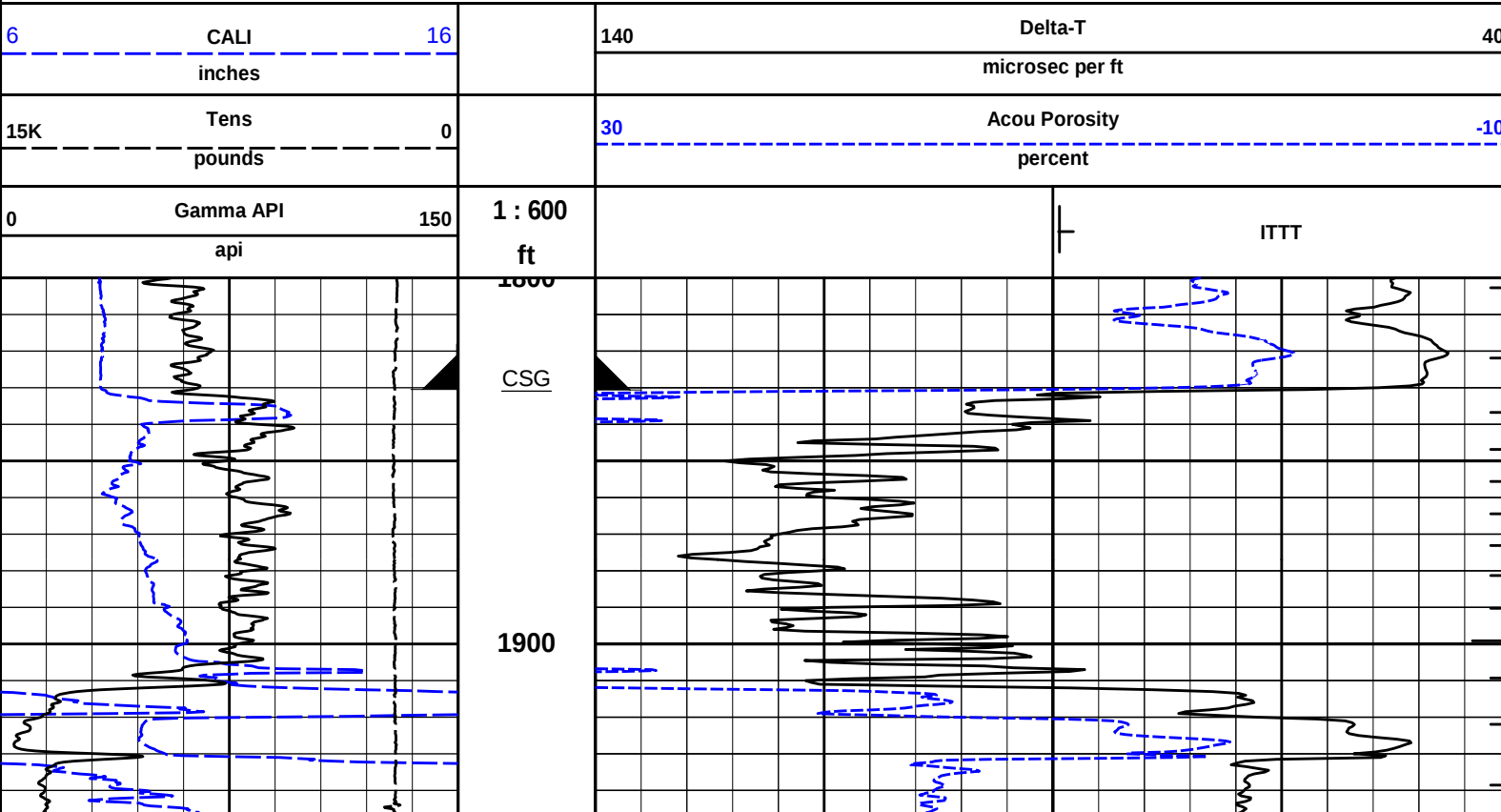
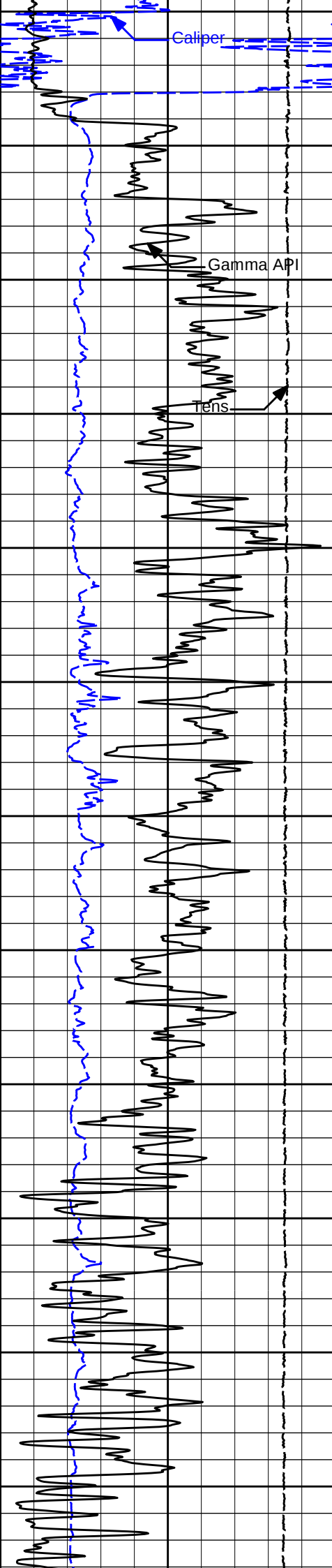


**BOREHOLE
COMPENSATED
SONIC
LOG**

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

Service Ticket No.: 905533484				API No.: 15-081-22187-00-00				PGM Version: WL INSITE R6.0.2 (Build 8)						
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	





2000

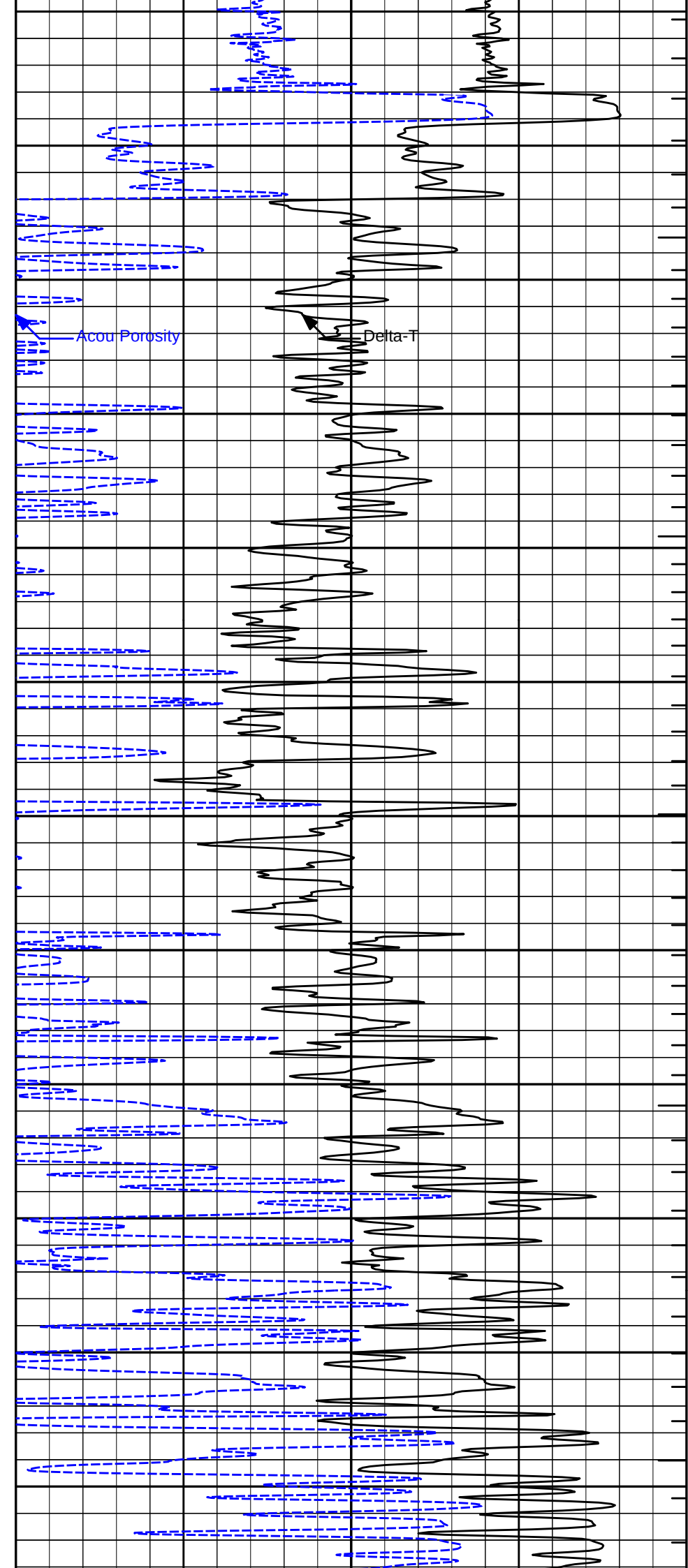
2100

2200

2300

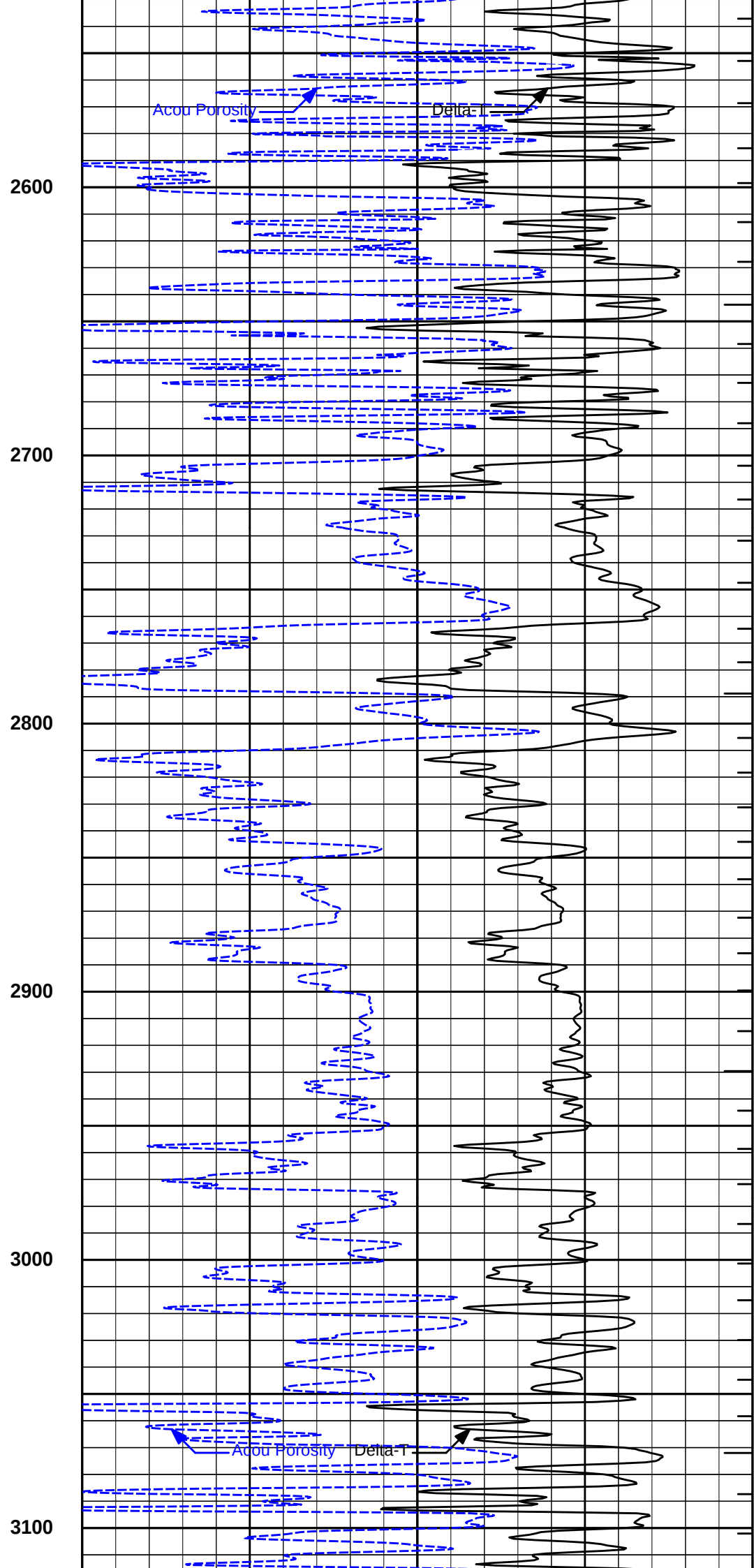
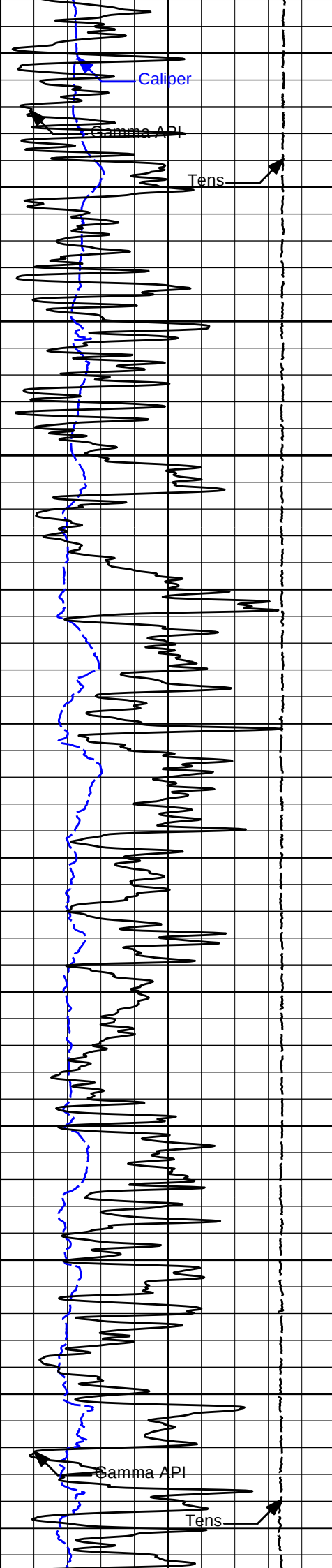
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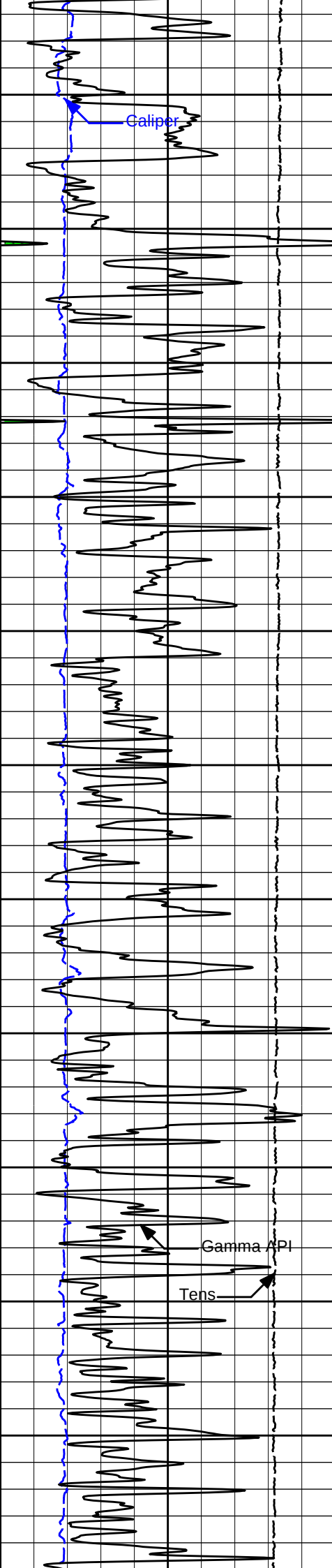
2500



