

HALLIBURTON

BOREHOLE COMPENSATED
SONIC ARRAY
LOG

COMPANY		HARTMAN OIL CO., INC.	
WELL		GANO UNIT #1-36	
FIELD/BLOCK		WILDCAT	
COUNTY		GRAHAM	
STATE		KANSAS	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date	01-Oct-13		
Run No.	ONE		
Depth - Driller	4100.00 ft		
Depth - Logger	4097.0 ft		
Bottom - Logged Interval	4053		
Top - Logged Interval	296		
Casing - Driller	8.625 in @ 295.0 ft		
Casing - Logger	296.0 ft		
Bit Size	7.875 in		
Type Fluid in Hole	WATER BASED MUD		
Density	9.2 ppg	65.00 s/qt	
PH	11.00 pH	5.8 cp/m	
Source of Sample	MUD PIT		
Rm @ Meas. Temperature	0.900 ohmm @ 85.00 degF	@	@
Rmf @ Meas. Temperature	0.77 ohmm @ 85.00 degF	@	@
Rmc @ Meas. Temperature	1.040 ohmm @ 85.00 degF	@	@
Source Rmf	CALCULATED	CALCULATED	
Rm @ BHT	0.63 ohmm @ 124.0 degF	@	@
Time Since Circulation	3.0 hr		
Time on Bottom	01-Oct-13 03:32		
Max. Rec. Temperature	124.0 degF @ 4097.0 ft	@	@
Equipment	11230668	LIBERAL	
Recorded By	S. INGERSOLL		
Witnessed By	K. NOAH		

COMPANY	HARTMAN OIL CO., INC.
WELL	GANO UNIT #1-36
FIELD/BLOCK	WILDCAT
COUNTY	GRAHAM
STATE	KANSAS

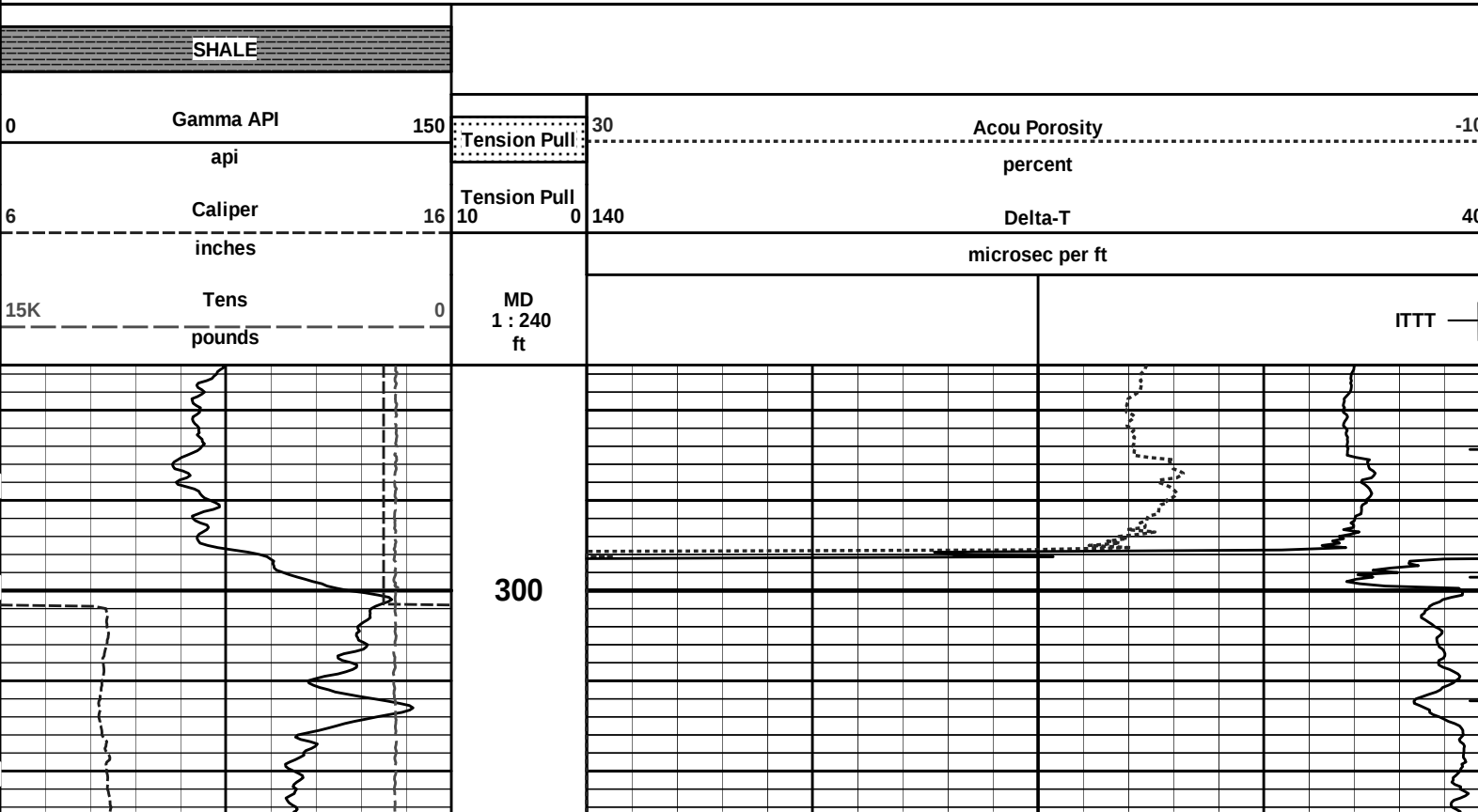
API No.	15-065-23953
Location	(SHL) 1150' FSL & 2400' FWL
Sect.	36
Twp.	9S
Rge.	24W
Elev.	2458.0 ft
D.F.	2469.0 ft
G.L.	2458.0 ft

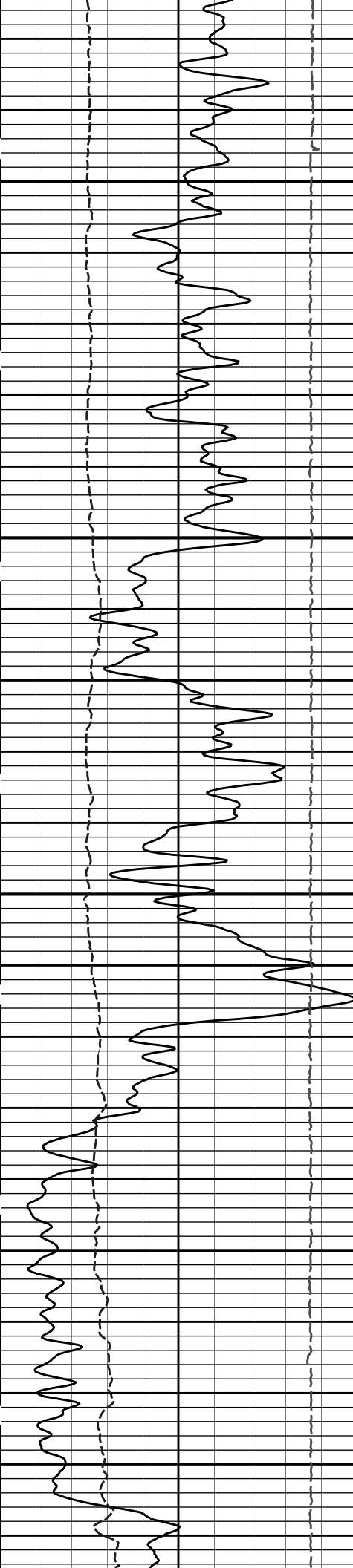
Other Services:
DSN / SDL
MICROLOG
BSAT
ACRT

Fold here

Service Ticket No.: 900787243				API Serial No.: 15-065-23953				PGM Version: WL INSITE R3.8.4 (Build 5)			
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES					
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole		
Depth-Driller											
Type Fluid in Hole											
Density	Viscosity										
Ph	Fluid Loss										
Source of Sample						RESISTIVITY EQUIPMENT DATA					
Rm @ Meas. Temp		@		@		Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other	
Rmf @ Meas. Temp.		@		@		ONE	ACRT	N/A	CENT		
Rmc @ Meas. Temp.		@		@			19029775				
Source Rmf	Rmc										
Rm @ BHT		@		@							
Rmf @ BHT		@		@							
Rmc @ BHT		@		@							
EQUIPMENT DATA											
GAMMA			ACOUSTIC			DENSITY			NEUTRON		
Run No.	ONE		Run No.	ONE		Run No.	ONE		Run No.	ONE	
Serial No.	10748374		Serial No.	10747684		Serial No.	10714945		Serial No.	10755066	
Model No.	GTET		Model No.	BSAT		Model No.	SDLT		Model No.	DSNT	
Diameter	3.625"		No. of Cent.	2		Diameter	5.3"		Diameter	3.625"	
Detector Model No.	T-102		Spacing	.5'		Log Type	GAM-GAM		Log Type	NEU-NEU	
Type	SCINT					Source Type	CS-137		Source Type	AM-241BE	
Length	8"		LSA [Y/N]			Serial No.	5073GW		Serial No.	DSN-436	
Distance to Source	N/A		FWDA [Y/N]			Strength	1.5 CI		Strength	15 CI	
LOGGING DATA											

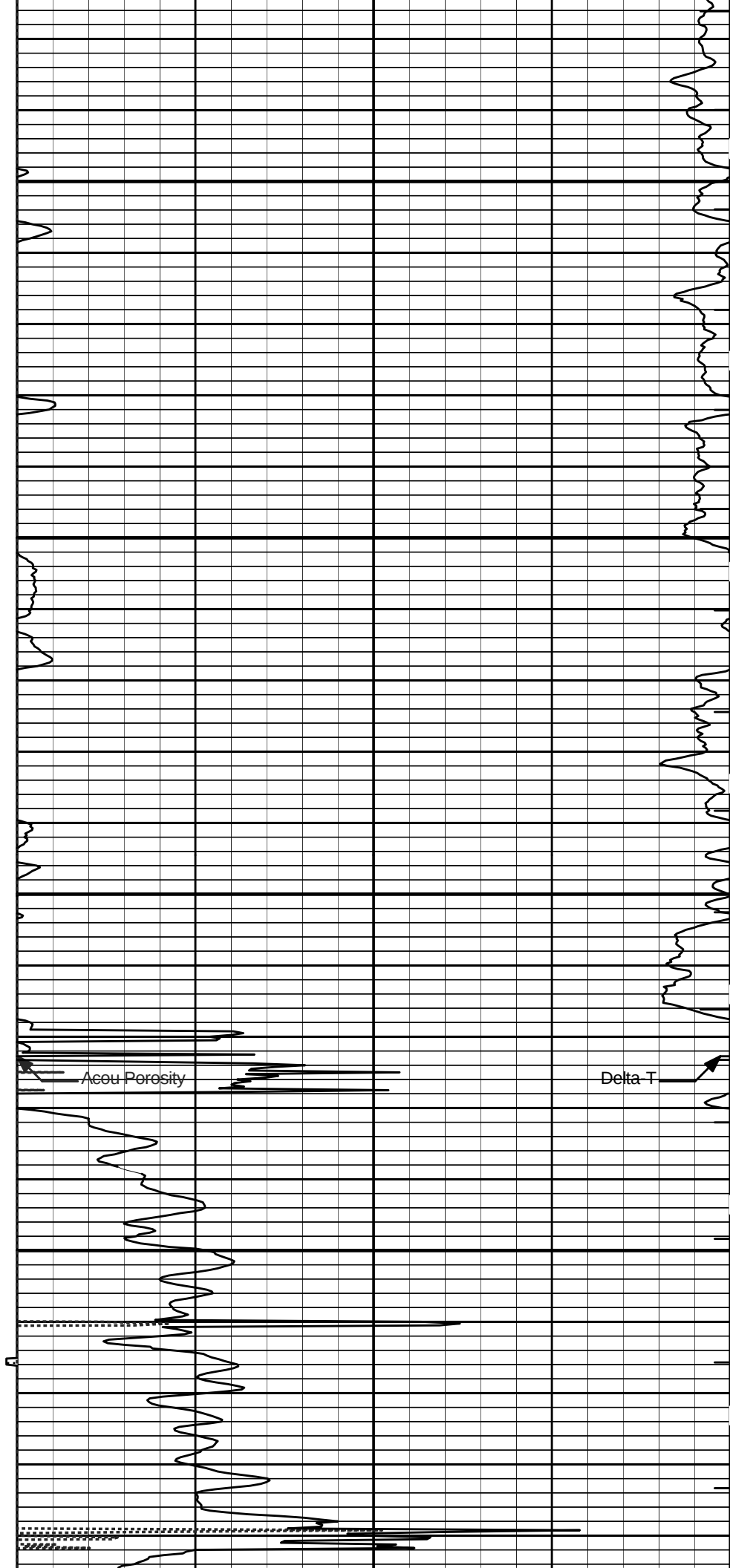
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	4097	296	REC	0	150	30	-10	47.6 us/ft	30	-10	2.71 gm/cc	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.														
CHLORIDES REPORTED AT 3000 ppm.														

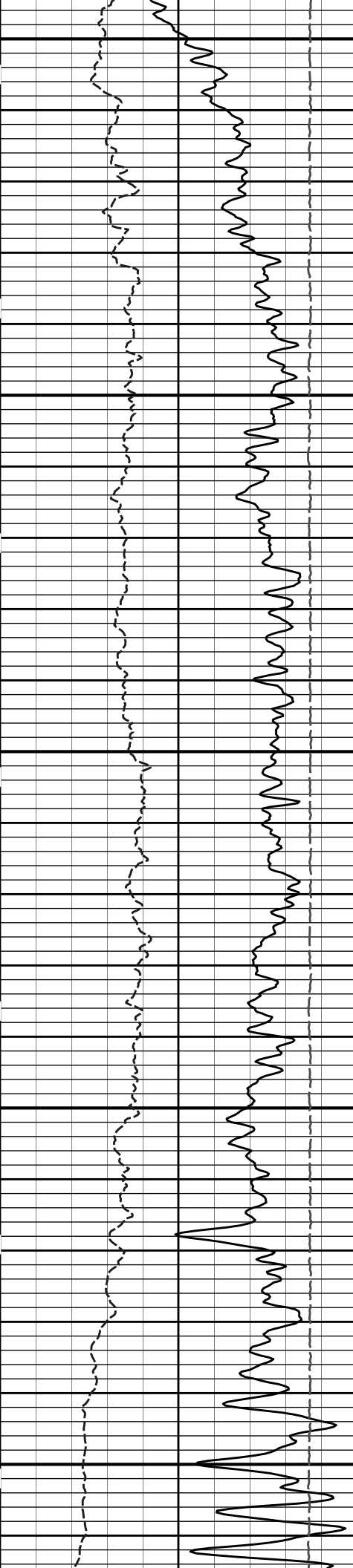




400

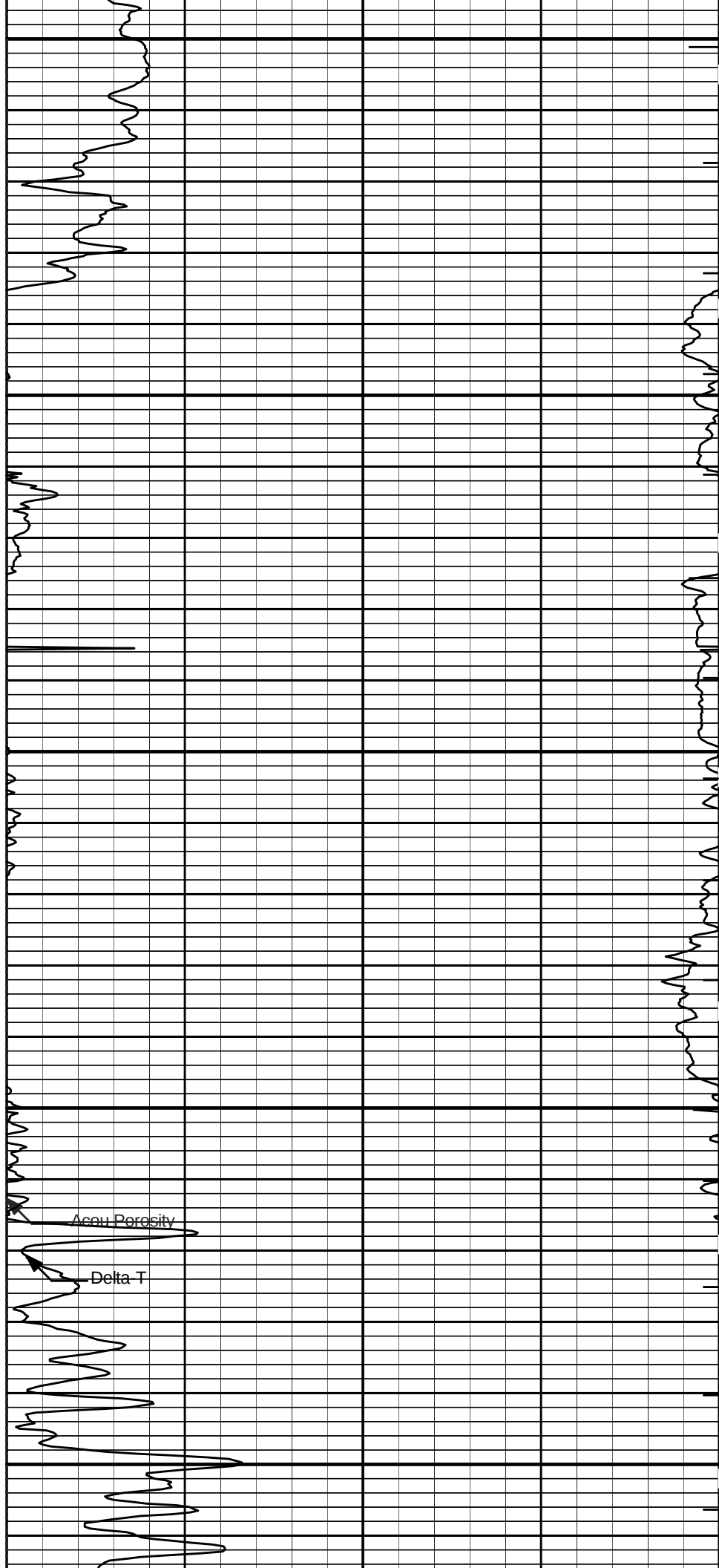
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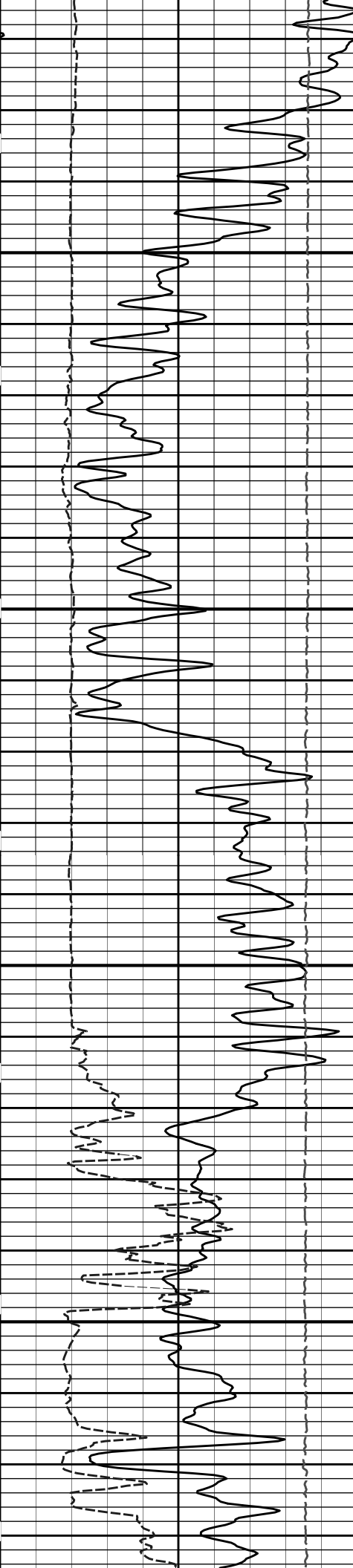
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700



