HALLIBURTON

ARRAY COMPENSATED RESISTIVITY LOG

COMPANY **NEW GULF OPERATING, LLC**

WELL **HORTON #1**

FIELD **LANGDON**

COUNTY **RENO** STATE **KANSAS**

COMPANY NEW GULF OPERATING, LLC
WELL HORTON #1
FIELD LANGDON
COUNTY RENO
STATE KANSAS

API No. 15-155-21574
Location 964' FNL & 670' FWL

Sect. 32 Twp. 24S Rge. 9W

Other Services:
SDL / DSN / ML
BSAT

Permanent Datum	GROUND LEVEL	Elev. 1707.0 ft	Elev.: K.B. 1717.0 ft
Log measured from	KELLY BUSHING	, 10.0 ft above perm. Datum	D.F. 1716.0 ft
Drilling measured from	KELLY BUSHING		G.L. 1707.0 ft

Date		23-Jun-11					
Run No.		ONE					
Depth - Driller		4320.00 ft					
Depth - Logger		4300.0 ft					
Bottom - Logged Interval		4291.0 ft					
Top - Logged Interval		222.0 ft					
Casing - Driller		8.625 in @ 226.0 ft		@		@	
Casing - Logger		222.0 ft					
Bit Size		7.875 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density	Viscosity	9.0 ppg	48.00 s/qt				
PH	Fluid Loss	11.50 pH	8.0 cptm				
Source of Sample		FLOW LINE					
Rm @ Meas. Temperature		0.320 ohmm @ 74.00 degF		@		@	
Rmf @ Meas. Temperature		0.27 ohmm @ 73.00 degF		@		@	
Rmc @ Meas. Temperature		0.380 ohmm @ 73.00 degF		@		@	
Source Rmf	Rmc	MEASURED	MEASURED				
Rm @ BHT		0.16 ohmm @ 120.0 degF		@		@	
Time Since Circulation		3.3 hr					
Time on Bottom		23-Jun-11 21:59					
Max. Rec. Temperature		120.0 degF @ 4300.0 ft		@		@	
Equipment	Location	10549592	LIBERAL				
Recorded By		S. JUNG					
Witnessed By		R. RODRIGUEZ					

Fold here

Service Ticket No.: 8264517 API Serial No.: 15-155-21574 PGM Version: WL INSITE R3.2.5 (Build 2)

RESISTIVITY SCALE CHANGES

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down Hole
Date					
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample					
Rm @ Meas. Temp	@				
Rmf @ Meas. Temp.	@				
Rmc @ Meas. Temp.	@				
Source Rmf	Rmc				
Rm @ BHT	@				
Rmf @ BHT	@				
Rmc @ BHT	@				

RESISTIVITY EQUIPMENT DATA

	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
Rm @ Meas. Temp	@				
Rmf @ Meas. Temp.	@	ONE	ACRT S0784	N/A	1.5" S.O.
Rmc @ Meas. Temp.	@				N/A
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: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING

GPS COORDINATES: LAT: 37.77 N & LONG: 98.51 W

CHLORIDES REPORTED AT 12,000 PPM LCM REPORTED AT 2 PPB

POST TOOL SURVEY NOT PERFORMED ON LOCATION PER CUSTOMER REQUEST

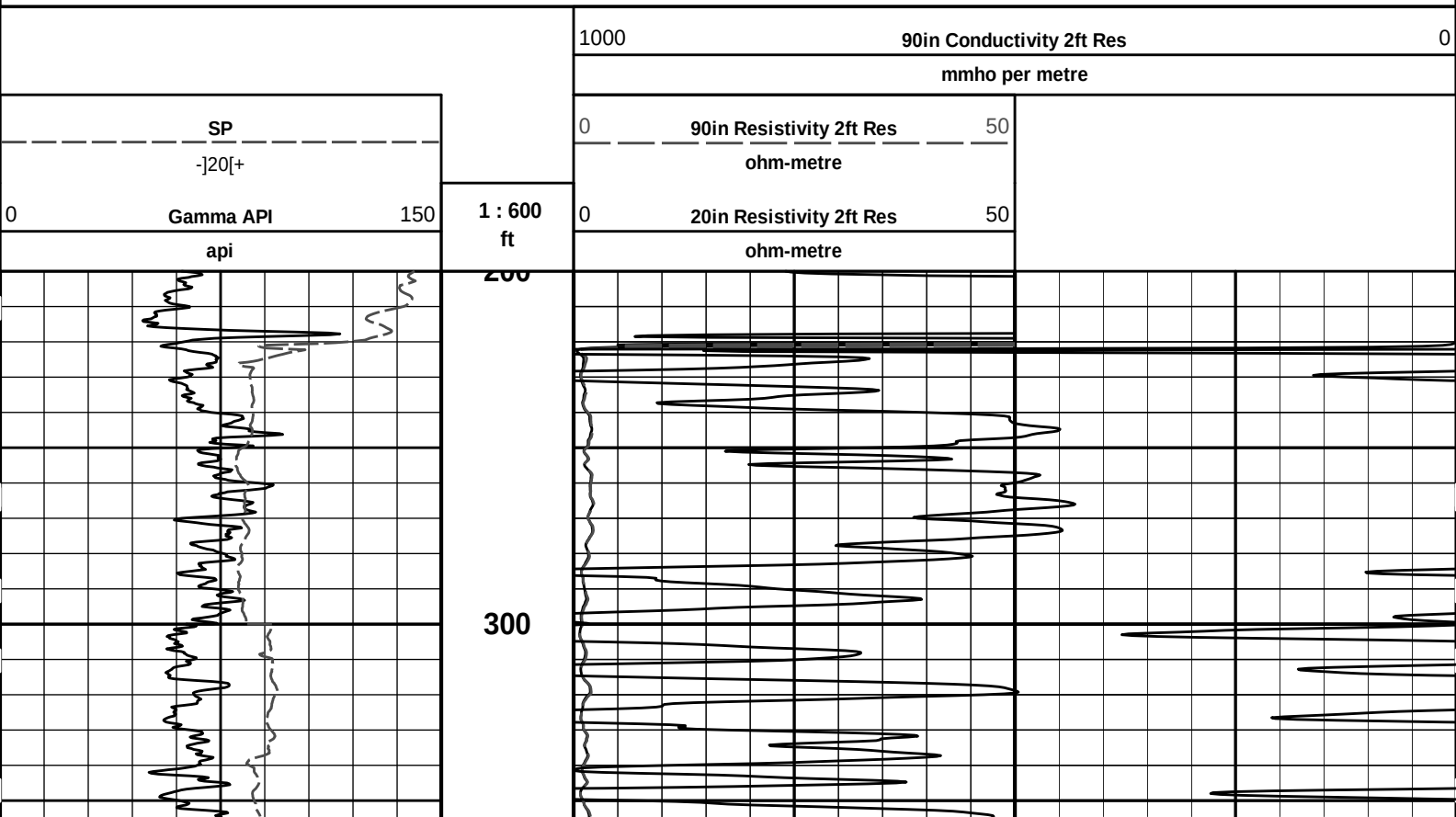
TODAY'S CREW: F. VILLA, P. COBLE

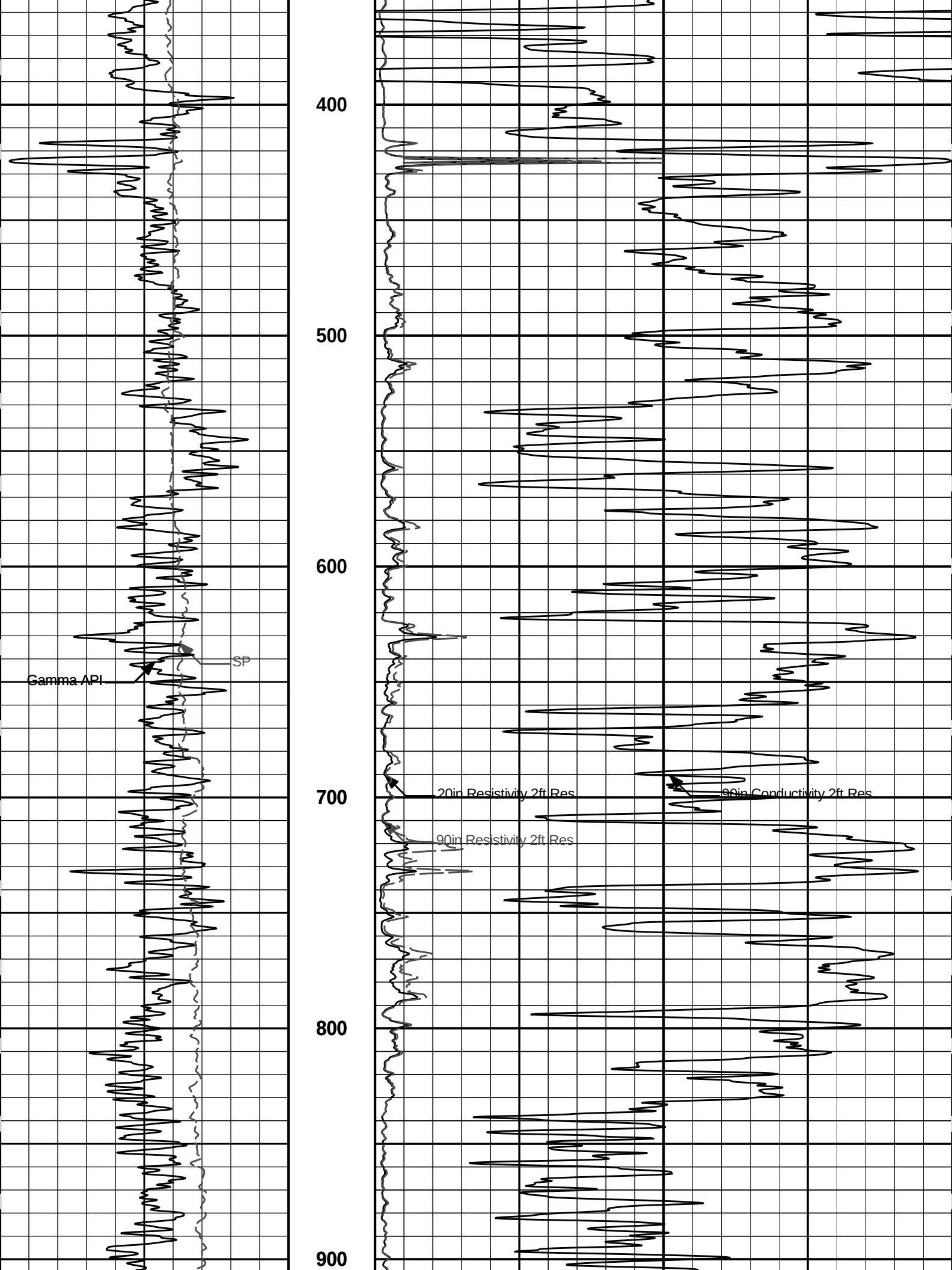
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - LIBERAL, KS (620-624-8123)

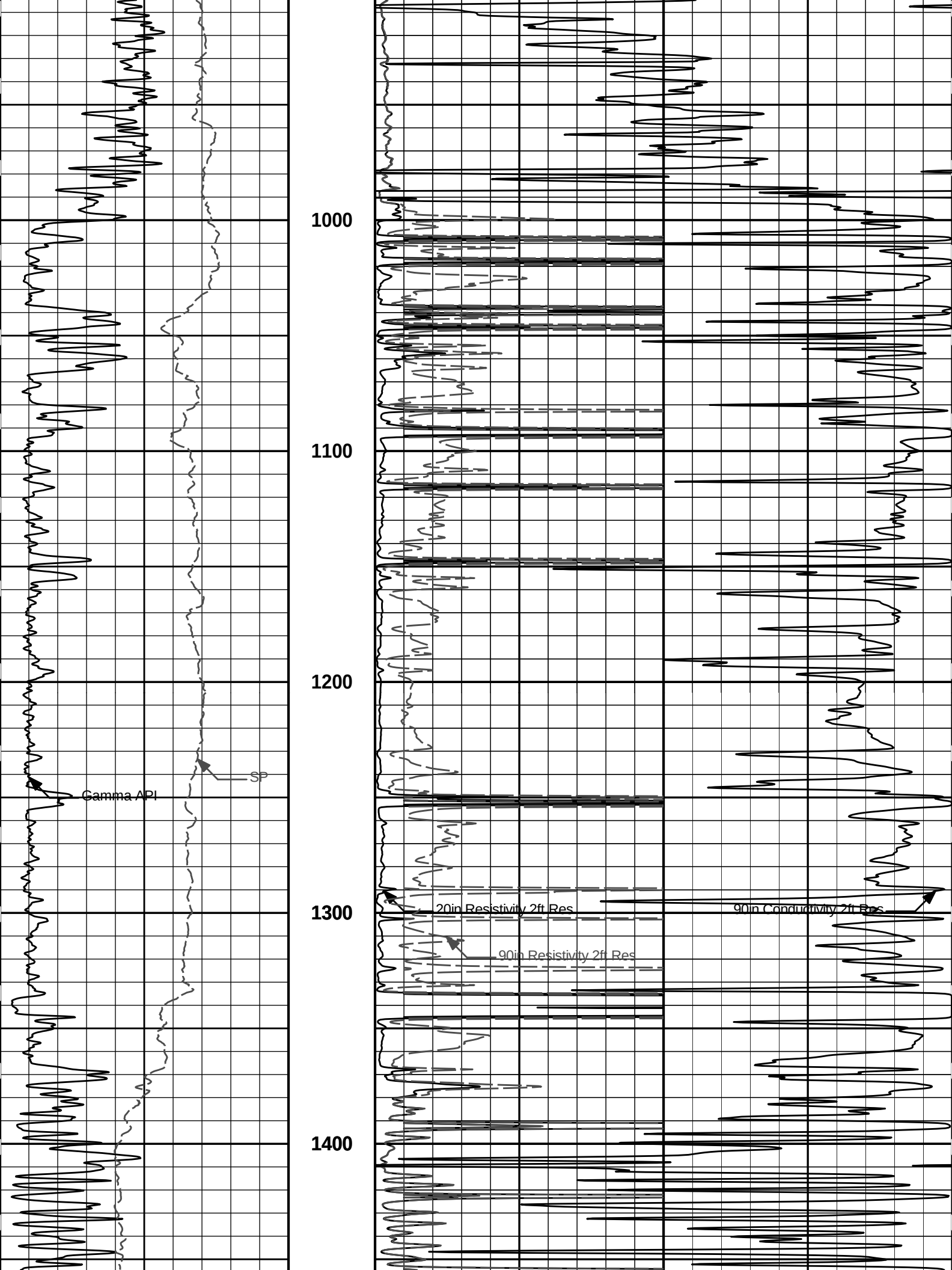
HALLIBURTON

Plot Time: 24-Jun-11 10:19:45
Plot Range: 200 ft to 4304 ft
Data: HORTON_1\Well Based\DAQ-0001-CSG
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_2_lib

