

**BOREHOLE
COMPENSATED
SONIC
LOG**

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

Service Ticket No.: 905820789				API No.: 15-189-22860-00-00				PGM Version: WL INSITE R6.2.1 (Build 2)						
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES								
Date	Sample No.					Type Log	Depth	Scale Up Hole		Scale Down Hole				
Depth-Driller														
Type Fluid in Hole														
Density	Viscosity													
Ph	Fluid Loss													
Source of Sample					RESISTIVITY EQUIPMENT DATA									
Rm @ Meas. Temp		@		@		Run No.	Tool Type & No.	Pad Type	Tool Pos.	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.						
Serial No.				Serial No.				Serial No.						
Model No.				Model No.				Model No.						
Diameter				No. of Cent.				Diameter						
Detector Model No.				Spacing				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	

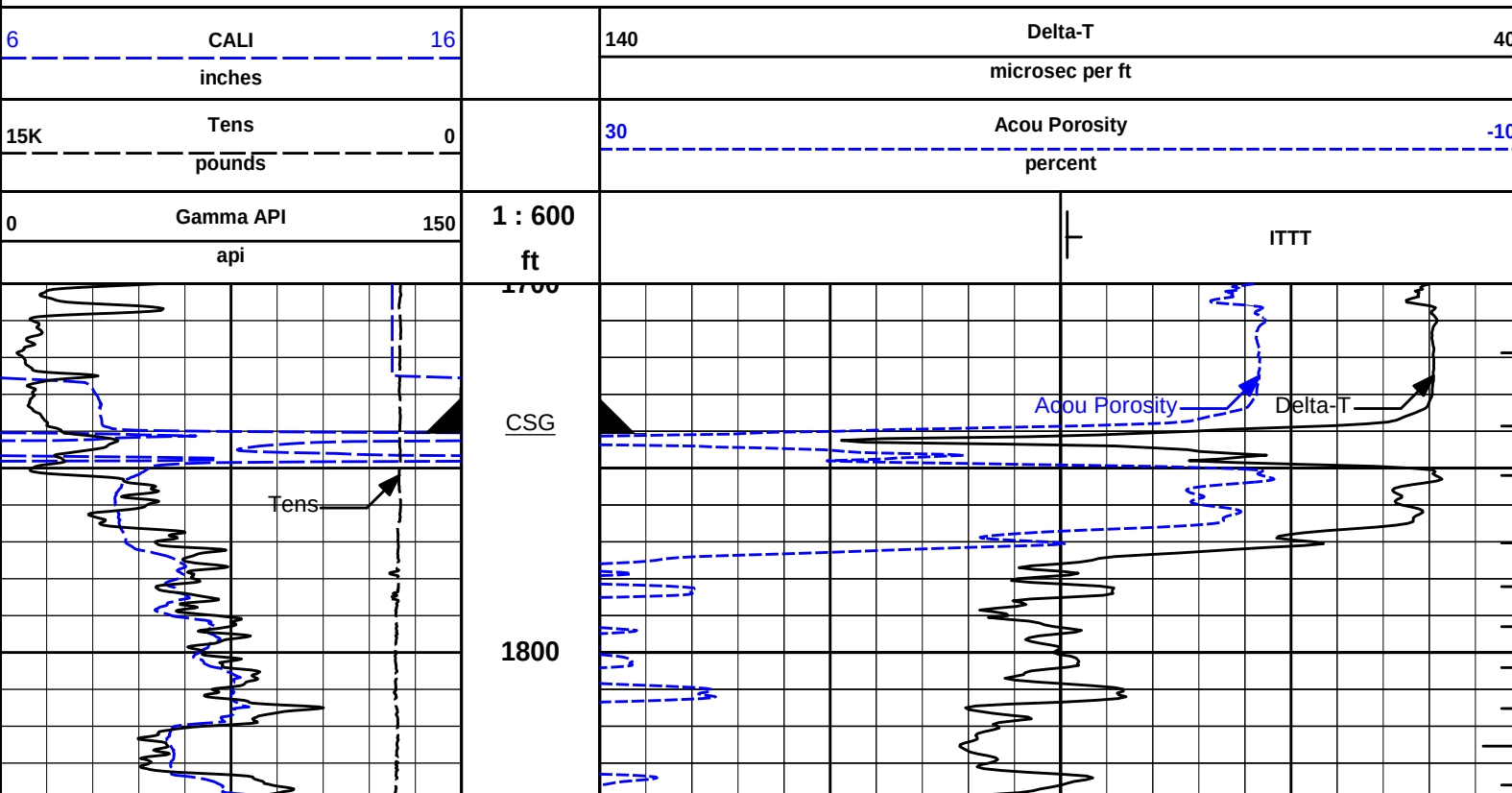
[illegible]

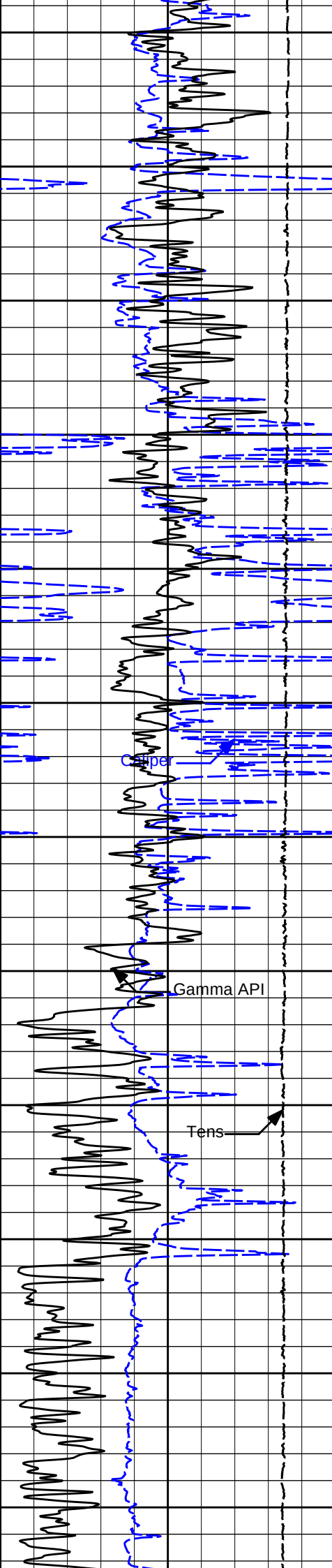
HALLIBURTON

Plot Time: 31-Jul-19 20:46:30
Plot Range: 1700 ft to 5758.58 ft
Data: BEREXCO_BROWN\Well Based\DAQ-0001-0031
Plot File: \\BSAT\BSAT_2inch

2 INCH MAIN LOG

2" MAIN LOG SECTION





1900

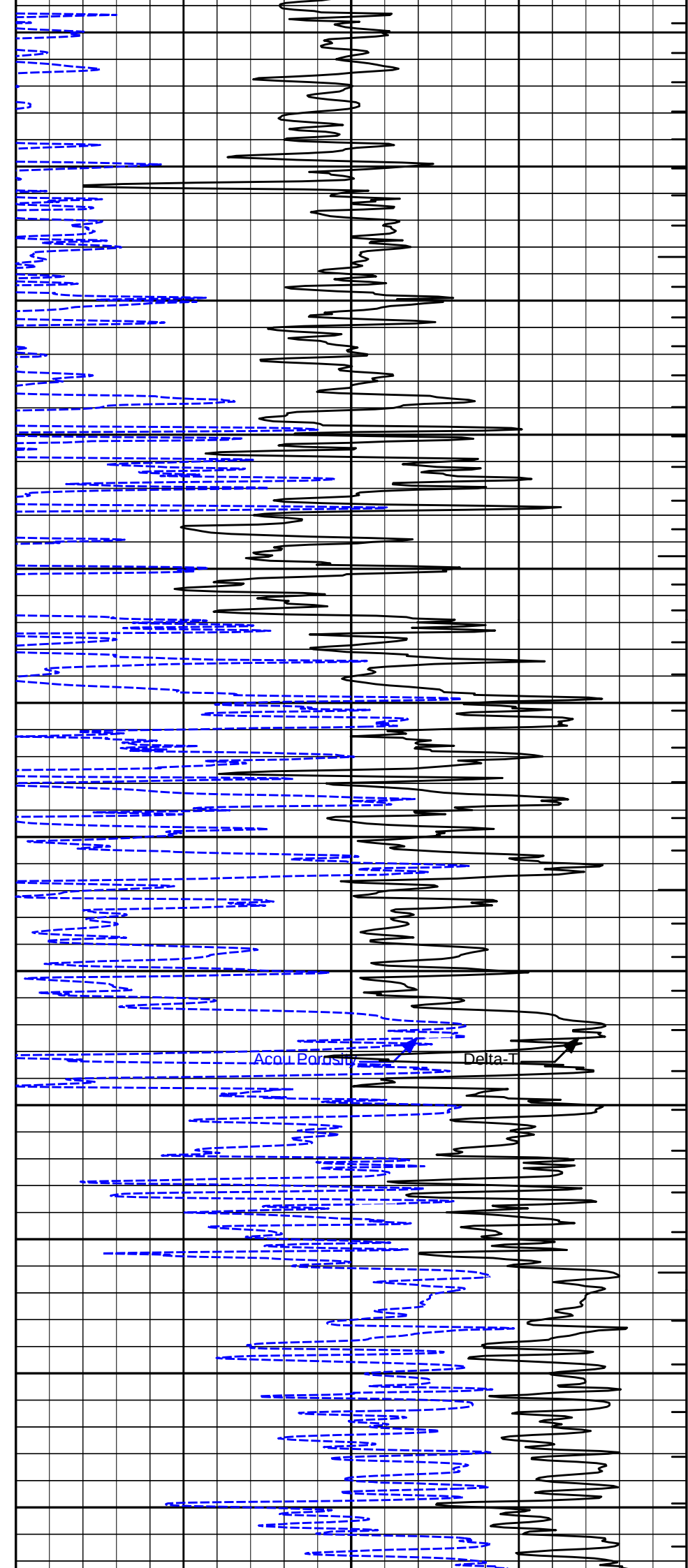
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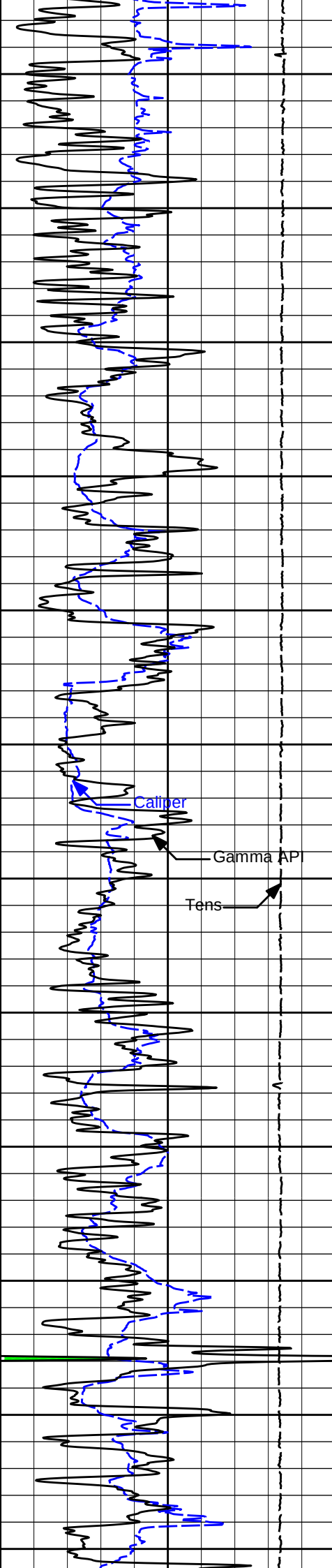
2100

2200

2300

2400





2500

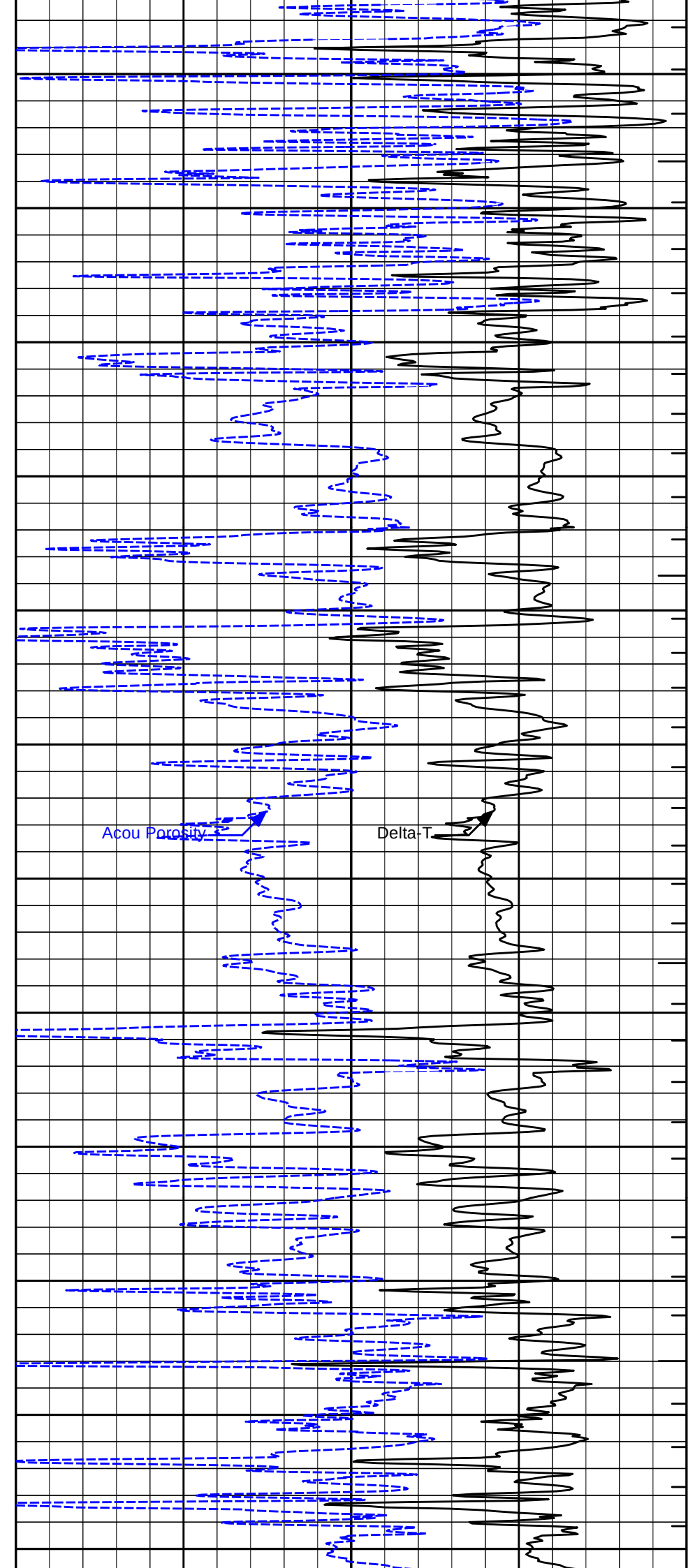
2600

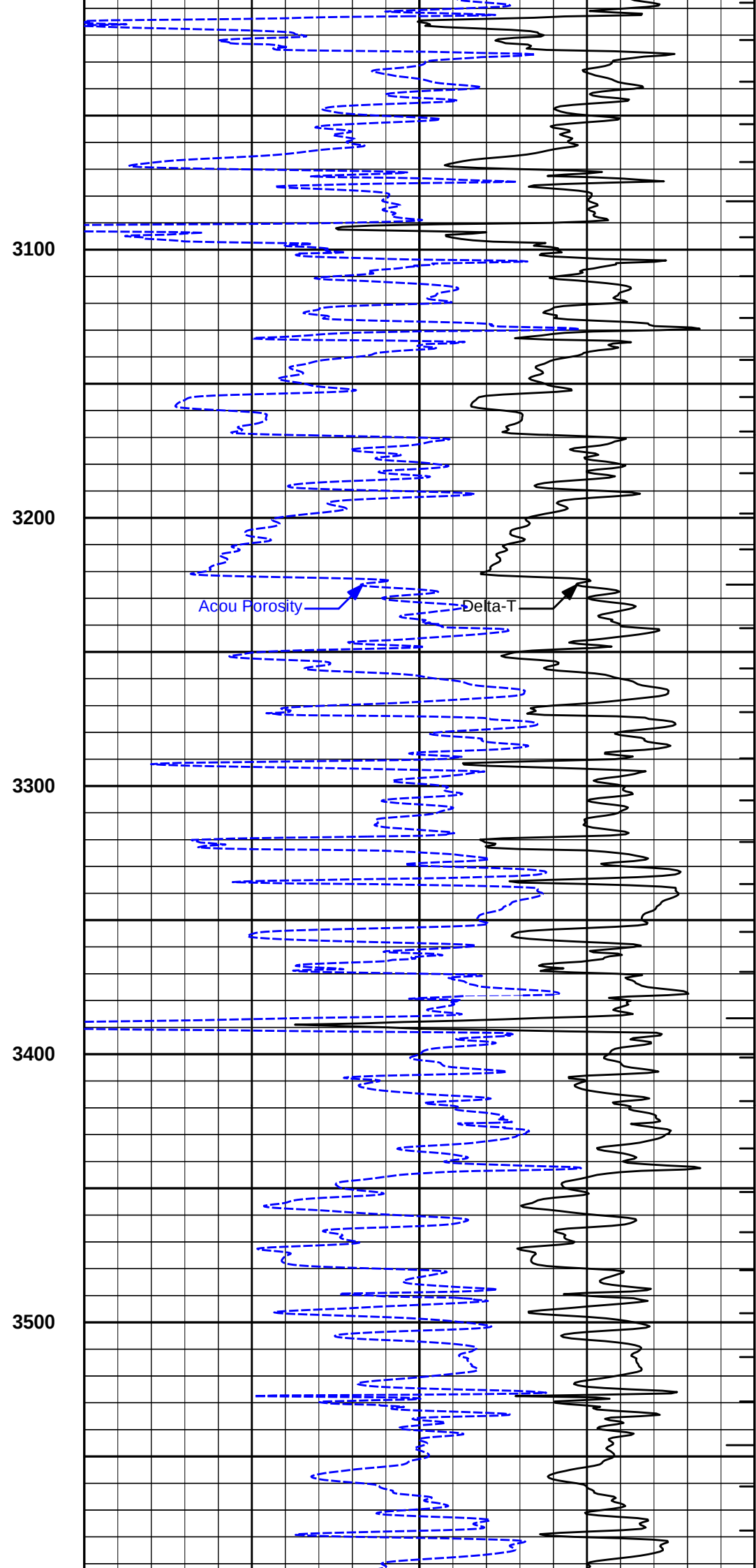
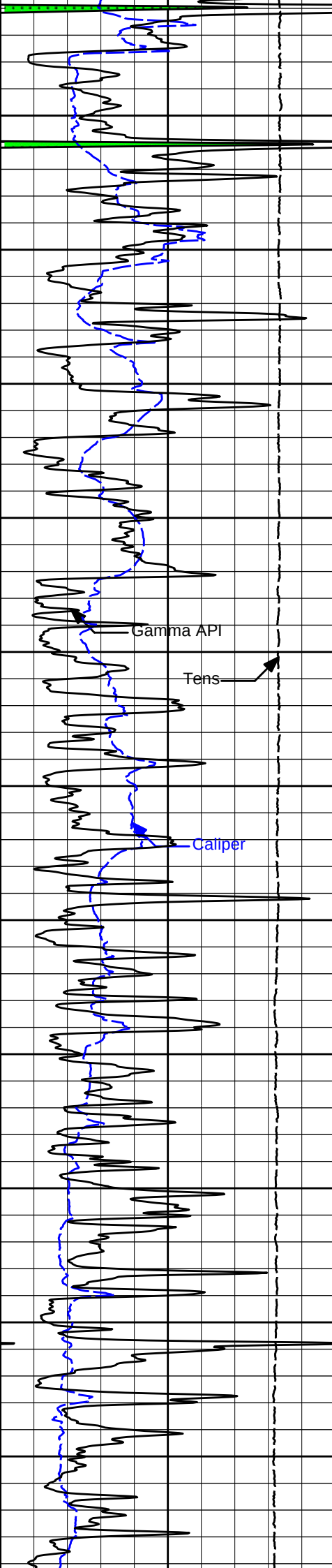
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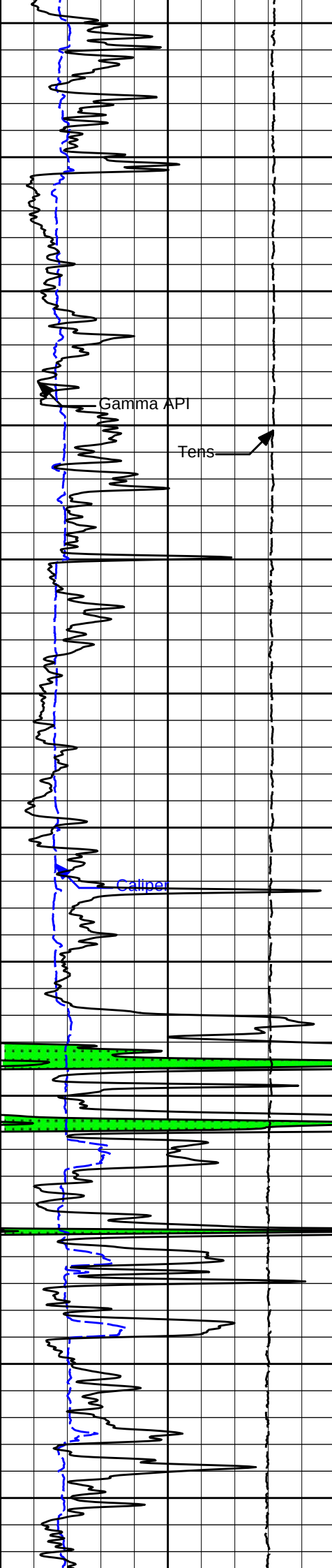
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2900

