



SUPERIOR
WELL SERVICES
Black Lick, Pa.
Mercer, Pa.
Wooster, Oh.
Cleveland, Ok.
Trinidad, Co.

COMPENSATED DENSITY NEUTRON LOG

Company XTO Energy Inc.
Well Hill Ranch 23-12
Field Purgatoire River
County Las Animas State Colorado

Location: API # : 05 071 09476 00

2521' FSL & 577' FWL

SEC 23 TWP 34S RGE 67W

Permanent Datum Ground Level Elevation 7785'
Log Measured From Ground Level
Drilling Measured From Ground Level

Other Services
DIL
Elevation
K.B. -----
D.F. -----
G.L. 7785'

Date 4-25-08

Run Number One

Depth Driller 2450'

Depth Logger 2448'

Bottom Logged Interval 2425'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 467'

Casing Logger 467'

Bit Size 7 7/8"

Type Fluid in Hole Water

Density / Viscosity ///

pH / Fluid Loss ///

Source of Sample ///

Rm @ Meas. Temp ///

Rmf @ Meas. Temp ///

Rmc @ Meas. Temp ///

Source of Rmf / Rmc ///

Rm @ BHT ///

Time Circulation Stopped 12:00 P.M.

Time Logger on Bottom 2:15 P.M.

Maximum Recorded Temperature 114 DEG F

Equipment Number T697

Location Trinidad

Recorded By J. Cappellucci

Witnessed By Mr. Don Johnson

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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

Neutron Density Porosity Presented On Sandstone Matrix.
ABHV Calculated For 5 1/2" Casing.
Neutron Porosity Invalid from 1456' to 1364' due to foam.
Well Directions:
Lorencito, 2.2 miles past Compressor station take right,
at next Y stay right up hill, At top of hill take hard left,
take third left, stay right at Hill Ranch 14-14, drive through one location,
take next left, drive through two locations, dead end on location.

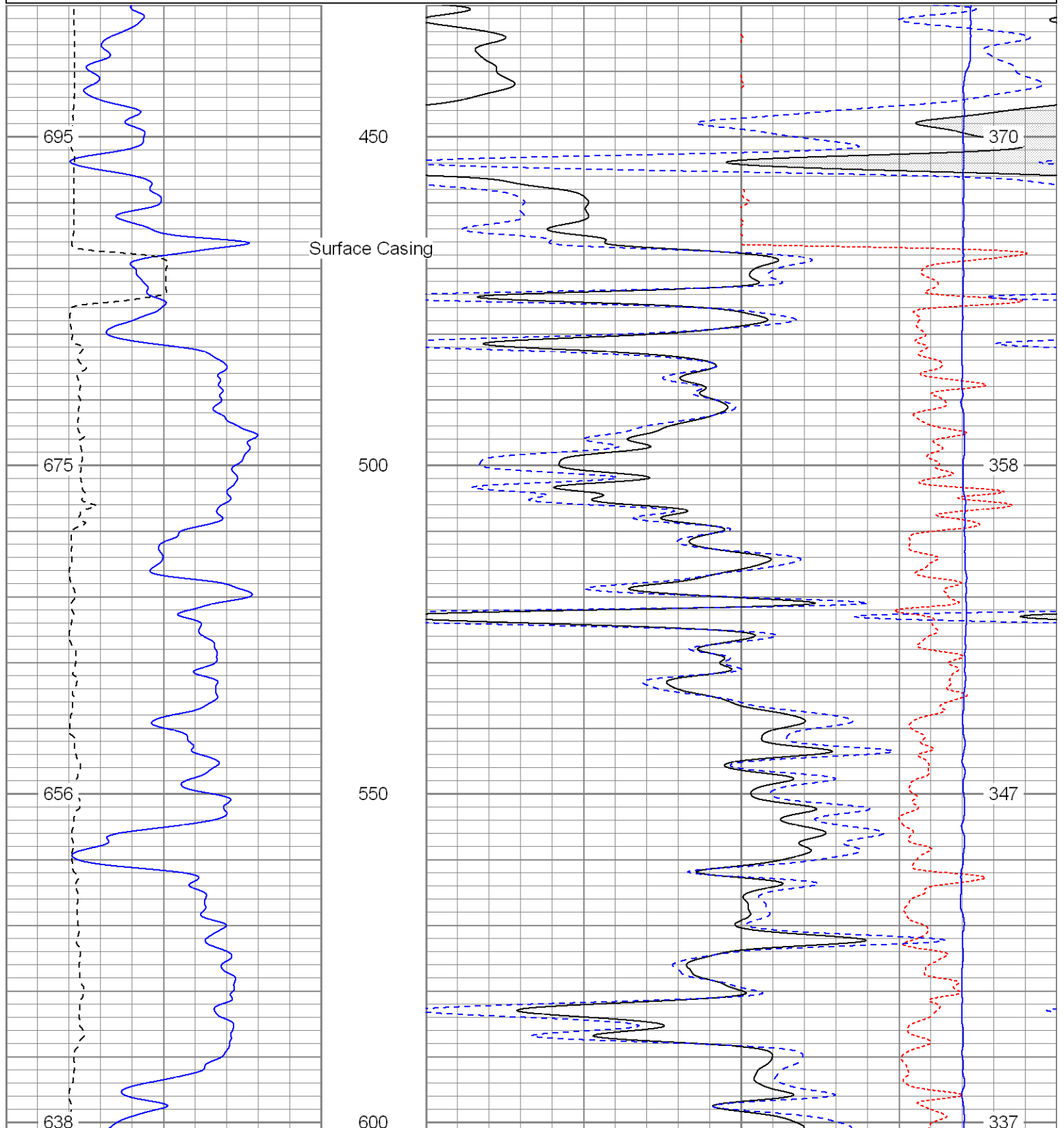


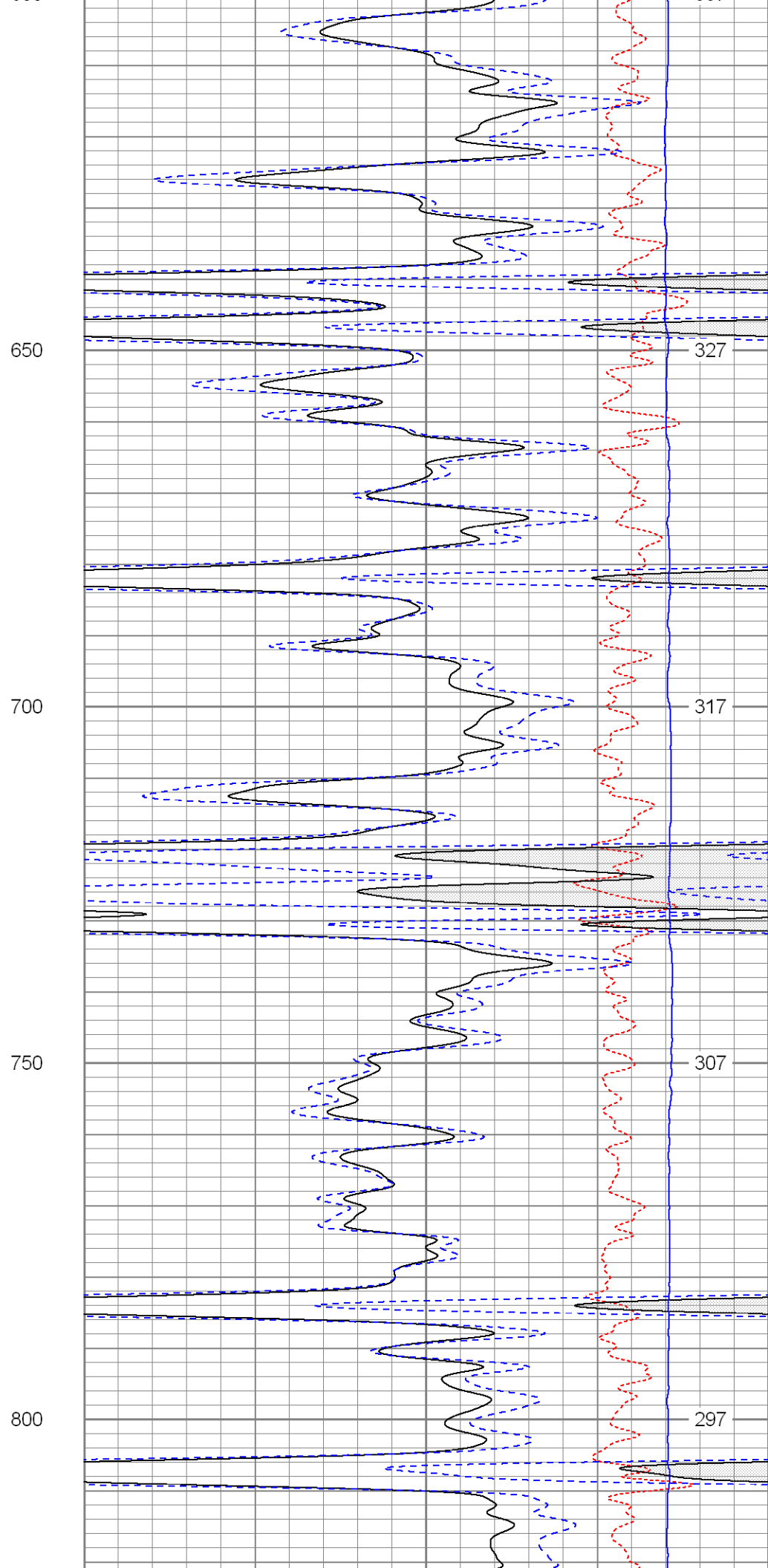
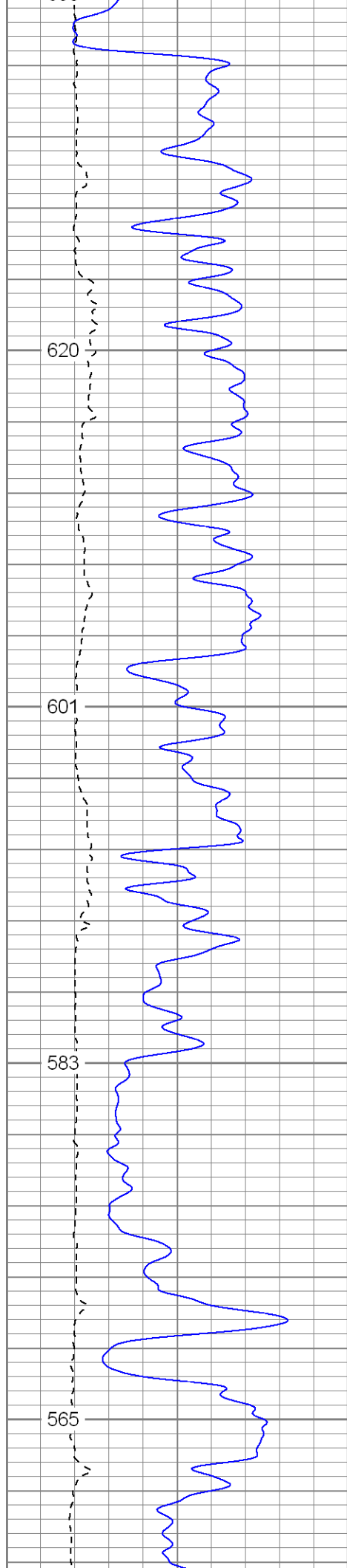
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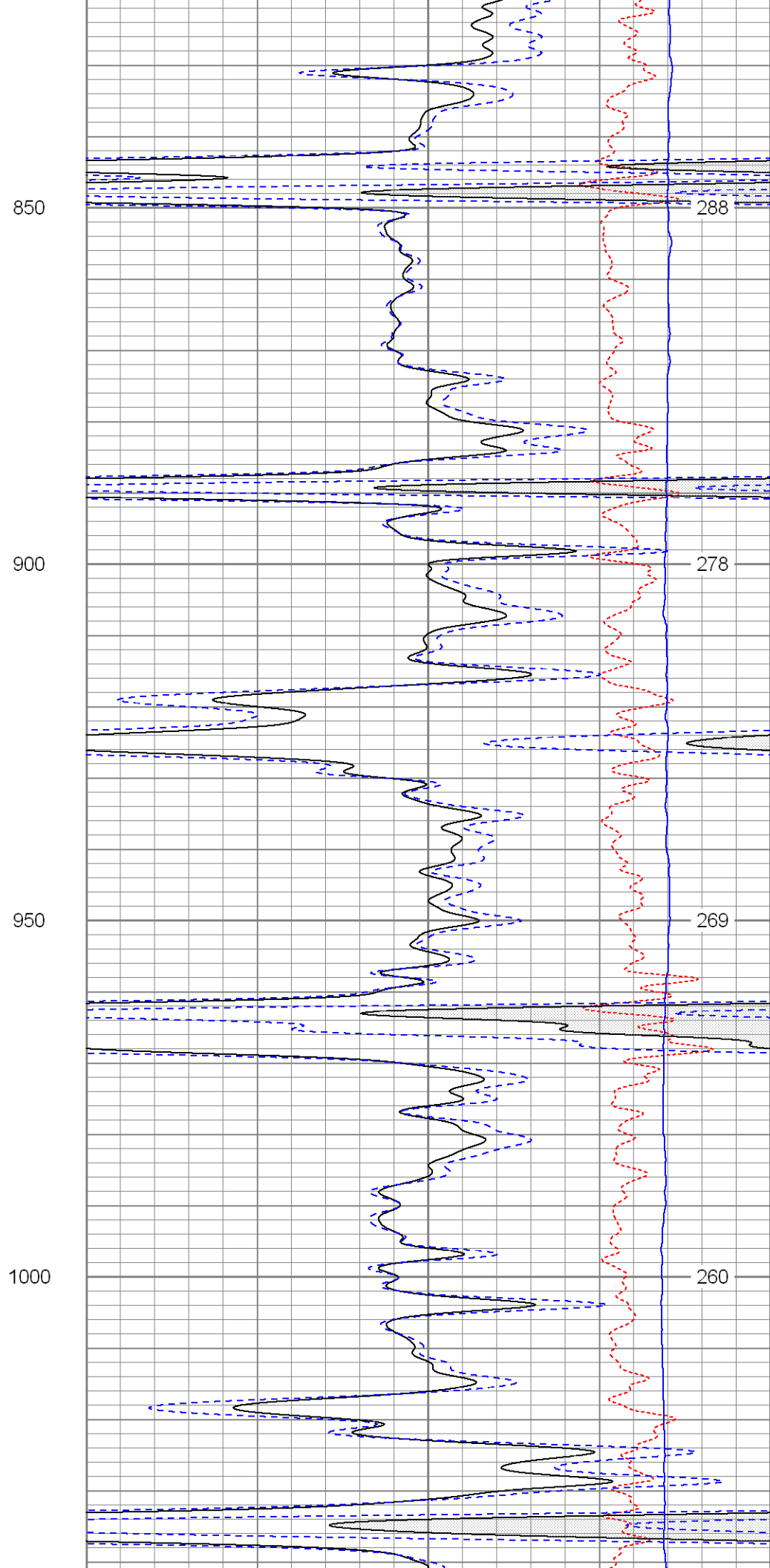
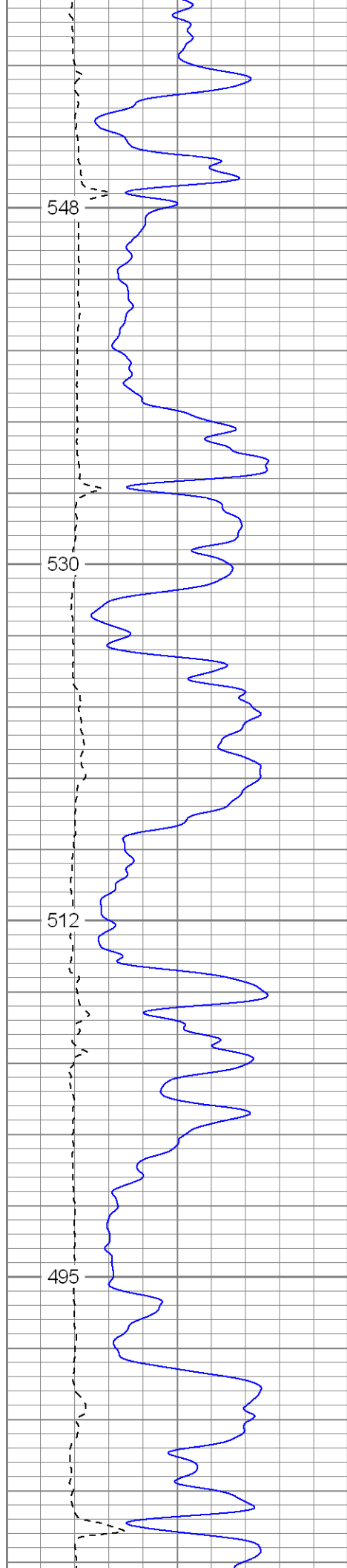
Main Pass

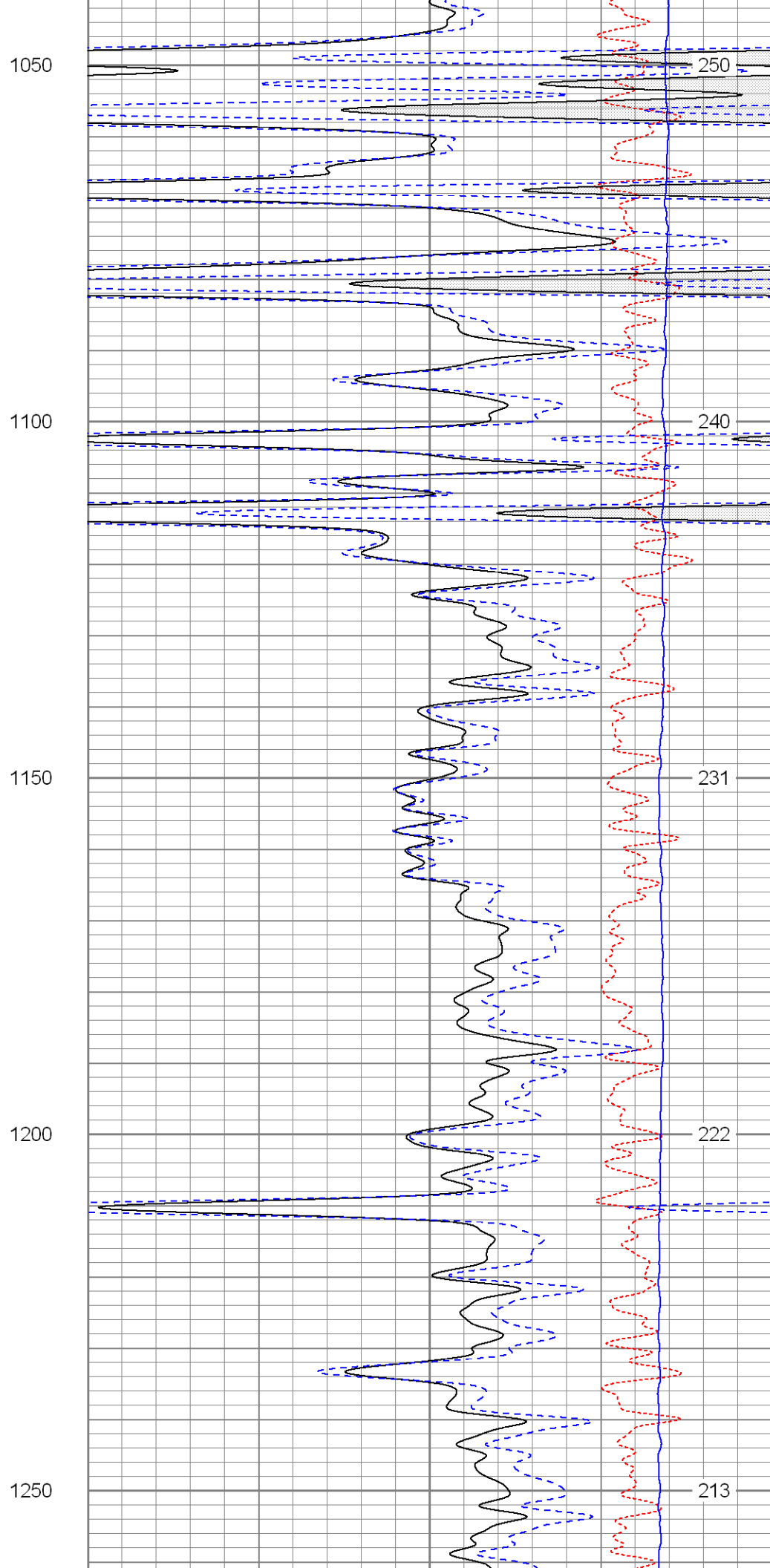
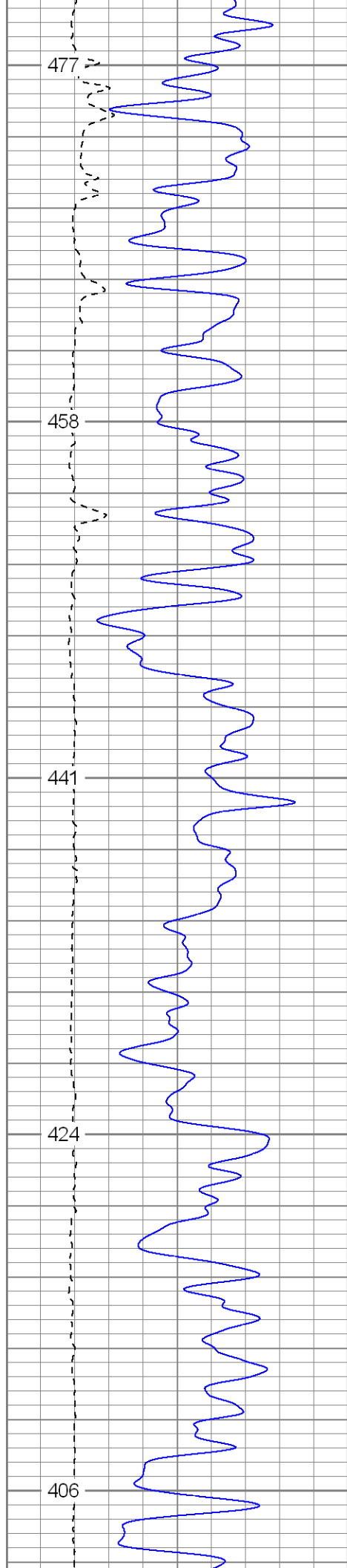
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Dataset Pathname: pass4.1
Presentation Format: cdl
Dataset Creation: Fri Apr 25 17:10:34 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

