



# DUAL INDUCTION COMPENSATED DENSITY COMPENSATED NEUTRON GAMMA RAY

Pioneer Energy Services

Company Augustus Energy Resources, LLC  
Well Dusty Farms 42-13 5N47W  
Field Rock Creek  
County Yuma  
State Colorado

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Field Rock Creek  
County Yuma State Colorado

Location: API #: 05 125 12100

2356' FNL & 900' FEL SENE

SEC 13 TWP 5N RGE 47W

Permanent Datum GL Elevation 3934  
Log Measured From KB  
Drilling Measured From KB

Elevation  
K.B. 3940  
D.F. 3939  
G.L. 3934

Date August 19, 2014

Run Number	1	
Depth Driller	2918	
Depth Logger	2910	
Bottom Logged Interval	2910	
Top Log Interval	2000	
Casing Driller	516	
Casing Logger	516	
Bit Size	6.25"	
Type Fluid in Hole	WBM	
Density / Viscosity	8.5 / 28	
pH / Fluid Loss	7.5 / 8.0	
Source of Sample	Mudpit	
Rm @ Meas. Temp	0.26 @ 78 F	
Rmf @ Meas. Temp	0.20 @ 78 F	
Rmc @ Meas. Temp	0.33 @ 78 F	
Source of Rmf / Rmc	Calc / Calc	
Rm @ BHT	0.20 @ 104 F	
Time Circulation Stopped	0800	
Time Logger on Bottom	1500	
Maximum Recorded Temperature	104 F	
Equipment Number	36	
Location	Ft. Morgan, CO	
Recorded By	Tracy Crane	
Witnessed By	Justin Stone	

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

## Comments

Annular volume calculated for 4.5" casing  
Excell Drilling Rig 2  
Thank you for using Pioneer Energy Services.

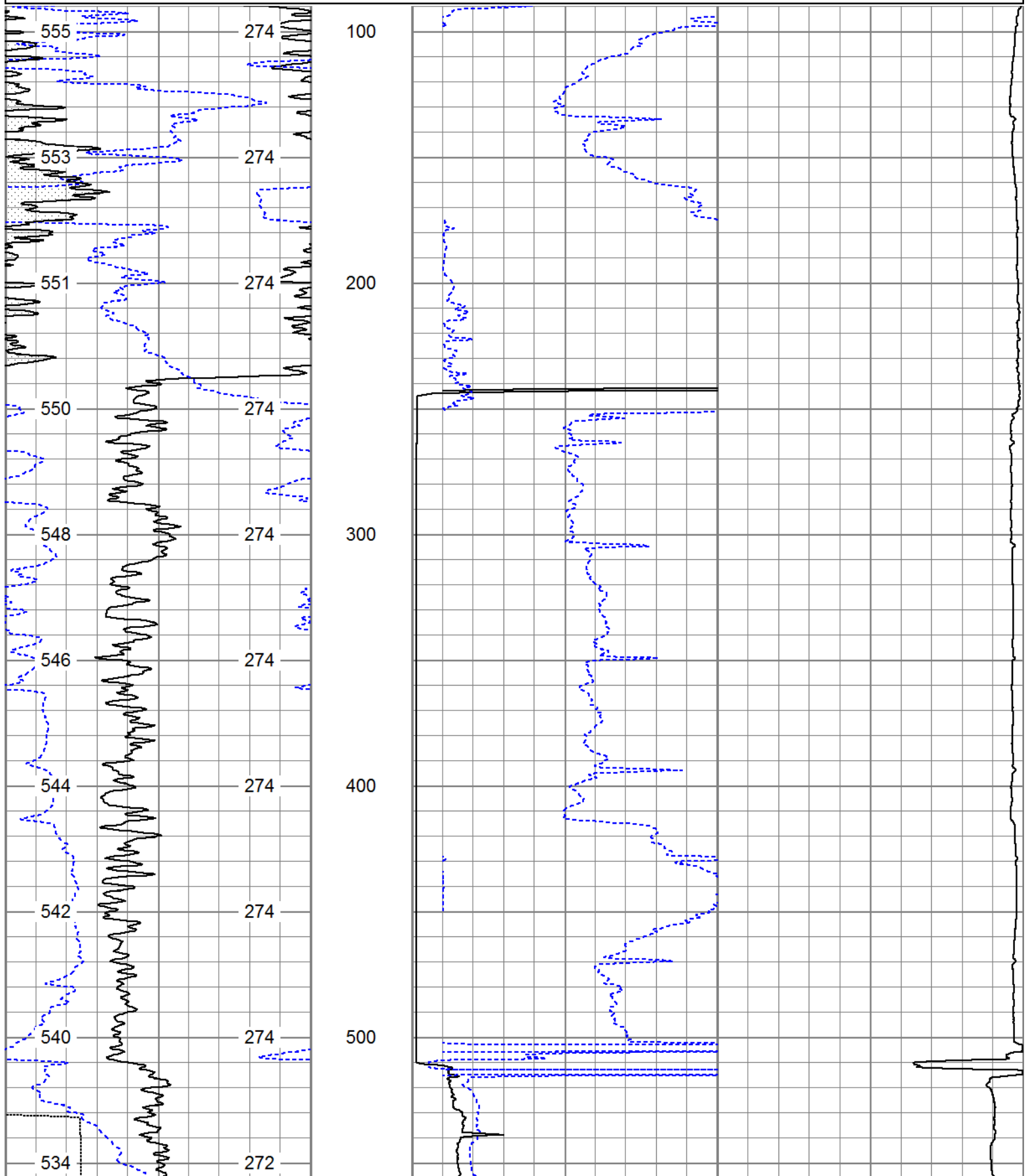
SO# 2-013649

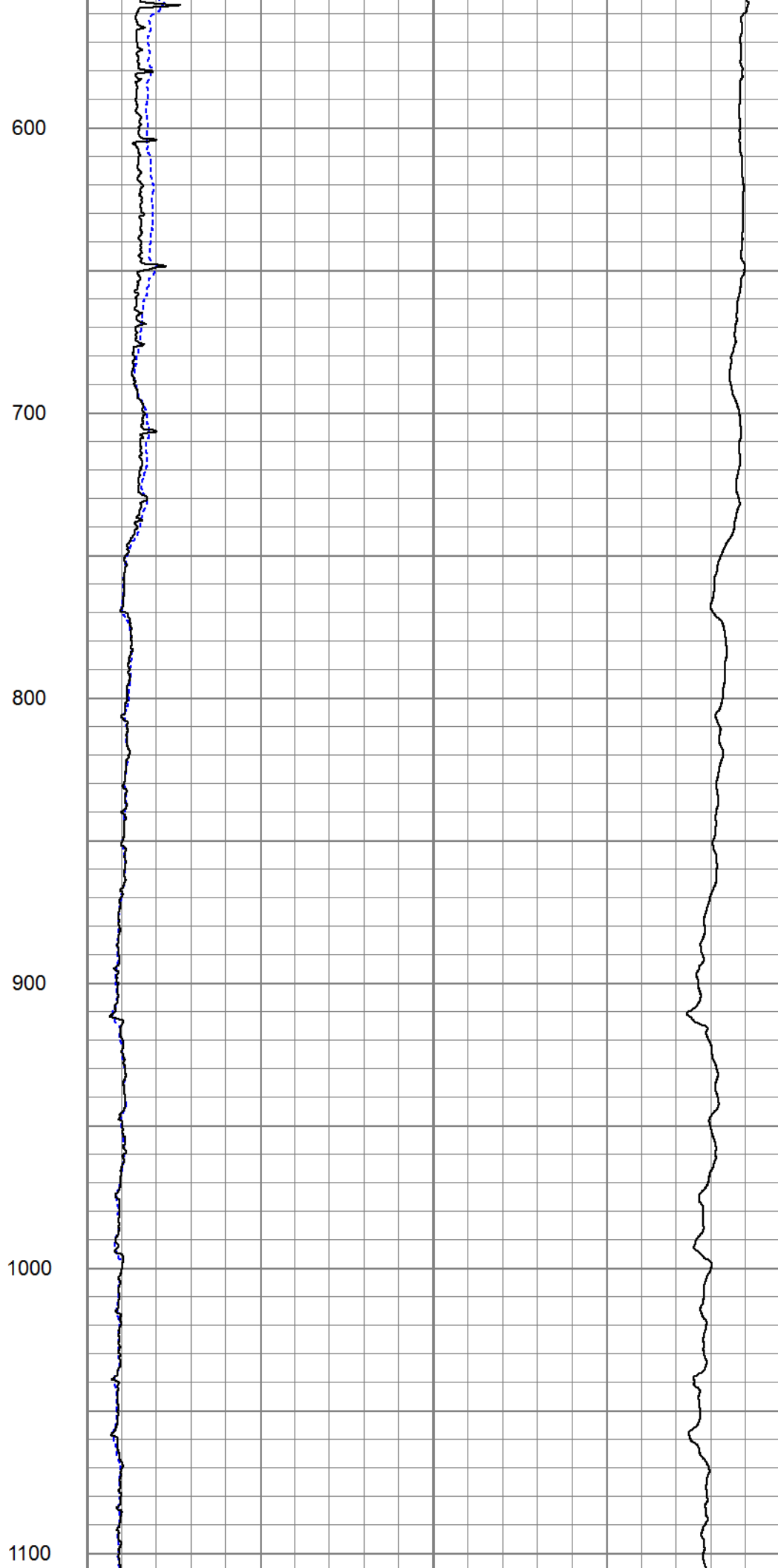
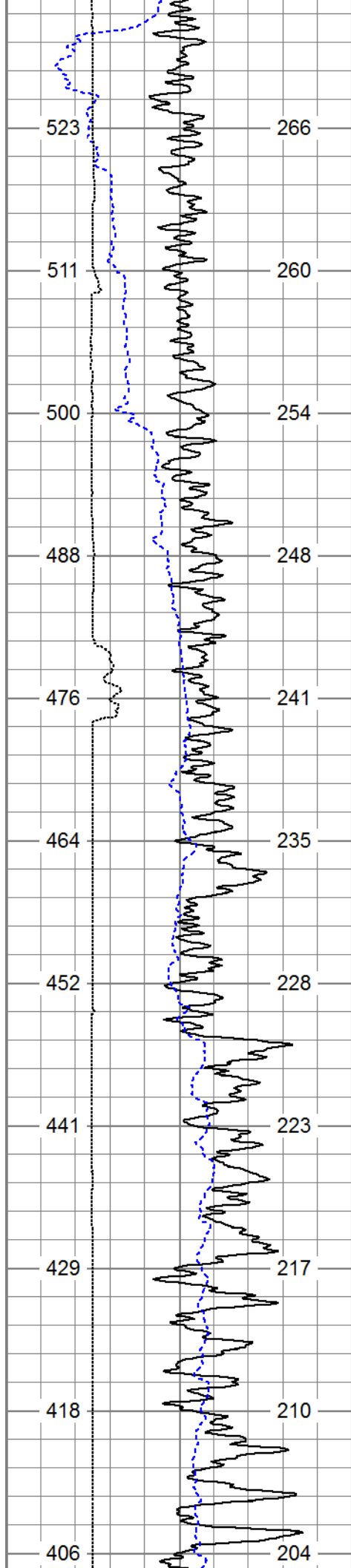
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD (~0)	2.00	3.50	30.00