3000







3600

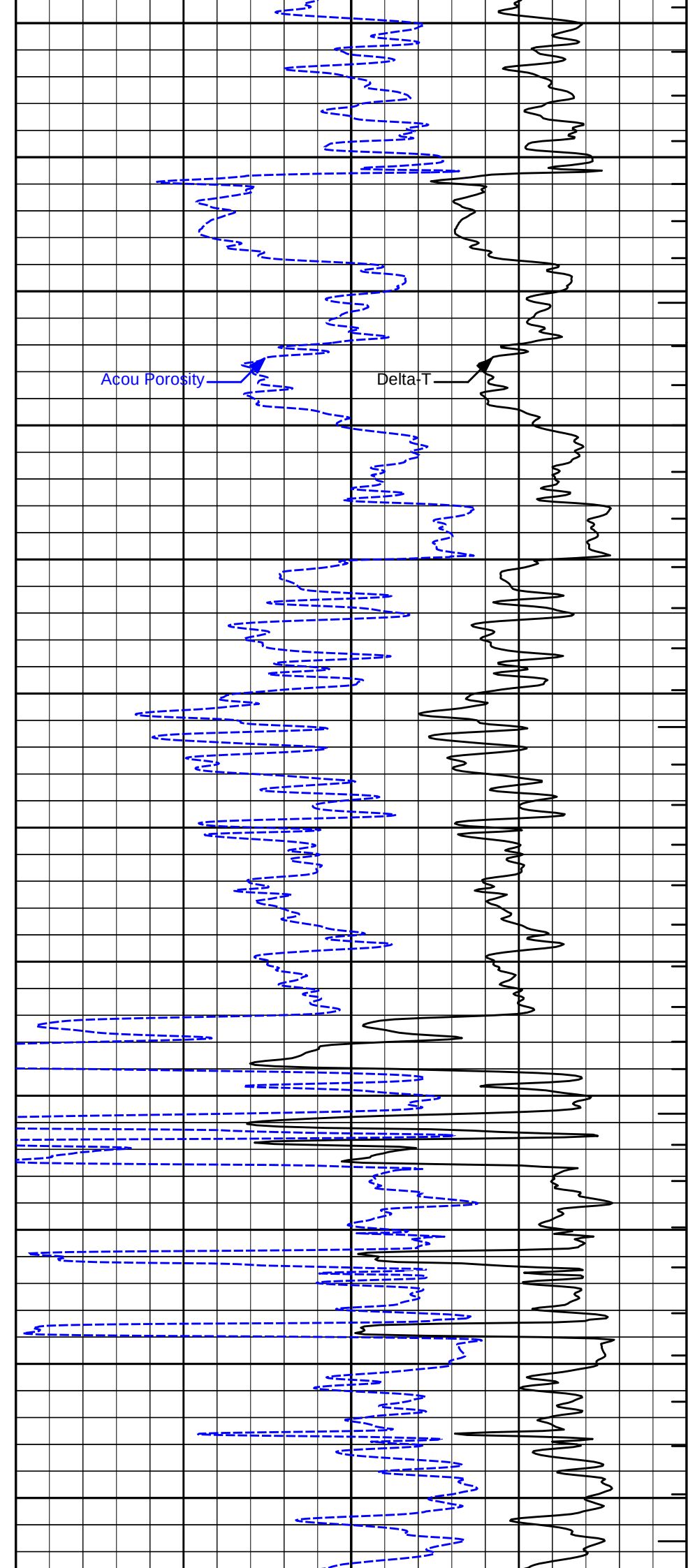
3700

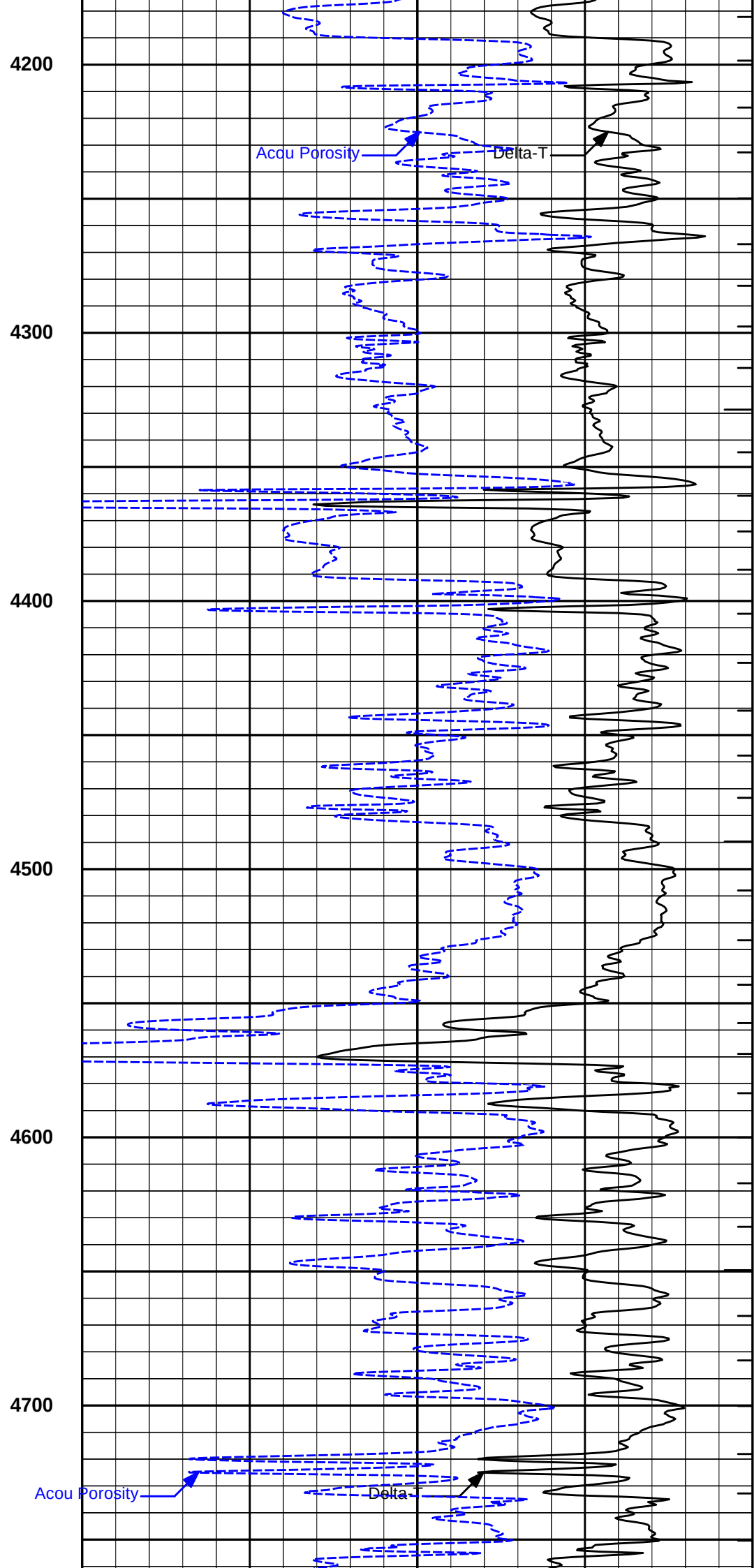
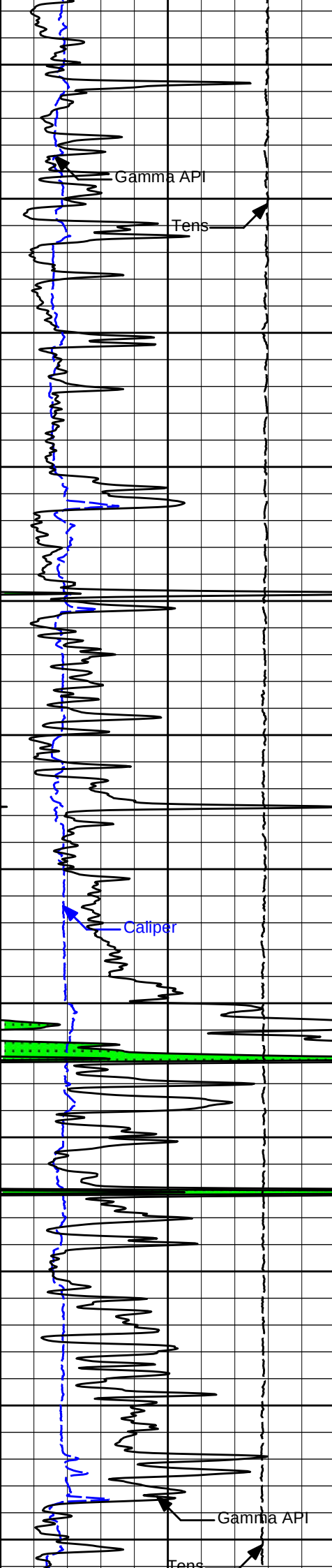
3800

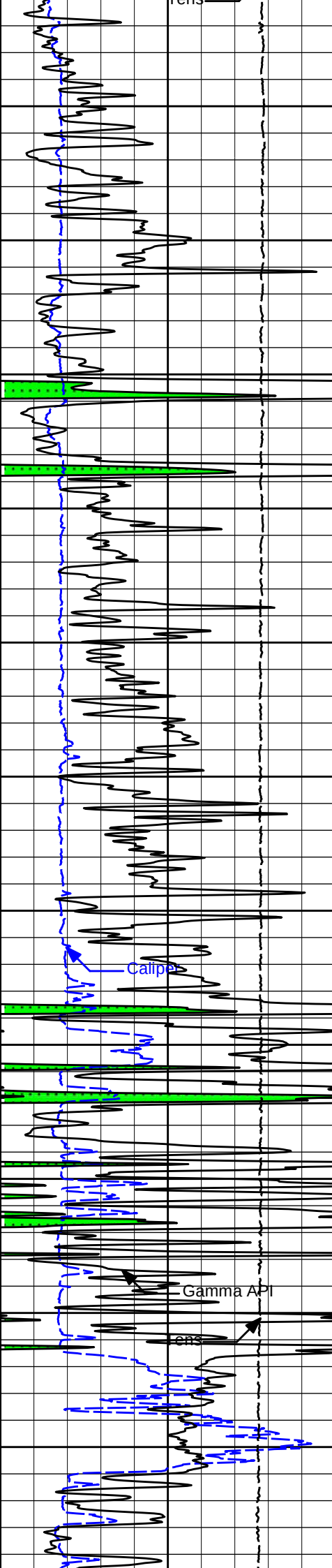
3900

4000

4100







4800

4900

5000

5100

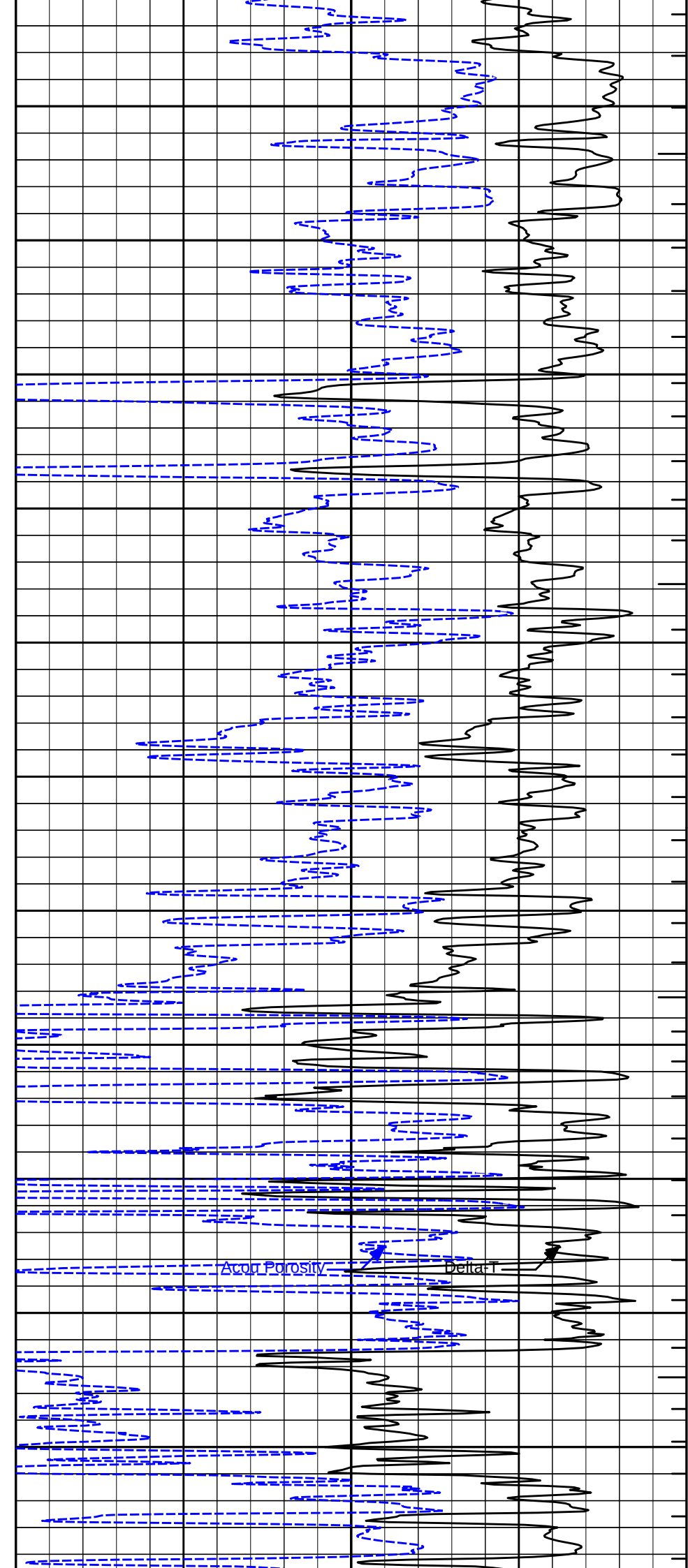
5200

5300

Caliper

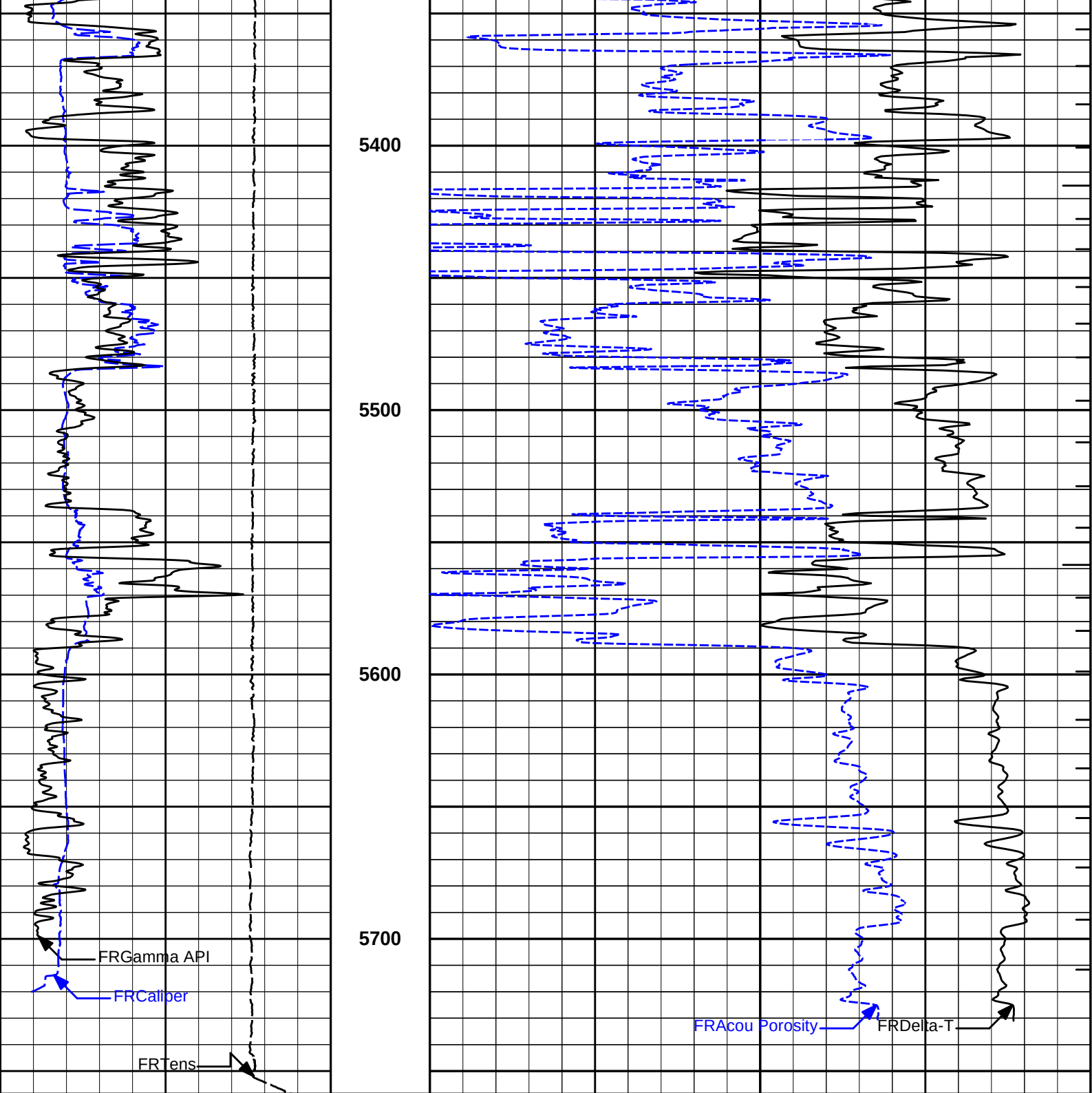
Gamma API

Gamma



Acoustic Porosity

Delta T



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

HALLIBURTON

Plot Time: 31-Jul-19 20:46:32
 Plot Range: 1700 ft to 5758.58 ft
 Data: BEREXCO_BROWN\Well Based\DAQ-0001-003\
 Plot File: \IBSAT\IBSAT_2inch

