



**PIONEER**

Pioneer Energy Services

## Temperature Survey

API No.

15-063-22104-00-00

Company Lario Oil & Gas Company  
Well Greg Andersen No, 2-34  
Field Logo East  
County Gove State Kansas

Location

345' FNL & 1135' FWL

Other Services

Sec: 34 Twp: 12 S Rge: 31 W

Permanent Datum Ground Level Elevation 2957  
Log Measured From Kelly Bushing 11 Ft. Above Perm. Datum  
Drilling Measured From Kelly Bushing

Elevation  
K.B. 2968  
D.F. 2957  
G.L. 2957

Date 06/14/2013

Run Number One

Type Log Temp

Depth Driller 4750

Depth Logger 2500

Bottom Logged Interval 2500

Top Logged Interval 0

Type Fluid In Hole Water

Top Of Cement

Density

Level Full

Max. Rec. Temp. F 118

Operating Rig Time 1.5 Hrs.

Equipment -- Location 18 Hays

Recorded By D. Hagan

Witnessed By Larry Karlin

Borehole Record

Casing Record

Run No. Bit From To Size Wgt. From To

8 5/8 0 262

5 1/2 0 TD

<<< Fold Here >>>

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

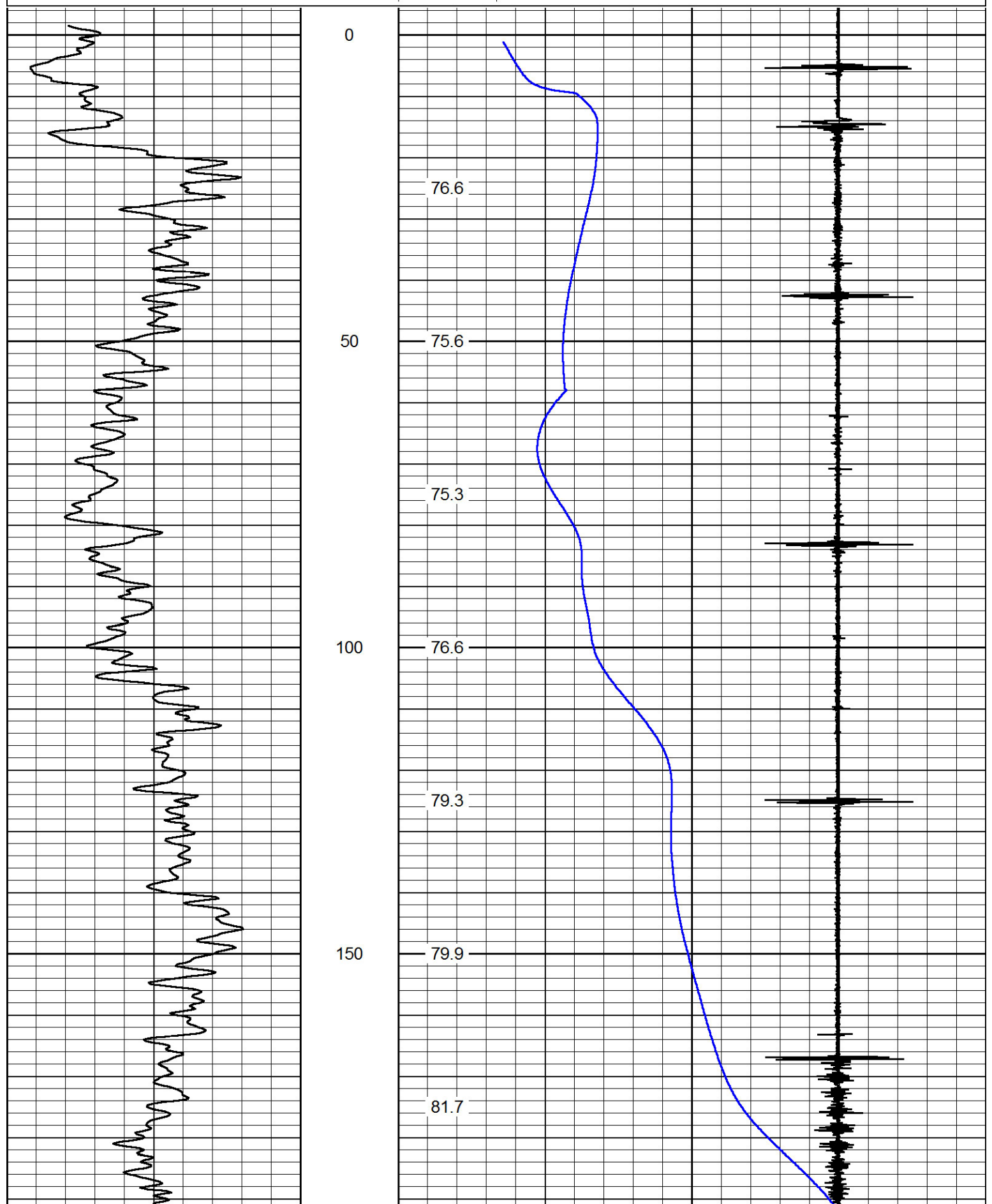
Thank you for using Pioneer Energy Services  
785.625.3858