Acou Porosity

Delta-T





3200

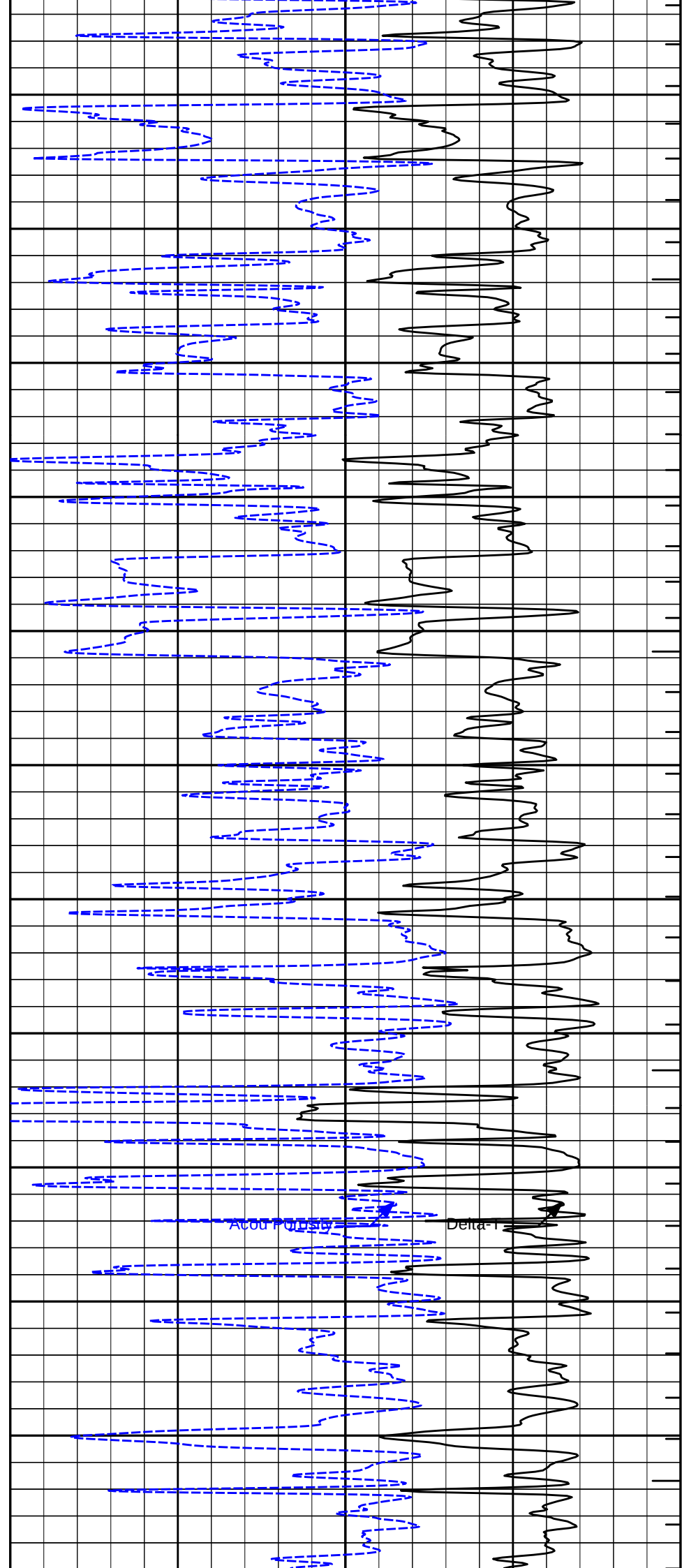
3300

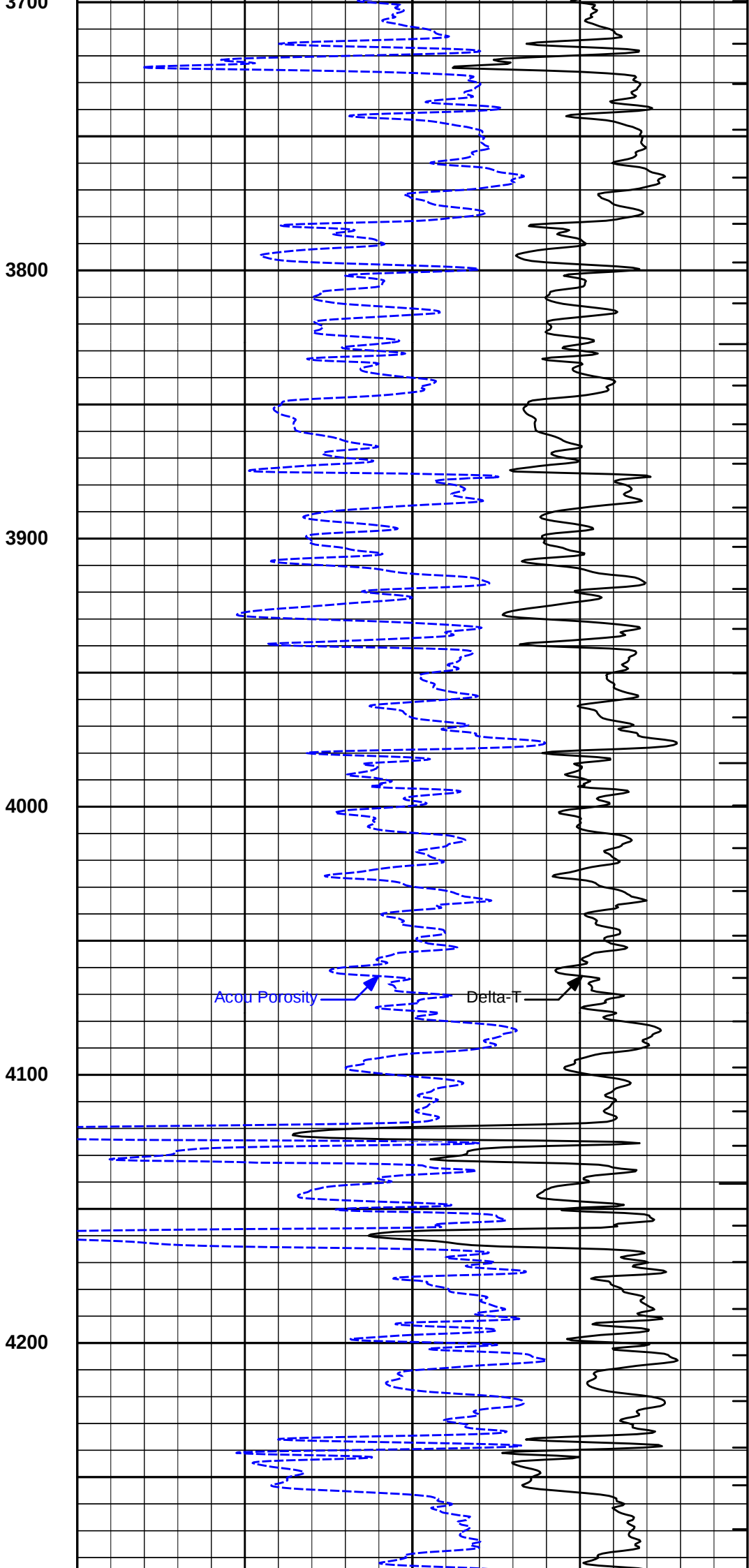
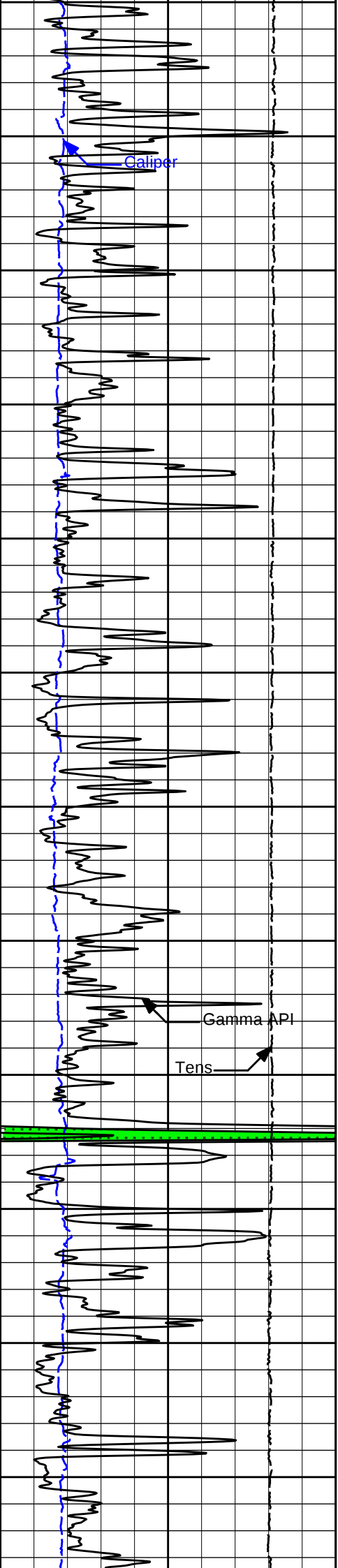
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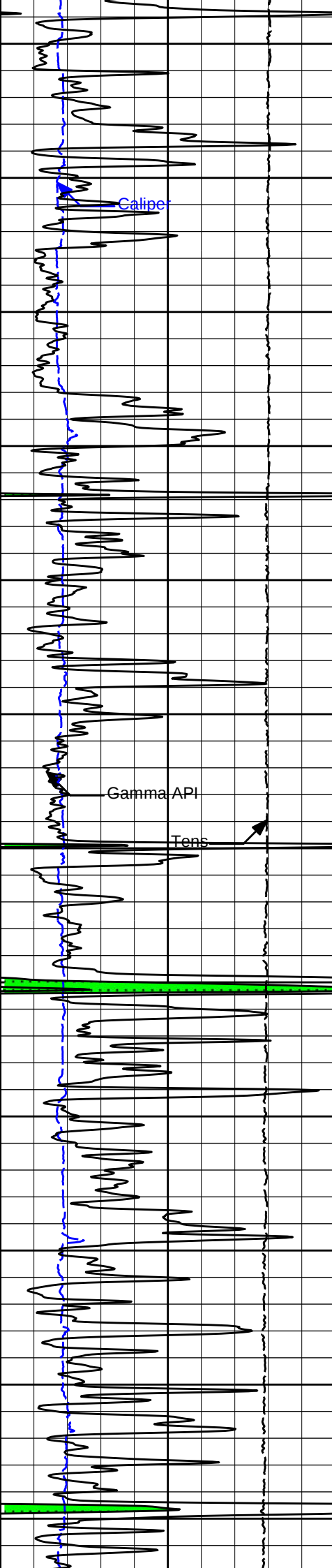
3500

3600

3700







4300

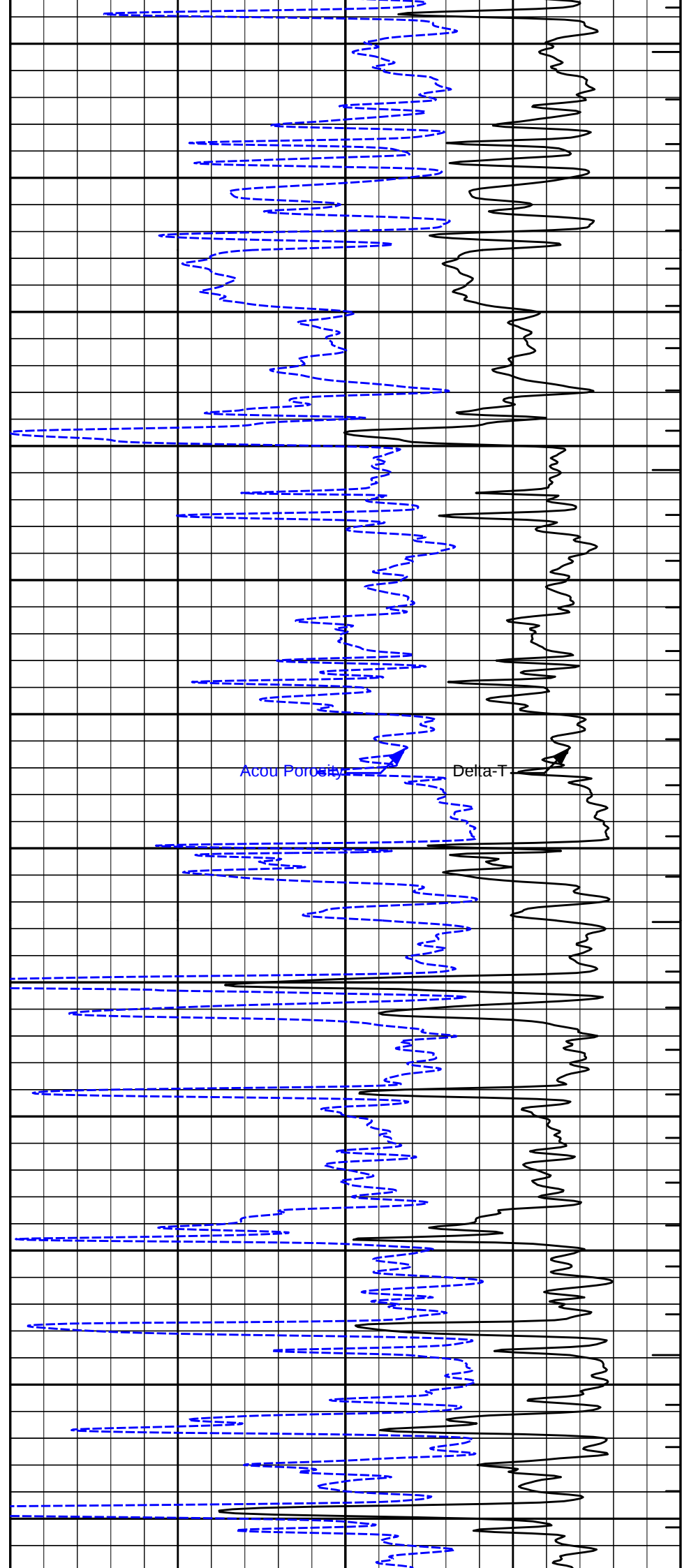
4400

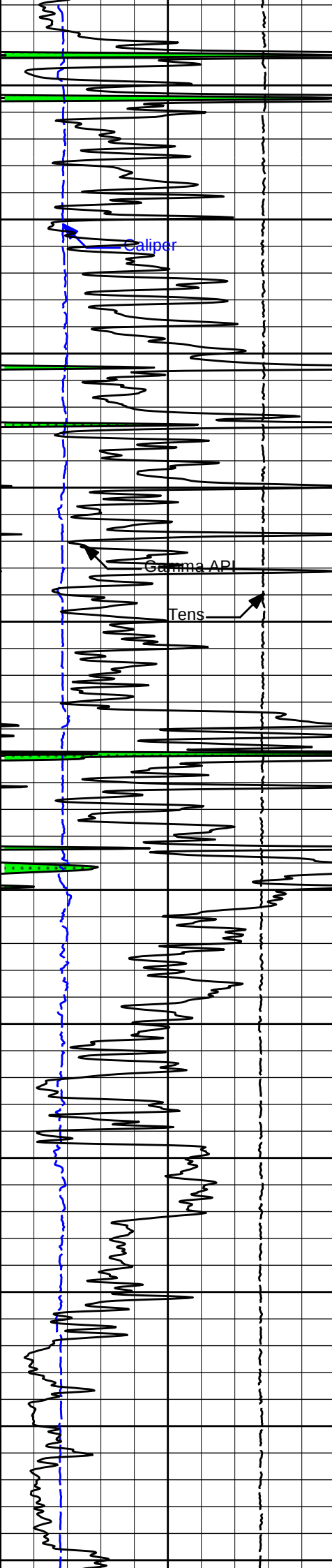
4500

4600

4700

4800





4900

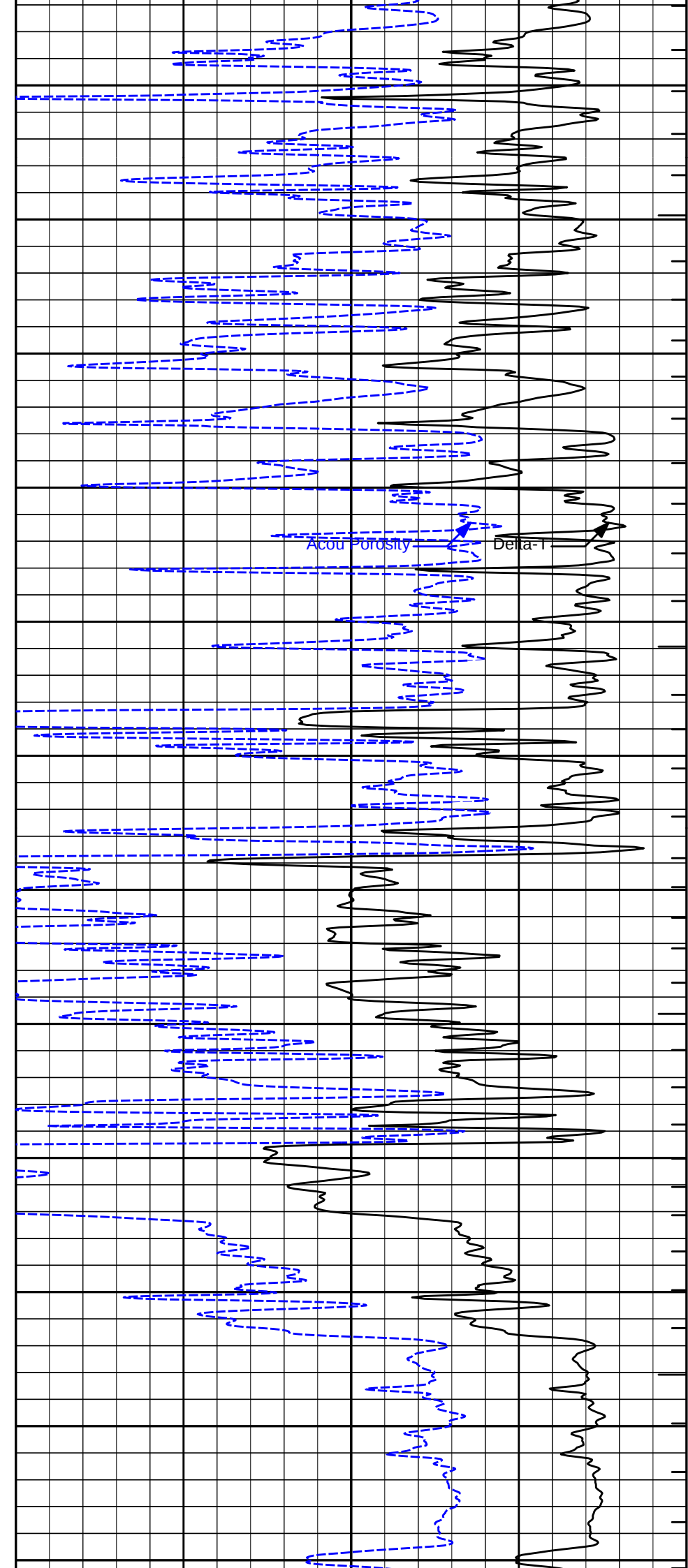
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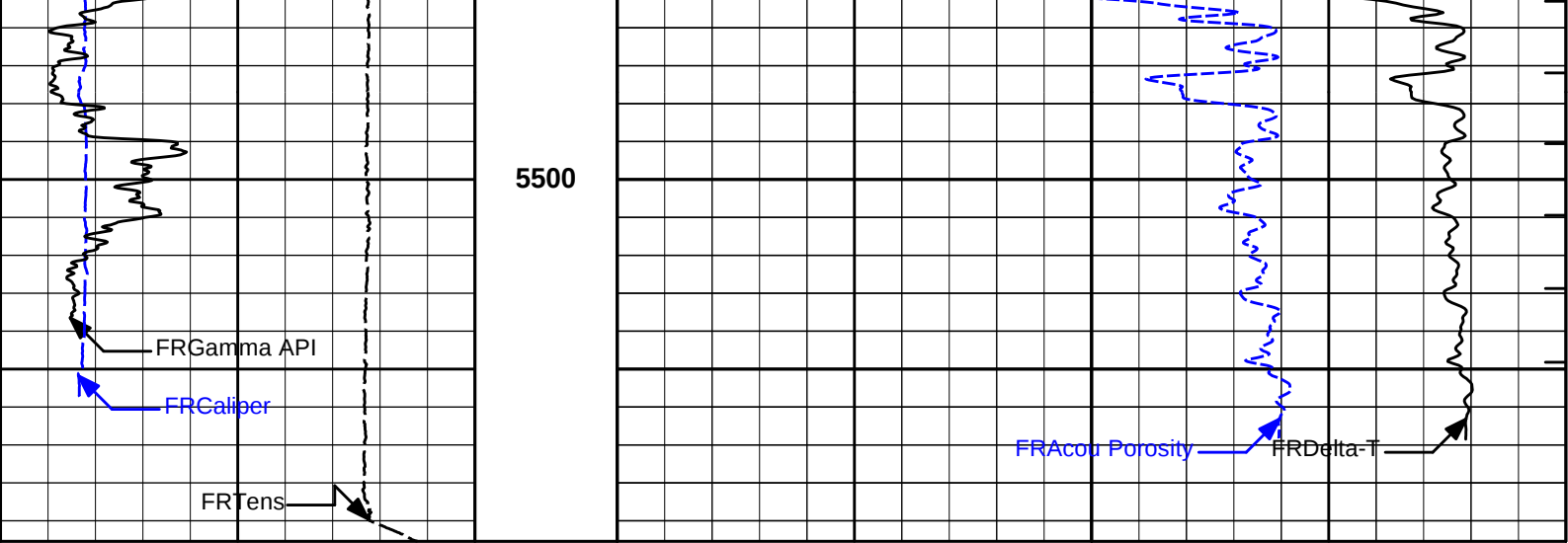
5100

5200

5300

5400





0	Gamma API	150	1 : 600		ITTT
	api		ft		
15K	Tens	0		30	Acou Porosity
	pounds				percent
6	CALI	16		140	Delta-T
	inches				microsec per ft

HALLIBURTON

Plot Time: 06-Mar-19 21:51:36
Plot Range: 1800 ft to 5595.42 ft
Data: MERIT_KELLS\Well Based\DAQ-0001-004\
Plot File: \\BSAT\BSAT_2inch

