

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

HALLIBURTON										ARRAY COMPENSATED TRUE RESISTIVITY LOG									
COMPANY					VAL ENERGY INC.					COMPANY					VAL ENERGY INC.				
WELL					MILLS 1-29					WELL					MILLS 1-29				
FIELD					UNKNOWN					FIELD					UNKNOWN				
COUNTY					BARBER					COUNTY					BARBER				
STATE					KANSAS					COUNTY					BARBER				
STATE					KANSAS					STATE					KANSAS				
Permanent Datum					GL					API No. 15-007-23841					Other Services: DSNT/SDLT ML MRIL				
Log measured from					KB					Location 485' FSL& 1410' FWL									
Drilling measured from					KB														
Date					19-Mar-12					Sect. 29					Twp. 31S				
Run No.					ONE					Rge. 13W									
Depth - Driller					4620.00 ft														
Depth - Logger					4616.0 ft														
Bottom - Logged Interval					4607 ft														
Top - Logged Interval					223 ft														
Casing - Driller					8.625 in @ 224.0 ft														
Casing - Logger					223.0 ft														
Bit Size					7.875 in														
Type Fluid in Hole					WATER BASED MUD														
Density					9.2 ppg					55.00 s/qt									
PH					11.00 pH					8.8 cpm									
Source of Sample					FLOWLINE														
Rm @ Meas. Temperature					0.450 ohmm @ 95.00 degF														
Rmf @ Meas. Temperature					0.30 ohmm @ 85.00 degF														
Rmc @ Meas. Temperature					0.500 ohmm @ 85.00 degF														
Source Rmf					MEASURED					MEASURED									
Rm @ BHT					0.36 ohmm @ 120.0 degF														
Time Since Circulation					3.8 hr														
Time on Bottom					19-Mar-12 20:41														
Max. Rec. Temperature					120.0 degF @ 4614.0 ft														
Equipment					10782954					LIBERAL									
Recorded By					C. MARLOWE														
Witnessed By					Z. STEWART														

Fold here

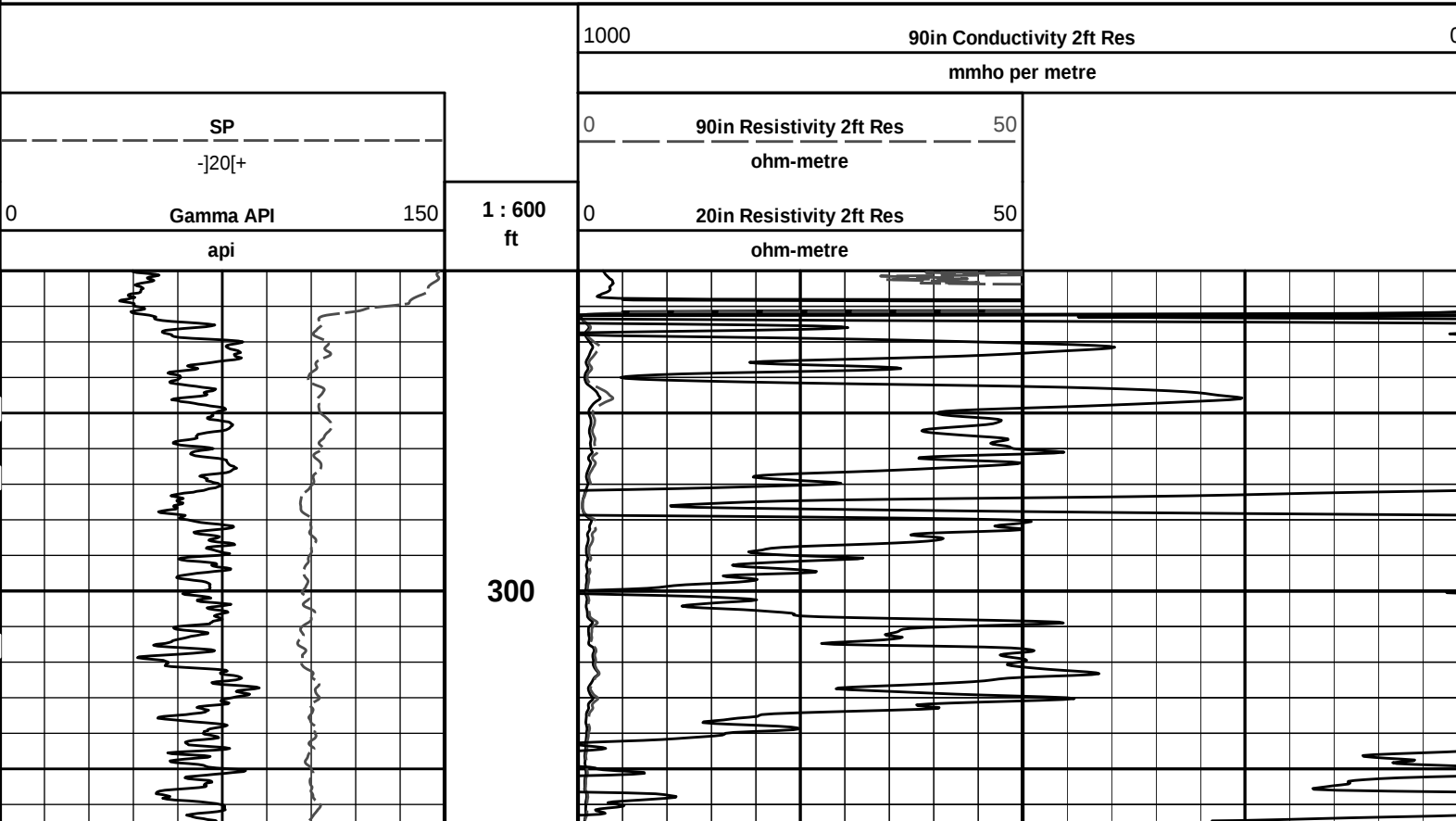
Service Ticket No.: 9369957						API Serial No.: 15-007-23841						PGM Version: WL INSITE R3.4.2 (Build 2)																	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES																	
Date		Sample No.										Type Log		Depth		Scale Up Hole		Scale Down Hole											
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.				@				@				ONE		ACRT		N/A		1.5" S.O.		N/A									
Rmc @ Meas. Temp.				@				@						I776_S775															
Source Rmf		Rmc																											
Rm @ BHT				@				@																					
Rmf @ BHT				@				@																					
Rmc @ BHT				@				@																					
EQUIPMENT DATA																													
GAMMA						ACOUSTIC						DENSITY						NEUTRON											
Run No.		ONE				Run No.						Run No.						Run No.											
Serial No.		10811258				Serial No.						Serial No.						Serial No.											
Model No.		GTET				Model No.						Model No.						Model No.											
Diameter		3.625				No. of Cent.						Diameter						Diameter											
Detector Model No.		T-102				Spacing						Log Type						Log Type											
Type		SCINT										Source Type						Source Type											
Length		8"				LSA [Y/N]						Serial No.						Serial No.											
Distance to Source		10'				FWDA [Y/N]						Strength						Strength											
LOGGING DATA																													
GENERAL						GAMMA						ACOUSTIC						DENSITY						NEUTRON					

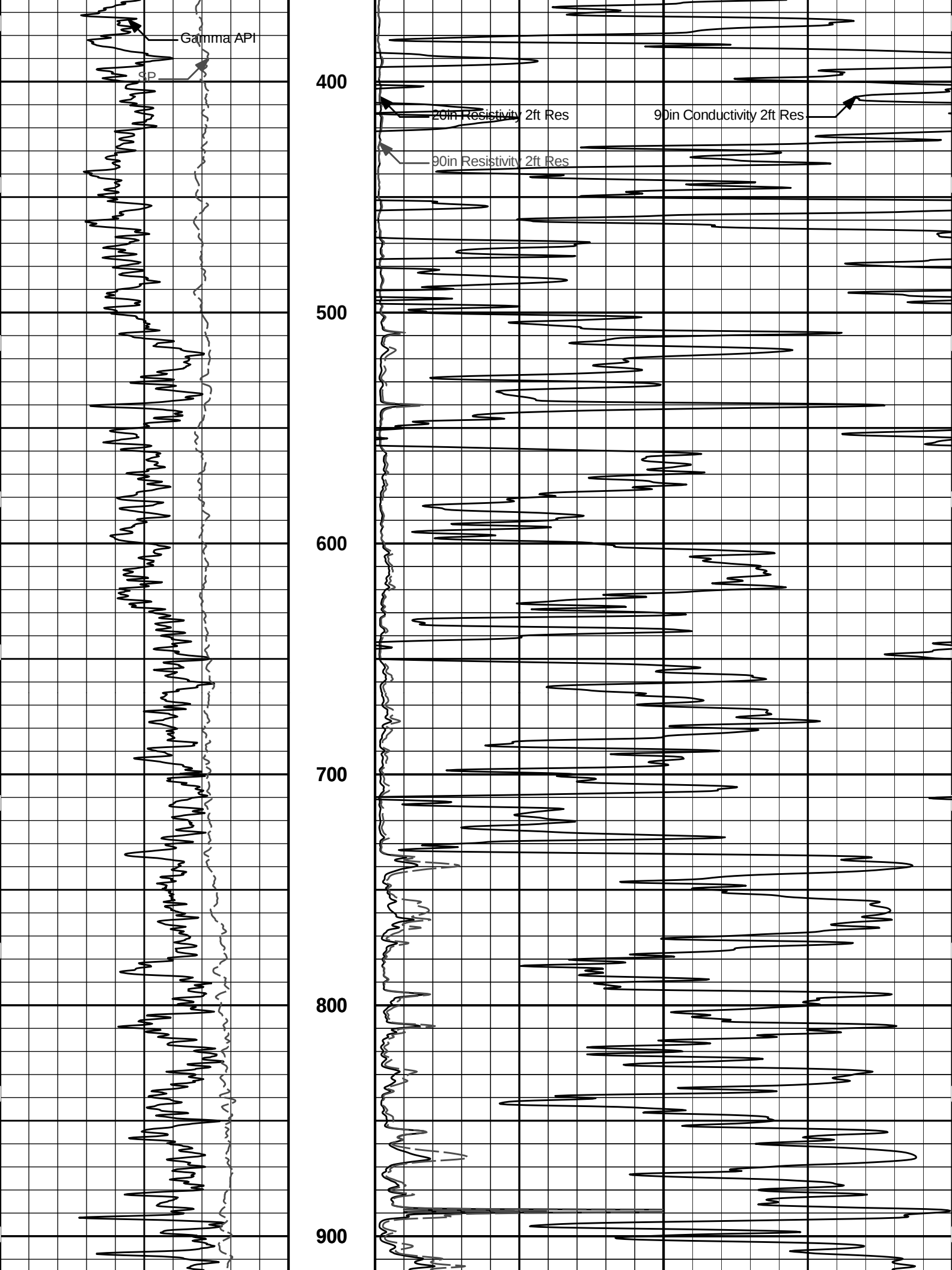
GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	CSG	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: SP-GTET-DSNT-SDLT-ACRT RUN IN COMBINATION														
ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING														
CHLORIDES REPORTED AT 5000 PPM														
POST JOB TOOL VERIFICATIONS NOT DONE AT CUSTOMER REQUEST														
TODAY'S CREW: F. VILLA, P. COBLE														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES: LIBERAL, KS 620-624-8123														
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.														
HALLIBURTON														

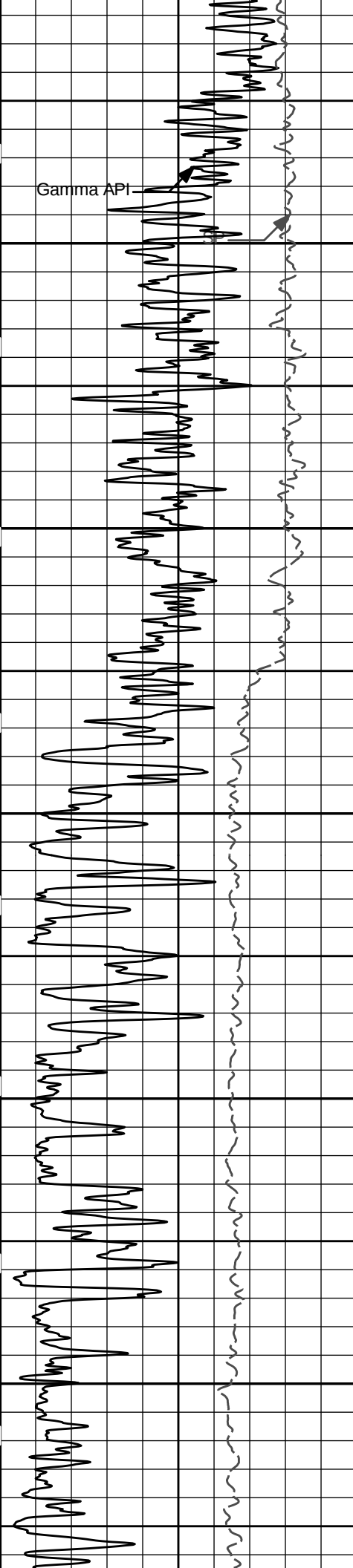
HALLIBURTON

Plot Time: 19-Mar-12 22:09:14
Plot Range: 210 ft to 4621 ft
Data: MILLS_1_29\Well Based\CASING\
Plot File: \\LOCAL-IMILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_2_lib

2 INCH MAIN LOG







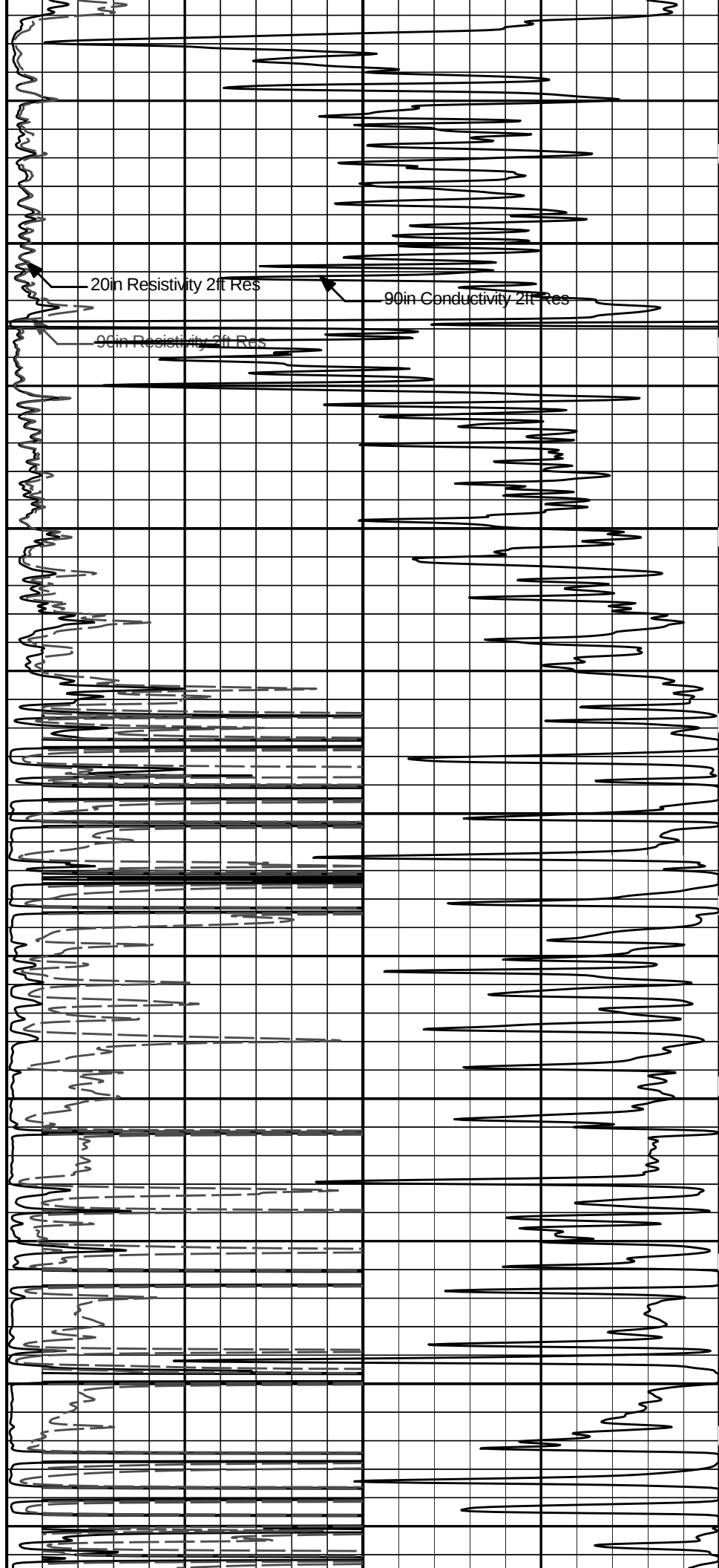
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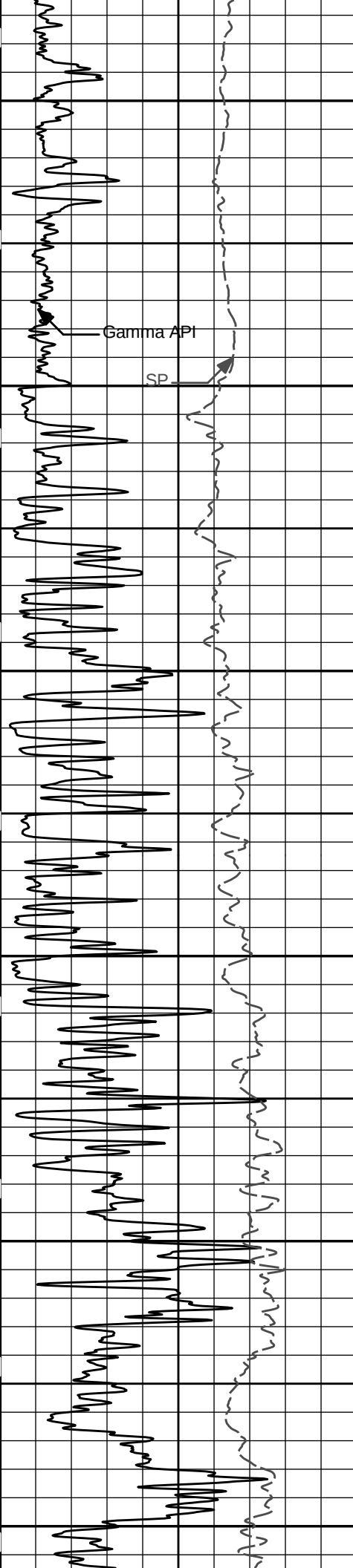
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1200

1300

1400





1500

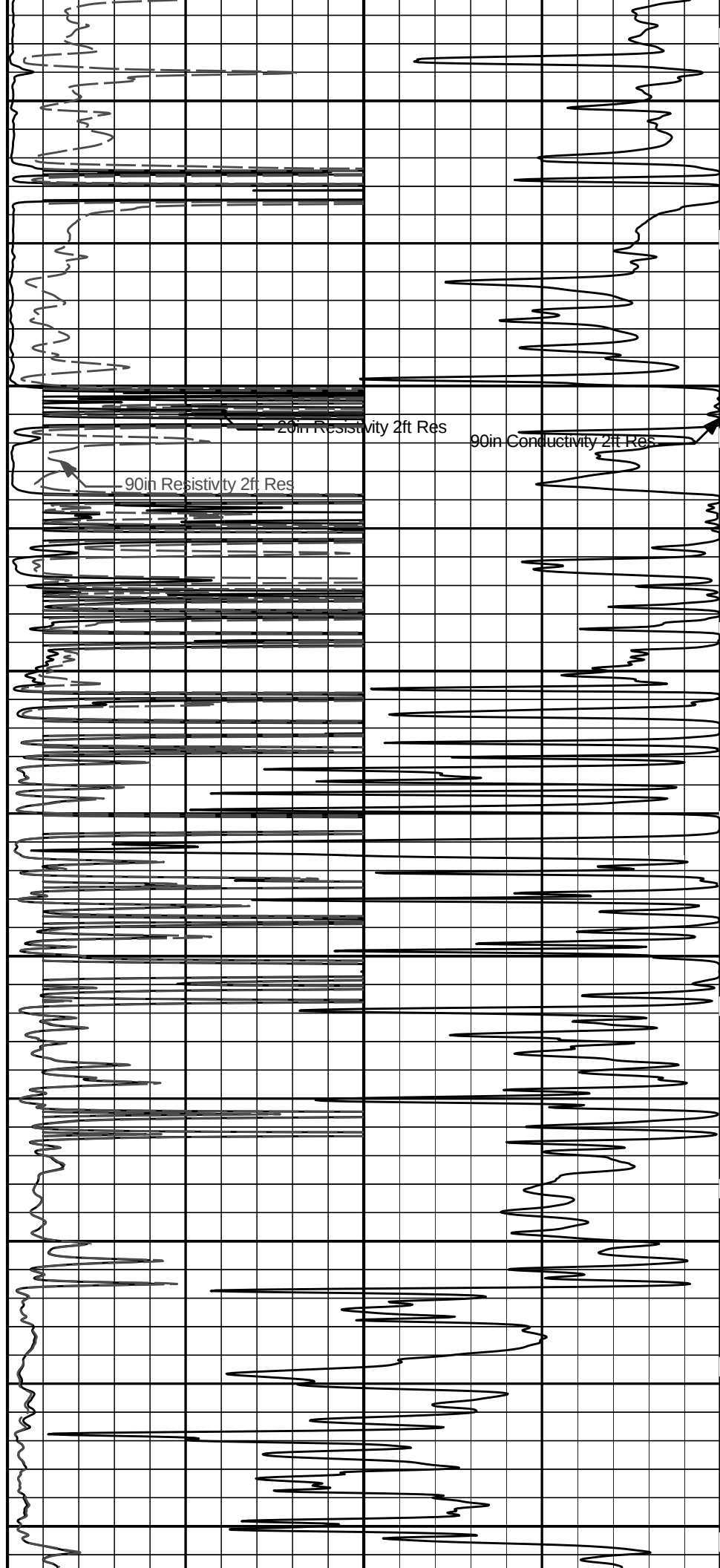
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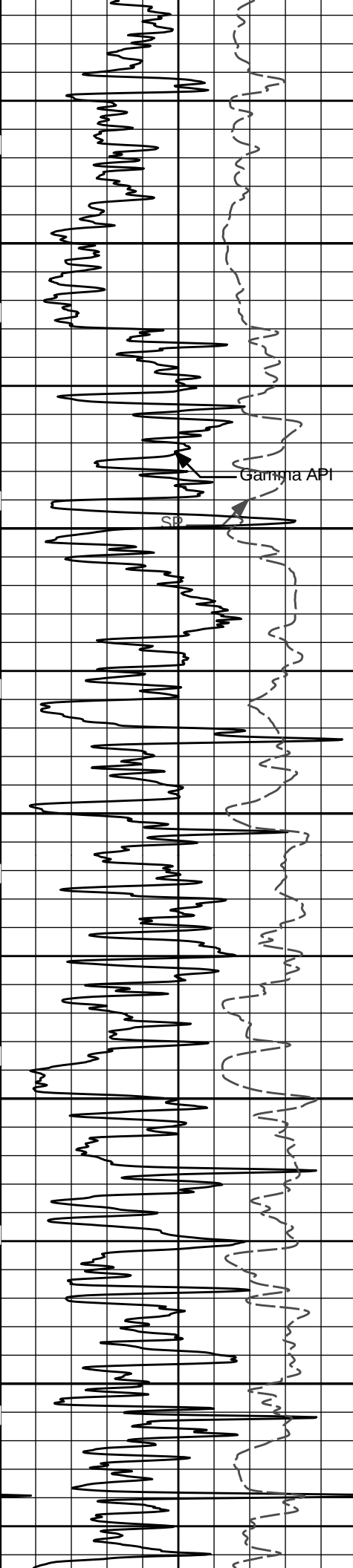
1700

