

HALLIBURTON

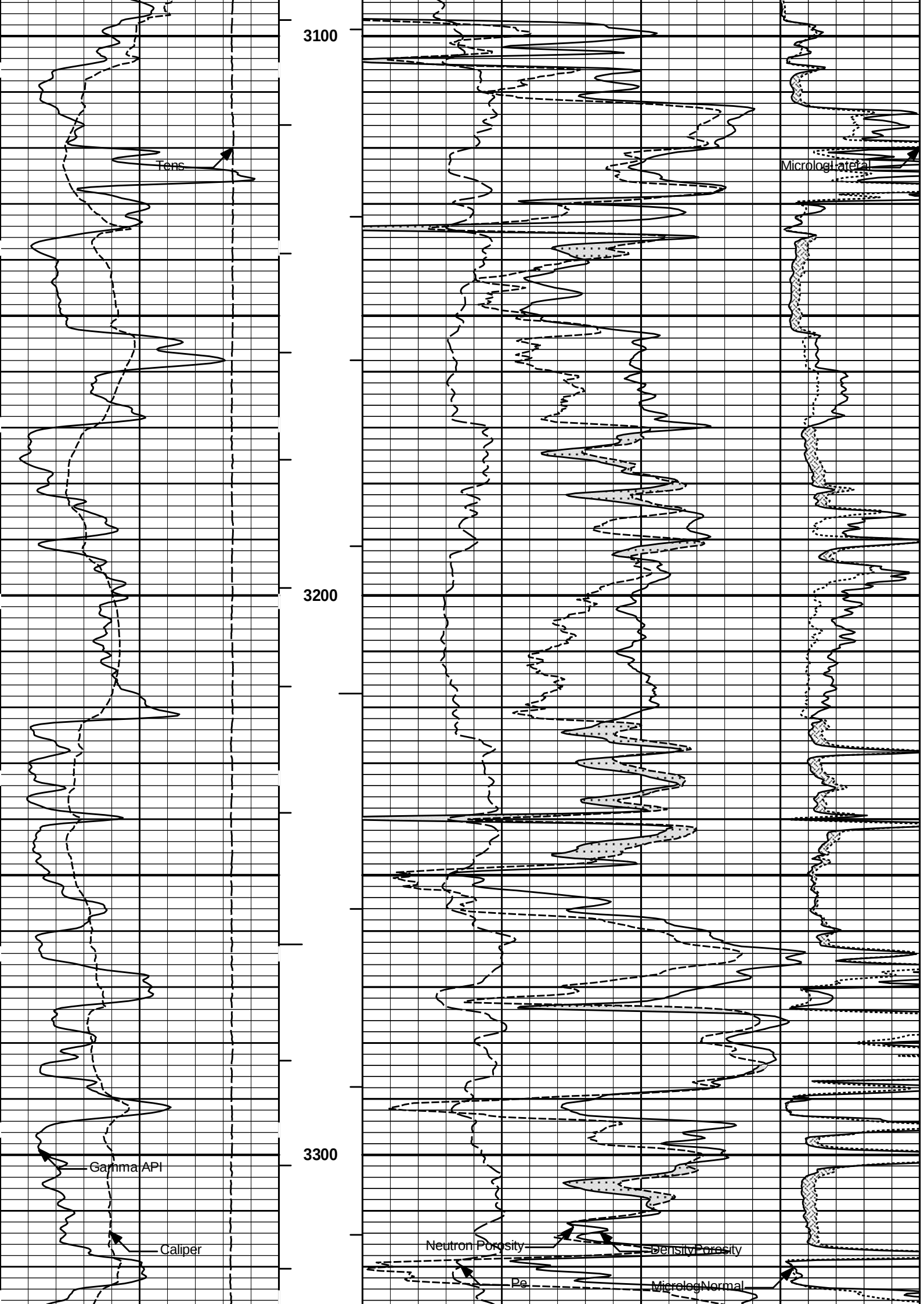
SPECTRAL DENSITY
DUAL SPACED NEUTRON
MICROLOG

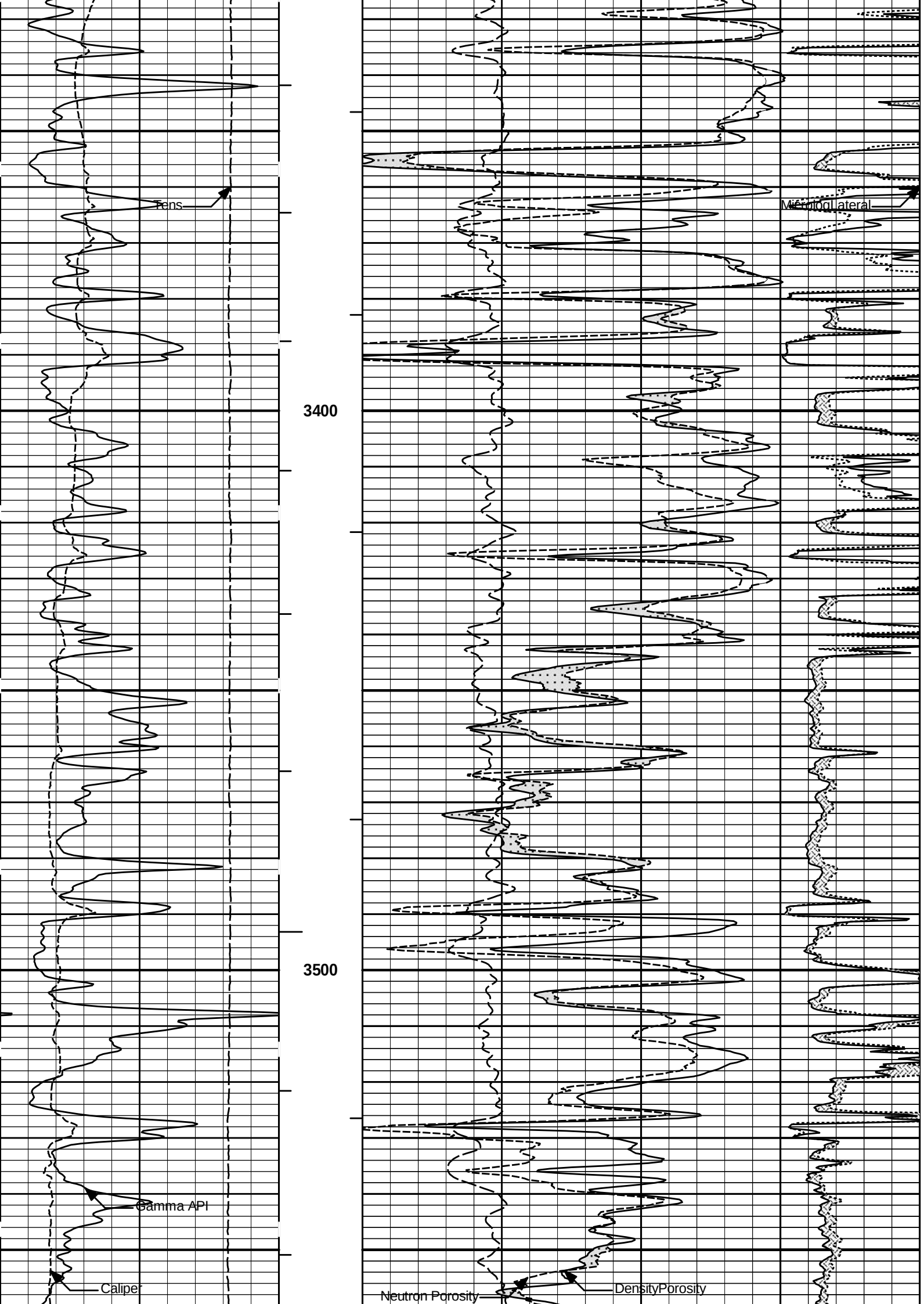
COMPANY				BEREXCO LLC			
WELL				BROWN 3-1			
FIELD/BLOCK				CUTTER			
COUNTY				STEVENS			
STATE				KANSAS			
Permanent Datum				GL			
Log measured from				KB			
Drilling measured from				KB			
Date				31-Jul-19			
Run No.				1			
Depth - Driller				5750.0 ft			
Depth - Logger				5752.0 ft			
Bottom - Logged Interval				5742			
Top - Logged Interval				3050			
Casing - Driller				8.625 in @ 1742.0 ft			
Casing - Logger				1741.0 ft			
Bit Size				7.875 in			
Type Fluid in Hole				Water Based Mud			
Density				9.30 g/cc			
PH				11.00 pH			
Source of Sample				FLOWLINE			
Rm @ Meas. Temperature				0.83 ohmm @ 92.00 degF			
Rmf @ Meas. Temperature				0.66 ohmm @ 90.00 degF			
Rmc @ Meas. Temperature				0.92 ohmm @ 90.00 degF			
Source Rmf				MEAS			
Rm @ BHT				0.55 ohmm @ 142.0 degF			
Time Since Circulation				13:00 hr			
Time on Bottom				31-Jul-19 16:55			
Max. Rec. Temperature				142.00 degF @ 5752.0 ft			
Equipment				12156883			
Recorded By				WHITLOCK			
Witnessed By				ED GRIEVES			

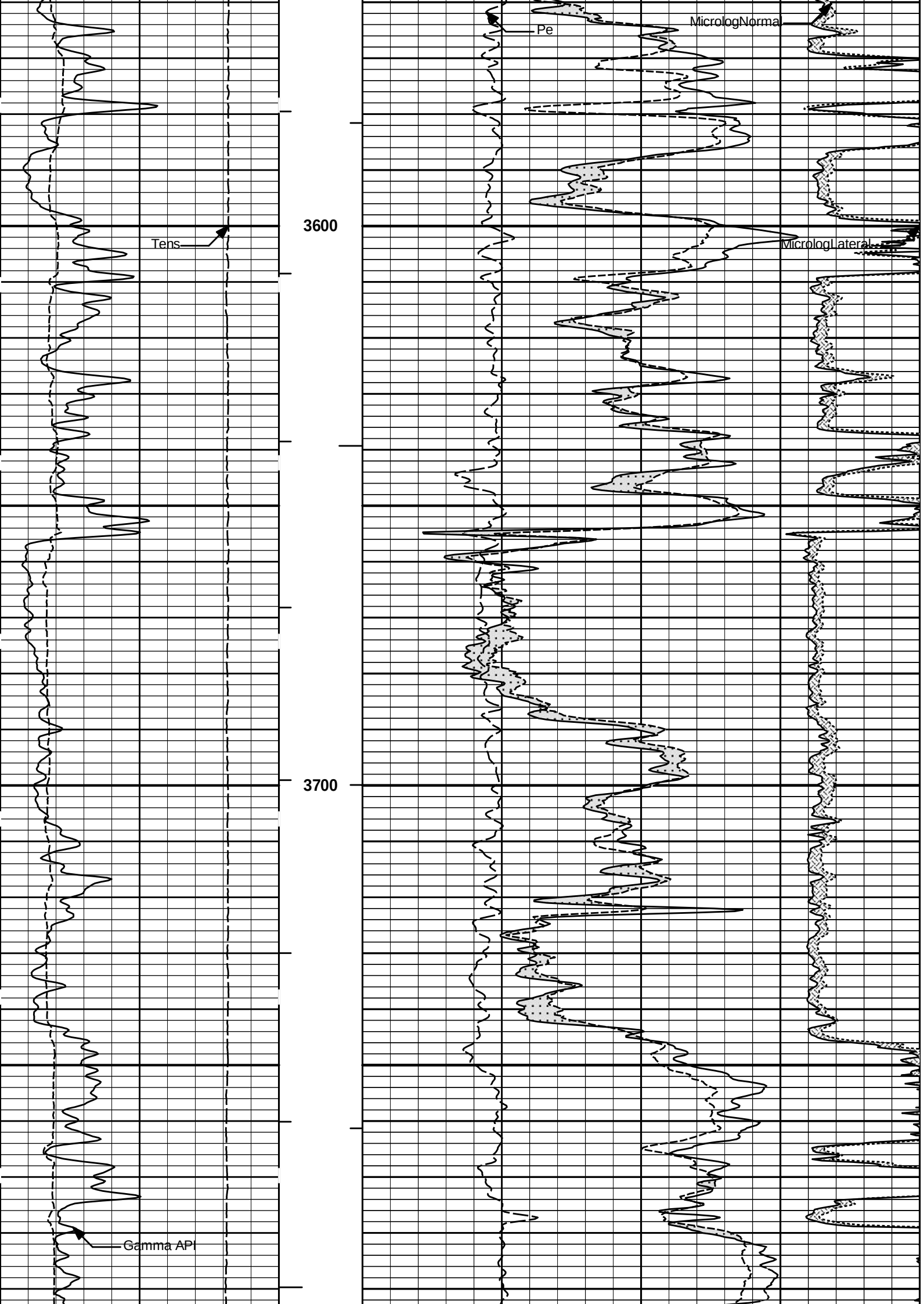
COMPANY	BEREXCO LLC
WELL	BROWN 3-1
FIELD/BLOCK	CUTTER
COUNTY	STEVENS
STATE	KANSAS
API No.	15-189-22860-00-00
Location	(SHL) W2 NE SE SW 990' FSL & 2305' FWL
Sect.	1
Twp.	31S
Rge.	35W
Other Services:	ACRT SDL-DSN MICROLOG SONIC
Elev. 2969.0 ft	Elev.: K.B.
2979.0 ft	D.F.
2969.0 ft	G.L.

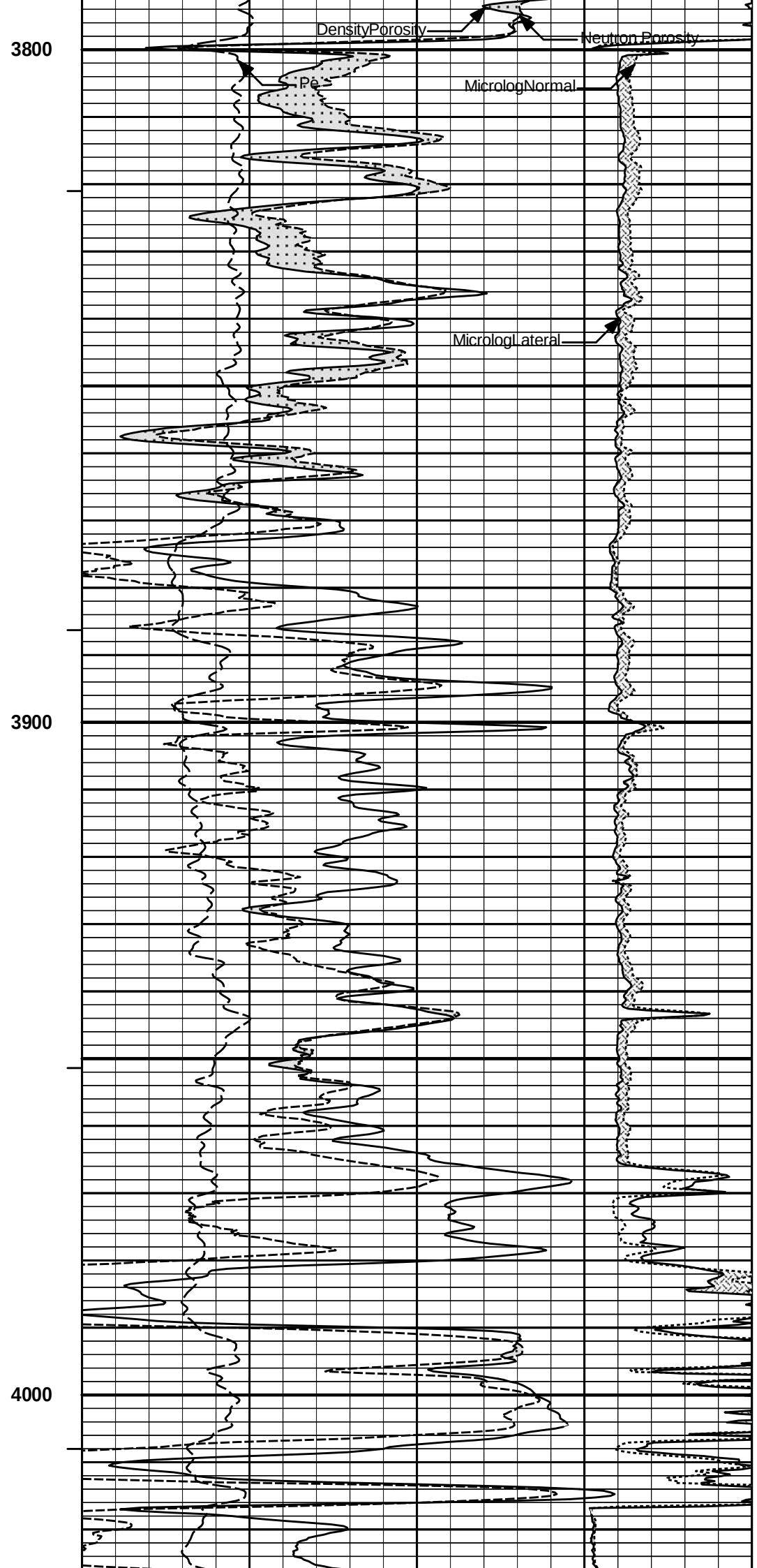
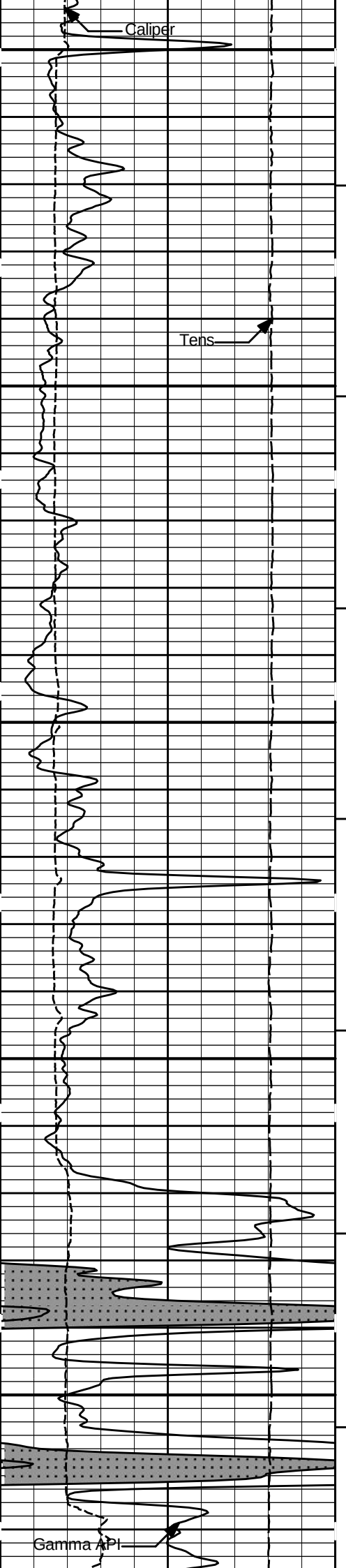
Service Ticket No.: 905820789	API No.: 15-189-22860-00-00	PGM Version: WL INSITE R6.2.1 (Build 2)
-------------------------------	-----------------------------	---

