



**Compensated Neutron
Litho Density
Micro Electric
Log**

Company	Merit Energy Company, LLC.	Company	Merit Energy Company, LLC.
Well	Carrie #15-2	Well	Carrie #15-2
Field	Wildcat	Field	Wildcat
County	Kearny	County	Kearny
State	Kansas	State	Kansas
Location:	2088' FSL & 887' FEL SE NW NE SE	API #:	15-093-21992
SEC 15	TWP 23S	RGE 35W	
Permanent Datum	G.L.	Elevation	3018 ft.
Log Measured From	K.B.		12 ft. above perm. datum
Drilling Measured From	K.B.		
		Other Services	MAS / IAT
		Elevation	K.B. 3030 ft. D.F. 3029 ft. G.L. 3018 ft.

Date	12-Sep-2021
Run Number	One
Depth Driller	4978'
Depth Logger	4974'
Bottom Logged Interval	4927'
Top Log Interval	3500'
Casing Driller	8 5/8" @ 1745'
Casing Logger	1740'
Bit Size	7 7/8" @
Type Fluid in Hole	Chemical @
Density / Viscosity	9.31 / 54
pH / Fluid Loss	11.0 / 7.2
Source of Sample	Flowline
Rm @ Meas. Temp	1.345 @ 75°F @
Rmt @ Meas. Temp	1.009 @ 75°F @
Rmc @ Meas. Temp	1.681 @ 75°F @
Source of Rmf / Rmc	Calculated @
Rm @ BHT	0.926 @ 114°F @
Time Circulation Stopped	12:00
Time Logger on Bottom	16:50
Maximum Recorded Temperature	114°F
Equipment Number	10001
Location	OKC, OK.
Recorded By	H. Garcia
Witnessed By	Mr. A. Garner

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Equipment and Log Data

Service Order: T1-210912

Gamma		Density		Neutron		Sonic		IAT	
Run No.	One	Run No.	One	Run No.	One	Run No.	One	Run No.	One
Serial No.	6122	Serial No.	872	Serial No.	071	Serial No.	36SS	Serial No.	110
O.D.	3.375 in.	Source No.	70997B	Source No.	1414NC	Centralizers	Two	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		
			Scales		Scales			Scales			Scales		Scales		
Run	Depths		Left	Right	Left	Right	Matrix	Left	Right	Matrix	Left	Right	Matrix	Left	Right
One	SCG	TD	0	150	0.3	-0.1	2.71 g/cc	0.3	-0.1	Lime	0.3	-0.1	47.6 usec/ft	1.2	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 2.71 g/cc Matrix, Neutron is presented on a Limestone Matrix, Sonic is presented on 47.6 usec/ft Matrix
 Chlorides: 2700 ppm
 LCM: 34 lbs/bbl
 Annular volume computed using 5.5" casing.

YOUR CREW TODAY: C. Swanson

THANK YOU FOR CHOOSING WIRELINE LOGGING SOLUTIONS. OKLAHOMA CITY, OK. (405) 445-7135.



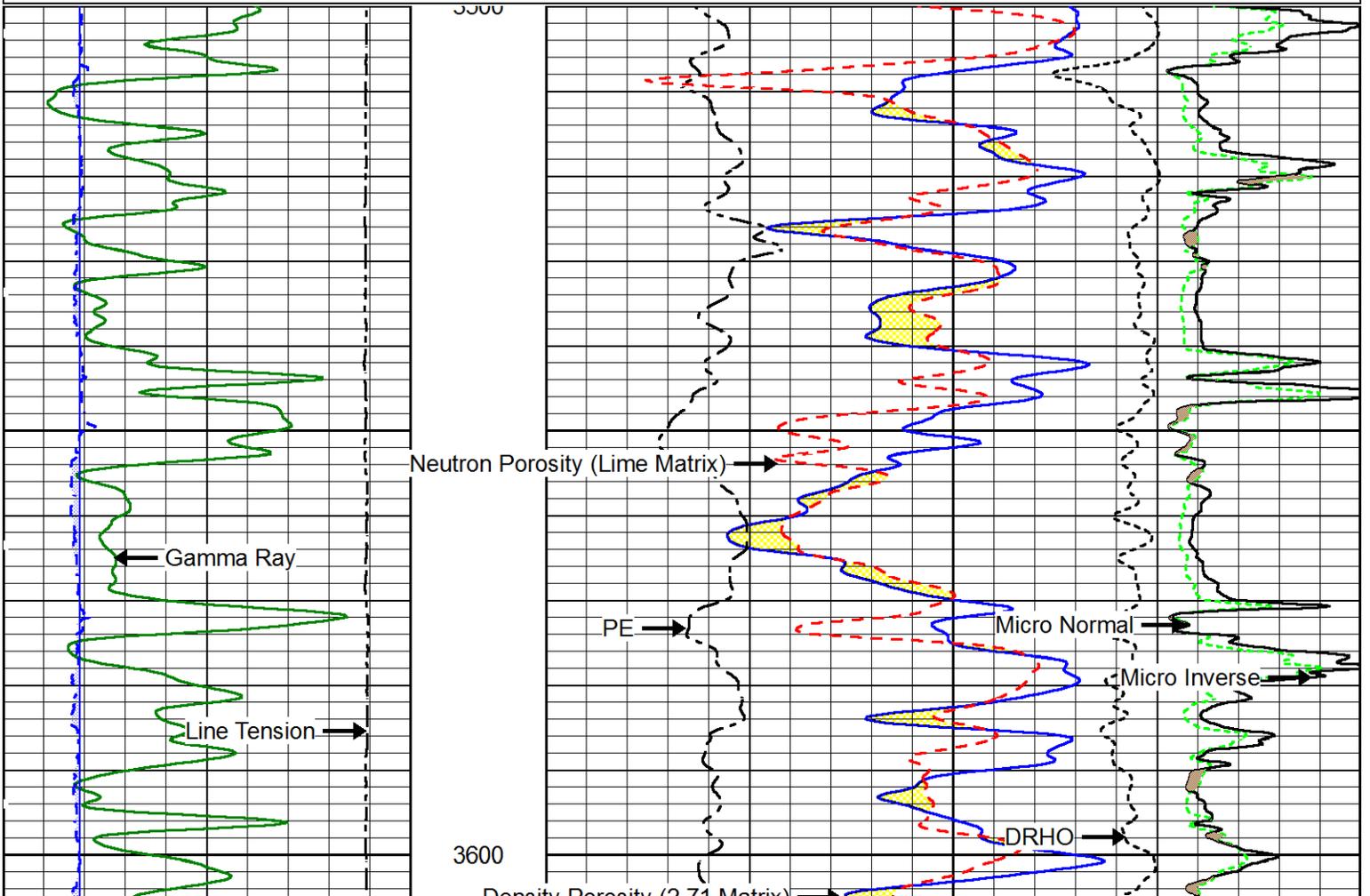
Main Pass

Database File merit-carrie #2-15.db
 Dataset Pathname pass5.3
 Presentation Format okc-porols-melrt-base
 Dataset Creation Sun Sep 12 19:11:30 2021
 Charted by Depth in Feet scaled 1:240

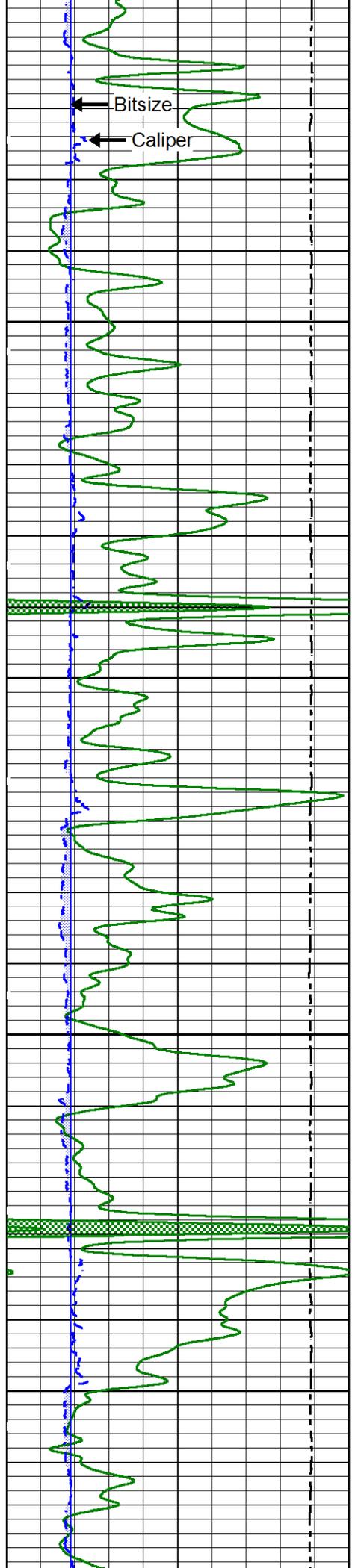
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6	Caliper (in)	16
6	Bitsize (in)	16
Line Tension		
10000 (lb)		0