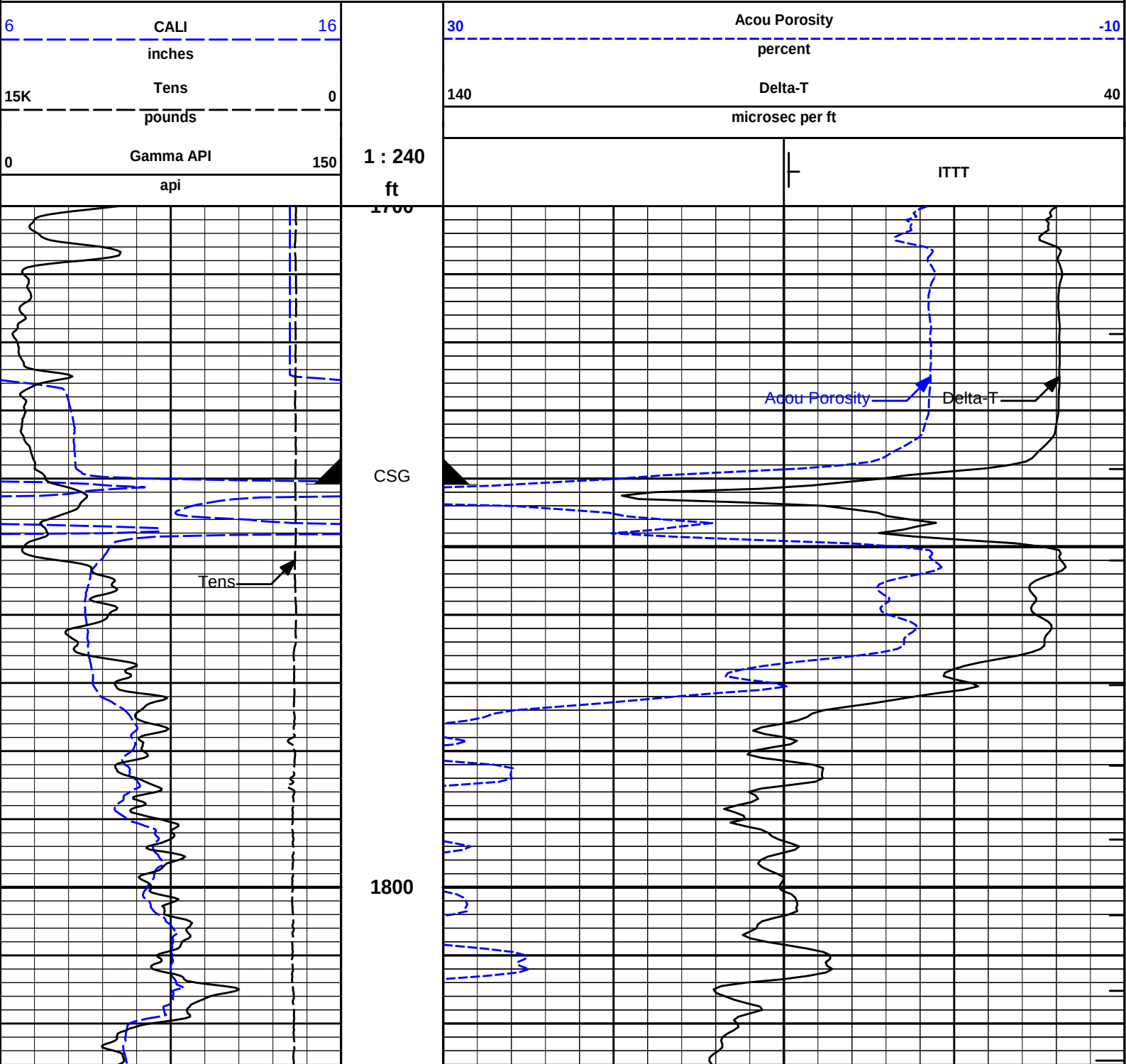
2 INCH MAIN LOG

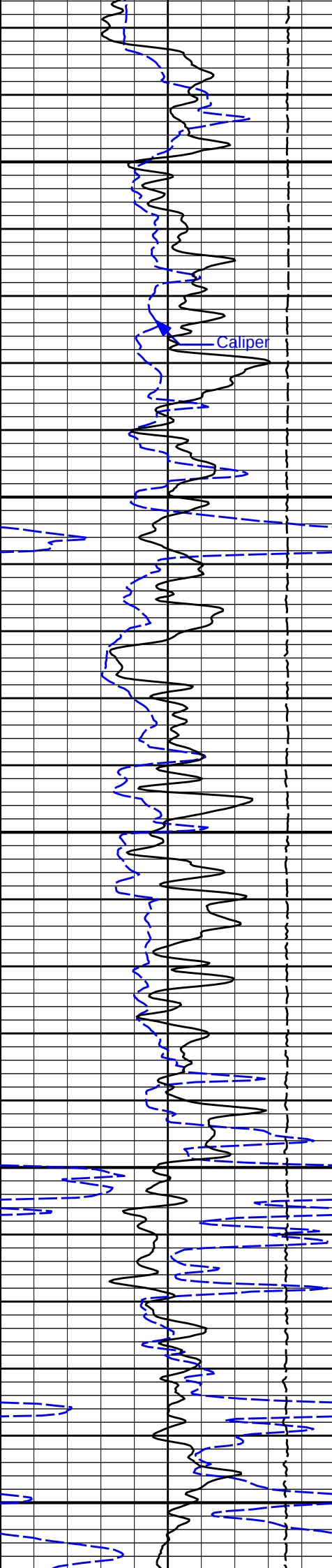
HALLIBURTON

Plot Time: 31-Jul-19 20:46:33
Plot Range: 1700 ft to 5758.58 ft
Data: BEREXCO_BROWN\Well Based\DAQ-0001-003\
Plot File: \BSAT\BSAT_5inch

5 INCH MAIN LOG

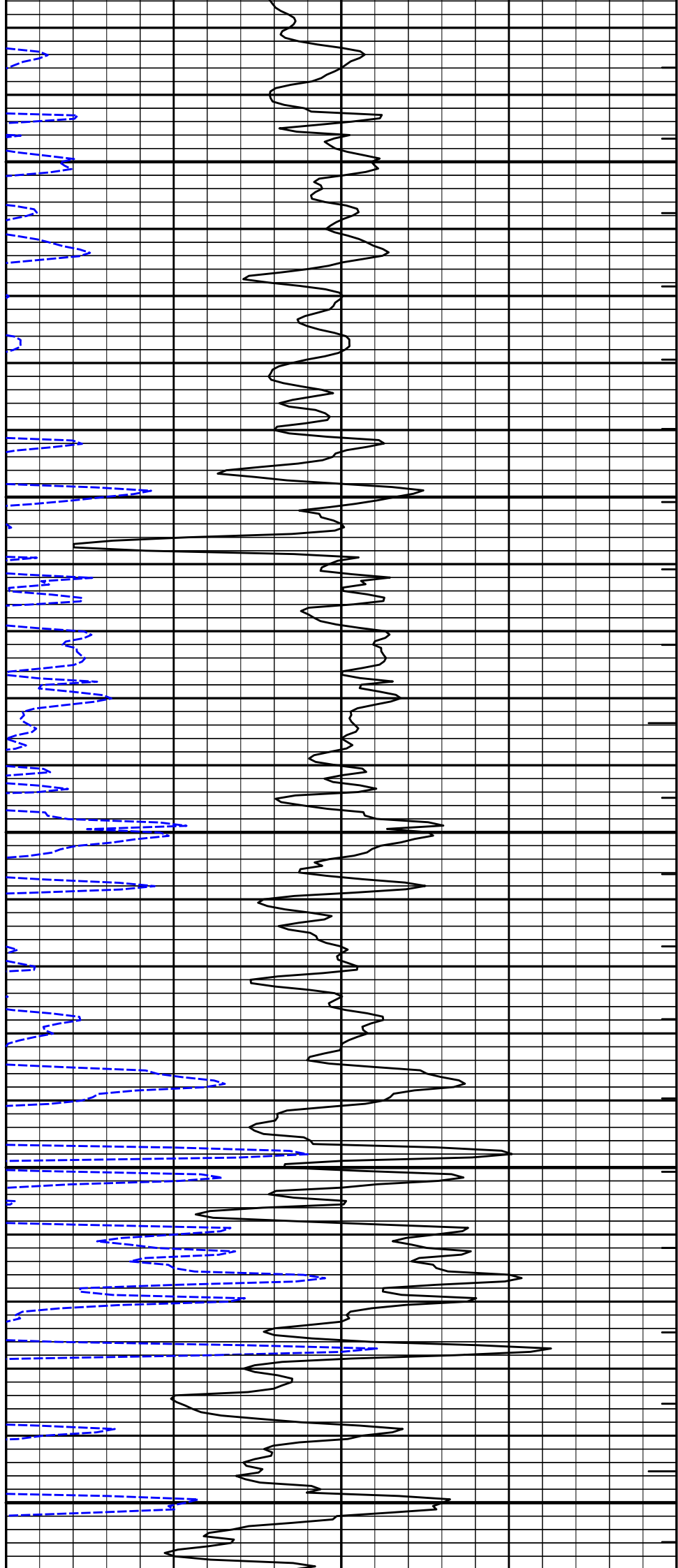
MAIN LOG SECTION

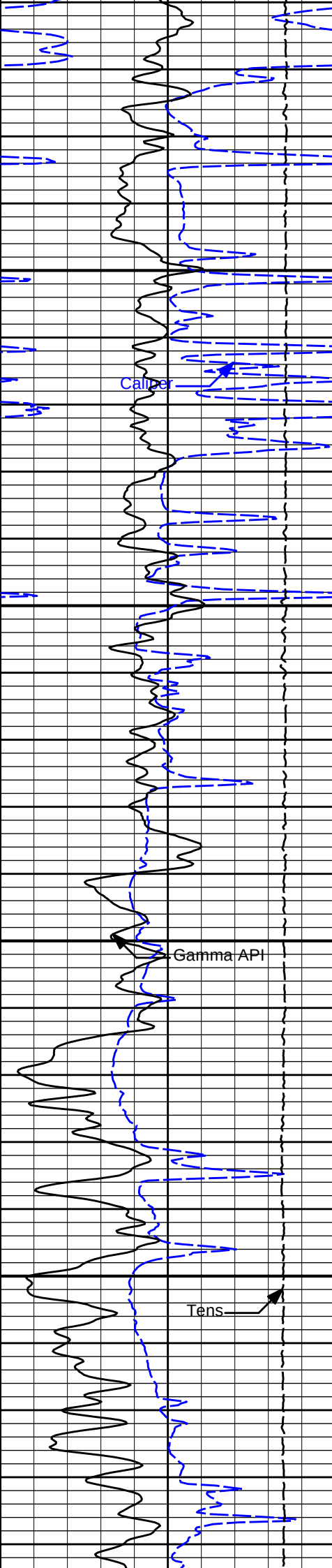




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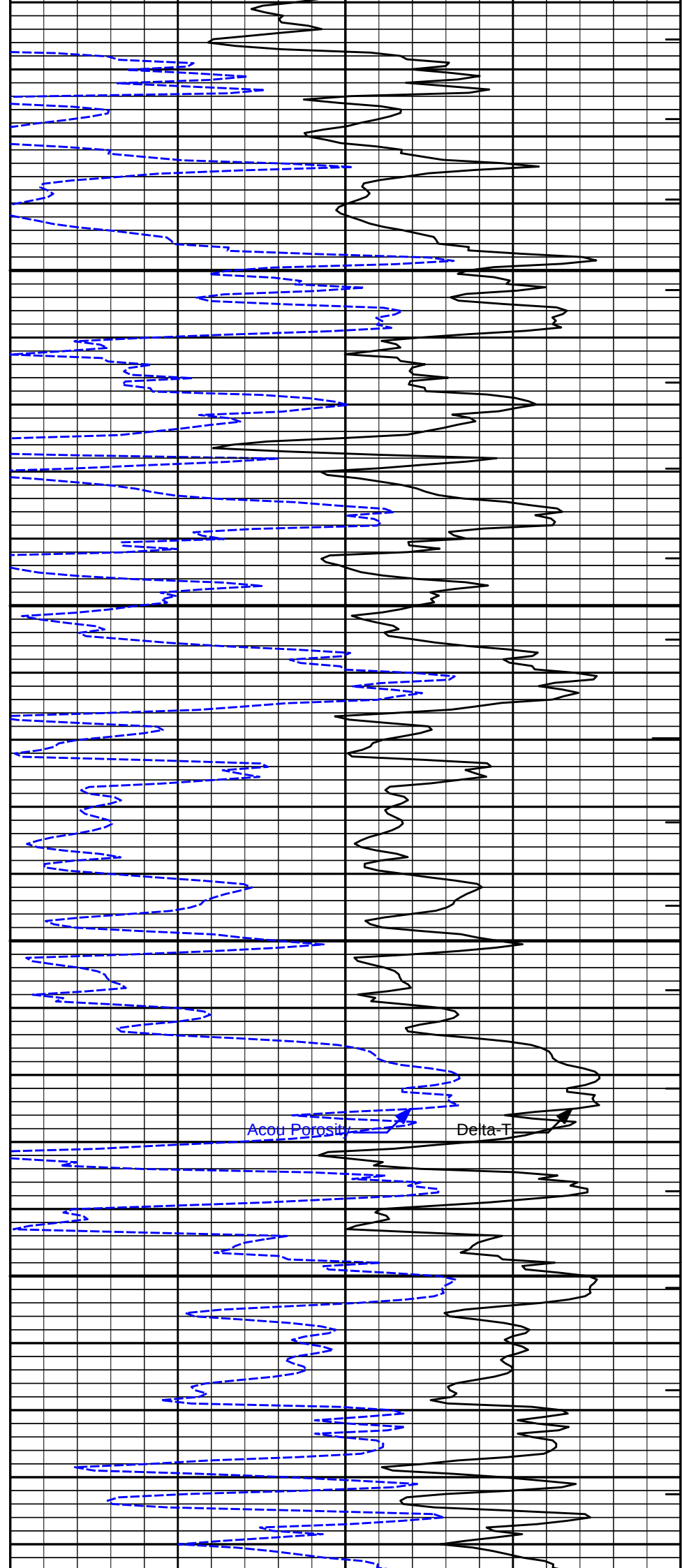
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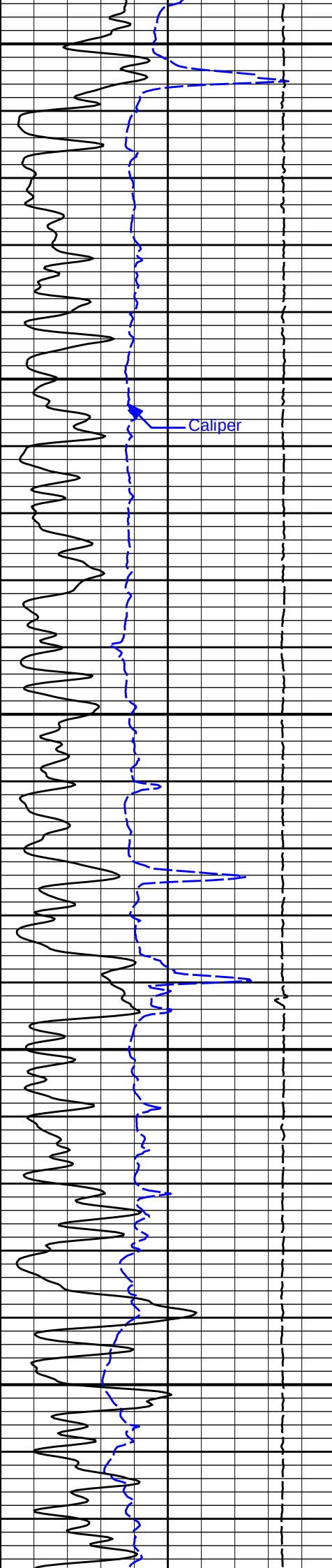




2100

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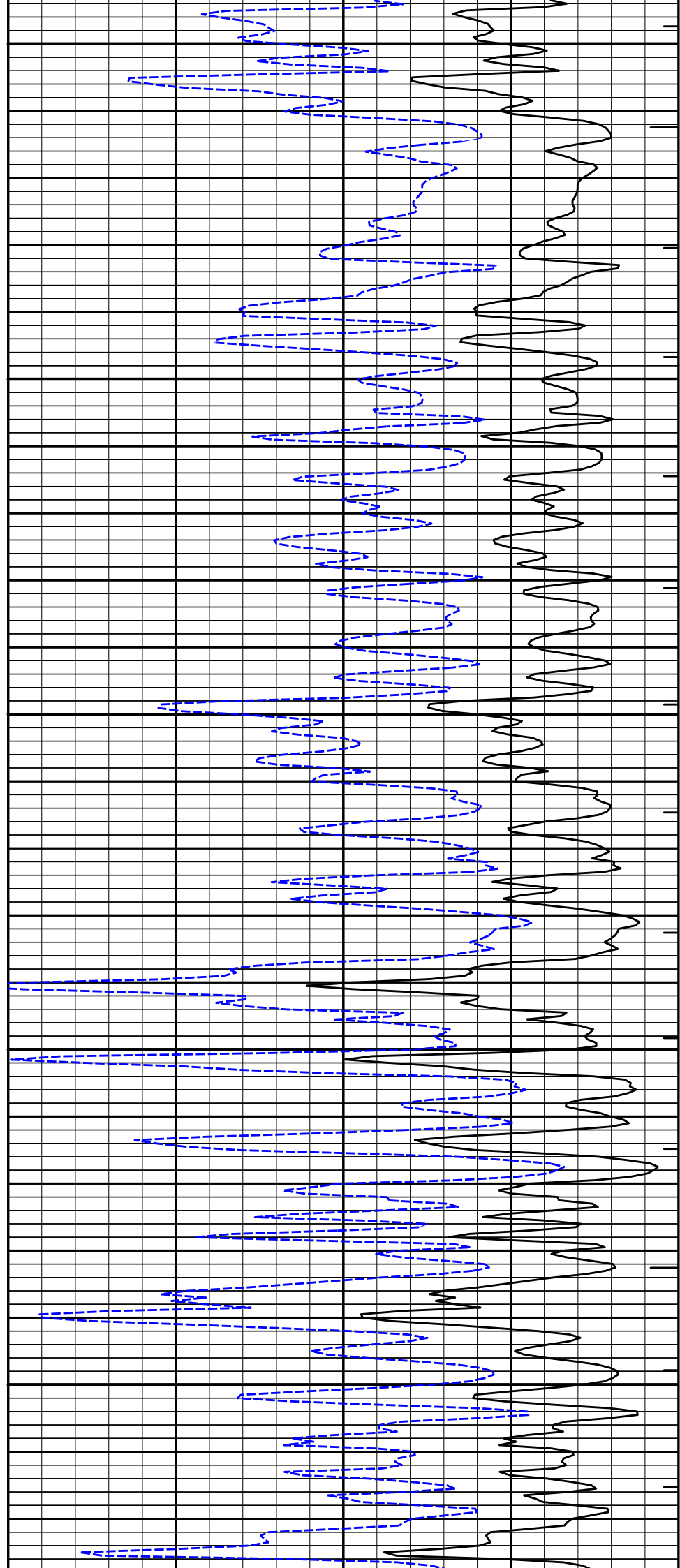