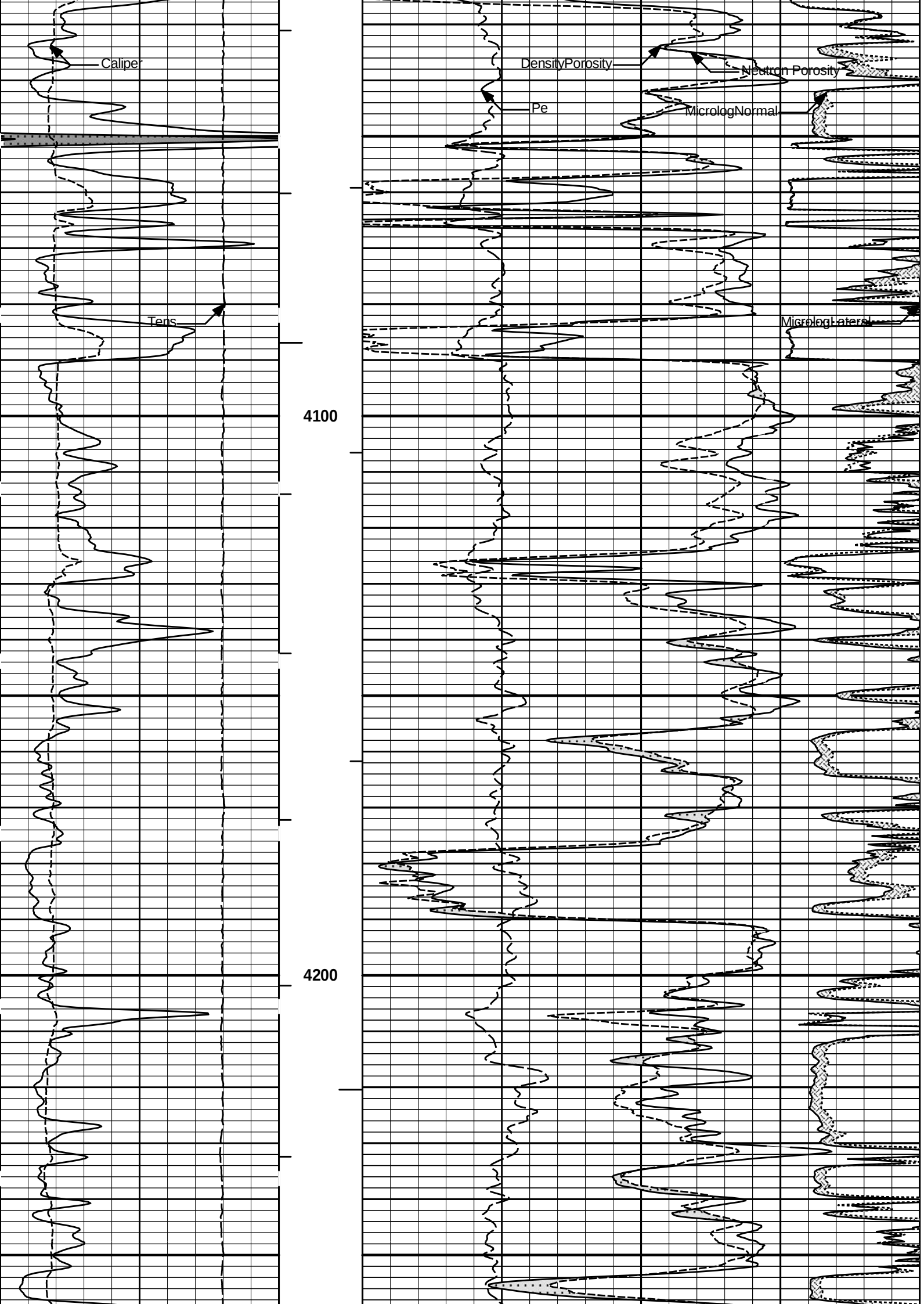
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE				RESISTIVITY SCALE CHANGES			
Date	Sample No.			Type Log	Depth	Scale Up Hole	Scale Down Hole
Depth-Driller							
Type Fluid in Hole							
Density	Viscosity						
Ph	Fluid Loss						
Source of Sample				RESISTIVITY EQUIPMENT DATA			
Rm @ Meas. Temp	@	@		Run No.	Tool Type & No.	Pad Type	Tool Pos.
Rmf @ Meas. Temp.	@	@					
Rmc @ Meas. Temp.	@	@					
Source Rmf	Rmc						
Rm @ BHT	@	@					
Rmf @ BHT	@	@					
Rmc @ BHT	@	@					
EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.		Run No.		Run No.		Run No.	
Serial No.		Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.		Model No.	
Diameter		No. of Cent.		Diameter		Diameter	
Detector Model No.		Spacing		Log Type		Log Type	
Type				Source Type		Source Type	
Length		LSA [Y/N]		Serial No.		Serial No.	
Distance to Source		FWDA [Y/N]		Strength		Strength	
LOGGING DATA							
GENERAL		GAMMA	ACOUSTIC	DENSITY		NEUTRON	
Run	Depth	Speed	Scale	Scale	Matrix	Scale	Matrix
No.	From	To	L	R		L	

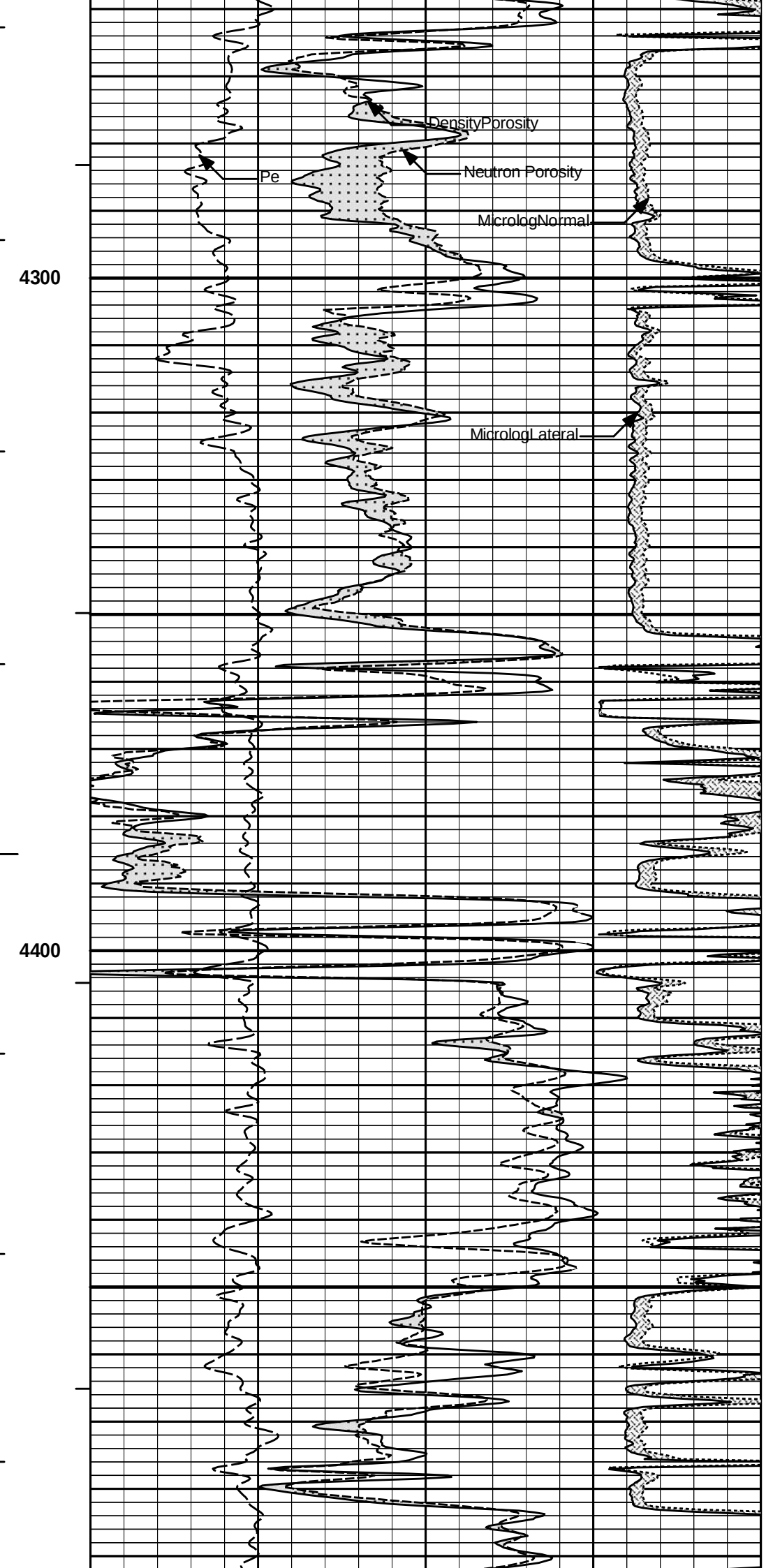
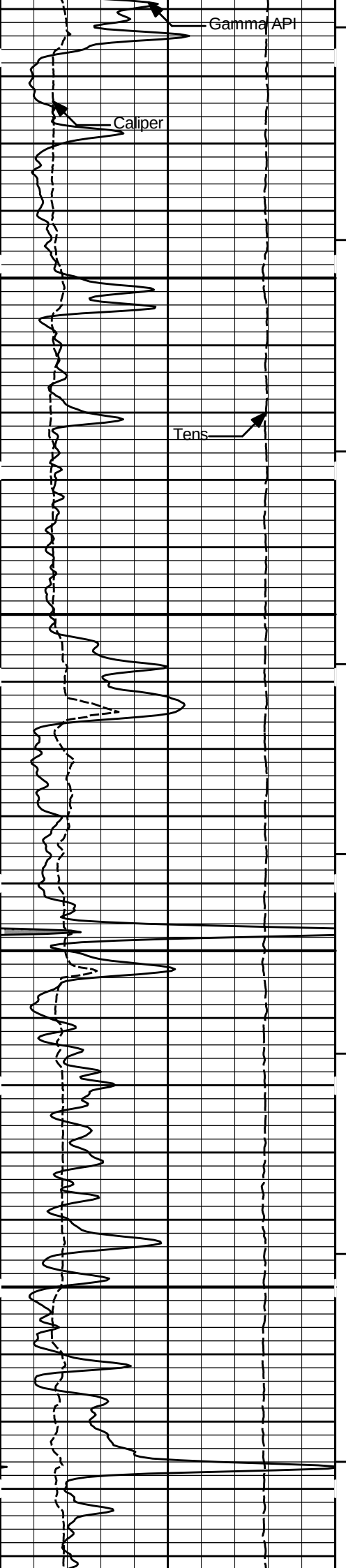