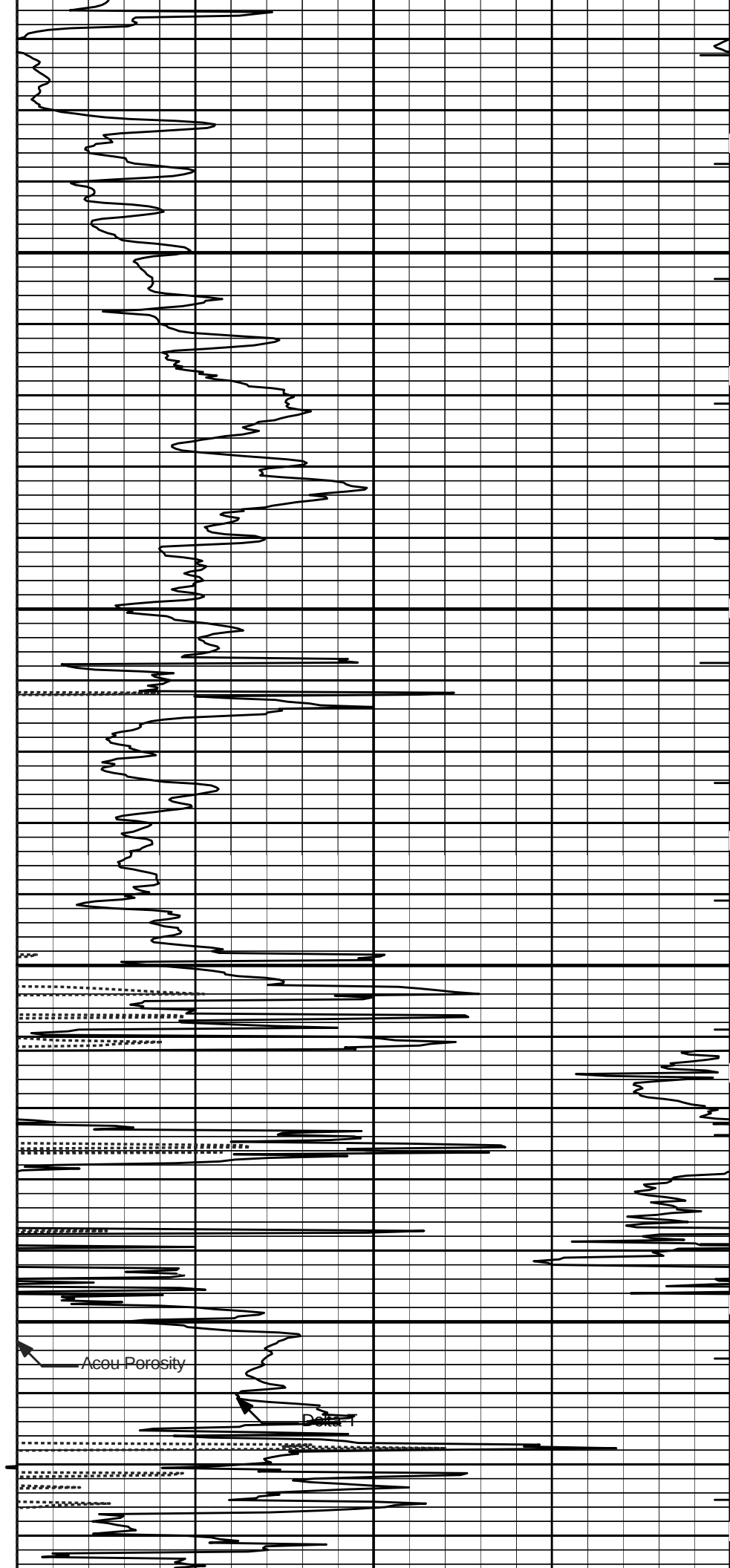
Acou Porosity

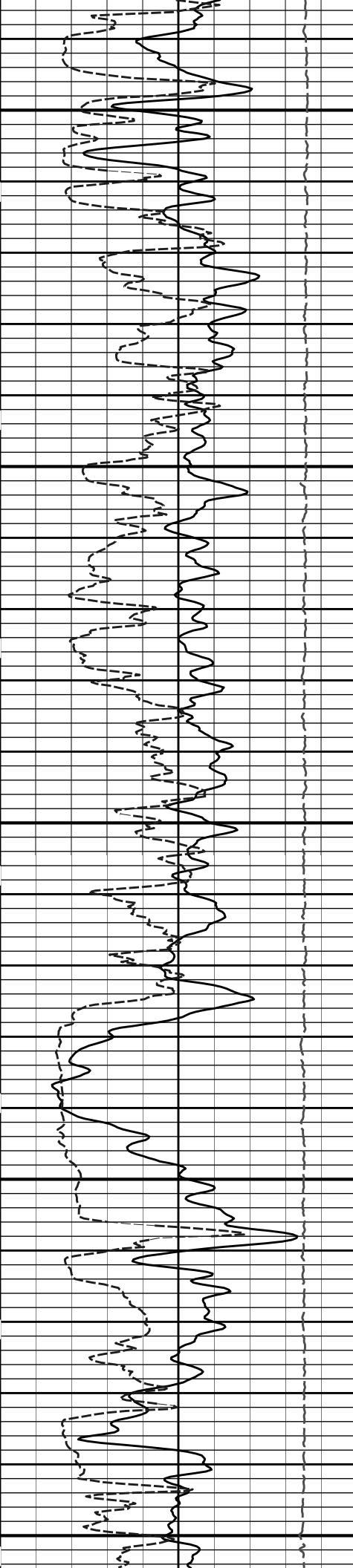
Delta T



800

900

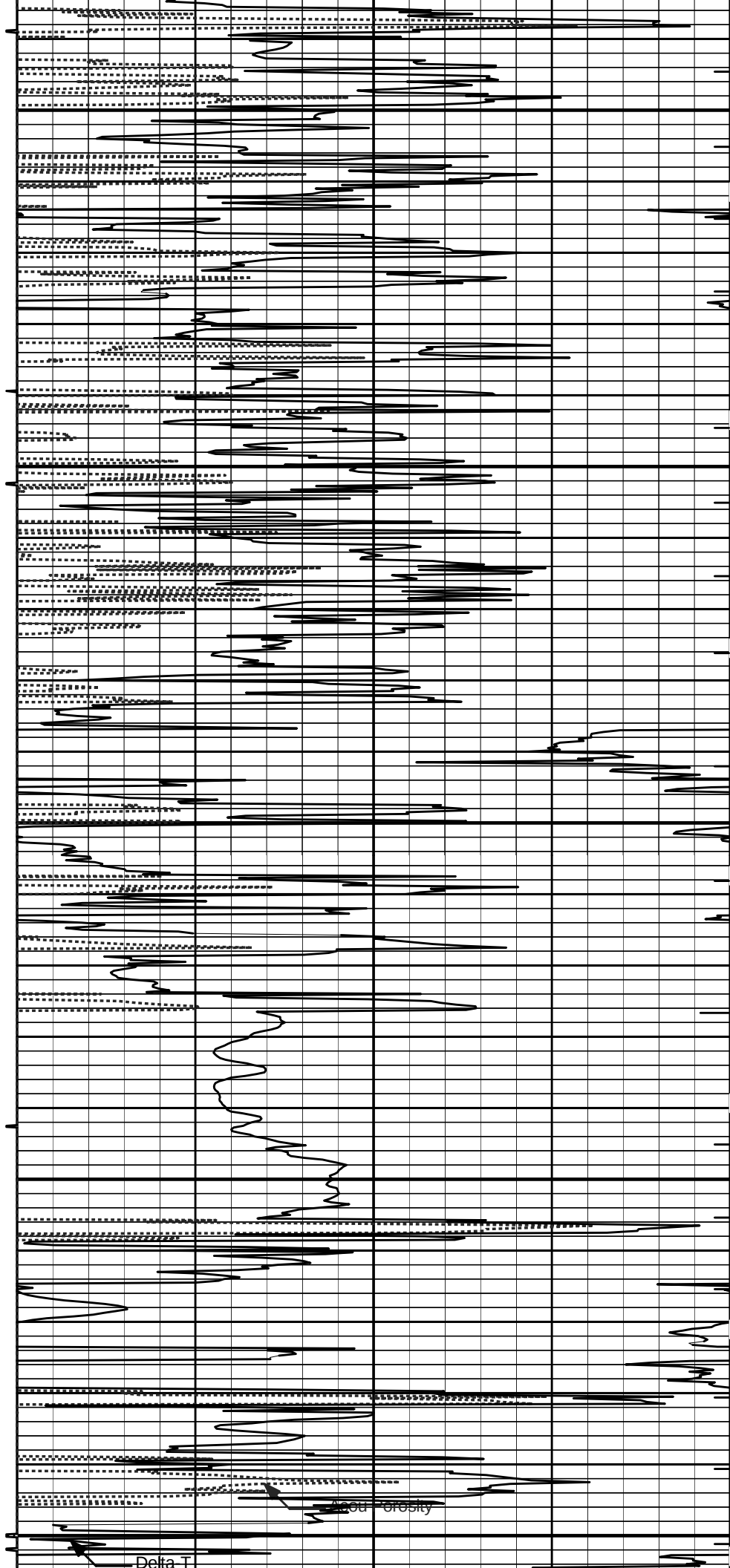




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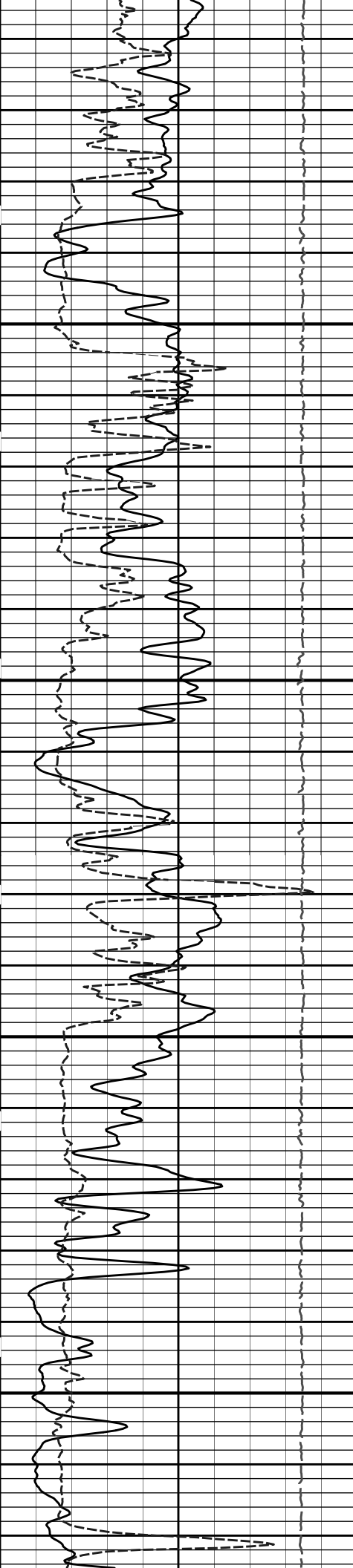
1100

