

**BOREHOLE
COMPENSATED
SONIC
LOG**

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

Service Ticket No.: 904731126				API No.: 15-175-22259-00-00				PGM Version: WL INSITE R5.6.3 (Build 4)						
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.			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	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	

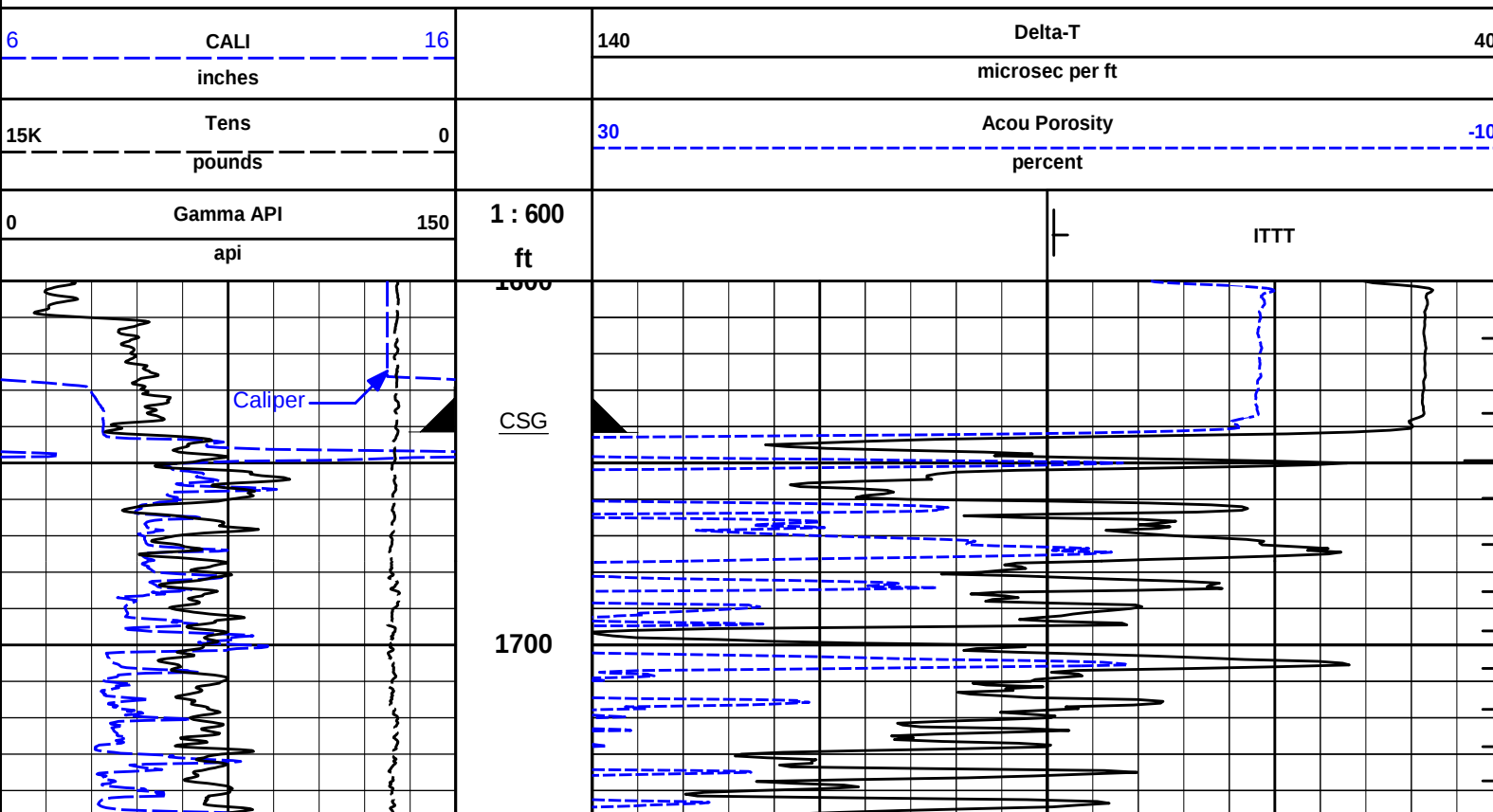
[illegible]

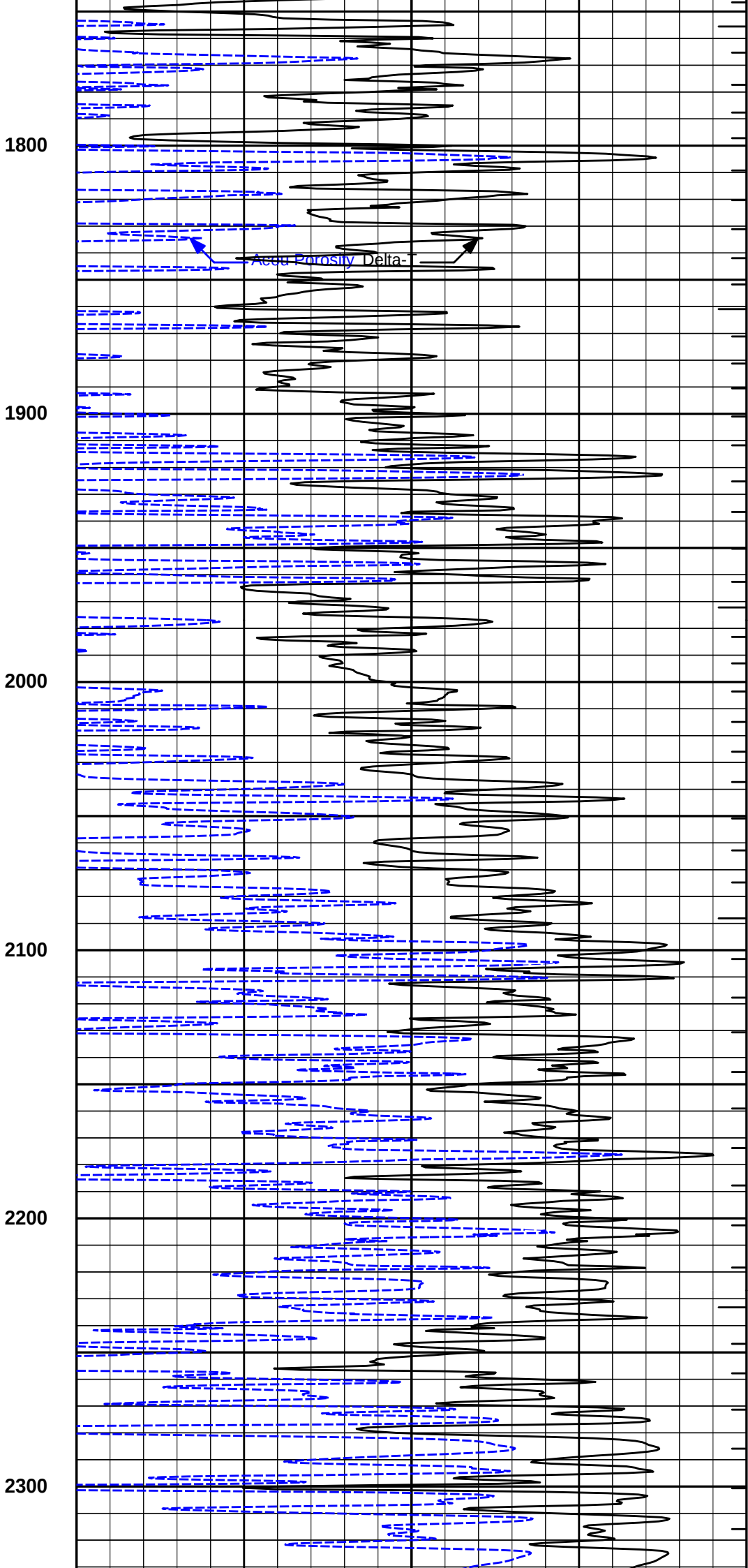
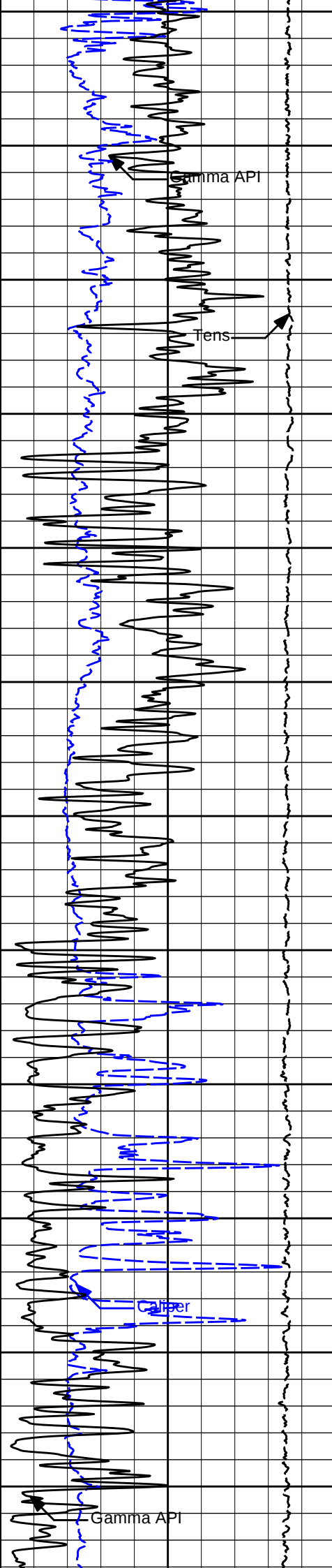
HALLIBURTON

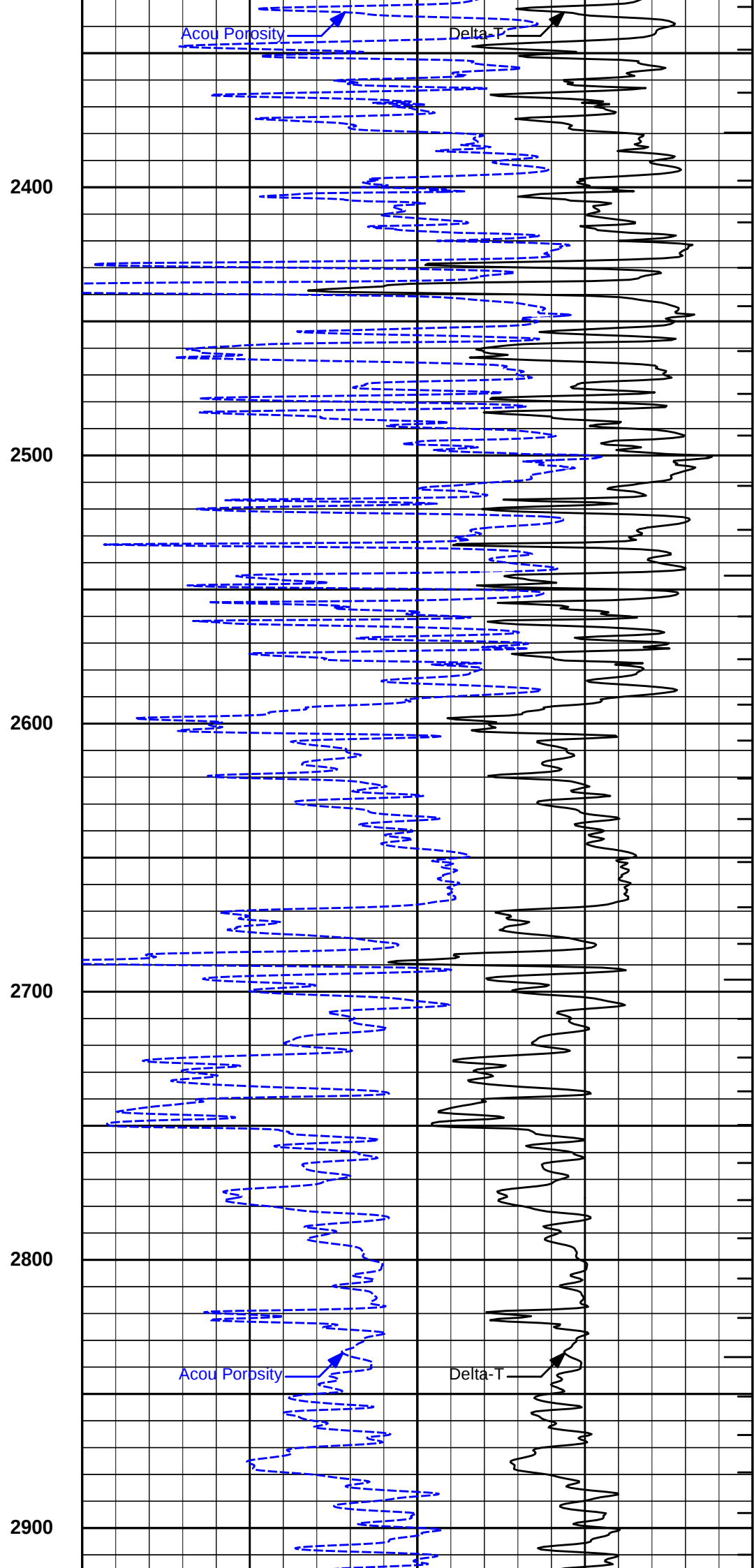
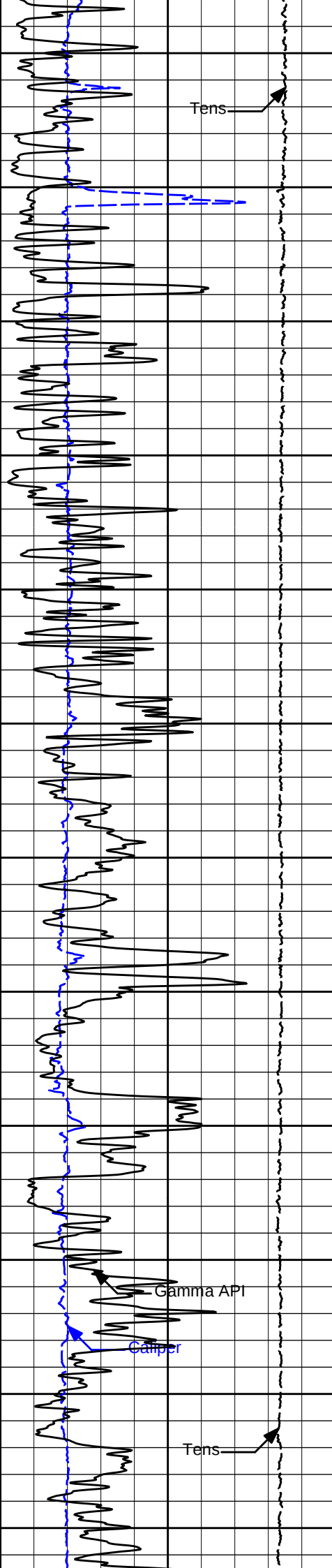
Plot Time: 02-Apr-18 22:09:46
Plot Range: 1600 ft to 5862.92 ft
Data: RAYDON_ROCK\Well Based\DAQ-0001-004\
Plot File: \IBSAT\IBSAT_2inch

