



Pioneer Energy Services

Sonic Cement
Bond Log

15-135-25492-00-00

Company Cobalt Energy, LLC.
Well Miner Unit 'A' No. 1-27
Field McDonald NE
County Ness
State Kansas

Location

2428' FSL & 1756' FEL

Sec: 27 Twp: 18S Rge: 24W

Other Services

Perforate

Permanent Datum Ground Level Elevation 2284
Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation
K.B. 2289
D.F.
G.L. 2284

| | | |
|---------------------------|--------------|----|
| Run Number | One | |
| Date Survey | 11/6/2012 | |
| Date Cementing | 10/26/2012 | |
| Type Cementing Operation | Primary | |
| Depth Driller | 4365 | |
| Depth Logger | 4338 | |
| Logged Interval | 4336 to 2900 | to |
| Casing Driller | 5.5 @ T.D. | @ |
| Float Collar -- D.V. Tool | 1515 | |
| Squeeze Depth | | |
| Amount & Type Cement | | |
| Amount & Type Admix | | |
| Type Fluid In Hole | Water | |
| Fluid Level | 340 | |
| Salinity PPM CL | | |
| Weight lb/gal -- Vis. | | |
| Approx. Logged Cement Top | 3065 | |
| Calculated Cement Top | | |
| Max. Hole Temperature | 122 | |
| Tool No. | D-1 | |
| Spacing Recorded | 3-5 | |
| Equipment -- Location | 72 Hays | |
| Recorded By | K. Ladrigan | |
| Witnessed By | Joe Rupp | |

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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, Inc. 785.625.3858

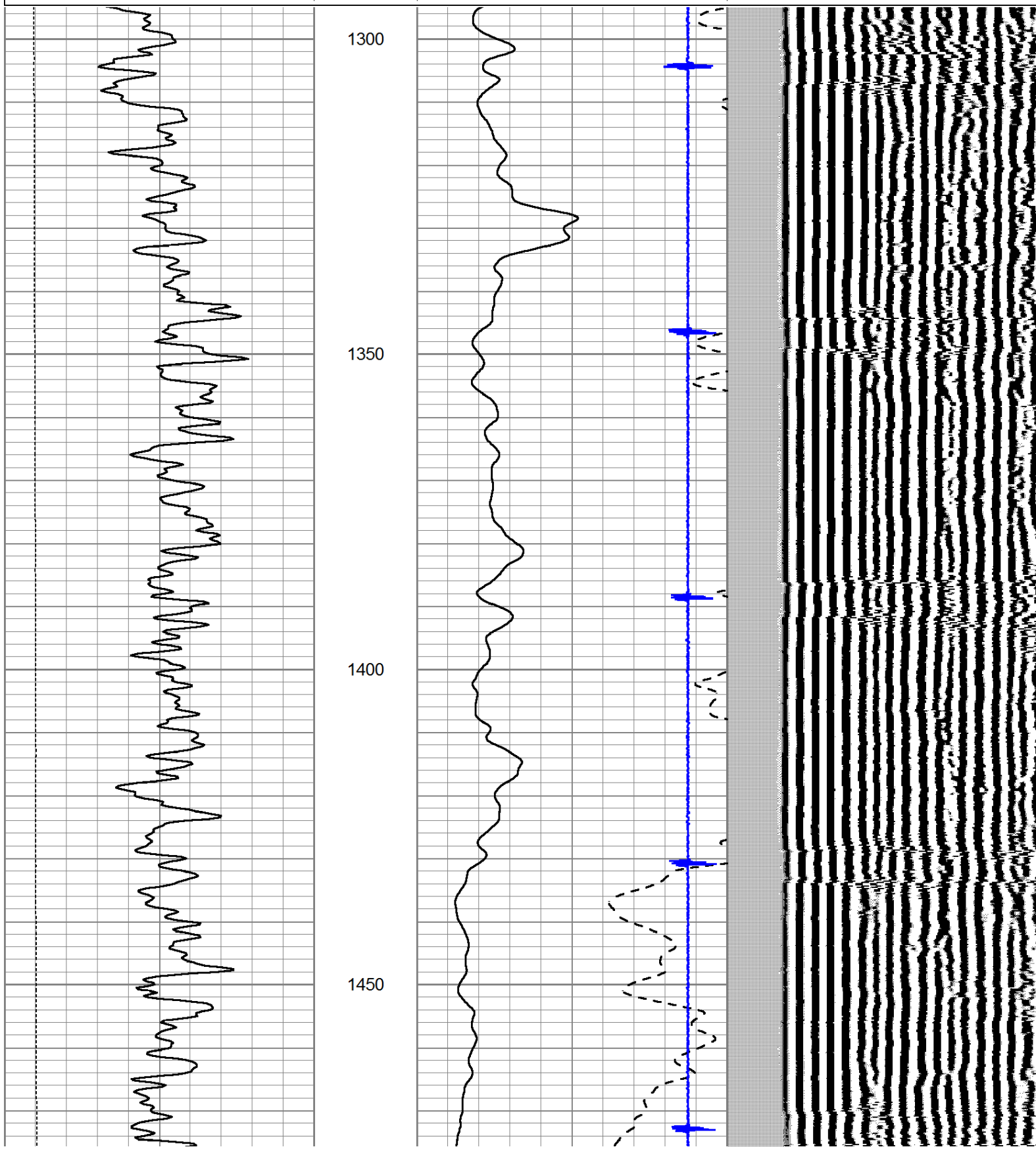
Ness City, KS., 2 West to P Road,
1/3 Rd North,
West Into.

