

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

Fold here

[illegible]

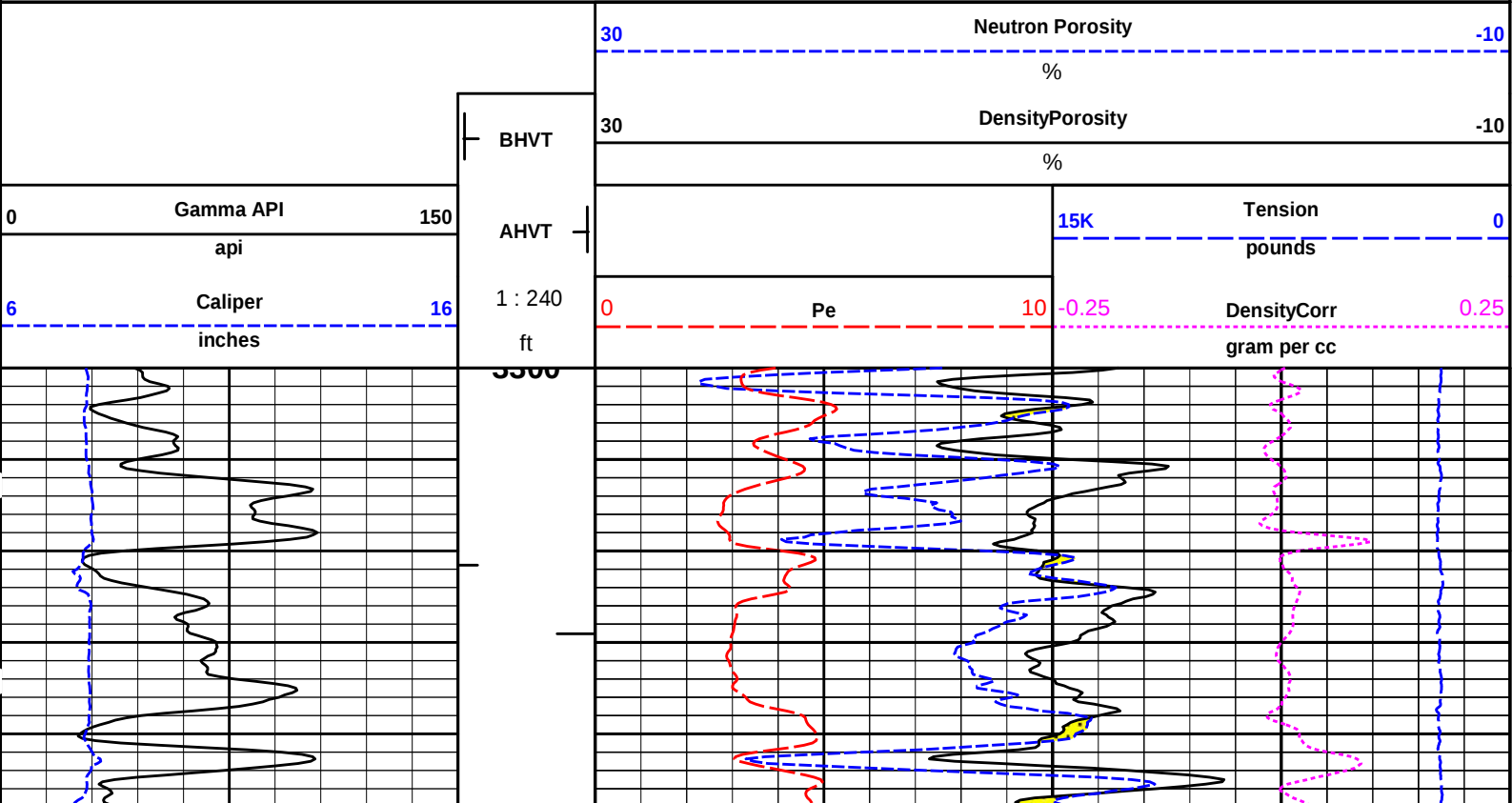
[illegible]

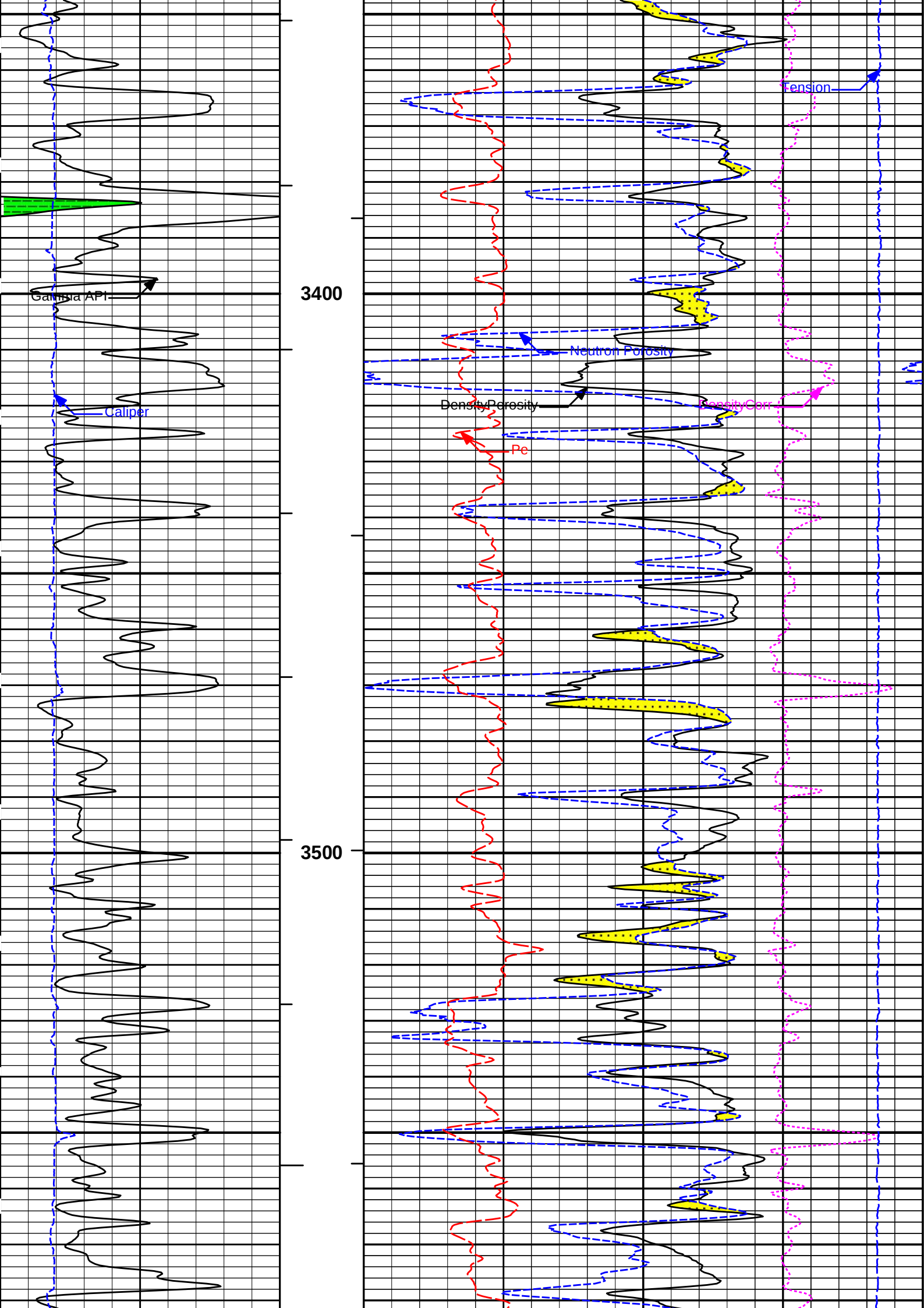
HALLIBURTON

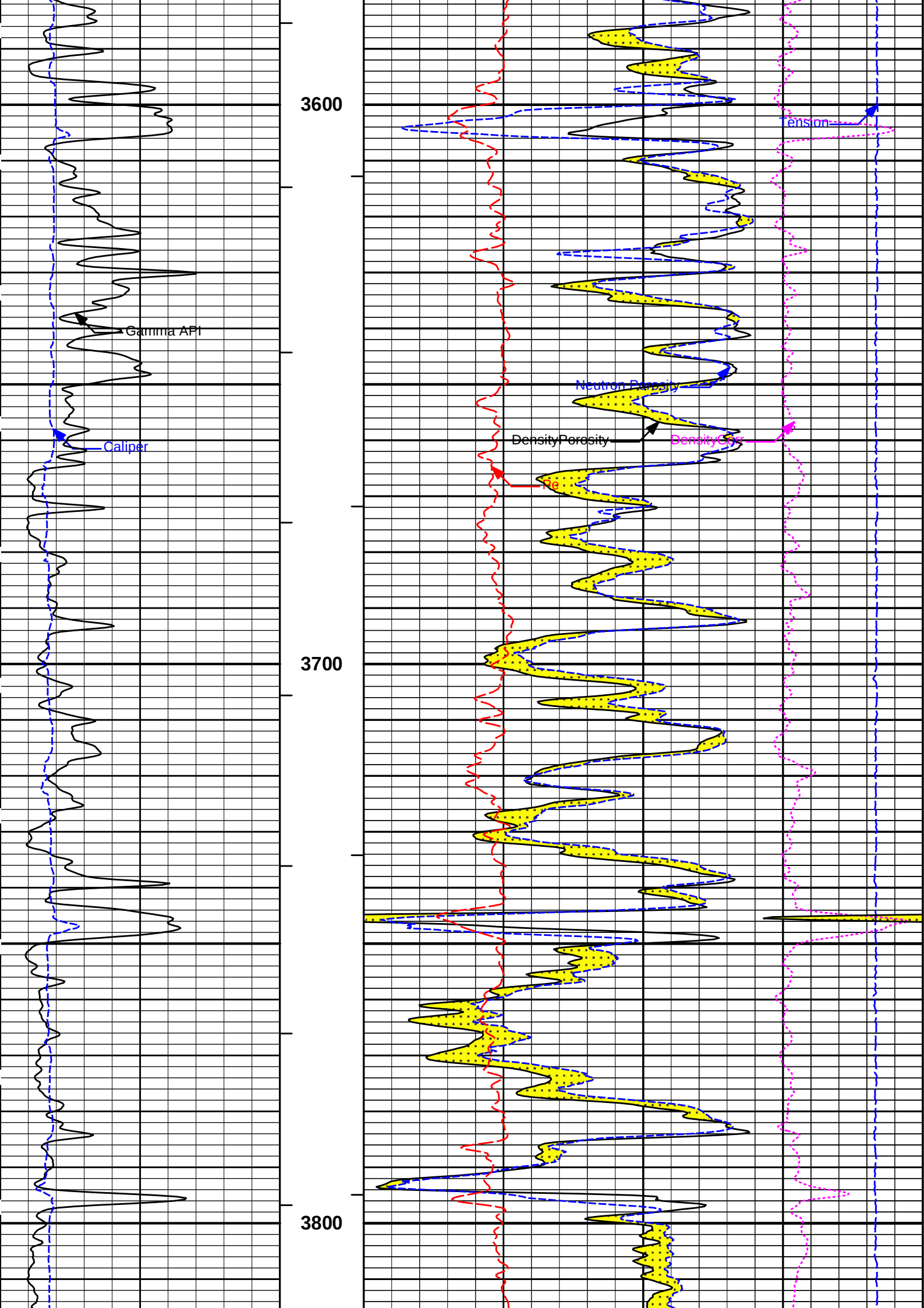
Plot Time: 28-Sep-19 01:30:55
Plot Range: 3300 ft to 5616.75 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-003\
Plot File: \\SDL-DSN\Poro_IQ_5_MAIN

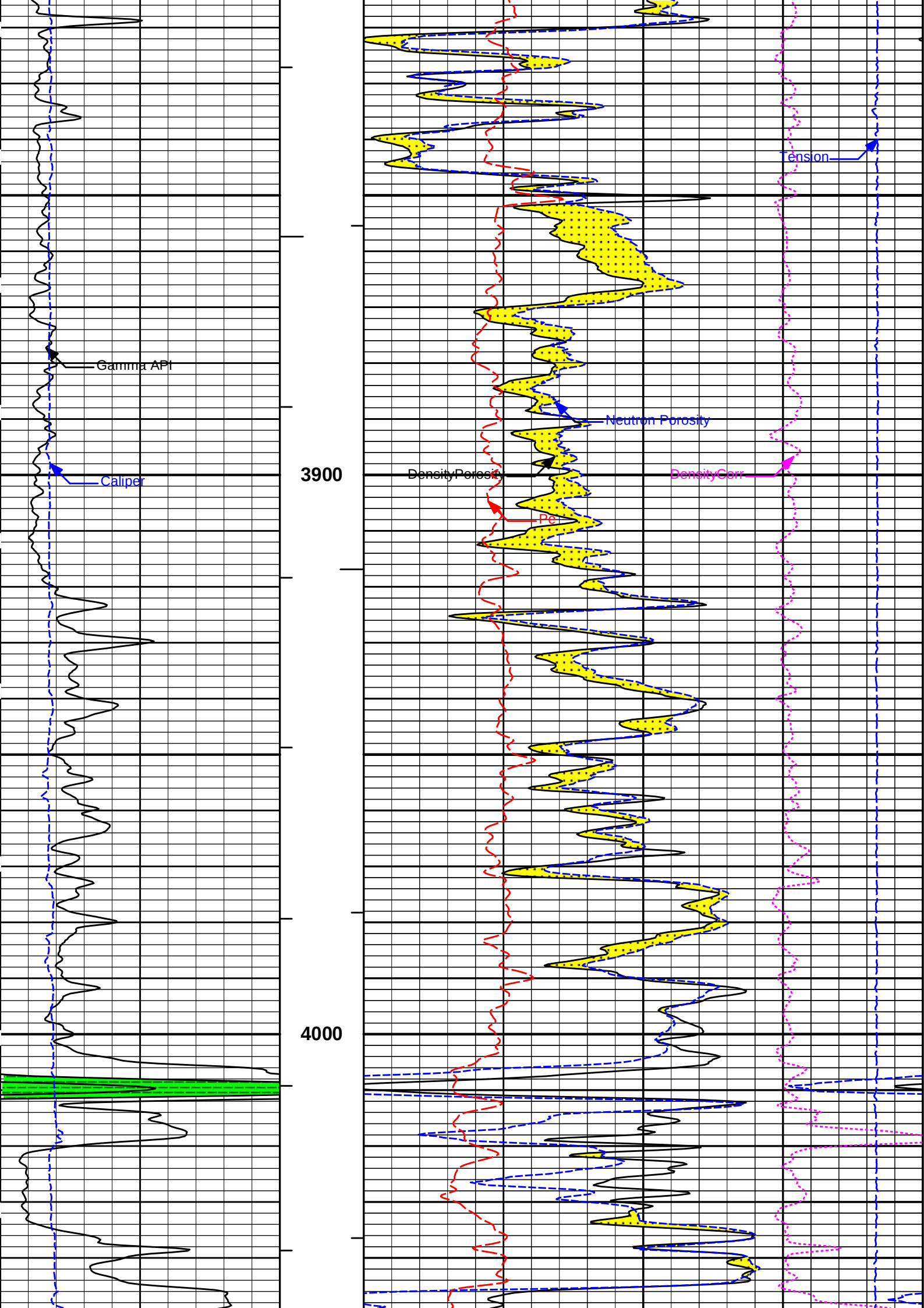
5 INCH MAIN LOG

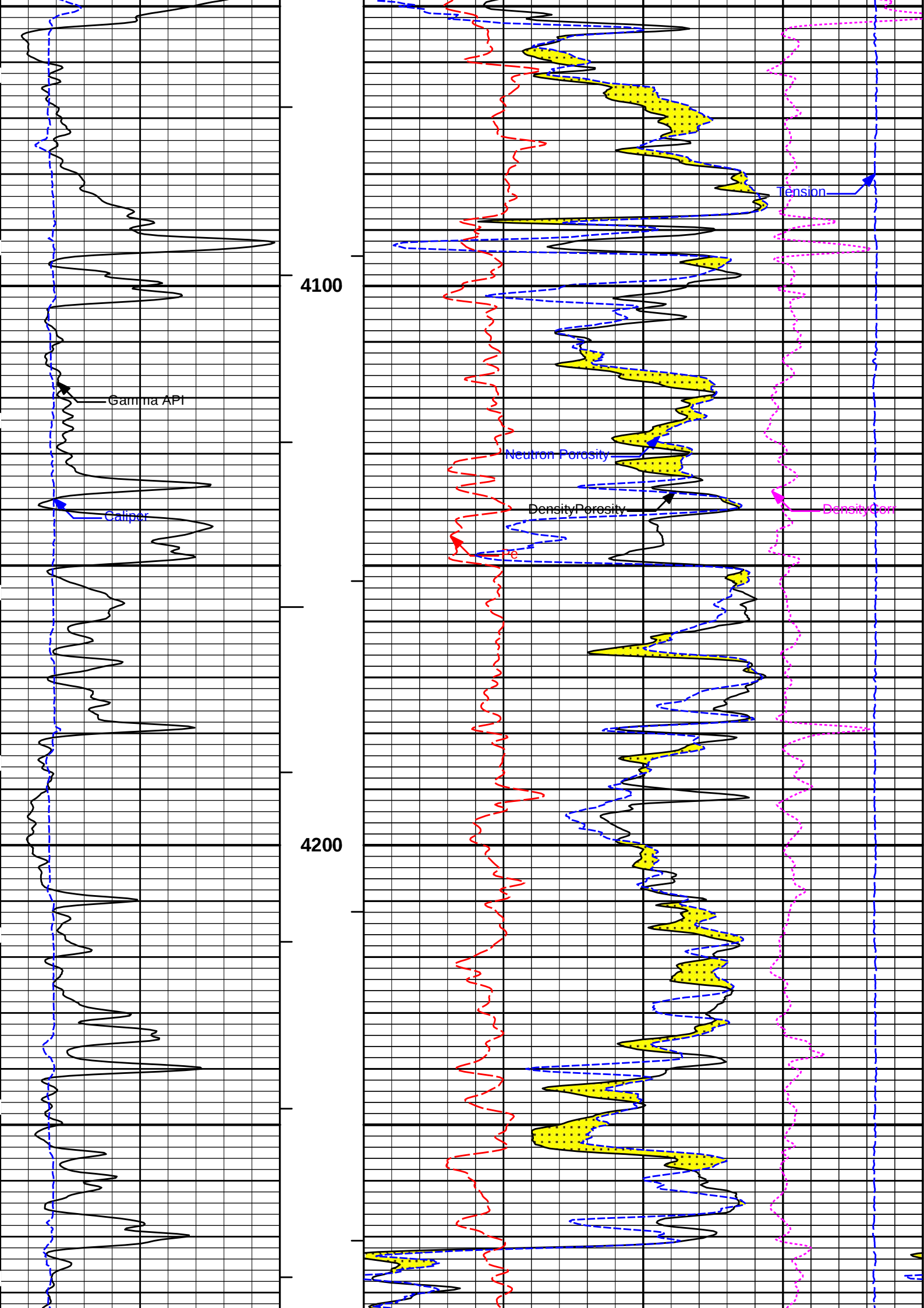
MAIN SECTION 5" PER 100'