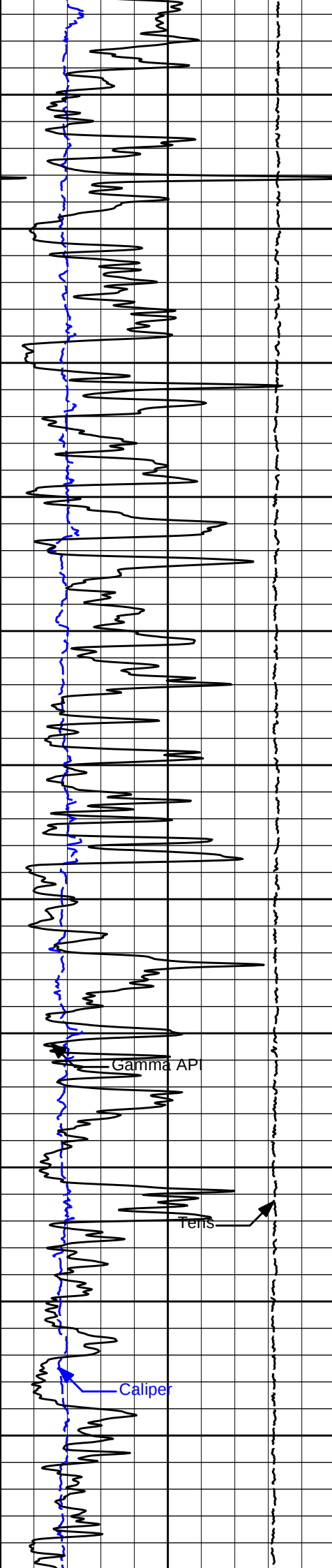
2 INCH MAIN LOG

2" MAIN LOG SECTION









3000

3100

3200

3300

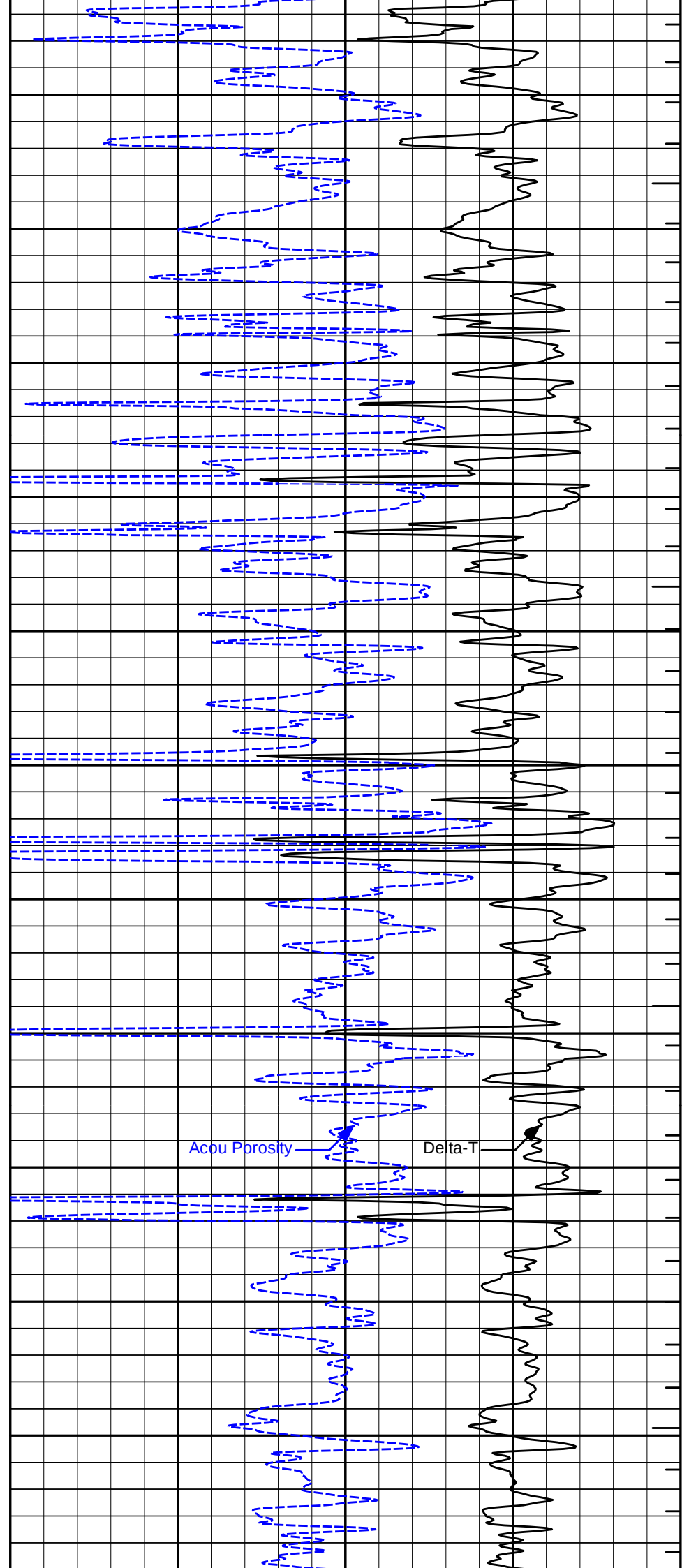
3400

3500

Gamma API

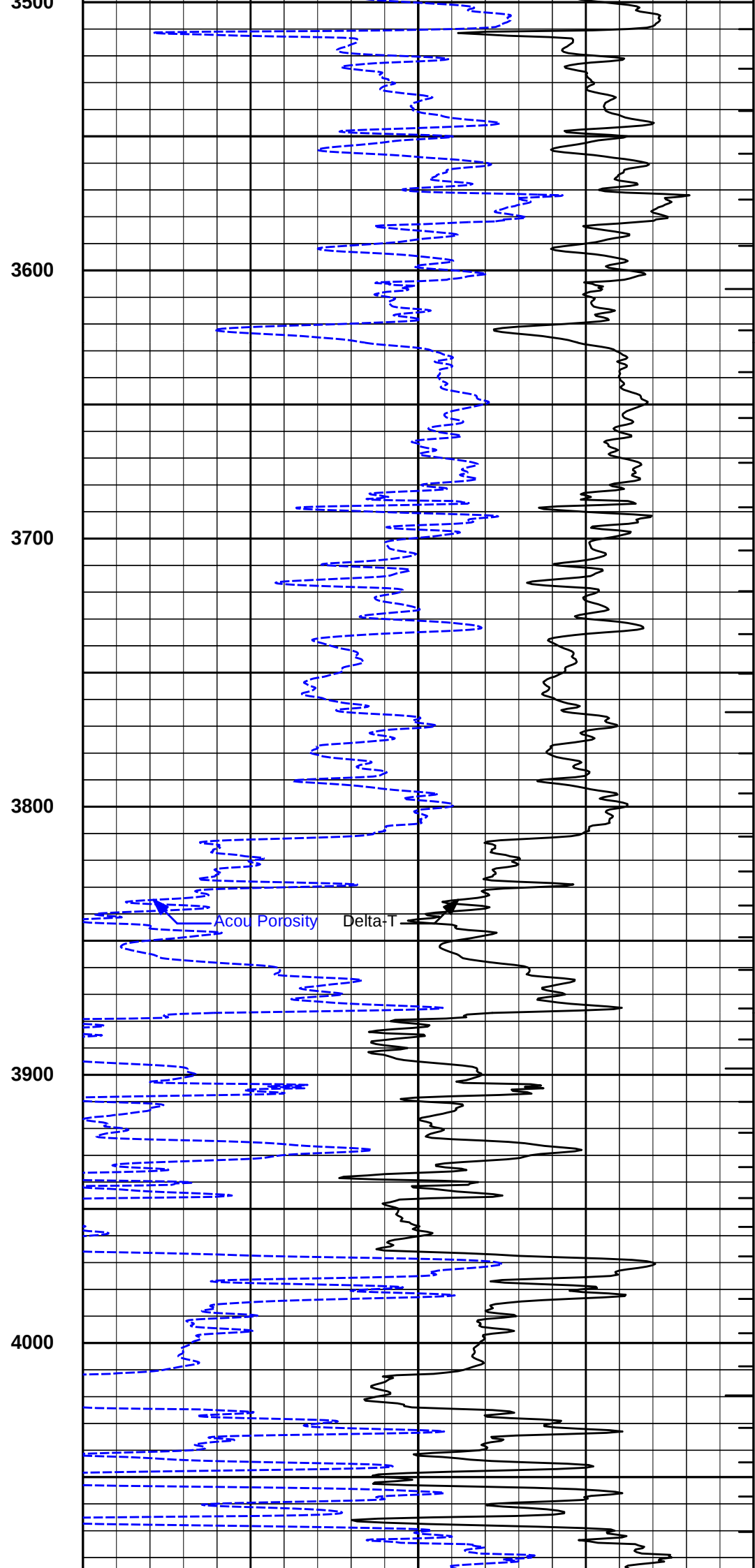
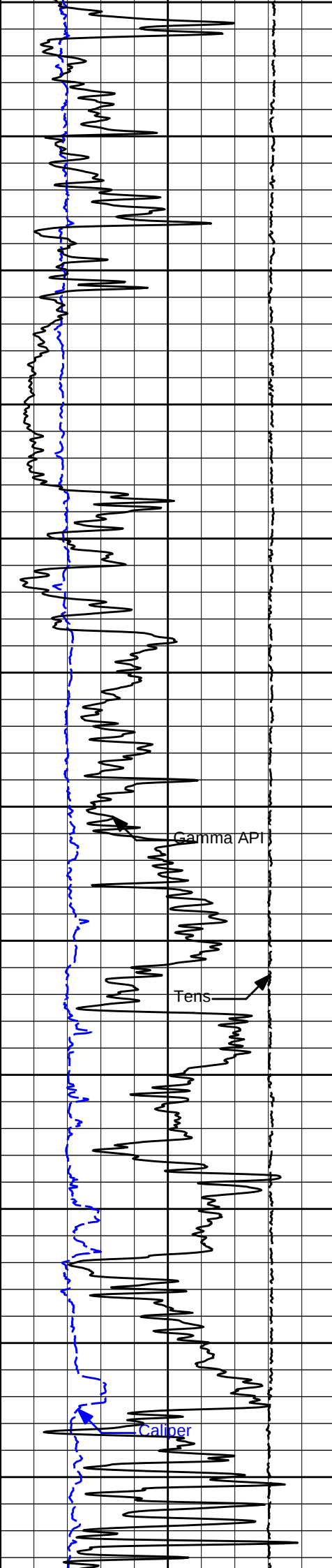
Tens

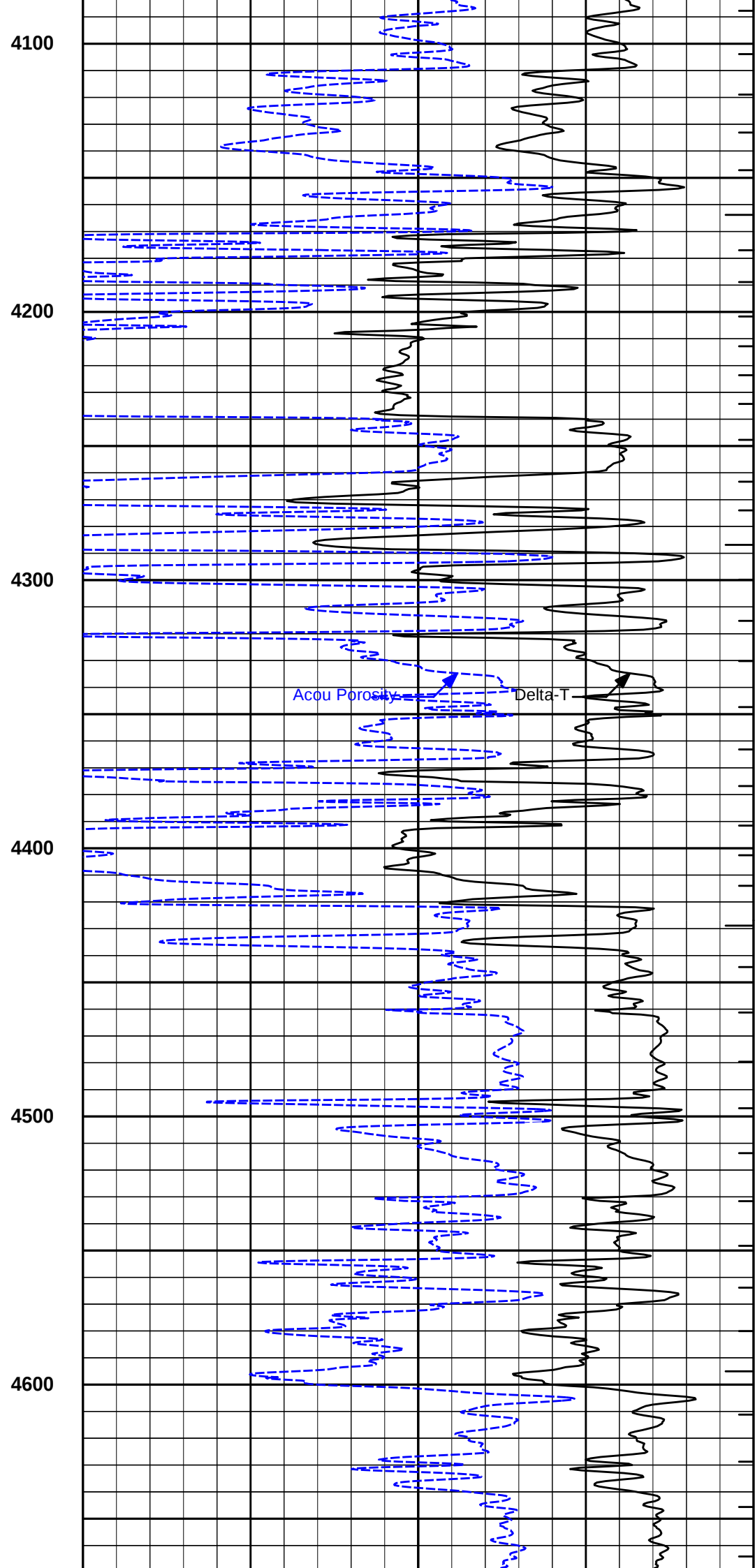
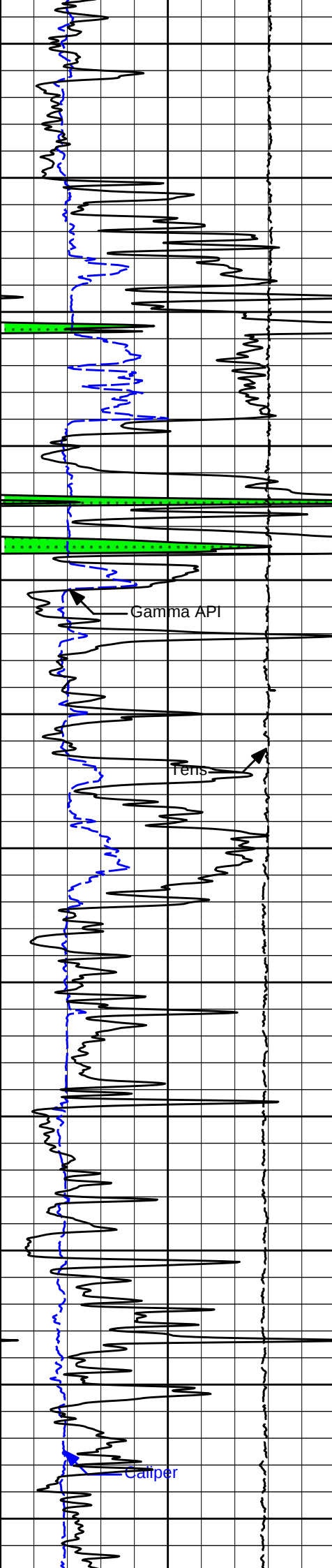
Caliper

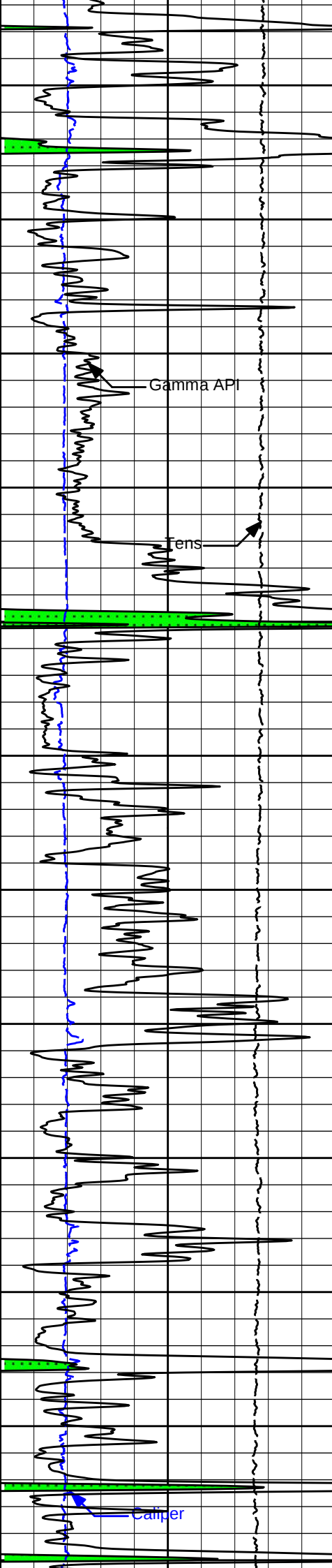


Acou Porosity

Delta-T







4700

4800

4900

5000

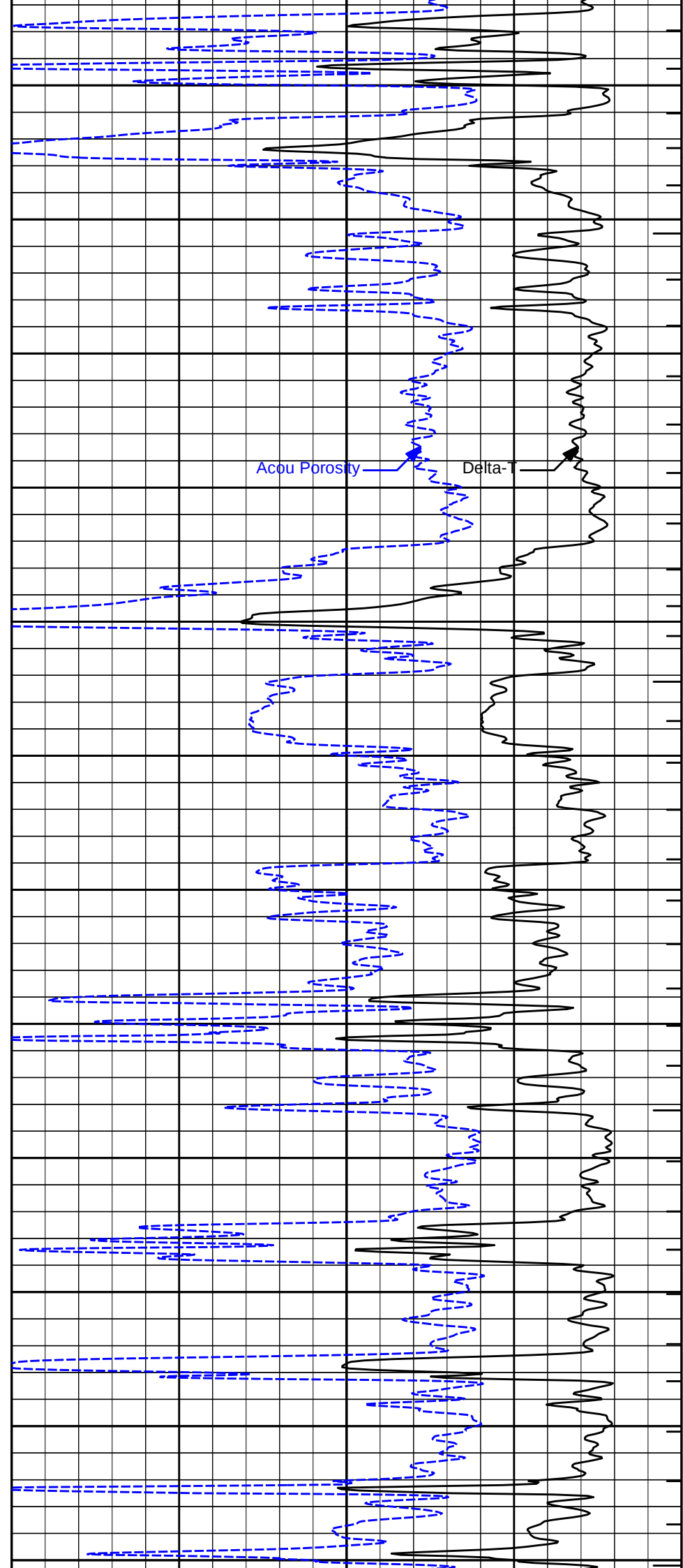
5100

5200

Gamma API

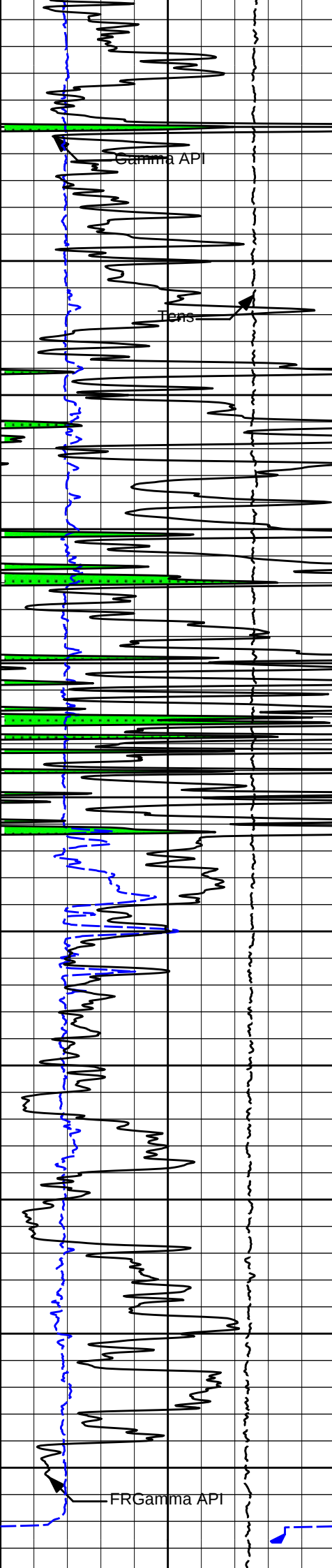
Density

Caliper



Acoustic Porosity

Delta-T



5300

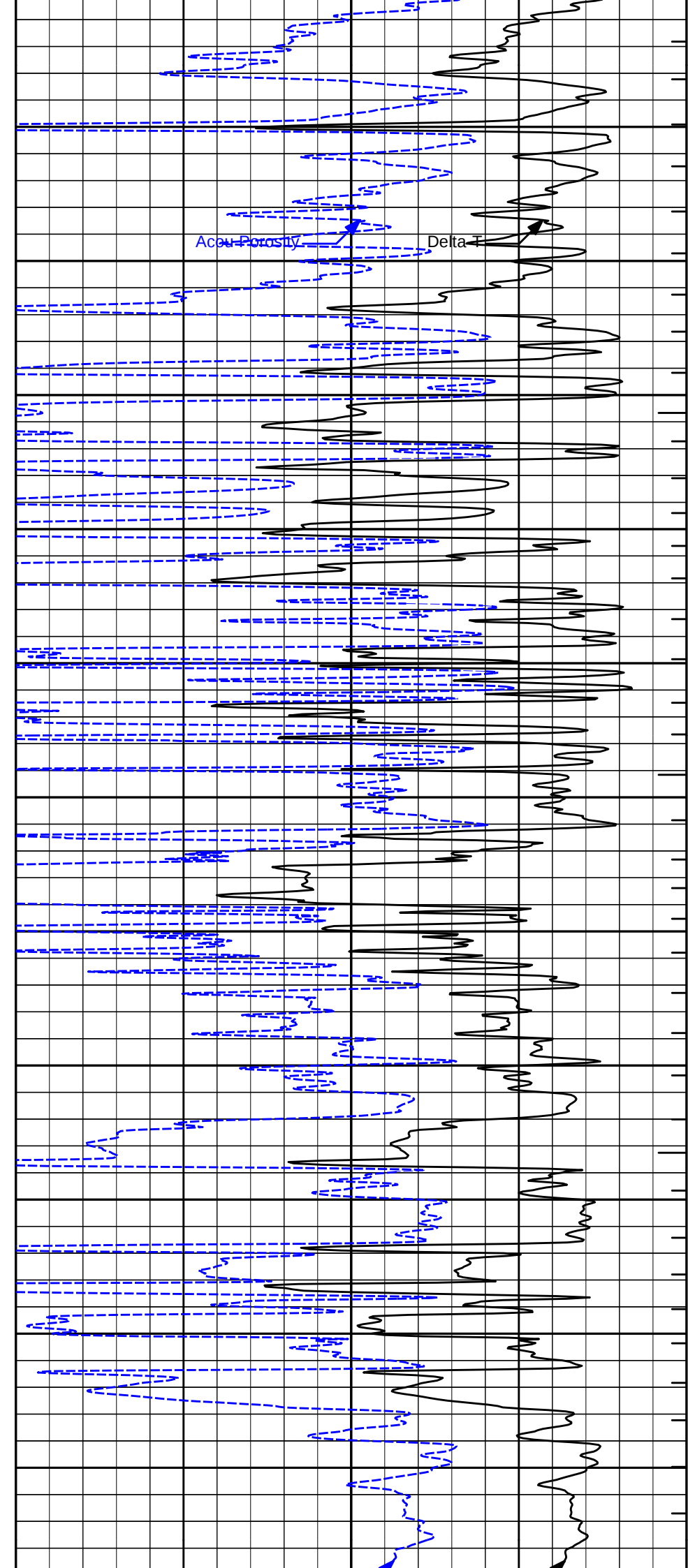
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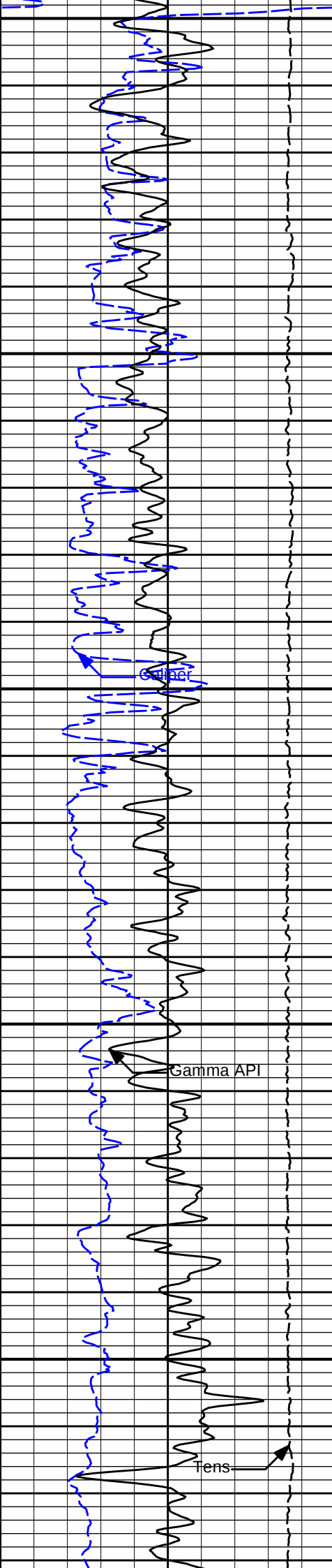
5500