2 INCH MAIN LOG

2" MAIN LOG SECTION

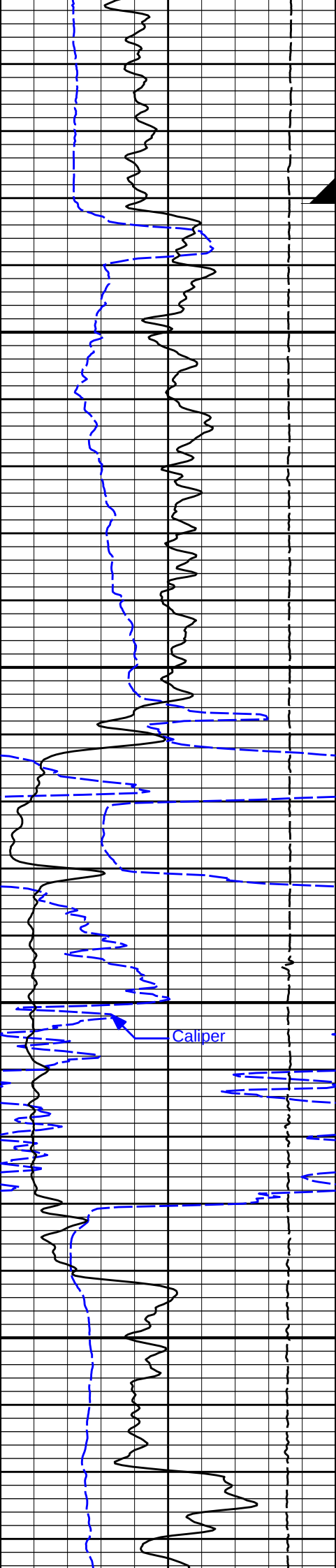
HALLIBURTON

Plot Time: 06-Mar-19 21:51:36
Plot Range: 1800 ft to 5595.42 ft
Data: MERIT_KELLS\Well Based\DAQ-0001-004\
Plot File: \\BSAT\BSAT_5inch

5 INCH MAIN LOG

MAIN LOG SECTION

6	CALI	16	30	Acou Porosity	-10
	inches			percent	
15K	Tens	0	140	Delta-T	40
	pounds			microsec per ft	
0	Gamma API	150	1 : 240		ITTT
	api		ft		

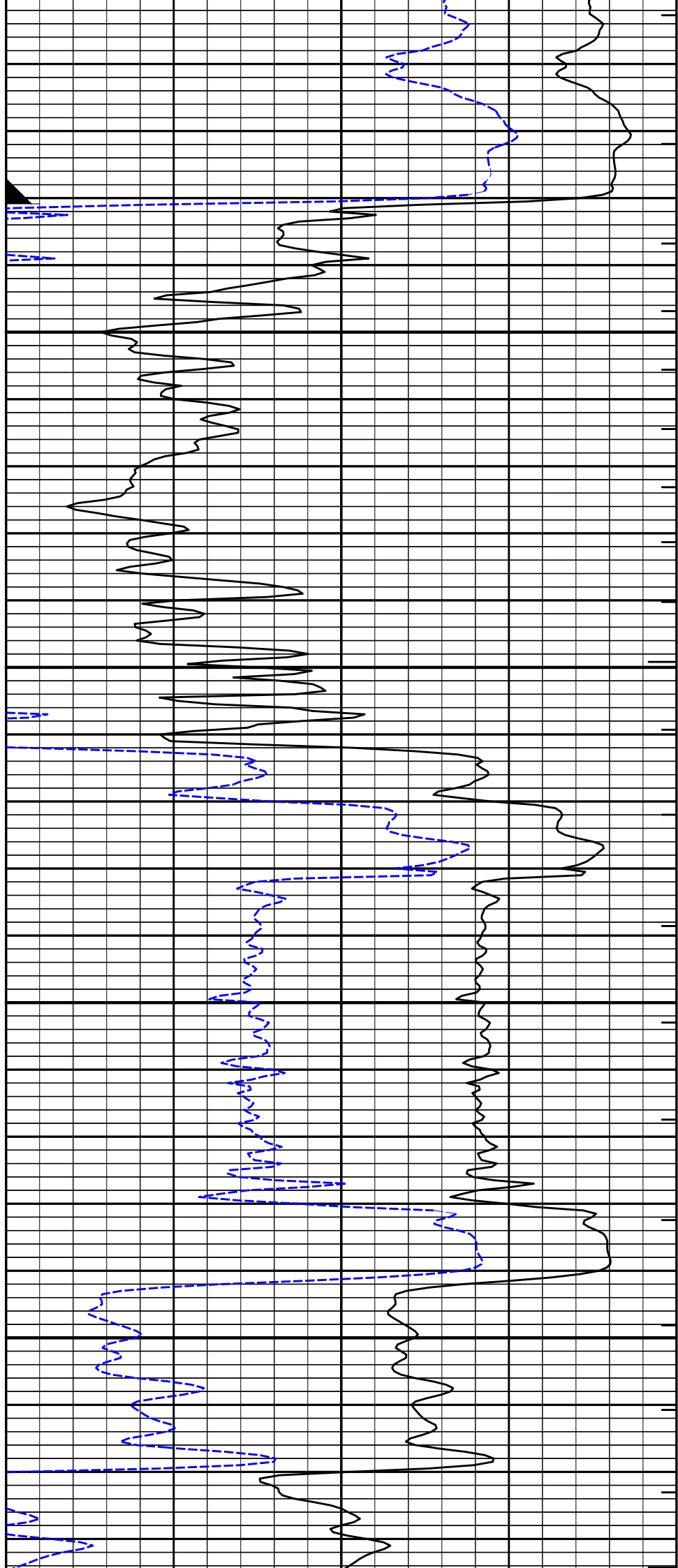


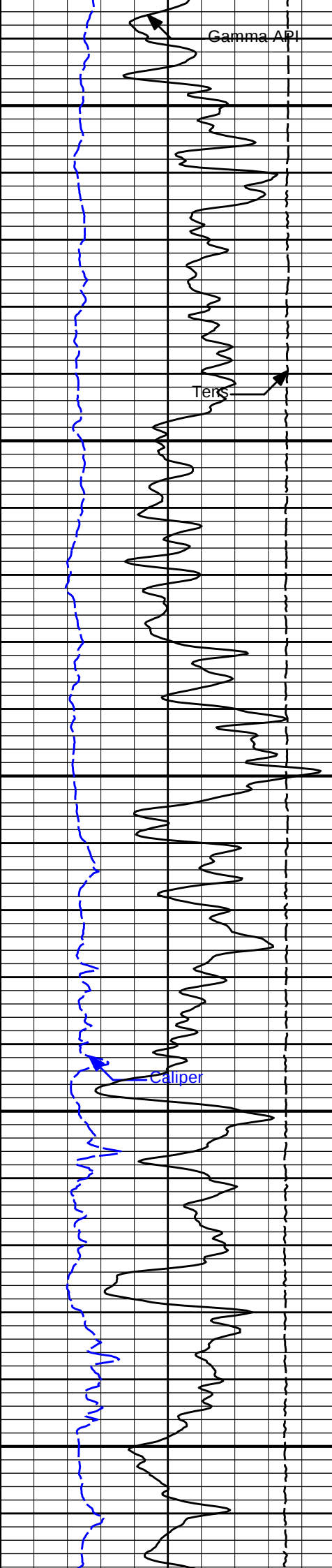
1800

CSG

1900

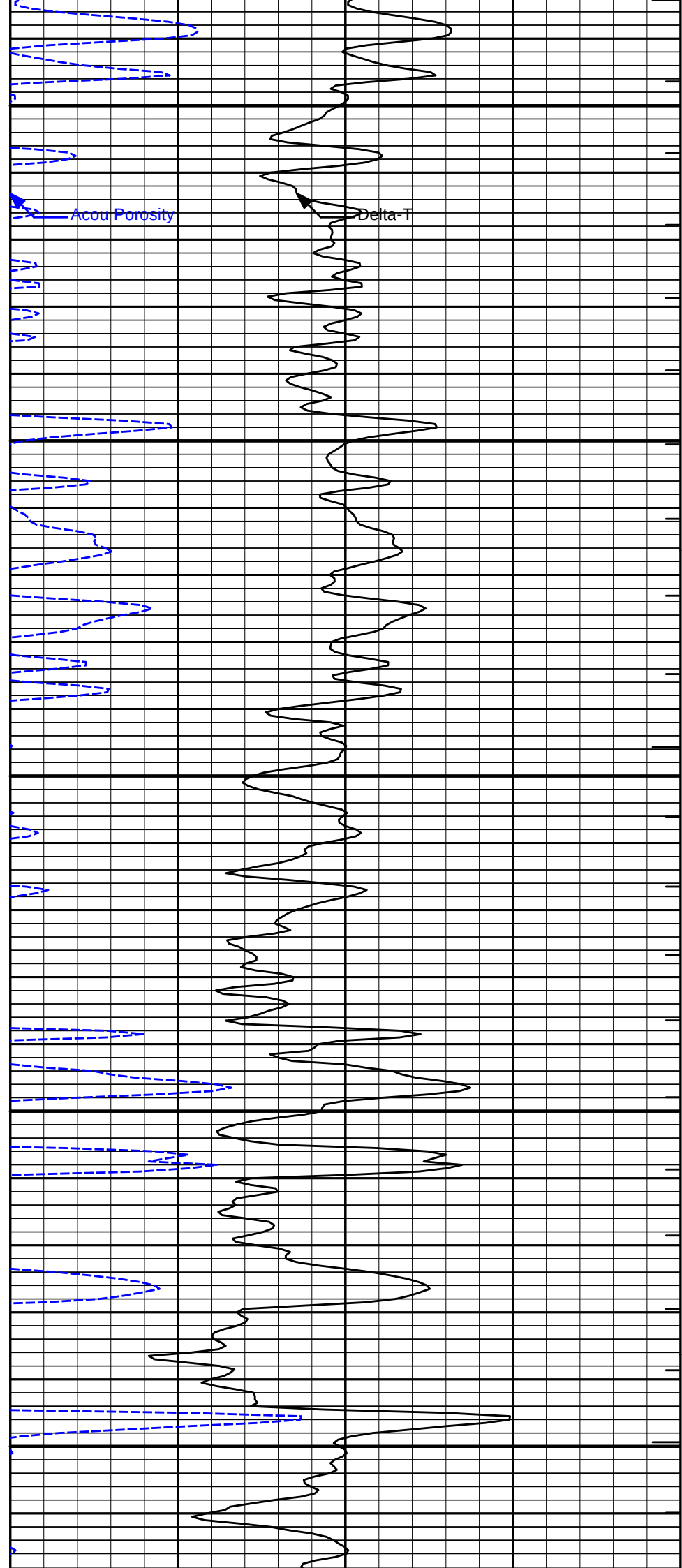
2000

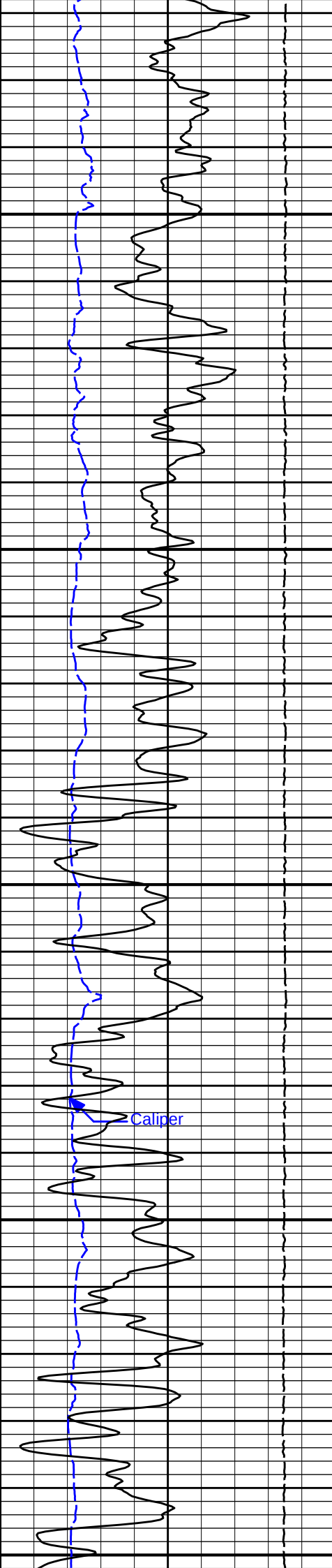




2100

2200

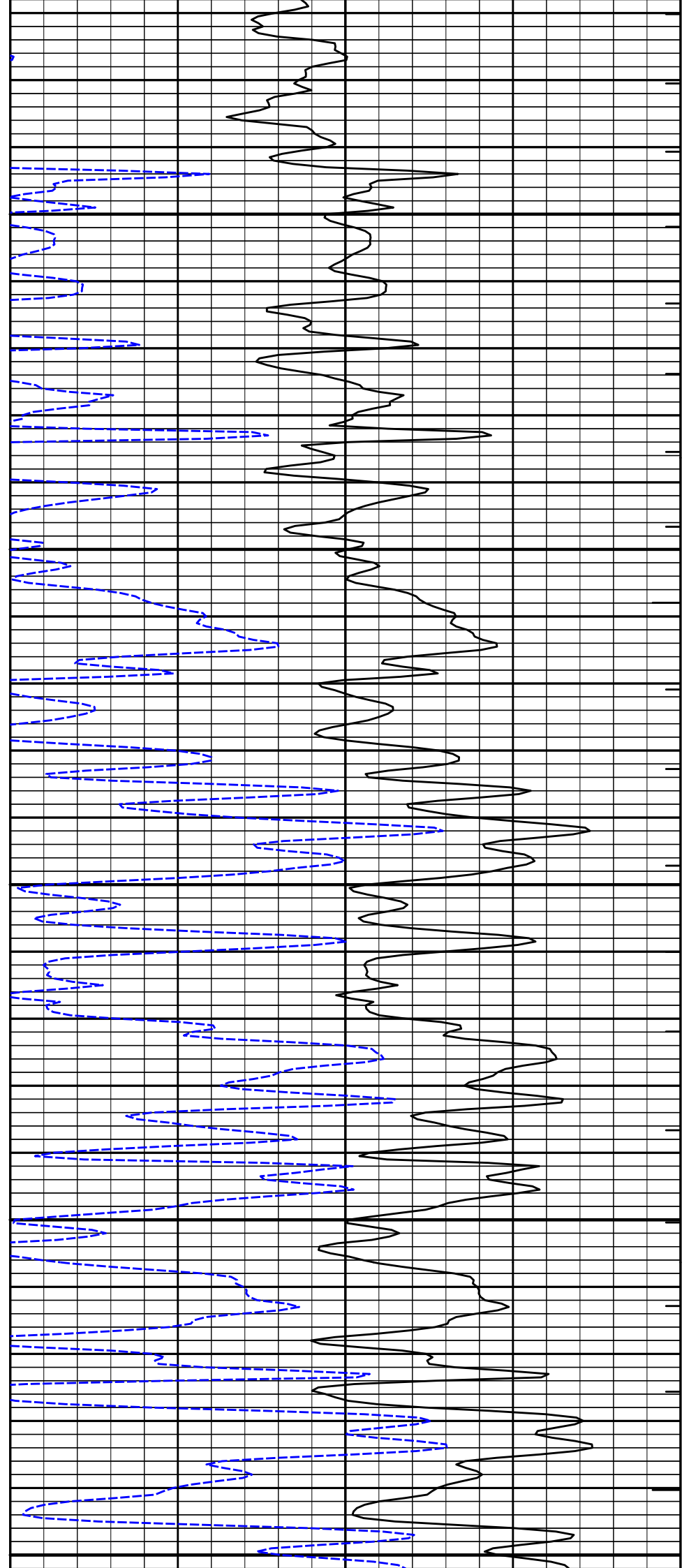




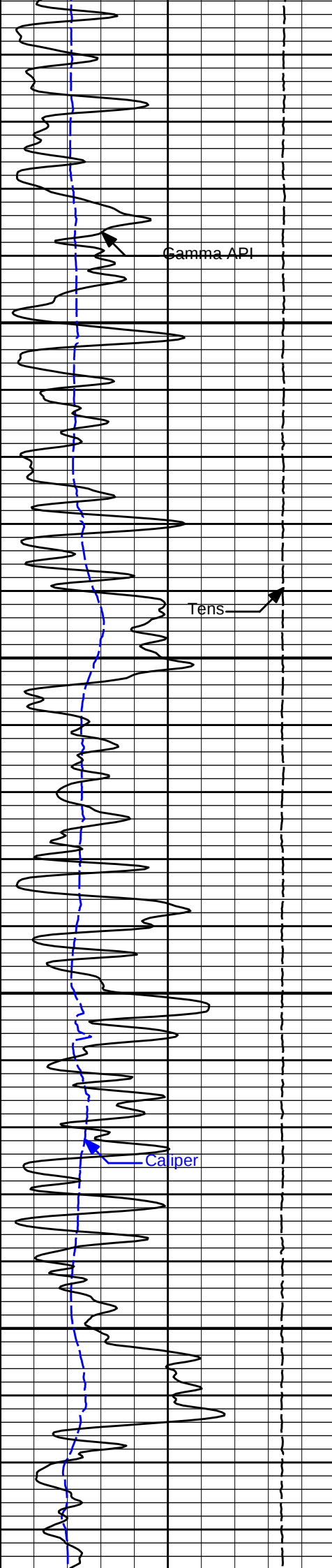
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2400