0.3	Density Porosity (2.71 Matrix)		-0.1
0.3	Neutron Porosity (Lime Matrix)		-0.1
0	PE	10 0.25	DRHO (g/cc) -0.25

Micro Normal	
0 (Ohm-m)	40
Micro Inverse	
0 (Ohm-m)	40

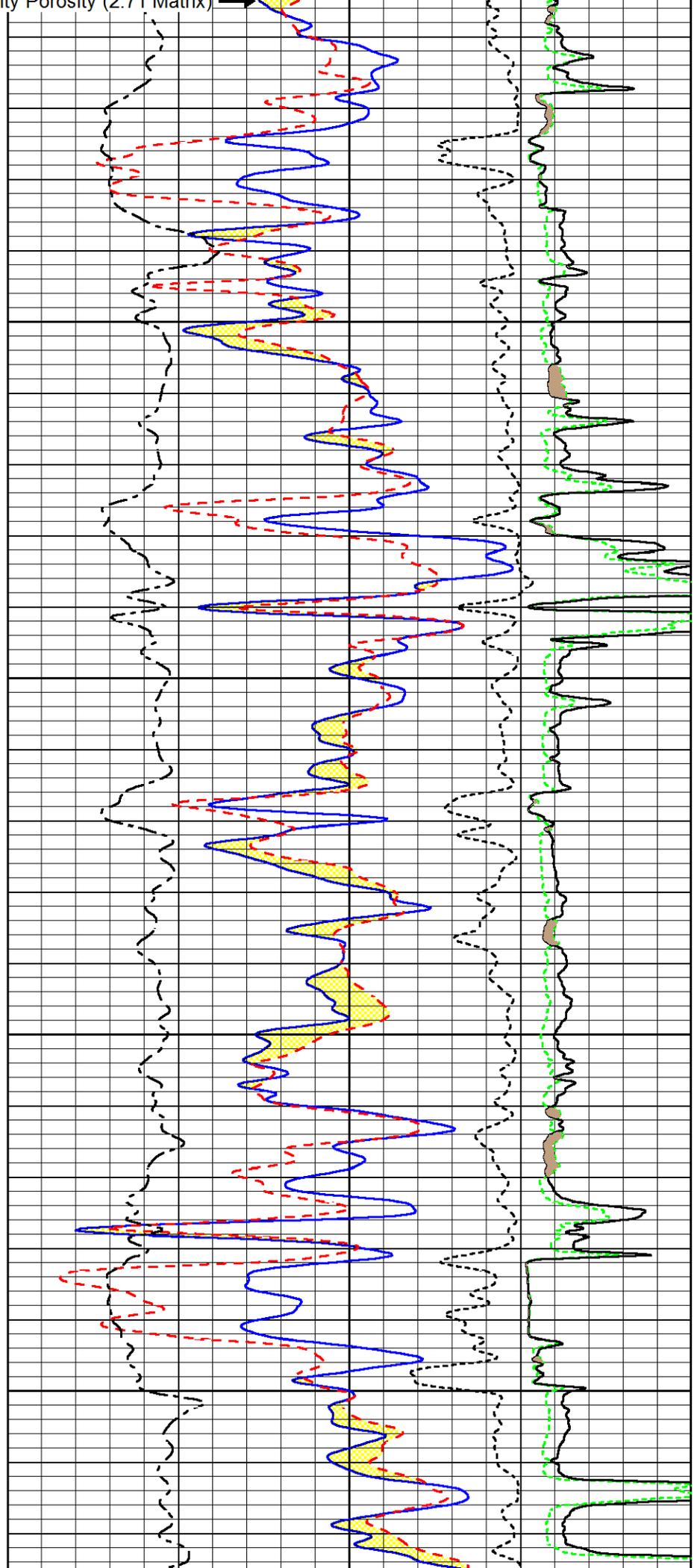


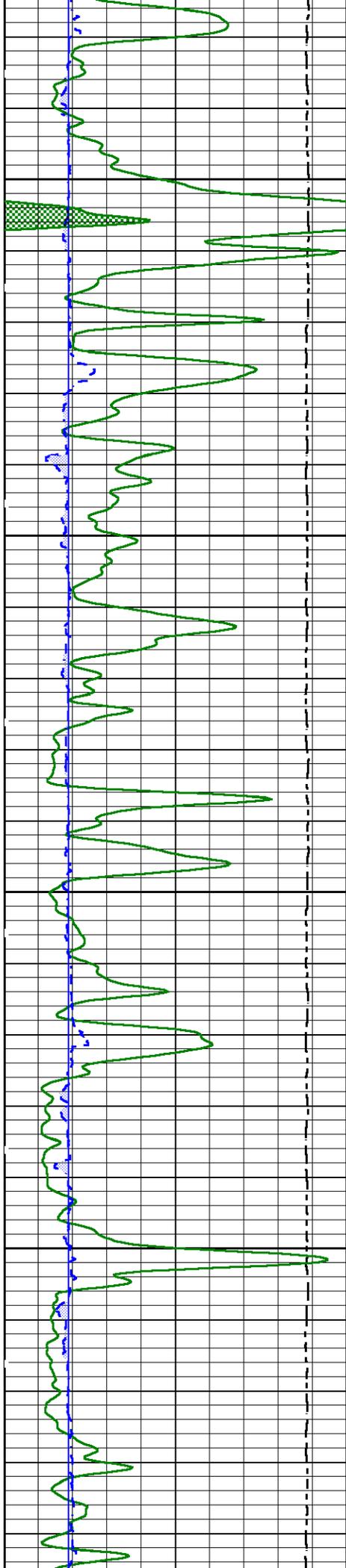
Density Porosity (2.71 matrix)



3700

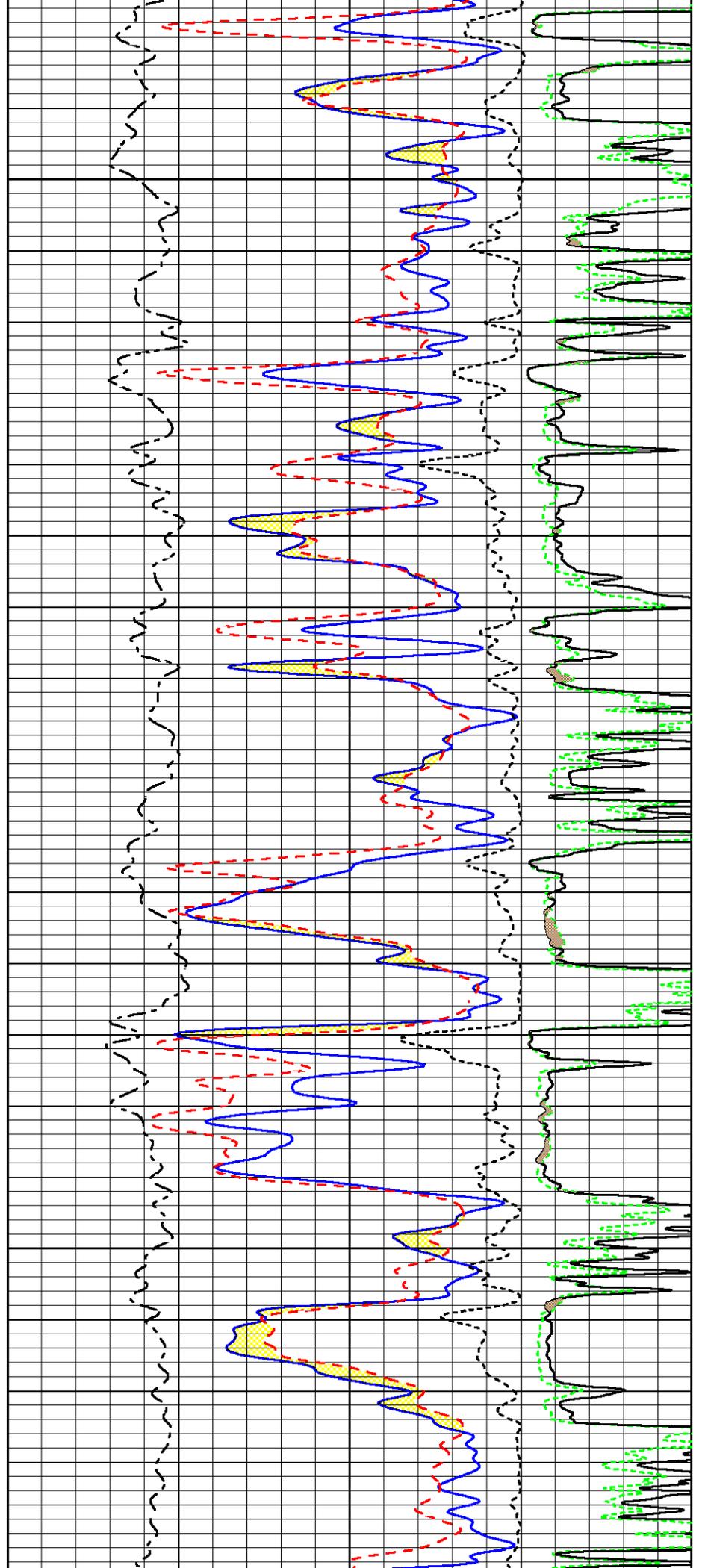
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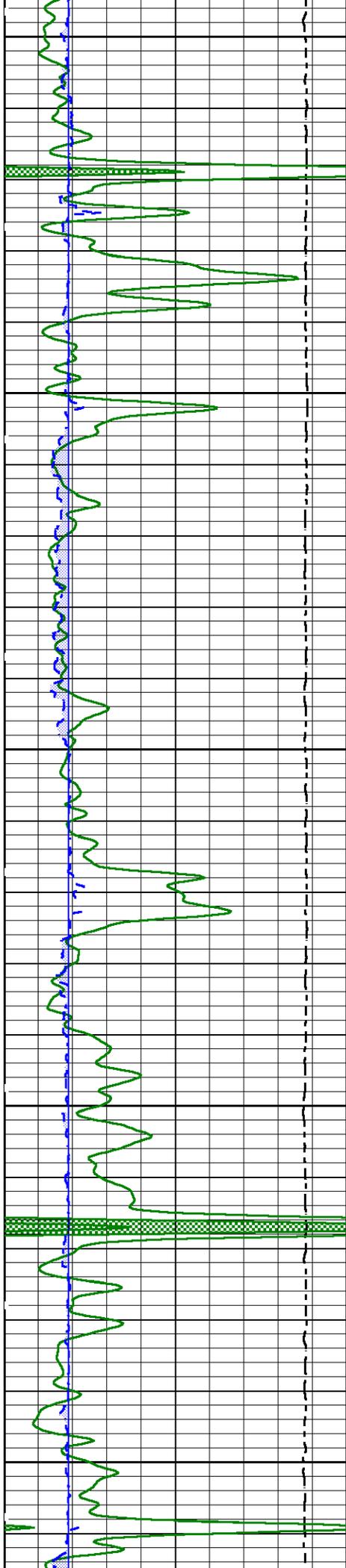




