



Compensated Neutron
Litho Density
Micro Electric
Log

Company Berexco, LLC.
Well Bailey OE #3-27
Field Amazon East Ditch
County Finney State Kansas

Company Berexco, LLC.
Well Bailey OE #3-27
Field Amazon East Ditch
County Finney
State Kansas

Location: 1490' FNL & 983' FWL
NWNE SWNW
SEC 27 TWP 22S RGE 34W
Permanent Datum G.L. Elevation 2940 ft.
Log Measured From K.B. , 12 ft. above perm. datum
Drilling Measured From K.B.
Other Services
IAT
Elevation
K.B. 2952 ft.
D.F. 2950 ft.
G.L. 2940 ft.

Date 25-Feb-2019

Run Number	One		
Depth Driller	4850'		
Depth Logger	4840'		
Bottom Logged Interval	4824'		
Top Log Interval	3600'		
Casing Driller	8.625" @ 1774'	@	@
Casing Logger	1774'		
Bit Size	7.875"	@	@
Type Fluid in Hole	WBM		
Density / Viscosity	9.4 / 53		
pH / Fluid Loss	10.5 / 7.2		
Source of Sample	Mud Tank		
Rm @ Meas. Temp	0.898 @ 75 °F	@	@
Rmf @ Meas. Temp	0.673 @ 75 °F	@	@
Rmc @ Meas. Temp	1.22 @ 75 °F	@	@
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.106 @ 94 °F	@	@
Time Circulation Stopped	8:00		
Time Logger on Bottom	11:30		
Maximum Recorded Temperature	94 °F		
Equipment Number	10002		
Location	OKC		
Recorded By	B. Oetting		
Witnessed By	E. Grieves		

<<< Fold Here >>>

Equipment and Log Data

Service Order: 12734

Gamma		Density		Neutron		Sonic		IAT/DLL	
Run No.	One	Run No.	One	Run No.	One	Run No.	One	Run No.	One
Serial No.	5939	Serial No.	112	Serial No.	2542	Serial No.		Serial No.	106
O.D.	3.375 in.	Source No.	50129B	Source No.	87624G	Centralizers		Standoffs	2 @ 0.5"
		O.D.	4.5 in.	O.D.	3.375 in.	O.D.	3.375 in.	O.D	3.875 in.

Logging Pass Data

General			Gamma		Density			Neutron			Sonic			IAT/DLL	
			Scales		Scales			Scales			Scales			Scales	
Run	Depths		Left	Right	Left	Right	Matrix	Left	Right	Matrix	Left	Right	Matrix	Left	Right
One	TD	CSG	0	150	0.3	-0.1	2.71 g/cc	0.3	-0.1	Lime				0.2	2000

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

Toolstring ran as per diagram
Density is presented on a 2.71g/cc Matrix, Neutron is presented on a Limestone Matrix,
Chlorides 3400 ppm
Annular volume computed using 5.5" Casing
Washouts and borehole rugosity affect data quality and repeatability

YOUR CREW TODAY: J. Washington, R. Valdez

THANK YOU FOR CHOOSING ALLIED HORIZONTAL WIRELINE. OKLAHOMA CITY. (405) 445-7135.

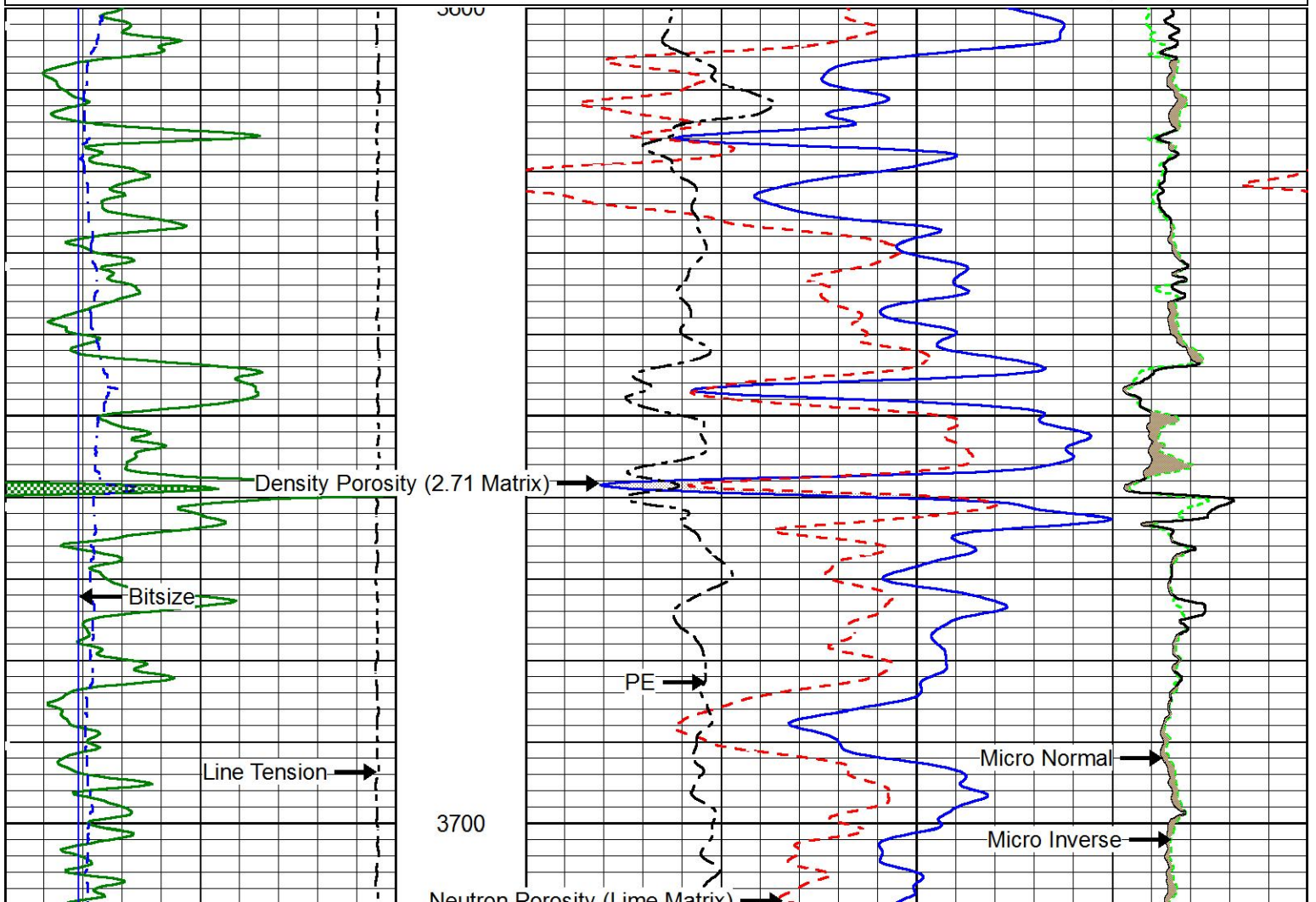


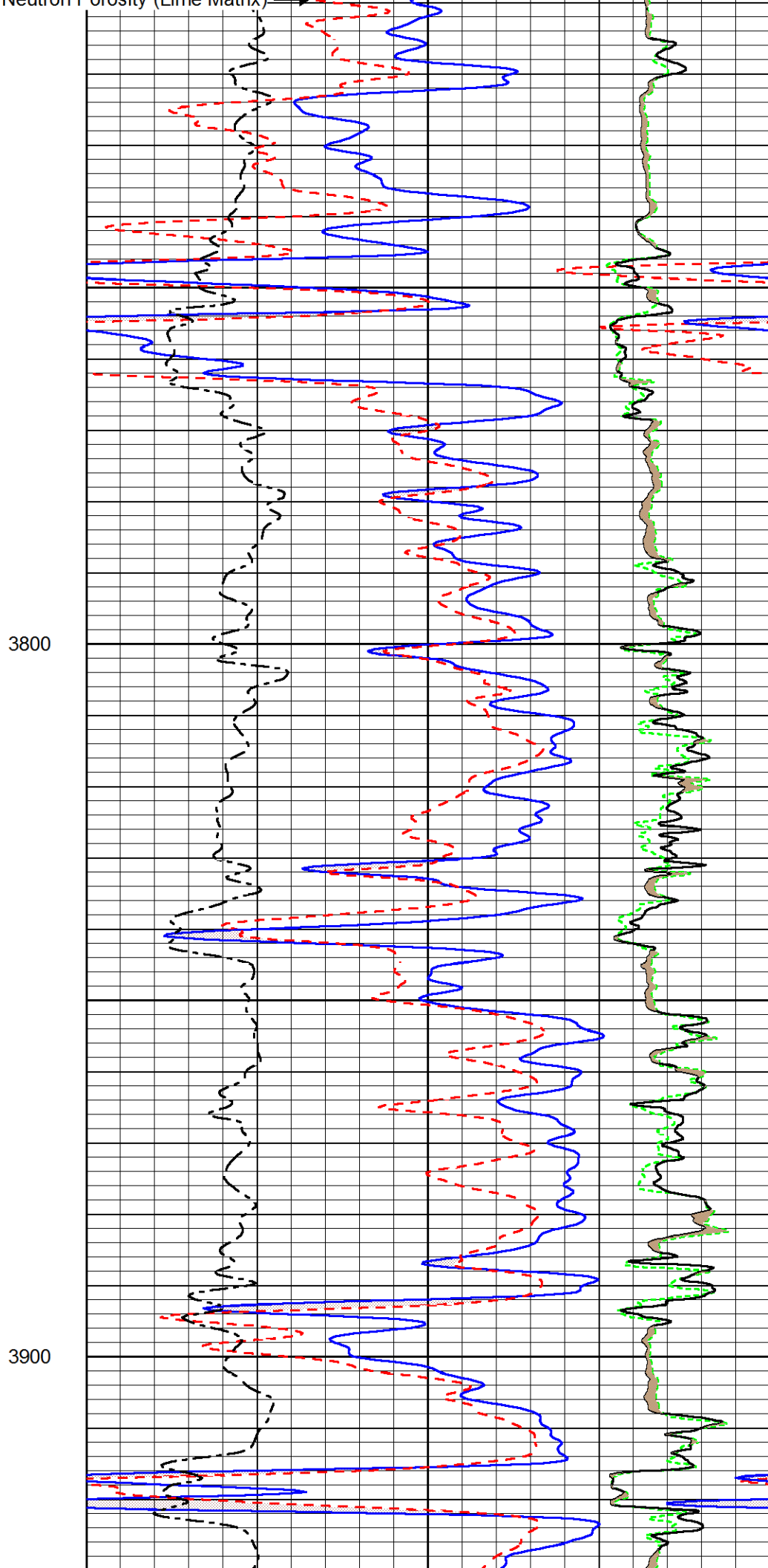
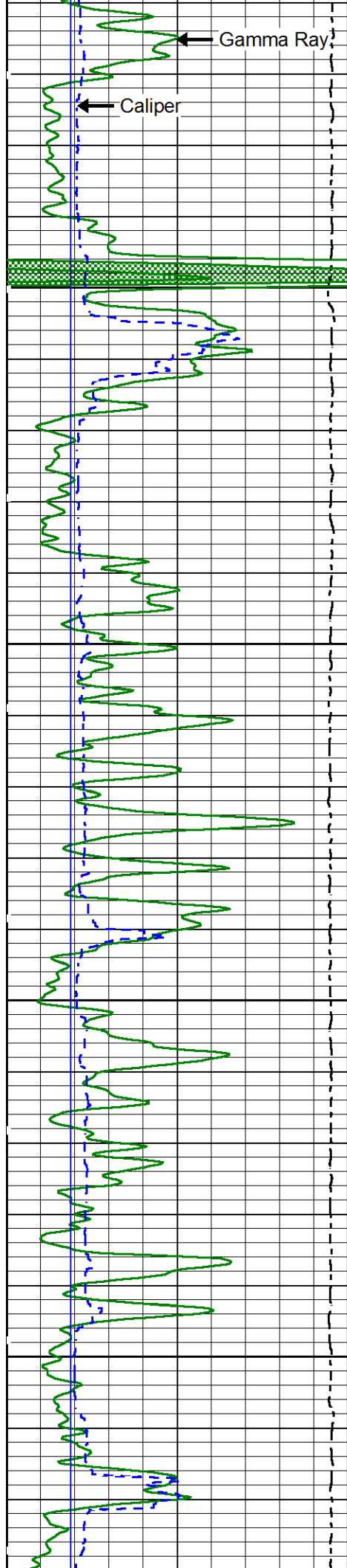
Main Pass

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass7
Presentation Format OKC-PO~2
Dataset Creation Mon Feb 25 15:47:25 2019
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
6	Bitsize (in)	16
Line Tension		
10000	(lb)	0

