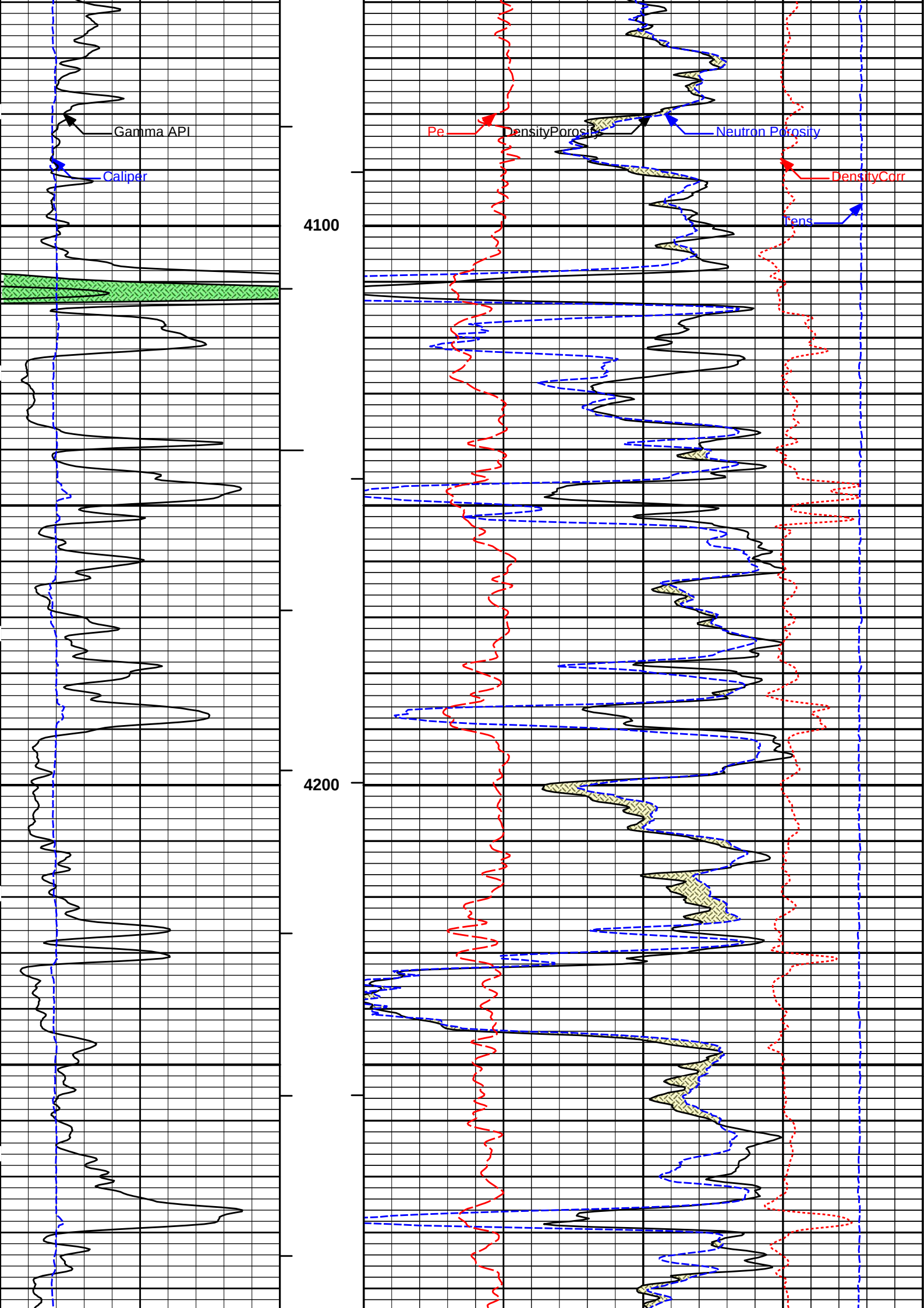
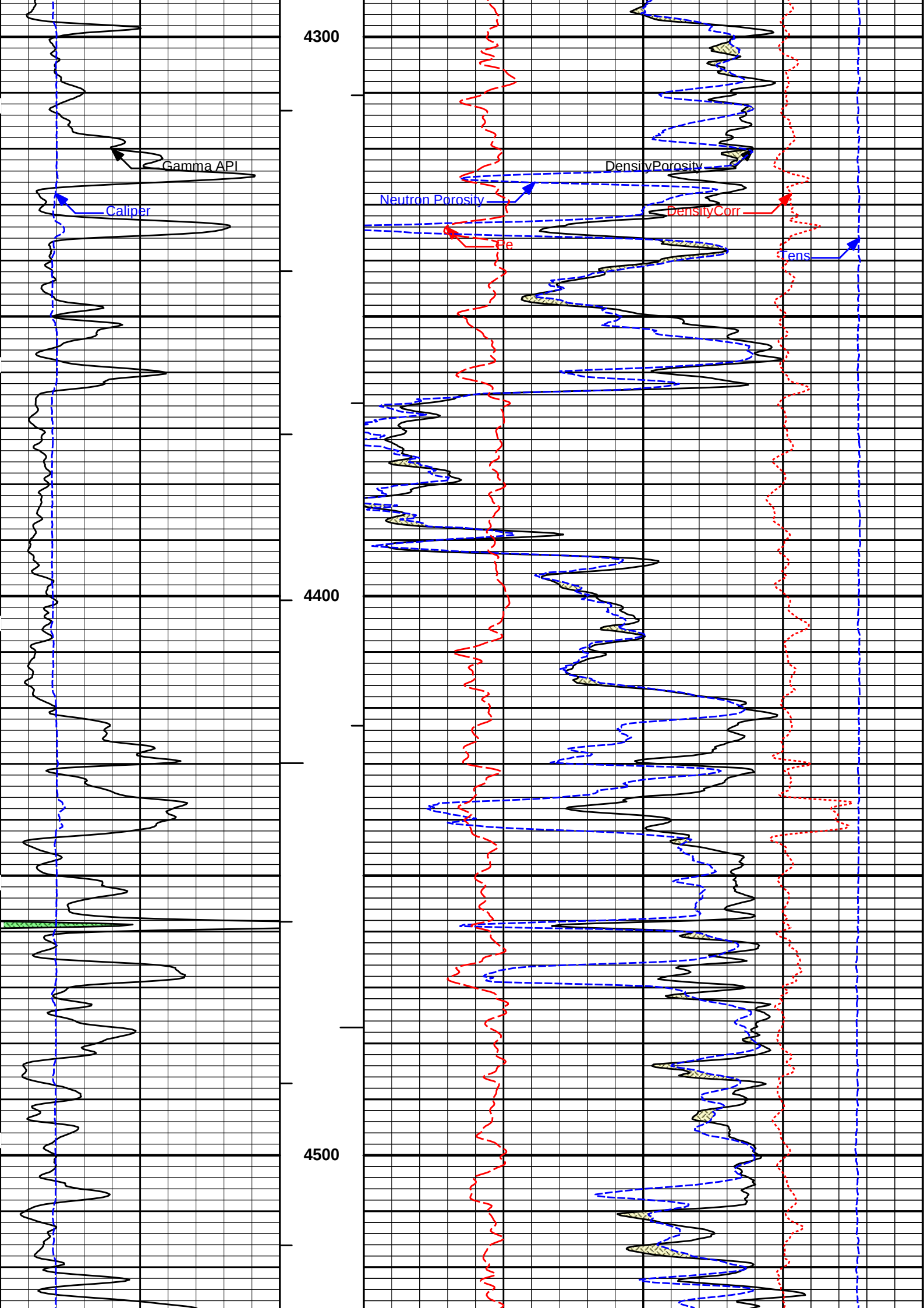


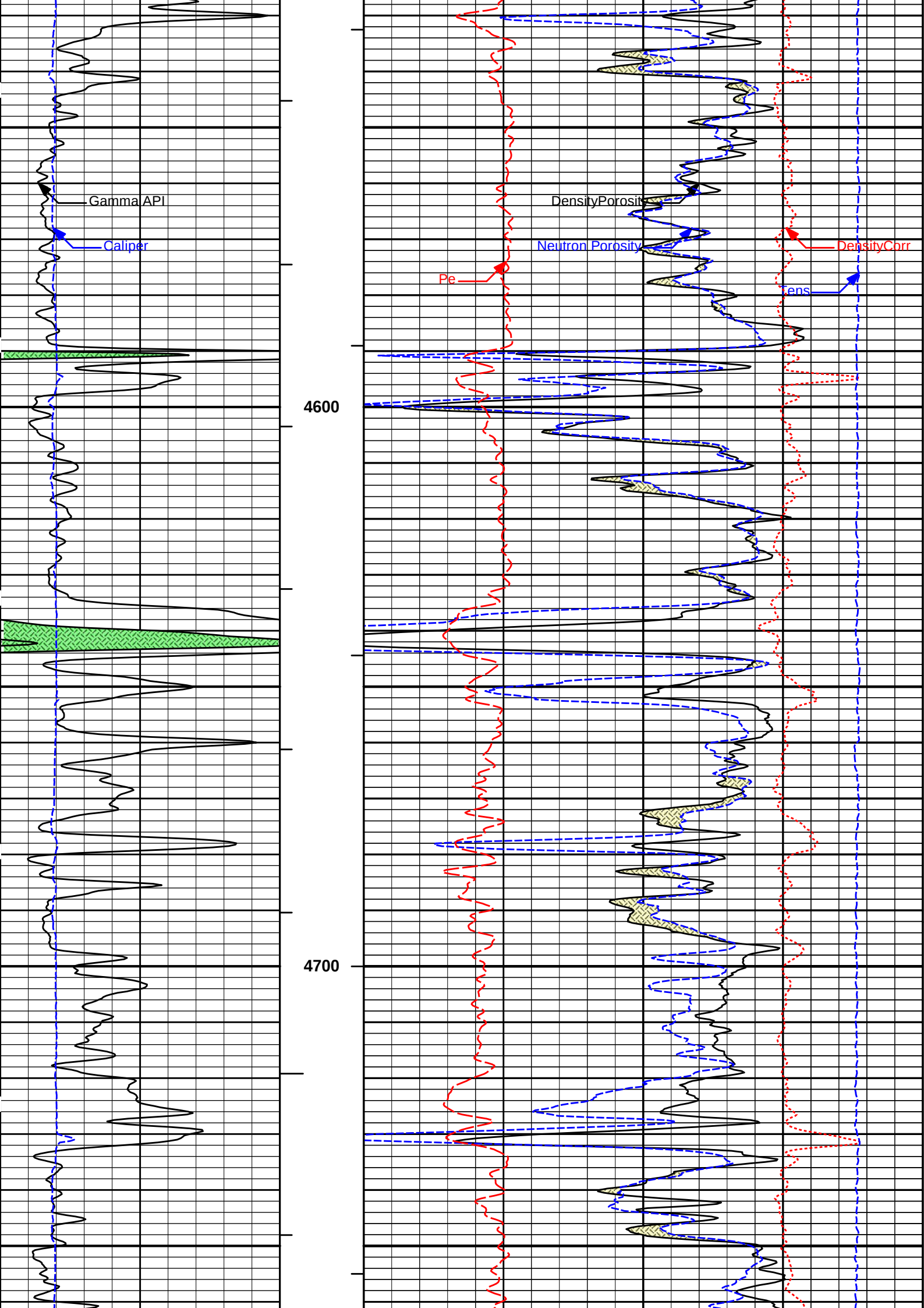
**SPECTRAL DENSITY
DUAL SPACED NEUTRON
LOG**