5600

5700

5800



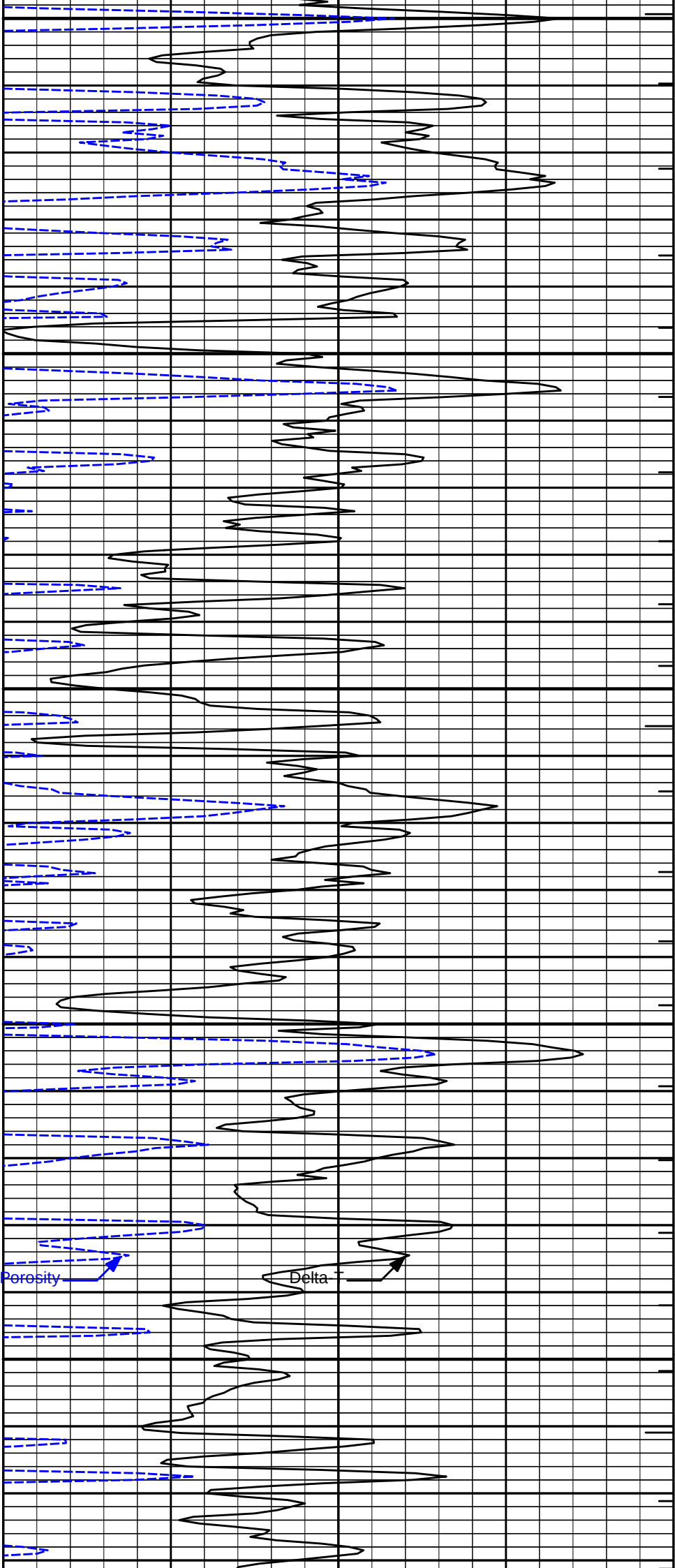


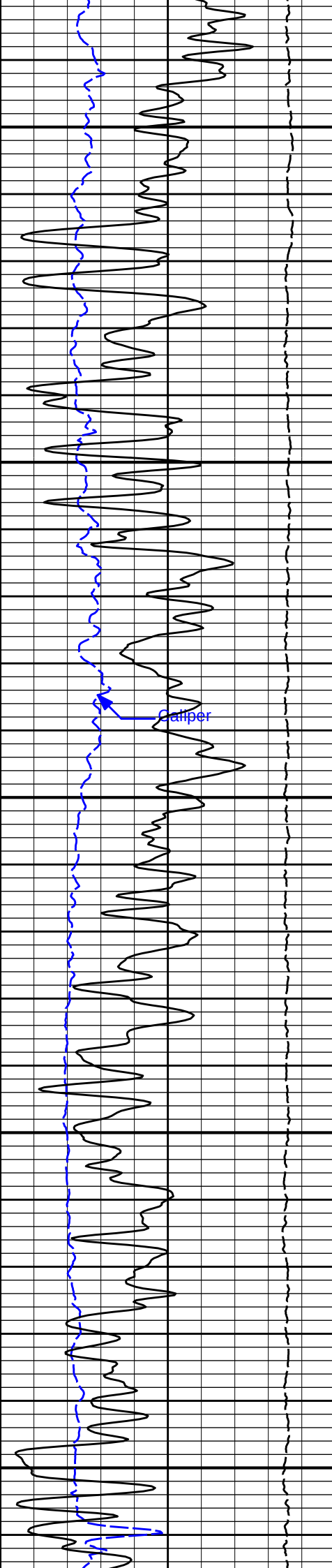
1700

1800

Acou Porosity

Delta T

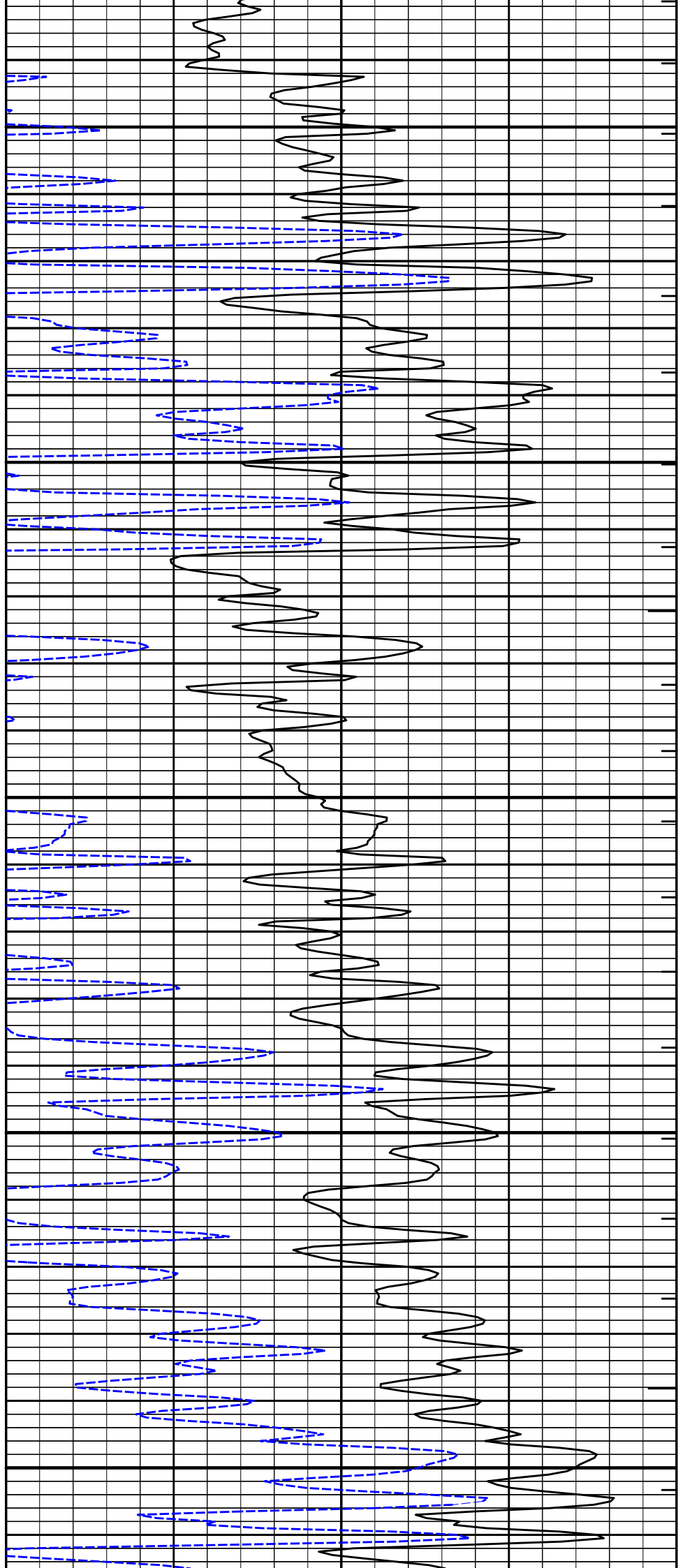


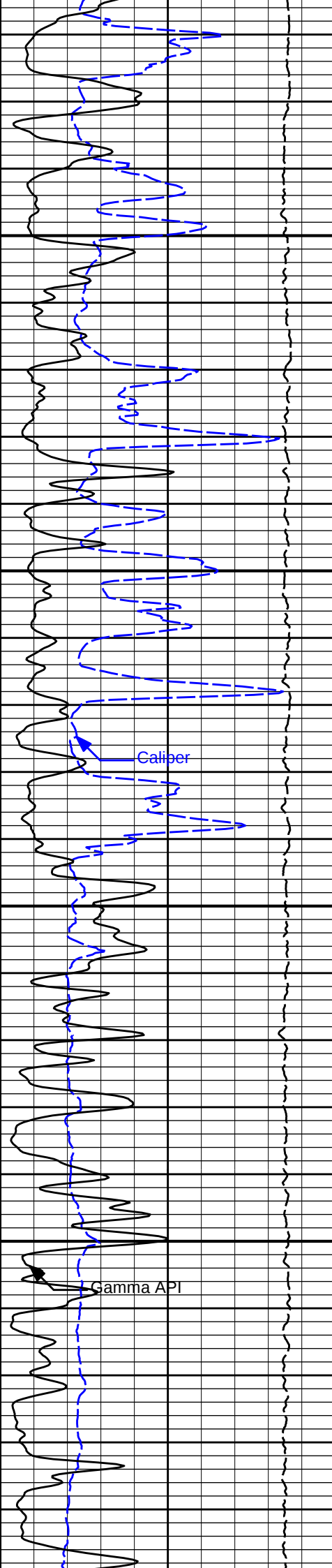


1900

2000

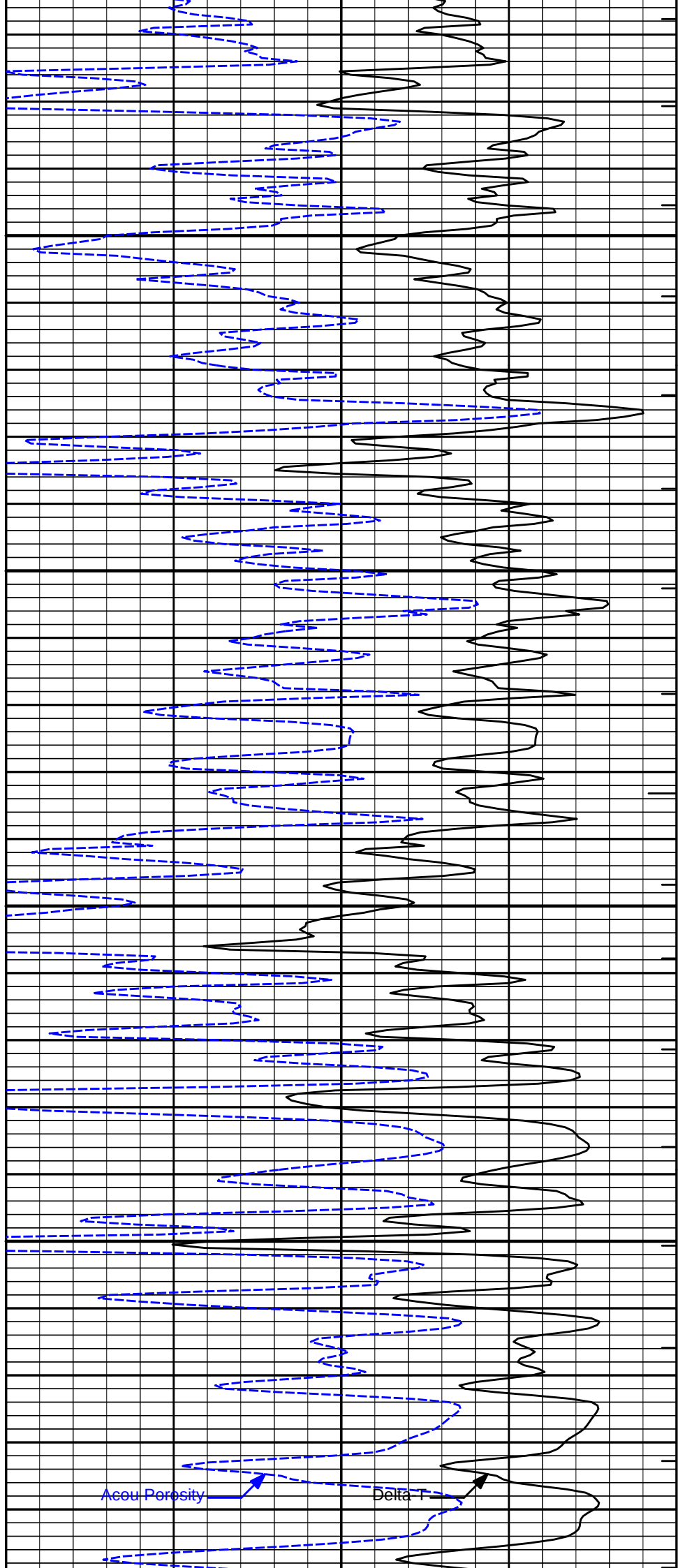
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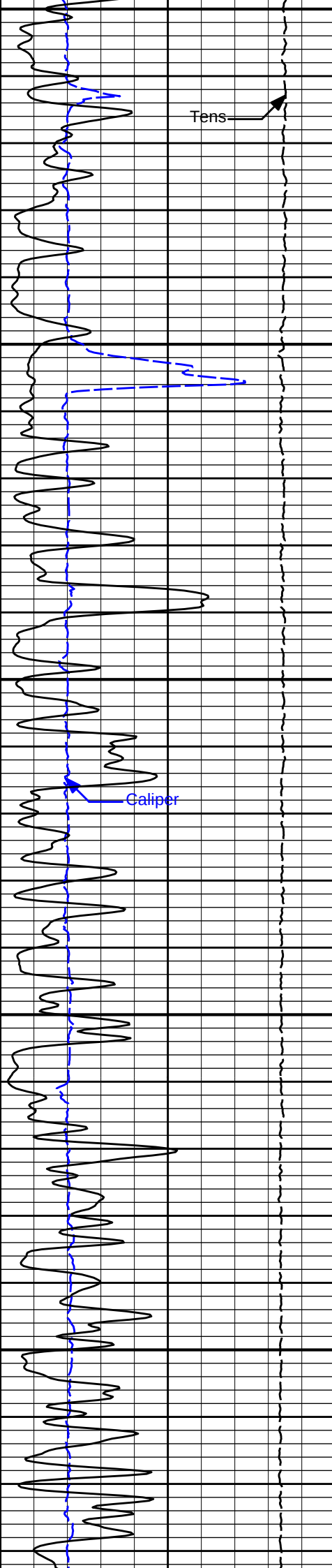




