

HALLIBURTON

ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY				BEREXCO INC.			
WELL				NEWBY 2-21			
FIELD				EVA SOUTH			
COUNTY				SCOTT			
STATE				KANSAS			
Permanent Datum		GL		API No.		15-171-20866	Other Services: SDLT, DSNT MICROLOG
Log measured from		KB		Location		954' FSL & 2232' FEL	
Drilling measured from		KB		Sect.		21 Twp. 18S Rge. 31W	
Date	14-Mar-12			Elev. 2943.0 ft		Elev.: K.B.	2955.0 ft
Run No.	ONE			D.F.		D.F.	2954.0 ft
Depth - Driller	4770.00 ft			G.L.		G.L.	2943.0 ft
Depth - Logger	4764.0 ft						
Bottom - Logged Interval	4754.0 ft						
Top - Logged Interval	449.0 ft						
Casing - Driller	8.626 in @ 427.0 ft						
Casing - Logger	449.0 ft						
Bit Size	7.875 in						
Type Fluid in Hole	WATER BASED MUD						
Density	9.4 ppg	50.00	s/qt				
PH	10.00 pH	8.0	cp/m				
Source of Sample	FLOWLINE						
Rm @ Meas. Temperature	0.660 ohmm @ 75.00 degF						
Rmf @ Meas. Temperature	0.89 ohmm @ 40.00 degF						
Rmc @ Meas. Temperature	1.450 ohmm @ 40.00 degF						
Source Rmf	MEASURED	MEASURED					
Rm @ BHT	0.43 ohmm @ 118.0 degF						
Time Since Circulation	2.0 hr						
Time on Bottom	14-Mar-12 04:08						
Max. Rec. Temperature	118.0 degF @ 4764.0 ft						
Equipment	10782954	LIBERAL					
Recorded By	J. BOLLOM						
Witnessed By	J. CARTER						

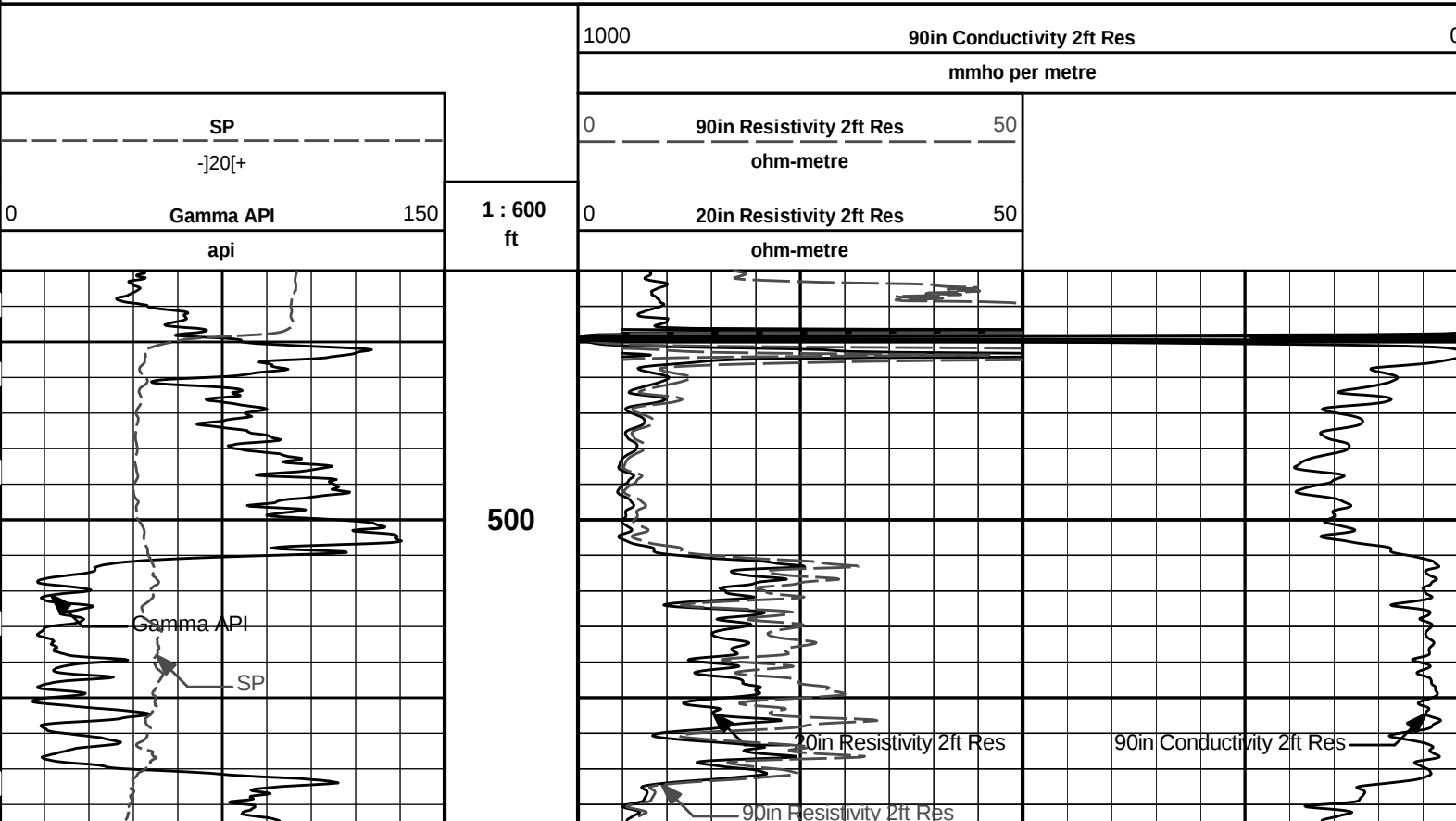
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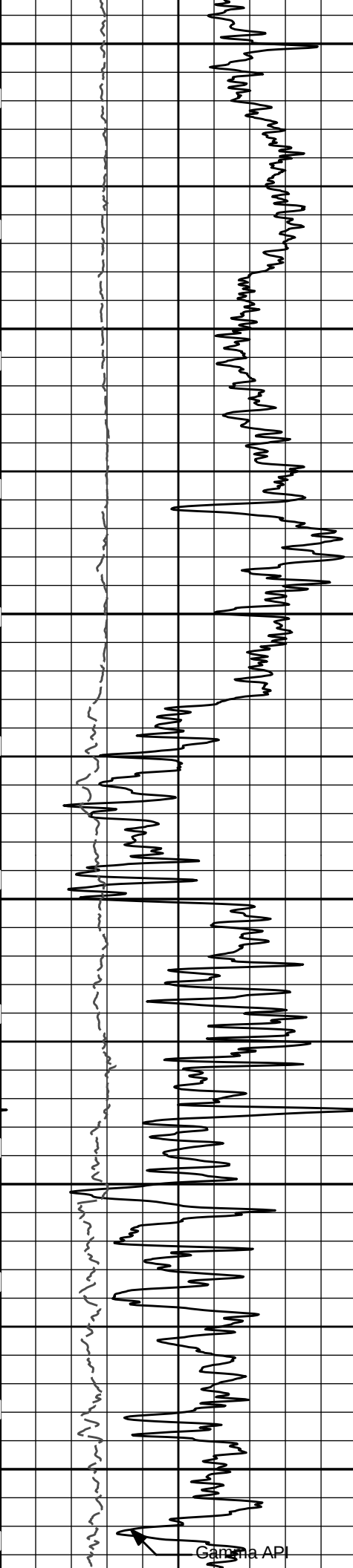
Service Ticket No.: 9338910						API Serial No.: 15-171-20866						PGM Version: WL INSITE R3.4.2 (Build 2)																	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE												RESISTIVITY SCALE CHANGES																	
Date		Sample No.										Type Log		Depth		Scale Up Hole		Scale Down Hole											
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.											
Rmc @ Meas. Temp.				@				@						1776_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.		GTET				Spacing						Log Type						Log Type											
Type		SCINT										Source Type						Source Type											
Length		8'				LSA [Y/N]						Serial No.						Serial No.											
Distance to Source		N/A				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	4764	449	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: TOOL SURVEYS NOT PERFORMED DUE TO TEMPERATURE														
LCM REPORTED AT 4 LB/BBL														
CHLORIDES REPORTED AT 1800 PPM														
ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
TODAY'S CREW: K. KING & B. TERREL														
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.														
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Plot Time: 14-Mar-12 07:53:15
Plot Range: 430 ft to 4769 ft
Data: NEWBY 2-21\Well Based\CASING\
Plot File: \\LOCAL-I\NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CHI\ACRT\ACRT_2_lib





600

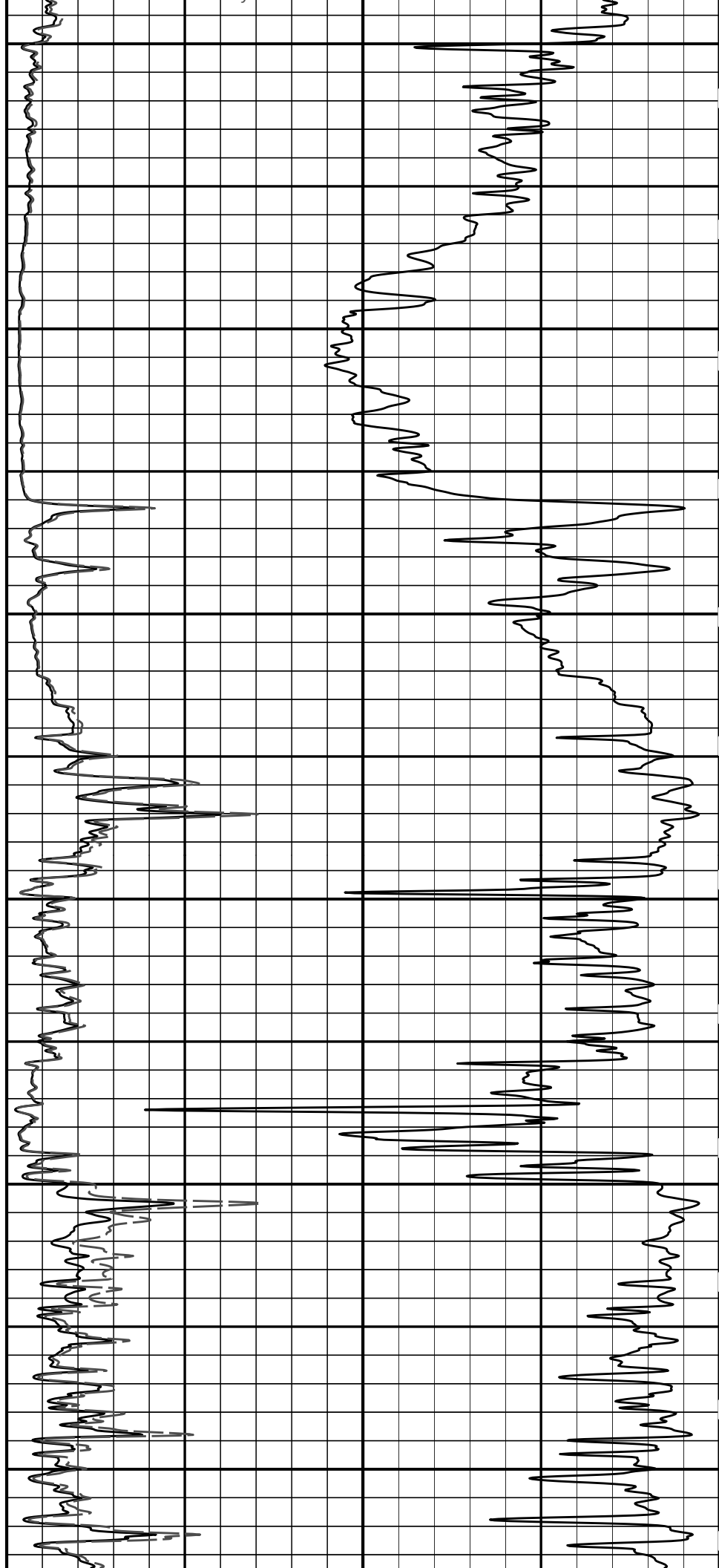
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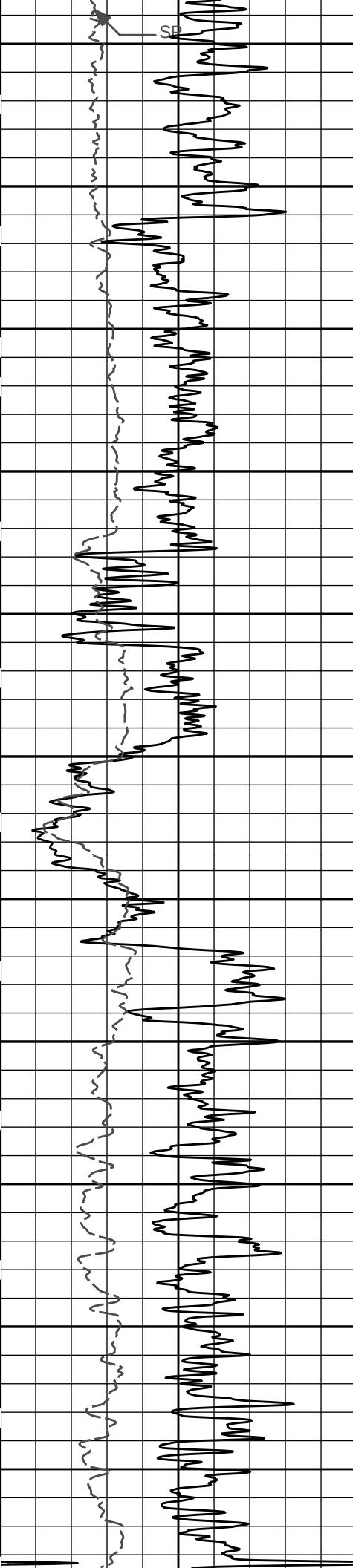
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900

1000

1100





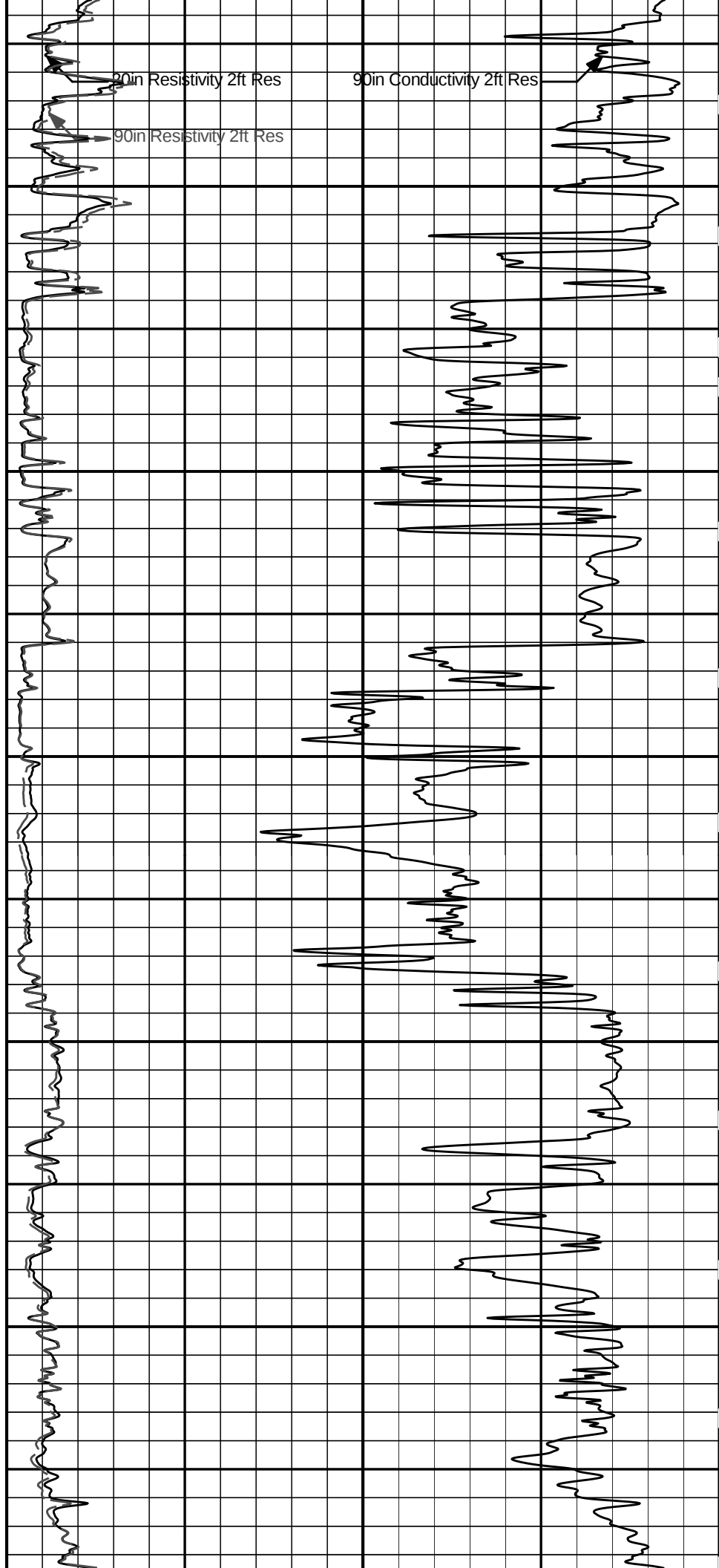
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1300

1400

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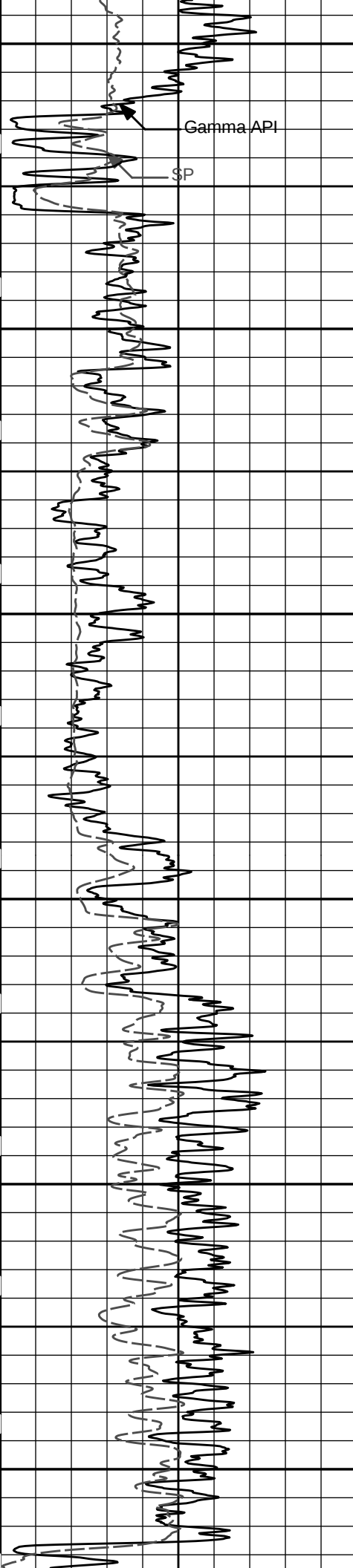
1600



20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



1700

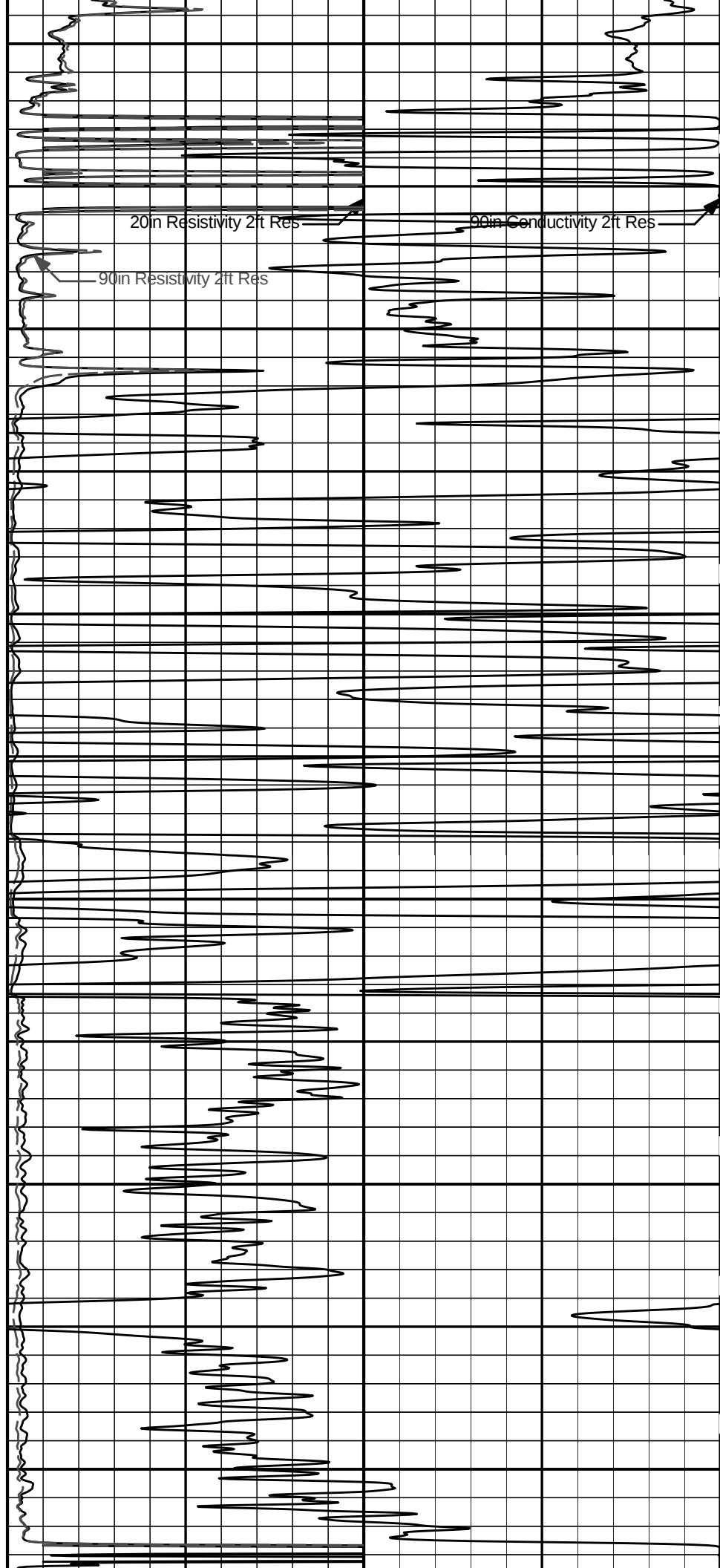
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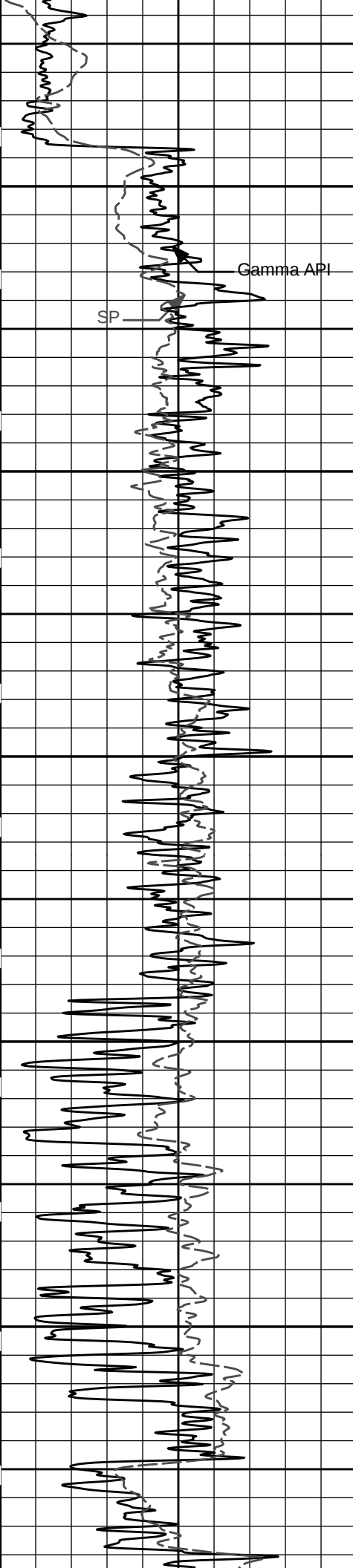
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20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



