

COMPANY WELL FIELD/BLOCK COUNTY STATE				MERIT ENERGY COMPANY WENU 505 EUBANK NORTH HASKELL KANSAS			
COMPANY WELL FIELD/BLOCK COUNTY STATE				MERIT ENERGY COMPANY WENU 505 EUBANK NORTH HASKELL KANSAS			
Permanent Datum Log measured from Drilling measured from				GL KB KB 12.0 ft above perm. Datum Elev. 3077.0 ft D.F. G.L. 3089.0 ft 3077.0 ft			
Date Run No. Depth - Driller Depth - Logger Bottom - Logged Interval Top - Logged Interval Casing - Driller Casing - Logger Bit Size Type Fluid in Hole Density PH Source of Sample Rm @ Meas. Temperature Rmf @ Meas. Temperature Rmc @ Meas. Temperature Source Rmf Rm @ BHT Time Since Circulation Time on Bottom Max. Rec. Temperature Equipment Recorded By Witnessed By				24-Nov-19 ONE 5580.0 ft 5579.0 ft 5541.00 ft 3800.00 ft 8.625 in 1750.0 ft 7.875 in Water Based Mud 9.20 g/cc 10.50 pH MUDPIT 1.13 ohmm 1.02 ohmm 1.25 ohmm MEAS 0.68 ohmm 4.0 hr 24-Nov-19 16:00 129.00 degF 12147634 JORGE ORLANDO PEREZ MARTIN LANGE			

Fold here

Service Ticket No.: 906120593						API No.: 15081222070000						PGM Version: WL INSITE R6.2.7 (Build 7)									
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		N/A		1.5" S.O.		N/A	
Rmc @ Meas. Temp.				@				@						I-12109517							
Source Rmf		Rmc										S-12109515									
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.		11958947		Serial No.		10747686		Serial No.		10951315		Serial No.		10993115							
Model No.		GTET		Model No.		BSAT		Model No.		SDLT		Model No.		DSNT							
Diameter		3.625"		No. of Cent.		2		Diameter		5.5"		Diameter		3.625"							
Detector Model No.		T-102		Spacing		EVEN		Log Type		GAM-GAM		Log Type		NEU-NEU							
Type		SCINT						Source Type		CS137		Source Type		AM241BE							
Length		8"		LSA [Y/N]				Serial No.		5471GW		Serial No.		DSN-424							
Distance to Source		N/A		FWDA [Y/N]				Strength		1.78 Ci		Strength		15.0 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 uSec/ft		30	-10	2.71 gr/cc		30	-10	LIME				

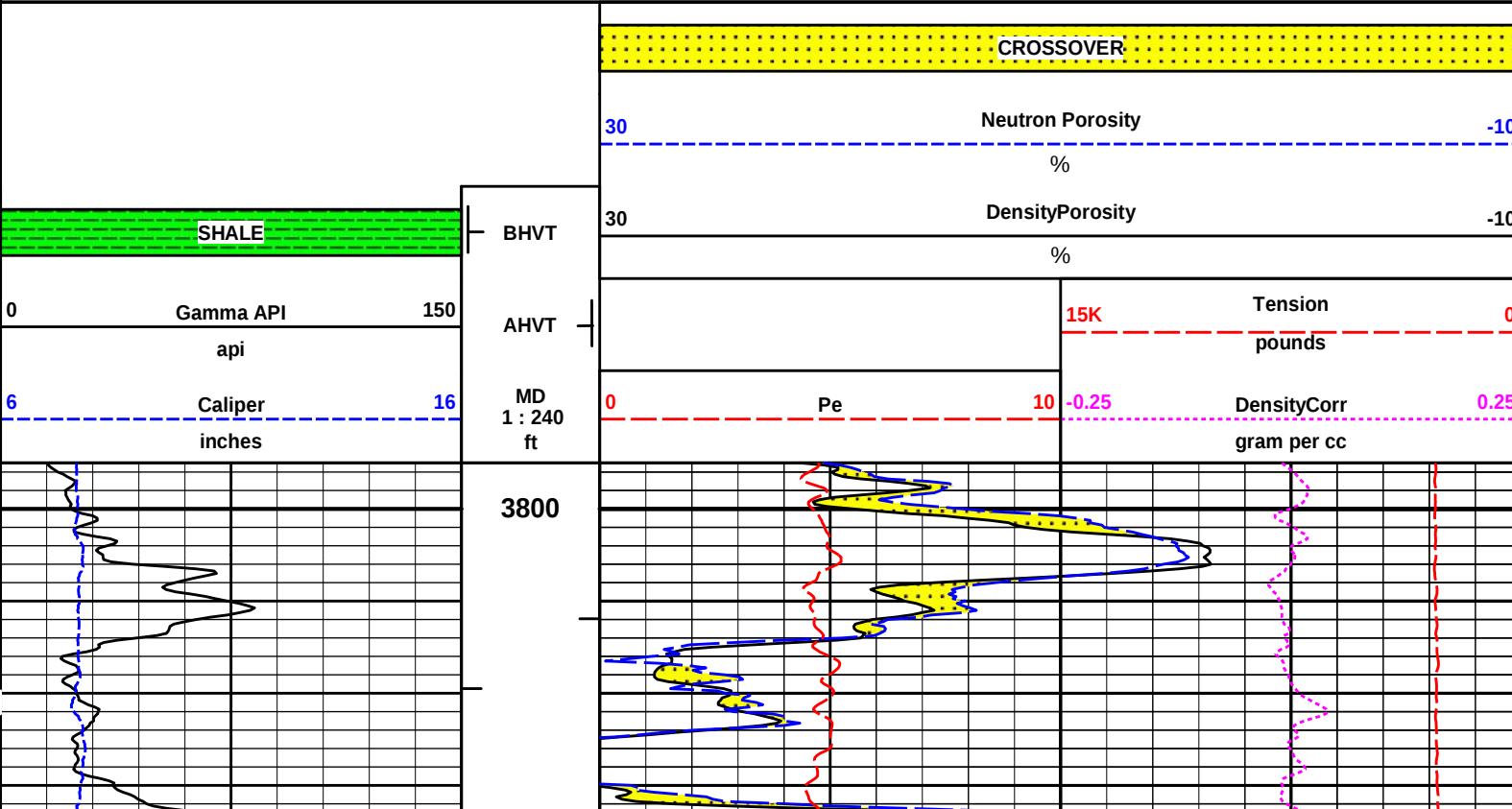
DIRECTIONAL INFORMATION															
Maximum Deviation @									KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING															
CHLORIDES REPORTED AT 1800 ppm															
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.															
HALLIBURTON															

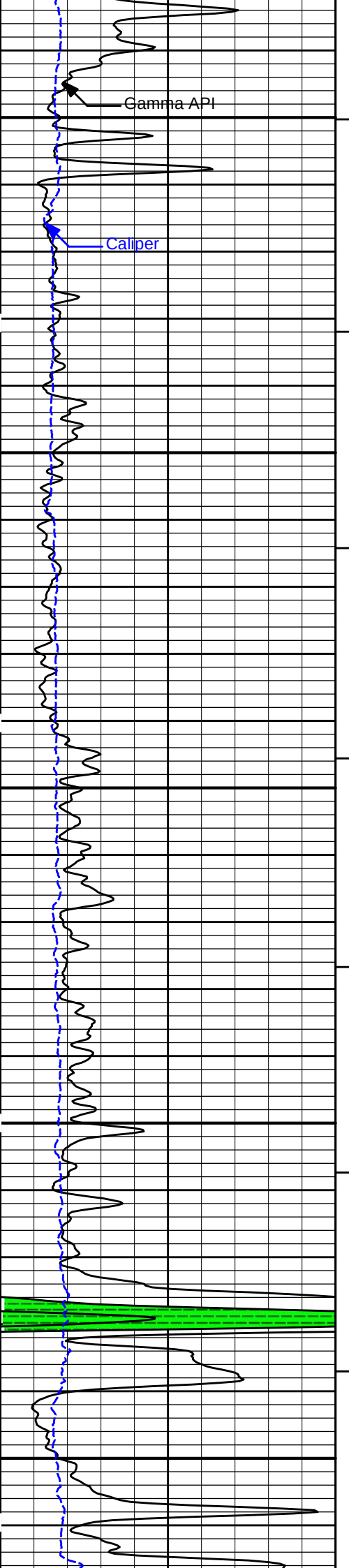
HALLIBURTON

Plot Time: 24-Nov-19 17:23:33
Plot Range: 3795 ft to 5584.25 ft
Data: WENU-505\Well Based\DETAILS\
Plot File: \\POROSITY\Porosity_Q_5_MAIN_LIB

5 INCH MAIN LOG

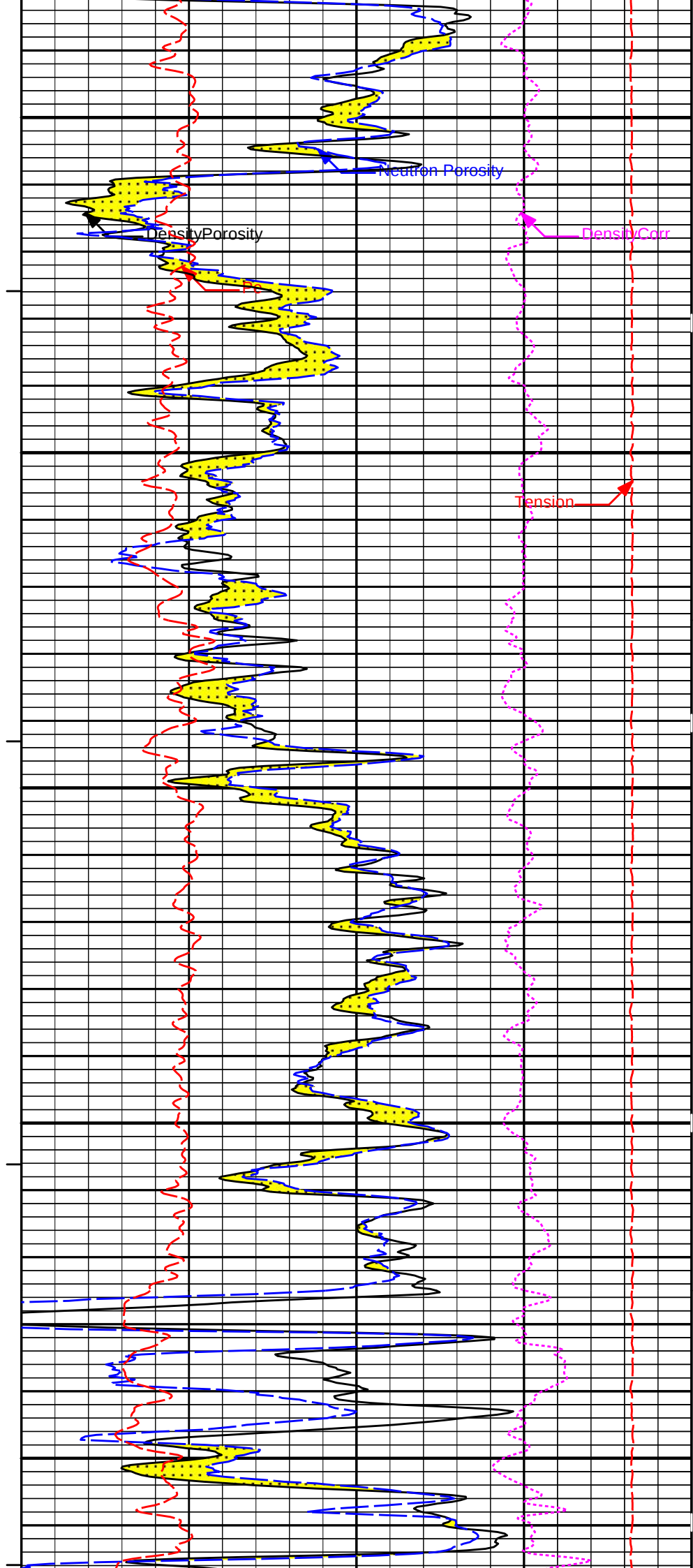
MEASURED DEPTH
MAIN SECTION 5" PER 100'

