

COMPENSATED DENSITY NEUTRON LOG

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Idrahaje 12-14	Well	Idrahaje 12-14
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API #: 05 071 09782 00 2198' FNL & 1109' FWL	Other Services	SIL
Permanent Datum	SEC 14 TWP 33S RGE 66W	Elevation	
Log Measured From	Ground Level	K.B. 7199'	
Drilling Measured From	Kelly Bushing 4' AGL Kelly Bushing	D.F. -----	
		G.L. 7195'	
Date	6-21-11		
Run Number	One		
Depth Driller	1830'		
Depth Logger	1826'		
Bottom Logged Interval	1810'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 424'		
Casing Logger	423'		
Bit Size	7 7/8"		
Type Fluid in Hole	Airated 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	10:15 A.M.		
Time Logger on Bottom	12:45 P.M.		
Maximum Recorded Temperature	76 DEG F		
Equipment Number	T590		
Location	Trinidad		
Recorded By	C. Sisneros		
Witnessed By	Mr. Bill Vigil		

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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.

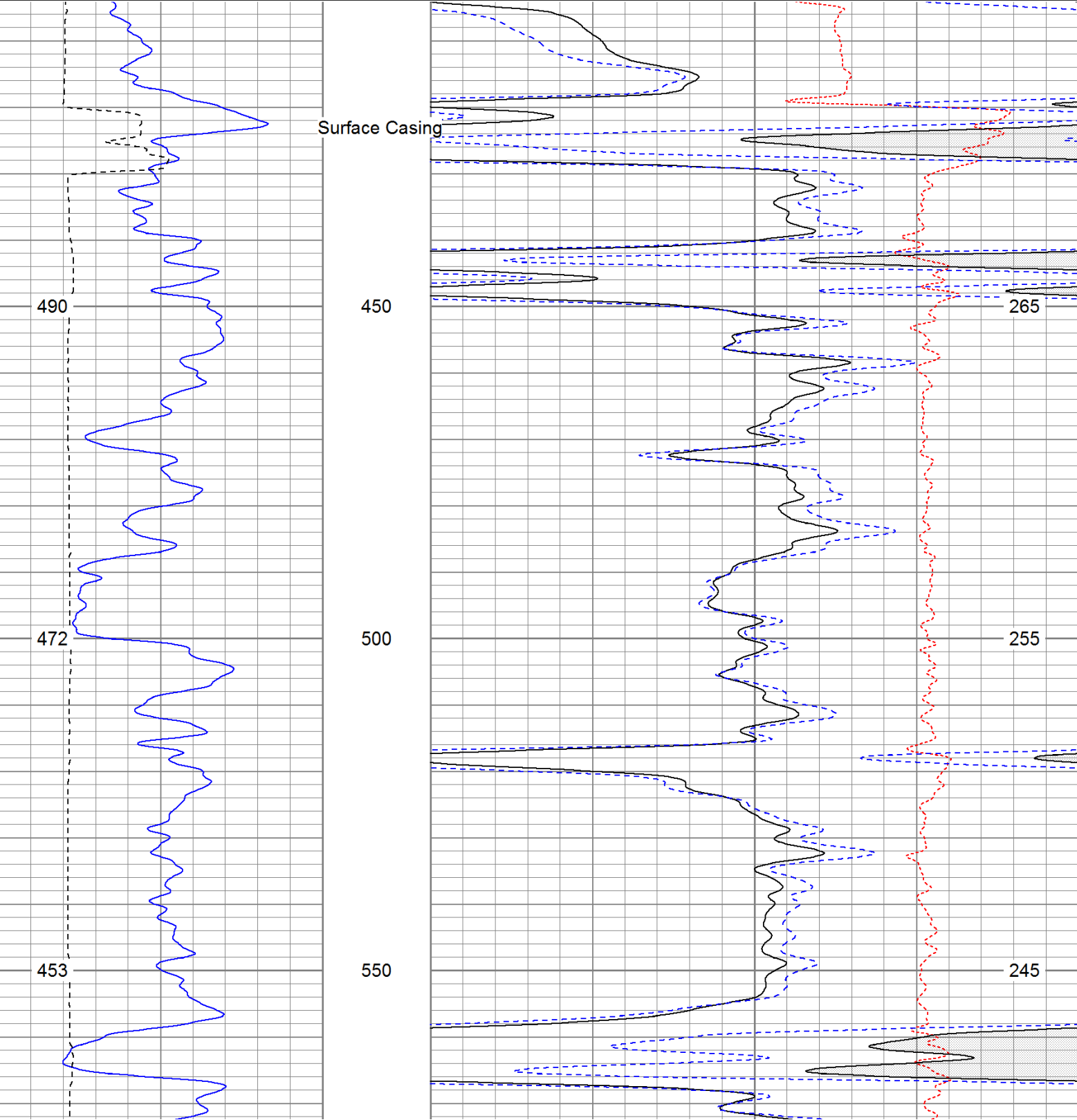
Directions:

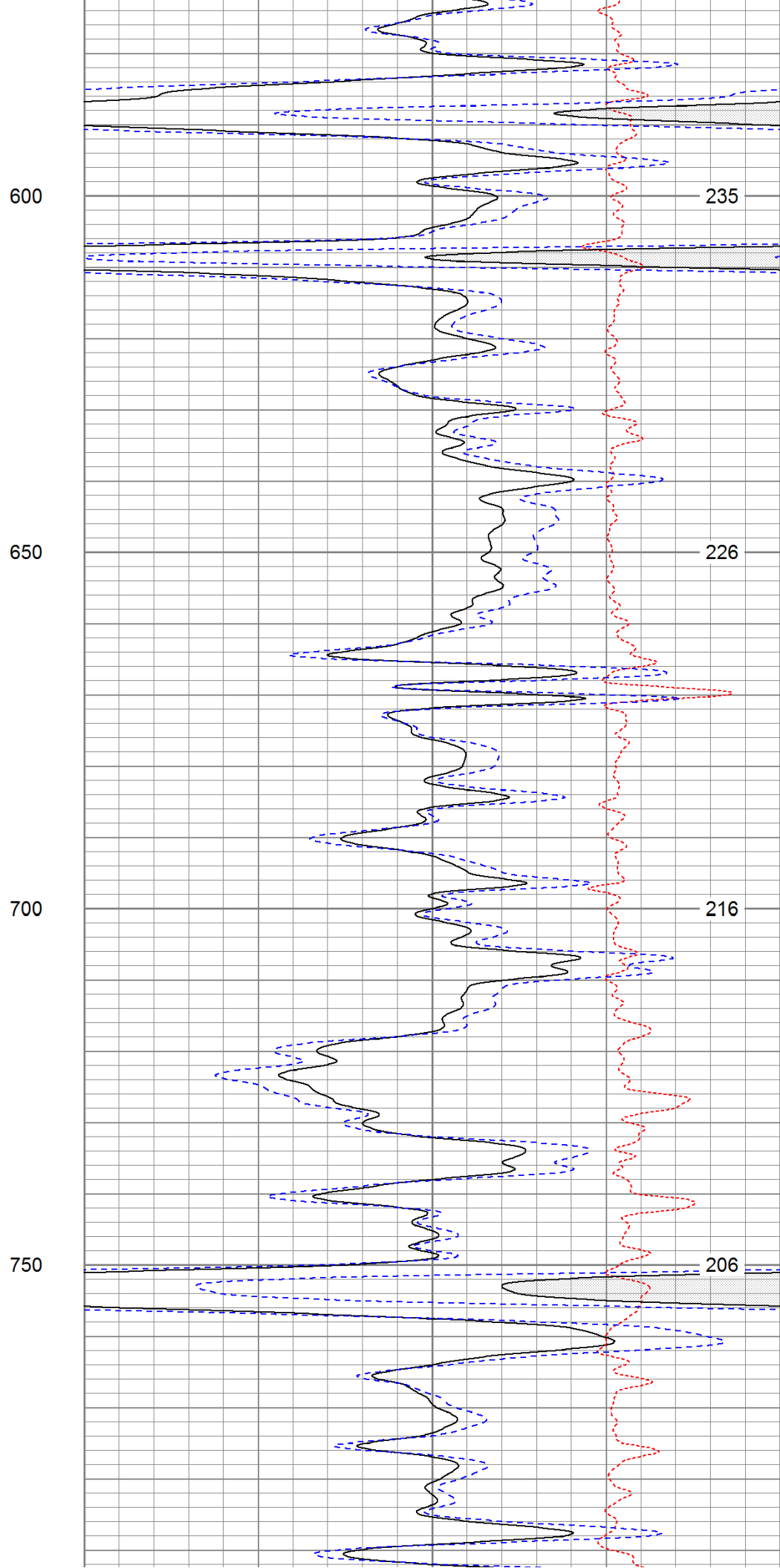
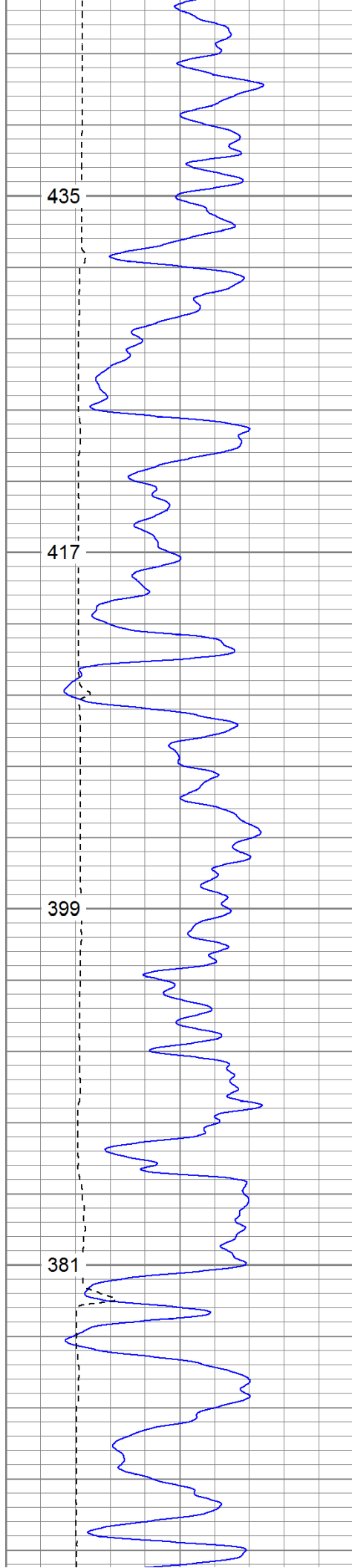
Sarcillo to Primero Ranches, go thru electric gate and stay on main rd to
Smith Canyon RD, go right, first right.

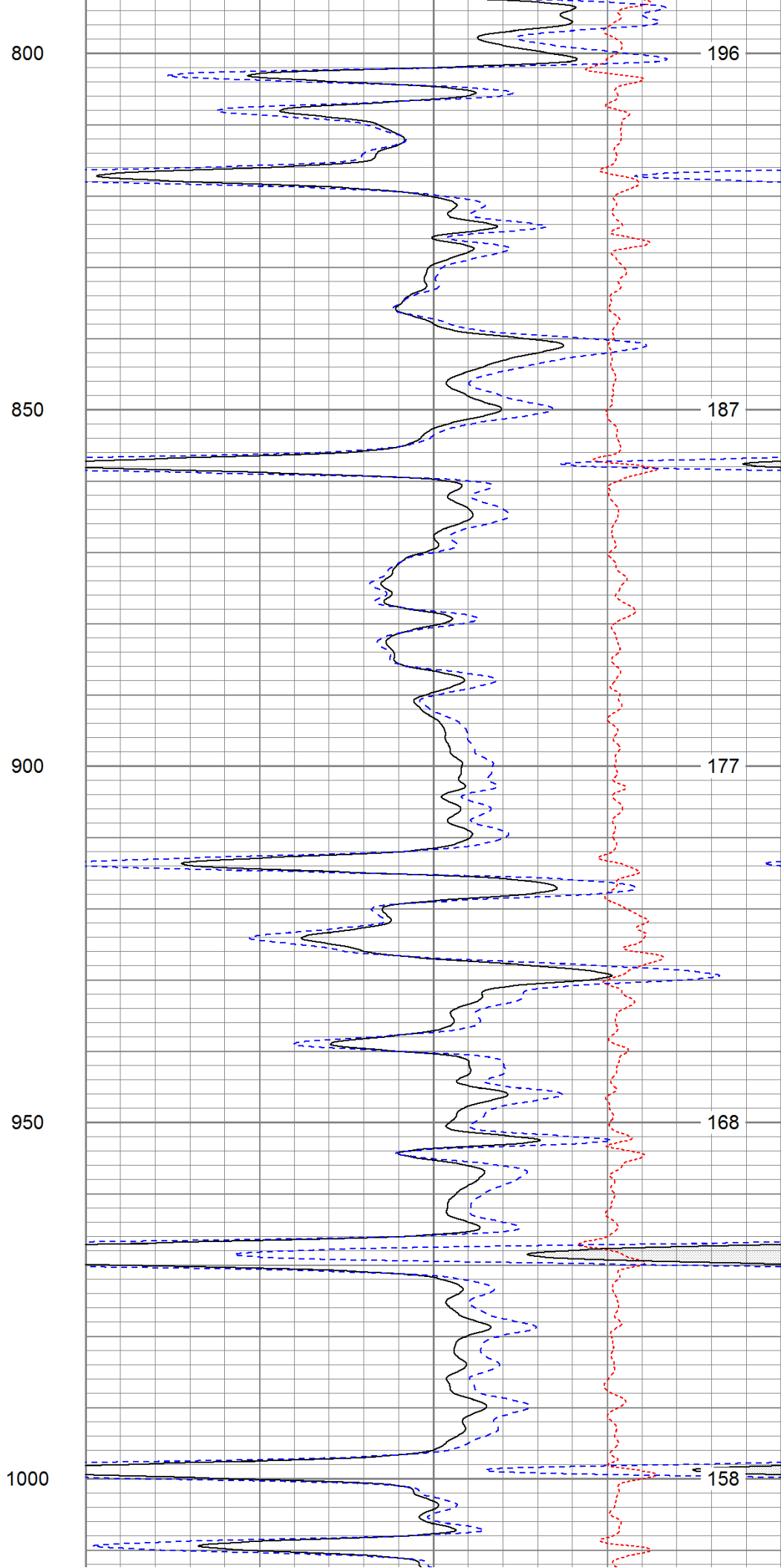
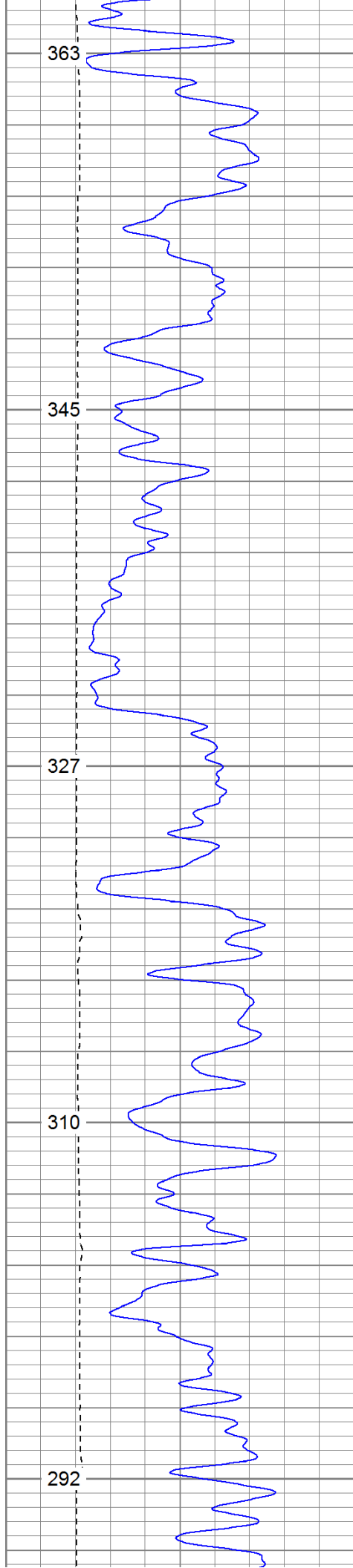
Database File: idrahaje.db
Dataset Pathname: pass2.1
Presentation Format: cdl
Dataset Creation: Tue Jun 21 16:09:31 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

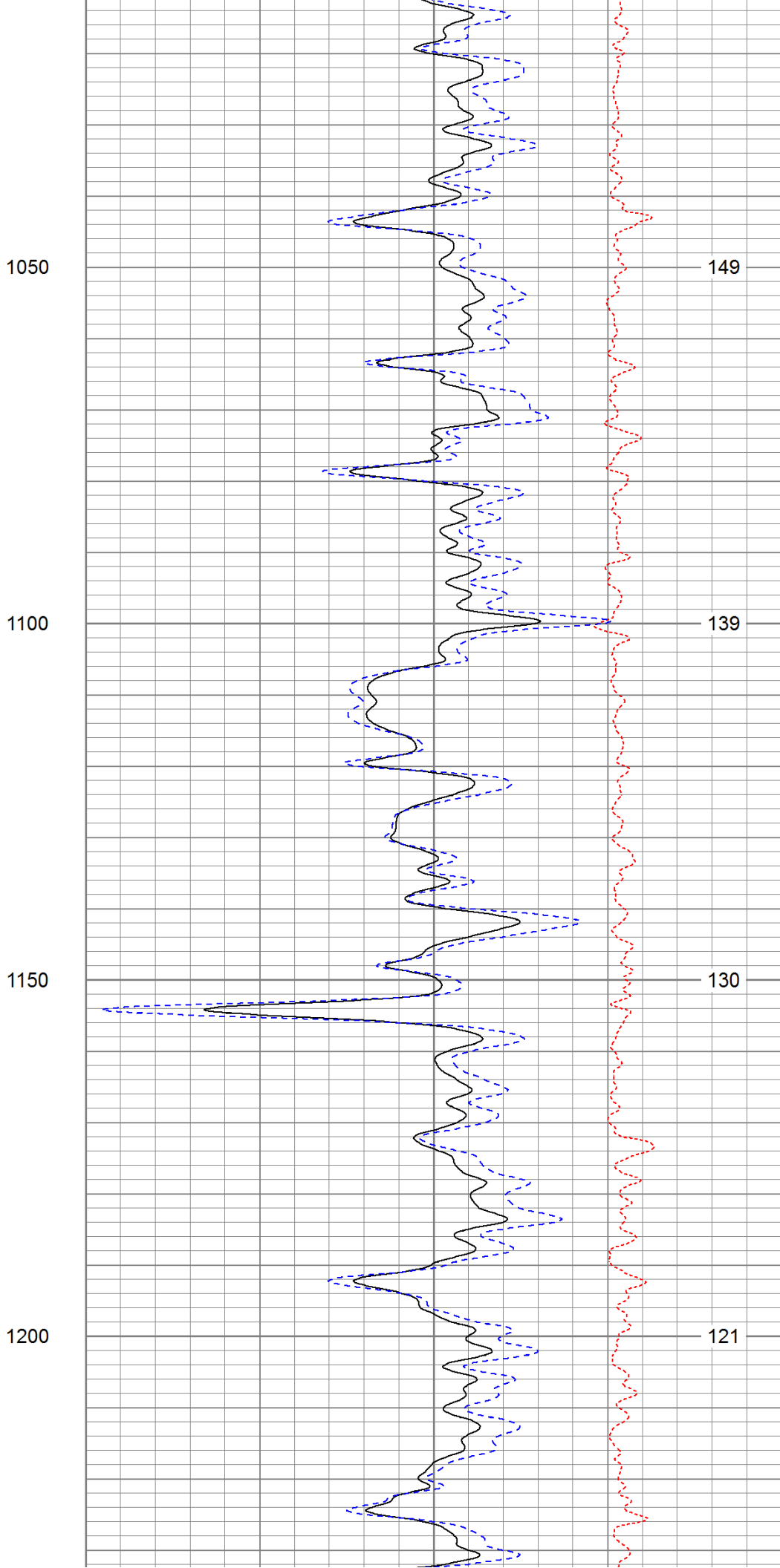
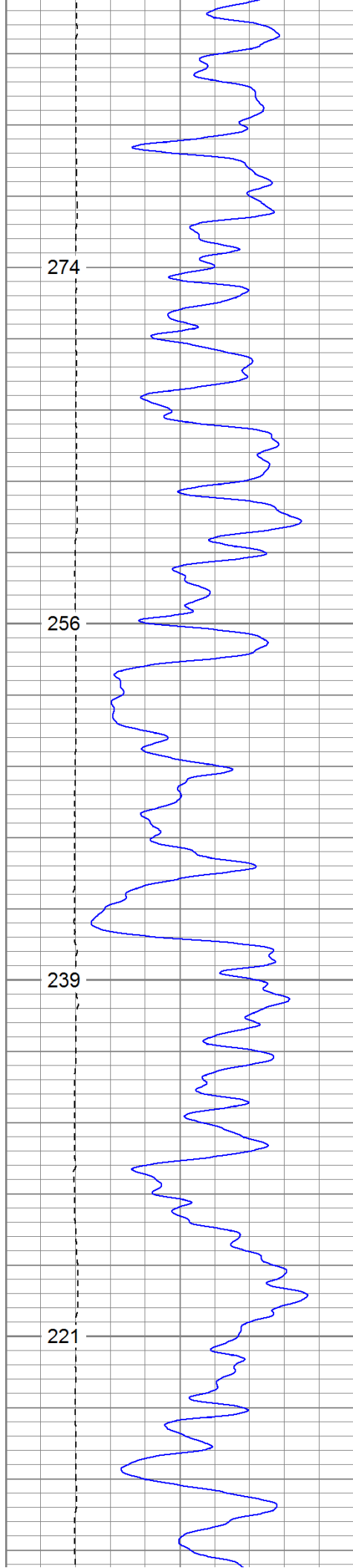
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