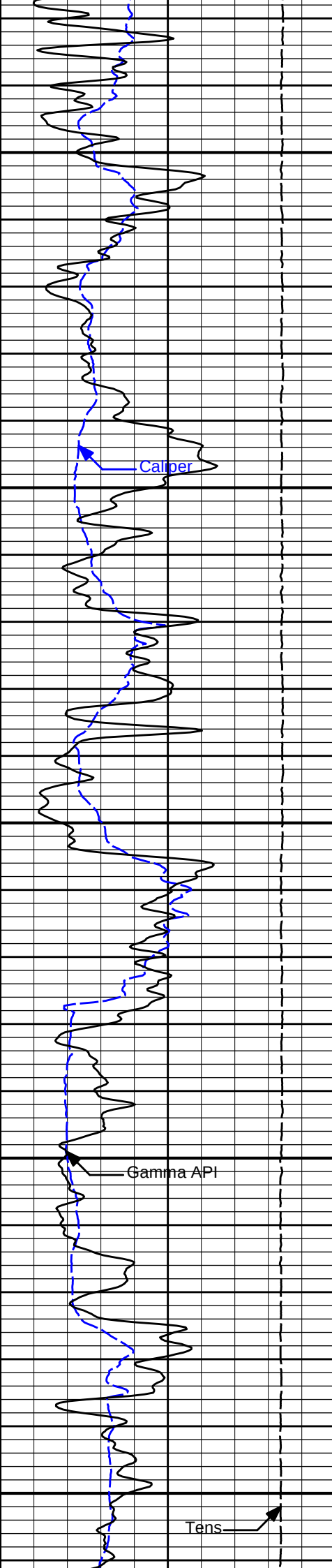


2300

2400

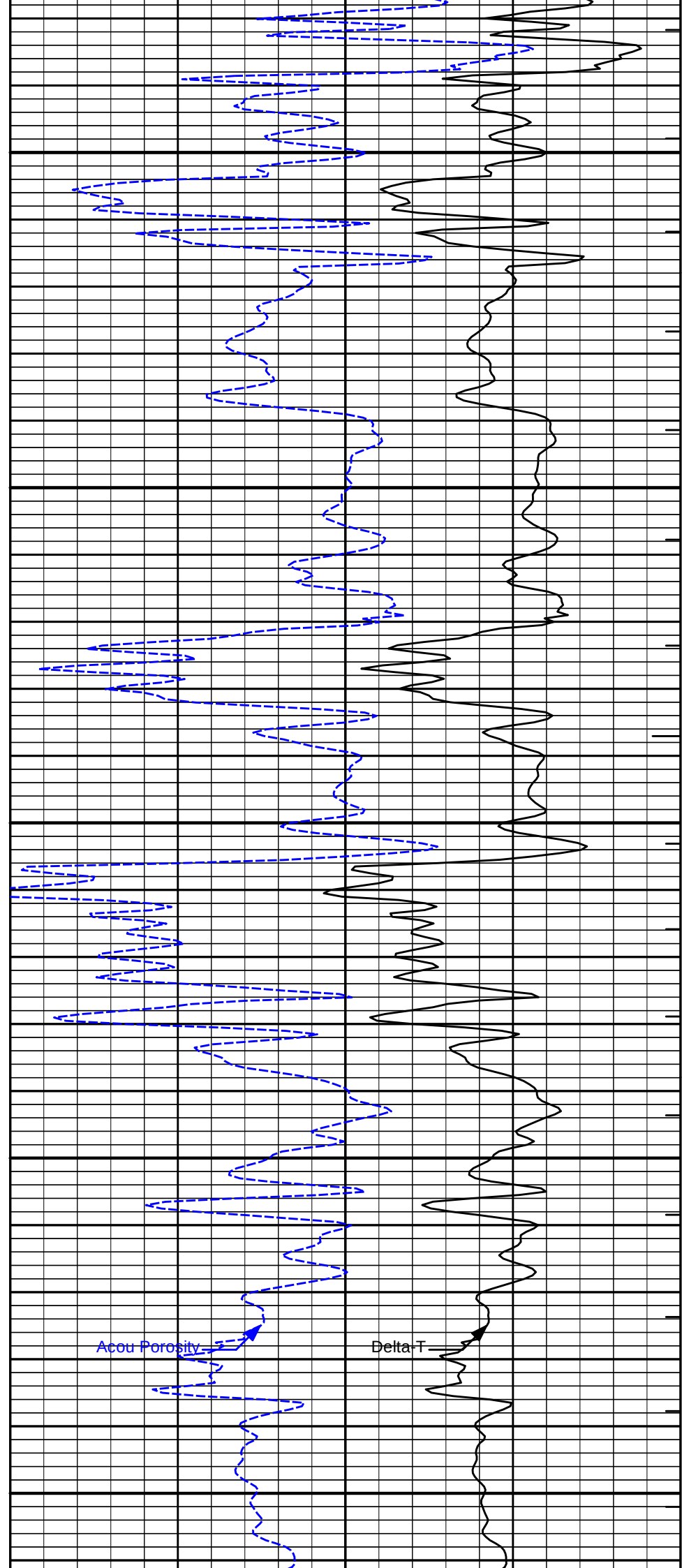
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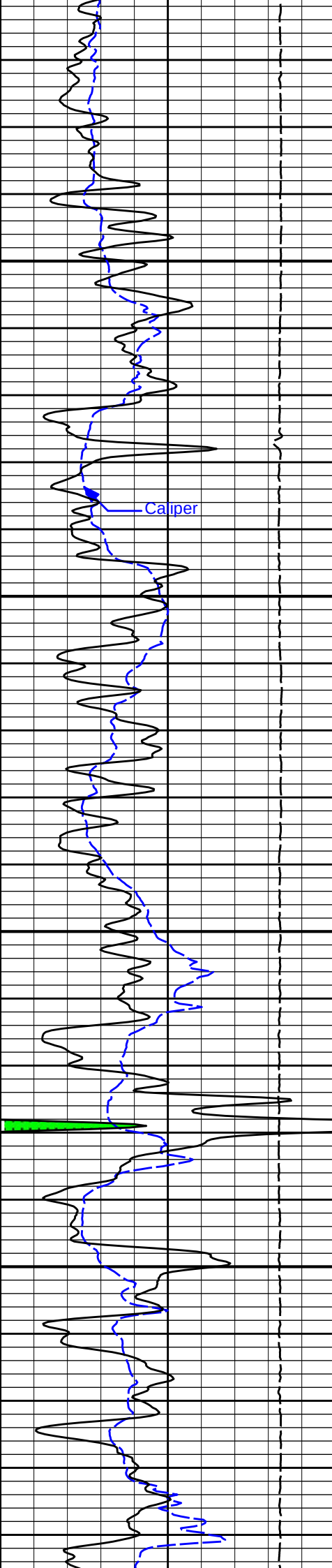




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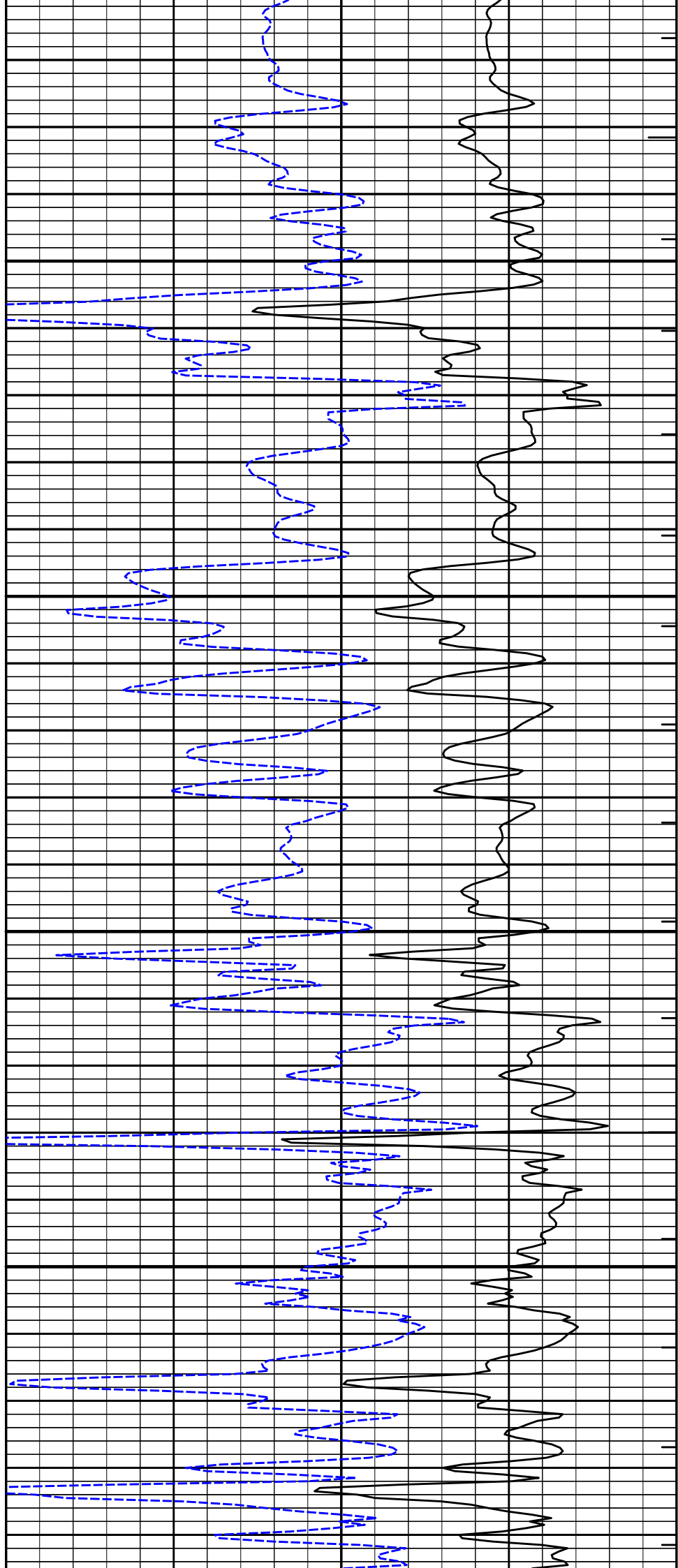
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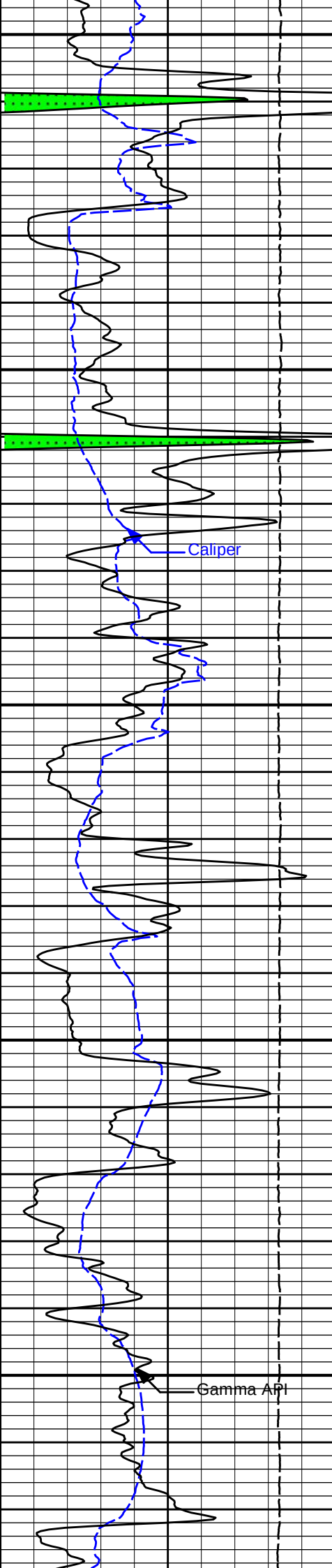




