

**COMPENSATED DENSITY
NEUTRON
LOG**

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Hellzapoppin 24-32 Tr	Well	Hellzapoppin 24-32 Tr
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API #: 05 071 09793 00	Location:	968' FSL & 2120' FWL
Permanent Datum	SEC 32 TWP 32S RGE 66W	Permanent Datum	Ground Level
Log Measured From	Kelly Bushing 4' AGL	Log Measured From	Elevation 7488'
Drilling Measured From	Kelly Bushing	Drilling Measured From	Elevation K.B. 7492'
			D.F. -----
			G.L. 7488'
Date	5-22-11		
Run Number	One		
Depth Driller	1815'		
Depth Logger	1799'		
Bottom Logged Interval	1788'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 635'		
Casing Logger	635'		
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	1:00 A.M.		
Time Logger on Bottom	4:45 A.M.		
Maximum Recorded Temperature	98 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 4.5" Casing.
Neutron Porosity invalid from 980' to 888' due to foam.

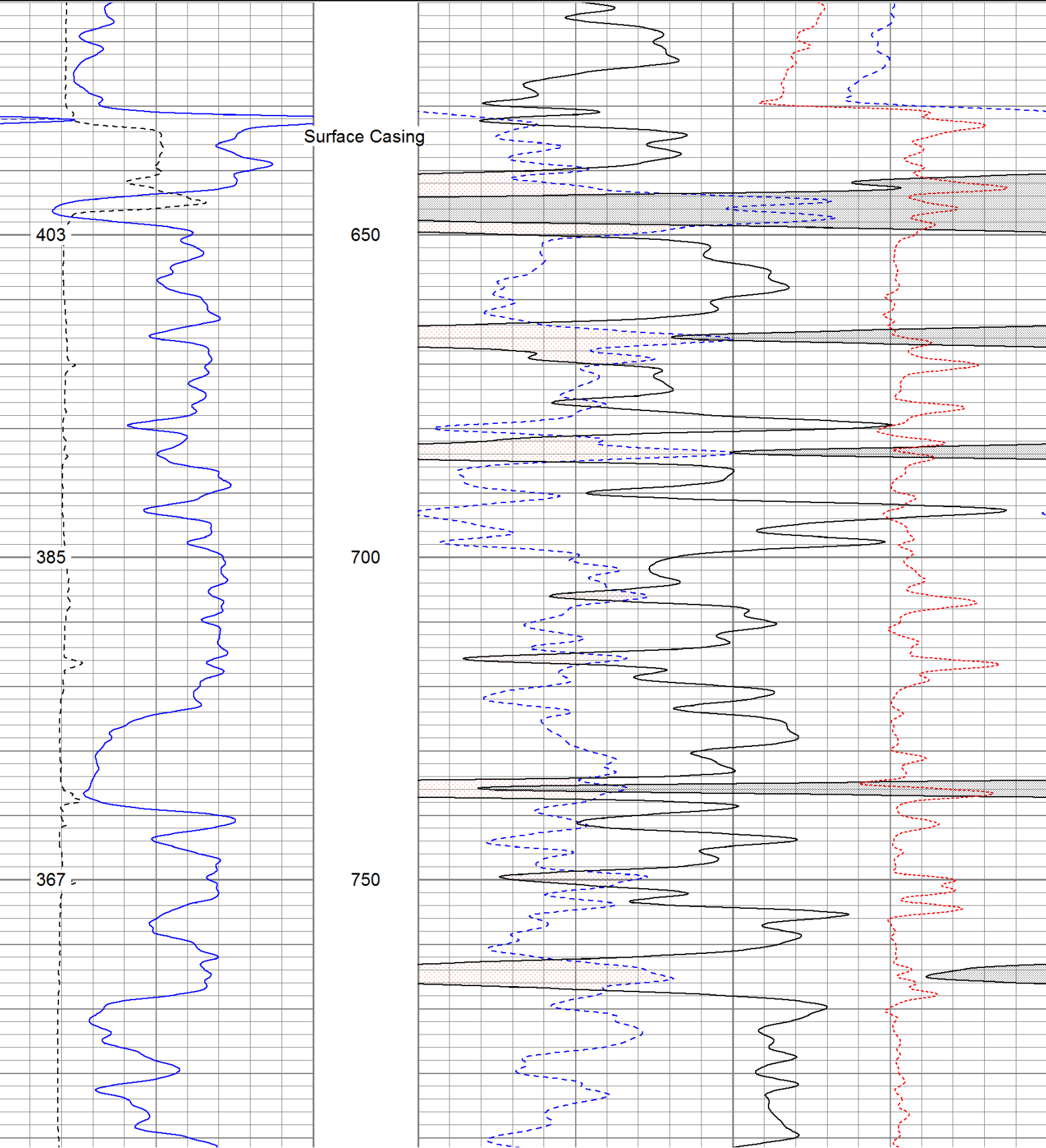
Directions:

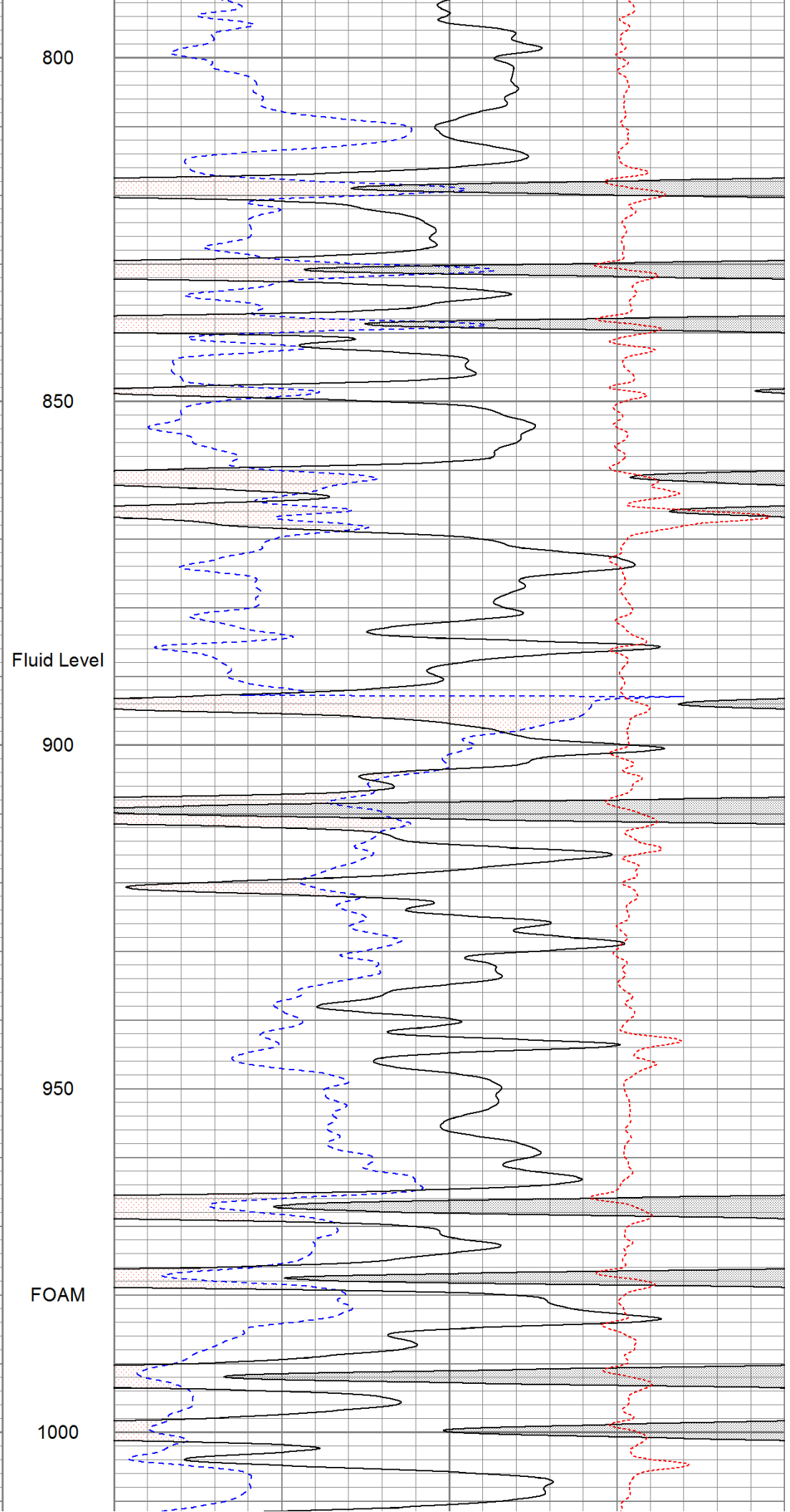
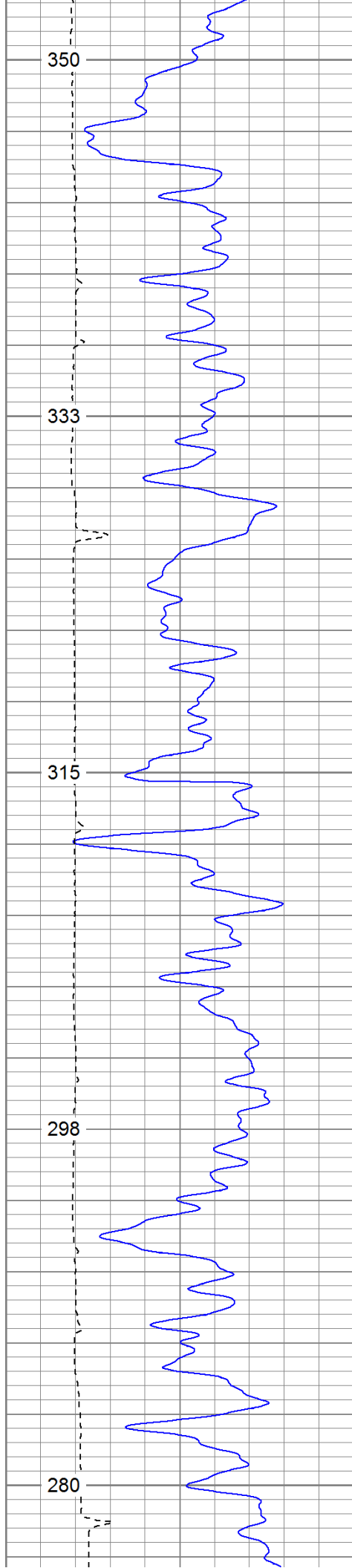
Sarcillo right to La Garita, at Y stay left towards Cottontail Compressor,
first left at arrowhead lane(line of mail boxes), at Y stay left, next Y stay left,
at three way stay left to location.