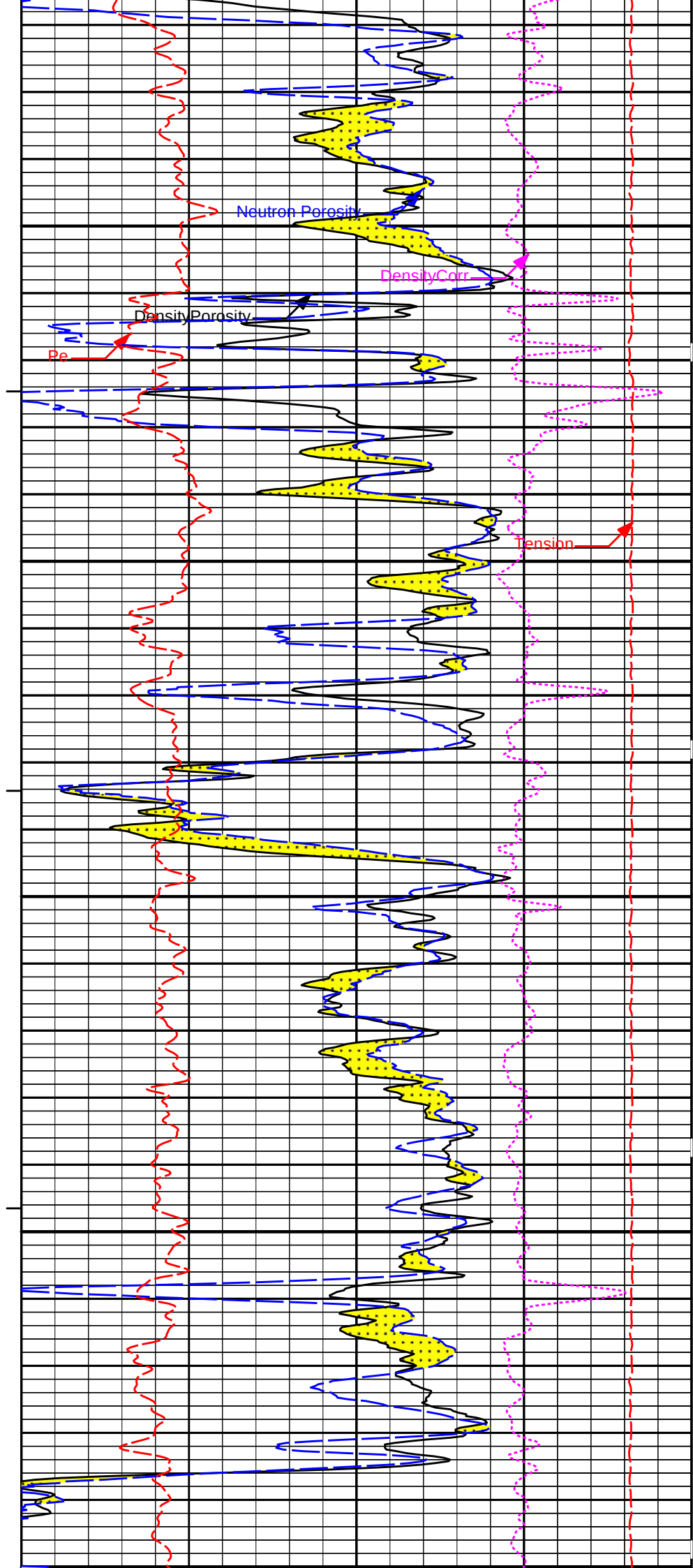
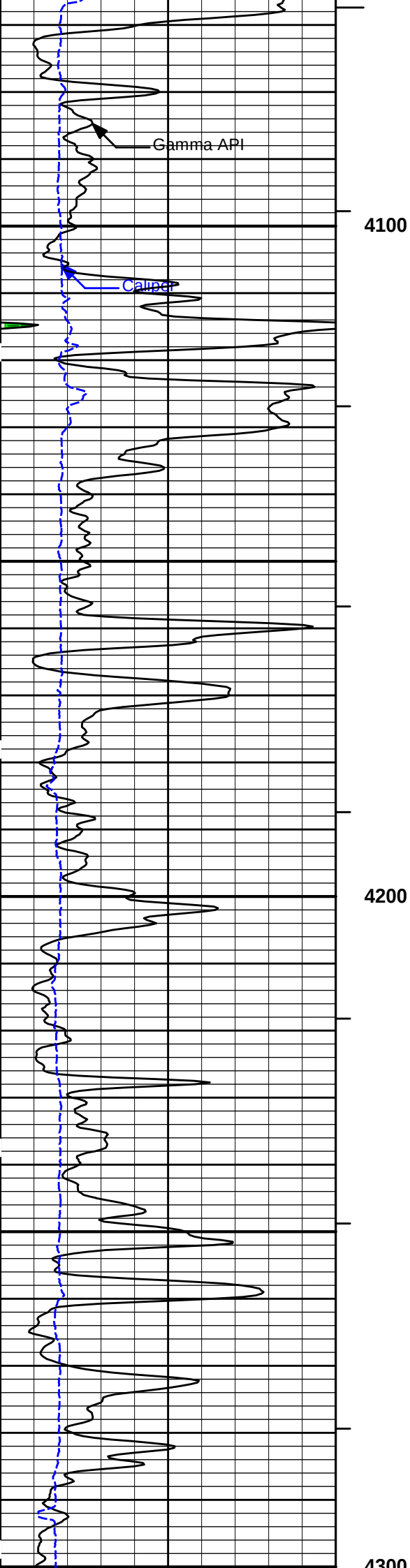


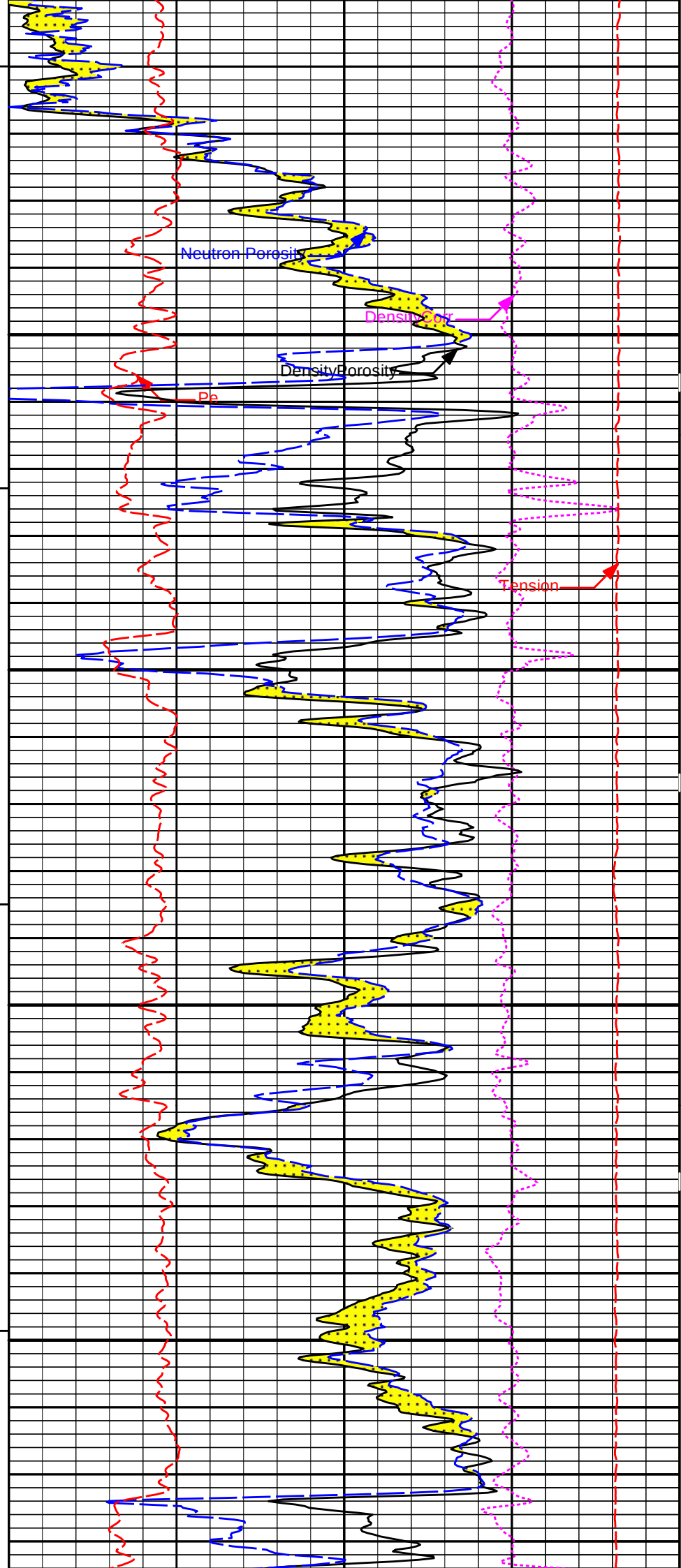
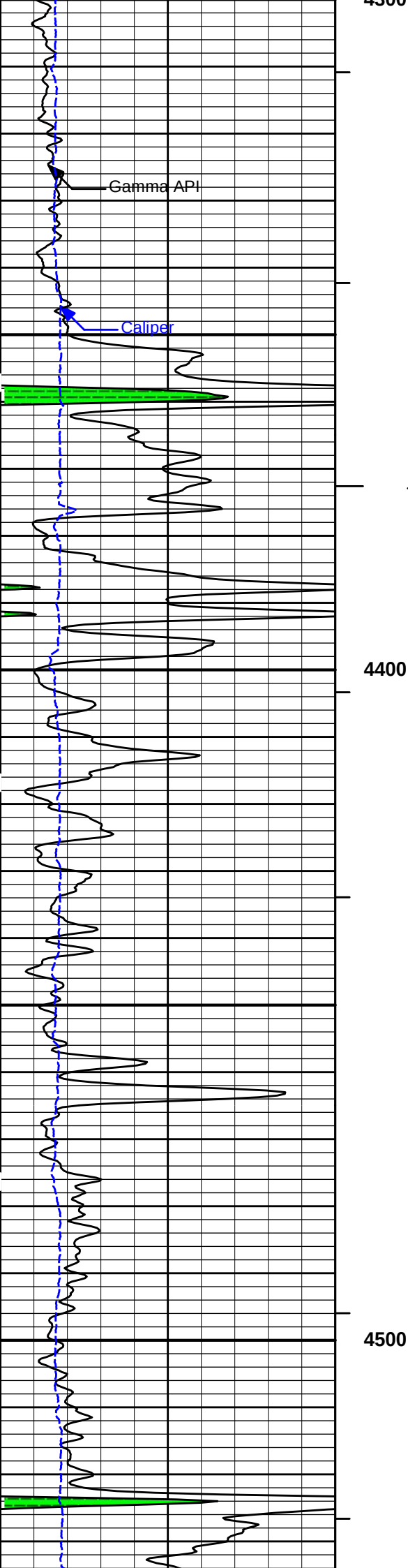


