



Pioneer Energy Services

CEMENT BOND GAMMA RAY CCL LOG

Company AUGUSTUS ENERGY RESOURCES LLC
Well COOPER 24-34 54N47W
Field BUFFALO GRASS
County YUMA
State COLORADO

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Field BUFFALO GRASS
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Location: 310 FSL & 1997 FWL SESW
SEC 34 TWP 4 RGE 47W
Permanent Datum GL Elevation 3986'
Log Measured From KB 6' AGL
Drilling Measured From KB
Other Services
Elevation
K.B. 3992
D.F. 3991
G.L. 3986

Date	28-OCT-2014
Run Number	ONE
Depth Driller	2980'
Depth Logger	2796'
Bottom Logged Interval	2796'
Top Log Interval	SURFACE
Open Hole Size	6.25
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	105 DEG F OHL
Estimated Cement Top	
Time Well Ready	4:00
Time Logger on Bottom	4:30
Equipment Number	P-75
Location	FT MORGAN
Recorded By	HARPER
Witnessed By	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record		Size		Wgt/Ft		Top	Bottom
Surface String							
Prot. String							
Production String							
Liner							

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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

LOG CORRELATED TO
PIONEER
HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON
DATED: OCTOBER 19, 2014

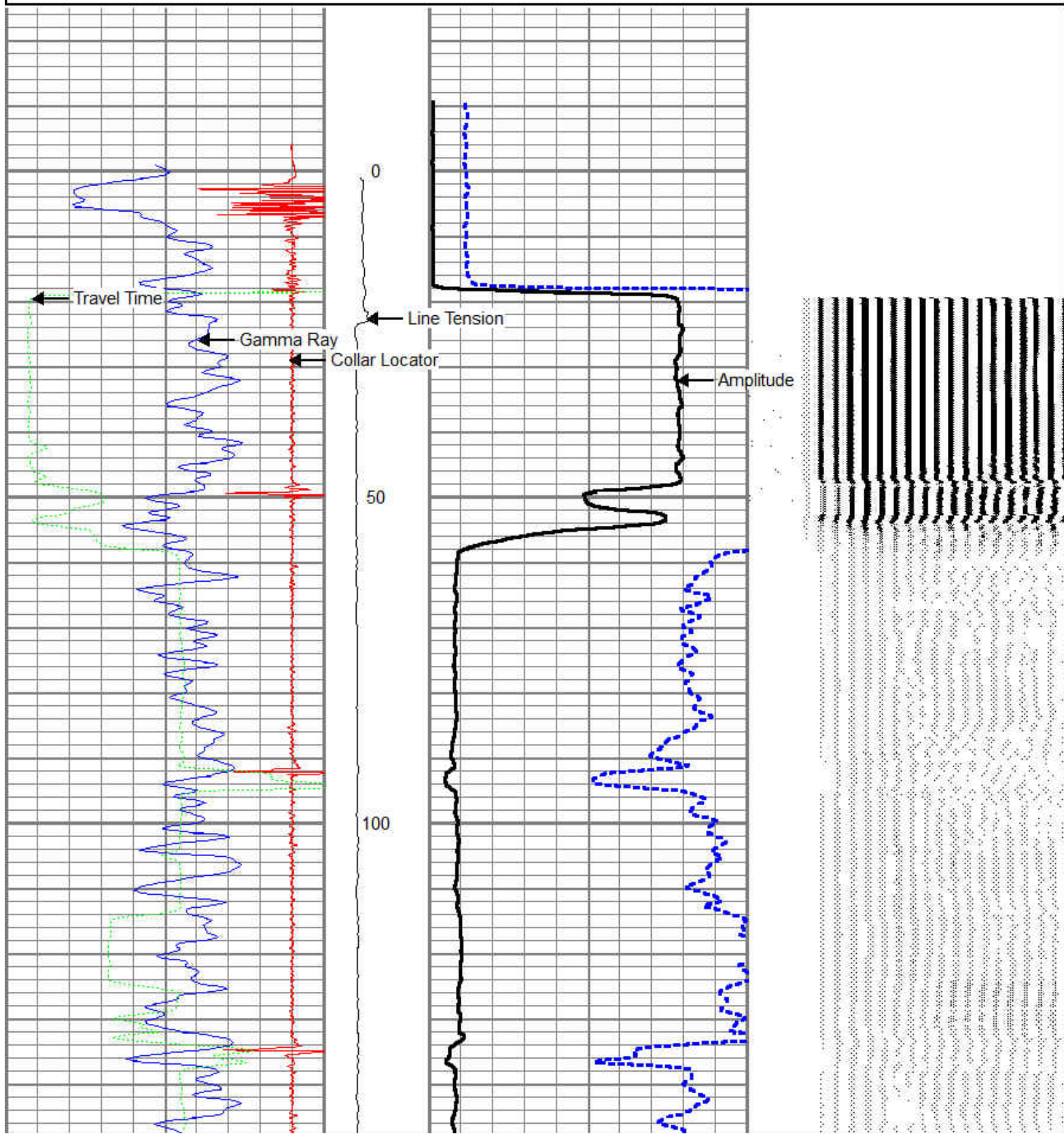
SHORT JOINT: 2527-48'

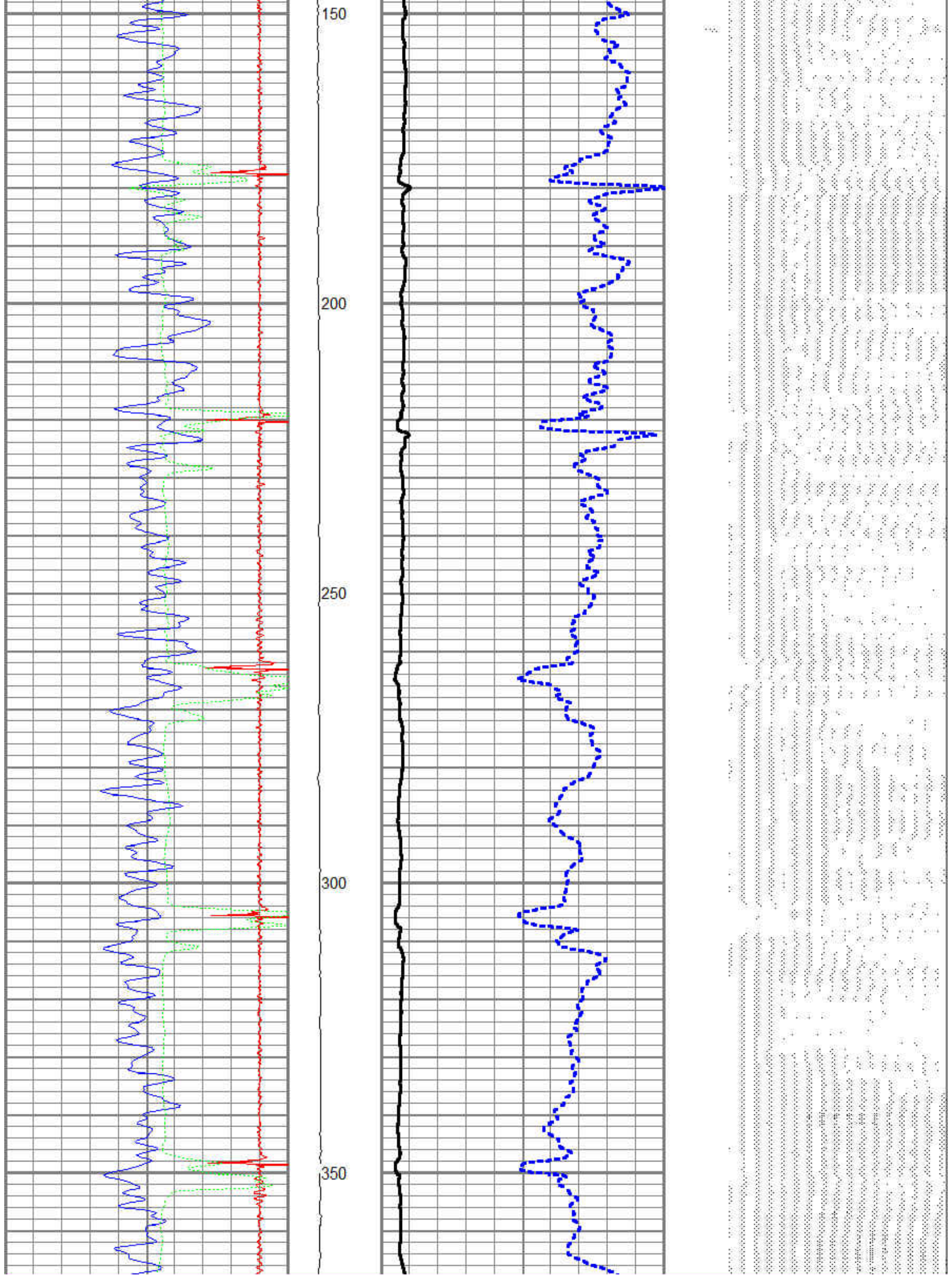
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)