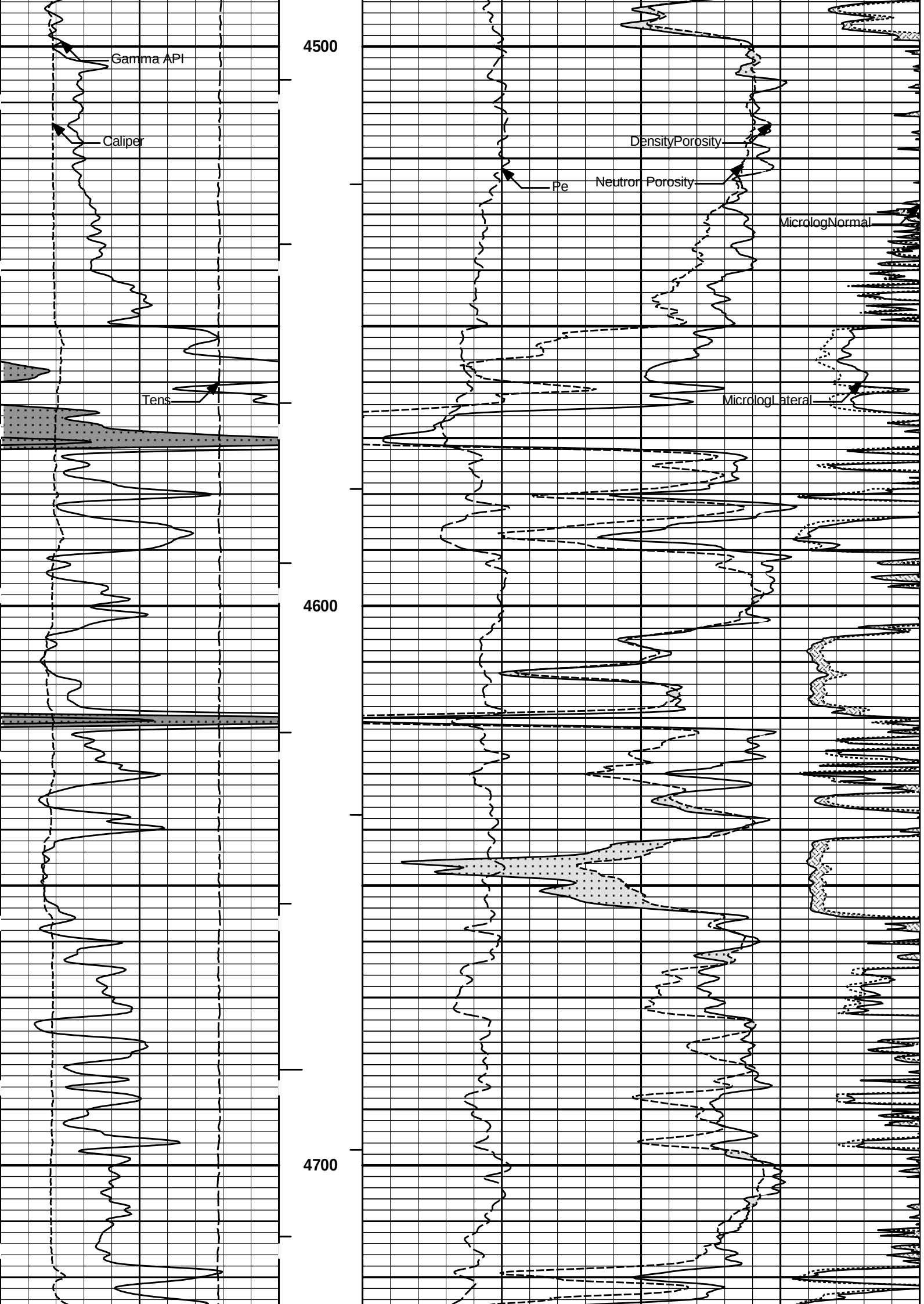


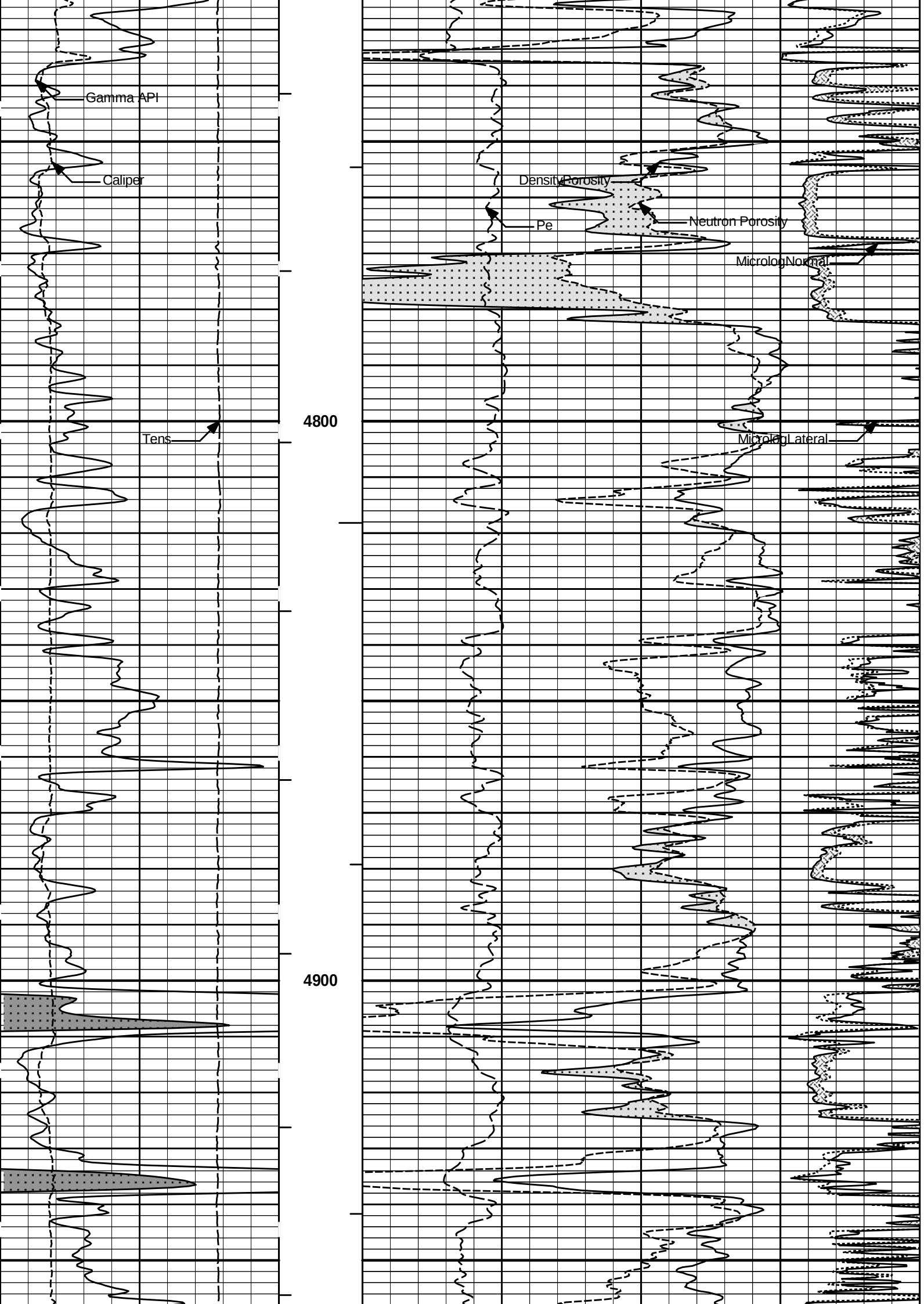


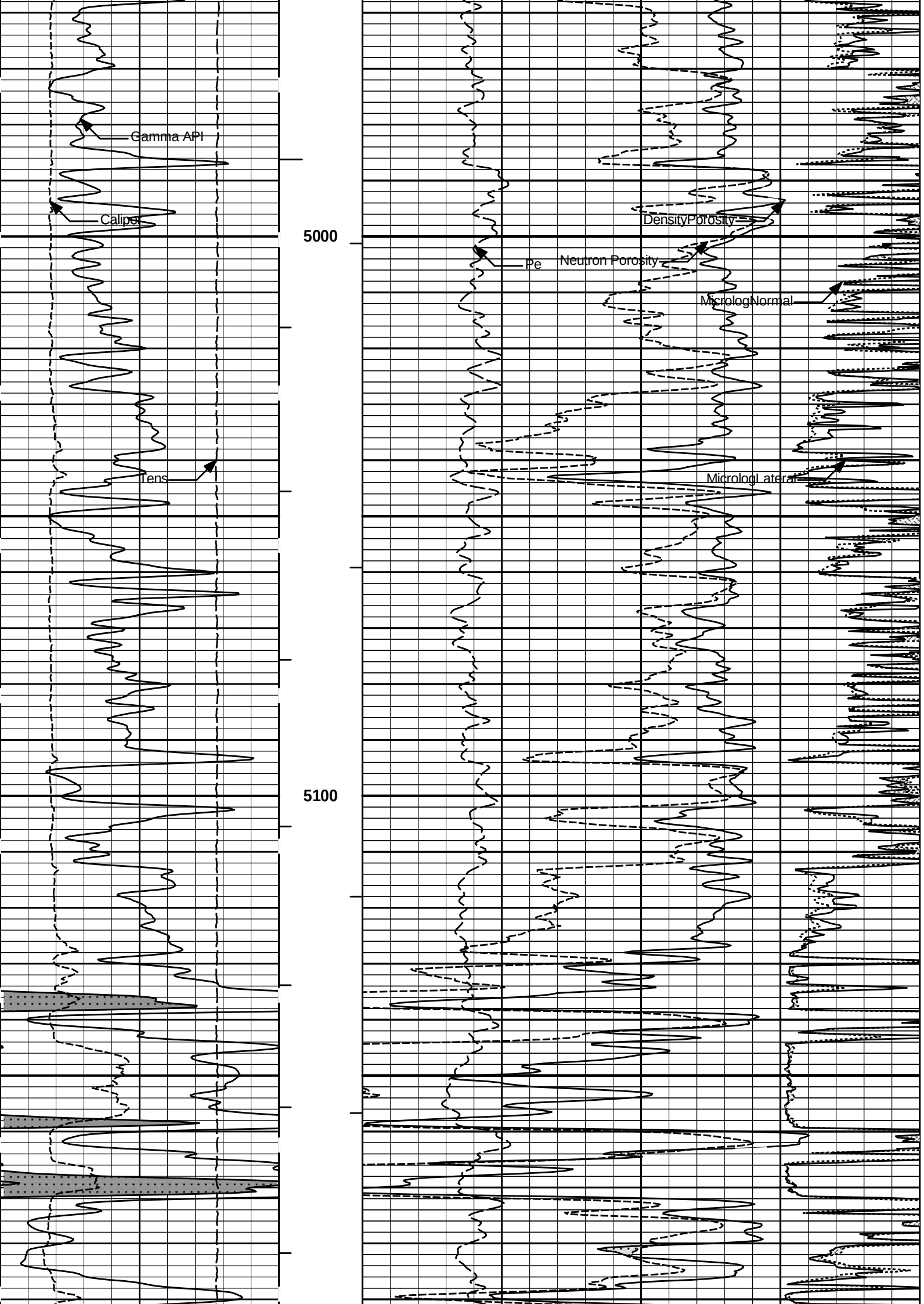


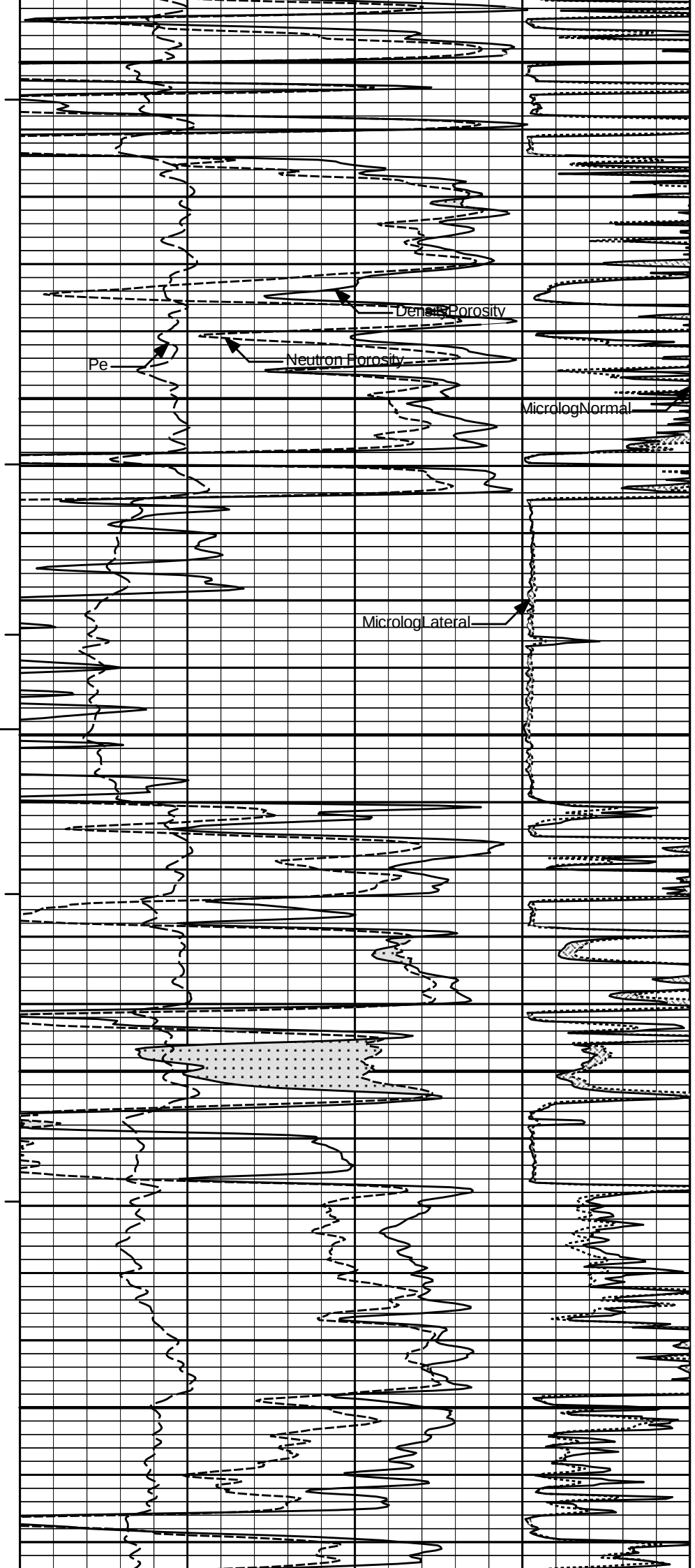
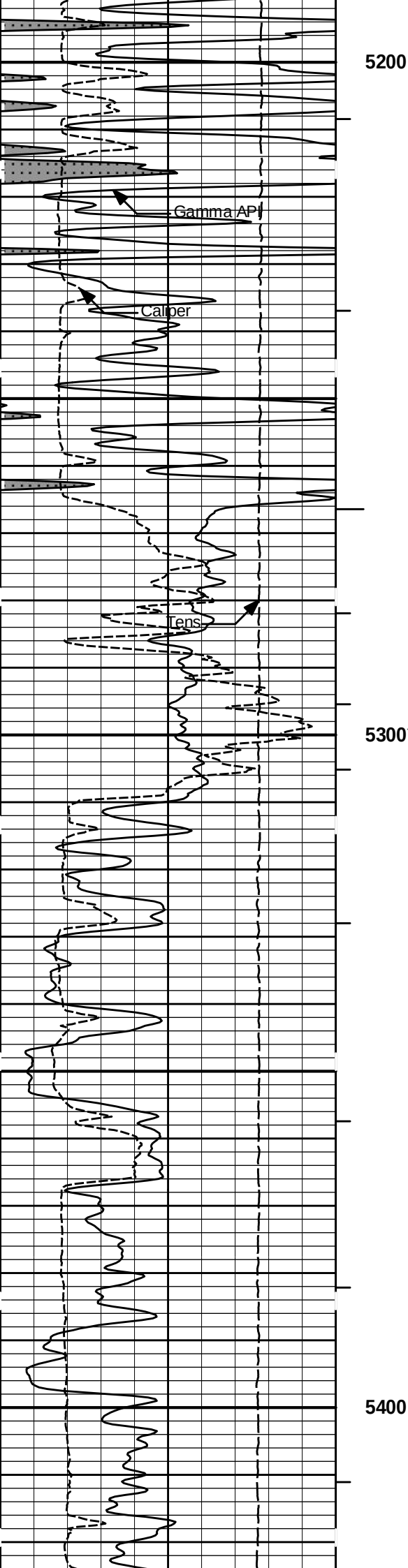


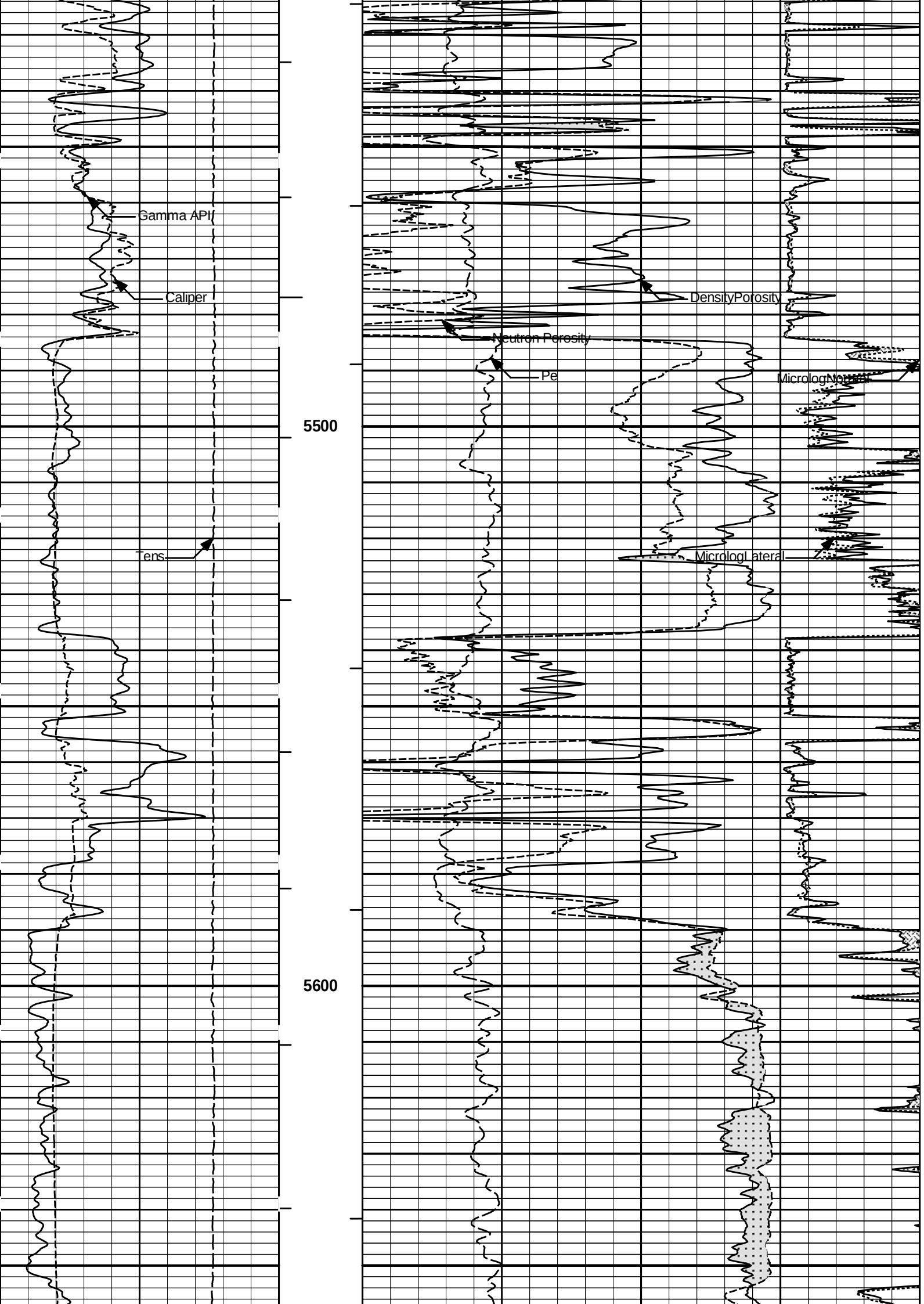


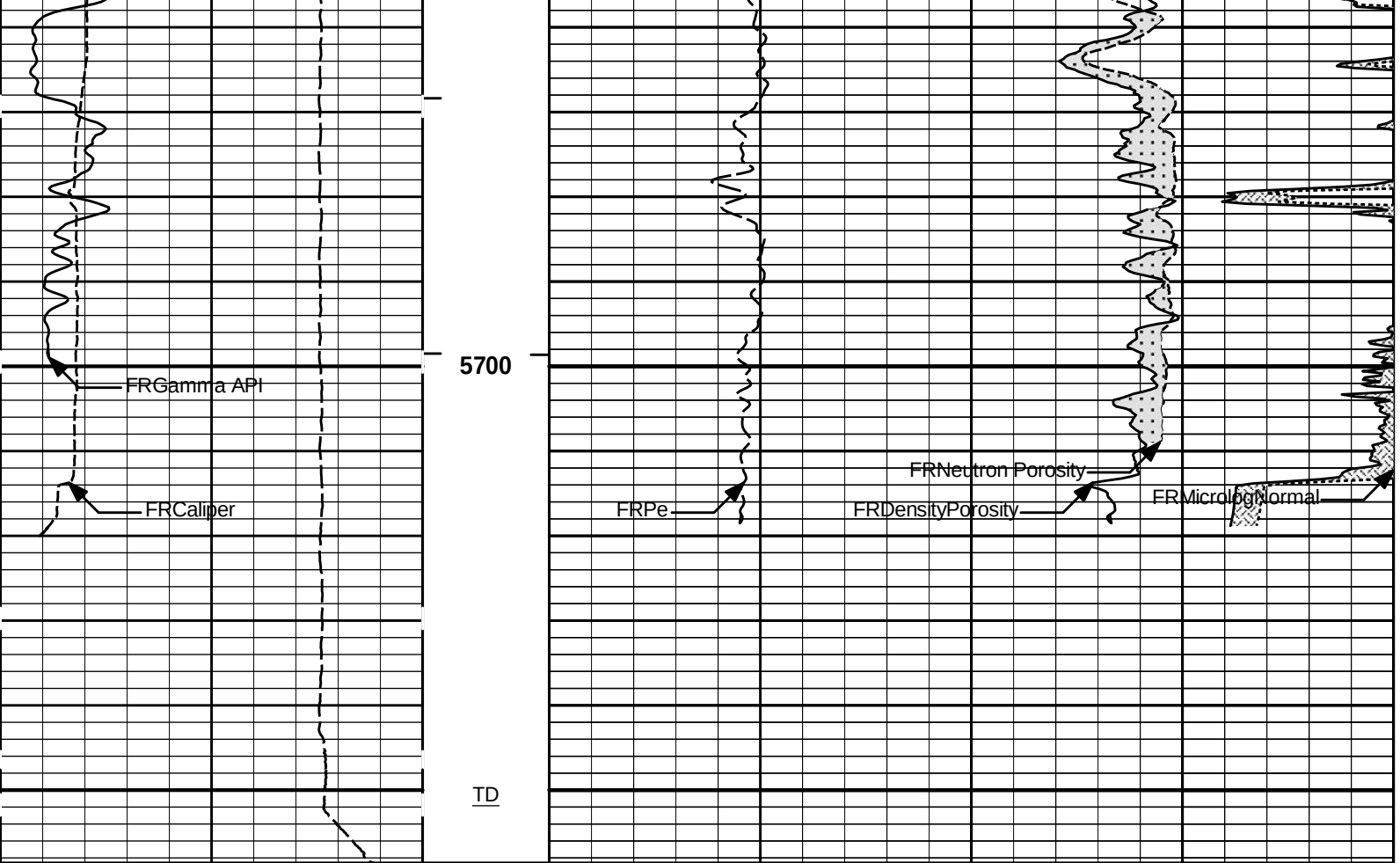












15K	Tens	0	1 : 240	0	Pe	10	0	MicrologNormal	20
	pounds		ft					ohm-metre	
6	Caliper	16	AHVT				0	MicrologLateral	20
	inches							ohm-metre	
0	Gamma API	150	BHVT	30	DensityPorosity	-10			
	api				%				
				30	Neutron Porosity	-10			
					%				