1200



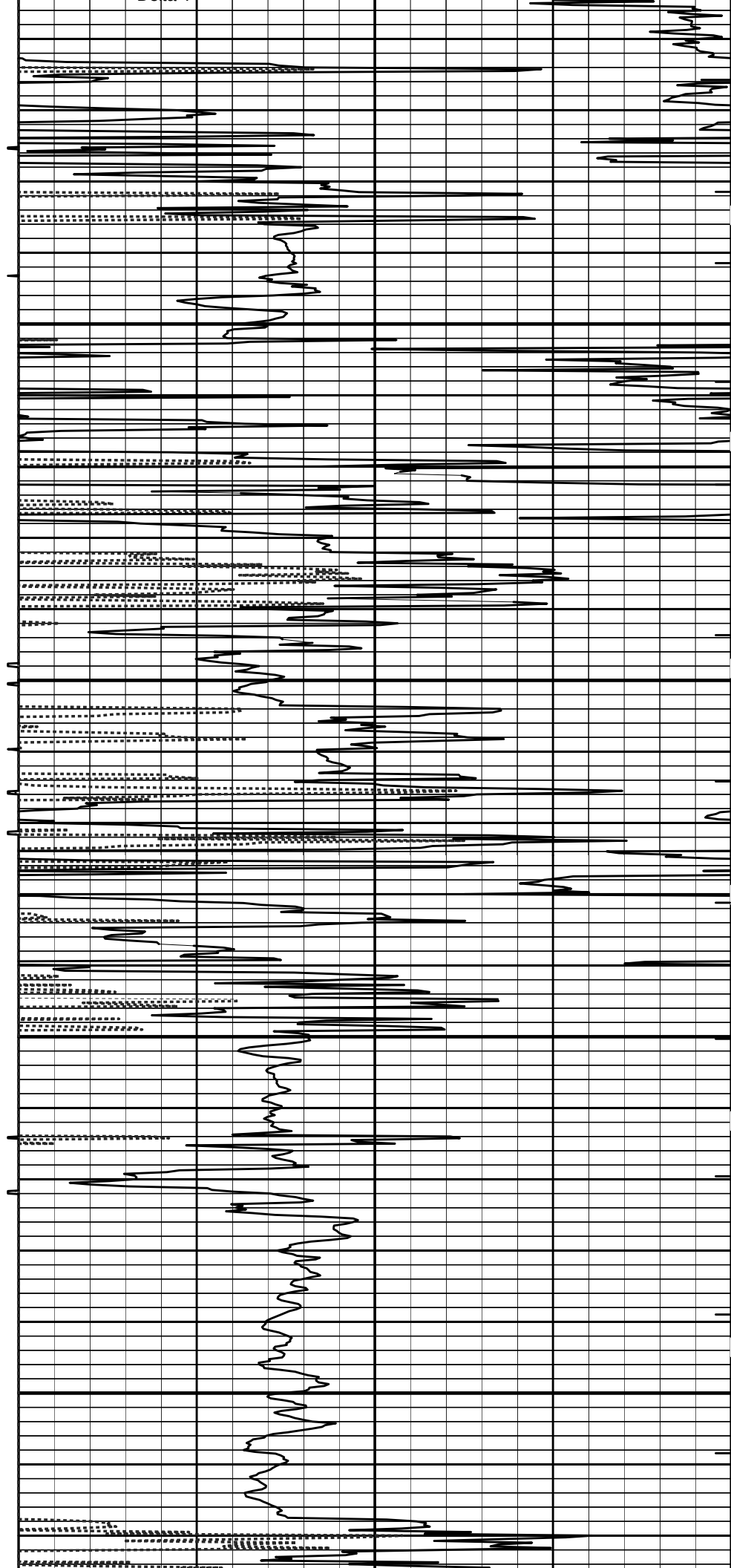
Delta T

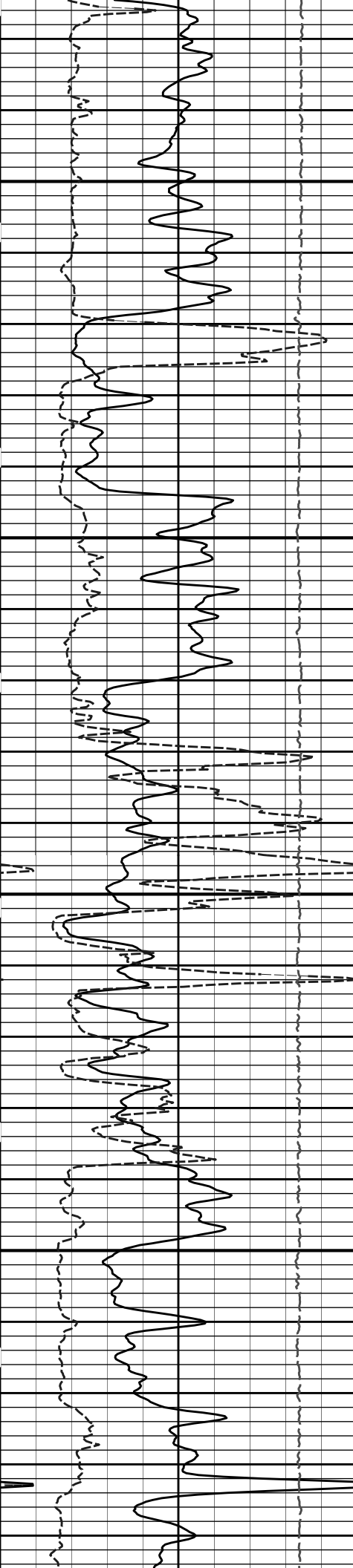
Acoustic Porosity



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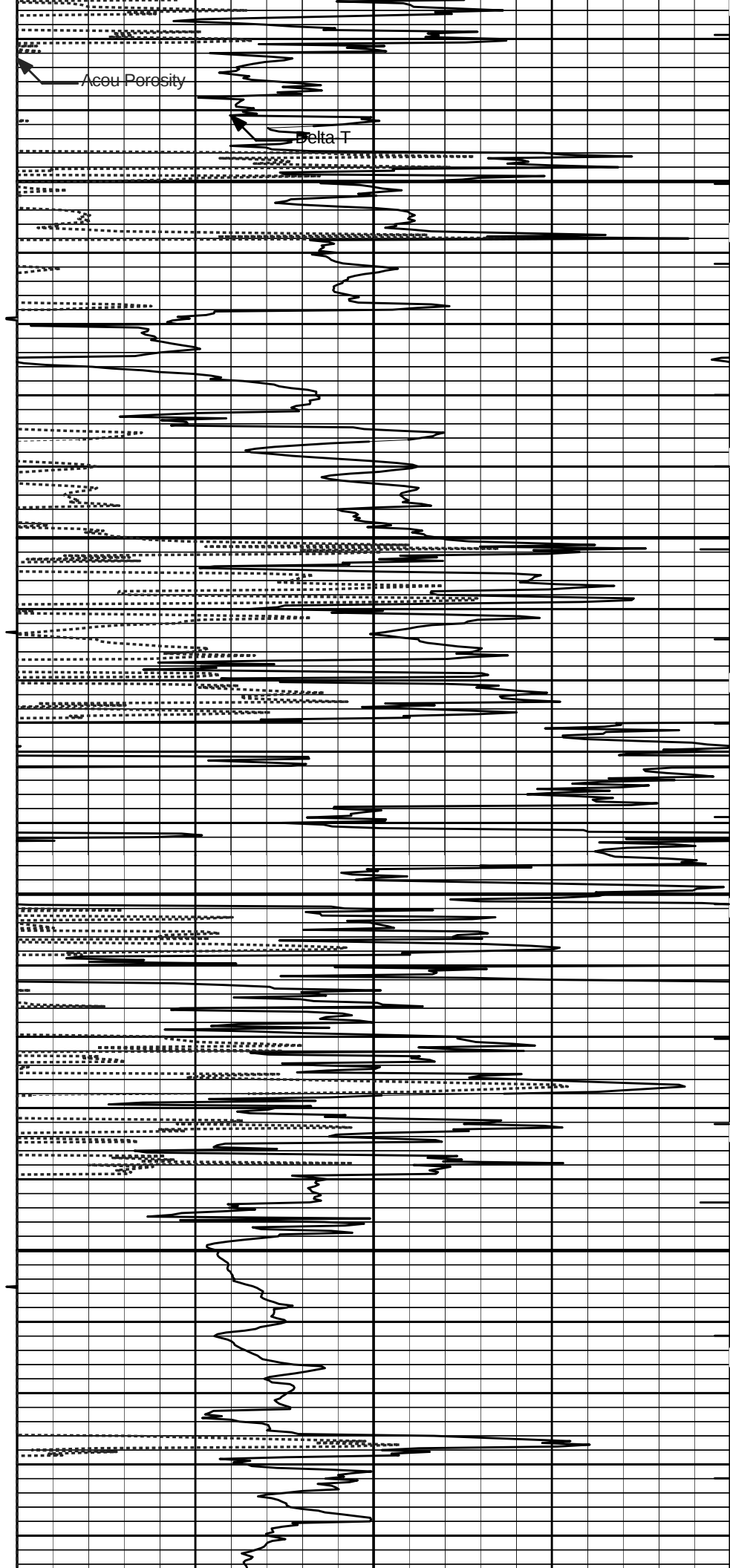
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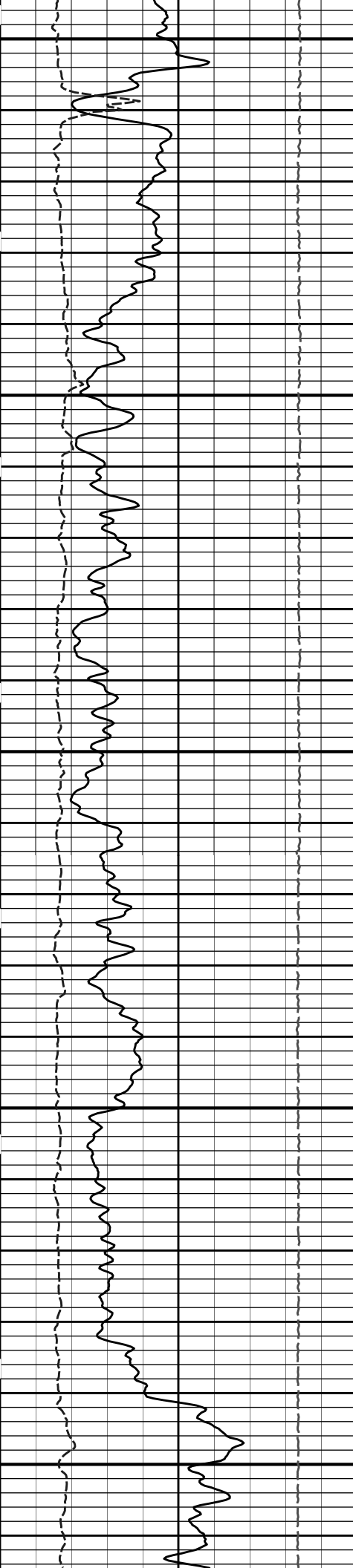




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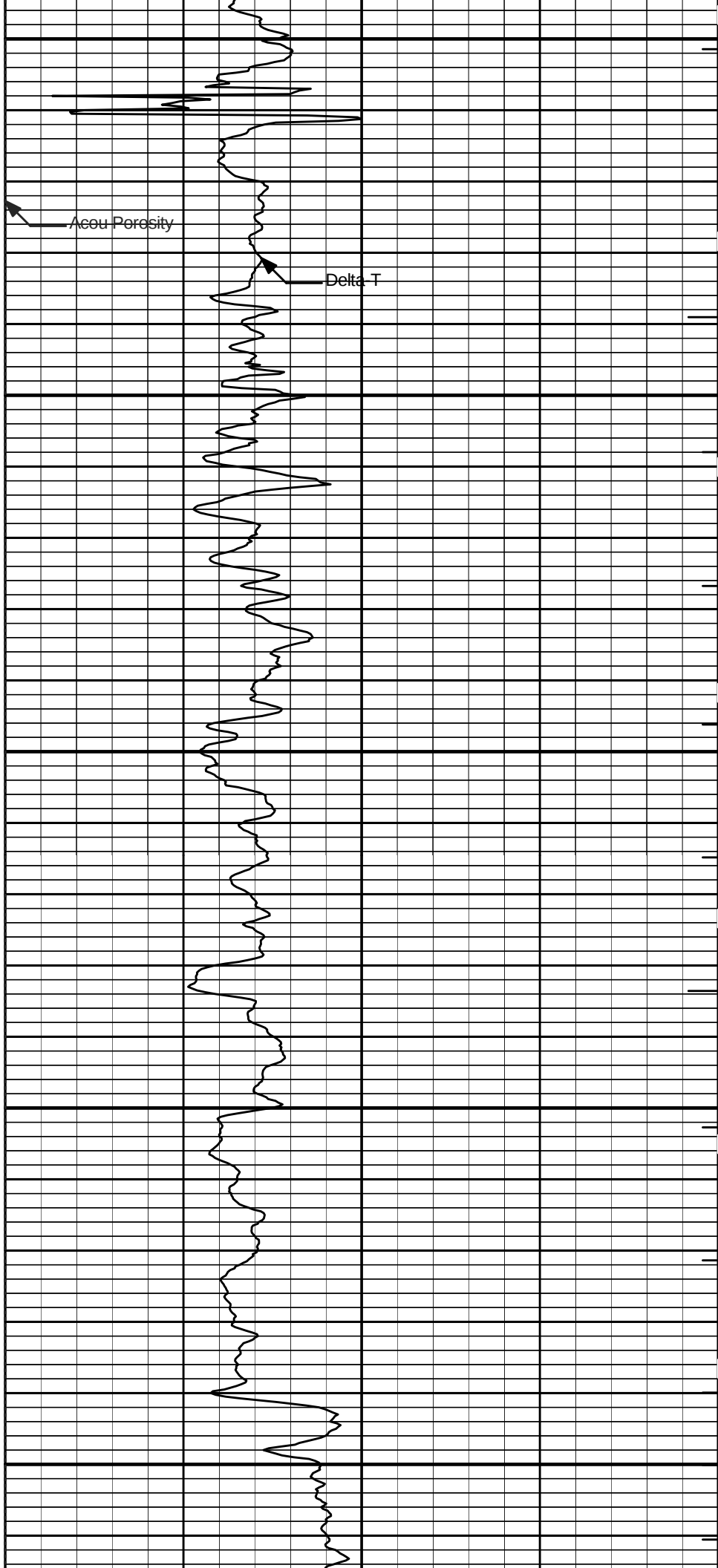
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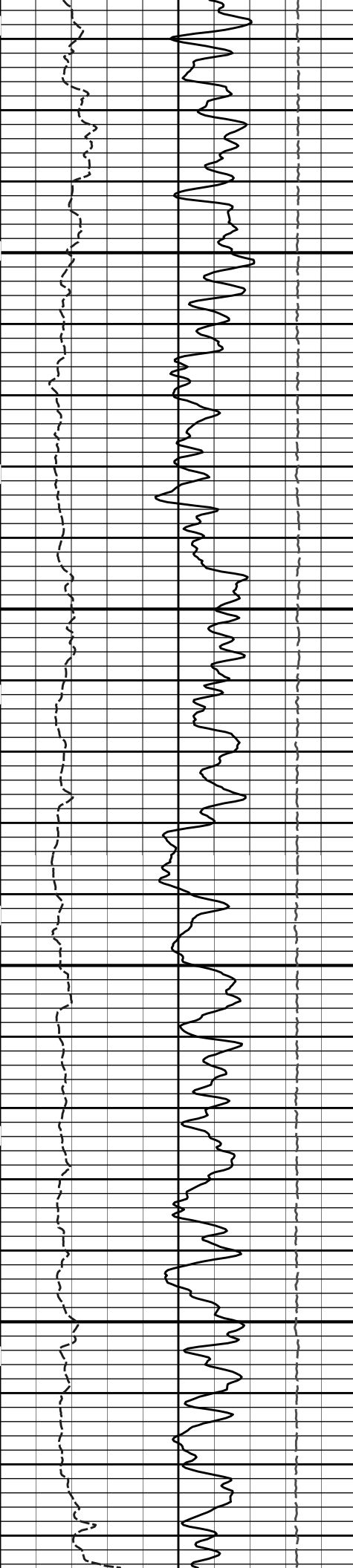




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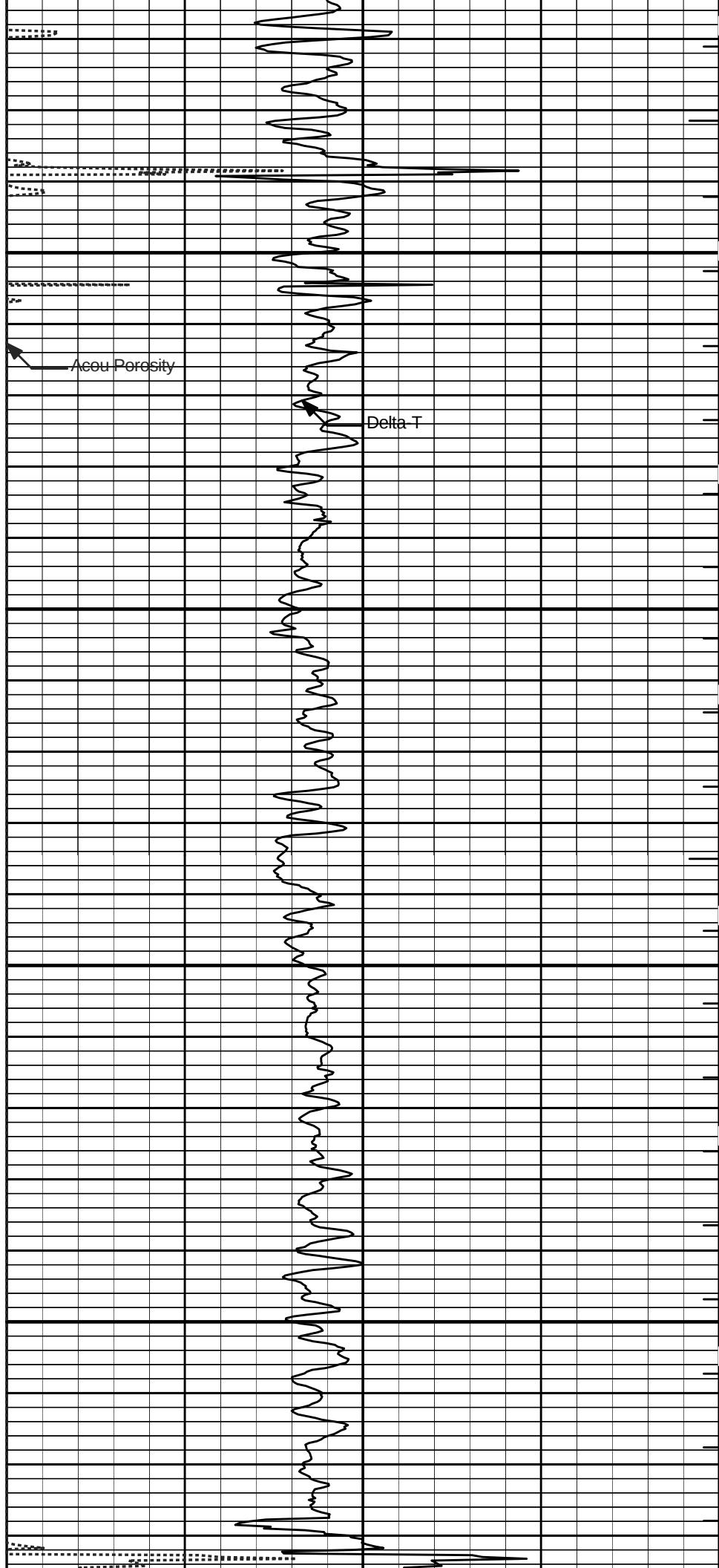
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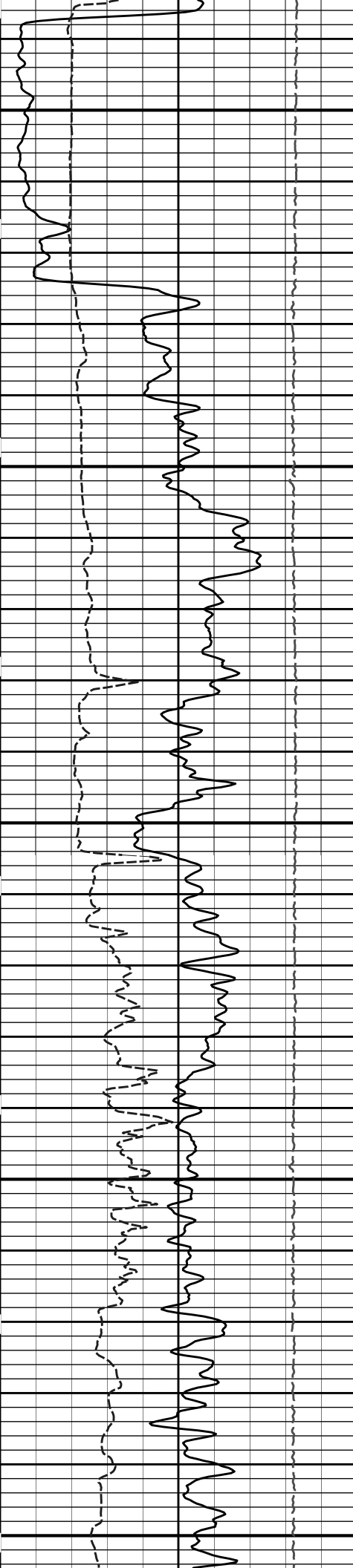




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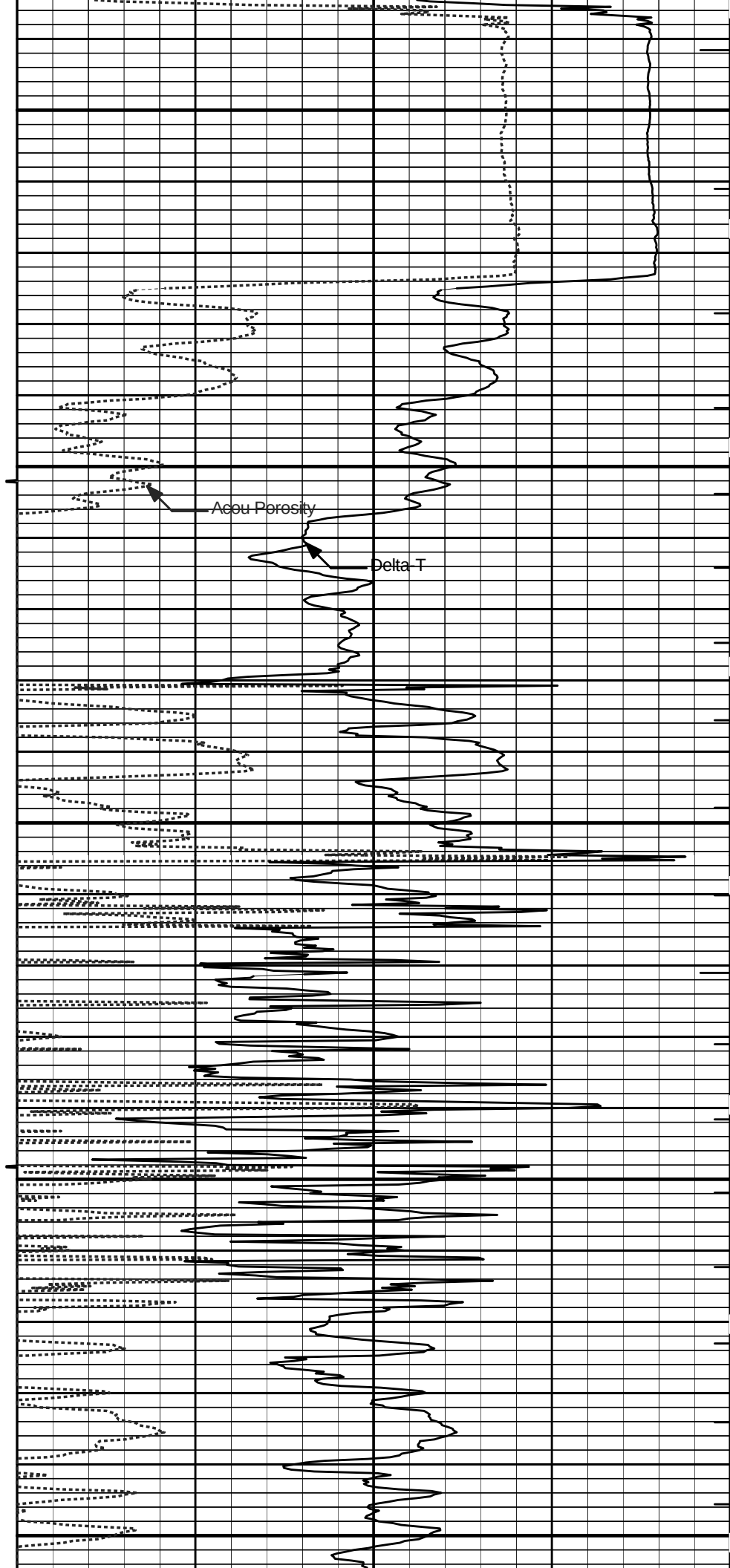


