

COMPENSATED DENSITY NEUTRON LOG

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Graham 32-22 Tr	Well	Graham 32-22 Tr
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API #: 05 071 09874 00	Other Services	SIL
SEC 22 TWP 32S RGE 66W	1949' FNL & 2565' FEL	Elevation	7513'
Permanent Datum	Ground Level	K.B.	7517'
Log Measured From	Kelly Bushing 4' AGL	D.F.	-----
Drilling Measured From	Kelly Bushing	G.L.	7513'
Date	8-18-11		
Run Number	One		
Depth Driller	1970'		
Depth Logger	1958'		
Bottom Logged Interval	1946'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 725'		
Casing Logger	726'		
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	3:00 A.M.		
Time Logger on Bottom	6:30 A.M.		
Maximum Recorded Temperature	81 DEG F		
Equipment Number	T590		
Location	Trinidad		
Recorded By	C. Sisneros		
Witnessed By	Mr. Derrick Berry		

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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

Density Porosity Presented On Sandstone Matrix.
 ABHV Calculated For 5.5" Casing.
 Neutron Porosity invalid from 1700' to 1480' due to foam.
 Directions:
 Bon Carbo, left at Post Office, follow main RD to Y @ C.R. 30.1 and State Wild Life Area,
 Stay Straight, right at Gourdins house, drive to Whispering Pines, after cattlegaurd its the
 2nd left, go thru gate, follow rd and dead end on location.
 Well is first on the right.

Database File: grahamtr.db
Dataset Pathname: pass2.1
Presentation Format: cdl
Dataset Creation: Thu Aug 18 07:27:41 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

2	RHOB (g/cc)		3
1	RHOB (g/cc)		2
30	DPOR (pu)		-10
-0.5		RHOC (g/cc)	0.5
7000		LTEN (lb)	0
ABHV (ft3)			

Surface Casing

410

750

214

392

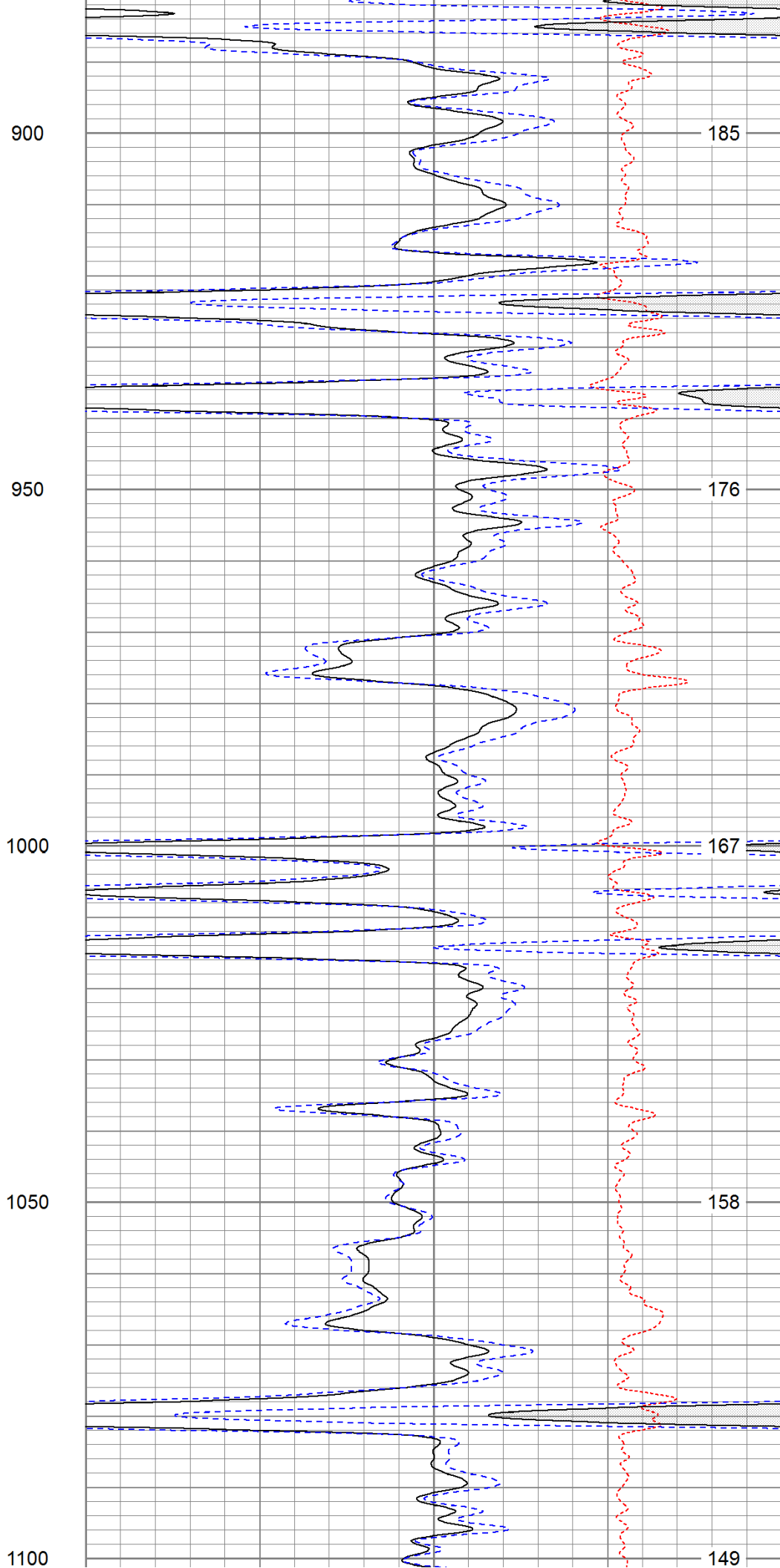
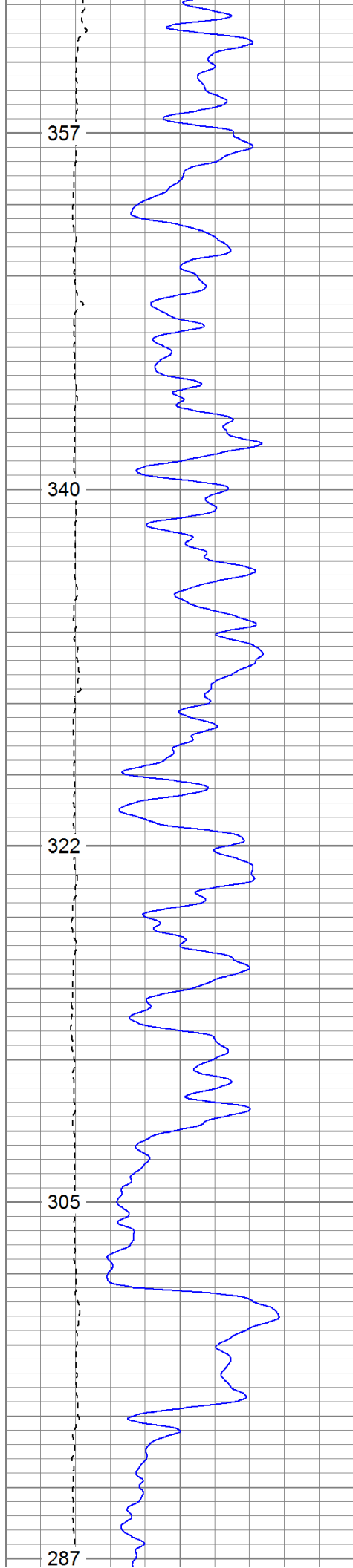
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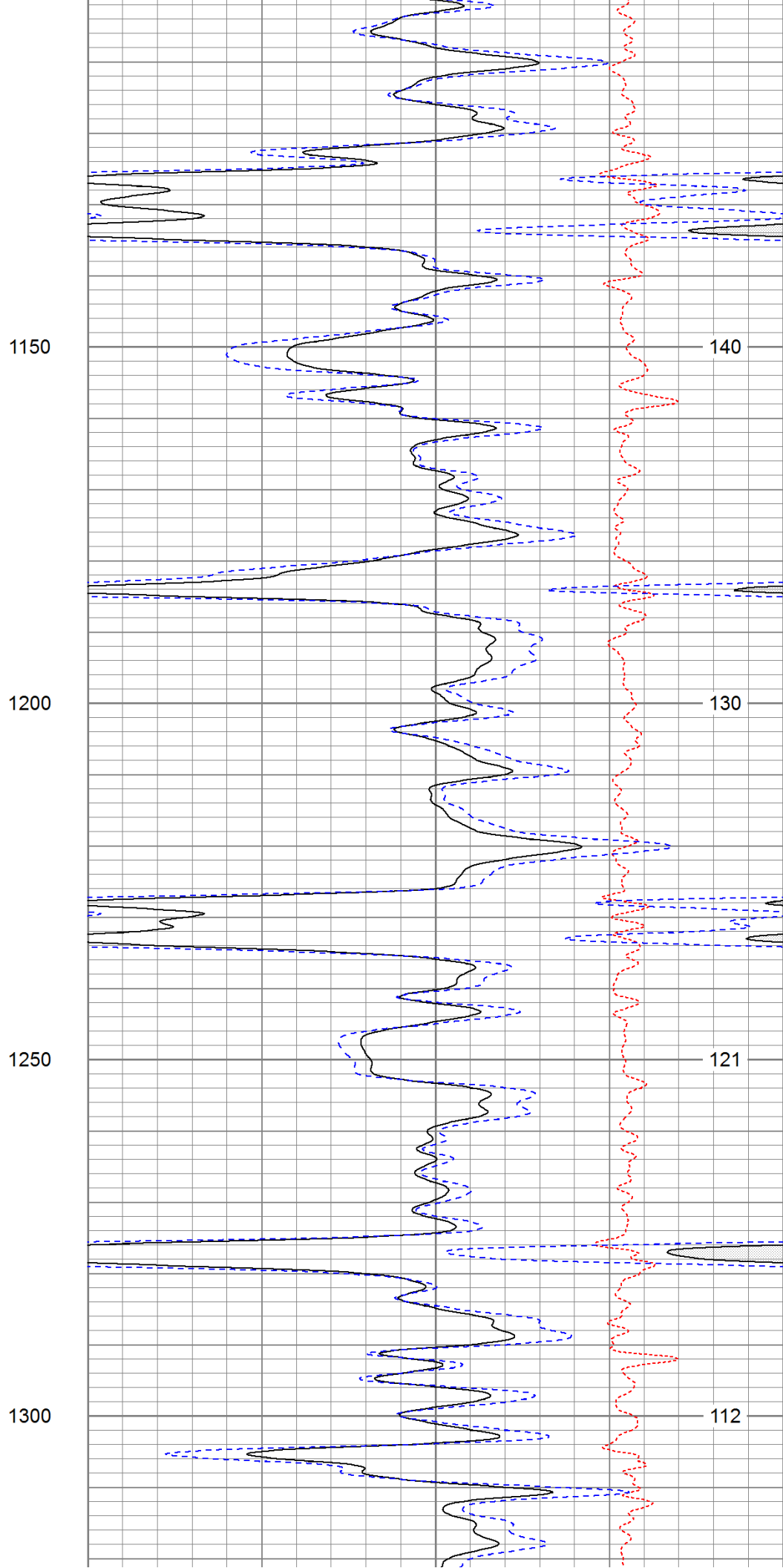
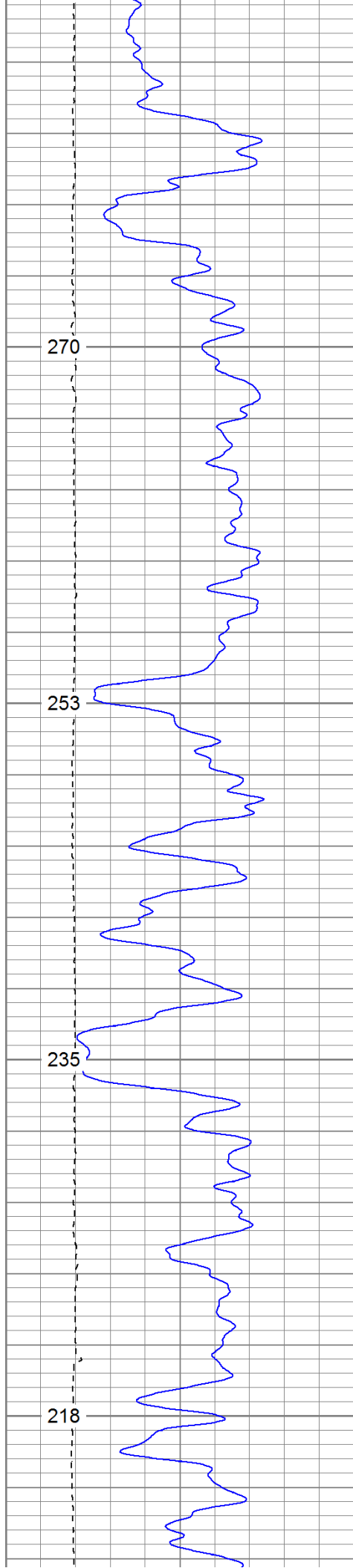
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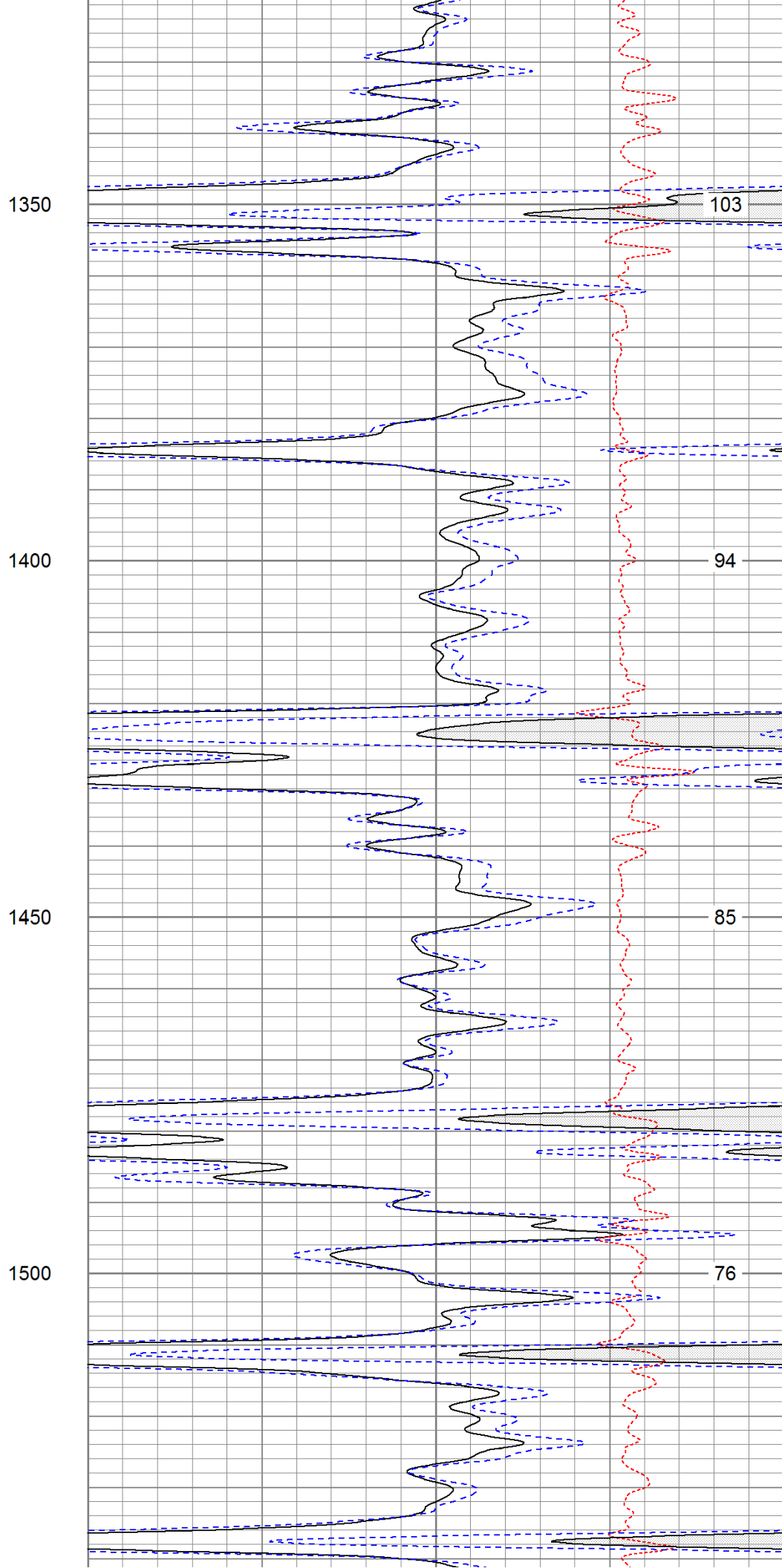
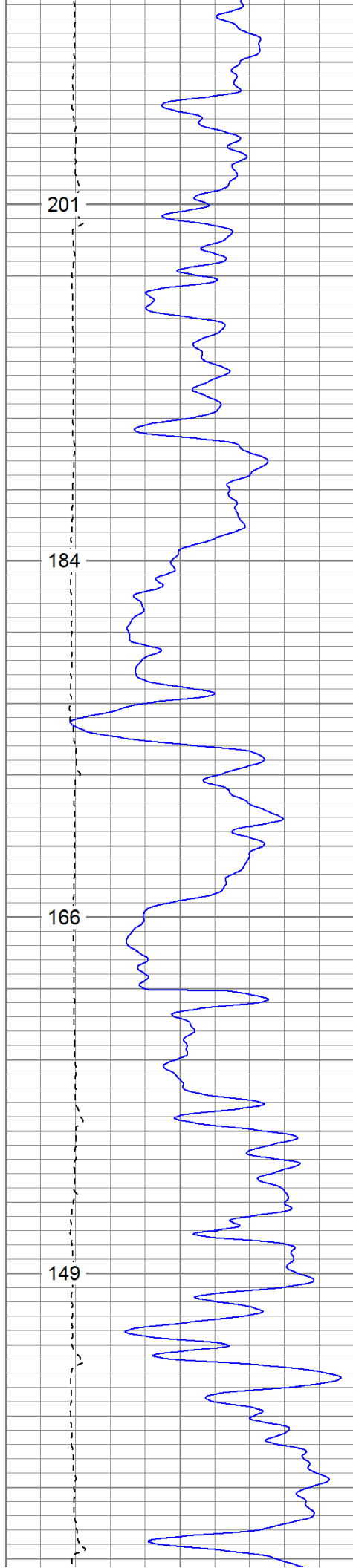
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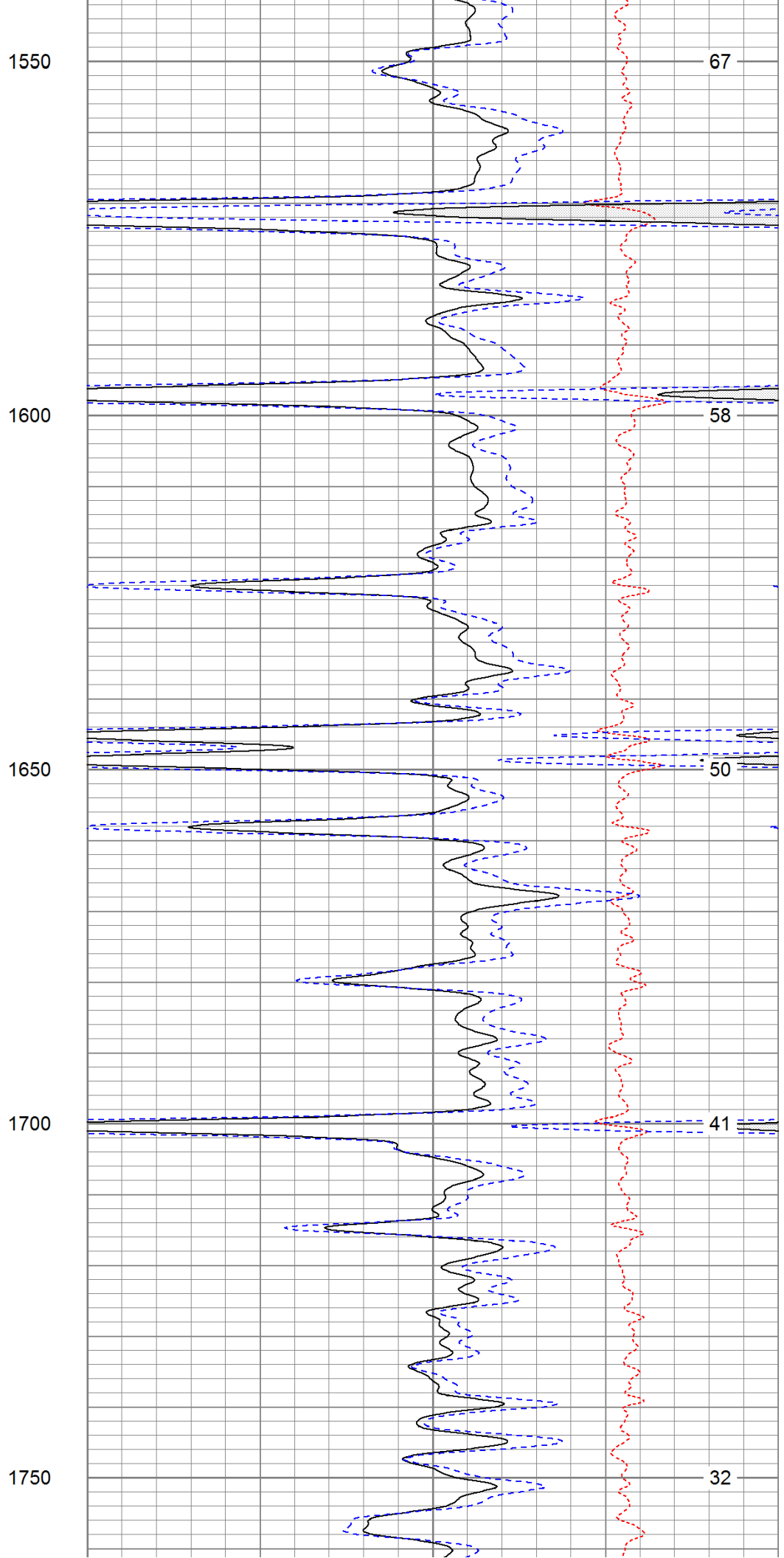
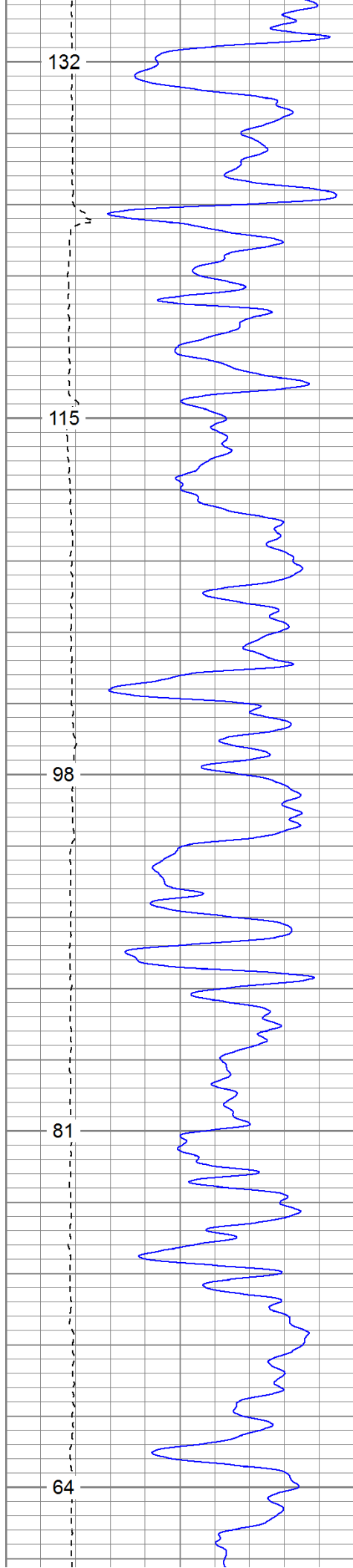
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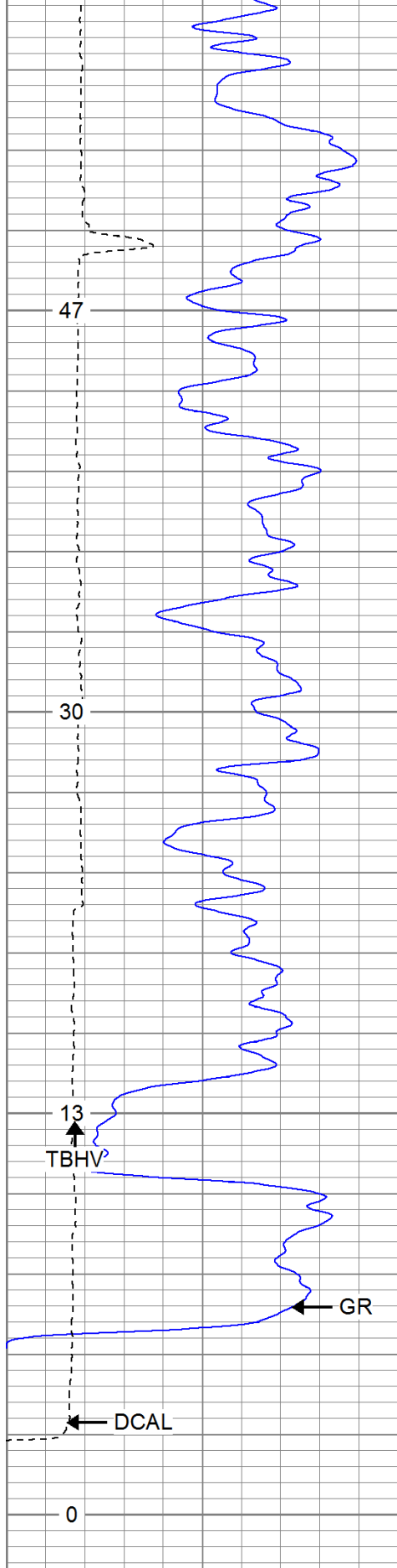
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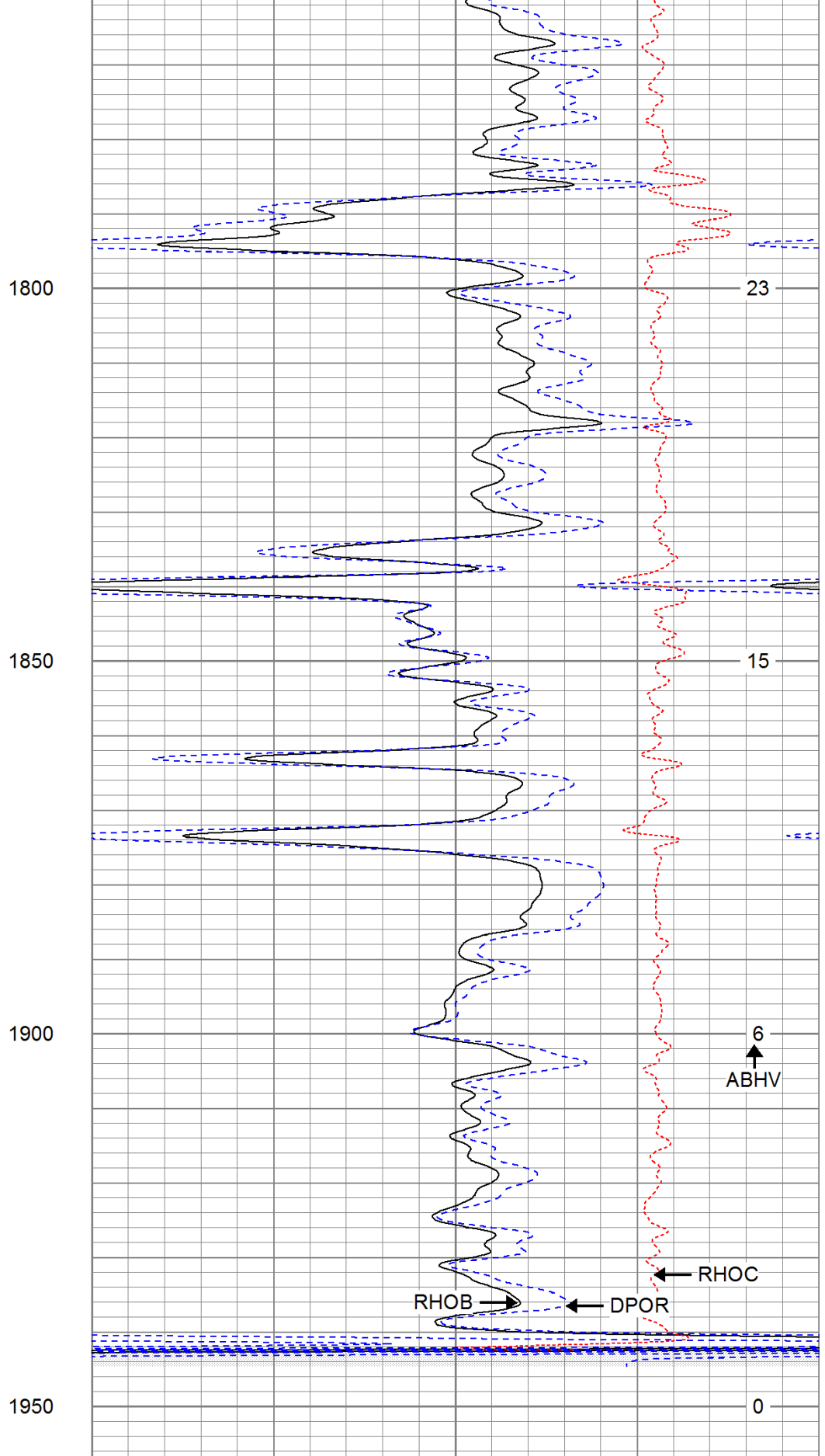








