



COMPENSATED DENSITY COMPENSATED NEUTRON GAMMA RAY

Pioneer Energy Services

Company Augustus Energy Resources, LLC
Well Hays 31-03 2S44W
Field Vernon
County Yuma State Colorado

Location: API #: 05-125-12088

710' FNL & 146' FEL NWNE
SEC 3 TWP 2S RGE 44W

Permanent Datum GL Elevation 3803
Log Measured From KB
Drilling Measured From KB

Other Services
Hi. Res.
Induction
Elevation
K.B. 3809
D.F. 3808
G.L. 3803

Date July 21, 2014

Run Number	1		
Depth Driller	2324		
Depth Logger	2311		
Bottom Logged Interval	2291		
Top Log Interval	1690		
Casing Driller	406		
Casing Logger	Not Logged		
Bit Size	6.25"		
Type Fluid in Hole	WBM		
Density / Viscosity	8.7 / 28		
pH / Fluid Loss	9.0 / 7.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.26 @ 68 F		
Rmf @ Meas. Temp	0.21 @ 68 F		
Rmc @ Meas. Temp	0.31 @ 68 F		
Source of Rmf / Rmc	Calc / Calc		
Rm @ BHT	0.17 @ 102 F		
Time Circulation Stopped	2245 / 2014		
Time Logger on Bottom	0230		
Maximum Recorded Temperature	102 F		
Equipment Number	48		
Location	Ft. Morgan, CO		
Recorded By	Clint Christensen		
Witnessed By	Justin Stone		

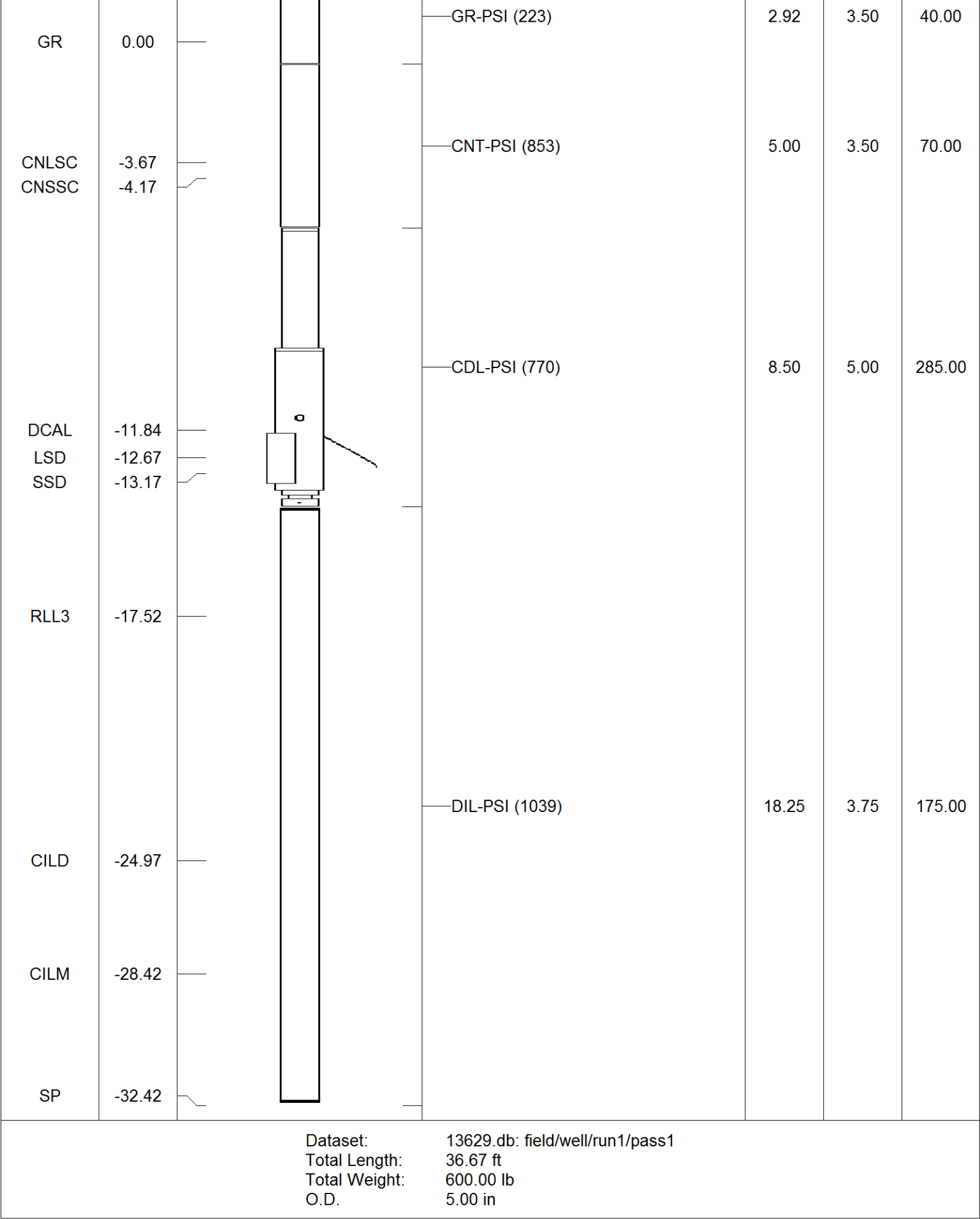
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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not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