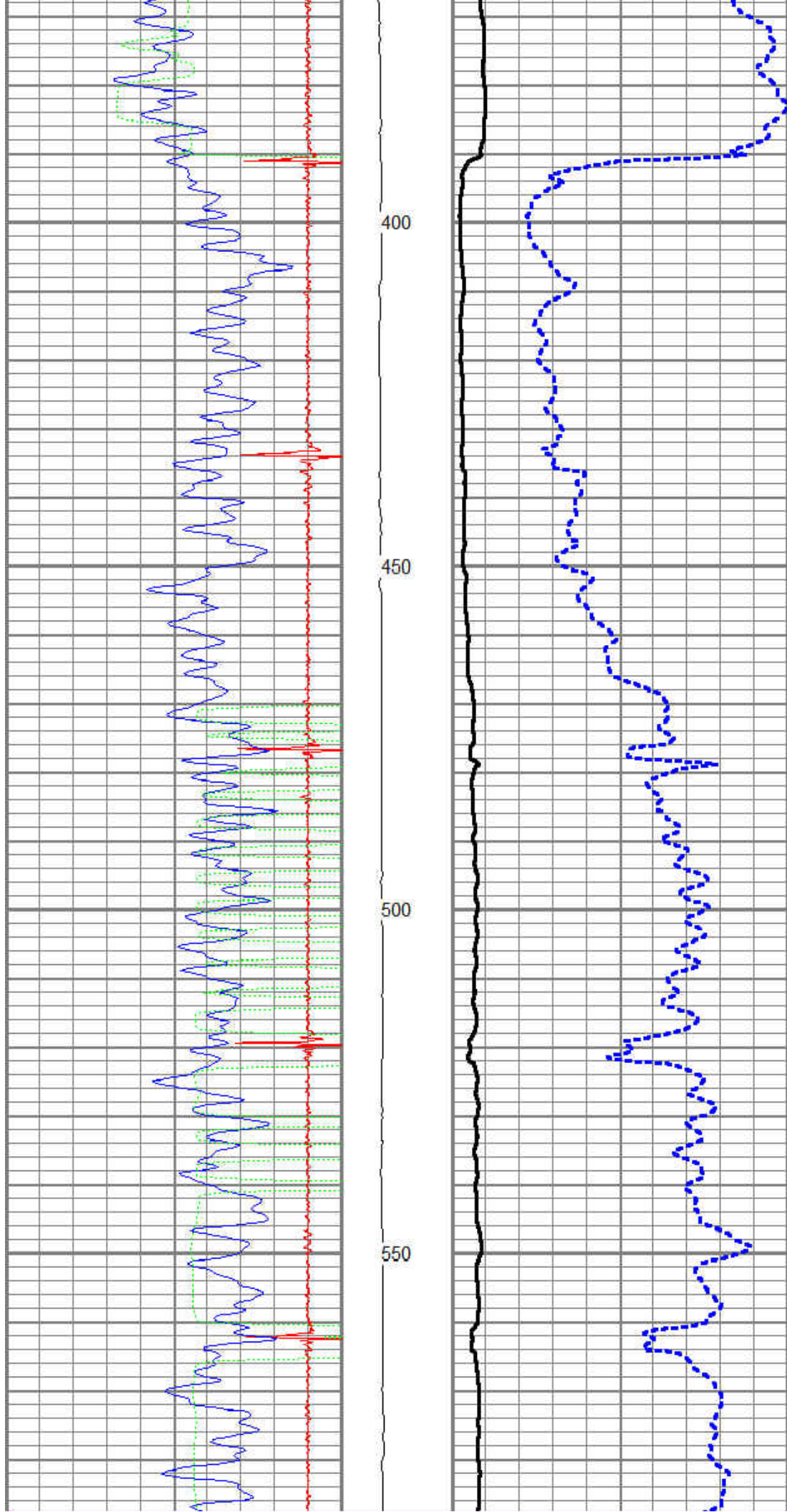
			SDSCENT Centralizer for testing	3.00	3.25	20.00
WVF3	13.25		CBL-Probe (050215) Probe 2.75" Dual Receiver Bond	8.75	2.75	60.00
WVF5	12.25					
			SDSCENT Centralizer for testing	3.00	3.25	20.00
CCL	5.17		CCL-Probe (275)	1.42	2.75	
GR	3.79		GR-Probe275 (030606)	3.33	2.75	57.00
TEMP	0.08		TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00
Dataset: august cooper 23-34 54n47w.db: field/well/run1/pass5 Total Length: 20.75 ft Total Weight: 187.00 lb O.D.: 3.25 in						

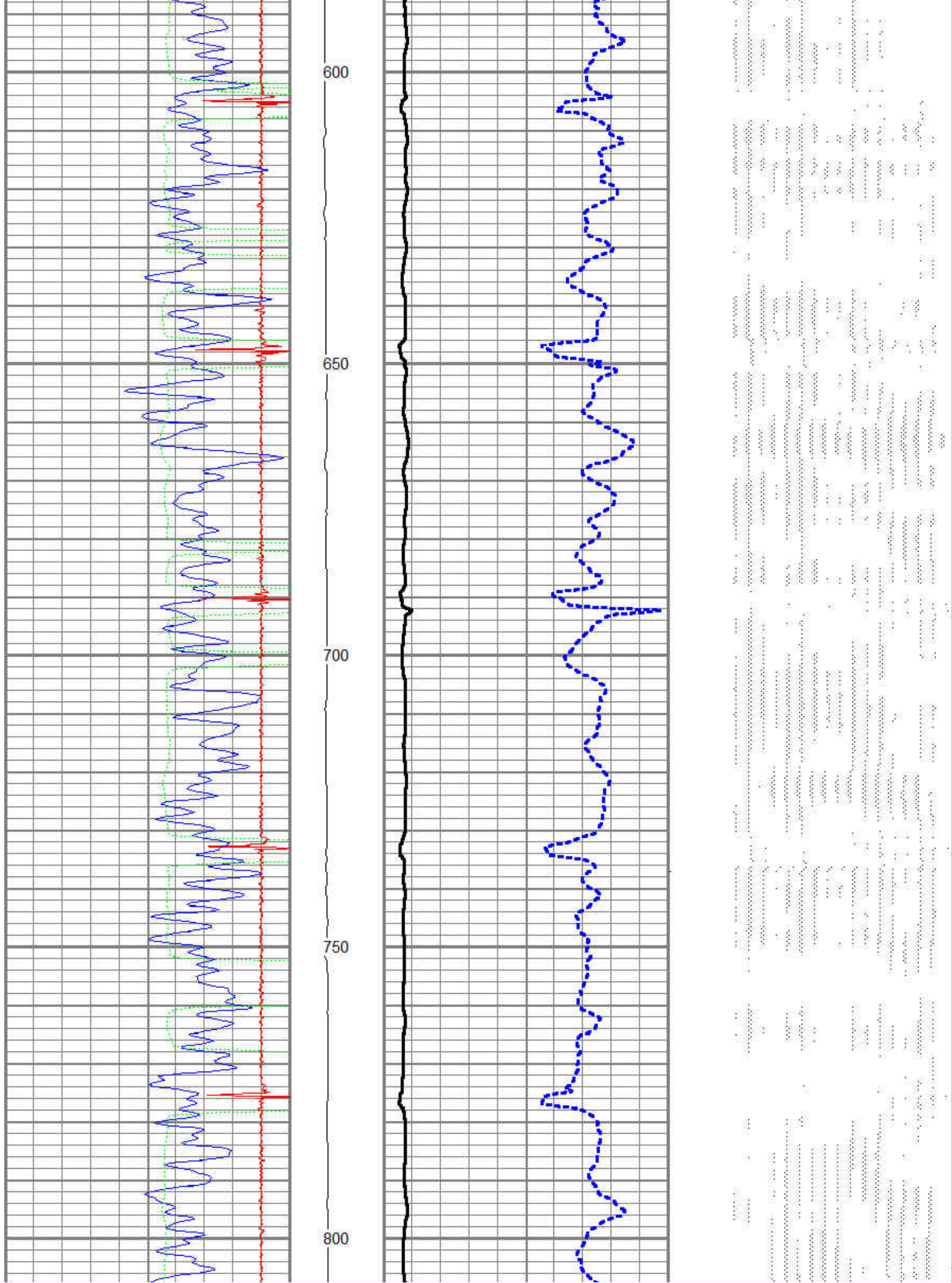
Database File: august cooper 23-34 54n47w.db
 Dataset Pathname: pass5
 Presentation Format: cbl_dr
 Dataset Creation: Tue Oct 28 16:17:34 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240