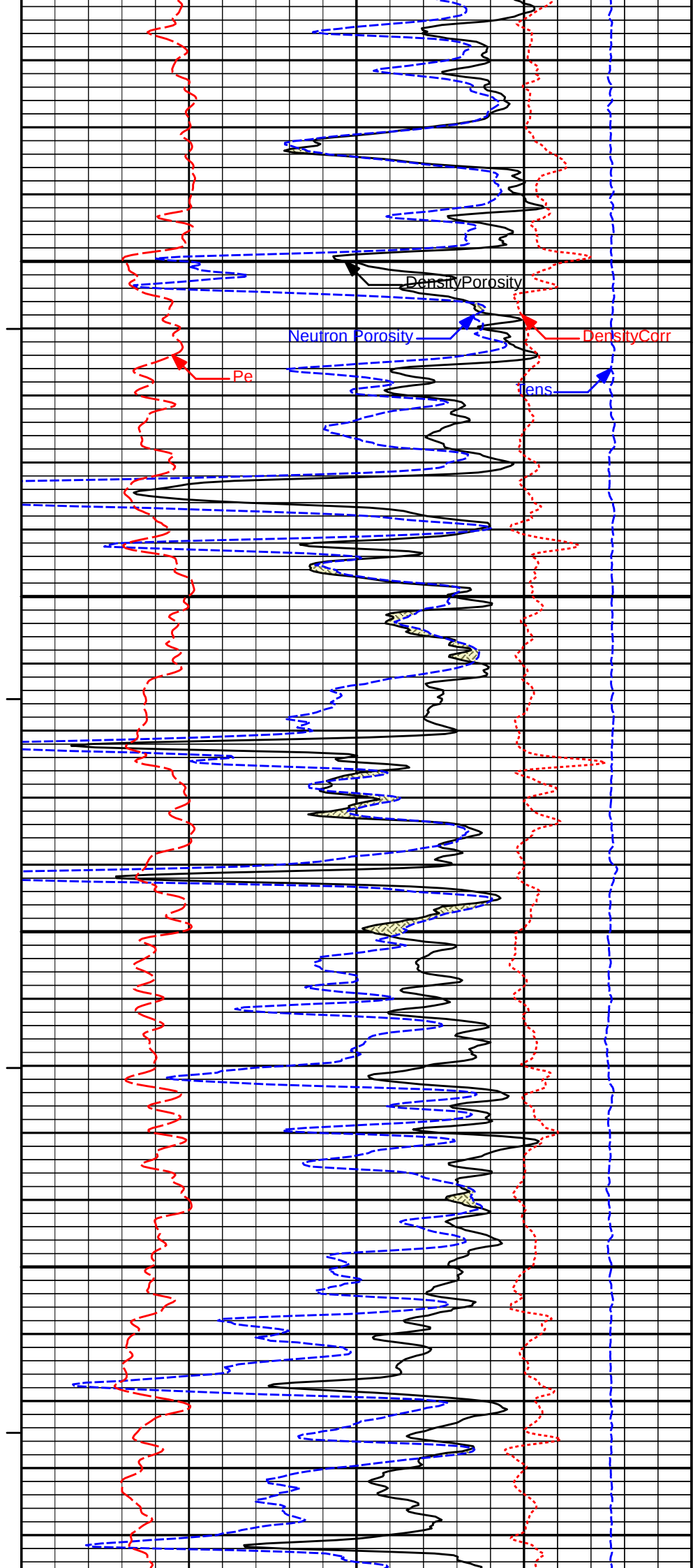
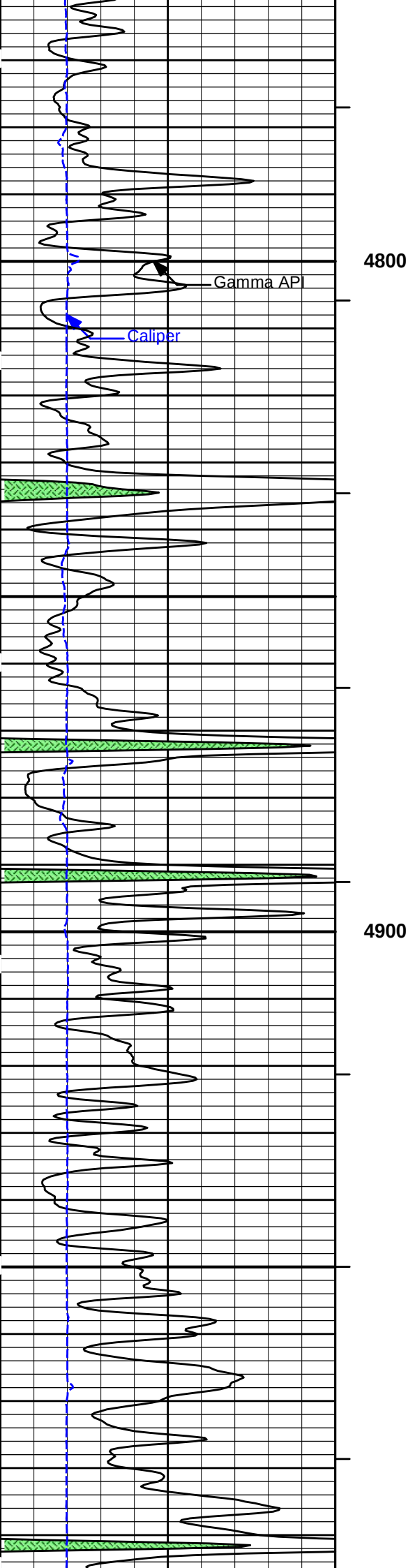
----- Fold here -----

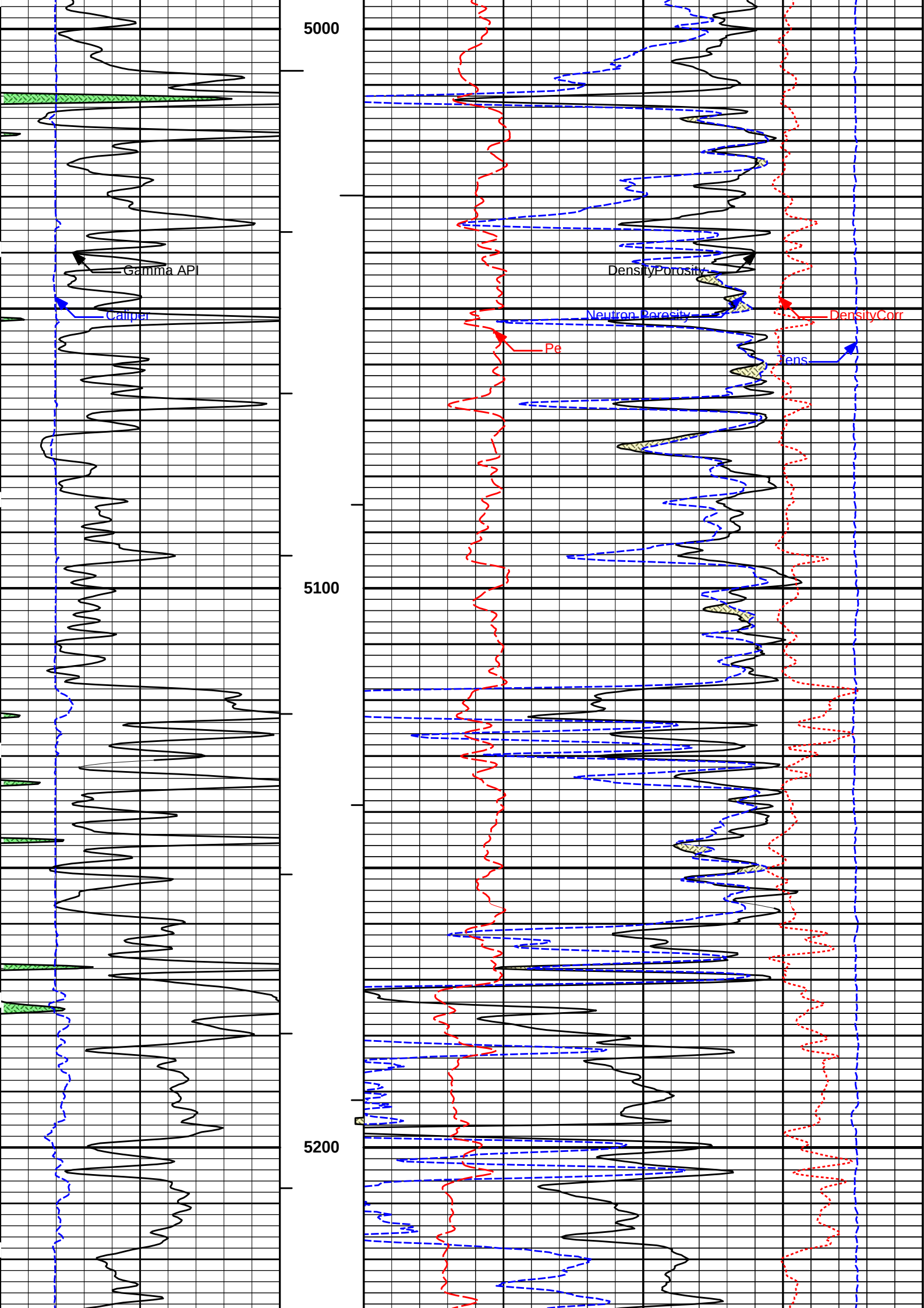
Service Ticket No.: DUAL904334094						API No.: 15081221640000						PGM Version: WL INSITE R5.0.5 (Build 8)								
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE										RESISTIVITY SCALE CHANGES										
Date	Sample No.										Type Log	Depth		Scale Up Hole		Scale Down Hole				
Depth-Driller																				
Type Fluid in Hole																				
Density	Viscosity																			
Ph	Fluid Loss																			
Source of Sample											RESISTIVITY EQUIPMENT DATA									
Rm @ Meas. Temp			@				@				Run No.		Tool Type & No.		Pad Type		Tool Pos.		Other	
Rmf @ Meas. Temp.			@				@				ONE		ACRT		NONE		CENT		N/A	
Rmc @ Meas. Temp.			@				@						I-11055059							
Source Rmf	Rmc												S-11038385							
Rm @ BHT			@				@													
Rmf @ BHT			@				@													
Rmc @ BHT			@				@													
EQUIPMENT DATA																				
GAMMA				ACOUSTIC				DENSITY				NEUTRON								
Run No.		ONE		Run No.		ONE		Run No.		ONE		Run No.		ONE						
Serial No.		11021139		Serial No.		10939049		Serial No.		10809130		Serial No.		11020487						
Model No.		GTET		Model No.		BSAT		Model No.		SDLT		Model No.		DSNT						
Diameter		3.625"		No. of Cent.		2		Diameter		6.1"		Diameter		3.625"						
Detector Model No.		GTET		Spacing		0.5"		Log Type		GAM-GAM		Log Type		NEU-NEU						
Type		SCINT						Source Type		Cs-137		Source Type		DSN-436						
Length		8"		LSA [Y/N]				Serial No.		5155GW		Serial No.		DSN-436						
Distance to Source		N/A		FWDA [Y/N]				Strength		1.5 Ci		Strength		15 Ci						
LOGGING DATA																				
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON								
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix						
No.	From	To	ft/min	L	R	L	R		L	R		L	R							
ONE	TD	CSG	REC	0	150	30	-10	47.6 us/ft	30	-10	2.71 g/cc	30	-10	LIME						

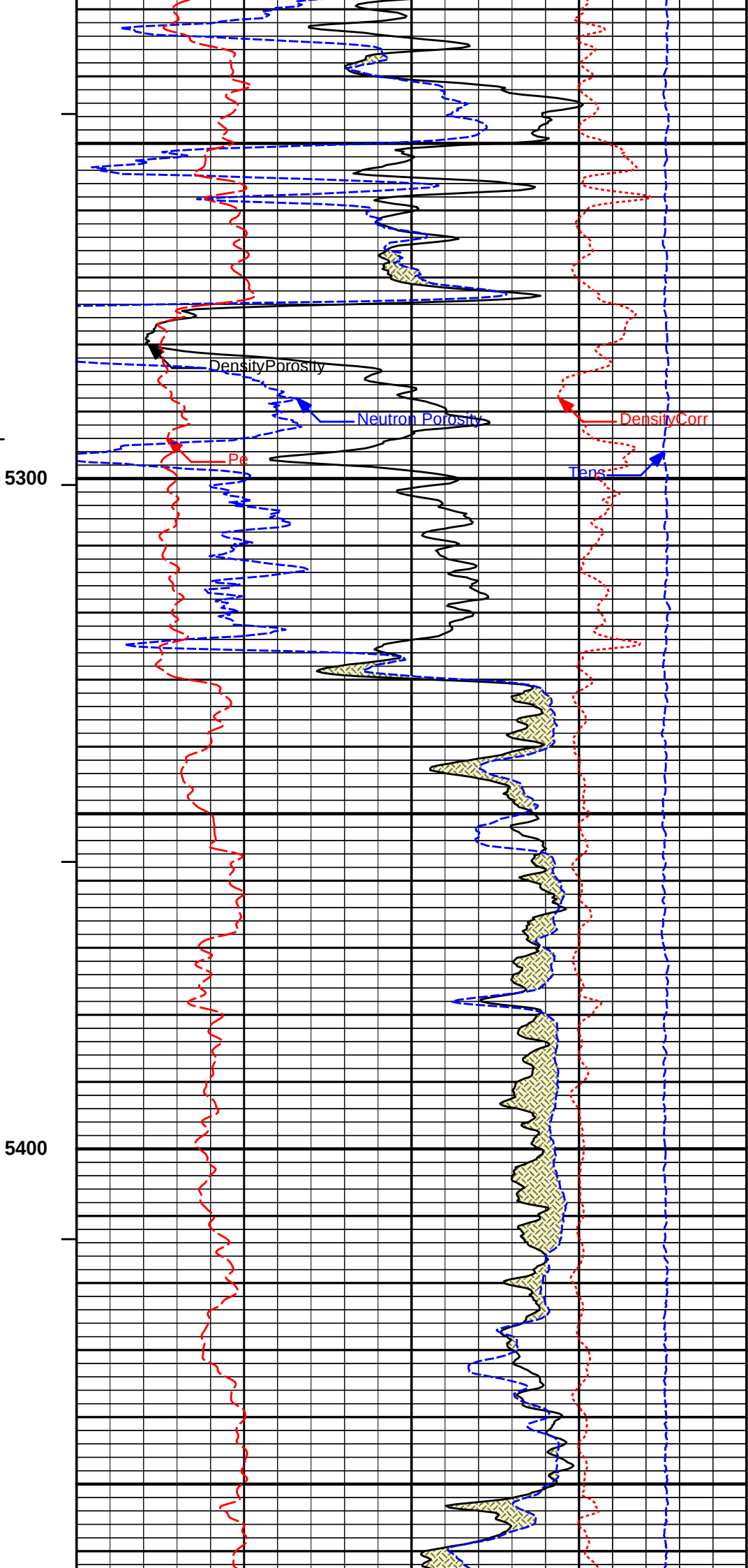
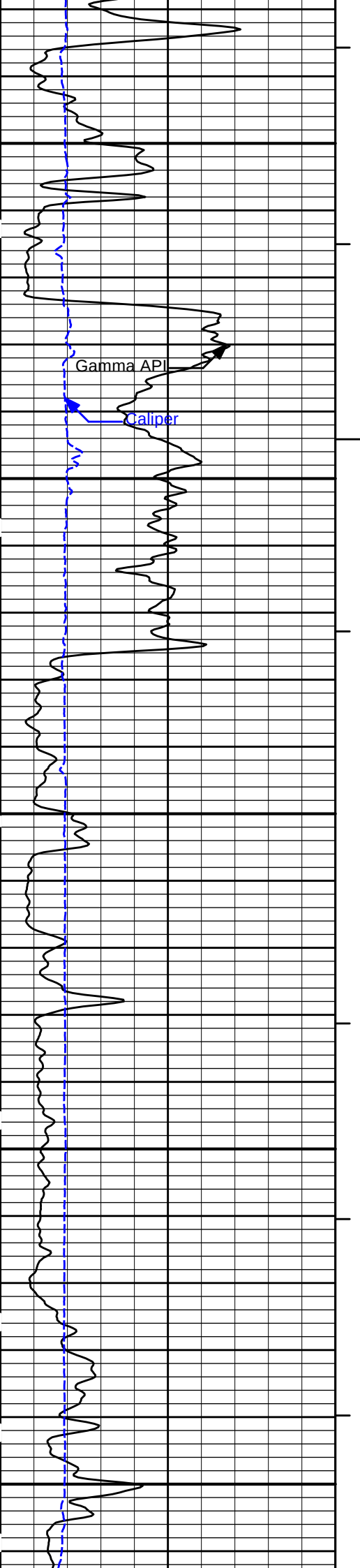


