



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

## COMPENSATED DENSITY NEUTRON LOG

Company	XTO Energy Inc.	Company	XTO Energy Inc.
Well	Hill Ranch 06-04	Well	Hill Ranch 06-04
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API # : 05 071 09566 00 327 FNL & 900' FWL	Other Services	DIL
Permanent Datum	SEC 06 TWP 35S RGE 67W	Elevation	8517'
Log Measured From	Ground Level	Elevation	8517'
Drilling Measured From	Ground Level	Elevation	8517'
Date	3-8-09		
Run Number	One		
Depth Driller	2370'		
Depth Logger	1896'		
Bottom Logged Interval	1894'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 460'		
Casing Logger	456'		
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	6:30 A.M.		
Time Logger on Bottom	2:45 P.M.		
Maximum Recorded Temperature	83 DEG F		
Equipment Number	T0701		
Location	Trinidad		
Recorded By	C. Sineros		J. Cappellucci
Witnessed By	Mr. Dalton King		

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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.

### Well Directions:

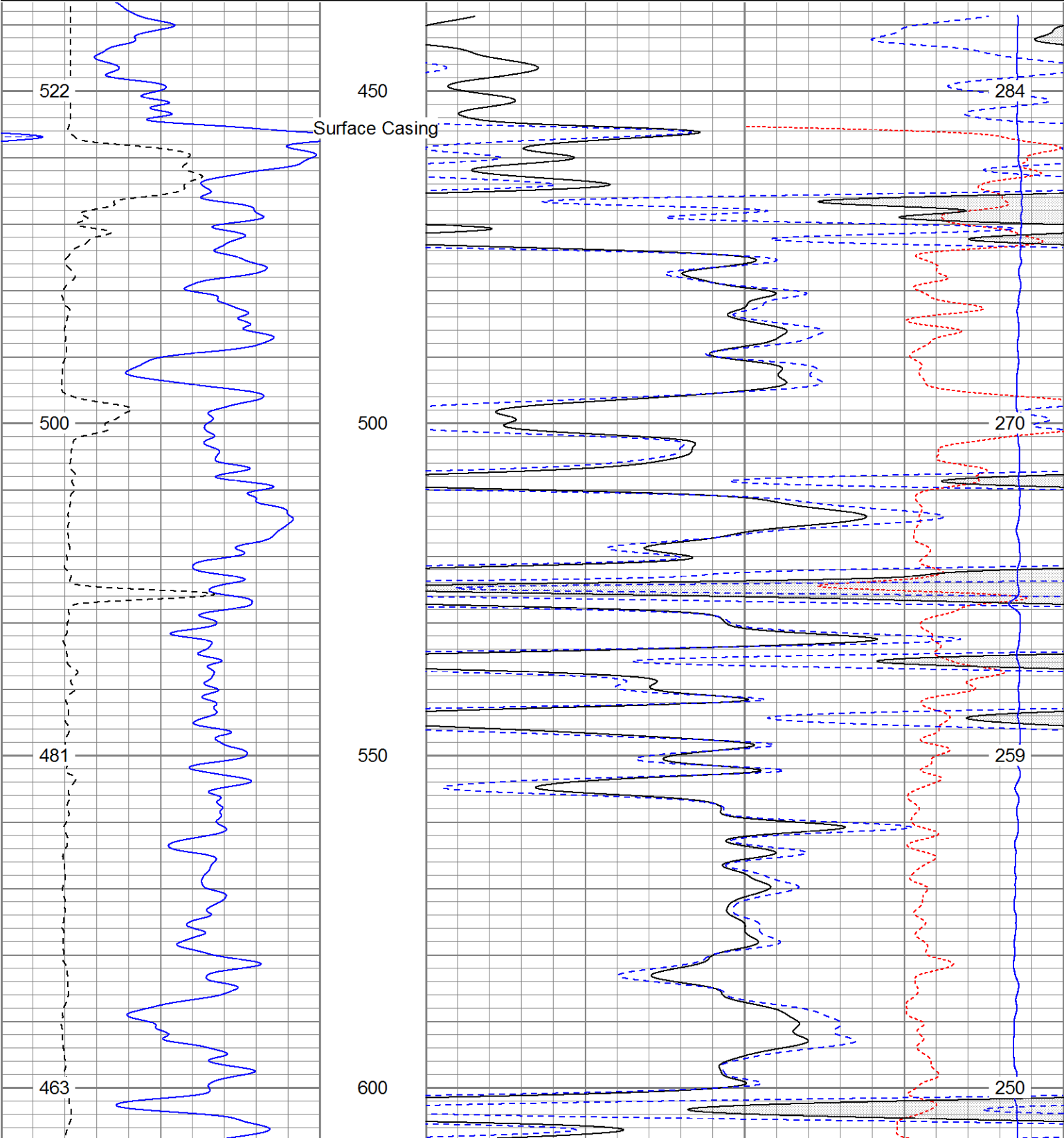
Lorencito, take door # 6 to top of hill, stay on main road past trash dumpster,  
stay straight, at Y stay left, stay on main road, at beige tank stay right,  
at big rocks take left, go straight up hill, past 3 locations, take hard right,  
end on first drive thru location.

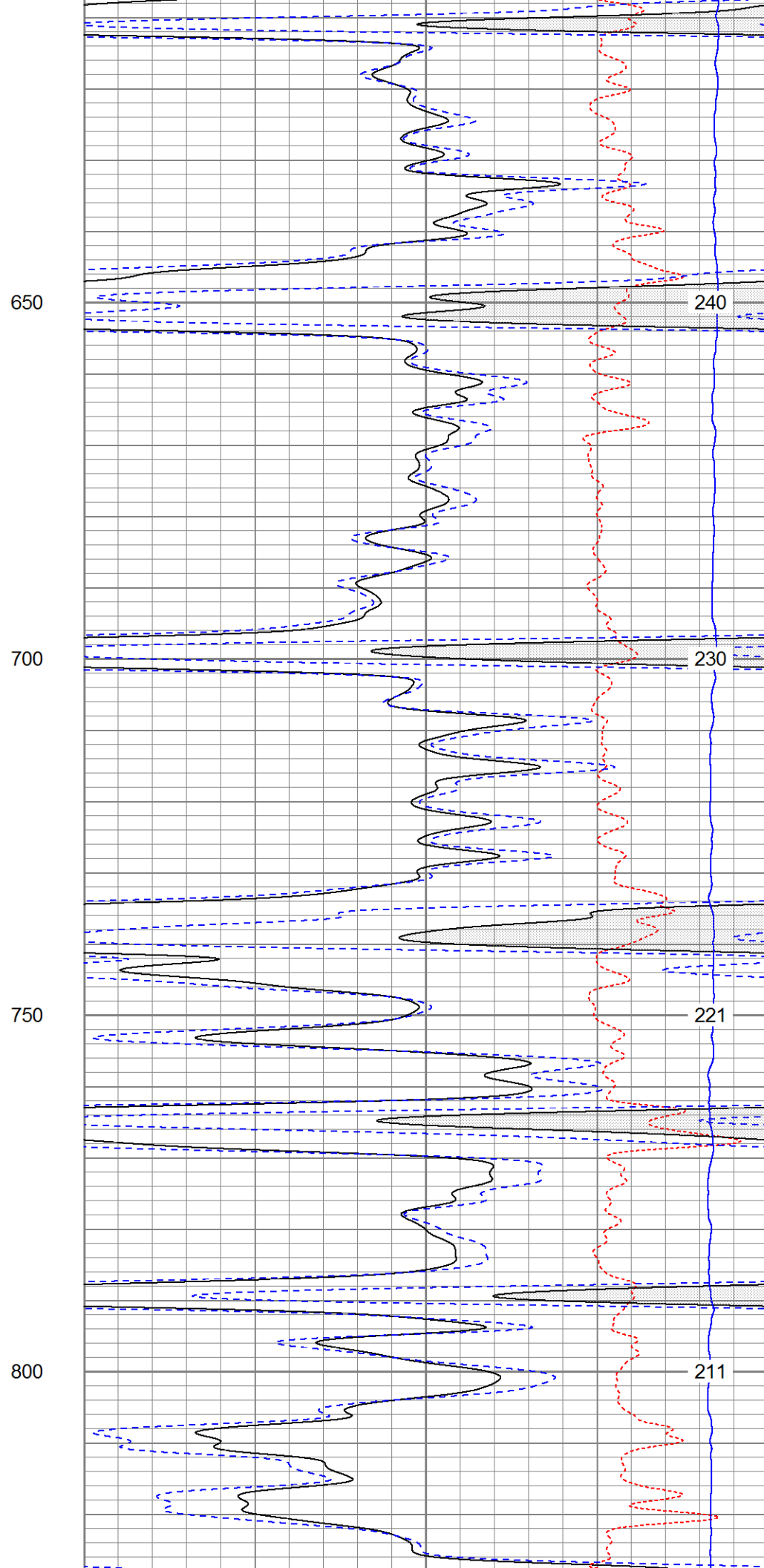
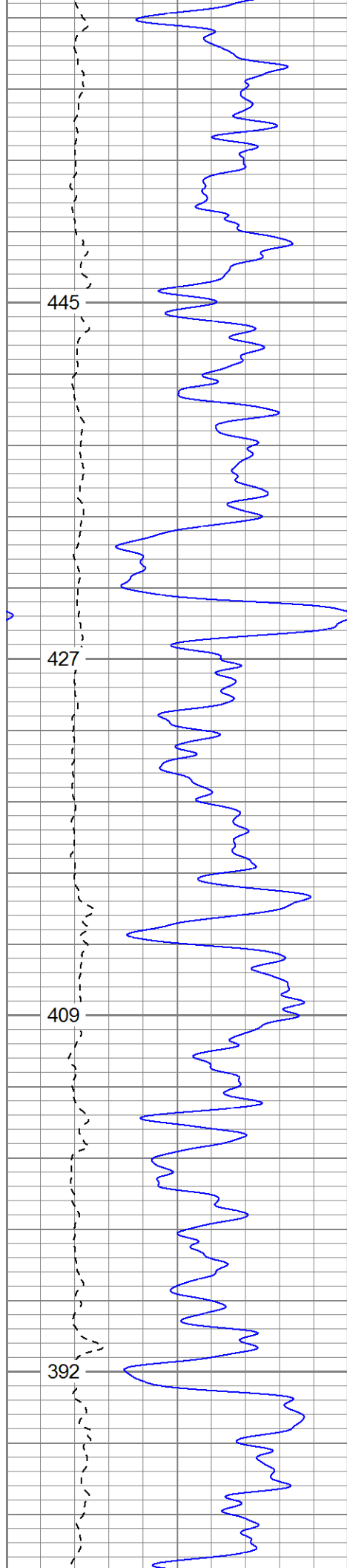


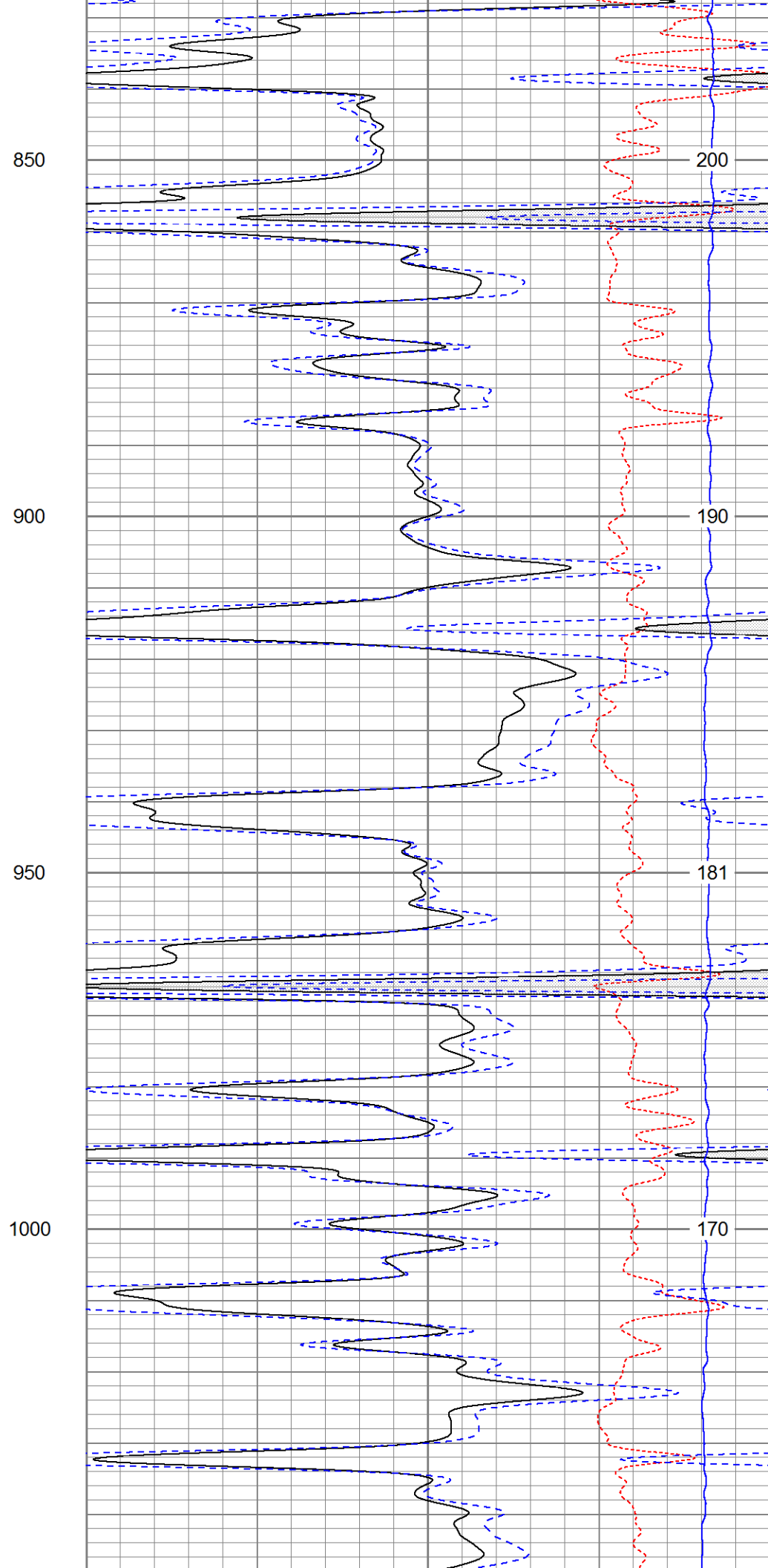
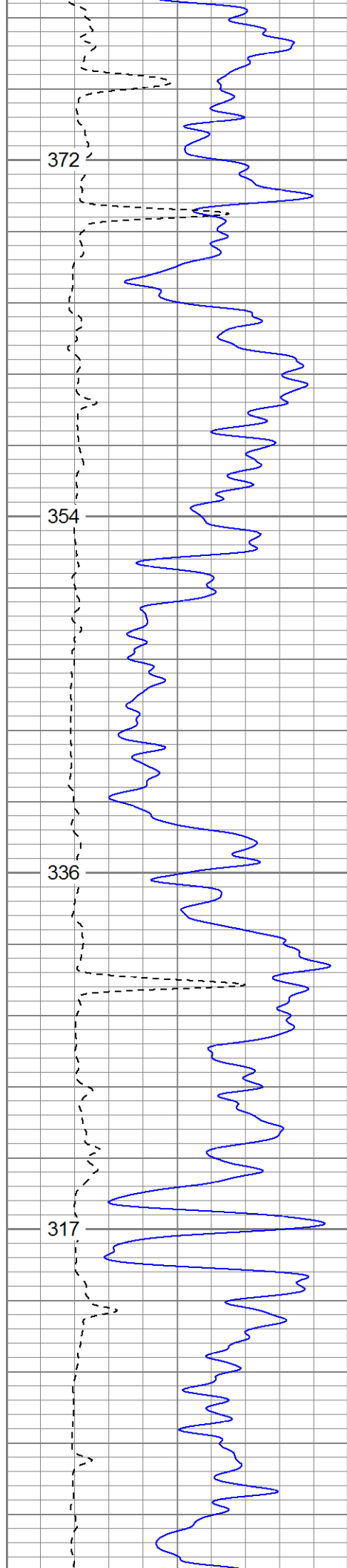
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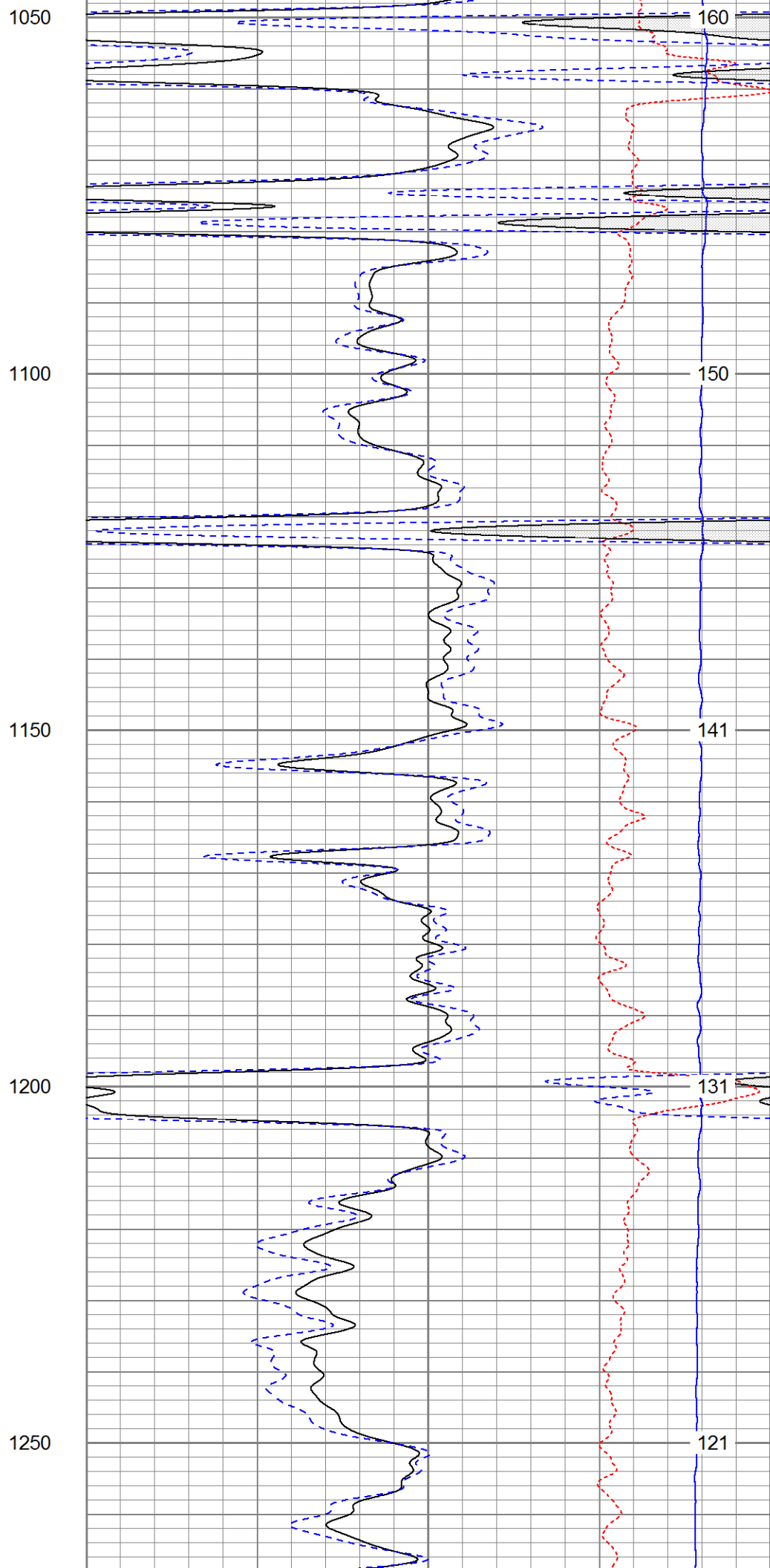
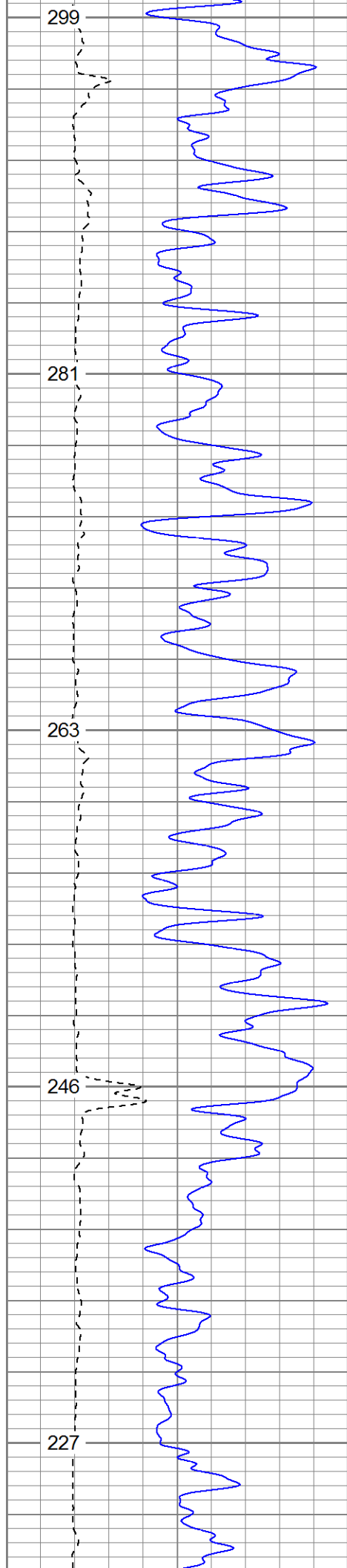
# Main Pass