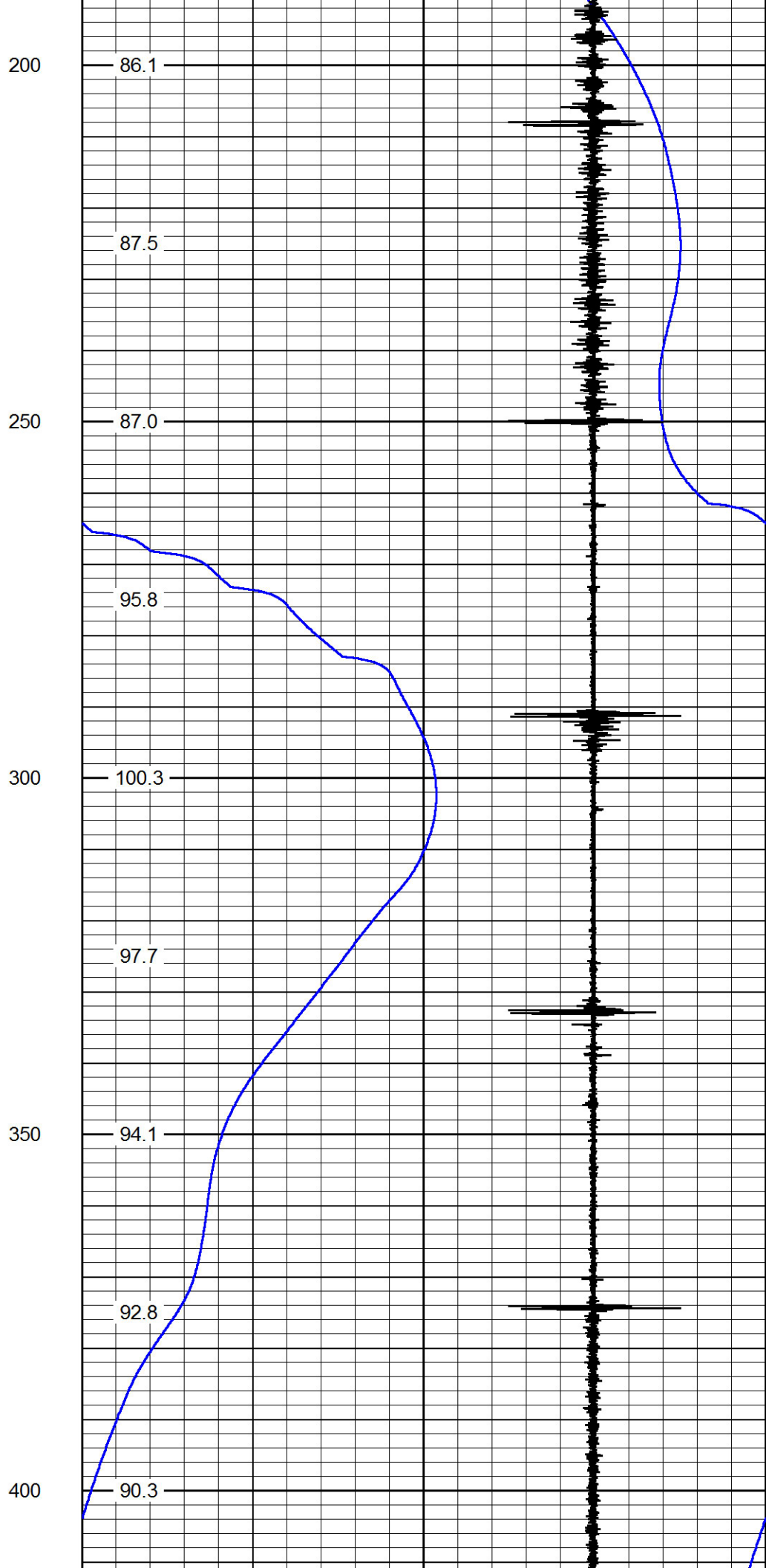
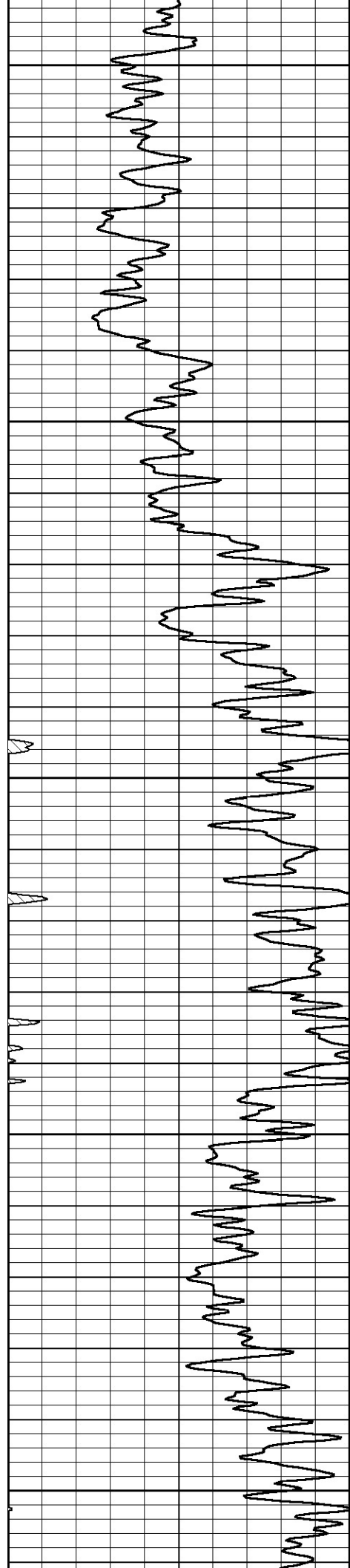
Campus, Ks. 10 South to T Rd.  
1/2 West, South into

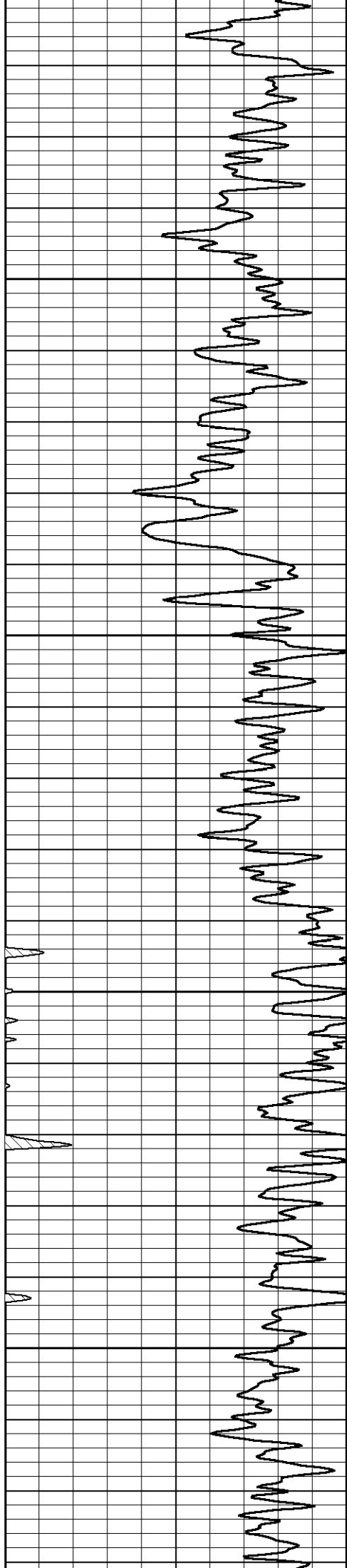
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Dataset Pathname: temp/pass2.1  
Presentation Format: temp  
Dataset Creation: Fri Jun 14 10:41:24 2013  
Charted by: Depth in Feet scaled 1:240

|   |           |     |
|---|-----------|-----|
| 0 | Gamma Ray | 150 |
|---|-----------|-----|

|                |             |    |     |    |
|----------------|-------------|----|-----|----|
| 70             | TEMP (degF) |    |     | 90 |
| TEMP<br>(degF) |             | -4 | CCL | 4  |
| TEMP<br>(degF) |             |    |     |    |