2300

Gamma API

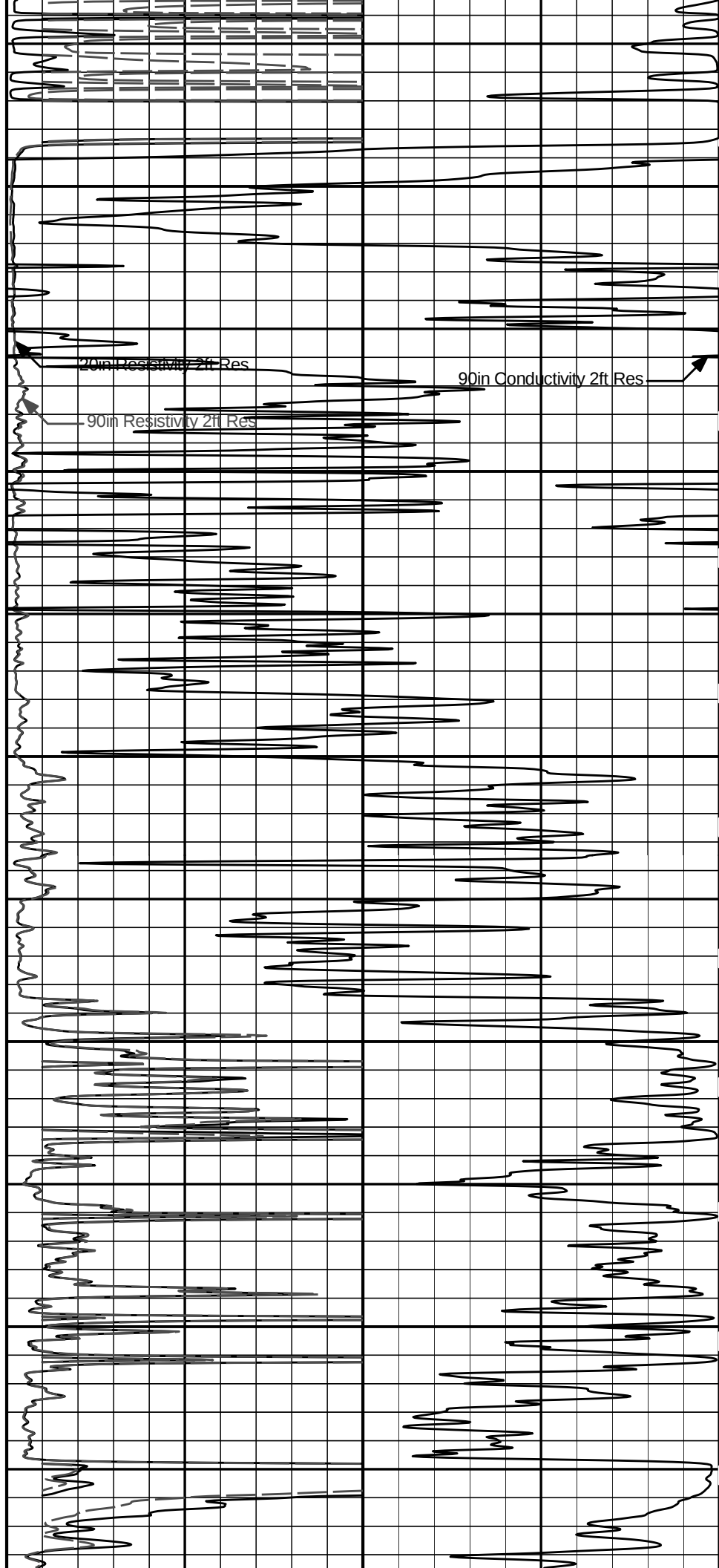
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2400

2500

2600

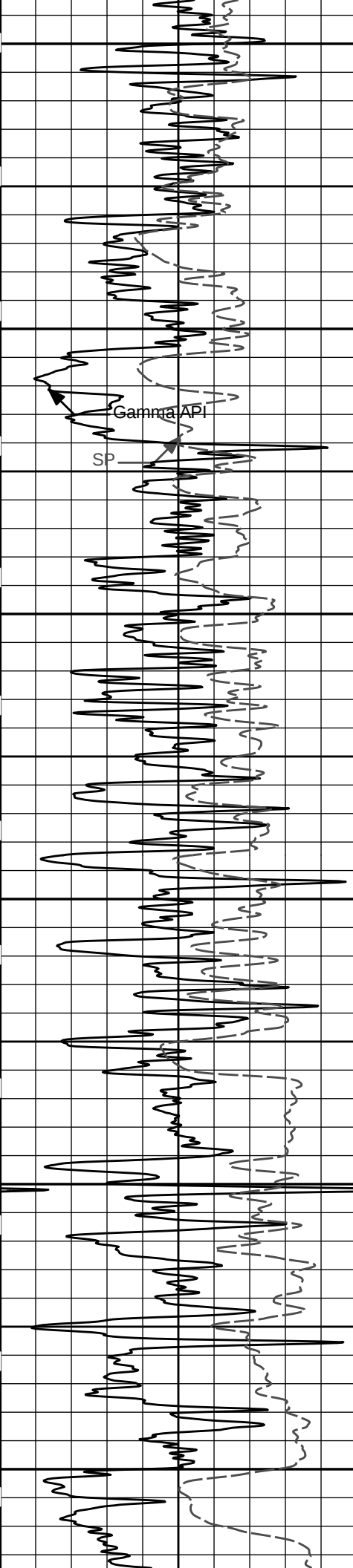
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20in Resistivity 2ft Res

90in Conductivity 2ft Res

90in Resistivity 2ft Res



2800

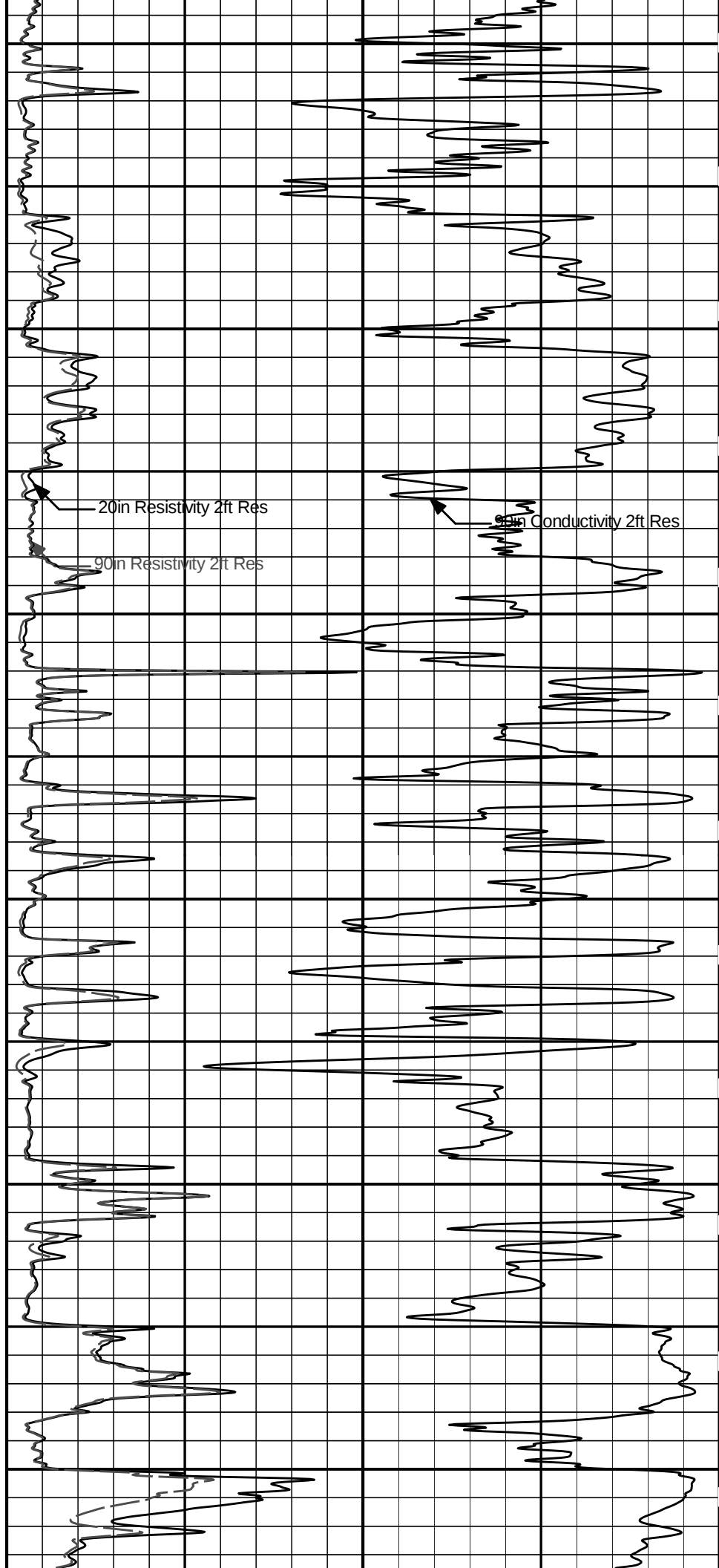
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3000

3100

3200

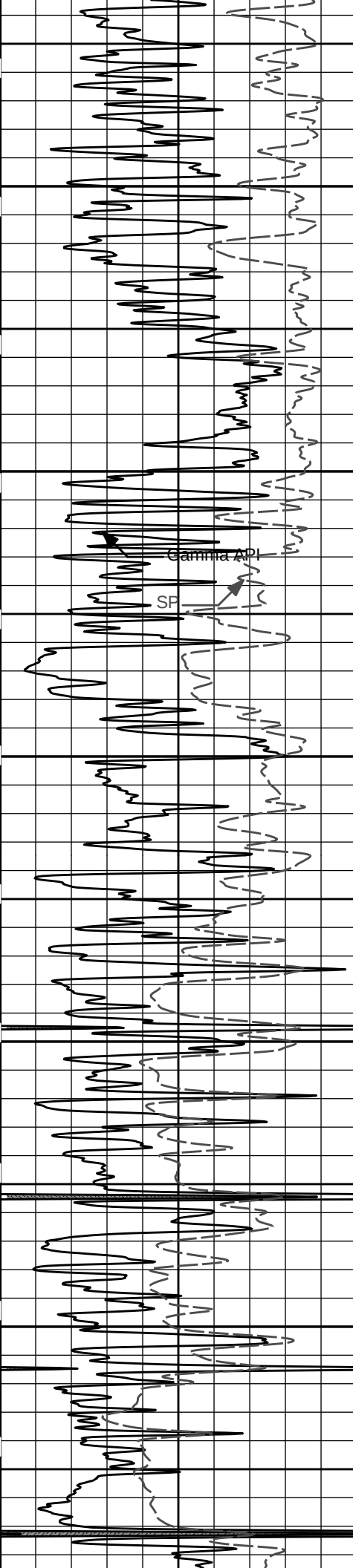
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20in Resistivity 2ft Res

90in Resistivity 2ft Res

20in Conductivity 2ft Res



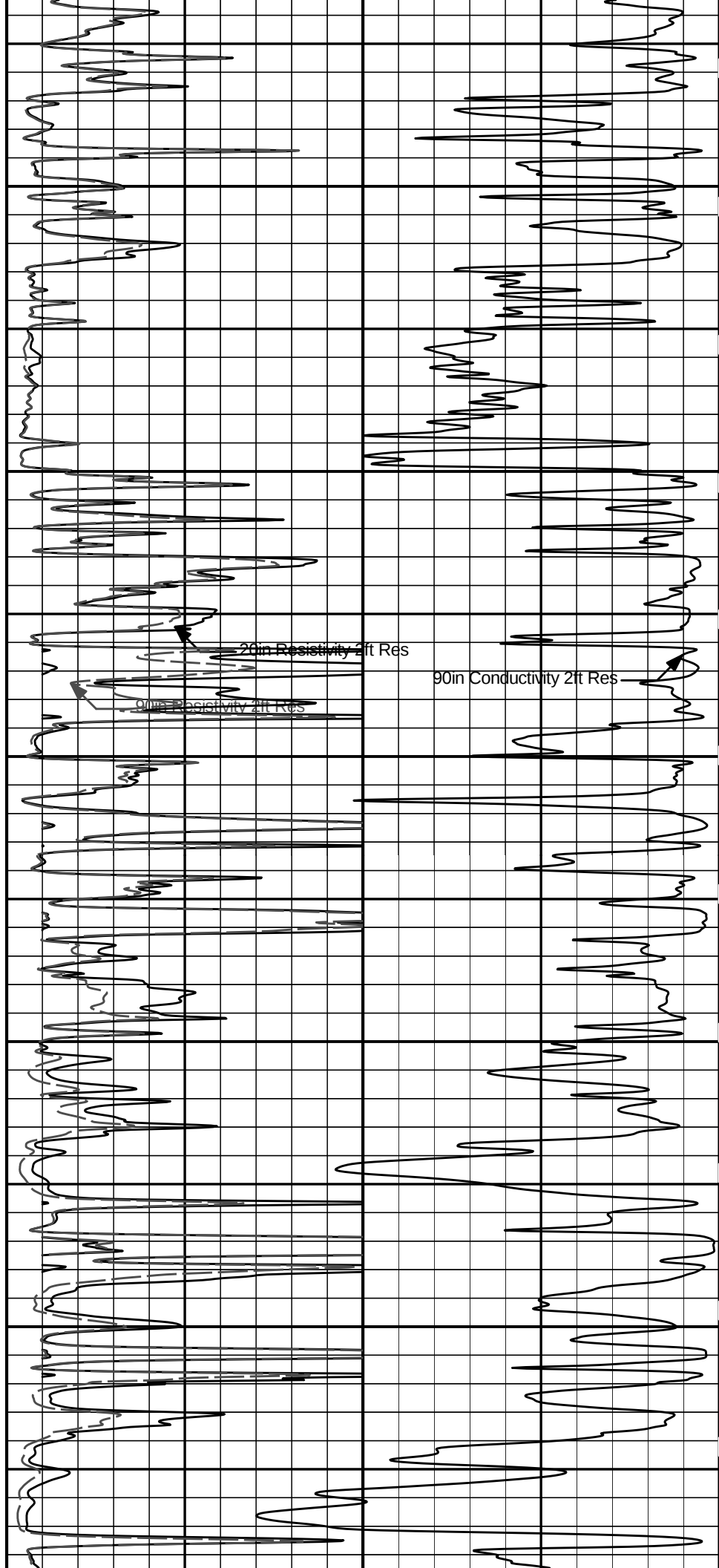
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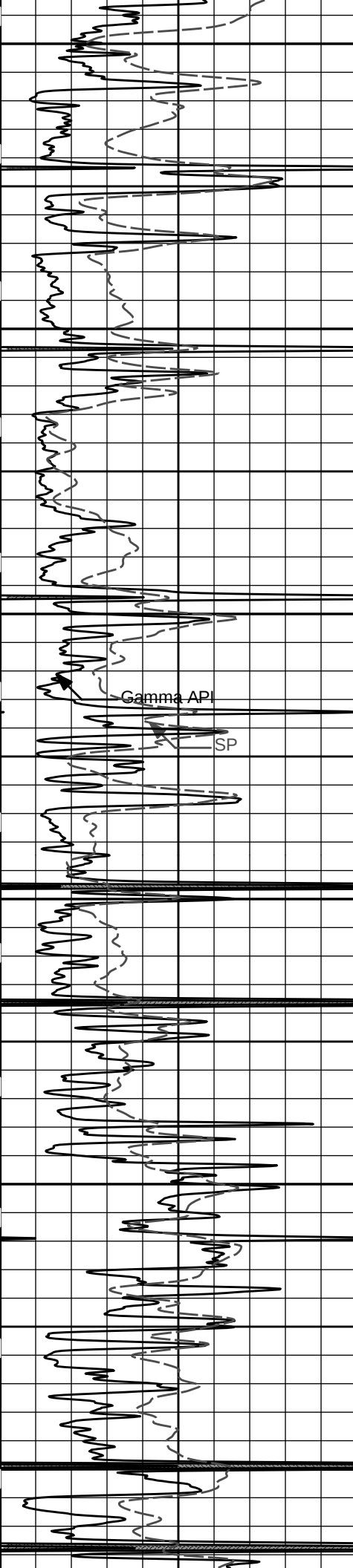
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3700

3800





3900

4000

4100

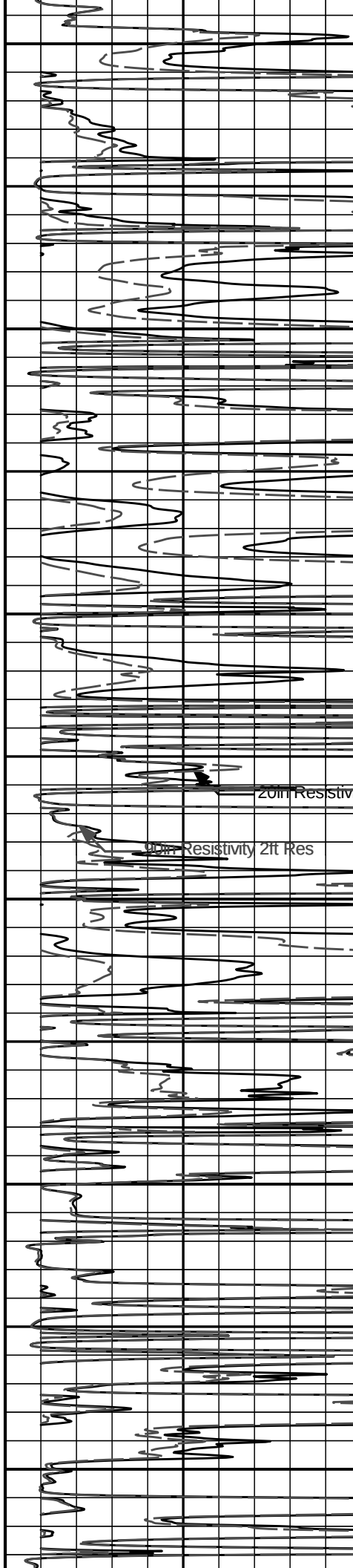
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4300

4400

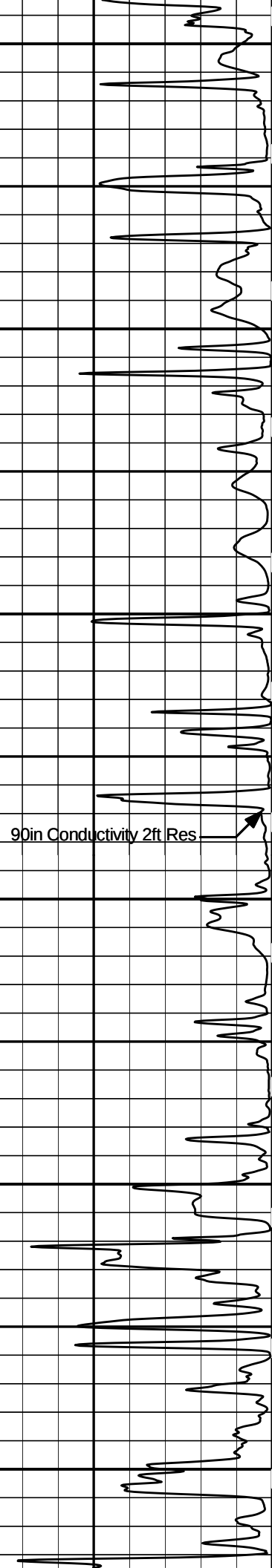
Gamma API

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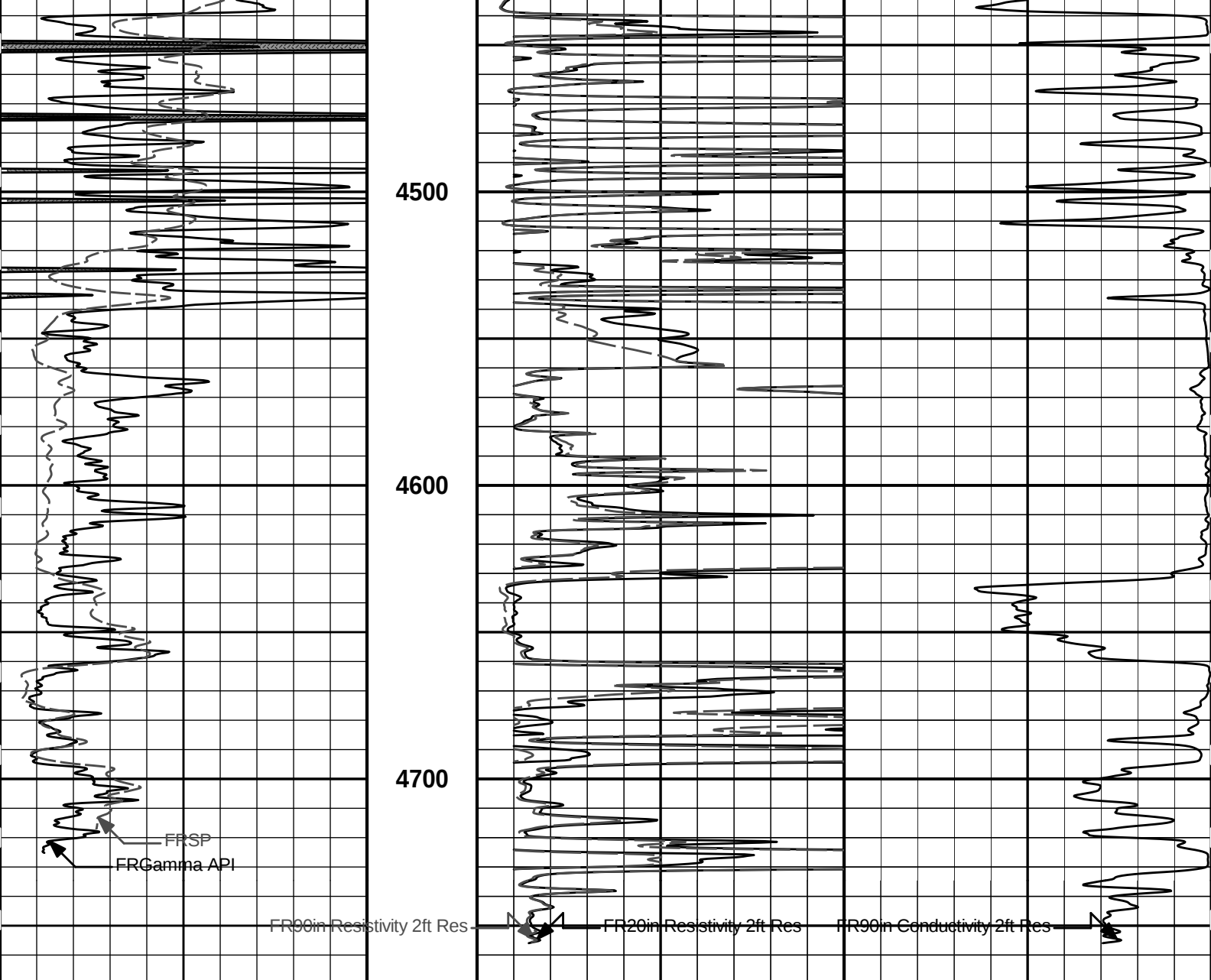