2 INCH MAIN LOG




400
500
600
700
800
900
SP
Gamma API
20in Resistivity 2ft Res
90in Conductivity 2ft Res
90in Resistivity 2ft Res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1100
1200
1300
1400
SP
Gamma API
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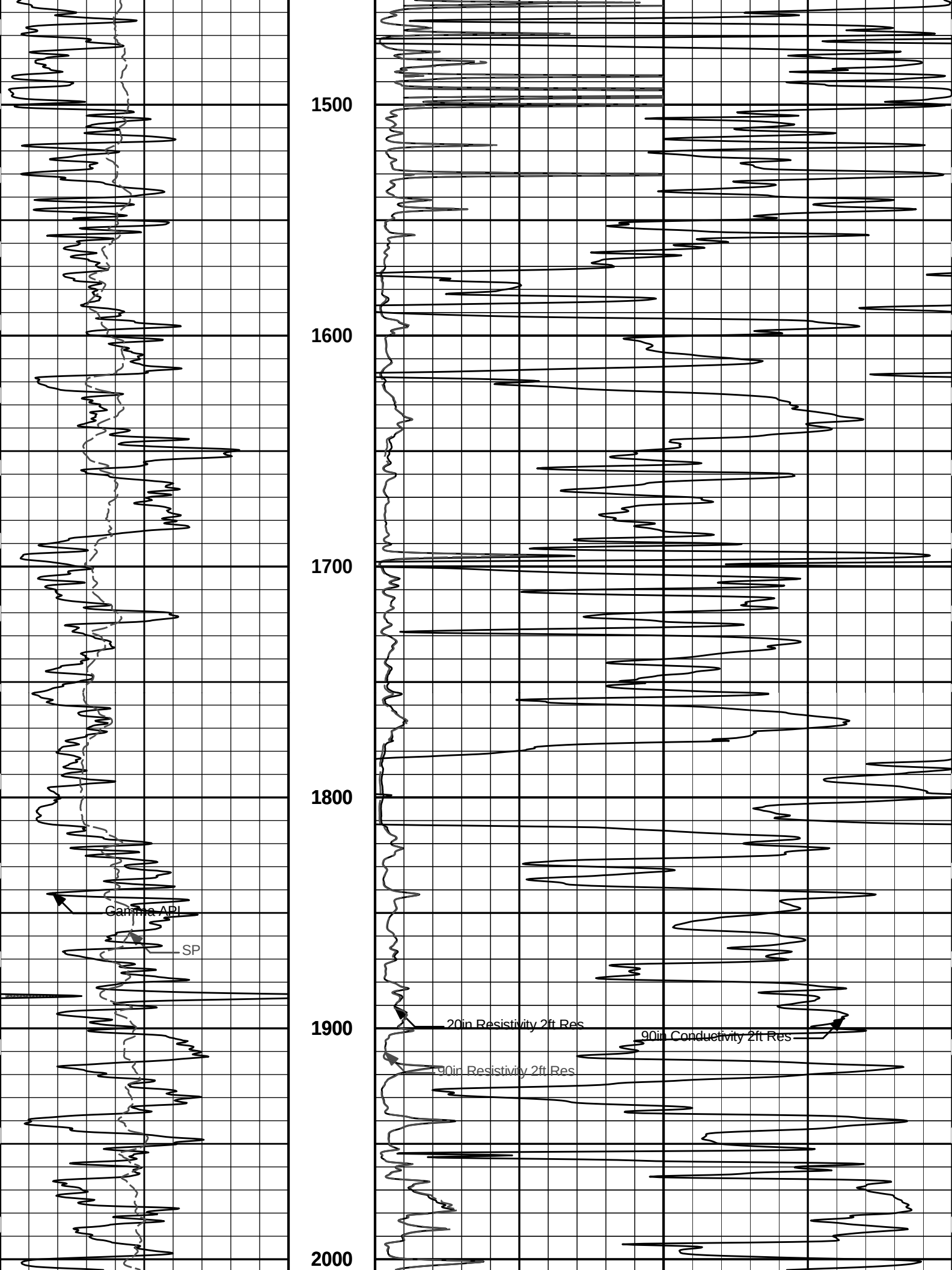
90in Resistivity 2ft Res
90in Conductivity 2ft Res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1700
1800
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90in Resistivity 2ft Res
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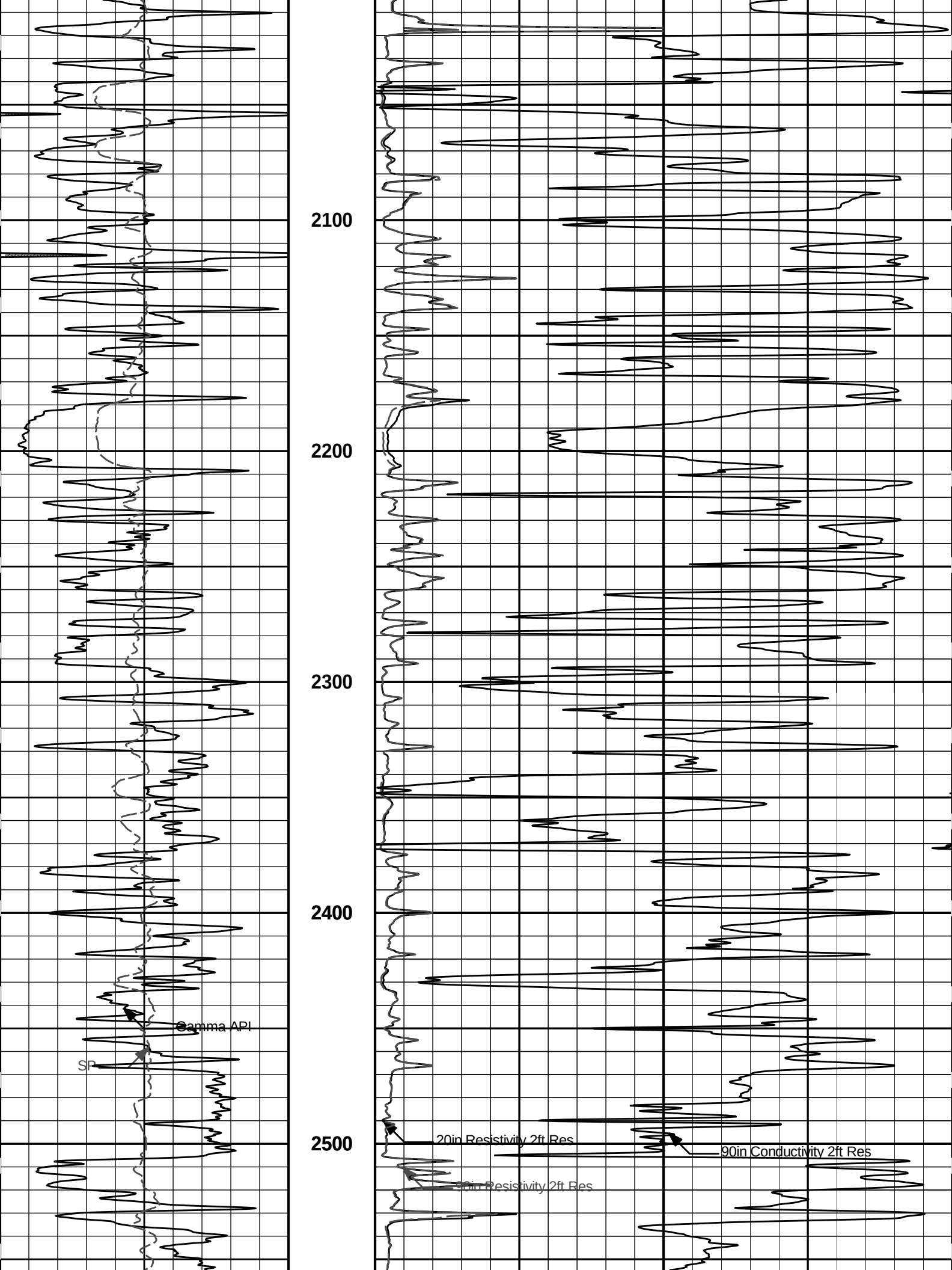
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2200
2300
2400
2500
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SP
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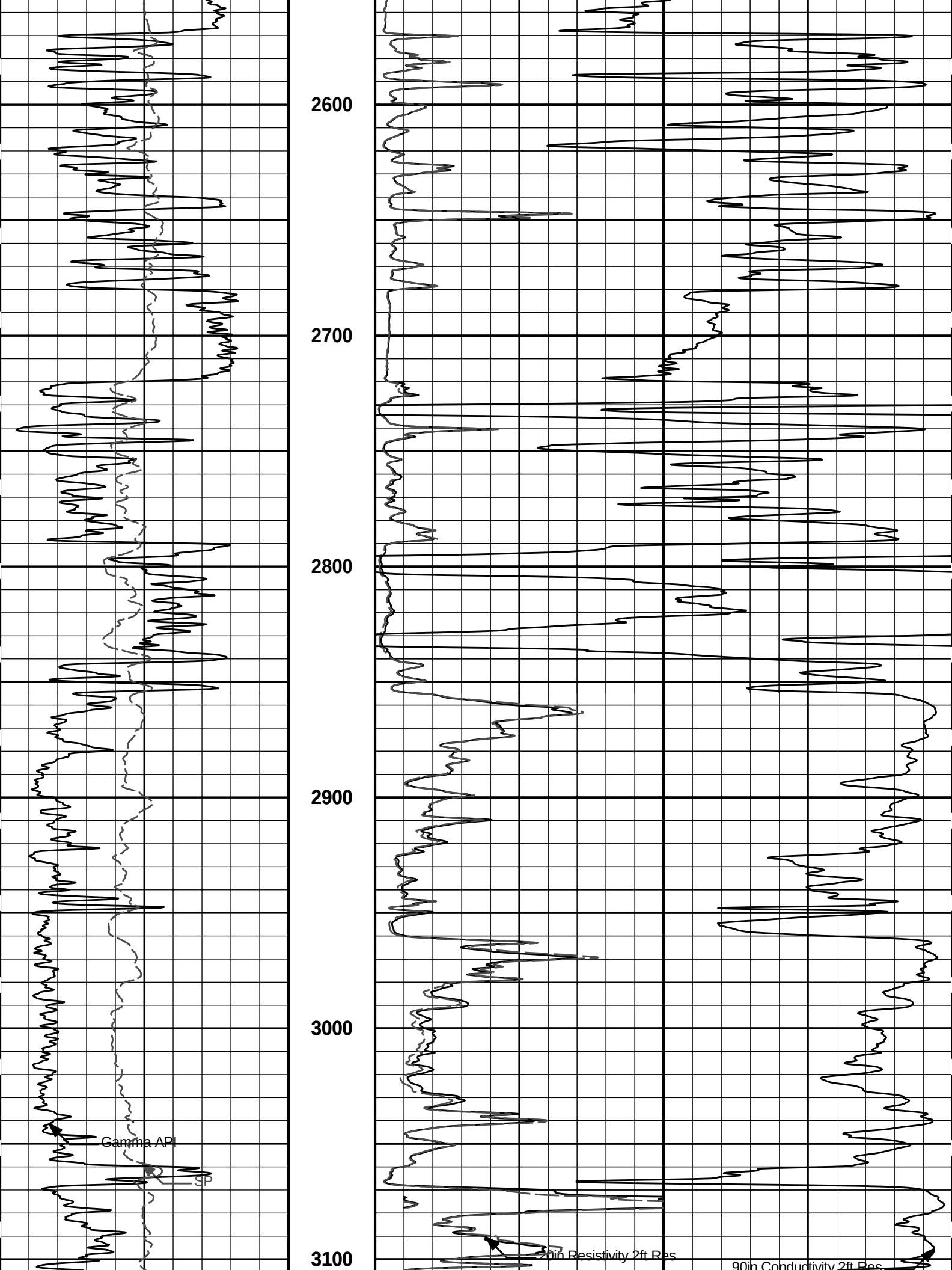
90in Conductivity 2ft Res
90in Resistivity 2ft Res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2700
2800
2900
3000
3100
Gamma API
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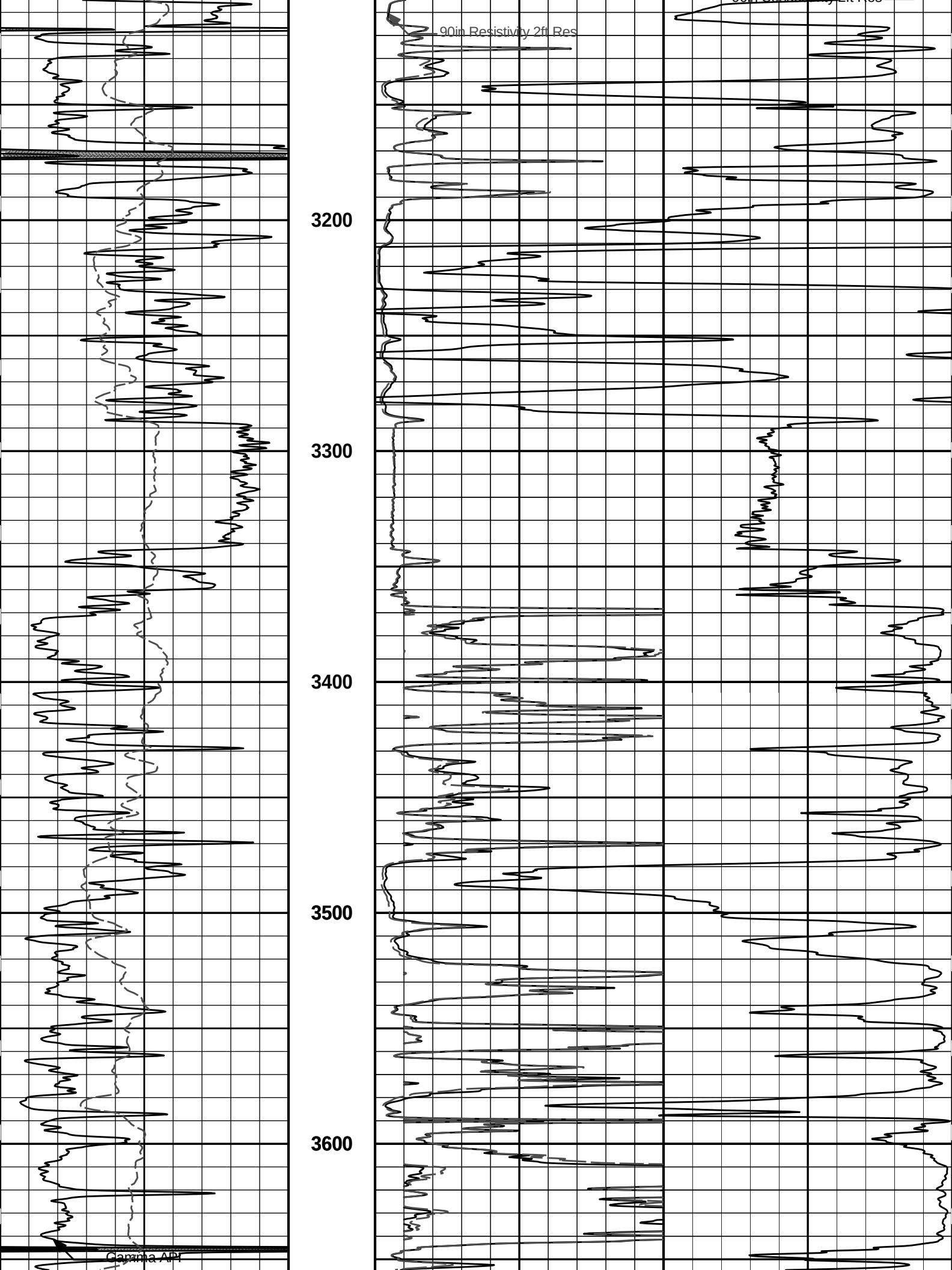
90in Conductivity 2ft Res


90in Resistivity 2ft Res
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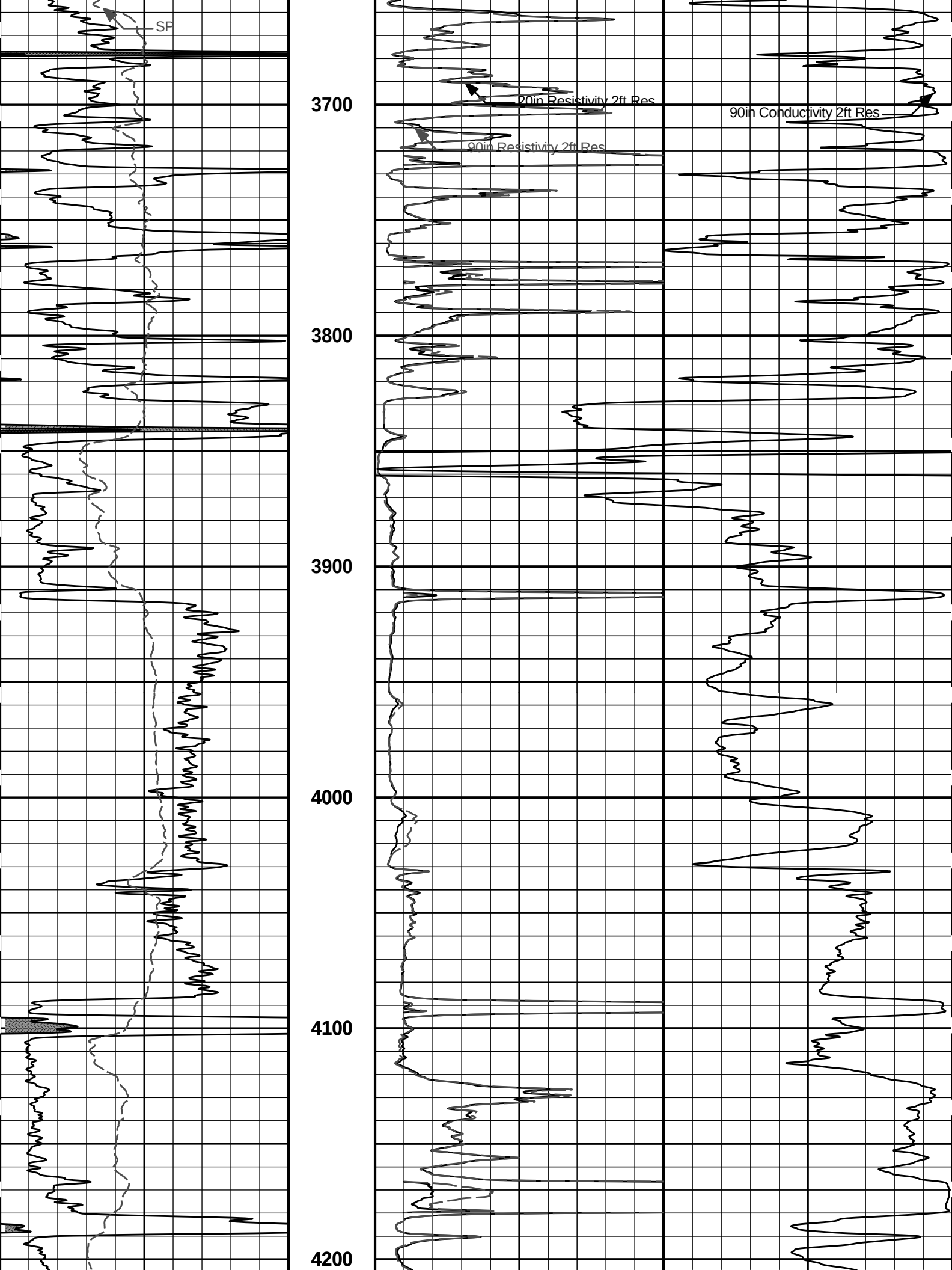
3300
3400
3500
3600
Gamma API


SP
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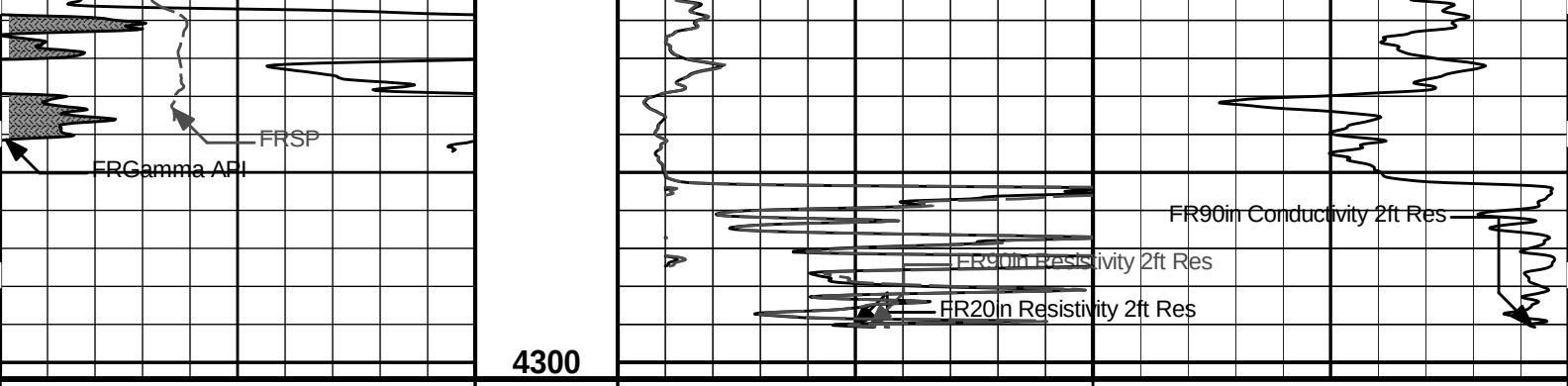
90in Resistivity 2ft Res
90in Conductivity 2ft Res
3700
3800
3900
4000
4100
4200