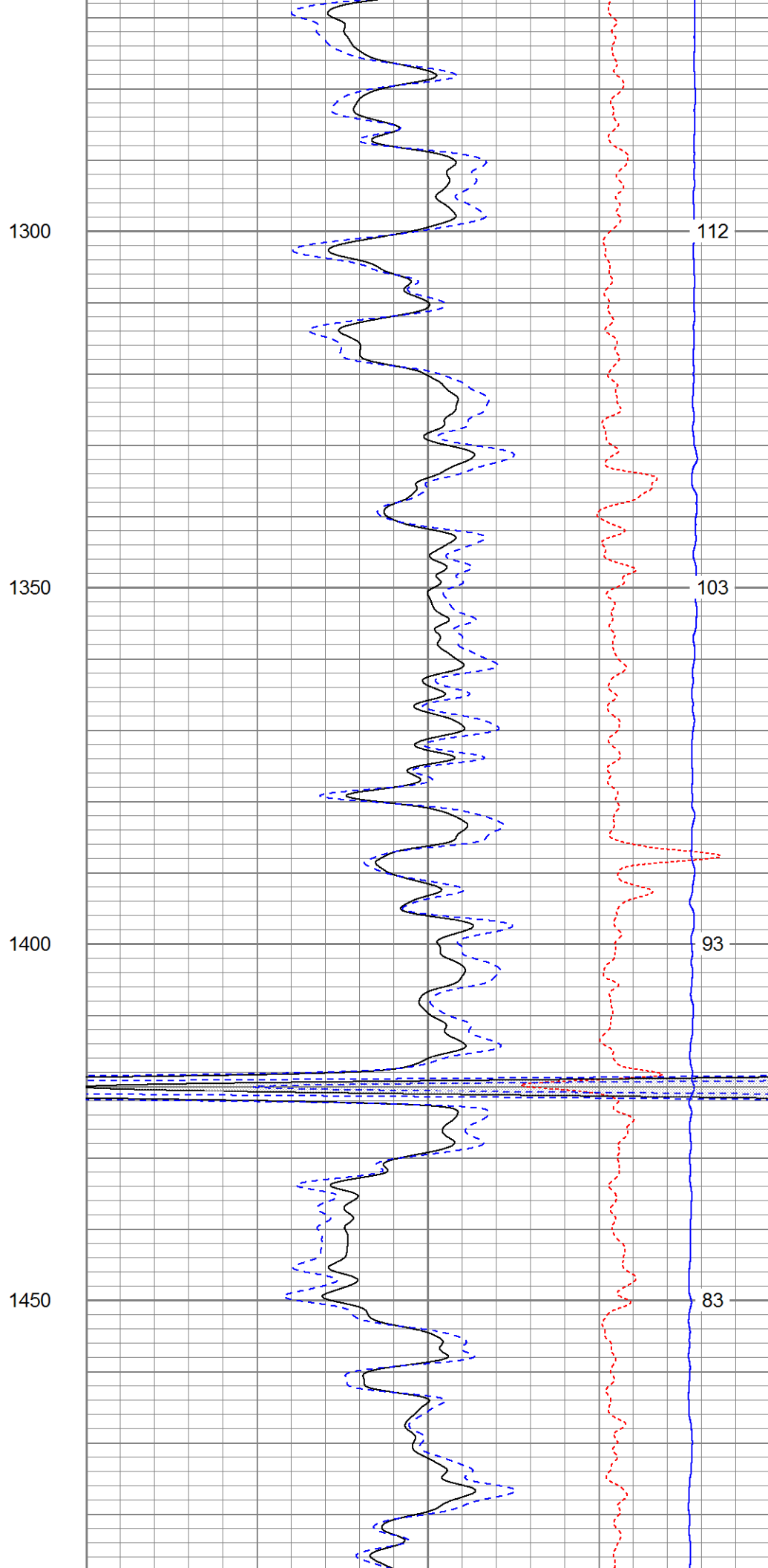
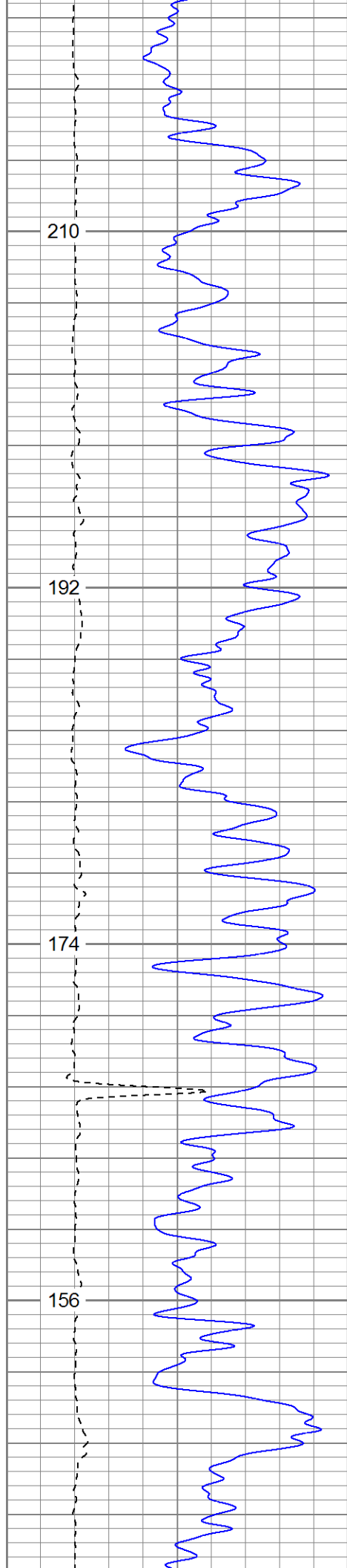
0	GR (GAPI)	200	2	RHOB (g/cc)		3
6	DCAL (in)	16	1	RHOB (g/cc)		2
TBHV (ft3)			30	DPOR (pu)		-10
				-0.5	RHOC (g/cc)	0.5
				4000	LTEN (lb)	0
						ABHV (ft3)

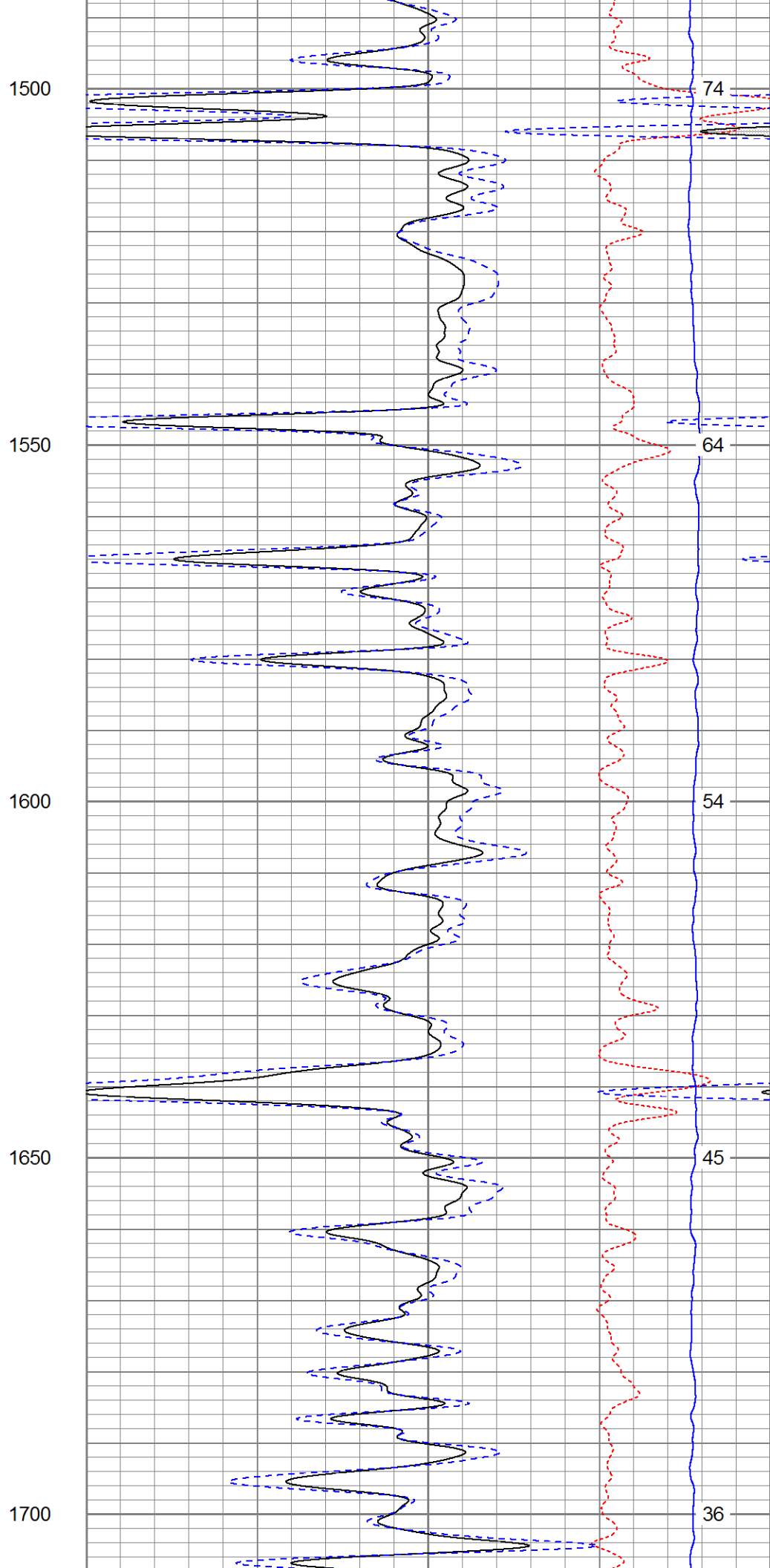
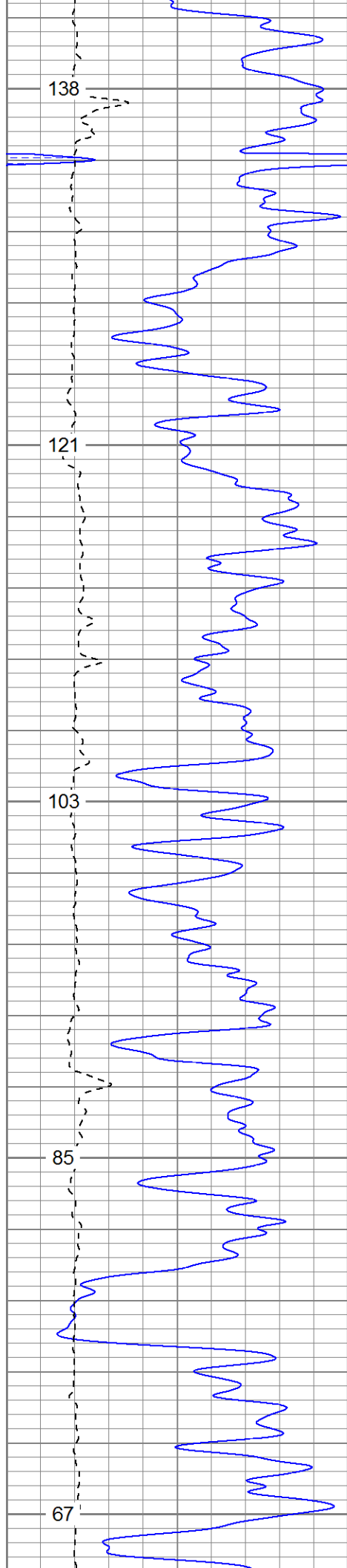


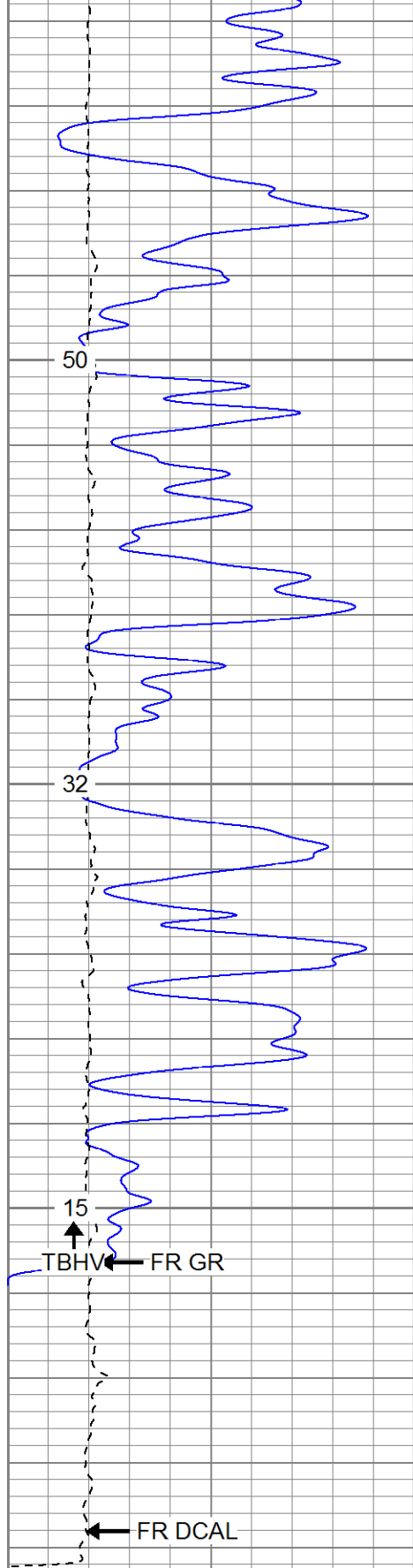




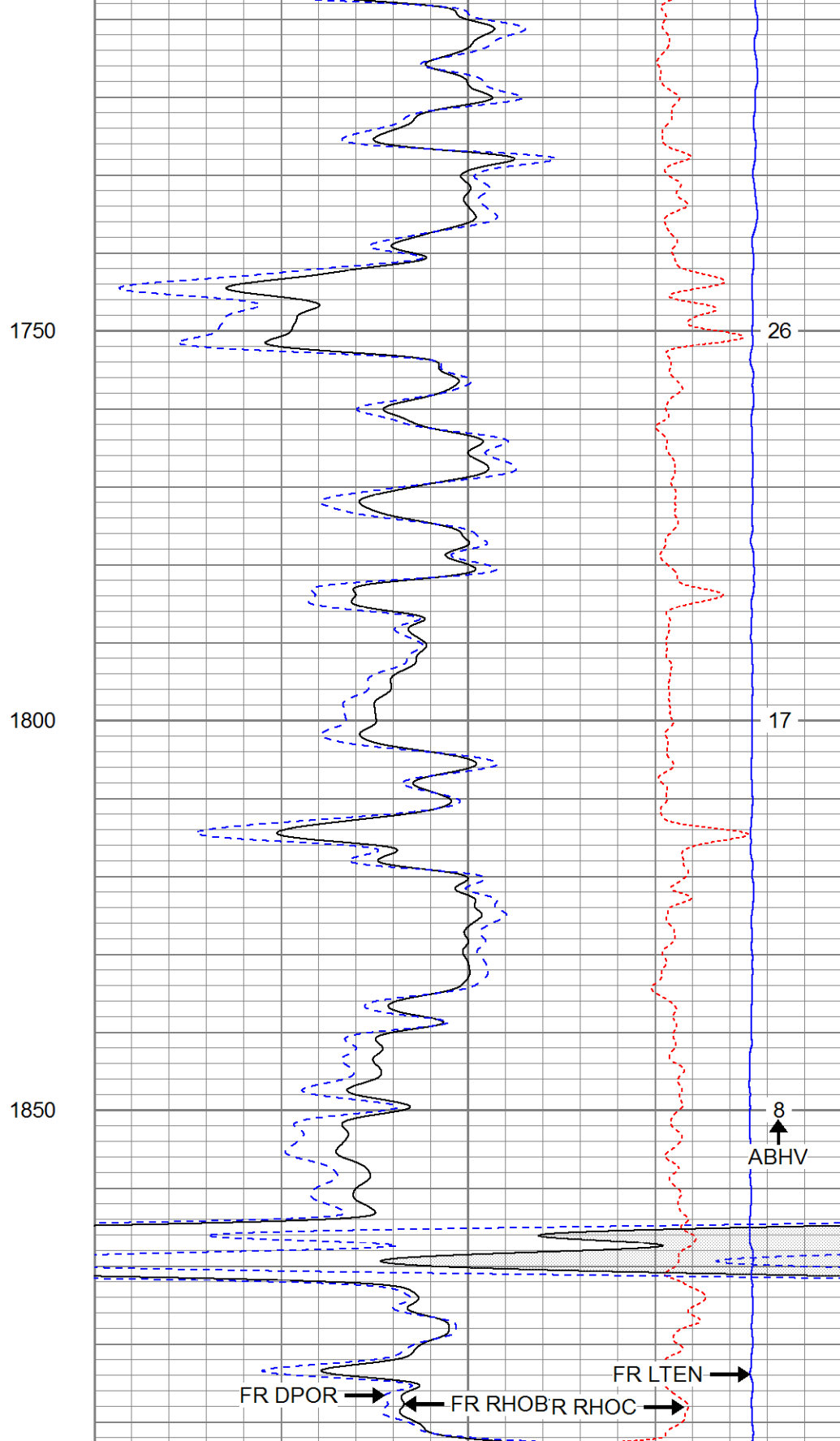








0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		



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

ABHV (ft3)



