

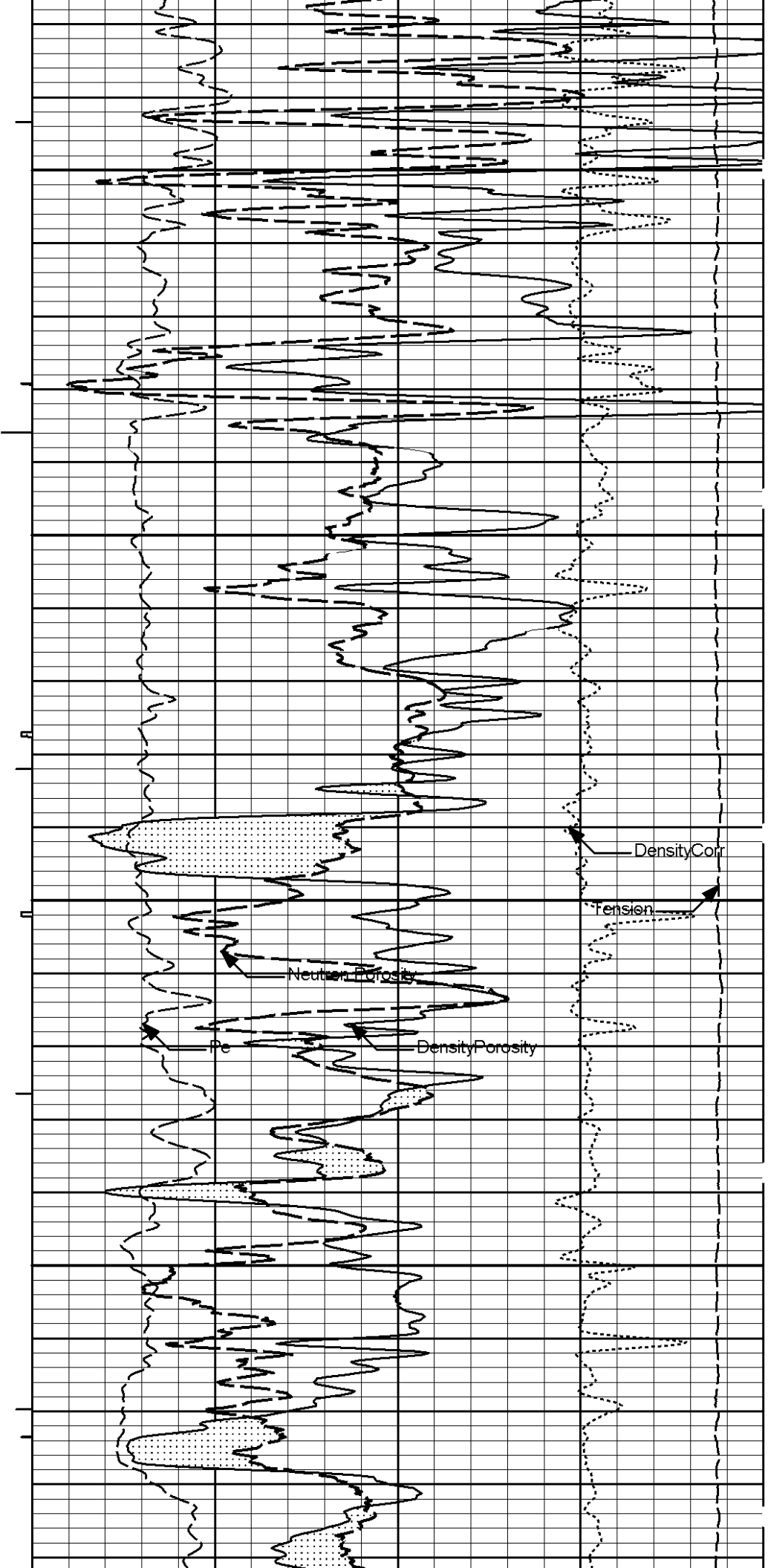
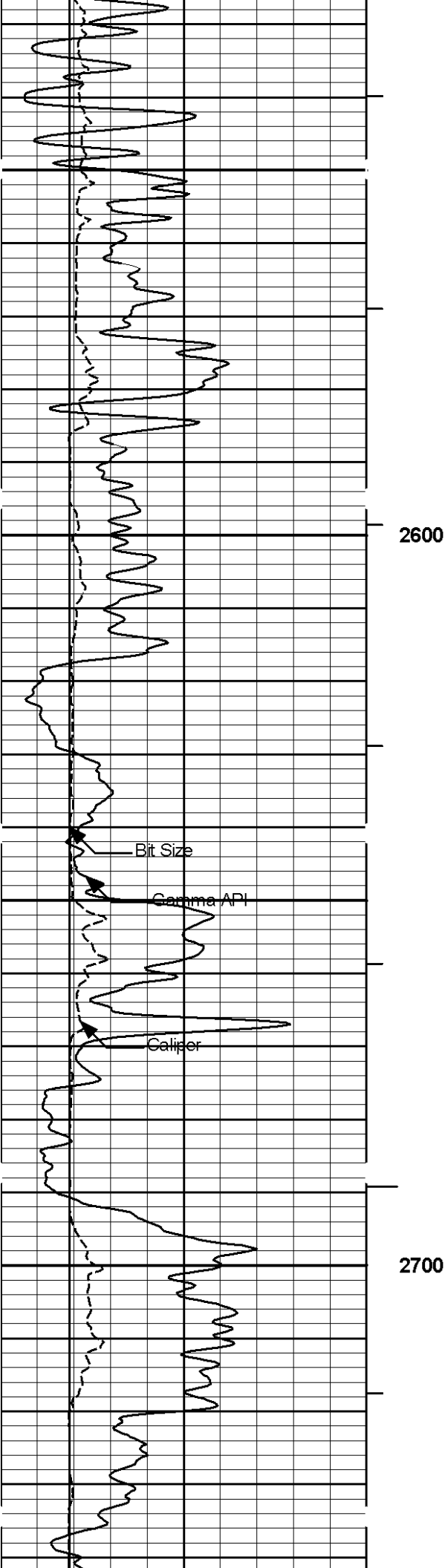
HALLIBURTON

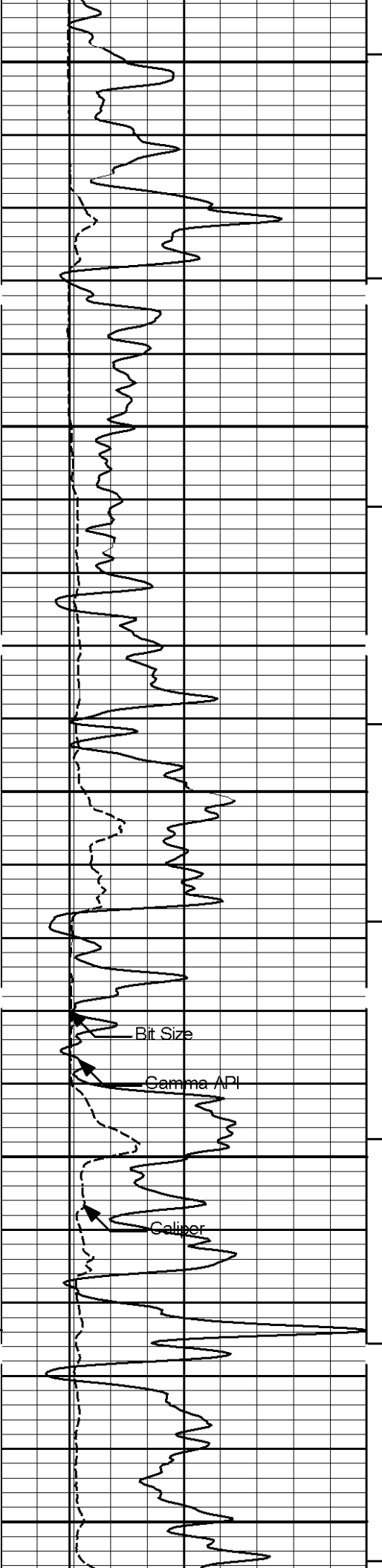
SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

EOG RESOURCES				EOG RESOURCES			
LAURA 21#1				LAURA 21#1			
WILD CAT				WILD CAT			
STEVENS				STEVENS			
KANSAS				KANSAS			
COMPANY	WELL	FIELD	COUNTY	COMPANY	WELL	FIELD	COUNTY
STATE				STATE			
Permanent Datum	GL			Permanent Datum	GL		
Log measured from	KB			Log measured from	KB		
Drilling measured from	KB			Drilling measured from	KB		
Date	11-Nov-10			Date	11-Nov-10		
Run No.	ONE			Run No.	ONE		
Depth - Driller	6650.00 ft			Depth - Driller	6650.00 ft		
Depth - Logger	6651.0 ft			Depth - Logger	6651.0 ft		
Bottom - Logged Interval	6607.00 ft			Bottom - Logged Interval	6607.00 ft		
Top - Logged Interval	1713.00 ft			Top - Logged Interval	1713.00 ft		
Casing - Driller	8.625 in	@		Casing - Driller	8.625 in	@	
Casing - Logger	1713.0 ft			Casing - Logger	1713.0 ft		
Bit Size	7.875 in			Bit Size	7.875 in		
Type Fluid in Hole	WATER BASE MUD			Type Fluid in Hole	WATER BASE MUD		
Density	9.0 ppG	52.00 s/cf		Density	9.0 ppG	52.00 s/cf	
PH	9.00 pH	8.4 cpm		PH	9.00 pH	8.4 cpm	
Source of Sample	FLOWLINE			Source of Sample	FLOWLINE		
Rm @ Meas. Temperature	1.240 ohmm	@		Rm @ Meas. Temperature	1.240 ohmm	@	
Rmf @ Meas. Temperature	1.05 ohmm	@		Rmf @ Meas. Temperature	1.05 ohmm	@	
Rmc @ Meas. Temperature	1.550 ohmm	@		Rmc @ Meas. Temperature	1.550 ohmm	@	
Source Rmf	CALCULATED	CALCULATED		Source Rmf	CALCULATED	CALCULATED	
Rm @ BHT	0.65 ohmm	@		Rm @ BHT	0.65 ohmm	@	
Time Since Circulation	4.0 hr			Time Since Circulation	4.0 hr		
Time on Bottom	11-Nov-10 12:46			Time on Bottom	11-Nov-10 12:46		
Max. Rec. Temperature	150.0 degF	@		Max. Rec. Temperature	150.0 degF	@	
Equipment	10549592	PV OK		Equipment	10549592	PV OK	
Recorded By	J COTHREN			Recorded By	J COTHREN		
Witnessed By	SCOTT MUELLER			Witnessed By	SCOTT MUELLER		

Fold here

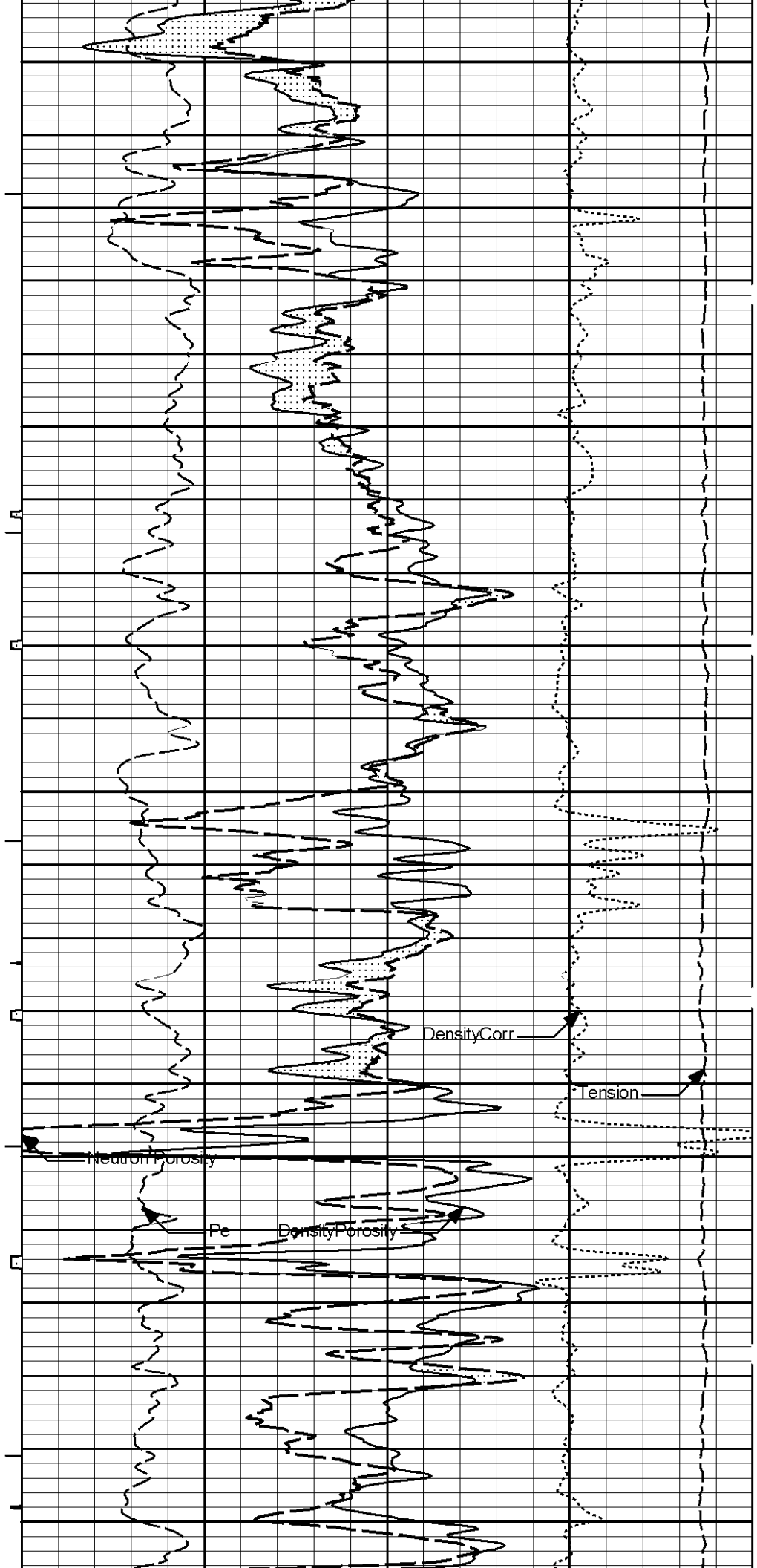
Service Ticket No.: 7763501						API Serial No.: 15-189-22757						PGM Version: WL INSITE R3.2.1 (Build 7)											
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES											
Date		Sample No.										Type Log		Depth		Scale Up Hole		Scale Down Hole					
Depth-Driller																							
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.				@				@															
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.		11013113				Serial No.						Serial No.		I87M06P72				Serial No.		11020487			
Model No.		GTET				Model No.						Model No.		SDLT-I				Model No.		DSNT-I			
Diameter		3.625"				No. of Cent.						Diameter		4.5"				Diameter		3.625"			
Detector Model No.		GTET				Spacing						Log Type		GAM-GAM				Log Type		NEU-NEU			
Type		SCINT										Source Type		Cs137				Source Type		Am241Be			
Length		8"				LSA [Y/N]						Serial No.		20791B				Serial No.		DSN-382			
Distance to Source		10'				FWDA [Y/N]						Strength		1.5 Ci				Strength		15 Ci			

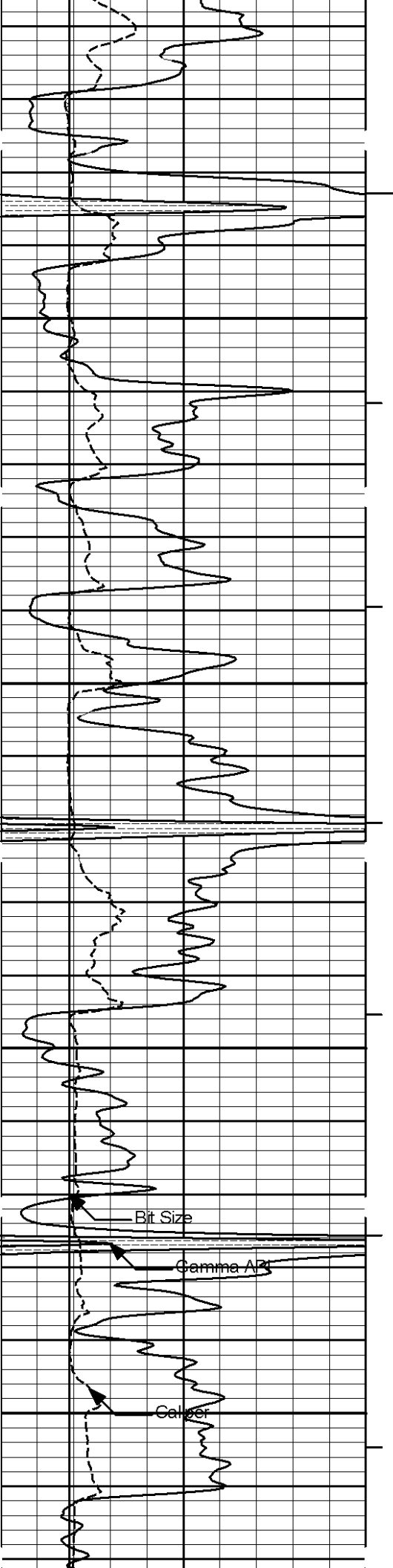




2800

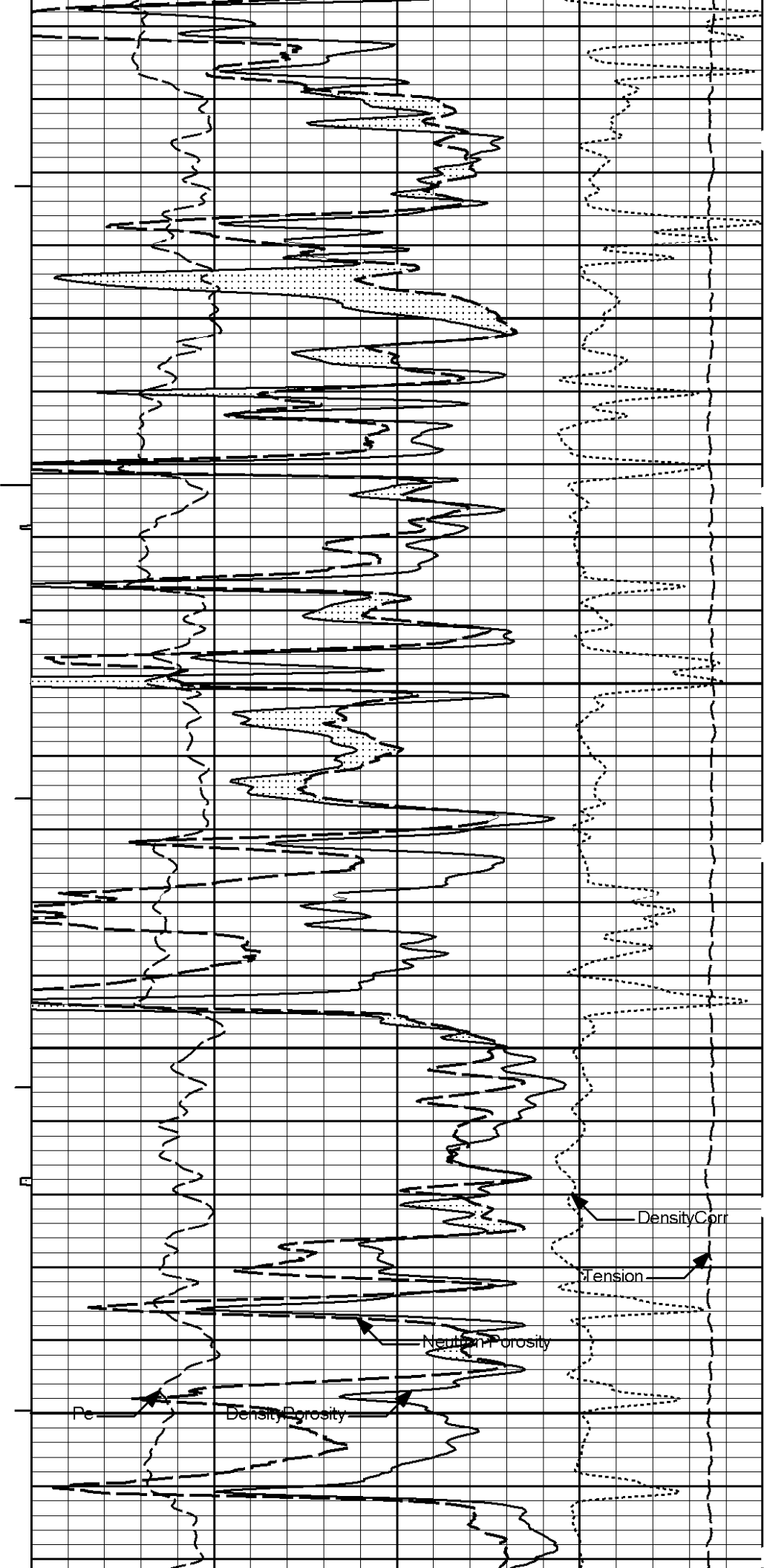
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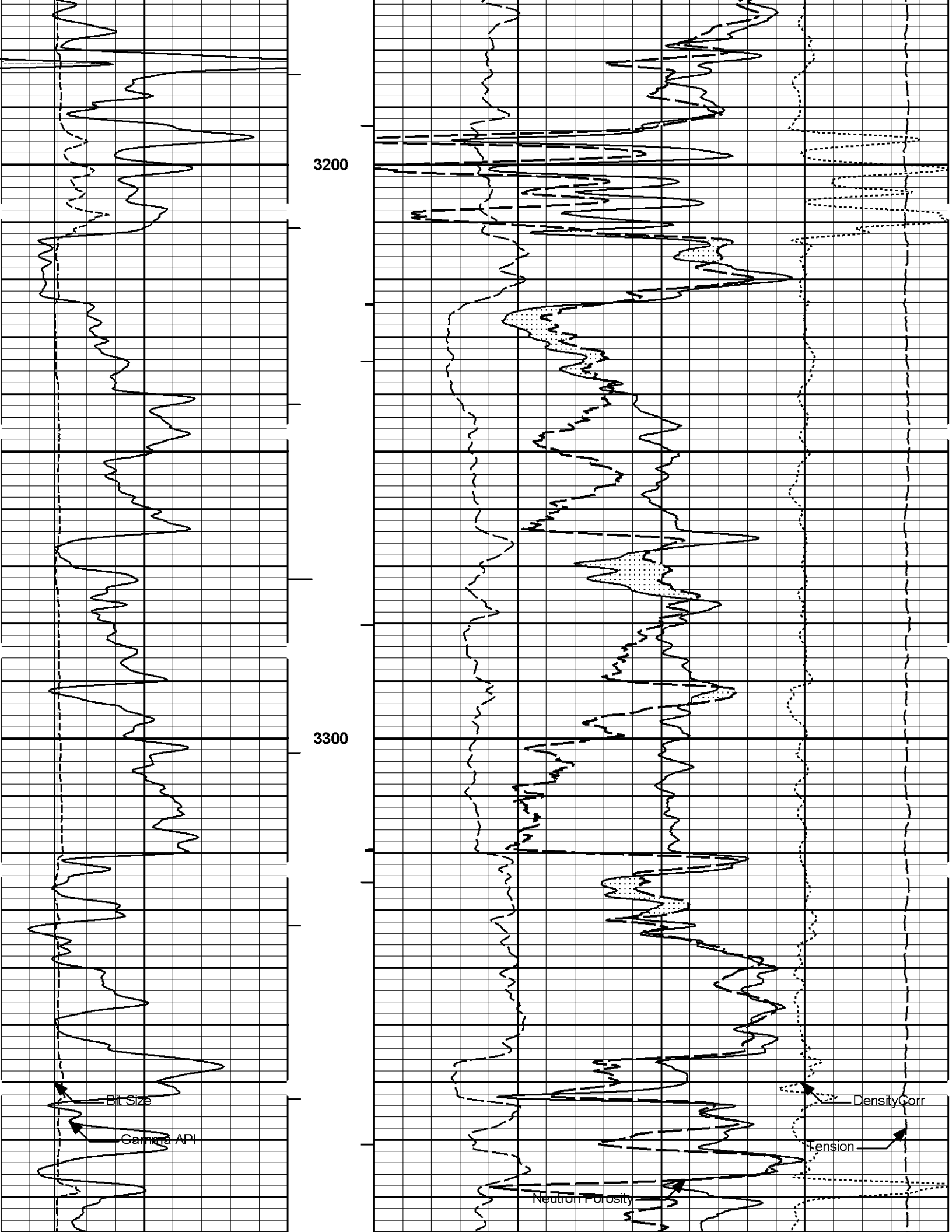