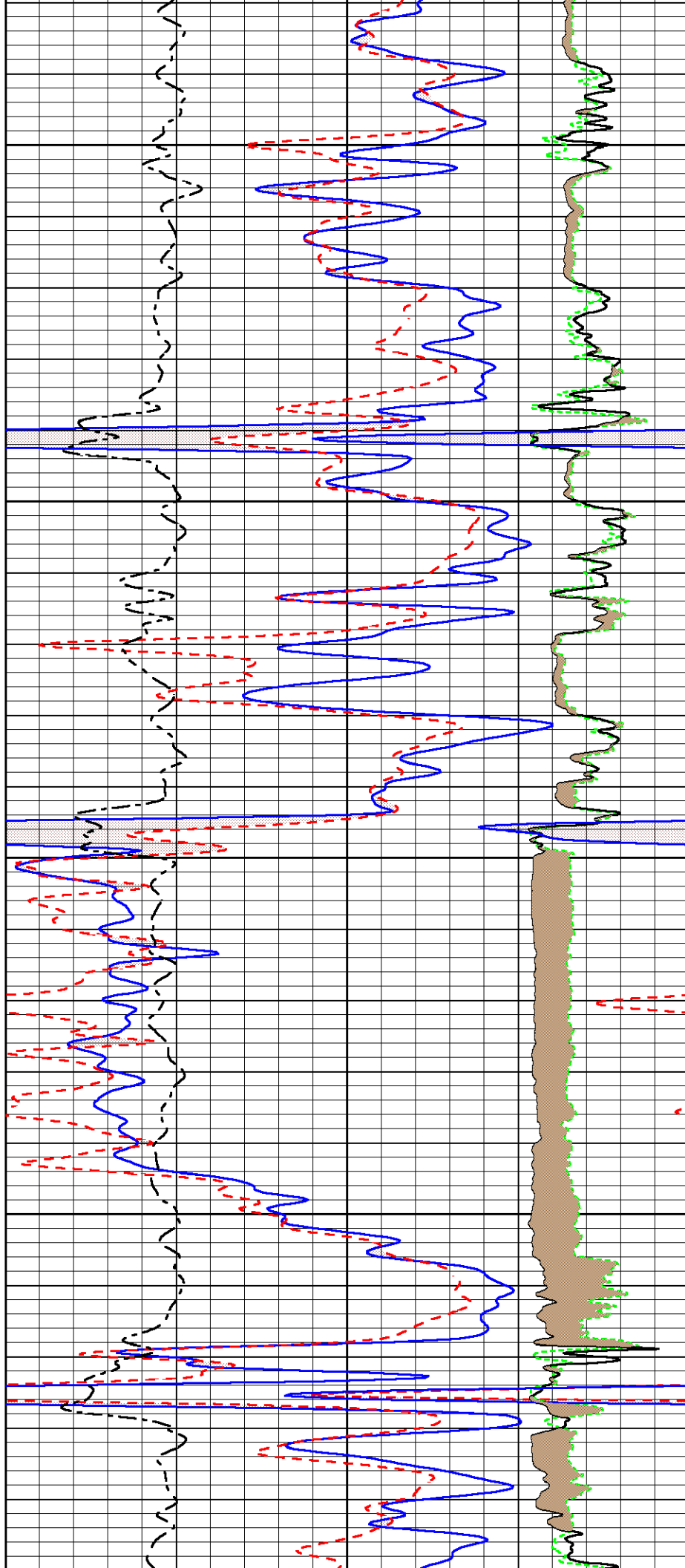
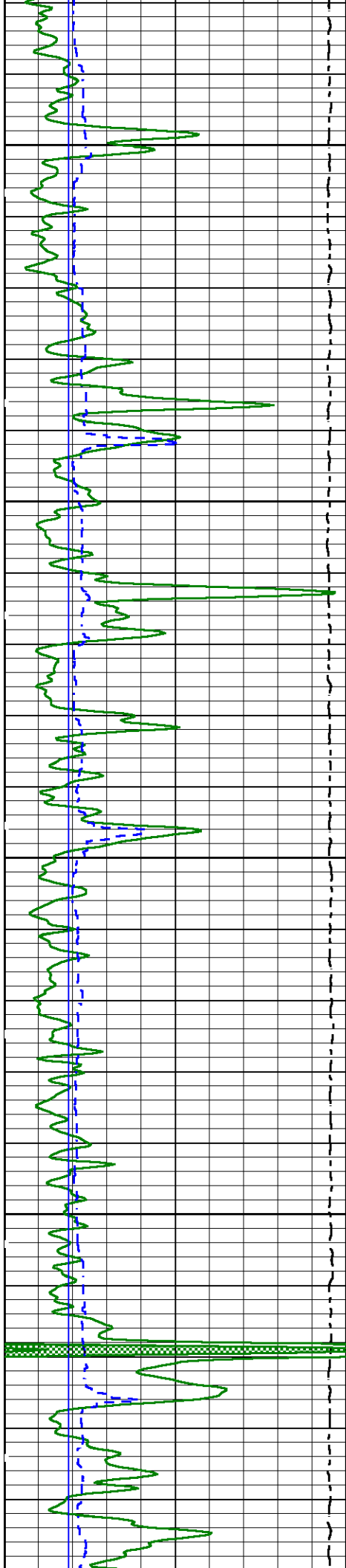
0.3	Density Porosity (2.71 Matrix)	-0.1
0.3	Neutron Porosity (Lime Matrix)	-0.1
0	PE	10
Micro Normal		
0	(Ohm-m)	20
Micro Inverse		
0	(Ohm-m)	20

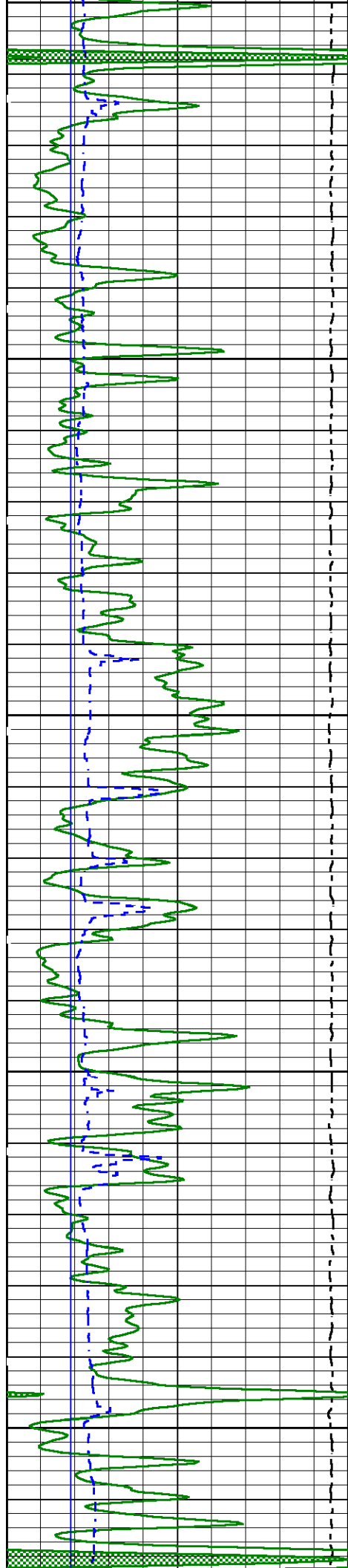




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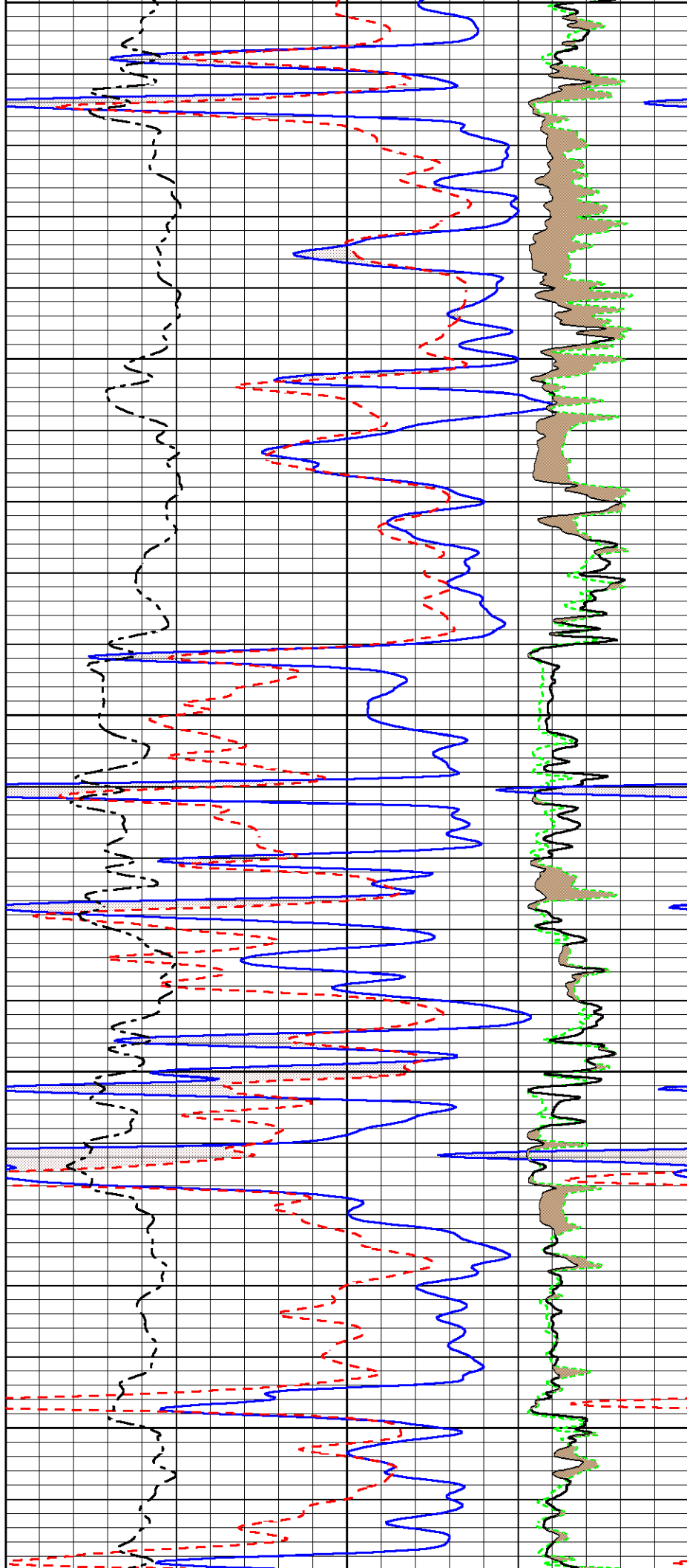
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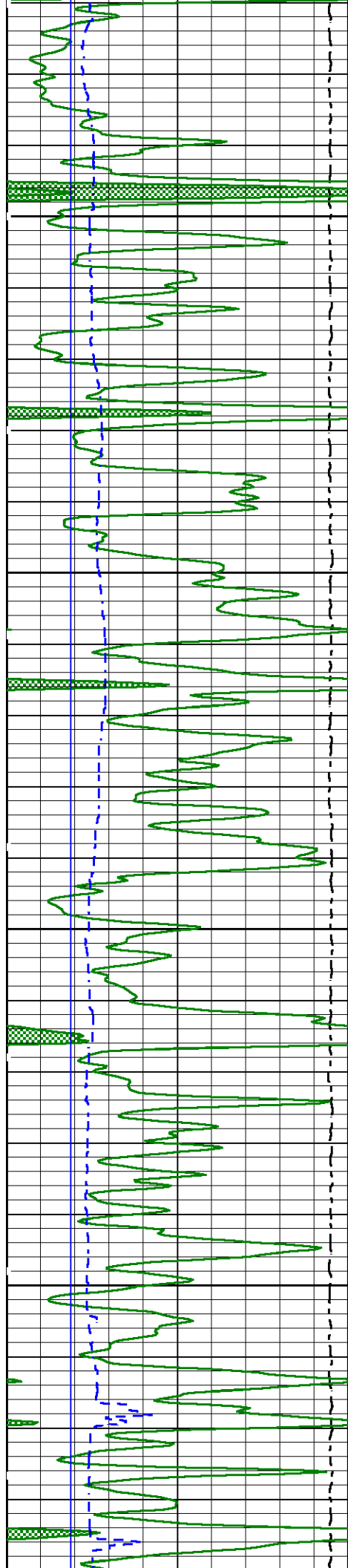




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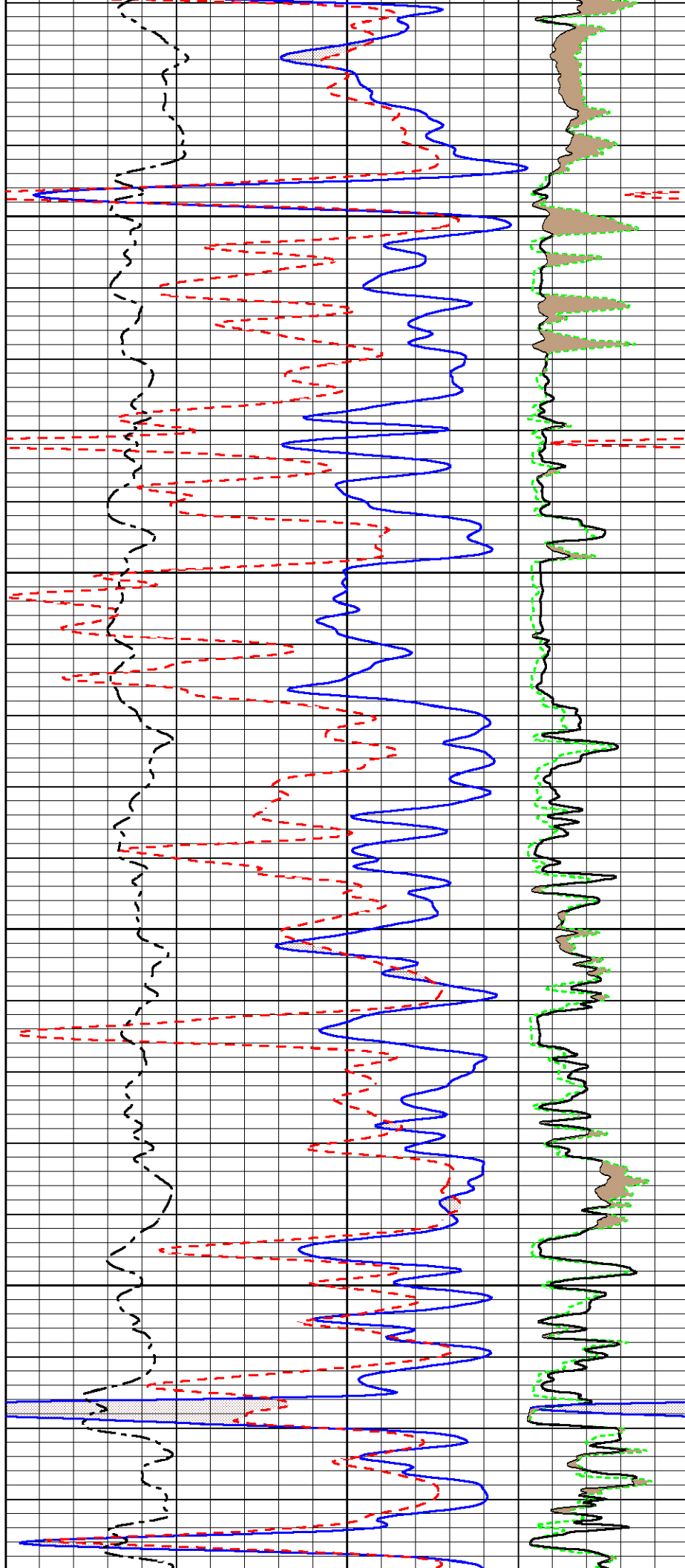
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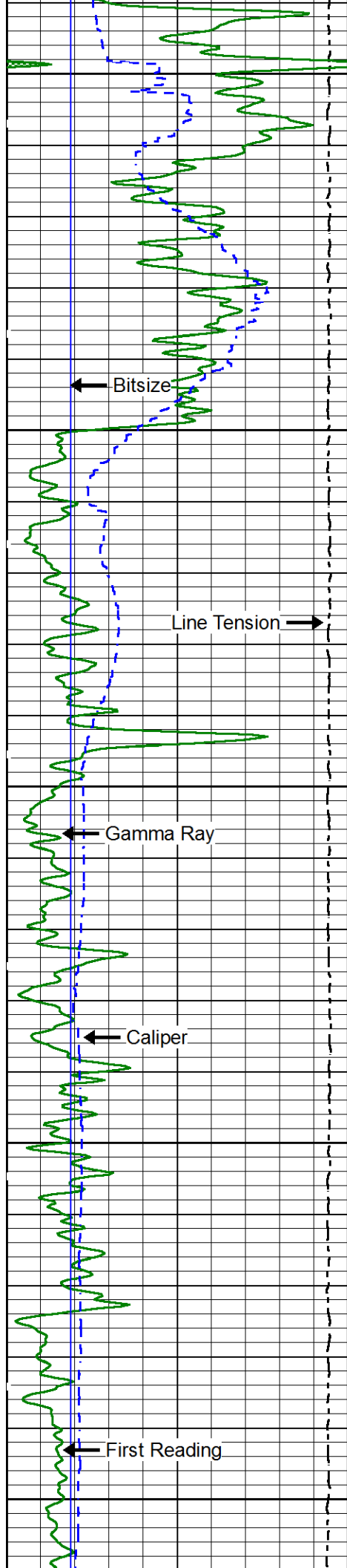