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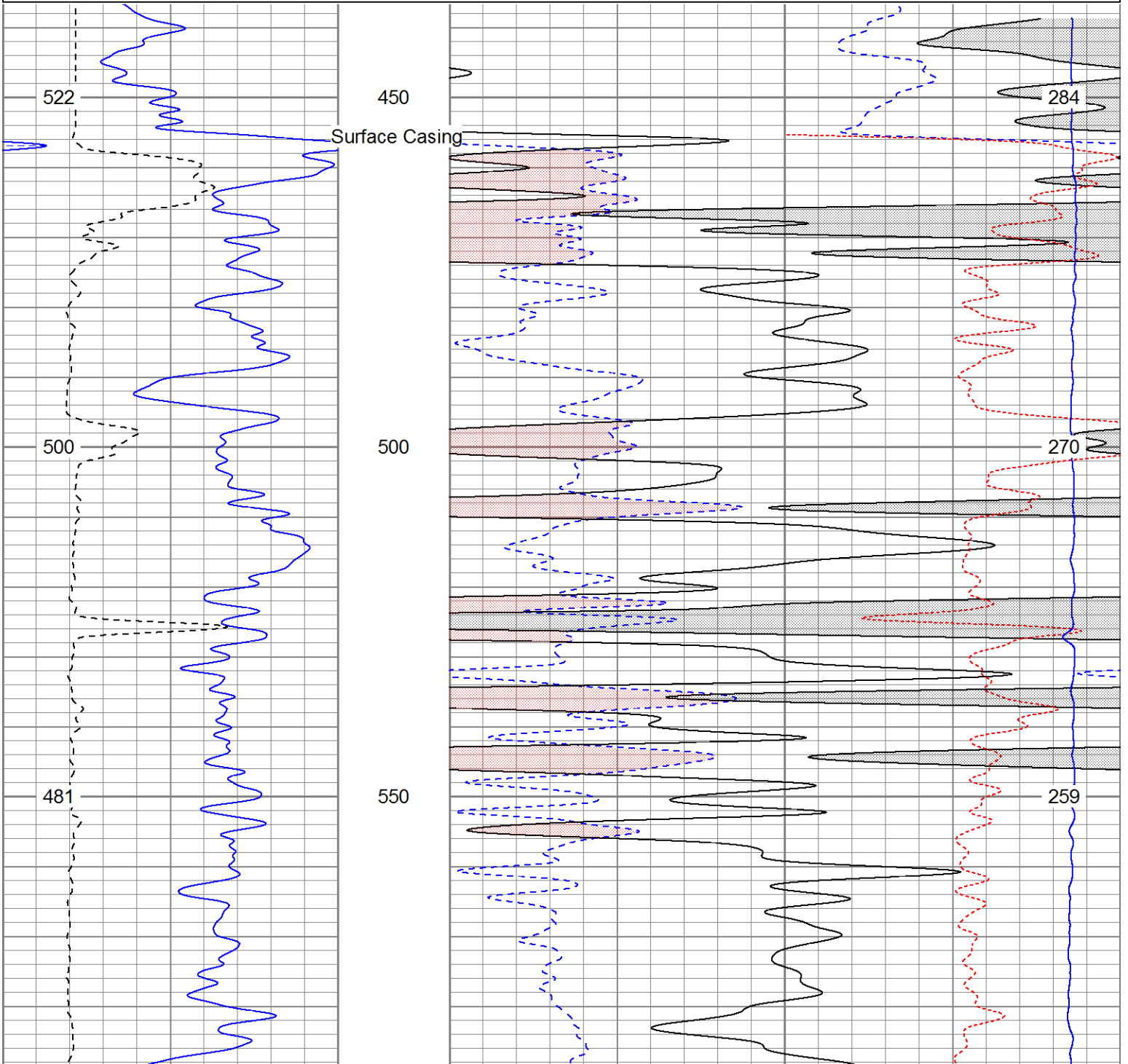
Black Lick, Pa.  
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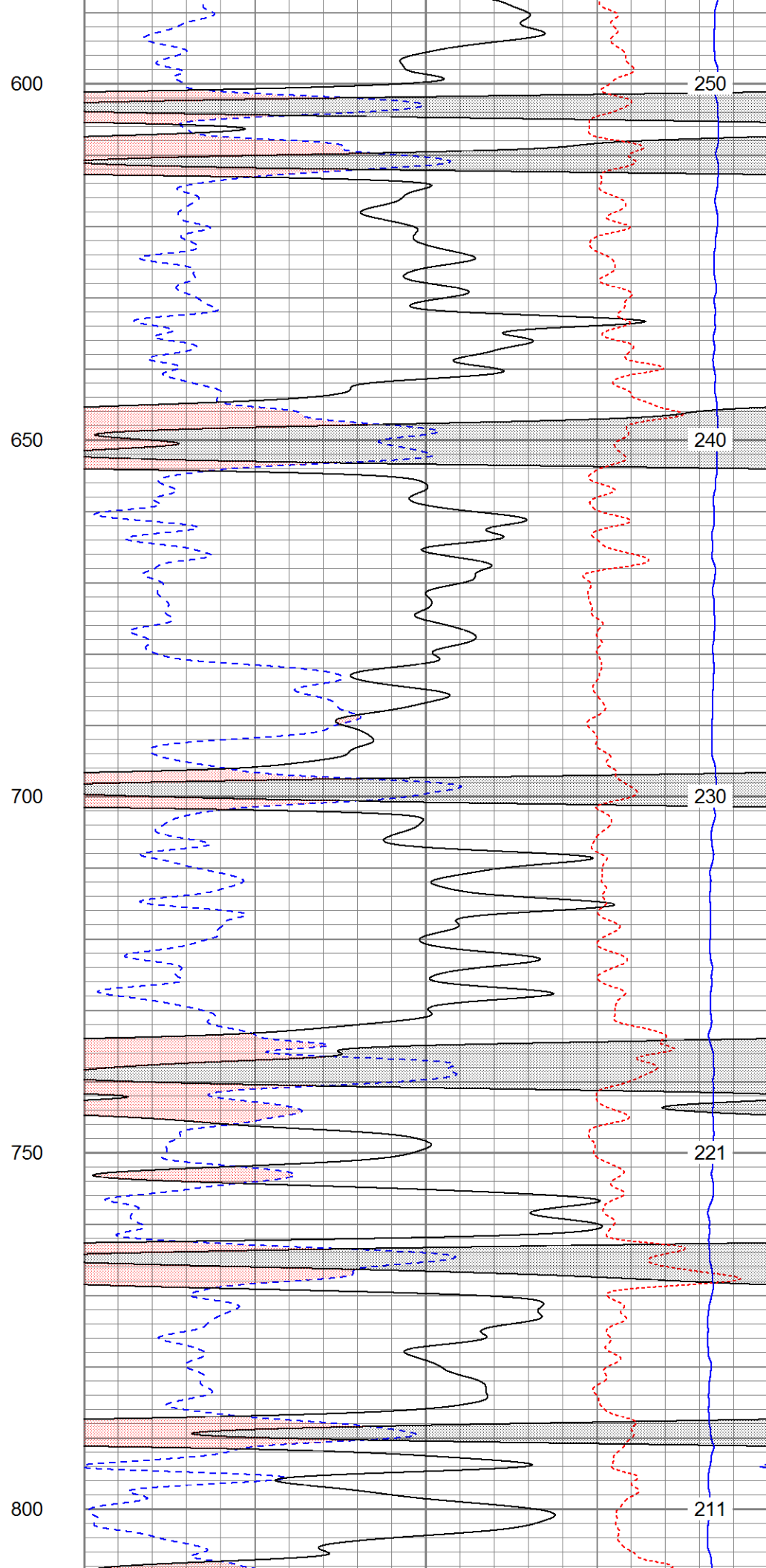
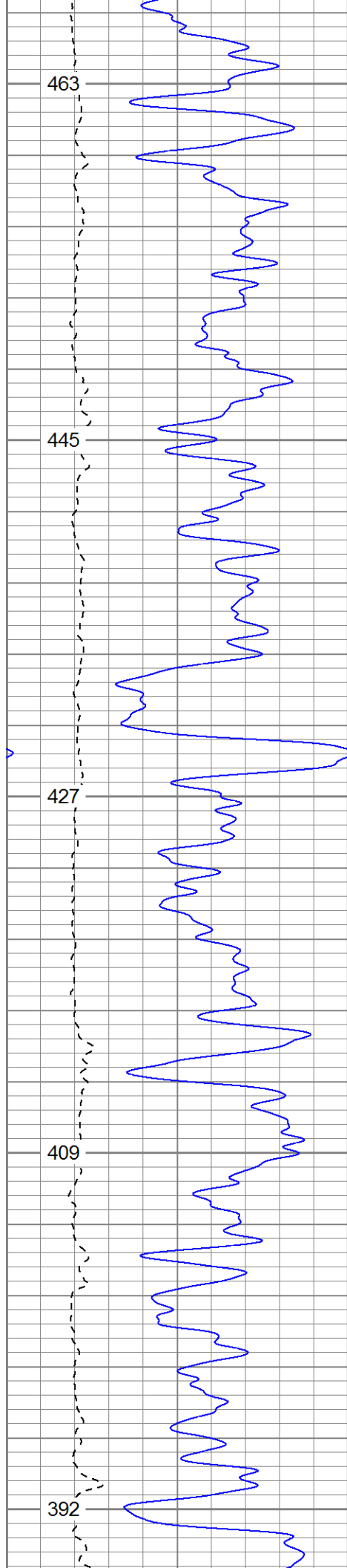
# Main Pass

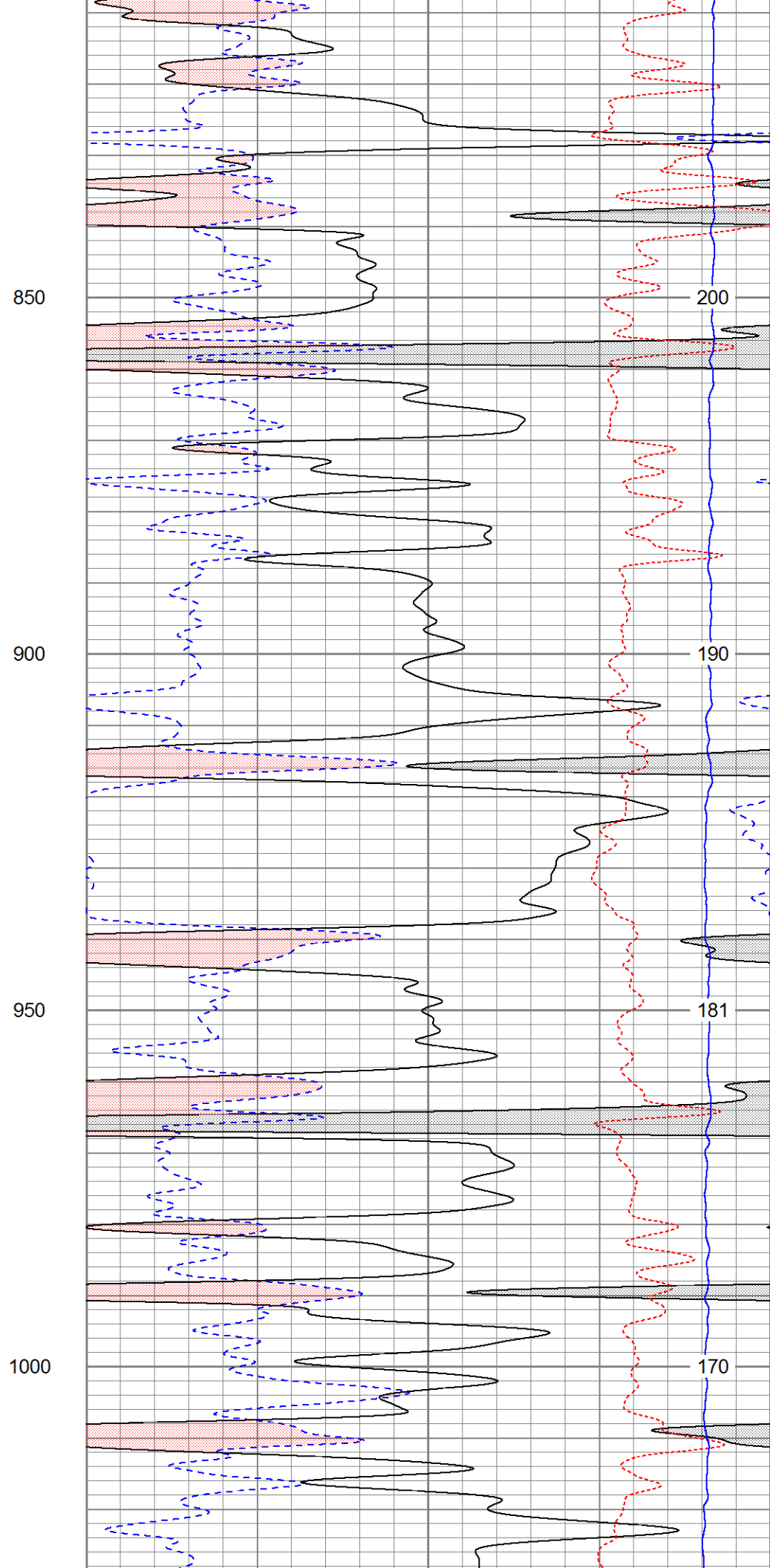
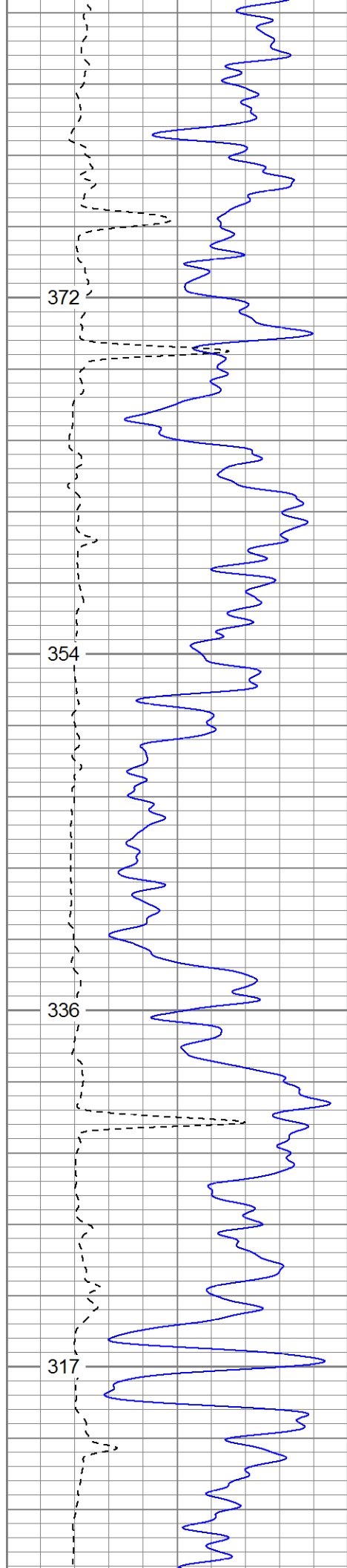
Database File: xtobr06-04.db  
Dataset Pathname: pass2.1  
Presentation Format: cdnl  
Dataset Creation: Sun Mar 08 16:25:14 2009 by Calc Open-Cased 071220  
Charted by: Depth in Feet scaled 1:240

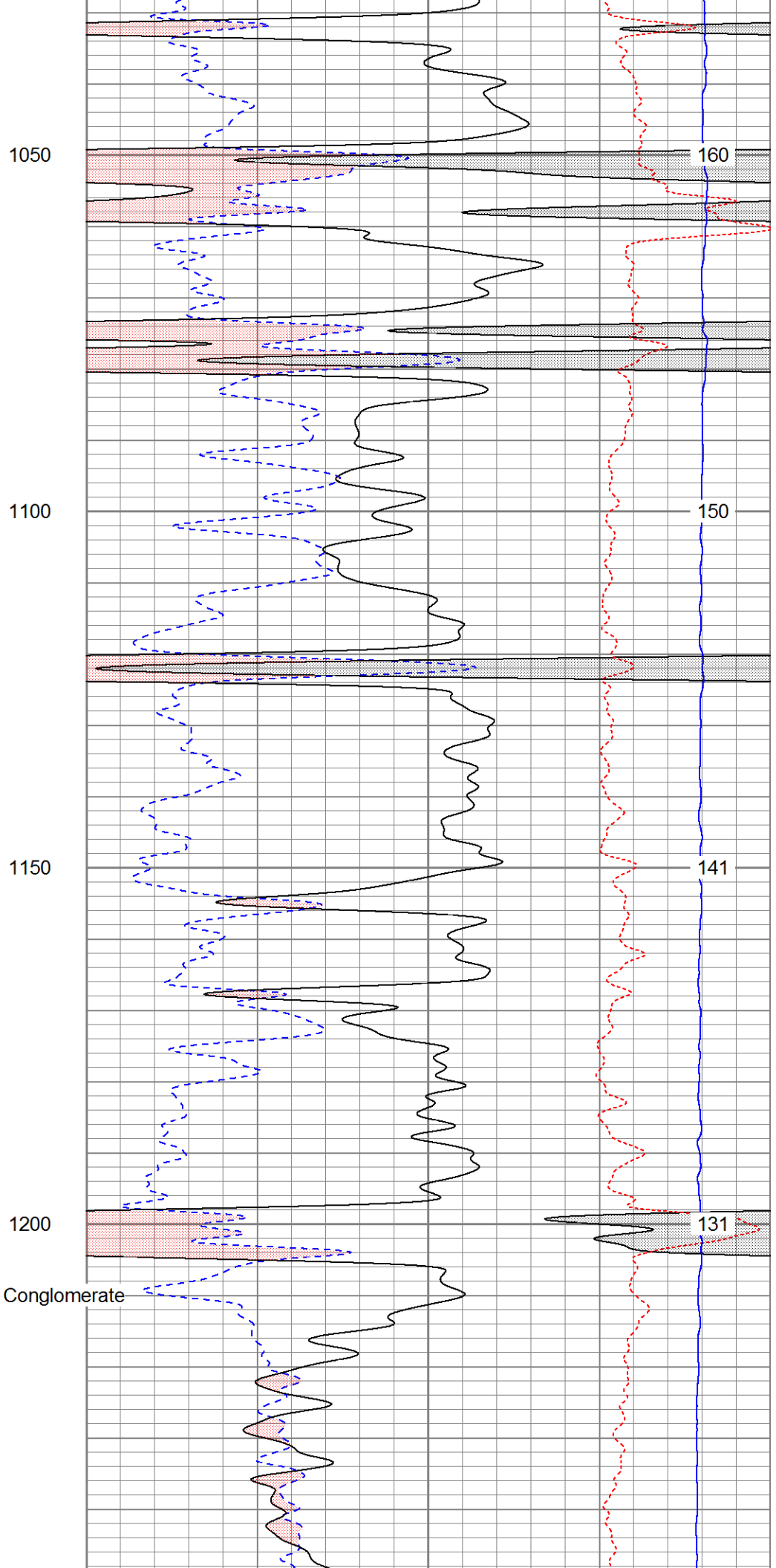
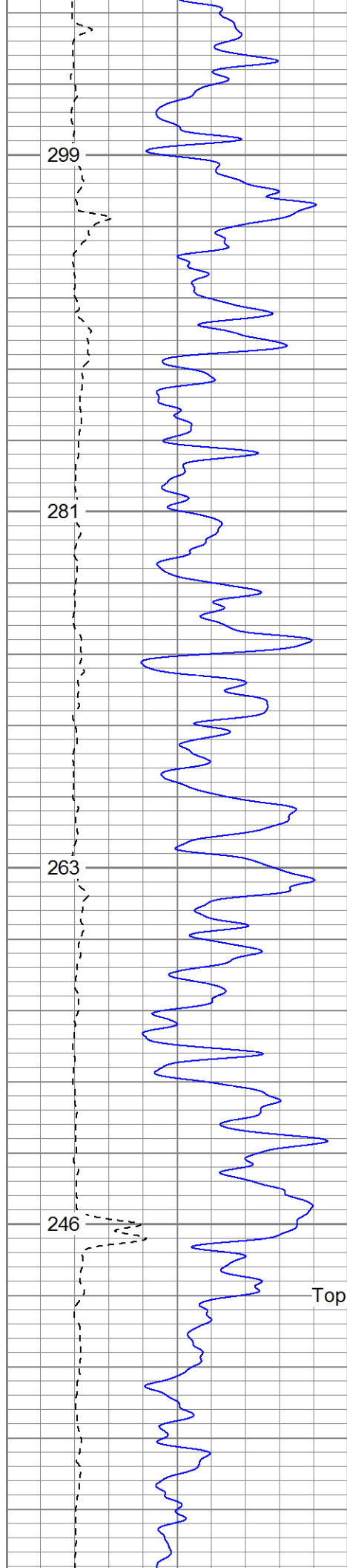
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