2800

2900

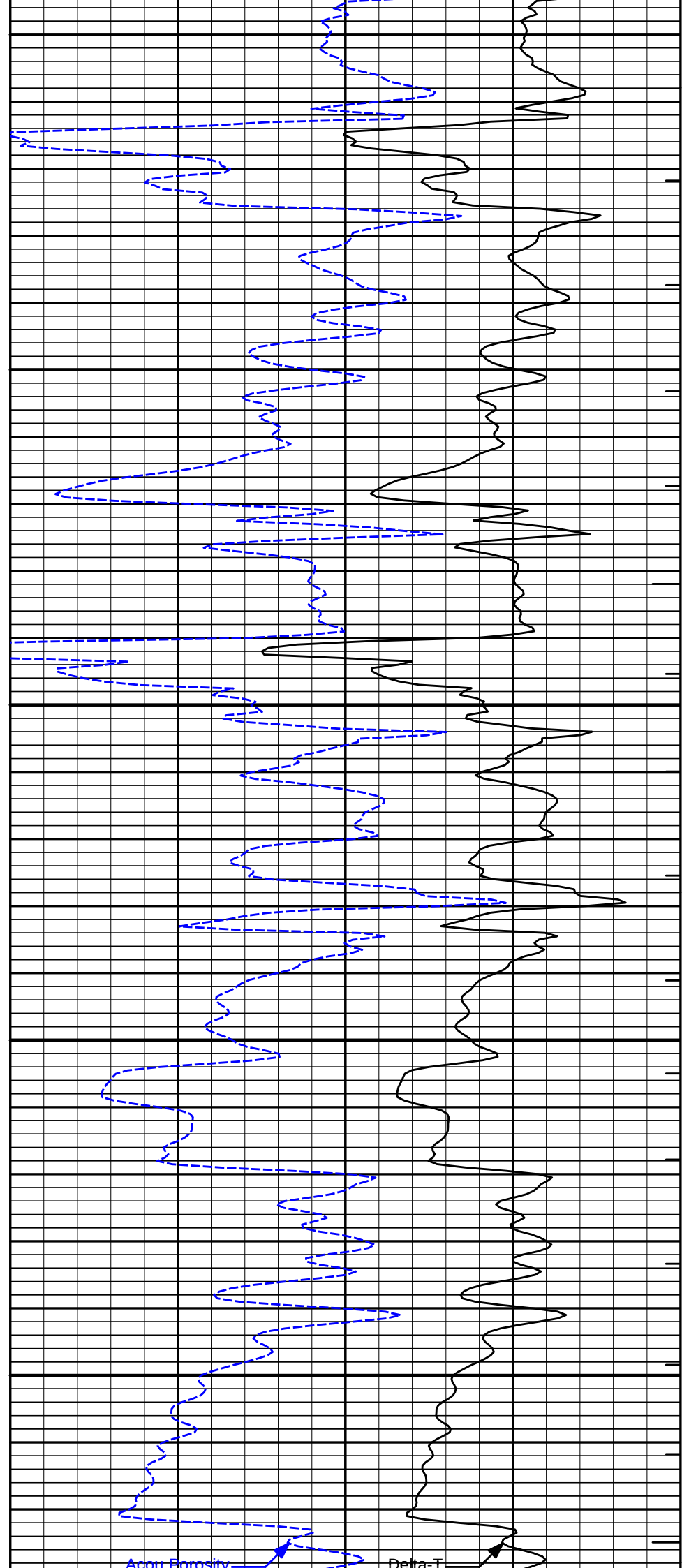




3000

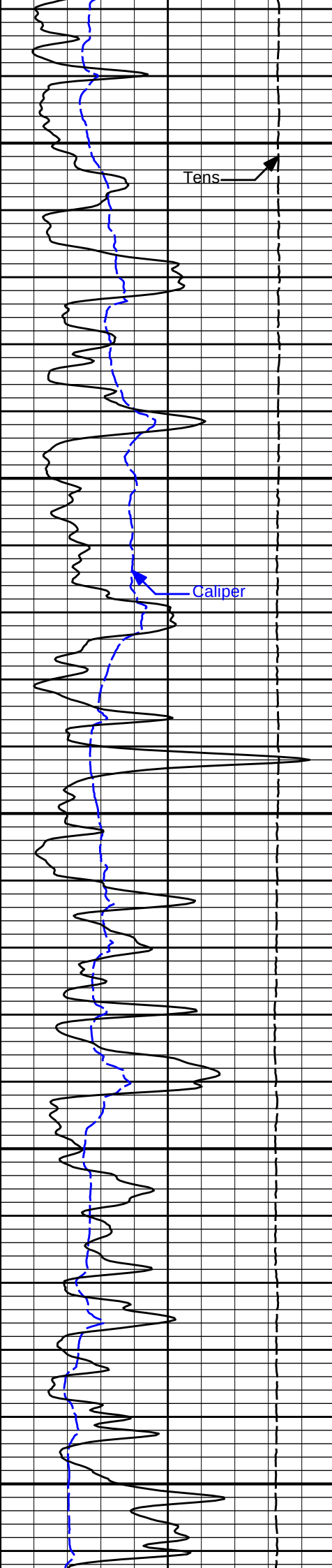
3100

3200



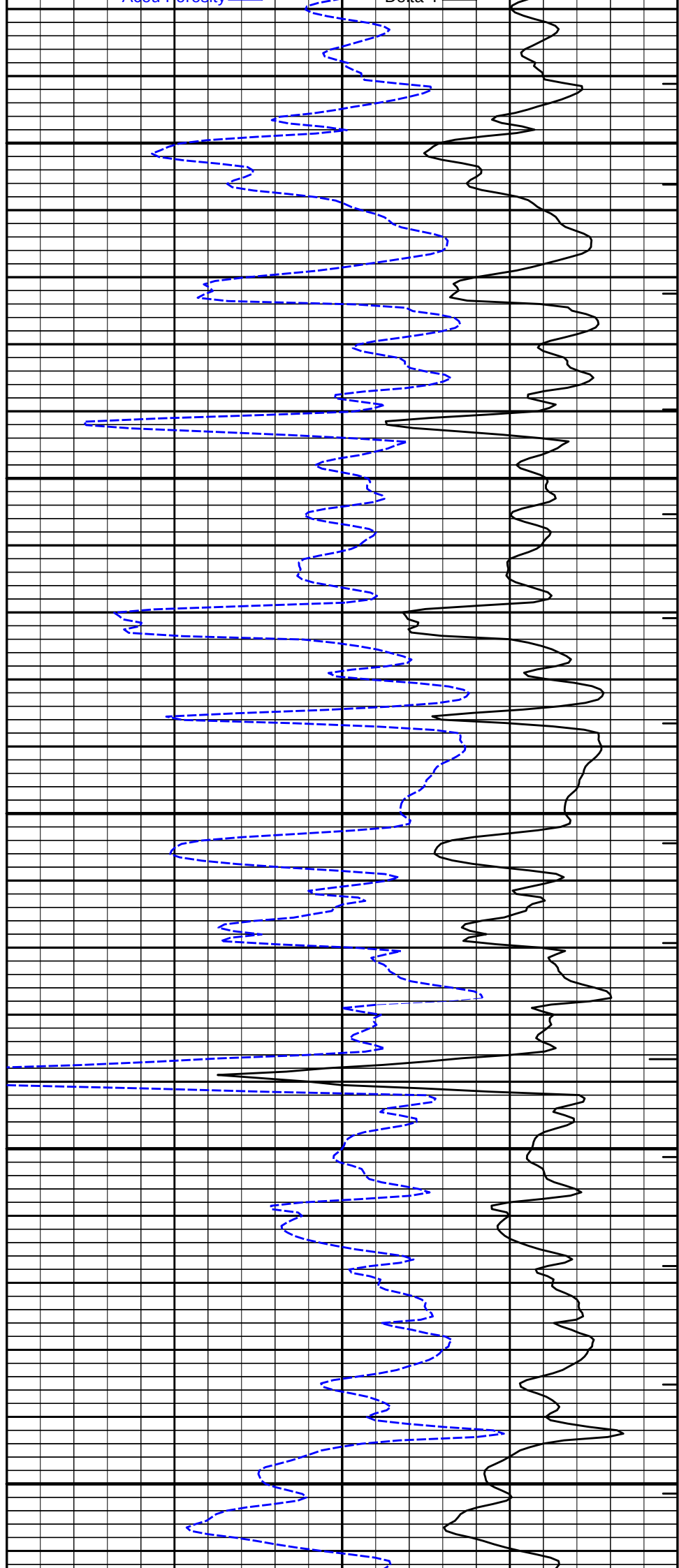
Acoustic Porosity

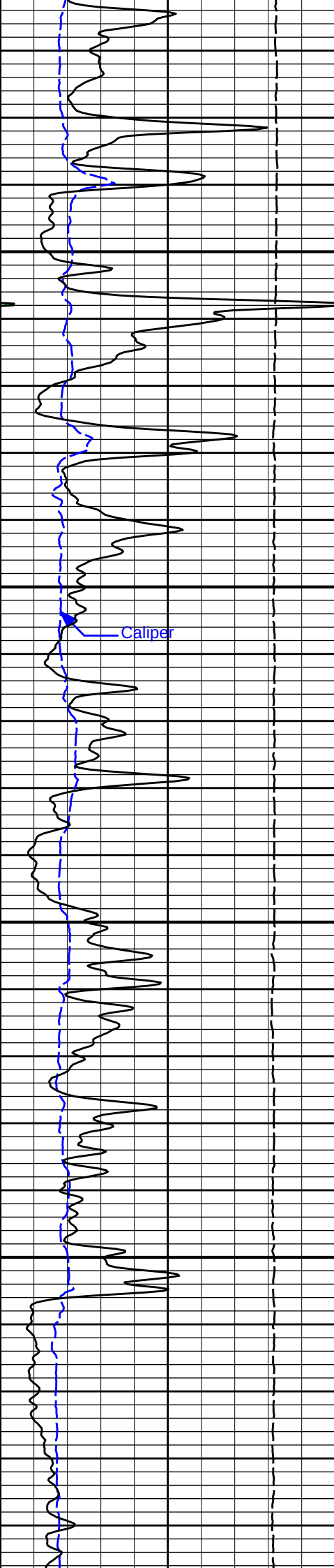
Delta-T



3300

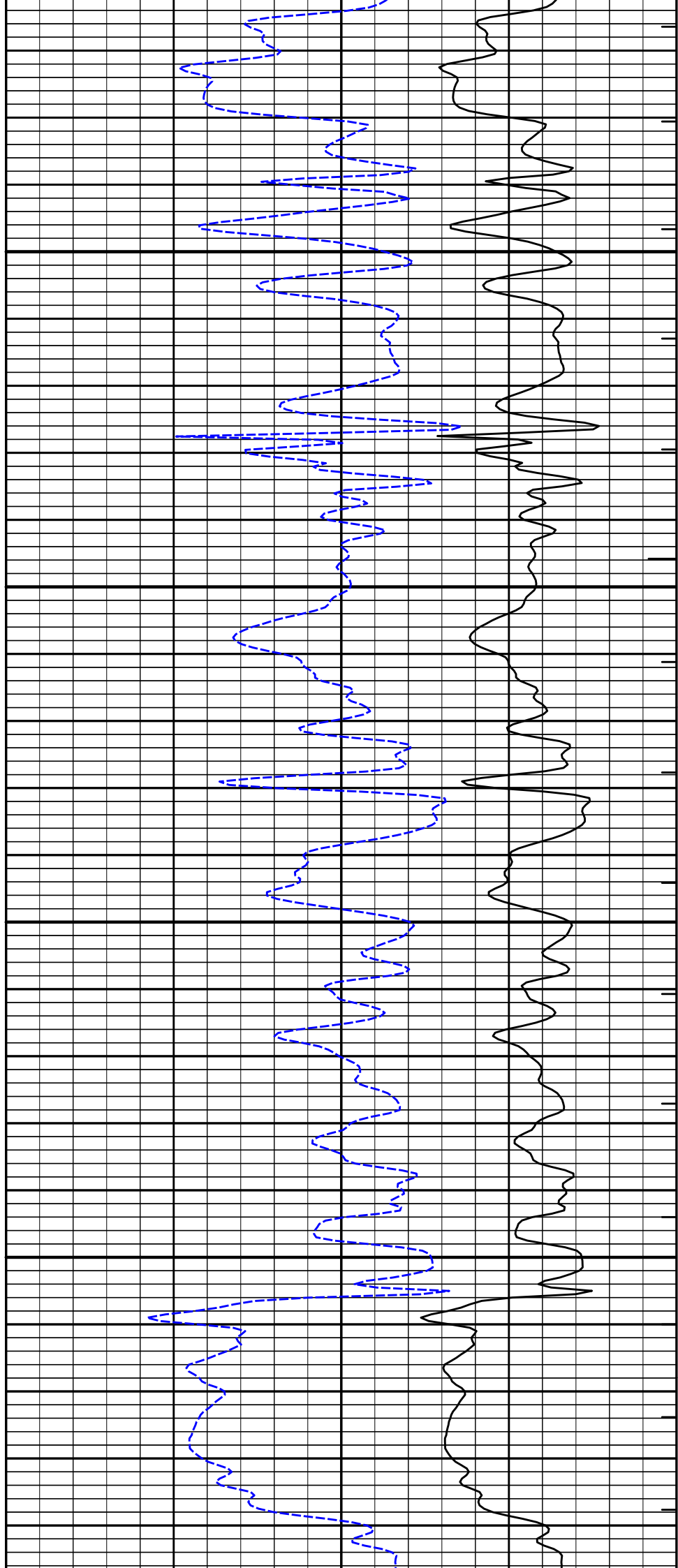
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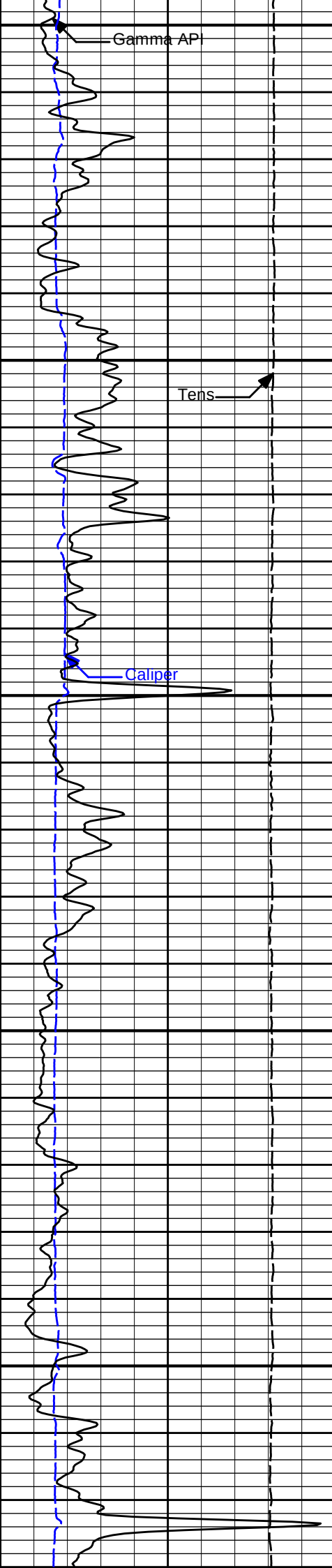




3500

3600

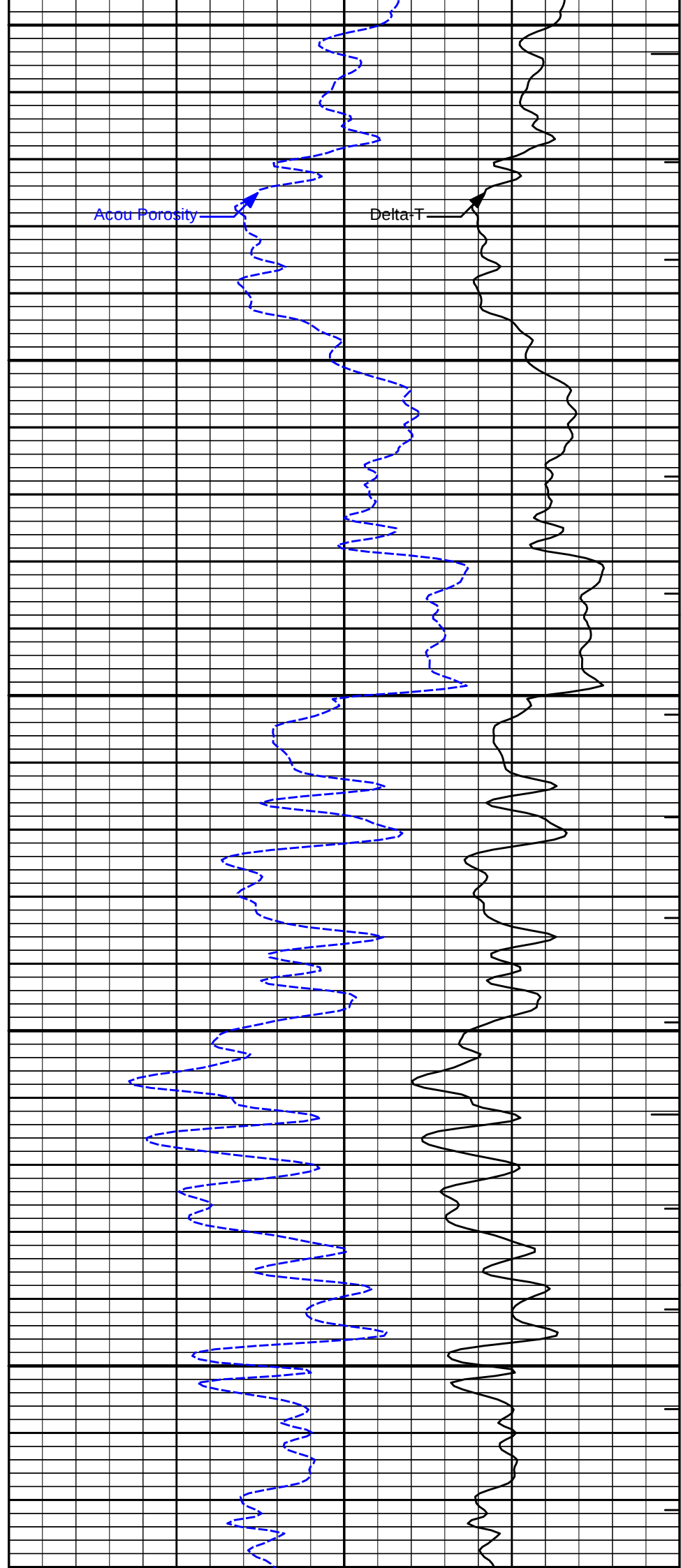


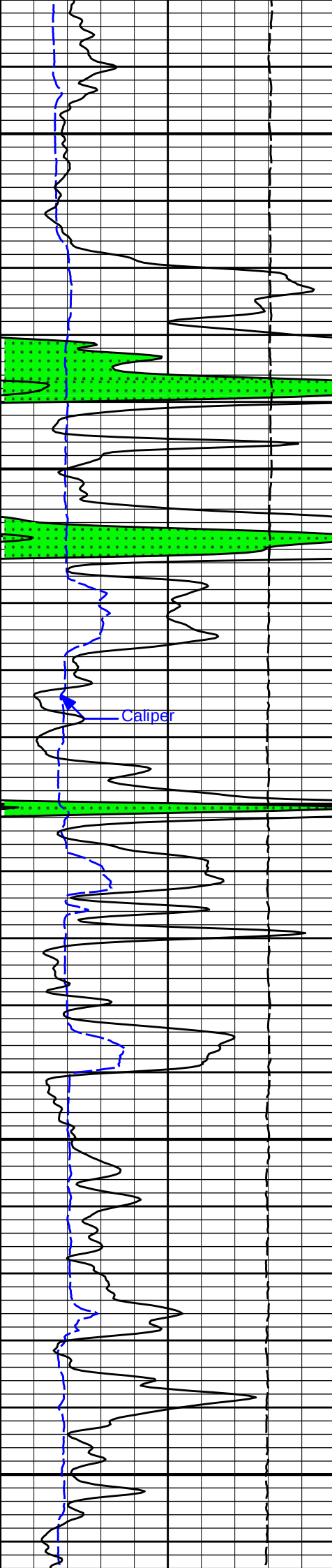


3700

3800

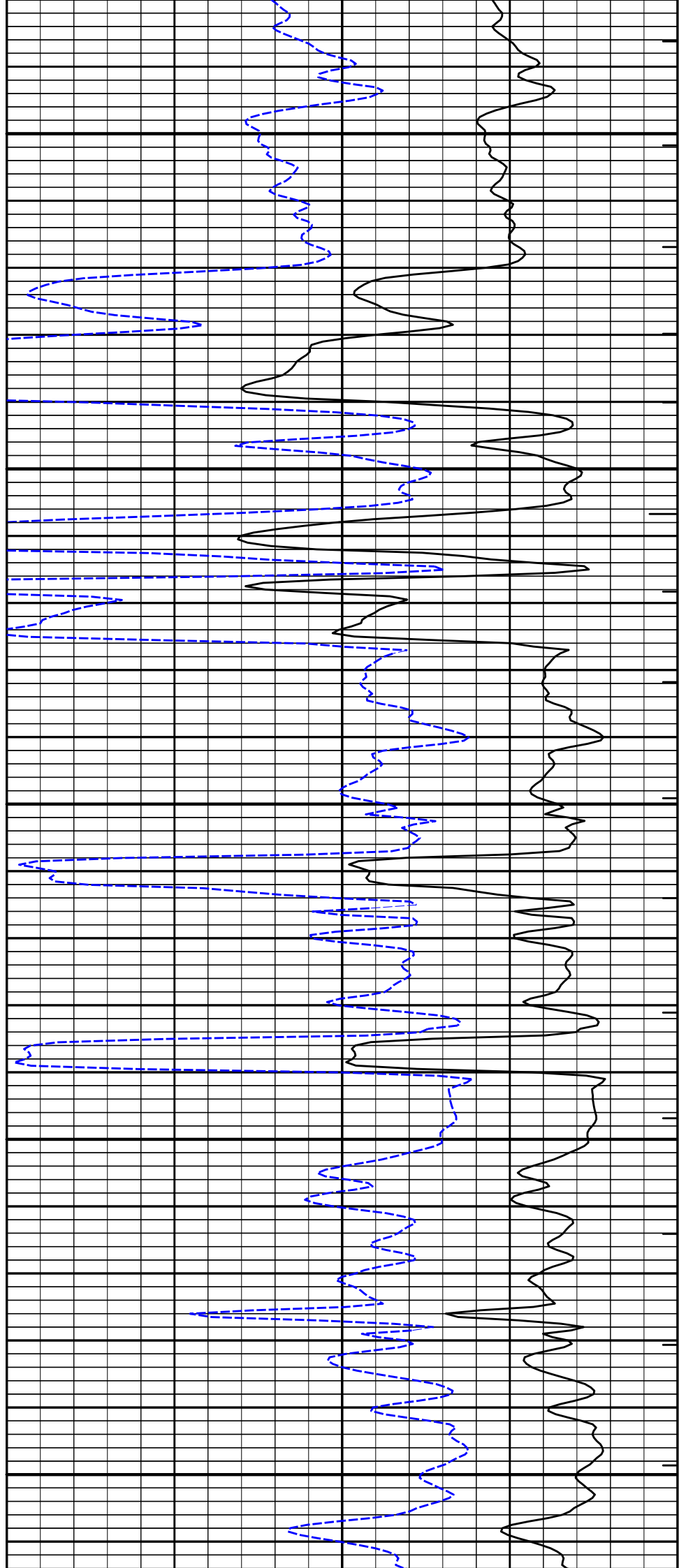
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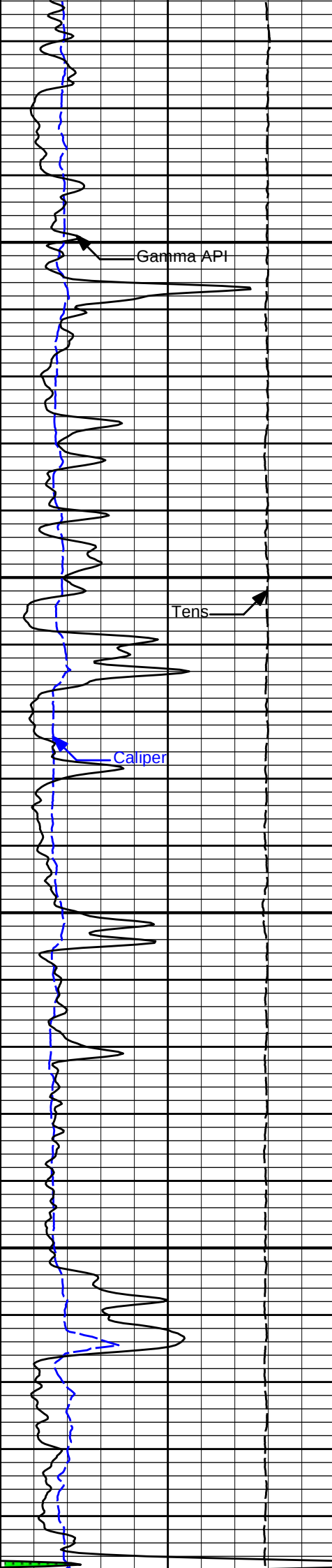




4000

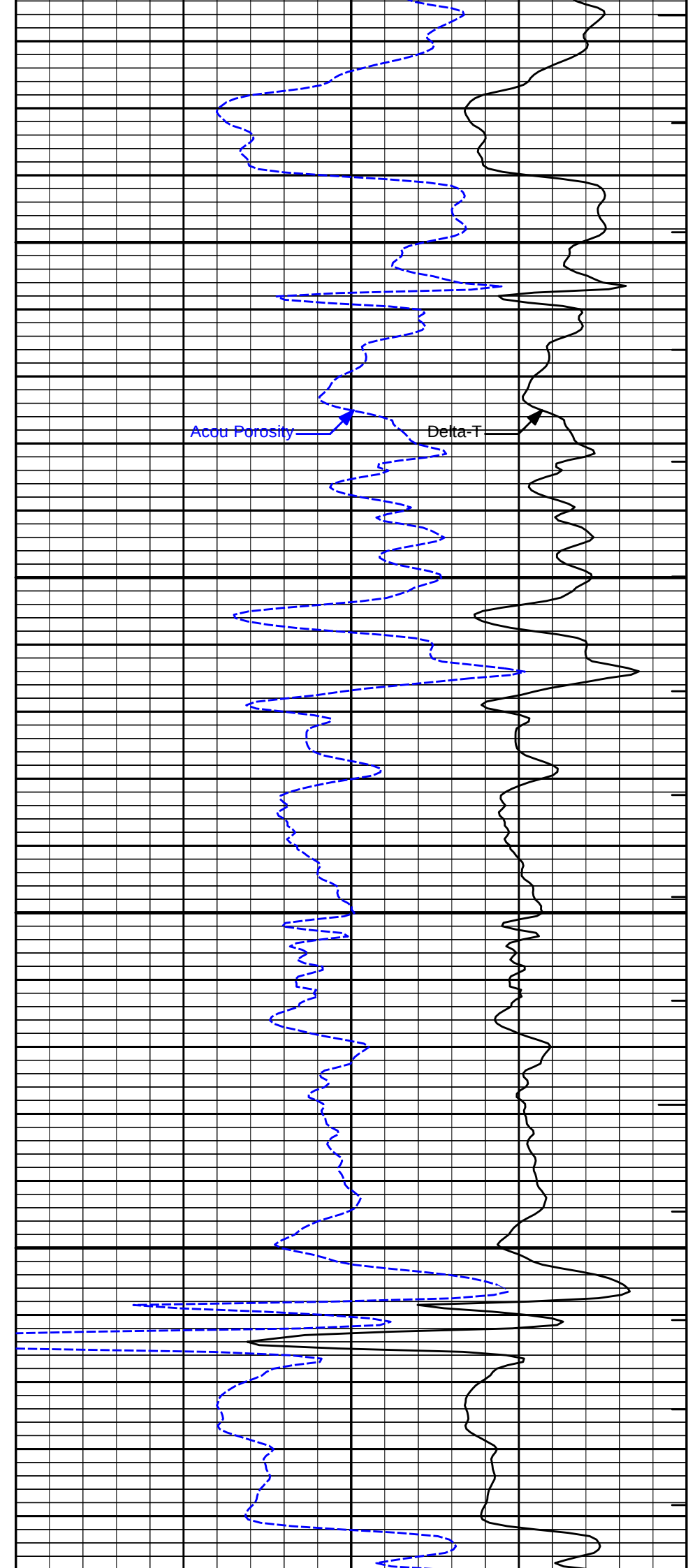
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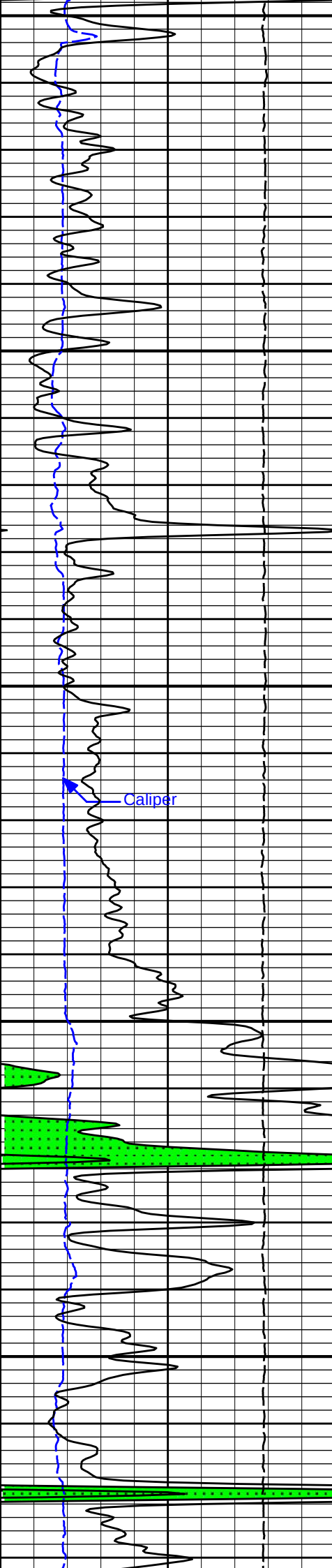