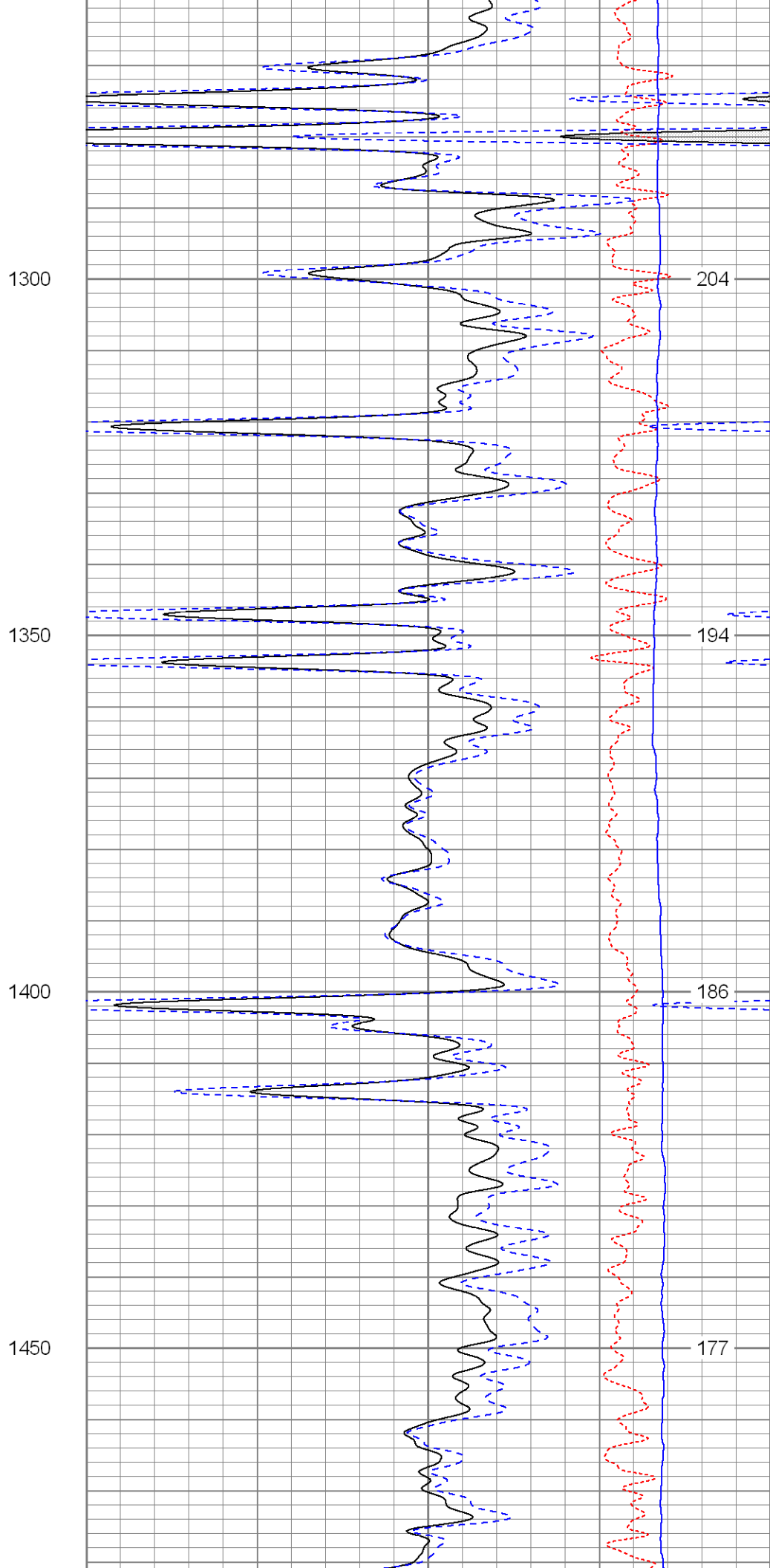
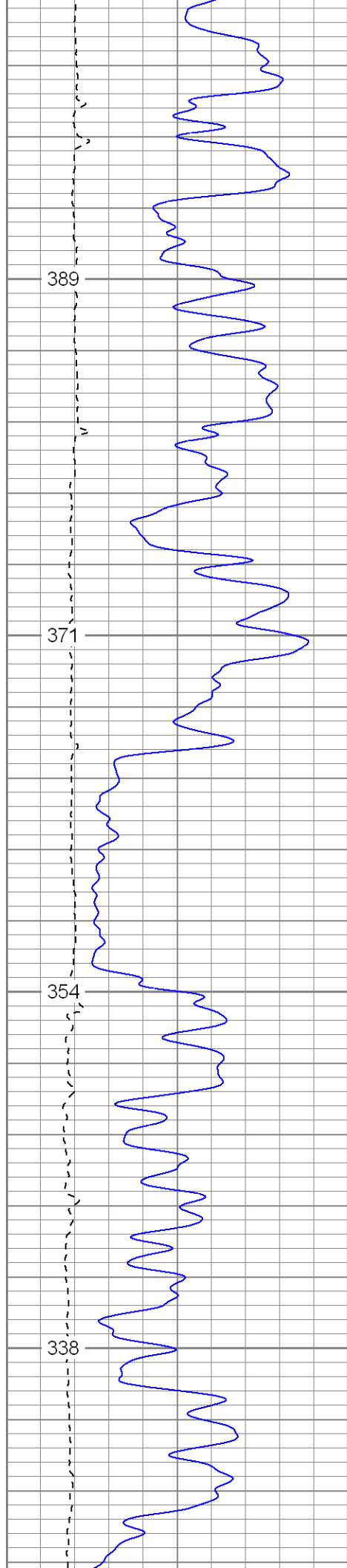
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6	DCAL (in)	16	1	RHOB (g/cc)	2
TBHV (ft3)			30	DPOR (pu)	-10
			-0.5 RHOC (g/cc) 0.5		
			4000 LTEN (lb) 0		
			ABHV (ft3)		

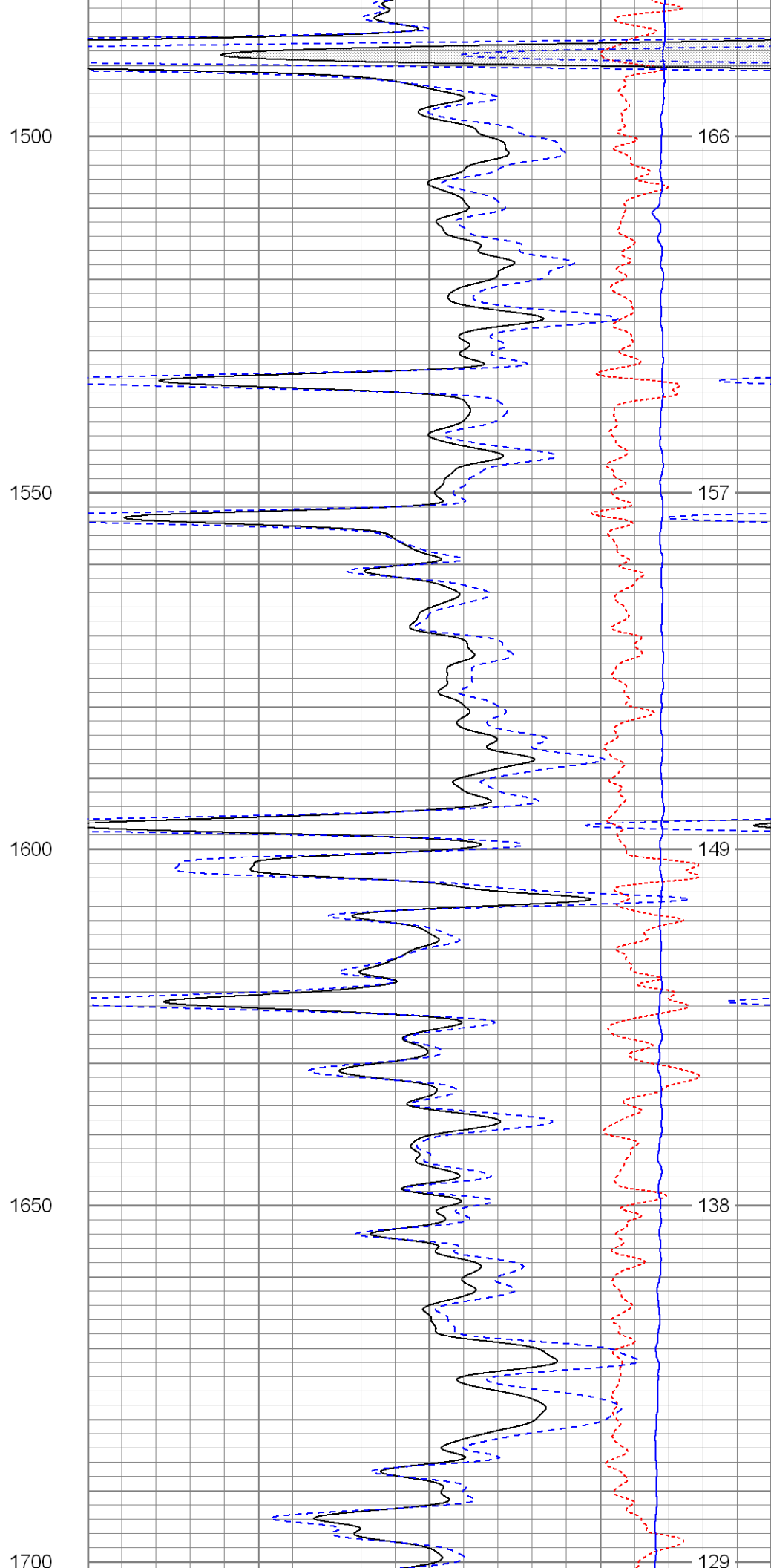
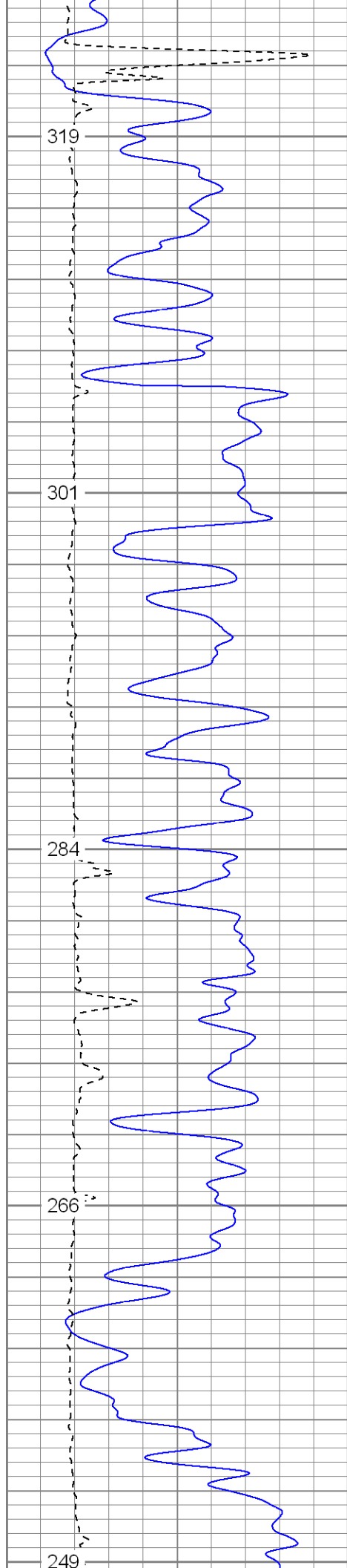


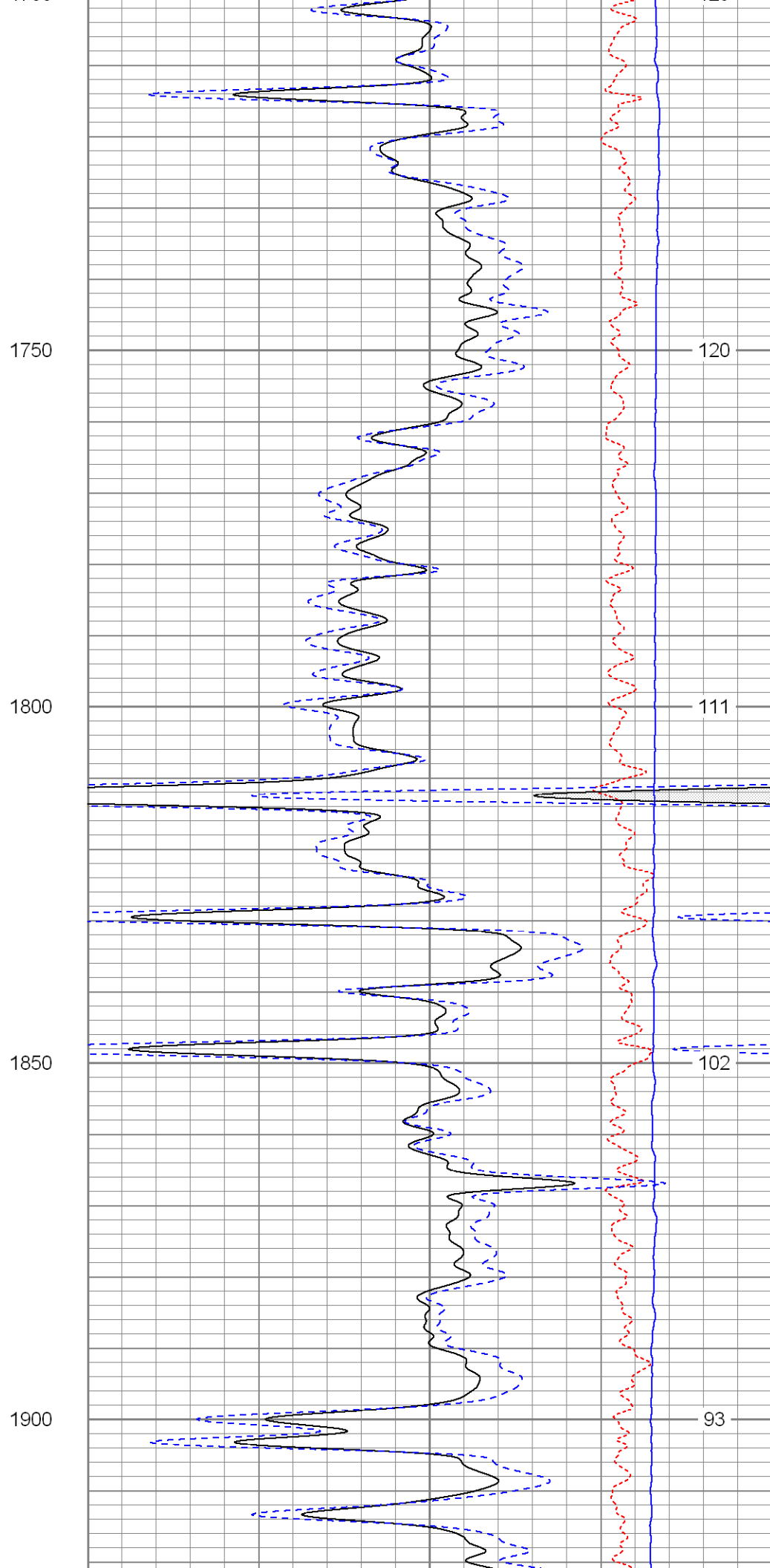
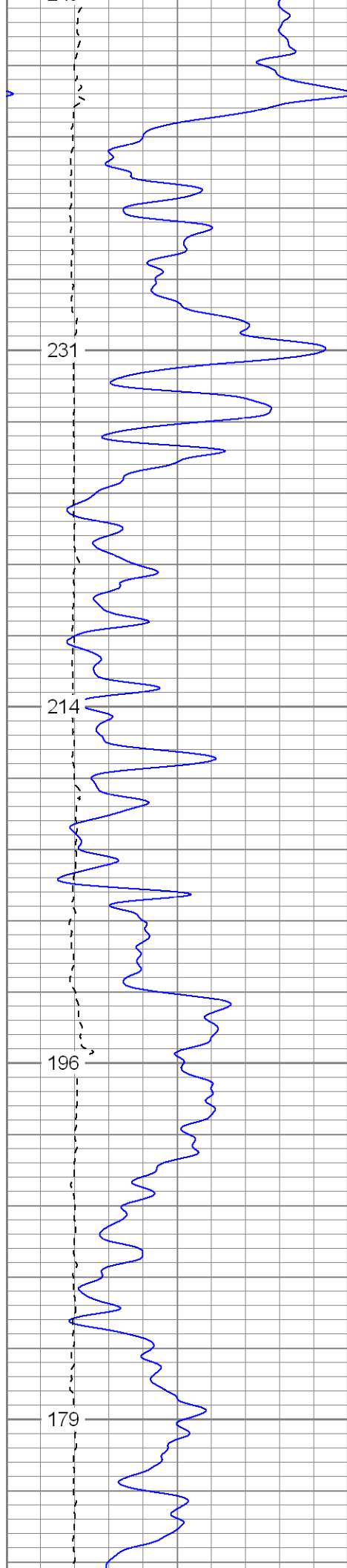


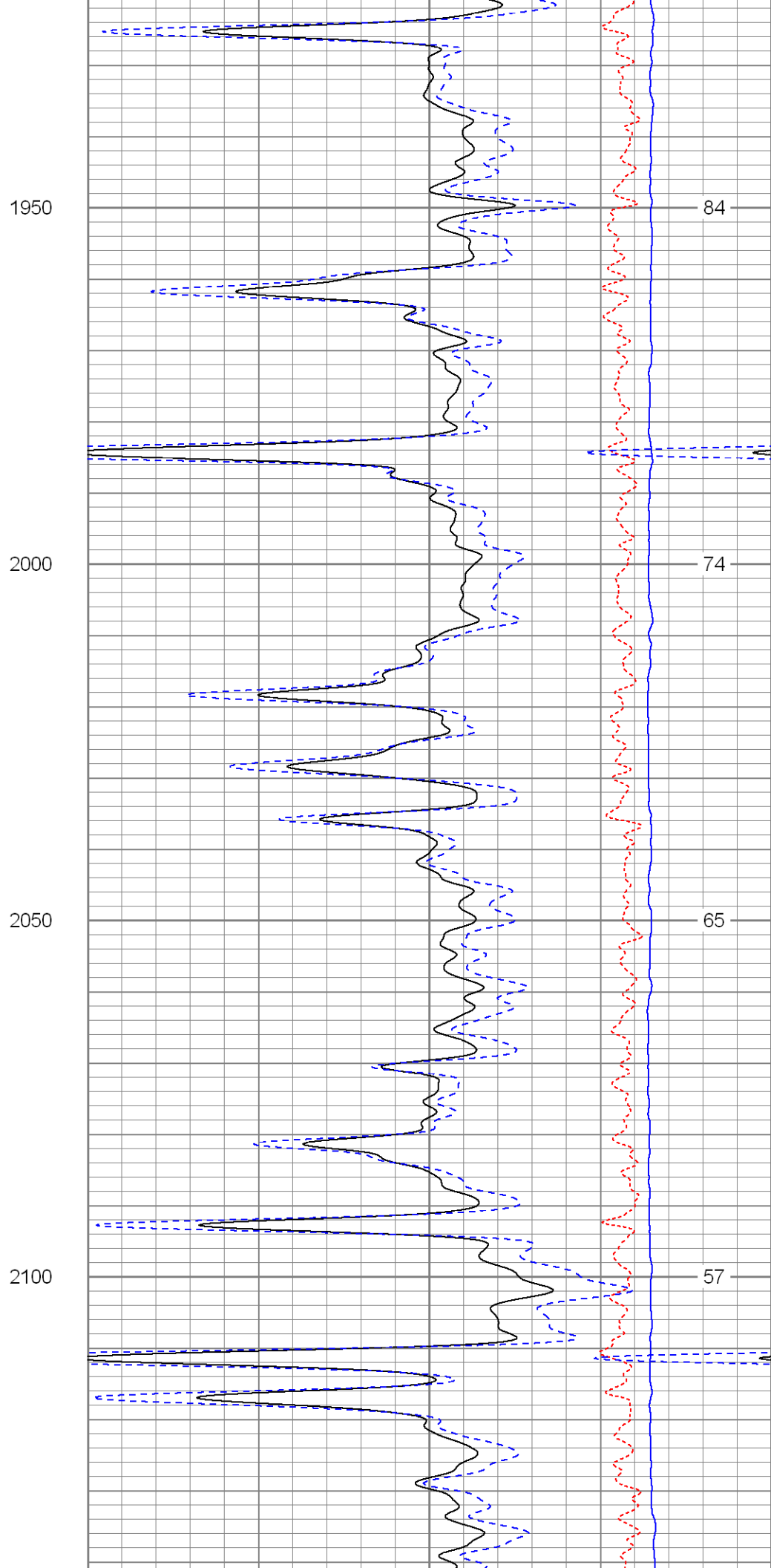
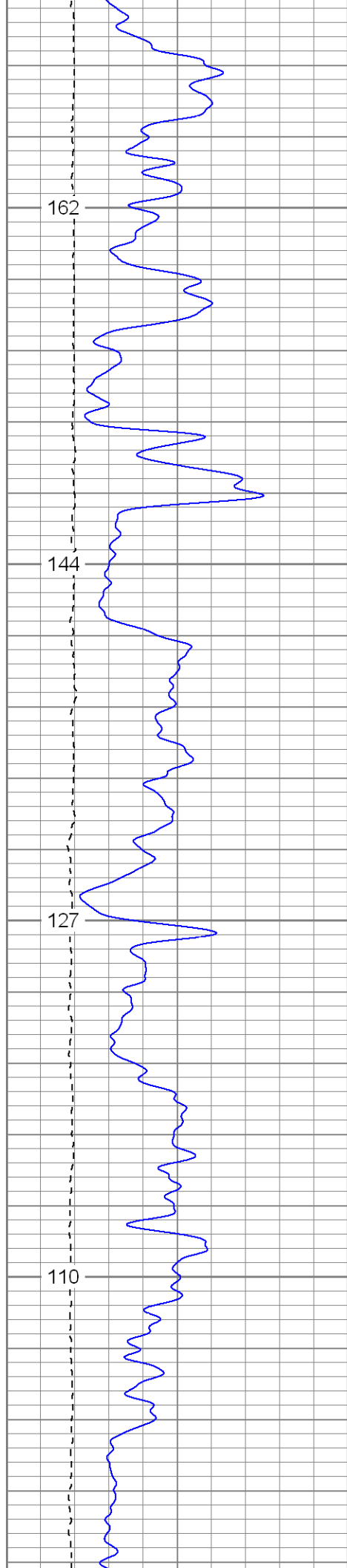


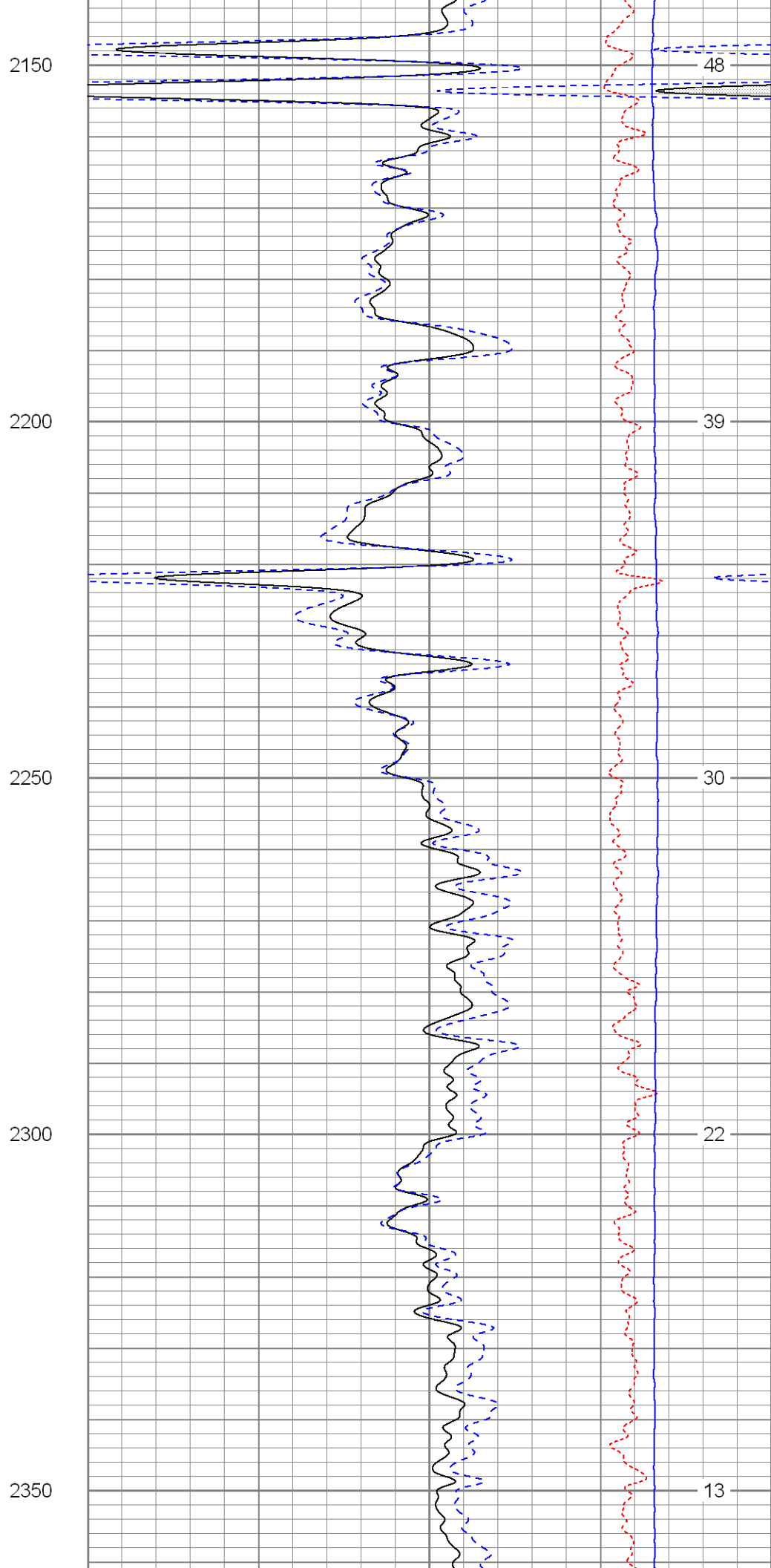
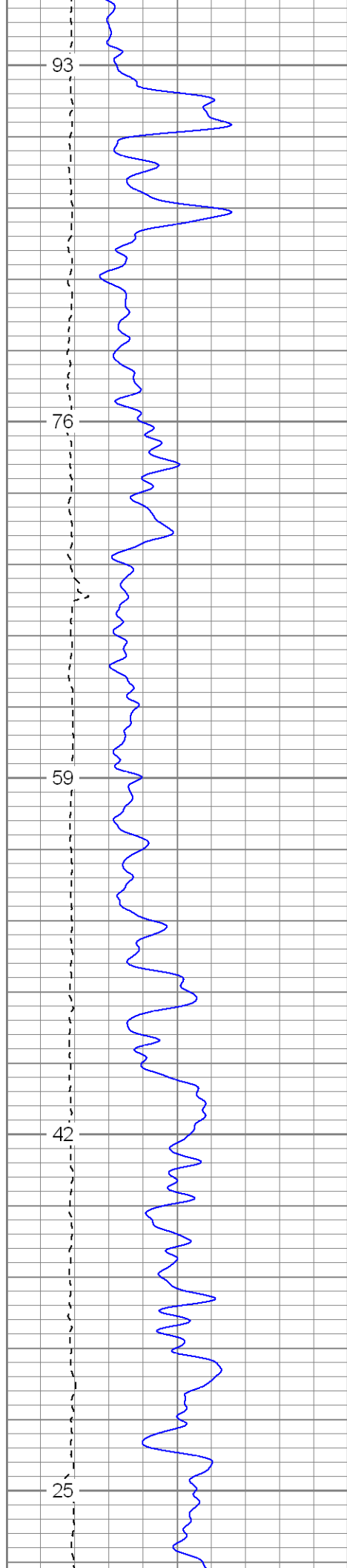