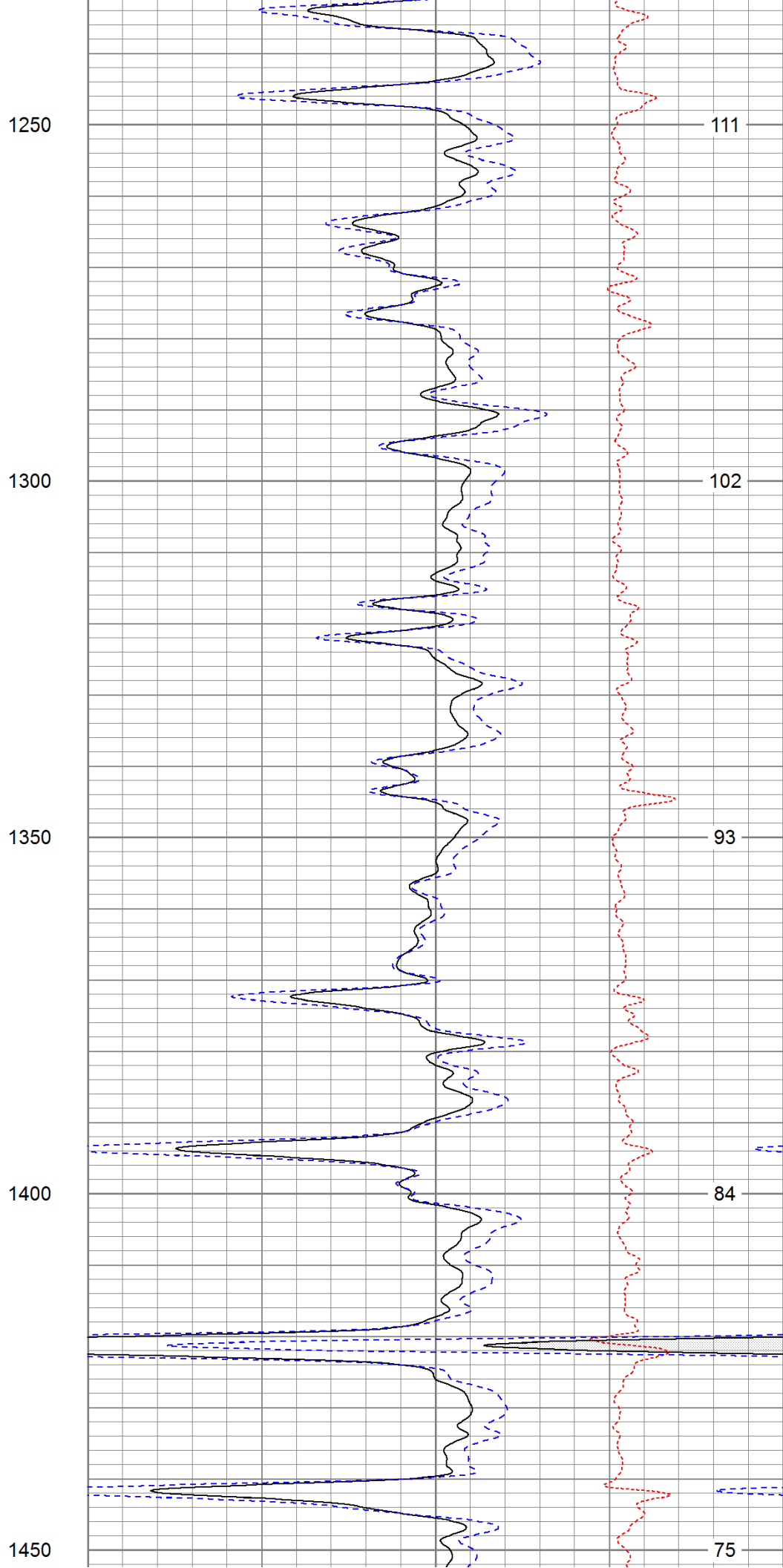
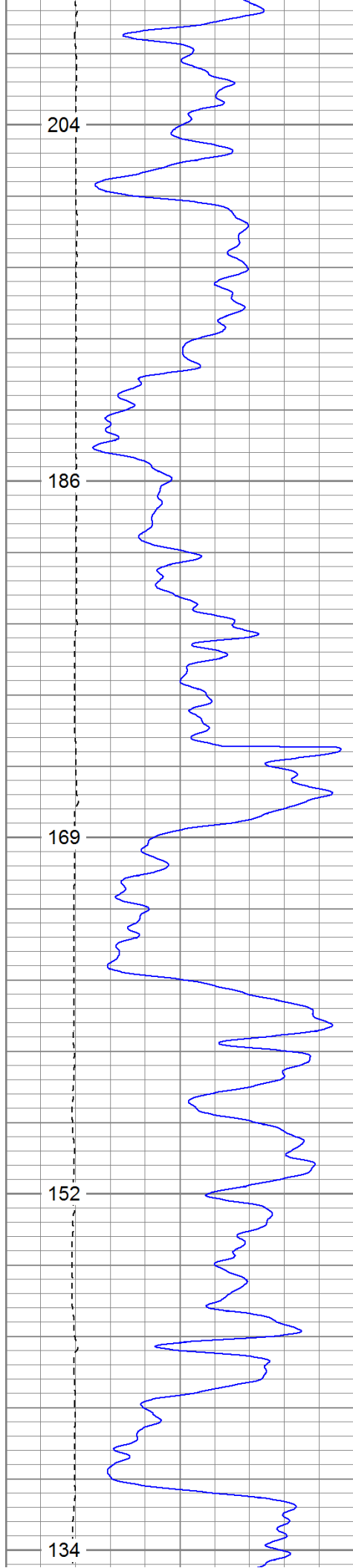
2	RHOB (g/cc)		3
1	RHOB (g/cc)		2
30	DPOR (pu)		-10
-0.5		RHOC (g/cc)	0.5
7000		LTEN (lb)	0
			ABHV (ft3)

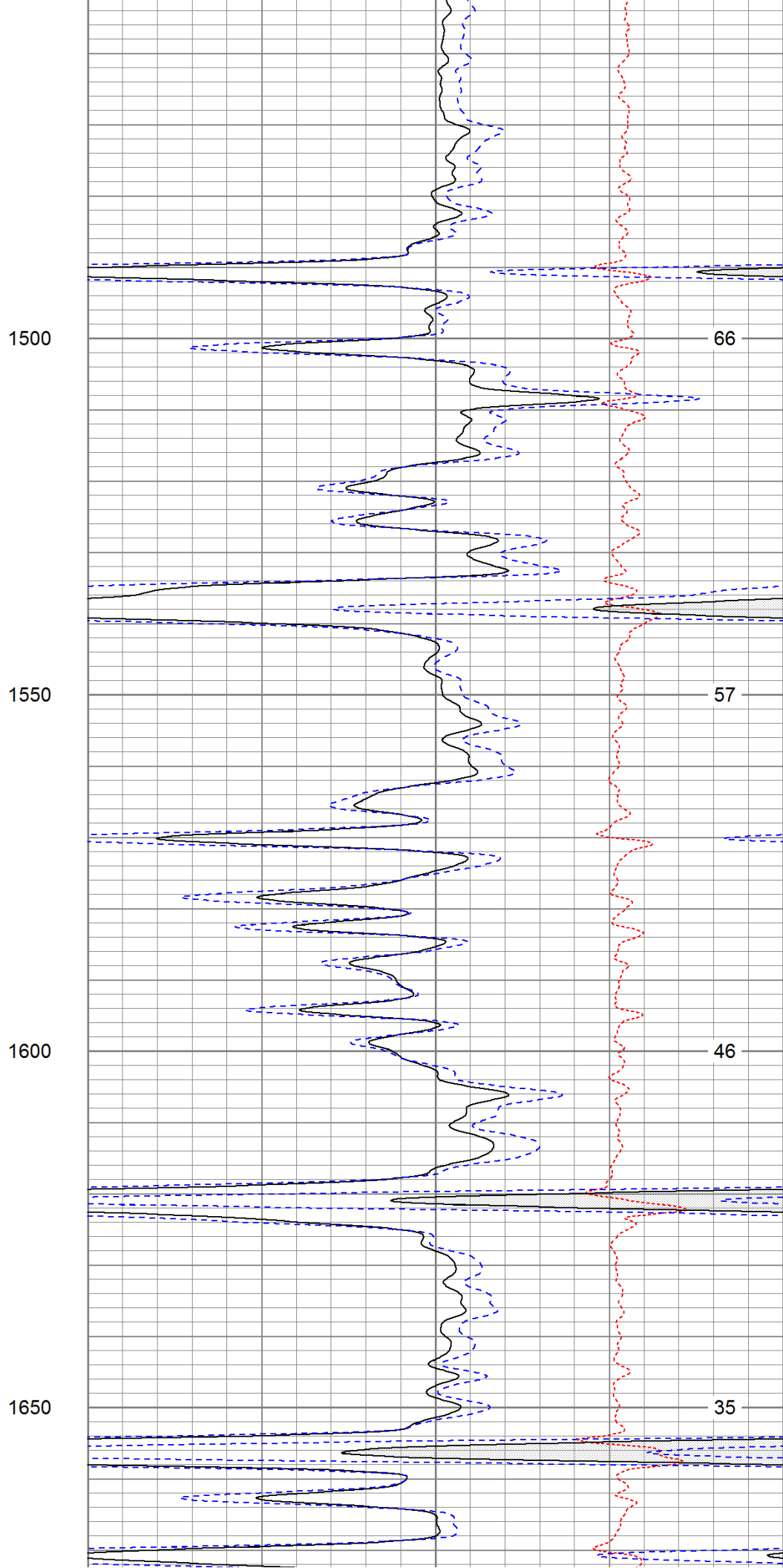
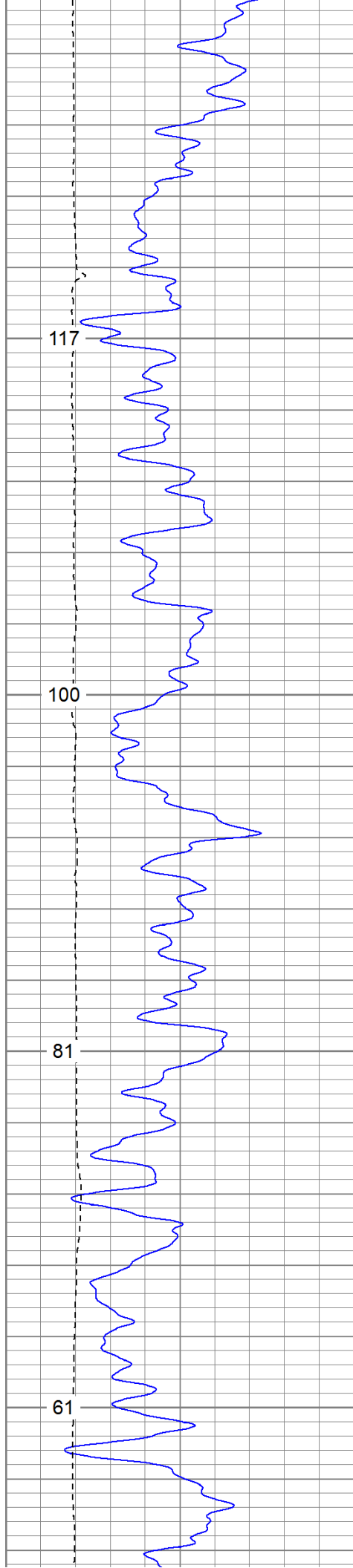