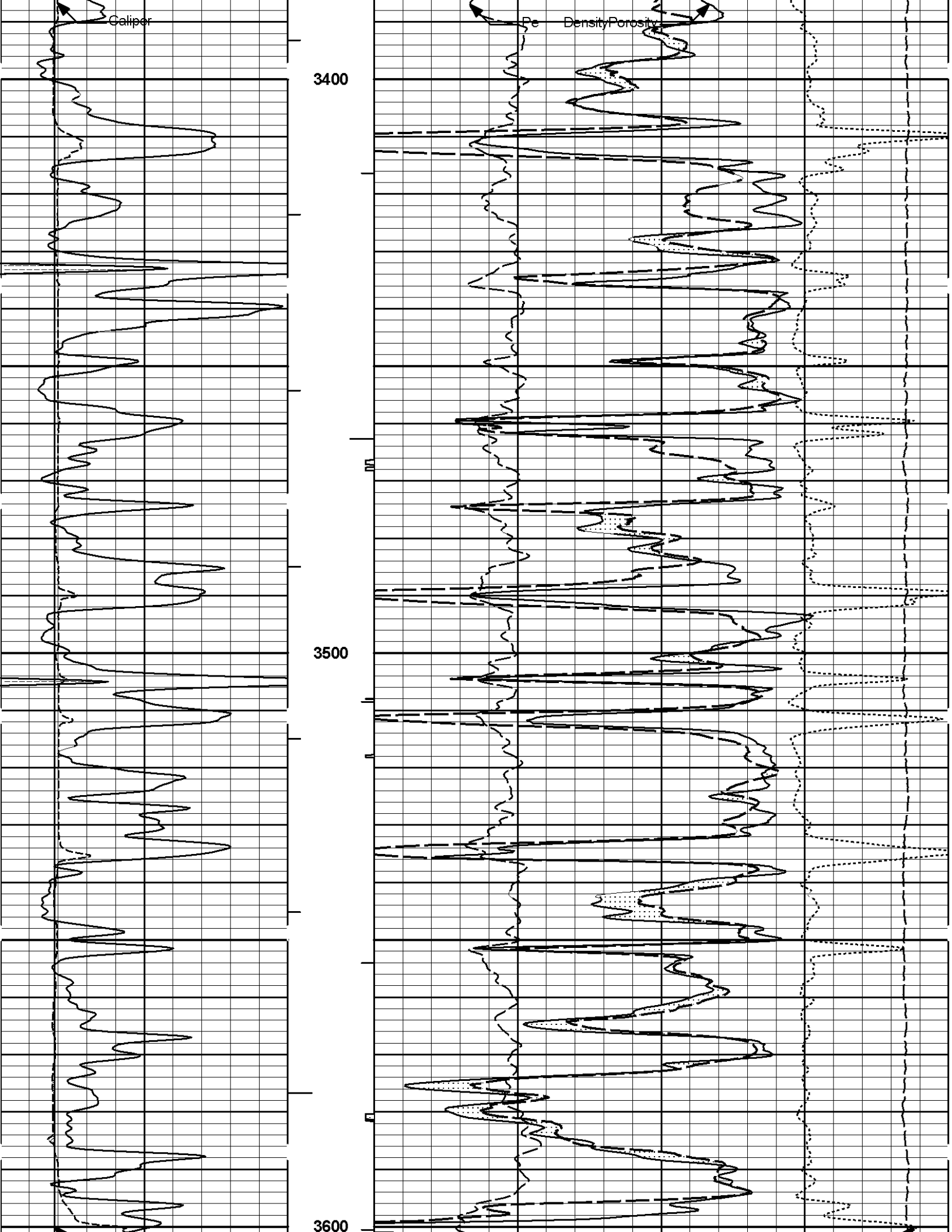


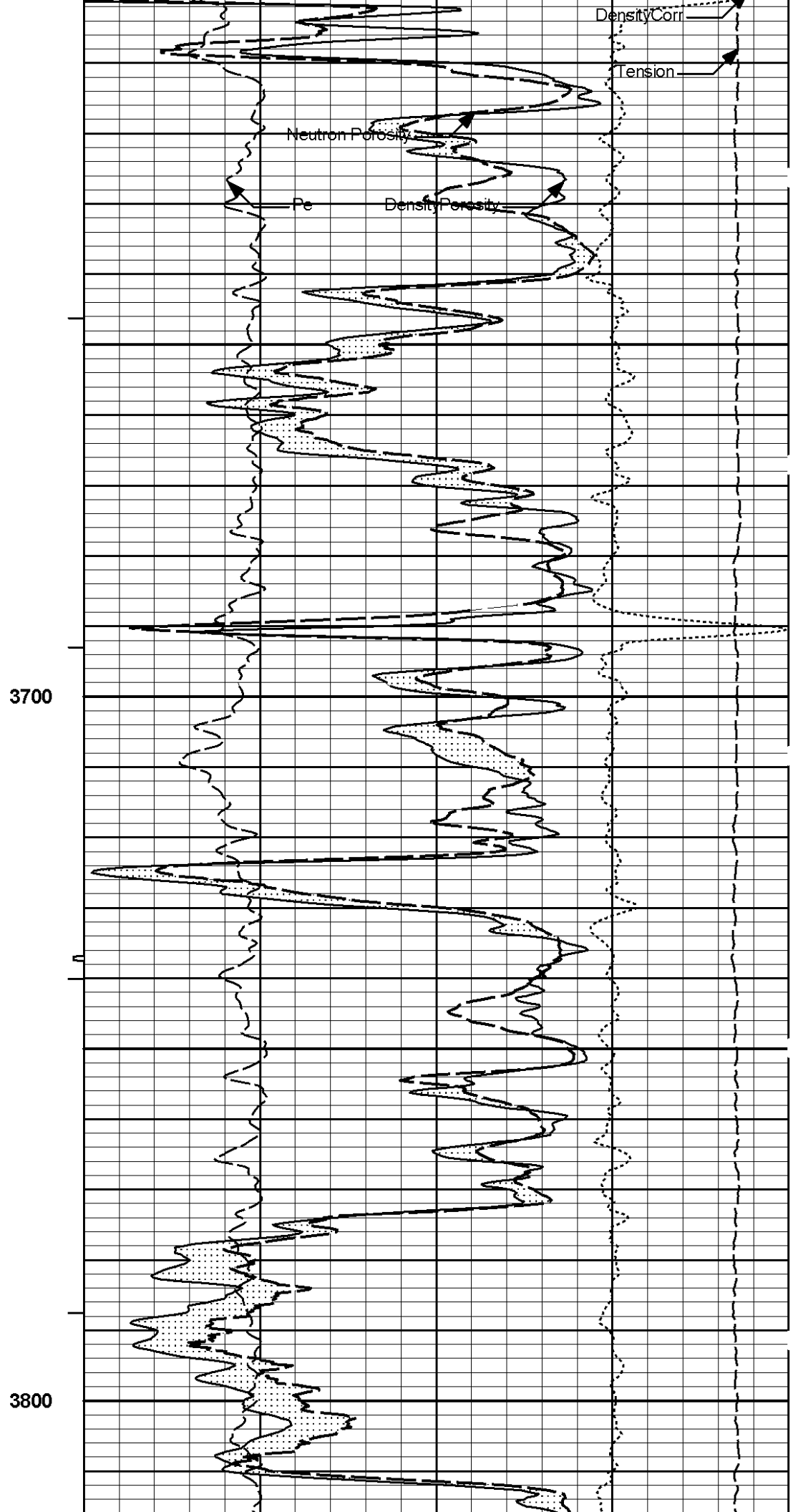
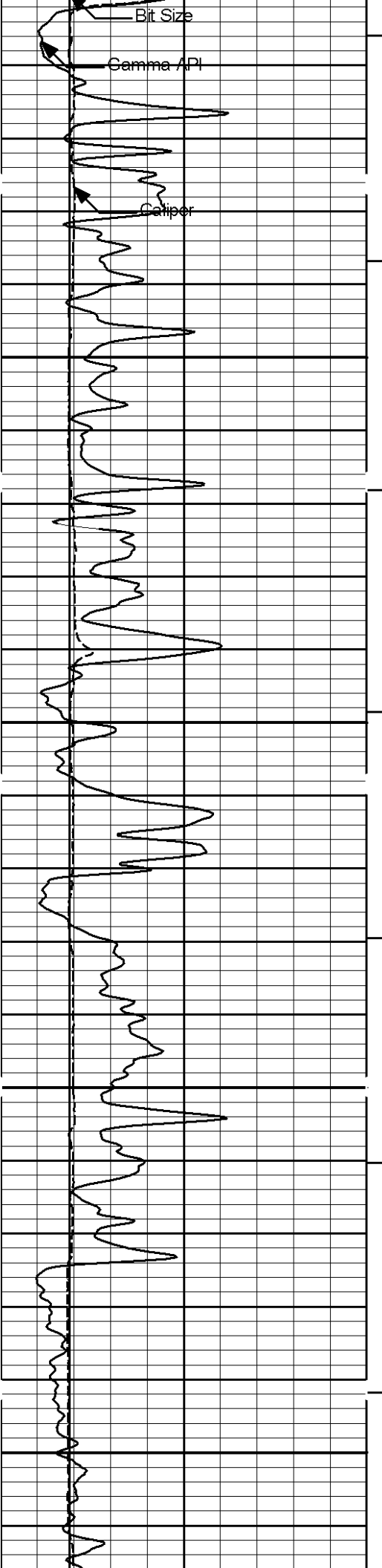
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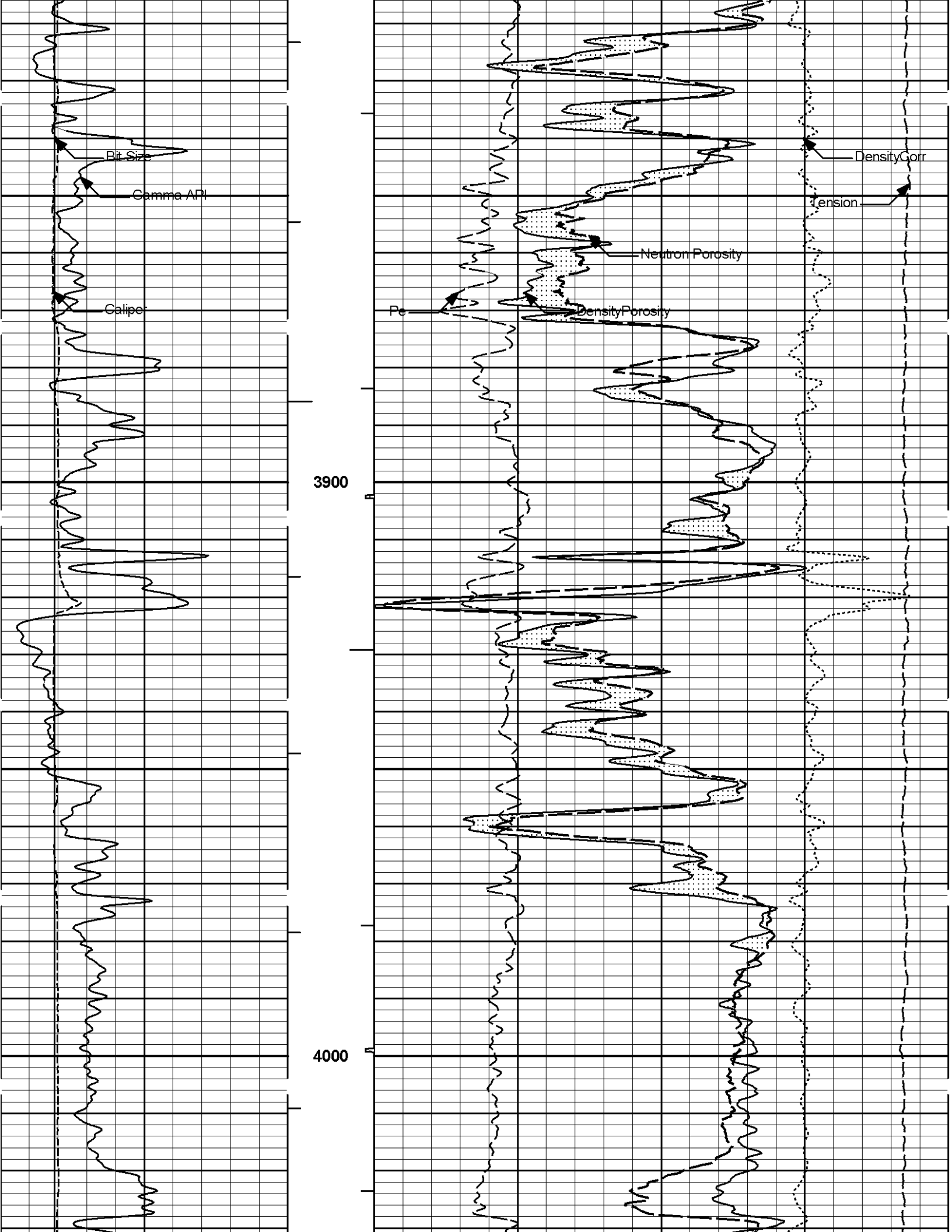
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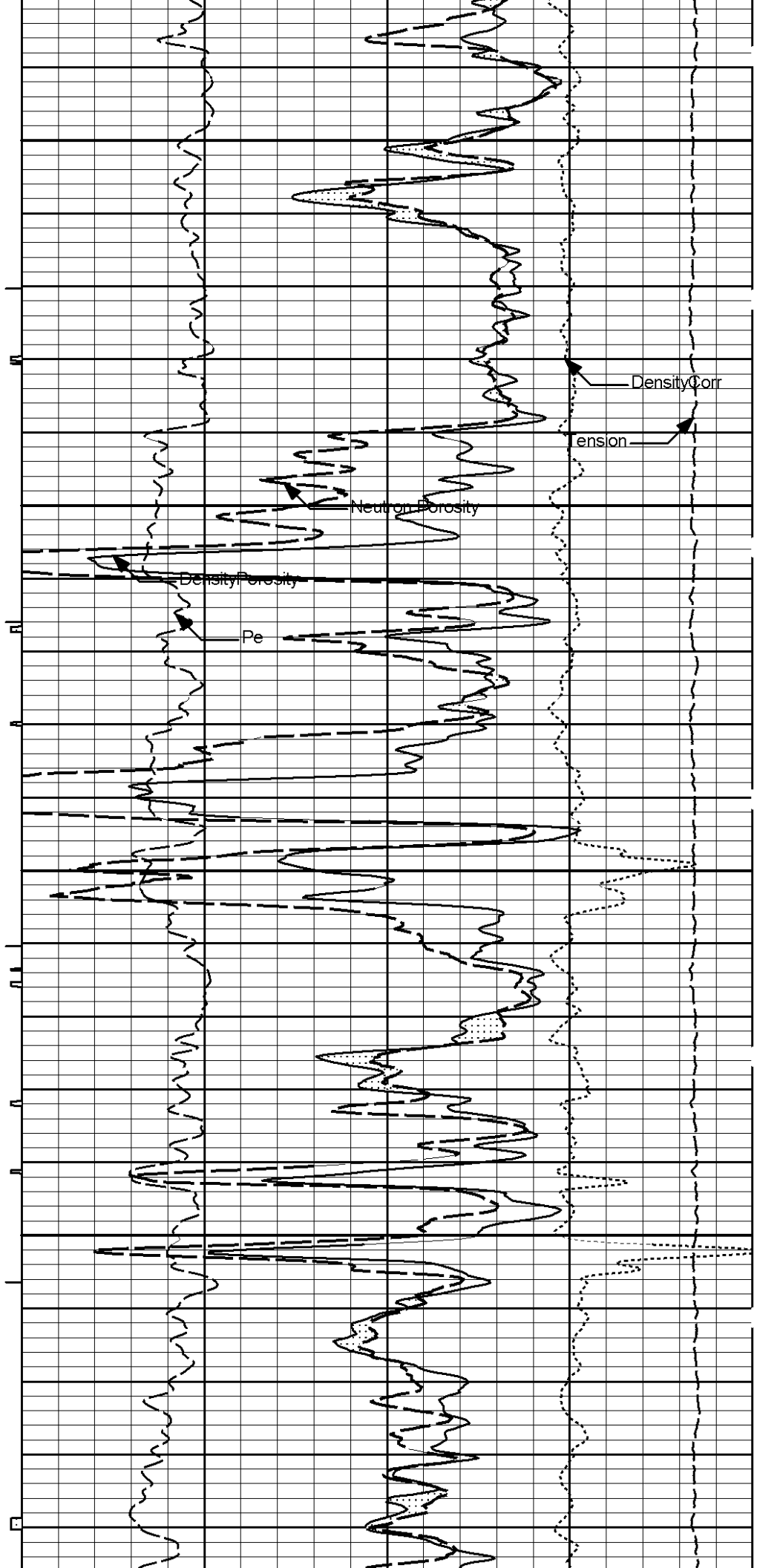
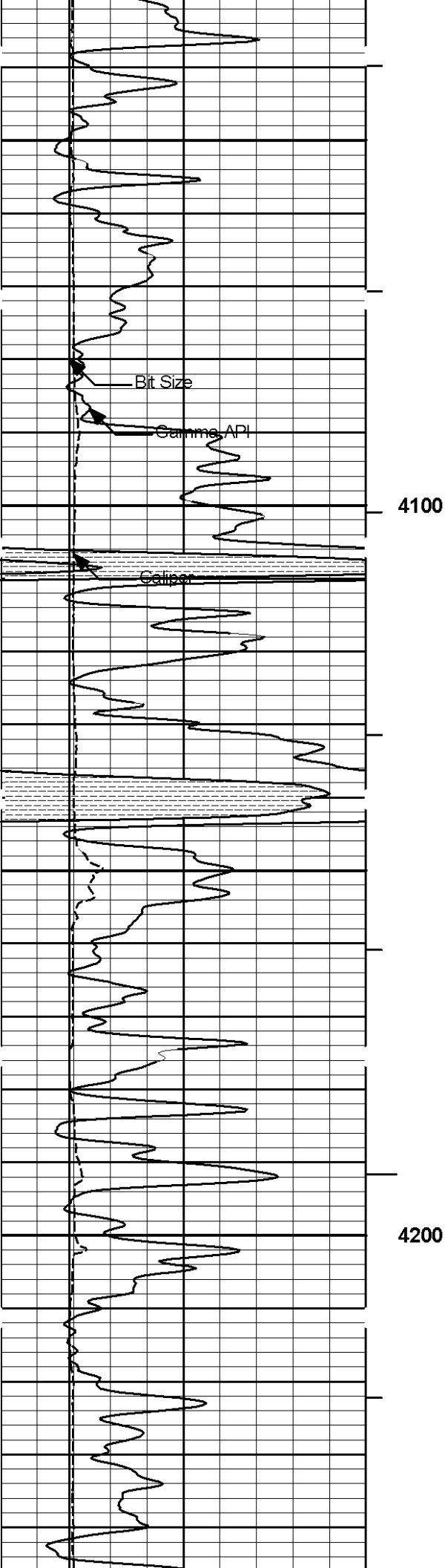


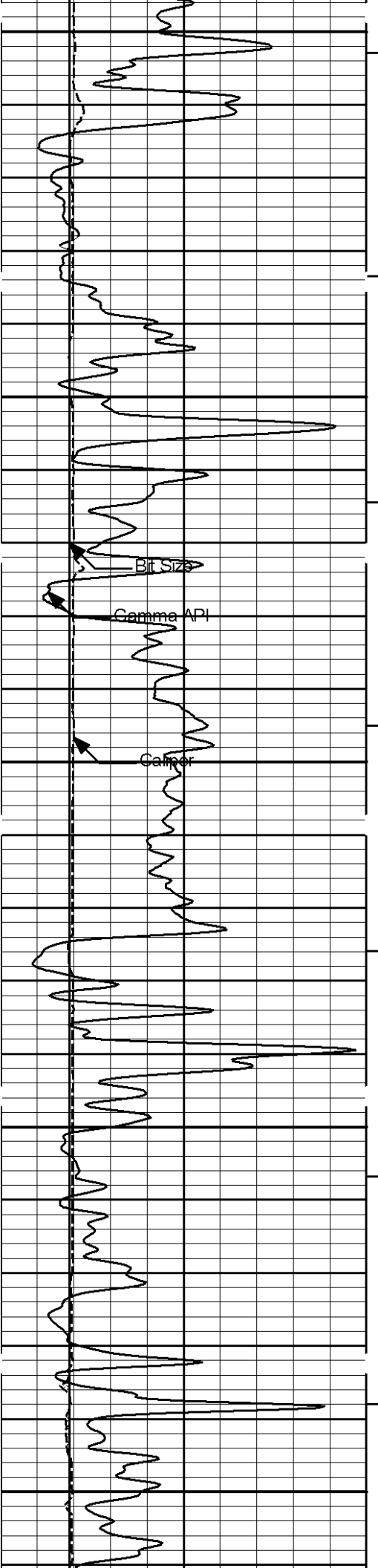




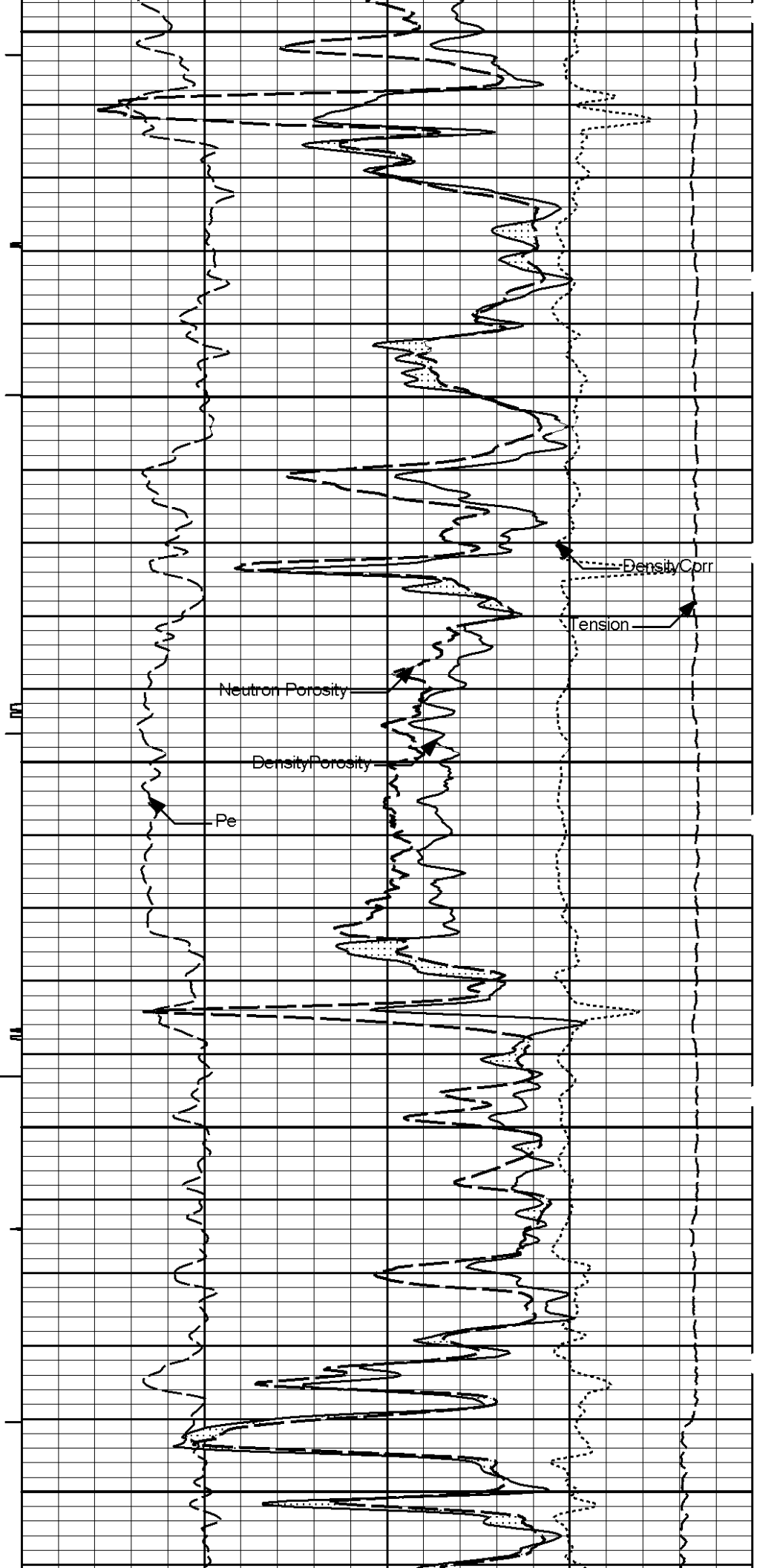


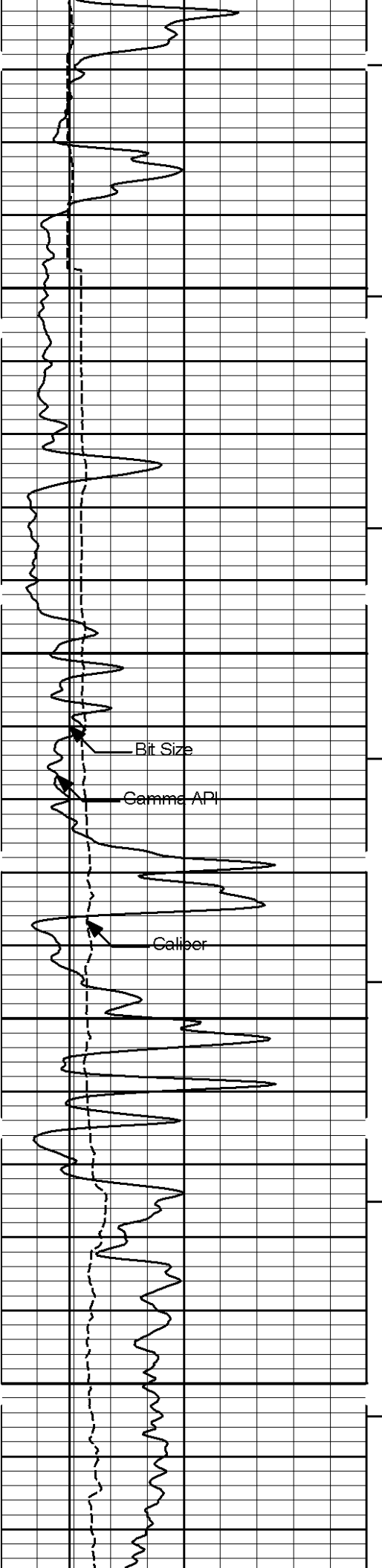






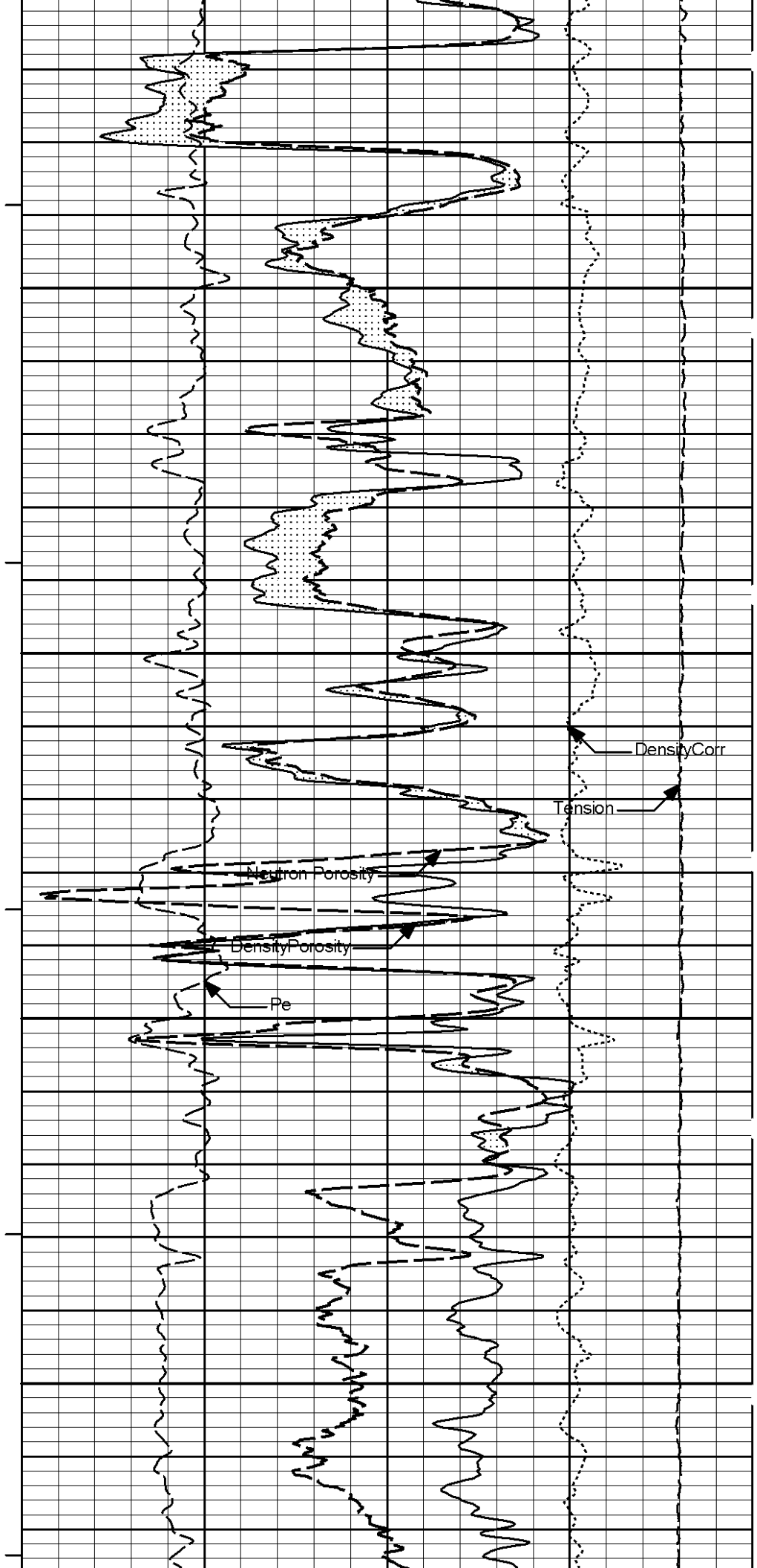
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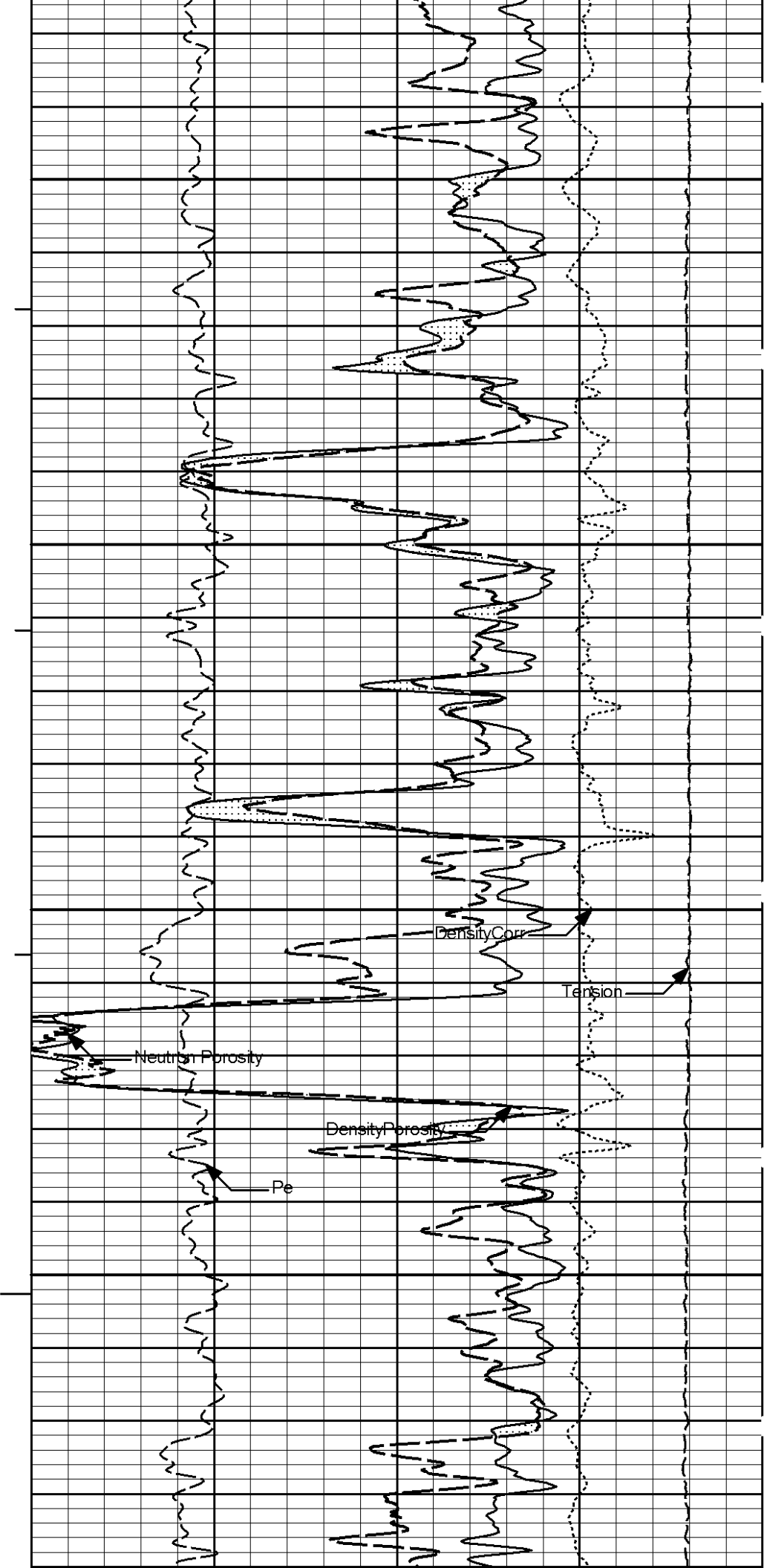
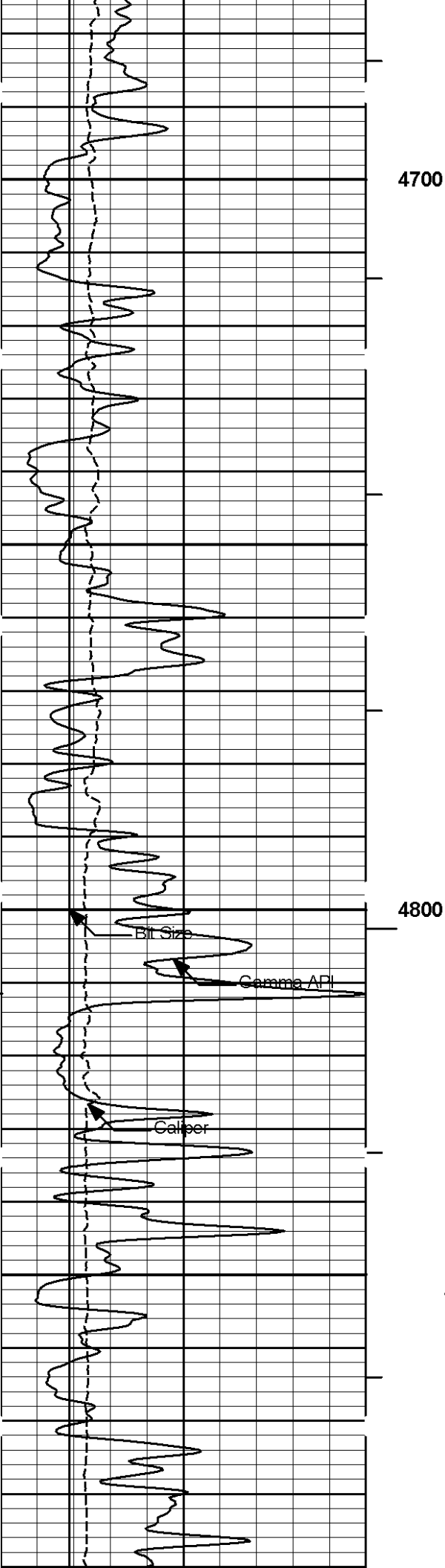


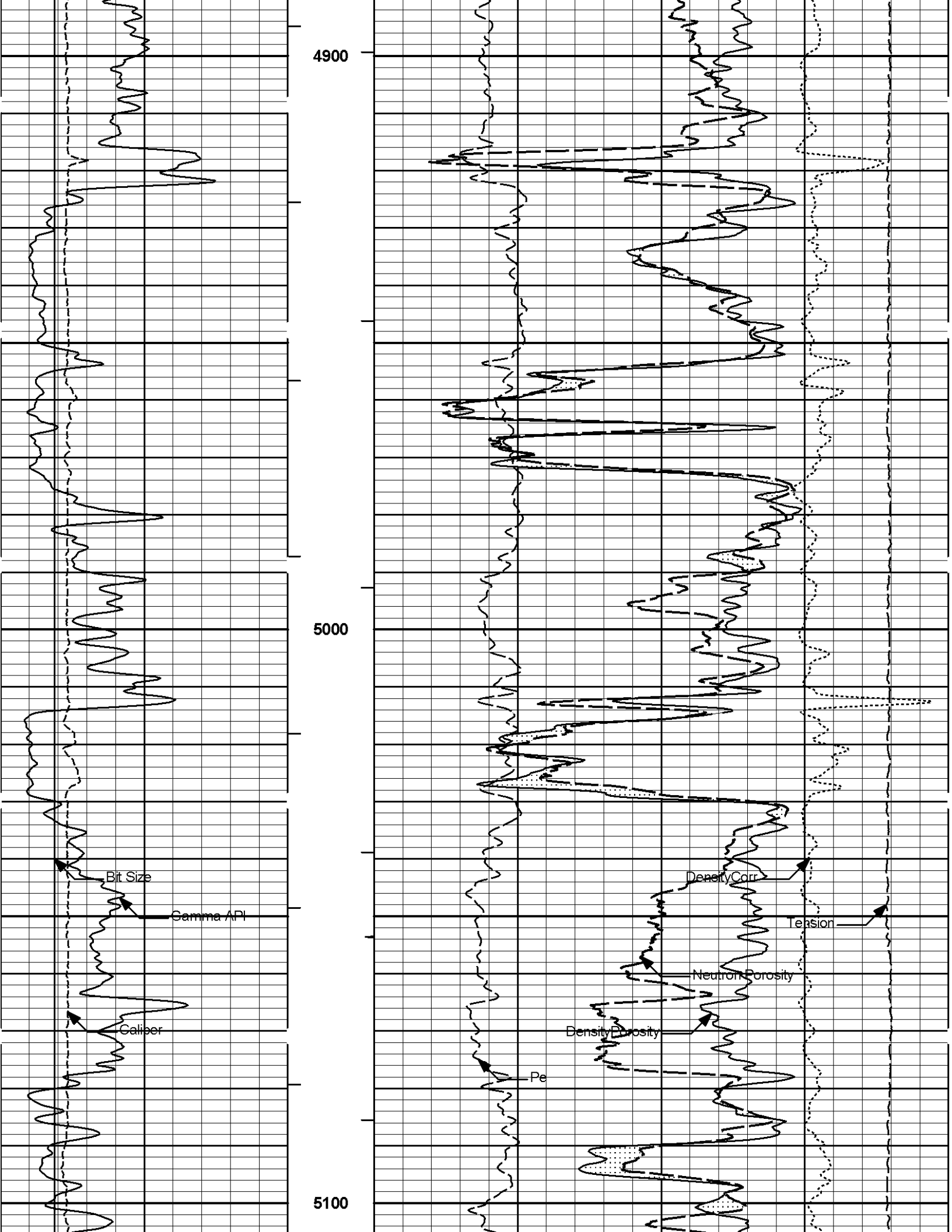


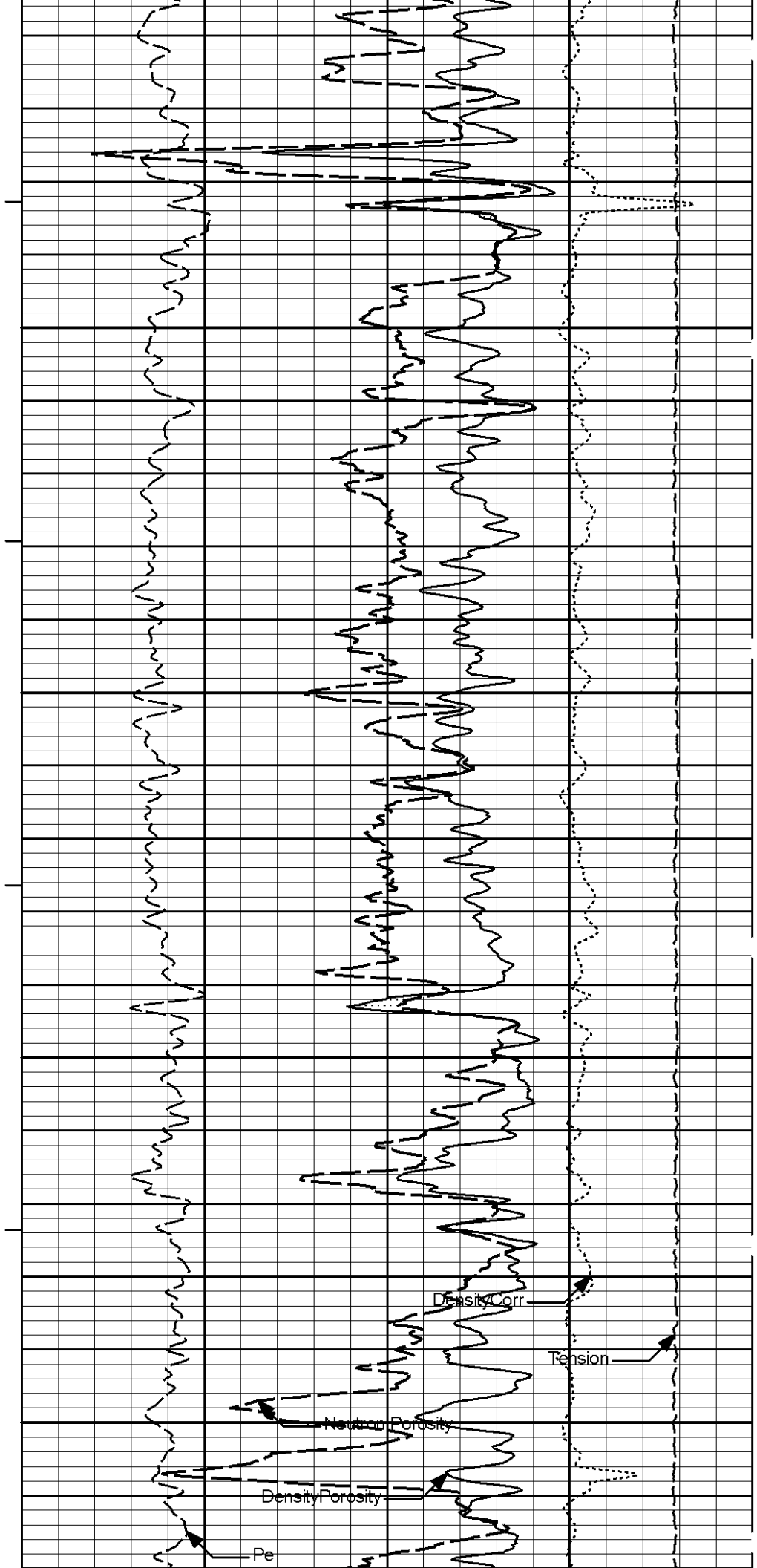
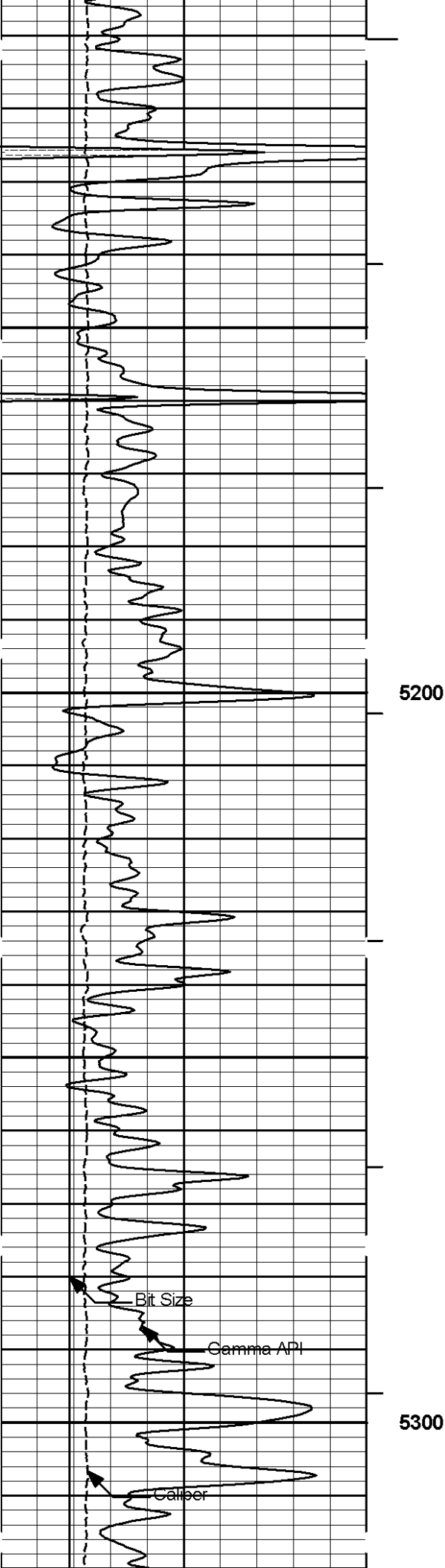
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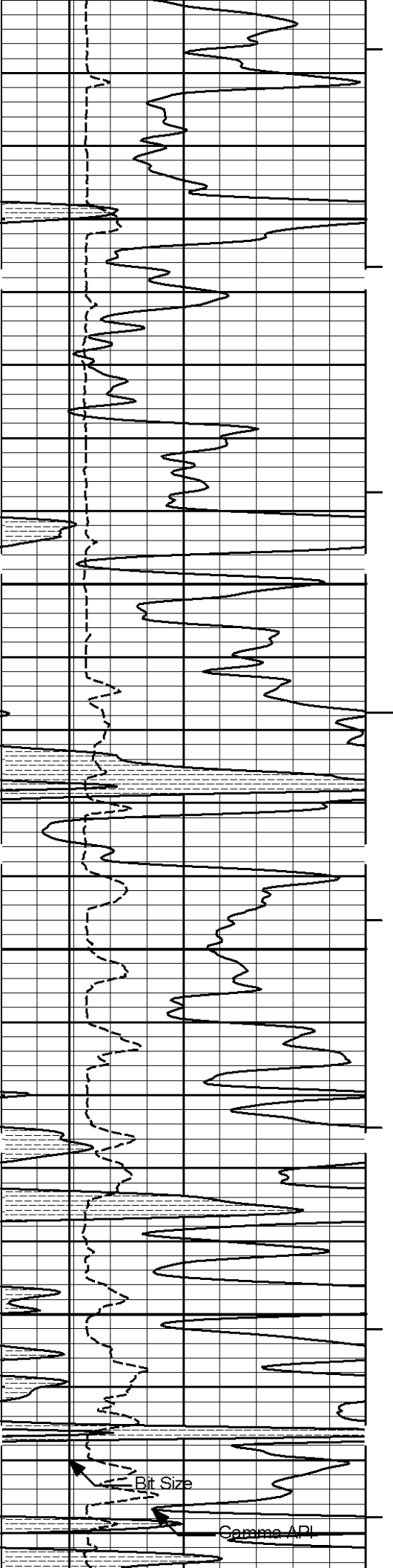
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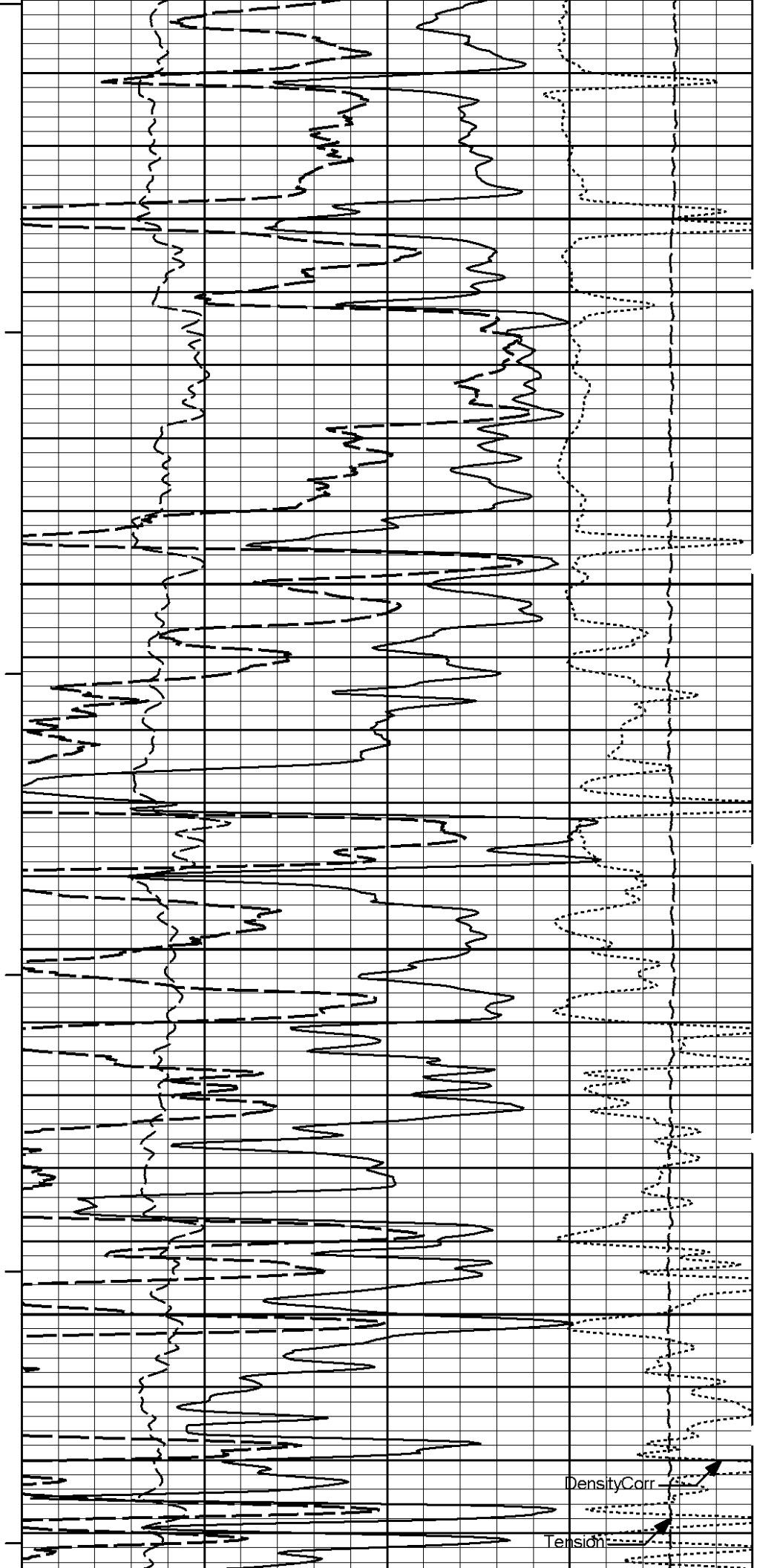