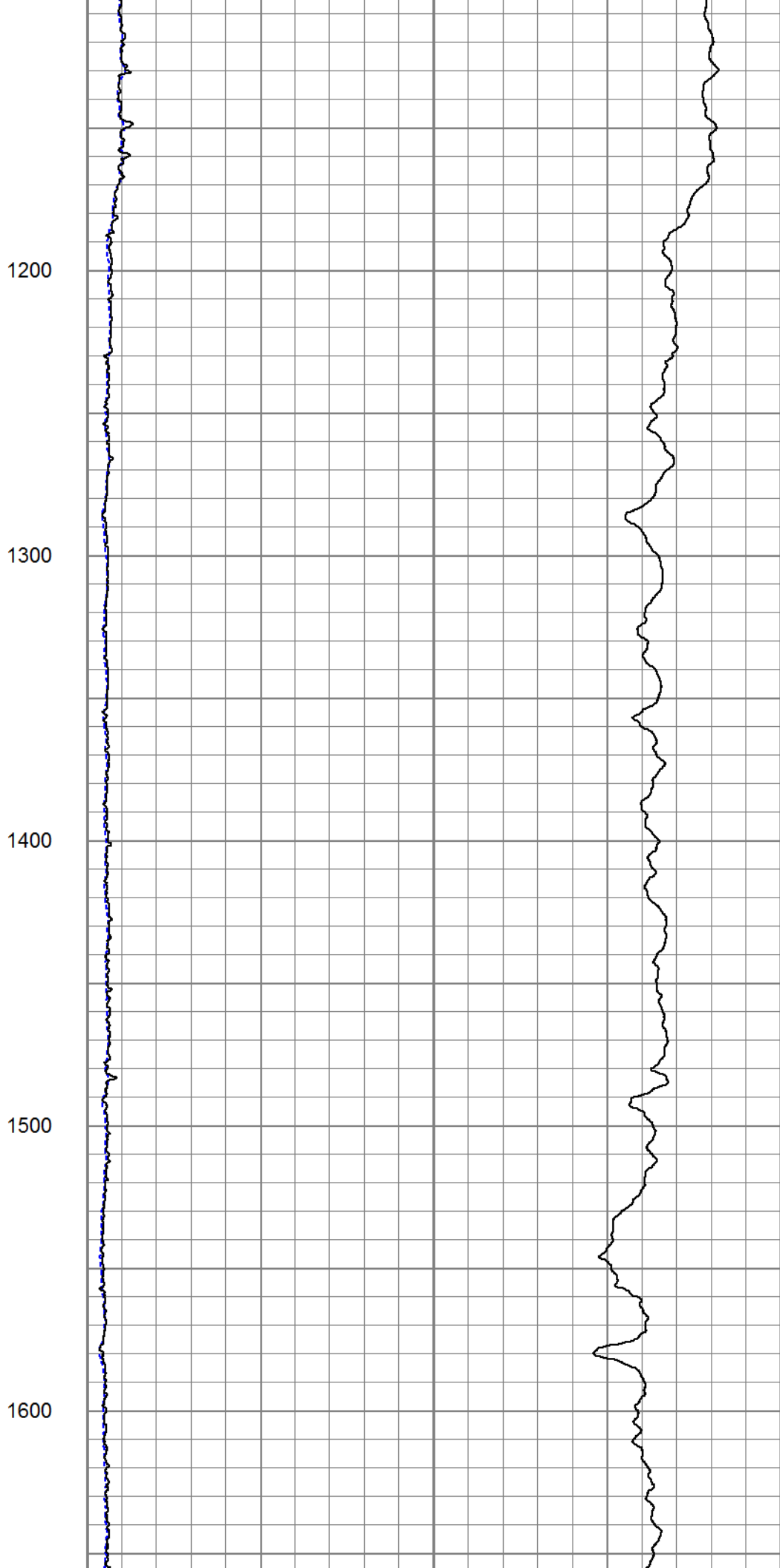
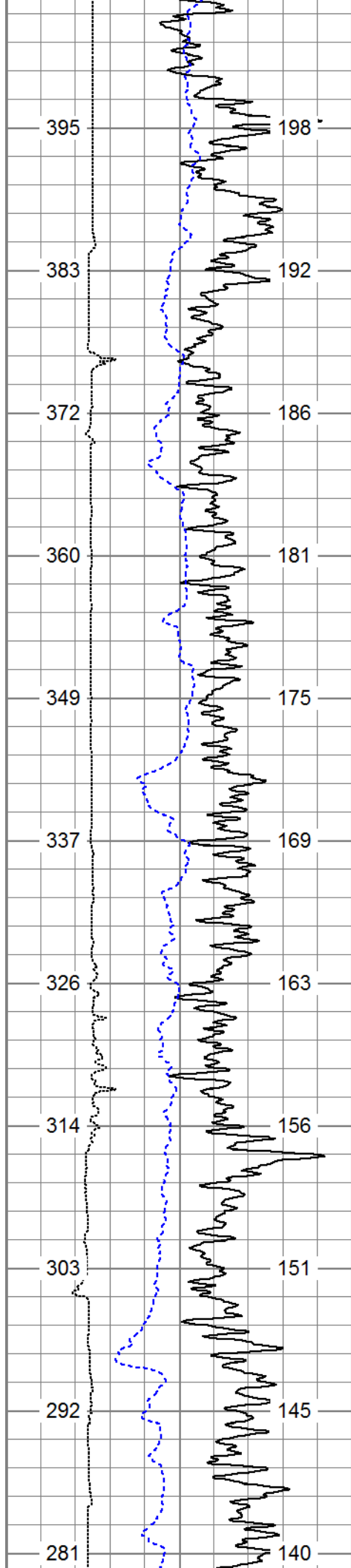
GR	0.00		GR-PSI (939)	2.92	3.50	40.00
CNLSC	-3.67		CNT-PSI (822)	5.00	3.50	70.00
CNSSC	-4.17					
			CDL-PSI (770)	8.50	5.00	285.00
DCAL	-11.84					
LSD	-12.67					
SSD	-13.17					
RLL3	-17.52					
			DIL-PSI (1011)	18.25	3.75	175.00
CILD	-24.97					
CILM	-28.42					
SP	-32.42					
Dataset: 13649.db: field/well/run1/pass6 Total Length: 36.67 ft Total Weight: 600.00 lb O.D. 5.00 in						

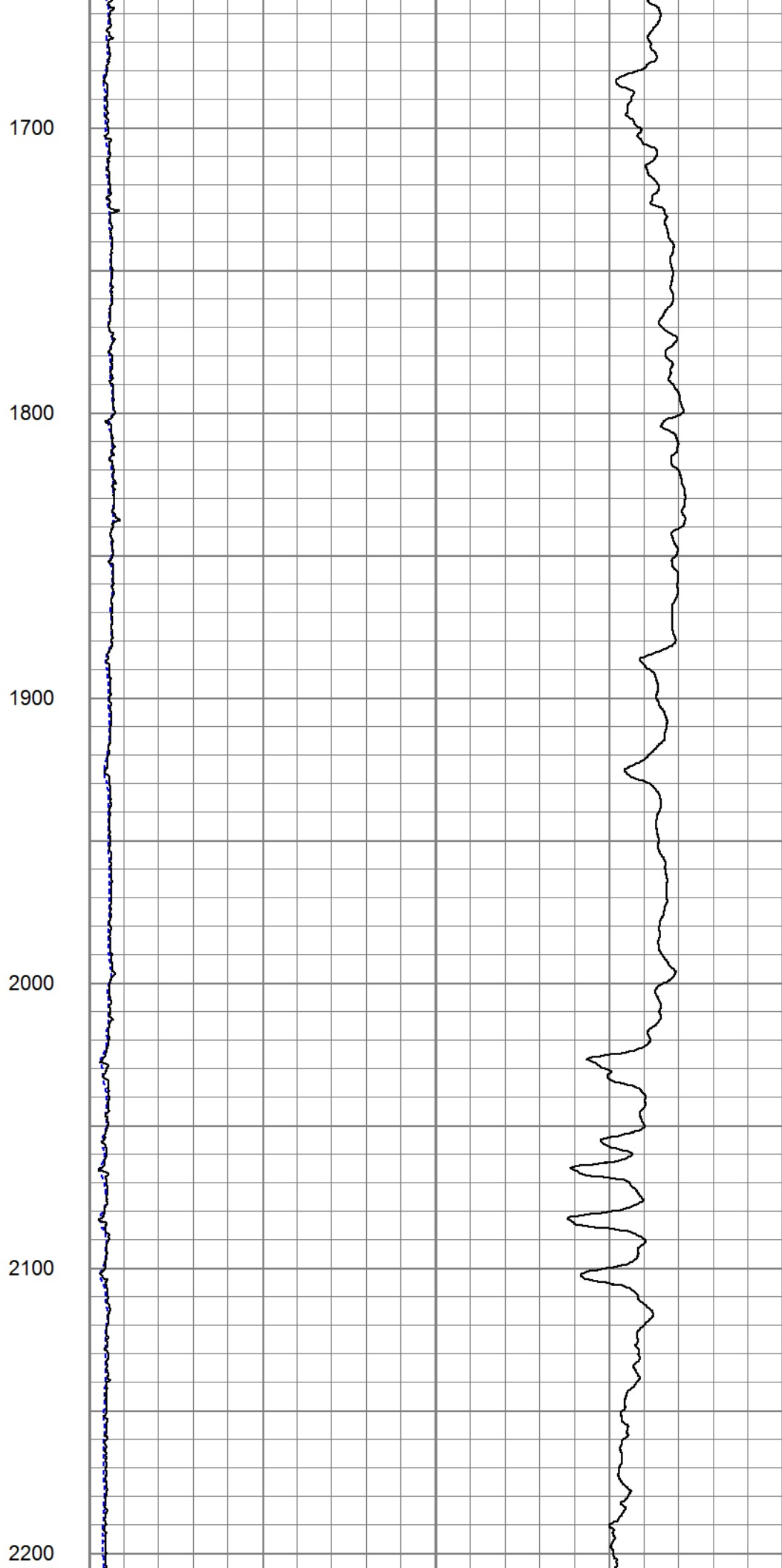
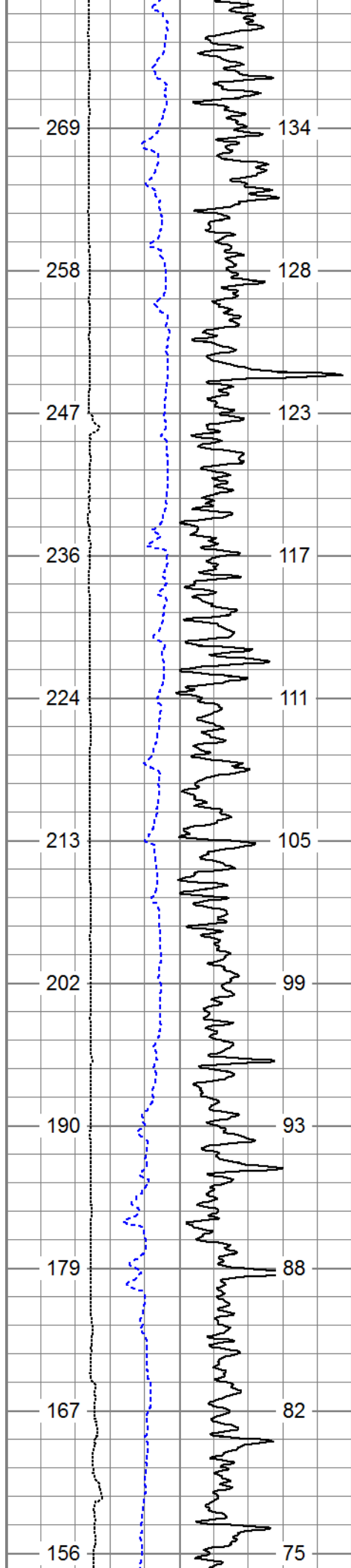
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 Dataset Pathname: pass6  
 Presentation Format: dilin60  
 Dataset Creation: Tue Aug 19 17:15:30 2014 by Log 0