2500

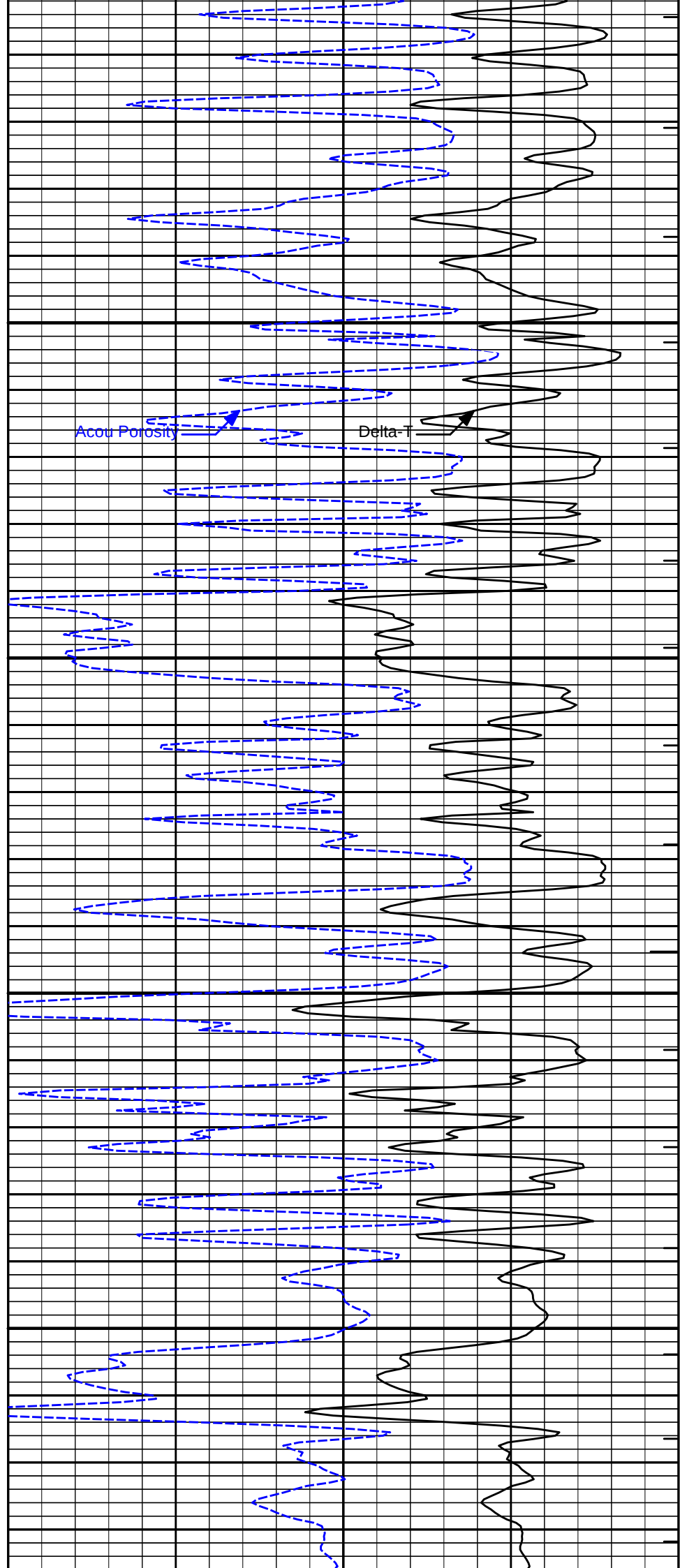


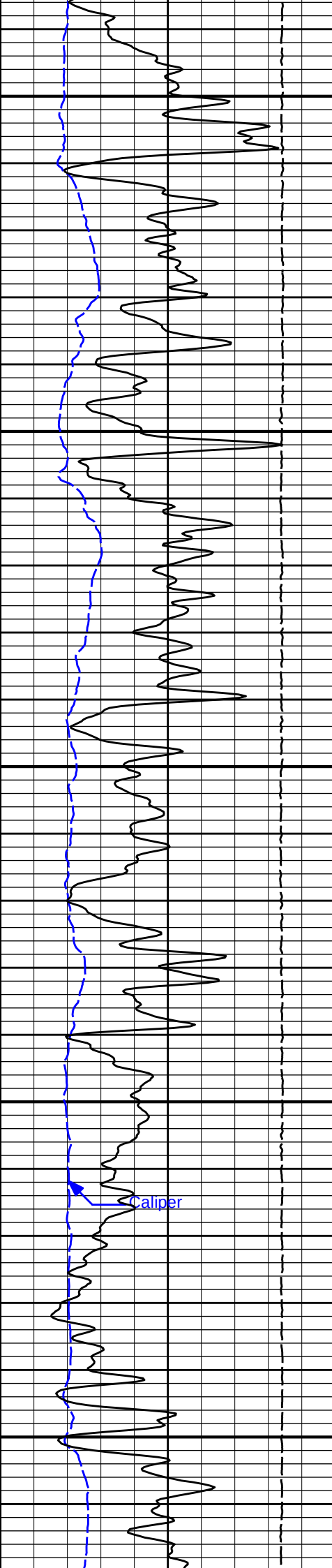
Caliper



2600

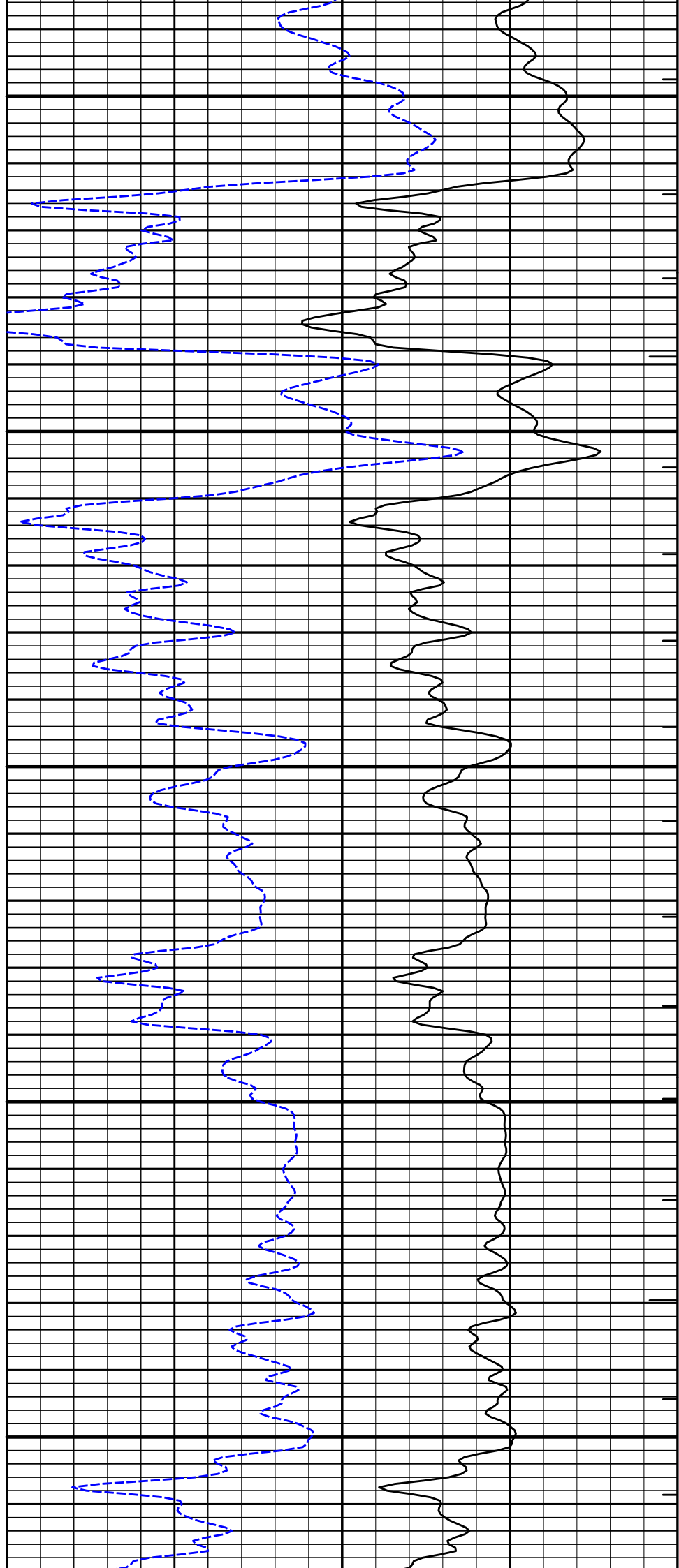
2700

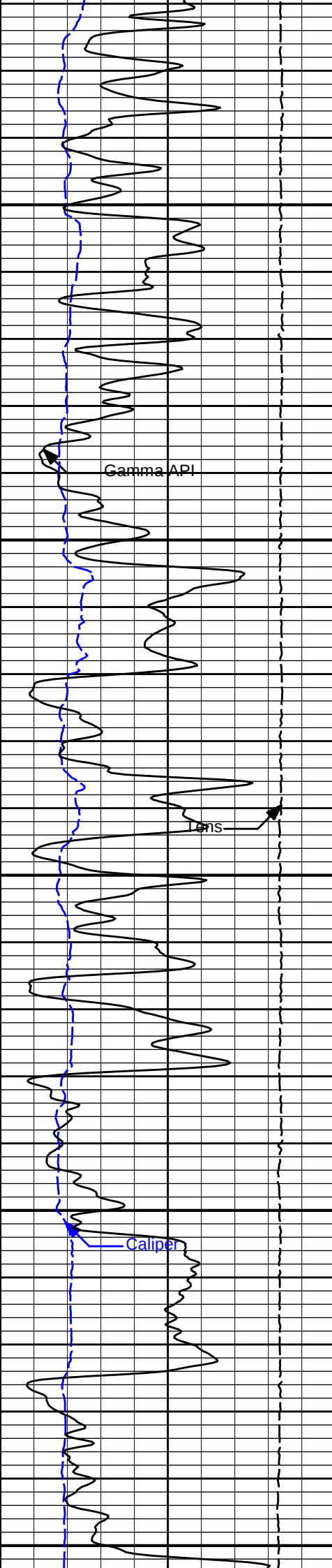




2800

2900

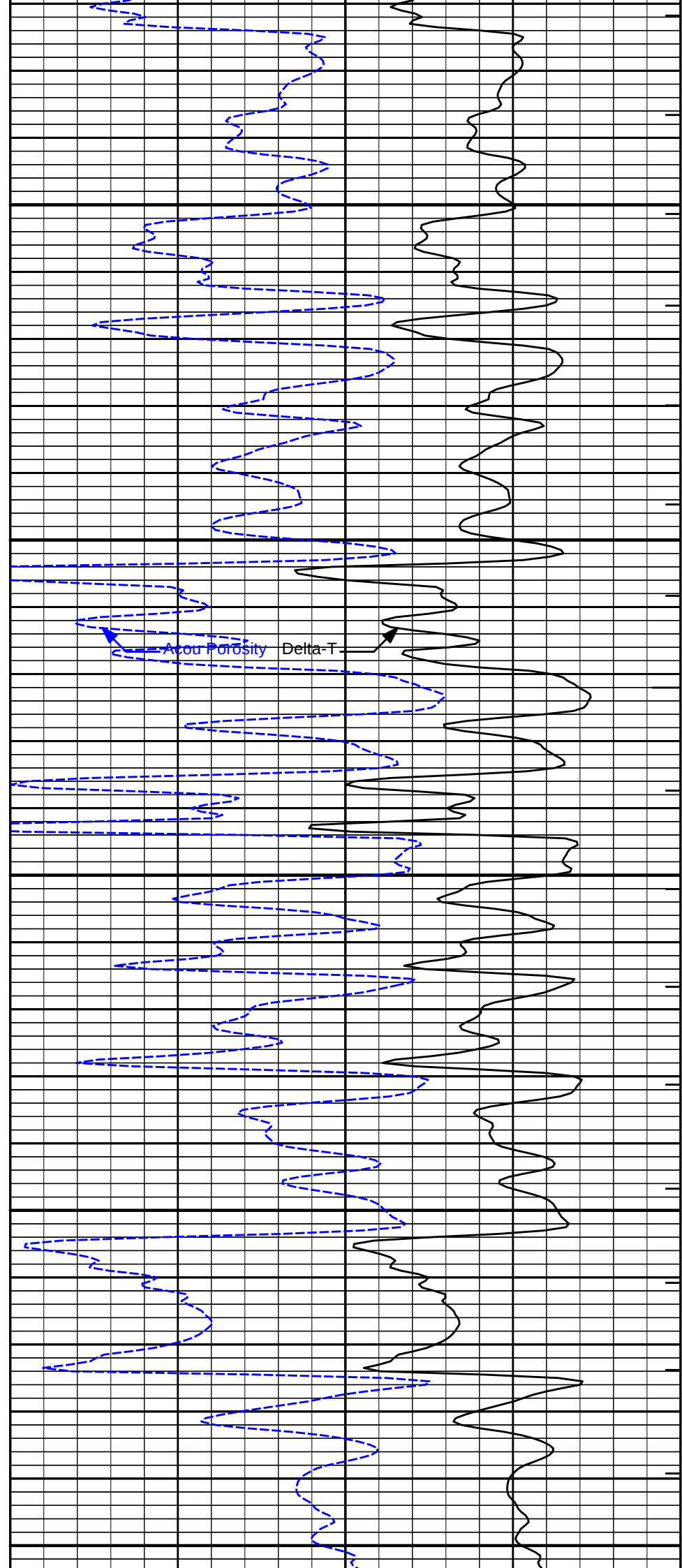


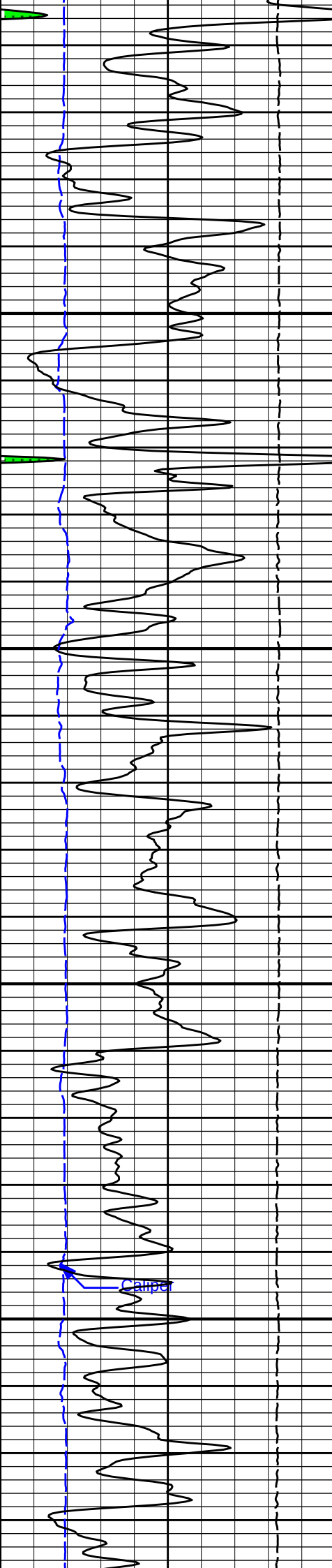


3000

3100

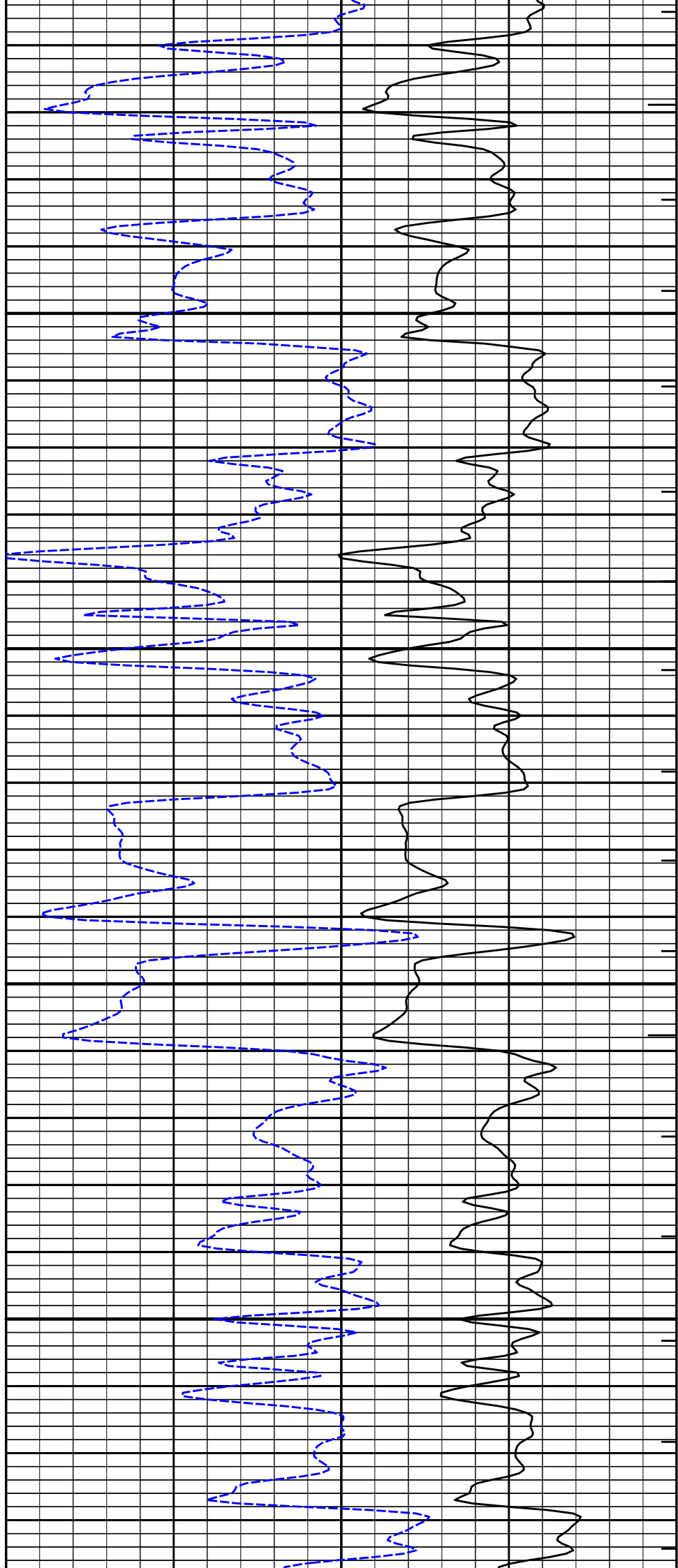
3200

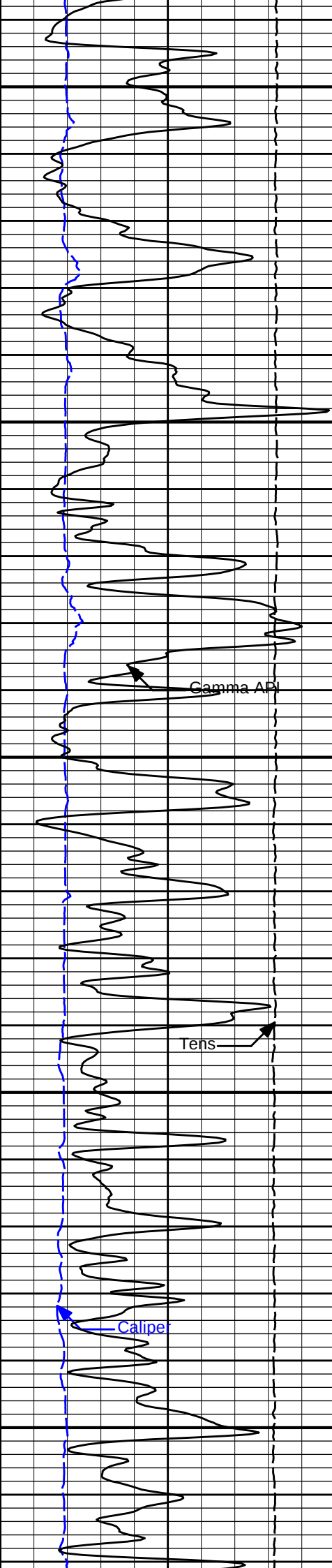




3300

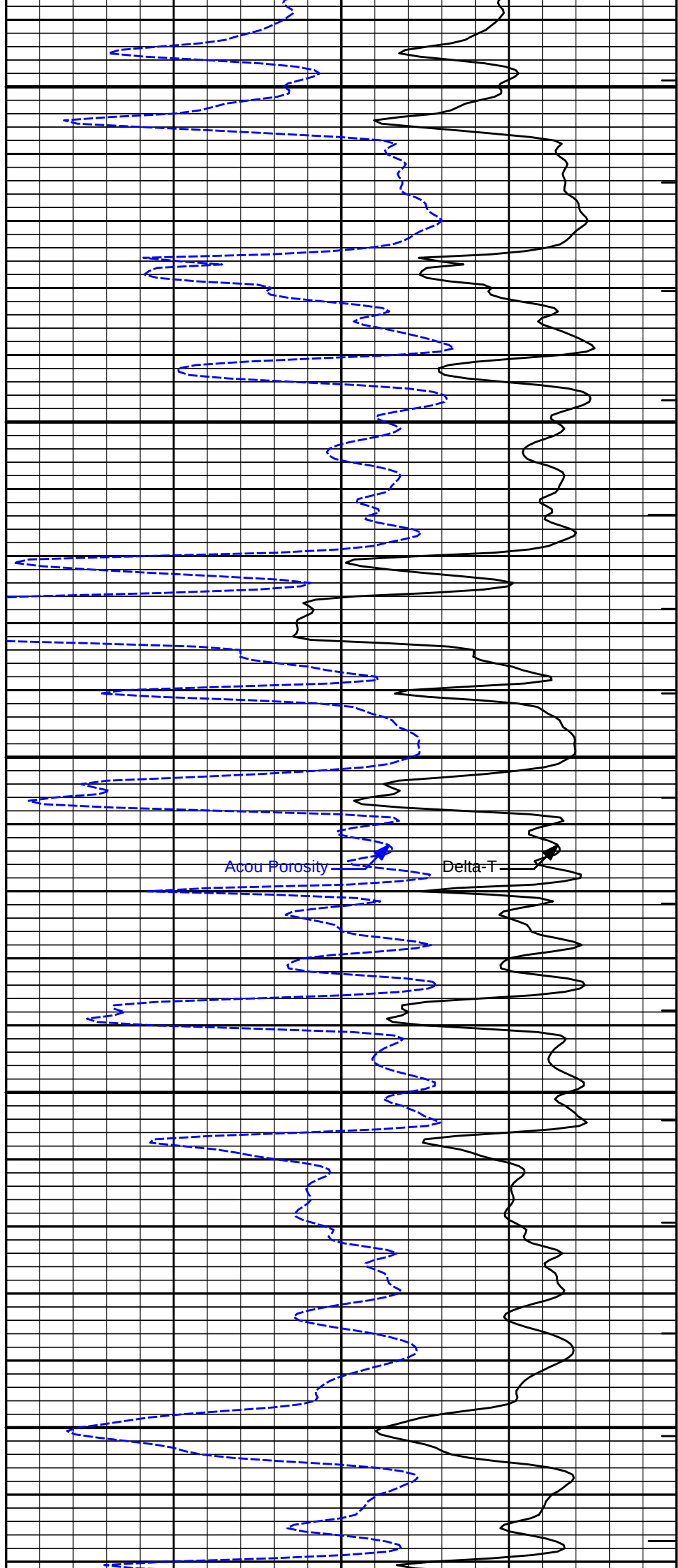
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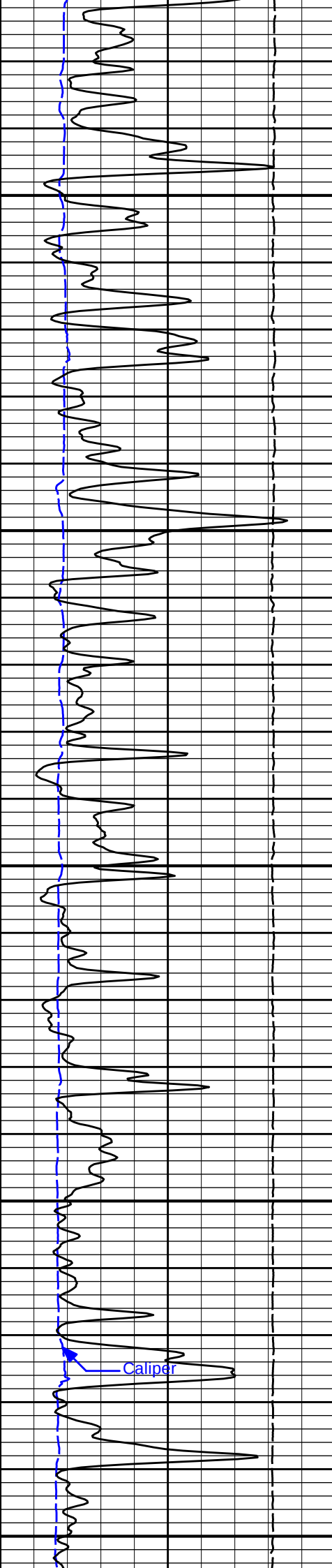