5400

5500

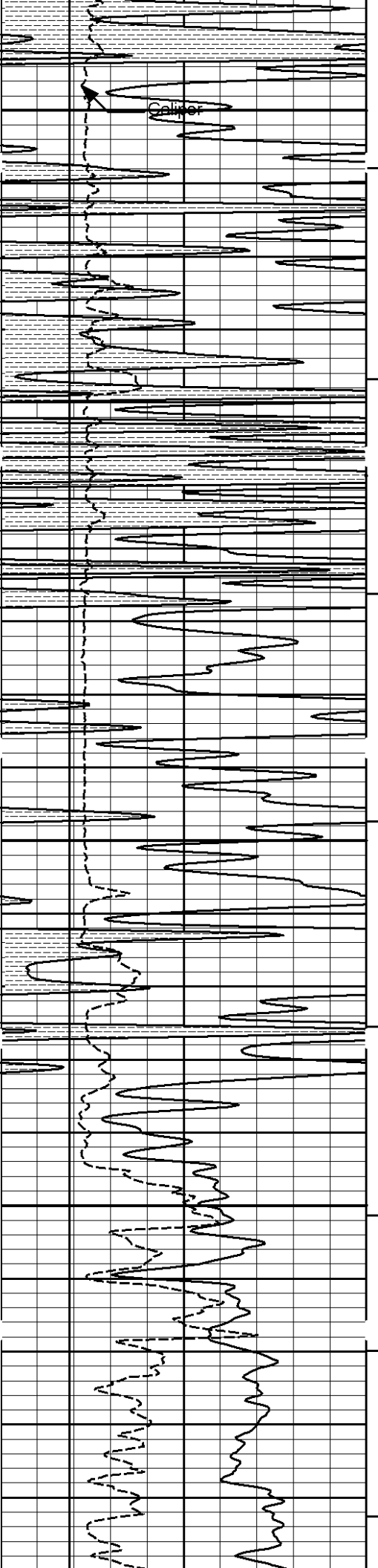


Density Corr

Tension

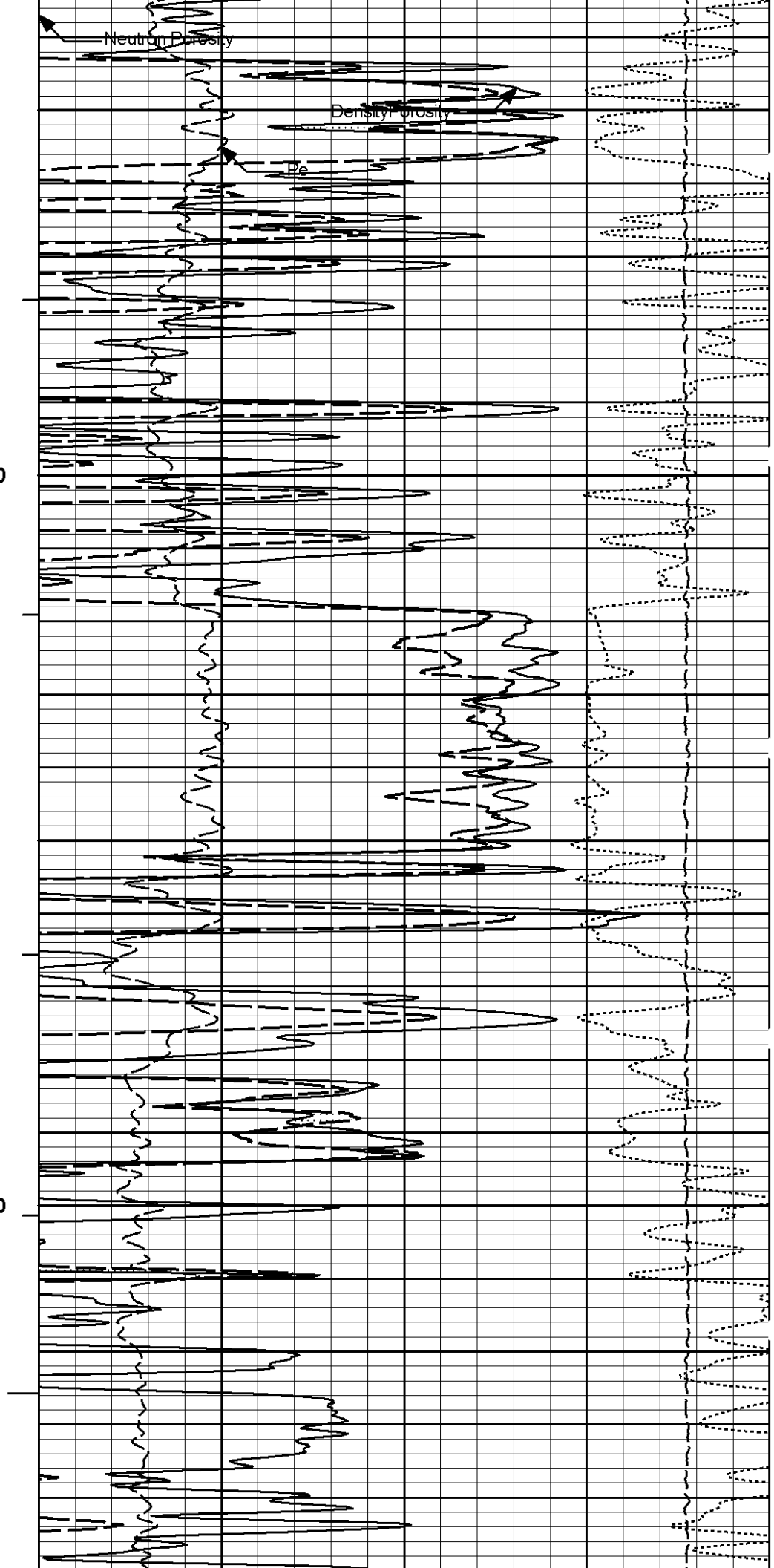
Gamma API

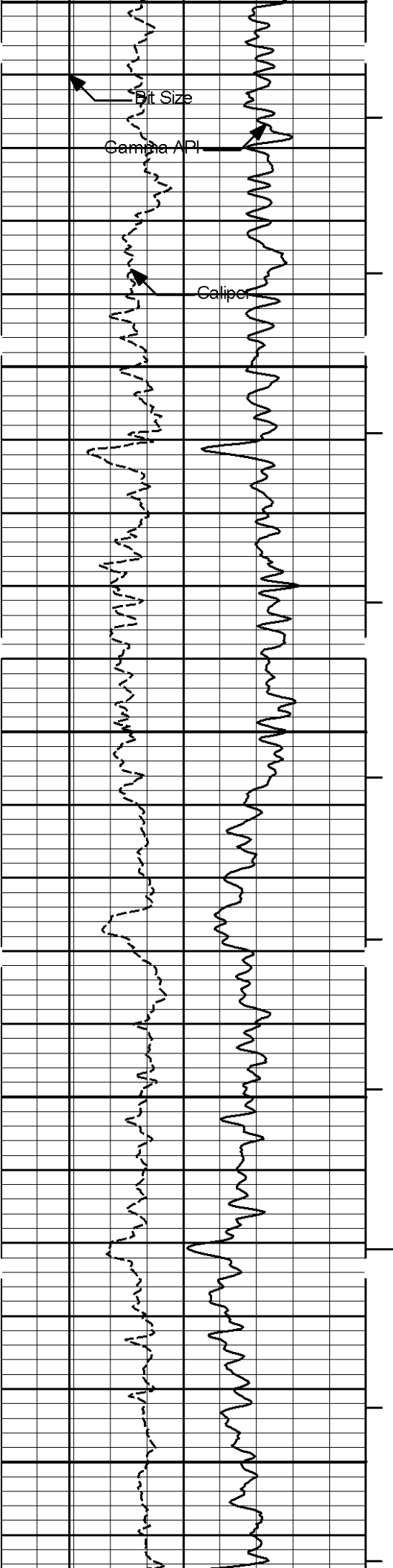
Bit Size



5600

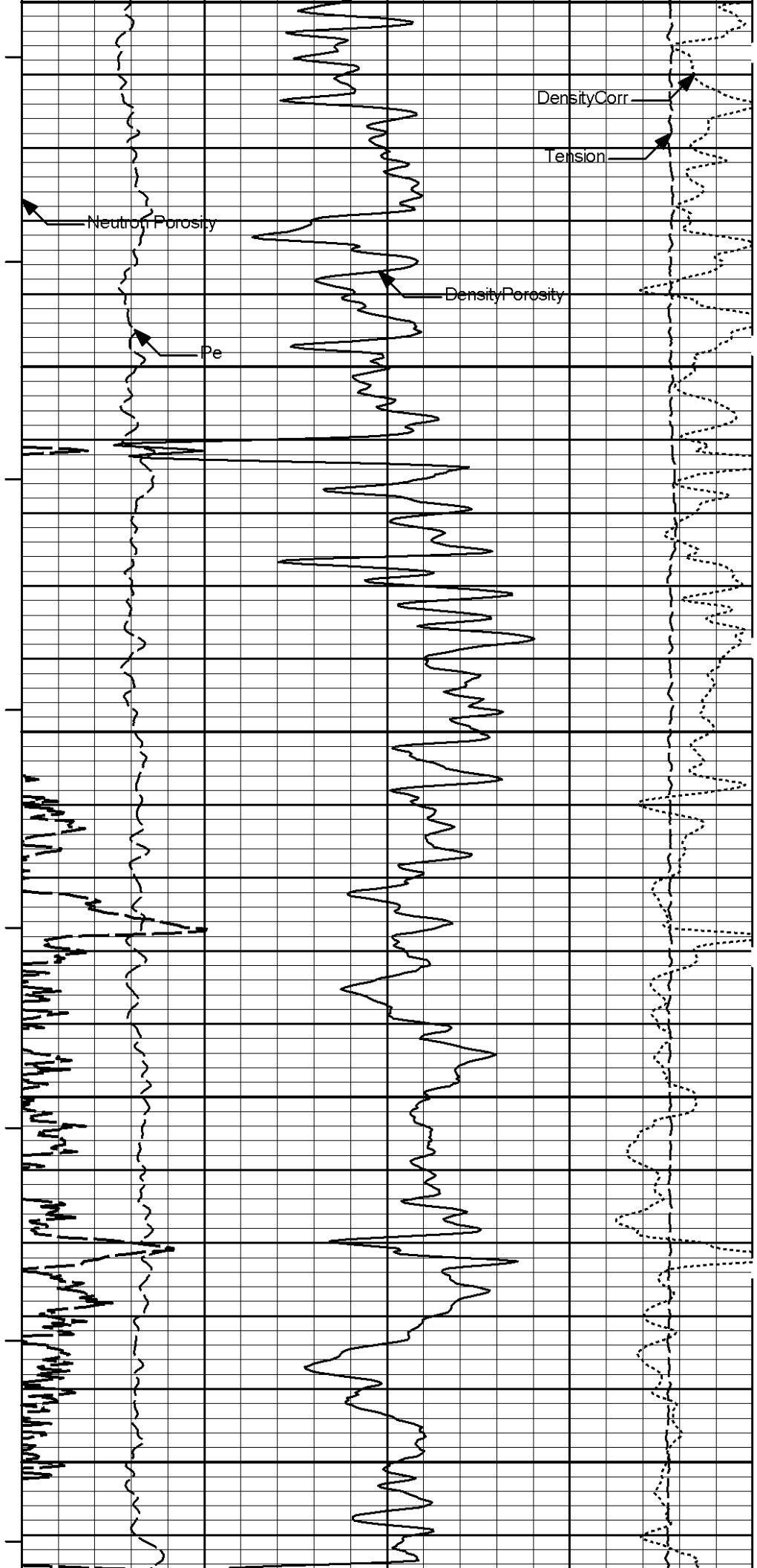
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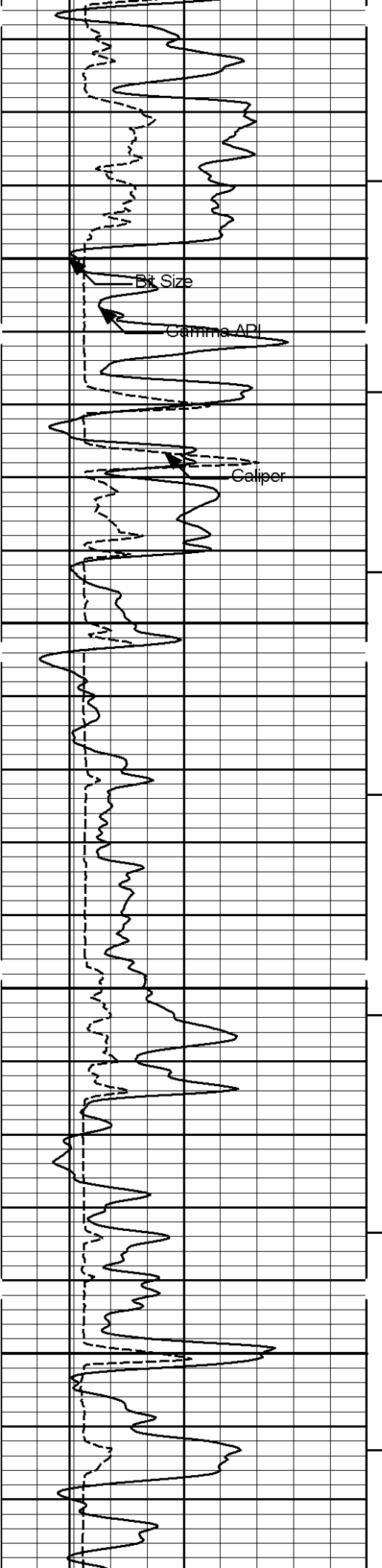




5800

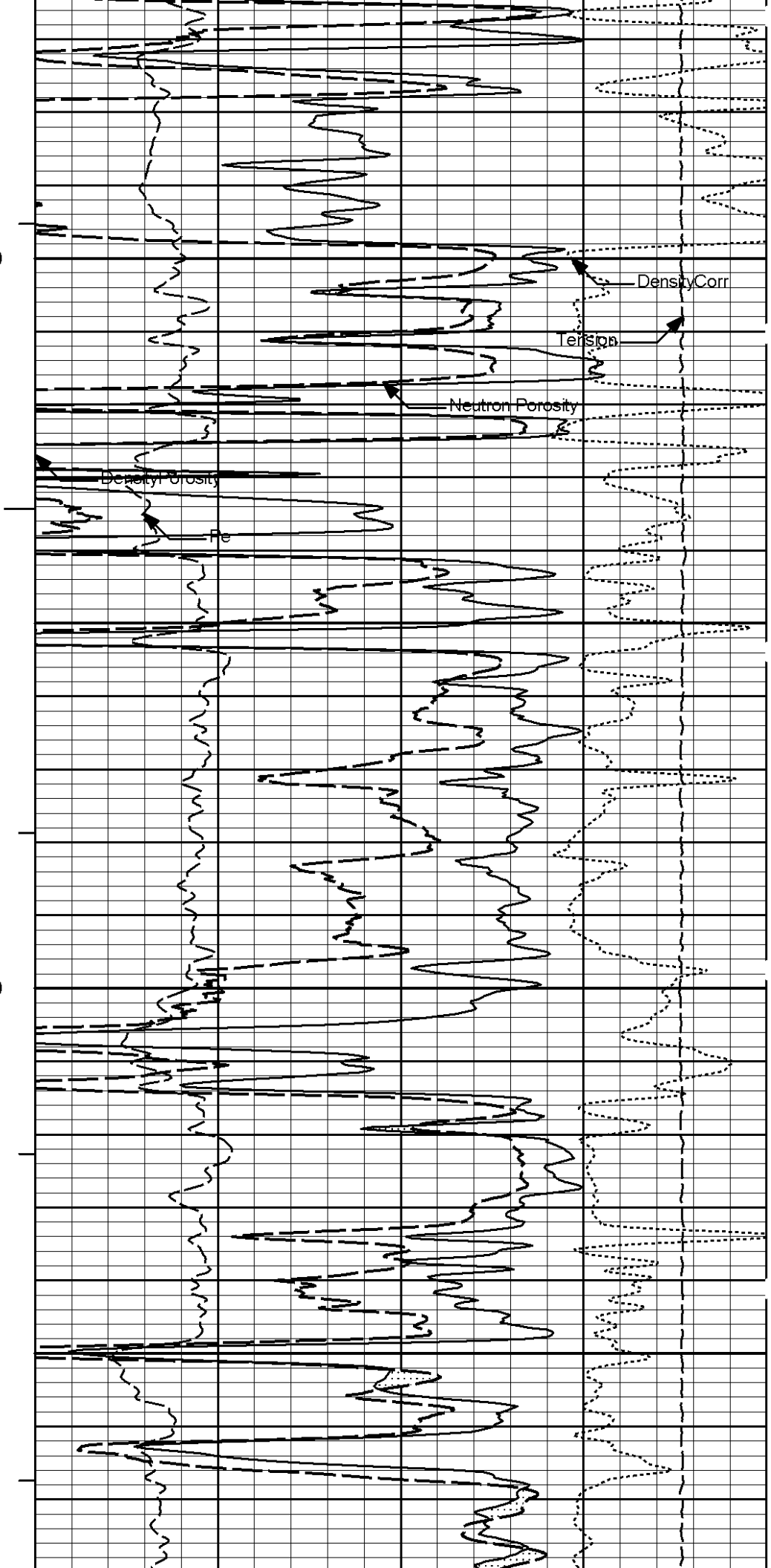
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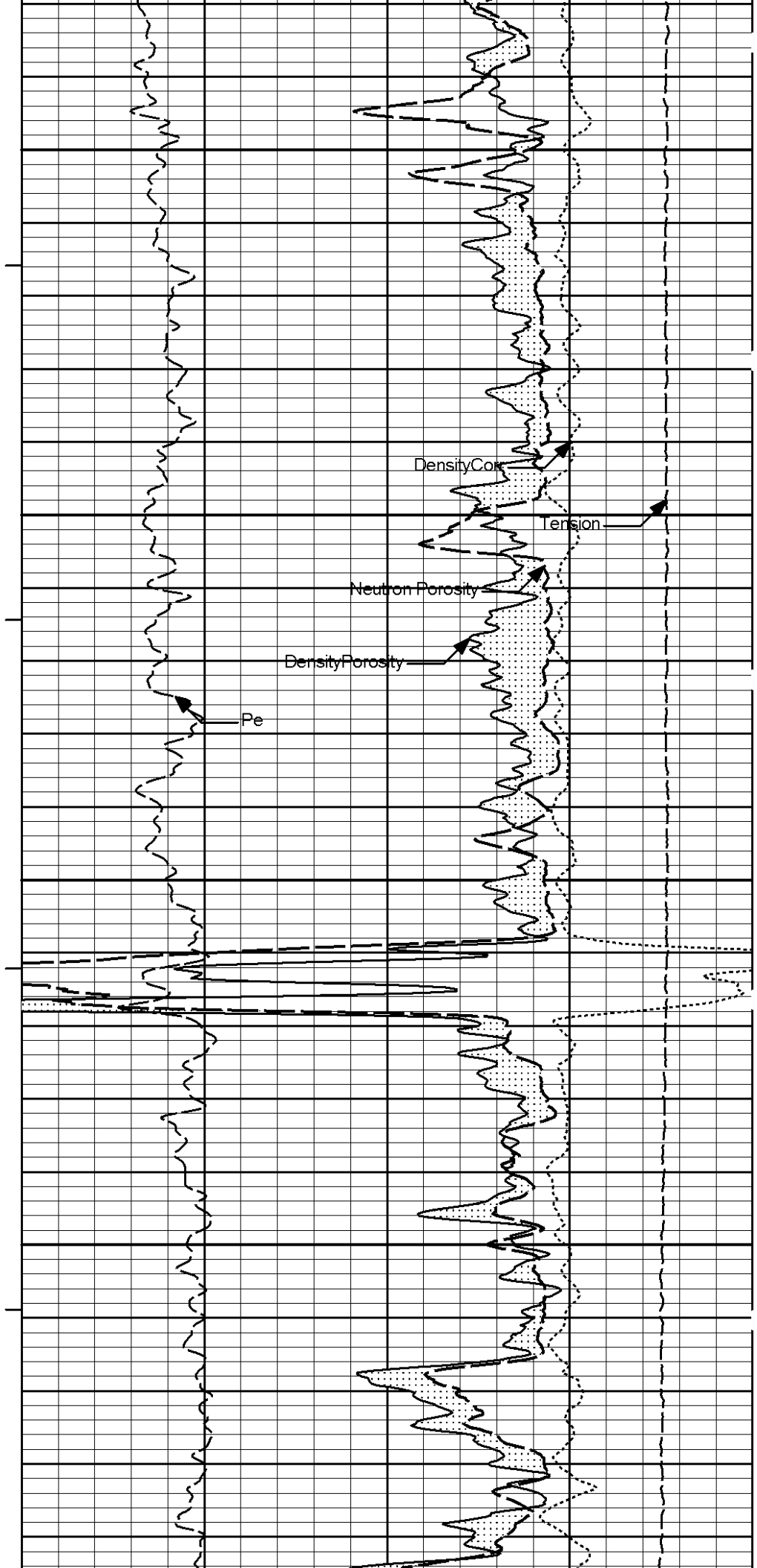
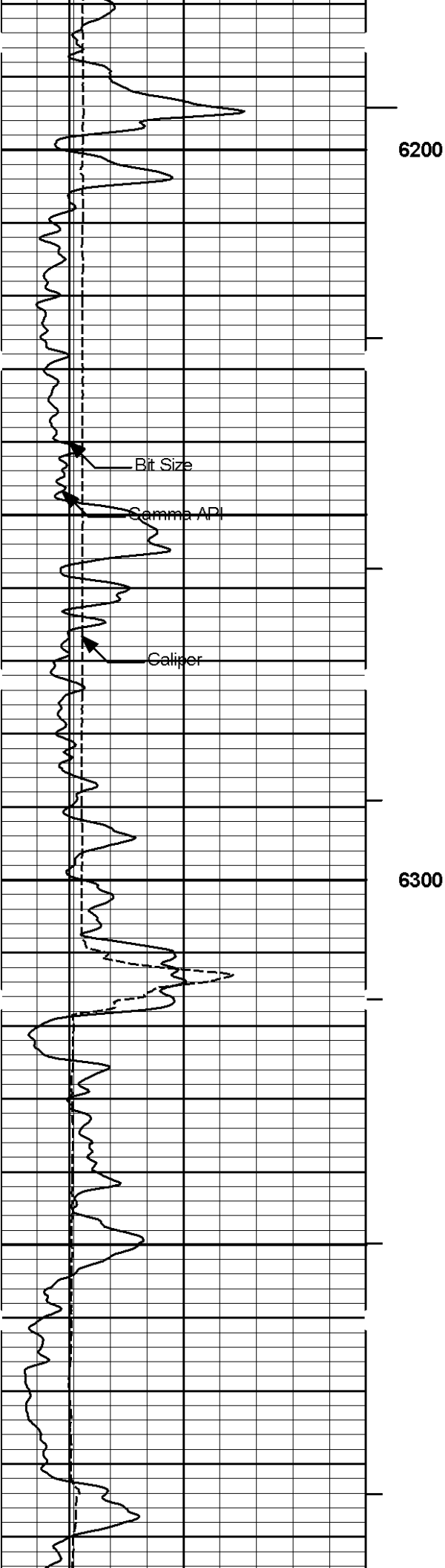


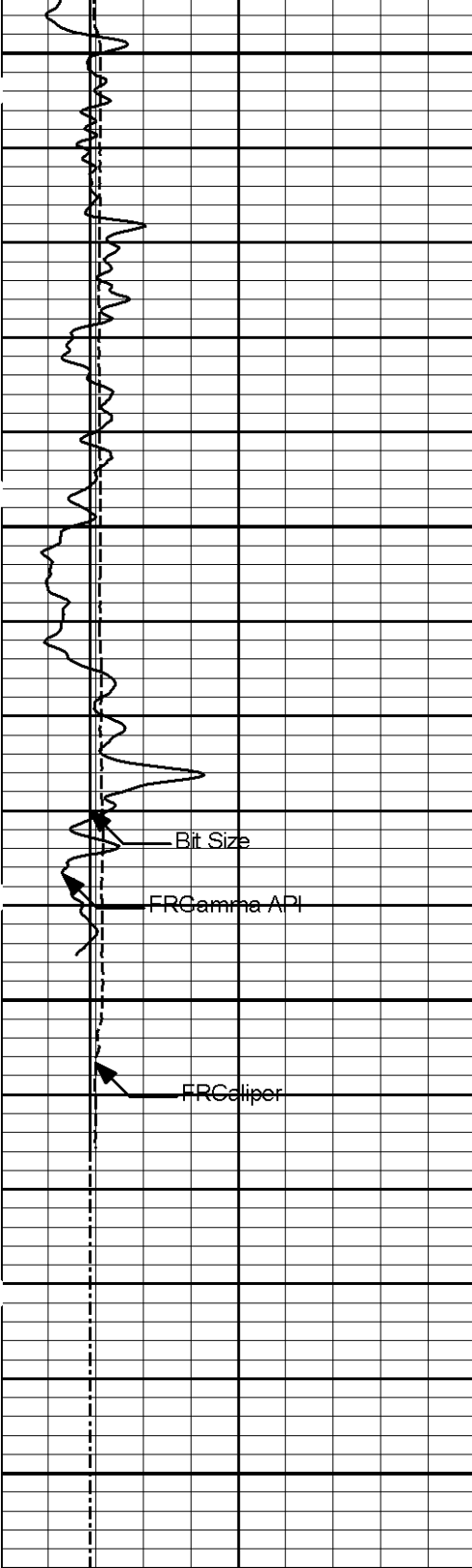


6000

6100



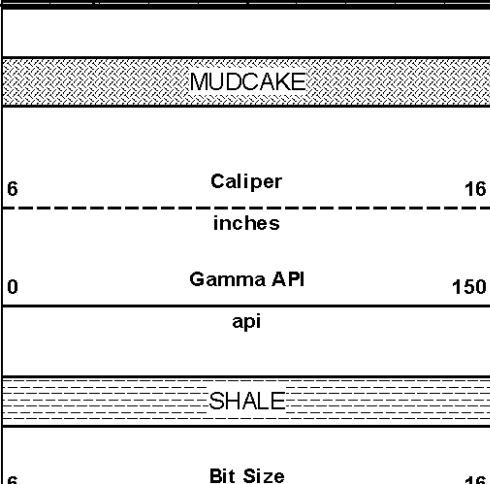
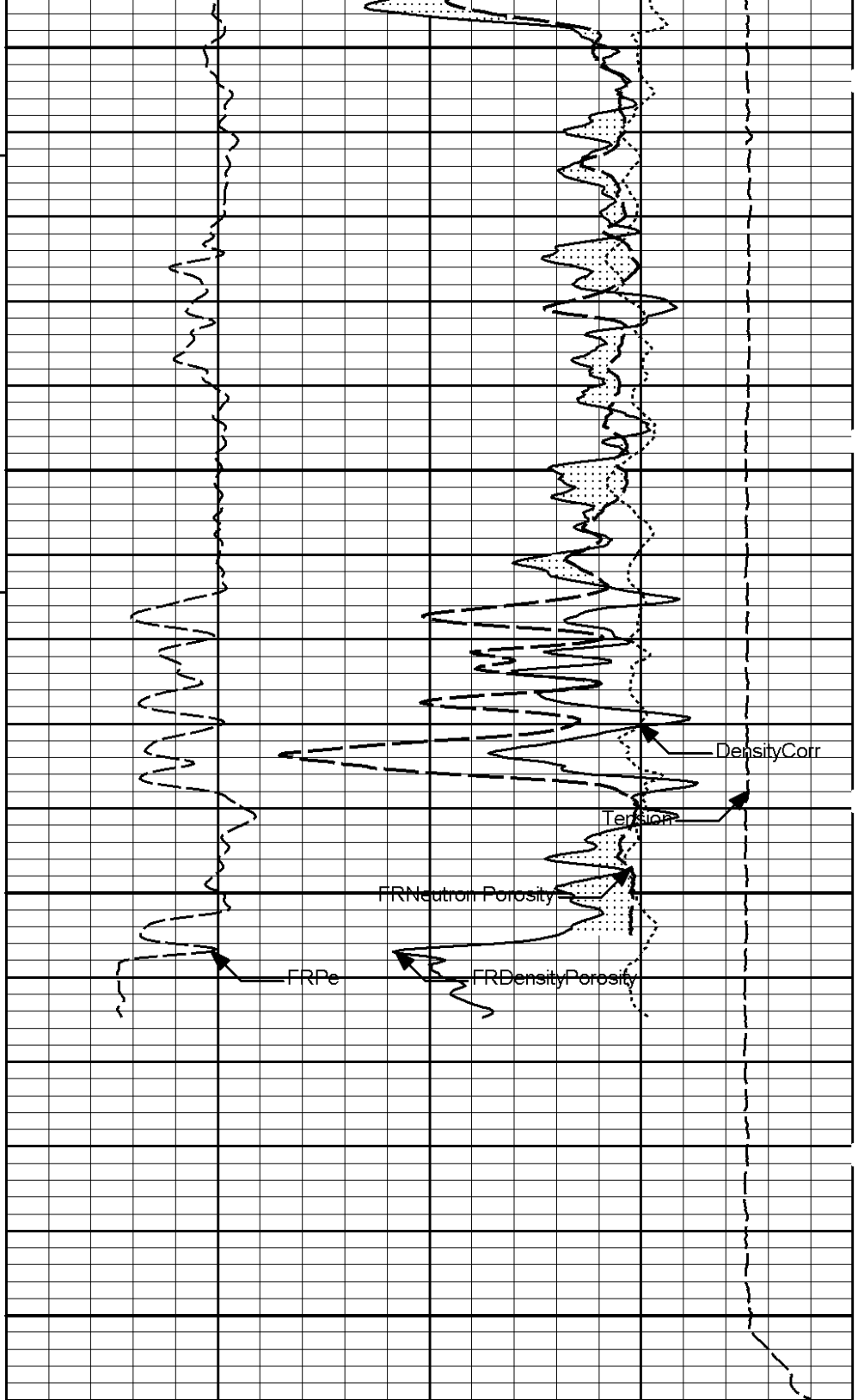