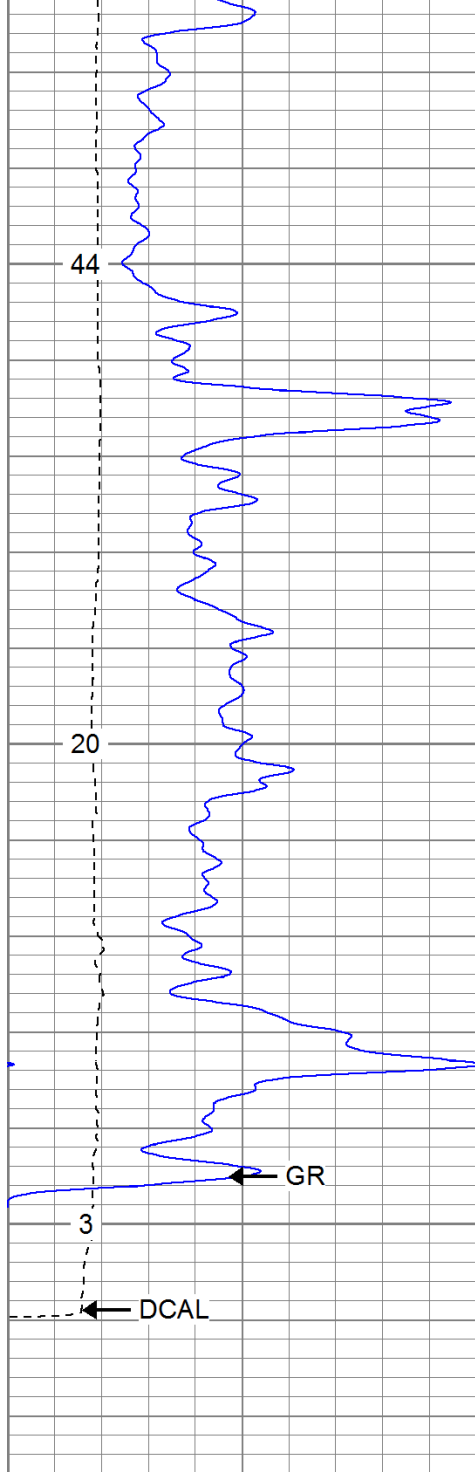




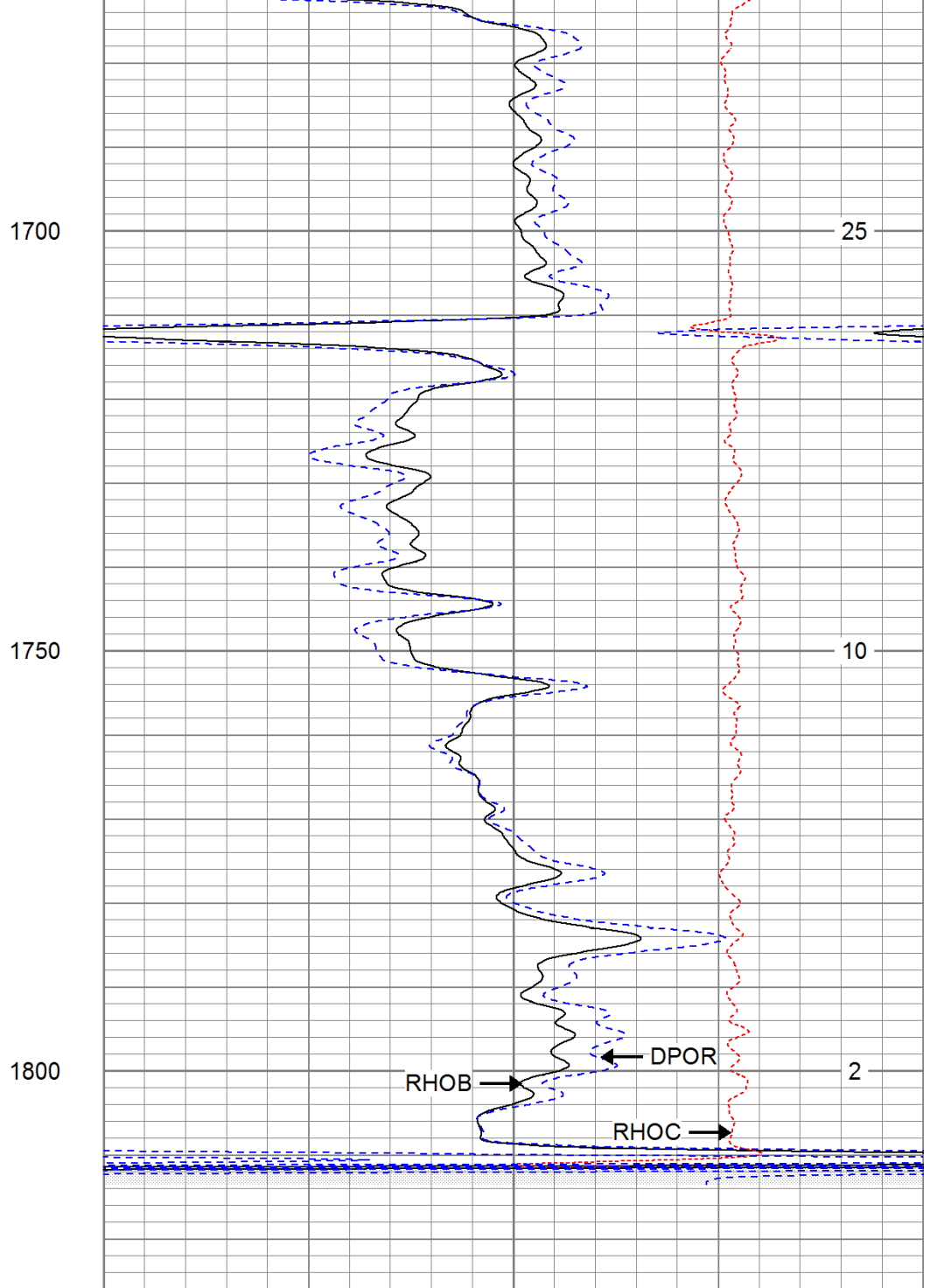






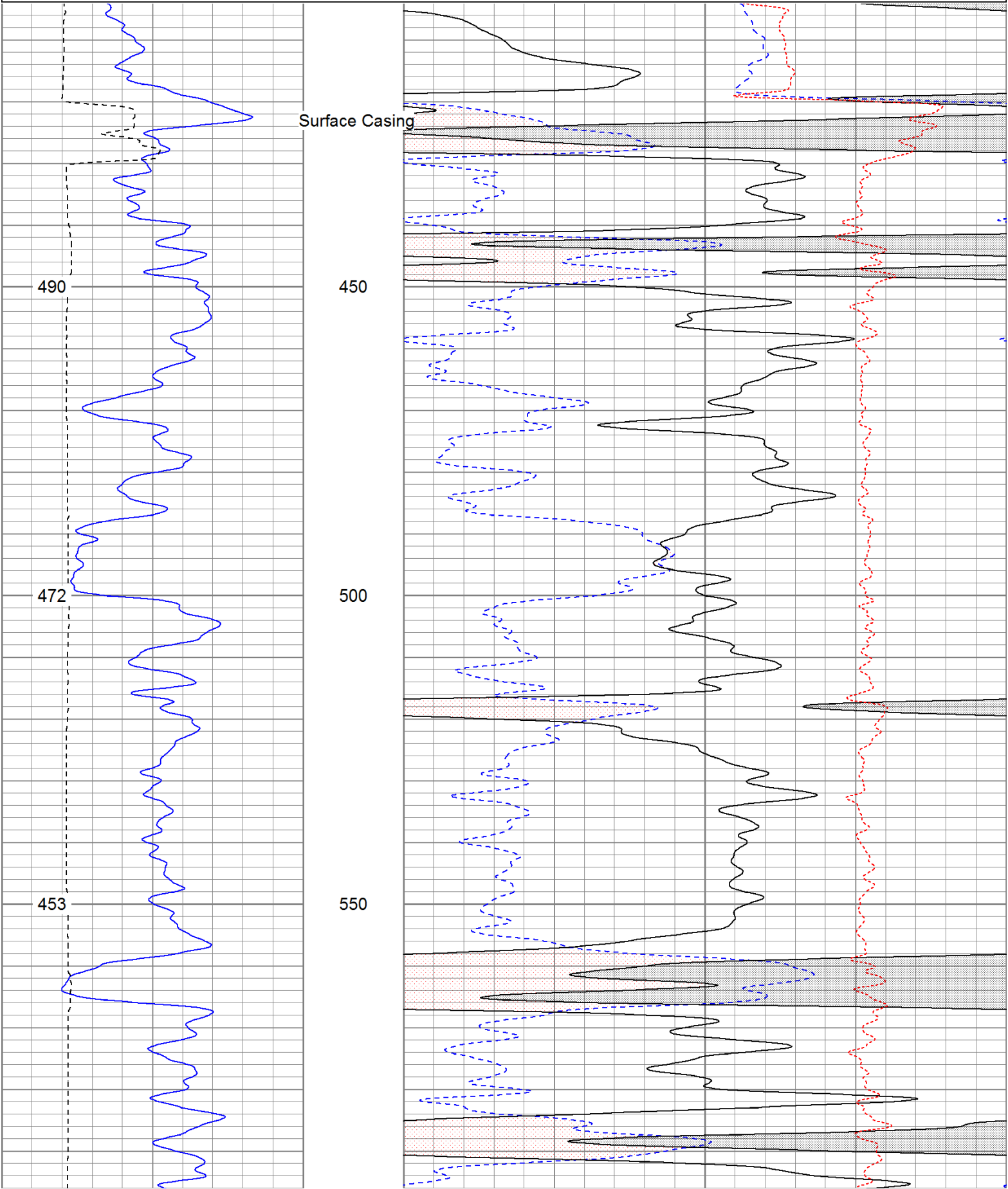


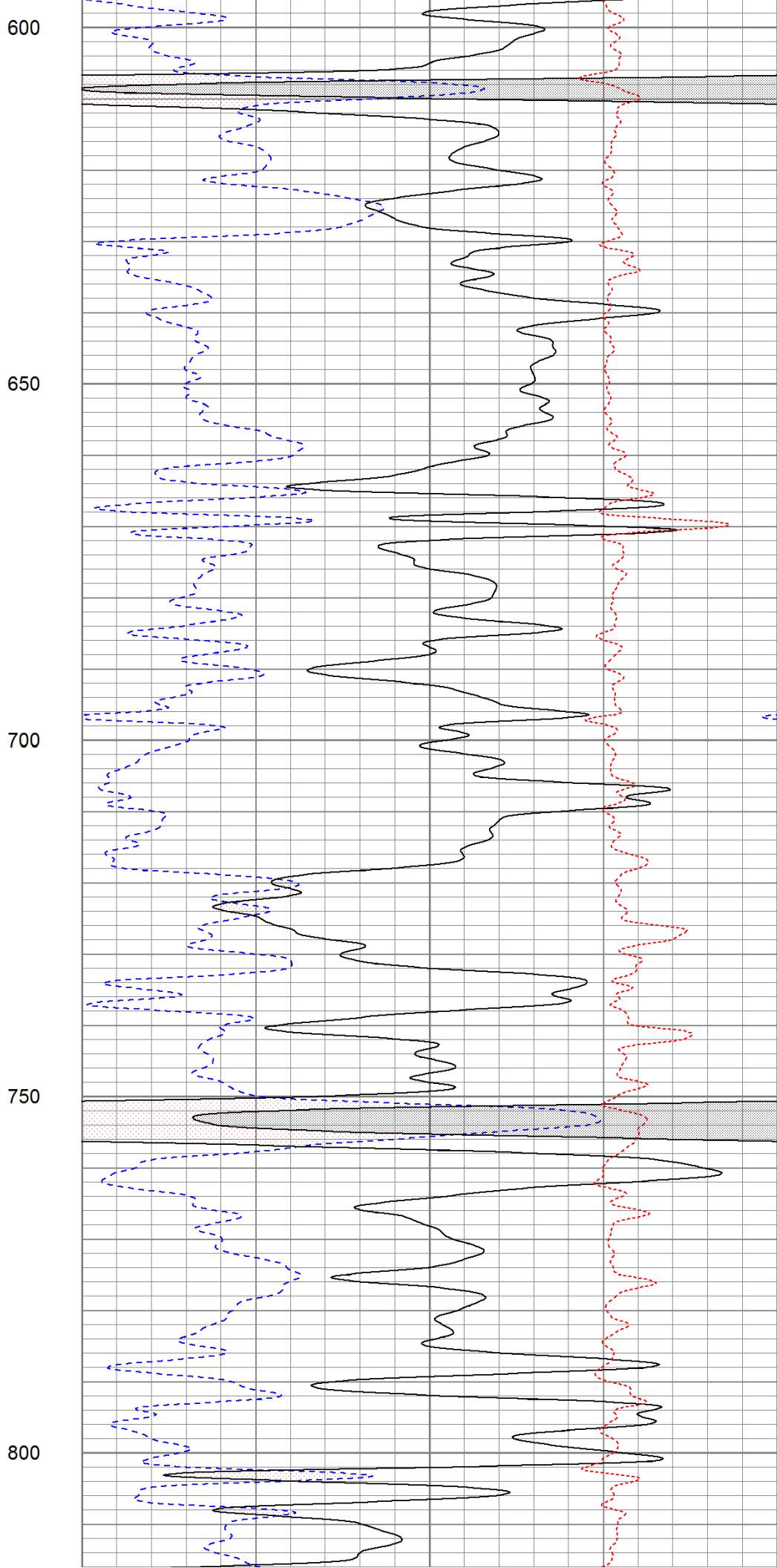
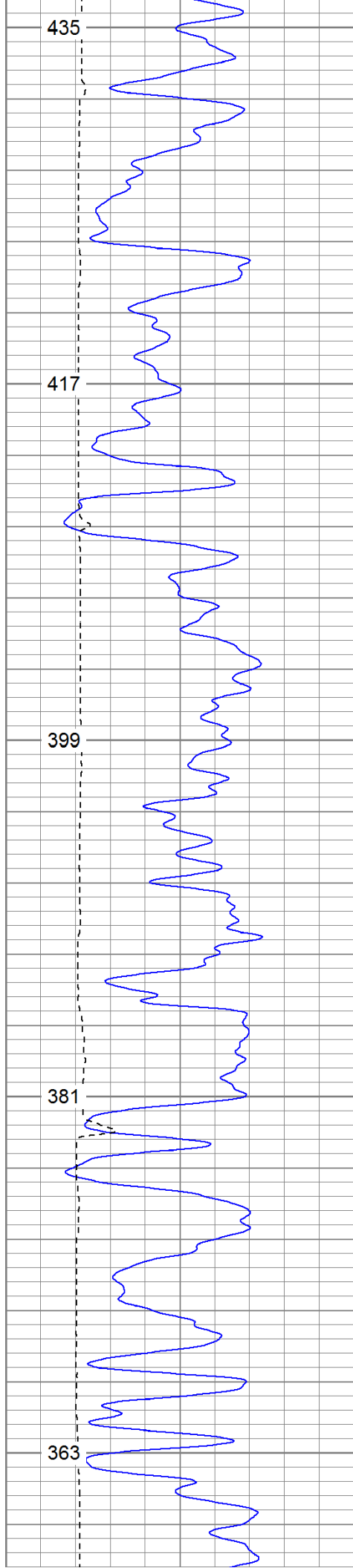
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

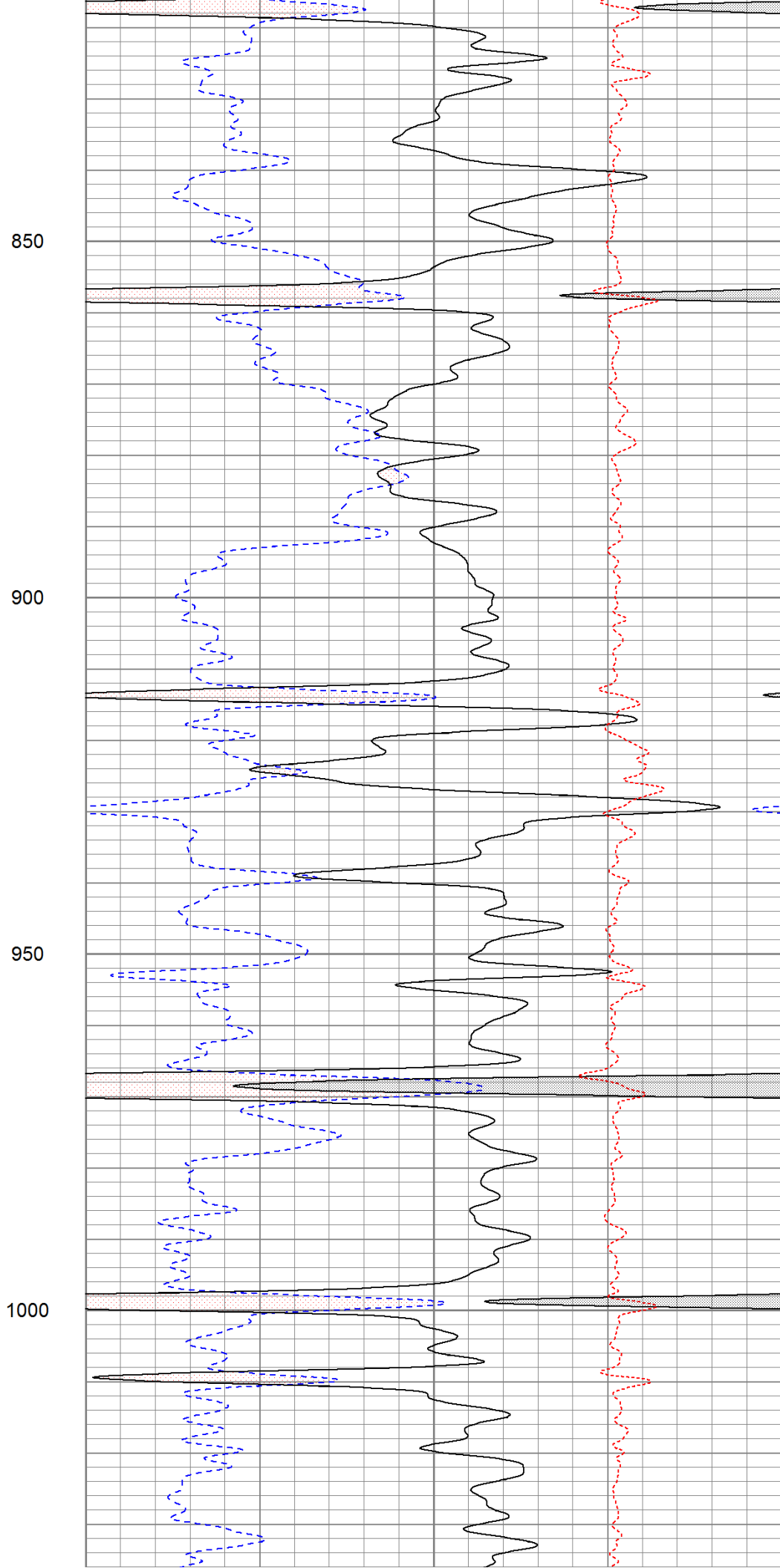
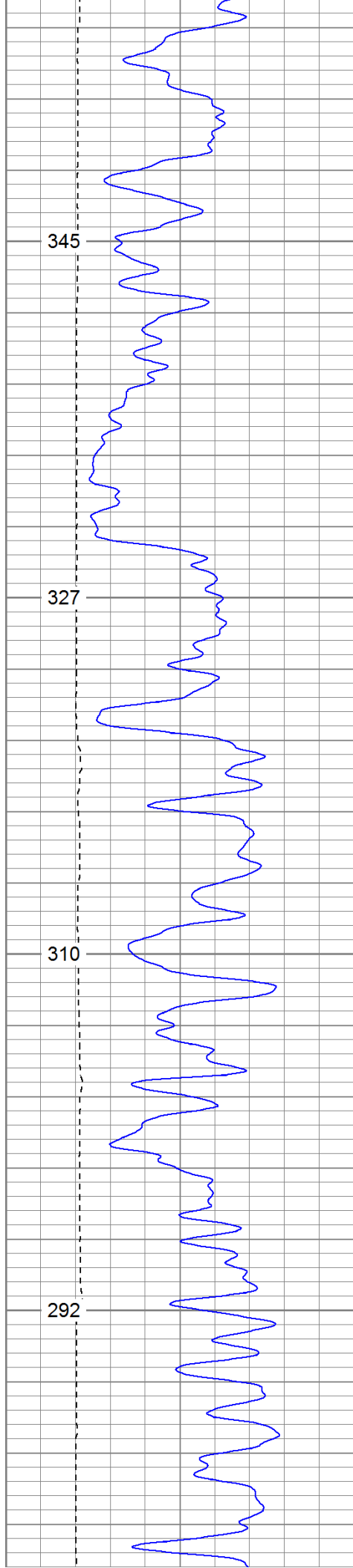


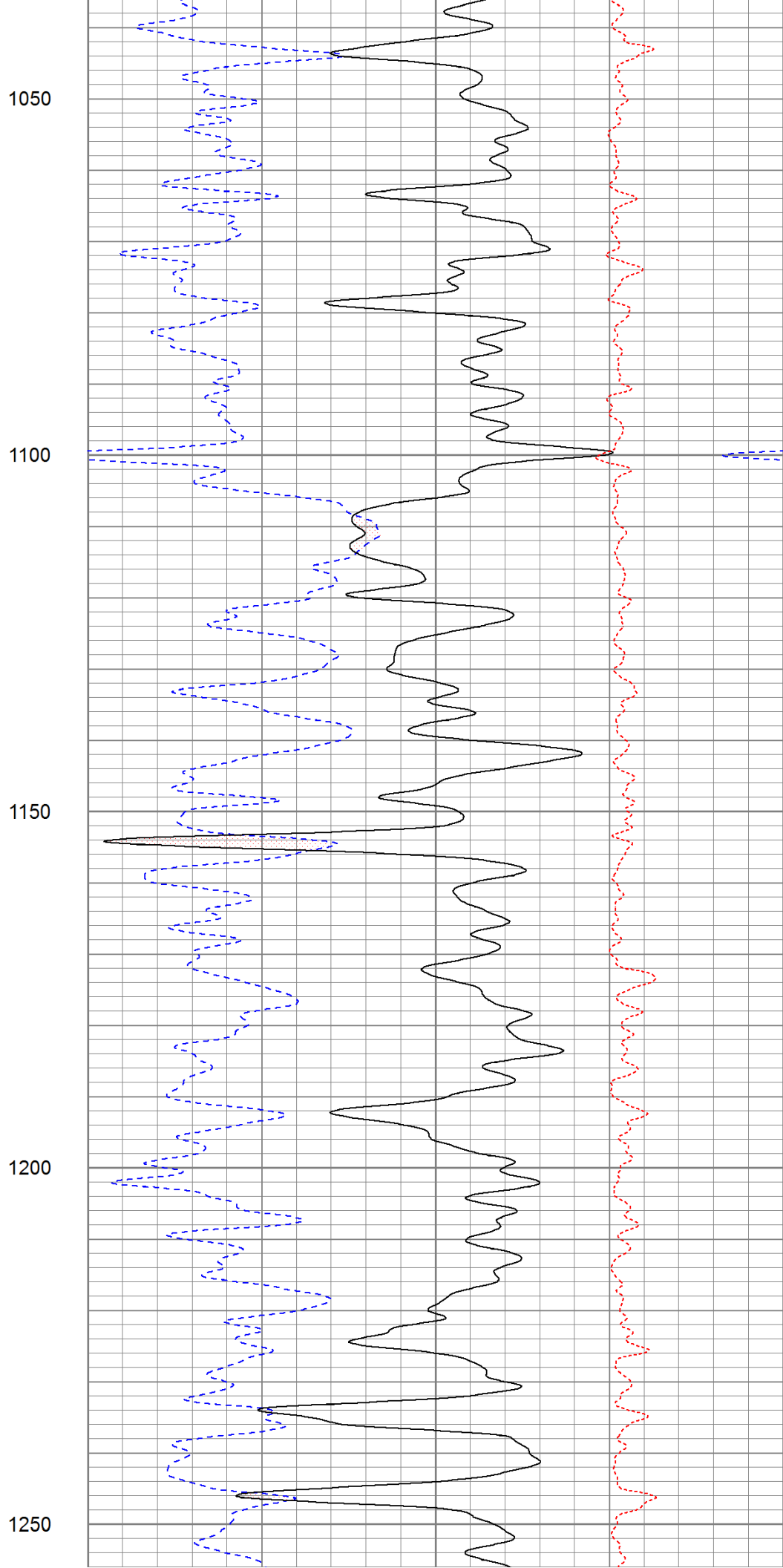
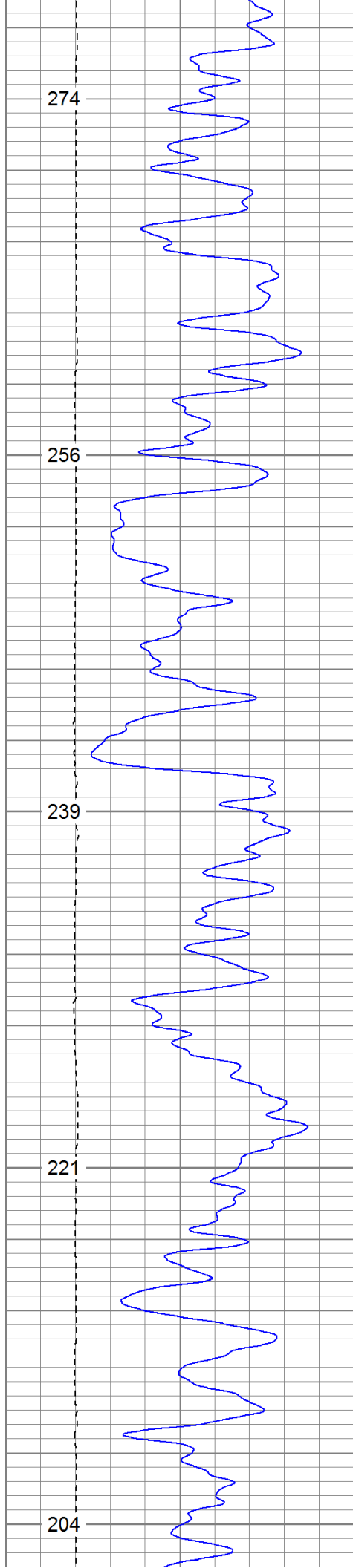
2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
7000	LTEN (lb)	0
ABHV (ft3)		