HALLIBURTON

Plot Time: 31-Jul-19 20:15:05
Plot Range: 3050 ft to 5758.58 ft
Data: BEREXCO_BROWNWell Based*\nPlot File: \\SDL-DSN-ML\\PoromL_5_main_IQ

5 INCH MAIN LOG

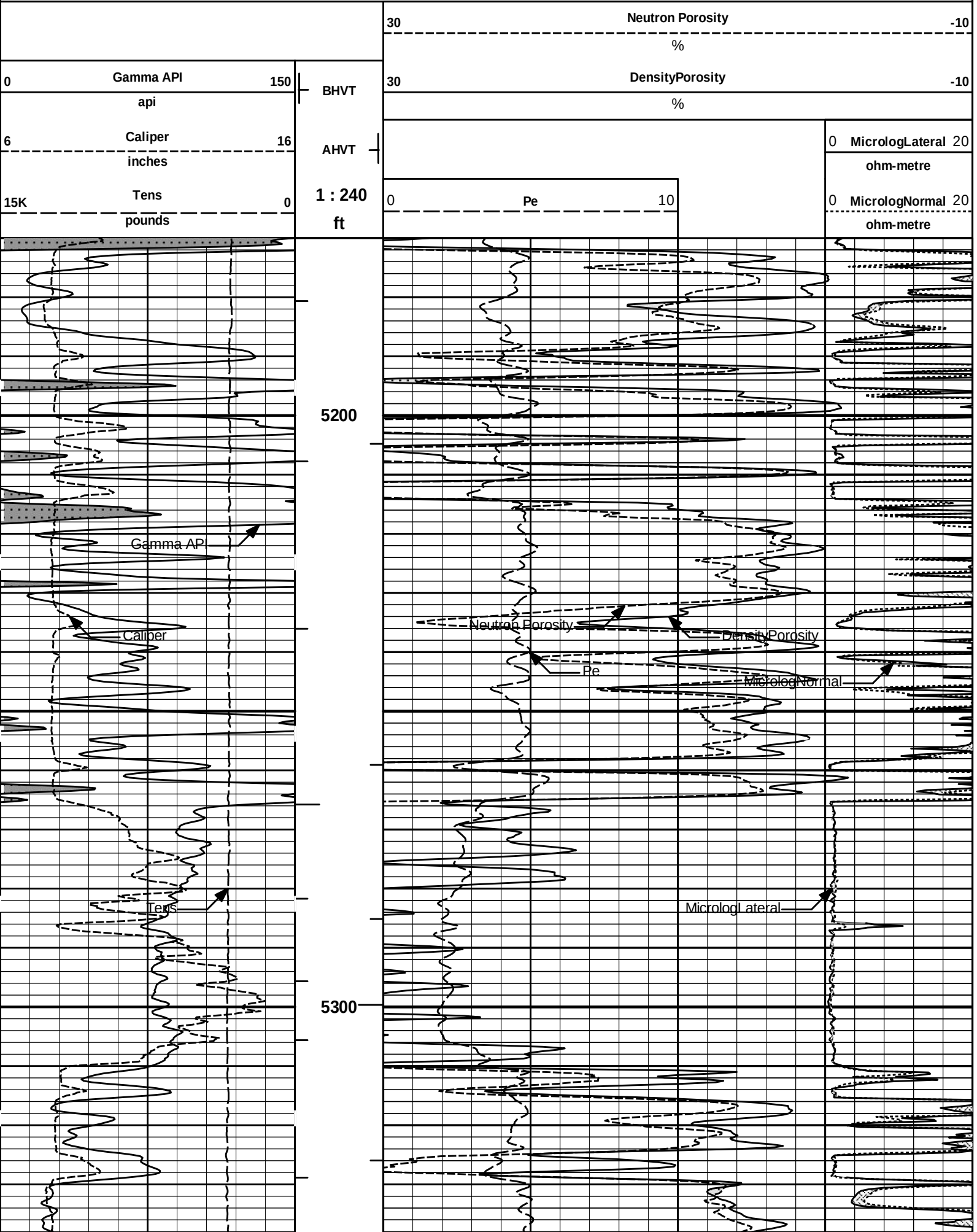
MAIN SECTION 5" PER 100'

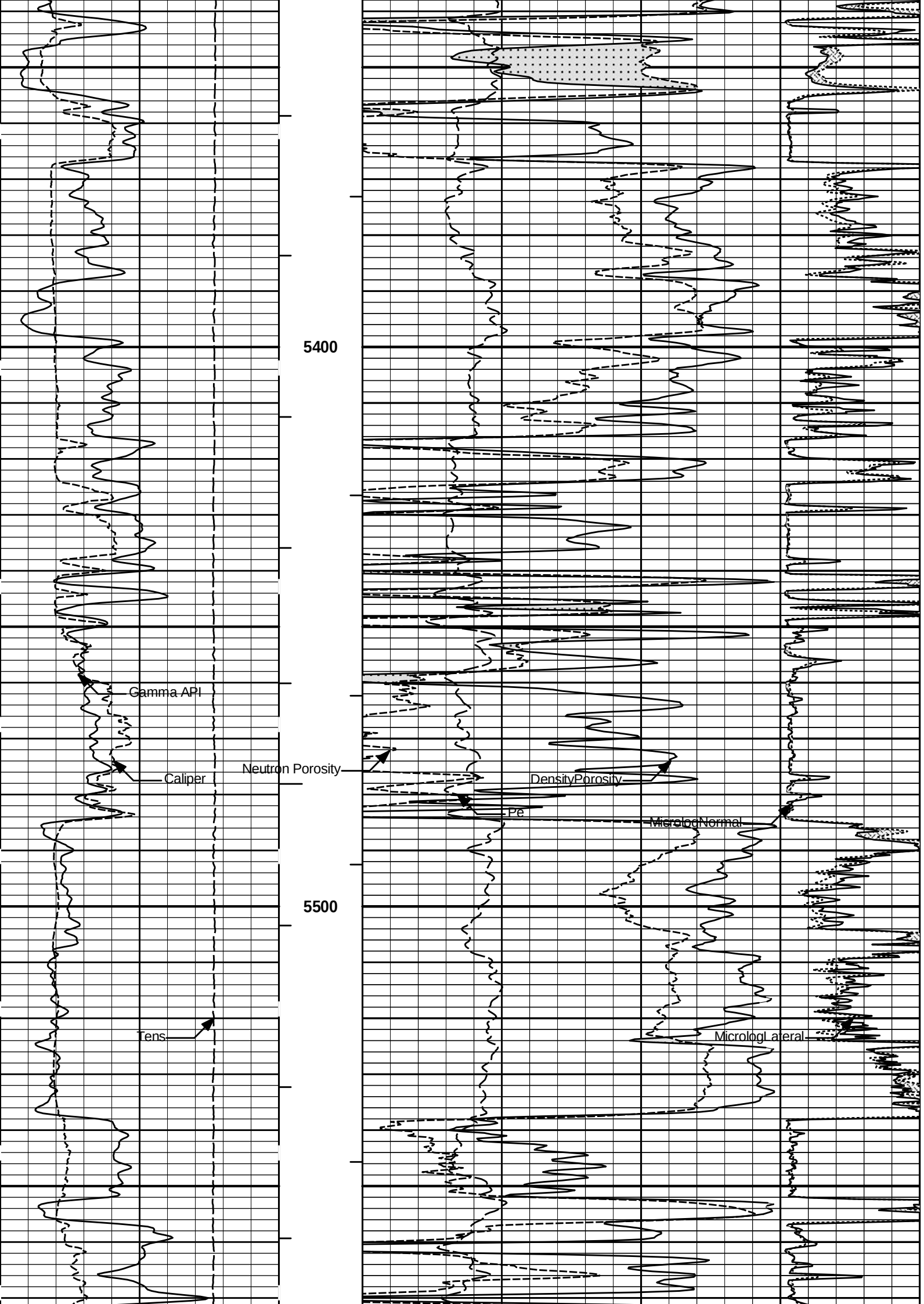
HALLIBURTON

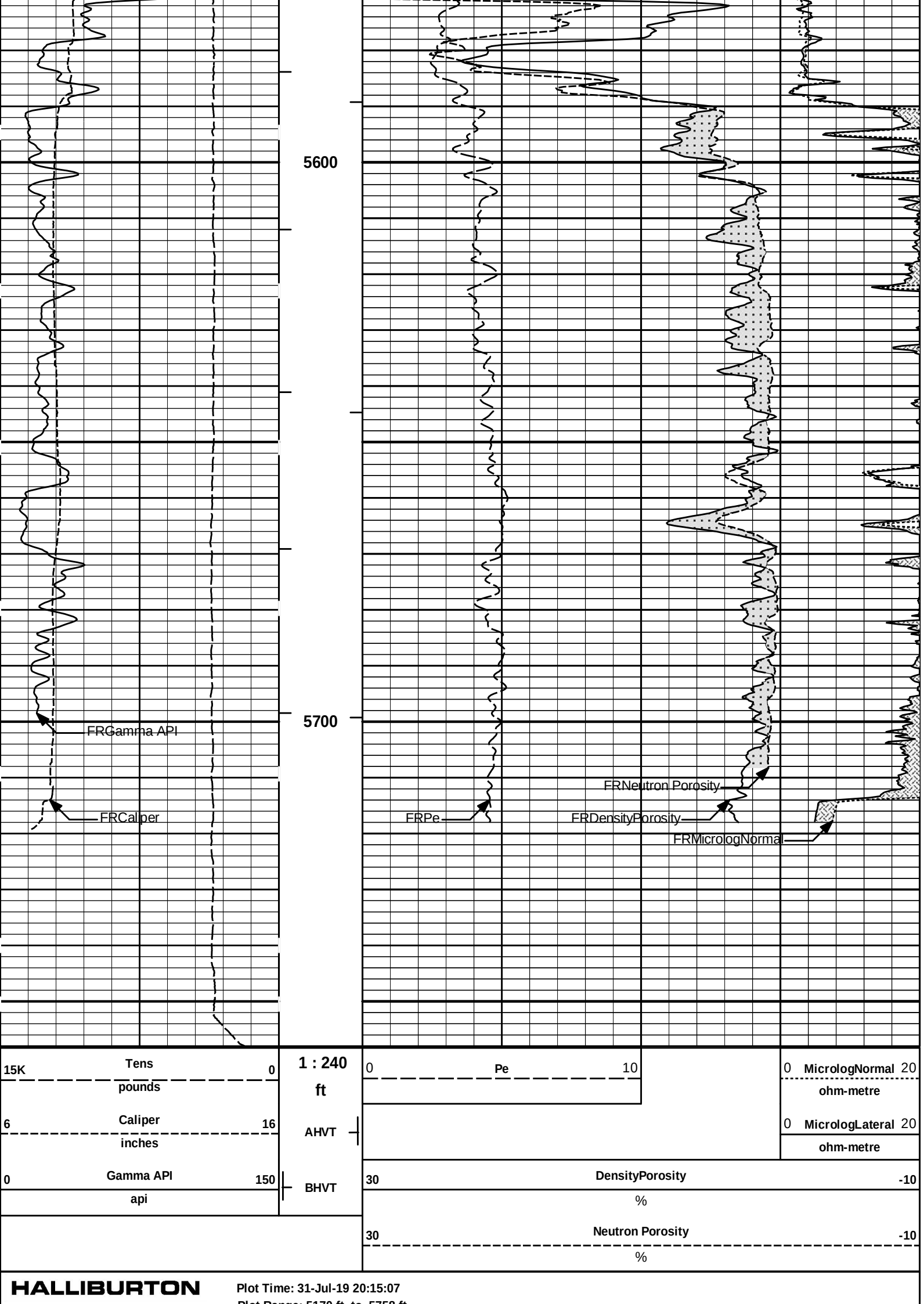
Plot Time: 31-Jul-19 20:15:05
Plot Range: 5170 ft to 5758 ft
Data: BEREXCO_BROWNWell Based*\nPlot File: \\SDL-DSN-ML\\PoromL_5_main_IQ