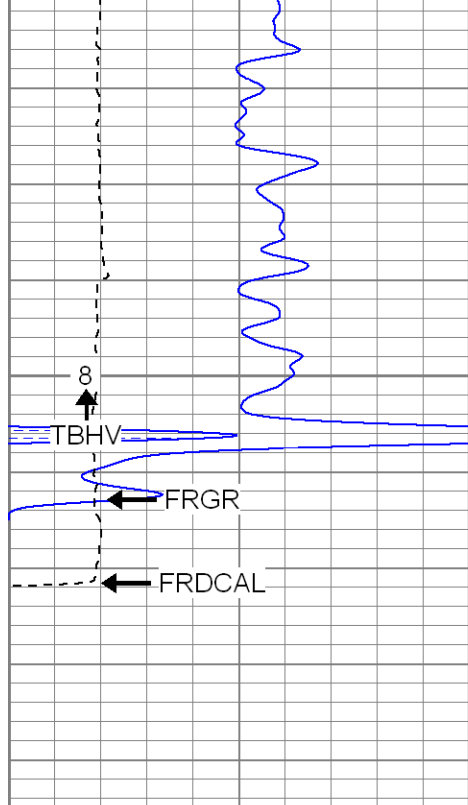








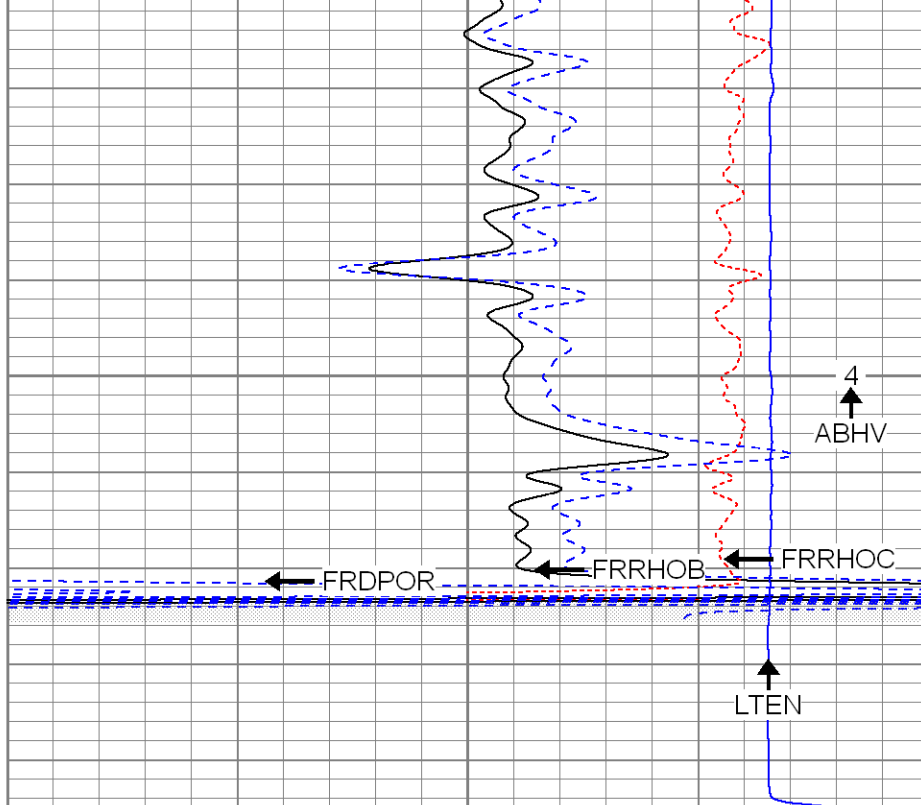




2400

0	GR (GAPI)	200
6	DCAL (in)	16

TBHV (ft3)



2	RHOB (g/cc)	3
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1	RHOB (g/cc)	2
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30	DPOR (pu)	-10
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-0.5	RHOC (g/cc)	0.5
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4000	LTEN (lb)	0
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ABHV (ft3)



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Main Pass

Database File: xtohr2312.db
Dataset Pathname: pass4.1
Presentation Format: cdnl
Dataset Creation: Fri Apr 25 17:10:34 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16

TBHV (ft3)

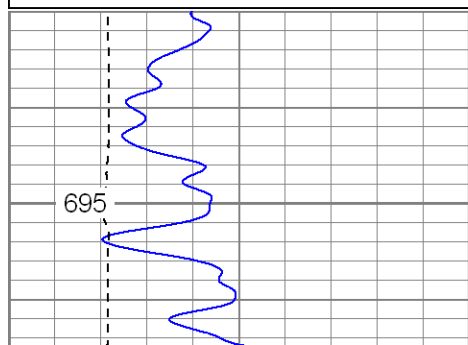
30	NPOR (pu)	-10
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30	DPOR (pu)	-10
----	-----------	-----

-0.5	RHOC (g/cc)	0.5
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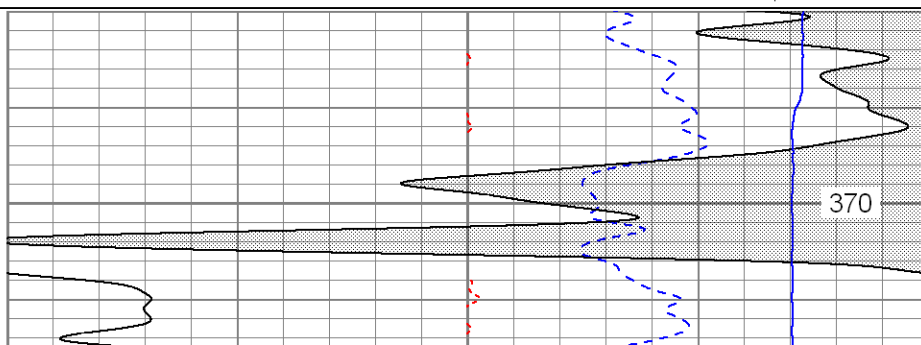
4000	LTEN (lb)	0
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ABHV (ft3)



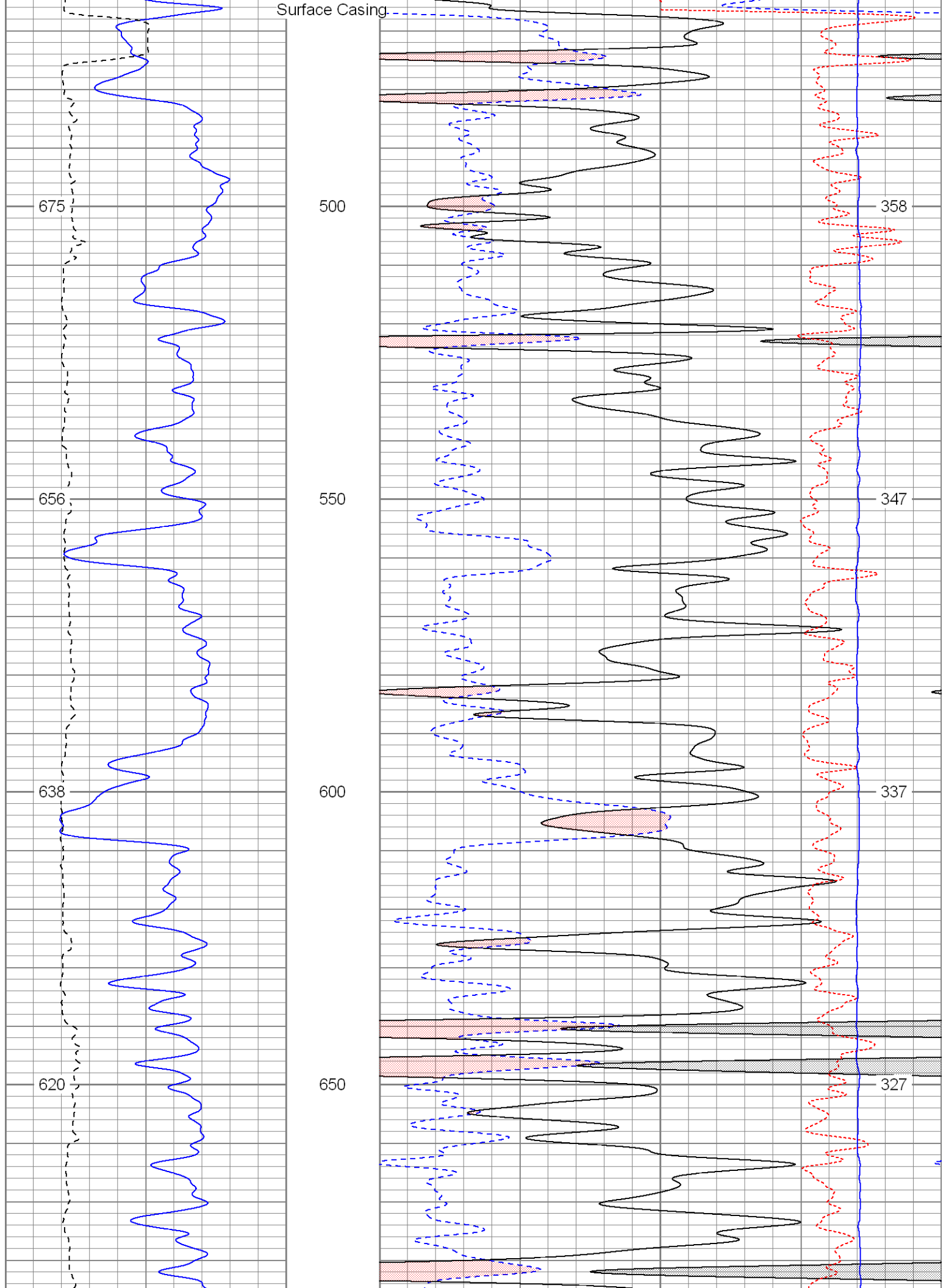
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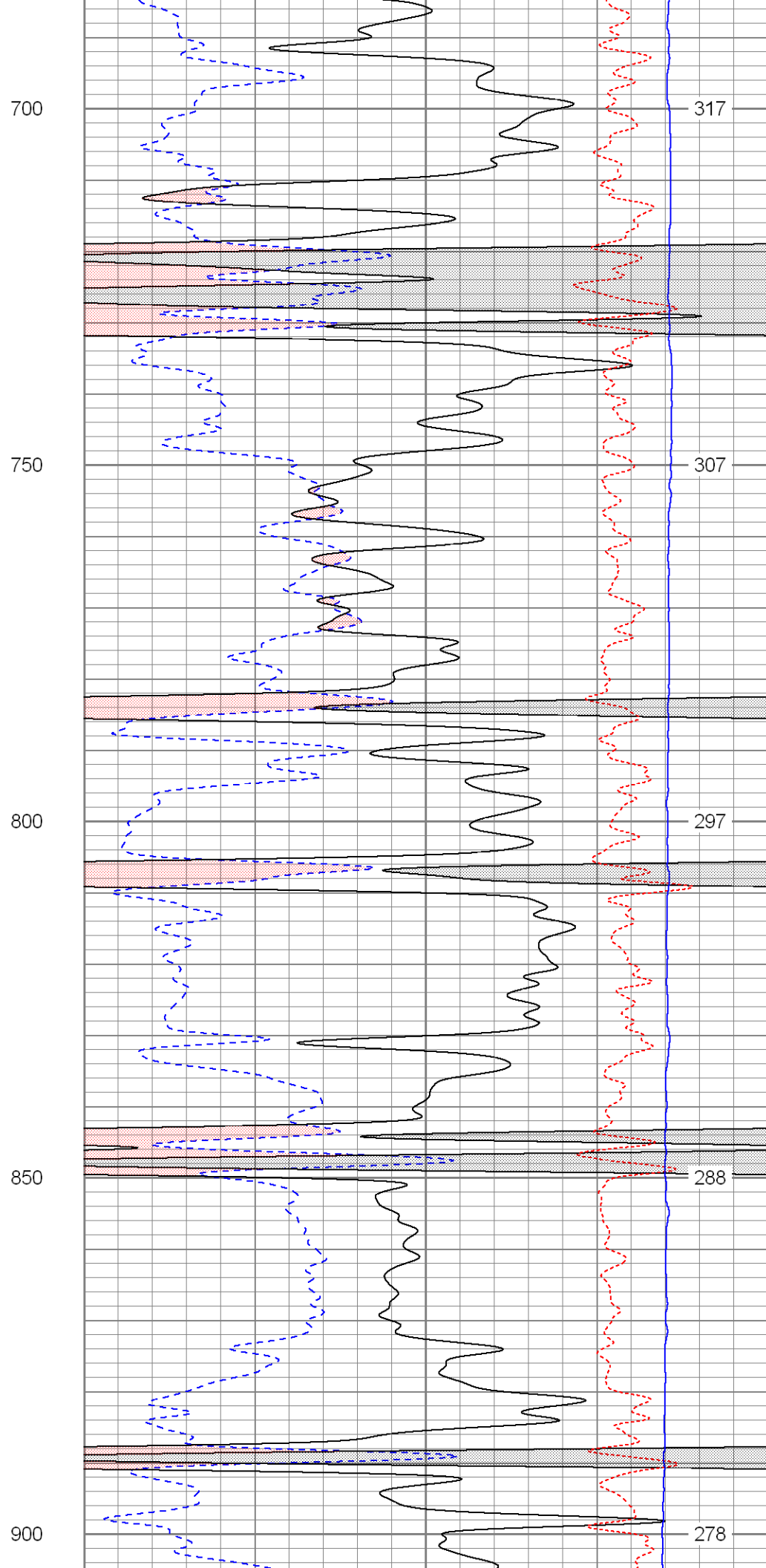
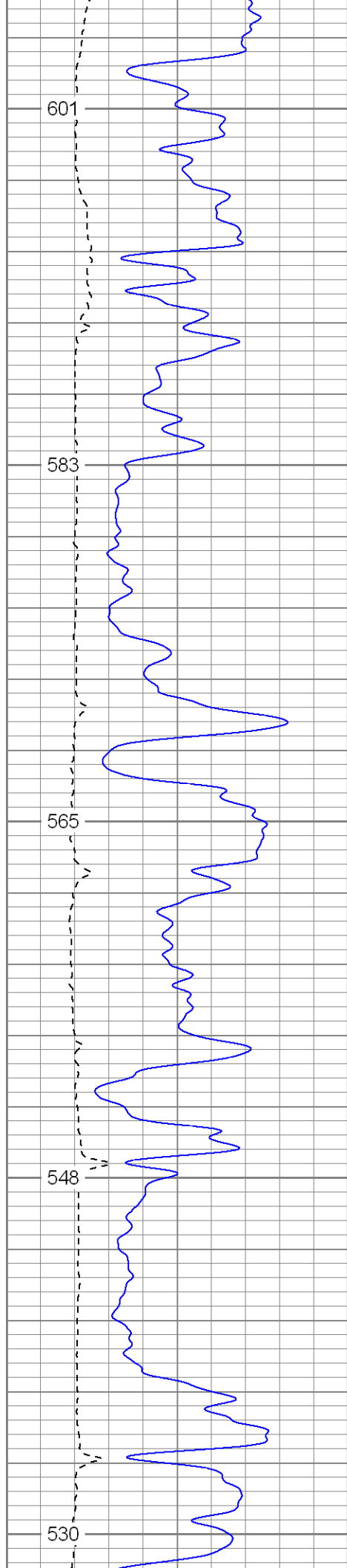
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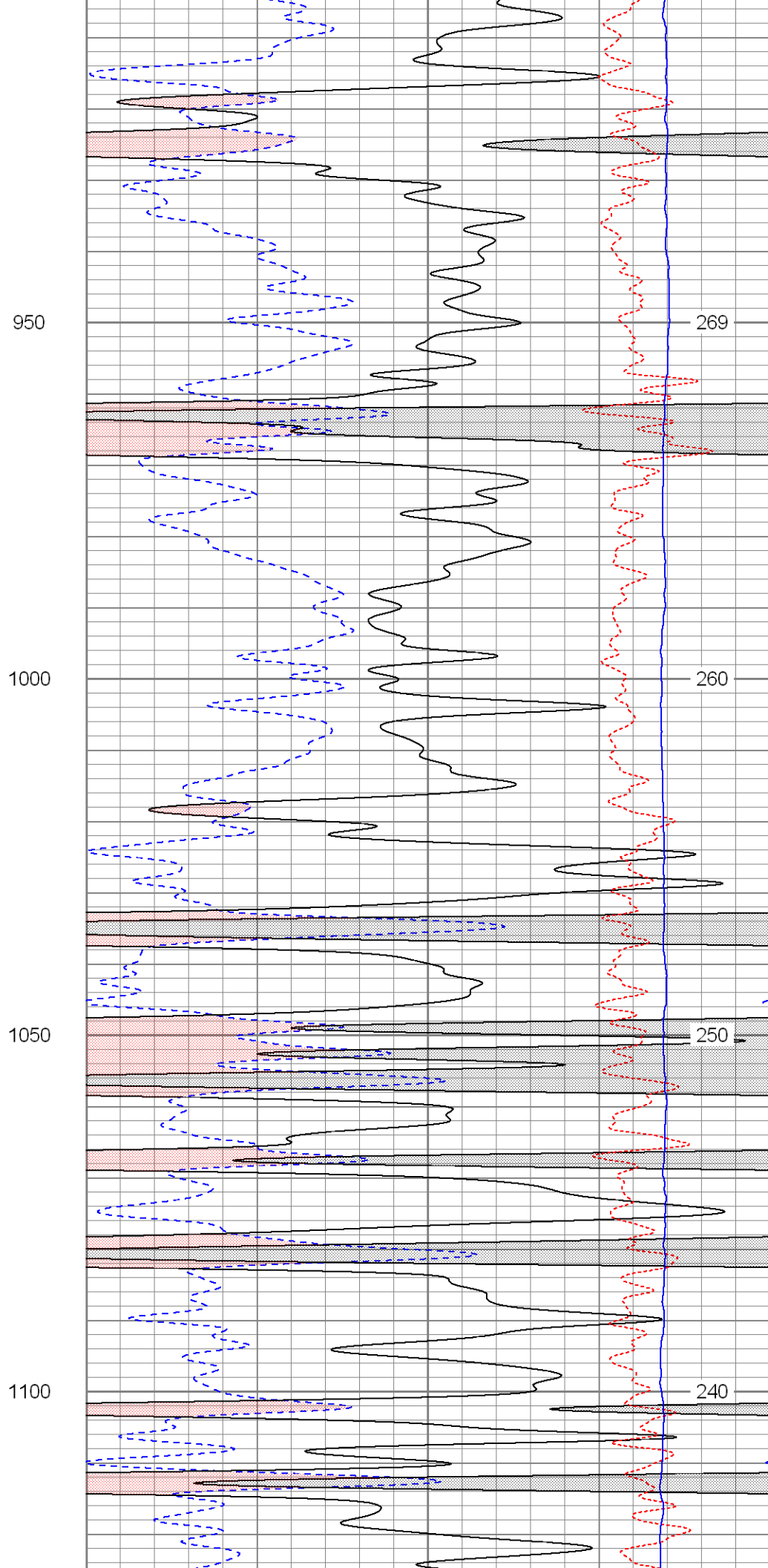
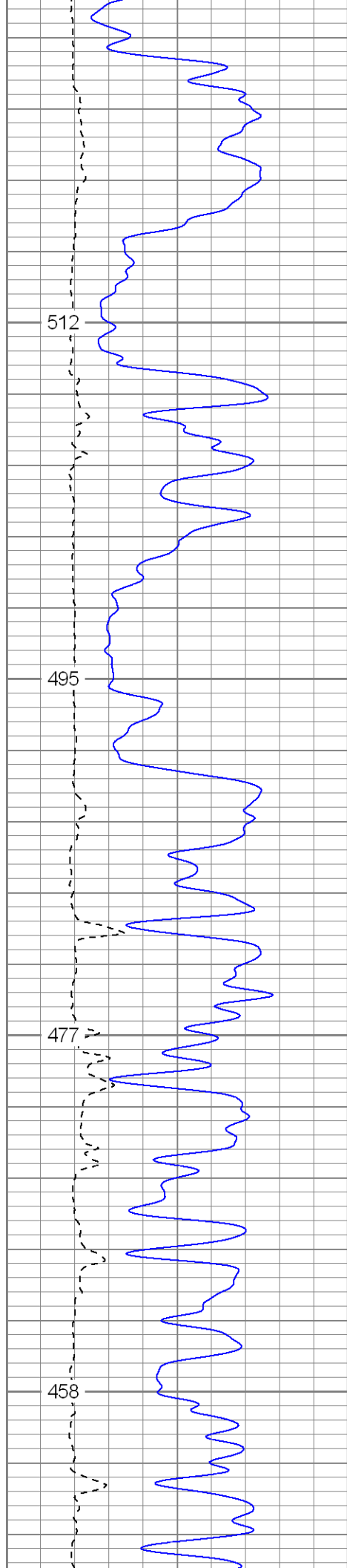