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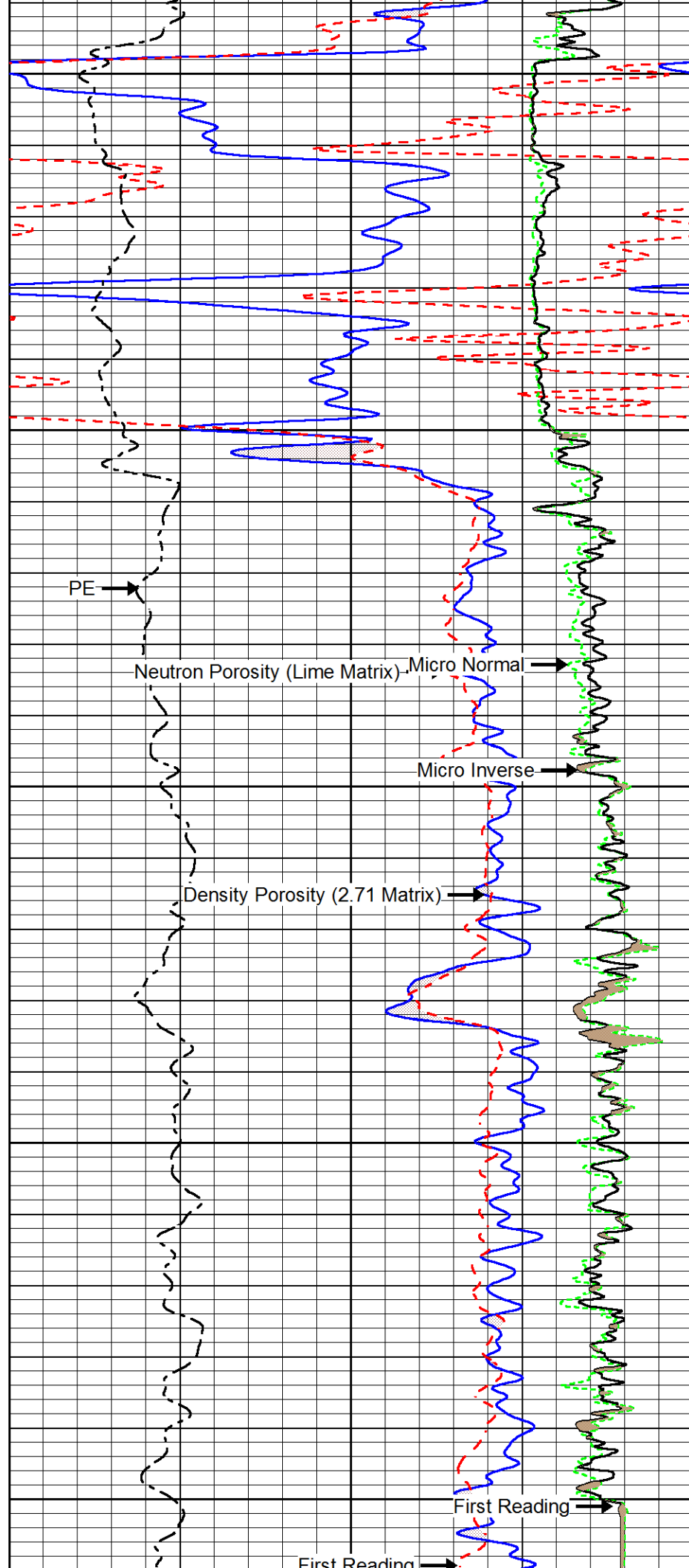


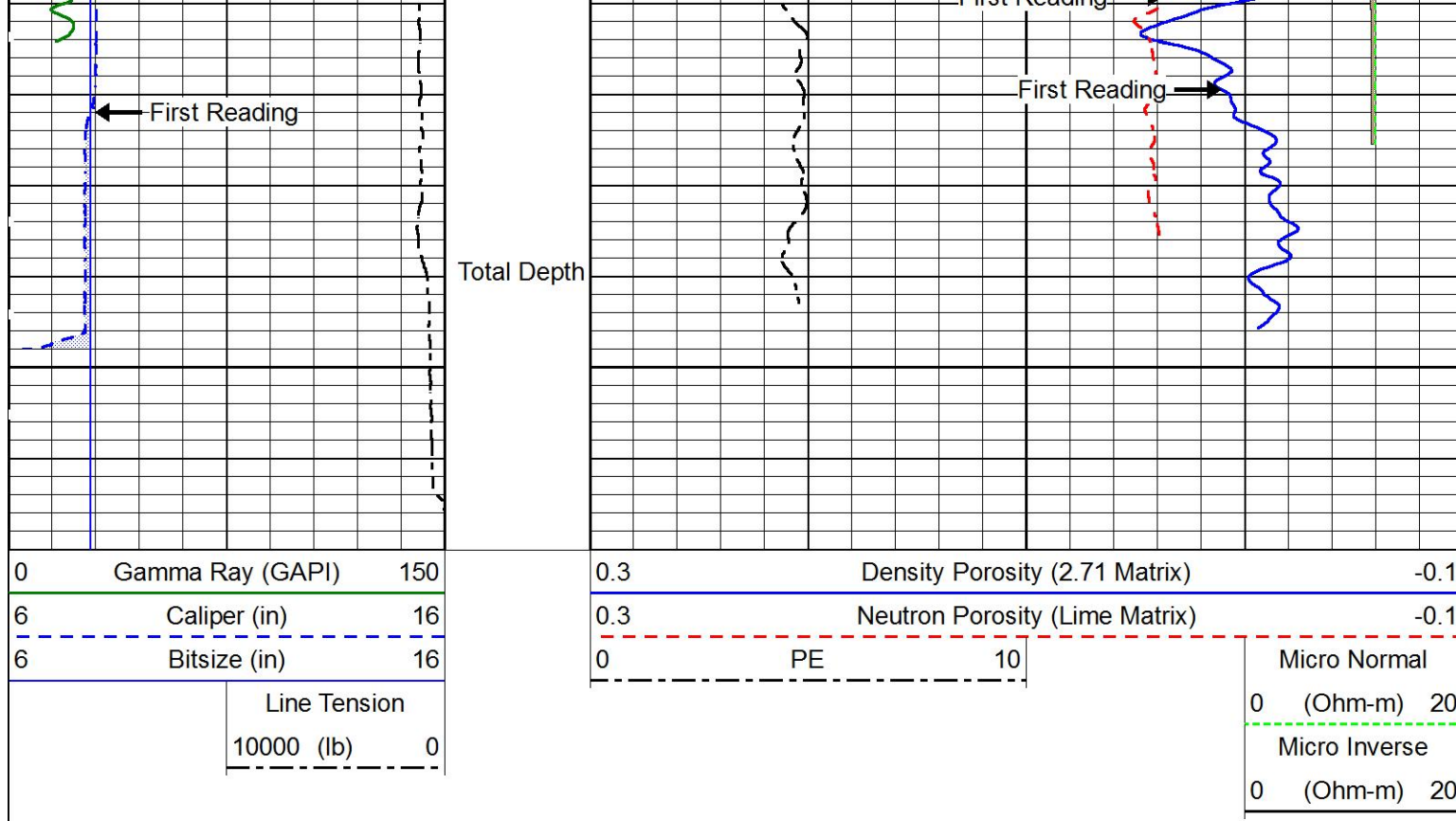


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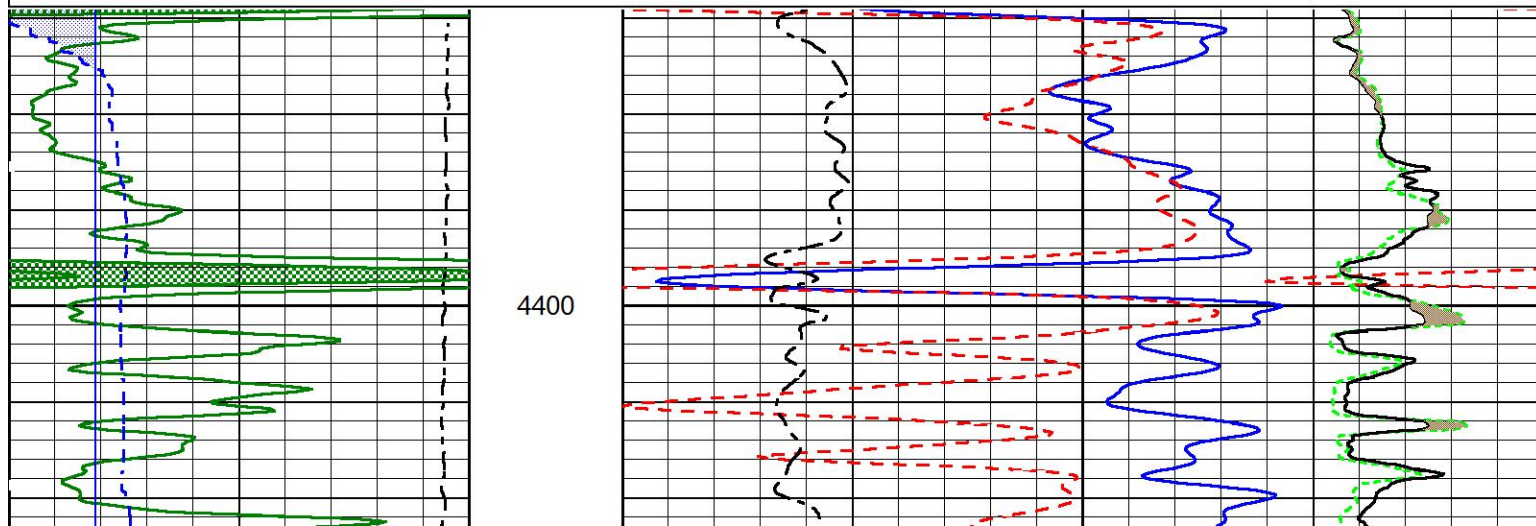
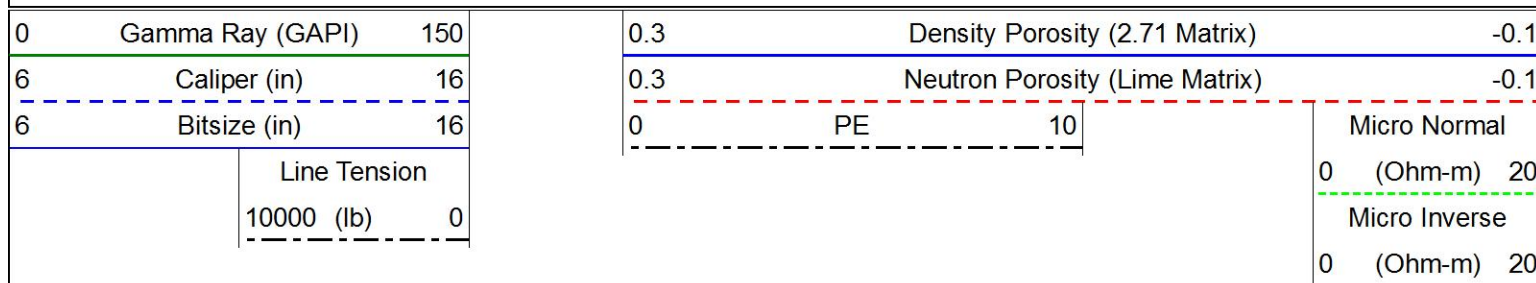
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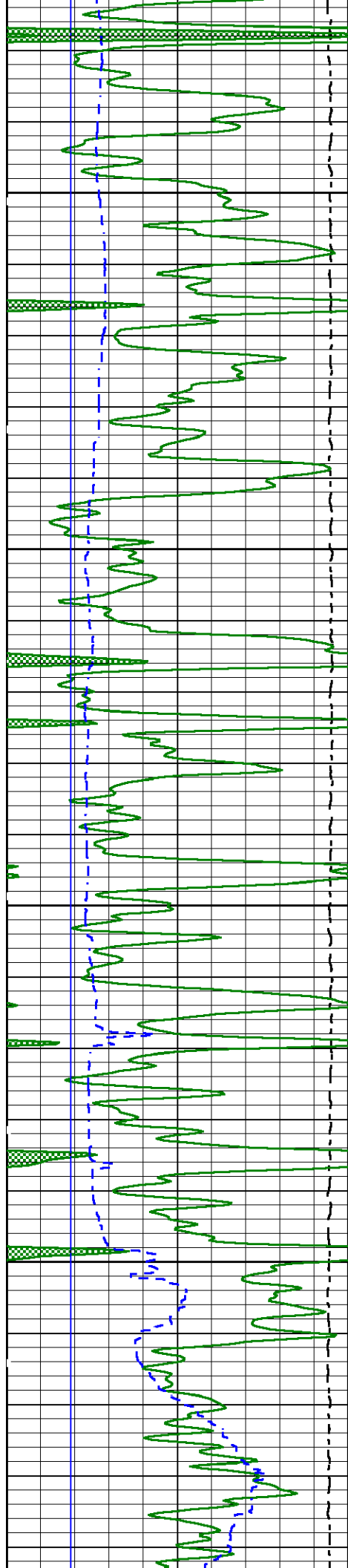