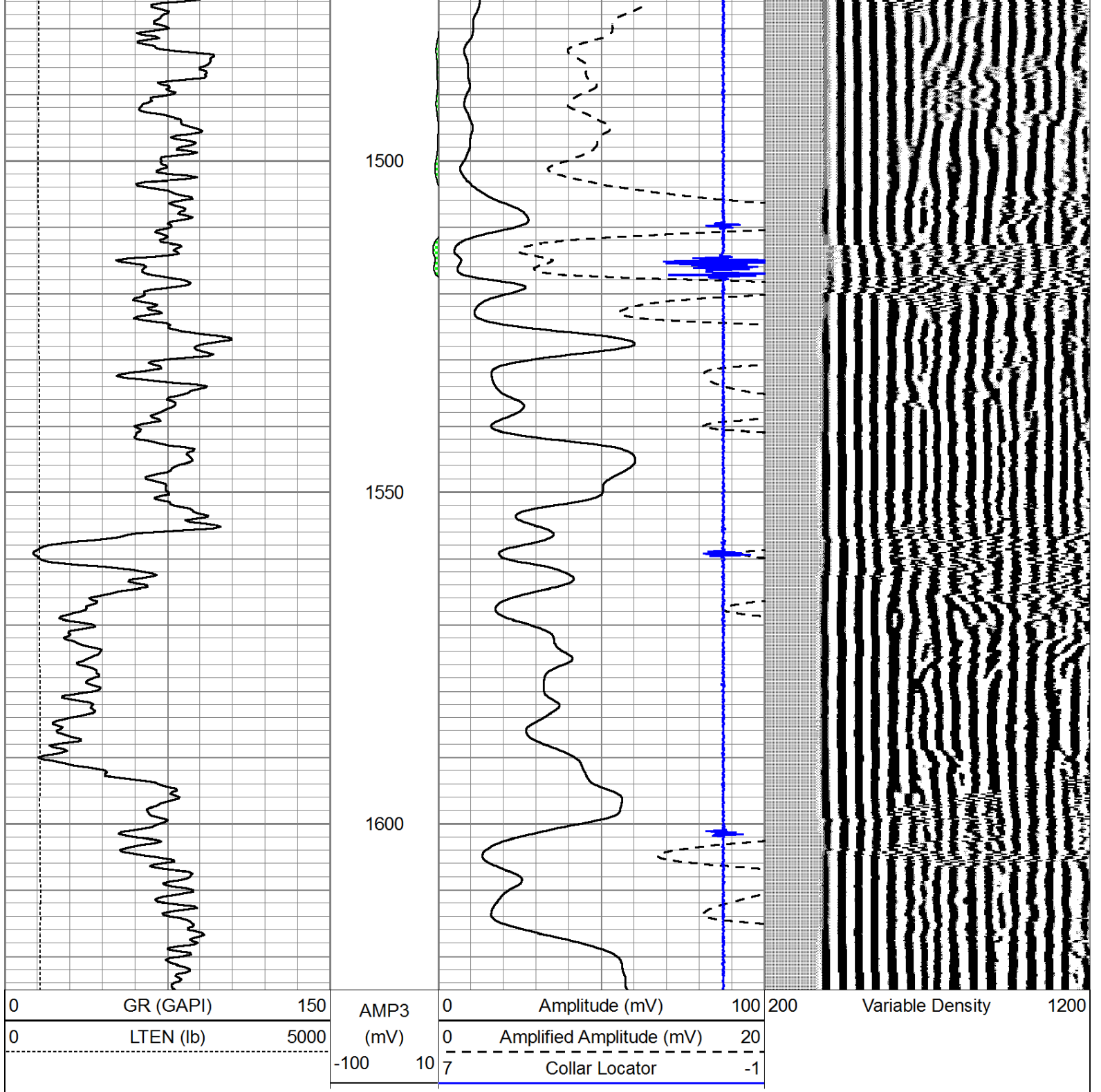


D.V. Tool @ 1515

Database File: colbalt-minera1-27.db
Dataset Pathname: grcbl/run1/pass5
Presentation Format: cldig
Dataset Creation: Tue Nov 06 15:55:29 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

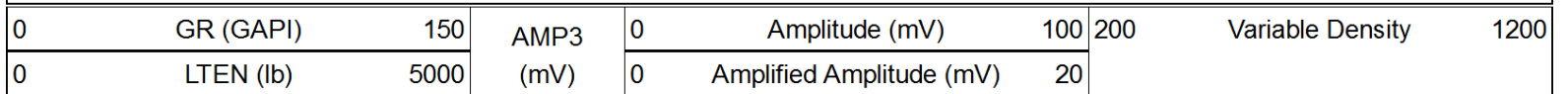
| | | | | | | | | | |
|---|-----------|------|---------|---|--------------------------|-----|-----|------------------|------|
| 0 | GR (GAPI) | 150 | AMP3 | 0 | Amplitude (mV) | 100 | 200 | Variable Density | 1200 |
| 0 | LTEN (lb) | 5000 | (mV) | 0 | Amplified Amplitude (mV) | 20 | | | |
| | | | -100 10 | 7 | Collar Locator | -1 | | | |