HALLIBURTON

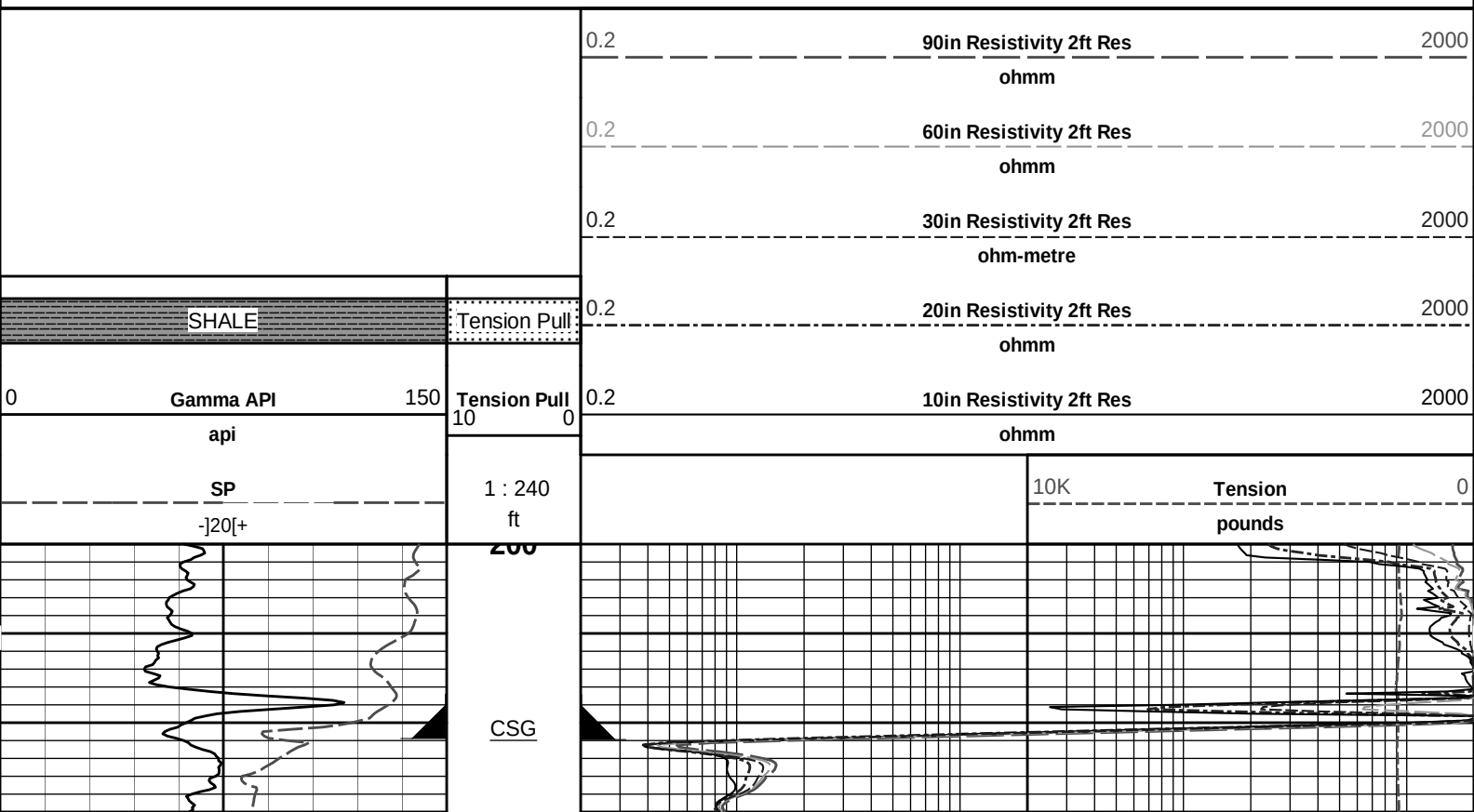
Plot Time: 24-Jun-11 10:19:58
Plot Range: 200 ft to 4304 ft
Data: HORTON_1\Well Based\DAQ-0001-CSG
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_2_lib

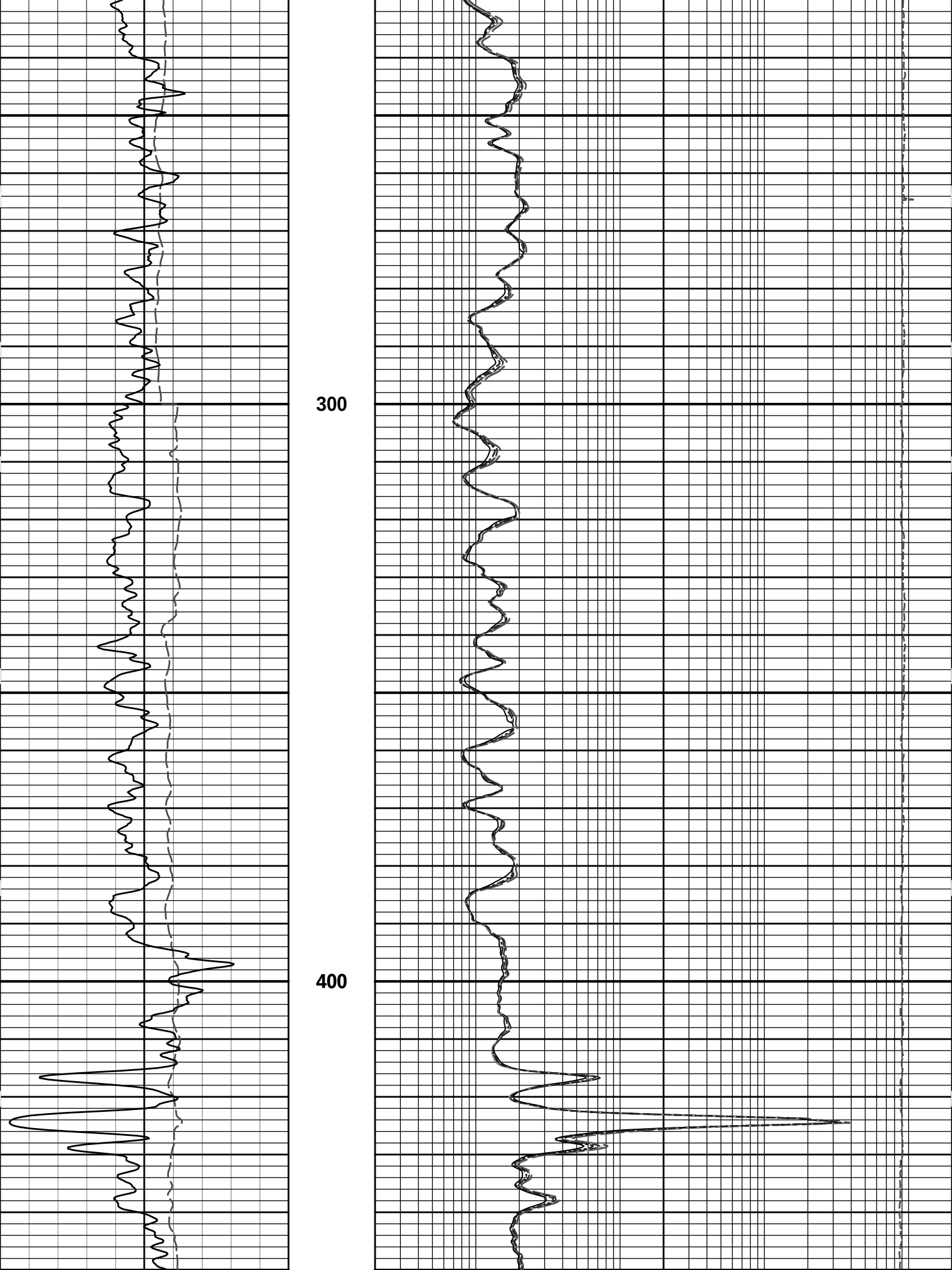
2 INCH MAIN LOG

HALLIBURTON

Plot Time: 24-Jun-11 10:19:58
Plot Range: 200 ft to 4304 ft
Data: HORTON_1\Well Based\DAQ-0001-CSG
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_5_main_lib

5 INCH MAIN LOG

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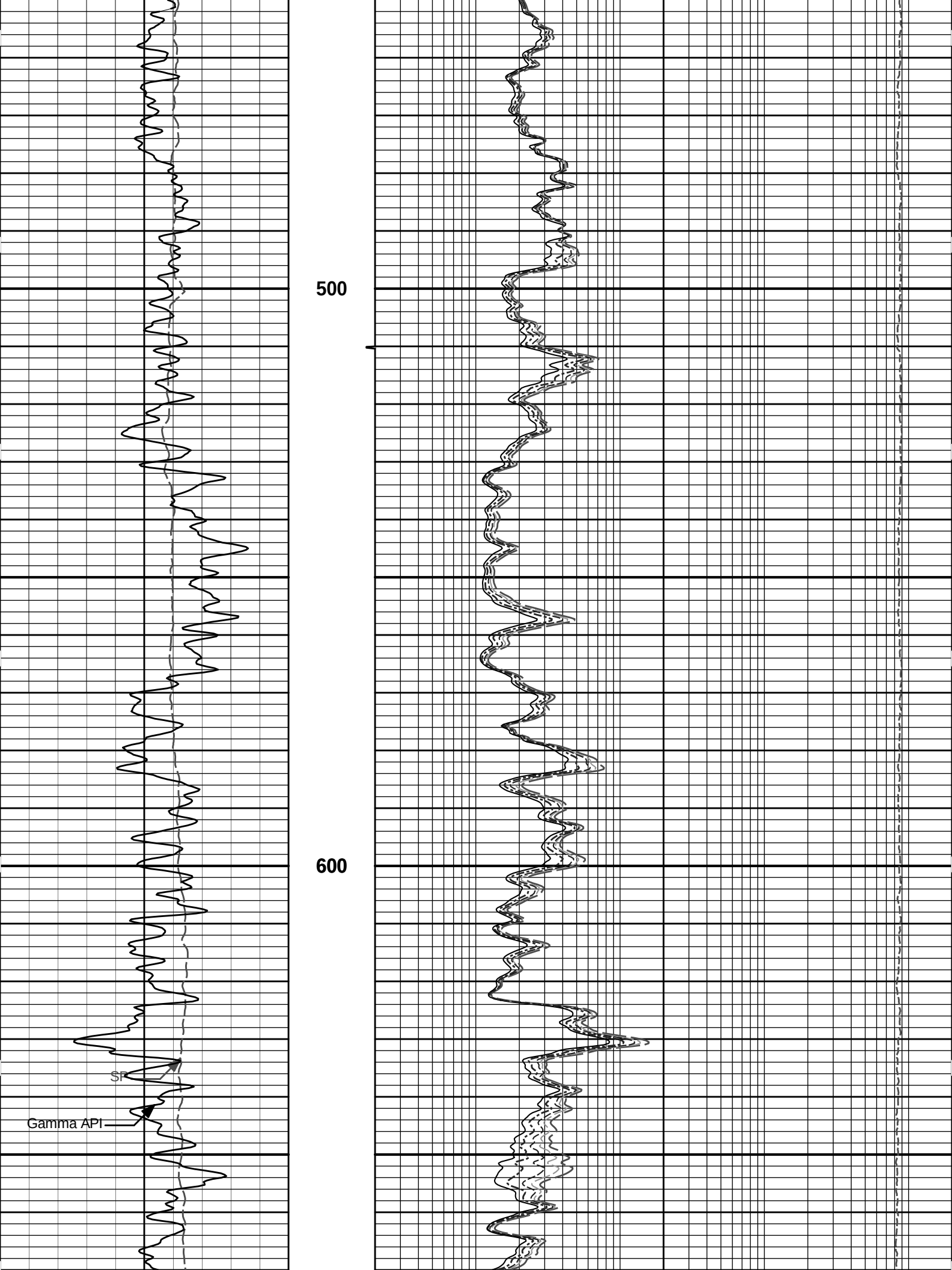
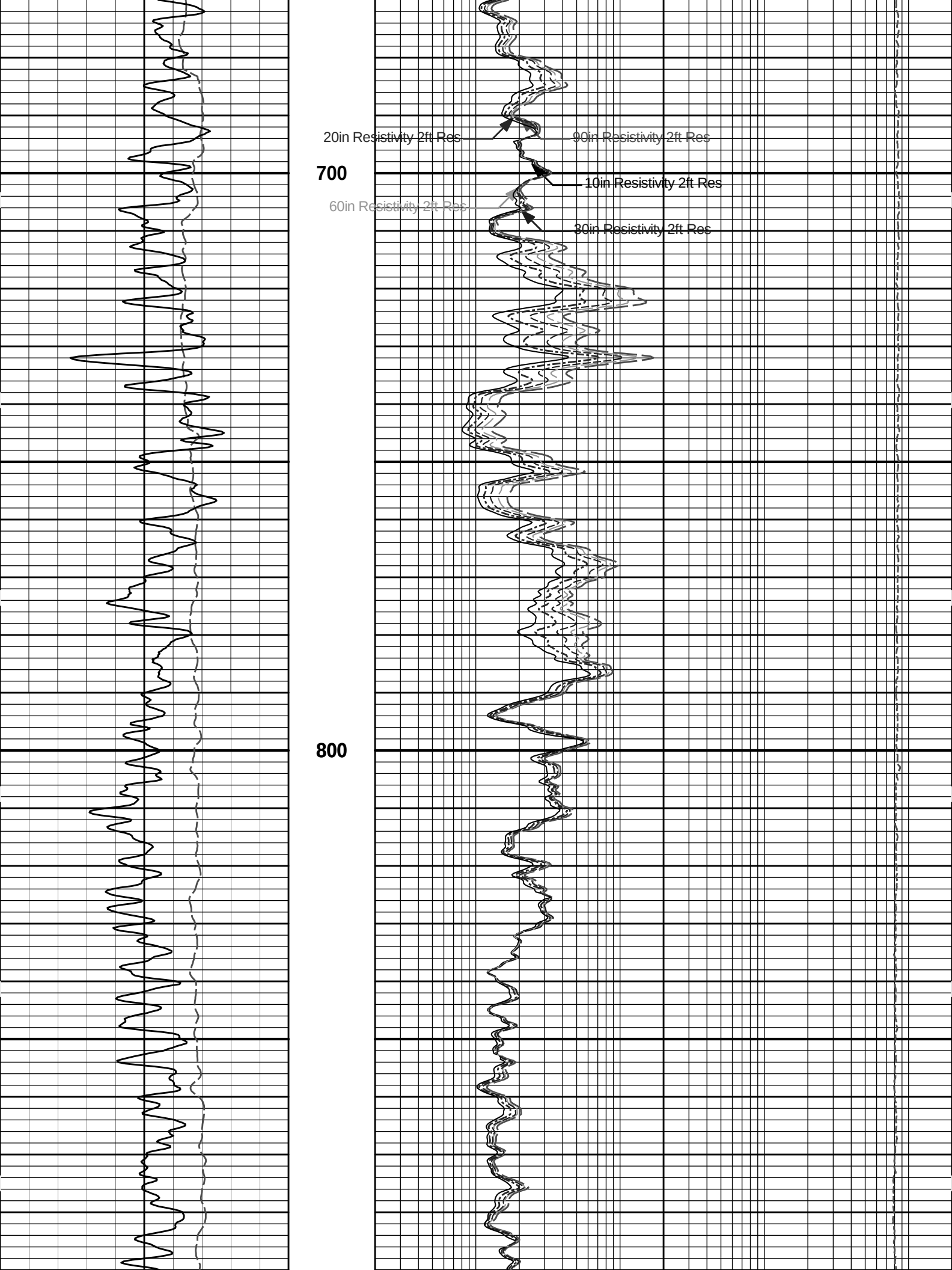