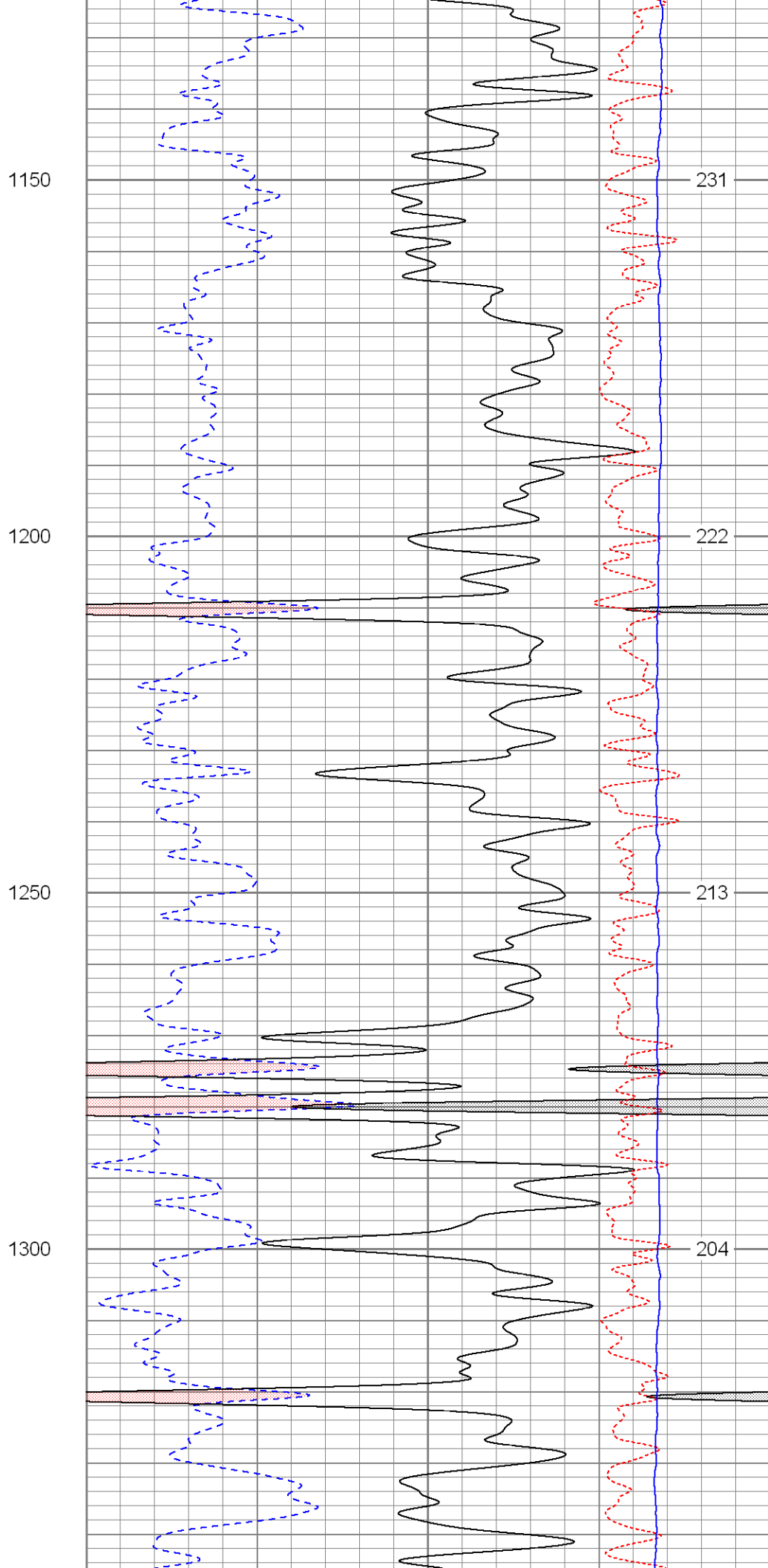
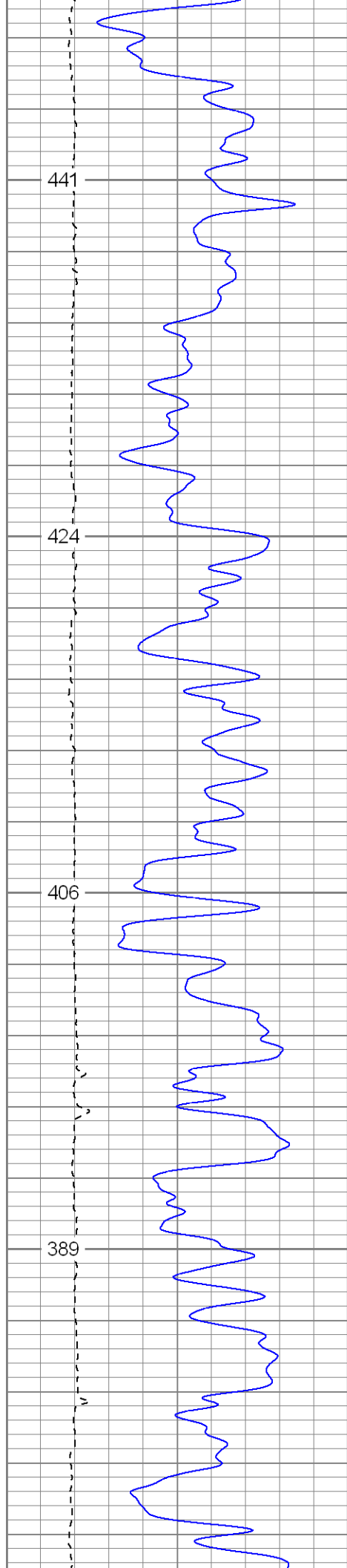
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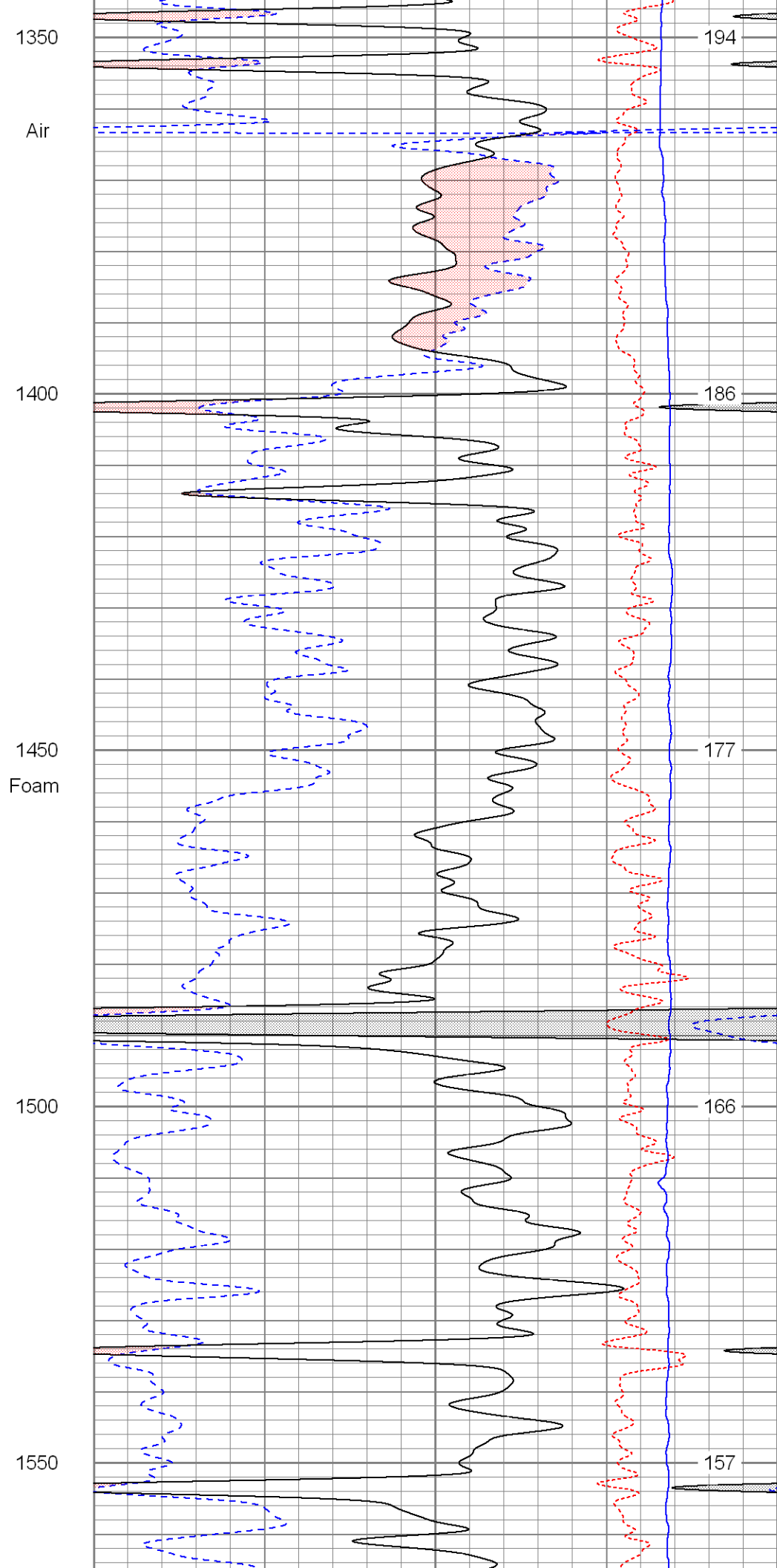
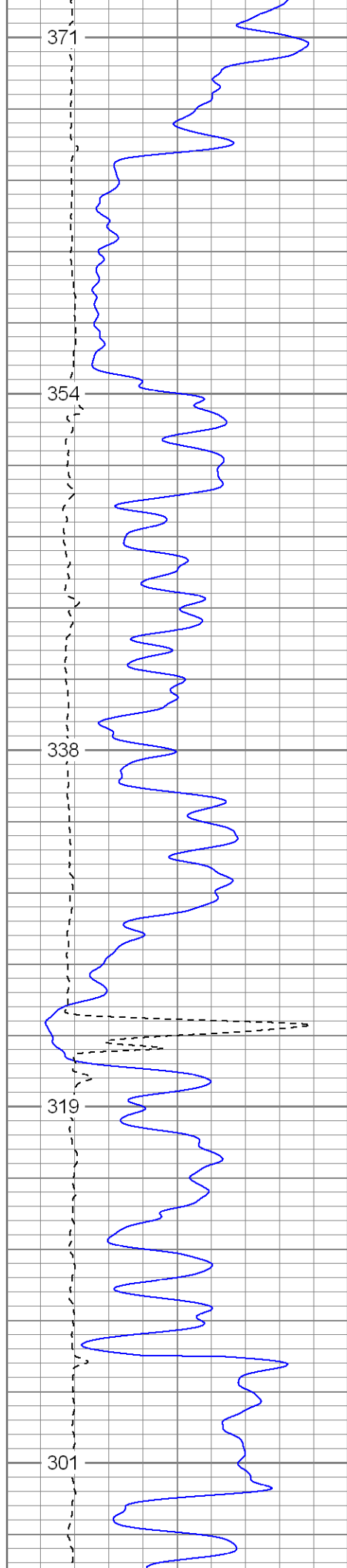
Surface Casing

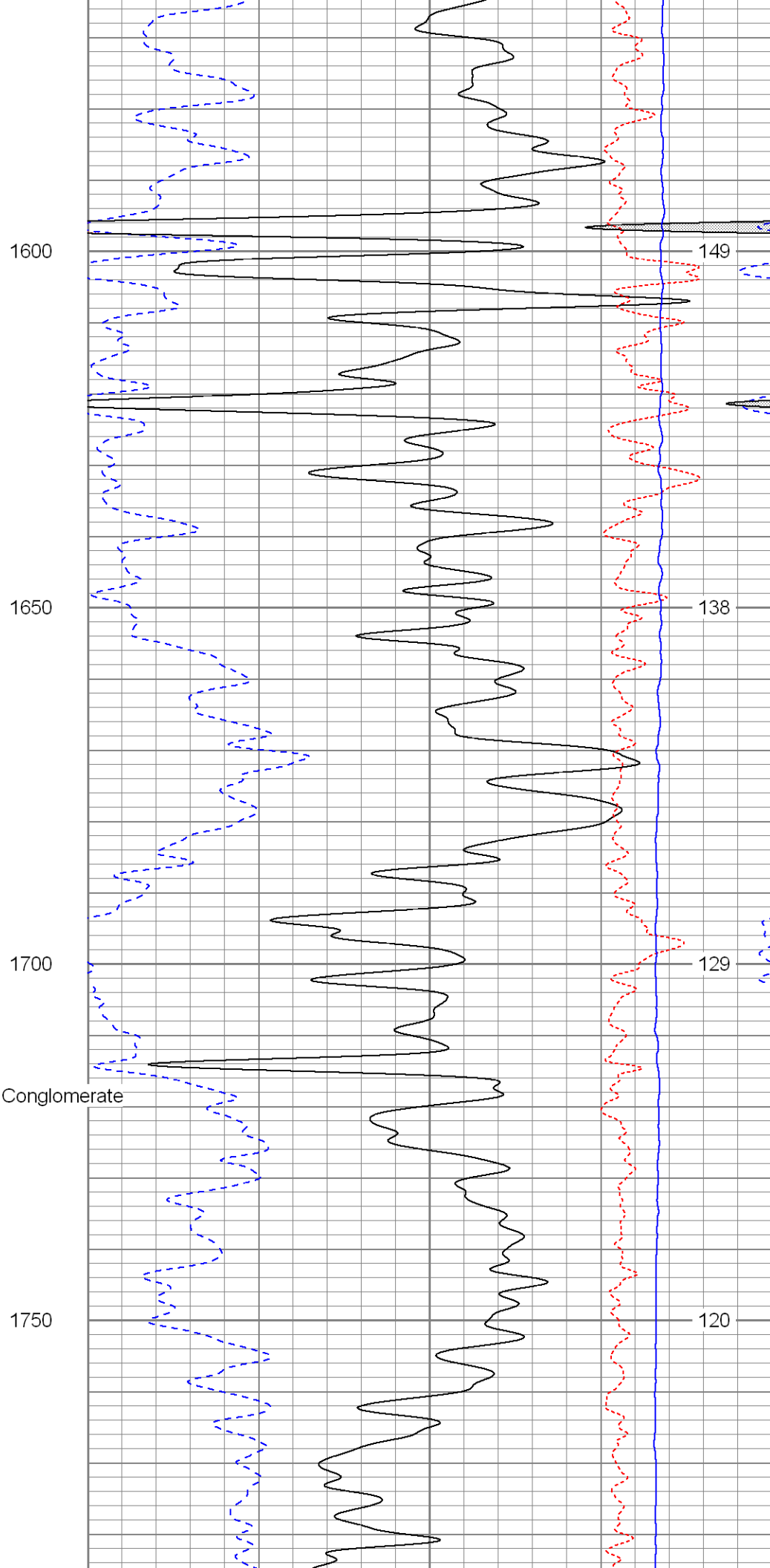
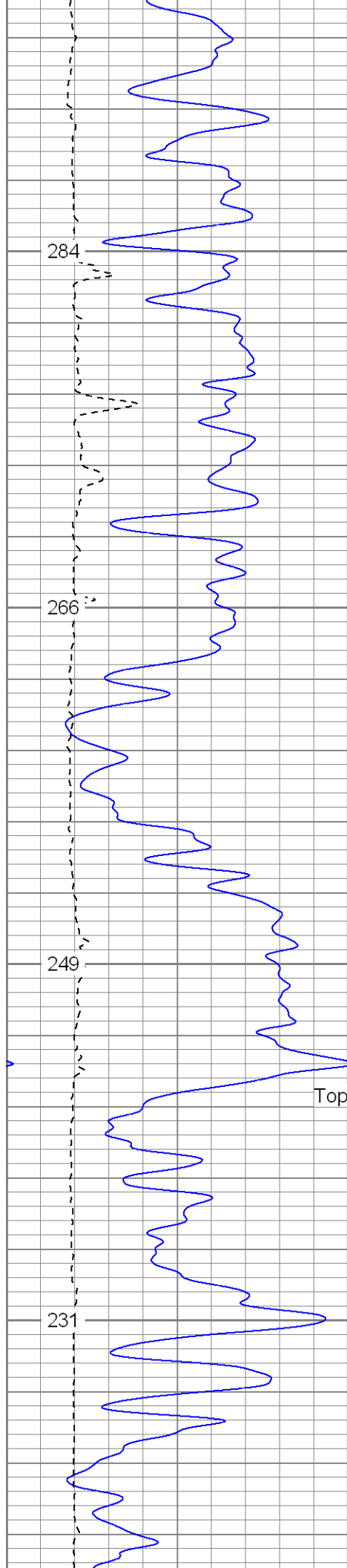


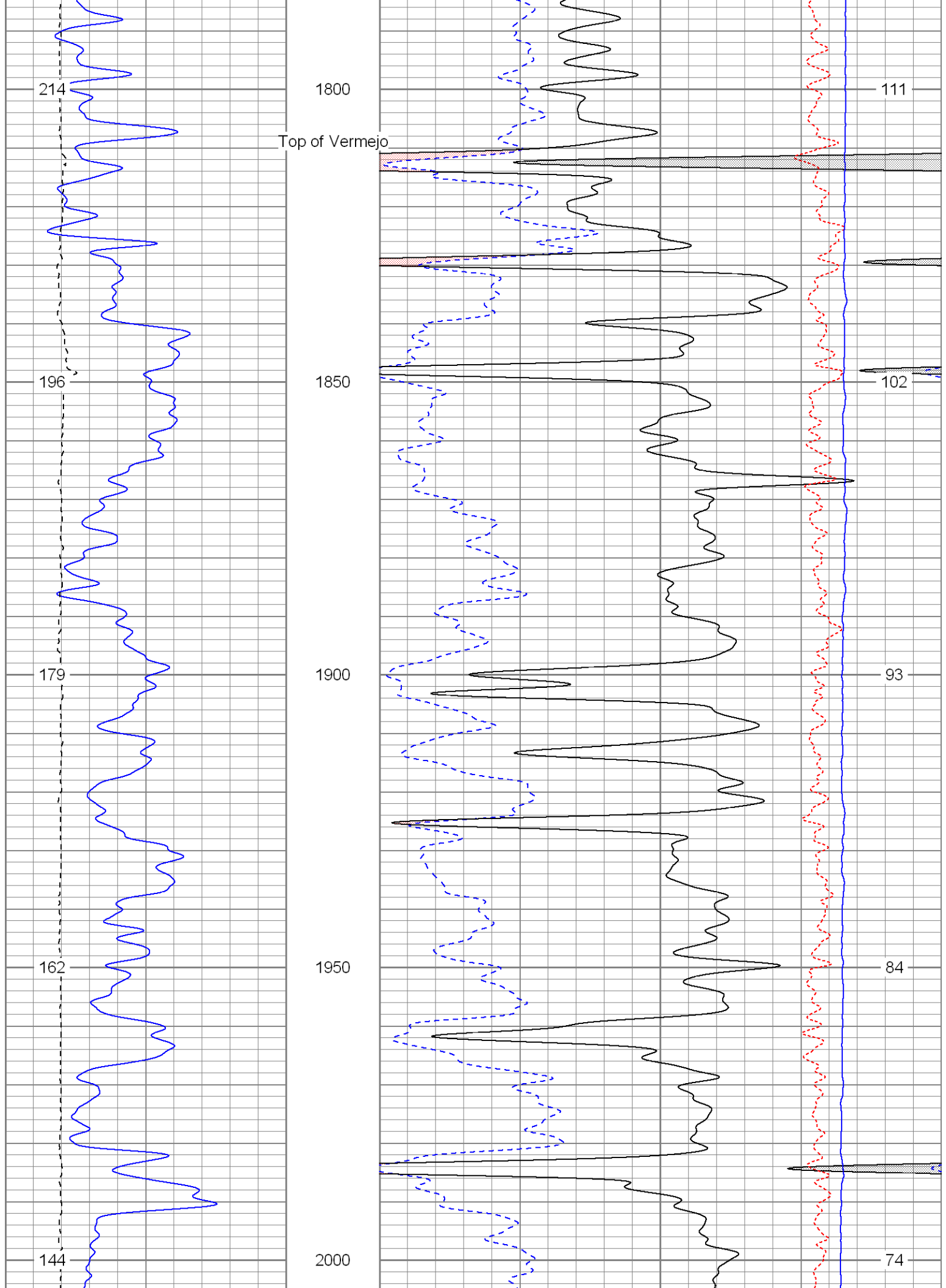


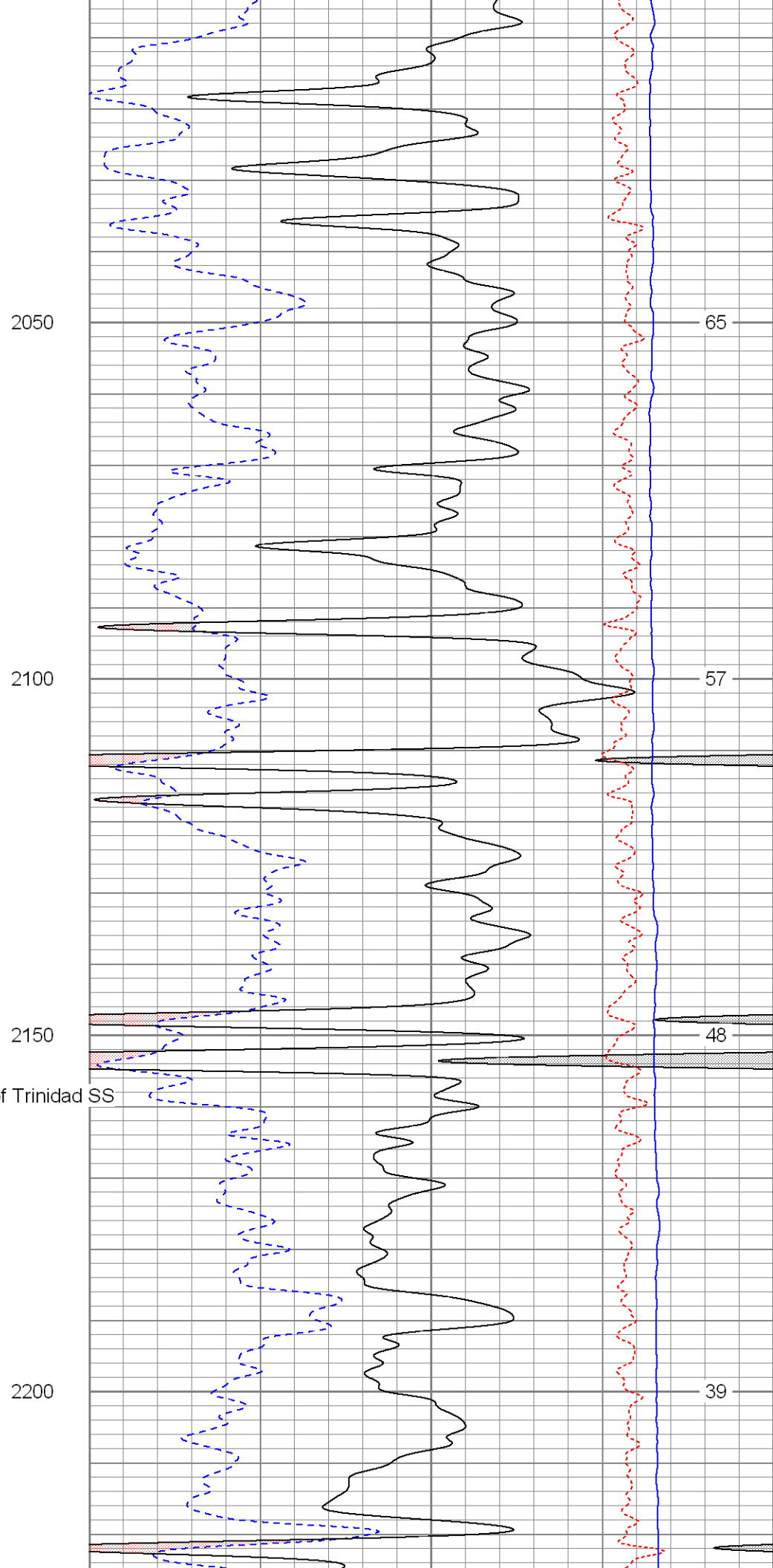
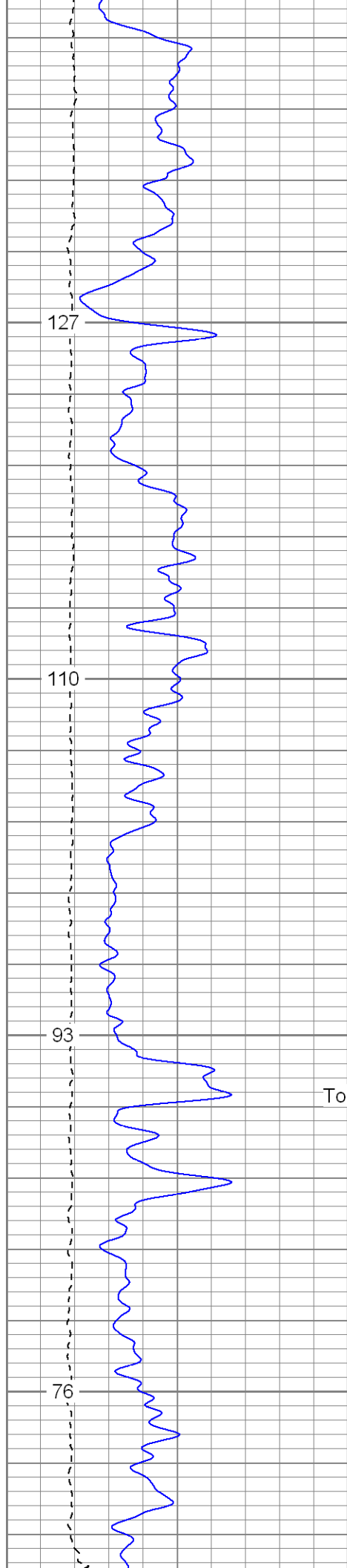


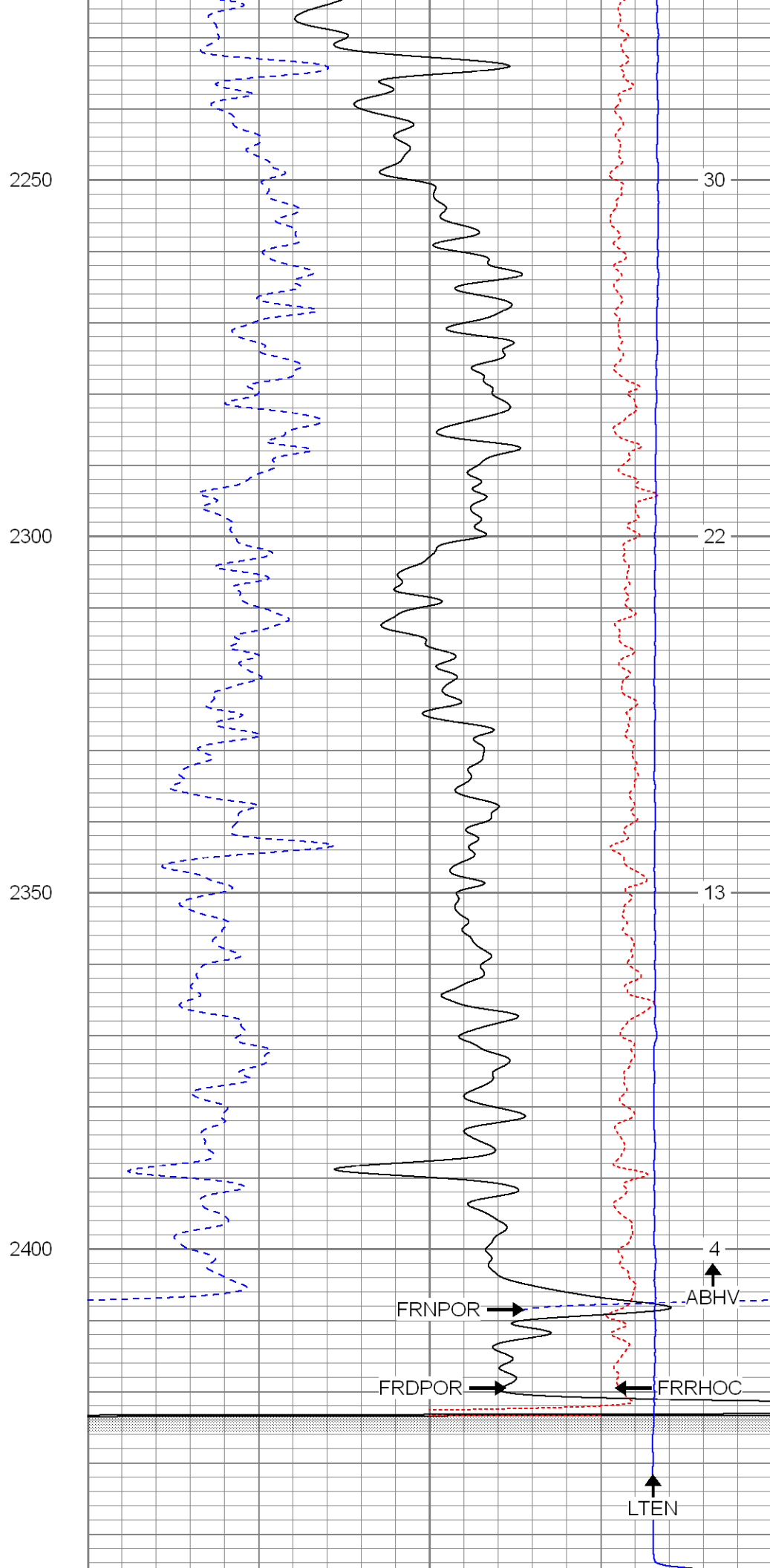
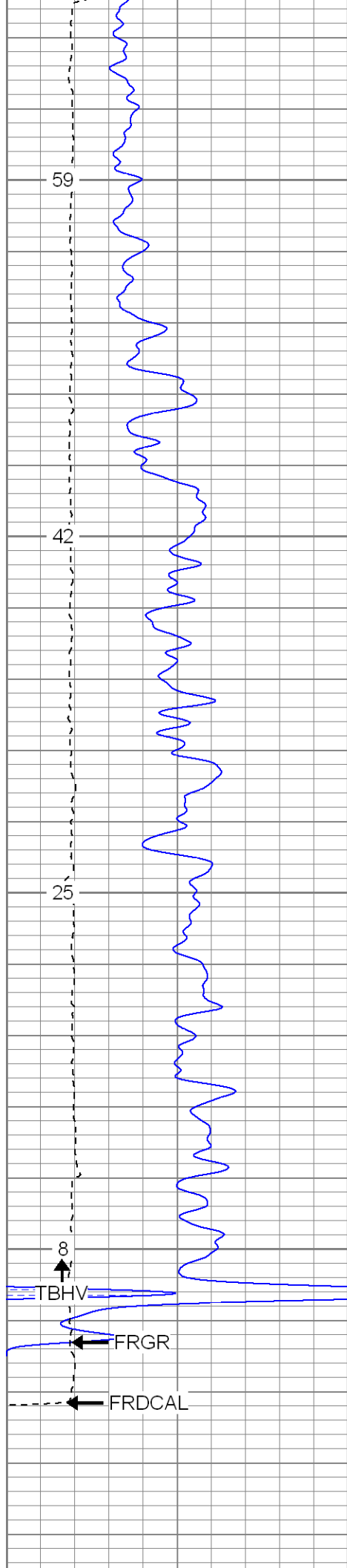