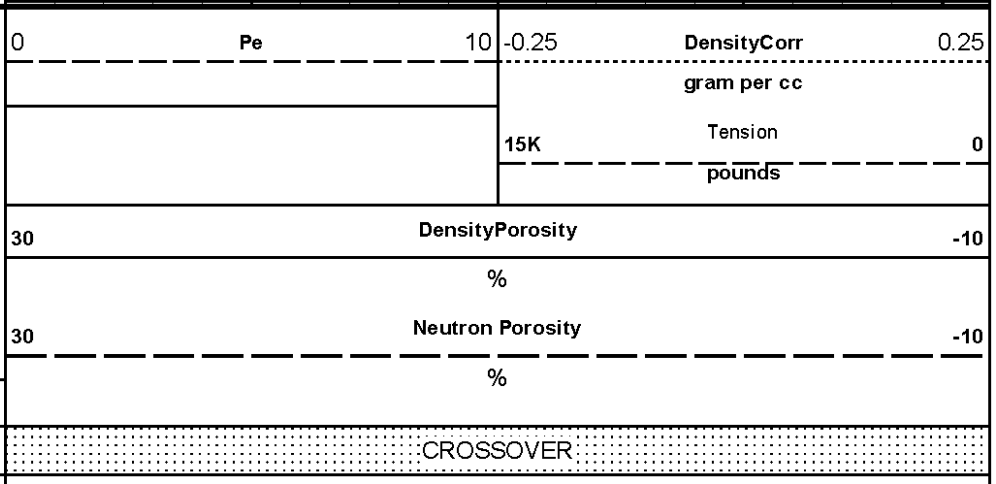
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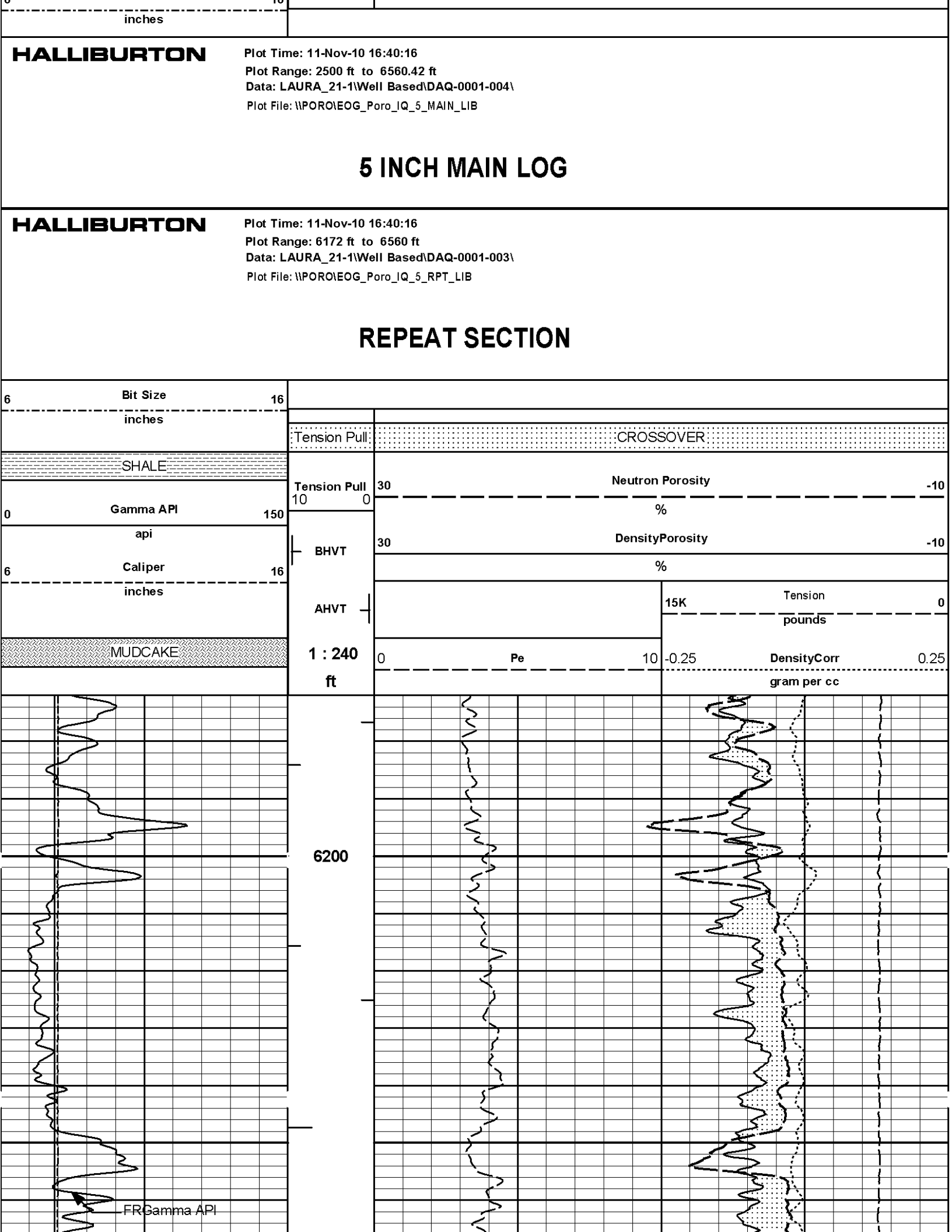
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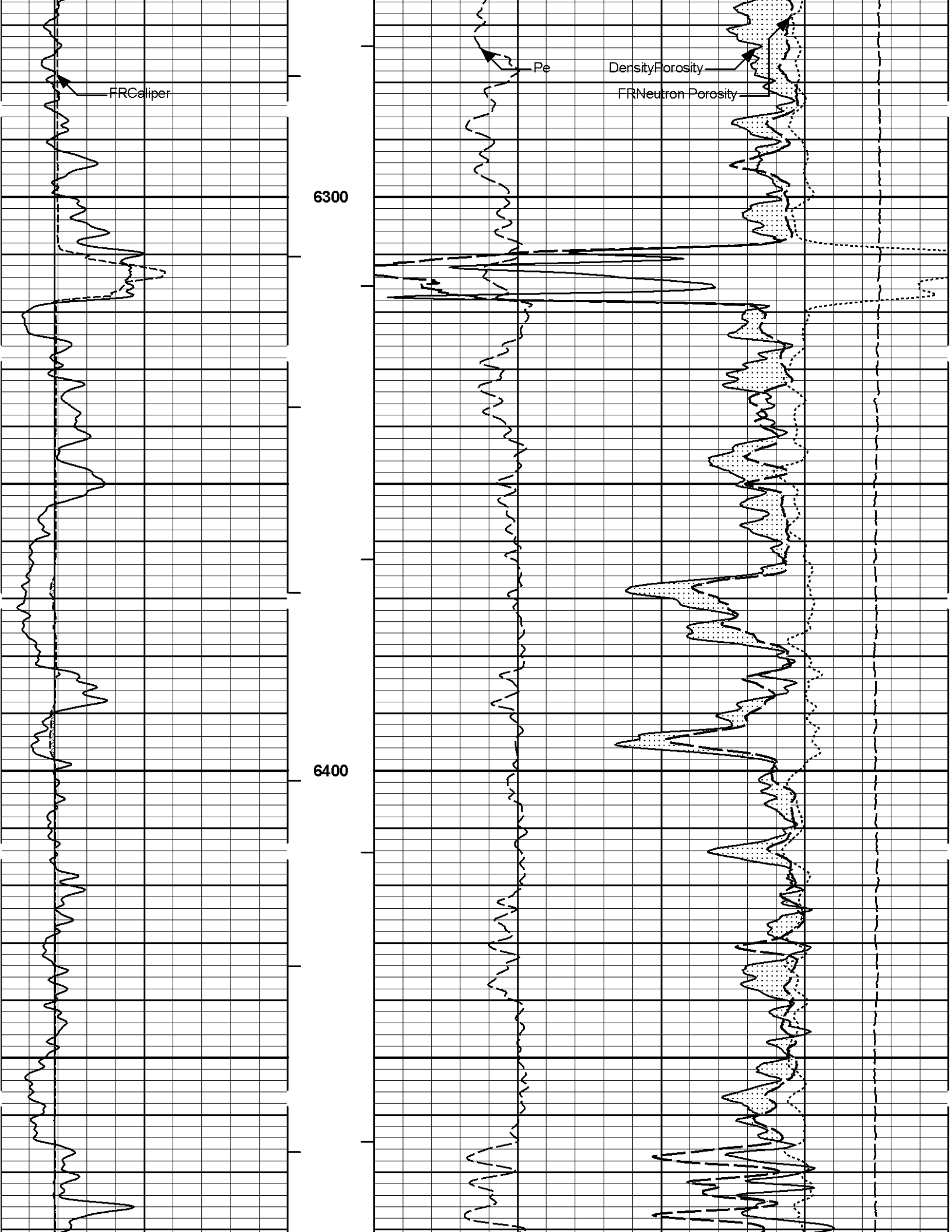
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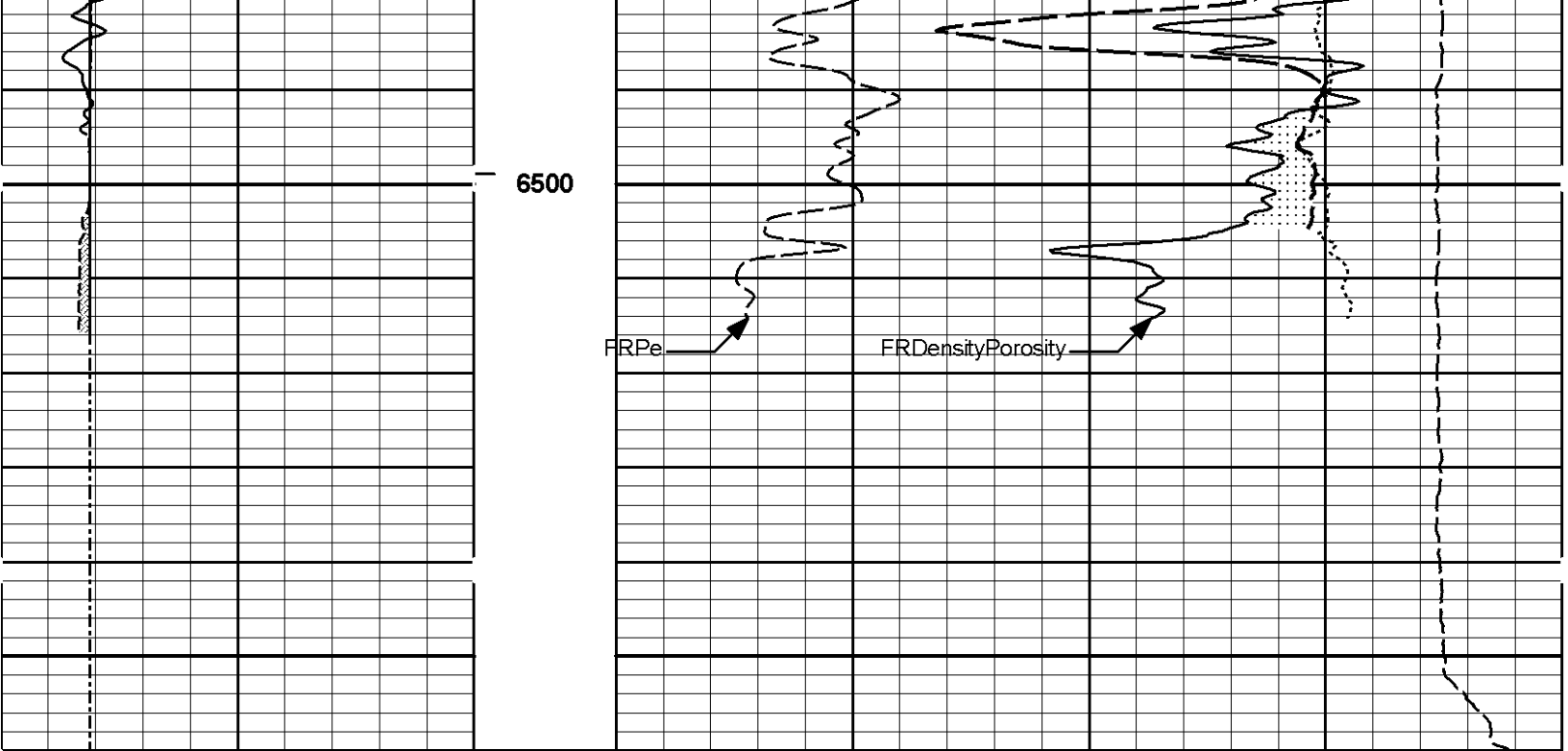


1 : 240
ft
AHVT
BHVT
Tension Pull 10 0
Tension Pull:









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

HALLIBURTON

Plot Time: 11-Nov-10 16:40:21
Plot Range: 6172 ft to 6560 ft
Data: LAURA_21-1\Well Based\DAQ-0001-003\
Plot File: \\PORO\EOG_Poro_IQ_5_RPT_LIB

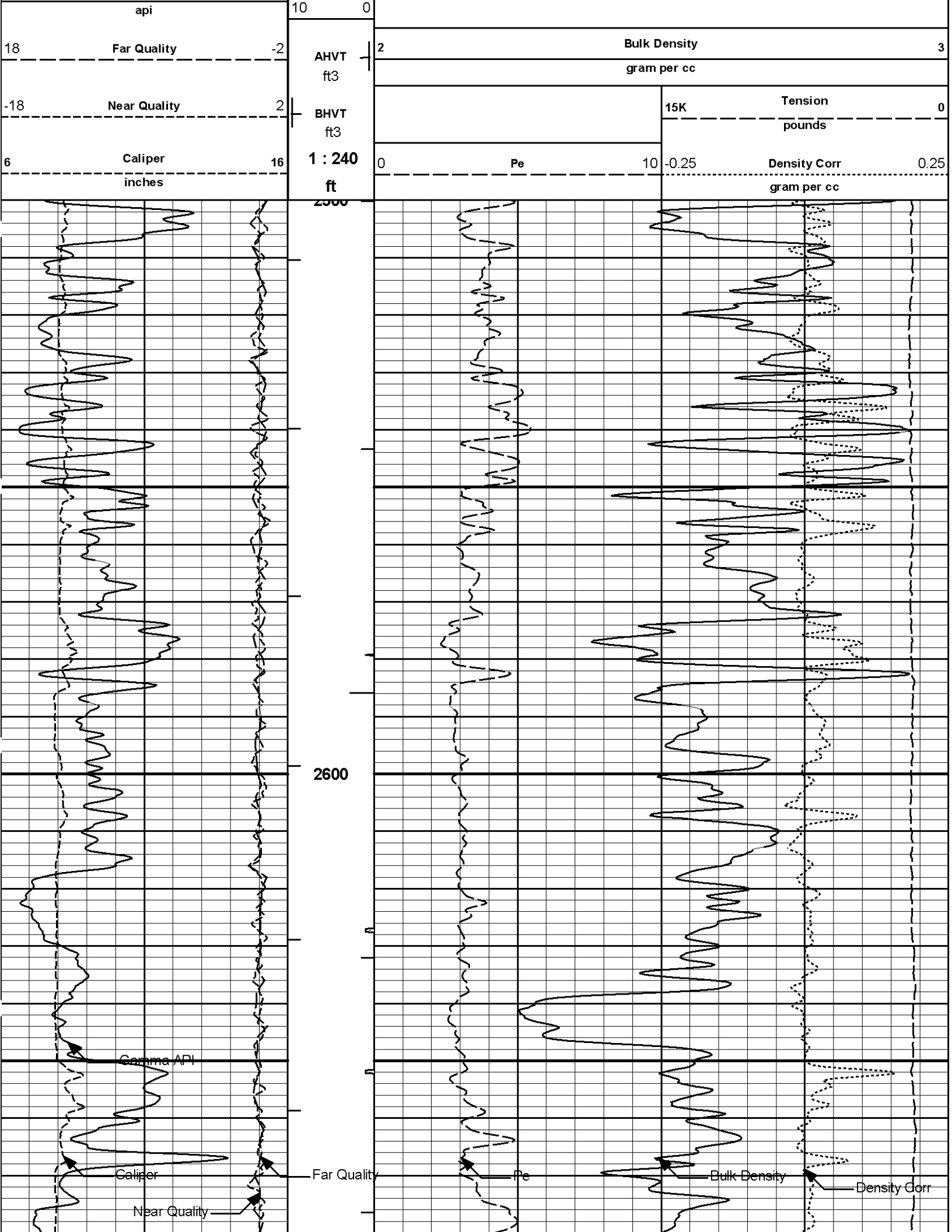
REPEAT SECTION

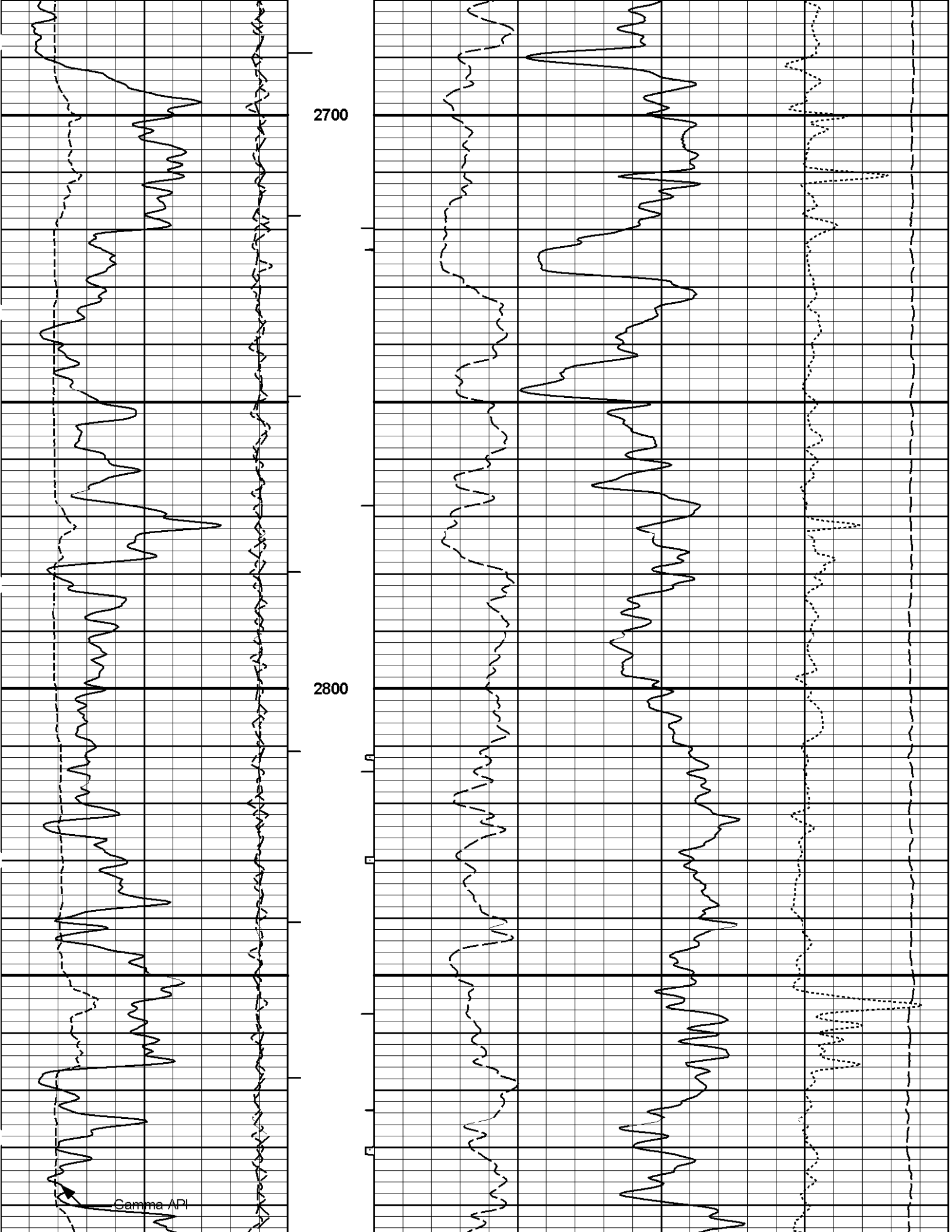
HALLIBURTON

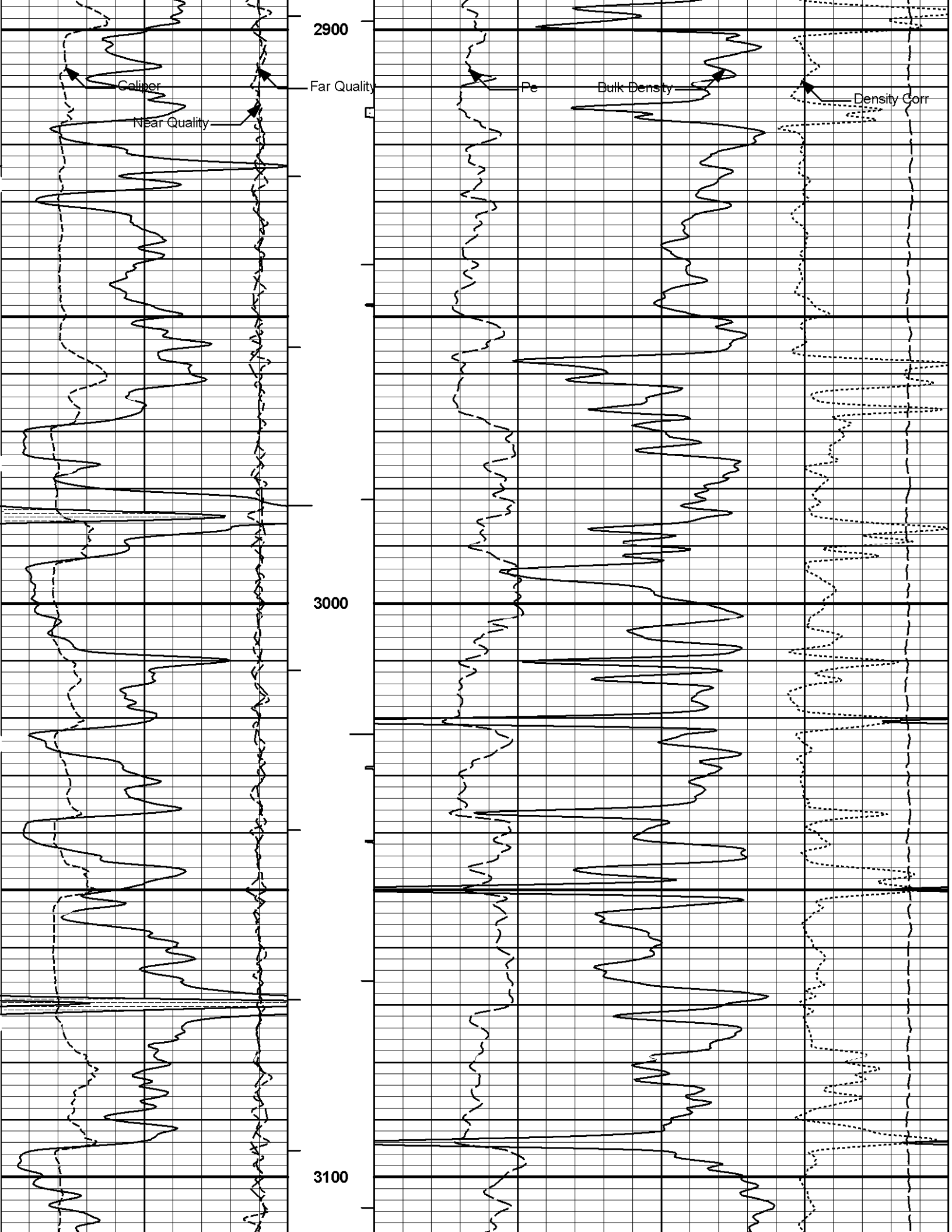
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Plot Range: 2500 ft to 6560.42 ft
Data: LAURA_21-1\Well Based\DAQ-0001-004\
Plot File: \\PORO\Bulk_5inch_IQ_main

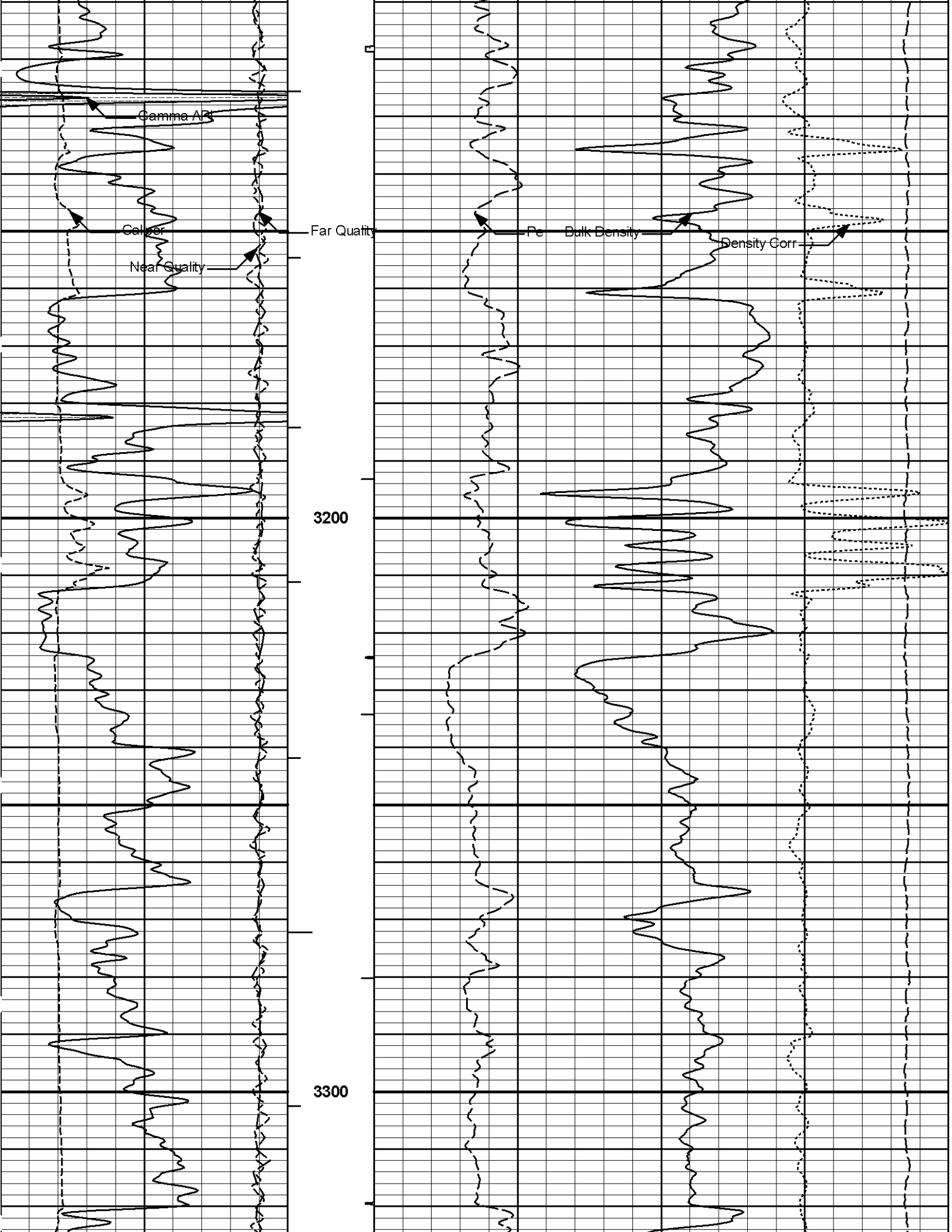
5 INCH MAIN LOG

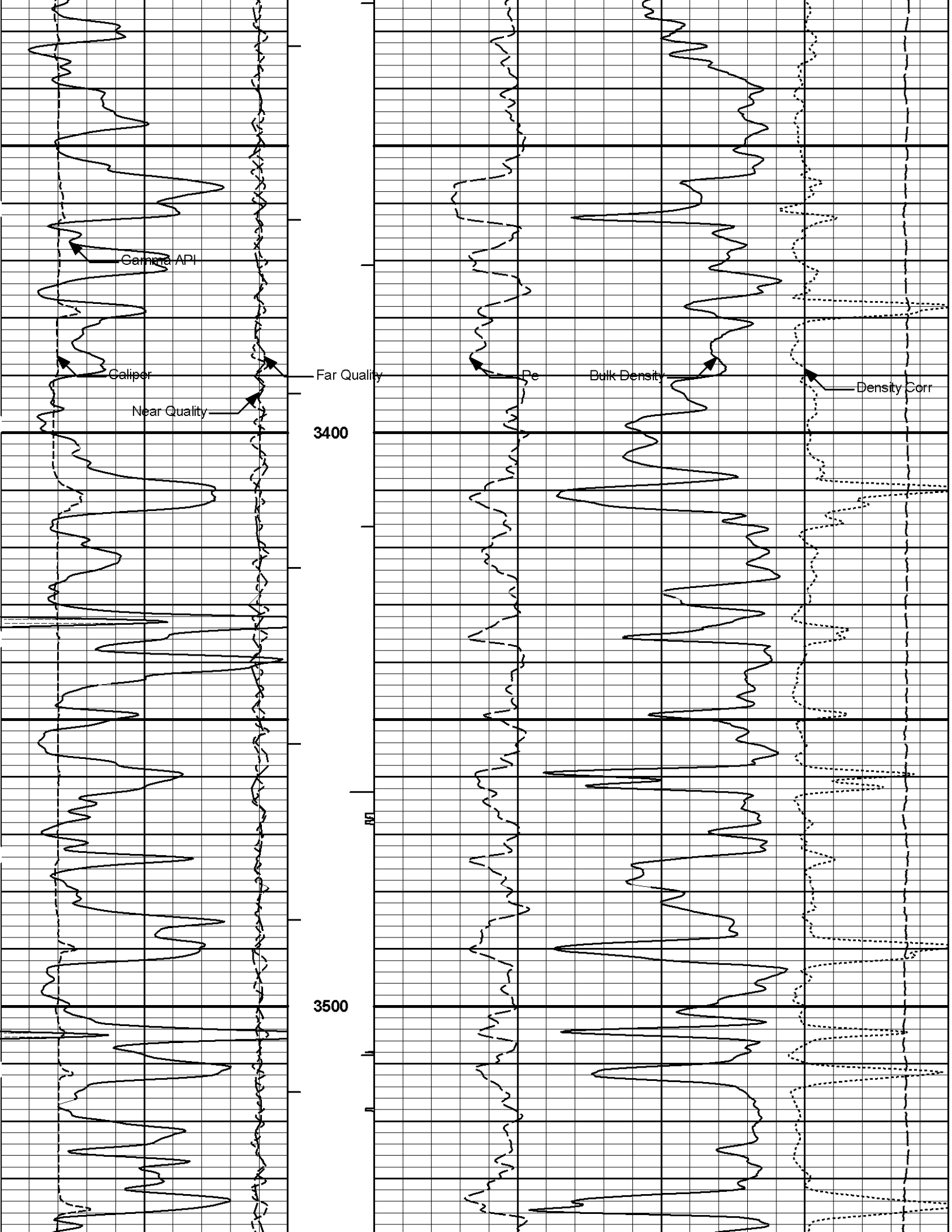
			Tension Pull:
SHALE			
0	Gamma API	150	
			Tension Pull

