

SPECTRAL DENSITY DUAL SPACED NEUTRON MICROLOG

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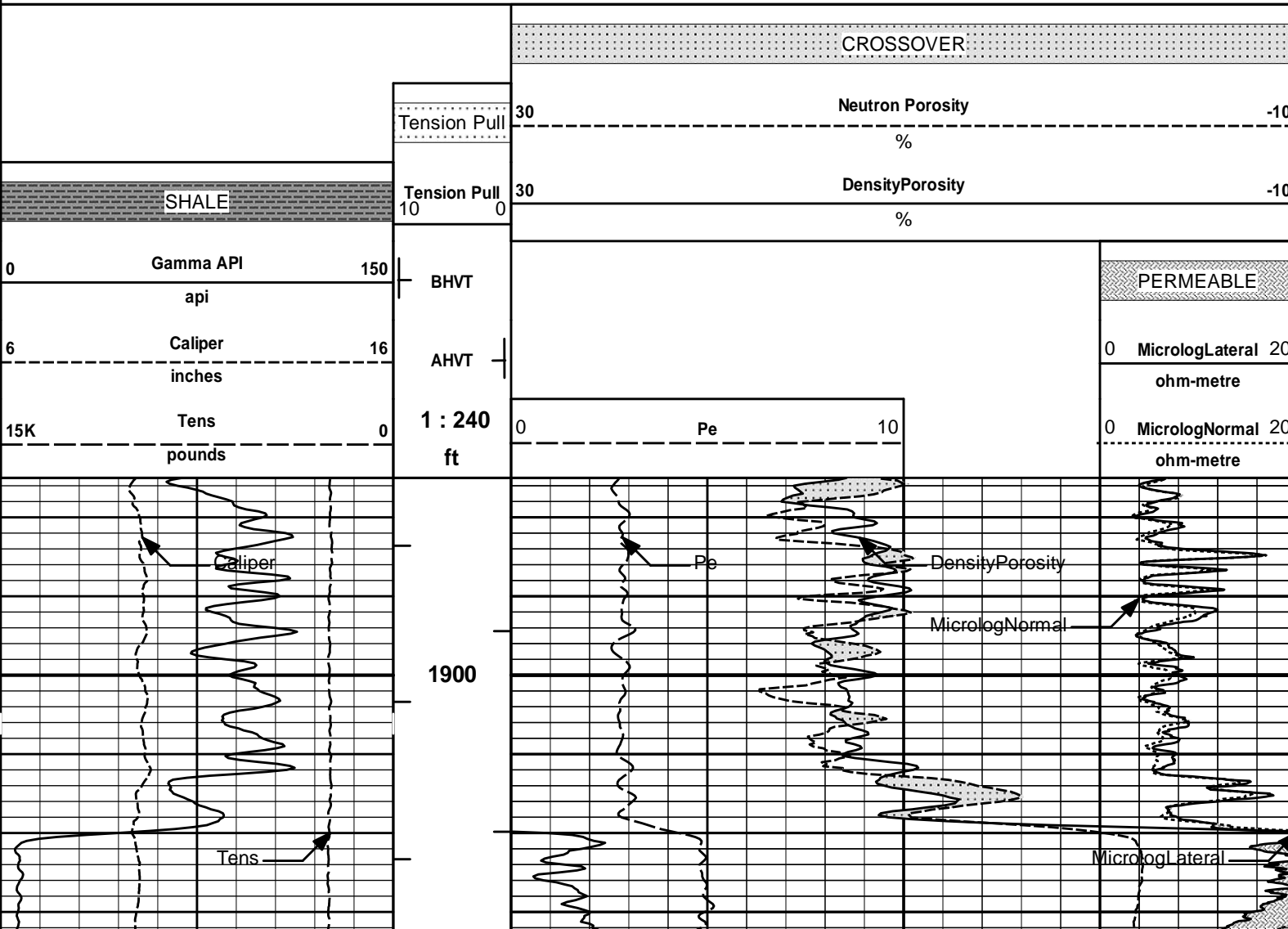
Service Ticket No.: 6599195				API Serial No.: 05-099-06905				PGM Version: WL INSITE R2.4 (Build 1)						
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES								
Date	Sample No.					Type Log	Depth	Scale Up Hole		Scale Down Hole				
Depth-Driller														
Type Fluid in Hole														
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	MICRO M85803	RUBBER	ADJ	N/A				
Rmc @ Meas. Temp.		@		@										
Source Rmf	Rmc													
Rm @ BHT		@		@										
Rmf @ BHT		@		@										
Rmc @ BHT		@		@										
EQUIPMENT DATA														
GAMMA			ACOUSTIC			DENSITY			NEUTRON					
Run No.	ONE		Run No.			Run No.	ONE		Run No.	ONE				
Serial No.	10811258		Serial No.			Serial No.	M85803		Serial No.	10755066				
Model No.	GTET		Model No.			Model No.	SDLT		Model No.	DSNT				
Diameter	3.625"		No. of Cent.			Diameter	4.75"		Diameter	3.625"				
Detector Model No.	T-102		Spacing			Log Type	GAM-GAM		Log Type	NEU-NEU				
Type	SCINT					Source Type	CS137		Source Type	AM241BE				
Length	8"		LSA [Y/N]			Serial No.	5073 GW		Serial No.	DSN 436				
Distance to Source	10'		FWDA [Y/N]			Strength	1.5 CI		Strength	14.5 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	5281'	1900'	REC	0	150				0.30	-0.10	2.71	0.30	-0.10	LIME

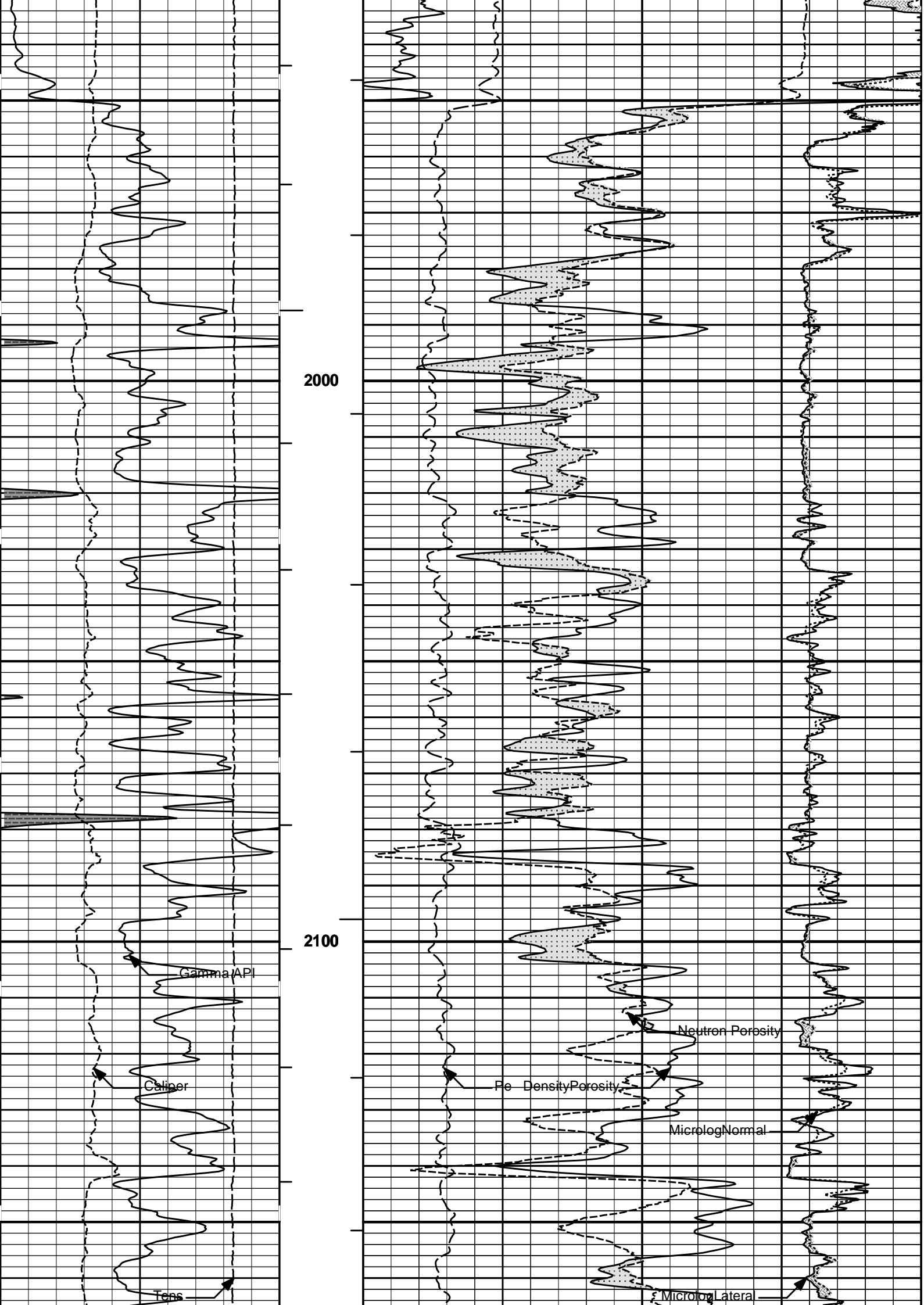
DIRECTIONAL INFORMATION																			
Maximum Deviation									@	KOP									@
Remarks: AHV CALCULATED FOR 4.5 - INCH CASING																			
CHLORIDES: 3400 PPM																			
GPS COORDINATES: LAT: 38.15 N & LONG: 102.29 W																			
TODAY'S CREW: KIRBY KING & ALBERTO VAQUERA																			
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - LIBERAL, KS (620-624-8123)																			
<p>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.</p> <p>HALLIBURTON</p>																			

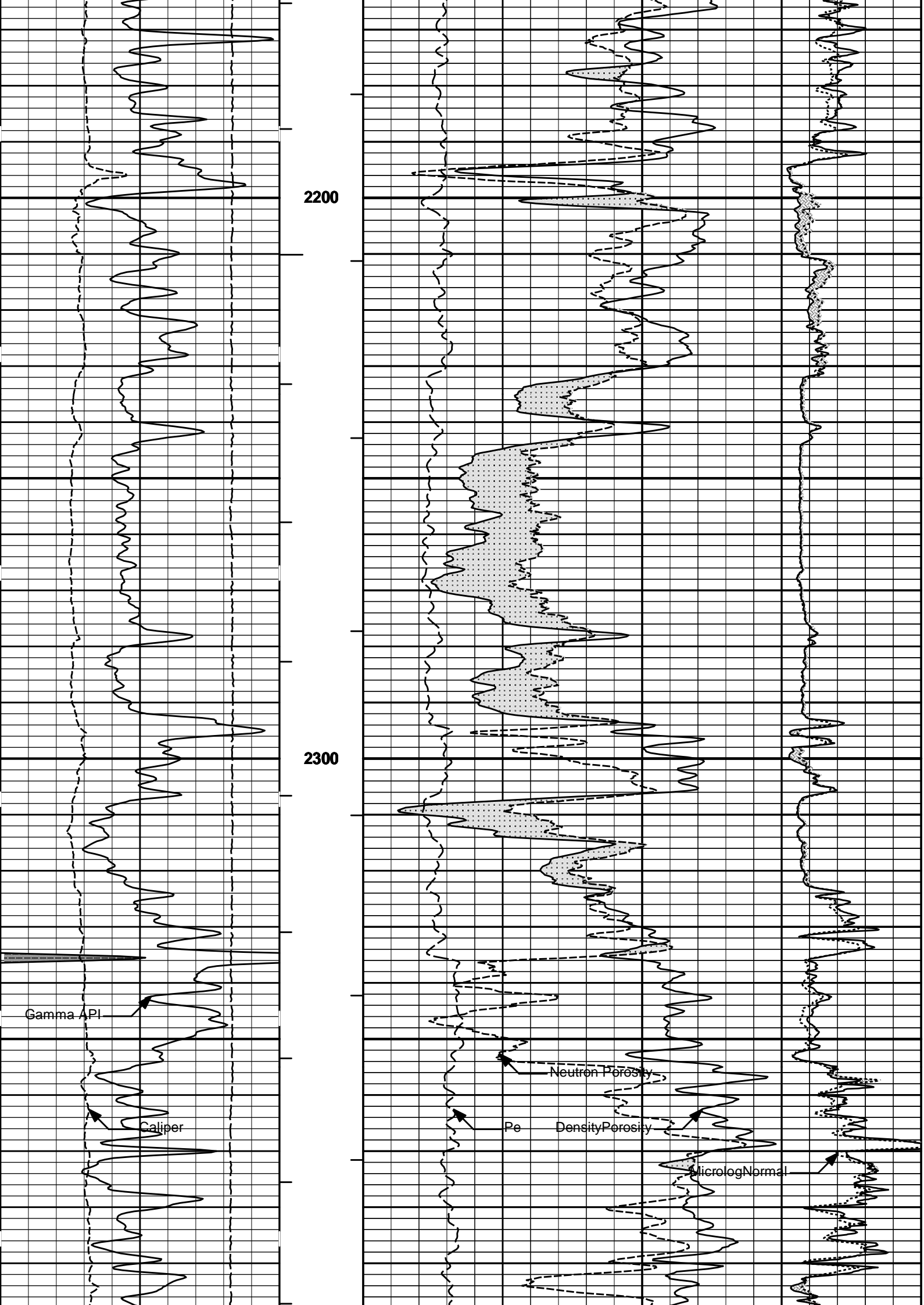
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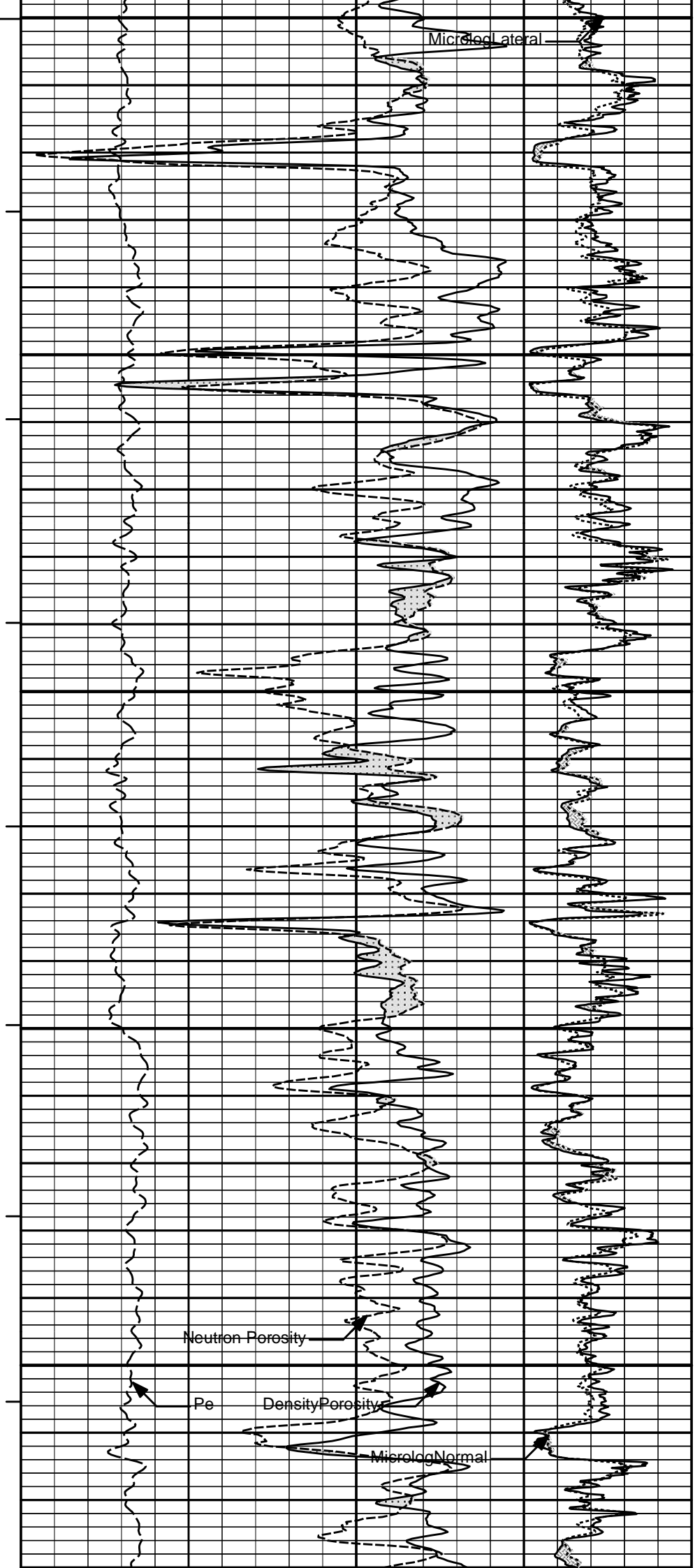
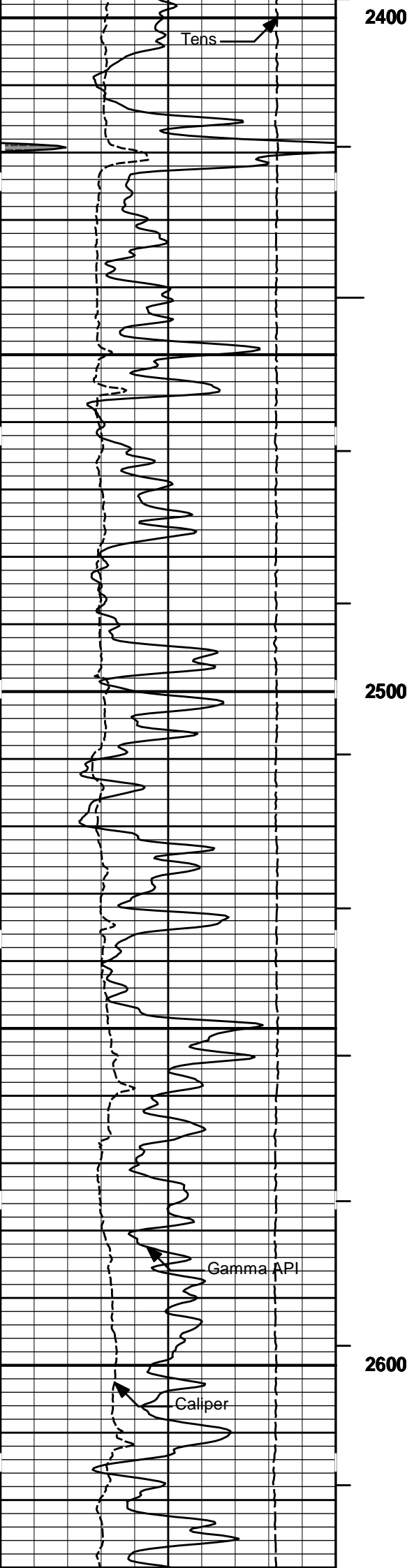
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Plot Range: 1875 ft to 5284.92 ft
Data: PROWERS_GRAZING\Well Based\DAQ-0001-003\
Plot File: \\POROML\ProML_5_main_IQ_LJB