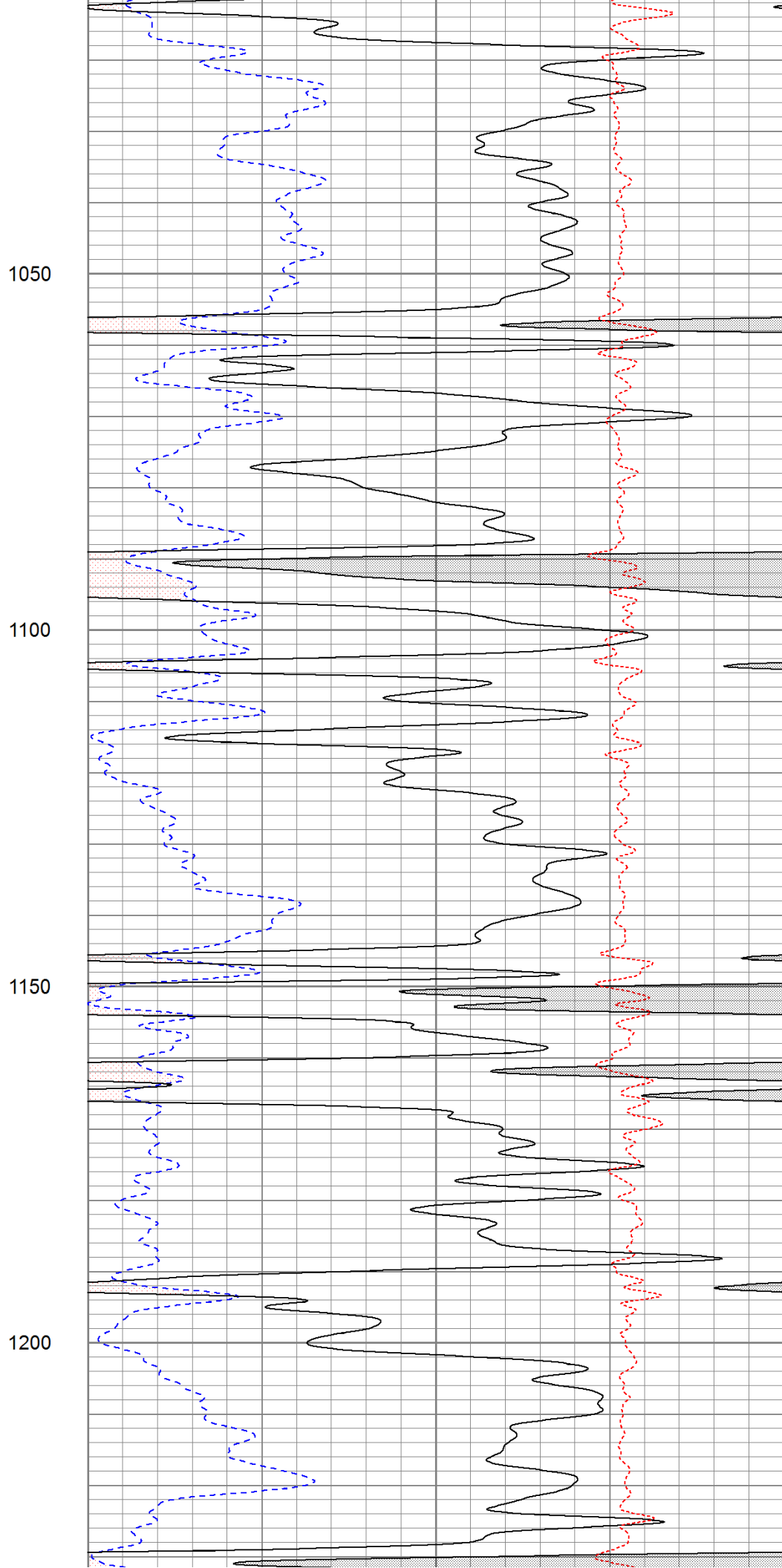
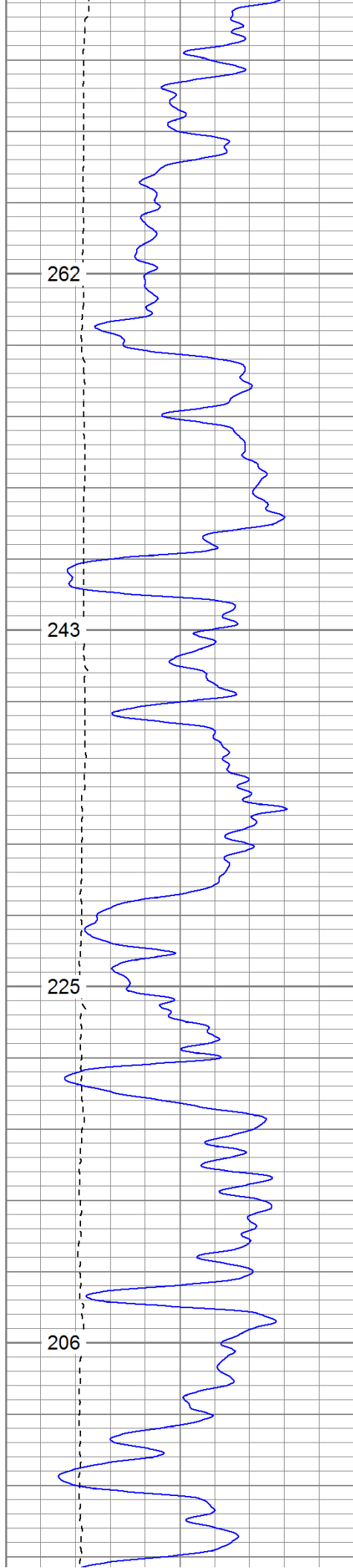
Database File: hellzapoppintr.db
Dataset Pathname: pass3.1
Presentation Format: cdnl
Dataset Creation: Mon May 23 08:20:08 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

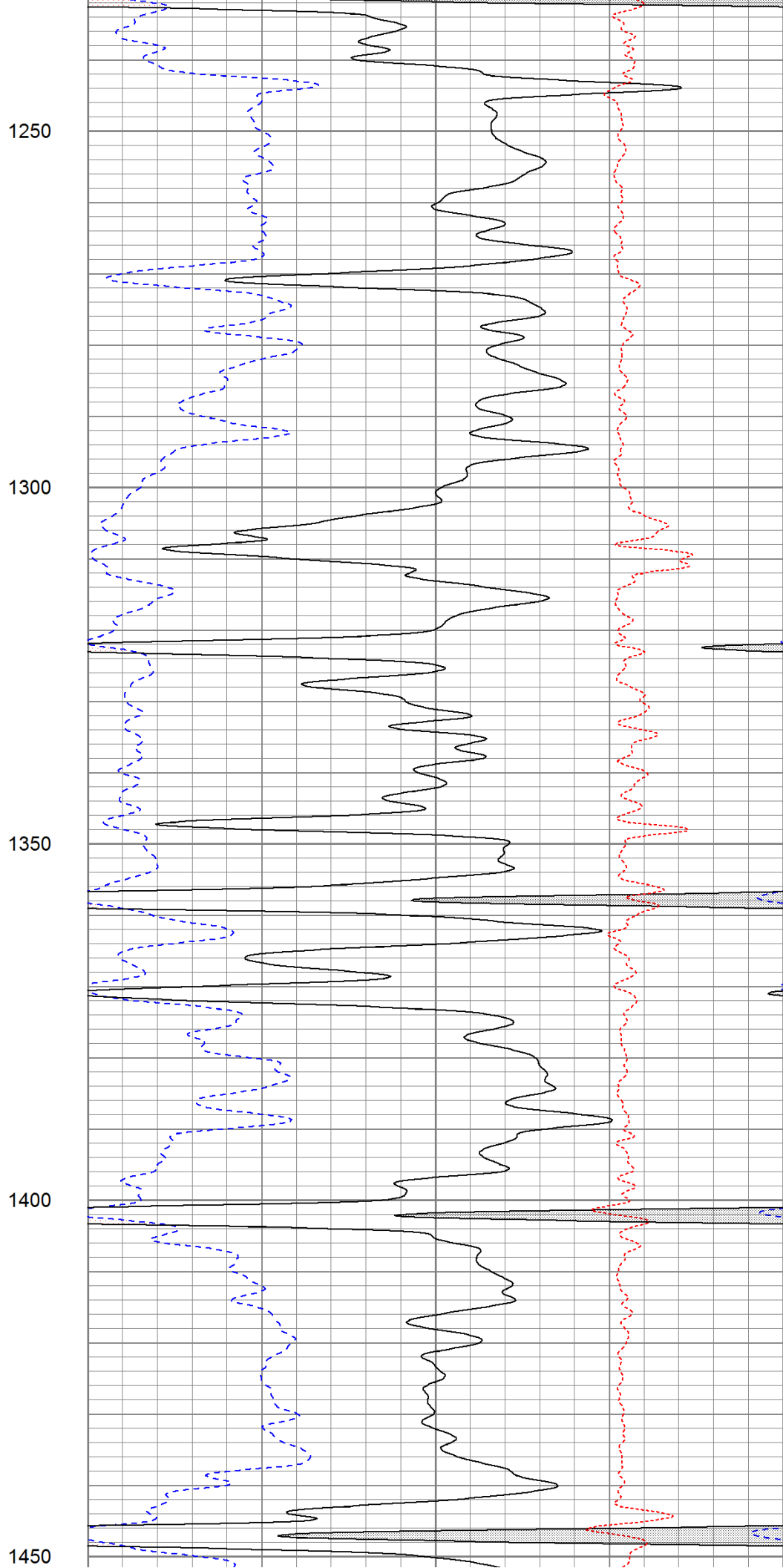
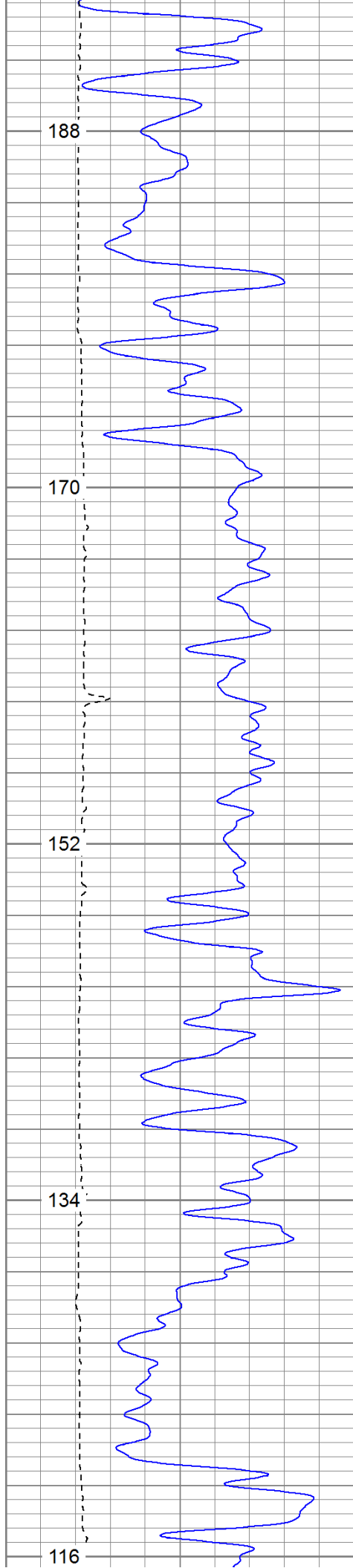
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

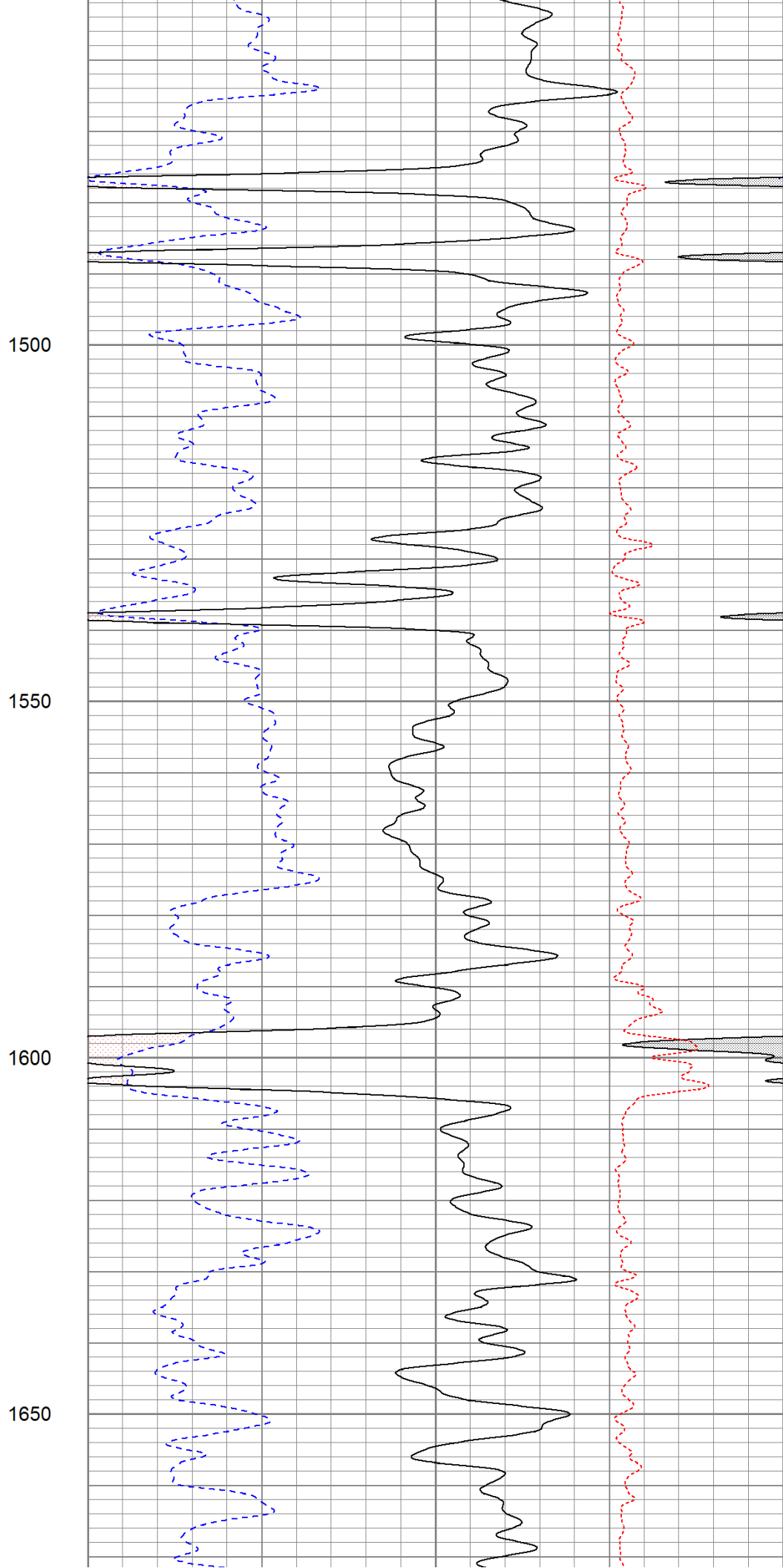
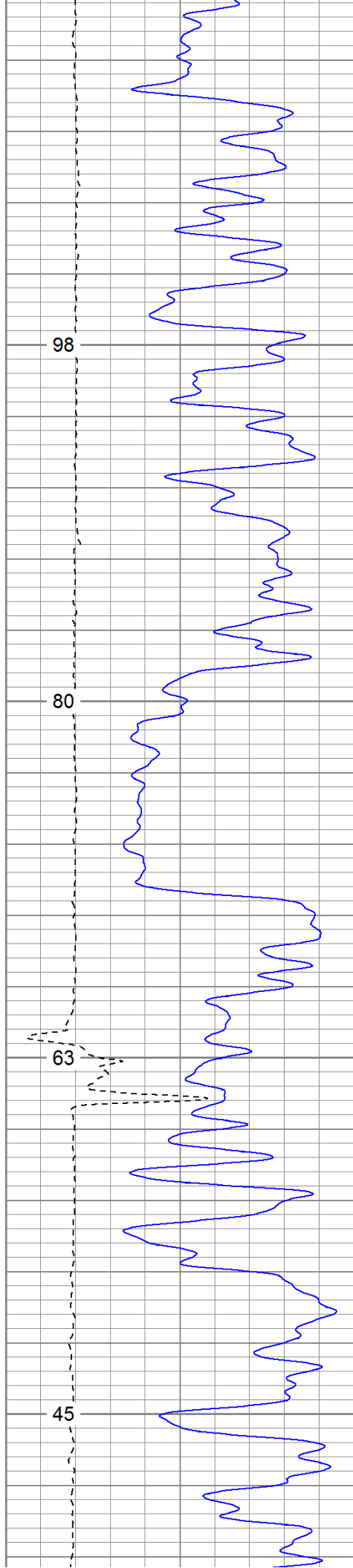
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5