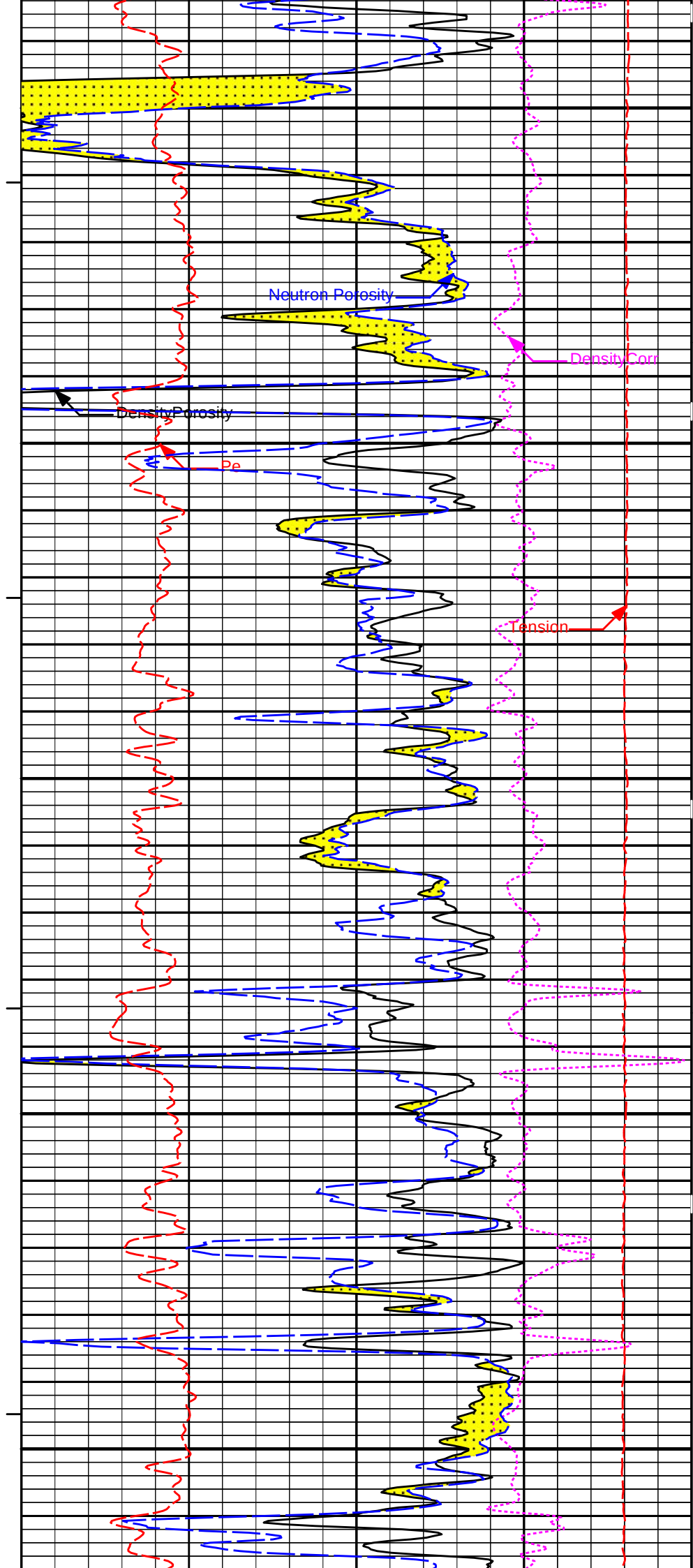
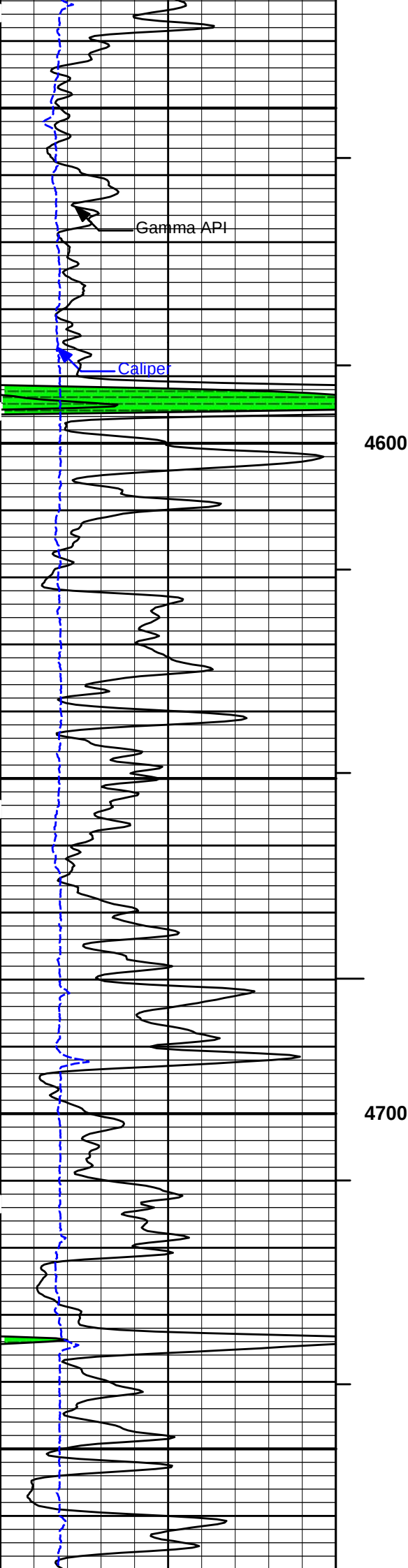
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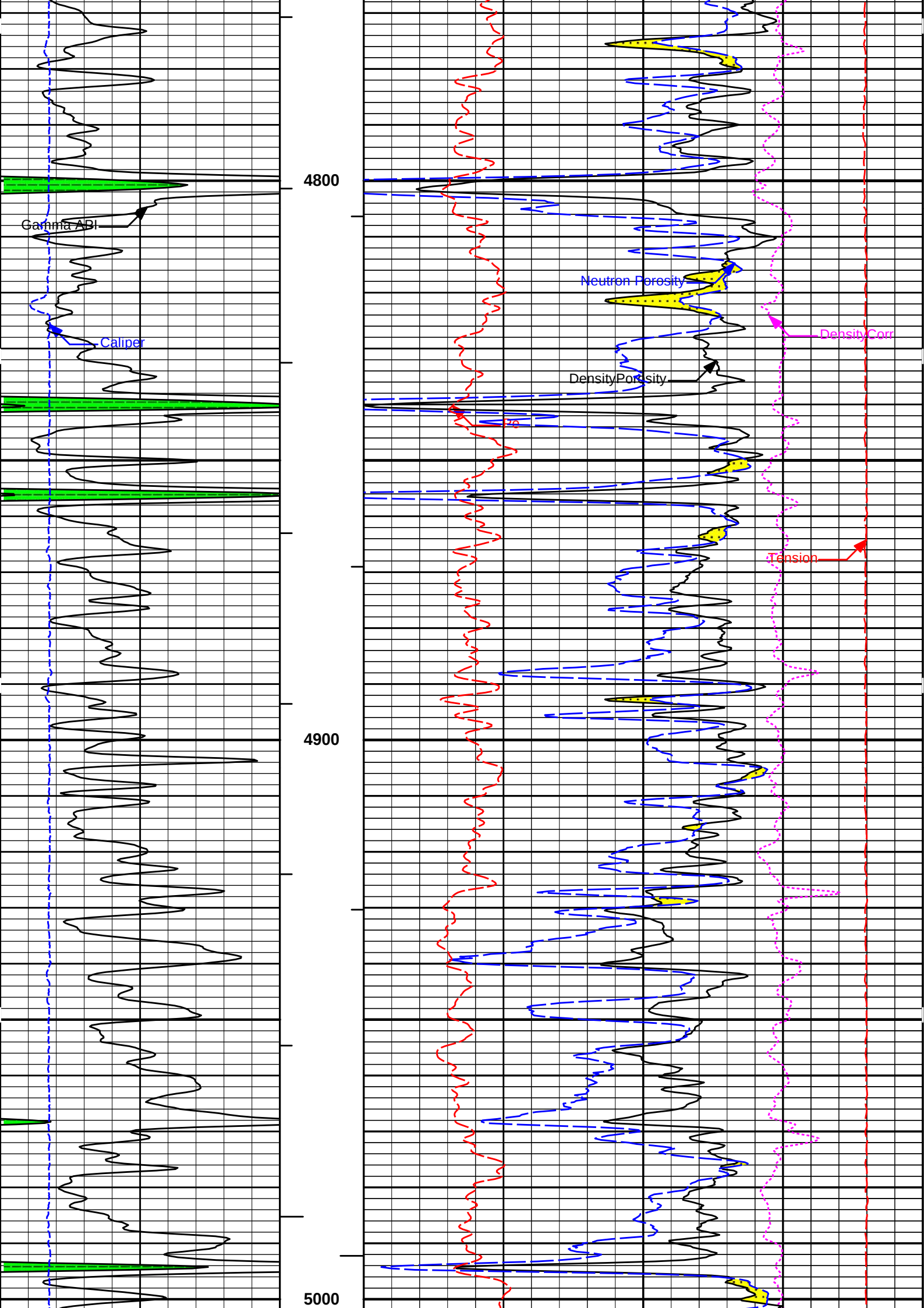
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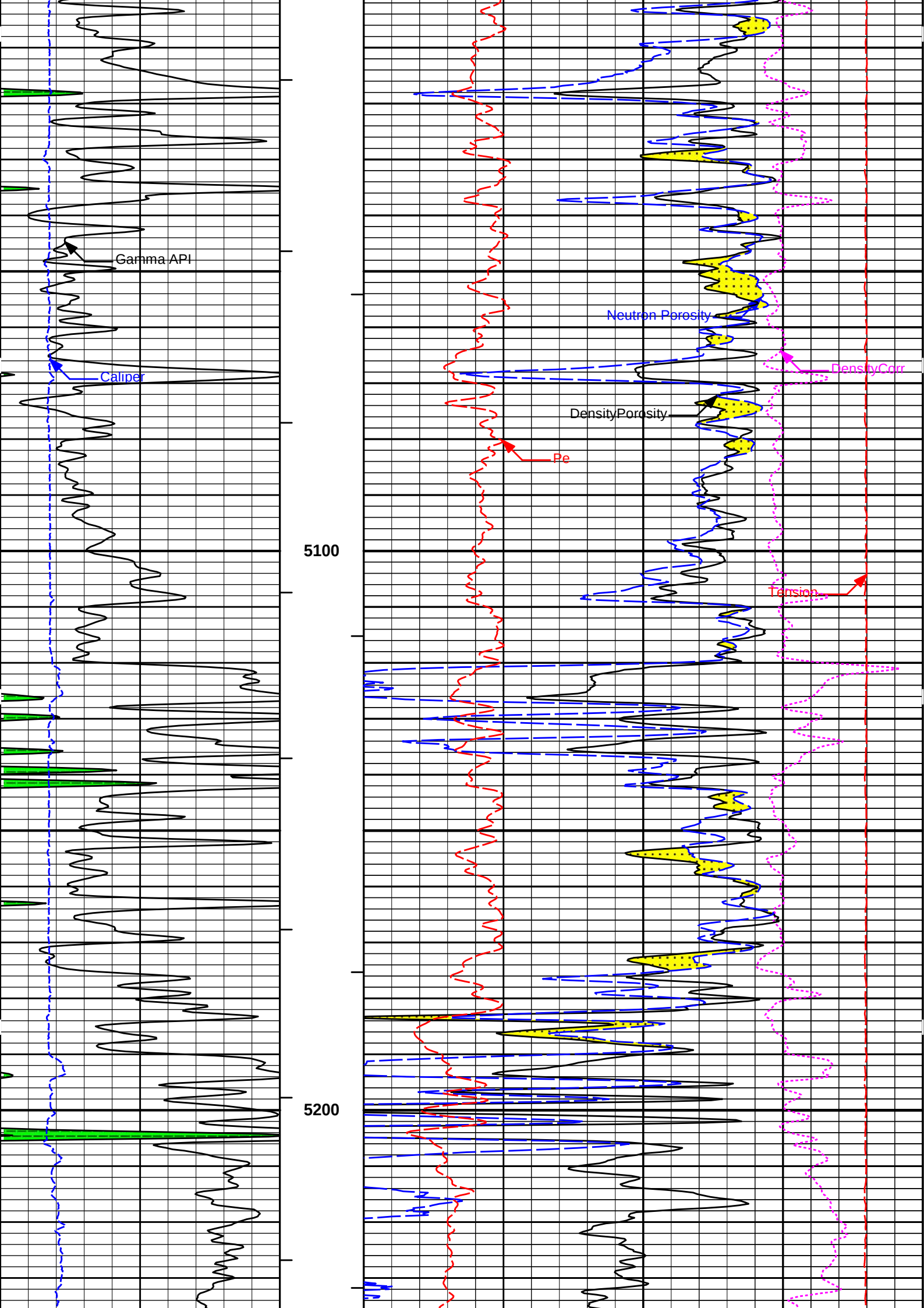


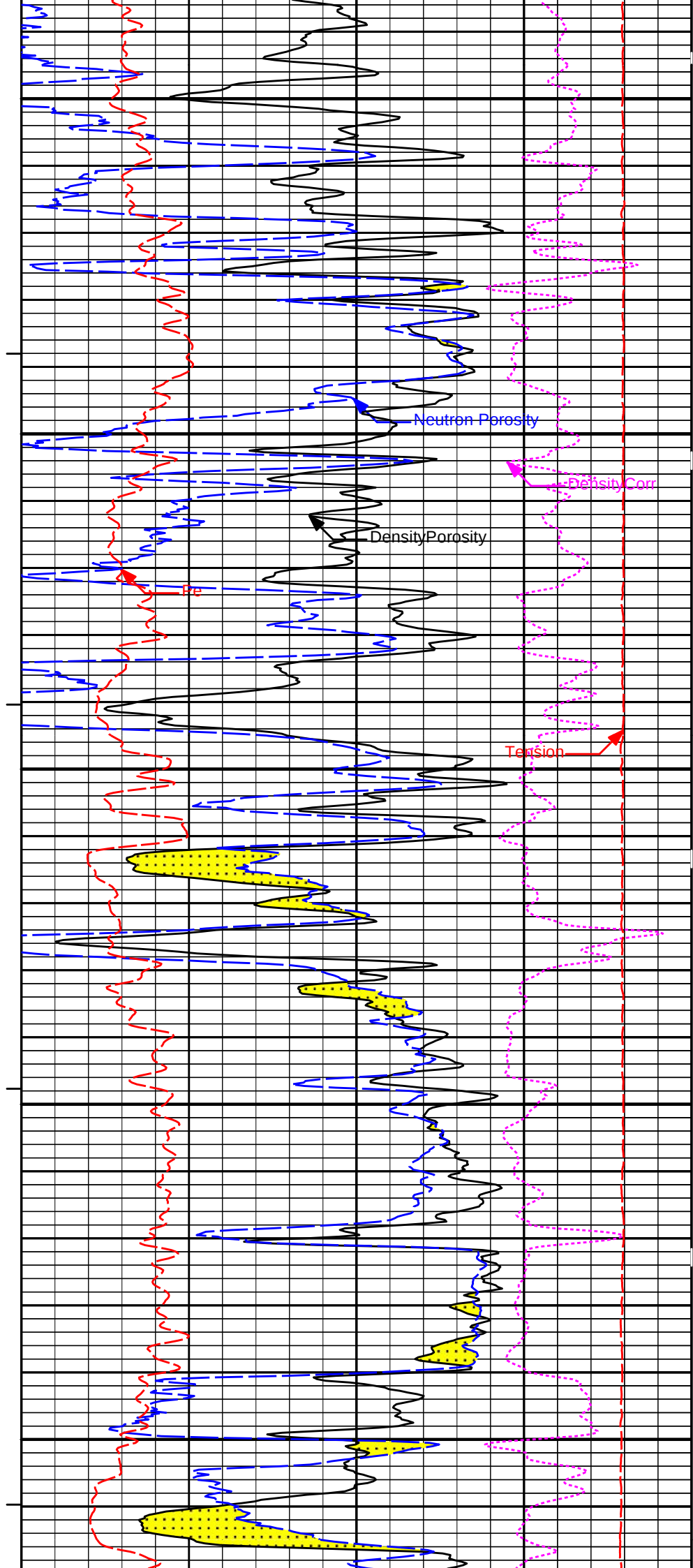
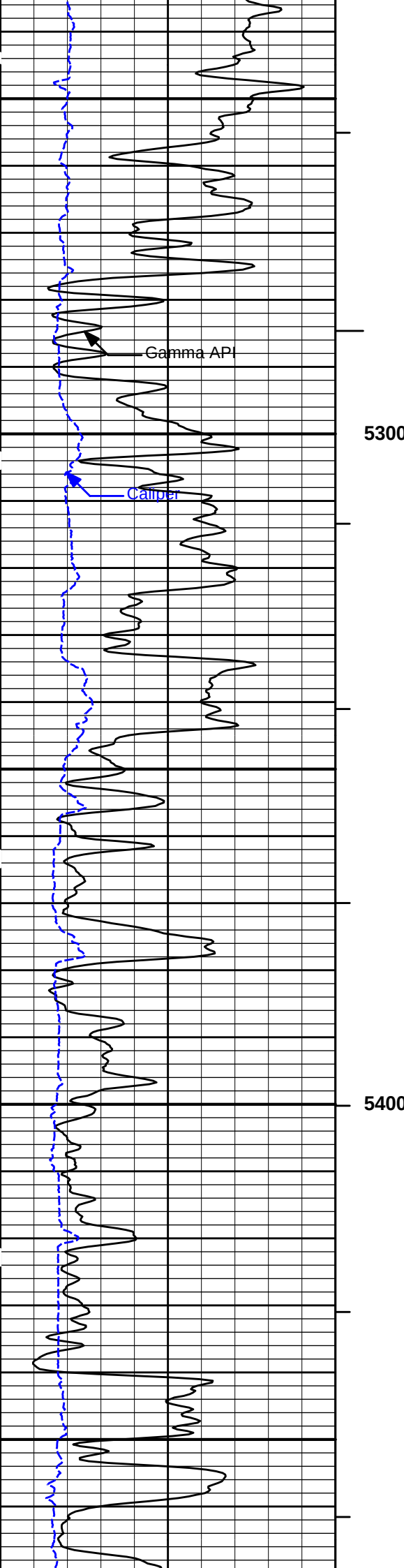


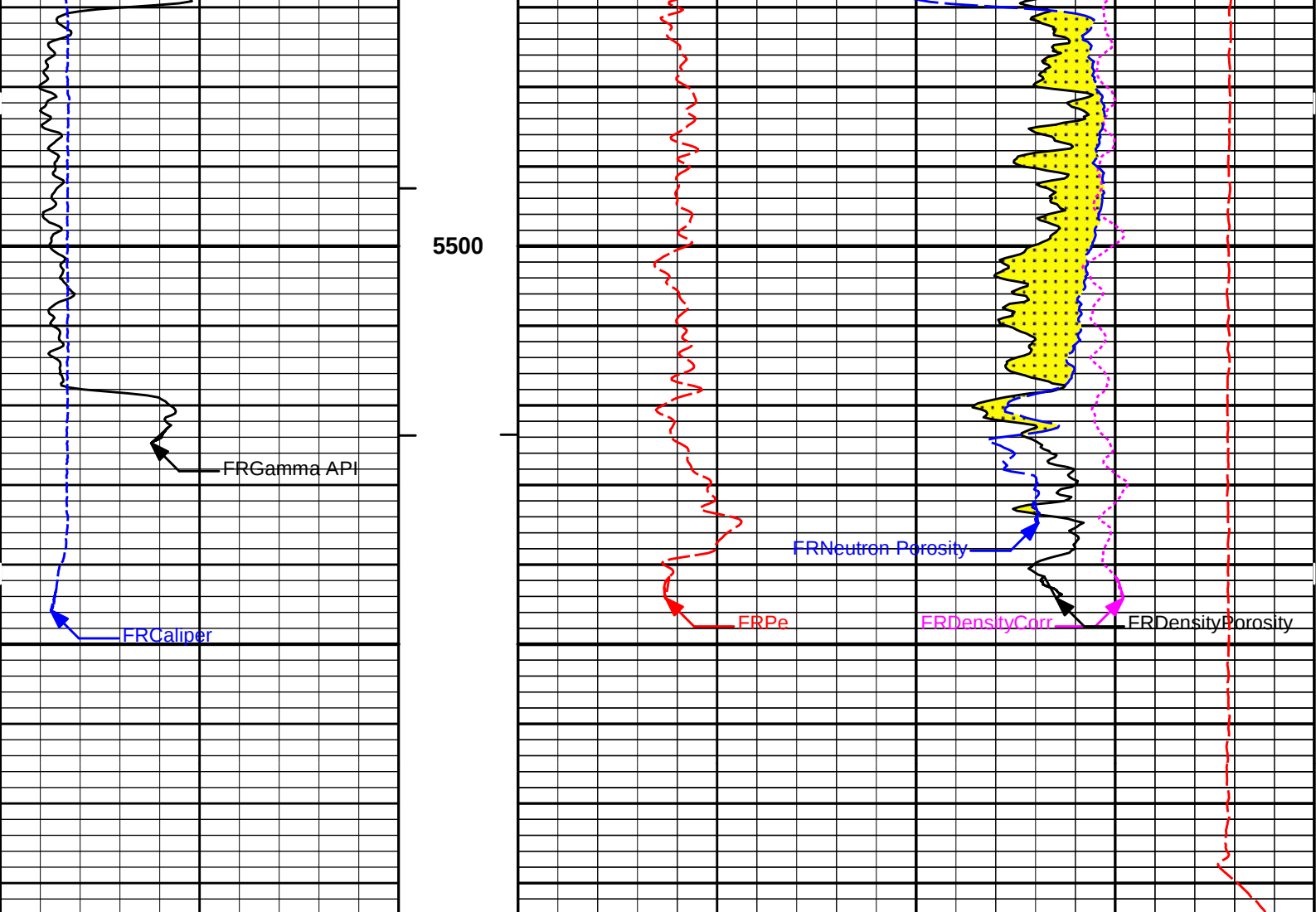












6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				
					CROSSOVER				

HALLIBURTON

Plot Time: 24-Nov-19 17:23:37
Plot Range: 3795 ft to 5584.25 ft
Data: WENU-505\Well Based\DETAILS\
Plot File: \\POROSITY\Porosity_5_MAIN_LIB