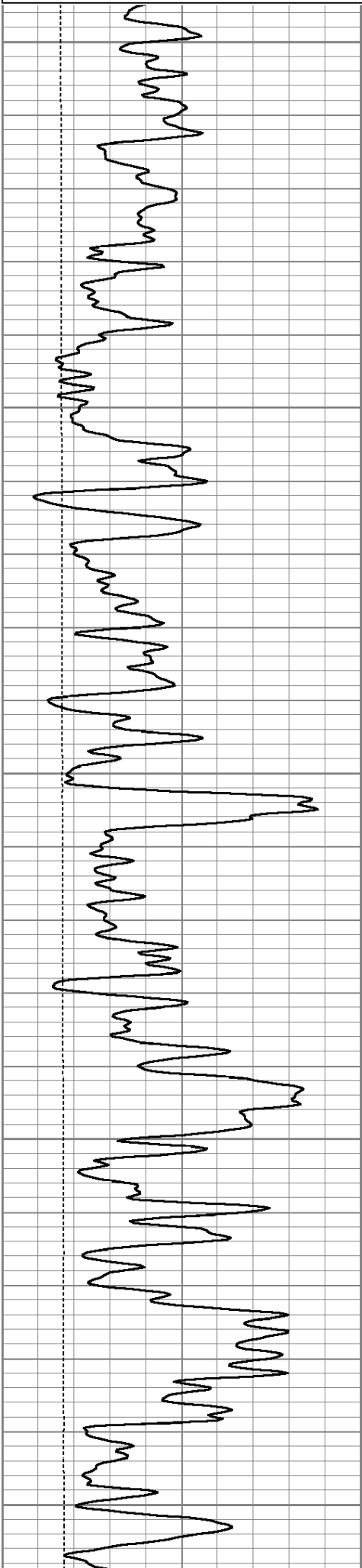




Main Pass

Database File: colbalt-minera1-27.db
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 Presentation Format: cldig
 Dataset Creation: Tue Nov 06 15:52:54 2012
 Charted by: Depth in Feet scaled 1:240





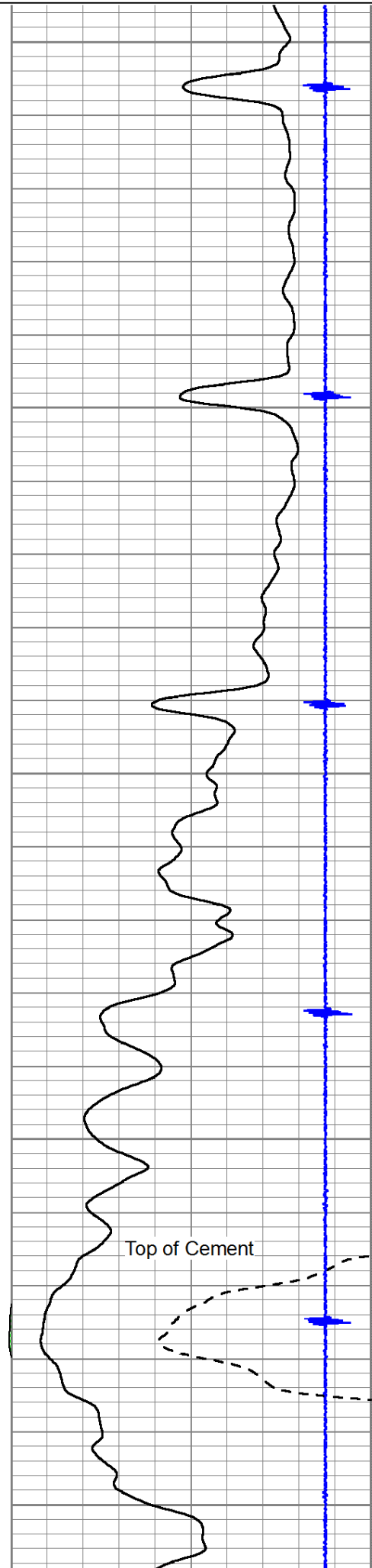
2900

2950

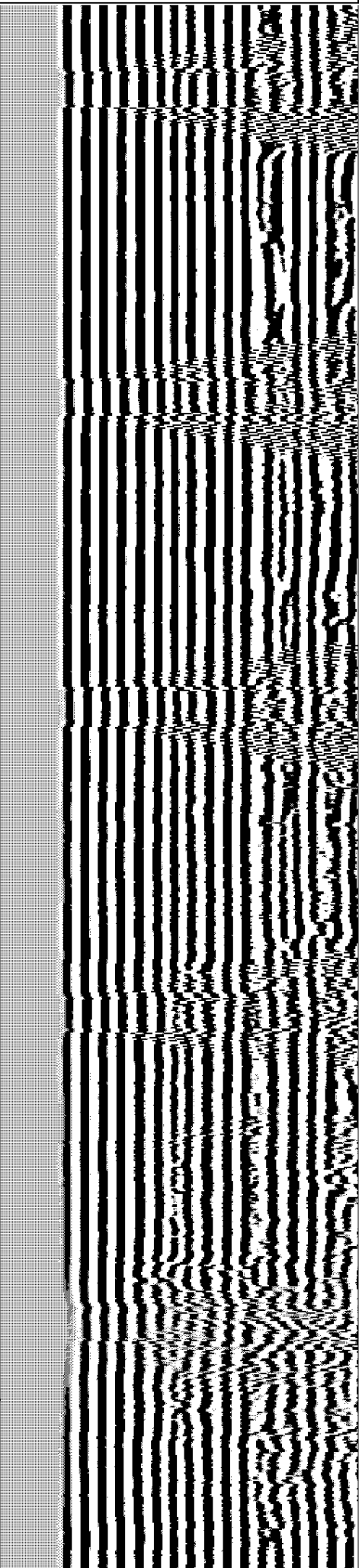
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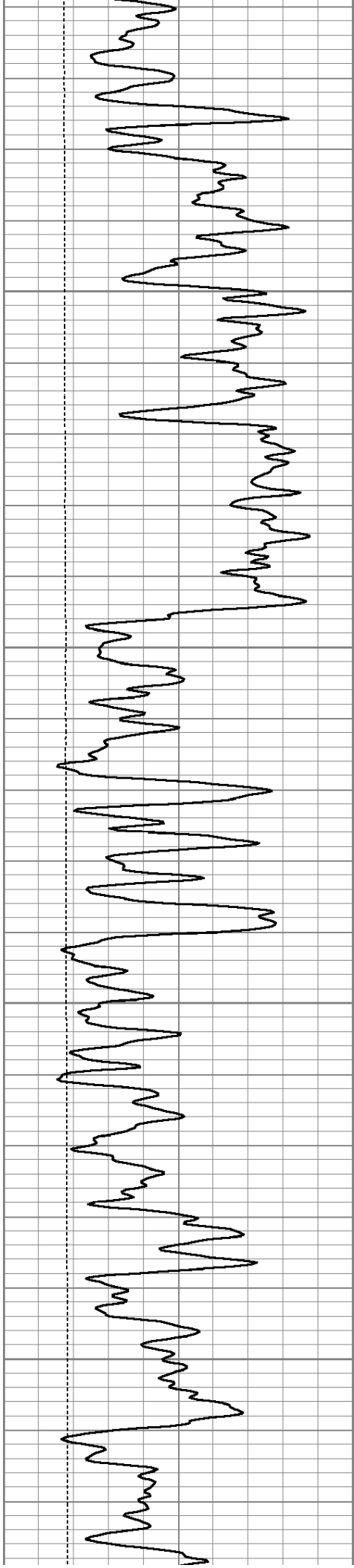
3050