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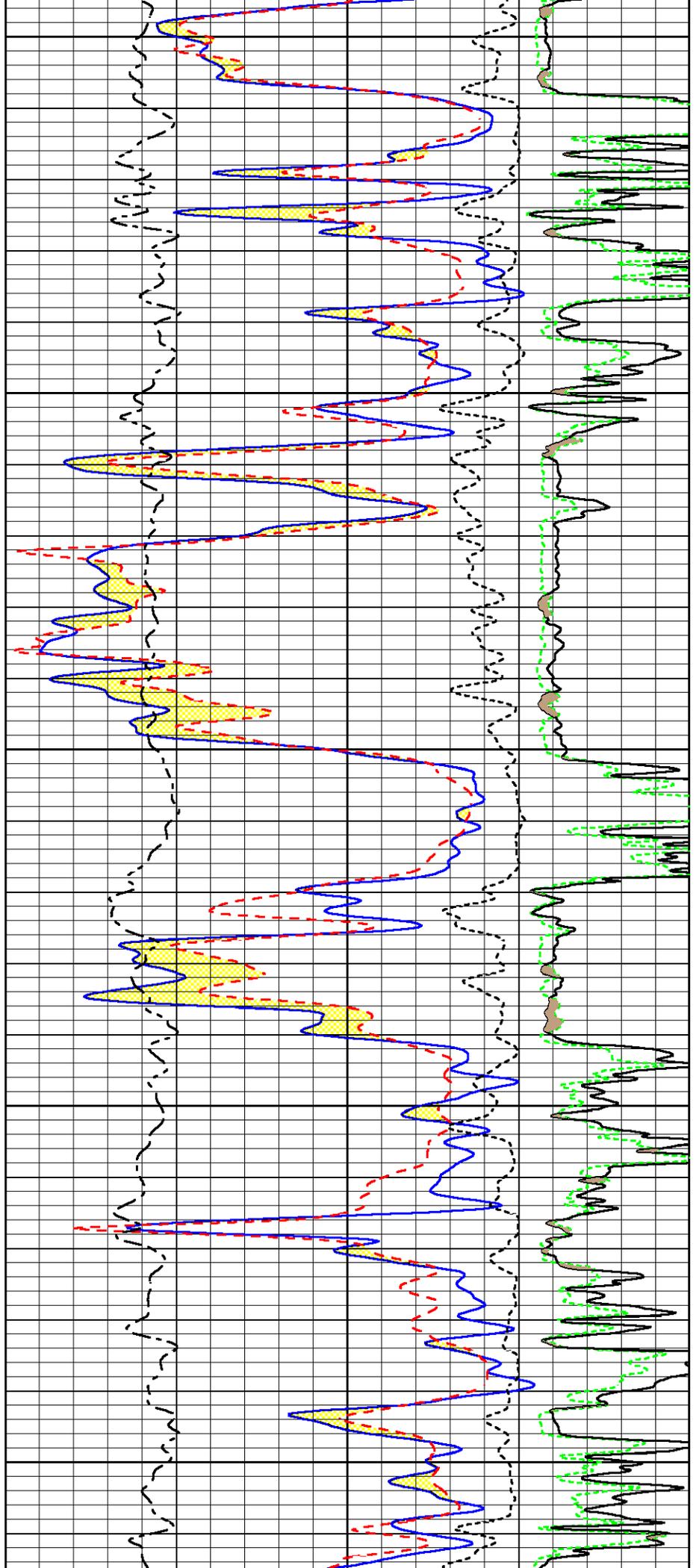
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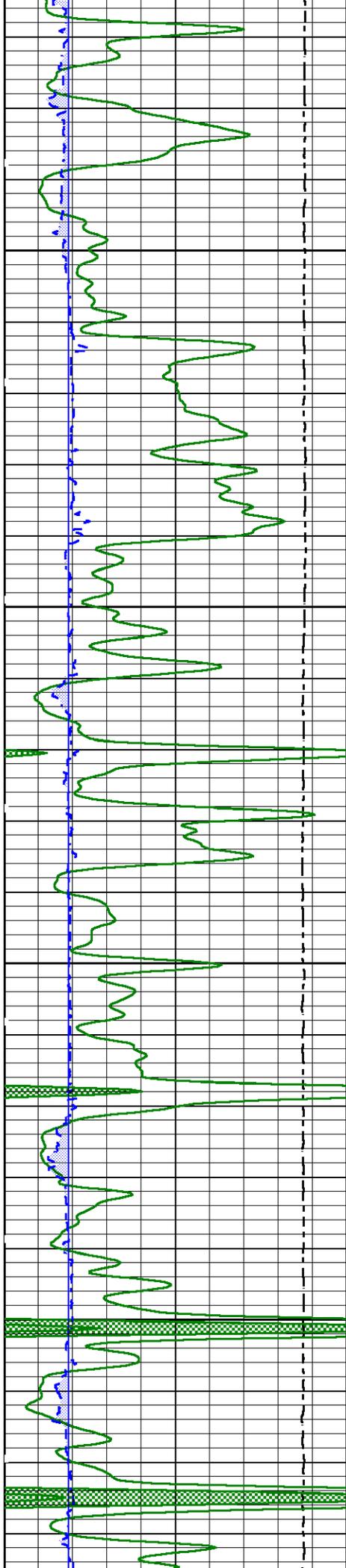




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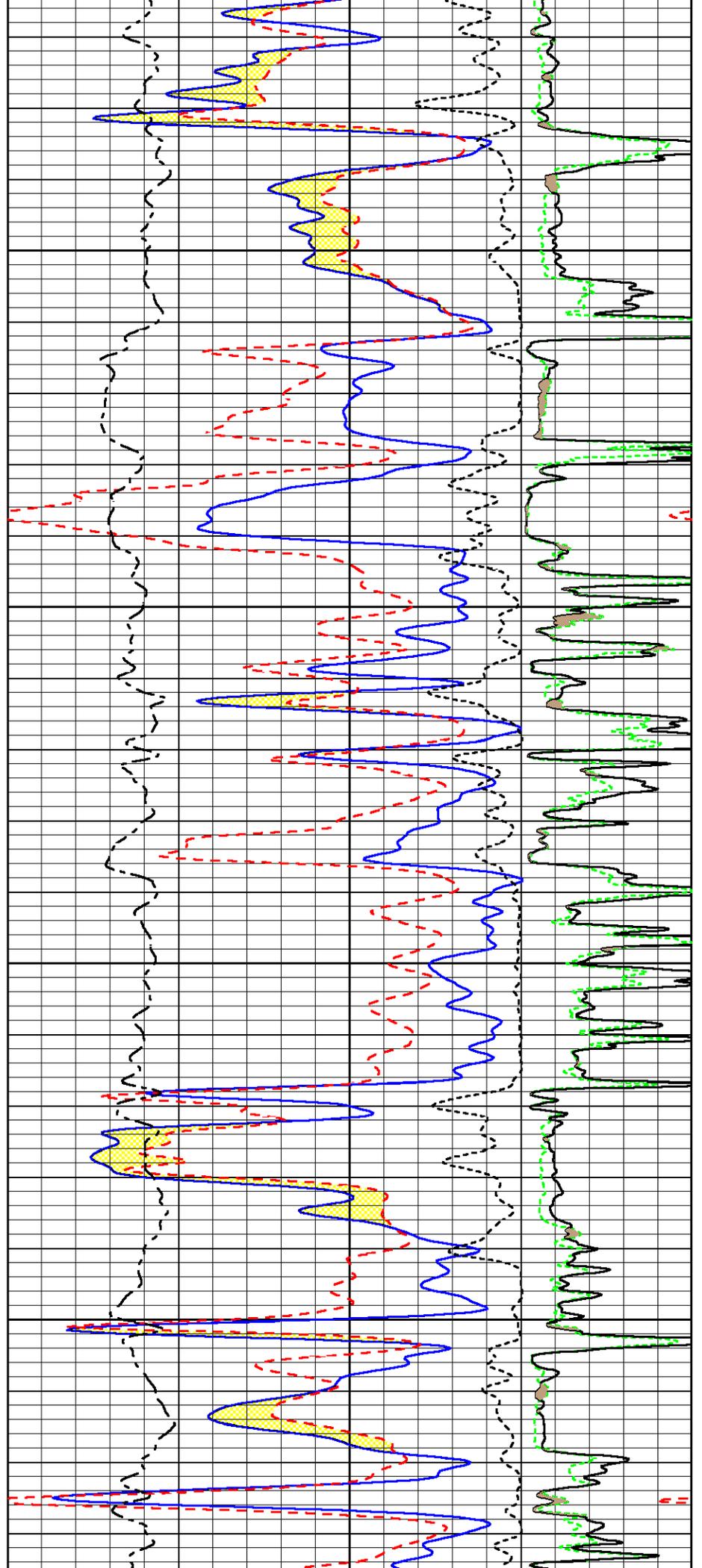
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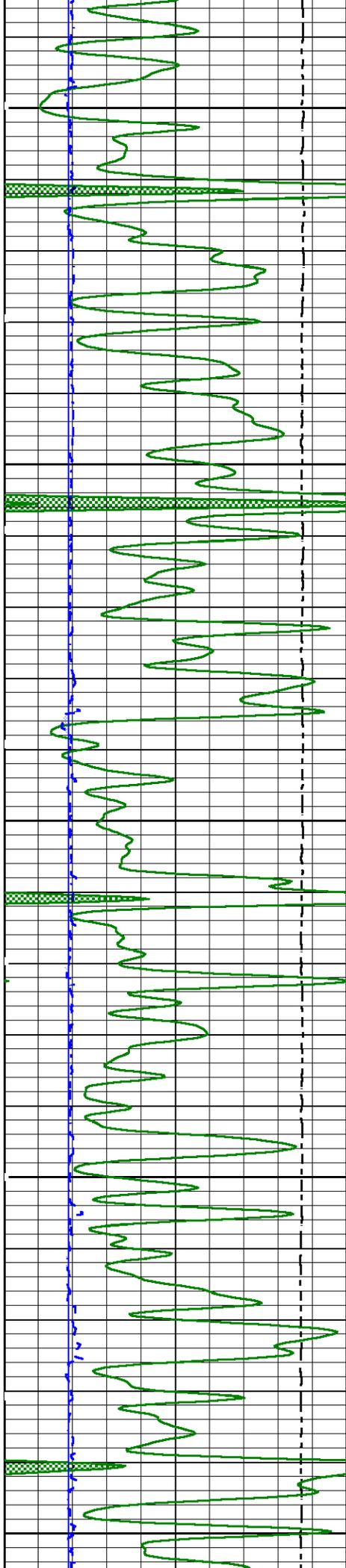