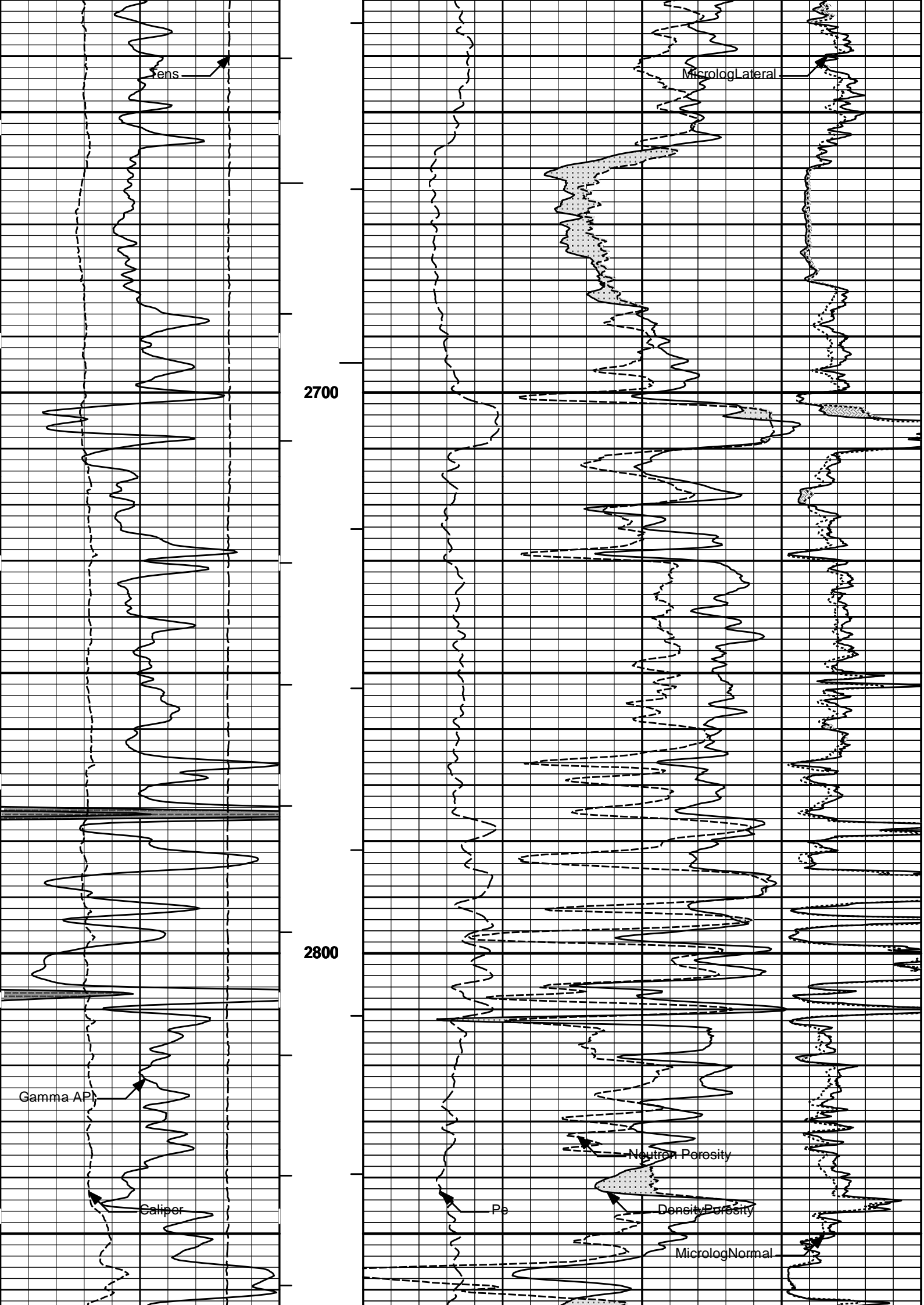
5 INCH MAIN LOG

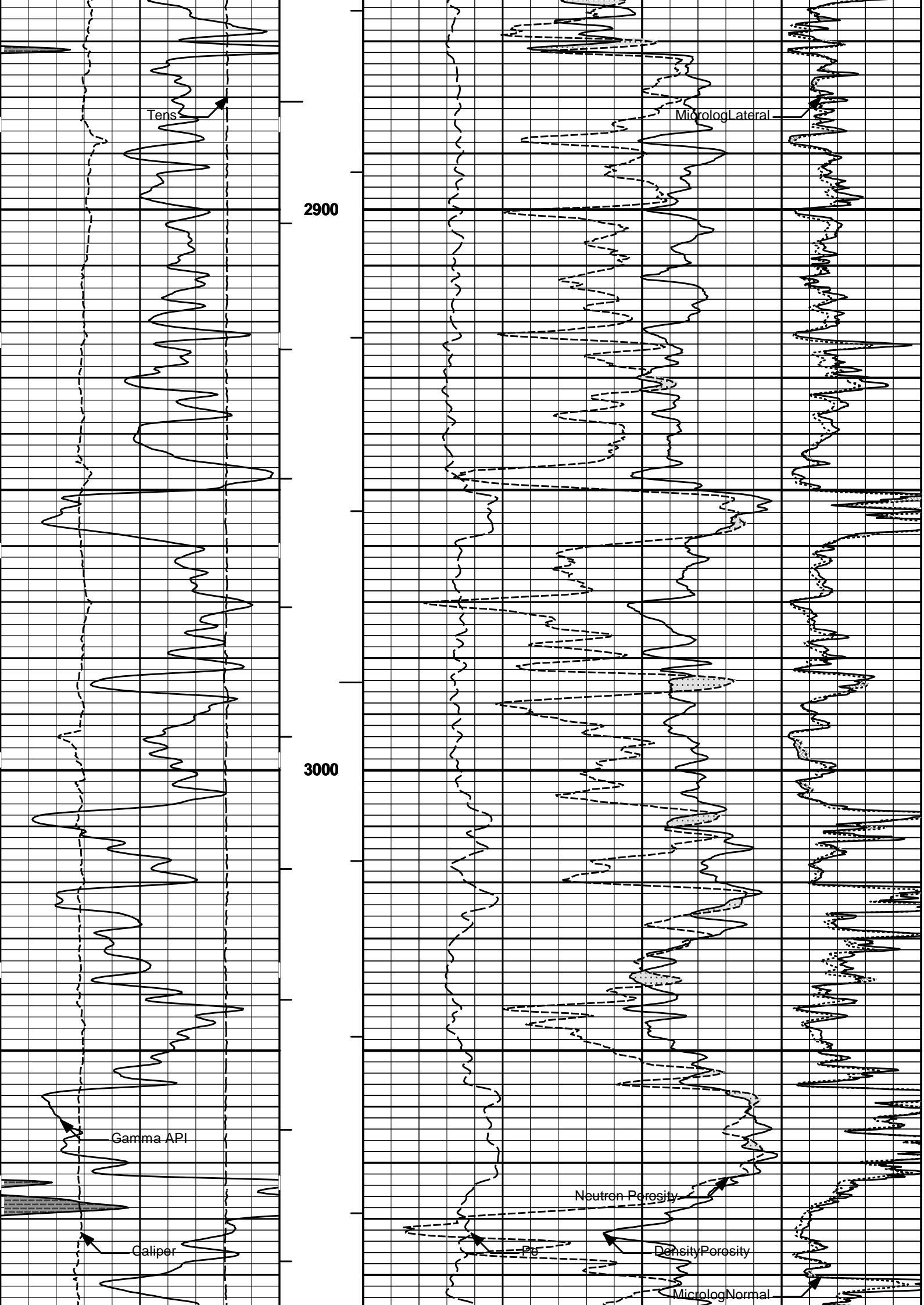


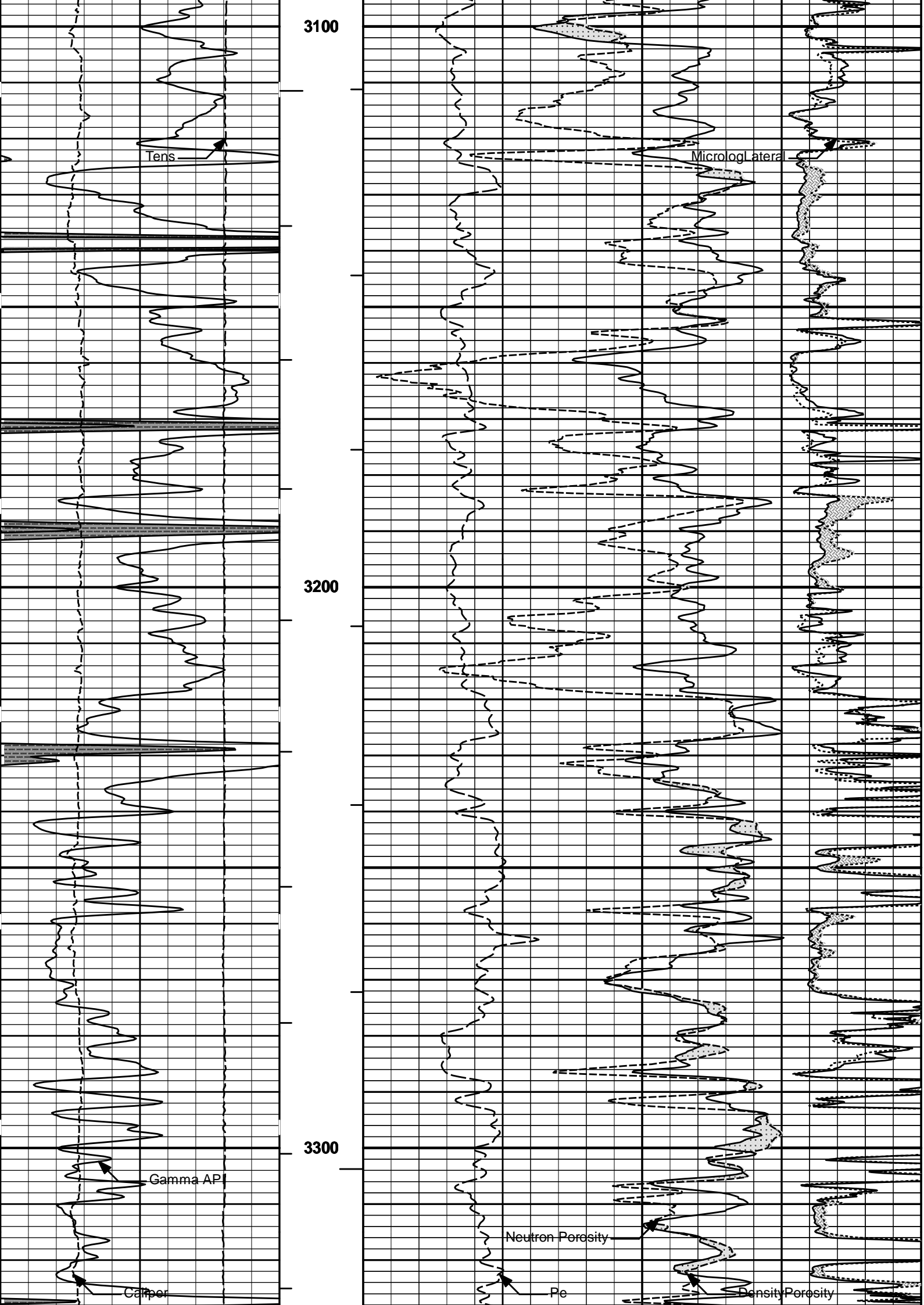


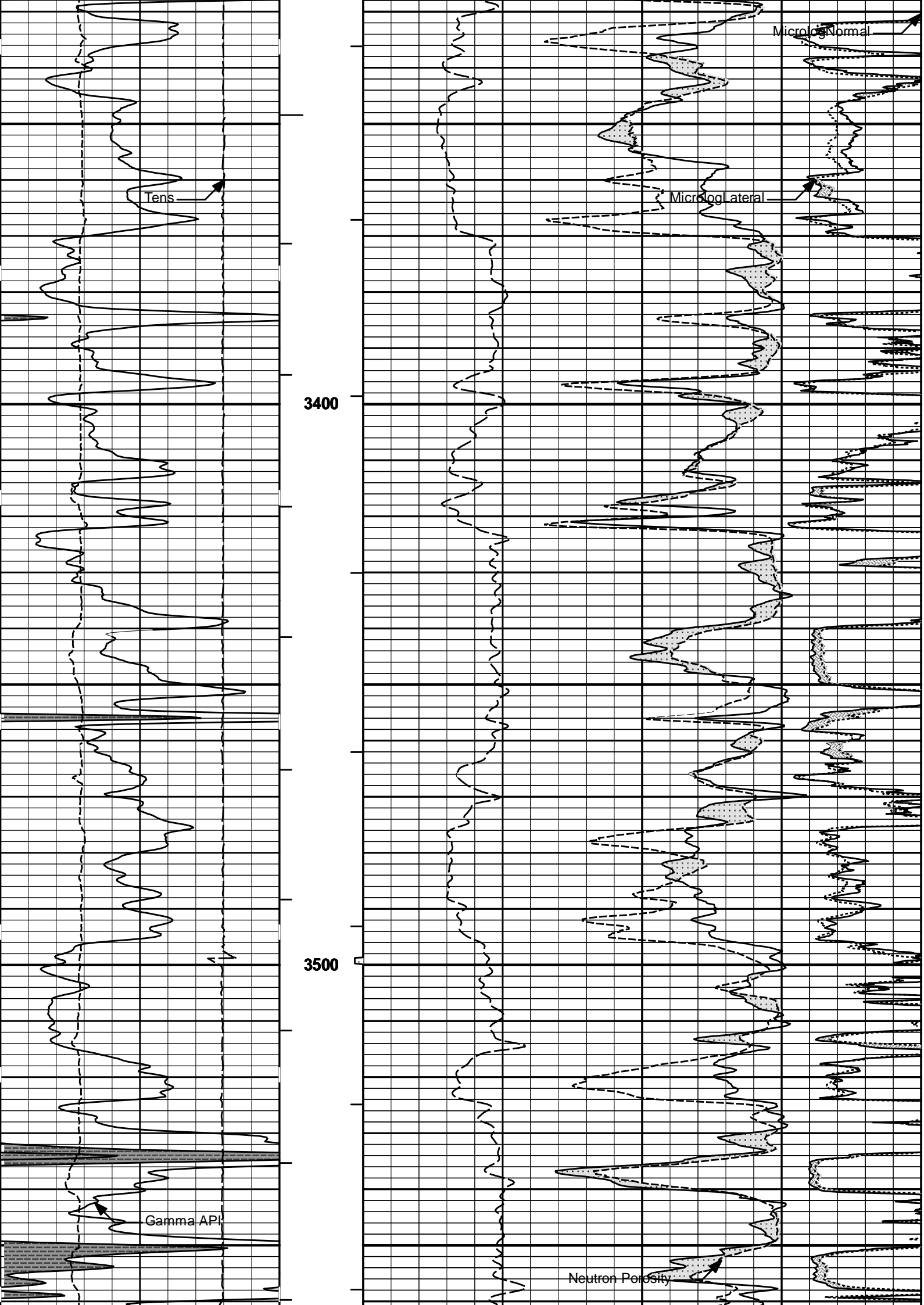


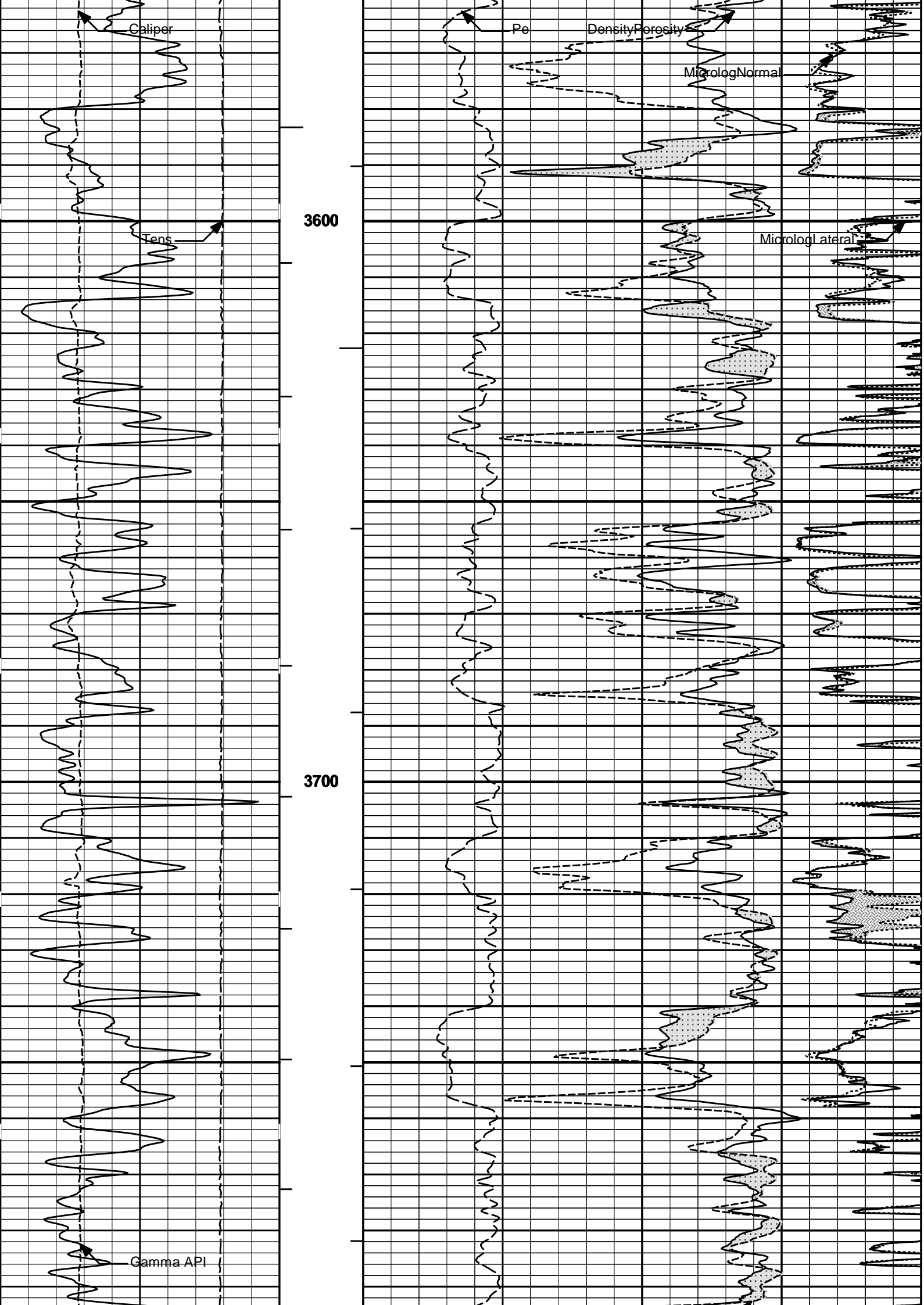


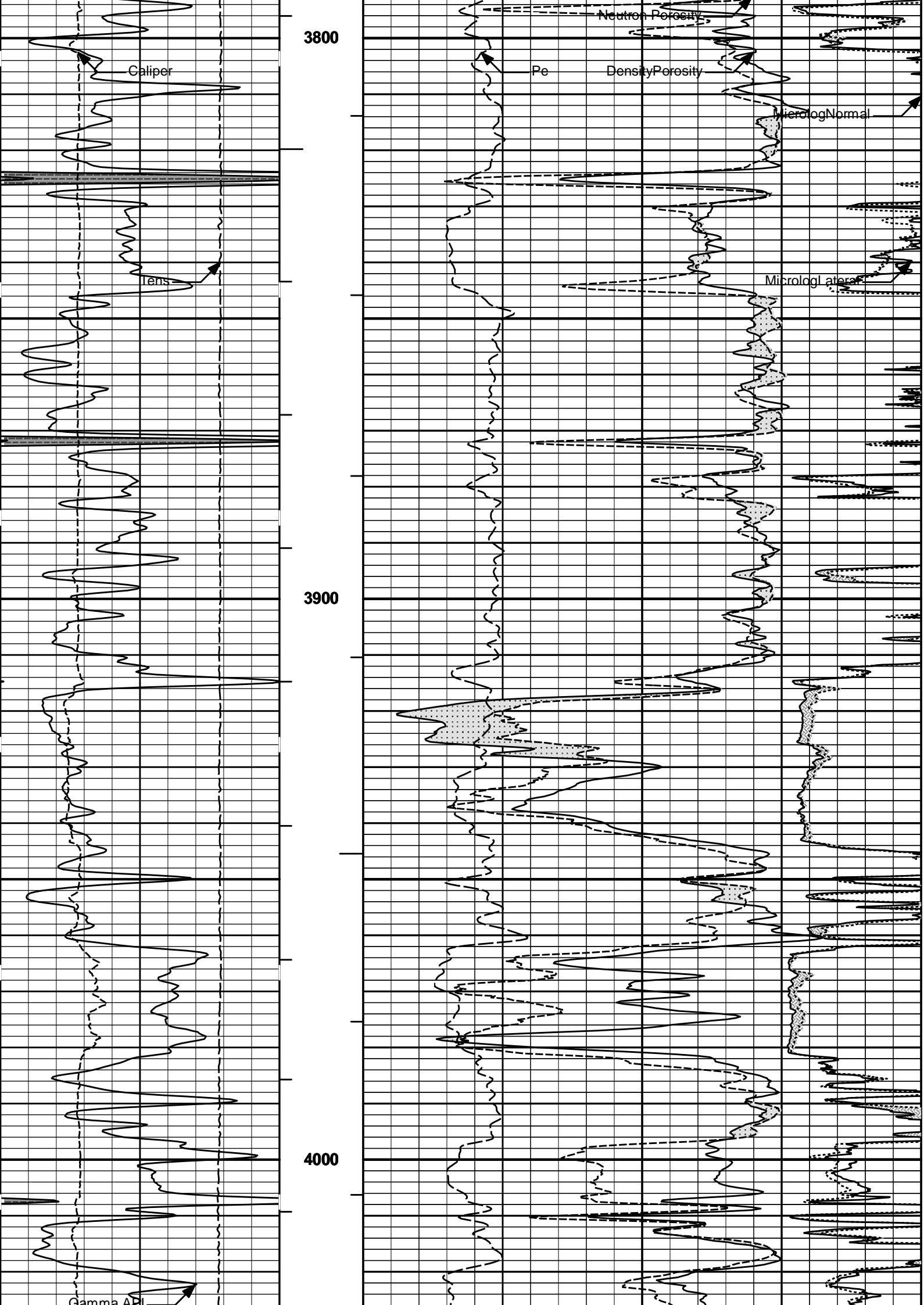


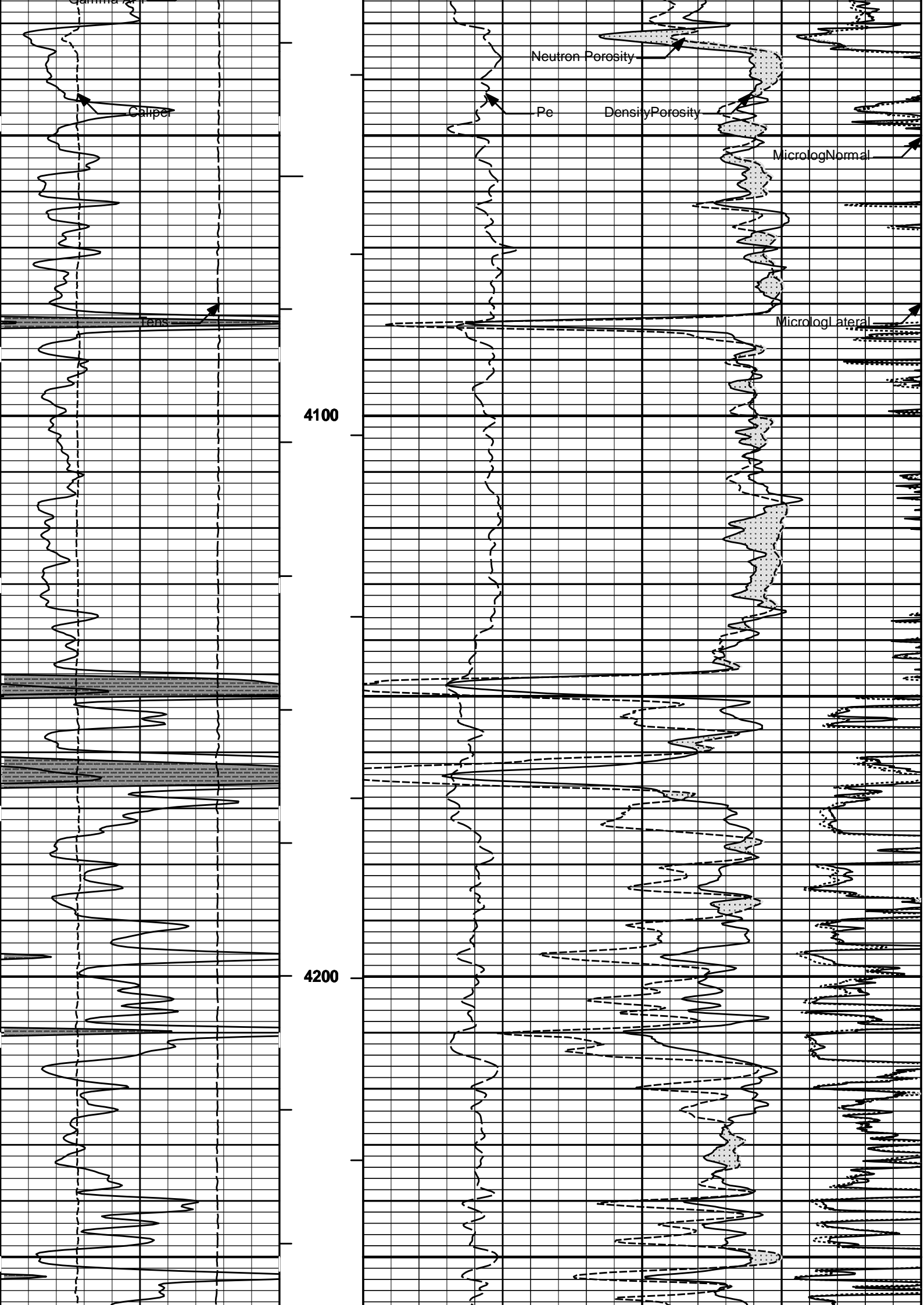


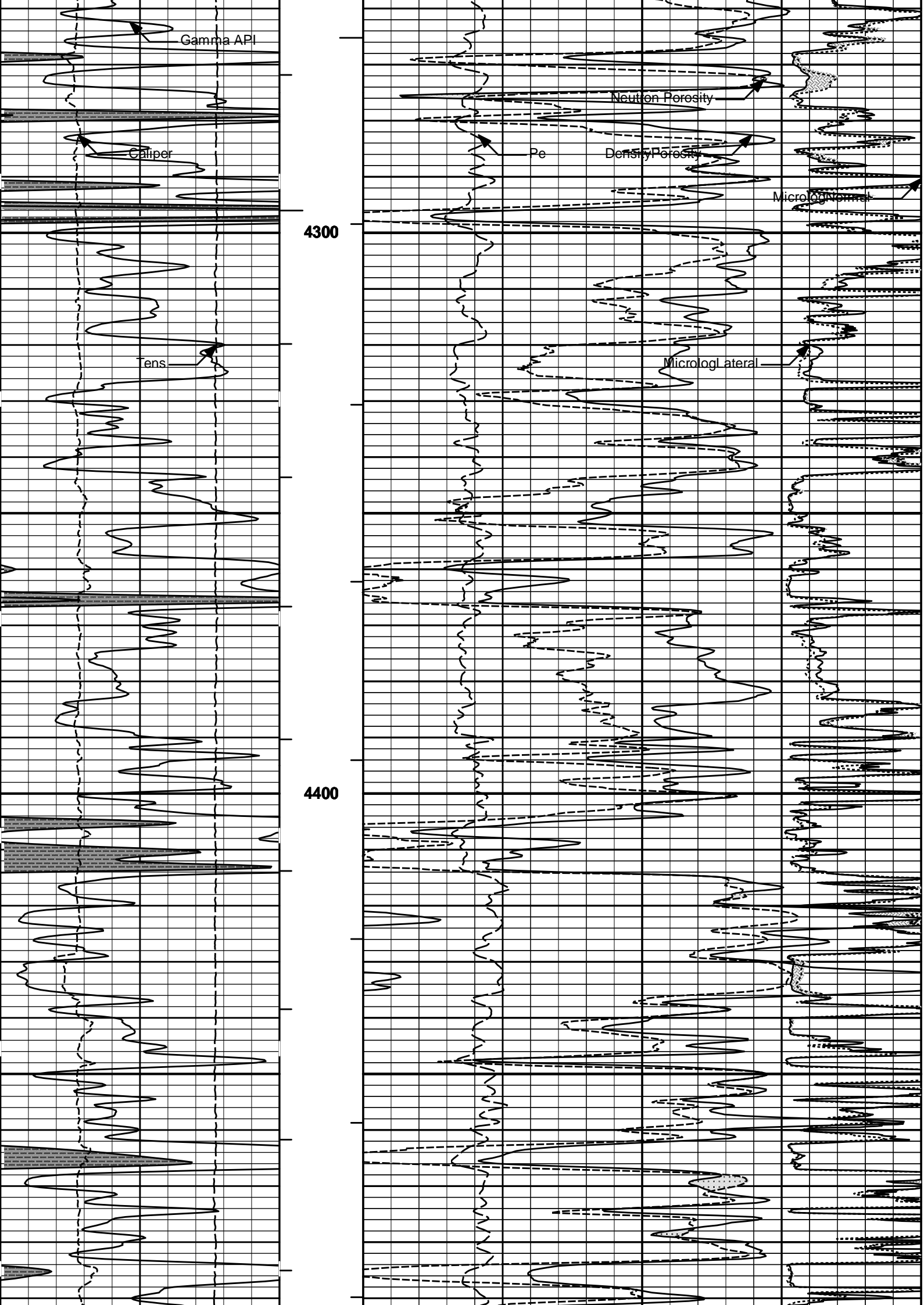


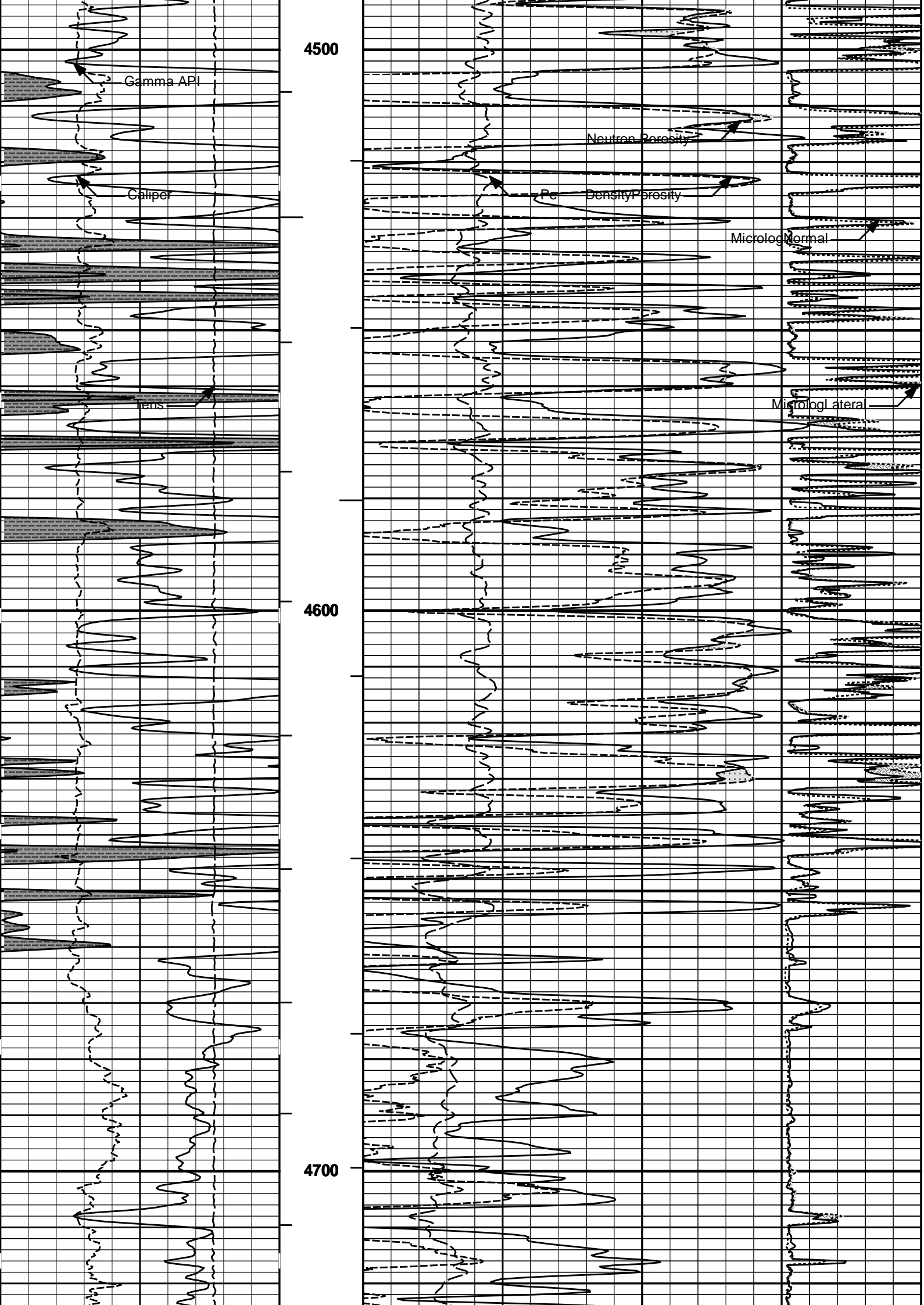


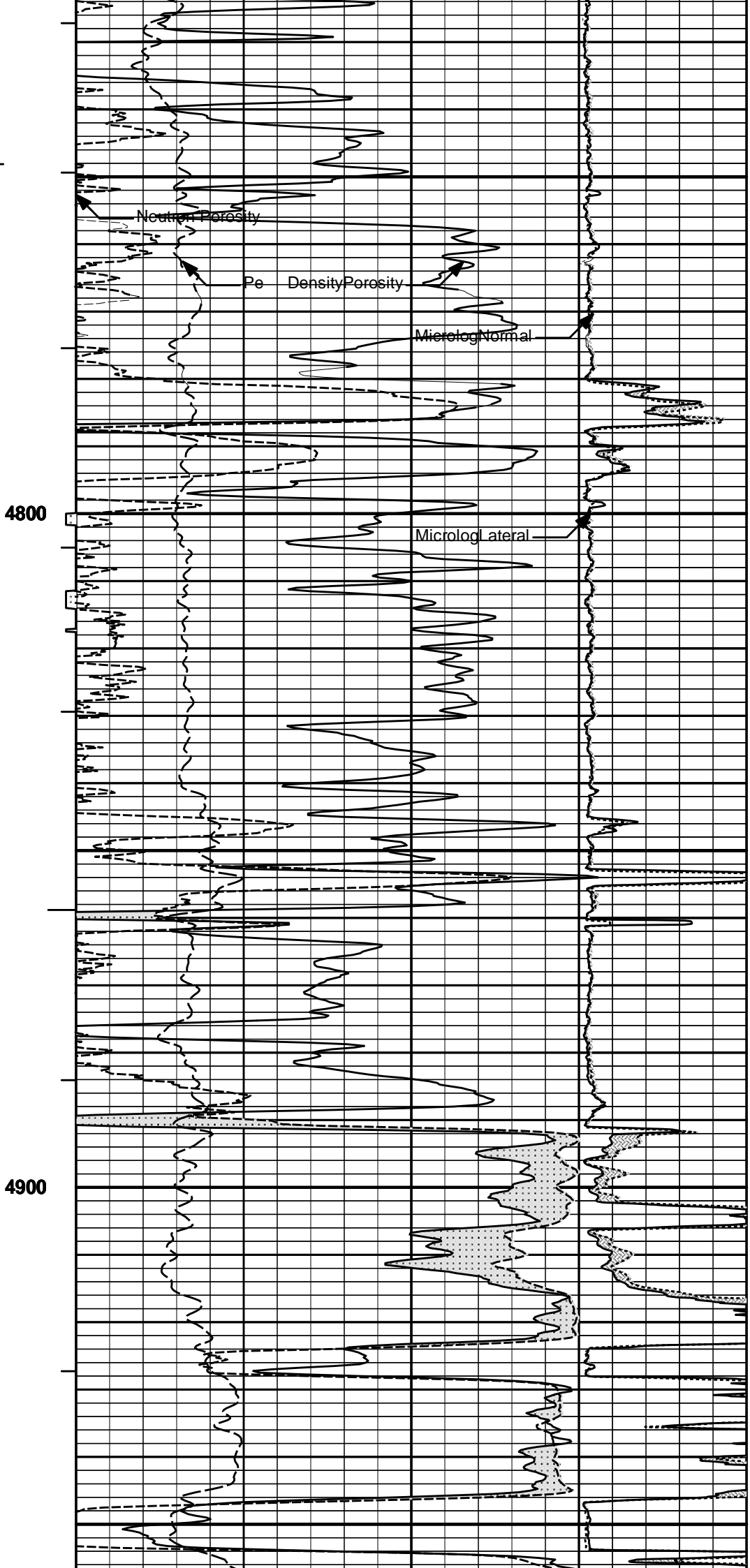
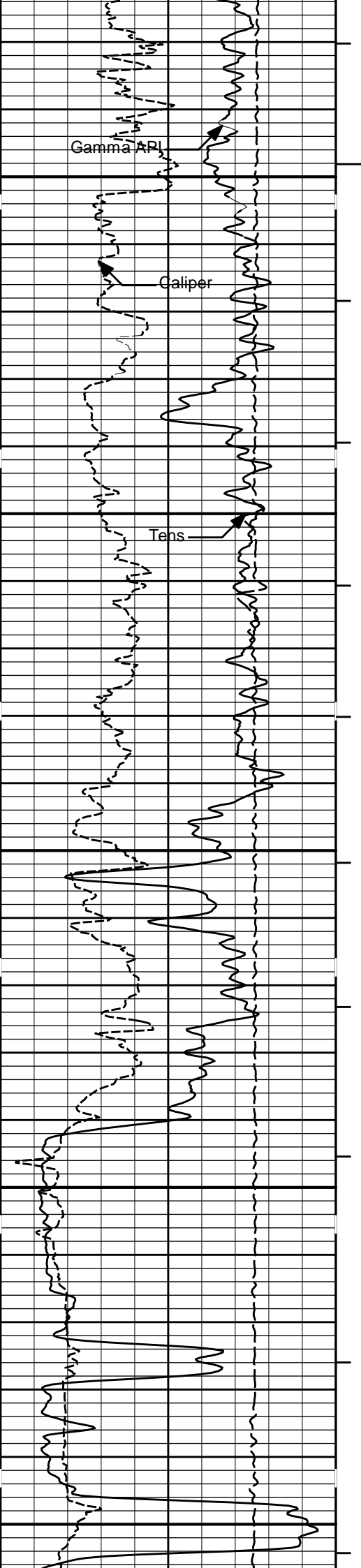


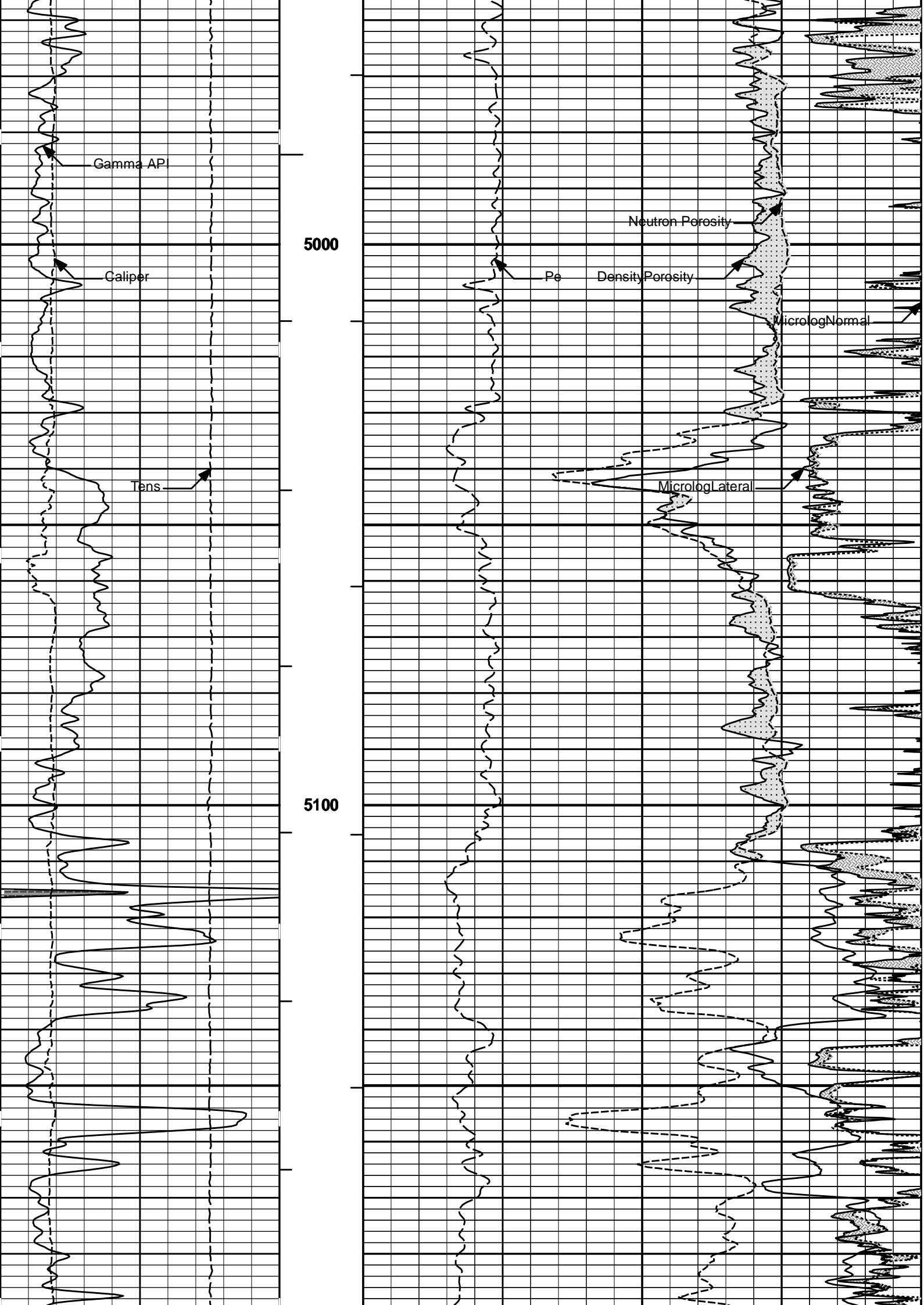


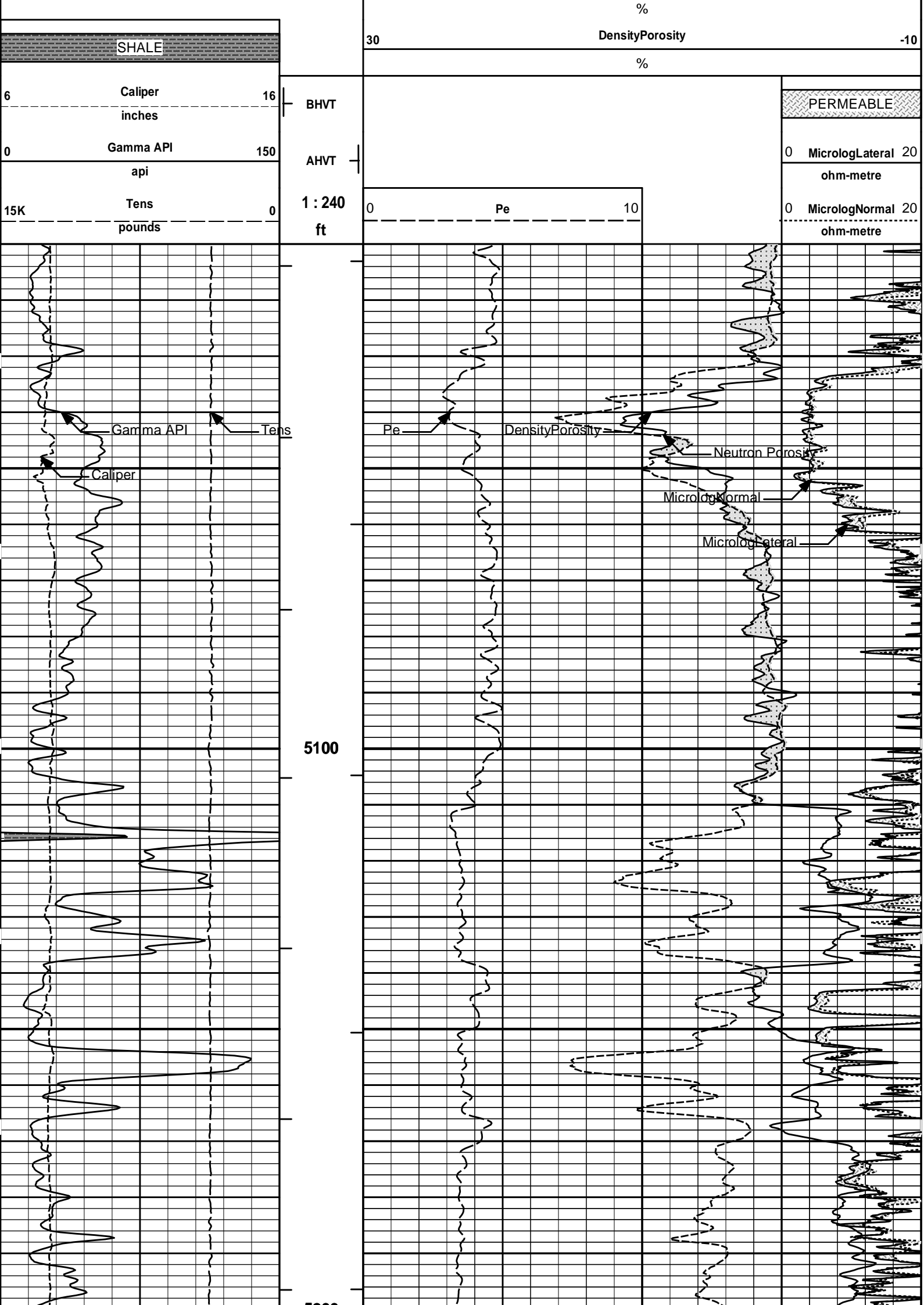