Repeat Pass

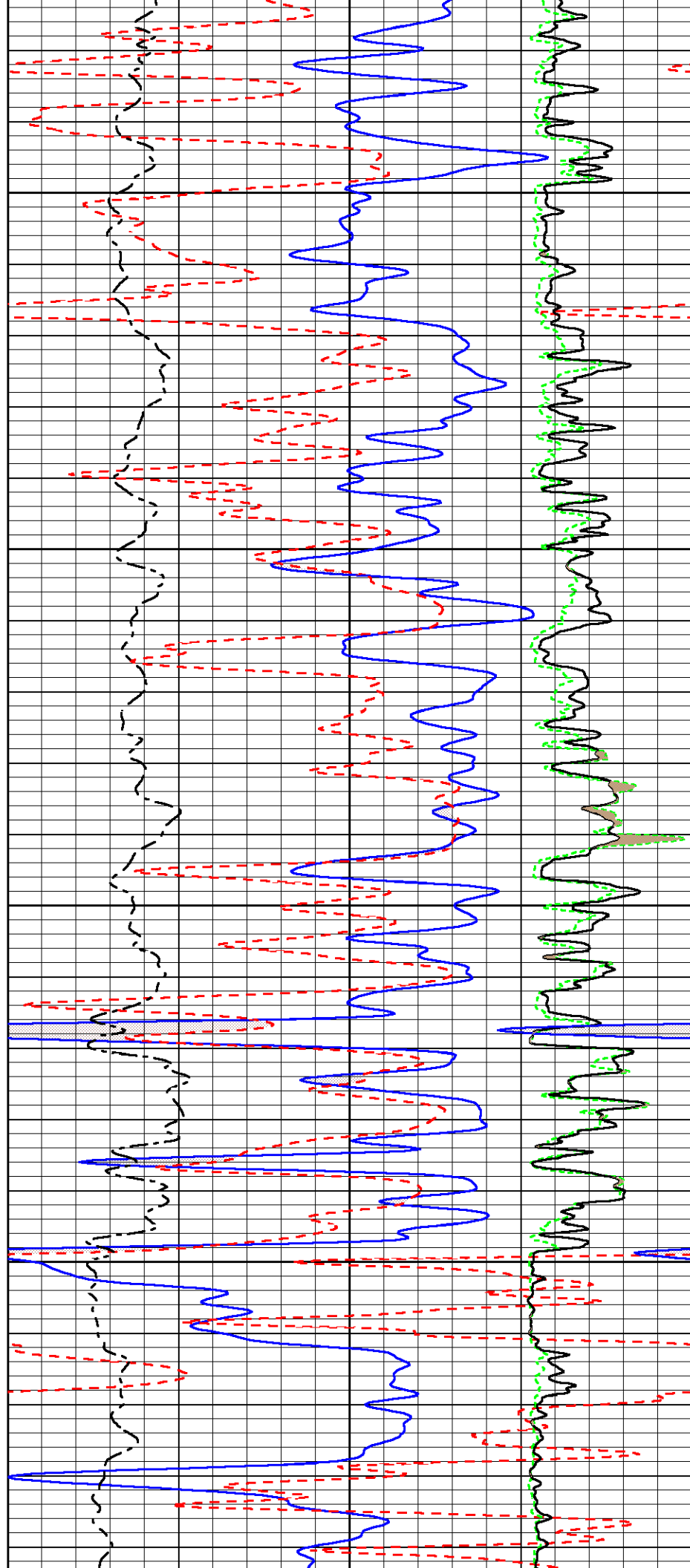
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 Dataset Pathname: pass3.6
 Presentation Format: okc-porols-melrt-base
 Dataset Creation: Mon Feb 25 16:01:08 2019 by Calc Sondex
 Charted by: Depth in Feet scaled 1:240

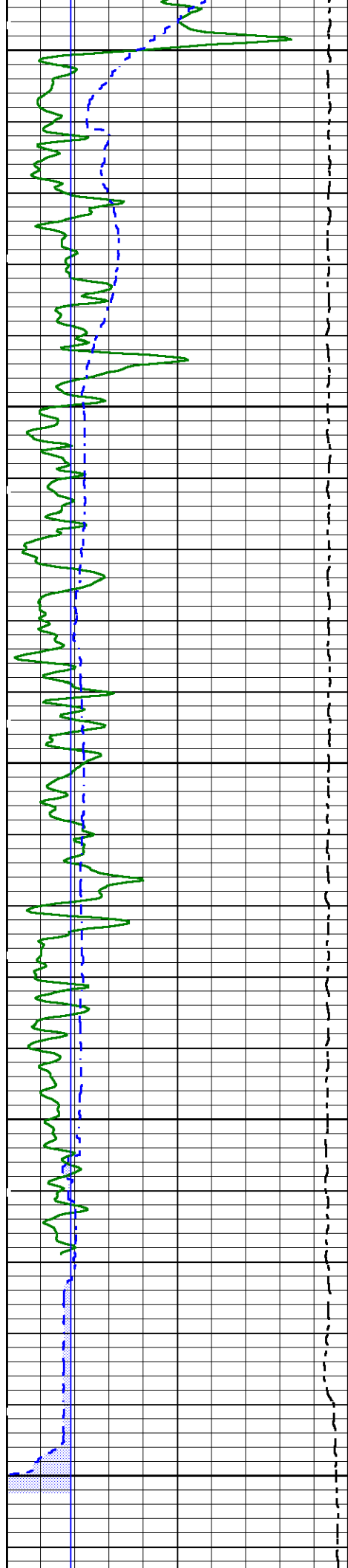




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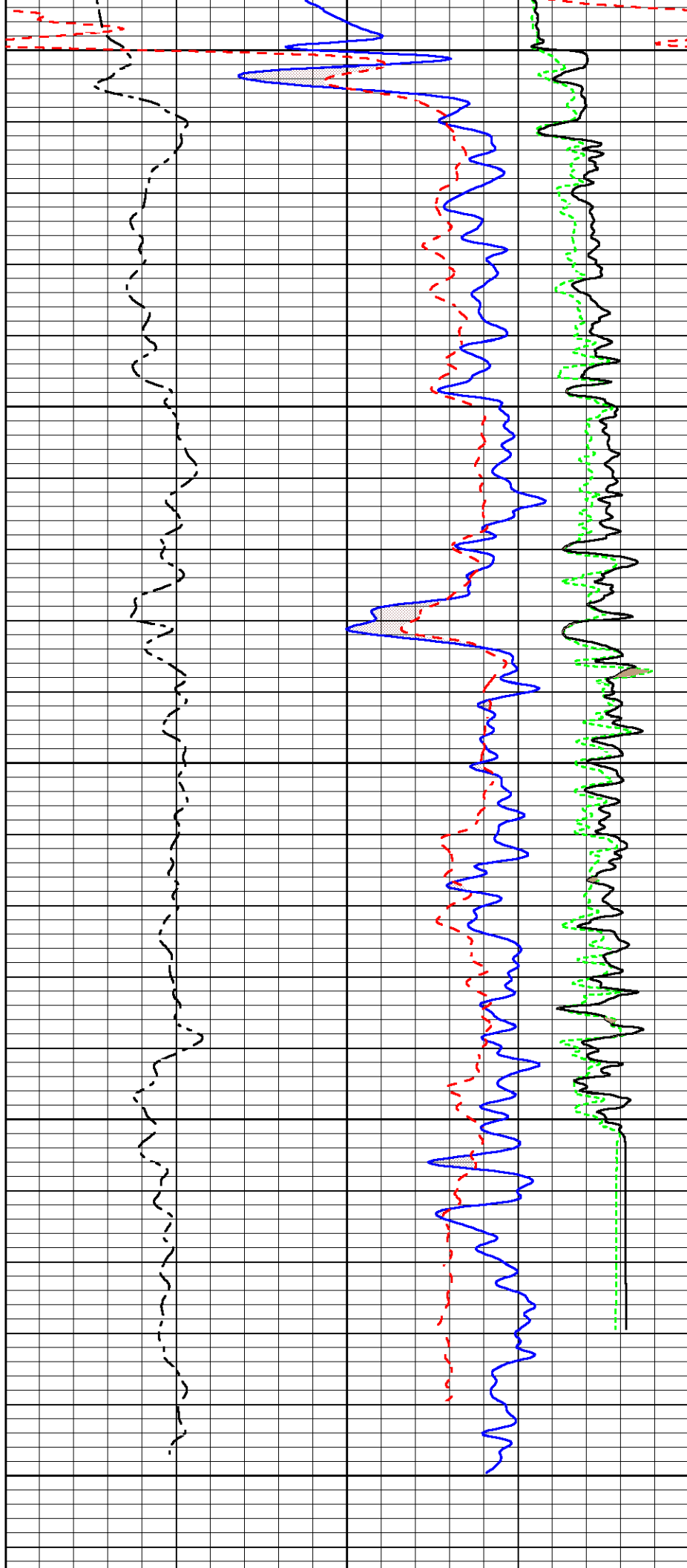
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0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
6	Bitsize (in)	16
Line Tension		
10000	(lb)	0

0.3	Density Porosity (2.71 Matrix)	-0.1
0.3	Neutron Porosity (Lime Matrix)	-0.1
0	PE	10
Micro Normal		
0	(Ohm-m)	20
Micro Inverse		
0	(Ohm-m)	20

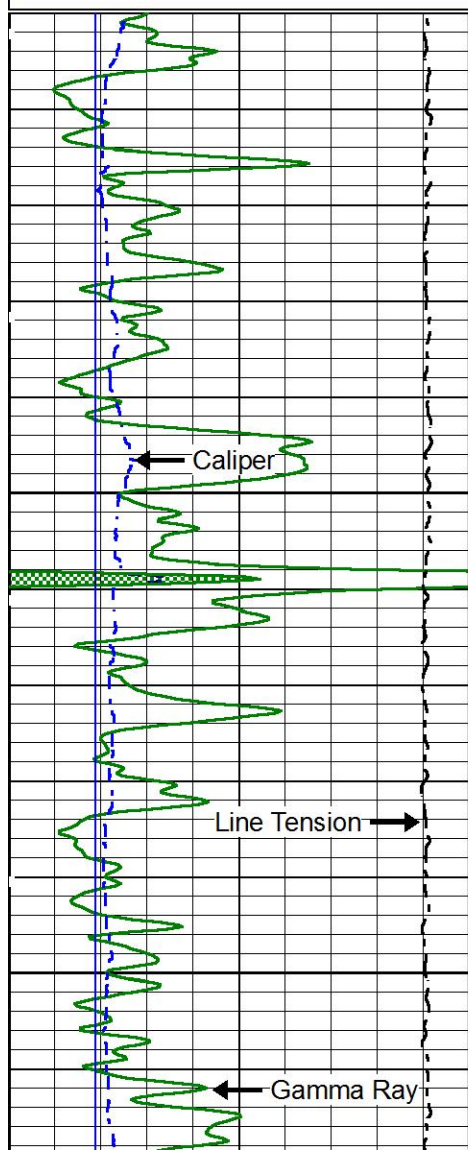


Main Pass

Database File: berexco_bailey_oe_3-27.db
 Dataset Pathname: pass7
 Presentation Format: OKC-BU~2
 Dataset Creation: Mon Feb 25 15:47:25 2019
 Charted by: Depth in Feet scaled 1:240