1800

1900

2000





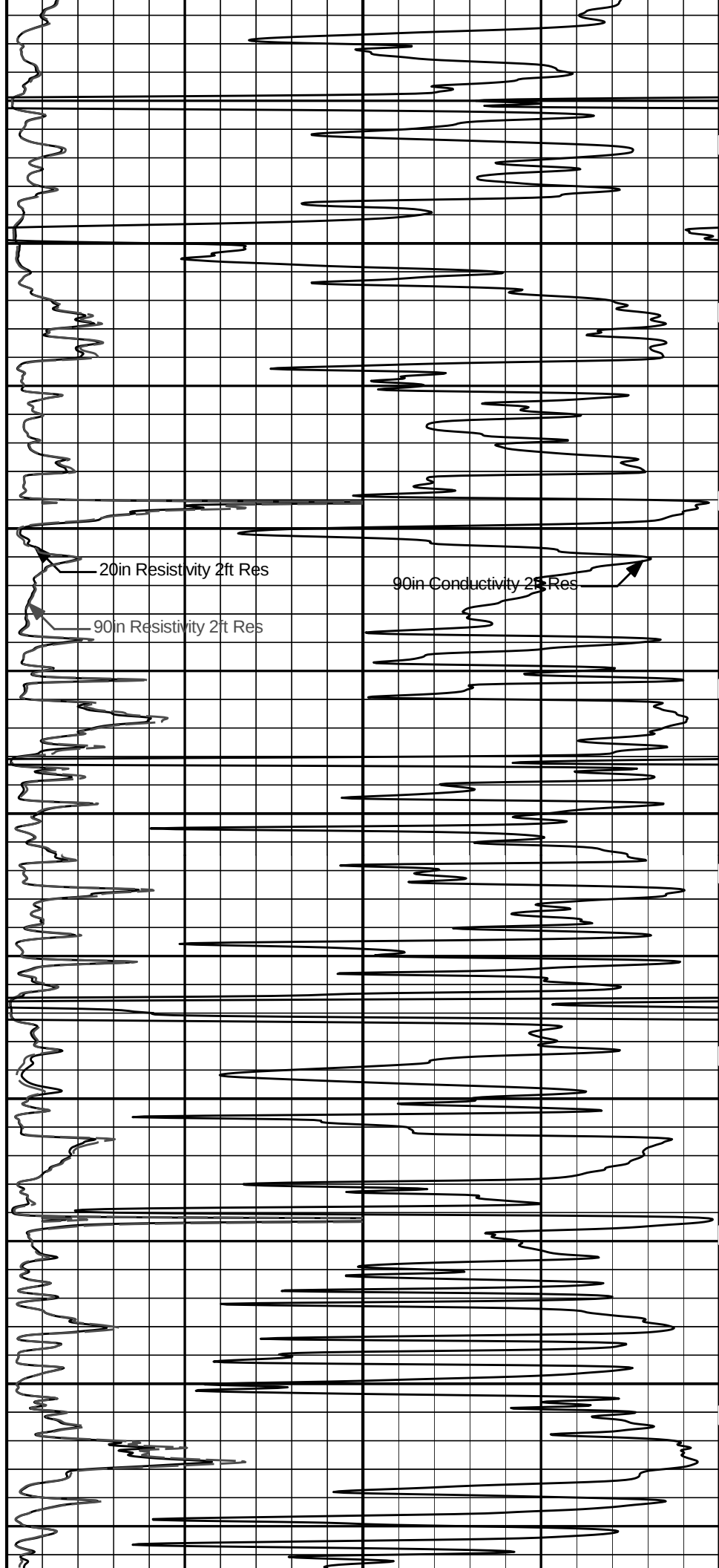
2100

2200

2300

2400

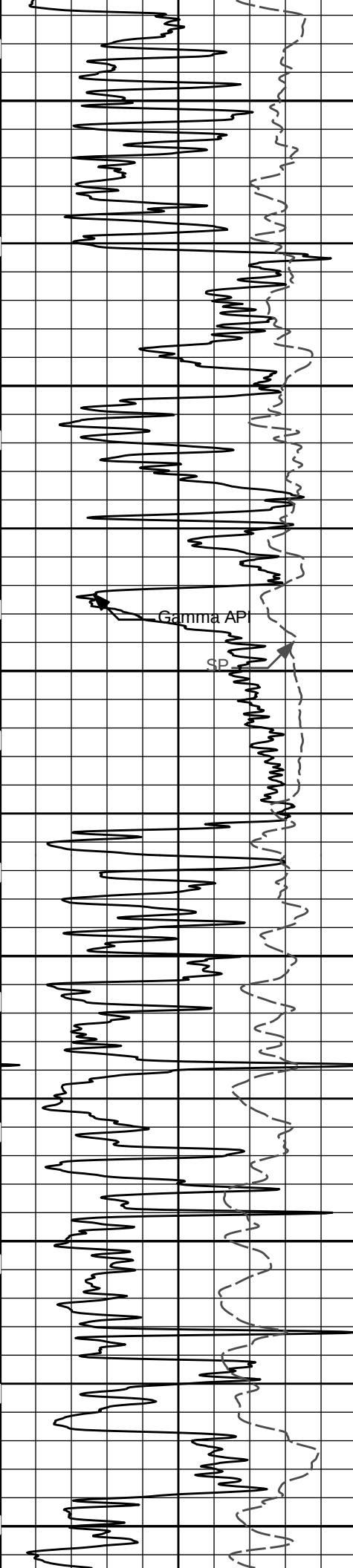
2500



20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



2600

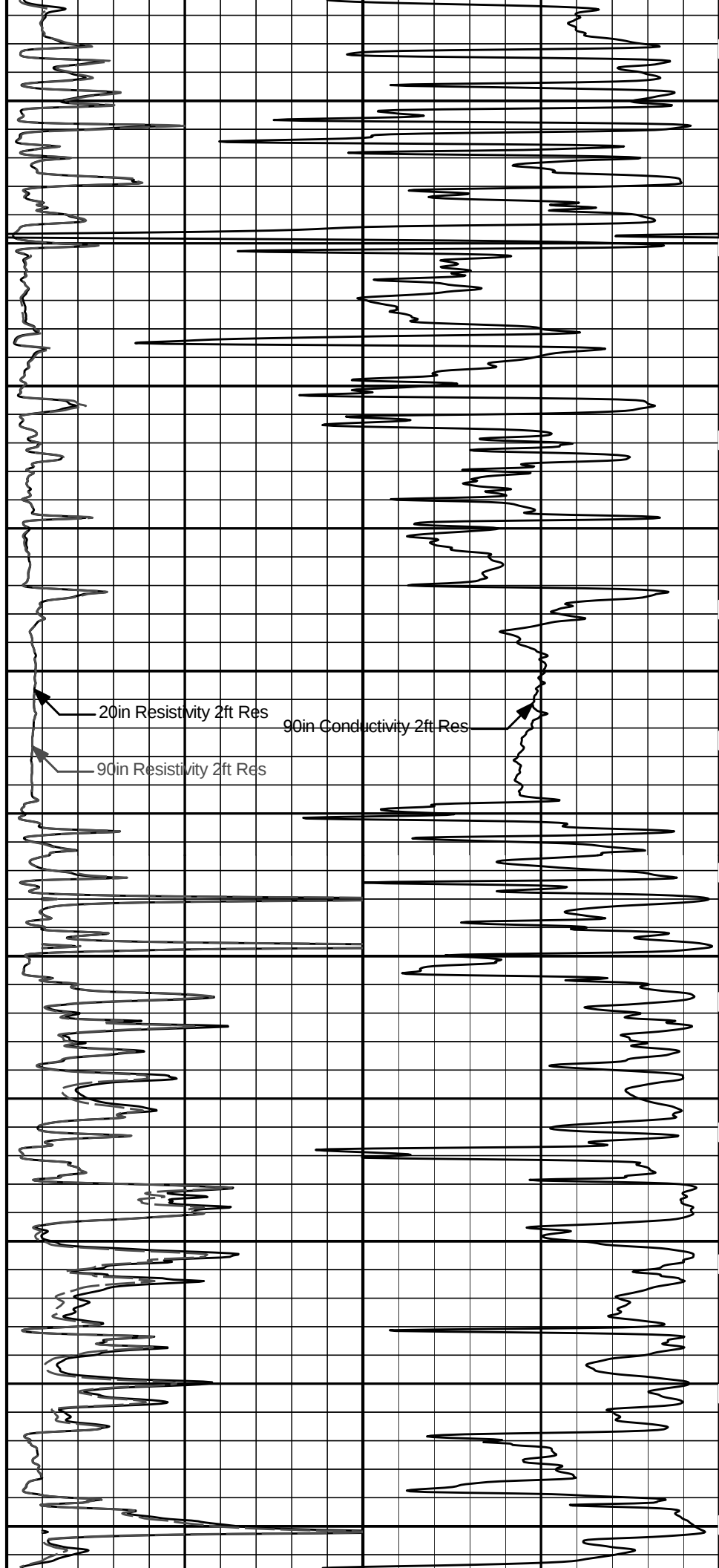
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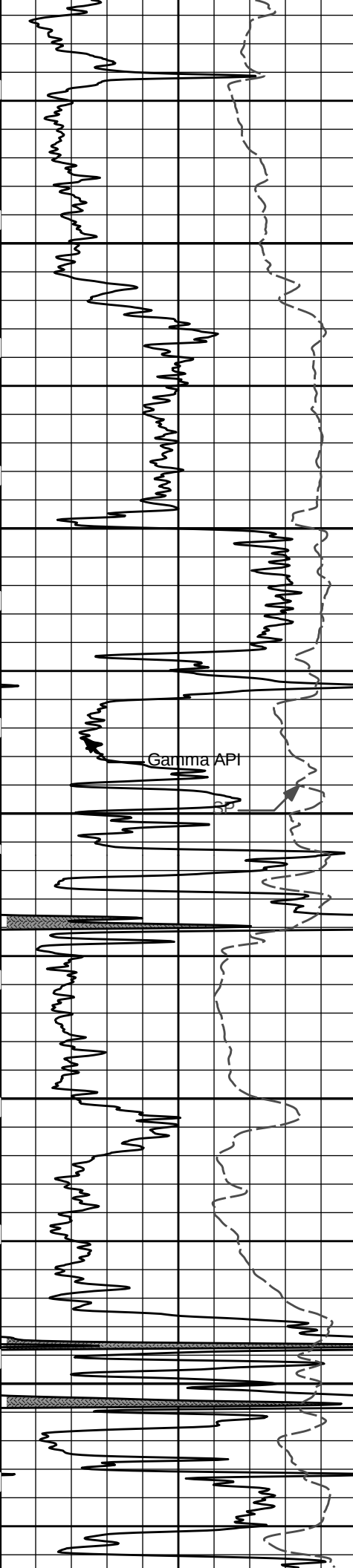
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2900

3000

3100





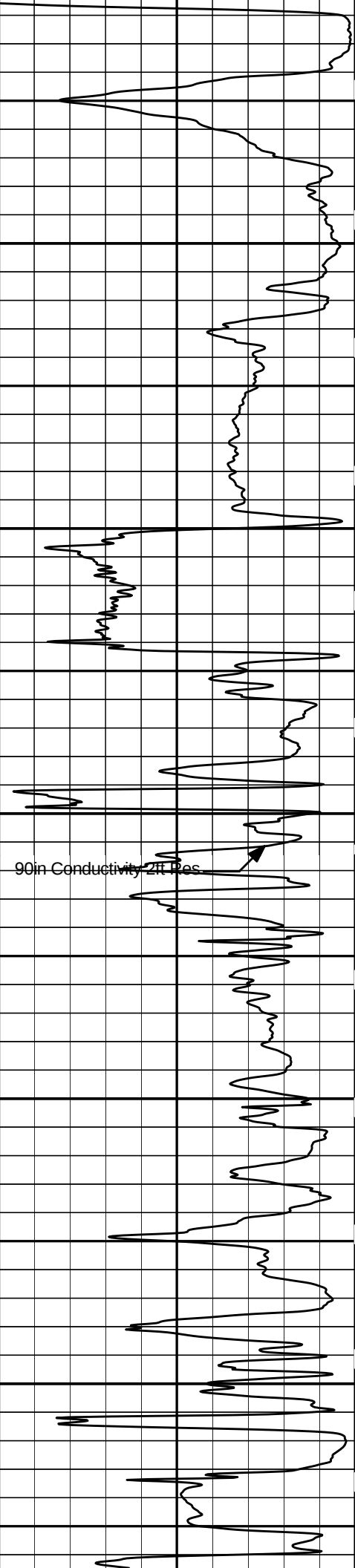
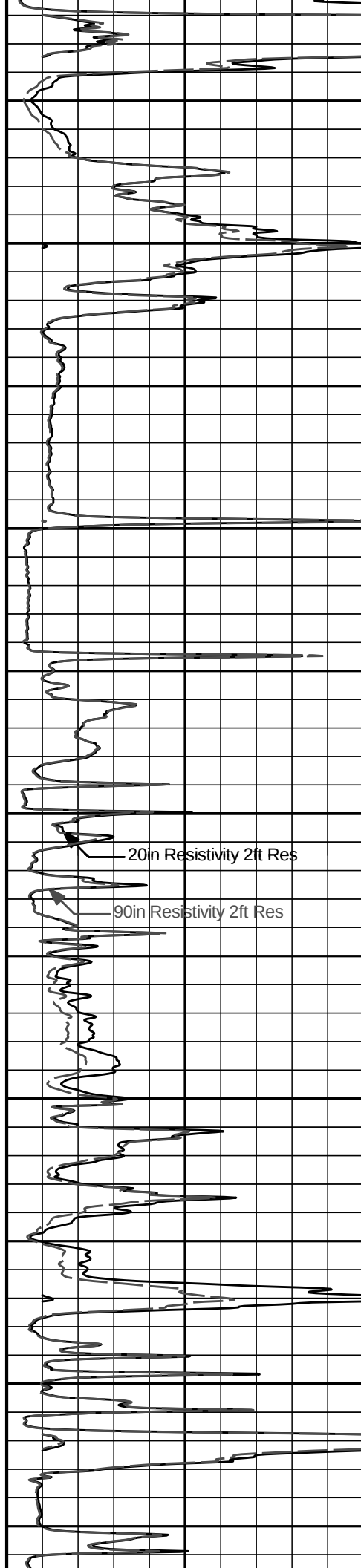
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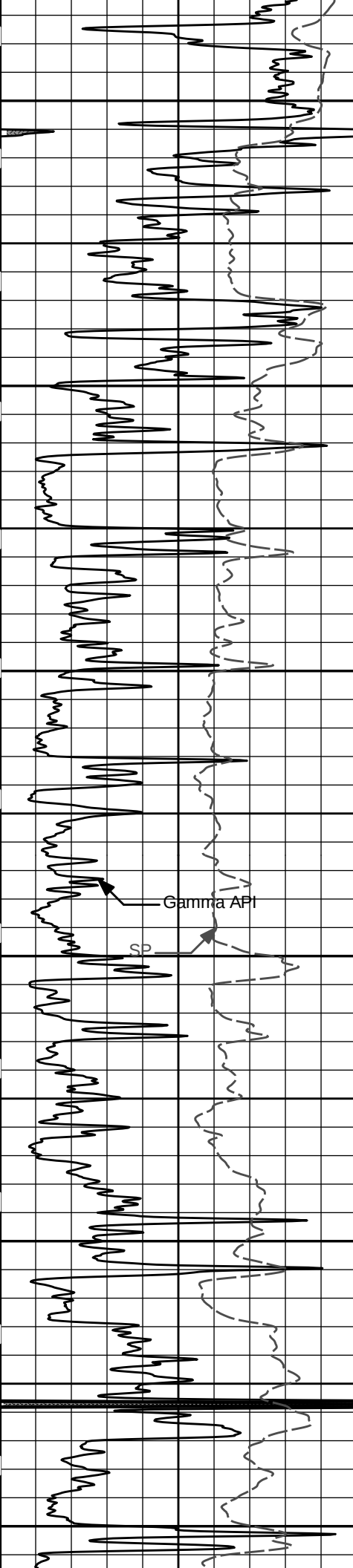
3300