450

500

550

600

89.0

89.0

88.4

88.1

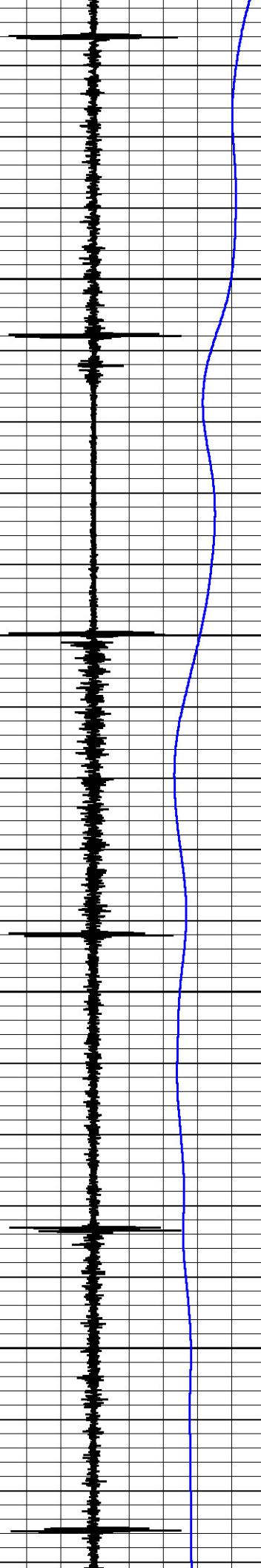
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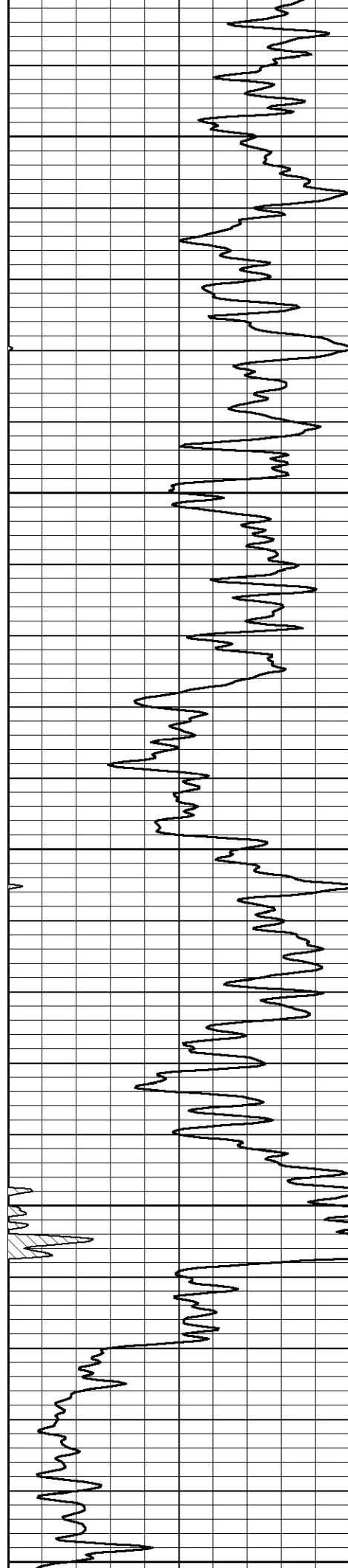
87.5