3100



Top of Cement



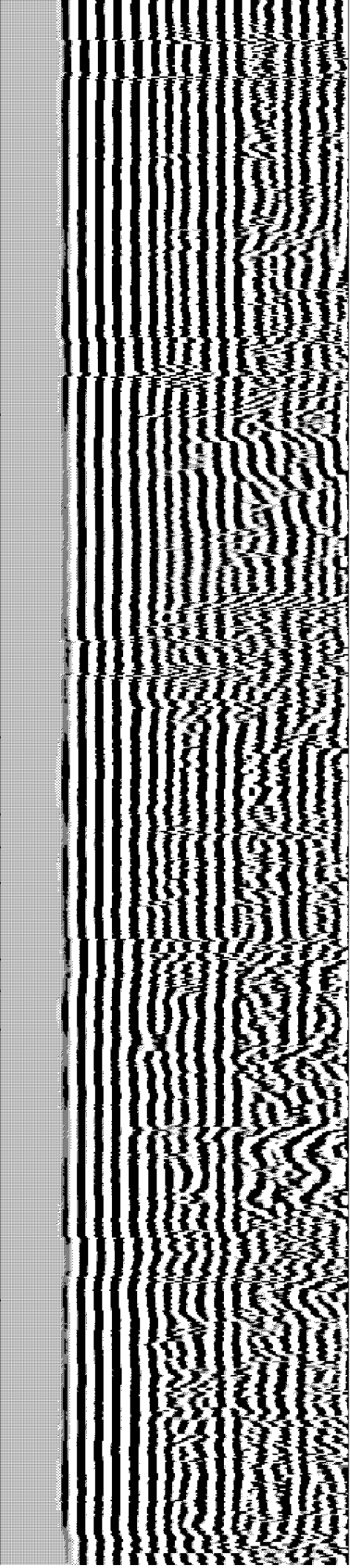
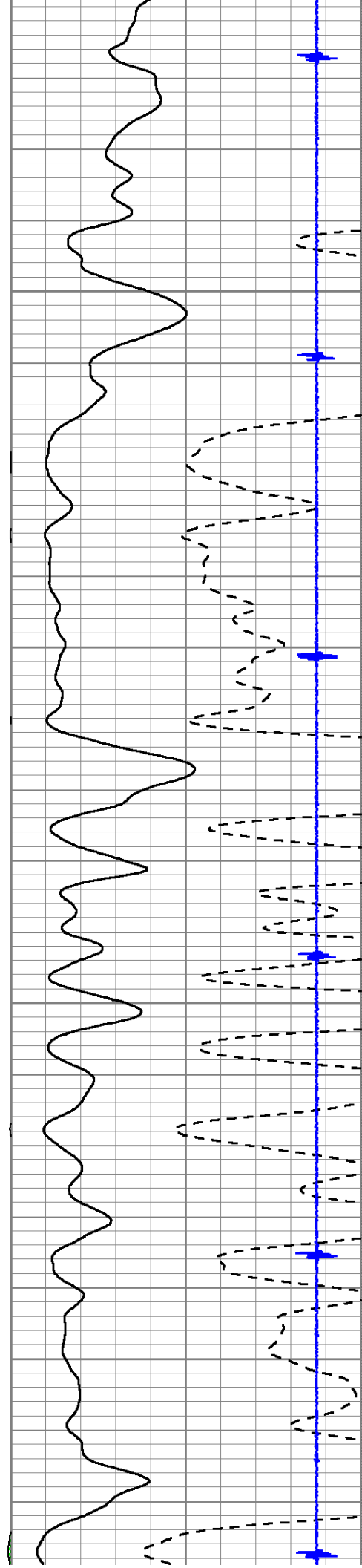