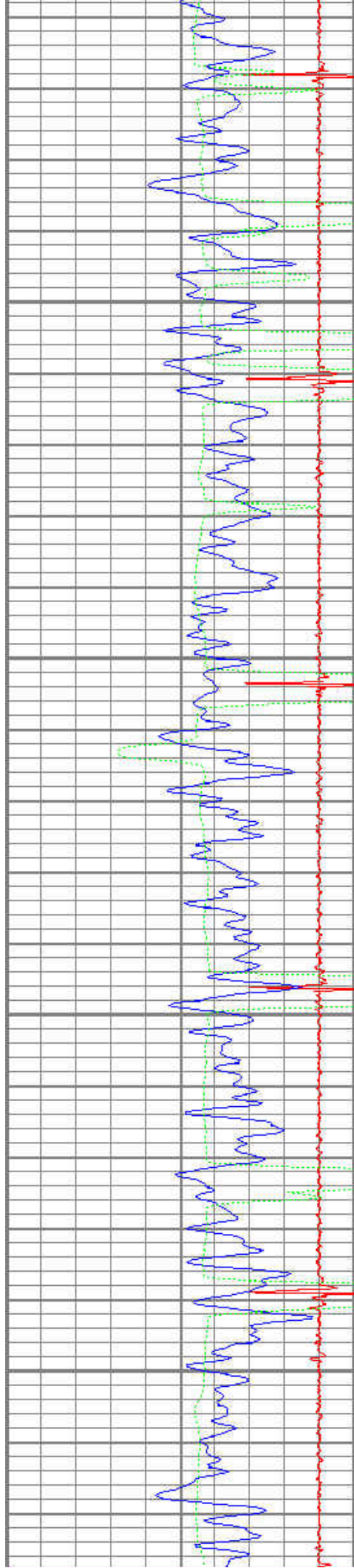
9	Collar Locator	-1	Line Tension	0	Amplified Amplitude (mV)	10	200	Variable Density	1200
0	Gamma Ray (GAPI)	200	0 (lb/1000)	0	Amplitude (mV)	100			
250	Travel Time (usec)	450							