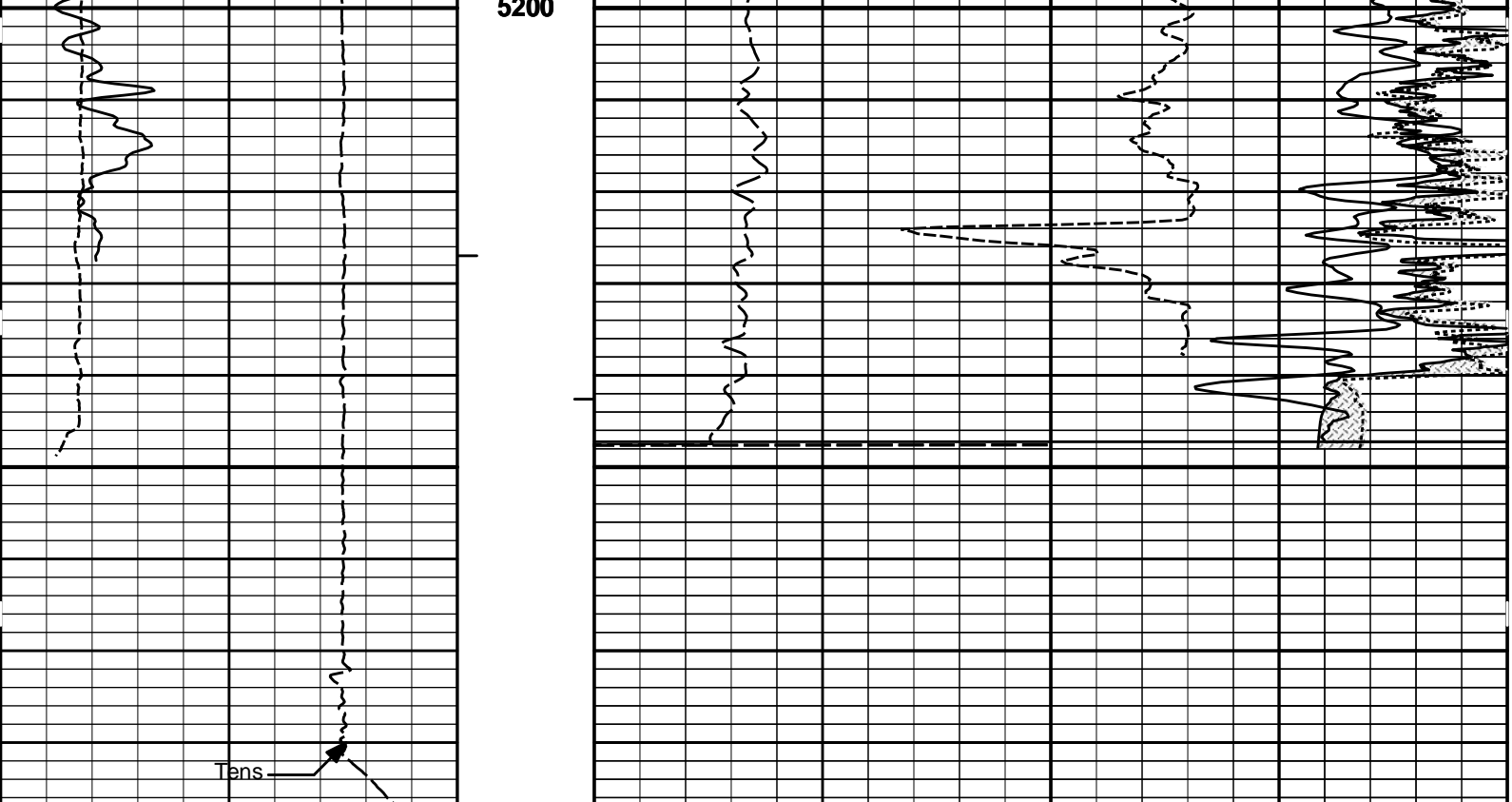












15K	Tens	0	1 : 240 ft	0	Pe	10	0	MicrologNormal	20	
	pounds							ohm-metre		
0	Gamma API	150		AHVT				0	MicrologLateral	20
	api								ohm-metre	
6	Caliper	16		BHVT					PERMEABLE	
	inches									
SHALE				30	DensityPorosity		-10			
					%					
				30	Neutron Porosity		-10			
					%					
					CROSSOVER					

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Plot Time: 04-Apr-09 07:11:56
Plot Range: 5010 ft to 5286.92 ft
Data: PROWERS_GRAZING\Well Based\DAQ-0001-002\
Plot File: \\POROML\PoromL_IQ_5_REPEAT_LIB