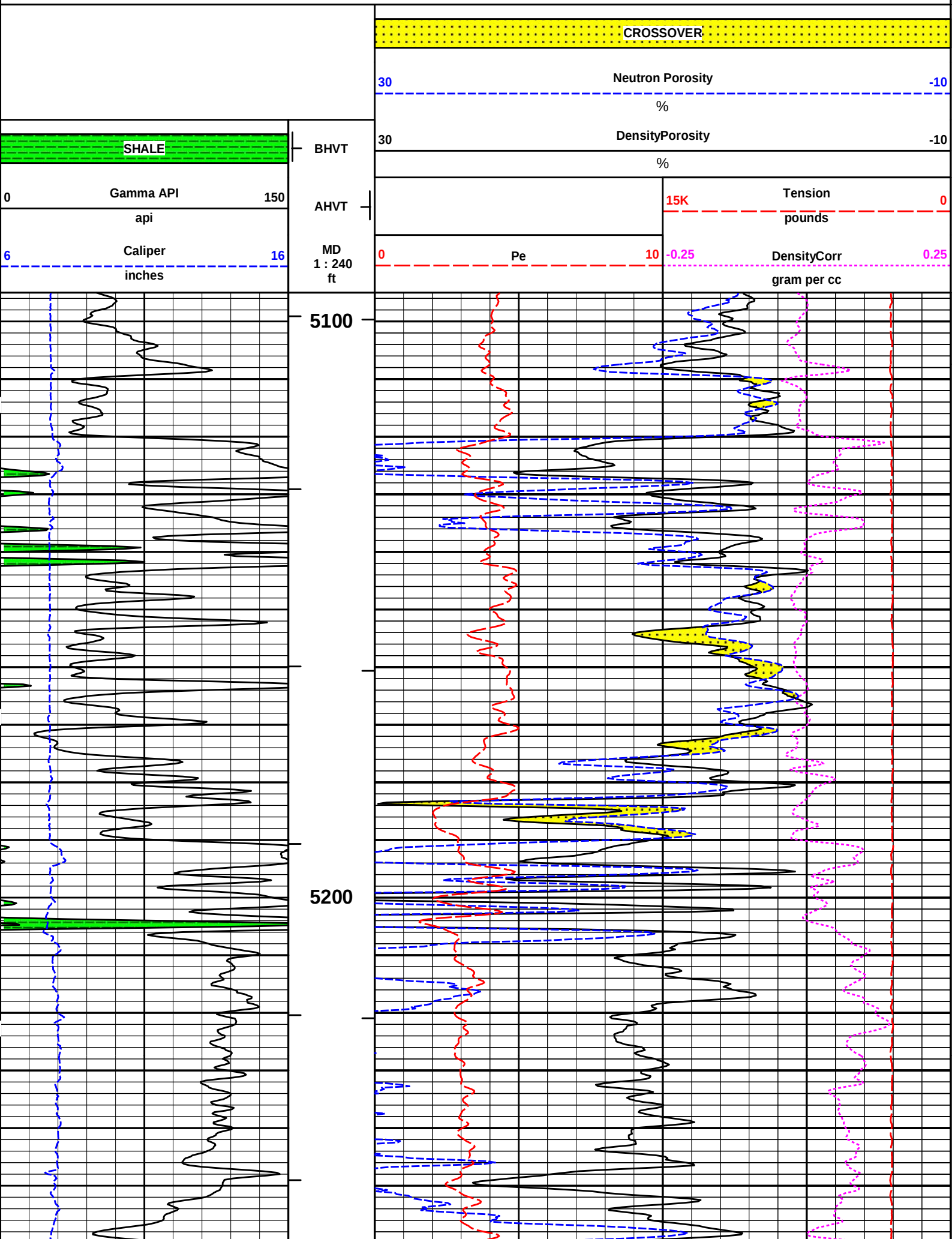
5 INCH MAIN LOG

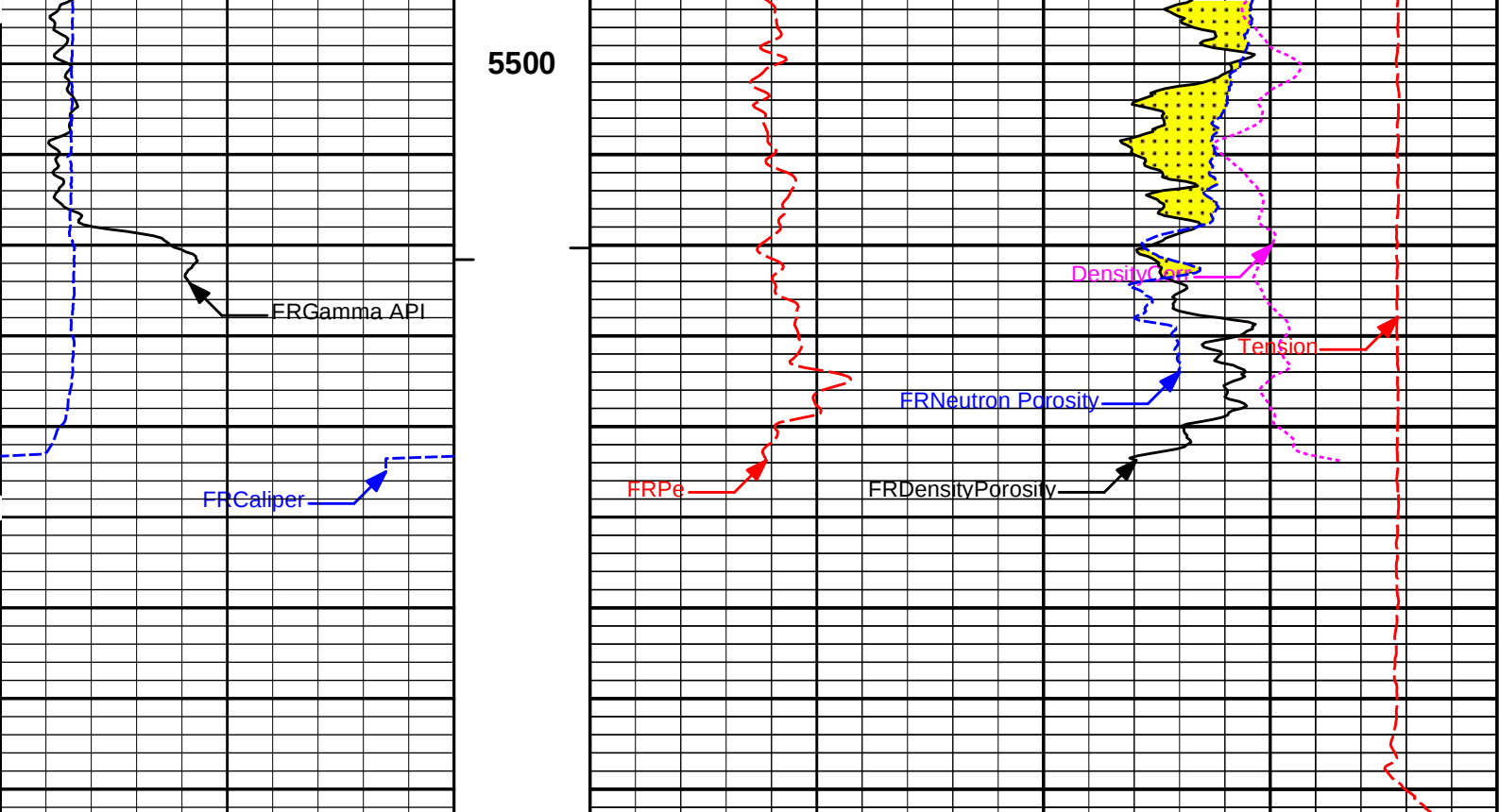
MEASURED DEPTH
MAIN SECTION 5" PER 100'

HALLIBURTON

Plot Time: 24-Nov-19 17:23:38
Plot Range: 5095 ft to 5582.92 ft
Data: WENU-505\Well Based\REPEAT\
Plot File: \\POROSITY\Porosity_5_MAIN_LIB

REPEAT SECTION





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

HALLIBURTON

Plot Time: 24-Nov-19 17:23:39
Plot Range: 5095 ft to 5582.92 ft
Data: WENU-505\Well Based\REPEAT\
Plot File: \\POROSITY\Porosity_Q_5_REP_LIB