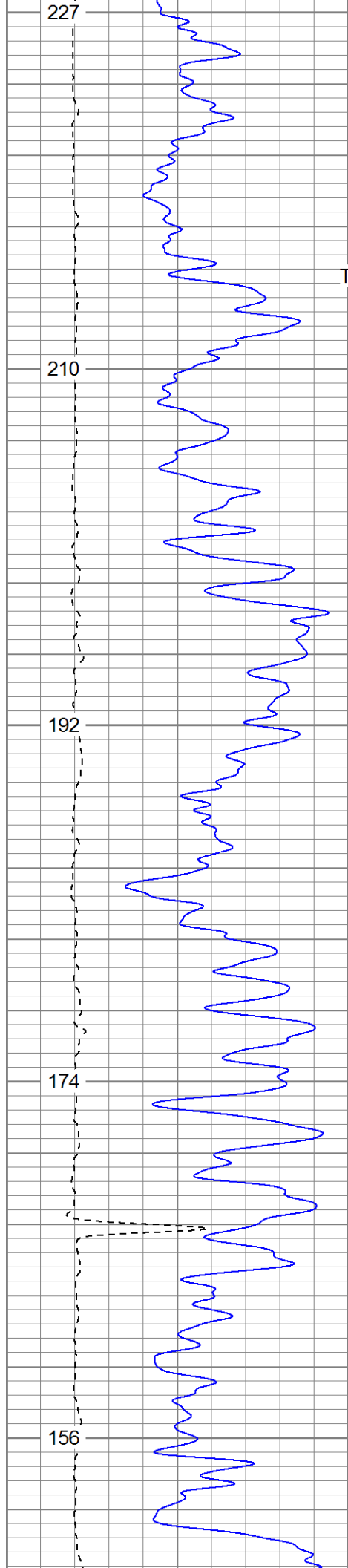
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		



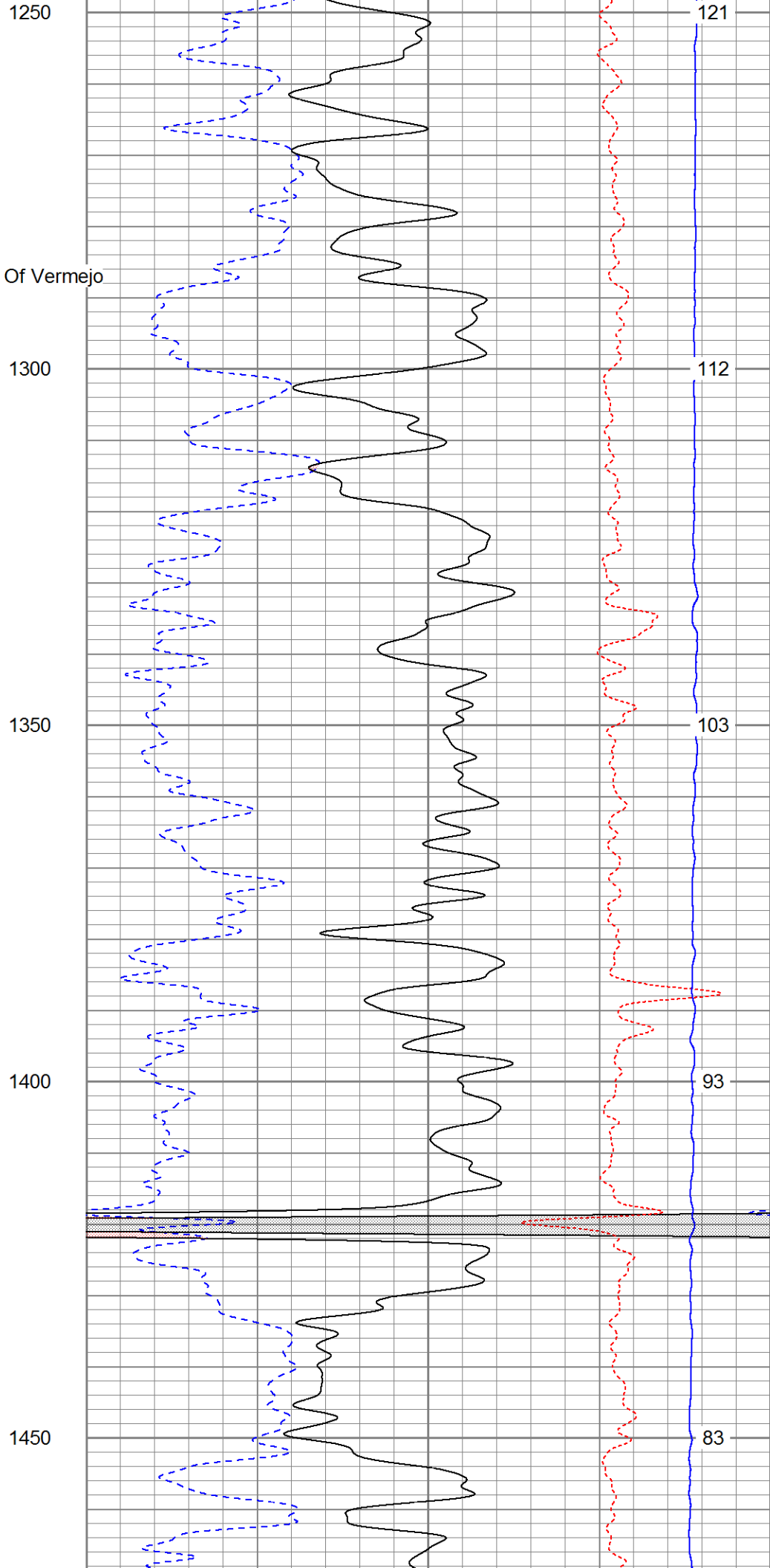


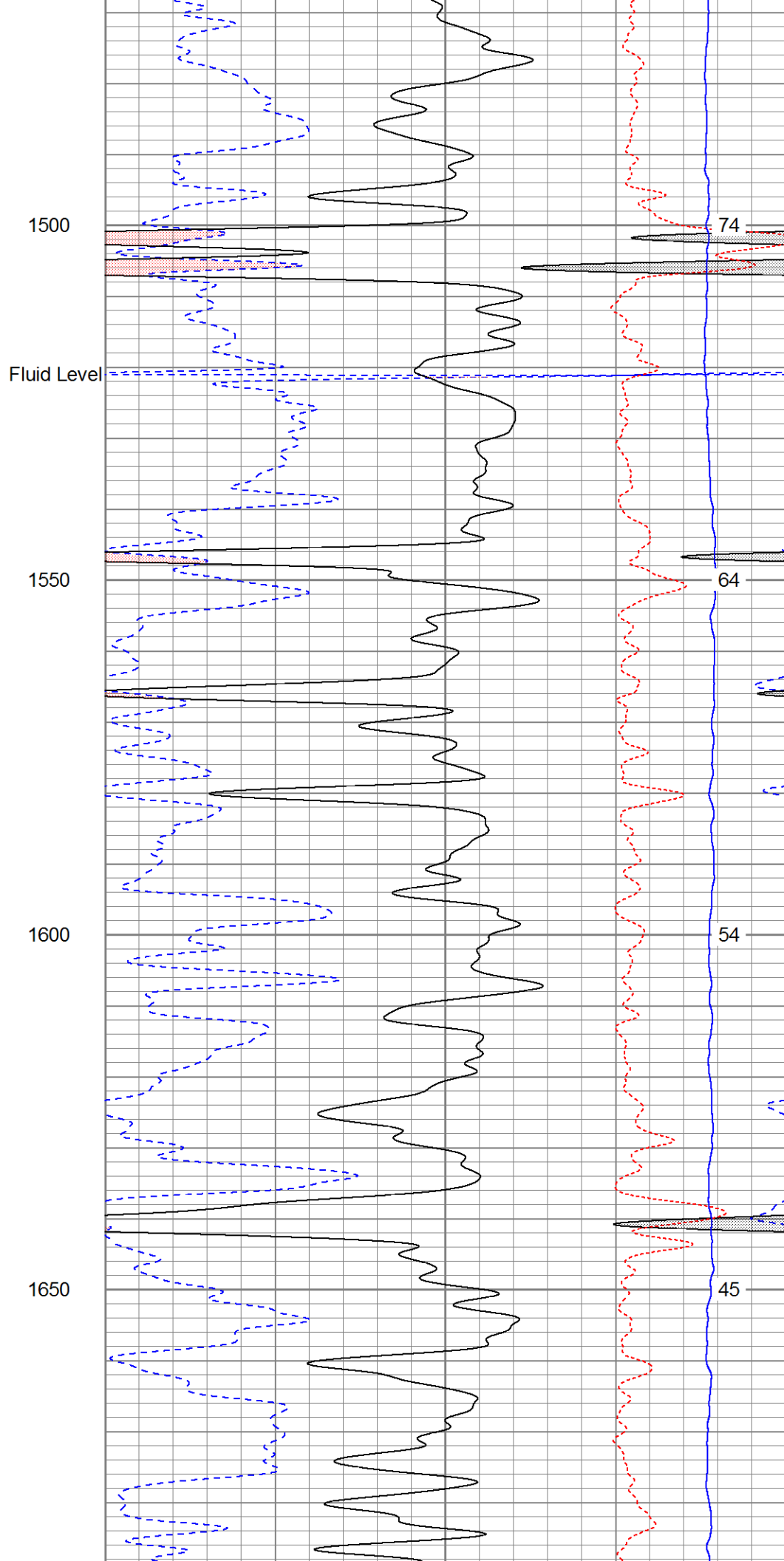
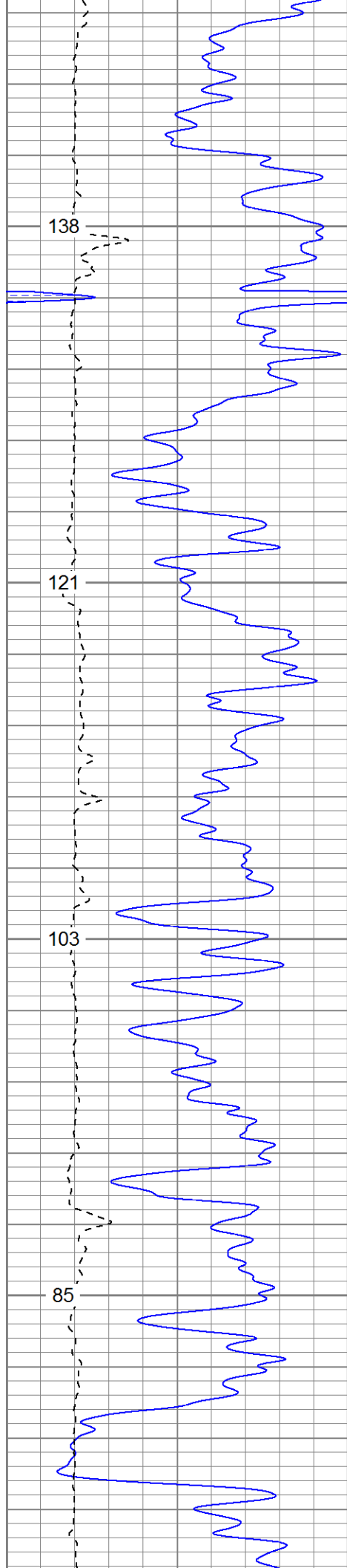


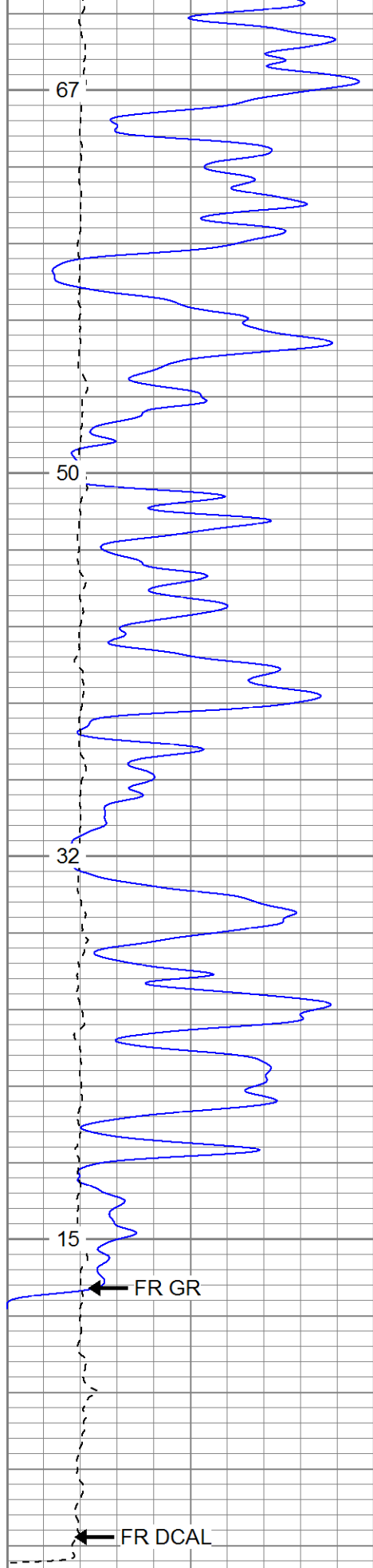




Top Of Vermejo

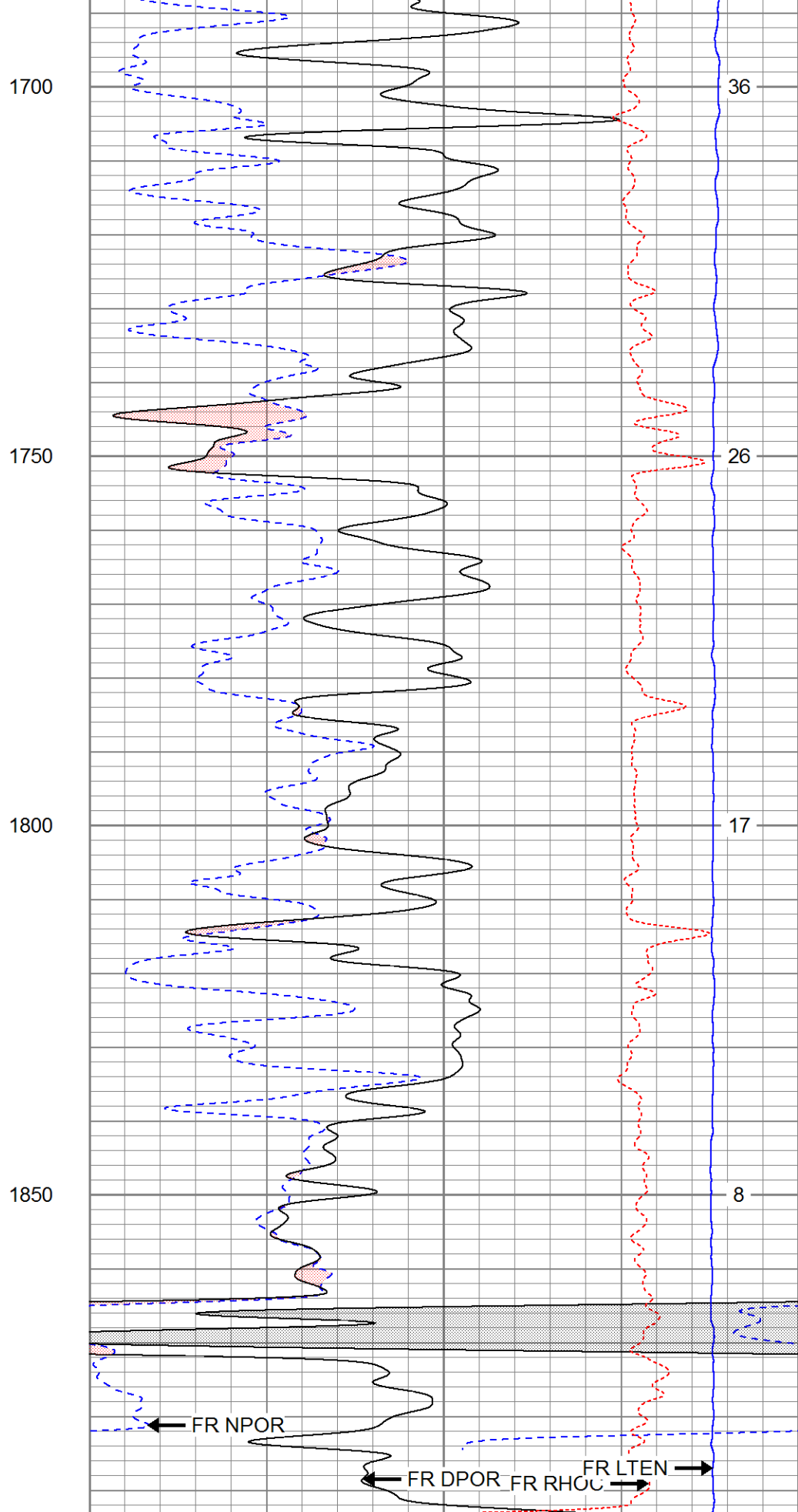






0	GR (GAPI)	200
6	DCAL (in)	16

TBHV (ft3)