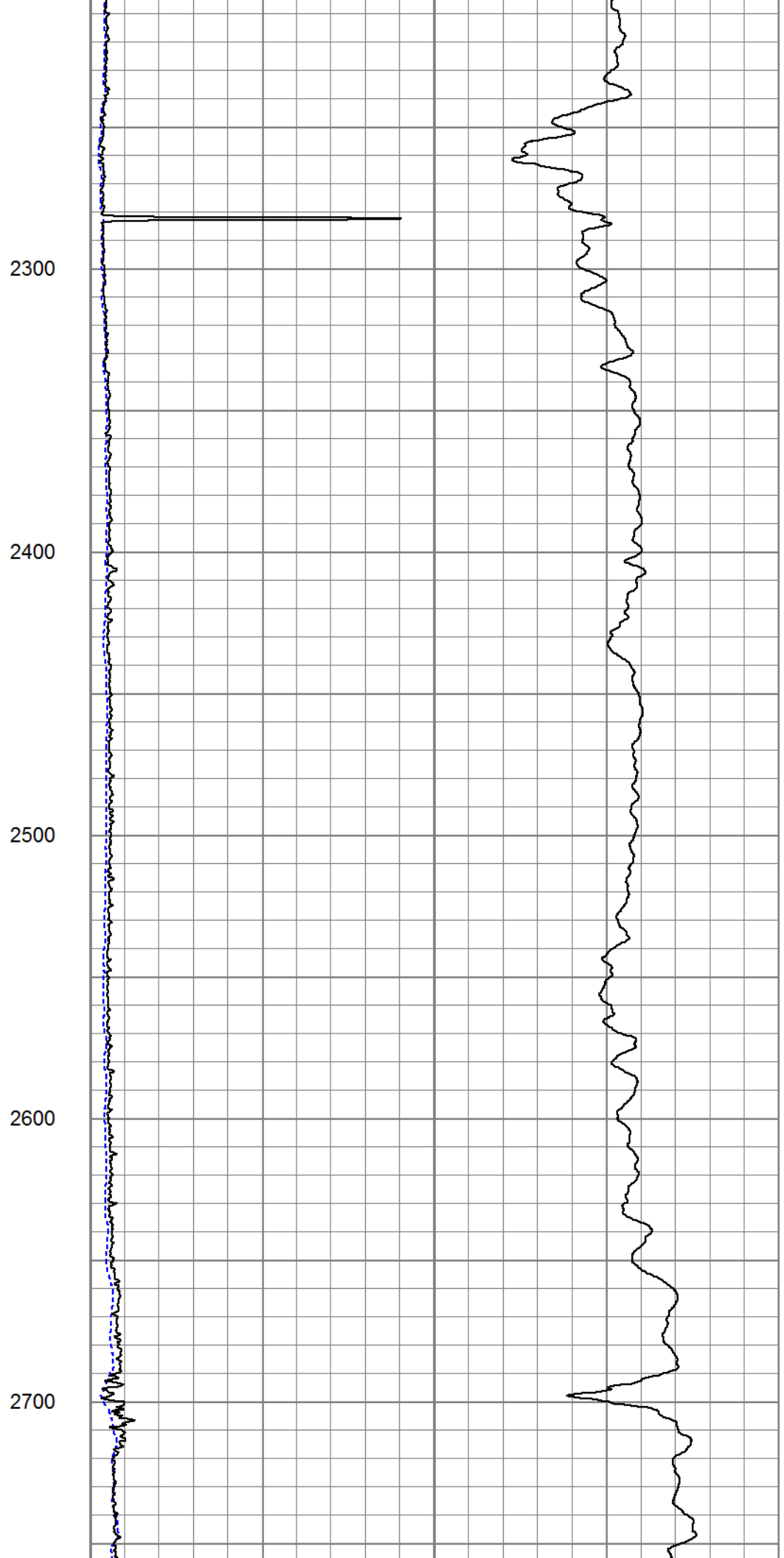
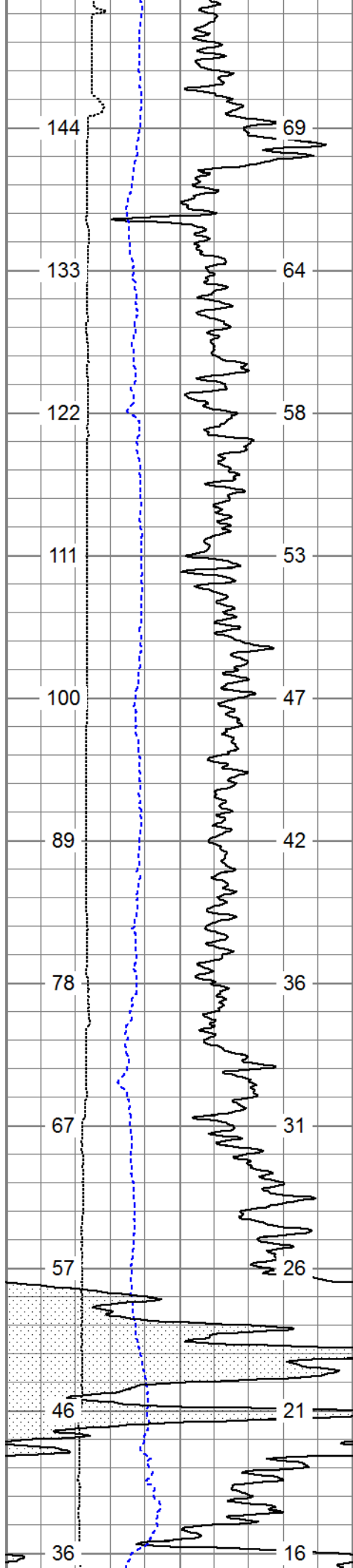
0	Gamma Ray (GAPI)	200	0	Deep Resistivity (Ohm-m)	50	1000	CILD (mmho/m)	0
0	SP (mV)	200	0	Shallow Resistivity (Ohm-m)	50			
4	Caliper (in)	14	50	RILD (Ohm-m)	500			
TBHV (ft3)		ABHV (ft3)	50	RLL3 (Ohm-m)	500			