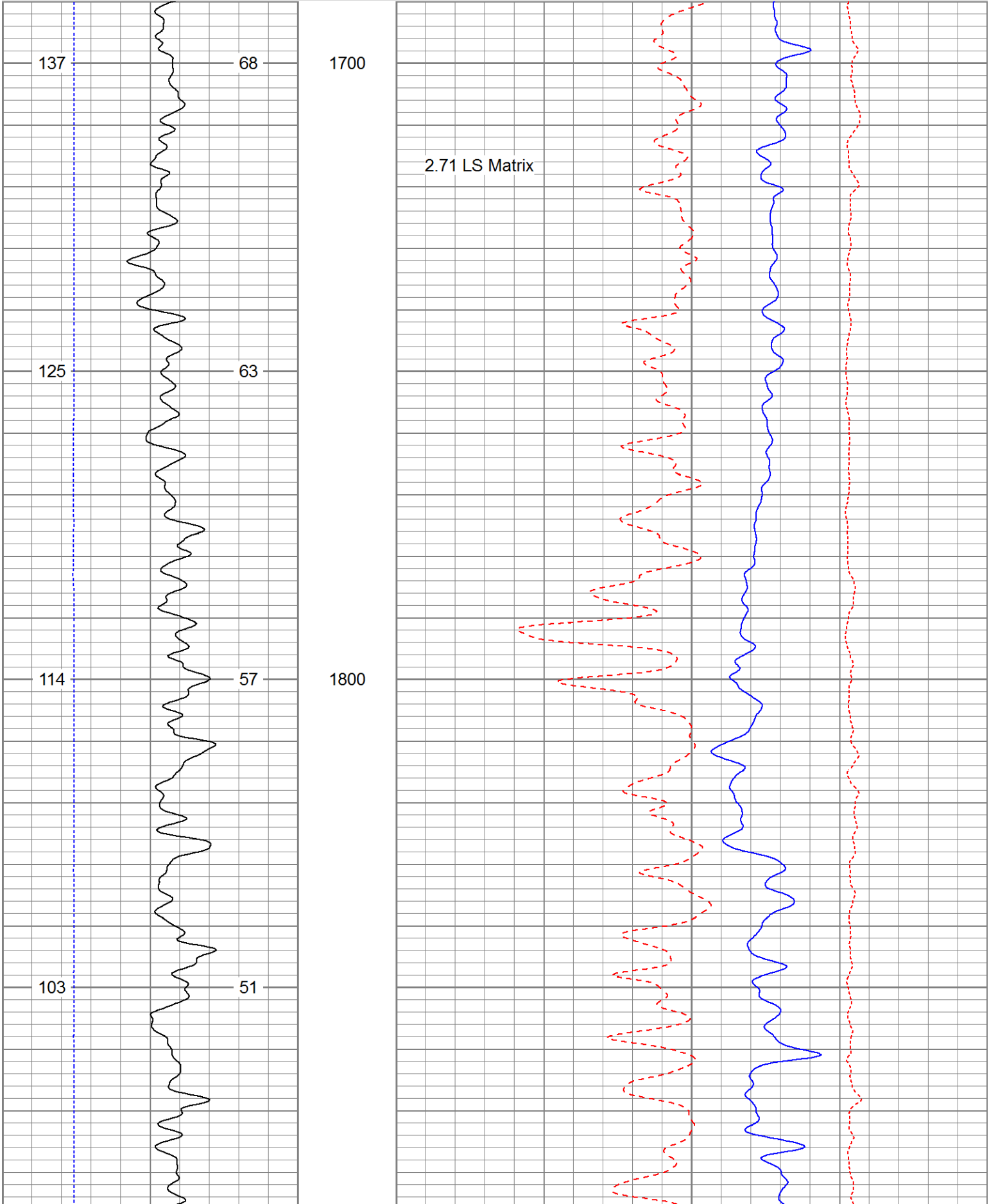
Comments

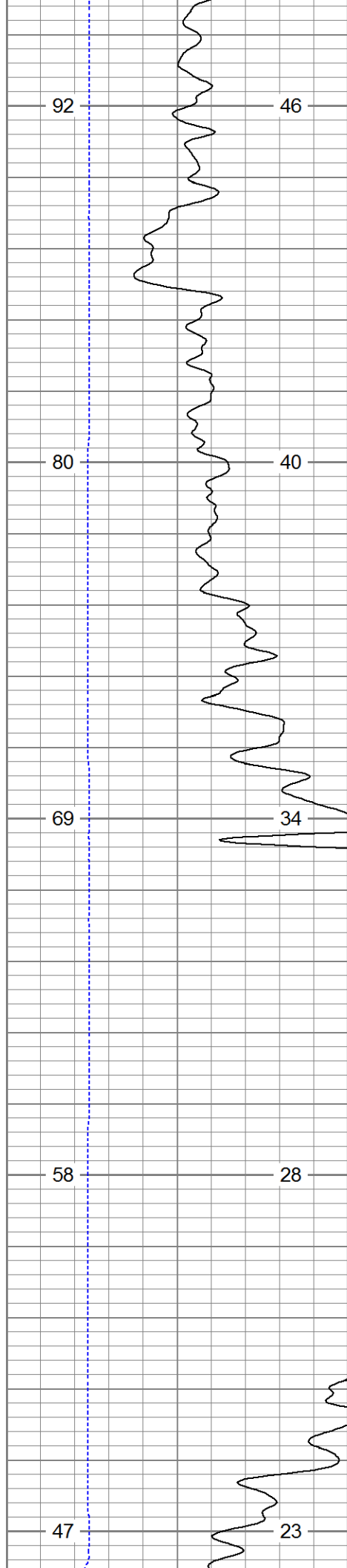
Annular volume calculated for 4.5" casing
Excell Drilling Rig 2
Thank you for using Pioneer Energy Services.