500
600
SP
Gamma API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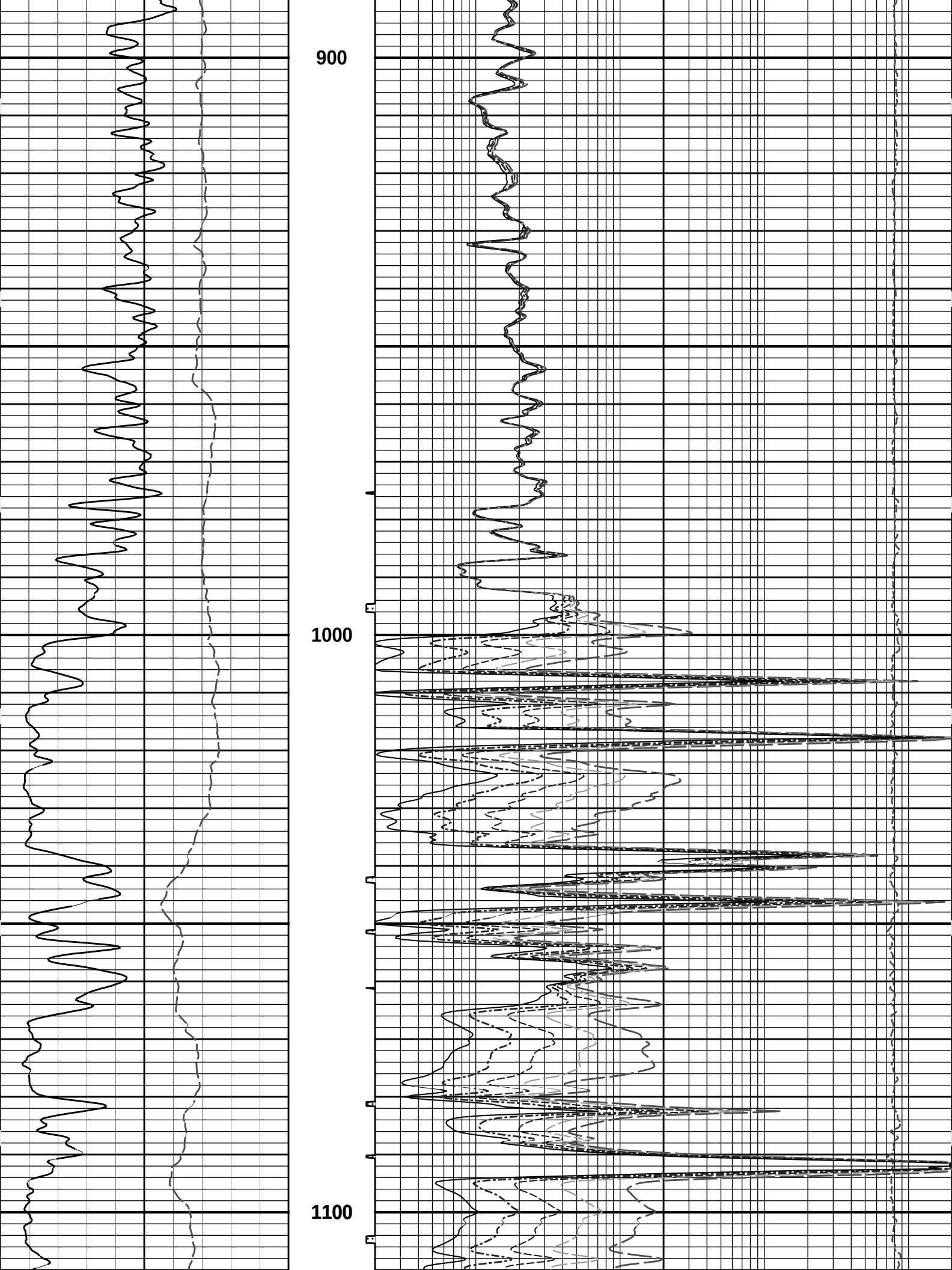
90in Resistivity 2ft Res
700
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res
800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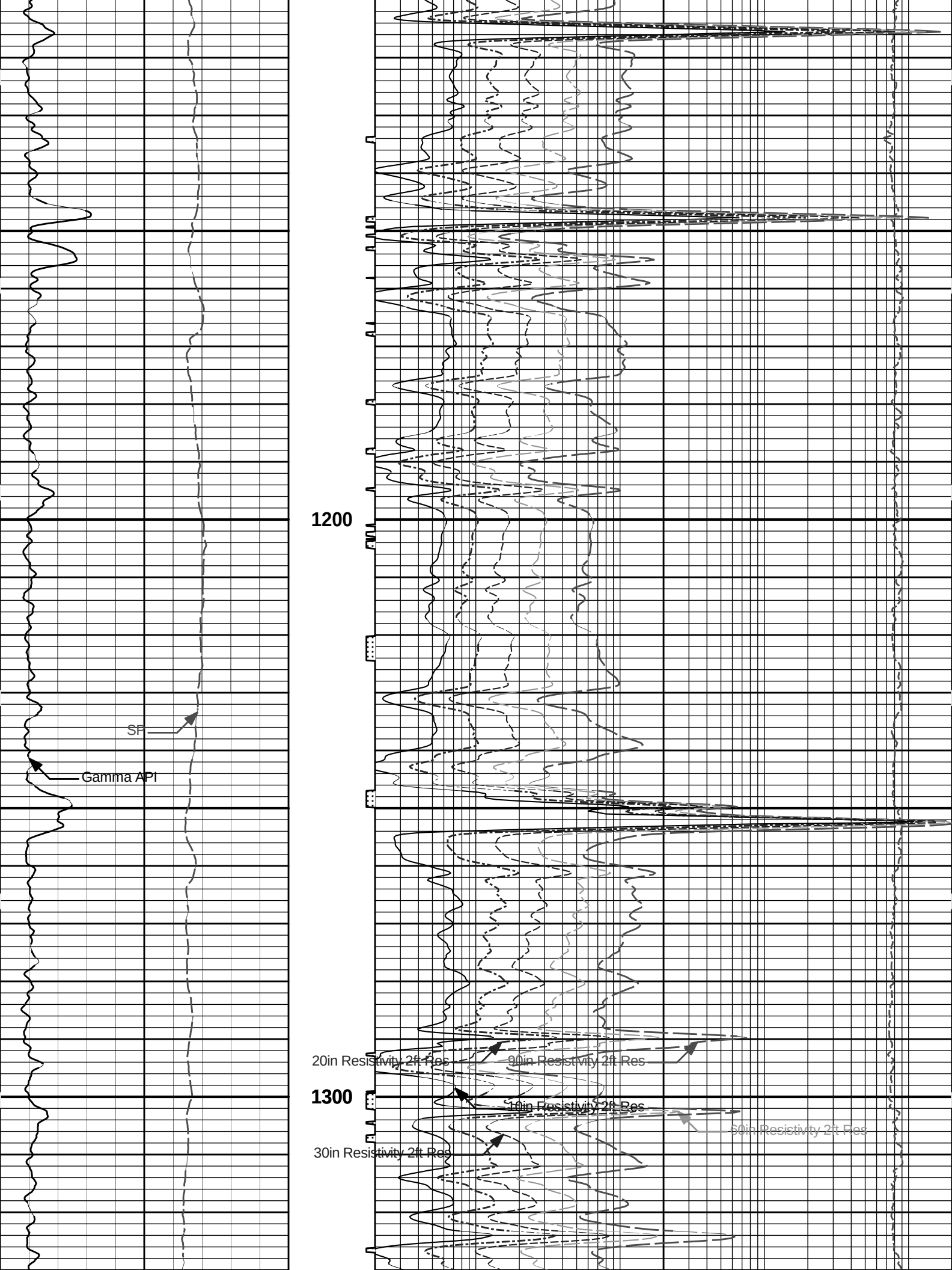
SP
Gamma API
1200
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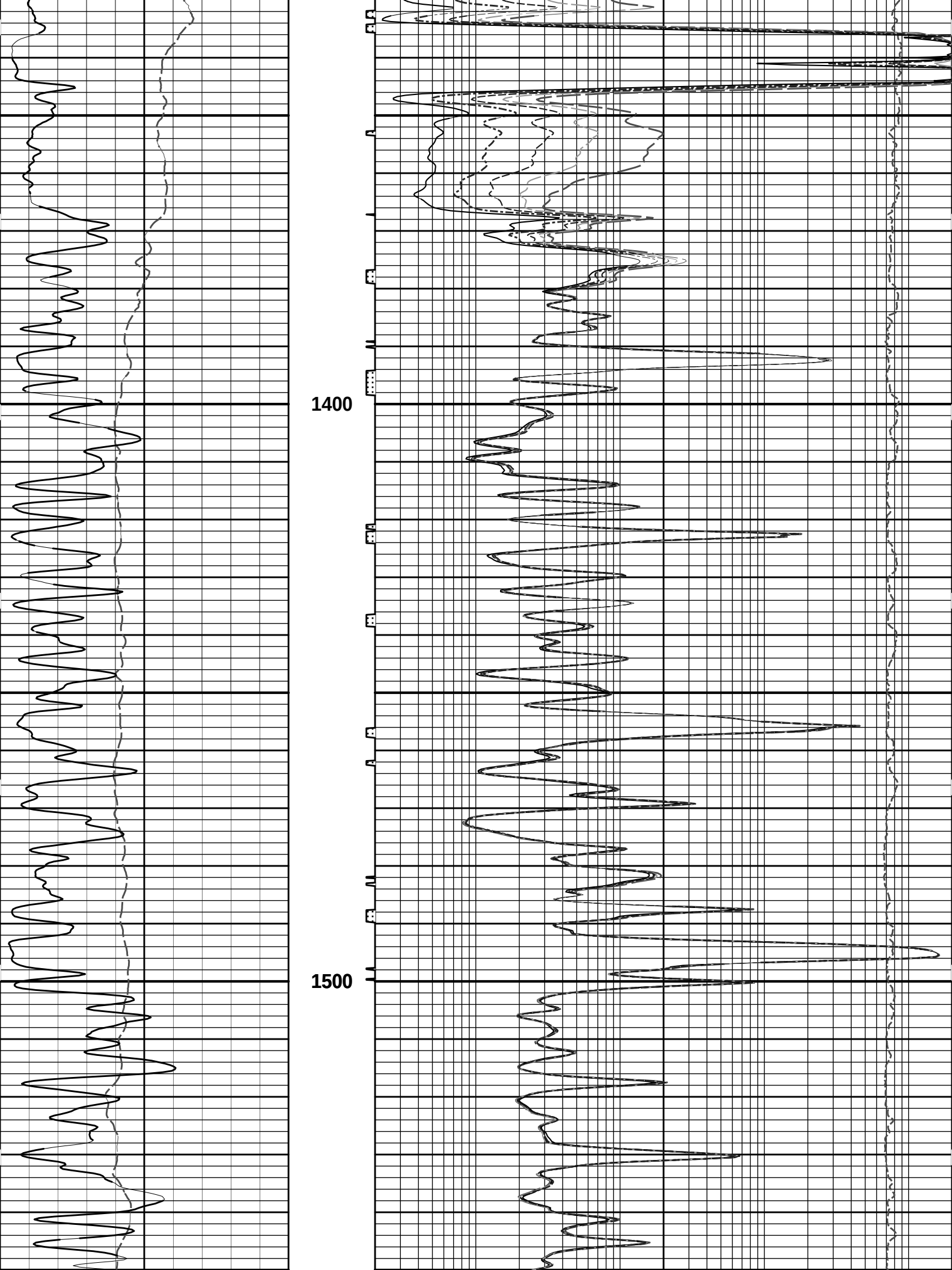
90in Resistivity 2ft Res
1300
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res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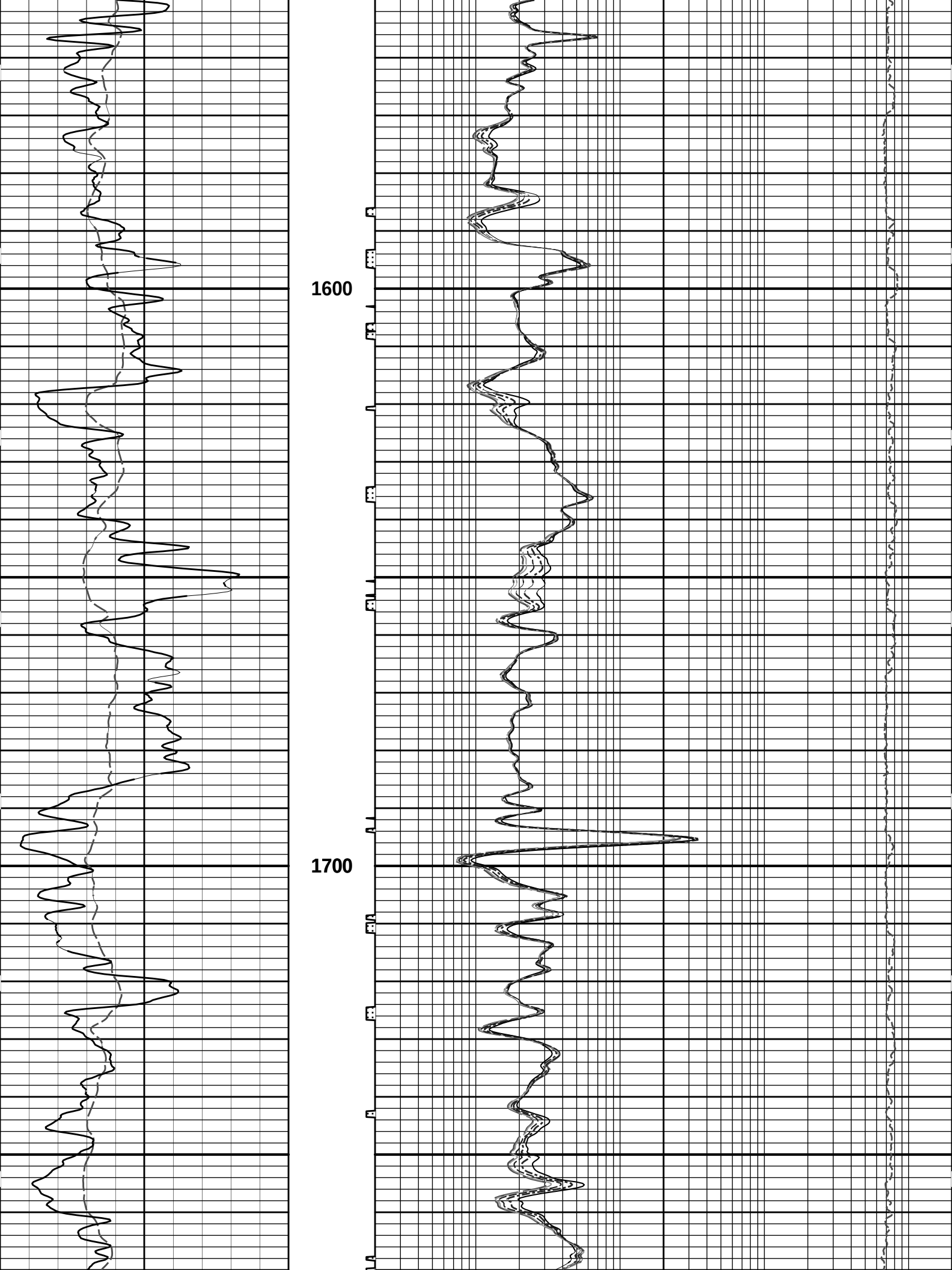
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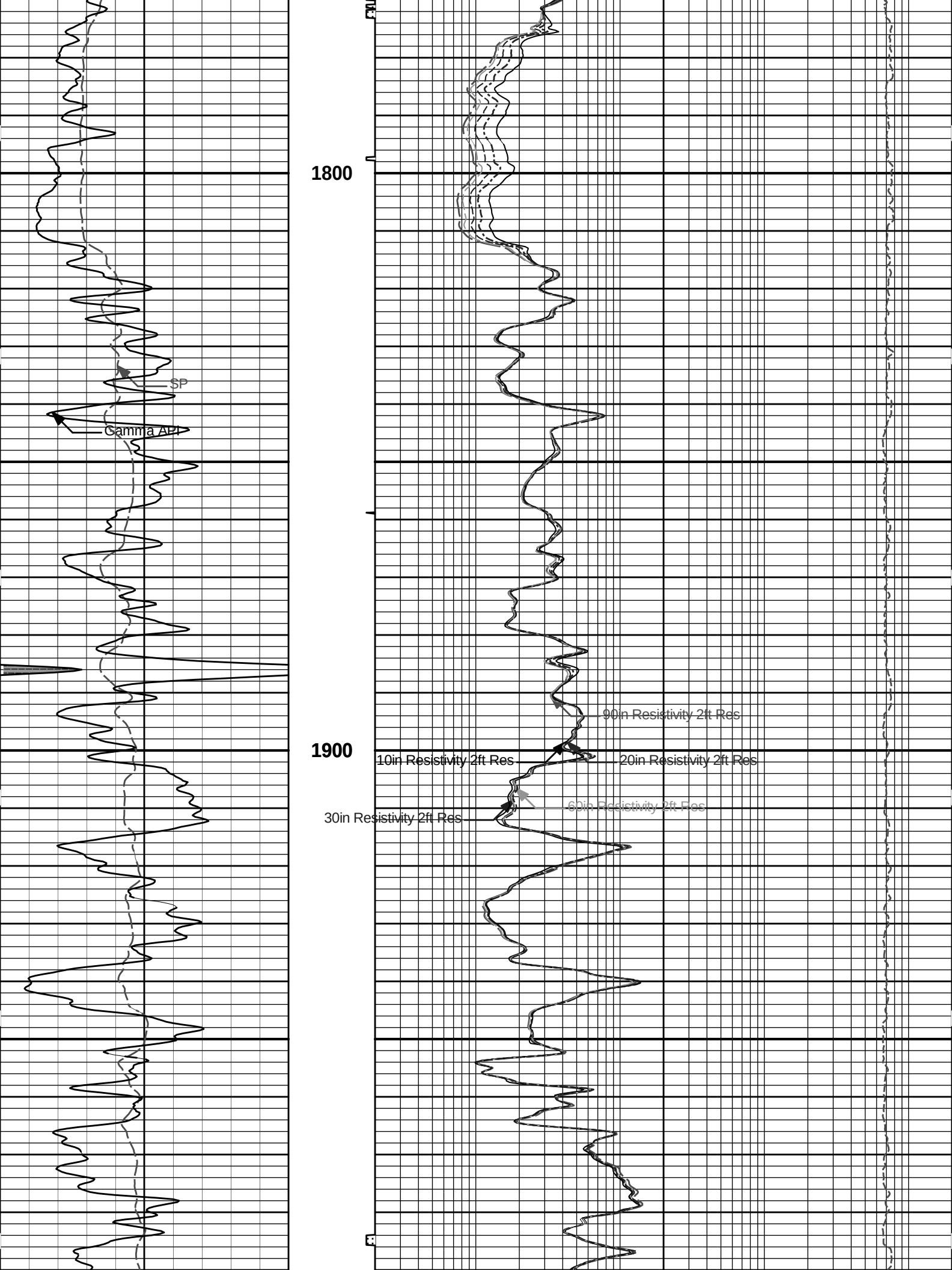
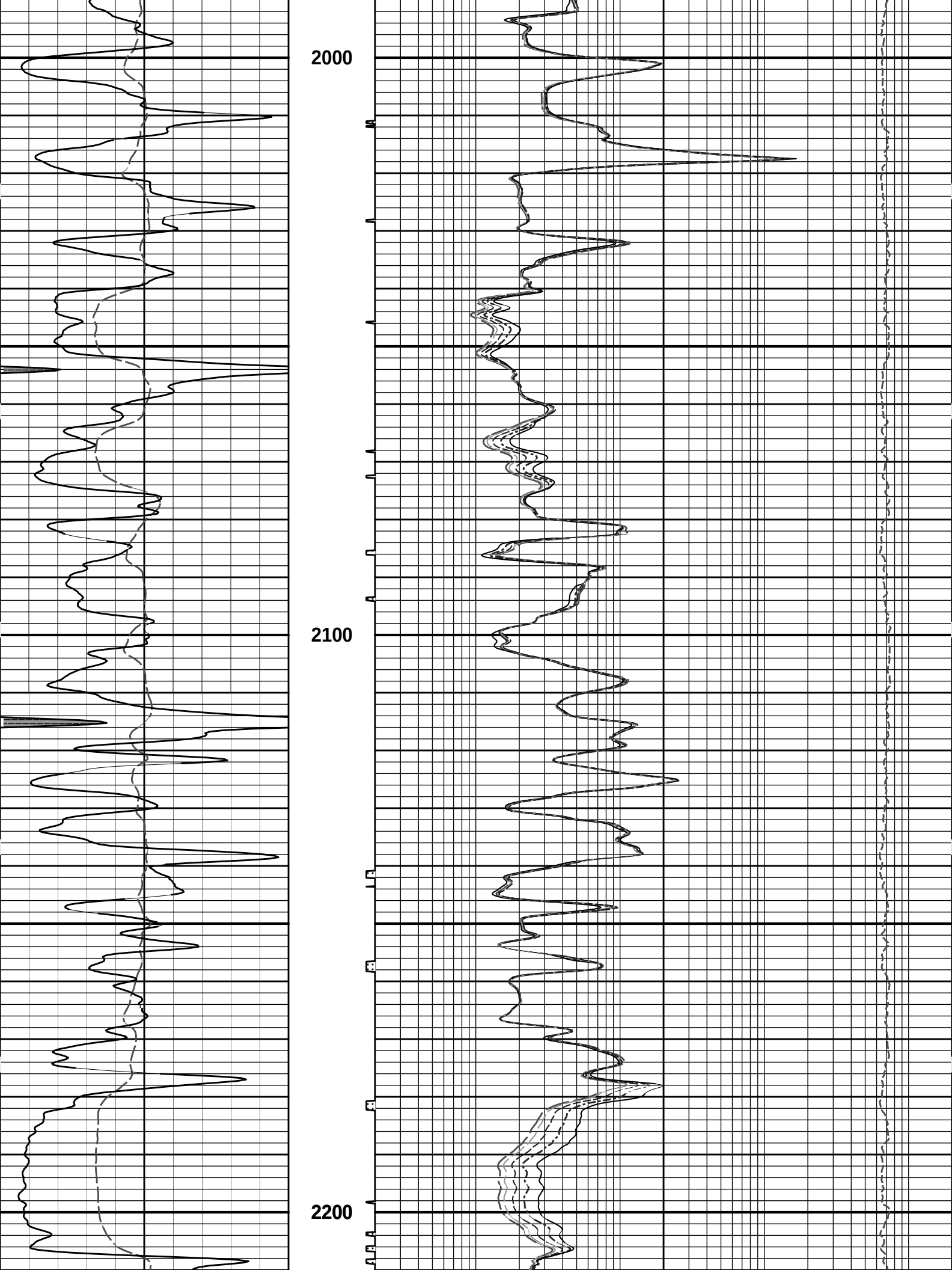