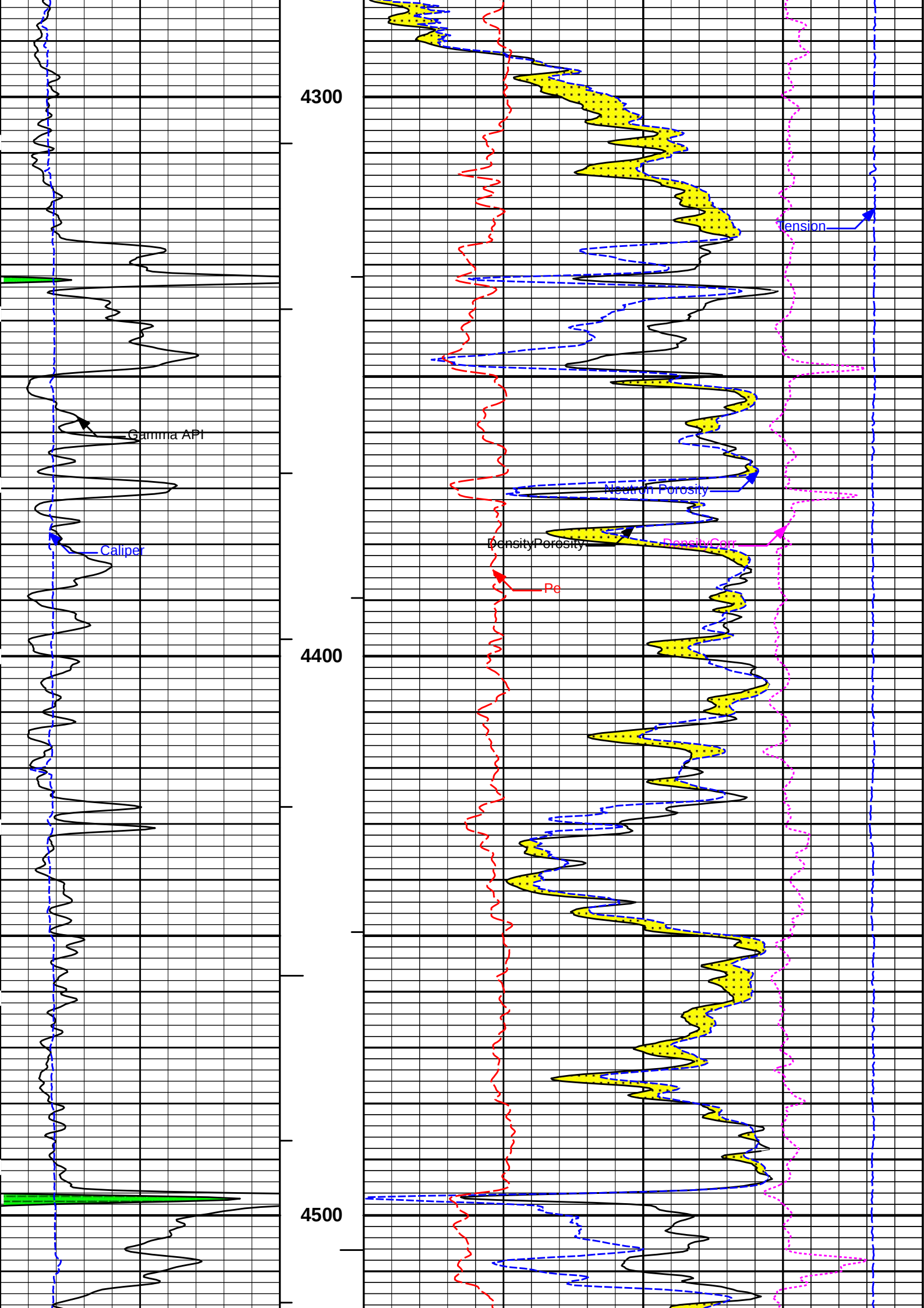


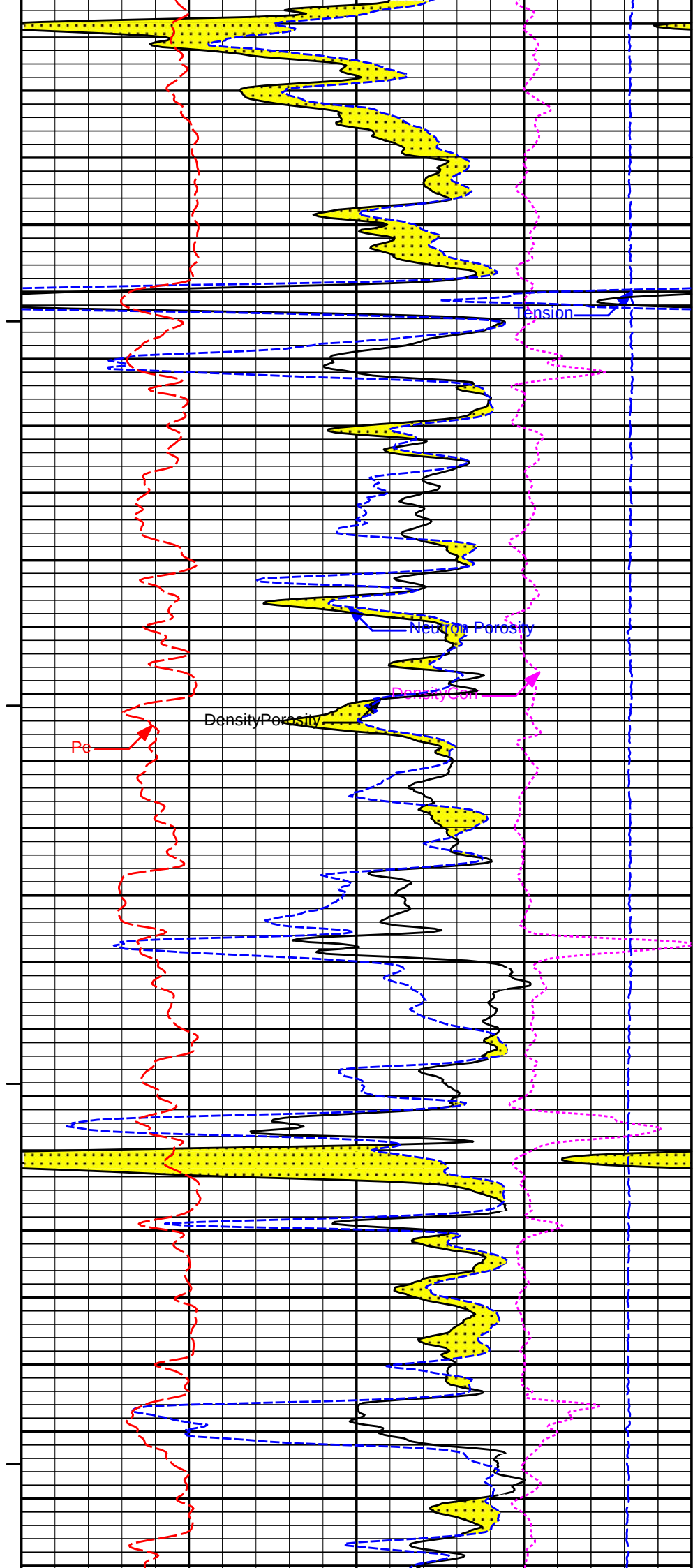
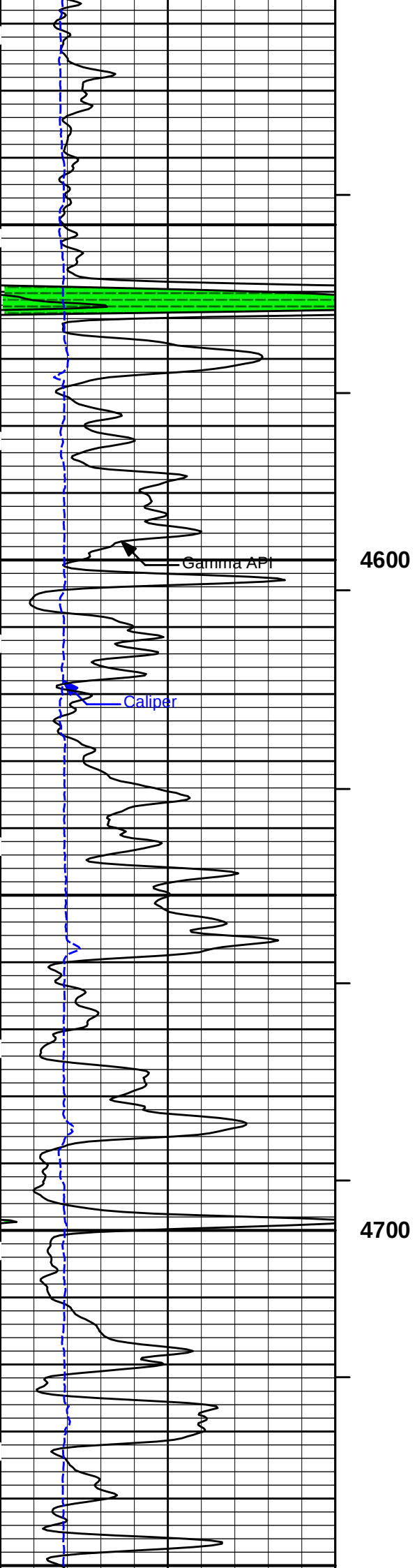