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



Charted by:			Depth in Feet scaled 1.240		
4	Density Caliper (in)	14	60	Density Porosity (pu)	0
0	Gamma Ray (GAPI)	200	60	Neutron Porosity (pu)	0
TBHV (ft3)		ABHV (ft3)		-0.5	Correction (g/cc)
					0.5

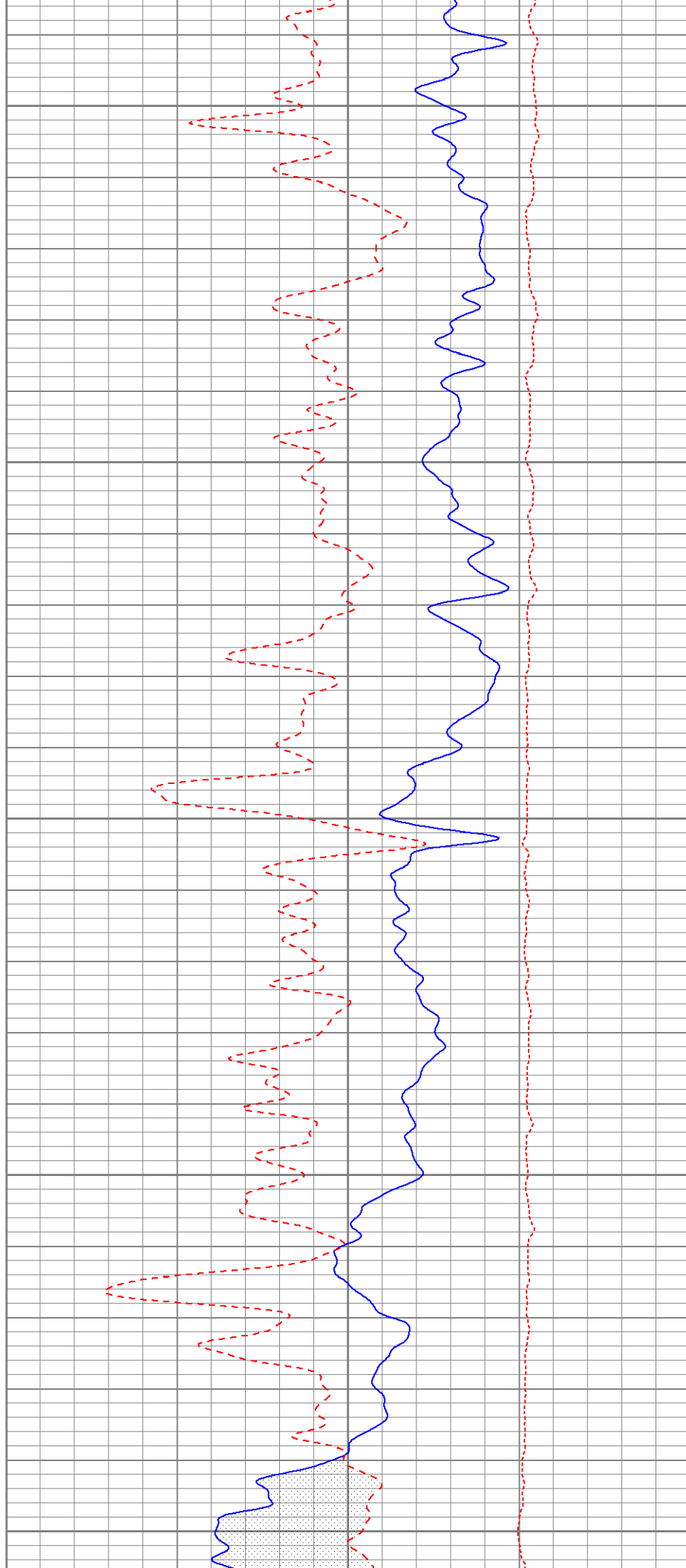


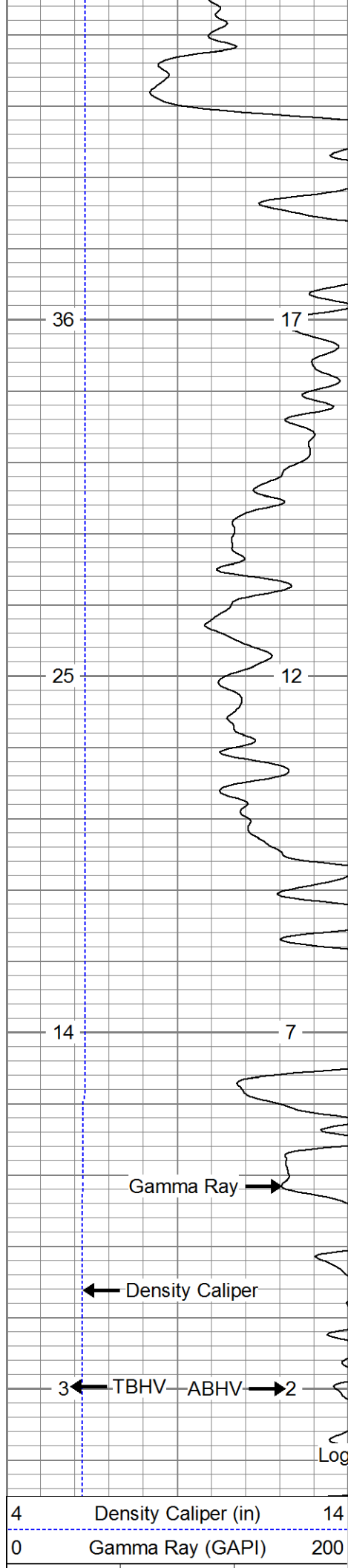


1900

2000

2100

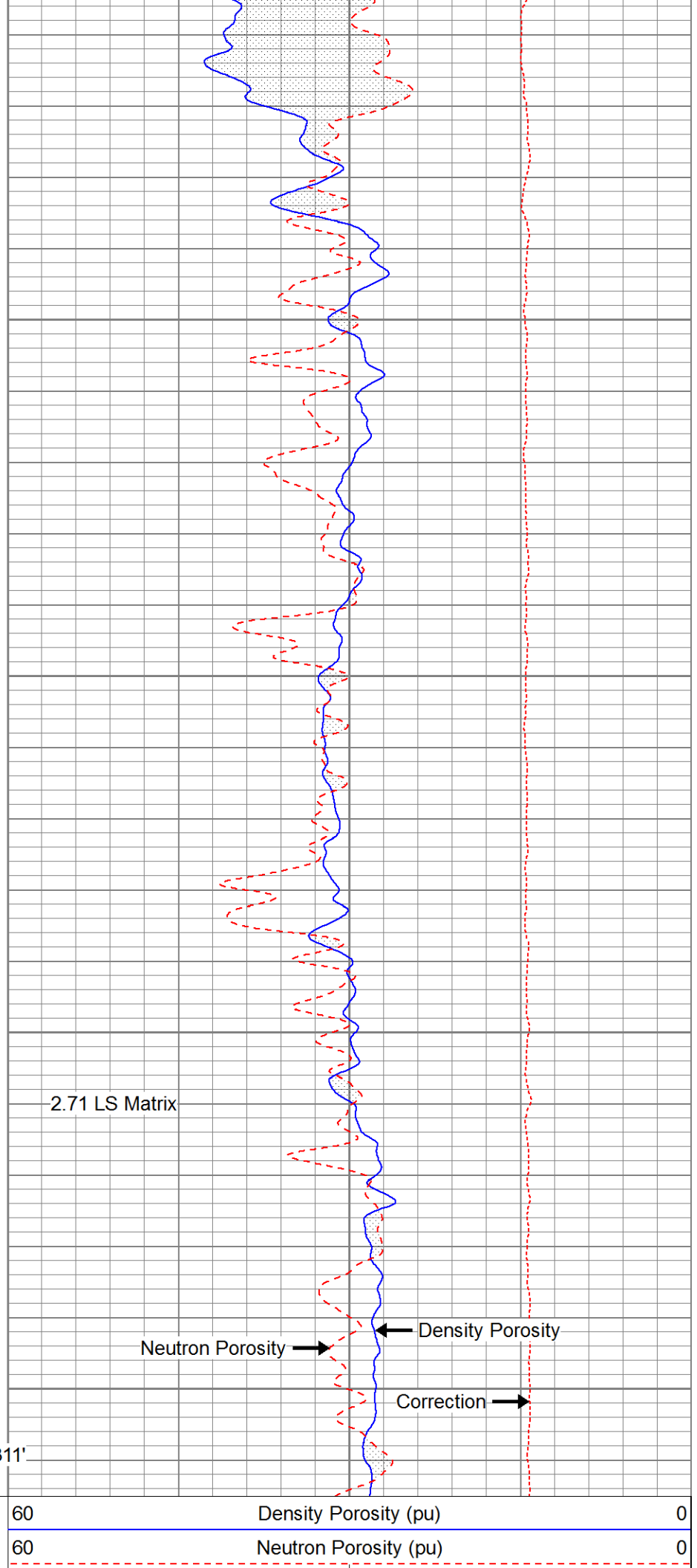




2200

2300

Logger's TD: 2311'