3400

3500

3600





3700

3800

3900

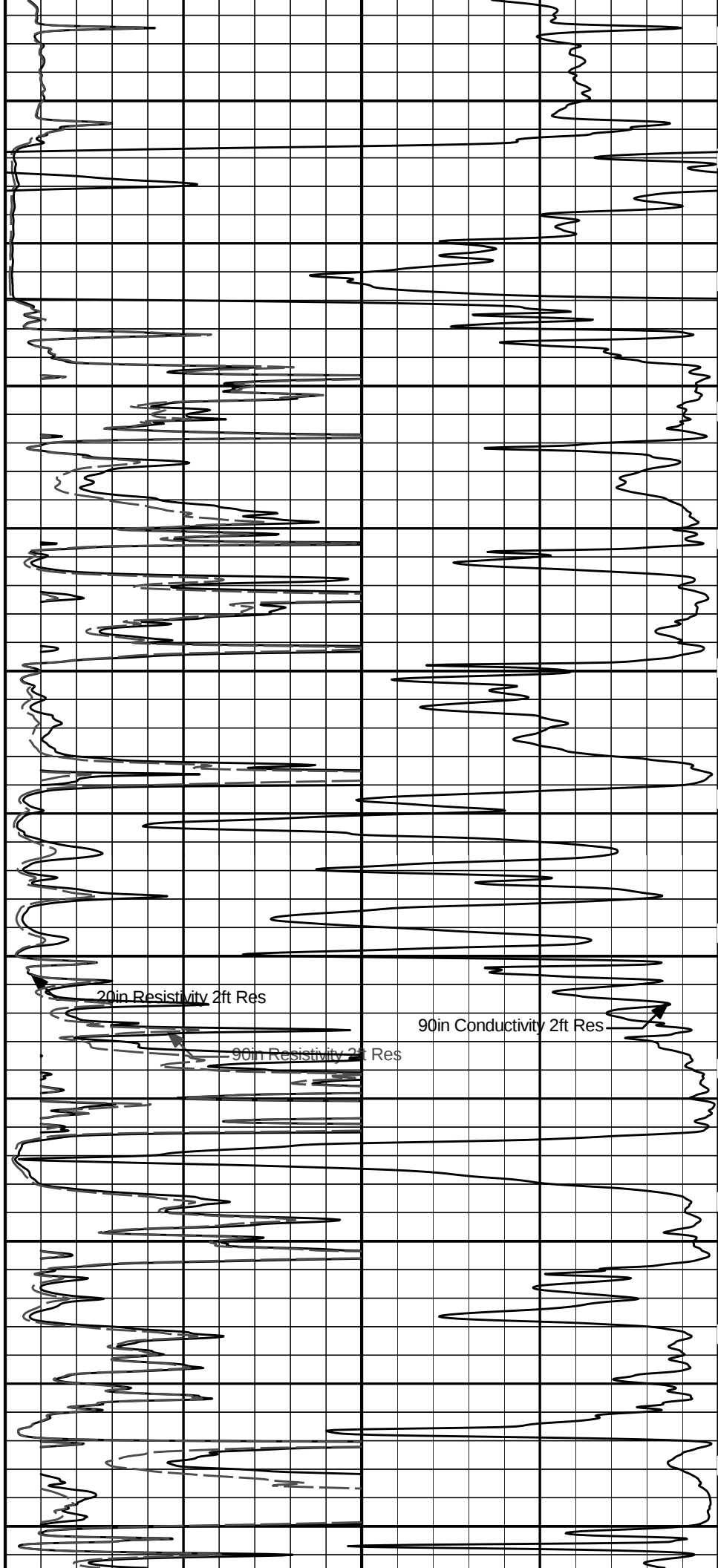
4000

4100

4200

Gamma API

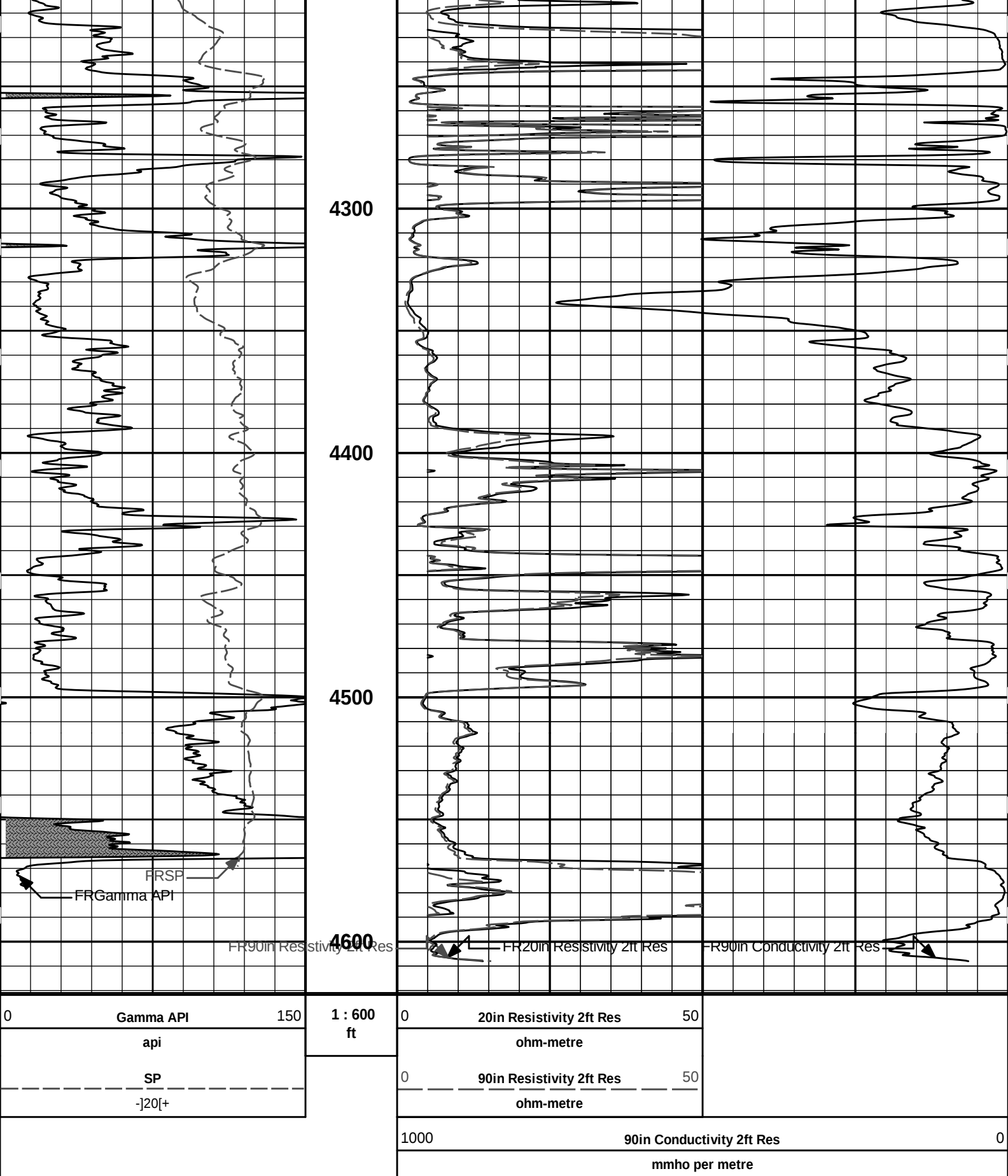
20in Resistivity 2ft Res



20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res

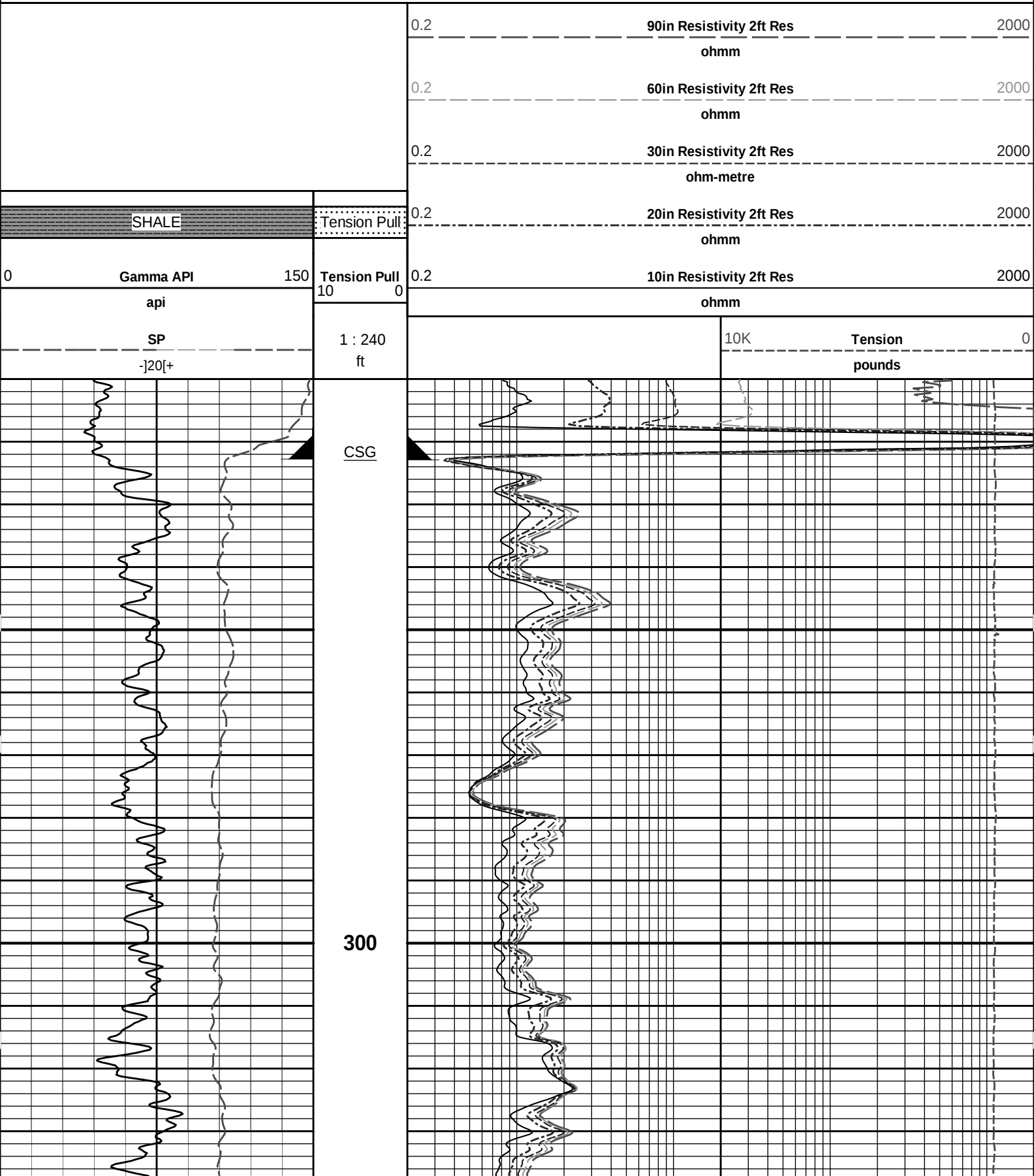


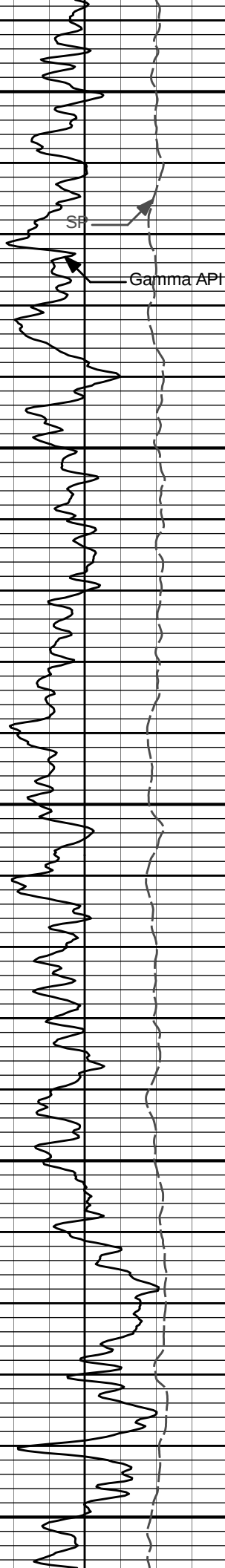
HALLIBURTON

Plot Time: 19-Mar-12 22:09:56
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Data: MILLS_1_29\Well Based\CASING\
Plot File: \\-LOCAL-MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CHIACRT\ACRT_2_lib

2 INCH MAIN LOG

5 INCH MAIN LOG



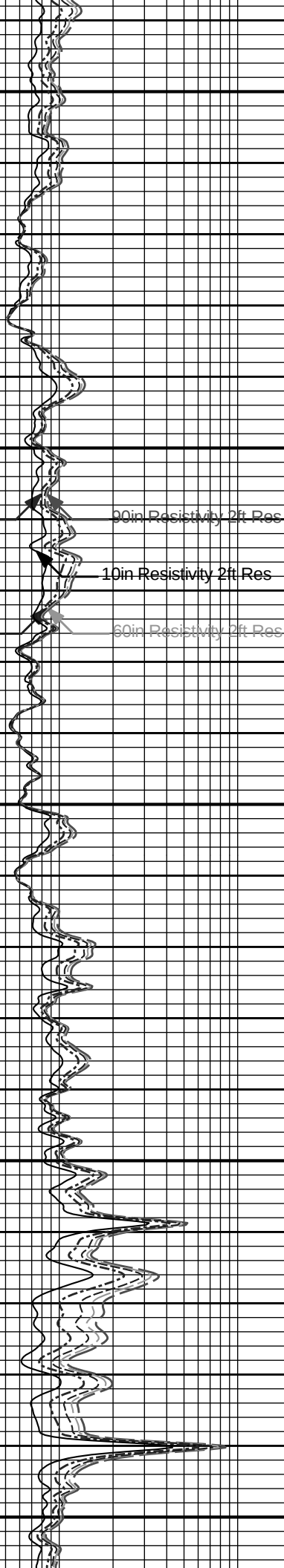


400

20in Resistivity 2ft Res

30in Resistivity 2ft Res

500



90in Resistivity 2ft Res

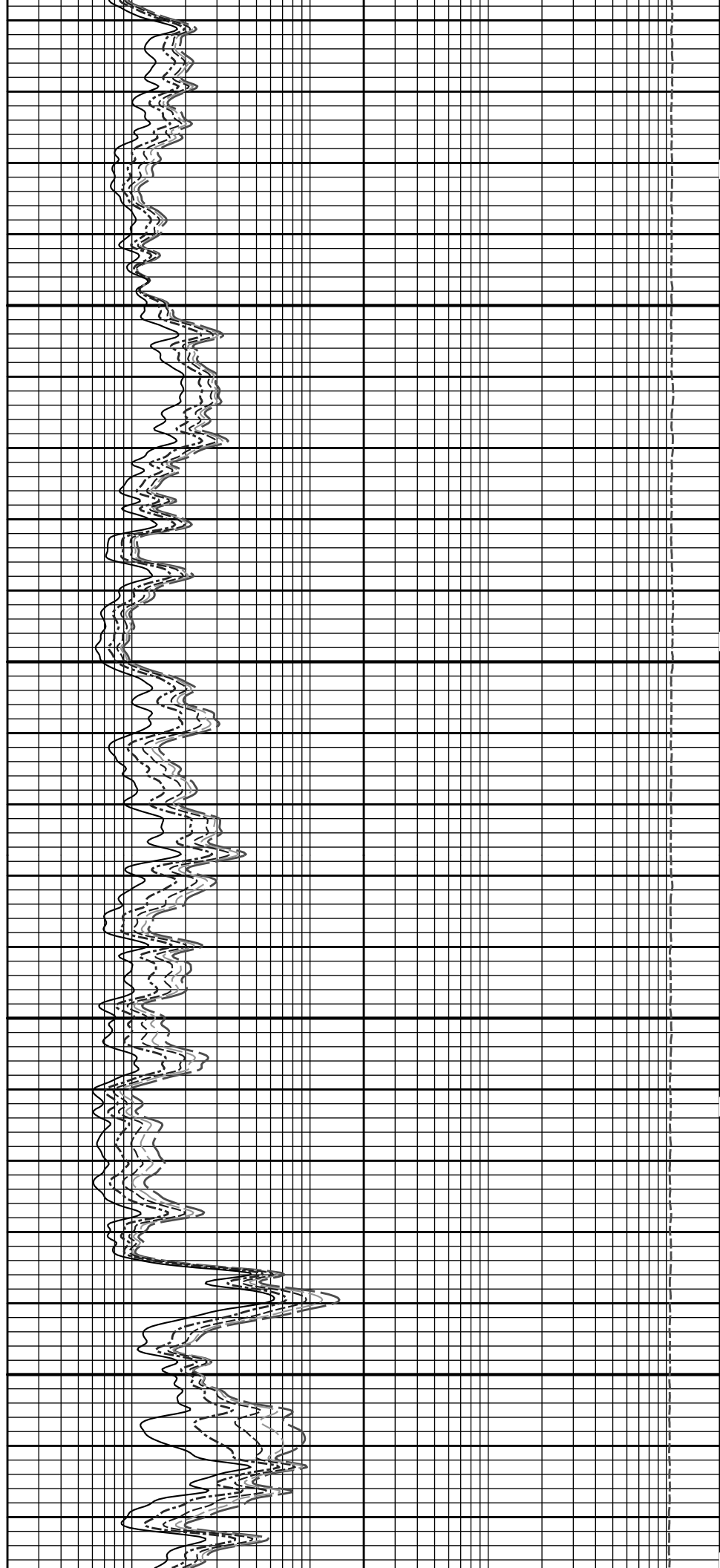
10in Resistivity 2ft Res

60in Resistivity 2ft Res



600

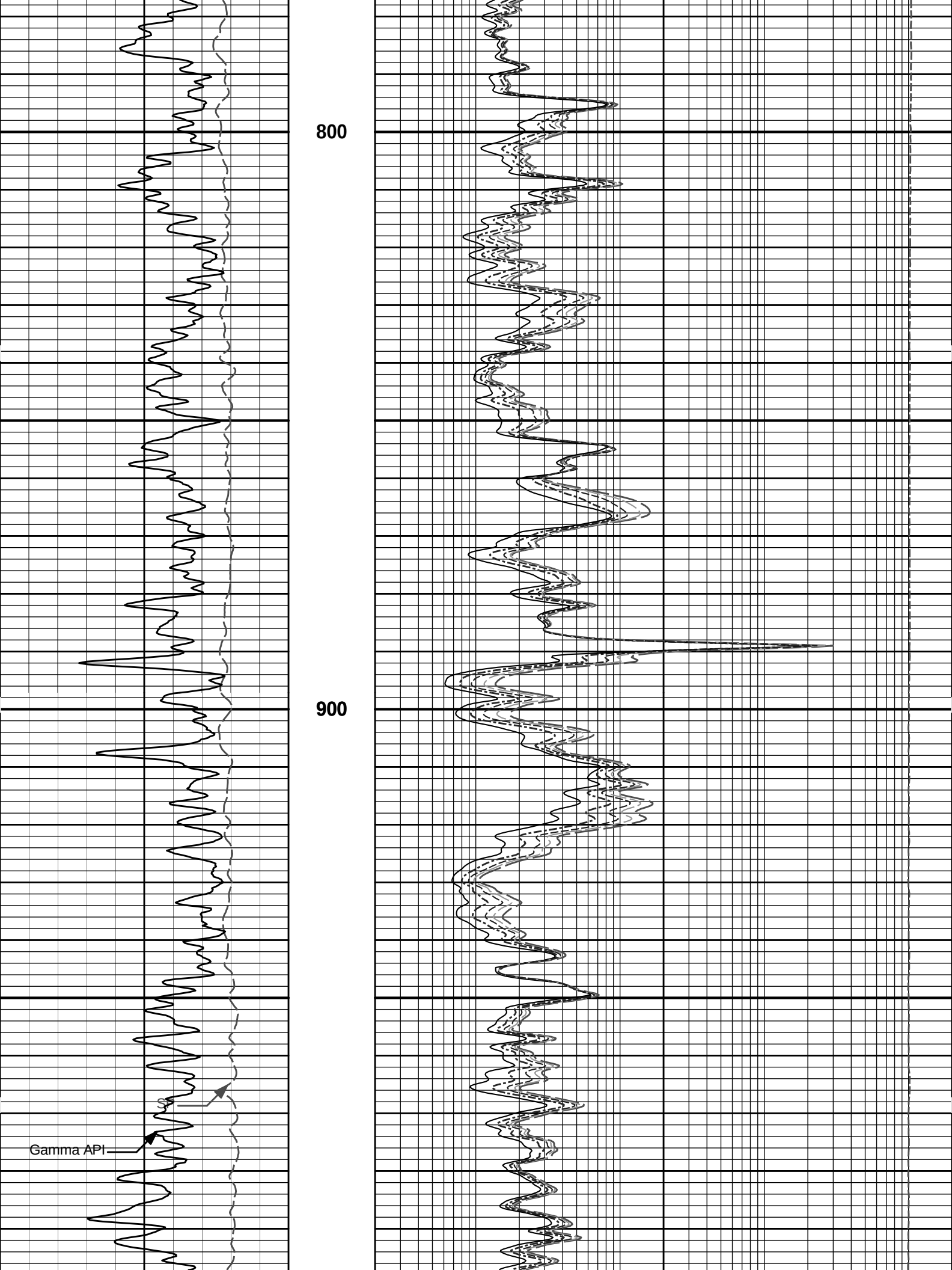
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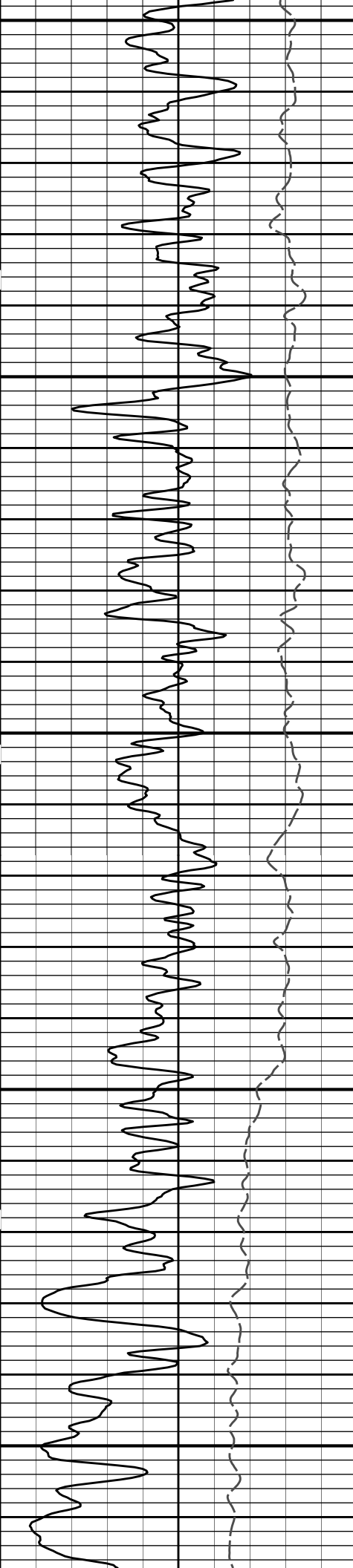