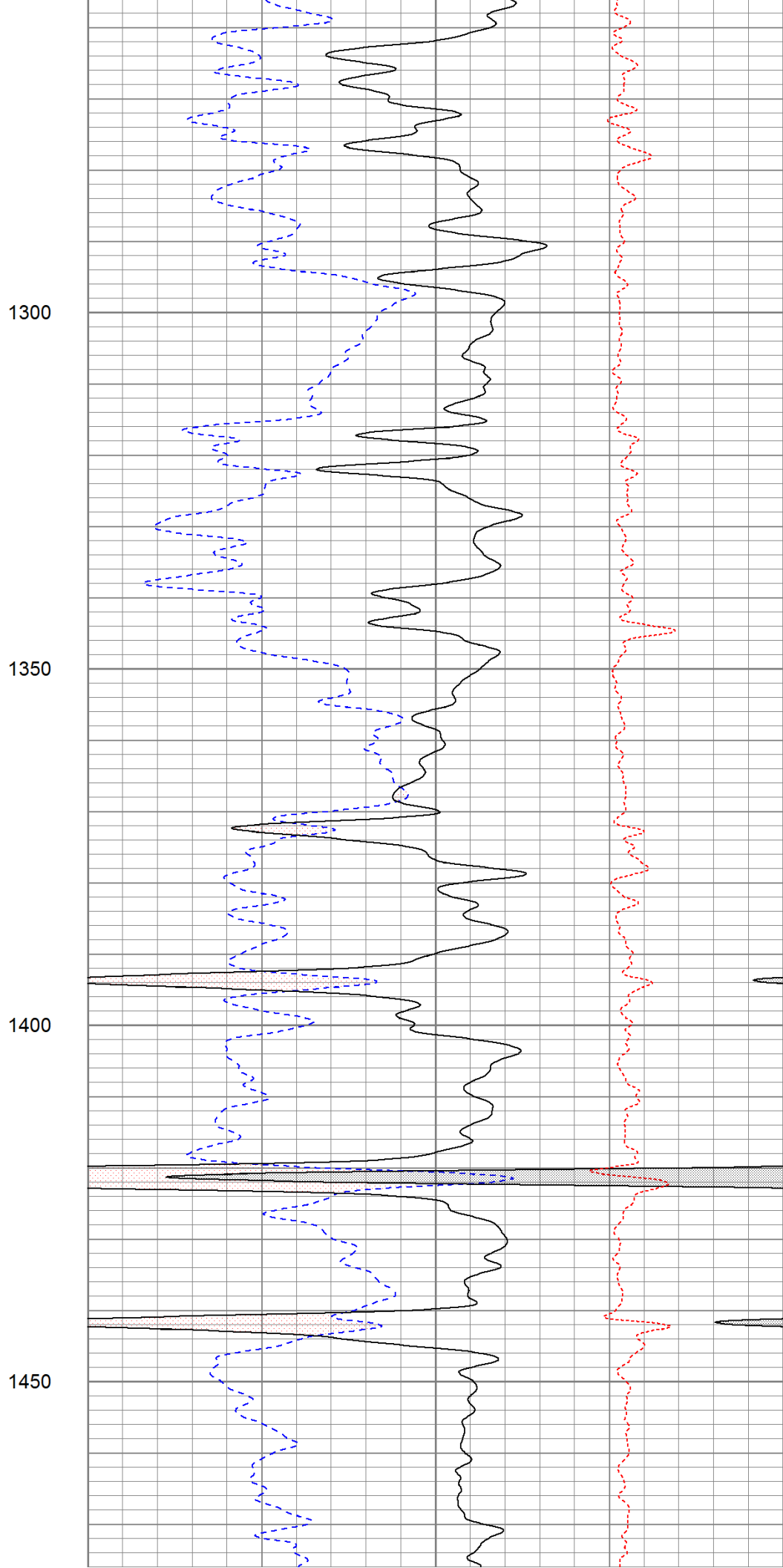
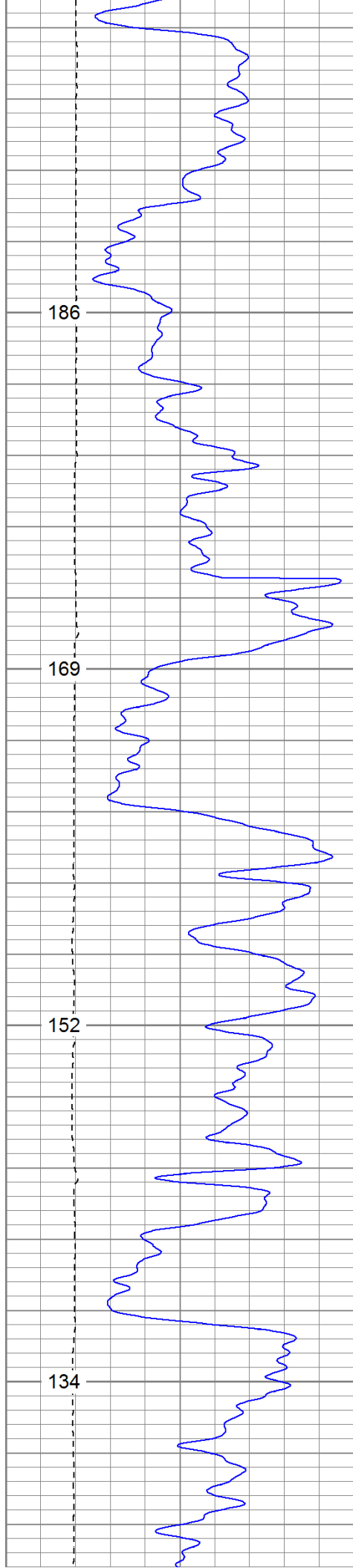
0	GR (GAPI)	200	30	NPOR (pu)	-10
6	DCAL (in)	16	30	DPOR (pu)	-10
TBHV (ft3)				-0.5	RHOC (g/cc) 0.5

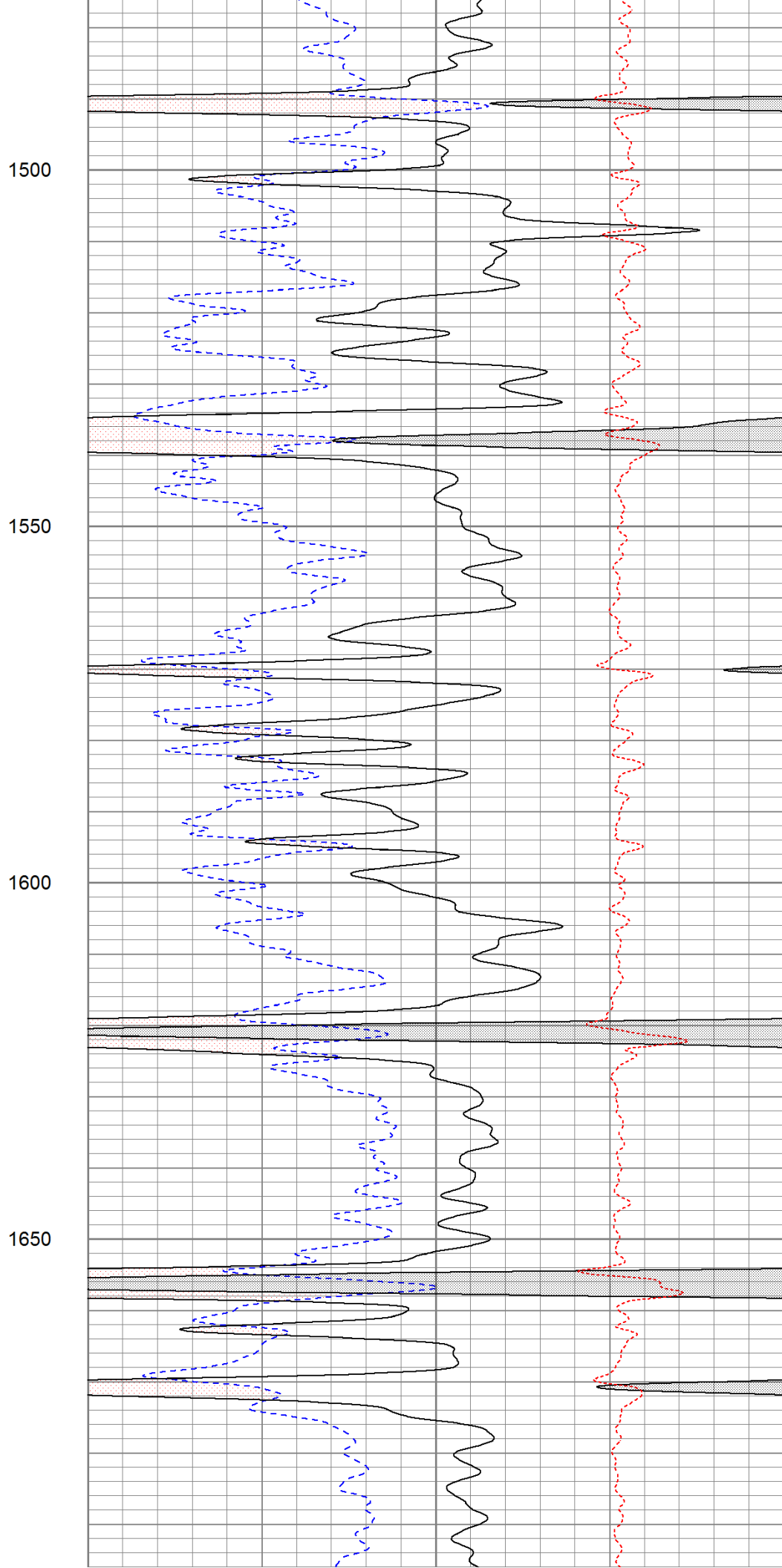
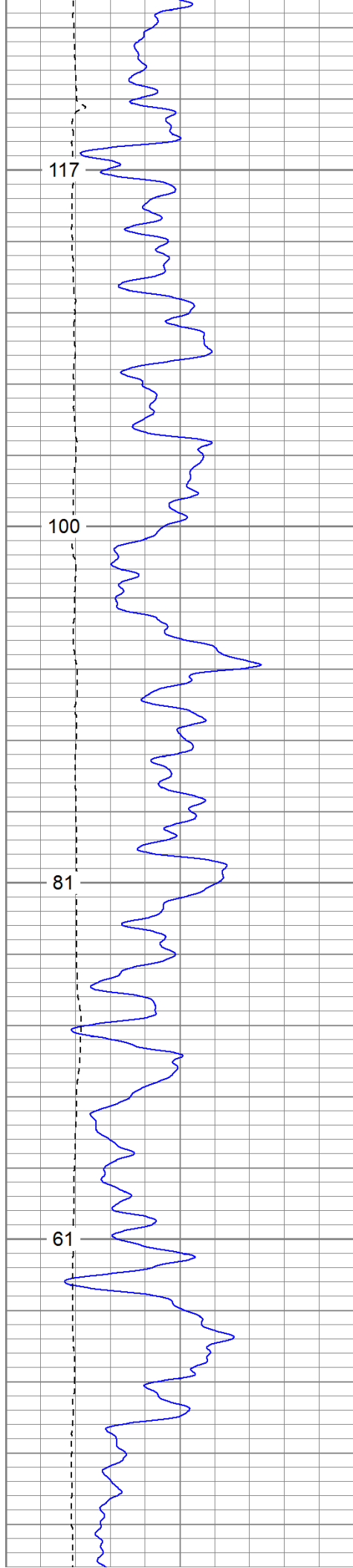