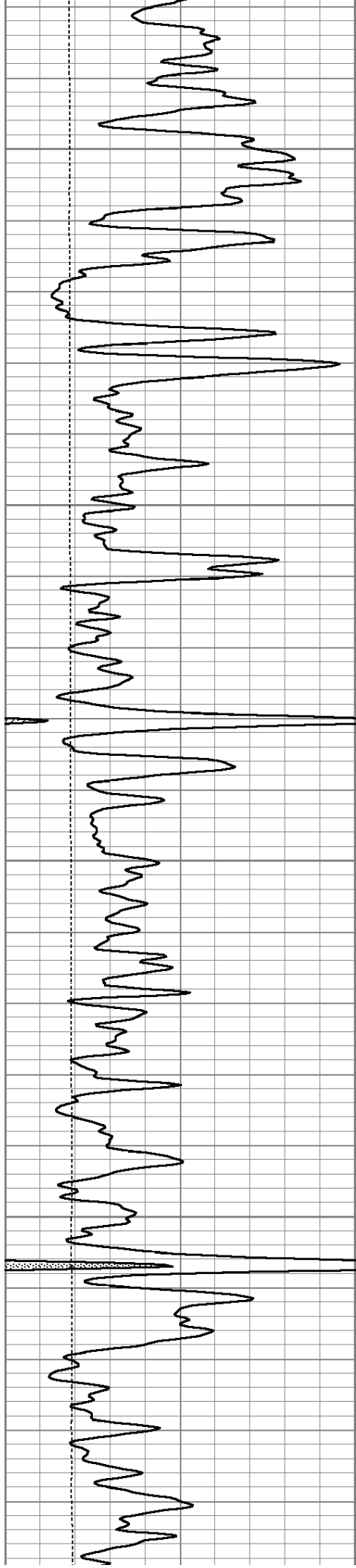
3150

3200

3250

3300



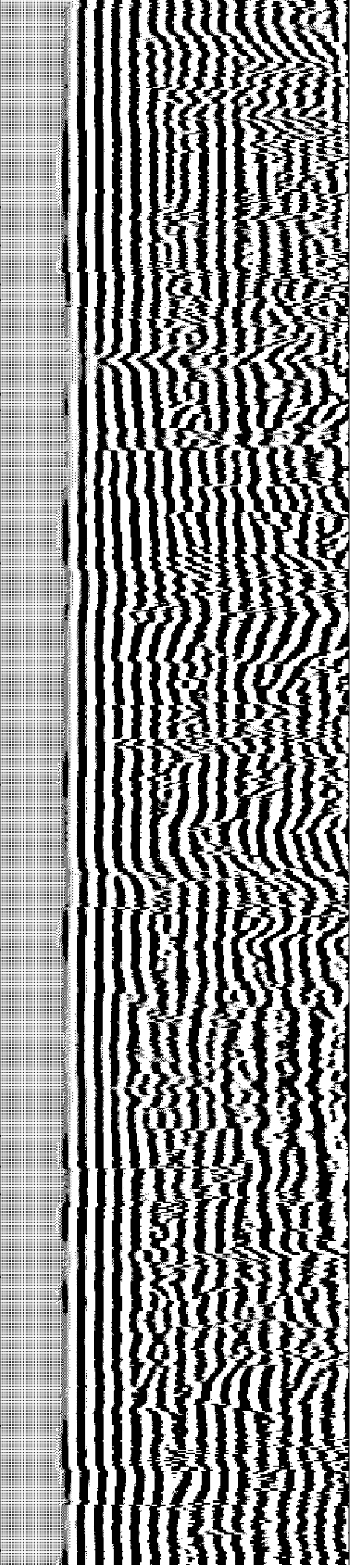
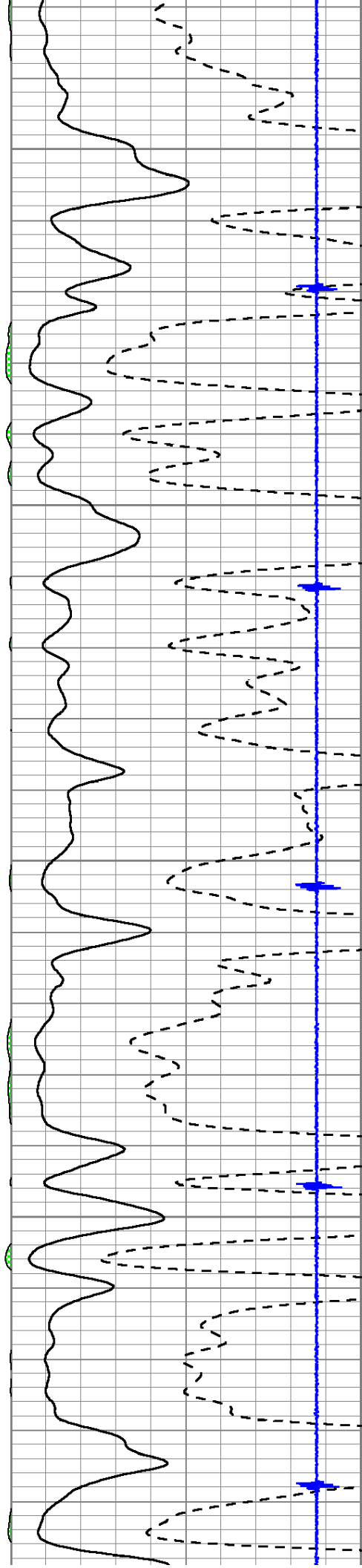


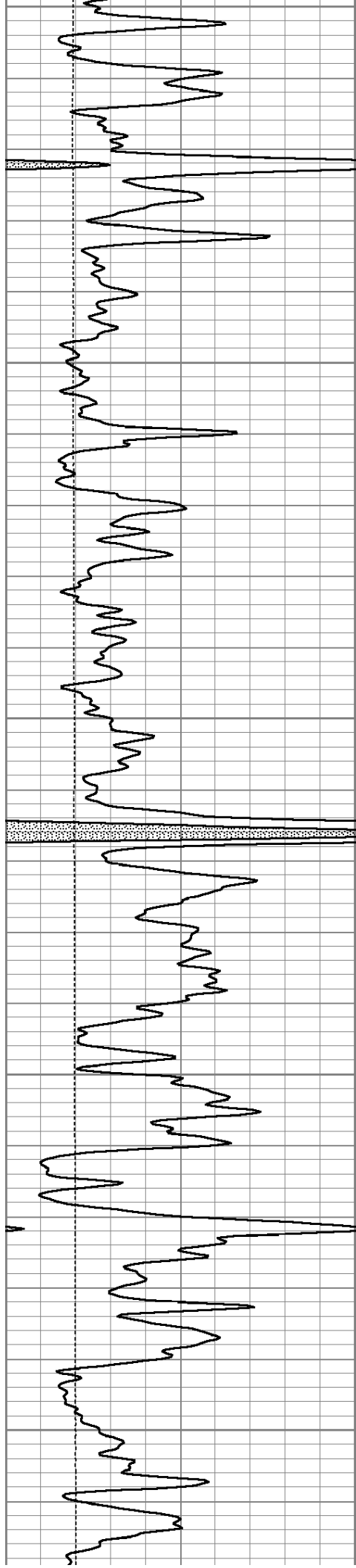
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3400