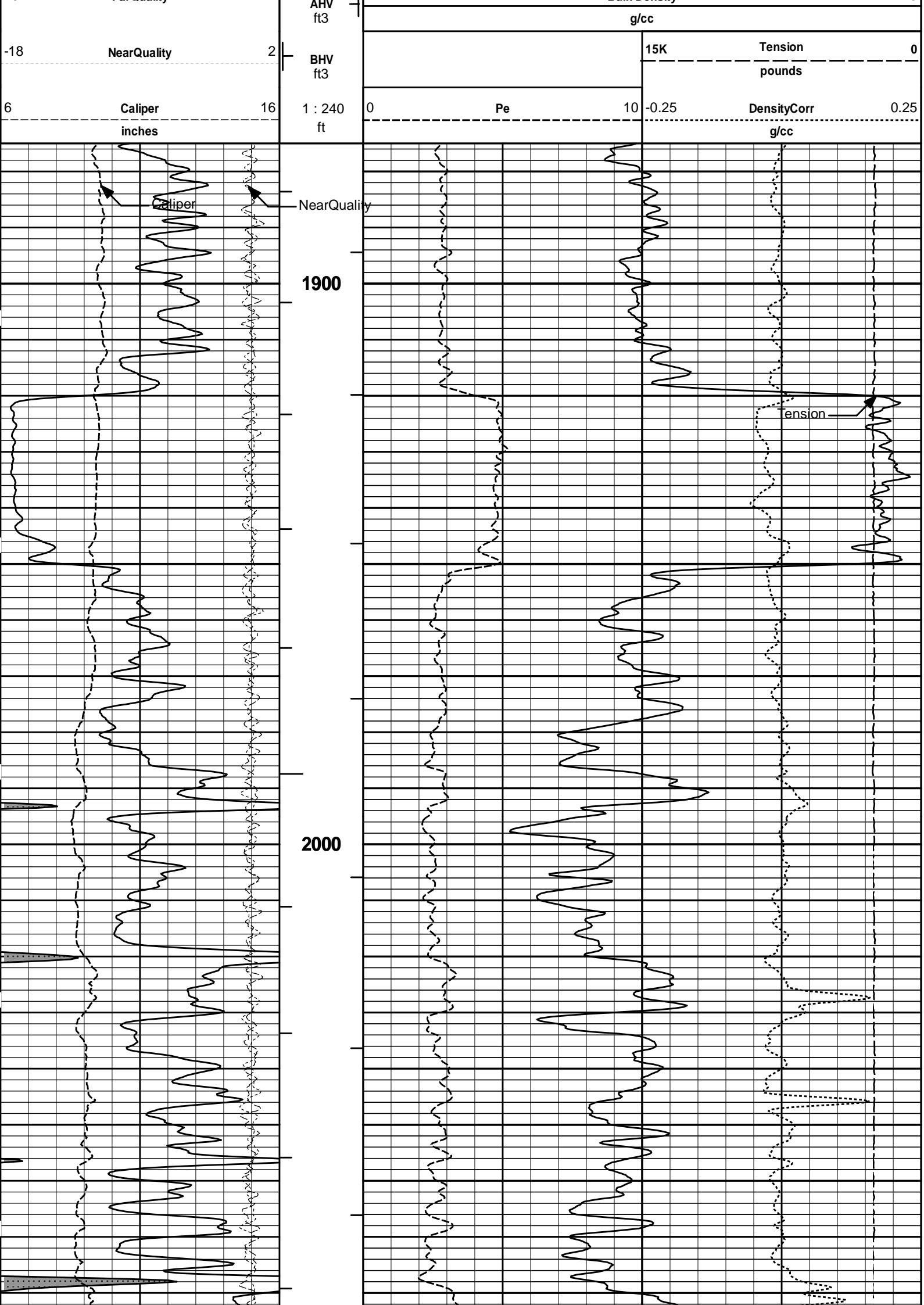
REPEAT SECTION

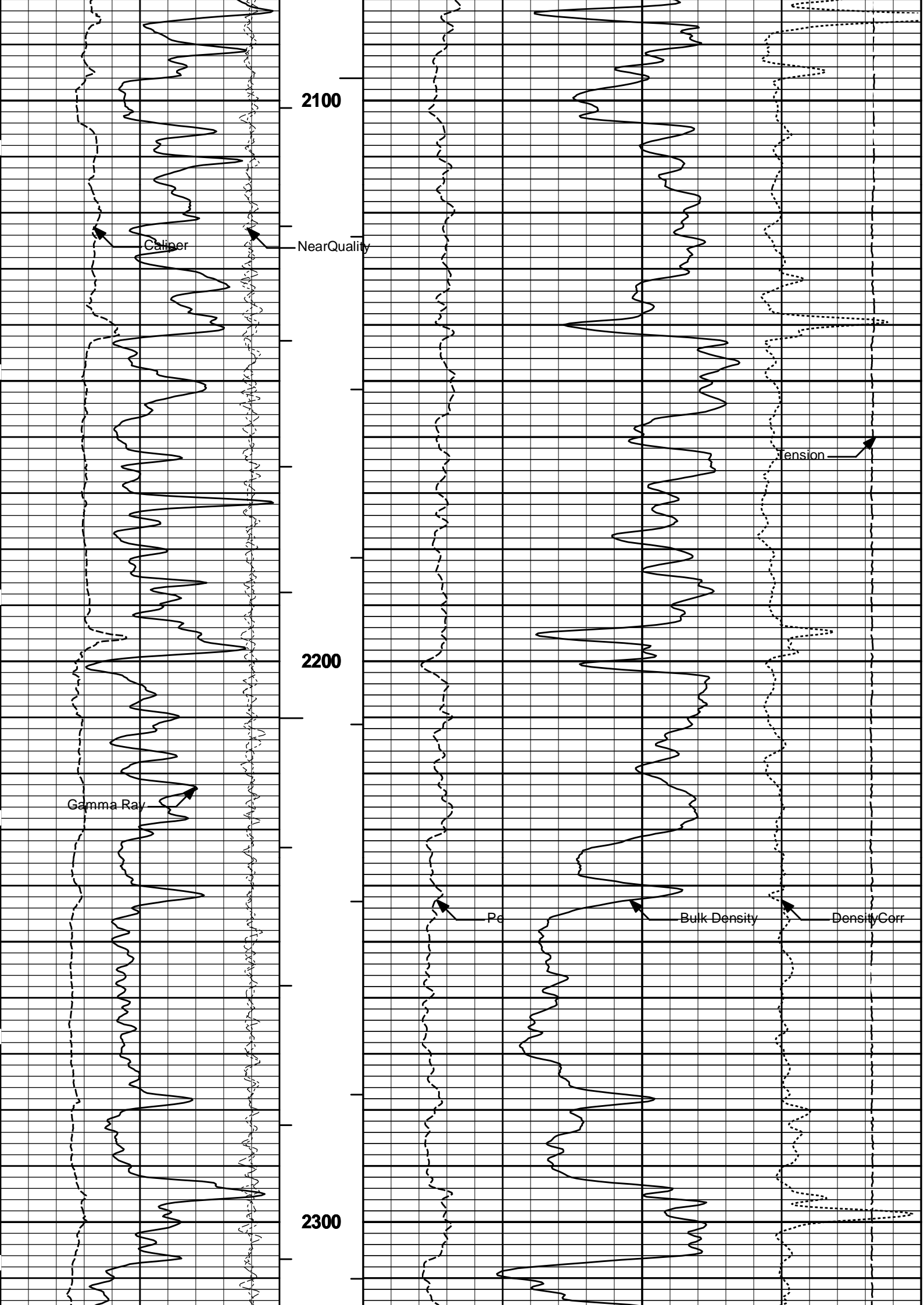
HALLIBURTON

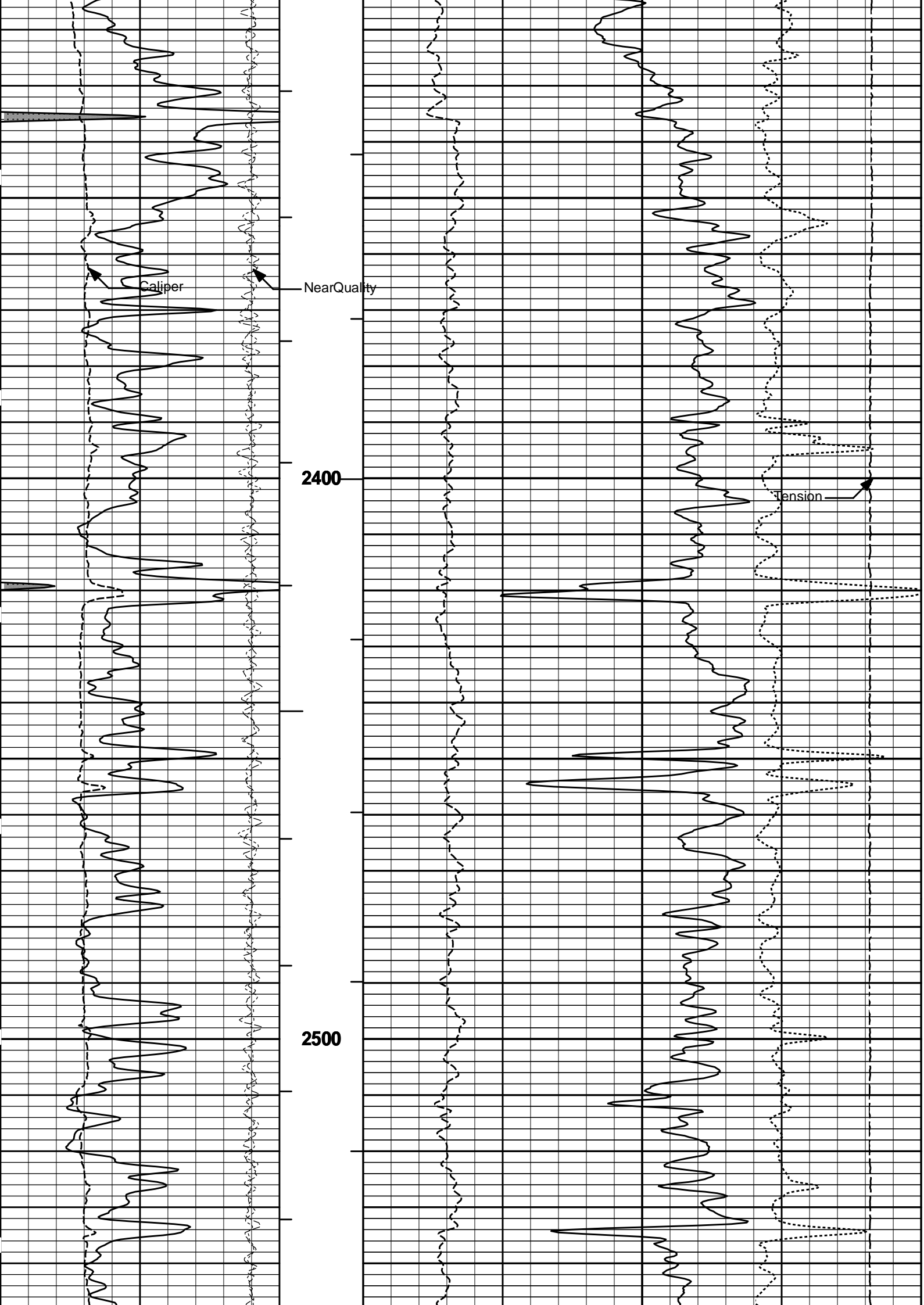
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Data: PROWERS_GRAZING\Well Based\DAQ-0001-003\
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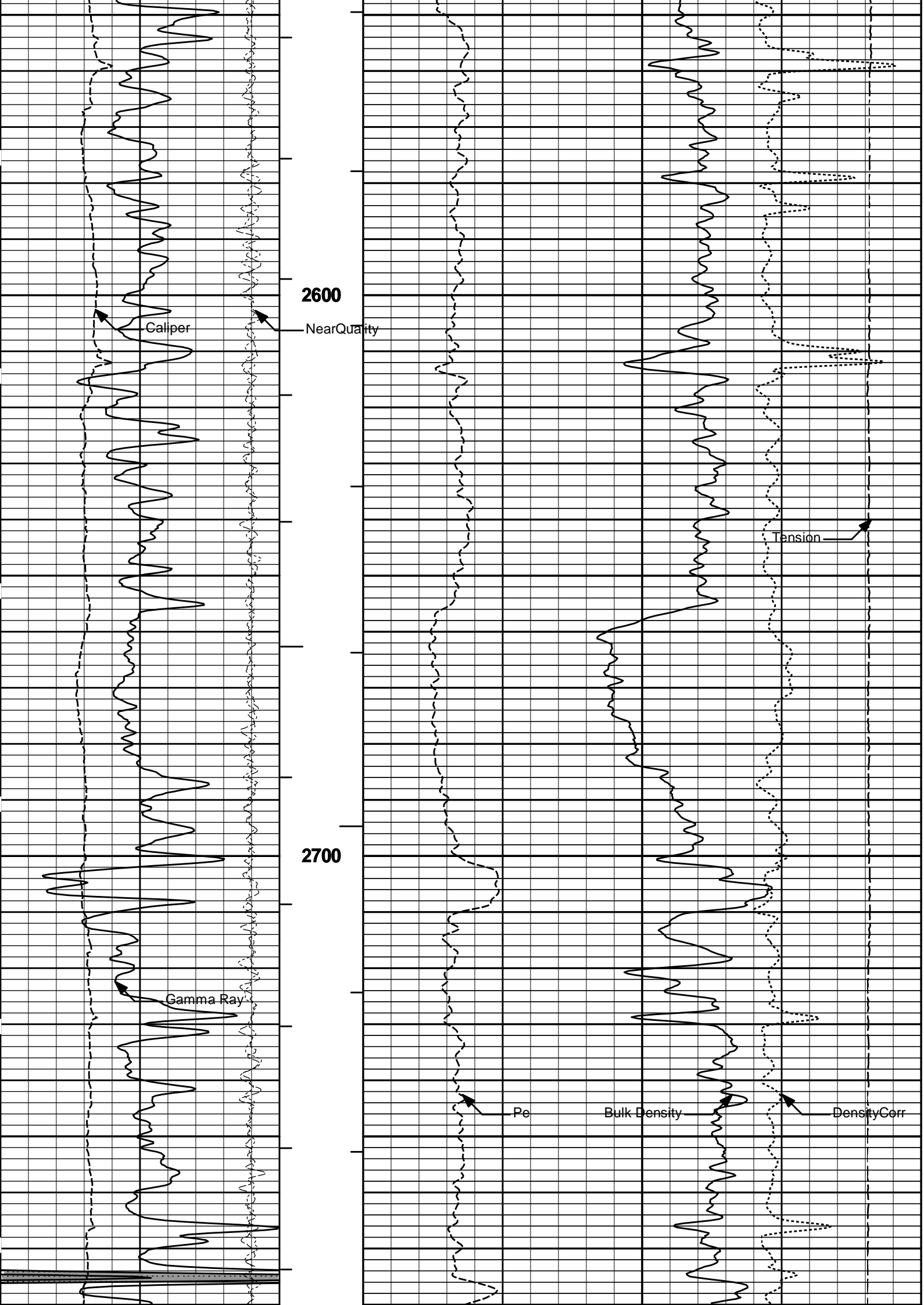
5 INCH MAIN LOG

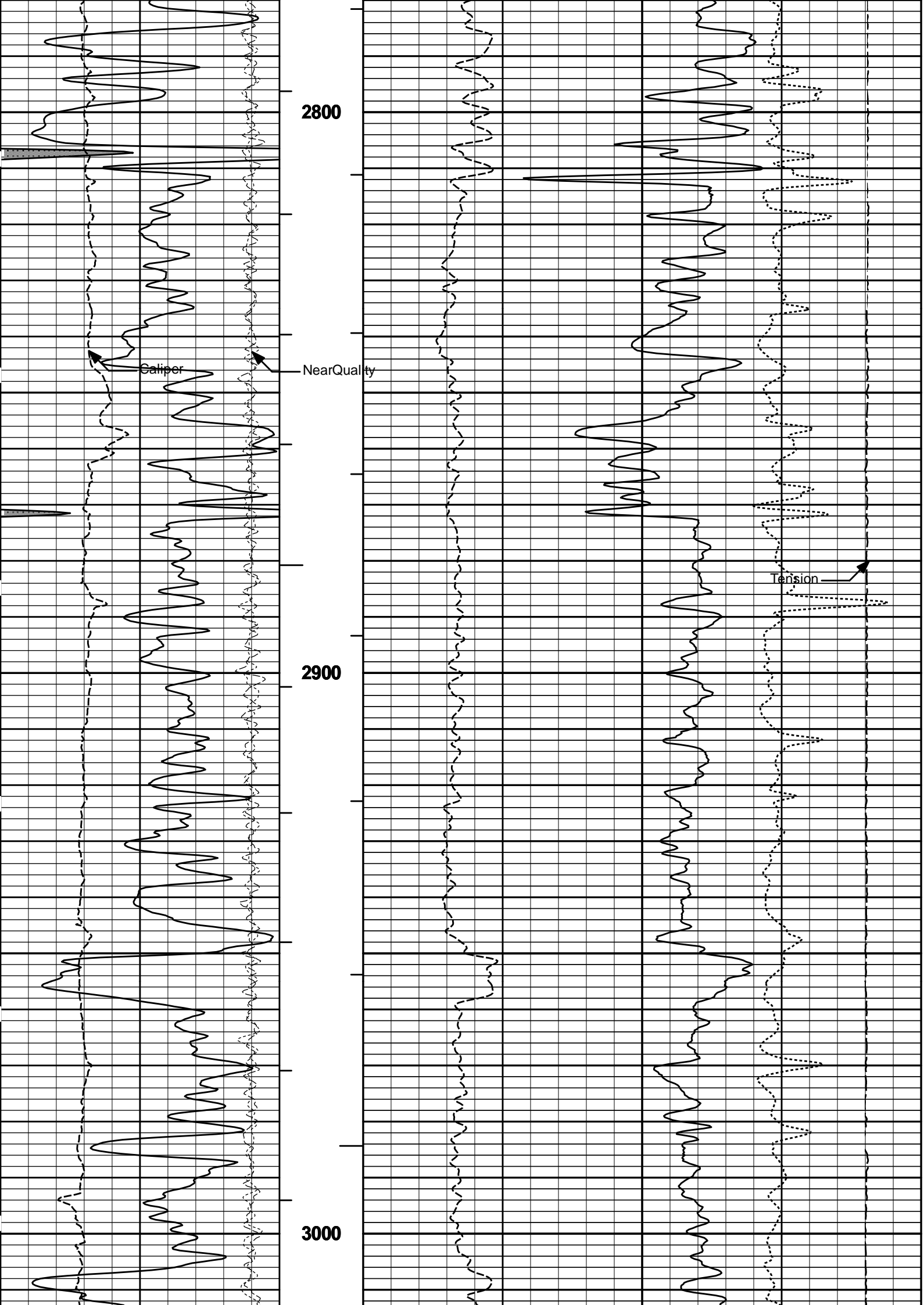
SHALE		Tension Pull	
0	Gamma Ray	150	Tension Pull
	api		10 0
18	FarQuality	-2	Bulk Density
			2 3