Gamma API

800

900





1000

20in Resistivity 2ft Res

60in Resistivity 2ft Res

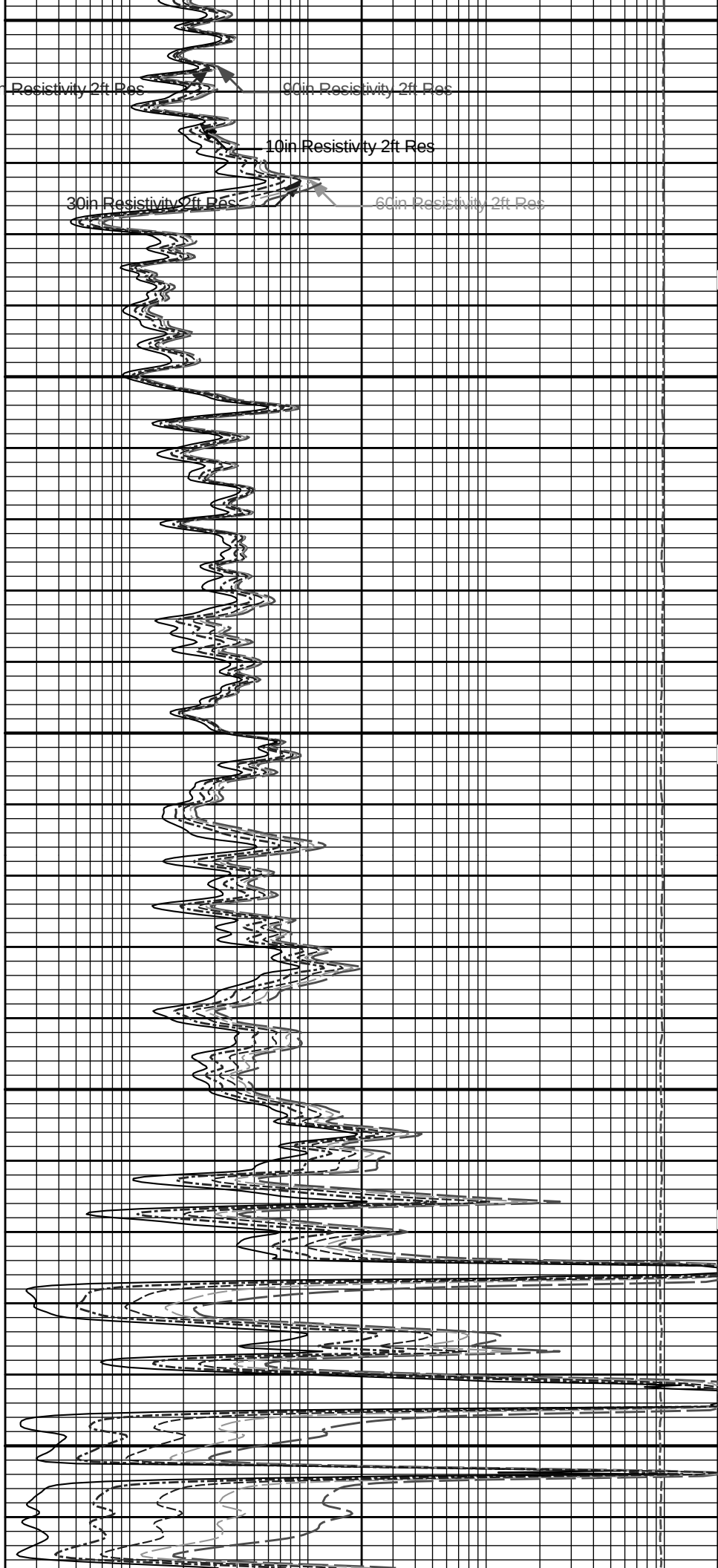
10in Resistivity 2ft Res

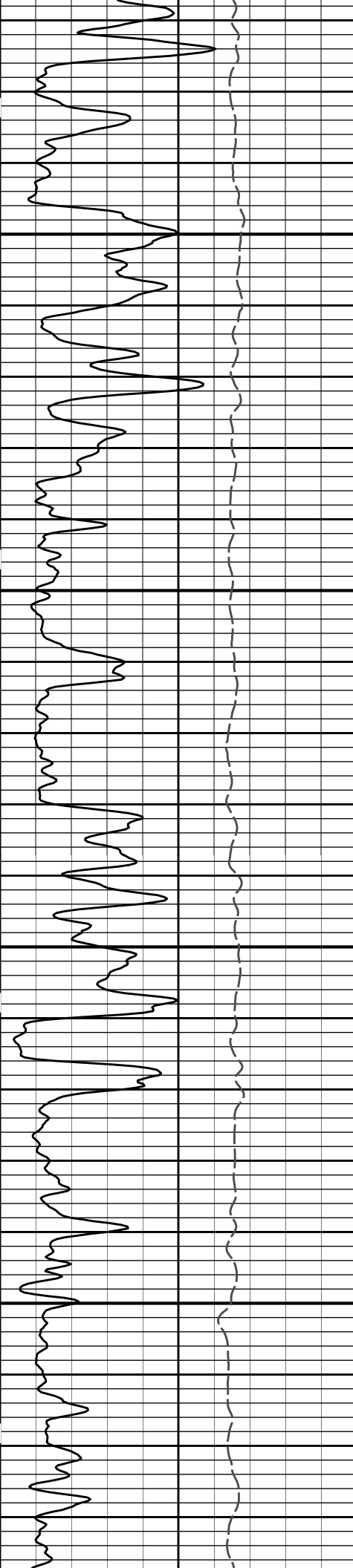
30in Resistivity 2ft Res

60in Resistivity 2ft Res

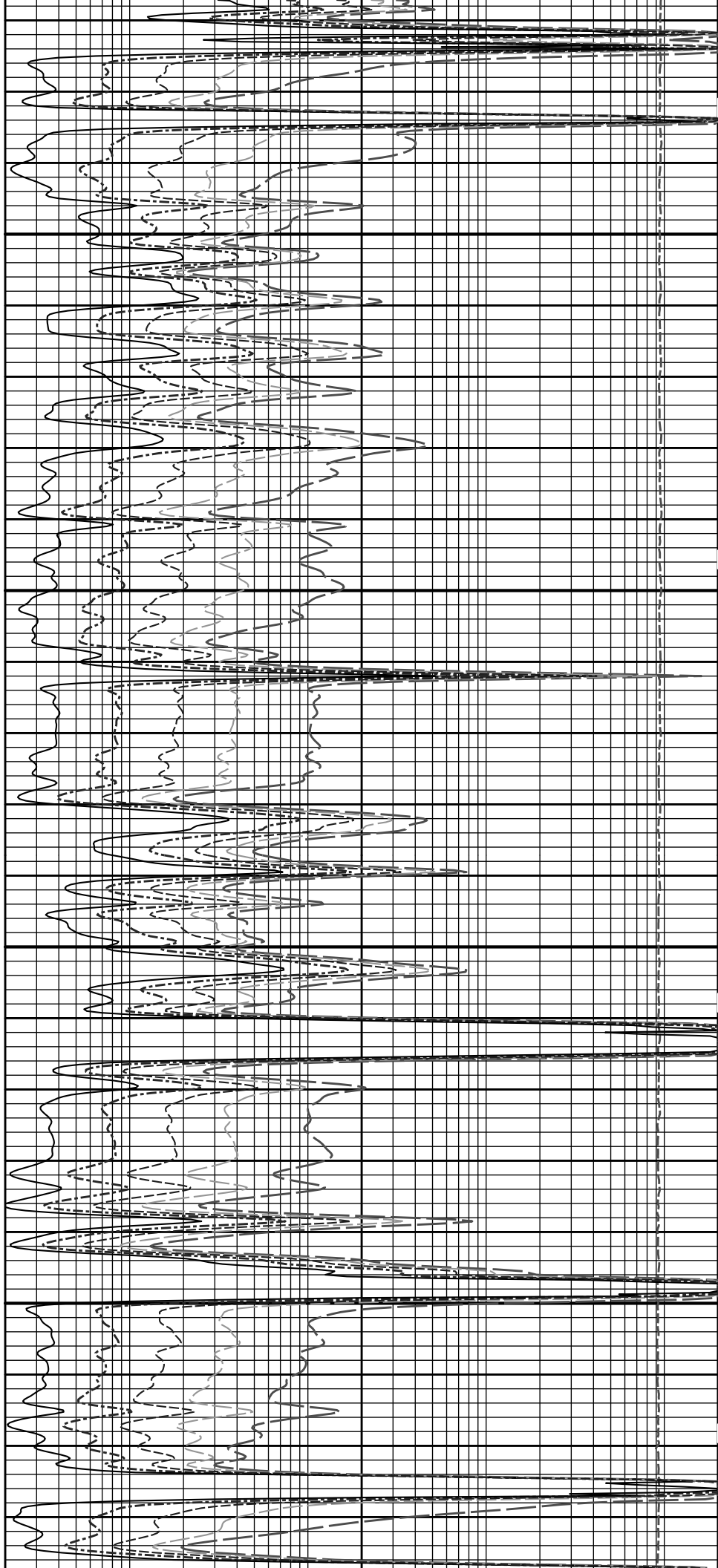
1100

1200

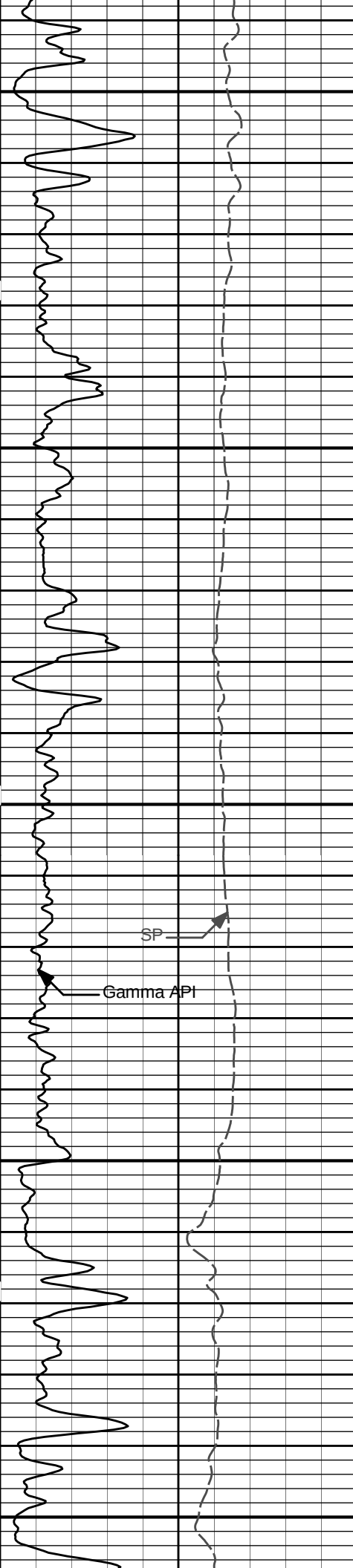




1300



1400



1500

SP

Gamma API

1600

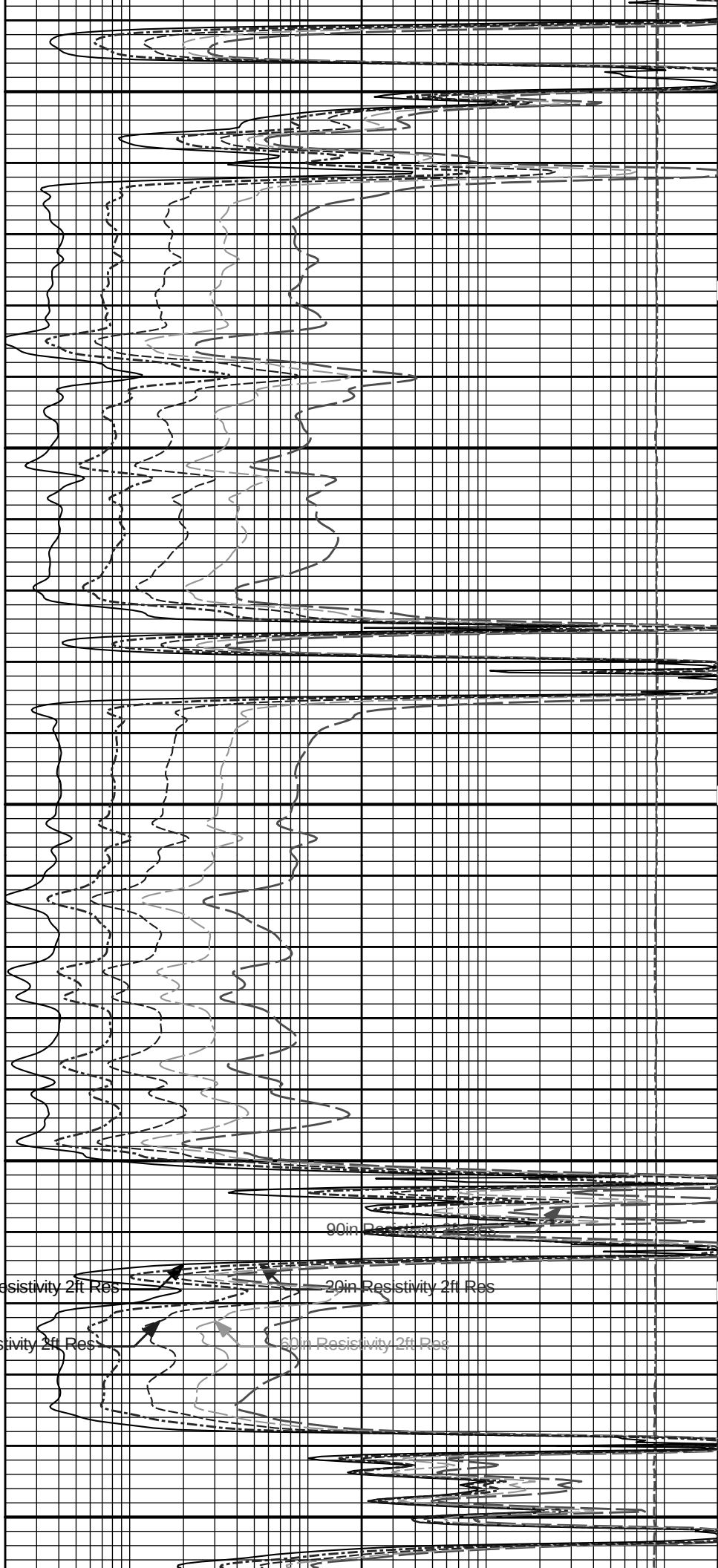
10in Resistivity 2ft Res

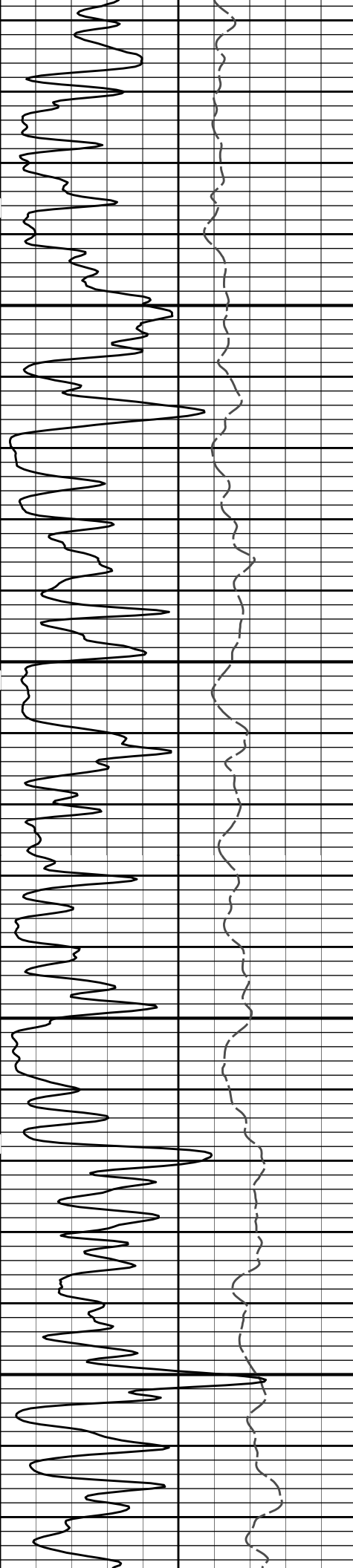
30in Resistivity 2ft Res

90in Resistivity 2ft Res

20in Resistivity 2ft Res

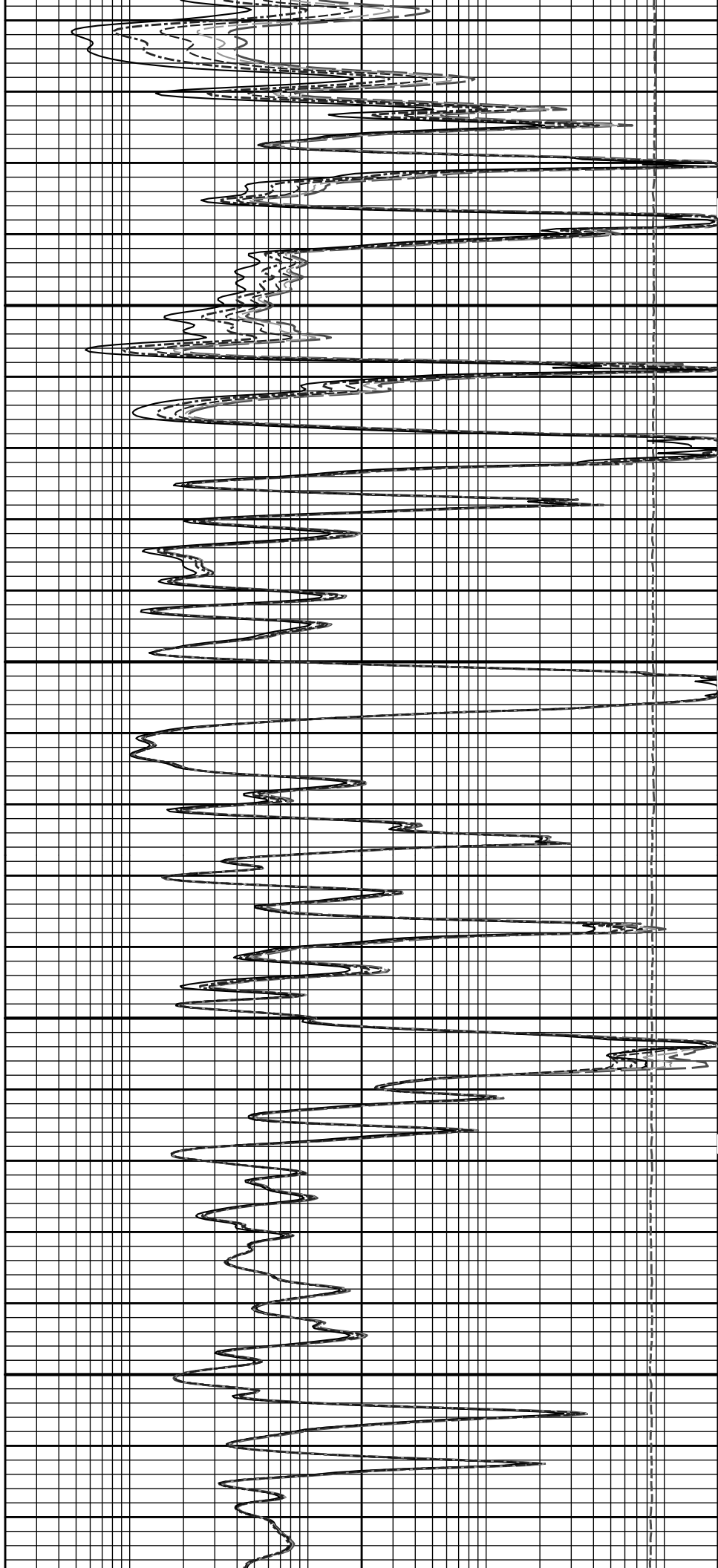
60in Resistivity 2ft Res

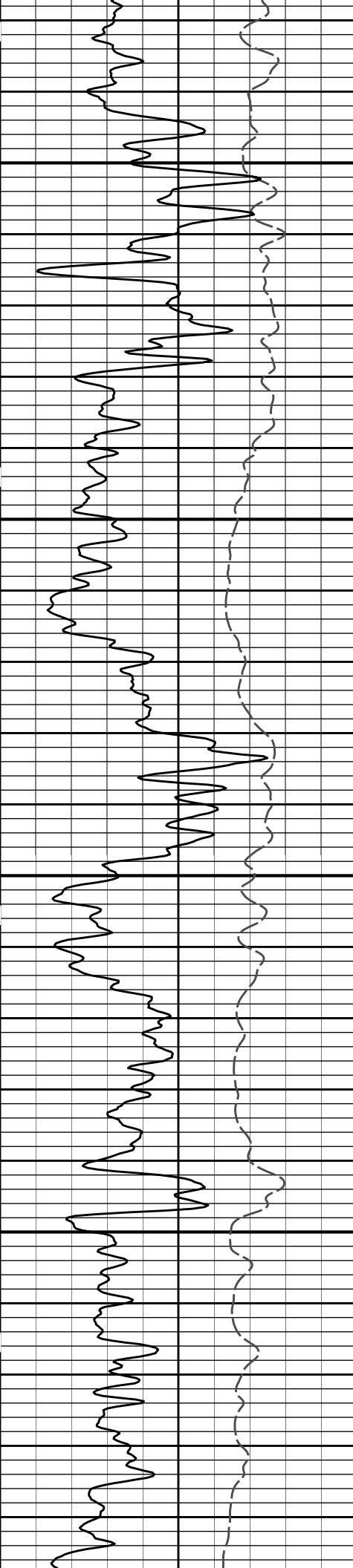




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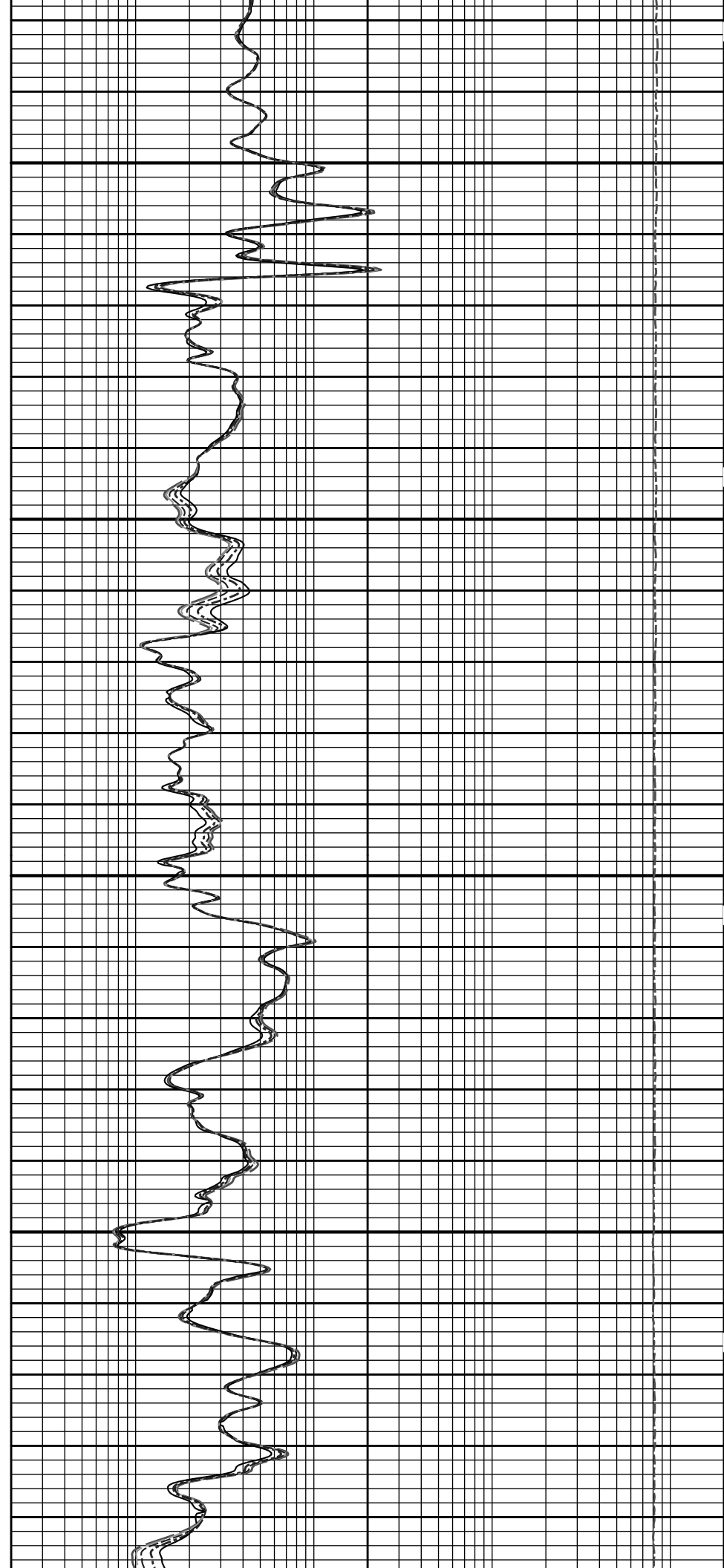
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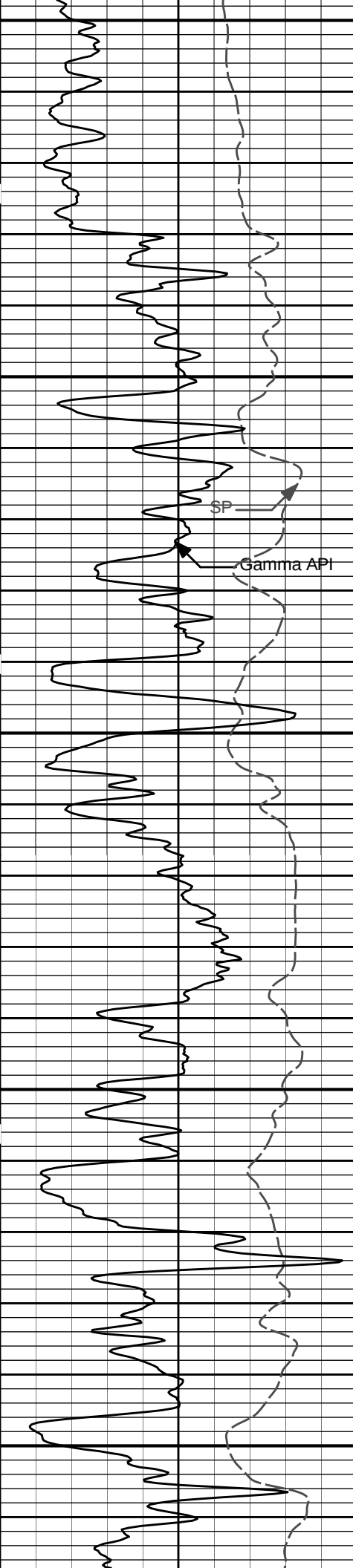