87.6

87.8

87.8





650

700

750

800

850

88.2

88.8

89.5

90.0

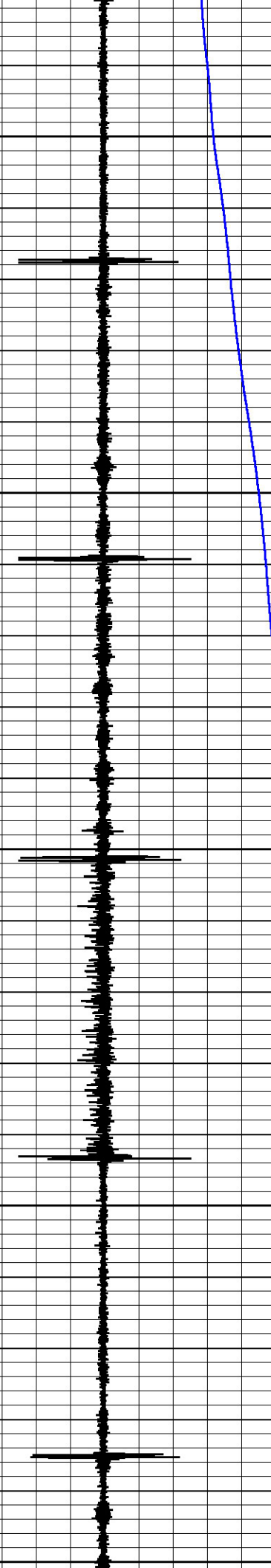
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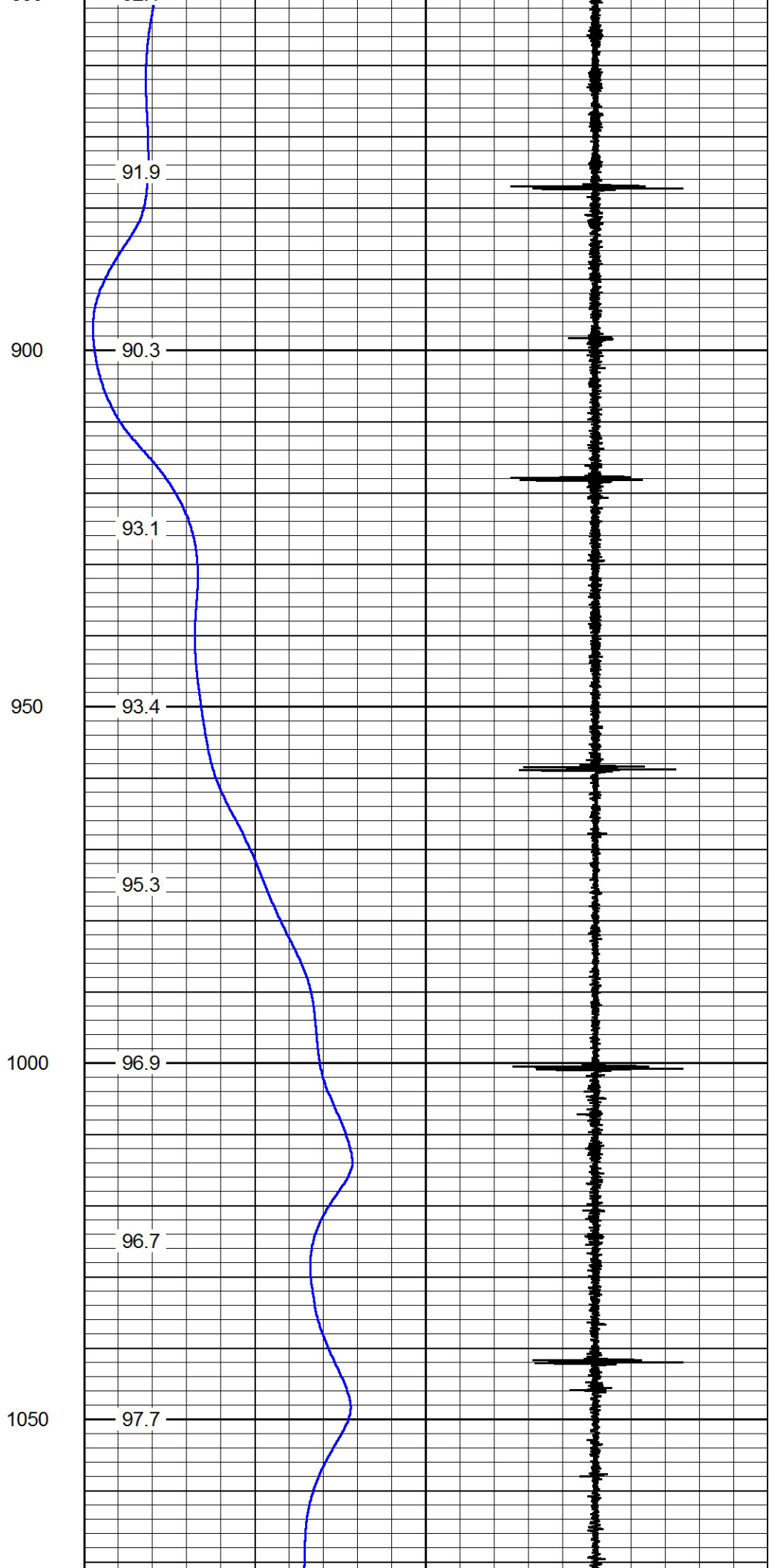
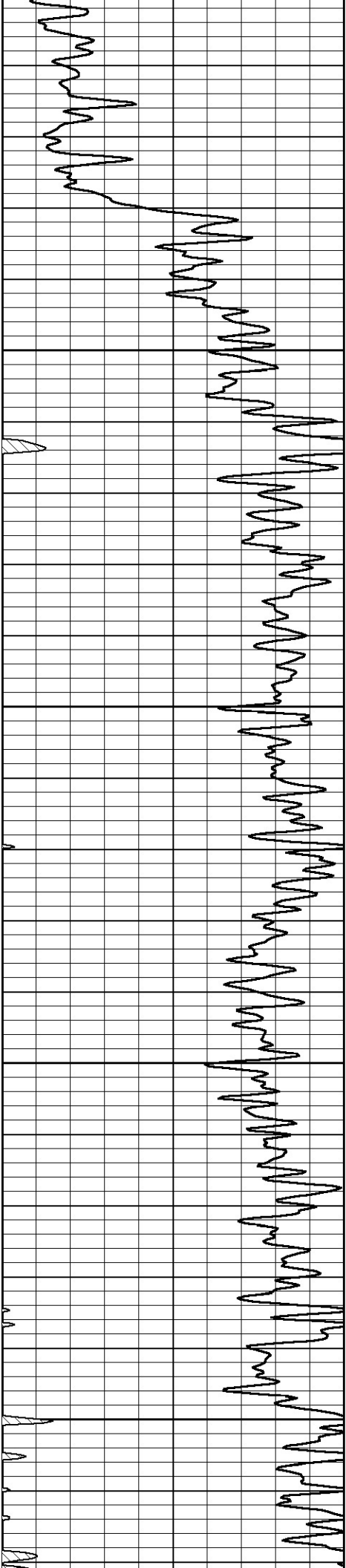
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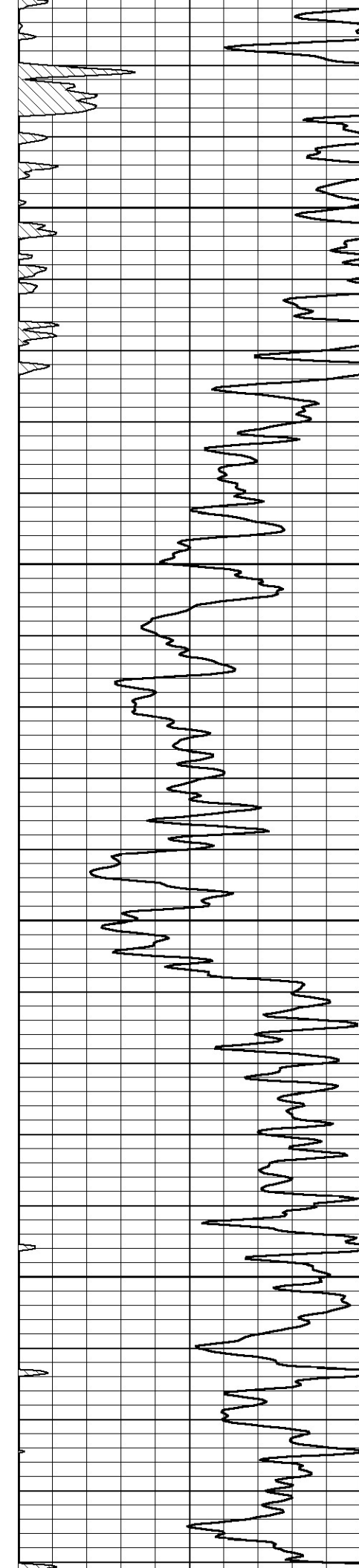
91.1