2200

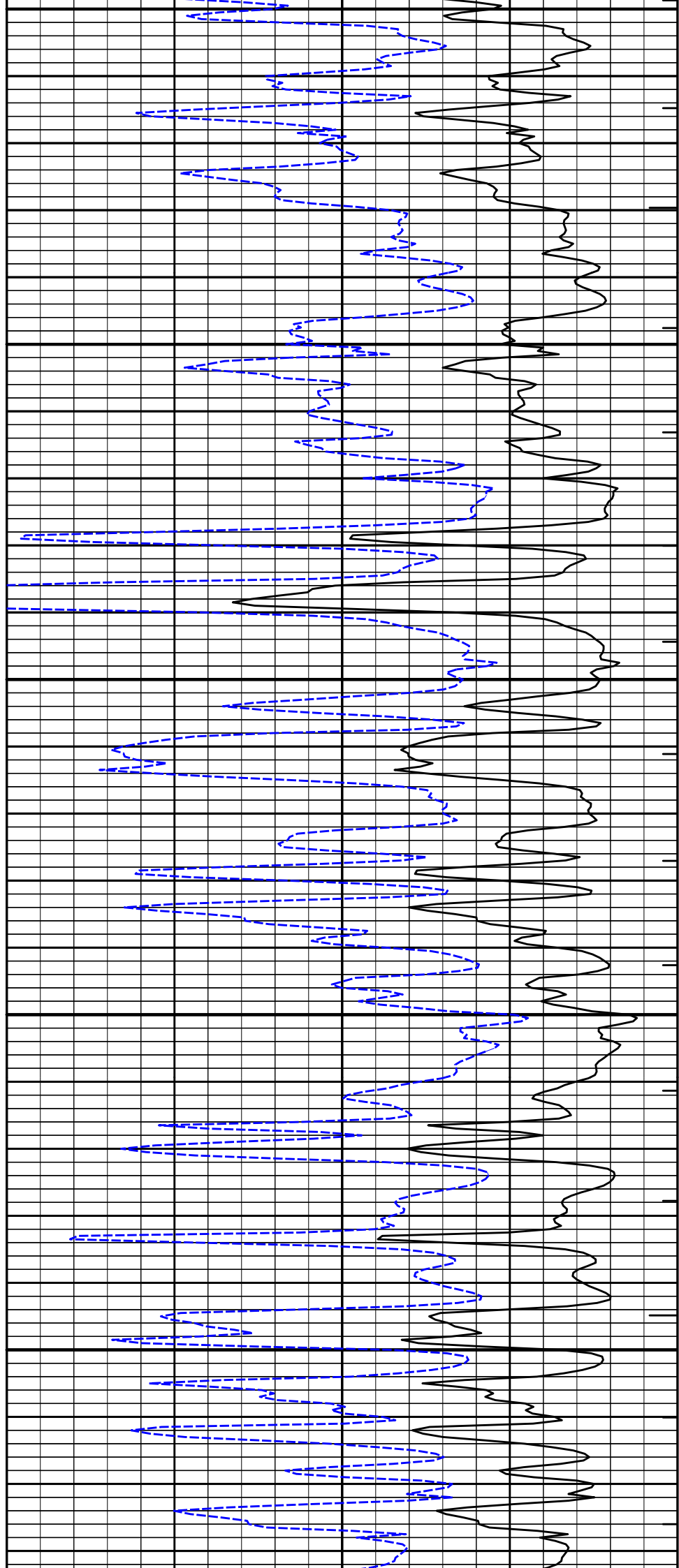
2300

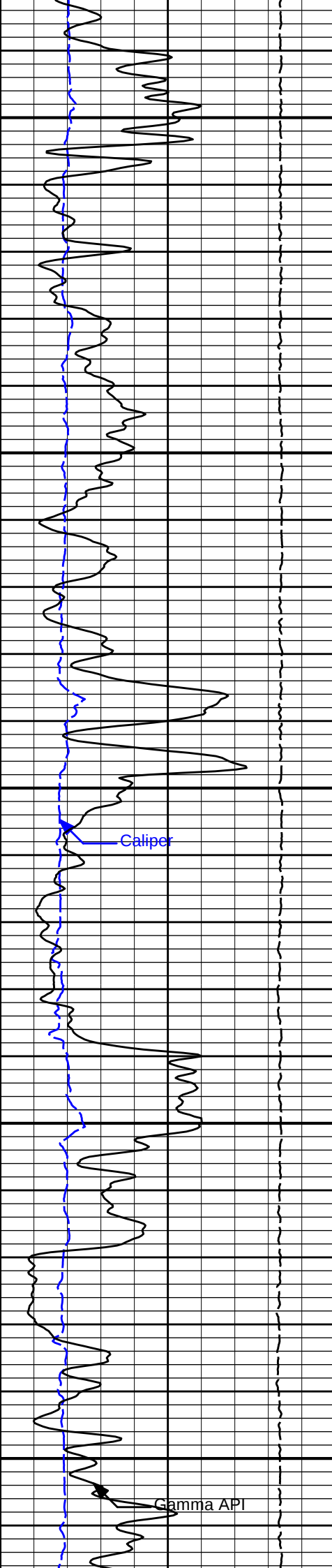




2400

2500

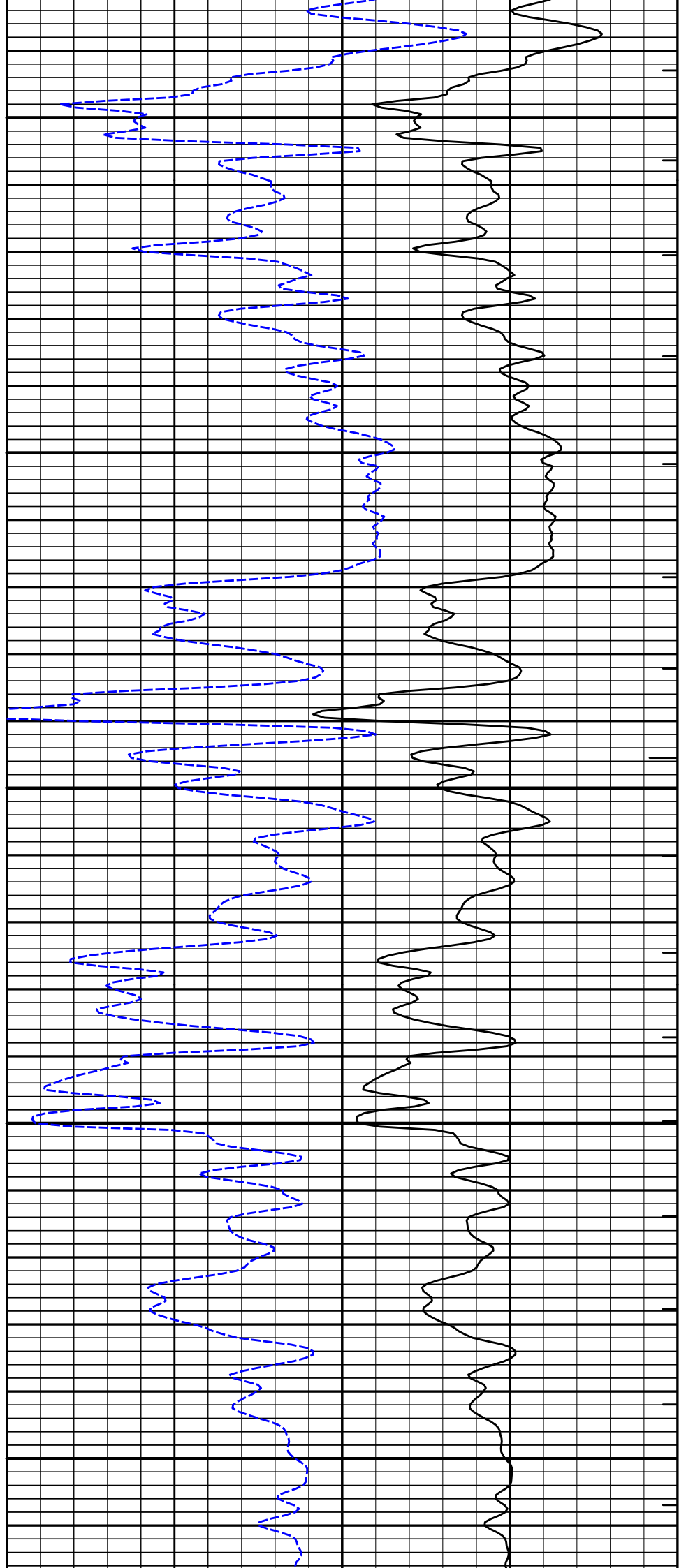


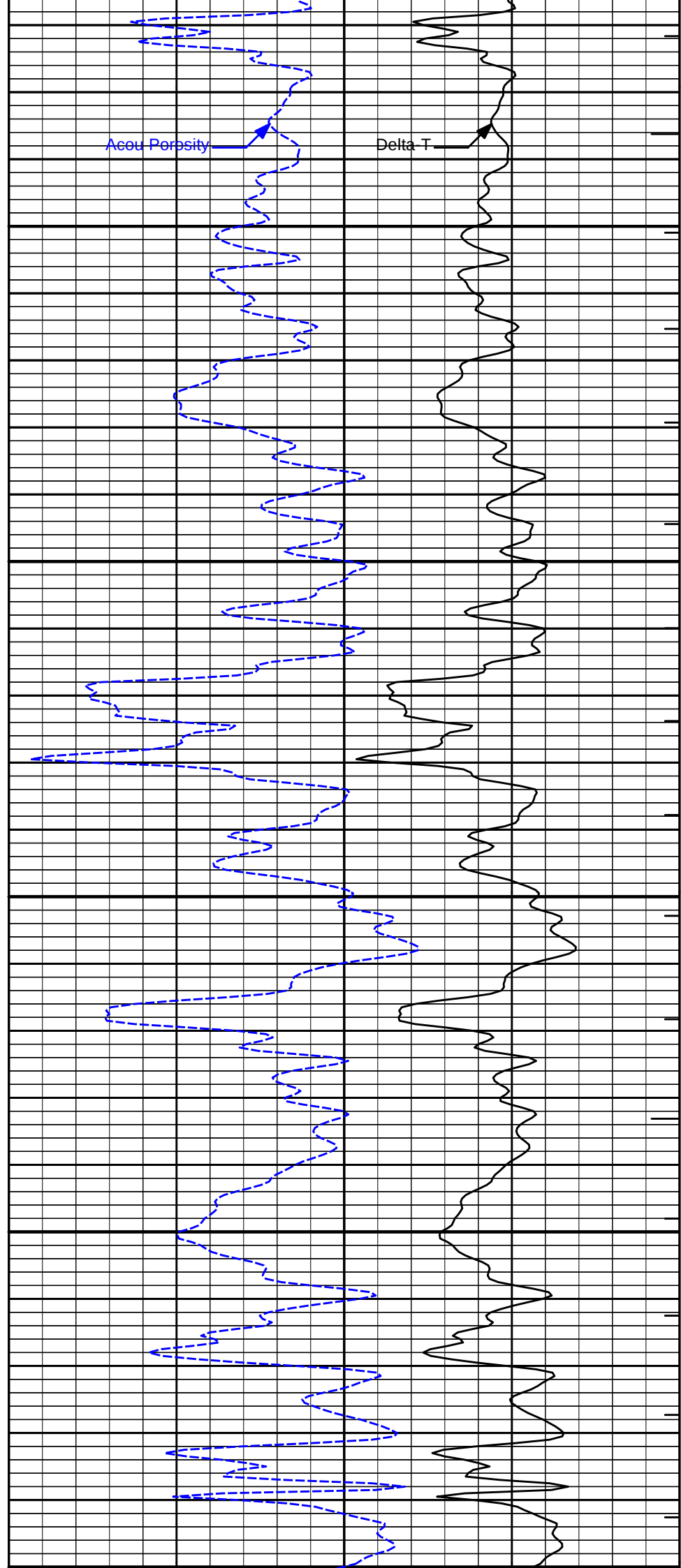
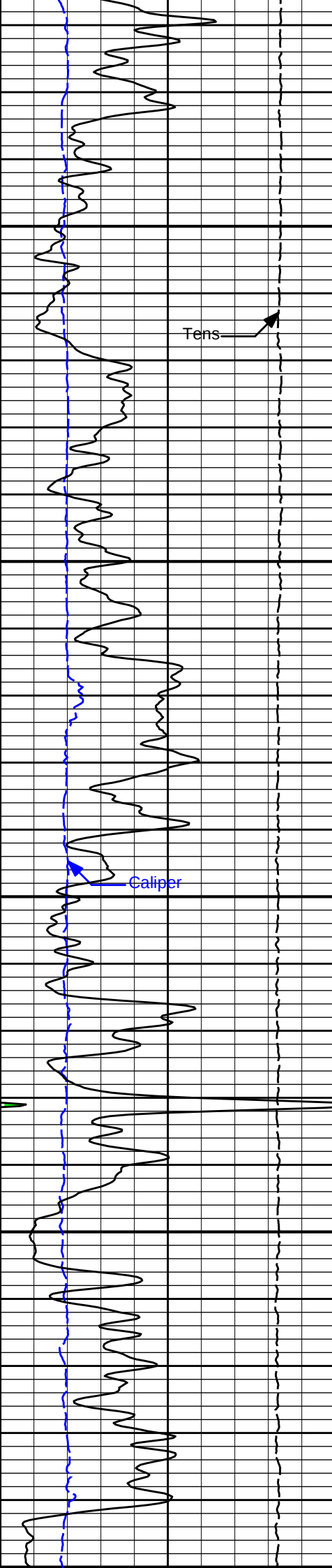