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4400

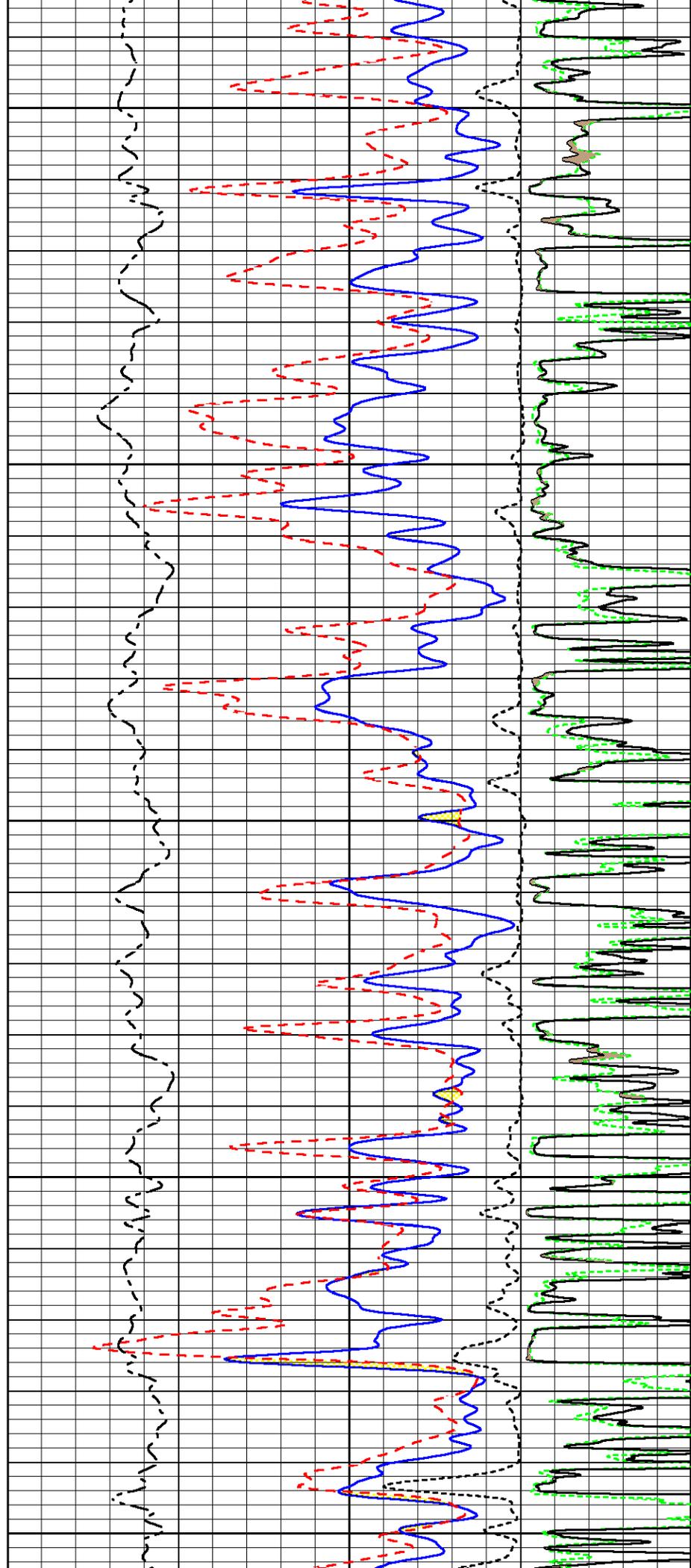


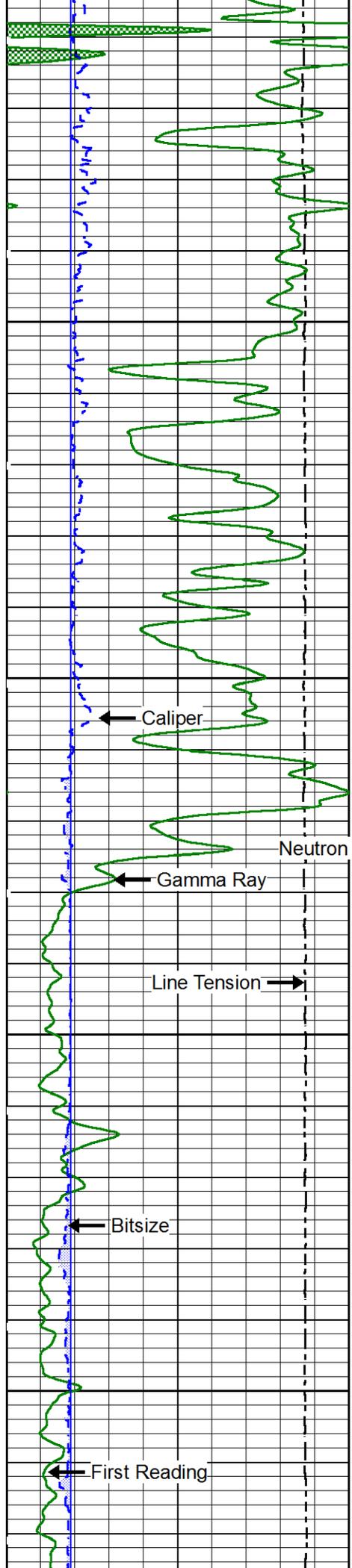


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4600

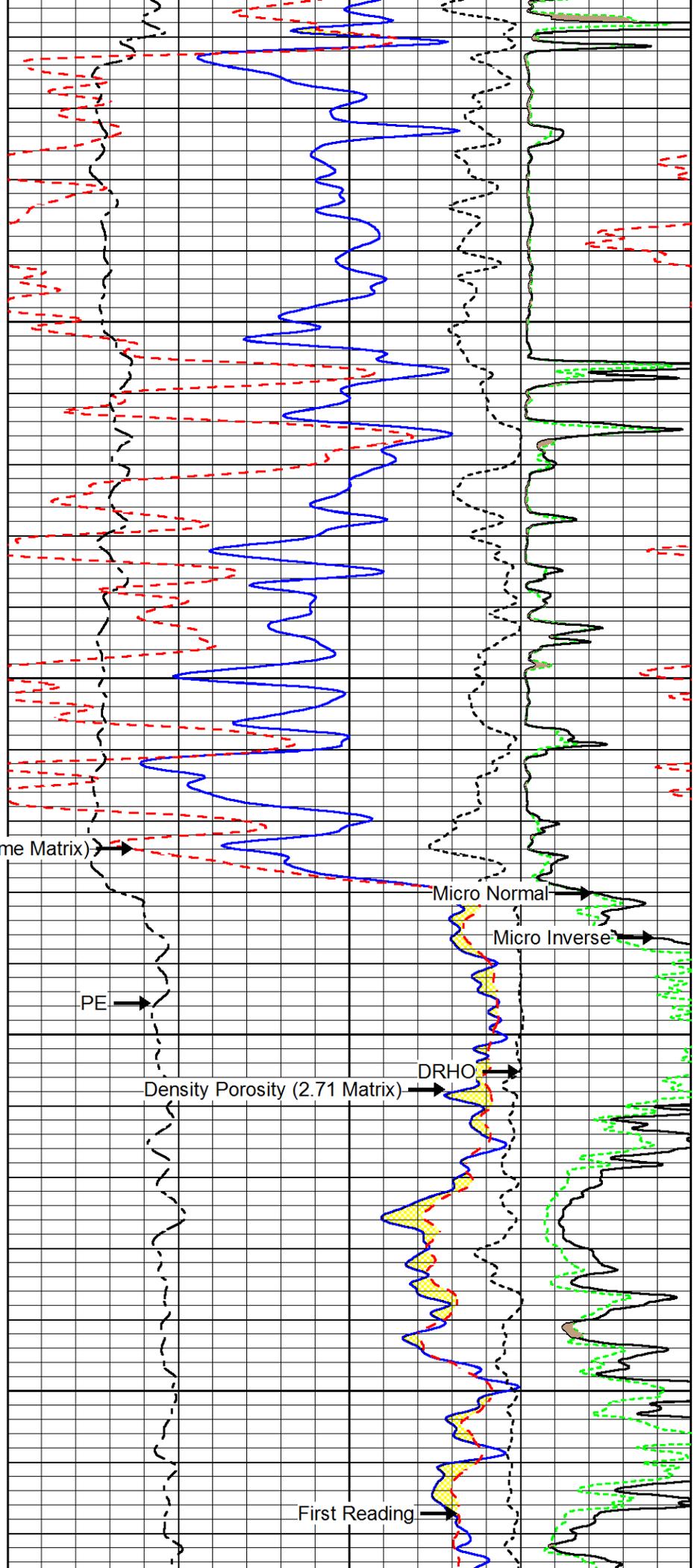
4700





4800

4900



Caliper

Gamma Ray

Line Tension

Bitsize

First Reading

Neutron Porosity (Lime Matrix)

PE

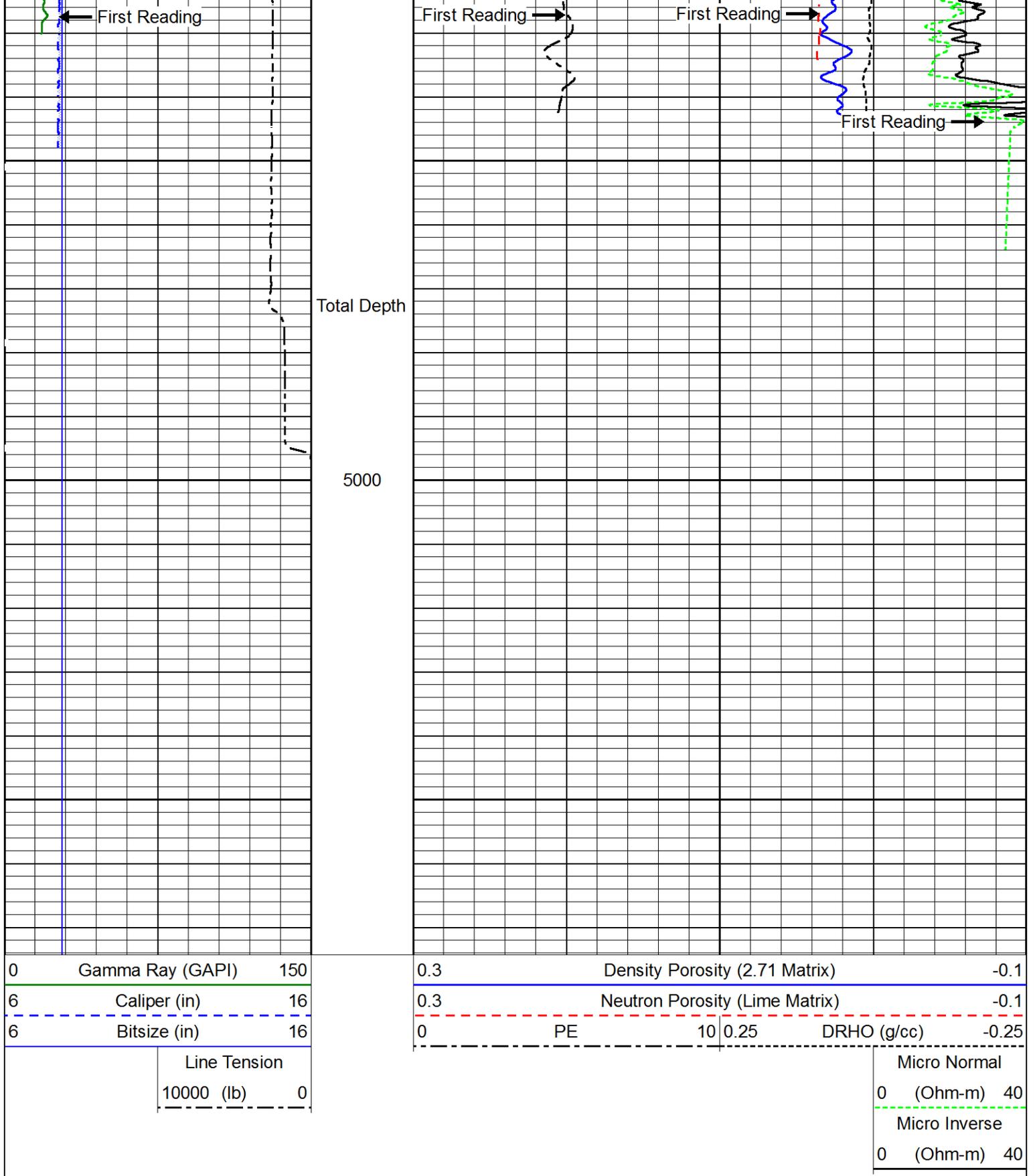
Density Porosity (2.71 Matrix)