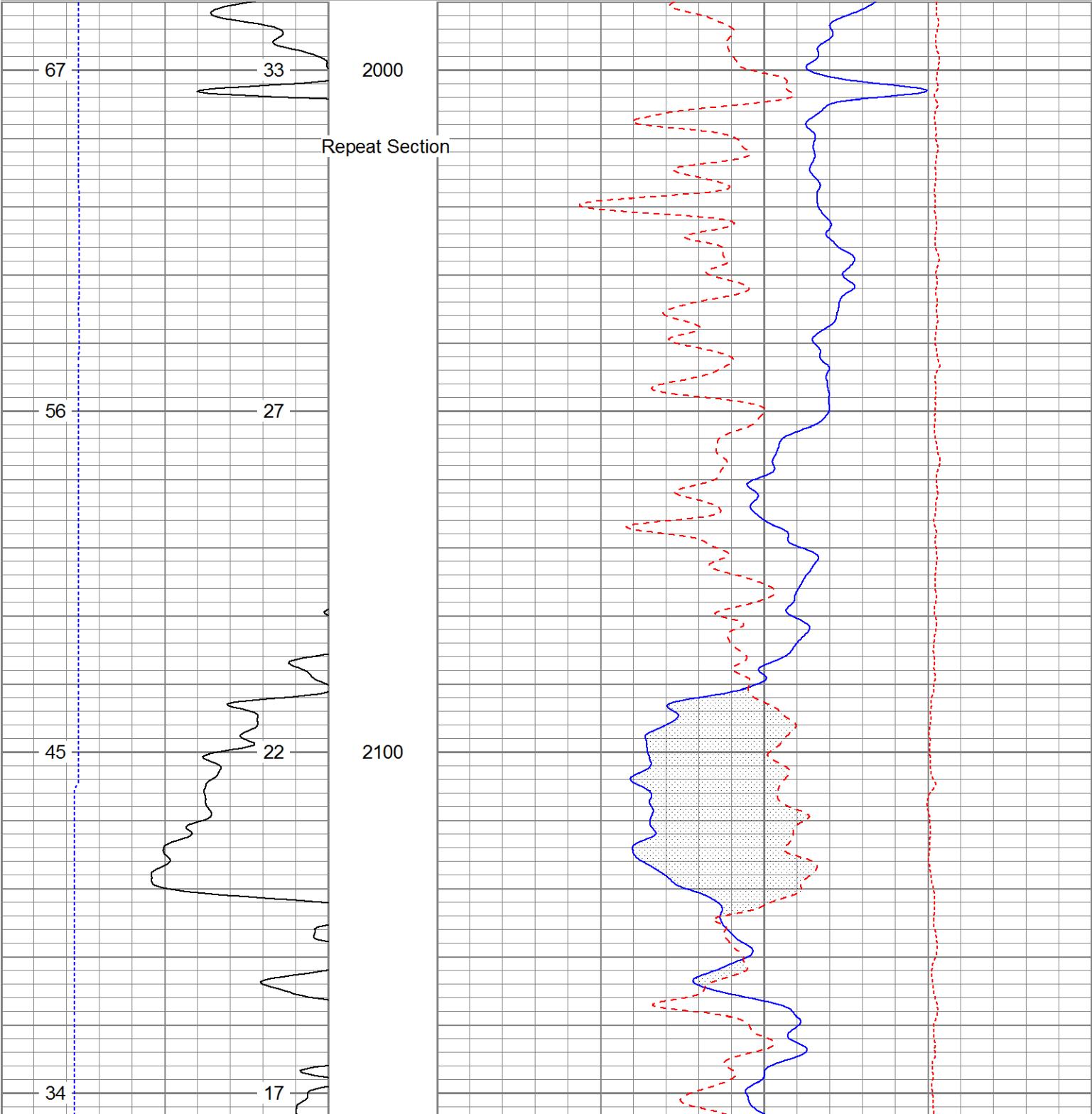


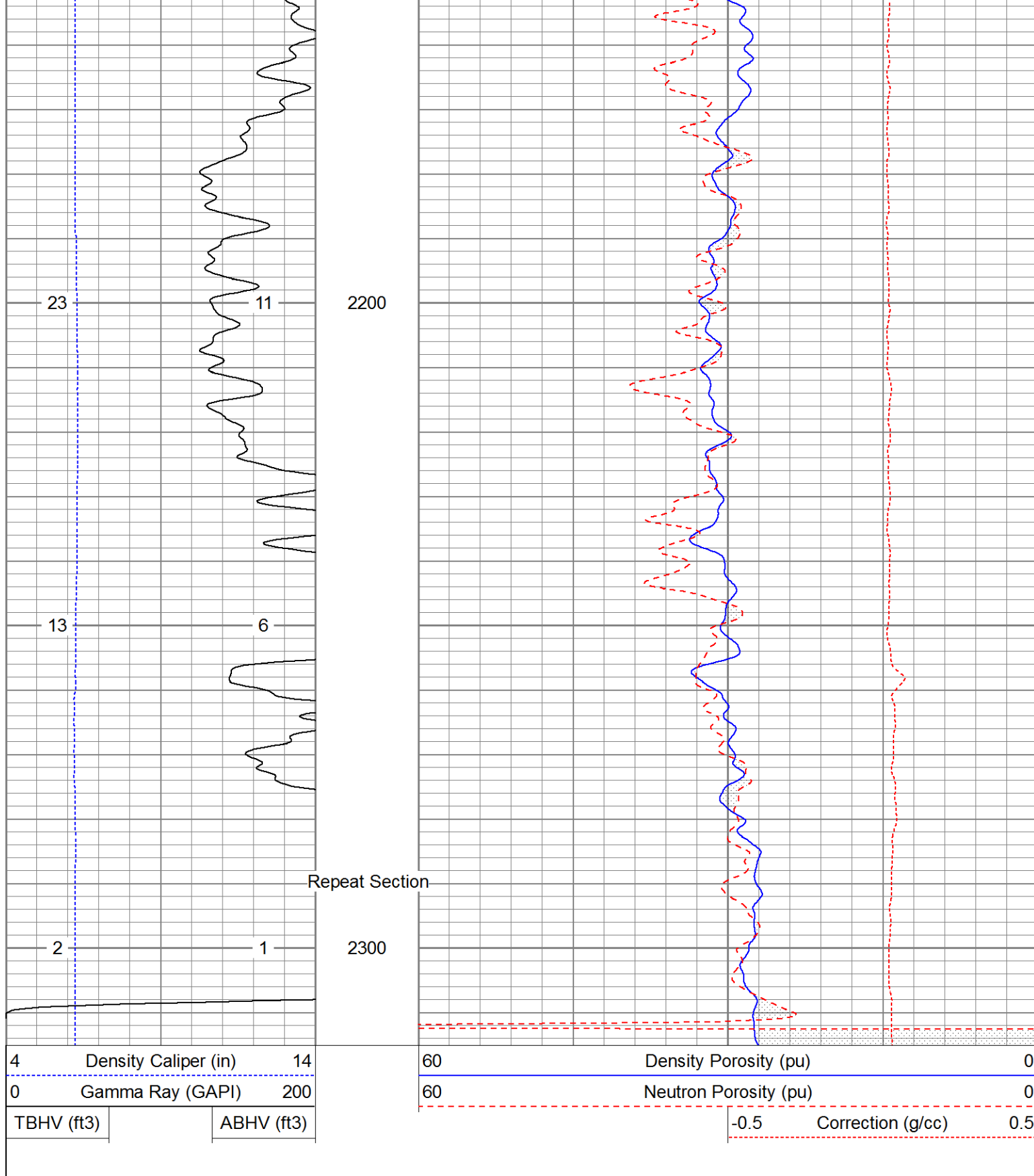
TBHV (ft3)	ABHV (ft3)	-0.5	Correction (g/cc)	0.5
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Database File:		13629.db	
Dataset Pathname:		pass2.1	
Presentation Format:		DEN_NE~1	
Dataset Creation:		Mon Jul 21 02:57:39 2014 by Calc 0	
Charted by:		Depth in Feet scaled 1:240	