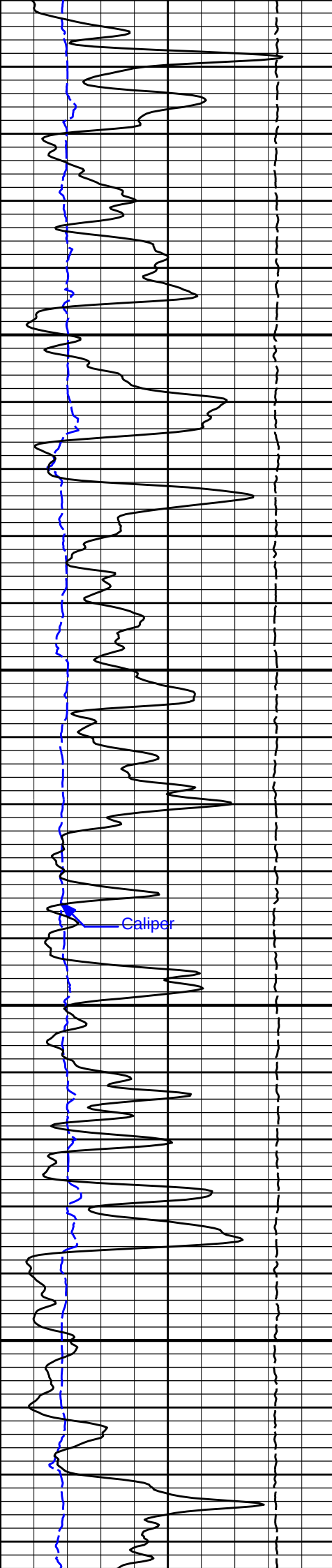
2600

2700

2800

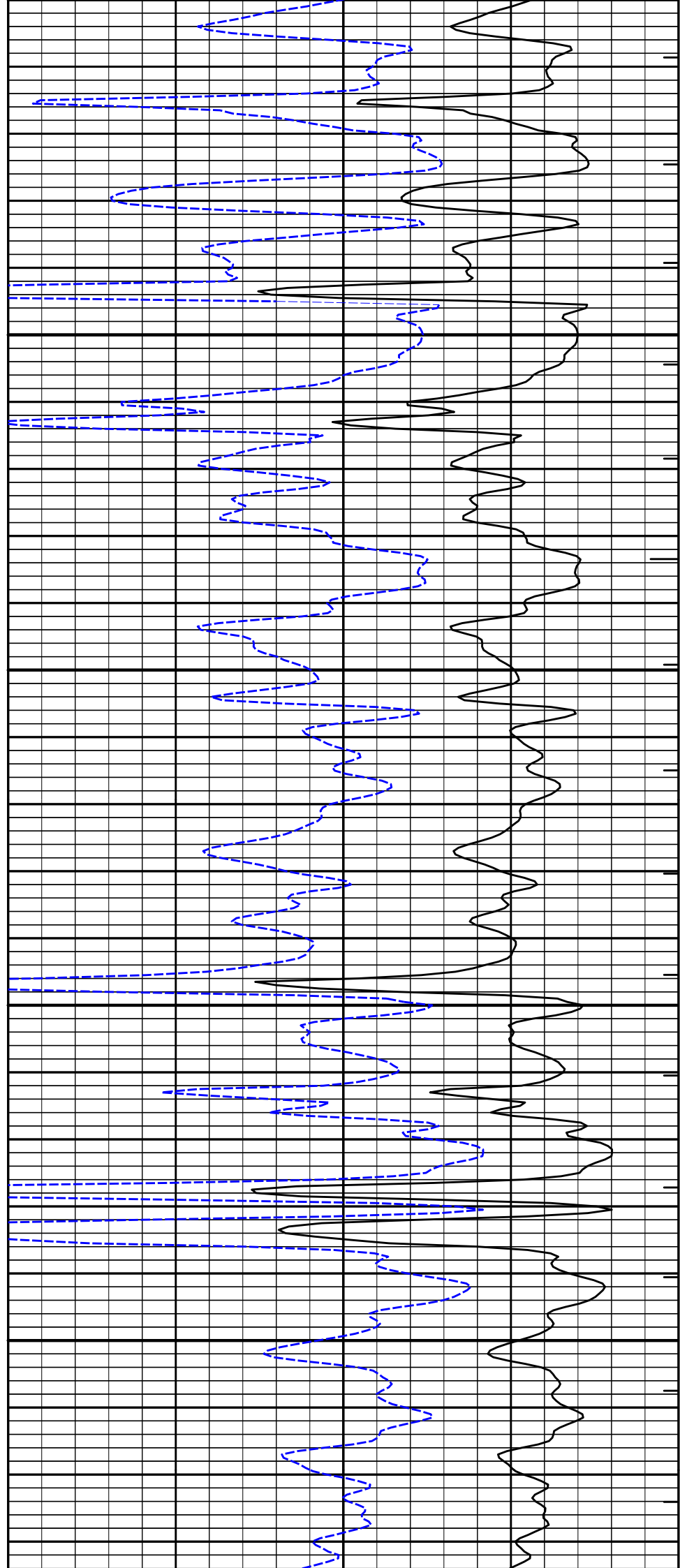


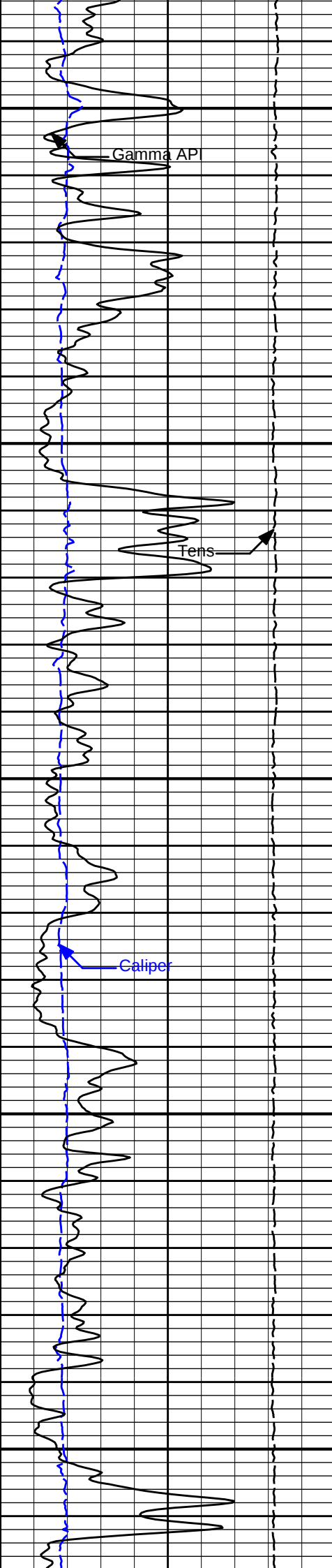




3100

3200

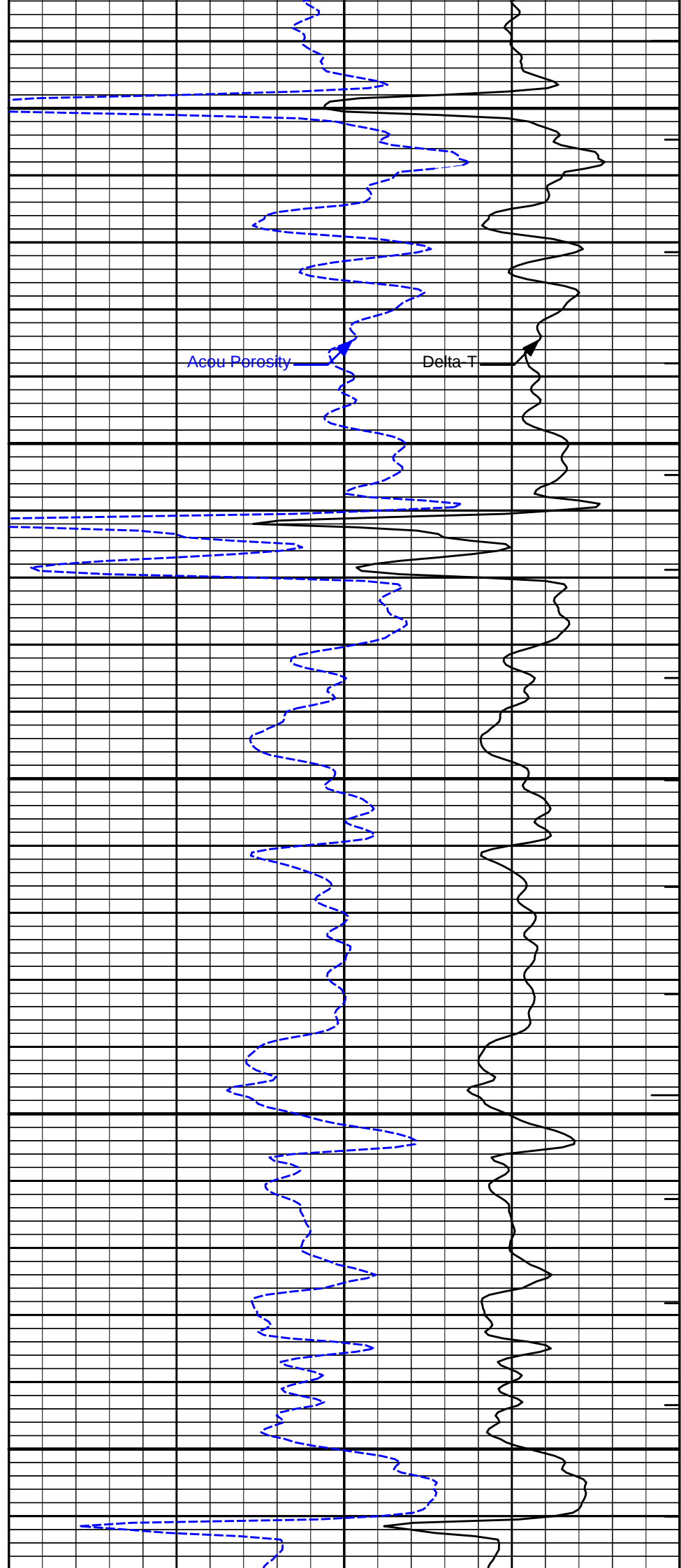


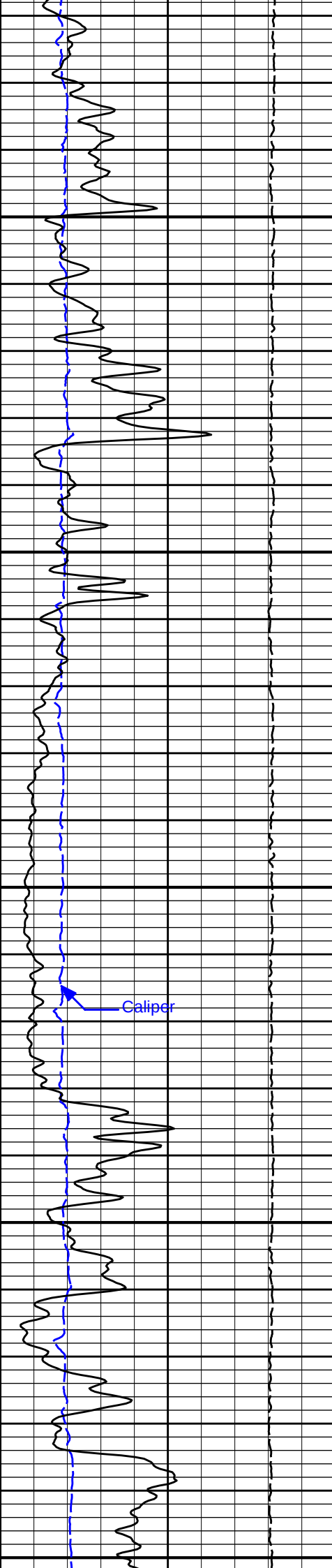


3300

3400

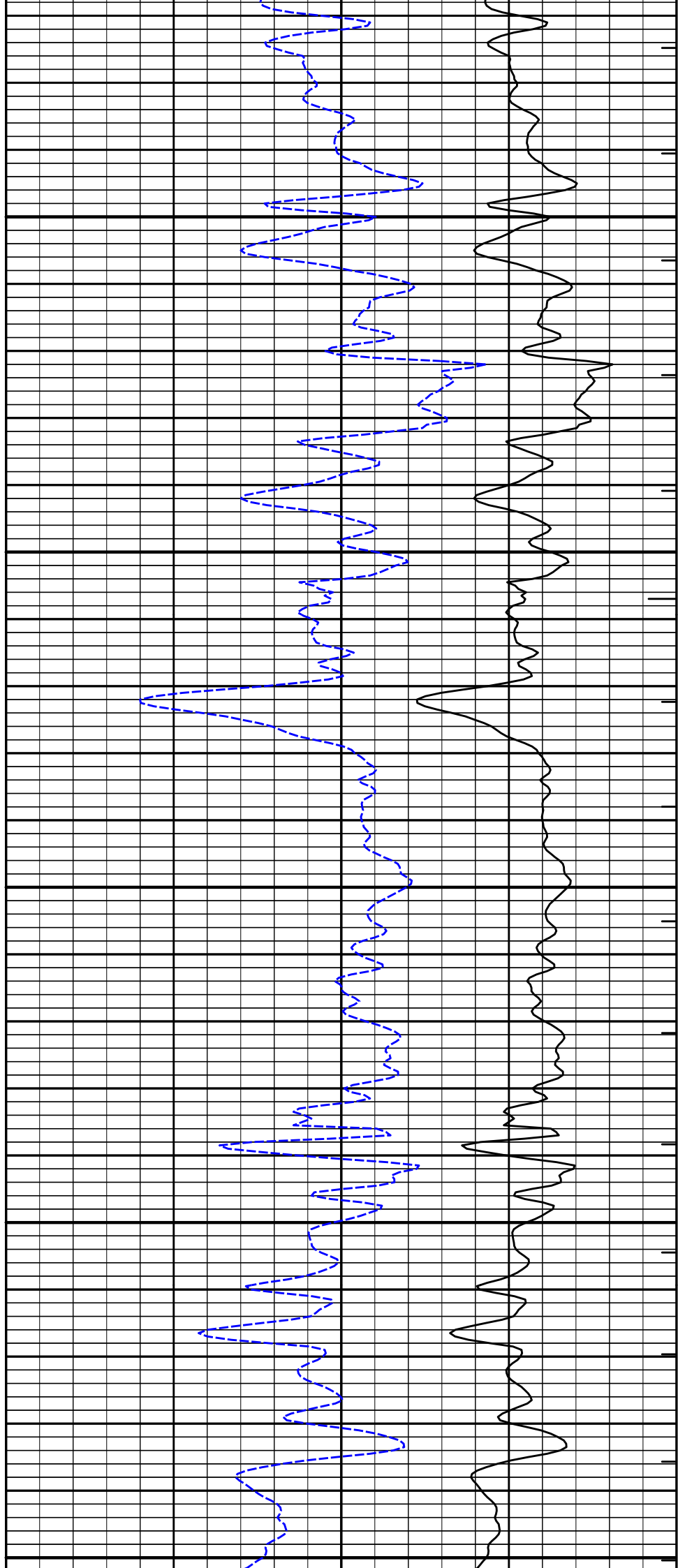
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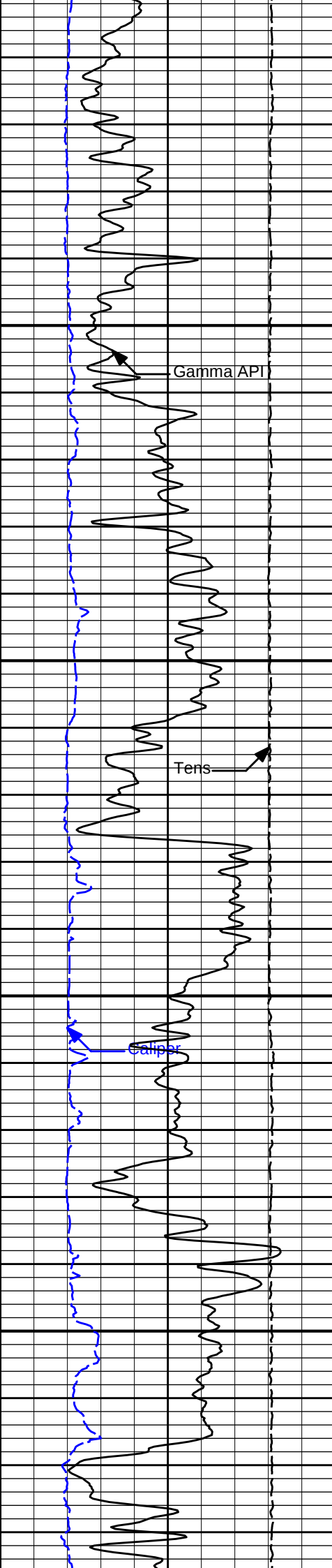




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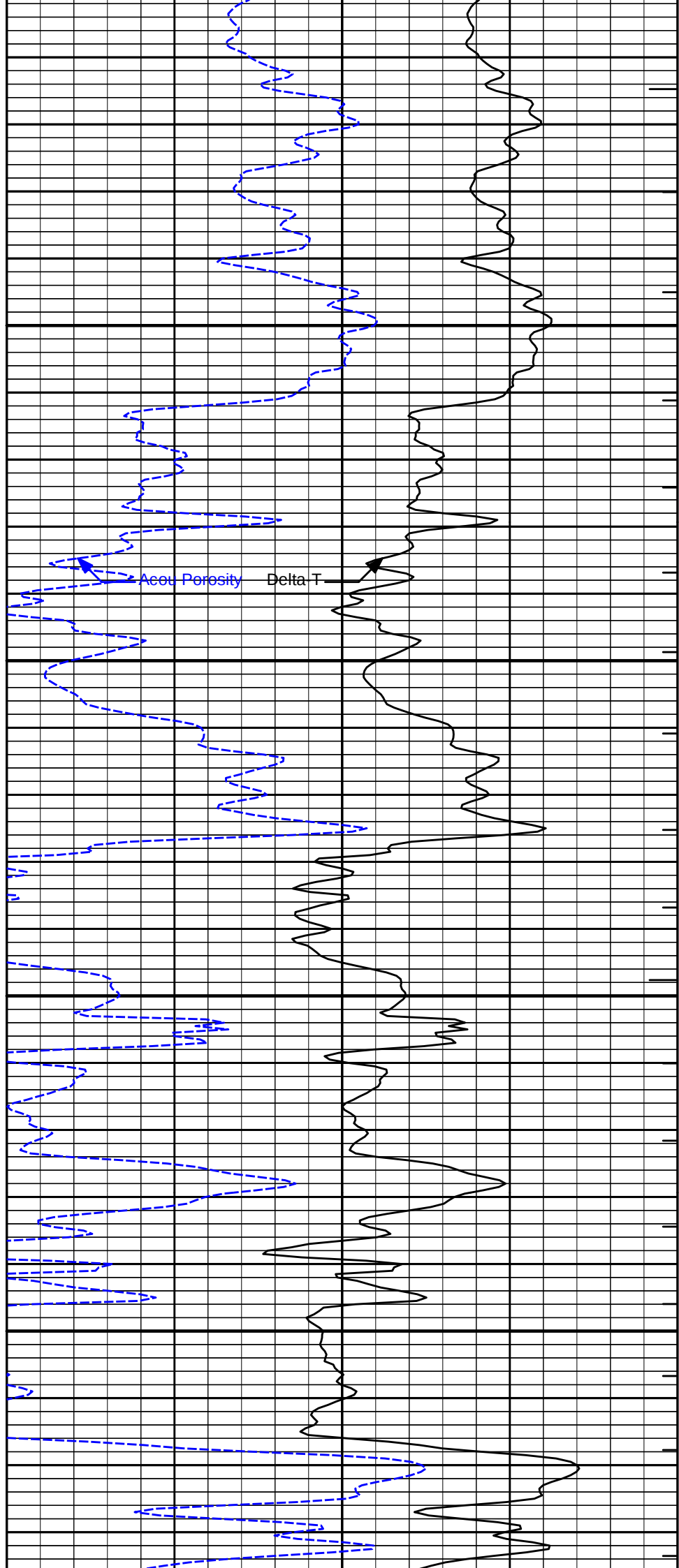
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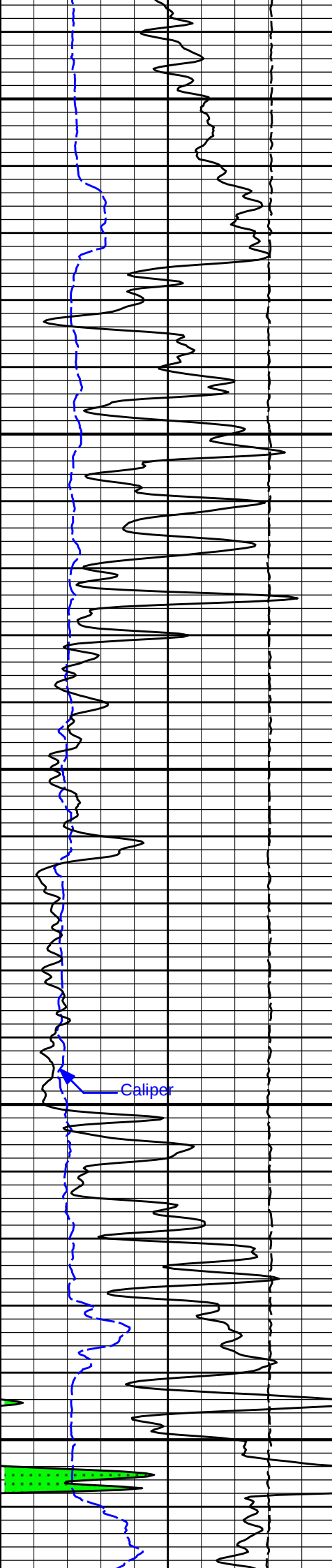




3800

3900

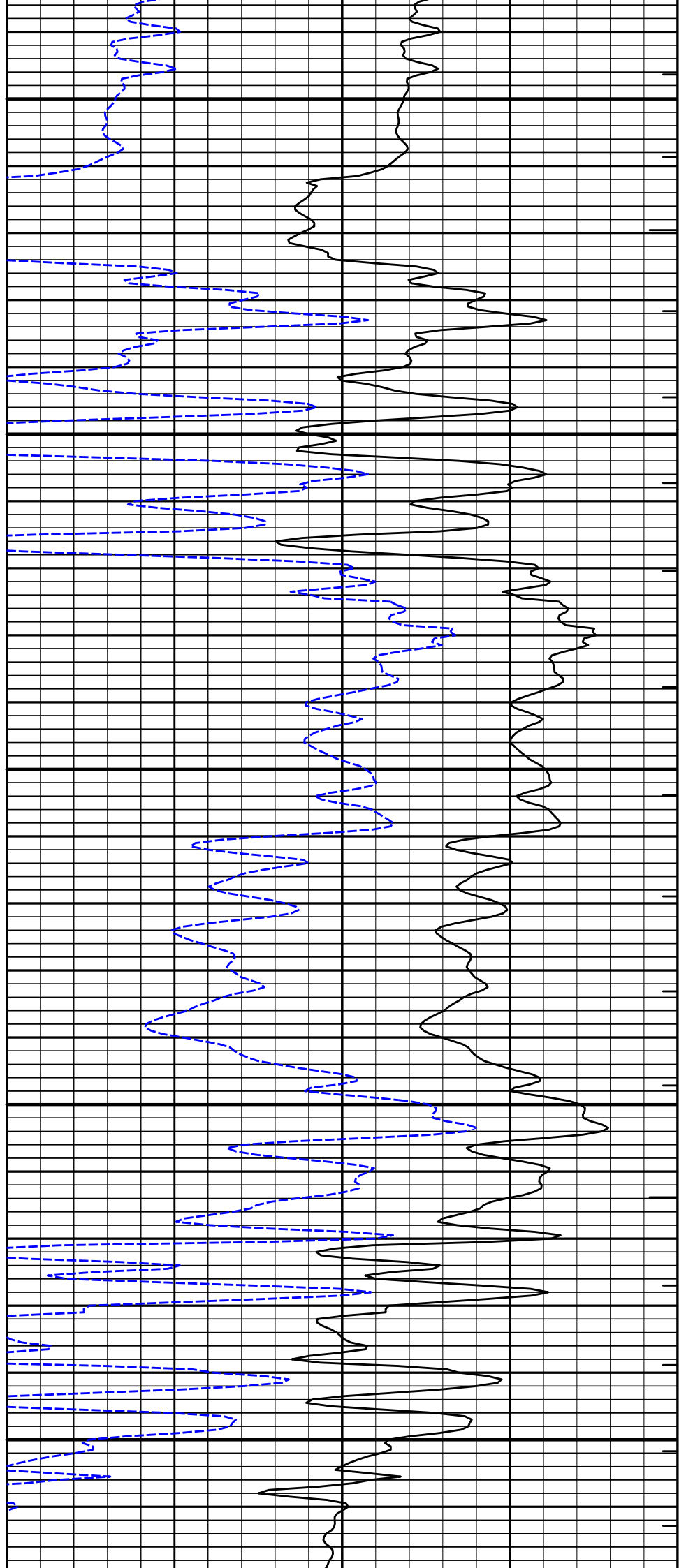


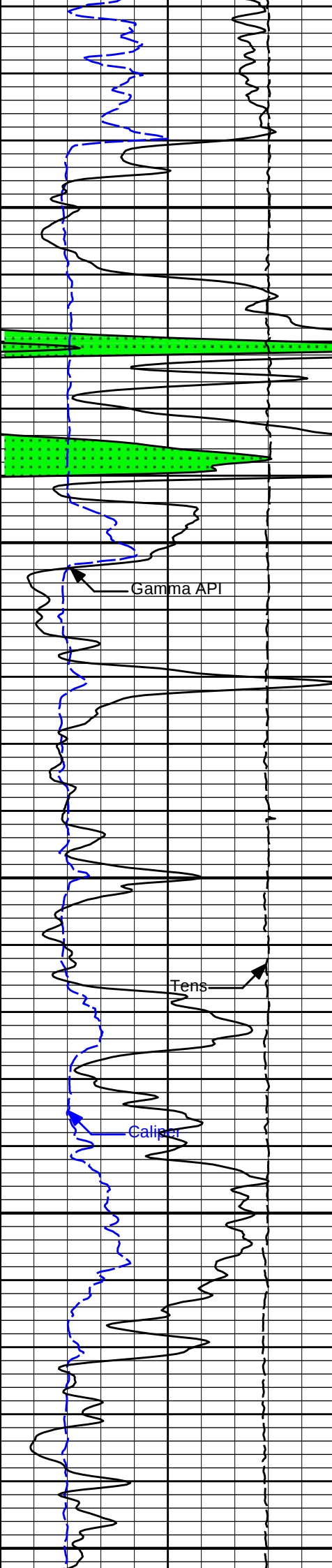


4000

4100

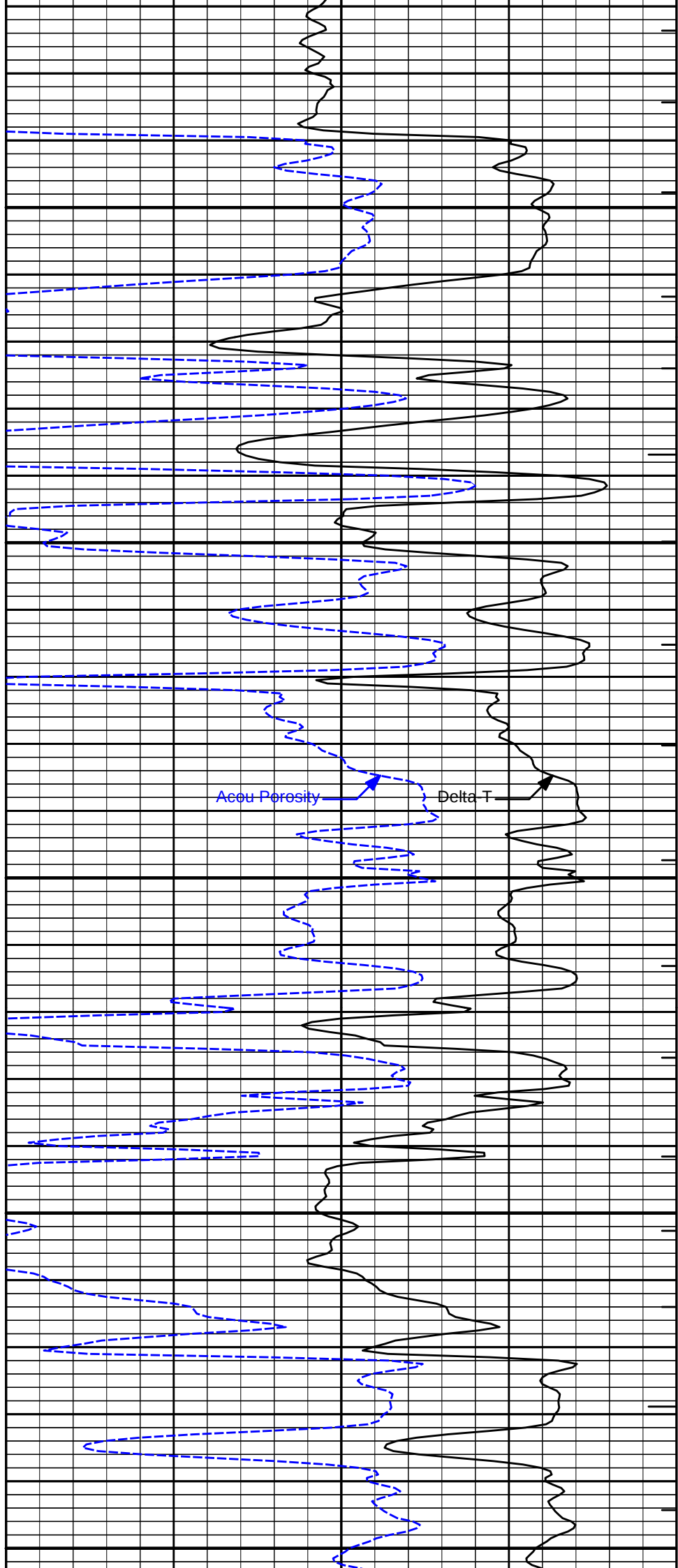
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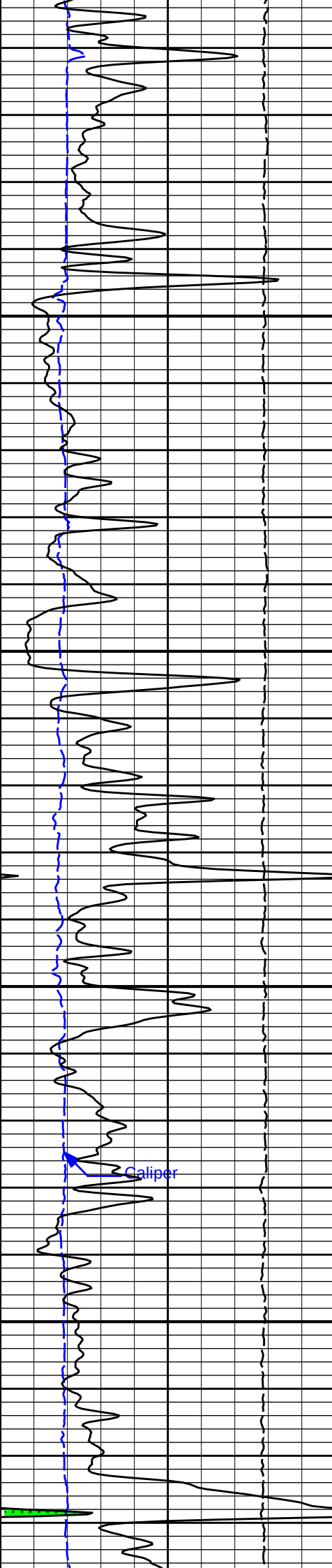