REPEAT SECTION

REPEAT SECTION







5600

5700

FRGamma API

FRCaliper

FRPe

ERNeutron Porosity

FRDensityPorosity

FRMicrologNormal

15K	Tens	0
	pounds	
6	Caliper	16
	inches	
0	Gamma API	150
	api	

1 : 240
ft
AHVT
BHVT

0	Pe	10
30	DensityPorosity	-10
	%	
30	Neutron Porosity	-10
	%	

0	MicrologNormal	20
	ohm-metre	
0	MicrologLateral	20
	ohm-metre	

HALLIBURTON

Plot Time: 31-Jul-19 20:15:07
Plot Range: 5170 ft to 5750 ft

REPEAT SECTION

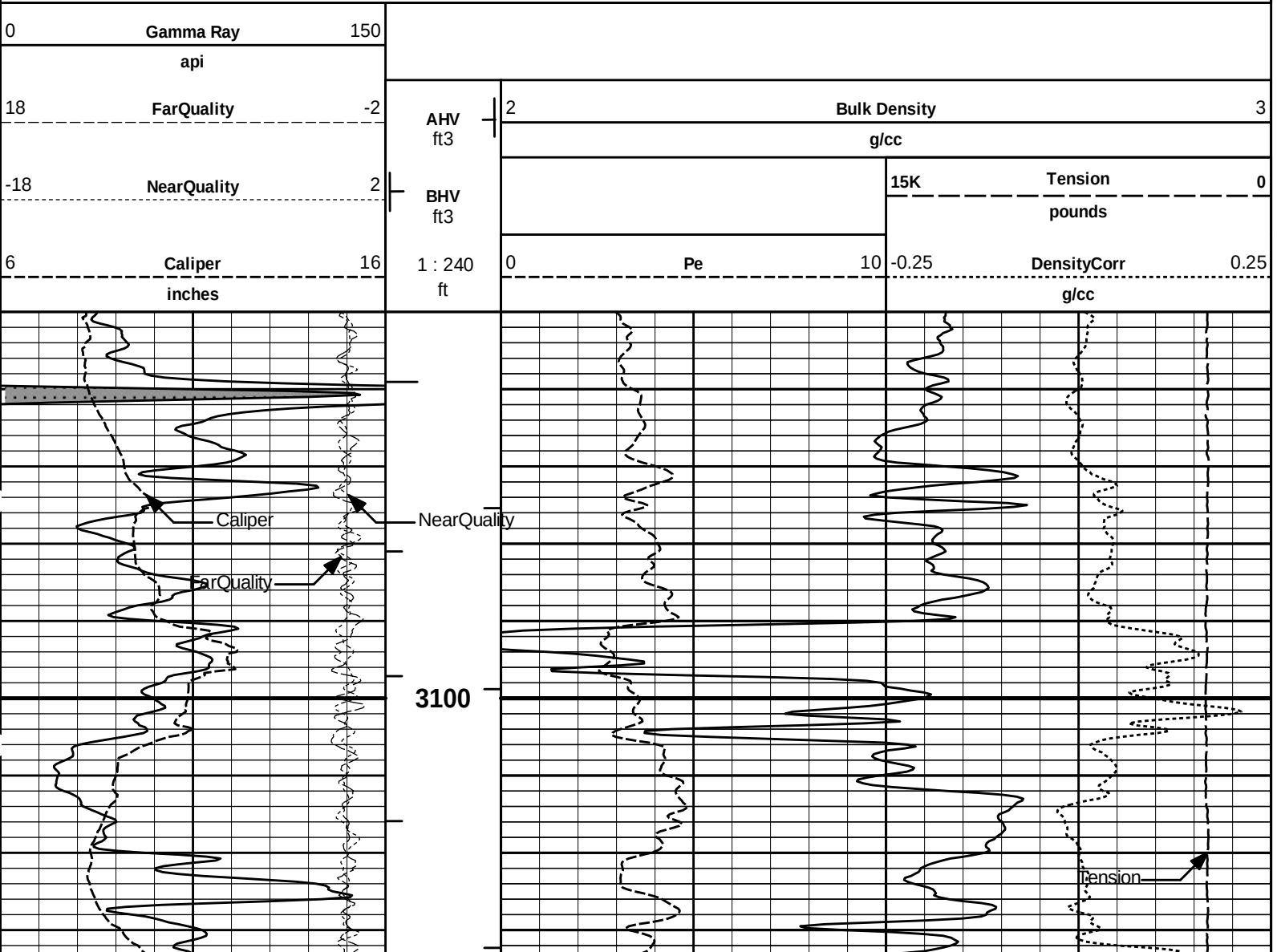
REPEAT SECTION

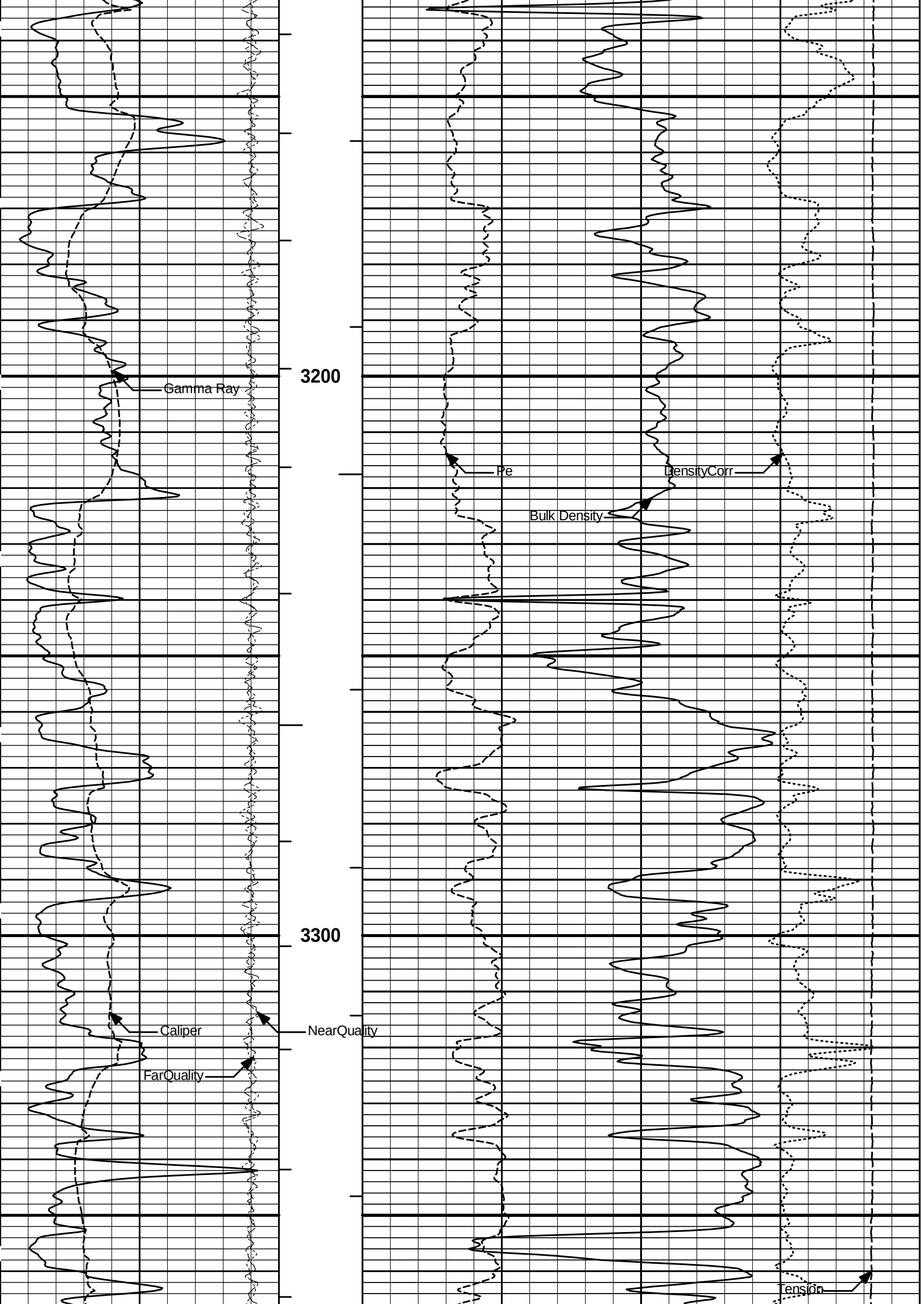
HALLIBURTON

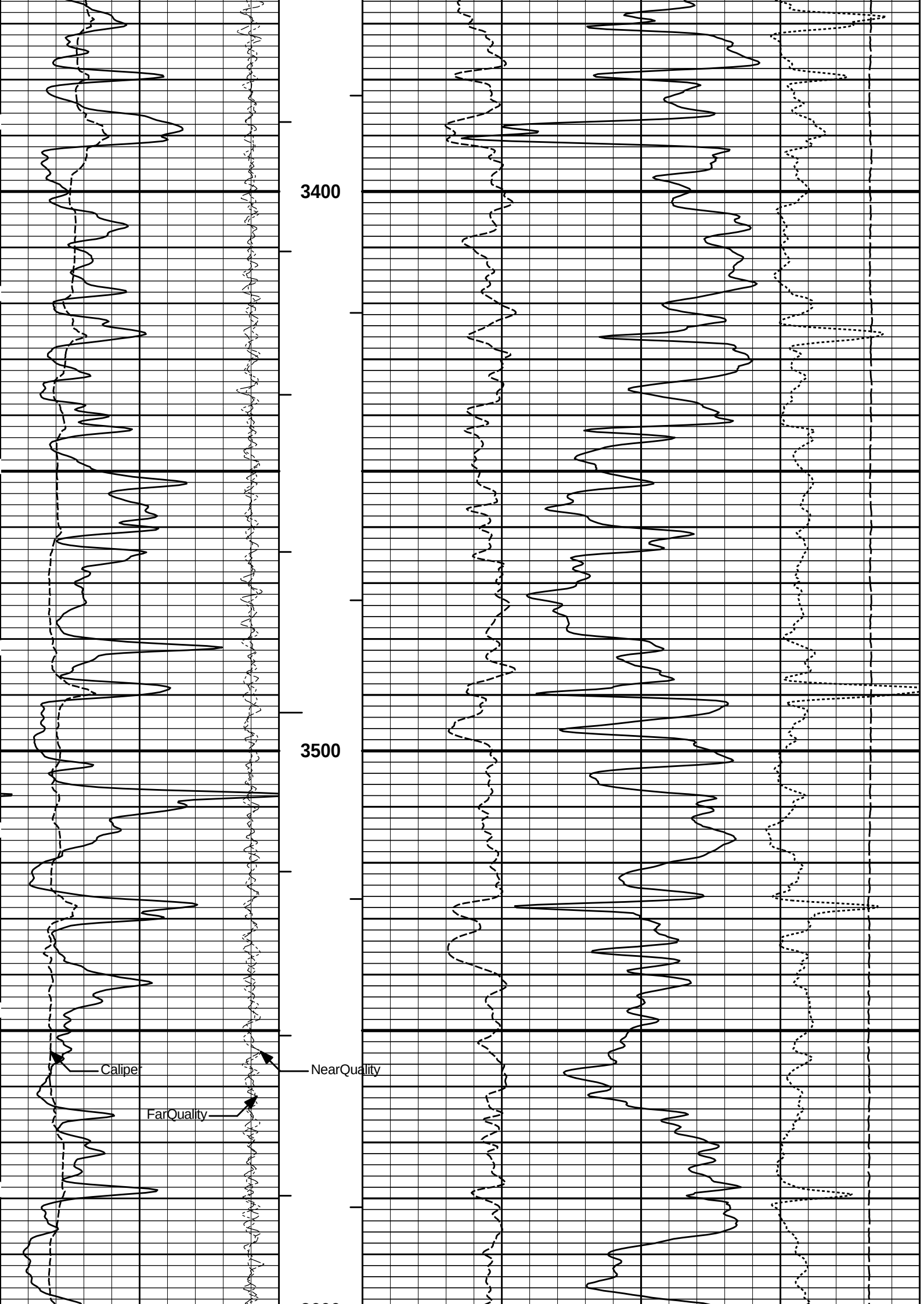
Plot Time: 31-Jul-19 20:15:07
Plot Range: 3050 ft to 5758.58 ft
Data: BEREXCO_BROWNWell Based\DAQ-0001-003\
Plot File: \\\LOCAL-\\BEREXCO_BROWN\\0001 GTET-DSN-SDL-BSAT-ACRT\\SDL-DSN-ML\\BULKD_5_MAIN_IQ

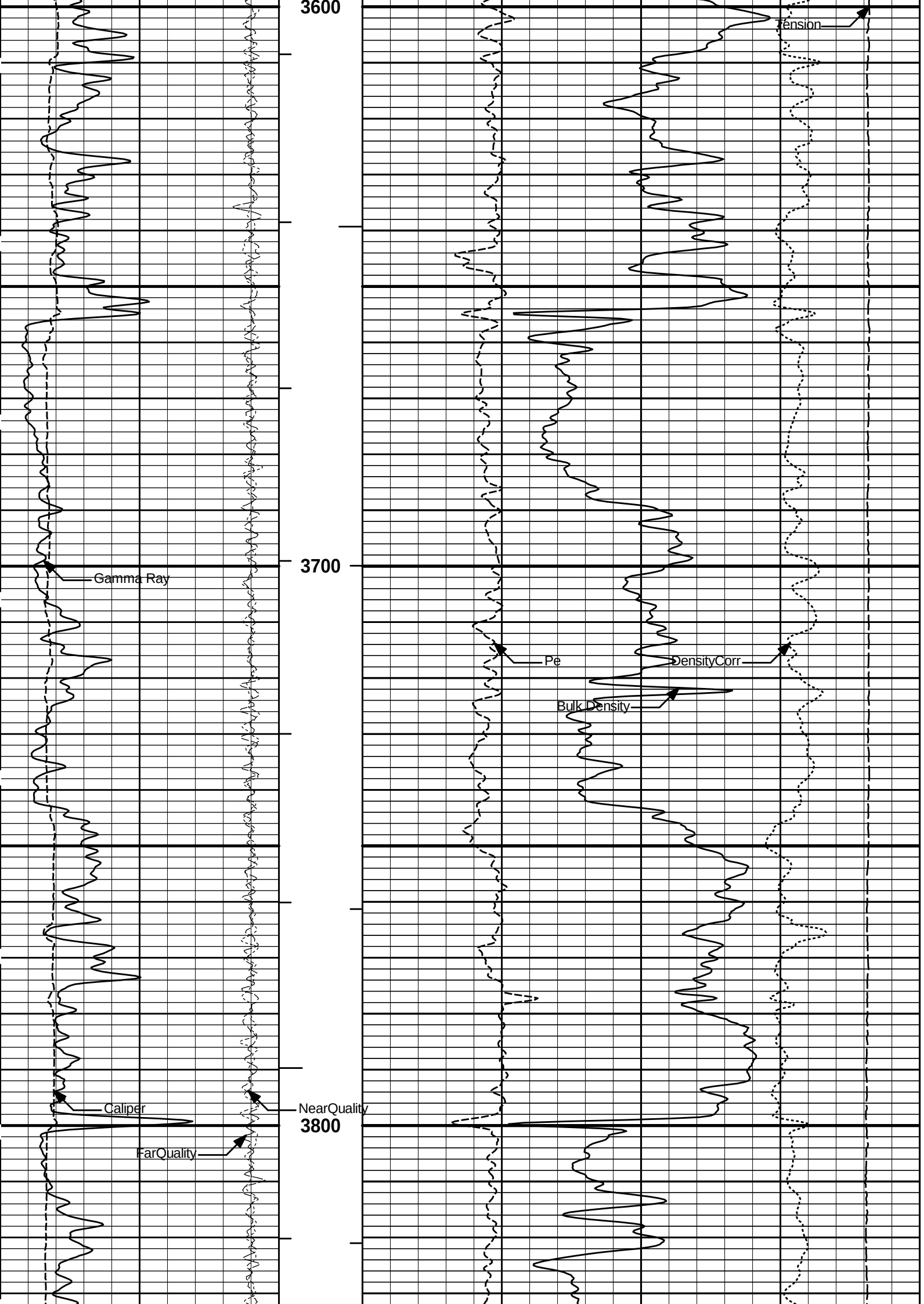
5 INCH MAIN LOG

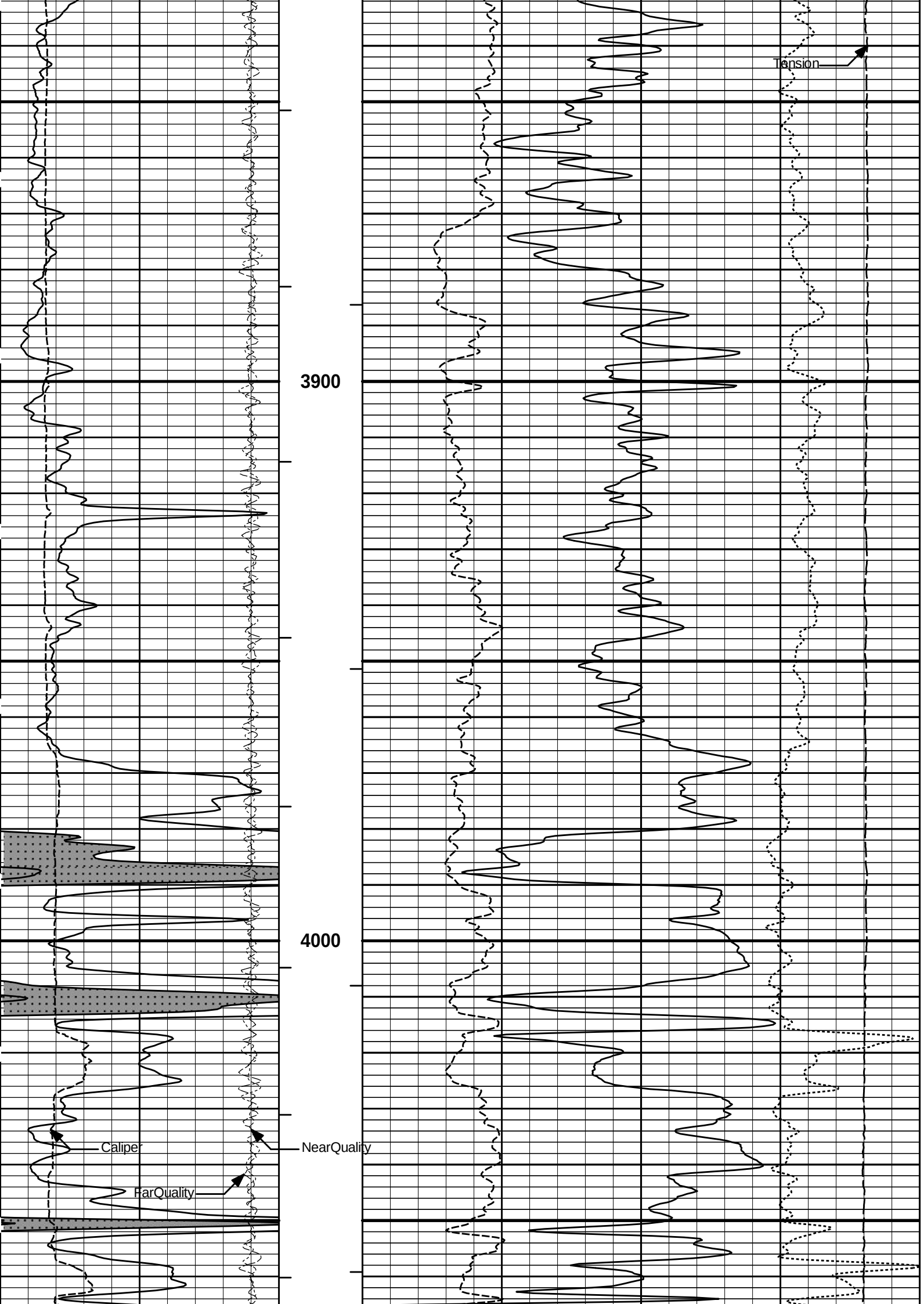
MAIN SECTION 5" PER 100'