3500

3600

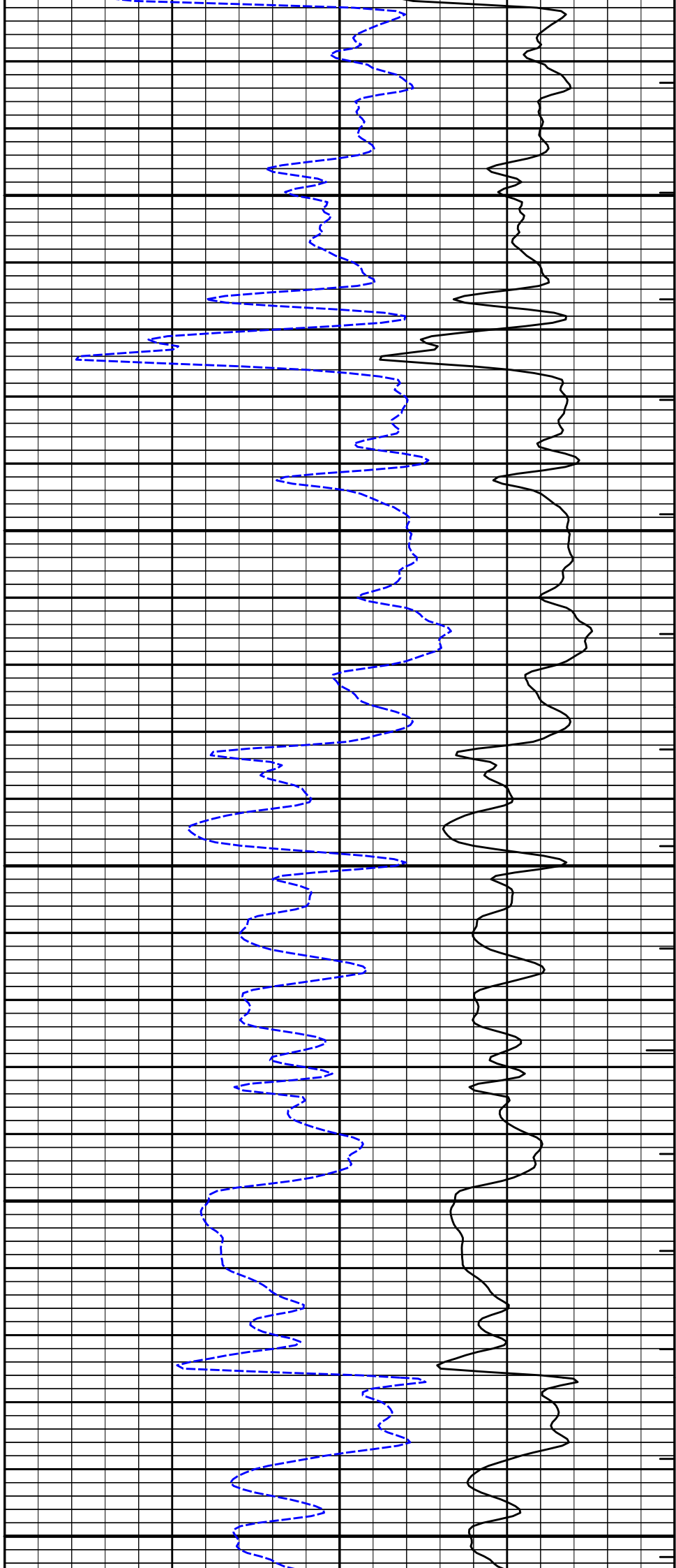


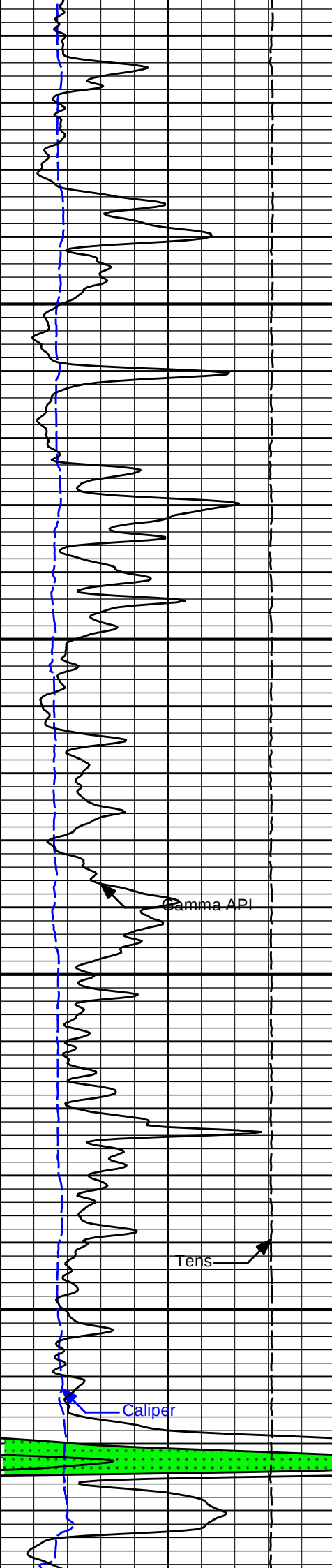


3700

3800

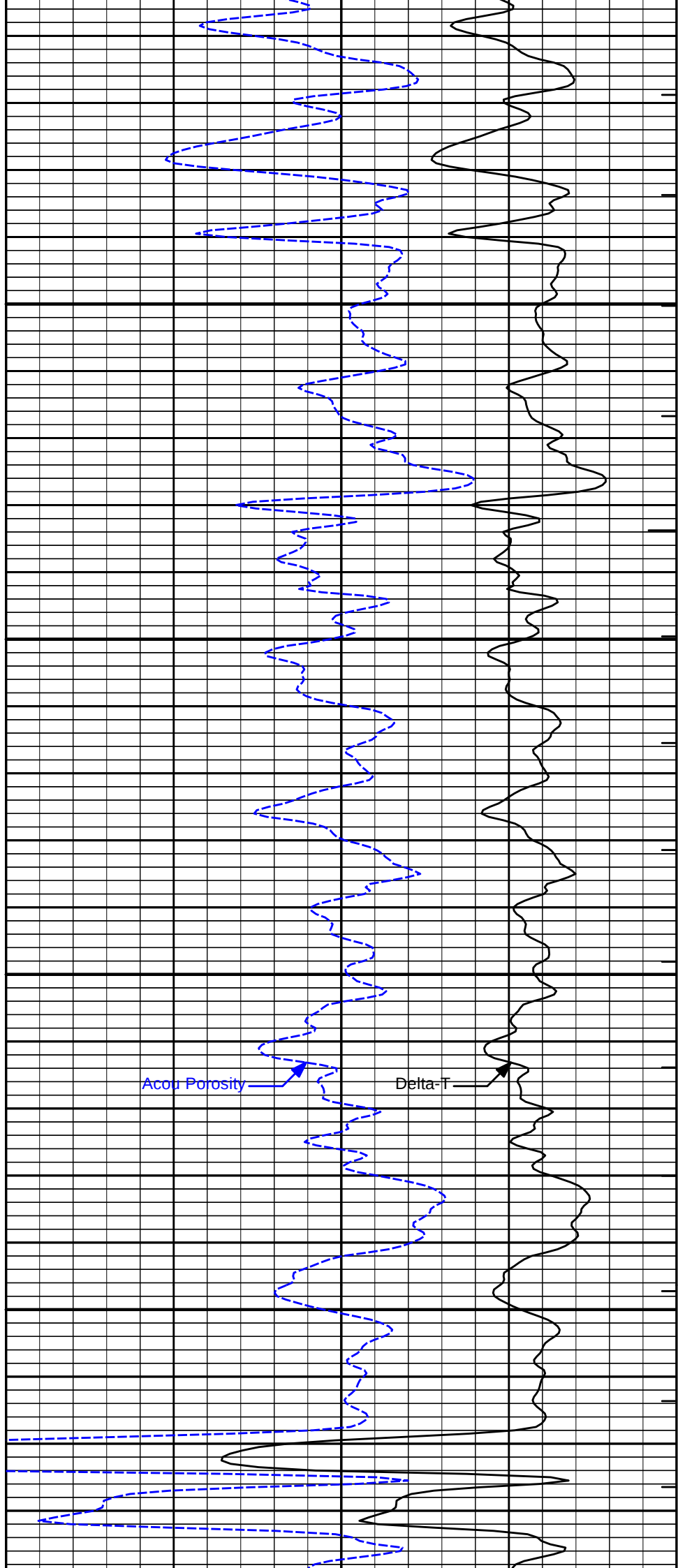
3900

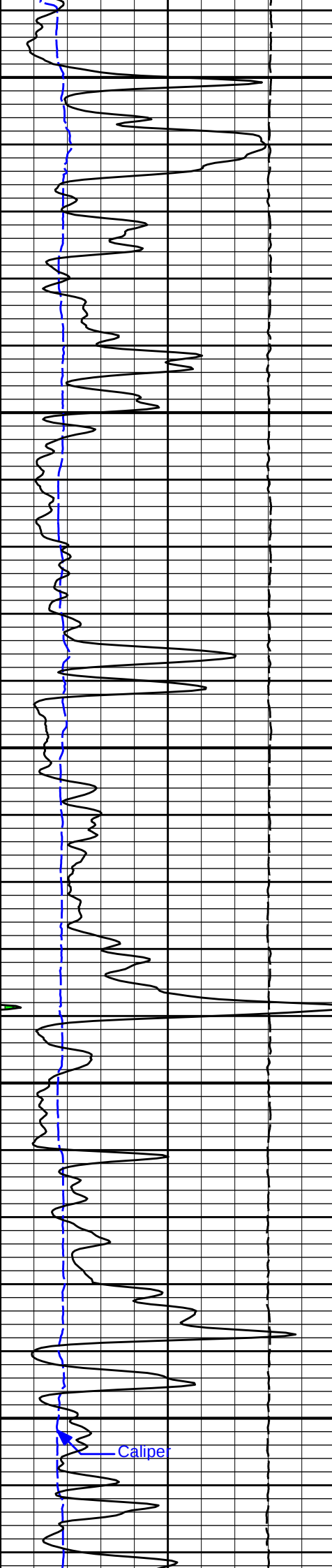




4000

4100

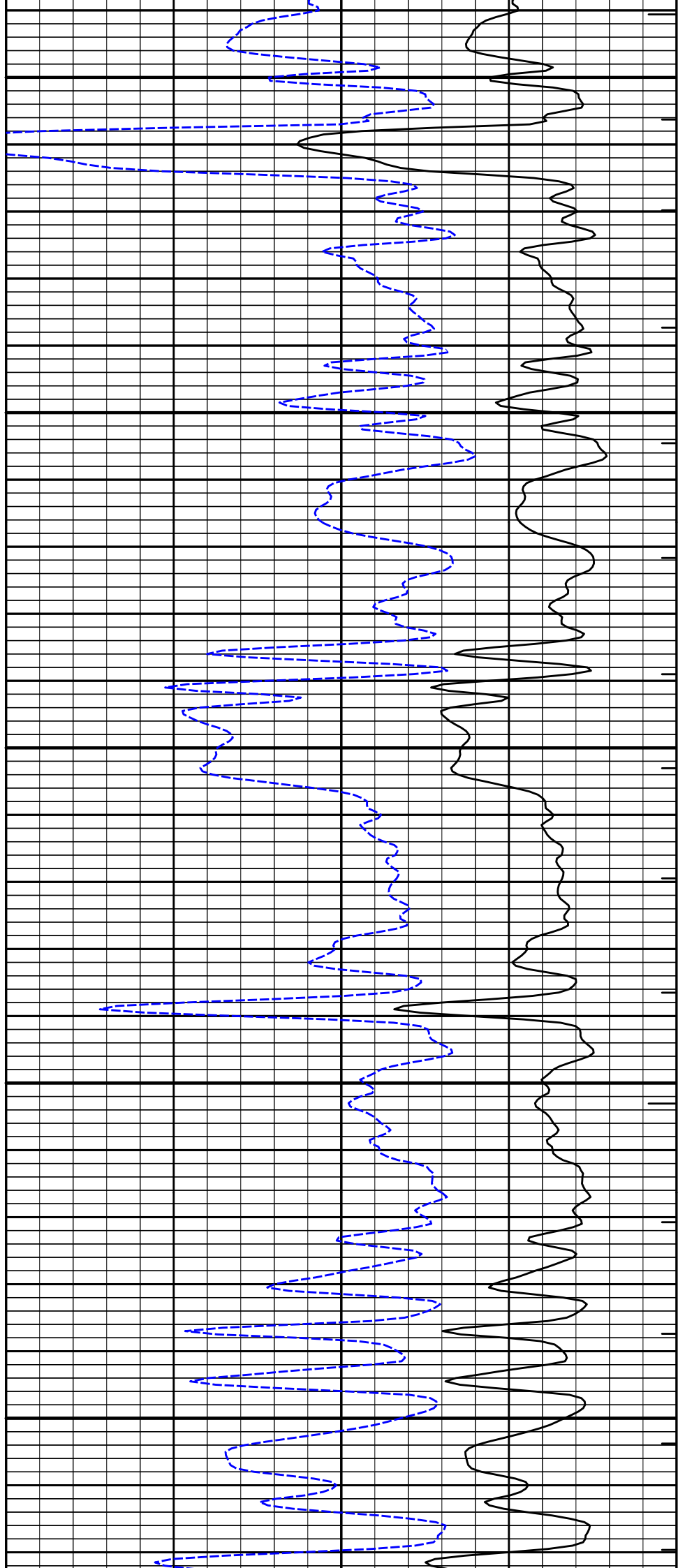


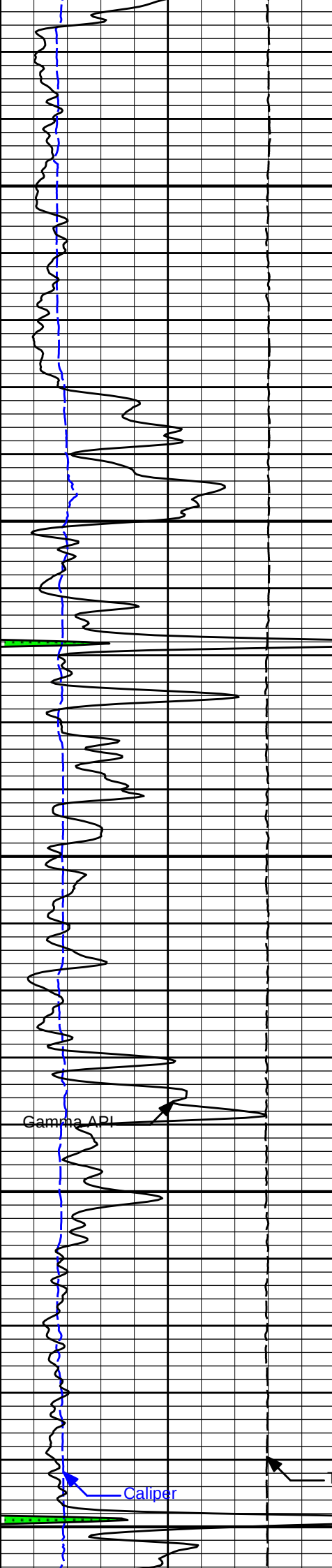


4200

4300

Caliper





4400

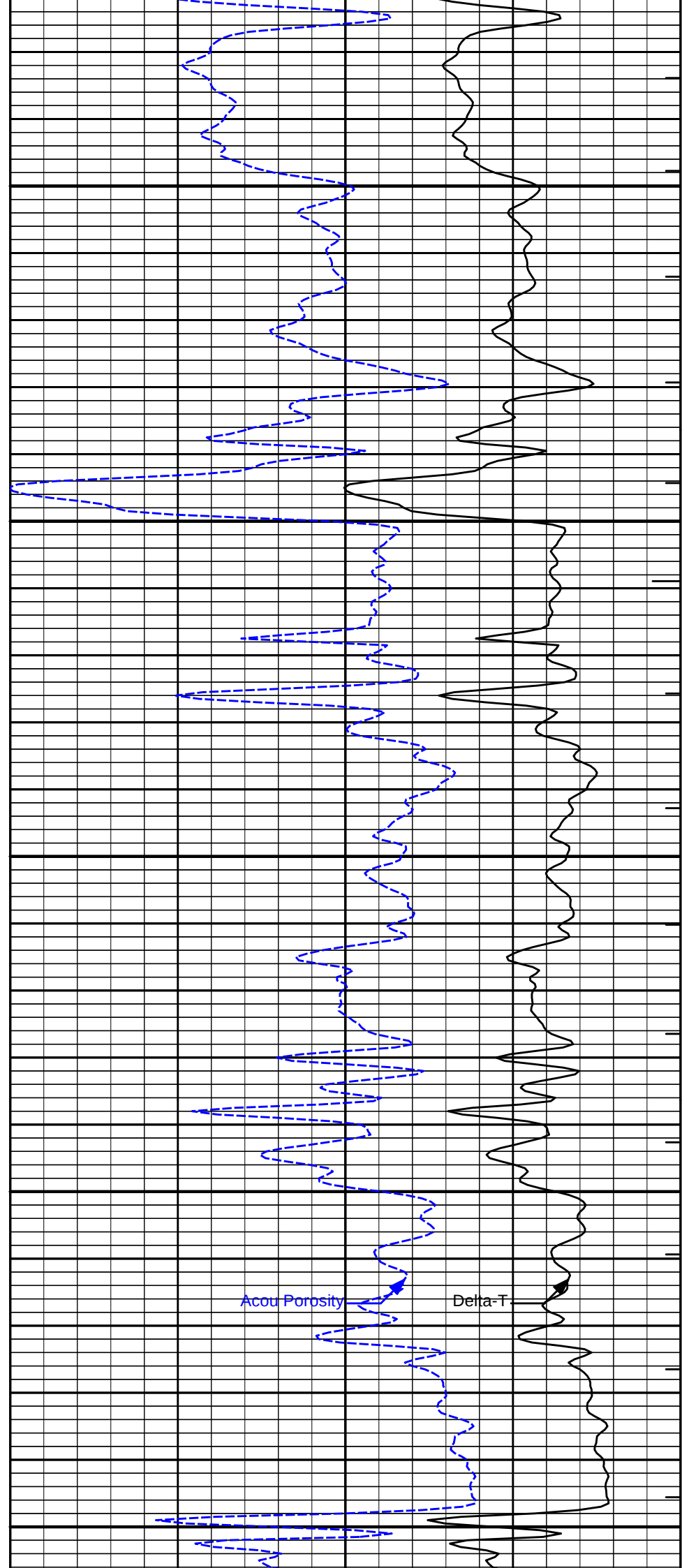
4500

Gamma API

Caliper

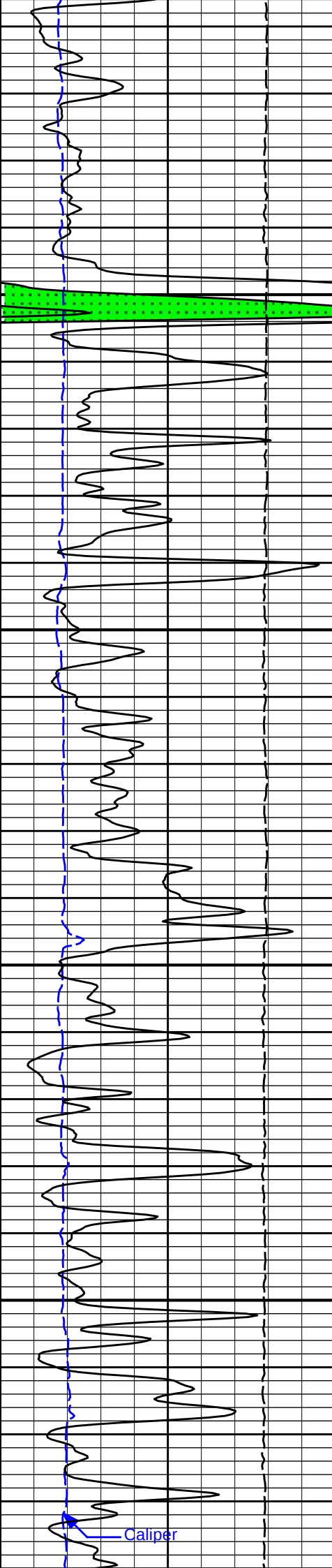
Tens

4600



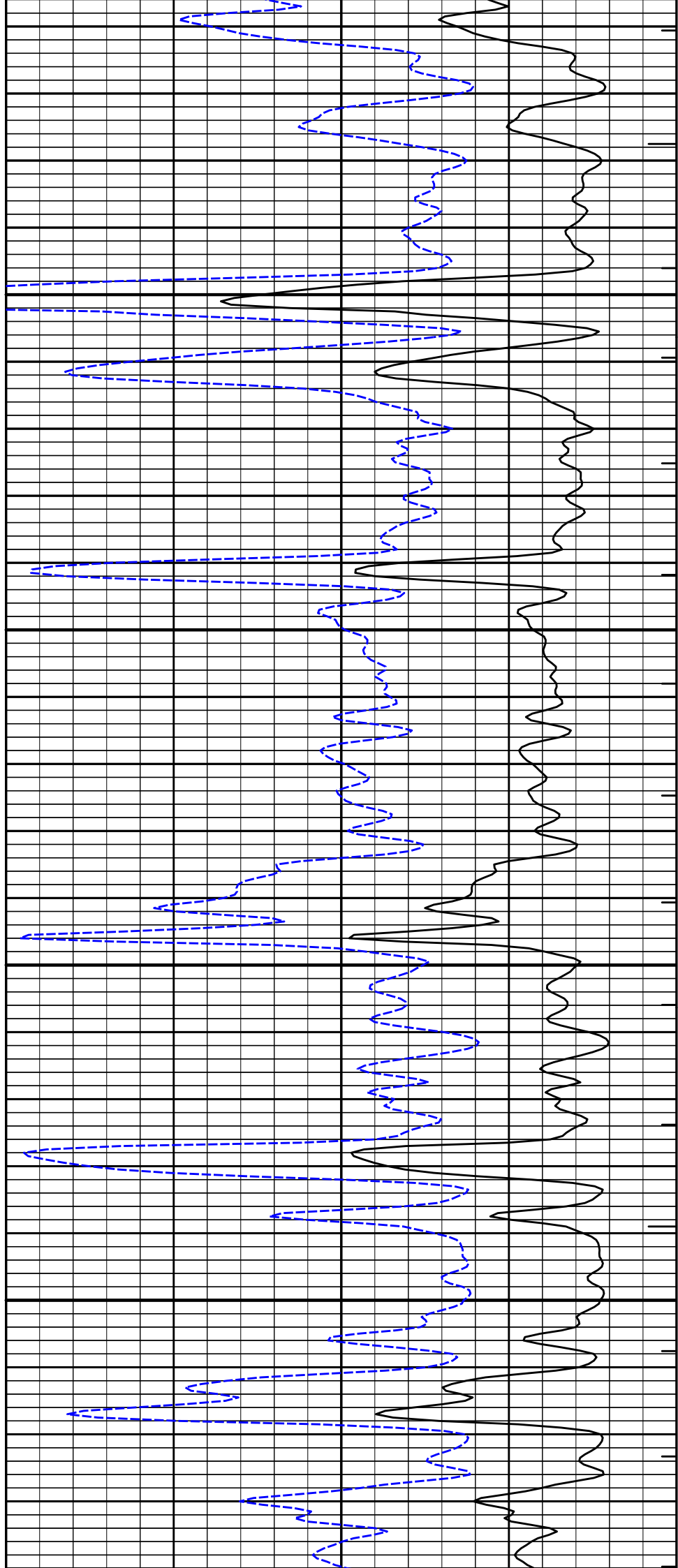
Acou Porosity