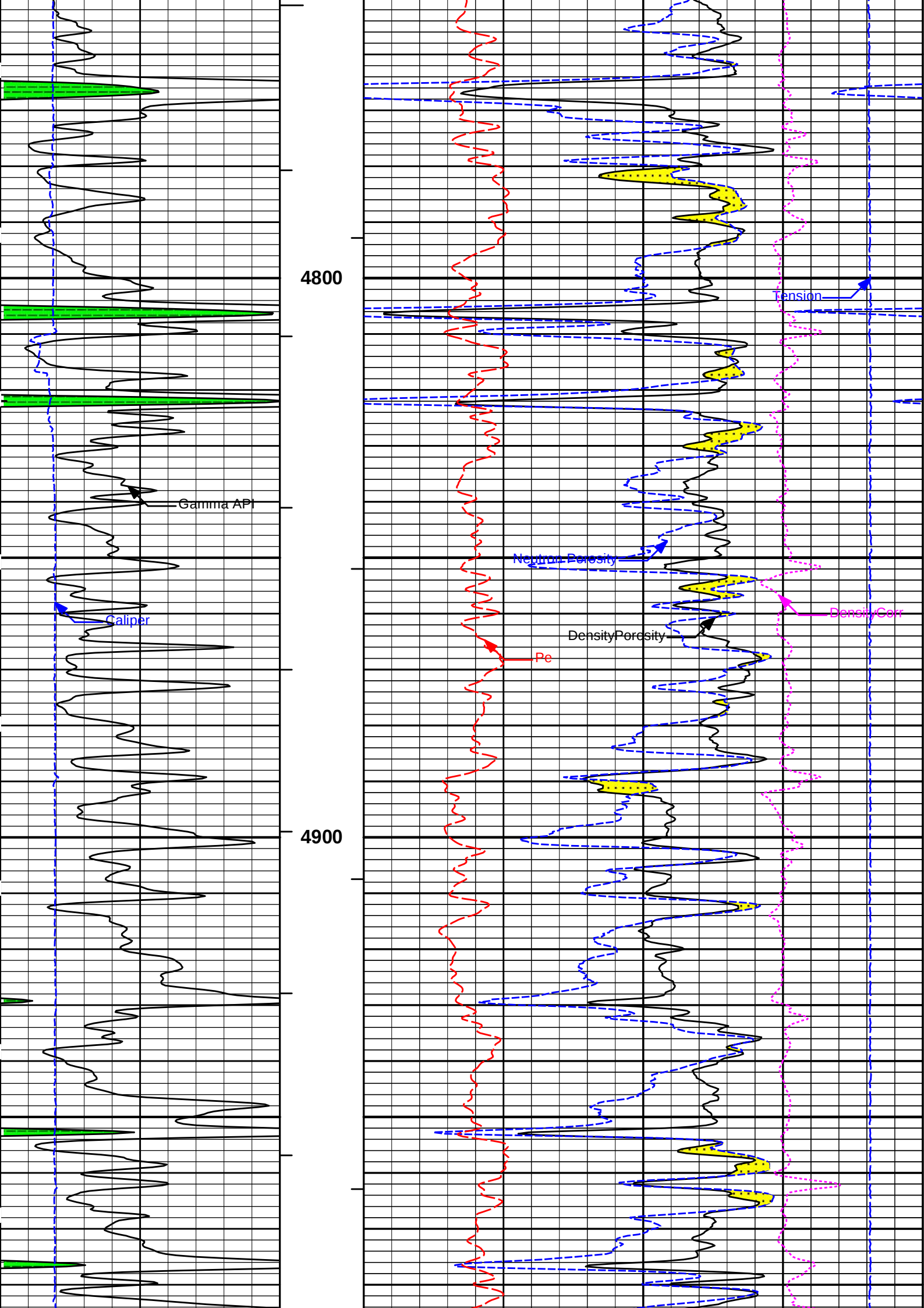


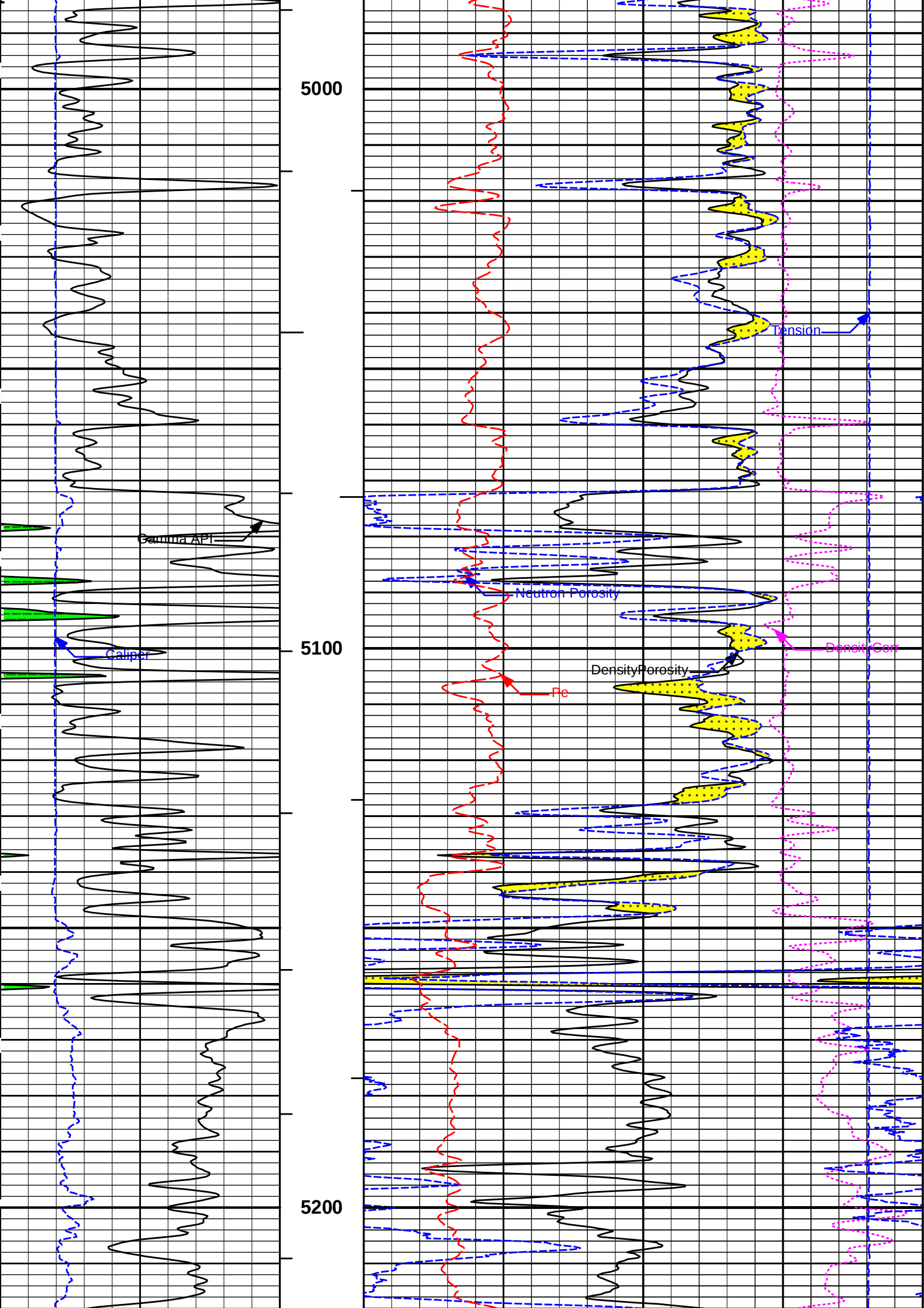


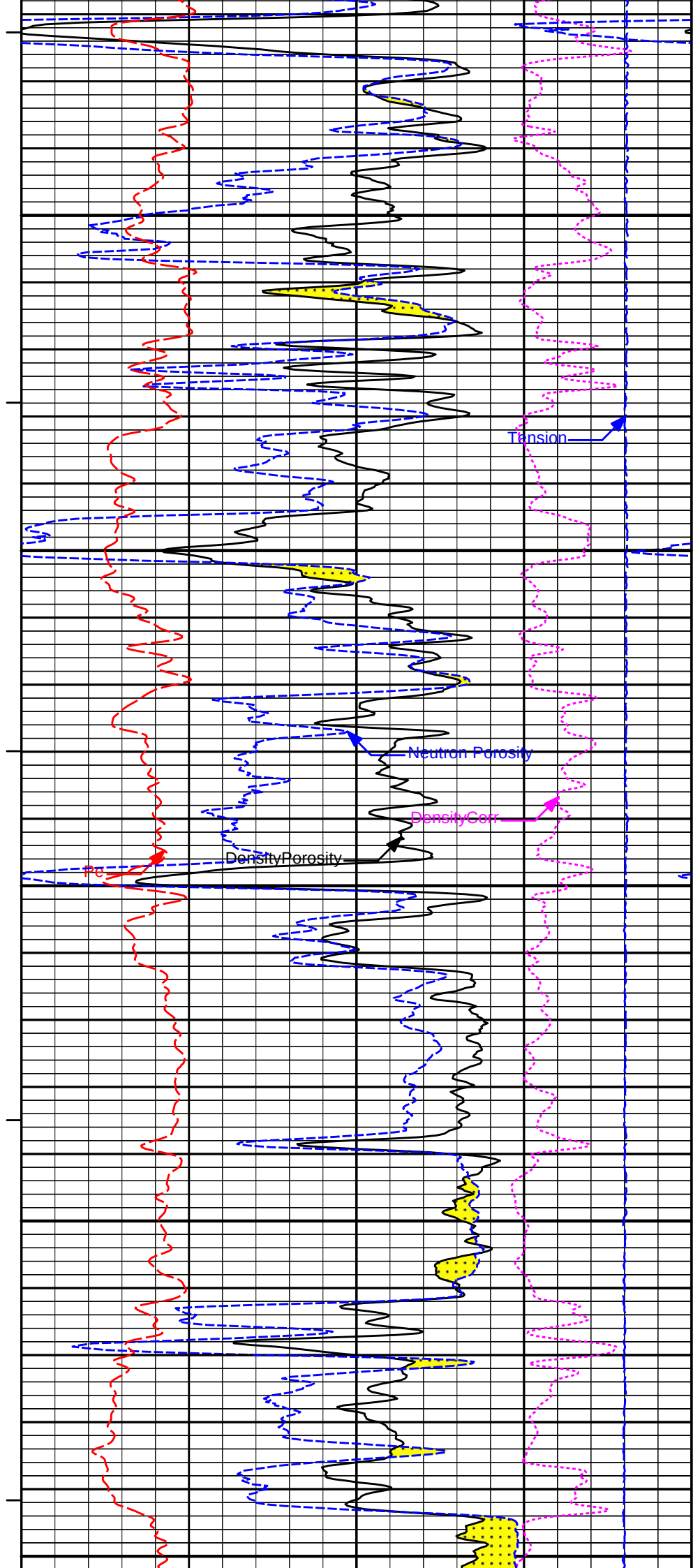
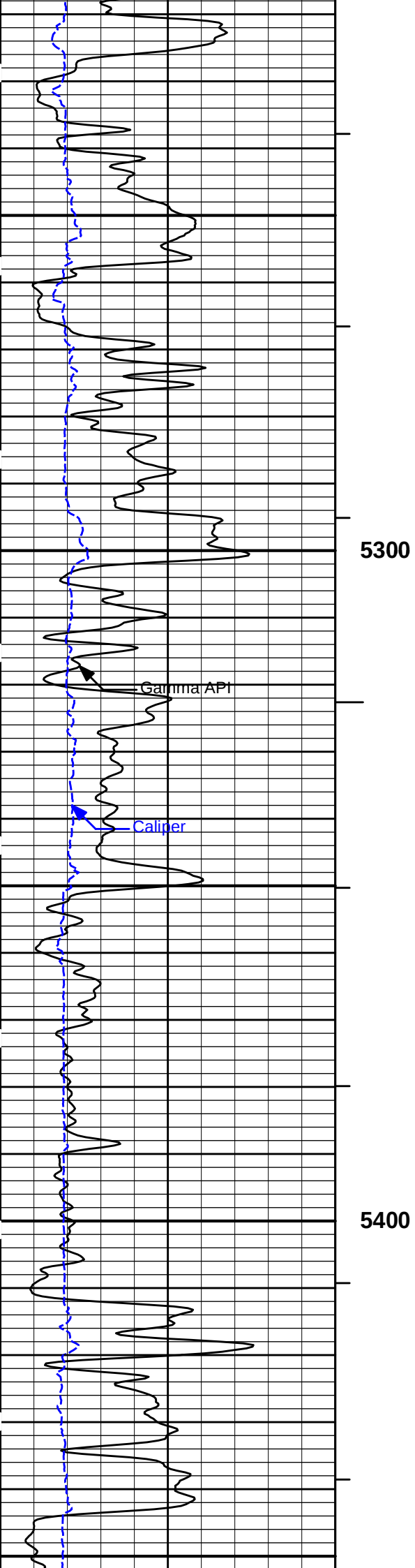


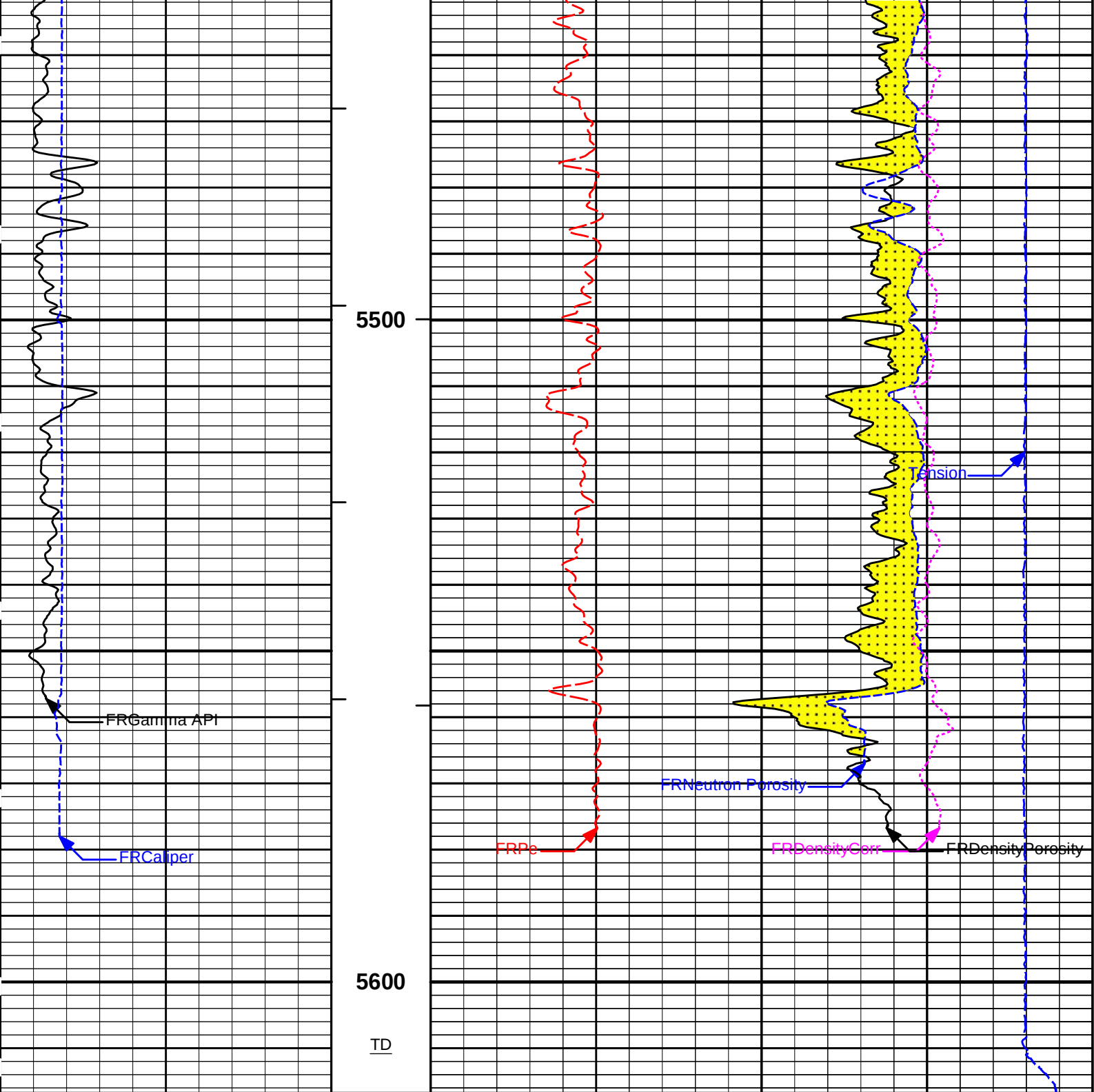












6	Caliper	16	1 : 240 ft	0	Pe	10	-0.25	DensityCorr	0.25	
	inches								gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0	
	api							pounds		
			BHVT	30	DensityPorosity				-10	
					%					
				30	Neutron Porosity				-10	
					%					

HALLIBURTON

Plot Time: 28-Sep-19 01:30:59
Plot Range: 3300 ft to 5616.75 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-003\
Plot File: \\SDL-DSN\Porosity_5_MAIN

5 INCH MAIN LOG

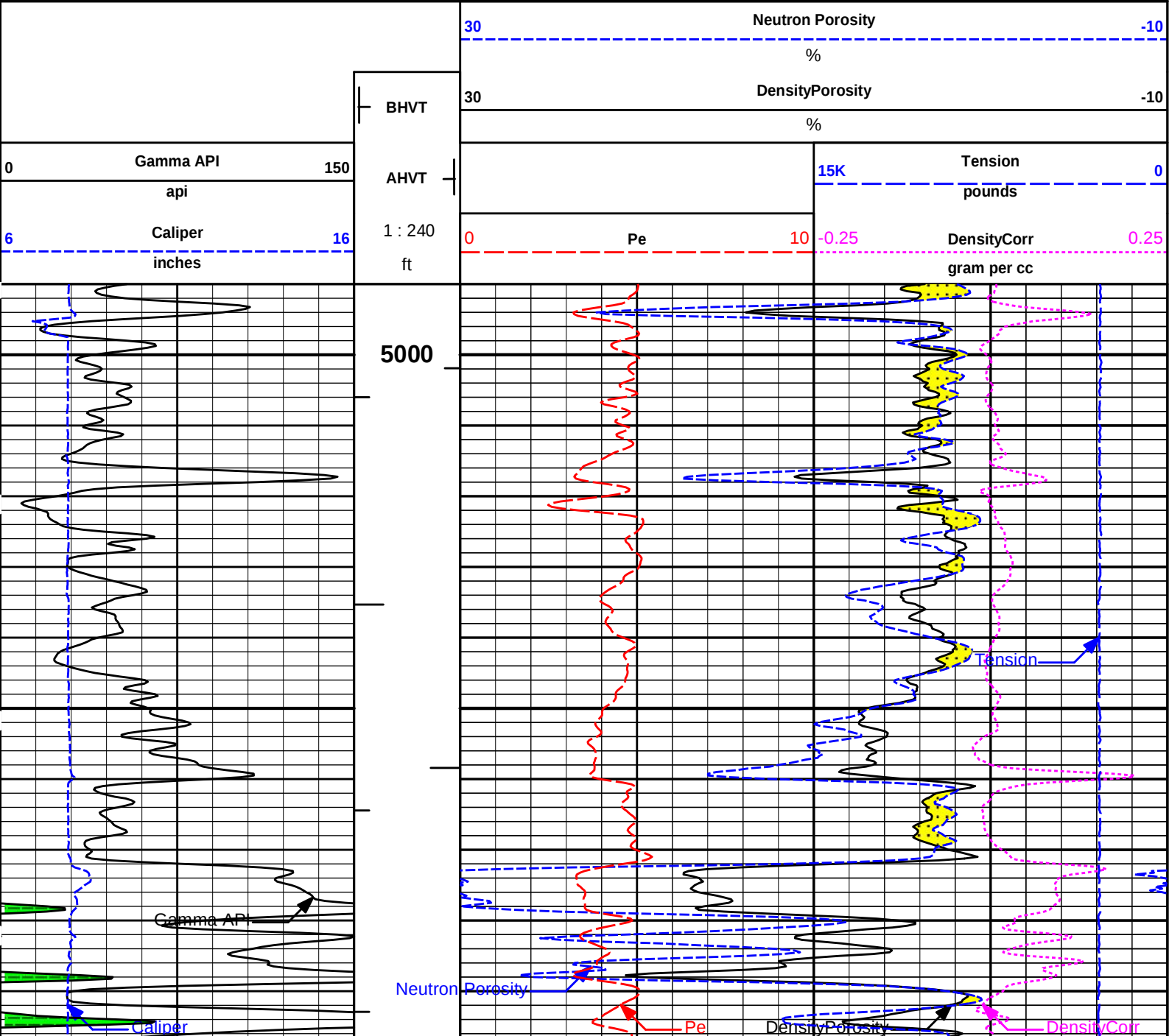
MAIN SECTION 5" PER 100'