1800
1900
SP
Gamma API
90in Resistivity 2ft Res
10in Resistivity 2ft Res
20in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res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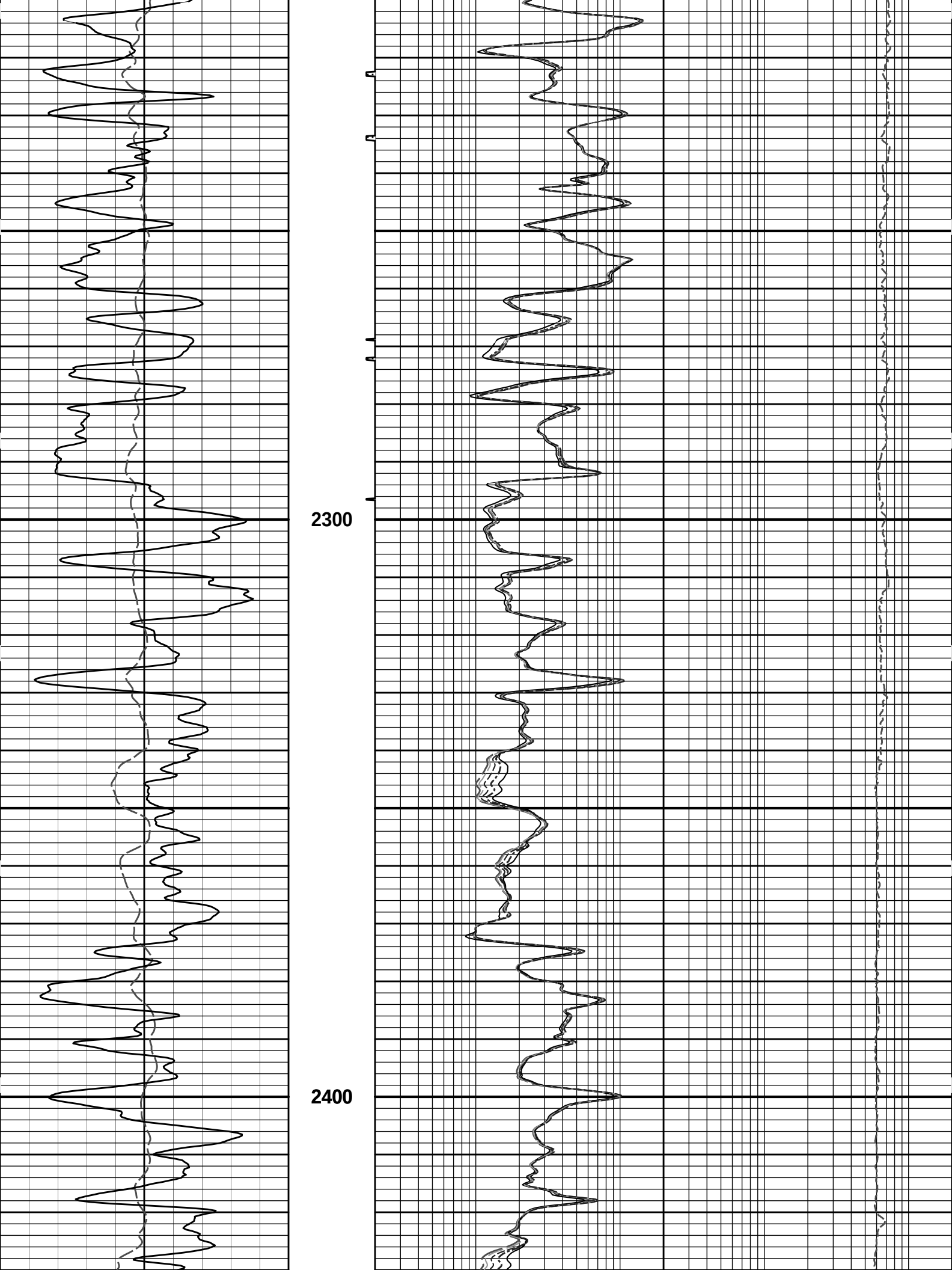
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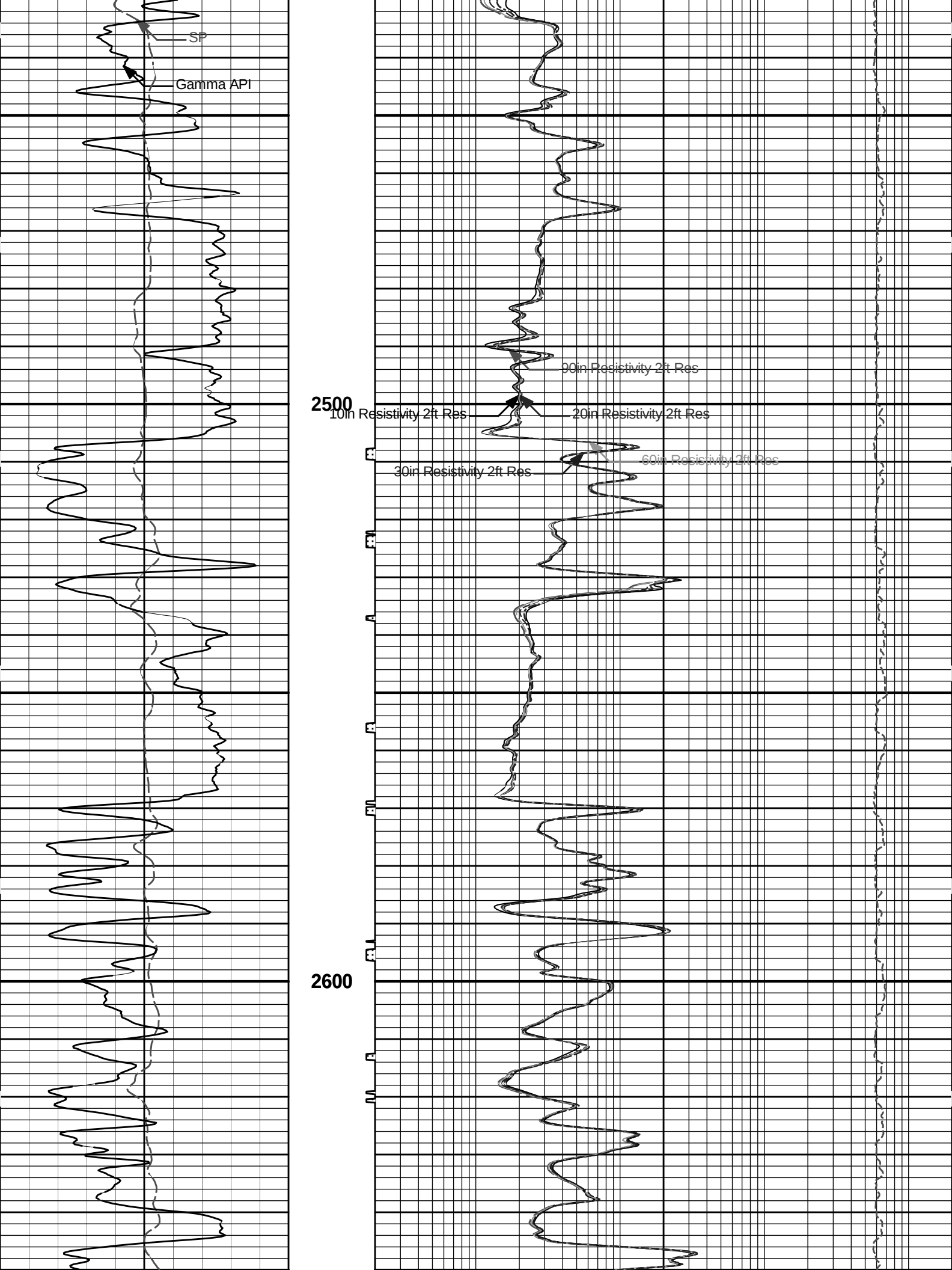
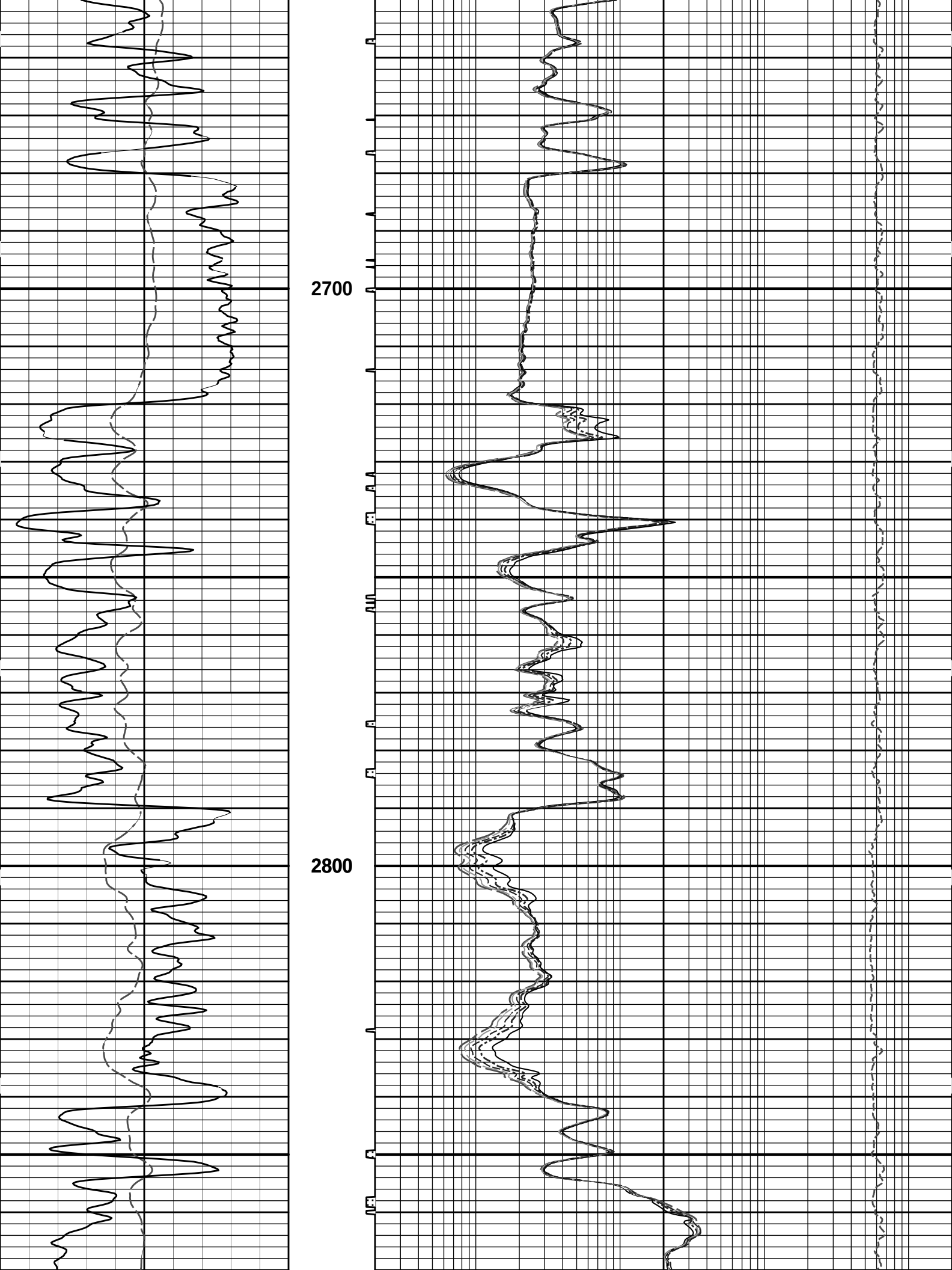

SP
Gamma API
90in Resistivity 2ft Res
2500
10in Resistivity 2ft Res
20in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res
2600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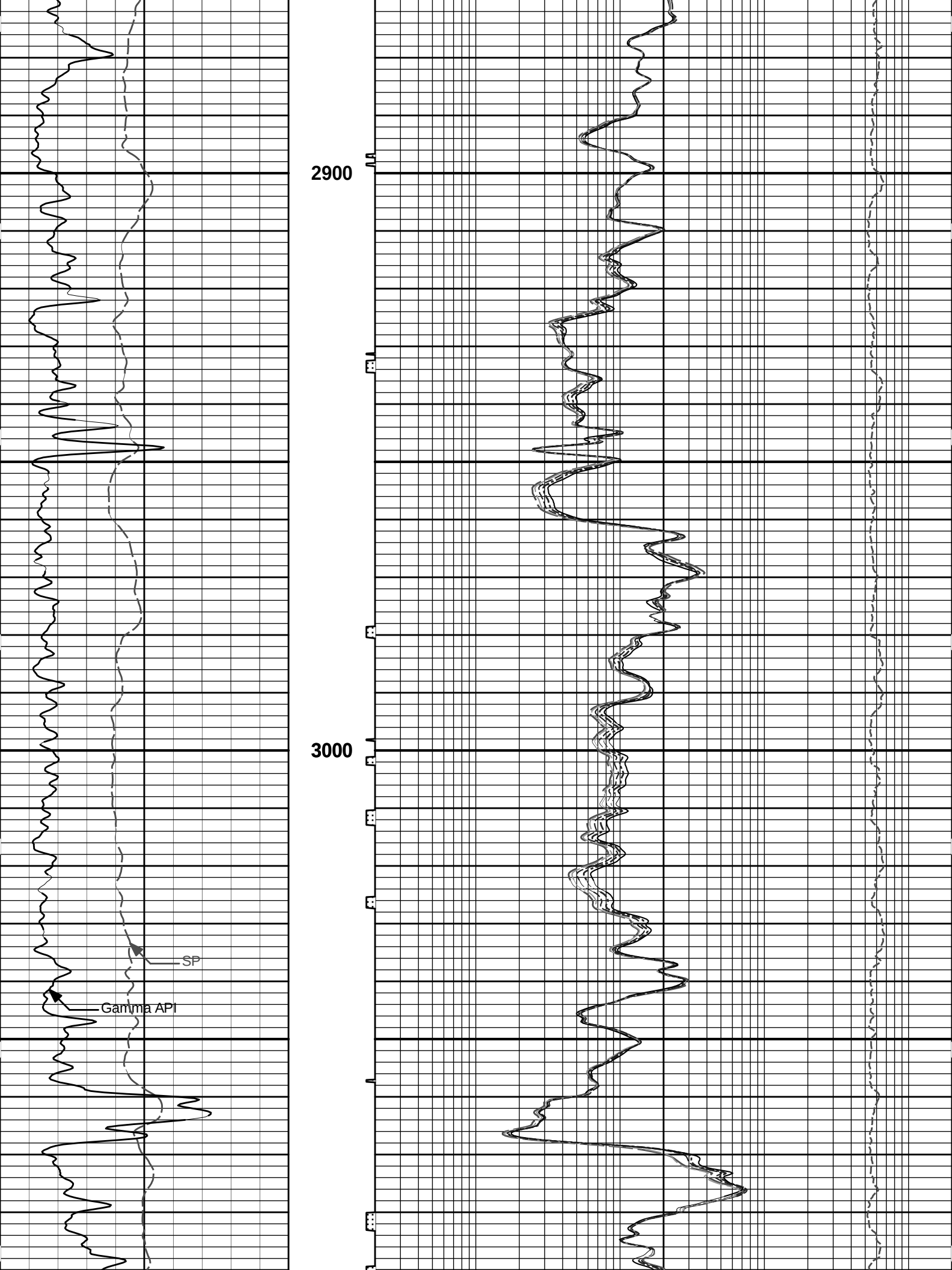
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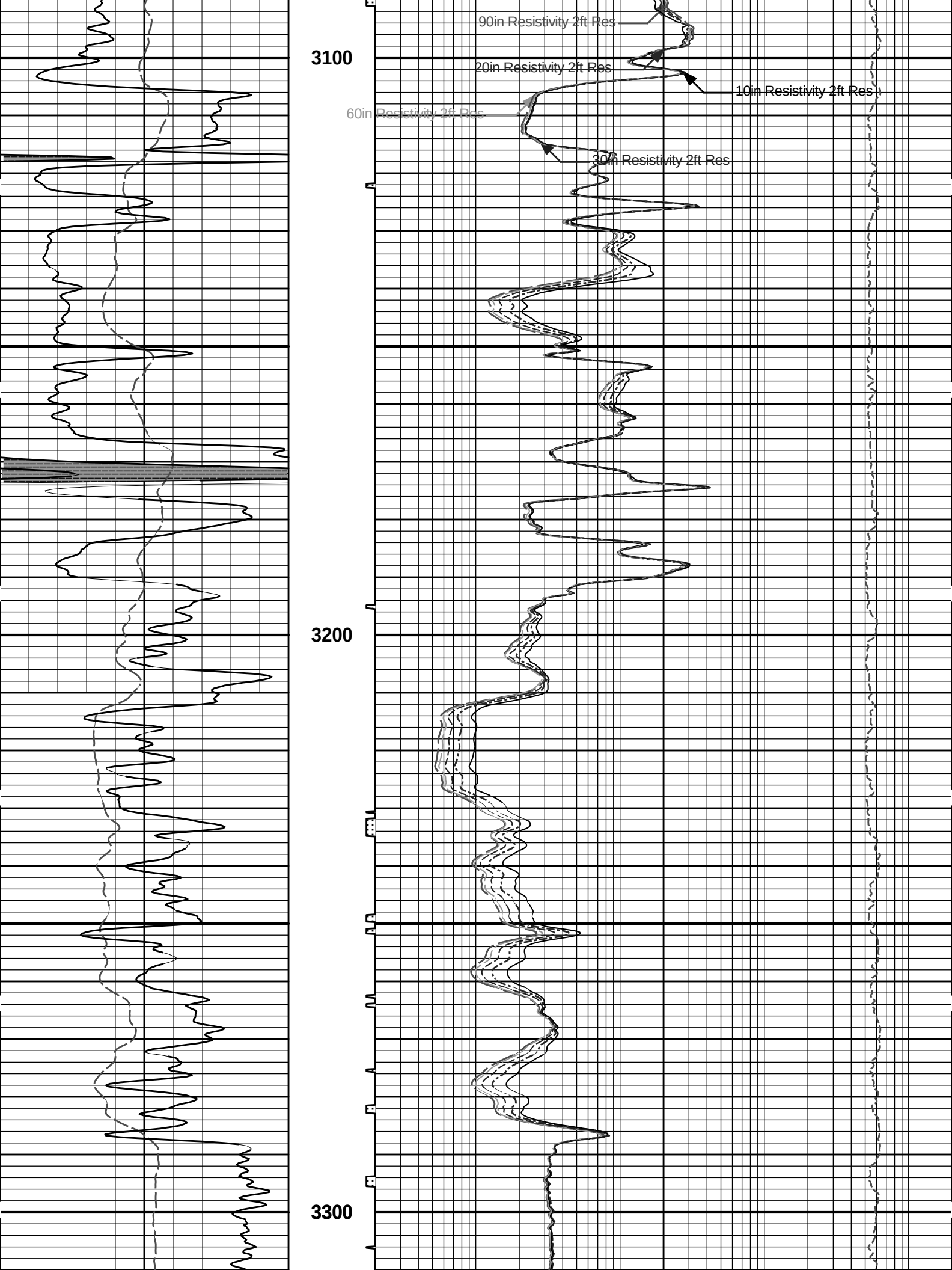
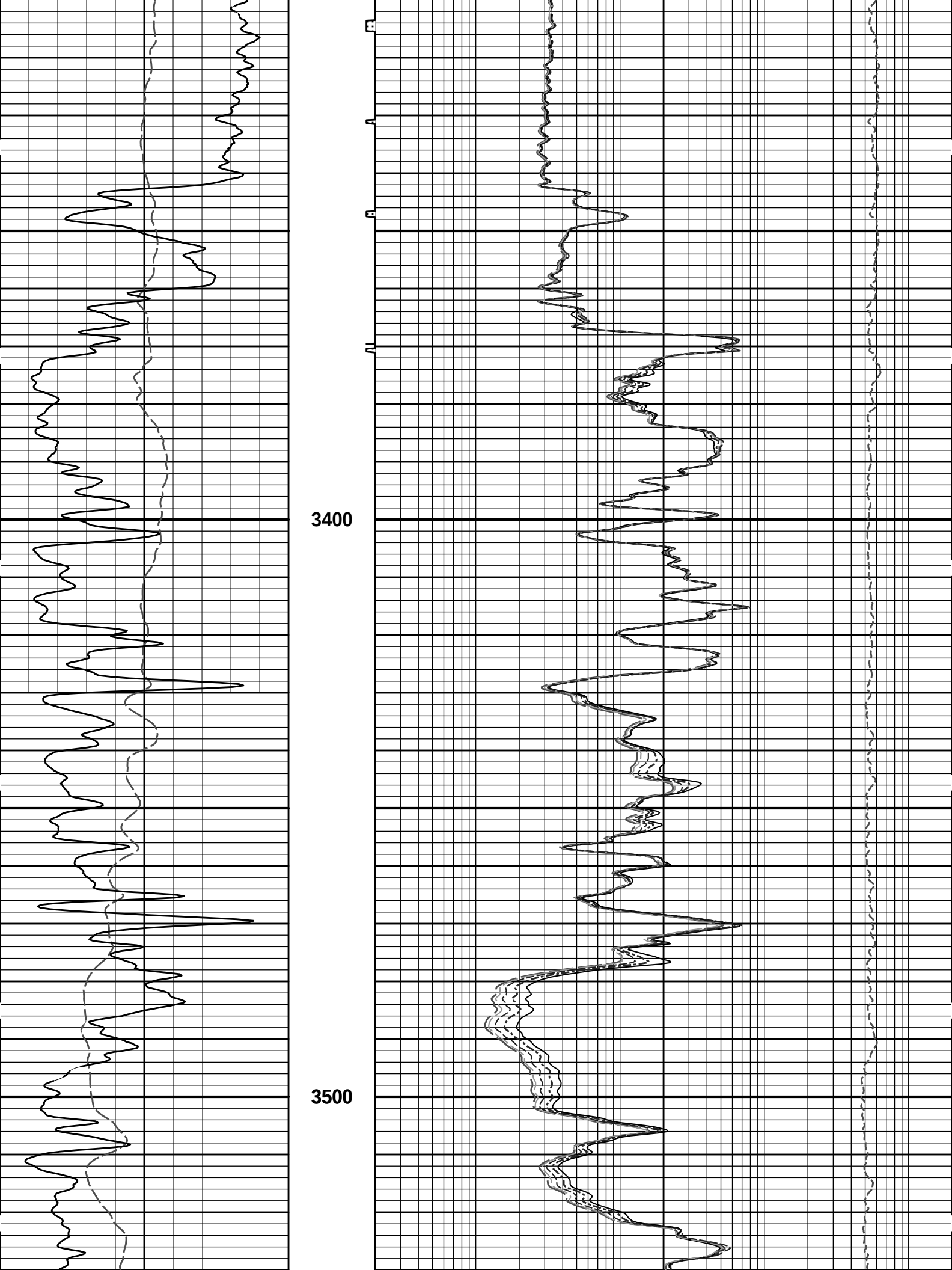
3000
SP
Gamma API