1900

2000

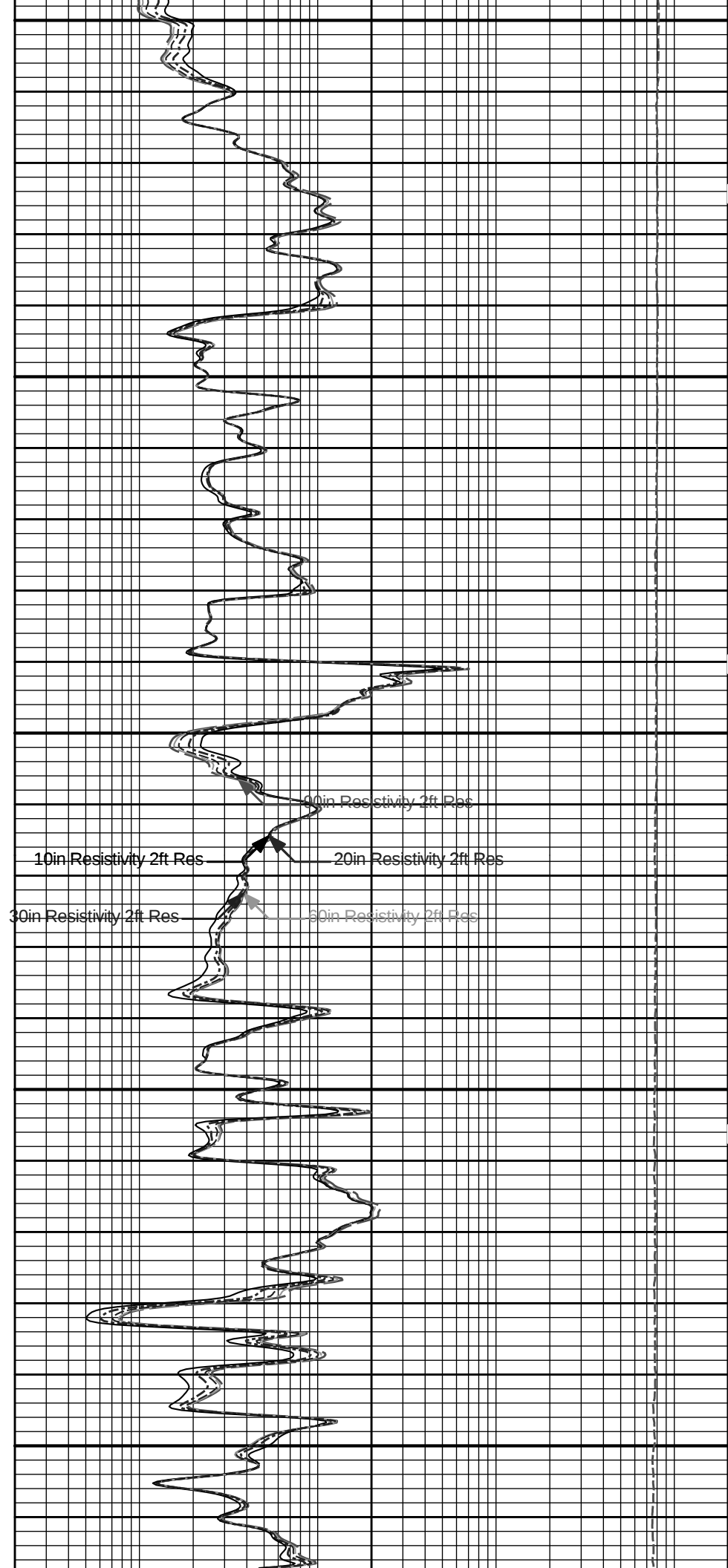


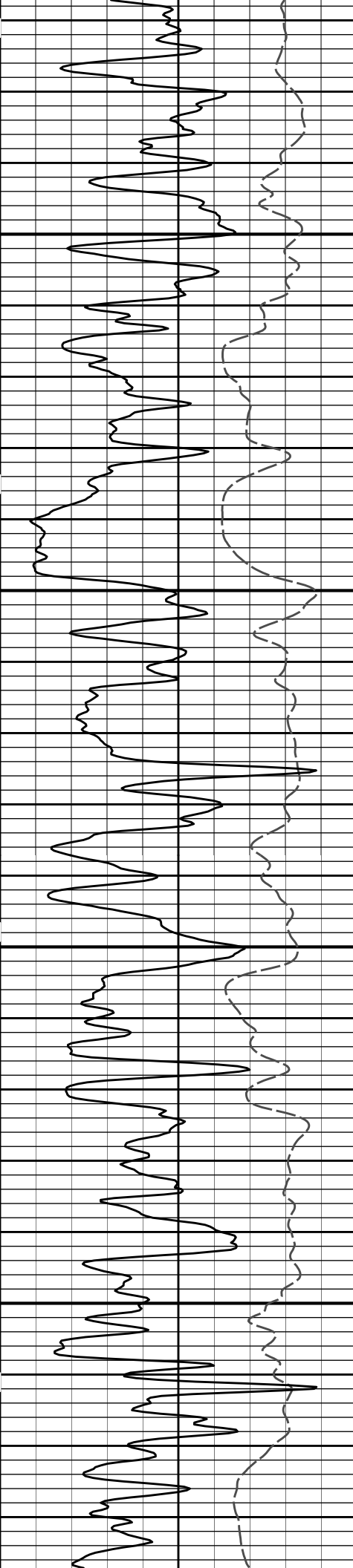


2100

2200

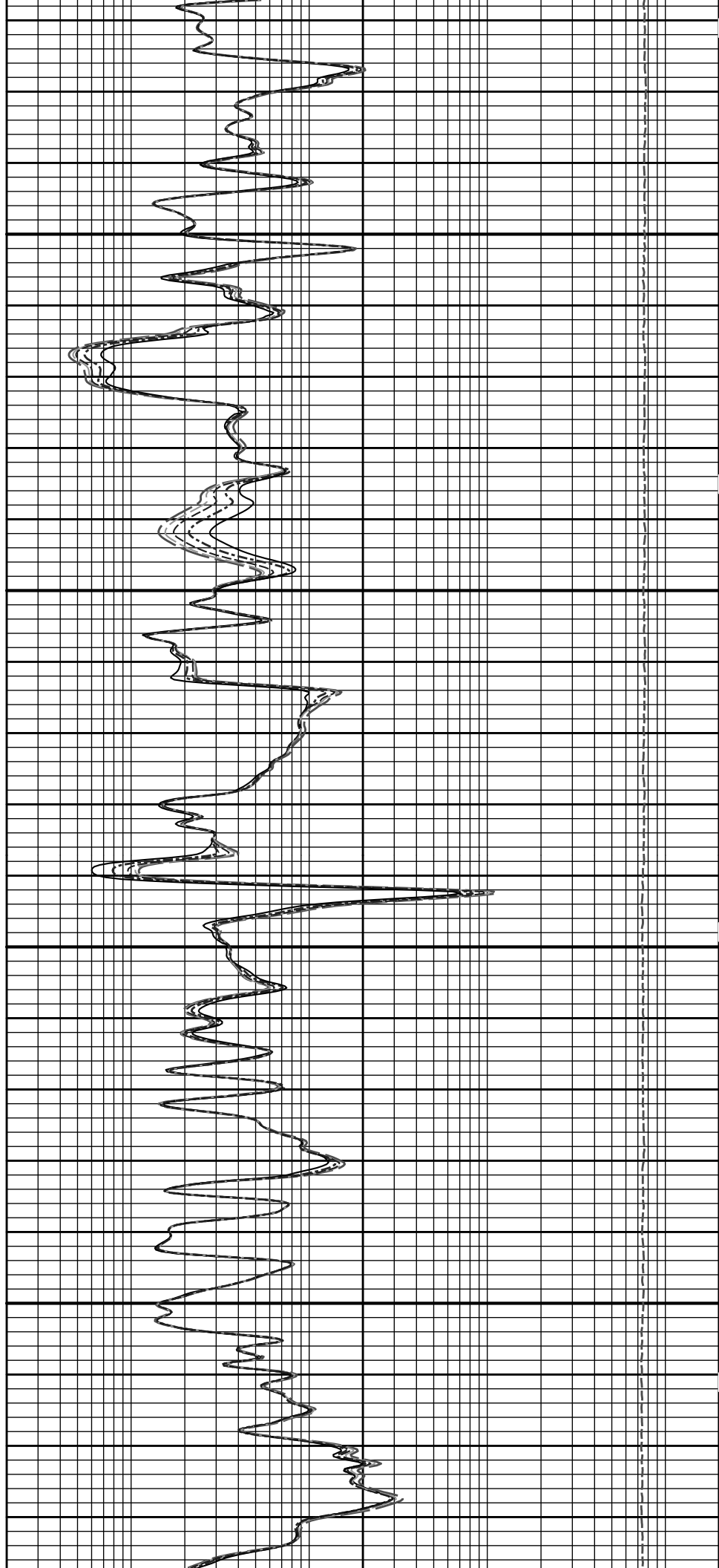
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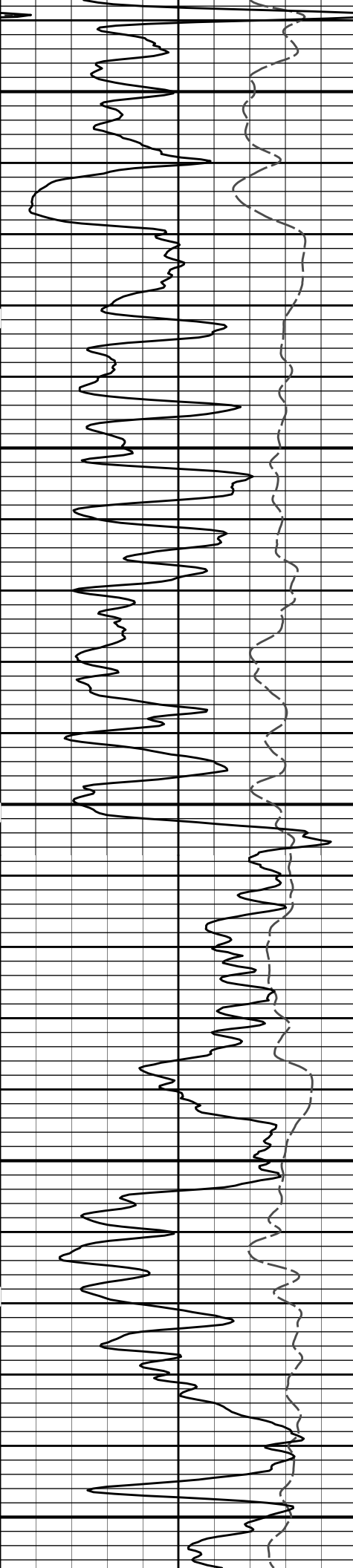




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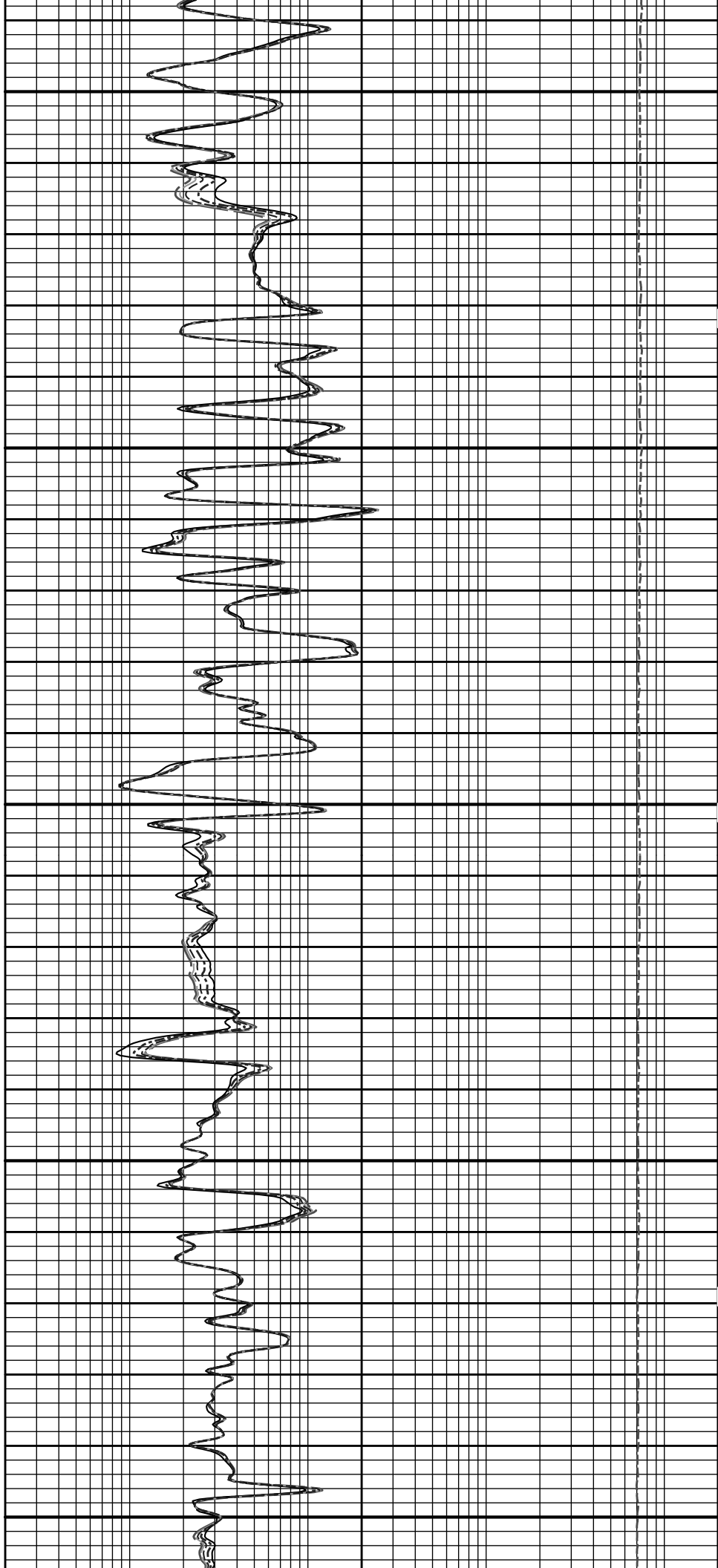
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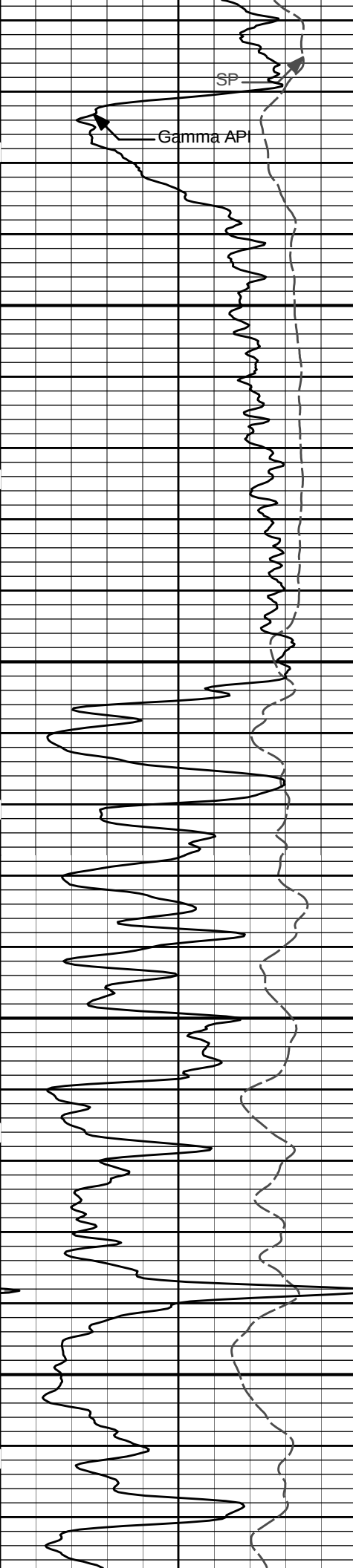




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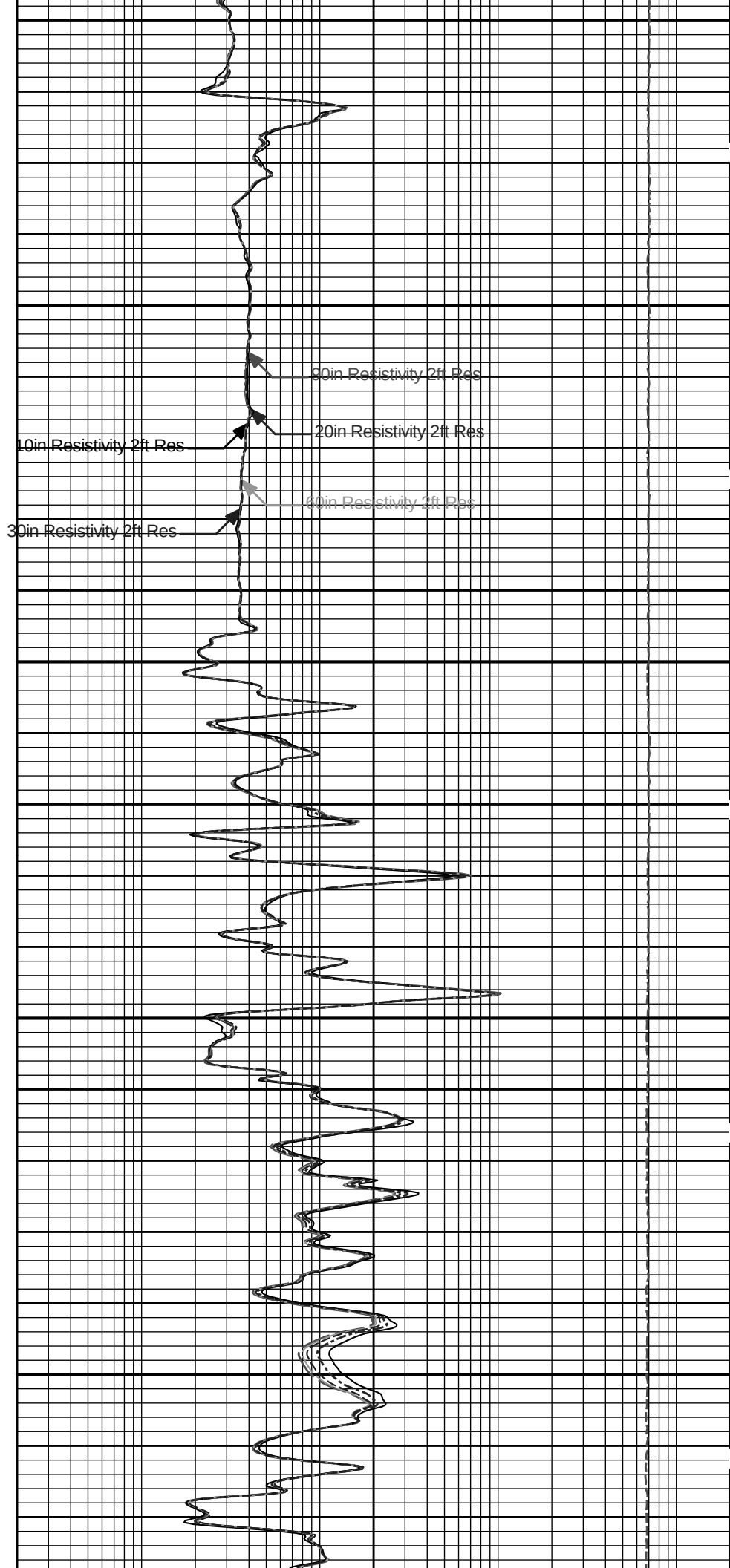
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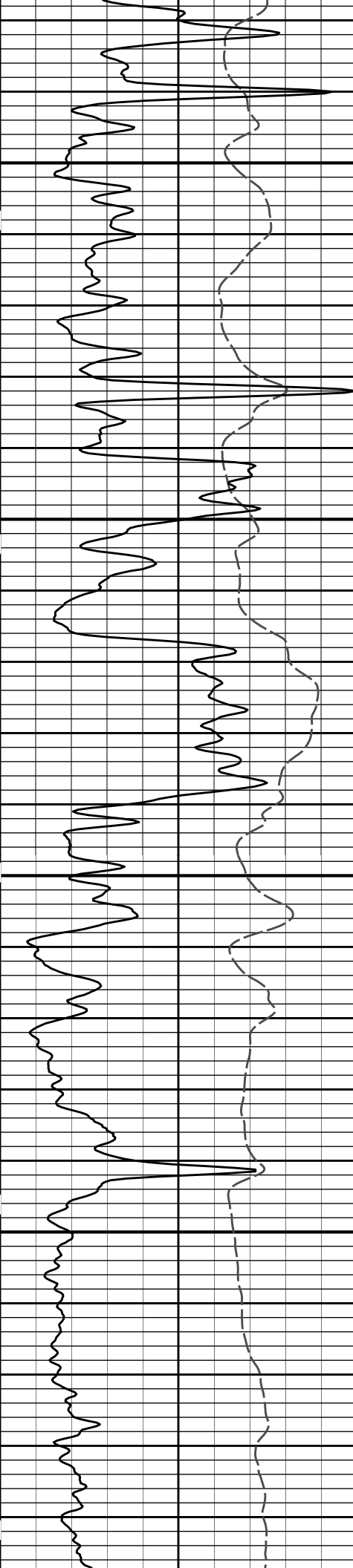




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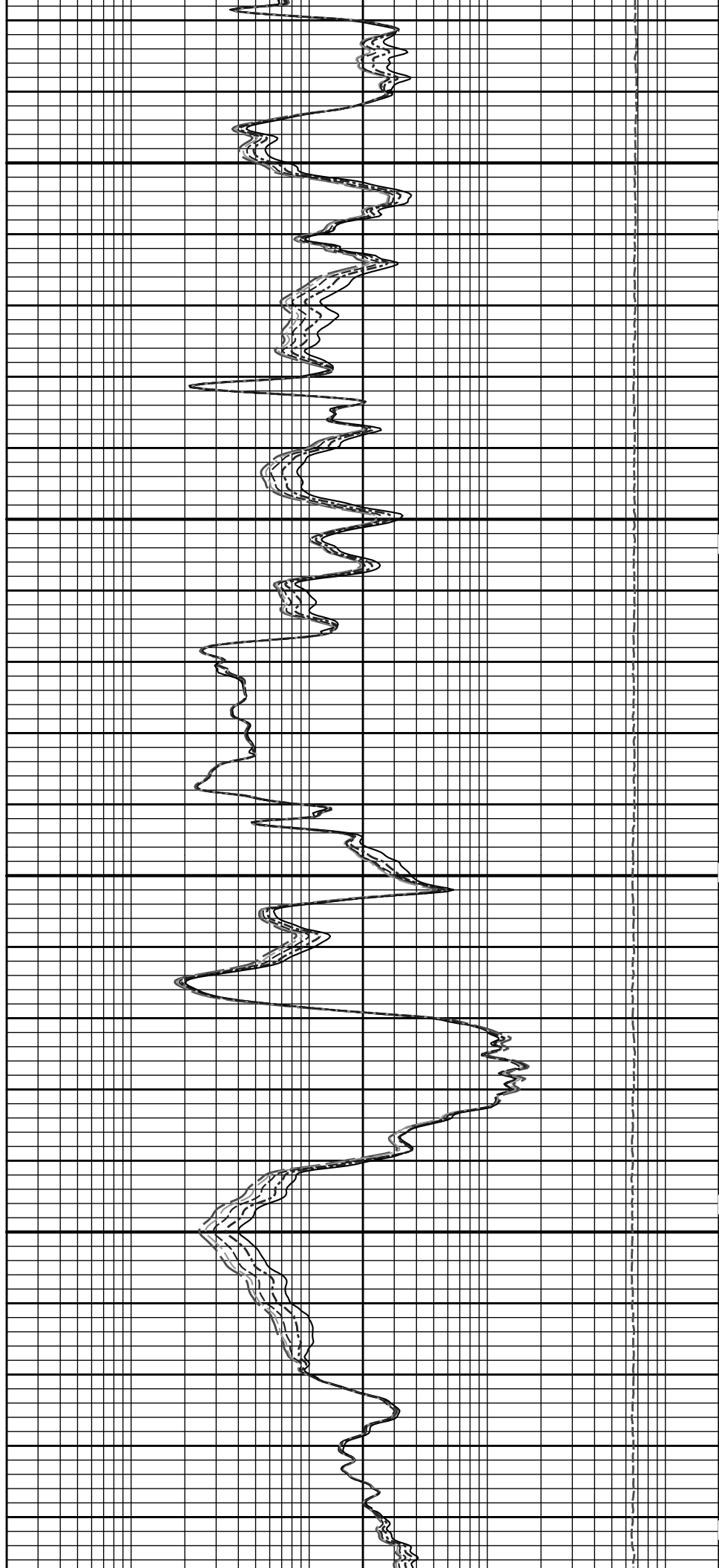
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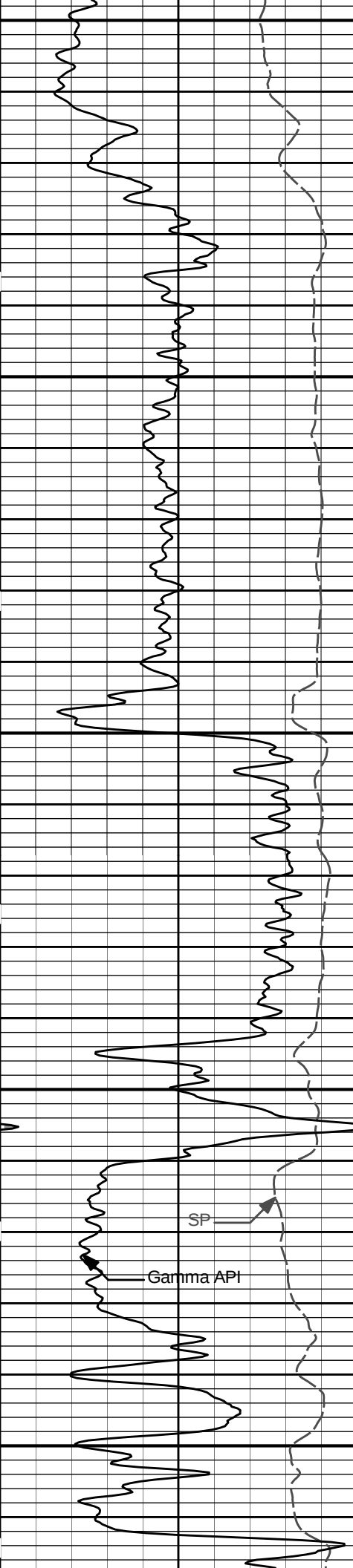