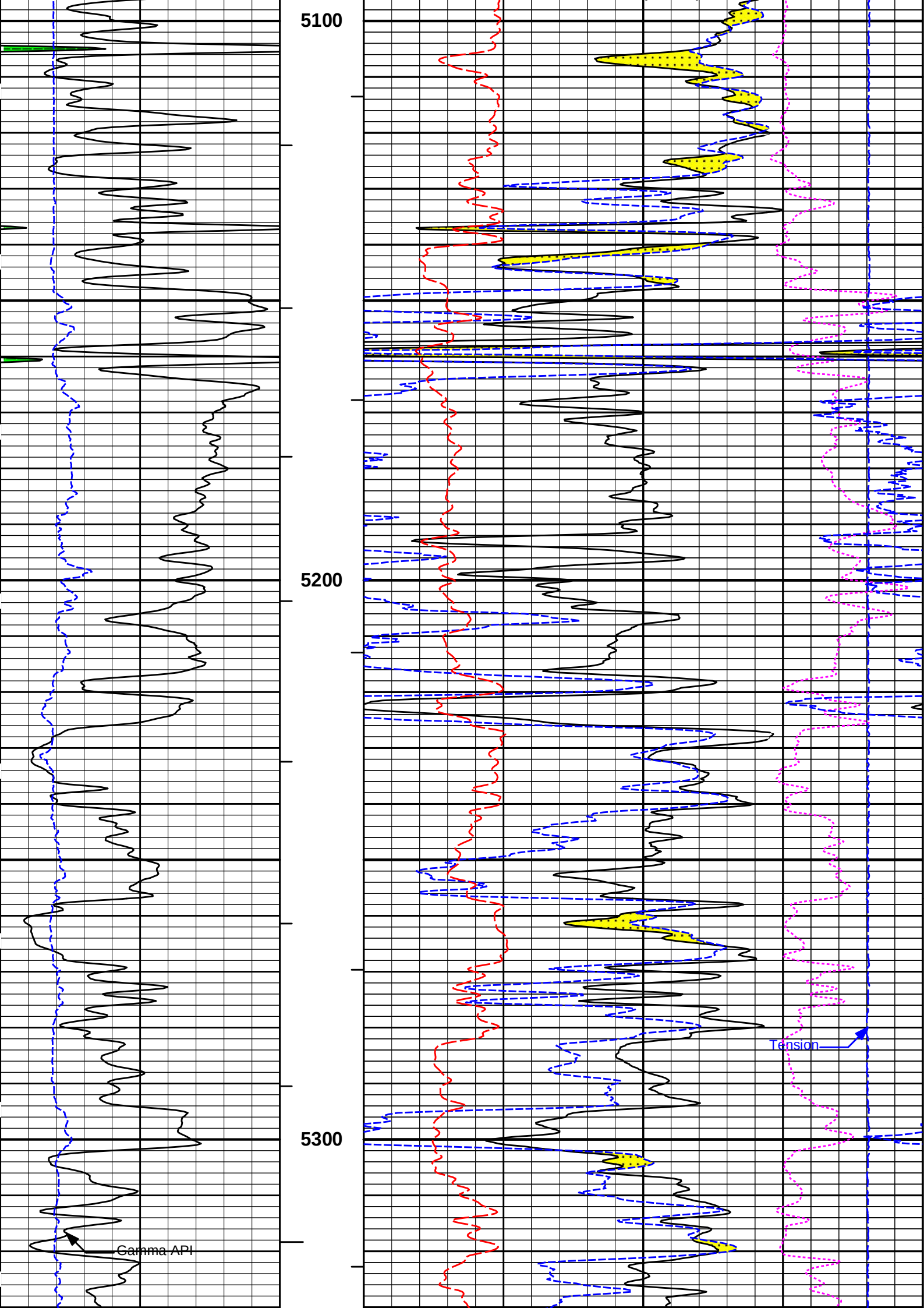
HALLIBURTON

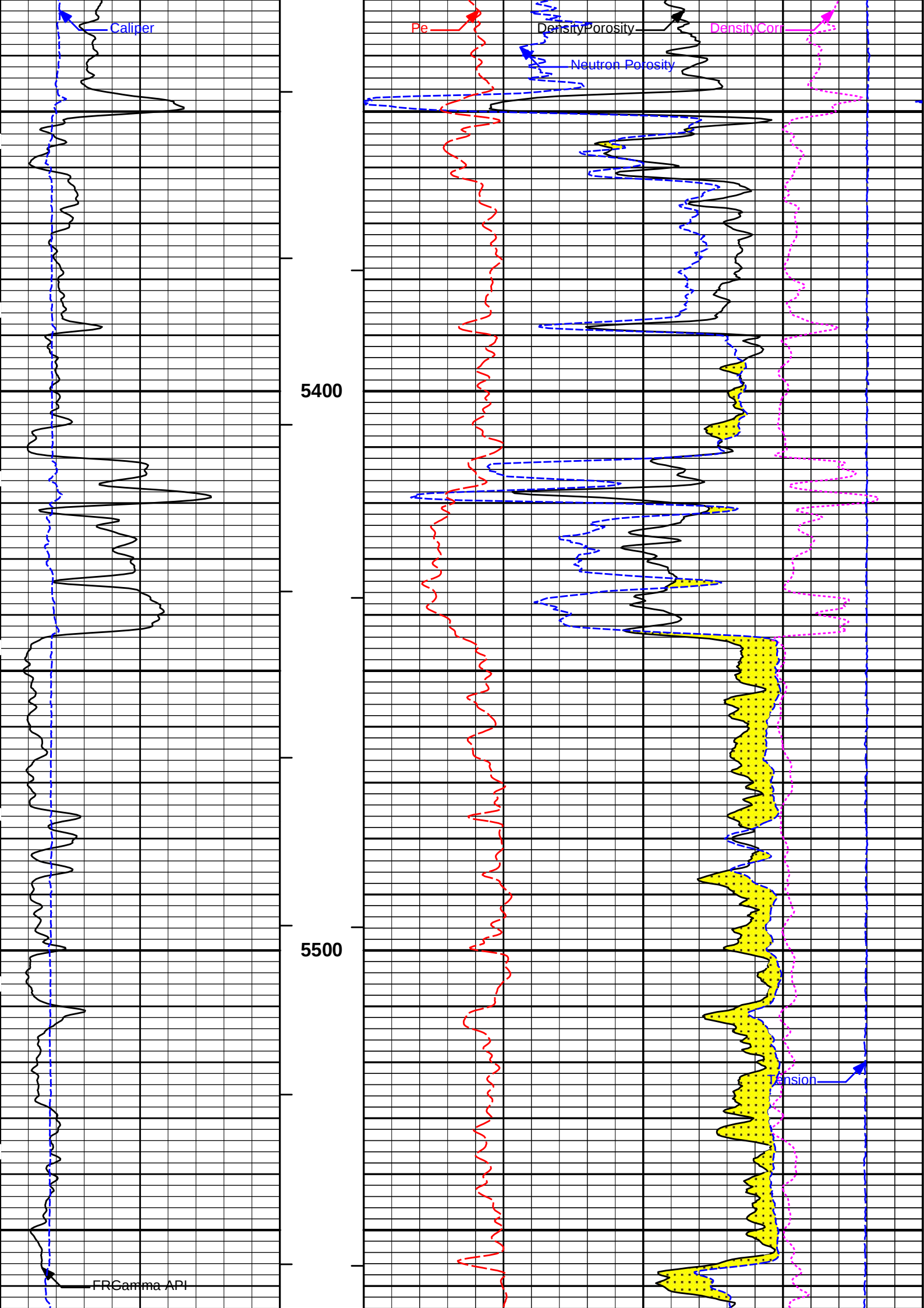
Plot Time: 28-Sep-19 01:30:59
Plot Range: 4990 ft to 5616.25 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-002\
Plot File: \\SDL-DSN\Porosity_Q_5_MAIN

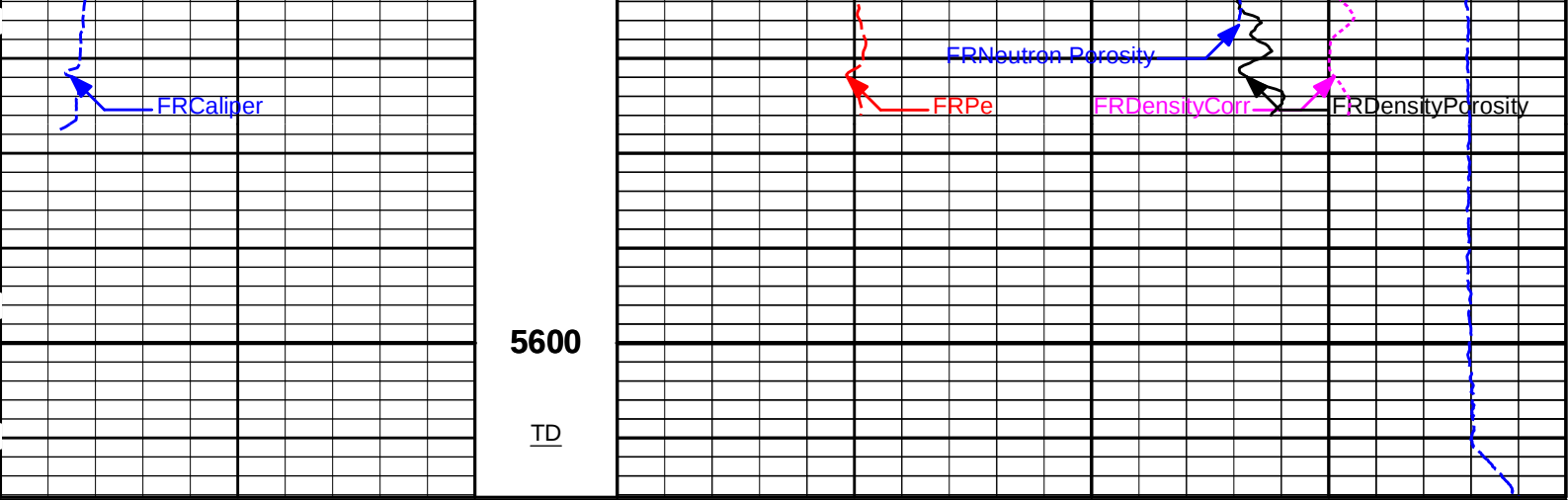
REPEAT SECTION

REPEAT SECTION









6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
			BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				

HALLIBURTON

Plot Time: 28-Sep-19 01:31:01
Plot Range: 4990 ft to 5616.25 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-002\
Plot File: \\\SDL-DSN\Porosity_IQ_5_MAIN

REPEAT SECTION

REPEAT SECTION

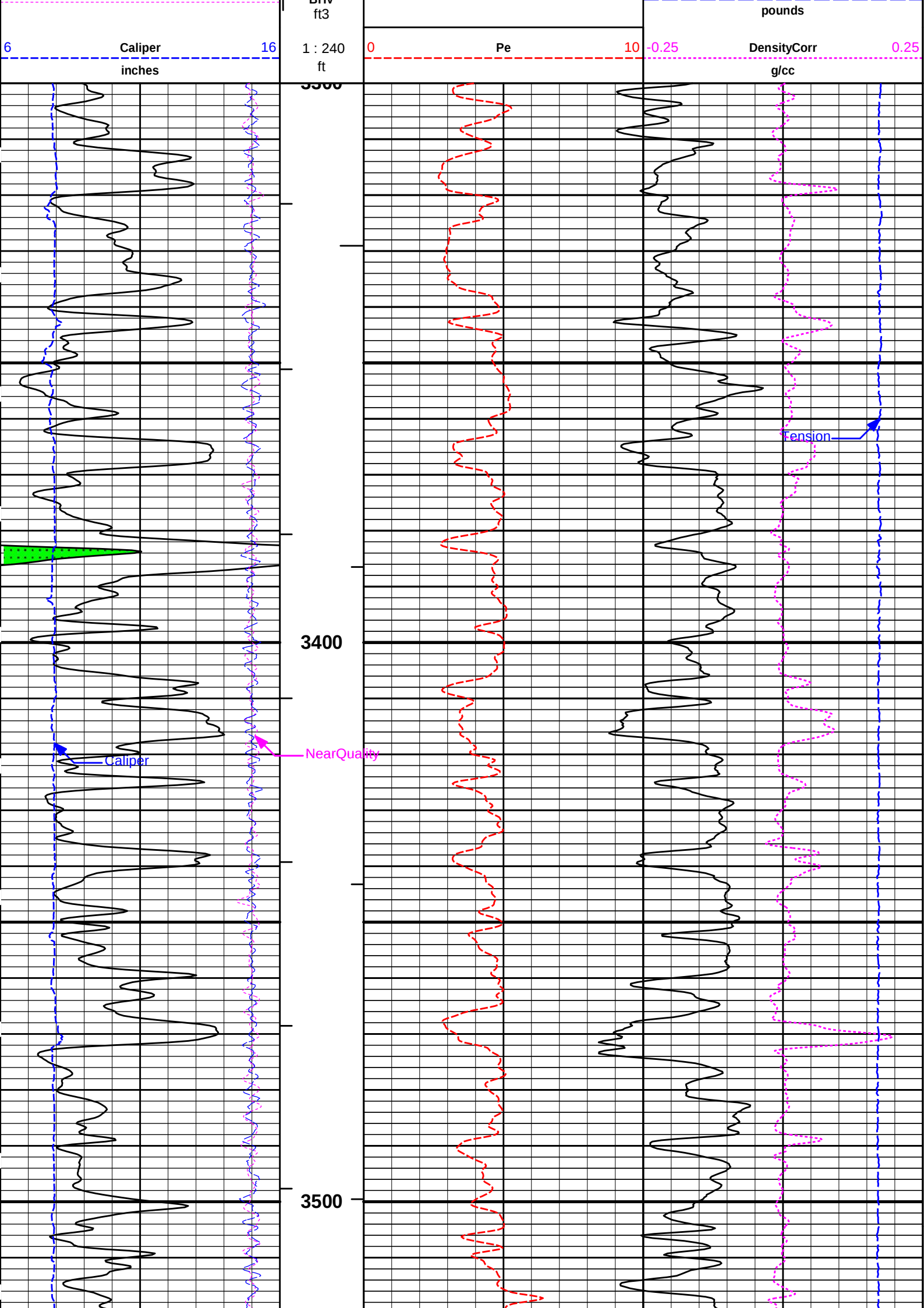
HALLIBURTON

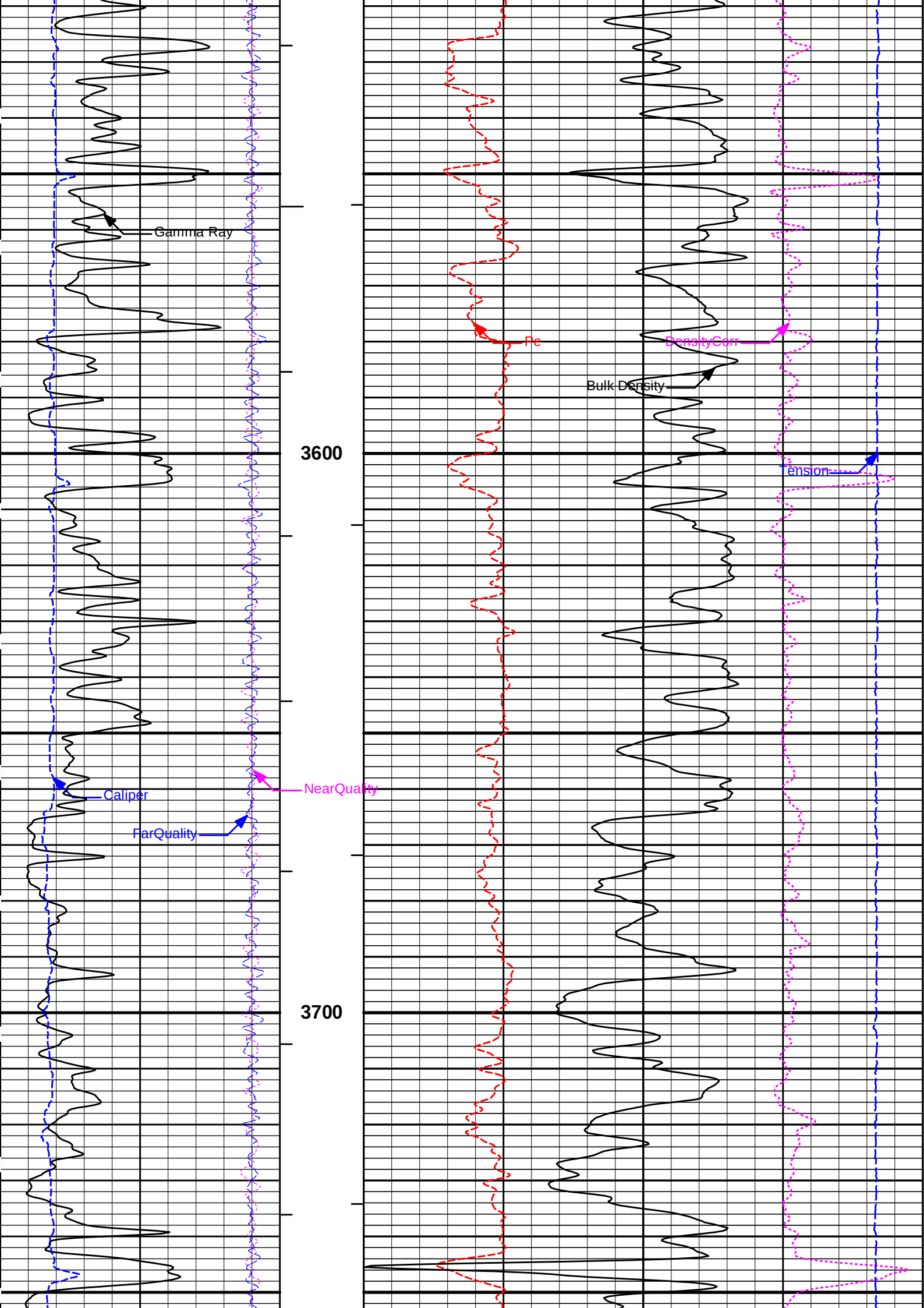
Plot Time: 28-Sep-19 01:31:01
Plot Range: 3300 ft to 5616.75 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-003\
Plot File: \\\LOCAL-IMERIT_LESTER\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\SDL-DSN\BULKD_5_MAIN_IQ