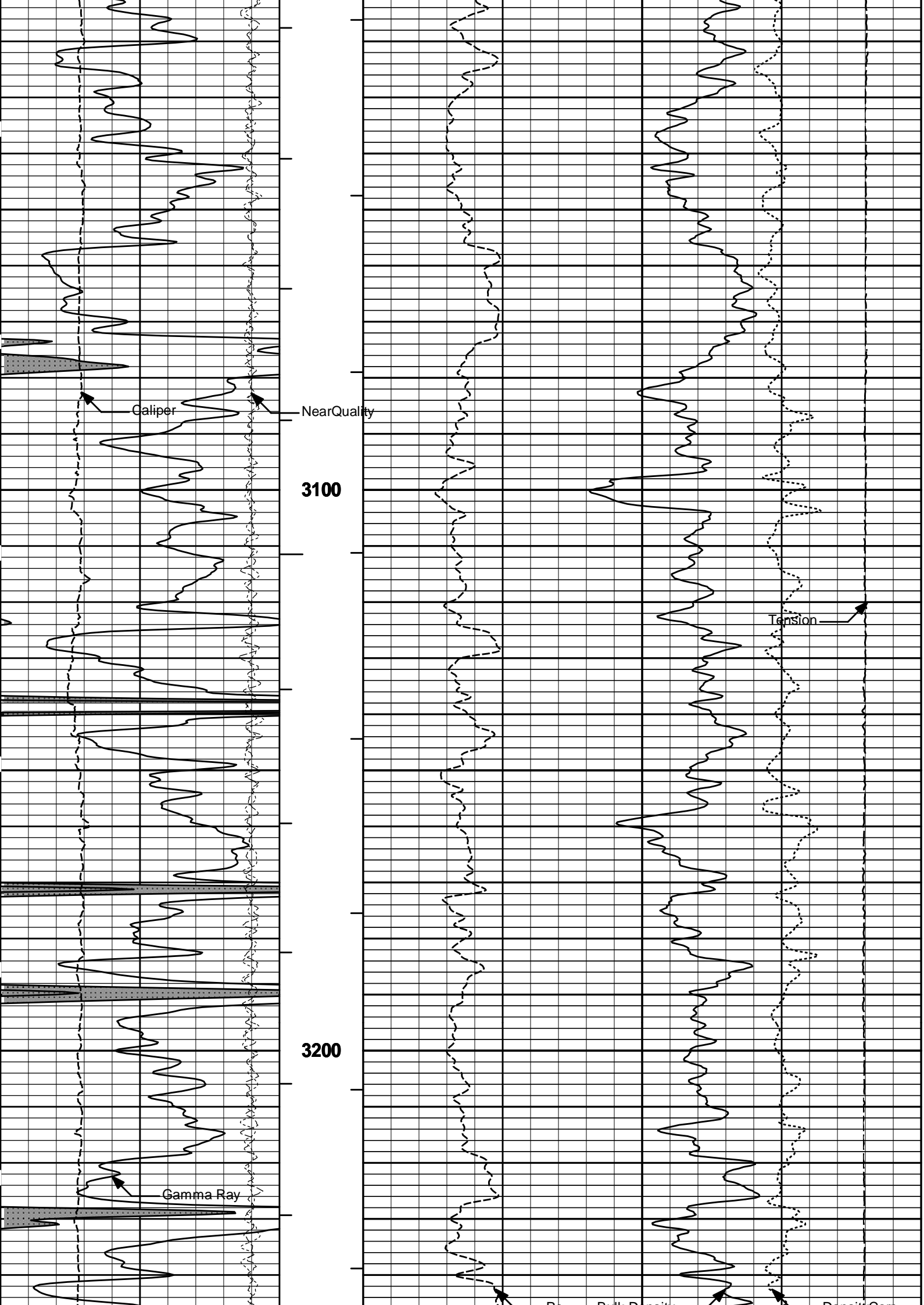


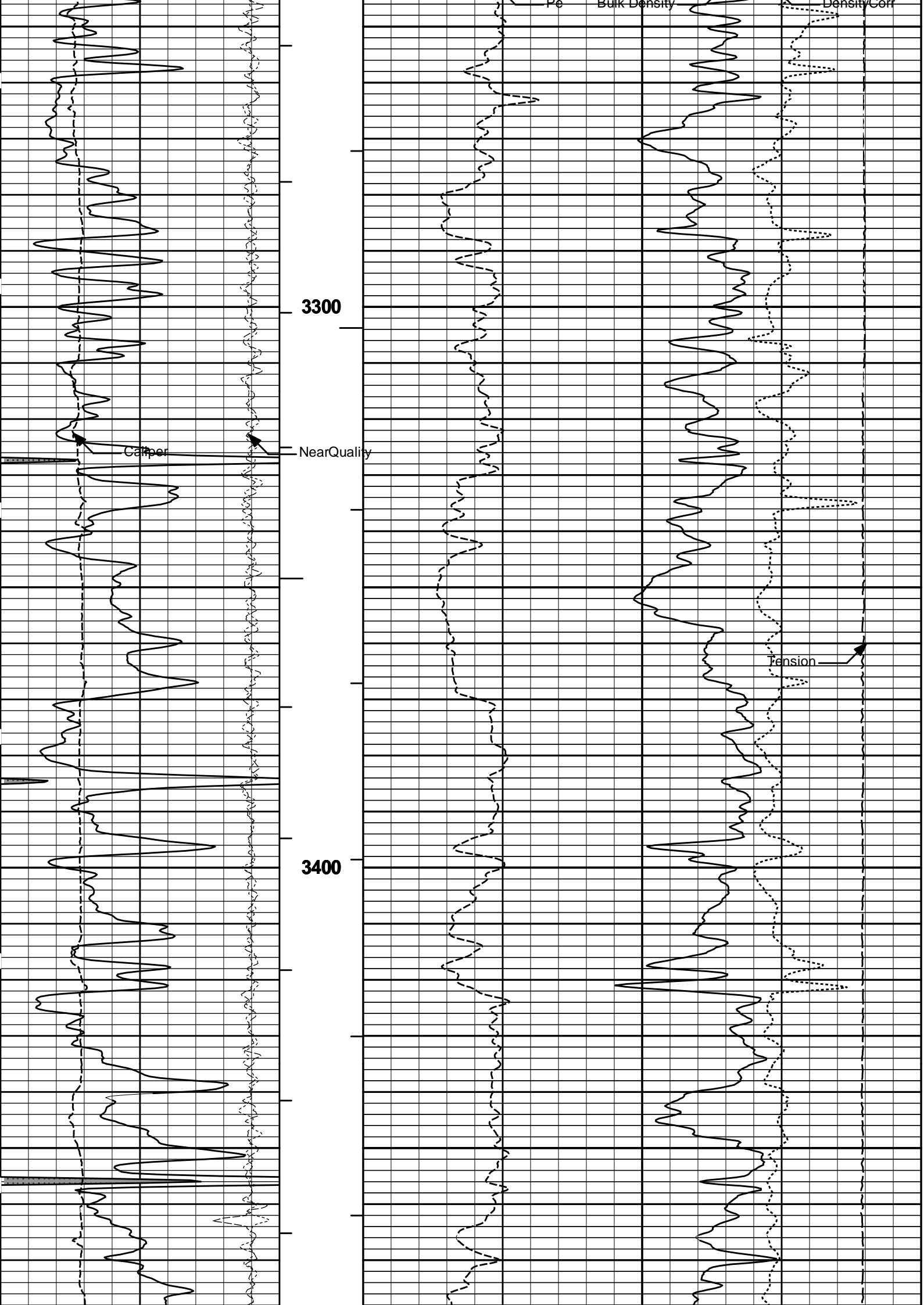


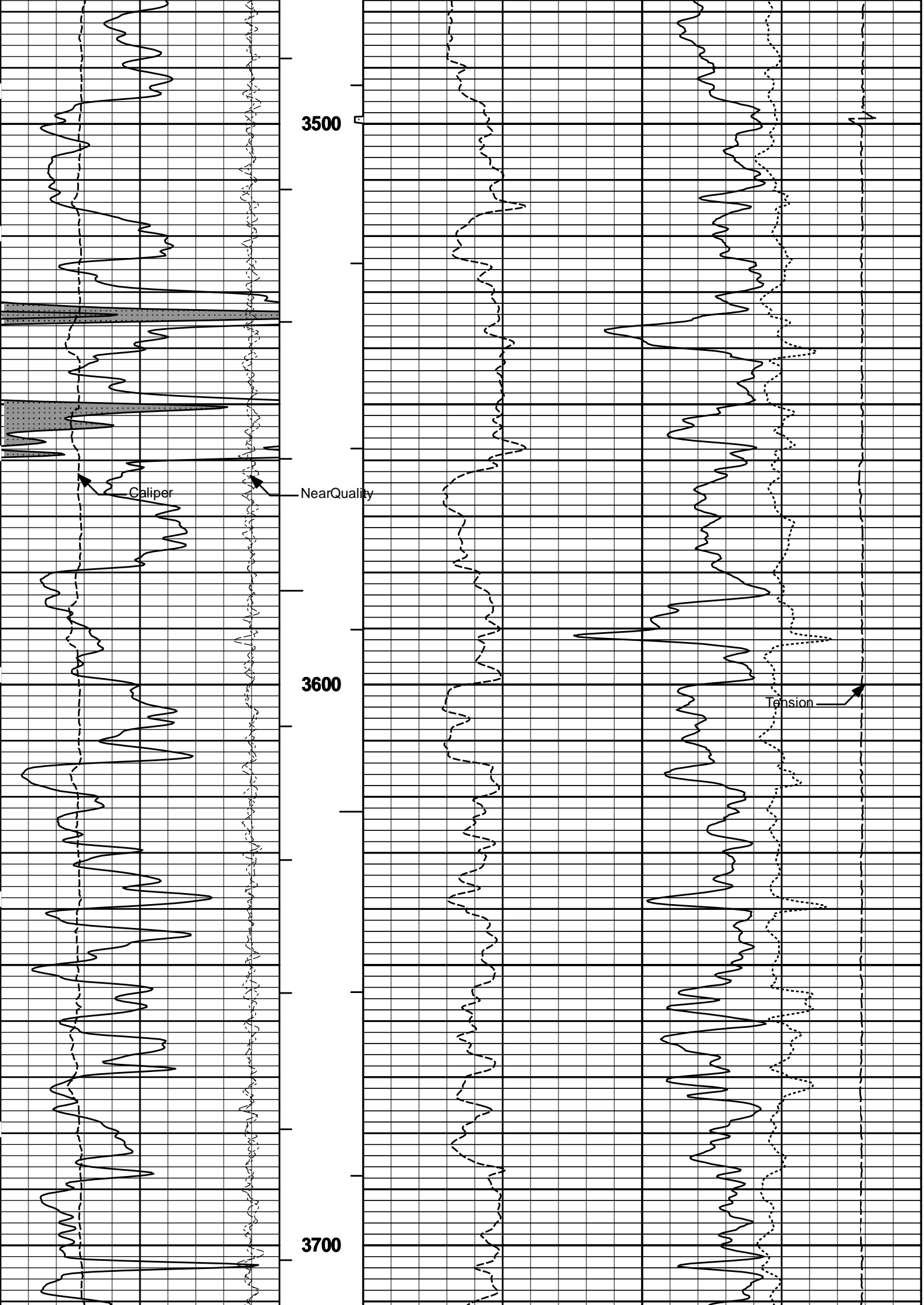


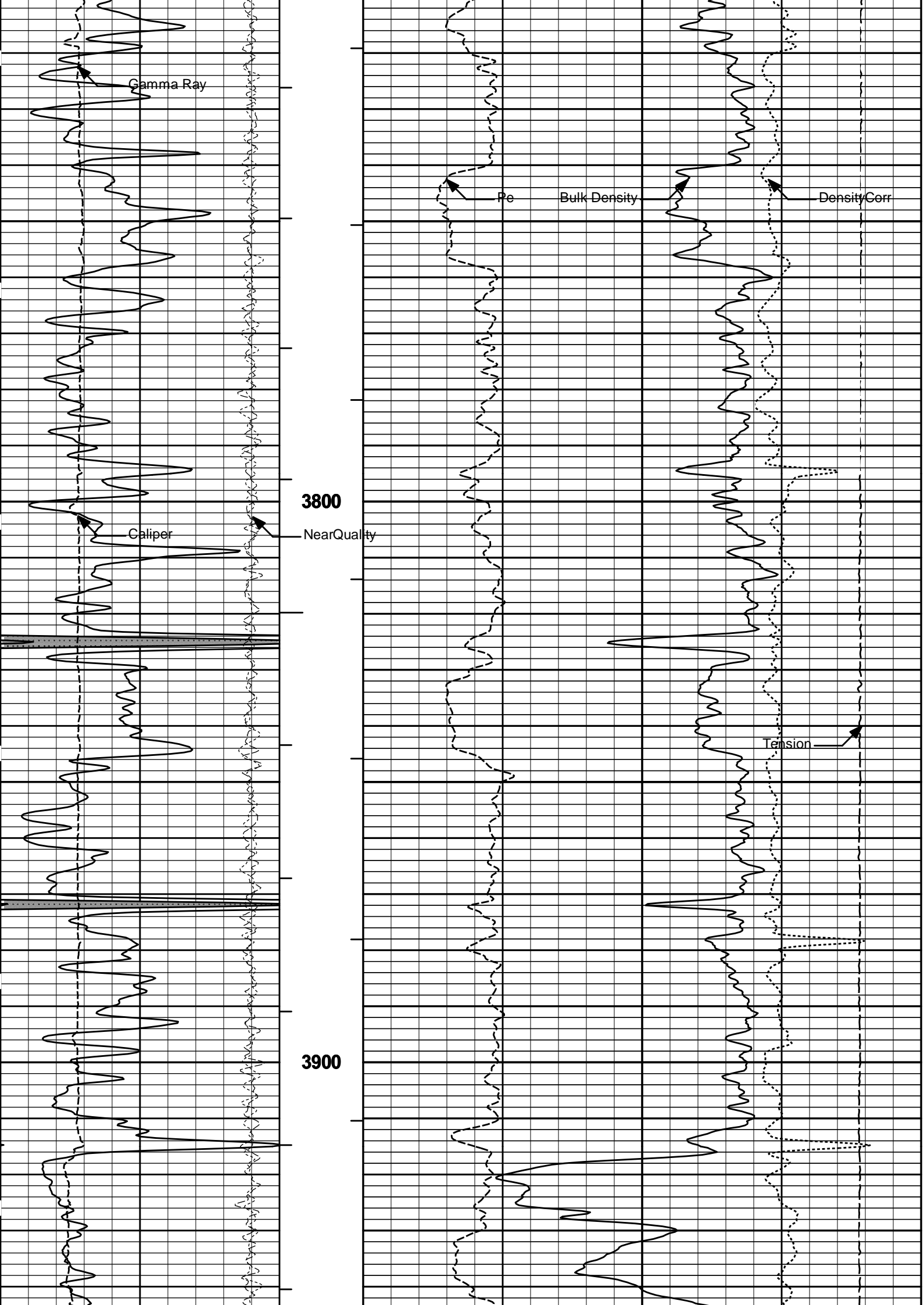


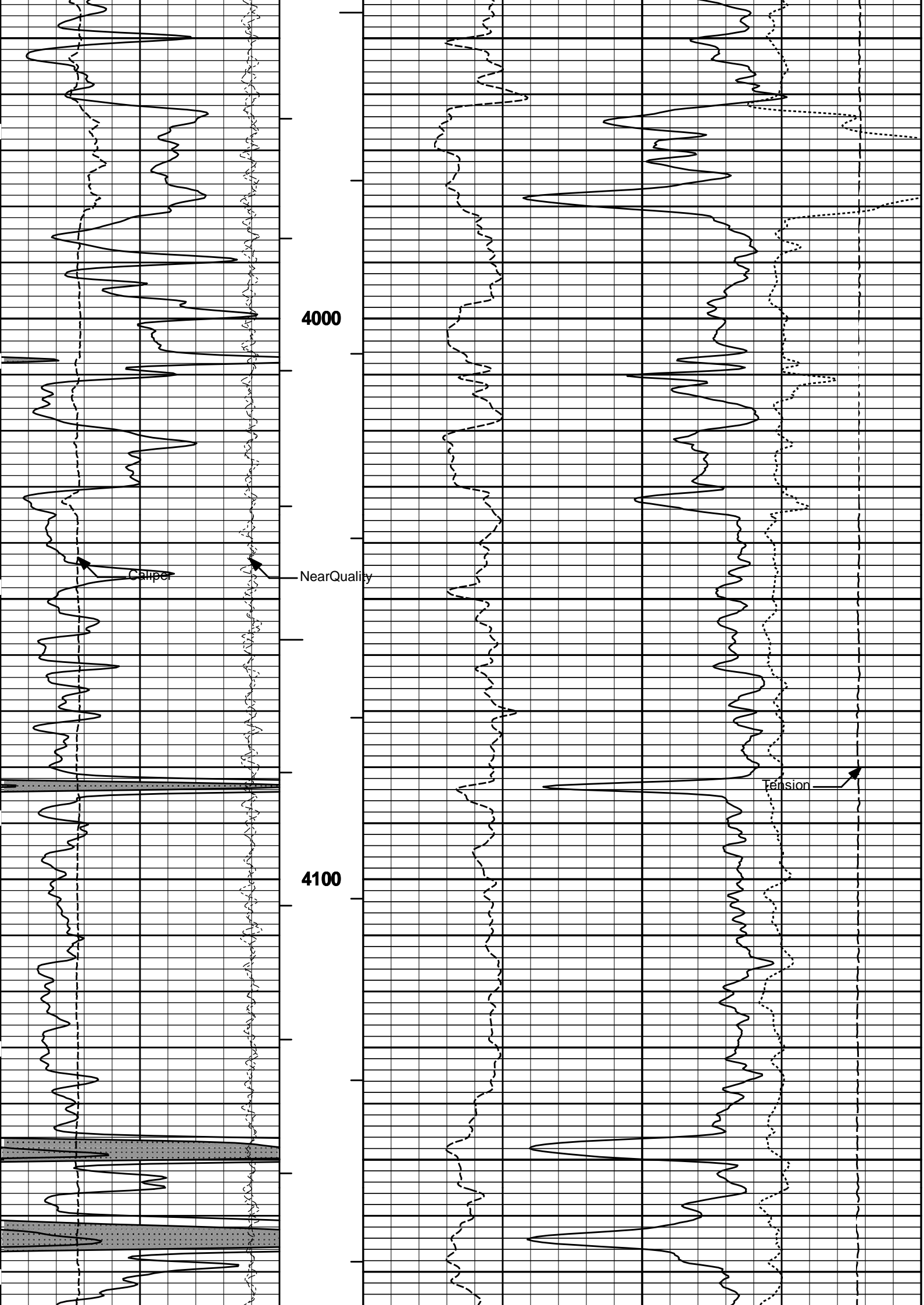


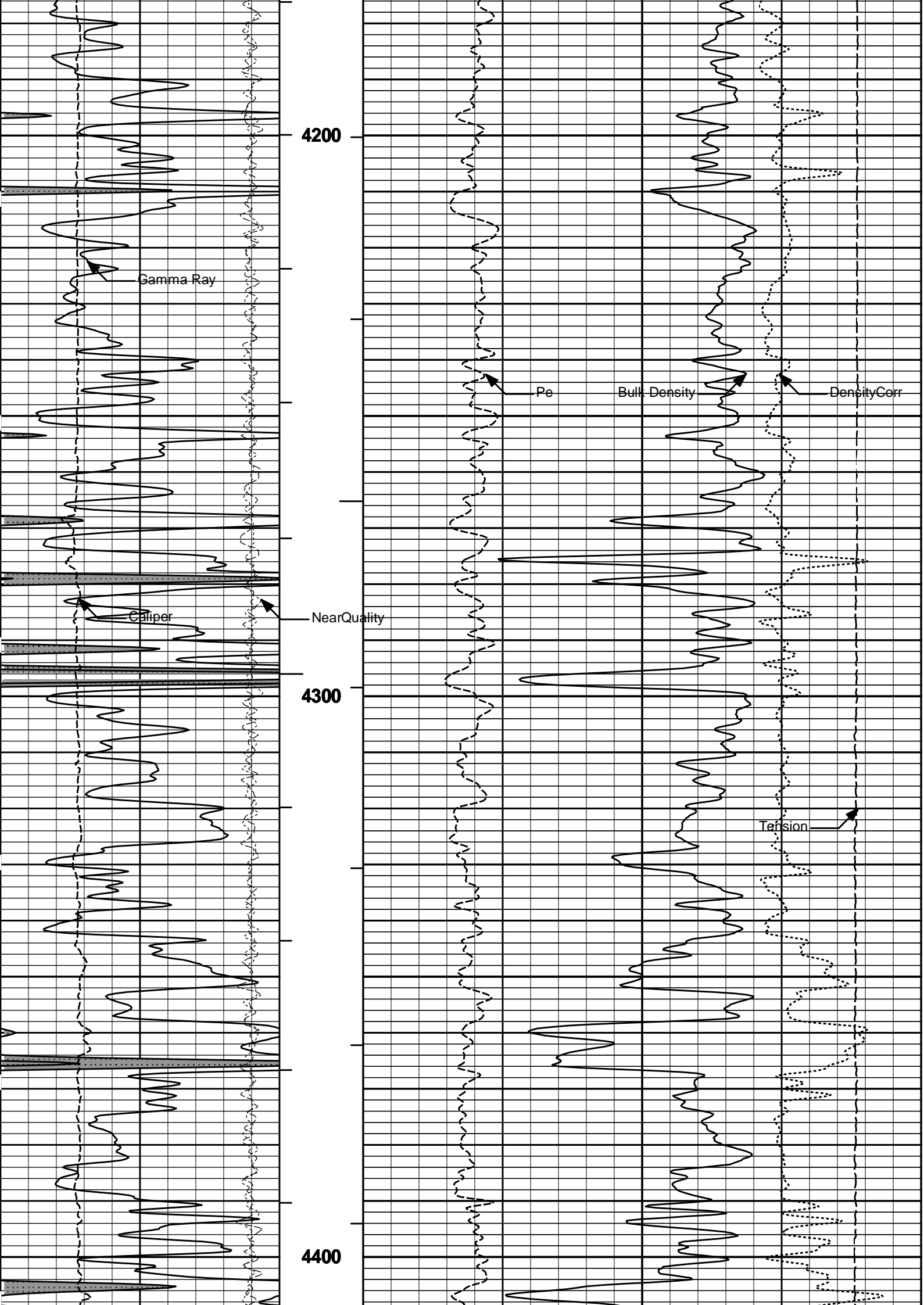


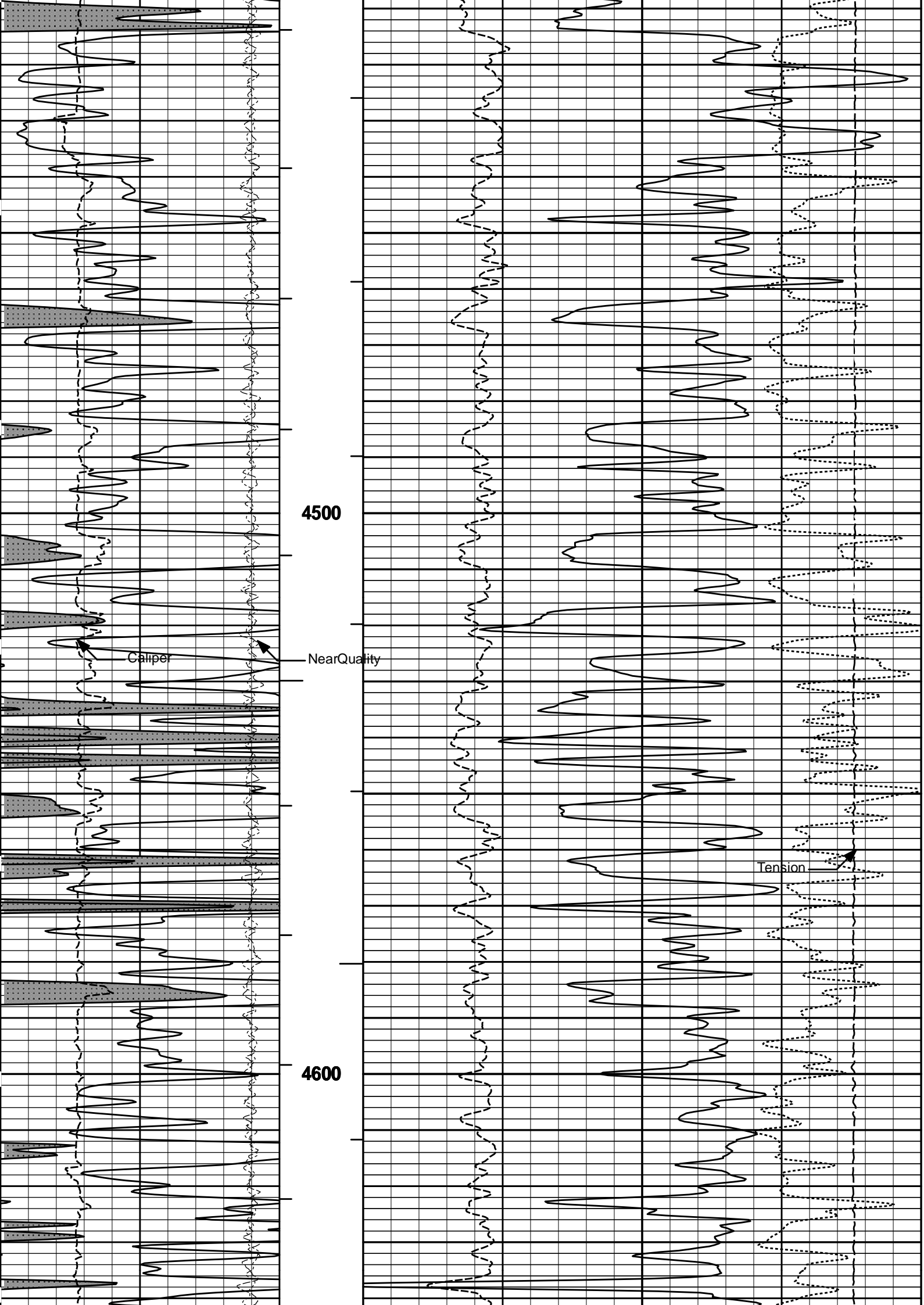


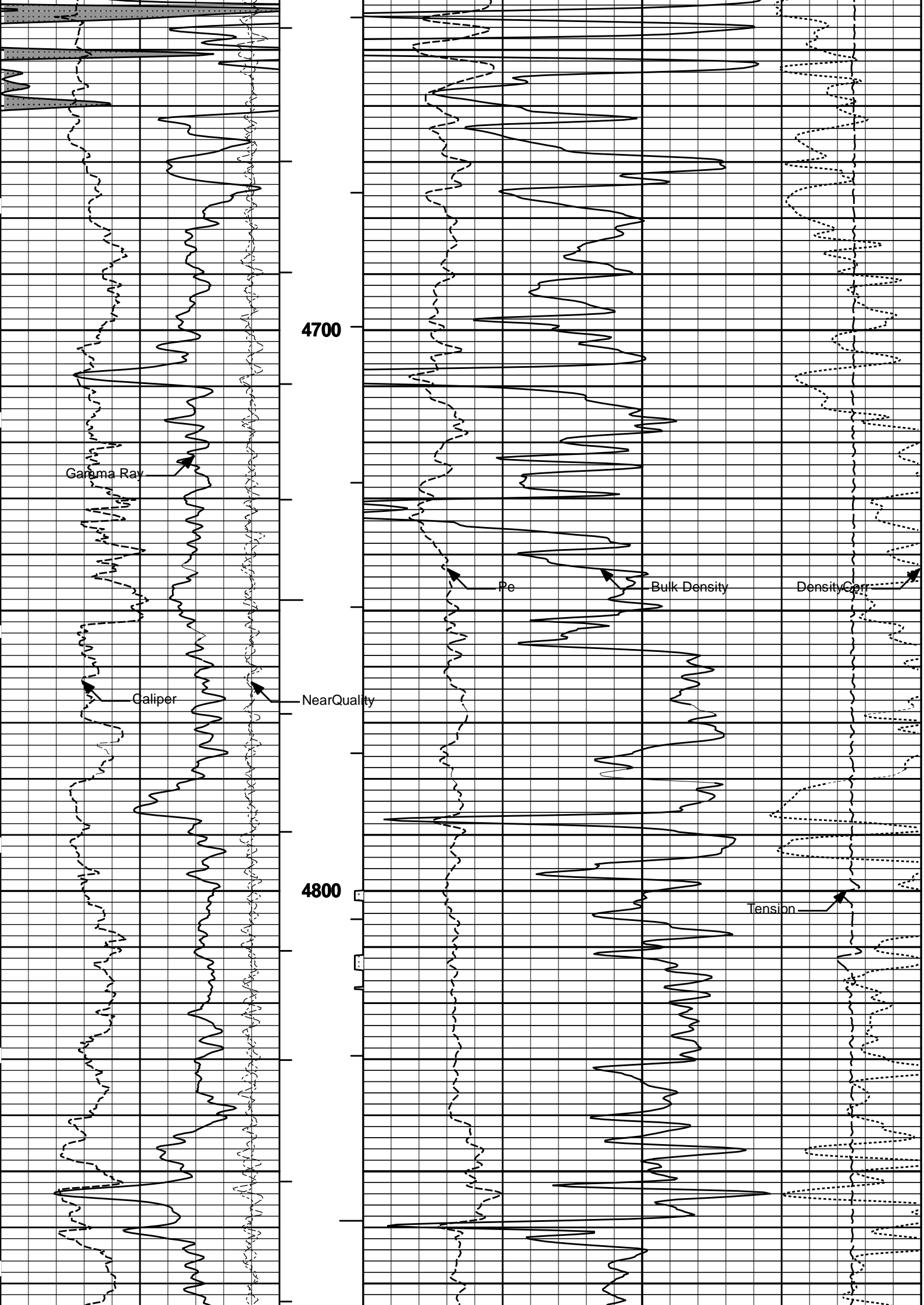


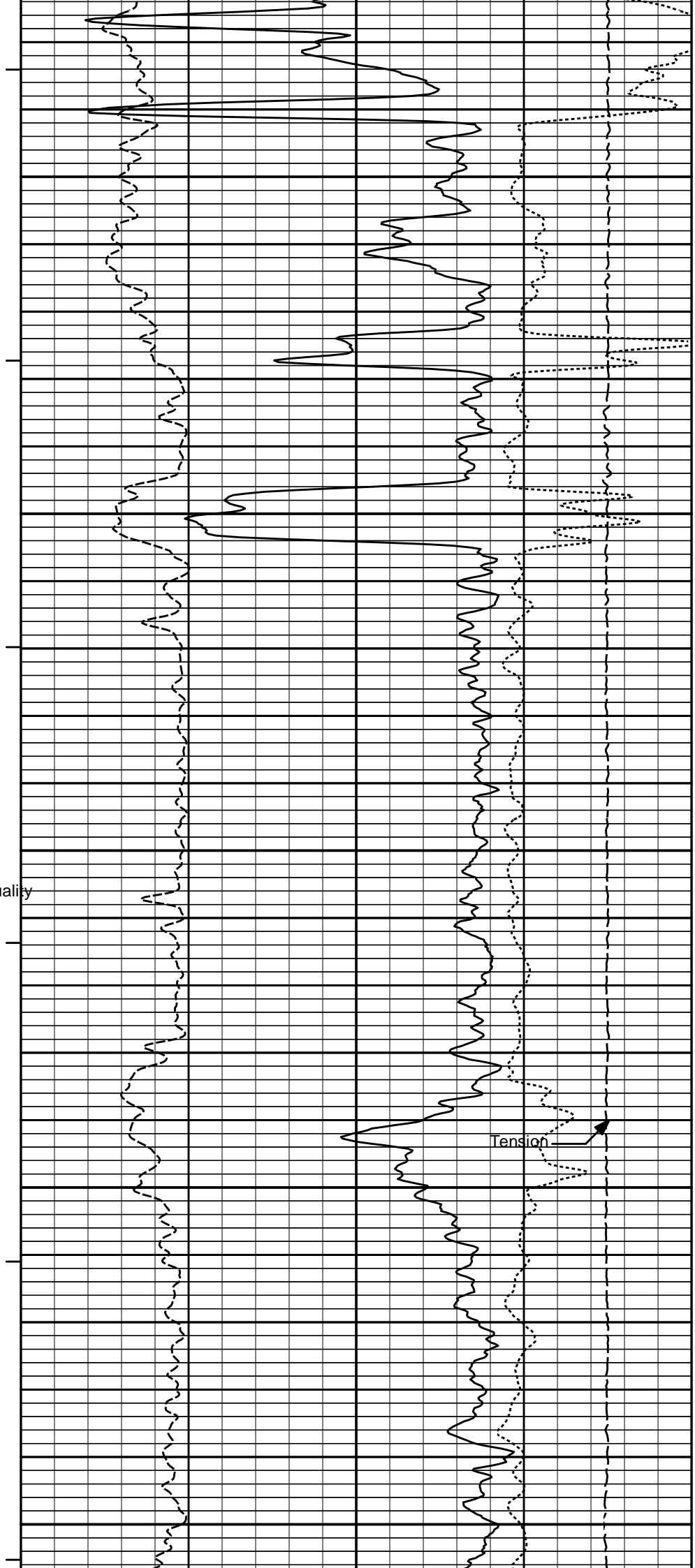
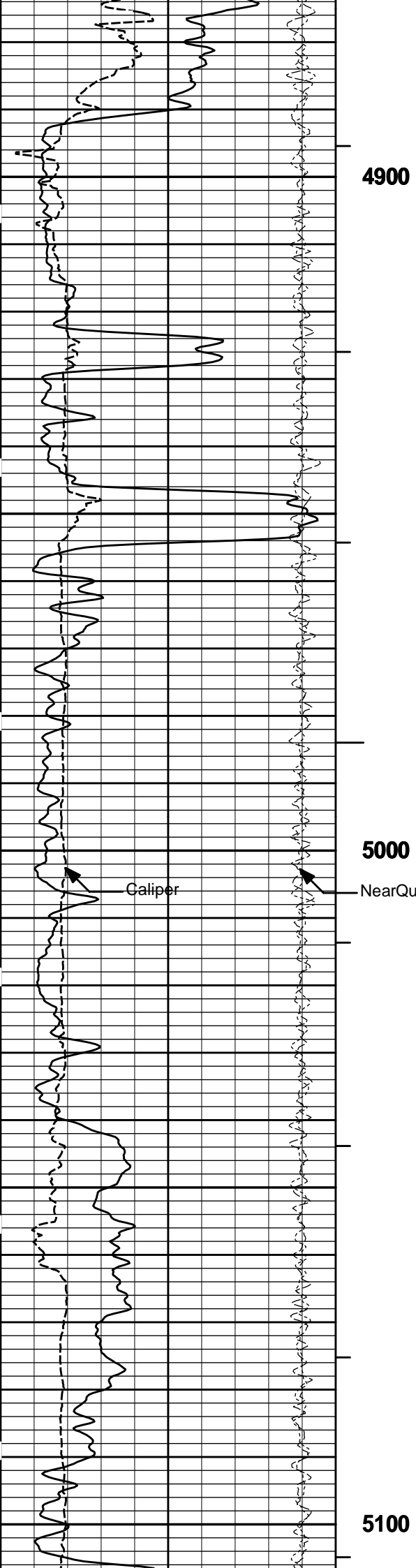