4	Density Caliper (in)	14
0	Gamma Ray (GAPI)	200
TBHV (ft3)		ABHV (ft3)

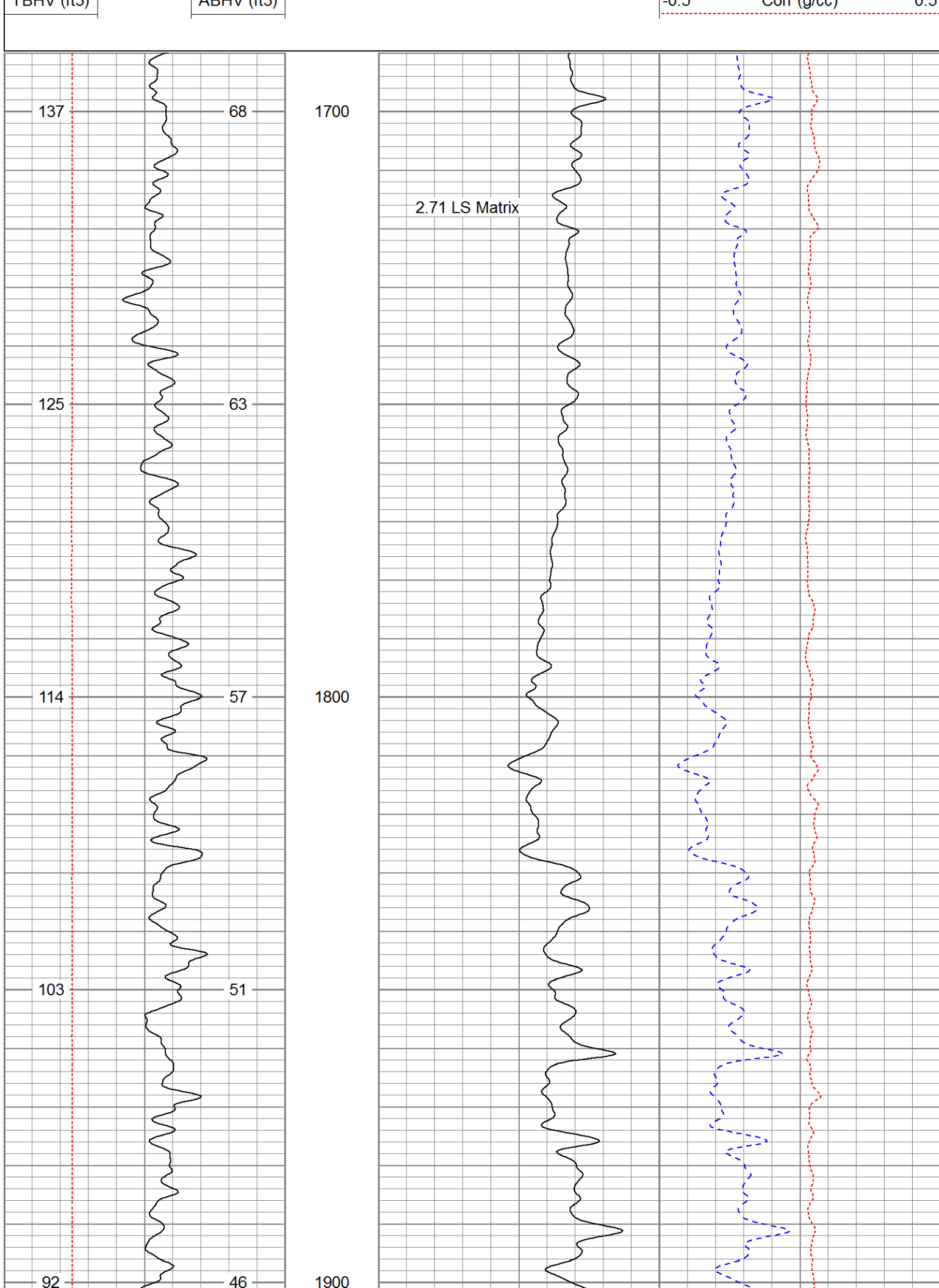
60	Density Porosity (pu)	0
60	Neutron Porosity (pu)	0
-0.5	Correction (g/cc)	0.5

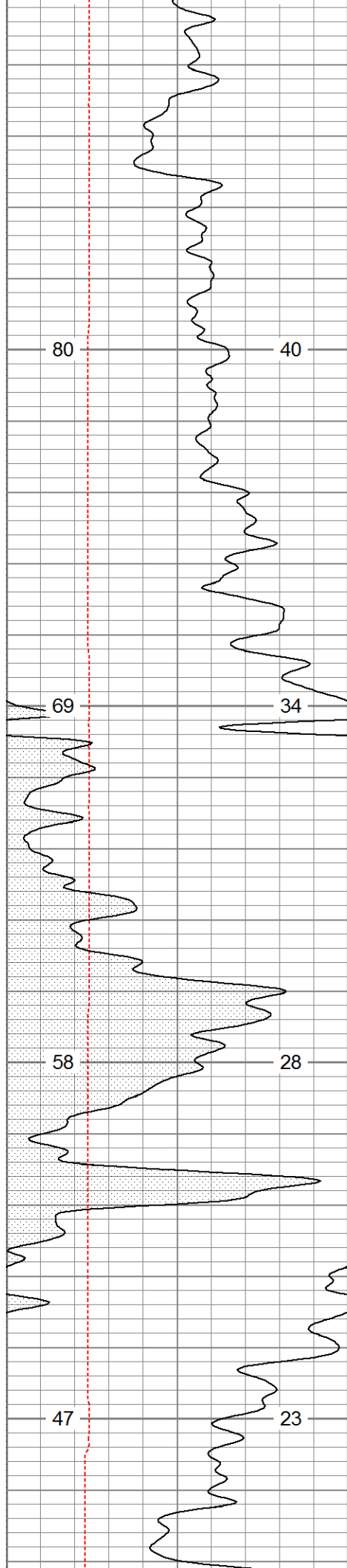




Database File: 13629.db
Dataset Pathname: pass3
Presentation Format: cdl60
Dataset Creation: Mon Jul 21 03:05:28 2014 by Log 0
Charted by: Depth in Feet scaled 1:240