0	GR (GAPI)	200	30	NPOR (pu)	-10
6	DCAL (in)	16	30	DPOR (pu)	-10
TBHV (ft3)			-0.5	RHOC (g/cc)	0.5
			4000	LTEN (lb)	0
				ABHV (ft3)	



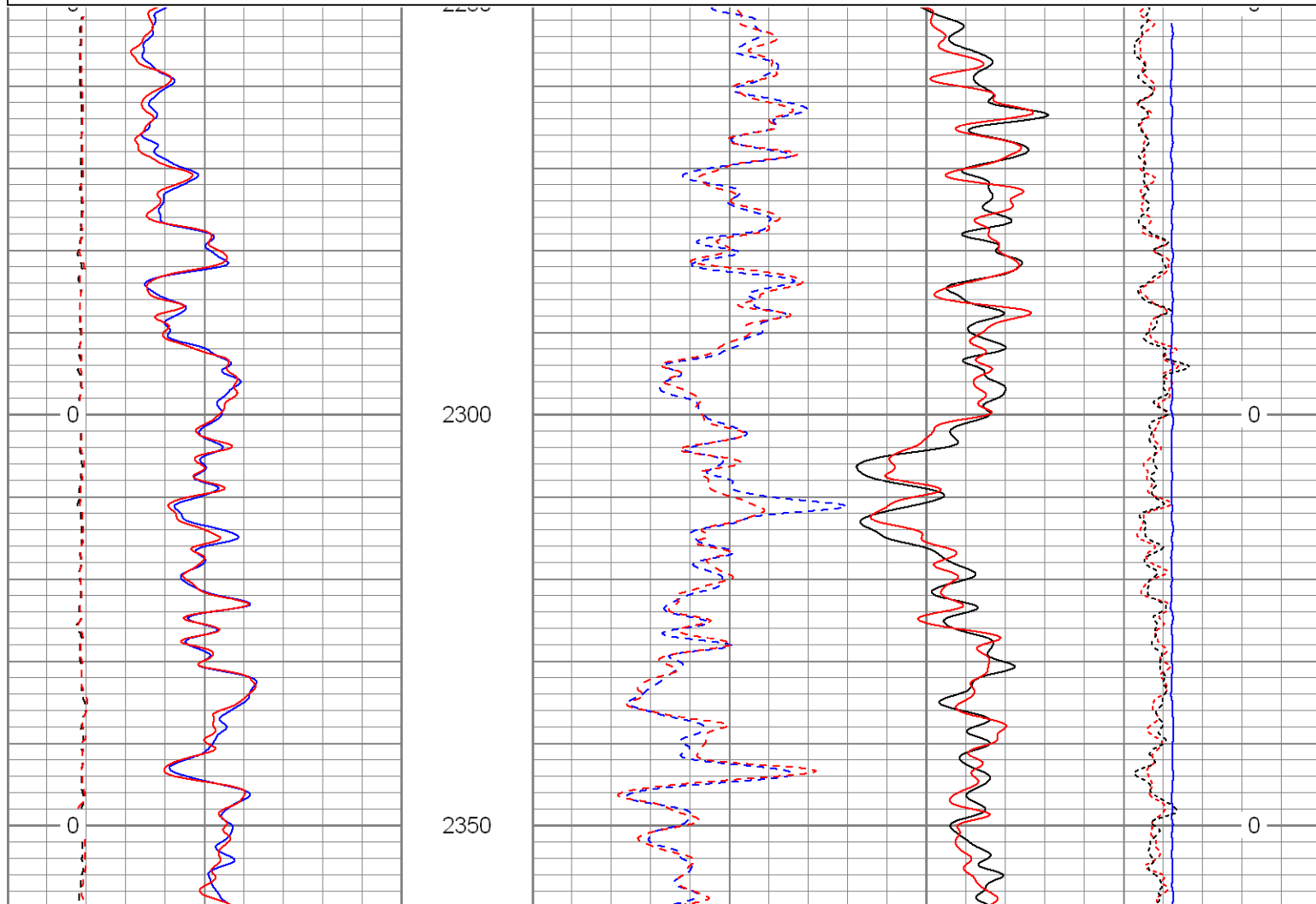
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Repeat Pass

Database File: xtohr2312.db
Dataset Pathname: pass2.1
Presentation Format: cdnl
Dataset Creation: Fri Apr 25 15:16:06 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200	30	NPOR (pu)	-10
6	DCAL (in)	16	30	DPOR (pu)	-10
0	GR-repeat (GAPI)	200	30	NPOR-repeat (pu)	-10
6	DCAL-repeat (in)	16	30	DPOR-repeat (pu)	-10
TBHV (ft3)			-0.5	RHOC (g/cc)	0.5
			4000	LTEN (lb)	0
			-0.5	RHOC-repeat (g/cc)	0.5
				ABHV (ft3)	

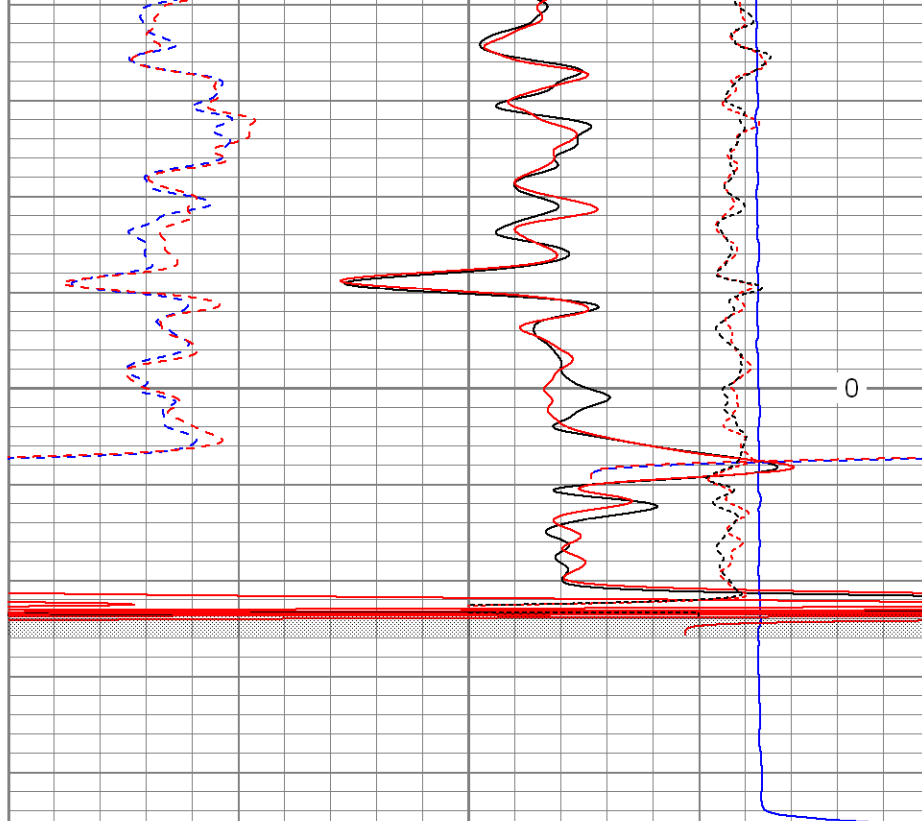




0	GR (GAPI)	200
6	DCAL (in)	16
0	GR-repeat (GAPI)	200
6	DCAL-repeat (in)	16

TBHV (ft3)

2400



30	NPOR (pu)	-10
30	DPOR (pu)	-10
30	NPOR-repeat (pu)	-10
30	DPOR-repeat (pu)	-10

-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5

ABHV (ft3)



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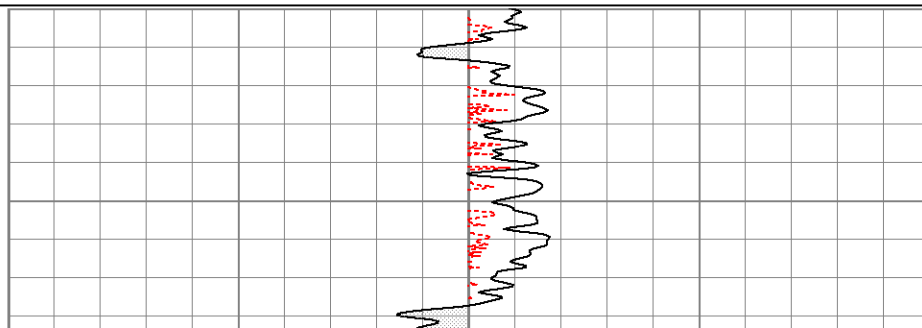
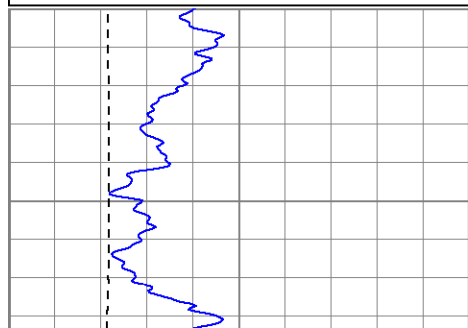
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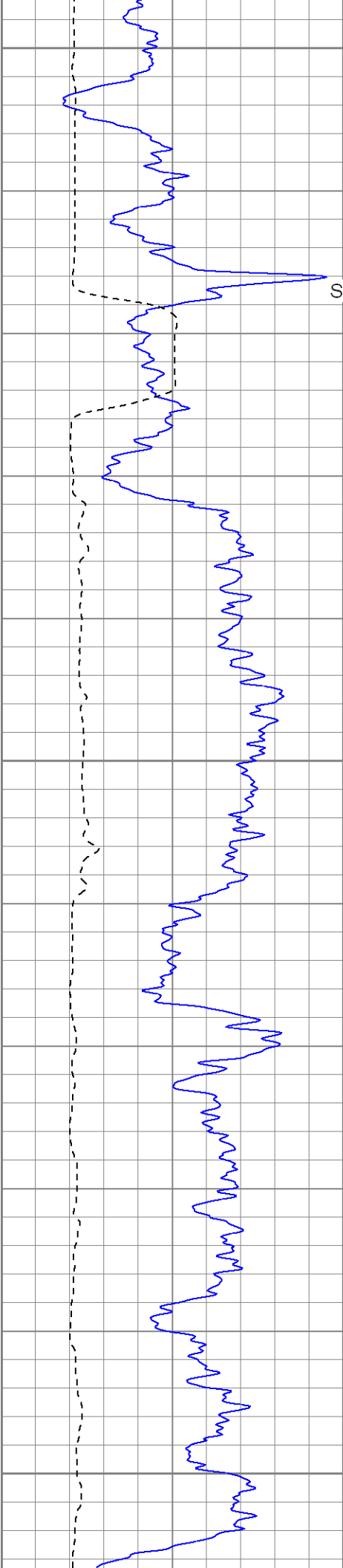
High Resolution Pass

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Dataset Pathname: pass4.2
Presentation Format: cdlhr
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Charted by: Depth in Feet scaled 1:120

0	GR (GAPI)	200
6	DCAL (in)	16

1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



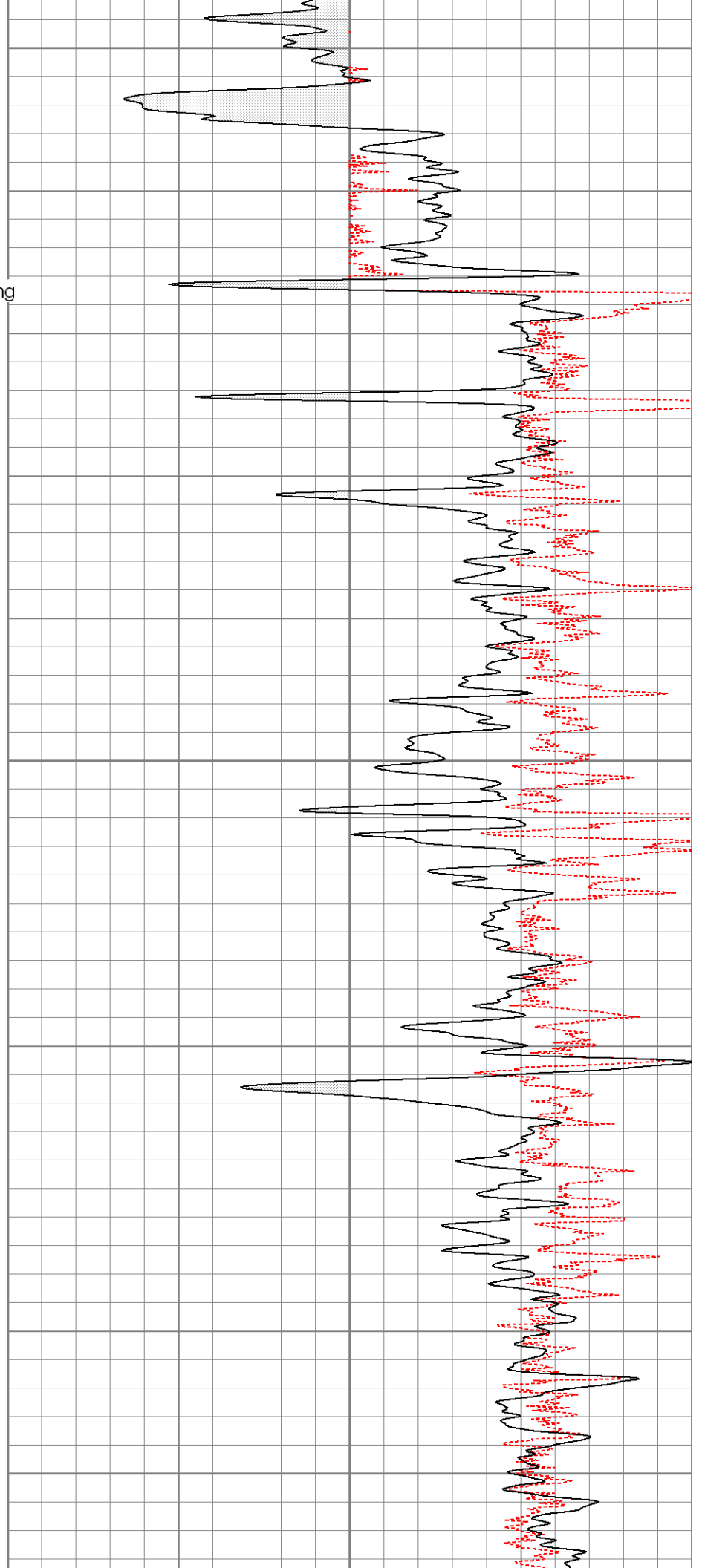


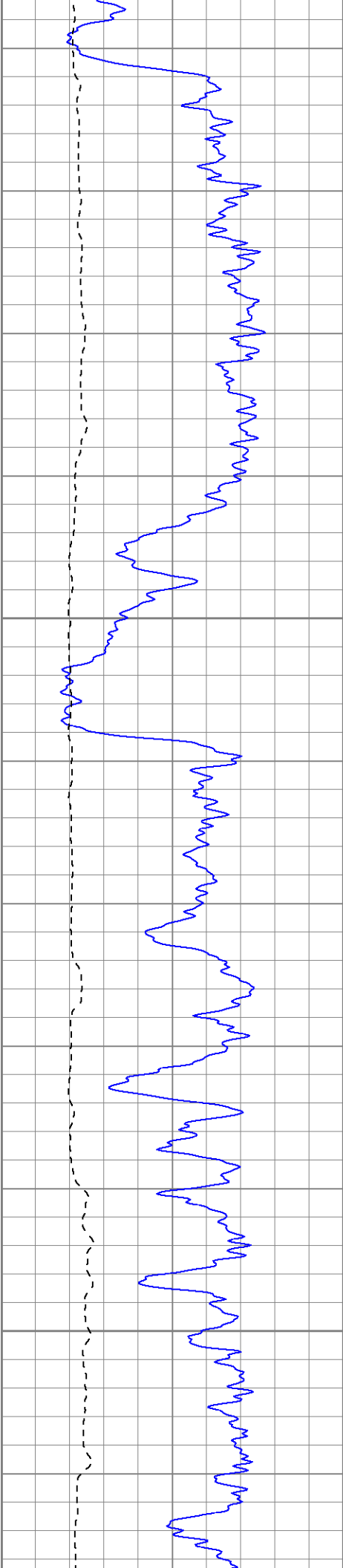
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Surface Casing

500

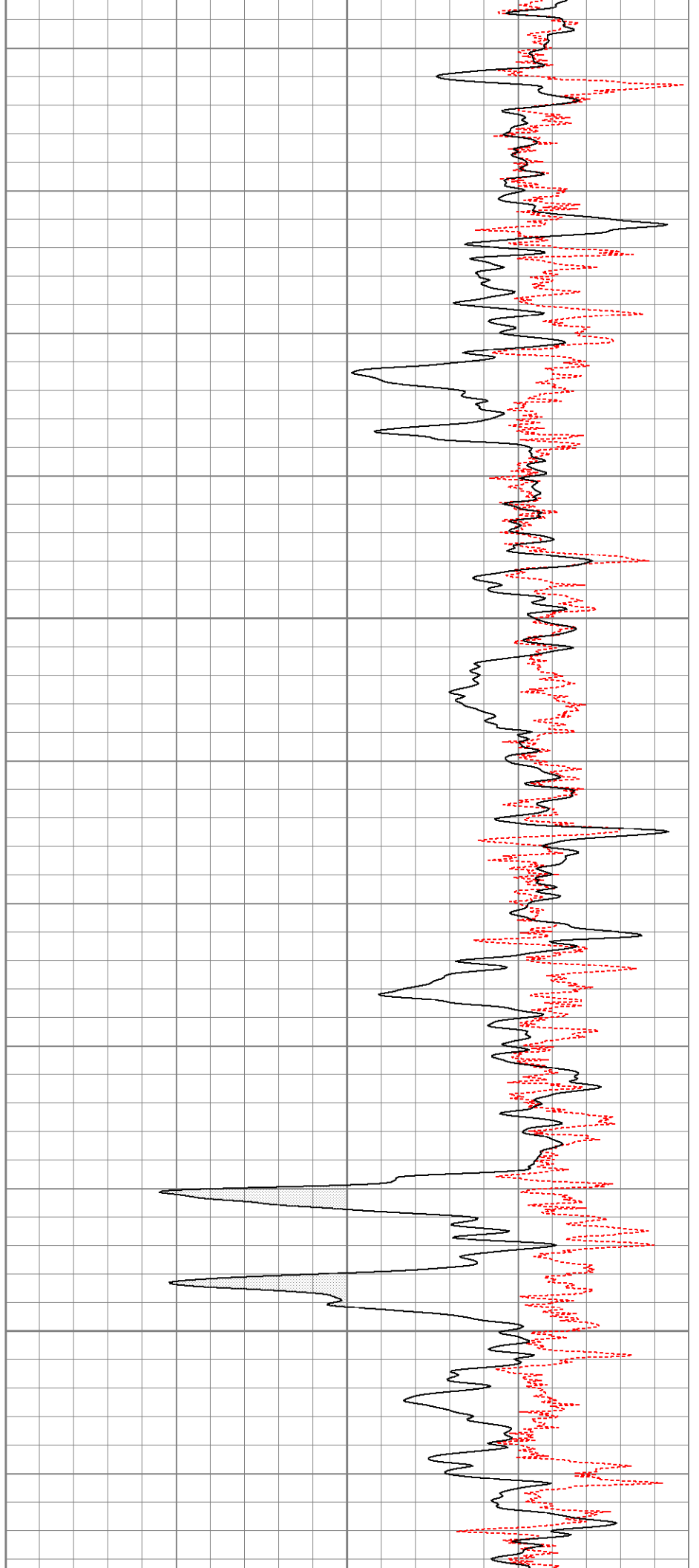
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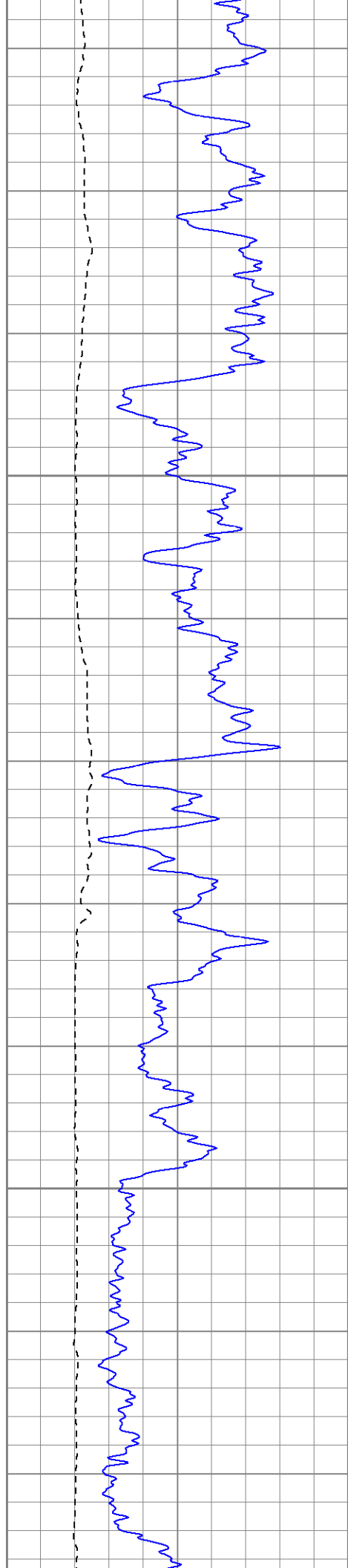