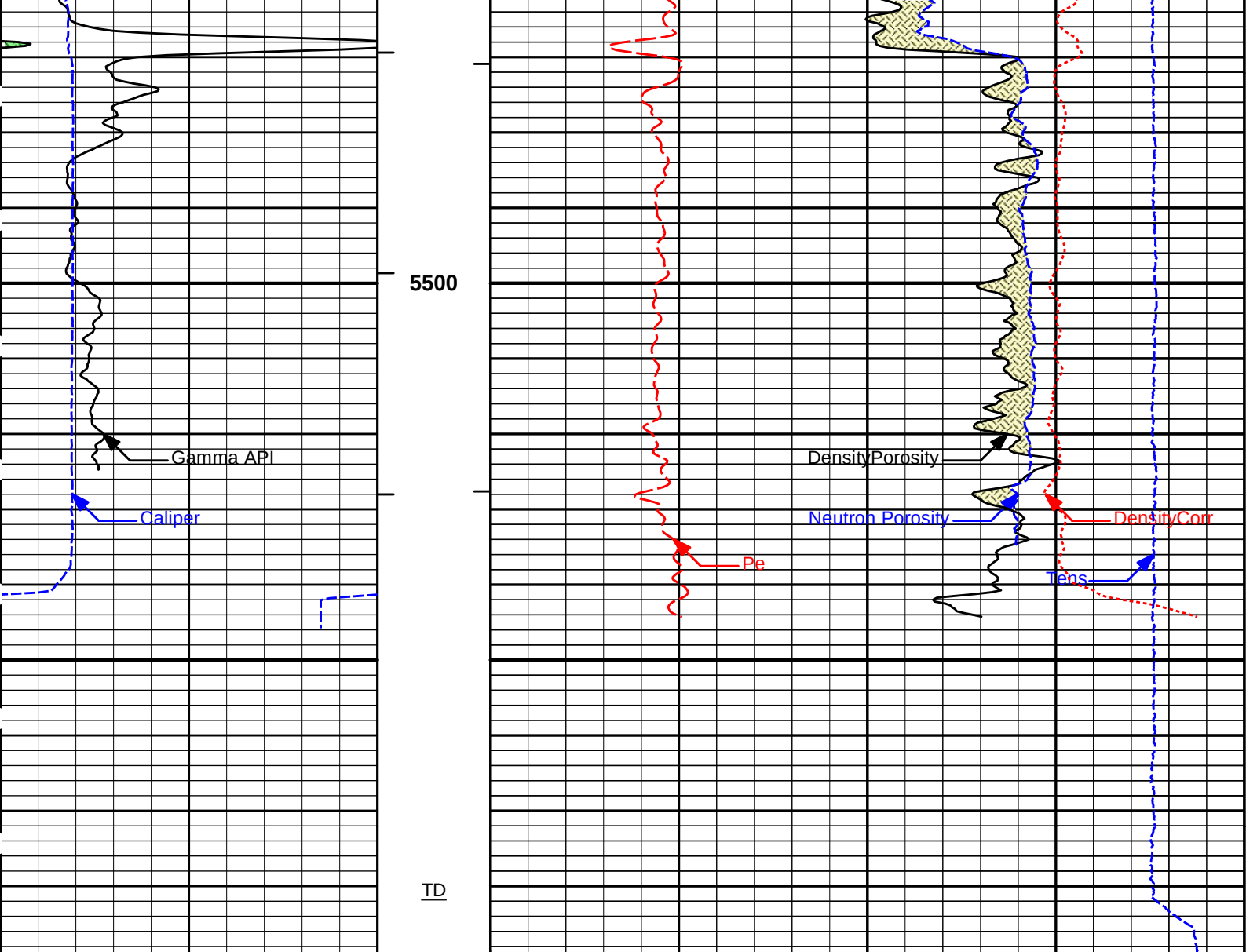












6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					gram per cc	
0	Gamma API	150	AHVT				15K	Tens	0
	api							pounds	
			BHVT	30	DensityPorosity				-10
					percent				
			Tension Pull	30	Neutron Porosity				-10
			10	0	percent				

HALLIBURTON

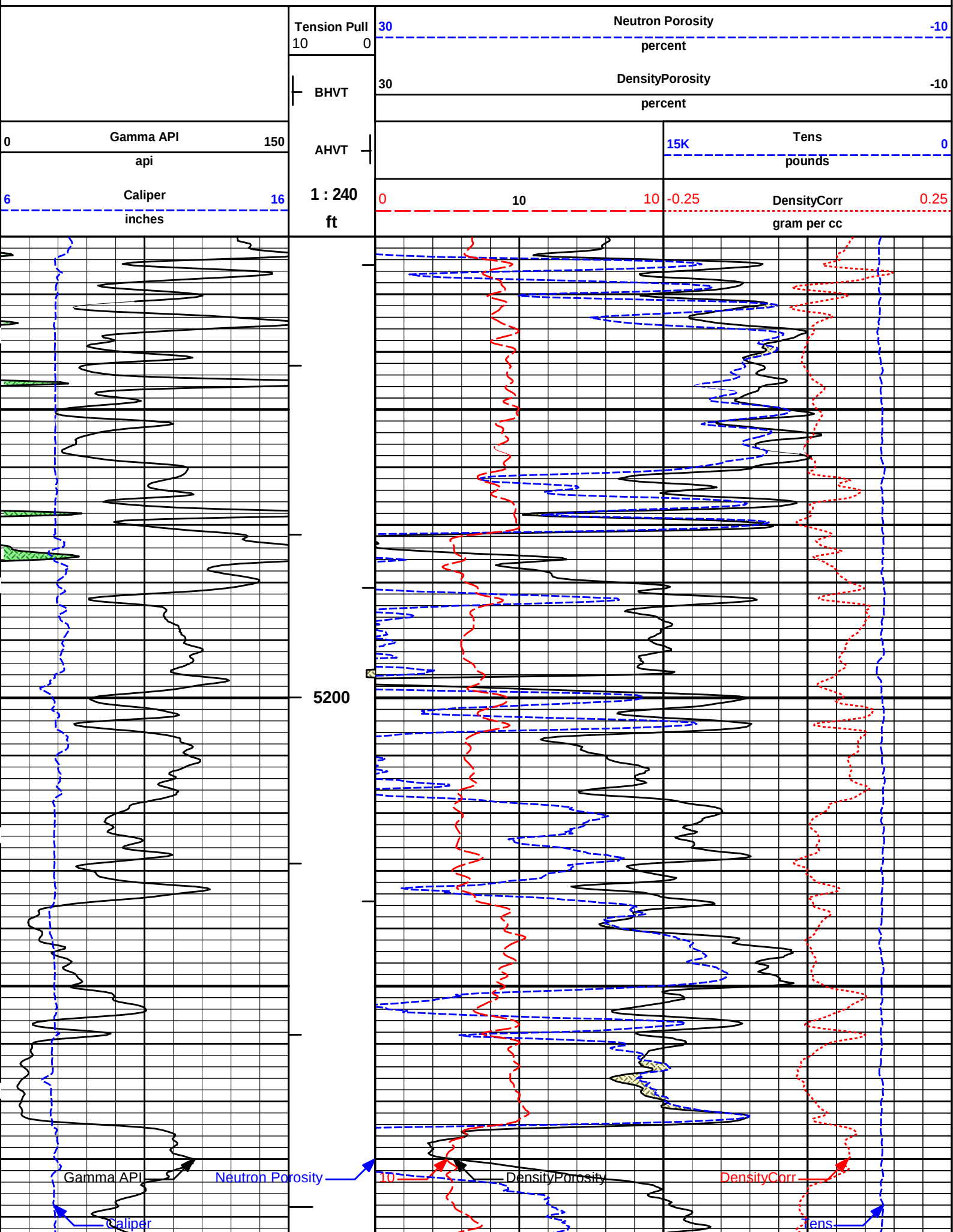
Plot Time: 01-Oct-17 16:00:30
Plot Range: 3995 ft to 5589.17 ft
Data: MERIT_KELLS I-1\Well Based\PORO\
Plot File: \\PORO\1_Poro_5_mainx