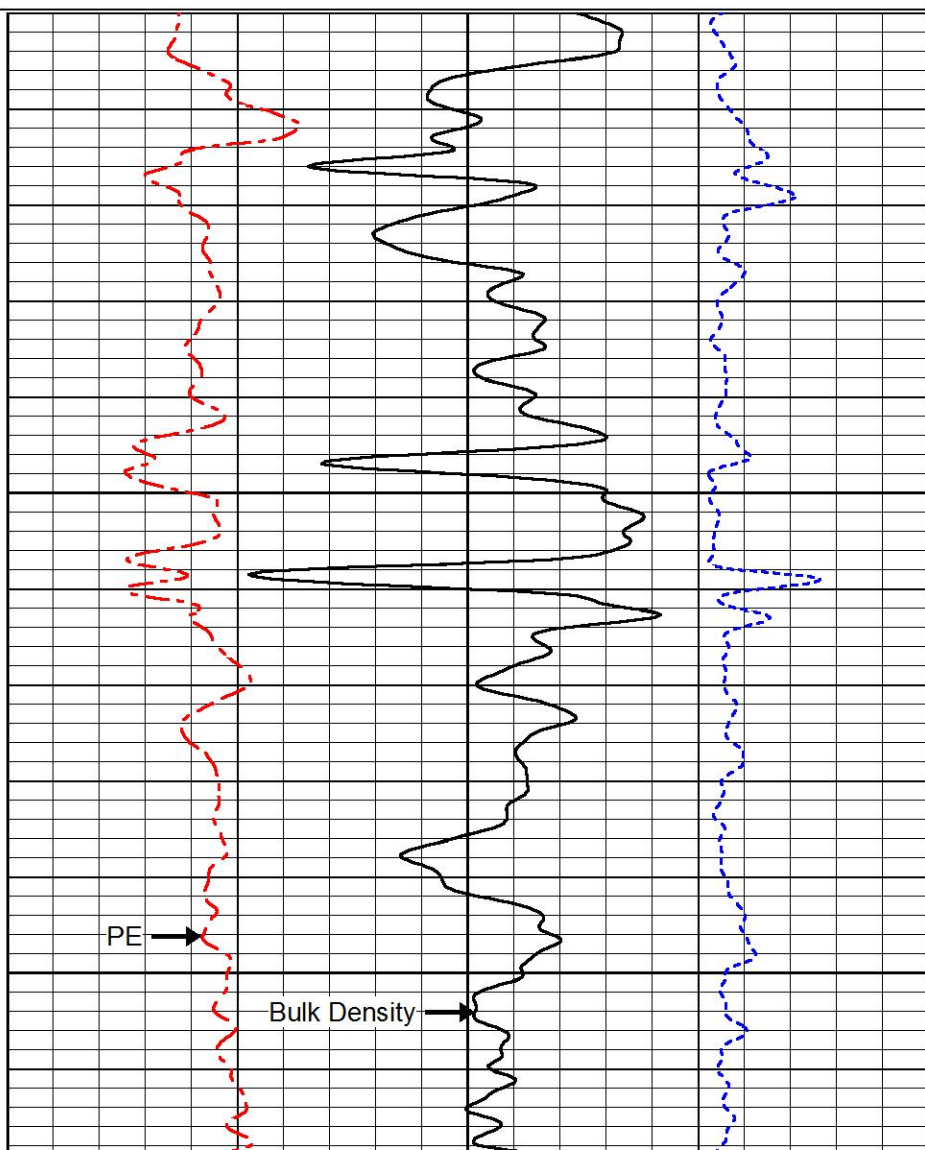
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
10000	Line Tension (lb)	0
6	Bit Size (in)	16

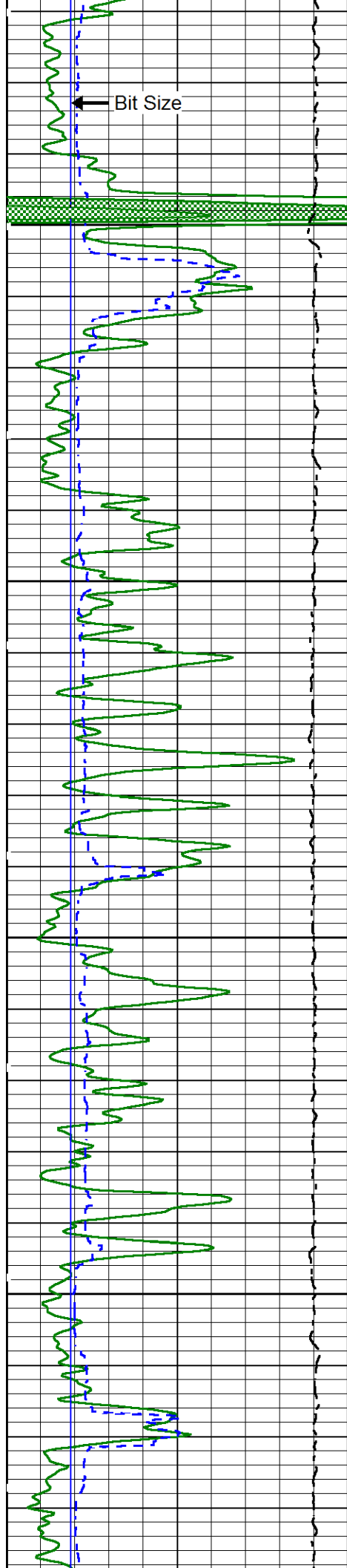
2	Bulk Density (g/cc)	3
0	PE	10
-0.25	Density Correction (g/cc)	0.25



3000

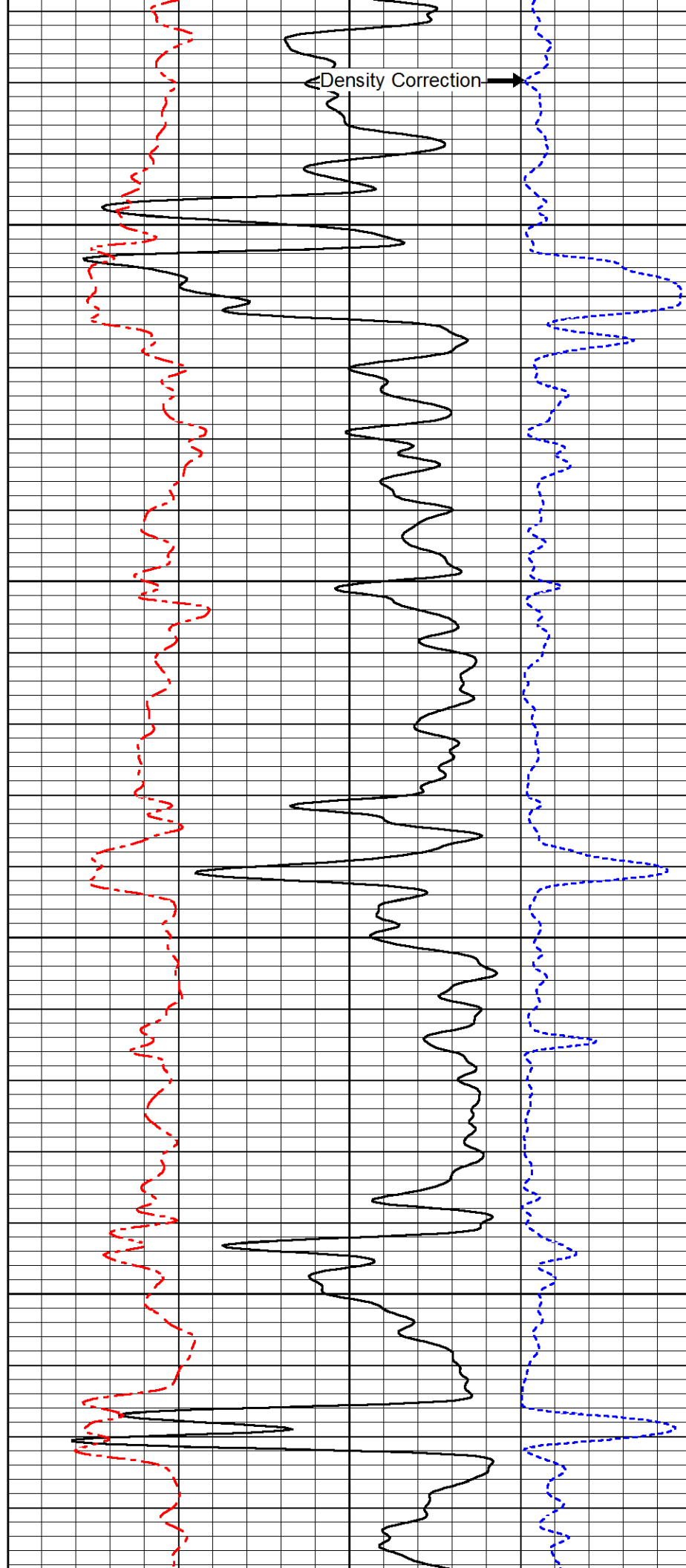
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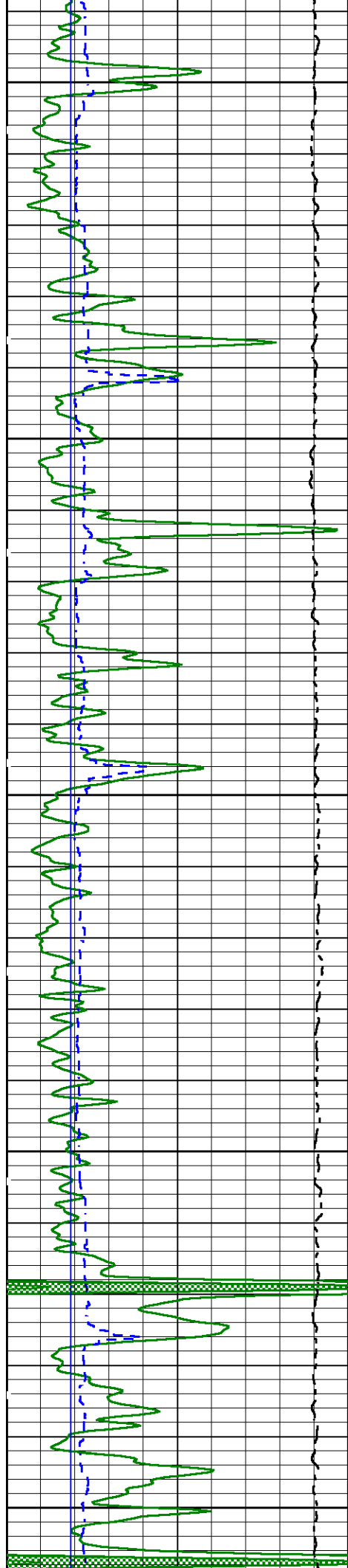




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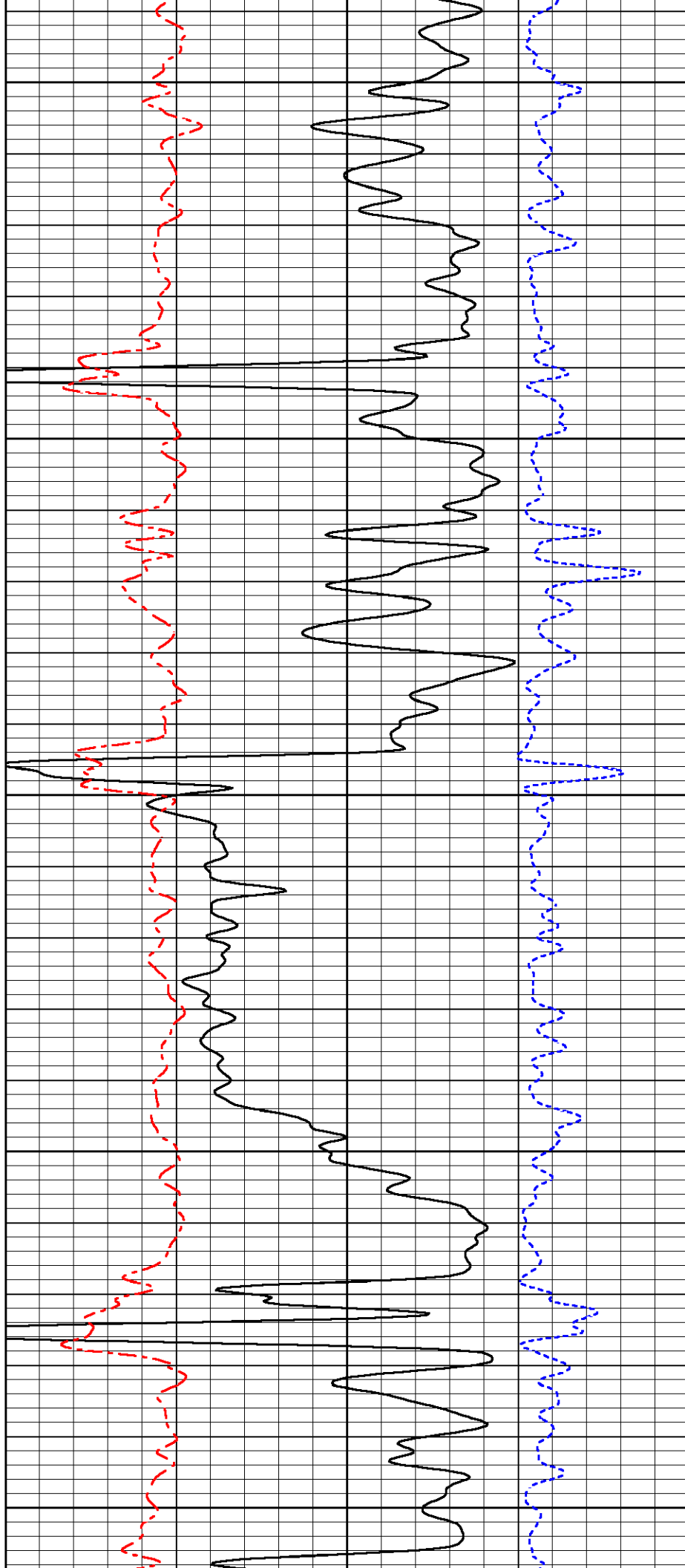
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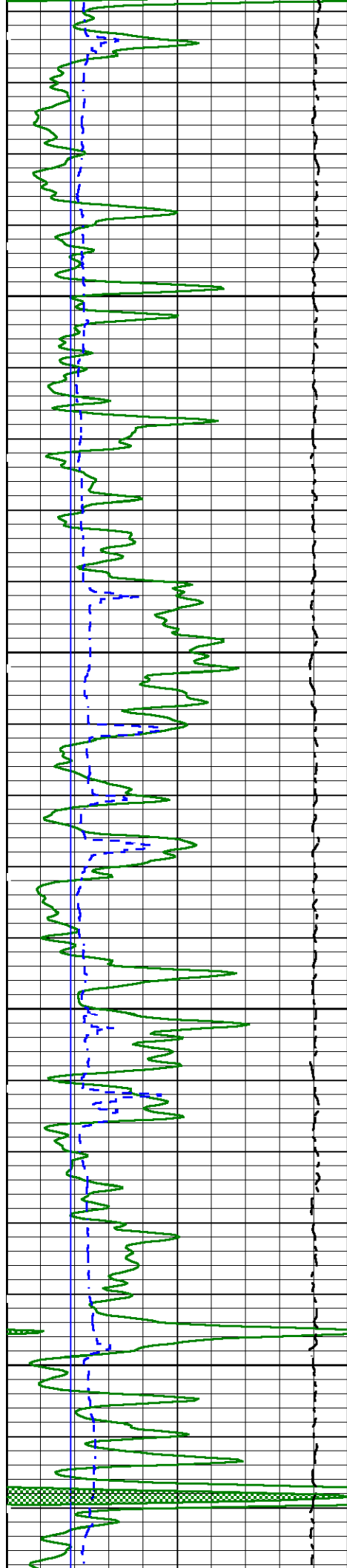