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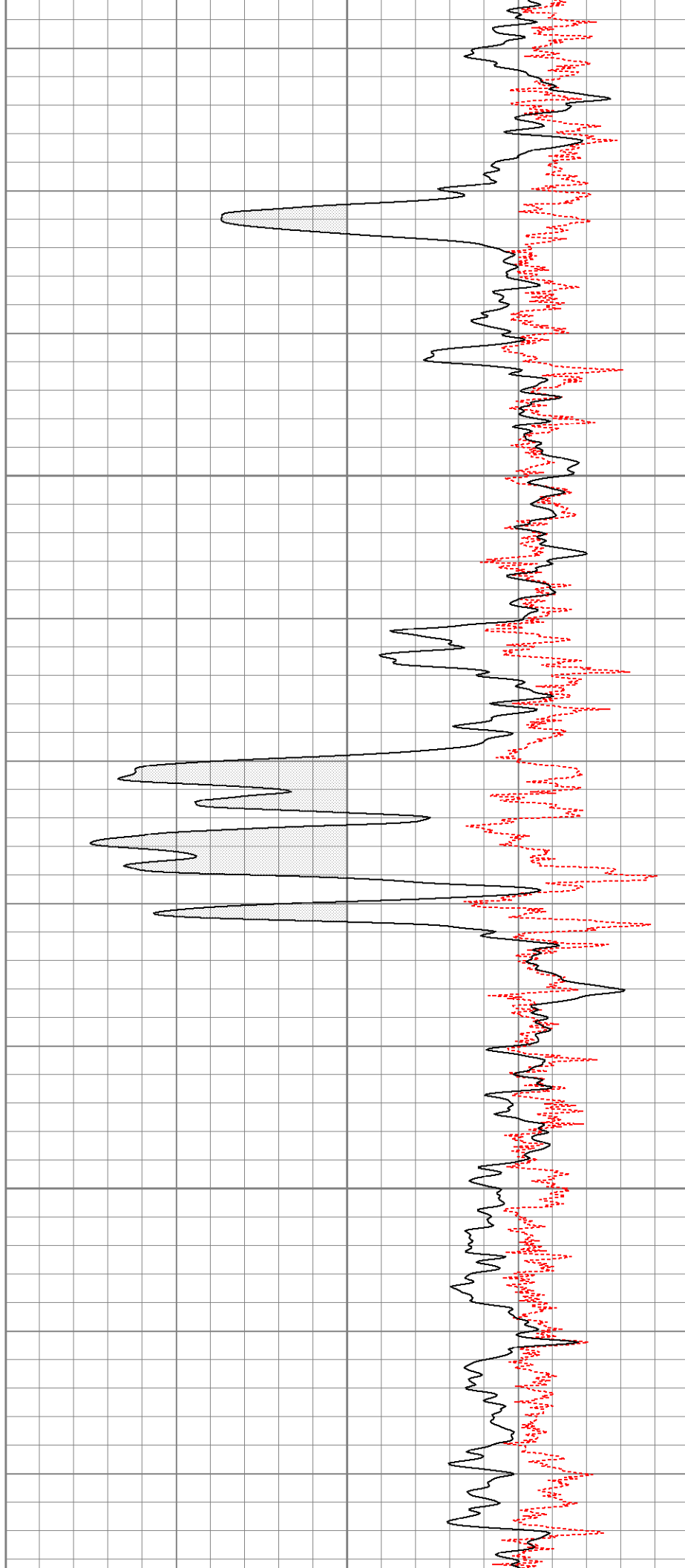
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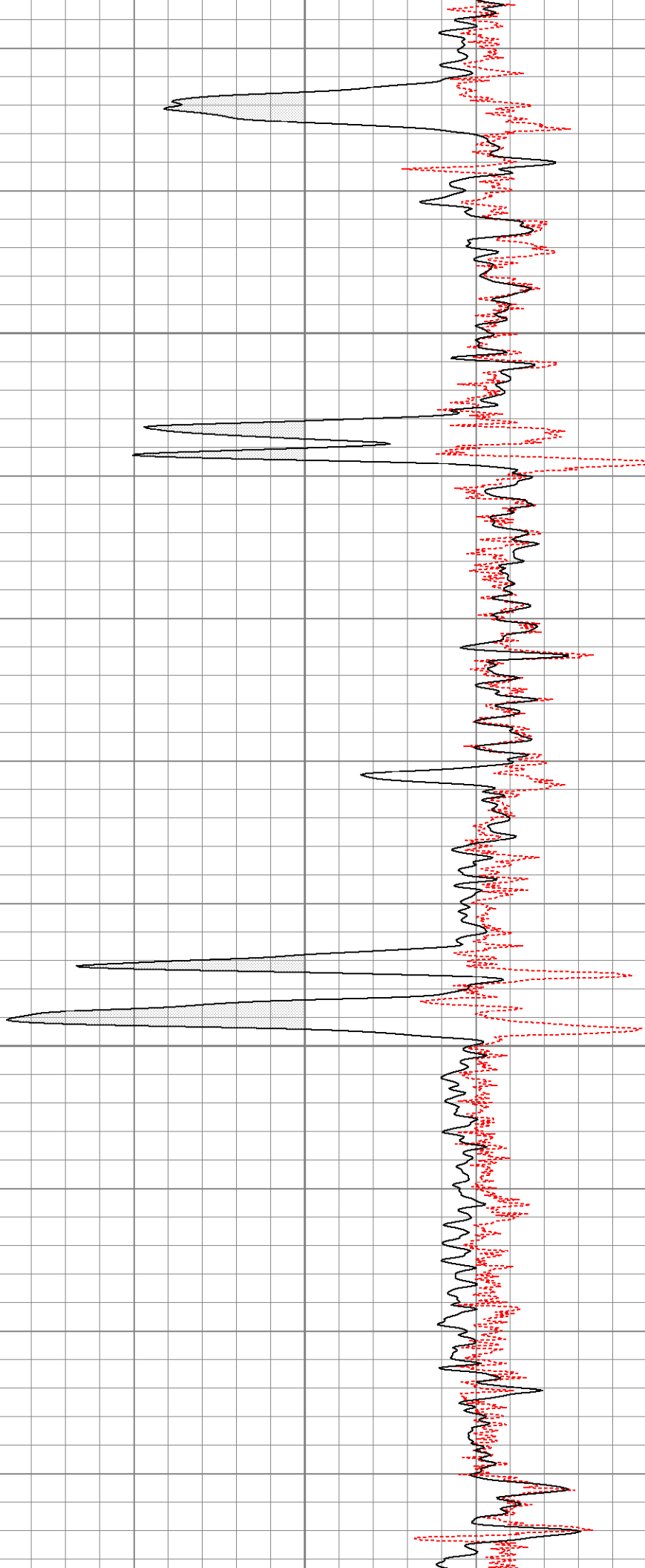
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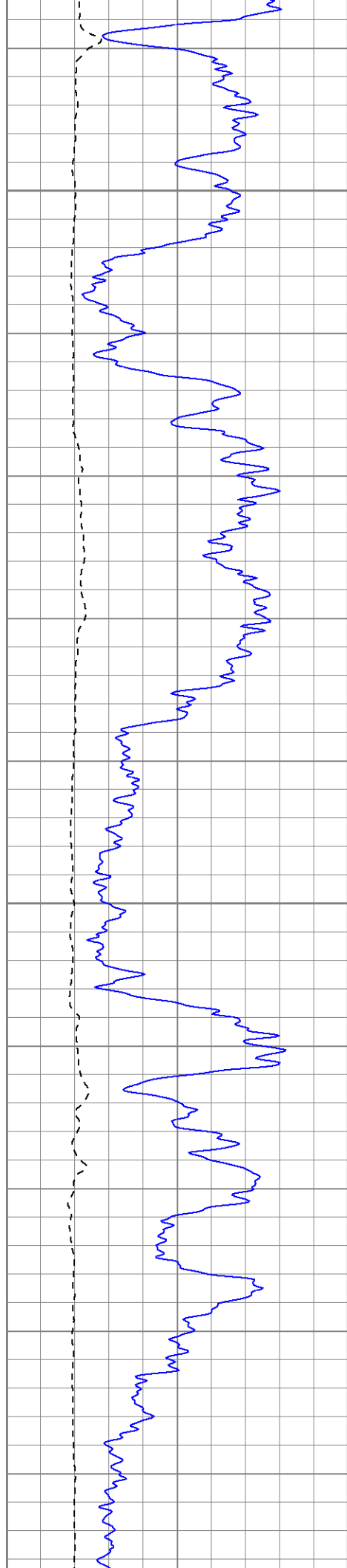
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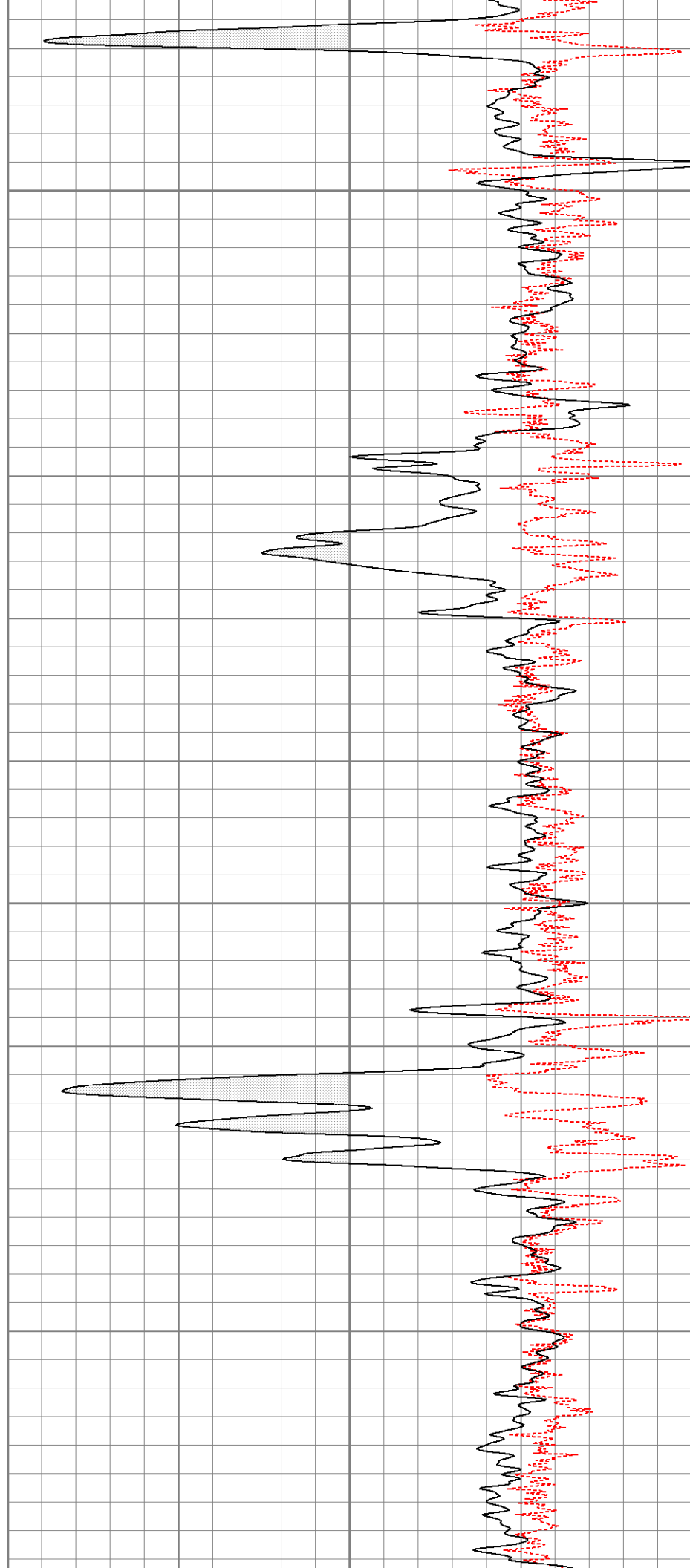
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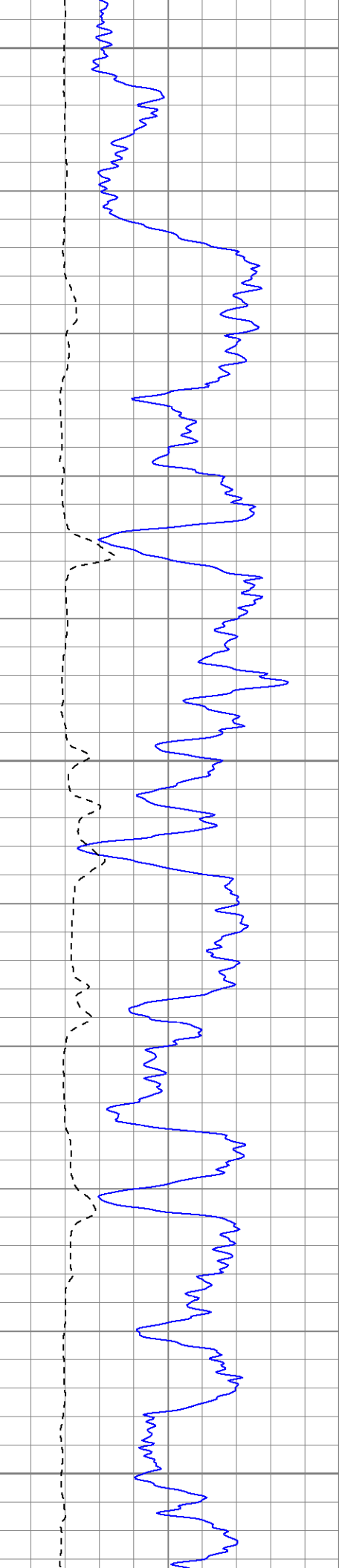




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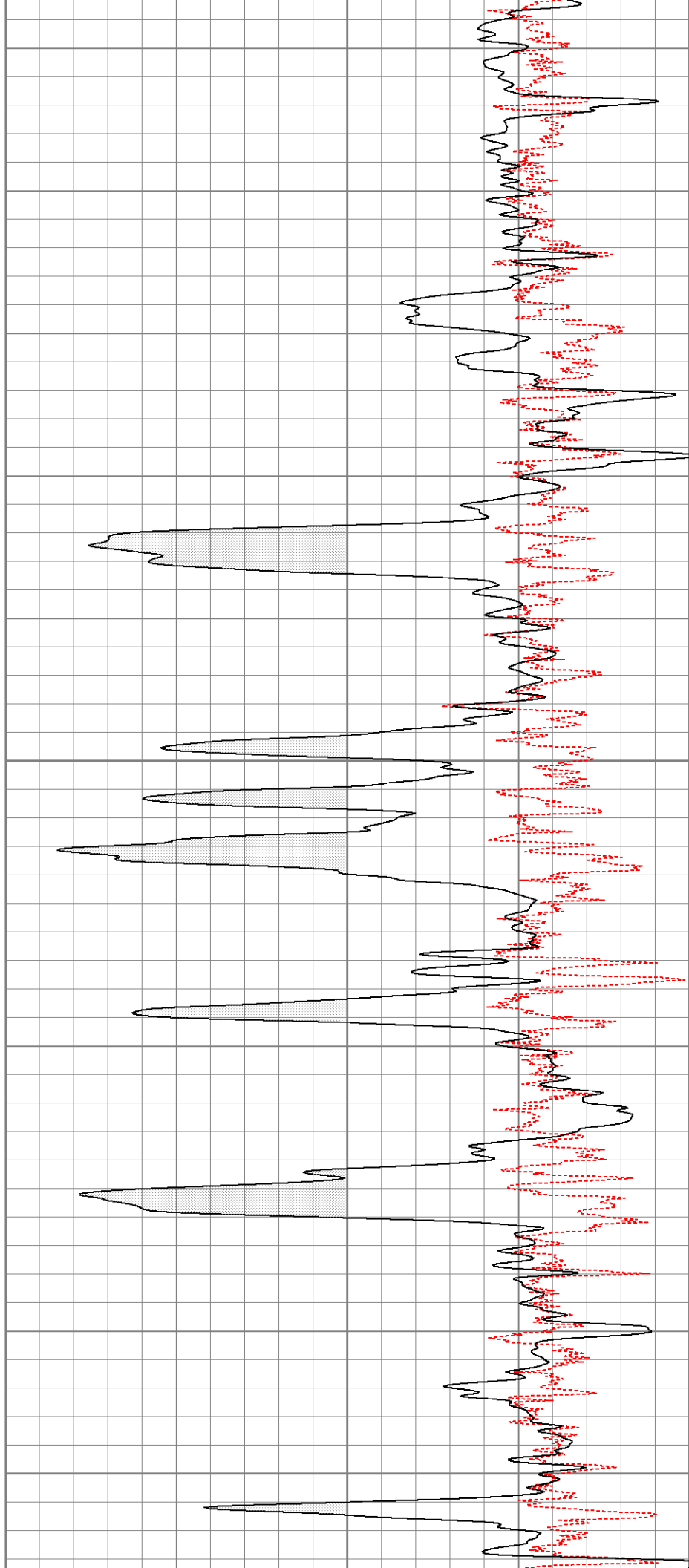


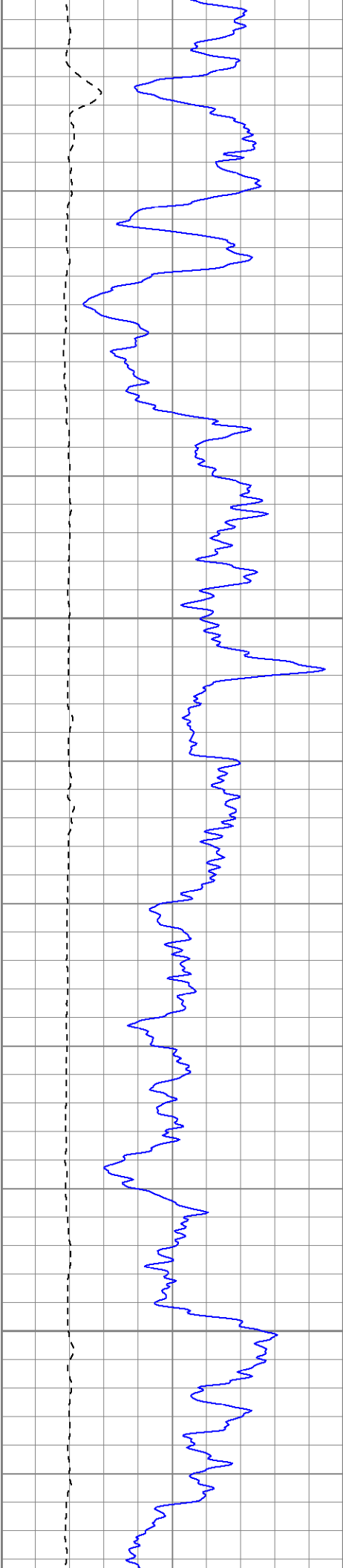


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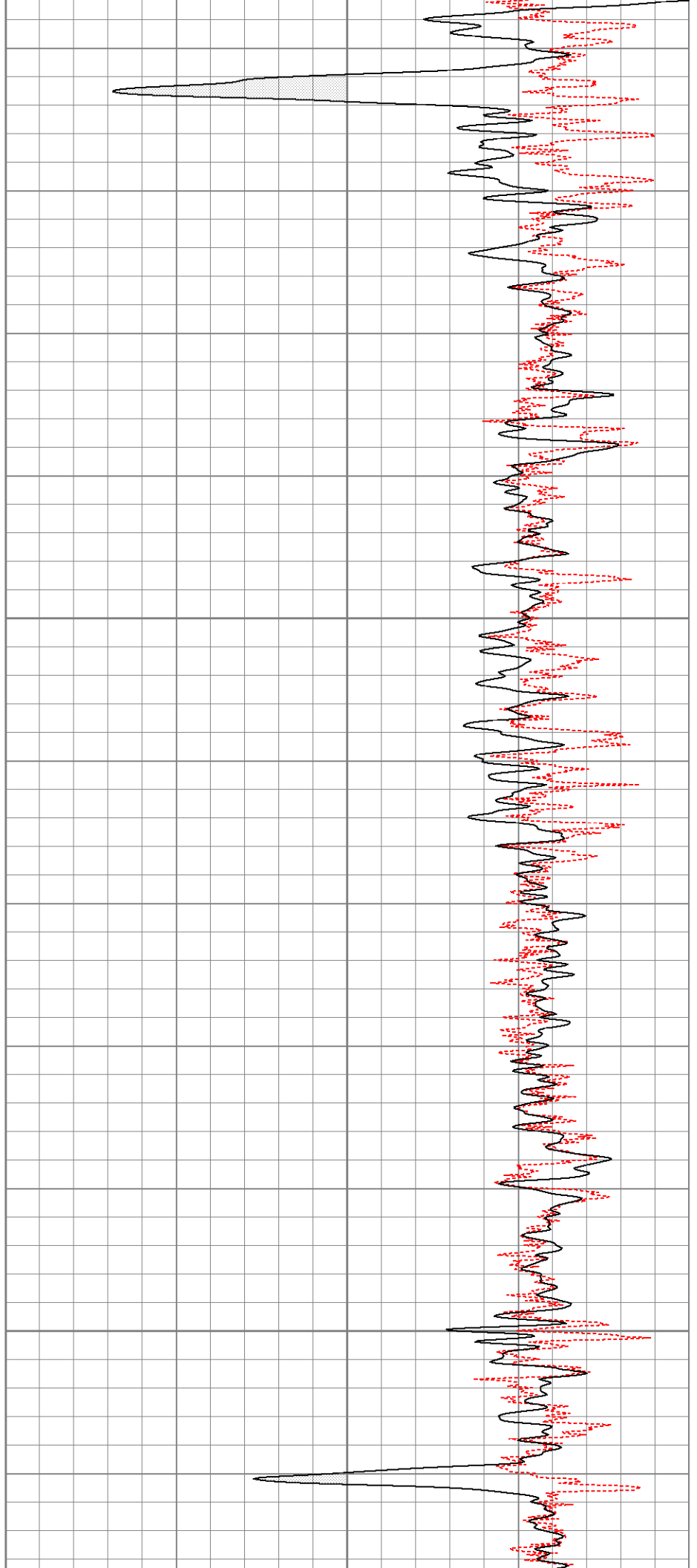
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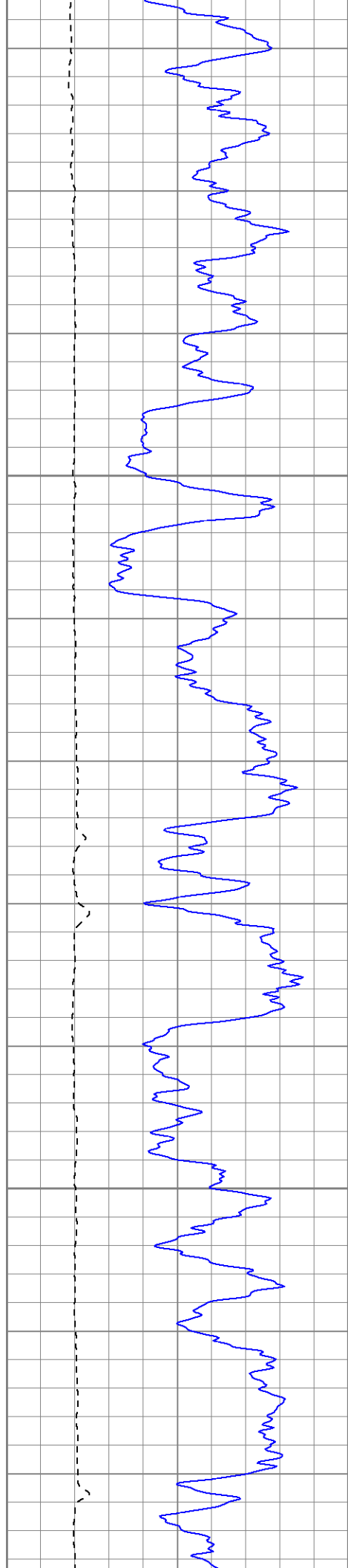




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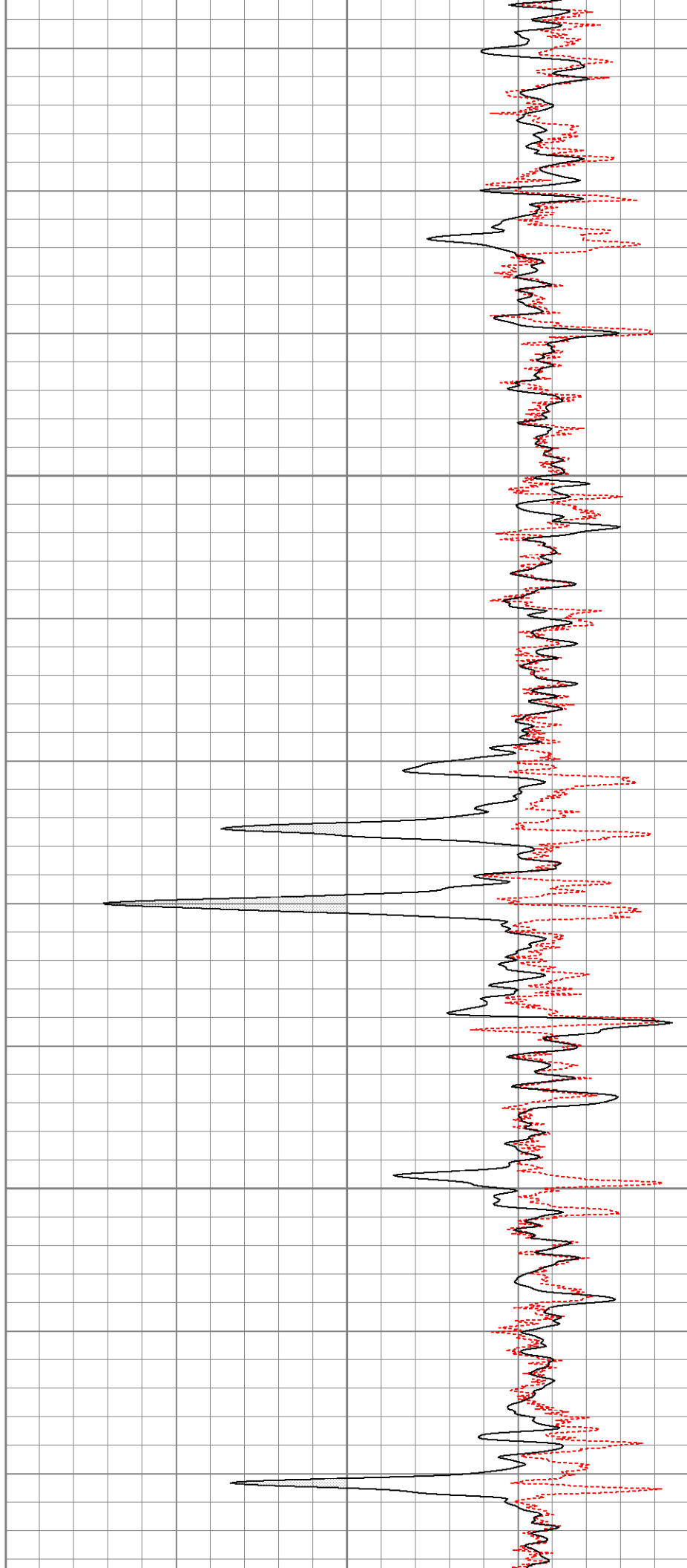
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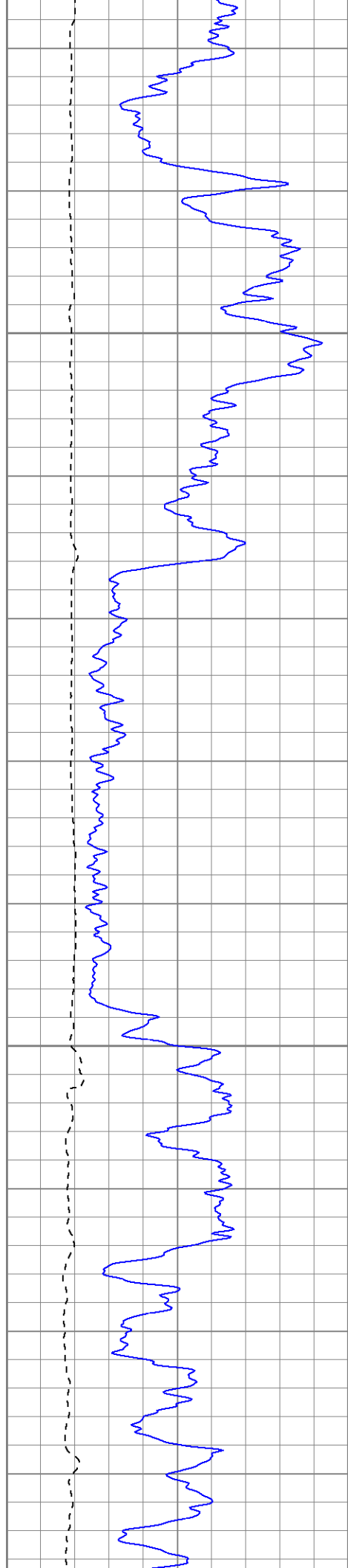