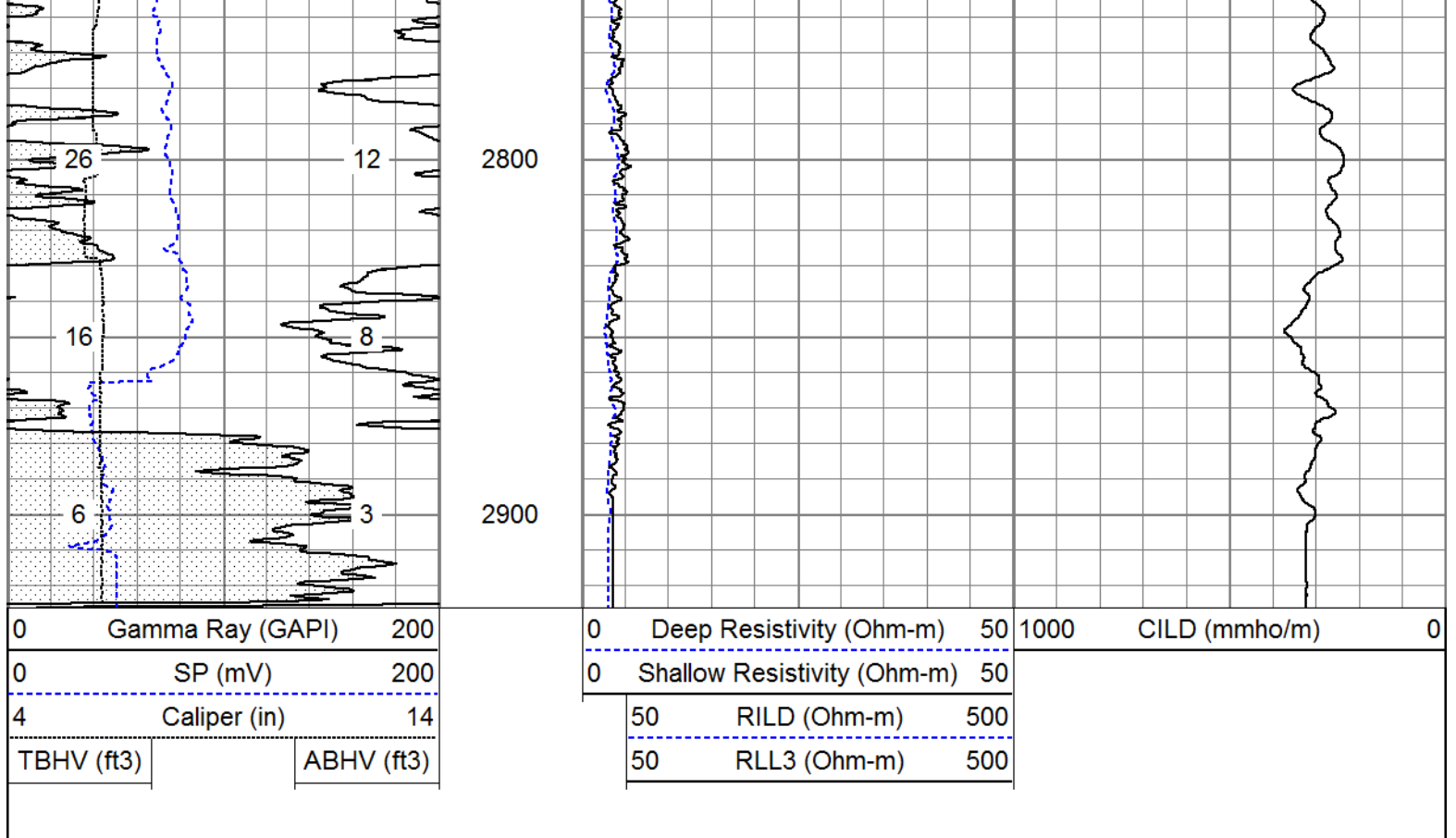




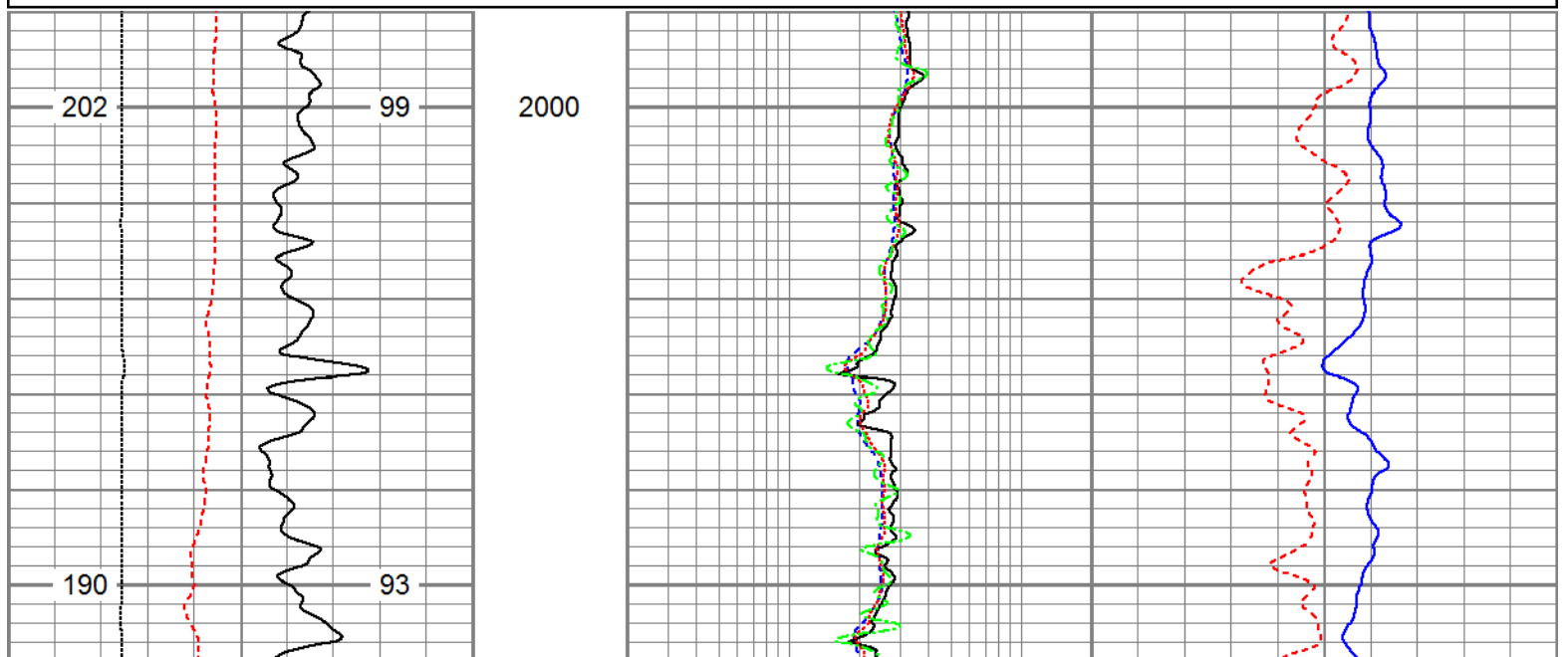
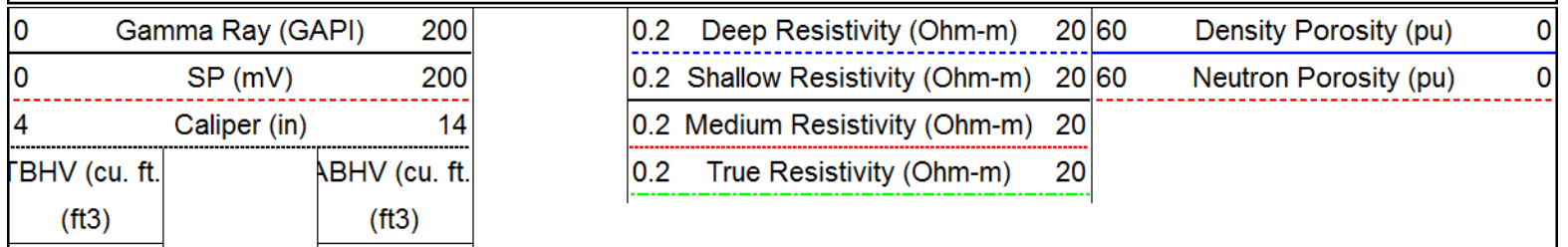




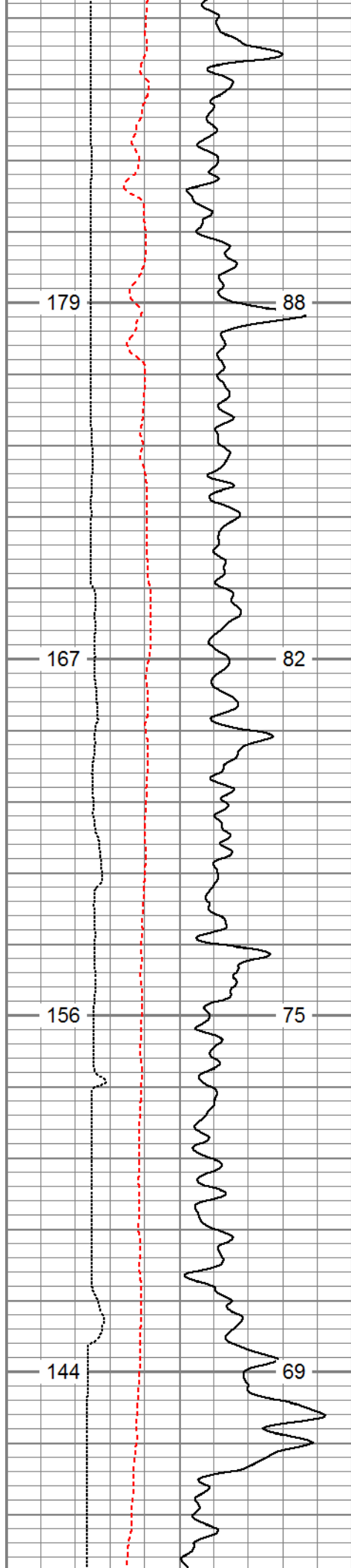




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 Dataset Pathname: pass6  
 Presentation Format: pdce  
 Dataset Creation: Tue Aug 19 17:15:30 2014 by Log 0  
 Charted by: Depth in Feet scaled 1:240

