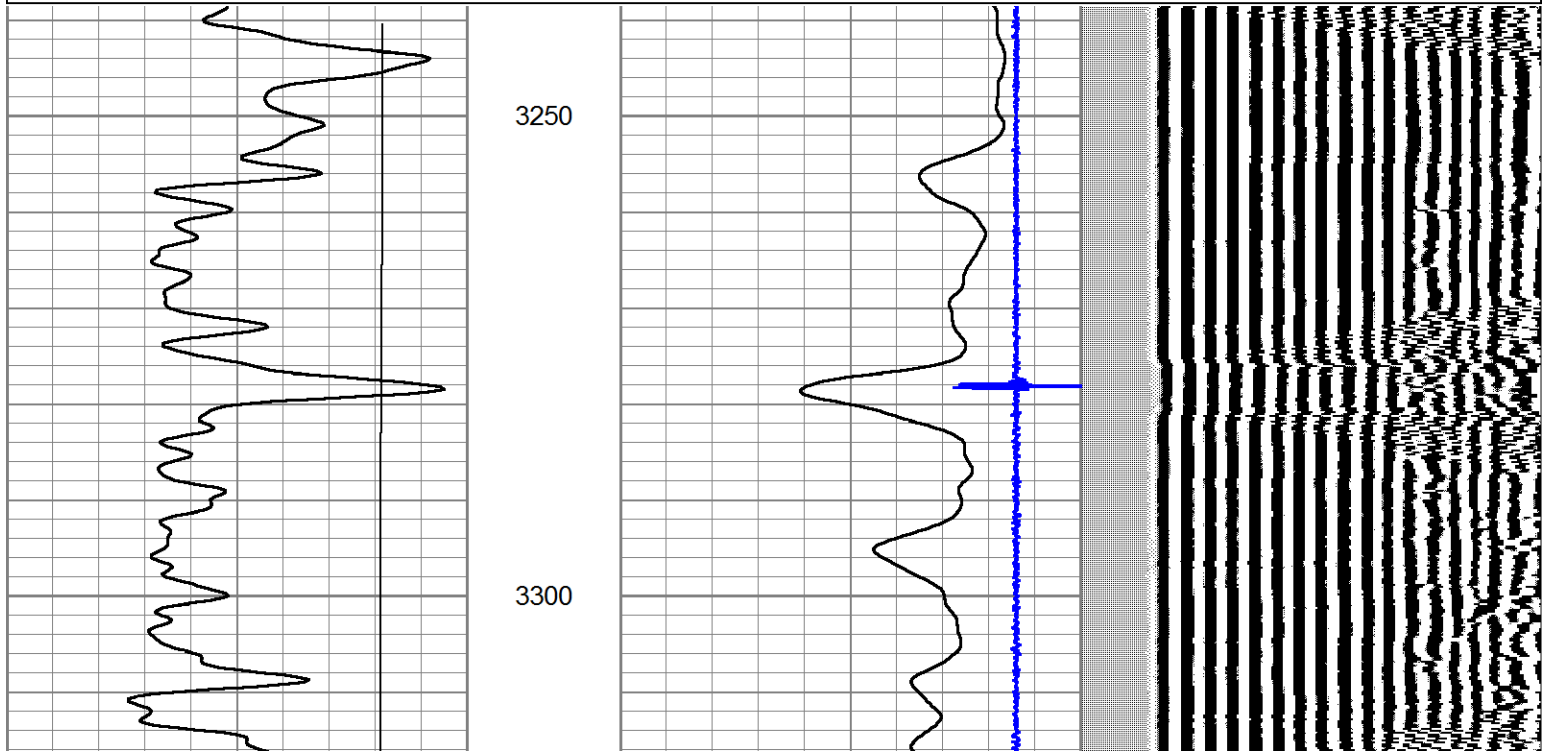
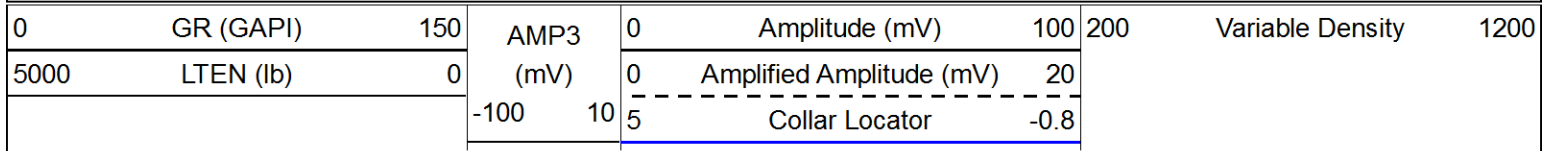
| | | | | | | | | | |
|------|-----------|-----|------|----|--------------------------|----------------|------|------------------|------|
| 0 | GR (GAPI) | 150 | AMP3 | 0 | Amplitude (mV) | 100 | 200 | Variable Density | 1200 |
| 5000 | LTEN (lb) | 0 | (mV) | 0 | Amplified Amplitude (mV) | 20 | | | |
| | | | -100 | 10 | 5 | Collar Locator | -0.8 | | |