0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		



2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
7000	LTEN (lb)	0

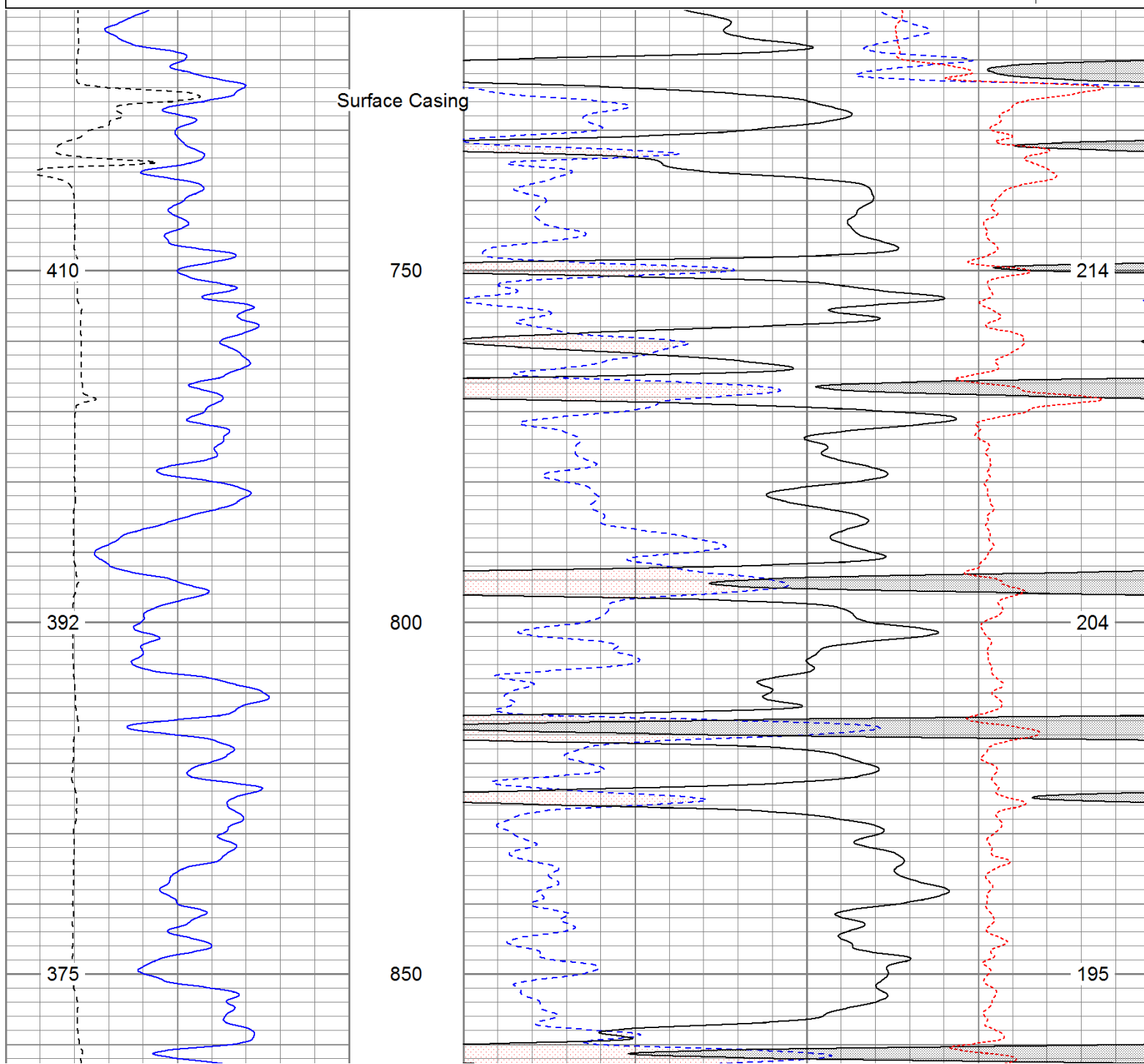


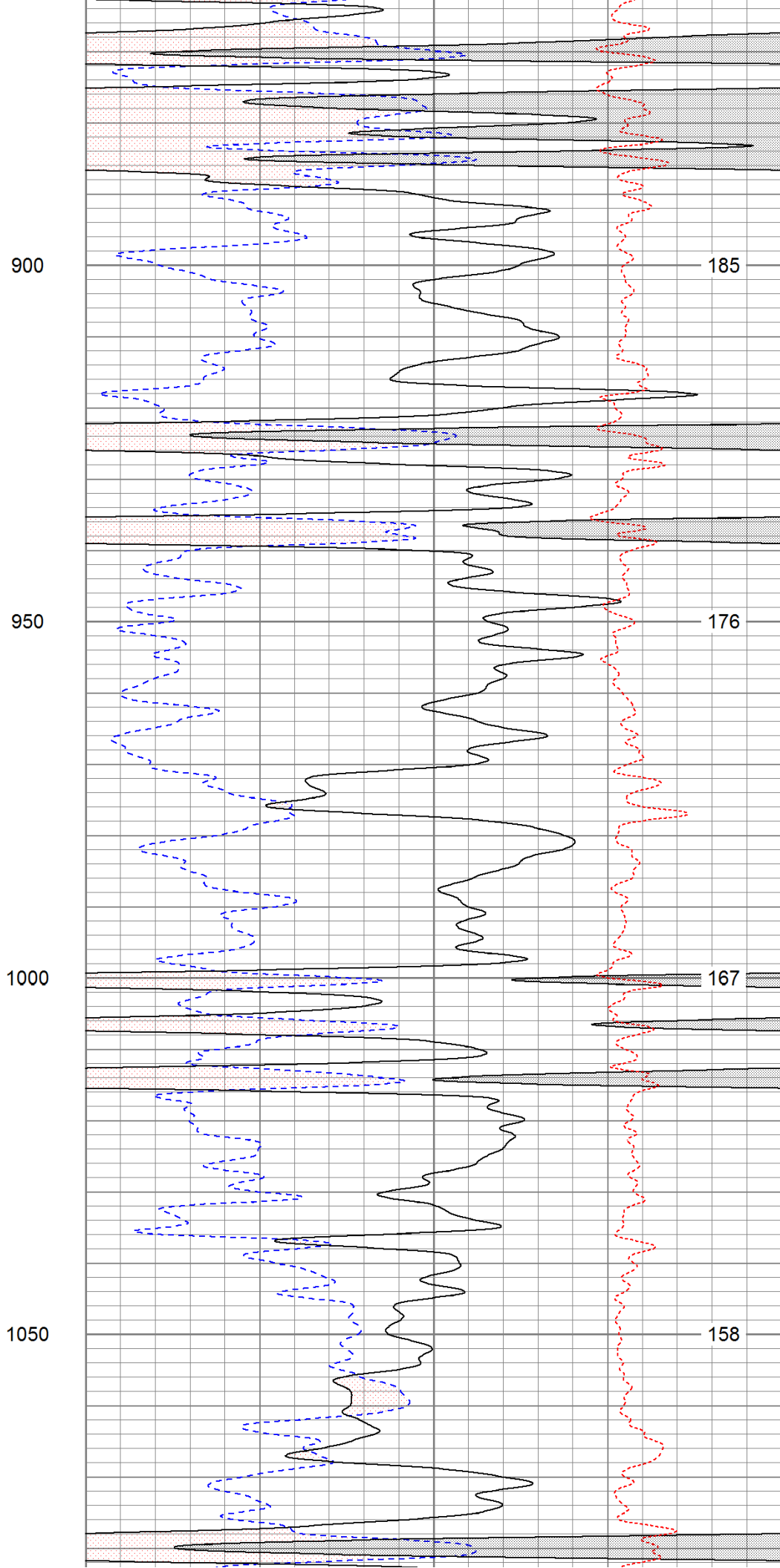
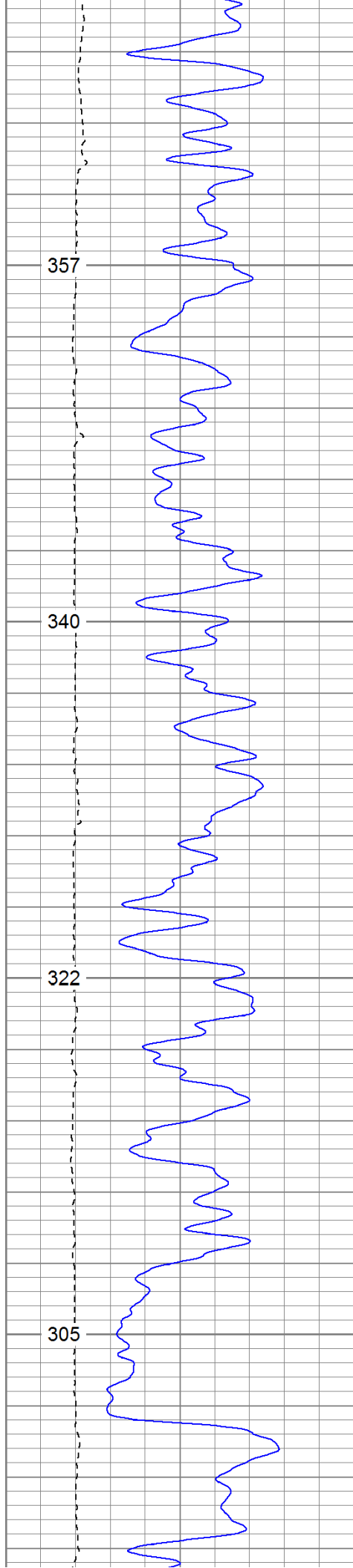
Main Pass

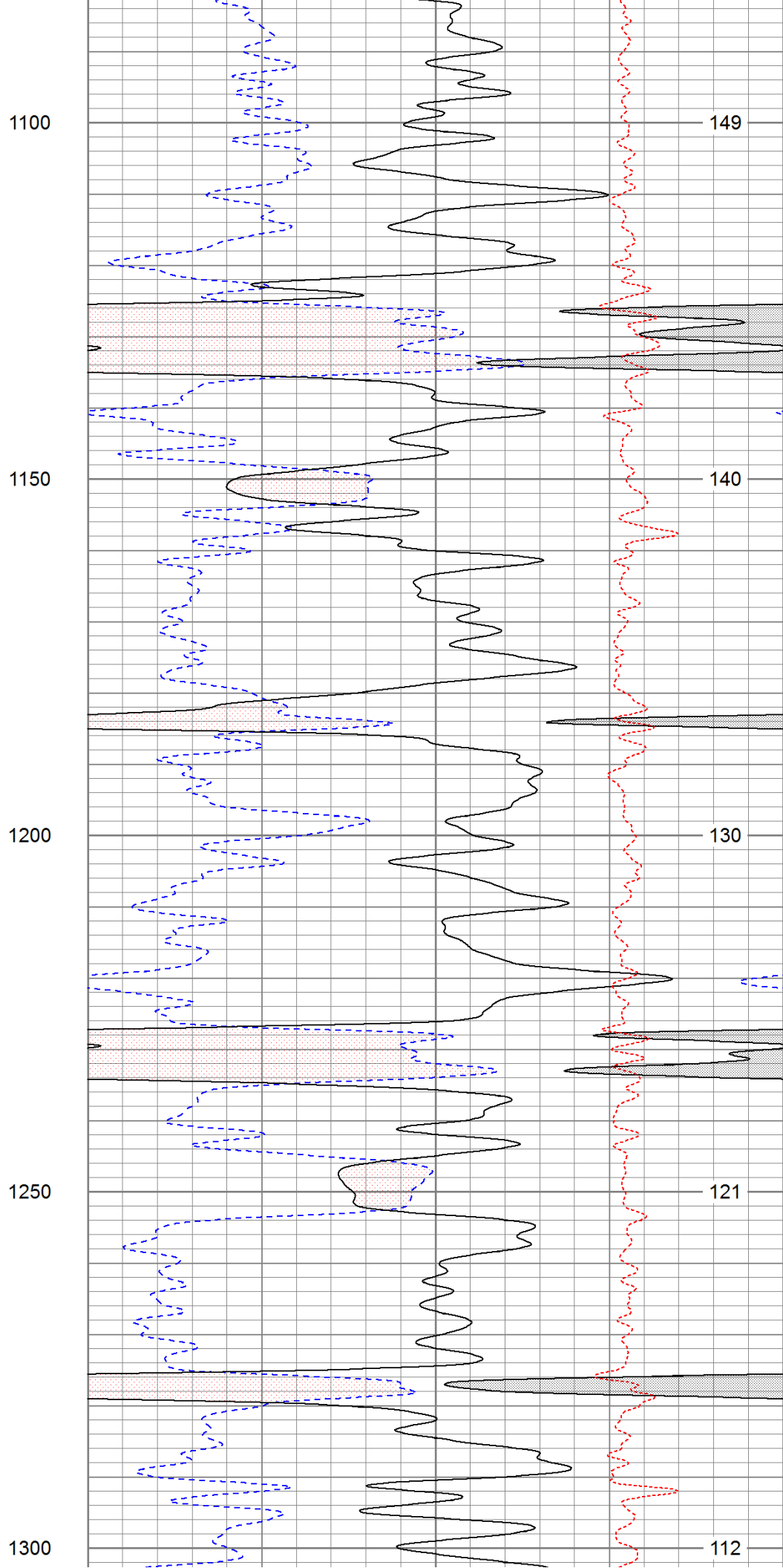
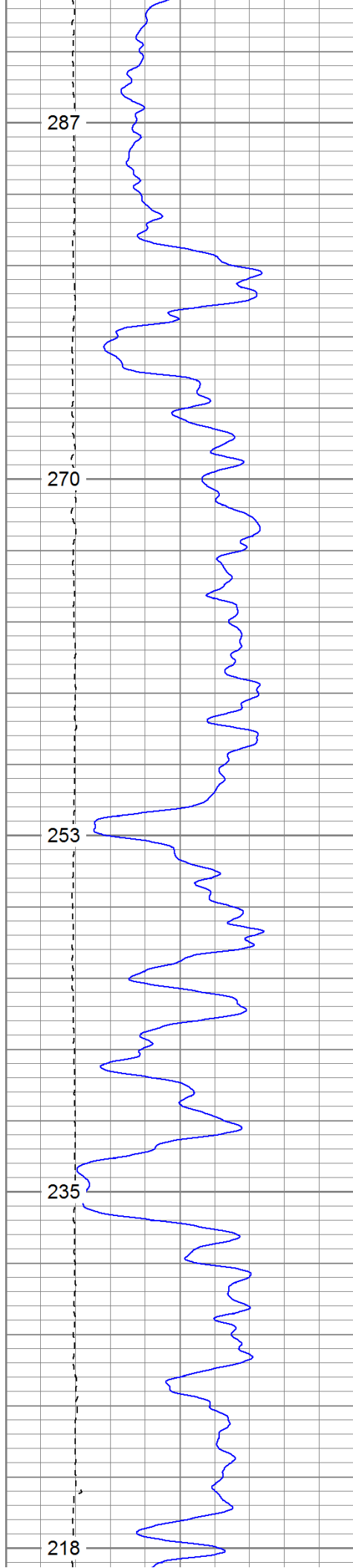
Database File: grahamtr.db
 Dataset Pathname: pass2.1
 Presentation Format: cdnl
 Dataset Creation: Thu Aug 18 07:27:41 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

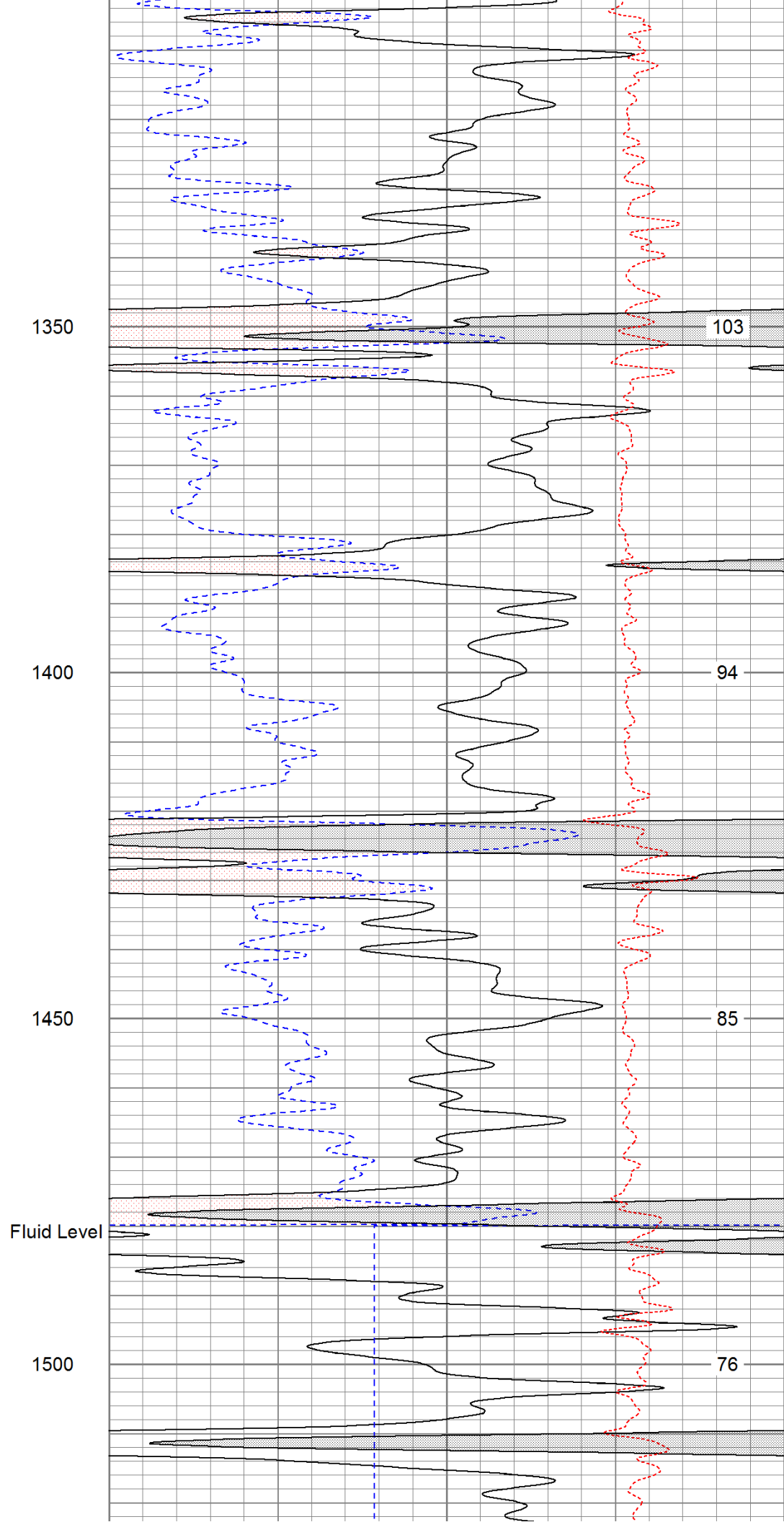
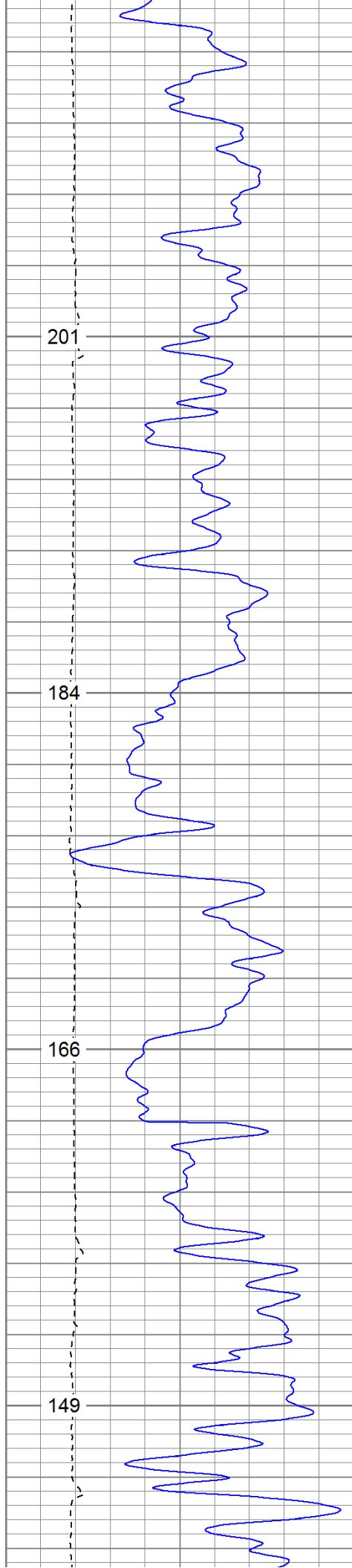
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6	DCAL (in)	16
TBHV (ft3)		