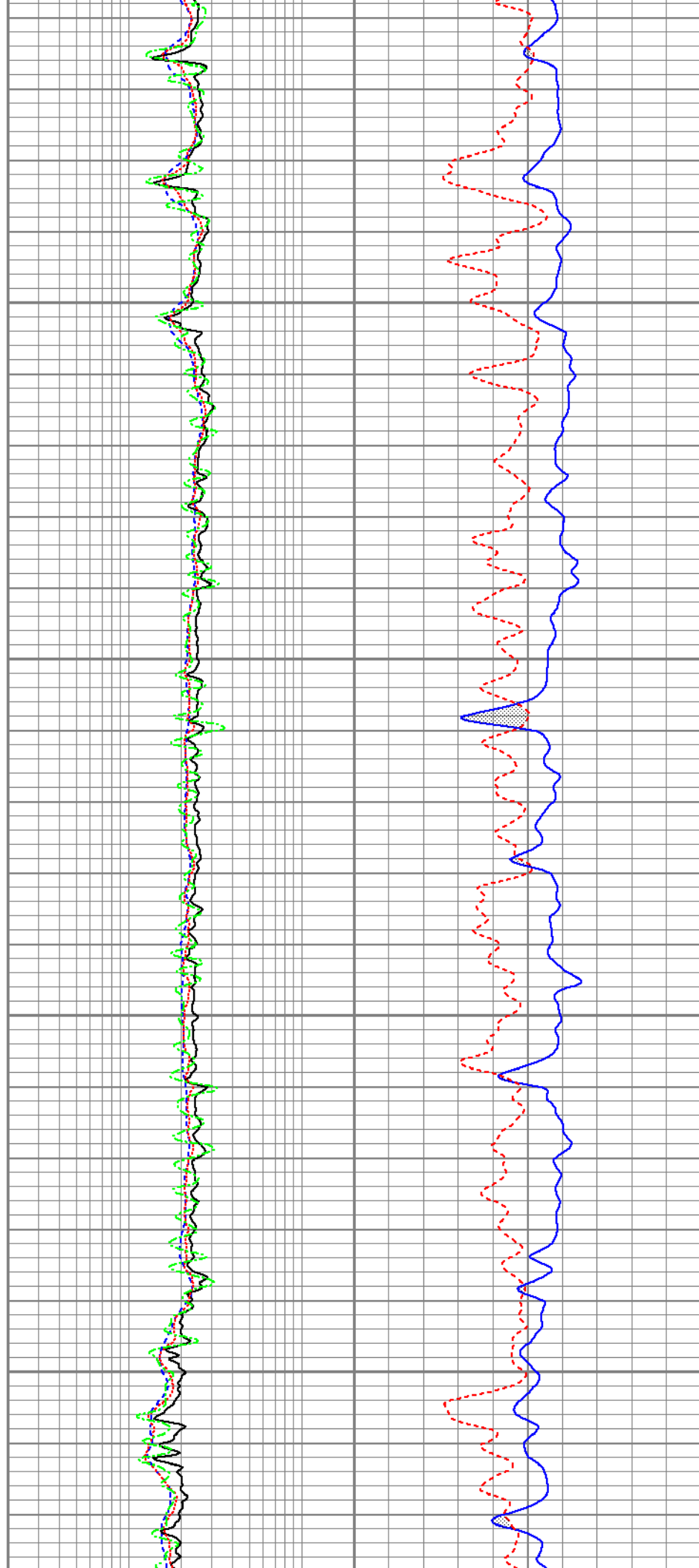


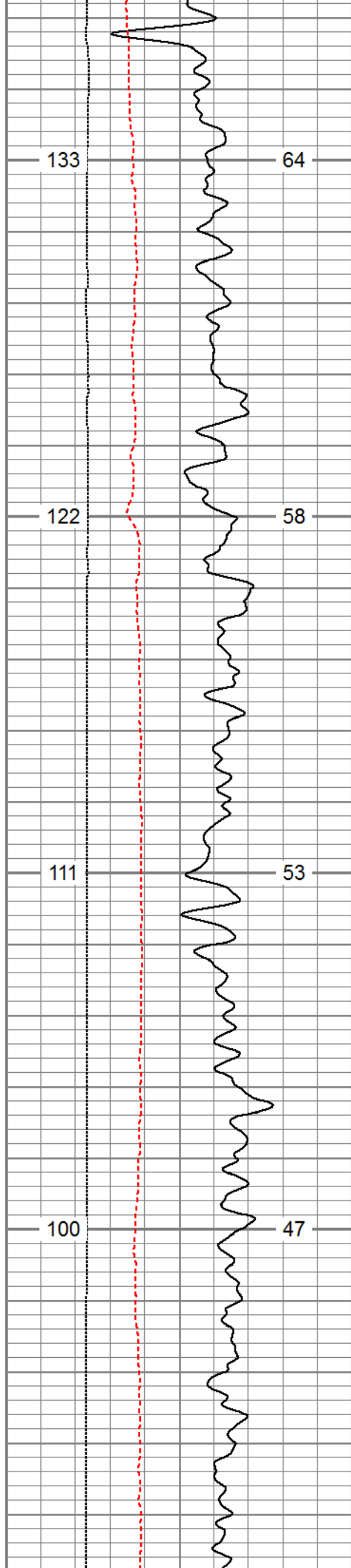




2100

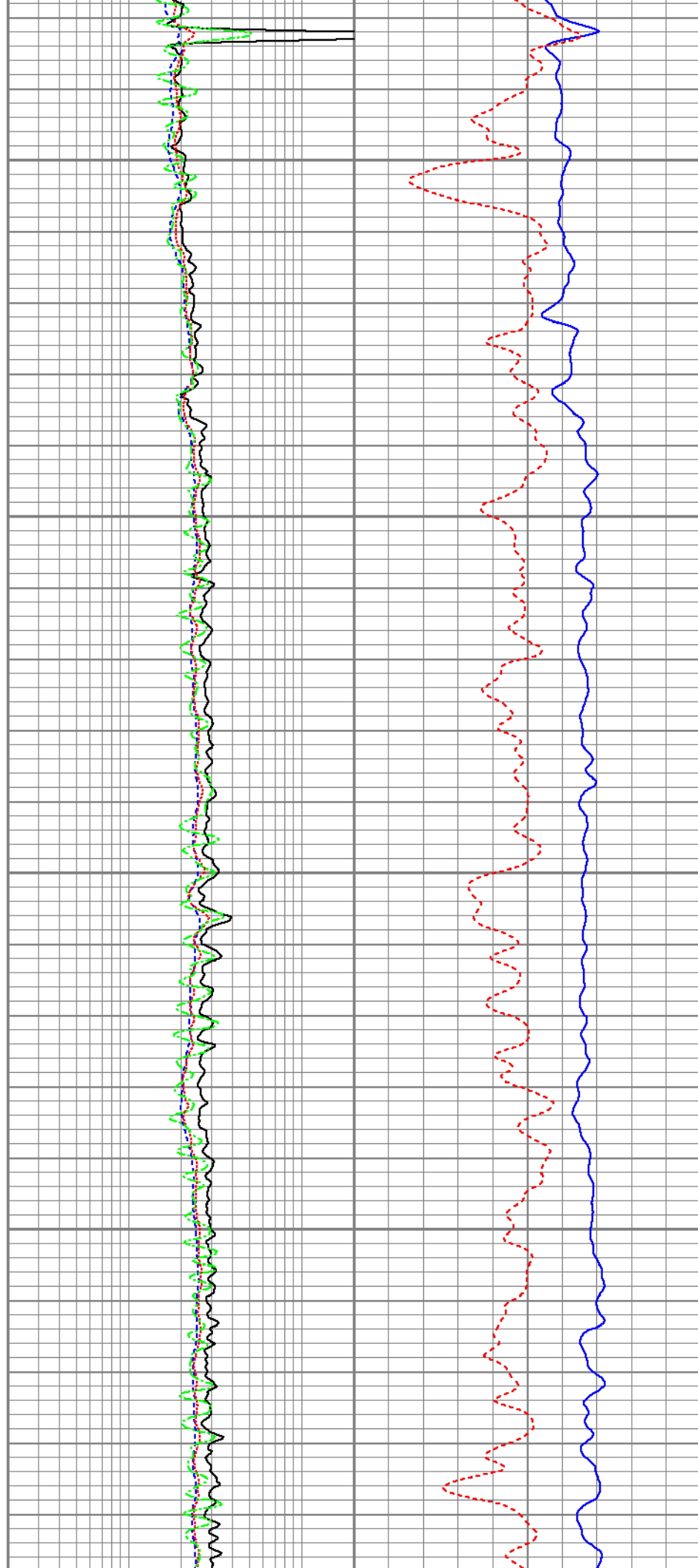
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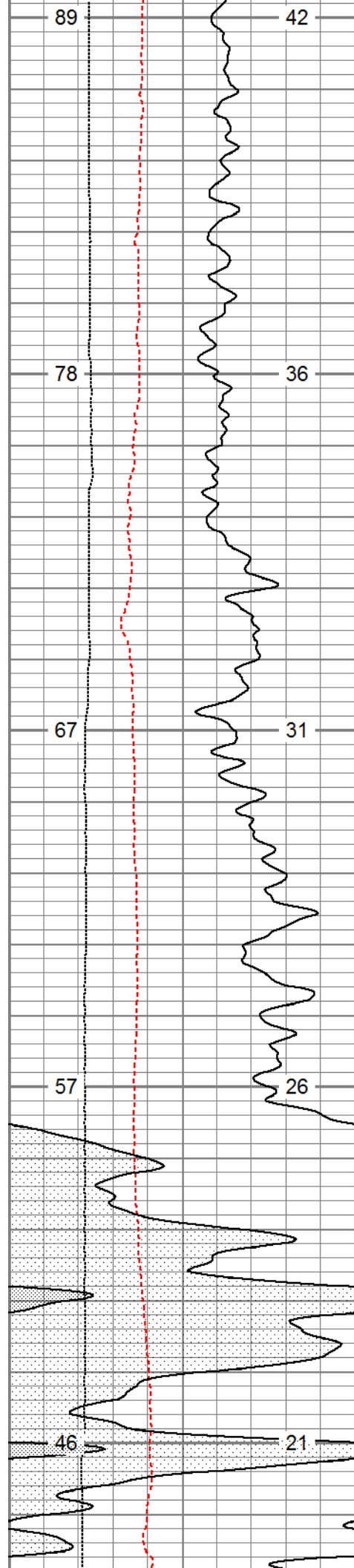