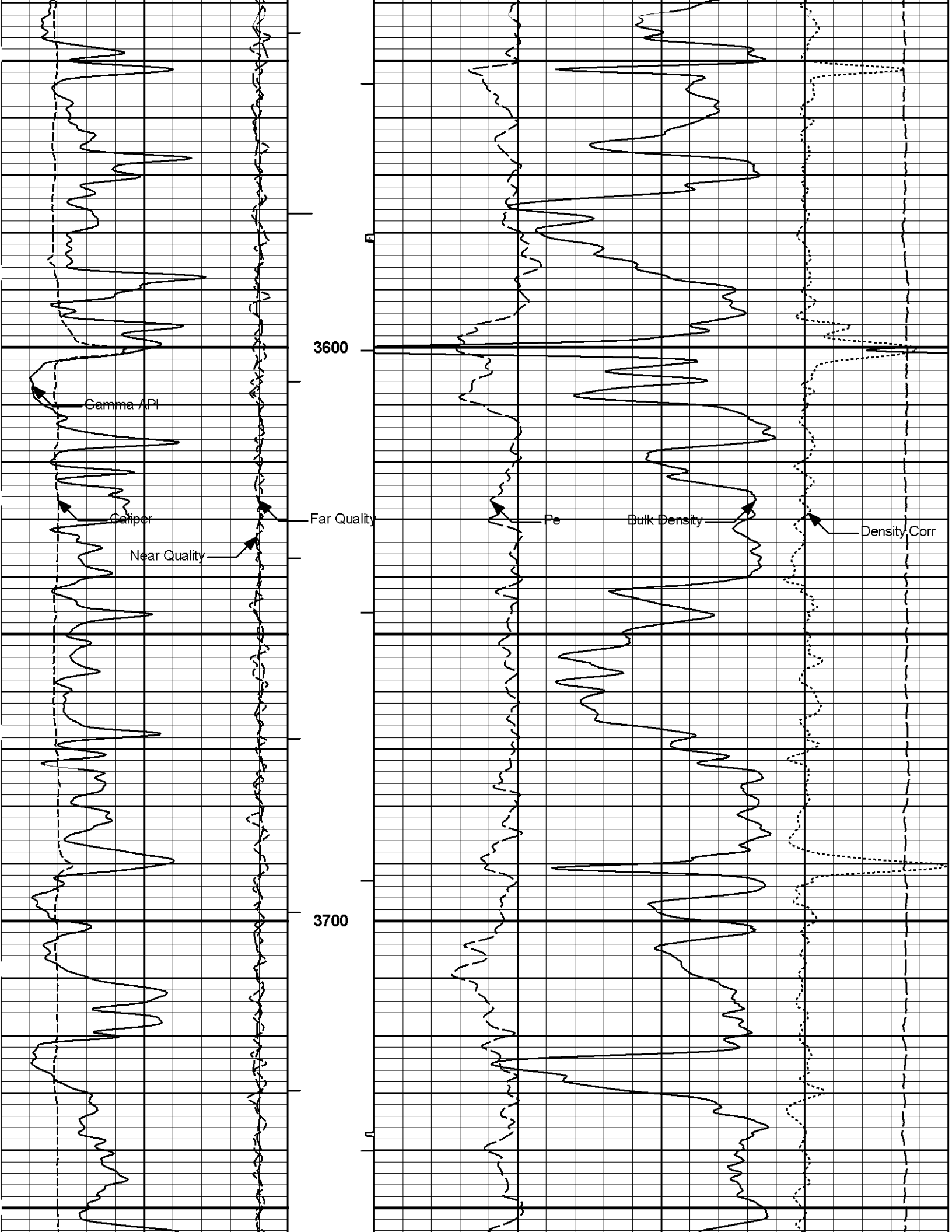


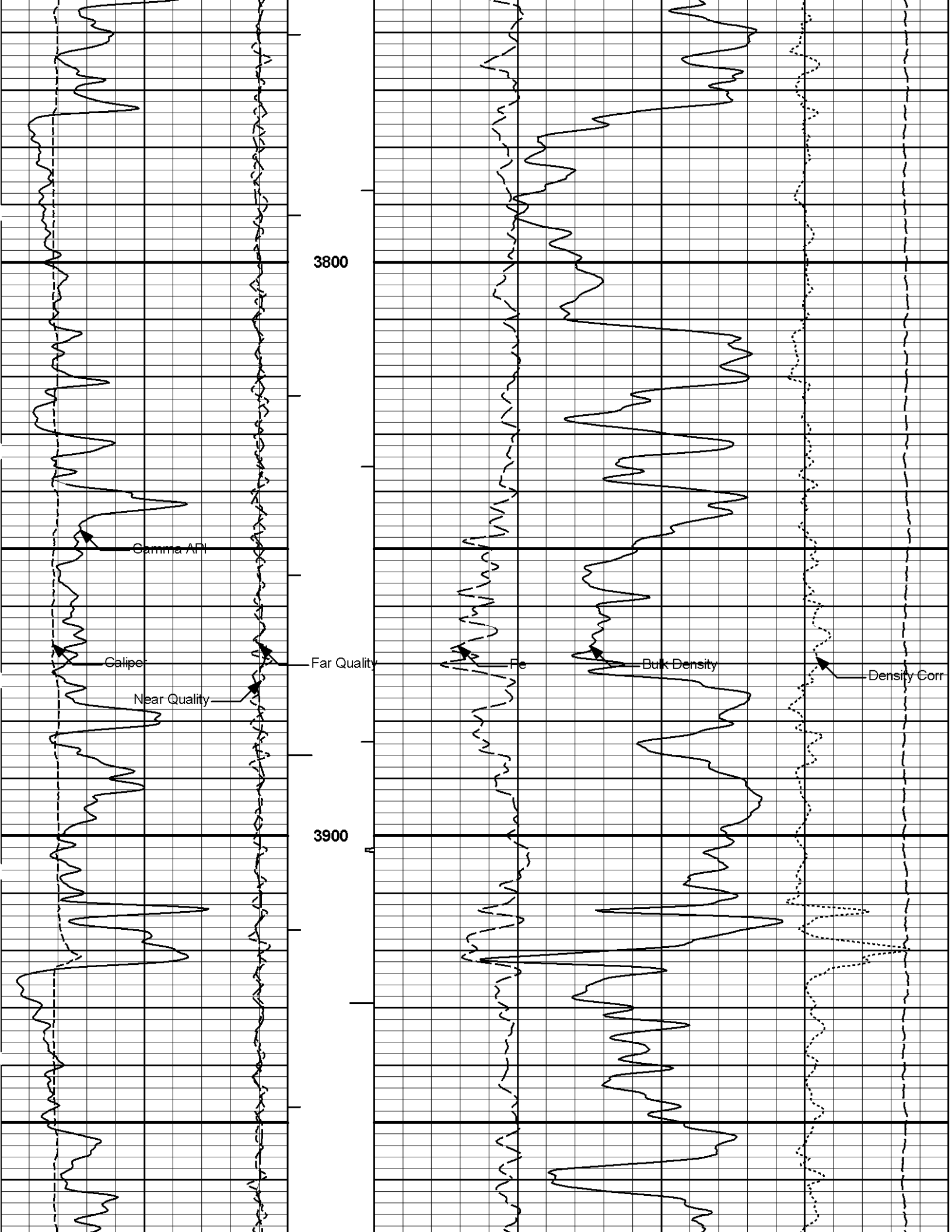


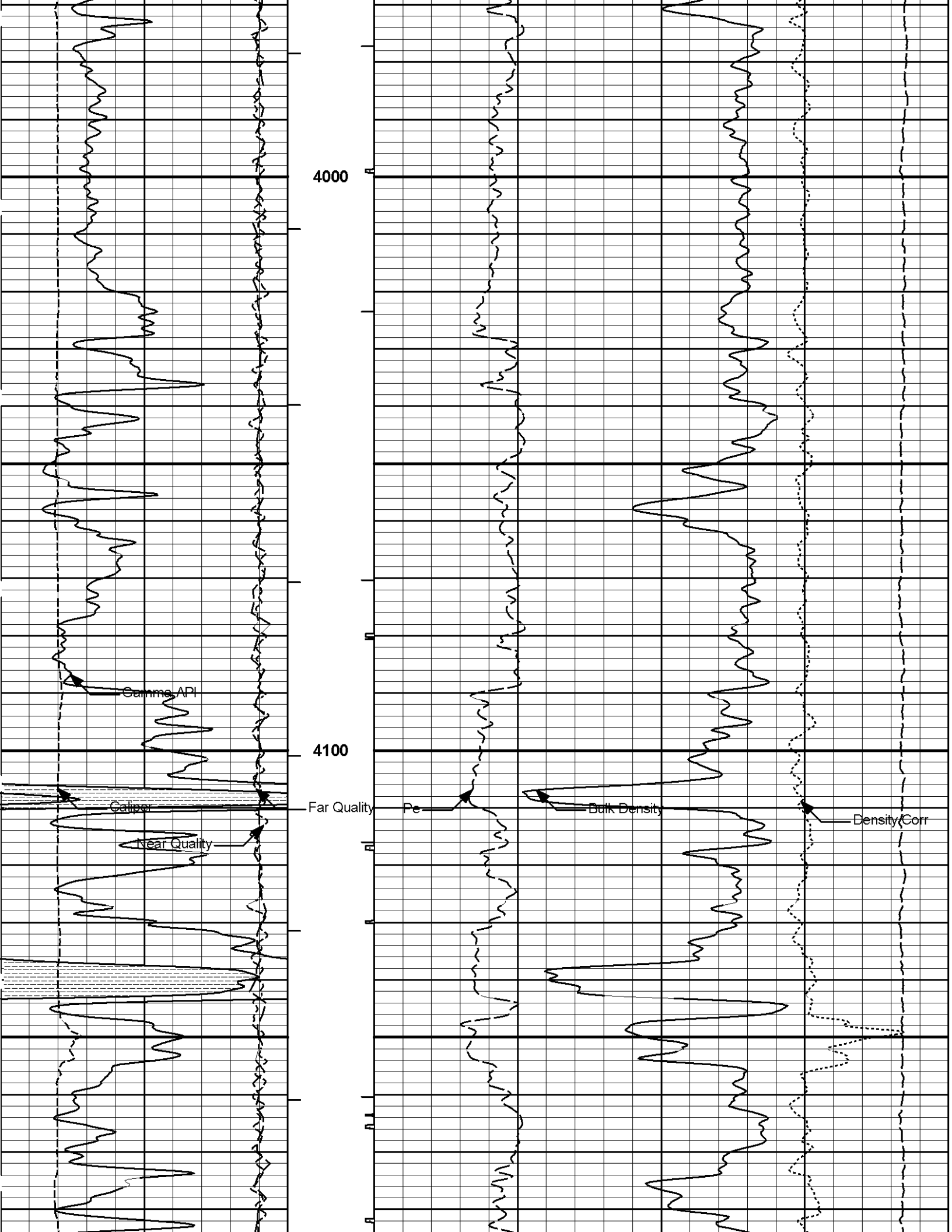


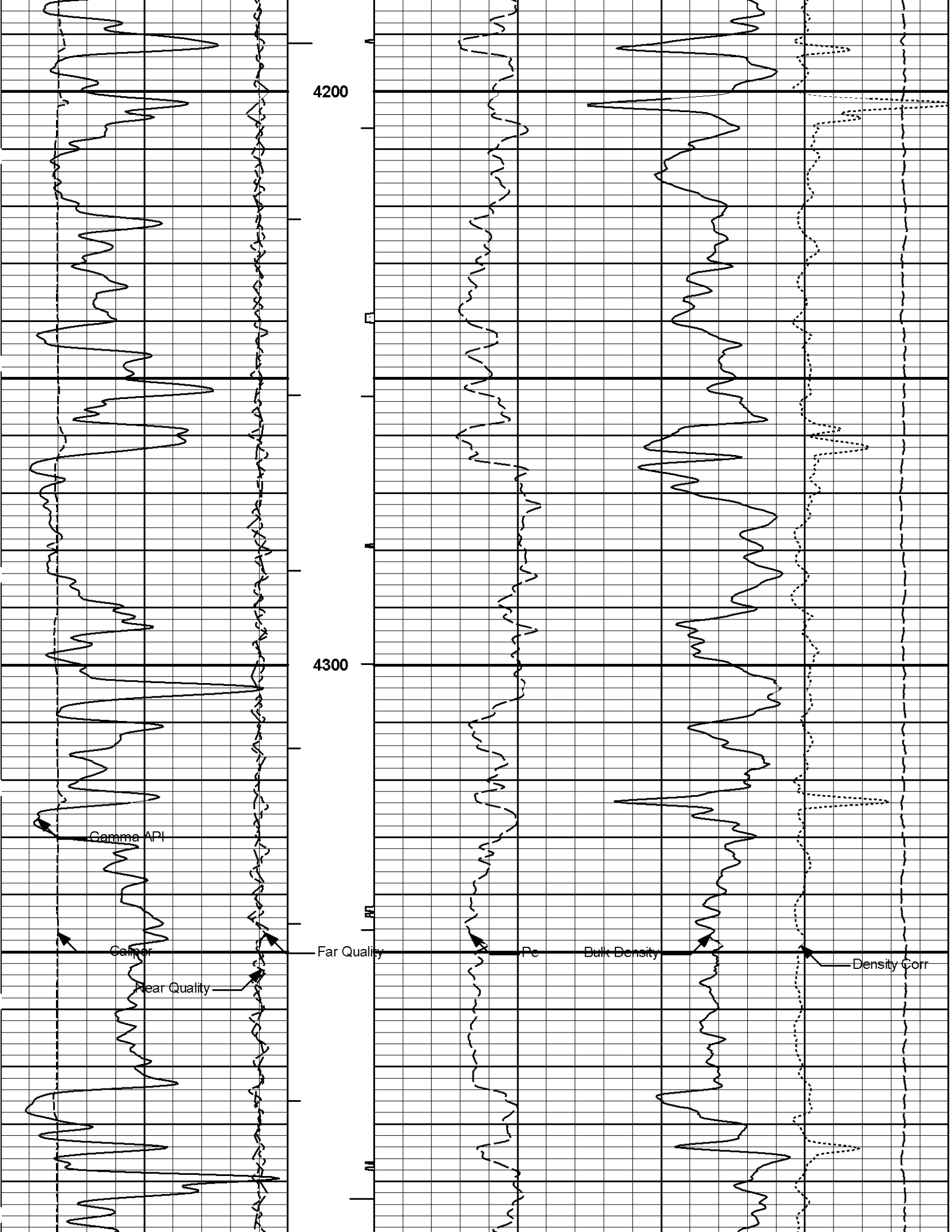


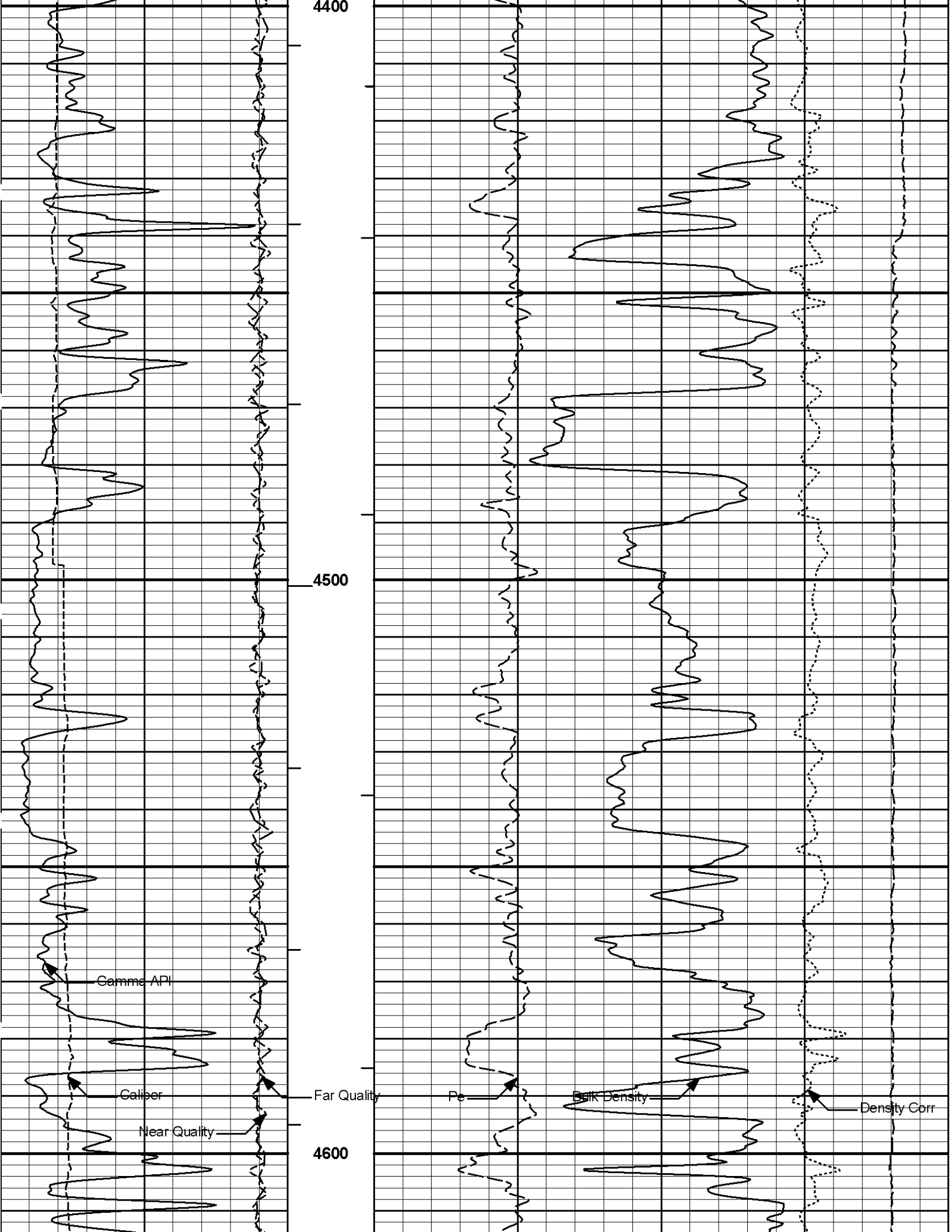


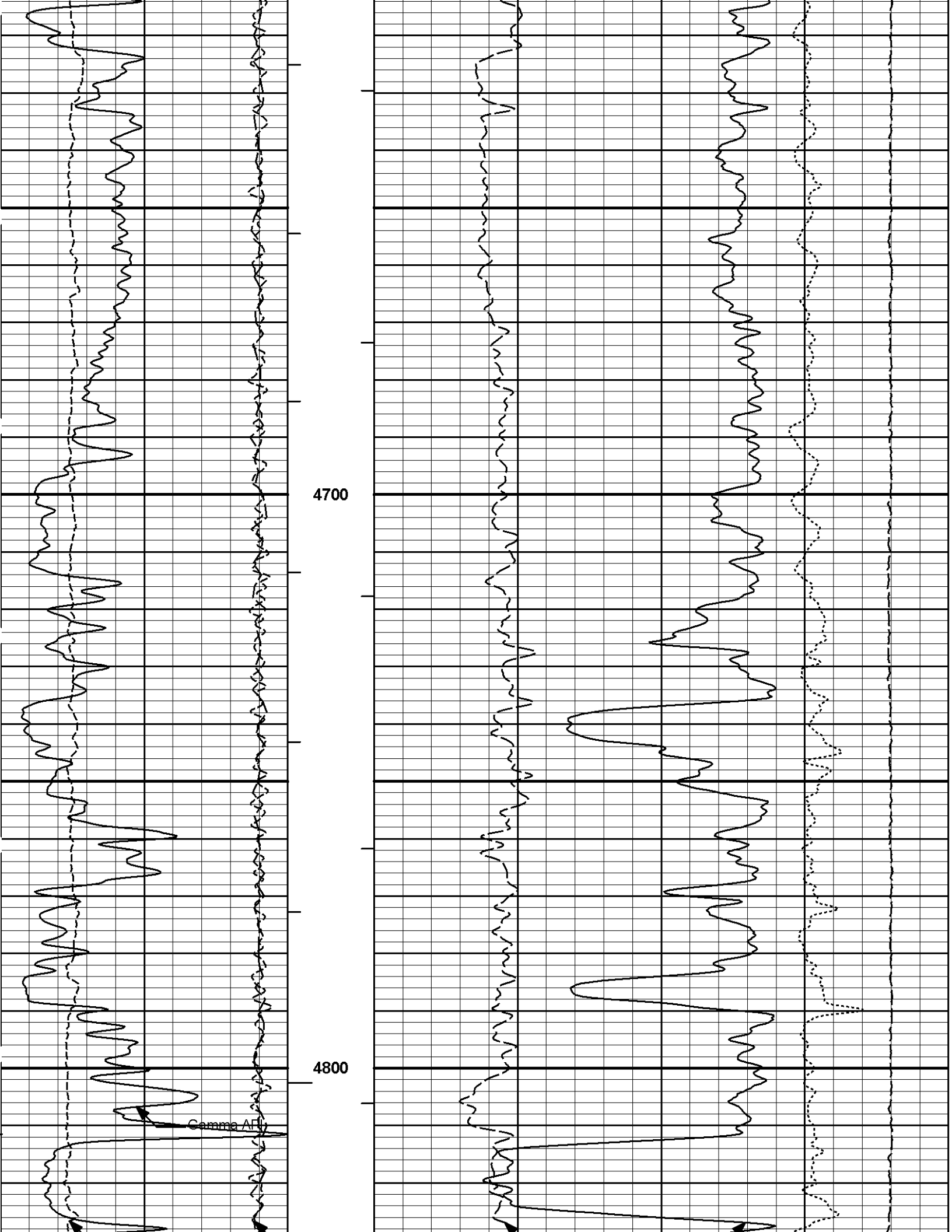


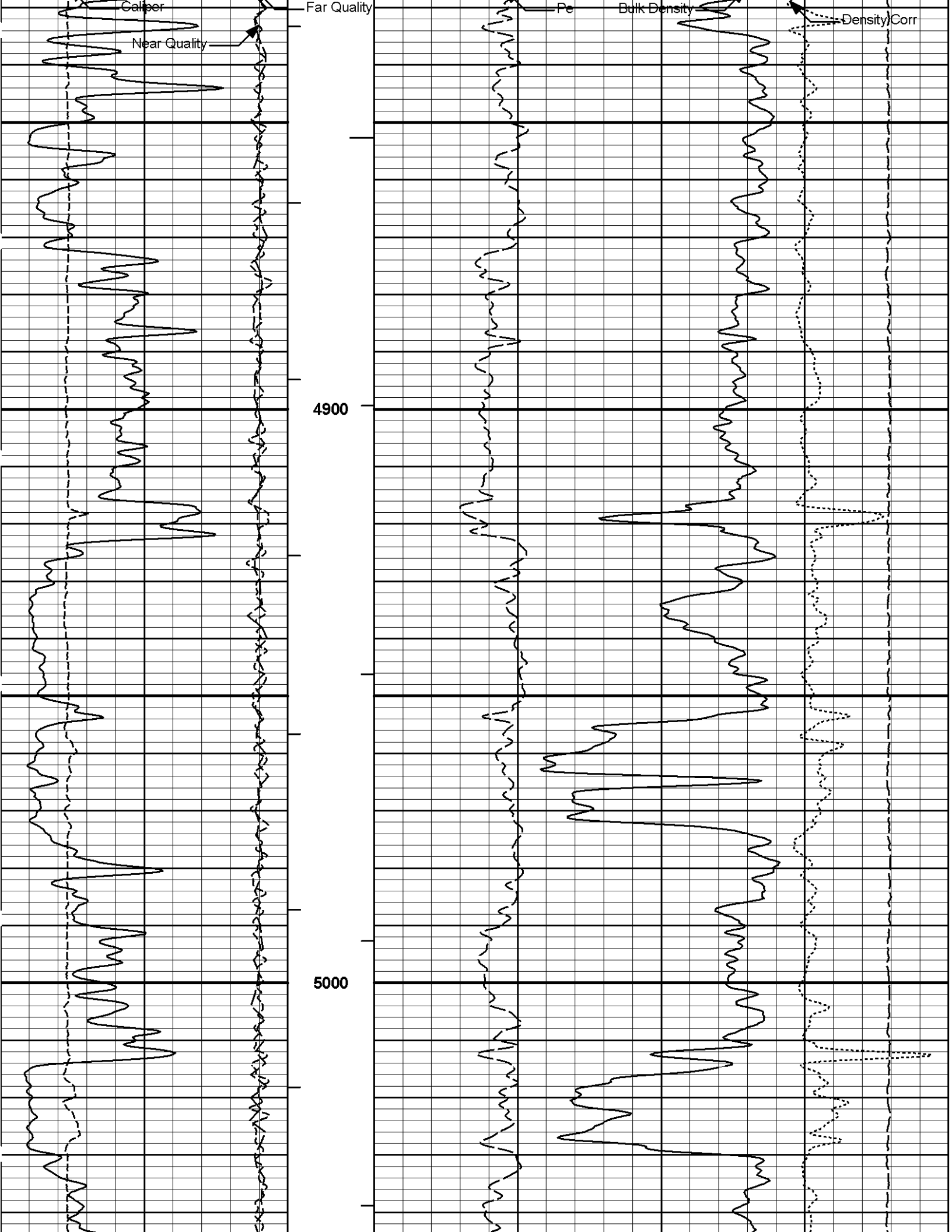


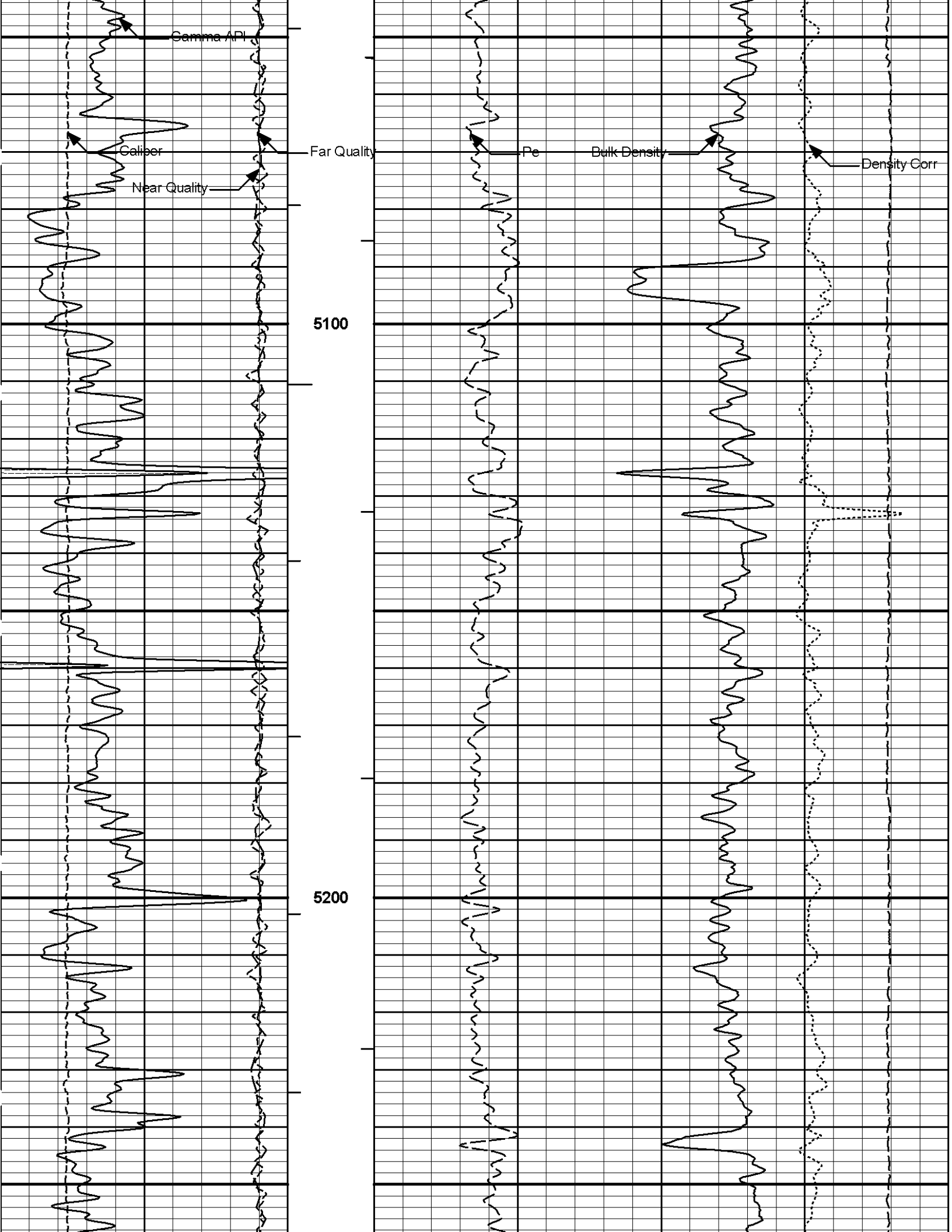


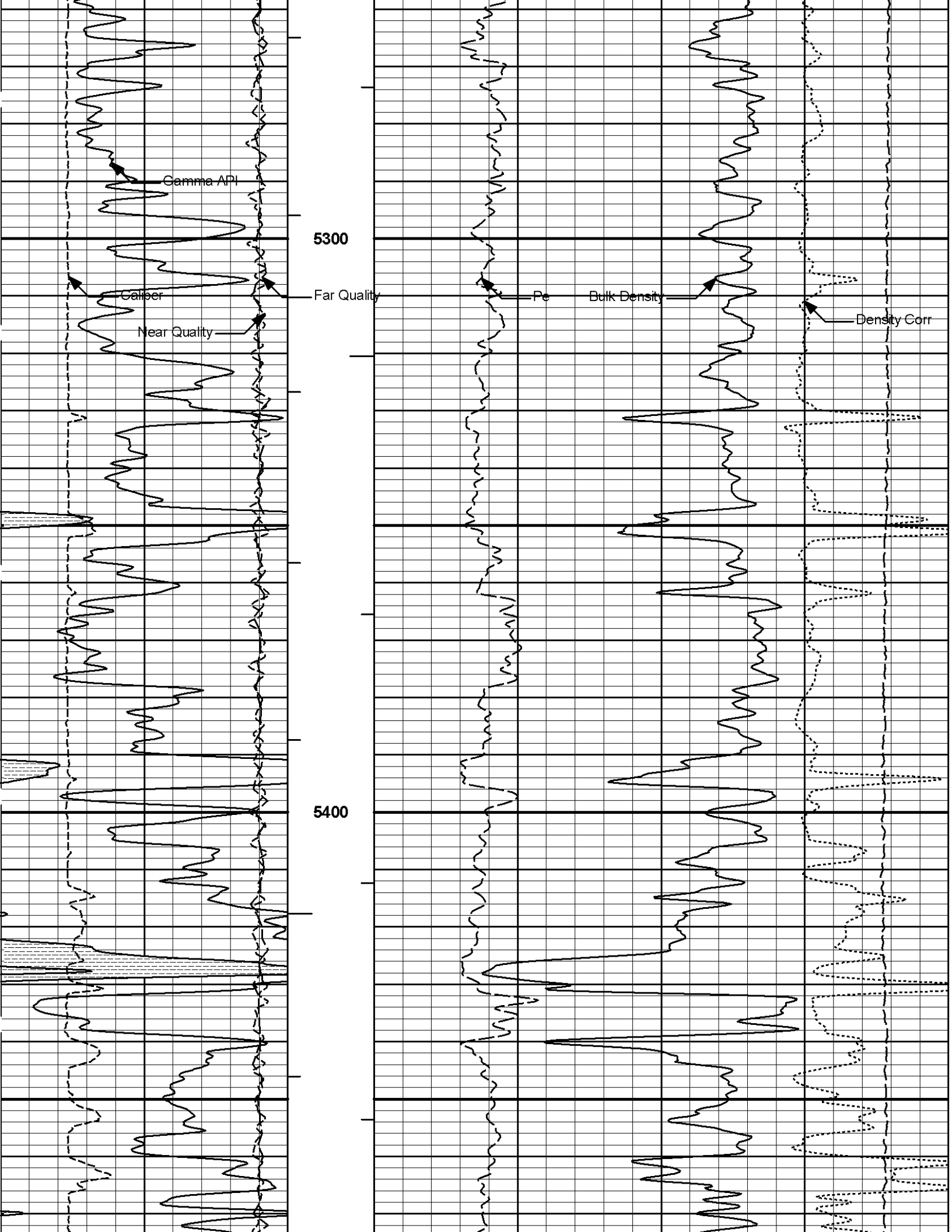


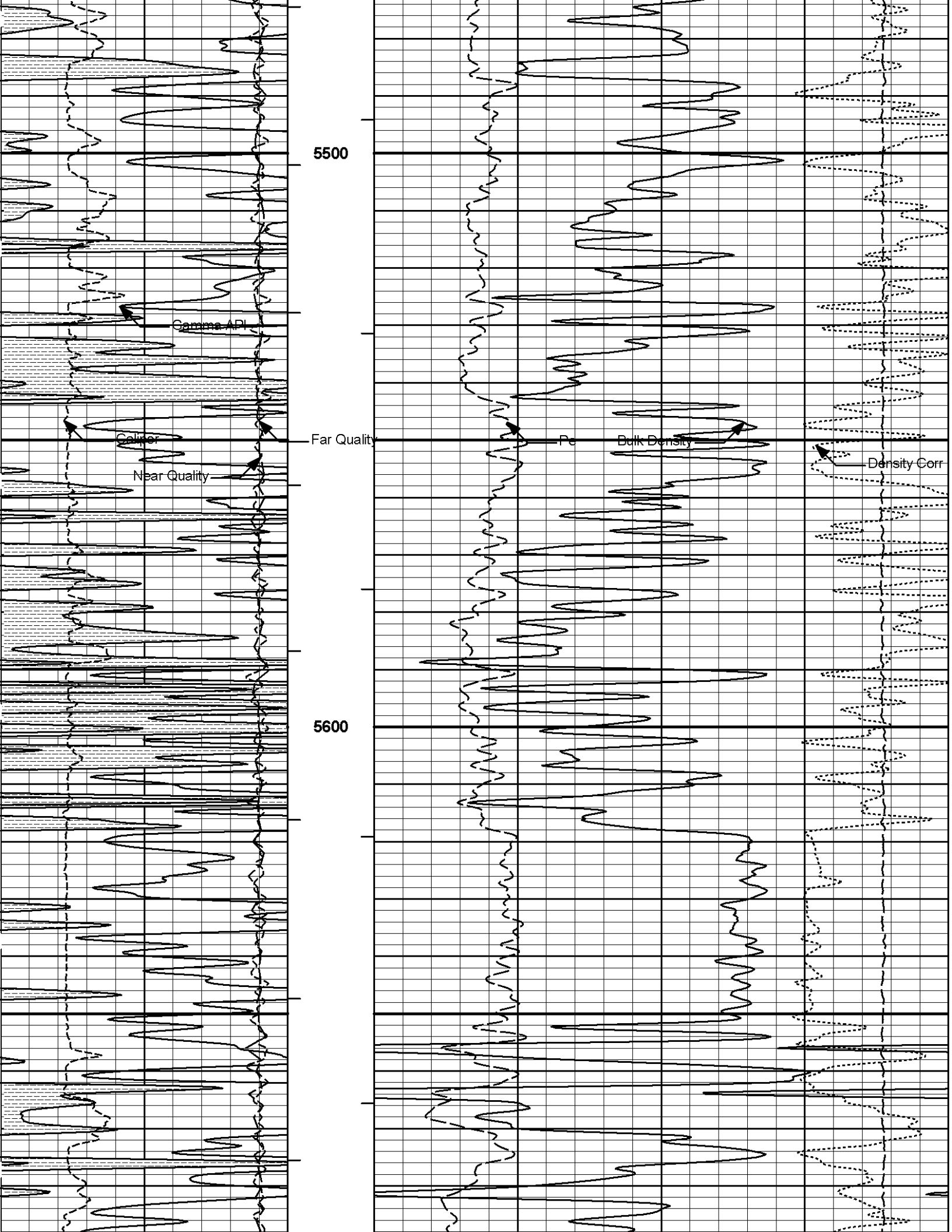


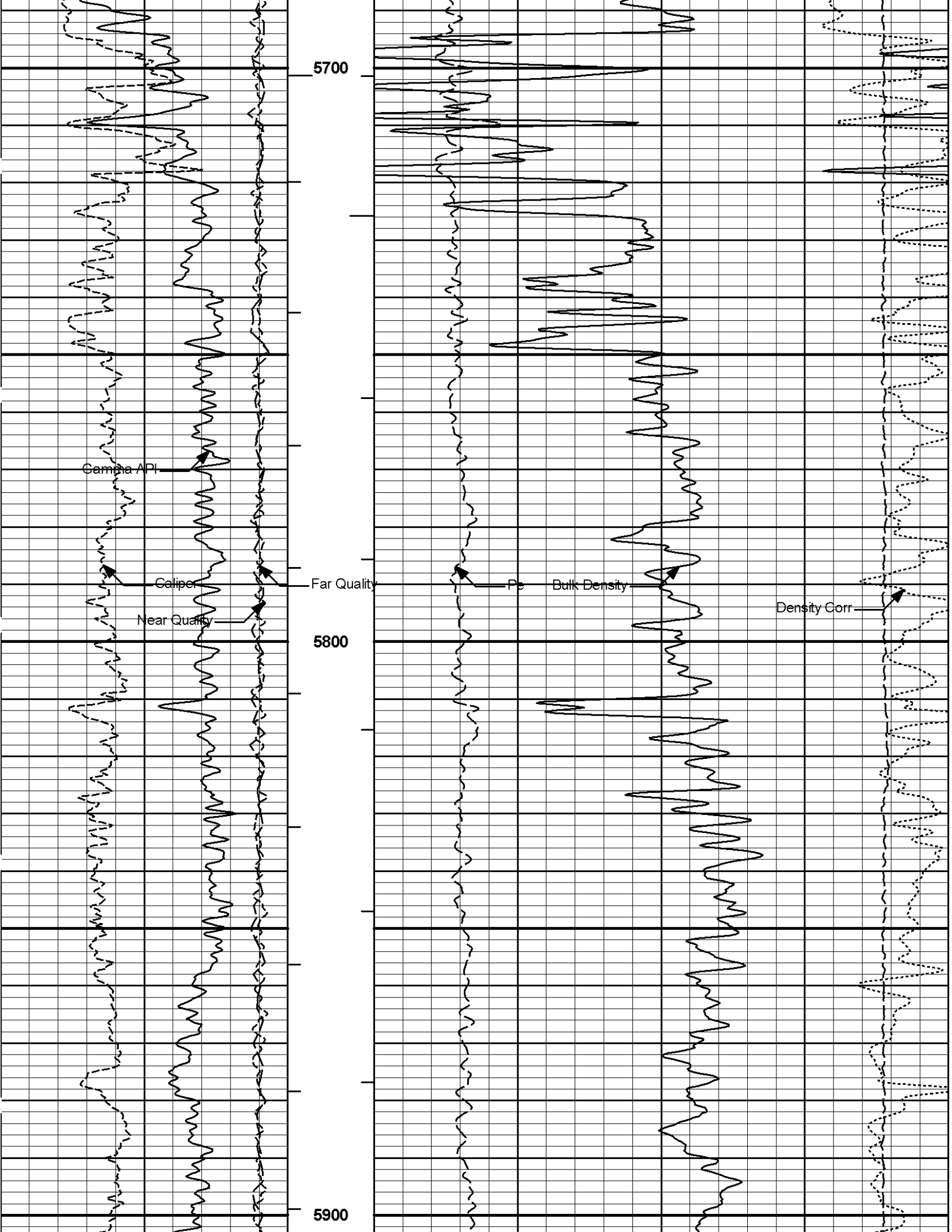


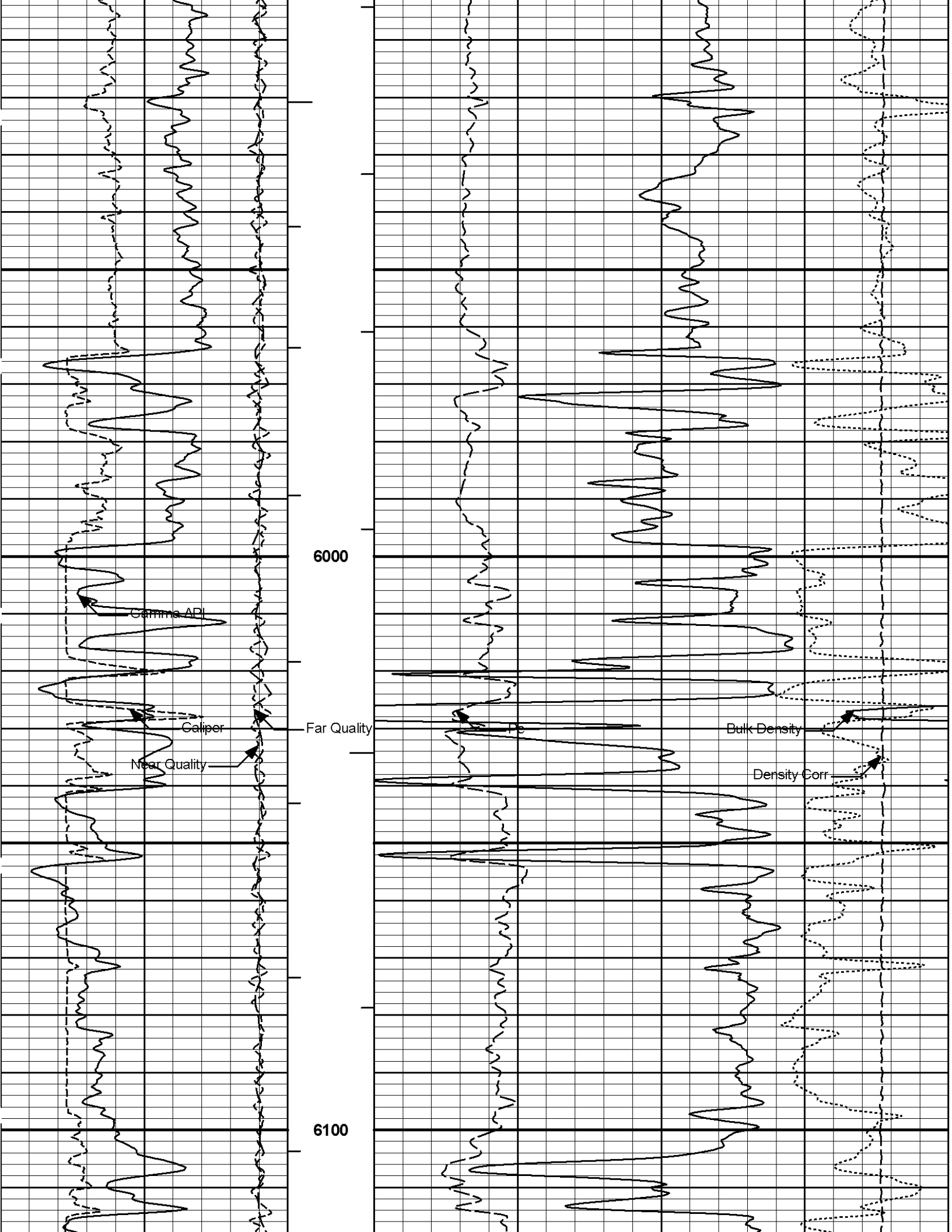


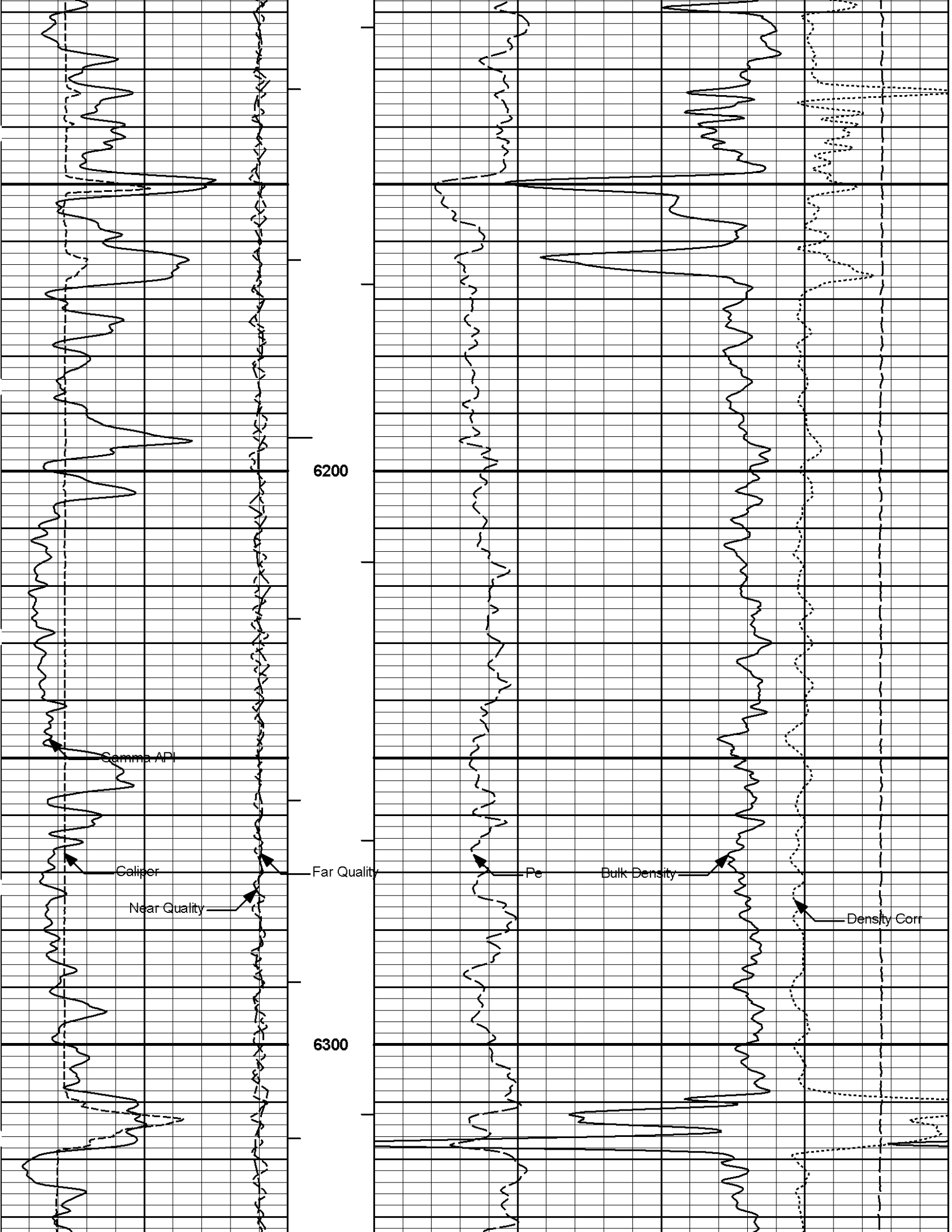


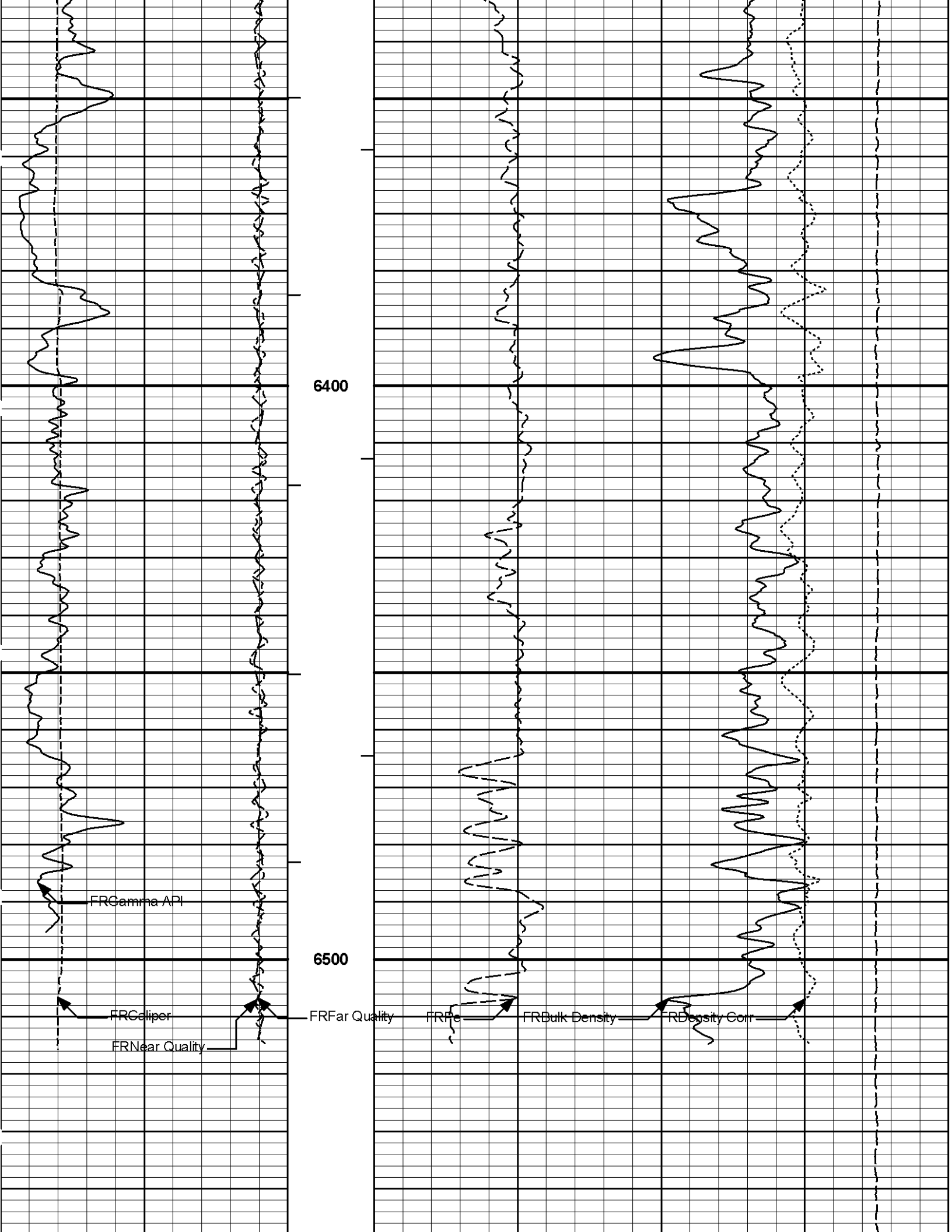


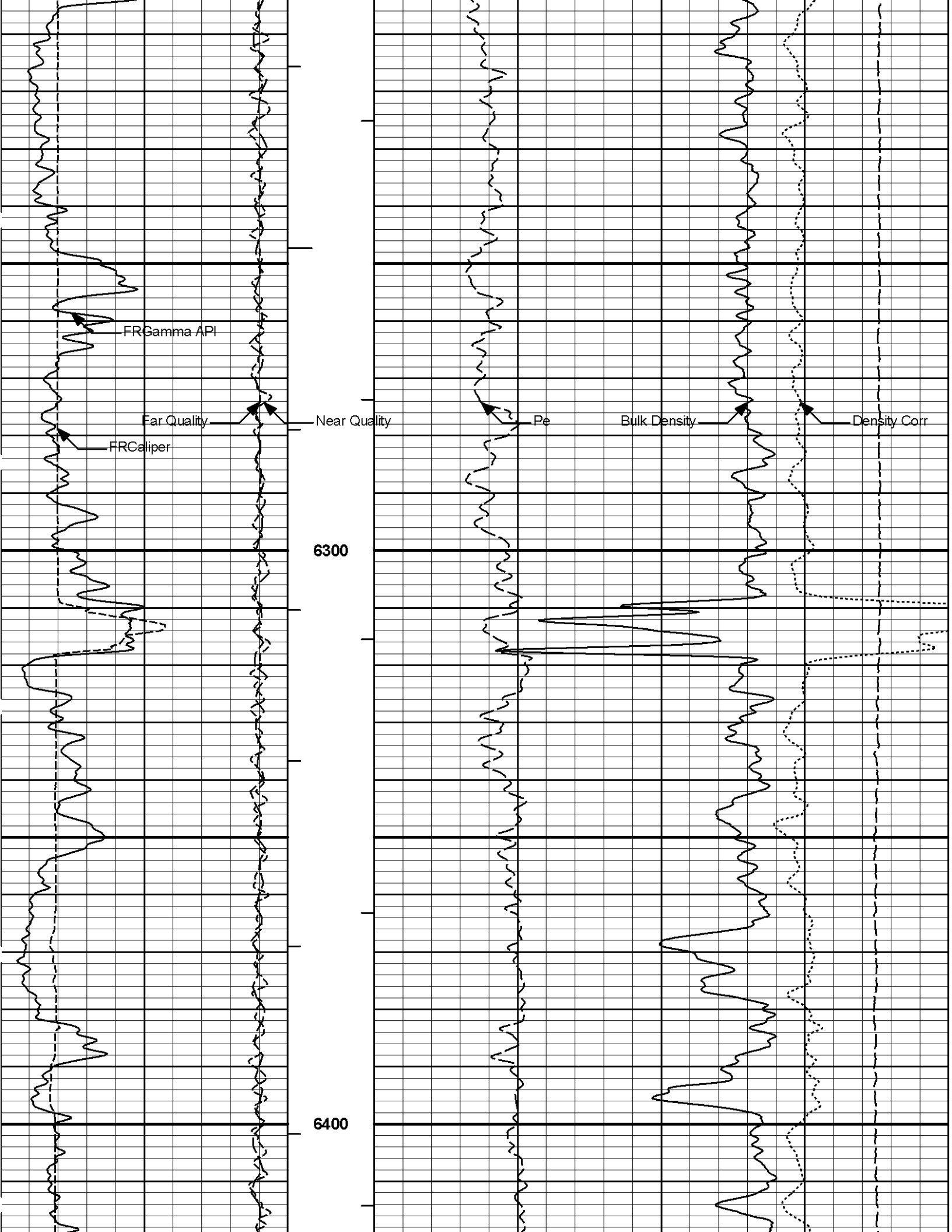


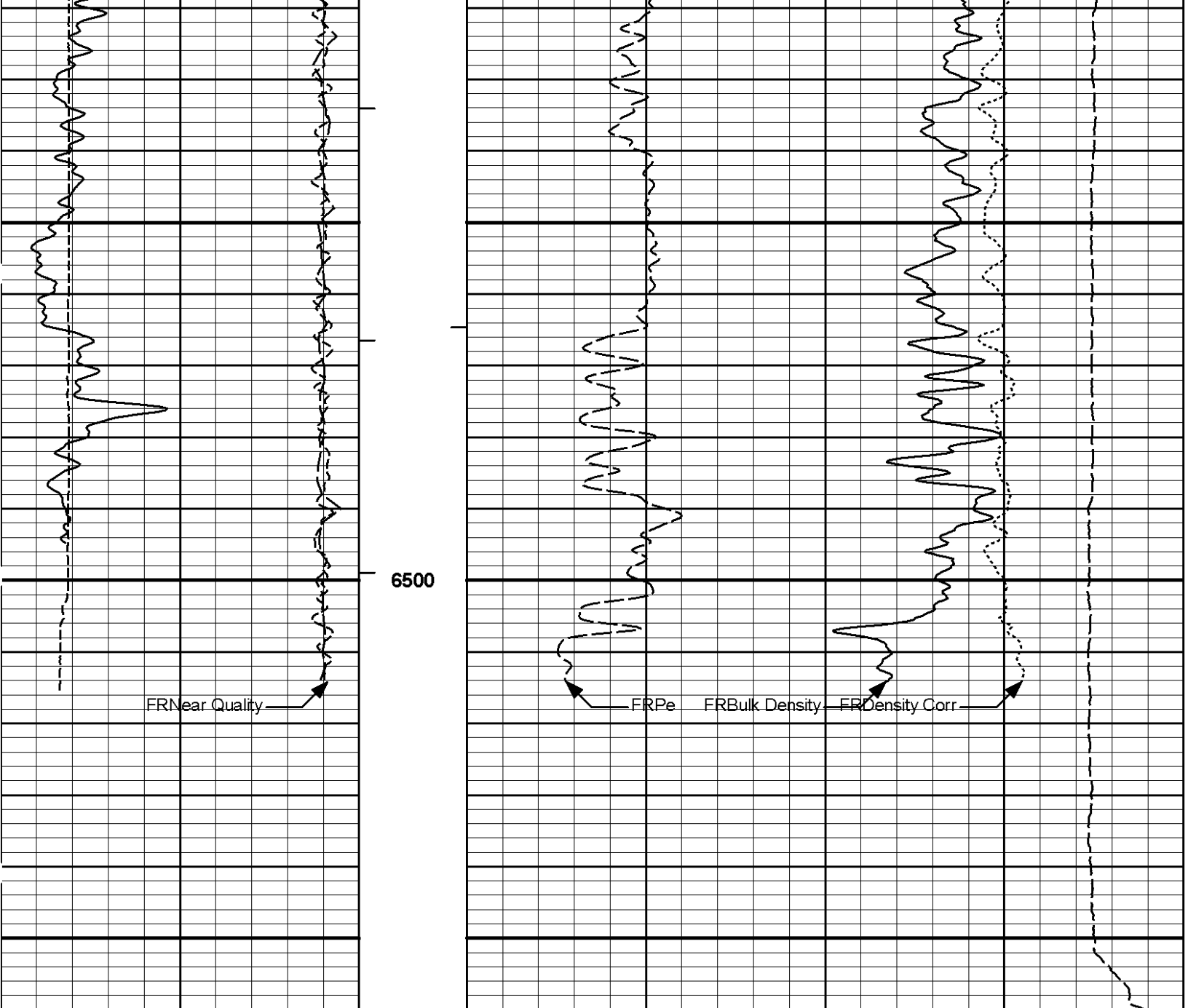












6	Caliper	16	1 : 240	0	Pe	10	-0.25	Density Corr	0.25
	inches		ft					gram per cc	
-18	Near Quality	2	BHVT				15K	Tension	0
			ft3					pounds	
18	Far Quality	-2	AHVT	2	Bulk Density				
			ft3		gram per cc				
0	Gamma API	150	Tension Pull						
	api		10 0						
SHALE			Tension Pull:						

HALLIBURTON

Plot Time: 11-Nov-10 16:40:28
 Plot Range: 6172 ft to 6560 ft
 Data: LAURA_21-1\Well Based\DAQ-0001-003\
 Plot File: \\PORO\Bulk_5inch_IQ_RPT

REPEAT SECTION

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.000	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	1200.00	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	4.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	6551.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	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	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	TPOS	Tool Position	Centered	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Limestone	
	DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
	DSNT	DNTP	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	

SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
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	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 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	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Mud Cell	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	
BOTTOM				
Data: LAURA_21-1\0001 QUAD_RED\IDLE			Date: 11-Nov-10 13:25:32	

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CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 11013113	Reference Calibration Date:	12-Oct-10 18:20:18
Engineer:	J. BROWNAWELL	Calibration Date:	18-Oct-10 03:28:13
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Calibrator Source S/N: 150
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Measurement	Measured	Calibrated	Units
Background	24.9	26.1	api
Background + Calibrator	239.7	251.1	api
Calibrator	226.2	225.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 11013113	Reference Calibration Date:	18-Oct-10 03:28:13
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 10:43:05
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Calibrator Source S/N: 150
 Calibrator API Reference:225.00 api
 Equivalent Calibrator API Reference:228.9 api

Equivalent Calibrator API Reference:228.9 api

Field Verification	Shop	Field	Units
Background	26.1	30.6	api
Background + Calibrator	251.1	251.5	api
Calibrator	225.0	220.9	api
Shop	Field	Difference	Tolerance
225.0	220.9	4.1	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name:	GTET - 11013113	Reference Calibration Date:	11-Nov-10 10:43:05
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 15:51:02
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Calibrator Source S/N: 150
Calibrator API Reference:225.00 api
Calibrator API Reference:228.9 api

Post Verification		Field	Post	Units
Background		30.6	31.8	api
Background + Calibrator		251.5	254.3	api
Calibrator		220.9	222.5	api
Shop	Field	Post	Difference	Tolerance
225.0	220.9	222.5	-1.6	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 11020487	Reference Calibration Date:	23-Aug-10 10:51:44
Engineer:	JEREMY.COTHREN	Calibration Date:	04-Nov-10 14:31:14
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Logging Source S/N: DSN-382
Tank Serial Number: PVOK
Reference value assigned to Tank: 56.100
Snow Block S/N: 592_PV
Calibration Tank Water Temperature: 96 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.007	1.006	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (dec):	0.2361	0.2358	0.0003	+/- 0.0020
Calibrated Ratio:	10.57	10.56	0.011	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (dec):	0.0859	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION			
Tool Name:	DSNT - 11020487	Reference Calibration Date:	04-Nov-10 14:31:14
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 10:55:09
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Logging Source S/N: DSN-382				
Snow Block S/N: 592_PV				
NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0859	0.0879	0.0020	+/- 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 - 11020487	Reference Calibration Date:	11-Nov-10 10:55:09	
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 15:57:30	
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1	
Logging Source S/N: DSN-382				
Snow Block S/N: 592_PV				
NEUTRON POST-CHECK SUMMARY				
	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0879	0.0891	0.0012	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:			Passed	
Snow Block Stat Check:			Passed	
Temperature Check:			Passed	

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name:	SDLT - I87M06P72	Reference Calibration Date:	23-Aug-10 12:14:01
Engineer:	JEREMY.COTHREN	Calibration Date:	04-Nov-10 11:52:55
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1

Logging Source S/N: 20791B			
Aluminum Block S/N: 63074	Density: 2.589g/cc		Pe: 3.140
Magnesium Block S/N: 632386	Density: 1.683g/cc		Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9747	1.0488	0.90 - 1.10
Near Dens Gain	0.9799	1.0542	0.90 - 1.10
Near Peak Gain	0.9884	1.0757	0.90 - 1.10
Near Lith Gain	0.9636	1.0550	0.90 - 1.10
Far Bar Gain	0.9992	1.0053	0.90 - 1.10
Far Dens Gain	0.9868	0.9933	0.90 - 1.10

Far Dens Gain	0.9888	0.9888	0.90 - 1.10
Far Peak Gain	0.9792	0.9898	0.90 - 1.10
Far Lith Gain	0.9565	0.9693	0.90 - 1.10
Near Bar Offset	0.3067	-0.4042	NONE
Near Dens Offset	0.2347	-0.4495	NONE
Near Peak Offset	0.1428	-0.6176	NONE
Near Lith Offset	0.3310	-0.4455	NONE
Far Bar Offset	0.0160	-0.0569	NONE
Far Dens Offset	0.1120	0.0397	NONE
Far Peak Offset	0.1297	0.0244	NONE
Far Lith Offset	0.2374	0.1316	NONE
Near Bar Background	950.19	935.14	700 - 1450
Near Dens Background	311.70	304.92	230 - 480
Near Peak Background	136.69	133.91	100 - 210
Near Lith Background	167.04	165.27	125 - 260
Far Bar Background	566.41	560.38	450 - 900
Far Dens Background	221.59	219.83	175 - 345
Far Peak Background	87.01	86.44	70 - 140
Far Lith Background	90.60	91.09	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.684	1.683	-0.001	+/- 0.015
Pe	2.640	2.547	-0.093	+/- 0.150
ALUMINUM				
Density (g/cc)	2.591	2.589	-0.002	+/- 0.01500
Pe	3.163	3.091	-0.072	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0027	+/- 0.0110	-0.0022	+/- 0.0140