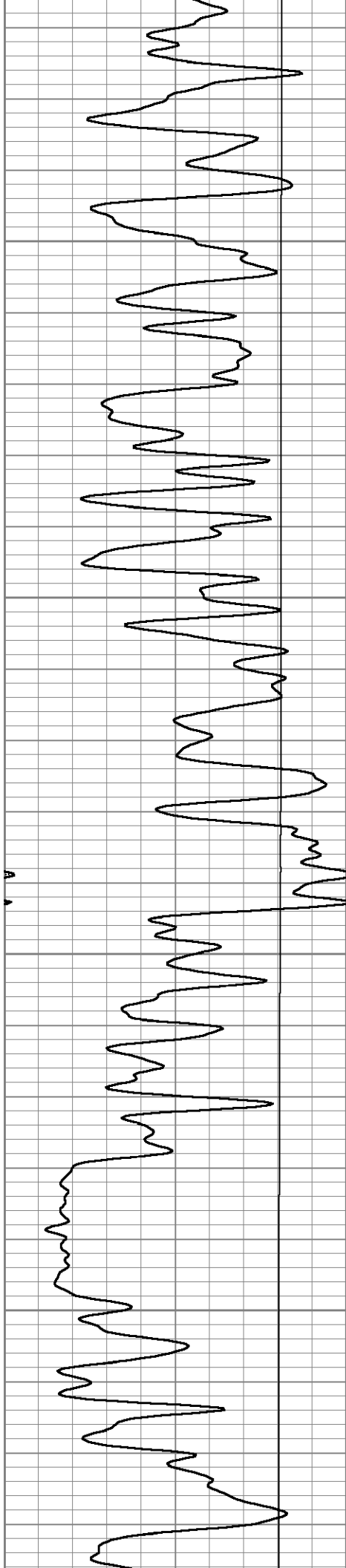




Main Pass

Database File: spiral_pfeifer_a#1.db
 Dataset Pathname: grcbl/pass3
 Presentation Format: cbldig
 Dataset Creation: Mon Aug 26 16:01:14 2013 by Log SCH 111116
 Charted by: Depth in Feet scaled 1:240