4300

4400

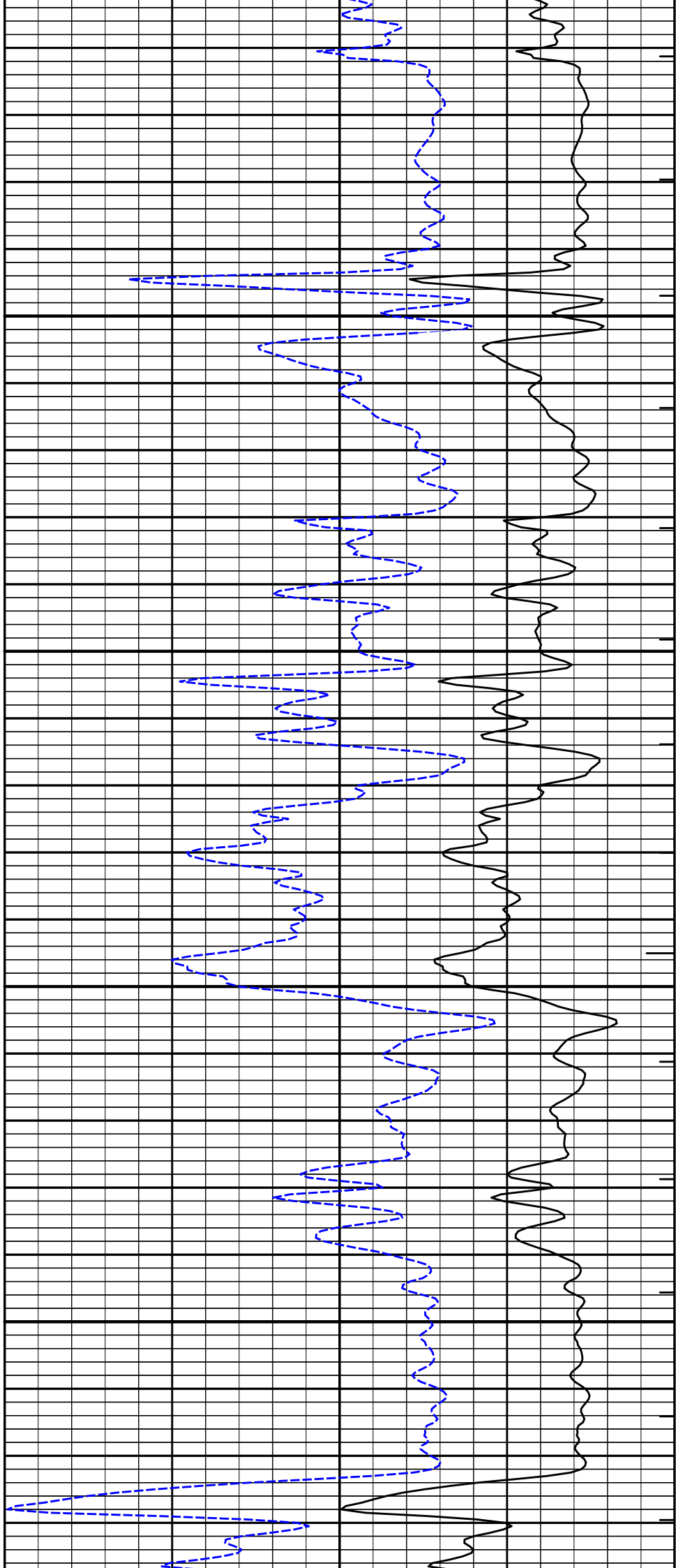


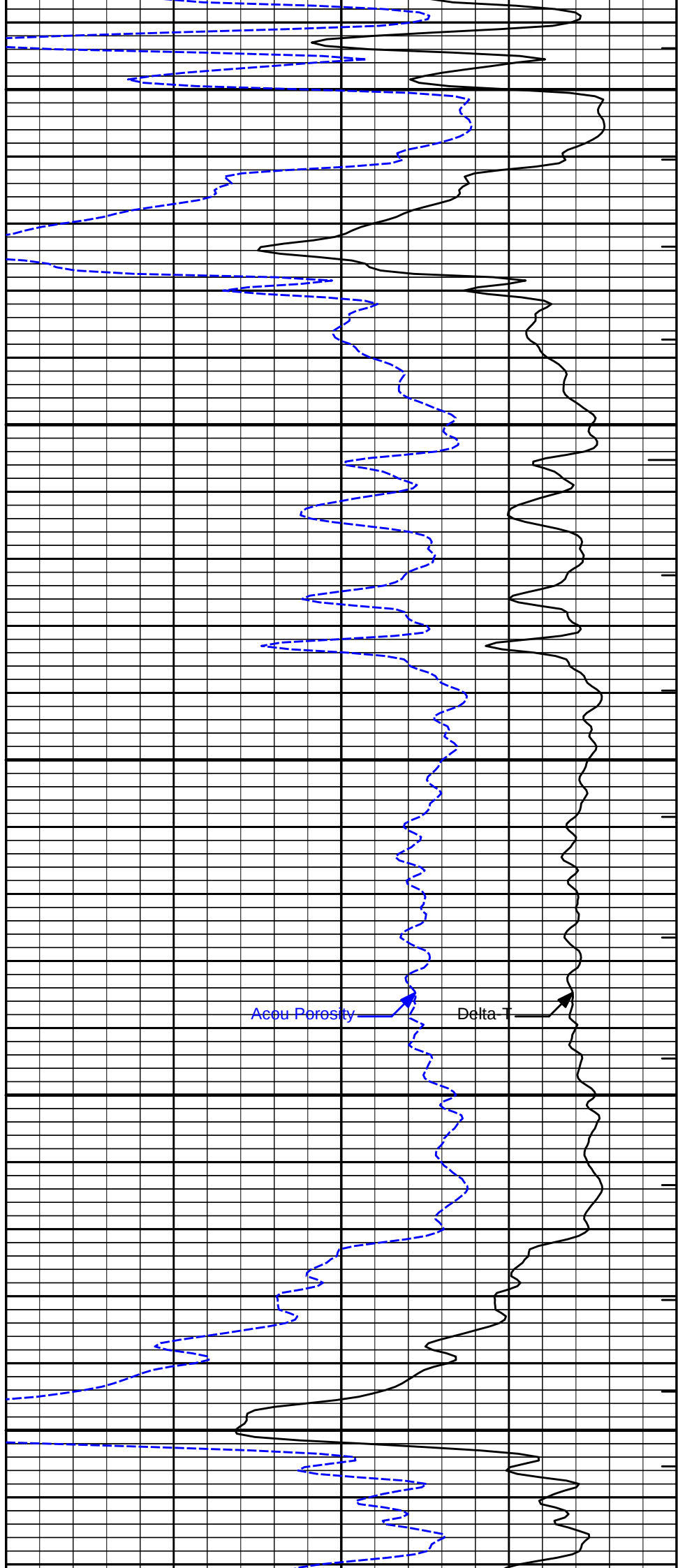
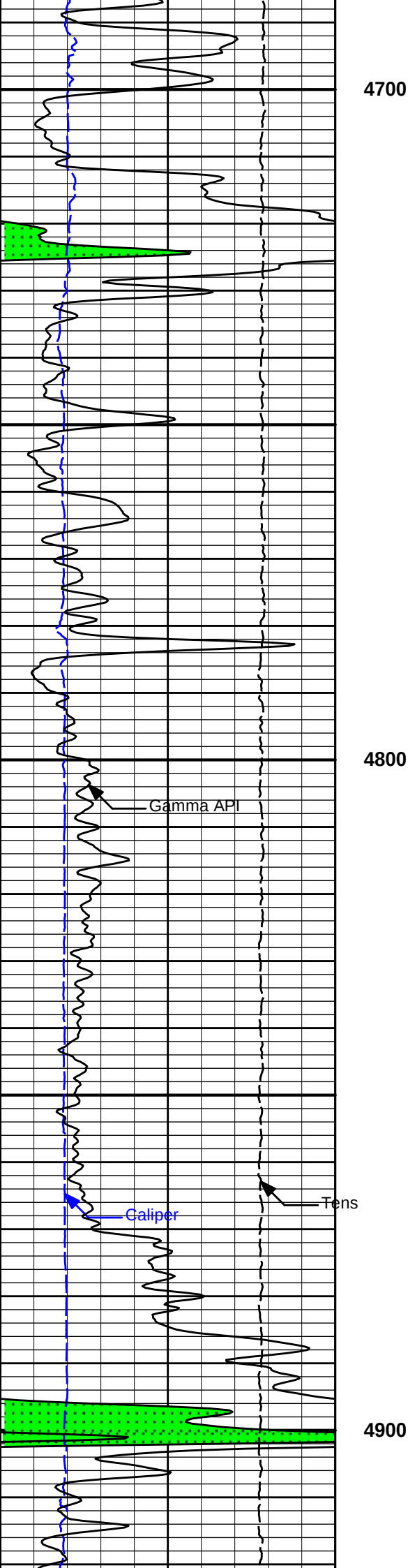