20in Resistivity 2ft Res

90in Resistivity 2ft Res



90in Conductivity 2ft Res



0	Gamma API	150	1 : 600 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		

HALLIBURTON

Plot Time: 14-Mar-12 07:53:19
Plot Range: 430 ft to 4769 ft
Data: NEWBY 2-21\Well Based\CASING\
Plot File: \\-LOCAL-\\NEWBY 2-21\\0001 SP-GTET-DSNT-SDLT-ACRT-CHI\ACRT\ACRT_2_lib

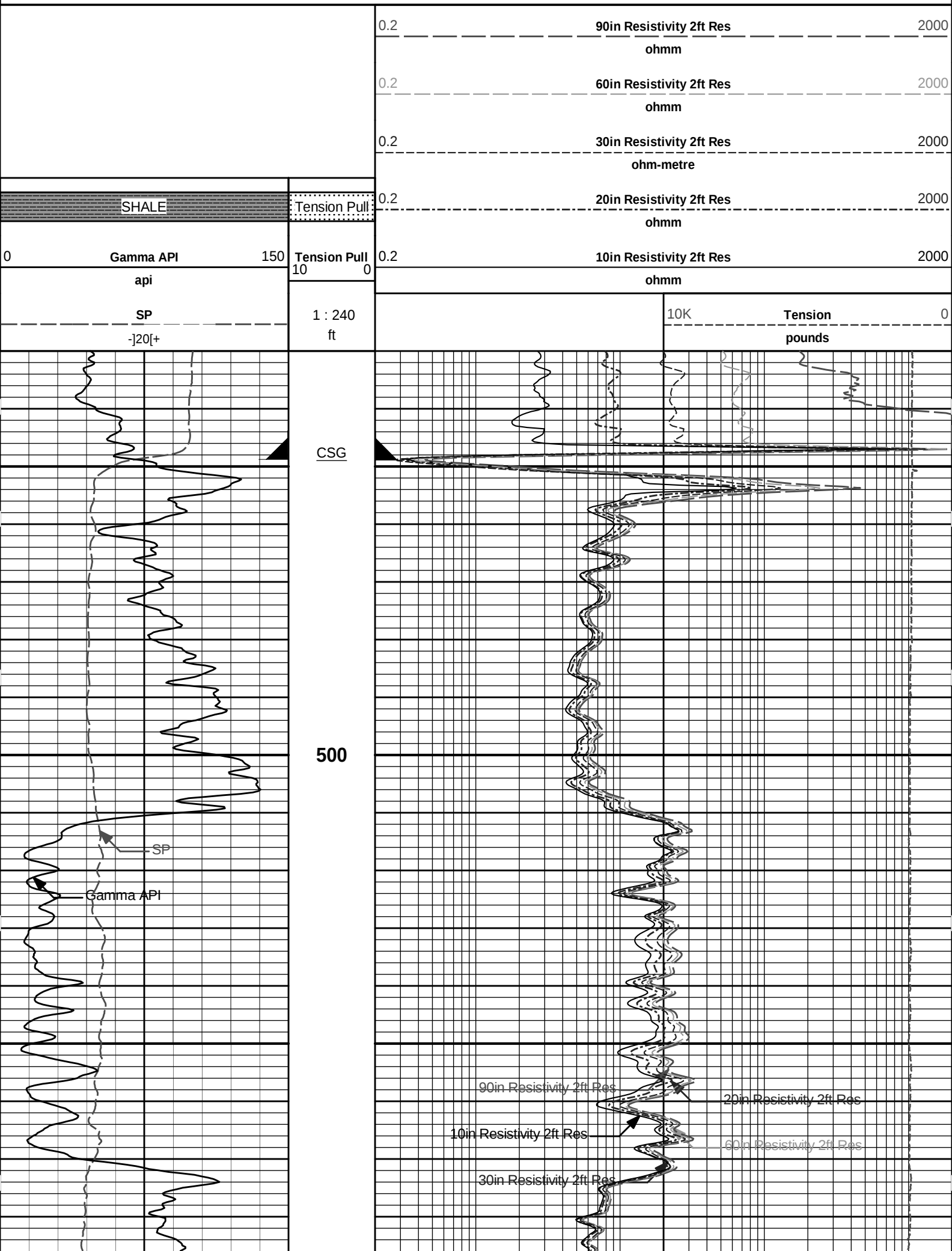
2 INCH MAIN LOG

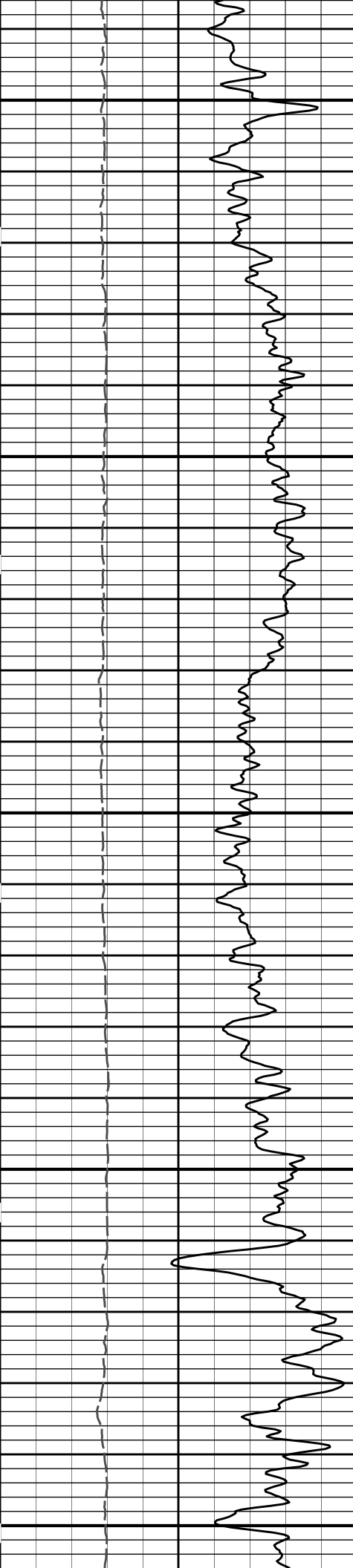
HALLIBURTON

Plot Time: 14-Mar-12 07:53:19
Plot Range: 430 ft to 4769 ft
Data: NEWBY 2-21\Well Based\CASING\
Plot File: \\-LOCAL-\\NEWBY 2-21\\0001 SP-GTET-DSNT-SDLT-ACRT-CHI\ACRT\ACRT_5_main_lib

5 INCH MAIN LOG

5 INCH MAIN LOG

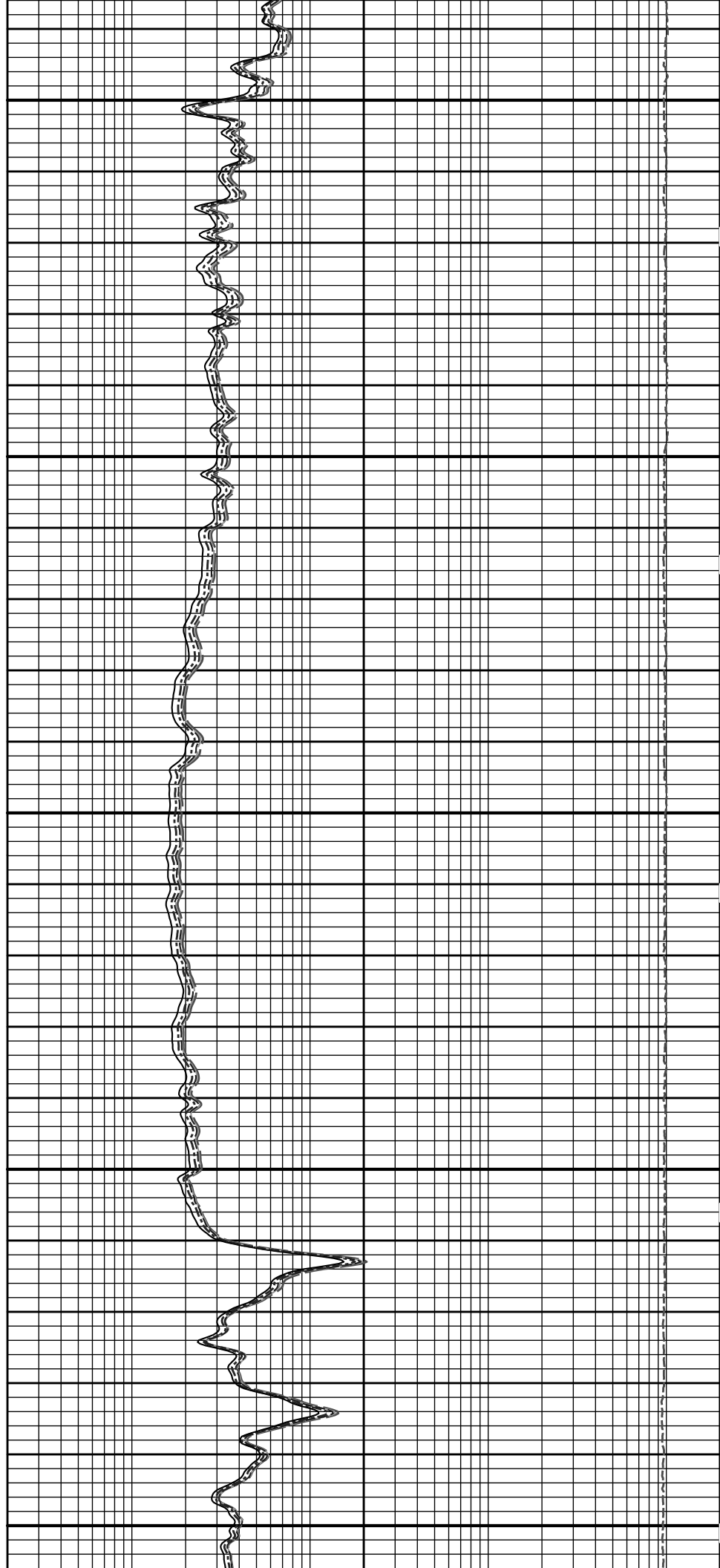


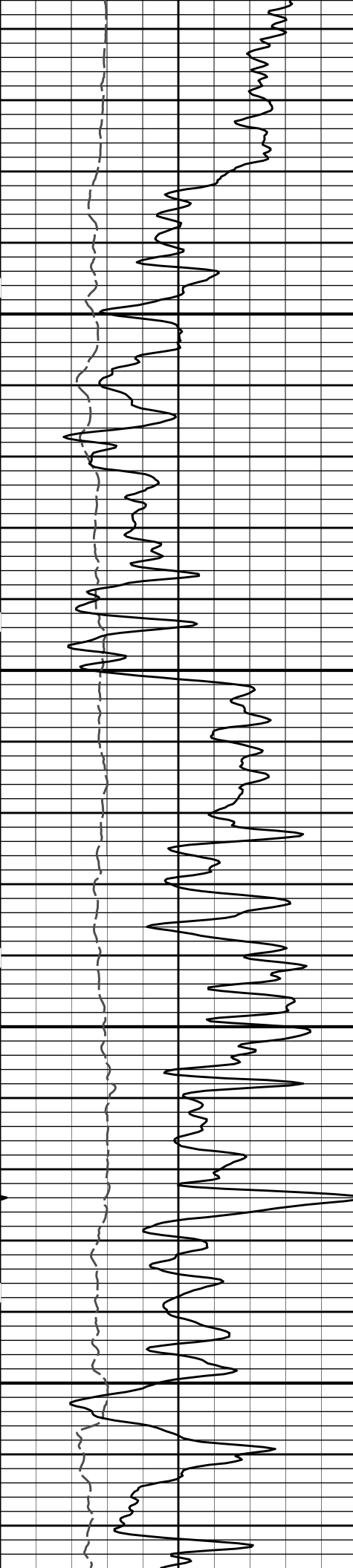


600

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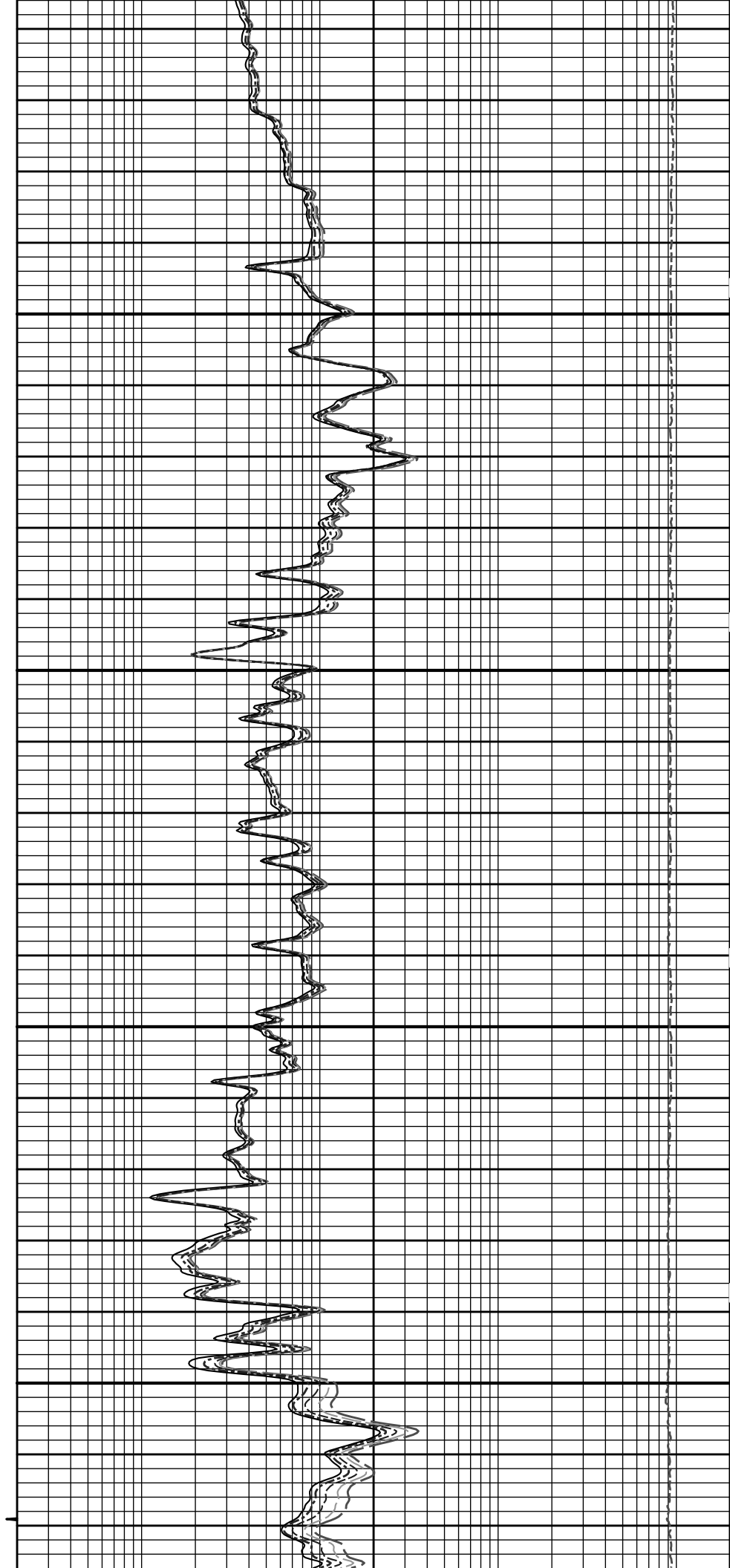
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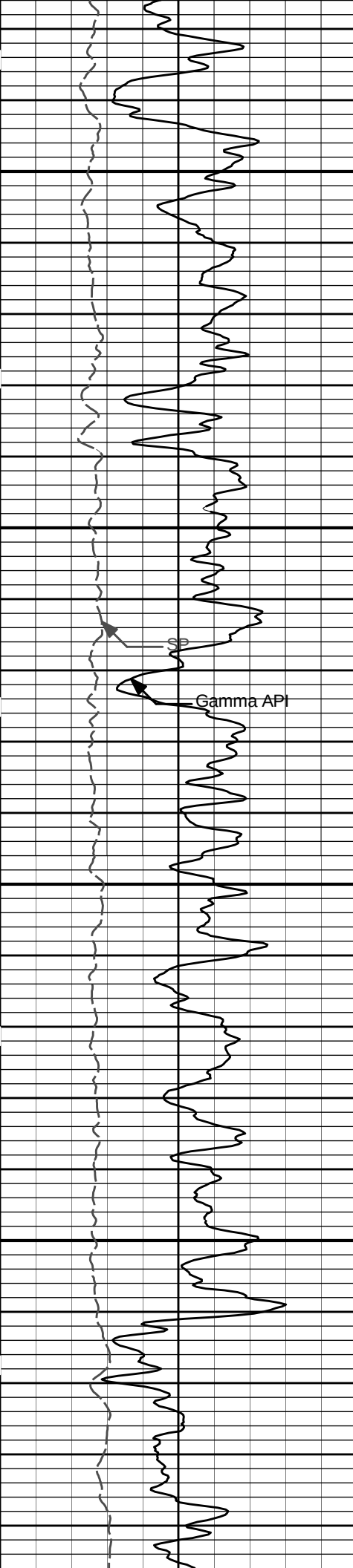




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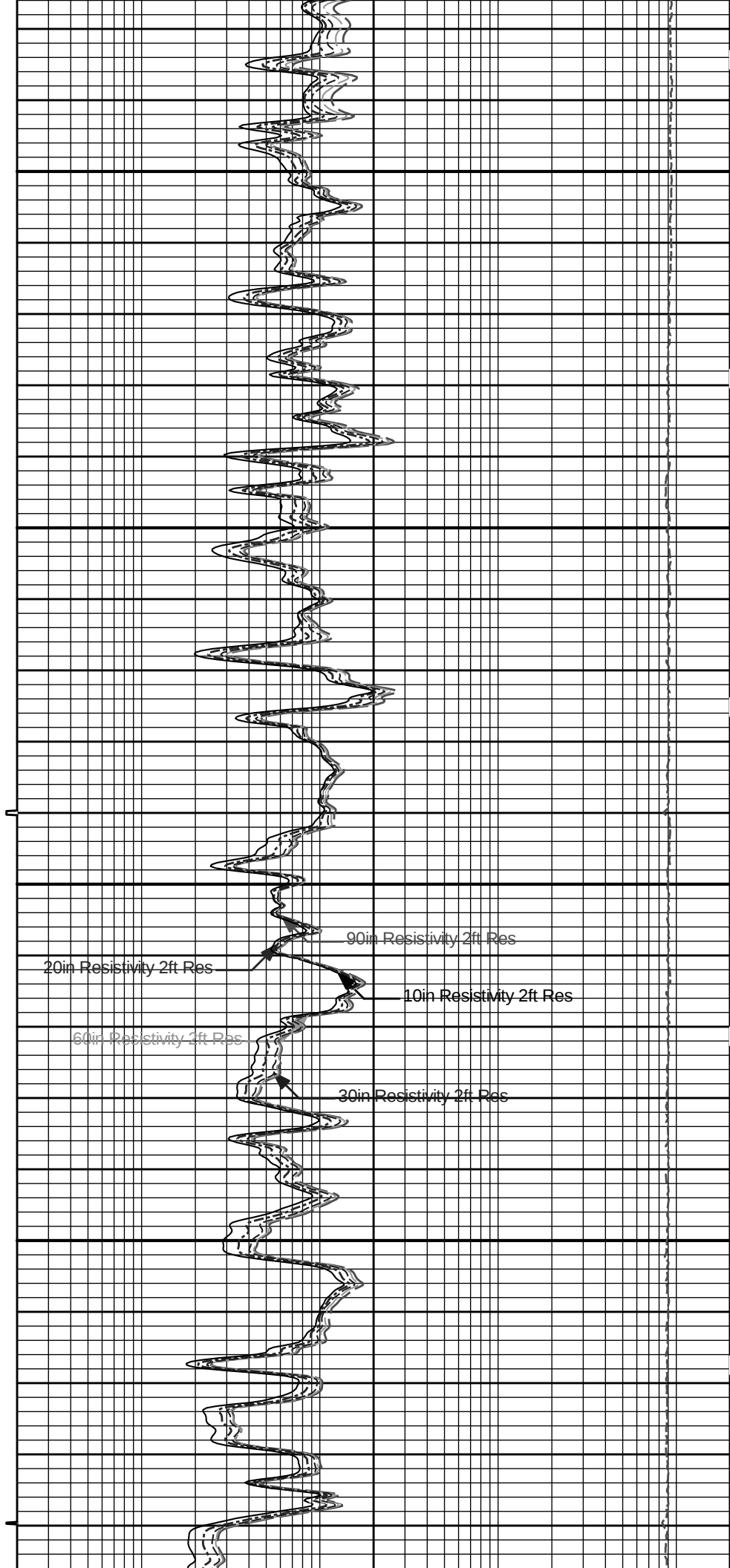
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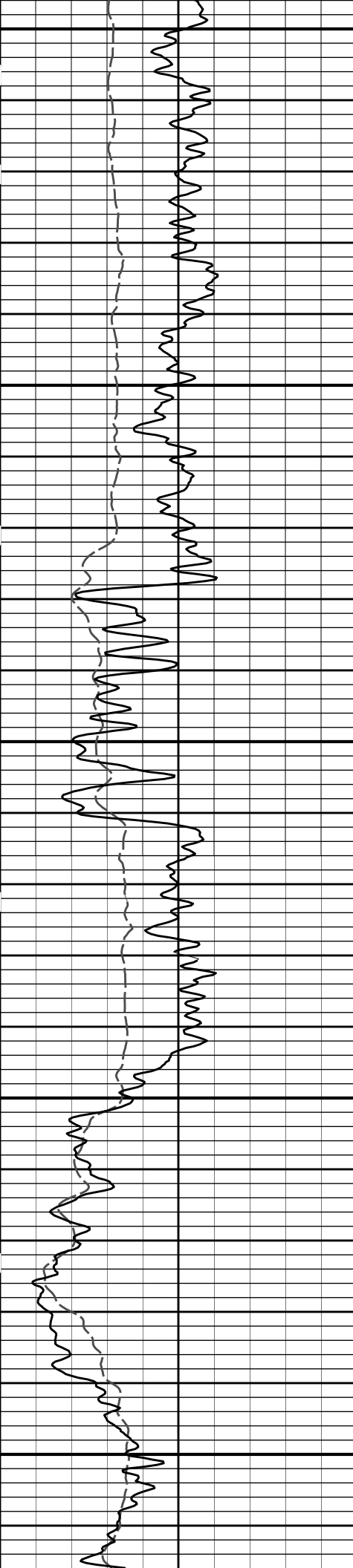