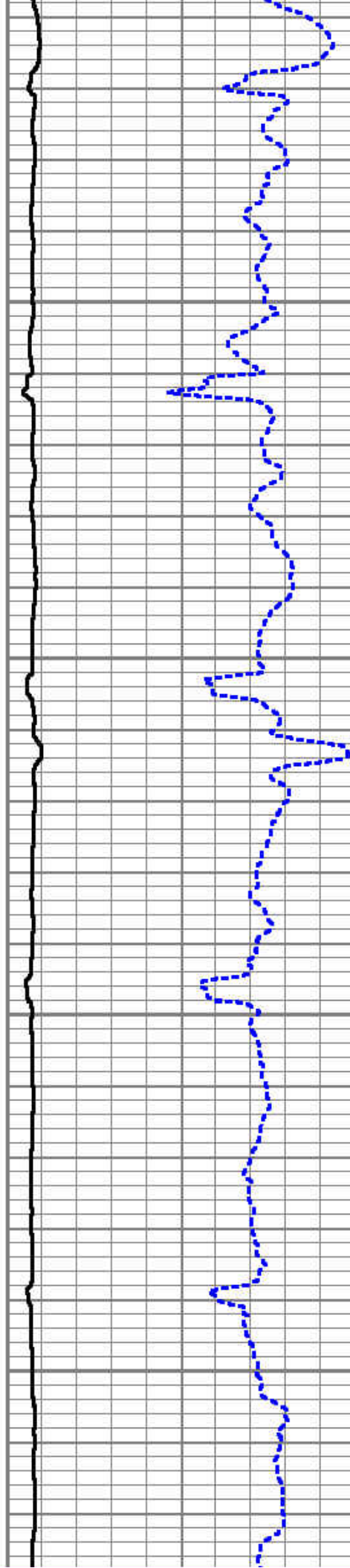


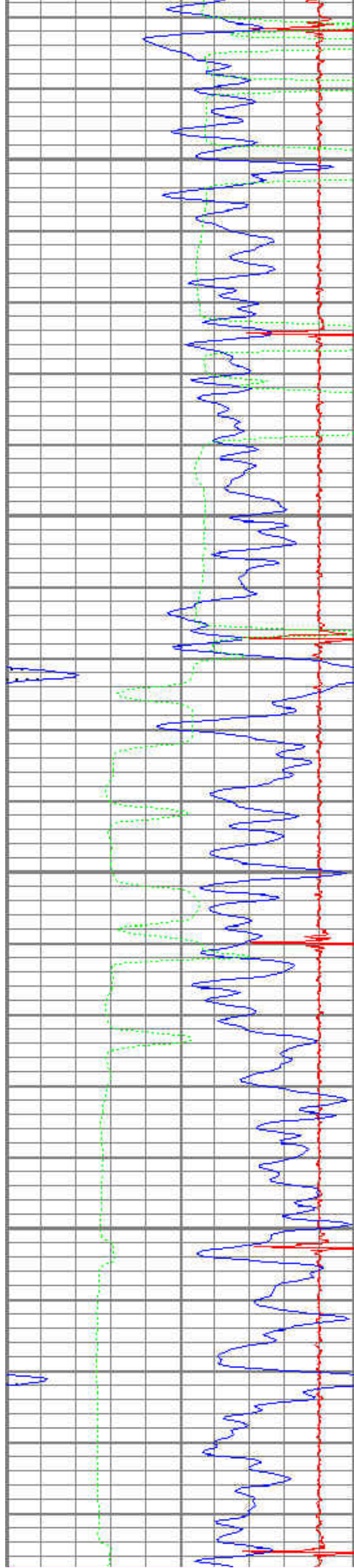
850

900

950

1000



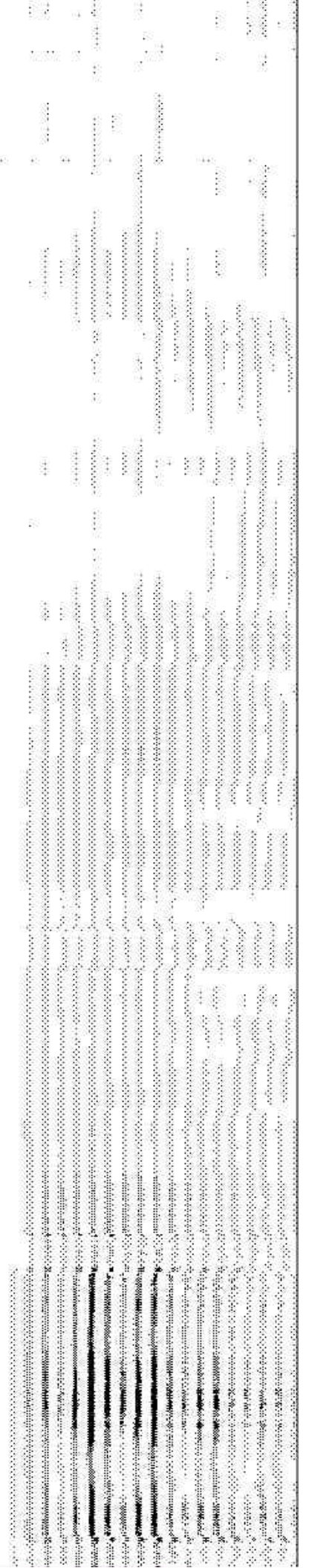
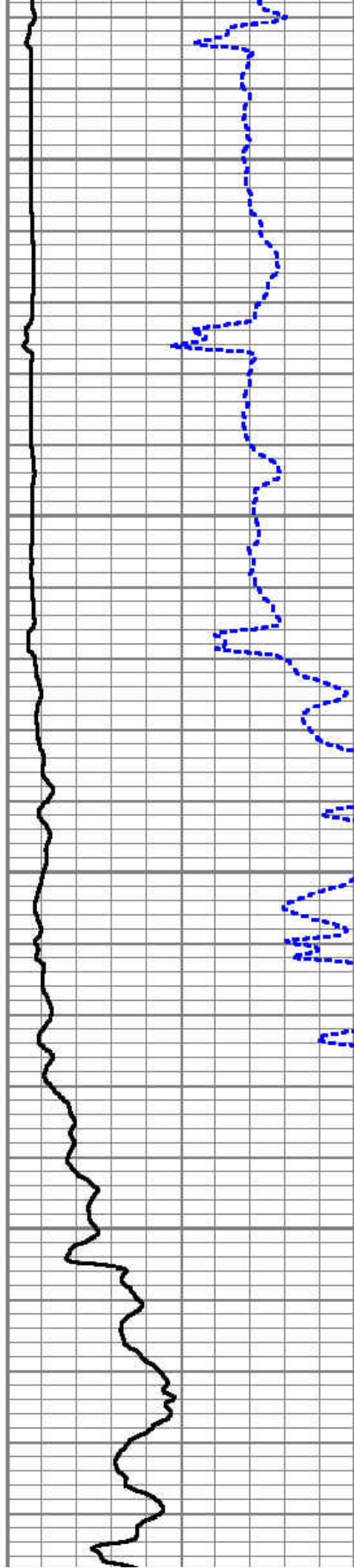


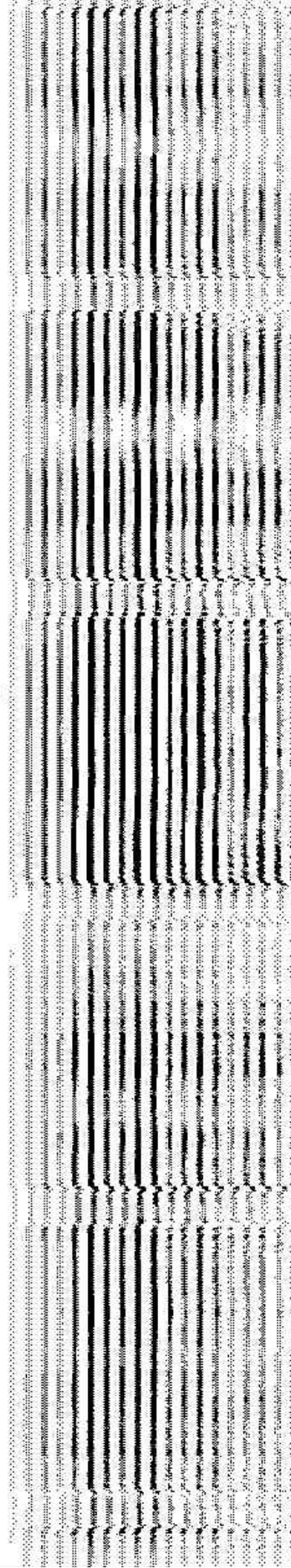
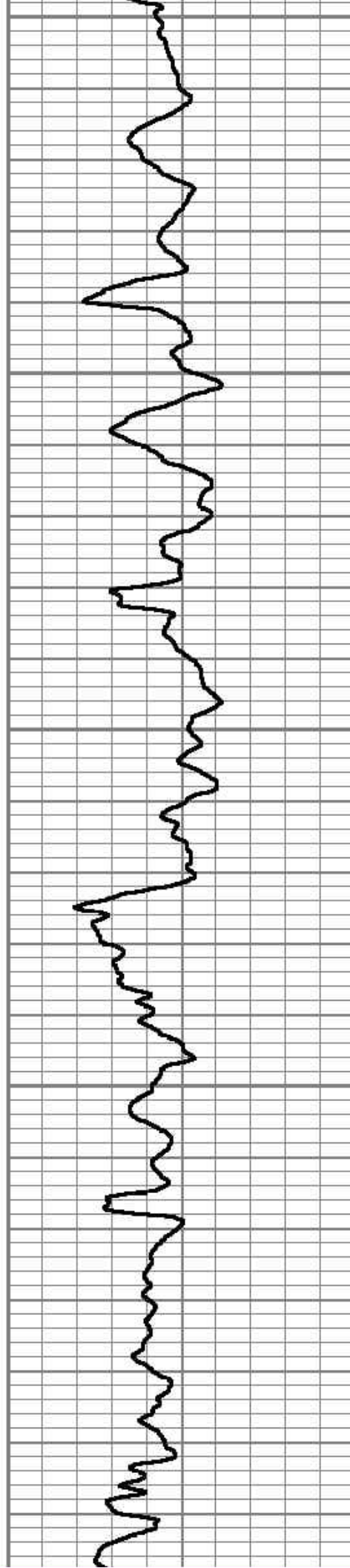
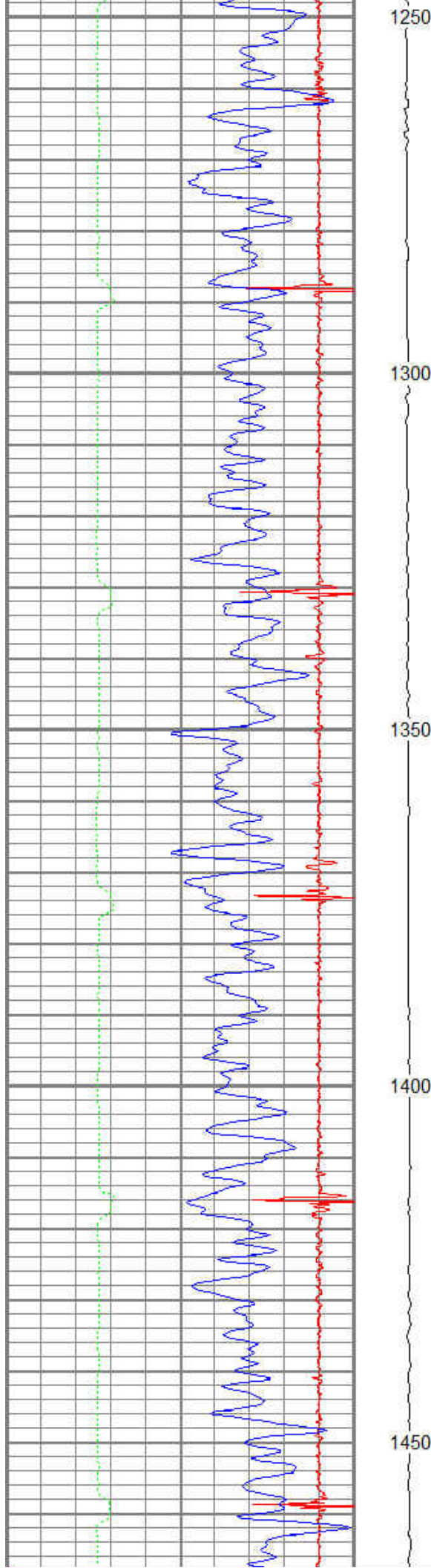
1050