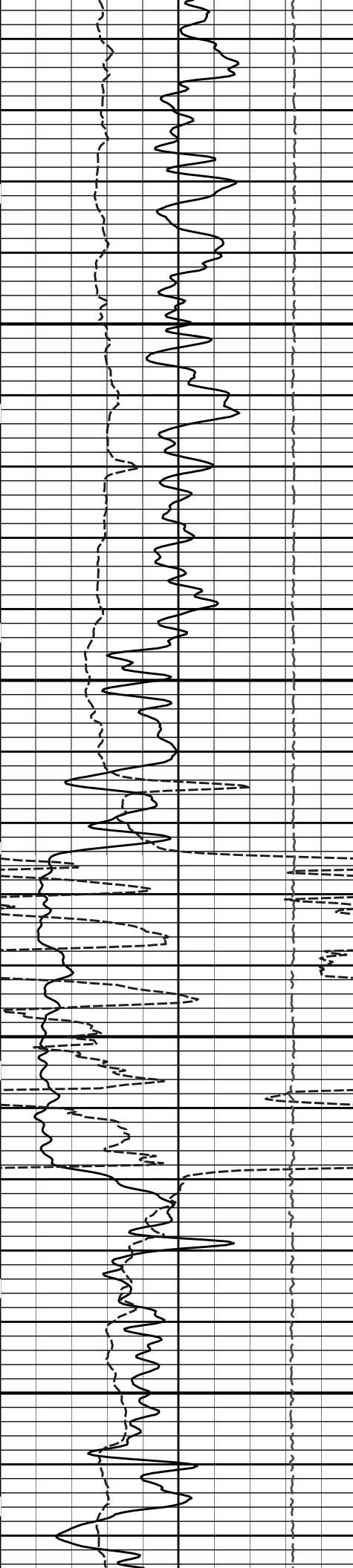


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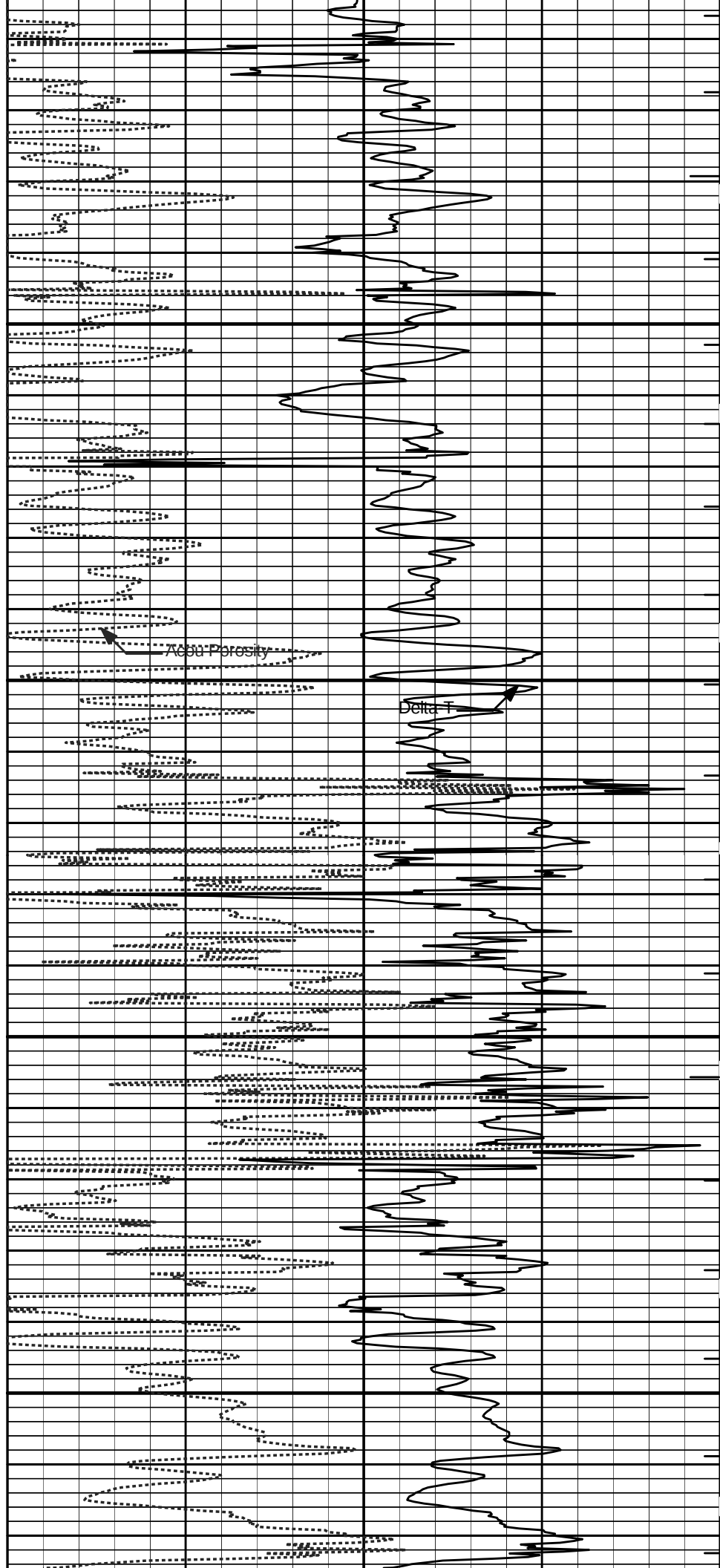
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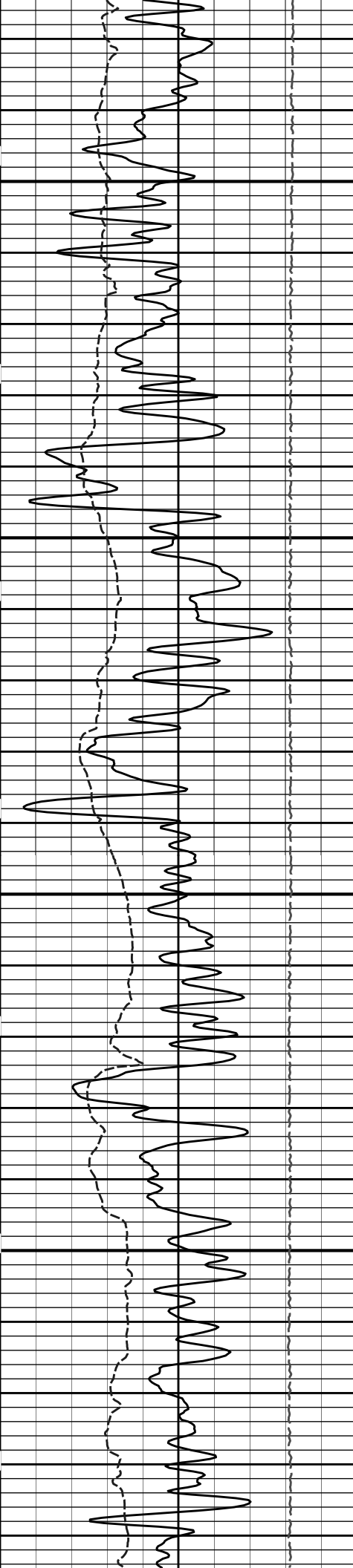




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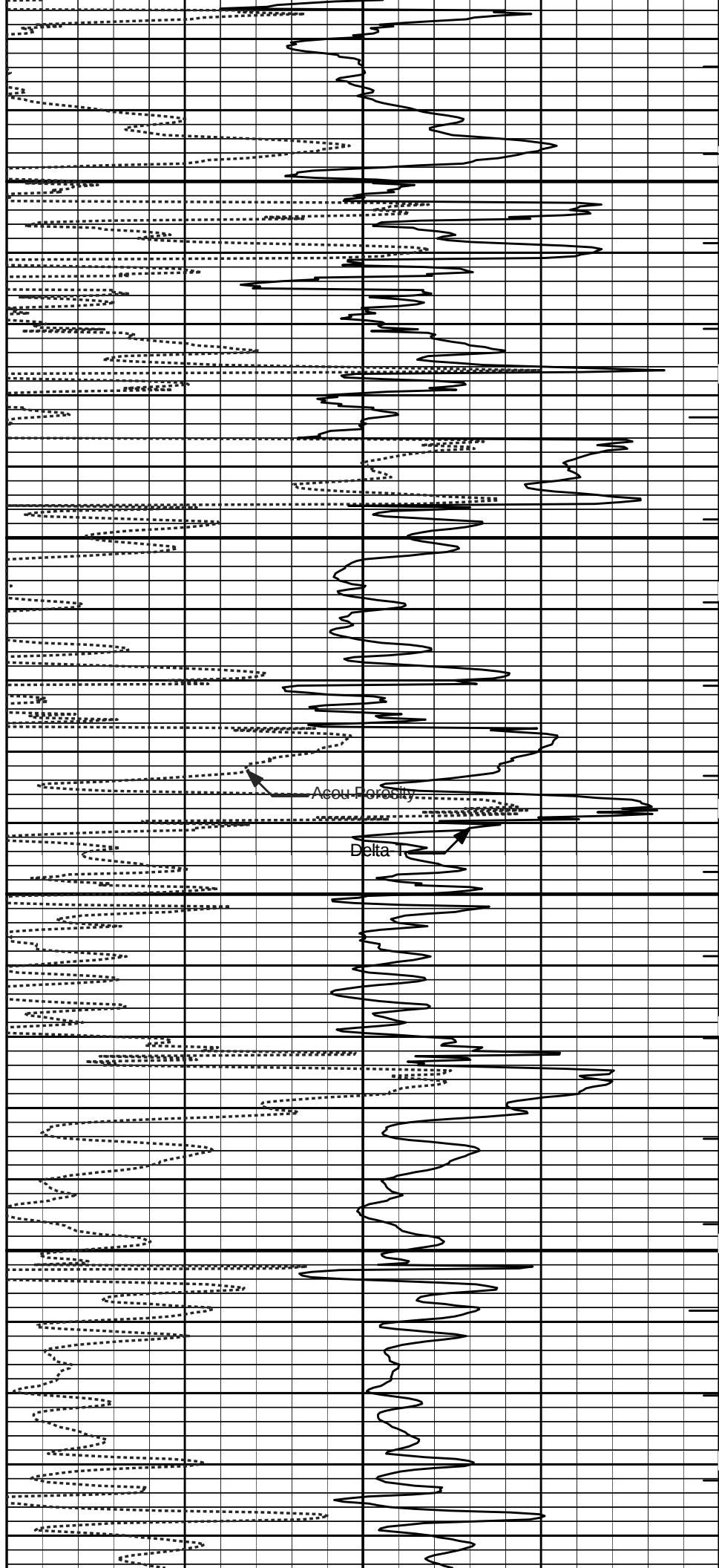
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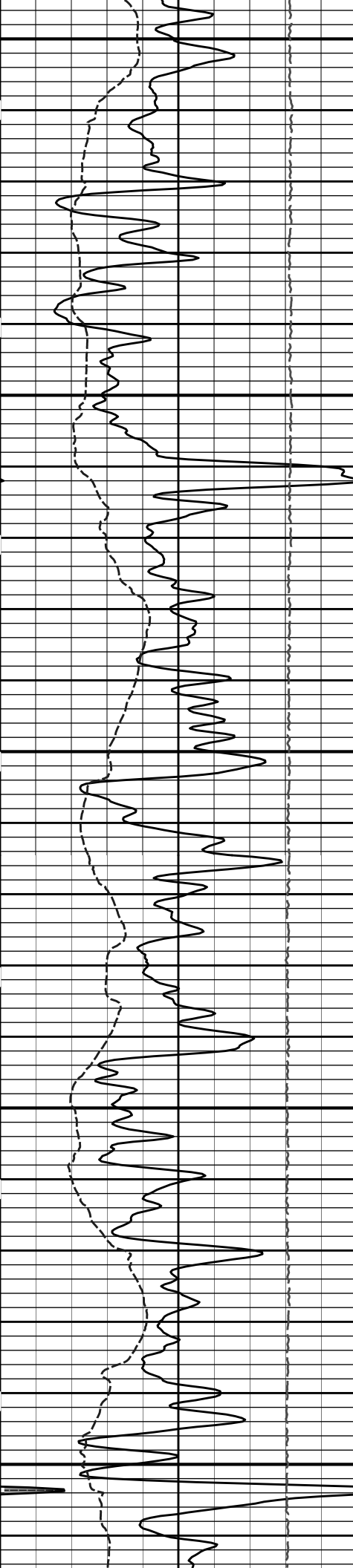




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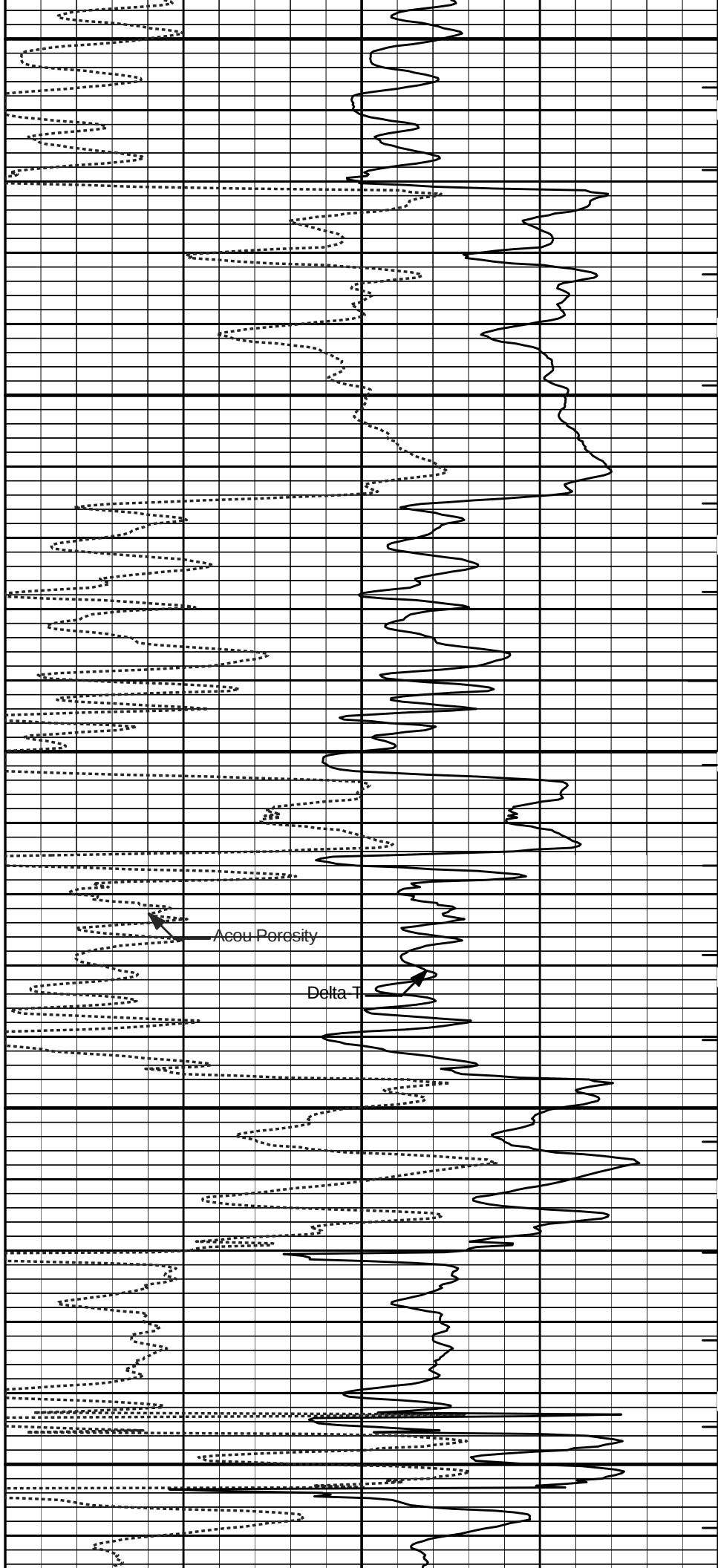
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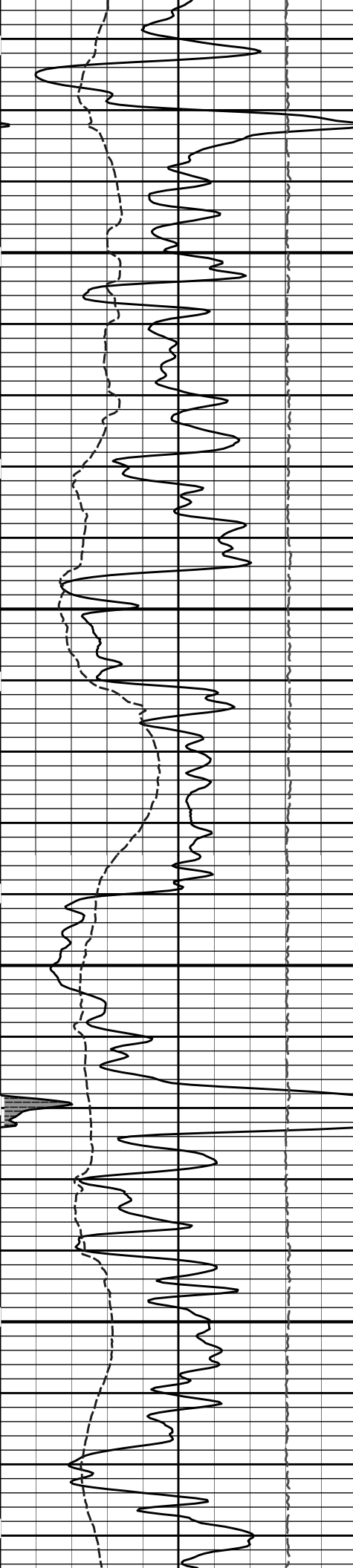