REPEAT SECTION

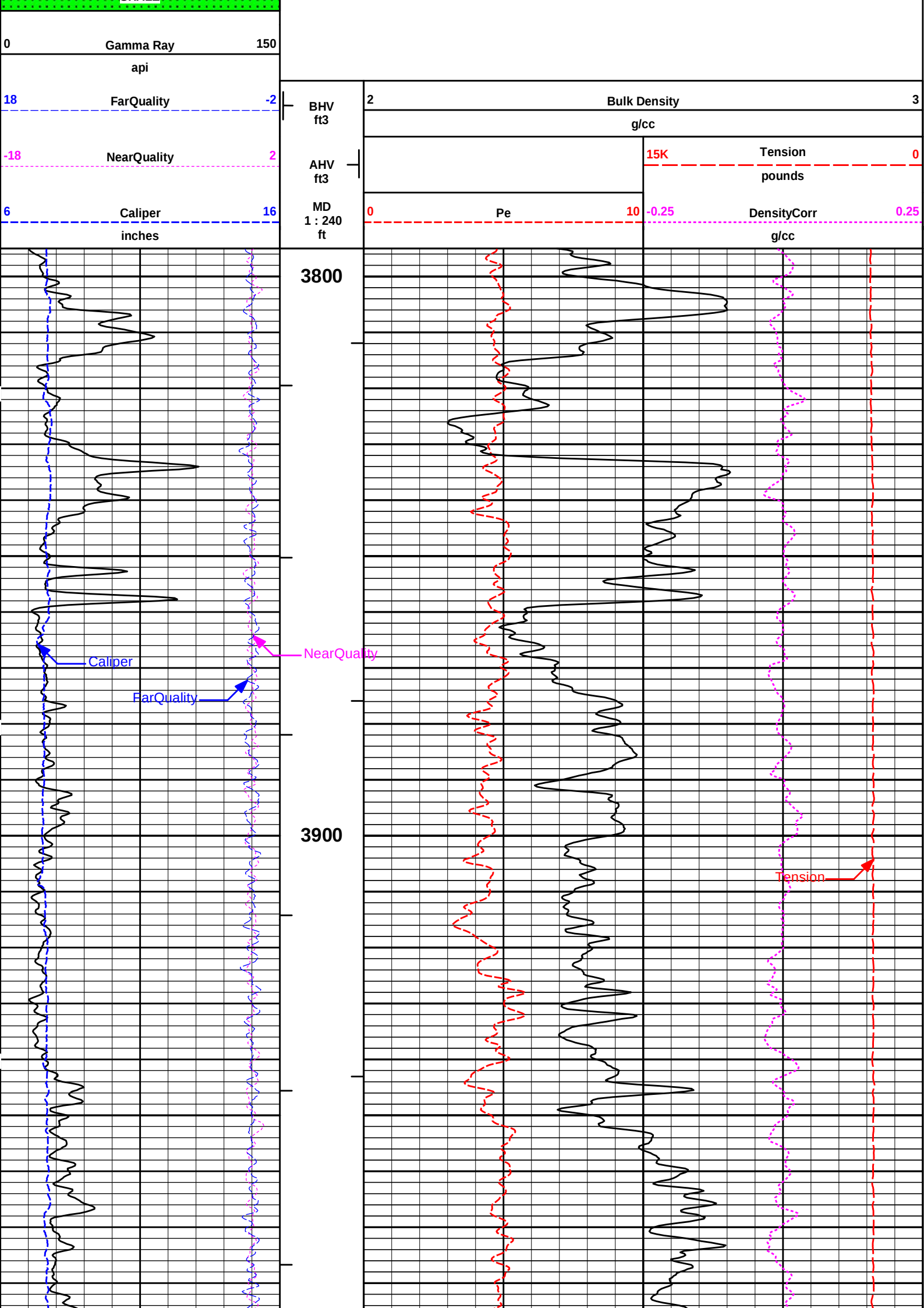
HALLIBURTON

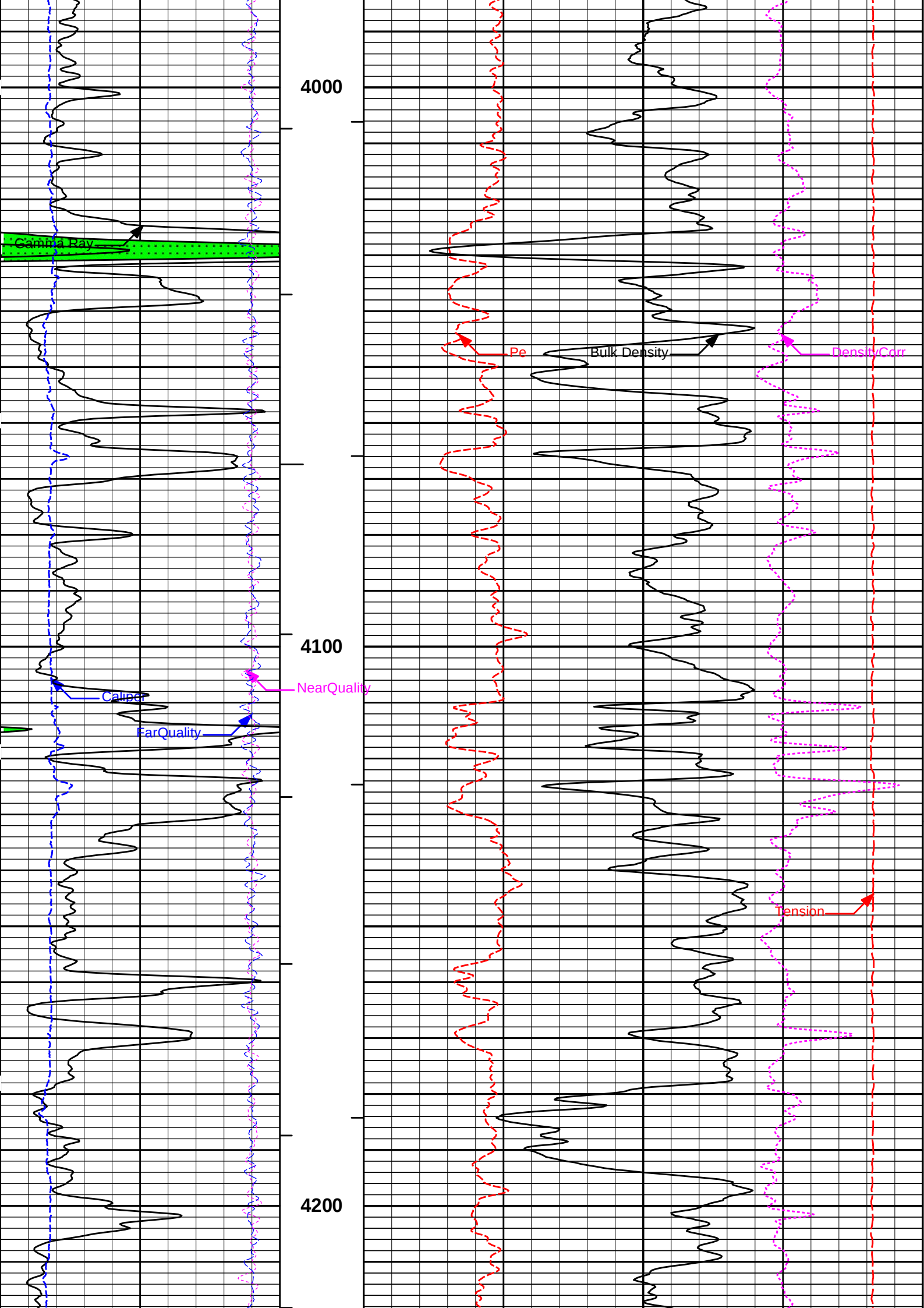
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Plot Range: 3795 ft to 5584.25 ft
Data: WENU-505\Well Based\DETAILS\
Plot File: \\LOCAL-WENU-505\Well Based\POROSITY\BULKD_5_MAIN_LIB

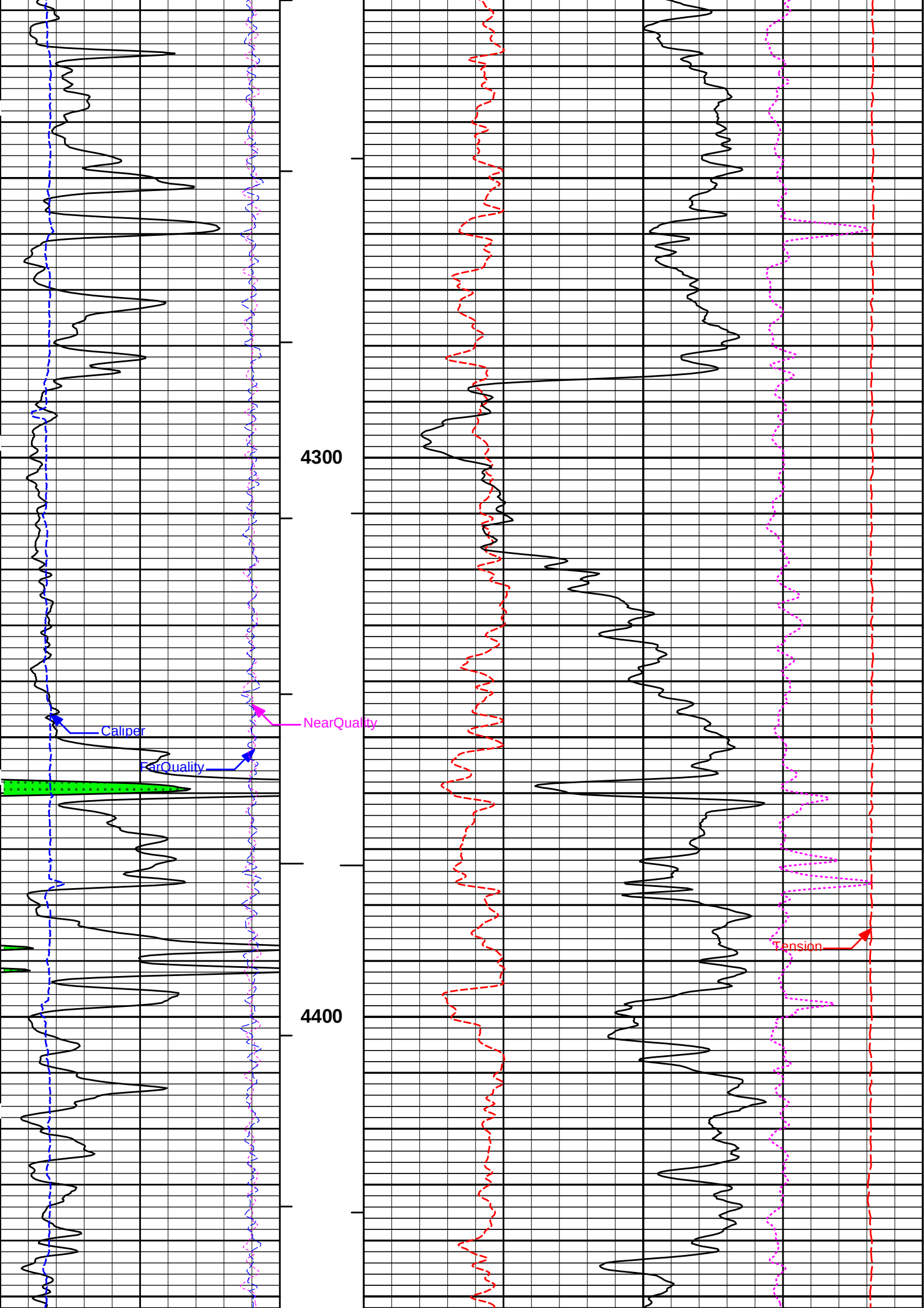
5 INCH MAIN LOG

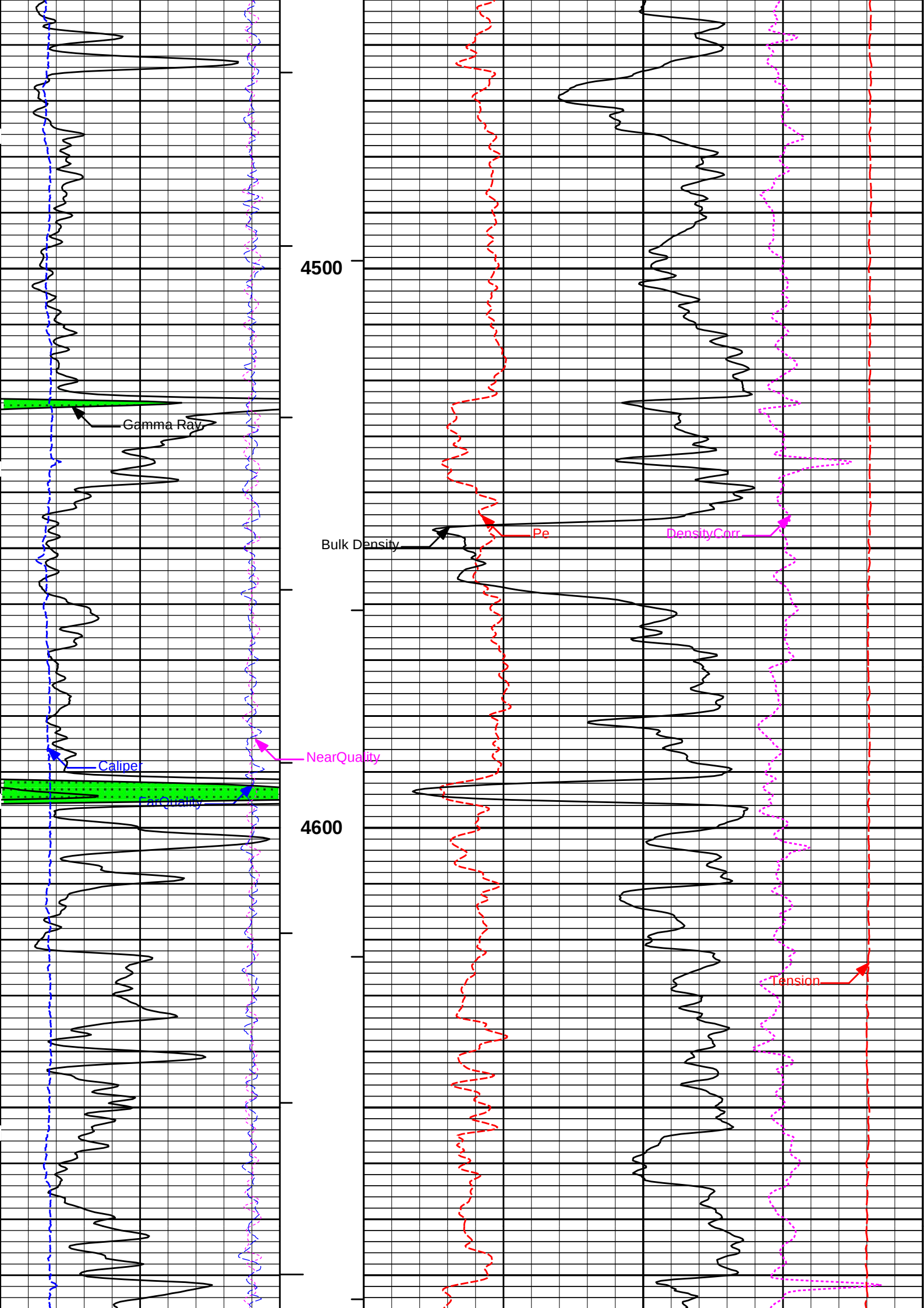
MEASURED DEPTH
MAIN SECTION 5" PER 100'