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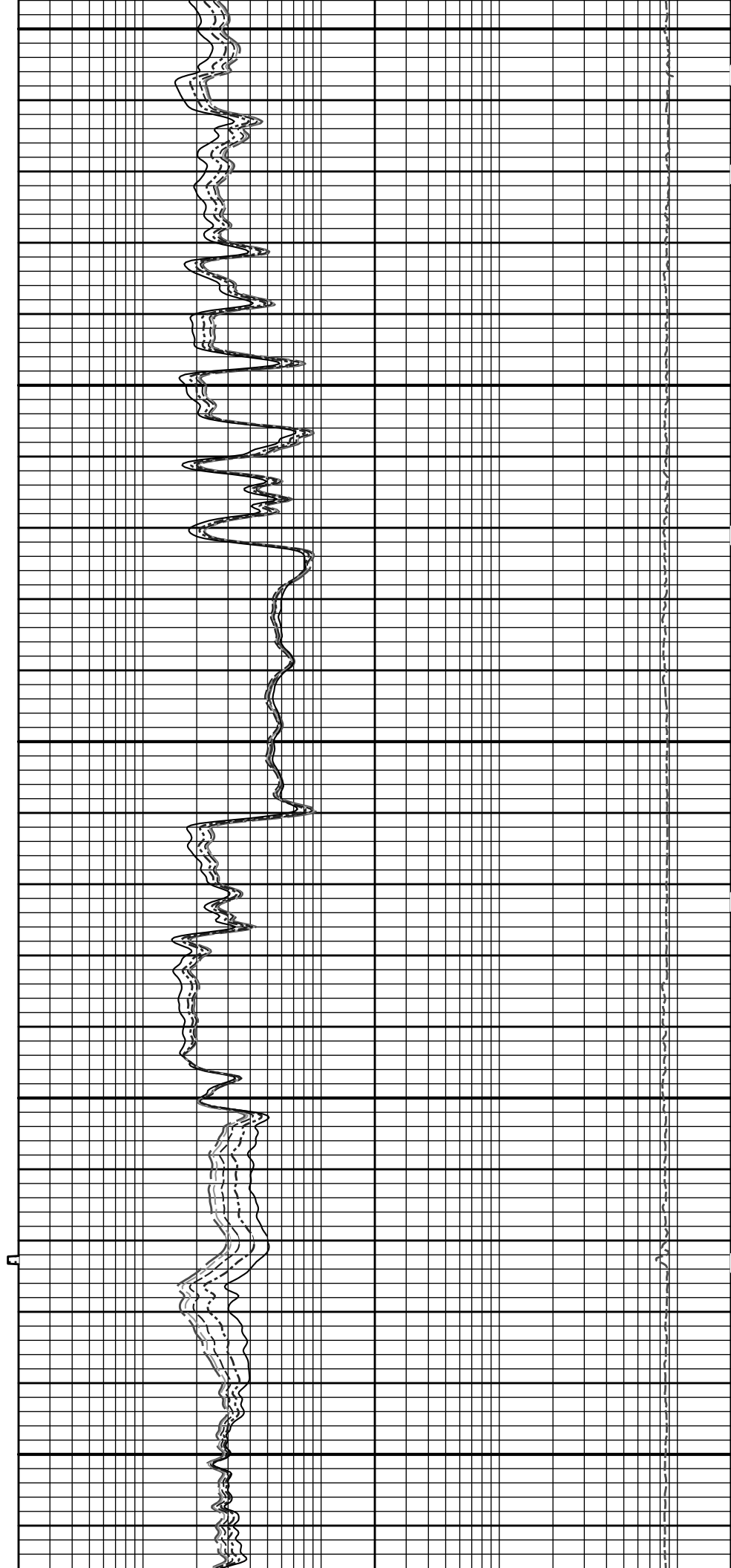
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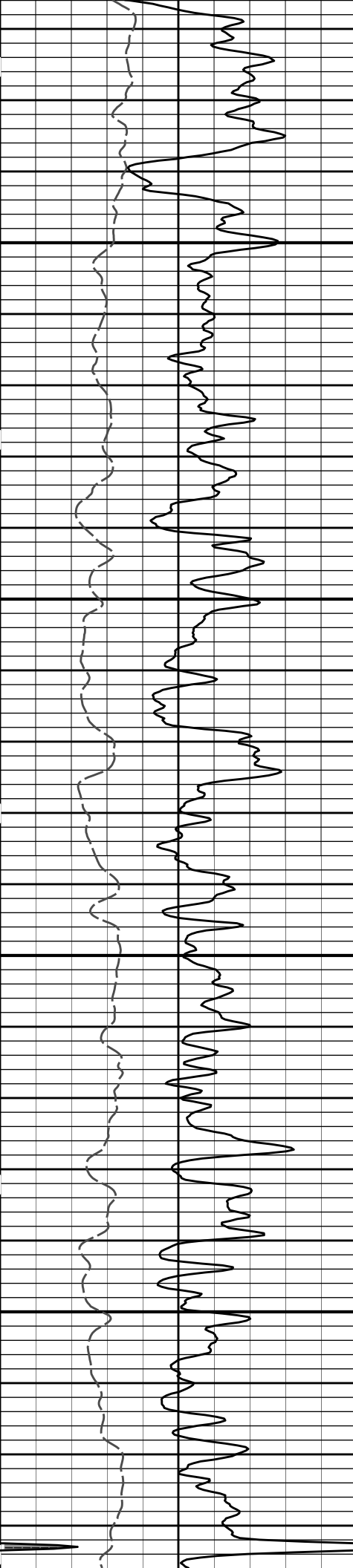




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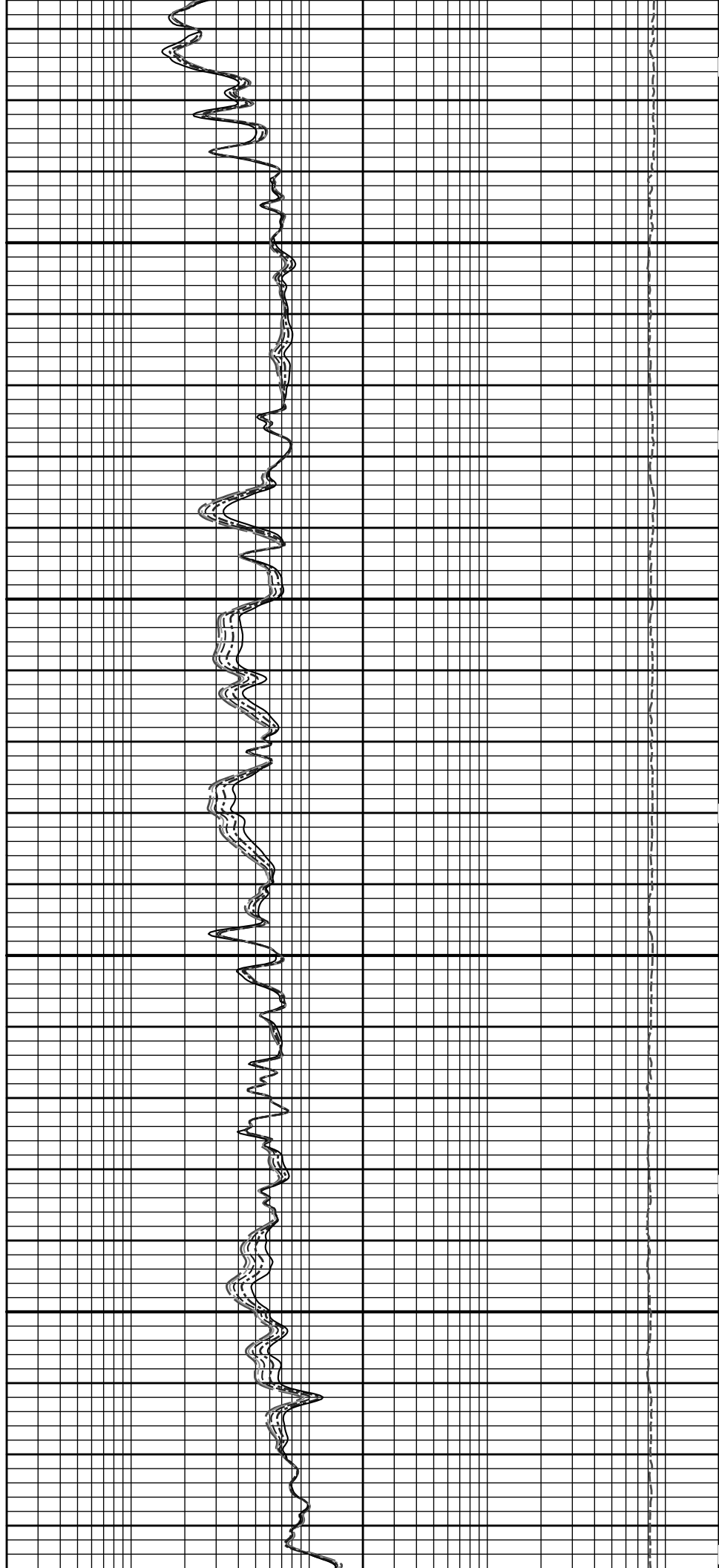
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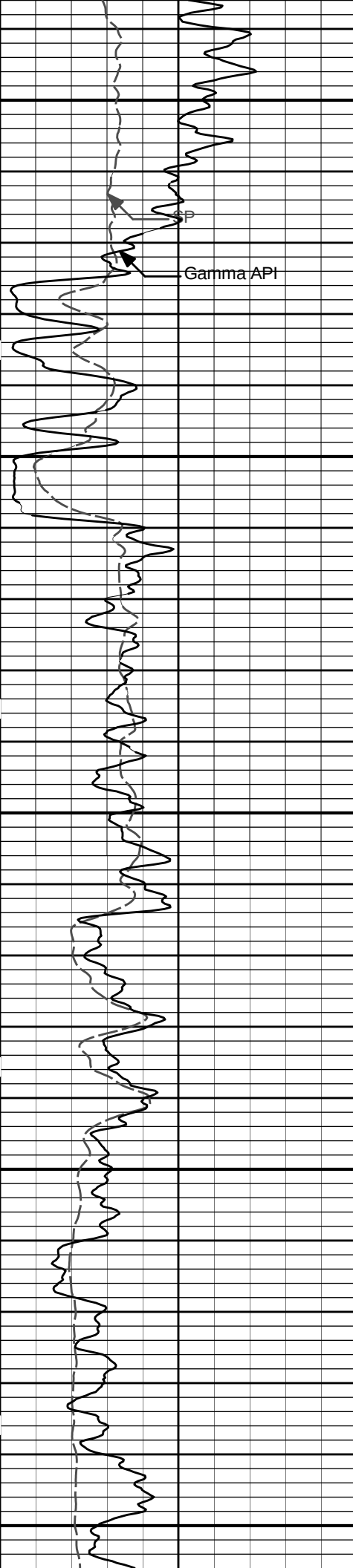




1500

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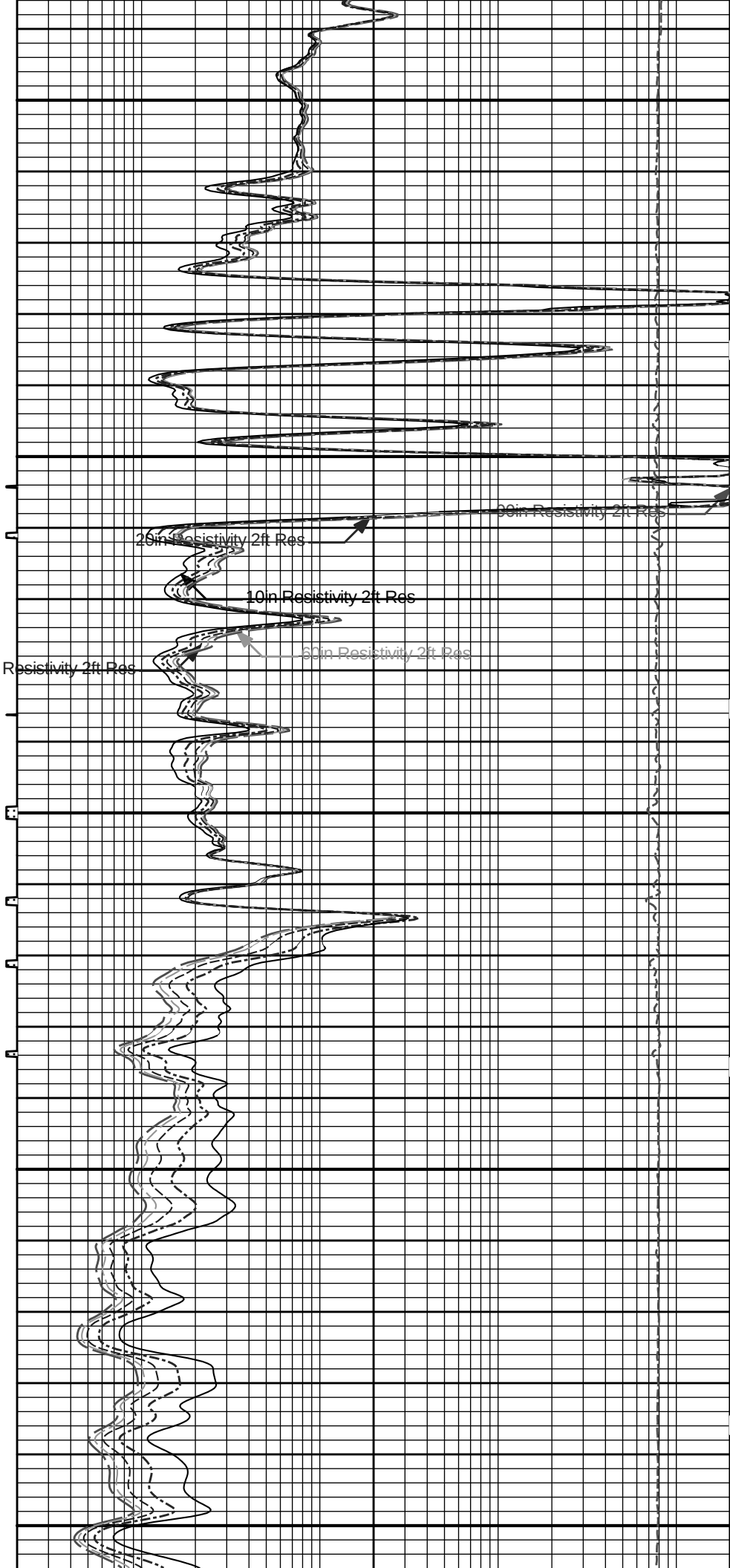