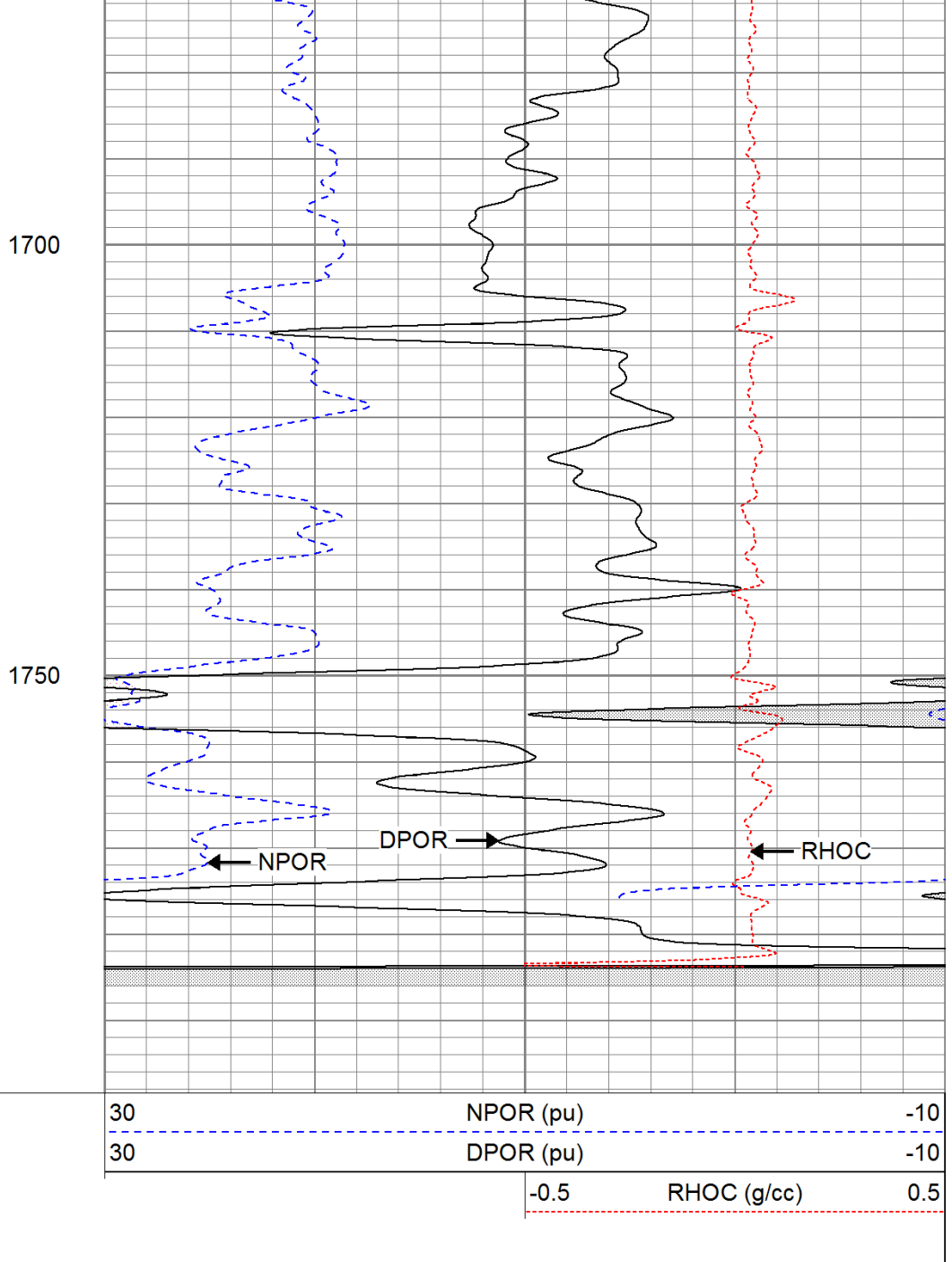
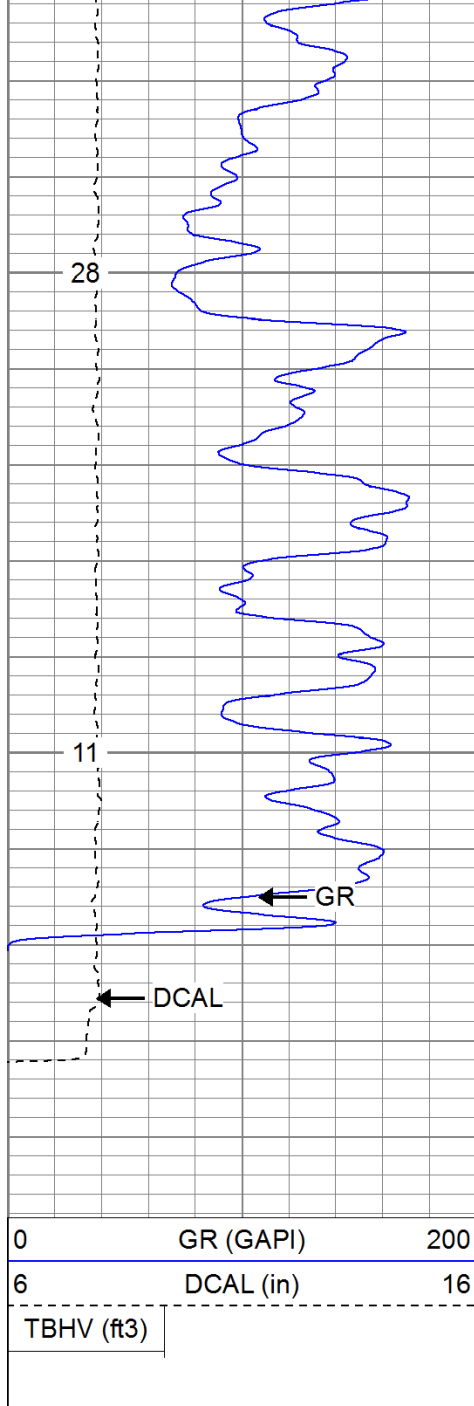










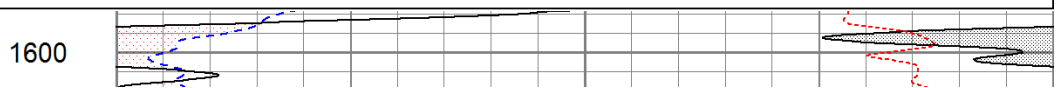
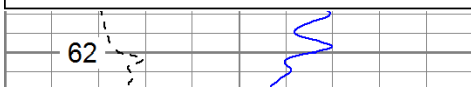


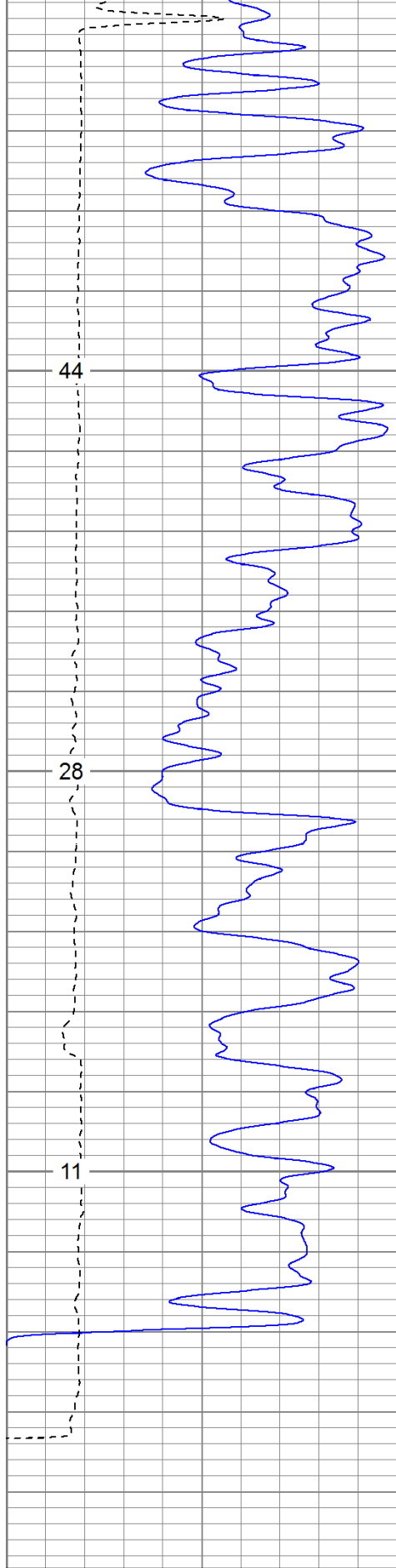
Repeat Section

Database File: hellzapoppintr.db
 Dataset Pathname: pass2.1
 Presentation Format: cdnl
 Dataset Creation: Mon May 23 08:55:01 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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