2300

2400

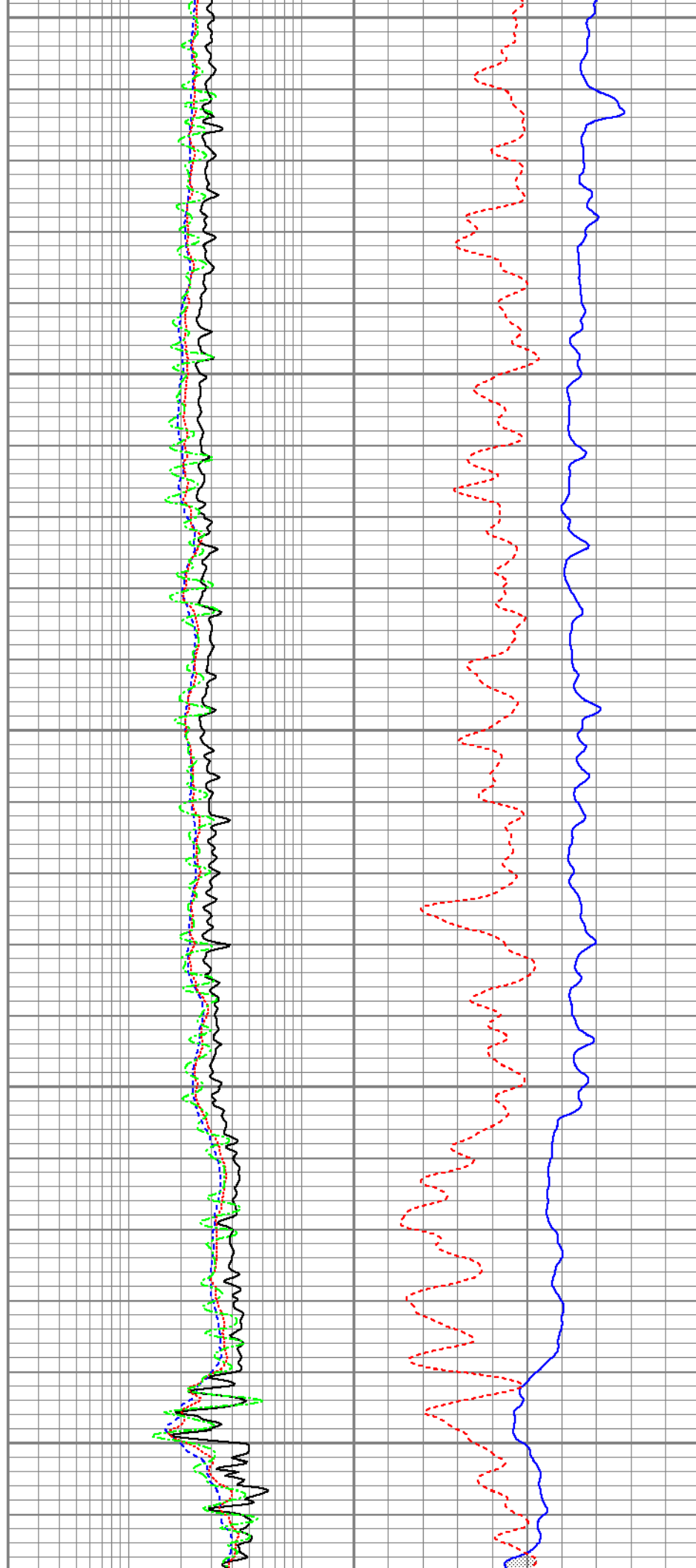


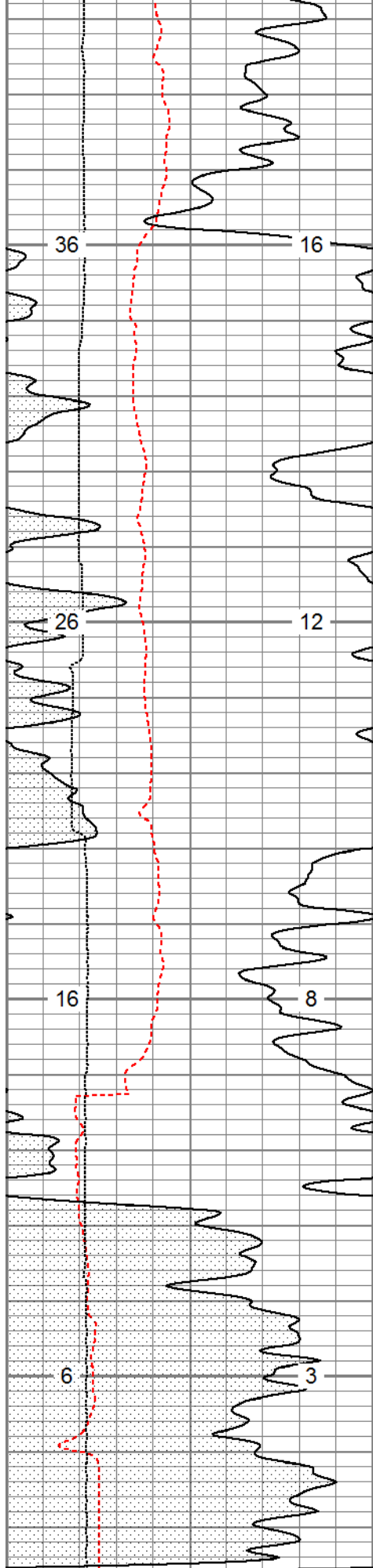


2500

2600

2700

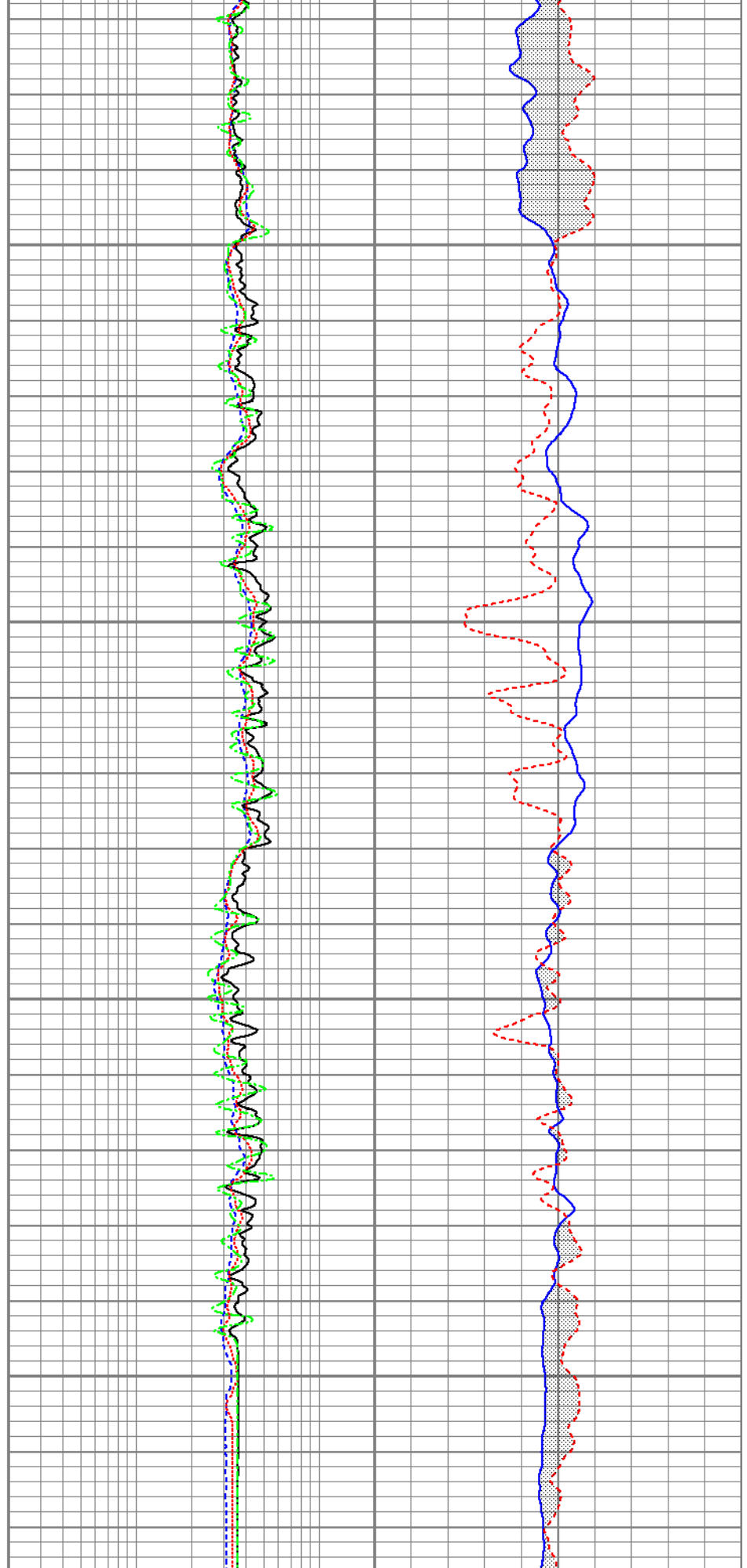




2800

2900

0	Gamma Ray (GAPI)	200
0	SP (mV)	200

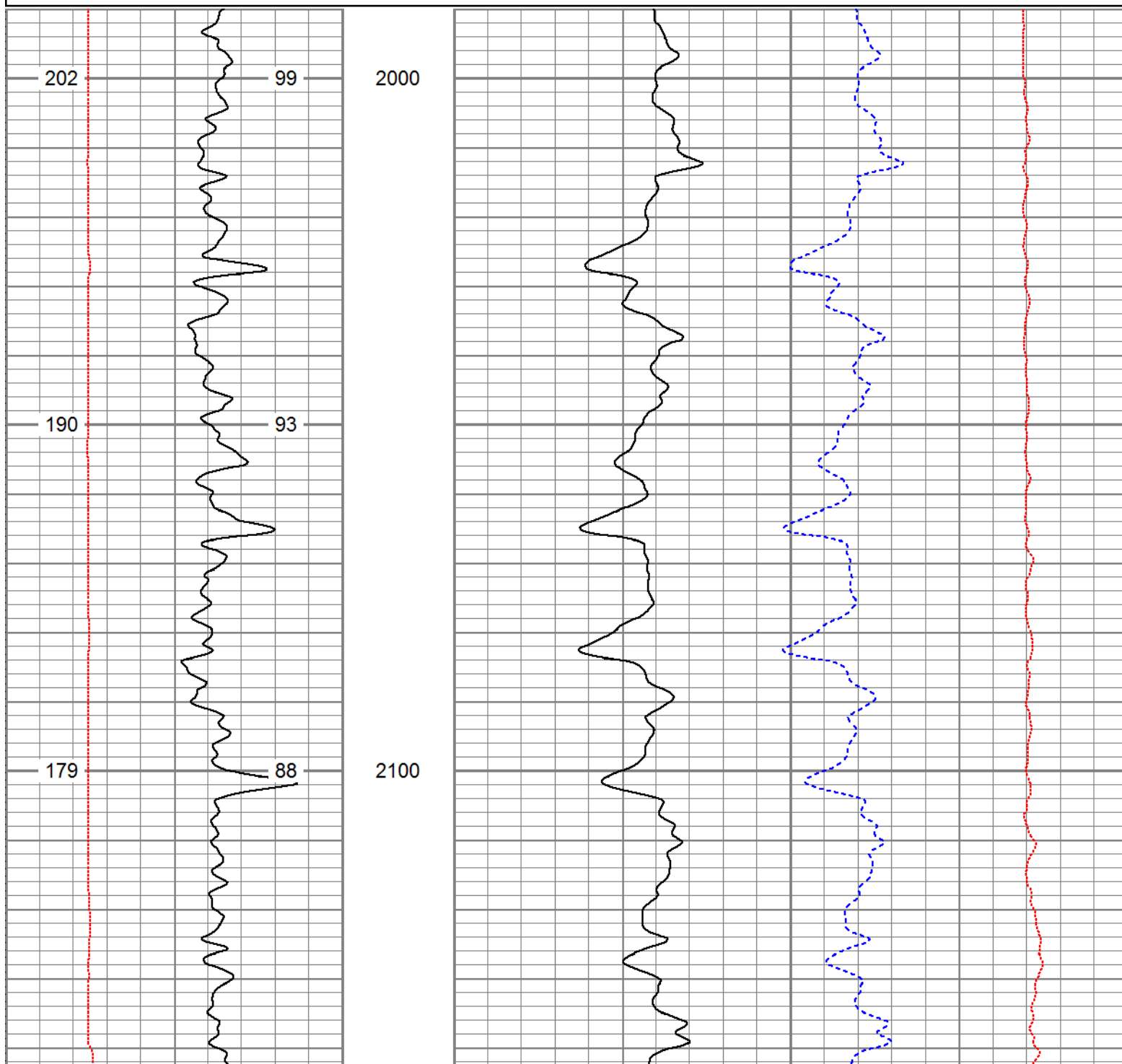


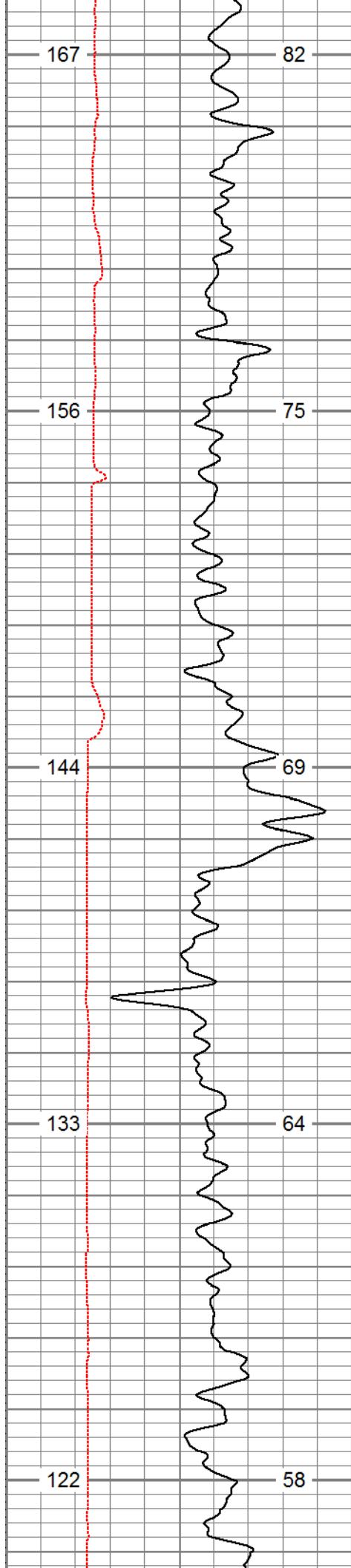
0.2	Deep Resistivity (Ohm-m)	20	60	Density Porosity (pu)	0
0.2	Shallow Resistivity (Ohm-m)	20	60	Neutron Porosity (pu)	0

4	Caliper (in)	14	0.2	Medium Resistivity (Ohm-m)	20
TBHV (cu. ft. (ft3)		ABHV (cu. ft. (ft3)		0.2	True Resistivity (Ohm-m)
					20