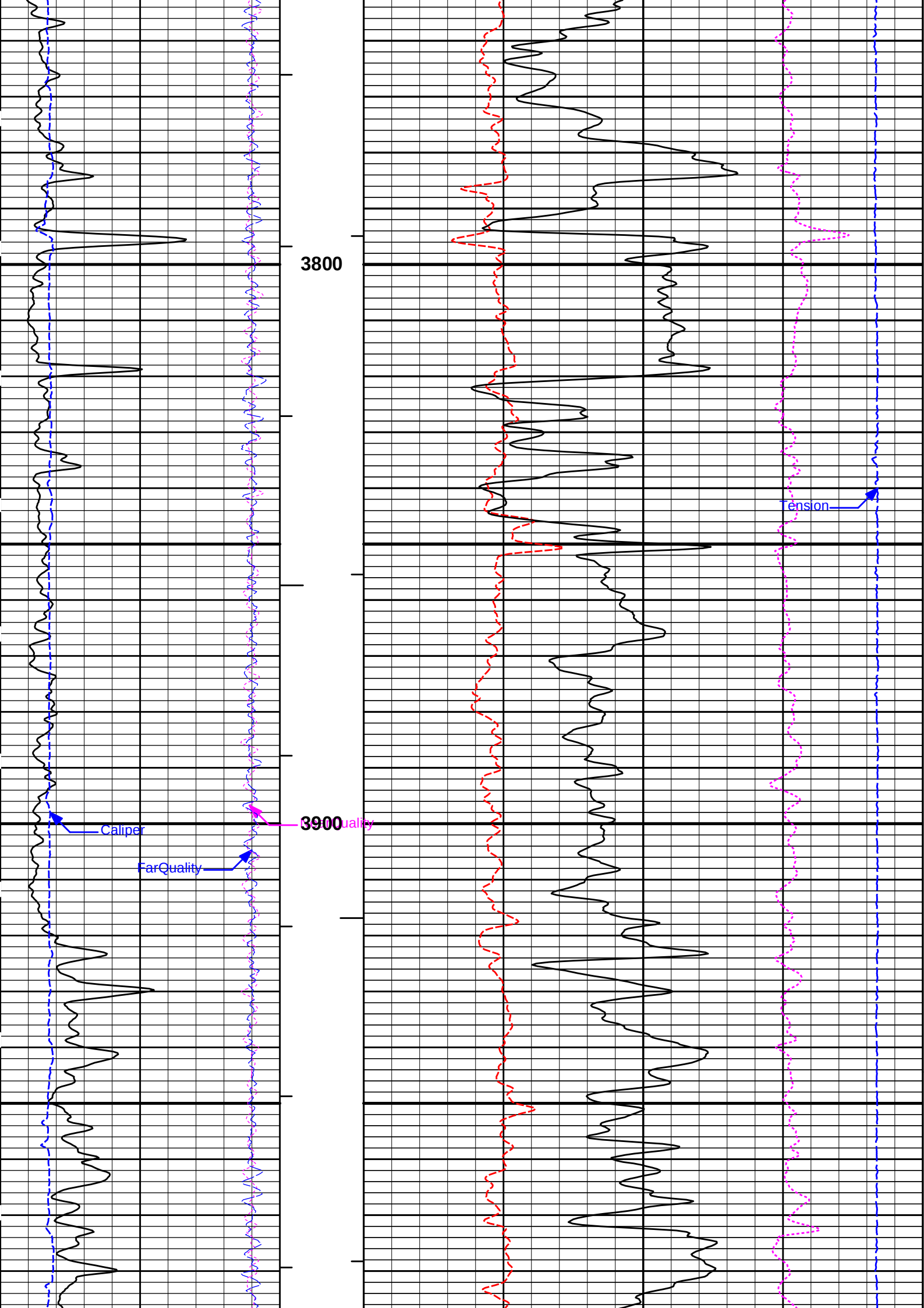
5 INCH MAIN LOG

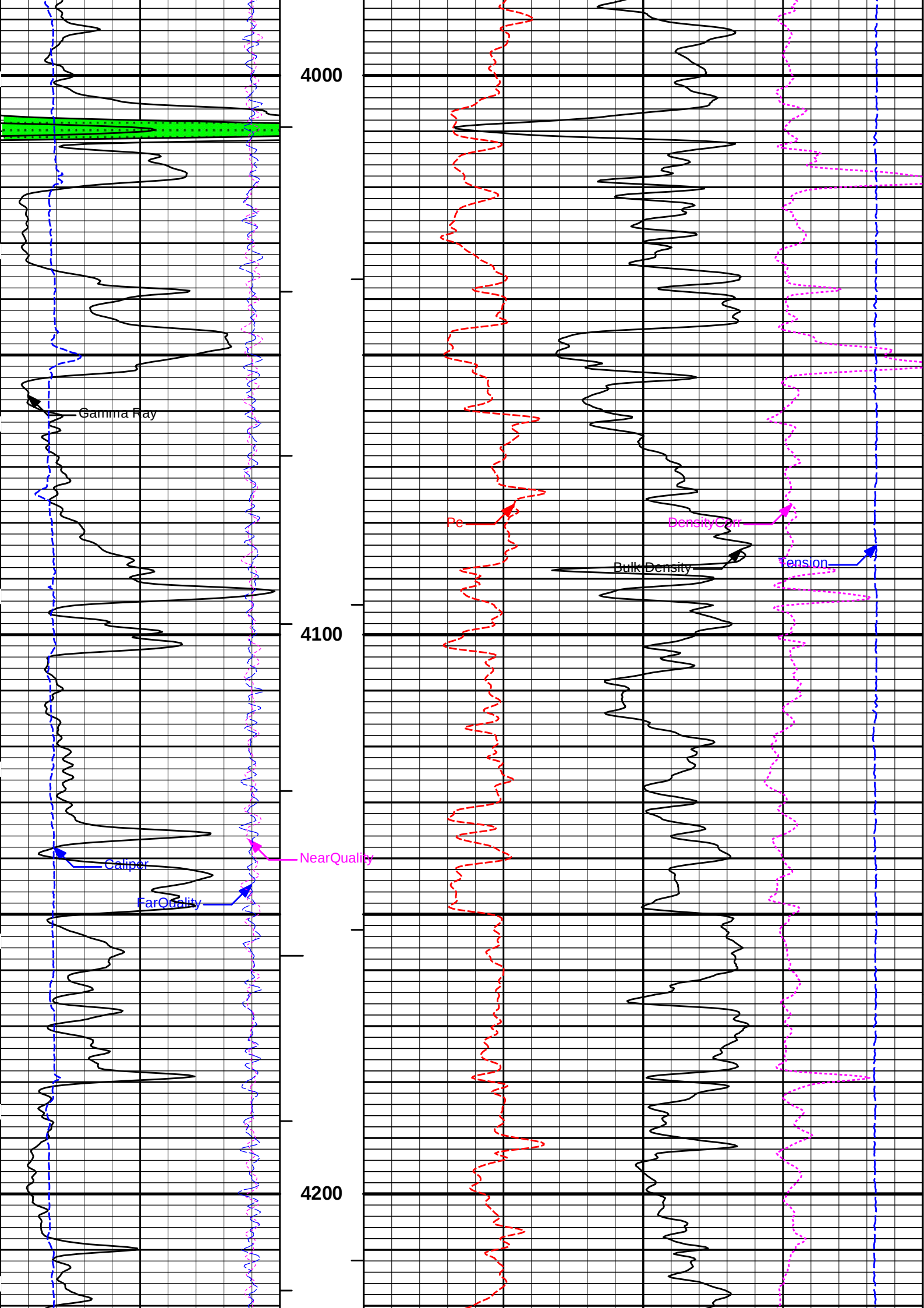
MAIN SECTION 5" PER 100'

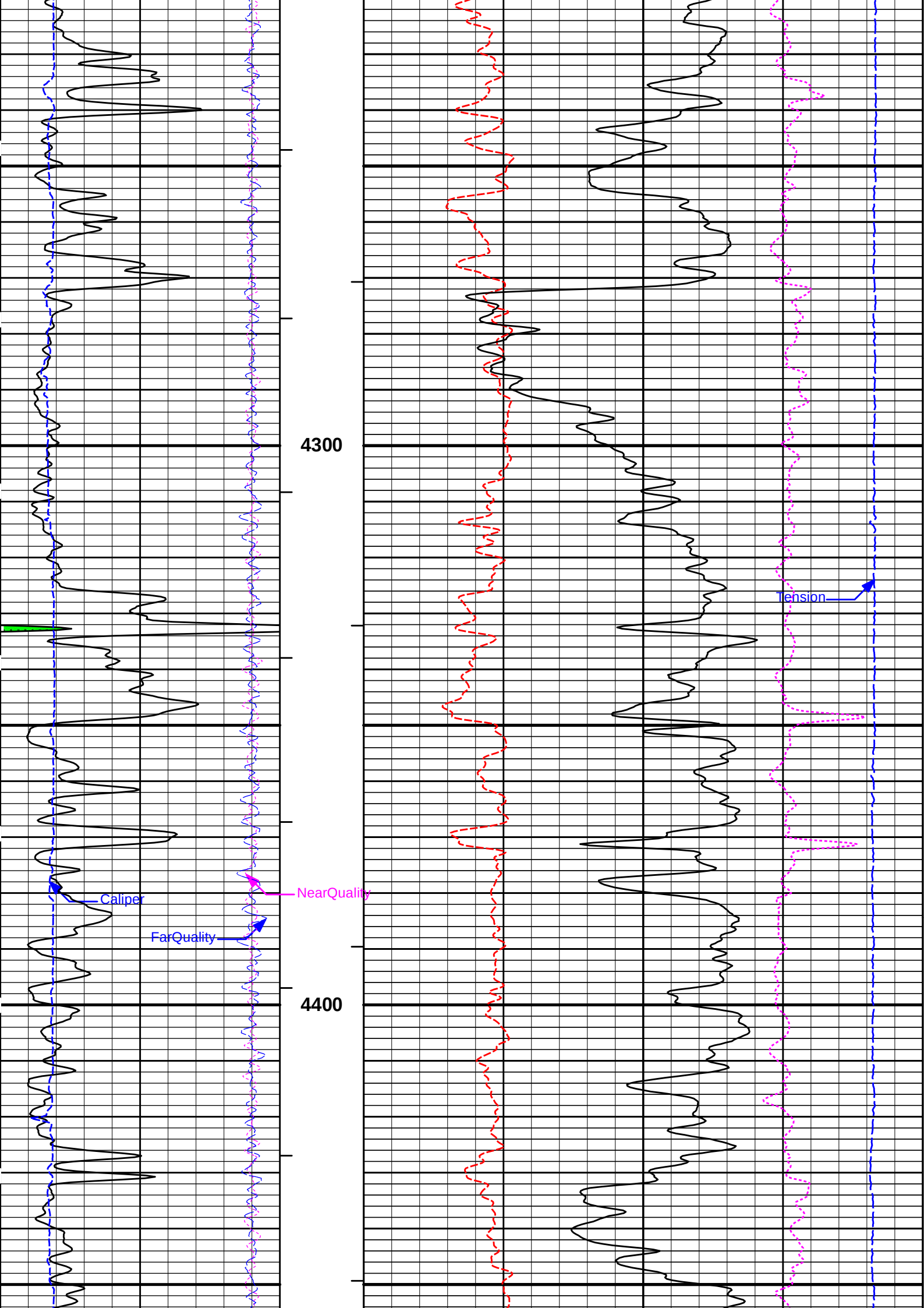
0	Gamma Ray	150						
api								
18	FarQuality	-2	AHV ft3	2	Bulk Density		3	
				g/cc				
-18	NearQuality	2	BHV			15K	Tension	0