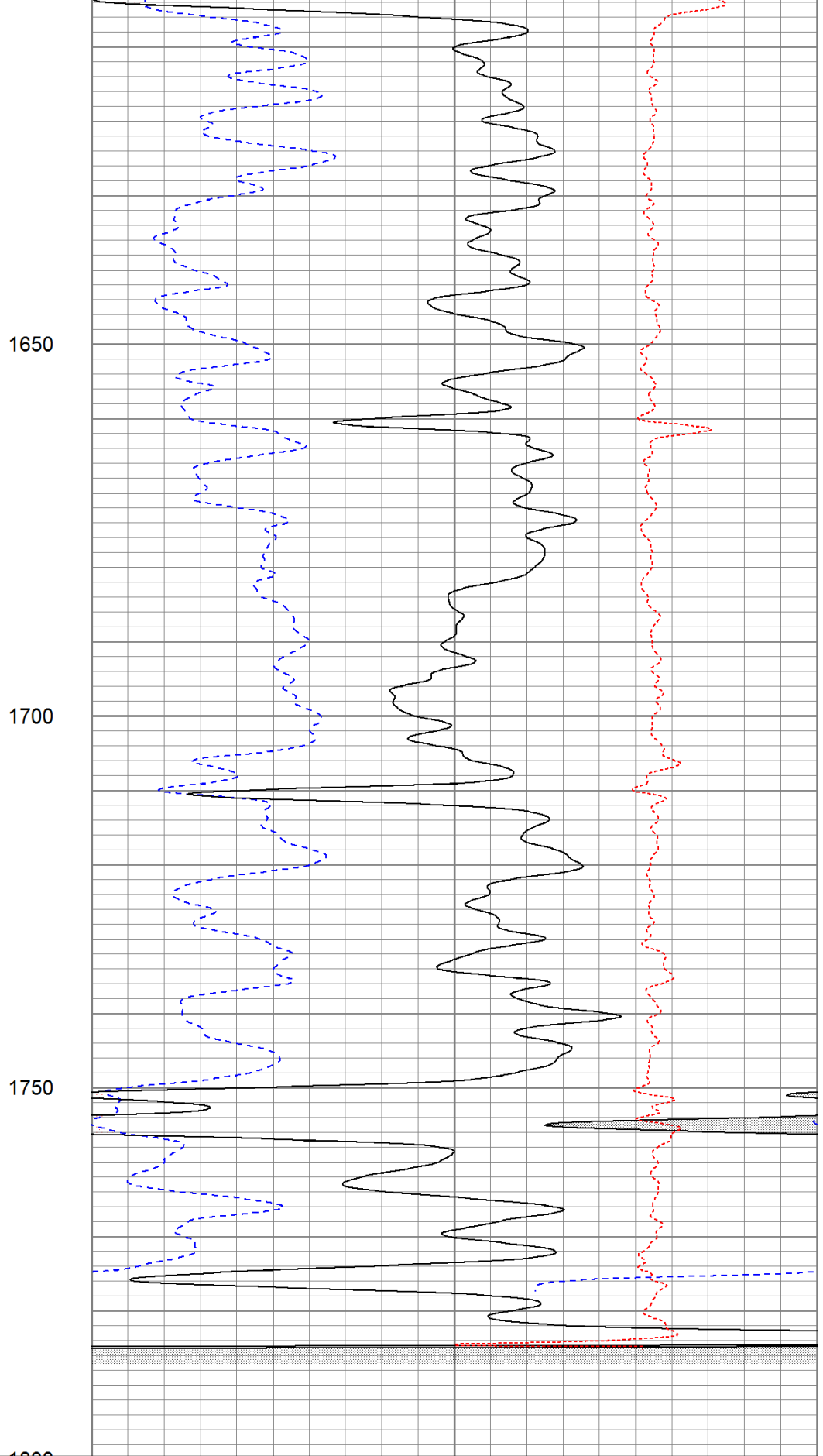
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5





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

TBHV (ft3)



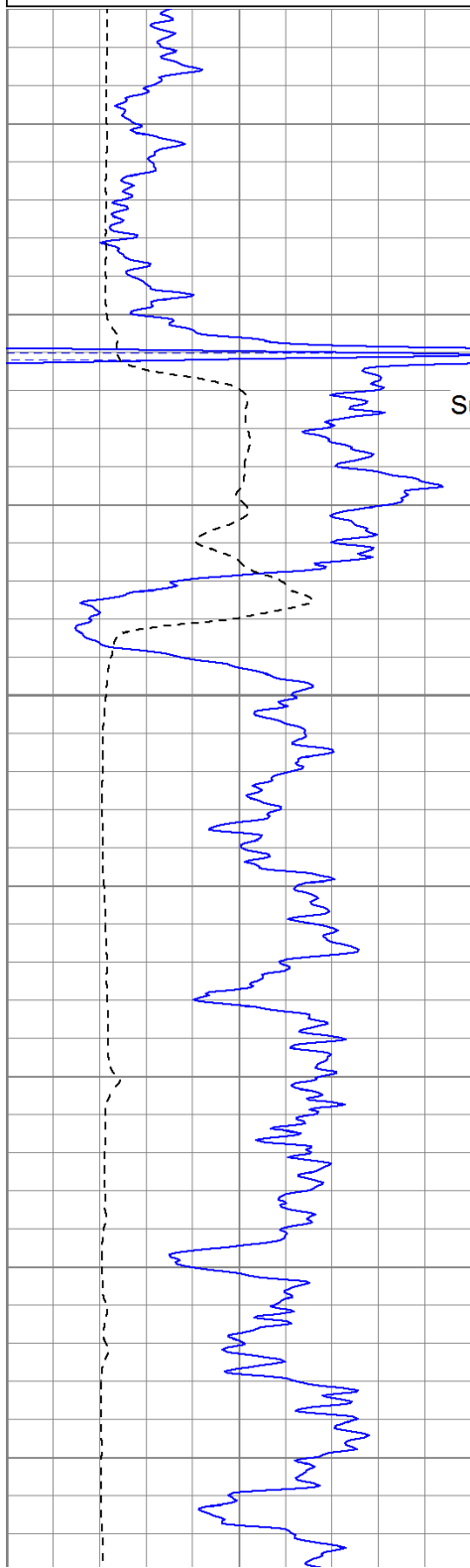
30	NPOR (pu)	-10
30	DPOR (pu)	-10

-0.5	RHOC (g/cc)	0.5
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Database File: hellzapoppintr.db
 Dataset Pathname: pass3.2
 Presentation Format: cdlhr
 Dataset Creation: Mon May 23 08:58:39 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:120

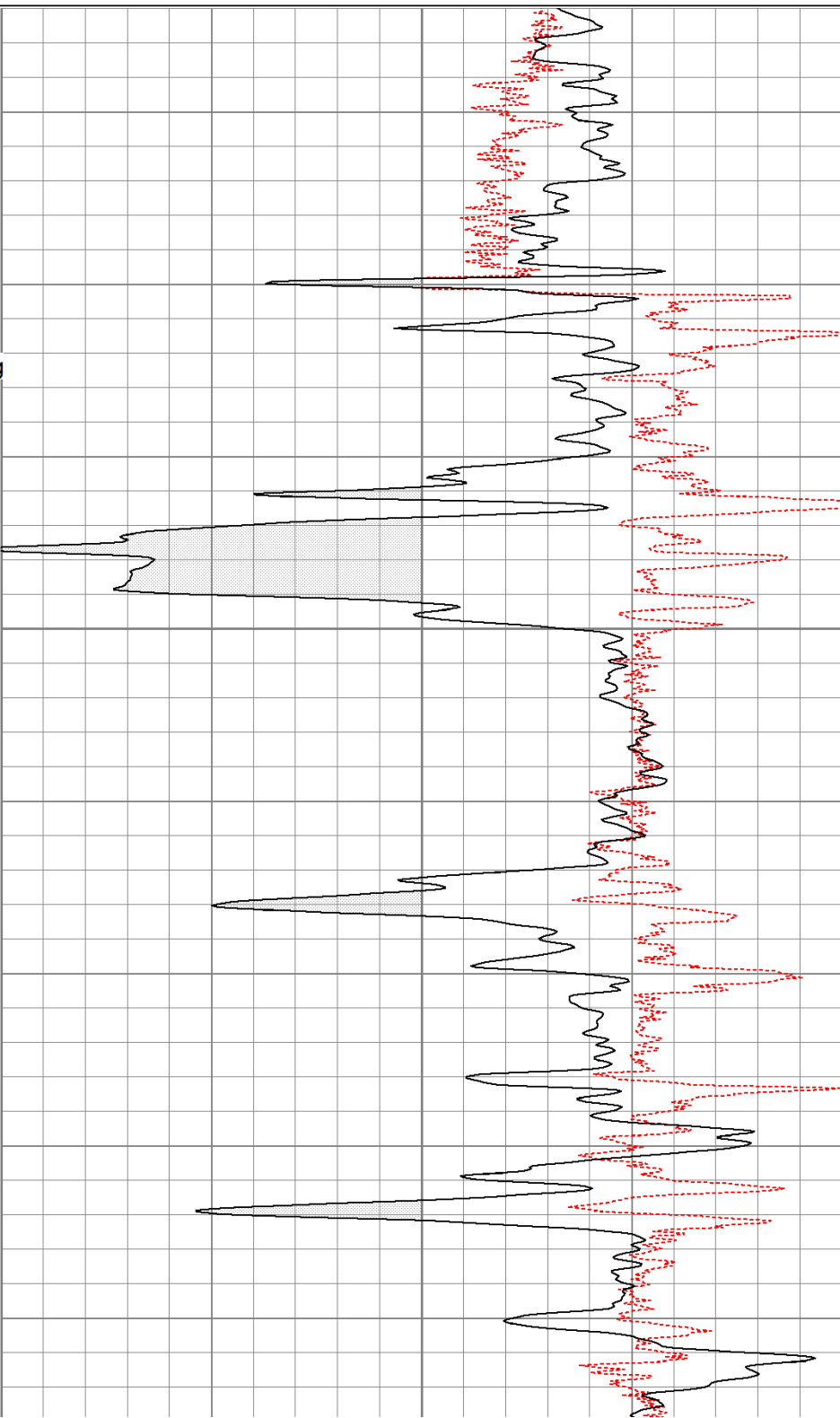
0	GR (GAPI)	200
6	DCAL (in)	16

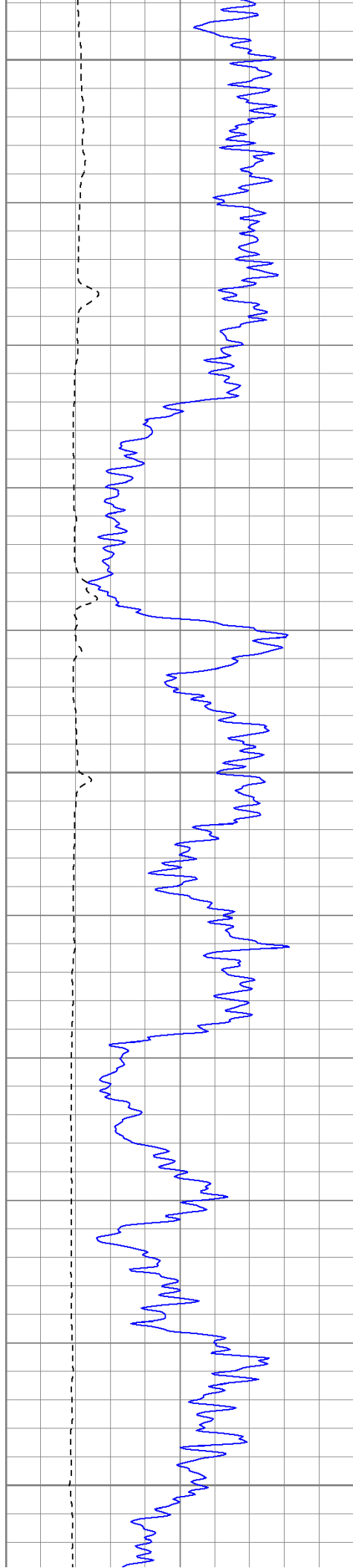
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