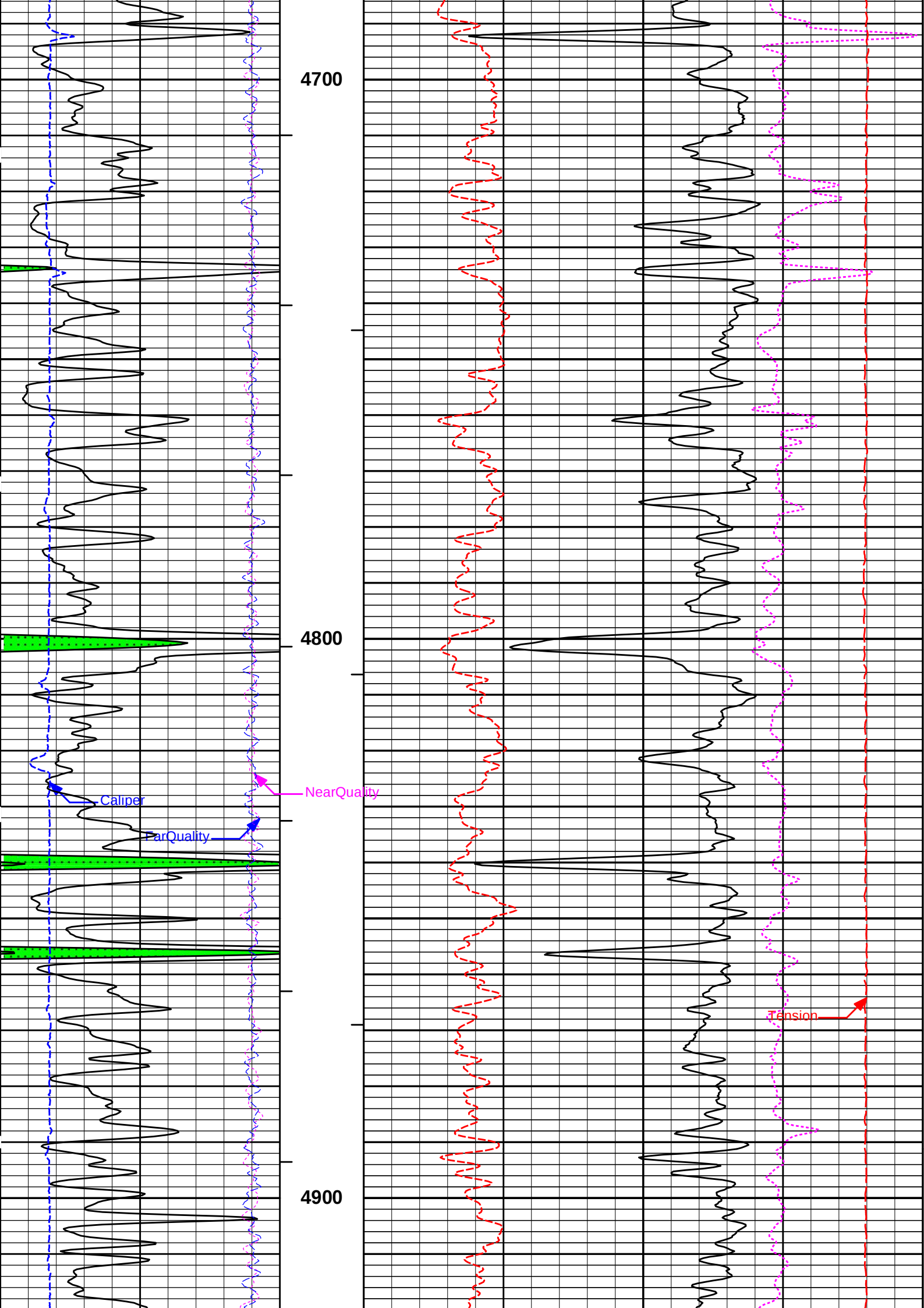


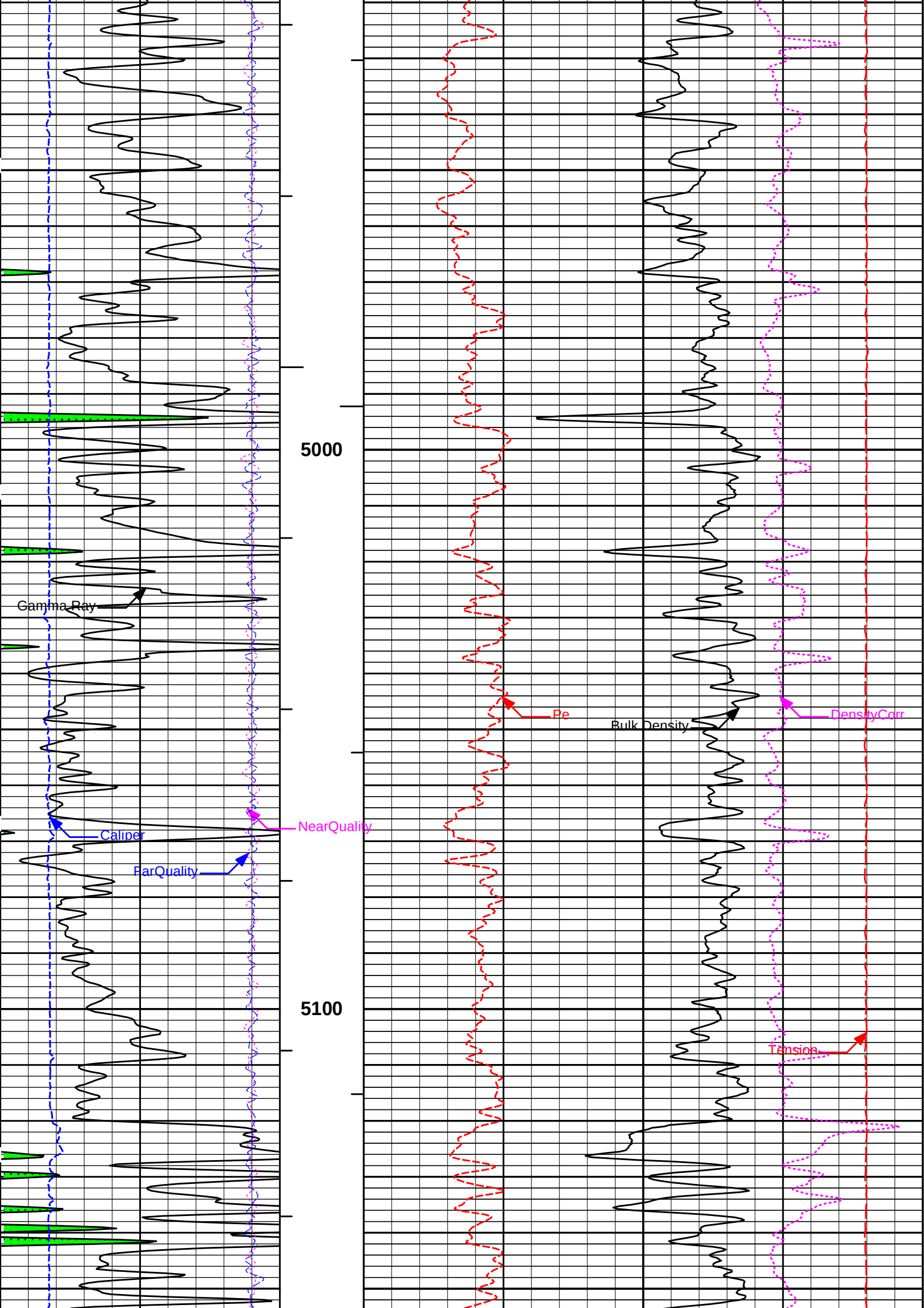


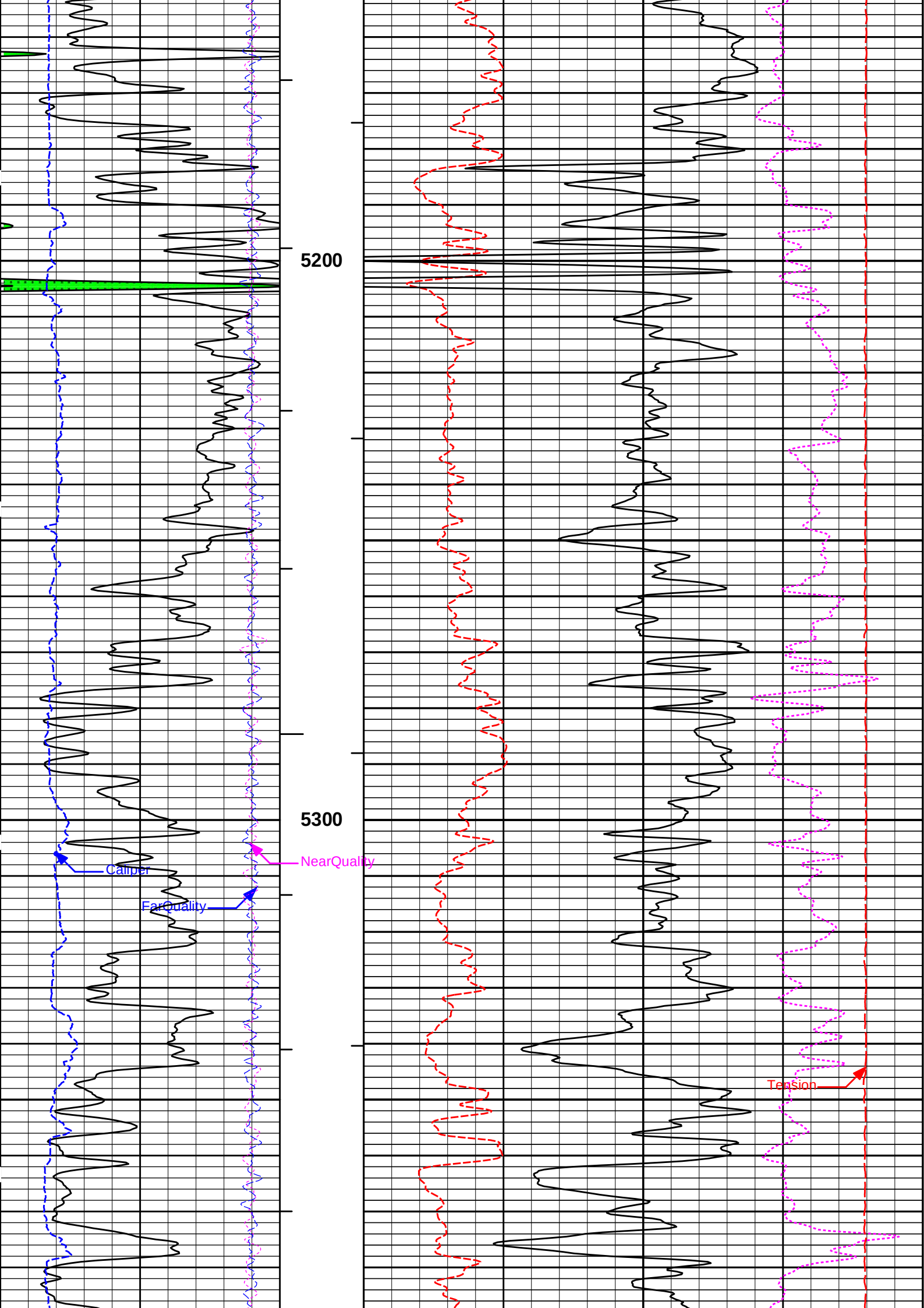


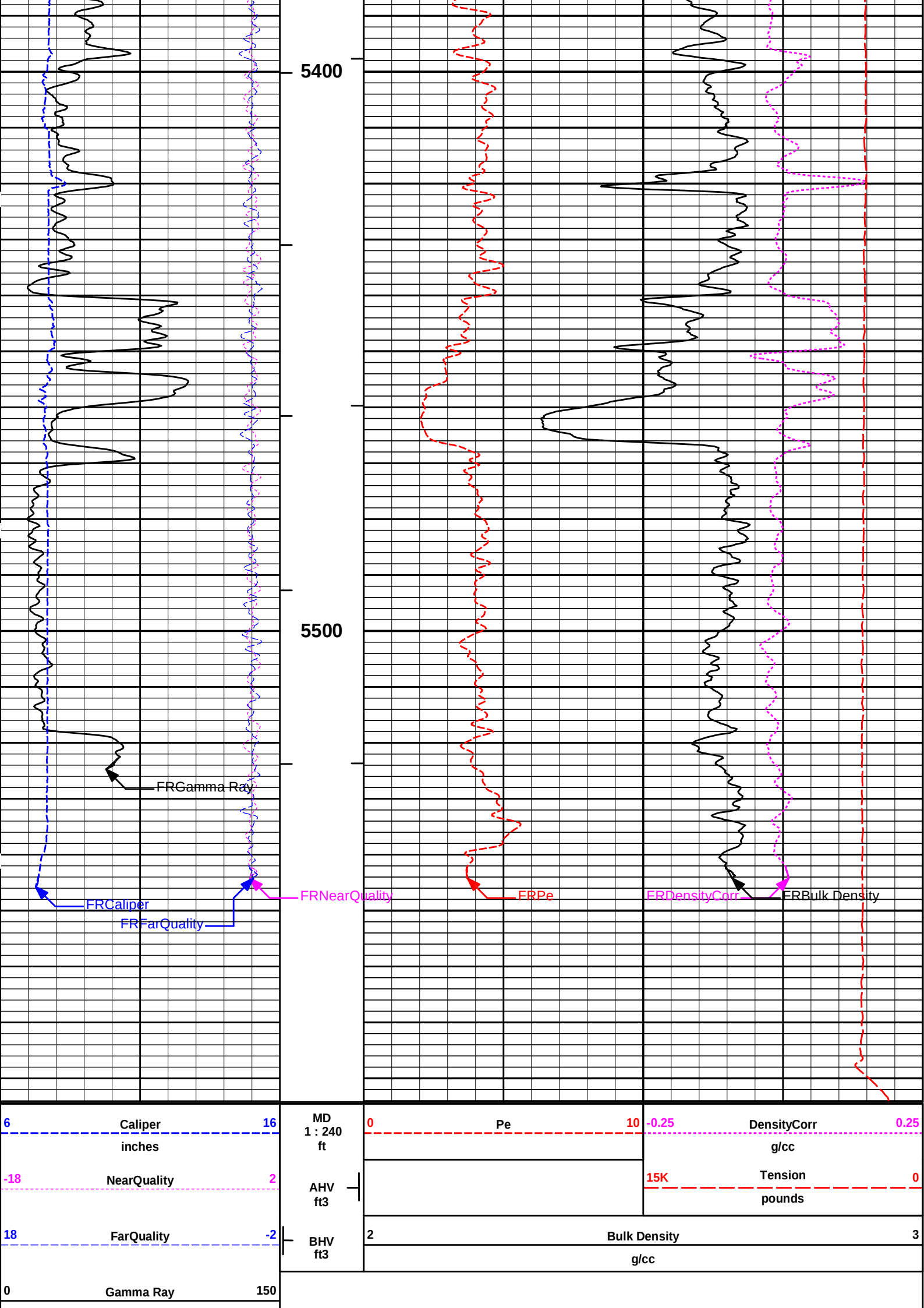












api

SHALE

HALLIBURTON

Plot Time: 24-Nov-19 17:23:43
Plot Range: 3795 ft to 5584.25 ft
Data: WENU-505\Well Based\DETAILS\
Plot File: \\-LOCAL-WENU-505\Well Based\POROSITY\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

MEASURED DEPTH
MAIN SECTION 5" PER 100'

HALLIBURTON

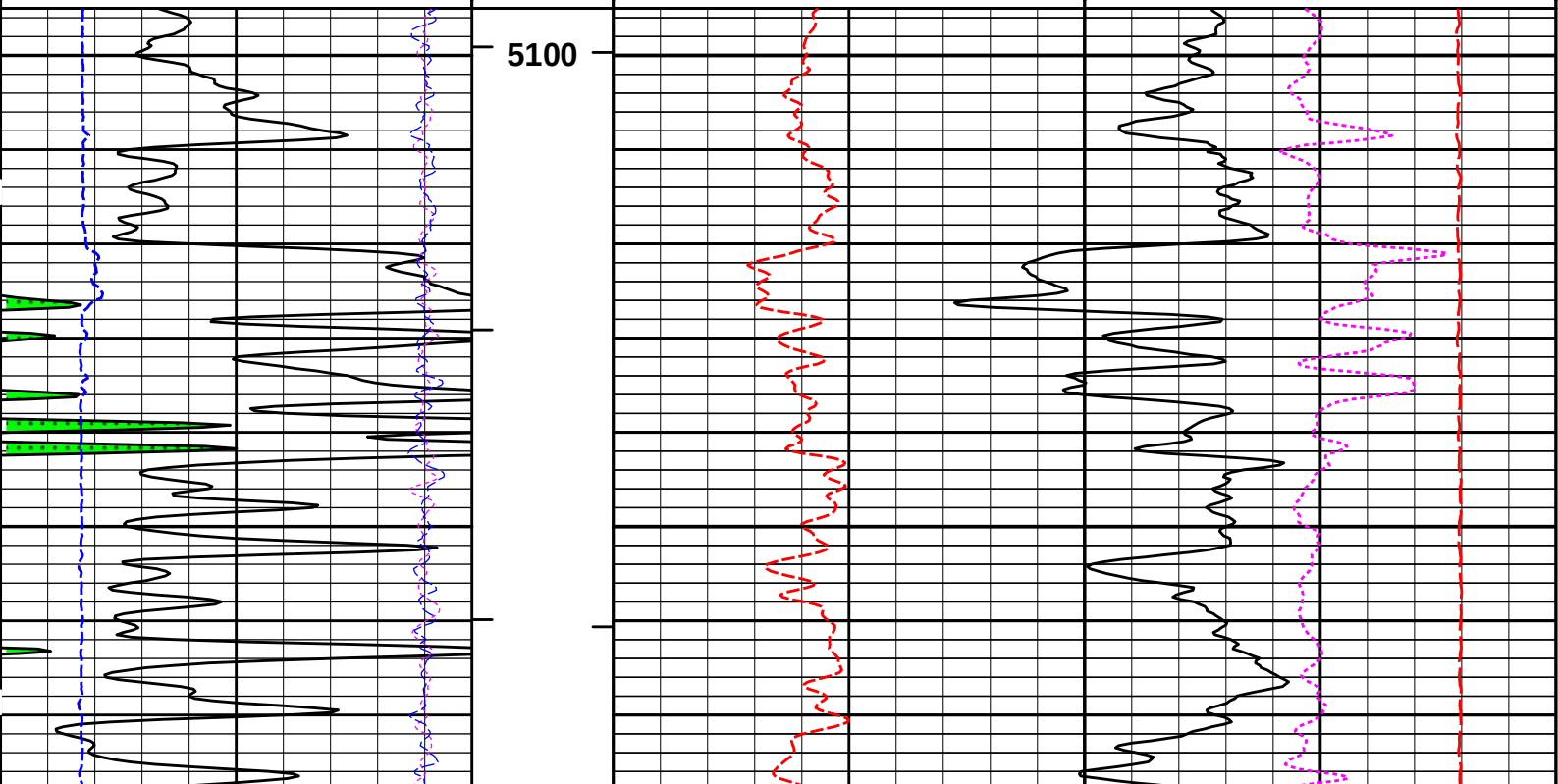
Plot Time: 24-Nov-19 17:23:43
Plot Range: 5095 ft to 5582.92 ft
Data: WENU-505\Well Based\REPEAT\
Plot File: \\-LOCAL-WENU-505\Well Based\POROSITY\BULKD_5_REP_LIB