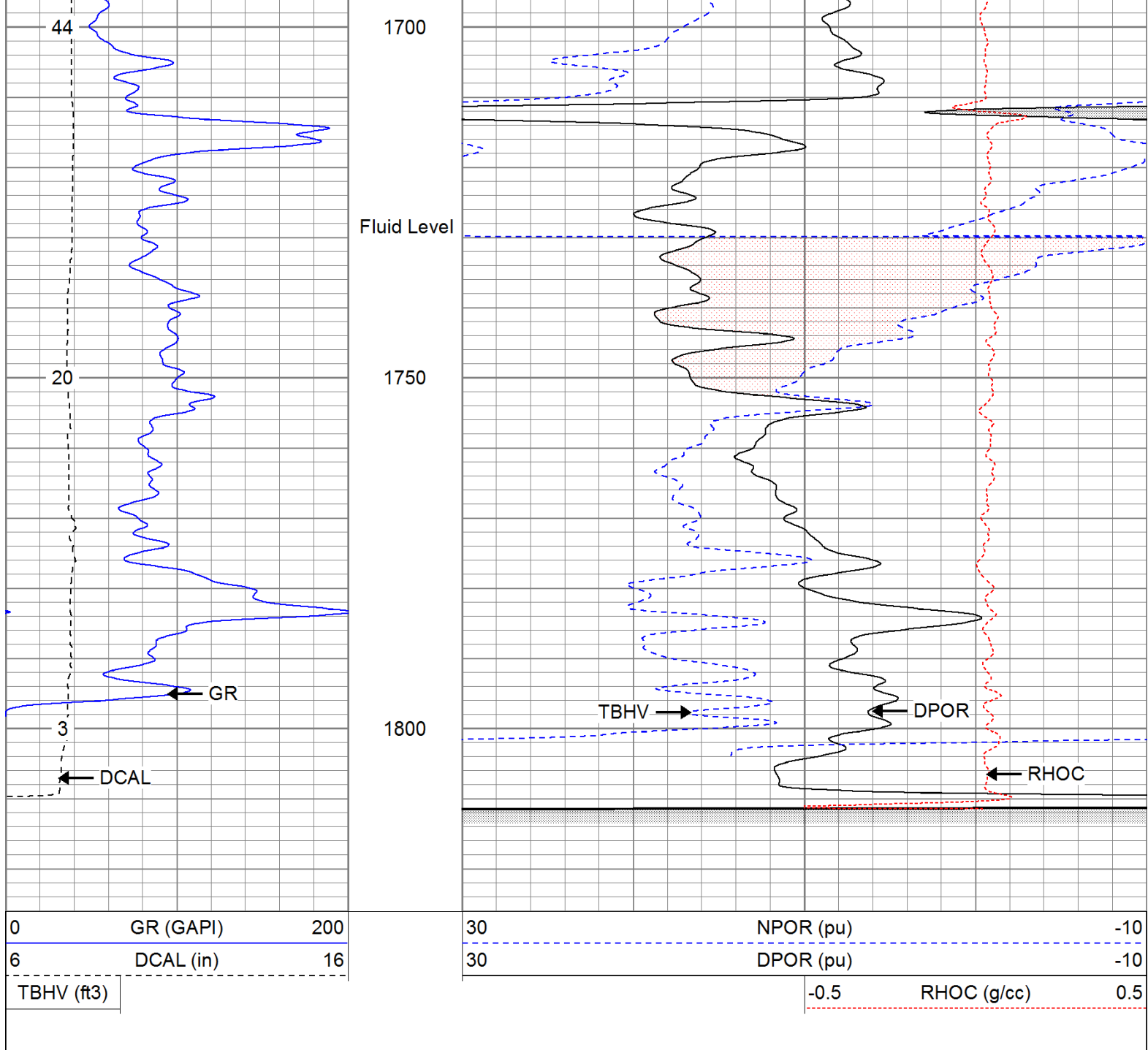








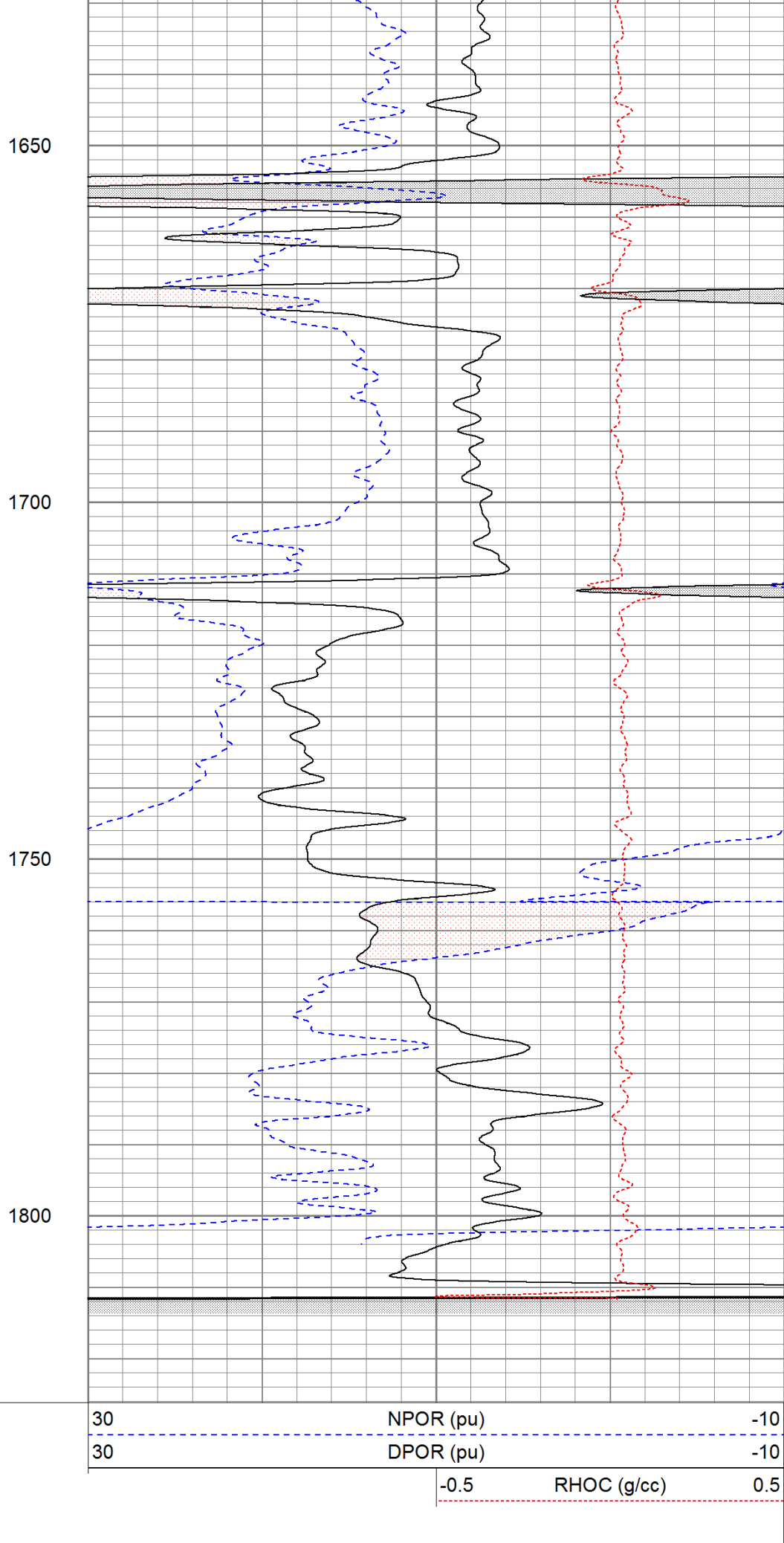
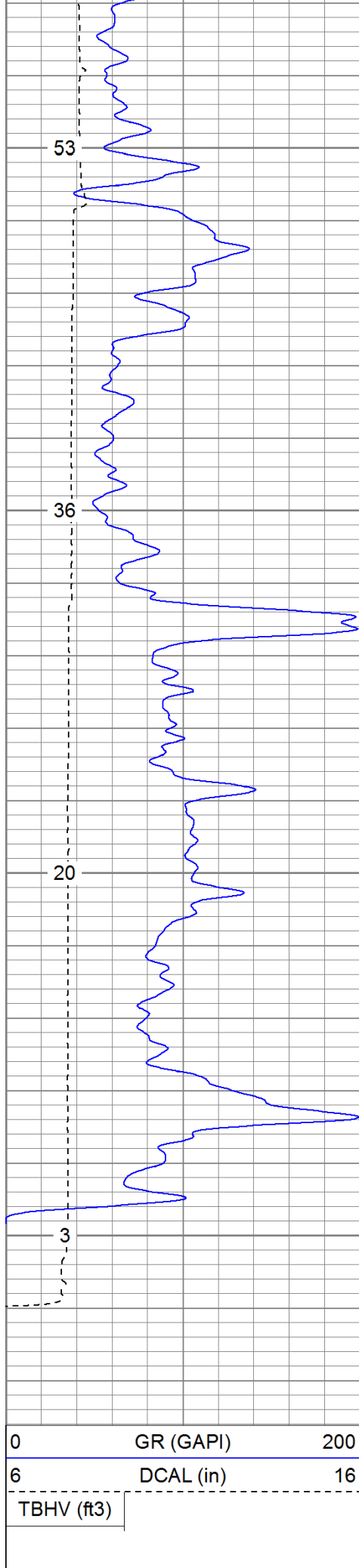




Repeat Pass

Database File: idrahaje.db
 Dataset Pathname: pass1.1
 Presentation Format: cdnl
 Dataset Creation: Tue Jun 21 16:23:06 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

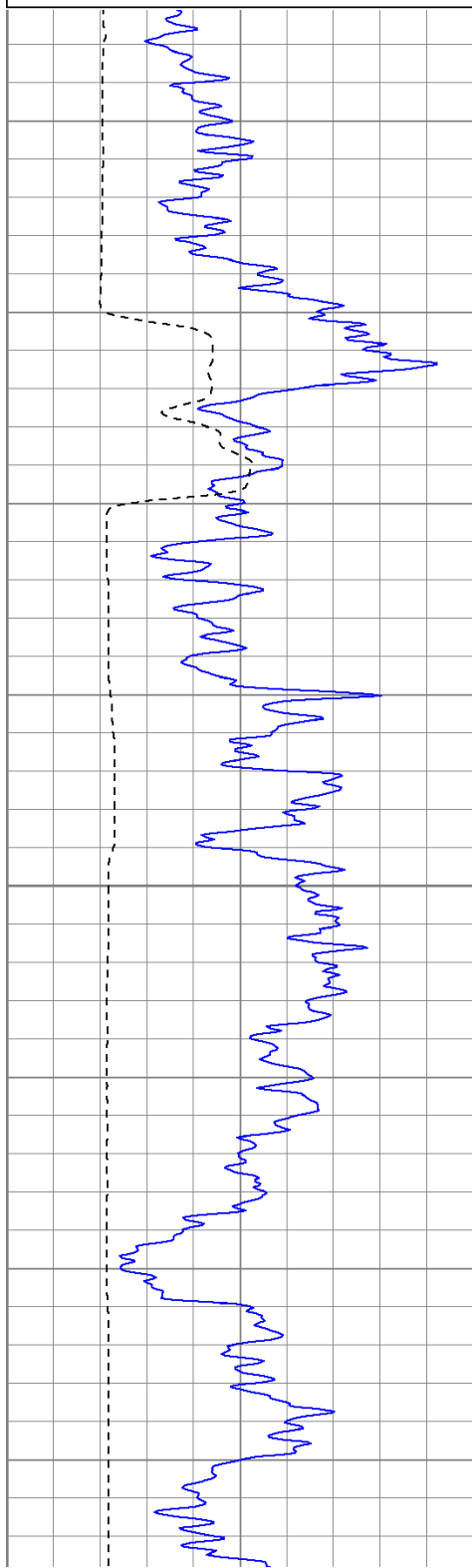
0	GR (GAPI)	200	30	NPOR (pu)	-10
6	DCAL (in)	16	30	DPOR (pu)	-10
TBHV (ft3)				-0.5	RHOC (g/cc) 0.5



Database File: idrahaje.db
 Dataset Pathname: pass2.2
 Presentation Format: cdlhr
 Dataset Creation: Tue Jun 21 16:19:57 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:120

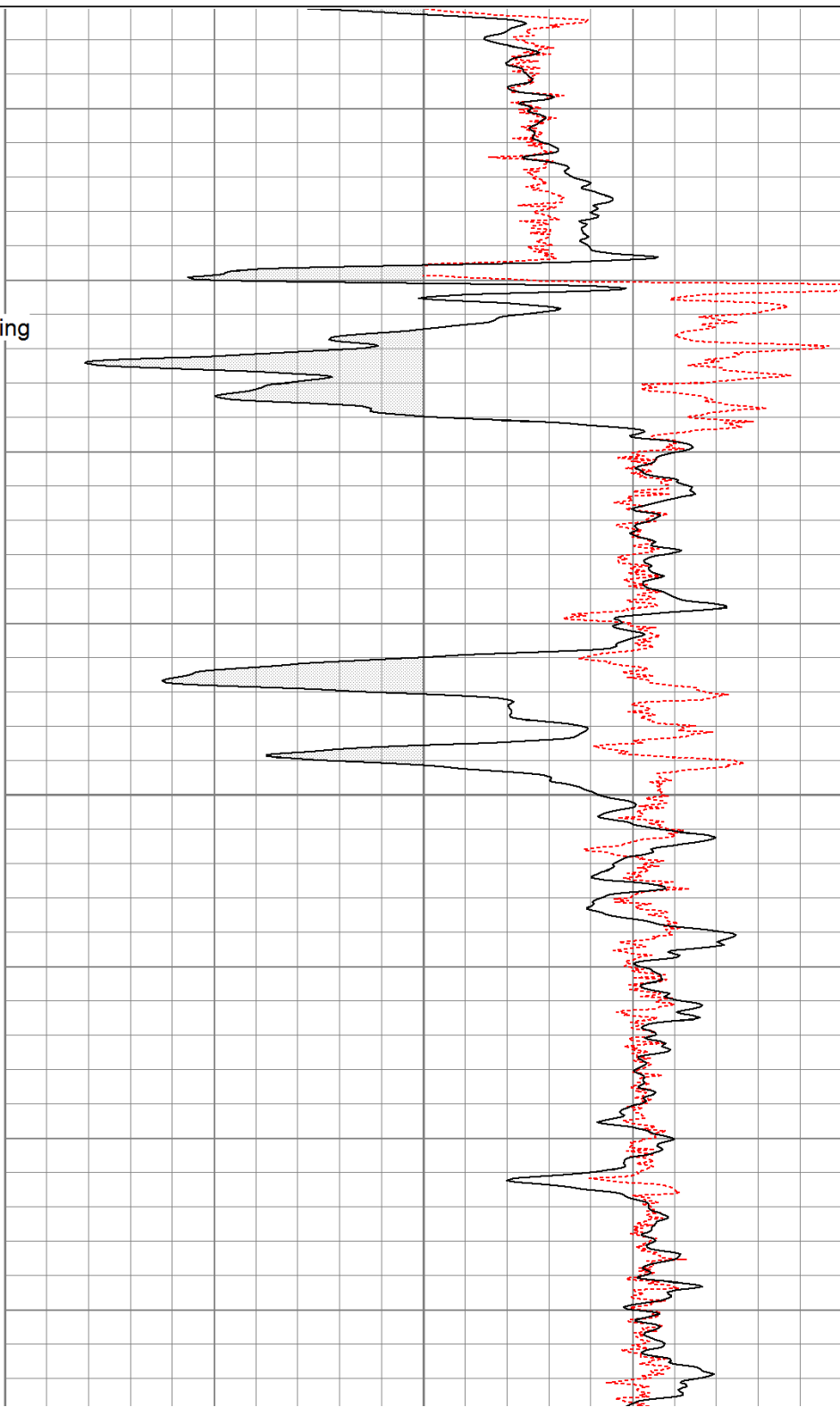
0	GR (GAPI)	200
6	DCAL (in)	16

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



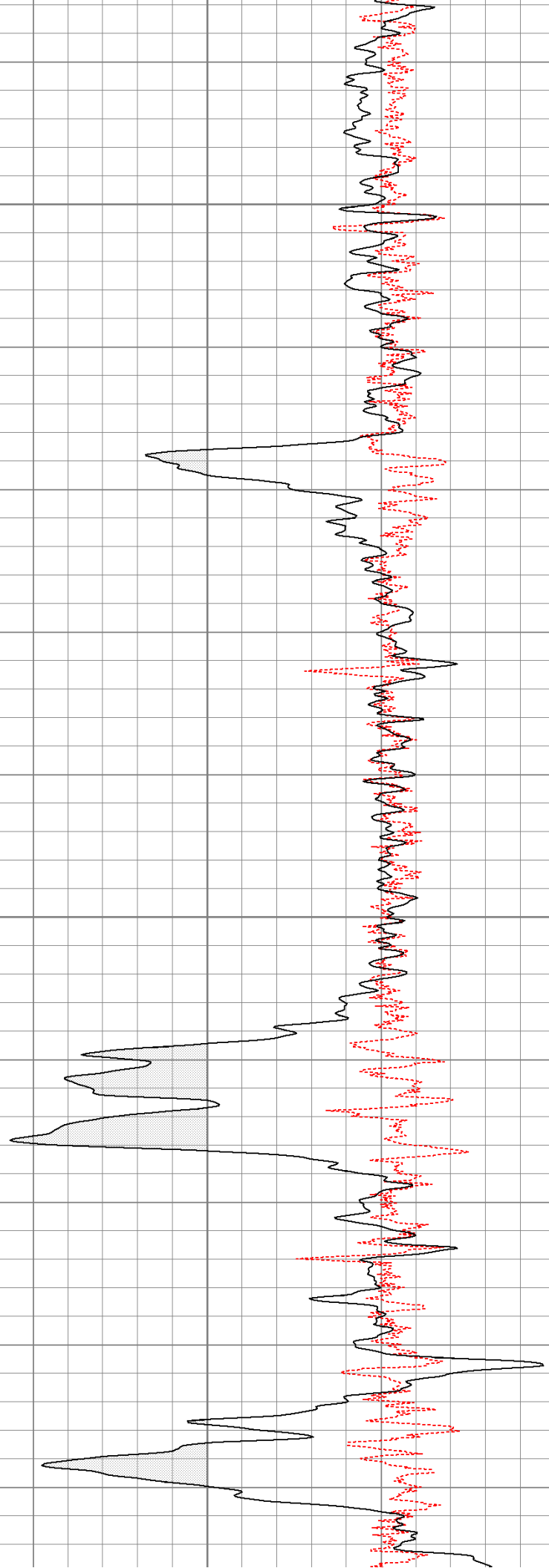
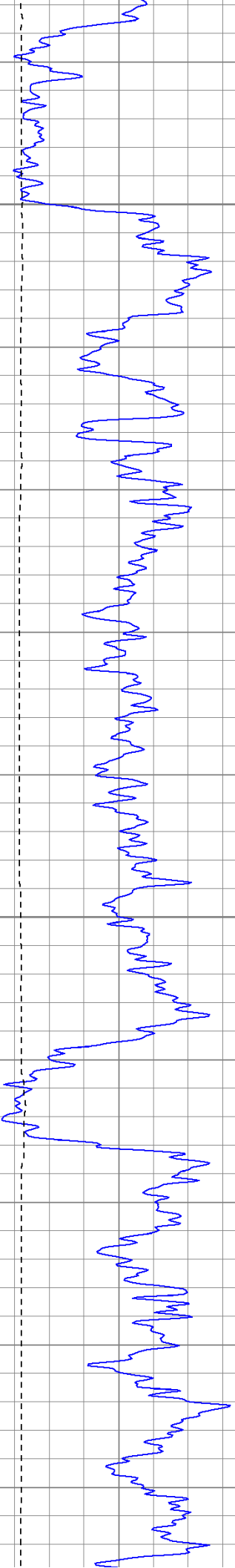
Surface Casing