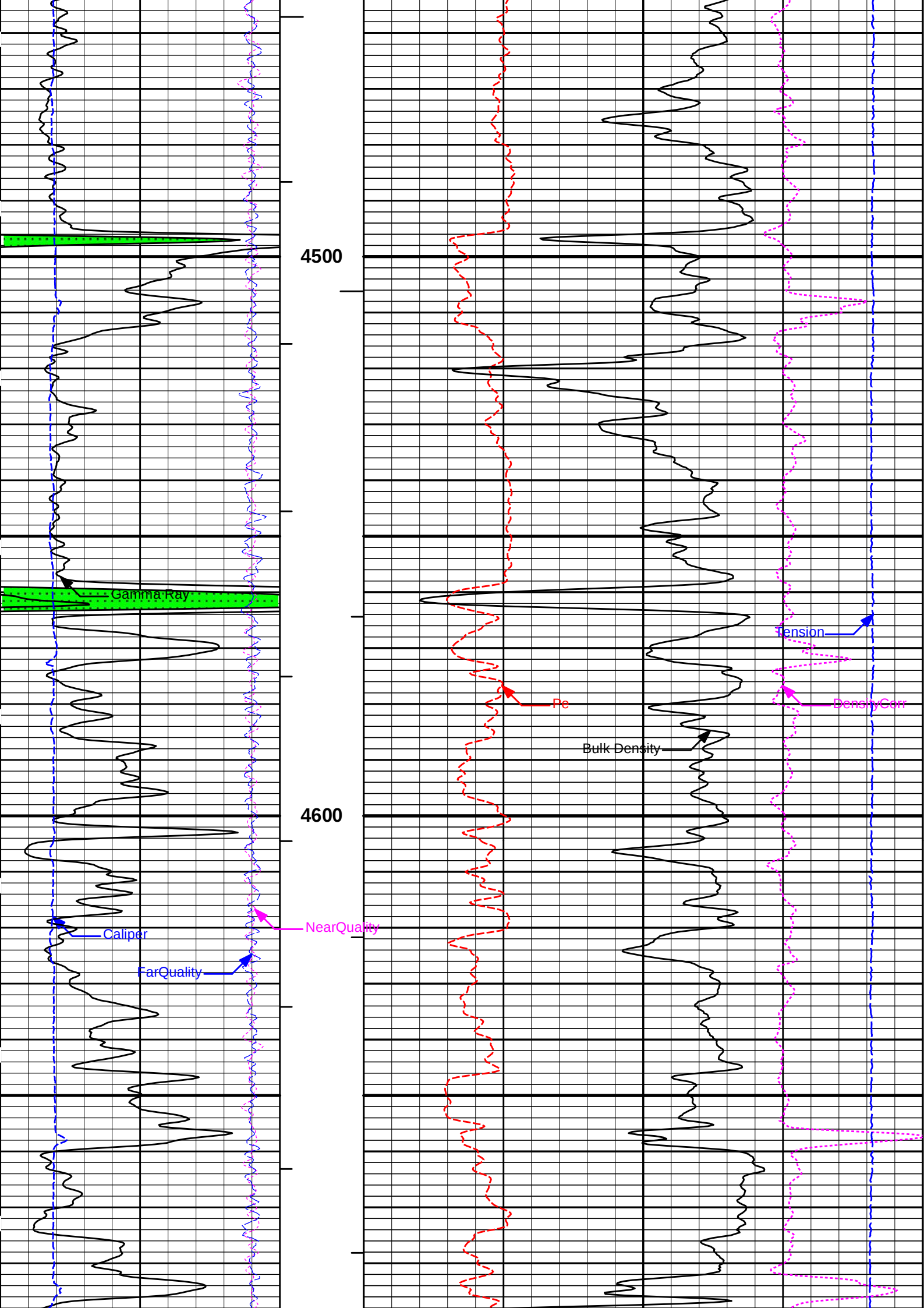


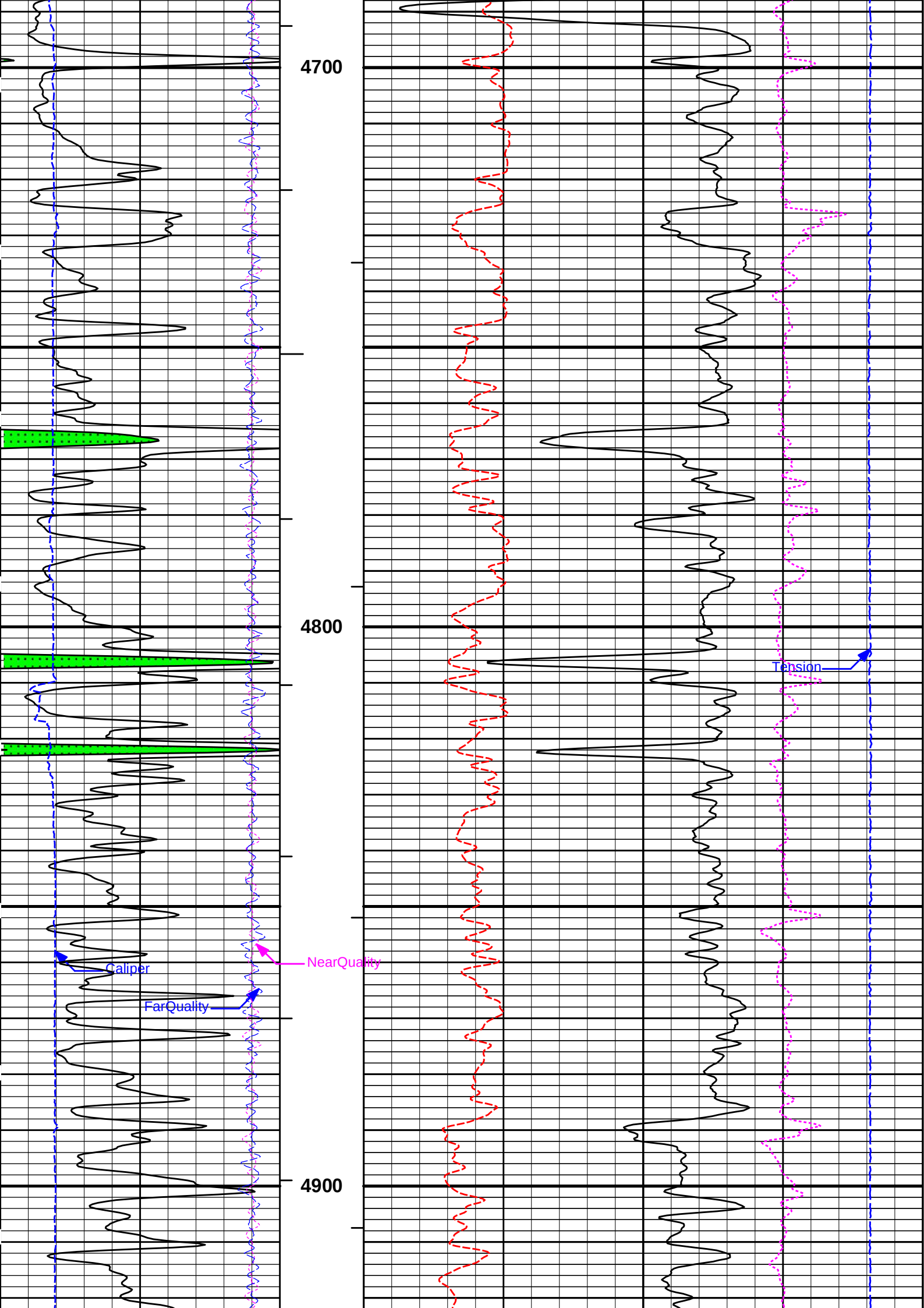


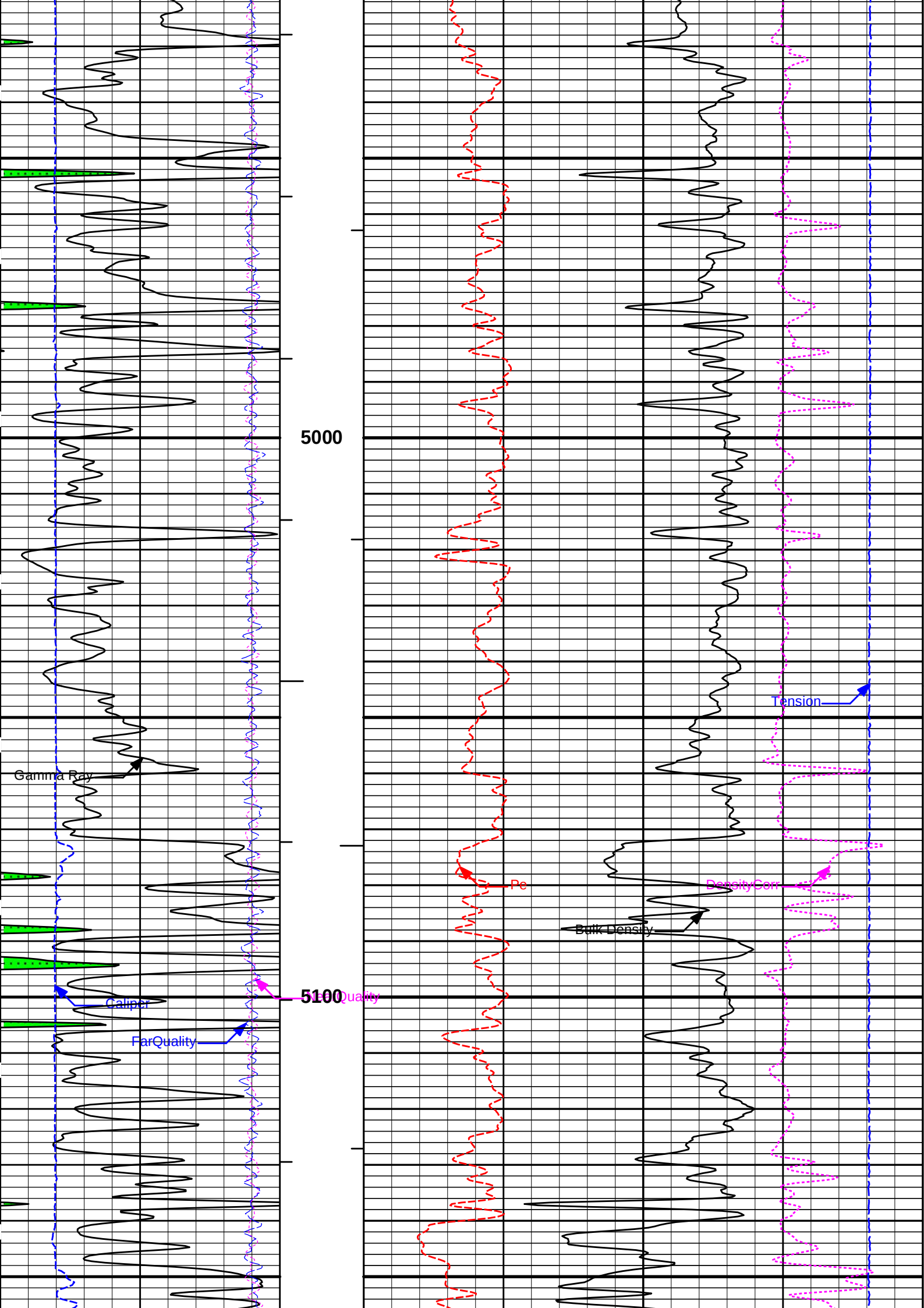


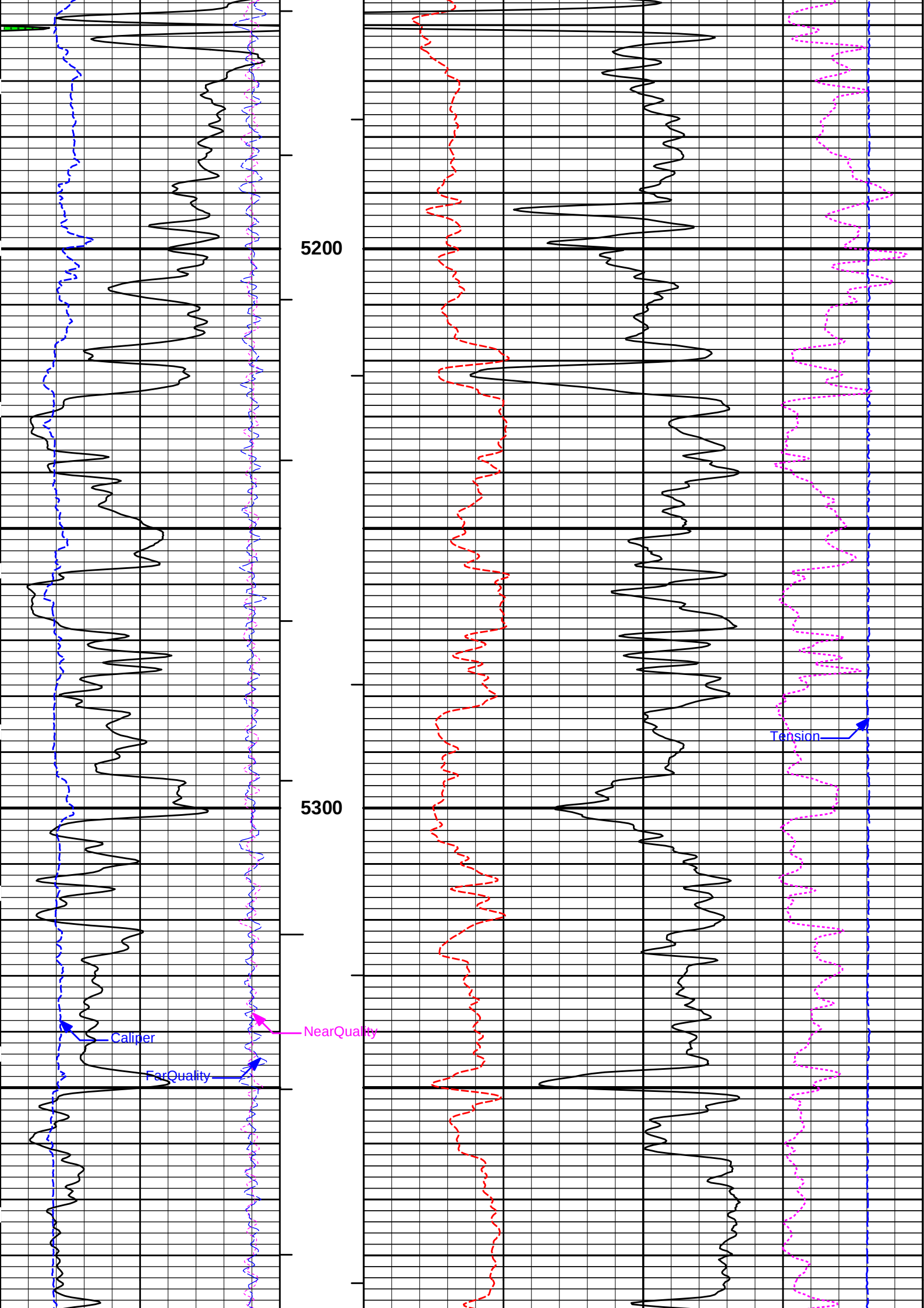


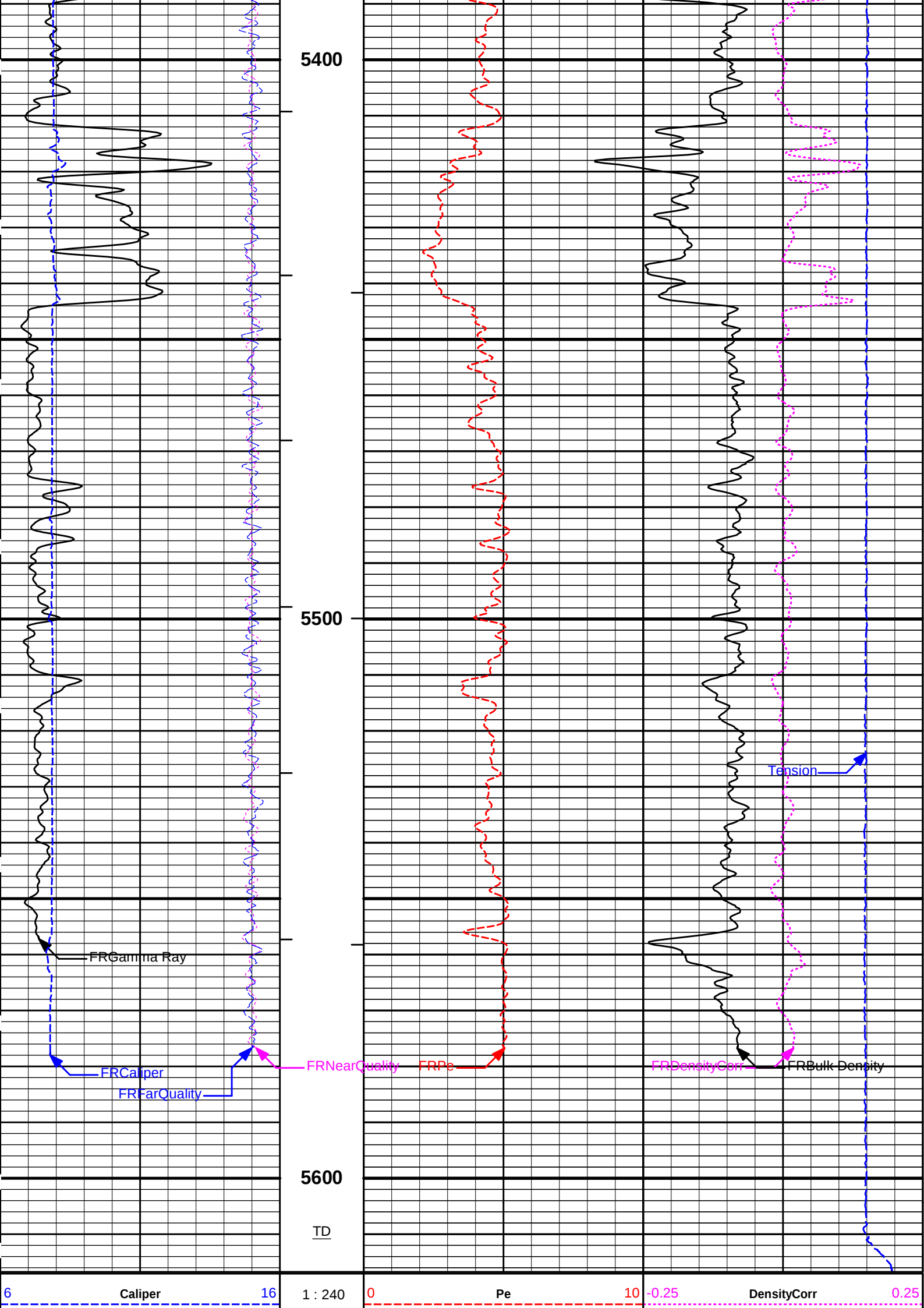












inches		ft	g/cc			
-18	NearQuality		2	15K	Tension	0
		BHV	pounds			
		ft3				
18	FarQuality	-2	Bulk Density			3
		AHV	g/cc			
		ft3				
0	Gamma Ray	150				
api						

HALLIBURTON

Plot Time: 28-Sep-19 01:31:04
Plot Range: 3300 ft to 5616.75 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-003\
Plot File: \\LOCAL-IMERIT_LESTER\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\SDL-DSN\BULKD_5_MAIN_IQ

5 INCH MAIN LOG

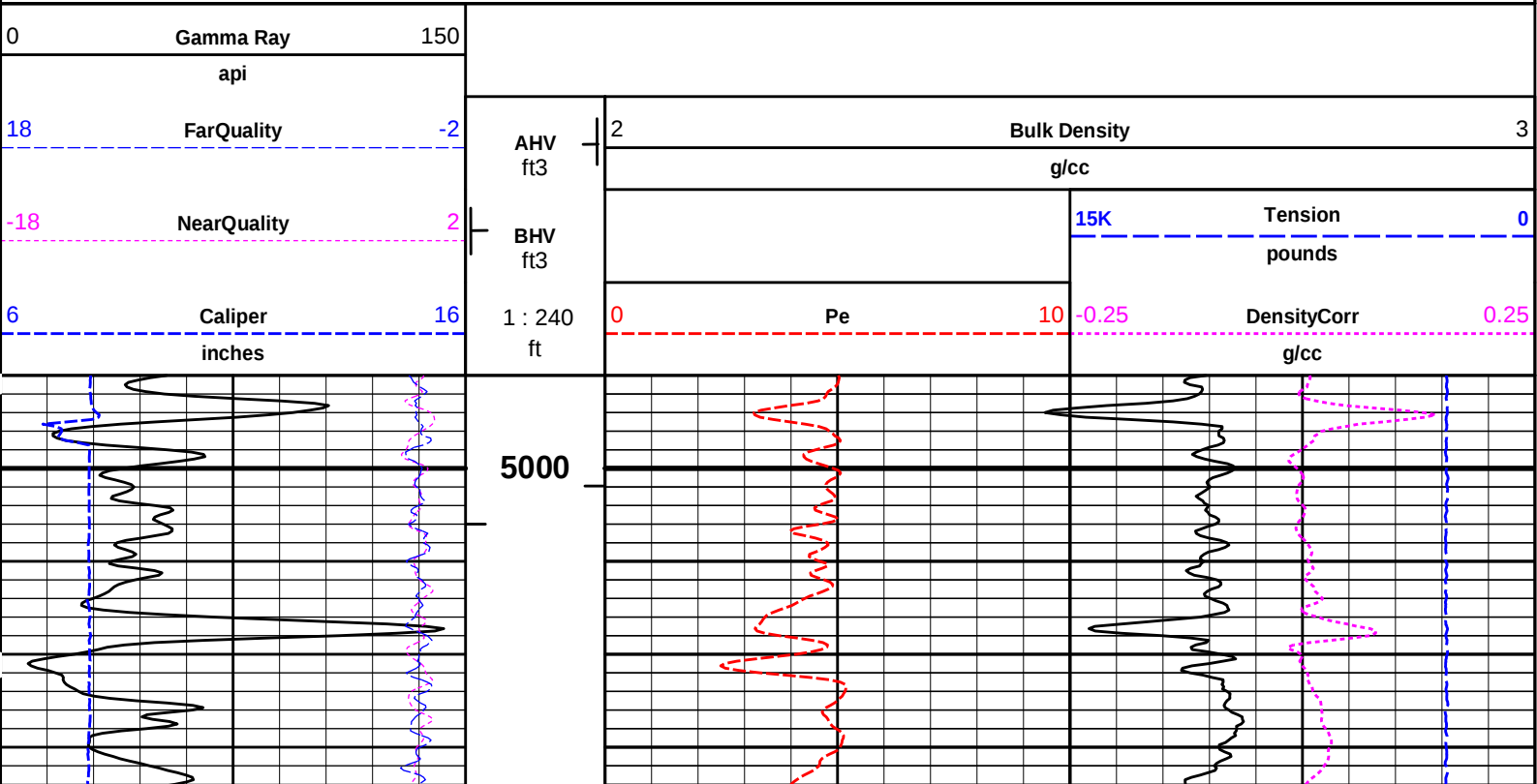
MAIN SECTION 5" PER 100'