3000

3100

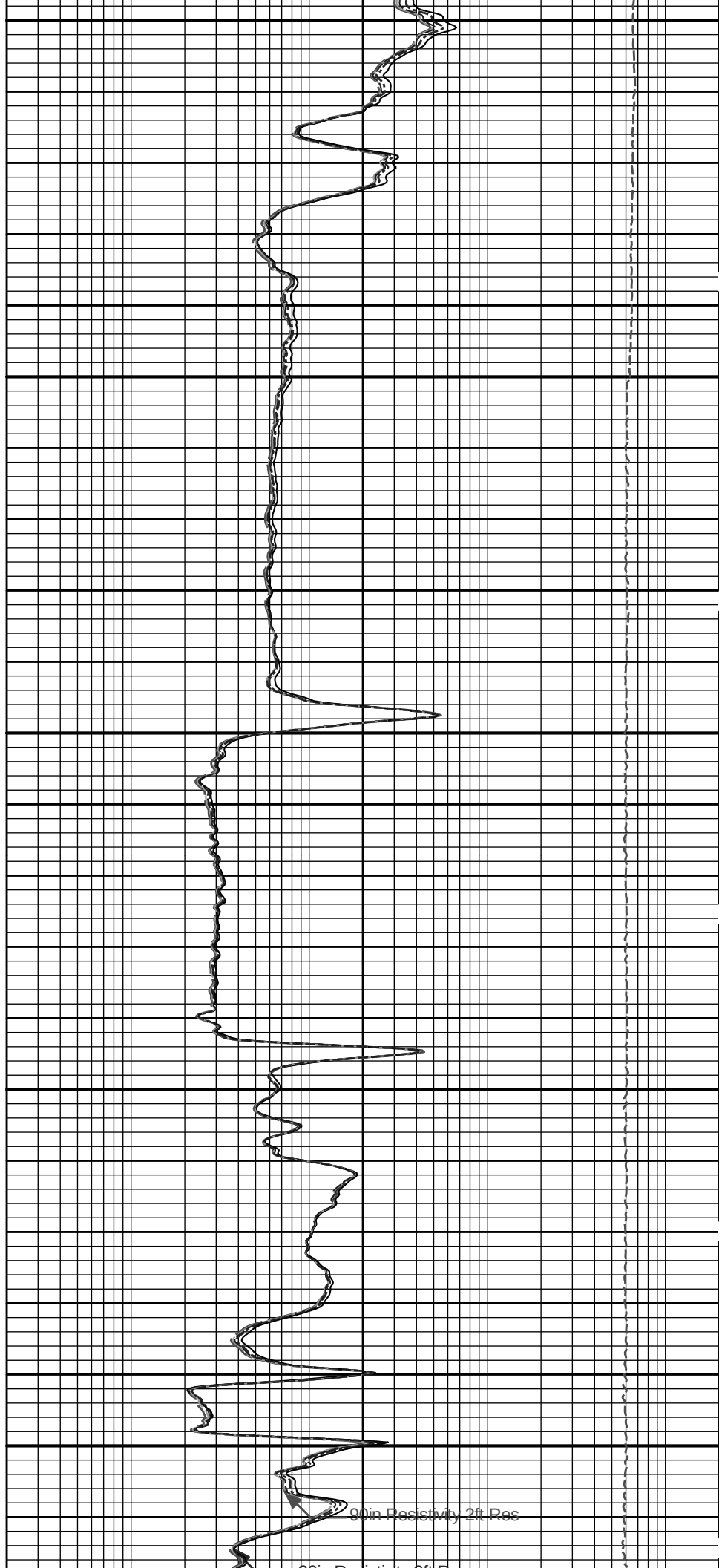




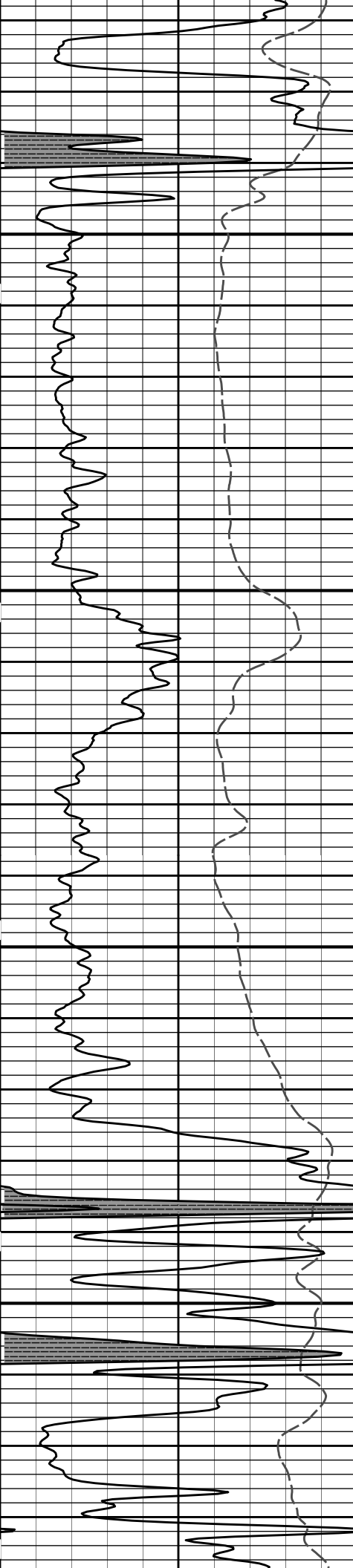
3200

3300

3400

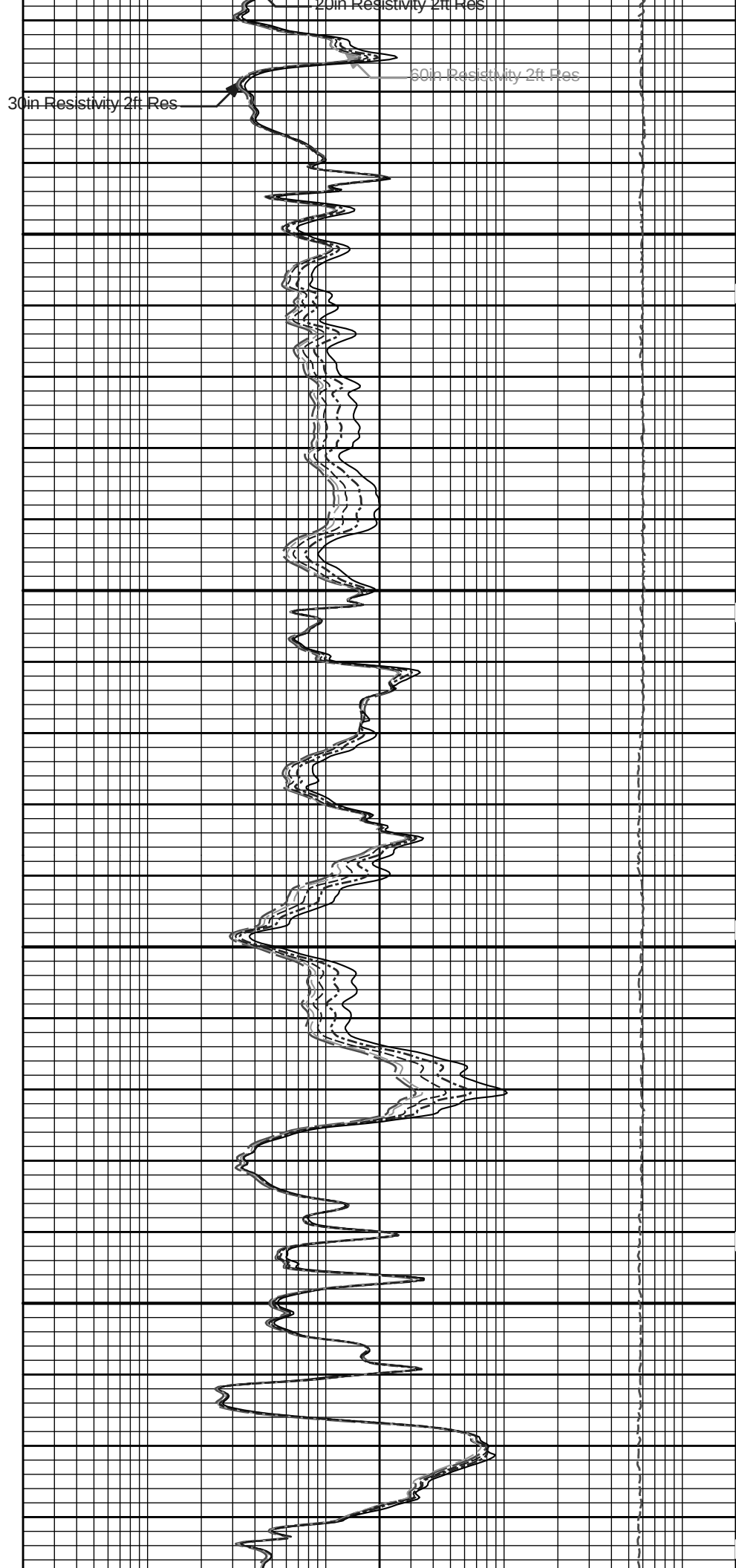


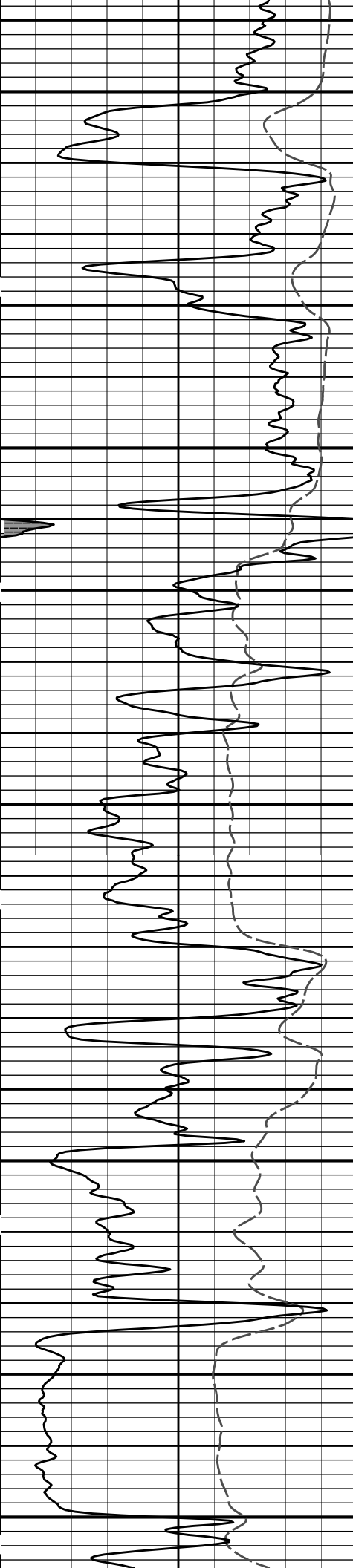
90in Resistivity 2ft Res



3500

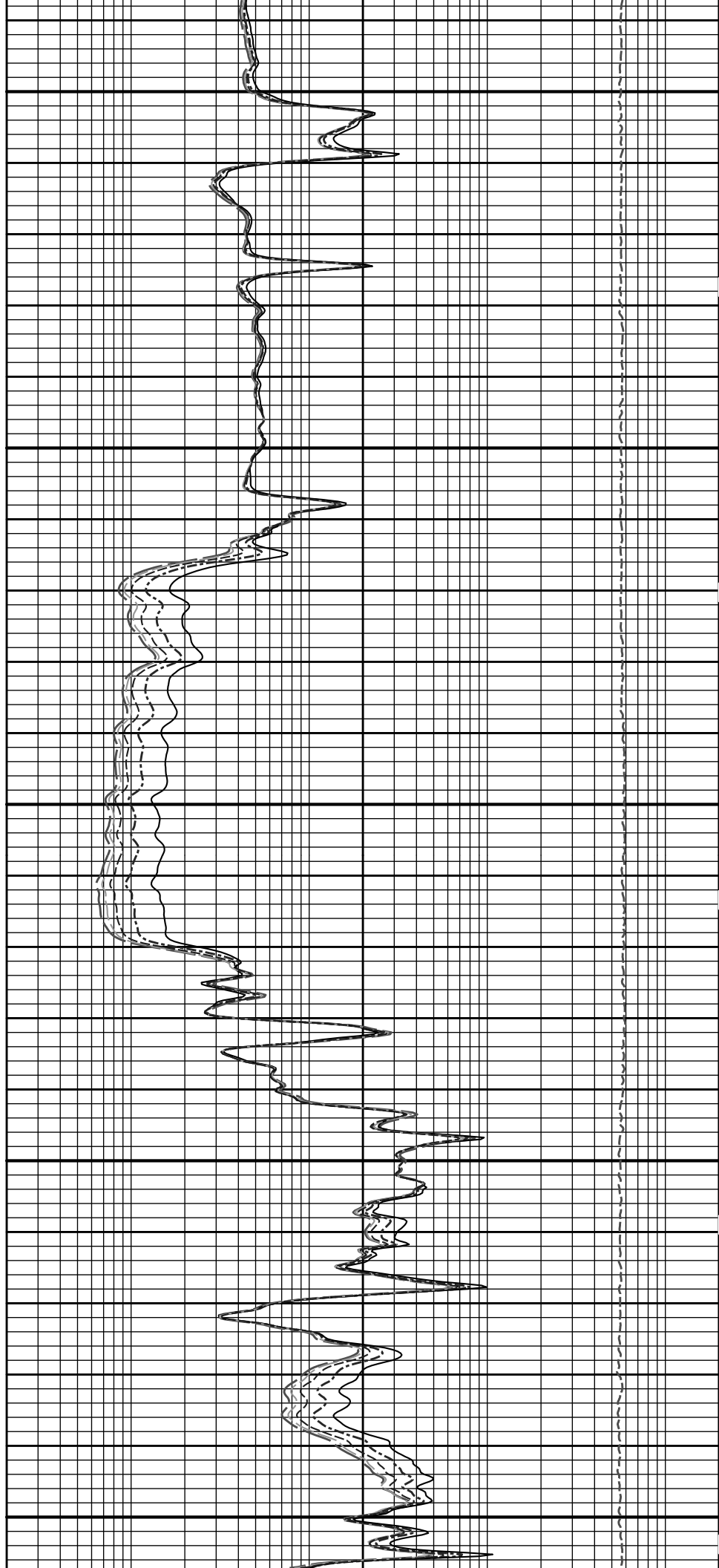
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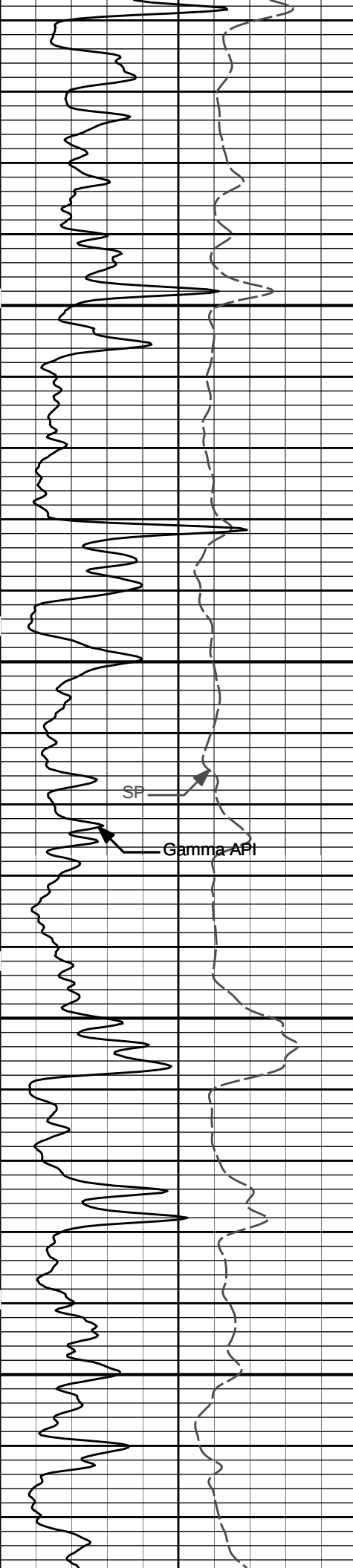