4200

4300

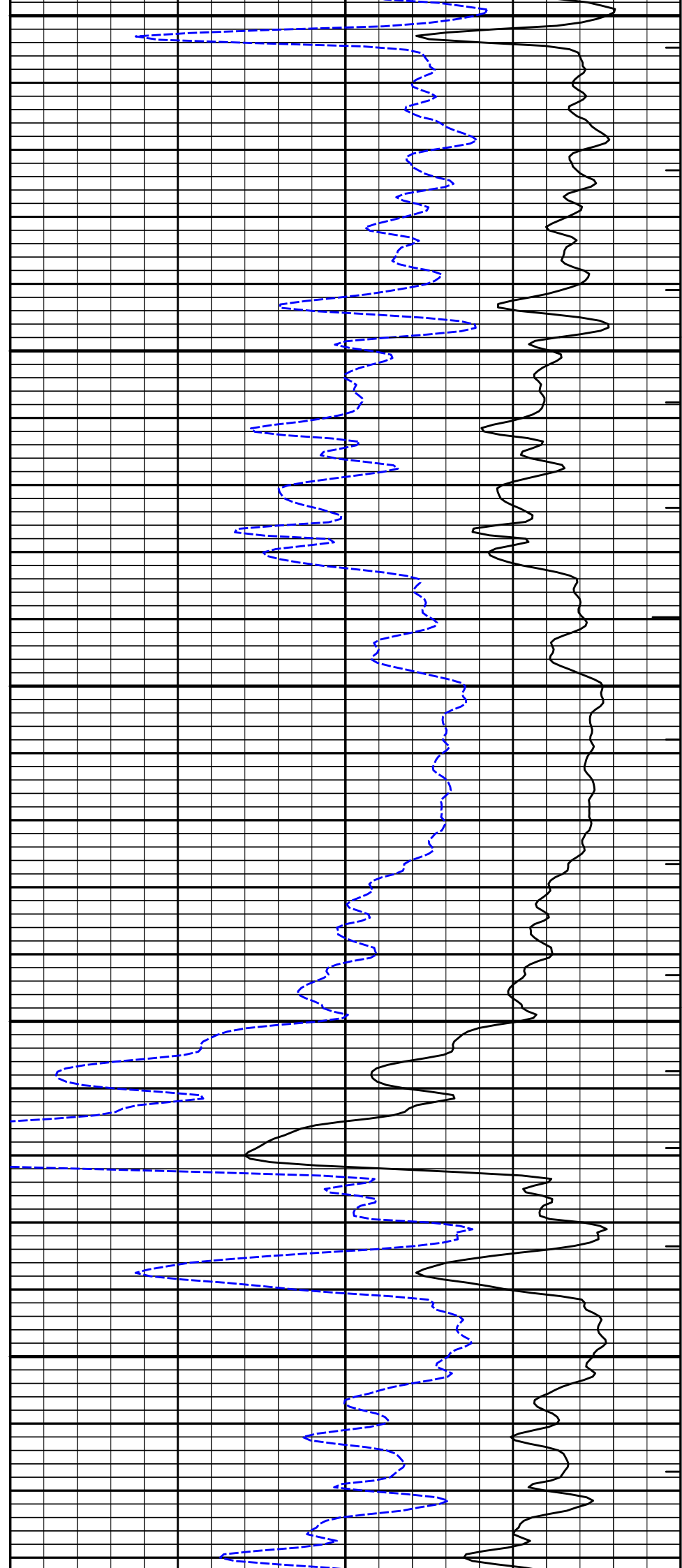


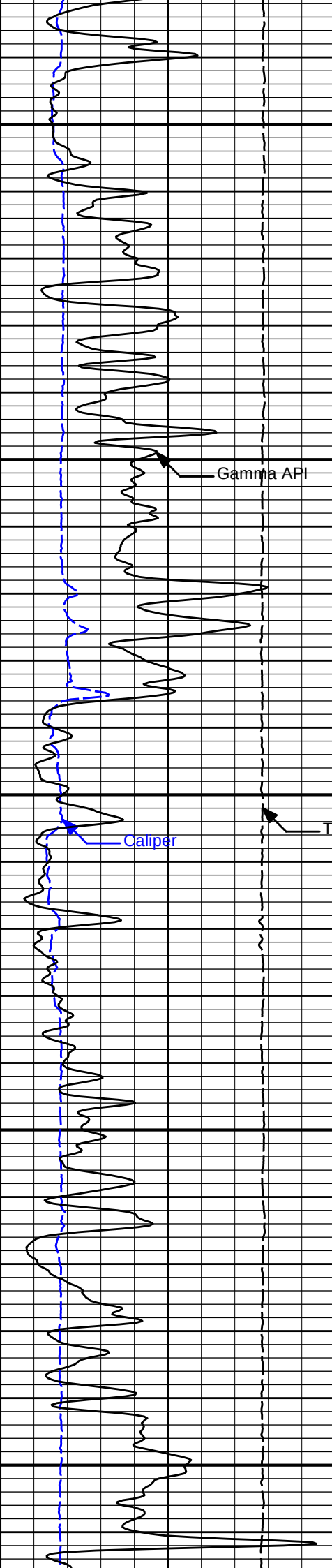


4400

4500

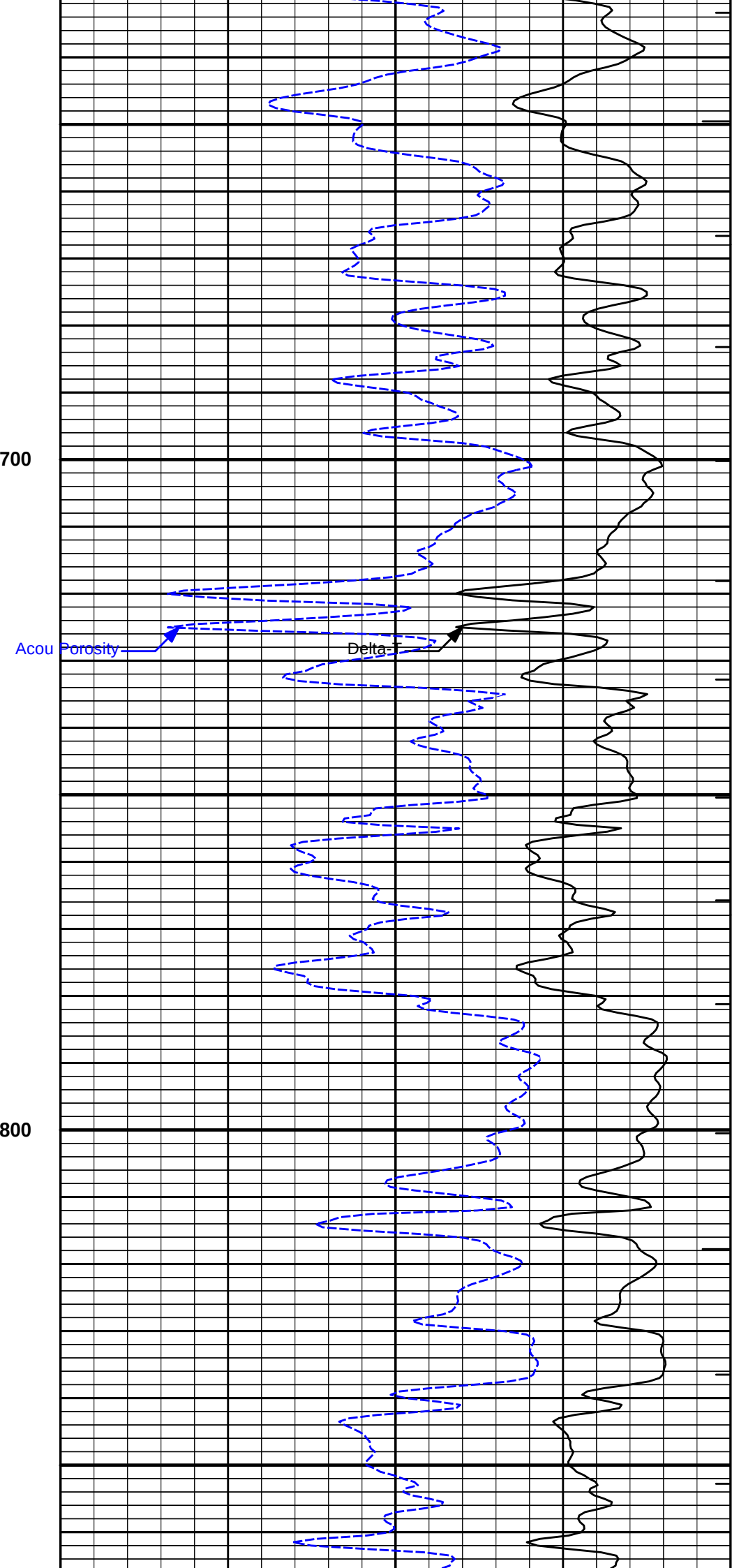
4600

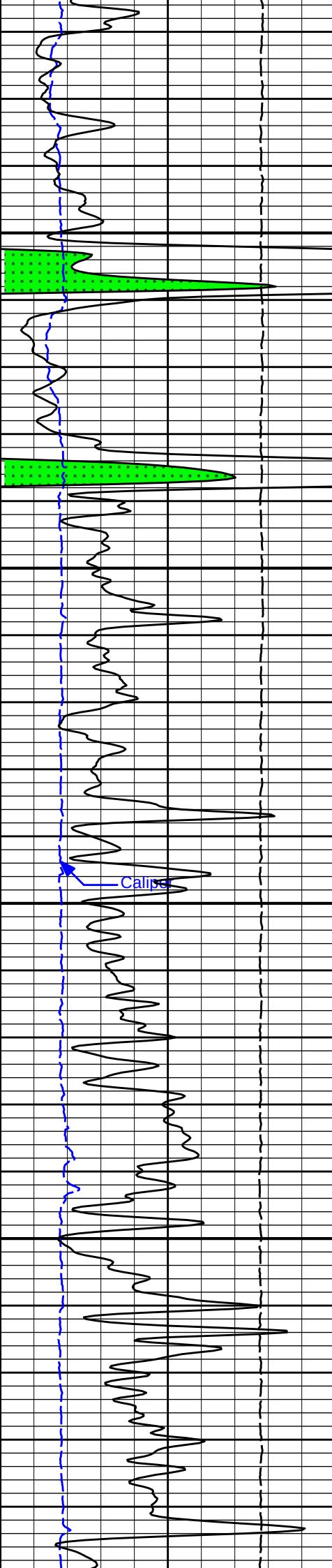




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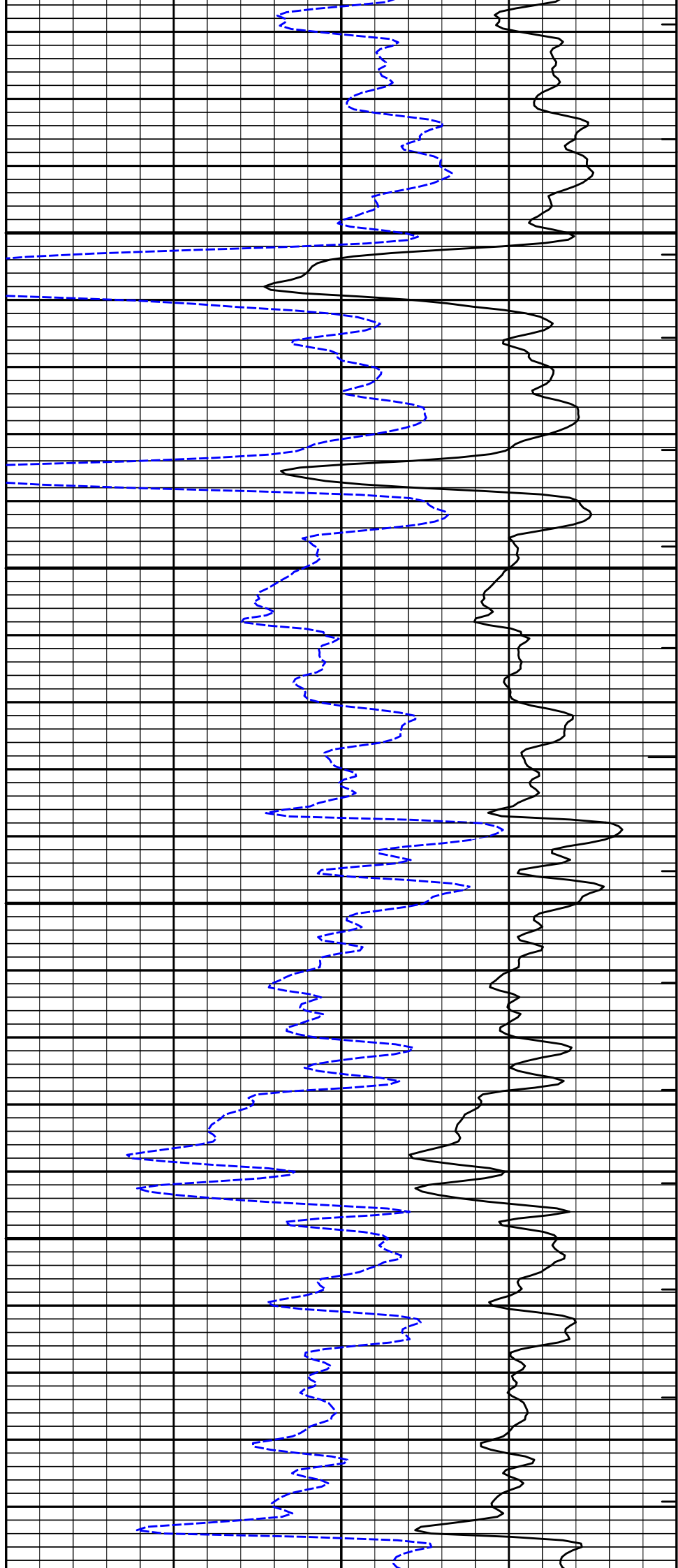
4800