Gamma API

1700

1800

1900

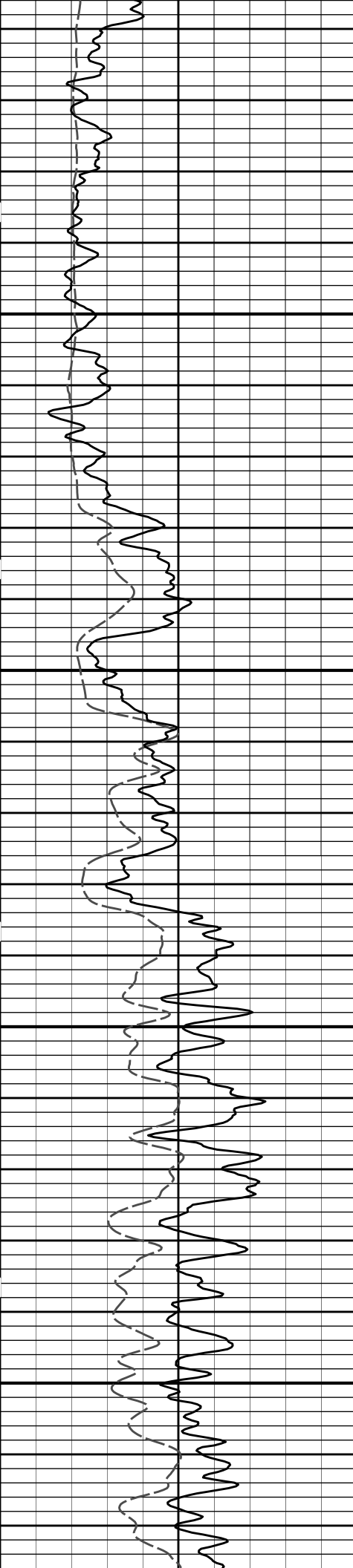


20in Resistivity 2ft Res

10in Resistivity 2ft Res

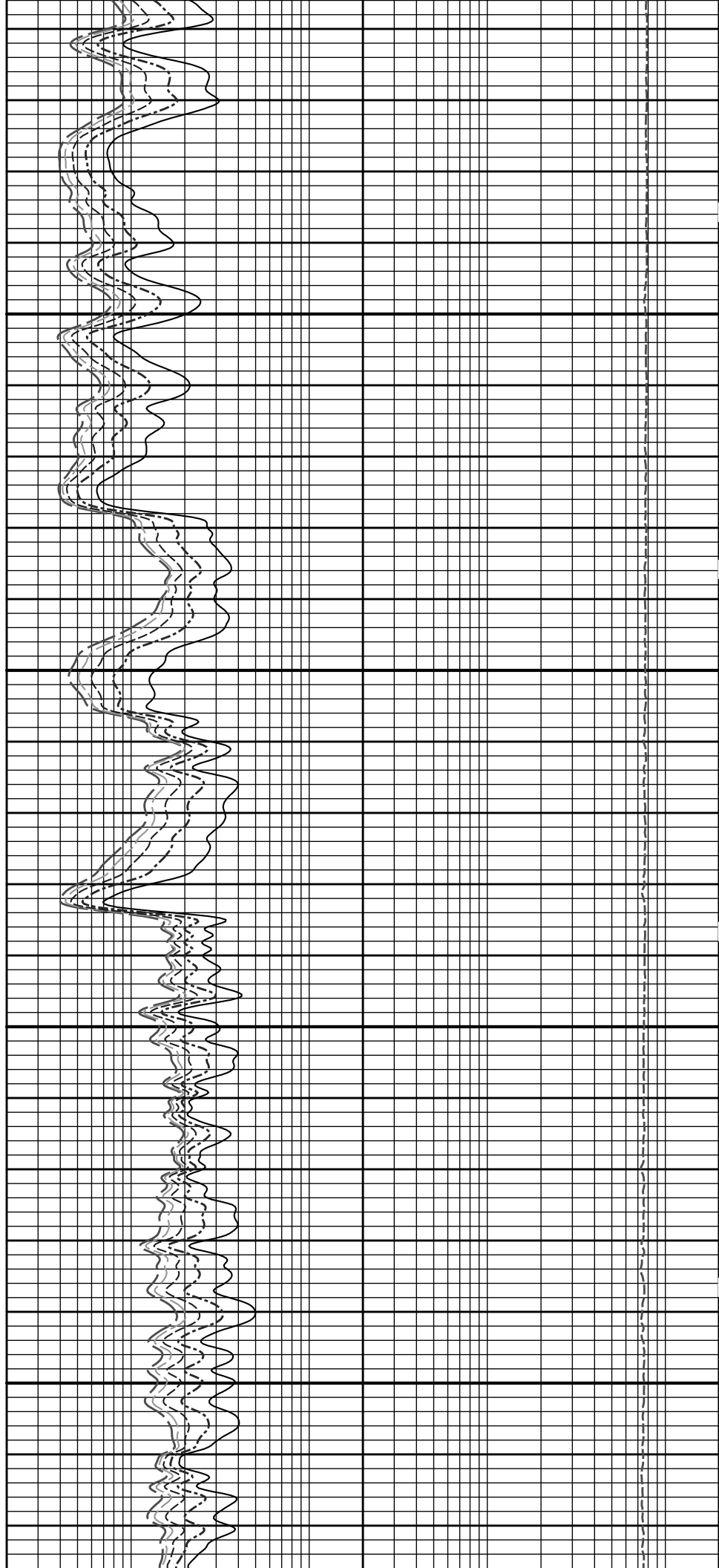
30in Resistivity 2ft Res

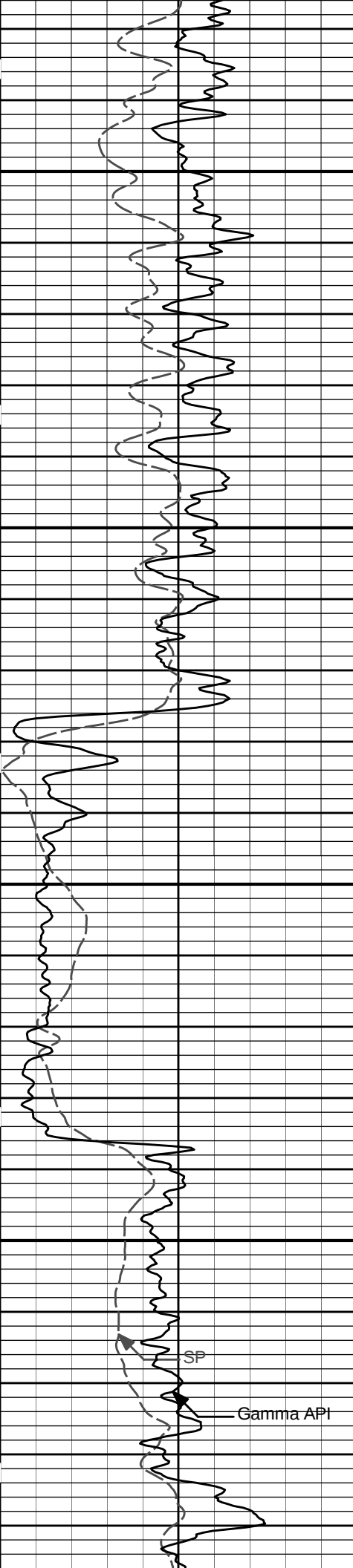
60in Resistivity 2ft Res



2000

2100



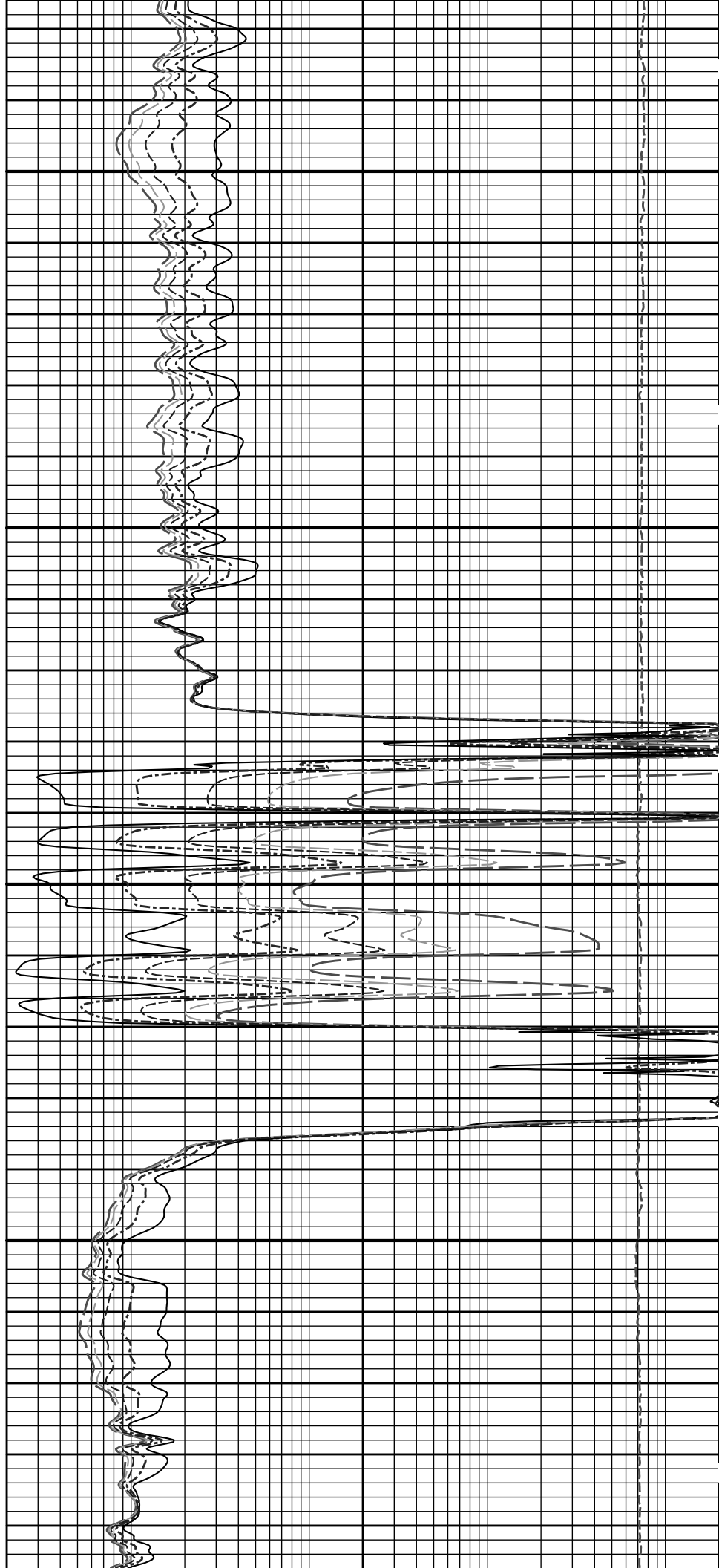


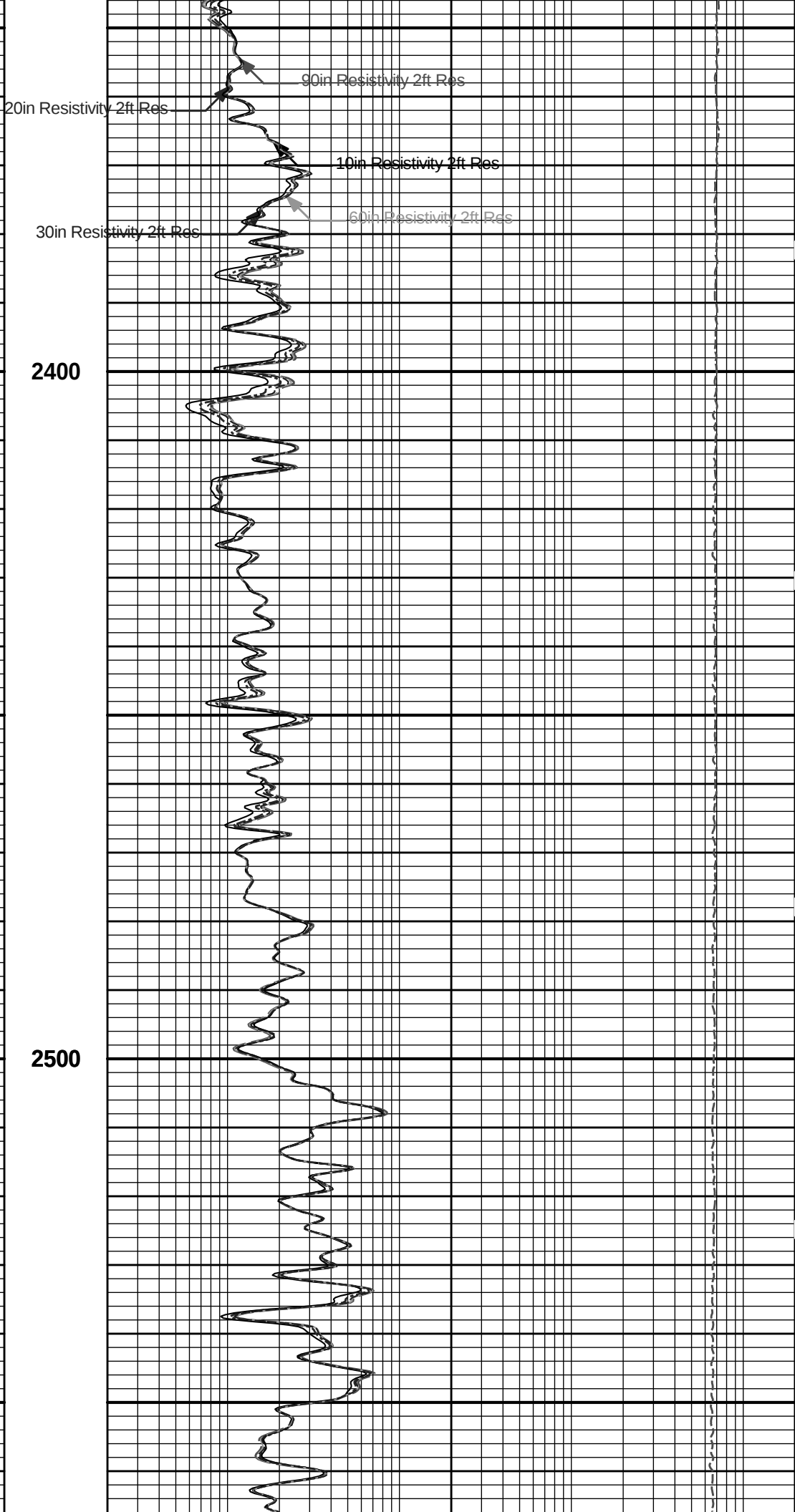
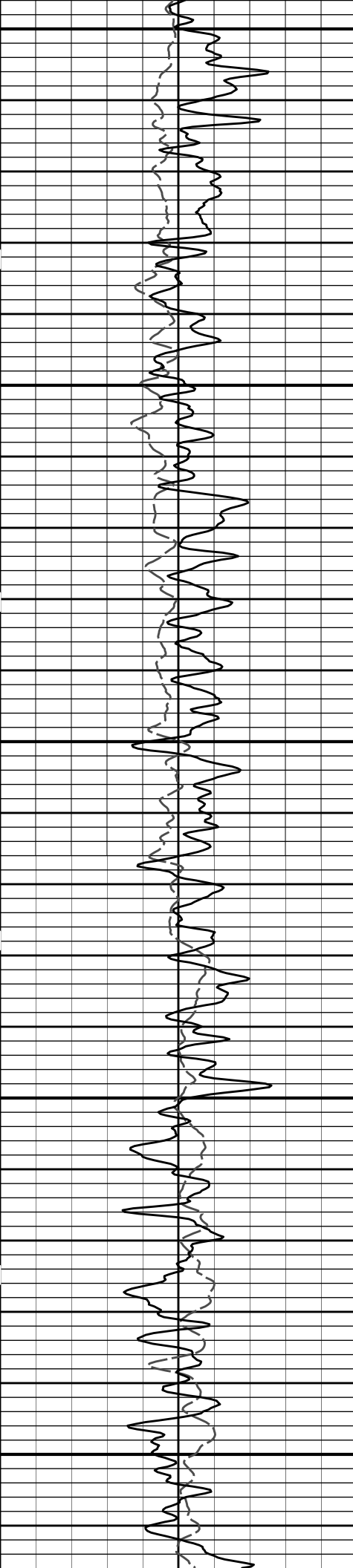
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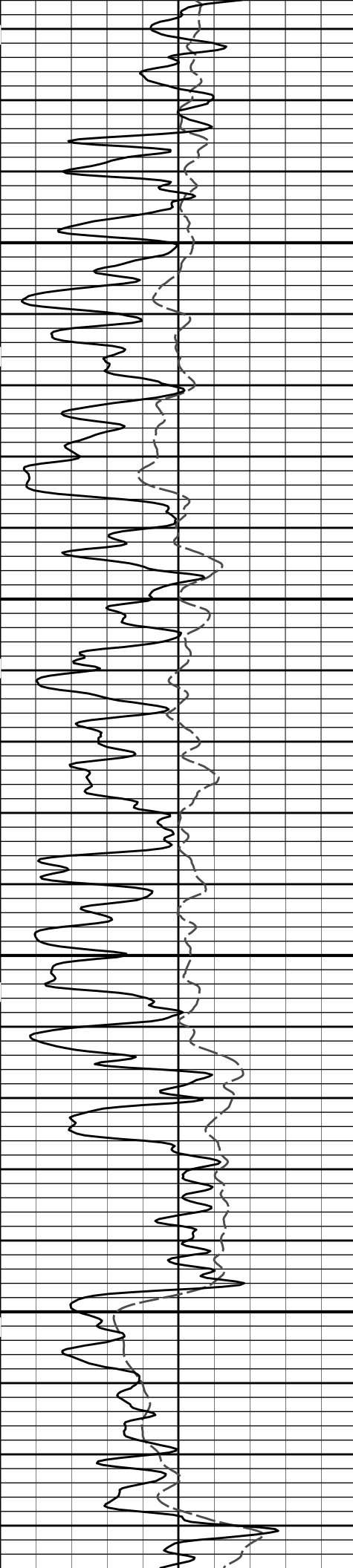
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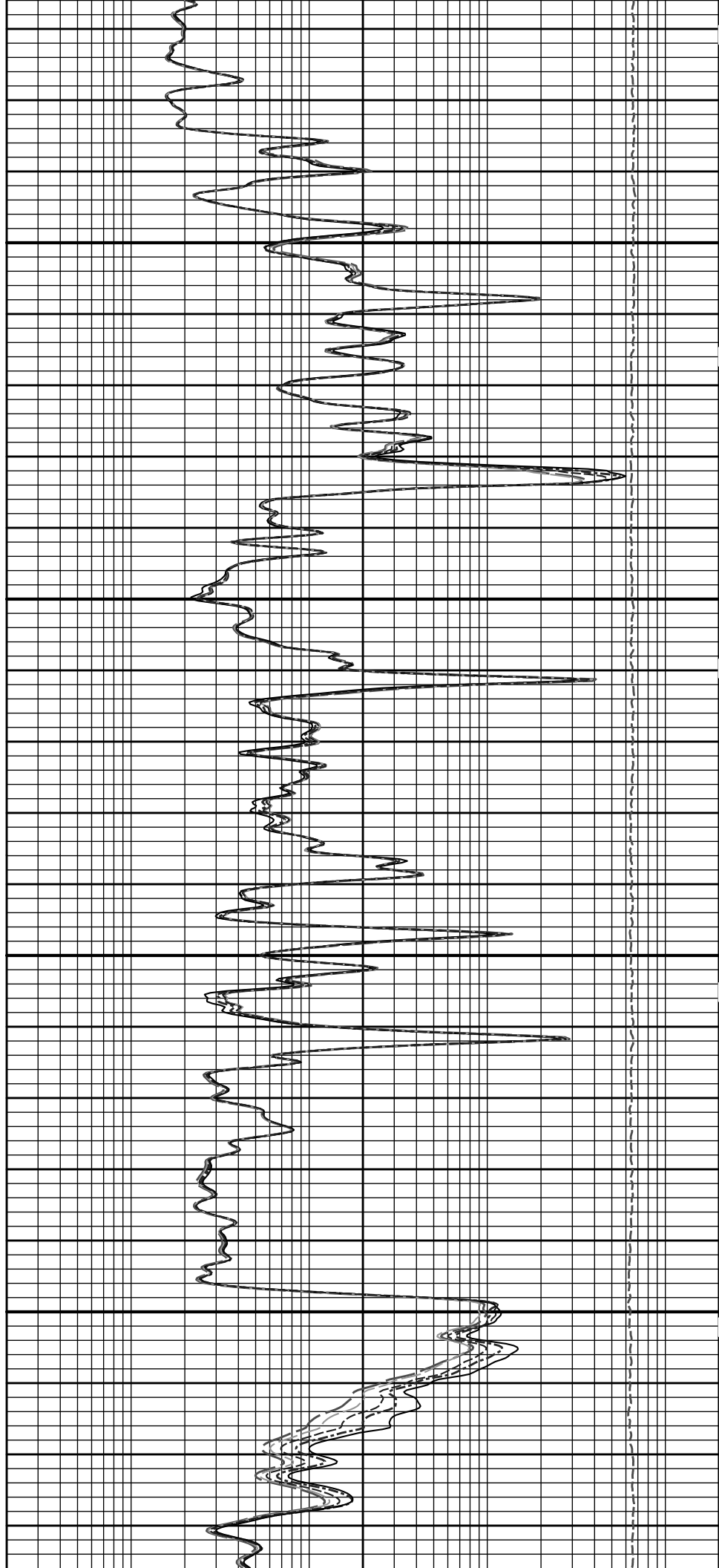
Gamma API



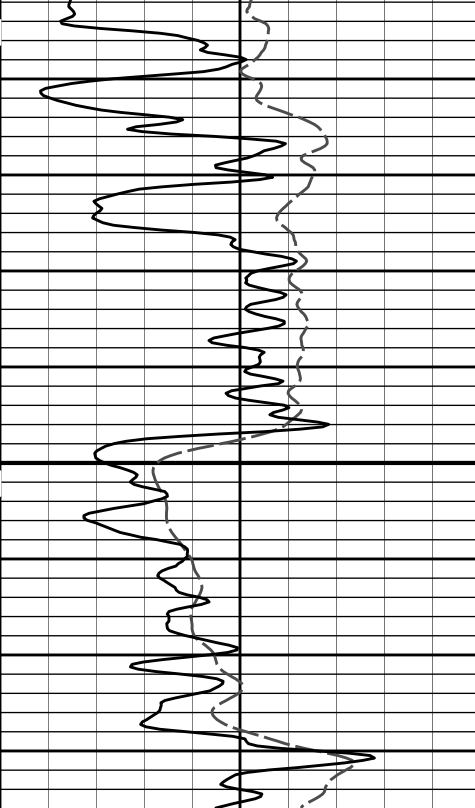


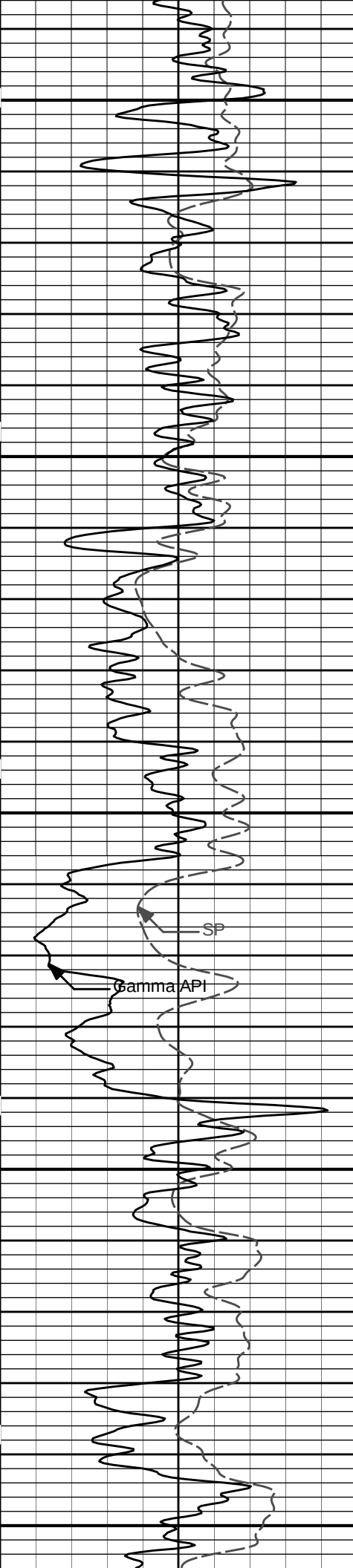


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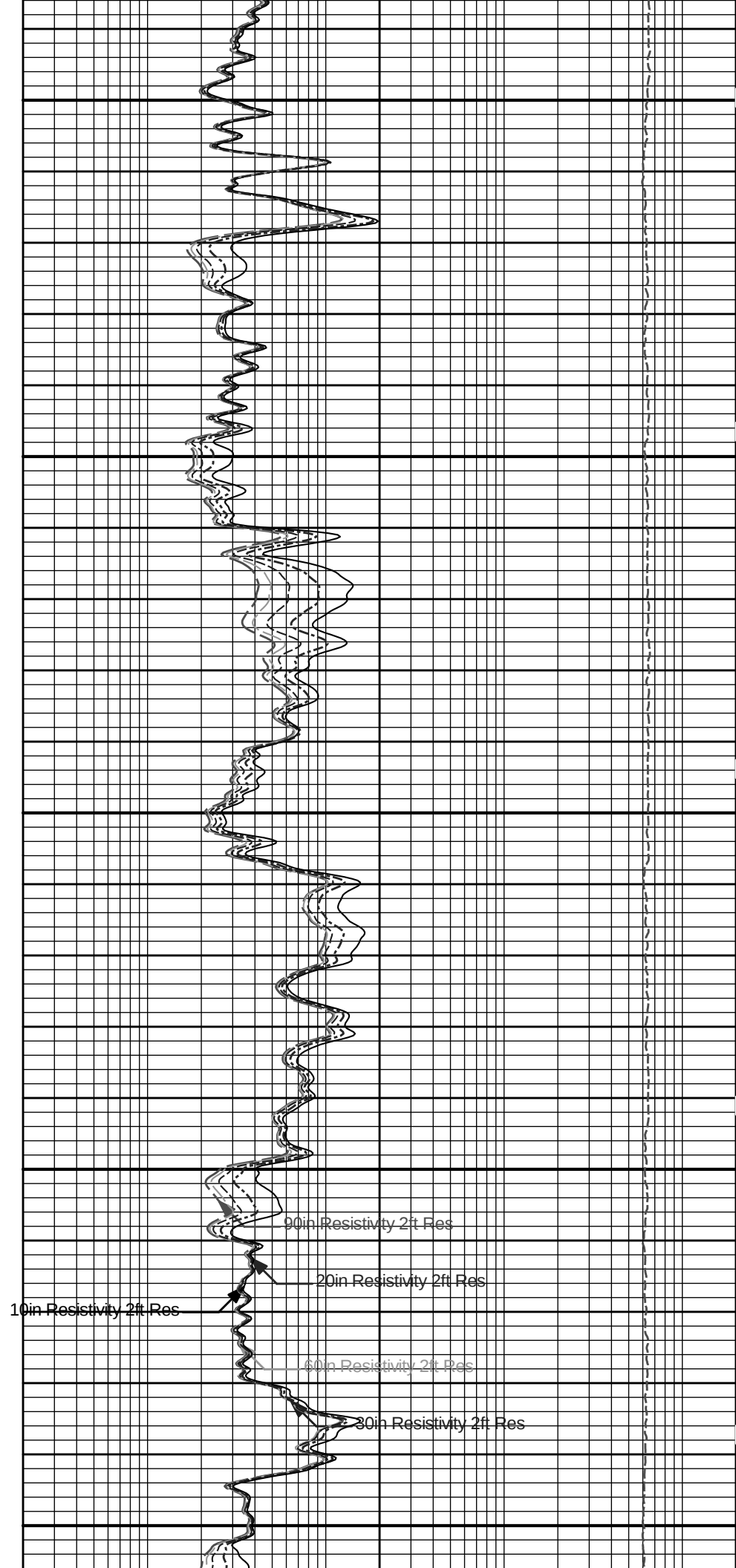