3700

3800



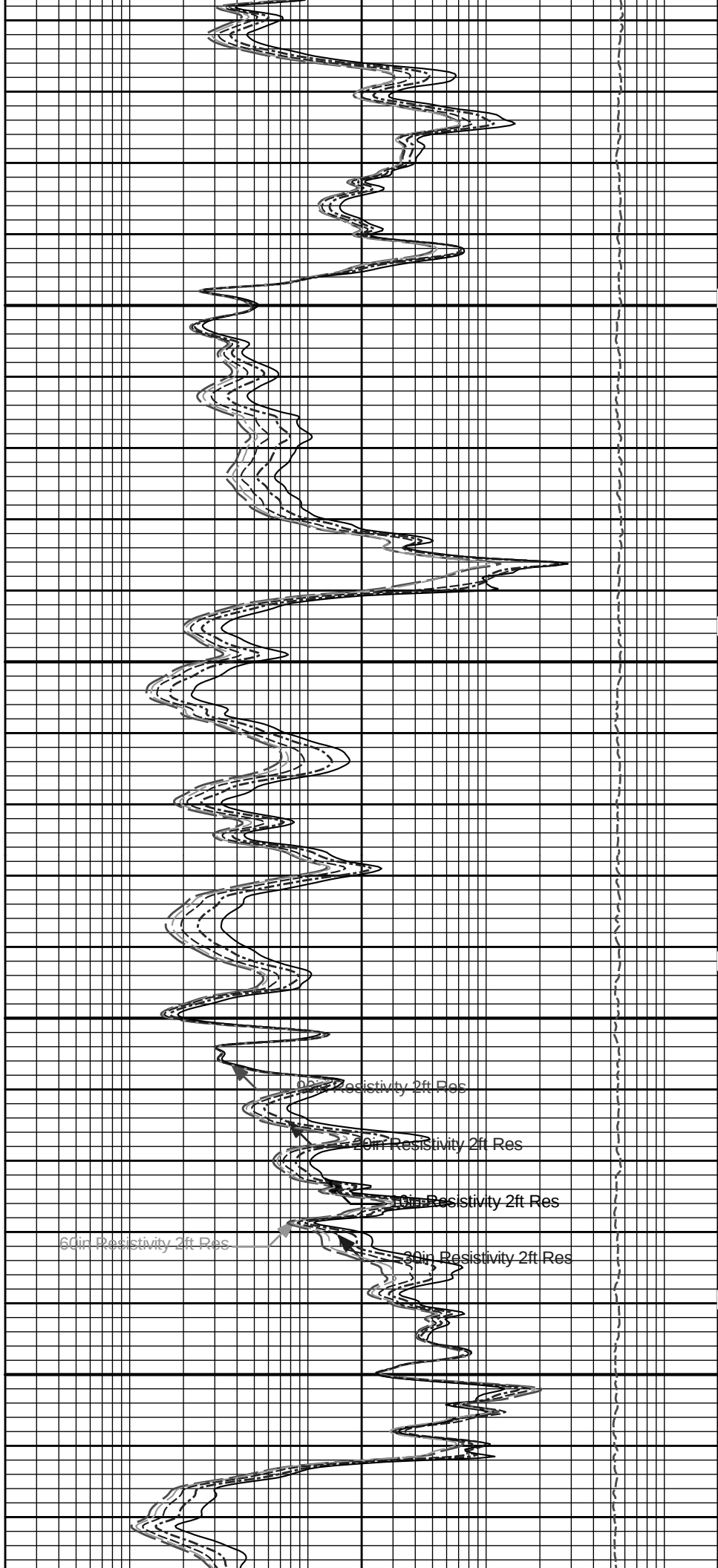


3900

4000

SF

Gamma API



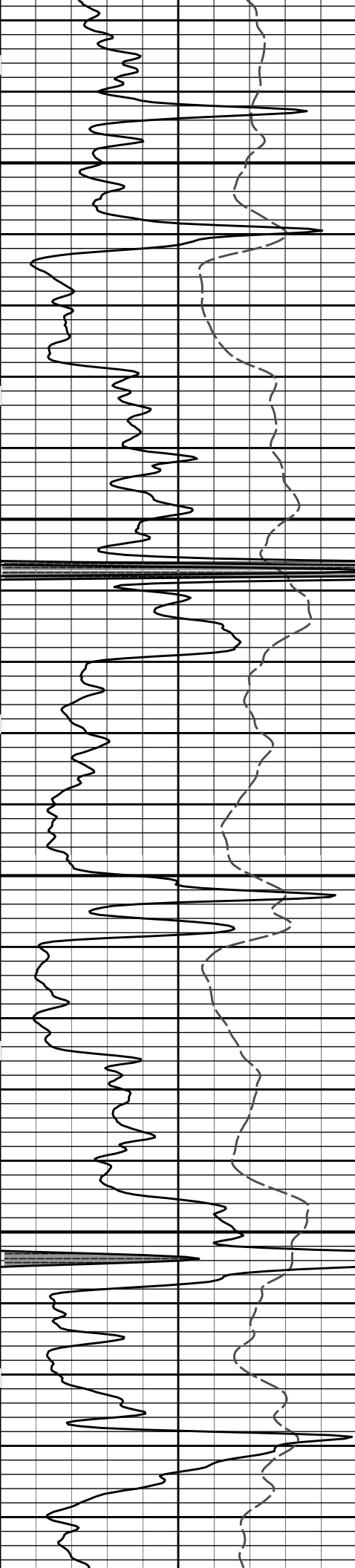
0in Resistivity 2ft Res

20in Resistivity 2ft Res

40in Resistivity 2ft Res

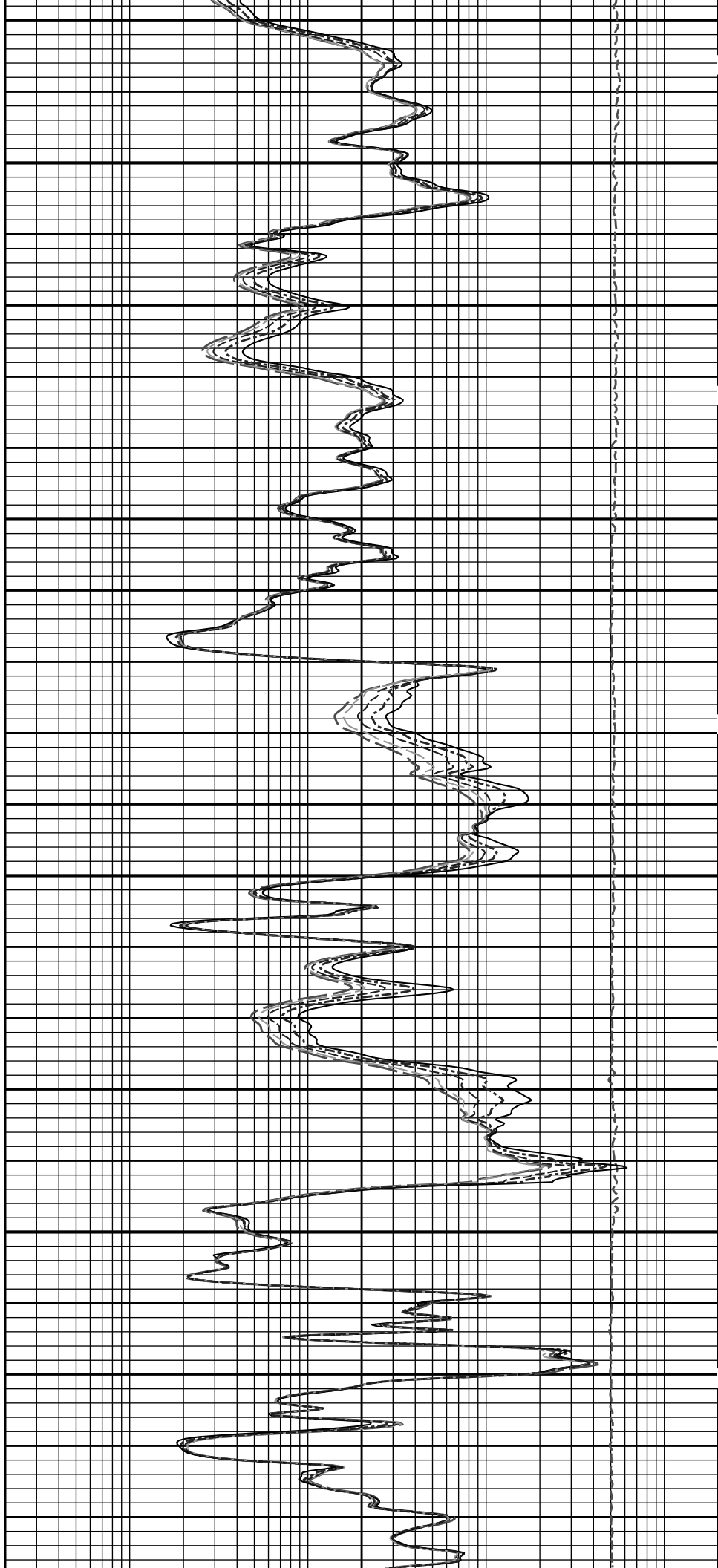
60in Resistivity 2ft Res

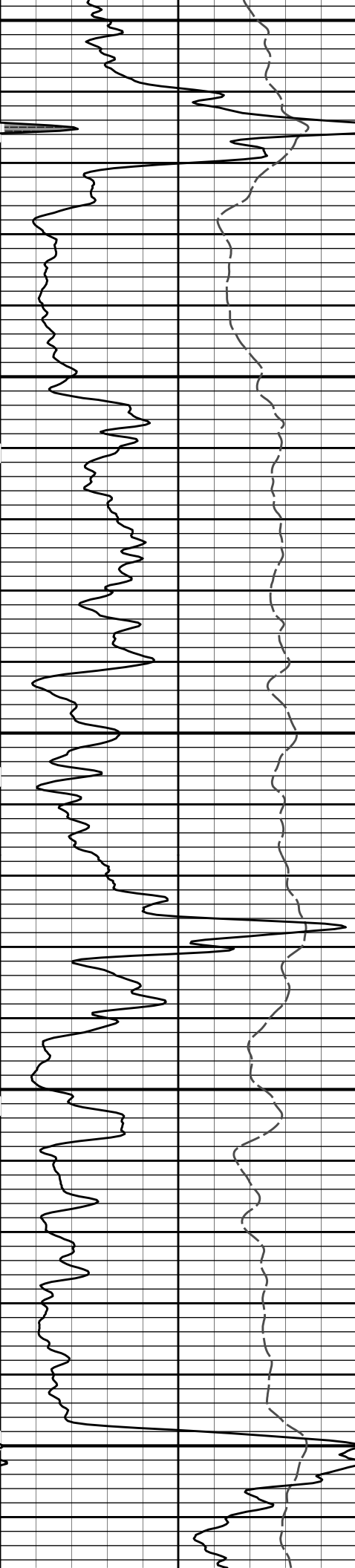
80in Resistivity 2ft Res



4100

4200

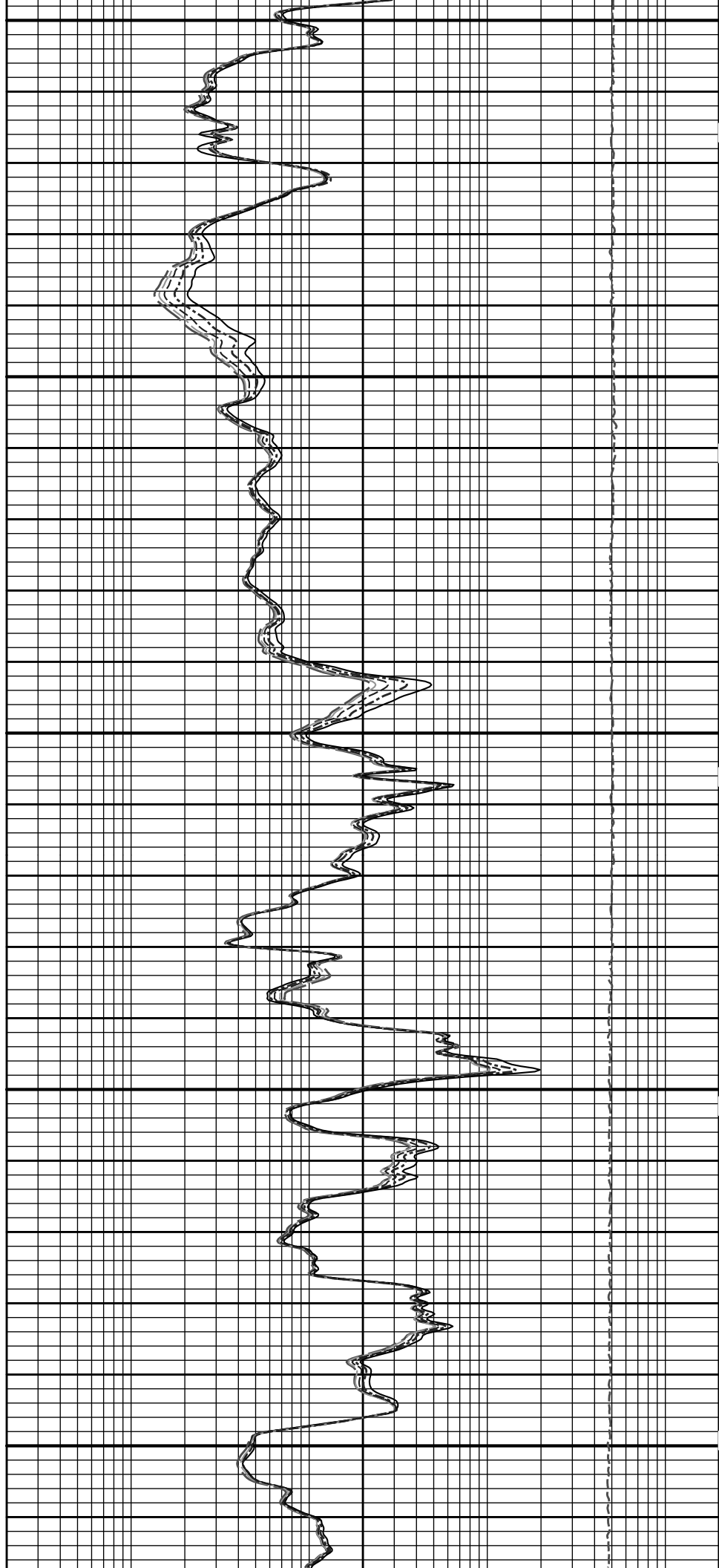


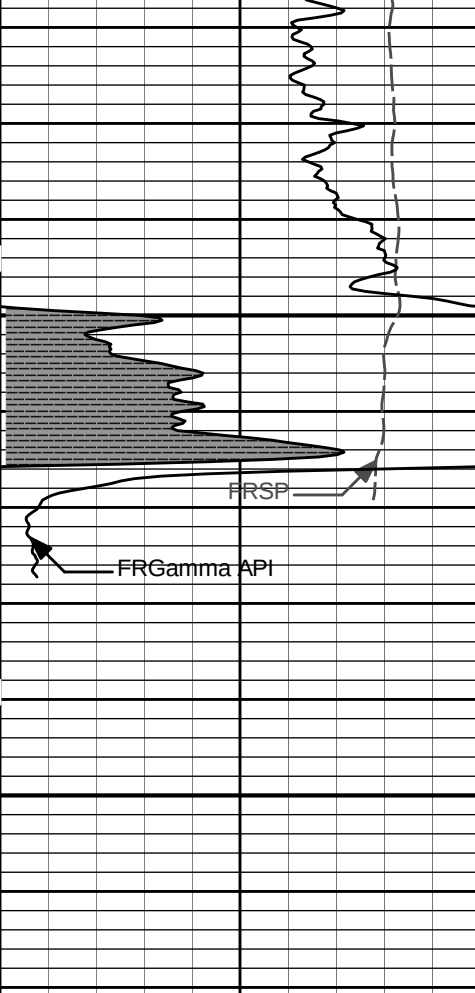


4300

4400

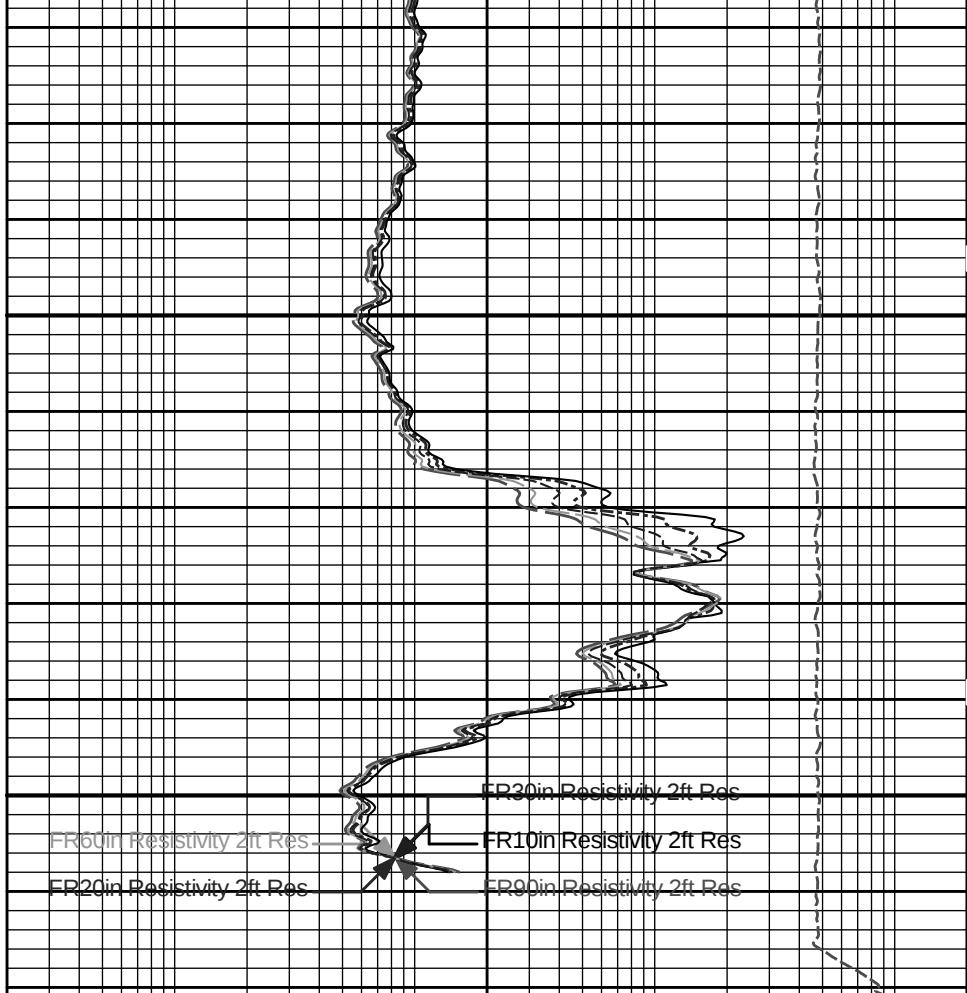
4500





4600

TD



SP		1 : 240 ft			10K	Tension	0
-]20[+					pounds		
0	Gamma API	150	Tension Pull	0.2	10in Resistivity 2ft Res	2000	
api				ohmm			
SHALE			Tension Pull	0.2	20in Resistivity 2ft Res	2000	
				ohmm			
				0.2	30in Resistivity 2ft Res	2000	
				ohm-metre			
				0.2	60in Resistivity 2ft Res	2000	
				ohmm			
				0.2	90in Resistivity 2ft Res	2000	
				ohmm			

HALLIBURTON

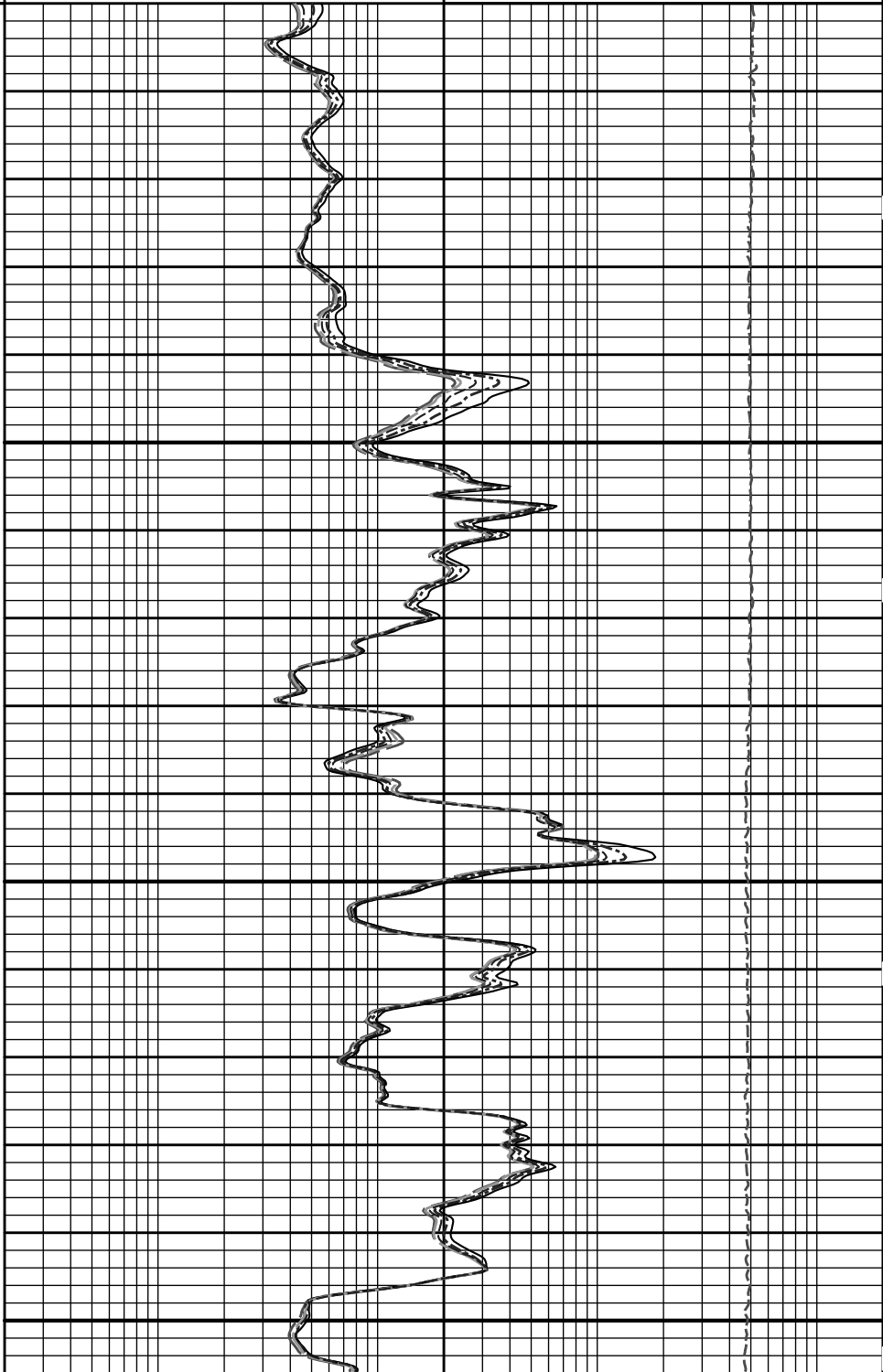
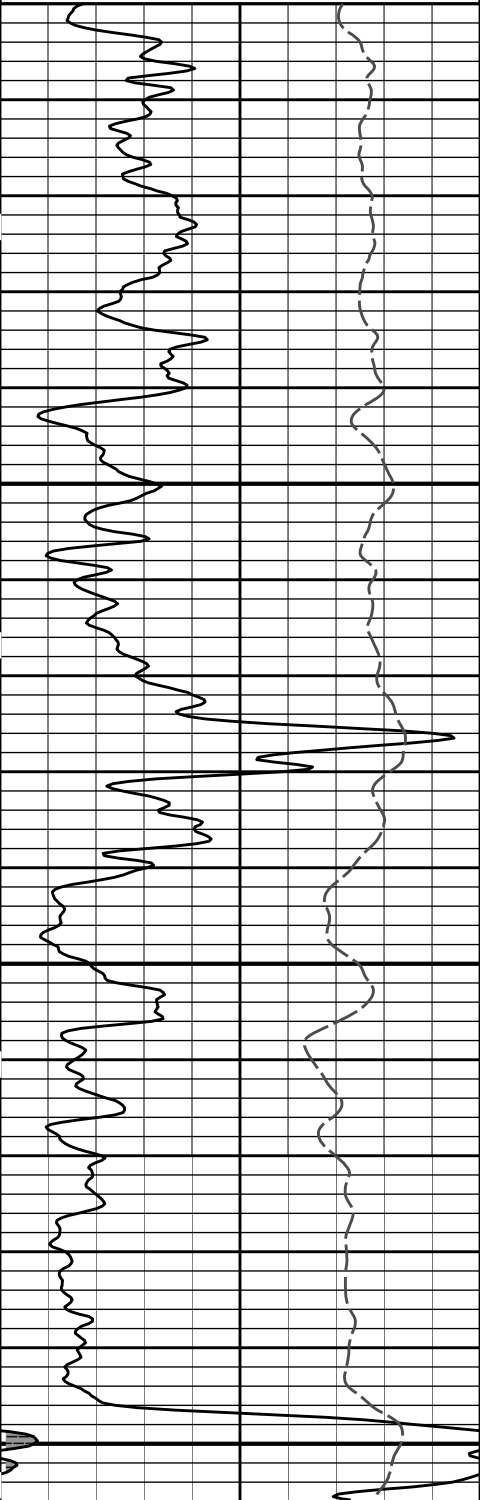
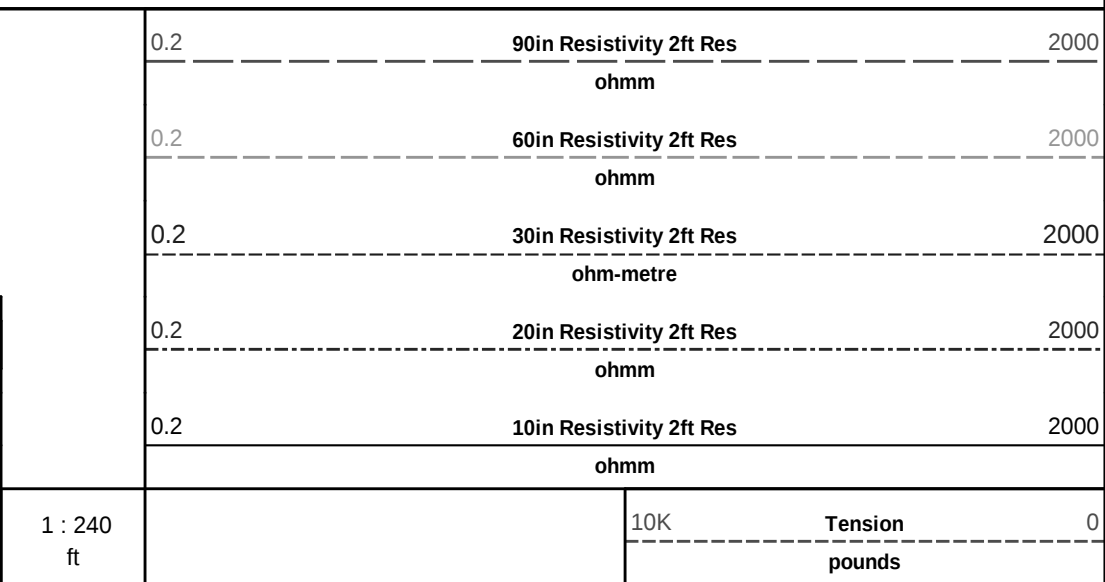
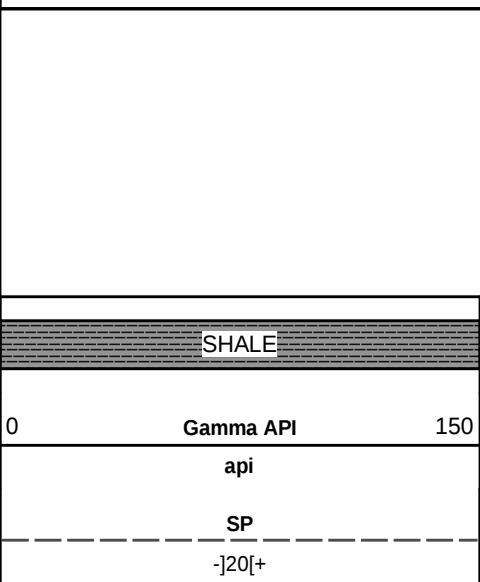
Plot Time: 19-Mar-12 22:10:01
Plot Range: 210 ft to 4621 ft
Data: MILLS_1_29\Well Based\CASING\
Plot File: \\LOCAL-MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_5_main_lib

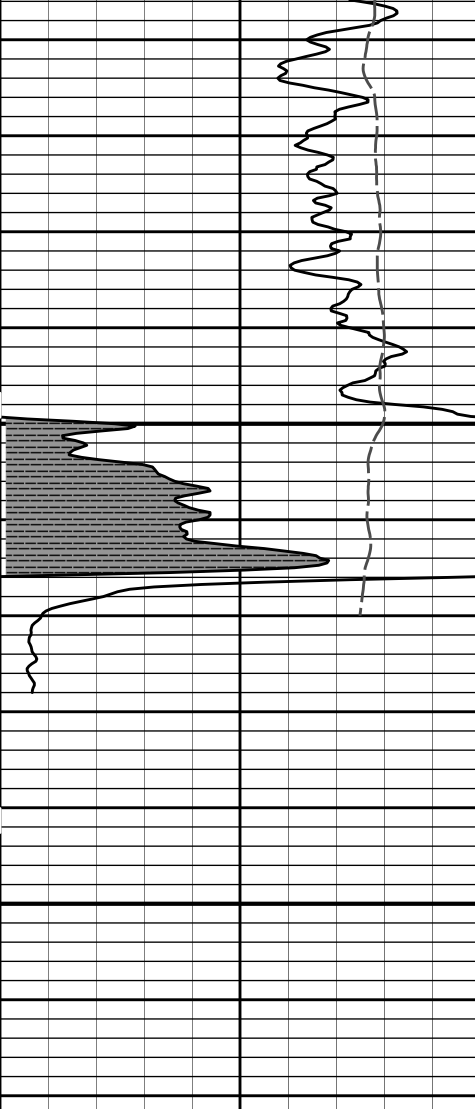
5 INCH MAIN LOG

HALLIBURTON

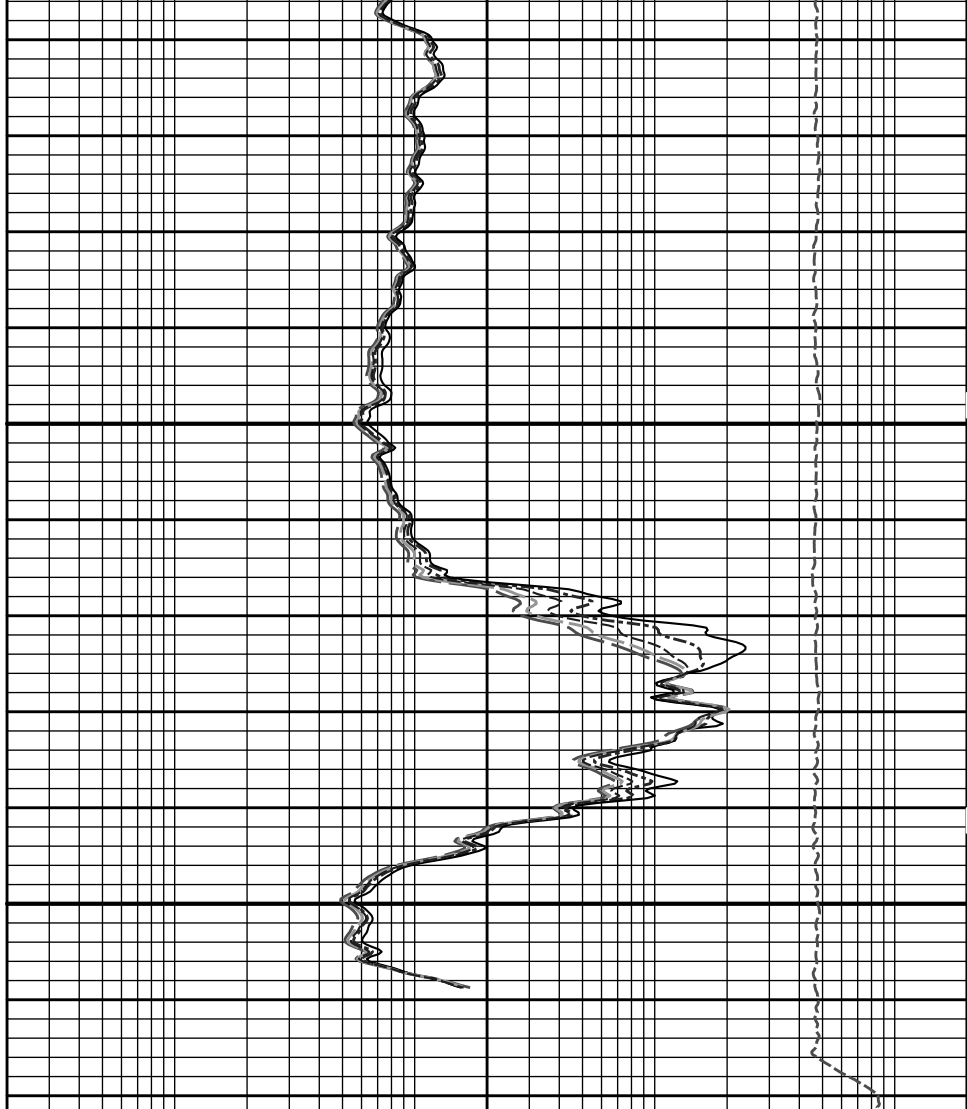
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Data: MILLS_1_29\Well Based\REPEAT\
Plot File: \\LOCAL-MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_5_repeat_lib

REPEAT SECTION





4600



SP		
-]20[+		
0	Gamma API	150
api		
SHALE		

1 : 240
ft

10K Tension
pounds 0

0.2	10in Resistivity 2ft Res	2000
ohmm		
0.2	20in Resistivity 2ft Res	2000
ohmm		
0.2	30in Resistivity 2ft Res	2000
ohm-metre		
0.2	60in Resistivity 2ft Res	2000
ohmm		
0.2	90in Resistivity 2ft Res	2000
ohmm		