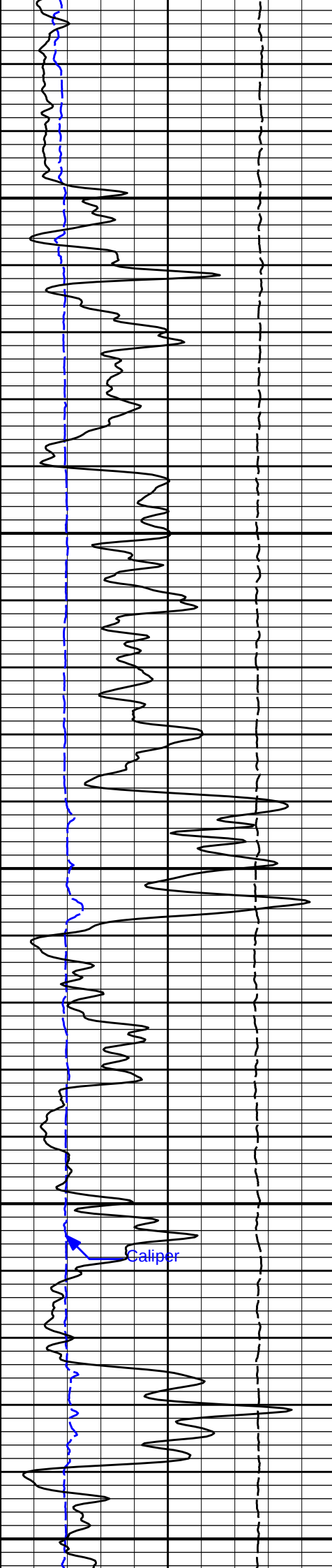
4500

4600

Caliper

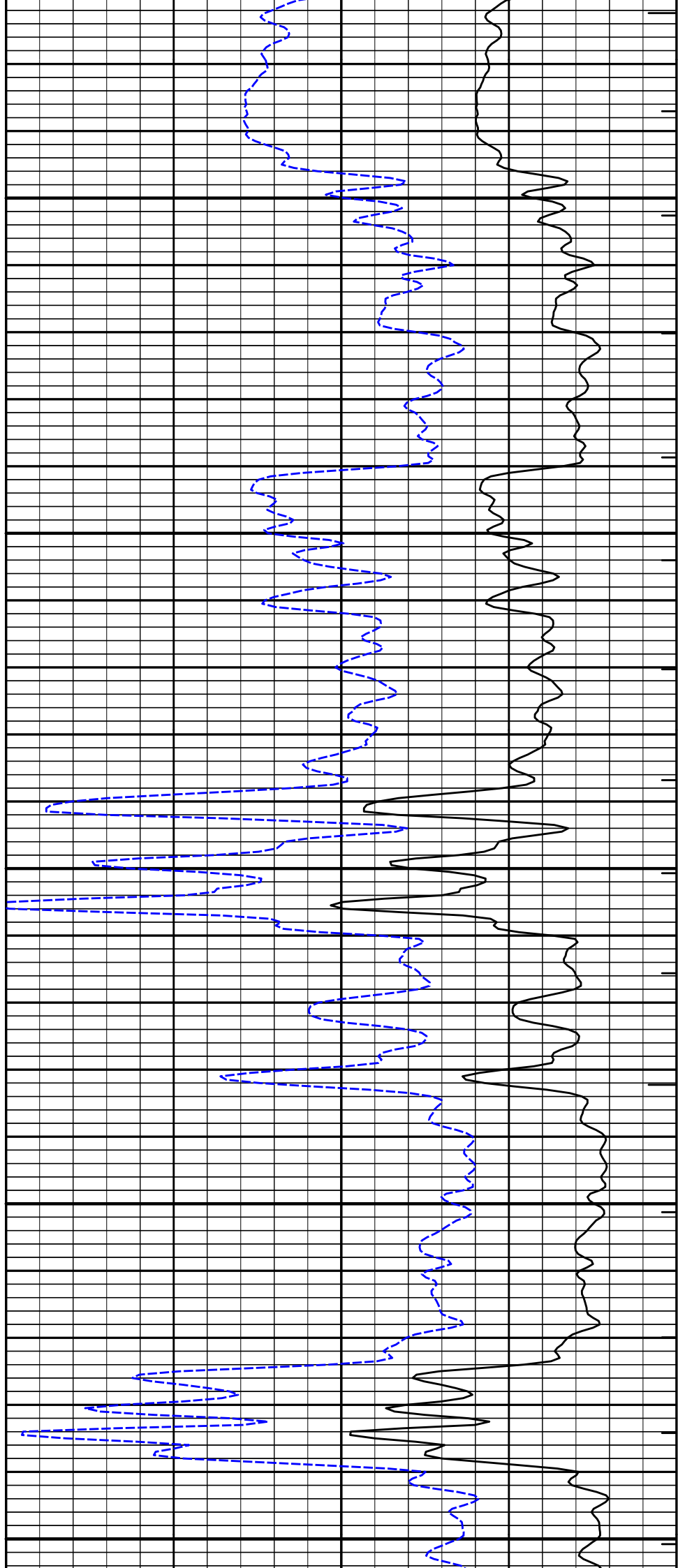


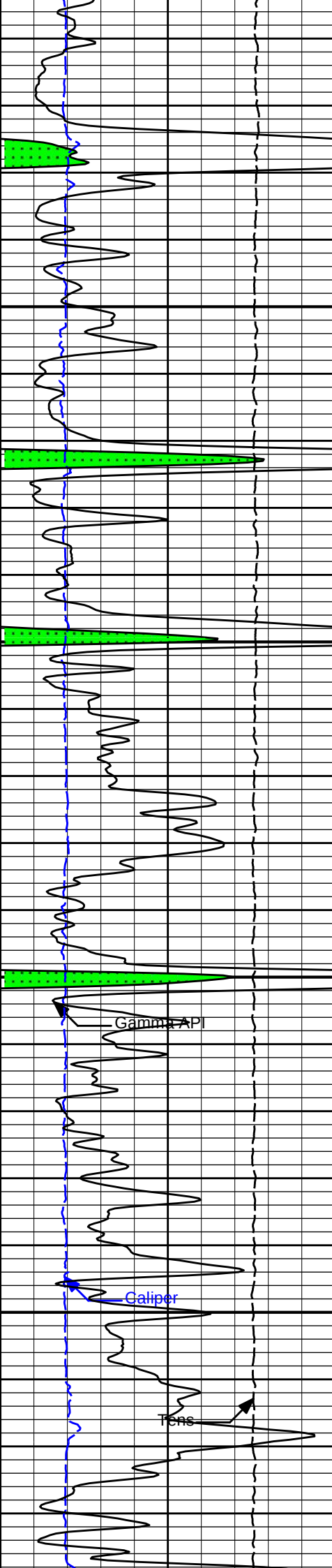




5000

5100





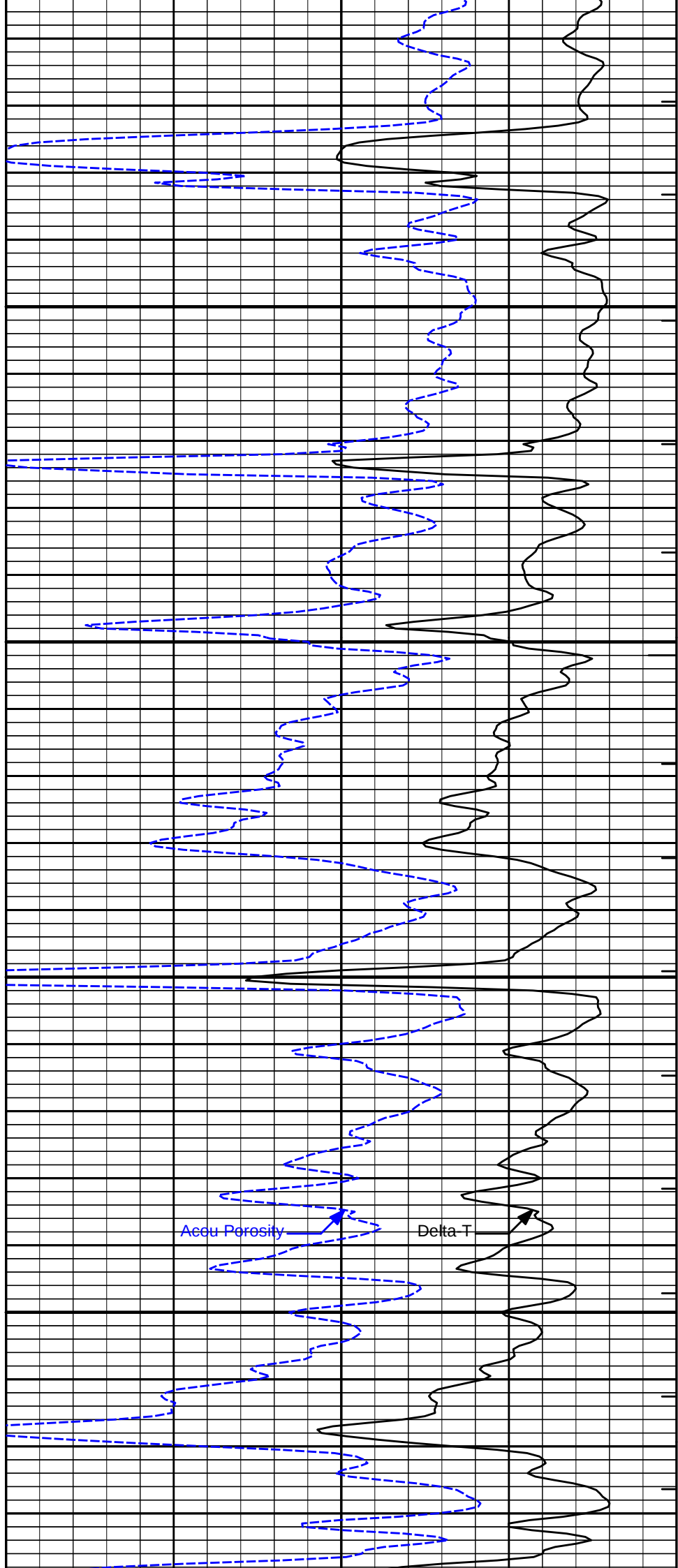
5200

5300

Gamma API

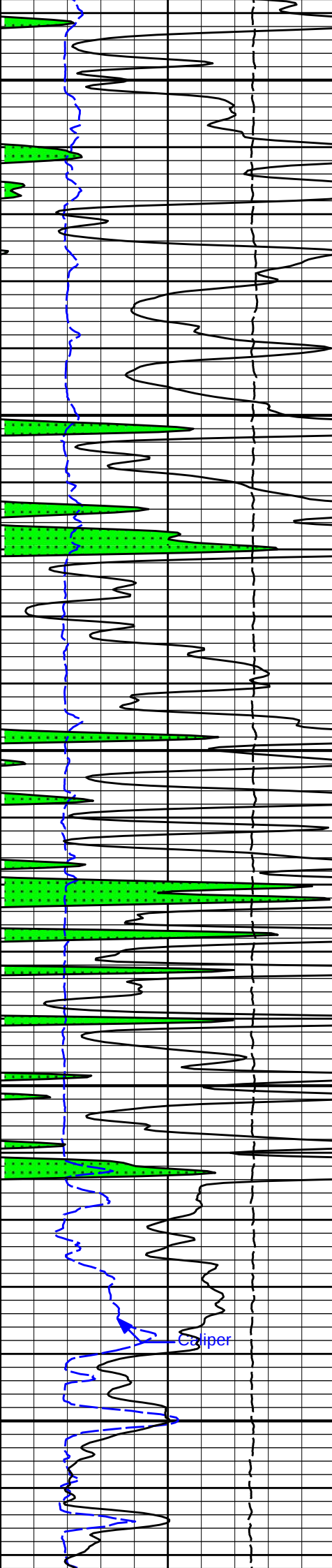
Galiper

Tens



Accu Porosity

Delta T

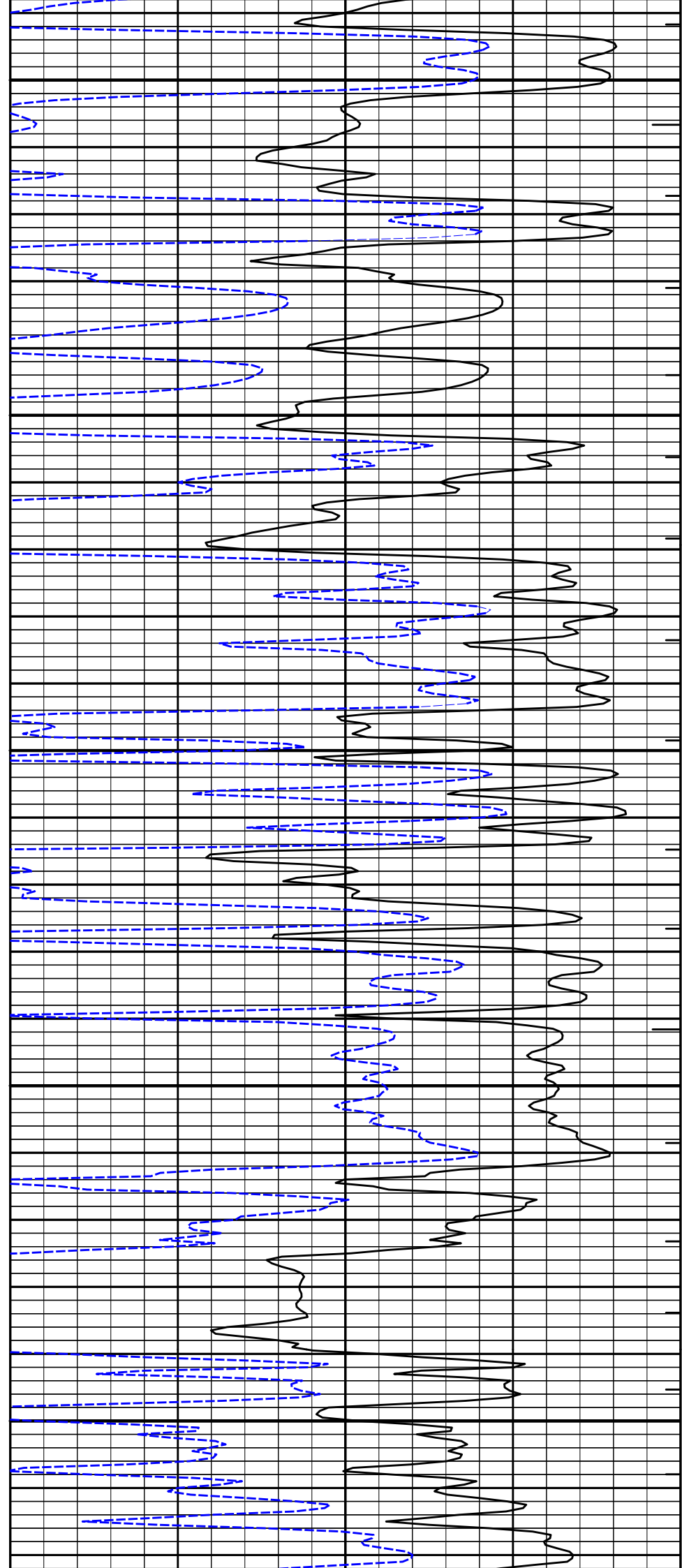


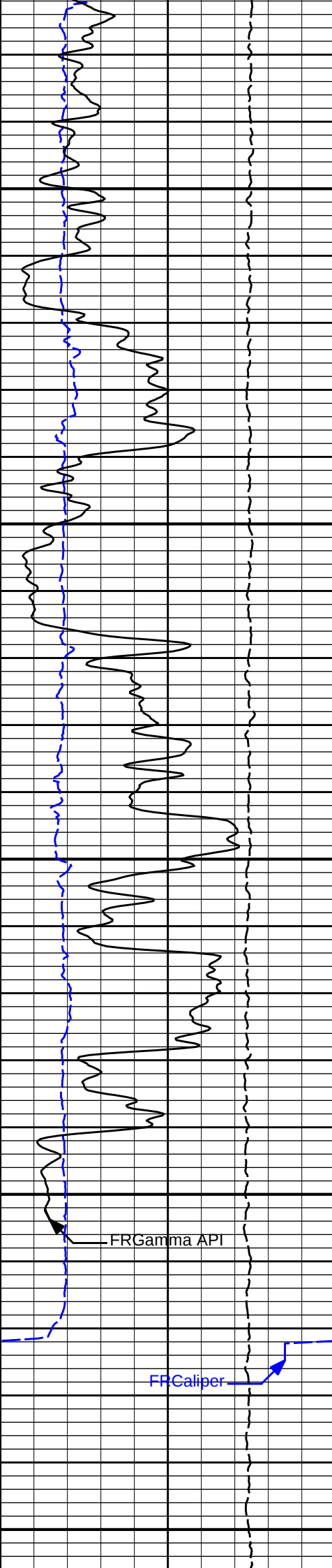
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5500

5600

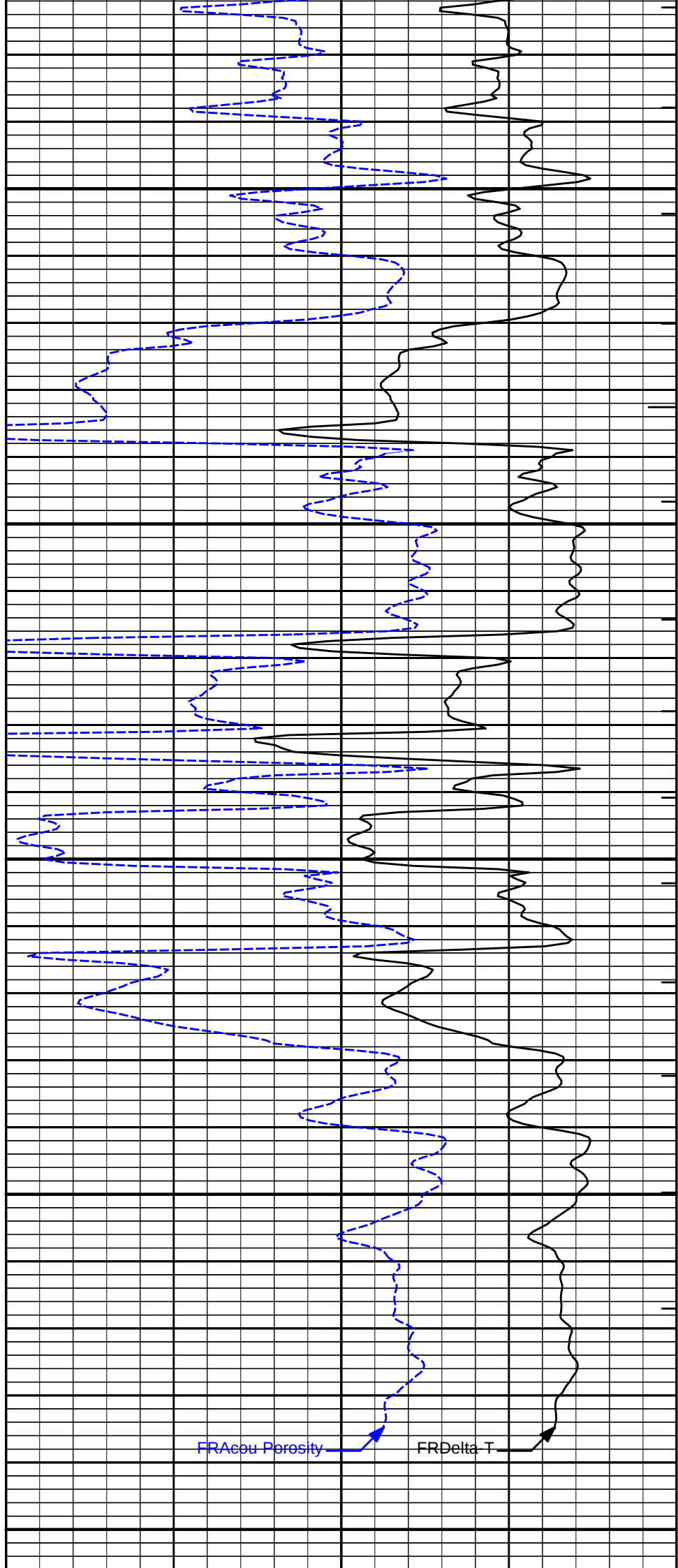
Caliper





5700

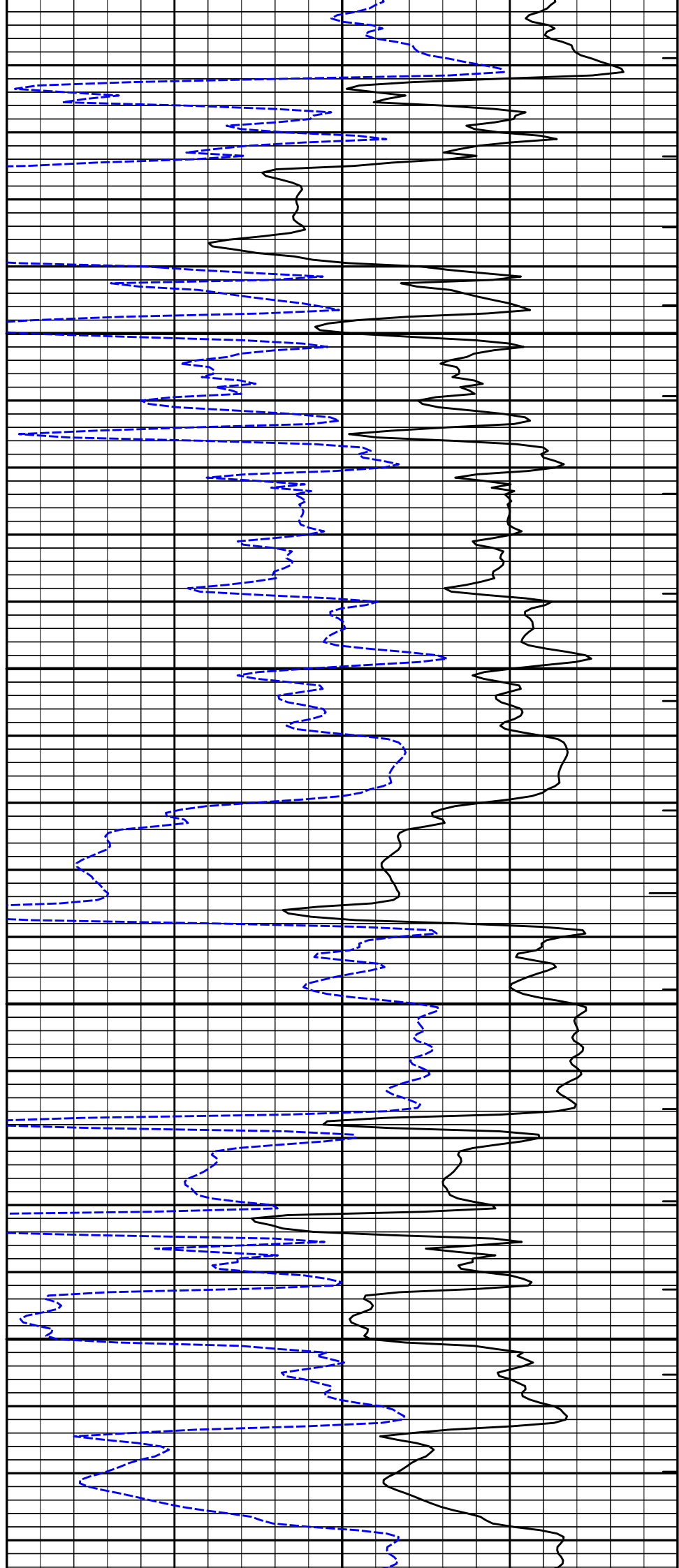
5800

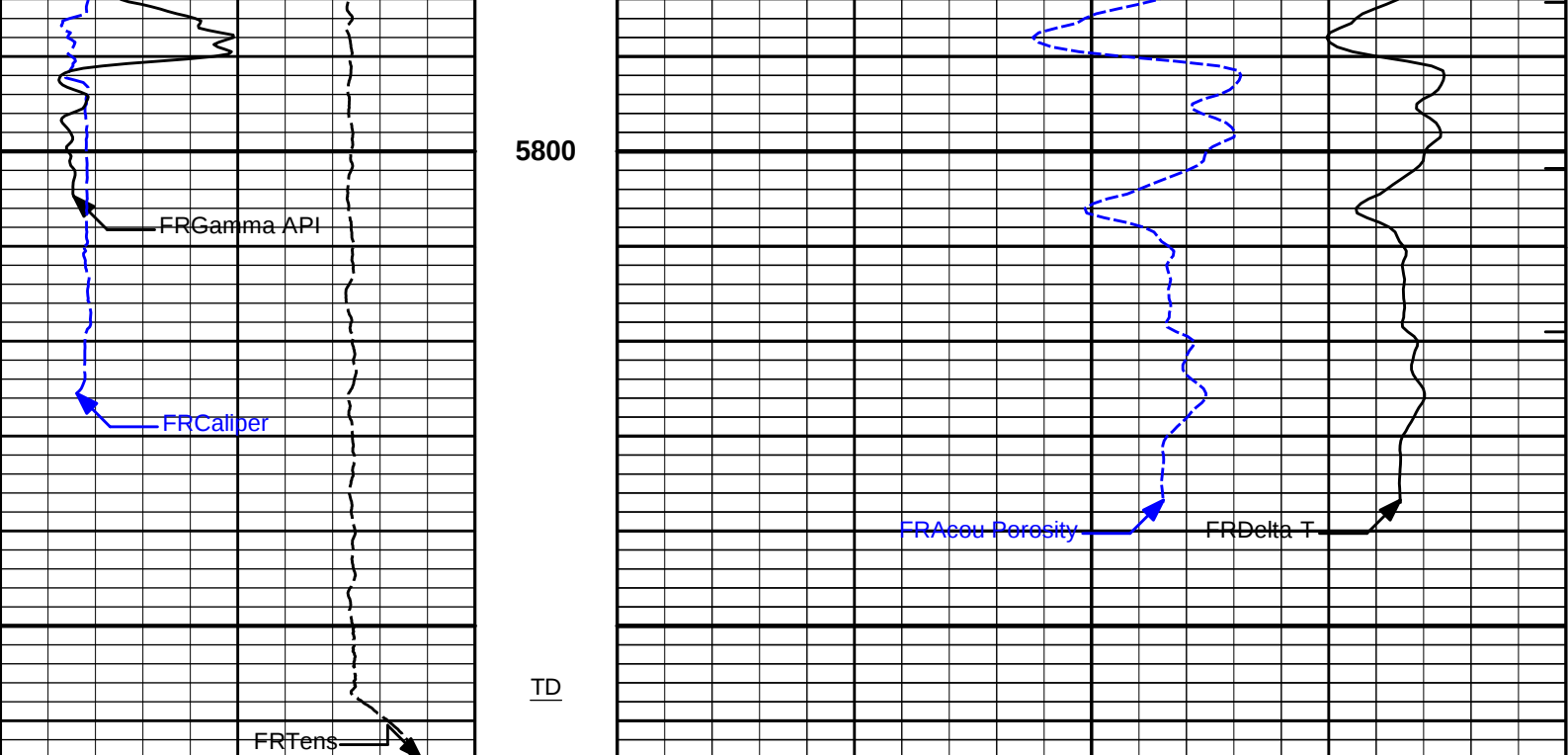




5600

5700





0	Gamma API	150	1 : 240		ITTT
	api		ft		
15K	Tens	0		140	Delta-T
	pounds				microsec per ft
6	CALI	16		30	Acou Porosity
	inches				percent

HALLIBURTON

Plot Time: 02-Apr-18 22:09:56
Plot Range: 5500 ft to 5864 ft
Data: RAYDON_ROCK\Well Based\DAQ-0001-003\
Plot File: \IBSAT\IBSAT_5inch

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name:	Depth Panel - 12345678	Reference Calibration Date:	22-Mar-18 13:22:04
Engineer:	MICHAEL RICHTER	Calibration Date:	26-Mar-18 02:44:11
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

SURFACE TENSION LOAD CELL				
Measurement	Load Cell Value	Measurement	Calibrated	Units
Low	10487.49	152.55	0.00	lbs
High	16966.98	7992.00	7830.00	lbs