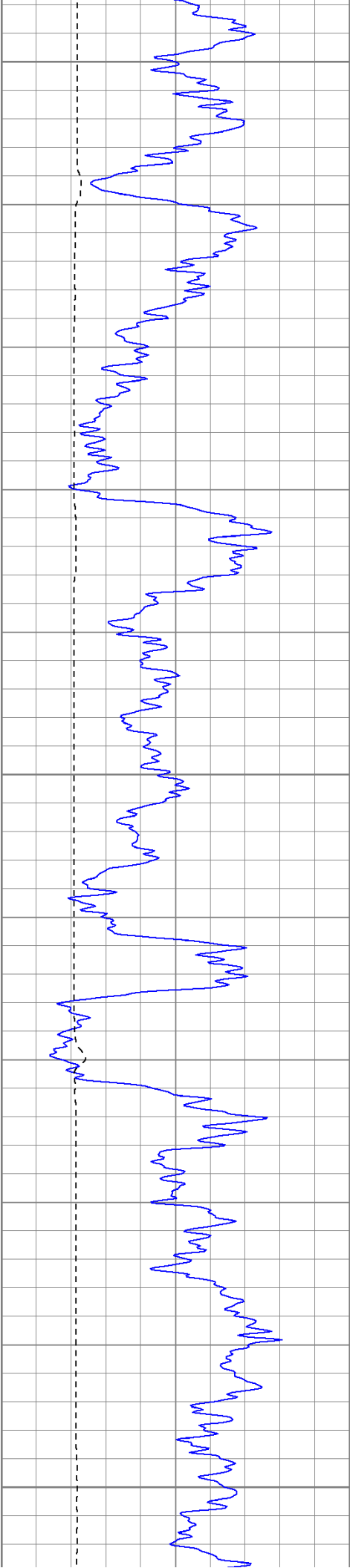
450



500

550

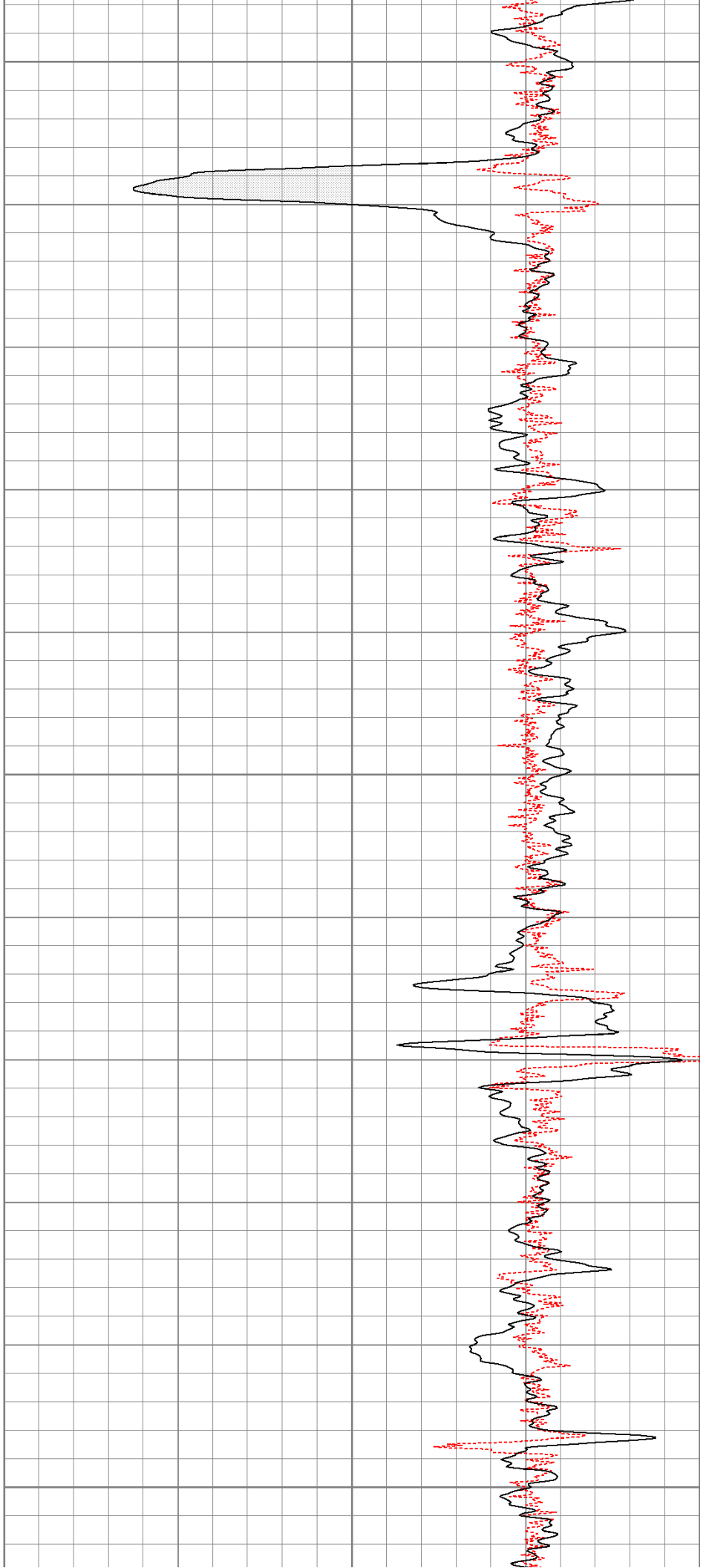


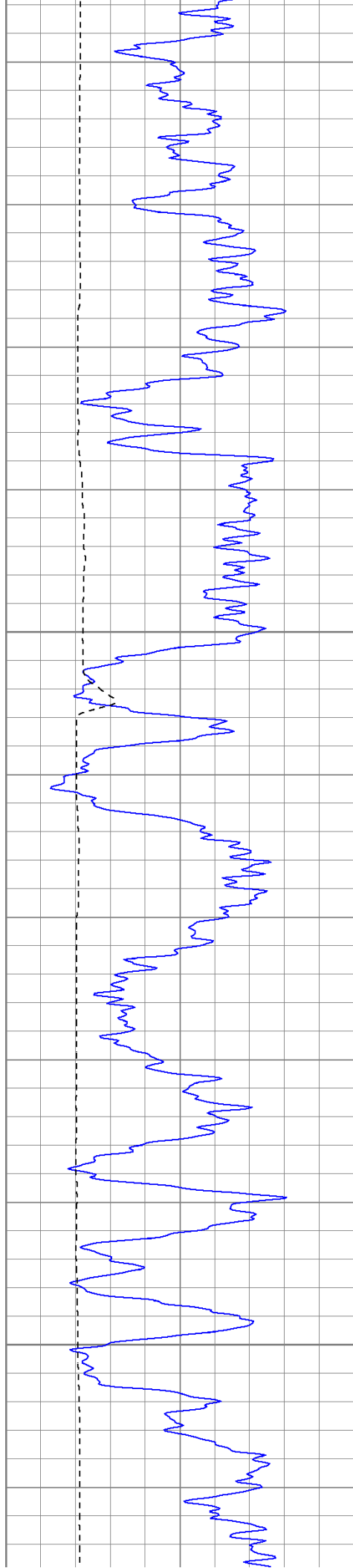


600

650

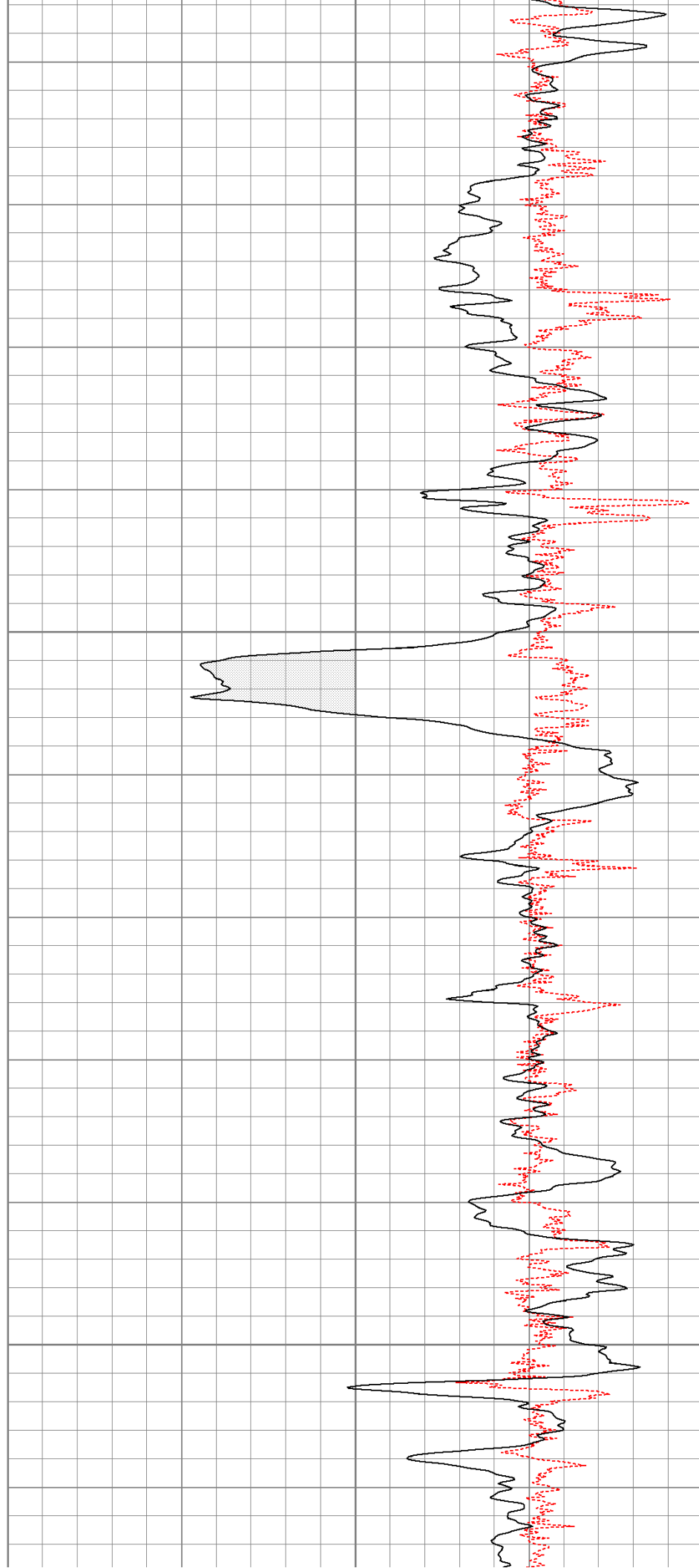
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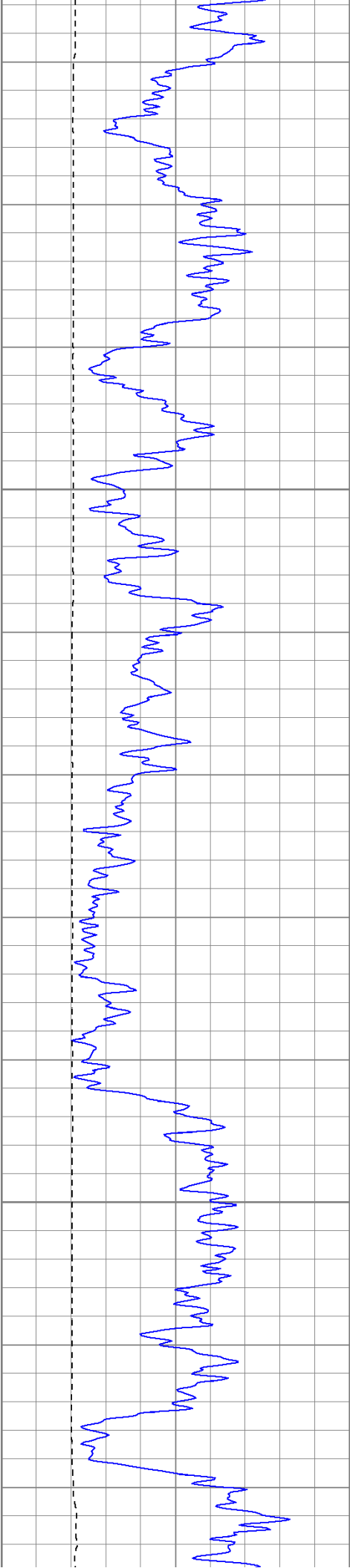




750

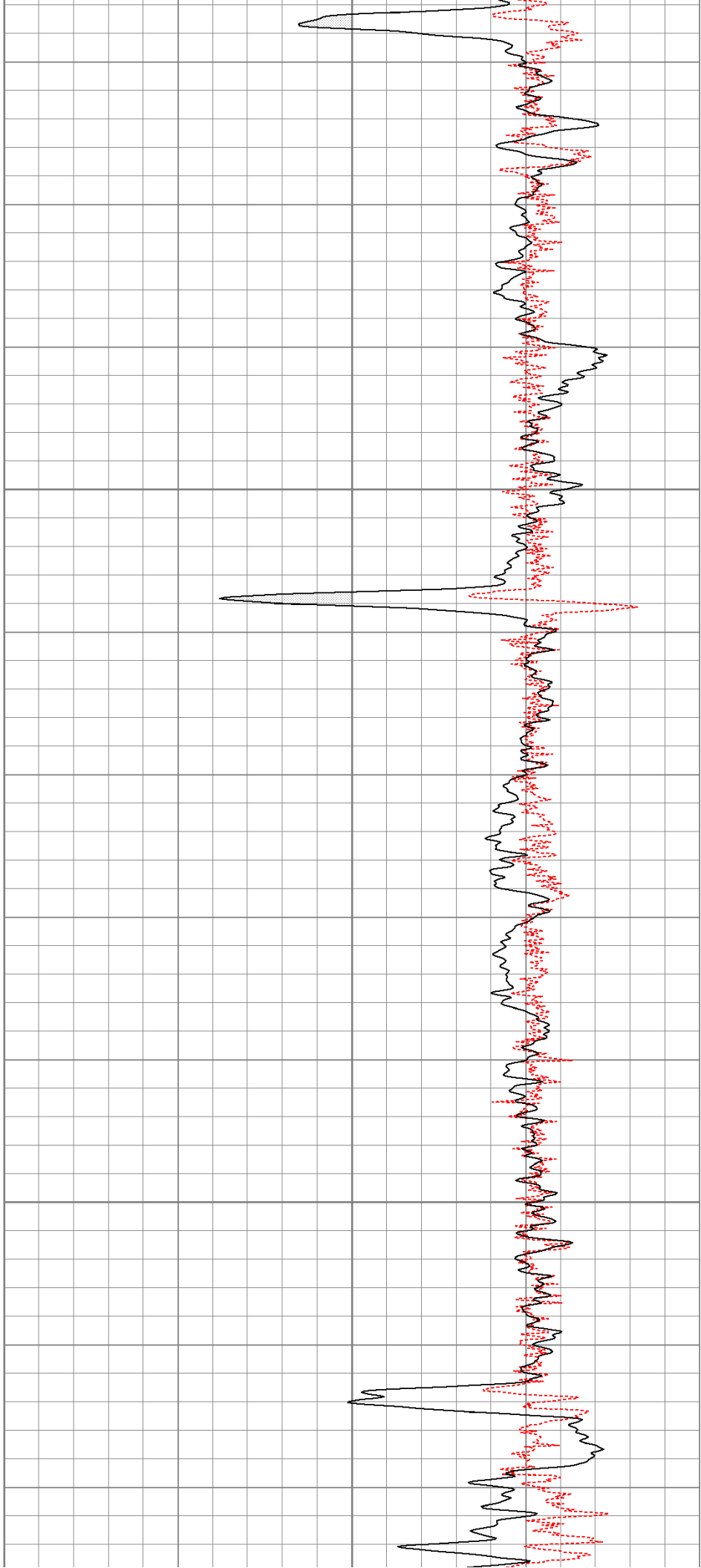
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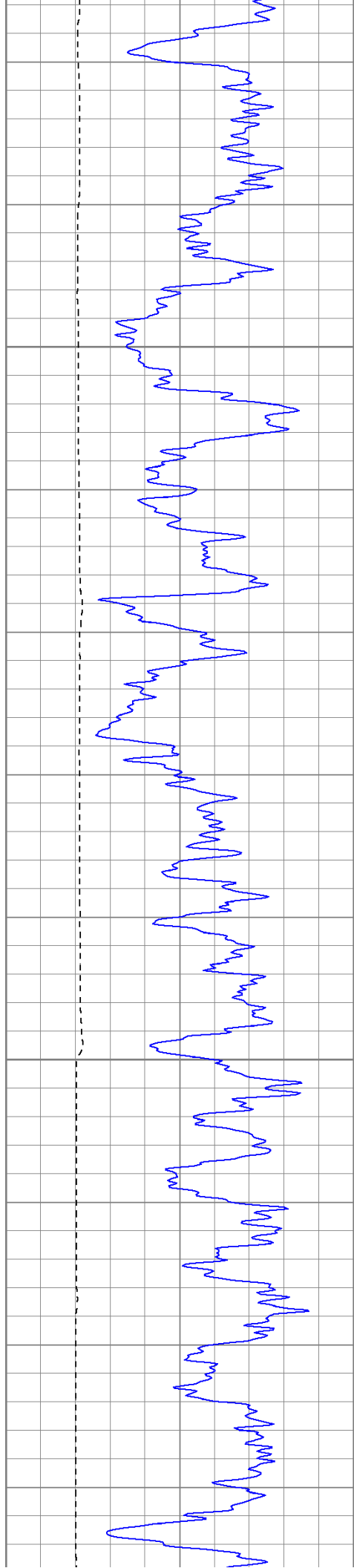




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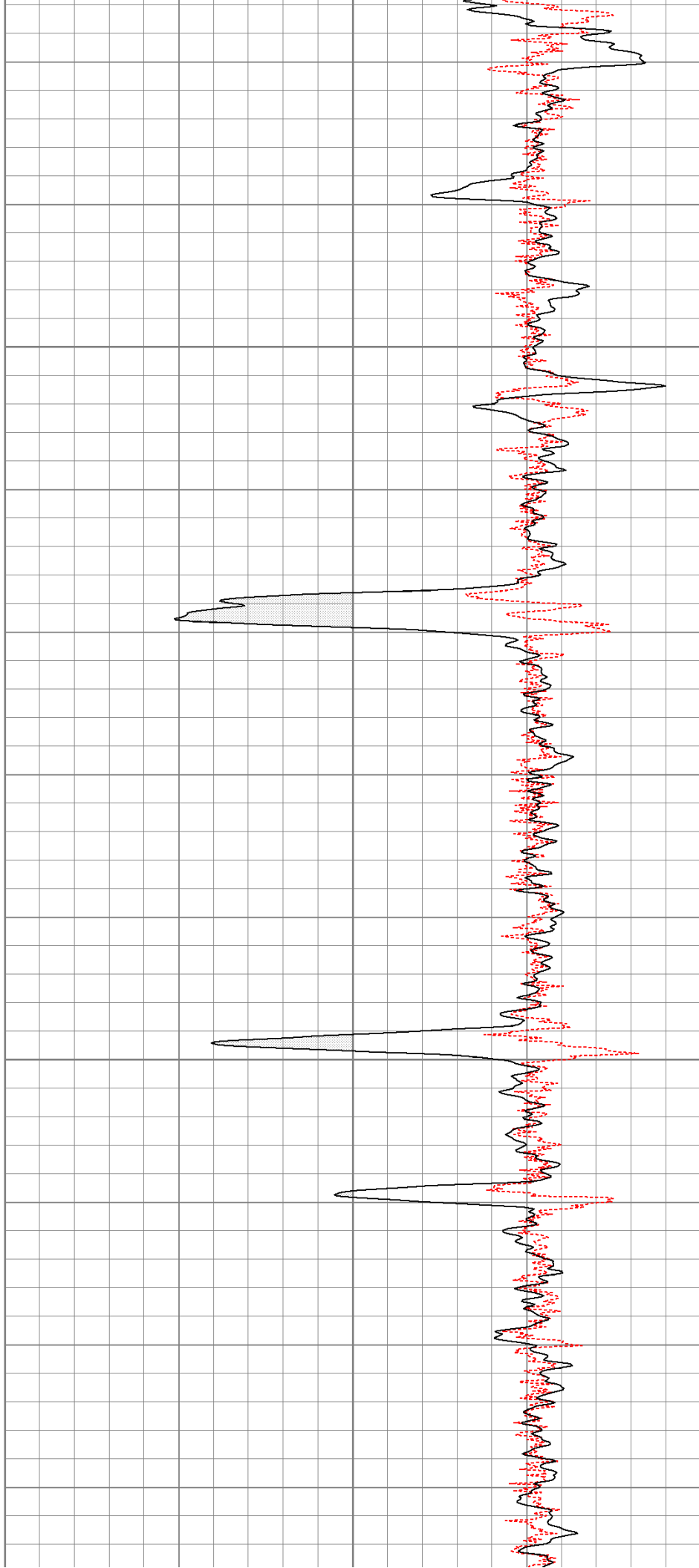
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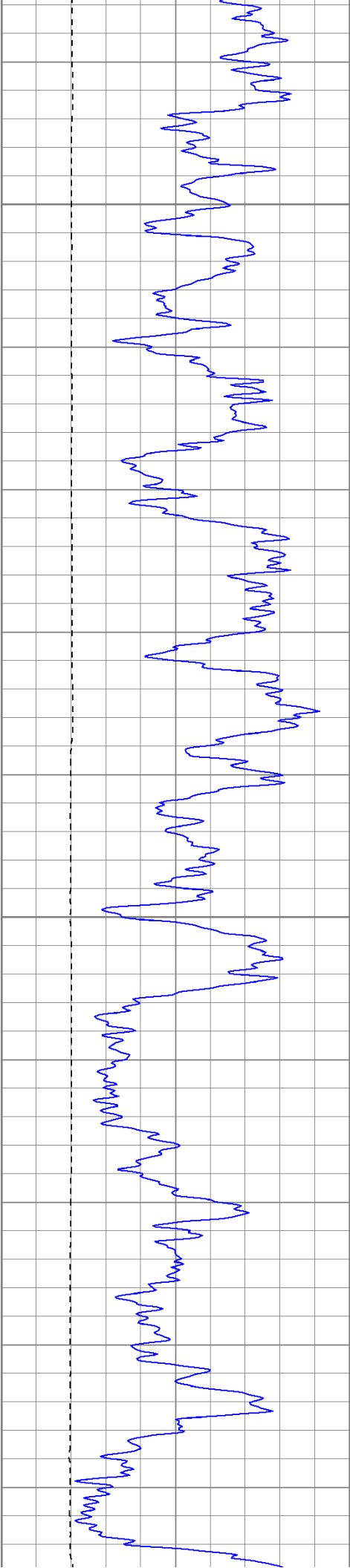