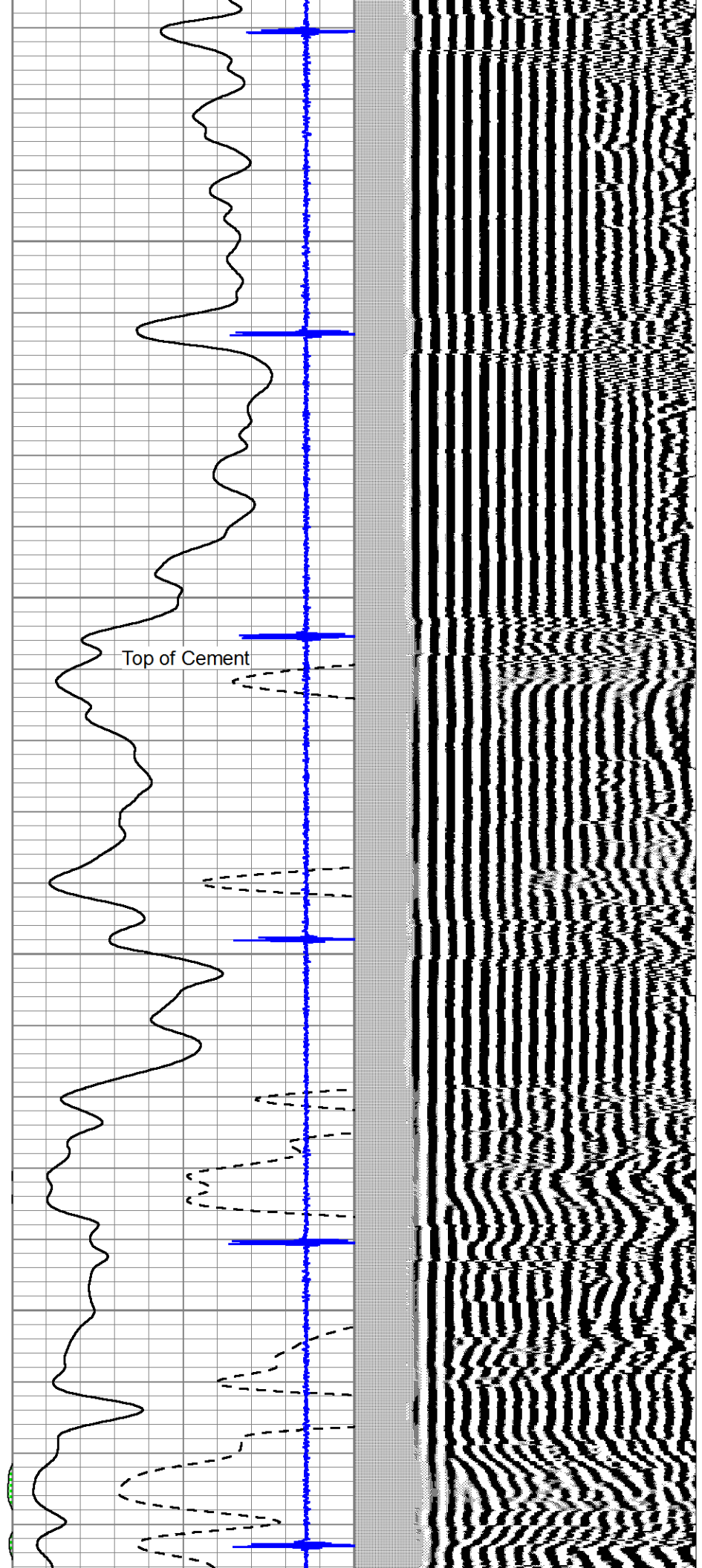


3350

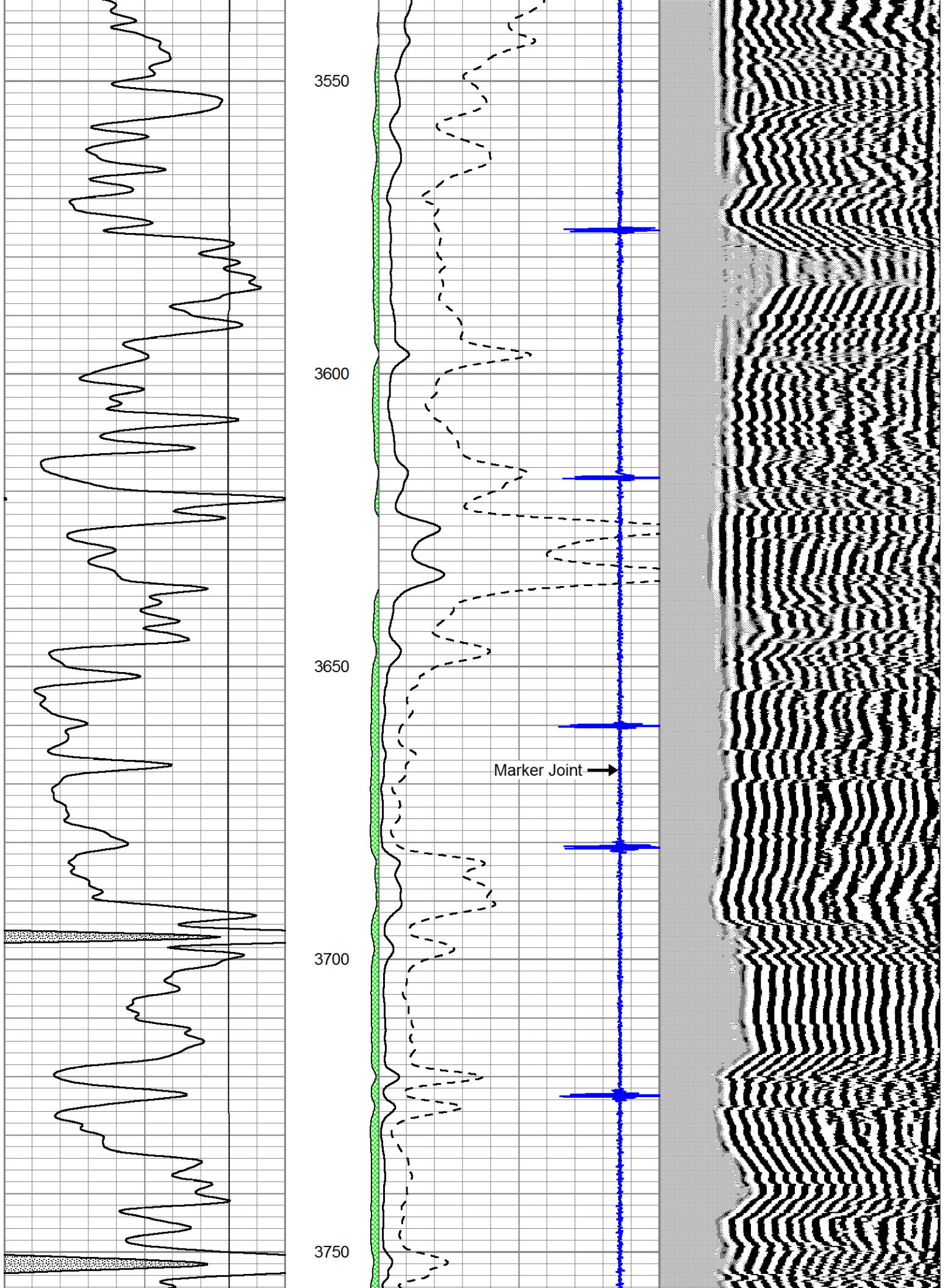
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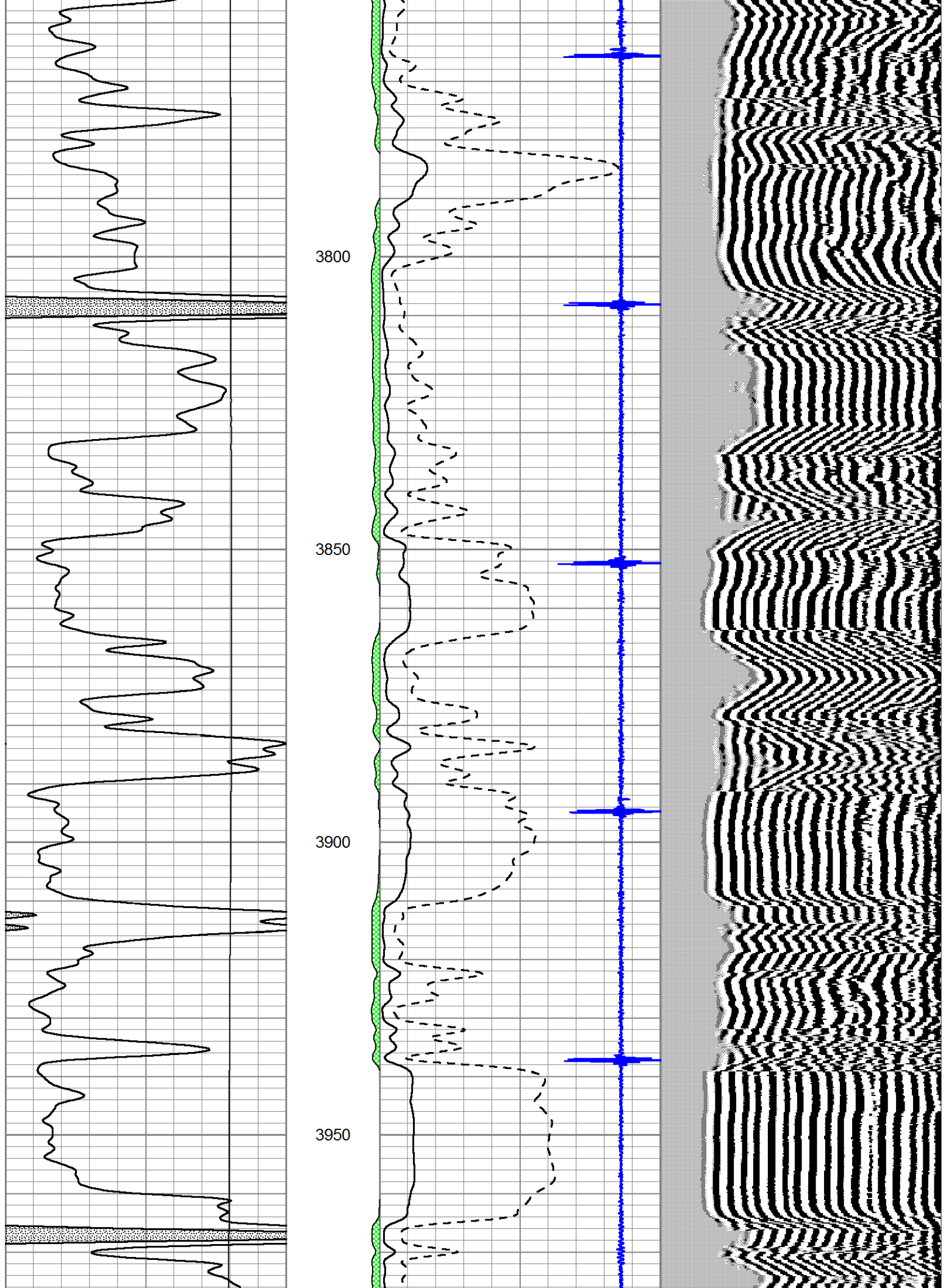