92.7

92.1







1100

1150

1200

1250

96.4

96.7

96.6

96.5

96.5

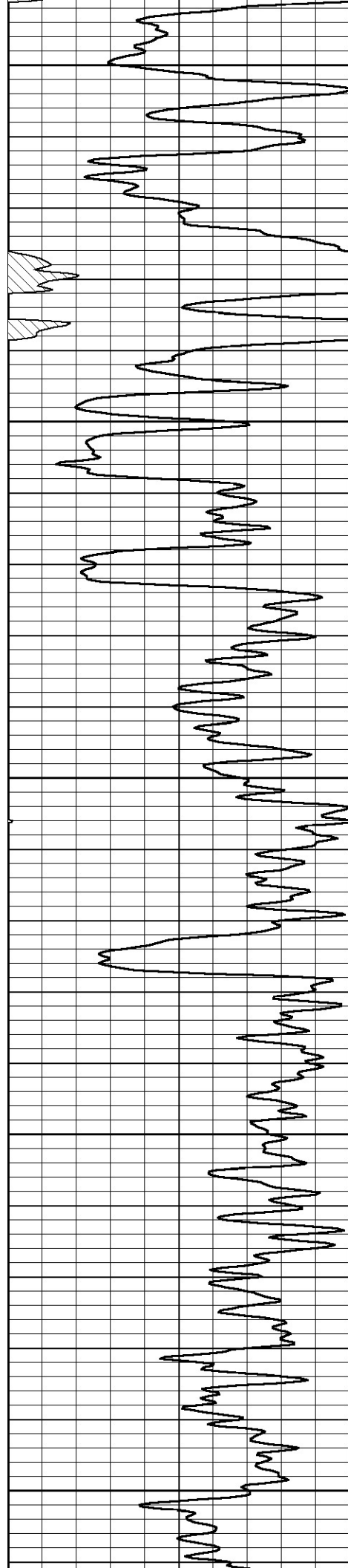
97.1

97.6

97.9

99.0





1300

1350

1400

1450

1500

99.3

96.8

98.2

97.3

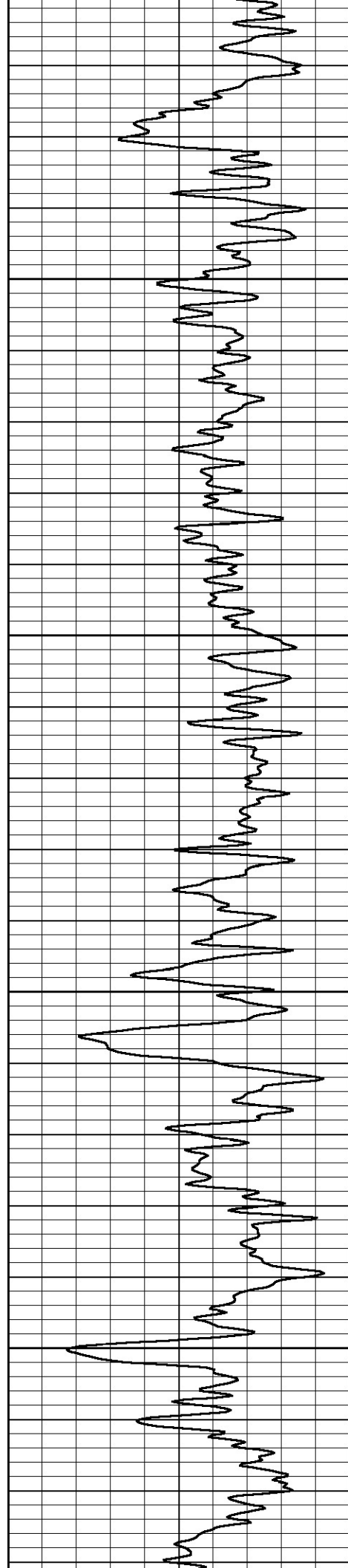
98.5

103.2

104.0

103.4

105.4

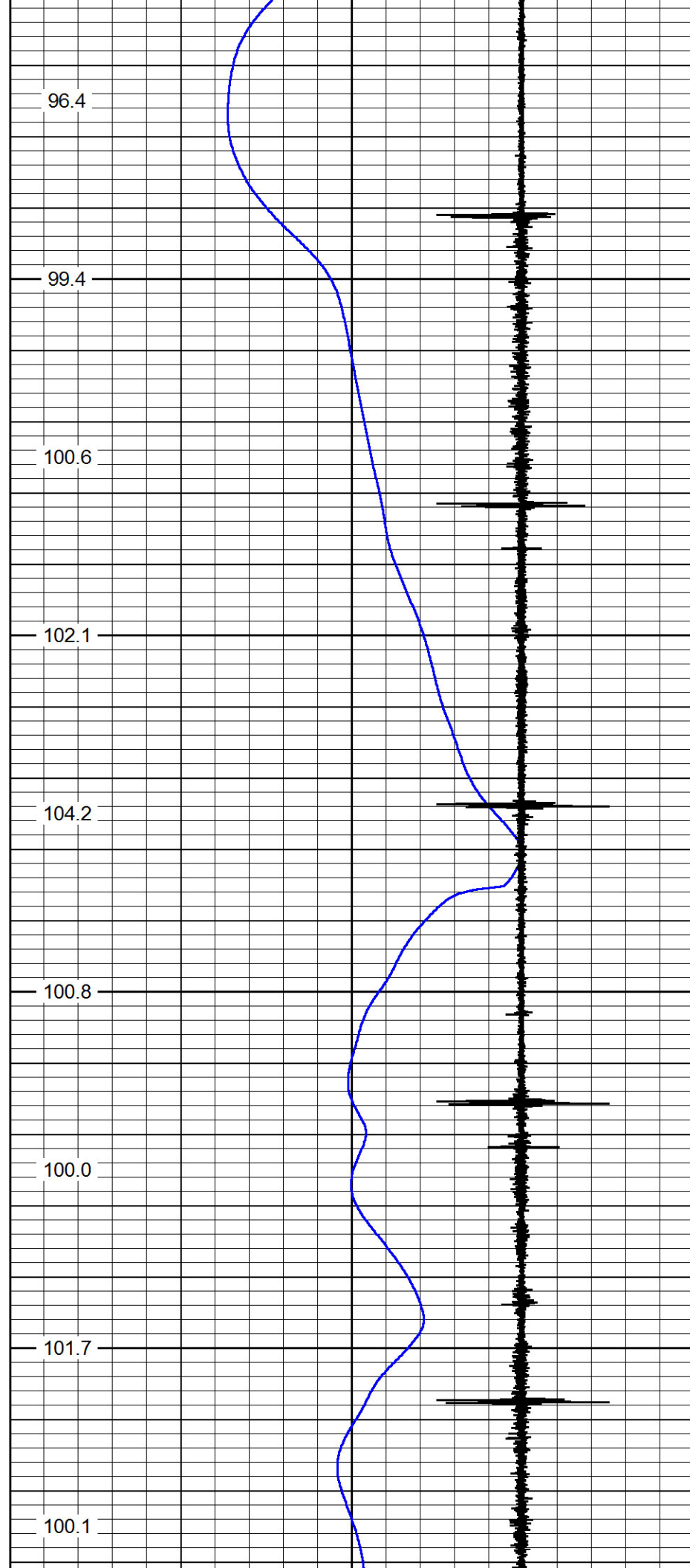