2800

2900

3000



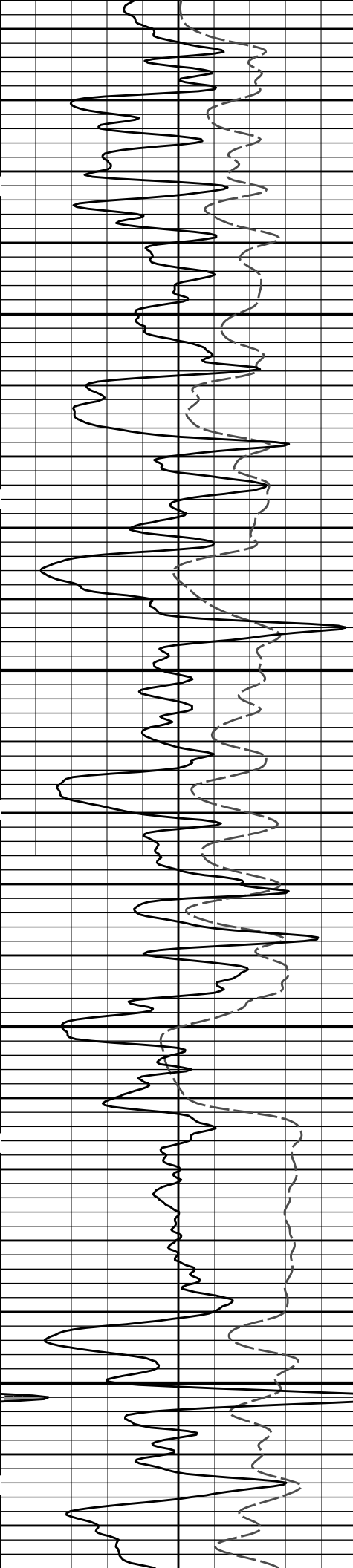
10in Resistivity 2ft Res

90in Resistivity 2ft Res

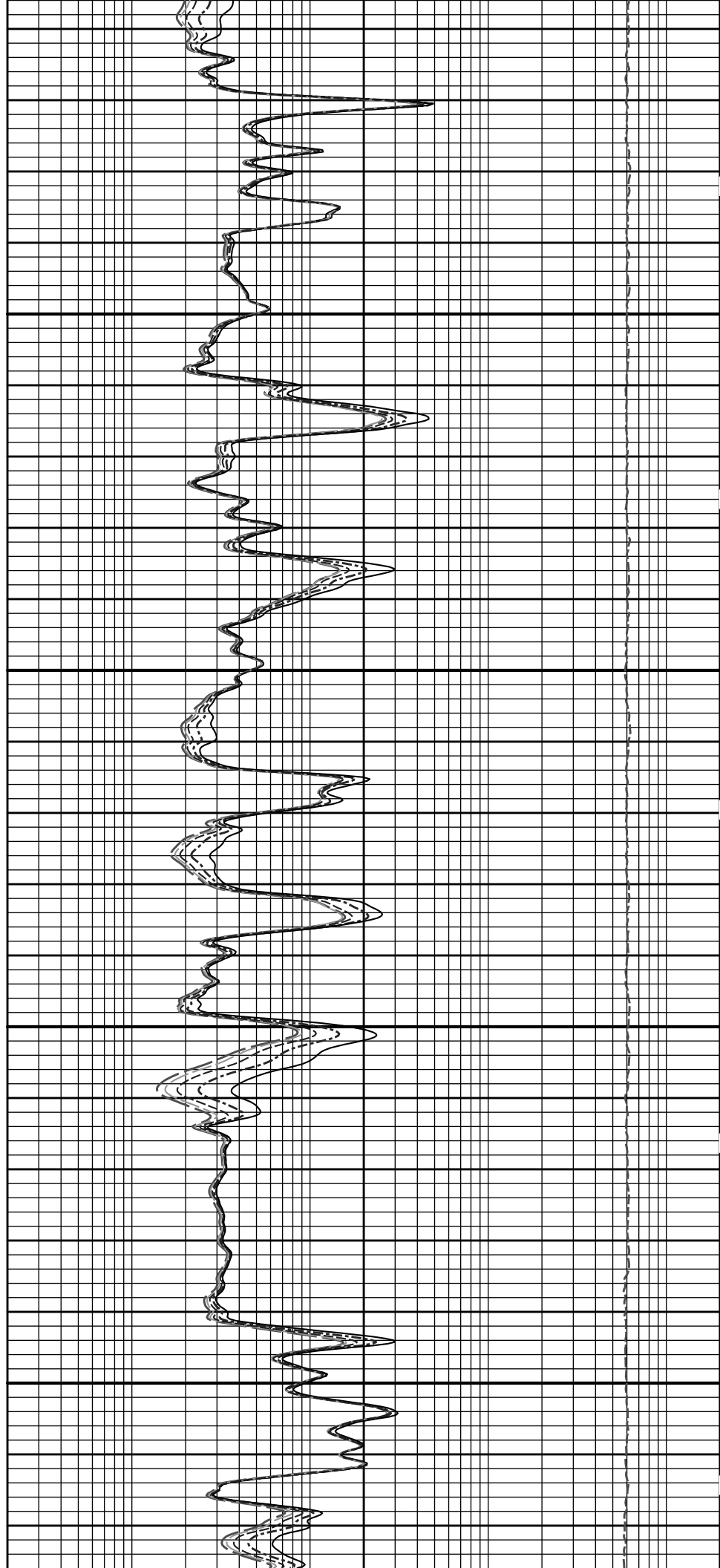
20in Resistivity 2ft Res

60in Resistivity 2ft Res

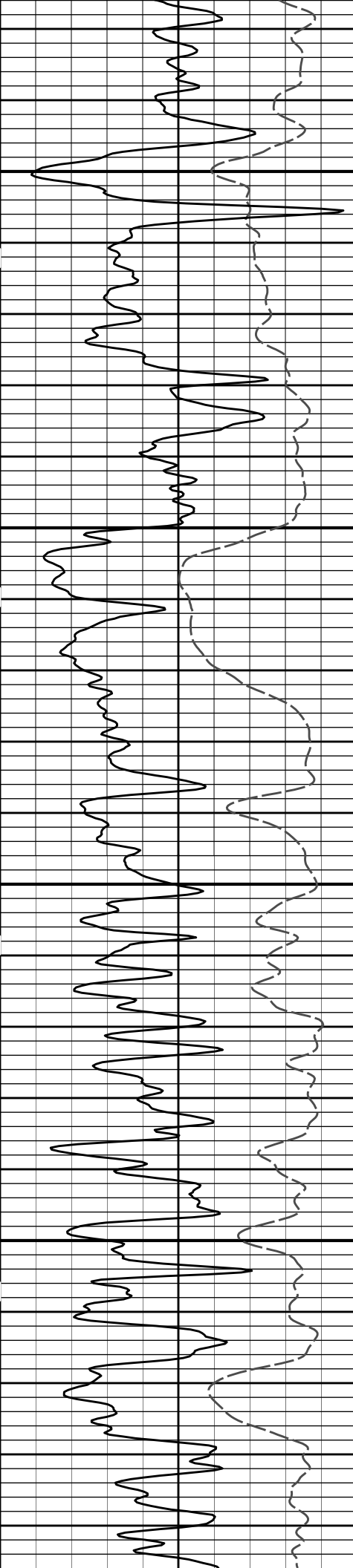
30in Resistivity 2ft Res



3100

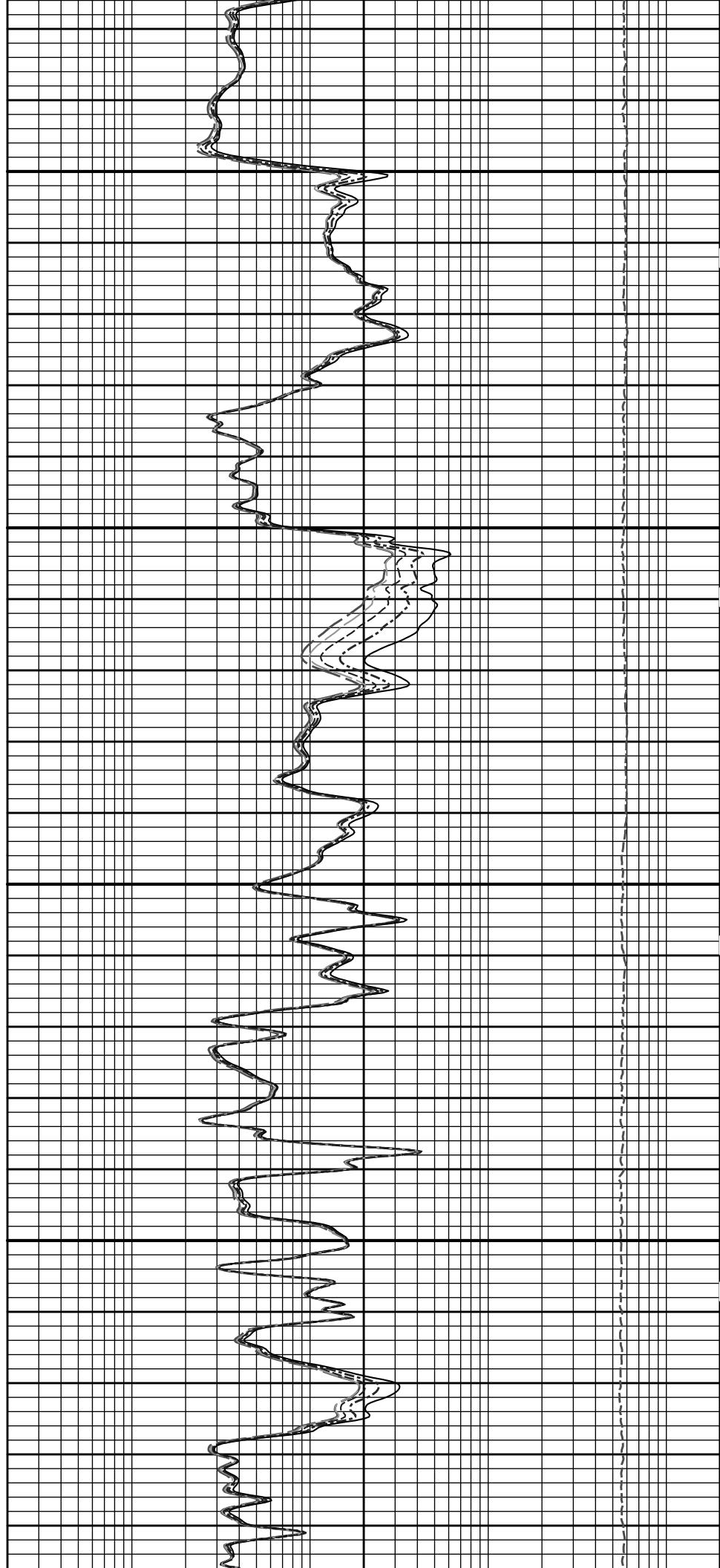


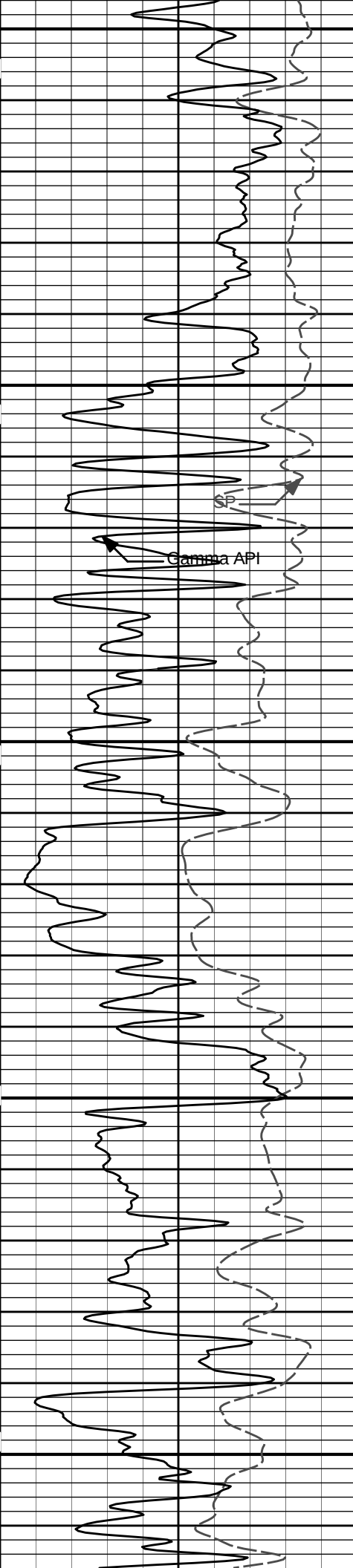
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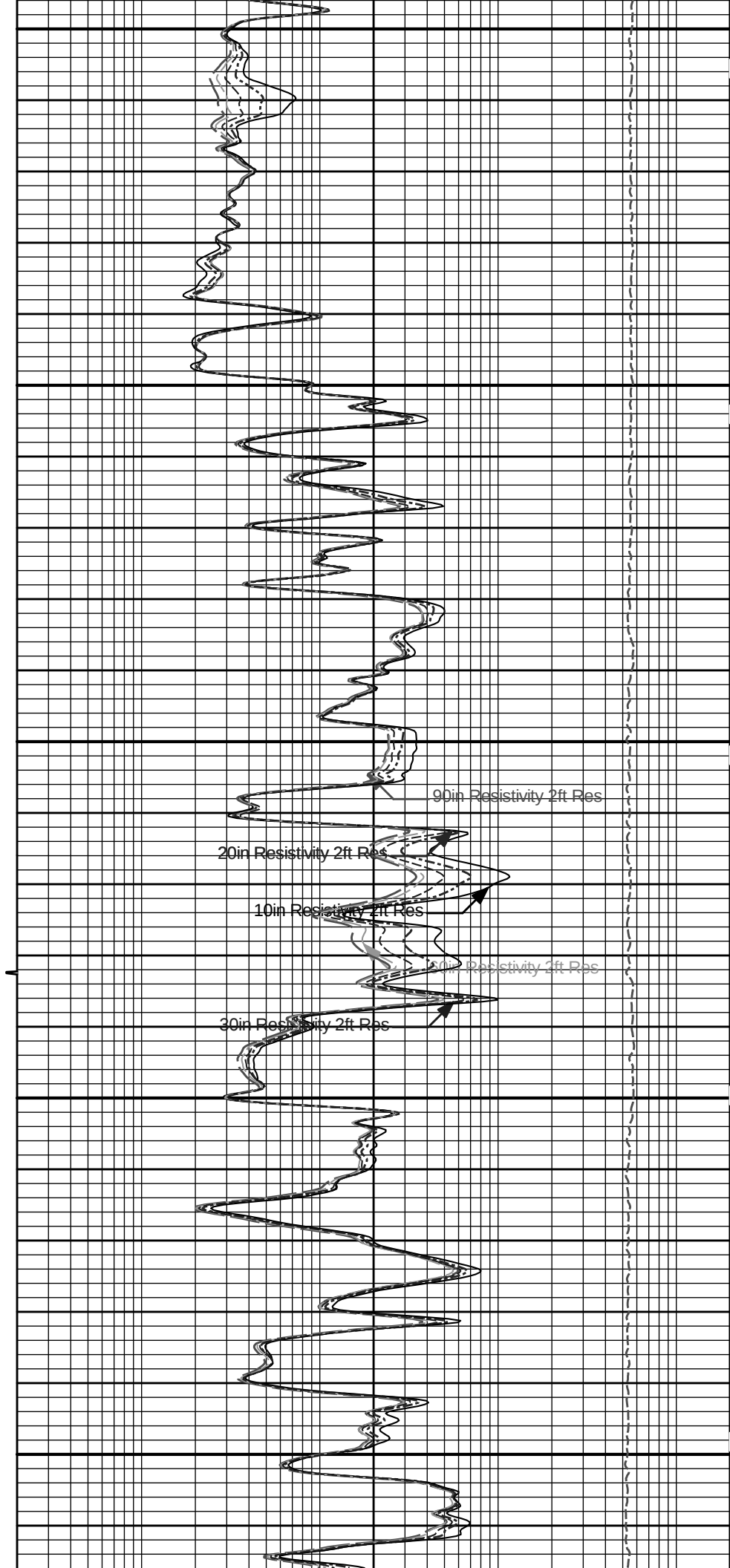
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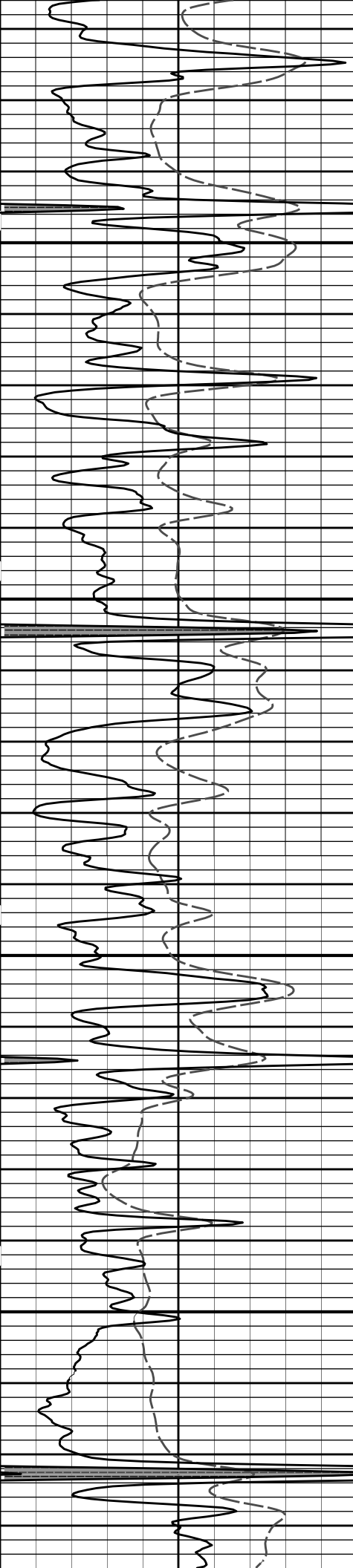




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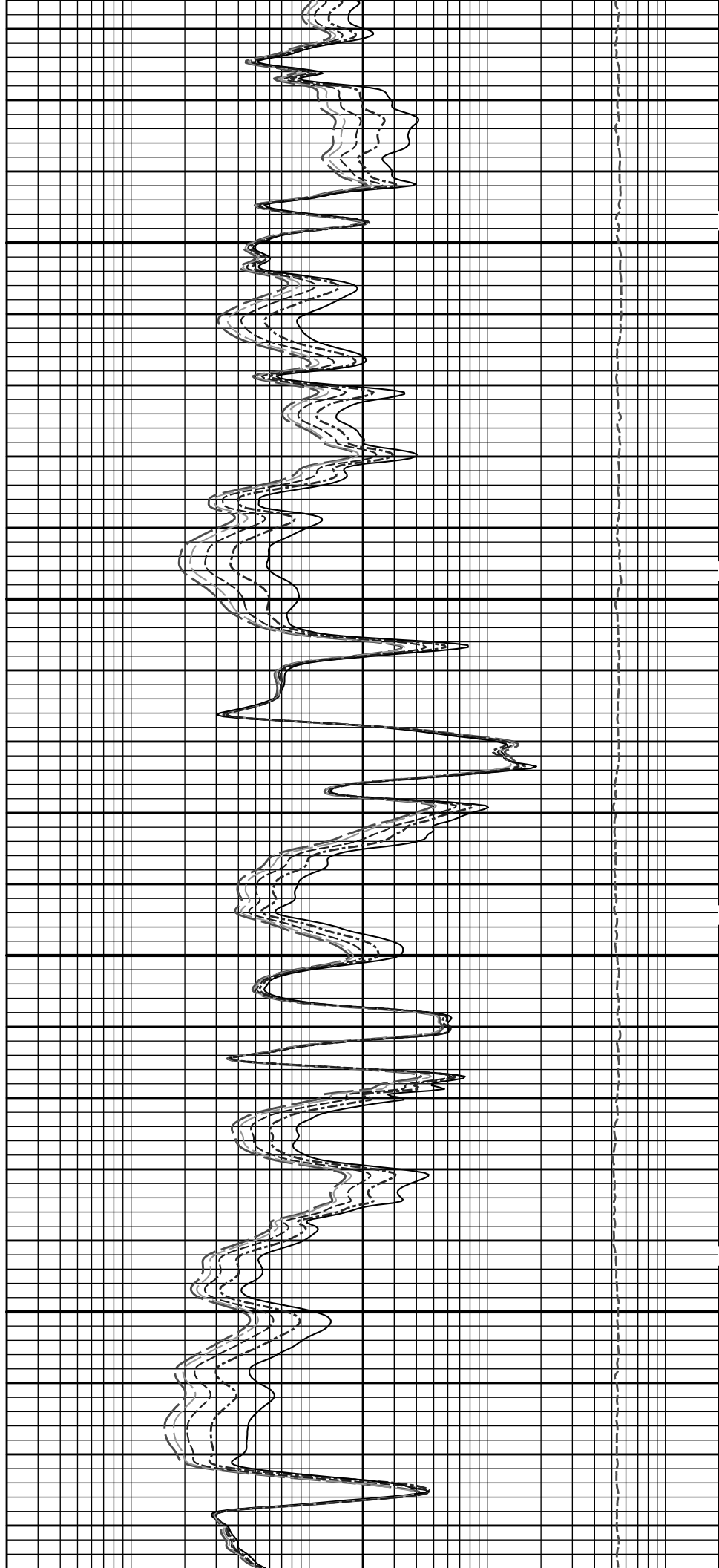
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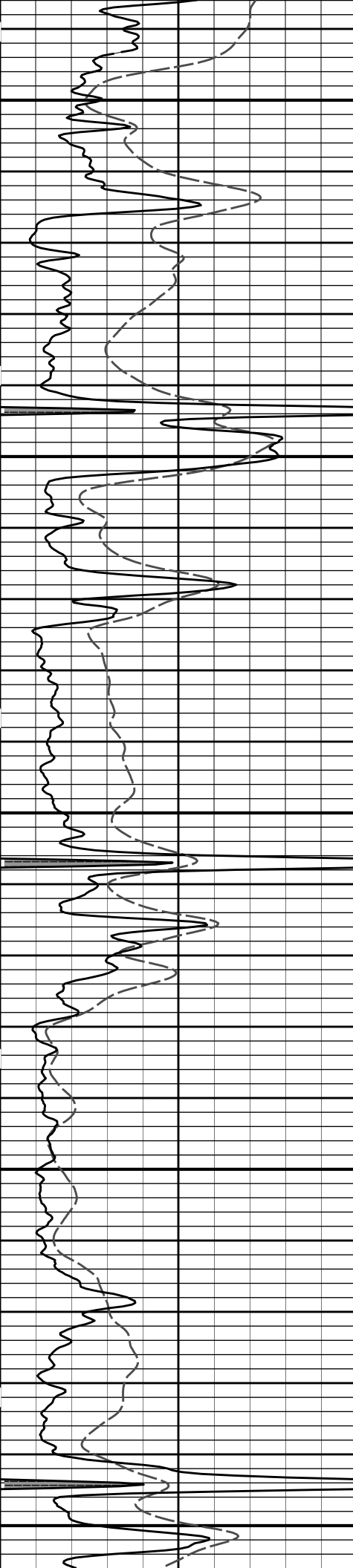




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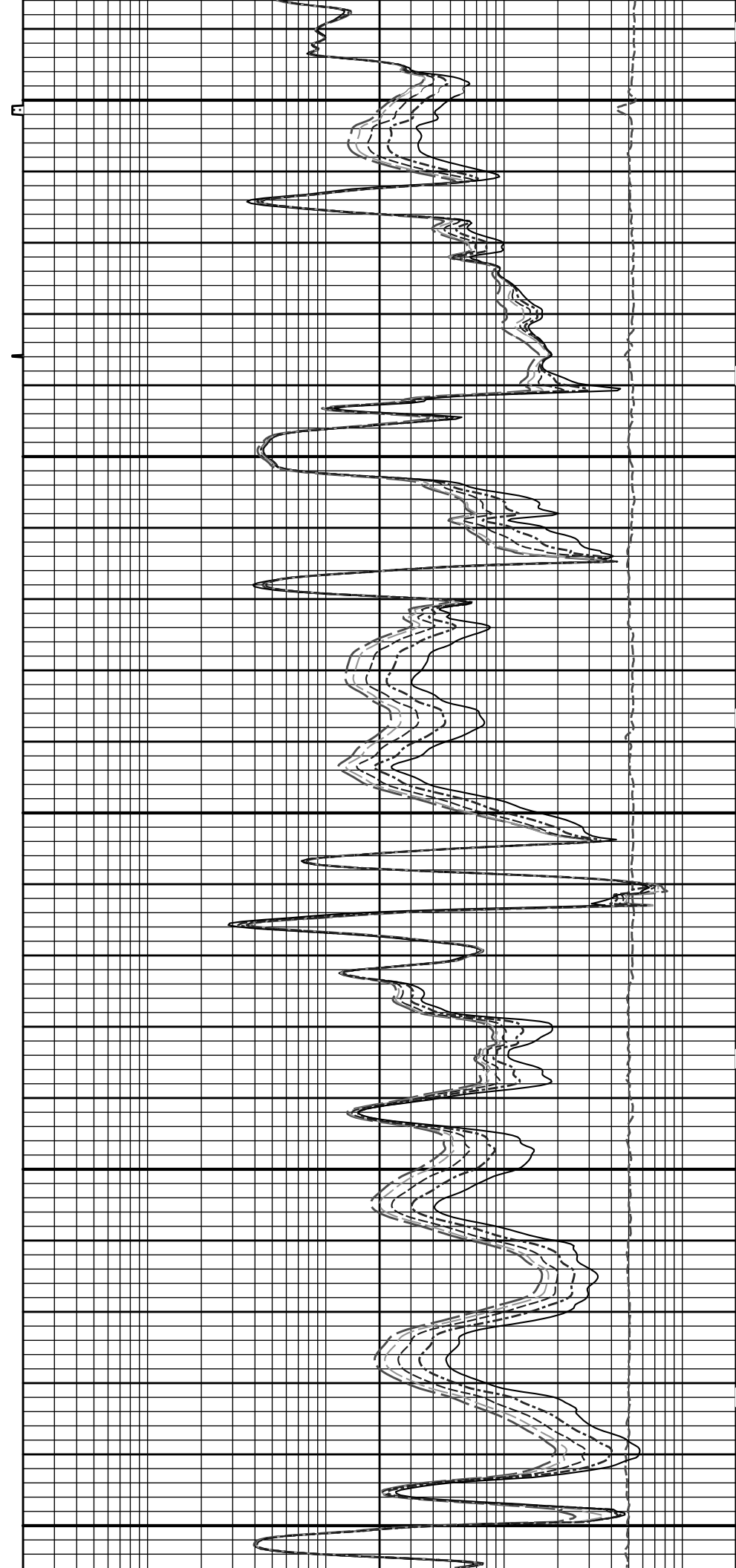