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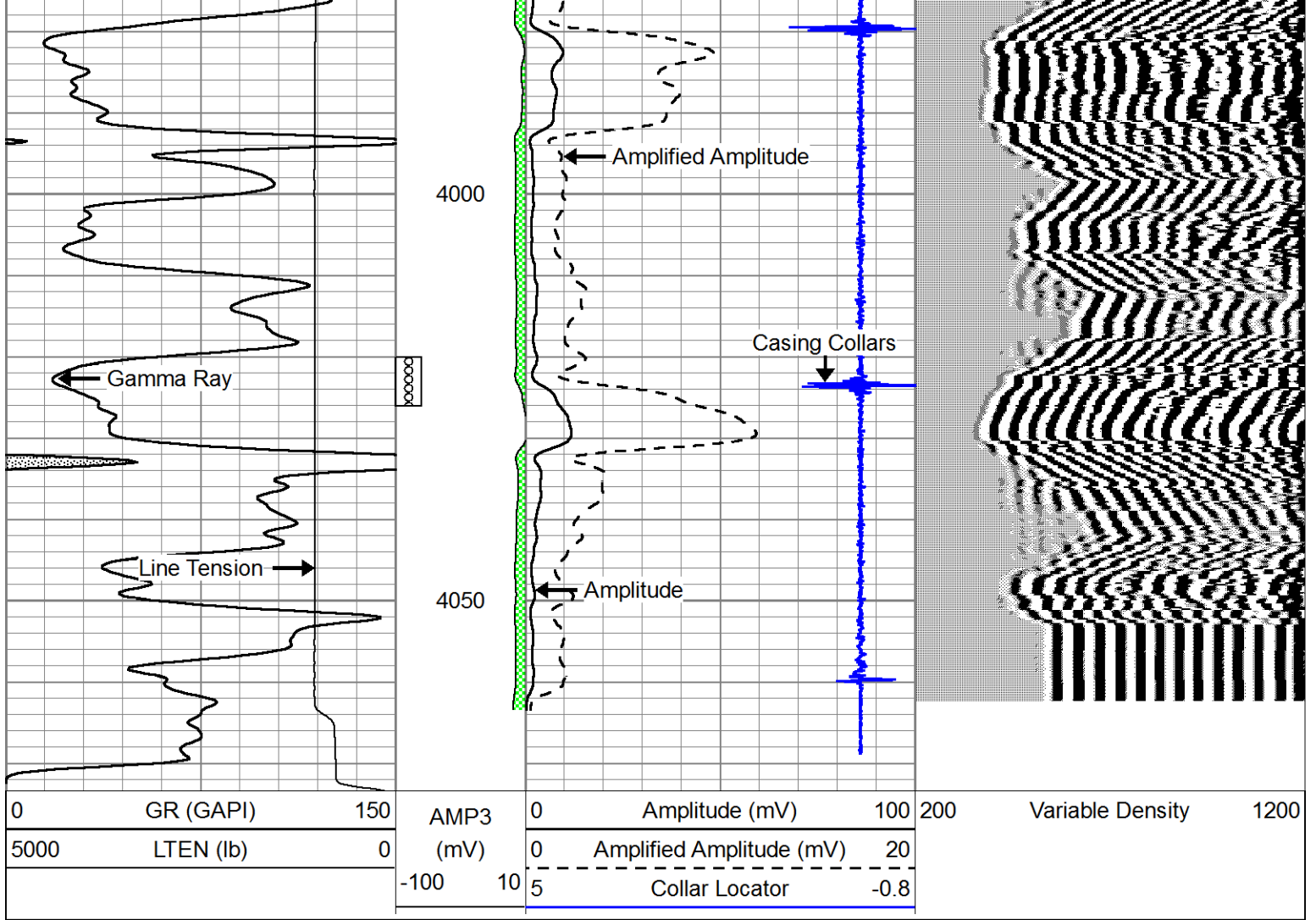
3500



Top of Cement







Repeat Section

Database File: spiral_pfeifer_a#1.db
 Dataset Pathname: grcb1/pass2
 Presentation Format: cbldig
 Dataset Creation: Mon Aug 26 15:56:19 2013 by Log SCH 111116
 Charted by: Depth in Feet scaled 1:240