3450

3500





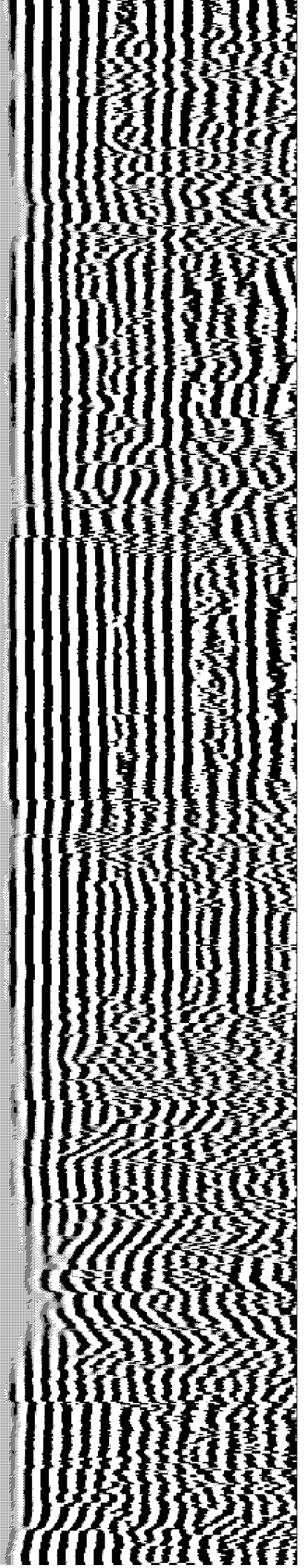
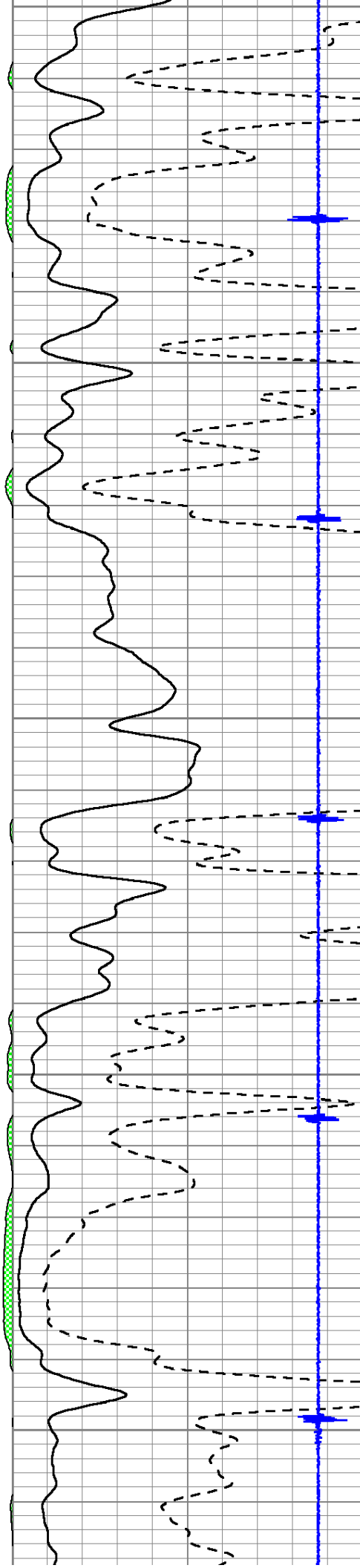
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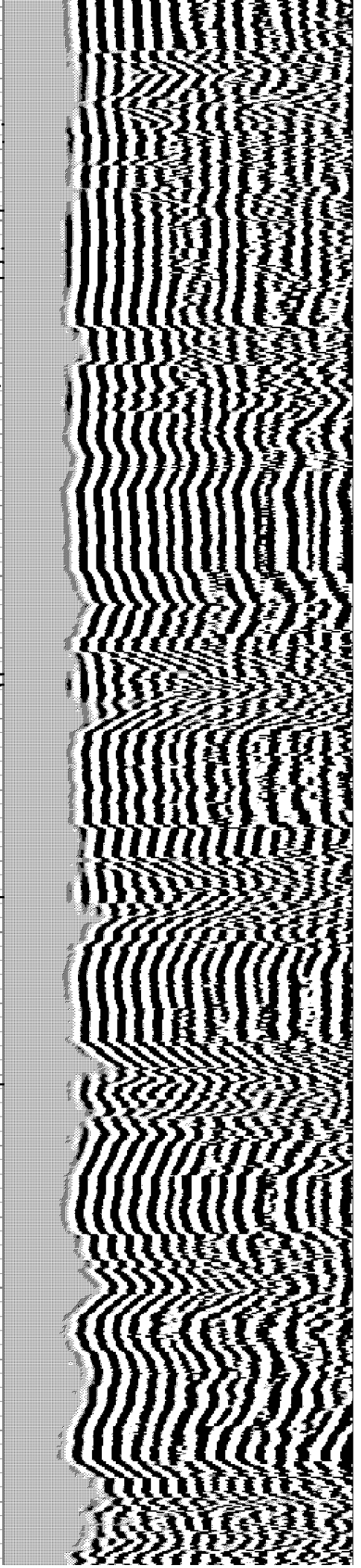
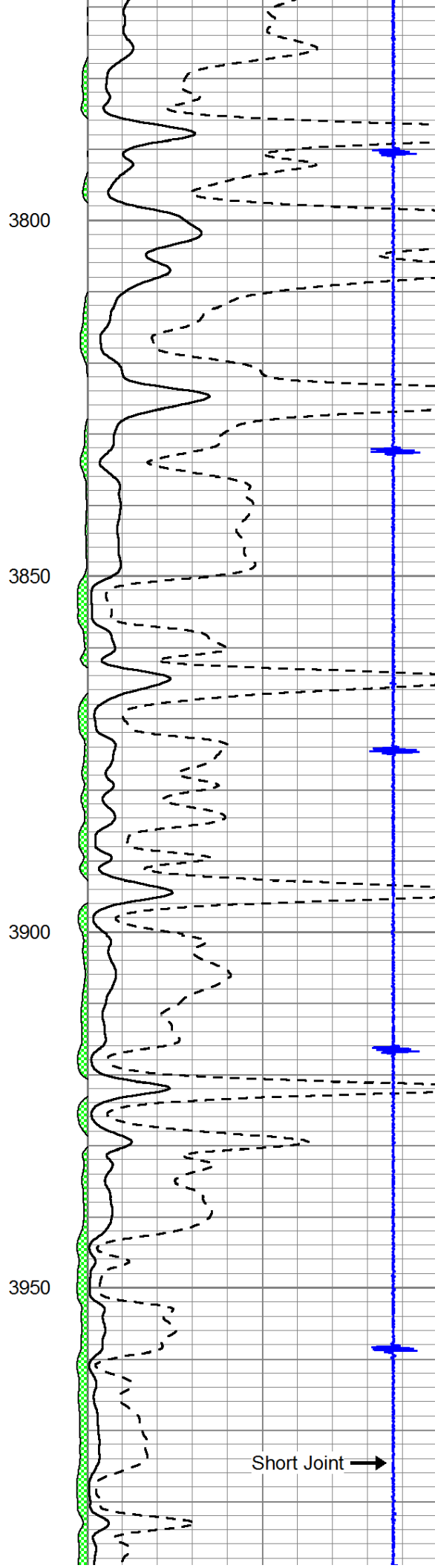