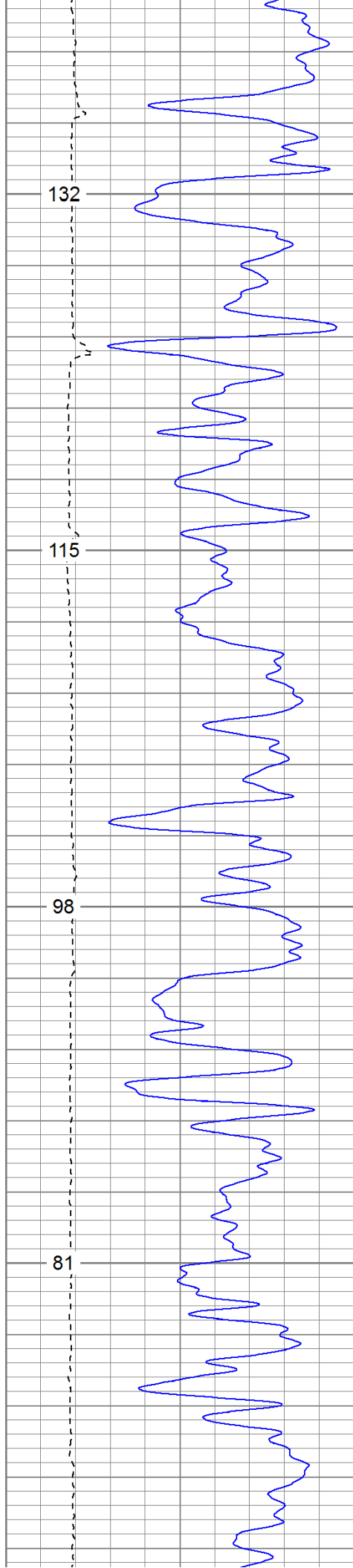
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
	ABHV (ft3)	









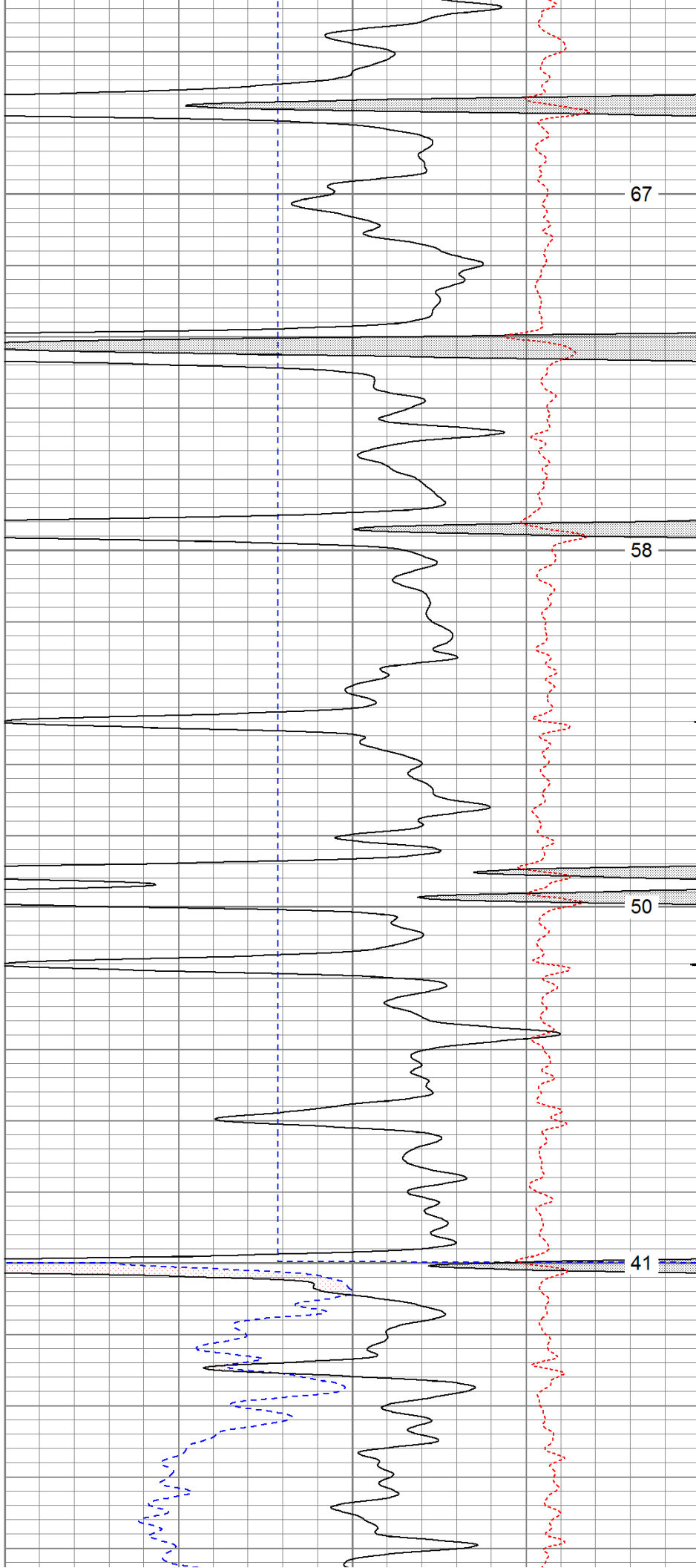


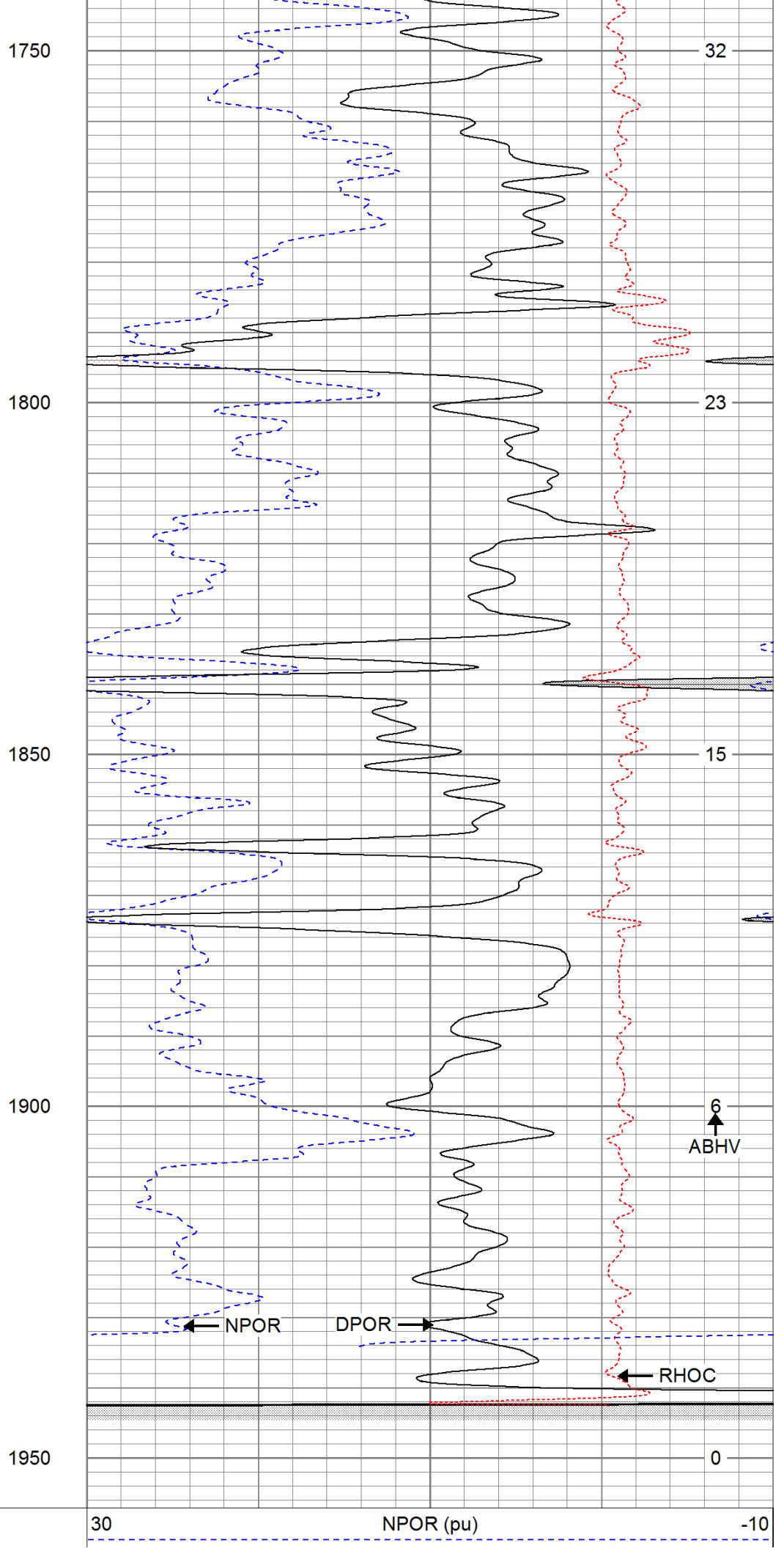
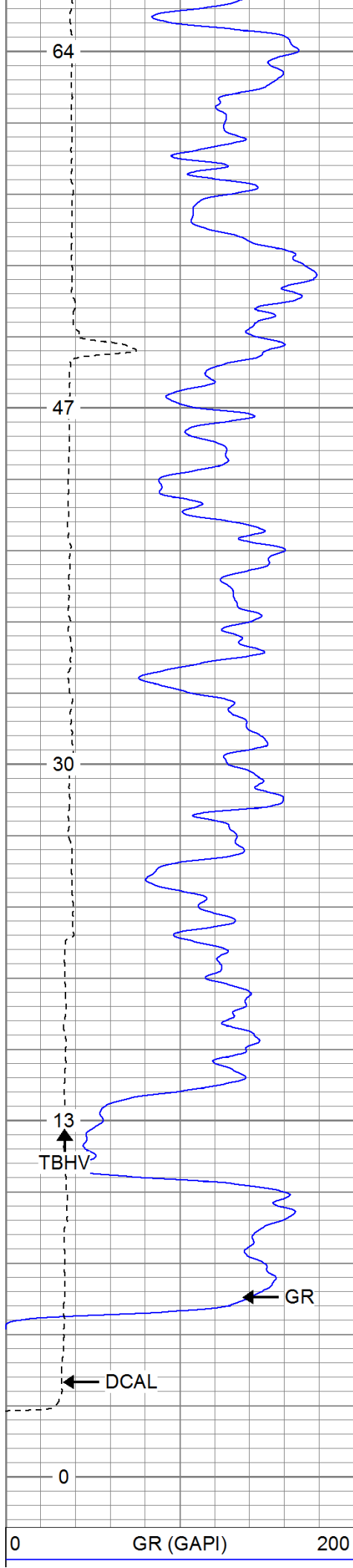
1550

1600

1650

FOAM
1700





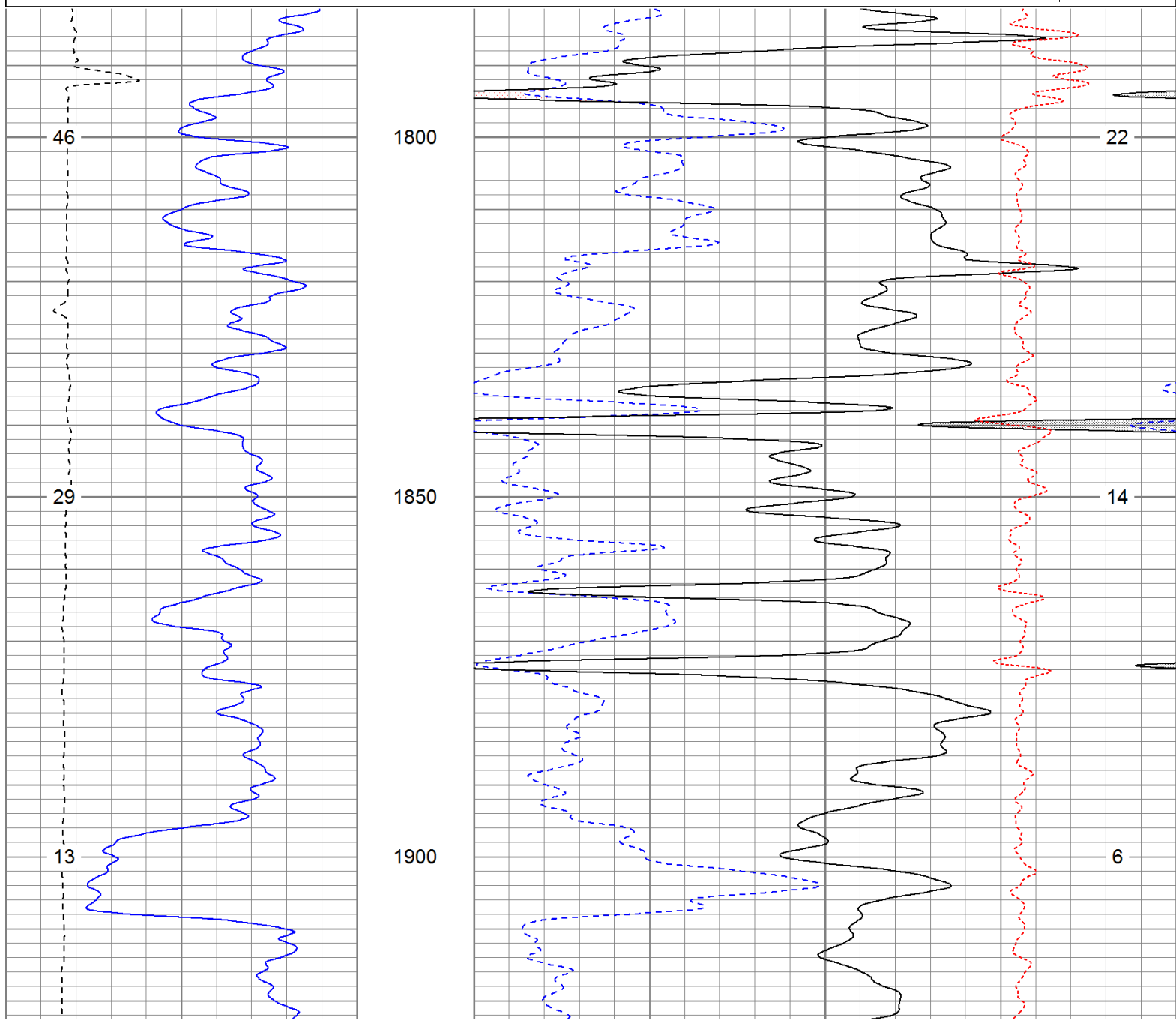
6		DCAL (in)		16		30		DPOR (pu)		-10			
TBHV (ft3)								-0.5		RHOC (g/cc)		0.5	
												ABHV (ft3)	