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

-0.5	RHOC (g/cc)	0.5
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4000

LTEN (lb)

0

ABHV (ft3)



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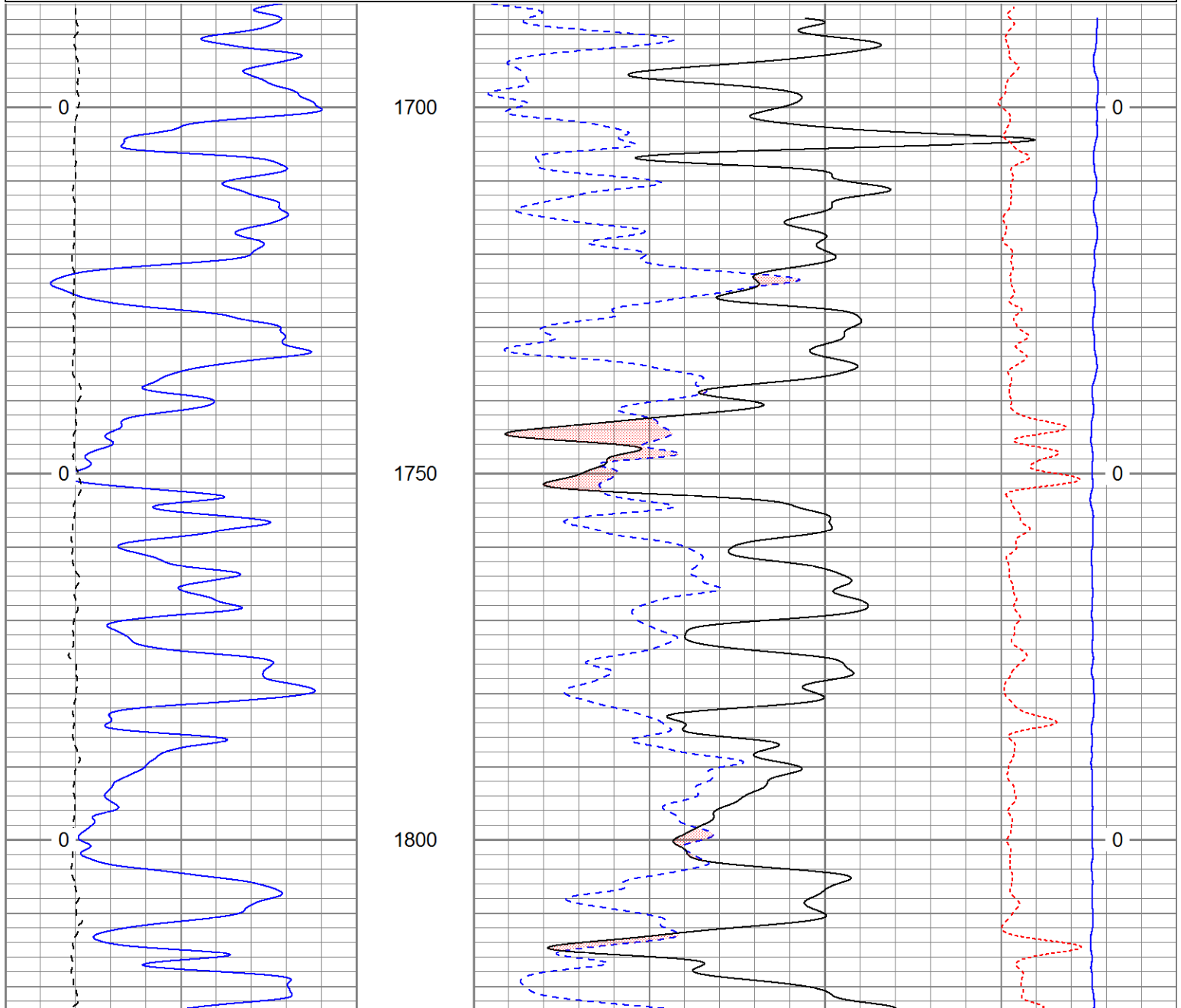
Black Lick, Pa.  
 Mercer, Pa.  
 Wooster, Oh.  
 Cleveland, Ok.  
 Trinidad, Co.

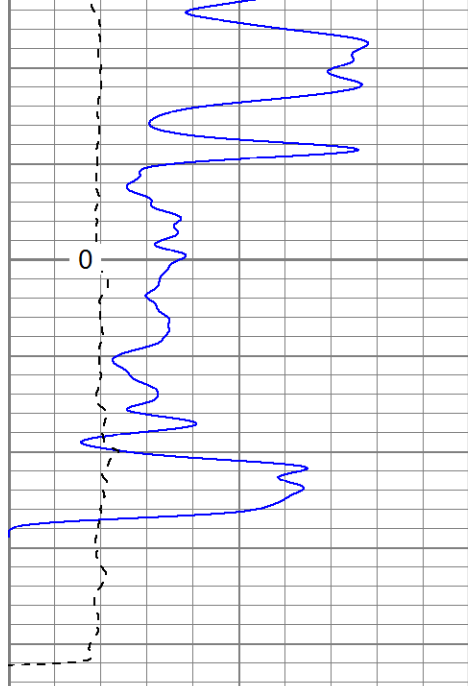
# Repeat Section

Database File: xtohr06-04.db  
 Dataset Pathname: pass1.1  
 Presentation Format: cdnl  
 Dataset Creation: Sun Mar 08 16:26:26 2009 by Calc Open-Cased 071220  
 Charted by: Depth in Feet scaled 1:240

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

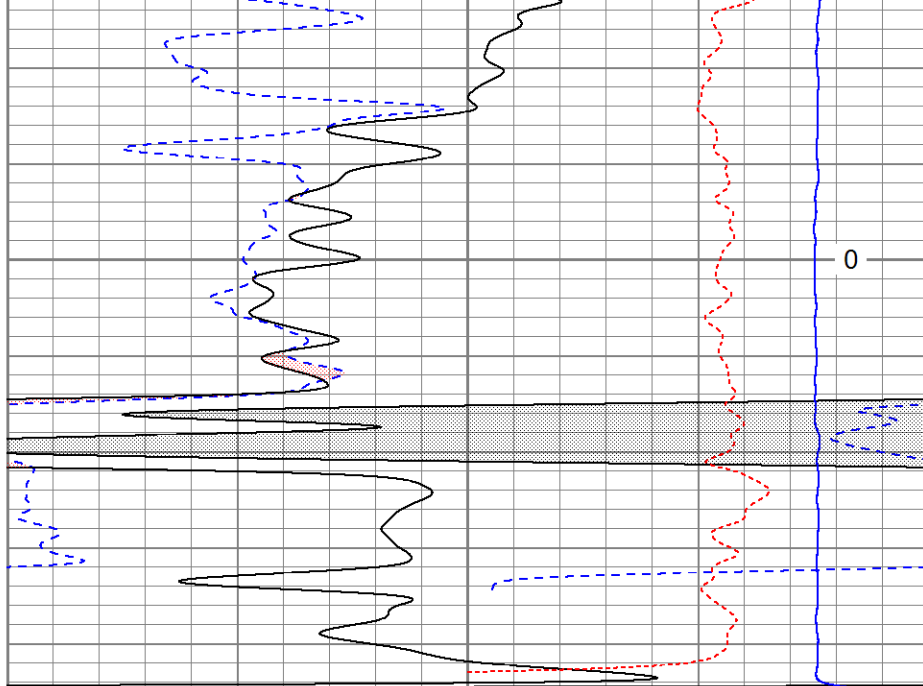
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		





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

1850



30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		



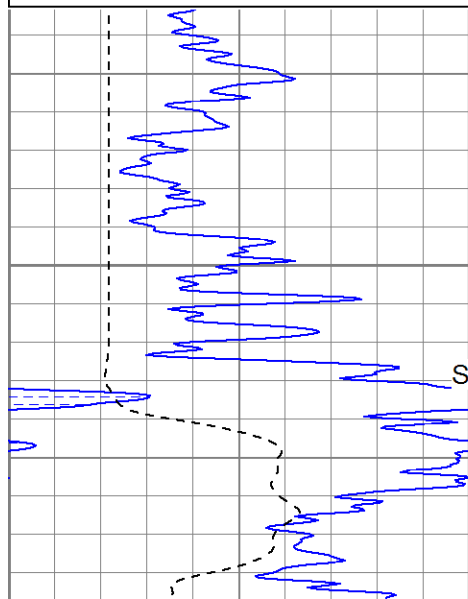
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# High Resolution Pass

Database File: xt0hr06-04.db  
Dataset Pathname: pass2.3  
Presentation Format: cdlhr  
Dataset Creation: Mon Mar 09 07:30:30 2009 by Calc Open-Cased 071220  
Charted by: Depth in Feet scaled 1:120

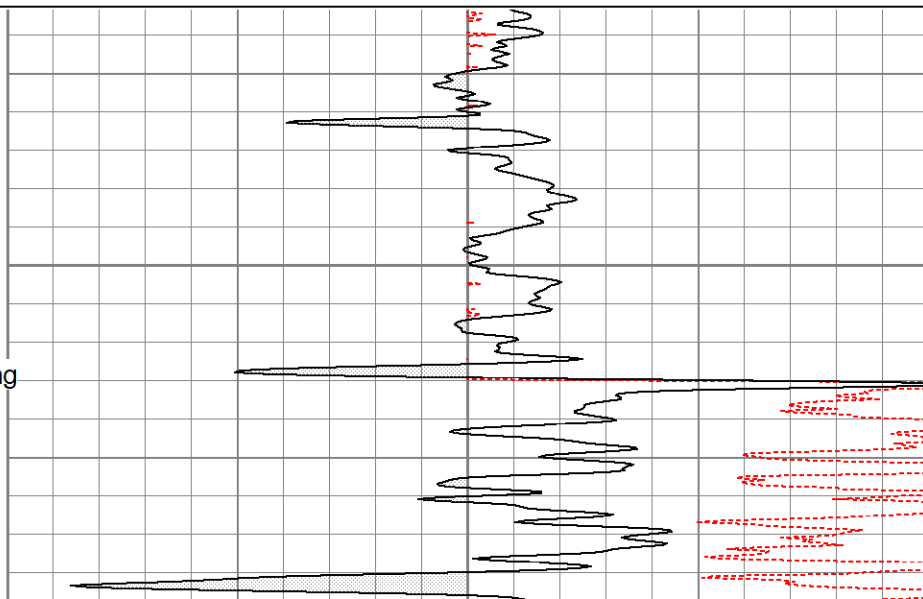
0	GR (GAPI)	200
6	DCAL (in)	16

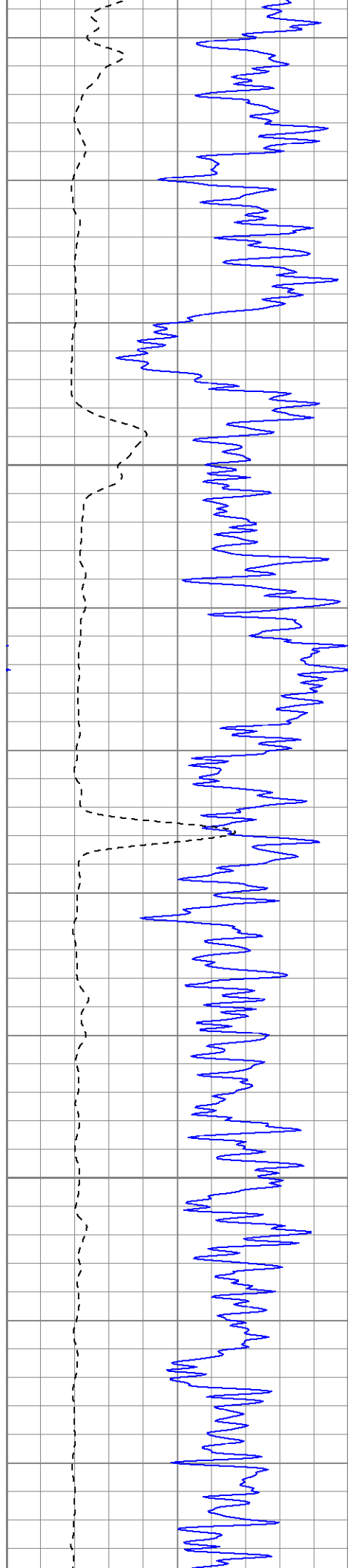
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