Magnesium Block	-0.0008	+/- 0.0110	-0.0013	+/- 0.0140
Aluminum Block	0.0006	+/- 0.0110	-0.0014	+/- 0.0140
Resolution	9.42	6.00 - 11.50	9.85	6.00 - 11.50
Internal Verifier(B+D+P+L)	1539	1200 - 2700	958	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 - I87M06P72

Reference Calibration Date: 04-Nov-10 11:52:55

Engineer: J.COTHREN

Calibration Date: 11-Nov-10 10:43:56

Software Version: WL INSITE R3.2.1 (Build 7)

Calibration Version: 1

Pad Temperature: 50.0 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1539.247	1540.238	0.991	15.796
Far (B+D+P+L) cps	957.744	959.293	1.549	16.671
Near Resolution	9.42	9.51	0.090	0.50
Far Resolution	9.85	10.23	0.380	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - I87M06P72

Reference Calibration Date: 11-Nov-10 10:43:56

Engineer: J.COTHREN

Calibration Date: 11-Nov-10 15:51:19

Software Version: WL INSITE R3.2.1 (Build 7)

Calibration Version: 1

Pad Temperature: 64.7 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1540.238	1553.520	13.282	15.796
Far (B+D+P+L) cps	959.293	959.779	0.486	16.671
Near Resolution	9.51	9.46	-0.050	0.50
Far Resolution	10.23	9.89	-0.340	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - I87M06P72

Reference Calibration Date: 29-Jun-10 13:03:18

Engineer: J. BROWNAWELL

Calibration Date: 29-Aug-10 18:00:58

Software Version: WL INSITE R3.0.6 (Build 4)

Calibration Version: 1

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1853.01	-1978.66	-7000.00 - -1000.00
Pad Gain	0.0003804	0.0003853	0.000200 - 0.000600
Arm Offset	-1387.84	-1757.27	-5000.00 - 3000.00
Arm Gain	0.0004900	0.0004993	0.000300 - 0.000700
Arm Power	-0.000004600	-0.000004791	-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	Calibrated	Control Limit On
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Measurement	(Previous Coeff.)	(New Coeff.)	Change	New Value
PAD EXTENSION:				
Small Ring (in)	2.02	2.00	-0.02	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.68	6.50	-0.18	+/- 0.20
Medium Ring (in)	8.40	8.25	-0.15	+/- 0.20
Large Ring (in)	15.05	15.00	-0.05	+/- 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 - I87M06P72	Reference Calibration Date:	29-Aug-10 18:00:58	
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 10:48:29	
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1	
MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.71	-0.04	+/- 0.10
Ring Diameter	8.25	8.23	-0.02	+/- 0.15
PASS/FAIL SUMMARY				
Pad Extension Check:			Passed	
Diameter Check:			Passed	

SDLT CALIPER POST CALIBRATION				
Tool Name:	SDLT - I87M06P72	Reference Calibration Date:	11-Nov-10 10:48:29	
Engineer:	J.COTHREN	Calibration Date:	11-Nov-10 15:54:44	
Software Version:	WL INSITE R3.2.1 (Build 7)	Calibration Version:	1	
MEASURED CALIPER VALUES				
Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.71	3.75	0.04	+/- 0.10
Ring Diameter	8.23	8.13	-0.09	+/- 0.15
PASS/FAIL SUMMARY				
Pad Extension Check:			Passed	
Diameter Check:			Passed	

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11013113						
Gamma Ray Calibrator	225.0	220.9	222.5	-1.6	+/- 9.00	api
DSNT-11020487						
Snow-Block Porosity	0.0859	0.0879	0.0891	-0.0012	+/- 0.0150	decp
SDLT-I87M06P72						
Near(B+D+P+I)	1539 247	1540 238	1553 520	-13 282	+/-15 796	cps

Far(B+D+P+L)	957.744	959.293	959.779	-0.486	+/-16.671	cps
Pad Extension	3.75	3.71	3.75	-0.04	+/-0.10	in
Ring Diameter	8.25	8.23	8.13	0.100	+/-0.15	in

Data: LAURA_21-1\0001 QUAD_RED\IDLE	Date: 11-Nov-10 16:00:33
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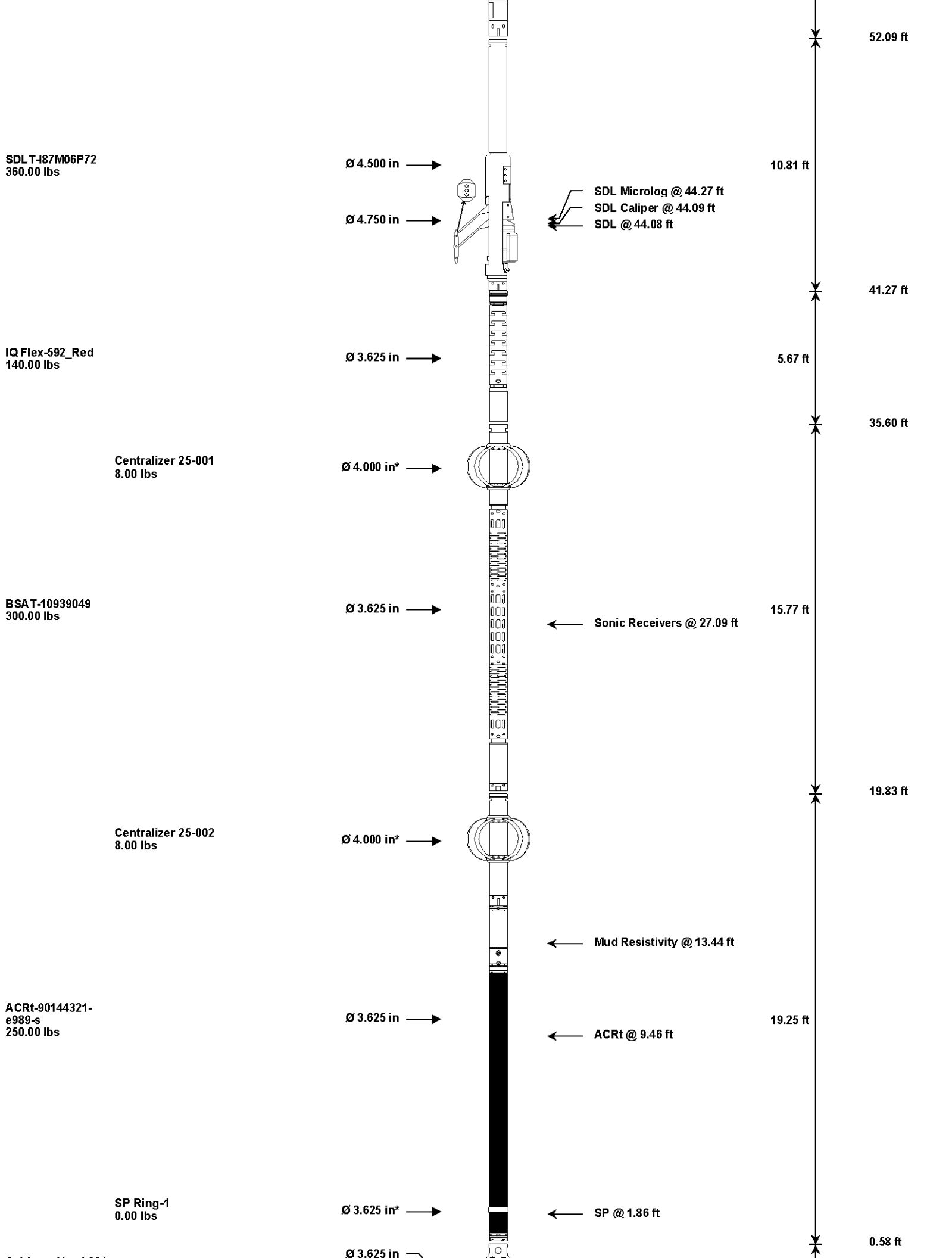
INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
GTET				
TPUL	Tension Pull	64.23	NO	
GR	Natural Gamma Ray API	64.23	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	64.23	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	64.23	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	53.99	NO	
RNDS	Near Detector Telemetry Counts	54.09	BLK	1.417
RFDS	Far Detector Telemetry Counts	54.84	TRI	0.583
DNTT	DSN Tool Temperature	54.09	NO	
DSNS	DSN Tool Status	53.99	NO	
ERND	Near Detector Telemetry Counts EVR	54.09	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	54.84	BLK	0.000
ENTM	DSN Tool Temperature EVR	54.09	NO	
SDLT				
TPUL	Tension Pull	44.08	NO	
NAB	Near Above	43.90	BLK	0.920
NHI	Near Cesium High	43.90	BLK	0.920
NLO	Near Cesium Low	43.90	BLK	0.920
NVA	Near Valley	43.90	BLK	0.920
NBA	Near Barite	43.90	BLK	0.920
NDE	Near Density	43.90	BLK	0.920
NPK	Near Peak	43.90	BLK	0.920
NLI	Near Lithology	43.90	BLK	0.920
NBAU	Near Barite Unfiltered	43.90	BLK	0.250
NLIU	Near Lithology Unfiltered	43.90	BLK	0.250
FAB	Far Above	44.26	BLK	0.250
FHI	Far Cesium High	44.26	BLK	0.250
FLO	Far Cesium Low	44.26	BLK	0.250
FVA	Far Valley	44.26	BLK	0.250
FBA	Far Barite	44.26	BLK	0.250
FDE	Far Density	44.26	BLK	0.250
FPK	Far Peak	44.26	BLK	0.250

FLI	Far Lithology	44.26	BLK	0.250
PTMP	Pad Temperature	44.09	BLK	0.920
NHV	Near Detector High Voltage	41.28	NO	
FHV	Far Detector High Voltage	41.28	NO	
ITMP	Instrument Temperature	41.28	NO	
DDHV	Detector High Voltage	41.28	NO	
TPUL	Tension Pull	44.09	NO	
PCAL	Pad Caliper	44.09	TRI	0.250
ACAL	Arm Caliper	44.09	TRI	0.250
TPUL	Tension Pull	44.28	NO	
MINV	Microlog Lateral	44.28	BLK	0.750
MNOR	Microlog Normal	44.28	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
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	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	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	
SP Ring				
PLTC	Plot Control Mask	1.86	NO	
SP	Spontaneous Potential	1.86	BLK	1.250
SPR	Raw Spontaneous Potential	1.86	NO	
SPO	Spontaneous Potential Offset	1.86	NO	
Data: LAURA_21-110001 QUAD_RED\\IDLE				Date: 11-Nov-10 13:26:57

HALLIBURTON						
TOOL STRING DIAGRAM REPORT						
Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-590_BLK 37.50 lbs		Ø 2.750 in →		← Temperature @ 72.30 ft	3.03 ft	73.32 ft
GTET-11013113 165.00 lbs		Ø 3.625 in →		← GammaRay @ 64.23 ft	8.52 ft	70.30 ft
DSNT-11020487 174.00 lbs	DSN Decentralizer- 10735144 6.60 lbs	Ø 3.625 in* → Ø 3.625 in →		← DSN Far @ 54.84 ft ← DSN Near @ 54.09 ft	9.69 ft	61.77 ft



Cabbage Head-001
10.00 lbs

Ø 6.000 in →



0.58 ft
↓

0.00 ft

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	590_BLK	37.50	3.03	70.30	300.00
GTET	Gamma Telemetry Tool	11013113	165.00	8.52	61.77	60.00
DSNT	Dual Spaced Neutron	11020487	174.00	9.69	52.09	60.00
DCNT	DSN Decentralizer	10735144	6.60	5.13	* 55.42	300.00
SDLT	Spectral Density Tool	I87M06P72	360.00	10.81	41.27	60.00
IQF	IQ Flex tool	592_Red	140.00	5.67	35.60	300.00
BSAT	Borehole Sonic Array Tool	10939049	300.00	15.77	19.83	60.00
OBCEN	Centralizer - 25 in. Overbody	001	8.00	2.08	* 32.68	300.00
ACRt	Array Compensated True Resistivity	90144321-e989-s	250.00	19.25	0.58	300.00
SP	SP Ring	1	0.00	0.25	* 1.86	300.00
OBCEN	Centralizer - 25 in. Overbody	002	8.00	2.08	* 16.78	300.00
CBHD	Cabbage Head	001	10.00	0.58	0.00	300.00
Total			1,459.10	73.32		
* Not included in Total Length and Length Accumulation.						
Data: LAURA_21-1\0001 QUAD_RED\IDLE					Date: 11-Nov-10 11:13:43	