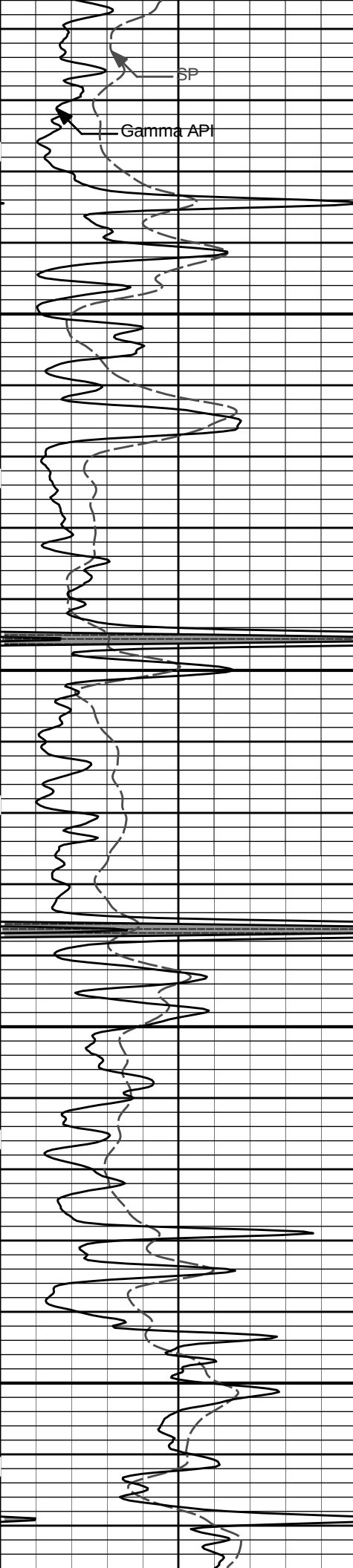


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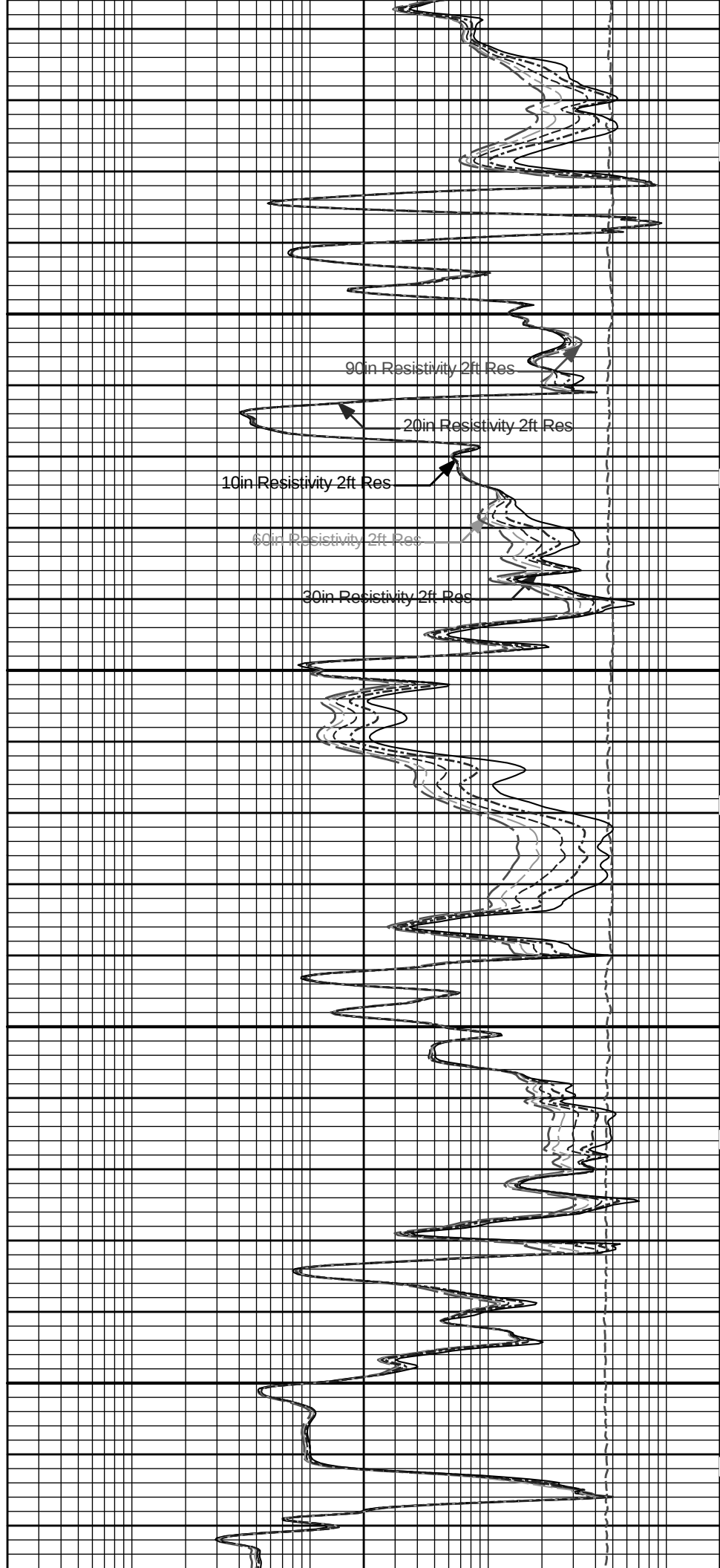
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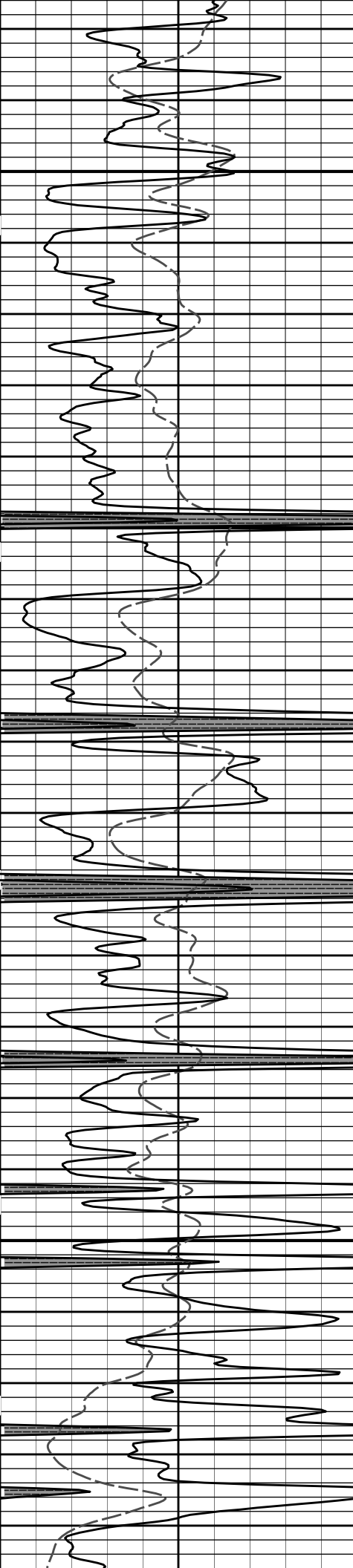




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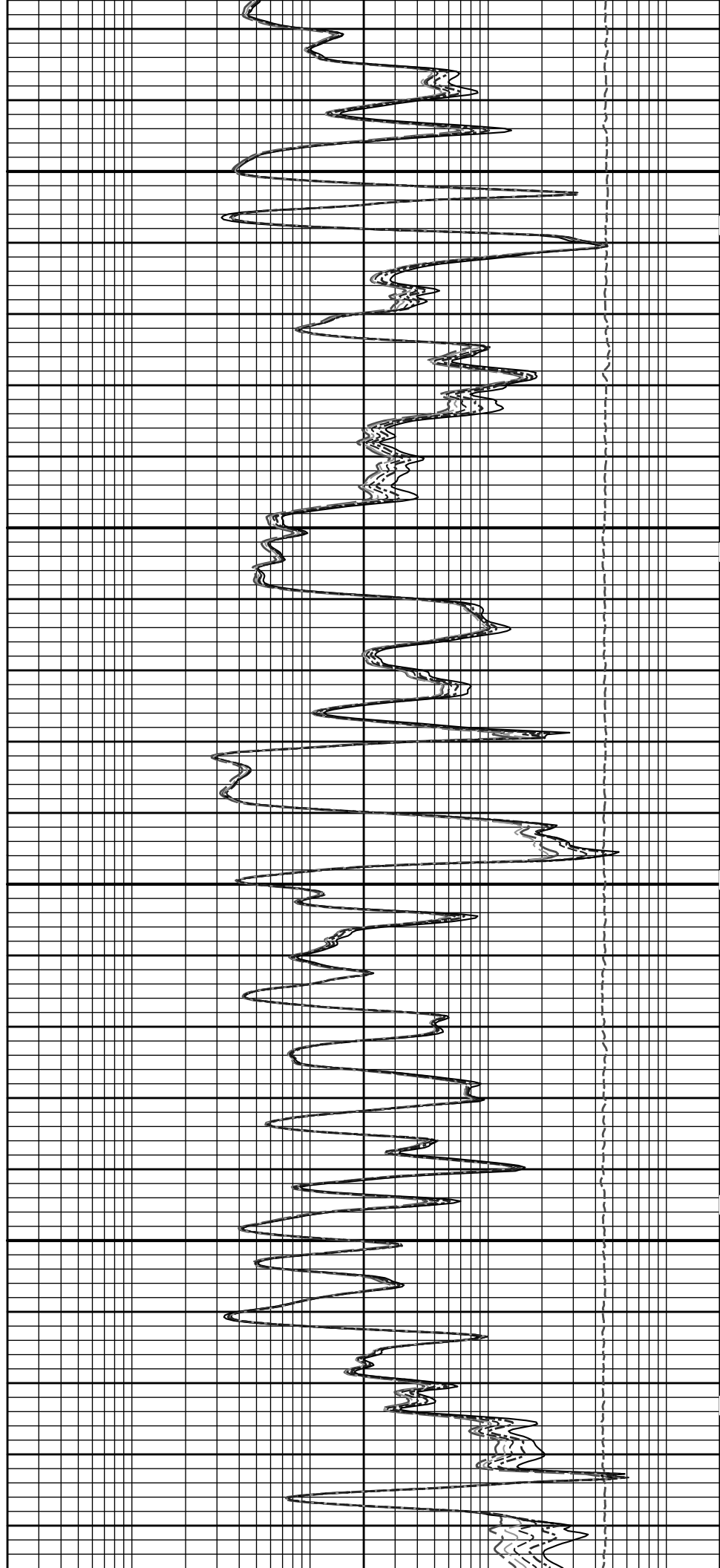
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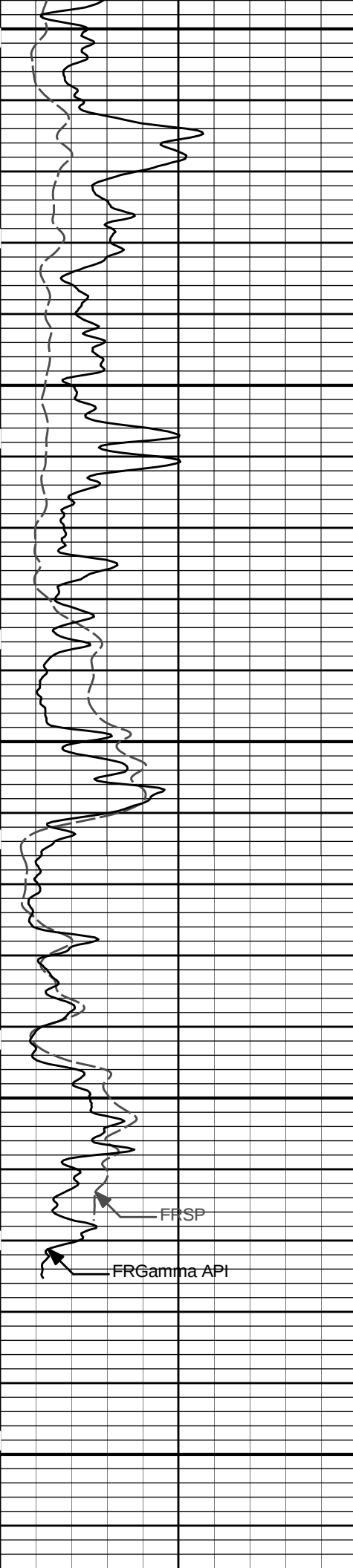




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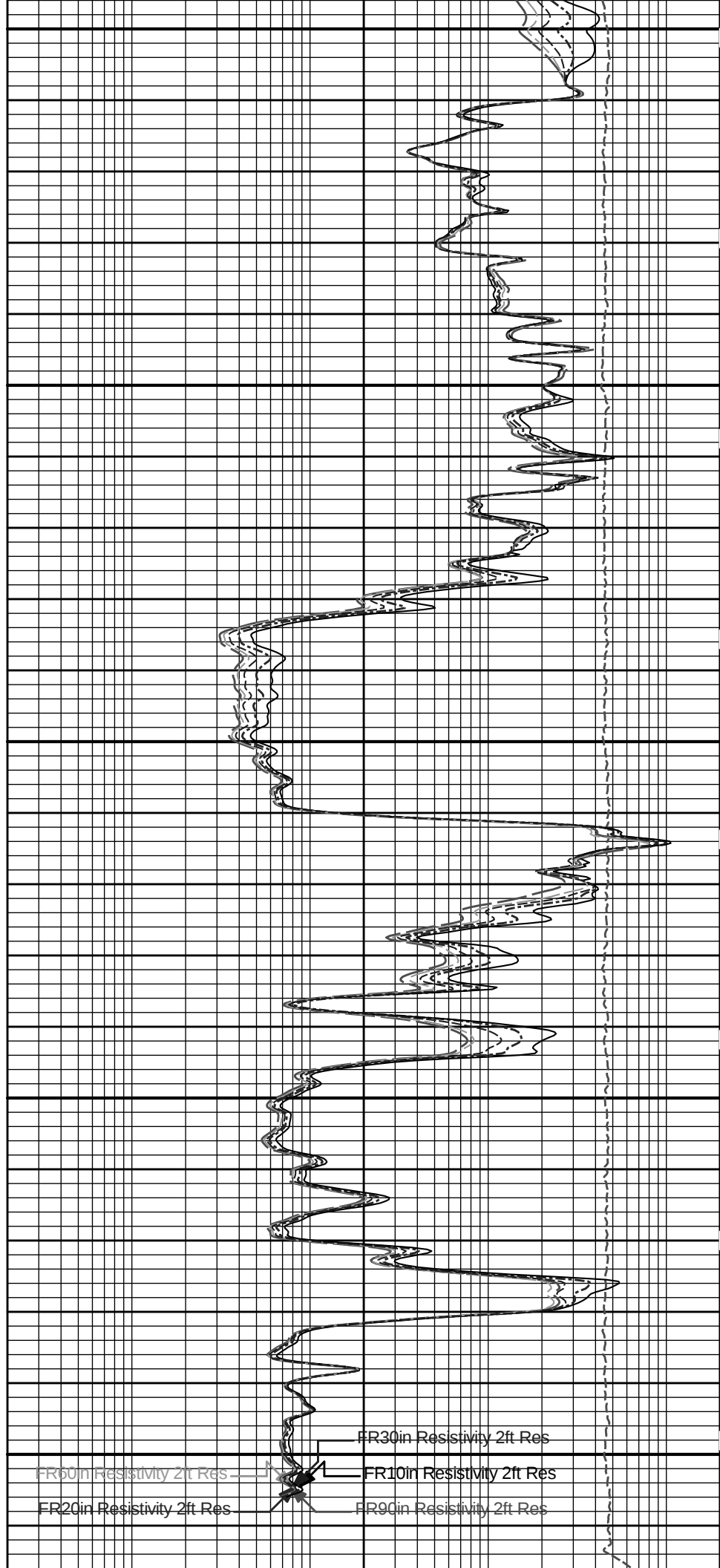




4600

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HALLIBURTON

Plot Time: 14-Mar-12 07:53:28

Plot Range: 430 ft to 4769 ft

Data: NEWBY 2-21\Well Based\CASING\

Plot File: \\-LOCAL-NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_5_main_lib

5 INCH MAIN LOG

HALLIBURTON

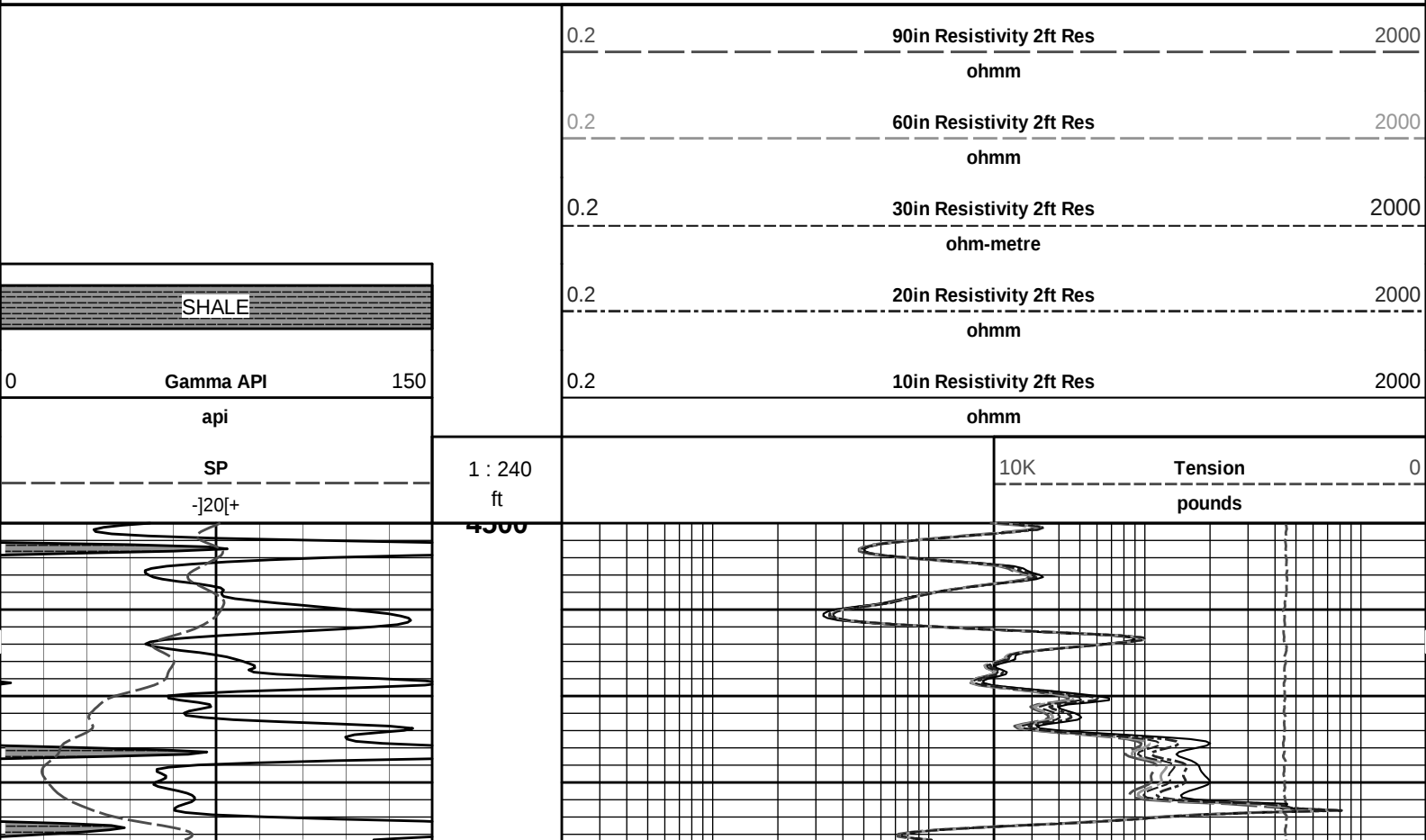
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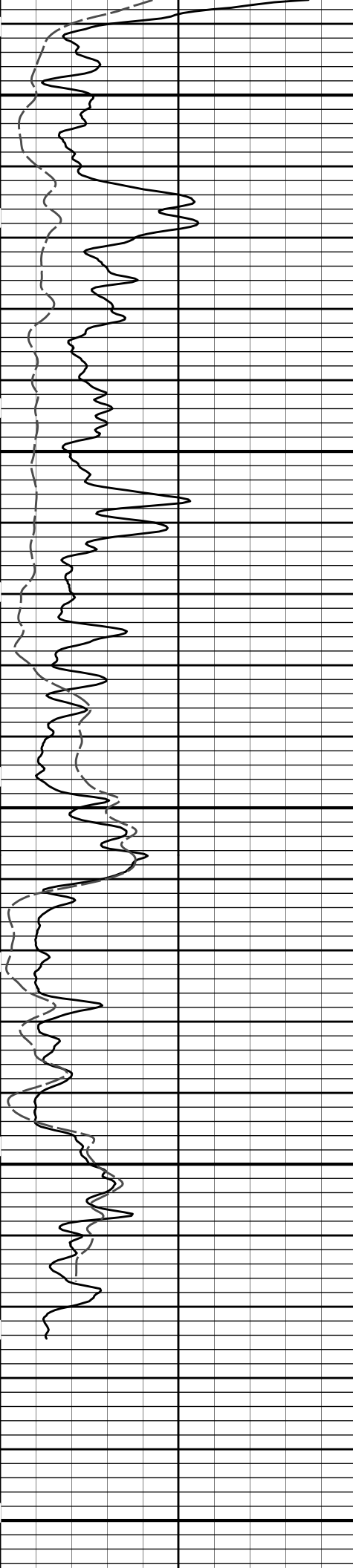
Plot Range: 4500 ft to 4768.25 ft

Data: NEWBY 2-21\Well Based\REPEAT\

Plot File: \\-LOCAL-NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CH\ACRT\ACRT_5_repeat_lib

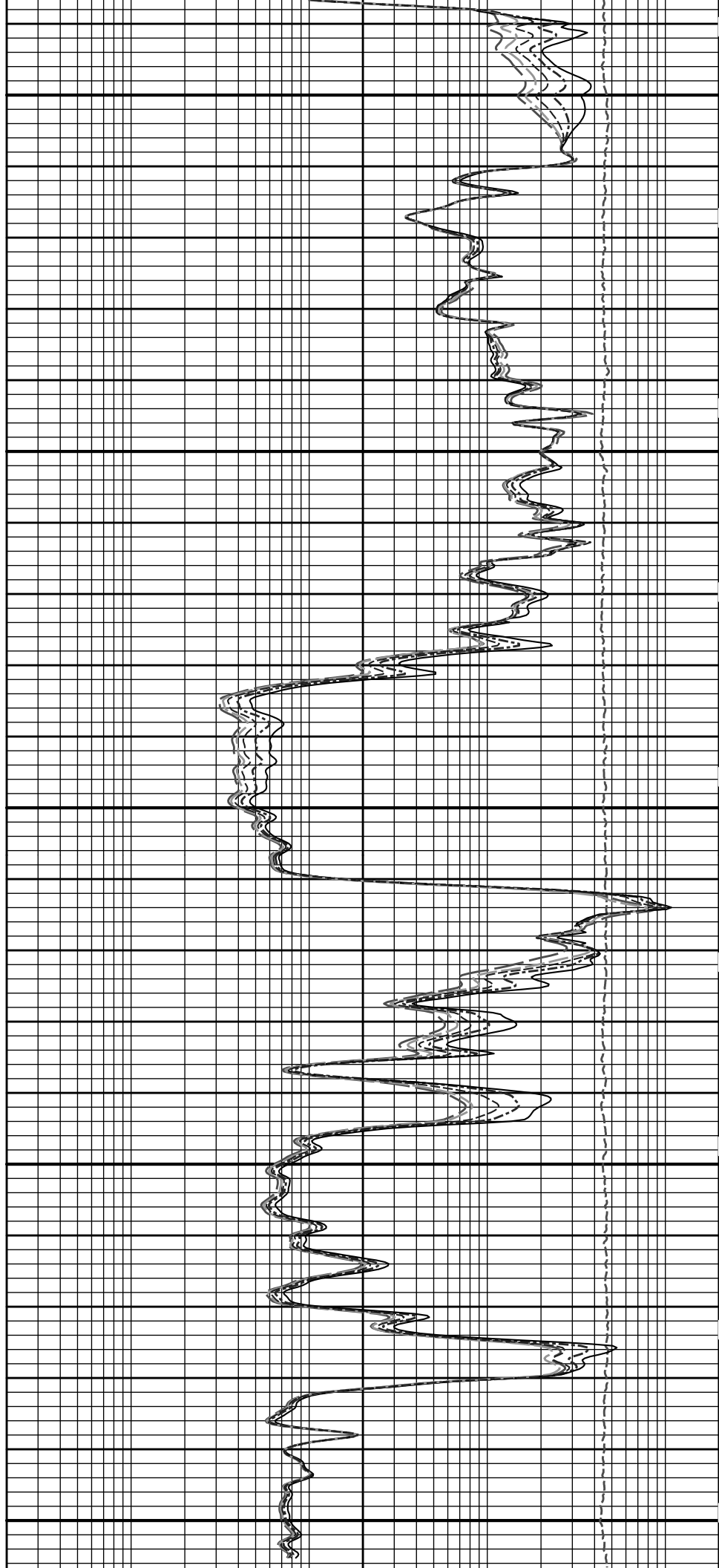
REPEAT SECTION





4600

4700



[illegible]