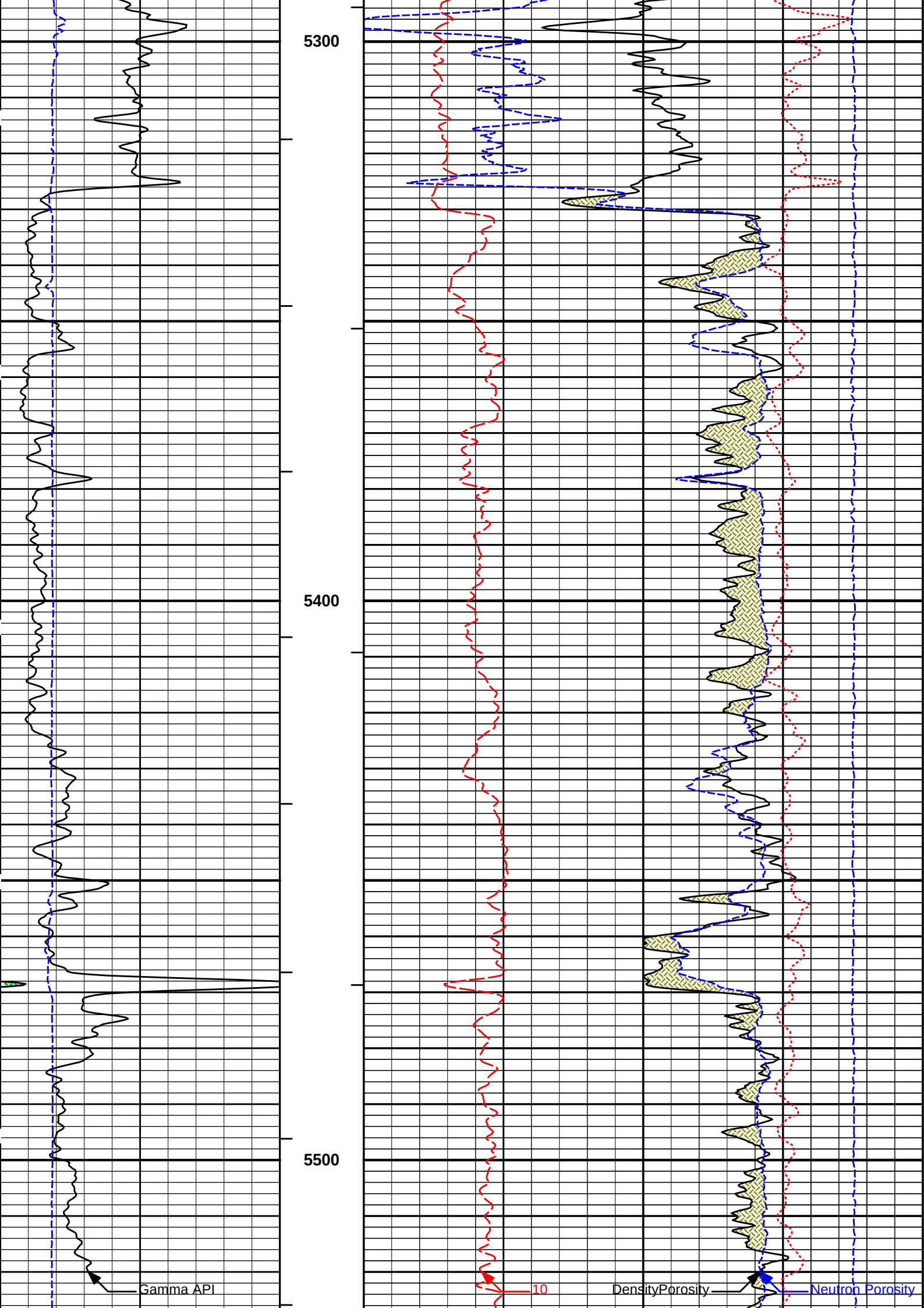
5 INCH MAIN LOG

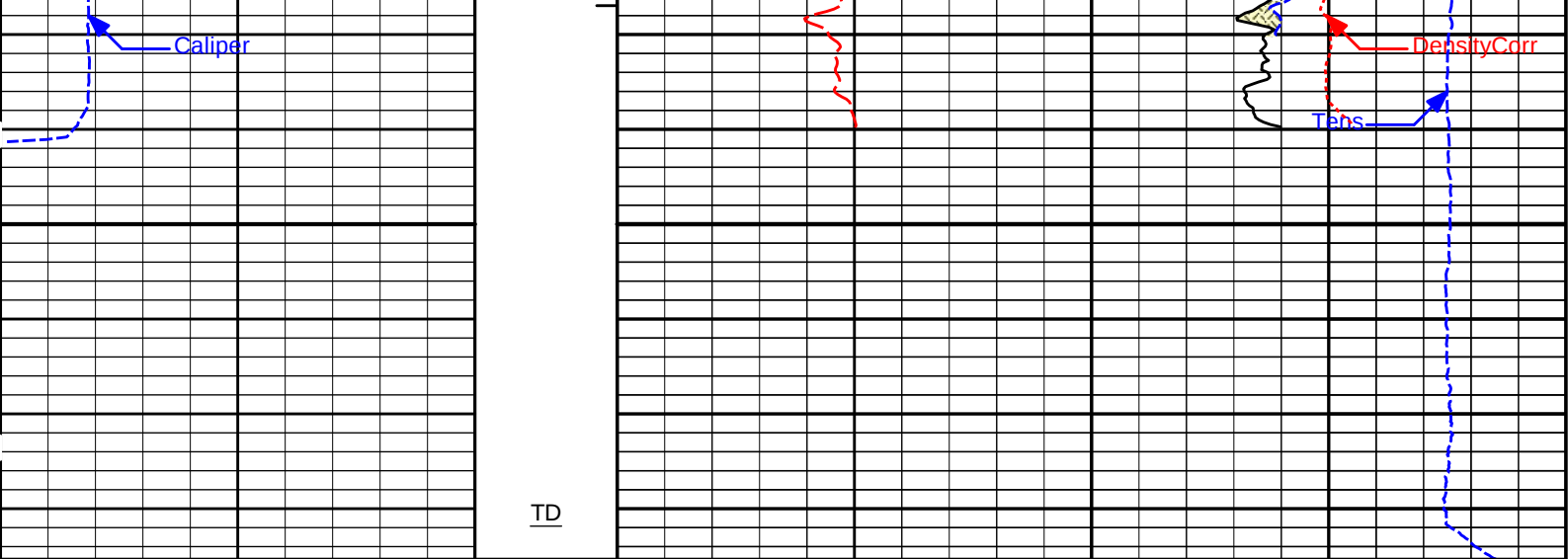
HALLIBURTON

Plot Time: 01-Oct-17 16:00:30
Plot Range: 5120 ft to 5585.33 ft
Data: MERIT_KELLS I-1\Well Based\REPEAT\
Plot File: \\PORO\1_Poro_5_rptx

REPEAT SECTION

[illegible]





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

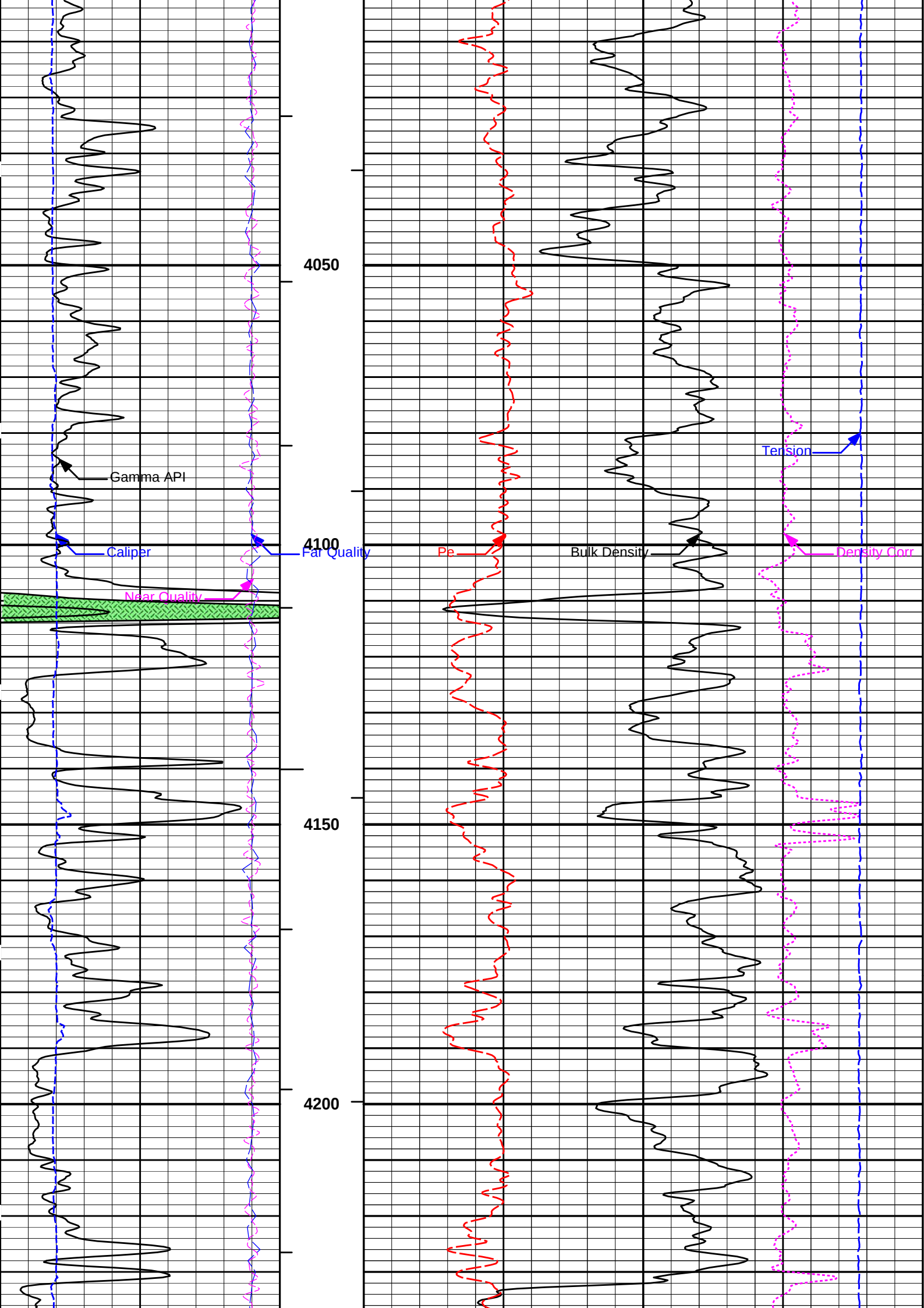
HALLIBURTON Plot Time: 01-Oct-17 16:00:32
Plot Range: 5120 ft to 5585.33 ft
Data: MERIT_KELLS I-1\Well Based\REPEAT\
Plot File: \\PORO\1_Poro_5_rptx