90in Resistivity 2ft Res
20in Resistivity 2ft Res
10in Resistivity 2ft Res
60in Resistivity 2ft Res
30in Resistivity 2ft Res
3100
3200
3300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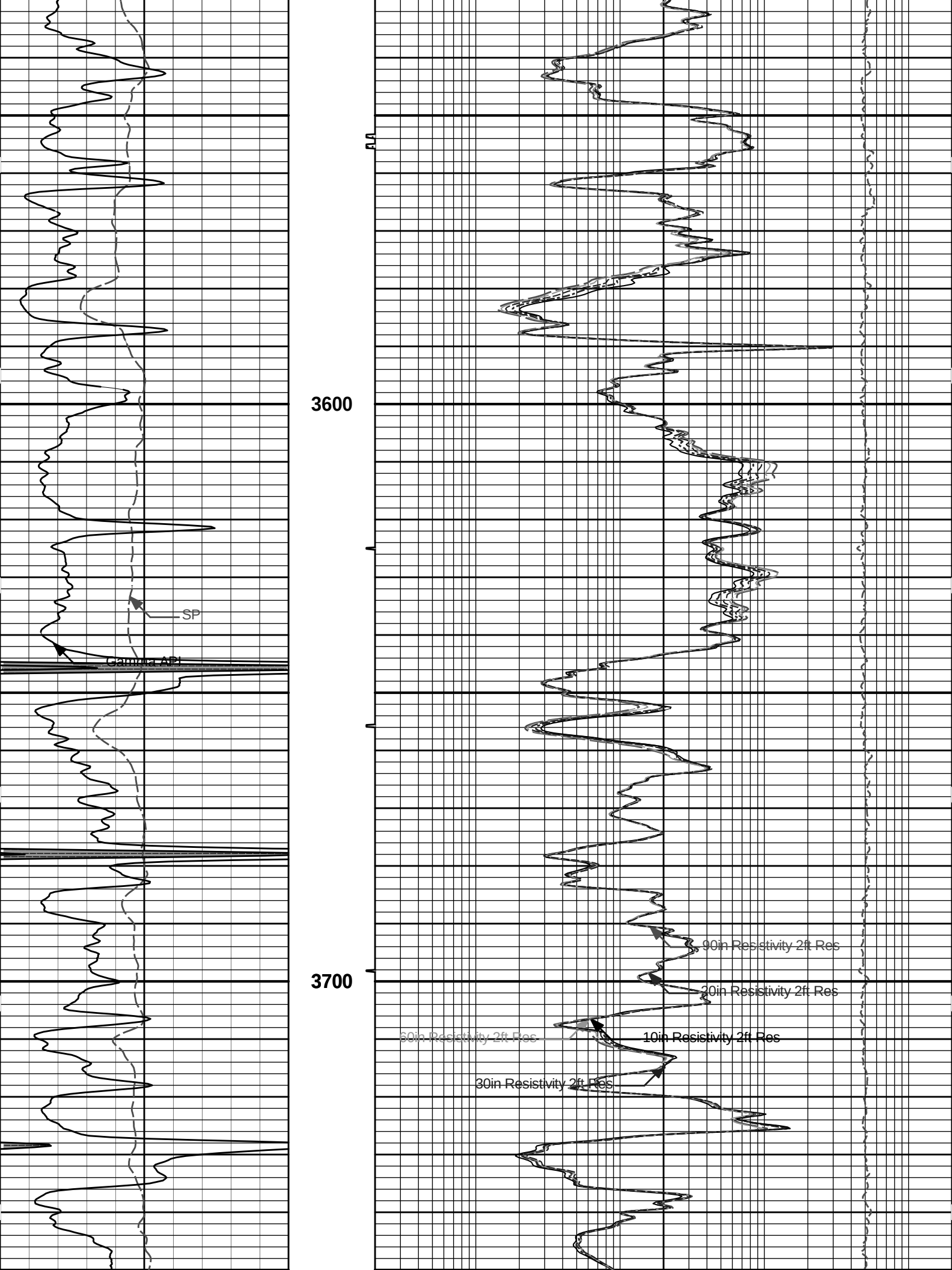
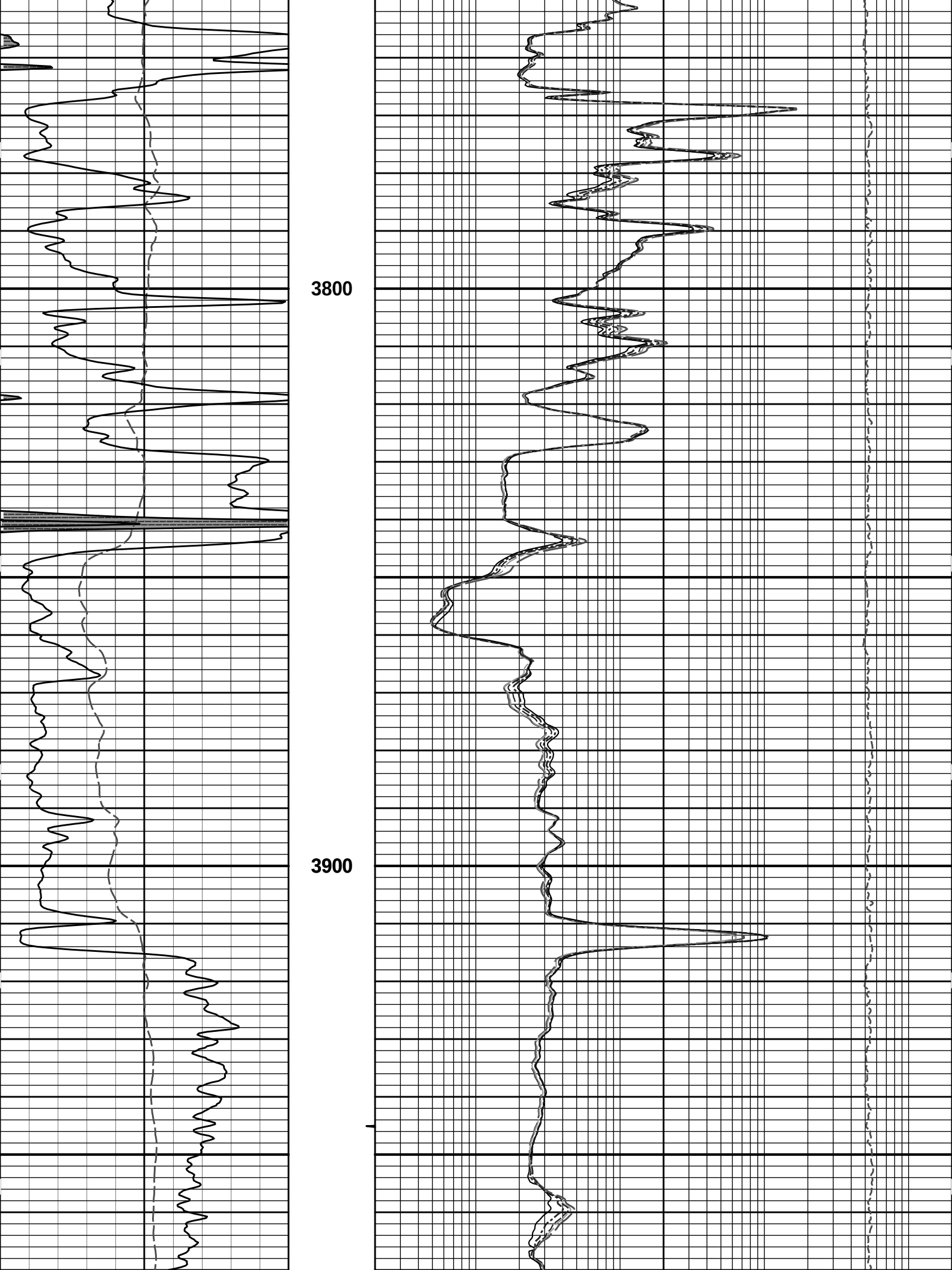

3600
3700
SP
Gamma API
90in Resistivity 2ft Res
20in Resistivity 2ft Res
60in Resistivity 2ft Res
10in Resistivity 2ft Res
30in Resistivity 2ft Res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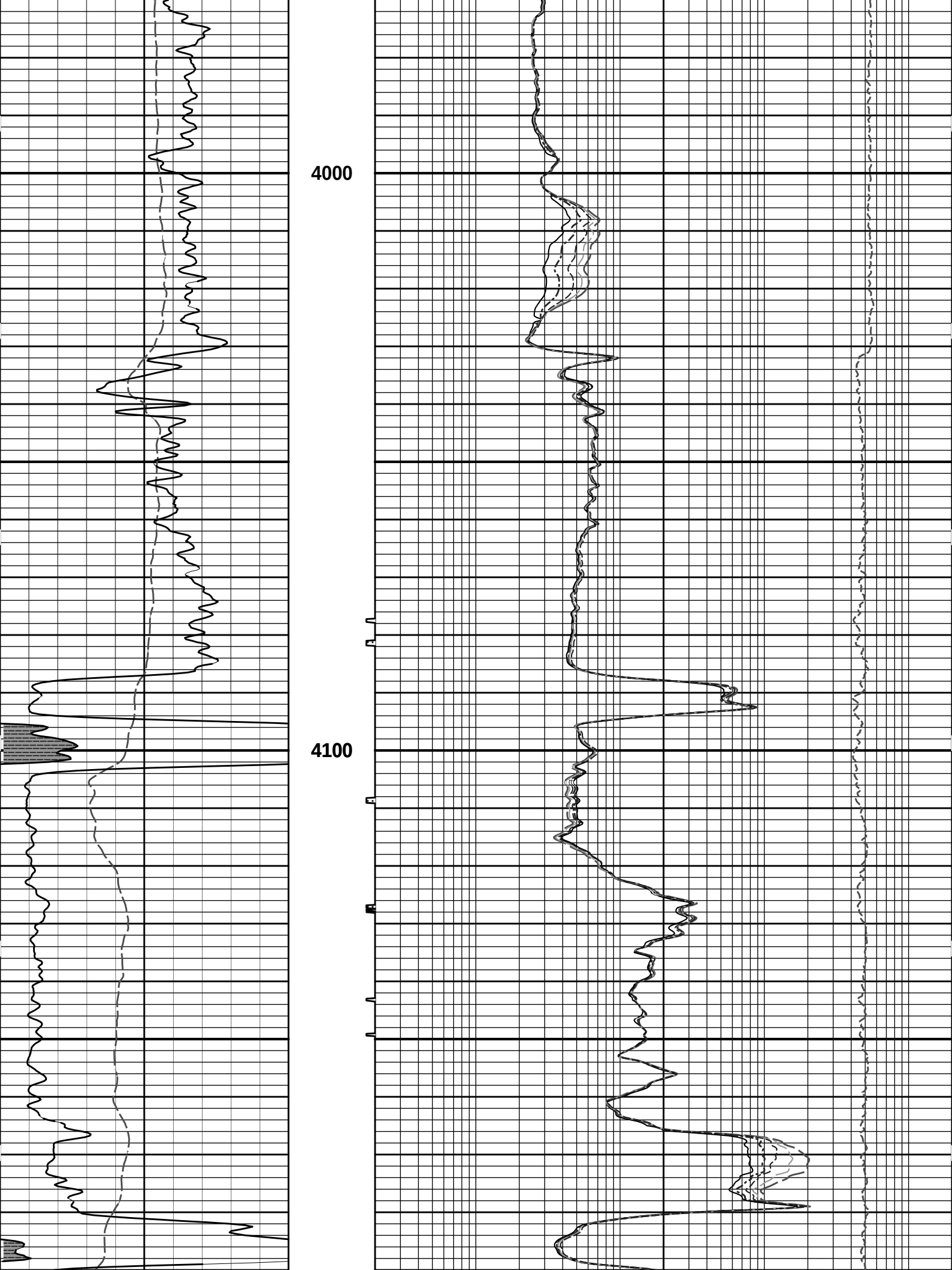
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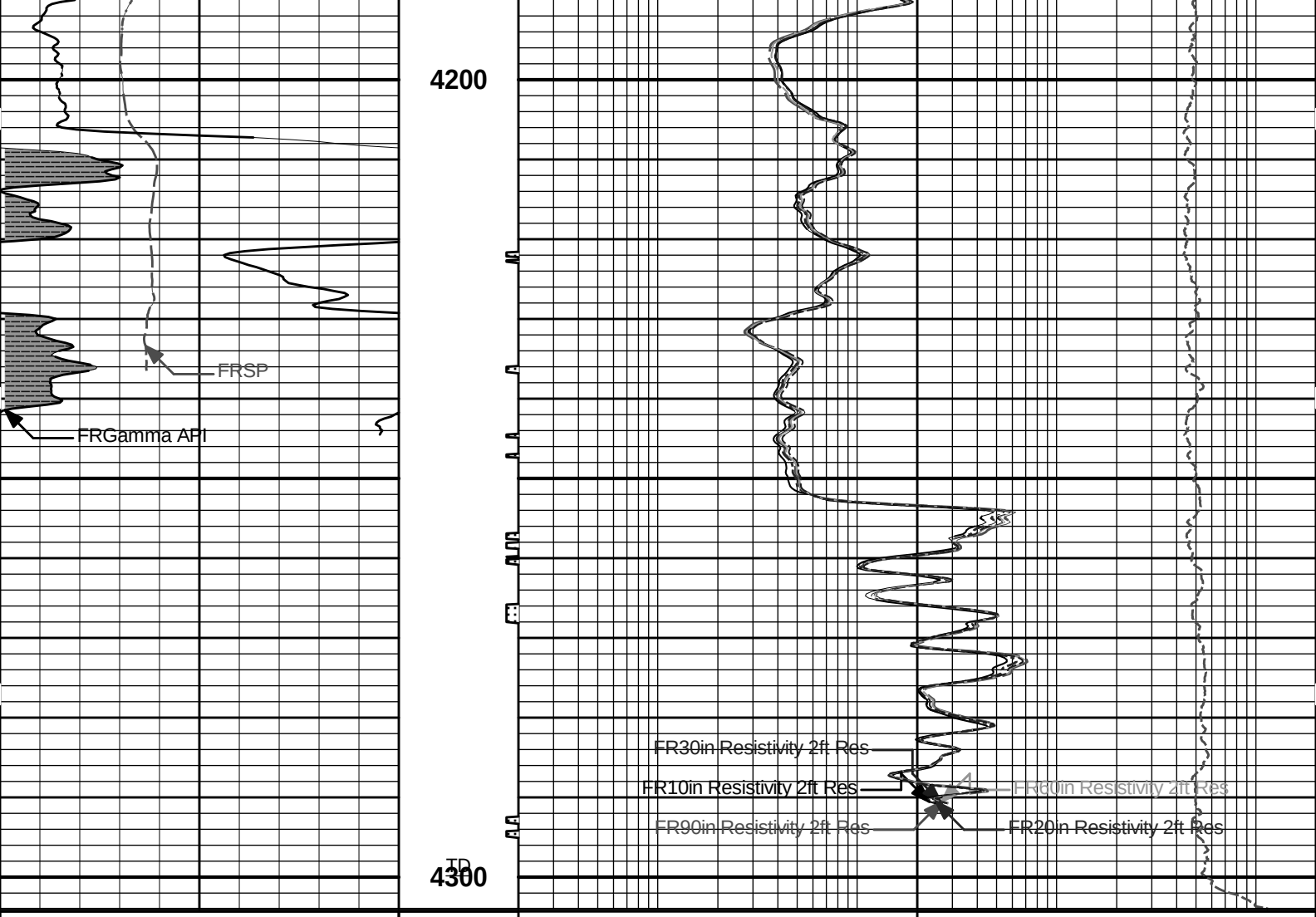