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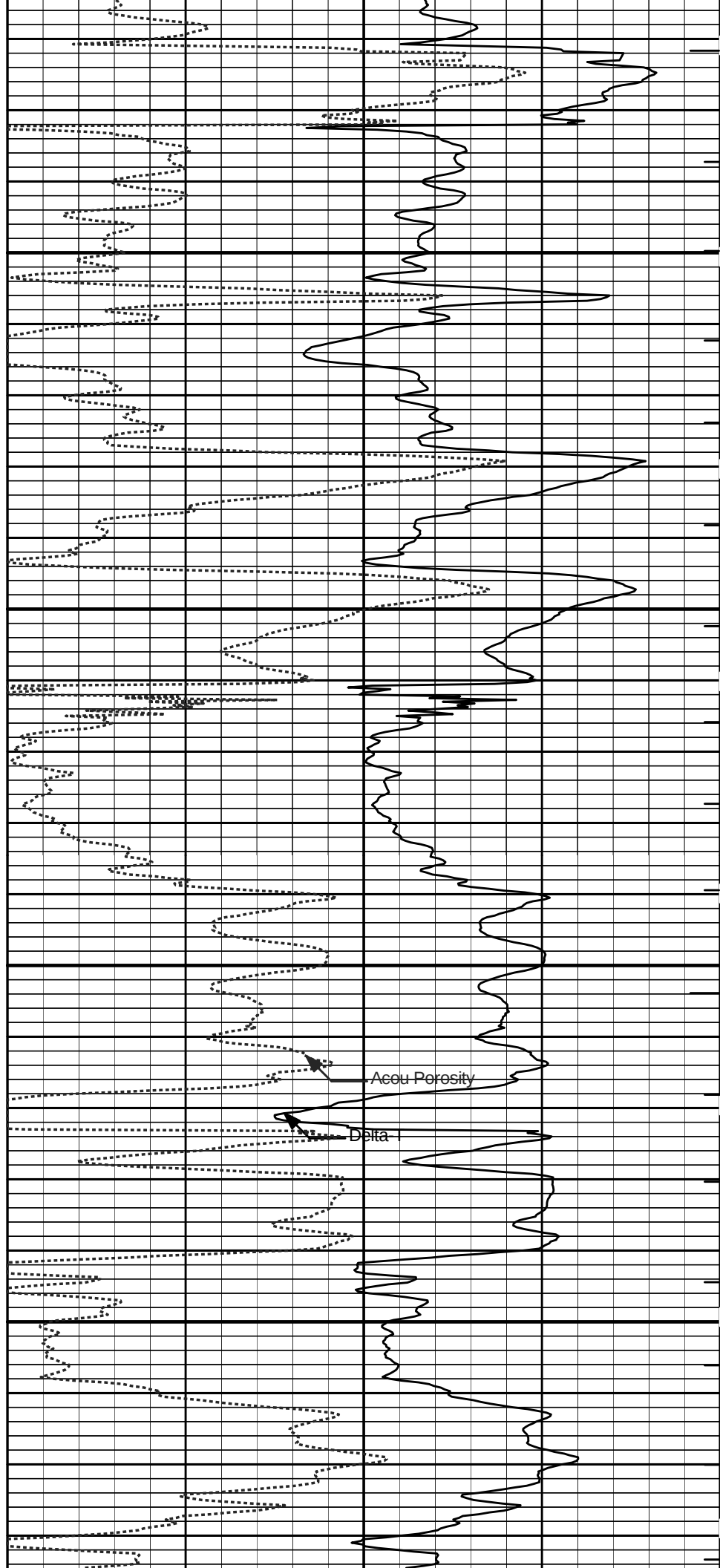
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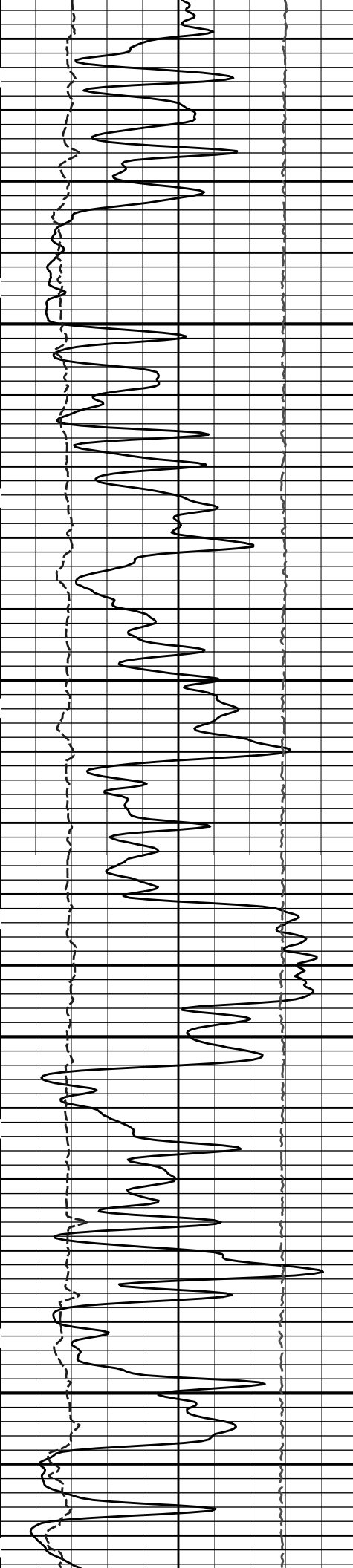




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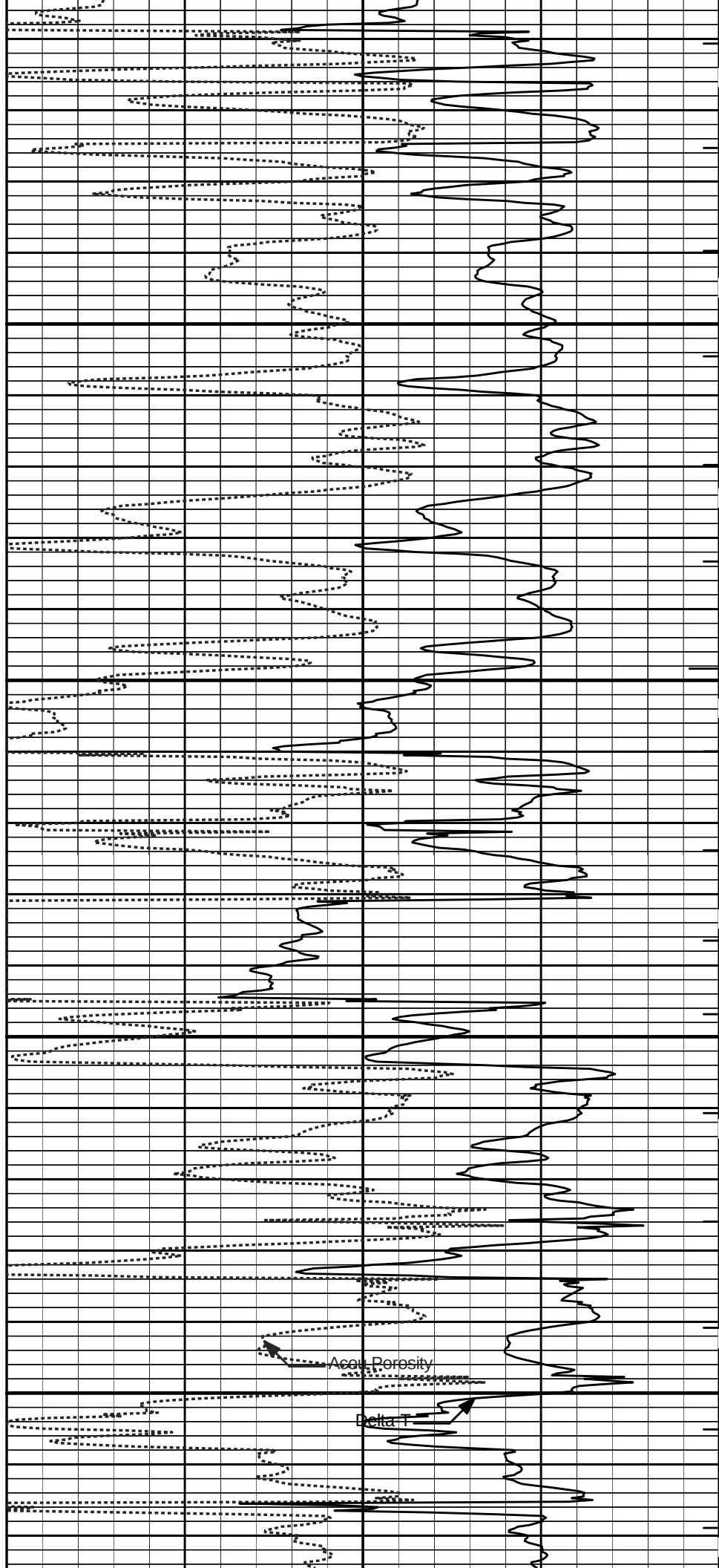
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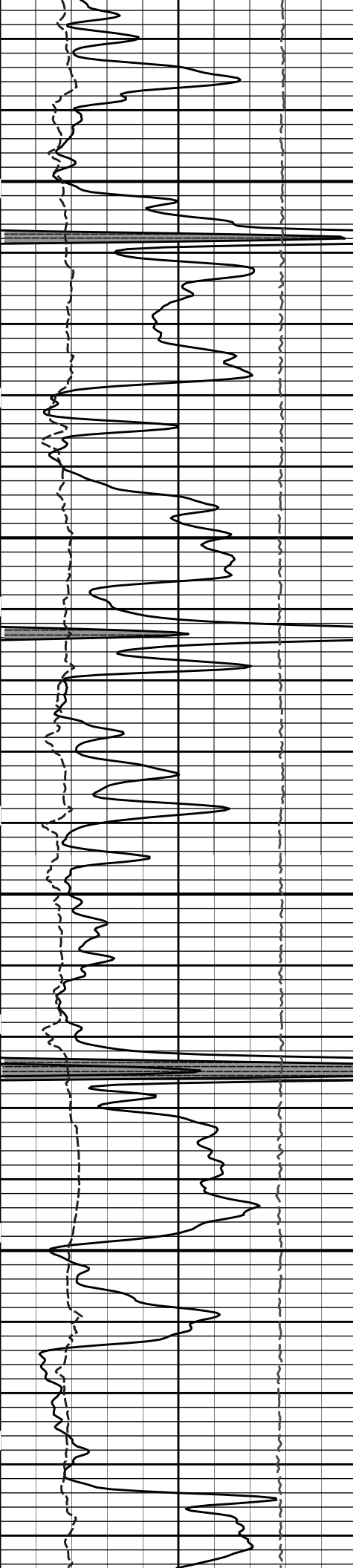




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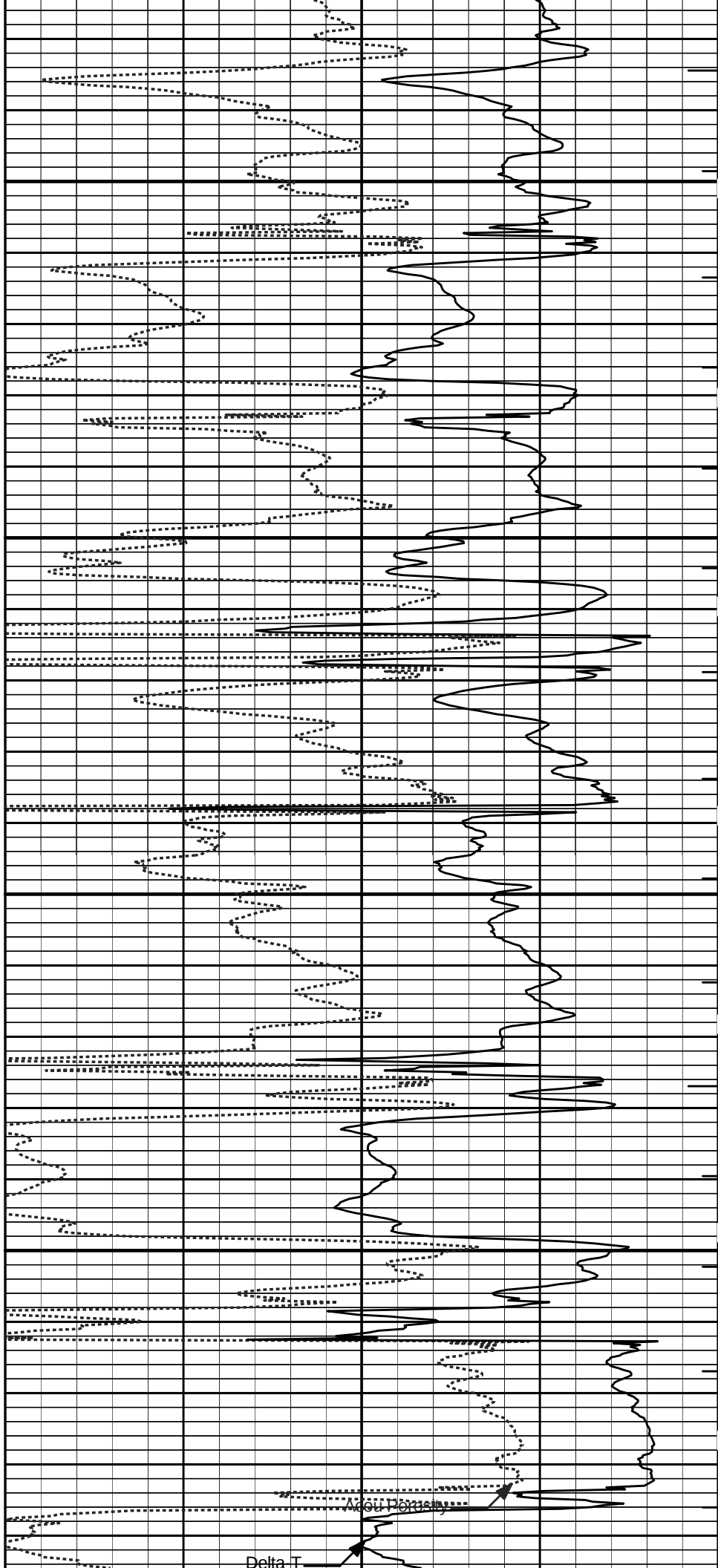
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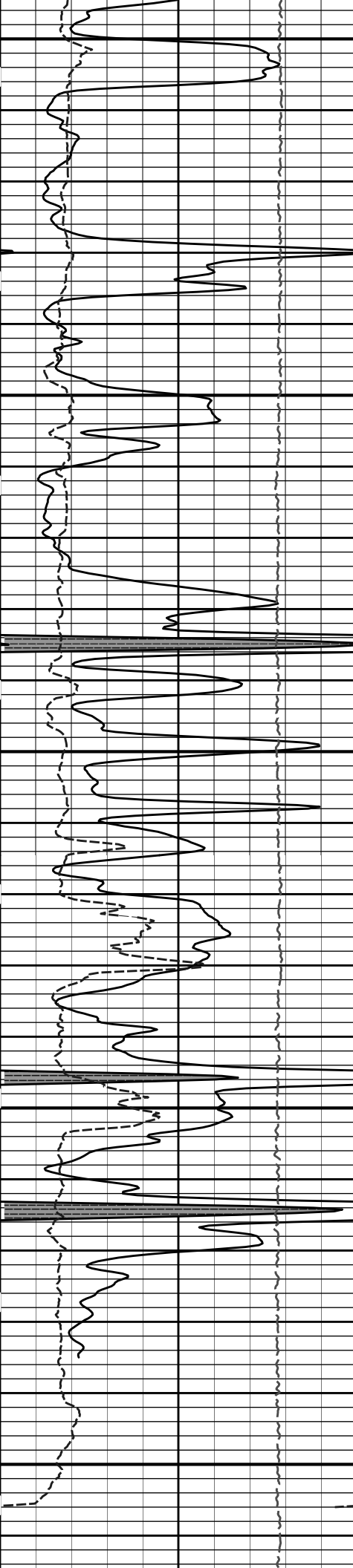
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3800



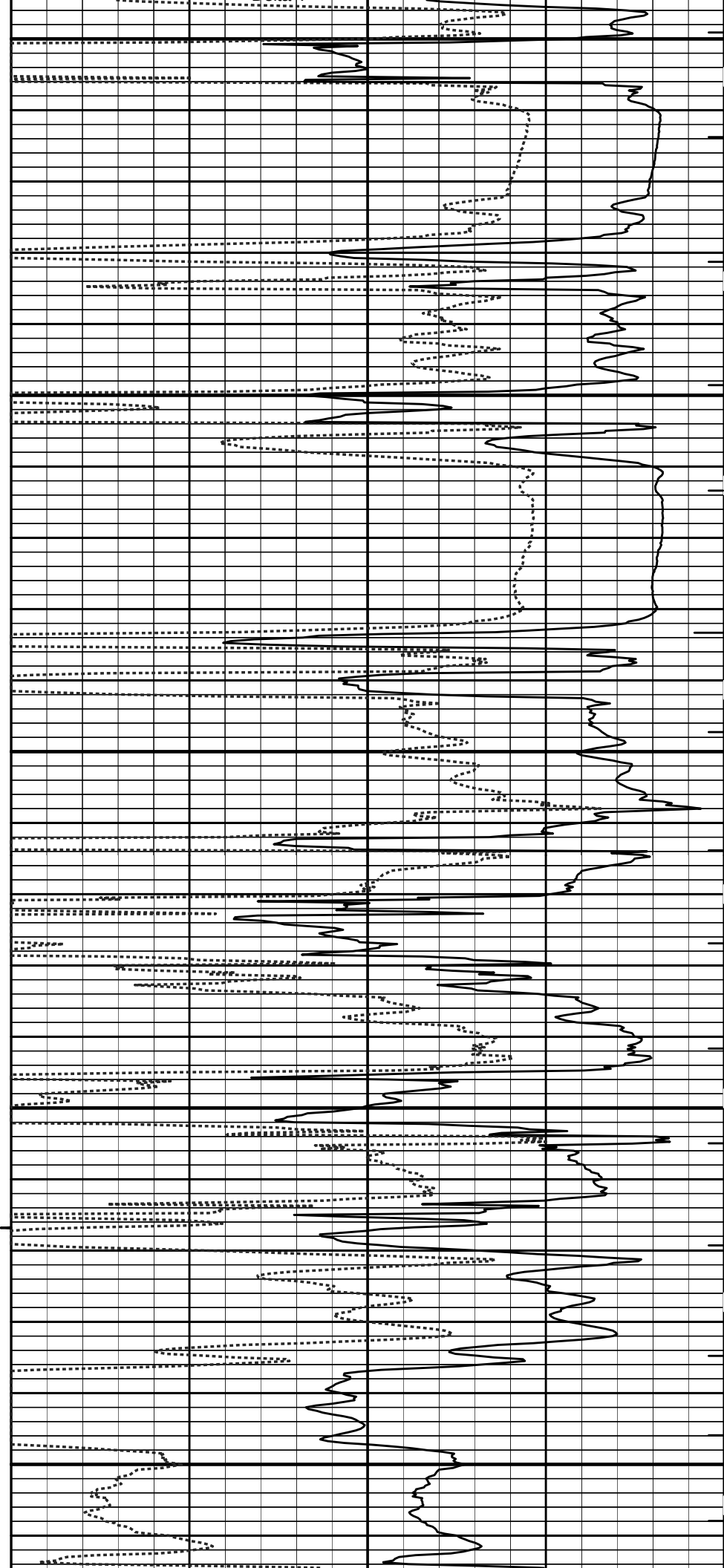
Delta-T

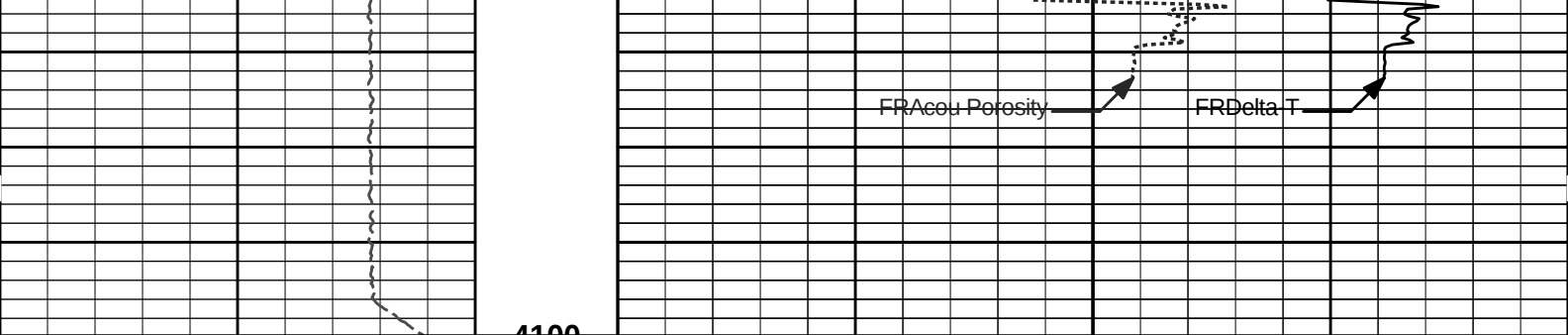
Acoustic Delay



3900

4000





15K	Tens	0	MD	1 : 240	ft	ITTT
6	Caliper	16	Tension Pull	10	0	140
0	Gamma API	150	Tension Pull	30	Acou Porosity	-10
	api				percent	
	SHALE					