Surface Casing

650

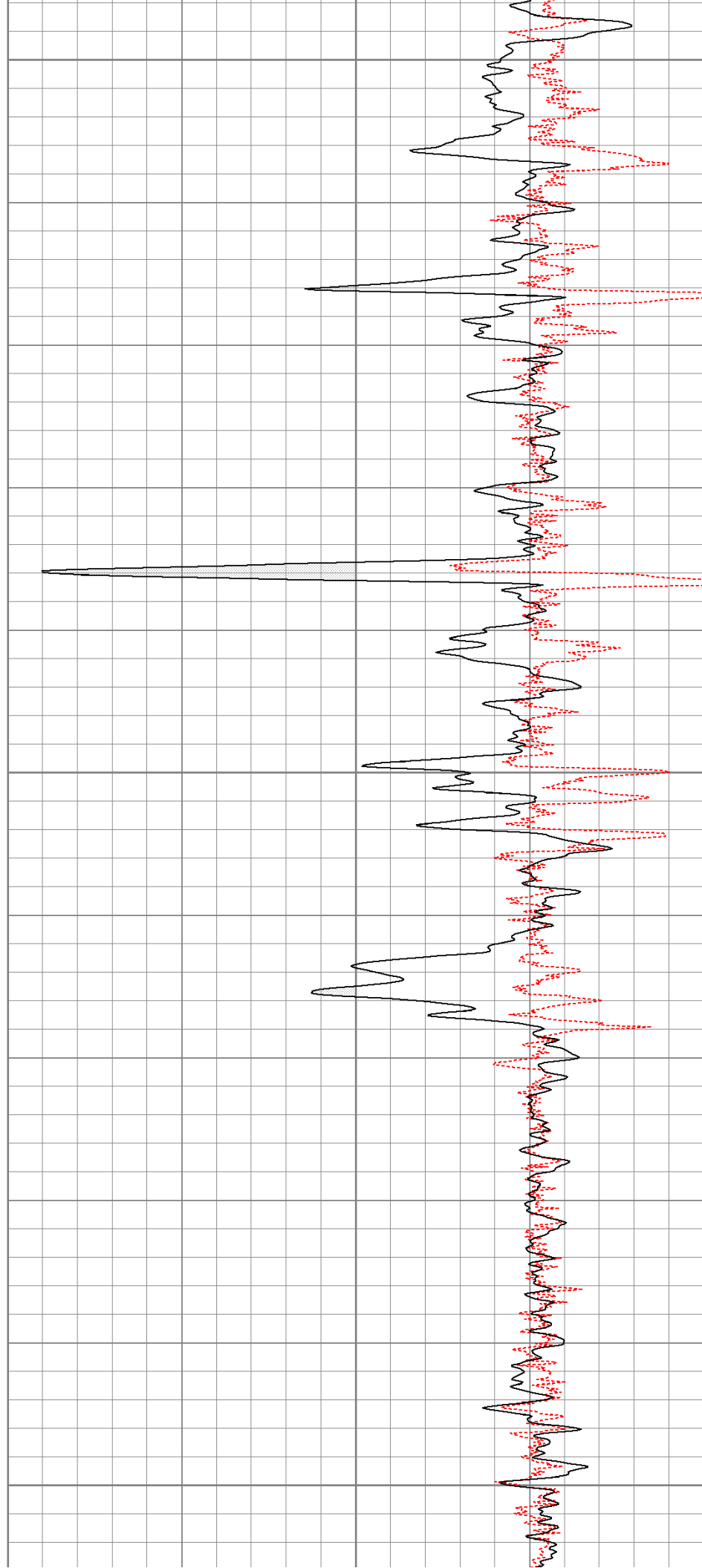


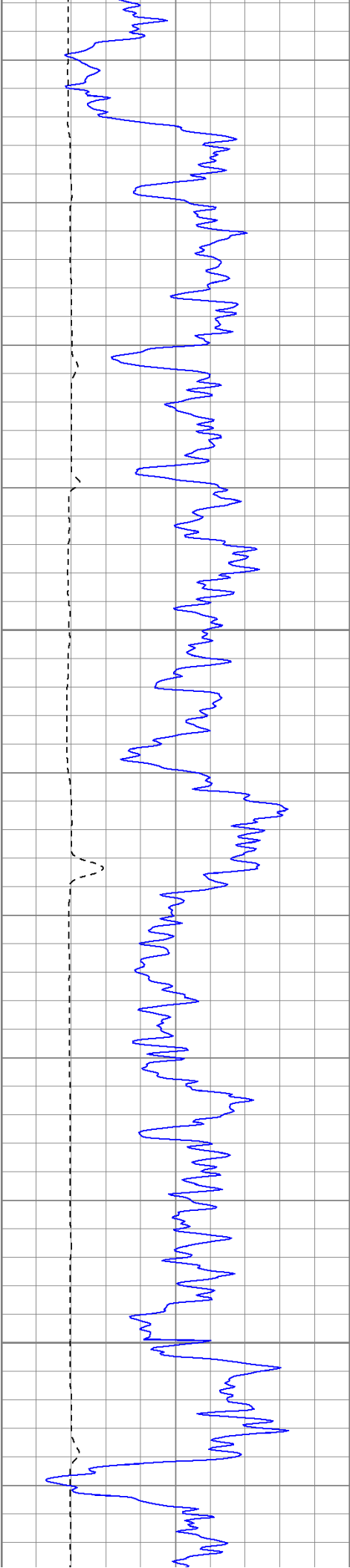


700

750

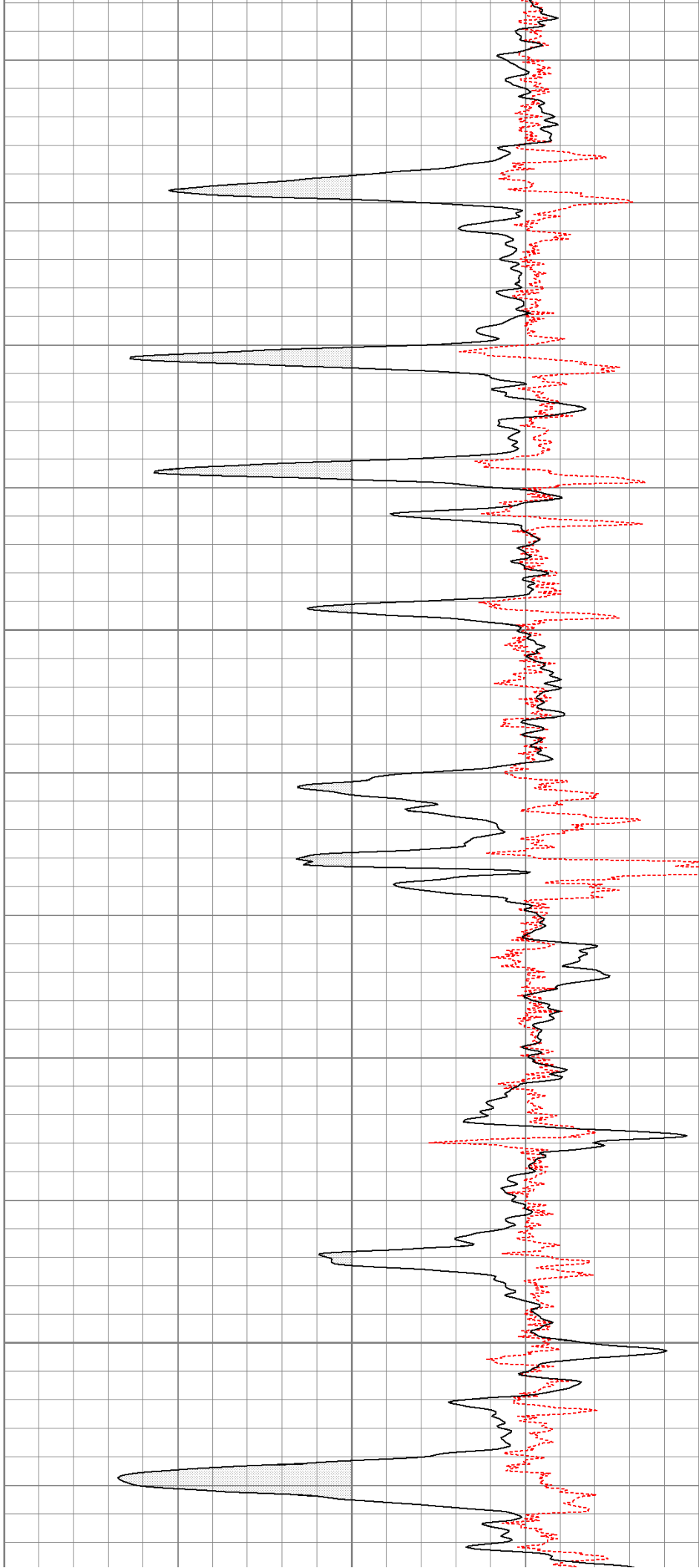
800

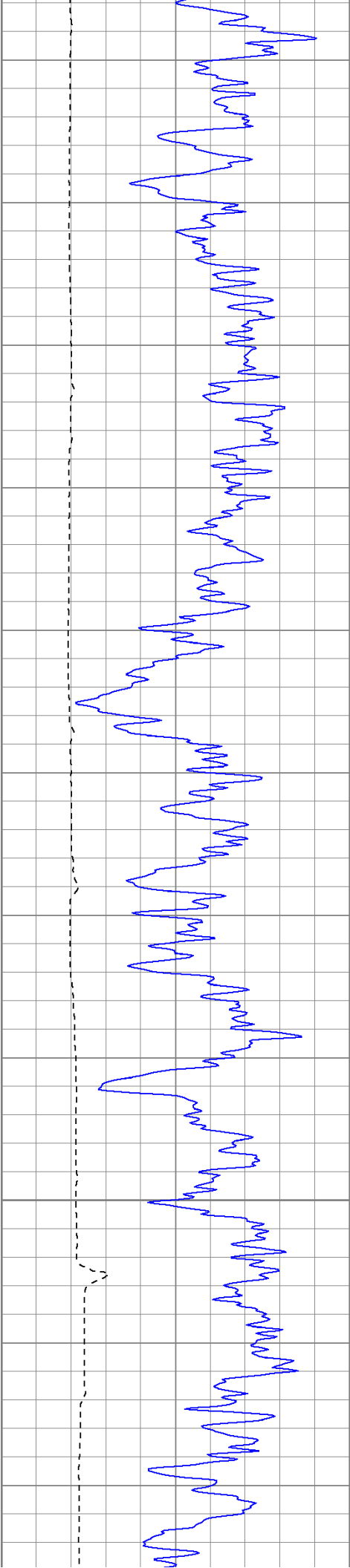




850

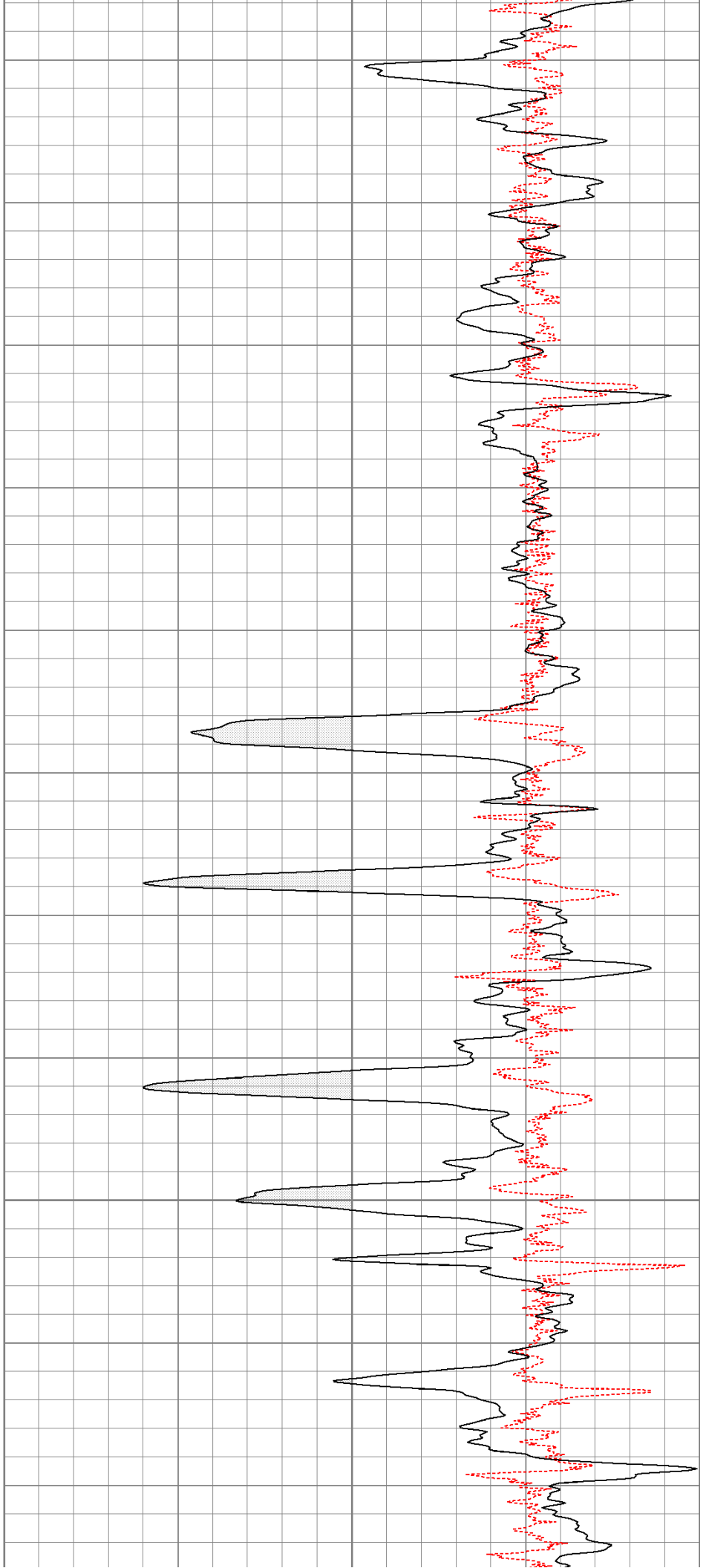
900

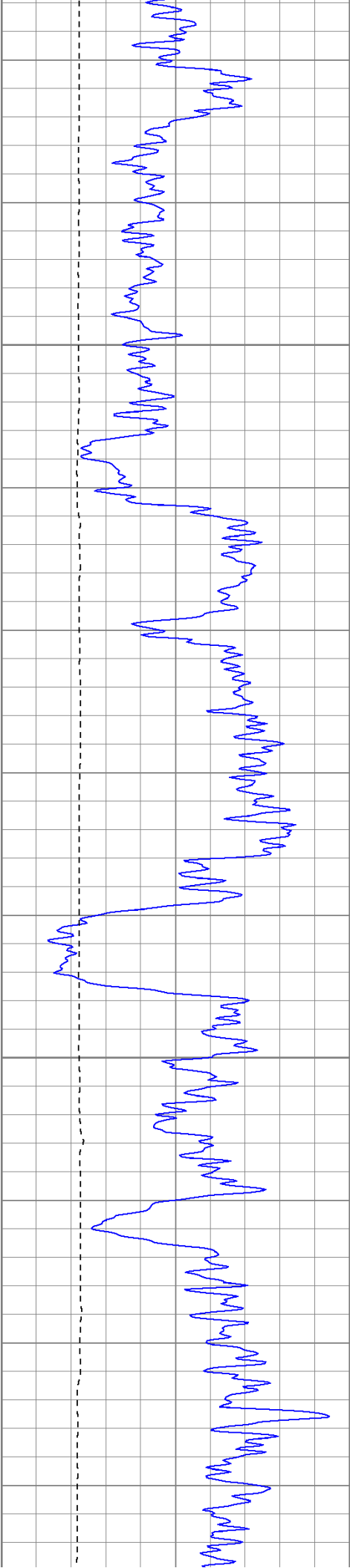




950

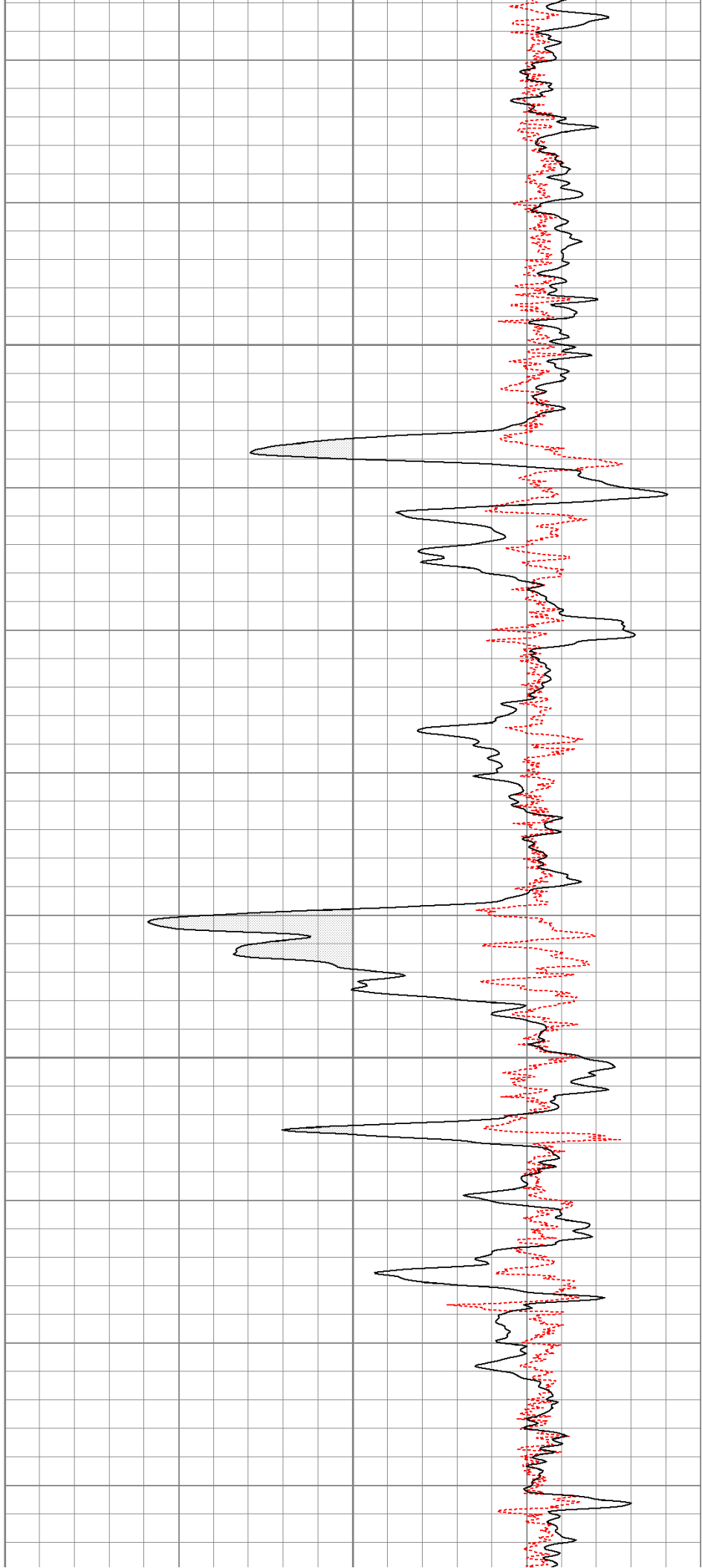
1000

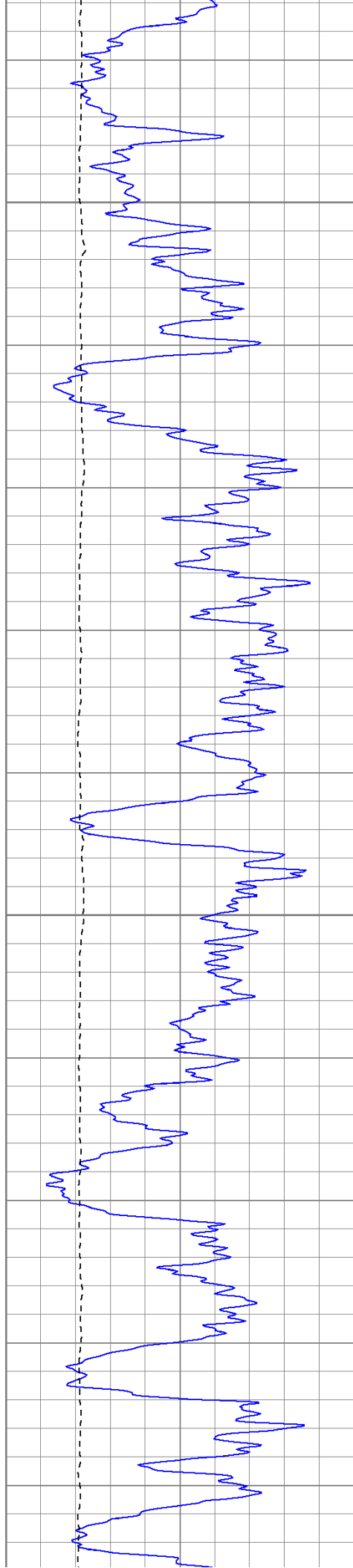




1050

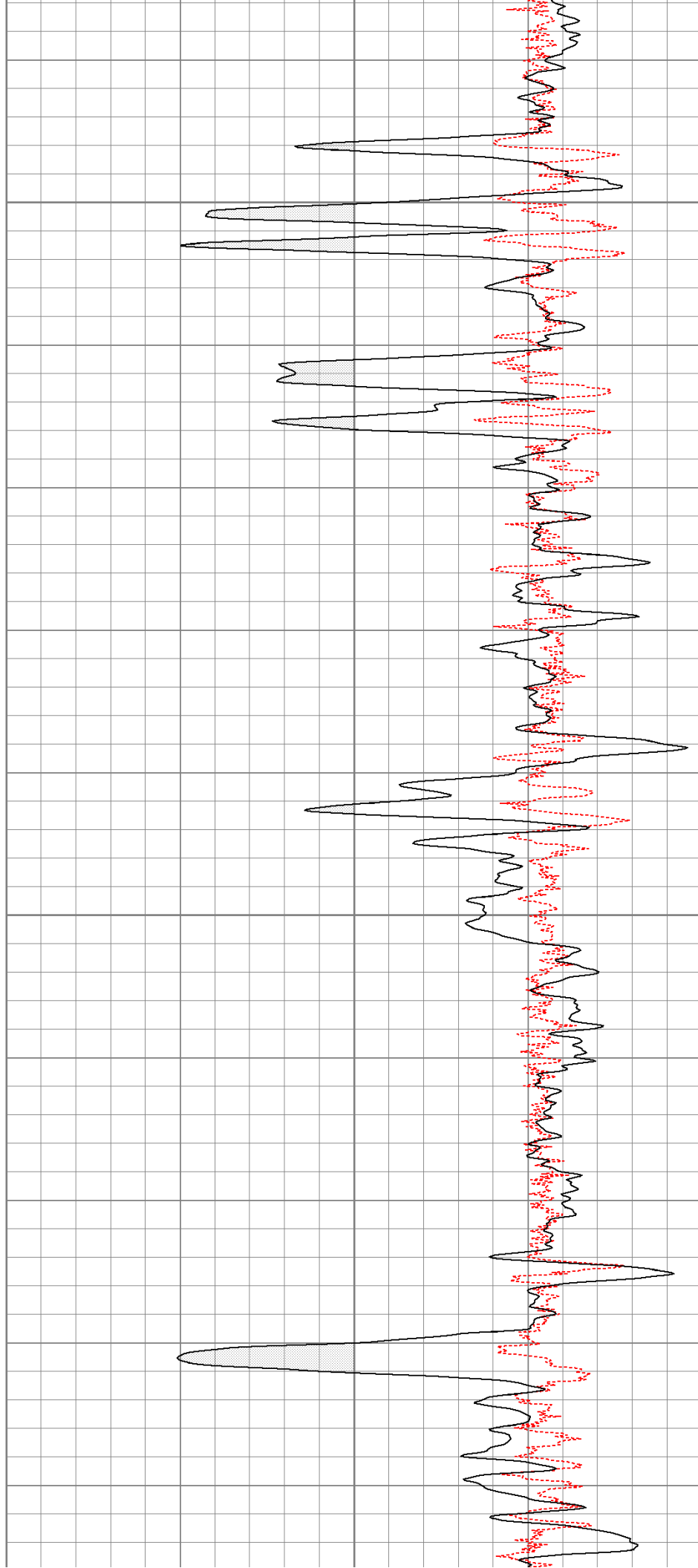
1100

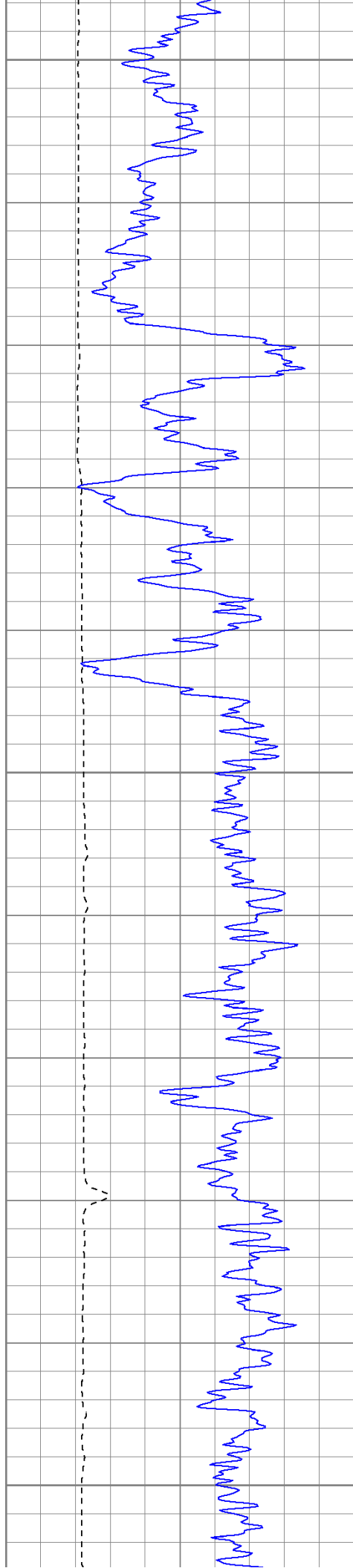




1150

1200

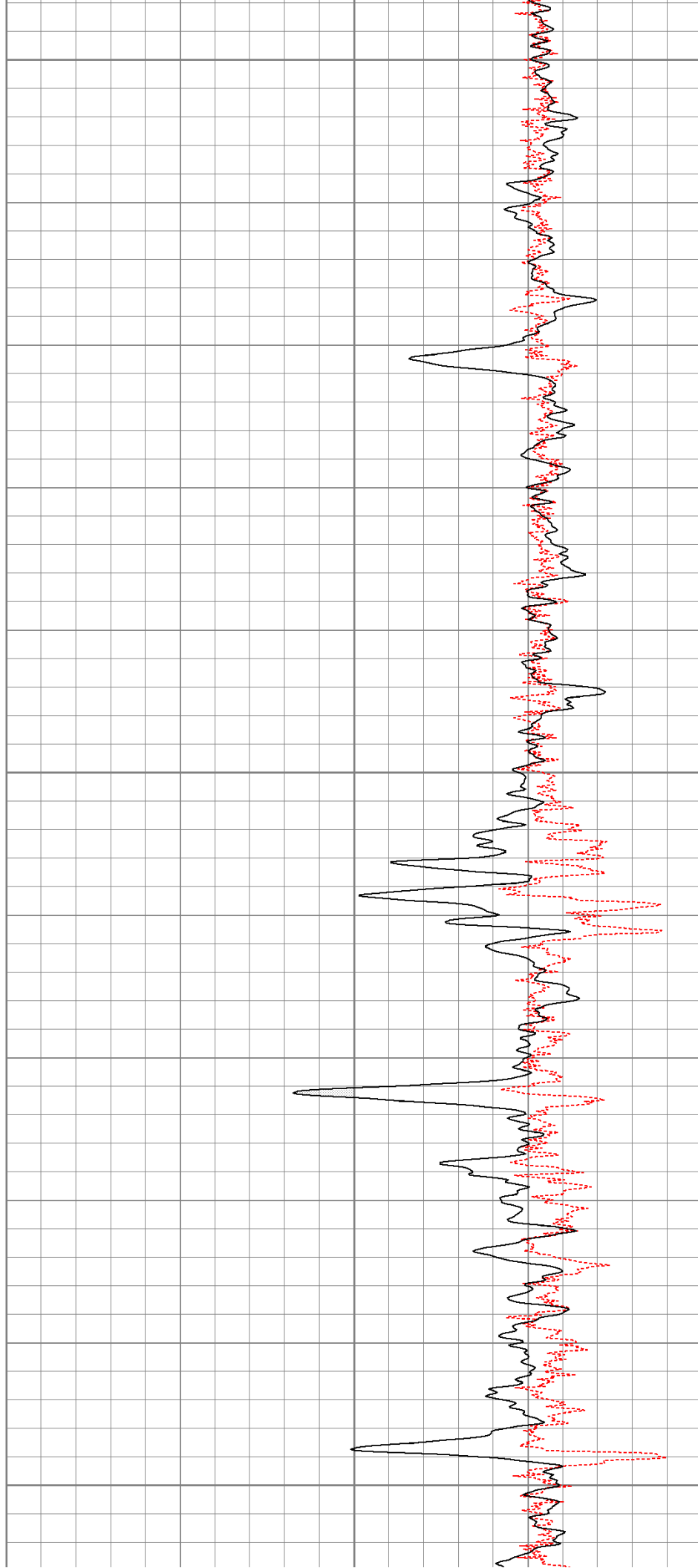


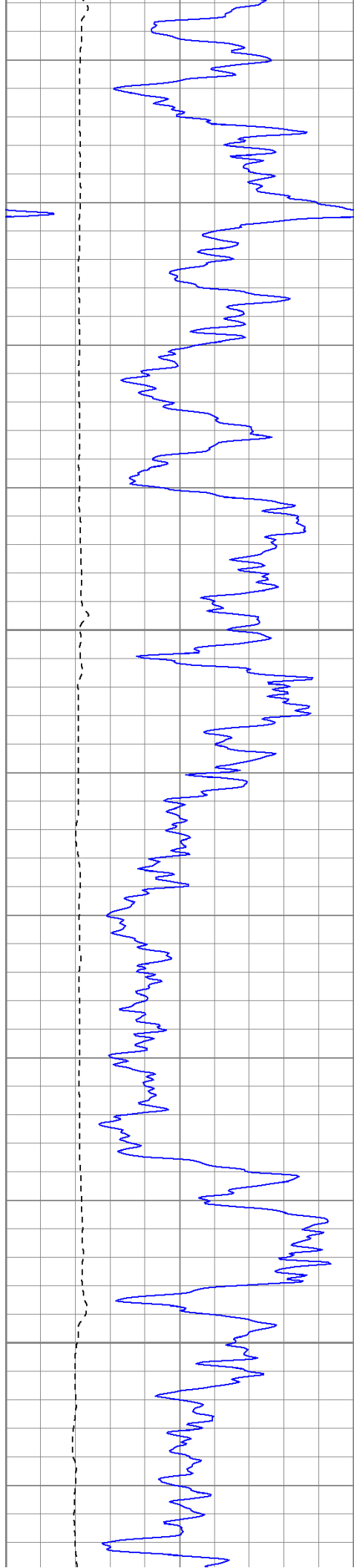


1250

1300

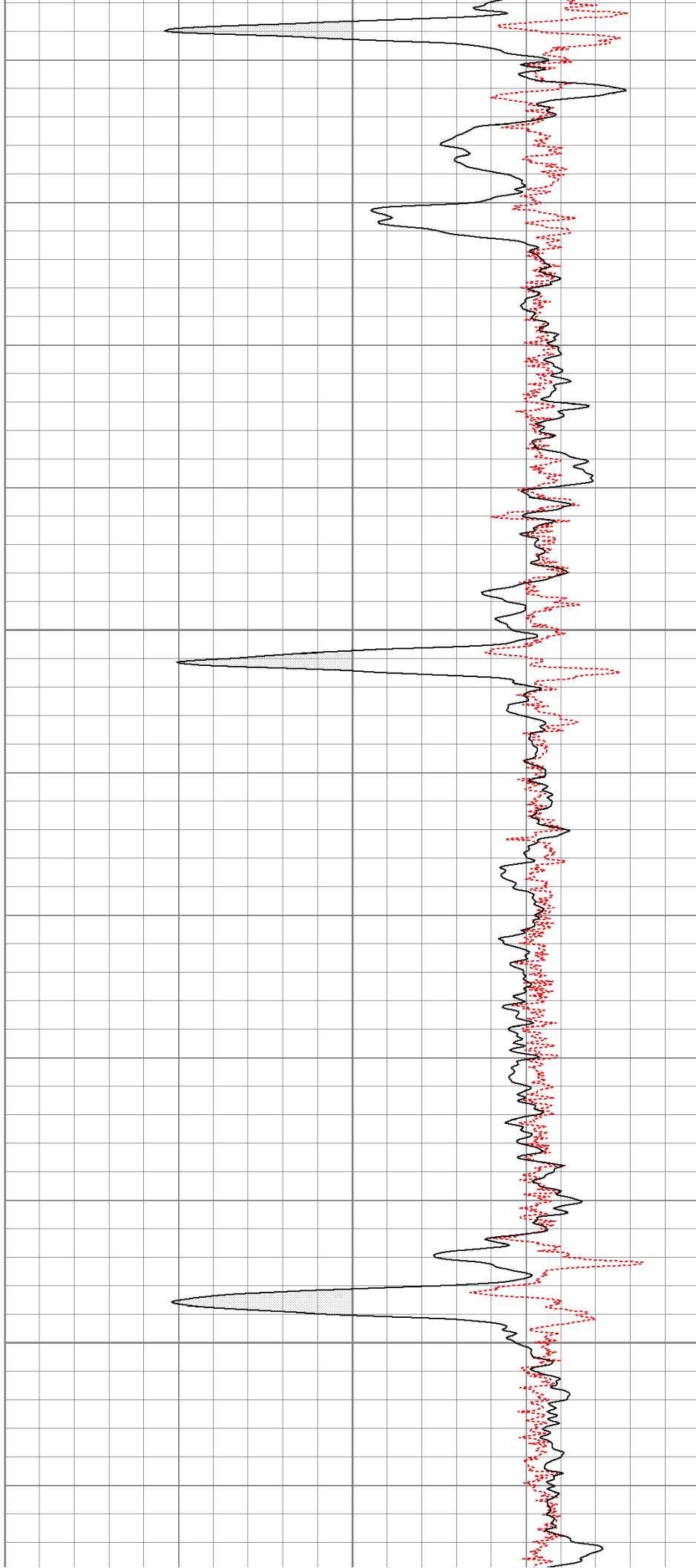
1350

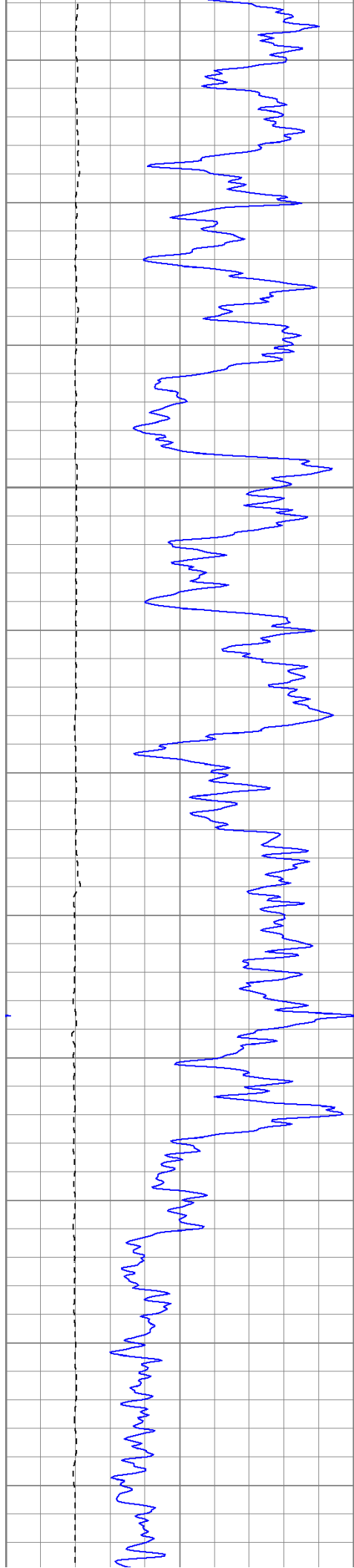




1400

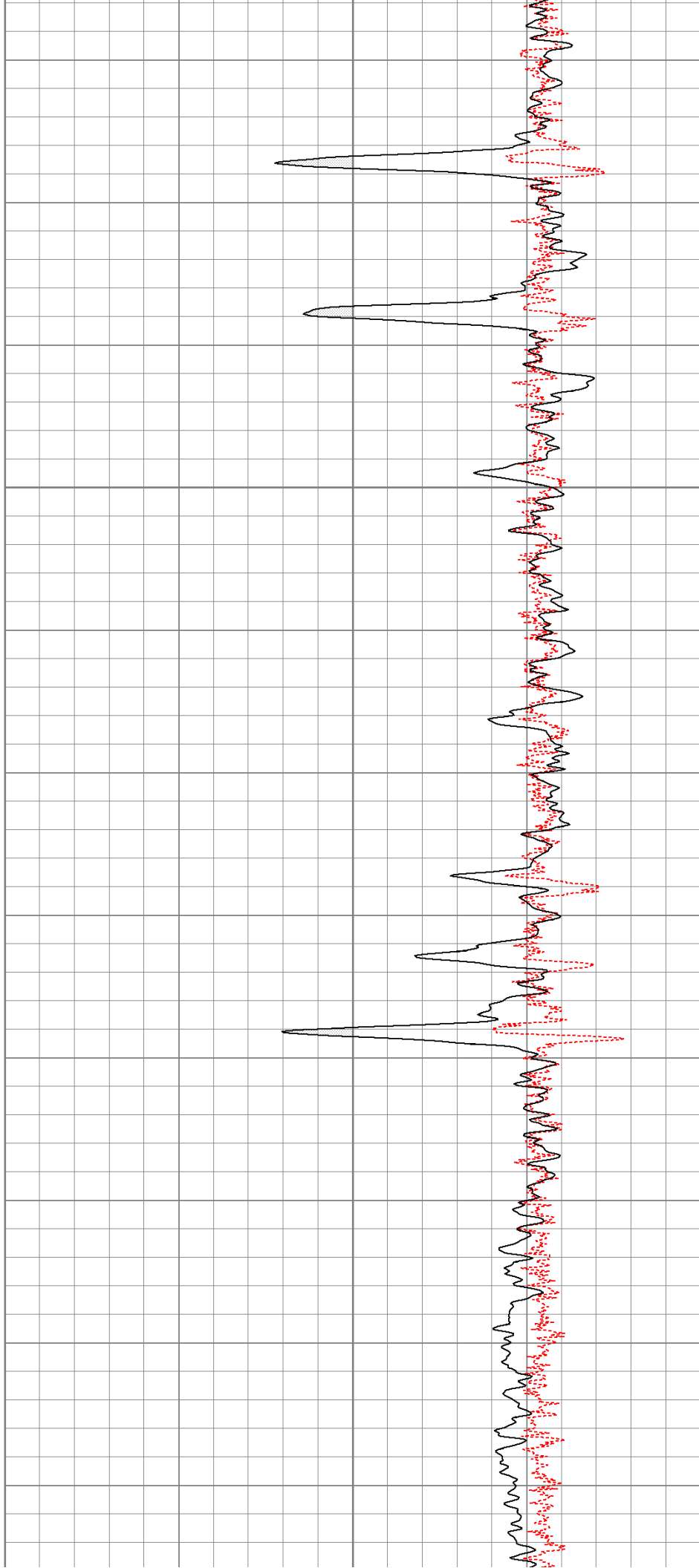