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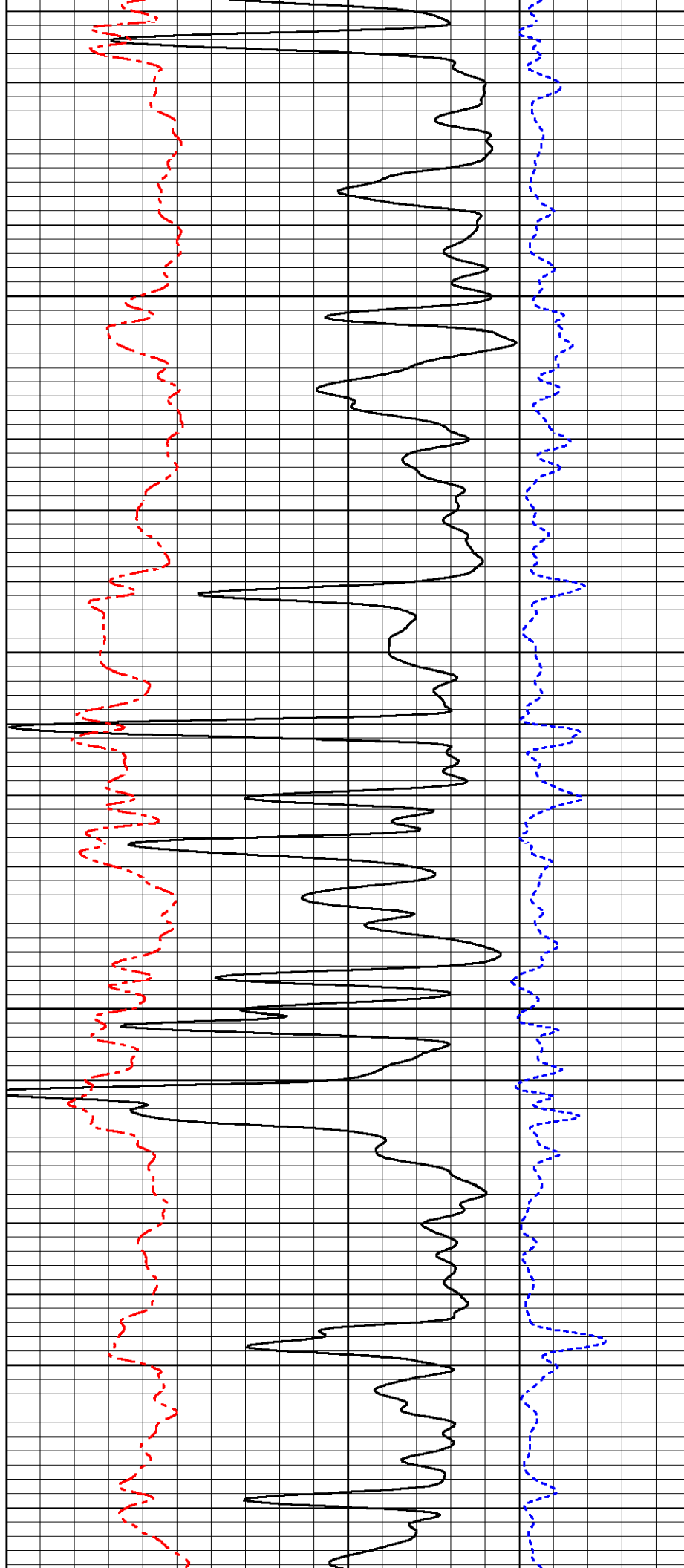
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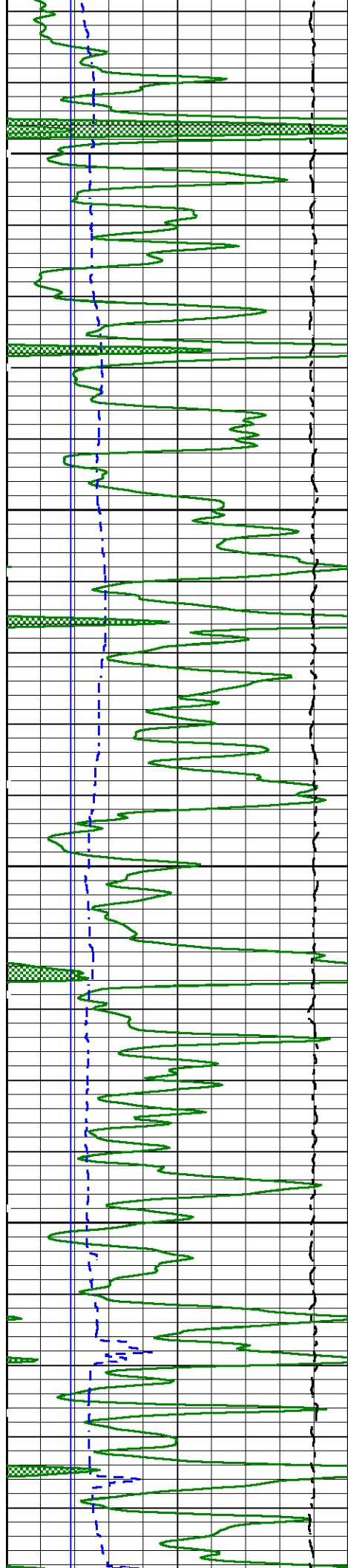




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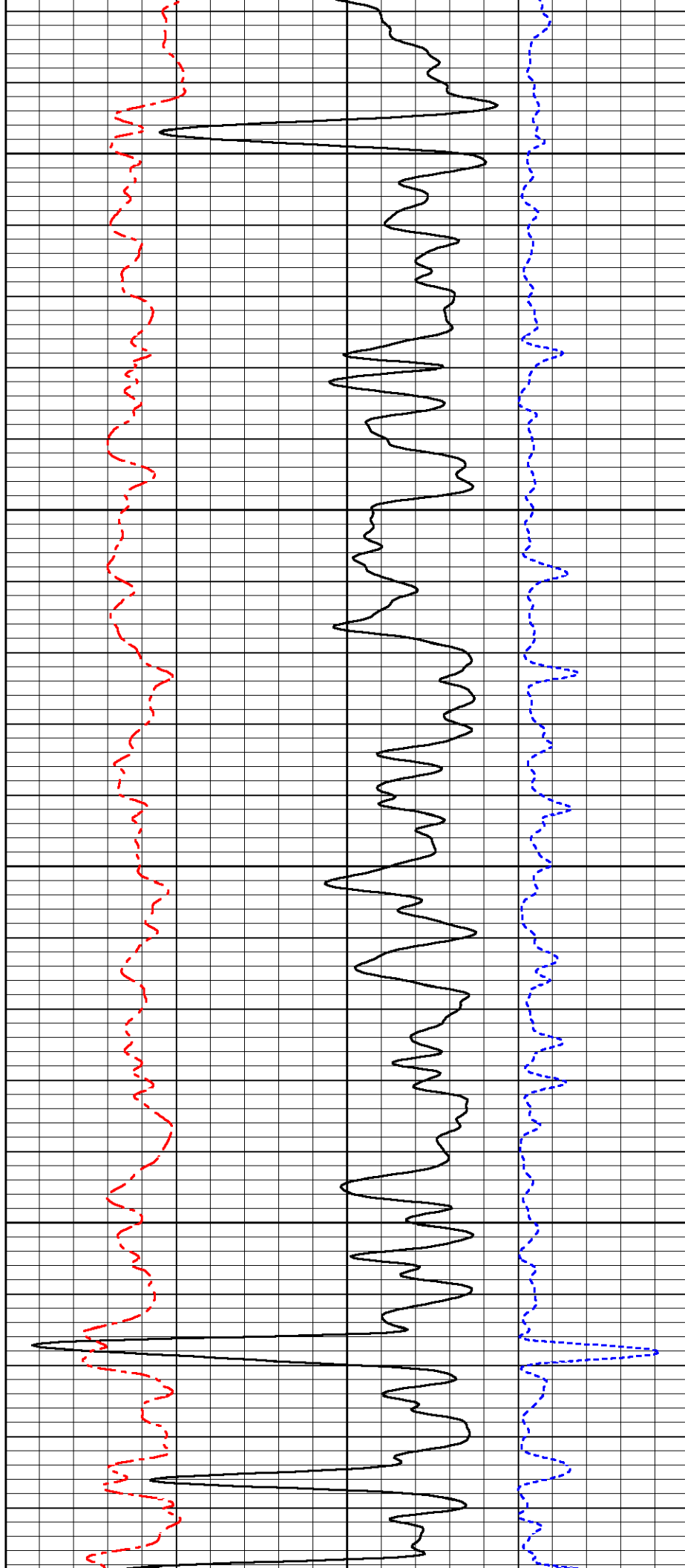
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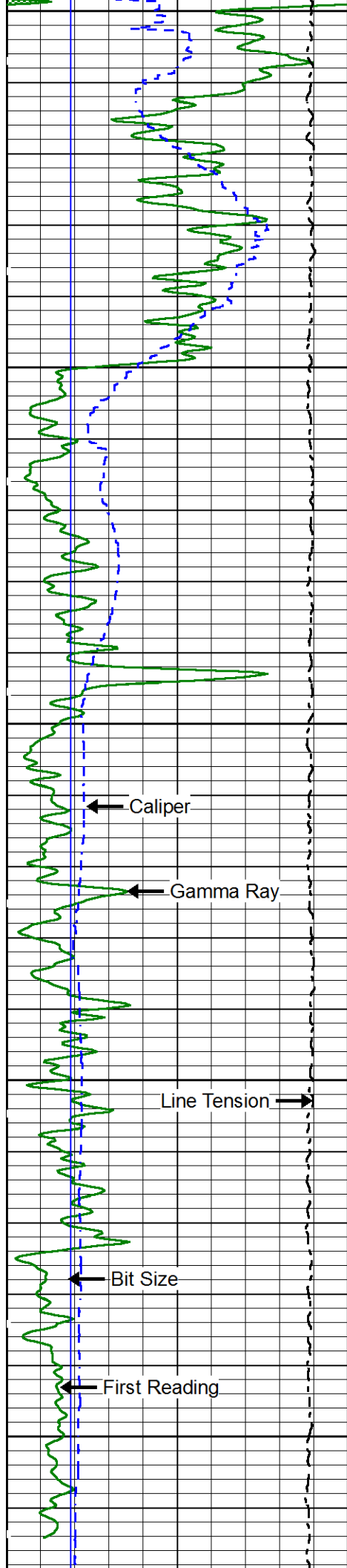




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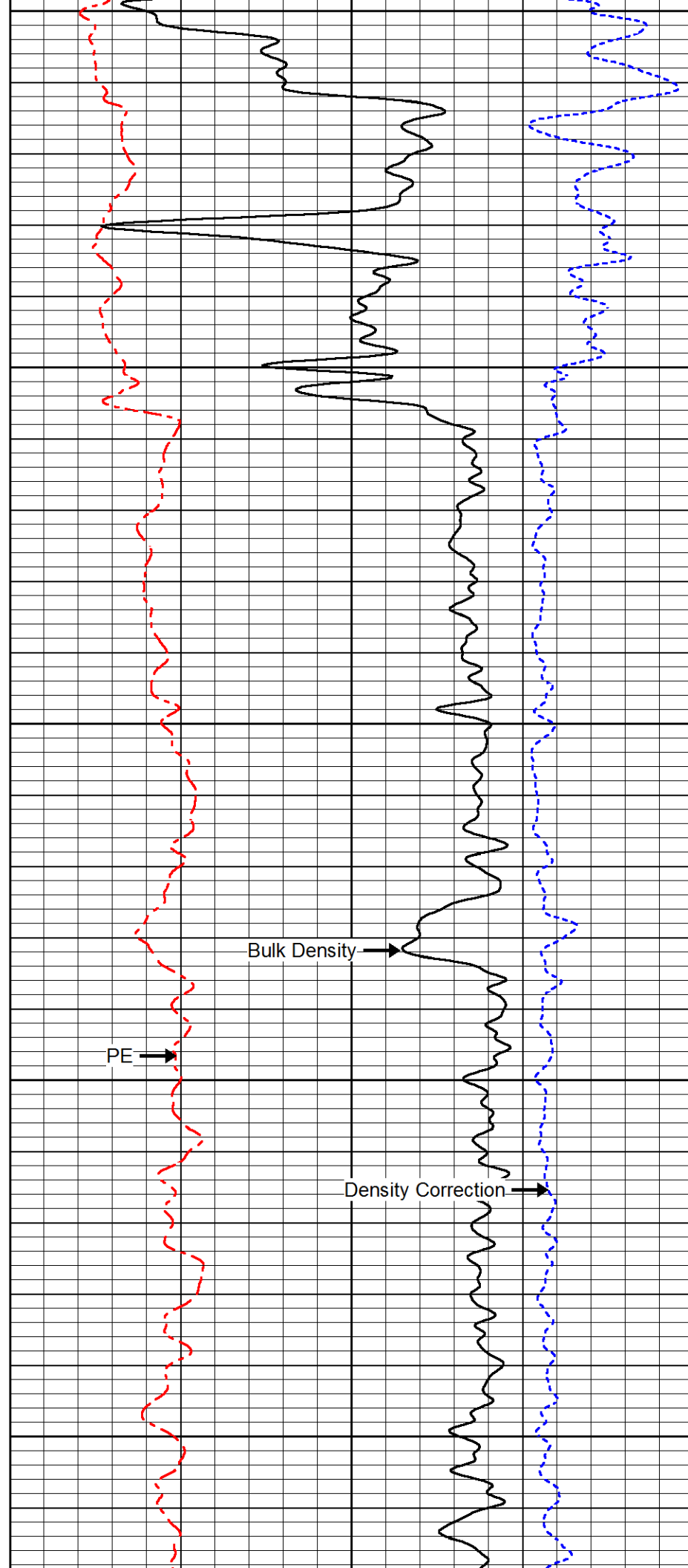