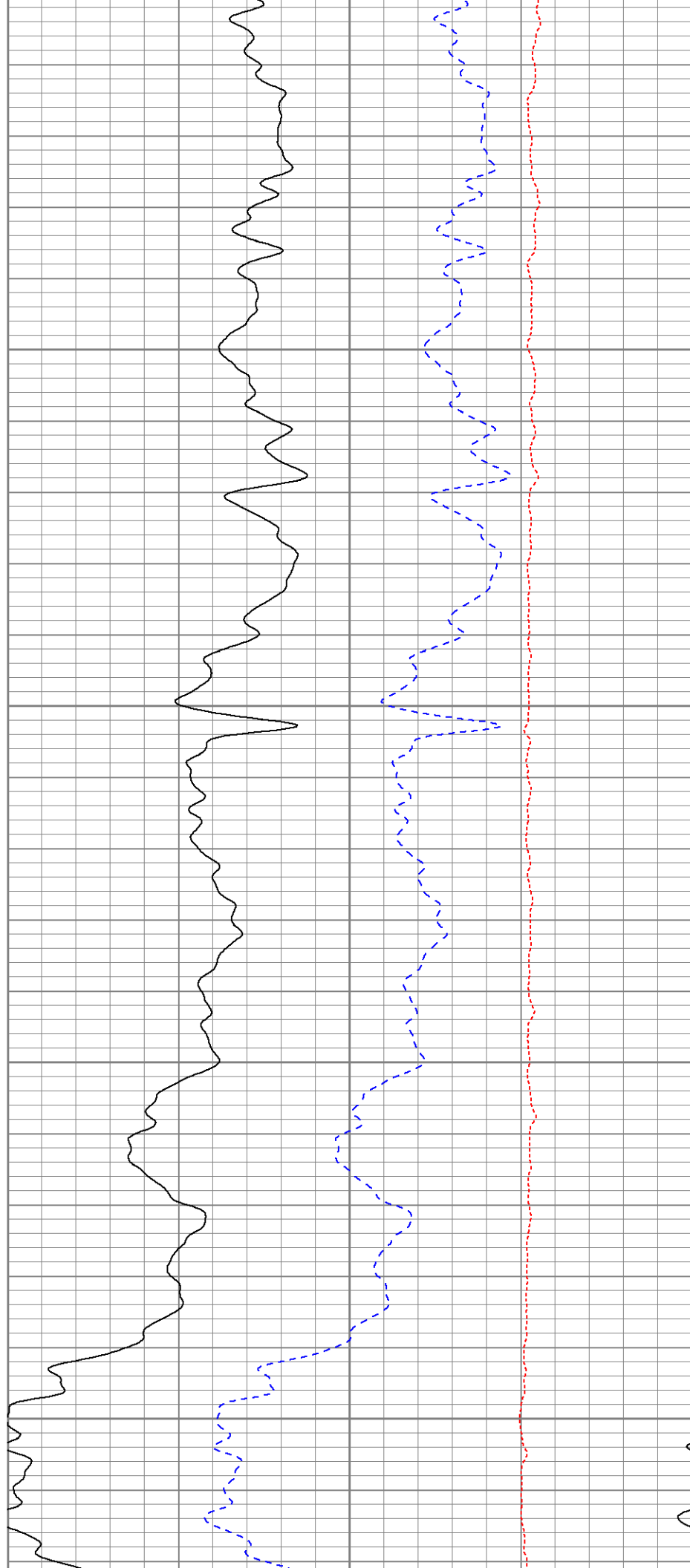
4	Caliper (in)	14	2	Bulk Density (g/cc)	3
0	Gamma Ray (GAPI)	200	60	Density Porosity (pu)	0
TBHV (ft3)	ABHV (ft3)		0.5	Corr (g/cc)	0.5