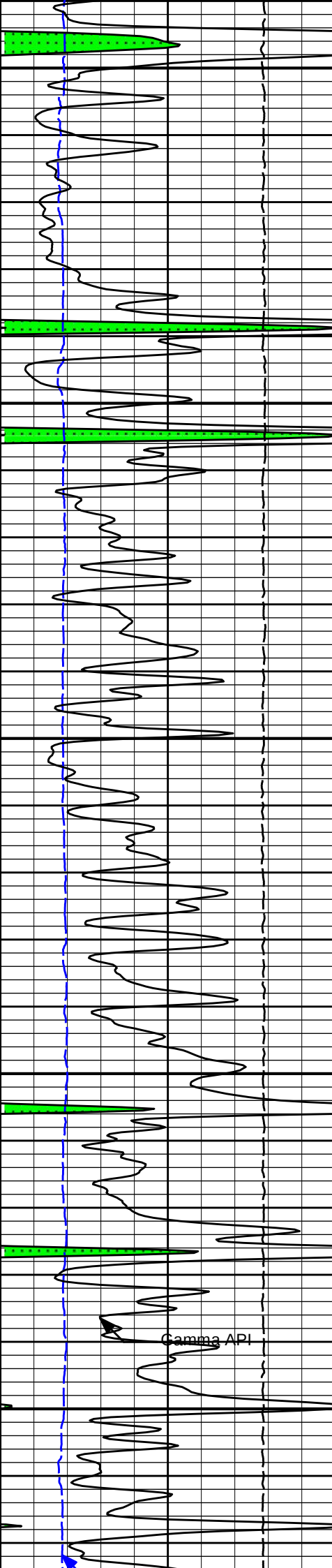
Delta-T



4700

4800





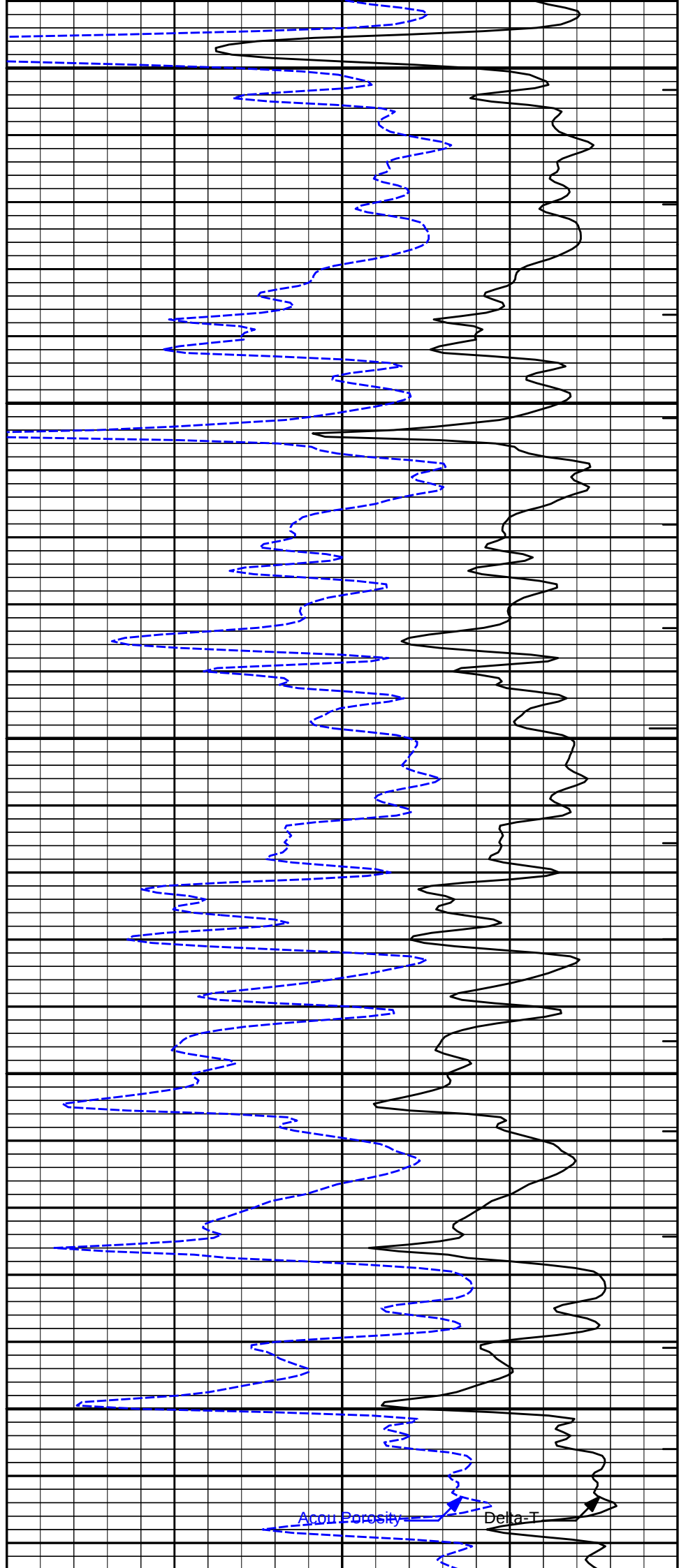
4900

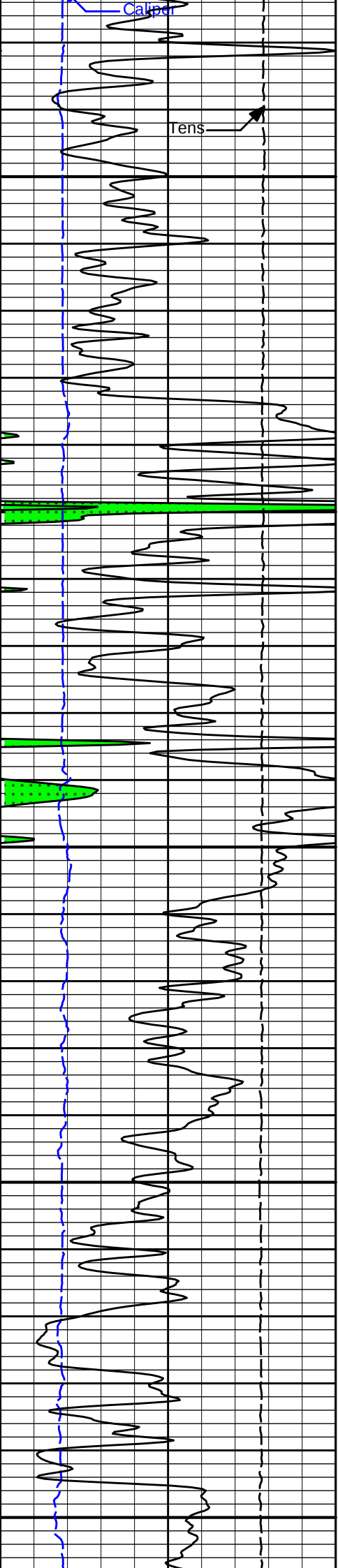
5000

Gamma API

Acoustic Porosity

Delta-T

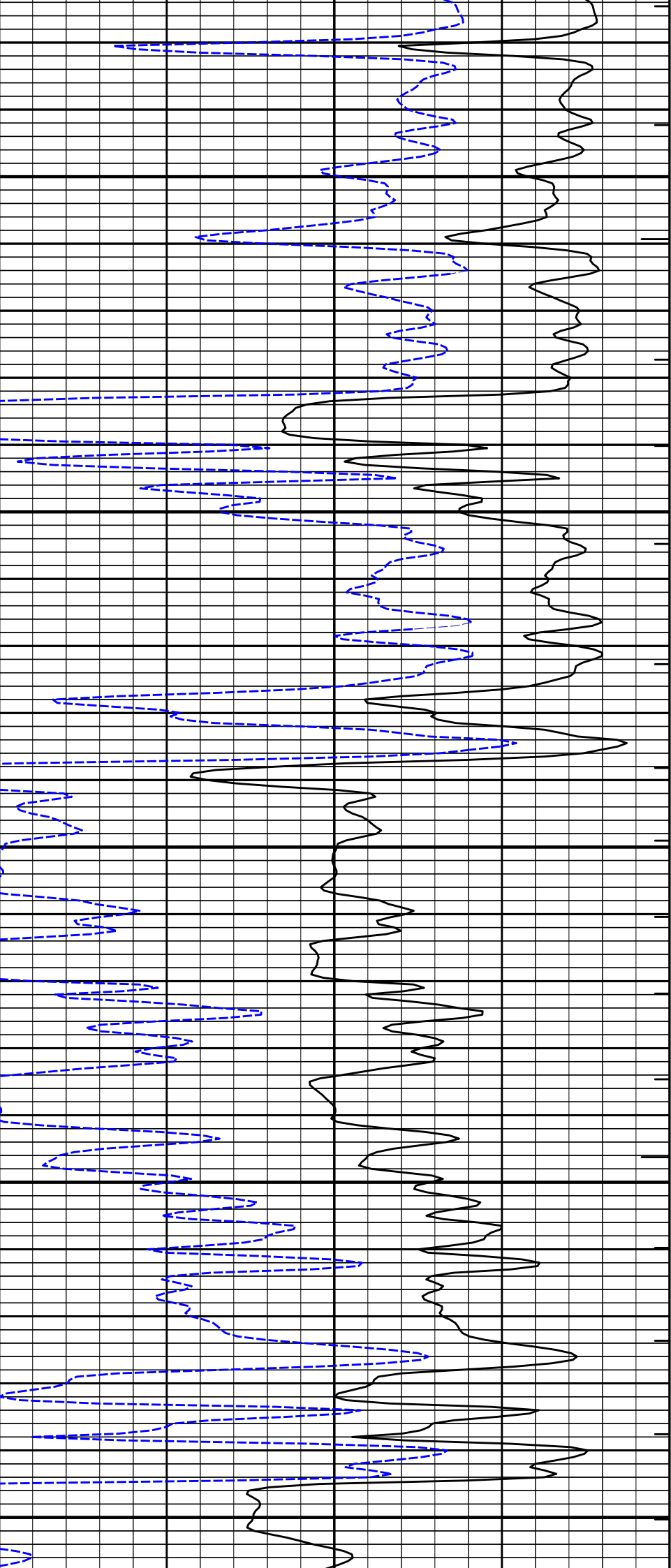


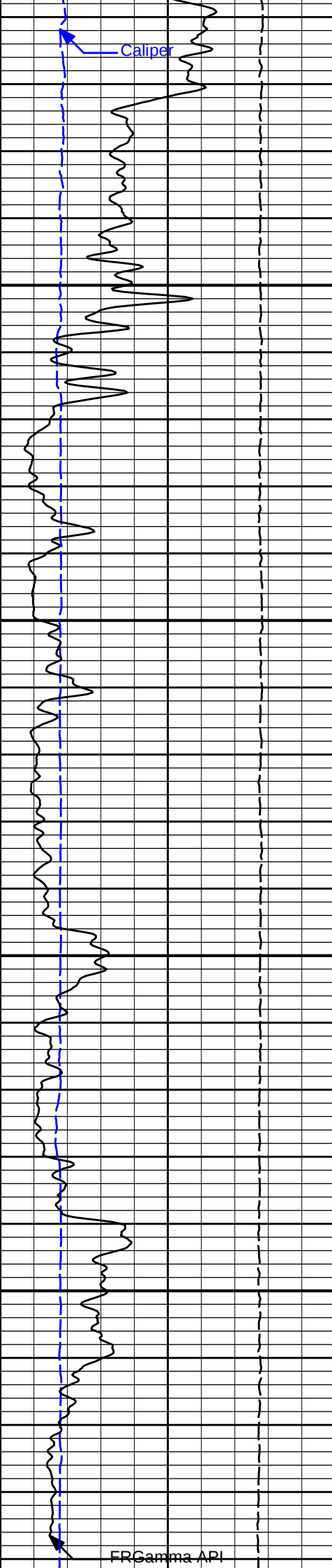


5100

5200

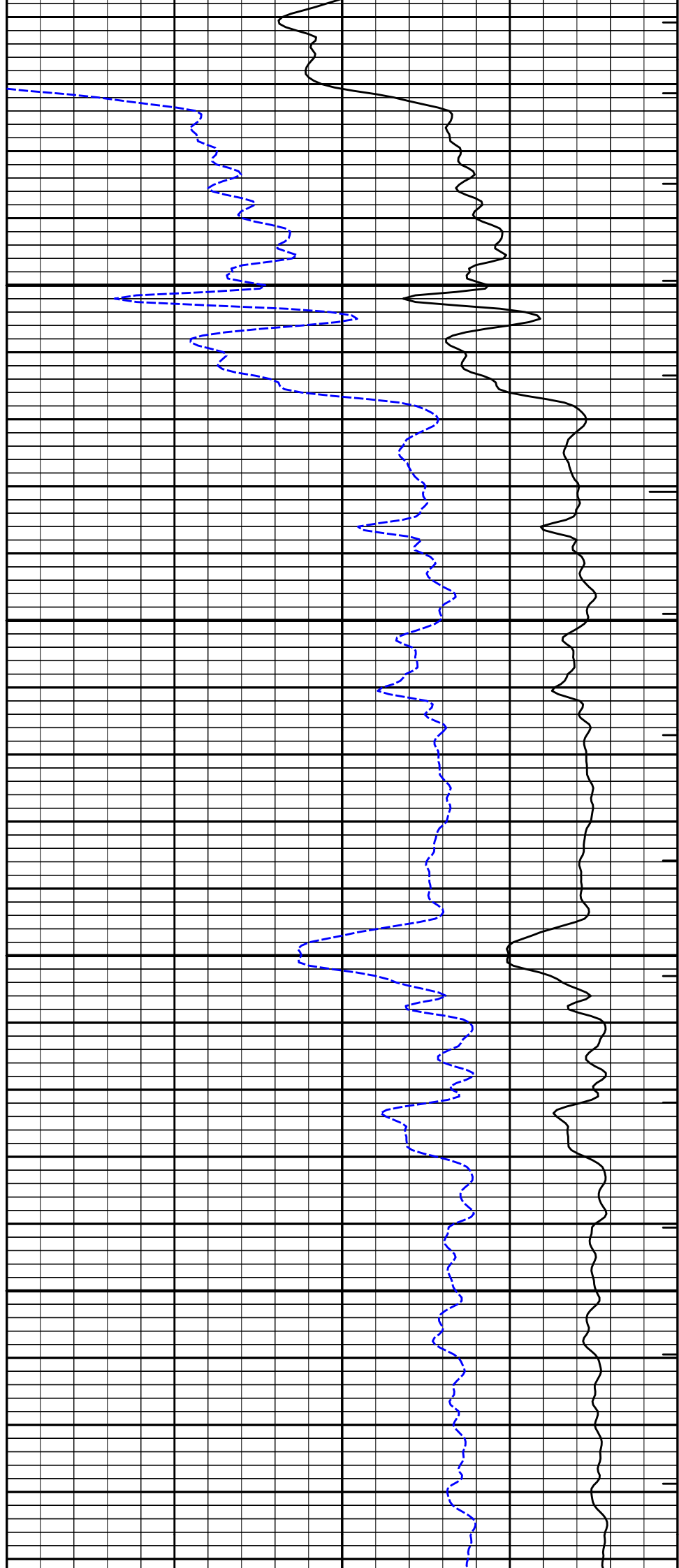
5300

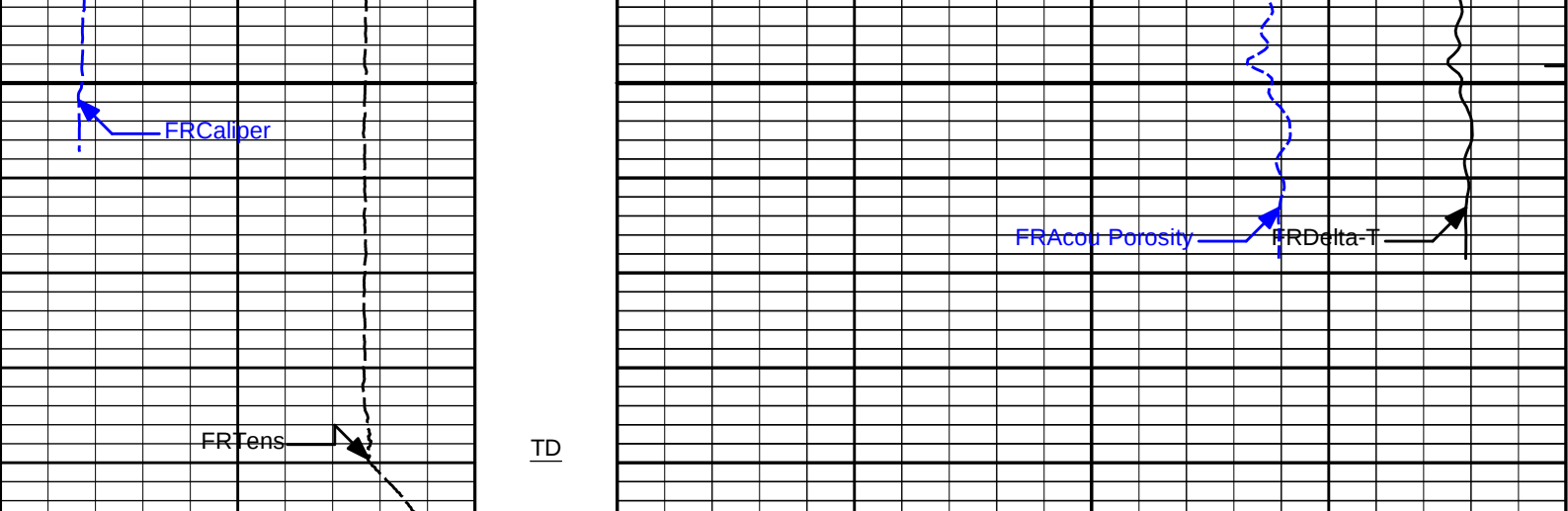




5400

5500





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: 06-Mar-19 21:51:39
Plot Range: 1800 ft to 5595.42 ft
Data: MERIT_KELLS\Well Based\DAQ-0001-004\