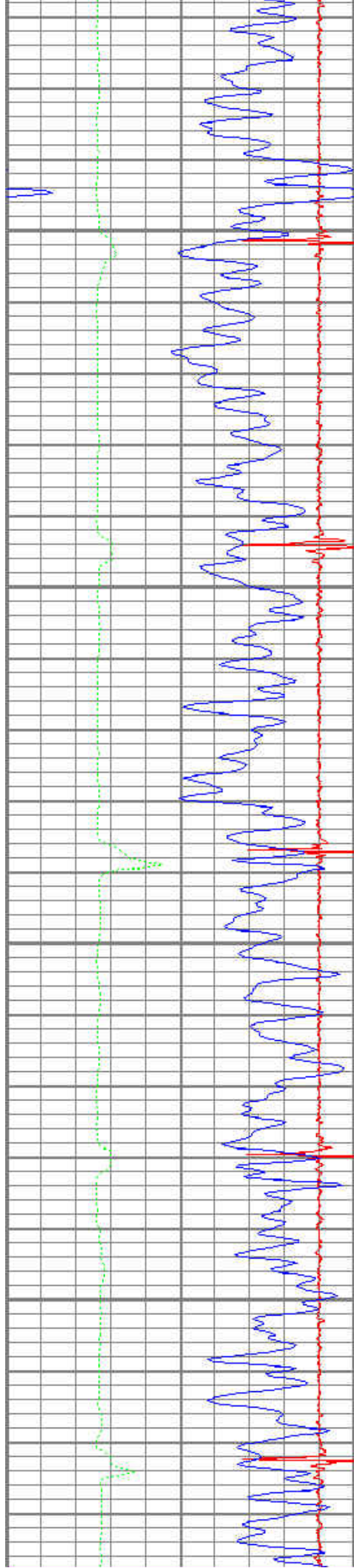
1100

1150

1200





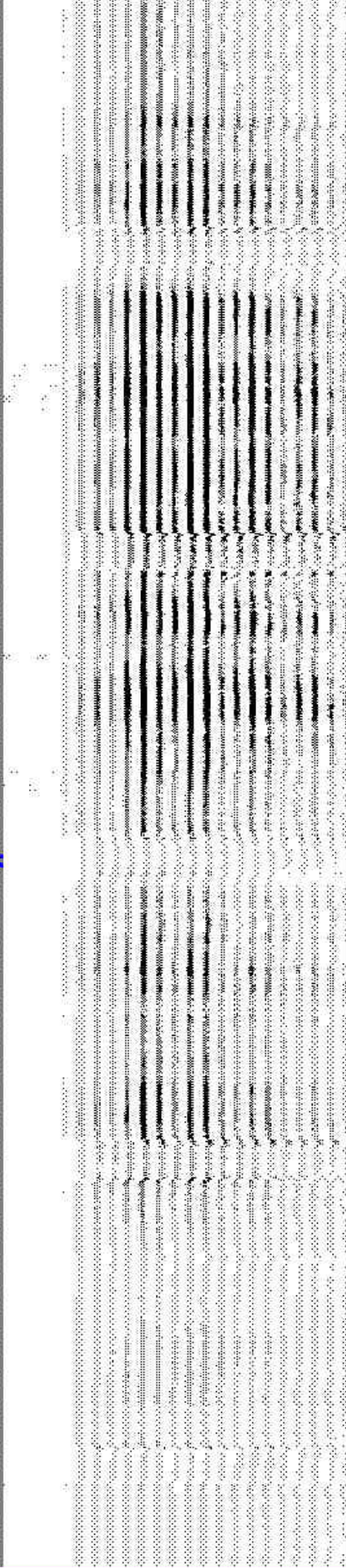
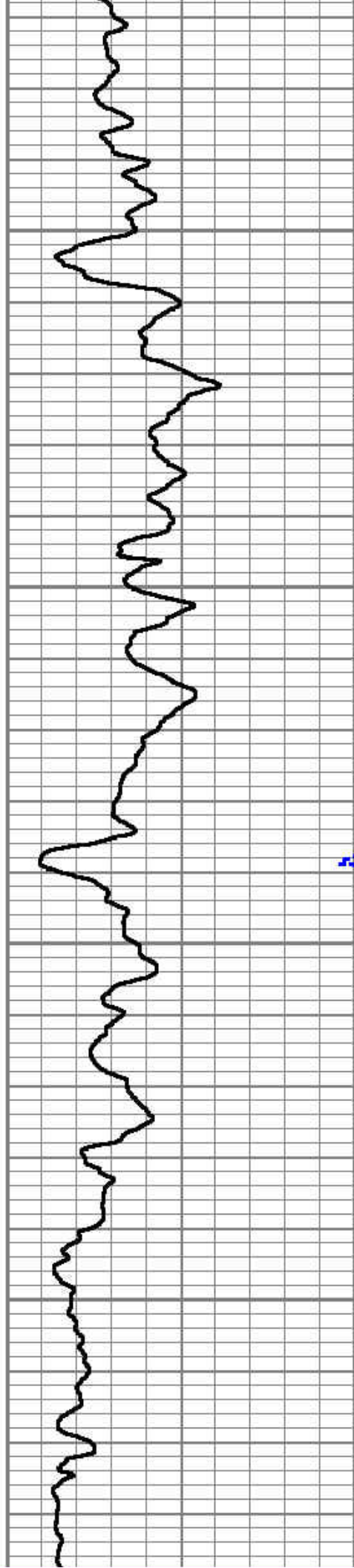