DOWNHOLE TENSION SHOP CALIBRATION

Tool Name:	CH_HOS - CH_HOS_I	Reference Calibration Date:	22-Mar-18 13:25:56
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Engineer: MICHAEL RICHTER		Calibration Date: 26-Mar-18 02:47:18			
Software Version: WL INSITE R5.6.3 (Build 4)		Calibration Version: 1			
	DOWNHOLE LOAD CELL				
	Measurement	Tool Value	Measurement	Calibrated	Units
	Low	-387.58	-26.64	0.00	lbs
	High	4481.23	556.85	1810.00	lbs
NATURAL GAMMA RAY TOOL SHOP CALIBRATION					
Tool Name: GTET - 11013113		Reference Calibration Date: 02-Mar-18 10:43:25			
Engineer: WHITLOCK		Calibration Date: 02-Apr-18 09:34:23			
Software Version: WL INSITE R5.6.3 (Build 4)		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	24.8	24.5	api	
	Background + Calibrator	253.9	250.4	api	
	Calibrator	229.0	225.9	api	
NATURAL GAMMA RAY TOOL FIELD CALIBRATION					
Tool Name: GTET - 11013113		Reference Calibration Date: 02-Apr-18 09:34:23			
Engineer: WHITLOCK		Calibration Date: 02-Apr-18 09:42:58			
Software Version: WL INSITE R5.6.3 (Build 4)		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	24.5	24.2	api	
	Background + Calibrator	250.4	247.0	api	
	Calibrator	225.9	222.8	api	
	Shop	Field	Difference	Tolerance	
	225.9	222.8	3.1	+/- 9.00	
DUAL SPACED NEUTRON SHOP CALIBRATION					
Tool Name: DSNT - 11019641		Reference Calibration Date: 23-Jan-18 12:17:50			
Engineer: WHITLOCK		Calibration Date: 23-Jan-18 12:36:13			
Software Version: WL INSITE R5.6.3 (Build 4)		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: 72 degF					
Min. Tool Housing Outside Diameter: 3.625 in					
	CALIBRATION CONSTANTS				
	Measurement	Prev. Value	New Value	Control Limit On New Value	
	Gain:	0.98237	0.98197	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):	0.2359	0.2358	0.0001	+/- 0.0020
	Calibrated Ratio:	10.5640	10.5596	0.004	+/- 0.050

VERIFIER

Measurement

Value

Control Limit

Snow-Block Porosity (decp):0.07700.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:

Passed

Gain-Range Check:

Passed

Snow-Block Check:

Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:DSNT - 11019641

Reference Calibration Date:23-Jan-18 12:36:13

Engineer:SEAN WOLTEMATH

Calibration Date:02-Apr-18 09:46:51

Software Version:WL INSITE R5.6.3 (Build 4)

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):0.07700.0634-0.0136+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:

Passed

Snow Block Stat Check:

Passed

Temperature Check:

Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:SDLT - 10950489

Reference Calibration Date:01-Jan-70 00:00:00

Engineer:WHITLOCK

Calibration Date:14-Dec-17 13:55:25

Software Version:WL INSITE R5.6.3 (Build 4)

Calibration Version:1

Host Tool Name:DSNT - 11019641

CALIBRATION COEFFICIENTS

Measurement

Previous Value

New Value

Control Limit On
New Value

Pad Offset

-3919.89

-3919.89

-7000.00 - -1000.00

Pad Gain

0.0003729

0.0003729

0.0002000 - 0.0006000

Arm Offset

-3610.38

-3610.38

-5000.00 - 3000.00

Arm Gain

0.0004319

0.0004319

0.000300 - 0.000700

Arm Power

-0.000000447

-0.000000447

-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

Pass/Fail Summary:	Passed
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ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			
Tool Name:	ACRt Sonde - 11830728	Reference Calibration Date:	15-Dec-17 11:55:35
Engineer:	WHITLOCK	Calibration Date:	23-Feb-18 10:15:37
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11830684		

TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0279	1.05	0.95	1.0076	1.05	0.95	0.9997	1.05
A2 (50")	0.95	1.0334	1.05	0.95	1.0139	1.05	0.95	1.0097	1.05
A3 (29")	0.95	1.0346	1.05	0.95	1.0146	1.05	0.95	1.0081	1.05
A4 (17")	0.95	1.0279	1.05	0.95	1.0063	1.05	0.95	1.0018	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0001	1.05	0.95	0.9950	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9869	1.05	0.95	0.9818	1.05

SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	0.315			-4.964			-5.711		
A2 (50")	0.409			-3.450			-5.485		
A3 (29")	-11.648			-3.720			-3.783		
A4 (17")	-90.980			-28.724			-23.707		
A5 (10")	N/A			-76.200			-37.537		
A6 (6")	N/A			280.488			149.005		

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.82	1.3		Mud Cell	0.95	0.99	1.05
36K	1.0	1.80	2.0					
72K	1.0	1.05	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 - 11830728	Reference Calibration Date:	15-Dec-17 11:58:57
Engineer:	WHITLOCK	Calibration Date:	23-Feb-18 10:21:17
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1
Host Tool Name:	ACRt Instrument - 11830684		

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	-0.006	> -0.500	Pass
A2 (50")	0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.005	> -0.500	Pass
A3 (29")	-0.000	< 0.500	Pass	-0.001	> -0.500	Pass	-0.003	> -0.500	Pass
A4 (17")	-0.002	> -0.500	Pass	-0.006	> -0.500	Pass	-0.022	> -0.500	Pass
A5 (10")	-0.010	> -0.500	Pass	-0.017	> -0.500	Pass	-0.036	> -0.500	Pass
A6 (6")	0.014	< 0.500	Pass	0.063	< 0.500	Pass	0.138	< 0.500	Pass

GAIN TOLERANCE					
R12KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-213173456.000	-213653808.000	480352.000	10682690.400	Pass
A2 (50")	-205651744.000	-206143280.000	491536.000	10307164.000	Pass
A3 (29")	-200817664.000	-201197776.000	380112.000	10059888.800	Pass
A4 (17")	-200193568.000	-200629872.000	436304.000	10031493.600	Pass
A5 (10")	-200252336.000	-200678960.000	426624.000	10033948.000	Pass
A6 (6")	-199820688.000	-200219344.000	398656.000	10010967.200	Pass
R36KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	48114080.000	48477272.000	363192.000	2423863.600	Pass
A2 (50")	33966292.000	34324412.000	358120.000	1716220.600	Pass
A3 (29")	28032378.000	28346680.000	314302.000	1417334.000	Pass
A4 (17")	27853682.000	28207516.000	353834.000	1410375.800	Pass
A5 (10")	27373208.000	27716930.000	343722.000	1385846.500	Pass
A6 (6")	26035236.000	26360300.000	325064.000	1318015.000	Pass
R72KHz					
	Measured (mmho/m)	Last Month (mmho/m)	Difference (mmho/m)	Tolerance (mmho/m)	Pass/Fail
A1 (80")	-92927656.000	-93022904.000	95248.000	4651145.200	Pass
A2 (50")	-90501024.000	-90617752.000	116728.000	4530887.600	Pass
A3 (29")	-88192472.000	-88292832.000	100360.000	4414641.600	Pass
A4 (17")	-88397088.000	-88515880.000	118792.000	4425794.000	Pass
A5 (10")	-86957704.000	-87076952.000	119248.000	4353847.600	Pass
A6 (6")	-87976216.000	-88080696.000	104480.000	4404034.800	Pass

PASS/FAIL SUMMARY		
Std Deviation Verification		Pass
Average Verification		Pass
Gain Tolerance Verification		Pass

MICRO LOG SHOP CALIBRATION			
Tool Name:	Microlog Pad - 10950489	Reference Calibration Date:	14-Dec-17 13:13:21
Engineer:	SEAN WOLTEMATH	Calibration Date:	29-Mar-18 10:10:09
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1
Host Tool Name:	DSNT - 11019641		

CALIBRATION COEFFICIENT SUMMARY						
Measurement	Micro Log Normal		Micro Log Lateral		Units	
	Measured	Calibrated	Measured	Calibrated		

Measured	Calibrated	Measured	Calibrated	Units
Tool Zero	-0.07	-0.09	-0.01	ohmm
Calibration Point #1	0.02	0.00	0.00	ohmm
Calibration Point #2	20.01	20.00	19.99	ohmm
Internal Reference	19.92	19.91	19.98	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	0.01	0.02	V
Calibration Point #1	22.62	2.05	V
Calibration Point #2	5331.95	6945.96	V
Internal Reference	5308.27	6942.10	V

MICRO LOG FIELD CHECK

Tool Name:	Microlog Pad - 10950489	Reference Calibration Date:	29-Mar-18 10:10:09
Engineer:	WHITLOCK	Calibration Date:	02-Apr-18 09:31:49
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.09	-0.09	-0.01	-0.01	ohmm
Internal Reference	19.91	19.88	19.99	19.96	ohmm
Summary					
Signal	Shop	Field	Difference		Tolerance
Microlog Normal	19.91	19.88	0.03		+/- 0.80
Microlog Lateral	19.99	19.96	0.03		+/- 0.80

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 11213308	Reference Calibration Date:	14-Dec-17 13:29:17
Engineer:	SEAN WOLTEMATH	Calibration Date:	29-Mar-18 13:45:53
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Logging Source S/N: 5155GW		
Aluminum Block S/N: EL RENO	Density: 2.581g/cc	Pe: 3.170
Magnesium Block S/N: EL RENO	Density: 1.687g/cc	Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0311	1.0351	0.90 - 1.10
Near Dens Gain	1.0140	1.0142	0.90 - 1.10
Near Peak Gain	1.0305	1.0443	0.90 - 1.10
Near Lith Gain	1.0375	1.0681	0.90 - 1.10
Far Bar Gain	1.0101	1.0125	0.90 - 1.10
Far Dens Gain	0.9969	0.9981	0.90 - 1.10
Far Peak Gain	0.9958	0.9949	0.90 - 1.10
Far Lith Gain	0.9757	0.9731	0.90 - 1.10
Near Bar Offset	0.0106	-0.0096	NONE
Near Dens Offset	0.1722	0.1818	NONE
Near Peak Offset	0.0177	-0.0795	NONE
Near Lith Offset	-0.0725	-0.3008	NONE
Far Bar Offset	0.1300	0.1155	NONE
Far Dens Offset	0.2552	0.2496	NONE
Far Peak Offset	0.2487	0.2613	NONE
Far Lith Offset	0.3676	0.3924	NONE
Near Bar Background	963.19	957.68	700 - 1450
Near Dens Background	320.82	317.42	230 - 480
Near Peak Background	140.46	138.59	100 - 210

Near Peak Background	140.40	138.39	100 - 210
Near Lith Background	171.88	169.33	125 - 260
Far Bar Background	490.97	486.09	450 - 900
Far Dens Background	195.43	194.85	175 - 345
Far Peak Background	78.63	78.00	70 - 140
Far Lith Background	81.18	81.14	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.674	1.687	0.013	+/- 0.015
Pe	2.623	2.551	-0.072	+/- 0.150
ALUMINUM				
Density (g/cc)	2.567	2.581	0.014	+/- 0.01500
Pe	3.146	3.123	-0.023	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0015	+/- 0.0110	-0.0006	+/- 0.0140
Magnesium Block	-0.0009	+/- 0.0110	0.0001	+/- 0.0140
Aluminum Block	-0.0011	+/- 0.0110	-0.0005	+/- 0.0140
Resolution	9.25	6.00 - 11.50	9.36	6.00 - 11.50
Internal Verifier(B+D+P+L)	1583	1200 - 2700	840	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 - 11213308	Reference Calibration Date:	29-Mar-18 13:45:53
Engineer:	WHITLOCK	Calibration Date:	02-Apr-18 09:35:32
Software Version:	WL INSITE R5.6.3 (Build 4)	Calibration Version:	1

Pad Temperature: 64.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1583.020	1579.950	-3.070	16.005
Far (B+D+P+L) cps	840.072	840.066	-0.006	15.931
Near Resolution	9.25	9.25	0.000	0.50
Far Resolution	9.36	9.25	-0.110	1.00

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

CALIBRATION SUMMARY	
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Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-12345678						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
CH_HOS-CH_HOS_I						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	1810.00	-----	-----	0.00	-----	lbs
GTET-11013113						
Gamma Ray Calibrator	225.9	222.8	-----	3.1	+/- 9.00	api
DSNT-11019641						
Snow-Block Porosity	0.0770	0.0634	-----	0.0136	+/- 0.0150	decp
SDLT-10950489						
Pad Extension	3.75	-----	-----	0.00	+/-0.20	in
Ring Diameter	8.25	-----	-----	0.00	+/-0.20	in
ACRt Sonde-11830728						
Mud Cell	0.99	-----	-----	0	-----	ohm-m
Microlog Pad-10950489						
MicroLog Normal	19.91	19.88	-----	0.03	+/-0.80	ohmm
MicroLog Lateral	19.99	19.96	-----	0.03	+/-0.80	ohmm
SDLT Pad-11213308						
Near(B+D+P+L)	1583.020	1579.950	-----	3.070	+/-16.005	cps
Far(B+D+P+L)	840.072	840.066	-----	0.006	+/-15.931	cps
Data: RAYDON_ROCK\0001 GTET-DSNT-SDLT-BSAT-ACRT\IDLE						
Date: 02-Apr-18 17:05:59						



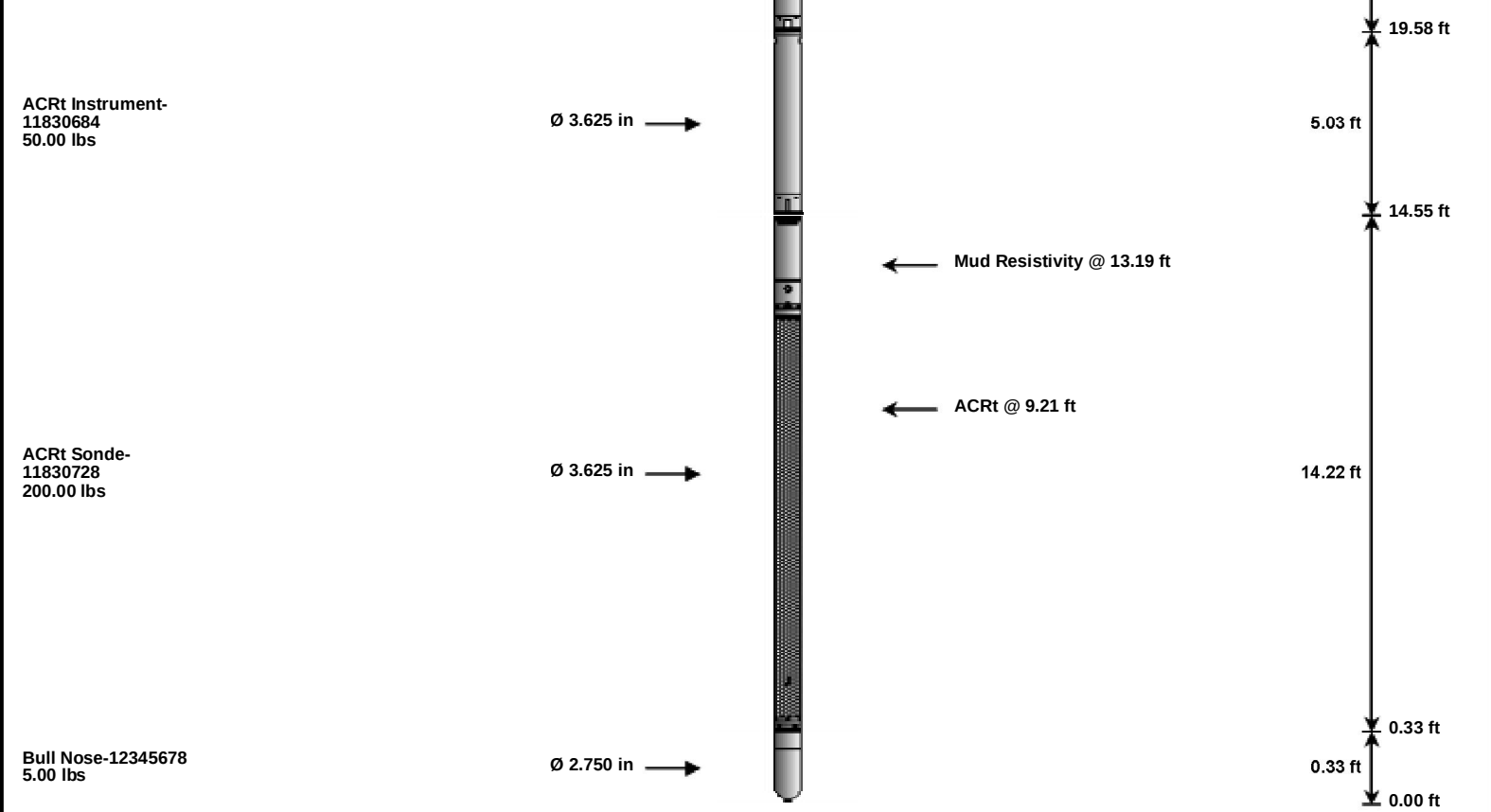
PARAMETERS REPORT

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	8.900	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.250	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	5860.00	ft
	SHARED	BHT	Bottom Hole Temperature	138.0	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	SOCI	Source of Casing Information	Parameters	
	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 /				

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	DNSO	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 Up	
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_____				
Data: RAYDON_ROCK\0001 GTET-DSNT-SDLT-BSAT-ACRT\IDLE			Date: 02-Apr-18 17:14:12	

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS_I 37.50 lbs	Weak Point 7000 lbs- CH_HOS_I 0.01 lbs	Ø 2.750 in Ø 0.010 in*		Temperature @ 71.07 ft	3.03 ft	72.10 ft
XOHD-12345678 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	69.07 ft
SP Sub-11812437 60.00 lbs		Ø 3.625 in		SP @ 66.34 ft	3.74 ft	68.12 ft
				Z-Accelerometer @ 63.93 ft		64.38 ft
GTET-11013113 165.00 lbs		Ø 3.625 in			8.52 ft	
				GammaRay @ 58.32 ft		55.86 ft
DSNT-11019641 174.00 lbs	DSN Decentralizer- 11660709 6.60 lbs	Ø 5.000 in* Ø 3.625 in		DSN Far @ 48.92 ft DSN Near @ 48.17 ft	9.69 ft	46.17 ft
SDLT-10950489 360.00 lbs	SDLT Pad-11213308 65.00 lbs Microlog Pad-10950489 8.00 lbs RAM-Cs137-00005155 1.00 lbs	Ø 4.500 in Ø 4.500 in* Ø 4.750 in* Ø 0.800 in*		Microlog @ 38.36 ft SDL Caliper @ 38.17 ft SDL @ 38.16 ft	10.81 ft	35.36 ft
BSAT-12173982 300.00 lbs		Ø 3.625 in		Receiver Array @ 26.84 ft Sonic Receivers @ 26.84 ft	15.77 ft	



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	CH_HOS_I	37.50	3.03	69.07	300.00
WP7K	Weak Point 7000 lbs	CH_HOS_I	0.01	0.01	* 69.87	300.00
XOHD	Hostile to Dits Cross Over	12345678	20.00	0.95	68.12	300.00
SP	SP Sub	11812437	60.00	3.74	64.38	300.00
GTET	Gamma Telemetry Tool	11013113	165.00	8.52	55.86	60.00
DSNT	Dual Spaced Neutron	11019641	174.00	9.69	46.17	60.00
DCNT	DSN Decentralizer	11660709	6.60	5.13	* 49.50	300.00
SDLT	Spectral Density Tool	10950489	360.00	10.81	35.36	60.00
SDLP	Density Insite Pad	11213308	65.00	2.55	* 37.57	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	00005155	1.00	0.80	* 37.80	300.00
MICP	Microlog Pad	10950489	8.00	1.00	* 37.86	60.00
BSAT	Borehole Sonic Array Tool	12173982	300.00	15.77	19.58	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11830684	50.00	5.03	14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11830728	200.00	14.22	0.33	120.00
BLNS	Bull Nose	12345678	5.00	0.33	0.00	300.00
Total			1,452.11	72.10		
* Not included in Total Length and Length Accumulation.						
Data: RAYDON_ROCK\0001 GTET-DSNT-SDLT-BSAT-ACRT\IDLE					Date: 02-Apr-18 17:14:23	