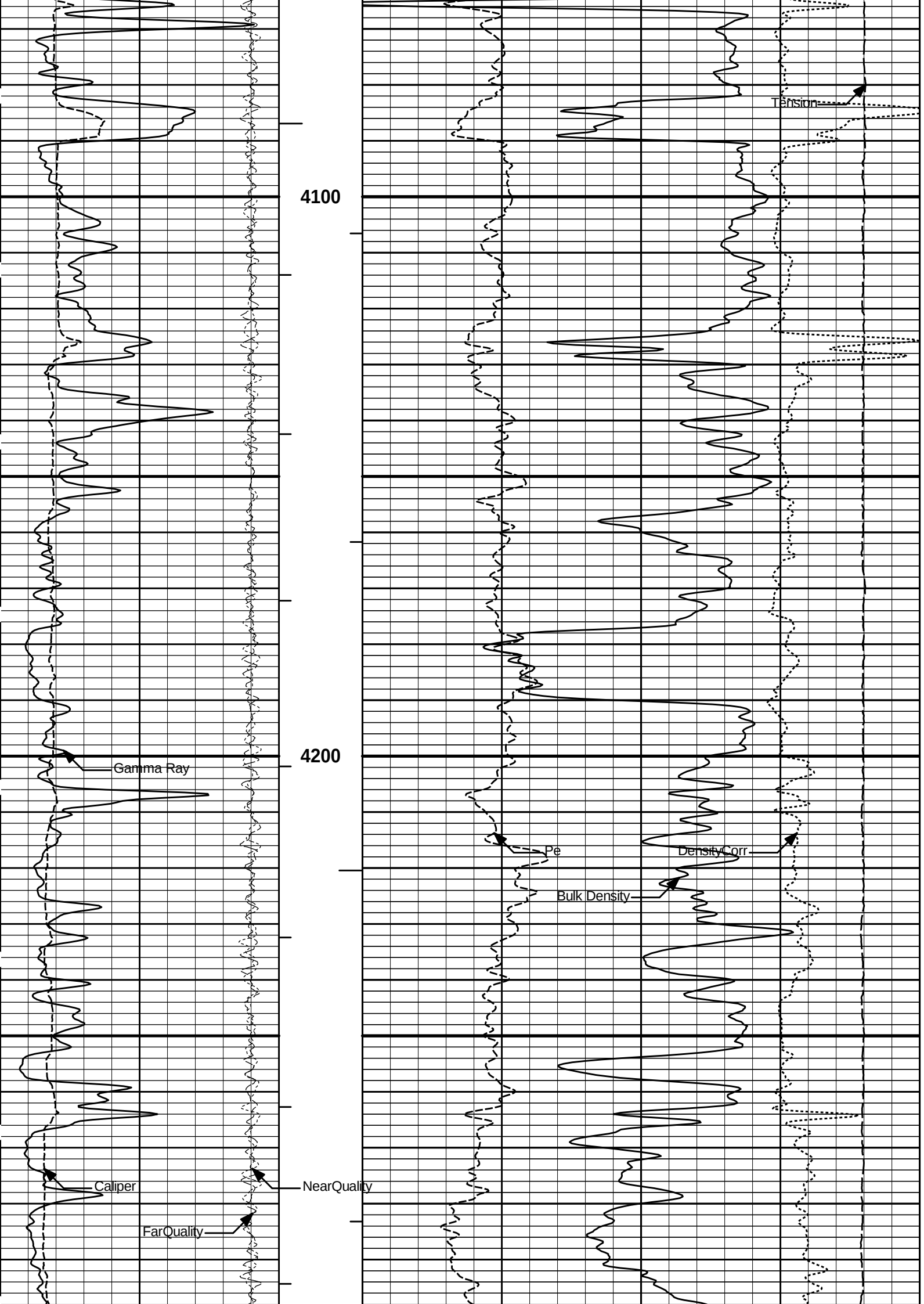


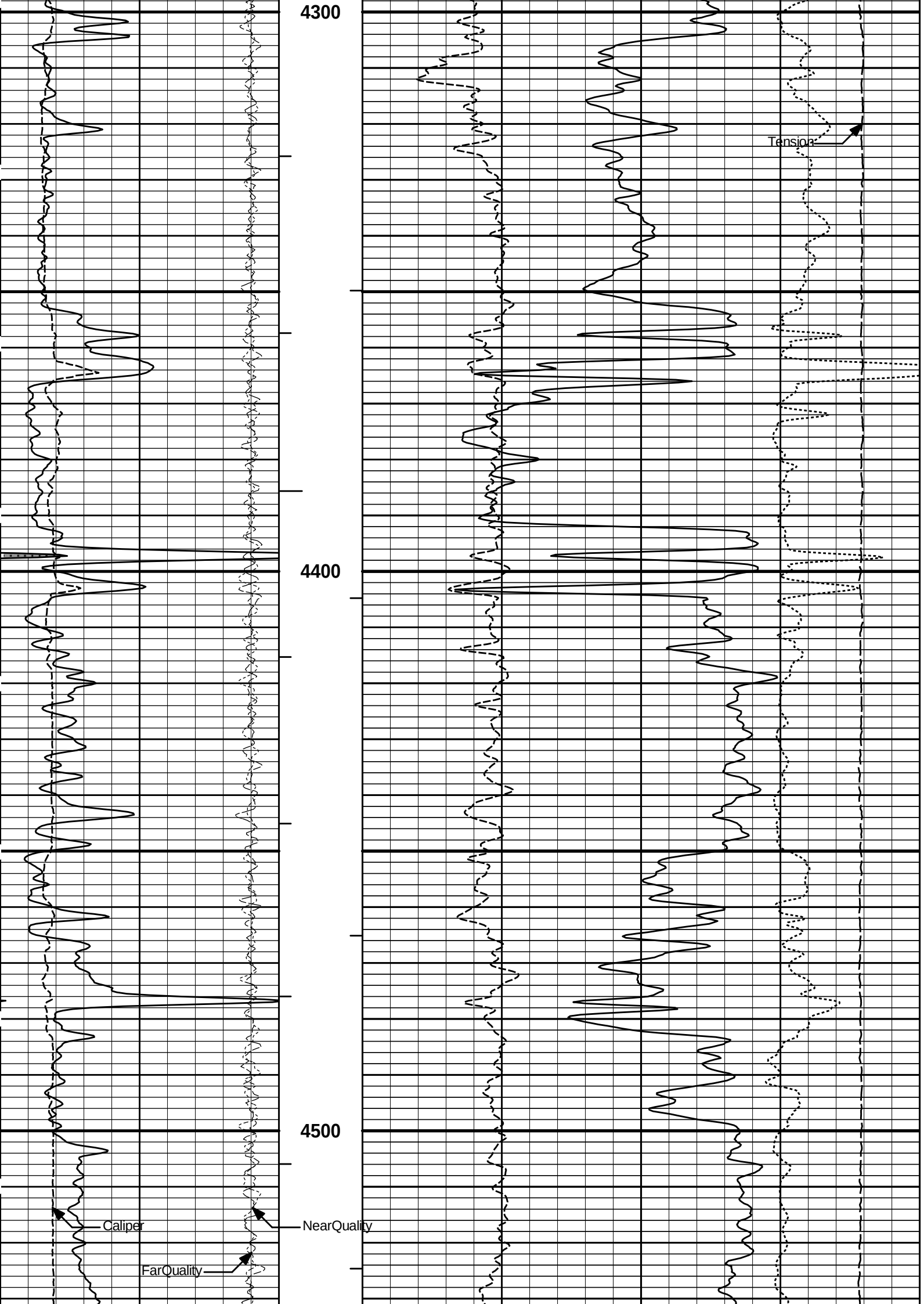


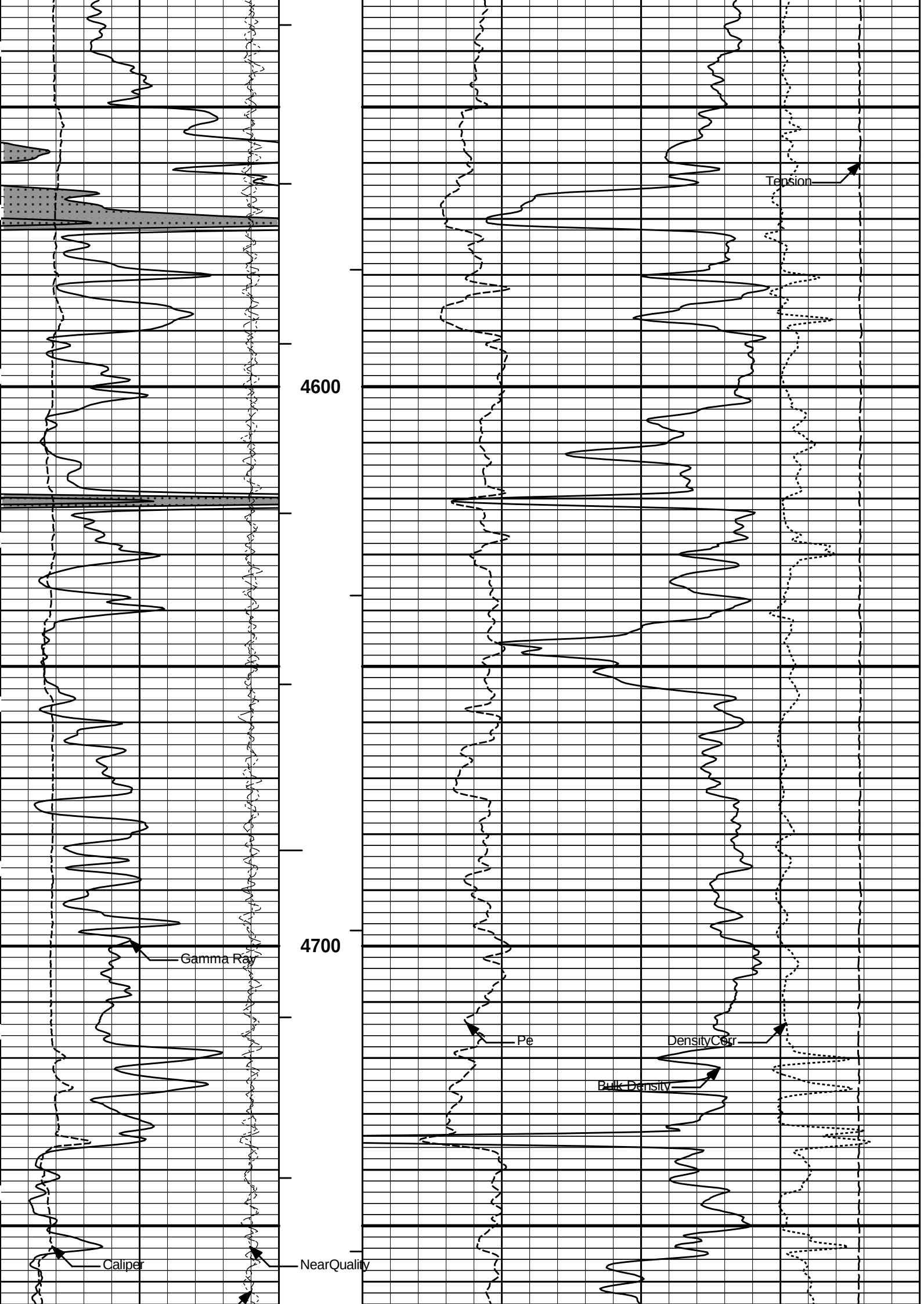


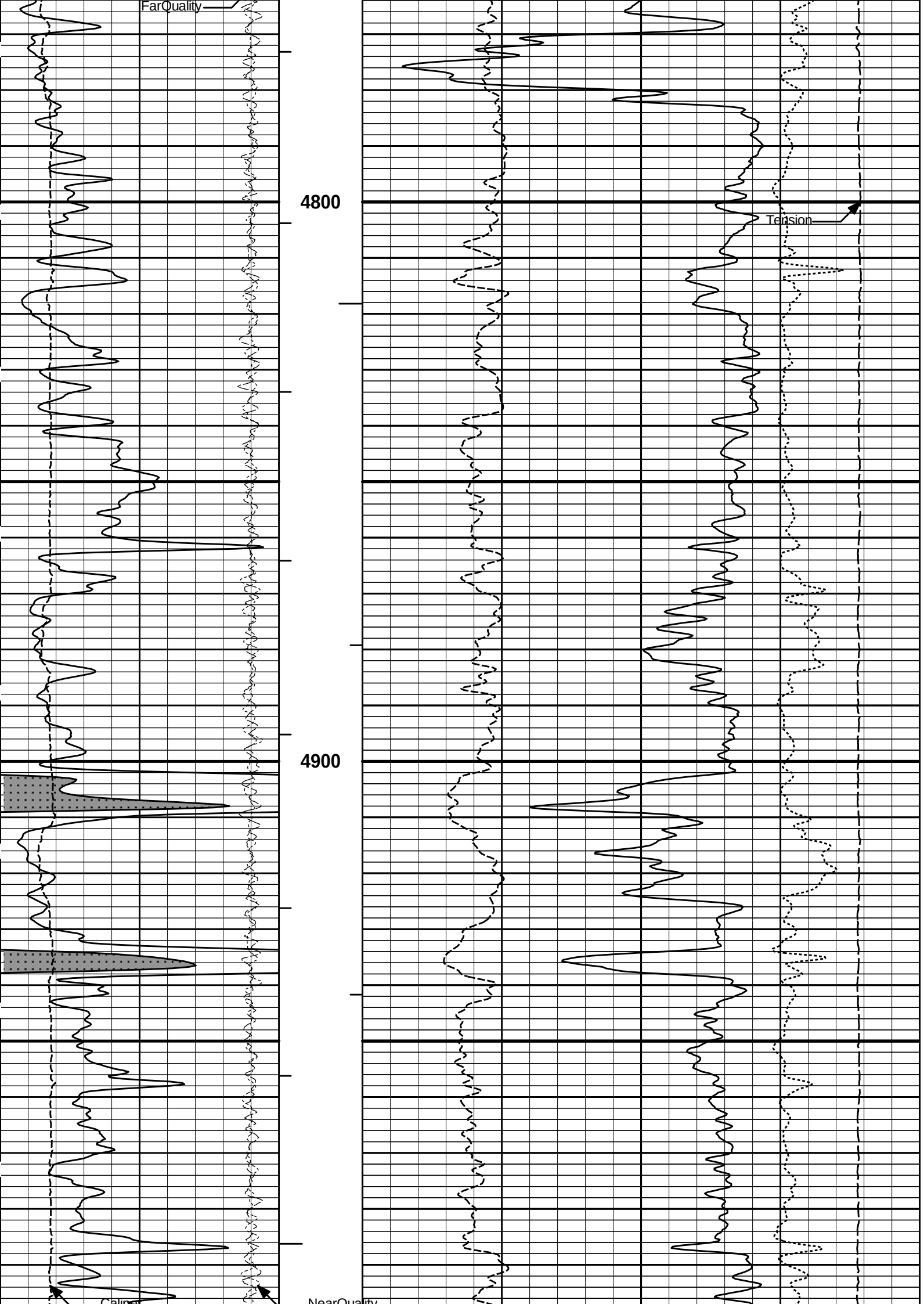


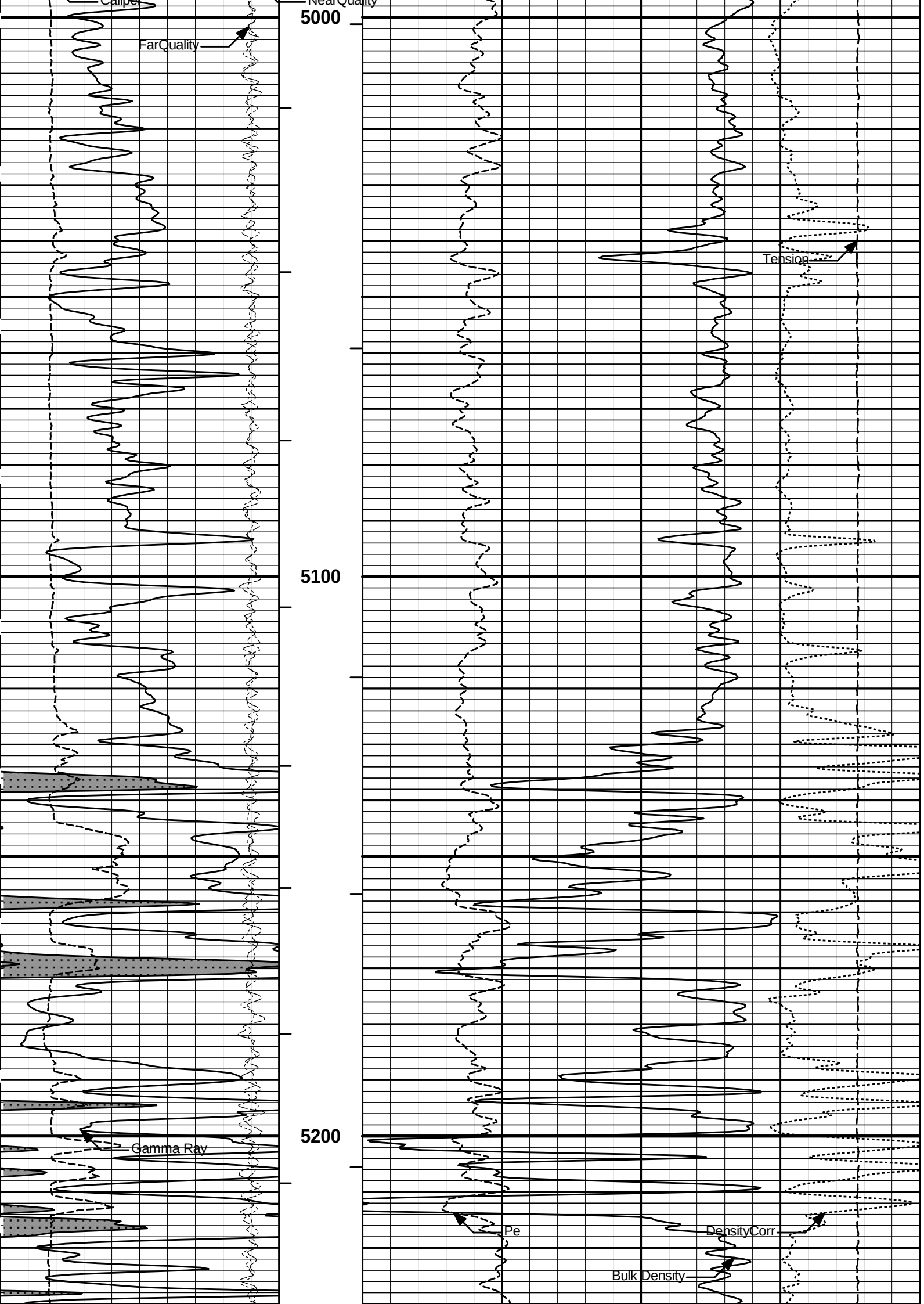


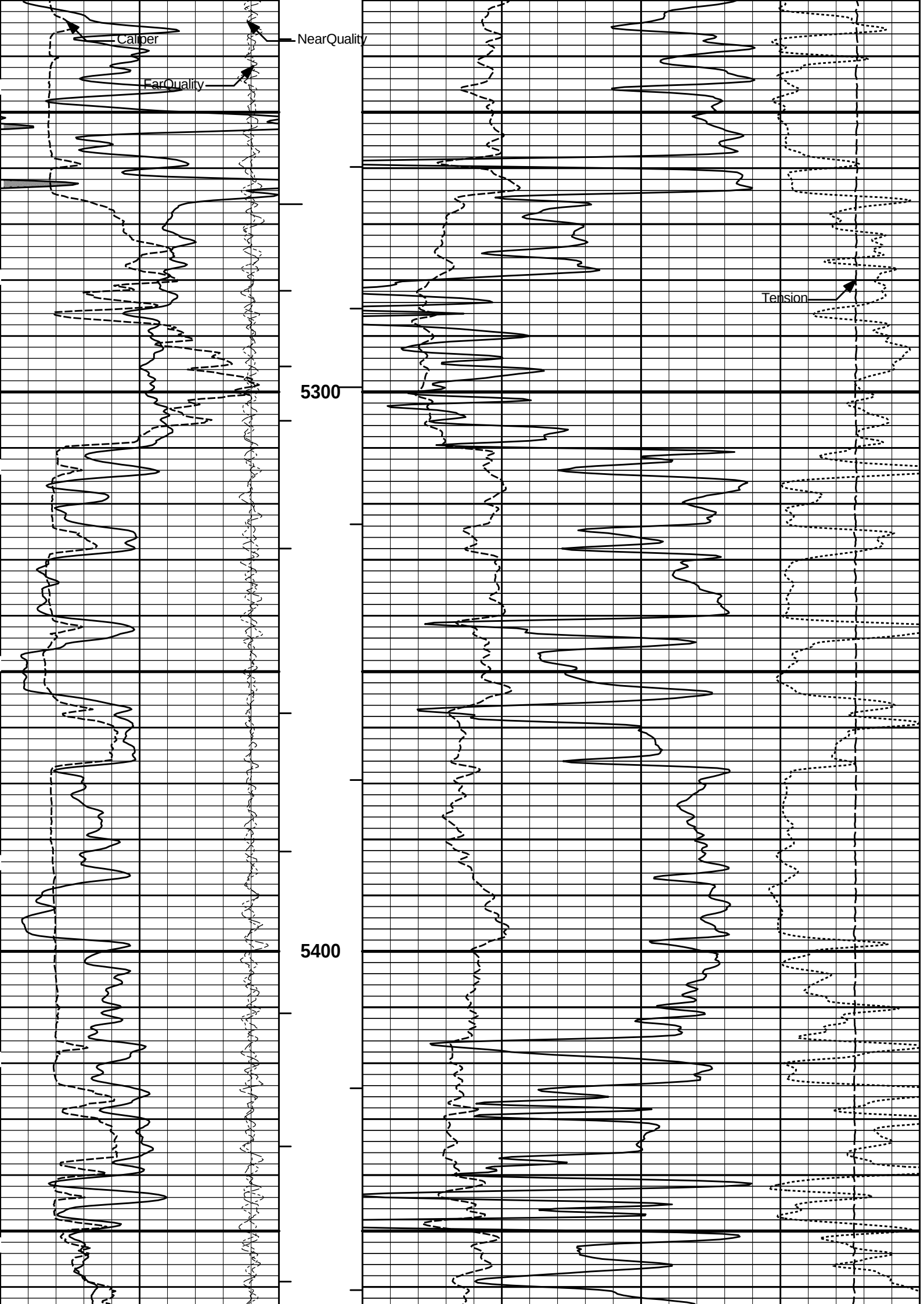


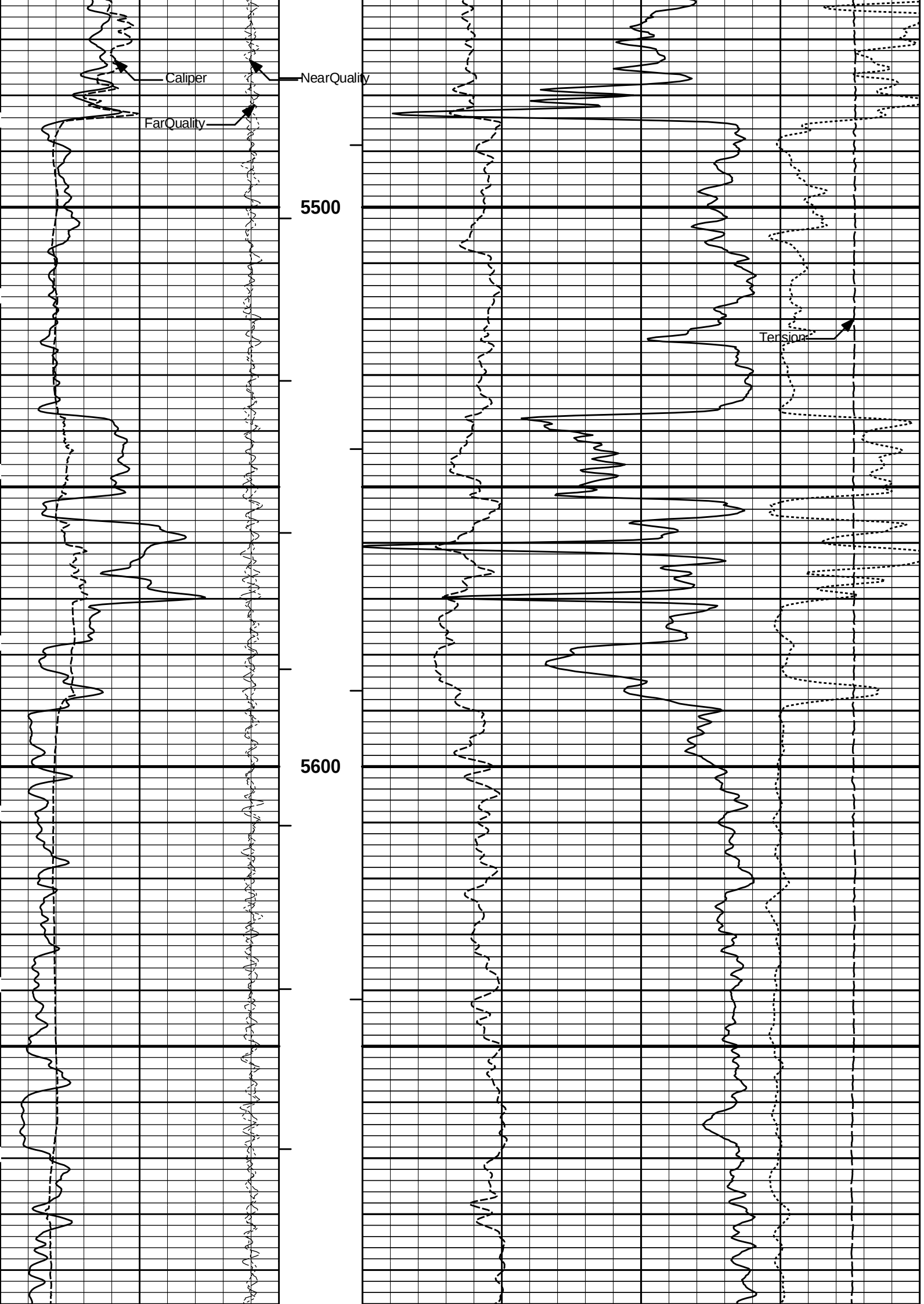


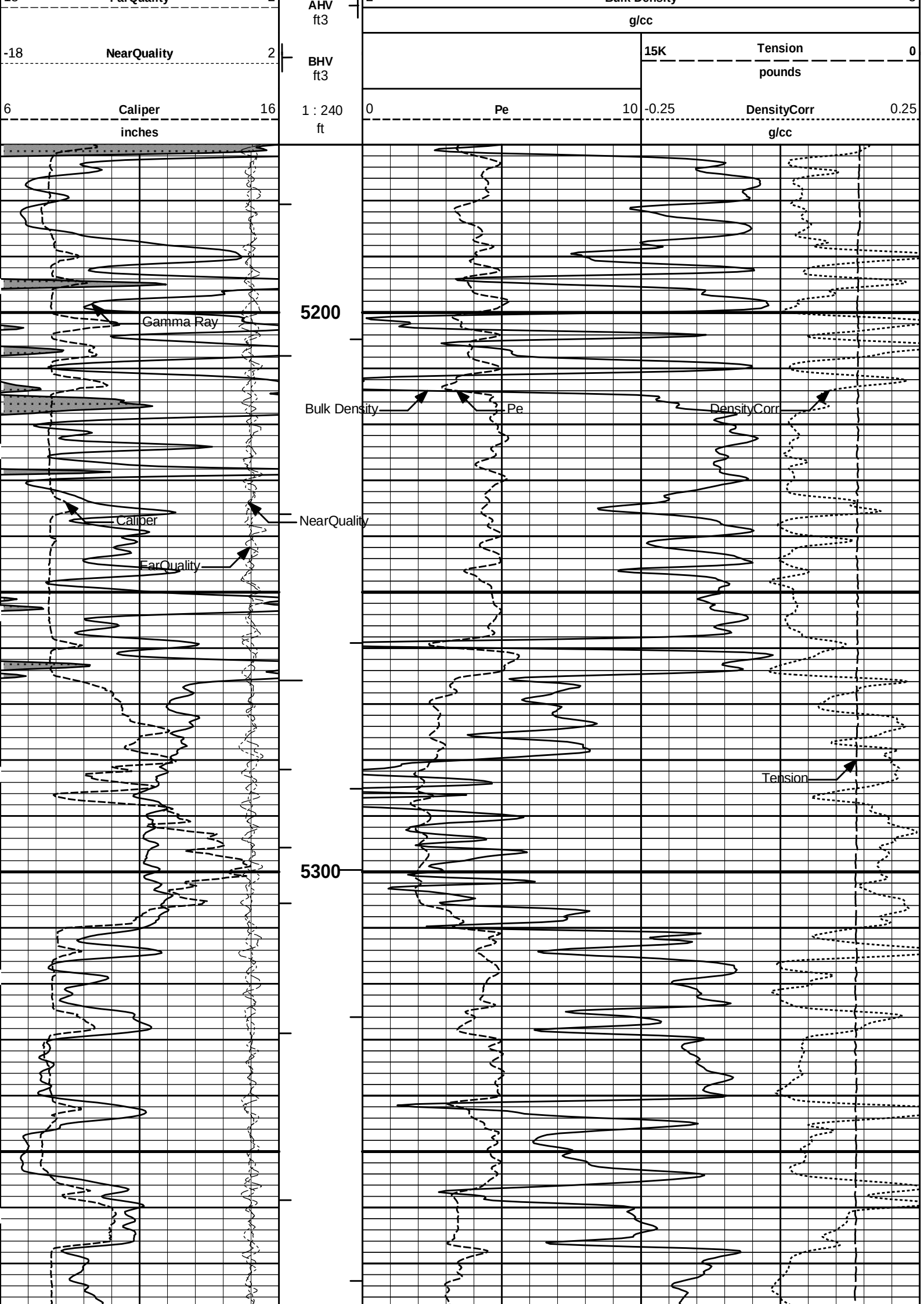


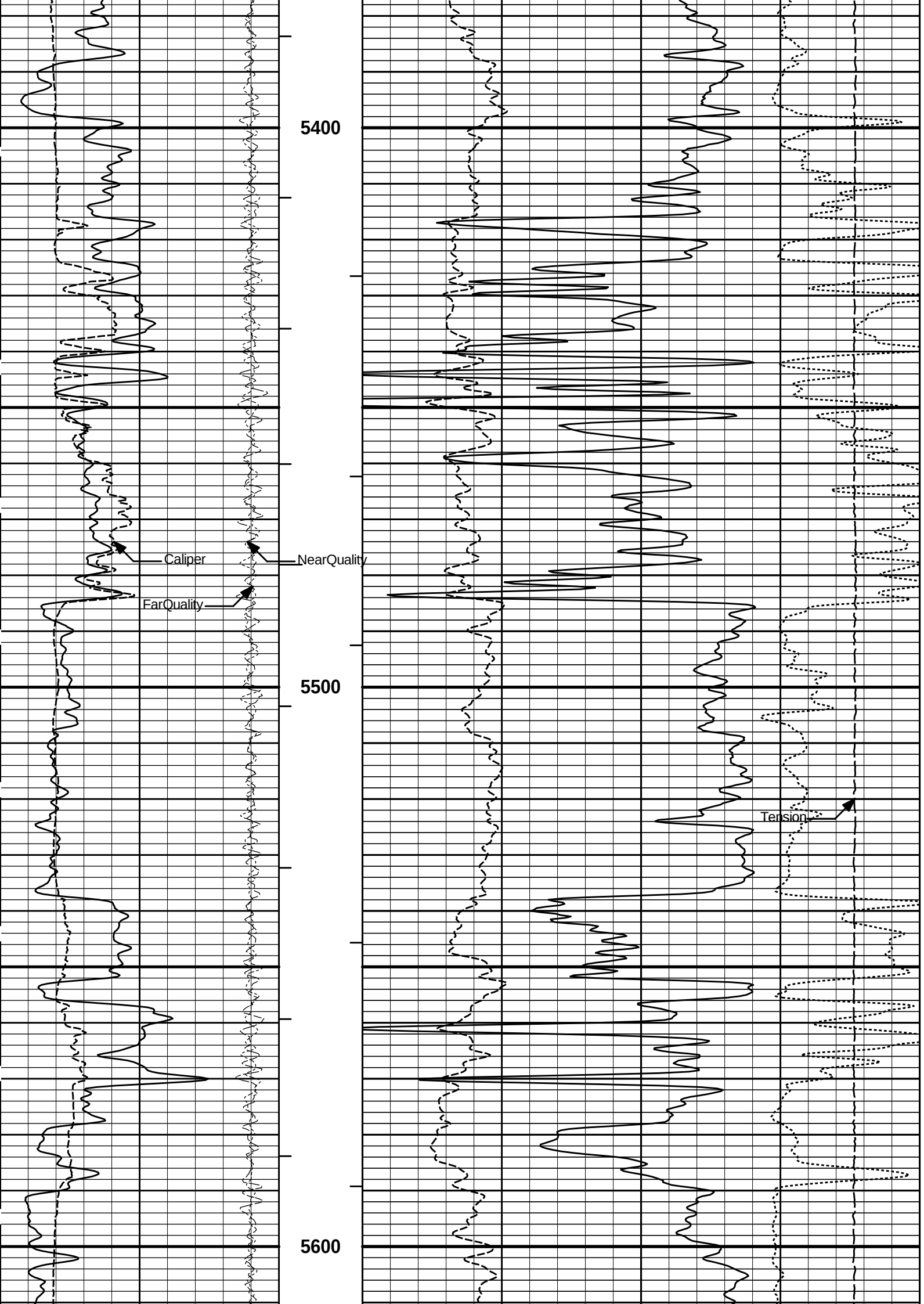