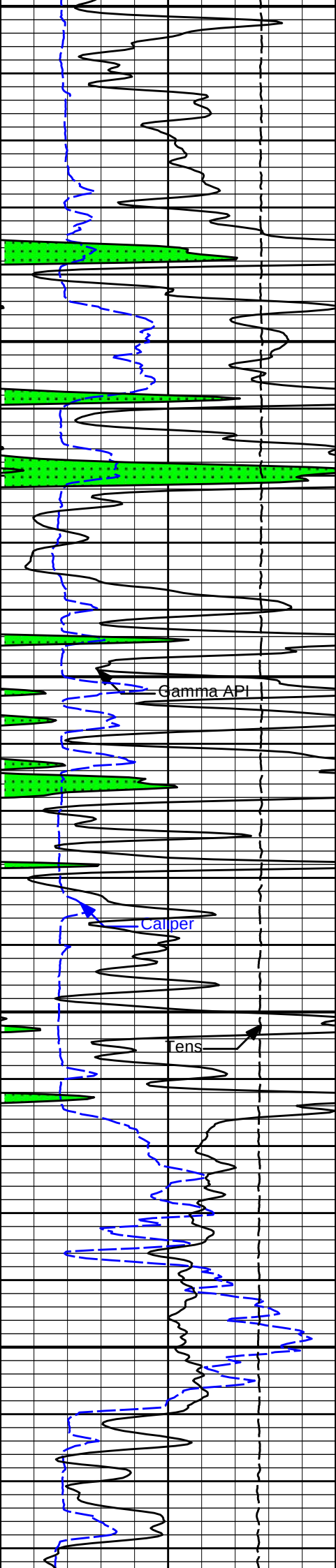




4900

5000

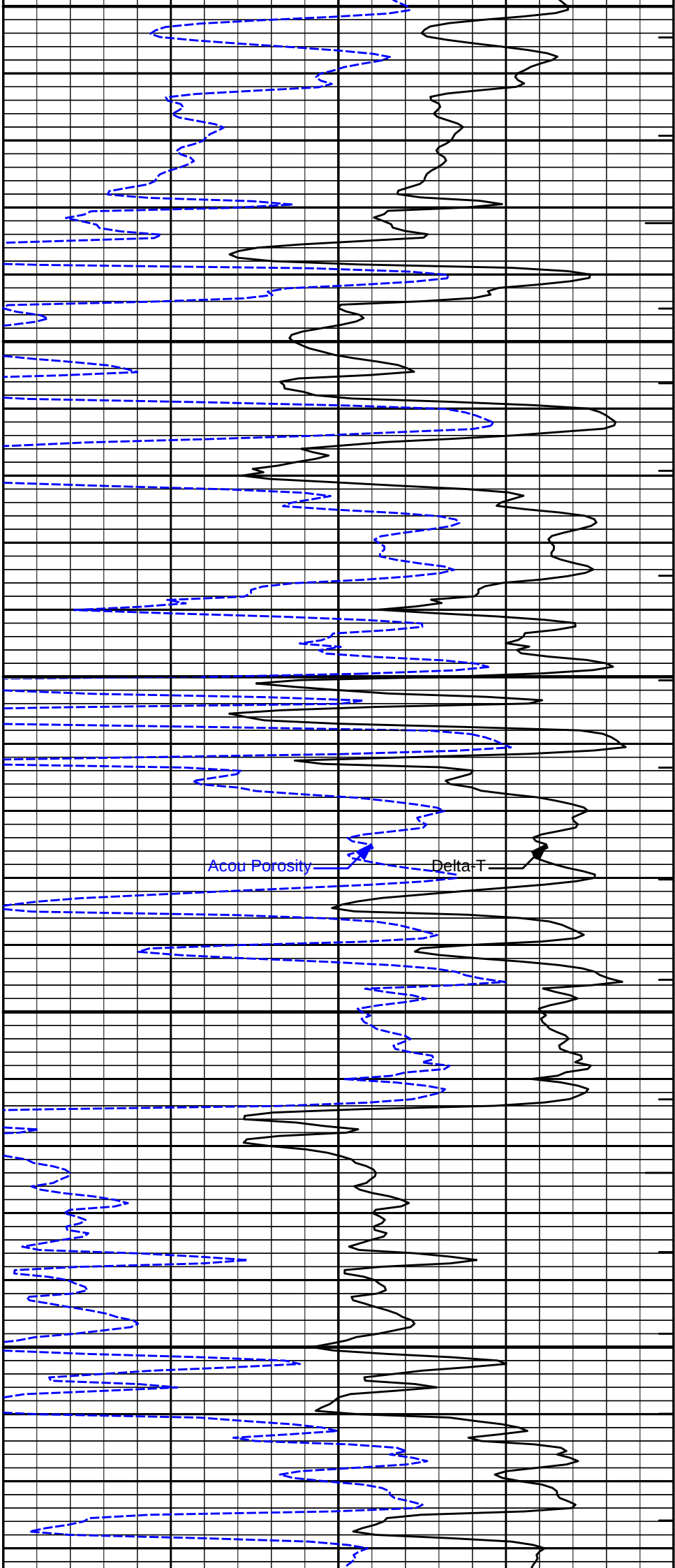


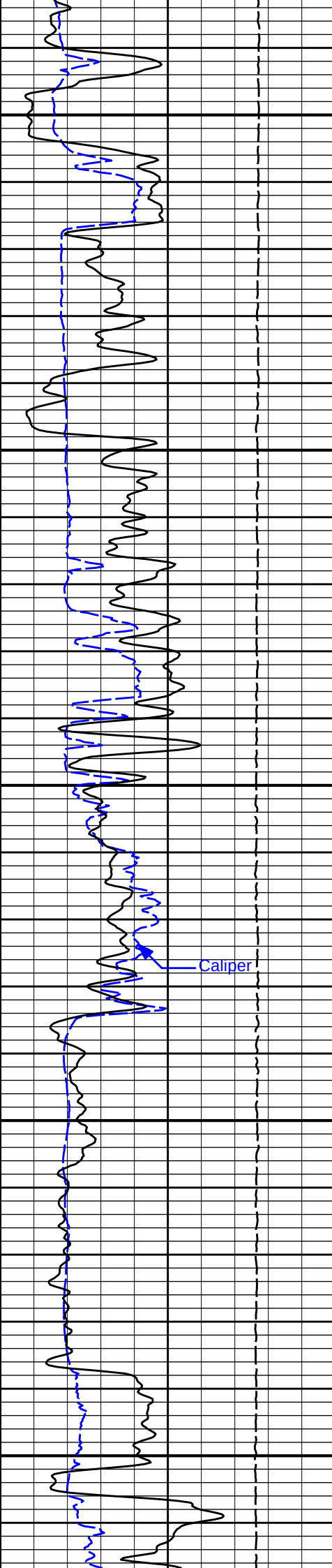


5100

5200

5300

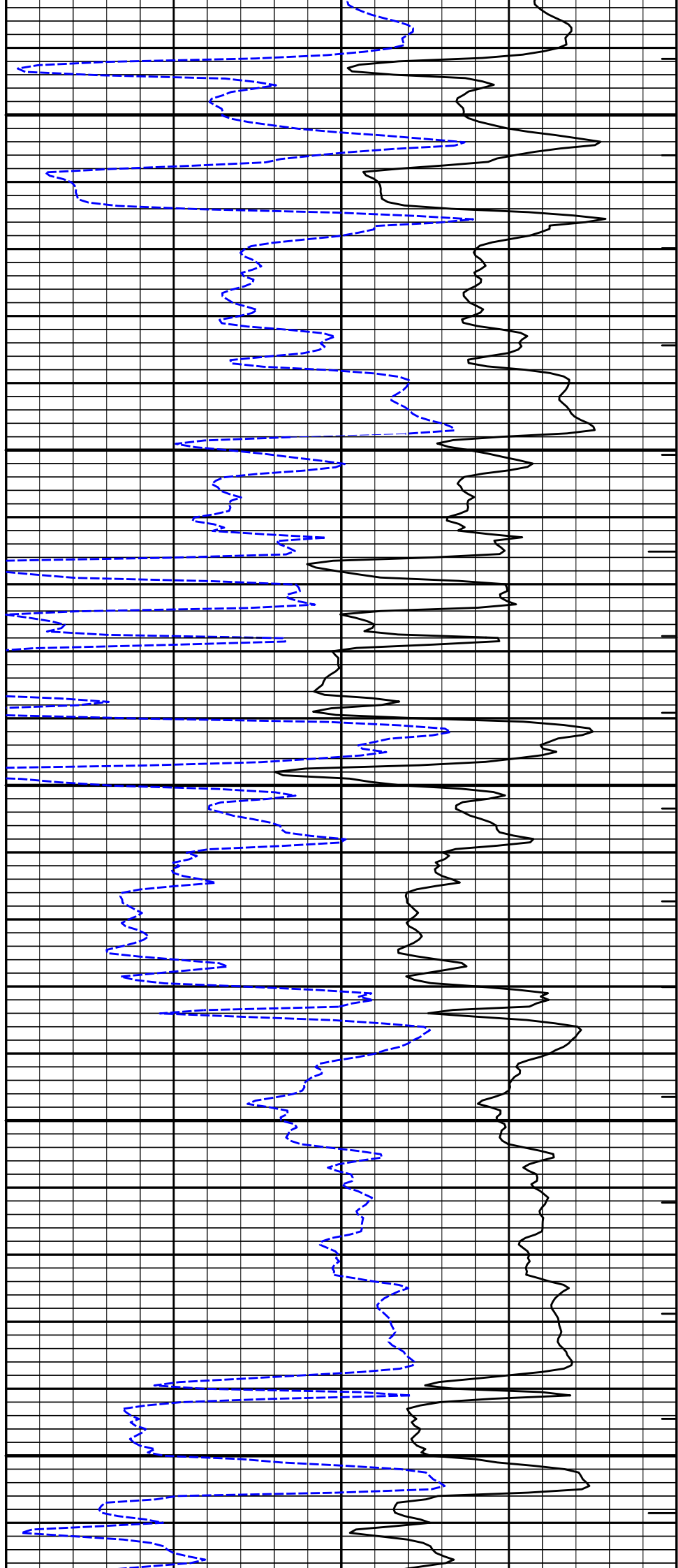


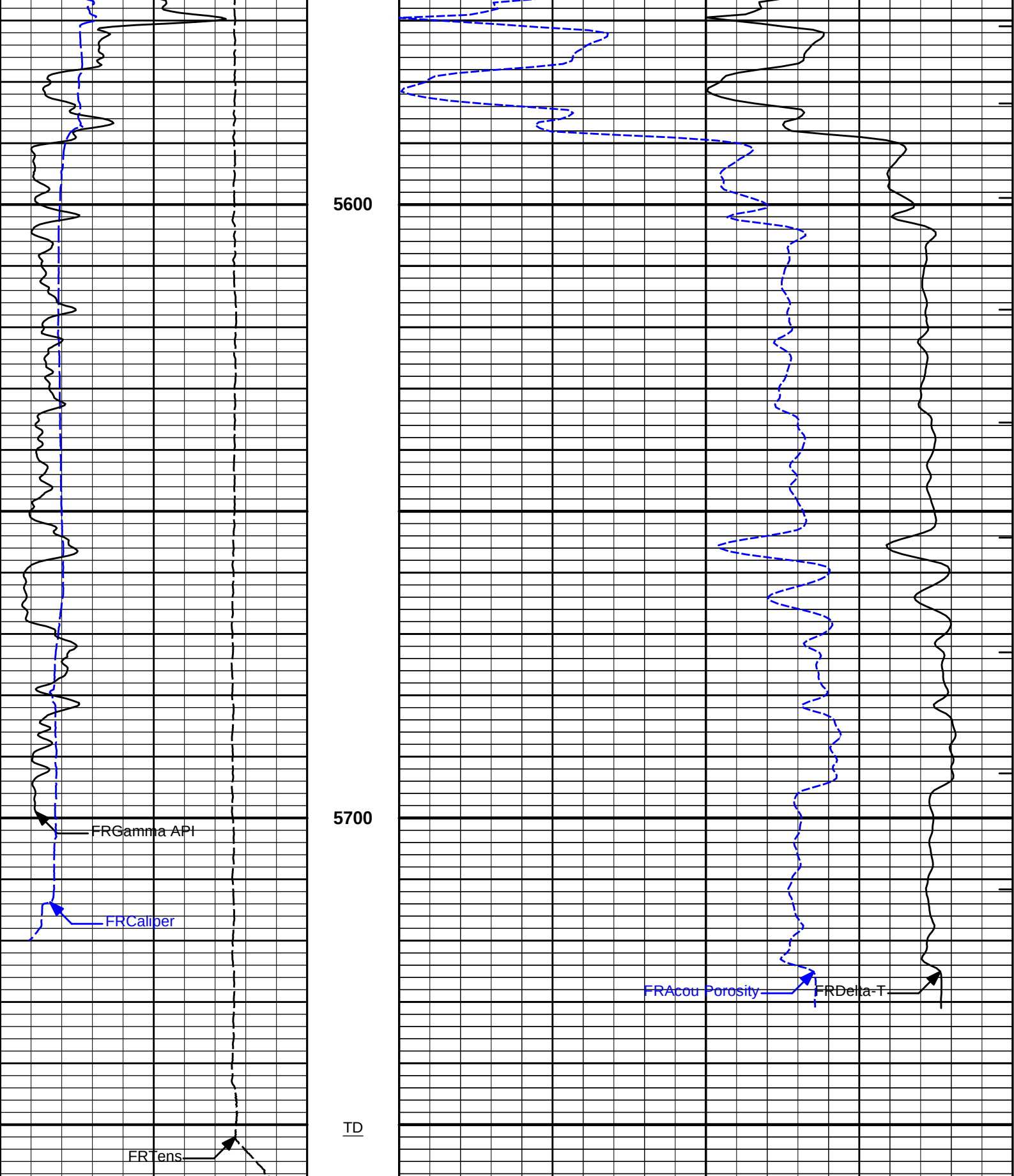


5400

5500

Caliper





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

HALLIBURTON

Plot Time: 31-Jul-19 20:46:35
Plot Range: 1700 ft to 5758.58 ft
Data: BEREXCO_BROWN\Well Based\DAQ-0001-003\
Plot File: WDACTIDCAT_5111

5 INCH MAIN LOG

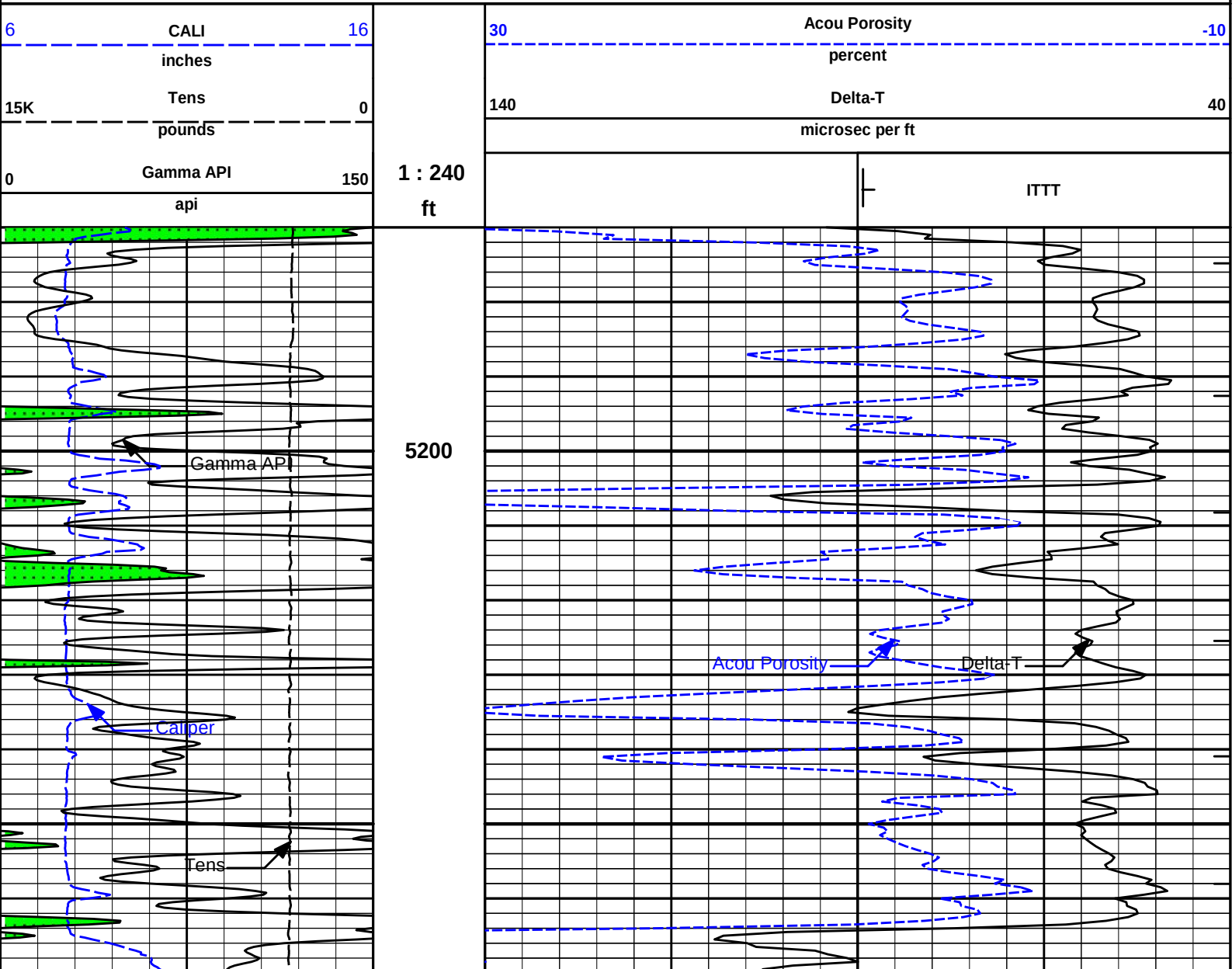
MAIN LOG SECTION

HALLIBURTON

Plot Time: 31-Jul-19 20:46:36
Plot Range: 5170 ft to 5758 ft
Data: BEREXCO_BROWN\Well Based\DAQ-0001-002\
Plot File: \\BSAT\BSAT_5inch

REPEAT SECTION

REPEAT SECTION

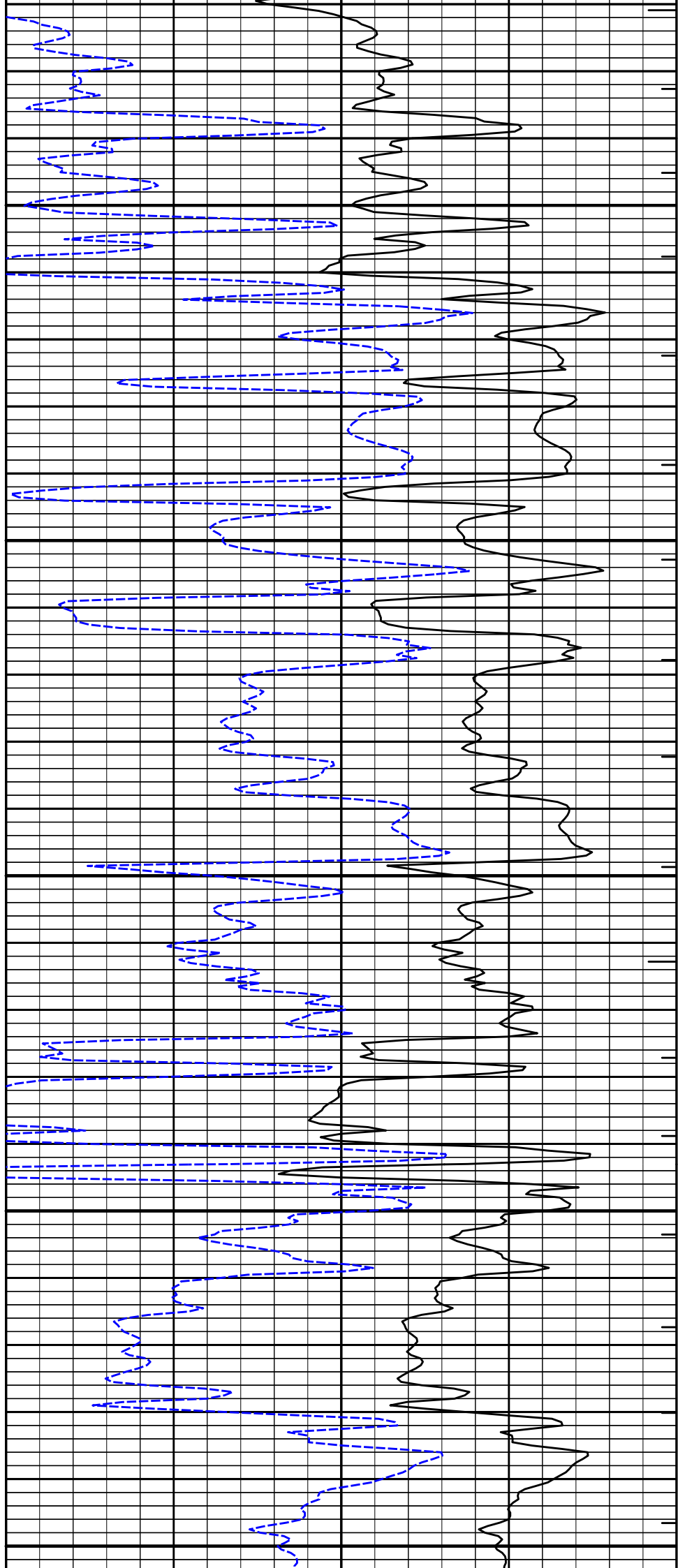




5300

5400

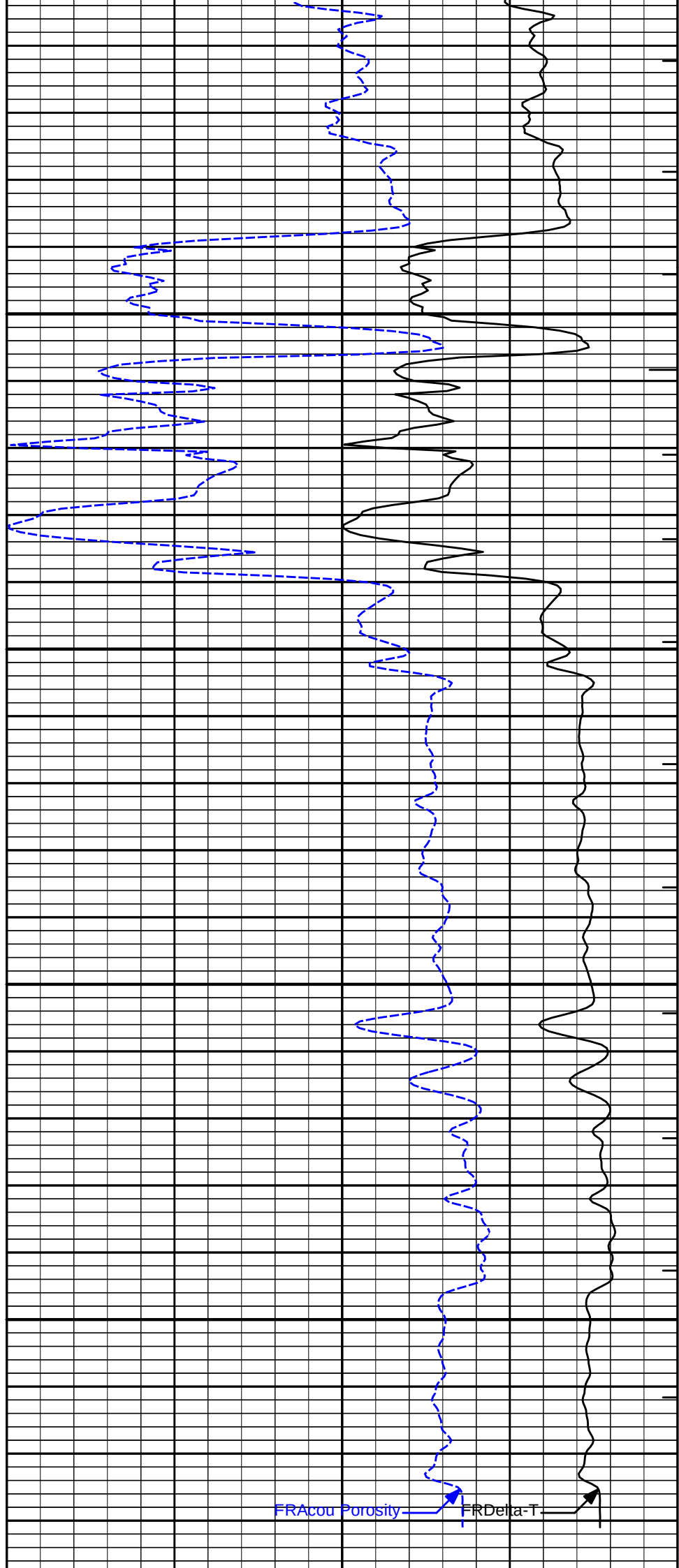
5500

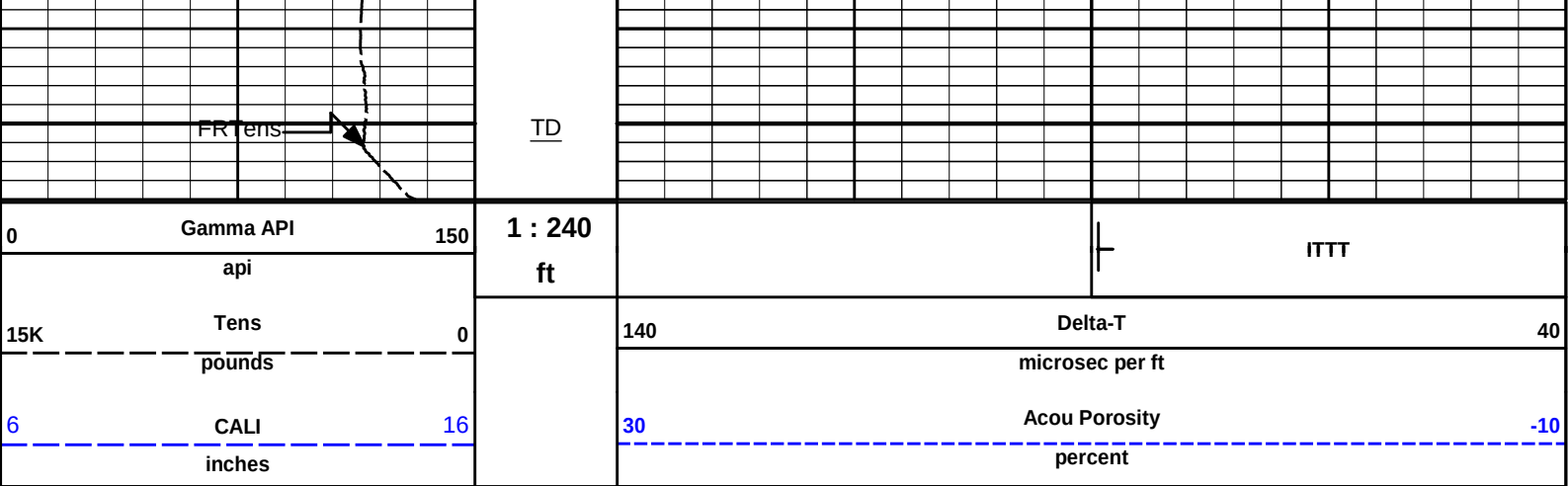




5600

5700





HALLIBURTON

Plot Time: 31-Jul-19 20:46:37
Plot Range: 5170 ft to 5758 ft
Data: BEREXCO_BROWN\Well Based\DAQ-0001-002\
Plot File: \\BSAT\BSAT_5inch