HALLIBURTON

Plot Time: 01-Oct-13 06:47:44
Plot Range: 275 ft to 4099.83 ft
Data: GANO_UNIT_1-36\Well Based\IR1 CASING\
Plot File: \BSAT\BSAT_5_MAIN_LIB

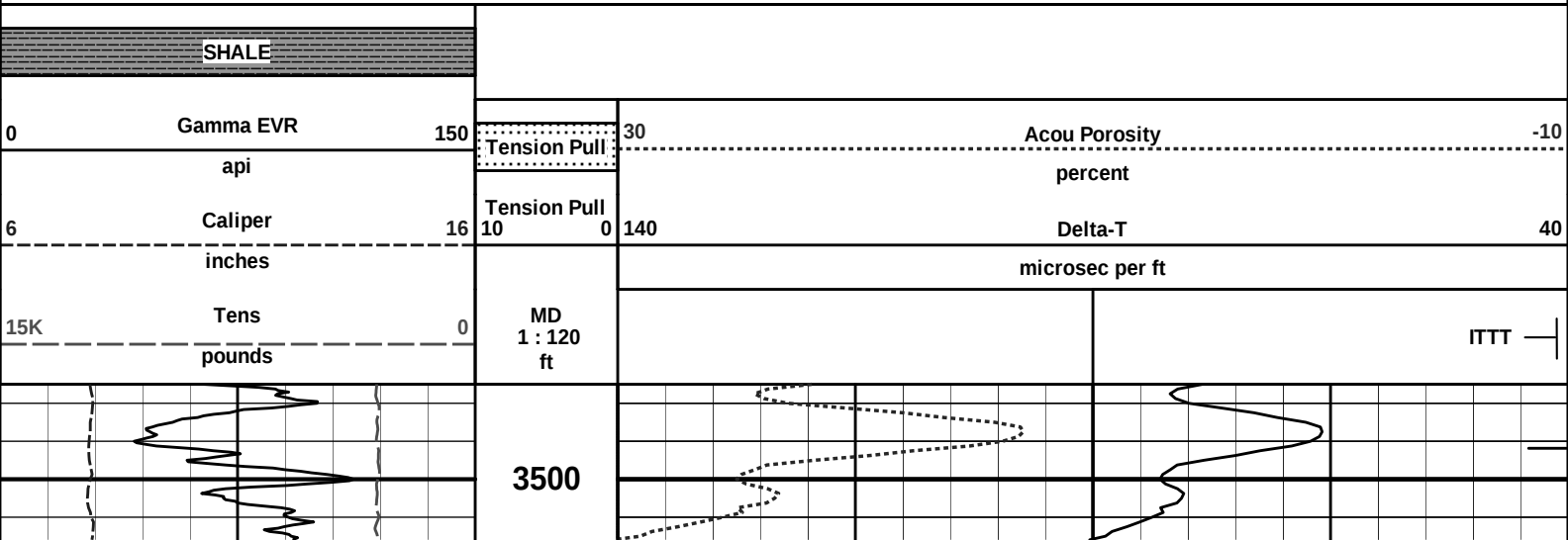
5 INCH MAIN LOG

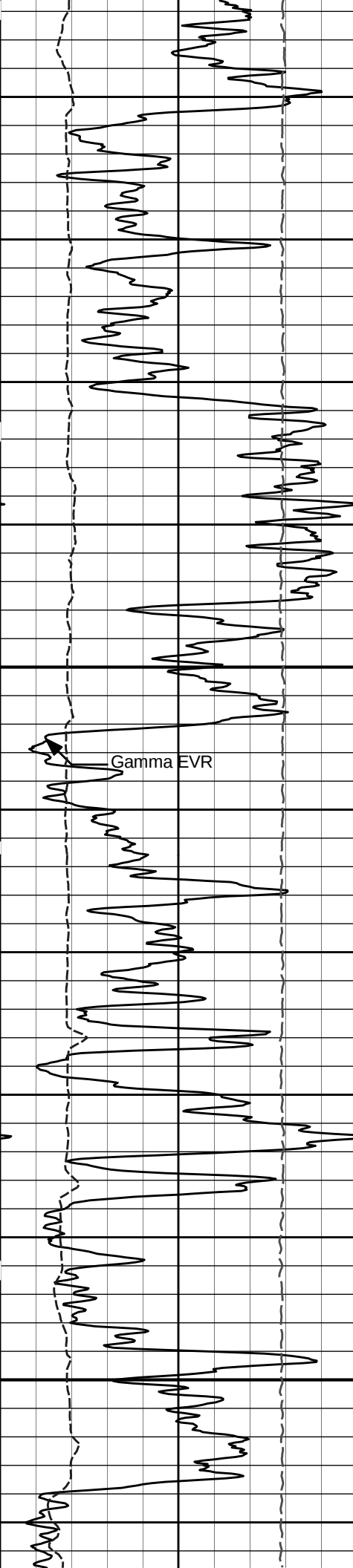
HALLIBURTON

Plot Time: 01-Oct-13 06:47:44
Plot Range: 3495 ft to 4099.83 ft
Data: GANO_UNIT_1-36\Well Based\IR1 LOWER DETAIL\
Plot File: \BSAT\BSAT_10_MAIN_LIB

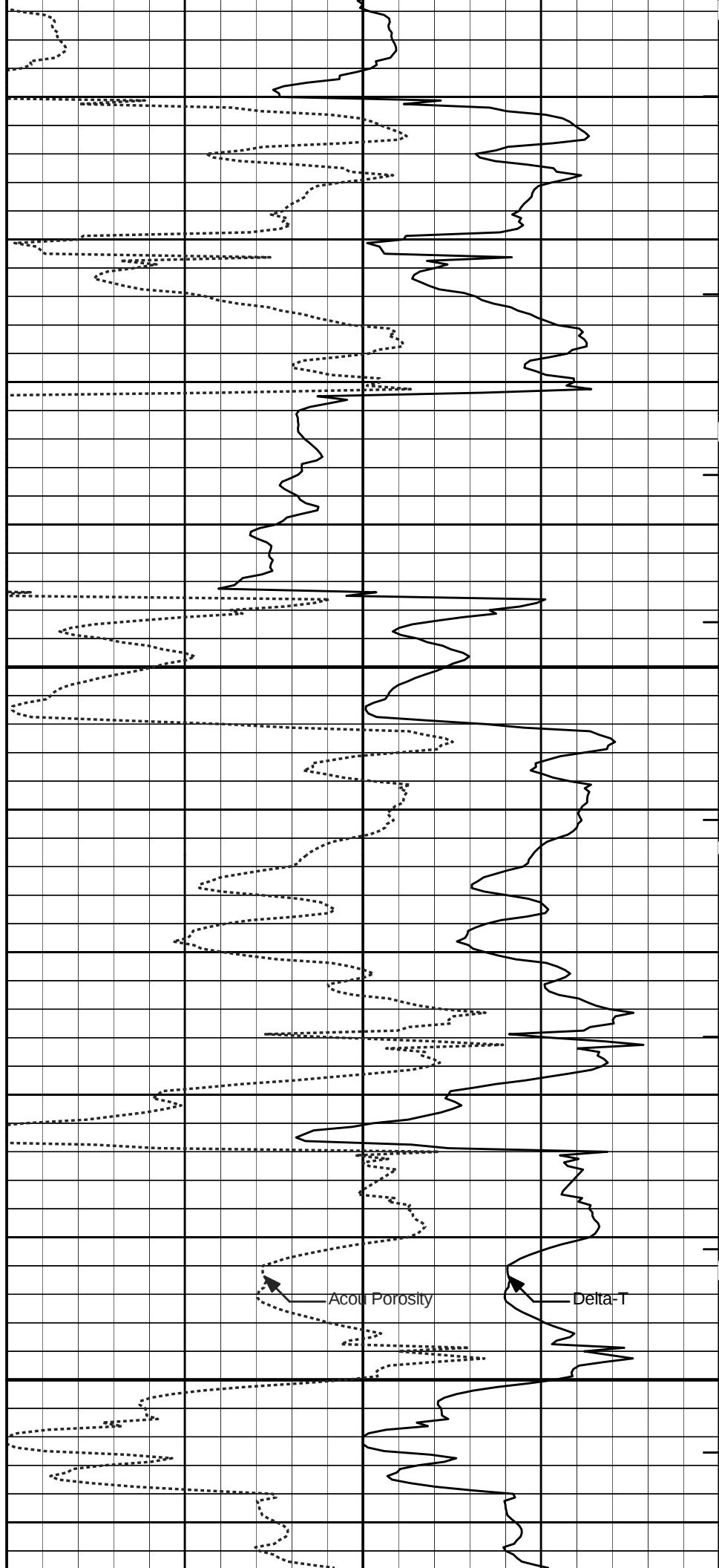
10 INCH MAIN LOG

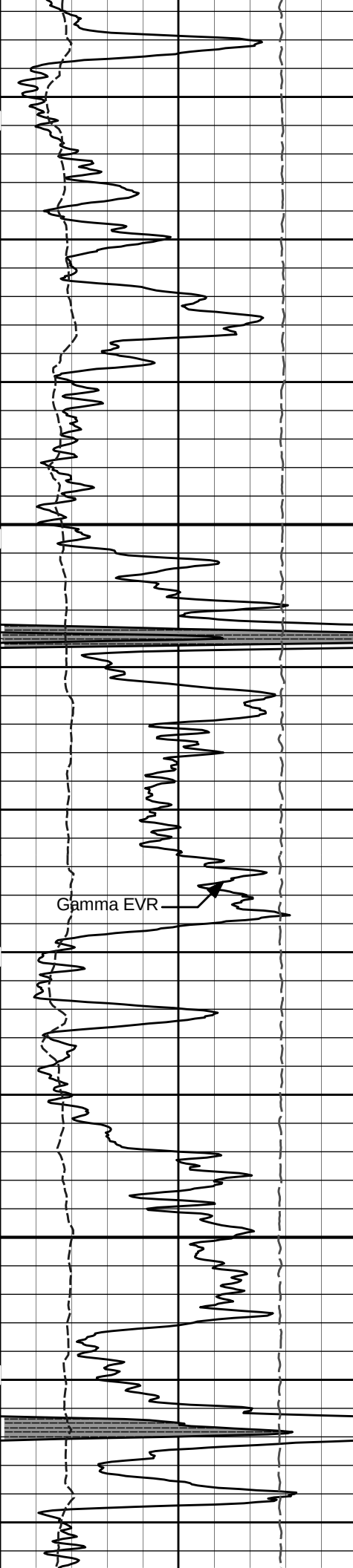
MAIN SECTION 10" PER 100'