HALLIBURTON

Plot Time: 19-Mar-12 22:10:05
Plot Range: 4350 ft to 4621.92 ft
Data: MILLS_1_29\Well Based\REPEAT\
Plot File: \\-LOCAL-MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
Cable Head- PROT01 30.00 lbs		Ø 3.625 in →			1.92 ft	54.51 ft
SP Sub-PROT01 60.00 lbs		Ø 3.625 in →		← SP @ 50.81 ft	3.74 ft	52.59 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	48.85 ft
DSNT-10735145 174.00 lbs	DSN Decentralizer- 10735145 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 ft	40.33 ft
SDLT- I145_M73803_P90 360.00 lbs	SDLT Pad-90 65.00 lbs Microlog Pad- I145_M73803_P90 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		Microlog @ 22.83 ft SDL Caliper @ 22.65 ft SDL @ 22.64 ft	10.81 ft	30.64 ft
ACRT Instrument- I776 50.00 lbs		Ø 3.625 in →			5.03 ft	19.83 ft
ACRT Sonde- I776_S775 200.00 lbs		Ø 3.625 in →		← Mud Resistivity @ 13.44 ft ← ACRT @ 9.46 ft	14.22 ft	14.80 ft

Cabbage Head-
TRK954
10.00 lbs

Ø 3.625 in
Ø 6.000 in



0.58 ft
0.58 ft
0.00 ft

Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head		PROT01	30.00	1.92	52.59	300.00
SP	SP Sub		PROT01	60.00	3.74	48.85	300.00
GTET	Gamma Telemetry Tool		10811258	165.00	8.52	40.33	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	30.64	60.00
DCNT	DSN Decentralizer		10735145	6.60	5.13	*	33.97
SDLT	Spectral Density Tool		I145_M73803_P90	360.00	10.81	19.83	60.00
MICP	Microlog Pad		I145_M73803_P90	8.00	1.00	*	22.33
SDLP	Density Insite Pad		90	65.00	2.55	*	22.04
ACRt	Array Compensated True Resistivity Instrument Section		I776	50.00	5.03	14.80	300.00
ACRt	Array Compensated True Resistivity		I776_S775	200.00	14.22	0.58	300.00
CBHD	Cabbage Head		TRK954	10.00	0.58	0.00	300.00
Total				1,128.60	54.51		
* Not included in Total Length and Length Accumulation.							
Data: MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\IDLE							
Date: 19-Mar-12 19:20:33							

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	27-Feb-12 10:42:34
Engineer:	T. HYDE	Calibration Date:	27-Feb-12 10:45:14
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1
Calibrator Source S/N: TB185 Calibrator API Reference:228.00 api Equivalent Calibrator API Reference:232.0 api			
Measurement	Measured	Calibrated	Units
Background	43.9	44.1	api
Background + Calibrator	275.0	276.1	api
Calibrator	231.1	232.0	api
NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 10811258	Reference Calibration Date:	27-Feb-12 10:45:14
Engineer:	C. MARLOWE	Calibration Date:	19-Mar-12 19:41:02
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1
Calibrator Source S/N: TB185 Calibrator API Reference:228.00 api Equivalent Calibrator API Reference:232.0 api			
Field Verification	Shop	Field	Units
Background	44.1	48.9	api
Background + Calibrator	276.1	277.7	api
Calibrator	232.0	228.8	api
Shop	Field	Difference	Tolerance
232.0	228.8	3.2	+/- 9.00
ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION			

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION									
Tool Name:		ACRt Sonde - I776_S775				Reference Calibration Date:		19-Jan-12 15:31:50	
Engineer:		T. HYDE				Calibration Date:		13-Mar-12 13:01:10	
Software Version:		WL INSITE R3.4.2 (Build 2)				Calibration Version:		1	
TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0182	1.05	0.95	1.0238	1.05	0.95	1.0250	1.05
A2 (50")	0.95	1.0191	1.05	0.95	1.0247	1.05	0.95	1.0239	1.05
A3 (29")	0.95	1.0020	1.05	0.95	1.0070	1.05	0.95	1.0057	1.05
A4 (17")	0.95	1.0042	1.05	0.95	1.0078	1.05	0.95	1.0098	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0196	1.05	0.95	1.0218	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.0299	1.05	0.95	1.0326	1.05
TYPICAL SONDE OFFSET RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-1.736	2	-6	-4.151	-2	-8	-4.087	-2
A2 (50")	-7	-3.028	-1	-6	-4.236	-2	-7	-4.272	-2
A3 (29")	-27	-14.459	-9	-9	-4.439	-3	-7	-2.628	-1
A4 (17")	-180	-101.693	-60	-45	-31.226	-15	-39	-24.236	-13
A5 (10")	N/A	N/A	N/A	-150	-119.327	-50	-80	-54.577	-10
A6 (6")	N/A	N/A	N/A	175	286.532	525	90	141.850	270
TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION				
Signal	Lower		R	Upper	Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)	
12K		0.6	0.8630	1.3	Mud Cell	0.95	0.991	1.05	
36K		1.0	1.1828	2.0					
72K		1.0	1.4604	2.0					
CALIBRATION SUMMARY									
Sensor		Shop	Field	Post	Difference	Tolerance	Units		
GTET-10811258									
Gamma Ray Calibrator		232.0	228.8	-----	3.2	+/- 9.00	api		
ACRt Sonde-I776_S775									
Mud Cell		0.991	-----	-----	0.000	-----	ohm-m		
Data: MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CH\IDLE								Date: 19-Mar-12 20:08:27	
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	0.450	ohmm
SHARED	TRM	Temperature of Mud	95.0	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	4620.00	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	0.30	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	85.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper 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
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
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	THOY	Threshold Quality	0.50	

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INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
SP Sub				
PLTC	Plot Control Mask	50.81	NO	
SP	Spontaneous Potential	50.81	BLK	1.250
SPR	Raw Spontaneous Potential	50.81	NO	
SPO	Spontaneous Potential Offset	50.81	NO	
GTET				
TPUL	Tension Pull	42.79	NO	
GR	Natural Gamma Ray API	42.79	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.79	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.79	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	32.54	NO	
RNDS	Near Detector Telemetry Counts	32.64	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.39	TRI	0.583
DNTT	DSN Tool Temperature	32.64	NO	
DSNS	DSN Tool Status	32.54	NO	
ERND	Near Detector Telemetry Counts EVR	32.64	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.39	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.64	NO	
SDLT				
TPUL	Tension Pull	22.65	NO	
PCAL	Pad Caliper	22.65	TRI	0.250
ACAL	Arm Caliper	22.65	TRI	0.250
ACRt Sonde				
TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	5.22	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	4.22	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	4.22	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.72	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.72	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.47	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.47	BLK	0.000

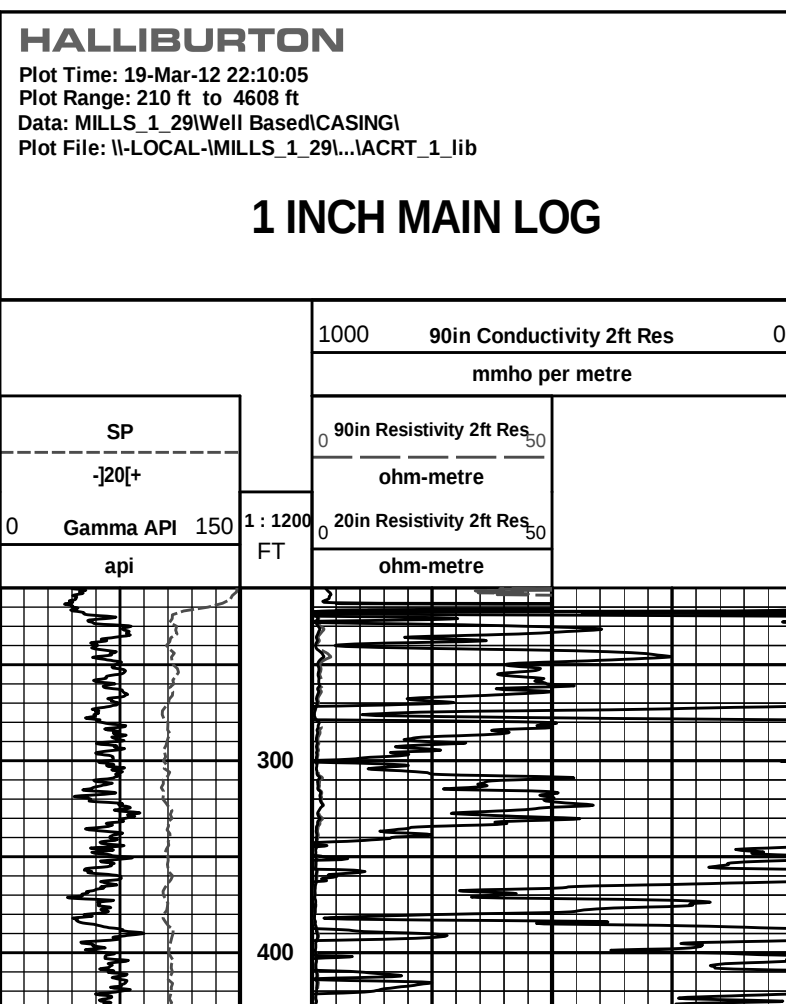
F1X6	ACRT 12KHz - 60in X value	3.47	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	9.22	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	9.22	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.72	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.72	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	5.22	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	5.22	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	4.22	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	4.22	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.72	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.72	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.47	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.47	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	9.22	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	9.22	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.72	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.72	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	5.22	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	5.22	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	4.22	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	4.22	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.72	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.72	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.47	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.47	BLK	0.000
RMUD	Mud Resistivity	12.76	BLK	0.000
F1RT	Transmitter Reference 12 KHz Real Signal	2.97	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.97	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.97	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.97	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.97	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.97	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.97	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.97	BLK	0.000
ITMP	Instrument Temperature	2.97	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.97	NO	
TIDV	Instrument Temperature Derivative	2.97	NO	
TUDV	Upper Temperature Derivative	2.97	NO	
TLDV	Lower Temperature Derivative	2.97	NO	
TRBD	Receiver Board Temperature	2.97	NO	
SDLT Pad				
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near Barite Unfiltered	22.46	BLK	0.250
NLIU	Near Lithology Unfiltered	22.46	BLK	0.250
FAB	Far Above	22.81	BLK	0.250
FHI	Far Cesium High	22.81	BLK	0.250
FLO	Far Cesium Low	22.81	BLK	0.250

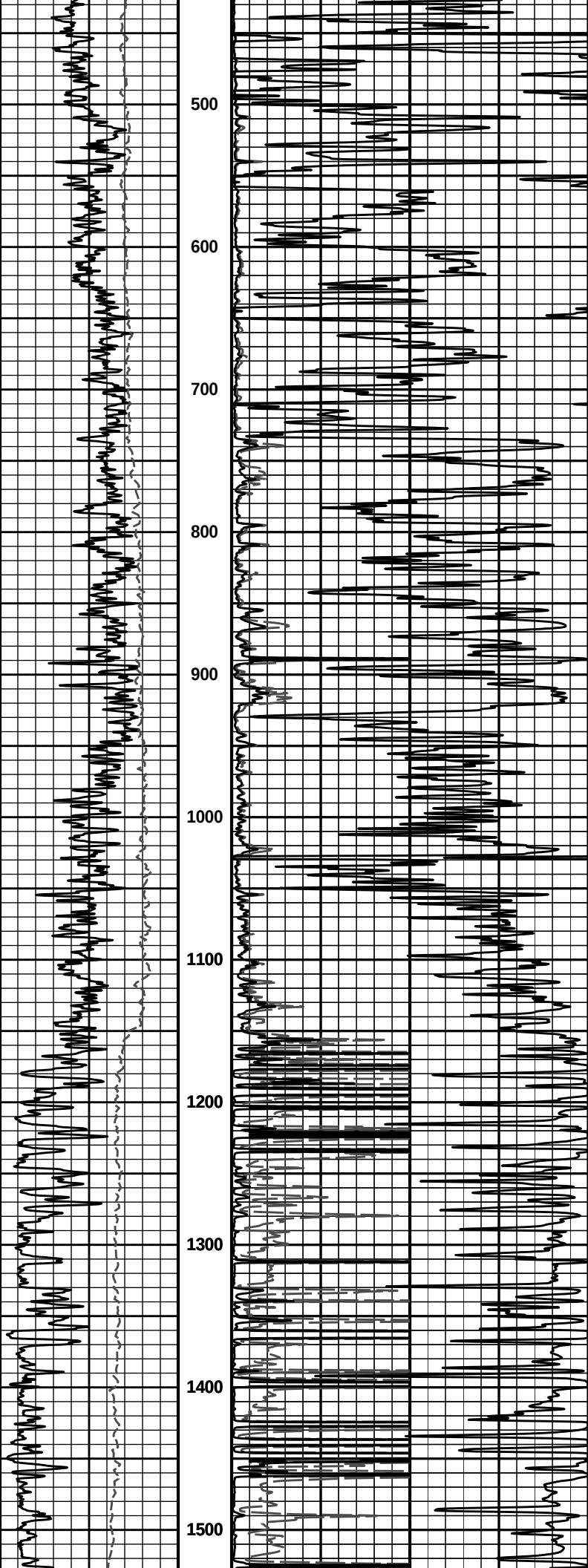
FVA	Far Valley	22.81	BLK	0.250
FBA	Far Barite	22.81	BLK	0.250
FDE	Far Density	22.81	BLK	0.250
FPK	Far Peak	22.81	BLK	0.250
FLI	Far Lithology	22.81	BLK	0.250
PTMP	Pad Temperature	22.65	BLK	0.920
NHV	Near Detector High Voltage	22.04	NO	
FHV	Far Detector High Voltage	22.04	NO	
ITMP	Instrument Temperature	22.04	NO	
DDHV	Detector High Voltage	22.04	NO	

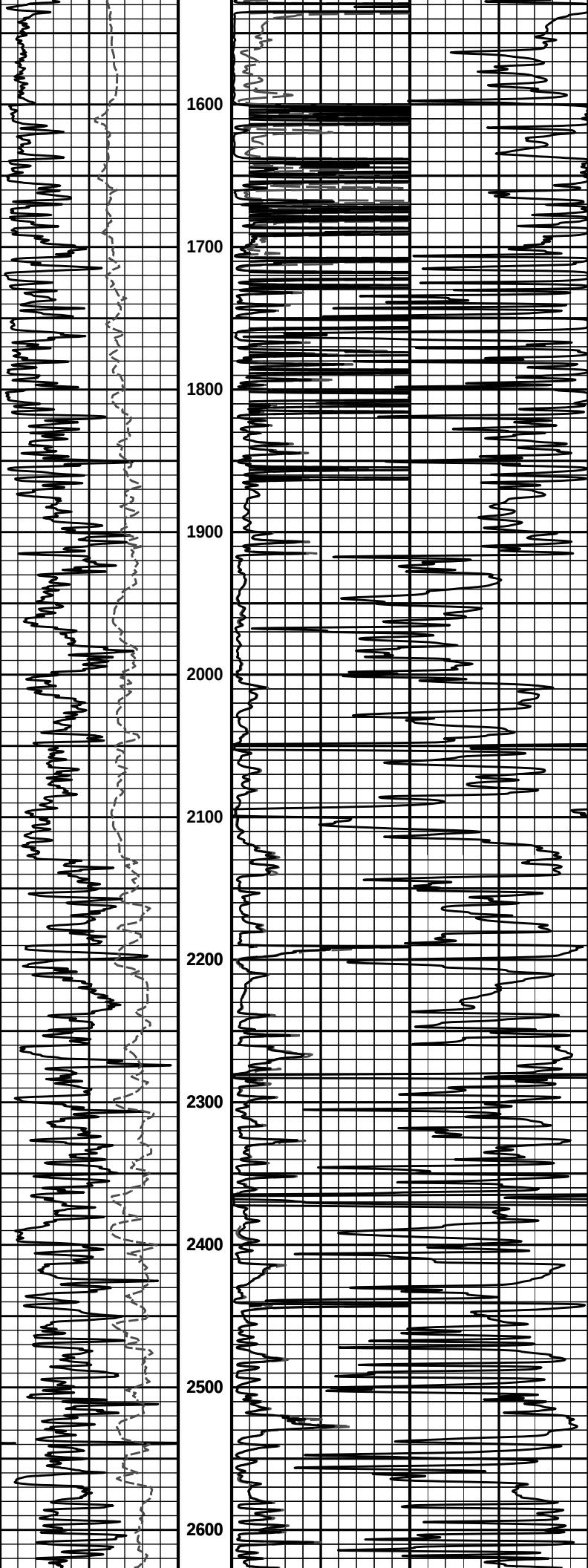
Microlog Pad				
TPUL	Tension Pull	22.83	NO	
MINV	Microlog Lateral	22.83	BLK	0.750
MNOR	Microlog Normal	22.83	BLK	0.750
Data: MILLS_1_29\0001 SP-GTET-DSNT-SDLT-ACRT-CHIDLE			Date: 19-Mar-12 20:54:47	

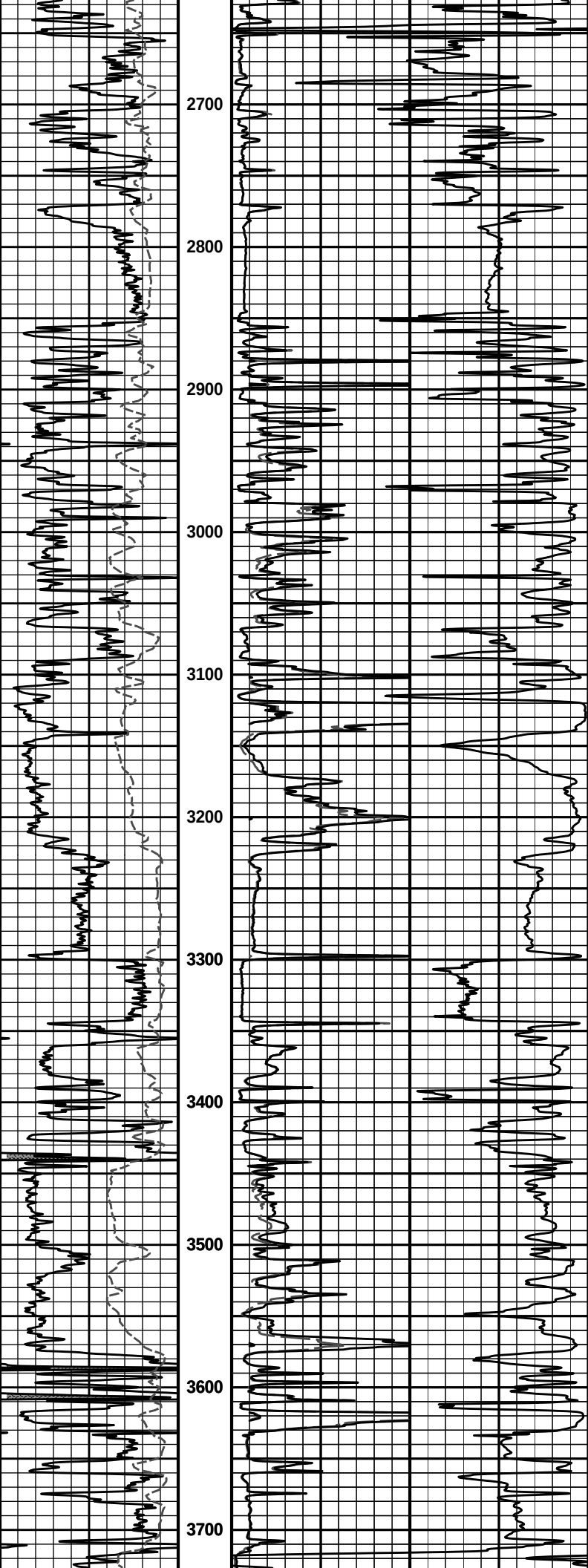
COMPANY	VAL ENERGY INC.		
WELL	MILLS 1-29		
FIELD	UNKNOWN		
COUNTY	BARBER	STATE	KANSAS

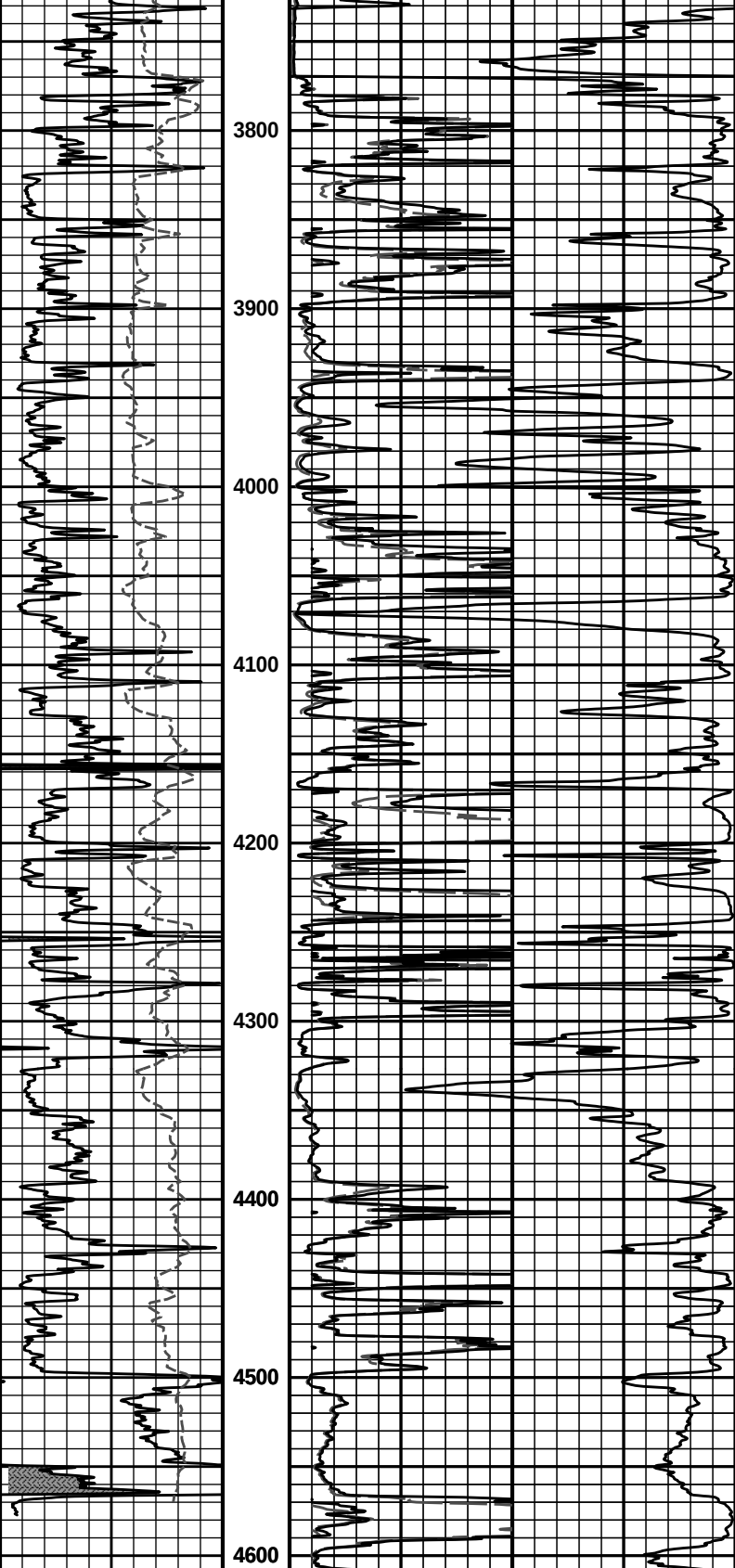
HALLIBURTON	ARRAY COMPENSATED TRUE RESISTIVITY LOG
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0	Gamma API	150	1 : 1200 FT	0	20in Resistivity 2ft Res ₅₀	
	api				ohm-metre	
	SP			0	90in Resistivity 2ft Res ₅₀	
	- 20 +				ohm-metre	
				1000	90in Conductivity 2ft Res	0
				mmho per metre		

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Plot Time: 19-Mar-12 22:10:08
Plot Range: 210 ft to 4608 ft
Data: MILLS_1_29\Well Based\CASING\

1 INCH MAIN LOG