REPEAT SECTION

REPEAT SECTION

HALLIBURTON

CALIBRATION REPORT

SURFACE TENSION SHOP CALIBRATION

Tool Name:

Depth Panel - 00000032

Reference Calibration Date:

26-Jul-19 17:26:31

Engineer:

WOLTEMATH

Calibration Date:

28-Jul-19 00:13:55

Software Version:

WL INSITE R6.2.1 (Build 2)

Calibration Version:

1

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

DOWNHOLE TENSION SHOP CALIBRATION

Tool Name:

RWCH - 11830866

Reference Calibration Date:

26-Jul-19 17:29:49

Engineer:

WOLTEMATH

Calibration Date:

28-Jul-19 00:18:29

Software Version:

WL INSITE R6.2.1 (Build 2)

Calibration Version:

1

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

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:

GTET - 11021139

Reference Calibration Date:

14-May-19 09:57:38

Engineer:

WHITLOCK

Calibration Date:

29-Jun-19 15:22:45

Software Version:

WL INSITE R6.2.1 (Build 2)

Calibration Version:

1

Equivalent Calibrator API Reference:225.9 api

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

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

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

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

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

Shop	Field	Difference	Tolerance
225.9	224.5	1.4	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 11660709	Reference Calibration Date:	14-Feb-19 11:05:14
Engineer:	WHITLOCK	Calibration Date:	14-May-19 11:28:42
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: EL RENO HWT
Reference value assigned to Tank: 56.100
Snow Block S/N: 12156883
Calibration Tank Water Temperature: 74 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.01152	1.00941	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2364	0.2358	0.0007	+/- 0.0020
Calibrated Ratio:	10.5816	10.5596	0.022	+/- 0.050

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

PASS/FAIL SUMMARY	
Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:	DSNT - 11660709	Reference Calibration Date:	14-May-19 11:28:42
Engineer:	WHITLOCK	Calibration Date:	16-Jul-19 11:07:48
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0724	0.0631	-0.0093	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

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

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-3224.77	-3224.77	-7000.00 - -1000.00
Pad Gain	0.0003783	0.0003783	0.0002000 - 0.0006000
Arm Offset	-2193.01	-2193.01	-5000.00 - 3000.00
Arm Gain	0.0005237	0.0005237	0.000300 - 0.000700
Arm Power	-0.000005118	-0.000005118	-0.000010000 - 0.000010000

The ring diameter is computed from: $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$
Tool Diameter: 4.50 in

CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed
PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	SDLT - 12153526	Reference Calibration Date:	08-Jul-19 10:59:56
Engineer:	WOLTEMATH	Calibration Date:	08-Jul-19 11:01:50
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.25	0.00	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed

Pad Extension Check:				Passed					
BSAT FIELD CASING CHECK									
Tool Name: BSAT - 10939049				Calibration Date: 30-Mar-17 10:01:32					
Engineer: HARRIS									
Software Version: WL INSITE R5.0.5 (Build 8)				Calibration Version: 1					
	Pre-Log Check		Check Depth	Shop	Field	Difference	Tolerance	Units	
	Delta-T Compensated		147.01	57.00	56.56	0.4400	1.00	uspf	
ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION									
Tool Name: ACRt Sonde - 11038385				Reference Calibration Date: 30-May-19 10:30:10					
Engineer: WHITLOCK				Calibration Date: 30-May-19 16:04:26					
Software Version: WL INSITE R6.2.1 (Build 2)				Calibration Version: 1					
Host Tool Name: ACRt Instrument - 11055059									
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0436	1.05	0.95	1.0233	1.05	0.95	1.0105	1.05
A2 (50")	0.95	1.0425	1.05	0.95	1.0248	1.05	0.95	1.0169	1.05
A3 (29")	0.95	1.0370	1.05	0.95	1.0178	1.05	0.95	1.0085	1.05
A4 (17")	0.95	1.0325	1.05	0.95	1.0108	1.05	0.95	1.0026	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0032	1.05	0.95	0.9929	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9937	1.05	0.95	0.9859	1.05
SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	1.105			-4.185			-6.175		
A2 (50")	-2.031			-4.364			-5.644		
A3 (29")	-15.630			-4.663			-3.991		
A4 (17")	-113.327			-34.718			-27.228		
A5 (10")	N/A			-86.739			-42.245		
A6 (6")	N/A			334.526			172.566		
TRANSMITTER CURRENT GAIN						R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)	
12K	0.6	0.93	1.3		Mud Cell	0.95	1.00	1.05	
36K	1.0	1.39	2.0						
72K	1.0	1.66	2.0						
PASS/FAIL SUMMARY									
GAIN RANGE CHK						PASS			
SONDE OFFSET CHK						PASS			
TOOL OK TO LOG									
QUALITY CHECK SHOP CALIBRATION									
Tool Name: ACRt Sonde - 11038385				Reference Calibration Date: 27-Mar-19 10:28:27					
Engineer: WHITLOCK				Calibration Date: 30-May-19 10:32:26					
Software Version: WL INSITE R6.2.1 (Build 2)				Calibration Version: 1					
Host Tool Name: ACRt Instrument - 11055059									
STANDARD DEVIATIONS									
	R12KHz			R36KHz			R72KHz		

Tool Name:	Microlog Pad - 12153526	Reference Calibration Date:	11-May-19 13:50:58
Engineer:	WHITLOCK	Calibration Date:	29-Jul-19 12:21:32
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1
Host Tool Name:	DSNT - 11660709		

	CALIBRATION COEFFICIENT SUMMARY						
	Measurement	Micro Log Normal		Micro Log Lateral			Units
		Measured	Calibrated	Measured	Calibrated		
	Tool Zero	-0.08	-0.15	-0.01	-0.01	ohmm	
	Calibration Point #1	0.06	0.00	0.00	0.00	ohmm	
	Calibration Point #2	20.11	20.00	20.07	20.00	ohmm	
	Internal Reference	19.97	19.87	20.05	19.98	ohmm	
	Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units	
	Tool Zero		-0.04		0.22	V	
	Calibration Point #1		38.83		2.19	V	
	Calibration Point #2		5332.43		6966.93	V	
	Internal Reference		5297.41		6959.23	V	

MICRO LOG FIELD CHECK			
Tool Name:	Microlog Pad - 12153526	Reference Calibration Date:	29-Jul-19 12:21:32
Engineer:	WHITLOCK	Calibration Date:	29-Jul-19 12:22:18
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

	Measurement	Micro Log Normal		Micro Log Lateral		
		Shop	Field	Shop	Field	Units
	Tool Zero	-0.15	-0.15	-0.01	-0.01	ohmm
	Internal Reference	19.87	19.88	19.98	19.99	ohmm
Summary						
	Signal	Shop	Field	Difference	Tolerance	
	Microlog Normal	19.87	19.88	-0.01	+/- 0.80	
	Microlog Lateral	19.98	19.99	-0.01	+/- 0.80	

SPECTRAL DENSITY SHOP CALIBRATION			
Tool Name:	SDLT Pad - 11284007	Reference Calibration Date:	14-May-19 10:35:42
Engineer:	WHITLOCK	Calibration Date:	14-May-19 11:01:04
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Logging Source S/N: 5475GW

Aluminum Block S/N: EL RENO AL BLK

Magnesium Block S/N: EL RENO MG BLK

Density: 2.581g/cc

Density: 1.687g/cc

Pe: 3.170

Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0672	1.0696	0.90 - 1.10
Near Dens Gain	1.0399	1.0253	0.90 - 1.10
Near Peak Gain	1.0698	1.0607	0.90 - 1.10
Near Lith Gain	1.0707	1.0600	0.90 - 1.10
Far Bar Gain	1.0119	1.0132	0.90 - 1.10
Far Dens Gain	1.0014	1.0004	0.90 - 1.10
Far Peak Gain	0.9998	0.9988	0.90 - 1.10
Far Lith Gain	0.9842	0.9832	0.90 - 1.10
Near Bar Offset	-0.4646	-0.4868	NONE
Near Dens Offset	-0.1638	-0.0376	NONE
Near Peak Offset	-0.4118	-0.3374	NONE
Near Lith Offset	-0.4691	-0.3841	NONE

Far Bar Offset	-0.0627	-0.0742	NONE
Far Dens Offset	0.0569	0.0650	NONE
Far Peak Offset	0.0511	0.0583	NONE
Far Lith Offset	0.1514	0.1583	NONE
Near Bar Background	993.88	993.91	700 - 1450
Near Dens Background	329.23	327.28	230 - 480
Near Peak Background	147.25	146.97	100 - 210
Near Lith Background	178.05	176.81	125 - 260
Far Bar Background	582.67	585.21	450 - 900
Far Dens Background	227.13	227.13	175 - 345
Far Peak Background	91.02	90.90	70 - 140
Far Lith Background	94.76	94.27	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.688	1.687	-0.001	+/- 0.015
Pe	2.523	2.556	0.033	+/- 0.150
ALUMINUM				
Density (g/cc)	2.580	2.581	0.001	+/- 0.01500
Pe	3.116	3.129	0.013	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0004	+/- 0.0110	-0.0020	+/- 0.0140
Magnesium Block	0.0005	+/- 0.0110	0.0007	+/- 0.0140
Aluminum Block	0.0003	+/- 0.0110	0.0001	+/- 0.0140
Resolution	8.86	6.00 - 11.50	9.16	6.00 - 11.50
Internal Verifier(B+D+P+L)	1645	1200 - 2700	998	800 - 1700

PASS/FAIL SUMMARY	
Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK

Tool Name:	SDLT Pad - 11284007	Reference Calibration Date:	14-May-19 11:01:04
Engineer:	WHITLOCK	Calibration Date:	29-Jul-19 12:19:53
Software Version:	WL INSITE R6.2.1 (Build 2)	Calibration Version:	1

Pad Temperature: 89.3 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1644.977	1647.359	2.382	16.295
Far (B+D+P+L) cps	997.505	992.725	-4.780	16.911
Near Resolution	8.86	8.85	-0.010	0.50
Far Resolution	9.16	9.12	-0.040	1.00

PASS/FAIL SUMMARY						
Bkg Quality Check:				Passed		
Bkg Resolution Check:				Passed		
Bkg Verification Check:				Passed		
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
Depth Panel-00000032						
Tension Zero	0.00	-----	-----	0.00	-----	lbs
Tension Cal	7830.00	-----	-----	0.00	-----	lbs
RWCH-11830866						
DH Tension Zero	0.00	-----	-----	0.00	-----	lbs
DH Tension Cal	1319.10	-----	-----	0.00	-----	lbs
GTET-11021139						
Gamma Ray Calibrator	225.9	224.5	-----	1.4	+/- 9.00	api
DSNT-11660709						
Snow-Block Porosity	0.0724	0.0631	-----	0.0093	+/- 0.0150	decP
SDLT-12153526						
Pad Extension	3.75	3.76	-----	-0.01	+/-0.10	in
Ring Diameter	8.25	8.25	-----	0.00	+/-0.15	in
ACRt Sonde-11038385						
Mud Cell	1.00	-----	-----	0	-----	ohm-m
Microlog Pad-12153526						
MicroLog Normal	19.87	19.88	-----	-0.01	+/-0.80	ohmm
MicroLog Lateral	19.98	19.99	-----	-0.01	+/-0.80	ohmm
SDLT Pad-11284007						
Near(B+D+P+L)	1644.977	1647.359	-----	-2.382	+/-16.295	cps
Far(B+D+P+L)	997.505	992.725	-----	4.780	+/-16.911	cps
Data: BEREXCO_BROWN\0001 GTET-DSN-SDL-BSAT-ACRT\IDLE				Date: 31-Jul-19 16:09:25		

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	2.000	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	CSTR	Compressive Strength	1000.00	psia
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	5750.00	ft
	SHARED	BHT	Bottom Hole Temperature	142.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	

	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	CBM Temperature Master Tool	GTET	
	SHARED	MSAL	Water-base mud filtrate salinity	0.00	ppm
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
	Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
	GTET	BHSM	Borehole Size Source Tool	SDLT	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Limestone	
	DSNT	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

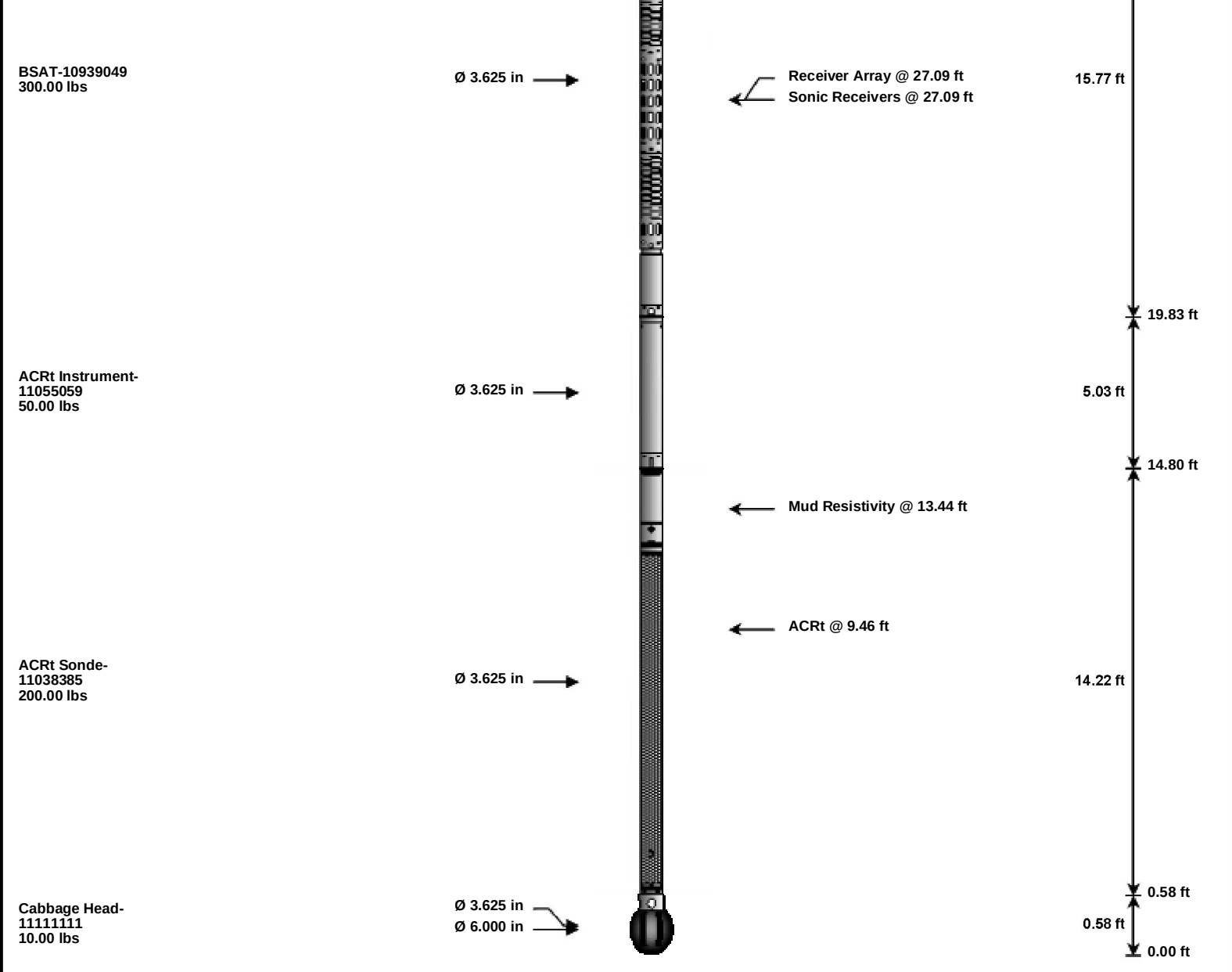
BOTTOM_____

Data: BEREXCO_BROWN\0001 GTET-DSN-SDL-BSAT-ACRT\IDLEDate: 31-Jul-19 16:12:16

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						74.61 ft
RWCH-11830866 135.00 lbs	Weak Point Solid- 11111111 0.01 lbs	Ø 2.310 in Ø 3.625 in Ø 0.010 in*		Fishing Neck @ 73.73 ft Load Cell @ 70.93 ft BH Temperature @ 70.36 ft	6.25 ft	68.36 ft
SP Sub-10904995 60.00 lbs		Ø 3.625 in		SP @ 66.59 ft Z-Accelerometer @ 64.17 ft	3.74 ft	64.63 ft
GTET-11021139 165.00 lbs		Ø 3.625 in		GammaRay @ 58.56 ft	8.52 ft	56.11 ft
DSNT-11660709 174.00 lbs	DSN Decentralizer- 11660709 6.60 lbs	Ø 5.000 in* Ø 3.625 in		DSN Far @ 49.17 ft DSN Near @ 48.42 ft	9.69 ft	46.42 ft
SDLT-12153526 360.00 lbs	SDLT Pad-11284007 65.00 lbs Microlog Pad-12153526 8.00 lbs RAM-Cs137-54750000 1.00 lbs	Ø 4.500 in Ø 4.500 in* Ø 4.750 in* Ø 0.800 in*		Microlog @ 38.61 ft SDL Caliper @ 38.42 ft SDL @ 38.41 ft	10.81 ft	35.61 ft



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		11830866	135.00	6.25	68.36	300.00
WPSS	Weak Point Solid		11111111	0.01	0.01	*	68.36
SP	SP Sub		10904995	60.00	3.74	64.63	300.00
GTET	Gamma Telemetry Tool		11021139	165.00	8.52	56.11	60.00
DSNT	Dual Spaced Neutron		11660709	174.00	9.69	46.42	60.00
DCNT	DSN Decentralizer		11660709	6.60	5.13	*	49.75
SDLT	Spectral Density Tool		12153526	360.00	10.81	35.61	60.00
SDLP	Density Insite Pad		11284007	65.00	2.55	*	37.82
Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137		54750000	1.00	0.80	*	38.05
MICP	Microlog Pad		12153526	8.00	1.00	*	38.11
BSAT	Borehole Sonic Array Tool		10939049	300.00	15.77	19.83	60.00
ACRt	Array Compensated True Resistivity Instrument Section		11055059	50.00	5.03	14.80	120.00
ACRt	Array Compensated True Resistivity Sonde Section		11038385	200.00	14.22	0.58	120.00
CBHD	Cabbage Head		11111111	10.00	0.58	0.00	300.00
Total				1,534.61	74.61		
* Not included in Total Length and Length Accumulation.							
Data: BEREXCO_BROWN10001 GTET-DSN-SDL-BSAT-ACRTIDLE						Date: 31-Jul-19 16:11:14	