1450

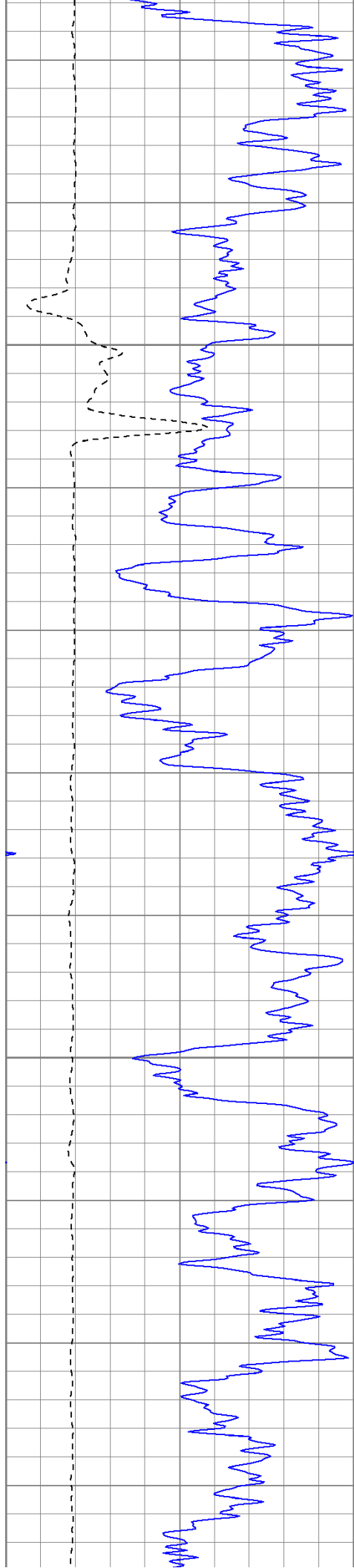




1500

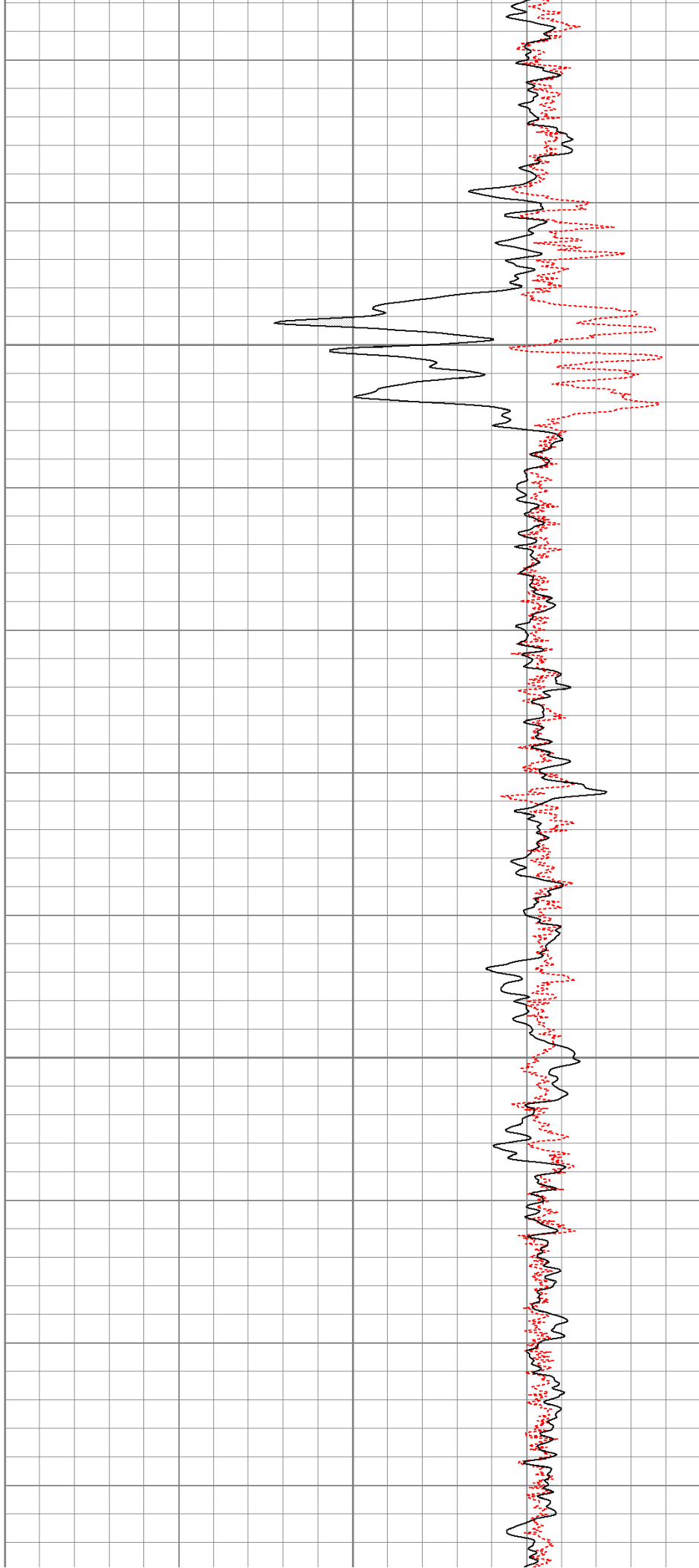
1550

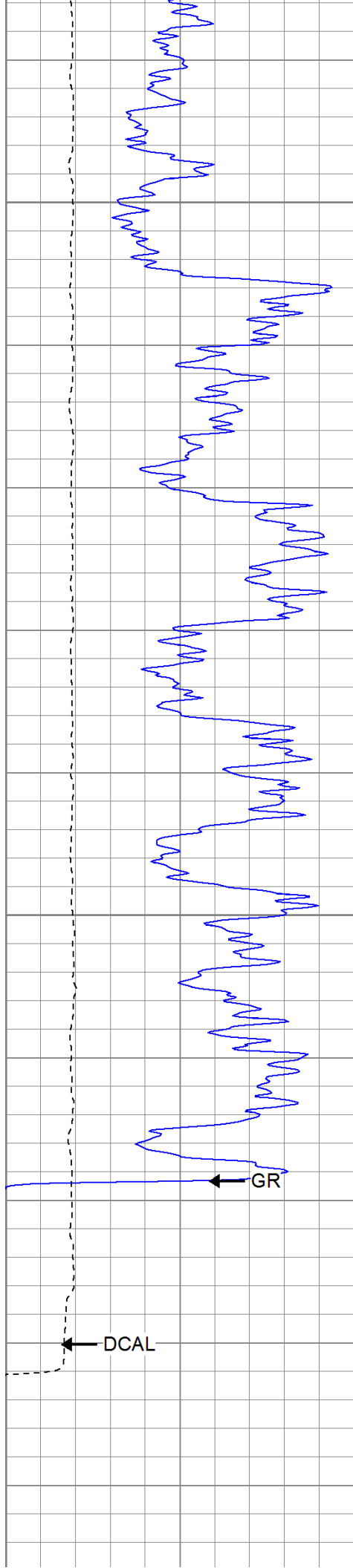




1600

1650



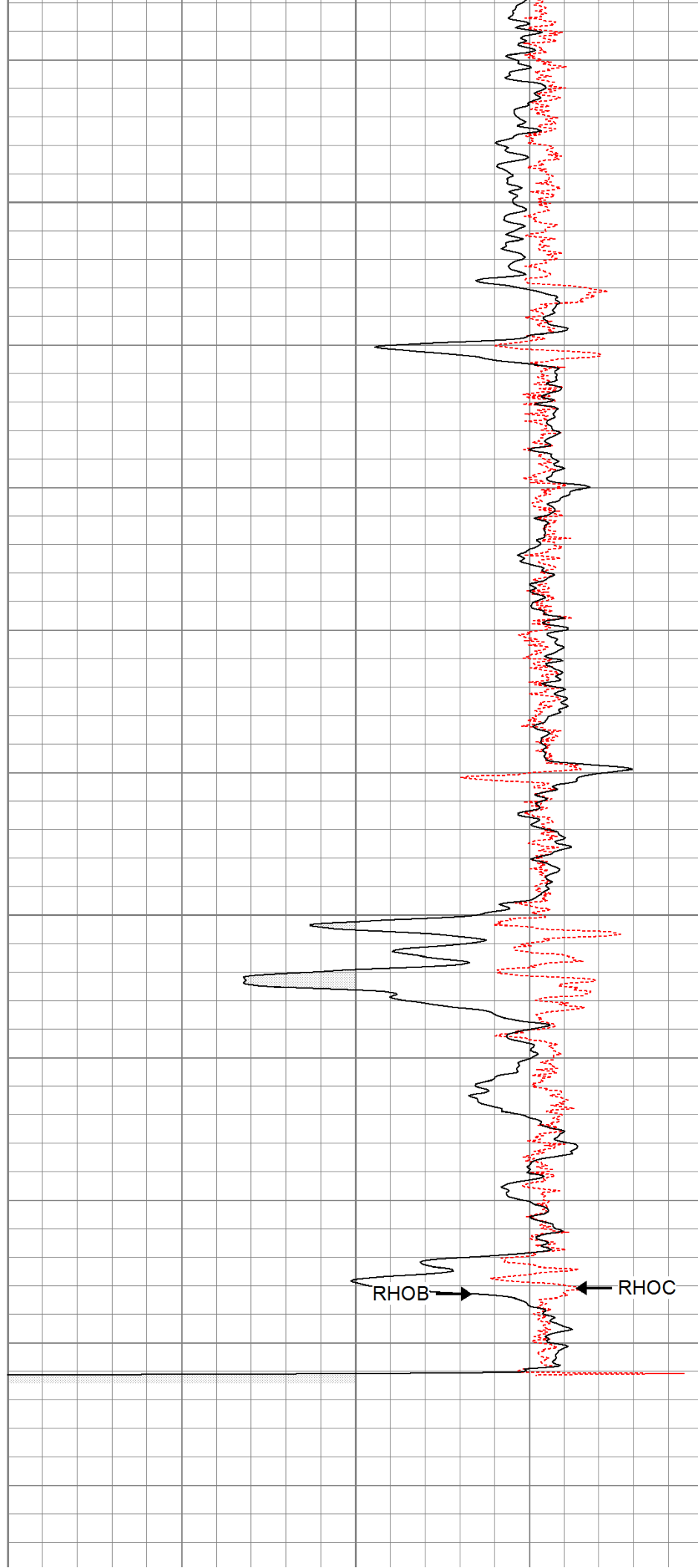


1700

1750

← GR

← DCAL



→ RHOB

← RHOC

0	GR (GAPI)	200	1	RHOB (g/cc)	3
6	DCAL (in)	16	-0.5	RHOC (g/cc)	0.5
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Calibration Report					
Database File:	hellzapoppinr.db				
Dataset Pathname:	pass2				
Dataset Creation:	Sun May 22 04:49:13 2011 by Log Open-Cased 110302				

Induction Tool Calibration Report					
Serial Number:	701				
Tool Model:	Probe				
Downhole Cal Performed:	Fri May 13 12:26:14 2011				
Surface Cal Performed:	Wed Apr 27 12:27:07 2011				
After Survey Verification Performed:					