1550

1600

1650

1700



96.4

99.4

100.6

102.1

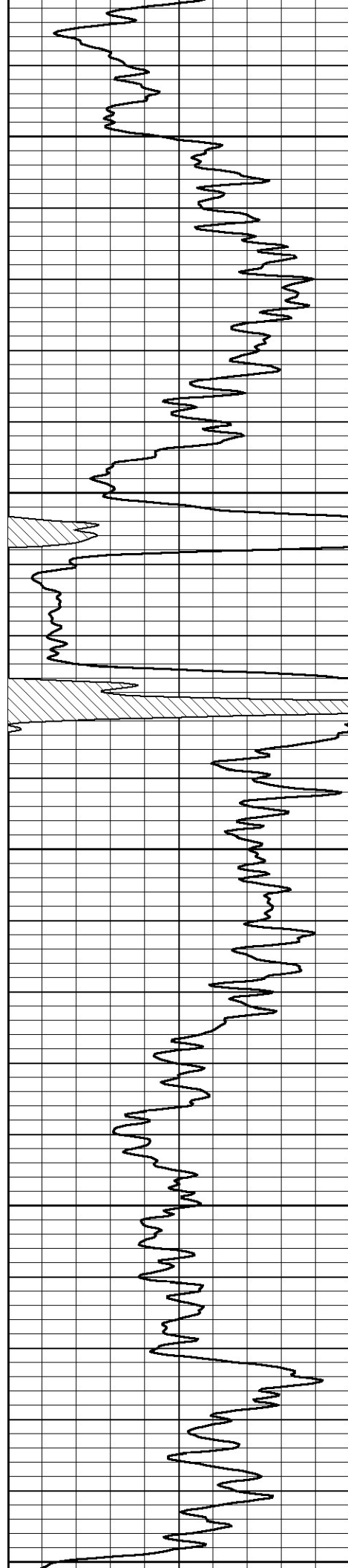
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100.8

100.0

101.7

100.1



1750

1800

1850

1900

1950

98.2

104.9

103.6

101.0

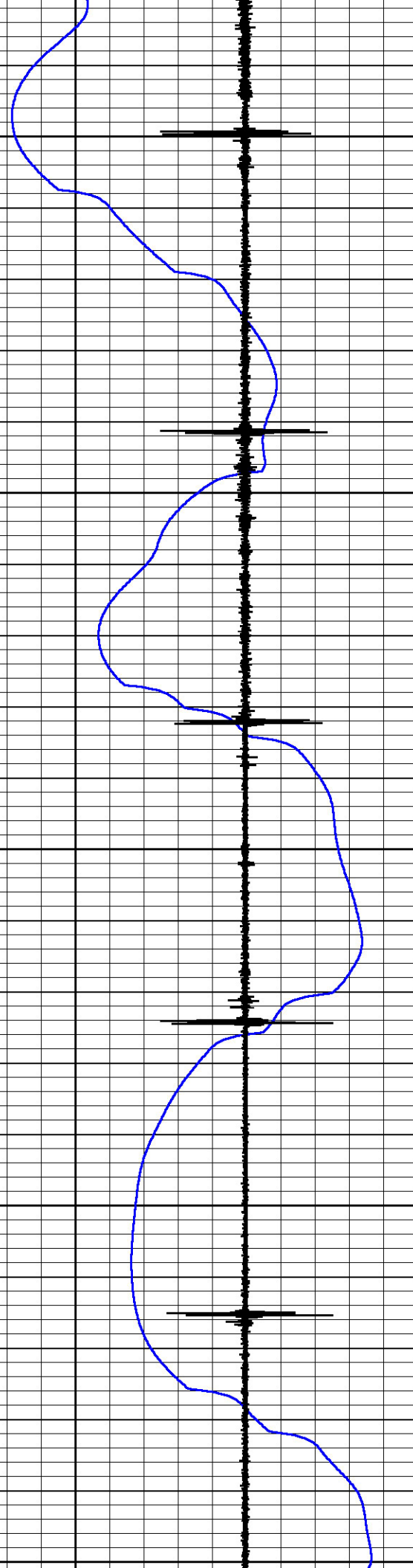