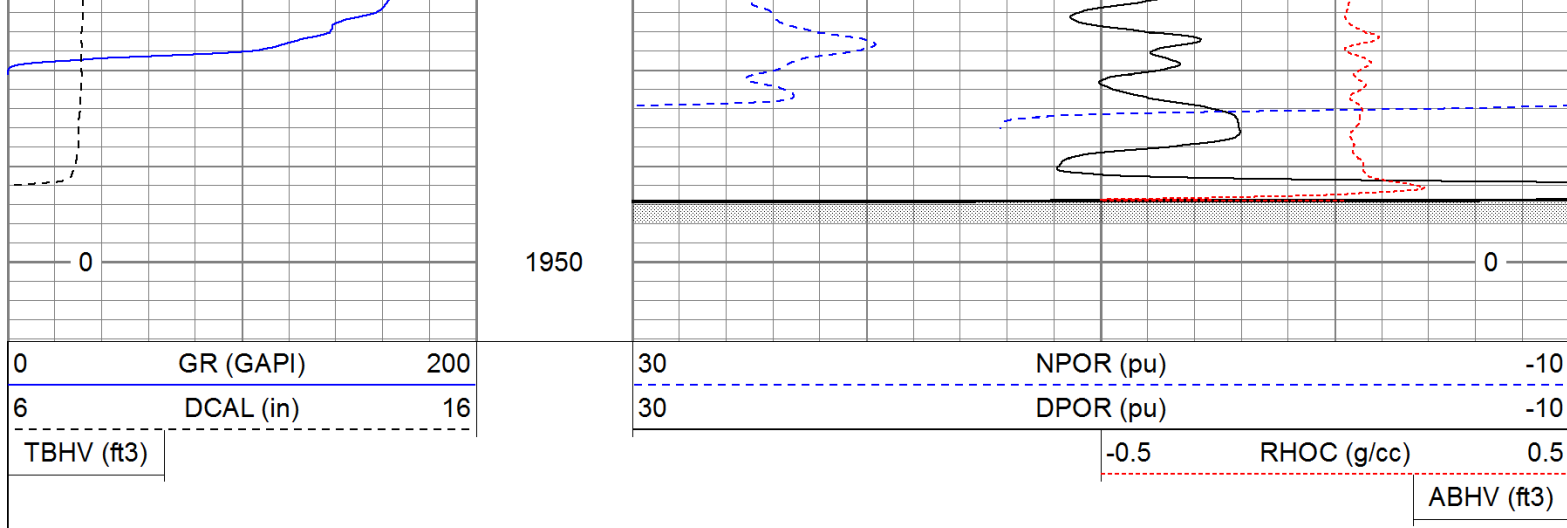


Repeat Pass

Database File: grahamtr.db
Dataset Pathname: pass1.1
Presentation Format: cdnl
Dataset Creation: Thu Aug 18 07:31:41 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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		
			ABHV (ft3)		

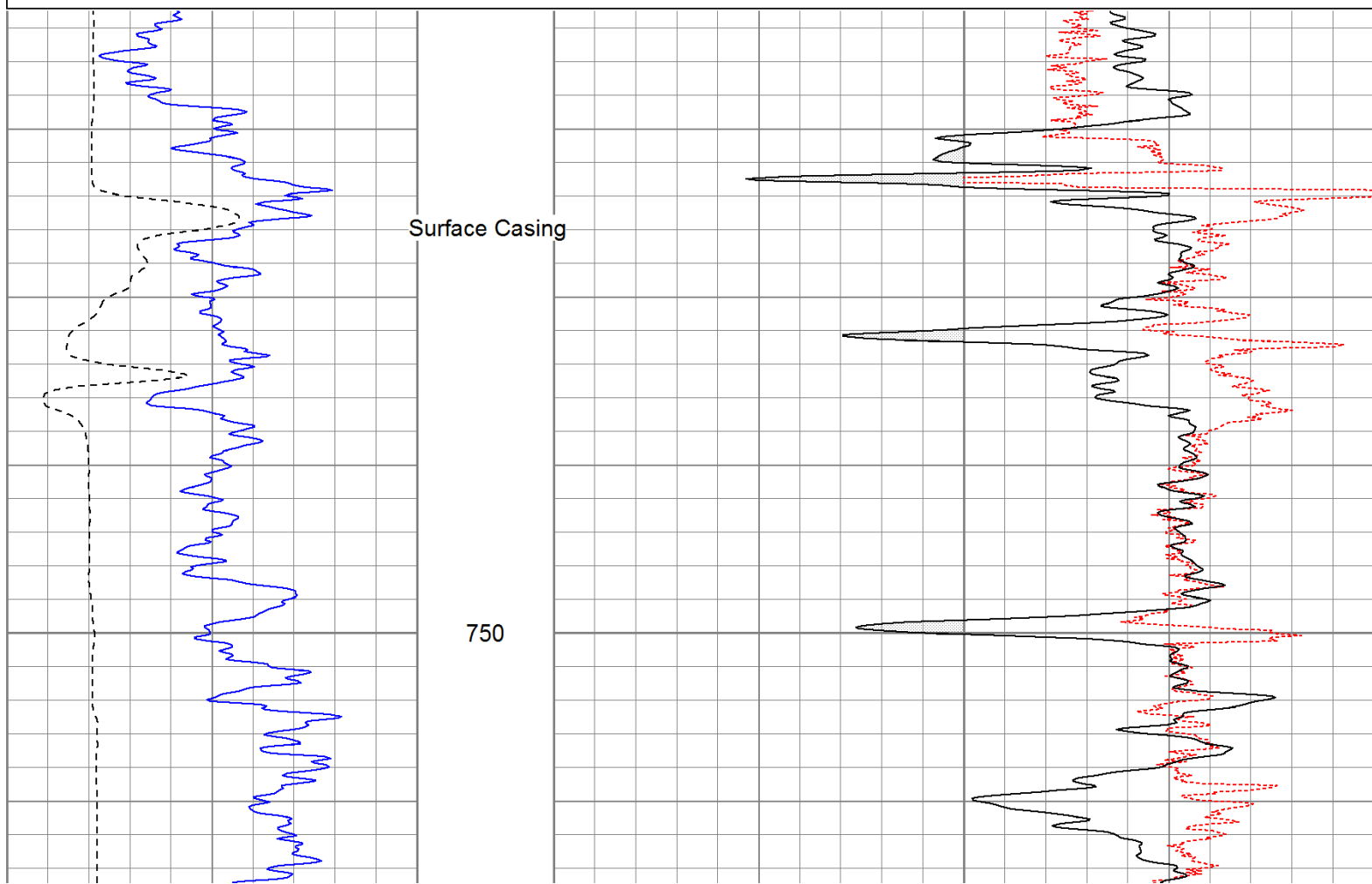


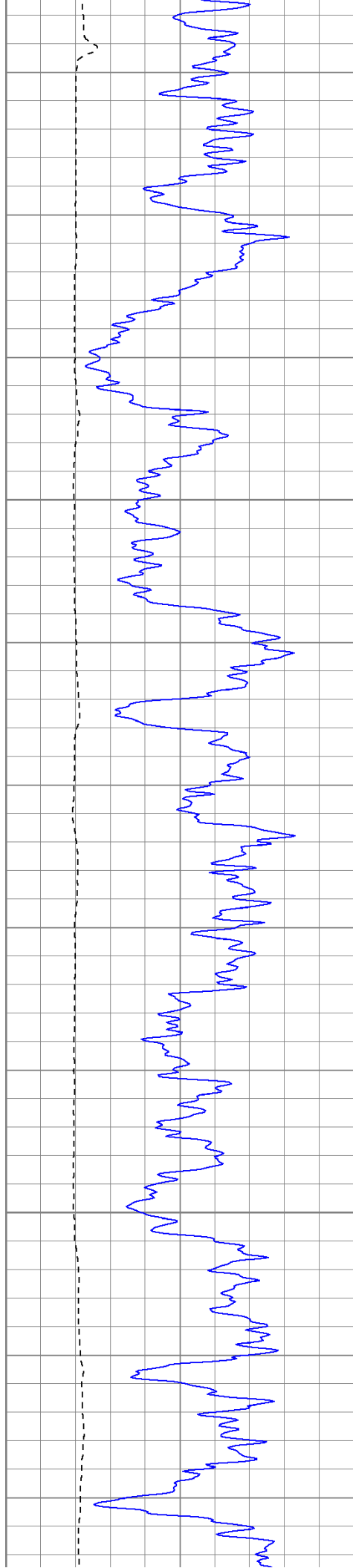


High Resolution Pass

Database File: grahamtr.db
 Dataset Pathname: pass2.2
 Presentation Format: cdlhr
 Dataset Creation: Sun Aug 21 19:27:08 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:120

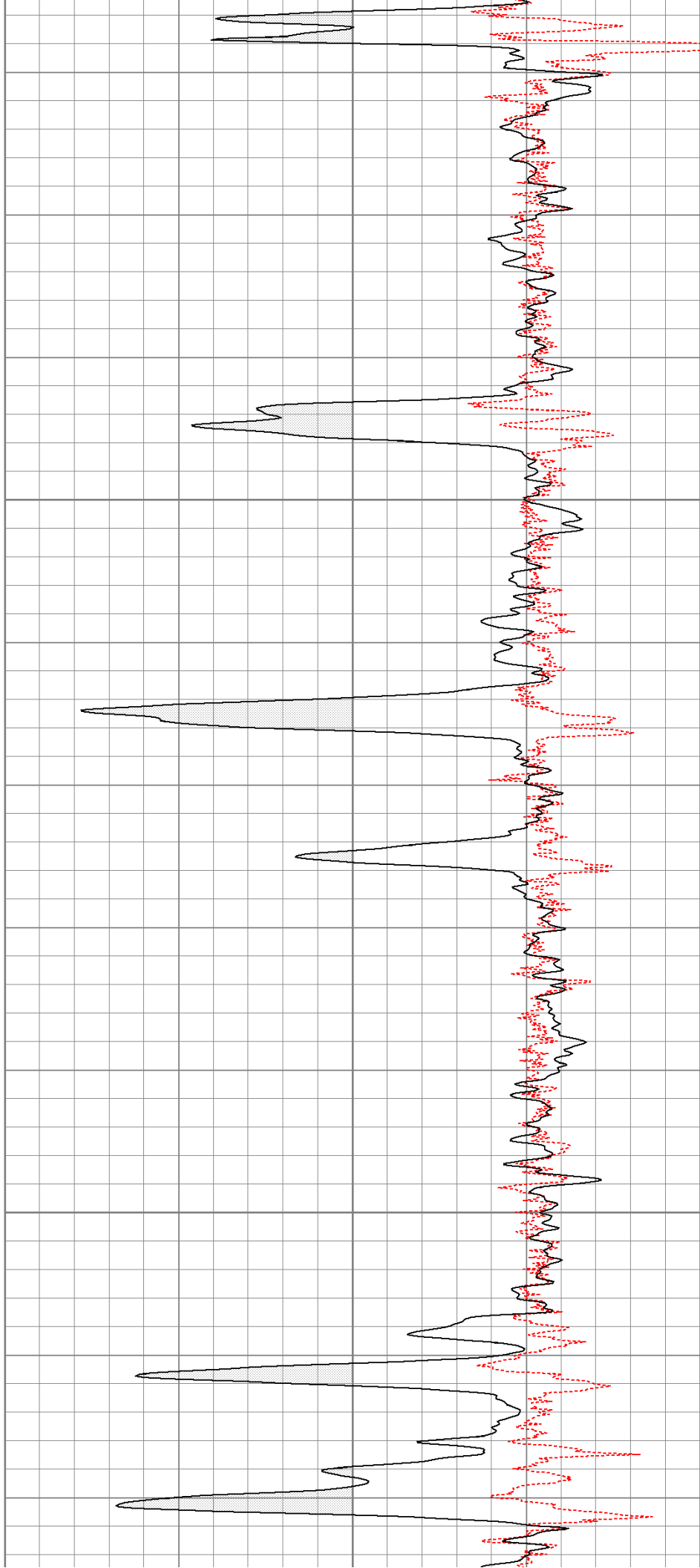
0	GR (GAPI)	200	1	RHOB (g/cc)	3
6	DCAL (in)	16		-0.5	RHOC (g/cc) 0.5

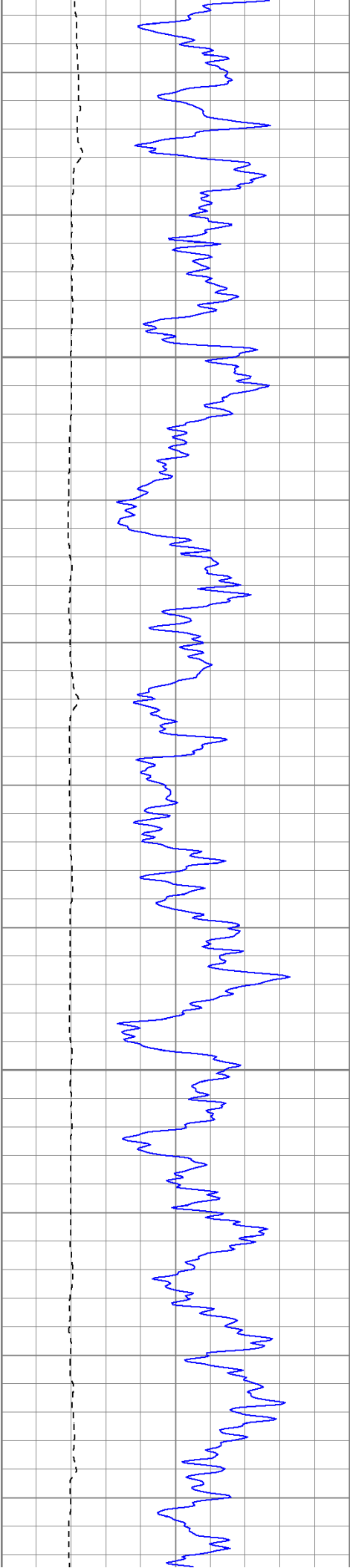




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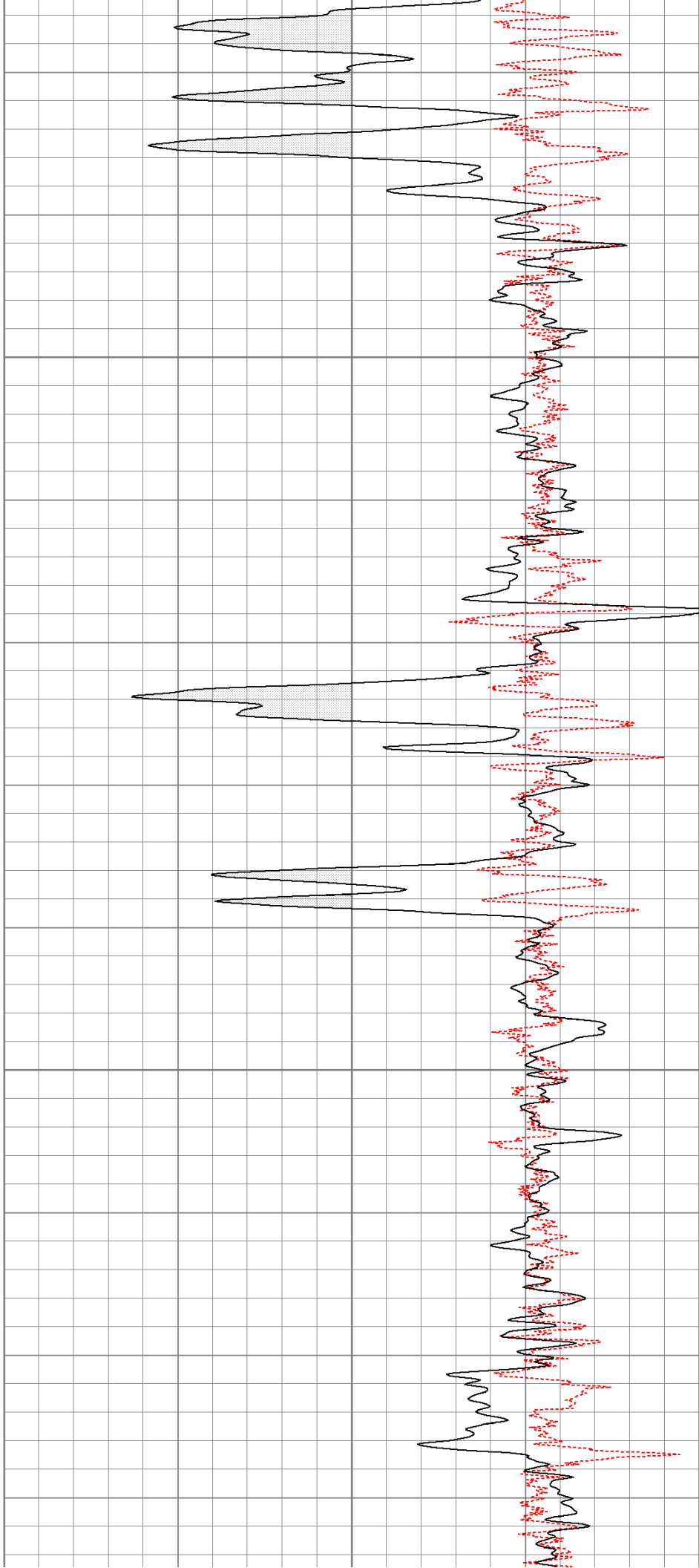
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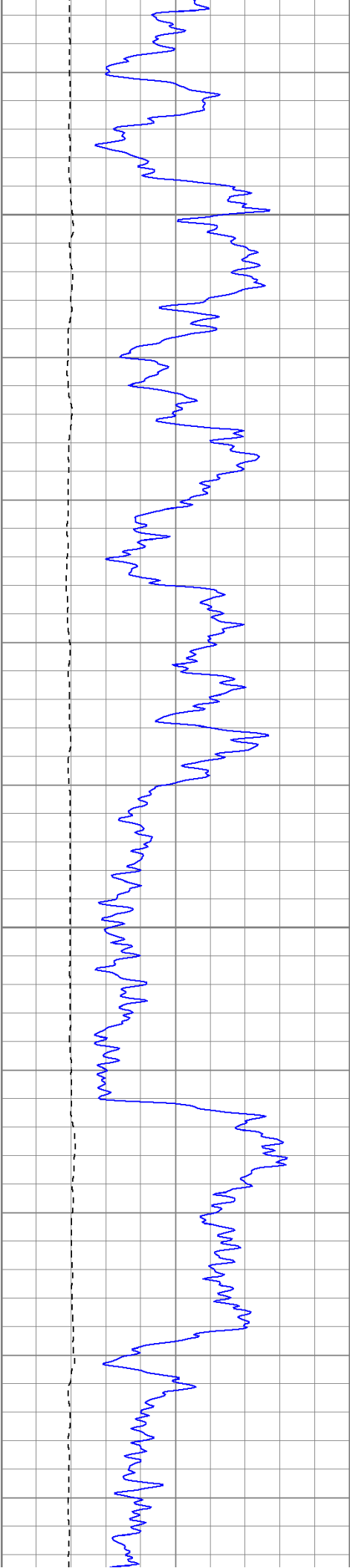