SP	1 : 240 ft	10K Tension 0
-]20[+		pounds
0 Gamma API 150	Tension Pull	0.2 10in Resistivity 2ft Res 2000
api	10 0	ohmm
SHALE	Tension Pull	0.2 20in Resistivity 2ft Res 2000
		ohmm
		0.2 30in Resistivity 2ft Res 2000
		ohm-metre
		0.2 60in Resistivity 2ft Res 2000
		ohmm
		0.2 90in Resistivity 2ft Res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

HALLIBURTON

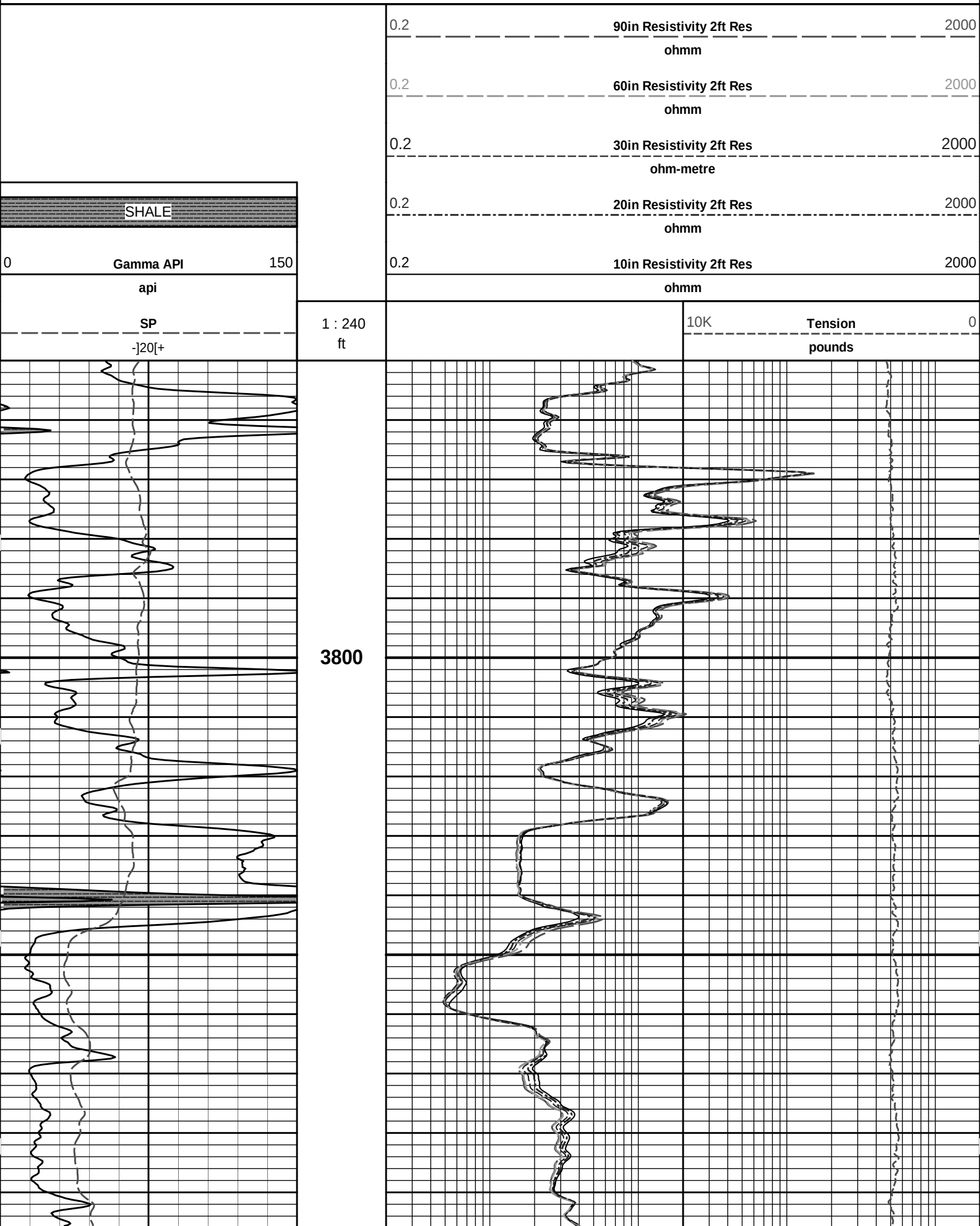
Plot Time: 24-Jun-11 10:20:03
Plot Range: 200 ft to 4304 ft
Data: HORTON_1\Well Based\DAQ-0001-CSG
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_5_main_lib

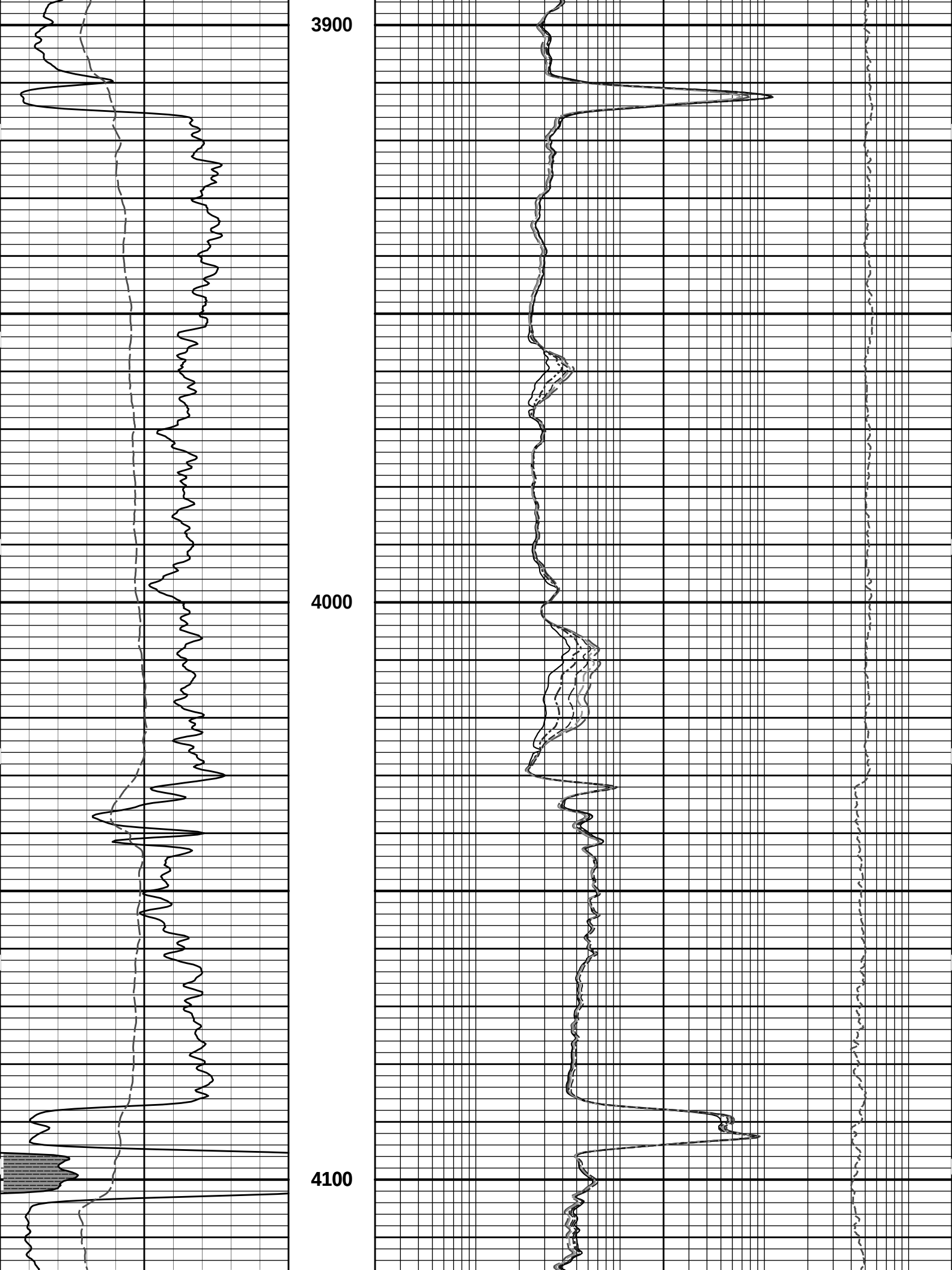
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 24-Jun-11 10:20:03
Plot Range: 3750 ft to 4303.92 ft
Data: HORTON_1\Well Based\DAQ-0001-REPEAT
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

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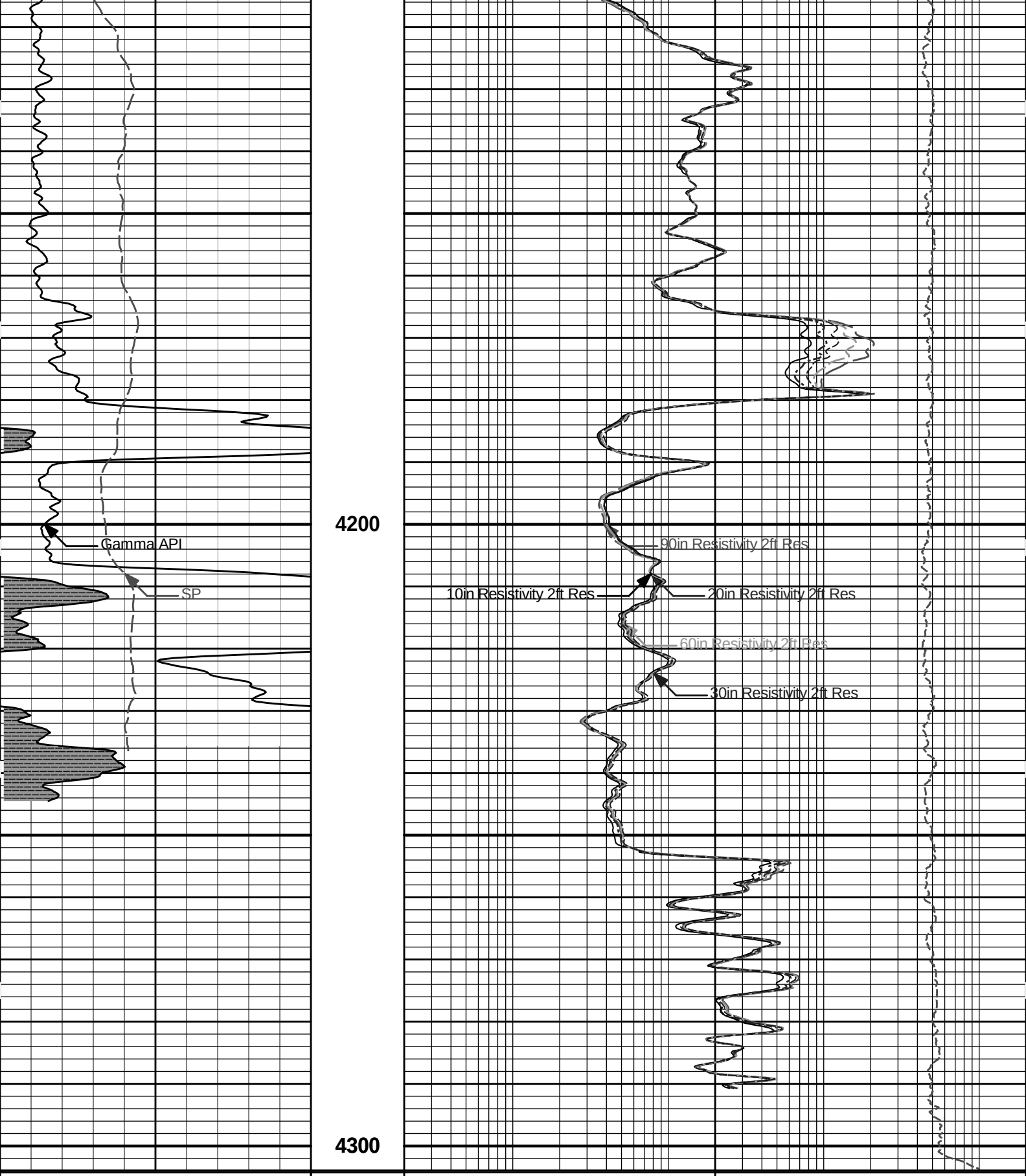
4100



SP	1 : 240 ft	10K **Tension** 0
-]20[+		**pounds**
0 **Gamma API** 150		0.2 **10in Resistivity 2ft Res** 2000
api		**ohmm**
SHALE		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

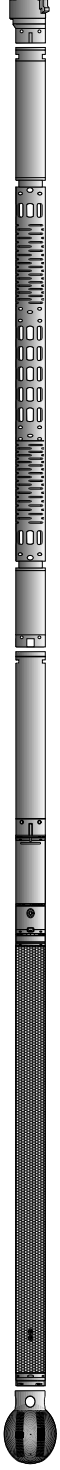
Plot Time: 24-Jun-11 10:20:06
Plot Range: 3750 ft to 4303.92 ft
Data: HORTON_1\Well Based\DAQ-0001-REPEAT\
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_5_repeat_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						70.36 ft
Cable Head Tension-001 30.00 lbs		Ø 3.625 in		Load Cell @ 69.36 ft	2.00 ft	
						68.36 ft
SP Sub-TRK954 60.00 lbs		Ø 3.625 in		SP @ 66.59 ft	3.74 ft	
						64.63 ft
GTET-10811258 165.00 lbs		Ø 3.625 in		GammaRay @ 58.56 ft	8.52 ft	
						56.10 ft
	DSN Decentralizer-11005605 6.60 lbs	Ø 3.625 in*				
DSNT-10735145 174.00 lbs		Ø 3.625 in		DSN Far @ 49.17 ft DSN Near @ 48.42 ft	9.69 ft	
						46.42 ft
SDLT-I145_M73803_P90 360.00 lbs		Ø 4.500 in		SDL Microlog @ 38.60 ft SDL Caliper @ 38.42 ft SDL @ 38.41 ft	10.81 ft	
		Ø 4.750 in				



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CHT	Cable Head with Load Cell	001	30.00	2.00	68.36	300.00
SP	SP Sub	TRK954	60.00	3.74	64.63	300.00
GTET	Gamma Telemetry Tool	10811258	165.00	8.52	56.10	60.00
DSNT	Dual Spaced Neutron	10735145	174.00	9.69	46.42	60.00
DCNT	DSN Decentralizer	11005605	6.60	5.13 *	49.75	300.00
SDLT	Spectral Density Tool	I145_M73803_P90	360.00	10.81	35.60	60.00
BSAT	Borehole Sonic Array Tool	10747683	300.00	15.77	19.83	60.00
ACRt	Array Compensated True Resistivity	I1256_S0784	250.00	19.25	0.58	300.00
CBHD	Cabbage Head	TRK954	10.00	0.58	0.00	300.00
Total			**1,355.60**	**70.36**		

* Not included in Total Length and Length Accumulation.