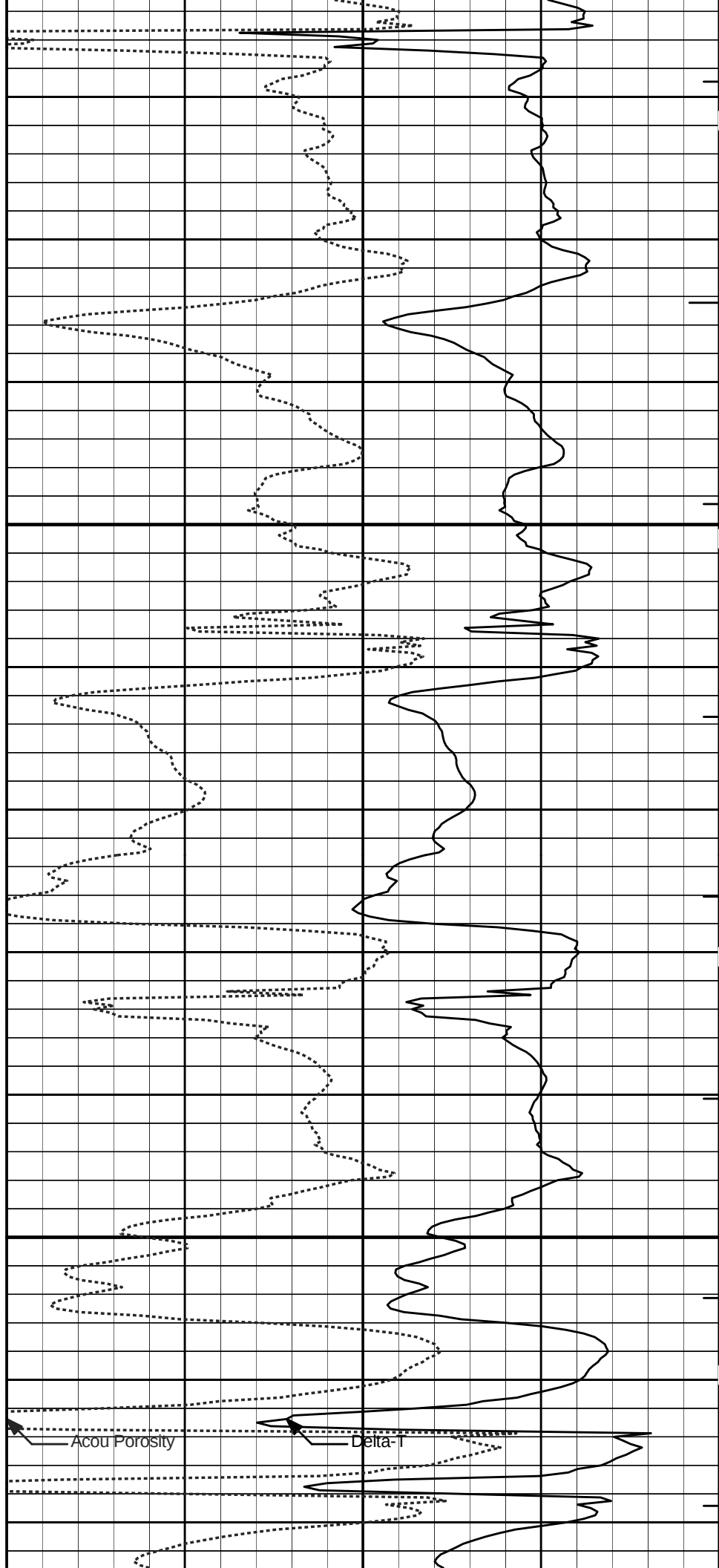


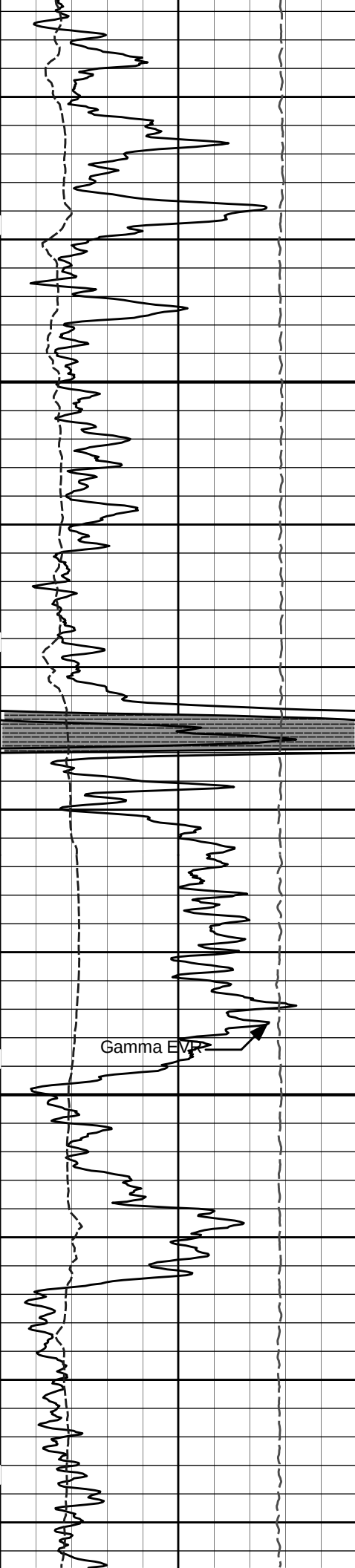
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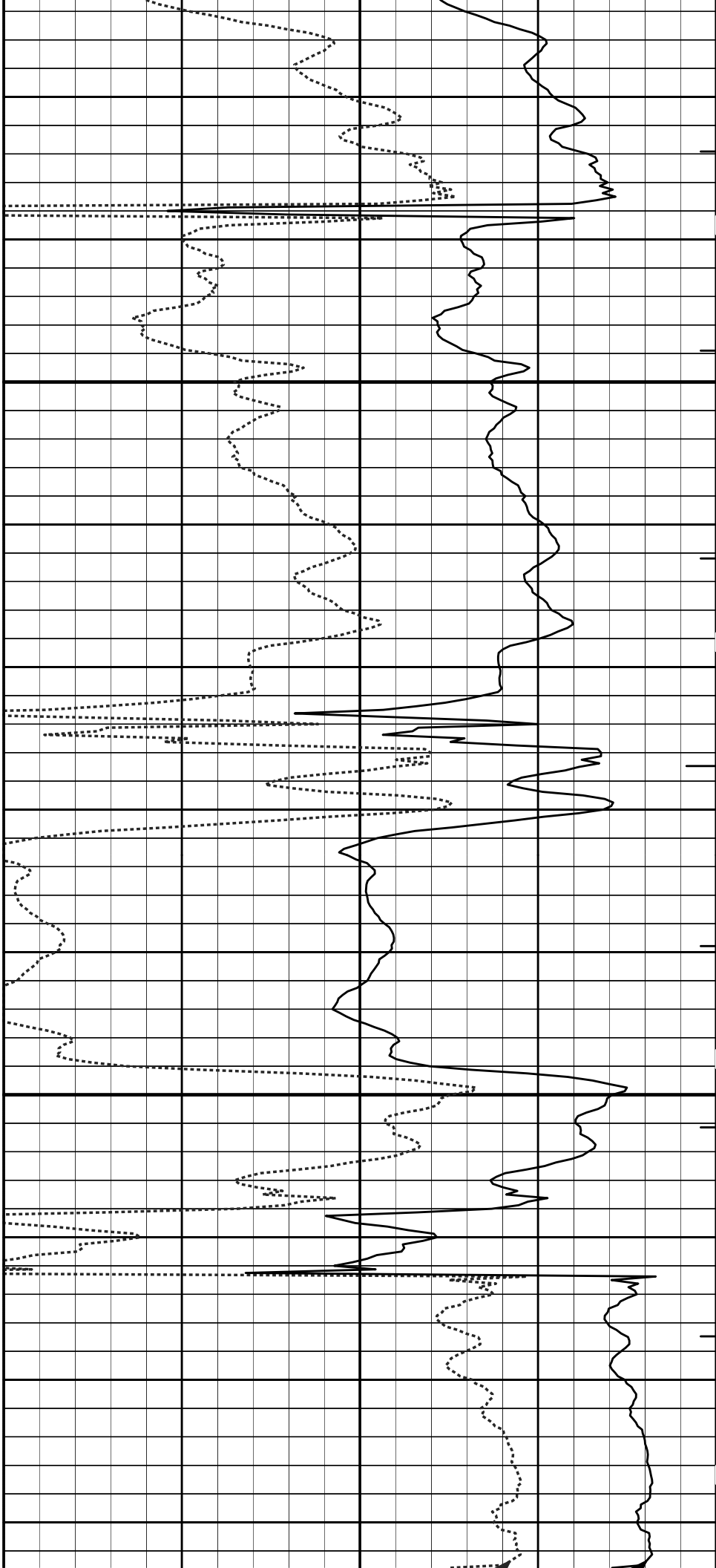
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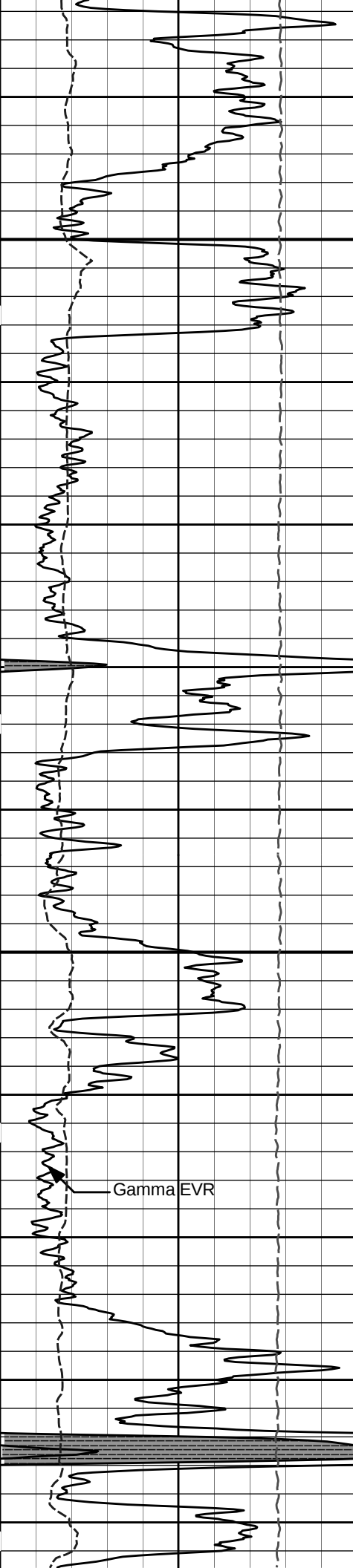




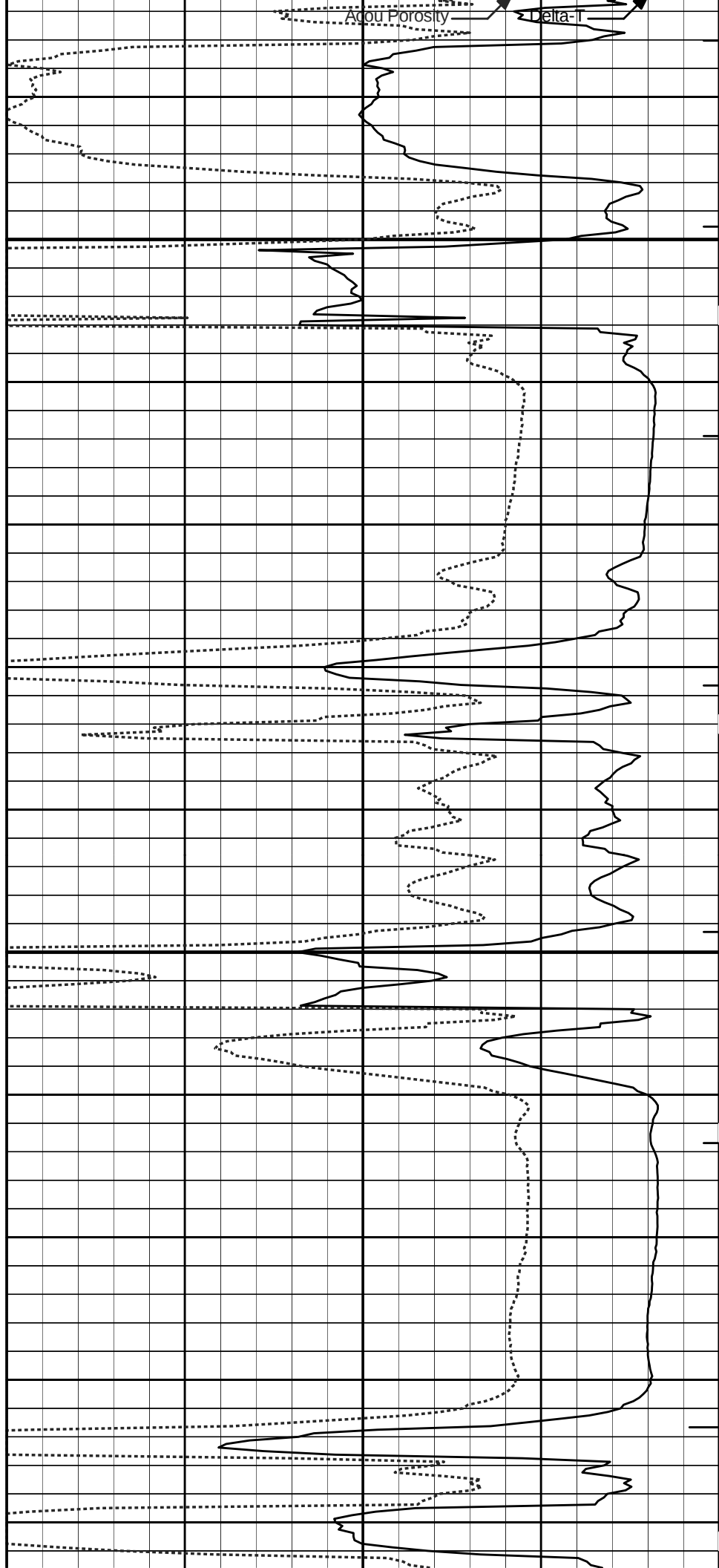
Gamma EPR

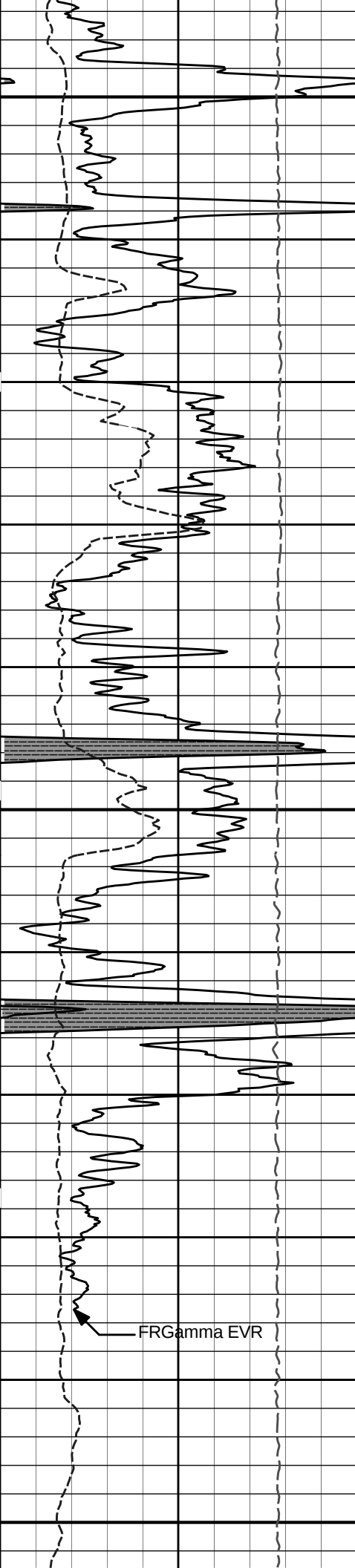
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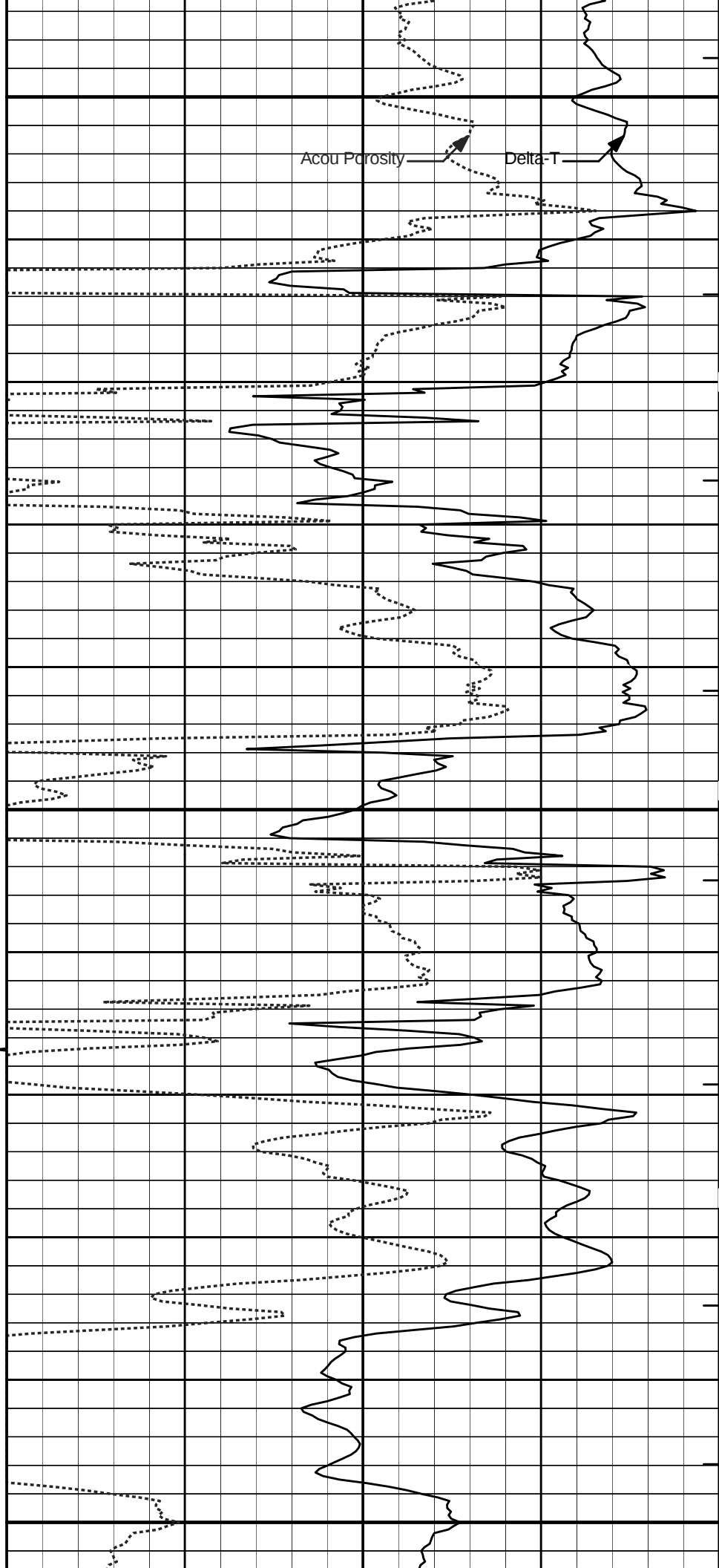


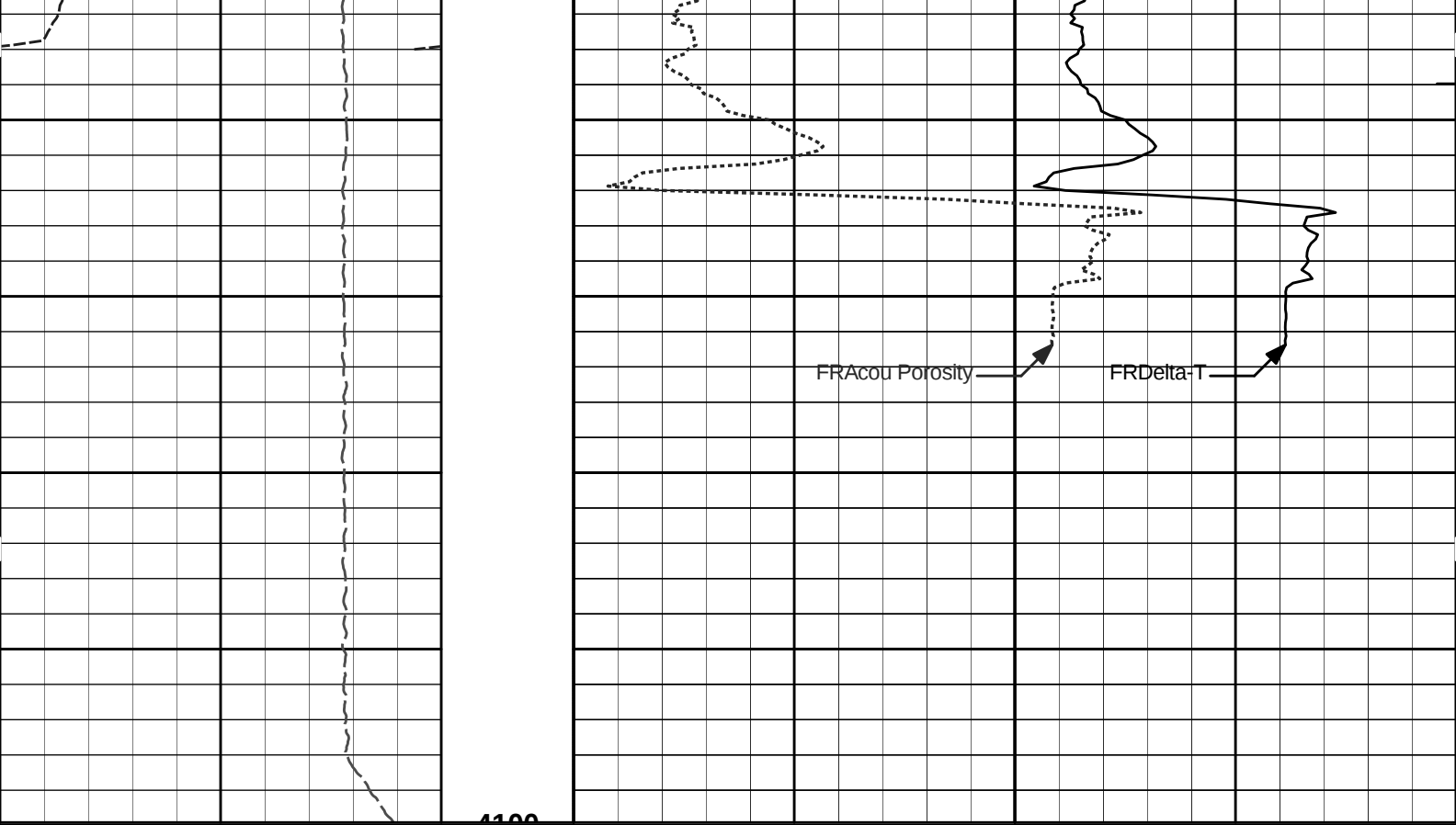
3900





4000





15K	Tens	0	MD		ITTT
	pounds		1 : 120		
			ft		
6	Caliper	16	Tension Pull	140	Delta-T
	inches		10 0		40
0	Gamma EVR	150			microsec per ft
	api		30		Acou Porosity
					percent
	SHALE				

HALLIBURTON

Plot Time: 01-Oct-13 06:47:48
Plot Range: 3495 ft to 4099.83 ft
Data: GANO_UNIT_1-36\Well Based\IR1 LOWER DETAIL\
Plot File: \\BSAT\BSAT_10_MAIN_LIB