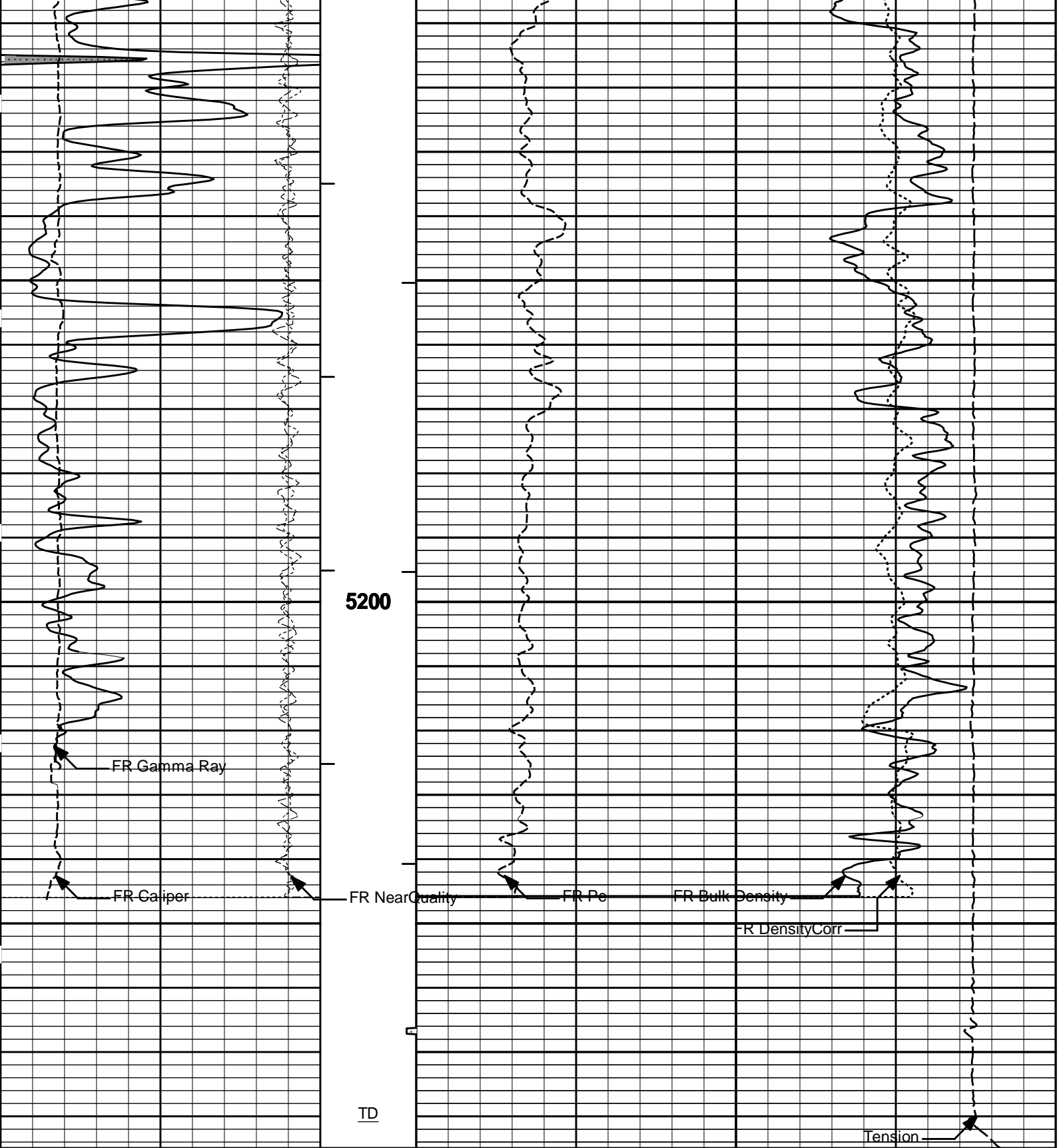












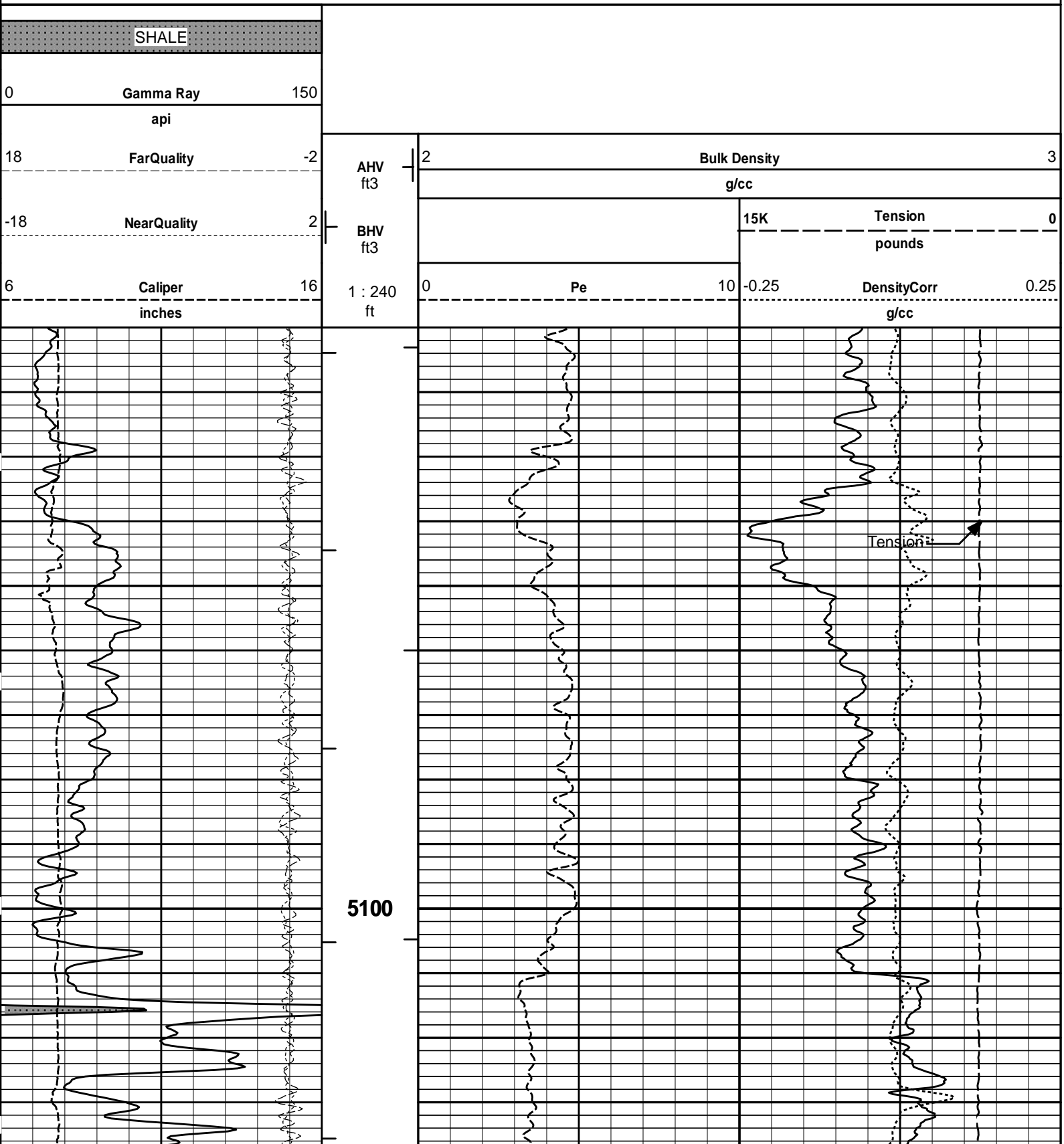
6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150	Tension Pull						
	api		10	0					
	SHALE		Tension Pull						

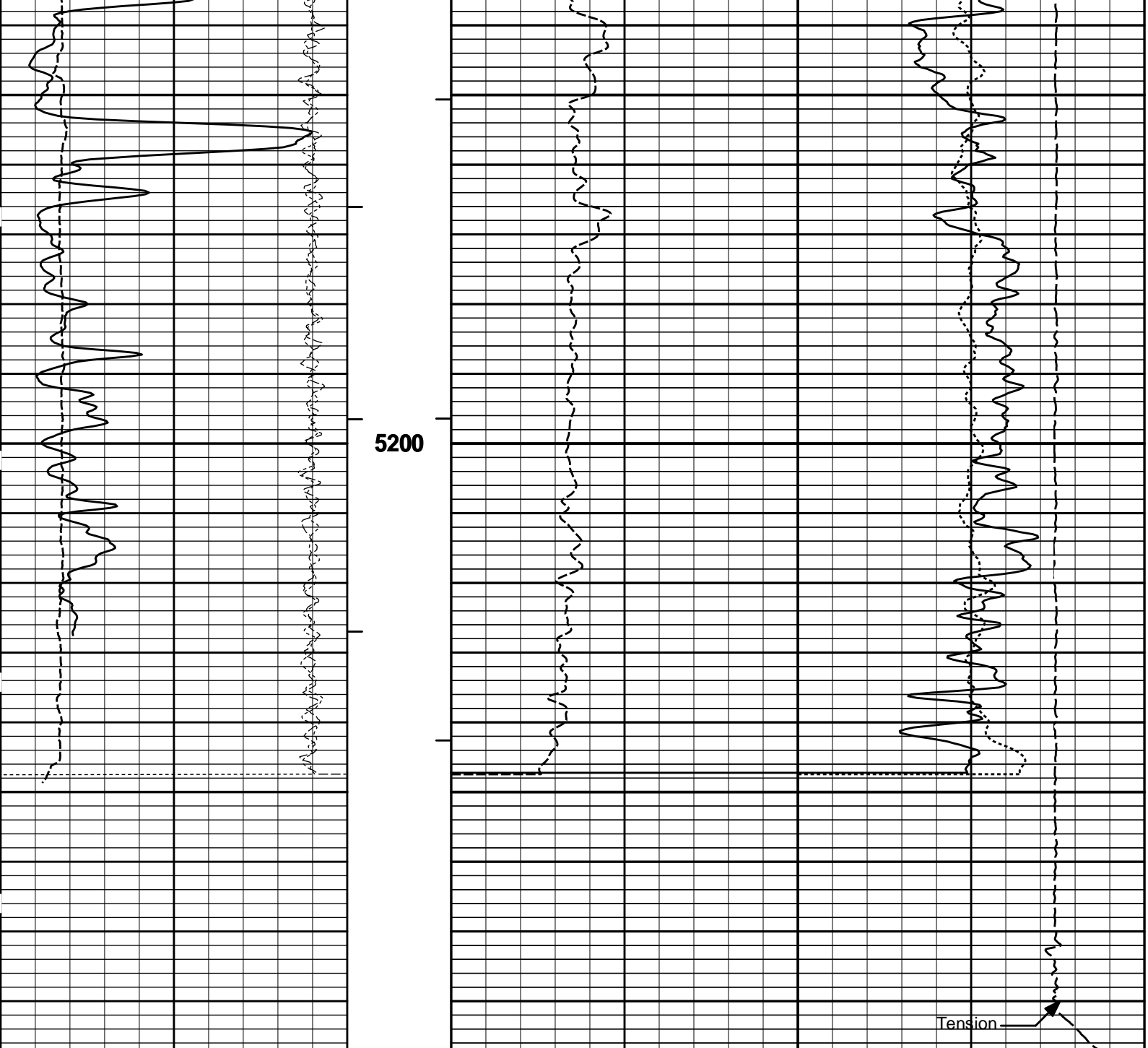
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 04-Apr-09 07:12:01
Plot Range: 5010 ft to 5286.92 ft
Data: PROWERS_GRAZING\Well Based\DAQ-0001-002\
Plot File: \\LOCAL-IPROWERS_GRAZING\0001 GTET-DSN-SDL-BSAT-ACRT-CABBAGE\POROML\BULKD_5_REP_LIB

REPEAT SECTION





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

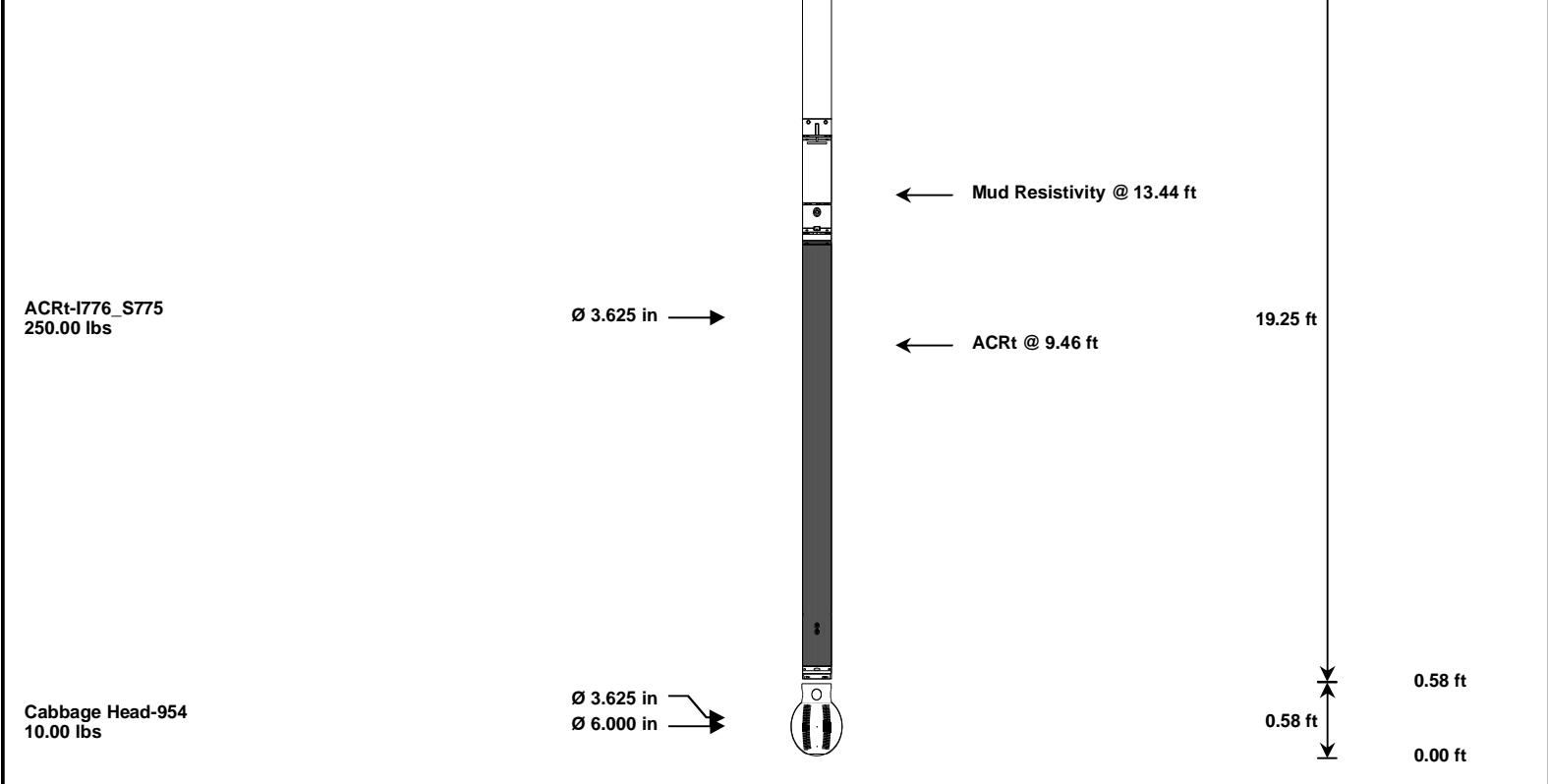
HALLIBURTON

Plot Time: 04-Apr-09 07:12:02
Plot Range: 5010 ft to 5286.92 ft
Data: PROWERS_GRAZING\Well Based\DAQ-0001-002\
Plot File: \\LOCAL-IPROWERS_GRAZING\0001 GTET-DSN-SDL-BSAT-ACRT-CABBAGE\POROML\BULKD_5_REP_LIB

REPEAT SECTION

TOOL STRING DIAGRAM REPORT

Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head-PROT01 30.00 lbs	Ø 3.625 in →			1.92 ft	70.21 ft
SP Digital-6745 60.00 lbs	Ø 3.625 in →		← SP @ 66.59 ft	3.67 ft	68.29 ft
GTET-10811258 165.00 lbs	Ø 3.625 in →		← GammaRay @ 58.56 ft	8.52 ft	64.63 ft
DSNT-10755066 174.00 lbs	Ø 3.625 in →			9.69 ft	56.10 ft
			← DSN Far @ 49.17 ft ← DSN Near @ 48.42 ft		46.42 ft
SDLT-I55066_M85803_P14945 360.00 lbs	Ø 4.500 in → Ø 4.750 in →		SDL Microlog @ 38.60 ft SDL Caliper @ 38.42 ft SDL @ 38.41 ft	10.81 ft	35.60 ft
BSAT-10747683 300.00 lbs	Ø 3.625 in →		← Sonic Receivers @ 27.09 ft	15.77 ft	19.83 ft



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Cable Head		PROT01	30.00	1.92	68.29	300.00
SP	Digital Downhole Measured SP		6745	60.00	3.67	64.63	300.00
GTET	Natural Gamma Ray Tool		10811258	165.00	8.52	56.10	60.00
DSNT	Dual Spaced Neutron		10755066	174.00	9.69	46.42	60.00
DCNT	DSN Decentralizer		10755066	50.00	5.13	* 49.75	300.00
SDLT	Spectral Density Tool		I55066_M85803_P14945	360.00	10.81	35.60	60.00
BCAS	Borehole Sonic Array Tool		10747683	300.00	15.77	19.83	60.00
ACRt	Array Compensated True Resistivity		I776_S775	250.00	19.25	0.58	300.00
CBHD	Cabbage Head		954	10.00	0.58	0.00	300.00
Total				1,399.00	70.21		
Data: PROWERS_GRAZING\0001 GTET-DSN-SDL-BSAT-ACRT-CABBAGE\IDLE							Date: 04-Apr-09 01:53:33

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CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	11-Feb-09 17:39:29
Engineer:	E.SHIBALOV	Calibration Date:	12-Mar-09 03:50:13
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1
Calibrator Source S/N: 185			
Calibrator API Reference:228.00 api			
Measurement	Measured	Calibrated	Units
Background	22.4	22.6	api
Background + Calibrator	248.0	250.6	api
Calibrator	228.2	228.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	12-Mar-09 03:50:13
Engineer:	E.SHIBALOV	Calibration Date:	03-Apr-09 05:05:53
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1
Calibrator Source S/N: 185			
Calibrator API Reference:228.00 api			

Field Verification	Shop	Field	Units
Background	22.6	22.3	api
Background + Calibrator	250.6	255.4	api
Calibrator	228.0	233.1	api
Shop	Field	Difference	Tolerance
228.0	233.1	-5.1	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	03-Apr-09 05:05:53
Engineer:	T. BRIDGEMAN	Calibration Date:	04-Apr-09 06:53:12
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1

Calibrator Source S/N: 185				
Calibrator API Reference:228.00 api				
Post Verification		Field	Post	Units
Background		22.3	41.8	api
Background + Calibrator		255.4	273.4	api
Calibrator		233.1	231.6	api
Shop	Field	Post	Difference	Tolerance
228.0	233.1	231.6	1.5	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION			
Tool Name:	DSNT - 10755066	Reference Calibration Date:	16-Jan-09 18:44:27
Engineer:	E.SHIBALOV	Calibration Date:	25-Feb-09 11:34:50
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1

Logging Source S/N: DSN 436			
Tank Serial Number: LIB-105060			
Reference value assigned to Tank: 51.680			
Snow Block S/N: LIBERAL			
Calibration Tank Water Temperature: 60 degF			
Min. Tool Housing Outside Diameter: 3.610 in			

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.979	0.979	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):	0.2109	0.2110	0.0000	+/- 0.0020
Calibrated Ratio:	9.73	9.73	0.002	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0610	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 - 10755066	Reference Calibration Date:	25-Feb-09 11:34:50

Engineer: E.SHIBALOV		Calibration Date: 03-Apr-09 05:08:52		
Software Version: WL INSITE R2.4 (Build 1)		Calibration Version: 1		
Logging Source S/N: DSN 436				
Snow Block S/N: LIBERAL				
NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0610	0.0531	-0.0079	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:		Passed		
Snow Block Stat Check:		Passed		
Temperature Check:		Passed		

DUAL SPACED NEUTRON POST CALIBRATION				
Tool Name: DSNT - 10755066		Reference Calibration Date: 03-Apr-09 05:08:52		
Engineer: T. BRIDGEMAN		Calibration Date: 04-Apr-09 07:01:19		
Software Version: WL INSITE R2.4 (Build 1)		Calibration Version: 1		
Logging Source S/N: DSN 436				
Snow Block S/N: LIBERAL				
NEUTRON POST-CHECK SUMMARY				
	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0531	0.0599	0.0068	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:		Passed		
Snow Block Stat Check:		Passed		
Temperature Check:		Passed		