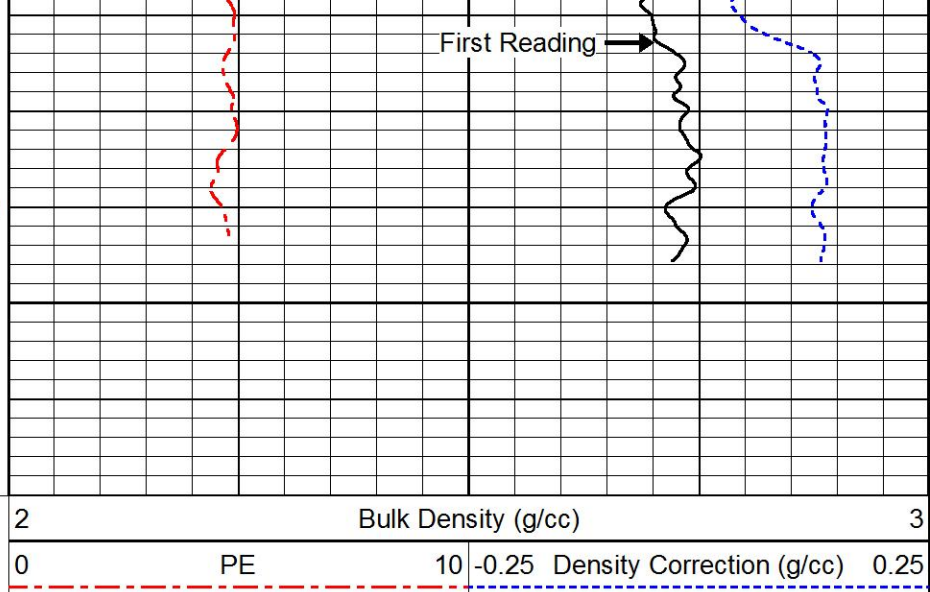
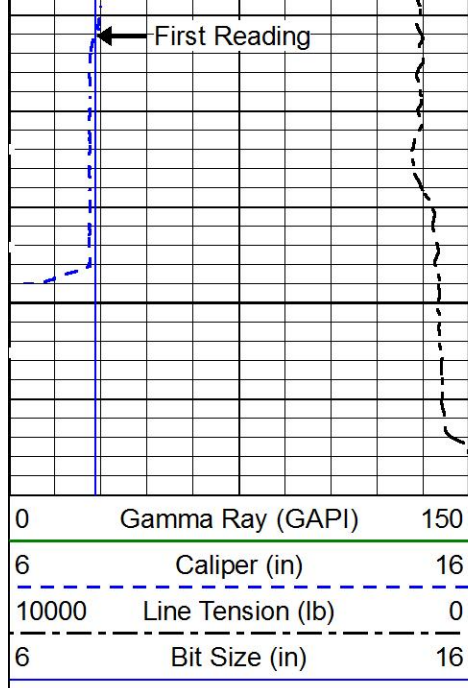


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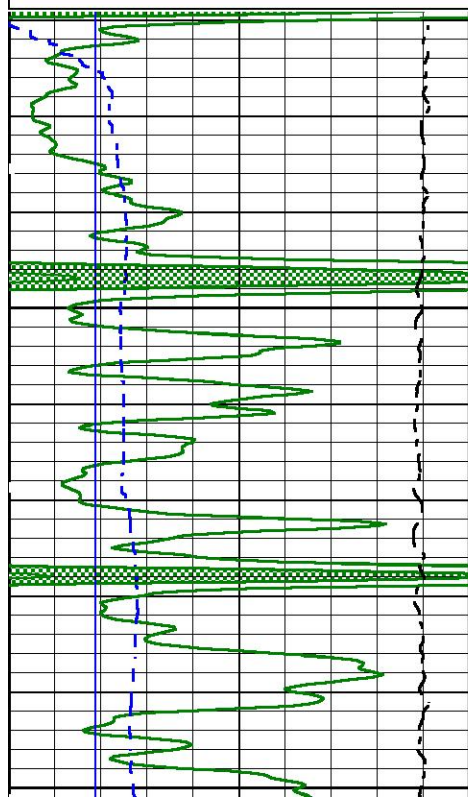
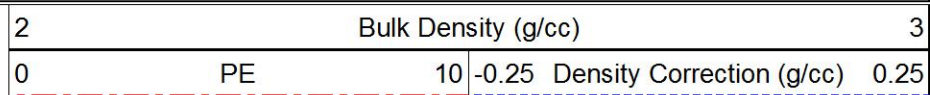
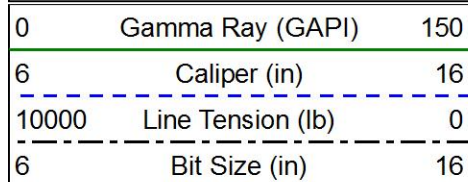
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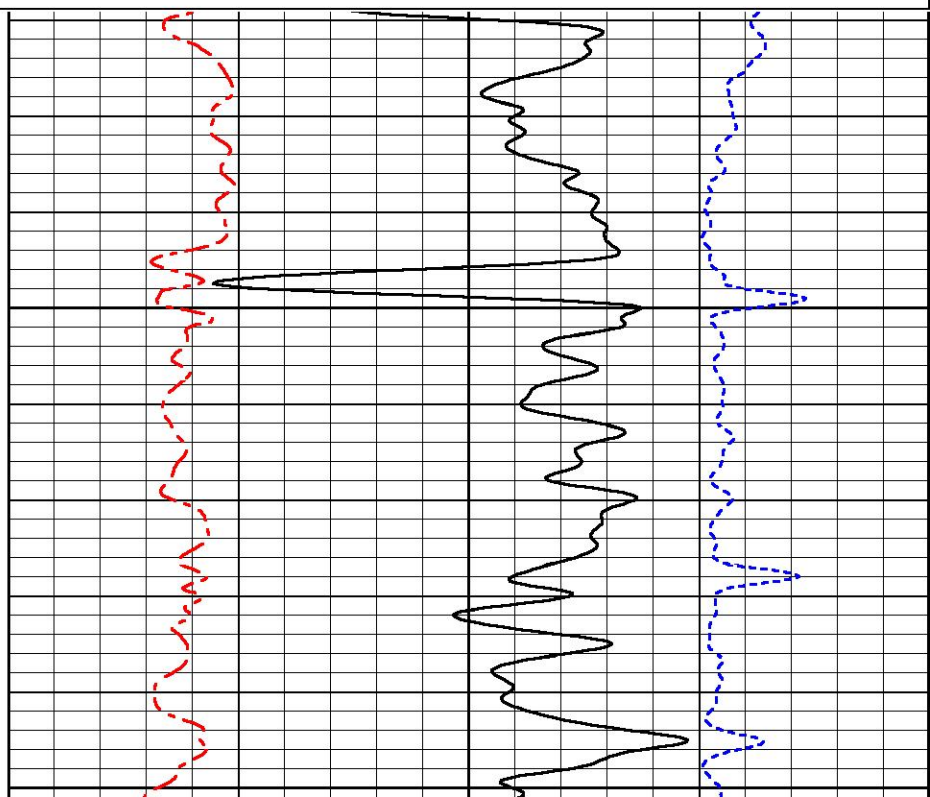


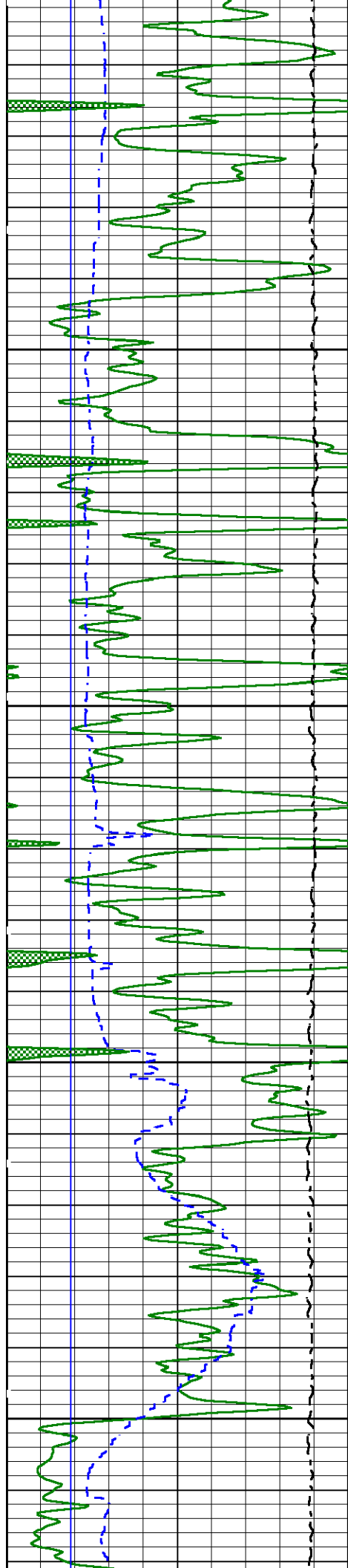
Repeat Pass

Database File: berexco_bailey_oe_3-27.db
 Dataset Pathname: pass3.6
 Presentation Format: okc-bulk-base_mel
 Dataset Creation: Mon Feb 25 16:01:08 2019 by Calc Sondex
 Charted by: Depth in Feet scaled 1:240



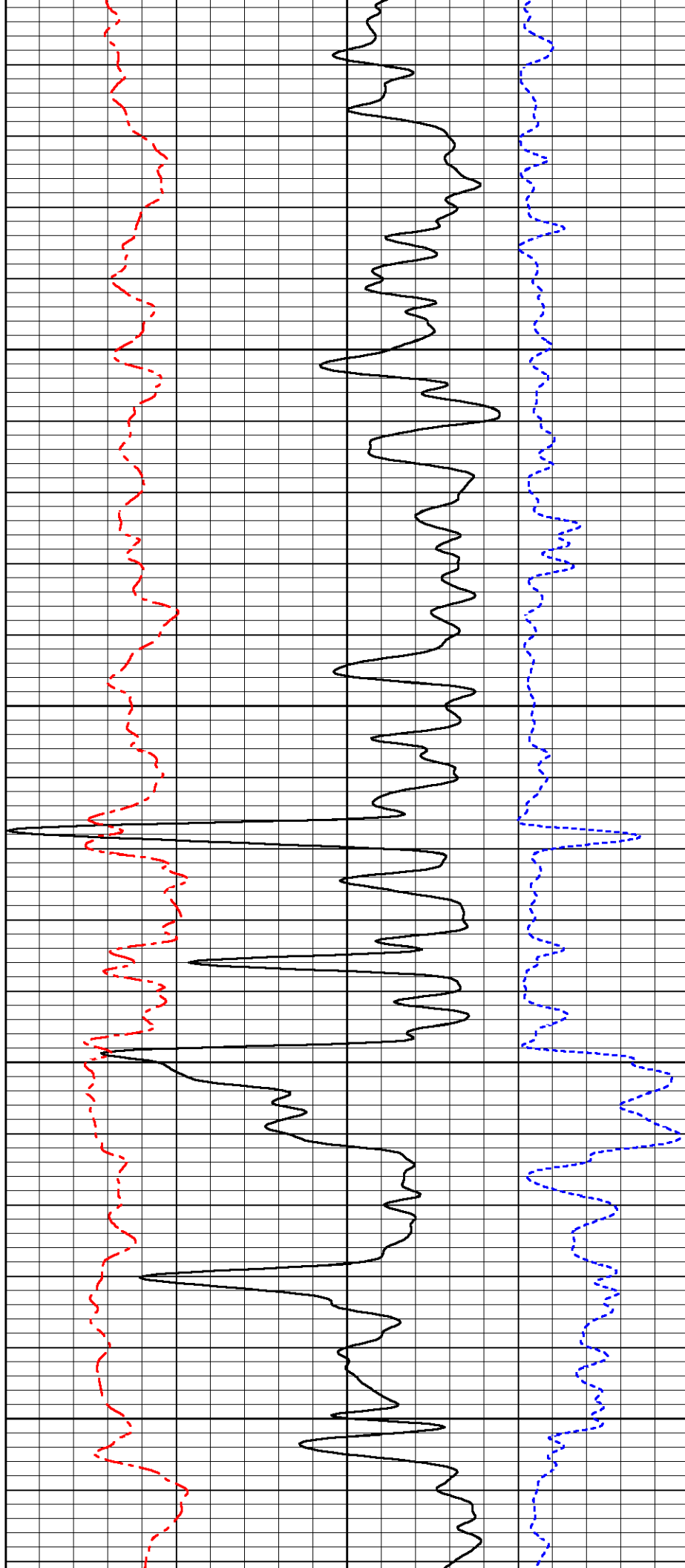
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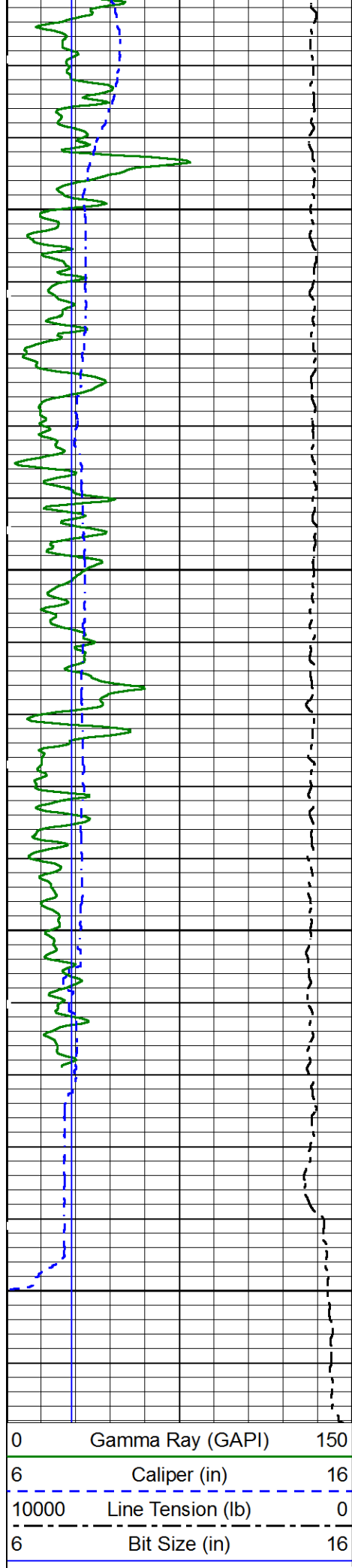