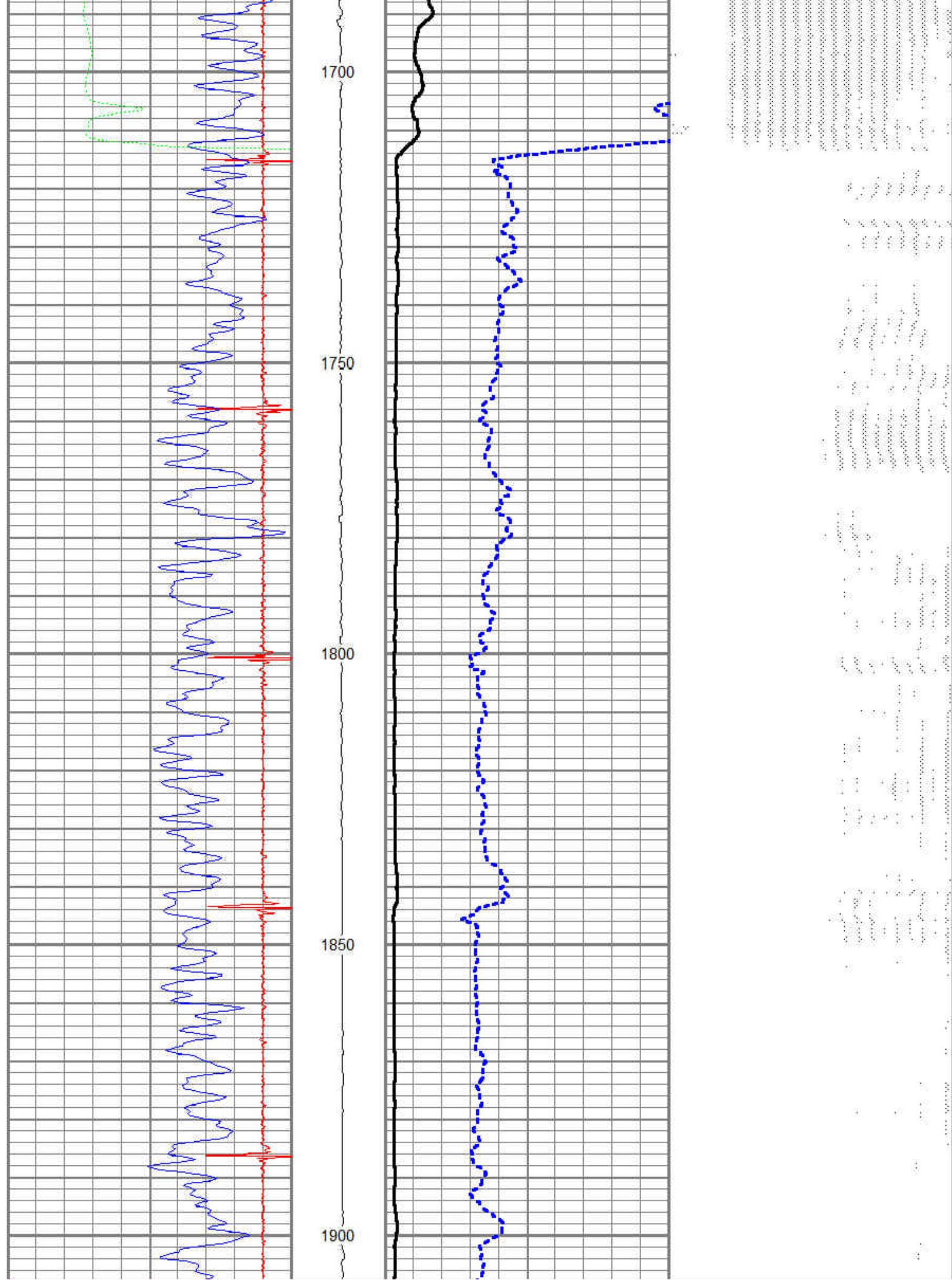
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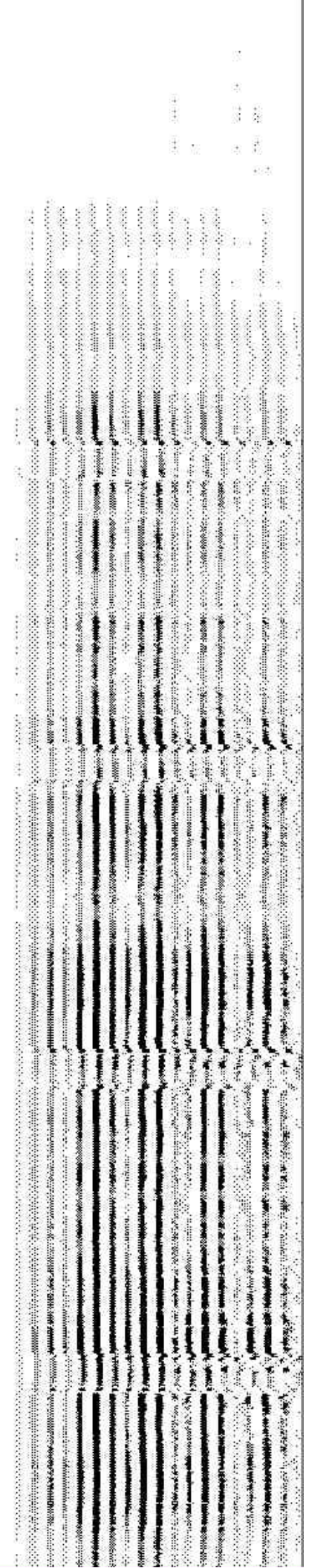
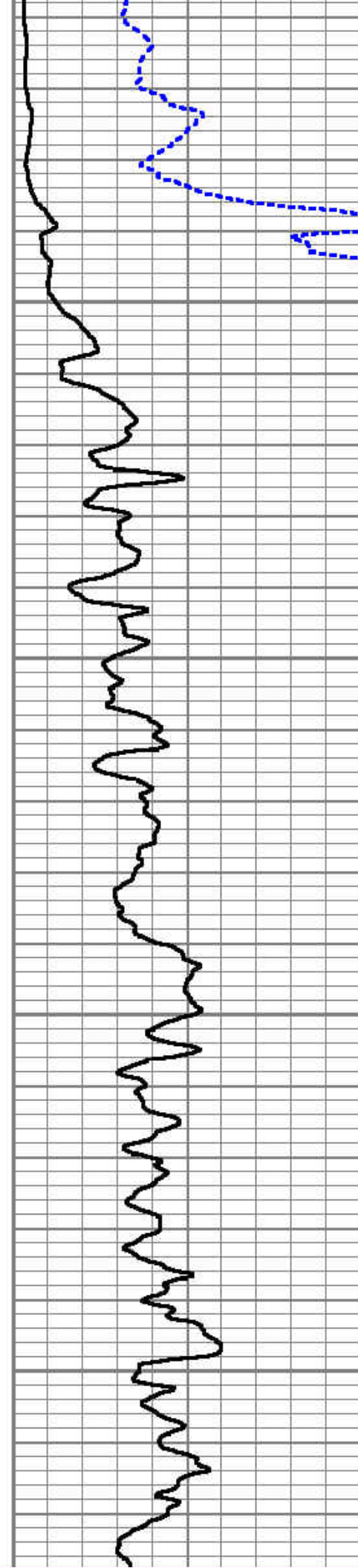
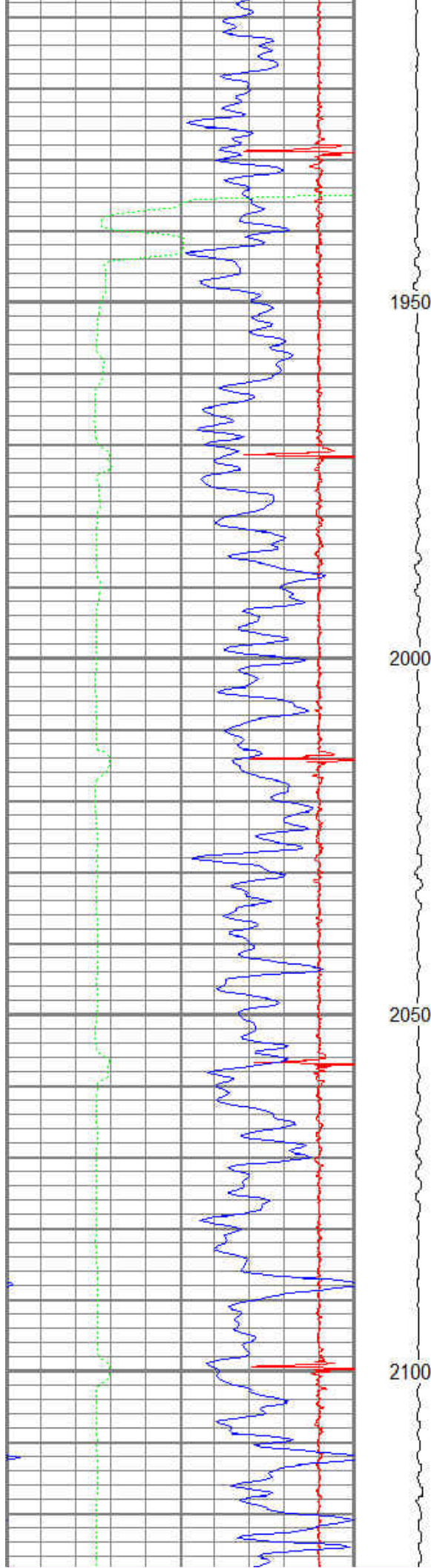