10 INCH MAIN LOG

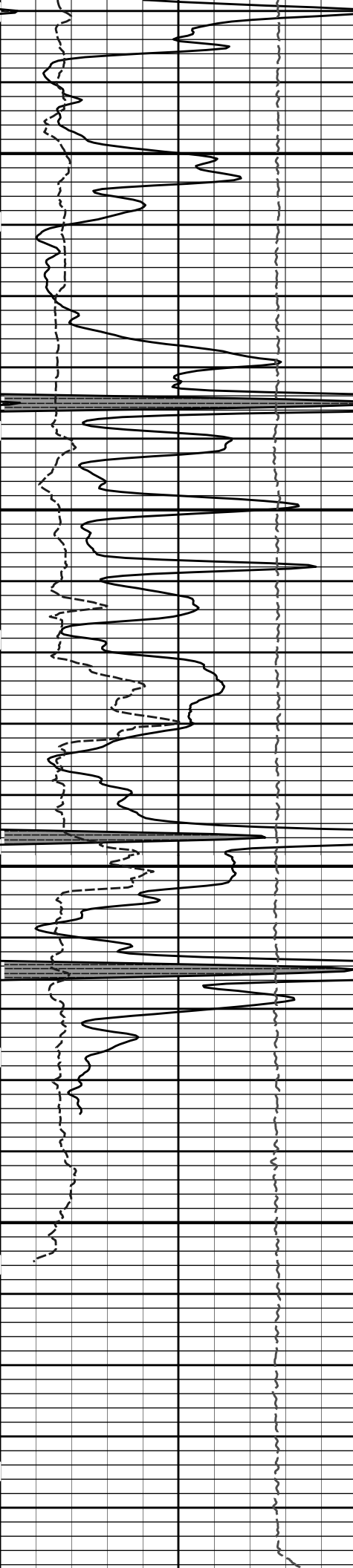
MAIN SECTION 10" PER 100'

HALLIBURTON

Plot Time: 01-Oct-13 06:47:48
Plot Range: 3700 ft to 4099.58 ft
Data: GANO_UNIT_1-36\Well Based\IR1 REPEAT\
Plot File: \\BSAT\BSAT_5_REP_LIB

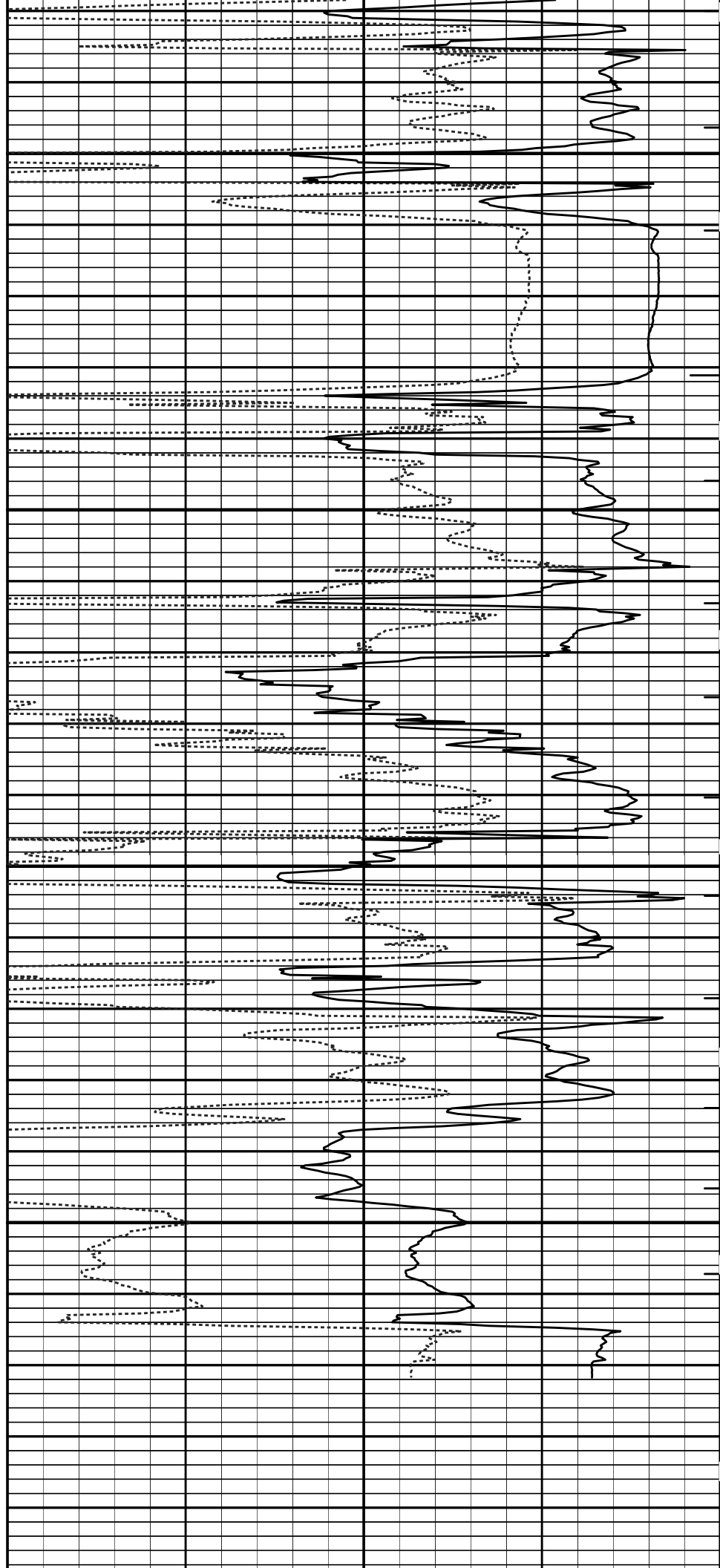
REPEAT SECTION

SHALE		
0	Gamma API	150
api		
6	Caliper	16
inches		
15K	Tension	0
pounds		
MD 1 : 240 ft		
3700		
3800		



3900

4000



15K	Tension	0	MD 1 : 240 ft		ITTT
6	Caliper	16		140	Delta-T
	inches				microsec per ft
0	Gamma API	150		30	Acou Porosity
	api				percent
SHALE					

HALLIBURTON

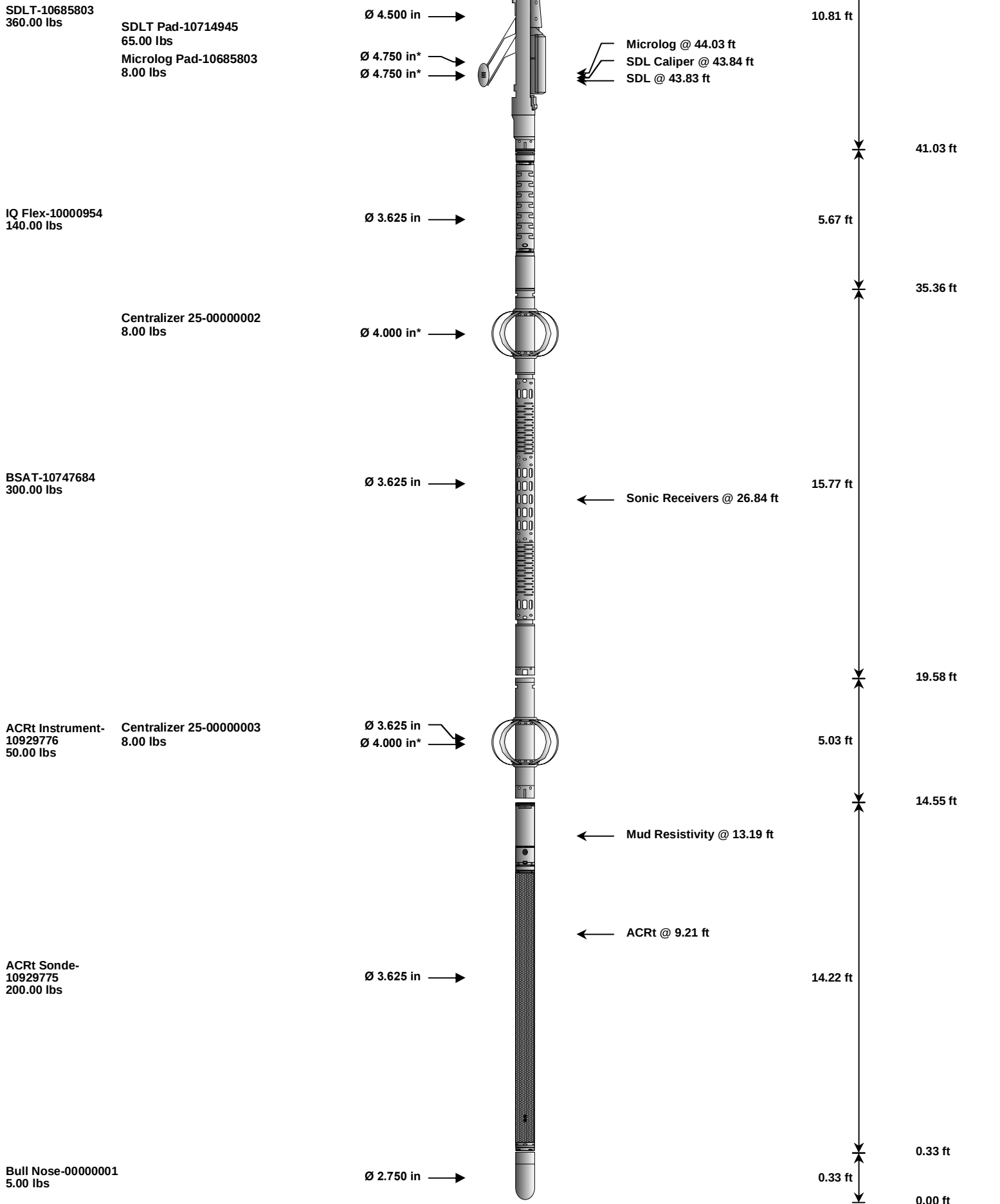
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Plot Range: 3700 ft to 4099.58 ft
Data: GANO_UNIT_1-36\Well Based\IR1 REPEAT\
Plot File: \\BSAT\BSAT_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-12027542 135.00 lbs		Ø 3.625 in →		← Load Cell @ 76.35 ft ← BH Temperature @ 75.79 ft	6.25 ft	80.04 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in →		← SP @ 72.01 ft	3.74 ft	73.79 ft
GTET-10748374 165.00 lbs		Ø 3.625 in →		← GammaRay @ 63.99 ft	8.52 ft	70.05 ft
DSN Decentralizer - Large Hole-00000001 6.60 lbs		Ø 5.000 in* →				61.53 ft
DSNT-10755066 174.00 lbs		Ø 3.625 in →		← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft	9.69 ft	51.84 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	12027542	135.00	6.25	73.79	300.00

SP	SP Sub	12345678	60.00	3.74	70.05	300.00
GTET	Gamma Telemetry Tool	10748374	165.00	8.52	61.53	60.00
DSNT	Dual Spaced Neutron	10755066	174.00	9.69	51.84	60.00
DCNT	DSN Decentralizer Large Hole	00000001	6.60	9.42	*	55.17
SDLT	Spectral Density Tool	10685803	360.00	10.81	41.03	60.00
MICP	Microlog Pad	10685803	8.00	1.00	*	43.53
SDLP	Density Insite Pad	10714945	65.00	2.55	*	43.24
IQF	IQ Flex tool	10000954	140.00	5.67	35.36	300.00
BSAT	Borehole Sonic Array Tool	10747684	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	00000002	8.00	2.08	*	32.51
ACRt	Array Compensated True Resistivity Instrument Section	10929776	50.00	5.03	14.55	300.00
OBCEN	Centralizer - 25 in. Overbody	00000003	8.00	2.08	*	15.87
ACRt	Array Compensated True Resistivity Sonde Section	10929775	200.00	14.22	0.33	300.00
BLNS	Bull Nose	00000001	5.00	0.33	0.00	300.00
Total			1,684.60	80.04		
* Not included in Total Length and Length Accumulation.						
Data: GANO_UNIT_1-36I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNIDLE						
Date: 01-Oct-13 01:25:18						

HALLIBURTON						
PARAMETERS REPORT						
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units	
TOP						
	GTET	GEOK	Process Gamma Ray EVR?	No		
	DSNT	DEOK	Process DSN EVR?	No		
	SDLT Pad	DNOK	Process Density EVR?	No		
3400.00						
	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	1.000	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	ST	Surface Temperature	75.0	degF	
	SHARED	TD	Total Well Depth	4100.00	ft	
	SHARED	BHT	Bottom Hole Temperature	120.0	degF	
	SHARED	SVTM	Navigation and Survey Master Tool	NONE		
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET		
	SHARED	TEMM	Temperature Master Tool	NONE		
	SHARED	BHSM	Borehole Size Master Tool	NONE		
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes		
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic		
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200		
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500		
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm	

Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	Yes	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	Yes	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	Yes	
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
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt 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	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
BOTTOM				
Data: GANO_UNIT_1-36I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNl004 01-Oct-13 03:32 Up @4100.3f				Date: 01-Oct-13 05:02:33

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION				
Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Aug-13 14:20:06	
Engineer:	THOMAS HYDE	Calibration Date:	03-Sep-13 10:36:47	

Software Version: WL INSITE R3.8.4 (Build 5)		Calibration Version: 1		
Calibrator Source S/N: TB-185				
Calibrator API Reference:228.00 api				
Equivalent Calibrator API Reference:232.0 api				
	Measurement	Measured	Calibrated	Units
	Background	44.2	44.4	api
	Background + Calibrator	275.0	276.4	api
	Calibrator	230.8	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION				
Tool Name:	GTET - 10748374	Reference Calibration Date:	03-Sep-13 10:36:47	
Engineer:	S. INGERSOLL	Calibration Date:	30-Sep-13 20:11:26	
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1	
Calibrator Source S/N: TB-185				
Calibrator API Reference:228.00 api				
Equivalent Calibrator API Reference:232.0 api				
	Field Verification	Shop	Field	Units
	Background	44.4	66.4	api
	Background + Calibrator	276.4	298.2	api
	Calibrator	232.0	231.8	api
	Shop	Field	Difference	Tolerance
	232.0	231.8	0.2	+/- 9.00

DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - 10685803	Reference Calibration Date:	07-Aug-13 16:03:28
Engineer:	THOMAS HYDE	Calibration Date:	05-Sep-13 09:46:41
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	DSNT - 10755066		

	CALIBRATION COEFFICIENTS				
	Measurement	Previous Value	New Value	Control Limit On New Value	
	Pad Offset	-4540.73	-5035.21	-7000.00 - -1000.00	
	Pad Gain	0.0003893	0.0004015	0.000200 - 0.000600	
	Arm Offset	-2828.82	-2028.23	-5000.00 - 3000.00	
	Arm Gain	0.0005533	0.0005309	0.000300 - 0.000700	
	Arm Power	-0.000007296	-0.000006519	-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)	2.13	2.00	-0.13	+/- 0.20
	Medium Ring (in)	3.83	3.75	-0.08	+/- 0.20
	RING DIAMETER:				
	Small Ring (in)	6.36	6.50	0.14	+/- 0.20
	Medium Ring (in)	8.19	8.25	0.06	+/- 0.20
	Large Ring (in)	15.10	15.00	-0.10	+/- 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 - 10685803		Reference Calibration Date: 05-Sep-13 09:46:41	
Engineer:		S. INGERSOLL		Calibration Date: 30-Sep-13 20:18:00	
Software Version:		WL INSITE R3.8.4 (Build 5)		Calibration Version: 1	

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.66	-0.09	+/- 0.10
Ring Diameter	8.25	8.34	0.09	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	231.8	-----	0.2	+/- 9.00	api
SDLT-10685803						
Pad Extension	3.75	3.66	-----	0.09	+/-0.10	in
Ring Diameter	8.25	8.34	-----	-0.09	+/-0.15	in

Data: GANO_UNIT_1-36I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BN1004 01-Oct-13 03:32 Up @4100.3f					Date: 01-Oct-13 05:05:28	
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HALLIBURTON						
INPUTS, DELAYS AND FILTERS TABLE						

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
RWCH				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	72.01	NO	
SP	Spontaneous Potential	72.01	BLK	1.250
SPR	Raw Spontaneous Potential	72.01	NO	
SPO	Spontaneous Potential Offset	72.01	NO	
GTET				
TPUL	Tension Pull	63.99	NO	
GR	Natural Gamma Ray API	63.99	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	63.99	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	63.99	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	

DSNT				
TPUL	Tension Pull	53.74	NO	
RNDS	Near Detector Telemetry Counts	53.84	BLK	1.417
RFDS	Far Detector Telemetry Counts	54.59	TRI	0.583
DNTT	DSN Tool Temperature	53.84	NO	
DSNS	DSN Tool Status	53.74	NO	
ERND	Near Detector Telemetry Counts EVR	53.84	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	54.59	BLK	0.000
ENTM	DSN Tool Temperature EVR	53.84	NO	
SDLT				
TPUL	Tension Pull	43.84	NO	
PCAL	Pad Caliper	43.84	TRI	0.250
ACAL	Arm Caliper	43.84	TRI	0.250
BSAT				
TPUL	Tension Pull	26.84	NO	
STAT	Status	26.84	NO	
DLYT	Delay Time	26.84	NO	
SI	Sample Interval	26.84	NO	
TXRX	Raw Telemetry 10 Receivers	26.84	NO	
FRMC	Tool Frame Count	26.84	NO	
GMOD	Gain processing mode	19.58	NO	
ACRt Sonde				
TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000

F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Current Raw 12K X Receiver	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	

SDLT Pad				
TPUL	Tension Pull	43.83	NO	
NAB	Near Above	43.66	BLK	0.920
NHI	Near Cesium High	43.66	BLK	0.920
NLO	Near Cesium Low	43.66	BLK	0.920
NVA	Near Valley	43.66	BLK	0.920
NBA	Near Barite	43.66	BLK	0.920
NDE	Near Density	43.66	BLK	0.920
NPK	Near Peak	43.66	BLK	0.920
NLI	Near Lithology	43.66	BLK	0.920
NBAU	Near Barite Unfiltered	43.66	BLK	0.250
NLIU	Near Lithology Unfiltered	43.66	BLK	0.250
FAB	Far Above	44.01	BLK	0.250
FHI	Far Cesium High	44.01	BLK	0.250
FLO	Far Cesium Low	44.01	BLK	0.250
FVA	Far Valley	44.01	BLK	0.250
FBA	Far Barite	44.01	BLK	0.250
FDE	Far Density	44.01	BLK	0.250
FPK	Far Peak	44.01	BLK	0.250
FLI	Far Lithology	44.01	BLK	0.250
PTMP	Pad Temperature	43.84	BLK	0.920
NHV	Near Detector High Voltage	43.24	NO	
FHV	Far Detector High Voltage	43.24	NO	
ITMP	Instrument Temperature	43.24	NO	
DDHV	Detector High Voltage	43.24	NO	

Microlog Pad				
TPUL	Tension Pull	44.03	NO	
MINV	Microlog Lateral	44.03	BLK	0.750
MNOR	Microlog Normal	44.03	BLK	0.750

Data: GANO_UNIT_1-36I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BN\004 01-Oct-13 03:32 Up @4100.3f Date: 01-Oct-13 05:01:50

COMPANY	HARTMAN OIL CO., INC.
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WELL	GANO UNIT #1-36		
FIELD	WILDCAT		
COUNTY	GRAHAM	STATE	KANSAS
HALLIBURTON		BOREHOLE COMPENSATED SONIC ARRAY LOG	