950

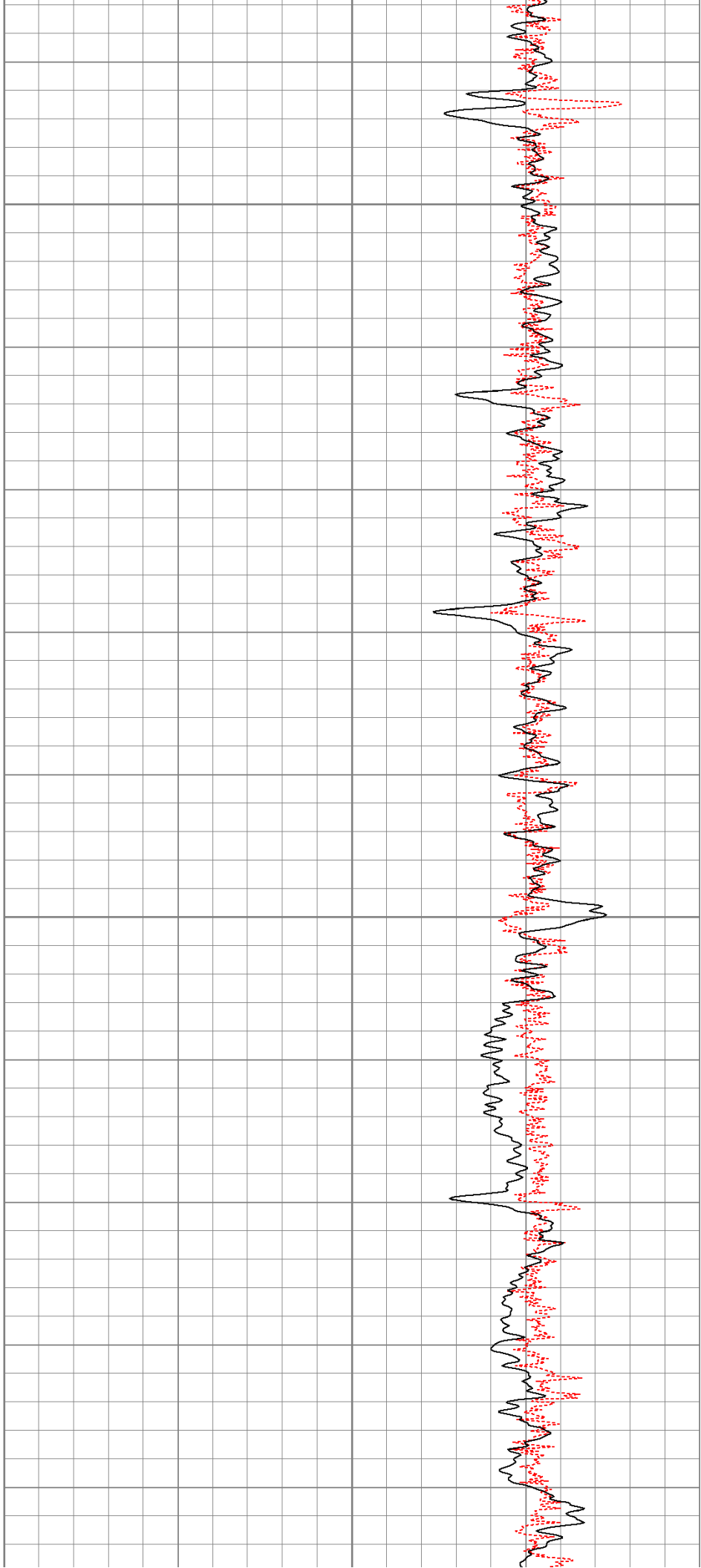
1000

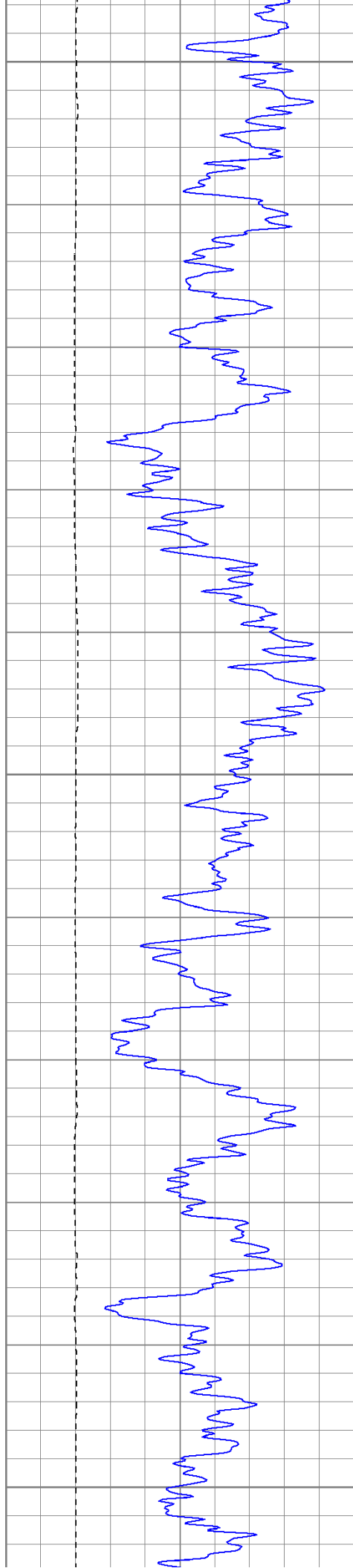




1050

1100

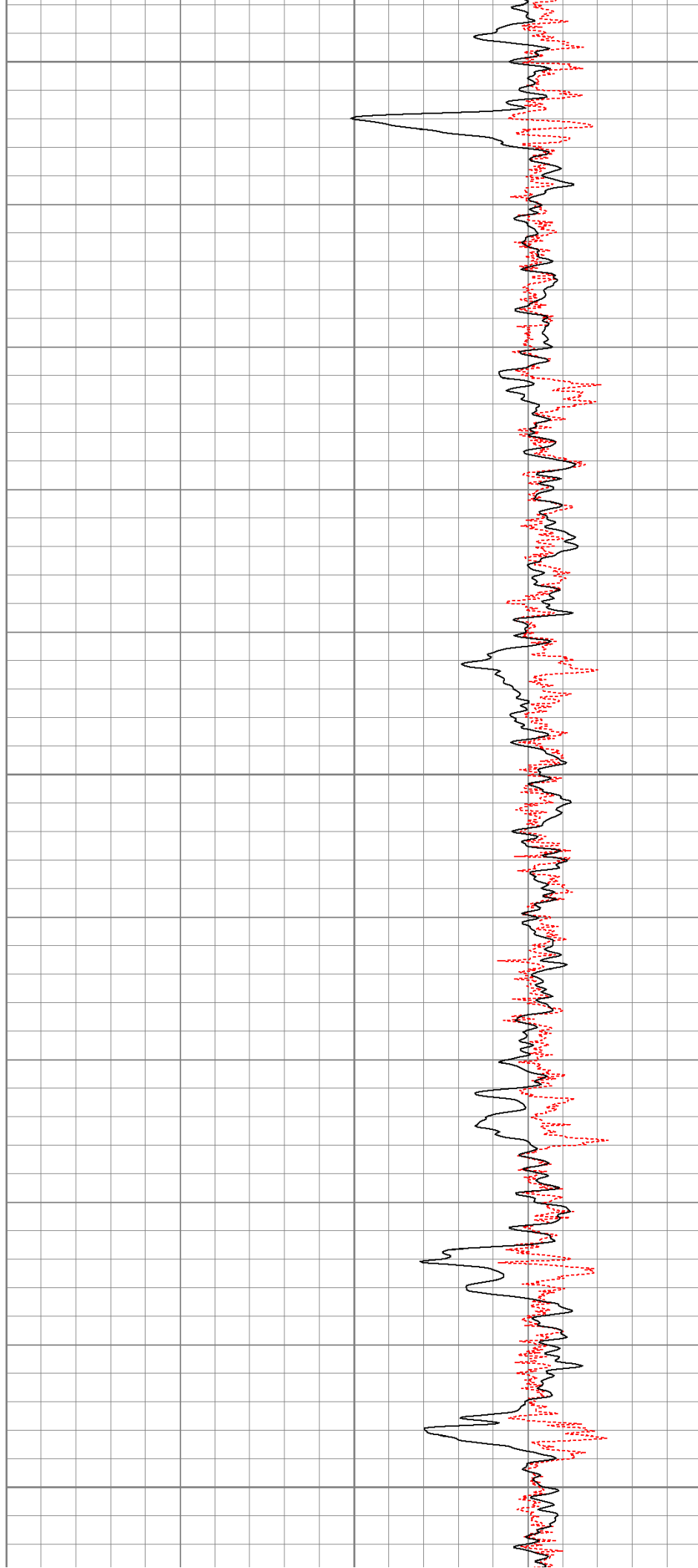


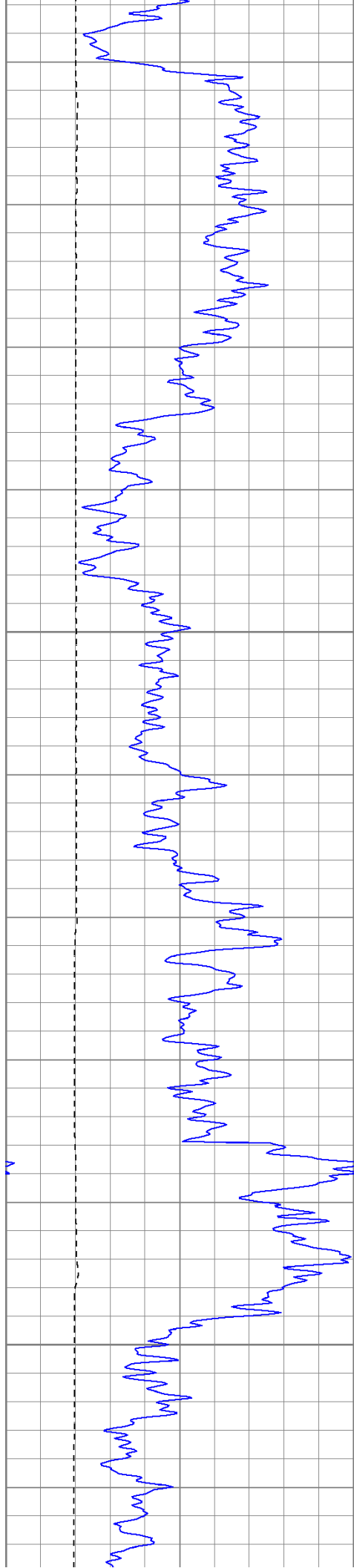


1150

1200

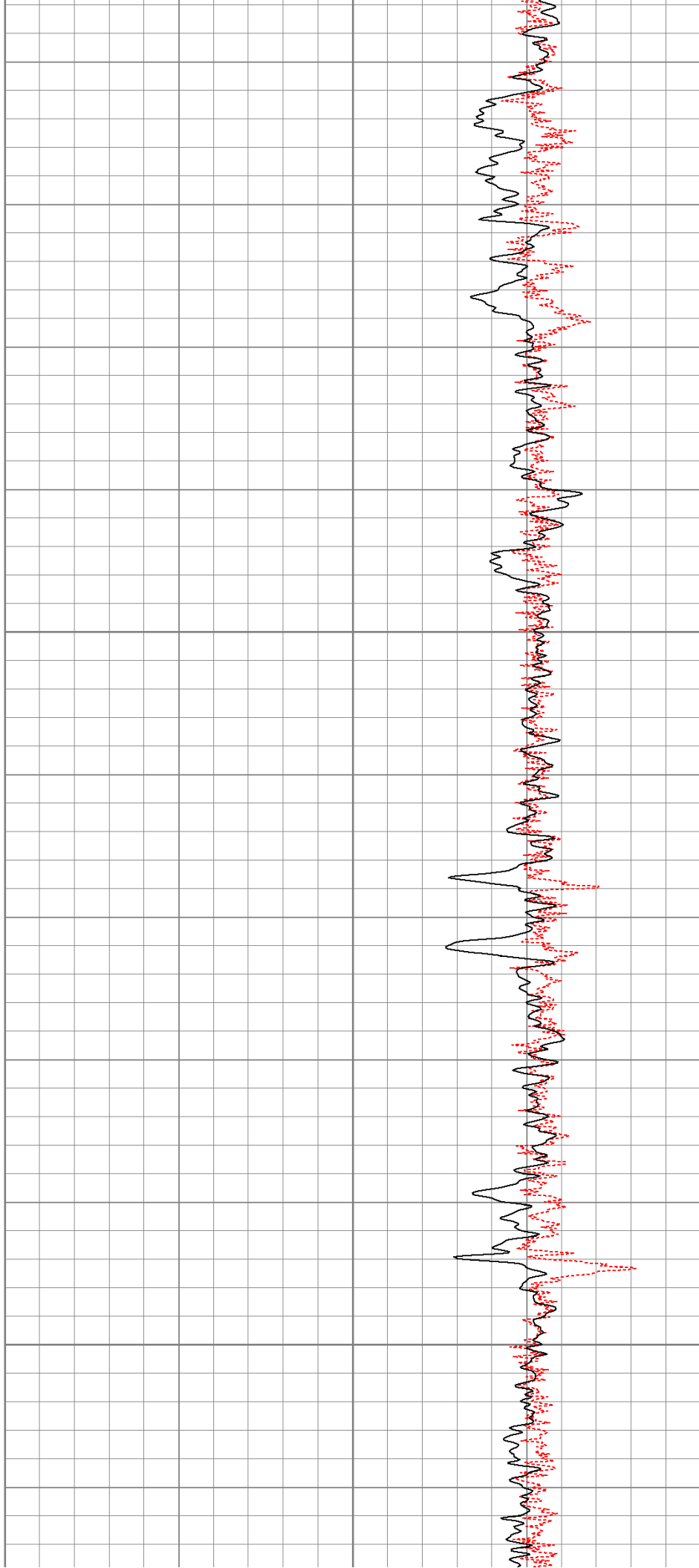
1250

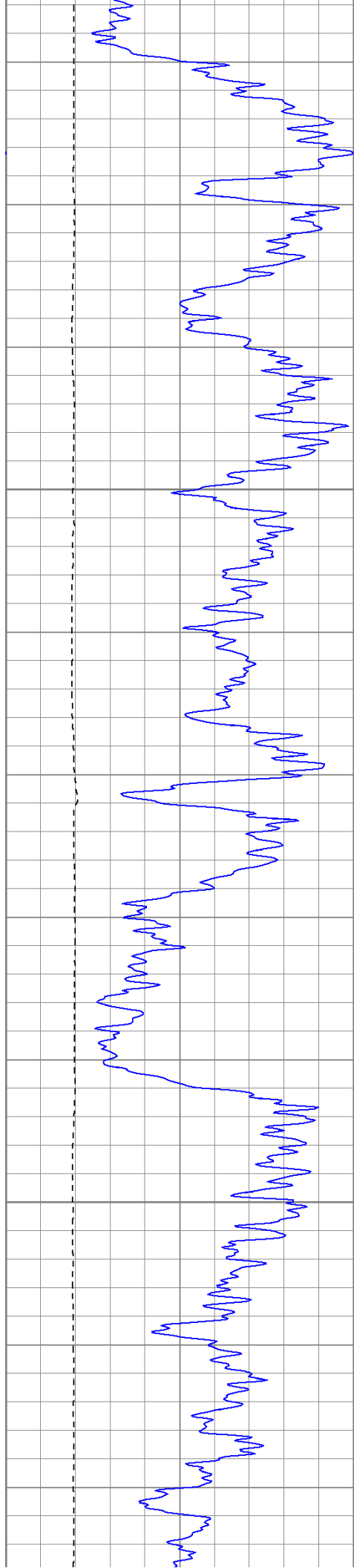




1300

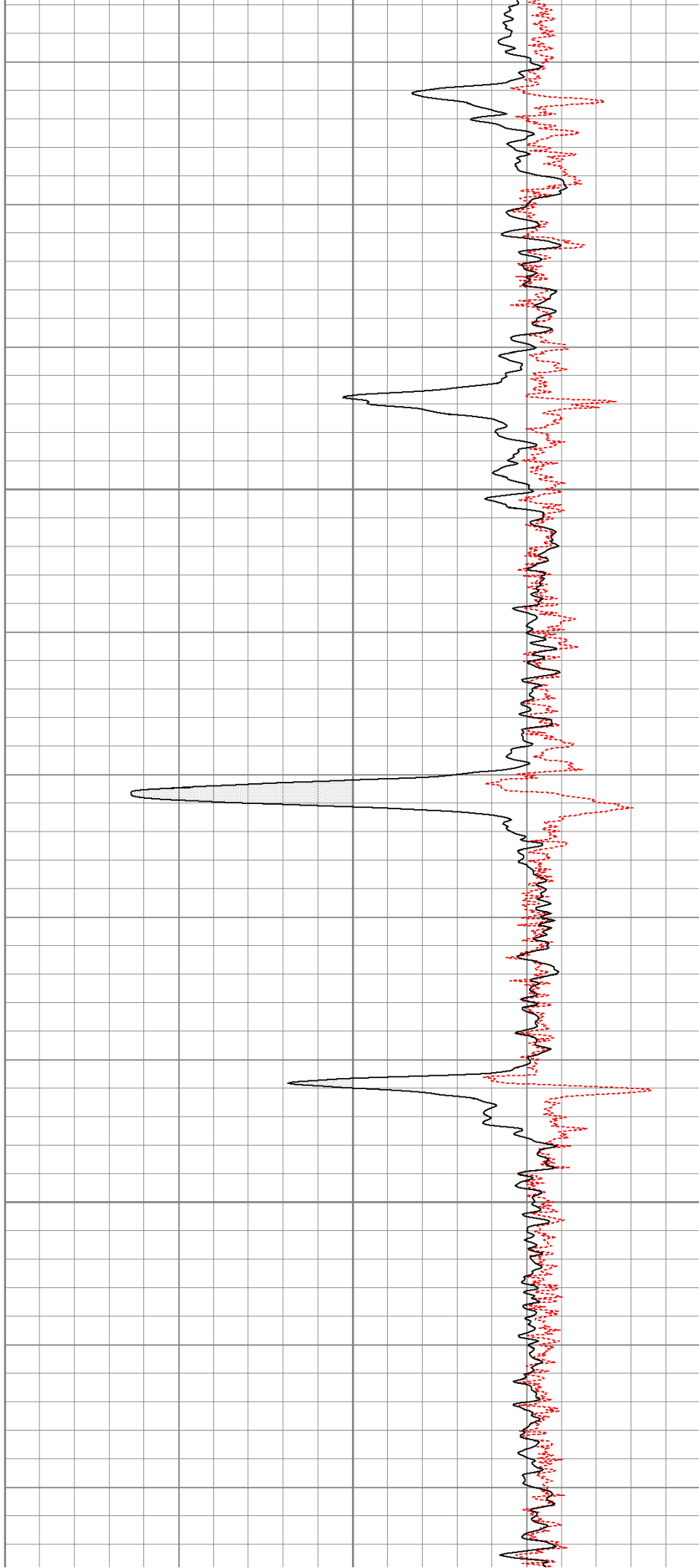
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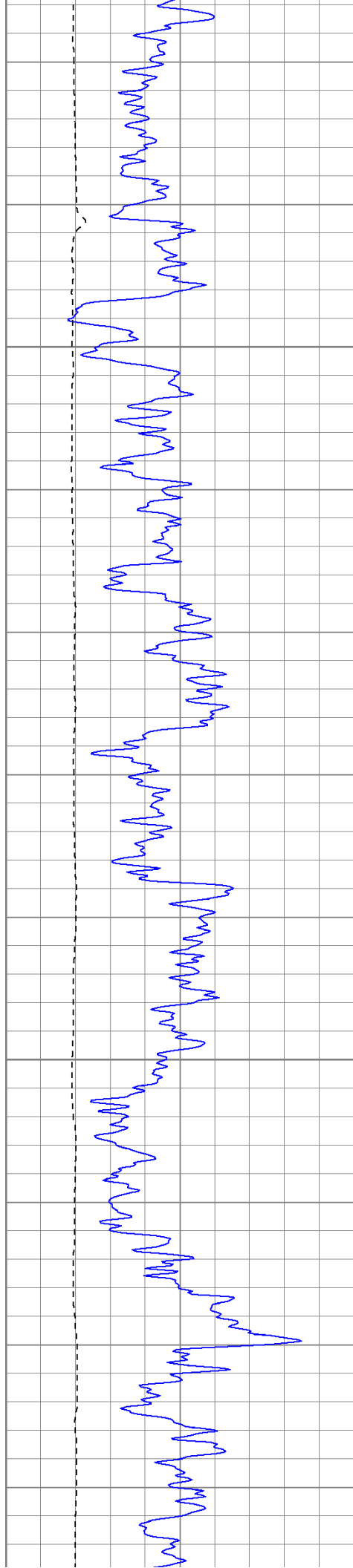