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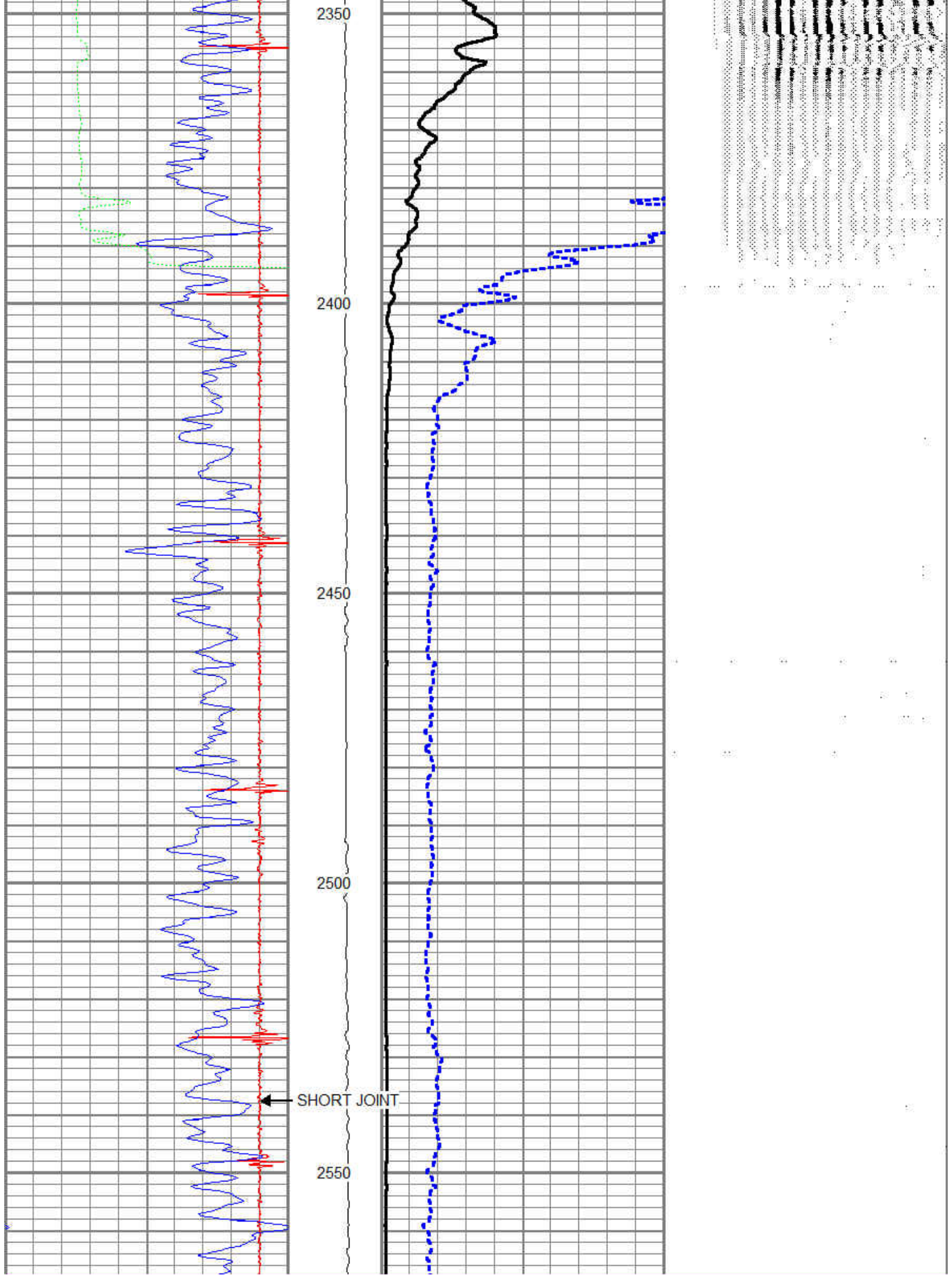
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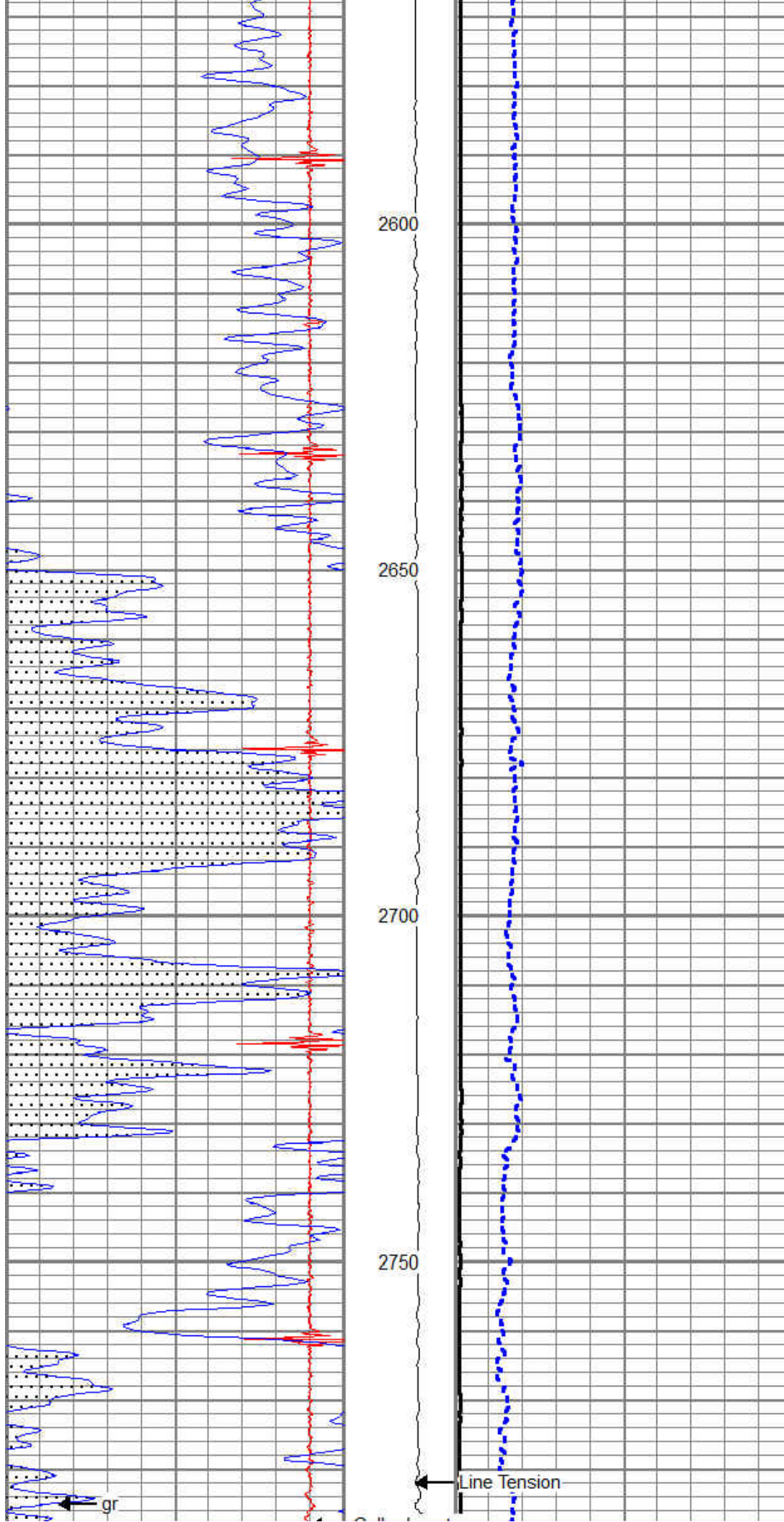
1650