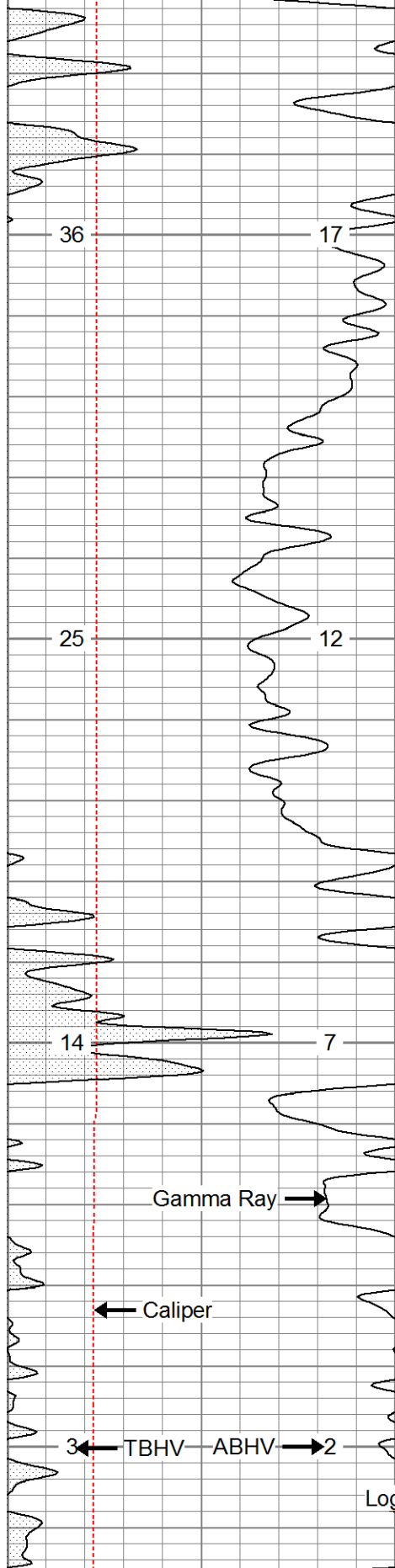




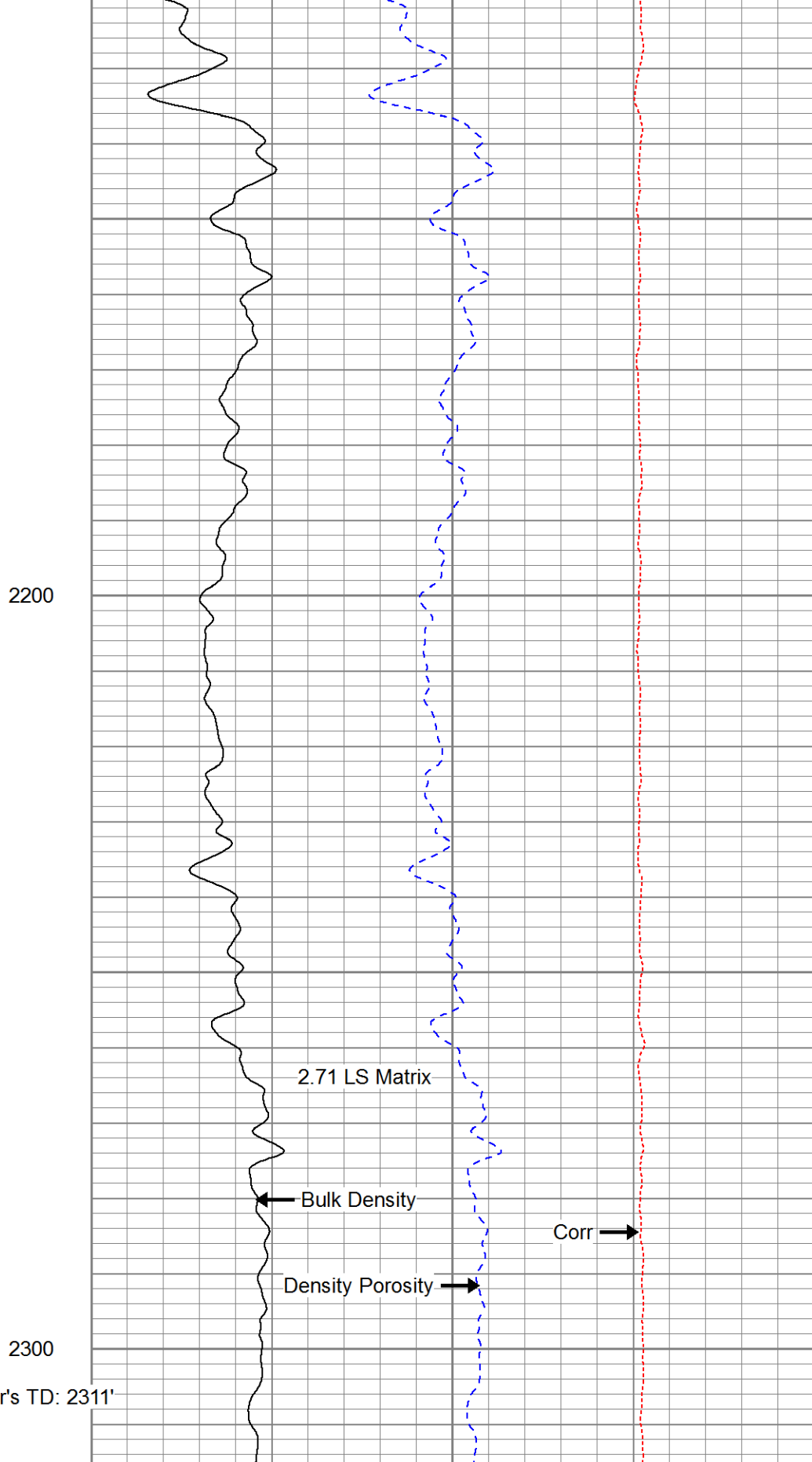
2000

2100





4	Caliper (in)	14
0	Gamma Ray (GAPI)	200
TBHV (ft3)		ABHV (ft3)



2	Bulk Density (g/cc)	3
60	Density Porosity (pu)	0
-0.5	Corr (g/cc)	0.5

Calibration Report							
Database File:		13629.db					
Dataset Pathname:		pass1					
Dataset Creation:		Mon Jul 21 02:03:05 2014 by Log 0					
Dual Induction Calibration Report							
Serial-Model:		1039-PSI					
Surface Cal Performed:							
		Readings		References		Results	
Loop:	Air	Loop		Air	Loop	m	b
Deep	0.000	1.000		0.000	1.000	mmho/m	0.585
Medium	0.000	1.000		0.000	1.000	mmho/m	-45.000
							-40.000
Compensated Density Calibration Report							
Serial-Model:		770-PSI					
Source / Verifier:		4400 / PSI					
Master Calibration Performed:		Mon Jul 21 02:13:30 2014					
Before Survey Verification Performed:							
After Survey Verification Performed:							
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	
		Spine Angle = 74.07		Density/Spine Ratio = 0.528			
		Size		Reading			
Small Ring		4.50	in	1.80			
Large Ring		13.00	in	1.46			
Before Survey Verification							
		Target		Measured			
After Survey Verification							
		Target		Measured			
Compensated Neutron Calibration Report							
Serial Number:		853					
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	2.0000	

PRE-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	
POST-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu
Gamma Ray Calibration Report				
	Serial Number:	223		
	Tool Model:	PSI		
	Performed:	Mon Jul 21 02:13:45 2014		
	Calibrator Value:	253.0	GAPI	
	Background Reading:	30.0	cps	
	Calibrator Reading:	380.0	cps	
	Sensitivity:	0.6300	GAPI/cps	