DRHO

Micro Normal

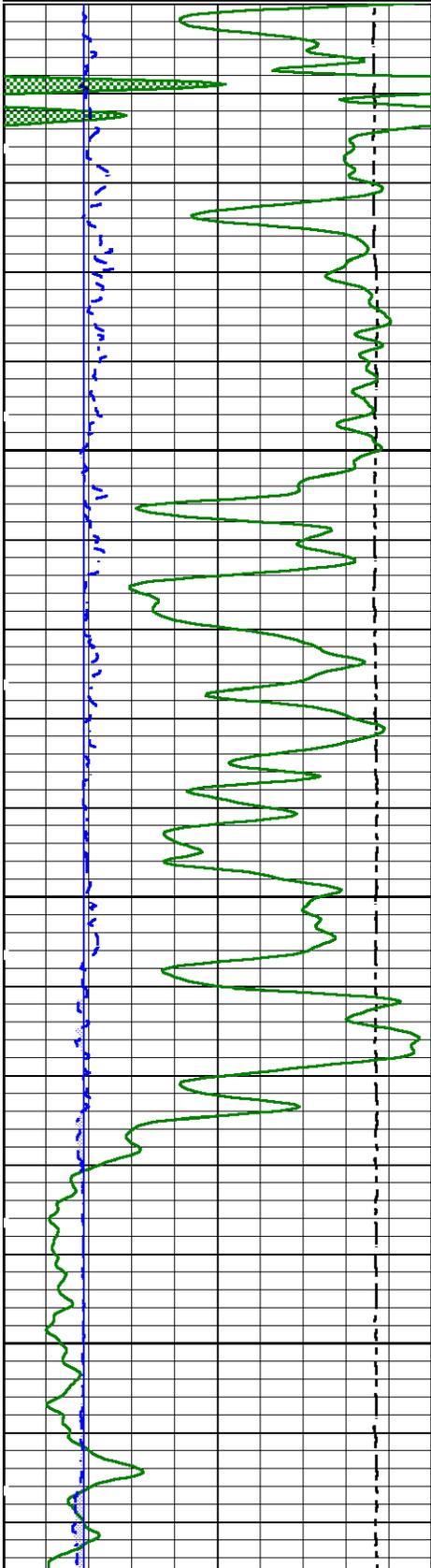
Micro Inverse

First Reading



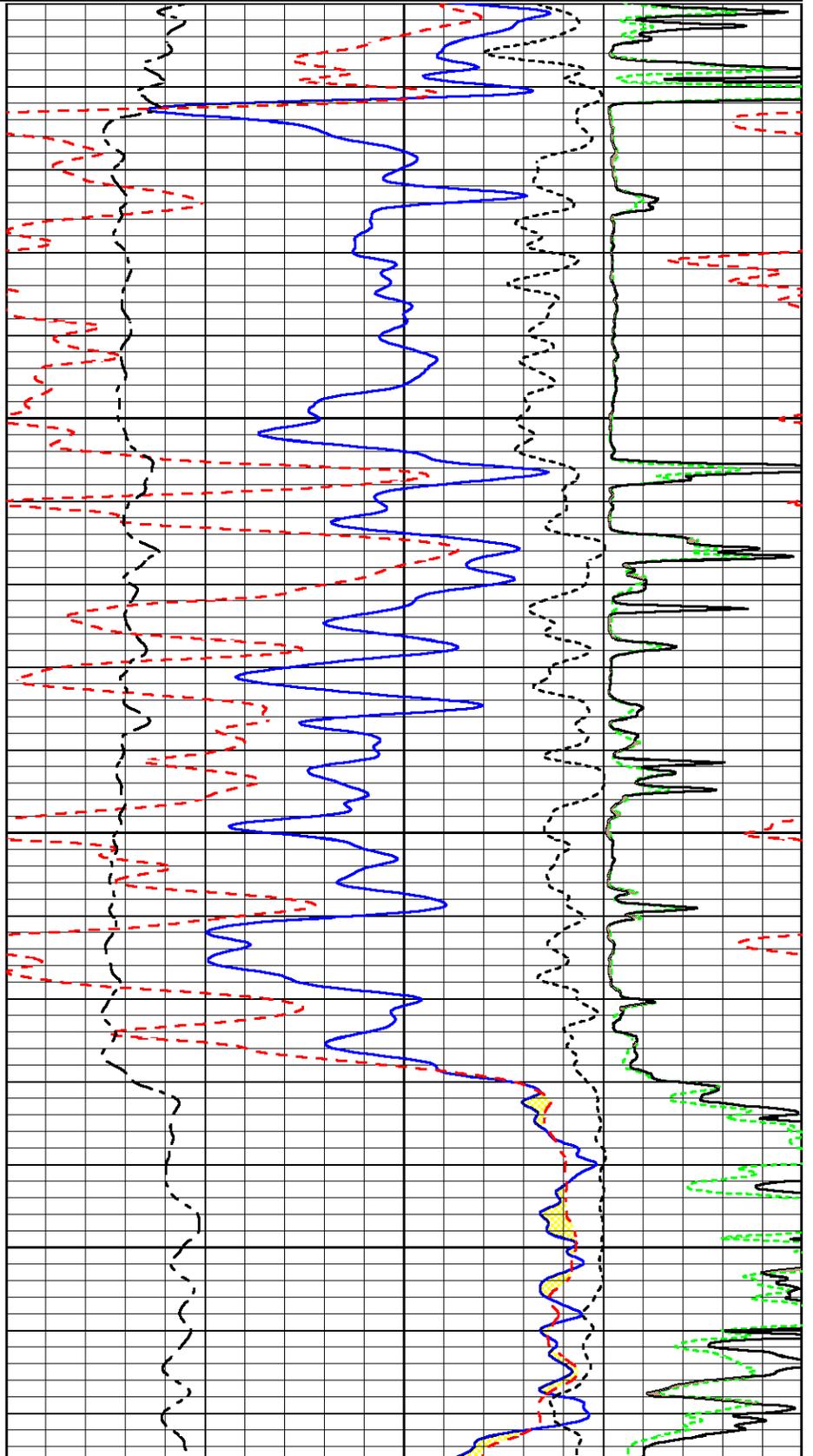
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6	Caliper (in)	16
6	Bitsize (in)	16
Line Tension		
10000 (lb)		0

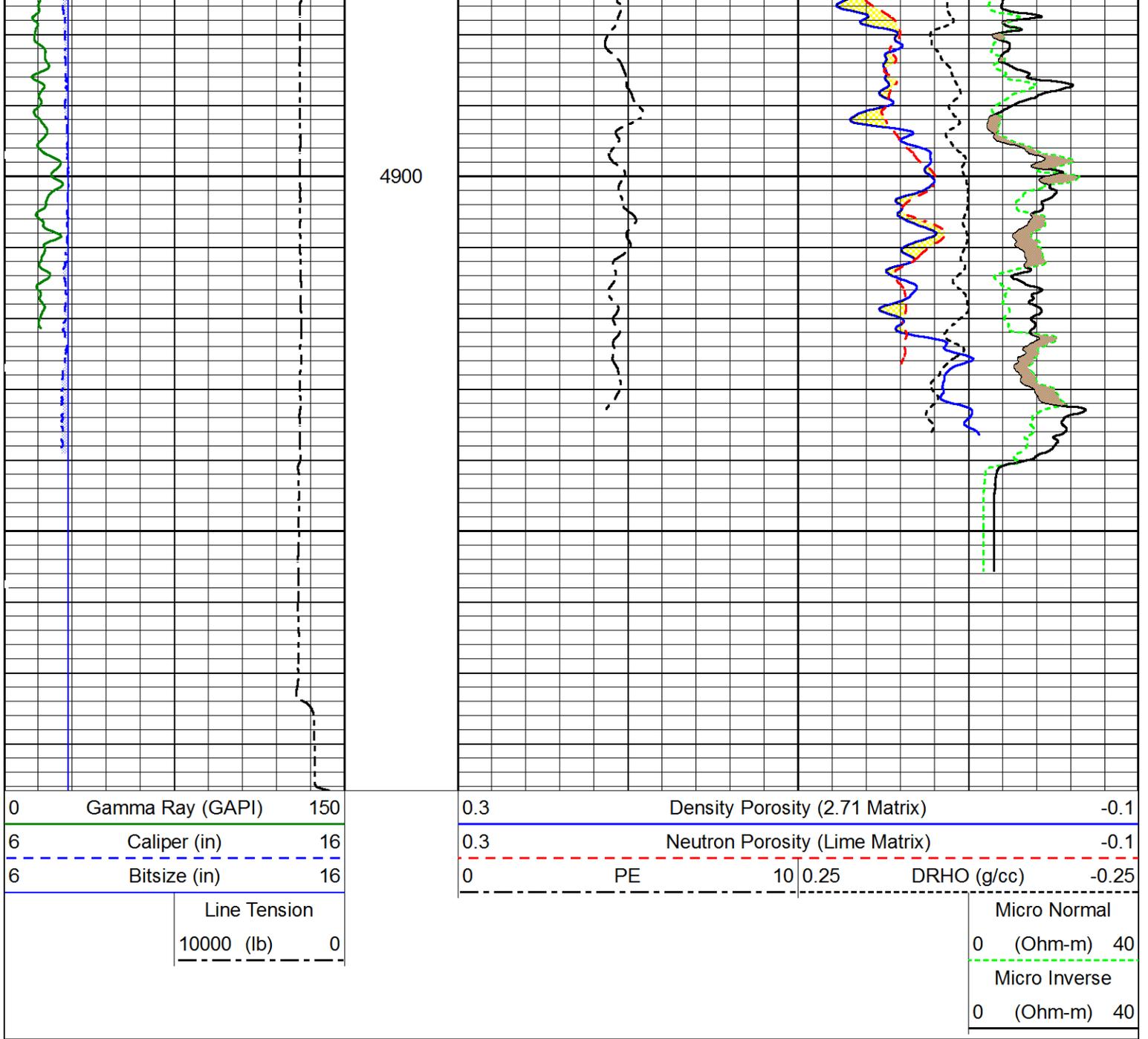
0.3	Density Porosity (2.71 Matrix)		-0.1
0.3	Neutron Porosity (Lime Matrix)		-0.1
0	PE	10 0.25	DRHO (g/cc) -0.25
			Micro Normal
0	(Ohm-m)		40
			Micro Inverse
0	(Ohm-m)		40