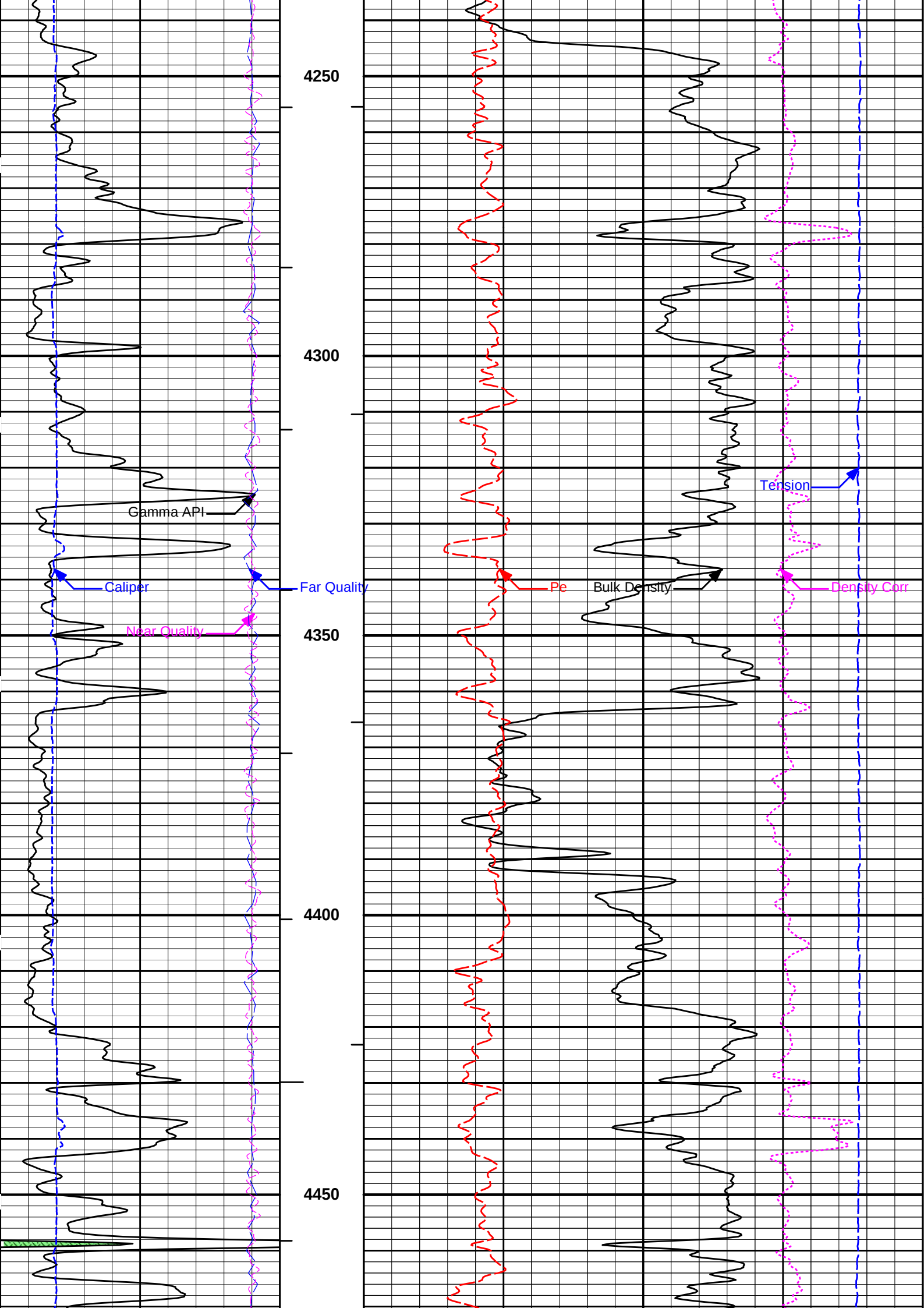
REPEAT SECTION

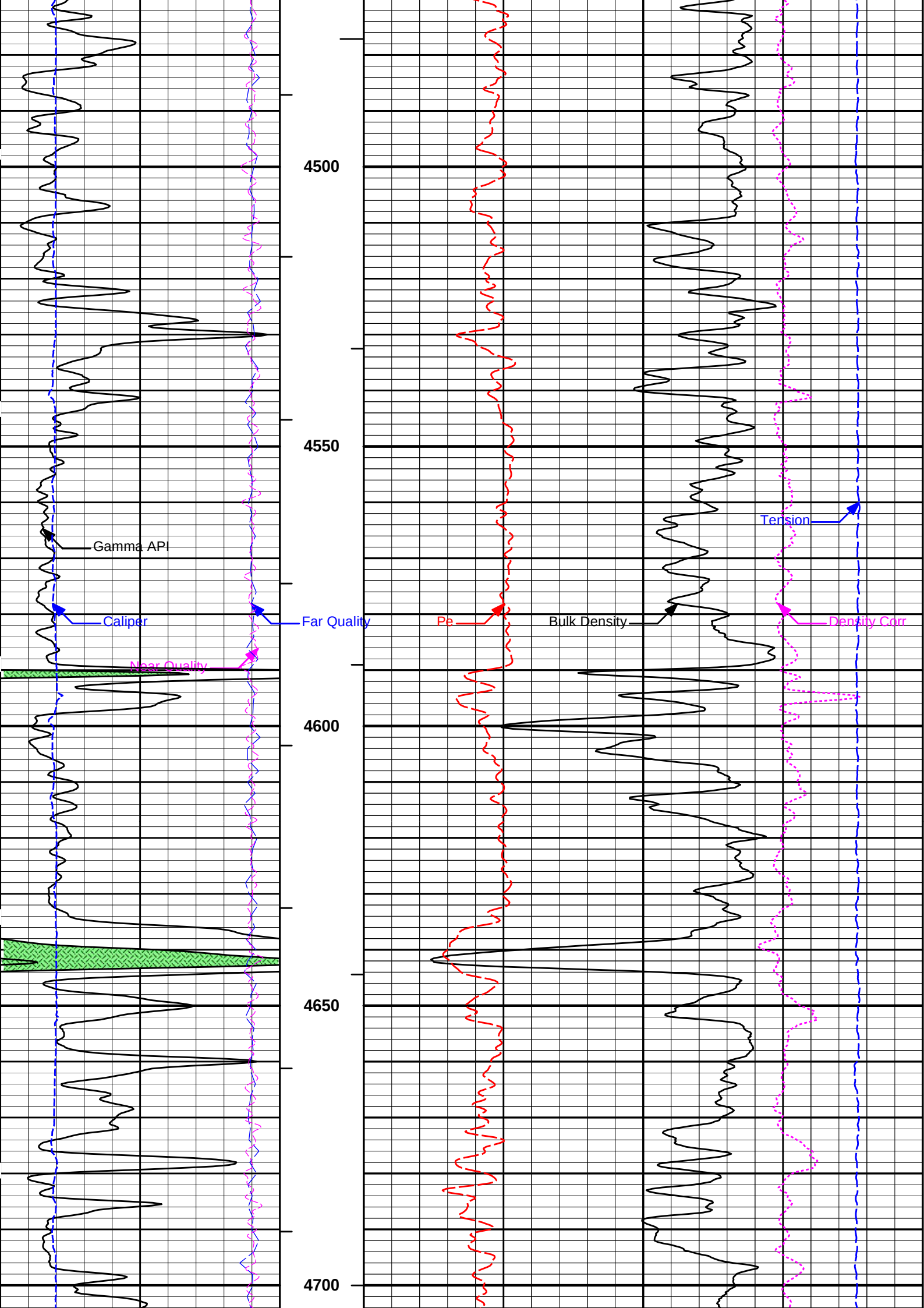
HALLIBURTON Plot Time: 01-Oct-17 16:00:32
Plot Range: 3995 ft to 5589.17 ft
Data: MERIT_KELLS I-1\Well Based\PORO\
Plot File: \\PORO\1_Bulk_5_mainx

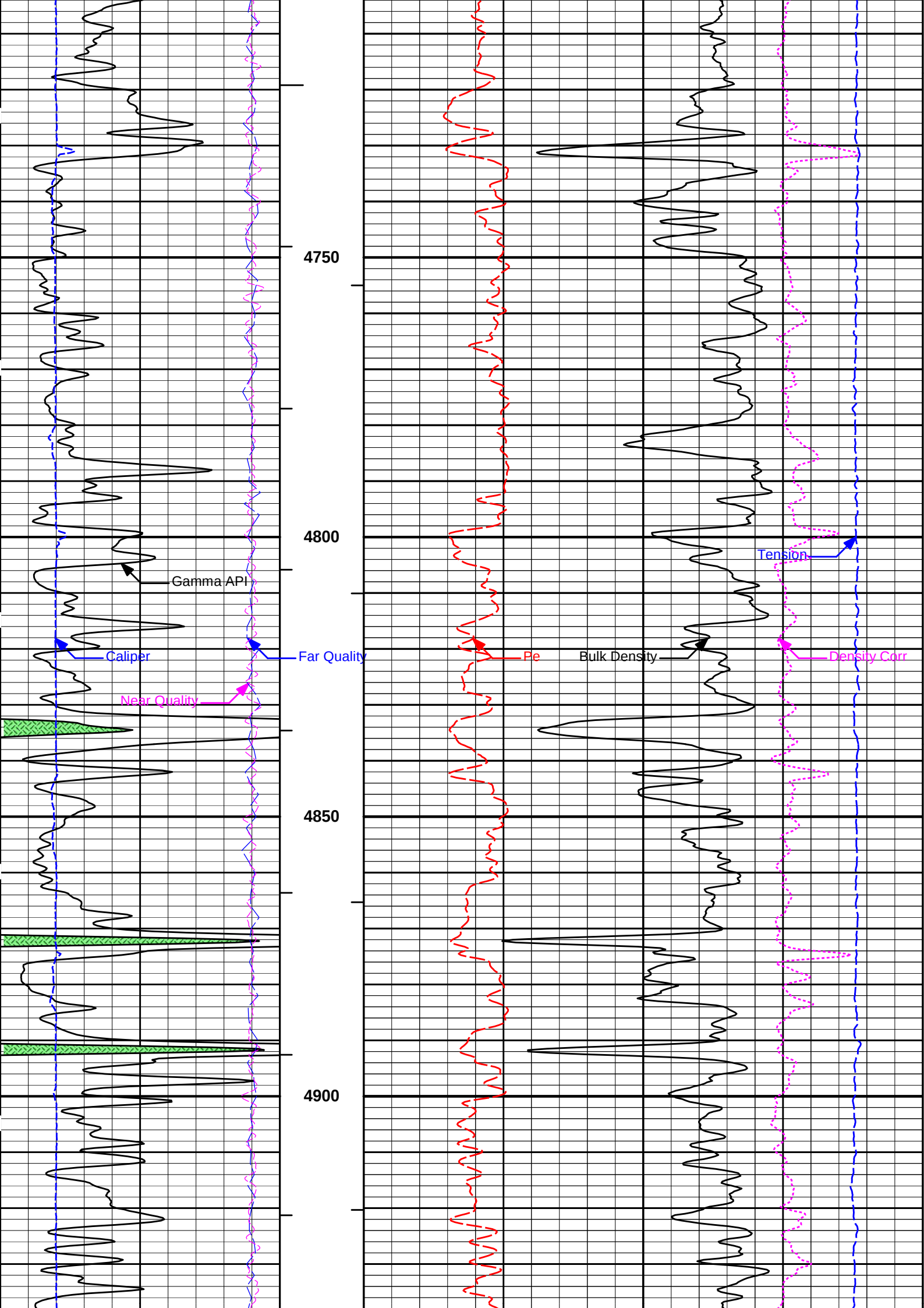
5 INCH MAIN LOG

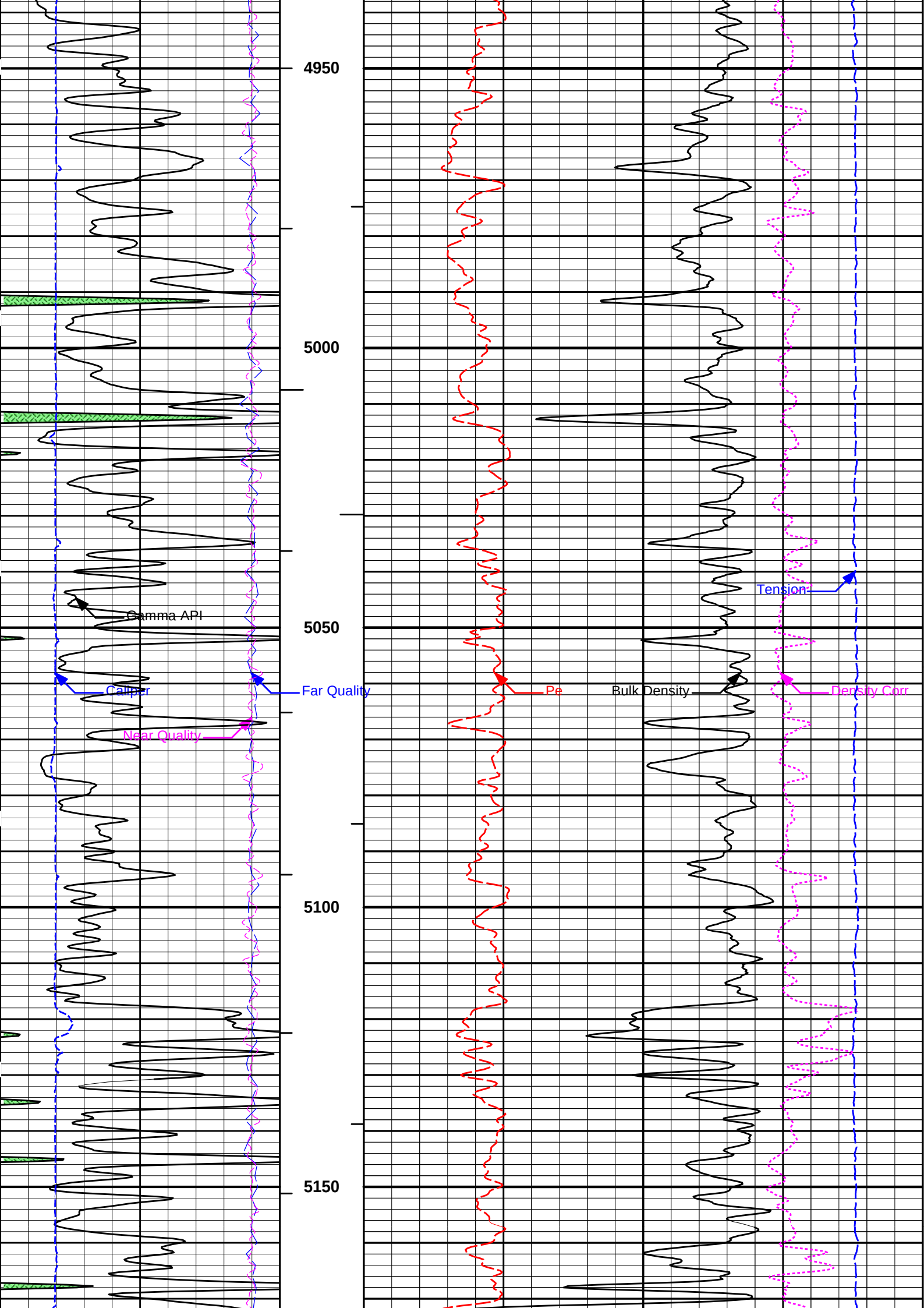
0	Gamma API	150	Tension Pull						
	api		10 0						
6	Caliper	16	BHVT	2				Bulk Density	3
	inches							gram per cc	
18	Far Quality	-2	AHVT				-0.25	Density Corr	0.25
								gram per cc	
-18	Near Quality	2	1 : 240	0	Pe	10	15K	Tension	0
			ft					pounds	
			4000						