HALLIBURTON

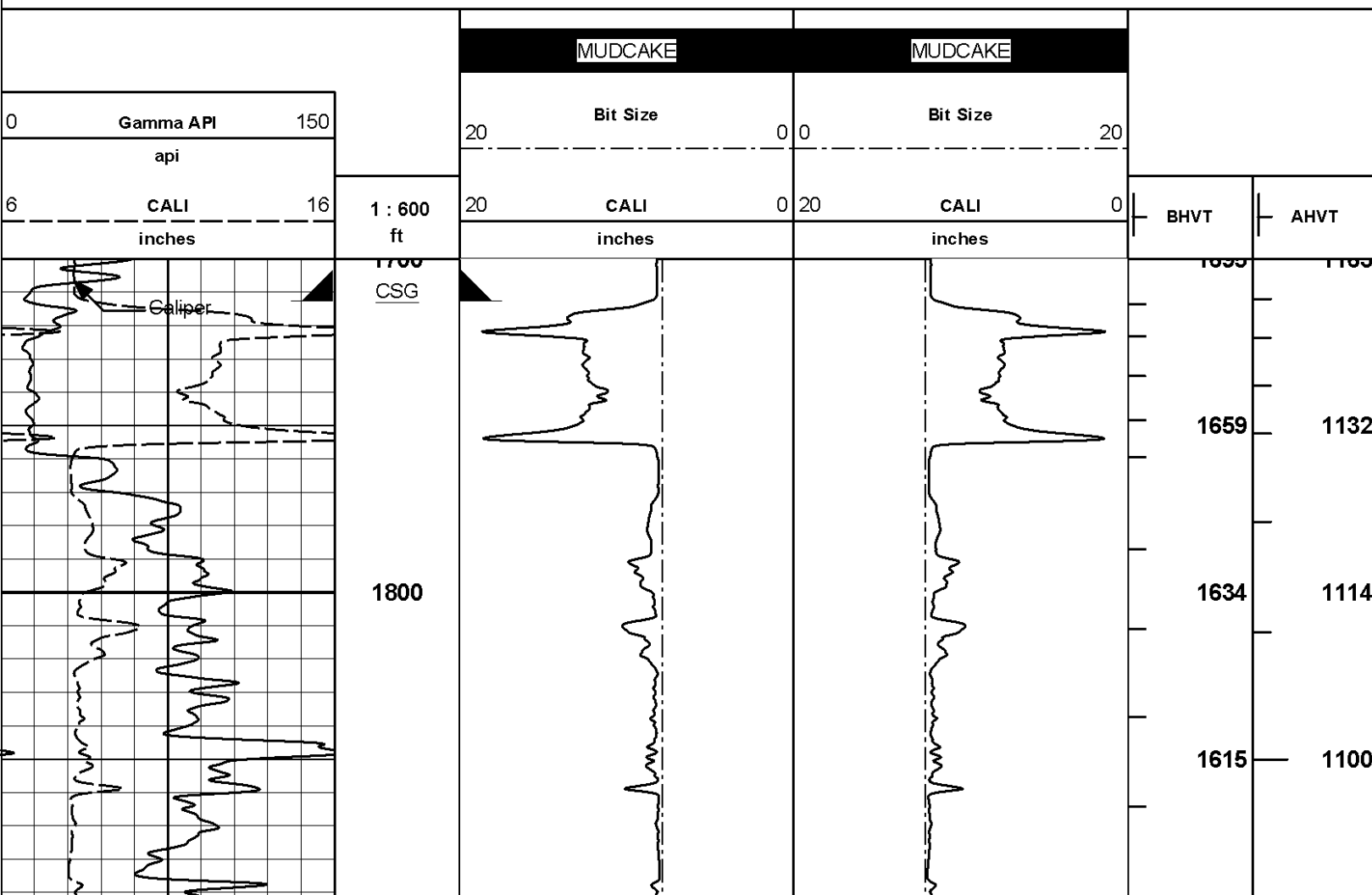
Plot Time: 11-Nov-10 16:40:28

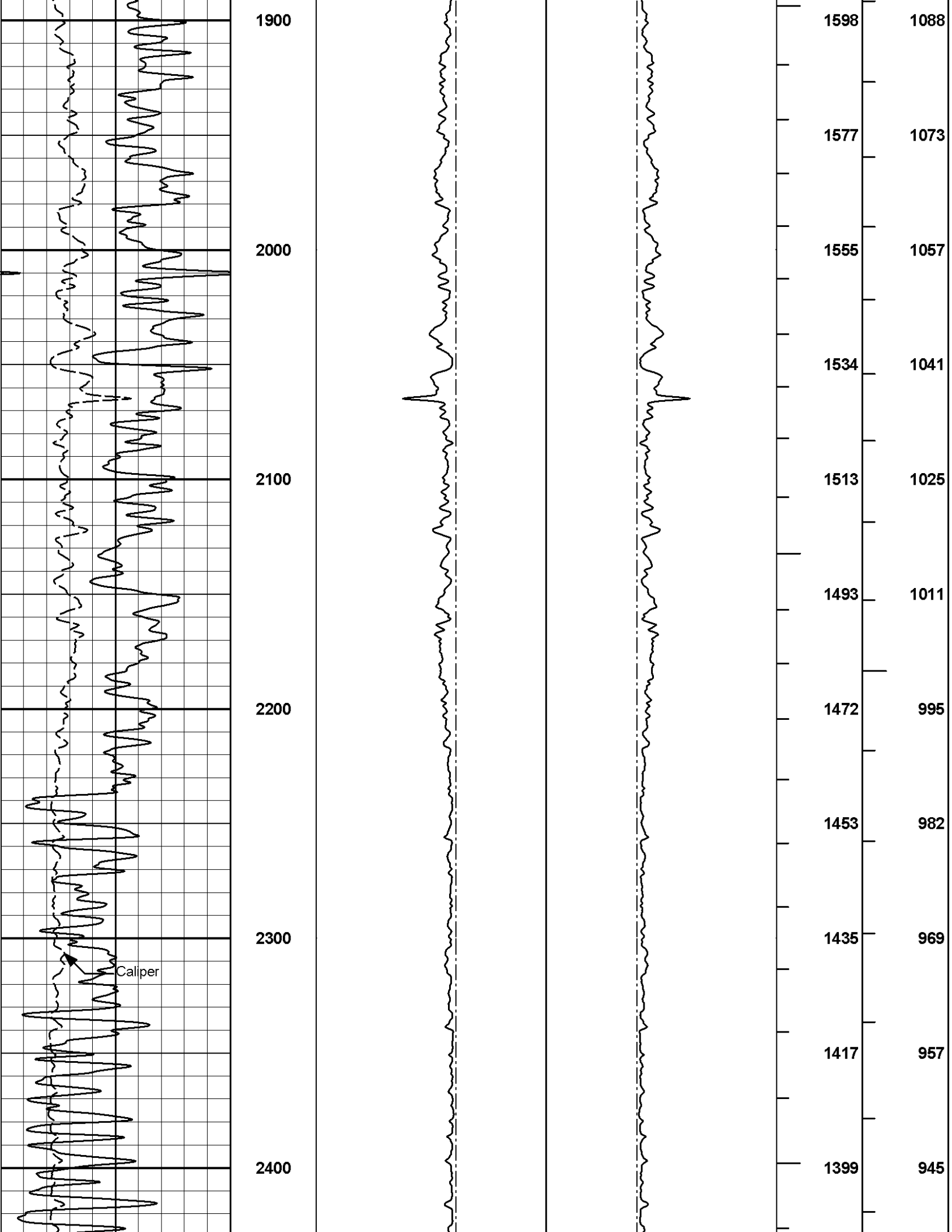
Plot Range: 1700 ft to 6560.42 ft

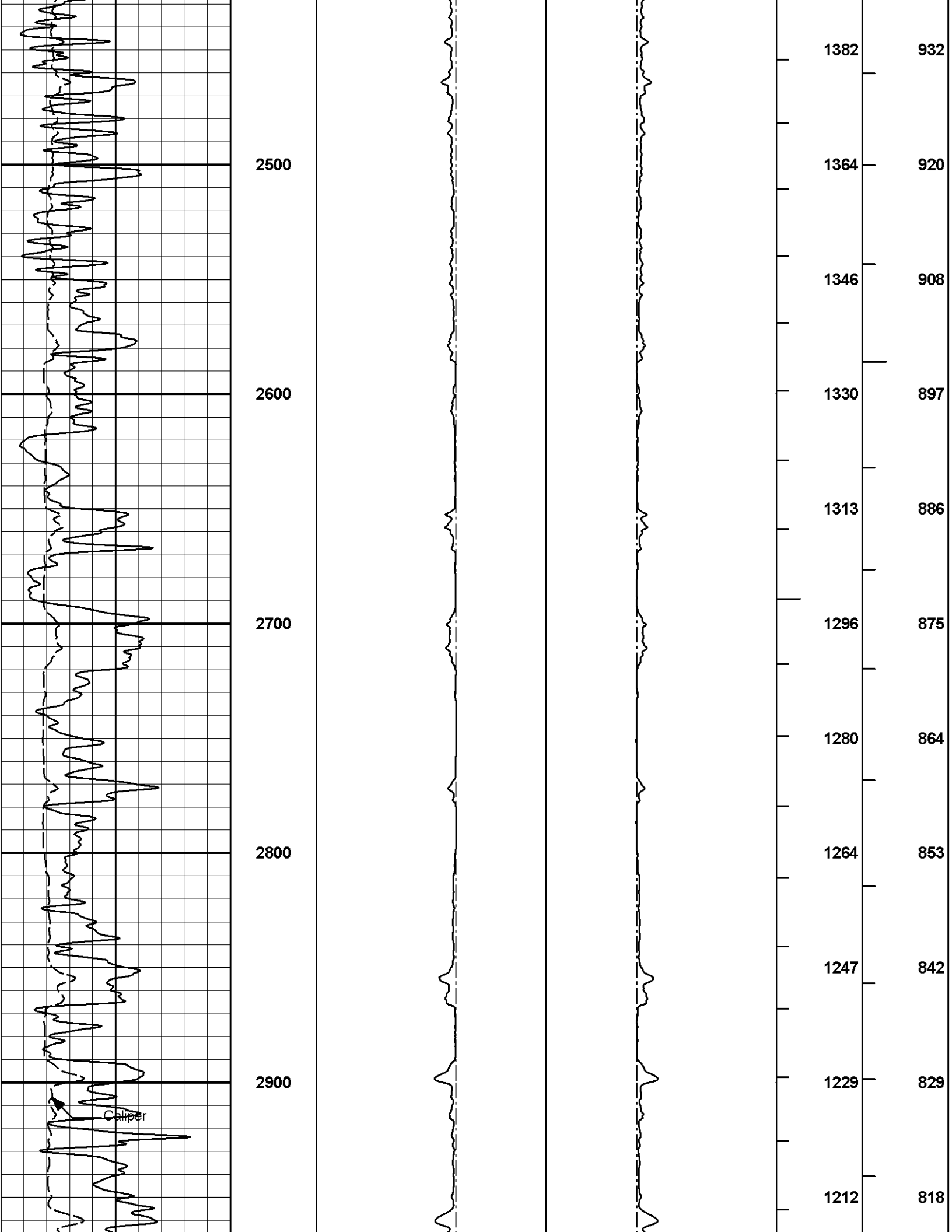
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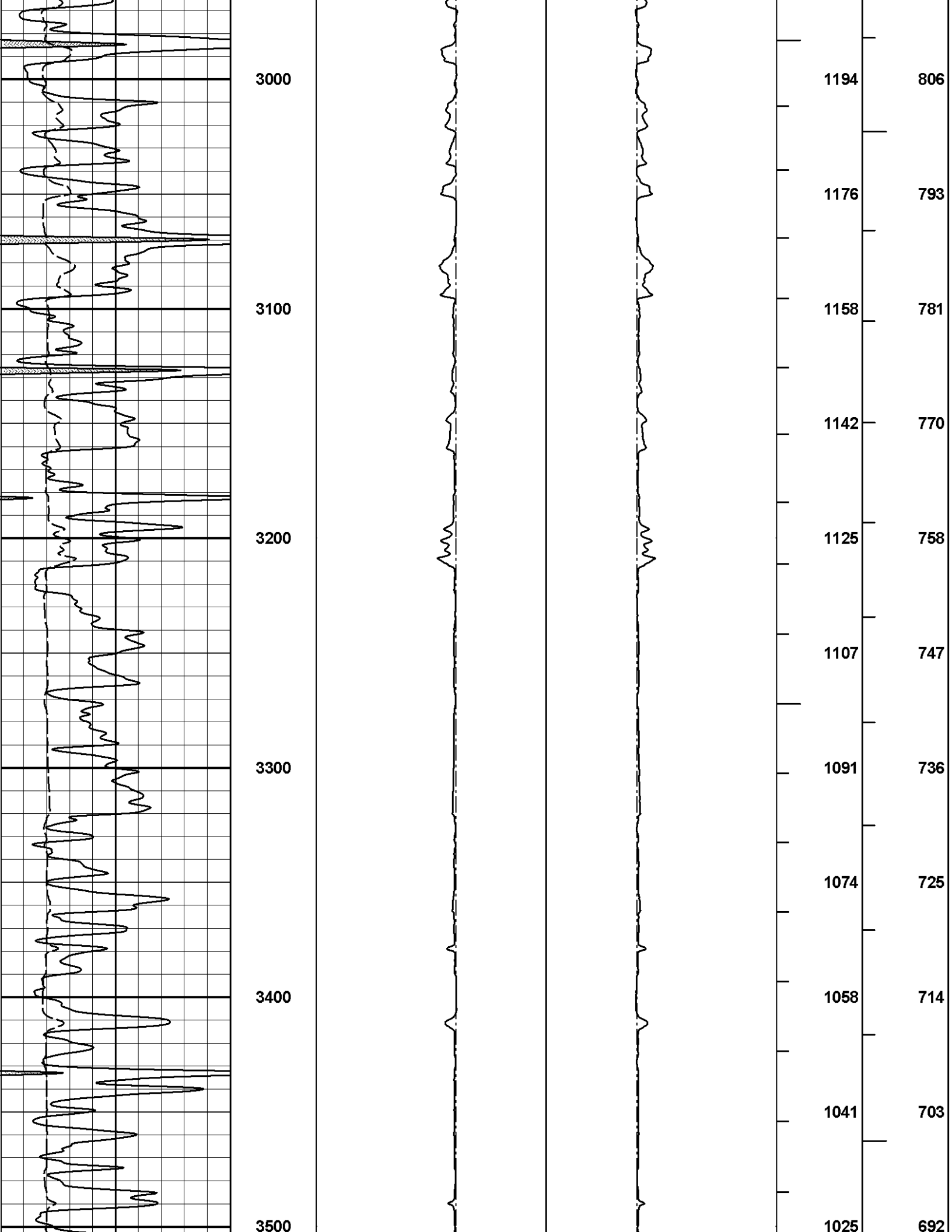
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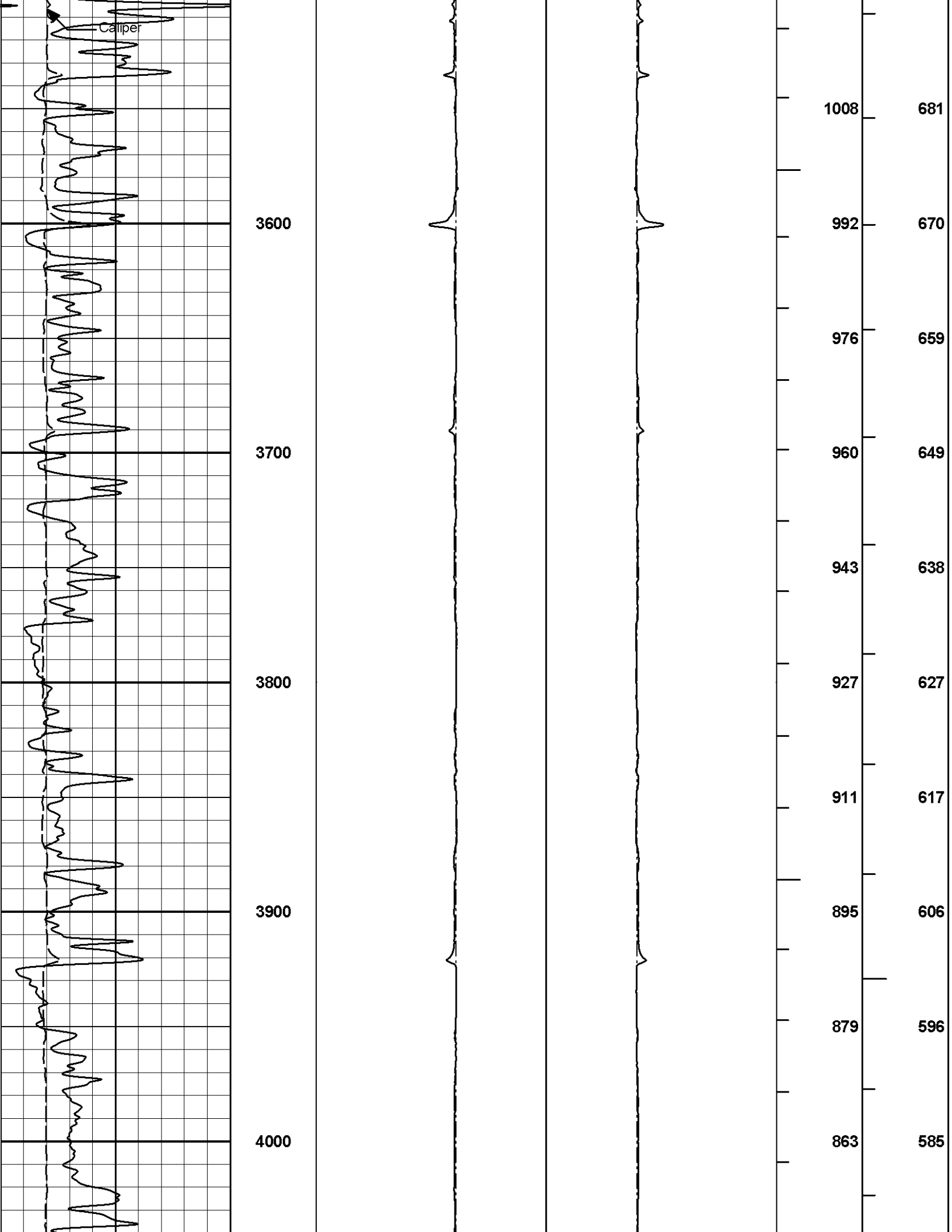
ANNULAR HOLE VOLUME PLOT - 4.5" CASING

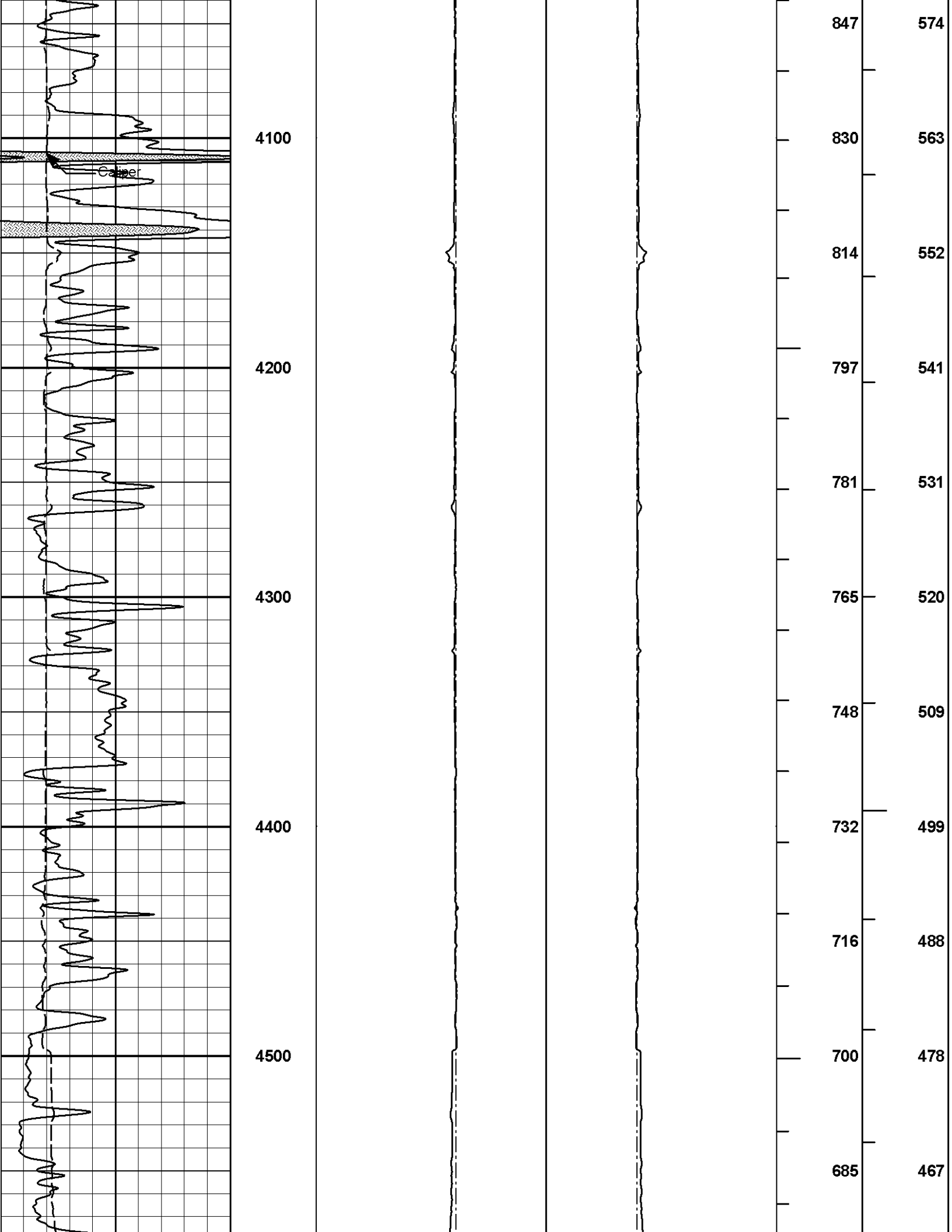


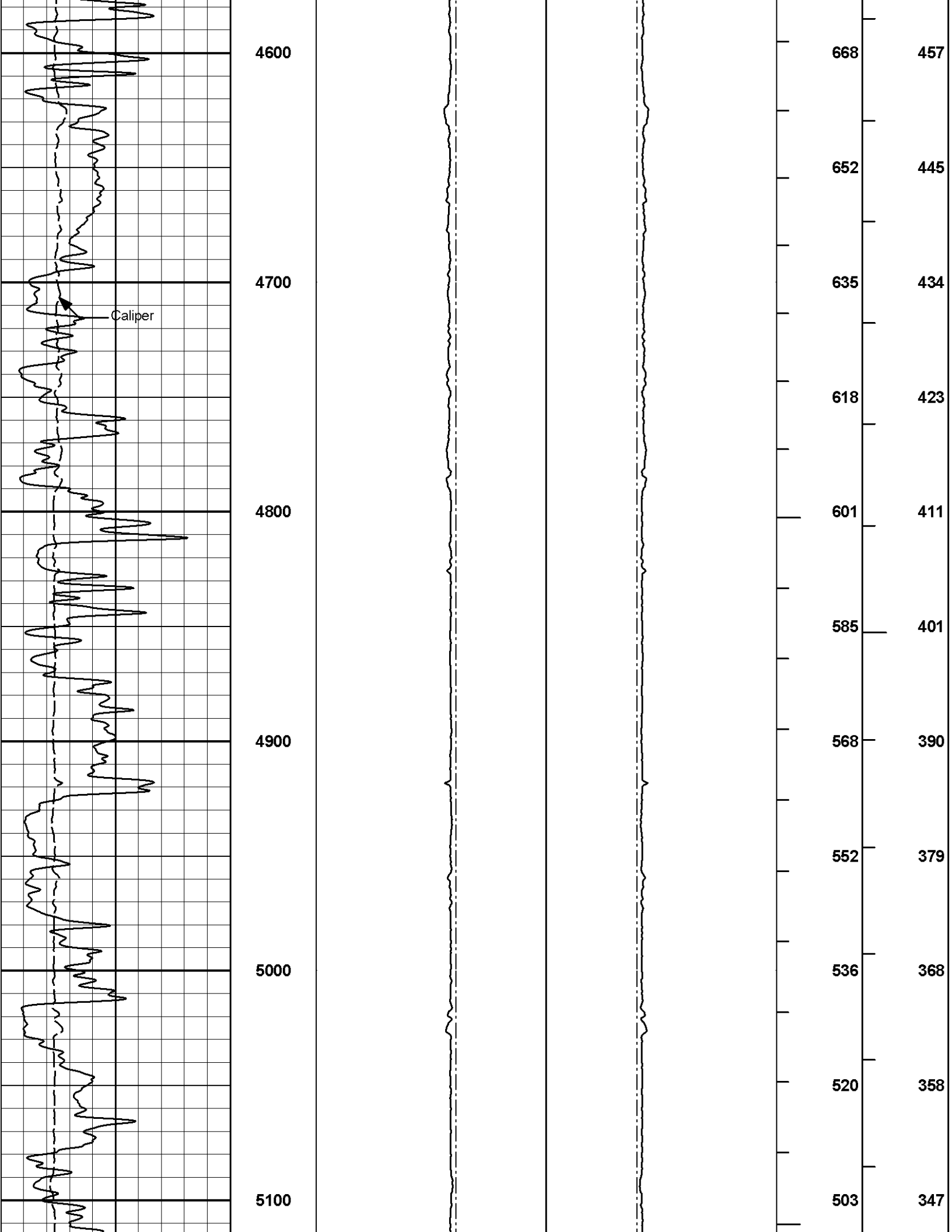


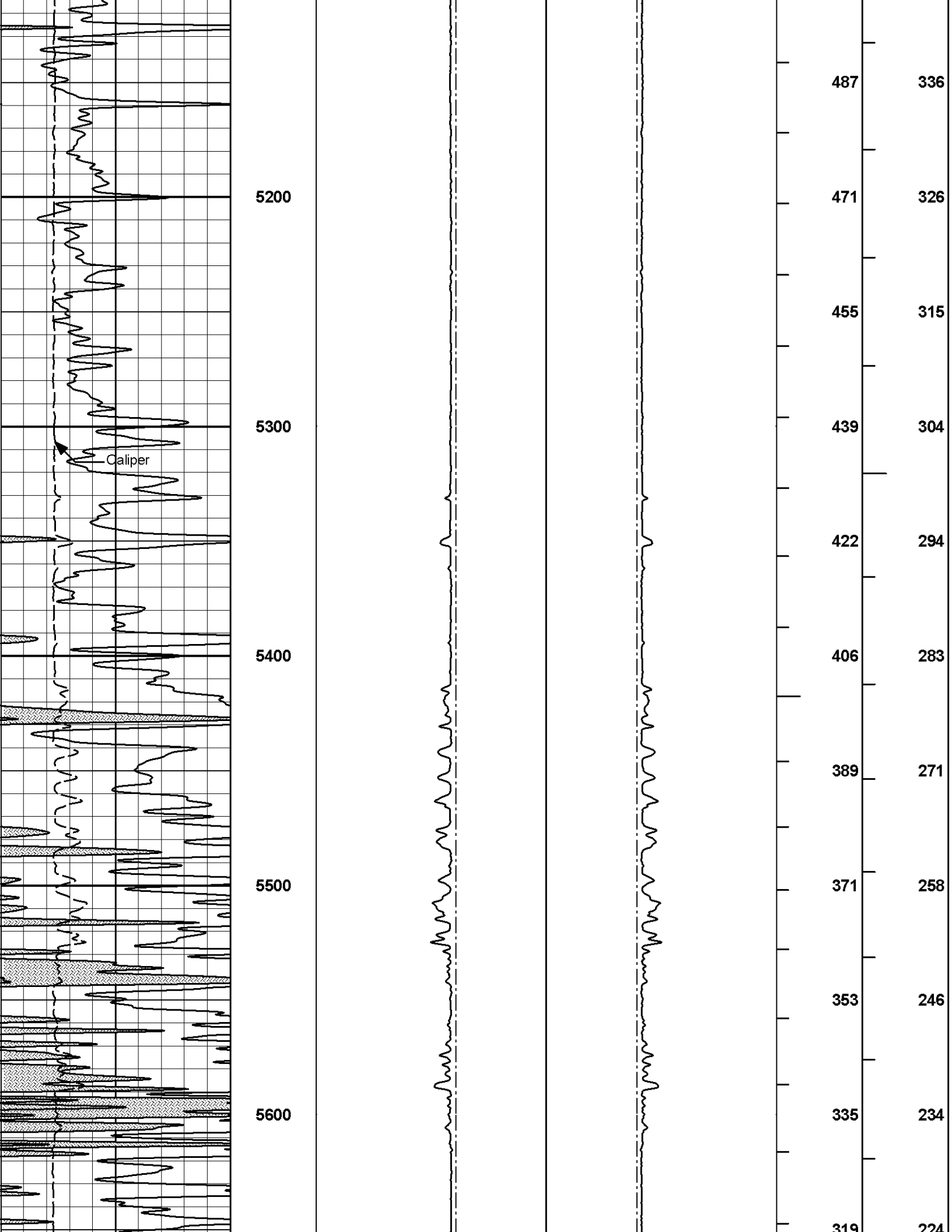


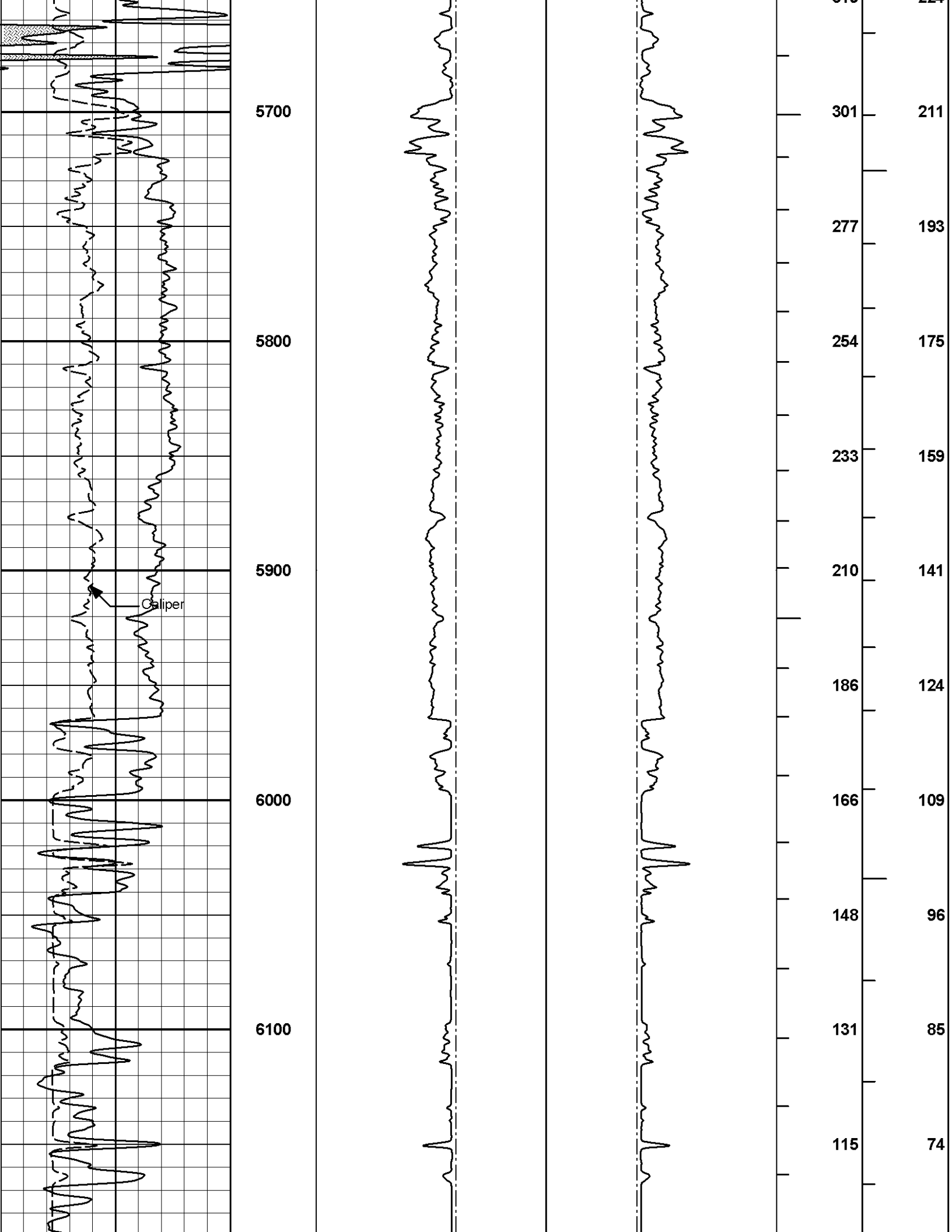


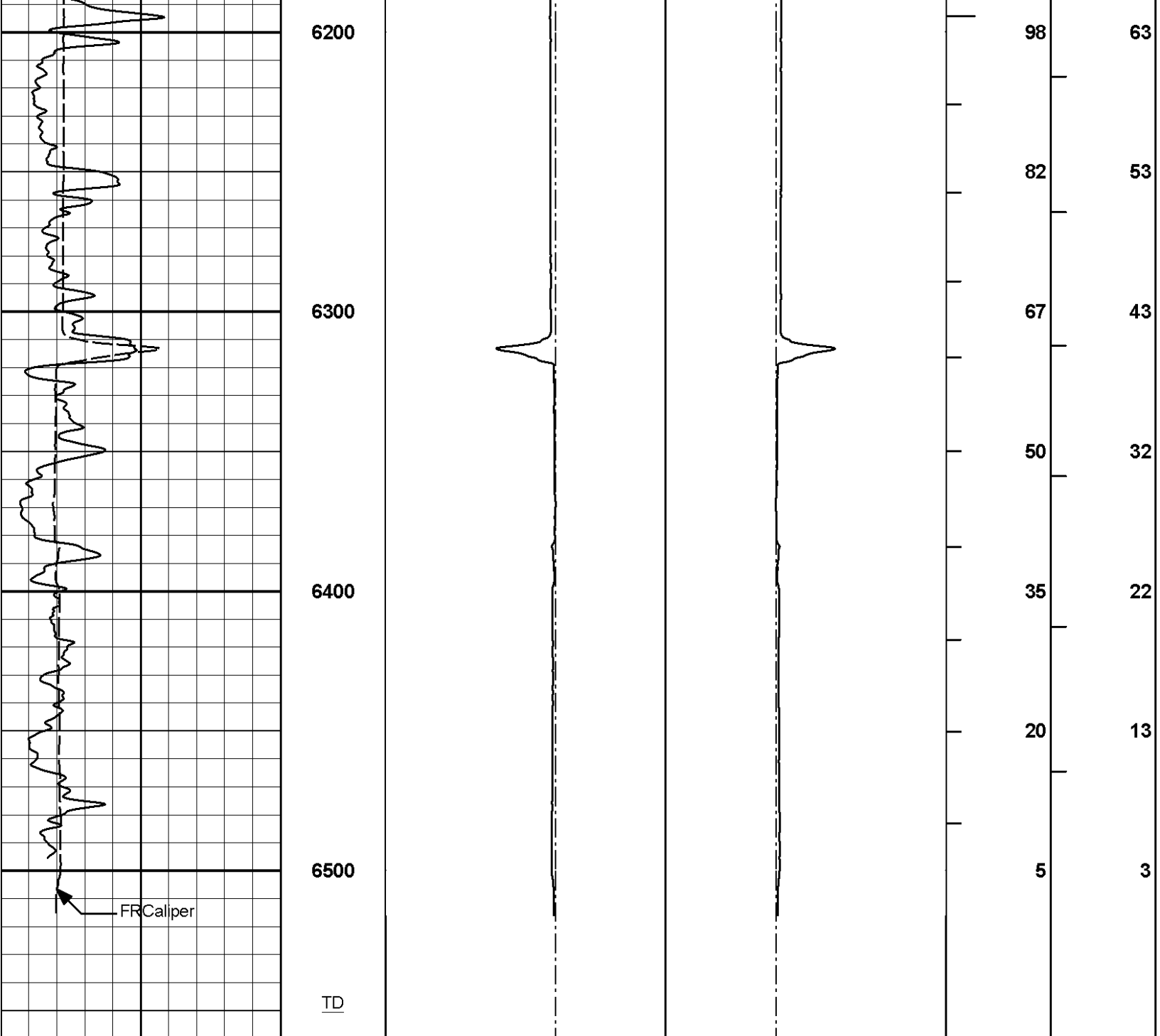












6 CALI 16 inches 0 Gamma API 150 api	1 : 600 ft	20 CALI 0 inches	20 CALI 0 inches	BHVT	AHVT
		20 Bit Size 0 0 20	20 Bit Size 0 0 20		
		MUDCAKE MUDCAKE			