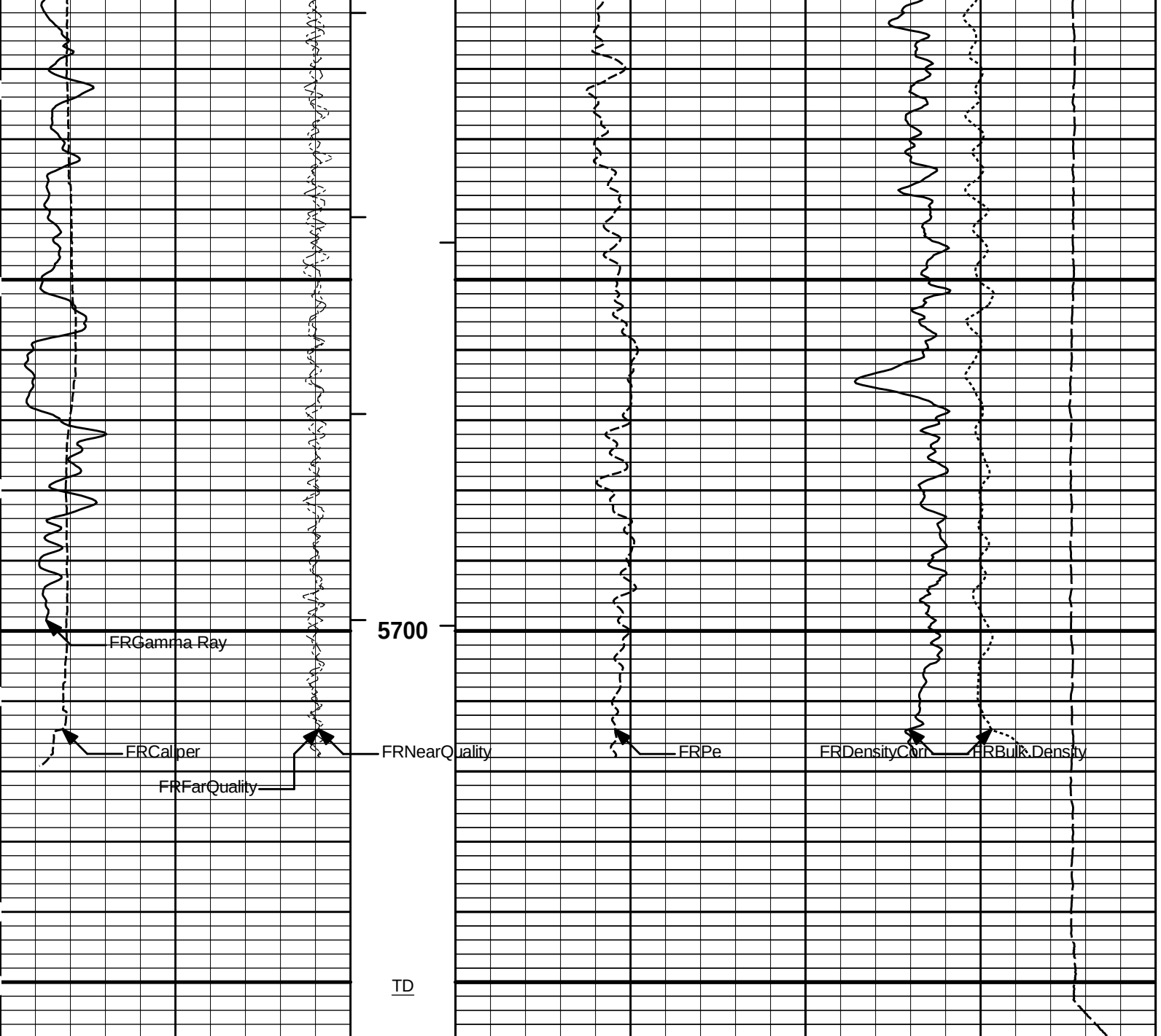












6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150							
	api								

HALLIBURTON

Plot Time: 31-Jul-19 20:15:12
Plot Range: 5170 ft to 5758 ft
Data: BEREXCO_BROWNWell Based\DAQ-0001-002\
Plot File: \\-LOCAL-\\BEREXCO_BROWN\\0001 GTET-DSN-SDL-BSAT-ACRT\\SDL-DSN-ML\\BULKD_5_MAIN_IQ