Database File: 13649.db  
 Dataset Pathname: pass6  
 Presentation Format: cdl60  
 Dataset Creation: Tue Aug 19 17:15:30 2014 by Log 0  
 Charted by: Depth in Feet scaled 1:240

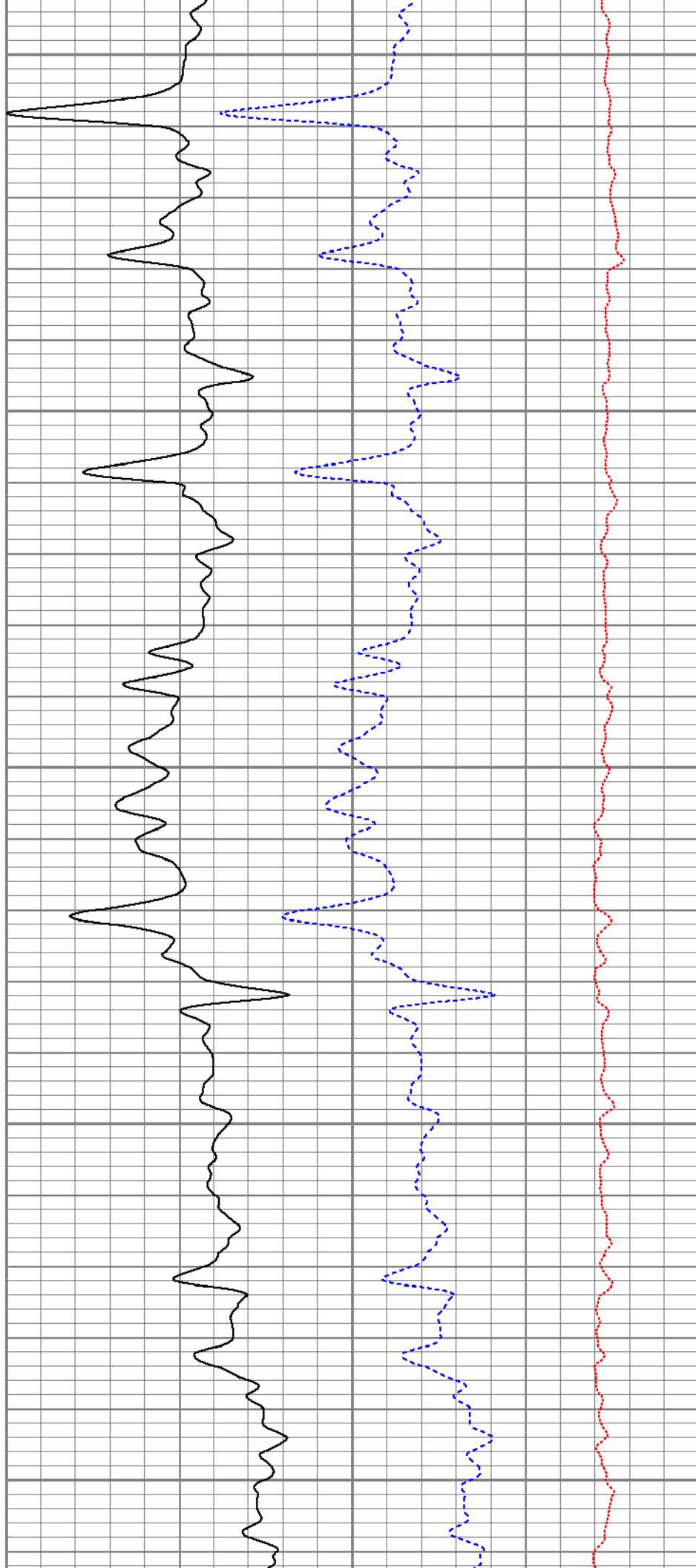
4	Caliper (in)	14	2	Bulk Density (g/cc)	3
0	Gamma Ray (GAPI)	200	60	Density Porosity (pu)	0
TBHV (ft3)		ABHV (ft3)		-0.5	Corr (g/cc)
					0.5

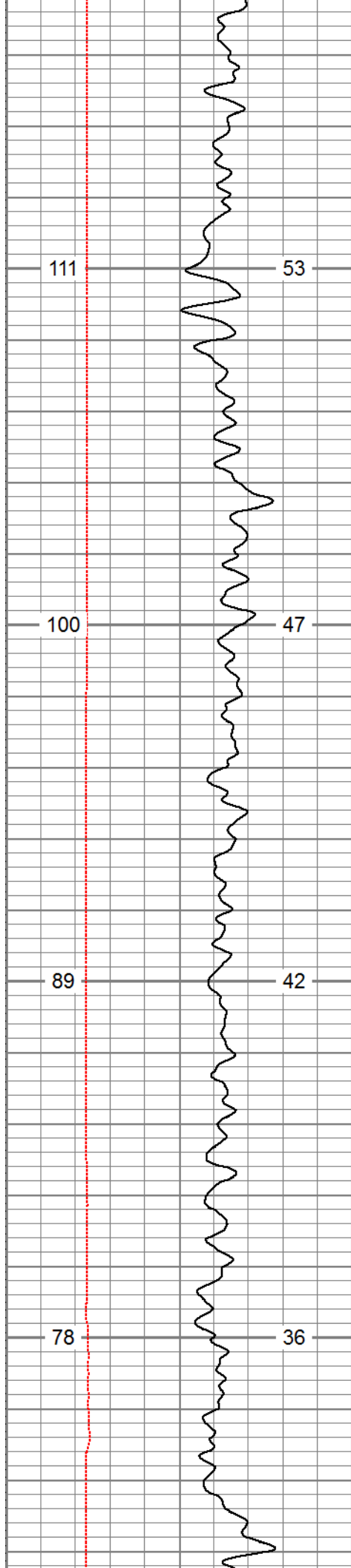




2200

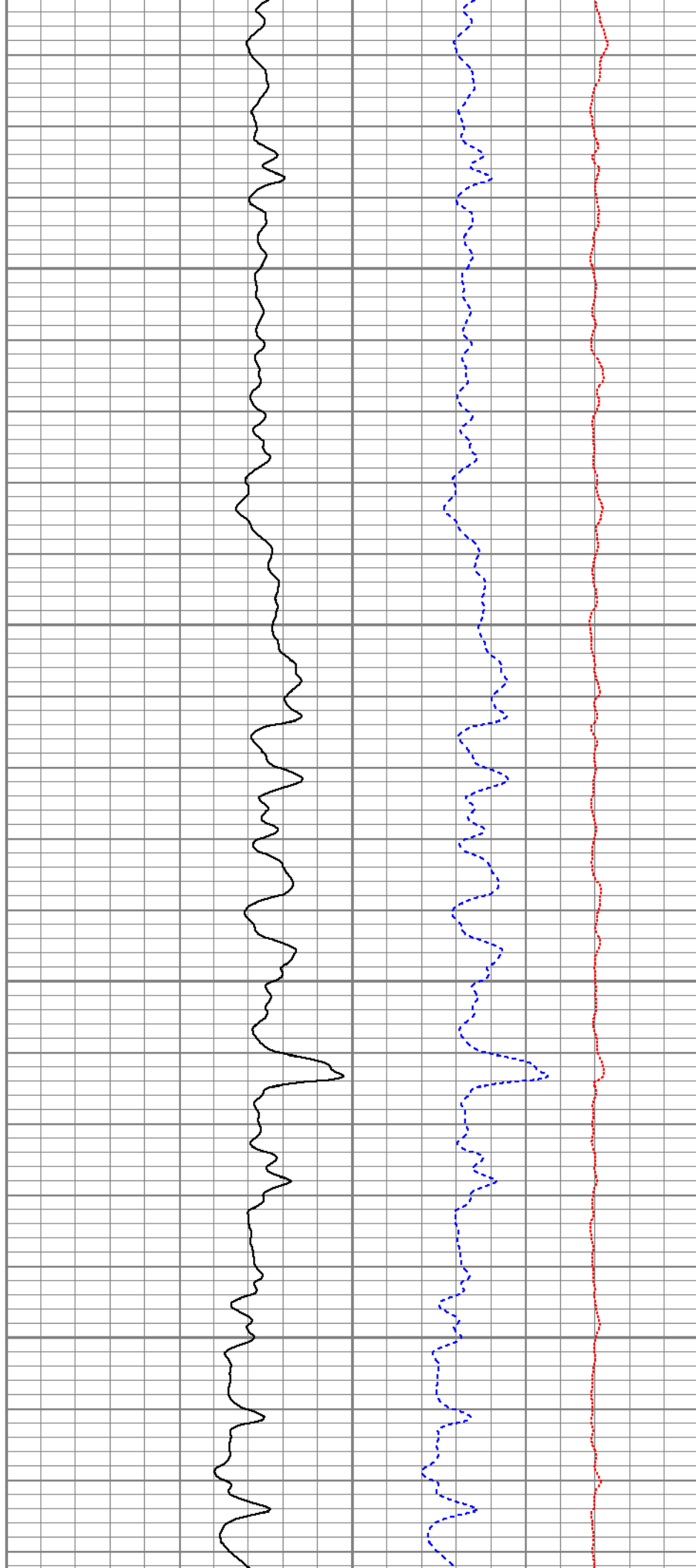
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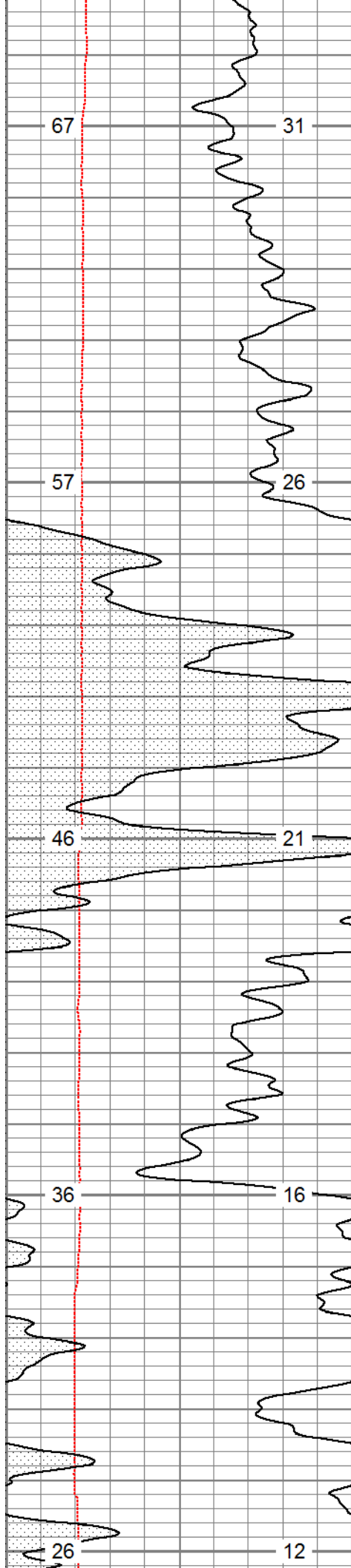