450

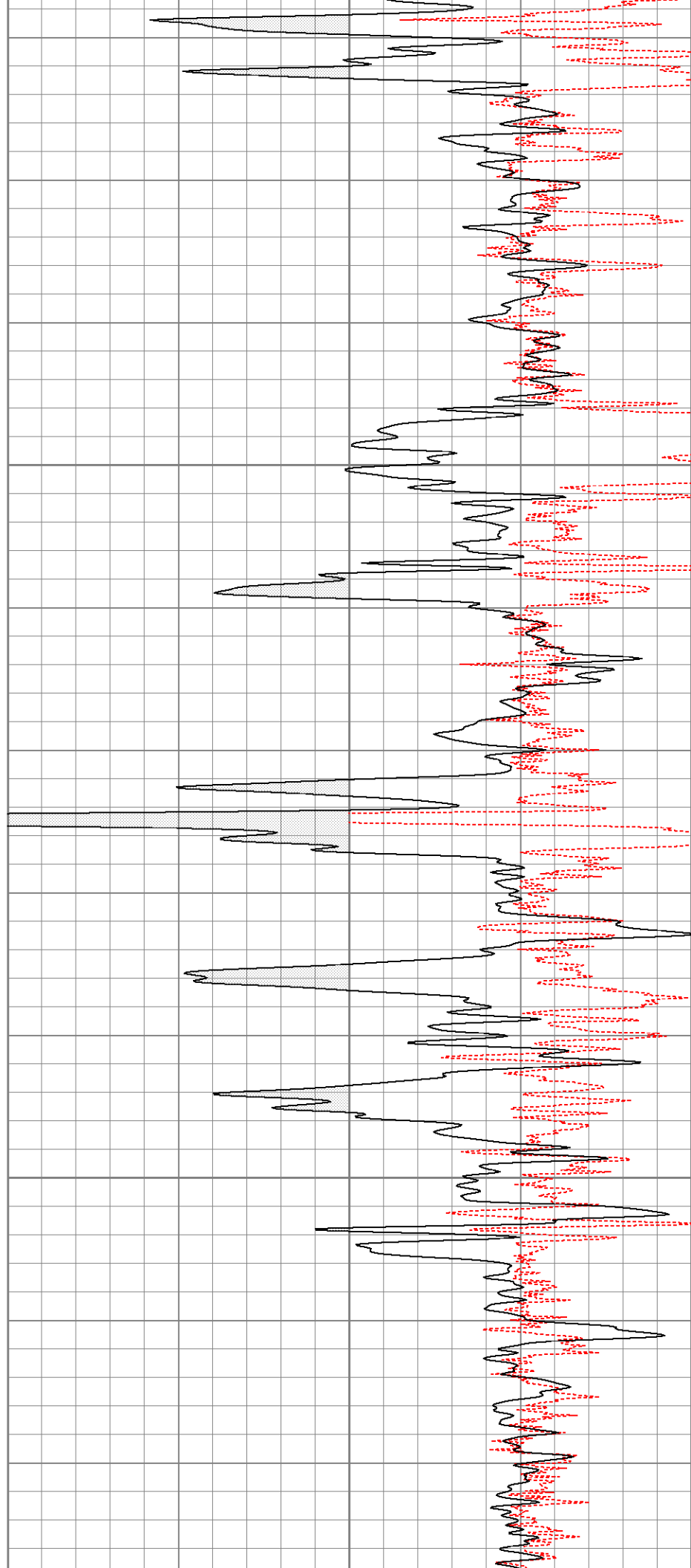
Surface Casing





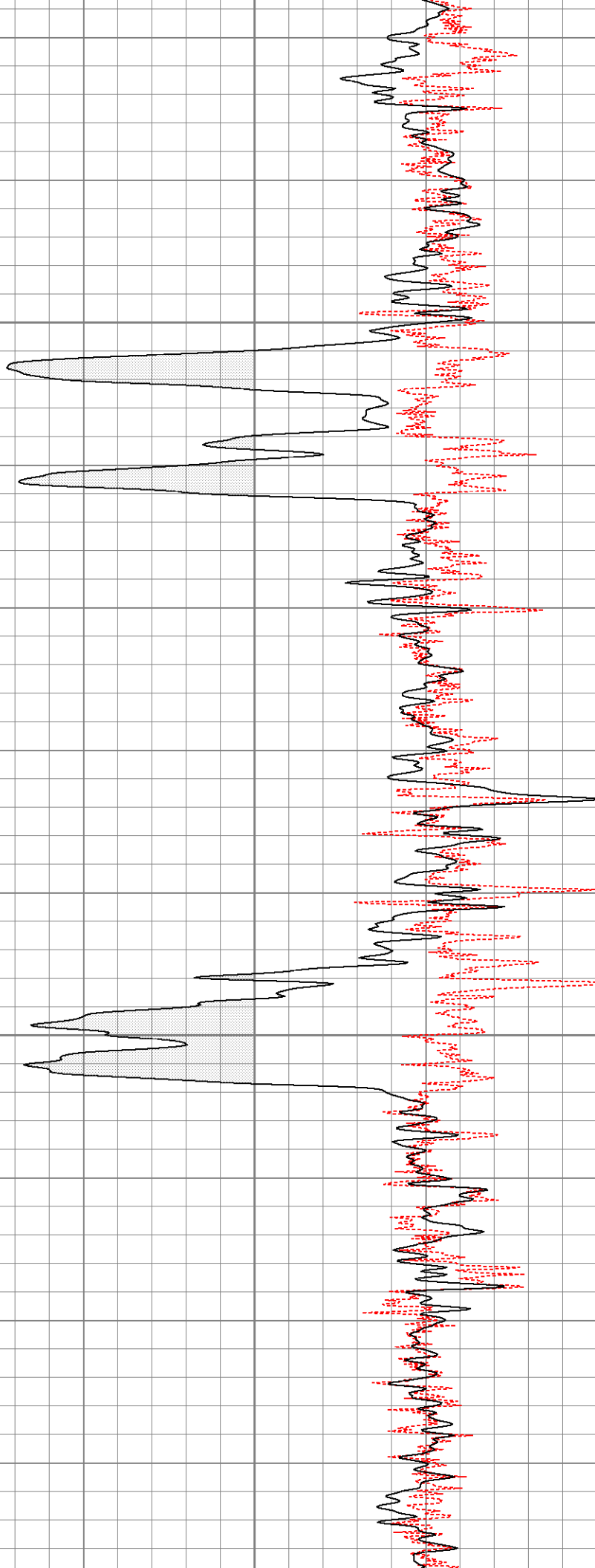
500

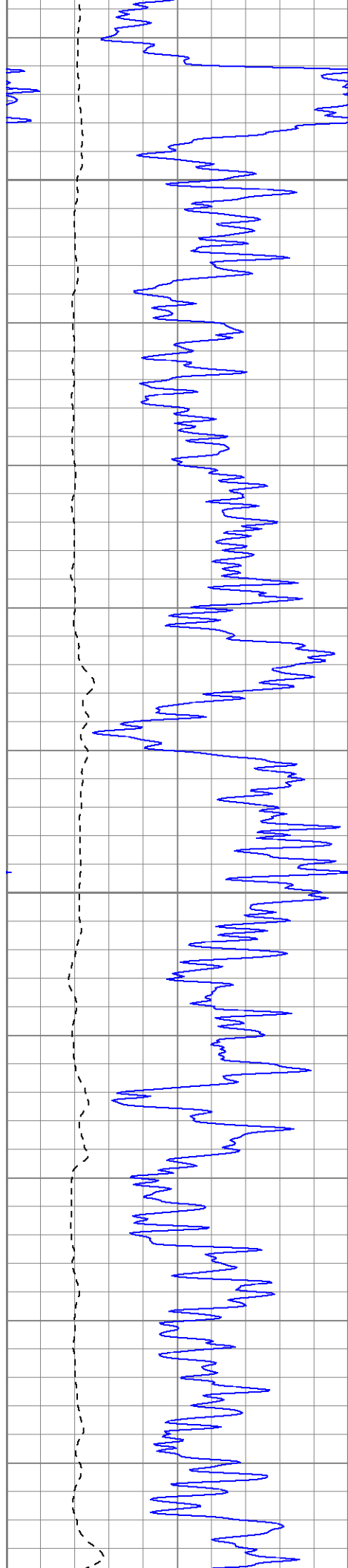
550



600

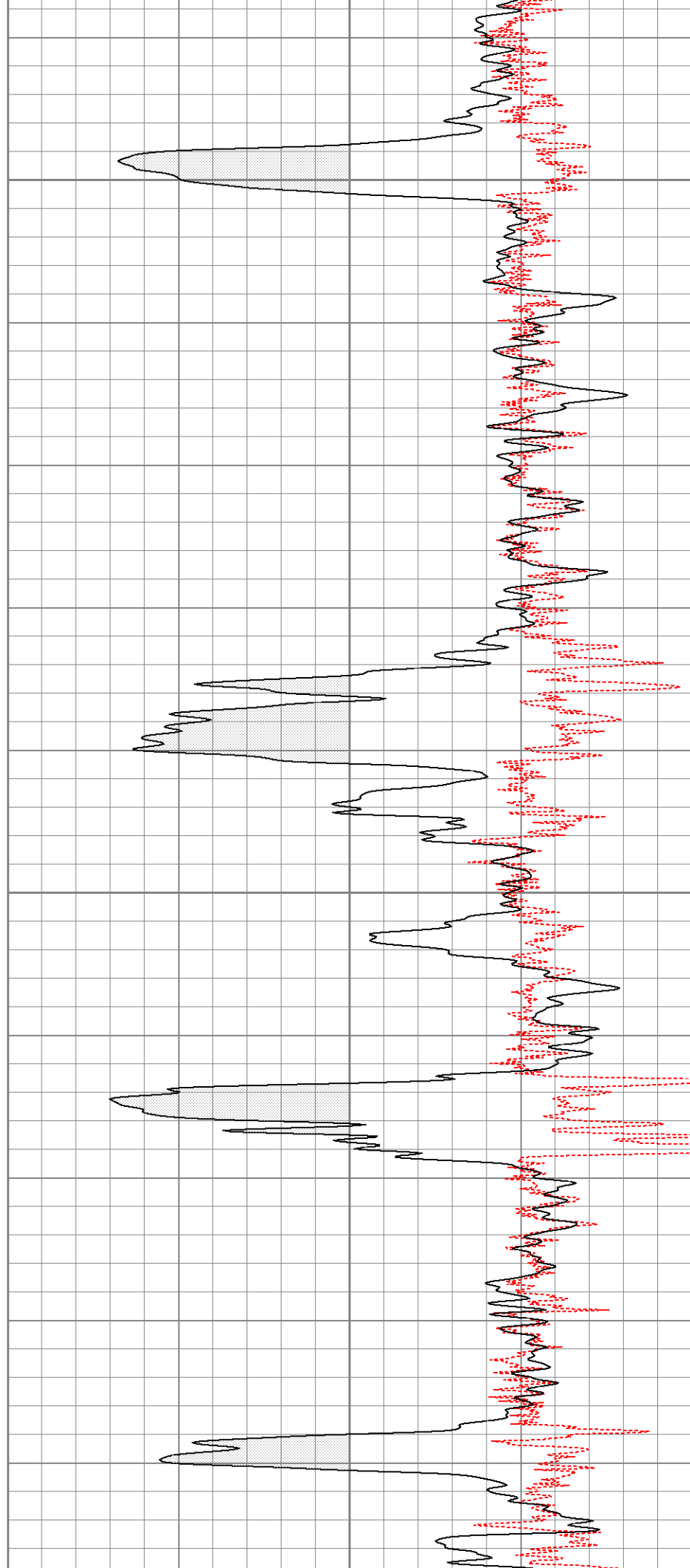
650

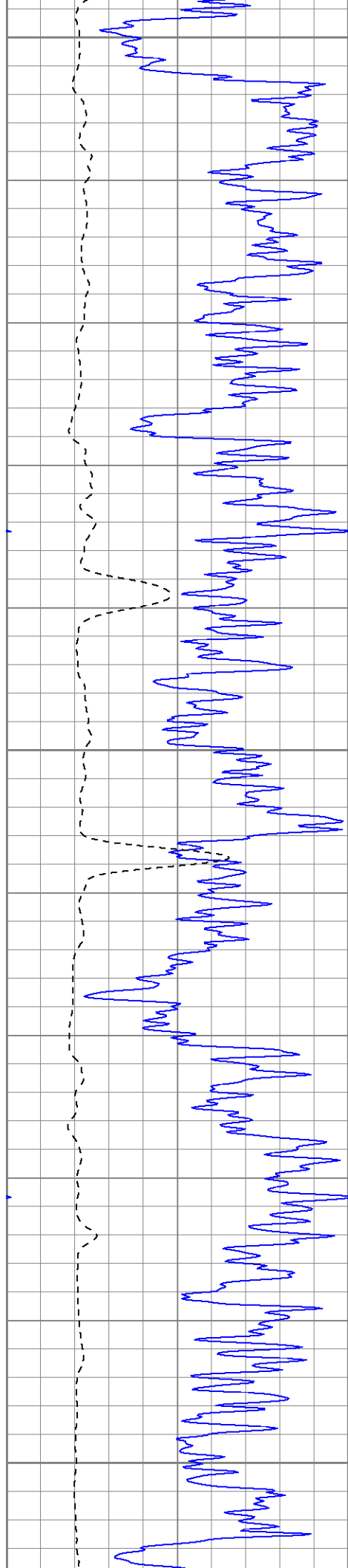




700

750

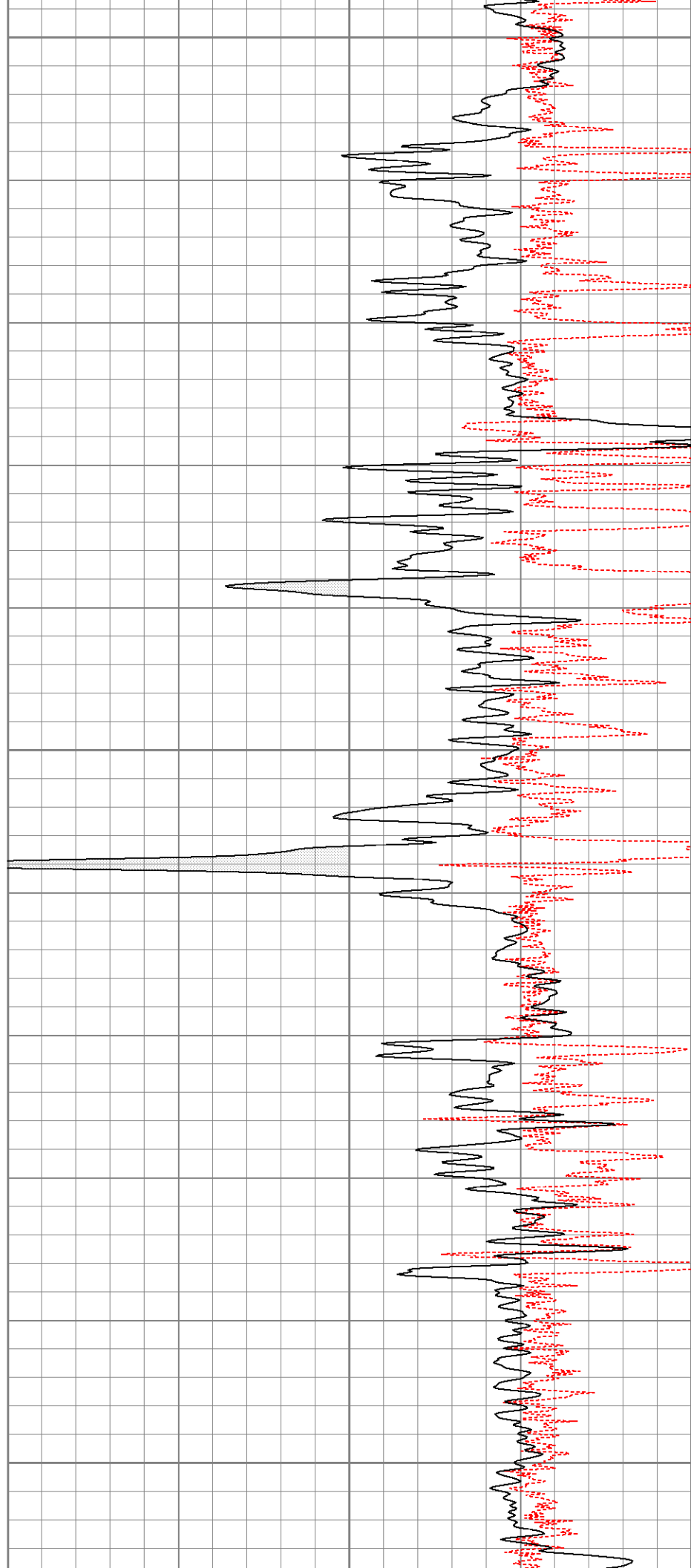


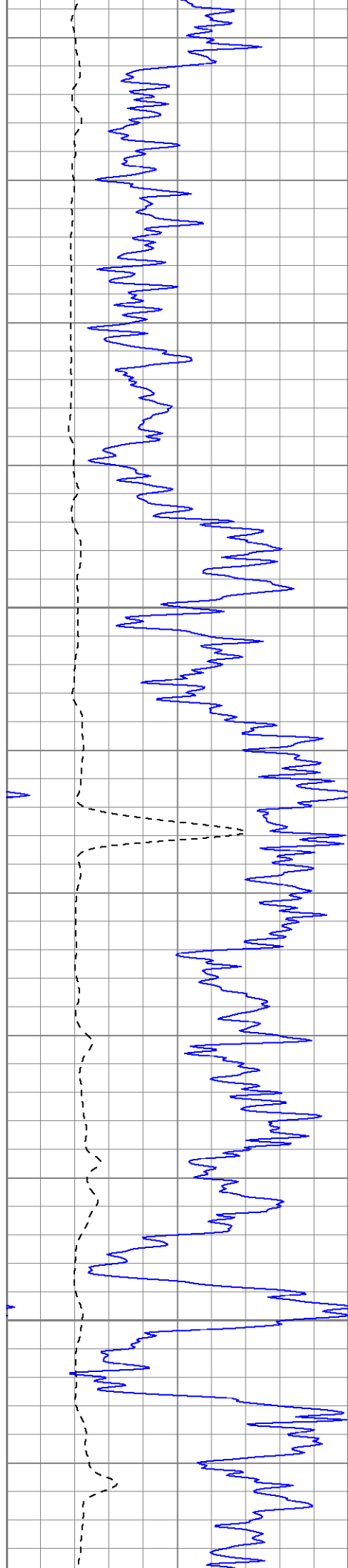


800

850

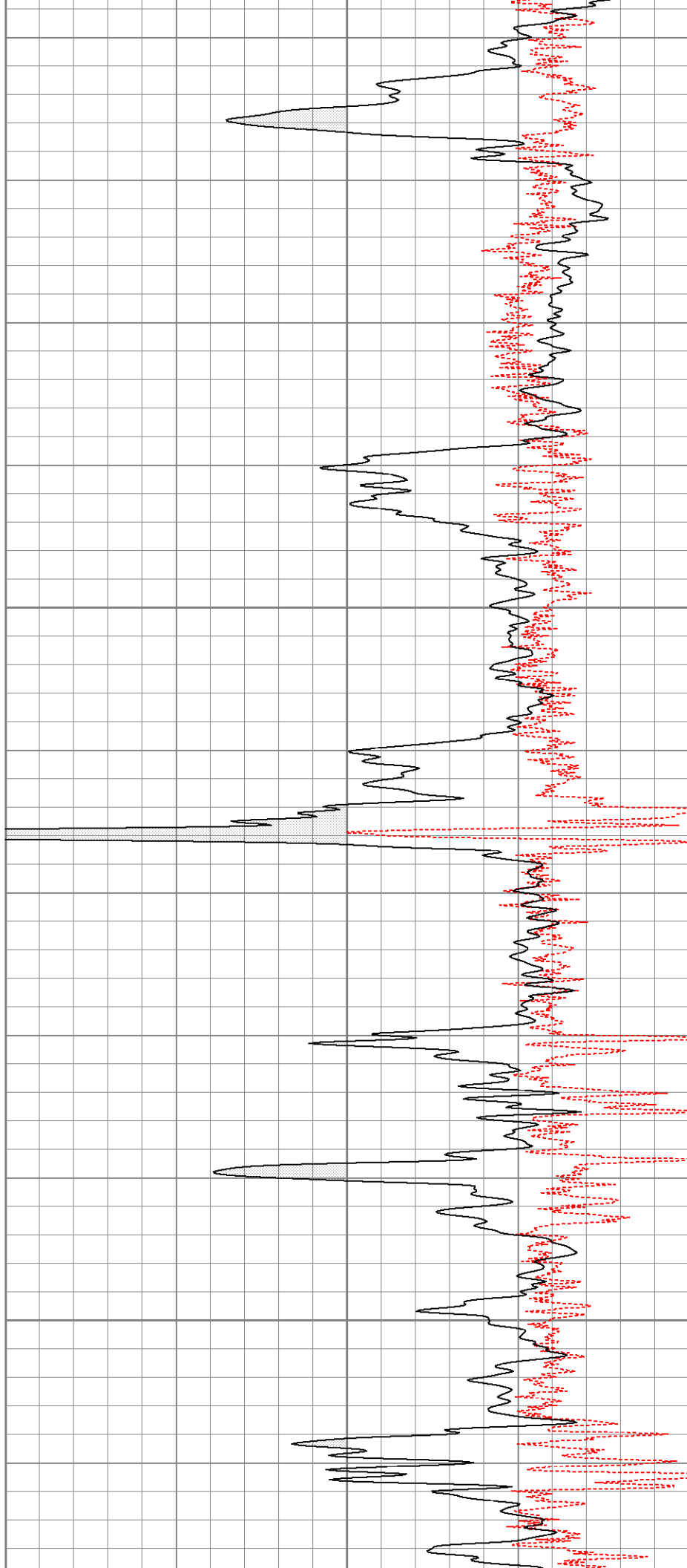
900

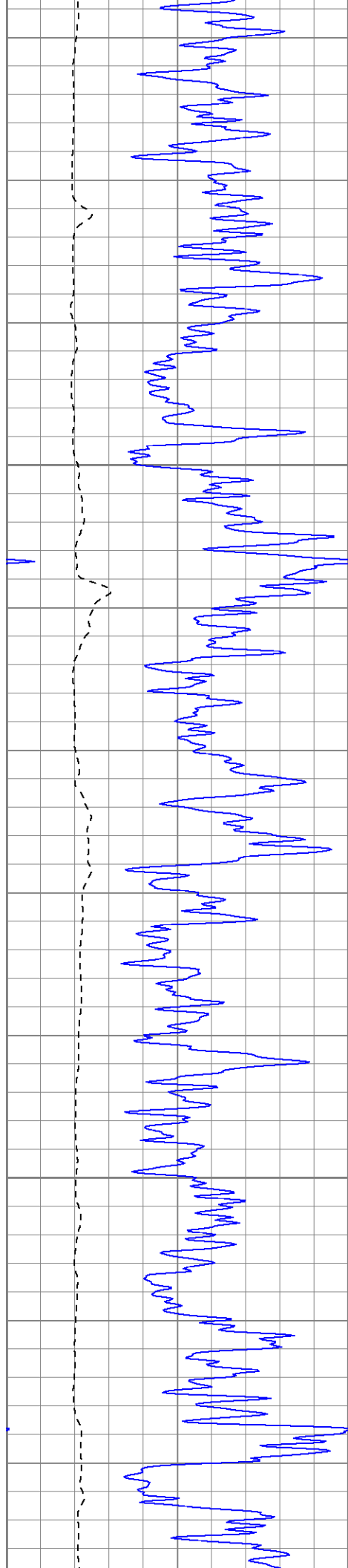




950

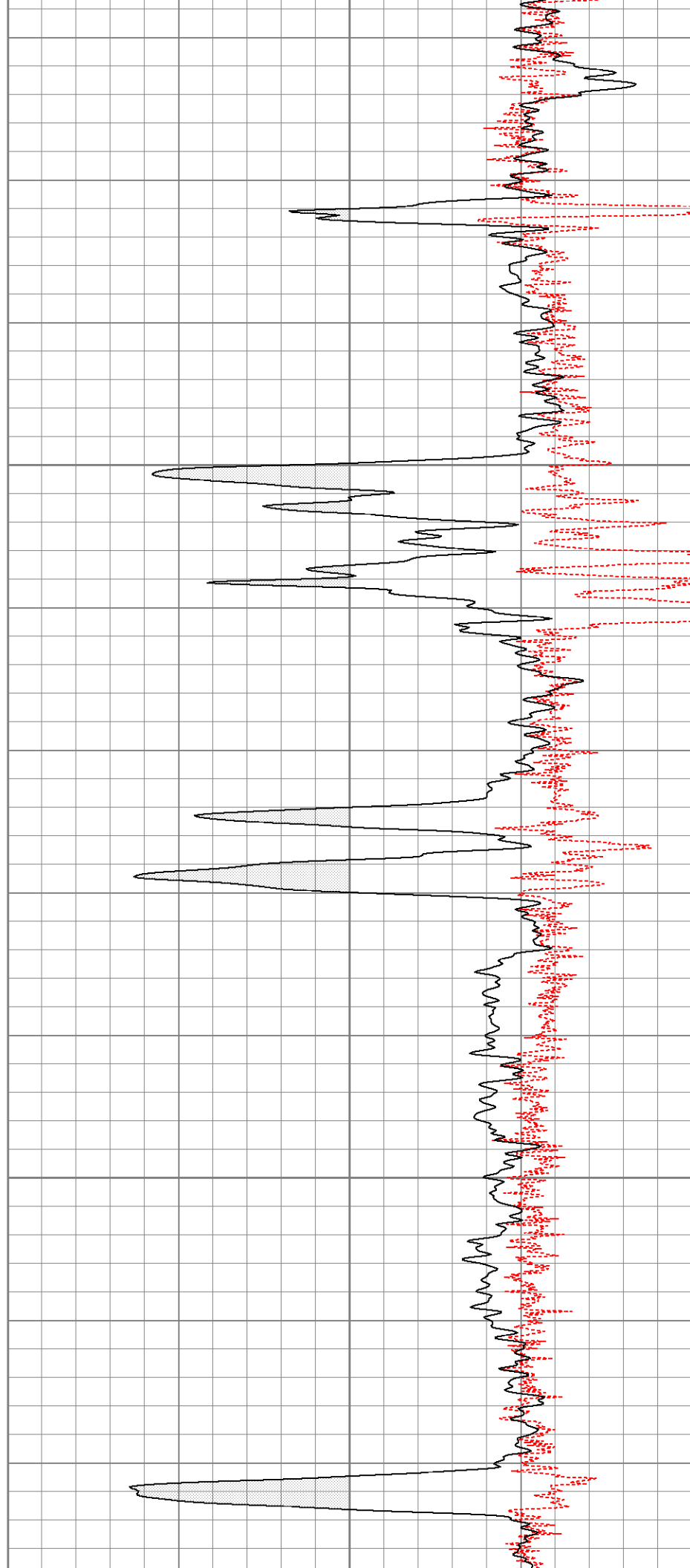
1000

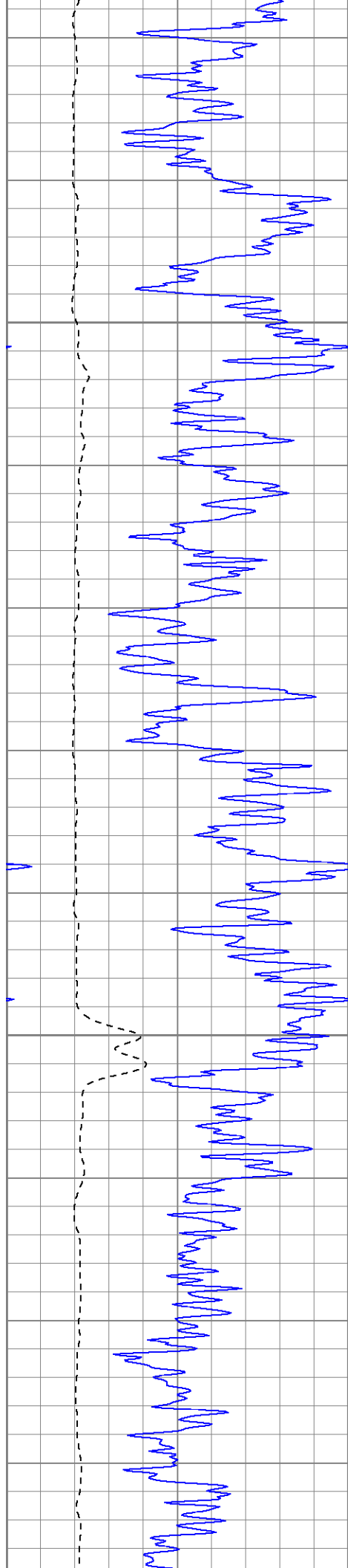




1050

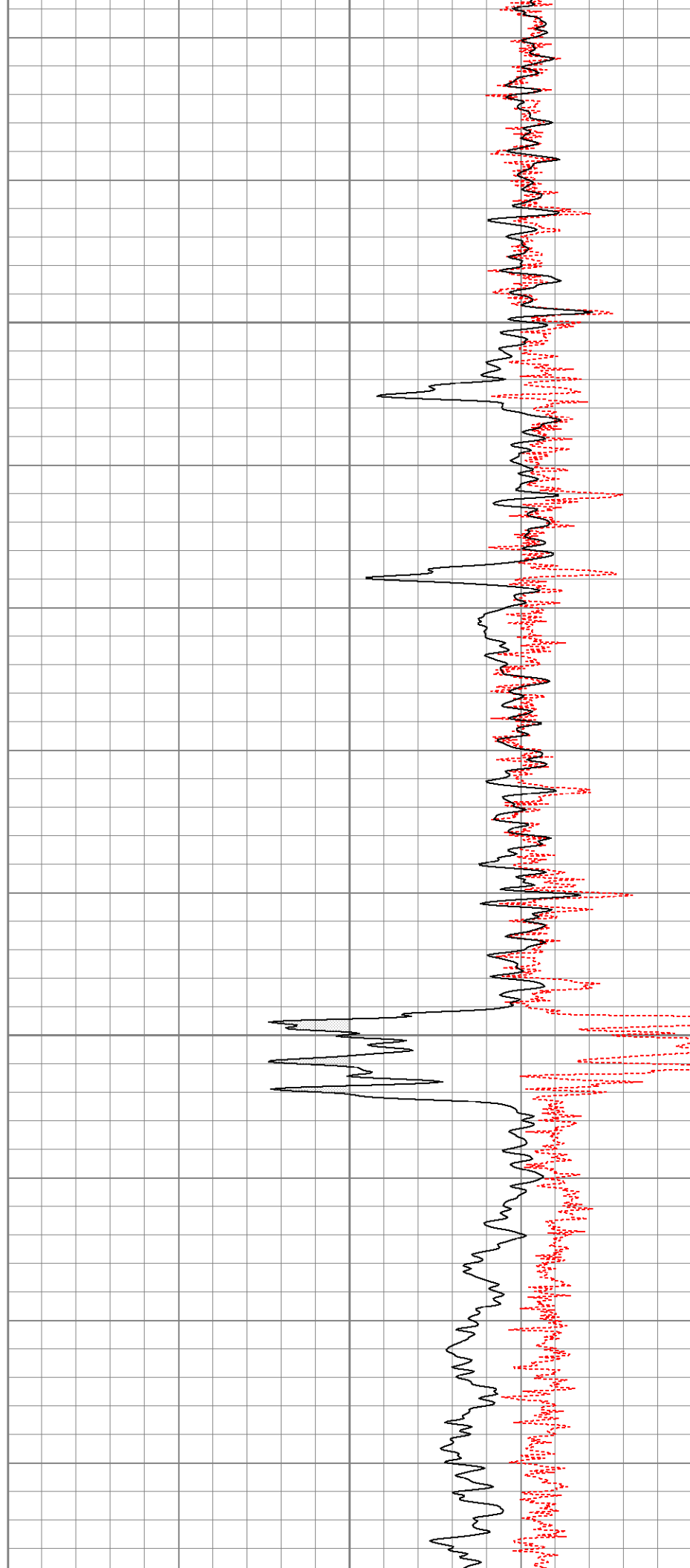
1100

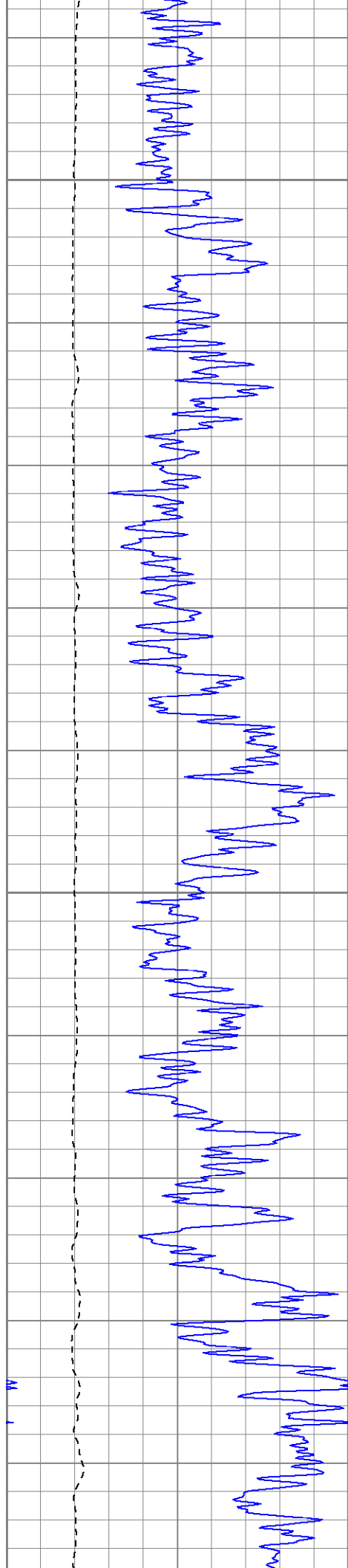




1150

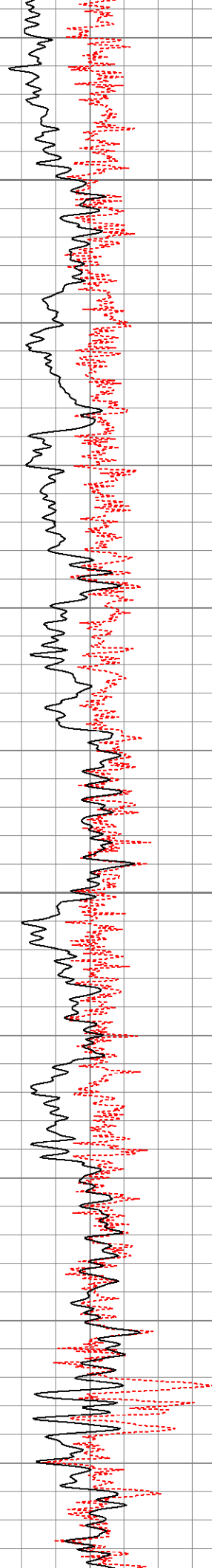
1200

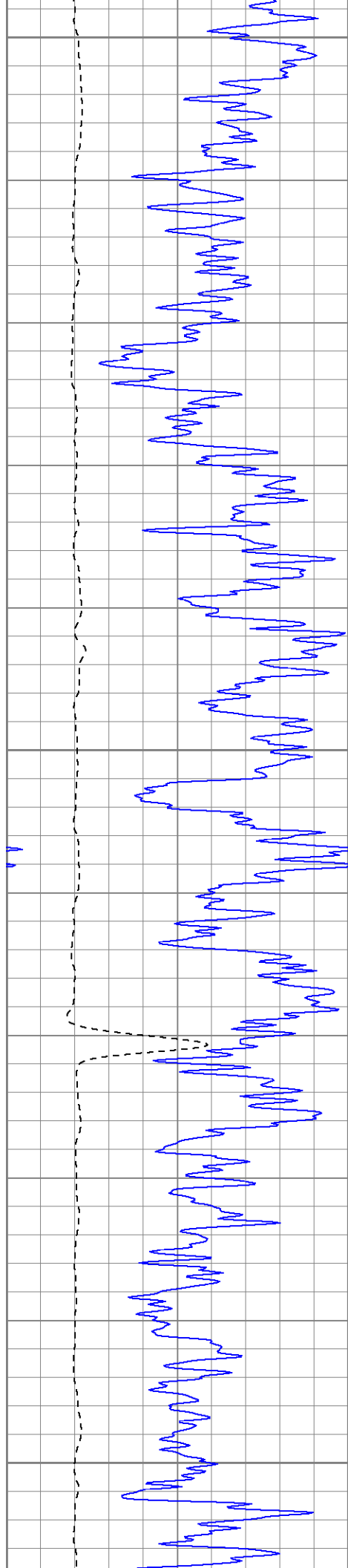




1250

1300

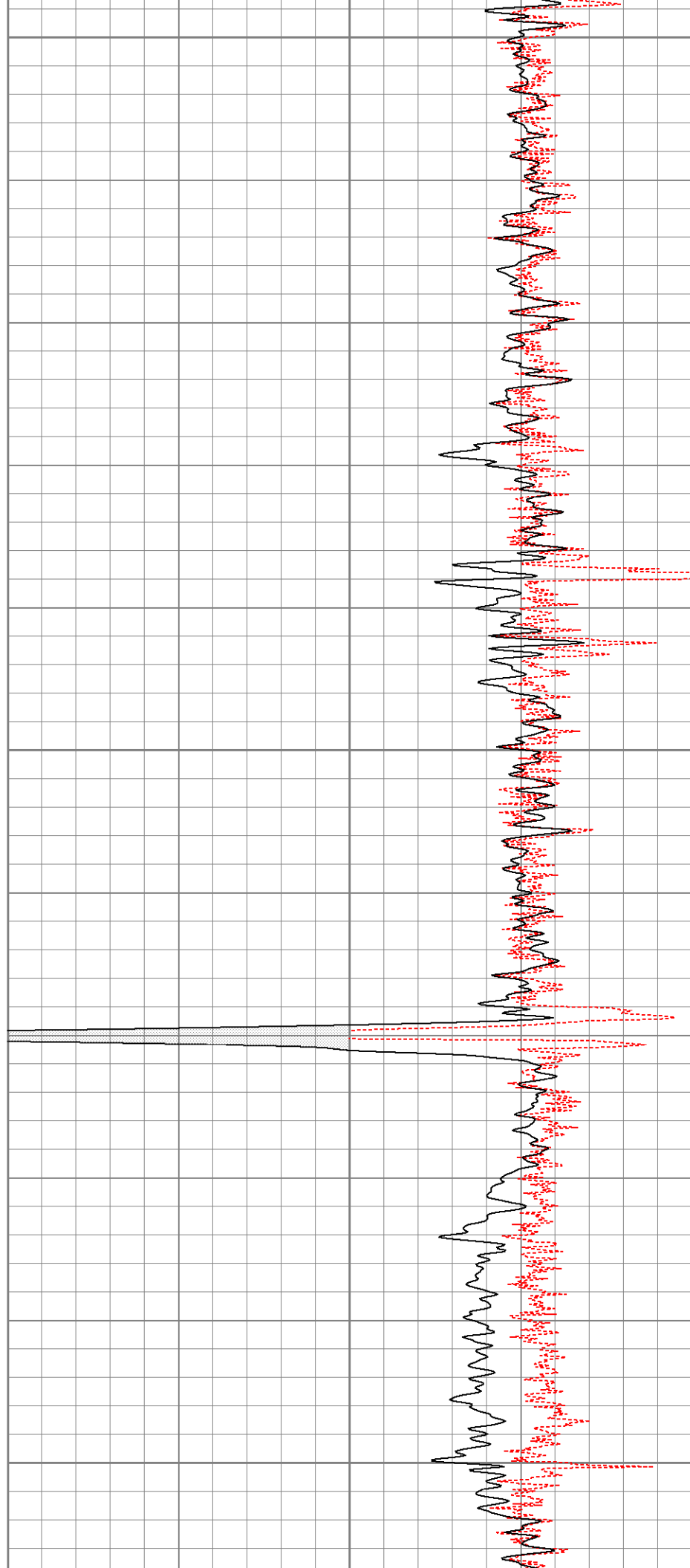


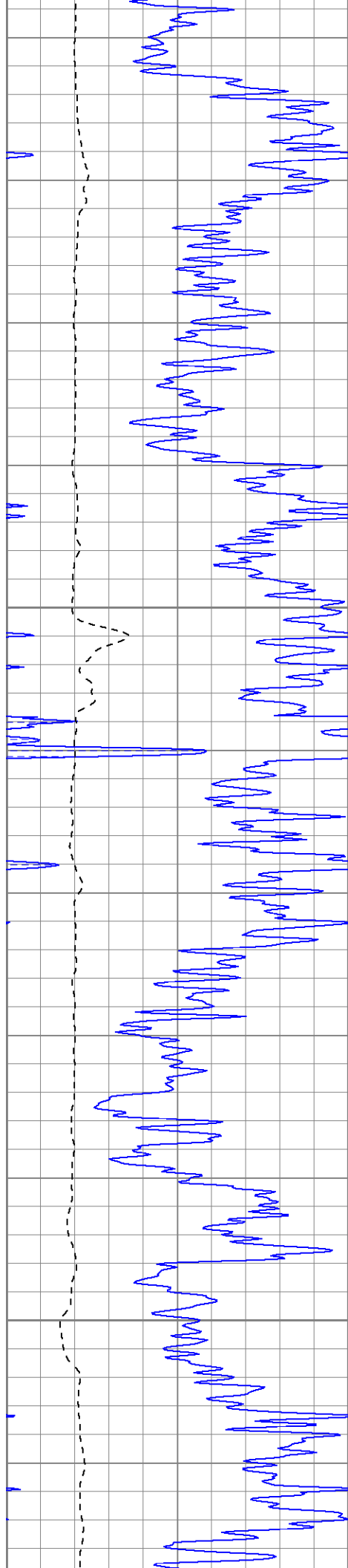


1350

1400

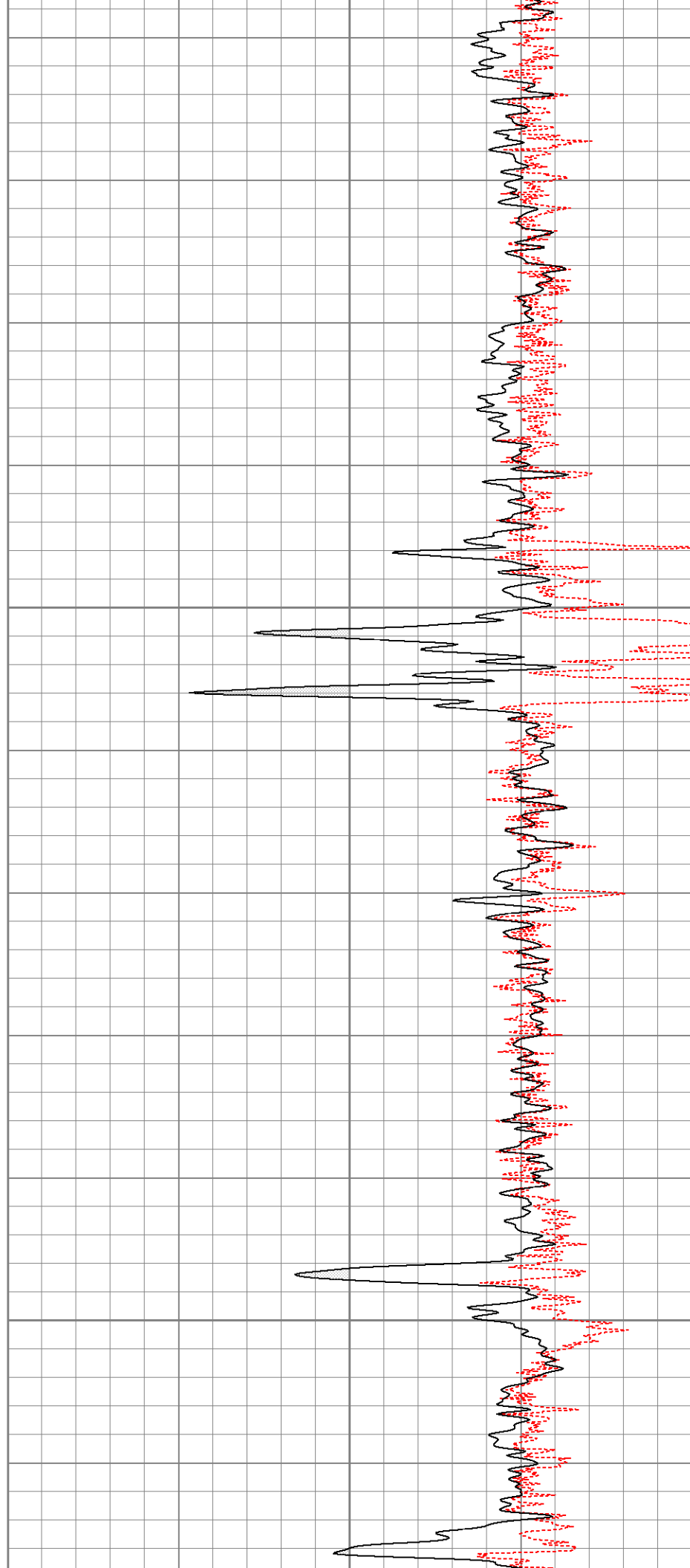
1450

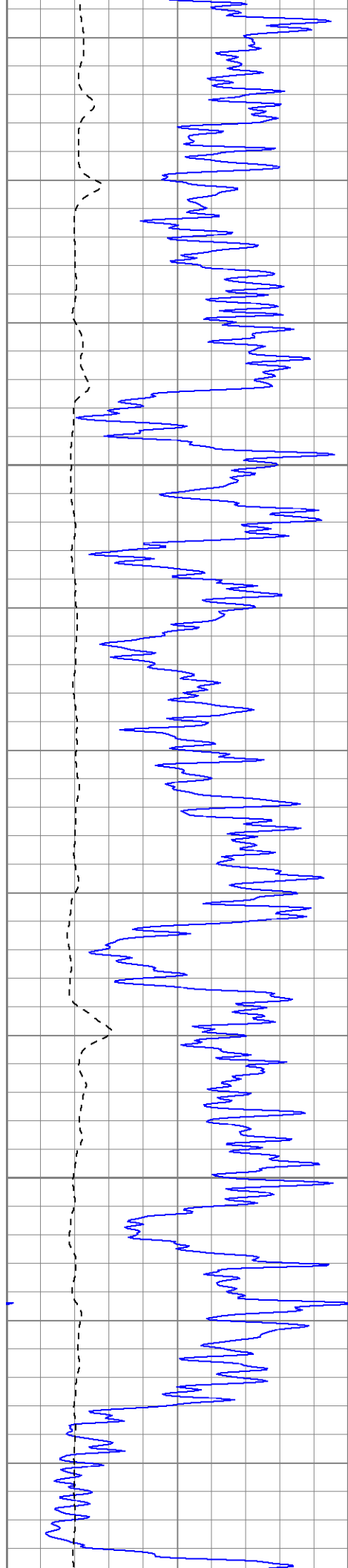




1500

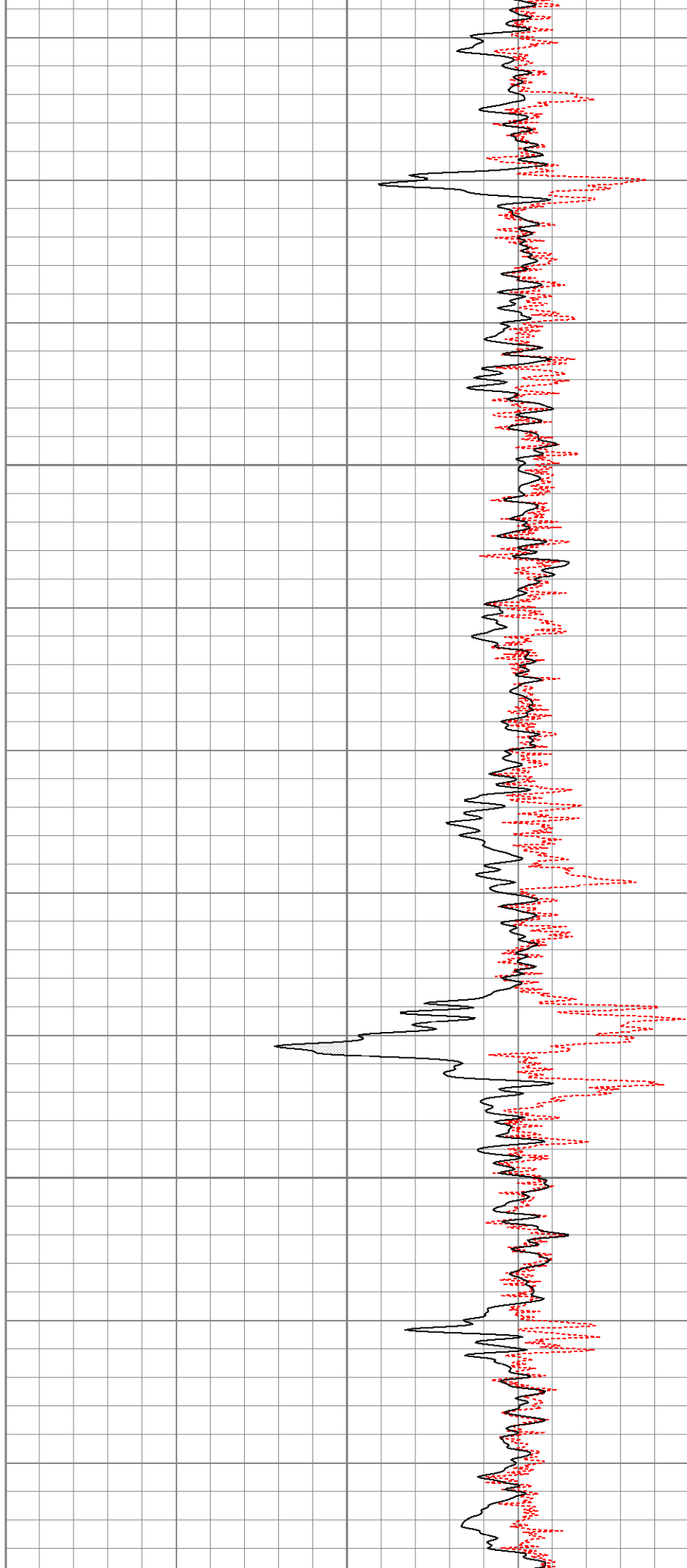
1550

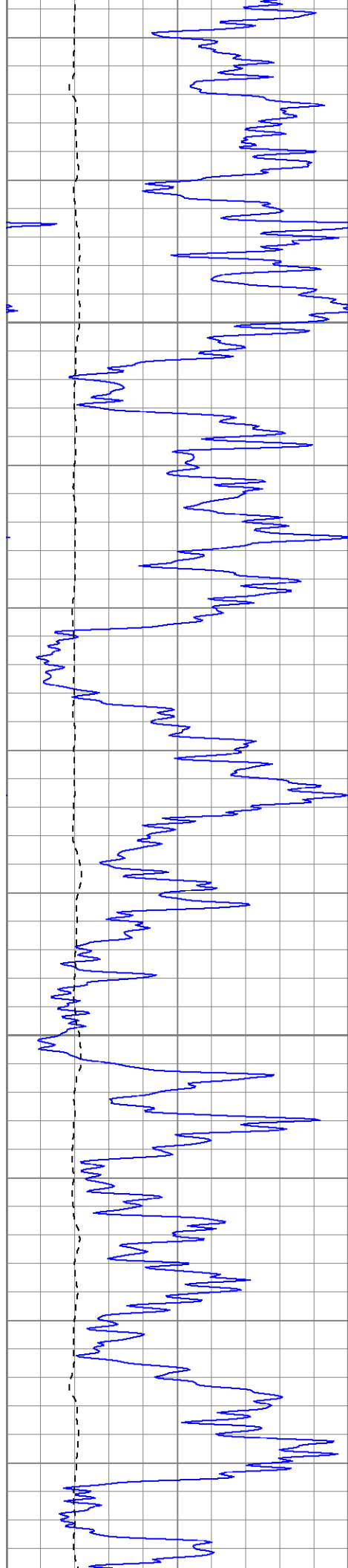




1600

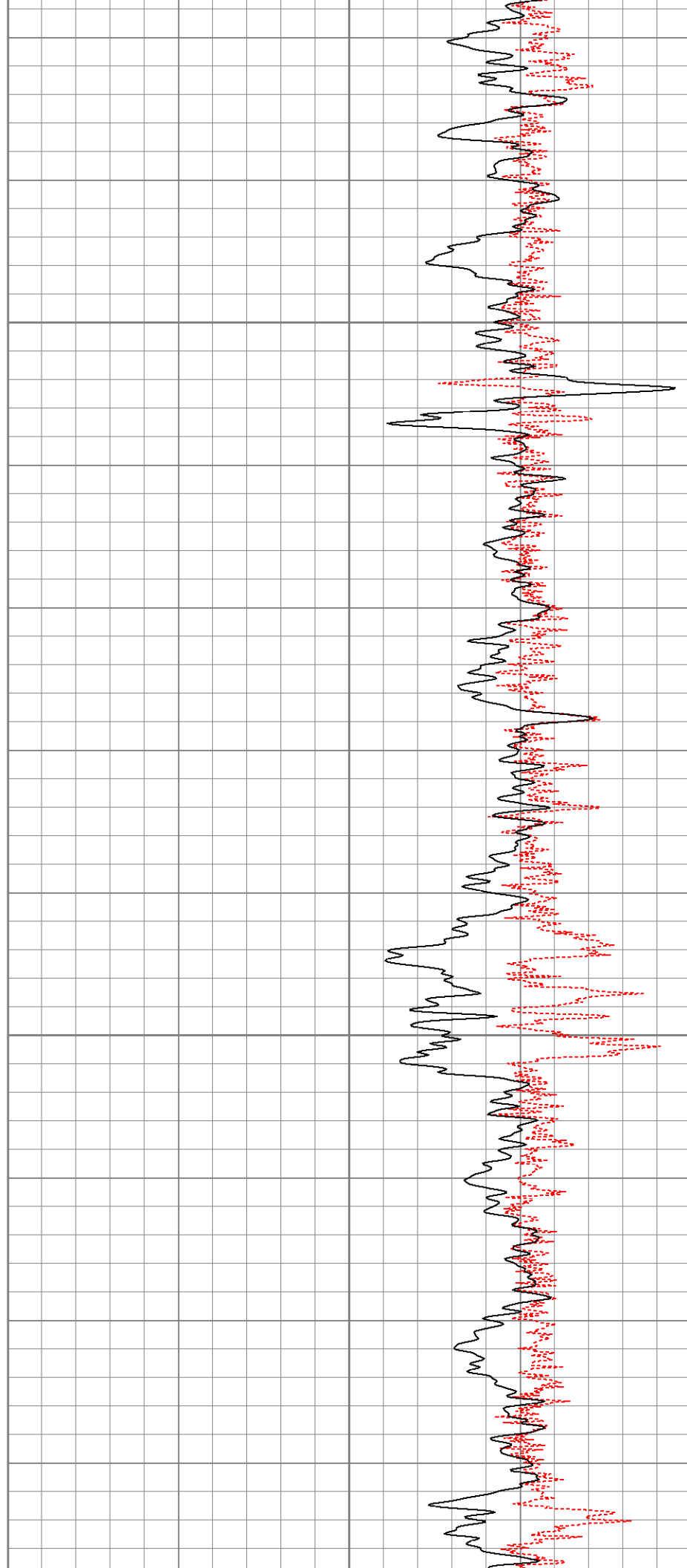
1650

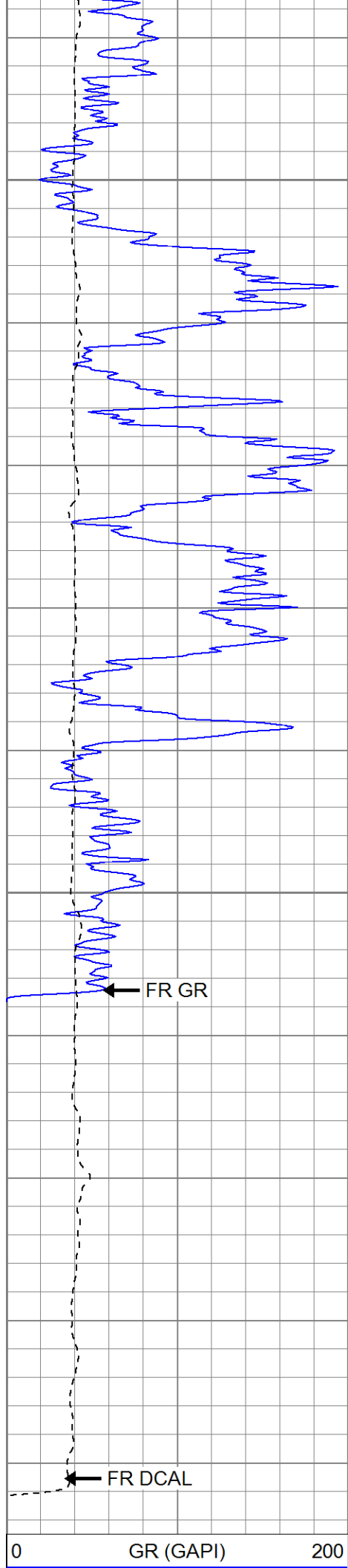




1700

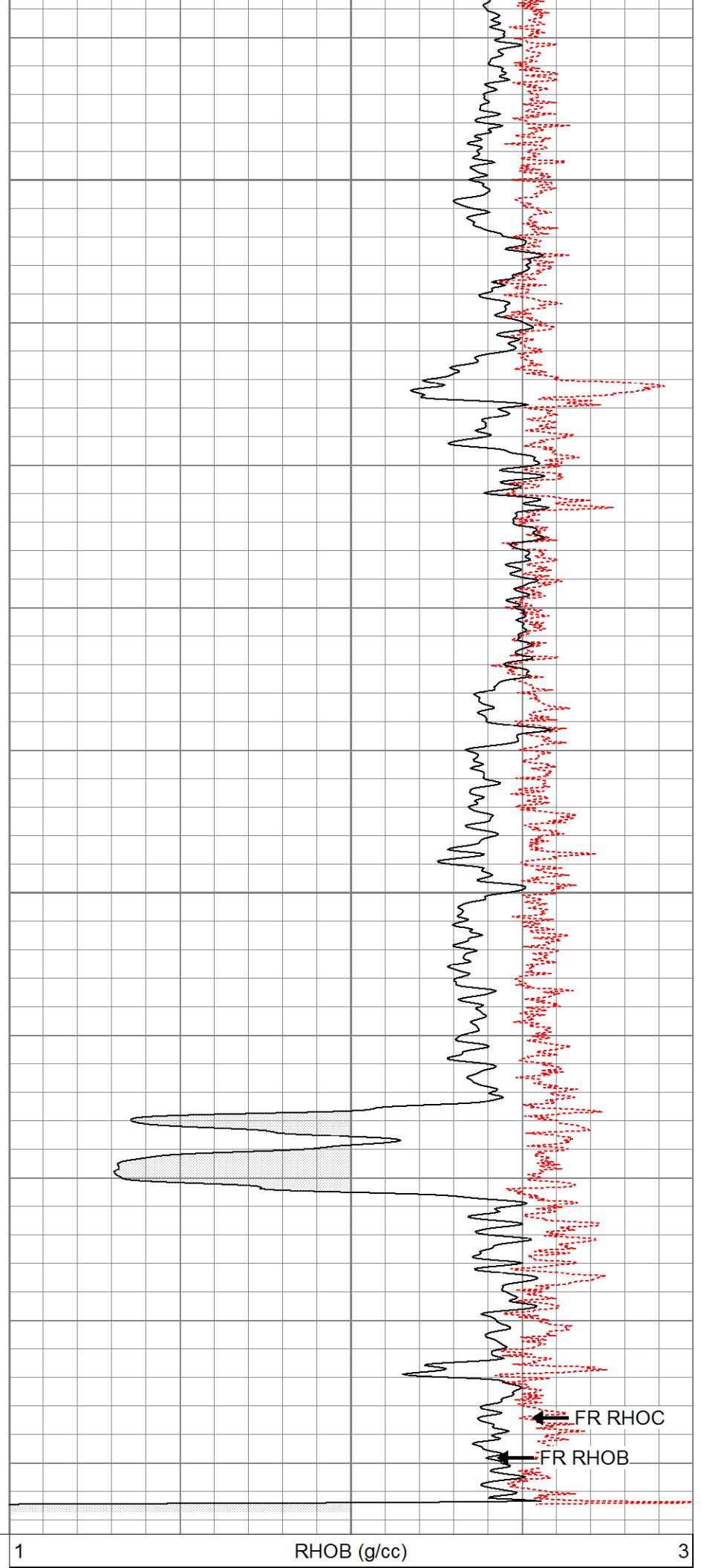
1750





1800

1850



6	DCAL (in)	16	-0.5	RHOC (g/cc)	0.5