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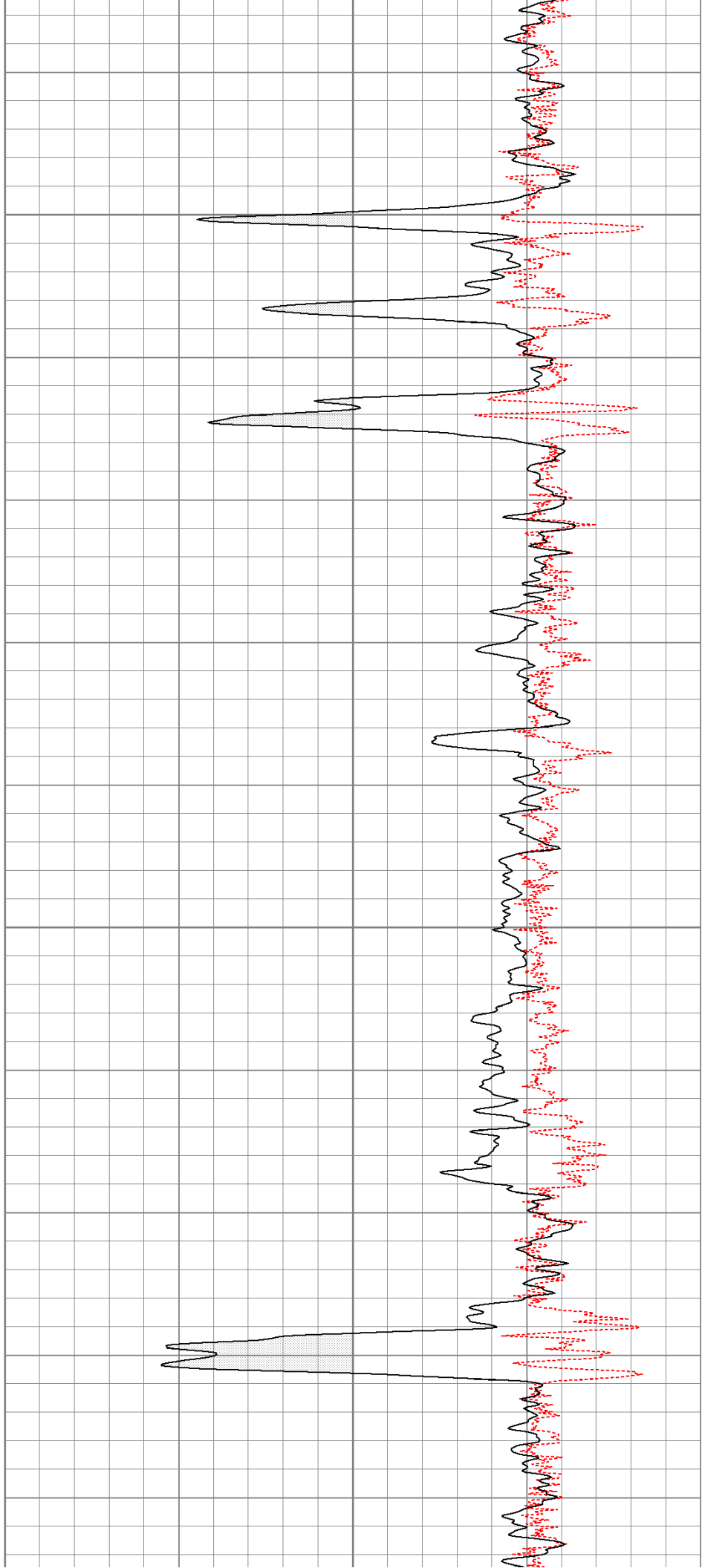
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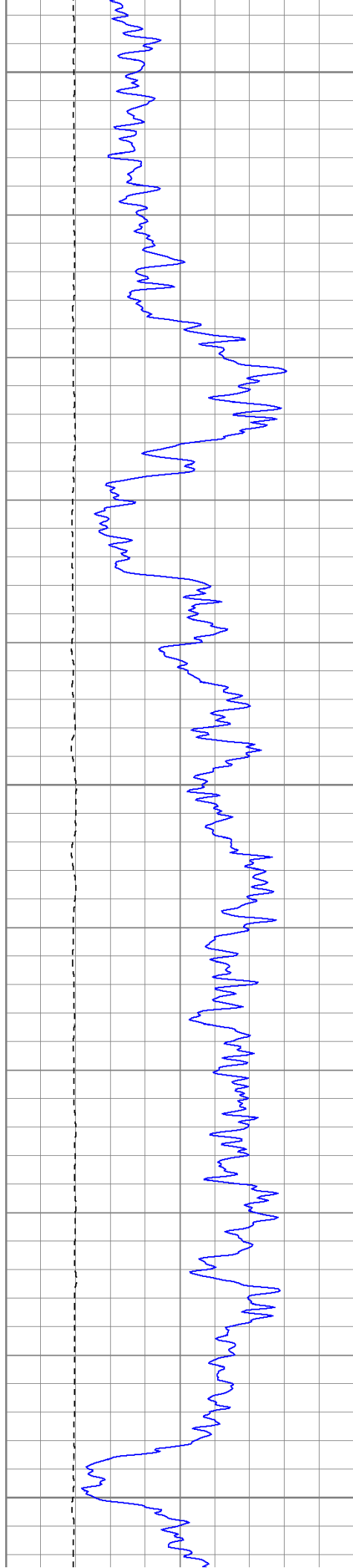




1000

1050

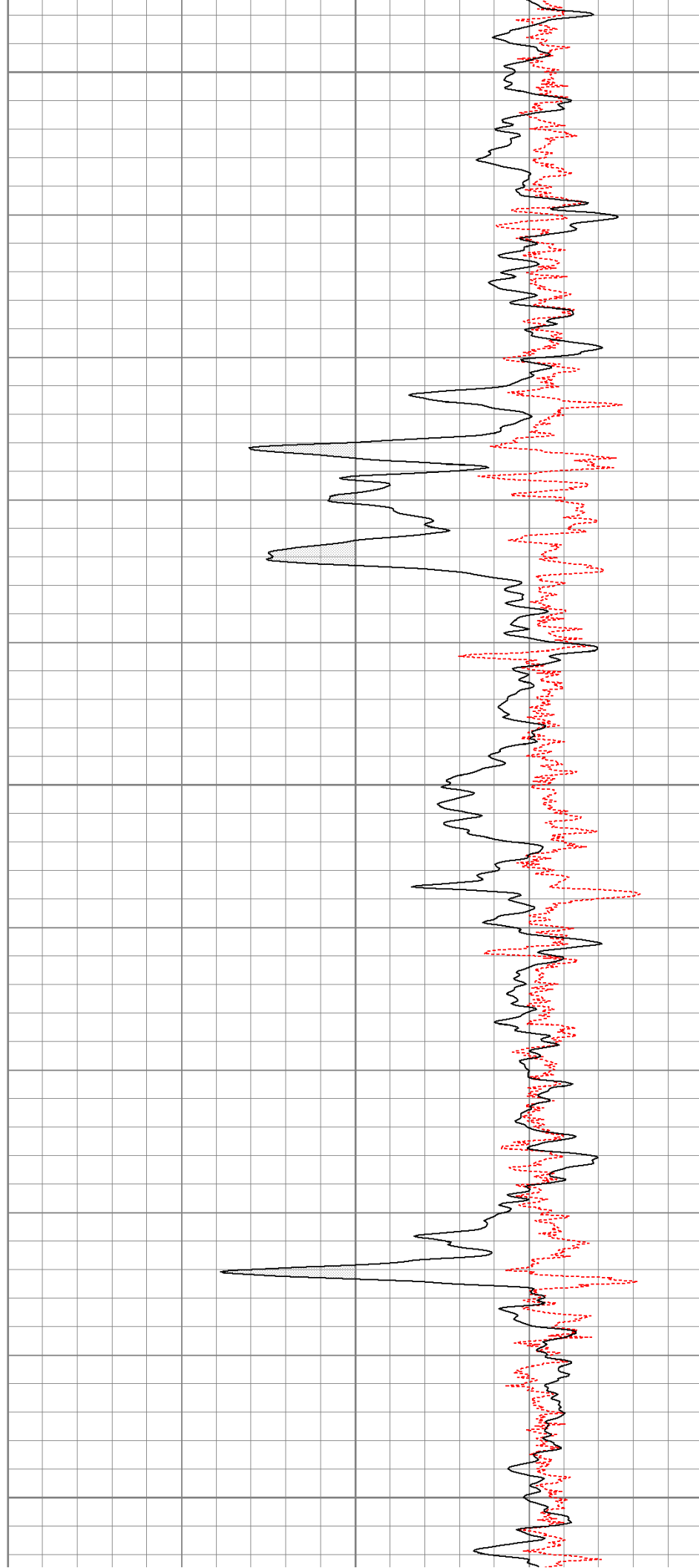


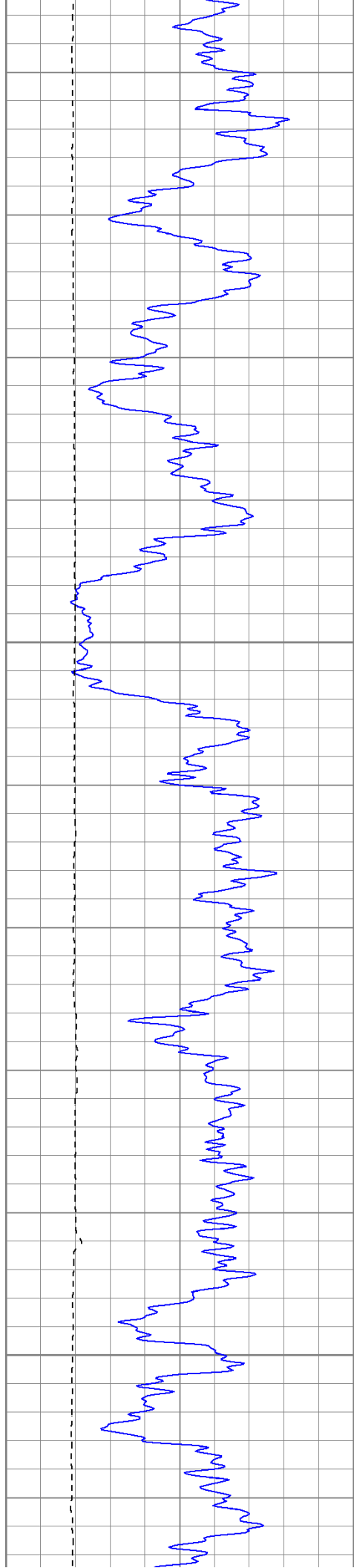


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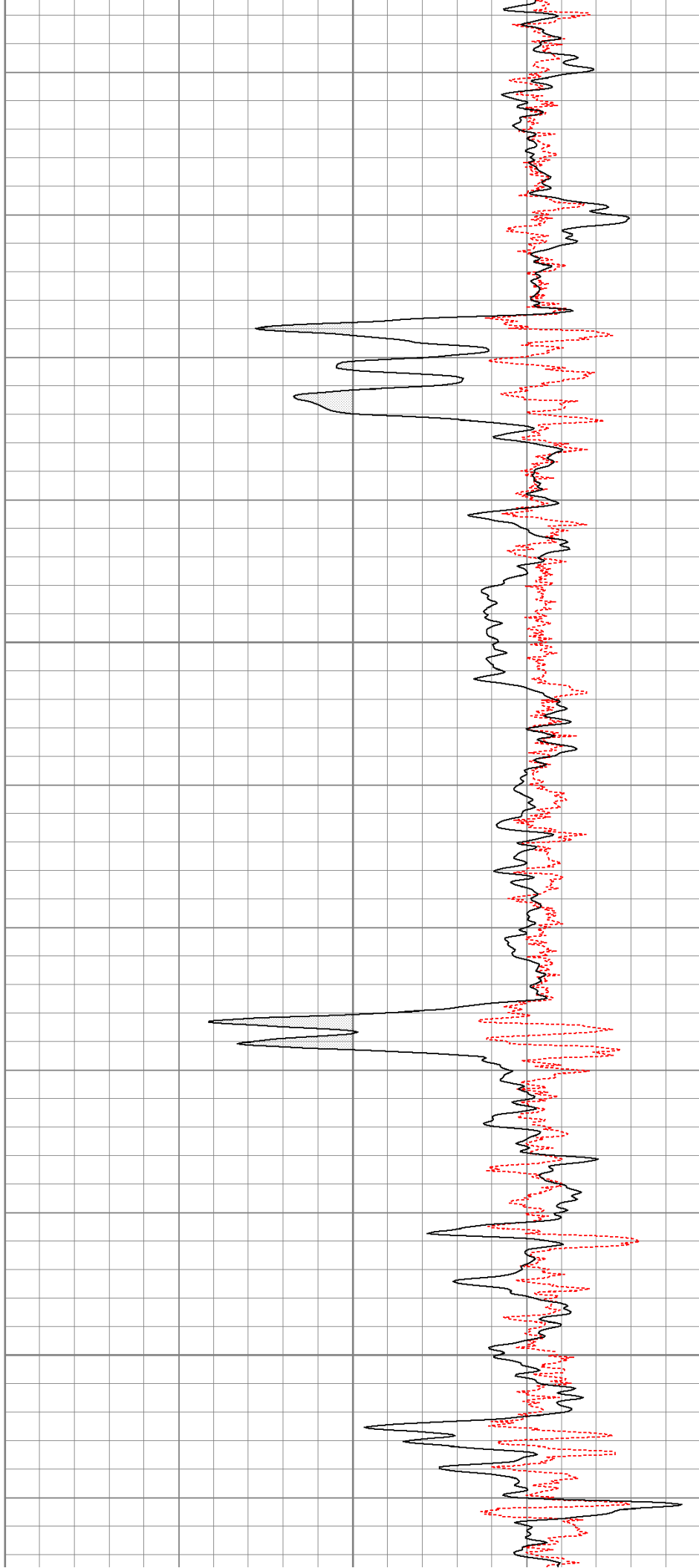
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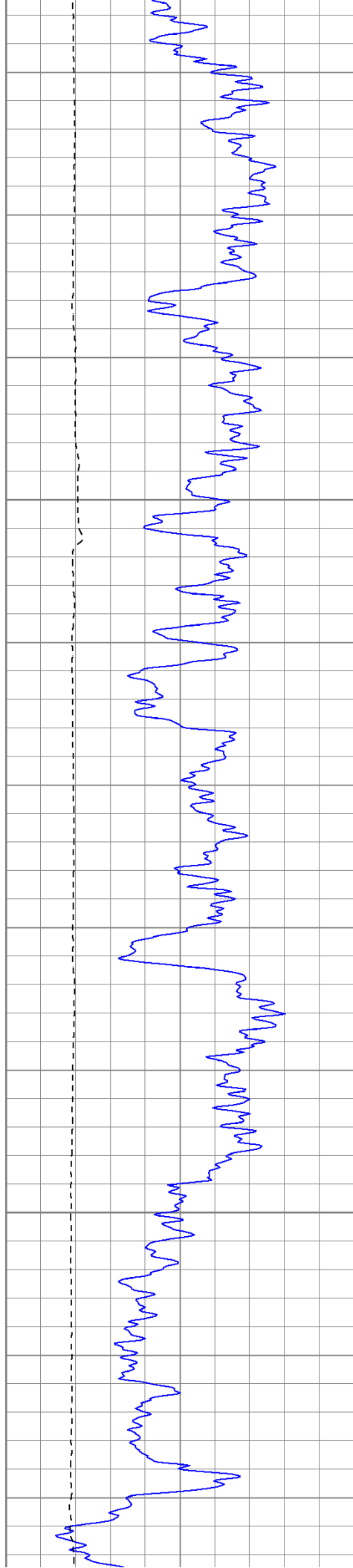