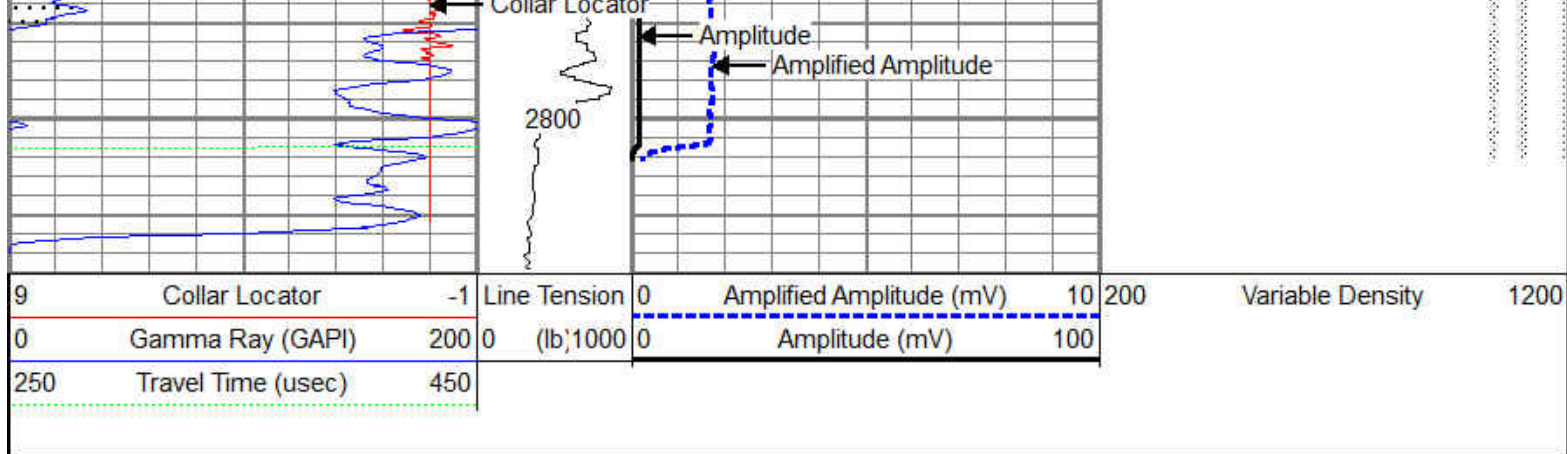




2600 2650 2700 2750

Line Tension

gr



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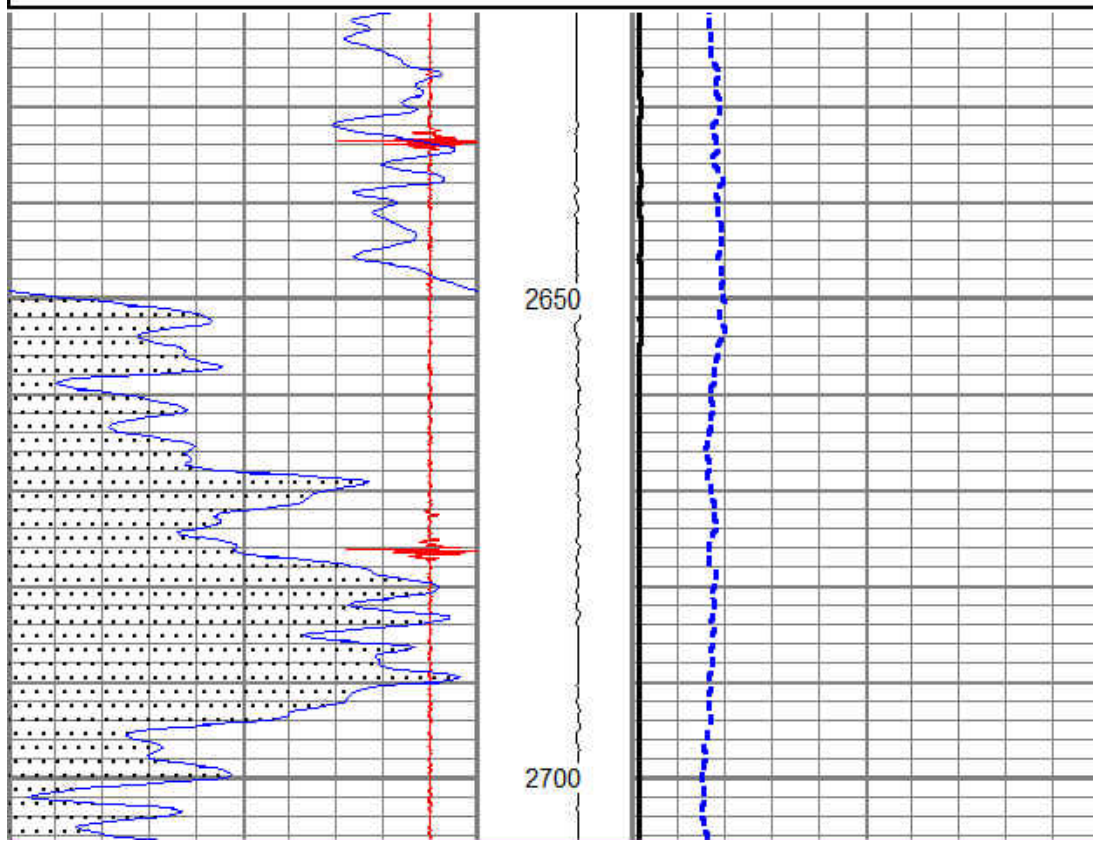
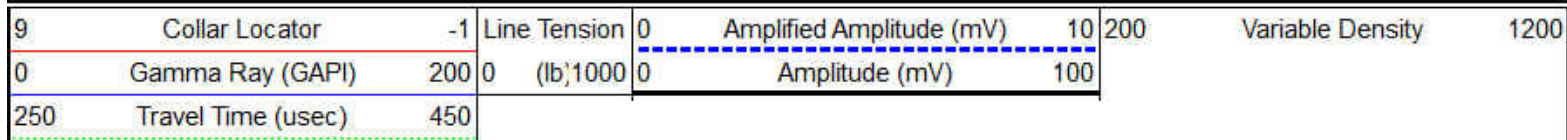
MAIN PASS

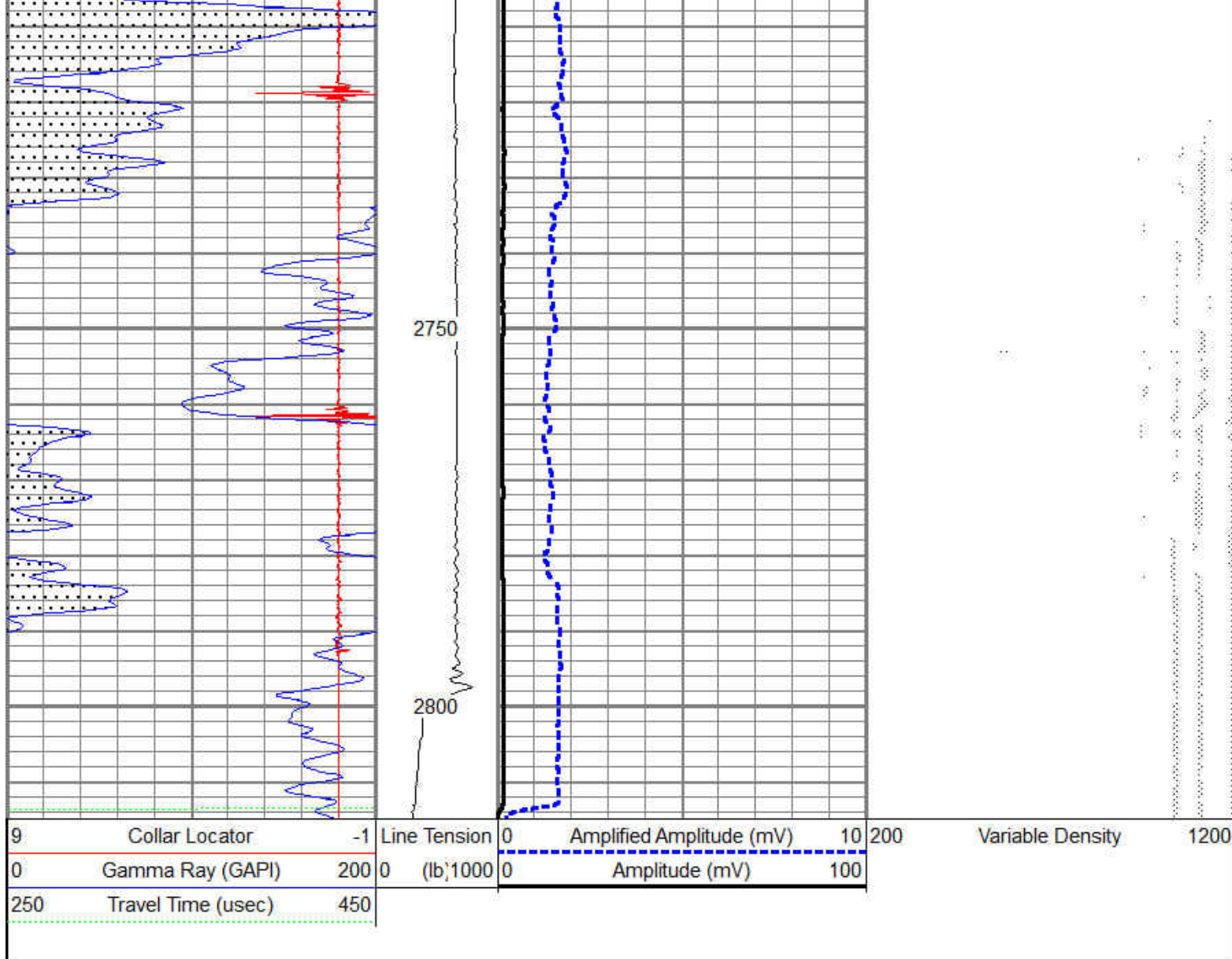


Pioneer Energy Services

REPEAT PASS

Database File: august cooper 23-34 54n47w.db
 Dataset Pathname: pass4
 Presentation Format: cbl_dr
 Dataset Creation: Tue Oct 28 16:12:08 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240





REPEAT PASS

Calibration Report

Database File: august cooper 23-34 54n47w.db
 Dataset Pathname: pass5
 Dataset Creation: Tue Oct 28 16:17:34 2014 by Log 7.0 B1

Temperature Calibration Report

Serial Number:	0001		
Tool Model:	1.375TEMP		
Performed:	Wed Mar 15 15:39:51 2006		
	Reference		Reading
Low Reference:	0.00 degF		0.00 cps
High Reference:	100.00 degF		1000.00cps
Gain:	0.10		
Offset:	0.00		
Delta Spacing	2		

Serial Number:	030606	
Tool Model:	Probe275	
Performed:	Mon Feb 03 13:47:27 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Cement Bond Log Calibration Report

Serial Number:	050215		
Tool Model:	Probe		
Performed:	Fri Oct 17 07:22:58 2014		
Depth:	455.392	ft	
Casing Diameter:	5.5	in	
	3' Spacing	5' Spacing	
Signal Zero:	1	1	mV
Calibrated Amplitude:	83	83	mV
Reading at Signal Zero:	0.0098877	0.00996094	V
Reading in Free Pipe:	1.08298	0.791064	V
Gain:	66.4144	104.98	
Offset:	0.244437	-0.0456961	