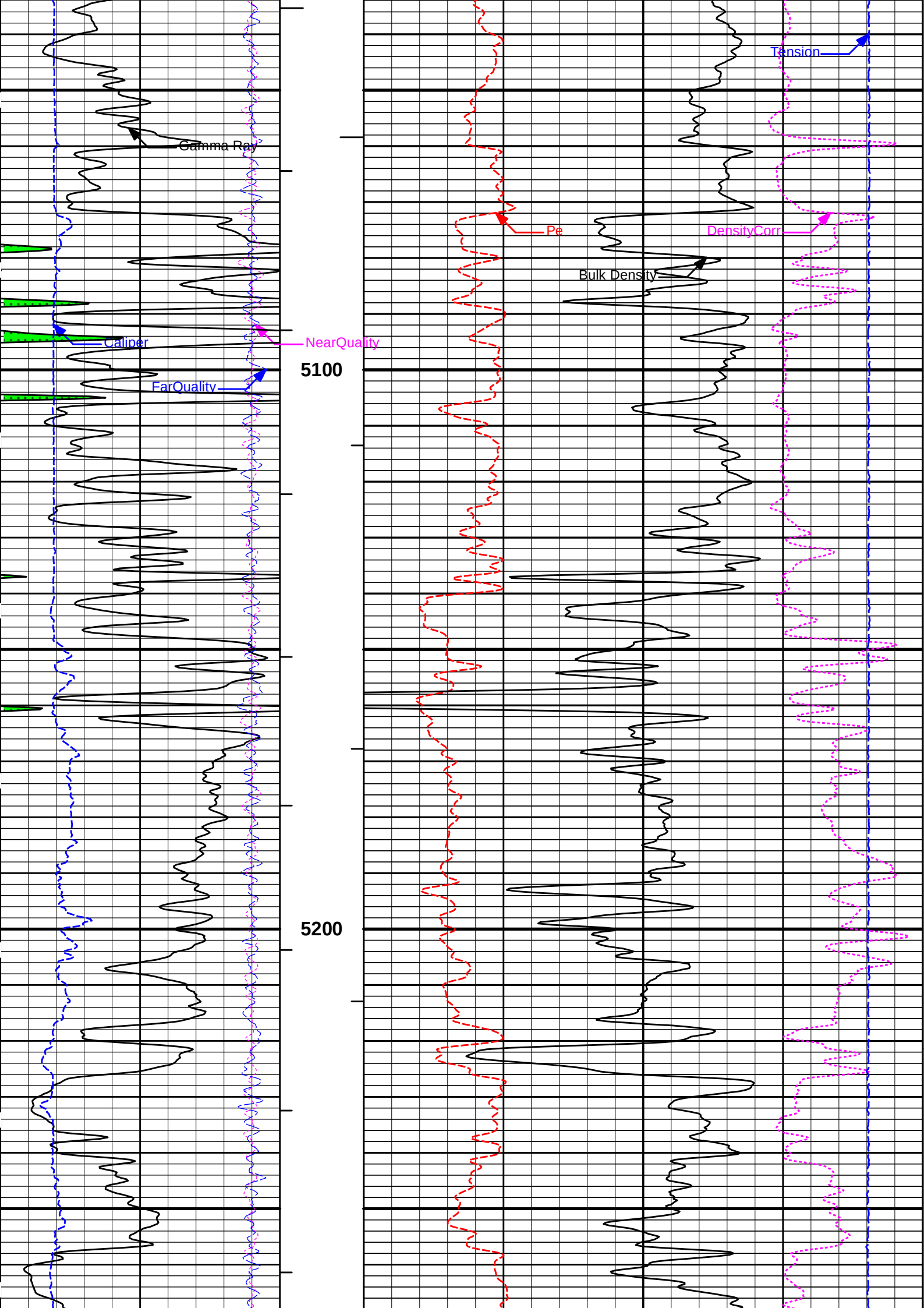
HALLIBURTON

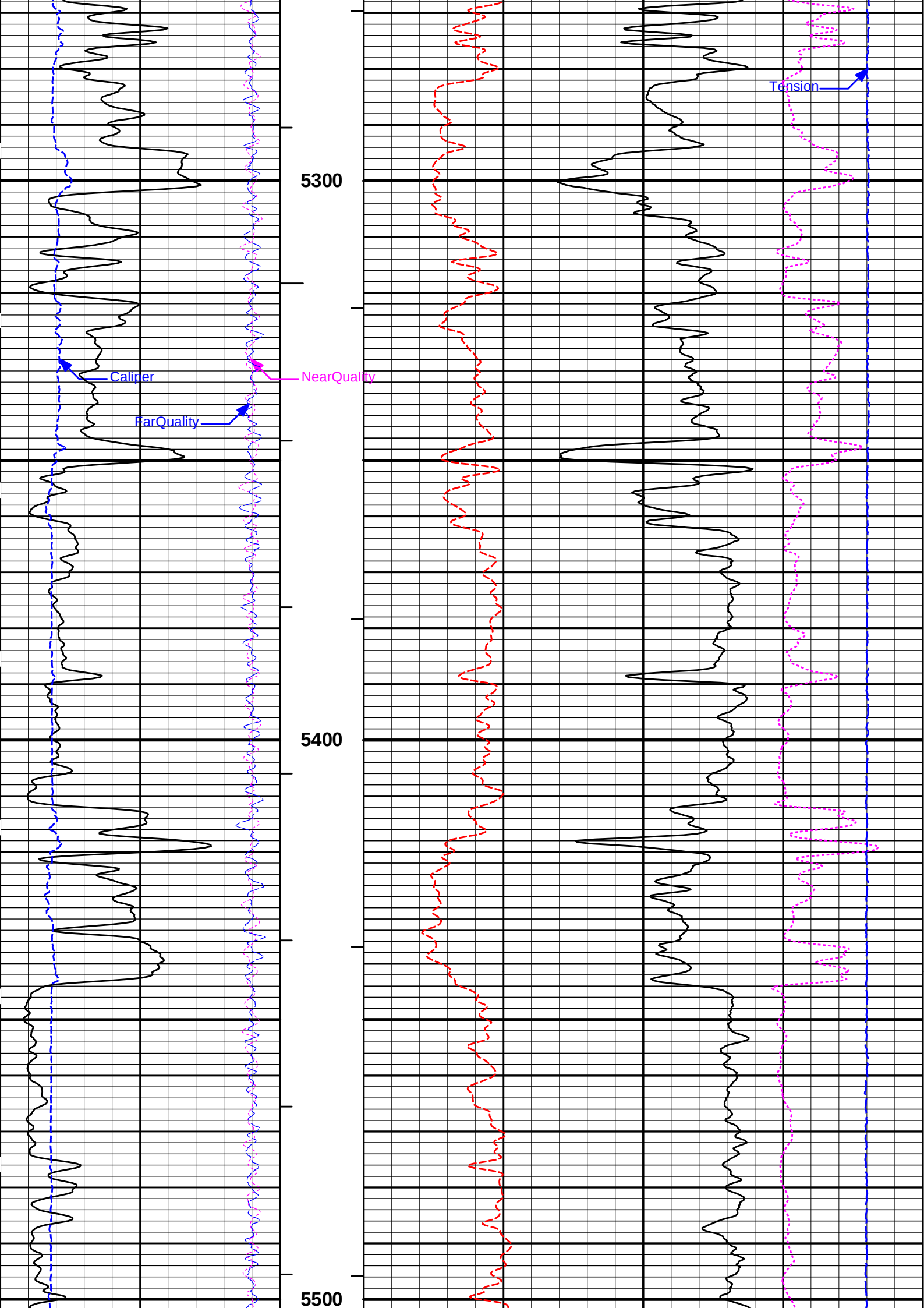
Plot Time: 28-Sep-19 01:31:05
Plot Range: 4990 ft to 5616.25 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-002\
Plot File: \\LOCAL-IMERIT_LESTER\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\SDL-DSN\BULKD_5_MAIN_IQ

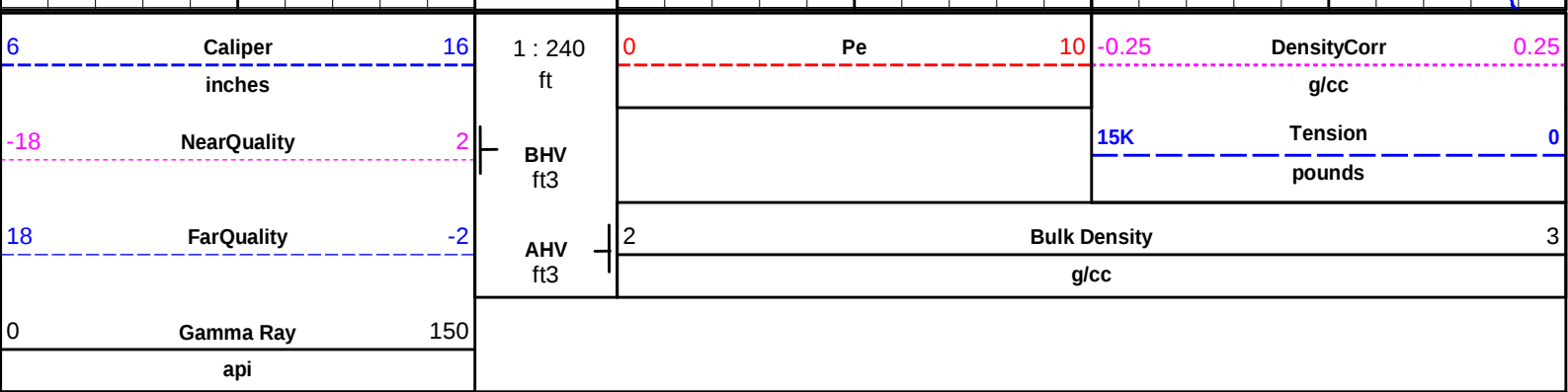
REPEAT SECTION

REPEAT SECTION







**HALLIBURTON**

Plot Time: 28-Sep-19 01:31:06
Plot Range: 4990 ft to 5616.25 ft
Data: MERIT_LESTER\Well Based\DAQ-0001-002\
Plot File: \\LOCAL-IMERIT_LESTER\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\SDL-DSNIBULKD_5_MAIN_IQ

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name: Depth Panel - 00000032		Reference Calibration Date: 07-Sep-19 17:01:41			
Engineer: JORGE ORLANDO PEREZ		Calibration Date: 21-Sep-19 08:46:46			
Software Version: WL INSITE R6.2.7 (Build 7)		Calibration Version: 1			
	SURFACE TENSION LOAD CELL				
	Measurement	Load Cell Value	Measurement	Calibrated	Units
	Low	11285.25	67.24	0.00	lbs
	High	17912.38	7904.98	7830.00	lbs
DOWNHOLE TENSION SHOP CALIBRATION					
Tool Name: RWCH - 12027542		Reference Calibration Date: 26-Sep-19 10:37:38			
Engineer: WHITLOCK		Calibration Date: 26-Sep-19 11:43:38			
Software Version: WL INSITE R6.2.7 (Build 7)		Calibration Version: 1			
	DOWNHOLE LOAD CELL				
	Measurement	Tool Value	Measurement	Calibrated	Units
	Low	-1468.59	79.75	0.00	lbs
	High	2034.75	957.48	1210.00	lbs
NATURAL GAMMA RAY TOOL SHOP CALIBRATION					
Tool Name: GTET - 10971172		Reference Calibration Date: 03-Jul-19 13:10:49			
Engineer: JORGE ORLANDO PEREZ		Calibration Date: 03-Aug-19 09:24:44			
Software Version: WL INSITE R6.2.1 (Build 2)		Calibration Version: 1			
Calibrator Source S/N: TB-146					
Calibrator API Reference:225.00 api					
Equivalent Calibrator API Reference:228.9 api					
	Measurement	Measured	Calibrated	Units	
	Background	20.8	20.8	api	
	Background + Calibrator	249.4	249.7	api	
	Calibrator	228.6	228.9	api	
NATURAL GAMMA RAY TOOL FIELD CALIBRATION					
Tool Name: GTET - 10971172		Reference Calibration Date: 03-Aug-19 09:24:44			
Engineer: JORGE ORLANDO PEREZ		Calibration Date: 23-Sep-19 11:35:29			
Software Version: WL INSITE R6.2.7 (Build 7)		Calibration Version: 1			
Calibrator Source S/N: TB-146					
Calibrator API Reference:225.00 api					
Equivalent Calibrator API Reference:228.9 api					
	Field Verification	Shop	Field	Units	
	Background	20.8	29.8	api	
	Background + Calibrator	249.7	257.3	api	
	Calibrator	228.9	227.4	api	
	Shop	Field	Difference	Tolerance	
	228.9	227.4	1.5	+/- 9.00	
ACCELEROMETER SHOP CALIBRATION					
Tool Name: GTET - 10971172		Reference Calibration Date: 01-Jan-70 00:00:00			
Engineer: WHITLOCK		Calibration Date: 20-Oct-08 14:40:55			
Software Version: WL INSITE R2.2 (Build 2)		Calibration Version: 1			
	Horizontal-1 Telemetry	Horizontal-2 Telemetry	Vertical Telemetry	Units	
	-85.64	-67.18	-16422.00	cnts	
	Coefficient	Coefficient Value	Tolerance		
Gain		-0.000061	-----		

Offset	-0.005	-----
Noise	0.0000	0.0000 - 0.0000

Orientation	Measured	Tolerance	Calibrated	Tolerance
Horizontal	-76.41	-0.10 - 0.10	0.00	-0.10 - 0.10
Vertical	-16422.00	0.90 - 1.10	1.00	0.90 - 1.10

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT2 - 10993115	Reference Calibration Date:	14-Mar-19 14:49:40
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	04-Jun-19 10:53:11
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Logging Source S/N: DSN-424
Tank Serial Number: 12345678
Reference value assigned to Tank: 56.100
Snow Block S/N: 12345678
Calibration Tank Water Temperature: 65 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.99184	0.99043	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2362	0.2358	0.0005	+/- 0.0020
Calibrated Ratio:	10.5746	10.5595	0.015	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0654	0.02000 - 0.09000

PASS/FAIL SUMMARY	
Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:	DSNT2 - 10993115	Reference Calibration Date:	04-Jun-19 10:53:11
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	23-Sep-19 10:05:43
Software Version:	WL INSITE R6.2.7 (Build 7)	Calibration Version:	1

Logging Source S/N: DSN-424
Snow Block S/N: 12345678

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0654	0.0709	0.0055	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT2 - 10951315	Reference Calibration Date:	22-Jul-19 10:31:20
------------	------------------	-----------------------------	--------------------

Engineer: JORGE ORLANDO PEREZ		Calibration Date: 22-Jul-19 10:38:21		
Software Version: WL INSITE R6.2.1 (Build 2)		Calibration Version: 1		
Host Tool Name: DSNT - 10993115				
	CALIBRATION COEFFICIENTS			
	Measurement	Previous Value	New Value	Control Limit On New Value
	Pad Offset	-3636.13	-3454.23	-7000.00 - -1000.00
	Pad Gain	0.0003771	0.0003718	0.0002000 - 0.0006000
	Arm Offset	-3231.82	-3426.34	-5000.00 - 3000.00
	Arm Gain	0.0005298	0.0005334	0.000300 - 0.000700
	Arm Power	-0.000006323	-0.000006556	-0.000010000 - 0.000010000
	The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER			
	Tool Diameter: 4.50 in			
	CALIBRATION RINGS			
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	1.96	2.00	0.04	+/- 0.20
Medium Ring (in)	3.74	3.75	0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.52	6.50	-0.02	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20
PASS/FAIL SUMMARY				
Calibration-Coefficients Range Check:			Passed	
Ring-Measurement Check:			Passed	
PASS/FAIL SUMMARY				
Calibration-Coefficients Range Check:			Passed	

SDLT CALIPER FIELD CALIBRATION			
Tool Name: SDLT2 - 10951315		Reference Calibration Date: 22-Jul-19 10:38:21	
Engineer: JORGE ORLANDO PEREZ		Calibration Date: 22-Jul-19 10:40:18	
Software Version: WL INSITE R6.2.1 (Build 2)		Calibration Version: 1	

	MEASURED CALIPER VALUES				
	Measurement	Shop	Field	Change	Control Limit On New Value
	Pad Extension	3.74	3.75	0.02	+/- 0.10
	Ring Diameter	8.25	8.26	0.01	+/- 0.15
	PASS/FAIL SUMMARY				
	Pad Extension Check:			Passed	
	Diameter Check:			Passed	

BSAT FIELD CASING CHECK			
Tool Name: BSAT - 10747686		Calibration Date: 26-Mar-14 12:42:00	
Engineer: HOFKAMP			
Software Version: WL INSITE R4.2.0 (Build 2)		Calibration Version: 1	

	Pre-Log Check	Check Depth	Shop	Field	Difference	Tolerance	Units
	Delta-T Compensated	153.78	57.00	56.99	0.0100	1.00	uspf

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name: ACRt Sonde - 12109515		Reference Calibration Date: 22-Oct-18 10:49:55	
Engineer: WHITLOCK		Calibration Date: 30-May-19 15:30:22	
Software Version: WL INSITE R6.2.1 (Build 2)		Calibration Version: 1	

Host Tool Name: ACRt Instrument - 12109517									
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0445	1.05	0.95	1.0220	1.05	0.95	1.0152	1.05
A2 (50")	0.95	1.0411	1.05	0.95	1.0340	1.05	0.95	1.0311	1.05
A3 (29")	0.95	1.0390	1.05	0.95	1.0188	1.05	0.95	1.0136	1.05
A4 (17")	0.95	1.0372	1.05	0.95	1.0168	1.05	0.95	1.0129	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0165	1.05	0.95	1.0111	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9978	1.05	0.95	0.9930	1.05
SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	1.339			-4.365			-5.632		
A2 (50")	-0.632			-4.127			-4.876		
A3 (29")	-13.611			-4.650			-3.361		
A4 (17")	-110.831			-34.163			-25.608		
A5 (10")	N/A			-93.889			-41.507		
A6 (6")	N/A			305.702			156.920		
TRANSMITTER CURRENT GAIN						R-MUD VERIFICATION			
Signal	Lower	R	Upper			Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.95	1.3			Mud Cell	0.95	1.00	1.05
36K	1.0	1.92	2.0						
72K	1.0	1.19	2.0						
PASS/FAIL SUMMARY									
GAIN RANGE CHK						PASS			
SONDE OFFSET CHK						PASS			
TOOL OK TO LOG									

QUALITY CHECK SHOP CALIBRATION									
Tool Name:	ACRt Sonde - 12109515					Reference Calibration Date:	22-Oct-18 10:51:40		
Engineer:	JORGE ORLANDO PEREZ					Calibration Date:	22-Oct-18 10:52:51		
Software Version:	WL INSITE R5.6.0 (Build 2)					Calibration Version:	1		
Host Tool Name:	ACRt Instrument - 12109517								

STANDARD DEVIATIONS									
	R12KHz			R36KHz			R72KHz		
	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail
A1 (80")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A2 (50")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A3 (29")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A4 (17")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A5 (10")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
A6 (6")	0.000	< 0.750	Pass	0.000	< 0.750	Pass	0.000	< 0.750	Pass
AVERAGES									
	R12KHz			R36KHz			R72KHz		
	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail	Measured (mmho/m)	Expected (mmho/m)	Pass/Fail
A1 (80")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.006	> -0.500	Pass