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name: SDLT - I55066_M85803_P14945		Reference Calibration Date: 16-Jan-09 16:01:39	
Engineer: E.SHIBALOV		Calibration Date: 25-Feb-09 14:28:29	
Software Version: WL INSITE R2.4 (Build 1)		Calibration Version: 1	
Logging Source S/N: 5073GW			
Aluminum Block S/N: LIBERAL		Density: 2.598g/cc	
Magnesium Block S/N: LIBERAL		Density: 1.684g/cc	
DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9877	1.0063	0.90 - 1.10
Near Dens Gain	0.9859	0.9975	0.90 - 1.10
Near Peak Gain	1.0028	0.9960	0.90 - 1.10
Near Lith Gain	0.9776	0.9760	0.90 - 1.10
Far Bar Gain	0.9997	1.0042	0.90 - 1.10
Far Dens Gain	0.9949	0.9950	0.90 - 1.10
Far Peak Gain	0.9896	0.9920	0.90 - 1.10
Far Lith Gain	0.9735	0.9757	0.90 - 1.10
Near Bar Offset	0.2887	0.1145	NONE
Near Dens Offset	0.2712	0.1666	NONE
Near Peak Offset	0.0964	0.1524	NONE
Near Lith Offset	0.2676	0.2801	NONE
Far Bar Offset	0.1136	0.0663	NONE
Far Dens Offset	0.1357	0.1275	NONE
Far Peak Offset	0.1675	0.1371	NONE

Far Lith Offset	0.2548	0.2245	NONE
Near Bar Background	1080.35	1076.83	700 - 1450
Near Dens Background	354.20	355.69	230 - 480
Near Peak Background	153.62	154.18	100 - 210
Near Lith Background	189.84	190.81	125 - 260
Far Bar Background	534.92	533.52	450 - 900
Far Dens Background	206.61	205.55	175 - 345
Far Peak Background	80.97	81.37	70 - 140
Far Lith Background	85.78	85.95	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.681	1.684	0.003	+/- 0.015
Pe	2.582	2.594	0.012	+/- 0.150
ALUMINUM				
Density (g/cc)	2.593	2.598	0.005	+/- 0.01500
Pe	3.185	3.170	-0.015	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0006	+/- 0.0110	-0.0008	+/- 0.0140
Magnesium Block	0.0015	+/- 0.0110	-0.0007	+/- 0.0140
Aluminum Block	-0.0002	+/- 0.0110	0.0016	+/- 0.0140
Resolution	10.00	6.00 - 11.50	9.19	6.00 - 11.50
Internal Verifier(B+D+P+L)	1778	1200 - 2700	906	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 - I55066_M85803_P14945	Reference Calibration Date:	25-Feb-09 14:28:29
Engineer:	E.SHIBALOV	Calibration Date:	03-Apr-09 05:05:03
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1

Aluminum Block S/N: LIBERAL	Density: 2.598g/cc
Magnesium Block S/N: LIBERAL	Density: 1.684g/cc
Pad Temperature: 44.2 degF	

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1777.508	1764.320	-13.188	16.900
Far (B+D+P+L) cps	906.387	906.315	-0.072	16.354
Near Resolution	10.00	10.08	0.080	0.50
Far Resolution	9.19	9.53	0.340	1.00

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

SPECTRAL DENSITY POST CHECK					
Tool Name:		SDLT - I55066_M85803_P14945		Reference Calibration Date: 03-Apr-09 05:05:03	
Engineer:		T. BRIDGEMAN		Calibration Date: 04-Apr-09 06:53:14	
Software Version:		WL INSITE R2.4 (Build 1)		Calibration Version: 1	
Aluminum Block S/N: LIBERAL			Density: 2.598g/cc		
Magnesium Block S/N: LIBERAL			Density: 1.684g/cc		
Pad Temperature: 63.9 degF					
DENSITY POST CALIBRATION SUMMARY					
Measurement	Field	Post	Change	Control Limit +/-	
Near (B+D+P+L) cps	1764.320	1766.132	1.812	16.900	
Far (B+D+P+L) cps	906.315	908.002	1.687	16.354	
Near Resolution	10.08	10.18	0.100	0.50	
Far Resolution	9.53	9.65	0.120	1.00	
PASS/FAIL SUMMARY					
Bkg Quality Check:			Passed		
Bkg Resolution Check:			Passed		
Bkg Verification Check:			Passed		

MICRO LOG SHOP CALIBRATION					
Tool Name:		SDLT - I55066_M85803_P14945		Reference Calibration Date: 12-Jan-09 12:47:17	
Engineer:		E.SHIBALOV		Calibration Date: 26-Feb-09 11:17:25	
Software Version:		WL INSITE R2.4 (Build 1)		Calibration Version: 1	
CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.07	-0.07	-0.01	-0.00	ohmm
Calibration Point #1	0.00	0.00	-0.00	0.00	ohmm
Calibration Point #2	19.98	20.00	19.97	20.00	ohmm
Internal Reference	19.96	19.99	19.96	19.98	ohmm
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Tool Value		Tool Value		
Tool Zero	0.23		-0.11		V
Calibration Point #1	18.77		0.72		V
Calibration Point #2	5288.42		6884.23		V
Internal Reference	5284.94		6878.27		V

MICRO LOG FIELD CHECK					
Tool Name:		SDLT - I55066_M85803_P14945		Reference Calibration Date: 26-Feb-09 11:17:25	
Engineer:		E.SHIBALOV		Calibration Date: 03-Apr-09 05:05:39	
Software Version:		WL INSITE R2.4 (Build 1)		Calibration Version: 1	
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.07	-0.07	-0.00	-0.00	ohmm
Internal Reference	19.99	19.88	19.98	19.87	ohmm
Summary					
Signal	Shop	Field	Difference	Tolerance	

Microlog Normal	19.99	19.88	0.11	+/- 0.80
Microlog Lateral	19.98	19.87	0.11	+/- 0.80

MICRO LOG POST CHECK				
Tool Name:	SDLT - I55066_M85803_P14945	Reference Calibration Date:	03-Apr-09 05:05:39	
Engineer:	T. BRIDGEMAN	Calibration Date:	04-Apr-09 06:09:55	
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1	

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Field	Post	Field	Post	
Tool Zero	-0.07	-0.07	-0.00	-0.00	ohmm
Internal Reference	19.88	20.11	19.87	20.11	ohmm
Summary					
Signal	Field	Post	Difference		Tolerance
Microlog Normal	19.88	20.11	0.23		+/- 0.80
Microlog Lateral	19.87	20.11	0.24		+/- 0.80

DENSITY CALIPER SHOP CALIBRATION				
Tool Name:	SDLT - I55066_M85803_P14945	Reference Calibration Date:	12-Jan-09 12:41:33	
Engineer:	E.SHIBALOV	Calibration Date:	26-Feb-09 11:05:16	
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1	

CALIBRATION COEFFICIENTS				
Measurement	Previous Value	New Value	Control Limit On New Value	
Pad Offset	-1810.28	-1917.55	-7000.00 - -1000.00	
Pad Gain	0.0003774	0.0003796	0.000200 - 0.000600	
Arm Offset	-2009.02	-2081.02	-5000.00 - 3000.00	
Arm Gain	0.0005251	0.0005465	0.000300 - 0.000700	
Arm Power	-0.000005698	-0.000006992	-0.000010 - 0.000010	
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)	2.03	2.00	-0.03	+/- 0.20
Medium Ring (in)	3.77	3.75	-0.02	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.51	6.50	-0.01	+/- 0.20
Medium Ring (in)	8.21	8.25	0.04	+/- 0.20
Large Ring (in)	15.01	15.00	-0.01	+/- 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 - I55066_M85803_P14945	Reference Calibration Date:	26-Feb-09 11:05:16	
Engineer:	E.SHIBALOV	Calibration Date:	03-Apr-09 05:15:32	
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1	

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	0.77	0.74	-0.03	+/- 0.10

Pad Extension	3.75	3.74	-0.01	+/- 0.10
Ring Diameter	8.25	8.22	-0.03	+/- 0.15
PASS/FAIL SUMMARY				
Pad Extension Check:		Passed		
Diameter Check:		Passed		

SDLT CALIPER POST CALIBRATION				
Tool Name:	SDLT - I55066_M85803_P14945	Reference Calibration Date:	03-Apr-09 05:15:32	
Engineer:	T. BRIDGEMAN	Calibration Date:	04-Apr-09 07:08:07	
Software Version:	WL INSITE R2.4 (Build 1)	Calibration Version:	1	

MEASURED CALIPER VALUES				
Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.74	3.64	-0.10	+/- 0.10
Ring Diameter	8.22	8.26	0.04	+/- 0.15
PASS/FAIL SUMMARY				
Pad Extension Check:		Passed		
Diameter Check:		Passed		

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	228.0	233.1	231.6	1.5	+/- 9.00	api
DSNT-10755066						
Snow-Block Porosity	0.0610	0.0531	0.0599	-0.0068	+/- 0.0150	decp
SDLT-I55066_M85803_P14945						
Near(B+D+P+L)	1777.508	1764.320	1766.132	-1.812	+/-16.900	cps
Far(B+D+P+L)	906.387	906.315	908.002	-1.687	+/-16.354	cps
MicroLog Normal	19.99	19.88	20.11	-0.23	+/-0.80	ohmm
MicroLog Lateral	19.98	19.87	20.11	-0.24	+/-0.80	ohmm
Pad Extension	3.75	3.74	3.64	0.10	+/-0.10	in
Ring Diameter	8.25	8.22	8.26	-0.040	+/-0.15	in
Data: PROWERS_GRAZING\0001 GTET-DSN-SDL-BSAT-ACRT-CABBAGE\IDLE					Date: 04-Apr-09 07:10:14	

HALLIBURTON						
PARAMETERS REPORT						

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	DSNT	DNOK	Process DSN?	No	
	SDLT	DNOK	Process Density?	No	
	SDLT	MLOK	Process MicroLog Outputs?	No	
1840.00					
	SHARED	BS	Bit Size	7.875	in
	SHARED		Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	9.200	ppg
	SHARED	RMUD	Mud Resistivity	0.680	ohmm
	SHARED	TRM	Temperature of Mud	69.0	degF
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	4.500	in

SHARED	STEM	Surface Temperature	45.0	degF
SHARED	TD	Total Well Depth	5285.00	ft
SHARED	BHT	Bottom Hole Temperature	132.0	degF
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	0.61	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	69.00	degF
Rwa / CrossPlot	RW	Resistivity of Formation Water	0.05	ohmm
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
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	TMPC	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		Logging Horizontal Water Tank?	No	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	No	
SDLT	CB	Use Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	None	
SDLT	DMA	Formation Density Matrix	2.710	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
BSAT	BCOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Semblance Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Semblance Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T 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	RTOK	Process ACRt?	Yes	
ACRt	CIND	Casing Indicator Enabled?	Yes	
ACRt	RECL	Relative Caliper Error	0	%
ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	RMC	Use RM Calculated for BHC?	No	
ACRt	TSEL	Calculate Temperature for Rmud Correction?	No	
ACRt	LTNM	Acrt Lateral Normalization	None	
ACRt	UTC	Use Temperature Correction	Yes	
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt	TPOS	Tool Position	Standoff	
ACRt	BHCM	Borehole Compensation Type	Automatic	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	REC6	Record 6 in curves in ADI?	No	

HALLIBURTON

INPUTS, DELAYS AND FILTERS TABLE

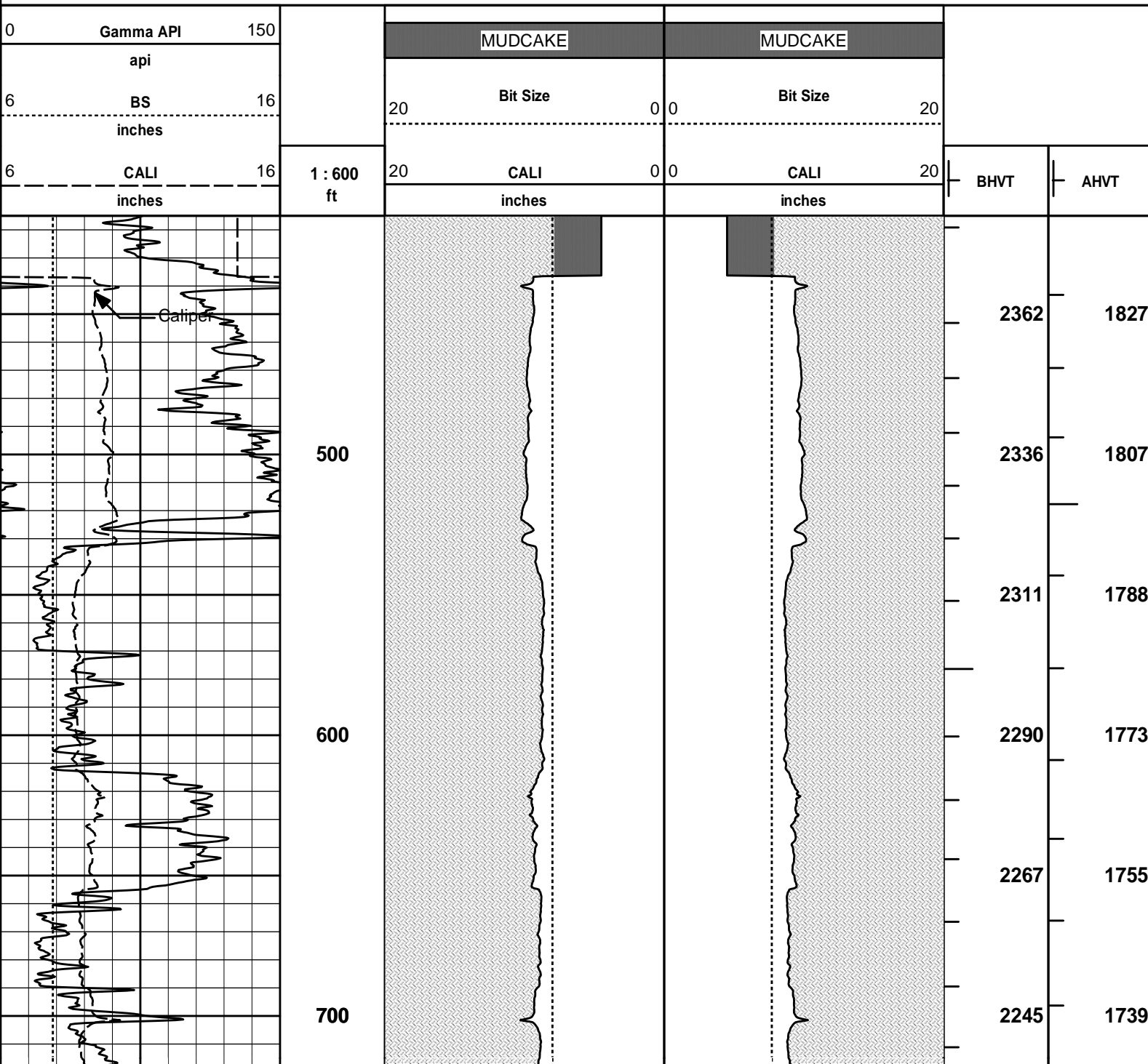
Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
SP Digital				
PLTC	Plot Control Mask	66.58	NO	
SP	Spontaneous Potential	66.58	BLK	1.250
SPR	Raw Spontaneous Potential	66.58	NO	
SPO	Spontaneous Potential Offset	66.58	NO	
GTET				
TPUL	Tension Pull	58.56	NO	
GR	Natural Gamma Ray API	58.56	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	58.56	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.56	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
INCL	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	48.32	NO	
RNDS	Near Detector Telemetry Counts	48.42	BLK	1.417
RFDS	Far Detector Telemetry Counts	49.17	TRI	0.583
DNTT	DSN Tool Temperature	48.42	NO	
DSNS	DSN Tool Status	48.32	NO	
ERND	Near Detector Telemetry Counts EVR	48.42	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	49.17	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.42	NO	
SDLT				
TPUL	Tension Pull	38.41	NO	
NAB	Near Above	38.24	BLK	0.920
NHI	Near Cesium High	38.24	BLK	0.920
NLO	Near Cesium Low	38.24	BLK	0.920
NVA	Near Valley	38.24	BLK	0.920
NBA	Near Barite	38.24	BLK	0.920
NDE	Near Density	38.24	BLK	0.920
NPK	Near Peak	38.24	BLK	0.920
NLI	Near Lithology	38.24	BLK	0.920
NBAU	Near Barite Unfiltered	38.24	BLK	0.250
NLIU	Near Lithology Unfiltered	38.24	BLK	0.250
FAB	Far Above	38.58	BLK	0.250
FHI	Far Cesium High	38.58	BLK	0.250
FLO	Far Cesium Low	38.58	BLK	0.250
FVA	Far Valley	38.58	BLK	0.250
FBA	Far Barite	38.58	BLK	0.250
FDE	Far Density	38.58	BLK	0.250
FPK	Far Peak	38.58	BLK	0.250
FLI	Far Lithology	38.58	BLK	0.250
PTMP	Pad Temperature	38.42	BLK	0.920
NHV	Near Detector High Voltage	35.60	NO	
ENV	Near Detector High Voltage EVR	35.60	NO	

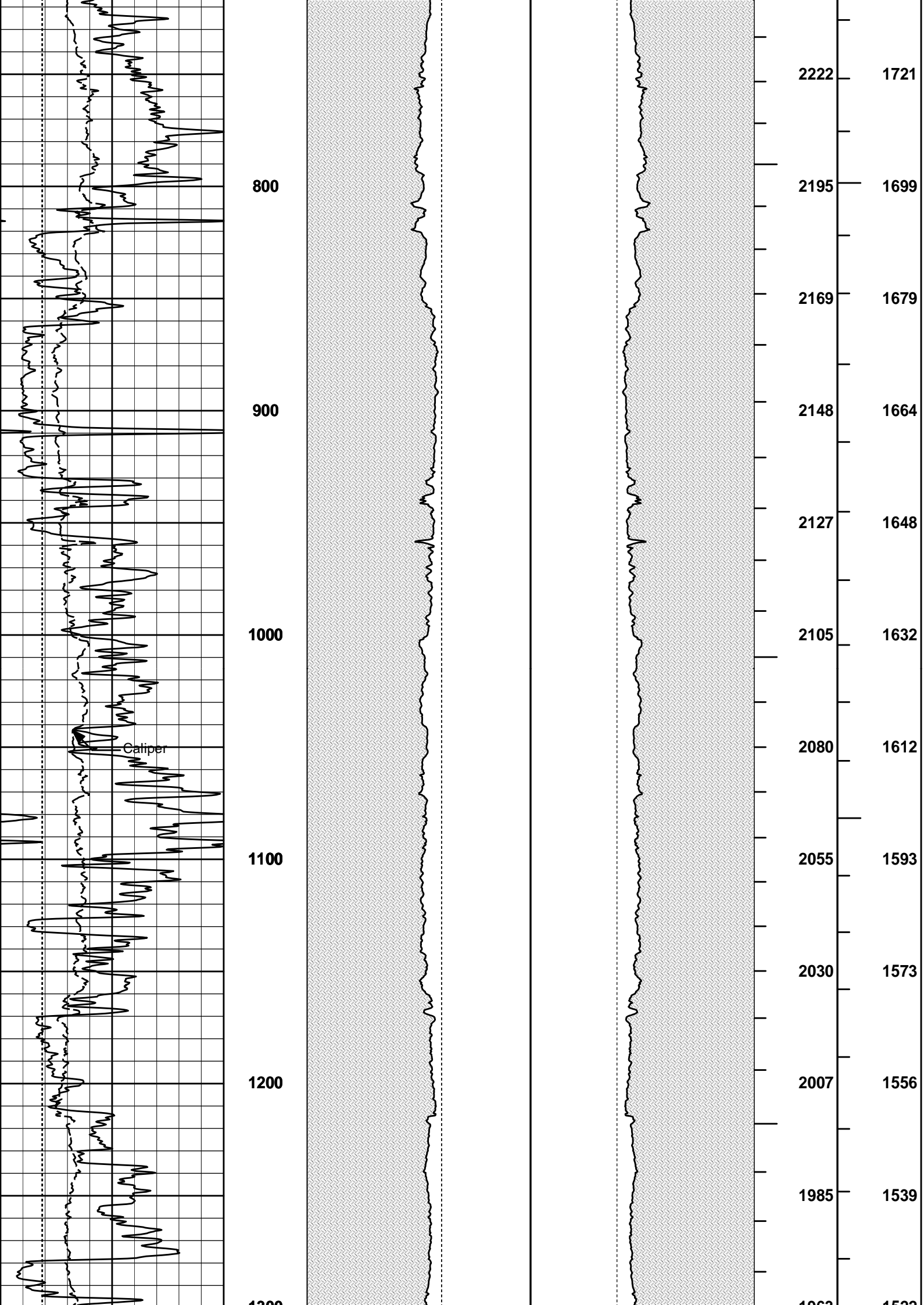
FHV	Far Detector High Voltage	35.60	NO	
ITMP	Instrument Temperature	35.60	NO	
TPUL	Tension Pull	38.42	NO	
PCAL	Pad Caliper	38.42	TRI	0.250
ACAL	Arm Caliper	38.42	TRI	0.250
TPUL	Tension Pull	38.60	NO	
MINV	Microlog Lateral	38.60	BLK	0.750
MNOR	Microlog Normal	38.60	BLK	0.750
BSAT				
TPUL	Tension Pull	27.09	NO	
STAT	Status	27.09	NO	
DLYT	Delay Time	27.09	NO	
SI	Sample Interval	27.09	NO	
TXRX	Raw Telemetry 10 Receivers	27.09	NO	
FRMC	Tool Frame Count	27.09	NO	
ACRt				
TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000

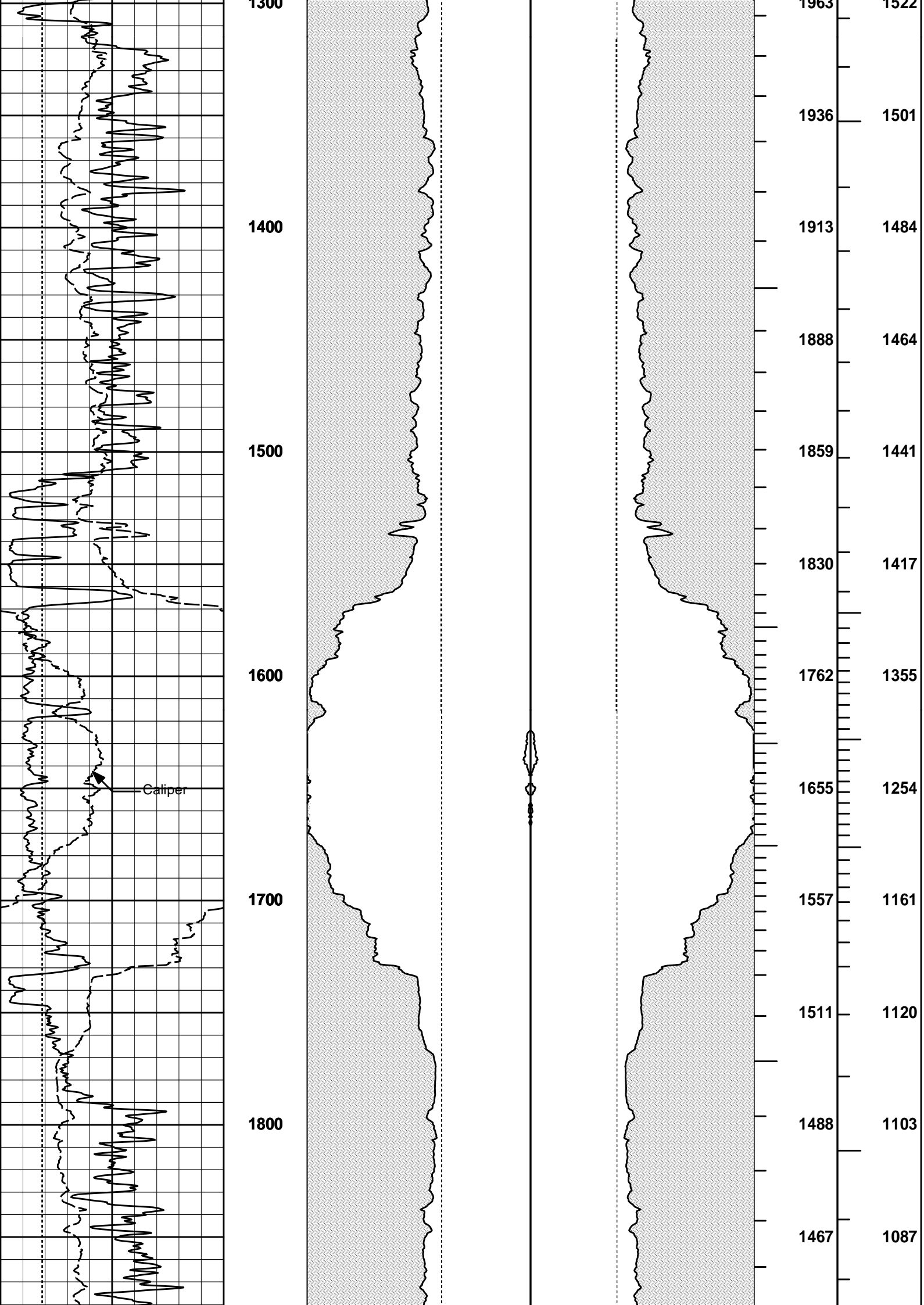
F2XI	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Feedpipe Temperature Calculated - Upper	2.97	BLK	0.000
TFPL	Feedpipe Temperature Calculated - Lower	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
Data: PROWERS_GRAZING\0001 GTET-DSN-SDL-BSAT-ACRT-CABBAGE\IDLE				Date: 04-Apr-09 01:53:13