HALLIBURTON

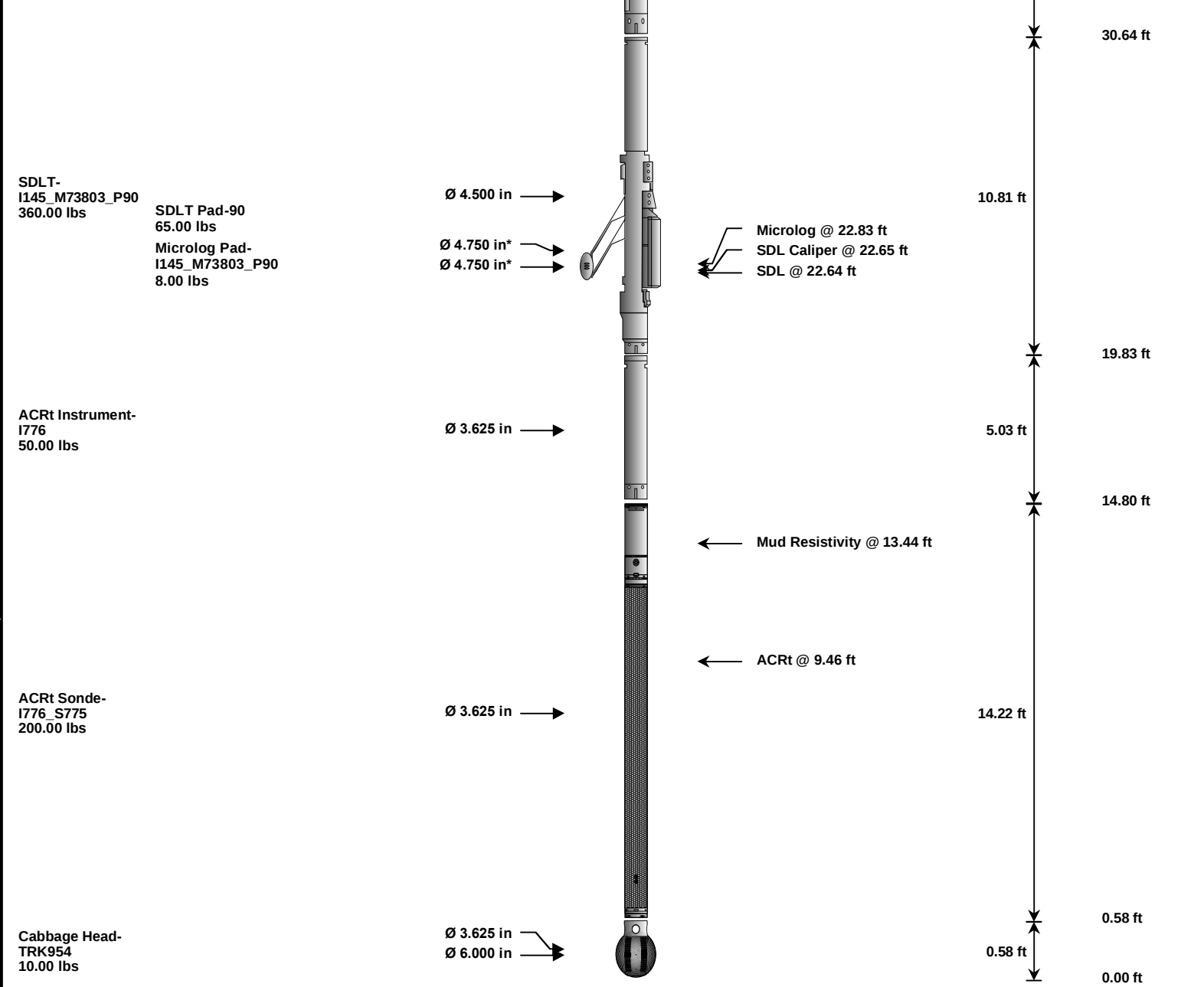
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Plot Range: 4500 ft to 4768.25 ft
Data: NEWBY 2-21\Well Based\REPEAT\
Plot File: \\LOCAL-NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CHI\ACRT\ACRT_5_repeat.lib

REPEAT SECTION

HALLIBURTON

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
						48.85 ft
GTET-10811258 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.79 ft	8.52 ft	
						40.33 ft
DSN Decentralizer- 10735145 6.60 lbs		Ø 5.000 in* →				
DSNT-10735145 174.00 lbs		Ø 3.625 in →		← DSN Far @ 33.39 ft ← DSN Near @ 32.64 ft	9.69 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	300.00
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	60.00
SDLP	Density Insite Pad	90	65.00	2.55	* 22.04	60.00
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: NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CH\IDLE Date: 14-Mar-12 04:45:16

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

DUAL SPACED NEUTRON SHOP CALIBRATION				
Tool Name:	DSNT - 10735145		Reference Calibration Date:	23-Jan-12 13:47:26
Engineer:	T. HYDE		Calibration Date:	27-Feb-12 13:38:46
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1
Logging Source S/N: 954				
Tank Serial Number: LIBERAL_NEUTRON				
Reference value assigned to Tank: 51.680				
Snow Block S/N: 954				
Calibration Tank Water Temperature: 67 degF				
Min. Tool Housing Outside Diameter: 3.600 in				
CALIBRATION CONSTANTS				
	Measurement	Prev. Value	New Value	Control Limit On New Value
	Gain:	0.933	0.931	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):	0.2094	0.2088	0.0006 +/- 0.0020
	Calibrated Ratio:	9.67	9.65	0.020 +/- 0.050
VERIFIER				
	Measurement	Value	Control Limit	
	Snow-Block Porosity (decp):	0.0624	0.02000 - 0.09000	
PASS/FAIL SUMMARY				
	Background Check:			Passed
	Gain-Range Check:			Passed
	Snow-Block Check:			Passed

DENSITY CALIPER SHOP CALIBRATION				
Tool Name:	SDLT - I145_M73803_P90		Reference Calibration Date:	13-Mar-12 07:51:45
Engineer:	J. BOLLLOM		Calibration Date:	13-Mar-12 07:57:35
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1
CALIBRATION COEFFICIENTS				
	Measurement	Previous Value	New Value	Control Limit On New Value
	Pad Offset	-2639.33	-2523.52	-7000.00 - -1000.00
	Pad Gain	0.0003736	0.0003667	0.000200 - 0.000600

Arm Offset	-2860.63	-3477.34	-5000.00 - 3000.00
Arm Gain	0.0005039	0.0005744	0.000300 - 0.000700
Arm Power	-0.000003830	-0.000008404	-0.000010 - 0.000010

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)	1.99	2.00	0.01	+/- 0.20
Medium Ring (in)	3.78	3.75	-0.03	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.58	6.50	-0.08	+/- 0.20
Medium Ring (in)	8.18	8.25	0.07	+/- 0.20
Large Ring (in)	15.05	15.00	-0.05	+/- 0.20

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

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				

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 90	Reference Calibration Date:	27-Feb-12 11:07:59
Engineer:	T. HYDE	Calibration Date:	27-Feb-12 11:25:47
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Logging Source S/N: 5073GW		
Aluminum Block S/N: LIBERAL	Density: 2.598g/cc	Pe: 3.170
Magnesium Block S/N: LIBERAL	Density: 1.684g/cc	Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9856	0.9682	0.90 - 1.10
Near Dens Gain	0.9885	0.9615	0.90 - 1.10
Near Peak Gain	0.9735	0.9585	0.90 - 1.10
Near Lith Gain	0.9731	0.9312	0.90 - 1.10
Far Bar Gain	1.0029	1.0019	0.90 - 1.10
Far Dens Gain	0.9915	0.9920	0.90 - 1.10
Far Peak Gain	0.9841	0.9845	0.90 - 1.10
Far Lith Gain	0.9542	0.9507	0.90 - 1.10
Near Bar Offset	0.3137	0.4689	NONE
Near Dens Offset	0.2724	0.5100	NONE
Near Peak Offset	0.3884	0.5102	NONE
Near Lith Offset	0.3734	0.7177	NONE
Far Bar Offset	0.0764	0.0851	NONE
Far Dens Offset	0.1574	0.1521	NONE
Far Peak Offset	0.1642	0.1606	NONE
Far Lith Offset	0.3045	0.3323	NONE
Near Bar Background	888.26	884.21	700 - 1450
Near Dens Background	294.87	292.50	230 - 480
Near Peak Background	128.25	129.52	100 - 210
Near Lith Background	157.60	157.77	125 - 260
Far Bar Background	596.35	593.58	450 - 900
Far Dens Background	234.07	233.79	175 - 345
Far Peak Background	92.13	93.24	70 - 140
Far Lith Background	97.19	97.98	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.688	1.684	-0.004	+/- 0.015
Pe	2.517	2.555	0.038	+/- 0.150
ALUMINUM				
Density (g/cc)	2.597	2.598	0.001	+/- 0.01500
Pe	3.140	3.124	-0.016	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0017	+/- 0.0110	0.0029	+/- 0.0140

Magnesium Block	-0.0007	+/- 0.0110	-0.0011	+/- 0.0140
Aluminum Block	0.0006	+/- 0.0110	0.0010	+/- 0.0140
Resolution	8.97	6.00 - 11.50	9.18	6.00 - 11.50
Internal Verifier(B+D+P+L)	1464	1200 - 2700	1019	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		

MICRO LOG SHOP CALIBRATION				
Tool Name:	Microlog Pad - I145_M73803_P90		Reference Calibration Date:	13-Jan-12 12:43:35
Engineer:	J. BOLLOM		Calibration Date:	12-Mar-12 08:17:08
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1

Measurement	CALIBRATION COEFFICIENT SUMMARY				
	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.08	-0.07	-0.00	-0.01	ohmm
Calibration Point #1	-0.02	0.00	0.00	0.00	ohmm
Calibration Point #2	19.92	20.00	19.94	20.00	ohmm
Internal Reference	19.85	19.93	19.94	19.99	ohmm
Measurement	Micro Log Normal Tool Value		Micro Log Lateral Tool Value		Units
Tool Zero	-0.32		-0.77		V
Calibration Point #1	17.42		1.71		V
Calibration Point #2	5373.42		6988.77		V
Internal Reference	5354.44		6985.83		V

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10811258						
Gamma Ray Calibrator	232.0	-----	-----	0.0	+/- 9.00	api
DSNT-10735145						
Snow-Block Porosity	0.0624	-----	-----	0.0000	+/- -.--	decp
SDLT-I145_M73803_P90						
Pad Extension	3.75	-----	-----	0.00	+/-0.20	in
Ring Diameter	8.25	-----	-----	0.00	+/-0.20	in
ACRt Sonde-I776_S775						
Mud Cell	0.991	-----	-----	0.000	-----	ohm-m
SDLT Pad-90						
Near(B+D+P+L)	1464.003	-----	-----	0.000	+/-13.496	cps
Far(B+D+P+L)	1018.591	-----	-----	0.000	+/-15.424	cps
Microlog Pad-I145_M73803_P90						
MicroLog Normal	19.93	-----	-----	0.00	-----	ohmm
MicroLog Lateral	19.99	-----	-----	0.00	-----	ohmm

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	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	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	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	4770.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	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?	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	DSNO	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	THQY	Threshold Quality	0.50	

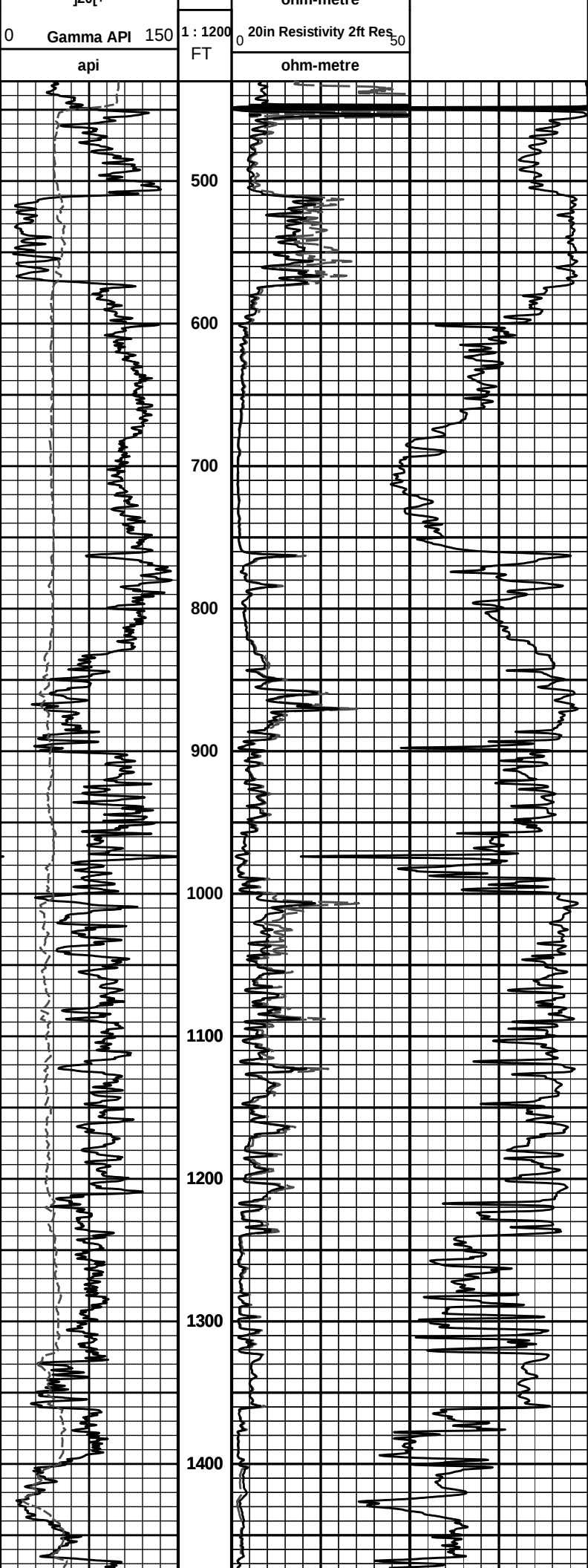
HALLIBURTON					
INPUTS, DELAYS AND FILTERS TABLE					
Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS	Tension		0.00	NO	
SP Sub					
PLTC	Plot Control Mask		50.81	NO	
SP	Spontaneous Potential		50.81	BLK	1.250
SPR	Raw Spontaneous Potential		50.81	NO	
SPO	Spontaneous 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

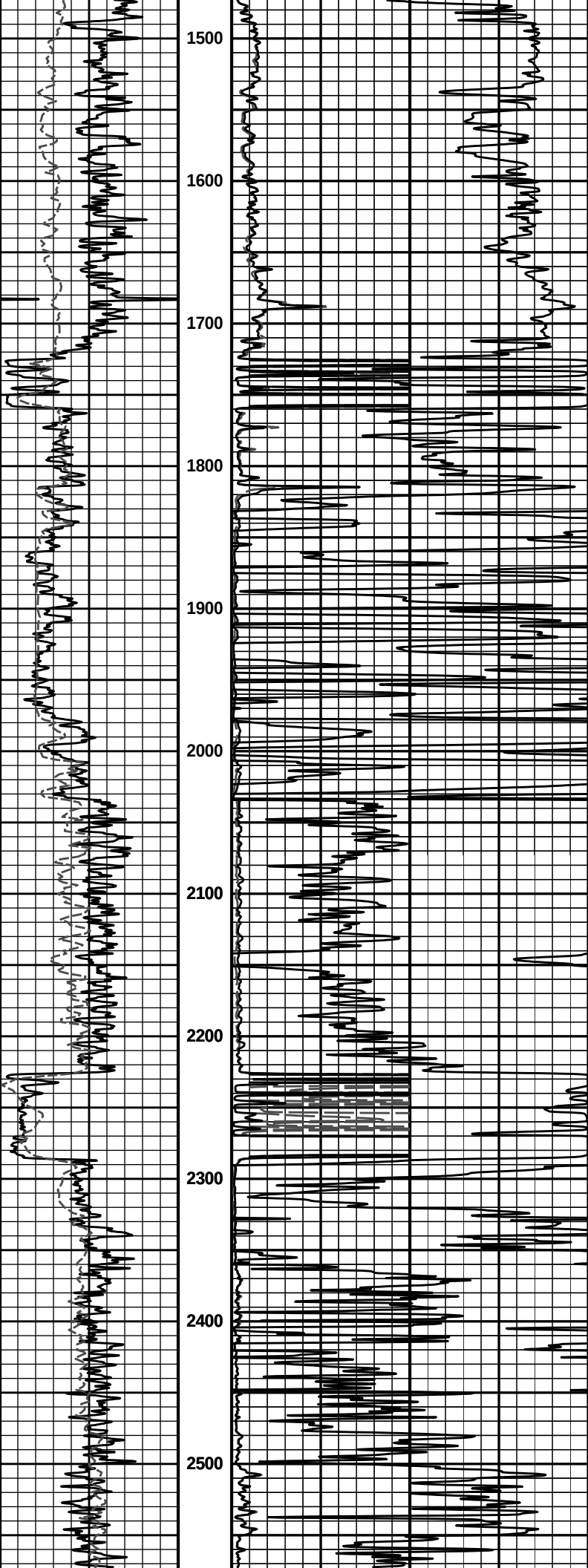
ACRt Sonde				
TPUL	Tension Pull	2.97	NO	
F1R1	ACRT 12KHz - 80in R value	9.22	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	9.22	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.72	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.72	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	5.22	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	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
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	2.97	NO	

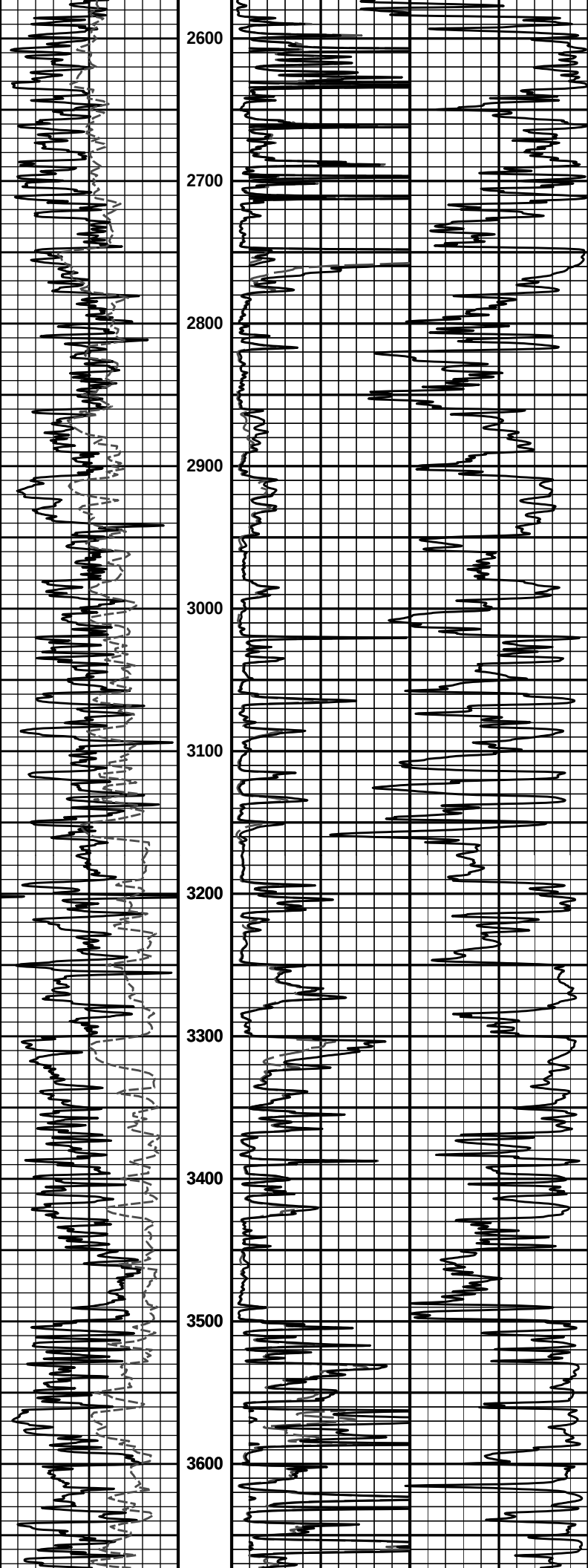
TPUL	Tension Pull	22.64	NO	
NAB	Near Above	22.46	BLK	0.920
NHI	Near Cesium High	22.46	BLK	0.920
NLO	Near Cesium Low	22.46	BLK	0.920
NVA	Near Valley	22.46	BLK	0.920
NBA	Near Barite	22.46	BLK	0.920
NDE	Near Density	22.46	BLK	0.920
NPK	Near Peak	22.46	BLK	0.920
NLI	Near Lithology	22.46	BLK	0.920
NBAU	Near 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: NEWBY 2-21\0001 SP-GTET-DSNT-SDLT-ACRT-CH\IDLE			Date: 14-Mar-12 04:47:00	

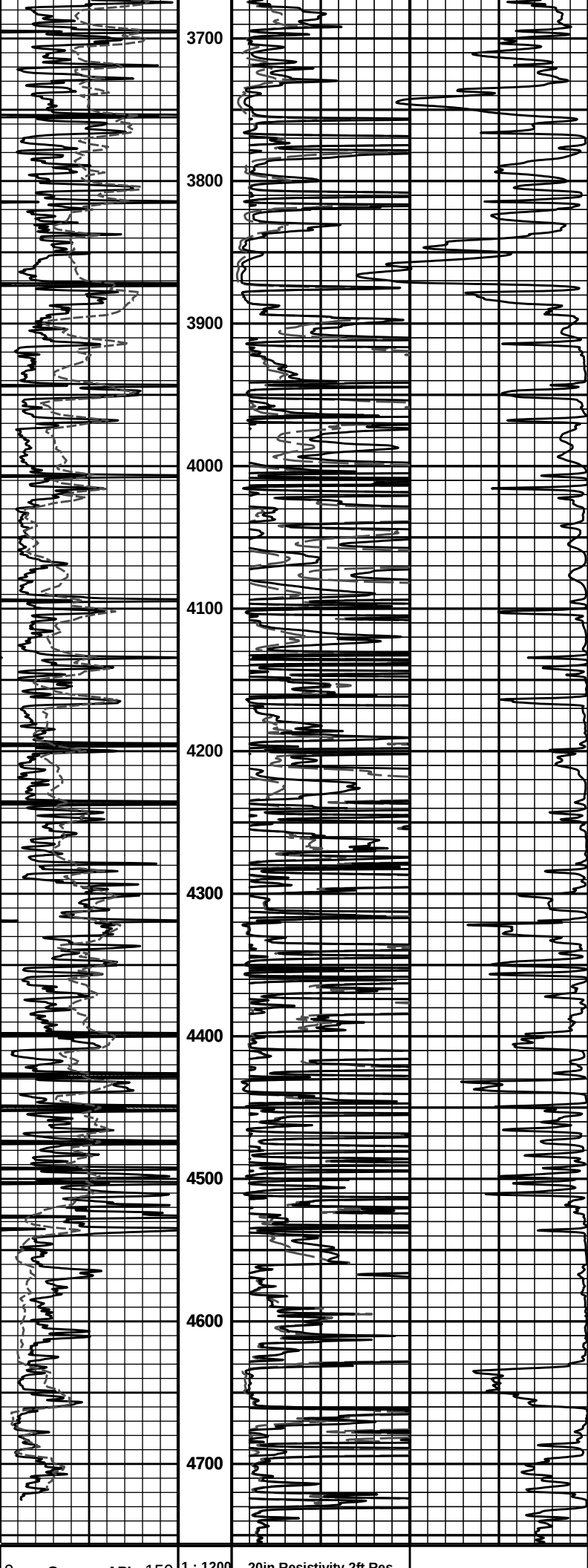
COMPANY	BEREXCO INC.		
WELL	NEWBY 2-21		
FIELD	EVA SOUTH		
COUNTY	SCOTT	STATE	KANSAS
HALLIBURTON		ARRAY COMPENSATED TRUE RESISTIVITY LOG	

HALLIBURTON Plot Time: 14-Mar-12 07:53:30 Plot Range: 430 ft to 4756 ft Data: NEWBY 2-21\Well Based\CASING\ Plot File: \\-LOCAL-\\NEWBY 2-21\\...\\ACRT_1.lib			
1 INCH MAIN LOG			
		1000	90in Conductivity 2ft Res 0
		mmho per metre	
SP		90in Resistivity 2ft Res 0	50
120I+		ohm-metre	









Gamma API	150	1 : 1200	0	20in Resistivity 2ft Res	50
api		FT		ohm-metre	
SP			0	90in Resistivity 2ft Res	50
-]20[+				ohm-metre	
			1000	90in Conductivity 2ft Res	0
				mmho per metre	
HALLIBURTON Plot Time: 14-Mar-12 07:53:33 Plot Range: 430 ft to 4756 ft Data: NEWBY 2-21\Well Based\CASING\ Plot File: \\-LOCAL-NEWBY 2-21...\ACRT_1_lib 1 INCH MAIN LOG					