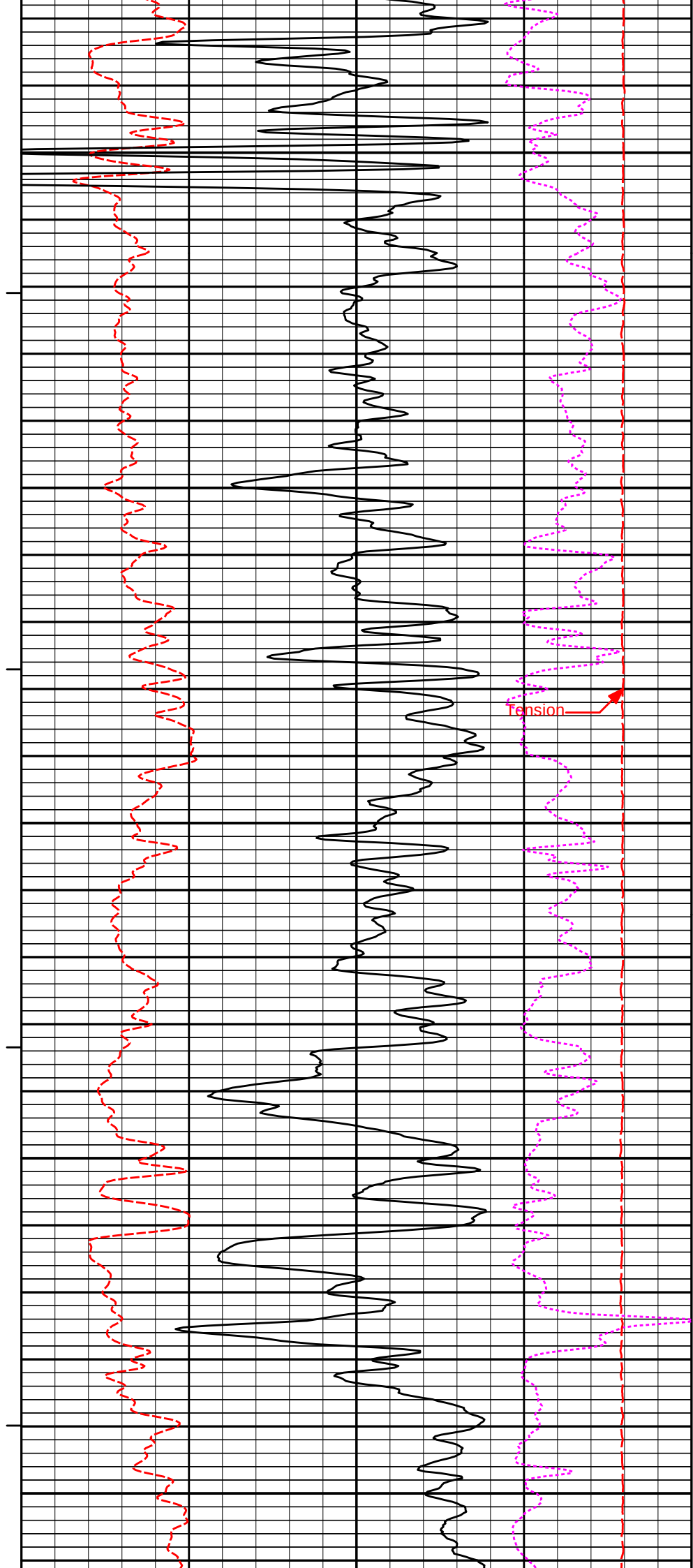
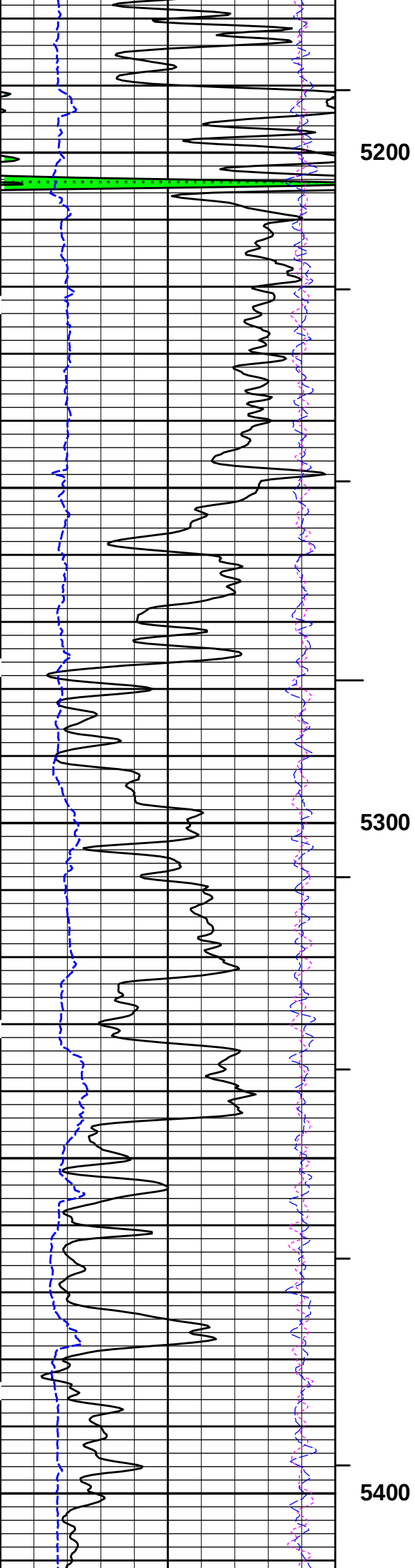
REPEAT SECTION

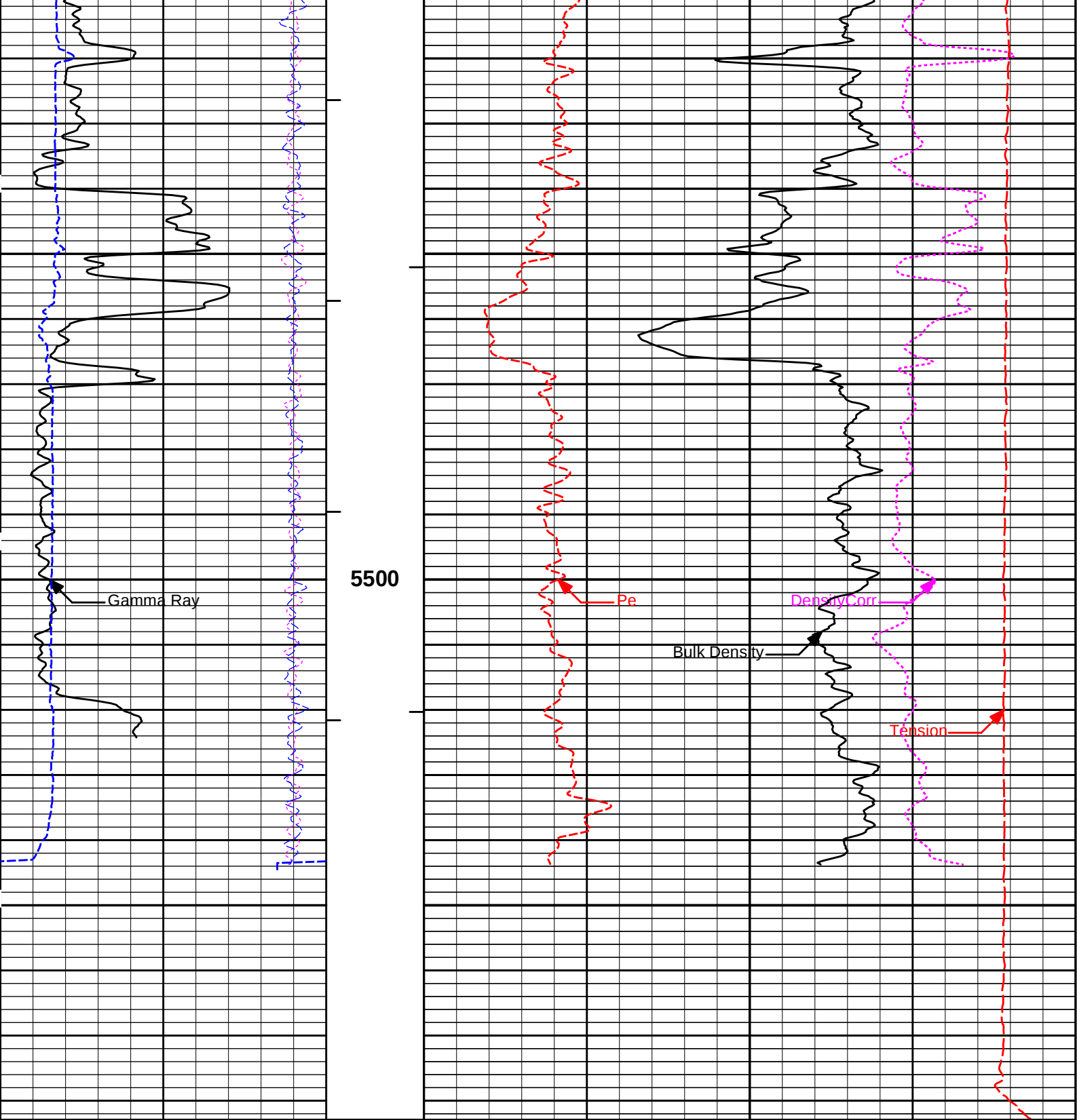
SHALE

0	Gamma Ray	150
	api	
18	FarQuality	-2
-18	NearQuality	2
6	Caliper	16
	inches	

BHV ft3	2	Bulk Density	3
		g/cc	
AHV ft3		15K	Tension pounds
			0
MD 1 : 240 ft	0	Pe	10
		-0.25	DensityCorr g/cc
			0.25







6	Caliper	16	MD 1 : 240 ft	0	Pe	10	-0.25	DensityCorr	0.25				
	inches												
-18	NearQuality	2	AHV ft3	2	Bulk Density		3	15K	Tension	0			
18	FarQuality	-2	BHV ft3		g/cc								
0	Gamma Ray	150											
	api												
SHALE													

HALLIBURTON

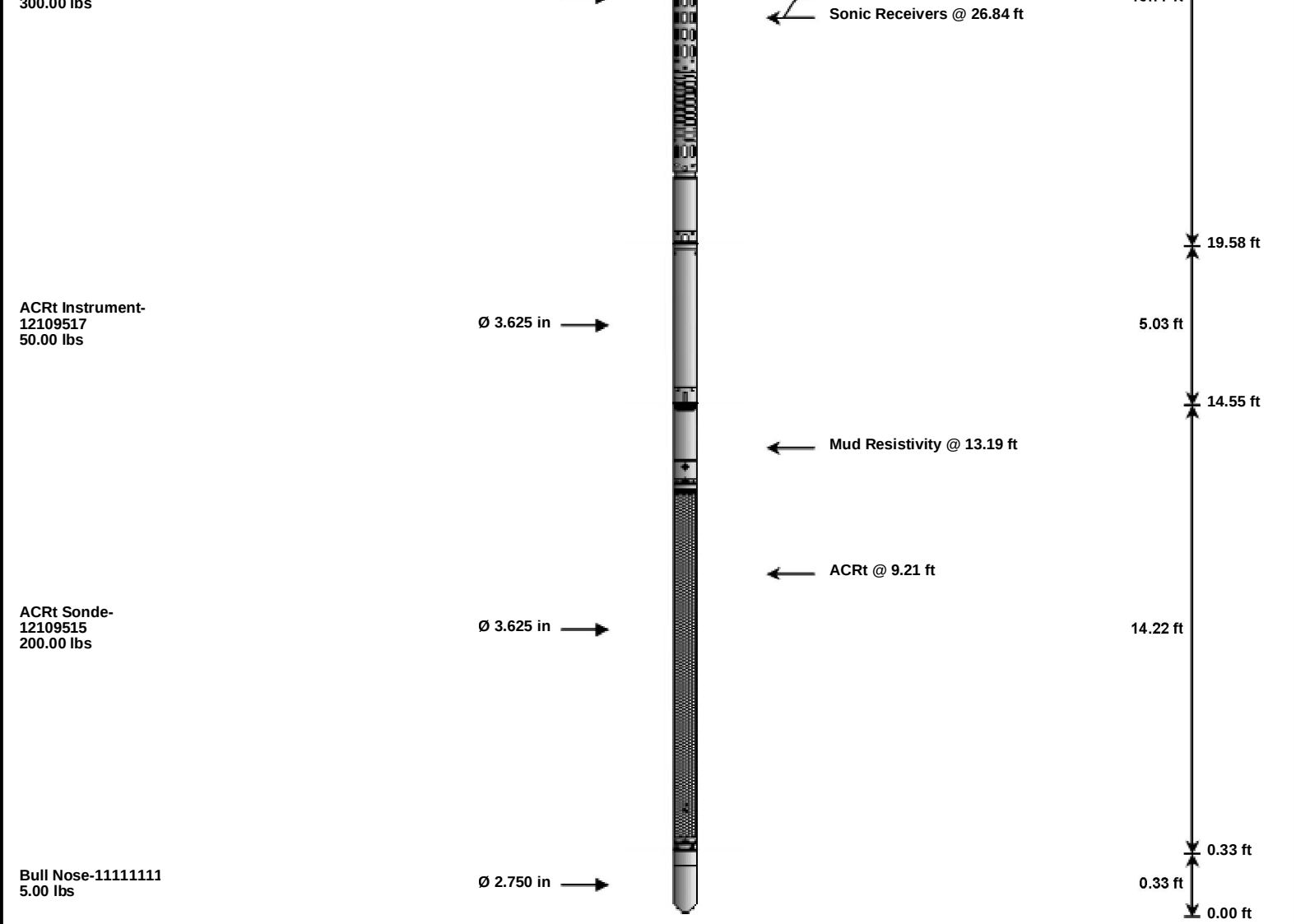
Plot Time: 24-Nov-19 17:23:45
Plot Range: 5095 ft to 5582.92 ft
Data: WENU-505(Well Based)REPEAT\
Plot File: \\LOCAL\WENU-505\Well Based\BODOSITY\BULK.D 5-REP.LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						74.37 ft
RWCH-12027542 135.00 lbs	Weak Point Solid- 12027542 0.01 lbs	Ø 2.310 in →		← Fishing Neck @ 73.49 ft	6.25 ft	
		Ø 3.625 in →		← Load Cell @ 70.68 ft ← BH Temperature @ 70.12 ft		
		Ø 0.010 in* →				68.12 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in →		← SP @ 66.34 ft	3.74 ft	
				← Z-Accelerometer @ 63.93 ft		64.38 ft
GTET-11958947 165.00 lbs		Ø 3.625 in →		← GammaRay @ 58.32 ft	8.52 ft	
						55.86 ft
DSN Decentralizer- 10993115 6.60 lbs		Ø 5.000 in* →				
DSNT2-10993115 174.00 lbs		Ø 3.625 in →		← DSN Far @ 48.92 ft ← DSN Near @ 48.17 ft	9.69 ft	
						46.17 ft
SDLT2-10951315 360.00 lbs	SDLT Pad2-10809130 65.00 lbs Microlog Pad2-10951315 8.00 lbs	Ø 4.500 in →		← Microlog @ 38.36 ft ← SDL Caliper @ 38.17 ft ← SDL @ 38.16 ft	10.81 ft	
		Ø 4.500 in* → Ø 4.750 in* →				35.36 ft
BSAT-10747686		Ø 3.625 in →		← Receiver Array @ 26.84 ft	15.77 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	68.12	300.00
WPSS	Weak Point Solid		12027542	0.01	0.01	*	68.12 300.00
SP	SP Sub		11441455	60.00	3.74	64.38	300.00
GTET	Gamma Telemetry Tool		11958947	165.00	8.52	55.86	60.00
DSNT	Dual Spaced Neutron		10993115	174.00	9.69	46.17	60.00
DCNT	DSN Decentralizer		10993115	6.60	5.13	*	49.50 300.00
SDLT	Spectral Density Tool		10951315	360.00	10.81	35.36	60.00
SDLP	Density Insite Pad		10809130	65.00	2.55	*	37.57 60.00
MICP	Microlog Pad		10951315	8.00	1.00	*	37.86 60.00
BSAT	Borehole Sonic Array Tool		10747686	300.00	15.77	19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section		12109517	50.00	5.03	14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section		12109515	200.00	14.22	0.33	120.00
BLNS	Bull Nose		11111111	5.00	0.33	0.00	300.00
Total				1,528.61	74.37		
* Not included in Total Length and Length Accumulation.							
Data: WENU-505\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\IDLE							
Date: 24-Nov-19 15:29:48							