1400

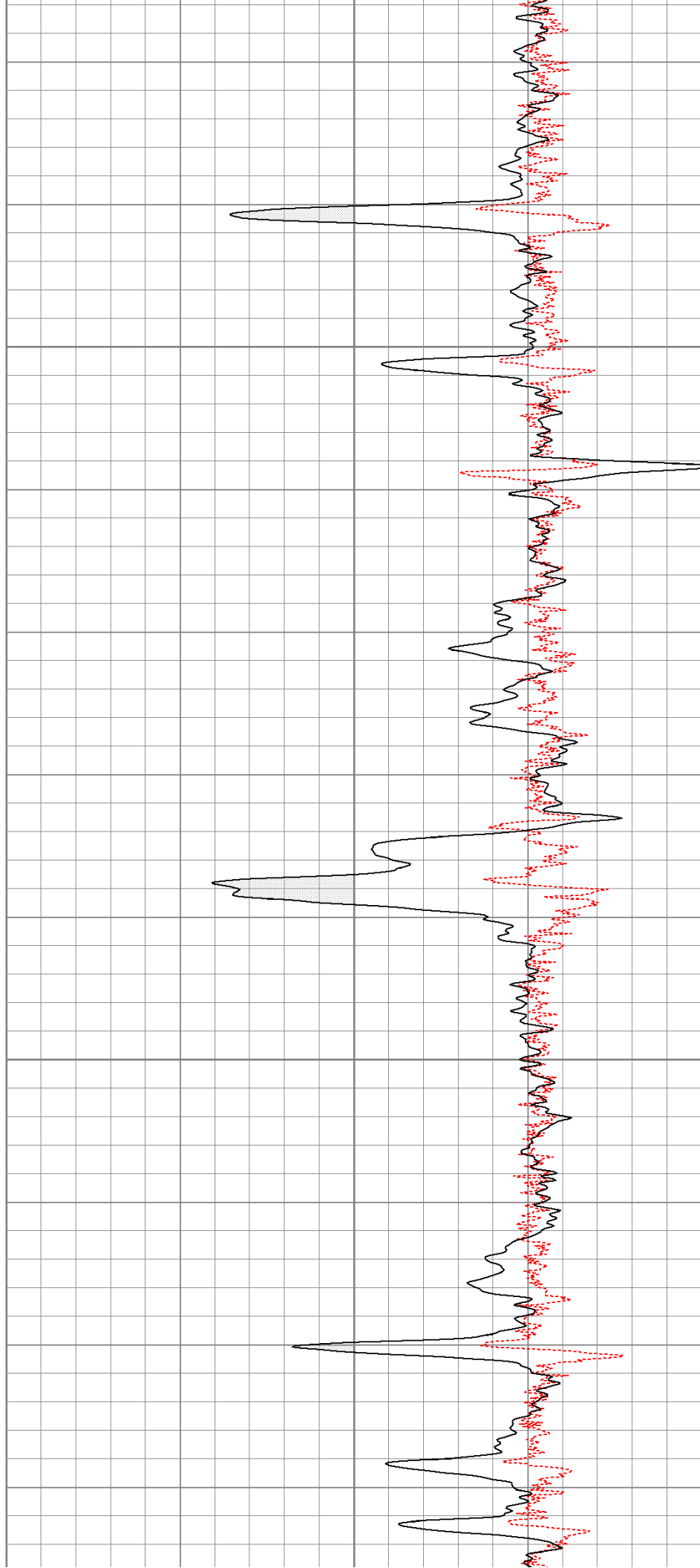
1450

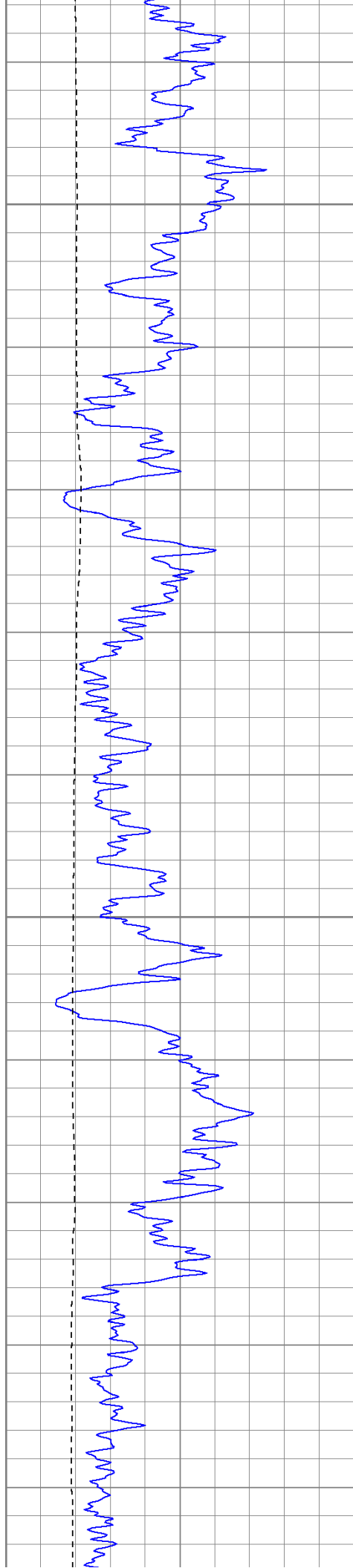




1500

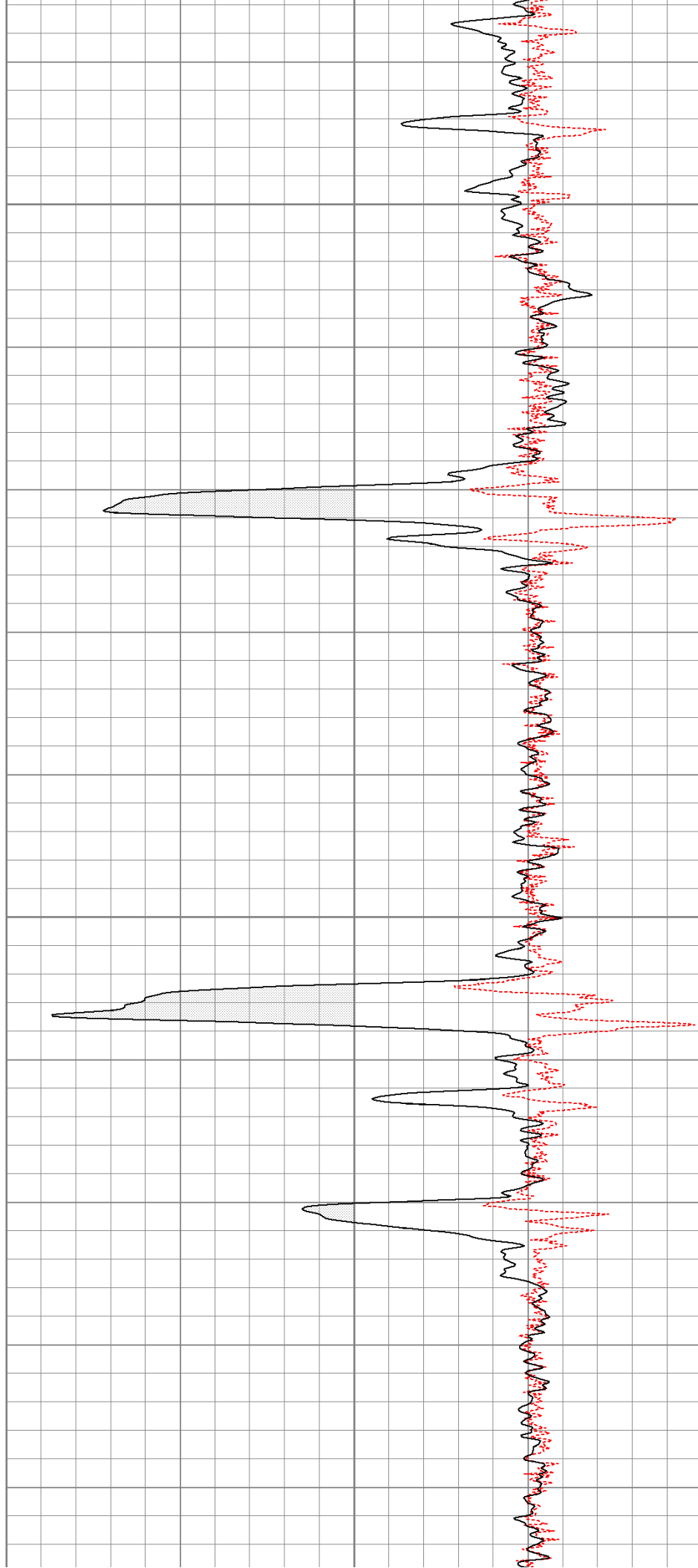
1550

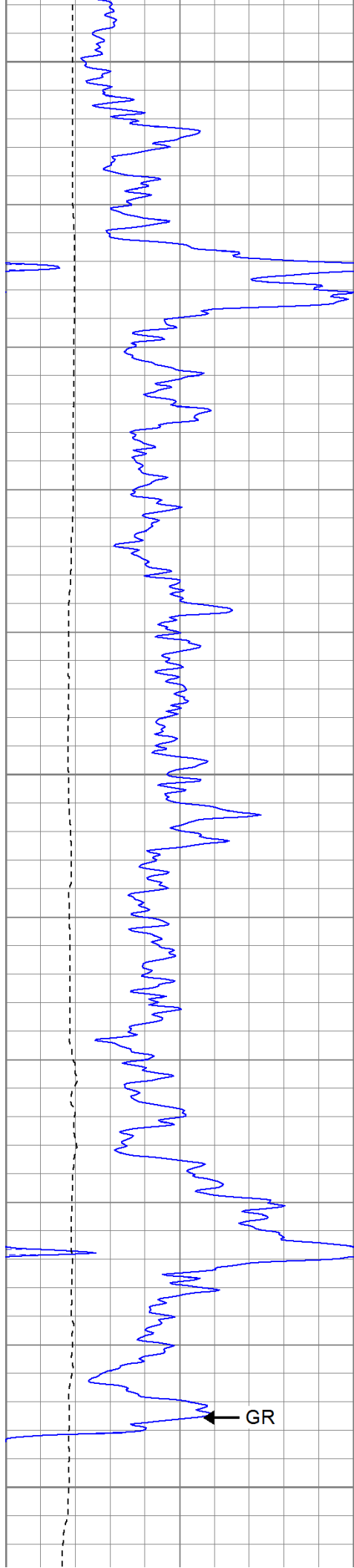




1600

1650

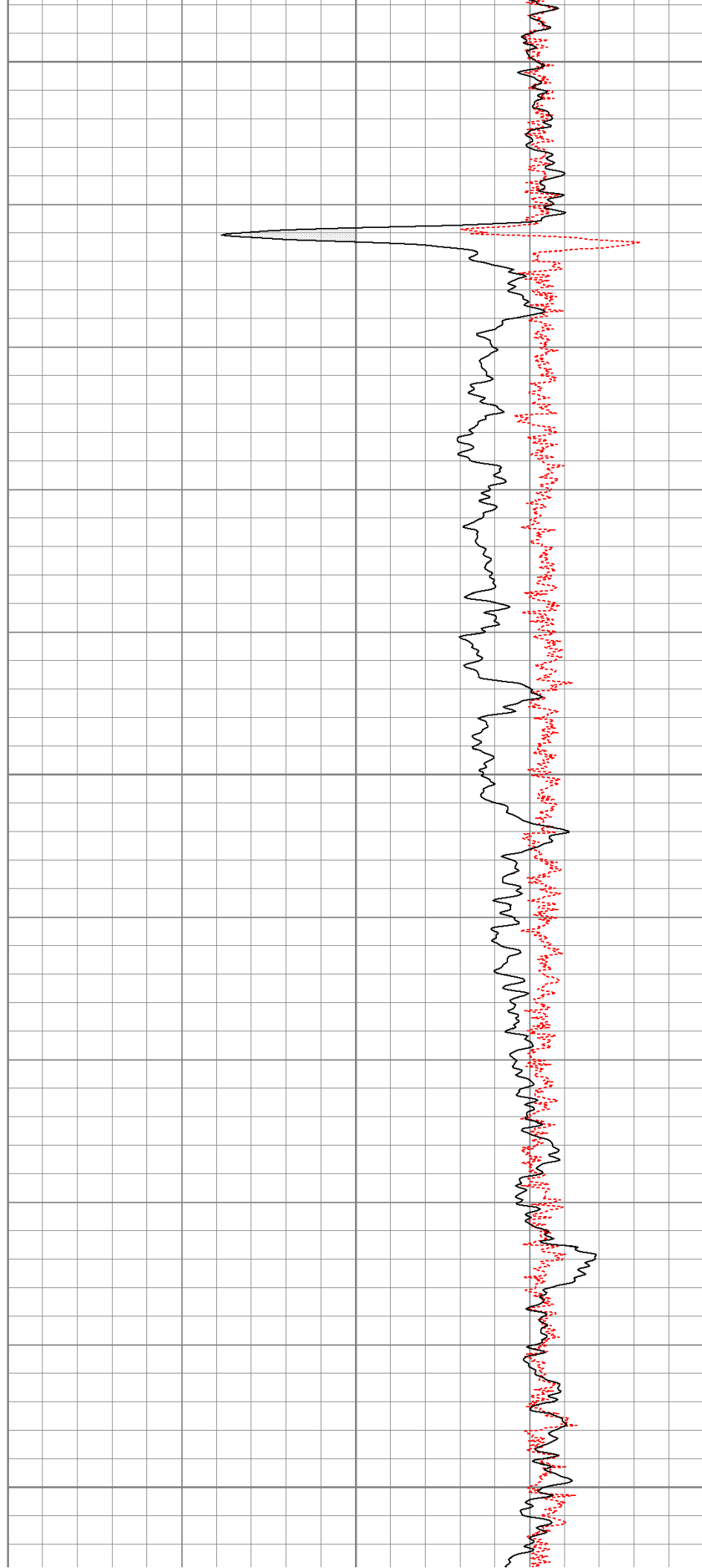


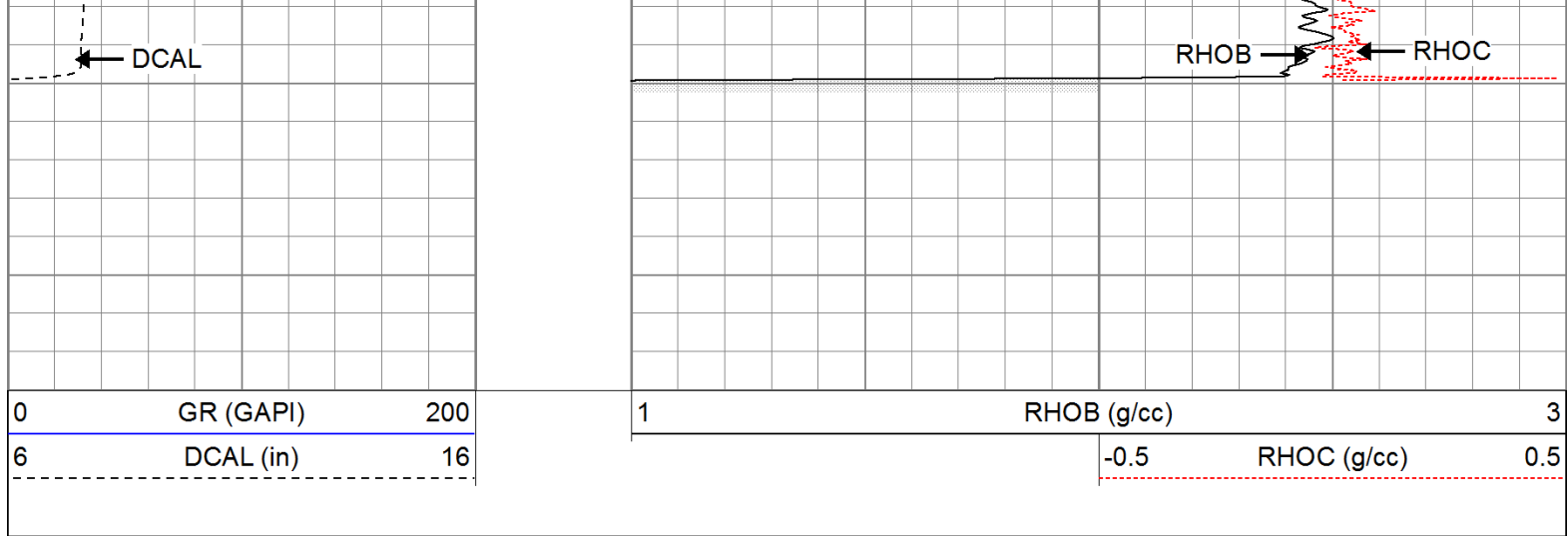


1700

1750

1800






Calibration Report				
Database File:	idrahaje.db			
Dataset Pathname:	pass1			
Dataset Creation:	Tue Jun 21 13:00:08 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
		g/cc			g/cc
Neutron Calibration Report					
Serial Number:	803				
Tool Model:	2.75POH				
Performed:	Wed Jun 08 13:12:55 2011				
Calibrator Value:	1	NAPI			
Calibrator Reading:	1	cps			
Sensitivity:	1	NAPI/cps			
Gamma Ray Calibration Report					
Serial Number:	804				
Tool Model:	2.75POH				
Performed:	Tue Jun 14 18:09:29 2011				
Calibrator Value:	1.0	GAPI			
Background Reading:	0.0	cps			
Calibrator Reading:	1.0	cps			
Sensitivity:	0.6000	GAPI/cps			

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	29.58		None	0.75	1.50	5.00
			GR-2.75POH (804) Probe 2.75" Probe Open Hole Gamma Ray	3.73	2.75	43.00
NEU	24.04		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00

LSD	16.21		CDL-2.75POH (901) Probe	8.43	2.75	106.00
DCAL	15.94					
SSD	15.69					
DIC	6.24		IEL-Probe (903)	13.46	2.75	93.00
SP	2.25					
SN	1.71					
Dataset: idrahaje.db: field/well/run1/pass1 Total Length: 31.11 ft Total Weight: 305.00 lb O.D. 2.75 in						