4700

4800



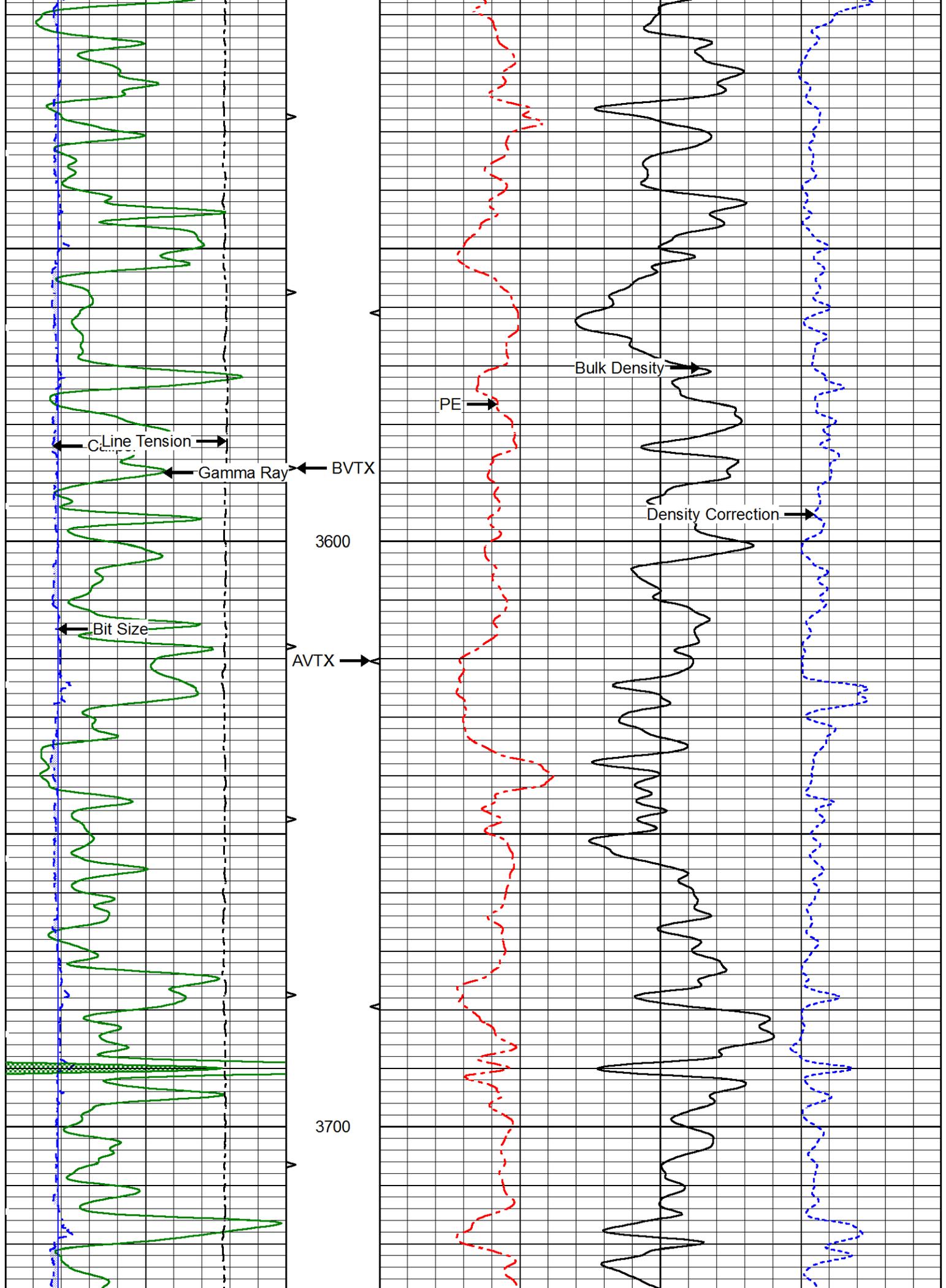


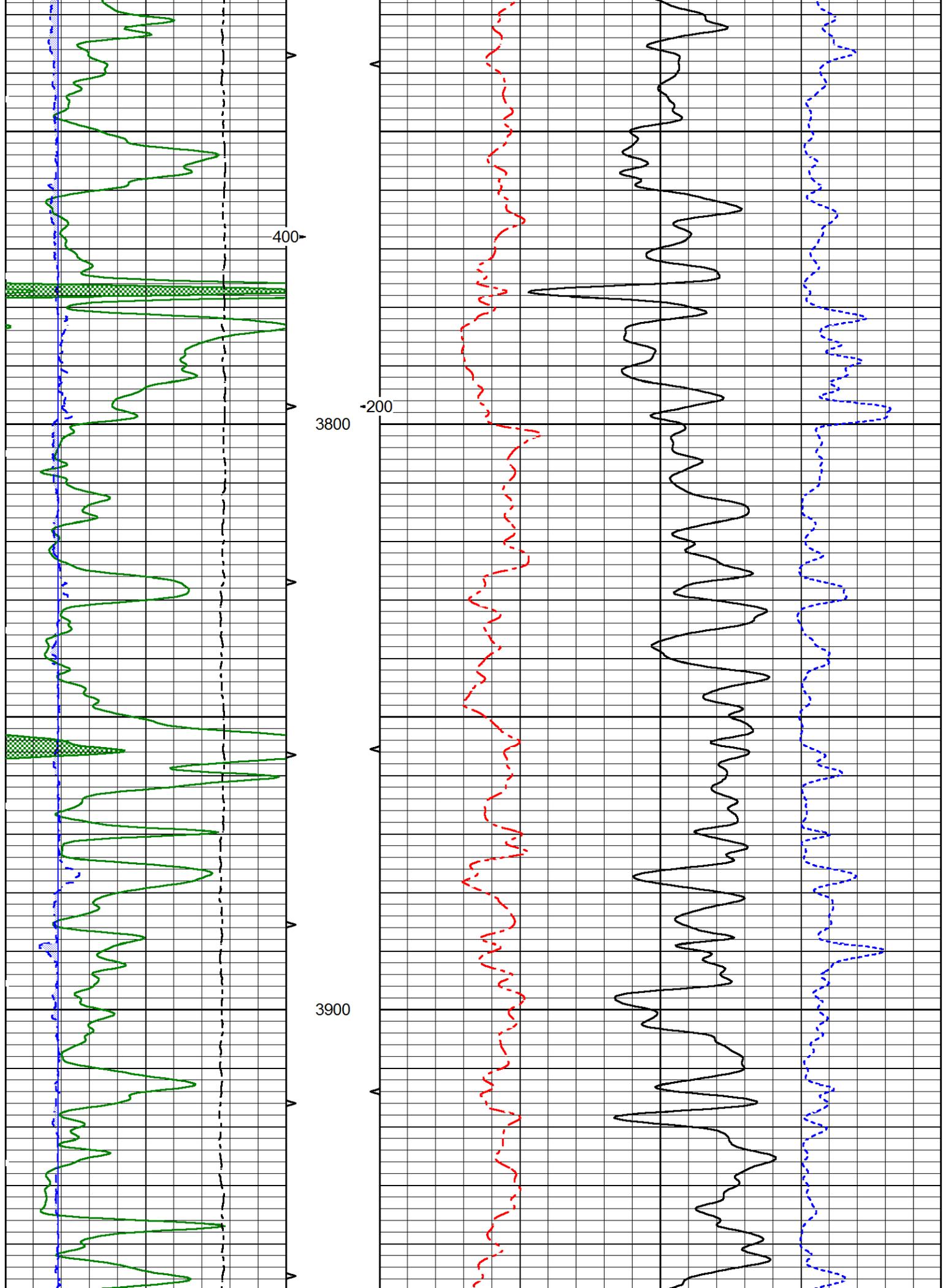
Main Pass

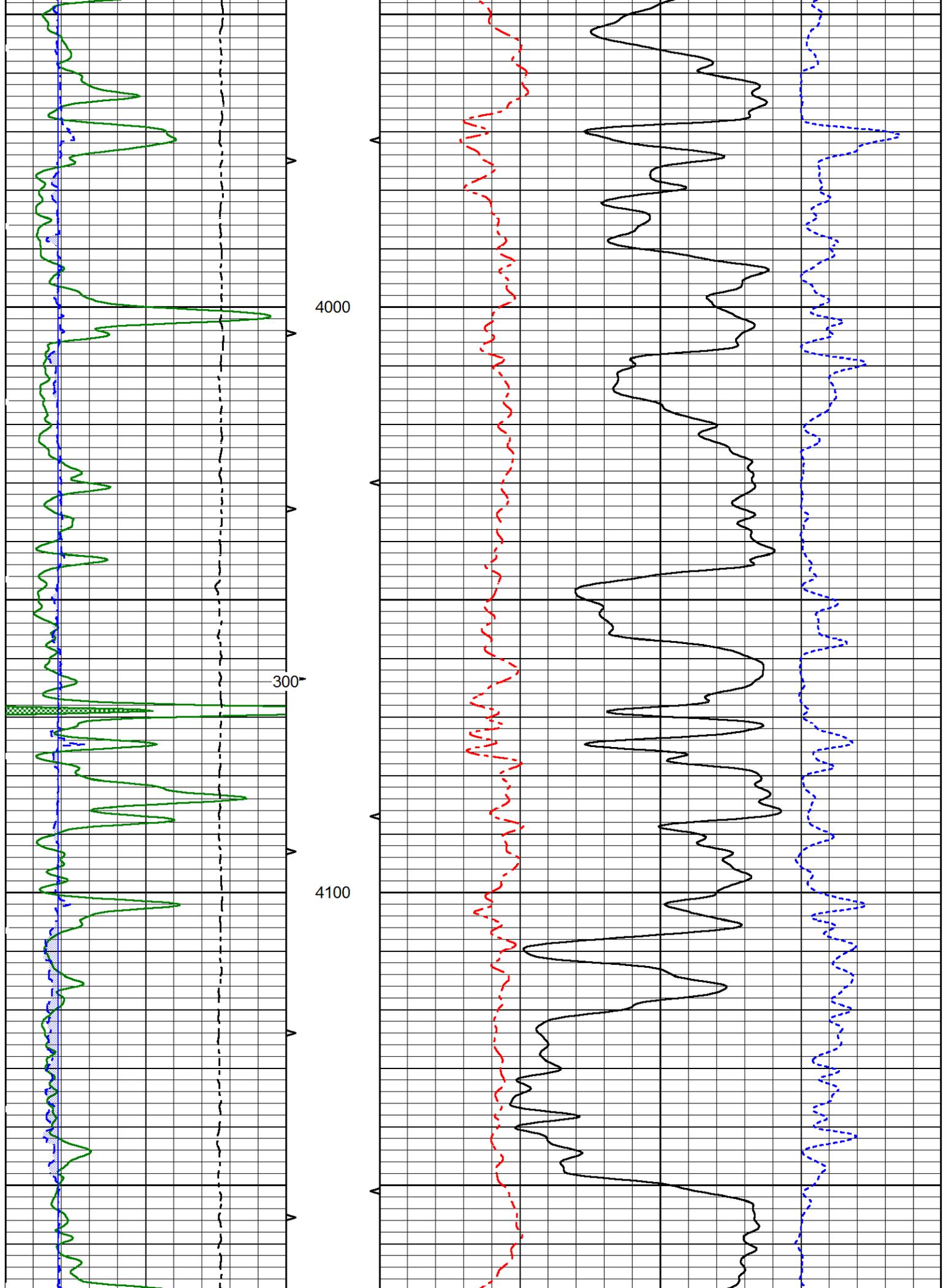
Database File merit-carrie #2-15.db
 Dataset Pathname pass5.3
 Presentation Format okc-bulk-base
 Dataset Creation Sun Sep 12 19:11:30 2021
 Charted by Depth in Feet scaled 1:240