HALLIBURTON

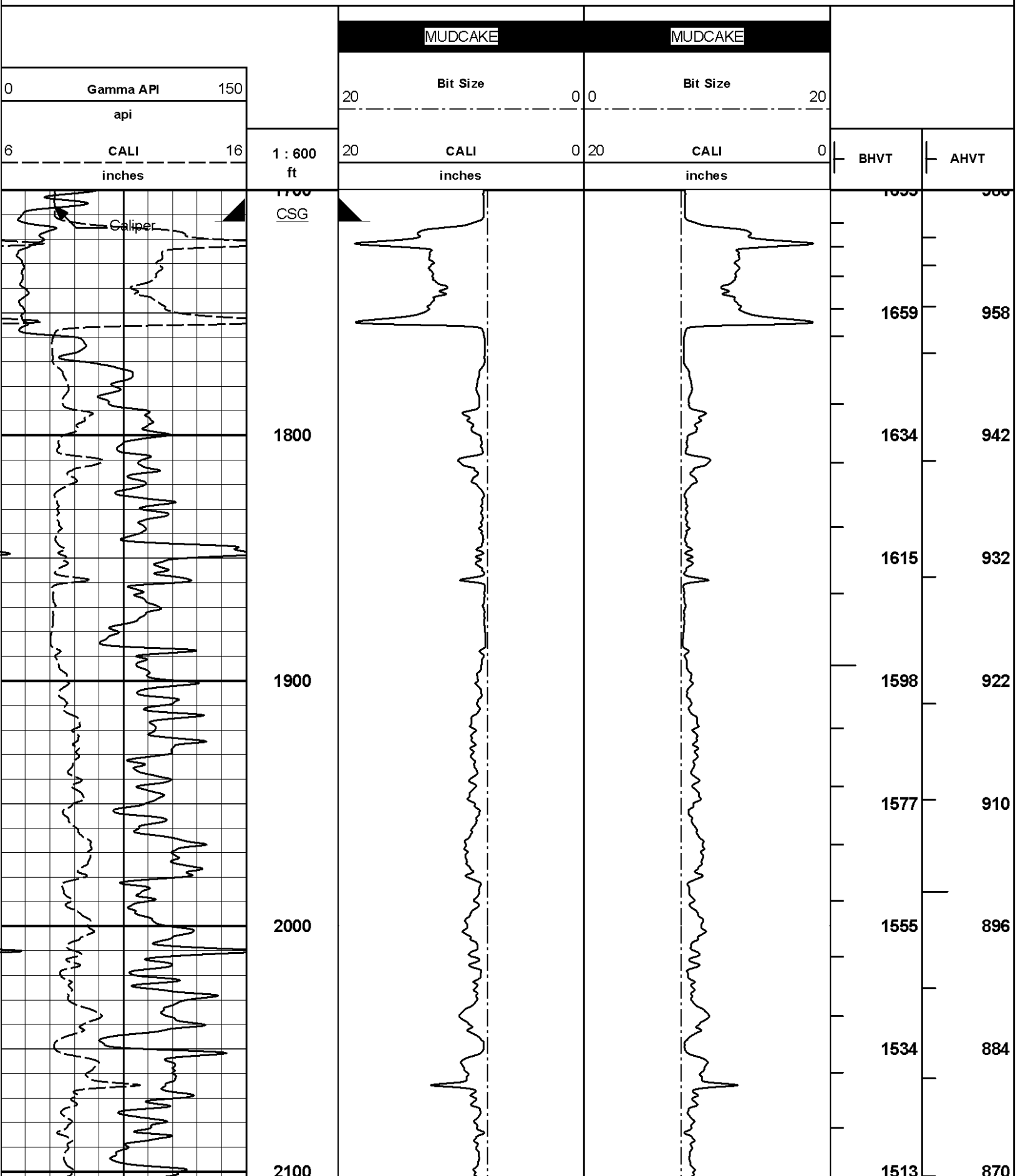
Plot Time: 11-Nov-10 16:40:33
Plot Range: 1700 ft to 6560.42 ft
Data: LAURA_21-1\Well Based\DAQ-0001-004\
Plot File: \\-LOCAL-LAURA_21-1\0001 QUAD_RED\PORO\1_AHV Plot_x

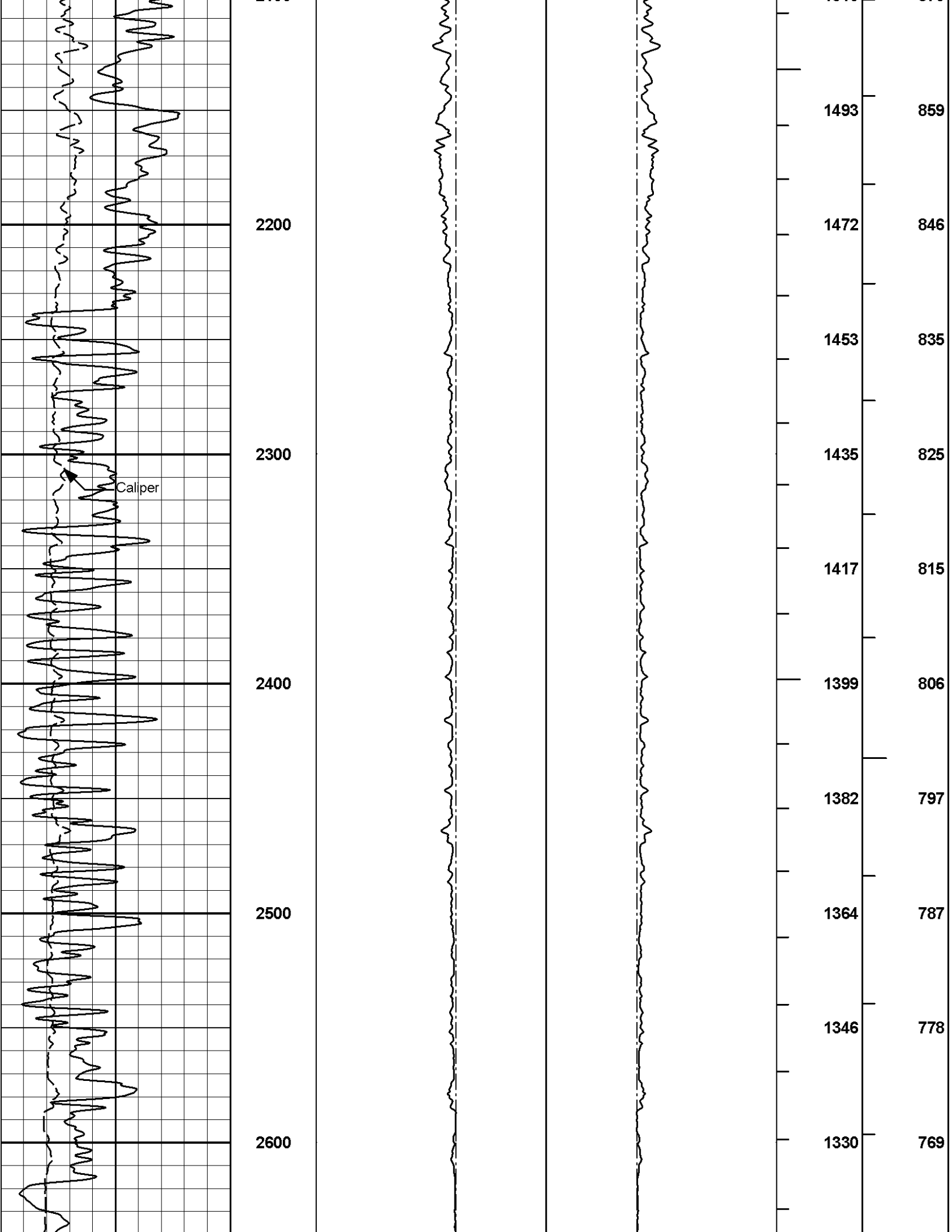
ANNULAR HOLE VOLUME PLOT - 4.5" CASING

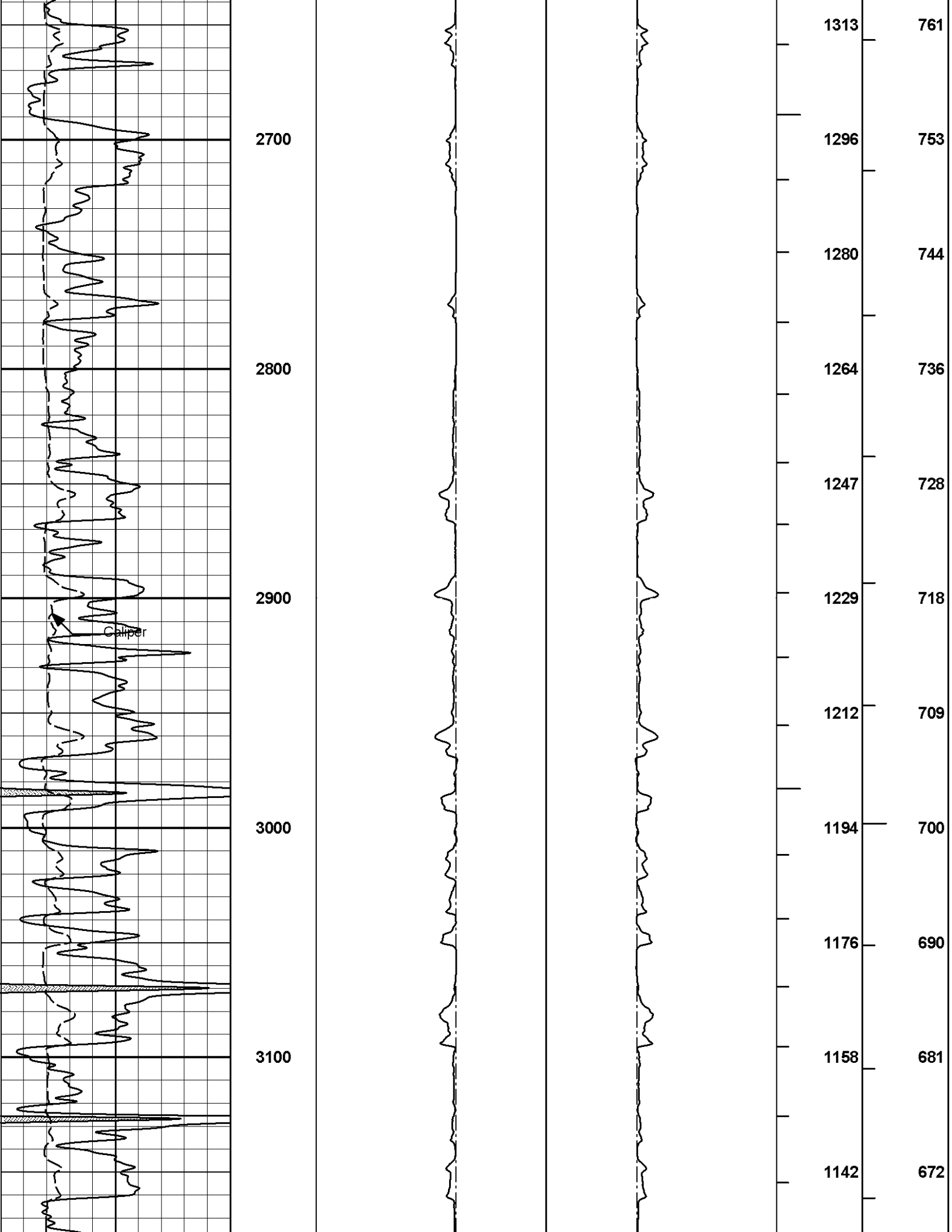
HALLIBURTON

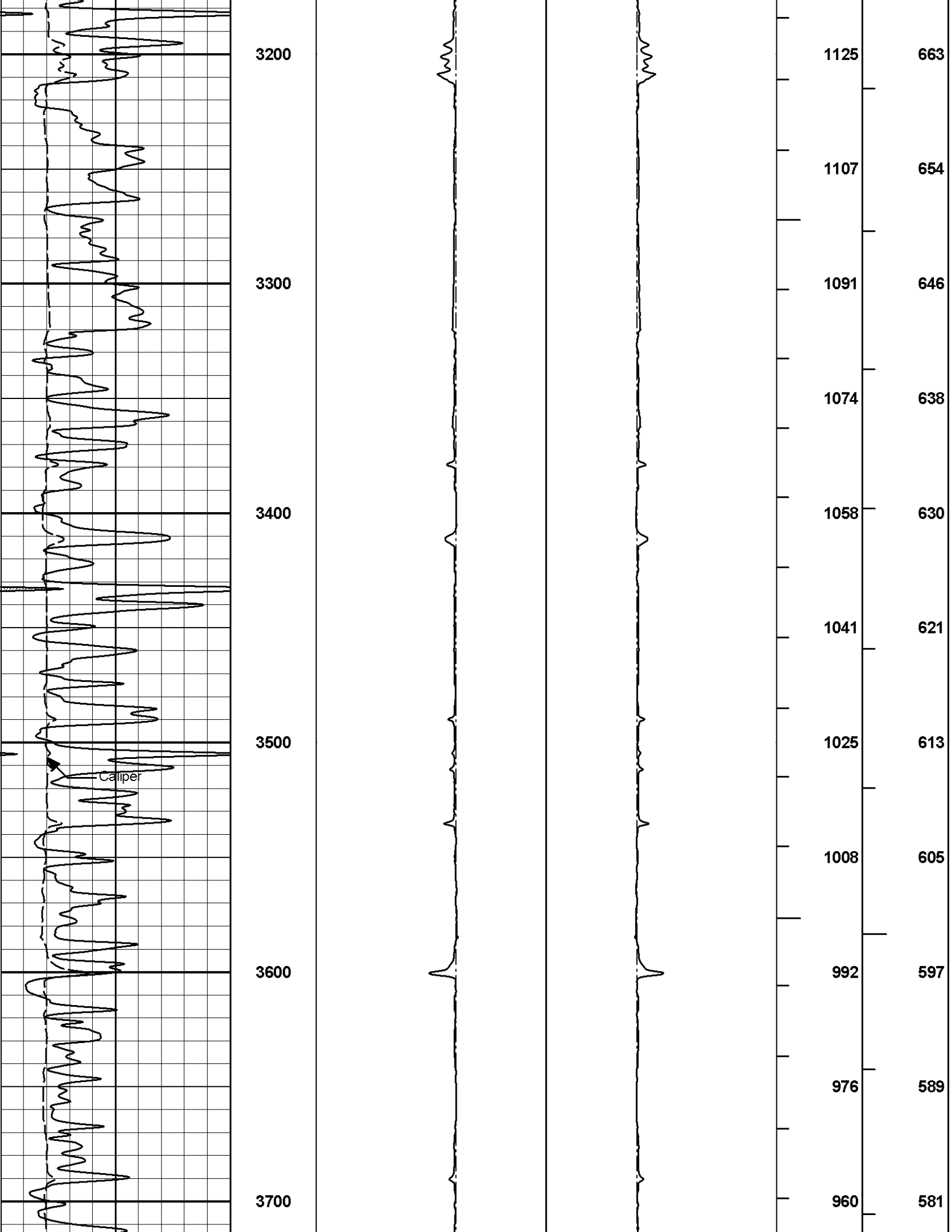
Plot Time: 11-Nov-10 16:40:33
Plot Range: 1700 ft to 6560.42 ft

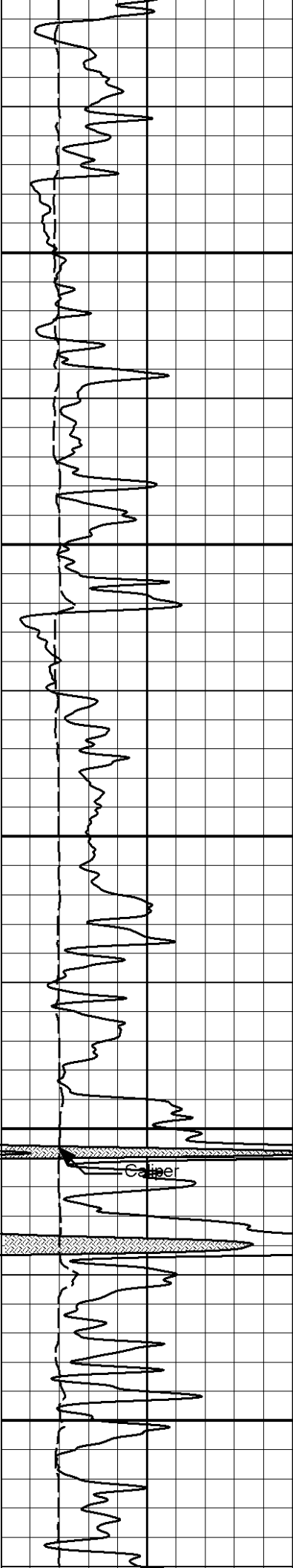
ANNULAR HOLE VOLUME PLOT - 5.5" CASING











3800

3900

4000

4100

4200

Casper

943

573

927

565

911

558

895

550

879

542

863

534

847

526

830

518

814

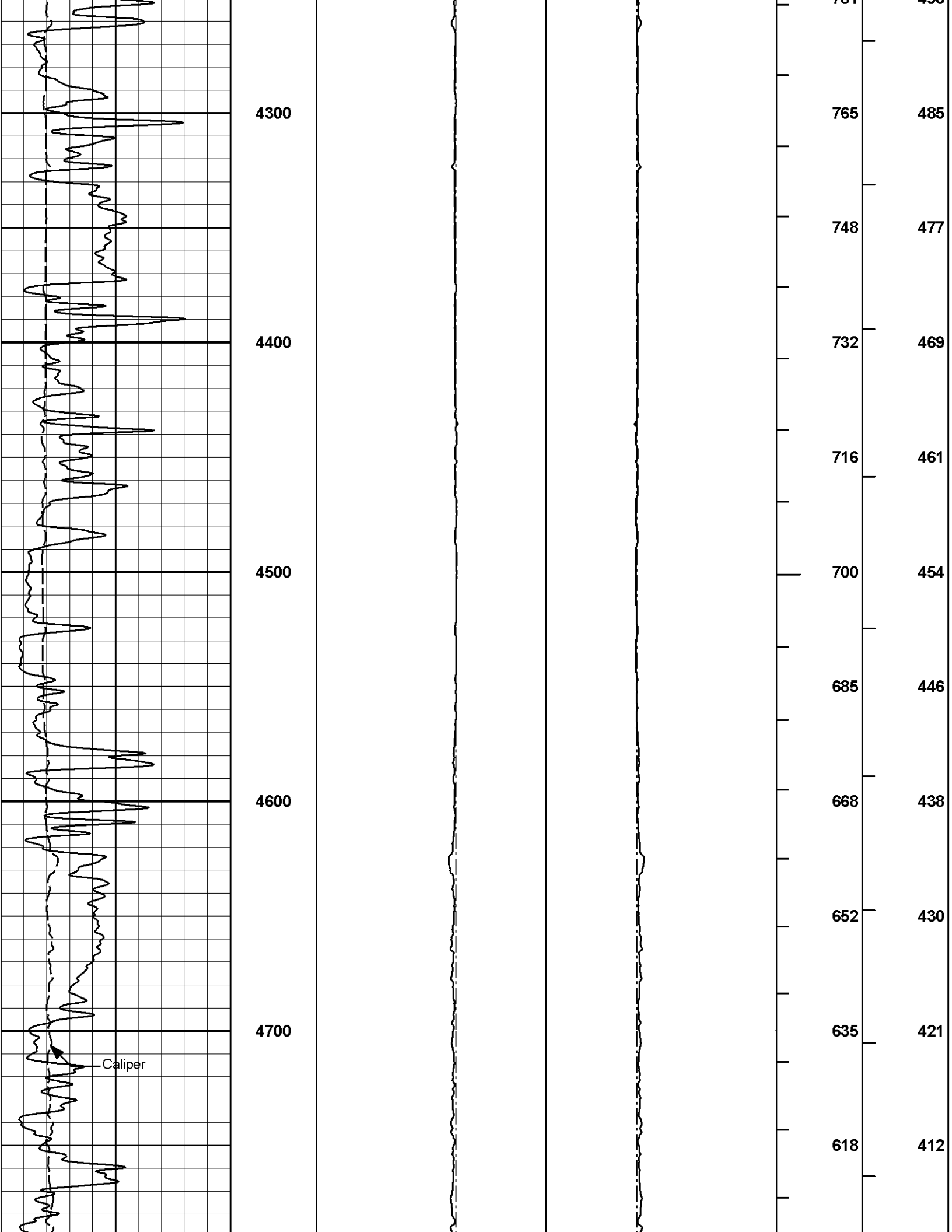
509

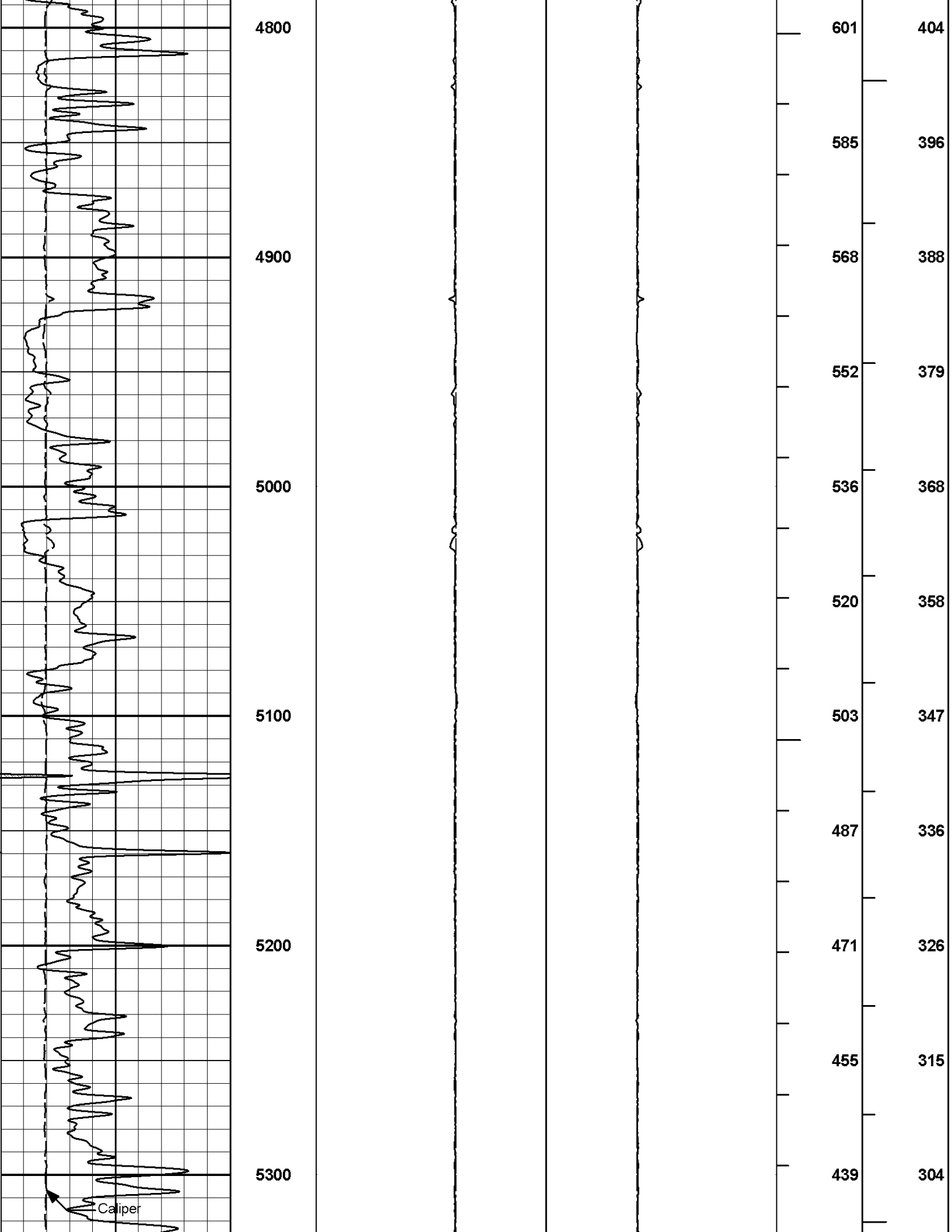
797

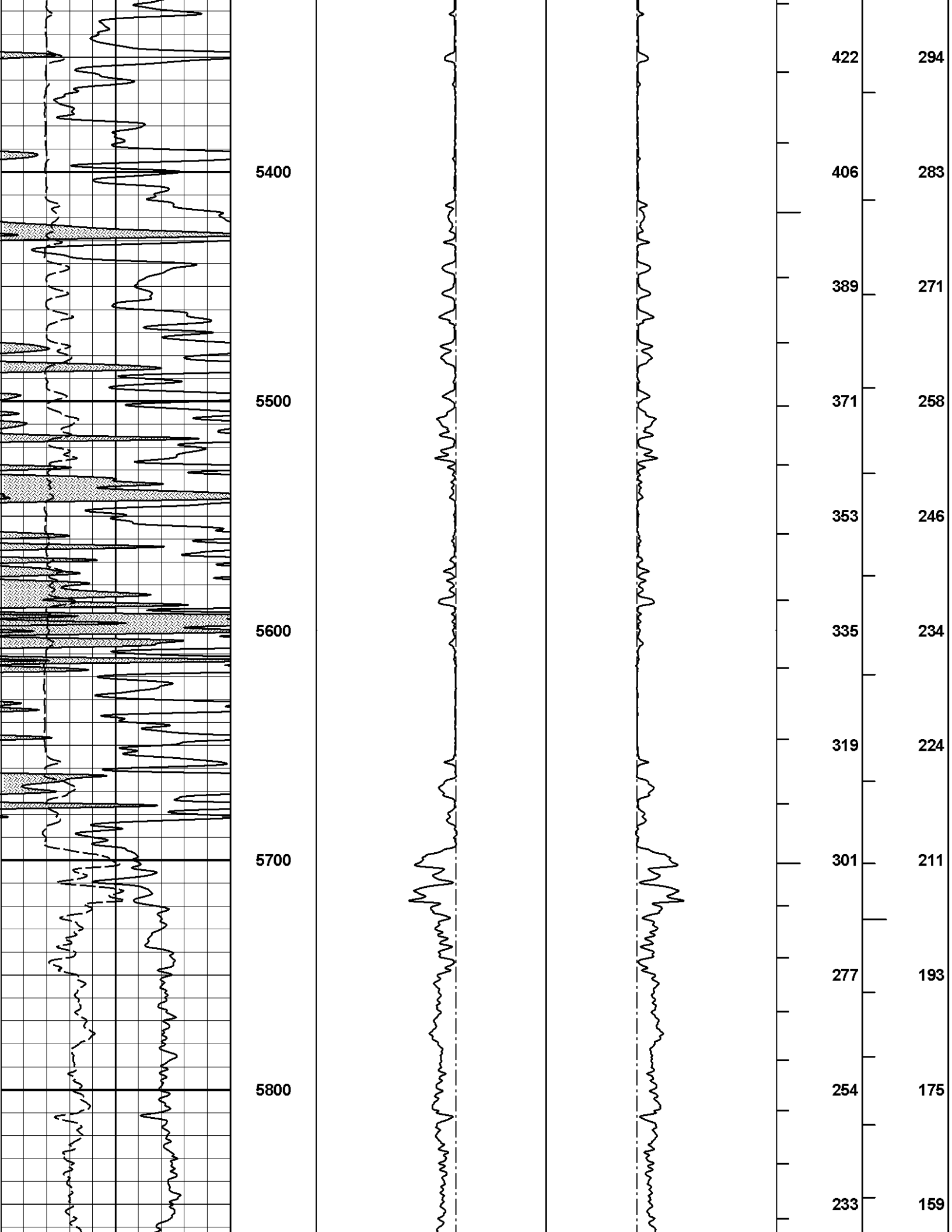
501

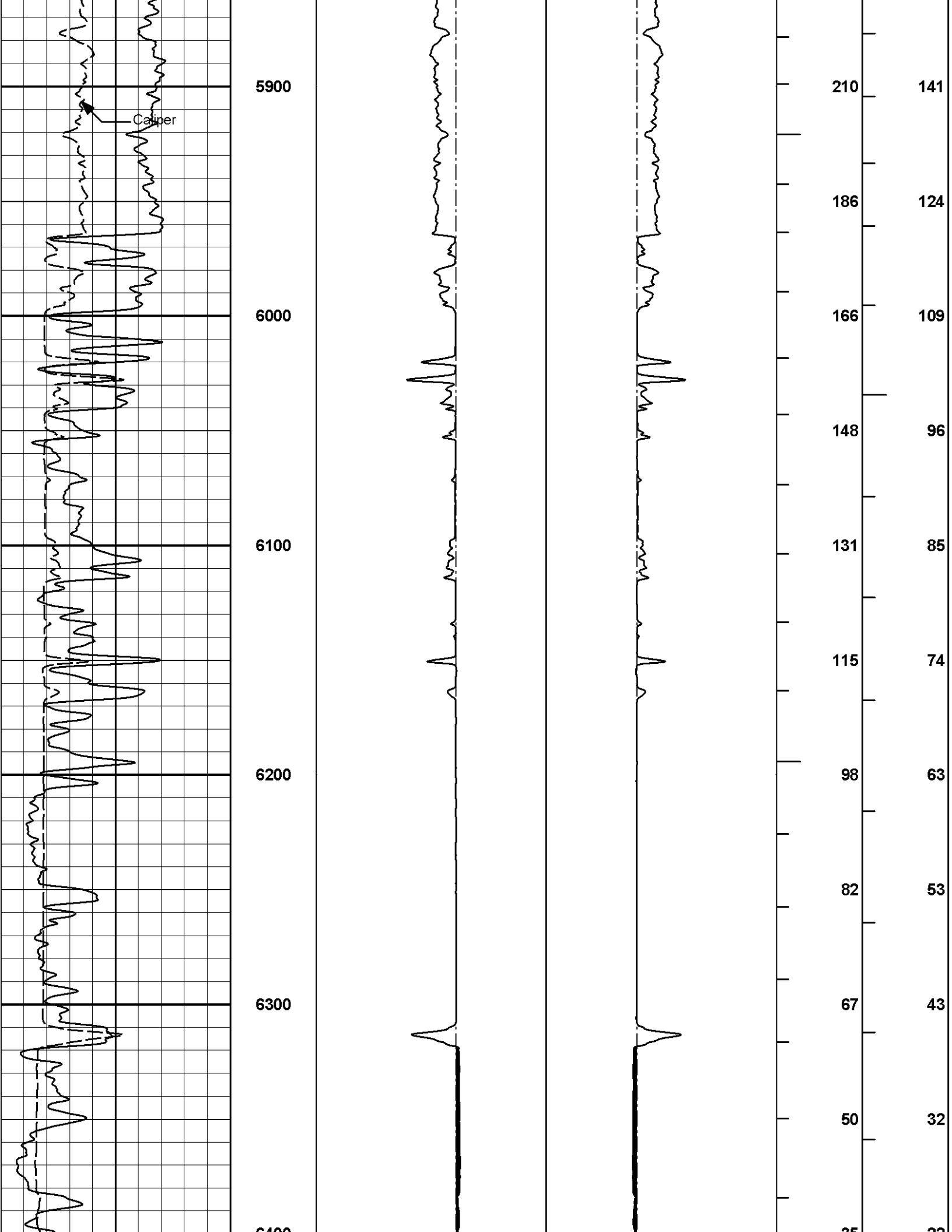
781

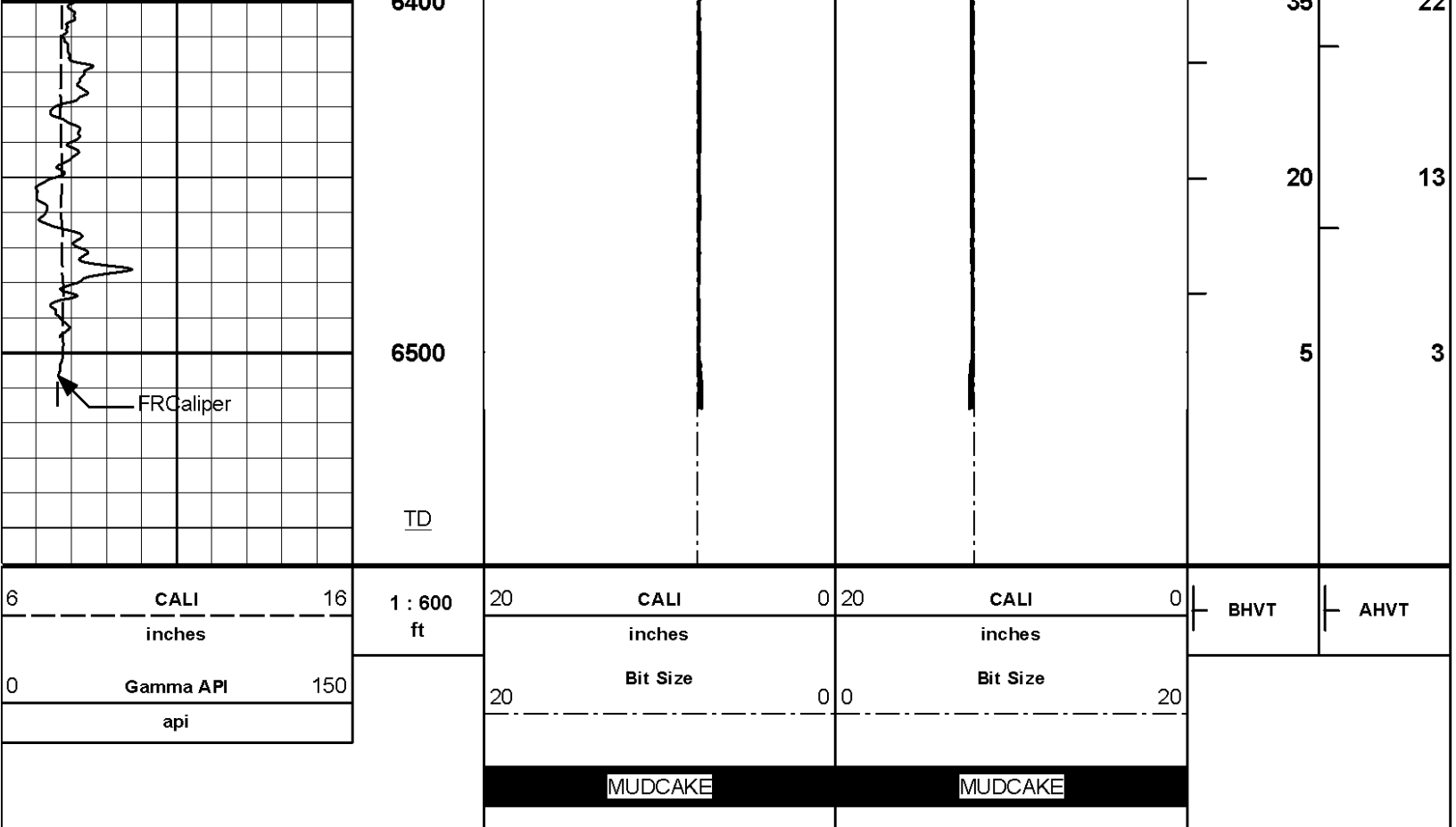
493











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Plot Time: 11-Nov-10 16:40:47
Plot Range: 1700 ft to 6560.42 ft
Data: LAURA_21-1\Well Based\DAQ-0001-004.01\
Plot File: \\-LOCAL-LAURA_21-1\0001 QUAD_RED\PORO\1_AHV Plot_x

ANNULAR HOLE VOLUME PLOT - 5.5" CASING

COMPANY	EOG RESOURCES		
WELL	LAURA 21#1		
FIELD	WILD CAT		
COUNTY	STEVENS	STATE	KANSAS

HALLIBURTON	SPECTRAL DENSITY DUAL SPACED NEUTRON LOG
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