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Calibration Report					
Database File:	xtohr06-04.db				
Dataset Pathname:	pass2				
Dataset Creation:	Sun Mar 08 12:06:52 2009 by Log Open-Cased 071220				

Dual Induction Calibration Report					
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Serial-Model:	5375-G
Surface Cal Performed:	Sun Mar 08 11:40:19 2009
Downhole Cal Performed:	Sun Mar 08 11:47:28 2009

Surface Calibration								
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.626	V	0.000	500.000	mmho-m	808.535	-6.509
Medium	0.009	0.748	V	0.000	550.000	mmho-m	743.848	-6.615
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.008	0.626	V	0.000	500.000	mmho-m	808.503	-6.356
Medium	0.009	0.748	V	0.000	550.000	mmho-m	744.032	-6.521

Downhole Calibration								
	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.271	499.817	mmho-m	-0.153	499.867	mmho-m	1.000	0.118
Medium	-0.041	550.005	mmho-m	-0.095	549.768	mmho-m	1.000	-0.054
Shallow	2.512	0.017	V	500.000	2.000	Ohm-m	125.000	-3.000

Compensated Density Calibration Report					
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Serial-Model:	901-2.75POH
Source / Verifier:	/
Master Calibration Performed:	Thu Mar 05 11:41:01 2009

Master Calibration					