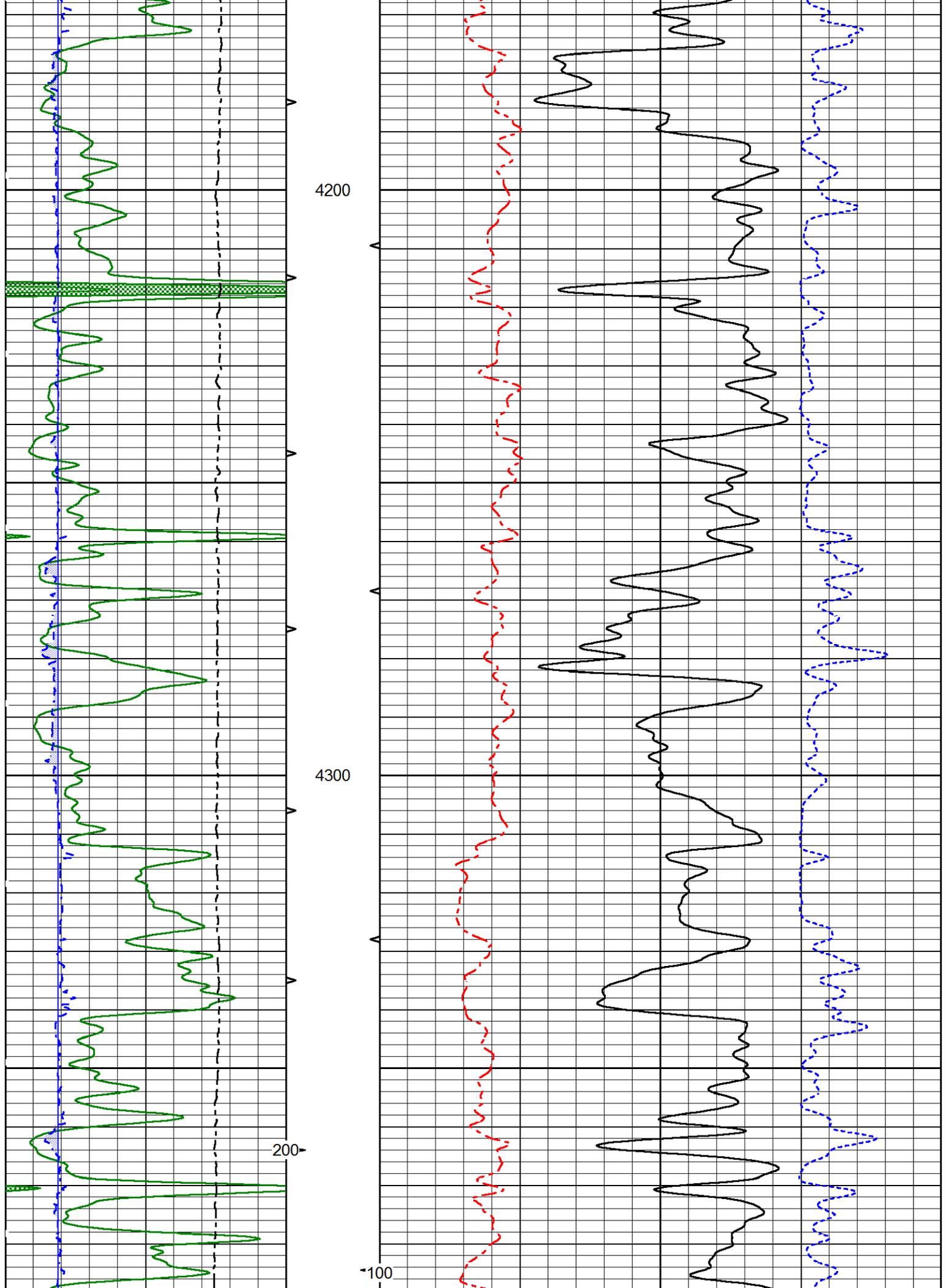
0	Gamma Ray (GAPI)	150	2	Bulk Density (g/cc)	3
6	Caliper (in)	16	0	PE	10 -0.25
10000	Line Tension (lb)	0		Density Correction (g/cc)	0.25
6	Bit Size (in)	16			