Plot File: \\BSAT\BSAT_5inch

5 INCH MAIN LOG

MAIN LOG SECTION

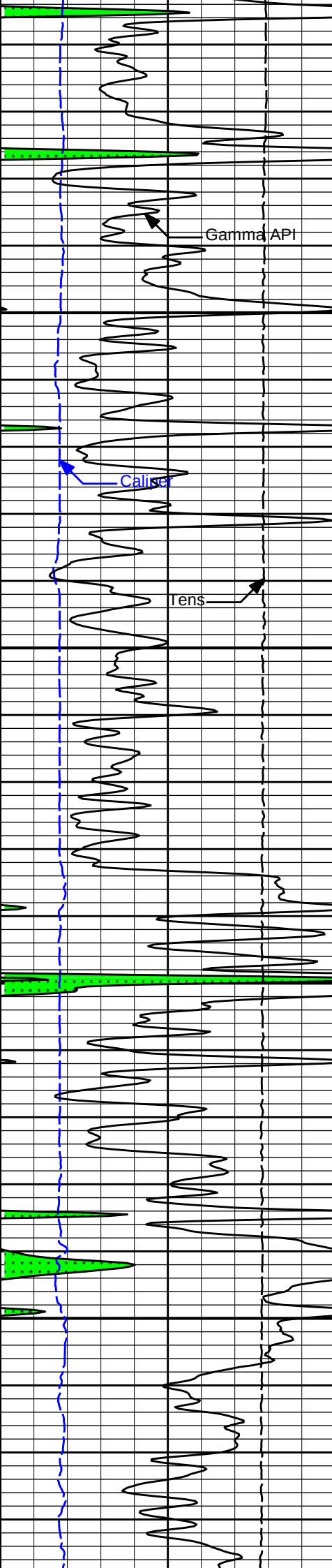
HALLIBURTON

Plot Time: 06-Mar-19 21:51:40
Plot Range: 5000 ft to 5594.33 ft
Data: MERIT_KELLS\Well Based\DAQ-0001-003\
Plot File: \\BSAT\BSAT_5inch

REPEAT SECTION

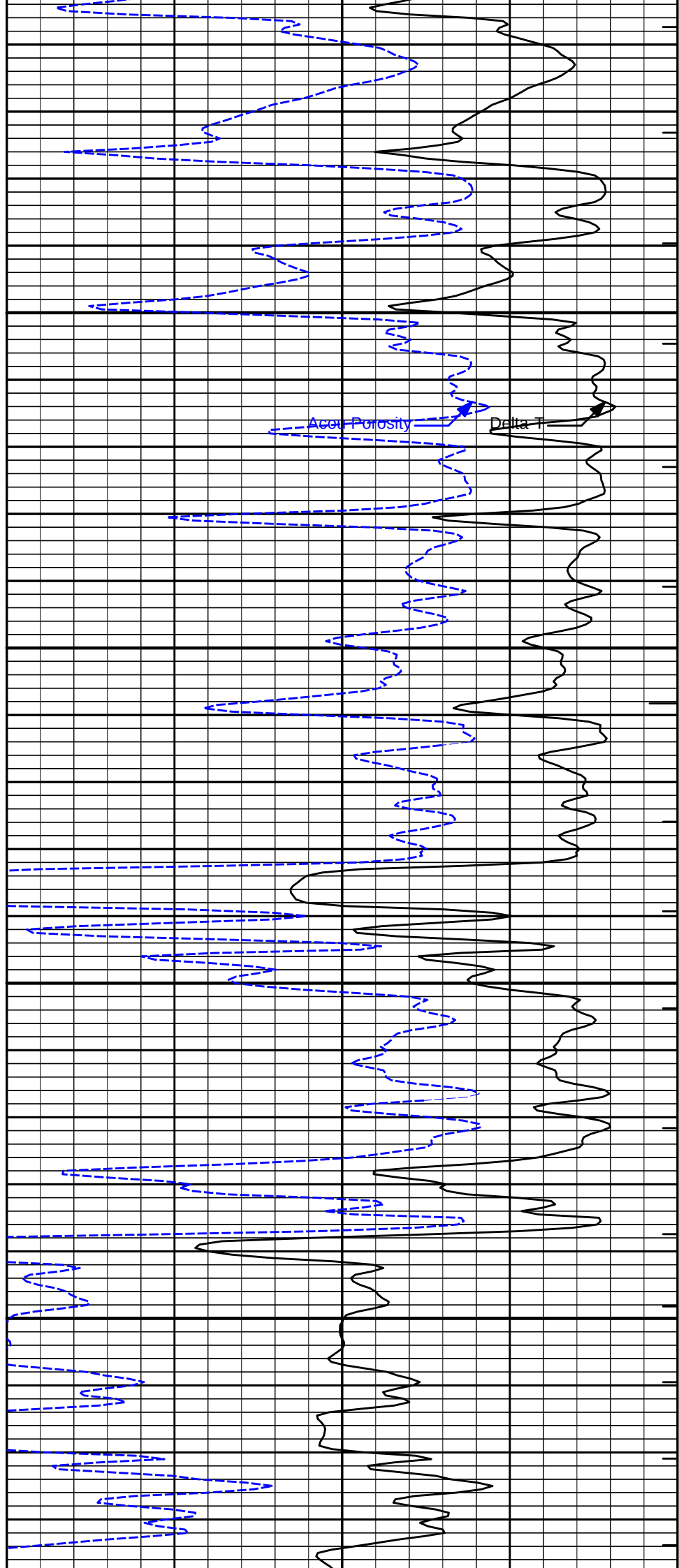
REPEAT SECTION

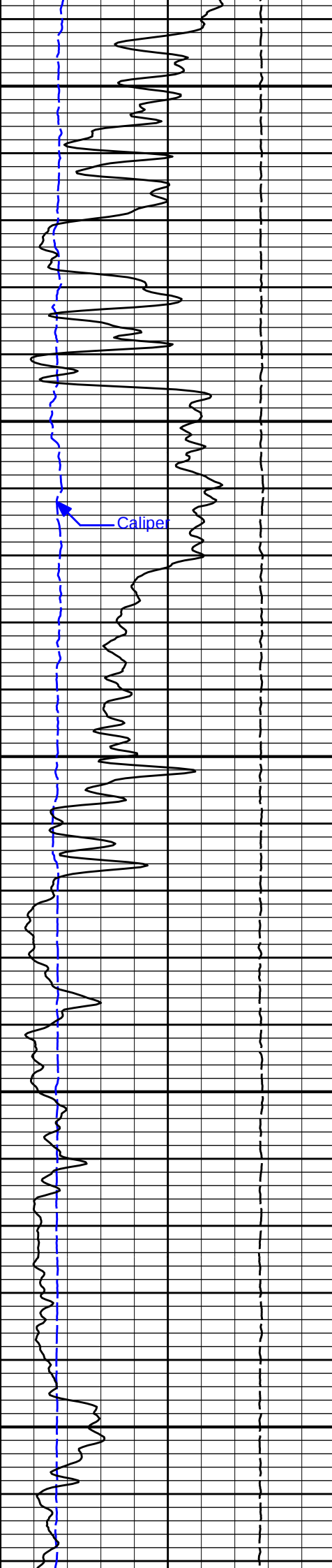
6	CALI	16	30	Acou Porosity	-10
	inches			percent	
15K	Tens	0	140	Delta-T	40
	pounds			microsec per ft	
0	Gamma API	150	1 : 240		ITTT
	api		ft		