A2 (50")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.005	> -0.500	Pass
A3 (29")	-0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.003	> -0.500	Pass
A4 (17")	-0.003	> -0.500	Pass	-0.008	> -0.500	Pass	-0.026	> -0.500	Pass
A5 (10")	-0.012	> -0.500	Pass	-0.021	> -0.500	Pass	-0.040	> -0.500	Pass
A6 (6")	0.015	< 0.500	Pass	0.067	< 0.500	Pass	0.144	< 0.500	Pass

GAIN TOLERANCE									
R12KHz									
	Measured (mmho/m)	Last Month (mmho/m)		Difference (mmho/m)		Tolerance (mmho/m)		Pass/Fail	
A1 (80")	-213571760.000	-213557040.000		14720.000		10677852.000		Pass	
A2 (50")	-216483264.000	-216468096.000		15168.000		10823404.800		Pass	
A3 (29")	-208602304.000	-208589536.000		12768.000		10429476.800		Pass	
A4 (17")	-206792240.000	-206770736.000		21504.000		10338536.800		Pass	
A5 (10")	-202998704.000	-202978400.000		20304.000		10148920.000		Pass	
A6 (6")	-208316864.000	-208294896.000		21968.000		10414744.800		Pass	
R36KHz									
	Measured (mmho/m)	Last Month (mmho/m)		Difference (mmho/m)		Tolerance (mmho/m)		Pass/Fail	
A1 (80")	58445244.000	58432960.000		12284.000		2921648.000		Pass	
A2 (50")	54700280.000	54687980.000		12300.000		2734399.000		Pass	
A3 (29")	47287512.000	47272796.000		14716.000		2363639.800		Pass	
A4 (17")	36497232.000	36481916.000		15316.000		1824095.800		Pass	
A5 (10")	32014552.000	32001312.000		13240.000		1600065.600		Pass	
A6 (6")	37168108.000	37152904.000		15204.000		1857645.200		Pass	
R72KHz									
	Measured (mmho/m)	Last Month (mmho/m)		Difference (mmho/m)		Tolerance (mmho/m)		Pass/Fail	
A1 (80")	-90832120.000	-90826936.000		5184.000		4541346.800		Pass	
A2 (50")	-87633424.000	-87632144.000		1280.000		4381607.200		Pass	
A3 (29")	-85509320.000	-85505200.000		4120.000		4275260.000		Pass	
A4 (17")	-86394448.000	-86393240.000		1208.000		4319662.000		Pass	
A5 (10")	-87099680.000	-87096752.000		2928.000		4354837.600		Pass	
A6 (6")	-86173632.000	-86168880.000		4752.000		4308444.000		Pass	

PASS/FAIL SUMMARY									
	Std Deviation Verification					Pass			
	Average Verification					Pass			
	Gain Tolerance Verification					Pass			

MICRO LOG SHOP CALIBRATION			
Tool Name:	Microlog Pad2 - 10951315	Reference Calibration Date:	12-Sep-19 14:14:46
Engineer:	WHITLOCK	Calibration Date:	12-Sep-19 14:17:40
Software Version:	WL INSITE R6.2.7 (Build 7)	Calibration Version:	1
Host Tool Name:	DSNT - 10993115		

CALIBRATION COEFFICIENT SUMMARY						
Measurement	Micro Log Normal		Micro Log Lateral		Units	
	Measured	Calibrated	Measured	Calibrated		
Tool Zero	0.01	-0.18	-0.11	-0.00	ohmm	
Calibration Point #1	0.18	0.00	-0.11	0.00	ohmm	
Calibration Point #2	19.98	20.00	20.03	20.00	ohmm	
Internal Reference	19.81	19.82	20.03	20.00	ohmm	
Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units	

Tool Zero	-0.33	0.40	V
Calibration Point #1	47.95	1.48	V
Calibration Point #2	5412.12	6962.17	V
Internal Reference	5365.03	6961.82	V

MICRO LOG FIELD CHECK			
Tool Name:	Microlog Pad2 - 10951315	Reference Calibration Date:	12-Sep-19 14:17:40
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	23-Sep-19 09:52:15
Software Version:	WL INSITE R6.2.7 (Build 7)	Calibration Version:	1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.18	-0.16	-0.00	-0.02	ohmm
Internal Reference	19.82	19.78	20.00	19.95	ohmm
Summary					
Signal	Shop	Field	Difference		Tolerance
Microlog Normal	19.82	19.78	0.04		+/- 0.80
Microlog Lateral	20.00	19.95	0.05		+/- 0.80

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name:	SDLT Pad2 - 10809130	Reference Calibration Date:	28-May-19 11:11:37
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	04-Jun-19 09:37:51
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Logging Source S/N: 5471GW		
Aluminum Block S/N: EL RENO STD ALUMINUM	Density: 2.581g/cc	Pe: 3.170
Magnesium Block S/N: EL RENO	Density: 1.687g/cc	Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0206	1.0595	0.90 - 1.10
Near Dens Gain	1.0053	1.0380	0.90 - 1.10
Near Peak Gain	1.0311	1.0668	0.90 - 1.10
Near Lith Gain	1.0358	1.0785	0.90 - 1.10
Far Bar Gain	1.0064	1.0092	0.90 - 1.10
Far Dens Gain	0.9963	1.0004	0.90 - 1.10
Far Peak Gain	0.9944	1.0006	0.90 - 1.10
Far Lith Gain	0.9694	0.9746	0.90 - 1.10
Near Bar Offset	-0.1045	-0.4695	NONE
Near Dens Offset	0.0390	-0.2575	NONE
Near Peak Offset	-0.1834	-0.4878	NONE
Near Lith Offset	-0.2862	-0.6503	NONE
Far Bar Offset	-0.0618	-0.0908	NONE
Far Dens Offset	0.0135	-0.0260	NONE
Far Peak Offset	-0.0229	-0.0815	NONE
Far Lith Offset	0.0990	0.0538	NONE
Near Bar Background	863.12	860.63	700 - 1450
Near Dens Background	284.30	282.37	230 - 480
Near Peak Background	122.67	123.09	100 - 210
Near Lith Background	154.82	153.05	125 - 260
Far Bar Background	595.06	597.83	450 - 900
Far Dens Background	230.72	229.79	175 - 345
Far Peak Background	91.76	91.18	70 - 140
Far Lith Background	94.41	94.38	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.685	1.687	0.002	+/- 0.015
Pe	2.574	2.561	-0.013	+/- 0.150
ALUMINUM				
Density (g/cc)	2.579	2.580	0.001	+/- 0.01500
Pe	3.137	3.134	-0.003	+/- 0.150
TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0006	+/- 0.0110	-0.0024	+/- 0.0140
Magnesium Block	-0.0000	+/- 0.0110	-0.0014	+/- 0.0140
Aluminum Block	0.0000	+/- 0.0110	0.0009	+/- 0.0140
Resolution	8.96	6.00 - 11.50	9.38	6.00 - 11.50
Internal Verifier(B+D+P+L)	1419	1200 - 2700	1013	800 - 1700
PASS/FAIL SUMMARY				
Background Quality Check:			Passed	
Background Range Check:			Passed	
Background Resolution Check:			Passed	
Background Verification Check:			Passed	
Magnesium Quality Check:			Passed	
Aluminum Quality Check:			Passed	
Gains Check:			Passed	
Changes in Calibration Blocks:			Passed	

SPECTRAL DENSITY FIELD CHECK				
Tool Name:	SDLT Pad2 - 10809130		Reference Calibration Date:	04-Jun-19 09:37:51
Engineer:	JORGE ORLANDO PEREZ		Calibration Date:	23-Sep-19 09:55:38
Software Version:	WL INSITE R6.2.7 (Build 7)		Calibration Version:	1

Pad Temperature: 88.2 degF				
DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1419.146	1407.521	-11.625	15.207
Far (B+D+P+L) cps	1013.179	1005.193	-7.986	17.004
Near Resolution	8.96	8.93	-0.030	0.50
Far Resolution	9.38	9.48	0.100	1.00
PASS/FAIL SUMMARY				
Bkg Quality Check:			Passed	
Bkg Resolution Check:			Passed	
Bkg Verification Check:			Passed	

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-00000032						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
RWCH-12027542						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs

DH Tension Cal	1210.00	-----	-----	0.00	-----	lbs
GTET-10971172						
Gamma Ray Calibrator	228.9	227.4	-----	1.5	+/- 9.00	api
DSNT2-10993115						
Snow-Block Porosity	0.0654	0.0709	-----	-0.0055	+/- 0.0150	decP
SDLT2-10951315						
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in
Ring Diameter	8.25	8.26	-----	-0.01	+/-0.15	in
ACRt Sonde-12109515						
Mud Cell	1.00	-----	-----	0	-----	ohm-m
Microlog Pad2-10951315						
MicroLog Normal	19.82	19.78	-----	0.04	+/-0.80	ohmm
MicroLog Lateral	20.00	19.95	-----	0.05	+/-0.80	ohmm
SDLT Pad2-10809130						
Near(B+D+P+L)	1419.146	1407.521	-----	11.625	+/-15.207	cps
Far(B+D+P+L)	1013.179	1005.193	-----	7.986	+/-17.004	cps
Data: MERIT_LESTERI0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERSIDLE					Date: 27-Sep-19 22:09:55	



PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP-----					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.250	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	CSTR	Compressive Strength	1000.00	psia
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5610.00	ft
	SHARED	BHT	Bottom Hole Temperature	142.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	CBM Temperature Master Tool	GTET	
	SHARED	MSAL	Water-base mud filtrate salinity	0.00	ppm
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	

Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT2	
Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT2	
DSNT2	DNOK	Process DSN?	Yes	
DSNT2	DEOK	Process DSN EVR?	No	
DSNT2	NLIT	Neutron Lithology	Limestone	
DSNT2	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT2	DNTT	Temperature Correction Type	None	
DSNT2	DPRS	DSN Pressure Correction Type	None	
DSNT2	SHCO	View More Correction Options	No	
DSNT2	UTVD	Use TVD for Gradient Corrections?	No	
DSNT2	LHWT	Logging Horizontal Water Tank?	No	
DSNT2	UCLA	Classic Neutron Parameter utilized?	No	
DSNT2	BHSM	Borehole Size Source Tool	SDLT2	
SDLT2	CLOK	Process Caliper Outputs?	Yes	
Microlog Pad2	MLOK	Process MicroLog Outputs?	Yes	
SDLT Pad2	DNOK	Process Density?	Yes	
SDLT Pad2	DNOK	Process Density EVR?	No	
SDLT Pad2	CB	Logging Calibration Blocks?	No	
SDLT Pad2	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad2	DTWN	Disable temperature warning	No	
SDLT Pad2	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad2	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad2	BHSM	Borehole Size Source Tool	SDLT2	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Pore Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Limestone 47.6	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRT?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMAX	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT2	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	
BOTTOM_____				
Data: MERIT_LESTERI0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERSIDLE			Date: 27-Sep-19 22:11:11	

HALLIBURTON TOOL STRING DIAGRAM REPORT						
Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						74.61 ft

RWCH-12027542
135.00 lbs

Weak Point Solid-
12027542
0.01 lbs

SP Sub-11441455
60.00 lbs

GTET-10971172
165.00 lbs

DSNT2-10993115
174.00 lbs

DSN Decentralizer-
10993115
6.60 lbs

SDLT2-10951315
360.00 lbs

SDLT Pad2-10809130
65.00 lbs
Microlog Pad2-10951315
8.00 lbs

BSAT-10747686
300.00 lbs

ACRt Instrument-
12109517
50.00 lbs

Ø 2.310 in →

Ø 3.625 in →

Ø 0.010 in* →

Ø 3.625 in →

Ø 3.625 in →

Ø 5.000 in* →

Ø 3.625 in →

Ø 4.500 in →

Ø 4.500 in* →

Ø 4.750 in* →

Ø 3.625 in →

Ø 3.625 in →

← Fishing Neck @ 73.73 ft

← Load Cell @ 70.93 ft
← BH Temperature @ 70.36 ft

← SP @ 66.59 ft

← Z-Accelerometer @ 64.17 ft

← GammaRay @ 58.56 ft

← DSN Far @ 49.17 ft
← DSN Near @ 48.42 ft

← Microlog @ 38.61 ft
← SDL Caliper @ 38.42 ft
← SDL @ 38.41 ft

← Receiver Array @ 27.09 ft
← Sonic Receivers @ 27.09 ft

6.25 ft

↕ 68.36 ft

3.74 ft

↕ 64.63 ft

8.52 ft

↕ 56.11 ft

9.69 ft

↕ 46.42 ft

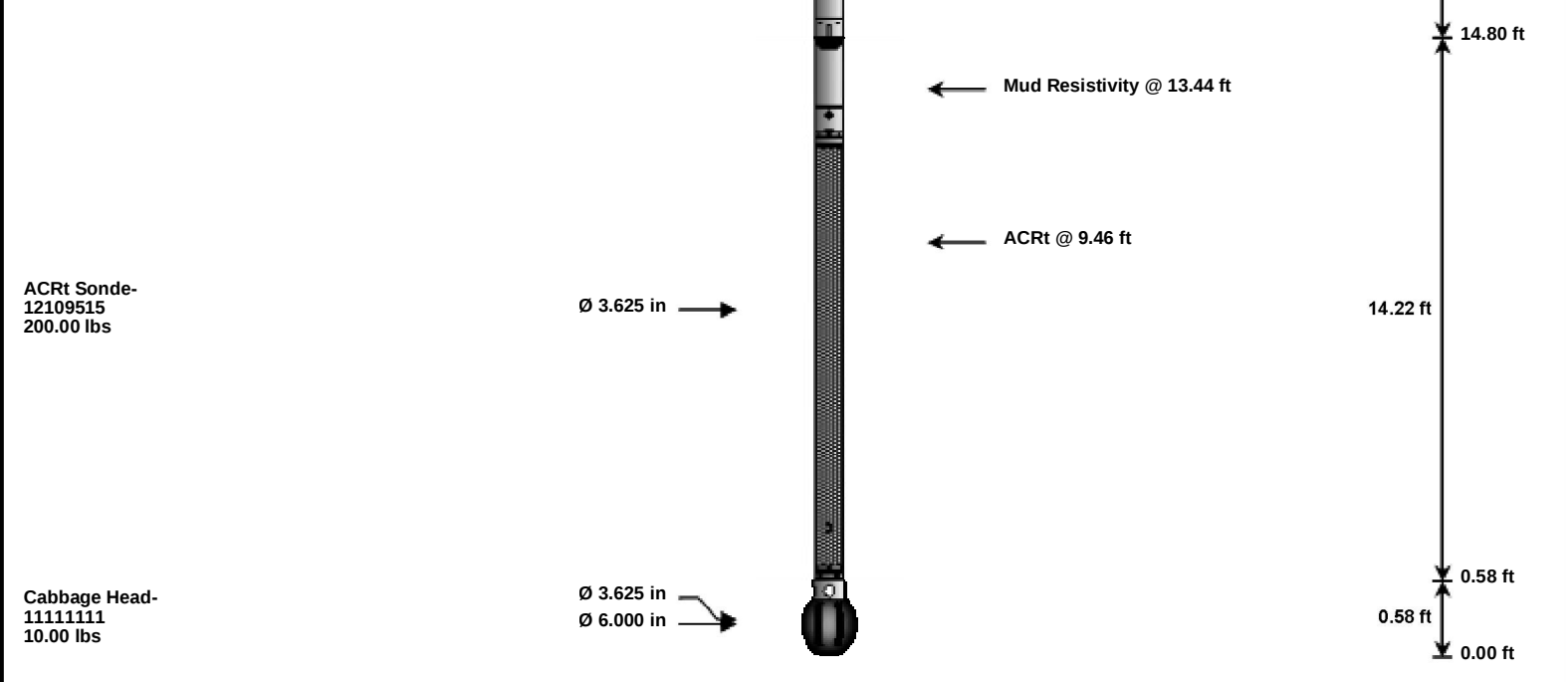
10.81 ft

↕ 35.61 ft

15.77 ft

↕ 19.83 ft

5.03 ft



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	12027542	135.00	6.25		68.36	300.00
WPSS	Weak Point Solid	12027542	0.01	0.01	*	68.36	300.00
SP	SP Sub	11441455	60.00	3.74		64.63	300.00
GTET	Gamma Telemetry Tool	10971172	165.00	8.52		56.11	60.00
DSNT	Dual Spaced Neutron	10993115	174.00	9.69		46.42	60.00
DCNT	DSN Decentralizer	10993115	6.60	5.13	*	49.75	300.00
SDLT	Spectral Density Tool	10951315	360.00	10.81		35.61	60.00
SDLP	Density Insite Pad	10809130	65.00	2.55	*	37.82	60.00
MICP	Microlog Pad	10951315	8.00	1.00	*	38.11	60.00
BSAT	Borehole Sonic Array Tool	10747686	300.00	15.77		19.83	60.00
ACRt	Array Compensated True Resistivity Instrument Section	12109517	50.00	5.03		14.80	120.00
ACRt	Array Compensated True Resistivity Sonde Section	12109515	200.00	14.22		0.58	120.00
CBHD	Cabbage Head	11111111	10.00	0.58		0.00	300.00
Total			1,533.61	74.61	* Not included in Total Length and Length Accumulation.		
Data: MERIT_LESTERI0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERSIDLE						Date: 27-Sep-19 22:11:38	