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	MDRS	Mud Resis	Water		

SHARED	MDBS	Mud Base	Water	
SHARED	MDWT	Borehole Fluid Weight	9.200	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	1.128	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	5580.00	ft
SHARED	BHT	Bottom Hole Temperature	128.0	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	1.02	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: WENU-505\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\003 24-Nov-19 16:38 Up @5583.8f			Date: 24-Nov-19 16:44:49	

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:GTET - 11958947Reference Calibration Date:20-Aug-19 09:32:18

Engineer:M. RICHTERCalibration Date:24-Oct-19 09:31:28

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

Measurement	Measured	Calibrated	Units
Background	28.5	29.7	api
Background + Calibrator	247.6	258.7	api
Calibrator	219.1	228.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:GTET - 11958947Reference Calibration Date:24-Oct-19 09:31:28

Engineer:JORGE ORLANDO PEREZCalibration Date:18-Nov-19 10:17:26

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	29.7	117.8	api
Background + Calibrator	258.7	345.1	api
Calibrator	228.9	227.3	api

Shop	Field	Difference	Tolerance
228.9	227.3	1.6	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:DSNT2 - 10993115Reference Calibration Date:04-Jun-19 10:53:11

Engineer:M. RICHTERCalibration Date:24-Oct-19 09:51:47

Software Version:WL INSITE R6.2.7 (Build 7)

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:	0.99043	0.98852	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):	0.2364	0.2358	0.0006	+/- 0.0020
Calibrated Ratio:	10.5798	10.5595	0.020	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0621	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:24-Oct-19 09:51:47

Engineer:JORGE ORLANDO PEREZ

Calibration Date:18-Nov-19 10:28:08

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):	0.0621	0.0616	-0.0005	+/- 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:20-Nov-19 14:47:54

Engineer:JORGE ORLANDO PEREZ

Calibration Date:20-Nov-19 14:51:56

Software Version:WL INSITE R6.2.7 (Build 7)

Calibration Version:1

Host Tool Name:DSNT - 10993115

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4400.61	-4475.42	-7000.00 - -1000.00
Pad Gain	0.0003790	0.0003884	0.0002000 - 0.0006000
Arm Offset	-3782.58	-3859.48	-5000.00 - 3000.00
Arm Gain	0.0005193	0.0005430	0.000300 - 0.000700

Arm Gain0.00001380.00004680.00003690.0000760

Arm Power-0.000005452-0.000006888-0.000010000-0.000010000

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)	1.98	2.00	0.02	+/- 0.20
Medium Ring (in)	3.69	3.75	0.06	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.49	6.50	0.01	+/- 0.20
Medium Ring (in)	8.19	8.25	0.06	+/- 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:	20-Nov-19 14:51:56
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	20-Nov-19 14:53:29
Software Version:	WL INSITE R6.2.7 (Build 7)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.69	3.75	0.06	+/- 0.10
Ring Diameter	8.25	8.32	0.07	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad2 - 10809130	Reference Calibration Date:	24-Oct-19 11:19:27
Engineer:	M. RICHTER	Calibration Date:	24-Oct-19 14:06:17
Software Version:	WL INSITE R6.2.7 (Build 7)	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	1.0199	1.0329	0.90 - 1.10
Near Dens Gain	1.0207	1.0133	0.90 - 1.10
Near Peak Gain	1.0626	1.0384	0.90 - 1.10
Near Lith Gain	1.0756	1.0344	0.90 - 1.10
Far Bar Gain	1.0039	1.0059	0.90 - 1.10
Far Dens Gain	0.9965	0.9975	0.90 - 1.10
Far Peak Gain	0.9967	0.9980	0.90 - 1.10
Far Lith Gain	0.9764	0.9757	0.90 - 1.10
Near Bar Offset	-0.0972	-0.2202	NONE
Near Dens Offset	-0.0993	-0.0352	NONE
Near Peak Offset	-0.4476	-0.2438	NONE

Near Lith Offset	-0.6206	-0.2686	NONE
Far Bar Offset	-0.0355	-0.0544	NONE
Far Dens Offset	0.0154	0.0066	NONE
Far Peak Offset	-0.0360	-0.0488	NONE
Far Lith Offset	0.0509	0.0579	NONE
Near Bar Background	851.22	853.54	700 - 1450
Near Dens Background	281.15	279.35	230 - 480
Near Peak Background	122.01	121.53	100 - 210
Near Lith Background	152.40	153.08	125 - 260
Far Bar Background	594.35	591.53	450 - 900
Far Dens Background	229.34	230.04	175 - 345
Far Peak Background	89.91	90.55	70 - 140
Far Lith Background	94.45	94.44	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	2.546	2.554	0.008	+/- 0.150
ALUMINUM				
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500
Pe	3.202	3.126	-0.076	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0005	+/- 0.0110	-0.0004	+/- 0.0140
Magnesium Block	0.0002	+/- 0.0110	-0.0016	+/- 0.0140
Aluminum Block	0.0003	+/- 0.0110	-0.0006	+/- 0.0140
Resolution	8.99	6.00 - 11.50	9.42	6.00 - 11.50
Internal Verifier(B+D+P+L)	1408	1200 - 2700	1007	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:	24-Oct-19 14:06:17
Engineer:	JORGE ORLANDO PEREZ	Calibration Date:	18-Nov-19 10:16:09
Software Version:	WL INSITE R6.2.7 (Build 7)	Calibration Version:	1

Pad Temperature: 75.2 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1407.502	1406.780	-0.722	15.148
Far (B+D+P+L) cps	1006.548	1005.604	-0.944	16.965
Near Resolution	8.99	9.01	0.020	0.50

Far Resolution		9.42	9.44	0.020	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	
GTET-11958947							
Gamma Ray Calibrator	228.9	227.3	-----	1.6	+/- 9.00	api	
DSNT2-10993115							
Snow-Block Porosity	0.0621	0.0616	-----	0.0005	+/- 0.0150	decp	
SDLT2-10951315							
Pad Extension	3.75	3.75	-----	0.00	+/-0.10	in	
Ring Diameter	8.25	8.32	-----	-0.07	+/-0.15	in	
SDLT Pad2-10809130							
Near(B+D+P+L)	1407.502	1406.780	-----	0.722	+/-15.148	cps	
Far(B+D+P+L)	1006.548	1005.604	-----	0.944	+/-16.965	cps	
Data: WENU-505\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\IDLE					Date: 24-Nov-19 15:32:58		
HALLIBURTON							
INPUTS, DELAYS AND FILTERS TABLE							
Mnemonic	Input Description		Delay (ft)	Depth Filter Type	Depth Filter Length (ft)	Time Filter Type	Time Filter Length (sec)
Depth Panel							
TENS	Tension		0.00	NO		NO	
Rwa / CrossPlot							
TPUL	Tension Pull		74.37	NO		NO	
BS	Bit Size		74.37	NO		NO	
HDIA	Measured Hole Diameter		0.00	NO		NO	
RWCH							
DHTN	DownholeTension		0.00	BLK	0.000	NO	
SP Sub							
PLTC	Plot Control Mask		66.34	NO		NO	
SP	Spontaneous Potential		66.34	BLK	1.250	NO	
SPR	Raw Spontaneous Potential		66.34	NO		NO	
SPO	Spontaneous Potential Offset		66.34	NO		NO	
GTET							
TPUL	Tension Pull		58.32	NO		NO	
GR	Natural Gamma Ray API		58.32	TRI	1.750	NO	
GRU	Unfiltered Natural Gamma Ray API		58.32	NO		NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution		58.32	W	1.416 , 0.750	NO	
HDIA	Measured Hole Diameter		0.00	NO		NO	
ACCZ	Accelerometer Z		0.00	BLK	0.083	NO	
DEVI	Inclination		0.00	NO		NO	
DSNT2							
TPUL	Tension Pull		48.07	NO		NO	
RNDS	Near Detector Telemetry Counts		48.17	BLK	1.417	NO	
RFDS	Far Detector Telemetry Counts		48.92	TRI	0.583	NO	
DNTT	DSN Tool Temperature		48.17	NO		NO	

DSNS	DSN Tool Status	48.07	NO	NO
ERND	Near Detector Telemetry Counts EVR	48.17	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	48.92	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.17	NO	NO
HDIA	Measured Hole Diameter	0.00	NO	NO
SDLT2				
TPUL	Tension Pull	38.17	NO	NO
PCAL	Pad Caliper	38.17	TRI	0.250
ACAL	Arm Caliper	38.17	TRI	0.250
BSAT				
TPUL	Tension Pull	26.84	NO	NO
STAT	Status	26.84	NO	NO
DLYT	Delay Time	26.84	NO	NO
SI	Sample Interval	26.84	NO	NO
TXRX	Raw Telemetry 10 Receivers	26.84	NO	NO
FRMC	Tool Frame Count	26.84	NO	NO
GMOD	Gain processing mode	19.58	NO	NO
ACRt Sonde				
TPUL	Tension Pull	2.73	NO	NO
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000

F1RT	Transmitter Reference 12 KHz Real Signal	2.73	BLK	0.000	NO
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000	NO
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000	NO
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000	NO
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000	NO
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000	NO
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000	NO
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000	NO
ITMP	Instrument Temperature	2.73	BLK	0.000	NO
TCVA	Temperature Correction Values Loop Off	2.73	NO		NO
TIDV	Instrument Temperature Derivative	2.73	NO		NO
TUDV	Upper Temperature Derivative	2.73	NO		NO
TLDV	Lower Temperature Derivative	2.73	NO		NO
TRBD	Receiver Board Temperature	2.73	NO		NO
HDIA	Measured Hole Diameter	0.00	NO		NO

Microlog Pad2					
TPUL	Tension Pull	38.36	NO		NO
MINV	Microlog Lateral	38.36	BLK	0.750	NO
MNOR	Microlog Normal	38.36	BLK	0.750	NO

SDLT Pad2					
TPUL	Tension Pull	38.16	NO		NO
NAB	Near Above	37.99	BLK	0.920	NO
NHI	Near Cesium High	37.99	BLK	0.920	NO
NLO	Near Cesium Low	37.99	BLK	0.920	NO
NVA	Near Valley	37.99	BLK	0.920	NO
NBA	Near Barite	37.99	BLK	0.920	NO
NDE	Near Density	37.99	BLK	0.920	NO
NPK	Near Peak	37.99	BLK	0.920	NO
NLI	Near Lithology	37.99	BLK	0.920	NO
NBAU	Near Barite Unfiltered	37.99	BLK	0.250	NO
NLIU	Near Lithology Unfiltered	37.99	BLK	0.250	NO
FAB	Far Above	38.34	BLK	0.250	NO
FHI	Far Cesium High	38.34	BLK	0.250	NO
FLO	Far Cesium Low	38.34	BLK	0.250	NO
FVA	Far Valley	38.34	BLK	0.250	NO
FBA	Far Barite	38.34	BLK	0.250	NO
FDE	Far Density	38.34	BLK	0.250	NO
FPK	Far Peak	38.34	BLK	0.250	NO
FLI	Far Lithology	38.34	BLK	0.250	NO
PTMP	Pad Temperature	38.17	BLK	0.920	NO
NHV	Near Detector High Voltage	37.57	NO		NO
FHV	Far Detector High Voltage	37.57	NO		NO
ITMP	Instrument Temperature	37.57	NO		NO
DDHV	Detector High Voltage	37.57	NO		NO
HDIA	Measured Hole Diameter	0.00	NO		NO

Data: WENU-505\0001 RWCH-GTET-DSNT2-SDLT2-BSAT-ACRT_PASSENGERS\IDLE	Date: 24-Nov-19 15:32:09
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COMPANY	MERIT ENERGY COMPANY		
WELL	WENU 505		
FIELD	EUBANK NORTH		
COUNTY	HASKELL	STATE	KANSAS