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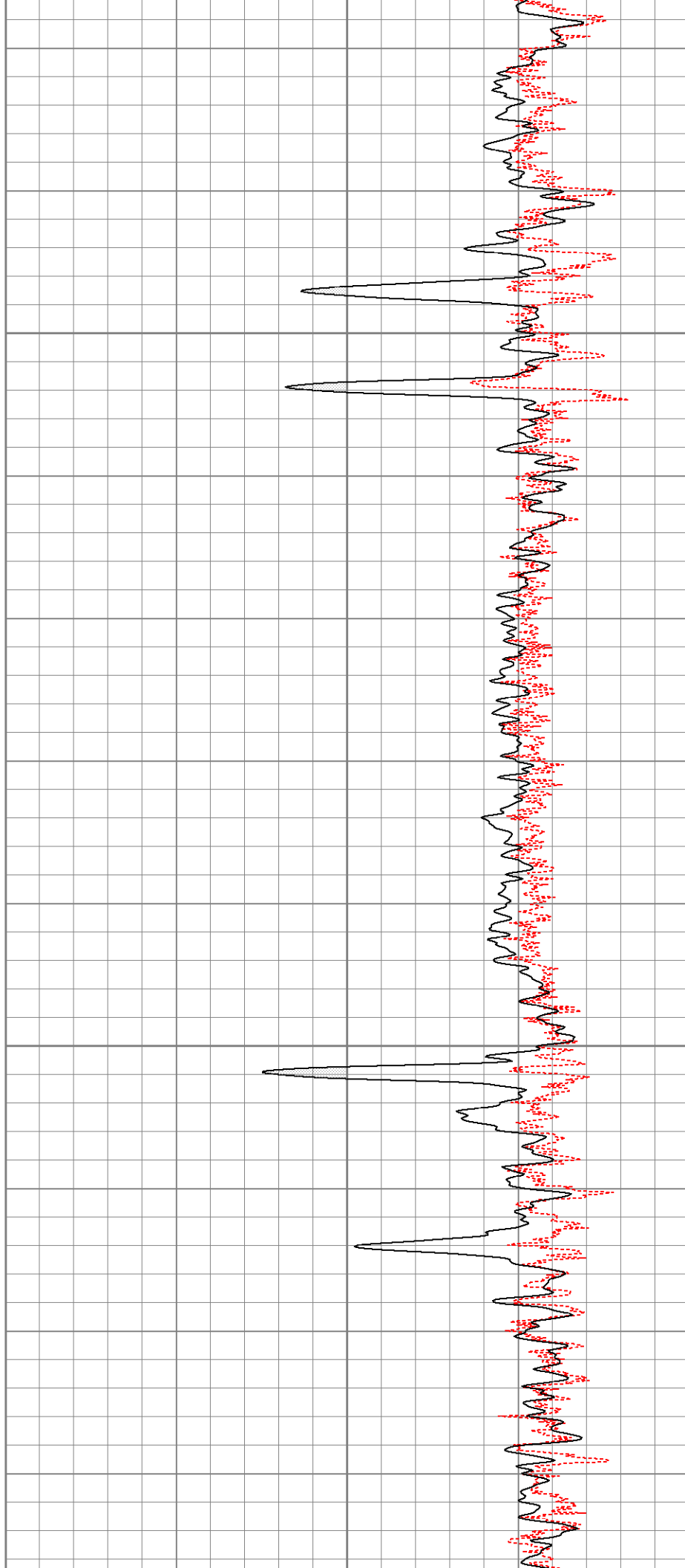
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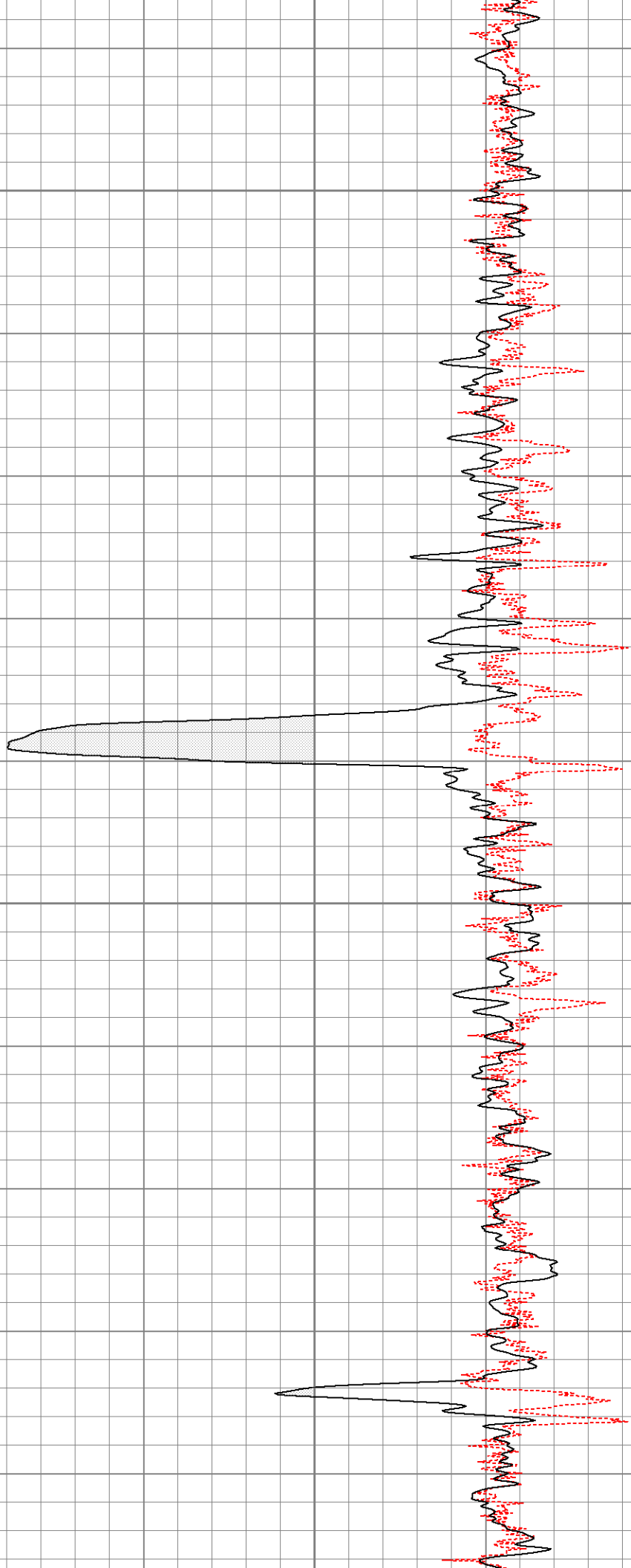
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1400



1450

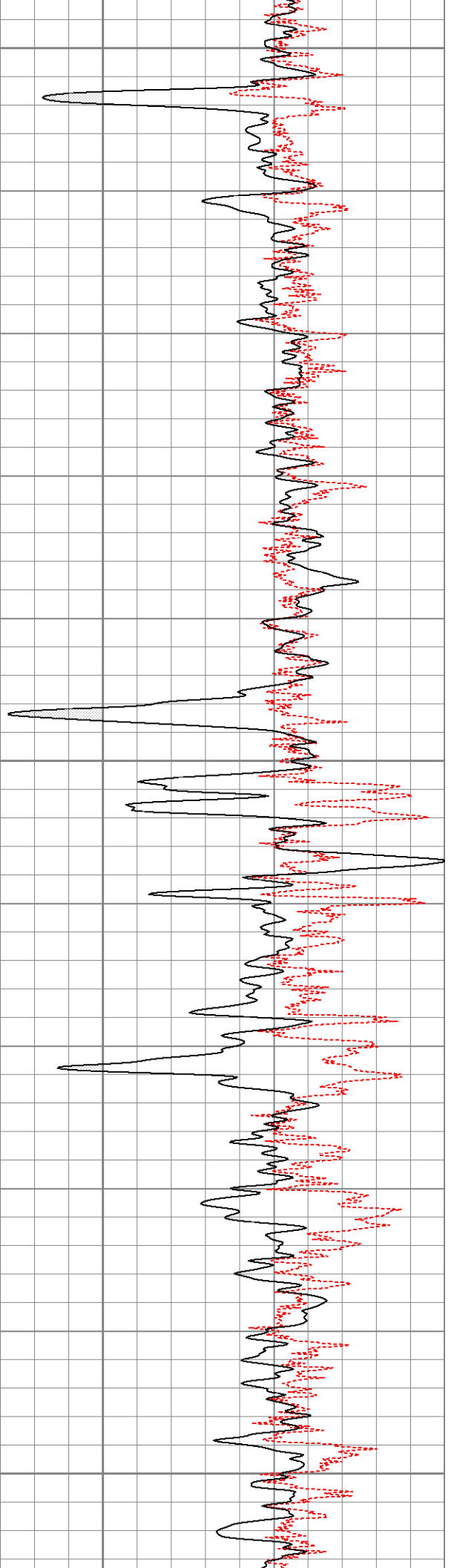
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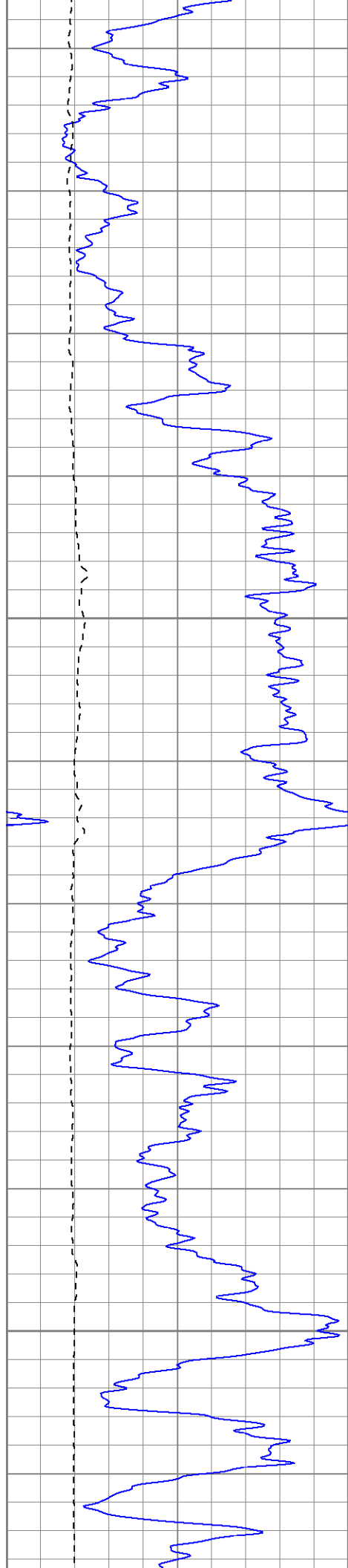


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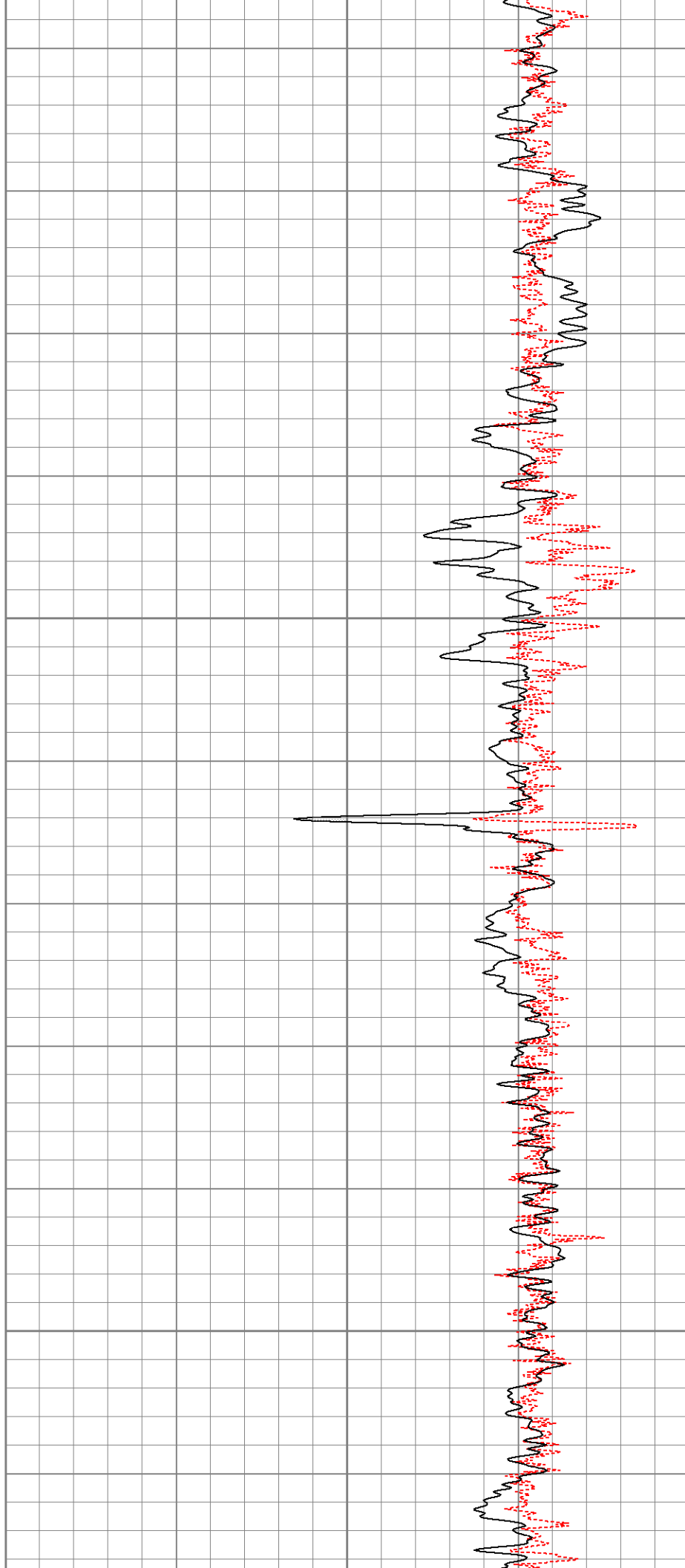
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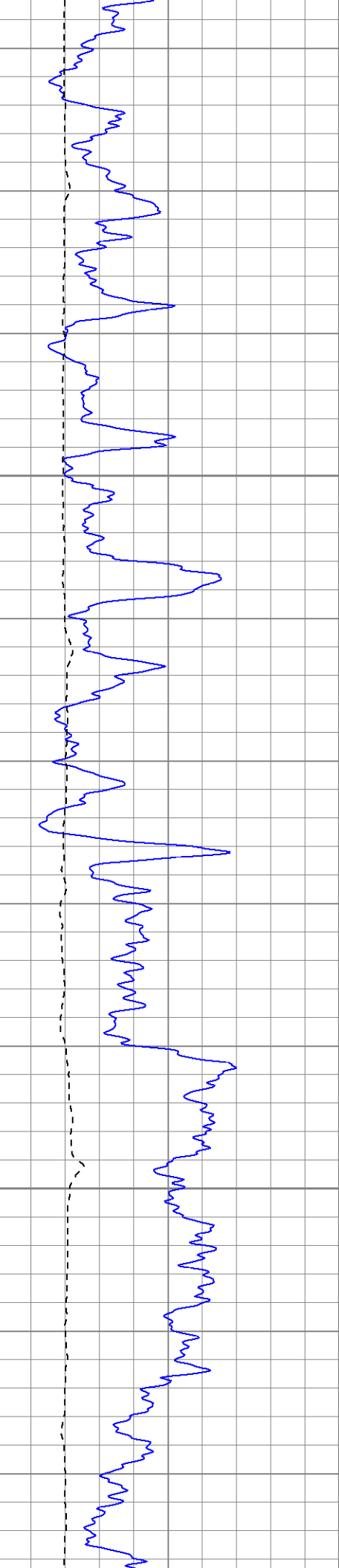




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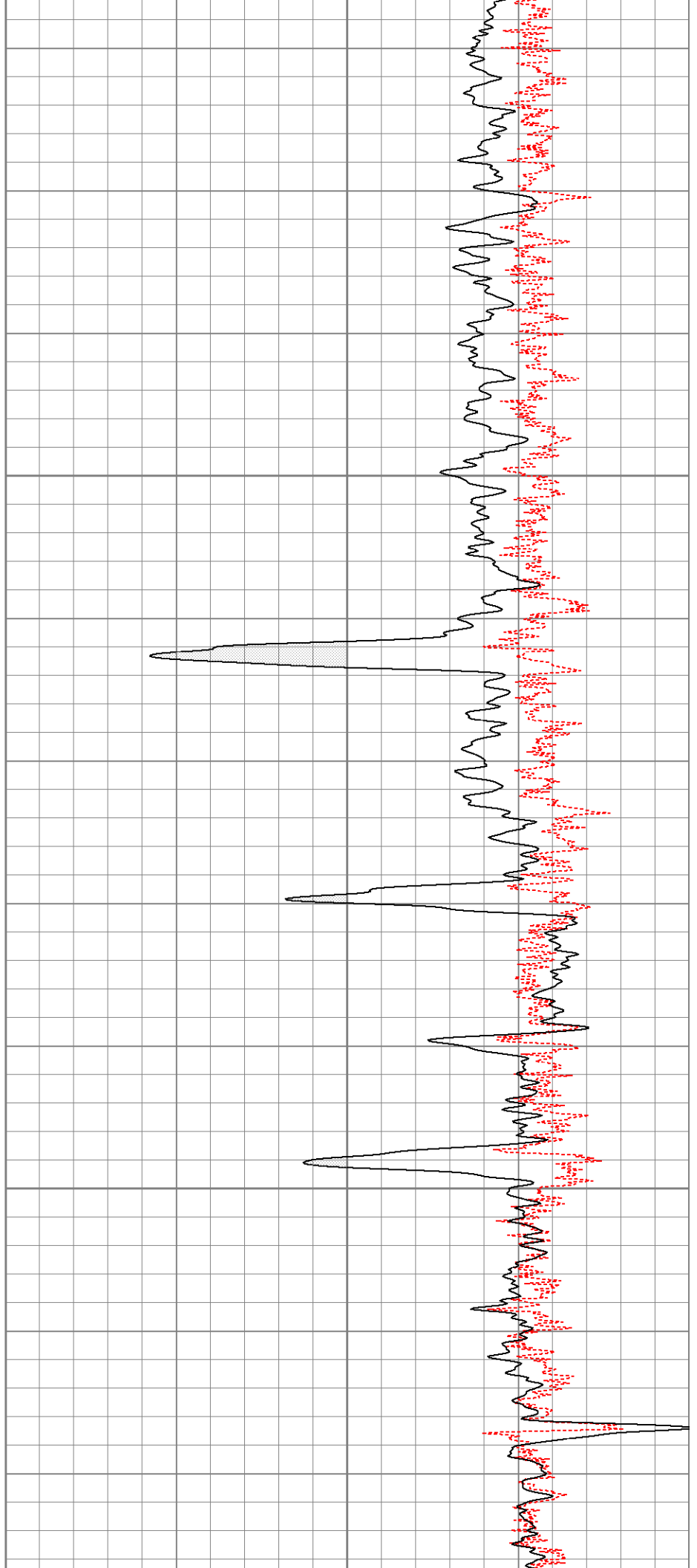
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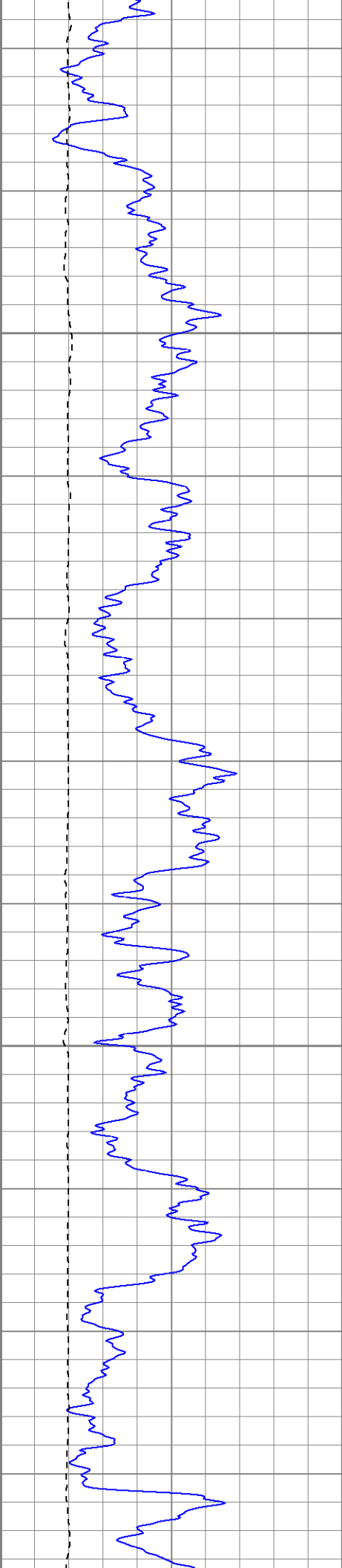




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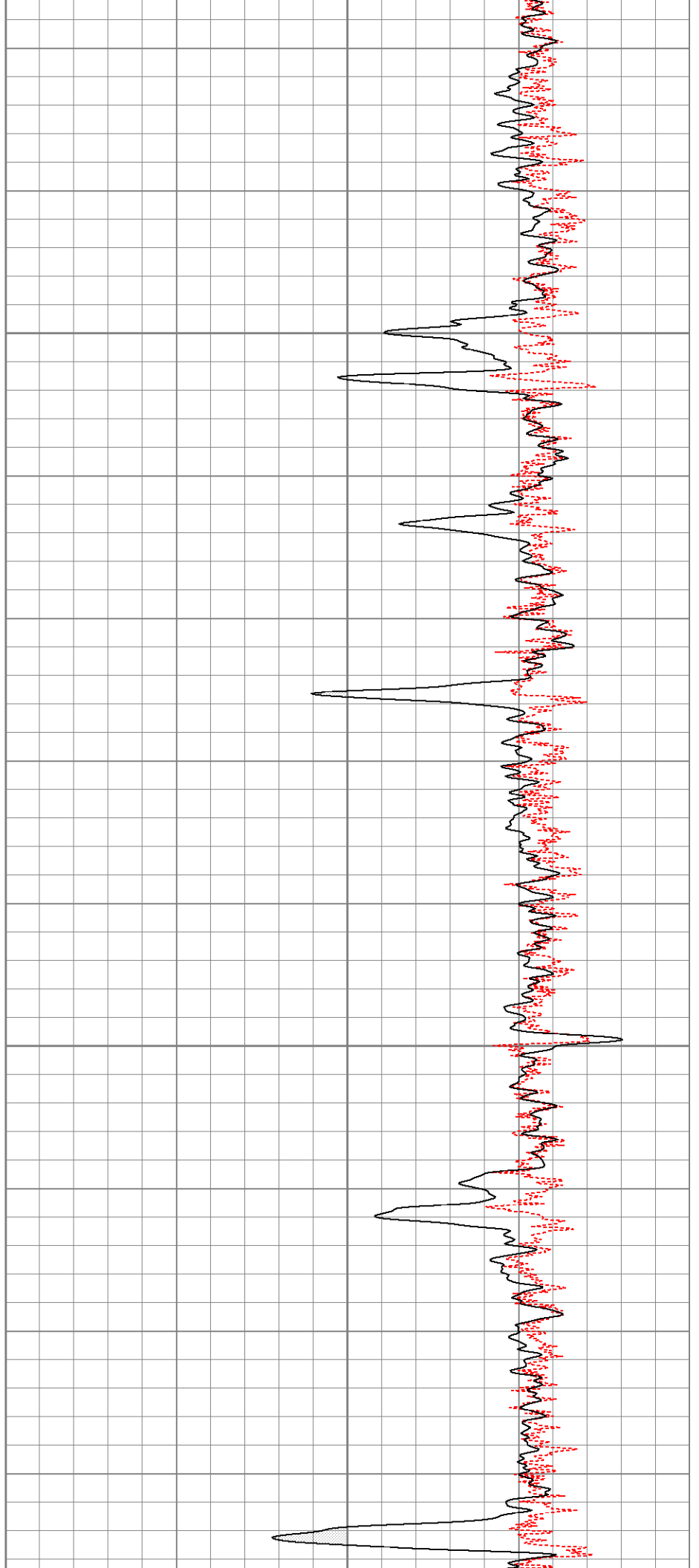
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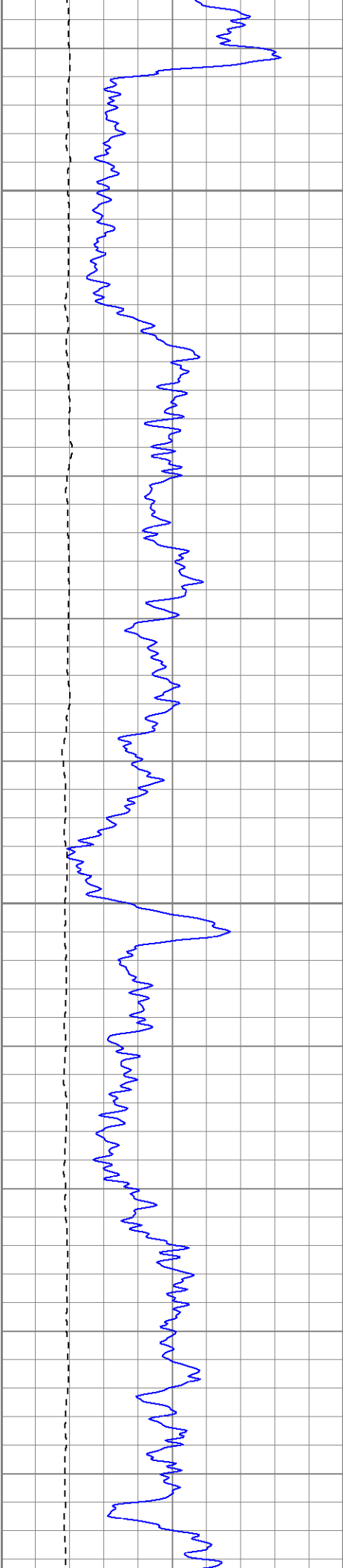