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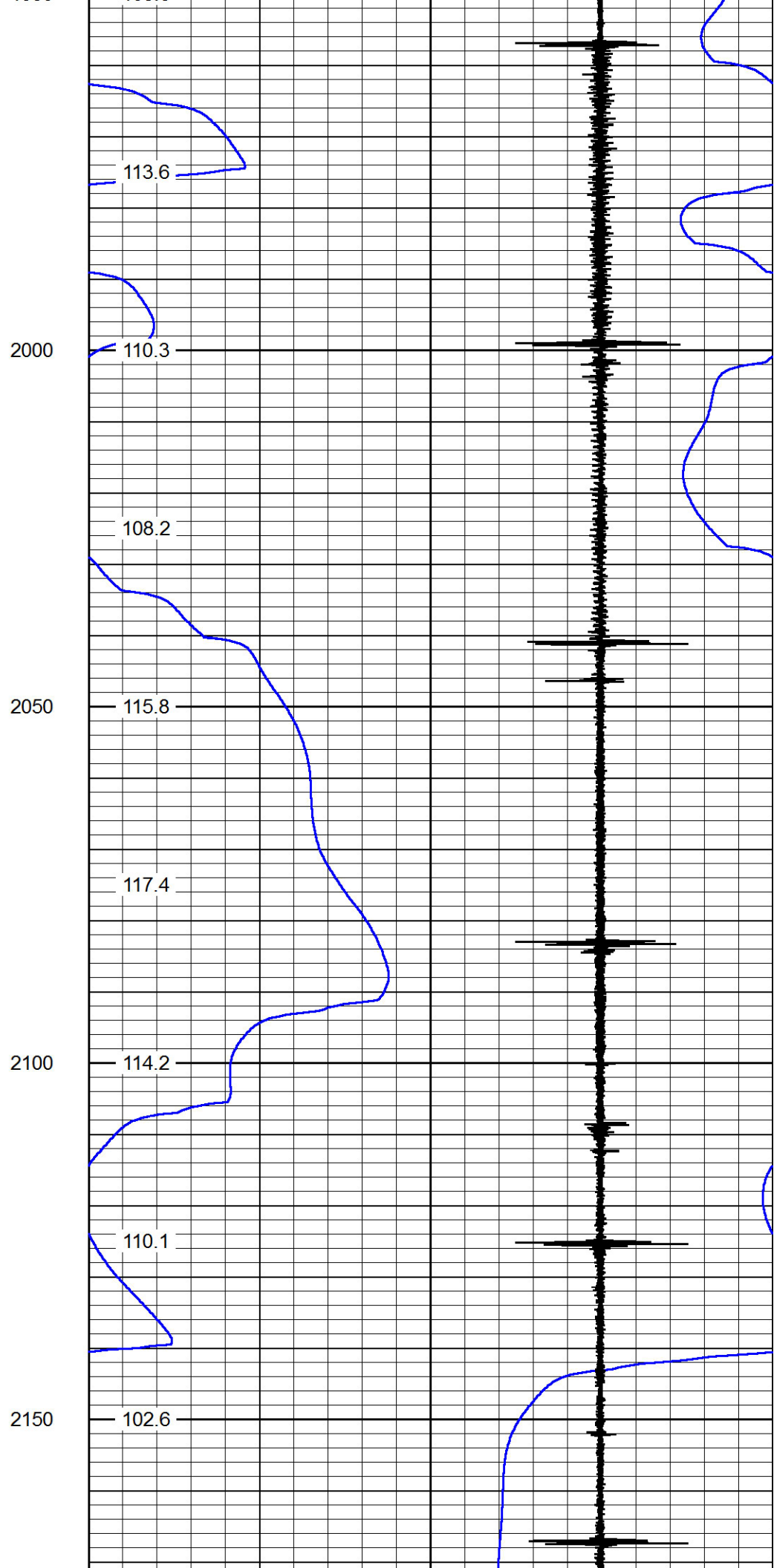
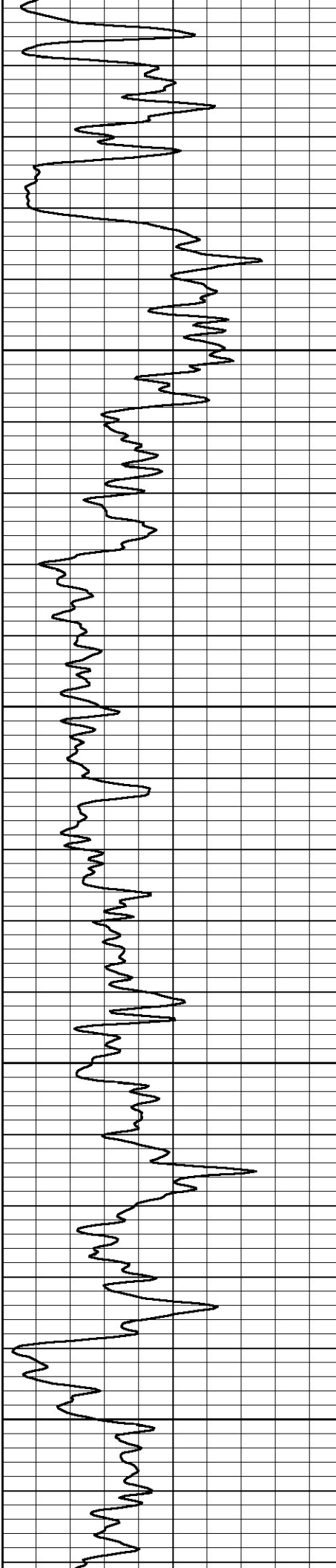
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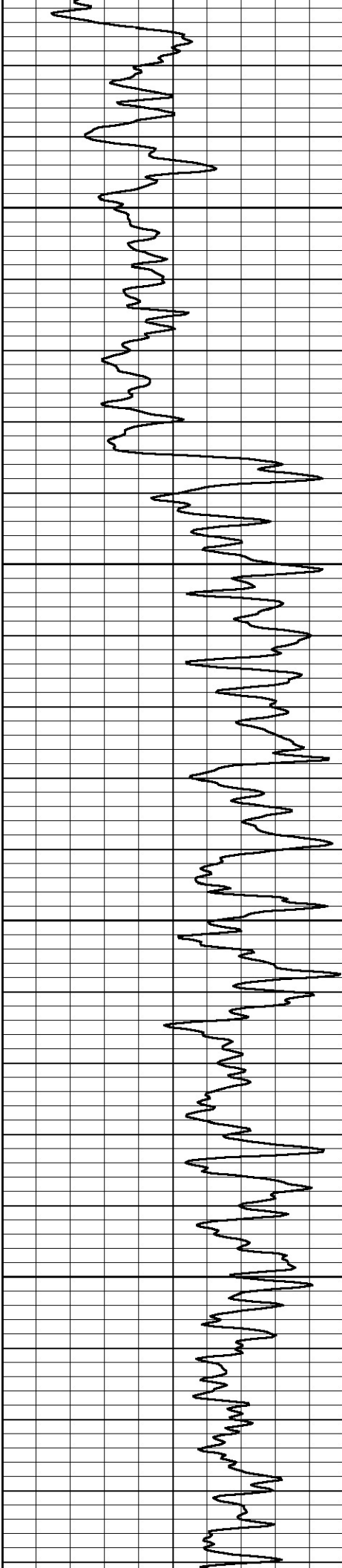
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103.1