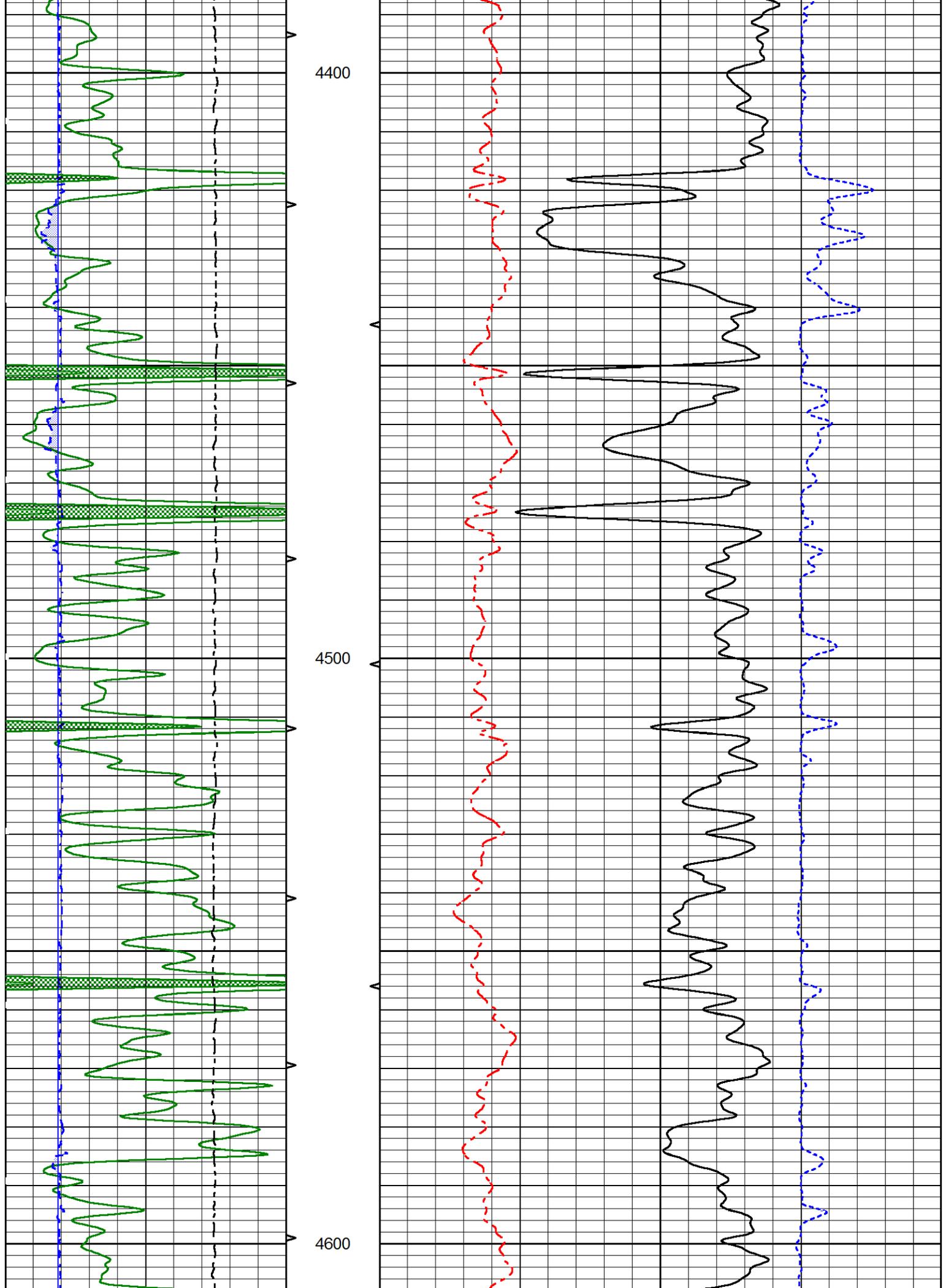


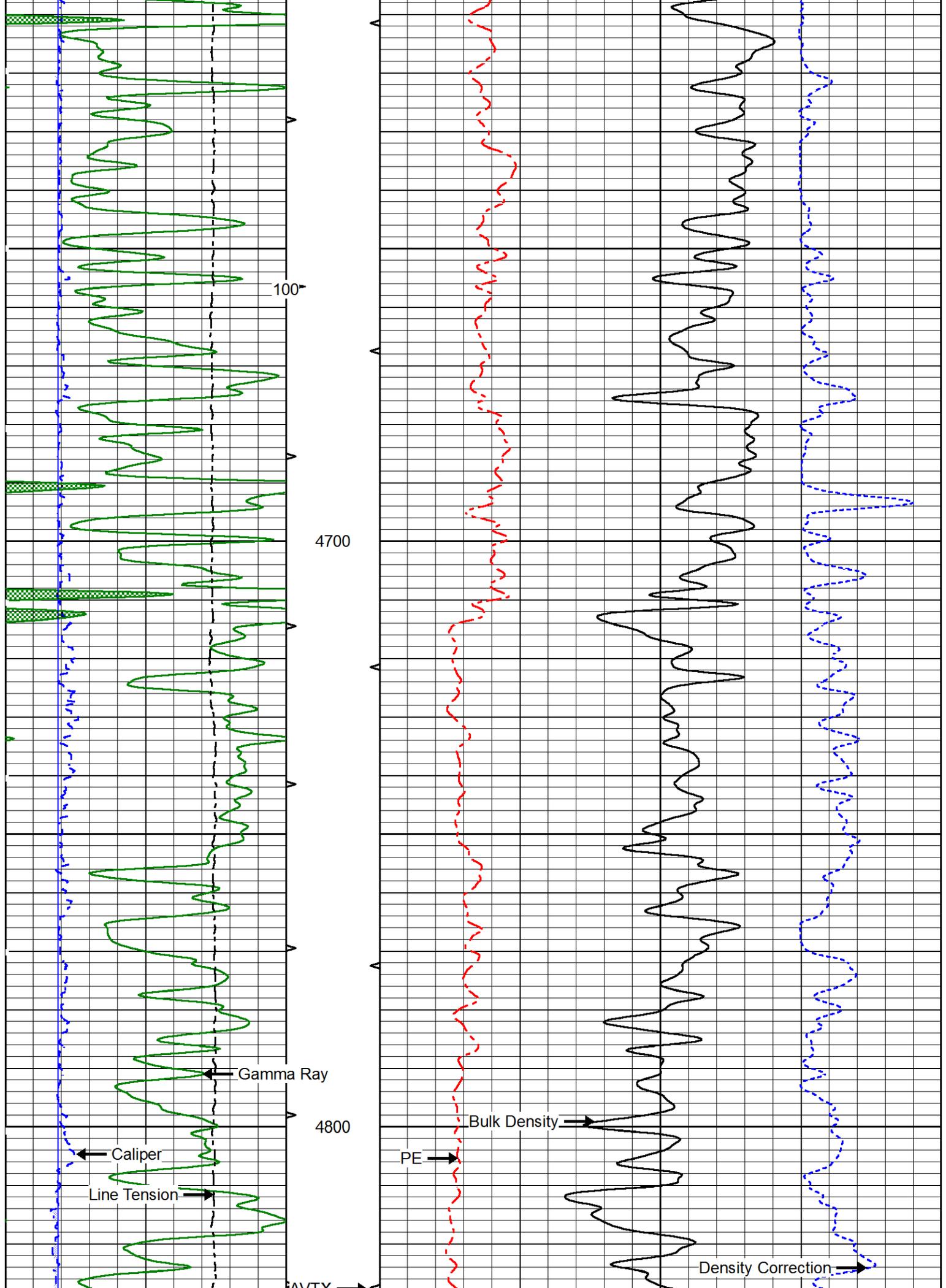


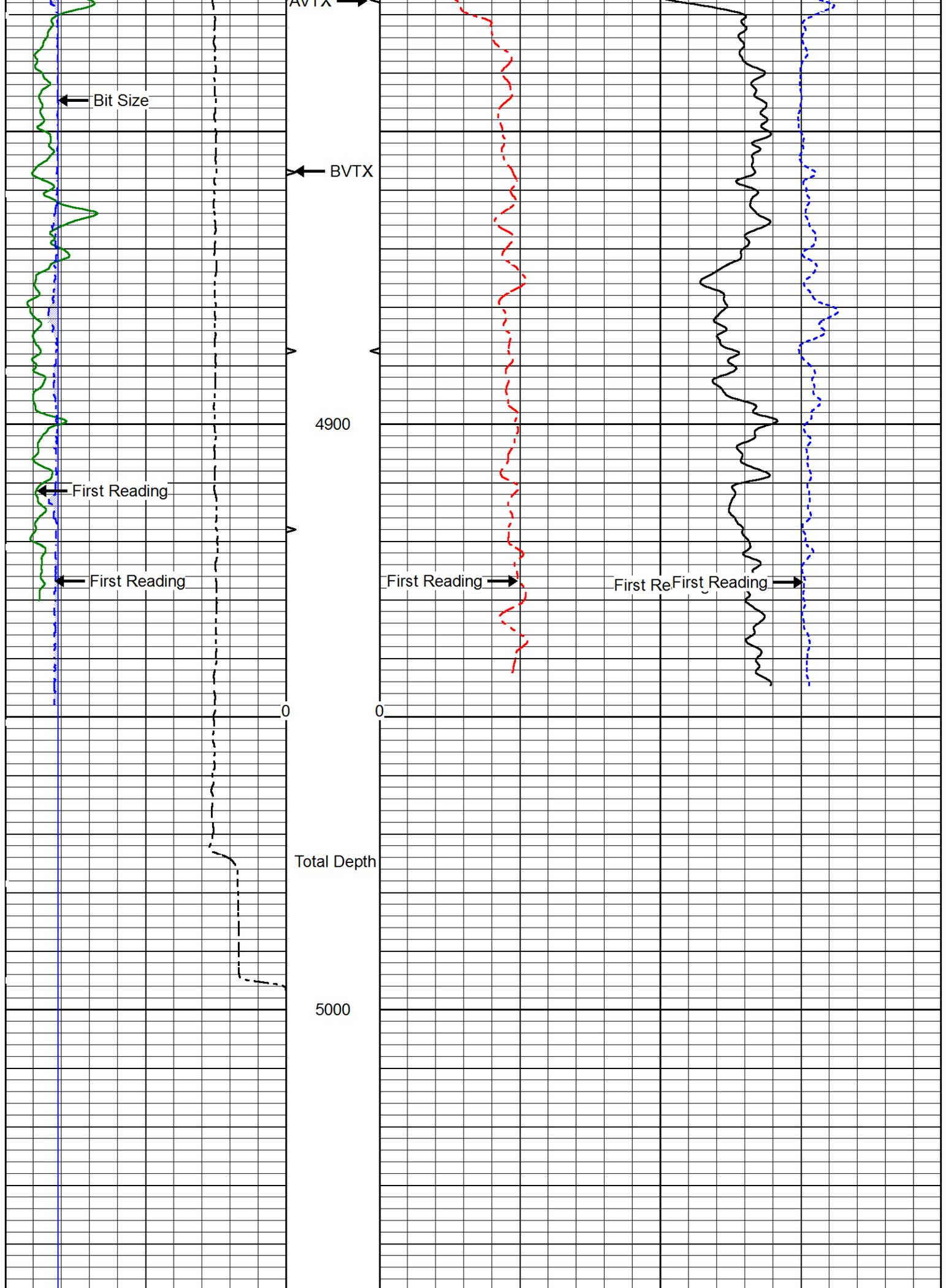












0	Gamma Ray (GAPI)	150	2	Bulk Density (g/cc)	3
6	Caliper (in)	16	0	PE	10 -0.25 Density Correction (g/cc) 0.25
10000	Line Tension (lb)	0			
6	Bit Size (in)	16			

Log Variables

Database: C:\Sondex\Sondex Warrior\Data\merit-carrie #2-15.db
 Dataset: field/well/run1/pass5.2/_vars_

Top - 1745.00 ft

FRMSALIN kppm 75	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 95	SO in 0.25	DE-CENT Yes	CASED? Yes	CASEWGHT lb/ft 54.5
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.1	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
COMPACT 1	SVFLUID usec/ft 189	SVMATRIX usec/ft 47.6	SPSHIFT mV 0	CASETHCK in 0.38	CASEOD in 8.625	PERFS 0	TDEPTH ft 1745
BOTTEMP degF 114	BOREID in 12.25						

1745.00 ft - Bottom

FRMSALIN kppm 75	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 95	SO in 0.25	DE-CENT Yes	CASED? No	CASEWGHT lb/ft 17
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.1	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8
COMPACT 1	SVFLUID usec/ft 189	SVMATRIX usec/ft 47.6	SPSHIFT mV 0	CASETHCK in 0.25	CASEOD in 5.5	PERFS 0	TDEPTH ft 4978
BOTTEMP degF 114	BOREID in 7.875						

Calibration Report

Database File: merit-carrie #2-15.db
 Dataset Pathname: pass5
 Dataset Creation: Sun Sep 12 17:10:47 2021 by Log Sondex

Small Jig:	4.000	in	1079.500	4.000	in	1216.600
Large Jig:	6.000	in	1483.400	6.000	in	1590.500
Gain:			0.0050			0.0053
Offset:			-1.3454			-2.5076

Pad Calibration

		Inverse	Normal
Gain:		1.0000	1.0000
Offset:		0.0000	0.0000

Tool Module Parameters

Software Version: 8.0.0.4

Litho Density Tool Calibration Report

Serial Number: B0872S70997B
Tool Model: B10872

Caliper Calibration Performed: Fri Aug 27 13:58:10 2021

	Diameter		Reading	
Small Ring:	9.000	in	1741.200	cps
Large Ring:	13.000	in	2083.500	cps
Gain:	0.0117			
Offset:	-11.3471			

Master Calibration Performed: Tue Sep 07 16:42:35 2021

Source Number: 70997B
Medium: Water
Al Block Density: 2.6017 g/cc

	Background	Al Block	Al Block + Fe	
SS1	651.4	4479.0	3908.3	cps
SS2	1859.0	30947.6	27081.5	cps
SSTOTAL	4344.4	49488.1	42873.3	cps
LITH	89.8	531.6	333.6	cps
LL	176.9	852.2	785.8	cps
LU	509.8	1086.9	1039.0	cps
LS	686.7	1939.0	1824.8	cps
LSTOTAL	1294.0	4797.0	4049.9	cps
SSHV	1466.7	1469.4	1469.9	V
LSHV	1418.0	1418.7	1418.9	V
SSFF	-0.001	0.004	-0.001	
LSFF	0.008	-0.006	0.002	

Before Survey Verification Performed: Tue Sep 07 17:00:38 2021

After Survey Verification Performed: Tue Sep 07 17:01:57 2021

	Master Background	Before Survey Background	After Survey Background	
SS1	651.4	657.0	649.5	cps
SS2	1859.0	1848.4	1847.5	cps
SSTOTAL	4344.4	4331.8	4329.7	cps
LITH	89.8	91.6	91.1	cps
LL	176.9	177.7	177.5	cps
LU	509.8	510.0	511.8	cps
LS	686.7	687.7	689.3	cps
LSTOTAL	1294.0	1295.1	1304.4	cps
SSHV	1466.7	1469.5	1469.5	V

LSHV	1418.0	1420.3	1420.4	V
SSFF	-0.001	0.006	-0.009	
LSFF	0.008	-0.003	-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: C10071S1414NC
 Tool Model: 009

Master Calibration Performed: Thu Aug 26 08:48:19 2021

Source Number: 1414NC

Short Spacing Counts: 5131.95 cps
 Long Spacing Counts: 186.21 cps
 High Voltage: 1363.96 V

Target Ratio: 27.2000
 Ratio: 27.5607
 K-Factor: 0.9869

Before Survey Verification Performed: Thu Aug 26 08:57:41 2021
 After Survey Verification Performed: Thu Aug 26 08:58:58 2021

Verifier Number: 6489

Verifier Values	Master Cal	Before Survey	After Survey	
Short Spacing Counts:	304.63	303.06	304.57	cps
Long Spacing Counts:	316.44	316.98	318.88	cps
High Voltage:	1363.94	1363.94	1363.94	V
Ratio:	0.9627	0.9561	0.9551	

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

Gamma Ray Calibration Report

Serial Number: C06122
 Tool Model: 001

Performed: Thu Aug 26 14:27:58 2021

Calibrator Value: 156.0 GAPI

Background Reading: 91.1 cps
 Calibrator Reading: 547.6 cps

Sensitivity: 0.3418 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	bits
167.00	degF	659.50	bits

Head Tension Unit Calibration Report

Serial Number: 00001
Tool Model: 011

Performed: Mon Mar 04 10:52:43 2013

Point #	Reference		Reading	
1	-19894.000	lb	8957.860	cps
2	-15010.000	lb	13965.100	cps
3	-9998.000	lb	19079.100	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)	
HTEN	69.23		CHD-WFT (WFT01) Weatherford Cable Head	2.67	2.25	15.00	
			X-Over-WFT (0001) Weatherford X-Over	1.13	3.38	5.00	
			XTU-008 (C10068) Crossover Ultrawire Toolbus to Ultralink	2.08	3.38	47.00	
			HTU-011 (00001) Head Tension Unit	2.18	3.38	55.00	
BFR	65.59		BFR-002 (P004) Borehole Fluid Resistivity Tool	4.39	3.38	94.00	
			GRT-001 (C06122) Gamma Ray Tool	3.22	3.38	69.00	
CNLSC CNSSC	57.18			CNL-009 (C10071S1414NC) Compensated Neutron Logging Tool	5.28	3.38	100.00
	56.68			LDT-B10872 (B0872S70997B) Litho Density Tool	9.75	4.50	310.00
LDT	47.02		OJT-001 (000001) OH Offset Joint	1.00	3.38	56.00	
			KJT-001 (10010515) Knuckle Joint	2.86	3.38	72.00	
		CEN-001 (000028) Inline OH Springbow Centraliser	4.27	3.38	66.00		

MEL	29.67		MEL-001 (10020666) Micro Electric Log	9.17	3.38	190.00
			Overbody-Over-cen Overbody Centralizer	3.00	3.38	10.00
WVFUTRF	21.67		MAS-001SS (C10036SS) Multi Array Sonic Tool (SS)	14.28	3.38	242.00
WVFLTRF	20.67					
WVFUTRN	20.67					
WVFLTRN	19.67					
			Overbody-Over-cen Overbody Centralizer	3.00	3.38	10.00
IAT	8.44		IAT-002 (B10110) Induction Array Tool	13.22	3.88	196.00
SP	0.43		Shorty-Short Short Hole Finder	0.38	3.88	6.00
Dataset: merit-carrie #2-15.db: field/well/run1/pass5 Total length: 75.87 ft Total weight: 1543.00 lb O.D.: 4.50 in						

	Company	Merit Energy Company, LLC.
	Well	Carrie #15-2
	Field	Wildcat
	Parish	Kearny
	State	Kansas