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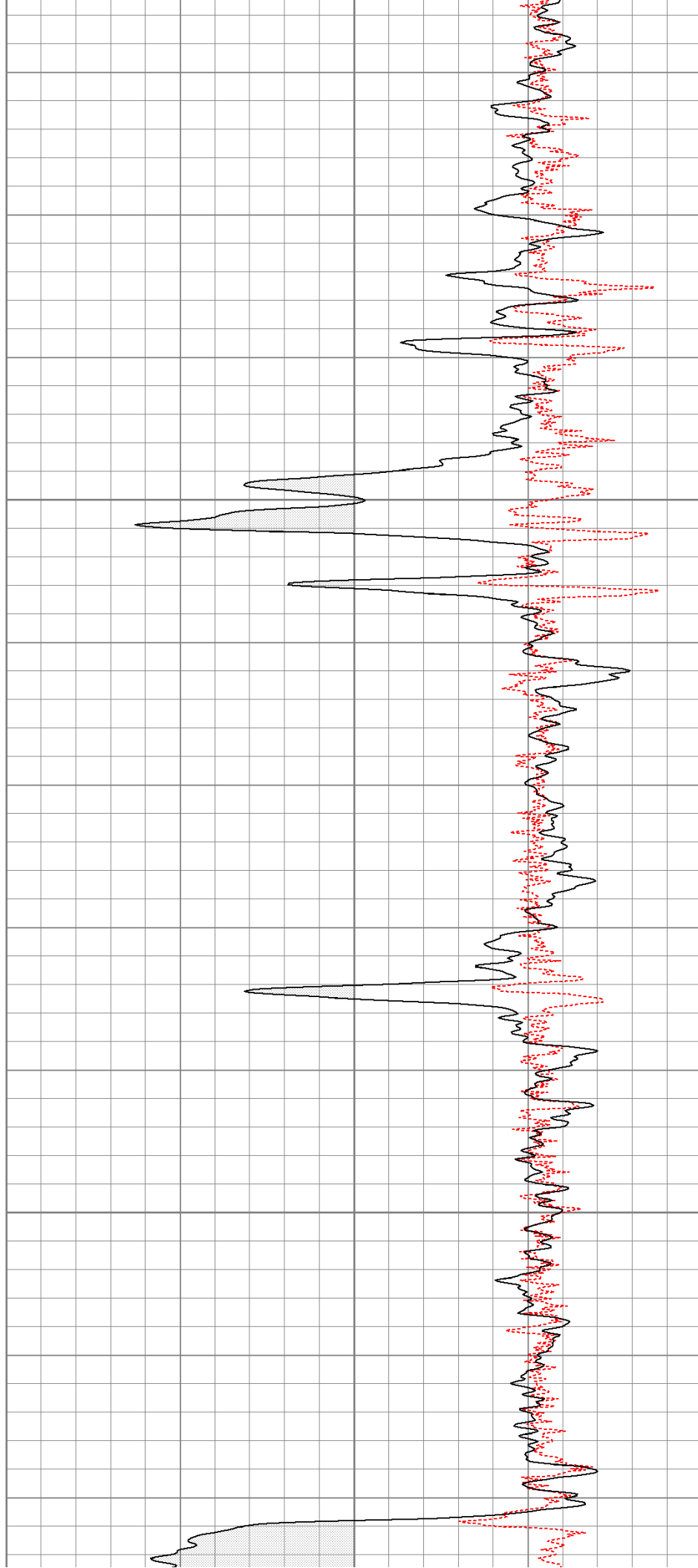
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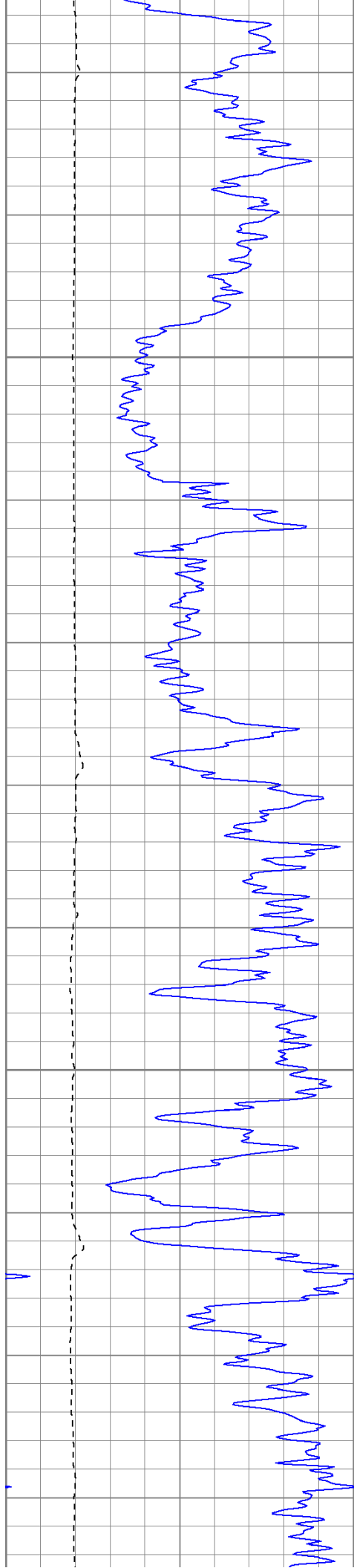




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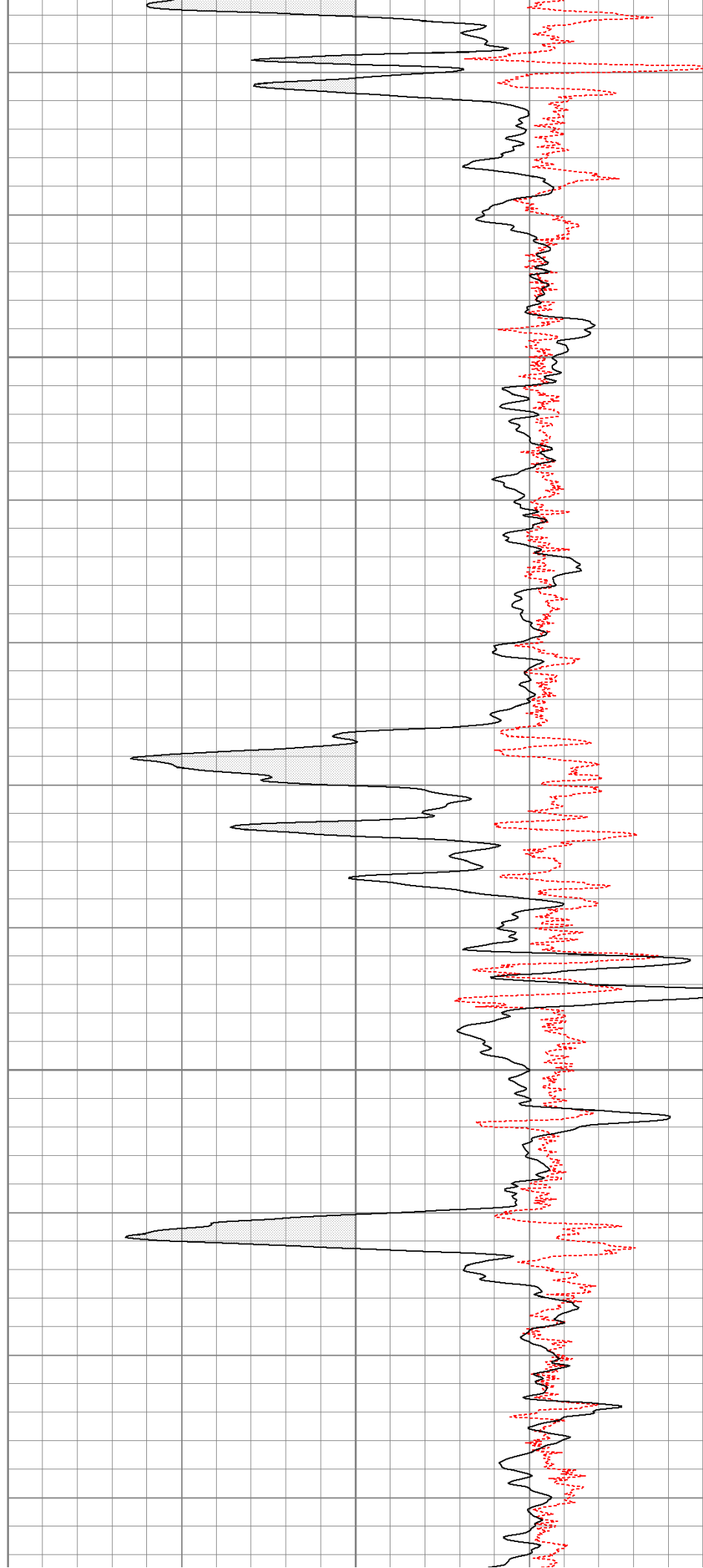
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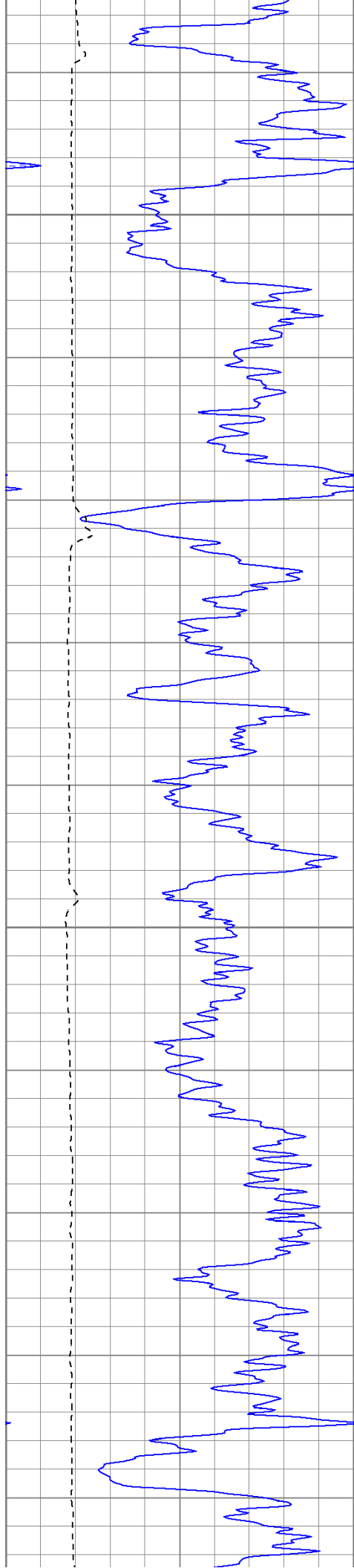




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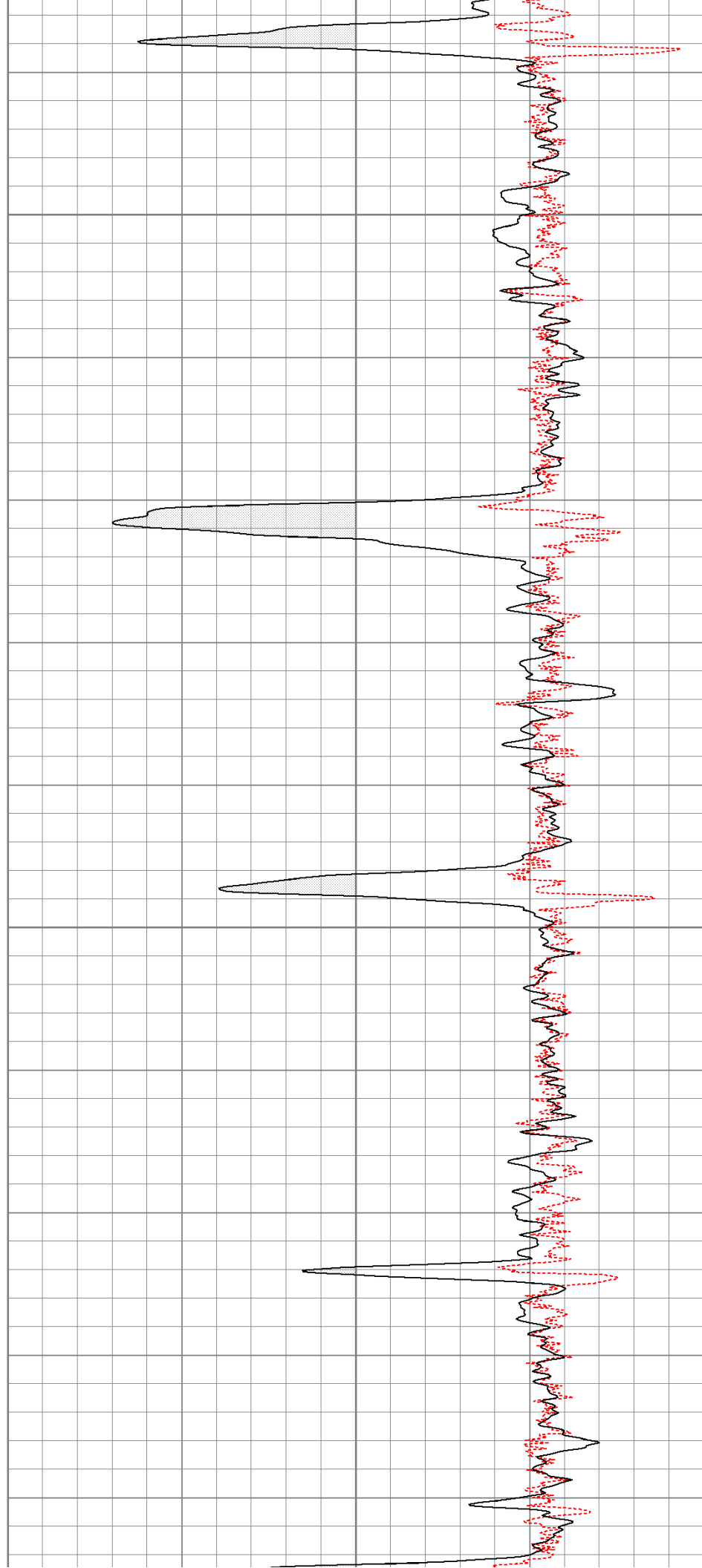
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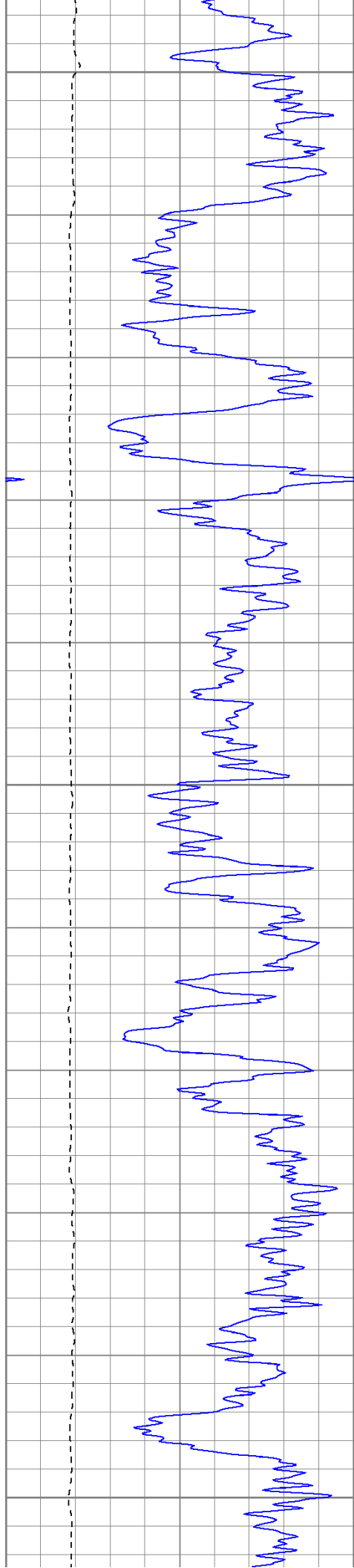