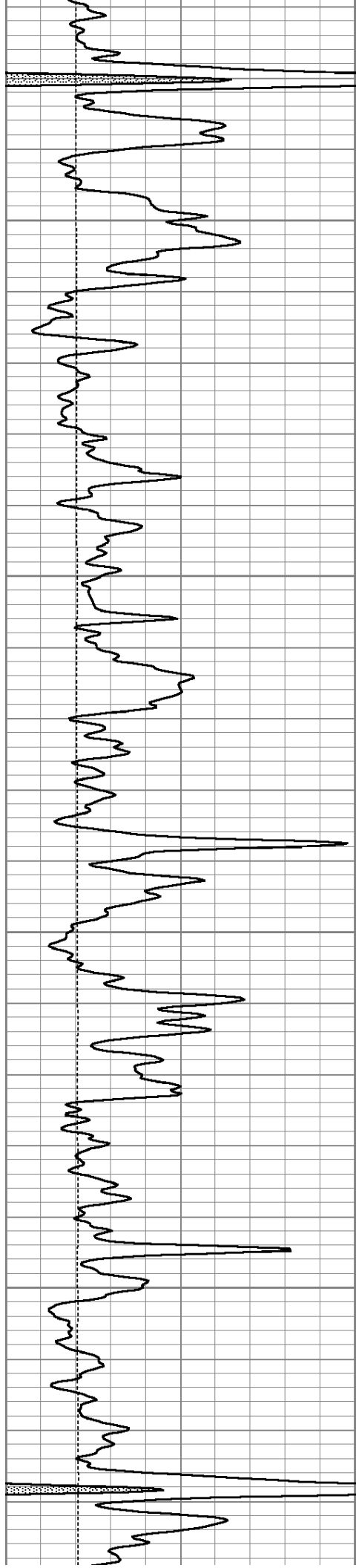
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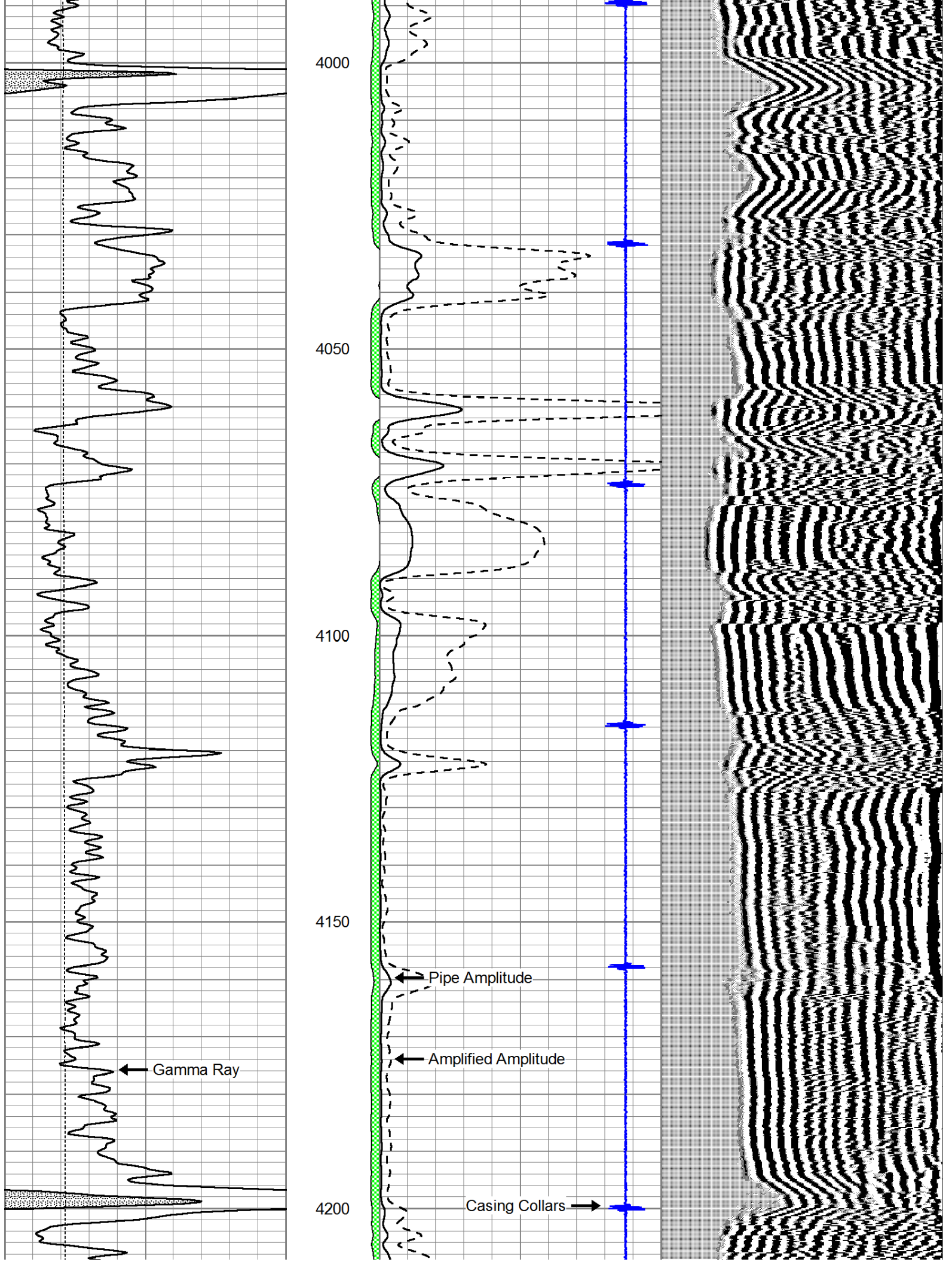
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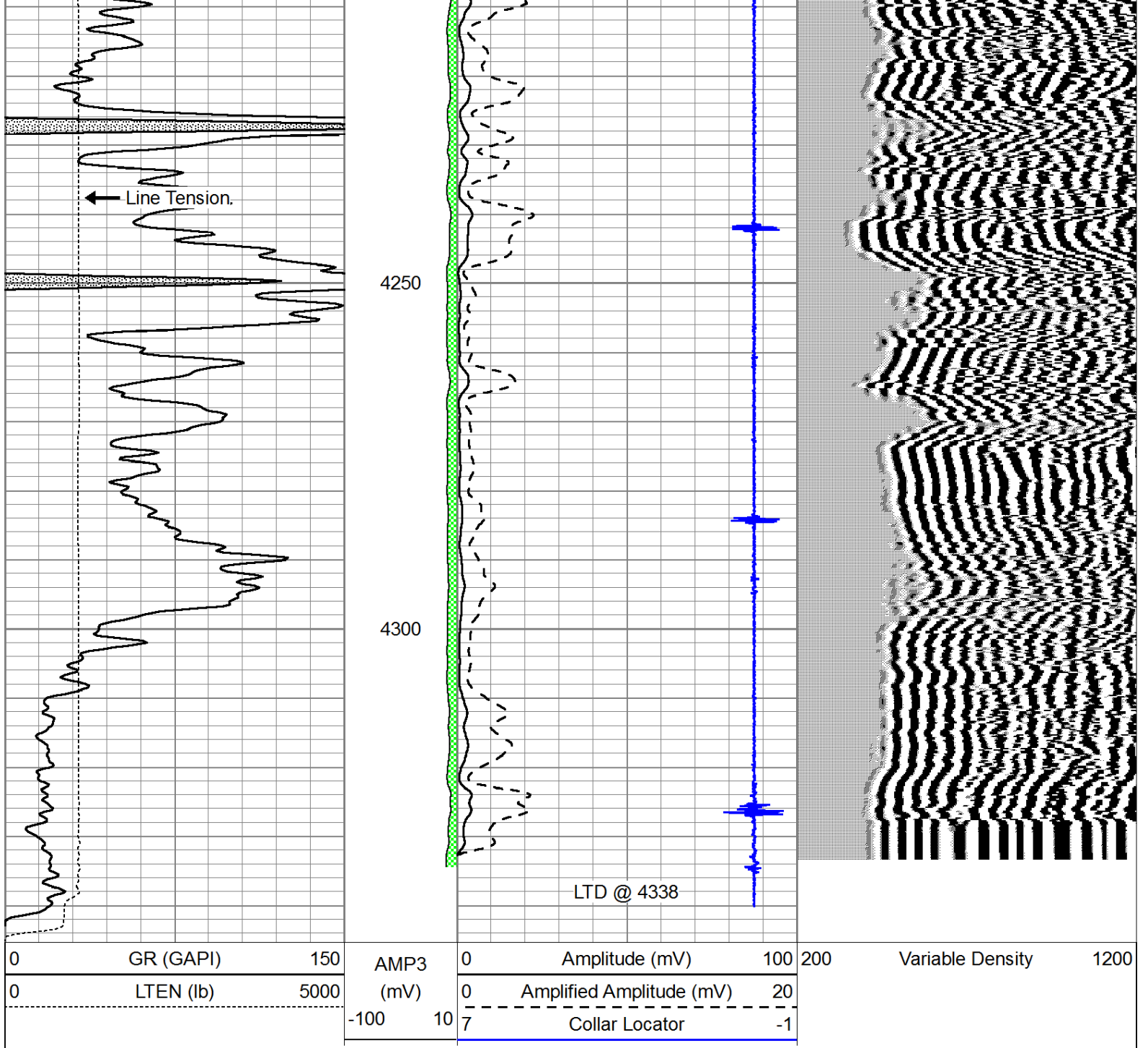
3700

3750









Pioneer Energy Services

Repeat Section

Database File: colbalt-minera1-27.db
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 Presentation Format: cbl dig
 Dataset Creation: Tue Nov 06 15:24:05 2012 by Log SCH 111116
 Charted by: Depth in Feet scaled 1:240