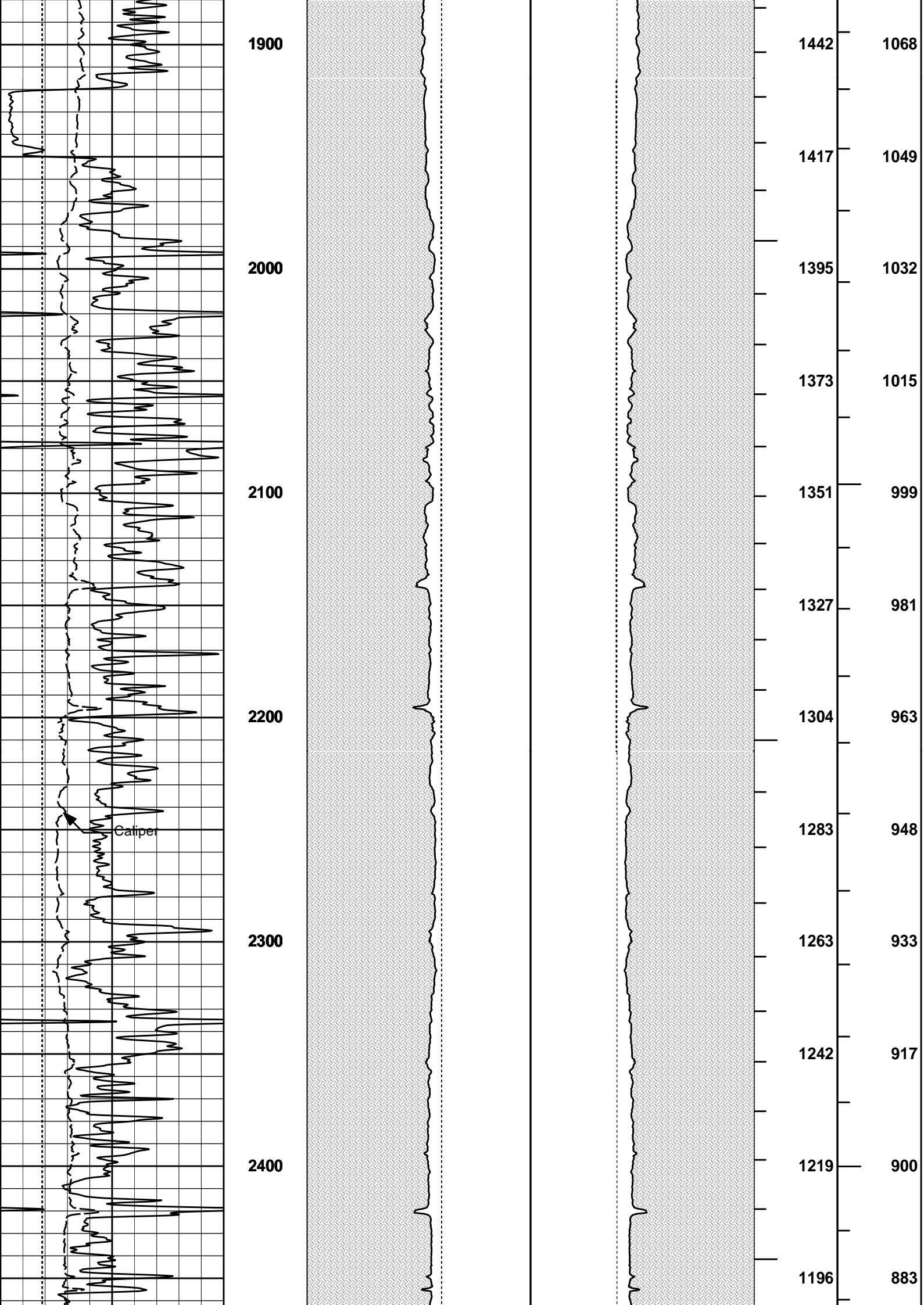
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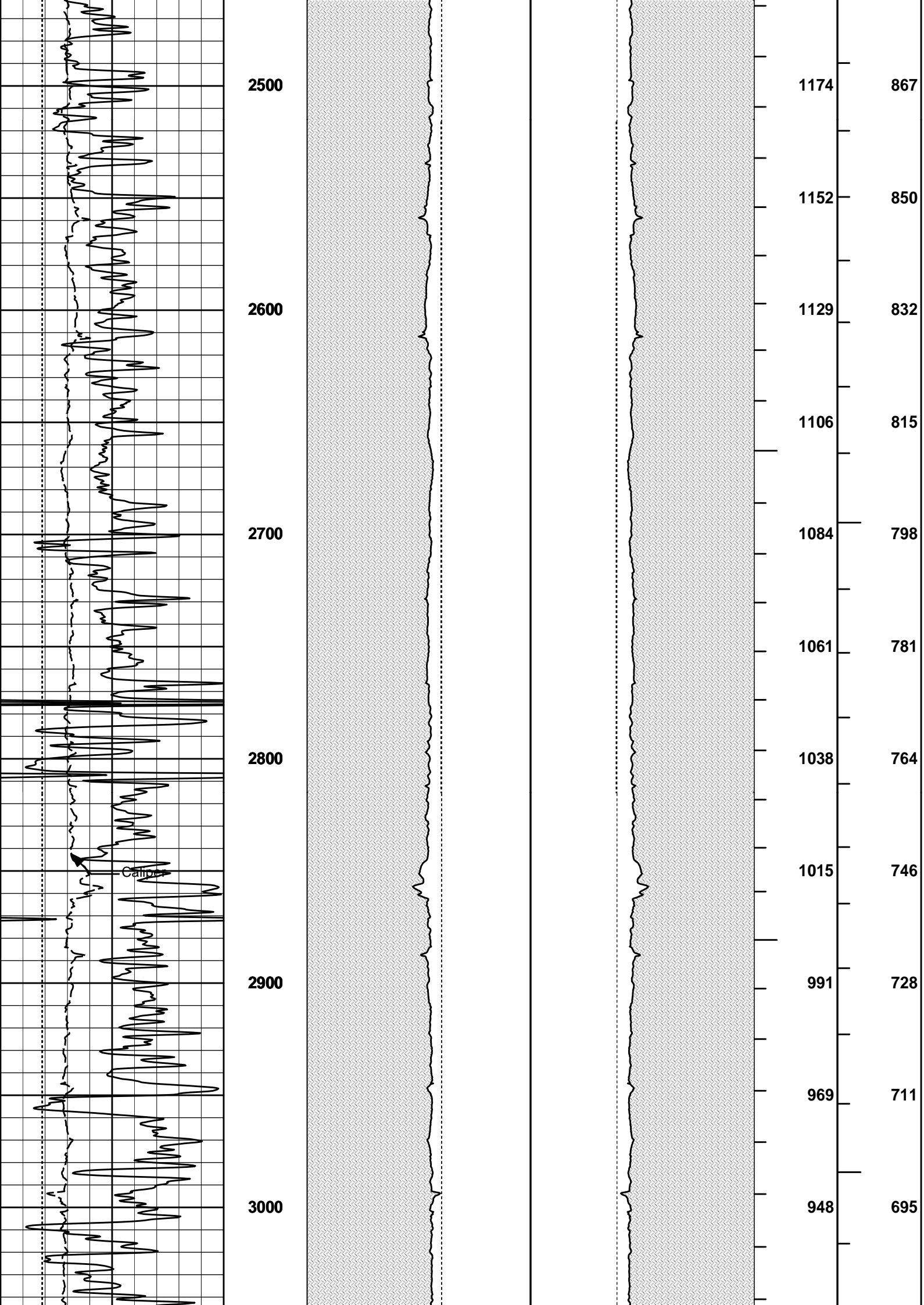
ANNULAR HOLE VOLUME PLOT

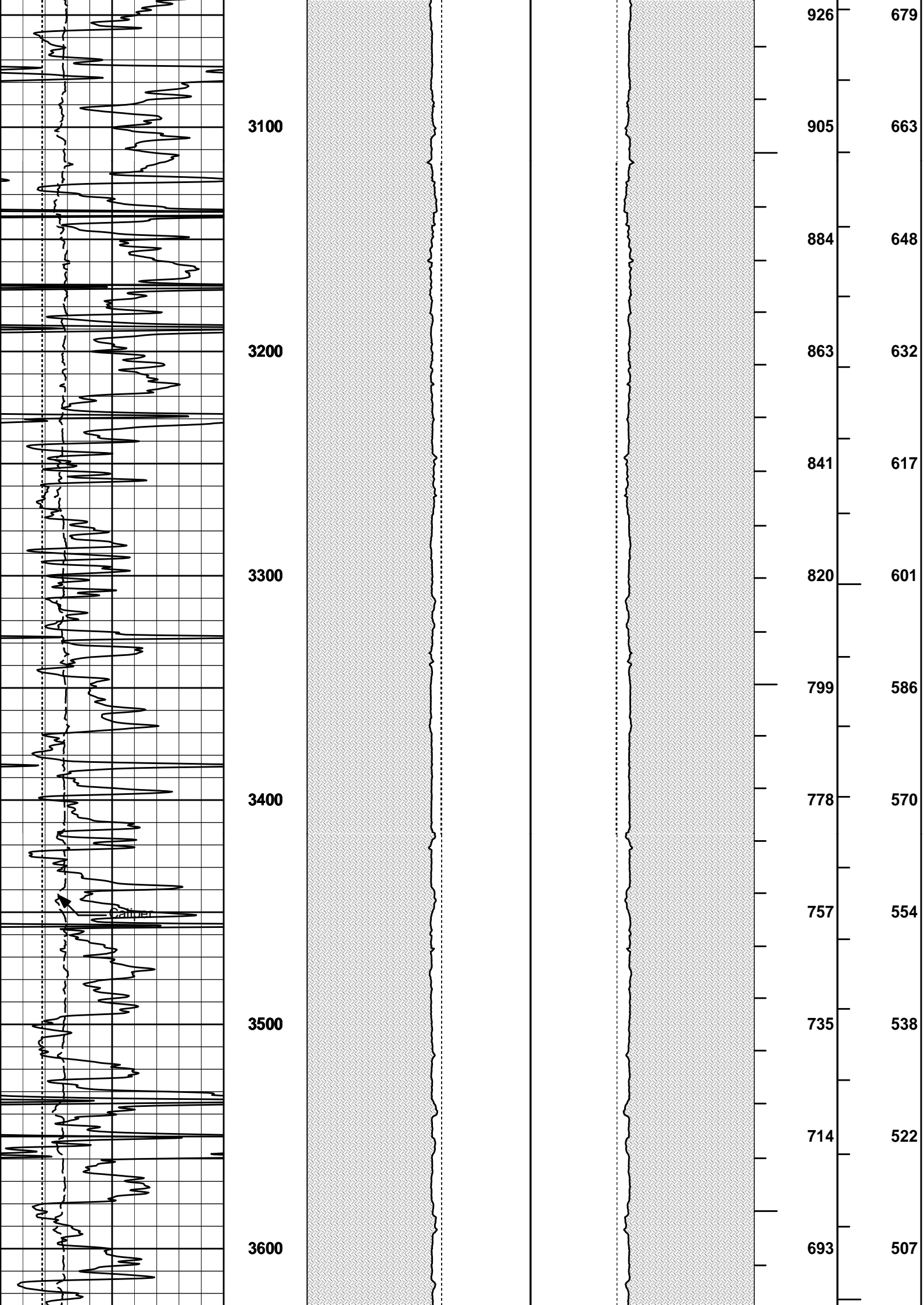


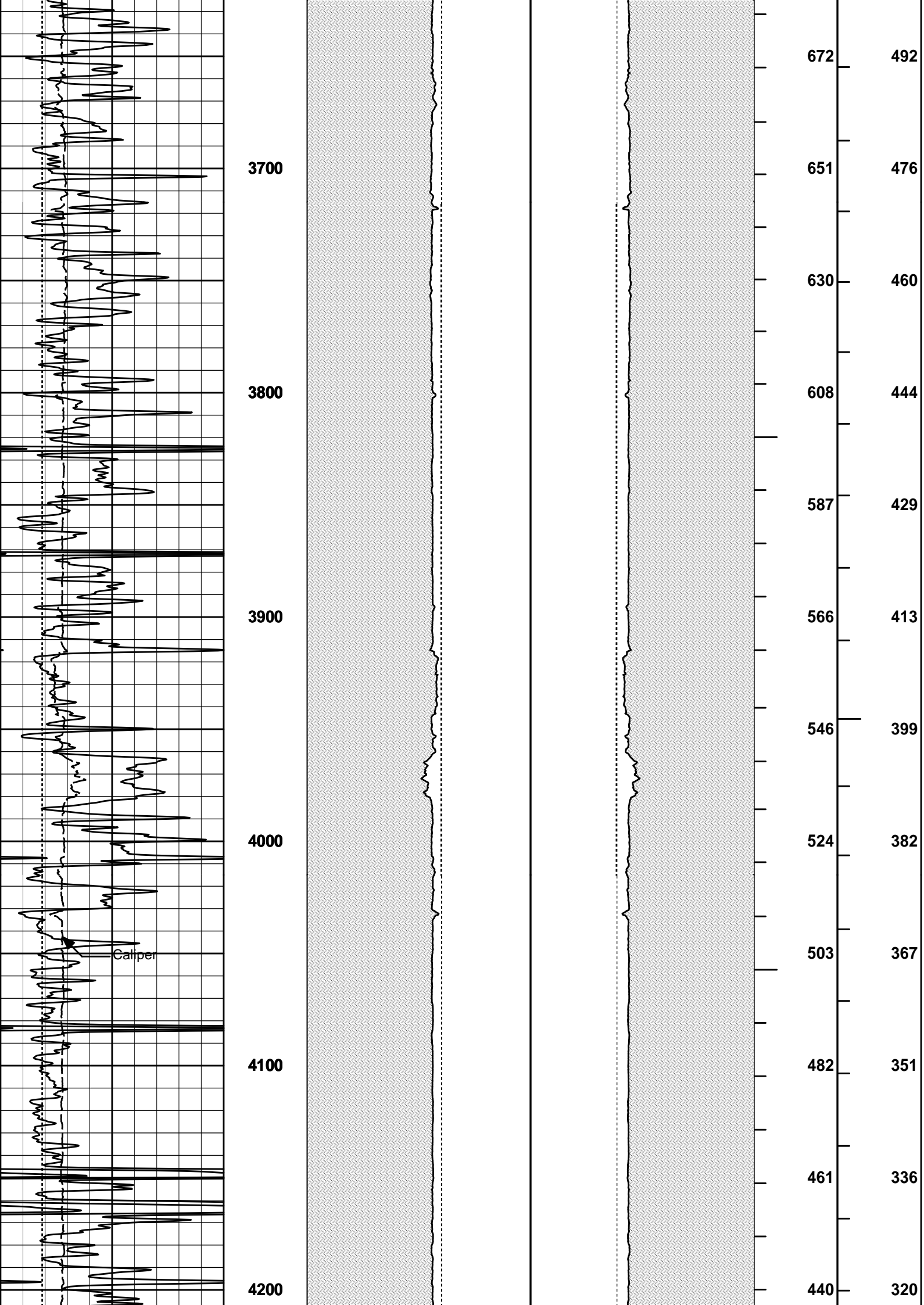


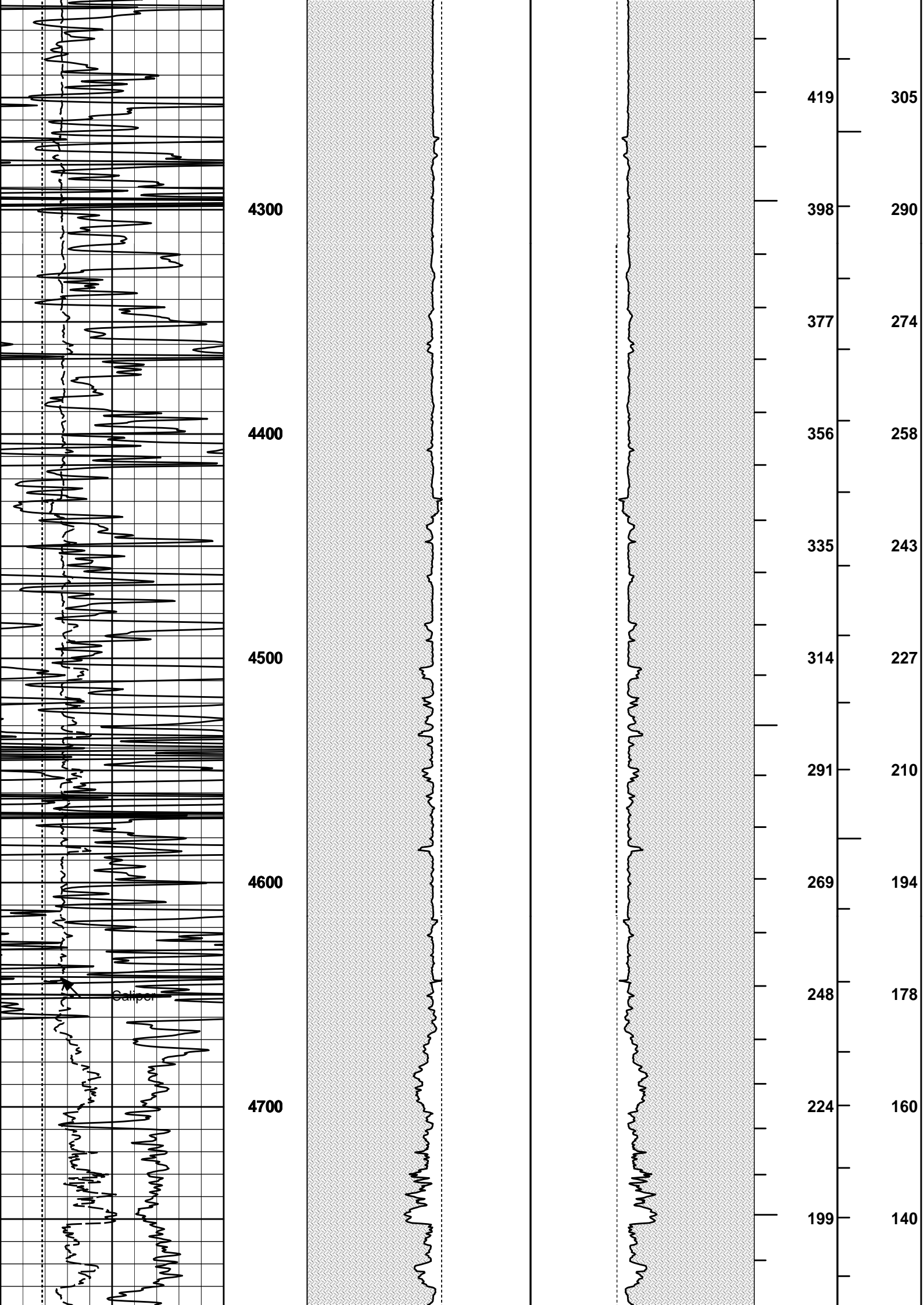


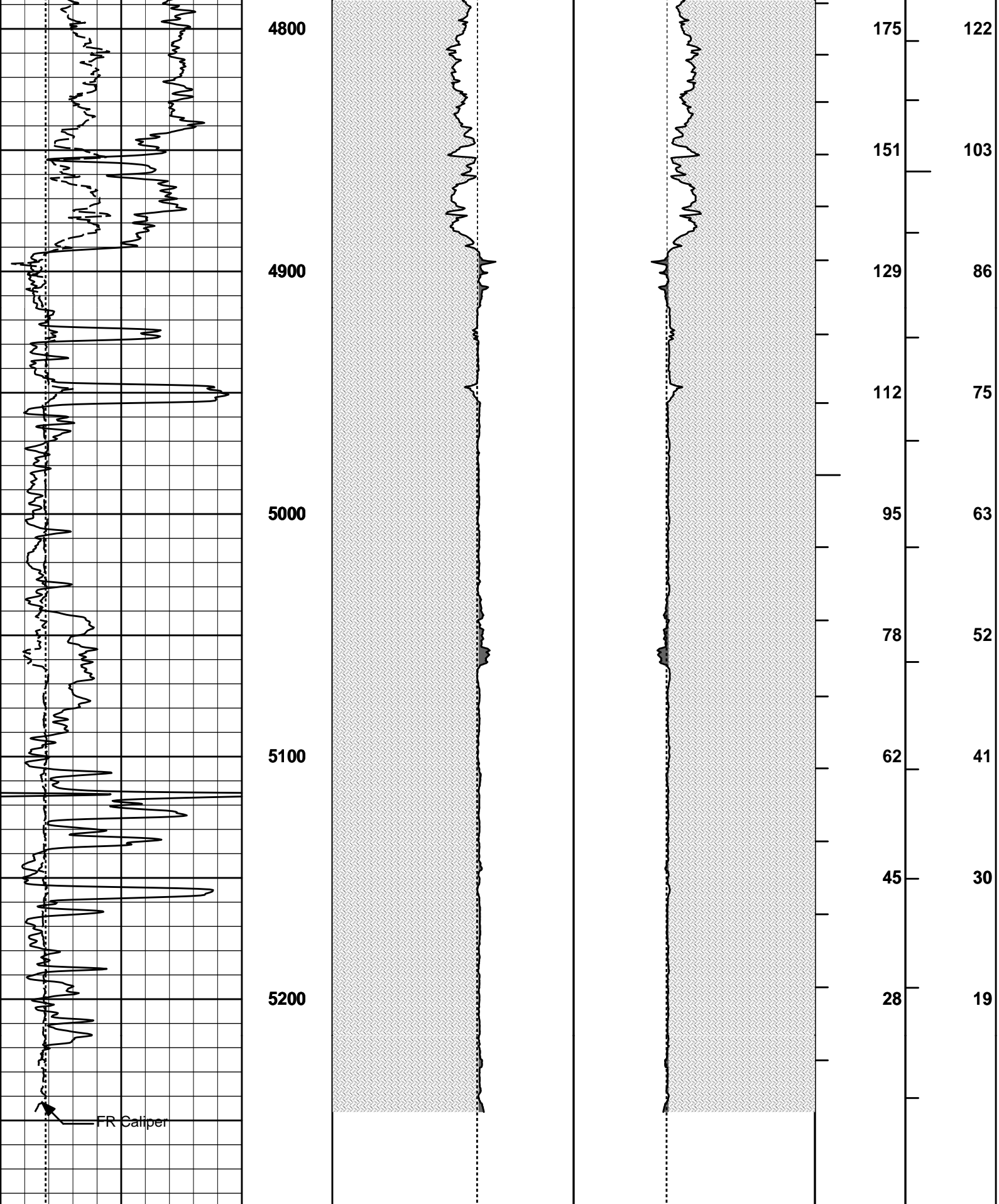












6	CALI	16	1 : 600	20	CALI	0	0	CALI	20	BHVT	AHVT
6	inches	16	ft	20	inches	0	0	inches	20		
6	BS	16		20	Bit Size	0	0	Bit Size	20		
0	inches										
0	Gamma API	150									
	api										
					MUDCAKE			MUDCAKE			

ANNULAR HOLE VOLUME PLOT

COMPANY	BAYHORSE PETROLEUM, LLC		
WELL	PROWERS COUNTY GRAZING #1		
FIELD	WILDCAT		
COUNTY	PROWERS	STATE	COLORADO
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON MICROLOG	