Data: HORTON_1\0001 QUAD_COMBO\IDLE **Date: 23-Jun-11 22:15:02**

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CALIBRATION REPORT

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt - I1256_S0784**	**Reference Calibration Date:**	**02-May-11 11:01:06**
Engineer:	**C. MARLOWE**	**Calibration Date:**	**14-Jun-11 13:12:05**
Software Version:	**WL INSITE R3.2.5 (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	1.0135	1.05	0.95	1.0136	1.05	0.95	1.0050	1.05
A2 (50")	0.95	1.0603	1.05	0.95	1.0633	1.05	0.95	1.0589	1.05
A3 (29")	0.95	0.9991	1.05	0.95	1.0010	1.05	0.95	0.9940	1.05
A4 (17")	0.95	1.0257	1.05	0.95	1.0260	1.05	0.95	1.0226	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0306	1.05	0.95	1.0267	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9961	1.05	0.95	0.9922	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	-0.314	2	-6	-3.672	-2	-8	-4.442	-2
A2 (50")	-7	-1.960	-1	-6	-3.748	-2	-7	-4.268	-2
A3 (29")	-27	-15.944	-9	-9	-4.528	-3	-7	-3.048	-1
A4 (17")	-180	-102.145	-60	-45	-33.383	-15	-39	-26.864	-13
A5 (10")	N/A	N/A	N/A	-150	-101.483	-50	-80	-51.029	-10
A6 (6")	N/A	N/A	N/A	175	311.016	525	90	163.151	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.8931	1.3
36K	1.0	1.2129	2.0
72K	1.0	1.5430	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.002	1.05

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
ACRt-I1256_S0784						
Mud Cell	1.002	----------	----------	0.000	----------	ohm-m

Data: HORTON_1\0001 QUAD_COMBO\IDLE **Date: 23-Jun-11 22:17:52**

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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	9.000	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	0.320	ohmm
SHARED	TRM	Temperature of Mud	74.0	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	4320.00	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	0.27	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	73.00	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	Centered	
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	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	DMA	Formation Density Matrix	2.710	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	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	RTOK	Process ACRt?	Yes	
	ACRt	MNSO	Minimum Tool Standoff	1.50	in
	ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
	ACRt	TPOS	Tool Position	Free Hanging	
	ACRt	RMOP	Rmud Source	Mud Cell	
	ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
	ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
	ACRt	THQY	Threshold Quality	0.50	
BOTTOM					

Data: HORTON_1\0001 QUAD_COMBO\IDLE **Date: 23-Jun-11 22:15:28**

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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	
	Cable Head Tension			
DHTN	DownholeTension	0.00	BLK	0.000
	SP Sub			
PLTC	Plot Control Mask	66.58	NO	
SP	Spontaneous Potential	66.58	BLK	1.250
SPR	Raw Spontaneous Potential	66.58	NO	
SPO	Spontaneous Potential Offset	66.58	NO	
	GTET			
TPUL	Tension Pull	58.56	NO	
GR	Natural Gamma Ray API	58.56	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	58.56	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	58.56	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
	DSNT			
TPUL	Tension Pull	48.32	NO	
RNDS	Near Detector Telemetry Counts	48.42	BLK	1.417
RFDS	Far Detector Telemetry Counts	49.17	TRI	0.583
DNTT	DSN Tool Temperature	48.42	NO	
DSNS	DSN Tool Status	48.32	NO	
ERND	Near Detector Telemetry Counts EVR	48.42	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	49.17	BLK	0.000
ENTM	DSN Tool Temperature EVR	48.42	NO	
	SDLT			
TPUL	Tension Pull	38.41	NO	
NAB	Near Above	38.24	BLK	0.920
NHI	Near Cesium High	38.24	BLK	0.920
NLO	Near Cesium Low	38.24	BLK	0.920
NVA	Near Valley	38.24	BLK	0.920

NBA	Near Barite	38.24	BLK	0.920
NDE	Near Density	38.24	BLK	0.920
NPK	Near Peak	38.24	BLK	0.920
NLI	Near Lithology	38.24	BLK	0.920
NBAU	Near Barite Unfiltered	38.24	BLK	0.250
NLIU	Near Lithology Unfiltered	38.24	BLK	0.250
FAB	Far Above	38.58	BLK	0.250
FHI	Far Cesium High	38.58	BLK	0.250
FLO	Far Cesium Low	38.58	BLK	0.250
FVA	Far Valley	38.58	BLK	0.250
FBA	Far Barite	38.58	BLK	0.250
FDE	Far Density	38.58	BLK	0.250
FPK	Far Peak	38.58	BLK	0.250
FLI	Far Lithology	38.58	BLK	0.250
PTMP	Pad Temperature	38.42	BLK	0.920
NHV	Near Detector High Voltage	35.60	NO	
FHV	Far Detector High Voltage	35.60	NO	
ITMP	Instrument Temperature	35.60	NO	
DDHV	Detector High Voltage	35.60	NO	
TPUL	Tension Pull	38.42	NO	
PCAL	Pad Caliper	38.42	TRI	0.250
ACAL	Arm Caliper	38.42	TRI	0.250
TPUL	Tension Pull	38.60	NO	
MINV	Microlog Lateral	38.60	BLK	0.750
MNOR	Microlog Normal	38.60	BLK	0.750
	BSAT			
TPUL	Tension Pull	27.09	NO	
STAT	Status	27.09	NO	
DLYT	Delay Time	27.09	NO	
SI	Sample Interval	27.09	NO	
TXRX	Raw Telemetry 10 Receivers	27.09	NO	
FRMC	Tool Frame Count	27.09	NO	
	ACRt			
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	

Data: HORTON_1\0001 QUAD_COMBO\IDLE **Date: 23-Jun-11 22:15:57**

COMPANY	**NEW GULF OPERATING, LLC**		
WELL	**HORTON #1**		
FIELD	**LANGDON**		
COUNTY	**RENO**	STATE	**KANSAS**

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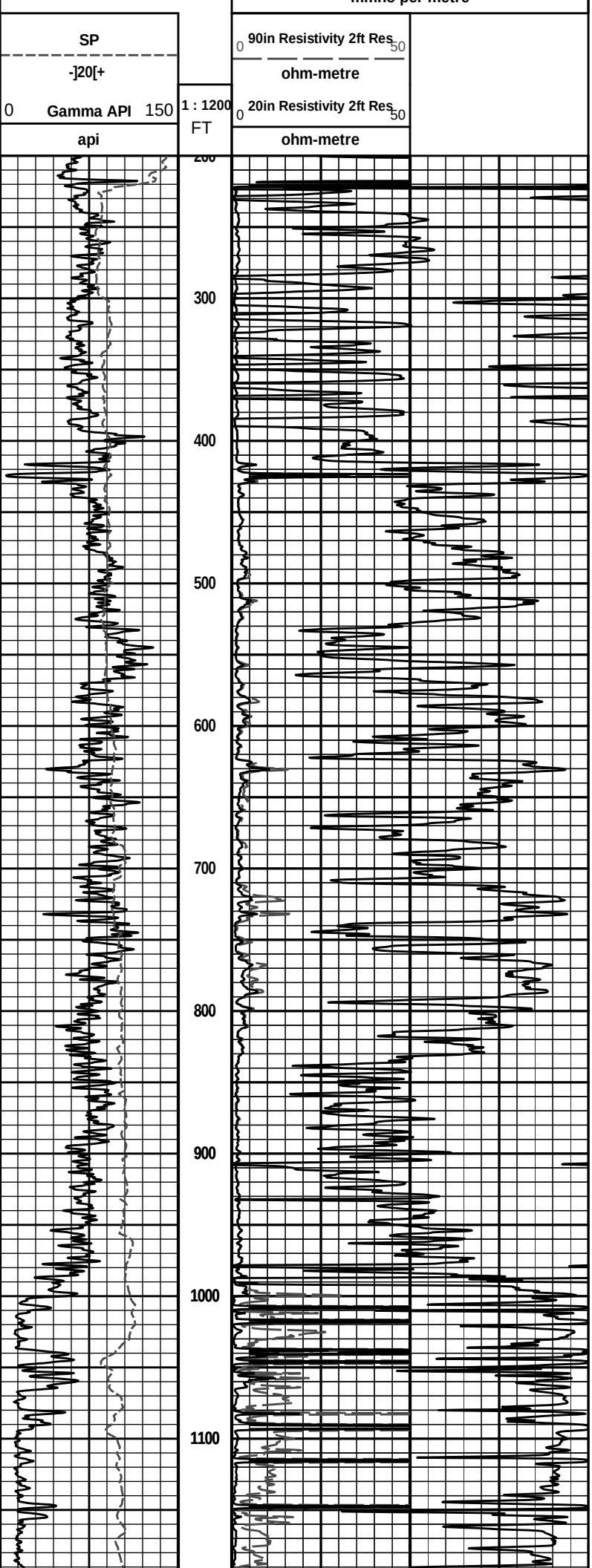
ARRAY COMPENSATED RESISTIVITY LOG

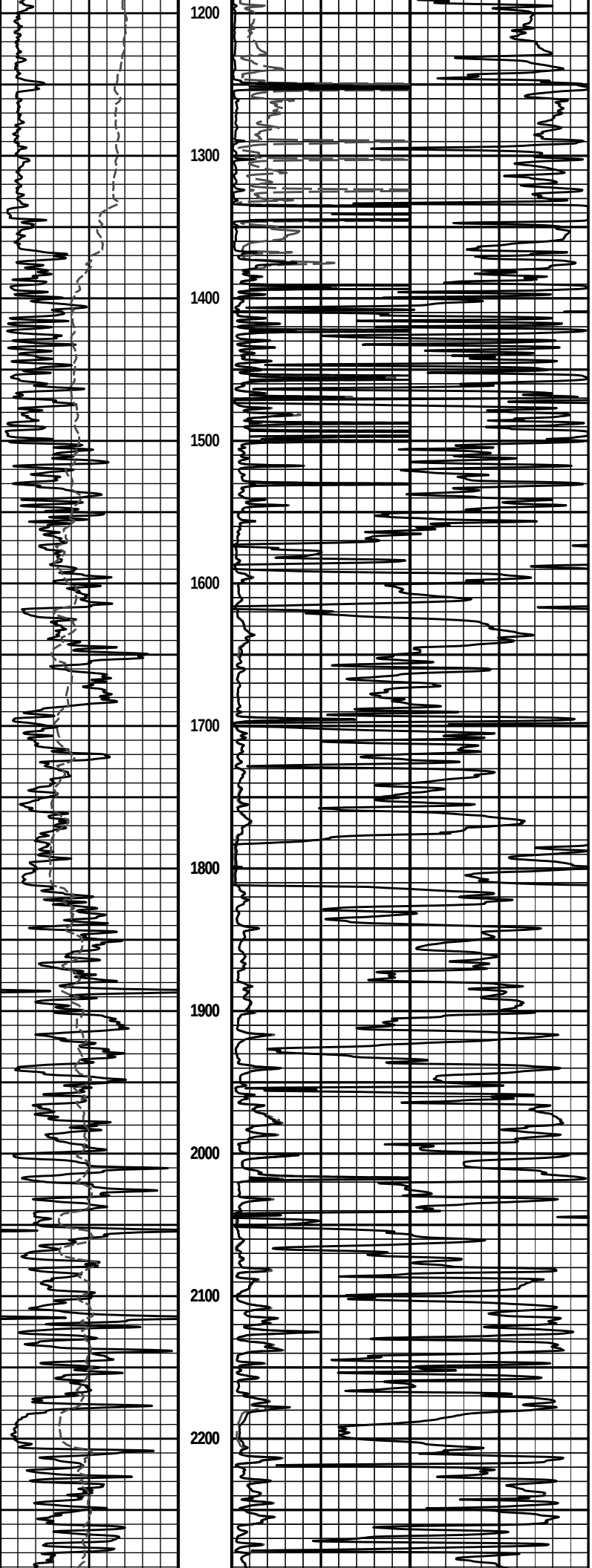
HALLIBURTON

Plot Time: 24-Jun-11 10:20:06
Plot Range: 200 ft to 4290.75 ft
Data: HORTON_1\Well Based\DAQ-0001-CSG
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_1_lib

1 INCH MAIN LOG

1000	**90in Conductivity 2ft Res**	0
	mmho per metre	


SP
-]20[+
0 Gamma API 150
api
1 : 1200
FT
0 90in Resistivity 2ft Res 50
ohm-metre
0 20in Resistivity 2ft Res 50
ohm-metre
200
300
400
500
600
700
800
900
1000
1100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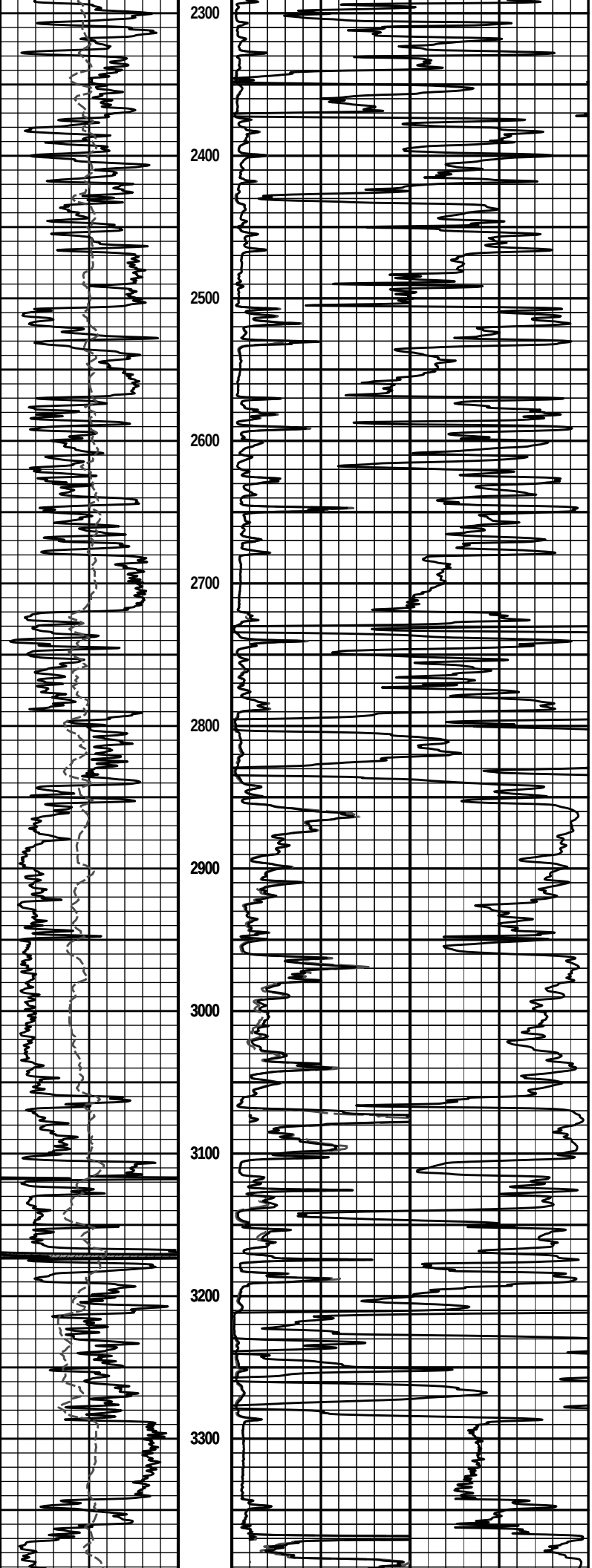
1400
1500
1600
1700
1800
1900
2000
2100
2200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2800
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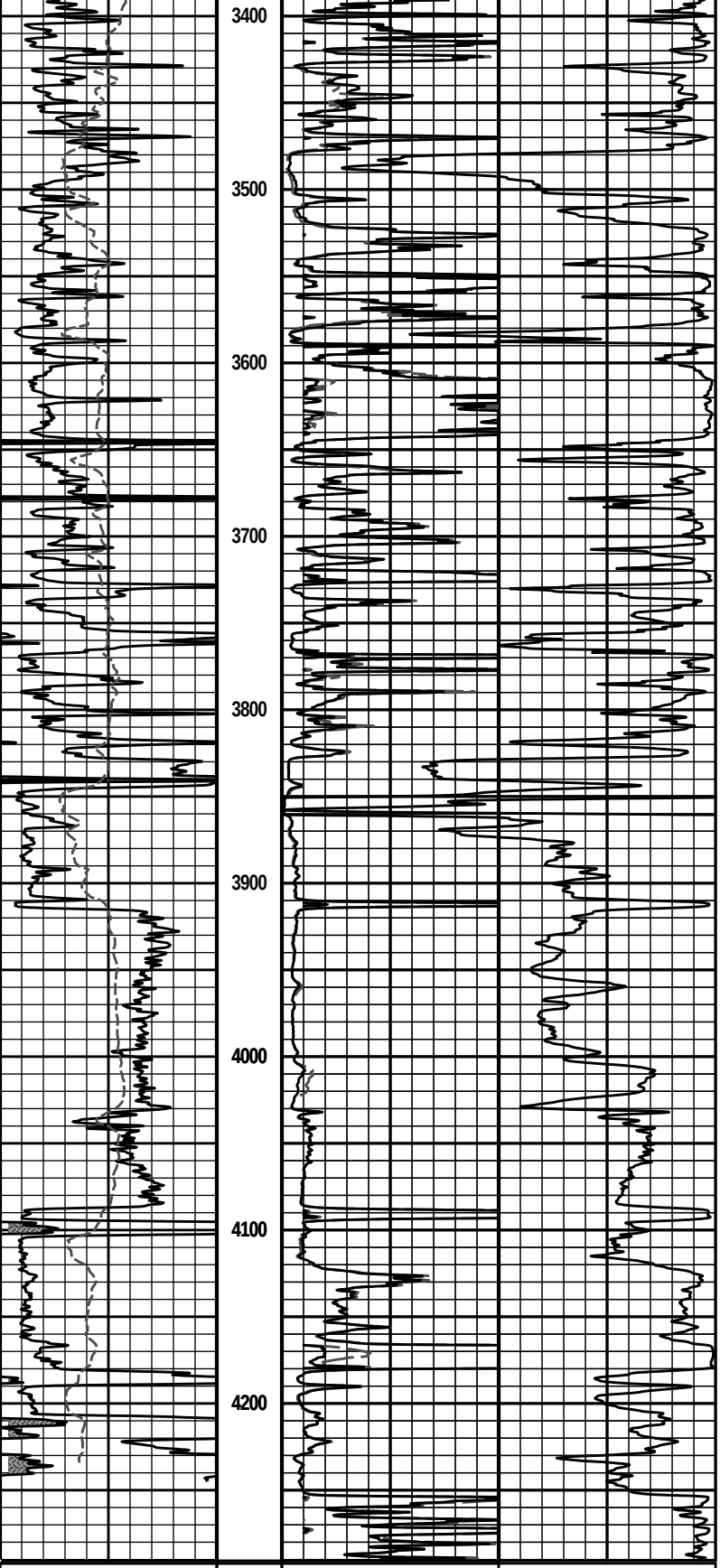
3000
3100
3200
3300



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

HALLIBURTON

Plot Time: 24-Jun-11 10:20:08
Plot Range: 200 ft to 4290.75 ft

Data: HORTON_1\Well Based\DAQ-0001-CSG\
Plot File: \\-LOCAL-\HORTON_1\0001 QUAD_COMBO\ACRT\ACRT_1_lib

1 INCH MAIN LOG