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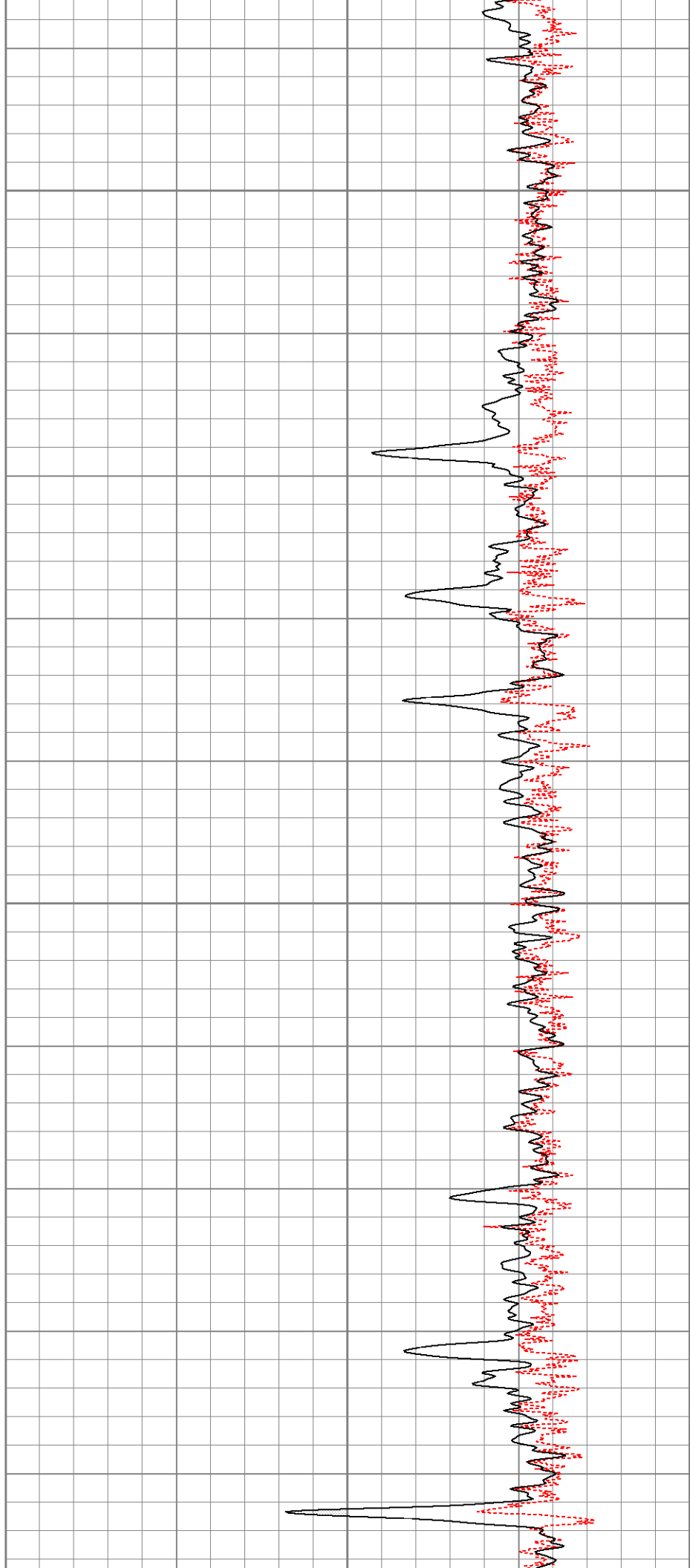
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2000

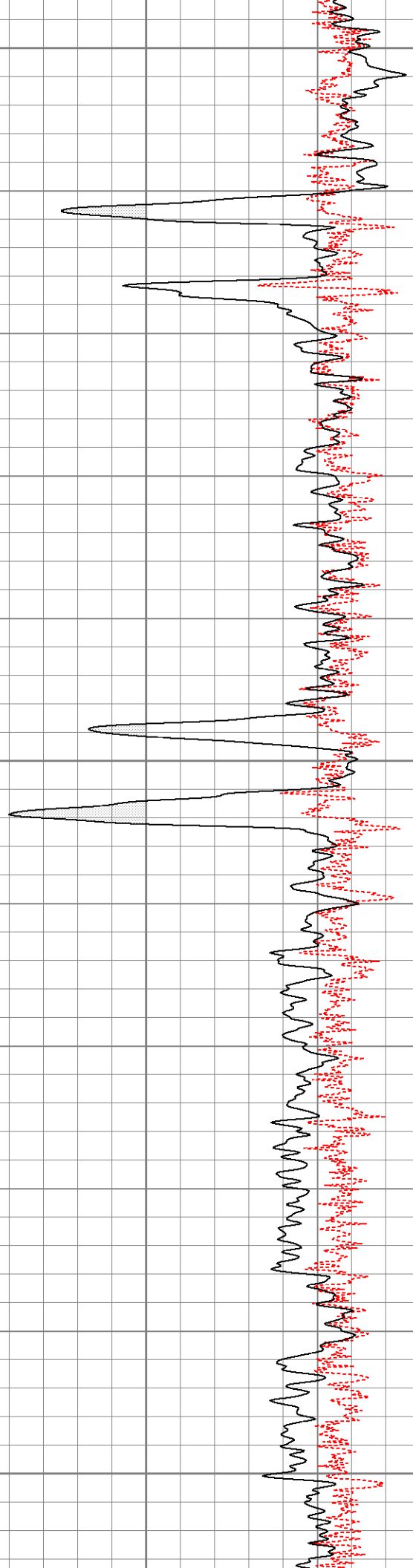
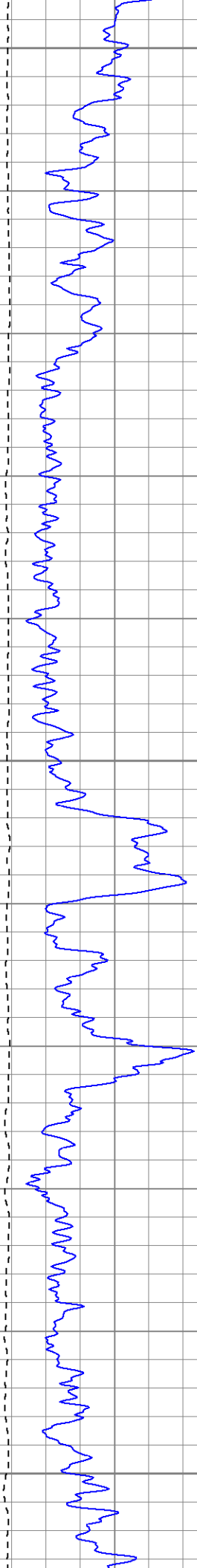
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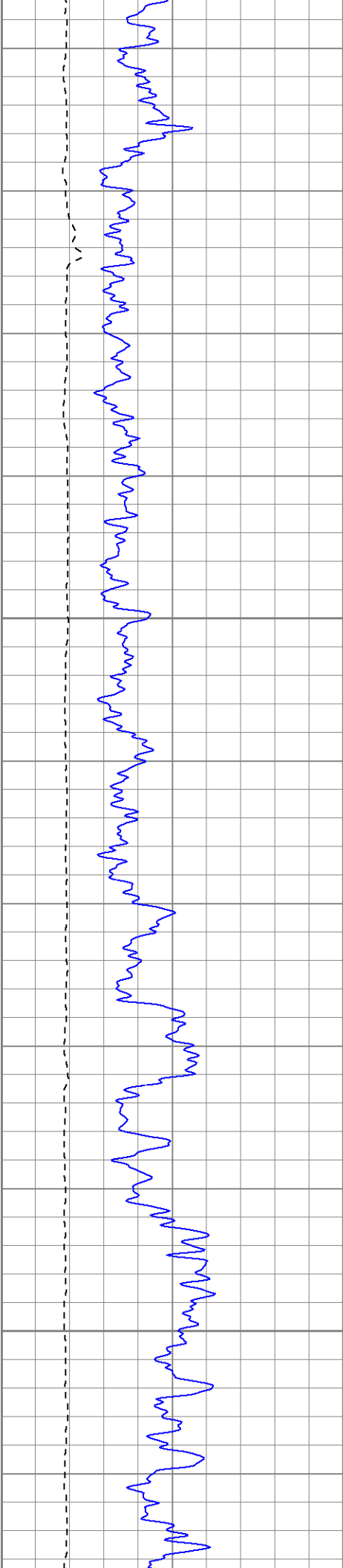


2100

2150

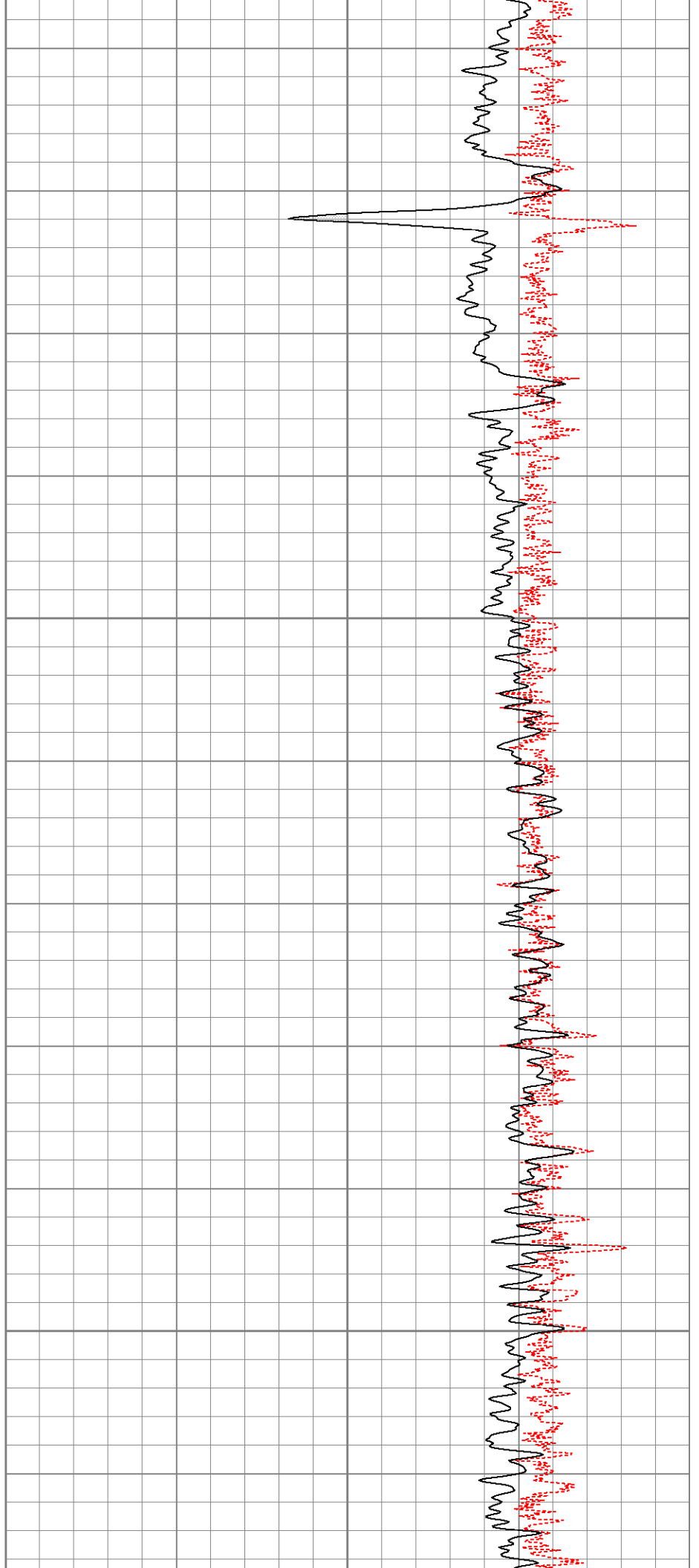
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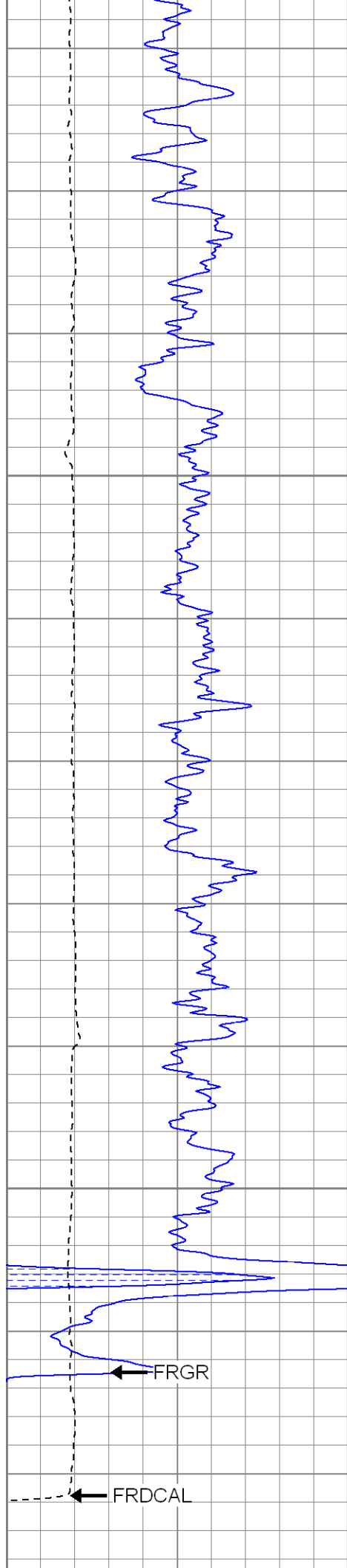




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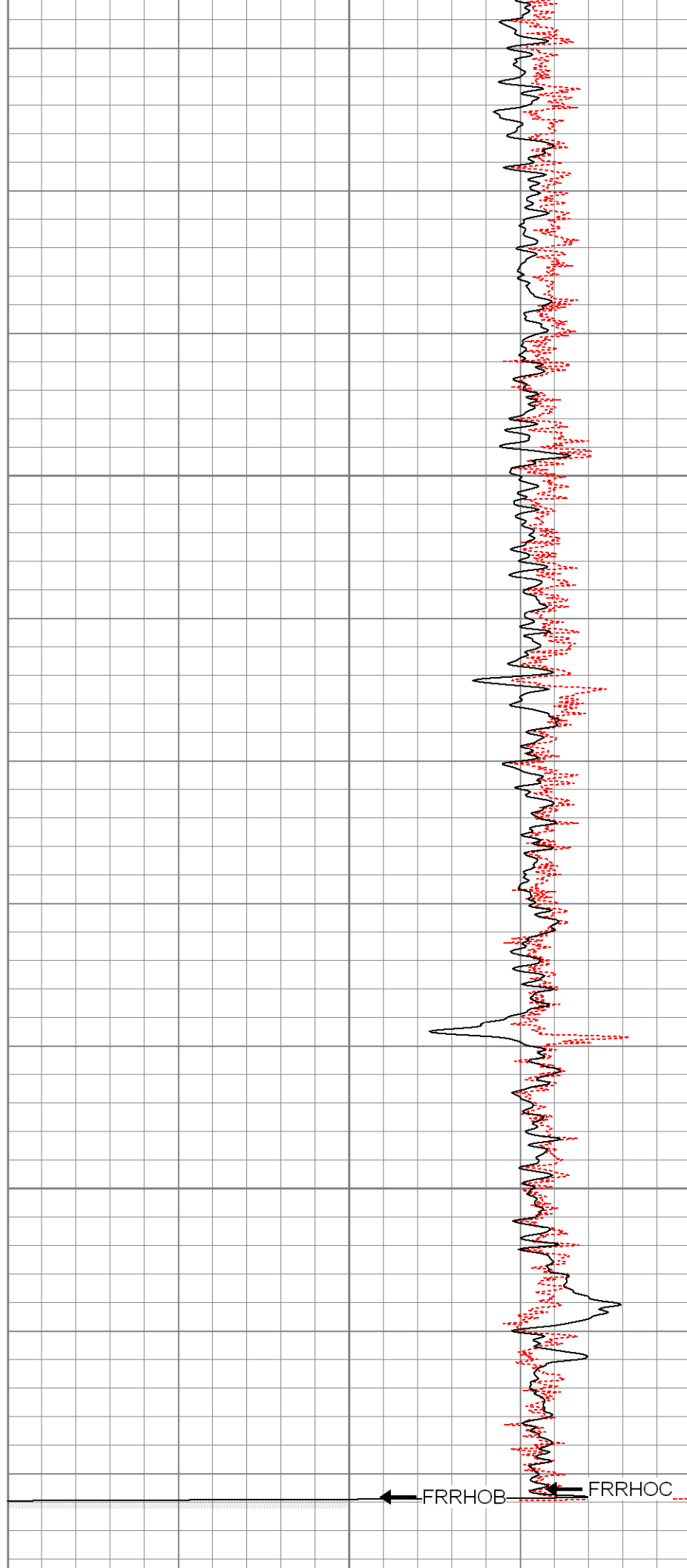
2300





2350

2400



0 GR (GAPI) 200

6 DCAL (in) 16

1 RHOB (g/cc) 3

-0.5 RHOC (g/cc) 0.5

Calibration Report

Database File: xtohr2312.db
Dataset Pathname: pass1
Dataset Creation: Fri Apr 25 14:16:09 2008 by Log Open-Cased 070814

Dual Induction Calibration Report

Serial-Model: 5375-G
Surface Cal Performed: Tue Apr 01 11:00:37 2008
Downhole Cal Performed: Tue Apr 01 11:01:24 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.001	0.620	V	0.000	500.000	mmho-m	807.237	-0.611
Medium	0.003	0.742	V	0.000	550.000	mmho-m	743.848	-2.179
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.620	V	0.000	500.000	mmho-m	807.141	-0.502
Medium	0.003	0.742	V	0.000	550.000	mmho-m	743.959	-2.189

Downhole Calibration

Readings				References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.493	500.241	mmho-m	-0.108	499.951	mmho-m	0.999	0.384
Medium	0.182	550.341	mmho-m	0.009	549.927	mmho-m	1.000	-0.172
Shallow	2.506	0.008	V	500.000	2.000	Ohm-m	124.000	-3.000

Temperature Calibration Report

Serial Number: 2542T
Tool Model: CDLP
Performed: Wed Apr 09 15:14:20 2008

Reference	Reading
1. Reference 1	Reading 1
2. Reference 2	Reading 2
3. Reference 3	Reading 3
4. Reference 4	Reading 4
5. Reference 5	Reading 5
6. Reference 6	Reading 6
7. Reference 7	Reading 7
8. Reference 8	Reading 8
9. Reference 9	Reading 9
10. Reference 10	Reading 10
11. Reference 11	Reading 11
12. Reference 12	Reading 12
13. Reference 13	Reading 13
14. Reference 14	Reading 14
15. Reference 15	Reading 15
16. Reference 16	Reading 16
17. Reference 17	Reading 17
18. Reference 18	Reading 18
19. Reference 19	Reading 19
20. Reference 20	Reading 20
21. Reference 21	Reading 21
22. Reference 22	Reading 22
23. Reference 23	Reading 23
24. Reference 24	Reading 24
25. Reference 25	Reading 25
26. Reference 26	Reading 26
27. Reference 27	Reading 27
28. Reference 28	Reading 28
29. Reference 29	Reading 29
30. Reference 30	Reading 30
31. Reference 31	Reading 31
32. Reference 32	Reading 32
33. Reference 33	Reading 33
34. Reference 34	Reading 34
35. Reference 35	Reading 35
36. Reference 36	Reading 36
37. Reference 37	Reading 37
38. Reference 38	Reading 38
39. Reference 39	Reading 39
40. Reference 40	Reading 40
41. Reference 41	Reading 41
42. Reference 42	Reading 42
43. Reference 43	Reading 43
44. Reference 44	Reading 44
45. Reference 45	Reading 45
46. Reference 46	Reading 46
47. Reference 47	Reading 47
48. Reference 48	Reading 48
49. Reference 49	Reading 49
50. Reference 50	Reading 50
51. Reference 51	Reading 51
52. Reference 52	Reading 52
53. Reference 53	Reading 53
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61. Reference 61	Reading 61
62. Reference 62	Reading 62
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67. Reference 67	Reading 67
68. Reference 68	Reading 68
69. Reference 69	Reading 69
70. Reference 70	Reading 70
71. Reference 71	Reading 71
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74. Reference 74	Reading 74
75. Reference 75	Reading 75
76. Reference 76	Reading 76
77. Reference 77	Reading 77
78. Reference 78	Reading 78
79. Reference 79	Reading 79
80. Reference 80	Reading 80
81. Reference 81	Reading 81
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83. Reference 83	Reading 83
84. Reference 84	Reading 84
85. Reference 85	Reading 85
86. Reference 86	Reading 86
87. Reference 87	Reading 87
88. Reference 88	Reading 88
89. Reference 89	Reading 89
90. Reference 90	Reading 90
91. Reference 91	Reading 91
92. Reference 92	Reading 92
93. Reference 93	Reading 93
94. Reference 94	Reading 94
95. Reference 95	Reading 95
96. Reference 96	Reading 96
97. Reference 97	Reading 97
98. Reference 98	Reading 98
99. Reference 99	Reading 99
100. Reference 100	

Low Reference:	55.00 degF	3.11	V
High Reference:	160.00 degF	5.35	V

Gain:	46.88
Offset:	-90.78
Delta Spacing	1

Compensated Density Calibration Report					
Serial-Model:			2542-T2		
Source / Verifier:			/		
Master Calibration Performed:			Fri Apr 04 08:43:29 2008		
Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	725.64	339.44	cps
Aluminum	2.590	g/cc	162.65	232.88	cps
	Spine Angle = 75.86		Density/Spine Ratio = 0.571		
	Size		Reading		
Small Ring	8.00	in	1.33	V	
Large Ring	14.00	in	2.67	V	

Gamma Ray Calibration Report			
Serial Number:	2001		
Tool Model:	OH		
Performed:	Fri Apr 04 09:53:13 2008		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2500	GAPI/cps	
Neutron Calibration Report			
Serial Number:	5108		
Tool Model:	PROBE		
Performed:	Wed Apr 09 15:10:14 2008		
Calibrator Value:	1	NAPI	
Calibrator Reading:	1	cps	
Sensitivity:	1	NAPI/cps	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	37.47		None	0.75	1.50	5.00
			NEU-PROBE (5108) Probe Epithermal	4.92	3.63	85.00
GR	31.94		GR-OH (2001) 2001	3.56	3.25	40.00
LSD	23.19		CDL-T2 (2542) Gearhart	9.29	4.00	201.00
DCAL	22.98		TEMP-CDL P (2542T)	0.01	1.00	1.00

SSD	22.73		21.47	4.00	345.00
TEMP	22.55				
CILD	10.60				
SP	10.60				
CILM	6.89				
RLL3	1.70				
Dataset: xtohr2312.db: field/well/run1/pass1 Total Length: 40.00 ft Total Weight: 677.00 lb O.D. 4.00 in					