5100

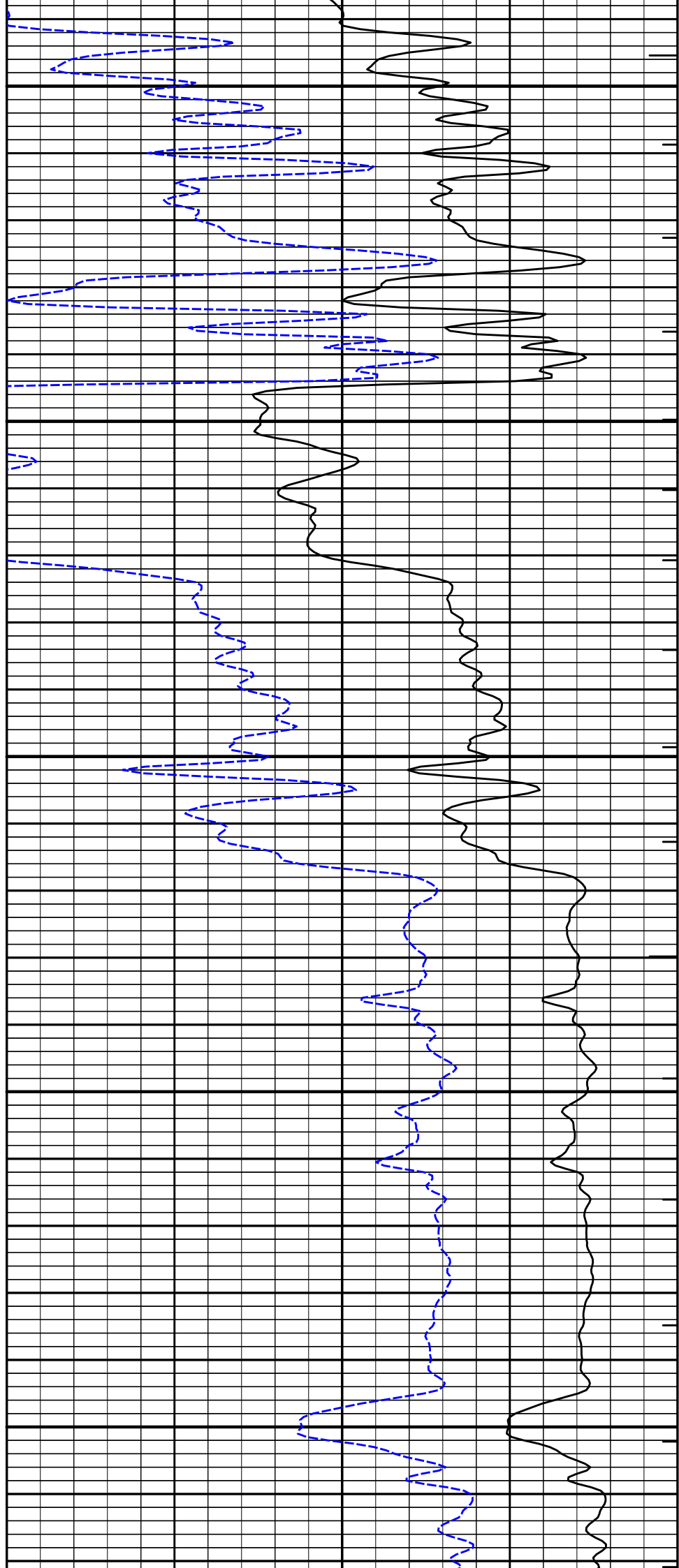
5200

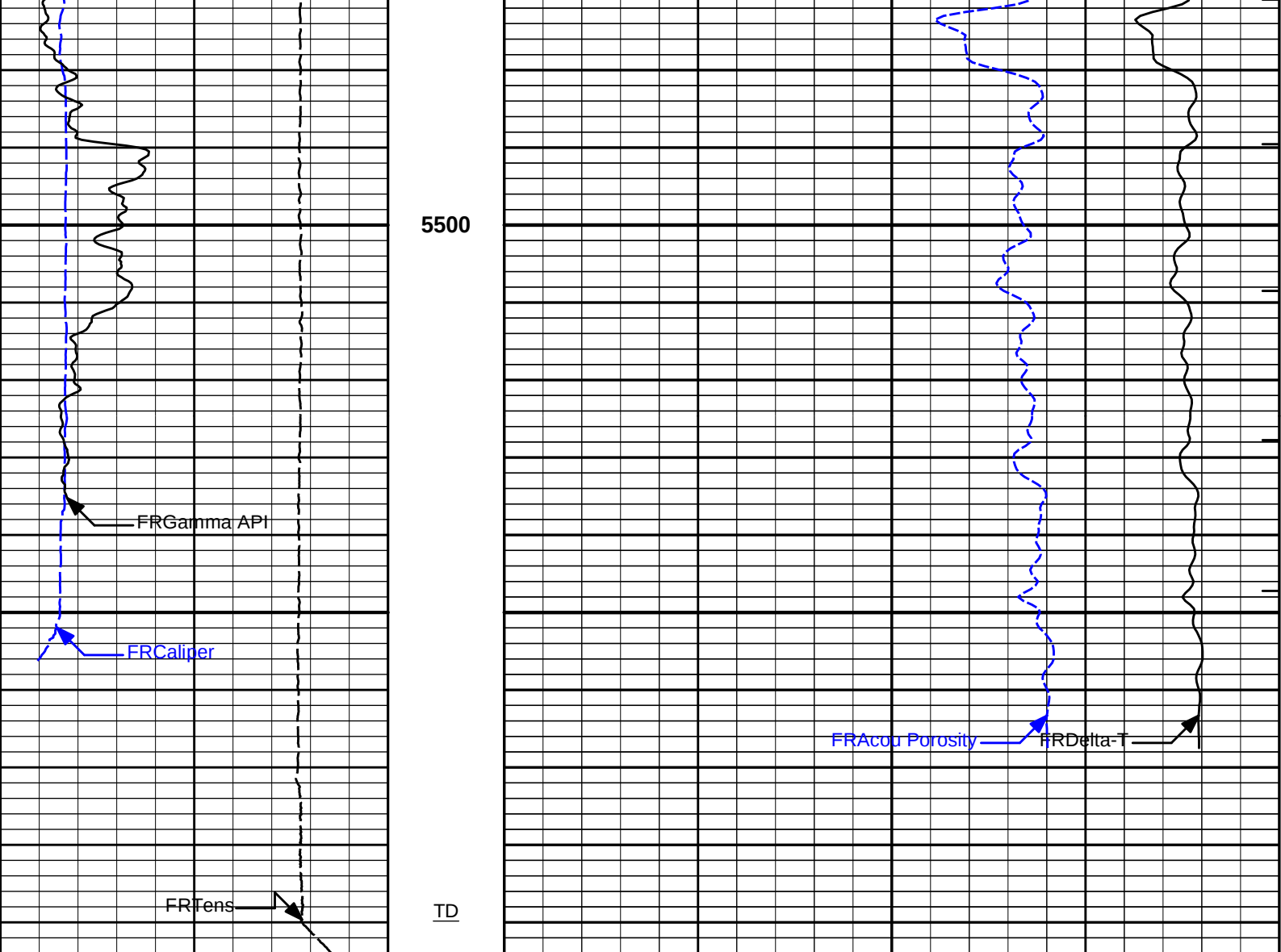




5300

5400





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: 06-Mar-19 21:51:41
Plot Range: 5000 ft to 5594.33 ft
Data: MERIT_KELLS\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: 08-Feb-19 14:23:35	
Engineer:	SEAN WOLTEMATH	Calibration Date:	09-Feb-19 14:35:03
Software Version:	WL INSITE R5.8.9 (Build 6)	Calibration Version:	1
SURFACE TENSION LOAD CELL			
Measurement	Load Cell Value	Measurement	Calibrated Units
Low	10112.01	-99.95	0.00 lbs
High	17473.17	7809.11	7830.00 lbs
DOWNHOLE TENSION SHOP CALIBRATION			
Tool Name:	RWCH - 12345678	Reference Calibration Date:	15-Feb-19 09:39:17
Engineer:	WHITLOCK	Calibration Date:	28-Feb-19 22:32:40
Software Version:	WL INSITE R5.8.9 (Build 6)	Calibration Version:	1
DOWNHOLE LOAD CELL			
Measurement	Tool Value	Measurement	Calibrated Units
Low	-224.15	43.98	0.00 lbs
High	18145.12	13233.32	2450.00 lbs
NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 11013113	Reference Calibration Date:	14-Dec-18 10:17:09
Engineer:	WHITLOCK	Calibration Date:	25-Feb-19 14:17:44
Software Version:	WL INSITE R5.8.9 (Build 6)	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	23.4	24.2	api
Background + Calibrator	241.5	250.1	api
Calibrator	218.1	225.9	api
NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 11013113	Reference Calibration Date:	25-Feb-19 14:17:44
Engineer:	WHITLOCK	Calibration Date:	04-Mar-19 15:12:41
Software Version:	WL INSITE R6.0.2 (Build 8)	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	24.2	22.5	api
Background + Calibrator	250.1	250.5	api
Calibrator	225.9	228.0	api
Shop	Field	Difference	Tolerance
225.9	228.0	-2.1	+/- 9.00
DUAL SPACED NEUTRON SHOP CALIBRATION			
Tool Name:	DSNT - 11019641	Reference Calibration Date:	07-Nov-18 10:07:09
Engineer:	WHITLOCK	Calibration Date:	14-Feb-19 10:28:24
Software Version:	WL INSITE R5.8.9 (Build 6)	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: 63 degF			
Min. Tool Housing Outside Diameter: 3.625 in			

CALIBRATION CONSTANTS				
Measurement	Prev. Value	New Value	Control Limit On New Value	
Gain:	0.98053	0.98060	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):	0.2357	0.2358	0.0000	+/- 0.0020
Calibrated Ratio:	10.5587	10.5594	0.001	+/- 0.050
VERIFIER				
Measurement	Value	Control Limit		
Snow-Block Porosity (decp):	0.0629	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 - 11019641	Reference Calibration Date:	14-Feb-19 10:28:24	
Engineer:	WHITLOCK	Calibration Date:	04-Mar-19 15:20:57	
Software Version:	WL INSITE R5.8.9 (Build 6)	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):	0.0629	0.0629	-0.0001	+/- 0.0150
PASS/FAIL SUMMARY				
Block Change Check:			Passed	
Snow Block Stat Check:			Passed	
Temperature Check:			Passed	

DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - 10960494	Reference Calibration Date:	01-Jan-70 00:00:00
Engineer:	SEAN WOLTEMATH	Calibration Date:	28-Dec-18 10:43:24
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	-3977.11	-3977.11	-7000.00 - -1000.00	
Pad Gain	0.0003897	0.0003897	0.0002000 - 0.0006000	
Arm Offset	-3073.13	-3073.13	-5000.00 - 3000.00	
Arm Gain	0.0005210	0.0005210	0.000300 - 0.000700	
Arm Power	-0.000005094	-0.000005094	-0.000010000 - 0.000010000	
The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER				
Tool Diameter: 4.50 in				
CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				

	Small Ring (in)	2.00	2.00	0.00	+/- 0.20
	Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:					
	Small Ring (in)	6.50	6.50	0.00	+/- 0.20
	Medium Ring (in)	8.25	8.25	0.00	+/- 0.20
	Large Ring (in)	15.00	15.00	0.00	+/- 0.20
PASS/FAIL SUMMARY					
	Calibration-Coefficients Range Check:			Passed	
	Ring-Measurement Check:			Passed	
PASS/FAIL SUMMARY					
	Calibration-Coefficients Range Check:			Passed	

SDLT CALIPER FIELD CALIBRATION					
Tool Name:	SDLT - 10960494		Reference Calibration Date:	28-Dec-18 10:43:24	
Engineer:	WHITLOCK		Calibration Date:	04-Mar-19 13:23:29	
Software Version:	WL INSITE R5.6.3 (Build 4)		Calibration Version:	1	
MEASURED CALIPER VALUES					
	Measurement	Shop	Field	Change	Control Limit On New Value
	Pad Extension	3.75	3.79	0.04	+/- 0.10
	Ring Diameter	8.25	8.25	-0.00	+/- 0.15
PASS/FAIL SUMMARY					
	Pad Extension Check:			Passed	
	Diameter Check:			Passed	

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION									
Tool Name:	ACRt Sonde - 11830728		Reference Calibration Date:	06-Jul-18 13:24:46					
Engineer:	WHITLOCK		Calibration Date:	31-Oct-18 14:22:50					
Software Version:	WL INSITE R5.8.9 (Build 6)		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:	06-Jun-18 14:01:20		
Engineer:	WHITLOCK			Calibration Date:	31-Oct-18 14:33:20		
Software Version:	WL INSITE R5.8.9 (Build 6)			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")	26025226.000	26260200.000		235064.000		1218015.000		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 - 10960494			Reference Calibration Date:	01-Feb-19 14:12:10
Engineer:	WHITLOCK			Calibration Date:	13-Feb-19 14:22:35
Software Version:	WL INSITE R5.8.9 (Build 6)			Calibration Version:	1
Host Tool Name:	DSNT - 11019641				

CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.10	-0.10	-0.01	-0.01	ohmm
Calibration Point #1	0.01	0.00	-0.00	0.00	ohmm
Calibration Point #2	19.94	20.00	20.01	20.00	ohmm
Internal Reference	19.84	19.91	20.03	20.01	ohmm
Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
Tool Zero	-0.04		0.17		V
Calibration Point #1	27.49		2.13		V
Calibration Point #2	5310.88		6942.96		V
Internal Reference	5286.33		6946.78		V

MICRO LOG FIELD CHECK					
Tool Name:	Microlog Pad - 10960494			Reference Calibration Date:	13-Feb-19 14:22:35
Engineer:	WHITLOCK			Calibration Date:	04-Mar-19 14:48:19
Software Version:	WL INSITE R6.0.2 (Build 8)			Calibration Version:	1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.10	-0.11	-0.01	-0.00	ohmm
Internal Reference	19.91	19.98	20.01	19.99	ohmm
Summary					
Signal	Shop	Field	Difference	Tolerance	
Microlog Normal	19.91	19.98	-0.07	+/- 0.80	
Microlog Lateral	20.01	19.99	0.02	+/- 0.80	

SPECTRAL DENSITY SHOP CALIBRATION					
Tool Name:	SDLT Pad - 11213308			Reference Calibration Date:	14-Dec-18 10:49:18
Engineer:	WHITLOCK			Calibration Date:	14-Dec-18 11:15:00
Software Version:	WL INSITE R5.8.9 (Build 6)			Calibration Version:	1

Logging Source S/N: 5475GW

Density Calibration Summary			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9935	0.9902	0.90 - 1.10
Near Dens Gain	0.9891	0.9881	0.90 - 1.10
Near Peak Gain	1.0020	1.0148	0.90 - 1.10
Near Lith Gain	1.0071	1.0175	0.90 - 1.10
Far Bar Gain	1.0015	1.0048	0.90 - 1.10
Far Dens Gain	0.9919	0.9938	0.90 - 1.10
Far Peak Gain	0.9878	0.9921	0.90 - 1.10
Far Lith Gain	0.9743	0.9808	0.90 - 1.10
Near Bar Offset	0.1918	0.2246	NONE
Near Dens Offset	0.2308	0.2401	NONE
Near Peak Offset	0.0959	-0.0122	NONE
Near Lith Offset	0.0296	-0.0574	NONE
Far Bar Offset	0.0411	0.0135	NONE
Far Dens Offset	0.1442	0.1314	NONE
Far Peak Offset	0.1660	0.1305	NONE
Far Lith Offset	0.2364	0.1860	NONE
Near Bar Background	937.48	939.15	700 - 1450
Near Dens Background	311.57	312.43	230 - 480
Near Peak Background	135.23	136.70	100 - 210
Near Lith Background	166.58	166.31	125 - 260
Far Bar Background	479.15	478.16	450 - 900
Far Dens Background	191.75	190.12	175 - 345
Far Peak Background	77.50	76.92	70 - 140
Far Lith Background	79.00	78.81	75 - 145

Calibration Block Summary				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.689	1.687	-0.002	+/- 0.015
Pe	2.556	2.551	-0.005	+/- 0.150
ALUMINUM				
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500
Pe	3.107	3.123	0.016	+/- 0.150

Tool Summary				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0000	+/- 0.0110	-0.0004	+/- 0.0140
Magnesium Block	-0.0005	+/- 0.0110	-0.0010	+/- 0.0140
Aluminum Block	-0.0013	+/- 0.0110	0.0004	+/- 0.0140
Resolution	9.27	6.00 - 11.50	9.45	6.00 - 11.50
Internal Verifier(B+D+P+L)	1555	1200 - 2700	824	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:	14-Dec-18 11:15:00		
Engineer:	WHITLOCK	Calibration Date:	04-Mar-19 15:12:49		
Software Version:	WL INSITE R6.0.2 (Build 8)	Calibration Version:	1		

Pad Temperature: 71.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1554.595	1551.104	-3.491	15.869
Far (B+D+P+L) cps	824.007	817.576	-6.431	15.826
Near Resolution	9.27	9.28	0.010	0.50
Far Resolution	9.45	9.43	-0.020	1.00
PASS/FAIL SUMMARY				
Bkg Quality Check:			Passed	
Bkg Resolution Check:			Passed	
Bkg Verification Check:			Passed	

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-12345678						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
RWCH-12345678						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	2450.00	-----	-----	0.00	-----	lbs
GTET-11013113						
Gamma Ray Calibrator	225.9	228.0	-----	-2.1	+/- 9.00	api
DSNT-11019641						
Snow-Block Porosity	0.0629	0.0629	-----	0.0000	+/- 0.0150	decp
SDLT-10960494						
Pad Extension	3.75	3.79	-----	-0.04	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.00	+/-0.15	in
ACRt Sonde-11830728						
Mud Cell	0.99	-----	-----	0	-----	ohm-m
Microlog Pad-10960494						
MicroLog Normal	19.91	19.98	-----	-0.07	+/-0.80	ohmm
MicroLog Lateral	20.01	19.99	-----	0.02	+/-0.80	ohmm
SDLT Pad-11213308						
Near(B+D+P+L)	1554.595	1551.104	-----	3.491	+/-15.869	cps
Far(B+D+P+L)	824.007	817.576	-----	6.431	+/-15.826	cps
Data: MERIT_KELLSI0001 RWCH-GTET-DSN-SDL-BSAT-ACRT\IDLE					Date: 06-Mar-19 17:53:42	

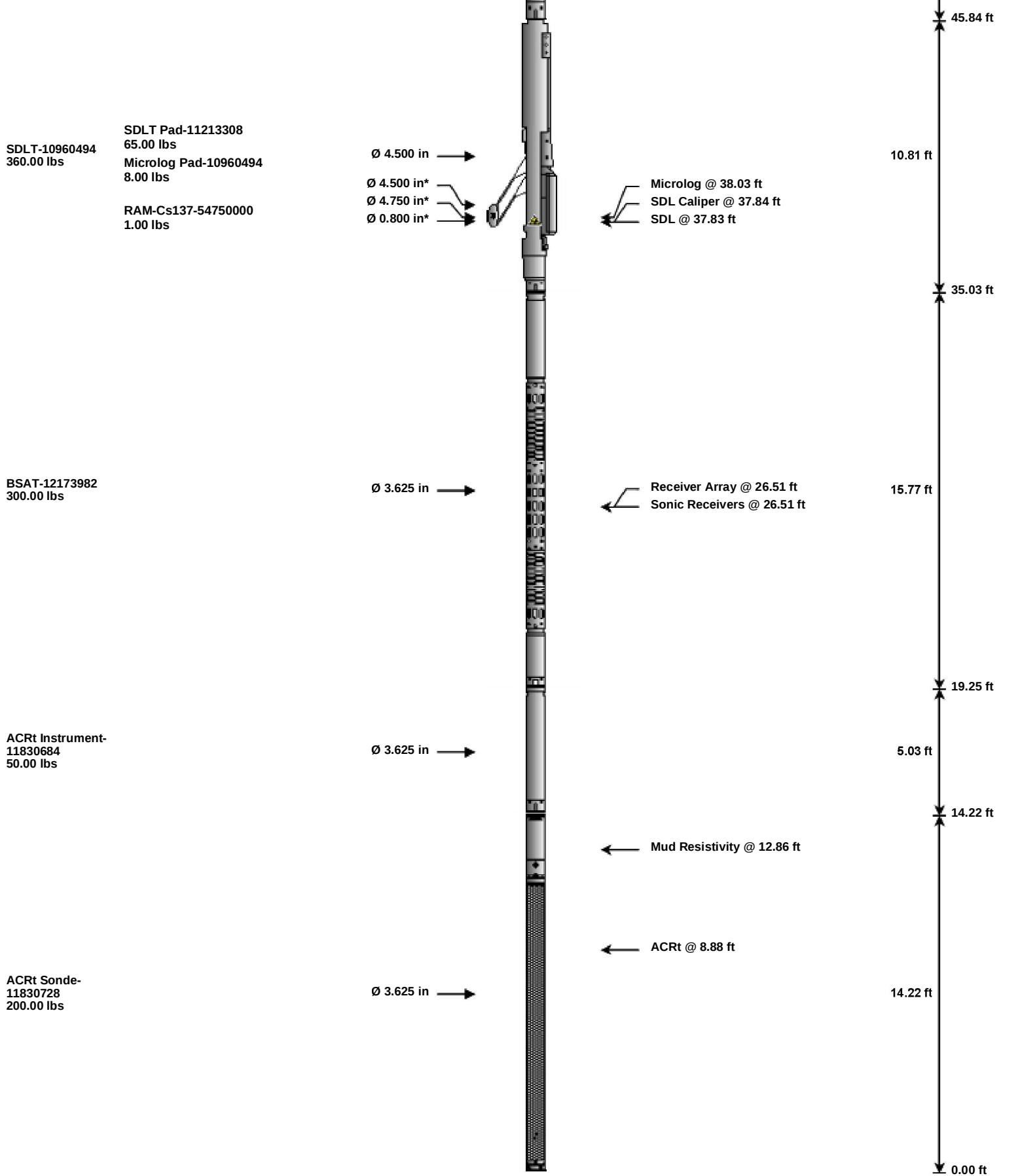
HALLIBURTON					
PARAMETERS REPORT					

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	9.200	ppg
SHARED	WAGT	Weighting Agent	Natural	
SHARED	BSAL	Borehole salinity	0.00	ppm
SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
SHARED	RMUD	Mud Resistivity	1.200	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	5590.00	ft
SHARED	BHT	Bottom Hole Temperature	130.0	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 / 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: MERIT_KELLS\0001 RWCH-GTET-DSN-SDL-BSAT-ACRT\IDLE				Date: 06-Mar-19 17:55:28

HALLIBURTON TOOL STRING DIAGRAM REPORT						
Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-12345678 135.00 lbs Weak Point Solid-12345678 0.01 lbs SP Sub-11812437 60.00 lbs GTET-11013113 165.00 lbs DSNT-11019641 174.00 lbs		Ø 2.310 in → Ø 3.625 in → Ø 0.010 in* → Ø 3.625 in → Ø 3.625 in → Ø 5.000 in* → Ø 3.625 in →		← Fishing Neck @ 73.15 ft ← Load Cell @ 70.35 ft ← BH Temperature @ 69.78 ft ← SP @ 66.01 ft ← Z-Accelerometer @ 63.59 ft ← GammaRay @ 57.98 ft ← DSN Far @ 48.59 ft ← DSN Near @ 47.84 ft	74.03 ft 6.25 ft 67.78 ft 3.74 ft 64.05 ft 8.52 ft 55.53 ft 9.69 ft	



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		12345678	135.00	6.25	67.78	300.00
WPSS	Weak Point Solid		12345678	0.01	0.01	* 67.78	300.00
SP	SP Sub		11812437	60.00	3.74	64.05	300.00
GTET	Gamma Telemetry Tool		11013113	165.00	8.52	55.53	60.00
DSNT	Dual Spaced Neutron		11019641	174.00	9.69	45.84	60.00
DCNT	DSN Decentralizer		11660709	6.60	5.13	* 49.17	300.00
SDLT	Spectral Density Tool		10960494	360.00	10.81	35.03	60.00
SDLP	Density Insite Pad		11213308	65.00	2.55	* 37.24	60.00
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137		54750000	1.00	0.80	* 37.47	300.00
MICP	Microlog Pad		10960494	8.00	1.00	* 37.53	60.00
BSAT	Borehole Sonic Array Tool		12173982	300.00	15.77	19.25	60.00

BSAT	Borehole Sonic Array Tool	12173982	300.00	15.77	19.25	60.00
ACRt	Array Compensated True Resistivity Instrument Section	11830684	50.00	5.03	14.22	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11830728	200.00	14.22	0.00	120.00
Total			1,524.61	74.03		
Data: MERIT_KELLSI0001 RWCH-GTET-DSN-SDL-BSAT-ACRTIDLE						* Not included in Total Length and Length Accumulation.
						Date: 06-Mar-19 17:55:39