	Density			Far Detector	Near Detector
Magnesium	1.710	g/cc		1032.51	516.27 cps
Aluminum	2.590	g/cc		184.87	256.60 cps
Spine Angle = 67.88			Density/Spine Ratio = 0.474		
	Size			Reading	
Small Ring	8.00	in		2.55	V
Large Ring	17.00	in		4.60	V

Neutron Calibration Report					
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Serial Number:	803
Tool Model:	2.75POH
Performed:	Fri Feb 27 11:14:22 2009

Calibrator Value:	1	NAPI
Calibrator Reading:	1	cps
Sensitivity:	1	NAPI/cps
Gamma Ray Calibration Report		
Serial Number:	804	
Tool Model:	2.75POH	
Performed:	Fri Feb 27 10:14:54 2009	
Calibrator Value:	200.0	GAPI
Background Reading:	50.0	cps
Calibrator Reading:	250.0	cps
Sensitivity:	0.6000	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	37.81		None	0.75	1.50	5.00
			GR-2.75POH (804) Probe	3.73	2.75	43.00
NEU	32.27		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00
LSD DCAL SSD	24.44		CDL-2.75POH (901) Probe	8.43	2.75	106.00
	24.16					
	23.91					
			Probe	0.89	3.50	20.00
CILD SP	10.60		DIL-G (5375) Gearhart	20.80	4.00	345.00
	10.60					
CILM	6.89					

RLL3	1.70				
<p>Dataset: xtohr06-04.db: field/well/run1/pass2</p> <p>Total Length: 39.34 ft</p> <p>Total Weight: 577.00 lb</p> <p>O.D. 4.00 in</p>					