REPEAT SECTION

REPEAT SECTION

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name:	Depth Panel - 00000032	Reference Calibration Date:	26-Jul-19 17:26:31
Engineer:	WOLTEMATH	Calibration Date:	28-Jul-19 00:13:55
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

SURFACE TENSION LOAD CELL

Measurement	Load Cell Value	Measurement	Calibrated	Units
Low	9998.08	-62.17	0.00	lbs
High	17295.07	7822.09	7830.00	lbs

DOWNHOLE TENSION SHOP CALIBRATION

Tool Name:	RWCH - 11830866	Reference Calibration Date:	26-Jul-19 17:29:49
Engineer:	WOLTEMATH	Calibration Date:	28-Jul-19 00:18:29
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

DOWNHOLE LOAD CELL

Measurement	Tool Value	Measurement	Calibrated	Units
Low	-689.04	3.64	0.00	lbs
High	4138.10	564.09	1319.10	lbs

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 11021139	Reference Calibration Date:	14-May-19 09:57:38
Engineer:	WHITLOCK	Calibration Date:	29-Jun-19 15:22:45
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB-79
Calibrator API Reference:222.00 api
Equivalent Calibrator API Reference:225.9 api

Measurement	Measured	Calibrated	Units
Background	21.7	21.5	api
Background + Calibrator	249.2	247.4	api
Calibrator	227.5	225.9	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 11021139	Reference Calibration Date:	29-Jun-19 15:22:45
Engineer:	WHITLOCK	Calibration Date:	29-Jul-19 12:19:35
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB-79
Calibrator API Reference:222.00 api
Equivalent Calibrator API Reference:225.9 api

Field Verification	Shop	Field	Units
Background	21.5	24.5	api
Background + Calibrator	247.4	248.9	api
Calibrator	225.9	224.5	api

Shop	Field	Difference	Tolerance
225.9	224.5	1.4	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 11660709	Reference Calibration Date:	14-Feb-19 11:05:14
------------	-----------------	-----------------------------	--------------------

Engineer:	WHITLOCK	Calibration Date:	14-May-19 11:28:42
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Logging Source S/N: DSN-436

Tank Serial Number: EL RENO HWT

Reference value assigned to Tank: 56.100

Snow Block S/N: 12156883

Calibration Tank Water Temperature: 74 degF

Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.01152	1.00941	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	0.0007	+/- 0.0020
Calibrated Ratio:	10.5816	10.5596	0.022	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0724	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:

Gain-Range Check:

Snow-Block Check:

Passed

Passed

Passed

DUAL SPACED NEUTRON FIELD CALIBRATION				
Tool Name:	DSNT - 11660709		Reference Calibration Date:	14-May-19 11:28:42
Engineer:	WHITLOCK		Calibration Date:	16-Jul-19 11:07:48
Software Version:	WL INSITE R6.2.1 (Build 2)		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):	0.0724	0.0631	-0.0093	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:			Passed	
Snow Block Stat Check:			Passed	
Temperature Check:			Passed	

DENSITY CALIPER SHOP CALIBRATION				
Tool Name: SDLT - 12153526		Reference Calibration Date: 01-Jan-70 00:00:00		
Engineer: WOLTEMATH		Calibration Date: 08-Jul-19 10:59:56		
Software Version: WL INSITE R6.2.1 (Build 2)		Calibration Version: 1		
Host Tool Name: DSNT - 11660709				

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-3224.77	-3224.77	-7000.00 - -1000.00
Pad Gain	0.0003783	0.0003783	0.0002000 - 0.0006000

Arm Offset	-2193.01	-2193.01	-5000.00 - 3000.00
Arm Gain	0.0005237	0.0005237	0.000300 - 0.000700
Arm Power	-0.000005118	-0.000005118	-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)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 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:	SDLT - 12153526	Reference Calibration Date:	08-Jul-19 10:59:56
Engineer:	WOLTEMATH	Calibration Date:	08-Jul-19 11:01:50
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	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.25	0.00	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

BSAT FIELD CASING CHECK

Tool Name:	BSAT - 10939049	Calibration Date:	30-Mar-17 10:01:32
Engineer:	HARRIS		
Software Version:	WL INSITE R5.0.5 (Build 8)	Calibration Version:	1

Pre-Log Check	Check Depth	Shop	Field	Difference	Tolerance	Units
Delta-T Compensated	147.01	57.00	56.56	0.4400	1.00	uspf

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	ACRt Sonde - 11038385	Reference Calibration Date:	30-May-19 10:30:10
Engineer:	WHITLOCK	Calibration Date:	30-May-19 16:04:26
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11055059		

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0436	1.05	0.95	1.0233	1.05	0.95	1.0105	1.05
A2 (50")	0.95	1.0425	1.05	0.95	1.0248	1.05	0.95	1.0169	1.05
A3 (29")	0.95	1.0370	1.05	0.95	1.0178	1.05	0.95	1.0085	1.05
A4 (17")	0.95	1.0325	1.05	0.95	1.0108	1.05	0.95	1.0026	1.05

A5 (10")	N/A	N/A	N/A	0.95	1.0032	1.05	0.95	0.9929	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9937	1.05	0.95	0.9859	1.05
SONDE OFFSET									
Subarray	R12KHz		R36KHz		R72KHz				
	(mmho/m)		(mmho/m)		(mmho/m)				
A1 (80")	1.105		-4.185		-6.175				
A2 (50")	-2.031		-4.364		-5.644				
A3 (29")	-15.630		-4.663		-3.991				
A4 (17")	-113.327		-34.718		-27.228				
A5 (10")	N/A		-86.739		-42.245				
A6 (6")	N/A		334.526		172.566				
TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION				
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)	
12K	0.6	0.93	1.3		Mud Cell	0.95	1.00	1.05	
36K	1.0	1.39	2.0						
72K	1.0	1.66	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 - 11038385	Reference Calibration Date:	27-Mar-19 10:28:27
Engineer:	WHITLOCK	Calibration Date:	30-May-19 10:32:26
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11055059		

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	-0.007	> -0.500	Pass
A2 (50")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.006	> -0.500	Pass
A3 (29")	-0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.004	> -0.500	Pass
A4 (17")	-0.003	> -0.500	Pass	-0.008	> -0.500	Pass	-0.028	> -0.500	Pass
A5 (10")	-0.012	> -0.500	Pass	-0.020	> -0.500	Pass	-0.043	> -0.500	Pass
A6 (6")	0.015	< 0.500	Pass	0.074	< 0.500	Pass	0.160	< 0.500	Pass
GAIN TOLERANCE									

R12KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-222464160.000	-219334160.000	3130000.000	10966708.000	Pass
A2 (50")	-218296048.000	-217147632.000	1148416.000	10857381.600	Pass
A3 (29")	-215615984.000	-213416928.000	2199056.000	10670846.400	Pass
A4 (17")	-212439408.000	-210205136.000	2234272.000	10510256.800	Pass
A5 (10")	-213281584.000	-210744480.000	2537104.000	10537224.000	Pass
A6 (6")	-213757744.000	-212744384.000	1013360.000	10637219.200	Pass
R36KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	58226652.000	59308716.000	1082064.000	2965435.800	Pass
A2 (50")	59078976.000	60516680.000	1437704.000	3025834.000	Pass
A3 (29")	50762576.000	52467084.000	1704508.000	2623354.200	Pass
A4 (17")	47774380.000	48963324.000	1188944.000	2448166.200	Pass
A5 (10")	49758800.000	51107628.000	1348828.000	2555381.400	Pass
A6 (6")	48666176.000	49936832.000	1270656.000	2496841.600	Pass
R72KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-92092456.000	-91475104.000	617352.000	4573755.200	Pass
A2 (50")	-88448376.000	-88531624.000	83248.000	4426581.200	Pass
A3 (29")	-88454672.000	-88284496.000	170176.000	4414224.800	Pass
A4 (17")	-83513648.000	-83029816.000	483832.000	4151490.800	Pass
A5 (10")	-82220840.000	-81717560.000	503280.000	4085878.000	Pass
A6 (6")	-83857920.000	-83900568.000	42648.000	4195028.400	Pass
PASS/FAIL SUMMARY					
	Std Deviation Verification			Pass	
	Average Verification			Pass	
	Gain Tolerance Verification			Pass	

MICRO LOG SHOP CALIBRATION					
Tool Name:	Microlog Pad - 12153526			Reference Calibration Date:	11-May-19 13:30:58
Engineer:	WHITLOCK			Calibration Date:	29-Jul-19 12:21:32
Software Version:	WL INSITE R6.2.1 (Build 2)			Calibration Version:	1
Host Tool Name:	DSNT - 11660709				
CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.08	-0.15	-0.01	-0.01	ohmm
Calibration Point #1	0.06	0.00	0.00	0.00	ohmm
Calibration Point #2	20.11	20.00	20.07	20.00	ohmm
Internal Reference	19.97	19.87	20.05	19.98	ohmm
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Tool Value		Tool Value		
Tool Zero	-0.04		0.22		V
Calibration Point #1	38.83		2.19		V
Calibration Point #2	5332.43		6966.93		V
Internal Reference	5297.41		6959.23		V

MICRO LOG FIELD CHECK					
Tool Name:	Microlog Pad - 12153526			Reference Calibration Date:	29-Jul-19 12:21:32
Engineer:	WHITLOCK			Calibration Date:	29-Jul-19 12:22:18

Software Version: WL INSITE R6.2.1 (Build 2)			Calibration Version: 1			
Measurement	Micro Log Normal		Micro Log Lateral			
	Shop	Field	Shop	Field	Units	
	Tool Zero	-0.15	-0.15	-0.01	-0.01 ohmm	
	Internal Reference	19.87	19.88	19.98	19.99 ohmm	
	Summary					
	Signal	Shop	Field	Difference	Tolerance	
	Microlog Normal	19.87	19.88	-0.01	+/- 0.80	
	Microlog Lateral	19.98	19.99	-0.01	+/- 0.80	
	SPECTRAL DENSITY SHOP CALIBRATION					
	Tool Name: SDLT Pad - 11284007			Reference Calibration Date: 14-May-19 10:35:42		
Engineer: WHITLOCK			Calibration Date: 14-May-19 11:01:04			
Software Version: WL INSITE R6.2.1 (Build 2)			Calibration Version: 1			
Logging Source S/N: 5475GW						
Aluminum Block S/N: EL RENO AL BLK			Density: 2.581g/cc		Pe: 3.170	
Magnesium Block S/N: EL RENO MG BLK			Density: 1.687g/cc		Pe: 2.594	
DENSITY CALIBRATION SUMMARY						
Measurement	Previous Value		New Value		Control Limit	
Near Bar Gain	1.0672		1.0696		0.90 - 1.10	
Near Dens Gain	1.0399		1.0253		0.90 - 1.10	
Near Peak Gain	1.0698		1.0607		0.90 - 1.10	
Near Lith Gain	1.0707		1.0600		0.90 - 1.10	
Far Bar Gain	1.0119		1.0132		0.90 - 1.10	
Far Dens Gain	1.0014		1.0004		0.90 - 1.10	
Far Peak Gain	0.9998		0.9988		0.90 - 1.10	
Far Lith Gain	0.9842		0.9832		0.90 - 1.10	
Near Bar Offset	-0.4646		-0.4868		NONE	
Near Dens Offset	-0.1638		-0.0376		NONE	
Near Peak Offset	-0.4118		-0.3374		NONE	
Near Lith Offset	-0.4691		-0.3841		NONE	
Far Bar Offset	-0.0627		-0.0742		NONE	
Far Dens Offset	0.0569		0.0650		NONE	
Far Peak Offset	0.0511		0.0583		NONE	
Far Lith Offset	0.1514		0.1583		NONE	
Near Bar Background	993.88		993.91		700 - 1450	
Near Dens Background	329.23		327.28		230 - 480	
Near Peak Background	147.25		146.97		100 - 210	
Near Lith Background	178.05		176.81		125 - 260	
Far Bar Background	582.67		585.21		450 - 900	
Far Dens Background	227.13		227.13		175 - 345	
Far Peak Background	91.02		90.90		70 - 140	
Far Lith Background	94.76		94.27		75 - 145	
CALIBRATION BLOCK SUMMARY						
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change		
MAGNESIUM						
Density (g/cc)	1.688	1.687	-0.001	+/- 0.015		
Pe	2.523	2.556	0.033	+/- 0.150		
ALUMINUM						
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500		
Pe	3.116	3.129	0.013	+/- 0.150		

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0004	+/- 0.0110	-0.0020	+/- 0.0140
Magnesium Block	0.0005	+/- 0.0110	0.0007	+/- 0.0140
Aluminum Block	0.0003	+/- 0.0110	0.0001	+/- 0.0140
Resolution	8.86	6.00 - 11.50	9.16	6.00 - 11.50
Internal Verifier(B+D+P+L)	1645	1200 - 2700	998	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 - 11284007		Reference Calibration Date:	14-May-19 11:01:04
Engineer:	WHITLOCK		Calibration Date:	29-Jul-19 12:19:53
Software Version:	WL INSITE R6.2.1 (Build 2)		Calibration Version:	1
Pad Temperature: 89.3 degF				
DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1644.977	1647.359	2.382	16.295
Far (B+D+P+L) cps	997.505	992.725	-4.780	16.911
Near Resolution	8.86	8.85	-0.010	0.50
Far Resolution	9.16	9.12	-0.040	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-11830866						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	1319.10	-----	-----	0.00	-----	lbs
GTET-11021139						
Gamma Ray Calibrator	225.9	224.5	-----	1.4	+/- 9.00	api
DSNT-11660709						
Snow-Block Porosity	0.0724	0.0631	-----	0.0093	+/- 0.0150	decp
SDLT-12153526						
Pad Extension	3.75	3.76	-----	-0.01	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.00	+/-0.15	in

Mud Cell	1.00	-----	-----	0	-----	ohm-m
Microlog Pad-12153526						
MicroLog Normal	19.87	19.88	-----	-0.01	+/-0.80	ohmm
MicroLog Lateral	19.98	19.99	-----	-0.01	+/-0.80	ohmm
SDLT Pad-11284007						
Near(B+D+P+L)	1644.977	1647.359	-----	-2.382	+/-16.295	cps
Far(B+D+P+L)	997.505	992.725	-----	4.780	+/-16.911	cps
Data: BEREXCO_BROWN\0001 GTET-DSN-SDL-BSAT-ACRT\IDLE						
Date: 31-Jul-19 16:09:25						

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	9.300	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	2.000	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	5750.00	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	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	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
DSNT	UCLA	Classic Neutron Parameter utilized?	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	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	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	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM_____

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-11830866 135.00 lbs	Weak Point Solid- 11111111 0.01 lbs	Ø 2.310 in Ø 3.625 in Ø 0.010 in*		Fishing Neck @ 73.73 ft Load Cell @ 70.93 ft BH Temperature @ 70.36 ft	6.25 ft	74.61 ft 68.36 ft
SP Sub-10904995		Ø 3.625 in		SP @ 66.59 ft	2.71 ft	

Date: 31-Jul-19 16:11:14