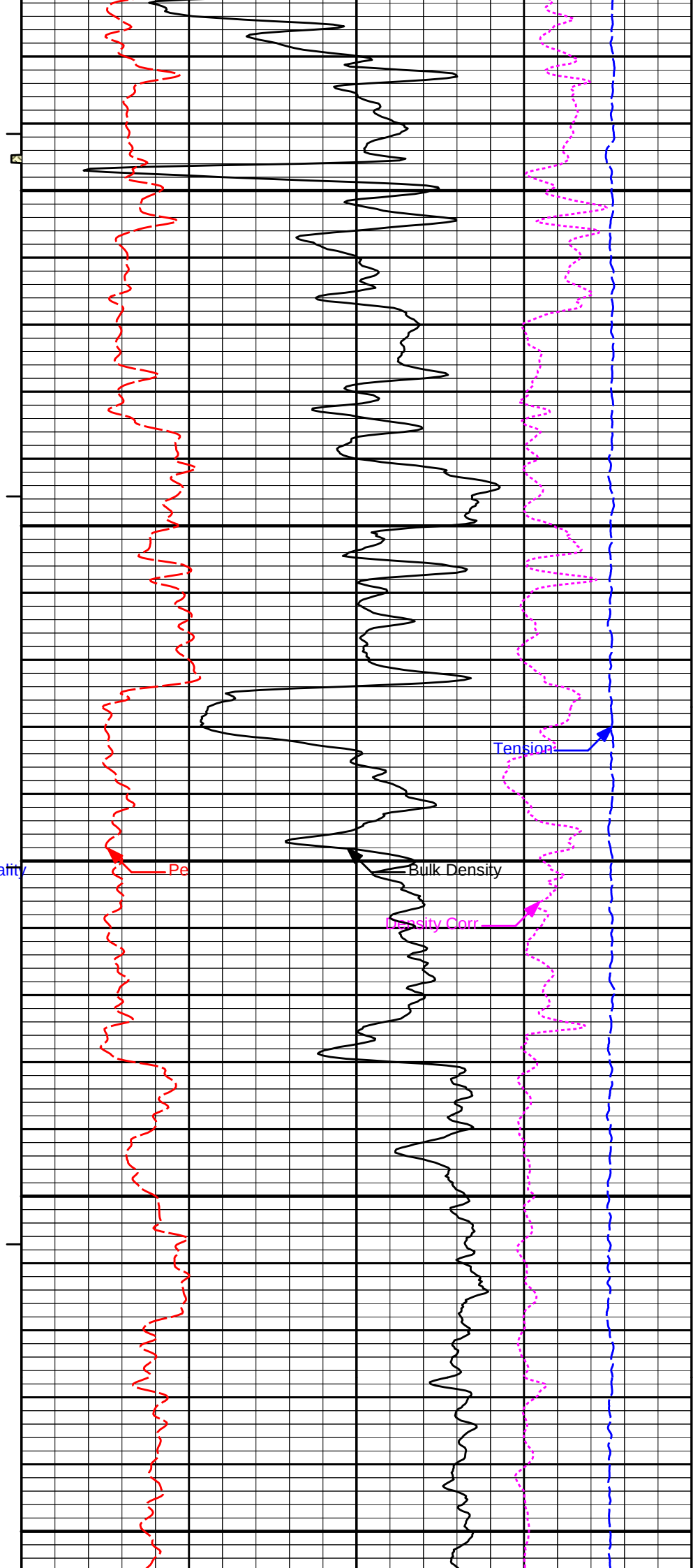
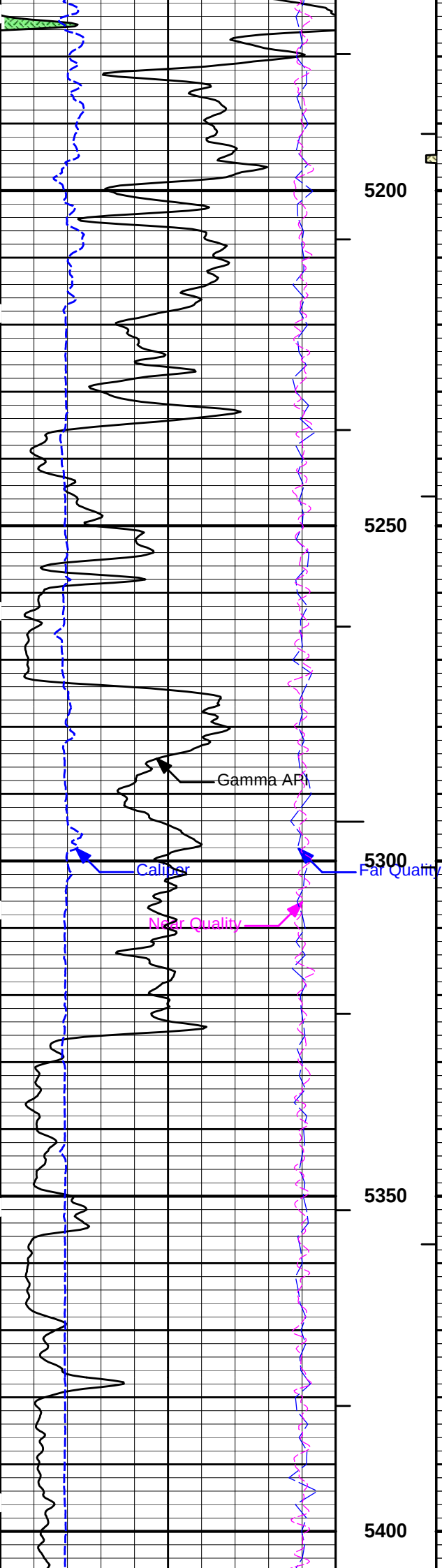


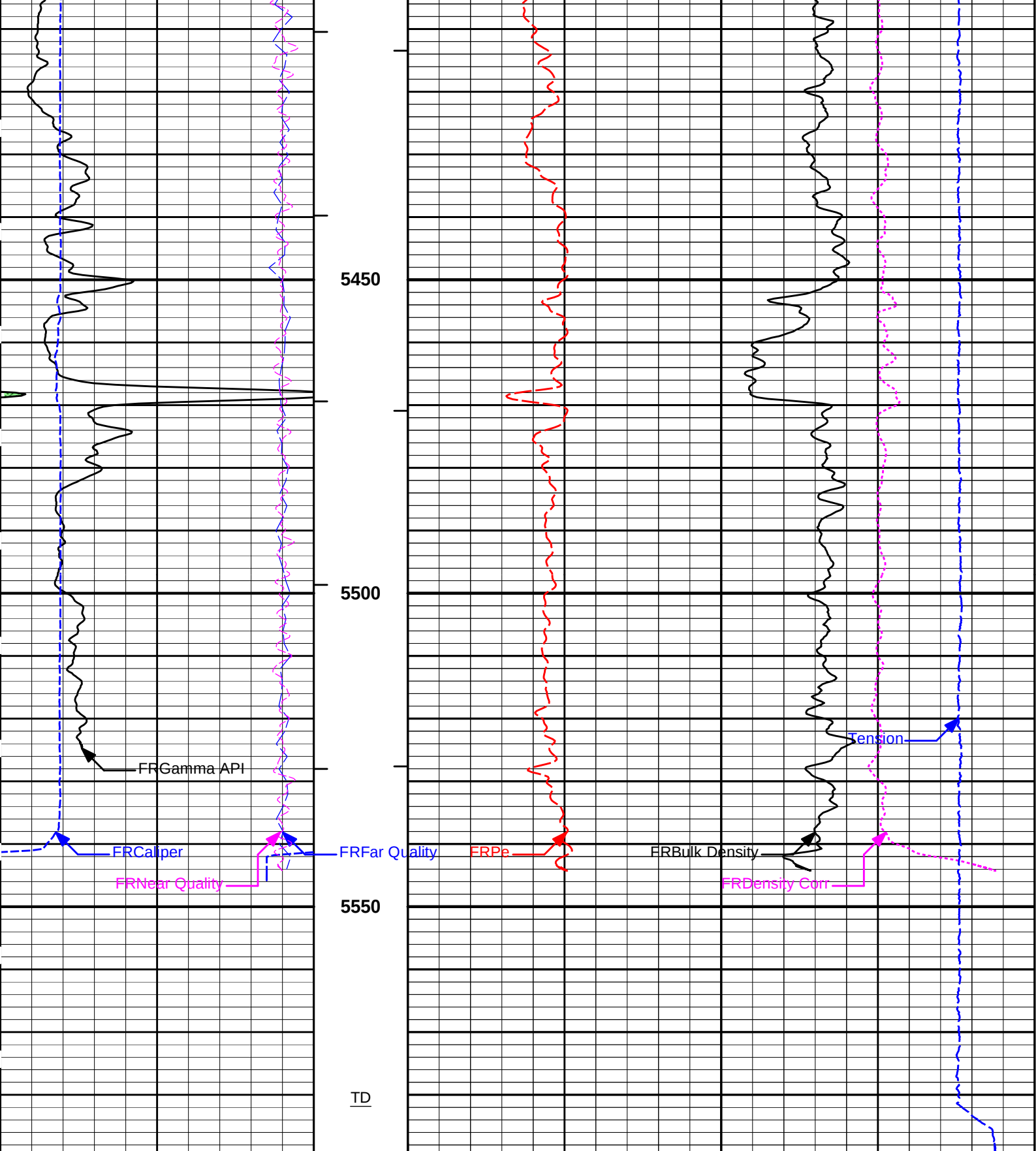












-18	Near Quality	2	1 : 240 ft	0	Pe	10	15K	Tension	0
								pounds	
18	Far Quality	-2	AHVT						
6	Caliper	16	BHVT	2	Bulk Density				3
	inches				gram per cc				
0	Gamma API	150	Tension Pull						
	api		10 0						

HALLIBURTON

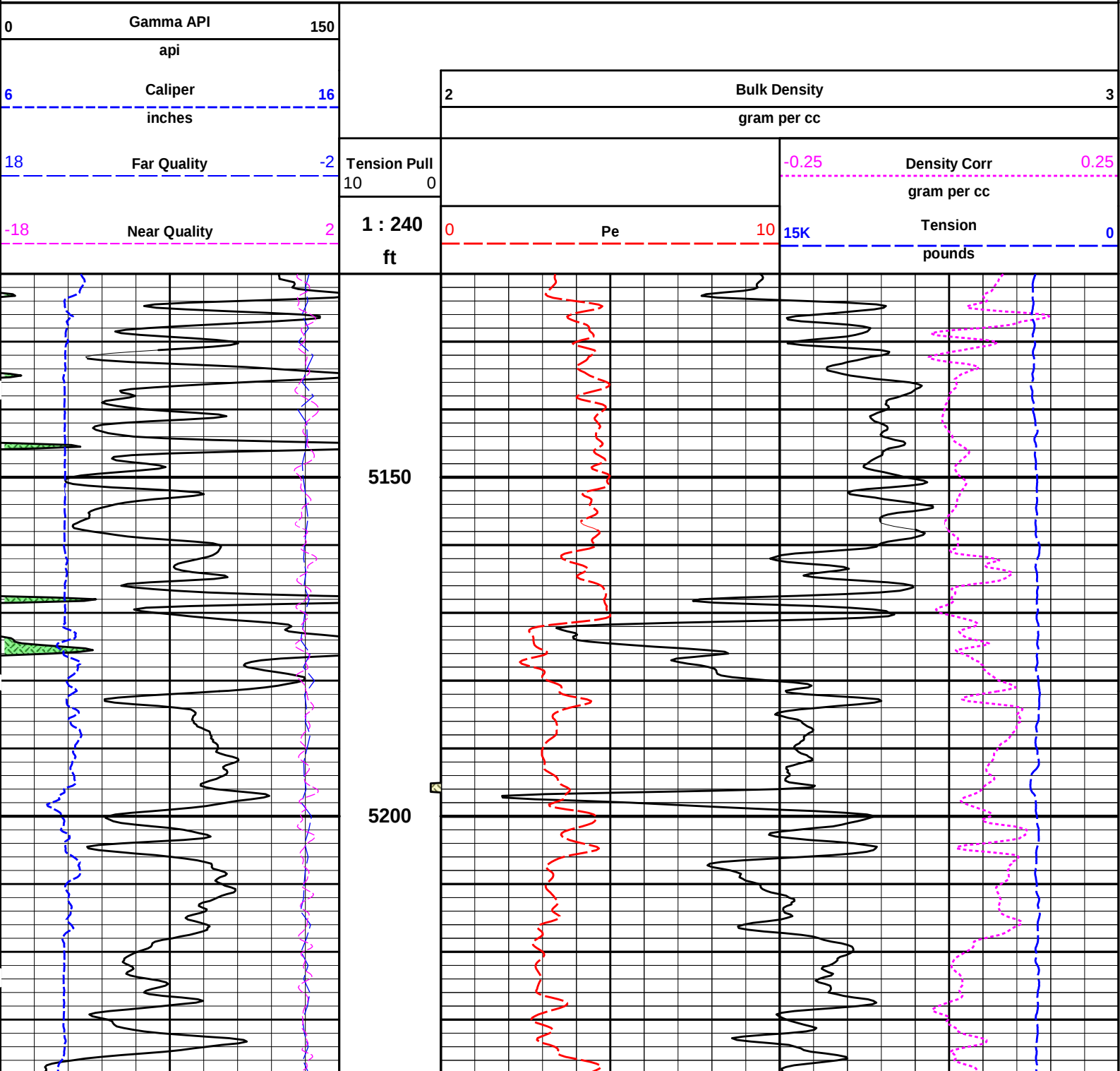
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 Data: MERIT_KELLS I-1\Well Based\POROI