1550

1600

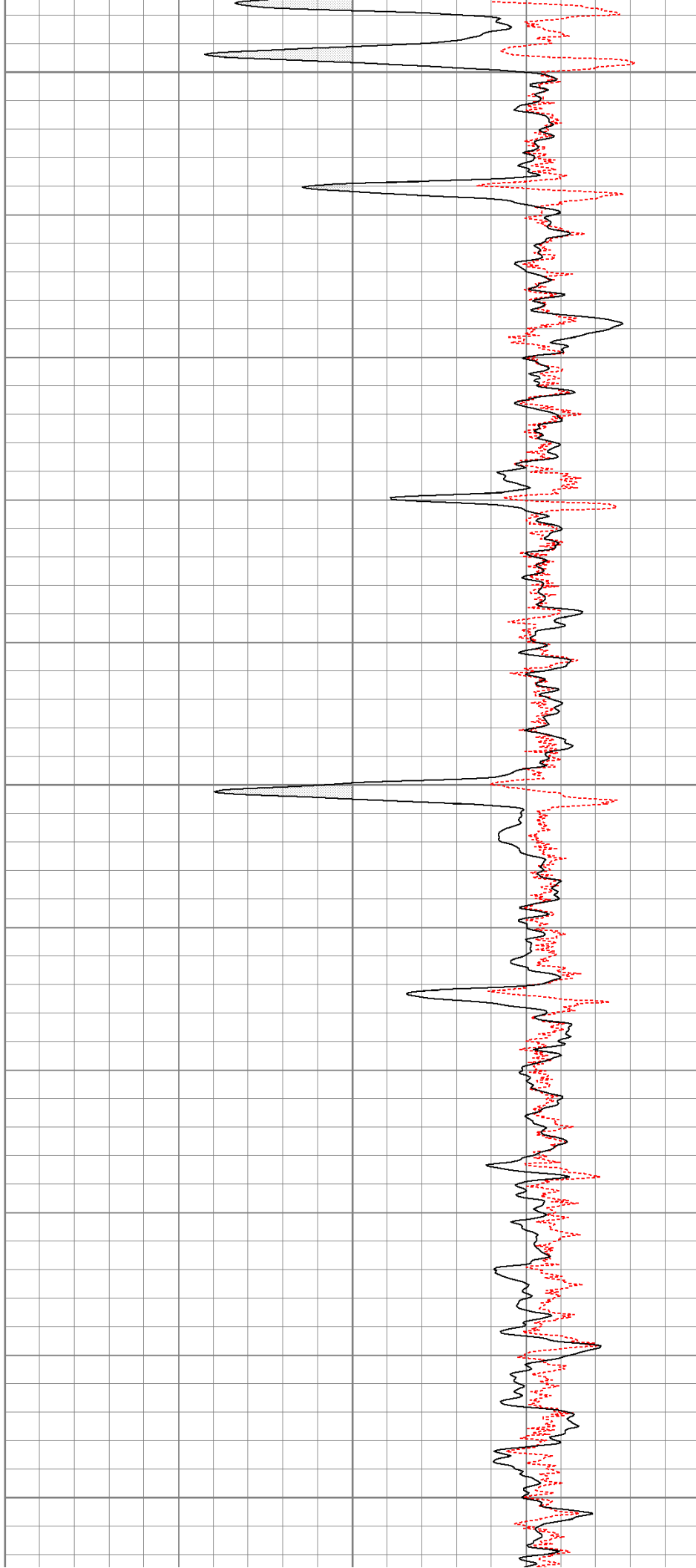


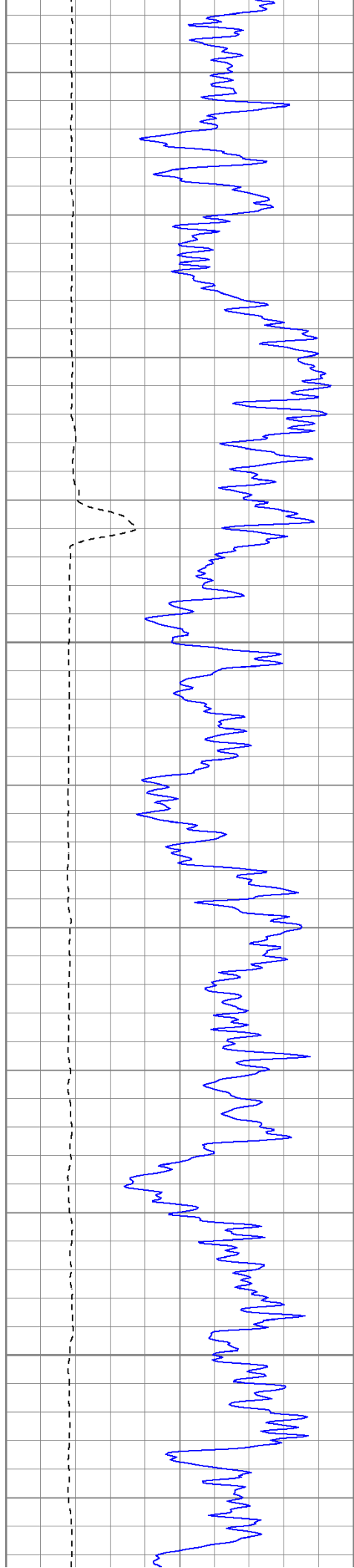


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1700

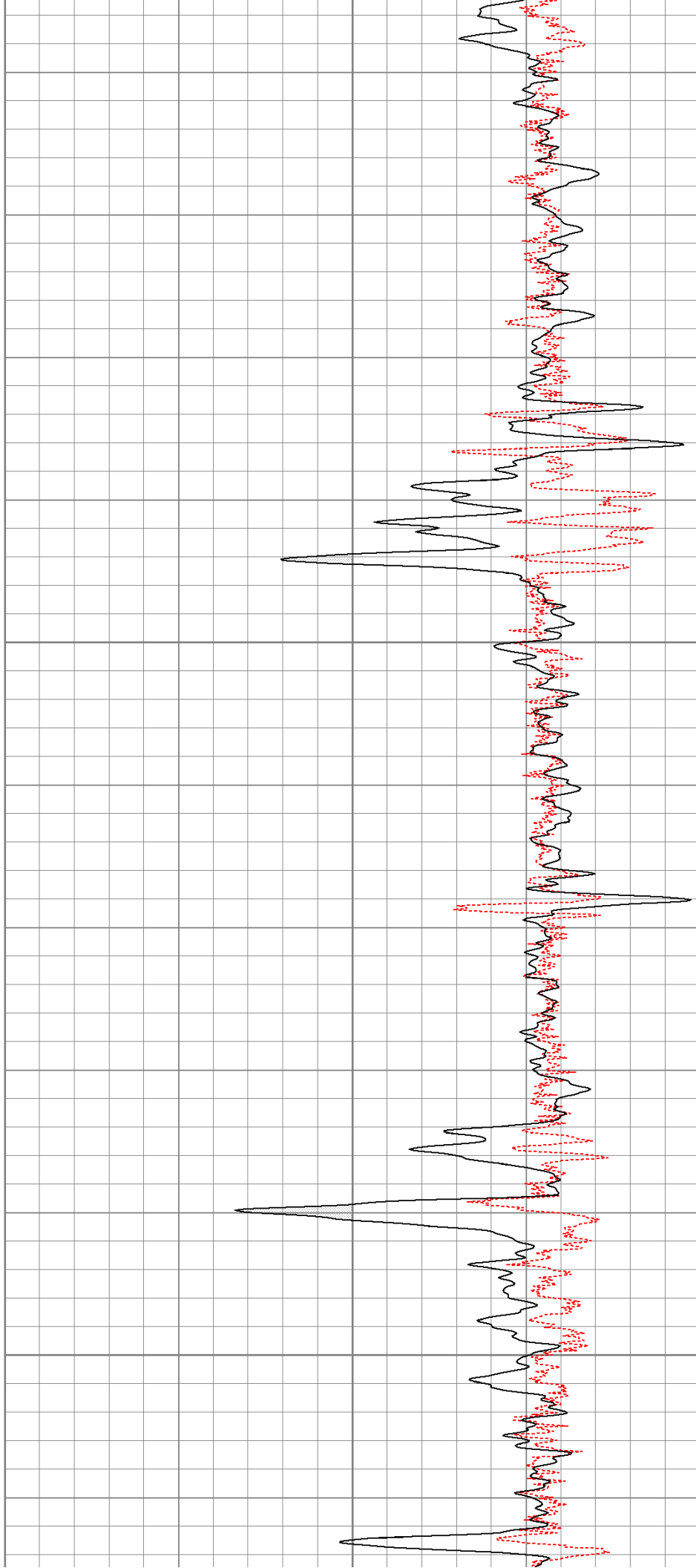
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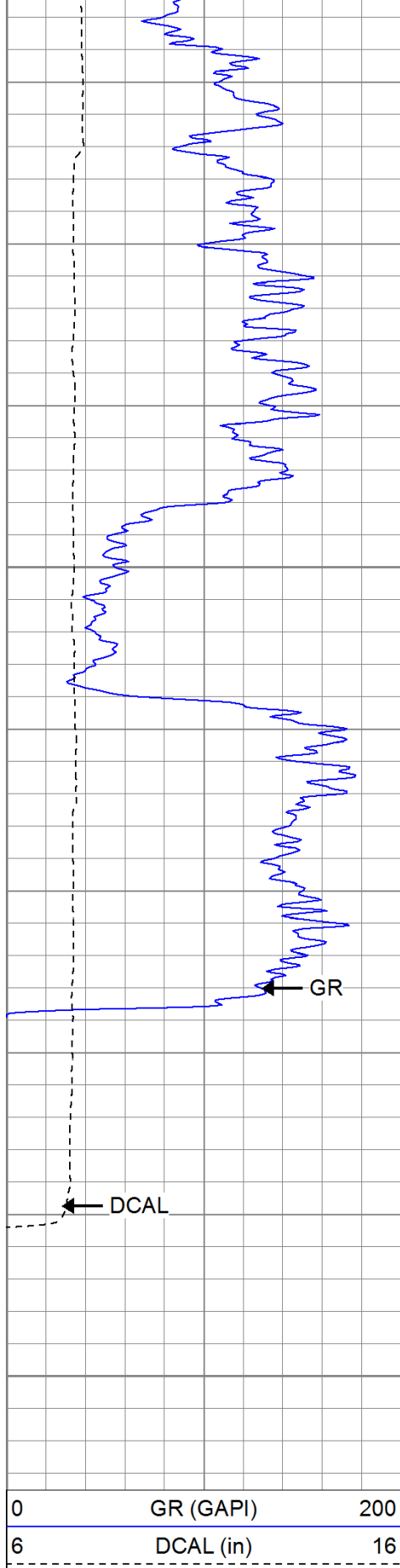




1800

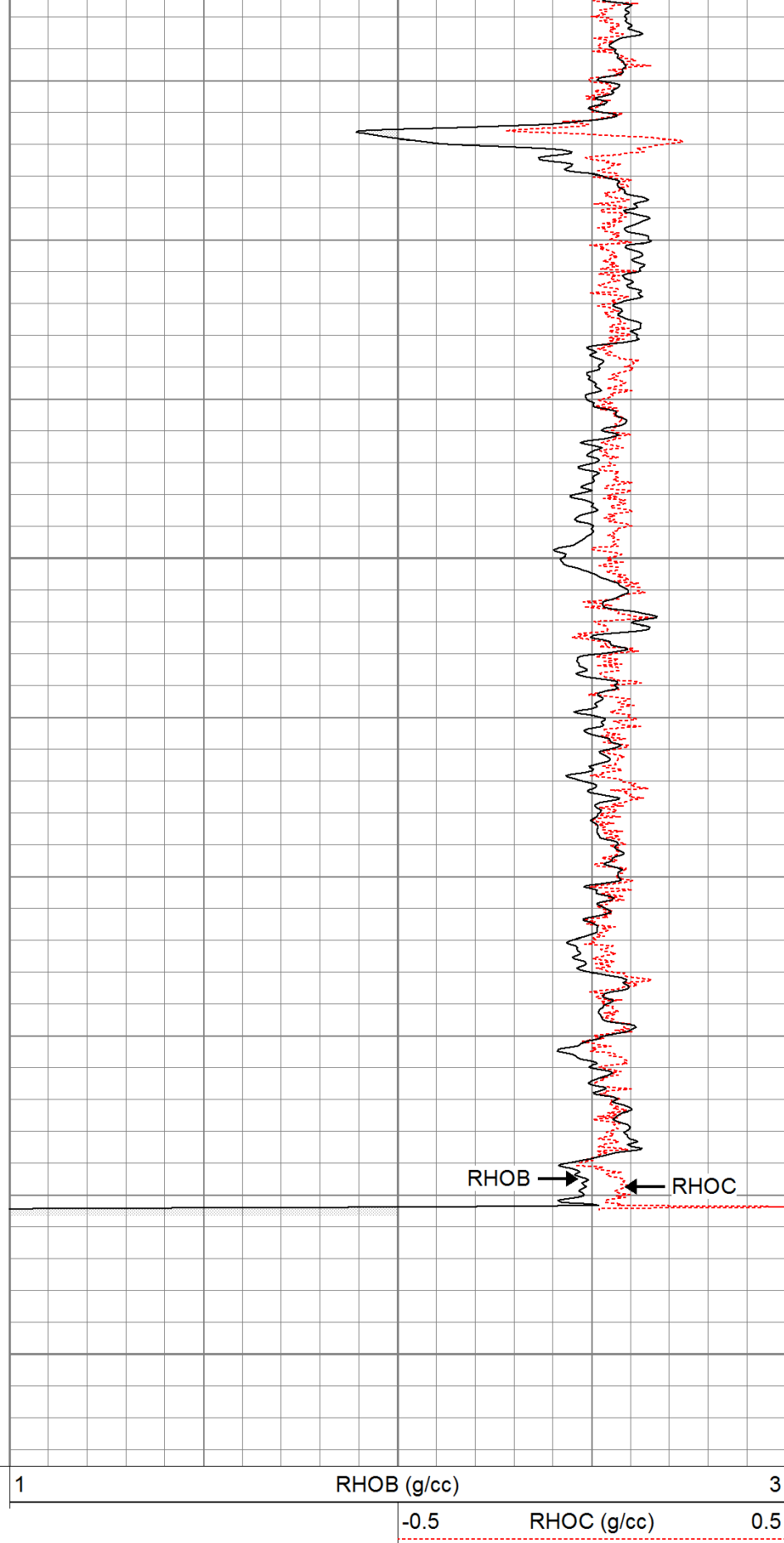
1850





1900

1950



Calibration Report

Database File: grahamtr.db
 Dataset Pathname: pass1
 Dataset Creation: Thu Aug 18 06:28:16 2011 by Log Open-Cased 110302

Induction Tool Calibration Report				
Serial Number:		903		
Tool Model:		Probe		
Downhole Cal Performed:		Sat Jun 18 15:02:12 2011		
Surface Cal Performed:		Sat Jun 18 17:40:00 2011		
After Survey Verification Performed:				
Surface Calibration:		Air	Loop	
Conductivity Reference:		0.000	500.000	mmho
Conductivity Reading:		-0.045	0.642	V
Internal Reference:		Zero	Cal	
Conductivity Reference:		0.000	500.000	mmho
Conductivity Reading:		0.006	0.641	V
Downhole Calibration:		Internal Zero	Internal Cal	
Conductivity Reference:		-0.702	499.904	mmho
Conductivity Reading:		-0.082	503.319	V
Short Normal Reference:		0.000	20.000	Ohm-m
Short Normal Reading:		0.006	0.233	V
Results:		Gain	Offset	
Loop Conductivity:		728.211	32.770	
Downhole Correction:		0.994	-0.621	
Short Normal Resistivity:		88.245	-3.000	
After Survey Verification		Internal Zero	Internal Cal	
Conductivity Reading:		0.000	0.000	V
Conductivity Result:		0.000	0.000	mmho
Short Normal Reading:		0.000	0.000	V
Short Normal Result:		0.000	0.000	Ohm-m

Compensated Density Calibration Report					
		Serial-Model:	901-2.75POH		
		Source / Verifier:	/		
		Master Calibration Performed:	Wed Jun 08 09:11:26 2011		
		Before Survey Verification Performed:			
		After Survey Verification Performed:			
Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1001.79	578.48	cps
Aluminum	2.590	g/cc	180.36	300.39	cps
Spine Angle = 69.08			Density/Spine Ratio = 0.479		
	Size		Reading		
Small Ring	8.00	in	2.50	V	
Large Ring	16.00	in	4.57	V	
Before Survey Verification					
	Target		Measured		
		g/cc		g/cc	
		g/cc		g/cc	
		g/cc		g/cc	
After Survey Verification					
	Target		Measured		
		g/cc		g/cc	
		g/cc		g/cc	