108.6







2200

2250

2300

2350

102.0

103.4

102.9

104.0

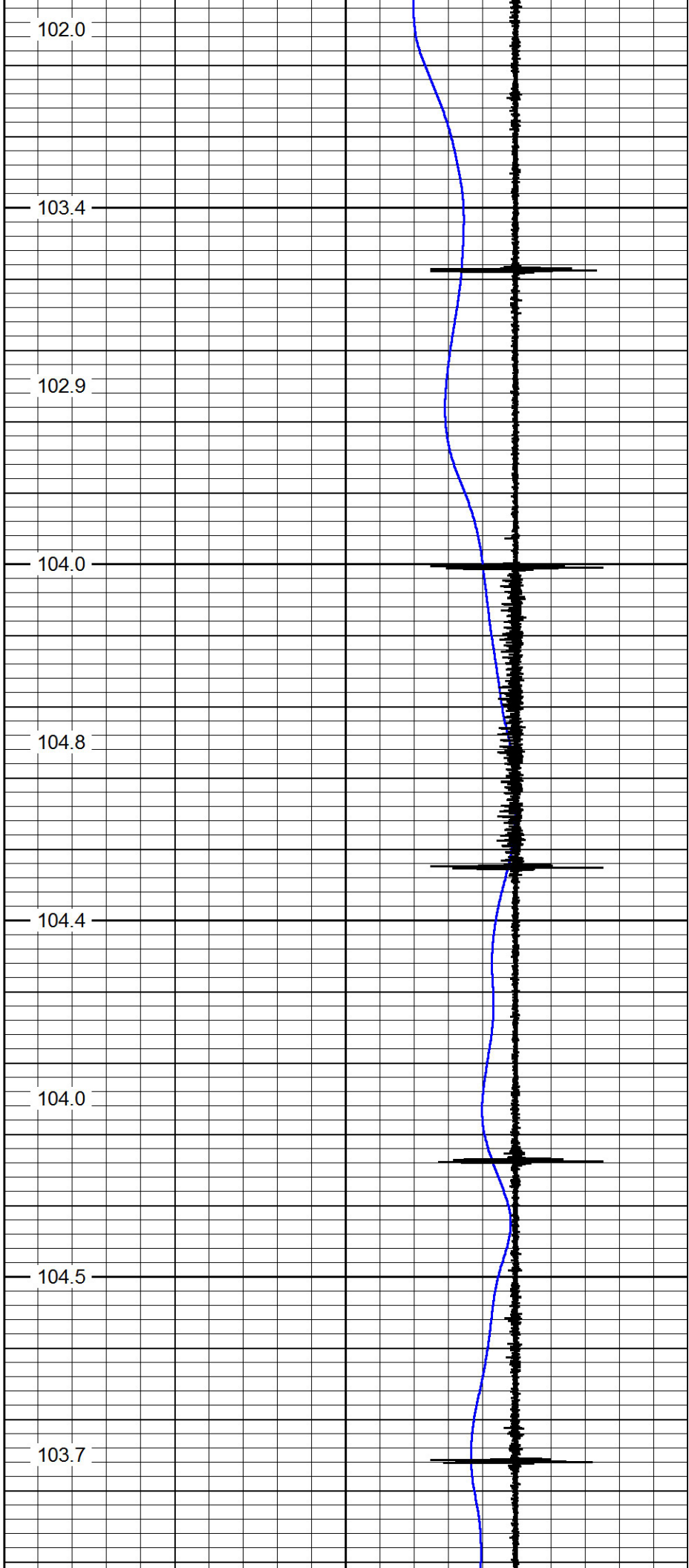
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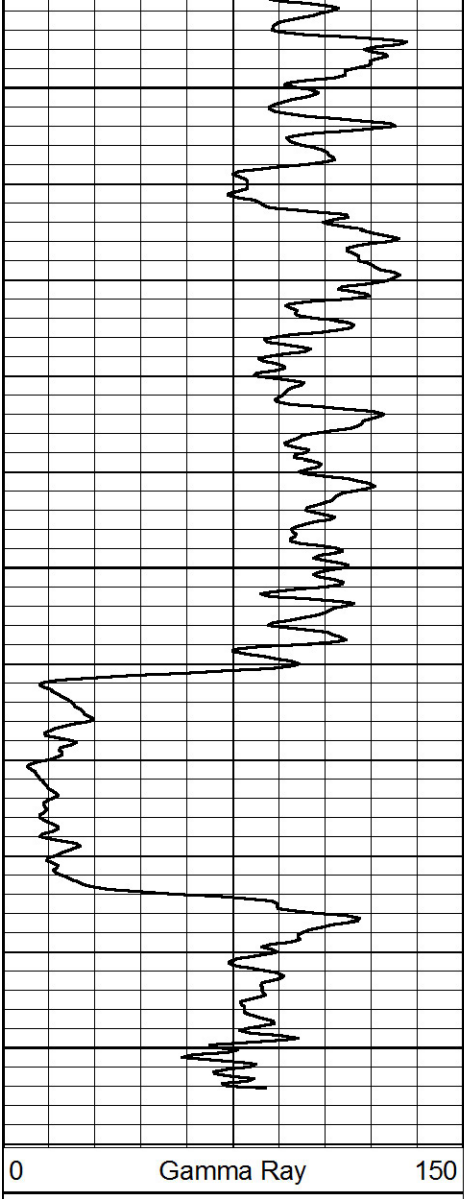
104.4

104.0

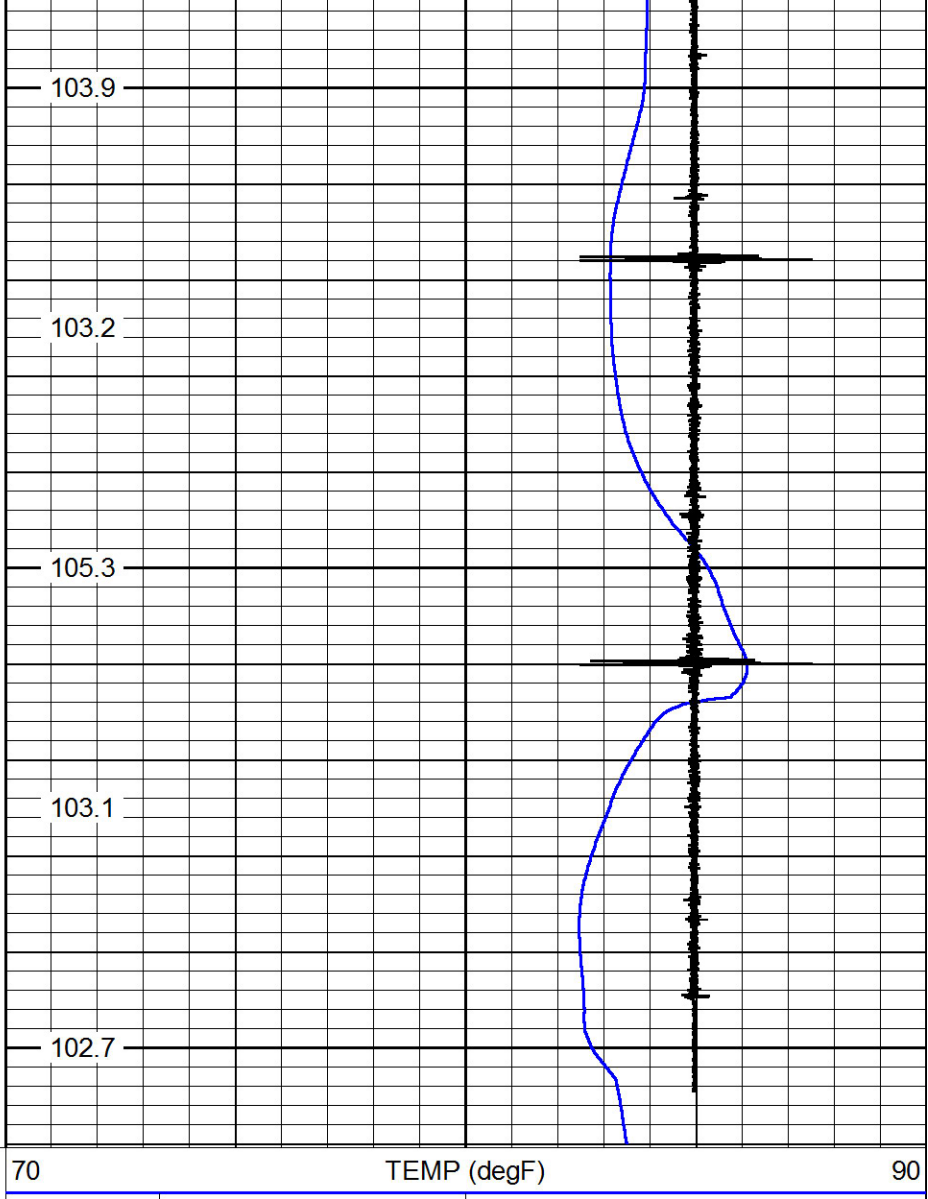
104.5

103.7





2400  
2450  
2500



TEMP  
(degF)  
TEMP  
(degF)

-4 CCL 4