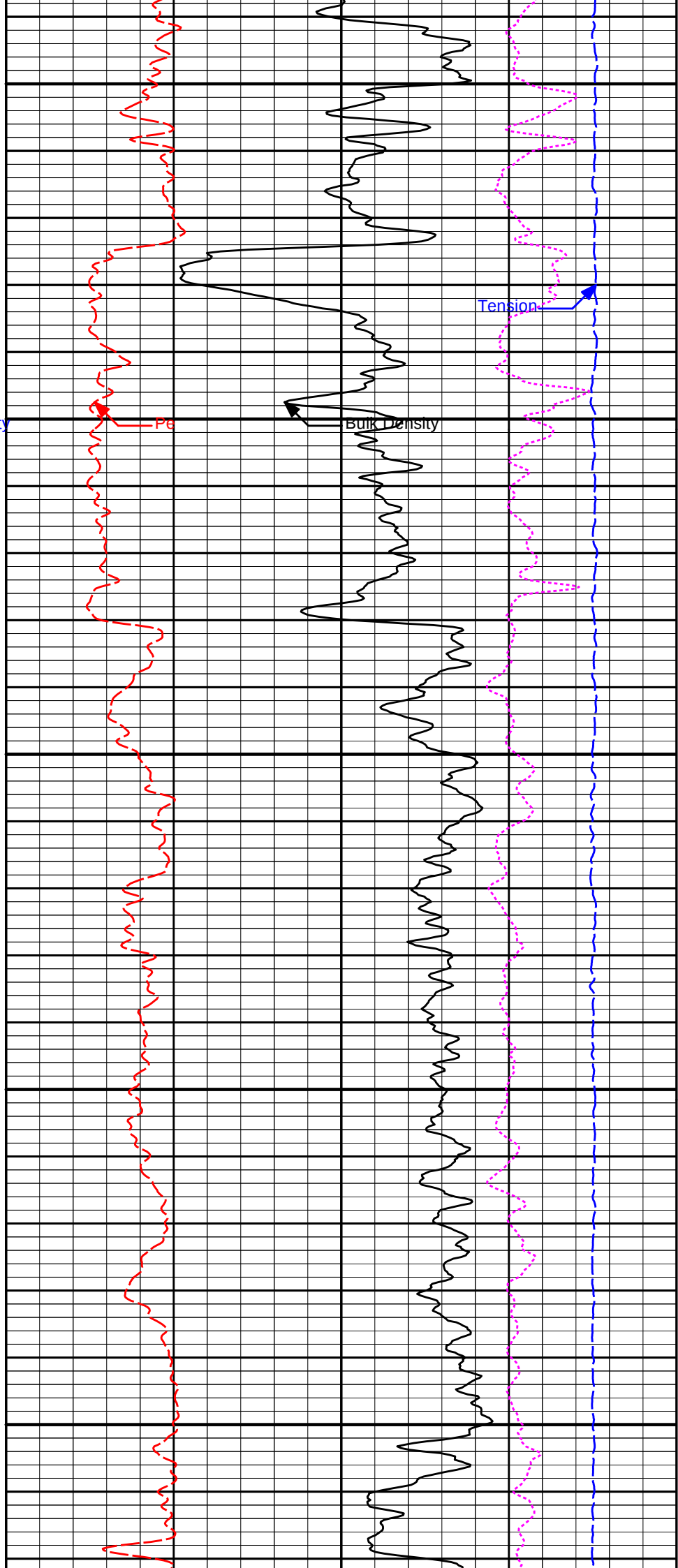
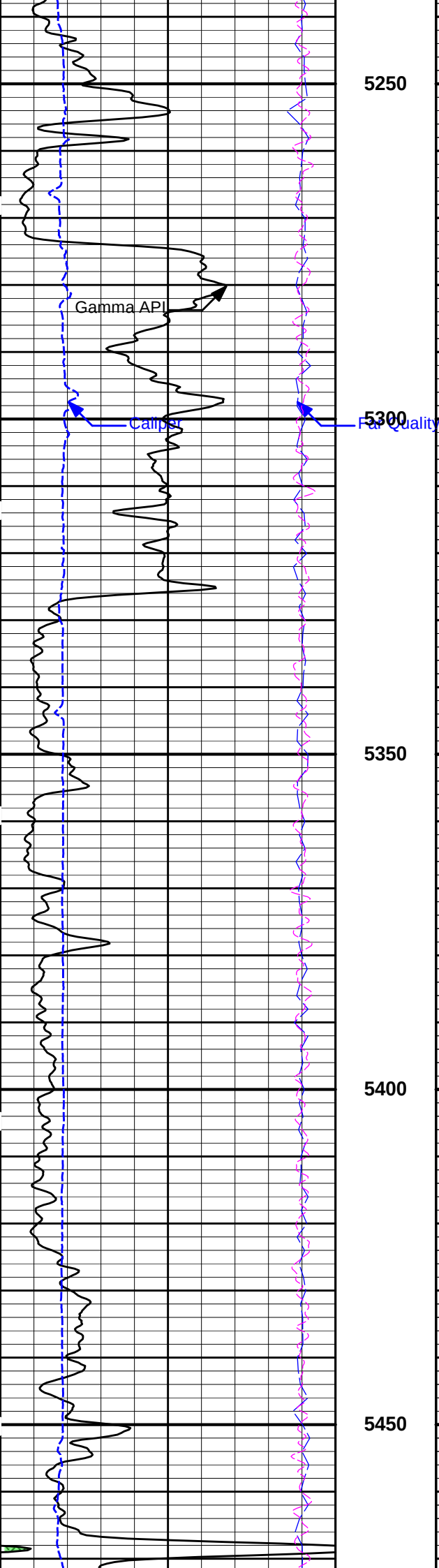
5 INCH MAIN LOG

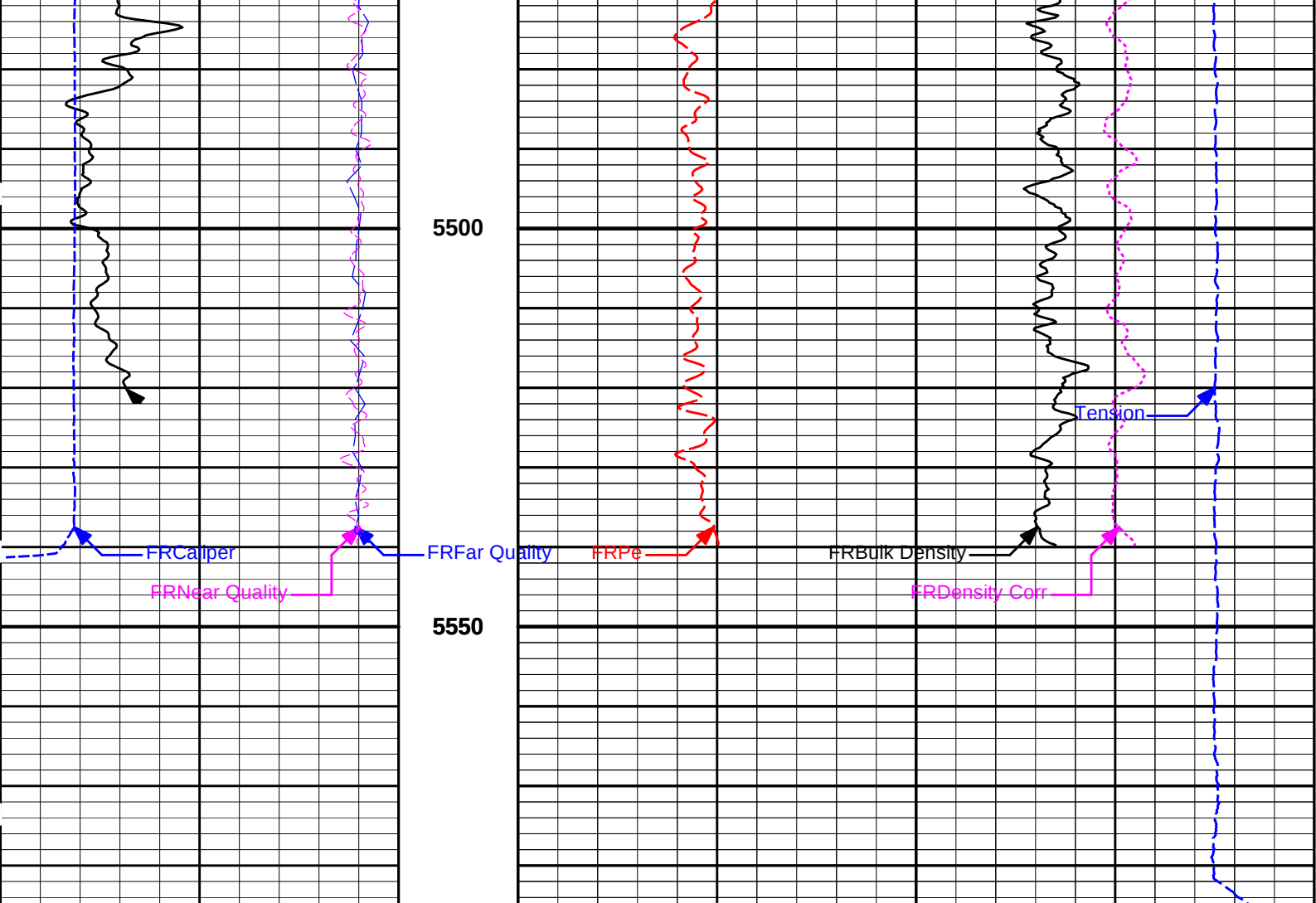
HALLIBURTON

Plot Time: 01-Oct-17 16:00:37
Plot Range: 5120 ft to 5585.33 ft
Data: MERIT_KELLS I-1\Well Based\REPEAT\
Plot File: \\PORO\1_Bulk_5_rptx

REPEAT SECTION







-18	Near Quality	2	1 : 240	0	Pe	10	15K	Tension	0
			ft					pounds	
18	Far Quality	-2	Tension Pull						
			10	0					
6	Caliper	16			2	Bulk Density			3
	inches					gram per cc			
0	Gamma API	150							
	api								

HALLIBURTON Plot Time: 01-Oct-17 16:00:39
Plot Range: 5120 ft to 5585.33 ft
Data: MERIT_KELLS I-1\Well Based\REPEAT\
Plot File: \\PORO\1_Bulk_5_rptx

REPEAT SECTION

HALLIBURTON

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	9.100	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	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	1.200	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	5578.00	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	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Density	
	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	SDLT	
	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	SDLT	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Limestone	
	DSNT	DSNO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
	DSNT	DNTT	Temperature Correction Type	Gradient	
	DSNT	DNTT	Top Zone Temperature Value	75.0	degF
	DSNT	DNBT	DSN Bottom Zone Temperature Value	142.0	degF
	DSNT	DTDT	Top Depth for Temperature Gradient Calculation (Measured Depth)	0	ft
	DSNT	DBDT	Bottom Zone Temperature Depth (Measured Depth)	5578	ft
	DSNT	DPRS	DSN Pressure Correction Type	Gradient	
	DSNT	DNTP	DSN Top Zone Pressure Value	14.70	psia
	DSNT	DNBP	DSN Bottom Zone Pressure Value	2640.00	psia
	DSNT	DTDP	Top Depth for Pressure Gradient Calculation (Measured Depth)	0	ft
	DSNT	DNDP	Bottom Zone Pressure Depth (Measured Depth)	5578	ft
	DSNT	SHCO	View More Correction Options	No	
	DSNT	UTVD	Use TVD for Gradient Corrections?	No	
	DSNT	LHWT	Logging Horizontal Water Tank?	No	
	DSNT	BHSM	Borehole Size Source Tool	SDLT	
	SDLT	CLOK	Process Caliper Outputs?	Yes	
	Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
	SDLT Pad	DNOK	Process Density?	Yes	
	SDLT Pad	DNOK	Process Density EVR?	No	

SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
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	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
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	1.19	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Centered	
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	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	
BOTTOM				

Data: MERIT_KELLS I-110001 GTET-DSN-SDL-FLX-BSAT-ACRTIDLE
Date: 01-Oct-17 14:58:14



CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11021139

Reference Calibration Date: 03-Aug-17 01:40:19

Engineer: WHITLOCK

Calibration Date: 23-Sep-17 12:22:06

Software Version: WL INSITE R5.0.5 (Build 8)

Calibration Version: 1

Calibrator Source S/N: TB79

Calibrator API Reference:222.00 api

Equivalent Calibrator API Reference:225.9 api

Measurement	Measured	Calibrated	Units
Background	18.8	18.6	api
Background + Calibrator	247.0	244.5	api
Calibrator	228.2	225.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11021139

Reference Calibration Date: 23-Sep-17 12:22:06

Engineer: WHITLOCK

Calibration Date: 27-Sep-17 10:26:06

Software Version: WL INSITE R5.0.5 (Build 8)

Calibration Version: 1

Calibrator Source S/N: TB79

Calibrator API Reference:222.00 api

Equivalent Calibrator API Reference:225.9 api

Field Verification	Shop	Field	Units
Background	18.6	20.9	api
Background + Calibrator	244.5	245.7	api

Shop	Field	Difference	Tolerance
225.9	224.8	1.1	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 11020487	Reference Calibration Date:	05-Jun-17 14:14:28
Engineer:	MICHAEL RICHTER	Calibration Date:	03-Aug-17 01:56:12
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: EL RENO
Reference value assigned to Tank: 56.100
Snow Block S/N: 12156883
Calibration Tank Water Temperature: 72 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.99837	0.99685	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):	0.2363	0.2358	0.0005	+/- 0.0020
Calibrated Ratio:	10.5757	10.5596	0.016	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0746	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:	DSNT - 11020487	Reference Calibration Date:	03-Aug-17 01:56:12
Engineer:	WHITLOCK	Calibration Date:	27-Sep-17 10:36:11
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Logging Source S/N: DSN-436
Snow Block S/N: 12156883

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0746	0.0691	-0.0054	+/- 0.0150