Surface Calibration:	Air	Loop			
Conductivity Reference:	0.000	500.000		mmho	
Conductivity Reading:	0.006	0.644		V	
Internal Reference:	Zero	Cal			
Conductivity Reference:	0.000	500.000		mmho	
Conductivity Reading:	0.007	0.643		V	
Downhole Calibration:	Internal Zero	Internal Cal			
Conductivity Reference:	0.703	499.163		mmho	
Conductivity Reading:	0.000	0.000		V	
Short Normal Reference:	0.000	20.000		Ohm-m	
Short Normal Reading:	0.005	0.214		V	
Results:	Gain	Offset			
Loop Conductivity:	783.886	-4.674			
Downhole Correction:	1.000	0.000			
Short Normal Resistivity:	95.281	-0.432			
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:		Tue May 17 10:06:24 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	2.47	V	
Large Ring	17.00	in	4.50	V	

Before Survey Verification					
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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:	802		
Tool Model:	2.75POH		
Performed:	Tue May 03 12:28:21 2011		
Calibrator Value:	700	NAPI	
Calibrator Reading:	1000	cps	
Sensitivity:	0.7	NAPI/cps	
Gamma Ray Calibration Report			
Serial Number:	801		
Tool Model:	2.75POH		
Performed:	Thu May 05 13:29:10 2011		
Calibrator Value:	200.0	GAPI	
Background Reading:	8.0	cps	
Calibrator Reading:	264.7	cps	
Sensitivity:	0.6500	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 (801) Probe 2.75" Probe Open Hole Gamma Ray	3.73	2.75	43.00
NEU	24.04		NEU-2.75POH (802) 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					