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2500

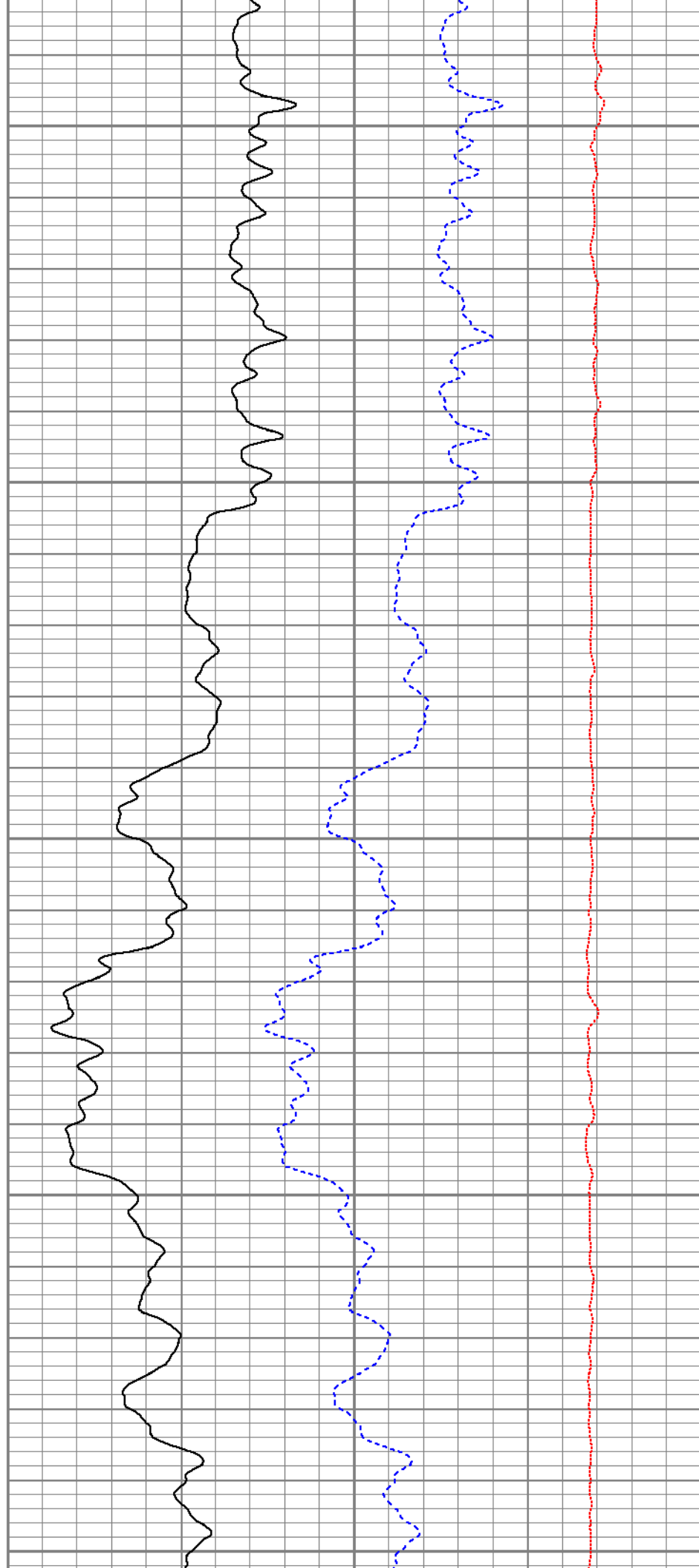




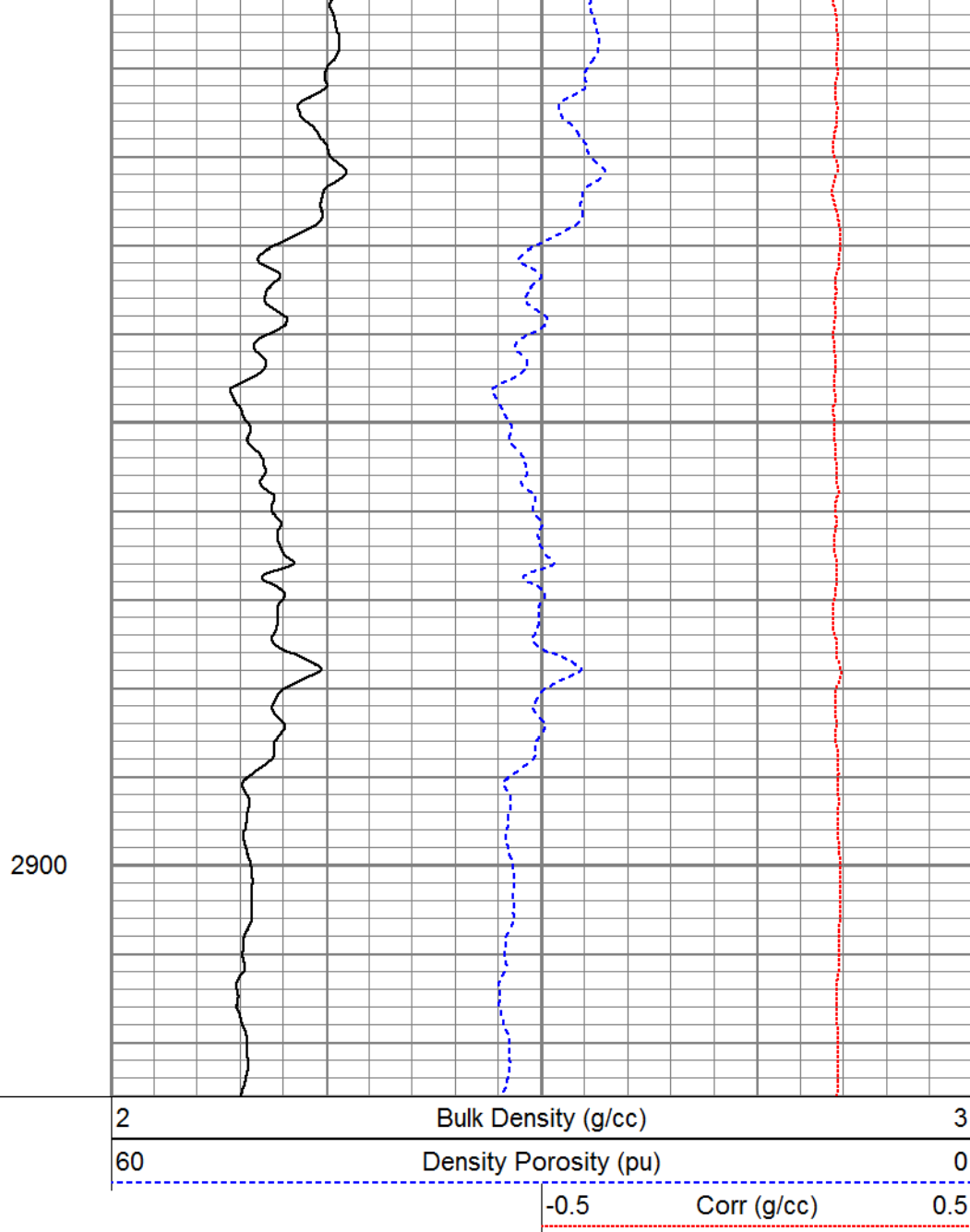
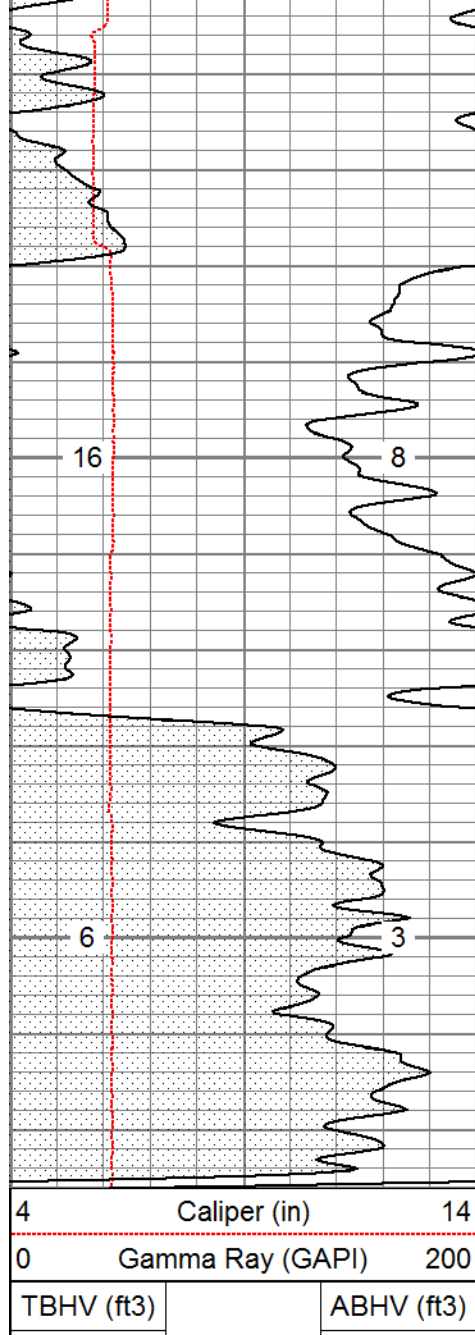
2600

2700

2800







### Calibration Report

Database File: 13649.db  
 Dataset Pathname: pass5  
 Dataset Creation: Tue Aug 19 17:08:50 2014 by Log 0

### Dual Induction Calibration Report

Serial-Model: 1011-PSI  
 Surface Cal Performed:

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.510 -28.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.440 -28.000

### Compensated Density Calibration Report

Serial-Model:  
Master Calibration Performed:

770-PSI  
Thu Jul 25 22:55:00 2013

### Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.750	g/cc	6052.27		9575.17	cps
Aluminum	2.690	g/cc	1090.90		5872.16	cps
	Size		Reading			
Small Ring		in				
Medium Ring		in				
Large Ring		in				

### Compensated Neutron Calibration Report

Serial Number: 822  
Tool Model: PSI

#### CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.9000
Long Space	1.00	cps	1.00	cps	2.2900

### Gamma Ray Calibration Report

Serial Number: 939  
Tool Model: PSI  
Performed: Wed Aug 06 01:11:14 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.6200 GAPI/cps

## Log Variables

Database: C:\Warrior\Data\13649.db  
Dataset: field/well/run1/pass6

#### Top - Bottom

SZCOR	NPORSEL	FLUIDDEN	MATRXDEN	SPSHIFT	SNDERRM	SNDERR
Off	Limestone	g/cc 1	g/cc 2.71	mV 0	mmho/m 0	mmho/m 0
SRFTEMP	CASEOD	PERFS	TDEPTH	BOTTEMP	BOREID	
degF 0	in 4.5	0	ft 0	degF 105	in 6.25	