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - 11014296	Reference Calibration Date:	06-Nov-16 12:09:13
Engineer:	MICHAEL RICHTER	Calibration Date:	15-Mar-17 09:33:53
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4335.63	-4512.85	-7000.00 - -1000.00
Pad Gain	0.0003910	0.0004190	0.0002000 - 0.0006000
Arm Offset	-3121.03	-2559.45	-5000.00 - 3000.00
Arm Gain	0.0005117	0.0005078	0.000300 - 0.000700
Arm Power	-0.000003980	-0.000003959	-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)	1.94	2.00	0.06	+/- 0.20
Medium Ring (in)	3.57	3.75	0.18	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.31	6.50	0.19	+/- 0.20
Medium Ring (in)	8.08	8.25	0.17	+/- 0.20
Large Ring (in)	14.92	15.00	0.08	+/- 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:	SDLT - 11014296	Reference Calibration Date:	15-Mar-17 09:33:53
Engineer:	WHITLOCK	Calibration Date:	27-Sep-17 10:11:22
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.84	0.09	+/- 0.10
Ring Diameter	8.25	8.31	0.06	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

MICRO LOG SHOP CALIBRATION

Tool Name:	Microlog Pad - 11014296	Reference Calibration Date:	06-Jun-17 12:12:34
Engineer:	MICHAEL RICHTER	Calibration Date:	03-Aug-17 02:26:45
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1
Host Tool Name:	DSNT - 11020487		

CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.21	-0.43	-0.01	0.00	ohmm
Calibration Point #1	0.23	0.00	-0.01	0.00	ohmm
Calibration Point #2	20.26	20.00	20.00	20.00	ohmm
Internal Reference	19.85	19.59	20.01	20.01	ohmm

	Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
	Tool Zero	-0.14		-1.30		V
	Calibration Point #1	115.47		-2.05		V
	Calibration Point #2	5448.88		6908.76		V
	Internal Reference	5338.32		6913.91		V

MICRO LOG FIELD CHECK

Tool Name:

Microlog Pad - 11014296

Reference Calibration Date:

03-Aug-17 02:26:45

Engineer:

WHITLOCK

Calibration Date:

27-Sep-17 10:56:14

Software Version:

WL INSITE R5.0.5 (Build 8)

Calibration Version:

1

	Measurement	Micro Log Normal		Micro Log Lateral		
		Shop	Field	Shop	Field	Units
	Tool Zero	-0.43	-0.44	0.00	0.01	ohmm
	Internal Reference	19.59	19.46	20.01	19.88	ohmm
Summary						
	Signal	Shop	Field	Difference		Tolerance
	Microlog Normal	19.59	19.46	0.13		+/- 0.80
	Microlog Lateral	20.01	19.88	0.13		+/- 0.80

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:

SDLT Pad - 10809130

Reference Calibration Date:

25-May-17 12:11:12

Engineer:

MICHAEL RICHTER

Calibration Date:

03-Aug-17 02:19:19

Software Version:

WL INSITE R5.0.5 (Build 8)

Calibration Version:

1

Logging Source S/N: 5155GW

Aluminum Block S/N: EL RENO

Magnesium Block S/N: EL RENO MG

Density: 2.581g/cc

Density: 1.687g/cc

Pe: 3.170

Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0466	0.9648	0.90 - 1.10
Near Dens Gain	1.0202	0.9664	0.90 - 1.10
Near Peak Gain	1.0587	0.9808	0.90 - 1.10
Near Lith Gain	1.0474	0.9899	0.90 - 1.10
Far Bar Gain	1.0144	1.0063	0.90 - 1.10
Far Dens Gain	1.0018	0.9910	0.90 - 1.10
Far Peak Gain	0.9968	0.9885	0.90 - 1.10
Far Lith Gain	0.9703	0.9595	0.90 - 1.10
Near Bar Offset	-0.1512	0.5881	NONE
Near Dens Offset	0.0840	0.5517	NONE
Near Peak Offset	-0.2272	0.4091	NONE
Near Lith Offset	-0.1986	0.2702	NONE
Far Bar Offset	0.0686	0.1331	NONE
Far Dens Offset	0.1508	0.2380	NONE
Far Peak Offset	0.1449	0.2044	NONE
Far Lith Offset	0.2786	0.3450	NONE
Near Bar Background	815.93	813.79	700 - 1450
Near Dens Background	269.20	265.74	230 - 480
Near Peak Background	115.80	115.36	100 - 210
Near Lith Background	146.10	144.32	125 - 260
Far Bar Background	479.68	477.53	450 - 900
Far Dens Background	184.50	185.37	175 - 345
Far Peak Background	72.51	72.20	70 - 140
Far Lith Background	76.60	75.50	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.689	1.687	-0.002	+/- 0.015
Pe	2.521	2.561	0.040	+/- 0.150
ALUMINUM				
Density (g/cc)	2.574	2.580	0.006	+/- 0.01500
Pe	3.085	3.134	0.049	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0002	+/- 0.0110	-0.0029	+/- 0.0140
Magnesium Block	-0.0013	+/- 0.0110	-0.0010	+/- 0.0140
Aluminum Block	-0.0009	+/- 0.0110	-0.0014	+/- 0.0140
Resolution	8.91	6.00 - 11.50	9.49	6.00 - 11.50
Internal Verifier(B+D+P+L)	1339	1200 - 2700	811	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 Pad - 10809130	Reference Calibration Date:	03-Aug-17 02:19:19
Engineer:	WHITLOCK	Calibration Date:	27-Sep-17 11:00:05
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Pad Temperature: 70.0 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1339.219	1341.398	2.179	14.801
Far (B+D+P+L) cps	810.608	809.039	-1.569	15.737
Near Resolution	8.91	8.94	0.030	0.50
Far Resolution	9.49	9.33	-0.160	1.00

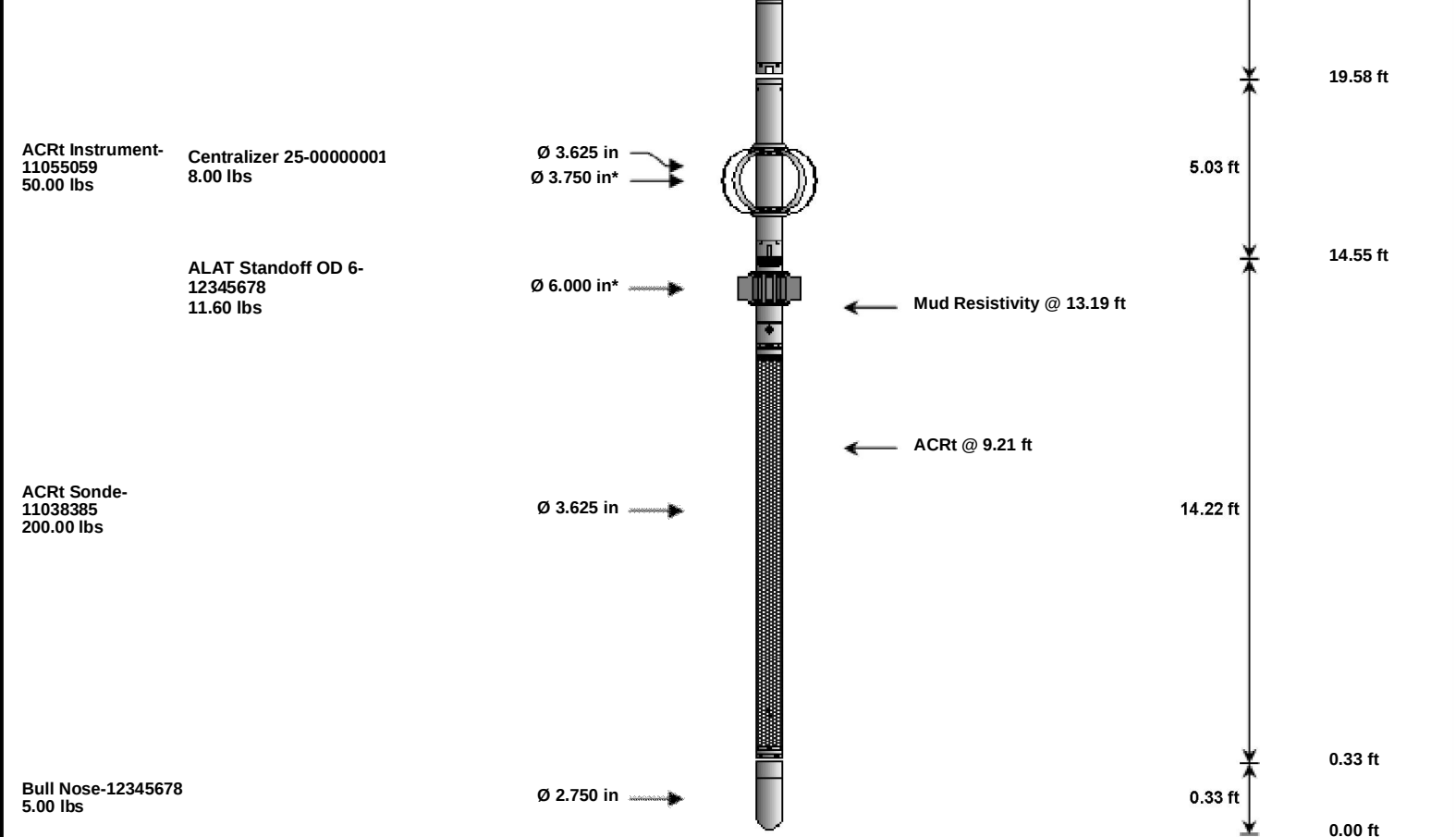
PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	ACRt Sonde - 11038385	Reference Calibration Date:	12-Sep-17 13:48:00
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	12-Sep-17 13:58:19
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11055059		

TYPICAL GAIN RANGE

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length	
CH_HOS_I 37.50 lbs		Ø 2.750 in →		Temperature @ 76.74 ft	2.25 ft	76.99 ft	
XOHD-11021555 20.00 lbs		Ø 2.750 in → Ø 3.625 in →				0.95 ft	74.74 ft
SP Sub-10904995 60.00 lbs		Ø 3.625 in →			← SP @ 72.01 ft	3.74 ft	73.79 ft
					← Z-Accelerometer @ 69.60 ft		70.05 ft
GTET-11021139 165.00 lbs		Ø 3.625 in →				8.52 ft	
					← GammaRay @ 63.99 ft		61.53 ft
DSNT-11020487 174.00 lbs	DSN Decentralizer-11023947 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →			← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft	9.69 ft	
							51.84 ft
SDLT-11014296 360.00 lbs	SDLT Pad-10809130 65.00 lbs Microlog Pad-11014296 8.00 lbs RAM-Cs137-10948154 1.00 lbs	Ø 4.500 in → Ø 4.500 in* → Ø 4.750 in* → Ø 0.800 in* →			Microlog @ 44.03 ft SDL Caliper @ 43.84 ft SDL @ 43.83 ft	10.81 ft	
							41.03 ft
IQ Flex-10973274 140.00 lbs		Ø 3.625 in →				5.67 ft	
							35.36 ft
	Centralizer 25-00000002 8.00 lbs	Ø 3.750 in* →					
BSAT-10939049 300.00 lbs		Ø 3.625 in →			Receiver Array @ 26.84 ft Sonic Receivers @ 26.84 ft	15.77 ft	



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	CH_HOS_I	37.50	2.25	74.74	300.00	
XOHD	Hostile to Dits Cross Over	11021555	20.00	0.95	73.79	300.00	
SP	SP Sub	10904995	60.00	3.74	70.05	300.00	
GTET	Gamma Telemetry Tool	11021139	165.00	8.52	61.53	60.00	
DSNT	Dual Spaced Neutron	11020487	174.00	9.69	51.84	60.00	
DCNT	DSN Decentralizer	11023947	6.60	5.13	* 55.17	300.00	
SDLT	Spectral Density Tool	11014296	360.00	10.81	41.03	60.00	
SDLP	Density Insite Pad	10809130	65.00	2.55	* 43.24	60.00	
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	10948154	1.00	0.80	* 43.47	300.00	
MICP	Microlog Pad	11014296	8.00	1.00	* 43.53	60.00	
IQF	IQ Flex tool	10973274	140.00	5.67	35.36	300.00	
BSAT	Borehole Sonic Array Tool	10939049	300.00	15.77	19.58	60.00	
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08	* 32.44	300.00	
ACRt	Array Compensated True Resistivity Instrument Section	11055059	50.00	5.03	14.55	120.00	
OBCEN	Centralizer - 25 in. Overbody	00000001	8.00	2.08	* 15.70	300.00	
ACRt	Array Compensated True Resistivity Sonde Section	11038385	200.00	14.22	0.33	120.00	
ALATS	Array Laterolog Tool OD 6 Standoff	12345678	11.60	1.00	* 13.19	60.00	
BLNS	Bull Nose	12345678	5.00	0.33	0.00	300.00	
Total			1,619.70	76.99			
* Not included in Total Length and Length Accumulation.							
Data: MERIT_KELLS I-1\0001 GTET-DSN-SDL-FLX-BSAT-ACRT\IDLE				Date: 01-Oct-17 13:37:57			

COMPANY	MERIT ENERGY COMPANY, LLC		
WELL	KELLS I-1		
FIELD	WILDCAT		
COUNTY	HASKELL	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	