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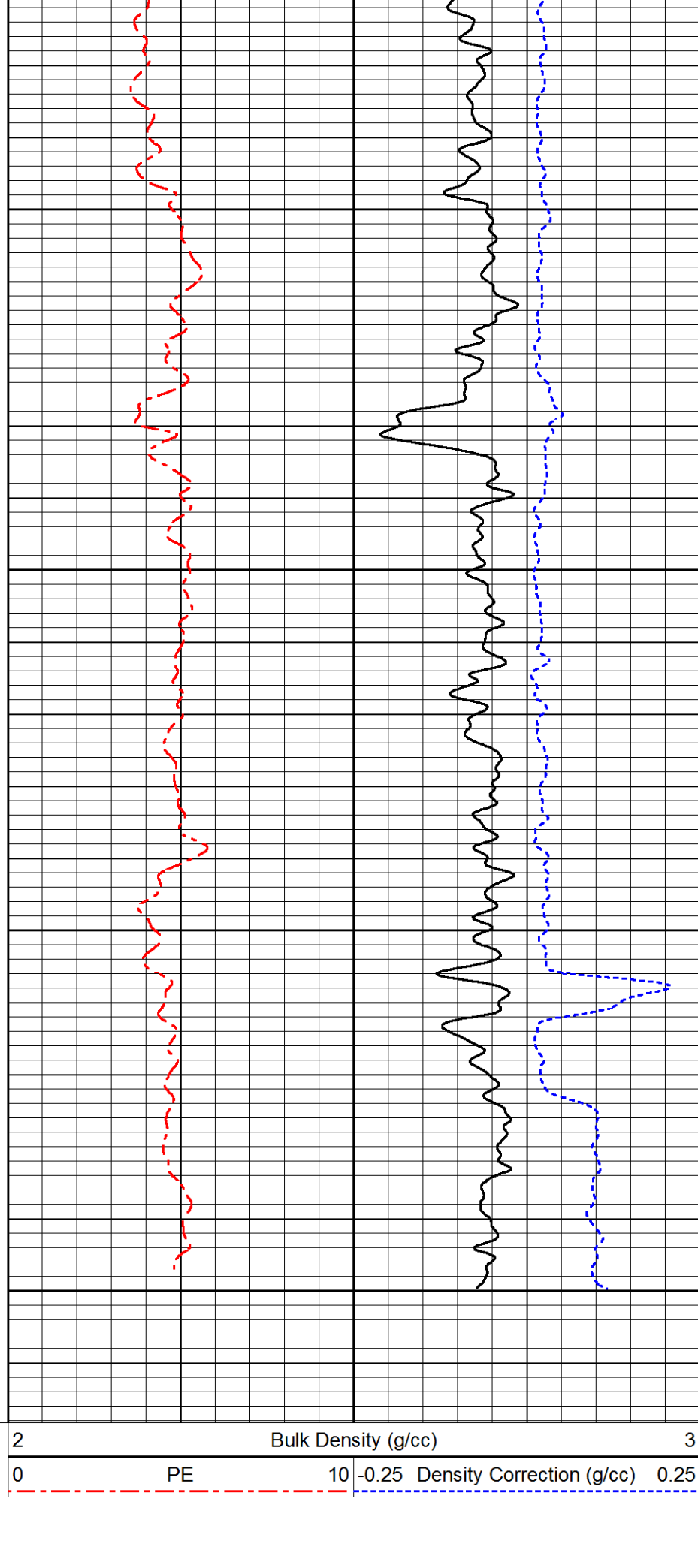
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Log Variables

DatabaseC:\Sondex\Sondex Warrior\Data\berexco_bailey_oe_3-27.db

Dataset field/well/run1/pass5/_vars_

Top - 1774.00 ft

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? Yes	CASEWGHT lb/ft 24
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 8.625
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 12.25				

1774.00 ft - Bottom

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? No	CASEWGHT lb/ft 15.5
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 7.875				

Calibration Report

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass5
Dataset Creation Mon Feb 25 12:20:11 2019 by Log Sondex

Induction Array Tool Calibration Report

Serial Number: B10106
Tool Model: 002

Master Calibration Performed: Tue Nov 28 10:59:51 2018
Temperature: 68.7 degF

Sonde Error:

Array	1	2	3	4	5	6	7	
Real	192.8	-11.9	-39.2	-13.2	-1.7	1.8	6.3	mmho/m
Imaginary	-65.1	-116.4	-28.7	-0.7	-6.9	-21.0	-0.3	mmho/m

Loop Gain:

Array	1	2	3	4	5	6	7	
Loop (real)	537.7	678.5	1295.3	1394.1	1144.8	712.8	404.8	mmho/m
Loop (imaginary)	73.3	92.5	389.8	419.5	344.5	214.5	121.8	mmho/m
Real	751.4	713.1	1269.0	1383.2	1170.0	744.4	431.8	mmho/m
Imaginary	7.4	-22.6	351.2	413.7	341.5	200.9	128.1	mmho/m
Gain (real)	0.963	0.936	0.990	0.998	0.977	0.960	0.951	
Gain (imaginary)	1.012	0.986	1.026	1.012	0.989	0.967	0.948	

Before Survey Verification Performed: Tue Aug 04 09:42:06 2015
Sonde 1 Temperature: 83.1 degF
Sonde 2 Temperature: 79.2 degF
Array 1 Temperature: 81.6 degF

Array	1	2	3	4	5	6	7
TxIR	-0.0	-0.0	0.1	0.1	0.1	0.1	0.1
TxIX	-0.0	-0.0	-0.2	-0.2	-0.2	-0.2	-0.2
Tx Magnitude	0.0	0.0	0.2	0.2	0.2	0.2	0.2
Gain	50.5	64.5	54.5	66.5	80.2	108.5	158.9
RxCR	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
RxCX	0.1	0.1	0.1	0.1	0.2	0.1	0.1
RxC Magnitude	0.1	0.1	0.1	0.1	0.2	0.1	0.1

Tool Module Parameters							
Software Version:				8.0.0.4			
Borehole Size Source:				CALI			
Mud Resistivity Source:				MUDRES			
Mud Resistivity At Surface:				N/A			
Mud Resistivity Surface Temperature:				N/A			
Borehole Corrections:				Automatic			
Minimum Standoff:				0.4 in			

Litho Density Tool Calibration Report							
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Serial Number:				B10112S50129B			
Tool Model:				002			

Caliper Calibration Performed:				Fri Jan 18 17:23:35 2019			
		Diameter		Reading			
Small Ring:	9.000	in		1790.600	cps		
Large Ring:	13.000	in		2200.200	cps		
Gain:	0.0098						
Offset:	-8.4863						

Master Calibration Performed:		Fri Jan 18 14:46:32 2019		
Source Number:		50129B		
Medium:		Water		
Al Block Density:		2.6027 g/cc		
	Background	Al Block	Al Block + Fe	
SS1	704.1	4883.0	4756.3	cps
SS2	1949.6	30593.7	29601.7	cps
SSTOTAL	4605.5	49303.4	47172.0	cps
LITH	93.3	547.6	374.8	cps
LL	183.4	852.0	880.0	cps
LU	528.9	1098.5	1129.5	cps
LS	712.3	1950.4	2009.5	cps
LSTOTAL	1340.9	4848.2	4509.7	cps
SSHV	1584.3	1588.9	1589.5	V
LSHV	1516.3	1520.9	1522.0	V
SSFF	-0.009	0.008	0.002	
LSFF	0.002	-0.009	-0.008	

Before Survey Verification Performed:				Fri Jan 18 12:24:18 2019			
After Survey Verification Performed:				Fri Jan 18 12:26:48 2019			
		Master Background	Before Survey Background	After Survey Background			
SS1	704.1	729.3	739.0	cps			
SS2	1949.6	2097.0	2081.2	cps			
SSTOTAL	4605.5	4887.8	4867.8	cps			
LITH	93.3	102.0	104.9	cps			

LL	183.4	204.5	199.1	cps
LU	528.9	587.0	578.5	cps
LS	712.3	791.5	777.7	cps
LSTOTAL	1340.9	1480.8	1478.2	cps
SSHV	1584.3	1456.7	1456.8	V
LSHV	1516.3	1408.7	1409.0	V
SSFF	-0.009	0.007	0.009	
LSFF	0.002	0.008	-0.001	

Tool Module Parameters

Software Version: 8.0.0.6
 Borehole Size Source: CALI
 Pad Type: 2

Compensated Neutron Tool Calibration Report

Serial Number: 10012542
 Tool Model: 009

Master Calibration Performed: Fri Jan 04 14:52:52 2019

Source Number: 87624G

Short Spacing Counts: 6709.01 cps
 Long Spacing Counts: 255.50 cps
 High Voltage: 1342.39 V

Target Ratio: 27.2000
 Ratio: 26.2583
 K-Factor: 1.0359

Before Survey Verification Performed: Fri Jan 04 15:03:09 2019
 After Survey Verification Performed: Fri Jan 04 15:04:18 2019

Verifier Number: 6489

Verifier Values	Master Cal	Before Survey	After Survey	
Short Spacing Counts:	256.34	255.21	253.84	cps
Long Spacing Counts:	249.52	244.92	245.49	cps
High Voltage:	1342.40	1342.41	1342.41	V
Ratio:	1.0273	1.0420	1.0340	

Tool Module Parameters

Software Version: 8.0.0.5
 Borehole Size Source: CALI
 Clip Crossplot Porosity: YES
 Lithology Identification Parameters:

	Calcite	Quartz	Dolomite	
Uma:	13.77	4.79	9.03	barns/cc
RHOma:	2.71	2.65	2.88	g/cc

Micro Electric Log Calibration Report

Serial Number: 10022649
 Tool Model: 003

Caliper Calibration Performed: Mon Nov 13 12:40:50 2017

	Pad Arm			Backup Arm		
	Radius		Reading	Radius		Reading
Small Jig:	9.000	in	1847.200	9.000	in	1677.000
Large Jig:	13.000	in	2371.600	13.000	in	2315.300

Gain:	0.0076	0.0063
Offset:	-5.0900	-1.5092
Pad Calibration		
	Inverse	Normal
Gain:	0.5000	1.0000
Offset:	0.0000	0.0000
Tool Module Parameters		
Software Version:	8.0.0.4	
Gamma Ray Calibration Report		
Serial Number:	10015939	
Tool Model:	001	
Performed:	Mon Nov 13 12:01:40 2017	
Calibrator Value:	156.0	GAPI
Background Reading:	117.4	cps
Calibrator Reading:	567.2	cps
Sensitivity:	0.3468	GAPI/cps
Borehole Fluid Resistivity Calibration Report		
Serial Number:	P004	
Tool Model:	002	
Master Calibration Performed:	Wed May 25 15:17:37 2016	
Resistivity Polynomial Equation:		
0.1429x^3 - 0.4495x^2 + 1.2097x - 0.2854		
Temperature Calibration:		
Reference		Reading
71.60	degF	559.80
167.00	degF	659.50
		bits
		bits
Head Tension Unit Calibration Report		
Serial Number:	00001	
Tool Model:	011	
Performed:	Tue Nov 29 12:33:39 2016	
Point #	Reference	Reading
1	-19894.000 lb	8957.860 cps
2	-15010.000 lb	13965.100 cps
3	-9998.000 lb	19076.100 cps
4	-5007.000 lb	24133.000 cps
5	-1009.000 lb	28232.100 cps
6	1017.000 lb	30185.400 cps
7	5040.000 lb	34439.700 cps
8	9970.000 lb	39346.900 cps
9	14955.000 lb	44466.000 cps
10	19770.000 lb	49397.800 cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-001 (000004) Cable Head	2.19	3.38	35.00

			XIU-008 (C10067) Crossover Ultrawire Toolbus to Ultralink	2.08	3.38	47.00
HTEN	53.95		HTU-011 (00001) Head Tension Unit	2.18	3.38	55.00
BFR	50.31		BFR-002 (P004) Borehole Fluid Resistivity	4.39	3.38	94.00
GR	47.56		GRT-001 (10015939) Gamma Ray Tool	3.22	3.38	69.00
			MEL-003 (10022649) Micro Electric Log	9.17	3.38	190.00
MEL	37.55		CEN-001 (C10025) Inline OH Springbow Centraliser	4.27	3.38	66.00
			KJT-001 (10002141) Knuckle Joint	2.86	3.38	72.00
CNLSC	25.59		CNL-009 (10012542) Compensated Neutron Logging Tool	5.28	3.38	100.00
CNSSC	25.09		LDT-002 (B10112S50129B) Litho Density Tool	9.75	4.50	310.00
			Standoff-Rubber Rubber Fin Standoff	1.08	4.88	3.00
LDT	15.44		IAT-002 (B10106) Induction Array Tool	13.22	3.88	196.00
IAT	8.44		Short-1 (Shorty) Short Hole Finder	0.38	3.88	6.00
SP	0.43					
Dataset: berexco_bailey_oe_3-27.db: field/well/run1/pass5 Total length: 58.99 ft Total weight: 1248.00 lb O.D.: 6.88 in						

ALLIED

Company Berexco, LLC.
Well Bailey OE #3-27



Well	Bailey OE #3-27
Field	Amazon East Ditch
County	Finney
State	Kansas